

# **Eisch-Kafka-Electronic GmbH**

## **Catalog 2017**



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| Inhaltsverzeichnis                | Content                             | Seite / page      |
|-----------------------------------|-------------------------------------|-------------------|
| <b>Halbleiter</b>                 | <b>Semiconductors</b>               |                   |
| Transistoren                      | Transistors                         | 2, 3              |
| GaAs-Fets                         | GaAs-Fets                           | 2, 3              |
| MMICs                             | MMICs                               | 3                 |
| Dioden                            | Diodes                              | 3, 4              |
| Integrierte Schaltungen           | Integrated circuits                 | 6, 7              |
| <b>HF-Module</b>                  | <b>RF modules</b>                   | <b>4</b>          |
| Quarze                            | Crystals                            | 5                 |
| VCO's                             | VCO's                               | 14                |
| <b>Passive Bauelemente</b>        | <b>Passive components</b>           |                   |
| Kondensatoren                     | Capacitors                          | 8, 9              |
| Widerstände, Potentiometer        | Resistors, variable resistors       | 10                |
| Drosseln, Filter, Spulen Ferrite  | Chokes, filters, coils, ferrites    | 11 - 13           |
| Ferrite, Relais, Netzteile        | Ferrites, Relays, Power supplies    | 13                |
| <b>Mechanische Bauelemente</b>    | <b>Mechanical components</b>        |                   |
| HF-Steckerverbindungen            | RF-connectors                       | 28 - 31           |
| Koaxialkabel Low Loss Kabel       | Coaxial cable Low Loss Kabel        | 22, 23            |
| Koaxialschalter, -relais          | Coaxial switches and relays         | 24 - 27           |
| Schrauben, Gewindebohrer          | Screws, screw tabs, drills          | 31                |
| Weißblechgehäuse                  | Tin plated boxes                    | 36                |
| Leiterplatten, -Materialien       | PCBs, base material                 | 15                |
| Mastrant Abspannseile und Zubehör | Mastrant guy-wire and parts         | 32 - 35           |
| <b>Antennen, Weichen</b>          | <b>Antennas, duplexers</b>          | <b>16, 54, 55</b> |
| PROCOM Mikrowellenkomp.           | PROCOM microw. components           | 16                |
| PROCOM Weichen                    | PROCOM diplexer                     | 54, 55            |
| Hornstrahler, Logper-Antennen     | Horns, Log. per antennas            | 19 – 21           |
| 2,4GHz-Antennen                   | 2,4GHz antennas                     | 17                |
| <b>Bausätze</b>                   | <b>Kits</b>                         |                   |
| Leiterkarten für Bausätze         | PC boards for kits                  | 37                |
| UHF-Bausätze                      | UHF kits                            | 37 – 41           |
| Powerdetector                     | Powerdetector                       | 44 - 45           |
| Mess-Sender                       | Signal generator                    | 42 - 43           |
| Transceiver for Digi / Links      | Transceiver for digis, links        | 50 – 51           |
| ATV – Sender, Basisband.          | Transceiver for ATV, baseband.      | 52, 53            |
| <b>Fertigergeräte</b>             | <b>Assembled units</b>              |                   |
| Aktivantenne für LW               | Active antenna for LW               | 18                |
| Network Analyzer                  | Network Analyzer                    | 46-49             |
| <b>Meßgeräte, -Zubehör</b>        | <b>Test equipments, accessories</b> | <b>57</b>         |



# General

## New developments:



**Network Analyzer**  
KC901S + KC901V (page 46-49)

**Signalgenerator**  
SIG 01 + SIG 02 (page 42-43)



**Powerdetector kit**  
Det 01 + Det 02 (page 44-45)



We are pleased to present our new comprehensive catalog. You may assume that we have on stock all parts listed in this catalog. We will inform you if any of the parts would be out of stock. We wish you happy lecture and would be pleased to receive your comments for improvement.

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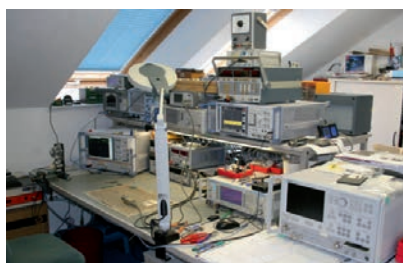
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All listed prices are valid at the date of publication of this catalog. Due to some large changes of price we must reserve change of indicated prices. We take into account the price effective the date of delivery.



# Transistors

Prices including VAT

| Type:    | Number  | Short data:                              | price: |
|----------|---------|------------------------------------------|--------|
| BC238    | 1001003 | NPN                                      | 0,15 € |
| BC308    | 1001001 | replacement BC558B PNP, 30 V, 0.2A, 0.3W | 0,15 € |
| BC327    | 1001002 | PNP, 30 V                                | 0,15 € |
| BC546    | 1001004 | NPN, 80 V, 0.2 A, 0.3 W                  | 0,15 € |
| BC618    | 1001005 | NPN transistor                           | 0,15 € |
| BC848c   | 1001018 | NPN transistor, SMD                      | 0,25 € |
| BC858c   | 1001040 | transistor, SMD                          | 0,25 € |
| BC857B   | 1001036 | PNP transistor, SMD                      | 0,30 € |
| BC869    | 1001043 |                                          | 0,30 € |
| BCY59X   | 1001006 | NPN                                      | 0,45 € |
| BCY79    | 1001007 | PNP                                      | 0,45 € |
| BD241    | 1001008 | NPN                                      | 0,70 € |
| BD680    | 1001019 | PNP                                      | 0,70 € |
| BDX53    | 1001035 |                                          | 1,10 € |
| BF245C   | 1001009 | N-channel, junction FET                  | 0,60 € |
| BF256C   | 1001021 | N-channel, junction FET                  | 0,60 € |
| BFG93a   | 1001017 | UHF transistor, SMD                      | 1,70 € |
| BFP196   | 1001039 | UHF transistor                           | 1,80 € |
| BFG235   | 1001037 | UHF Transistor                           | 2,55 € |
| BFR90    | 1001011 | UHF-rauscharm SMD (5Ghz)                 | 1,00 € |
| BFR91    | 1001012 | UHF-rauscharm SMD (5Ghz)                 | 1,40 € |
| BFR92a   | 1001013 | UHF-rauscharm SMD (5Ghz)                 | 1,50 € |
| BFR93a   | 1001027 | UHF-rauscharm SMD (5Ghz)                 | 1,50 € |
| BSP 171  | 1001044 | SMD                                      | 1,25 € |
| BSS 138  | 1001045 | SMD                                      | 0,25 € |
| J310     | 1001014 | Junction FET, low noise                  | 0,65 € |
| SST310   | 1001031 | Junction FET, same as J310 but SMD       | 0,65 € |
| Si9430   | 1001041 | P-FET SMD                                | 1,15 € |
| AT-42085 | 1001020 | RF NPN transistor, low noise             | 3,70 € |
| AT 41435 | 1001042 | HF NPN transistor, low noise             | 4,20 € |

## GaAs - FET

|          |         |                                           |         |
|----------|---------|-------------------------------------------|---------|
| MGF1302  | 1002001 | 4 GHz, F=1.5 dB, G=10 dB                  | 5,75 €  |
| MGF1303  | 1002002 | low noise GaAs-FET                        | 7,25 €  |
| MGF1801  | 1002003 | power GaAs-FET                            | 39,00 € |
| MGF0904  | 1002004 | power GaAs-FET                            | 44,20 € |
| MGF0905  | 1002005 | power GaAs-FET                            | 41,00 € |
| MGF0909  | 1002022 | power GaAs-FET                            | 72,90 € |
| MGF4953A | 1002023 | GaAs-Fet                                  | 4,00 €  |
| MGF4317  | 1002013 | HEMT (replacement 10 GHz MGF1303)         | 15,40 € |
| FHX35LGT | 1002011 | low noise GaAs-FET                        | 14,20 € |
| NE32584A | 1002020 | low noise GaAs-FET (replacement NE42484C) | 10,10 € |
| CFY 30   | 1002007 | GaAs-FET                                  | 3,60 €  |
| CGY 50   | 1002008 | GaAs-FET                                  | 6,80 €  |
| CLY 5    | 1002009 | GaAs-FET                                  | 12,35 € |
| CLY 10   | 1002010 | GaAs-FET                                  | 11,30 € |

**10% discount for more than 10 pieces for MGF 1302/1303, CLYxx**

# Transistors, MMIC's, Diodes

Prices including VAT

Type:      Number    Short data:      price:

## MMICs (integrated broadband amplifiers)

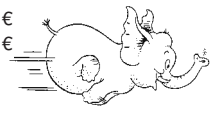
|           |         |                                                  |        |
|-----------|---------|--------------------------------------------------|--------|
| MSA 0385  | 1003001 | DC-4 GHz, 1 GHz: F=6 dB, G=12 dB, 10 V, 35 mA    | 3,80 € |
| MSA 0685  | 1003006 | DC-4 GHz, 1 GHz: F=3 dB, G=20 dB, 10 V, 35 mA    | 3,80 € |
| MSA 0885  | 1003002 | DC-4 GHz, 1 GHz: F=3.3 dB, G=23 dB, 10 V, 36 mA  | 4,15 € |
| MAR 6     | 1003003 | DC-2 GHz, 1 GHz: F=3.3 dB, G=20 dB, 10 V, 16 mA  | 4,15 € |
| INA 10386 | 1003004 | DC-2 GHz, 1 GHz: F=3,7 dB, G=26 dB, 6V, 45 mA    | 6,25 € |
| INA 03184 | 1003005 | DC-2 GHz, 1.5 GHz: F=2,6 dB, G=26 dB, 6V, 45 mA  | 8,00 € |
| MGA86563  | 1003007 | 0.5-6 GHz, 2.4 GHz: F=1.6 dB, G=22 dB, 5V, 14 mA | 6,25 € |
| MGA86576  | 1003008 | 1.5-8 GHz, 4 GHz: F=1.6 dB, G=23 dB, 5 V, 16 mA  | 9,70 € |
| MAG 30489 | 1003025 | 0,5-2,5GHz, 1GHz: F=3dB, G=16dB, 5V, 97,A        | 3,75 € |
| MAG 30689 | 1003026 | 0,04-2GHz, 1GHz: F=3dB, G=14dB, 5V, 104mA        | 3,65 € |
| MAG 62563 | 1003027 | 0,1-3GHz, 1GHz; F=0.9dB, G=20dB, 3V, 62 mA       | 2,35 € |
| SGA 2286  | 1003022 | 3,5 GHz, F=3,2 dB, G=14 dB, 2,2V/20 mA           | 2,80 € |
| SGA 2386  | 1003023 | 2,8 GHz, F=2,9 dB, G=16 dB, 2,7V/20 mA           | 3,00 € |
| SGA 2486  | 1003024 | 2,0 GHz, F=2,5 dB, G=18 dB, 2,7V/20 mA           | 3,10 € |
| ERA1      | 1003011 | GaAs-FET MMIC                                    | 3,40 € |
| ERA2      | 1003012 | GaAs-FET MMIC                                    | 3,40 € |
| ERA3      | 1003013 | GaAs-FET MMIC                                    | 3,60 € |
| ERA4      | 1003014 | GaAs-FET MMIC                                    | 7,40 € |
| ERA5      | 1003015 | GaAs-FET MMIC                                    | 7,40 € |
| GALI 1    | 1003017 | DC-8 GHz, G=12,5 dB 3,4V, 40mA                   | 4,00 € |
| GALI 3    | 1003018 | DC-3 GHz, G=21 dB 3,3V, 35mA                     | 2,10 € |
| GALI 5    | 1003019 | DC-4 GHz, G=19 dB 4,4V, 65mA                     | 3,15 € |
| GALI 6    | 1003021 | DC-4 GHz, G=12 dB 5V, 70mA                       | 3,10 € |
| GALI 74   | 1003036 | DC-1 GHz, G=25 dB 4,8V, 80mA                     | 3,50 € |
| GALI 84   | 1003037 | DC-6 GHz, G=25 – 11 dB 6,8V, 100mA               | 4,25 € |
| WJA1001   | 1003028 | 0,05-3GHz, 1GHz: F=6dB, G=19dB, 5V, 100 mA       | 4,65 € |
| WJA1021   | 1003029 | 0,05-4GHz, 2GHz: F=6dB, G=17dB, 5V, 90 mA        | 4,50 € |
| WJA1500   | 1003030 | 0,05-1GHz, 0,2GHz: F=5dB, G=19dB, 5V, 95 mA      | 5,50 € |
| WJA1510   | 1003032 | 0,05-1GHz, 0,2GHz: F=5dB, G=14dB, 5V, 95 mA      | 4,50 € |
| PGA 103   | 1003038 | 0,05-4GHz, F=0,6dB, G=20dB, 5V, 100mA            | 4,00 € |
| TQP3M9008 | 1003039 | 0,05-4GHz, 1GHz: F=1.3dB, G=21dB, 5V, 95mA       | 3,35 € |
| TQP3M9028 | 1003040 | 0,05-4GHz, 1GHz: F=2dB, G=14dB, 5V, 95mA         | 3,90 € |
| TQ7M9102  | 1003041 | 0,4-4GHz, 2GHz,F=4dB, G=18dB, 5V, 140mA          | 6,05 € |
| PSA4-5043 | 1003042 | 0,05-4GHz, 1GHz F=0,75dB, G=18dB, 5V, 56mA       | 3,40 € |
| AG 302-86 | 1003033 | DC-6GHz, 1GHz: F=3dB, G=15dB, 4,2V, 35mA         | 2,15 € |
| PHA-1+    | 1003034 | 0,05-6GHz, 1GHz: F=2dB, G=15dB, 5V, 146 mA       | 2,35 € |
| GVA-81+   | 1003035 | 0,01-7GHz, 1GHz: F=7dB, G=10dB, 5V, 100mA        | 2,90 € |
| MAV-11SM  | 1003016 | 0,05-1GHz, F=3.6dB, G=10dB, P1=17.5dBm, 60mA     | 3,20 € |

## Diodes, general purpose

|        |         |                                     |        |
|--------|---------|-------------------------------------|--------|
| 1N4148 | 1004001 | Diode, silicon, general purpose     | 0,05 € |
| LL4148 | 1004101 | Diode, silicon, general purpose SMD | 0,10 € |
| 1N4151 | 1004002 | Diode, silicon, general purpose     | 0,05 € |
| 1N4004 | 1004003 | Rectifier diode, 200 V, 1 A         | 0,10 € |
| 1N4001 | 1004102 | Rectifier diode,100 V, 1 A SMD      | 0,10 € |
| LL101  | 1004103 | Rectifier diode, Schottky, SMD      | 0,30 € |

## Suppressor diodes

|            |         |                               |        |
|------------|---------|-------------------------------|--------|
| 1,5 SE6,8A | 1004202 | 6.8 Volt, 1500 Watt           | 2,20 € |
| 1,5 SE 16A | 1004203 | 16 Volt, 1500 Watt (=1N6276A) | 2,00 € |



# Diodes, RF-Modules, Crystals

Prices including VAT

Type:      Number    Short data:      price:

## Zener diodes

|           |         |                         |        |
|-----------|---------|-------------------------|--------|
| BZX79C27  | 1004204 | 27 Volt, 0.5 Watt axial | 0,15 € |
| BZX79C2V7 | 1004205 | 2.7 Volt, 0.5 Watt      | 0,15 € |
| BZX79C3V3 | 1004207 | 3.3 Volt, 0.5 Watt      | 0,15 € |
| BZX79C4V7 | 1004206 | 4.7 Volt, 0.5 Watt      | 0,15 € |

## Varicaps

|       |          |                 |        |
|-------|----------|-----------------|--------|
| BB521 | 1004503  | 1.8 pF - 2.2 pF | 1,55 € |
| BBY40 | 10045004 | SMD             | 1,05 € |

## Schottky Diodes, Pin Diodes, Mixers

|             |         |                                  |         |
|-------------|---------|----------------------------------|---------|
| 5082-3188   | 1004413 | HP-Schottky diode                | 1,95 €  |
| MA44769-287 | 1004470 | Step-Recovery-diode              | 6,25 €  |
| BA481       | 1004402 | Schottky mixer diode             | 1,65 €  |
| BAT14 03w   | 1004404 | Schottky mixer diode, SMD        | 3,25 €  |
| BAT15-03w   | 1004407 | Schottky mixer diode, SMD        | 3,25 €  |
| BAT15-099   | 1004415 | Schottky mixer diode, SMD        | 2,05 €  |
| BAT62-03W   | 1004417 | Schottky mixer diode, SMD        | 0,90 €  |
| BA595       | 1004403 | PIN diode, SMD                   | 1,55 €  |
| BA682       | 1004405 | PIN diode, SMD                   | 2,05 €  |
| BAR80       | 1004410 | PIN diode, SMD                   | 4,75 €  |
| BAR63-03W   | 1004412 | PIN diode, SMD                   | 0,85 €  |
| BAR64-03W   | 1004416 | PIN diode, SMD                   | 1,10 €  |
| BAR64-04    | 1004418 | PIN diode, SMD                   | 0,60 €  |
| BA282       | 1004408 | PIN diode                        | 0,85 €  |
| UM9401      | 1004406 | PIN diode, 20 Watt RF/70 cm, SMD | 4,10 €  |
| SYM11       | 1005101 | Mixer, SMD-C3, +7dBm. 1-2500 MHz | 15,60 € |
| SYM-30DHW   | 1005104 | Mixer, SMD, +15dBm, 5-3000 MHz   | 21,00 € |
| SYM30DMHW   | 1005105 | Mixer, SMD, +13dBm, 5-3000 MHz   | 20,00 € |
| ADE-5       | 1005103 | Mixer, SMD, +7dBm, 5-1500 MHz    | 6,80 €  |
| MCA1-60     | 1005106 | Mixer, SMD, 7dBm, 1600-6000 MHz  | 14,00 € |
| MCA1-60MH   | 1005107 | Mixer, SMD, 13dBm, 1600-6000 MHz | 14,00 € |
| TUF-1LHSM   | 1005108 | Mixer, SMD, 10dBm, 2-6000 MHz    | 18,00 € |
| TUF-1HSM    | 1005109 | Mixer, SMD, 17 dBm, 2-6000 MHz   | 22,00 € |
| TUF-2HSM    | 1005112 | Mixer, SMD, 17 dBm, 50-1000 MHz  | 23,00 € |
| TUF-5HSM    | 1005111 | Mixer, SMD, 17dBm, 20-500 MHz    | 39,00 € |
| LRPS-2-I    | 1005114 | Leistungsteiler SMD, 5 – 500MHz  | 7,10 €  |
| SBTC-2-10   | 1005115 | Leistungsteiler SMD, 5 - 1000MHz | 3,90 €  |
| JSW2-63DR   | 1013033 | HF-Schalter 10 - 6000MHz         | 3,40 €  |

## RF-Modules

|               |         |                                                   |         |
|---------------|---------|---------------------------------------------------|---------|
| M67715        | 1008001 | 1240 - 1300 MHz, SSB, P <sub>out</sub> =1,5 Watt  | 55,00 € |
| RA30H0608M    | 1008015 | 60 - 80 MHz, P <sub>out</sub> =30 Watt, U=12 V    | 57,20 € |
| RA18H1213G    | 1008006 | 23 cm, P <sub>out</sub> =18W, 12V                 | 52,80 € |
| RA30H1317M    | 1008009 | 130-175 MHz, 30W, 12V                             | 34,00 € |
| RA30H2127M-01 | 1008010 | 210-270 MHz, 30W                                  | 52,80 € |
| RA20H8994M-01 | 1008007 | 896-941 MHz, 20W, 12V                             | 52,00 € |
| RA13H4047M    | 1008014 | 400-470 MHz, P <sub>out</sub> =13W, 12V           | 27,00 € |
| RA30H4047M    | 1008011 | 400-470 MHz, P <sub>out</sub> =30W, 12V           | 43,30 € |
| M57719-01     | 1008012 | 435 - 445MHz, FM, P <sub>out</sub> =10Watt, U=12V | 25,00 € |
| M57704H-01    | 1008013 | 450 - 470MHz, FM, P <sub>out</sub> =13Watt, U=12V | 25,00 € |

# Crystals

Prices including VAT

Type:      Number    Short data:      price:

## Crystals for RF applications

|               |         |                                              |                  |         |
|---------------|---------|----------------------------------------------|------------------|---------|
| 44,5450MHz    | 1007017 | Mixer crystal for 70 cm Trx                  |                  | 19,50 € |
| 96,0000MHz    | 1007012 | Crystal or 23 cm transverter                 |                  | 19,50 € |
| 96,0000MHz    | 1007007 | Crystal for 23cm transverter                 | <b>60°C OCXO</b> | 23,60 € |
| 103,000MHz    | 1007035 | Crystal for 3 cm transverter                 | <b>60°C OCXO</b> | 23,60 € |
| 103,458339MHz | 1007027 | Crystal for 3 cm transverter                 | <b>60°C OCXO</b> | 23,60 € |
| 103,5000MHz   | 1007031 | Crystal for 3 cm transverter                 | <b>60°C OCXO</b> | 23,60 € |
| 106,500MHz    | 1007030 | Crystal for 3 cm transverter                 |                  | 19,50 € |
| 106,500MHz    | 1007026 | Crystal for 3 cm transverter                 | <b>60°C OCXO</b> | 23,60 € |
| 117,000MHz    | 1007013 | Crystal for 6 cm transverter                 |                  | 19,50 € |
| 117,000MHz    | 1007008 | Crystal for 6cm Transverter                  | <b>60°C OCXO</b> | 23,60 € |
| 120,889MHz    | 1007016 | Crystal for 13 cm transverter                |                  | 19,50 € |
| 120,7778MHz   | 1007041 | Crystal for 13 cm transverter ZF=146-148 MHz |                  | 19,50 € |
| 122,250MHz    | 1007034 | Crystal for LO 47 GHz                        | <b>40°C</b>      | 23,60 € |
| 122,250MHz    | 1007038 | Crystal for LO 47 GHz                        | <b>60°C OCXO</b> | 23,60 € |
| 122,6250MHz   | 1007036 | Crystal for                                  | <b>60°C OCXO</b> | 23,60 € |
| 124,500MHz    | 1007039 | Crystal for LO 12/24 GHz                     | <b>40°C</b>      | 23,60 € |
| 124,500MHz    | 1007040 | Crystal for LO 12/24 GHz                     | <b>60°C OXCO</b> | 23,60 € |
| 125,333MHz    | 1007029 | Crystal for 13 cm transverter, 2400-2402 MHz |                  | 19,50 € |
| 125,250MHz    | 1007038 | Crystal for LO 24/47 GHz                     | <b>40°C</b>      | 23,60 € |
| 135,667MHz    | 1007014 | Crystal for 9 cm transverter                 |                  | 19,50 € |
| 135,667MHz    | 1007009 | Crystal for 9 cm transverter                 | <b>60°C OCXO</b> | 23,60 € |

Crystals for UHF applications will always been manufactured according to the specifications of the designer.

We never offer cheap crystals with inadequate temperature behavior.

Upon request the specifications will be indicated.

KTY10-62    1004601    Temperature depended Si resistor (DF9LN)    1,90 €

## Crystals - special to purpose

We can also supply crystals for amateur radio or other applications according to your requirements. However the following items should be observed.

1. **Orders should always be placed in written form (post card, letter, fax, e-mail)**
2. Type of equipment (in which equipment the crystal has to be mounted ?)
3. Crystal can (designation or small sketch)
4. Final frequency
5. Crystal frequency
6. Modes of oscillation: parallel resonance (load capacity shall be given) **or** serial resonance

**Lead time:** The lead time will be approx. 4-5 weeks after receipt of order.

Upon request the crystals can be manufactured by express (14 days) (increase of price +35%)

Type:      Number    Short data:      price:

## Voltage regulators

|           |         |                                        |         |
|-----------|---------|----------------------------------------|---------|
| 7805      | 1012001 | 5 Volt, 1 A                            | 0,55 €  |
| 7806      | 1012002 | 6 Volt, 1 A                            | 0,55 €  |
| 7808      | 1012003 | 8 Volt, 1 A                            | 0,55 €  |
| 7809      | 1012010 | 8 Volt, 1 A                            | 0,55 €  |
| 7810      | 1012009 | 10 Volt, 1 A                           | 0,55 €  |
| 78L05     | 1012004 | 5 Volt, 100 mA                         | 0,55 €  |
| 78L05 SMD | 1012015 | 5 Volt, 100 mA, SMD, 8 pins            | 0,65 €  |
| 78L05F    | 1012019 | 5 Volt, 100 mA, SMD, SOT-89            | 0,75 €  |
| 78L06     | 1012005 | 6 Volt, 100 mA                         | 0,55 €  |
| 78L08     | 1012006 | 8 Volt, 100 mA                         | 0,55 €  |
| 78L08 SMD | 1012018 | 8 Volt, 100 mA                         | 0,65 €  |
| 78L08F    | 1012020 | 8 Volt, 100 mA, SMD, SOT-89            | 0,75 €  |
| 78L09     | 1012011 | 9 Volt, 100 mA                         | 0,55 €  |
| 78S09     | 1012016 | 9 Volt, 2 A                            | 1,50 €  |
| L2940T10  | 1012007 | Low drop voltage regulator, 10 V 1 A   | 2,25 €  |
| L2940T12  | 1012017 | Low drop voltage regulator, 12 V 1 A   | 2,25 €  |
| LT1084CP  | 1012012 | Low drop voltage regulator, adjustable | 11,50 € |
| LT1085CT  | 1012013 | Low drop voltage regulator, adjustable | 9,55 €  |
| LT1086CT  | 1012008 | Low drop voltage regulator, adjustable | 6,55 €  |
| MKU55     | 1012014 | Voltage converter +5 Volt / -5 Volt    | 13,00 € |

## Interface IC's

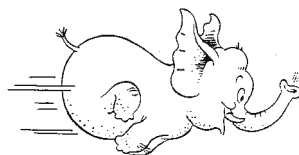
|         |         |                        |        |
|---------|---------|------------------------|--------|
| MC1488  | 1013009 | 4 buffer, serial       | 1,05 € |
| MC1489  | 1013010 | 4 receiver, serial     | 1,05 € |
| MAX 232 | 1013011 | Interface IC. (ICL232) | 4,99 € |
| MAX 292 | 1013031 | Interface IC           | 8,55 € |
| ULN2003 | 1013012 | Transistor array       | 1,05 € |

## Spezial - Analog IC's

|         |         |                               |         |
|---------|---------|-------------------------------|---------|
| ICL7660 | 1013019 | Voltage converter             | 2,60 €  |
| ICL7660 | 1013027 | Voltage converter, <b>SMD</b> | 2,10 €  |
| LM567   | 1013020 | Tone decoder, PLL             | 2,99 €  |
| MAX8211 | 1013021 | Watchdog, reset IC            | 4,70 €  |
| TCM3105 | 1013030 | Modem chip, <b>SMD</b>        | 13,00 € |
| TL7705  | 1013023 | Watchdog, reset IC            | 1,05 €  |
| U1096   | 1013024 | LED control IC                | 6,20 €  |
| XR2211  | 1013025 | PLL LF IC                     | 3,10 €  |
| SSM2165 | 1013032 | Microfon preamp + compression | 6,20 €  |

## AD/DA Converter

|        |         |                                |         |
|--------|---------|--------------------------------|---------|
| LT1099 | 1013003 | AD Converter, 8 bit, 1 $\mu$ S | 18,00 € |
|--------|---------|--------------------------------|---------|



# Integrated Circuits, Analog / Special

Prices including VAT

Type:      Number   Short data:      price:

## Operational Amplifiers

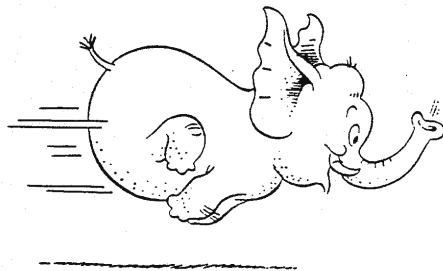
|             |         |                             |        |
|-------------|---------|-----------------------------|--------|
| CA3130      | 1012101 | OP-Amp, MOS FET input       | 1,30 € |
| CA3140      | 1012102 | OP-Amp, MOS FET input       | 1,30 € |
| LF356       | 1012104 | Op-Amp with FET input       | 0,95 € |
| LM324       | 1012105 | Uni Op-Amp, 4x              | 1,85 € |
| LM339       | 1012106 | Comparator, 4 x             | 0,40 € |
| LM358       | 1012113 | Op-Amp                      | 0,50 € |
| LM386       | 1012111 | Op-Amp                      | 0,80 € |
| TL072       | 1012108 | CMOS OP, 2x                 | 0,50 € |
| TL082       | 1012109 | CMOS OP, 2x, low noise      | 0,90 € |
| TL084       | 1012110 | CMOS OP, 4x, low noise      | 0,95 € |
| TLC393      | 1012112 | Op-Amp                      | 1,45 € |
| AD8051 AR-8 | 1012114 | Video OP-Amp GBW 110MHz SMD | 2,90 € |
| AD8055 AR-8 | 1012115 | Video OP-Amp GBW 300MHz SMD | 3,10 € |

## Processor ICs

|             |         |                       |         |
|-------------|---------|-----------------------|---------|
| PIC 16F84/4 | 1016208 | Pic prozessor for ATV | 13,10 € |
|-------------|---------|-----------------------|---------|

## HF Schaltungen

|         |         |                                   |        |
|---------|---------|-----------------------------------|--------|
| MC3371  | 1017001 | ZF IC mit RSSI Ausgang <b>SMD</b> | 6,20 € |
| MC13156 | 1017004 | ZF IC mit RSSI Ausgang <b>SMD</b> | 9,99 € |
| TDA5030 | 1017002 |                                   | 4,75 € |
| TSA5055 | 1017005 | Synthesizer, <b>SMD</b>           | 6,30 € |



Type:      Number      Short data:      price:

# Capacitors

Prices including VAT

| Type: | Number | Short data: | price: |
|-------|--------|-------------|--------|
|-------|--------|-------------|--------|

## ATC- Ceramic multilayer capacitors

Suitable for use in power amplifiers. Due to their high Q factor (Q=5000) only very low losses will occur when using at 70 cm or higher. Therefore the temperature elevation will be decreased of the capacitors. Most of the condensers are from the Type ATC600F (0805), some are bigger.

|        |         |        |        |
|--------|---------|--------|--------|
| 0,1pF  | 1301834 |        | 0,70 € |
| 0,2pF  | 1301835 |        | 0,70 € |
| 0,3pF  | 1301836 |        | 0,70 € |
| 0,5pF  | 1301837 |        | 0,70 € |
| 0,7pF  | 1301838 |        | 0,70 € |
| 1pF    | 1301805 | ATC100 | 2,10 € |
| 1pF    | 1301833 |        | 0,70 € |
| 1,2 pF | 1301816 |        | 0,70 € |
| 1,5 pF | 1301818 |        | 0,70 € |
| 2,2 pF | 1301819 |        | 0,70 € |
| 2,4 pF | 1301820 |        | 0,70 € |
| 3,3 pF | 1301803 |        | 0,70 € |
| 5,6 pF | 1301822 |        | 0,70 € |
| 6,8 pF | 1301832 |        | 0,70 € |
| 8,2 pF | 1301806 |        | 0,70 € |
| 10 pF  | 1301823 |        | 0,70 € |
| 22 pF  | 1301824 |        | 0,70 € |
| 33 pF  | 1301807 |        | 0,70 € |
| 47 pF  | 1301826 |        | 0,70 € |
| 68 pF  | 1301827 |        | 0,70 € |
| 82 pF  | 1031804 |        | 0,70 € |
| 91 pF  | 1301811 |        | 0,70 € |
| 100 pF | 1301812 |        | 0,70 € |
| 110 pF | 1301813 |        | 0,70 € |
| 390 pF | 1301814 |        | 0,70 € |
| 820 pF | 1301831 |        | 0,70 € |
| 1 nF   | 1301817 |        | 2,50 € |
| 10 nF  | 1301815 |        | 0,70 € |

## Tantalum capacitors

|       |         |                            |        |
|-------|---------|----------------------------|--------|
| 1μF   | 1302001 | drop style, RM 2.54 mm 35V | 0,30 € |
| 10μF  | 1302002 | drop style, RM 2.54 mm 16V | 0,40 € |
| 22μF  | 1302003 | drop style, RM 2.54 mm 10V | 0,50 € |
| 47μF  | 1302004 | drop style, RM 2.54 mm 6V  | 0,80 € |
| 1μF   | 1302101 | SMD, M016, 16V A           | 0,50 € |
| 2,2μF | 1302103 | SMD, M016, 16V B           | 0,60 € |
| 4,7μF | 1302105 | SMD, M016, 25V B           | 0,60 € |
| 6,8μF | 1302106 | SMD, M016, 16V style: C    | 0,70 € |
| 10μF  | 1302102 | SMD, M016, 16V style: C    | 0,70 € |
| 15μF  | 1302107 | SMD, M016, 16V style: C    | 0,70 € |
| 22μF  | 1302104 | SMD, M016, 16V style: D    | 0,60 € |

# Resistors, Potentiometers

Prices including VAT

## Carbon deposited resistors 1/4 Watt

N°: 10055-value

0,15€

The preferred values of the E24 range are in stock (3.3 Ω - 2.2 MΩ)

1 1.2 1.5 1.8 2.2 2.7 3.3 3.9 4.7 5.6 6.8 8.2 10

## SMD Metal deposited resistors, 1/4 Watt, Style 0805 /1206

N°: 10056-value

0,15€

All resistors required for the DB6NT kits are available ex stock. (1 Ω - 27 KΩ).

## Metal deposited resistors

4,5 Watt 1Ω, 56Ω, 220Ω, 270Ω, 330 Ω

N°: 10057-value

1,00€

1,4 Watt 1/2, 2/4, 7/18/33/39/56/68/82/120/150/180/220/330/470/680 Ω

N°: 10058-value

0,80€

5k2/110k/180 KΩ

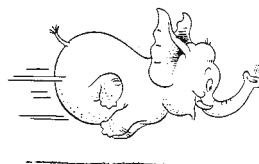
## Potentiometers, spindle potentiometers

Actually potentiometers made by PIHER are only deliverable in style PT 10-L.

| Type:  | Number  | Short data:                           | price: |
|--------|---------|---------------------------------------|--------|
| 2,5 KΩ | 1005005 | Potentiometer, horiz. mounting        | 0,40 € |
| 10 KΩ  | 1005001 | Potentiometer horiz. mounting         | 0,40 € |
| 25 KΩ  | 1005002 | Potentiometer horiz. mounting         | 0,40 € |
| 50 KΩ  | 1005003 | Potentiometer horiz. mounting         | 0,40 € |
| 10 KΩ  | 1005010 | Spindle potentiometer, 19 mm          | 0,90 € |
| 100 Ω  | 1005011 | Spindle potentiometer p25 (23 cm kit) | 1,40 € |
| 1 KΩ   | 1005012 | Spindle potentiometer p25 (13 cm kit) | 1,40 € |

## SMD-trim potentiometer

| Type:  | Number  | Short data:                           | price: |
|--------|---------|---------------------------------------|--------|
| 100 Ω  | 1005201 | Potentiometer Vitrom 4312             | 1,10 € |
| 500 Ω  | 1005202 | Vitrom Type 21x (adjustable resistor) | 1,10 € |
| 1 KΩ   | 1005203 | Potentiometer Vitrom 4312             | 1,10 € |
| 2,5 KΩ | 1005204 | Vitrom Type 21x (adjustable resistor) | 1,10 € |
| 10 KΩ  | 1005205 | Potentiometer Vitrom 4312             | 1,10 € |
| 100 Ω  | 1005210 | Potent. Beckmann Helitrimm Typ 23B    | 1,25 € |
| 1 KΩ   | 1005206 | Potent. Beckmann Helitrimm Typo 23B   | 1,25 € |
| 5 kΩ   | 1005209 | Potent. Beckmann Helitrimm Typ 23B    | 1,25 € |
| 10 kΩ  | 1005211 | Potent. Beckmann Helitrimm Typ 23B    | 1,25 € |
| 1 KΩ   | 1005207 | Potent. 64W (DF9LN TCXO)              | 1,50 € |



# Chokes, Filter

Prices including VAT

## RF Chokes

| Type:    | Number  | Short data:             | price: |
|----------|---------|-------------------------|--------|
| 0.12 µH  | 1005321 | RF choke                | 0,70 € |
| 1,0 µH   | 1005301 | RF choke                | 0,70 € |
| 2.2 µH   | 1005310 | RF choke                | 0,70 € |
| 4.7 µH   | 1005331 | RF choke                | 0,70 € |
| 10 µH    | 1005302 | RF choke                | 0,70 € |
| 100 µH   | 1005303 | RF choke                | 0,70 € |
| 1 mH     | 1005304 | RF choke                | 0,70 € |
| 2.2 mH   | 1005305 | RF choke                | 0,70 € |
| 0.27 µH  | 1005317 | RF choke, SMD, SIMID 01 | 0,70 € |
| 0.033 µH | 1005318 | RF choke, SMD, SIMID 01 | 0,70 € |
| 0.047 µH | 1005319 | RF choke, SMD, SIMID 01 | 0,70 € |
| 0.056 µH | 1005320 | RF choke, SMD, SIMID 01 | 0,70 € |
| 0.068 µH | 1005306 | RF choke, SMD, SIMID 01 | 0,70 € |
| 0.1 µH   | 1005307 | RF choke, SMD, SIMID 01 | 0,70 € |
| 0.15 µH  | 1005313 | RF choke, SMD, SIMID 01 | 0,70 € |
| 0.22 µH  | 1005308 | RF choke, SMD, SIMID 01 | 0,70 € |
| 0.47 µH  | 1005312 | RF choke, SMD, SIMID 01 | 0,70 € |
| 0.56 µH  | 1005322 | RF choke, SMD, SIMID 01 | 0,70 € |
| 0.68 µH  | 1005314 | RF choke, SMD, SIMID 01 | 0,70 € |
| 1.0 µH   | 1005309 | RF choke, SMD, SIMID 01 | 0,70 € |
| 2.2 µH   | 1005315 | RF choke, SMD, SIMID 01 | 0,70 € |
| 10.0 µH  | 1005316 | RF choke, SMD, SIMID 01 | 0,70 € |

## Helical Filters

| Type:            | Number  | Short data:                          | price:  |
|------------------|---------|--------------------------------------|---------|
| 5HW 365 35A-385  | 1007101 | IF = 385 MHz                         | 10,50 € |
| 5HW 367 MN 110A  | 1007102 | (new= 5HW-109060A-1130), IF=1130 MHz | 10,50 € |
| 5HW 367 MN 113F  | 1007103 | (new= 5HW-125055F-1305), IF=1305 MHz | 10,50€  |
| 5HT 123080C      | 1007117 | 3 stage 23 cm/50 Ω, IF=1270 MHz      | 10,50 € |
| 5HT112570C-1125  | 1007127 | Dreikreisfilter 23cm/50Ω MF=1125 MHz | 10,50 € |
| 5HW 367 MN 101A  | 1007114 | MF = 650 MHz                         | 10,50 € |
| 5HW 78045A-820   | 1007104 | 5HW, IF=820 MHz                      | 10,50 € |
| 5HW 47535A-500   | 1007135 | 5HW, IF=500 MHz                      | 10,50 € |
| 252 MX 1521A     | 1007105 | 7HW-40525A, IF=415 MHz               | 10,50 € |
| 252 MX 1544A     | 1007106 | (new = 252MNPR2682A), IF=367 MHz     | 10,50 € |
| 252 MX 1546A     | 1007110 | 7HW IF=385 MHz                       | 10,50 € |
| 252 MX 1547A     | 1007134 | IF=405 MHz                           | 10,50 € |
| 252 MT 1101A     | 1007115 | (new=252HEP-2965A), IF=332MHz        | 10,50 € |
| 5HW 115045F-1195 | 1007118 | 5HW, IF=1195 MHz                     | 10,50 € |
| 5HW 120050F-1225 | 1007119 | 5HW, IF=1225 MHz                     | 10,50 € |
| 7HW 42025A-435   | 1007109 | 7HW, IF=435 MHz                      | 10,50 € |
| 5HW 35045A-365   | 1007112 | 5HW, IF= 365 MHz                     | 10,50 € |
| 5HW40545A-435    | 1007131 | 5HW, IF=435MHz                       | 10,50 € |
| 367MN105A        | 1007132 | IF=820 MHz                           | 10,50 € |
| 252HEP2385V      | 1007133 | IF=296 MHz                           | 10,50 € |

# Coils, Filters, Ferrites, Relays

Prices including VAT

## Helical Filters

| Type:           | Number  | Short data:                            | price:  |
|-----------------|---------|----------------------------------------|---------|
| Neosid 511765   | 1007116 | 2 stage 70 cm/50 $\Omega$              | 8,80 €  |
| Neosid 510501   | 1007111 | 3 stage 70 cm/50 $\Omega$              | 10,00 € |
| Neosid 512196   | 1007140 | 3 stage 7,3E 455 kHz                   | 10,00 € |
| Neosid 510232   | 1107126 | 2 stage 1300 MHz/50 $\Omega$ /         | 11,30 € |
| Neosid 510233   | 1007139 | 2 stage 1396 MHz/50 $\Omega$           | 9,00 €  |
| Neosid 510239   | 1007121 | 2 stage 1520 MHz/50 $\Omega$ /88839080 | 9,00 €  |
| Neosid 510237   | 1007125 | 2 stage 1690 MHz/50 $\Omega$ /88839050 | 9,00 €  |
| Neosid 510240   | 1007122 | 2 stage 2000 MHz/50 $\Omega$ /         | 9,00 €  |
| Neosid 88896504 | 1007128 | 2 stage 2300 MHz/50 $\Omega$ / 801550  | 11,30 € |
| Neosid 510241   | 1007113 | 2 stage 2450 MHz/50 $\Omega$           | 11,30 € |
| Neosid 511836   | 1007124 | 2 stage helical filter (120-160 MHz)   | 7,50 €  |

## Coils - Filters

| Type:           | Number  | Short data:                                | price: |
|-----------------|---------|--------------------------------------------|--------|
| TOKO E544AN1031 | 1007308 | 27 nH, spaced wound, silvered wire, white  | 1,20 € |
| TOKO E544AN1032 | 1007309 | 37 nH, spaced wound, silvered wire, red    | 1,20 € |
| TOKO E544AN1033 | 1007310 | 48 nH, spaced wound, silvered wire, orange | 1,20 € |
| NEOSID 5036     | 1007206 | 560 nH                                     | 1,90 € |
| NEOSID 5061     | 1007201 | 115 nH                                     | 1,90 € |
| NEOSID 514630   | 1007207 | 70 nH, spaced wound, silvered wired        | 4,05 € |
| NEOSID 5048     | 1007212 | 1 $\mu$ H                                  | 3,00 € |
| NEOSID 5224     | 1007219 | 2 $\mu$ H                                  | 3,60 € |
| NEOSID 5044     | 1007220 | 3,3 $\mu$ H                                | 3,60 € |
| NEOSID 5049     | 1007202 | 330 nH                                     | 3,40 € |
| NEOSID 5056     | 1007213 | 4 $\mu$ H                                  | 1,90 € |
| NEOSID 50341    | 1007203 | 40 nH                                      | 3,50 € |
| NEOSID 5243     | 1007204 | 15 nH                                      | 1,90 € |
| NEOSID 513800   | 1007208 | 2.6 $\mu$ H                                | 1,90 € |
| NEOSID 511732   | 1007218 | 170 nH 7.1E                                | 2,50 € |
| NEOSID 514831   | 1007217 | 21 nH 7.1E, silber                         | 2,50 € |
| NEOSID 511631   | 1007216 | 34 nH 7.1E, silber                         | 2,50 € |
| NEOSID 511829   | 1007214 | 48 nH 7.1E, silber                         | 2,80 € |
| NEOSID 511830   | 1007215 | 55 nH 7.1E, silber                         | 3,45 € |
| NEOSID 5800     | 1007210 | 8 $\mu$ H                                  | 4,50 € |
| NEOSID 531317   | 1007209 | 22 $\mu$ H (marking: 94067)                | 1,90 € |
| Neosid 511829   | 1007214 | 7,1 E 48,5 nH                              | 2,80 € |
| Neosid 511830   | 1007215 | 7,1 E 51 nH                                | 2,50 € |
| Neosid 511631   | 1007216 | 7,1 E 34 nH                                | 2,50 € |
| Neosid 514831   | 1007217 | 7,1 E 22,5 nH                              | 2,50 € |
| TOKO 369SN1676Z | 1007311 | 8,2 $\mu$ H coil 6x6mm                     | 1,10 € |
| NEOSID slug     | 1007291 | brass slug FK3 x 0.5 x 5                   | 0,25 € |
| Kit coil 7F1K   | 1007292 | kit                                        | 1,80 € |

## Crystal Filters, fear east brand

| Type:  | Number  | Short data:                      | price:  |
|--------|---------|----------------------------------|---------|
| 45M15B | 1007511 | Crystal filter, 4 pole, B:15 KHz | 20,00 € |
| 45M20B | 1007513 | Crystal filter, 4 pole, B:20 KHz | 20,00 € |
| 45M30B | 1007512 | Crystal filter, 4 pole, B:30 KHz | 20,20 € |
| 10M15A | 1007514 | Crystal filter, 4 pole, B:15 KHz | 9,70 €  |
| 10M30A | 1007515 | Crystal filter, 4 pole, B:30 KHz | 9,70 €  |
| 10M40A | 1007516 | Crystal filter, 4 pole, B:40 KHz | 9,70 €  |

# Ferrites, Relays, Power Supplies

Prices including VAT

## Ceramic Filters *muRata*

| Type:      | Number  | Short data:                                    | price: |
|------------|---------|------------------------------------------------|--------|
| CFW455-D   | 1007521 | Ceramic filter, B:20 KHz                       | 5,60 € |
| CFW455-B   | 1007524 | Ceramic filter, B:30 KHz                       | 5,60 € |
| SFH455-D   | 1007523 | Ceramic filter, B:20 KHz, constant group delay | 5,60 € |
| SFE10,7MHz | 1005727 | Ceramic filter; 10.7MHz, B:180kHz              | 1,90 € |
| SFE 5,5    | 1007525 | Ceramic filter, 5,5MHz, B:100kHz               | 1,40 € |
| SFE 6,5    | 1007526 | Ceramic filter, 6,5MHz, B:100kHz               | 1,40 € |

## Surface Wave Filter *muRata*

| Type:    | Number  | Short data:                      | price: |
|----------|---------|----------------------------------|--------|
| SAF110.6 | 1007531 | OFW-Filter, B:±576 KHz, GD: 1 µS | 9,50 € |

## Ferrites

Ferrite beads/broad band chokes

For use in our kits we supply ferrite beads, grade 3B1 (Valvo) and F10b (Neosid).

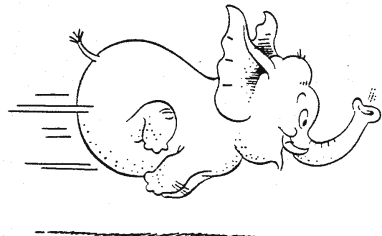
| Type: | Number  | Short data:                              | price: |
|-------|---------|------------------------------------------|--------|
| DP1   | 1005100 | 3 mm x 3 mm, material 3B1                | 0,25 € |
| DP2   | 1005102 | 2 mm x 2 mm, material F10b               | 0,25 € |
| VK200 | 1005110 | 3.5 turns, frequency range 10 - 1000 MHz | 0,80 € |

## Relays:

| Type:    | Number  | Short data: | price: |
|----------|---------|-------------|--------|
| TQ 2-12  | 1006801 | 12V, DPDT   | 4,50 € |
| DSP1-12V | 1006802 | 12V, DPDT   | 6,90 € |

## Power Supplies:

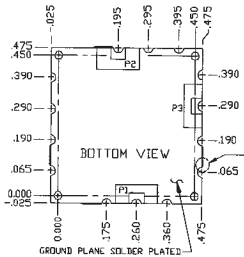
| Type:   | Number  | Short data:                                | price:  |
|---------|---------|--------------------------------------------|---------|
| PS1615  | 1006901 | 220 V / 6 V, 9 V, 12 V, 1 A, with CE label | 13,00 € |
| PS1615A | 1006902 | 220 V / 5 V, 1 A, with CE label            | 15,00 € |





We supply some VCOs made by z-comm

| Typ:       | Nummer  | Kurzdaten              | Preis   |
|------------|---------|------------------------|---------|
| V805ME03   | 1005401 | 2300-2650MHz U=10Volt  | 52,40 € |
| V585ME03   | 1005402 | 900-1600MHz U=10Volt   | 52,40 € |
| V630ME13   | 1005403 | 2700-2900MHz U=4,5Volt | 51,90 € |
| V810ME01   | 1005404 | 2800-3400MHz U=4,5Volt | 51,90 € |
| V600ME02   | 1005409 | 1250-2350MHz U=5Volt   | 52,40 € |
| V600ME05   | 1005405 | 1500-2350MHz U=5Volt   | 52,40 € |
| V585ME41   | 1005410 | 720-1750MHz U=5Volt    | 52,40 € |
| V585ME01   | 1005407 | 1190-1610MHz U=10Volt  | 51,90 € |
| V940ME03   | 1005408 | 5700-5800MHz U= 5Volt  | 65,70 € |
| V560M-05LF | 1005406 | 400-800MHz U=5Volt     | 52,40 € |
| V350ME01   | 1005411 | 350- 700MHz U=5Volt    | 55,70 € |
| V940ME00   | 1005412 | 5700 MHz U=5Volt       | 55,70 € |
| CLV256A    | 1005413 | 2495-2625MHz U=10Volt  | 65,70 € |
| ROS-200    | 1005433 | 100- 2000MHz U=12Volt  | 28,75 € |
| ROS-300    | 1005434 | 150- 280MHz U=12Volt   | 28,75 € |
| ROS-400    | 1005430 | 200- 380MHz U=12Volt   | 28,75 € |
| ROS-535    | 1005431 | 300- 525 MHz U=12Volt  | 28,75 € |
| ROS-765    | 1005435 | 485- 765MHz U=12Volt   | 28,75 € |
| ROS-1200W  | 1005436 | 612- 1200MHz U=12Volt  | 28,75 € |
| ROS-2150VW | 1005437 | 970- 2150MHz U=5Volt   | 28,75 € |
| ROS-2160W  | 1005438 | 1160- 2160MHz U=10Volt | 28,75 € |
| JTOS-2000  | 1005432 | 1370-2000MHz U=10Volt  | 28,75 € |



The power output of the VCOs is 2dBm to 10 dBm.

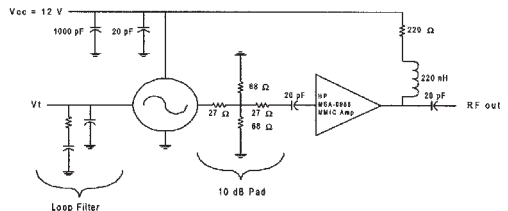
P1=VT  
P2=RF OUT  
P3=Vcc

You will find detailed Datasheets over all VCO's on the homepage from Zcomm.

Please use an attenuator of 8dB – 10 dB between VCO and the following circuit

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Fig. 1: Schematic Drawing



# Special components for SHF

Prices including VAT

## Teflon PCB material

We supply glass fiber reinforced PTFE PCB material Ultralam 2000,  $E_r=2.5$ . Upon request we can also supply other board materials (refer to description on previous page).

| Type:          | Number  | Short data: |                             | price: |
|----------------|---------|-------------|-----------------------------|--------|
| Ultralam 2000  | 1006006 | $E_r=2,43$  | +/- 0,02, thickness 0,5 mm  | 0,35 € |
| RT/duroid 5870 | 1006002 | $E_r=2,33$  | +/- 0,02, thickness 0,5 mm  | 0,35 € |
| RT/duroid 5880 | 1006005 | $E_r=2,2$   | +/- 0,02, thickness 0,5 mm  | 0,40 € |
| R04003         | 1006003 | $E_r=3,38$  | +/- 0,05, thickness 0,81 mm | 0,30 € |
| R04003         | 1006004 | $E_r=3,4$   | +/- 0,04, thickness 0,5 mm  | 0,30 € |

In accordance to your requirements we cut the material in rectangular boards. If you provide us with a film we can get PCBs etched by a special company (thus not in our own bathtub at home!!). Please take into account a cut-back of approx. 1 cm (the size of the board will then increase by 1 cm on all 4 sides).

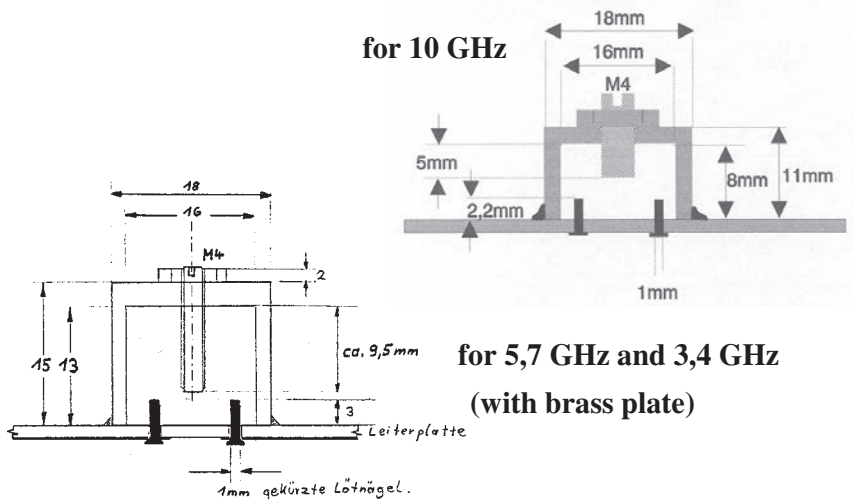
## UHF - Resonator Cans

All resonator cans are machined. They are copper and silver plated in a galvanic bath, with tarnish protection.

| Type:   | Number  | Short data:                  | price:  |
|---------|---------|------------------------------|---------|
| UHF-6cm | 1006201 | Cavity resonator for 5.5 GHz | 19,20 € |
| UHF-3cm | 1006202 | Cavity resonator for 10 GHz  | 19,20 € |
| UHF-9cm | 1006203 | Cavity resonator for 3.4 GHz | 19,20 € |

Identical to the 6 cm cavity but with brass base plate (as per DB6NT design).

We can manufacture cavities according to your required dimensions. Please inquire - with drawing. We will be pleased to submit a quotation.



# PROCOM microwave components

Prices incl. VAT

**Procom no longer produce the microwave parts. We will sell while stocks last.**



## 10GHz

|                                                                            |              |         |         |
|----------------------------------------------------------------------------|--------------|---------|---------|
| 10GHz Waveguide, WR90<br>The waveguide will be cut for the required length | Prices per m | 1006305 | 75,90 € |
| PROCOM 10GHz Flange for WR90                                               |              | 1006306 | 4,95 €  |
| PROCOM 10GHz Transition coaxial / Waveguide<br>(N-female connector)        |              | 1006307 | 75,00 € |
| PROCOM 10GHz Transition coaxial / Waveguide<br>(SMA-female connector)      |              | 1006308 | 85,00 € |

## 24GHz

|                                                                       |         |         |
|-----------------------------------------------------------------------|---------|---------|
| PROCOM 24GHz Flange for WR942                                         | 1006316 | 6,35 €  |
| PROCOM 24GHz Transition Coaxial / Waveguide<br>(SMA-female connector) | 1006317 | 80,00 € |

## 47GHz

|                                                                                             |         |          |
|---------------------------------------------------------------------------------------------|---------|----------|
| 47GHz Waveguide, WR19, Price per meter<br>The waveguide will be cut for the required length | 1006325 | 146,70 € |
| PROCOM 47GHz Flange for WG19                                                                | 1006326 | 10,80 €  |

## 76GHz

|                                                                                                                                                                                                  |         |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------|
| PROCOM 76GHz Parabolic Reflector Antenna, complete<br>D = 25 cm, F/D = 0.4 completely assembled parabolic reflector antenna<br>(white finish and marked) with flange, waveguide and subreflector | 1006331 | 224,00 € |
| PROCOM 76 GHz Parabolic Reflector Antenna<br>D = 25 cm, F/D = 0.4 completely assembled parabolic reflector antenna, white finish, but without marking and hole for waveguide                     | 1006332 | 131,00 € |
| PROCOM 76GHz Waveguide, WR12<br>L = 91,6 mm (suitable for the above mentioned. parabolic antenna                                                                                                 | 1006334 | 31,00 €  |
| PROCOM 76GHz Waveguide, WR12 Price per m<br>The waveguide will be cut to the required length                                                                                                     | 1006335 | 193,00 € |
| PROCOM 76GHz Flange for WR12                                                                                                                                                                     | 1006336 | 14,65€   |

## 145GHz

|                                                                                                      |         |          |
|------------------------------------------------------------------------------------------------------|---------|----------|
| PROCOM 145GHz Waveguide, WR7<br>L = 91,6 mm 6 mm (suitable for the above mentioned parabolic antenna | 1006344 | 48,00 €  |
| 145GHz Waveguide, WR7, price per m<br>The waveguide will be cut to the required length               | 1006345 | 236,00 € |
| PROCOM 145GHz Flange for WR7<br>L = 91,6 mm 6 mm (suitable for the above mentioned parabolic antenna | 1006346 | 14,65 €  |

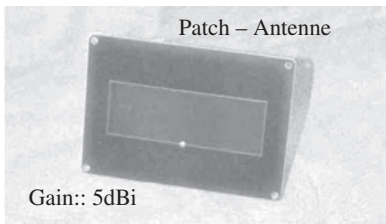


# Antennas for ATV and wireless communication

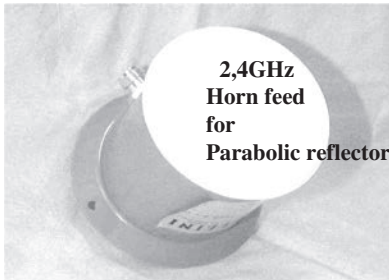
Prices incl. VAT



Dipolantenna



Gain:: 5dBi



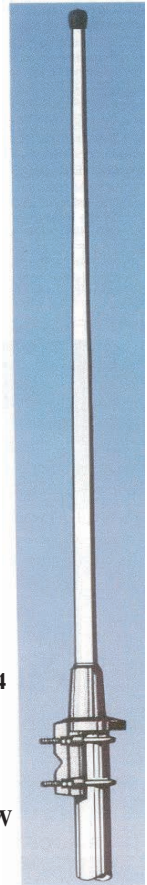
**Antenna mobil**  
MU 2401-LX  
Gain: 0dbD

**Mobil antenna**  
MU 2402-LX  
Gain: 2dBD



**short antenna**  
Gain: 5dB by  $\gamma/4$

**antenna**  
CXL 2400-6LW  
Gain: 6dBD



| Type:         | Number  | short form data                         | Price:   |
|---------------|---------|-----------------------------------------|----------|
| Dipolant-SMA  | 1009110 | Dipolantenne mit SMA-male               | 6,00 €   |
| Dipolant-SMA  | 1009111 | Dipolantenne mit SMA-male angle         | 6,00 €   |
| Dipolant-BNC  | 1009112 | Dipolantenne mit BNC-male               | 6,00 €   |
| Dipolant-BNC  | 1009120 | Dipolantenne mit BNC-male angle         | 6,00 €   |
| Dipolant-TNC  | 1009121 | Dipolantenne mit TNC-male               | 6,00 €   |
| Dipolant-TNC  | 1009122 | Dipolantenne mit TNC- male angle        | 6,00 €   |
| Aantenna      | 1009113 | ELF2500/2400/TNC                        | 22,70 €  |
| Antenna       | 1009114 | CXL2400-6LW                             | 295,00 € |
| Mobil antenna | 1009115 | MU 2401-LX/h                            | 28,50 €  |
| Mobil antenna | 1009116 | MU 2404-LX                              | 31,00 €  |
| Mobil antenna | 1009123 | MU 2404-MM (antenna with magnetic feed) | 45,00 €  |
| Patchantenna  | 1008117 | Patchantenna pcb                        | 10,00 €  |
| Patchantenne  | 1009118 | Patchantenna komplede with SMA-male     | 15,00 €  |
| Hornstrahler  | 1009119 | Hornstrahler für Parabolsp. wasserdicht | 57,00 €  |

# Active Antenna for LW

Prices incl. VAT

## Active Antenna for LW

suitable for the reception of very low waves

Aren't you interested in receiving noise free FAX signals and weather pictures? But, many receivers and converters actually on the market are just too insensitive for operation on long waves. And quite often it is not possible to install 100 m of wire.

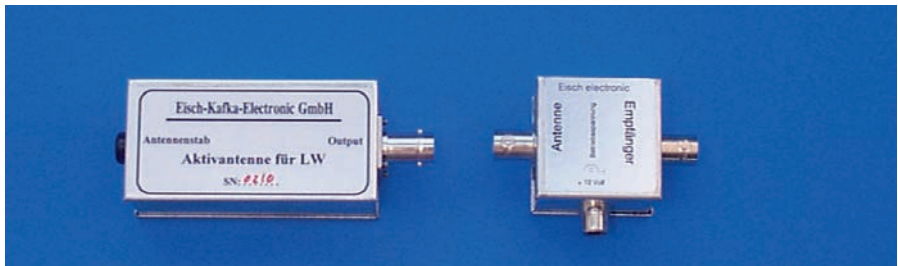
**Specially for this application we have designed an Active Antenna for operation between 10 kHz and 1.5 MHz.**

**Already with 30 cm of wire you will obtain full receiving performance.**

The antenna as designed by us has been tested by the magazine Funk (issue 2/1992) and has been awarded and received the appreciation „good“. The unit consists of the antenna preamplifier and a remote supply duplexer. Therefore you can operate the active antenna unit from up to 300 m outside the noisy environment. The active antenna is fed via the coaxial cable.

Technical data of the active antenna:

|                           |                                           |
|---------------------------|-------------------------------------------|
| Frequency range:          | 10 kHz - 1.5 MHz                          |
| Gain:                     | 3 dB                                      |
| Noise figure:             | approx. 15 kTo (below the external noise) |
| Supply voltage:           | 12 Volt - 16 Volt                         |
| Power consumption:        | approx. 30 mA                             |
| Coaxial cable connection: | BNC - bulkhead jack                       |
| Power supply connection:  | Cinch - bulkhead jack                     |



**Complete unit consisting of:**

**Active antenna and supply duplexer  
with operating instructions**

1009150

60,- €

If you would only need the supply duplexer, no problem.

**Supply duplexer**

1009151

25,- €

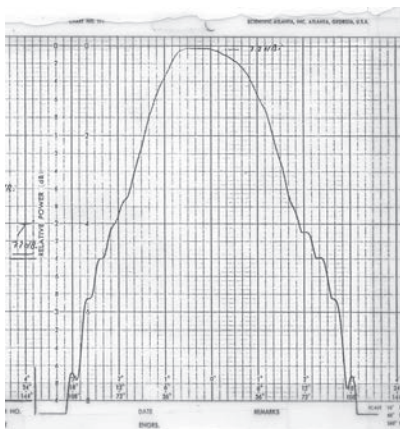
(frequency range 10 kHz - 30 MHz, insertion loss < 0.5 dB)

### Horn feed for illuminations of parabolic reflector

#### Technical datas:

|                       |                                          |
|-----------------------|------------------------------------------|
| Frequency range:      | 5550 MHz - 5830 MHz or 3.4 GHz or 10 GHz |
| Adaption:             | > 18 dB                                  |
| Half power beamwidth: | 149° at 10 dB                            |
| Gain:                 | 7.2 dBi (tested!)                        |
| Interface connector:  | SMA                                      |
| Mounting:             | 3 holes M2.5 spaced by 120°              |

In future only the 6 cm band will be authorized for interlink data transmission. Transmitting and receiving units are already available. However many amateurs will surely have problems to build suitable antennas with acceptable adaption, given beamwidth and gain. Thus we saved this task from you. The horn feed can be mounted problems at the focal point of the parabolic antenna.



|                   |                          |          |
|-------------------|--------------------------|----------|
| Horn feed 3,4 GHz | 1009132 (with test data) | 135,00 € |
| Horn feed 5,7 GHz | 1009131 (with test data) | 107,00 € |
| Horn feed 10 GHz  | 1009130 (with test data) | 82,00 €  |

# Antennas

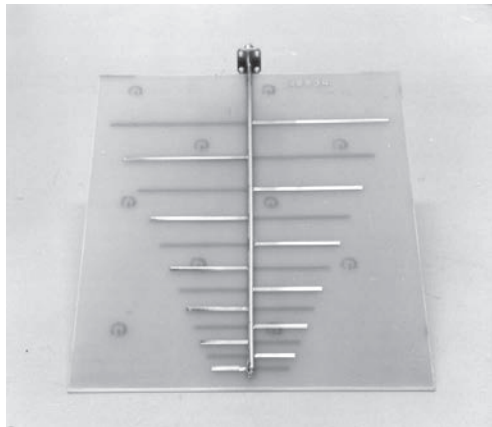
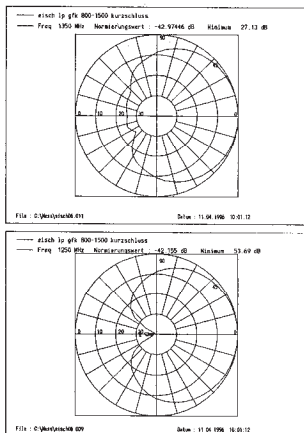
Prices including VAT

## Log-periodic Antenna for illuminating a parabolic reflector

### Technical data:

Frequency range: 800 MHz - 3000 MHz  
 Adaption: > 12  
 Half power beamwidth: 100° at 10 dB ad 1300 MHz  
 Gain: 6 dBi (tested!)  
 Interface connector: SMA  
 Mounting::

The log-periodic antenna designed by us can be used without problems for illumination of a parabolic reflector antenna or as a test antenna. The antenna structure has been etched on epoxy. The resulting losses (approx. 0.2 dB) are tolerable. We can also supply a commercial grade radom.



|                          |                   |         |
|--------------------------|-------------------|---------|
| Log.per. Antenna 1009108 | <b>with Radom</b> | 190,- € |
| Log.per. Antenna 1009104 | Leiterkarte       | 25,- €  |

## Log-periodic Antenna

for 2.4GHz PR, ATV

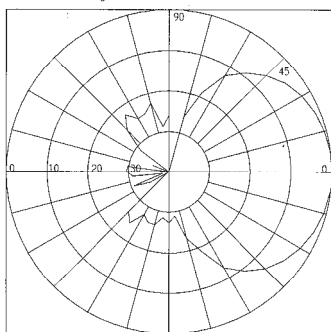
### Technical data:

|                       |                           |
|-----------------------|---------------------------|
| Frequency range:      | 2200MHz – 2600MHz         |
| Adaption:             | >15dB                     |
| Half power beamwidth: | 110° bei 10dB und 2300MHz |
| Gain:                 | 7dBi (gemessen)           |
| HF-Power:             | 10 Watt                   |
| Return loss:          | >20dB                     |
| Interface connectors: | SMA                       |

The log-periodic antenna designed by us can be used without problems for illumination of a parabolic reflector antenna or as a test antenna. The antenna structure has been etched on epoxy. The resulting losses (approx. 0.2 dB) are tolerable. This antenna will be supply with a radom.

**We can also supply a commercial grade radom.**

—— 2.4ghz mit rad. mit hornstr.  
 - - - Freq 2300 MHz Normierungswert : -42.04843 dB Minimum 56.21 dB



file : C:\Mess\leischl8.013

Datum : 31.01.1997 21:00:24



Log. Per. Antenne 1009101 with radom

143,70€

**We are able to develop other LogPer Antennen for frequency, which you need. Please ask us.**

# Coaxial Cables

Prices including VAT

The **JBY-Low Loss 5002** series substitute the smaller RG cables such as e.g. RG-188, RG-316.

The cable **JBY-Low Loss 5003** can be used as a substitution for medium size RG cables such as RG-142, RG-223, RG-400, RG-55 or RG-58.

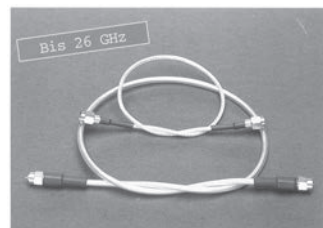
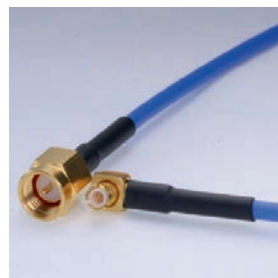
**JBY-Low Loss** cables are always double shielded and suitable up to 26 GHz. They feature improved characteristics compared to common RG cables. **JBY-Low Loss** cables are only available customized. Generally lead time will be approx. 14 days.



|                                     |                                    |
|-------------------------------------|------------------------------------|
| Frequency range:                    | until 26 GHz                       |
| Impedanz:                           | 50 Ohm                             |
| Attenuation 1m:                     |                                    |
| ati 1GHz 1dB (5002); 0,8dB (5003)   |                                    |
| at 10GHz 2,6dB (5002); 1,6dB (5003) |                                    |
| at 18GHz 4,0dB (5002); 2,3dB (5003) |                                    |
| VSWR until 18GHz:                   | <1,35:1                            |
| Shielding:                          | > 90dB                             |
| Min. band radius:                   | 13mm (5002); 26mm (5003)           |
| External diameter:                  | 2,7mm (5002); 3,95mm (5003)        |
| Internal diameter:                  | 0,9mm silvered, coppert steel wire |
| Dielectricum:                       | PTFE                               |
| Jacket:                             | FEP                                |
| Temperature range:                  | -50 bis +200°C                     |

## Ex stock Ulm, cable with 2 x SMA connector male

| Kabeltyp          | Länge             | Bestell-Nr. | Preis   |
|-------------------|-------------------|-------------|---------|
| JBY-Low Loss 5002 | 10cm              | 1001416     | 34,50 € |
| JBY-Low Loss 5002 | 15cm              | 1001417     | 35,50 € |
| JBY-Low Loss 5002 | 20cm              | 1001418     | 35,70 € |
| JBY-Low Loss 5002 | 25cm              | 1001401     | 35,70 € |
| JBY-Low Loss 5003 | 25cm              | 1001405     | 35,70 € |
| JBY-Low Loss 5002 | 30cm              | 1001405     | 36,70 € |
| JBY-Low Loss 5002 | 50cm              | 1001402     | 36,70 € |
| JBY-Low Loss 5003 | 50cm              | 1001403     | 39,90 € |
| JBY-Low Loss 5002 | 75cm              | 1001408     | 46,90 € |
| JBY-Low Loss 5003 | 75cm              | 1001404     | 97,80 € |
| JBY-Low Loss 5003 | 75cm / bis 3 GHz  | 1001412     | 65,70 € |
| JBY-Low Loss 5003 | 75cm / bis 6 GHz  | 1001413     | 71,75 € |
| JBY-Low Loss 5003 | 75cm / bis 12 GHz | 1001414     | 77,70 € |
| JBY-Low Loss 5003 | 75cm / bis 18 GHz | 1001415     | 83,60 € |
| JBY-Low Loss 5003 | 1 m               | 1001406     | 72,00 € |
| JBY-Low Loss 5002 | 3 m               | 1001411     | 77,00 € |
| JBY-Low Loss 5003 | 3 m               | 1001410     | 92,50 € |



We are able to supply customized cable in every lenght and customized with other connectors as your requirement. Please contact us.

# Low loss Cables

Prices including VAT

We supply cable with the length and the connector you need. Lead time will be 2 weeks.

## Semi-Rigid-cable UT0047

number:1001427 15,50 €/m

## Semi-Rigid-cable UT0085

number:1001428 16,80 €/m

## Semi-Rigid-cable UT0141

number:1001429 19,60 €/m



## Semi-Rigid-cable UT085 semiflexibel with 2 SMA-connector male

| Typ of cable          | Lenght | number  | Price   |
|-----------------------|--------|---------|---------|
| SemiRigid Kabel UT085 | 5cm    | 1001430 | 15,40 € |
| SemiRigid Kabel UT085 | 7cm    | 1001431 | 15,90 € |
| SemiRigid Kabel UT085 | 9cm    | 1001432 | 16,60 € |
| SemiRigid Kabel UT085 | 10cm   | 1001433 | 17,20 € |
| SemiRigid Kabel UT085 | 11cm   | 1001434 | 17,50 € |
| SemiRigid Kabel UT085 | 12cm   | 1001435 | 17,90 € |
| SemiRigid Kabel UT085 | 20cm   | 1001436 | 19,50 € |

## Low Loss Patch cable

| Typ of cable | connectors              | Length | number  | Price   |
|--------------|-------------------------|--------|---------|---------|
| LMR 240      | 2 x SMA-male            | 20 cm  | 1001450 | 15,40 € |
| LMR 240      | 2 x N-male              | 20 cm  | 1001460 | 15,90 € |
| LMR 100      | 2 x SMA-male            | 1 m    | 1001470 | 16,50 € |
| LMR 100      | SMA-male/N-male         | 1 m    | 1001490 | 19,50 € |
| LMR 100      | N-male /N-male          | 1 m    | 1001480 | 19,50 € |
| LMR 100      | SMA-R-male/ N-male      | 30 cm  | 1001491 | 21,40 € |
| LMR 100      | SMA-R-male /N-female    | 30 cm  | 1001492 | 21,40 € |
| LMR 100      | SMA-R-male/SMA-R-female | 1 m    | 1001493 | 18,70 € |
| LMR 100      | SMA-R-male/SMA-R-female | 2 m    | 1001494 | 19,90 € |
| LMR 100      | SMA-R-male/SMA-R-female | 3 m    | 1001495 | 20,90 € |

# Coaxial relay

Prices including VAT

## Coaxial Switch, miniature

**174,- €**
**Number: 1006850**


### Technical Data:

|                 |                                    |
|-----------------|------------------------------------|
| Impedance:      | 50 $\Omega$                        |
| Power supply:   | 12V DC / 250mA (8 – 14V) Fail safe |
| HF –connection: | SMA - female                       |
| DC –connection: | solder lugs                        |
| Life time:      | $10^6$ cycles                      |
| Switch time:    | 15ms max.                          |
| Weight:         | around. 60g                        |
| Environmental:  | MIL – S - 3928                     |
| Operating mode: | Failsafe                           |

Now RLC Electronics, one of the largest American manufacturers of multi-position coaxial relays is offering miniature SPDT relays made according to their well known quality. The relays are fitted with BNC bulkhead jacks. They can be operated within a frequency range of DC to 26 GHz. In comparison to similar competitive products they feature compact design and high operating life. In the standard version this switch is controlled with coils voltages of 12 V DC (nominal).

| Typ of switch        | 1 SPDT, 1 input, 2 outputs |             |              |              |
|----------------------|----------------------------|-------------|--------------|--------------|
| Frequency range      | DC – 18GHz (26GHz)         |             |              |              |
|                      | DC – 4GHz                  | 4 – 12,4GHz | 12,4 – 18GHz | (18 – 26GHz) |
| Insertion Loss, max. | 0,1dB                      | 0,2dB       | 0,3dB        | 1,0dB        |
| VSWR max.            | 1,2:1                      | 1,3:1       | 1,5:1        | 1,65:1       |
| Isolation max.       | 80dB                       | 70dB        | 60dB         | 40dB         |
| HF – Power max.!     | 70W                        | 40W         | 20W          | 2W           |

**Please do not switch under full RF power!!! This will be destroy the relay.**

# Coaxial relay

Prices including VAT

## ...For print montage

Max. Input Power: 150W PEP at 500MHz  
 Insertion Loss:  $\leq 0,2\text{dB}$  at 500MHz  
 Crosstalk:  $\geq 35\text{dB}$  at 500MHz  
 VSWR: 1:1,08 at 1GHz  
 Supply Voltage: 12V, min 9V  
 Current Consumption: 80mA at 12V



## ...For coaxial cable

Max. Input Power: 150W PEP at 500MHz  
 Insertion Loss:  $\leq 0,2\text{dB}$  at 500MHz  
 Crosstalk:  $\geq 35\text{dB}$  at 500MHz  
 VSWR: 1:1,08 at 1GHz  
 Supply Voltage: 12V, min 9V DC  
 Current Consumption: 80mA at 12V



For cable connections RG58C/U

Max. Input Power: 200W PEP at 500MHz  
 Insertion Loss:  $\leq 0,2\text{dB}$  at 500MHz  
 Crosstalk:  $\geq 30\text{dB}$  at 500MHz  
 VSWR: 1:1,06 at 1GHz  
 Supply Voltage: 12V, min 9V DC  
 Current Consumption: 80mA at 12V

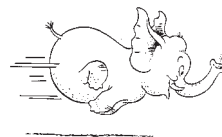


2 cable connections, 1x N connector

Max. Input Power: 600W PEP at 500MHz  
 Insertion Loss:  $\leq 0,2\text{dB}$  at 500MHz  
 Crosstalk:  $\geq 30\text{dB}$  at 500MHz  
 VSWR: 1:1,1 at 1GHz  
 Supply Voltage: 12V, min 9V  
 Current Consumption: 160mA at 12V



2 cable connections, 1 x N connector



# Coaxial relay

Prices including VAT

## ..for coaxial connectors

Max. Input Power: 300W PEP at 500MHz  
 Insertion Loss:  $\leq 0,2\text{dB}$  at 500MHz  
 Crosstalk:  $\geq 30\text{dB}$  at 500MHz  
 VSWR: 1:1,1 at 1GHz  
 Supply Voltage: 12V, min 9V DC  
 Current Consumption: 160mA at 12V

**CX230L****94,00€**

1006856

3 x BNC connector

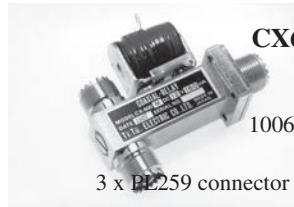
Max. Input Power: 600W PEP at 500MHz  
 Insertion Loss:  $\leq 0,2\text{dB}$  at 500MHz  
 Crosstalk:  $\geq 30\text{dB}$  at 500MHz  
 VSWR: 1:1,1 at 1GHz  
 Supply Voltage: 12V, min 9V DC  
 Current Consumption: 160mA at 12V

**CX600N****99,00€**

1006857

3 x N connector

Max. Input Power: 600W PEP at 500MHz  
 Insertion Loss:  $\leq 0,2\text{dB}$  at 500MHz  
 Crosstalk:  $\geq 30\text{dB}$  at 500MHz  
 VSWR: 1:1,1 at 1GHz  
 Supply Voltage: 12V, min 9V DC  
 Current Consumption: 160mA at 12V

**CX600M****94,00€**

1006858

3 x PL259 connector

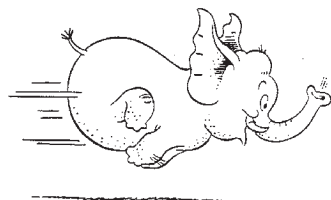
## .. for coaxial connectors and mounting on a front panel

Max. Input Power: 300W PEP at 500MHz  
 Insertion Loss:  $\leq 0,2\text{dB}$  at 500MHz  
 Crosstalk:  $\geq 50\text{dB}$  at 500MHz  
 VSWR: 1:1,05 at 1GHz  
 Supply Voltage: 12V, min 9V DC  
 Current Consumption: 160mA at 12V

**CX520D****102,00€**

1006859

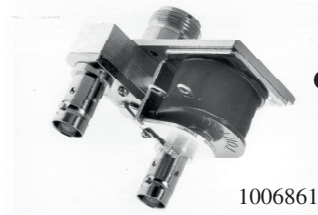
3 x N connector



# Coaxial relay

Prices including VAT

Max. Input Power: 300W PEP at 500MHz  
 Insertion Loss:  $\leq 0,2\text{dB}$  at 500MHz  
 Crosstalk:  $\geq 50\text{dB}$  at 500MHz  
 VSWR: 1:1,05 at 1GHz  
 Supply Voltage: 12V, min 9V DC

**CX540D****97,00€**

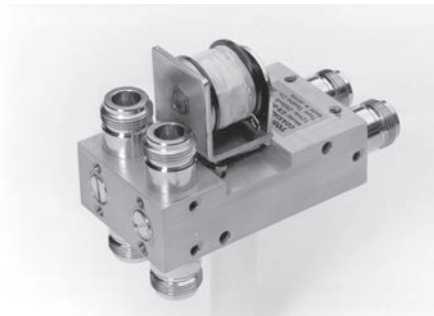
1006861

Current Consumption: 160mA at 12V

3 x BNC connector

## ..Double relay

|                      | 50             | 500  | 1000 | 1500 | 2000MHz |
|----------------------|----------------|------|------|------|---------|
| Max. Input Power:    | 900            | 800  | 500  | 350  | 150W CW |
| Insertion Loss:      | 0,1            | 0,15 | 0,2  | 0,2  | 0,25 dB |
| Crosstalk:           | 50             | 37   | 28   | 26   | 23 dB   |
| VSWR:                | 1.1            | 1.15 | 1.15 | 1.2  | 1.2     |
| Supply Voltage:      | 12V, min 9V DC |      |      |      |         |
| Current Consumption: | 160mA at 12V   |      |      |      |         |

**CX800N**

4 x N connector

**179,00€**

1006862

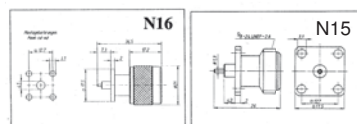
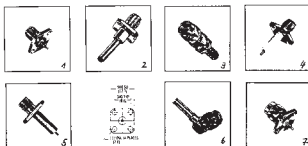
|               |                 |         |
|---------------|-----------------|---------|
| <b>CX800M</b> | 4x UHFconnector | 1006863 |
| <b>CX531M</b> |                 | 1006864 |
| <b>CX531N</b> |                 | 1006865 |

**159,00€****77,00€****82,00€**

# RF Connectors

Prices including VAT

| Type:                 | Number   | Short data:                                                                 | Price   | Fig. |
|-----------------------|----------|-----------------------------------------------------------------------------|---------|------|
| <b>SMA - Standard</b> |          |                                                                             |         |      |
| SMA864AS-0000         | 1002304  | Bulkhead connector, square mounting, stainless steel                        | 4,70 €  | 1    |
| SMA864A-0000          | 1002305  | Bulkhead connector, square mounting, gold plated                            | 3,60 €  | 1    |
| SMA864H-0000          | 1002310  | Bulkhead jack, rectangular flange mounting, with teflon extension           | 4,50 €  |      |
| SMA864LS-0000         | 1002350  | Bulkhead jack, rectangular flange mounting, with teflon extension, steel    | 7,10 €  | 4    |
| SMA864A-9000          | 1002392  | Bulkhead jack, rectangular flange mounting, right angle                     | 5,90 €  |      |
| SMA364A-0000          | 1002314  | Connector, male square mounting                                             | 6,40 €  |      |
| SMA862HE-0000         | 1002311  | Bulkhead jack, two hole flange mounting, with teflon extension              | 4,00 €  |      |
| SMA862LE-0000         | 1002340  | Bulkhead jack, two hole flange mounting, with teflon extension              | 4,60 €  | 5    |
| SMA862AS-0000         | 1002321  | Bulkhead conn. two hole flange mounting, stainless steel                    | 5,80 €  |      |
| SMA862A-0000          | 1002345  | Jack for panel receptable, two hole flange mounting,                        | 3,80 €  |      |
| SMA 15                | 1002320  | Bulkhead connector, single-hole mounting, gold plated                       | 3,60 €  |      |
| SMA8500S-0000         | 1002331  | Jack solder for bulkhead, female, stainless steel                           | 4,00 €  |      |
| SMA862NS-0032         | 1002317  | Bulkhead jack two hole flange mounting, with microstrip                     | 9,30 €  |      |
| SMA862N-0000          | 1002318  | Bulkhead jack two hole flange mounting, with microstrip                     | 10,30 € |      |
| SMA862PP1S-0000       | 1002328  | Bulkhead jack two hole flange mounting, with stripline                      | 12,00 € |      |
| SMA862PP2S-0000       | 1002327  | Bulkhead jack two hole flange mounting, with stripline                      | 12,00 € |      |
| SMA864N-0000          | 1002379  | Connector female four hole flange mounting, with microstrip                 | 6,00 €  |      |
| SMA8300L-0085         | 1002330  | Jack solder for bulkhead, female, for <b>UT085</b> , gold plated            | 4,00 €  |      |
| SMA8305-0085          | 1002391  | Jack solder for bulkhead, female, for <b>UT085</b> ,                        | 3,40 €  |      |
| SMA8300-0085          | 1002361  | Jack solder for bulkhead, female, for <b>UT085</b> , gold plated            | 2,90 €  |      |
| SMA8346S-0085         | 1002319  | Bulkhead connector, plug, square mounting, for <b>UT085</b>                 | 5,50 €  | 2    |
| SMA8346SG-0085        | 1002374  | Bulkhead connector, plug, square mounting, for <b>UT085</b> stainless steel | 6,00 €  | 2    |
| SMA8326-0085          | 1002334  | Bulkhead connector, two hole flange mounting for <b>UT085</b>               | 5,40 €  |      |
| SMA8300-0047          | 1002334  | Jack solder for bulkhead, female, for <b>UT047</b> , gold plated            | 6,80 €  |      |
| SMA33NP-9085          | 1002378  | Connector, male, right angle, for <b>UT 085</b> stainless steel             | 4,10 €  | 6    |
| SMA33NP-0085          | 1002316  | Plug for <b>UT-085</b> stainless steel                                      | 3,30 €  |      |
| SMA8300-0141          | 1002363  | Jack solder for bulkhead, female, for <b>UT085</b> , gold plated            | 2,10 €  |      |
| SMA8300L-0141         | 1002341  | Jack solder for bulkhead, female, for <b>UT141</b> , gold plated            | 4,00 €  |      |
| SMA8346-0141          | 1002307  | Bulkhead connector, square mounting, for <b>UT141</b> ,                     | 5,50 €  | 2    |
| SMA8326-0141          | 1002338  | Bulkhead connector, two hole flange mounting, for <b>UT141</b>              | 5,40 €  |      |
| SMA3300-9141          | 1002312  | Connector, male, right angle, for <b>UT 141</b>                             | 3,40 €  | 6    |
| SMA3300-9141          | 1002315  | Plug for semi-rigid cable 3.6 mm <b>UT-141</b>                              | 3,30 €  |      |
| SMA8105-0316          | 1002375  | Bulkhead connector, one hole flange for <b>RG316</b>                        | 4,40 €  |      |
| SMA8100S-0316         | 1002376  | Bulkhead connector, one hole flange for <b>RG316</b> stainless steel        | 5,10 €  |      |
| SMA8146-0316          | 1002306  | Bulkhead connector, two hole flange mounting, for <b>RG316</b>              | 6,90 €  |      |
| SMA3100-0316          | 1002349  | Connector male for <b>RG316</b> for crimp connection                        | 3,40 €  |      |
| SMA3100S-0316         | 1002377  | Connector male for <b>RG316</b> for crimp connection, stainless steel       | 3,90 €  |      |
| SMA 18                | 1002309  | Connector, male; for <b>RG316</b> ; straight, with stopsocket               | 5,20 €  | 3    |
| SMA18-9               | 1002309G | Connector, male; for <b>RG316</b> ; angle, crimp with stopsocket            | 5,20 €  |      |
| SMA3100-9316          | 1002329  | Connector male for <b>RG316</b> crimp connection right angle                | 3,90 €  |      |
| SMA8146-0178          | 1002336  | Bulkhead connector, two hole flange mounting <b>RG 178</b>                  | 4,40 €  |      |
| SMA8100-0178          | 1002337  | Bulkhead connector for <b>RG 178</b> for crimp connection                   | 2,90 €  |      |
| SMA3100-0178          | 1002301  | Connector male for <b>RG178</b> for crimp                                   | 3,00 €  |      |
| SMA3100-9178          | 1002302  | Connector male for <b>RG 178</b> 90°angle for crimp                         | 3,20 €  |      |
| SMA8100-0058          | 1002346  | Bulkhead plug, for coax cable <b>RG58</b> or <b>RG142</b>                   | 4,00 €  |      |
| SMA31NP-0058          | 1002325  | Connector, male, for <b>RG58</b> , straight crimp stainless steel           | 4,10 €  | 4    |
| SMA3100-0058          | 1002303  | Connector, male for <b>RG58</b> straight crimp                              | 3,25 €  |      |
| SMA3100-9058          | 1002308  | Connector, male, right angle, for <b>RG58</b>                               | 3,95 €  |      |



# RF Connectors

Prices including VAT

| Type:           | Number  | Short data:                                          | Price:  | Fig. |
|-----------------|---------|------------------------------------------------------|---------|------|
| SMA6100-0058    | 1002339 | SMA <b>reverse</b> connector, plug for <b>RG58</b>   | 5,20 €  |      |
| SMA9100-0058    | 1002347 | SMA <b>reverse</b> connector, jack for <b>RG58</b>   | 5,00 €  |      |
| SMA6100-0316    | 1002353 | SMA <b>reverse</b> connector, plug for <b>RG 316</b> | 3,80 €  |      |
| SMA9100-0316    | 1002351 | SMA <b>reverse</b> connector, jack for <b>RG316</b>  | 5,00 €  |      |
| SMA3000-0000    | 1002333 | SMA Terminator                                       | 6,10 €  |      |
| SMA3900S-0018   | 1002324 | SMA high power termination 50 Ω/ 0,5W                | 17,70 € |      |
| SMA-A           | 1002332 | SMA high power termination 50 Ω/ 5W                  | 31,90 € |      |
| SMA8401-00AB    | 1002335 | Jack pcb mount female (end launch)                   | 3,30 €  |      |
| SMA8400A-0000   | 1002395 | Jack pcb mount female                                | 2,55 €  |      |
| SMA8403-0000    | 1002397 | Jack pcb mount female                                | 4,95 €  |      |
| SMA8401C-0000   | 1002396 | Jack pcb mount female                                | 4,30 €  |      |
| SMA8432-0000    | 1002387 | Jack pcb mount female                                | 4,20 €  |      |
| SMA8400MP-0000  | 1002393 | Jack pcb mount female                                | 5,50 €  |      |
| SMA8400MP1-0000 | 1002394 | Jack pcb mount female                                | 5,50 €  |      |
| SMA8403B-0000   | 1002323 | Jack pcb mount female                                | 4,80 €  |      |
| SMA8400-9000    | 1002344 | Jack pcb mount right angle, female length 15mm       | 5,80 €  |      |
| SMA8400A-9000   | 1002348 | Jack pcb mount right angle, female length 18mm       | 4,45 €  |      |
| SMA8410A-9000   | 1002342 | Jack pcb mount right angle, female length 21mm       | 5,50 €  |      |
| SMA8432-0000    | 1002387 | Jack pcb mount female                                | 4,20 €  |      |
| SMA3400-9000    | 1002343 | Plug pcb mount right angle, male                     | 4,70 €  |      |
| SMA8411-9000    | 1002381 | Jack pcb mount right angle, thickness of pcb 1,6mm   | 5,85 €  |      |
| SMA8400S-0000   | 1002404 | Jack pcb mount, short pins                           | 3,00 €  |      |

## Adapter SMA/SMA SMA/N high grade adapter made by JyeBao



|            |         |                                                        |         |
|------------|---------|--------------------------------------------------------|---------|
| AD-A8N8-P4 | 1002352 | N bulkhead jack/SMA jack, up to 18 GHz flange mounting | 21,60 € |
| AD-A3N8    | 1002360 | N bulkhead jack/SMA plug, up to 12 GHz                 | 19,50 € |
| AD-A8N3    | 1002362 | N plug/SMA jack, up to 15 GHz                          | 20,60 € |
| AD-A3N3    | 1002364 | N plug/SMA plug, up to 12 GHz                          | 18,50 € |
| AD-A8N8    | 1002369 | SMA jack/N jack,                                       | 15,90 € |
| AD-A3N8-P4 | 1002370 | N bulkhead jack/SMA plug, up to 12 GHz flange mounting | 21,60 € |
| AD-A6N3    | 1002382 | SMA <b>reverse</b> plug/N-plug                         | 20,00 € |
| AD-A6N8    | 1002383 | SMA <b>reverse</b> jack/N jack,                        | 20,00 € |
| AD-A9N3    | 1002388 | SMA <b>reverse</b> plug/N jack,                        | 20,00 € |
| AD-A3A3    | 1002367 | SMA plug/SMA plug                                      | 12,00 € |
| AD-A8A8    | 1002368 | SMA jack/SMA jack,                                     | 11,60 € |
| AD-A3A8-BF | 1002380 | SMA plug/SMA jack one whole mounting                   | 12,60 € |
| AD-A3A8    | 1002371 | SMA jack/SMA plug,                                     | 12,00 € |
| AL-A3A8    | 1002372 | SMA jack/SMA plug, angle                               | 12,00 € |
| AT-A8A3A8  | 1002354 | SMA plug, SMA jack, SMA plug                           | 10,00 € |
| AT-A8A8A8  | 1002355 | 3 x SMA plug                                           | 11,20 € |
| AD-A9A8    | 1002358 | SMA plug, SMA <b>reverse</b> plug                      | 10,20 € |
| AD-A3A6    | 1002359 | SMA jack, SMA <b>reverse</b> jack                      | 12,90 € |
| AD-A3A9    | 1002390 | SMA jack, SMA <b>reverse</b> plug                      | 12,00 € |
| AD-A6A8    | 1002389 | SMA plug, SMA <b>reverse</b> jack                      | 13,30 € |

## Adapter SMA→ BNC, TNC suitable up to 2,5 GHz

|         |         |                                |         |
|---------|---------|--------------------------------|---------|
| AD-A3B8 | 1002800 | SMA plug/BNC jack,             | 14,00 € |
| AD-A3B3 | 1002373 | SMA plug/ BNC plug             | 13,70 € |
| AD-A8B3 | 1002366 | BNC plug/SMA jack, up to 5 GHz | 12,80 € |
| AD-A8B8 | 1002398 | BNC plug/SMA plug              | 12,80 € |
| AD-A3T8 | 1002804 | SMA plug/TNC jack              | 14,40 € |
| AD-A8T3 | 1002806 | SMA jack/ TNC plug             | 10,80 € |
| AD-A8T8 | 10028   | BNC plug/SMA plug              | 10,80 € |
| AD-A3S3 | 1002356 | SMA jack/SMB jack              | 13,00 € |
| AD-A3S8 | 1002357 | SMA jack/SMB plug,             | 13,00 € |
| AD-A8S3 | 1002386 | SMA plug/SMB jack              | 22,80 € |

# RF Connectors

Prices including VAT

Type: Number Short data Prices: Fig.

## BNC - Standard

|               |         |                                                |        |
|---------------|---------|------------------------------------------------|--------|
| BNC3100-0058  | 1002101 | Cable plug for RG58                            | 2,10 € |
| BNC364A-0316  | 1002108 | Bulkhead plug, square mounting for RG 316      | 3,95 € |
| BNC3100-0316  | 1002110 | Cable plug for RG 316                          | 2,25 € |
| BNC3100-9316  | 1002124 | Connector, right angle, male, for RG316        | 3,10 € |
| BNC3100-9179  | 1002130 | Connector, right angle, male, for RG179        | 3,30 € |
| BNC 13        | 1002103 | Bulkhead jack T-adapter                        | 1,50 € |
| BNC 16        | 1002112 | Bulkhead jack, square mounting, TEFLON         | 3,00 € |
| BNC8146-0316  | 1002111 | Bulkhead jack, square mounting for RG 316      | 5,20 € |
| BNC8146-0178  | 1002115 | Bulkhead jack, square mounting for RG 178      | 3,95 € |
| BNC8146-0058  | 1002127 | Bulkhead jack, square mounting, for RG58/RG142 | 4,40 € |
| BNC8105T-0316 | 1002125 | Bulkhead jack, single hole mounting, for RG316 | 3,10 € |
| BNC 29        | 1002114 | Bulkhead jack, single hole mounting, for RG58  | 2,60 € |
| BNC8500-0000  | 1002104 | Bulkhead jack, single hole mounting            | 2,40 € |
| BNC8500-9000  | 1002128 | Bulkhead jack, single hole mounting, angle     | 2,40 € |
| BNC 15        | 1002105 | Bulkhead jack for PCB connection, angle        | 3,30 € |
| AD-B3B3       | 1002106 | Adapter, 2x plug,                              | 7,60 € |
| AD-B8B8       | 1002107 | Adapter 2x jack,                               | 2,80 € |
| BNC 24        | 1002109 | T-Adapter plug/jack                            | 3,60 € |
| BNC 31        | 1002117 | T-Adapter, 1 x jack                            | 3,50 € |
| AD-B3M8       | 1002131 | BNC plug/ UHF jack                             | 6,40 € |
| AD-B8Cinch3   | 1002132 | BNC jack/ Cinch plug                           | 5,00 € |
| AD-B3T8       | 1002133 | BNC plug/ TNC jack                             | 3,40 € |
| BNC-3900-0002 | 1002134 | BNC power termination 50 Ω                     | 4,20 € |

## N - Standard

|             |         |                                                      |       |
|-------------|---------|------------------------------------------------------|-------|
| N346L-0000  | 1002206 | Bulkhead plug, small square mounting, teflon collar, | 6,90€ |
| N364AL-0000 | 1002227 | Bulkhead plug, big square mounting                   | 3,80€ |
| N3200B-0213 | 1002202 | Cable plug UG21B/U for RG213 with stopsocket         | 3,90€ |
| N3100B-0213 | 1002226 | Cable jack for RG213 for crimp                       | 5,20€ |
| N 01        | 1002201 | Cable plug UG21B/U for RG58                          | 3,90€ |
| N3100-9058  | 1002224 | Cable jack for RG58, angle, for crimp                | 5,65€ |
| N3100-0058  | 1002225 | Cable jack for RG 58, for crimp                      | 2,75€ |
| N3100-9316  | 1002228 | Cable jack for RG 316, for crimp, angle              | 3,80€ |
| N 31        | 1002235 | Cable jack for RG316/174/188 for crimp               | 3,50€ |
| N3300-0085  | 1002212 | Jack for UT085                                       | 4,20€ |
| N864A-0000  | 1002203 | Bulkhead, jack, square mounting, teflon              | 3,90€ |
| N864AL-0000 | 1002205 | Bulkhead jack, small square mounting, Teflon collar  | 6,20€ |
| N8146-0058  | 1002238 | Plug, square mounting for RG 58                      | 6,20€ |
| N8146-0316  | 1002237 | Bulkhead jack, square mounting for RG316             | 8,25€ |
| N 32        | 1002236 | Jack for UT 141, square mounting                     | 5,30€ |
| N864L7-0000 | 1002207 | Bulkhead jack with small square mounting             | 5,50€ |
| N 29        | 1002213 | Cable jack for RG58 crimp                            | 4,10€ |
| N8100A-0058 | 1002221 | Cable plug for RG58 for crimp                        | 2,60€ |
| N8105-0058  | 1002222 | Cable plug for RG58 for crimp                        | 2,70€ |
| N8105B-D316 | 1002384 | Cable plug for RG58 with stopsocket                  | 7,80€ |
| AD-N3N3     | 1002215 | Adaptor N plug/N plug                                | 7,20€ |
| AD-N8N8     | 1002216 | Adaptor N jack/N jack                                | 7,95€ |
| AD-N3N8     | 1002239 | Adaptor N jack/N plug                                | 8,90€ |
| ALS-N3N8    | 1002217 | Adaptor N jack/ N plug right angle                   | 8,75€ |
| AD-N3M8     | 1002229 | N Plug/ UHF Jack                                     | 7,30€ |
| AD-N8M3     | 1002229 | N jack/ UHF plug                                     | 3,00€ |
| AD-N3B8     | 1002230 | N plug / BNC jack                                    | 9,20€ |

# RF-Connectors/ Screws

Prices including VAT

Type:                      Number                      Short                      Prices:    Fig.

## Adapter BNC → Cynch, TNC, F

|        |         |                    |        |
|--------|---------|--------------------|--------|
| BNC 27 | 1002113 | BNC-plug, F-jack   | 1,30 € |
| BNC 40 | 1002140 | BNC-plug, TNC-plug | 3,40 € |

## SMC Standard

|              |         |                                                  |        |
|--------------|---------|--------------------------------------------------|--------|
| SMC13        | 1002601 | Bulkhead jack, square mounting, for PCB mounting | 2,40 € |
| SMC8100-0316 | 1002602 | Plug for coaxial cable. 3.2 mm, straight         | 3,75 € |
| SMC15        | 1002603 | Plug for coaxial cable. 3.2 mm, right angle      | 5,25 € |
| SMC3100-0178 | 1002604 | Plug for RG 178 straight                         | 4,00 € |
| SMC8100-0178 | 1002605 | Jack for RG 178 straight                         | 3,25 € |
| SMC8100-0316 | 1002606 | Jack for RG 316 right angle                      | 3,25 € |

## TNC-Standard

|              |         |                                    |        |
|--------------|---------|------------------------------------|--------|
| TNC6100      | 1002901 | TNC-Reverse-plug for RG58          | 4,10 € |
| TNC9100      | 1002902 | TNC-Reverse-jack for RG58          | 4,10 € |
| TNC8146-0058 | 1002903 | TNC- jack for RG58 square mounting | 4,65 € |
| TNC8146-0000 | 1002906 | TNC- jack square mounting          | 4,50 € |
| TNC3100-0316 | 1002907 | TNC- plug for RG316                | 2,60 € |

## Screws: brass or steel machined (not pressed)

|        |         |                                      |       |
|--------|---------|--------------------------------------|-------|
| S20041 | 1000400 | Screw, cylinderhead, brass, M2 x 4   | 0,10€ |
| S20081 | 1000401 | Screw, cylinderhead, brass, M2 x 8   | 0,10€ |
| S20061 | 1000402 | Screw, cylinderhead, brass, M2 x 6   | 0,10€ |
| S20043 | 1000403 | Screw, cylinderhead, NIRO, M2 x 4    | 0,15€ |
| S20083 | 1000404 | Screw, cylinderhead, NIRO, M2 x 8    | 0,15€ |
| S25031 | 1000457 | Screw, cylinderhead, brass, M2,5 x 3 | 0,15€ |
| S25041 | 1000458 | Screw, cylinderhead, brass, M2,5 x 4 | 0,15€ |
| S25043 | 1000451 | Screw, cylinderhead, NIRO, M2,5 x 4  | 0,15€ |
| S25063 | 1000452 | Screw, cylinderhead, NIRO, M2,5 x 6  | 0,15€ |
| S25083 | 1000453 | Screw, cylinderhead, NIRO, M2,5 x 8  | 0,15€ |
| S25103 | 1000454 | Screw, cylinderhead, NIRO, M2,5 x 10 | 0,15€ |
| S30062 | 1000472 | Screw, cylinderhead, steel, M3 x 6   | 0,15€ |
| S30082 | 1000456 | Screw, cylinderhead, steel, M3 x 8   | 0,15€ |
| S30103 | 1000455 | Screw, cylinderhead,, NIRO, M3 x 10  | 0,15€ |
| S30122 | 1000474 | Screw, cylinderhead, steel, M3 x 12  | 0,15€ |
| S40062 | 1000482 | Screw, cylinderhead, steel, M4 x 6   | 0,15€ |
| S40083 | 1000484 | Screw, cylinderhead, NIRO, M4 x 8    | 0,15€ |
| U20013 | 1000601 | Washer , NIRO, for M2,5              | 0,05€ |
| U30022 | 1000602 | Washer, steel, for M3                | 0,05€ |
| U40032 | 1000603 | Washer, steel, for M4                | 0,05€ |
| U40031 | 1000604 | Washer, brass, for M4                | 0,10€ |
| M25013 | 1000701 | Nut, NIRO, M2                        | 0,15€ |
| M25023 | 1000702 | Nut, NIRO, M2,5                      | 0,15€ |
| M25033 | 1000703 | Nut, NIRO, M3                        | 0,15€ |

## Screw taps, (set of 3)

|      |         |                     |        |
|------|---------|---------------------|--------|
| G201 | 1000200 | Screw tap, HSS M2   | 20,00€ |
| G251 | 1000201 | Screw tap, HSS M2,5 | 20,00€ |

## Suitable drills

|      |         |                                |       |
|------|---------|--------------------------------|-------|
| B201 | 1000300 | Drill, HSS for M2 (D=1.6 mm)   | 3,60€ |
| B251 | 1000301 | Drill, HSS for M2,5 (D=2.1 mm) | 4,25€ |

## Special Guy-Wires for Antenna Masts and Vertical Structures

Prices including VAT



### Optimalization with synthetics, non-conducting ropes of modern materials

Do you want to sleep soundly? Even if you have a high mast very near to your house and a storm is coming up? The basic properties of any rope depend on its material composition. The production of our non-metallic rope uses the most modern recently developed materials – Dyneema, Vectran, specially prepared polyester, polyamide and our own special high strength polypropylene fiber, MULTITEX. These materials are extremely reliable in terms of:

- \* Their unusually high strength.
- \* Negligible elongation and elasticity.
- \* High durability and resistance to environmental damage including UV radiation.
- \* A minimal bending radius (it is possible to knot without risk of damage).

### Mastrant is not made from Kevlar

**Mastrant** is optimized for anchoring *Kevlar (or Technora, Twaron, etc.)* is a brand name for ropes from aramid fibres. But there exists better material for ropes for anchoring - high tenacity polyethylene; trade names are *Dyneema* or *Spectra*. It has excellent UV resistance, higher knot strength and much lower specific gravity in comparison with *Vectran*. This is **Mastrant-D** - double braided rope, core is braided 100% *Dyneema* SK 75. We also had ropes from *Vectran* in our assortment **Mastrant-P**, which is better for our purpose (guy-wire). This is braided rope with twisted cores. It has lower strength and higher elongation than **Mastrant-D**, but all other properties needed for guying are similar - moreover, it has much higher knot strength. And finally - **Mastrant-P** is dramatically cheaper. The new development of **Mastrant-M** (Dyneema Max Technologie DSM) is qualified particularly for anchoring by continuous load. **Mastrant -M** was developed for anchoring and fixation in the water.

### MASTRANT-P

This guywire optimized for anchoring with respect to maximized „performance/price“ rate. This excellent rope offers very good strength, low elongation, high UV and humidity resistance. It has low weight, great abrasion resistance, great durability, and a high knot strength and is electrically insulating.

*Construction:* Braided rope with twisted cores. *Core:* Polyester, parallel-arranged twisted cores. *Cover:* Polyester 12 or 16 (depending on the diameter)

### MASTRANT-D: will never be produced, but we have stocked some rope. Please ask.

MASTRANT-D is the choice for those who require a thinner rope with high performance at an affordable price. High strength, negligible elongation, low weight, and great abrasion resistance - are all attributes that make this rope a perfect for guying. Due to its special structure, it holds very well on all levels. Force transference from the cover to the core is exceptional, even at high loads. It is a highly durable rope with an outstanding performance-to-price ratio.

### MASTRANT-M

Number one among high-strength ropes, D-F1 is an unbeatably strong rope with minimum elongation. The rope surface is furnished with a special protective finish which endows the rope with unusual abrasion resistance and stability even when exposed to UV radiation. Considering its extraordinary properties, the rope is the first choice for the most sophisticated users.

*Construction:* Double braided rope Core: 100% Dyneema (DM30)  
Outer cover: Polyester 12, 16, 24 or 40 (depending on the diameter)



**Short rope** Length: 30cm. The rope has timbles on both side



Diameter 5mm (400kg strength, 150kg SL)

5,00€

Diameter 10mm (1700kg strength, 570kg SL)

9,50€

| Price list MASTRANT |          |       |            |                       |       |
|---------------------|----------|-------|------------|-----------------------|-------|
| Diameter            | Strength | SL*   | Elongation | Price EUR (incl. VAT) |       |
| [mm]                | [daN]    | [daN] | [%]        | [100m]                | [1m]  |
| <b>Mastrant-P</b>   |          |       |            |                       |       |
| 2                   | 100      | 30    | 2,4        | 14                    | 0,20  |
| 3                   | 200      | 60    | 2,4        | 20                    | 0,28  |
| 4                   | 400      | 120   | 2,4        | 30                    | 0,39  |
| 5                   | 500      | 150   | 2,4        | 44                    | 0,57  |
| 6                   | 850      | 255   | 2,4        | 73                    | 0,95  |
| 8                   | 1300     | 390   | 2,4        | 92                    | 1,20  |
| 10                  | 1900     | 570   | 2,4        | 123                   | 1,60  |
| 12                  | 2200     | 660   | 2,4        | 165                   | 2,15  |
| 14                  | 3100     | 930   | 2,4        | 210                   | 2,73  |
| <b>Mastrant-D</b>   |          |       |            |                       |       |
| 2                   | 200      | 60    | 1,2        | 31                    | 0,37  |
| 3                   | 400      | 120   | 1,2        | 54                    | 0,65  |
| 4                   | 800      | 240   | 1,2        | 89                    | 1,07  |
| 5                   | 1100     | 330   | 1,2        | 167                   | 2,00  |
| 6                   | 1800     | 540   | 1,2        | 200                   | 2,40  |
| 8                   | 2600     | 780   | 1,2        | 290                   | 3,48  |
| 10                  | 4000     | 1200  | 1,2        | 360                   | 4,32  |
| 12                  | 4000     | 1200  | 1,2        | 510                   | 6,12  |
| <b>Mastrant-M</b>   |          |       |            |                       |       |
| 2                   | 250      | 75    | 1,2        | 33                    | 0,40  |
| 3                   | 390      | 117   | 1,2        | 55                    | 0,66  |
| 4                   | 900      |       | 1,2        | 110                   | 1,32  |
| 5                   | 1150     | 345   | 1,2        | 173                   | 2,08  |
| 6                   | 1850     | 555   | 1,2        | 220                   | 2,64  |
| 8                   | 2600     | 780   | 1,2        | 310                   | 3,72  |
| 10                  | 3850     | 1155  | 1,2        | 540                   | 6,48  |
| 12                  | 5500     | 1650  | 1,2        | 890                   | 10,68 |



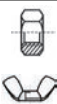
## Price list accessoires Mastrant®

| Code                                                                                | item               | EUR*  |                                                                                     |
|-------------------------------------------------------------------------------------|--------------------|-------|-------------------------------------------------------------------------------------|
| Thimbles (stainless)                                                                |                    |       |                                                                                     |
| ATH02                                                                               | 2 mm               | 0,28  |    |
| ATH03                                                                               | 3 mm               | 0,32  |                                                                                     |
| ATH04                                                                               | 4 mm               | 0,41  |                                                                                     |
| ATH05                                                                               | 5 mm               | 0,55  |                                                                                     |
| ATH06                                                                               | 6 mm               | 0,69  |                                                                                     |
| ATH08                                                                               | 8 mm               | 1,15  |                                                                                     |
| ATH10                                                                               | 10 mm              | 1,79  |                                                                                     |
| ATH12                                                                               | 12 mm              | 1,83  |                                                                                     |
| ATH14                                                                               | 14 mm              | 2,43  |                                                                                     |
| Duplex wire rope clips (stainless)                                                  |                    |       |                                                                                     |
| ADC02                                                                               | 2 mm (M4)          | 1,28  |    |
| ADC03                                                                               | 3 mm (M4)          | 1,51  |                                                                                     |
| ADC04                                                                               | 4 mm (M5)          | 1,88  |                                                                                     |
| ADC05                                                                               | 5 mm (M5)          | 2,46  |                                                                                     |
| ADC06                                                                               | 6 mm (M6)          | 3,42  |                                                                                     |
| ADC08                                                                               | 8 mm (M8)          | 6,65  |                                                                                     |
| ADC10                                                                               | 10 mm (M10)        | 12,38 |                                                                                     |
| Wire rope                                                                           |                    |       |                                                                                     |
| APC06                                                                               | 6mm (5-8mm, M6)    | 2,12  |    |
| APC09                                                                               | 9mm (9-10mm, M8)   | 2,88  |                                                                                     |
| APC12                                                                               | 12mm (11-12,M10)   | 4,23  |                                                                                     |
| APC16                                                                               | 16mm (13-16,M12)   | 5,38  |                                                                                     |
| Wire rope                                                                           |                    |       |                                                                                     |
| ASC05Z                                                                              | 5mm DIN 1142 (Zn)  | 0,31  |    |
| ASC06Z                                                                              | 6mm DIN 1142 (Zn)  | 0,38  |                                                                                     |
| ASC08Z                                                                              | 8mm DIN 1142 (Zn)  | 0,73  |                                                                                     |
| ASC10Z                                                                              | 10mm DIN 1142 (Zn) | 0,96  |                                                                                     |
| ASC12Z                                                                              | 12mm DIN 1142 (Zn) | 1,69  |                                                                                     |
| ASC02                                                                               | 2 mm (M3)          | 1,27  |  |
| ASC03                                                                               | 3 mm (M3)          | 1,46  |                                                                                     |
| ASC04                                                                               | 4 mm (M4)          | 1,54  |                                                                                     |
| ASC05                                                                               | 5 mm (M5)          | 1,73  |                                                                                     |
| ASC06                                                                               | 6 mm (M6)          | 1,92  |                                                                                     |
| ASC08                                                                               | 8 mm (M6)          | 2,31  |                                                                                     |
| ASC10                                                                               | 10 mm (M8)         | 3,46  |                                                                                     |
| ASC12                                                                               | 12 mm (M10)        | 6,54  |                                                                                     |
| ASC13                                                                               | 13 mm (M10)        | 7,69  |                                                                                     |
|  |                    |       |                                                                                     |

| Code                    | item                                                                                                                                                        | EUR*  |                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fixing eyes (stainless) |                                                                                                                                                             |       |                                                                                                                                                                                                                                                                                                                                                           |
| AES061                  | eye-screw M6 (hole 15, L= 13)                                                                                                                               | 1,69  |                                                                                                                                                                                                                                                                         |
| AES068X                 | eye-screw M6 (hole 15, L= 80)                                                                                                                               | 5,86  |                                                                                                                                                                                                                                                                                                                                                           |
| AES081                  | eye-screw M8 (hole 20, L= 13)                                                                                                                               | 2,38  |                                                                                                                                                                                                                                                                                                                                                           |
| AES101                  | eye-screw M10 (hole 25, L= 17)                                                                                                                              | 4,45  |                                                                                                                                                                                                                                                                                                                                                           |
| AEN06                   | eye-nut (hole 15)                                                                                                                                           | 1,41  |                                                                                                                                                                                                                                                                         |
| AEN08                   | eye-nut M8 (hole 20)                                                                                                                                        | 2,03  |                                                                                                                                                                                                                                                                                                                                                           |
| AEN10                   | eye-nut M10 (hole 25)                                                                                                                                       | 3,41  |                                                                                                                                                                                                                                                                          |
| AEN12                   | eye-nut M12 (hole 30)                                                                                                                                       | 4,14  |                                                                                                                                                                                                                                                                                                                                                           |
| AE0540                  | eye M5 (5x40)                                                                                                                                               | 0,76  |                                                                                                                                                                                                                                                                                                                                                           |
| AE0660                  | eye M6 (6x60)                                                                                                                                               | 1,10  |                                                                                                                                                                                                                                                                                                                                                           |
| AE0860                  | eye M8 (8x60)                                                                                                                                               | 1,69  |                                                                                                                                                                                                                                                                         |
| AE0560Z                 | eye M5 (8x60, Zn coated)                                                                                                                                    | 0,34  |                                                                                                                                                                                                                                                                                                                                                           |
| AE0680Z                 | eye M6 (10x80, Zn coated)                                                                                                                                   | 0,48  |                                                                                                                                                                                                                                                                                                                                                           |
| AE0860Z                 | eye M8 (12x60, Zn coated)                                                                                                                                   | 0,90  |                                                                                                                                                                                                                                                                                                                                                           |
| AE0812Z                 | eye M8 (12x120, Zn coated)                                                                                                                                  | 1,31  |                                                                                                                                                                                                                                                                                                                                                           |
| A7A836                  | anchoring set 10x100 mm, 30 kN                                                                                                                              | 8,62  |                                                                                                                                                                                                                                                                                                                                                           |
| Mast clamps (Zn Coated) |                                                                                                                                                             |       |                                                                                                                                                                                                                                                                                                                                                           |
| ACL330                  | 3 directional, ø 30 - 55mm                                                                                                                                  | 8,50  |                                                                                                                                                                                                                                                                         |
| ACL445                  | 4 directional, ø 45 - 75mm                                                                                                                                  | 10,00 |                                                                                                                                                                                                                                                                                                                                                           |
| Personal protective     |                                                                                                                                                             |       |                                                                                                                                                                                                                                                                                                                                                           |
| A7T112                  | positioning lanyard PROT 11: rope with stainless length adjuster and rope protection - Polyamid rope Ø 12mm, sewn eyes with snap hook, length 2m            | 51,92 | <br><br><br> |
| A7T113                  | positioning lanyard PROT 11, 3m                                                                                                                             | 53,85 |                                                                                                                                                                                                                                                                                                                                                           |
| A7L101                  | lanyard LB 10 with adjuster - 1m                                                                                                                            | 13,46 |                                                                                                                                                                                                                                                                                                                                                           |
| A7L102                  | lanyard LB 10 with adjuster - 2m                                                                                                                            | 15,38 |                                                                                                                                                                                                                                                                                                                                                           |
| A7SLP2                  | sling width 19mm - 20cm (60, 120)                                                                                                                           | 1,73  |                                                                                                                                                                                                                                                                                                                                                           |
| A7PB20                  | work waist positioning belt PB20: Positioning rings, adjustable buckle, loops for connecting a toolbox                                                      | 32,69 |                                                                                                                                                                                                                                                                       |
| A7SHBA                  | safety harness BASIC: rear and front attachment points, adjustable shoulder and thigh straps, prolonged webbing to rear attach point                        | 37,00 |                                                                                                                                                                                                                                                                       |
| A7SHX2                  | safety harness LX2: as BASIC plus position belt with side rings                                                                                             | 56,54 |                                                                                                                                                                                                                                                                                                                                                           |
| A7SHX3                  | safety belt LX3: recommended for longer periods of working. As LX2 plus wide position belt with side rings, ergonomic thigh padded, elastic shoulder straps | 94,23 |                                                                                                                                                                                                                                                                                                                                                           |

## Price list accessoires Mastrant®

| Code                                       | item             | EUR*  |                                                                                                                                                                                                                                                             |
|--------------------------------------------|------------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Spring hooks (stainless)                   |                  |       |                                                                                                                                                                                                                                                             |
| AHO05                                      | 5 mm             | 1,42  |                                                                                                                                                                            |
| AHO06                                      | 6 mm             | 1,74  |                                                                                                                                                                                                                                                             |
| AHO07                                      | 7 mm             | 2,89  |                                                                                                                                                                                                                                                             |
| AHO08                                      | 8 mm             | 3,62  |                                                                                                                                                                                                                                                             |
| AHO10                                      | 10 mm            | 6,23  |                                                                                                                                                                                                                                                             |
| A7AZ11                                     | 42 kN screw lock | 8,48  |                                                                                                                                                                            |
| Chain quick-acting couplers (stainless)    |                  |       |                                                                                                                                                                                                                                                             |
| ACC05                                      | 5 mm             | 2,25  |                                                                                                                                                                            |
| ACC06                                      | 6 mm             | 3,16  |                                                                                                                                                                                                                                                             |
| ACC07                                      | 7 mm             | 4,13  |                                                                                                                                                                                                                                                             |
| ACC08                                      | 8 mm             | 5,04  |                                                                                                                                                                                                                                                             |
| ACC10                                      | 10 mm            | 8,25  |                                                                                                                                                                                                                                                             |
| Shackles (stainless)                       |                  |       |                                                                                                                                                                                                                                                             |
| ASE05                                      | 5 mm             | 2,25  |                                                                                                                                                                            |
| ASE06                                      | 6 mm             | 2,70  |                                                                                                                                                                                                                                                             |
| ASE08                                      | 8 mm             | 3,35  |                                                                                                                                                                                                                                                             |
| ASE10                                      | 10 mm            | 5,73  |                                                                                                                                                                                                                                                             |
| Turnbuckles (stainless)                    |                  |       |                                                                                                                                                                                                                                                             |
| ASHE06                                     | eye-eye M6       | 5,50  | <br><br> |
| ASHE08                                     | eye-eye M8       | 8,71  |                                                                                                                                                                                                                                                             |
| ASHE10                                     | eye-eye M10      | 15,13 |                                                                                                                                                                                                                                                             |
| ASHH06                                     | eye-hook M6      | 5,50  |                                                                                                                                                                                                                                                             |
| ASHH08                                     | eye-hook M8      | 8,71  |                                                                                                                                                                                                                                                             |
| ASHH10                                     | eye-hook M10     | 15,13 |                                                                                                                                                                                                                                                             |
| ASHF06                                     | fork-fork M6     | 8,71  |                                                                                                                                                                                                                                                             |
| ASHF08                                     | fork-fork M8     | 13,29 |                                                                                                                                                                                                                                                             |
| ASHF10                                     | fork-fork M10    | 22,46 |                                                                                                                                                                                                                                                             |
| Turnbuckles (Zn, coated)                   |                  |       |                                                                                                                                                                                                                                                             |
| ASHE06Z                                    | eye-eye M6       | 2,25  | <br>                                                                                  |
| ASHE08Z                                    | eye-eye M8       | 2,98  |                                                                                                                                                                                                                                                             |
| ASHE10Z                                    | eye-eye M10      | 4,08  |                                                                                                                                                                                                                                                             |
| ASHH06Z                                    | eye-hock M6      | 2,25  |                                                                                                                                                                                                                                                             |
| ASHH08Z                                    | eye-hock M8      | 2,96  |                                                                                                                                                                                                                                                             |
| ASHH10Z                                    | eye-hock M10     | 4,08  |                                                                                                                                                                                                                                                             |
| Steel cords with thimbles ends (stainless) |                  |       |                                                                                                                                                                                                                                                             |
| ASR403                                     | ø 4mm, 3m        | 10,77 | <br>                                                                                  |
| ASR4xx                                     | ø 4mm, + 1m add. | 1,92  |                                                                                                                                                                                                                                                             |
| ASR503                                     | ø 5mm, 3 m       | 13,85 |                                                                                                                                                                                                                                                             |
| ASR5xx                                     | ø 5mm, + 1m add. | 3,07  |                                                                                                                                                                                                                                                             |
| ASR603                                     | ø 6mm, 3 m       | 18,08 |                                                                                                                                                                                                                                                             |
| ASR6xx                                     | ø 6mm, + 1 m add | 3,84  |                                                                                                                                                                                                                                                             |
| ASR803                                     | ø 8mm, 3 m       | 30,38 |                                                                                                                                                                                                                                                             |
| ASR8xx                                     | ø 8mm, + 1 m add | 4,62  |                                                                                                                                                                                                                                                             |

| Code                                        | item                                                        | EUR*  |                                                                                                                                                                          |                 |      |                                                                                                                                                                              |
|---------------------------------------------|-------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pulleys (Zn coated or Nylon)                |                                                             |       |                                                                                                                                                                          |                 |      |                                                                                                                                                                              |
| APUN08                                      | nylon, 8mm                                                  | 2,69  |                                                                                        |                 |      |                                                                                                                                                                              |
| APUN10                                      | nylon, 10mm                                                 | 4,23  |                                                                                                                                                                          |                 |      |                                                                                                                                                                              |
| APUM06                                      | metal, 6mm (sale)                                           | 1,73  |                                                                                        |                 |      |                                                                                                                                                                              |
| APUO05                                      | metallrolle 5mm (verzinkt)                                  | 1,92  |                                                                                                                                                                          |                 |      |                                                                                                                                                                              |
| APUO06                                      | metallrolle, 6mm (verzinkt)                                 | 3,08  |                                                                                                                                                                          |                 |      |                                                                                                                                                                              |
| APUO08                                      | metallrolle, 8mm (verzinkt)                                 | 5,58  |                                                                                        |                 |      |                                                                                                                                                                              |
| APUO10                                      | metallrolle, 10 mm (verzinkt)                               | 10,96 |                                                                                                                                                                          |                 |      |                                                                                                                                                                              |
| APU205                                      | double Nylon, 5 mm                                          | 2,12  |                                                                                                                                                                          |                 |      |                                                                                                                                                                              |
| APU206                                      | double Nylon, 6 mm                                          | 2,42  |                                                                                        |                 |      |                                                                                                                                                                              |
| APU208                                      | double Nylon, 8 mm                                          | 4,62  |                                                                                                                                                                          |                 |      |                                                                                                                                                                              |
| APU210                                      | double Nylon, 10 mm                                         | 6,54  |                                                                                                                                                                          |                 |      |                                                                                                                                                                              |
| APU820                                      | pulley high density, ropes <16 mm (30 kN, alluminuim alloy) | 38,08 | <br> |                 |      |                                                                                                                                                                              |
| APU826                                      | double HD <13 mm                                            | 78,85 |                                                                                                                                                                          |                 |      |                                                                                                                                                                              |
| APU827                                      | double HD <16 mm                                            | 78,85 |                                                                                                                                                                          |                 |      |                                                                                                                                                                              |
| Hex bolts (full thread, DIN 933, stainless) |                                                             |       |                                                                                                                                                                          |                 |      |                                                                                                                                                                              |
| AFS062X                                     | M6x20                                                       | 0,11  | AFS102X                                                                                                                                                                  | M10x20          | 0,42 |                                                                                            |
| AFS067X                                     | M6x70                                                       | 0,35  | AFS107X                                                                                                                                                                  | M10x70          | 0,85 |                                                                                                                                                                              |
| AFS06AX                                     | M6x100                                                      | 0,38  | AFS10BX                                                                                                                                                                  | M10x130         | 1,92 |                                                                                                                                                                              |
| AFS082X                                     | M8x20                                                       | 0,25  | AFS122X                                                                                                                                                                  | M12x20          | 0,54 | <br>     |
| AFS086X                                     | M8x60                                                       | 0,50  | AFS128X                                                                                                                                                                  | M12x80          | 1,42 |                                                                                                                                                                              |
| AFS08AX                                     | M8x100                                                      | 0,85  | AFS12CX                                                                                                                                                                  | M12x150         | 2,38 |                                                                                                                                                                              |
| Nuts (DIN 934 or DIN 315, stainless)        |                                                             |       |                                                                                                                                                                          |                 |      |                                                                                                                                                                              |
| AFB06SX                                     | M6 (hex 0.8D)                                               | 0,05  | AFB06SW                                                                                                                                                                  | M6 (wing)       | 0,35 | <br>    |
| AFB08SX                                     | M8 (hex 0.8D)                                               | 0,10  | AFB08SW                                                                                                                                                                  | M8 (wing)       | 0,65 |                                                                                                                                                                              |
| AFB10SX                                     | M10 (hex 0.8D)                                              | 0,21  | AFB10SW                                                                                                                                                                  | M10 (wing)      | 0,92 |                                                                                                                                                                              |
| AFB12SX                                     | M12 (hex 0.8D)                                              | 0,31  | AFB12SW                                                                                                                                                                  | M12 (wing)      | 3,42 |                                                                                                                                                                              |
| Washers (stainless)                         |                                                             |       |                                                                                                                                                                          |                 |      |                                                                                                                                                                              |
| AFW06SX                                     | 6.4 (flat)                                                  | 0,02  | AFW10KX                                                                                                                                                                  | 10.5 (ex. lock) | 0,07 | <br> |
| AFW08SX                                     | 8.4 (flat)                                                  | 0,04  | AFW12KX                                                                                                                                                                  | 12.5 (ex. lock) | 0,09 |                                                                                                                                                                              |
| AFW10SX                                     | 10.5 (flat)                                                 | 0,08  | AFW06L                                                                                                                                                                   | large 6.6       | 0,10 | <br> |
| AFW12SX                                     | 13 (flat)                                                   | 0,15  | AFW08L                                                                                                                                                                   | large 9         | 0,19 |                                                                                                                                                                              |
| AFW06KX                                     | 6.4 (external lock)                                         | 0,02  | AFW10L                                                                                                                                                                   | large 11        | 0,35 |                                                                                                                                                                              |
| AFW08KX                                     | 8.4 (external lock)                                         | 0,05  | AFW12L                                                                                                                                                                   | large 13.5      | 0,73 |                                                                                                                                                                              |



\* all prices are include VAT

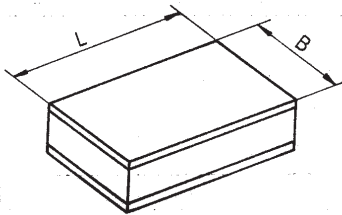
# Tin Plated boxes

Prices including VAT

The boxes are made of tin plated sheet metal (0,05mm) and are mostly suitable for mounting of electronic modules. The boxes consist of two L-shaped lateral parts and two covers. They can be easily soldered and treated.

| Cover          | high 30mm     | high 40mm     | high 50mm     |
|----------------|---------------|---------------|---------------|
| length x width | Part number   | Part number   | Part number   |
| 37 x 37        | 1000101 1,95€ | 1000141 2,25€ | 1000151 2,20€ |
| 37 x 55,5      | 1000112 2,20€ | 1000142 2,40€ | 1000162 2,60€ |
| 37 x 74        | 1000102 2,30€ | 1000143 2,70€ | 1000152 2,60€ |
| 37 x 111       | 1000103 2,60€ | 1000144 2,90€ | 1000153 2,80€ |
| 37 x 148       | 1000104 3,00€ |               | 1000154 3,50€ |
| 55,5 x 55,5    | 1000114 2,40€ | 1000183 2,70€ | 1000163 2,70€ |
| 55,5 x 74      | 1000105 2,65€ | 1000146 3,50€ | 1000155 3,10€ |
| 55,5 x 111     | 1000106 3,55€ | 1000147 4,10€ | 1000156 4,10€ |
| 55,5 x 148     | 1000107 4,60€ | 1000148 5,00€ | 1000157 5,00€ |
| 64 x 102       |               | 1000145 4,90€ |               |
| 74 x 74        | 1000108 3,40€ | 1000149 4,10€ | 1000158 4,50€ |
| 74 x 111       | 1000109 4,60€ | 1000150 5,60€ | 1000159 5,60€ |
| 74 x 148       | 1000110 5,05€ | 1000164 6,30€ | 1000160 5,90€ |
| 102 x 162      | 1000111 7,20€ | 1000165 8,25€ | 1000161 7,90€ |

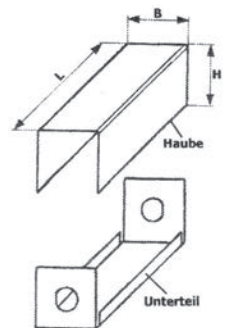
discount: 10 of same style - 5% discount  
 above 20, mixed styles - 5% discount



At a minimum order of 20 pieces the above mentioned boxes can be delivered with other heights. Provision of cuts and holes is possible. Please place your inquiry.

## Filter Boxes Length x Width x High in mm

|            | Without holes     | with 2x BNC-wholes |
|------------|-------------------|--------------------|
| 37 x 20x20 | FG1 1000131 1,75€ | FG1B 1000132 2,20€ |
| 55 x 20x20 | FG2 1000133 2,15€ | FG2B 1000134 2,50€ |
| 74 x 20x20 | FG3 1000135 2,50€ | FG3B 1000136 2,90€ |



2 x BNC-gelocht oder ungelocht

# Printed Circuit Boards, Kits DB6NT, DK2DB, DL6NCI

Prices including VAT

## Printed Circuit Boards:

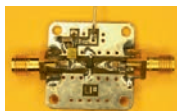
All printed circuit boards are made of ULTRALAM 2000 (resp. 5870, RO4003) by a PCB manufacturer. They will be silvered by us and individually packed..

**All PCBs are sold by permission of the designer!**

| Type:                          | Number  | Short data:                                     | price:  |
|--------------------------------|---------|-------------------------------------------------|---------|
| 1,3GHz preamplifier            | 1008614 | GaAs preamplifier, 1 stage                      | 21,60 € |
| 1,3GHz preamplifier            | 1008615 | GaAs preamplifier, 1 stage                      | 21,60 € |
| 1,3GHz Transverter             | 1008604 | xxxx                                            | 18,50 € |
| 2,3GHz preamplifier            | 1008616 | GaAs preamplifier, 2 stage                      | 21,60 € |
| 2,3GHz preamplifier            | 1008617 | GaAs preamplifier, 1 stage                      | 21,60 € |
| 2,3GHz Transverter             | 1008610 | xxxx                                            | 20,55 € |
| 2,3GHz final amplifier DK2DB   | 1008612 | P <sub>in</sub> 1.5 W, P <sub>out</sub> 10 Watt | 22,50 € |
| 3,4GHz Transverter             | 1008602 | xxxx                                            | 21,60 € |
| 3,4GHz Oscillator              | 1008603 | xxxx                                            | 19,50 € |
| 3,4GHz final amplifier 2 stage | 1008605 | xxxx                                            | 23,50 € |
| 3,4GHz final amplifier 3stage  | 1008606 | xxxx                                            | 23,60 € |
| 5,7GHz Oscillator              | 1008603 | xxxx                                            | 19,50 € |
| 5,7GHz Transverter             | 1008601 | xxxx                                            | 21,60 € |
| 10GHz final amplifier          | 1008608 | xxxx                                            | 16,50 € |
| 10GHz Transverter              | 1008609 | xxxx                                            | 21,50 € |
| 10GHz LO DF9LN                 | 1008611 | xxxx                                            | 21,60 € |
| OCXO DF9LN                     | 1008622 | xxxx                                            | 15,40 € |
| 12 GHz LO MK3                  | 1008620 | xxxx                                            | 23,60 € |
| Attenuator DL6NCI              | 1008621 |                                                 | 14,50 € |

Universal pcb 01 for

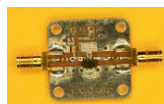
wide band amplifier SOT 86 1008623



12,00 €

Universal pcb 02 for

wide band amplifier SOT 89 1008624



12,00 €

## Attenuator for 2 m Transceiver designed by DL6NCI

The „controllable attenuator“ designed by DL6NCI attenuates the output power of a 2 m TRX of 10 W to 100 mW max. thus preventing damage to the following transverter. The PTT-signal of the 2 m equipment controls the attenuator. It only operates in the transmit mode.

Input power:: max 10 Watt  
 Frequency range: 2m band  
 Output power: depending on the selected attenuation  
 Attenuation values: 6, 10, 13, 20 dB

The complete attenuator is mounted in a small box, size 55 x 74 x 30 mm.

**Kit price:** 1009020 Kit, complete, with all parts 50,-€

**Kits****DB6NT, DK2DB, DL6NCI**

Prices including VAT

**1,3GHz 1 stage preamplifier designed by DB6NT**

Selective preamplifier kit for 23 cm.

Input frequency: 1.3 GHz tunable

Gain.: typ. 15 dB

Noise figure: typ. 0.7 dB

Supply voltage: 12.6 V= (8 V - 24 V), 20 mA, remote supply possible

The complete preamplifier is mounted in a small box ,  
size 37 x 77 x 30 mm. Most parts are in SMD technology.Kit price: 1009016 Kit, complete, with all parts 73,-€**1,3GHz 2 stage preamplifier designed by DB6NT**

Selective preamplifier kit for 23 cm

Input frequency: 1.3 GHz tunable

Gain.: typ. 35 dB

Noise figure: typ. 0.7 dB

Supply voltage: 12.6 V= (8 V - 24 V), 30 mA, remote supply possible

The complete preamplifier is mounted in a small box ,  
size 37 x 77 x 30 mm. Most parts are in SMD technology.Kit price: 1009017 Kit, complete, with all parts 88,-€**1,3GHz Transverter designed by DB6NT**

Linear transverter kit for 23 cm. The 2 m band is transposed in the 23 cm band.

Input frequency: 144 MHz - 146 MHz

Output frequency: 1296 MHz - 1298 MHz

Noise figure: 1.4d B

Output power : &gt;1.5 Watt

The complete transverter is mounted in a small box ,  
size 50 x 70 x 30 mm. Most parts are in SMD technology.Kit price: 1009013 Kit, complete, with all parts 199,-€**2,3GHz 1 stage preamplifier designed by DB6NT**

Selective preamplifier kit for 13 cm

Input frequency: 2.35 GHz tunable

Gain typ. 15 dB

Noise figure: typ. 0.7 dB

Supply voltage: 12.6 V= (8 V - 24 V), 20 mA, remote supply possible

The complete preamplifier is mounted in a small box ,  
size 37 x 77 x 30 mm. Most parts are in SMD technology.Kit price: 1009018 Kit, complete, with all parts 73,-€

**The kits contain all electrical and mechanical parts including printed circuit boards, SMA/SMC-bulkhead connectors. However screws are included only partially!**

**Kits****DB6NT, DK2DB, DL6NCI**

Prices including VAT

**2,3GHz 2 stage preamplifier designed by DB6NT**

Selective preamplifier kit for 13 cm

Input frequency: 2.35 GHz tunable

Gain typ. 35 dB

Noise figure: typ. 0.7 dB

Supply voltage: 12.6 V= (8 V - 24 V) 30 mA, remote supply possible

The complete preamplifier is mounted in a small box ,  
size 37 x 77 x 30 mm. Most parts are in SMD technology.

|                   |         |                               |       |
|-------------------|---------|-------------------------------|-------|
| <u>Kit price:</u> | 1009019 | Kit, complete, with all parts | 88,-€ |
|-------------------|---------|-------------------------------|-------|

**2,3GHz Transverter designed by DB6NT**

Linear transverter kit for 13 cm. The 2 m band is transposed in the 13 cm band.

Input frequency: 144 MHz - 146 MHz

Output frequency: 2320 MHz - 2322 MHz

Noise figure: &lt; 2 dB

Output power : &gt;1.0 Watt

The complete transverter is mounted in a small box ,  
size 50 x 150 x 30 mm. Most parts are in SMD technology.

|                   |         |                               |        |
|-------------------|---------|-------------------------------|--------|
| <u>Kit price:</u> | 1009010 | Kit, complete, with all parts | 236,-€ |
|-------------------|---------|-------------------------------|--------|

**2,3GHz power amplifier designed by DB6NT**

Power amplifier kit for 13 cm. The amplifier is suitable for ATV, SSB and FM operation.

Frequency range: 2200 MHz - 2380 MHz

Input power: 10 mW (with attenuator up to 300 mW)

Output power:: typ 1.5 Watt

The complete power amplifier is mounted in a small box ,  
size 40 x 111 x 30 mm. Most parts are in SMD technology.

The required heat sink with holes is included in the kit.

|                         |         |  |        |
|-------------------------|---------|--|--------|
| solded and tested price | 1009412 |  | 185,-€ |
|-------------------------|---------|--|--------|

**2,3GHz power amplifier designed by DK2DB**

Power amplifier kit for 13 cm. The amplifier is suitable for ATV, SSB and FM operation.

Frequency range: 2200 MHz - 2380 MHz

Input power: 1.5W

Output power:: typ. 10 Watt

The complete power amplifier is mounted in a small box , size 75 x 148 x 30 mm.

The required aluminum mounting plate is not included in the kit.

|                   |         |                                                  |        |
|-------------------|---------|--------------------------------------------------|--------|
| <u>Kit price:</u> | 1009011 | Kit, complete, with all parts, without heat sink | 157,-€ |
|-------------------|---------|--------------------------------------------------|--------|

|                                                          |         |       |
|----------------------------------------------------------|---------|-------|
| Aluminum plate for 2,3 GHz power amplifier DK2DB 10 Watt | 1000713 | 42,-€ |
|----------------------------------------------------------|---------|-------|

Aluminum plate, containing all holes and machined.

|                                                     |         |       |
|-----------------------------------------------------|---------|-------|
| Heat sink for 2,3 GHz power amplifier DK2DB 10 Watt | 1000711 | 23,-€ |
|-----------------------------------------------------|---------|-------|

(The heat sink is required for ATV operation in addition to the aluminum plate)

**Kits****DB6NT, DK2DB, DL6NCI**

Prices including VAT

**3.4 GHz RF Source designed by DB6NT**

This module generates an oscillator signal within the 3.4 GHz range to be feed to the linear transverter 3.4 GHz.

Crystal frequency: 135.667 MHz

Output frequency: 3256 MHz

Output power: 10 mW

The complete RF source is mounted in a small box, size 35 x 150 x 30 mm.

Kit price: 1009003 Kit, complete, with all parts 125,-€

**3.4 GHz Transverter designed by DB6NT**

Linear transverter kit for 9 cm. The 2m band is transposed into the 9 cm band..

Input frequency: 144 MHz - 146 MHz

Output frequency: 3400 MHz - 3402 MHz

Noise figure: < 2 dB

Output power : 200 mW

The complete transverter is mounted in a small box, size 50 x 150 x 30 mm.

The RF source 1009003 is required for operation.

Kit price: 1009002 Kit, complete, with all parts 240,-€

**3,4GHz 2 stage / 3 stage power amplifier designed by DB6NT**

Power amplifier kit for 9 cm. The amplifier is suitable for ATV, SSB and FM operation.

Frequency range: 3400 MHz - 3460 MHz

Input power: 200 mW

Output power: 5 Watt (2 stages)

Output power: 10 Watt (3 stages)

The complete power amplifier is mounted in a small box, size 55 x 111 x 30 mm ( 2 stage configuration)/ 75 x 111 x 30 mm (2 stage configuration).

The required aluminum mounting plate is not included in the kit.

Kit price: 1009005 2 stage - Kit, complete, with all parts 150,00 €  
1009006 3 stage - Kit, complete, with all parts 272,00 €

**5,7GHz RF Source designed by DB6NT**

This module generates an oscillator signal within the 5.7 GHz range to be feed to the linear transverter 5.7 GHz.

Crystal frequency: 117 MHz

Output frequency: 5616 MHz

Output power: 10 mW

The complete preamplifier is mounted in a small box, size 35 x 130 x 30 mm.

Kit price: 1009004 Kit, complete, with all parts 110,-€

**5,7GHz Transverter designed by DB6NT**

Linear transverter kit for 6 cm. The 2 m band is transposed into the 6 cm band.

Input frequency: 144 MHz - 146 MHz

Output frequency: 5760 MHz - 5762 MHz

Noise figure: < 2 dB

Output power : 200 mW

The complete transverter is mounted in a small box, size 77 x 150 x 30 mm.

The RF source 1009004 is required for operation.

Kit price: 1009001 Kit, complete, with all parts 225,-€

**Kits****DB6NT, DK2DB, DL6NCI**

Prices including VAT

**10GHz RF Source designed by DF9LN**

This module generates an oscillator signal within the 2.5 GHz range to be feed to the 10 GHz linear transverter.

Crystal frequency: 106.5 MHz

Output frequency: 2556 MHz

Output power: 10 mW

The complete RF source is mounted in a small box,  
size 35 x 75 x 30 mm.

Kit price: 1009055 Kit, complete, with all parts 100,-€

**10GHz Transverter designed by DB6NT**

Linear transverter kit for 3 cm. The 2 m band is transposed into the 3 cm band..

Input frequency: 144 MHz - 146 MHz

Output frequency: 10368 MHz - 10370 MHz

Noise figure: <3 dB

Output power: 10 mW

The complete transverter is mounted in a small box,  
size 50 x 150 x 30 mm. The RF source 1009055 is required for operation.

Kit price: 1009009 Kit, complete, with all parts 142,-€

**10GHz Power Amplifier designed by DB6NT**

Power amplifier kit for 3 cm. The amplifier is suitable for operation modes such as ATV, SSB and FM.

Frequency range: 10350 MHz - 10400 MHz

Input power: 10 mW

Output power: 200 mW

The complete power amplifier is mounted in a small box,  
size 37 x 77 x 30 mm.

Kit price: 1009008 Kit, complete, with all parts 99,-€

**Local Oscillator as per designed by DF9LN OCOXO**

This module generates a highly stable oscillator signal within the frequency range of 90 MHz-135 MHz for various SHF applications. The Crystal is warmed up to

60 °C using a high precision analog circuit.

Oscillator frequency: 90 MHz - 135 MHz (depending on Crystal frequency)

Output power: 10 mW

Size of the complete oscillator is 30 x 28 x 15 mm.

Kit price: 1009021 Kit, complete, with all parts without Crystal and case 82,-€

## Signal generator SIG 01

## 35MHz ... 4GHz

The kit consists of one preassembled multilayer circuit board. **All SMD components have been soldered.** A small numbers of wired components have to be soldered. After mounting the circuit board into the prebored tin plate box the signal generator is ready to use.

This inexpensive generator can be controlled by a regular terminal programm (installed on your notebook). A dedicated programm with a comfortable user interface is beeing worked on.



### Technical specification:

|                       |                                                                           |
|-----------------------|---------------------------------------------------------------------------|
| frequency:            | 35MHz ... 4000MHz                                                         |
| resolution:           | 80Hz .... 5kHz                                                            |
| output power:         | +10dBm $\pm$ 1,5dB over the whole range                                   |
| rangelevel:           | -20dBm .... +10dBm                                                        |
| resolution:           | 1dB                                                                       |
| phase noise:          | <-122dBc @ 145MHz @ at 20 Khz offset<br><-92dBc @ 4GHz @ at 20 KHz offset |
| Harmonic supression:  | > 30dB (1 <sup>th</sup> harm) , >10dB (2 <sup>th</sup> harm)              |
| frequency modulation: | possible through extern input                                             |
| frequency stability:  | TCXO 10MHz $\pm$ 2.0ppm<br>input for OCXO available                       |
| HF- output connector  | SMA jack                                                                  |
| control connector:    | RS232 and USB                                                             |
| operating voltage:    | 12,0 Volt                                                                 |
| power consumption:    | 240 mA                                                                    |
| dimensions:           | 111 x 55 x 30mm                                                           |
| weight:               | 200g                                                                      |
| temperature range:    | operating 0°C - +50°C                                                     |

**Kit SIG 01 with preassembled pcb 1009290**

**299,- €**

## Signal generator SIG 02

## 1MHz ... 35MHz

The kit consists of one preassembled multilayer circuit board. **All SMD components have been soldered.** A small numbers of wired components have to be soldered. After mounting the circuit board into the prebored tin plate box the signal generator is ready to use.

This inexpensive generator can be controlled by a regular terminal programm (installed on your notebook). A dedicated programm with a comfortable user interface is beeing worked on.



### Technical specification:

|                      |                                         |
|----------------------|-----------------------------------------|
| frequency:           | 1MHz ... 35MHz                          |
| resolution:          | 1Hz                                     |
| output power:        | +10dBm $\pm$ 1,5dB over the whole range |
| rangelevel:          | -20dBm .... +10dBm                      |
| resolution:          | 1dB                                     |
| phase noise:         | TBA                                     |
| Harmonic supression: | > 50dB                                  |
| frequency stability: | TCXO                                    |
| HF- output connector | SMA jack                                |
| control connector:   | RS232 and USB                           |
| operating voltage:   | 12,0 Volt                               |
| power consumption:   | 200 mA                                  |
| dimensions:          | 150 x 75 x 30mm                         |
| weight:              | 200g                                    |
| temperature range:   | operating 0°C - +50°C                   |

Kit SIG 02 with preassembled pcb 1009291

299,- €

## Powerdetector Det 01

The kit includes a double-sided printed circuit board with partially mounted components. Only a few "wired" components have to be soldered. When the pre-assembled pcb is mounted into the tinplated case (all required holes are available) the power detector is ready for operation.



### Technical data:

|                       |                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------|
| Frequency range:      | 10MHz .... 11GHz                                                                               |
| Max input power:      | +10dBm                                                                                         |
| Measuring range:      | -70dBm ..... +10dBm & 1GHz                                                                     |
| Accuracy:             | ±0,5dB @ 40MHz .....2GHz @ 0 ..... -60dBm<br>±1dB @ 10MHz .....4GHz<br>±2dB @ 4 GHz .....11GHz |
| Acquisition time:     | approx. 15µS/sample                                                                            |
| Number of samples:    | adjustable from 1 .... 255                                                                     |
| Correction curves:    | 7 correction curves stored in the EEPROM.                                                      |
| RF-Input:             | SMA female -connector                                                                          |
| Control input:        | USB                                                                                            |
| Data rate:            | 19200 .... 115200Bd                                                                            |
| Operating Voltage:    | supplied via USB                                                                               |
| Operating current:    | 110mA                                                                                          |
| Dimensions:           | 111 x 35 x 30mm                                                                                |
| Weight:               | 100g                                                                                           |
| Operating temp range: | 0°C - +50°C                                                                                    |

The power detector will be controlled using a standard terminal program of a notebook. In order to improve the accuracy 7 correction curves are stored. They can be selected according to the used frequency.

A specific program featuring a comfortable display is already available from DK8OH and from Eisch-Kafka-electronic!

## Powerdetector Det 02

The kit includes a double-sided printed circuit board with partially mounted components. Only a few "wired" components have to be soldered. When the pre-assembled pcb is mounted into the tinplated case (all required holes are available) the power detector is ready for operation.



### Technical data:

|                       |                                            |
|-----------------------|--------------------------------------------|
| Frequency range:      | 1MHz .... 450GHz                           |
| Max input power:      | +10dBm                                     |
| Measuring range:      | -70dBm ..... +10dBm & 100MHz               |
| Accuracy:             | ±0,5dB @ 1MHz .....300MHz @ 0 ..... -60dBm |
| Acquisition time:     | approx. 15µS/sample                        |
| Number of samples:    | adjustable from 1 .... 255                 |
| Correction curves:    | 7 correction curves stored in the EEPROM.  |
| RF-Input:             | SMA female -connector                      |
| Control input:        | USB                                        |
| Data rate:            | 19200 .... 115200Bd                        |
| Operating Voltage:    | supplied via USB                           |
| Operating current:    | 110mA                                      |
| Dimensions:           | 111 x 35 x 30mm                            |
| Weight:               | 100g                                       |
| Operating temp range: | 0°C - +50°C                                |

The power detector will be controlled using a standard terminal program of a notebook. In order to improve the accuracy 7 correction curves are stored. They can be selected according to the used frequency.

A specific program featuring a comfortable display is already available from DK8OH and from Eisch-Kafka-electronic!

**Kit Det 02 with SMD-preassembled pcb 1009296**

**159,- €**

# Network Analyzer KC901S

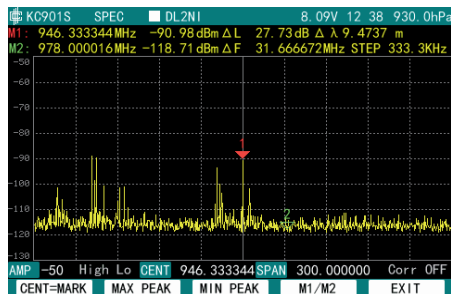
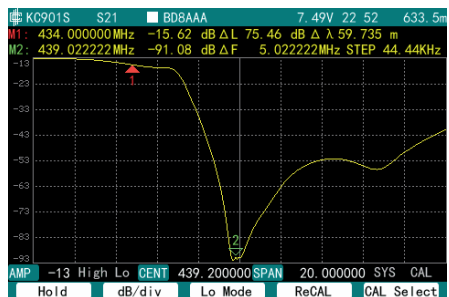
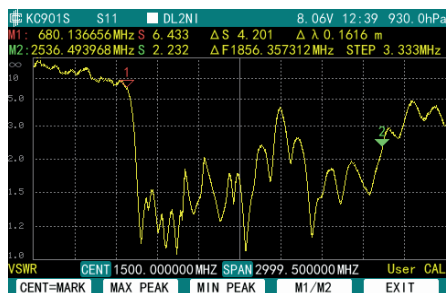
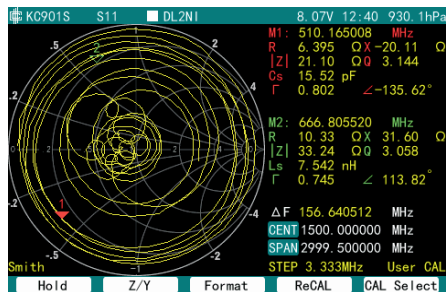
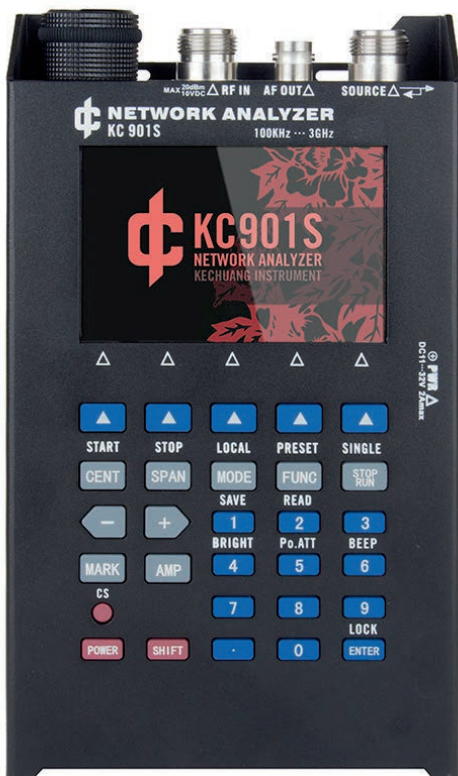
June 26, 2017

Prices incl. German VAT (19%)

## Network Analyzer KC901S VNA01

Exampel for possibility of measurement.

All test readings can be saved for documentation.



Number: 1009350

Price: 1450,- €

## Network Analyzer KC901S/ VNA01

With this measuring instrument you can choose the following operating:

1. **Spectrum analyzer**
2. **Reflection Amplitude and phase S11**
3. **Transmission Amplitude and phase S21**
4. **Electric field strength**
5. **Distance to Failure**

### Technical data:

Measurement procedure:

Frequency range:

Frequency stability:

Output level:

Input sensitivity

300kHz – 1GHz:

1GHz – 2,2GHz:

Level:

Maximum input level:

Dynamic range:

100kHz:

1MHz – 500MHz:

500MHz - 3GHz:

Resolution:

Measurement accuracy

Drift:

Measurement methods:

Extern storage:

Connector socket:

HF- output:

HF- input:

DDS - output:

Operating voltage:

Endurance time:

size

weight:

temperature range:

**vectoriell** measurement procedure

**100kHz .... 3000MHz (S21)**

**250kHz .... 3000MHz (S11)**

better than 1ppm / year @ 25°C

max. +0 dBm over the full frequency range

-107dBm (1µV)

-87dBm (10µV)

adjustable over a band of 30dB

+20dBm, DC 15V

at measurement S21

ca. 60dB

100dB

70dB

Frequency: 1Hz

Level: 0,01dB

Phase: 0,01°

Spectrum analyzer ±1,5dB

Strength ±3dB

S21 with calibration ±0,3dB

0.05dB / h, 10 minutes after power up

S11, S21, Spectrum analyzer, Field strength

Memory card 4GB Micro SD Card

N – connector

N – connector

BNC- connector power supply

11,5 - 32,0Volt (external power)

7,2V - 8,4V (with battery)

ca. 5h – 7h

200 x 114 x 46mm

2000g

operative 0°C - +50°C



The meter is operated with Li-Ion-Accumulator. It will be delivered with battery charger, accumulator, carrying strap and instruction manual.

All claimed performance datas are conductiv to your guidance and are not guarantee.

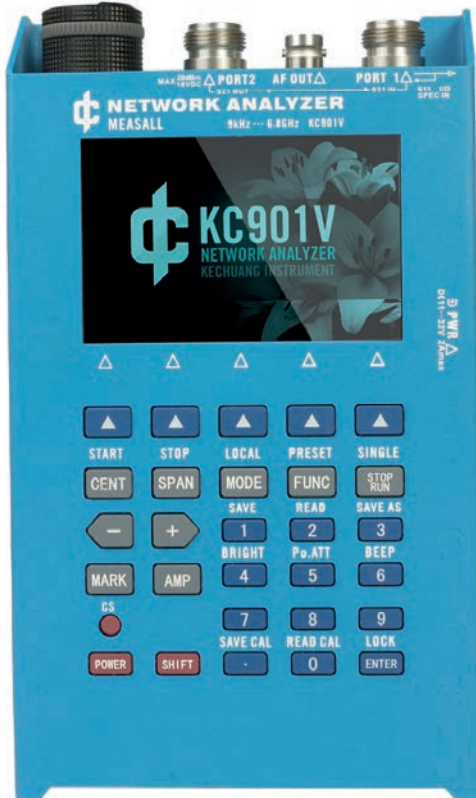
# Network Analyzer KC901V

16.05.17

Prices are including German VAT (19%)

## Network Analyzer KC901V VNA02

This Network Analyzer was developed from KC901S. Thereby we pay attention of the extension of frequency range and measurement accuracy. All test readings can be saved for documentation.



number.: 1009351

price: 2399,00 €



### Calibration-Kit for KC901S and KC901V

The Calibration-Kit constituted of open, short and a 50Ω termination with N-connector male

**CAL-N-M-4G**

number: 1009355

price: 118,00€

## Network Analyzer KC901V VNA02

With this measuring instrument you can choose the following measurements:

1. **Spectrum analyzer**
2. **Reflection**      **Amplitude and phase S11**
3. **Transmission**    **Amplitude and phase S21**
4. **Electric field strength**
5. **Distance to Failure**

### Technical data:

|                        |                                                                  |                |
|------------------------|------------------------------------------------------------------|----------------|
| Measurement procedure: | <b>vectoriell</b> measurement procedure                          |                |
| Frequency range:       | <b>9kHz .... 6800MHz (S21)</b><br><b>9kHz .... 6800MHz (S11)</b> |                |
| Frequency stability:   | better than 1ppm / year @ 25°C                                   |                |
| Output level:          | max. +13 dBm depends on frequency                                |                |
| 100kHz – 5GHz:         | -6dBm                                                            |                |
| 5GHz – 6,8GHz:         | -13dBm                                                           |                |
| Level:                 | adjustable over a range of 30dB                                  |                |
| Input sensitivity:     | (RBW=1kHz)                                                       |                |
| 9kHz - 5GHz:           | -101dBm (2μV)                                                    |                |
| 5GHz-6,8GHz:           | -87dBm (10μV)                                                    |                |
| Maximum input level:   | +20dBm, DC 15V                                                   |                |
| Dynac range:           | at measurement S21                                               |                |
| 100kHz:                | ca. 60dB                                                         |                |
| 1MHz – 500MHz:         | 80dB                                                             |                |
| 1GHz - 2GHz:           | 70dB                                                             |                |
| 2GHz – 3GHz:           | 60dB                                                             |                |
| 3GHz – 6,8GHz:         | 50dB                                                             |                |
| Resolution:            | Frequency: 1Hz                                                   |                |
|                        | Level: 0,01dB                                                    |                |
|                        | Phase: 0,01°                                                     |                |
| Measurement accuracy   | Spectrum analyzer ±1,5dB                                         |                |
|                        | Strength ±3dB                                                    |                |
|                        | S21 with calibration ±0,5dB                                      |                |
| Drift:                 | 0.05dB / h, 10 minutes after power up                            |                |
| Measurement methods:   | S11, S21, Spectrum analyzer, Field strength                      |                |
| Extern storage:        | Memory card 4GB Micro SD Card                                    |                |
| Connector socket:      |                                                                  |                |
| HF- output:            | N – connector                                                    | USB - Micro    |
| HF- input:             | N – connector                                                    | Network socket |
| DDS - output:          | BNC- connector                                                   | power supply   |
| Operating voltage:     | 11,5 - 32,0Volt (external power)                                 |                |
|                        | 7,2V - 8,4V (with battery)                                       |                |
| Endurance time:        | ca. 4h – 7h                                                      |                |
| Size                   | 200 x 114 x 46mm                                                 |                |
| Weight:                | 2000g                                                            |                |
| Temperature range:     | operative 0°C - +50°C                                            |                |



The meter is operated with Li-Ion-Accumulator. It will be delivered with battery charger, accumulator, carrying strap and instruction manual.

All claimed performance data's are conductive to your guidance and are not guarantee.

# 13cm Modules for duplex digis / repeater/ links

Prices incl. VAT

For operation of duplex digis, repeater and high speed links you can use the following modules:

**Transmitter:** The transmitter contains of our LinkTrx-11 with other filters of the reason to have the half frequency to transmit. The next modul are a doubler, which power out is 50 mW, and a amplifier for 1W.



## LinkTrx-11 exciter 23cm DC8SE

The exciter comprises two separate crystal oscillators. One oscillator determines the stability of the frequency (the crystal has been heated to 60°C!), the second crystal oscillator features extremely broad and linear frequency modulation, enabling linear modulation between 10 Hz and 40 kHz. Multiple band and helical filters eliminate all undesired spurious and harmonics. The exciter provides approx. 10 mW at 23 cm.

|                        |         |          |
|------------------------|---------|----------|
| Kit price:             | 1009213 | 124,00 € |
| Printed circuit board: | 1008213 | 21,90 €  |

Please indicate on order which frequency will be used!



## Doubler 1190MHz → 2380MHz

Of the reason to use the 23cm exciter for 13cm, we developed a doubler for the frequency 2360-2500 MHz. The doubler delivers approx. 50 mW. The first harmonics will be suppressed about 50dB.

|            |         |         |
|------------|---------|---------|
| Kit price: | 1009230 | 73,00 € |
| Pcb price: | 1008230 | 21,90 € |

**Receiver:** The receiver contains of a HF part and a IF part. The IF part contains an oscillator for the input. There for the attenuation of the cable between the HF – part and IF–part is up to 10dB.



## HF – input part for 2,4GHz

The HF-part for 2,4 GHz is align able for the whole frequency range of the 13cm band. It works for a IF of 110,592 MHz and doesn't contain an oscillator. Of the reason to a schottky-mixer of >10dBm the HF-part is reliable in the signal. The input module has a input return loss >7dB. This makes it possible to plug in a filter or a duplexer.

**Module, assembled:** in a milling Alu box with SMA connectors 1009419 168,- €

## IF – part for PR and sound



IF–part with a IF-frequency of 110,592MHz. The IF-part contains an OCXO with a output frequency of appr. 1140MHz. The signal of the oscillator and the IF will be leaded via a integrated antenna duplexer with a SMA-conncetor female. The receiver is suitable for univercial different IF-band width (15kHz – 250kHz) and for diffierent NF – bandwidth (3kHz – 40kHz). It contains a suitable squelch and a NF-amplifier, too.

**Module assembled:** in a tin plate box 1009420 170,- €

# 6cm Modules for duplex digis / repeater / links

Prices incl. VAT

For operation of duplex digis / repeater and links you can use the following modules:

## Pentrupler DC8SE

### 1140MHz -> 5700MHz



For using the exciter LinkrTrx-11 in the 6cm band we developed a pentrupler for the frequency 5700MHz - 5800MHz. The input power is 8mW, the output power 150mW (with alignment up to 200mW). The first harmonics will be suppressed with 40dB.

Kit price:

1009250

129,- €

Pcb price

1008250

22,- €

## Receiver:

The receiver contains the UHF-part and a IF-part. The IF-part contains the oscillator for the microwave part. Of the reason to this oscillator it is suitable to have an attenuation between the UHF and the IF part of up to 10dB



## UHF – part for 5,7GHz

The UHF-part for 5,7 GHz is alienable for the whole frequency range. It works for a IF of 110,592 MHz and doesn't contain an oscillator. Of the reason to a schottky-mixer of 10dBm the HF-part is reliable in the signal. The input module has a input return loss of better 7dB. This makes it possible to plug in a filter or a duplexer.

Module, assembled: in a milled Alu box with SMA connectors

1009460

245,- €

## Duplexer for 5.7GHz DF9IC



spacing of duplexer: 140MHz  
insertion loss: ca.1dB (duplexer is covered with silver)  
isolation: >45dB

The kit contains all mechanical parts and the connectors. All parts are galvanise covered with silver.

Kit price:

1007554

97,- €

Duplexer, assembled: with test data

1007555

183,- €

## Horn feed for illuminations of parabolic reflector

Frequency range: 5550 MHz - 5830 MHz

Adaption: > 18 dB

Half power beamwidth: 149° at 10 dB

Gain: 7.2 dBi (tested!)

Interface connector: SMA

Mounting: 3 holes M2.5 spaced by 120°



Horn feed 5,7 GHz

1009131 (with test data)

107,00 €

# Kits or modules complete

Prices incl. VAT

## UNIVERSAL FM-ATV-Transmitter

FM-ATV-transmitter for 23cm or 13cm.

- commercial VCO-module produces simple building
- stable in frequency by PLL
- with LCD-Display for a direct frequency signal.
- The frequency is adjustable by a rotary encoder
- Step by step: minimal 250kHz
- There are outputs for PA und coax relay
- Input of base band for camera of CCIR.
- No alignment necessary

### Technical data:

Frequency: 2320 – 2450MHz 13cm (max 2300 – 2650MHz)  
1240 – 1300MHz 23cm (max 800 – 1600MHz)

power output: 20mW (2,4GHz) 30mW (1280MHz)

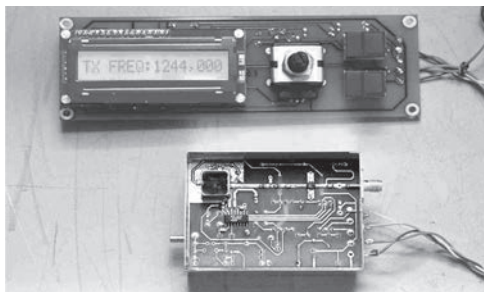
first harmonics: min. 15dB below

supply volage: 12V DC ca.200mA

Modulation: FM (F3F) max. 20MHz bandwidth

Mod. Frequency range: 10Hz – 6MHz within 3dB

For transmit of pictures and sound you need a basic band video, for example the BBA21



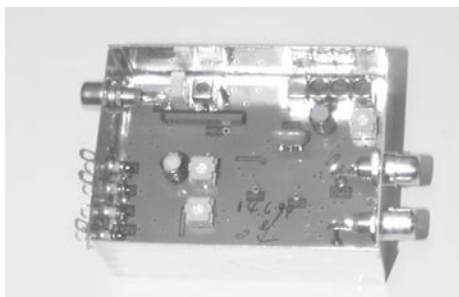
|                                     |         |         |
|-------------------------------------|---------|---------|
| 13cm kit                            | 1009260 | 154,00€ |
| 23cm kit                            | 1009261 | 154,00€ |
| only the HF-part for 13cm kit       | 1009270 | 101,60€ |
| only the HF-part for 23cm kit       | 1009271 | 99,60€  |
| kit of display                      | 1009280 | 61,60€  |
| PIC – processor 16F84               | 1016208 | 13,00€  |
| programmable for 1,3 / 2,3 or 10GHz |         |         |

## Universal basic band video exciter

- Suitable for all ATV-transmitter
- Limitation of the videos bandwidth by video filter
- Strength linear by a 150MHz-videoamplifier
- Separate input for video recorder and micro
- Dynamic compressor for micro input
- Suitable for dynamics and electronic micros
- Test generator for video and sound (1kHz)
- Output video : invertible and normal
- Low pass in the NF-part (10kHz), high order filter for audio
- Suppressing of harmonics by additional ceramic filter
- Sound oscillator are temperature compensated
- Input of the basic band for camera ( CCIR)
- Pc board is assembled with SMD parts

### Technical data's:

|                 |                                                                                |
|-----------------|--------------------------------------------------------------------------------|
| Frequency:      | Video 10Hz – 5,2Mhz<br>Audio carrier 5,5 – 7Mhz adjustable by a ceramic filter |
| Supply voltage: | 12V DC app. 80mA                                                               |
| size:           | 55 x 74 x 30mm                                                                 |
| Mod. Frequency: | 10Hz – 10khz                                                                   |



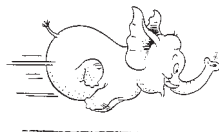
**BBA 21**

BBA21 kit

1009265

98,- €

**Please indicate on order the frequency of the audio carrier!**



# Duplexers for Repeaters

Prices including VAT

## DPF 70/6...

6-Cavity Duplexer for the 450 MHz Band



**DESCRIPTION:**

- ★ The DPF 70/6... is a 6-cavity duplex filter for duplex radiotelephones.
- ★ The DPF 70/6... can be adjusted within the complete 406-470 MHz band. The duplexer can be delivered in four different versions according to required duplex spacing. See also "Ordering information" below.
- ★ The DPF 70/6... is primarily intended for equipment, where the TX and RX operate on single frequencies, but it can also, however with slightly reduced data, be used where the TX and RX operate on several channels, i.e. within a certain port bandwidth. In the last case, factory tuning is recommended.
- ★ The filter uses full-length  $1/4 \lambda$  cavities in a compact, extruded aluminium housing. The chassis is made of passivated steel, and teflon insulation has been applied in the coaxial cables and in the connectors.
- ★ The filter is black vinyl coated to prevent corrosion.

**SPECIFICATIONS:**

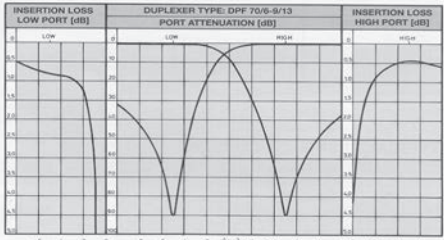
| ELECTRICAL                                   |                             |
|----------------------------------------------|-----------------------------|
| TX/RX FREQUENCY                              | 406-470 MHz                 |
| MAX. INPUT POWER                             | 50 watt                     |
| INSERTION LOSS                               |                             |
| TX-ANT AND ANT-RX (at 10 MHz duplex spacing) | $\pm 1.2$ dB (typ. 1.0 dB)  |
| Single-channel tuned                         | $\pm 1.2$ dB (typ. 1.0 dB)  |
| Multi-channel tuned, 2 MHz BW                |                             |
| TX NOISE SUPPRESSION ON RX-FREQUENCY         |                             |
| Single-channel tuned                         | > 85 dB                     |
| Multi-channel tuned, 2 MHz BW                | > 65 dB                     |
| RX ISOLATION ON TX-FREQUENCY                 |                             |
| Single-channel tuned                         | > 85 dB                     |
| Multi-channel tuned, 2 MHz BW                | > 65 dB                     |
| DUPLEX SPACING                               | 5-16 MHz (see table)        |
| IMPEDANCE                                    | Nom. 50 $\Omega$            |
| own                                          | $\leq 1.0$                  |
| MECHANICAL                                   |                             |
| TEMP. RANGE                                  | -30° C $\rightarrow$ +60° C |
| FREQ. STABILITY                              | Approx. 4.5 ppm/° C         |
| CONNECTORS                                   | DIN2-female                 |
| DIMENSIONS (L x W x H)                       | 226 x 154 x 33 mm           |
| WEIGHT                                       | Approx. 990 g               |



**MODEL SELECTION TABLE:**

| DUPLEX SPACING (MHz) | ORDERING DESIGNATION |
|----------------------|----------------------|
| 5-7                  | DPF 70/6 - 5/7       |
| 7-9                  | DPF 70/6 - 7/9       |
| 9-13                 | DPF 70/6 - 9/13      |
| 13-16                | DPF 70/6 - 13/16     |

**TYPICAL RESPONSE CURVES @ 10 MHz SPACING:**



**ORDERING INFORMATION:**

When ordering, please use the table above to select the appropriate ordering designation for the desired filter type. If duplex TX and RX frequencies are stated when ordering, the duplexers are delivered factory adjusted. If TX and RX frequencies are not stated, the filters are delivered non-adjusted.

**PLEASE NOTE:**

Special configurations of this filter type may be quoted on request. For instance, the filter can be delivered with other connector types, or with flying leads (RG 316 coaxial cable) terminated with connectors or for soldering-connection.

51

The duplexer is designed to a channel spacing of 7 - 9 MHz between transmitting and receiving frequency. Insertion loss < 1,2 dB, isolation >70 dB, Interface: N bulkhead jack, female.

| Type:        | Number  | Short data:                         | price:  |
|--------------|---------|-------------------------------------|---------|
| DFP 70/6-7/9 | 1007551 | Duplexer, 430 MHz - 470 MHz         | 285,- € |
| DFP-Align.   | 1007552 | Alignment of the duplexer with data | 42,- €  |

# Duplexer for Repeaters

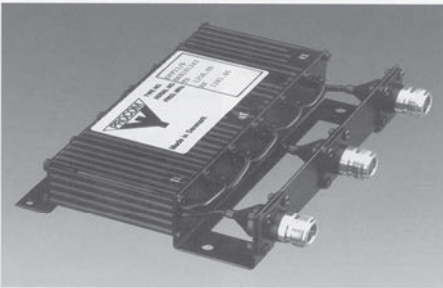
Prices including VAT

**DPF 23/6**  
**6-Cavity Duplexer for the 23 cm**  
**Amateur Radio Band**



**DESCRIPTION:**

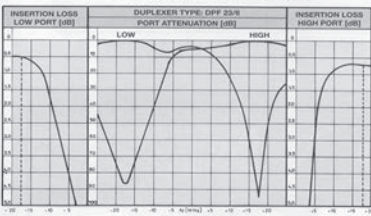
- ★ The DPF 23/6 is a 6-cavity duplex filter for the 23 cm amateur band.
- ★ The DPF 23/6 can be tuned within the 1240-1300 MHz amateur band with a nominal duplex separation of 35 MHz.
- ★ The filter uses full-length 1/4 λ cavities in a compact, extruded aluminium housing. The chassis is made of passivated steel, and teflon insulation has been applied in the rigid coaxial cables and in the connectors.
- ★ The filter is black vinyl coated to prevent corrosion.



**SPECIFICATIONS:**

| ELECTRICAL                                                  |                               |
|-------------------------------------------------------------|-------------------------------|
| TX/RX FREQUENCY                                             | 1240-1300 MHz                 |
| MAX. INPUT POWER                                            | 50 watt                       |
| NOM. SPACING TX-RX                                          | 35 MHz                        |
| INSERTION LOSS                                              | ≤ 1.0 dB (typically ≈ 0.7 dB) |
| TX-ANT AND ANT-RX                                           | ≤ 1.0 dB (typically ≈ 0.7 dB) |
| TX-NOISE SUPPRESSION ON RX-FREQUENCY (SINGLE CHANNEL TUNED) | ≥ 85 dB                       |
| RX ISOLATION ON TX-FREQUENCY (SINGLE CHANNEL TUNED)         | ≥ 85 dB                       |
| DUPLEX SPACING                                              | 35 MHz (nominal)              |
| IMPEDANCE                                                   | Nom. 50 Ω                     |
| SWR                                                         | ≤ 1.5                         |
| MECHANICAL                                                  |                               |
| TEMPERATURE RANGE                                           | -30° C → +60° C               |
| FREQUENCY STABILITY                                         | Approx. 5 ppm/° C             |
| CONNECTORS                                                  | N-female                      |
| DIMENSIONS (L x W x H)                                      | 135 x 154 x 33 mm             |
| WEIGHT                                                      | Approx. 620 g                 |

**TYPICAL RESPONSE CURVES @ 35 MHz DUPLEX SPACING:**



The duplexer is designed to a channel spacing of 28 MHz between transmitter and receiver frequency. Insertion loss < 1,1 dB, isolation >70 dB, Interface: N bulkhead jack, female.

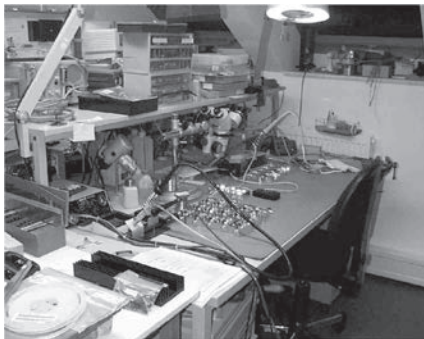
| Type:      | Number  | Short data:                         | price:  |
|------------|---------|-------------------------------------|---------|
| DPF 23/6S  | 1007553 | Duplexer, 1240 MHz - 1300 MHz       | 275,- € |
| DFP-Align. | 1007552 | Alignment of the duplexer with data | 42,- €  |



# Development and Production



**Our development and test workstation (10Hz – 40GHz)**



**Workstation for assembly of  
SMD- and wired technology  
for small production quantities**



**Workstation for stripping coaxial  
cables D=0.8mm – 12mm**

Also we design and manufacture professional equipments and systems according to customer specifications within the frequency range from 10 Hz to 40 GHz. This includes complete radio transmitting equipments for data transmission, broadband antenna amplifiers, antenna distribution units, synthesizers and antennas (with measured characteristics including diagrams).

We also manufacture semi-rigid- and coaxial cables for professional applications. If required we can deliver cable sets with identical phase characteristics (adjusted for identical phase). Also a test plot can be provided.

If that meet your requirements please contact us.

## **General Terms and Conditions of Eisch-Kafka-Electronic, Ulm**

- 1.) Validity: The following terms and conditions shall apply for all contracts, deliveries and other services- without any contraction against the buyers conditions- provided altered conditions have previously been agreed. Only German law is applicable.
- 2.) Offer and Conclusion: With respect to price and delivery contingencies, offers are not always binding unless the seller has specifically given his obligation in writing. Verbal collateral agreements and undertakings exceeding the written sales contract always require the sellers confirmation in writing. In case the financial conditions of the customer deteriorate considerably after conclusion of the contract and if this fact get known after the conclusion we are entitled to request either advance payment or provision of security or may withdraw from the contract. Descriptions, drawings and illustrations of the products offered by us and price lists and catalogues are prepared as per the best knowledge. The details given therein are not binding provided certain properties are expressly warranted in writing.
- 3.) Delivery and Delay: Delivery periods are not binding unless the seller has expressly given a confirmation in writing. Part deliveries are admissible. In case of unforeseen delivery impediments such as act of God, strike, interruption of operations in our own company or in our suppliers company or transport problems etc. the seller is entitled to cancel the supply commitment partly or completely. Damage claims of the buyer are excluded.
- 4.) Dispatch and Delivery: Dispatch is made within the sellers discretion and without any guarantee of the cheapest way of dispatch. All consignments including possible returns are at the buyers risk and expenses. On request of the buyer insurance is effected at his expense. As for the rest, the risk is passed to the buyer, when the goods are handed over to the forwarder or carrier, however no later than when leaving the stock.
- 5.) Retention of title; In principle we deliver under extended retention of title. Until the buyers fulfilment of all claims we retain title to the delivered goods. Preceding pledging and assignment for security.
- 6.) Prices and Payment: Prices are not binding and are ex place of delivery in € (EURO) including the respectively valid rate of VAT. Freight, postage and packing are excluded. The price being valid at the day of dispatch will be charged. If not agreed otherwise in writing, payment has to be effected within 30 days upon invoice date without deduction. Supplies to customers who are unknown to the seller are only made against cash on delivery or advance payment: At the day, the seller has the money at his disposal without any loss, payments are regarded as effected. In case of delay in payment interest will be charged to the amount charged by the banks for appropriate loans. The withholding of payments due to the customs counterclaims which are not accepted by the seller and the offsetting of those claims are prohibited.
- 7.) Notice of Defects, Warranty: Notice of defects and complaints about quantity are to be asserted immediately by the customer in writing, at least within 8 days upon receipt. The sellers responsibility will be set aside if notices of defects are not in due time. In case of a justified notice of defect the seller has the right either to remedy the defect or to take the product back against a relevant credit note or to replace the product without costs in a reasonable period of time. The legal warranty period of 24 months is applicable. Further claims are excluded. The warranty will lapse if the devices are opened and modified. Supplied semiconductors will not be repaired.
- 8.) Repairs: An estimate of costs prior to the execution of a repair will only be furnished on the customers express request and at the expenses. It is within the sellers discretion whether the repair is carried out in his own workshop or in another one. The costs incurred by dispatch and packing are to the buyers account.
- 9.) Place of Performance and Court of Jurisdiction: Place of performance and court of jurisdiction is the place of the selling company for all deliveries and payments and for all differences between the contracting parties, including actions for cheques. Only German law is applicable. In the event that one of the clauses of the agreement become inoperative the validity of the remaining clauses will not be affected.
- 10.) Export.: Deliveries abroad are only effected against advance payment. Upon receipt of your order we will send you the relevant invoice. As soon as the invoice amount in €(Euro) is transferred and credited to our account the ordered good will be immediately dispatched ex Ulm stock unless a delivery period has been agreed in writing. Bank charges are always to be taken over by the customer. .