

## BF 1053 VHF

### KURZBESCHREIBUNG

Der Sender BF 1053 ist ein speziell auf die drahtlose Mikrofonübertragung ausgelegter Taschensender im VHF-Bereich. Das mitgelieferte Ansteckmikrofon MKE 2-1053 wird aus dem Sender mit Strom versorgt. Am Sender läßt sich die Mikrofonempfindlichkeit umschalten, um verzerrungs- und rauschfrei zu arbeiten.

### MERKMALE

- kompakt und bedienfreundlich
- zwei Kanäle umschaltbar
- Lizenzierung in allen wesentlichen Märkten
- Empfindlichkeitsschalter für den Mikrofonantrieb
- einfacher Betrieb mit 9-Volt-Block
- 8 Stunden Betriebszeit mit Alkali-Mangan-Batterie
- 120 dB Geräuschspannungsabstand

### BRIEF DESCRIPTION

The BF 1053 transmitter is a pocket-format unit for cordless transmission of microphone signals in the VHF band. The enclosed MKE 2-1053 clip-on microphone receives its power supply from the transmitter unit, which is also equipped with a microphone sensitivity switch for minimizing noise and distortion.

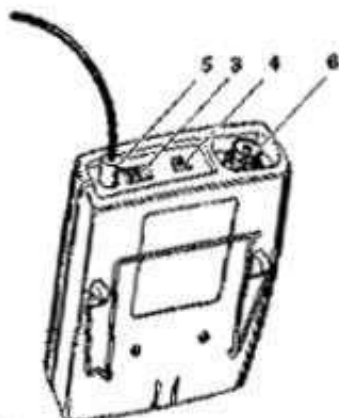
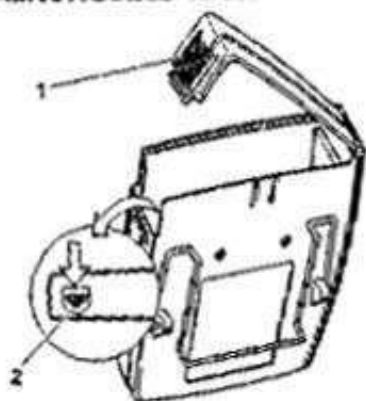
### FEATURES

- compact unit with convenient controls
- selection of two channels
- licensed in all major markets
- microphone input sensitivity switch
- simple operation with 9-volt compound battery
- 8 hours operating time with alkaline-manganese battery
- 120 dB signal-to-noise ratio

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## 1. BEDIENUNGSELEMENTE



- 1 Batteriefach
- 2 Mikrofonumschalter
- 3 Ein / Aus - Schalter
- 4 Schaltbare Mikrofonempfindlichkeit
- 5 Antennenanschluszbuchse
- 6 Mikrofonanschlusbuchse

## 2. TECHNISCHE DATEN

### HF-TEIL

Frequenzaufbereitung  
Trägerfrequenz  
Schaltbandbreite  
Kanalarzahl  
Kanalkonstante  
Frequenzstabilität  
Sendeleistung / Abgestrahlte Leistung  
Stromstrahlungsleistung  
Modulationsart  
Nennhub / Spitzenhub bei 1 kHz

PLL (Phase-Lock-Loop)-Synthesizer  
130 - 260 MHz (6 Bereiche)  
ca. 6% der Bereichsmittelfrequenz  
2 Kanäle, umschaltbar  
> 5 kHz  
besser  $\pm 10$  kHz (-10 bis +55 °C, UB = 5,6 - 10,0 V)  
max. 50 mW / 10 mW  
< 4 nV  
FM, Breitband  
 $\pm 40$  kHz /  $\pm 36$  kHz

### NF-TEIL

Frequenzgang (+2 / -3 dB)  
Geräuschspannungsabstand  
NF-Empfindlichkeit für Nennhub (0 dB / -20 dB)  
Spitzensteuerung (0 dB / -20 dB)  
Eingangswiderstand  
Einstellumfang des Empfindlichkeitschalters  
Trinkschaltfilter Roll-Off (Eckfrequenz 90 Hz)  
High-Cut Roll-Off  
Klirrfaktor  
Preemphasis  
Rausch- und Störunterdrückungssystem

80 - 18000 Hz  
120 dB (A)  
110 / 850 mV  
0,35 / 2,6 V  
5  $\Omega$   
20 dB  
18 dB / Okt.  
24 dB / Okt.  
< 1 % bei Spitzenhub, < 0,3 % bei Nennhub  
50  $\mu$ s  
HiDynPlus

### STROMVERSORGUNG, MECHANIK

Batterie  
Betriebszeit  
Stromaufnahme bei Nennspannung  
Betriebsspannungsbereich  
Abmessungen in mm  
Gewicht

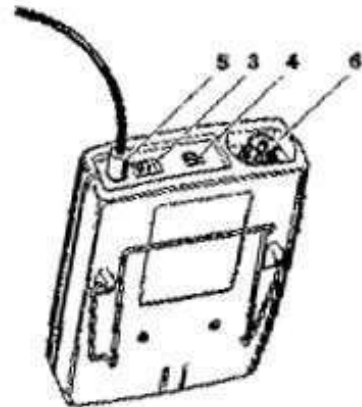
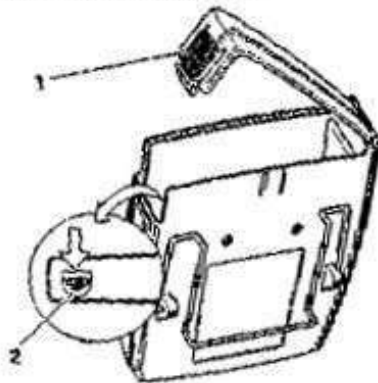
(EC G LR 61 9 V, Alkaline (keine NiCd-Akkus verwenden))  
bis zu 8 Stunden Dauerbetrieb möglich  
45 mA  
5,6 - 10,0 V  
100 x 38 x 73  
ca. 130 g incl. Batterie

### MIKROFON MKE 2-1053

Richtcharakteristik  
Grenzscheiteldruckpegel  
Kabellänge  
Abmessungen  
Steckverbinder

Kugel  
130 dB bei 1 kHz (K = 1%)  
1,5 m  
 $\varnothing$  6 mm  
LEMO konikal

## 1. OPERATING ELEMENTS



- 1 Battery compartment
- 2 Channel selector switch
- 3 On / off switch
- 4 Sensitivity switch
- 5 Antenna socket
- 6 Microphone socket

## 2. TECHNICAL DATA

### RF SECTION

Frequency generation  
Carrier frequency  
Switching bandwidth  
Channels  
Channel grid  
Frequency stability  
Transmitting output power / radiated power  
Spurious emissions  
Modulation  
Nominal deviation / peak deviation at 1 kHz

PLL (Phase Locked Loop) synthesizer  
138 - 260 MHz (6 ranges)  
approx. 8 % of the range center frequency  
2, switchable  
> 5 kHz  
<  $\pm 10$  kHz (-10 to +55 °C, UB = 5.6 - 10.0 V)  
max. 50 mW / 10 mW  
< 4 nW  
FM, wideband  
 $\pm 40$  kHz /  $\pm 50$  kHz

### AF SECTION

Frequency response range (+2 / -3 dB)  
Signal-to-noise ratio  
AF input sensitivity for nominal deviation (0 dB / -20 dB)  
max. AF input voltage for peak deviation (0 dB / -20 dB)  
Input impedance  
Control range of sensitivity switch  
Roll off filter (Cut-off frequency 80 Hz)  
High-Cut Roll-Off  
THD at 1 kHz  
Preemphasis  
Compressor

80 - 18,000 Hz  
120 dB (A)  
110 / 350 mV  
0.25 / 2.0 V  
5 k $\Omega$   
20 dB  
18 dB / Oct.  
24 dB / Oct.  
< 1% for peak dev., < 0.3 % for nominal dev.  
50  $\mu$ s  
HiDynamics

### POWER SUPPLY

Battery  
Operating time  
Current consumption for rated voltage  
Operating voltage  
Dimensions in mm  
Weight

IEC 6LR 6; 9 V, alkaline (do not use NiCd batteries!)  
up to 2 hrs (continuous operation)  
45 mA  
5.6 - 10.0 V  
100 x 38 x 73  
approx. 130 g incl. battery

### MICROPHONE MKE 2-1053

Directivity  
Sensitivity  
Grid length  
Dimensions  
Plug jack

omnidirectional  
130 dB at 1 kHz ( $K = 1\%$ )  
1.5 m  
diameter 6 mm  
LEMO coaxial

### 3. ALLGEMEINES

#### 3.1. INHALT DER SERVICE-ANLEITUNG

Eine Reparatur kann durch Leiterplattentausch vorgenommen werden. Diese Form der Reparatur hat sich in der Praxis bewährt und begrenzt das notwendige Funktionsverständnis auf die Leiterplatten.

Auf geeigneten Meßplätzen kann die Reparatur der Leiterplatten bis auf Bautelebene erfolgen. Detaillierte Reparaturanleitungen befinden sich in den Service-Hinweisen und der Prüf- und Abgleichanleitung.

Die Service-Anleitung vermittelt das entsprechende Wissen zur Fehlerlokalisierung und Reparatur des BF 1053 VHF.

#### 3.2. SERVICE-KONZEPT

##### 3.2.1. Leiterplatte

Die Leiterplatte des BF 1053 VHF ist als 2-seitig kupferkaschierte Platine aufgebaut und kann durch einen unsachgemäßen Reparaturversuch irreparabel beschädigt werden.

##### 3.2.2. Service-Anleitung

Die Service-Anleitung soll dem Techniker die Möglichkeit bieten, die wichtigsten Reparatur- und Abgleicharbeiten ausführen zu können.

Die Service-Anleitung kann im Bedarfsfall auch dem Kunden ausgehändigt werden.

##### 3.2.3. SMD (Surface Mounted Devices)

Die Leiterplatten des BF 1053 VHF sind weitgehend mit Chip-Elementen (SMD) bestückt. Sollte beim **Handieren** mit den Baugruppen ein SMD mechanisch zerstört werden, ist es erforderlich, dieses Bauelement zu ersetzen.

SMD werden direkt auf die dafür vorgesehenen Lötflächen gelötet. Hierfür besitzen sie lötfähige Stimmkontaktierungen, die weitgehend hitzeunempfindlich sind.

Zum Auswechseln ist folgendes Werkzeug erforderlich: Neben einer Pinzette und einem normalen temperaturgeregelten LötKolben (z. B. Weller mit 0,8 mm Flachkopflötlspitze PT-H 7 oder 0,8 mm Langkopflötlspitze PT-K 7) sollten noch ein absolut rückschlagfreies Absauggerät und 1,2 mm Entlötlitze vorhanden sein. Sinnvoll ist eine Arbetstlupe.

Die Lötzeit ist so kurz wie möglich zu halten, damit die Leiterbahnen nicht beschädigt werden. Besonders beim Auslöten der Bauteile ist darauf zu achten, daß die Leiterbahnen nicht abgehoben werden. Danach ist die Auflagefläche der Bauteile von Lötresten zu säubern. Um mechanische Spannungen in den Bauteilen zu vermeiden, sollte man erst nach dem Erkalten der ersten Lötstelle die gegenüberliegende Seite anlöten.

Eine Wiederverwendung eines bereits ausgelöteten Chip-Bauelementes ist nicht zulässig. Dies gilt auch dann, wenn es offensichtlich fehlerfrei ist, da durch die mechanische Beanspruchung beim Ein- und Auslöten eine Beschädigung nicht ausgeschlossen werden kann.

Die SMD werden als Ersatzteile in Packelherten von je 50 Stück geliefert. Die Lagerbehälter müssen verwechslungssicher gekennzeichnet sein, da nur dadurch eine Unterscheidung der Bauteile möglich ist.

### 3. GENERAL

#### 3.1. CONTENTS OF THIS SERVICE MANUAL

Practical experience gained from corrective maintenance shows that it is best to repair the unit by replacing defective PCBs. This type of repair has proven to be good in practical use as it spares the service engineer the effort to learn all details on the unit's complex circuit design.

Special tools and test equipment allow the modules to be easily repaired up to the lowest level, i.e. their individual components. Detailed instructions are given in the service hints as well as in the test and alignment instructions.

The present service manual shall provide the service engineer with important information required to find faults and to repair the BF 1053 VHF.

#### 3.2. SERVICE CONCEPT

##### 3.2.1. Printed circuit board

The PCB incorporated into the BF 1053 VHF is a double-sided printed circuit board which can be accidentally damaged through improper handling or repair.

##### 3.2.2. Service manuals

The present document shall help the service engineer to accomplish the most important maintenance and repair work.

The service manual may be handed to customers, if need be.

##### 3.2.3. SMD (Surface Mounted Devices)

The PCBs incorporated into the BF 1053 VHF chiefly include Surface Mounted Devices (SMD). Should one SMD be accidentally damaged, replace the defective component with a new one.

SMDs are to be soldered to the surface provided for this purpose. They feature solderable contacts which are relatively insensitive to heat.

Tools required to replace SMDs: tweezers, temperature-controlled soldering iron (e.g. Weller with 0.8 mm flat headed soldering tip PT-H 7 or 0.8 mm oblong soldering tip PT-K 7), blow-back proof unsoldering set, 1.2 mm unsoldering wire. It is recommendable to use magnifying glasses.

Minimize the soldering time in order not to damage the PCB. Be careful not to damage any tracks when unsoldering the components to be replaced. Clean the surface. Wait until the first soldered joint has cooled down before starting to solder the opposite side. This serves to avoid stress built-up in the components.

Do not reuse unsoldered components, even if they seem to be faultless. Mechanical damage, possibly caused by soldering or unsoldering some components, cannot be excluded.

SMDs are available as spare parts, 50 pcs. packaged in a poly bag. Containers or packages should be marked in order to make the components distinguishable from each other.

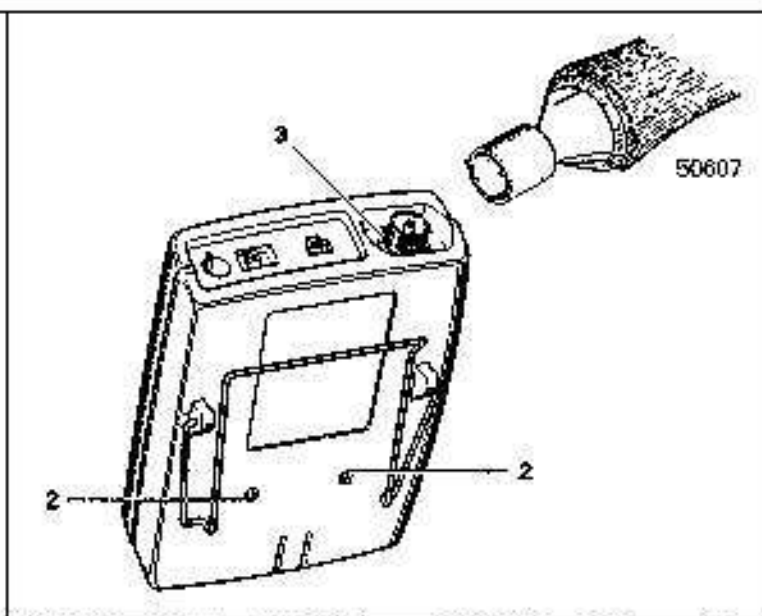
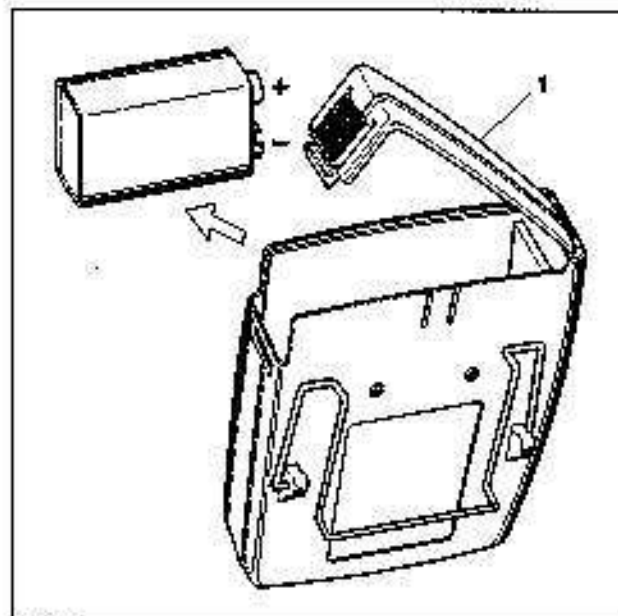
## 4. SERVICE HINWEISE

### 4.1. ALLGEMEINES

Je nach Bestückung der frequenzabhängigen Bauelemente ist der Taschensender BF 1053 VHF in 6 Bereichen des VHF - Bandes einsetzbar (siehe Tabelle 'Frequenzbereiche' auf Seite 16). Die Auswahl der Kanalfrequenzen ergibt sich durch die Wahl des PROM - Bausteins U3 und den Widerständen R95, R96, R97, R98 und R99 (siehe Tabelle 'Kanalfrequenzen' auf Seite 16).

### 4.2. DEMONTAGE:

- Taschensender BF 1053 VHF ausschalten.
- Mikrofonstecker lösen und entnehmen.
- Antennenstecker lösen und entnehmen.
- Batteriefach (1) öffnen und Batterie entnehmen.
- Schrauben (2) lösen und entnehmen.
- Ringmutter und Zahnscheibe (3) mit Spezialschlüssel (Ersatzteilnummer 50607) lösen und entnehmen.
- Leiterplatte aus Gehäuse schieben.



## 4. SERVICE HINTS

### 4.1. GENERAL

The BF 1053 VHF pocket transmitter is available in 6 ranges in the VHF band range (please see table 'Frequency ranges' on page 16). The channel frequencies can be selected by choice of PROM circuit U3 and resistors R95, R96, R97, R98 and R99 (please see table 'Channel frequencies' on page 16).

### 4.2. DISASSEMBLY:

- Switch pocket transmitter BF 1053 VHF to "OFF".
- Disconnect the microphone plug.
- Disconnect the antenna plug.
- Open the battery compartment (1) and remove battery.
- Unscrew the screws (2).
- Unscrew ring nut and tooth lock washer (3) with special tool (Spare part number 50607).
- Slide the PCB out of the transmitter housing.

### 4.3. FEHLERSUCHE

- Taschensender BF 1053 VHF besprechen und mit Empfänger BFR 1051 (Kopfhörer) abhören. Funktionsüberprüfung mit anschließendem Abklopfen und Reichweitentest.
- Taschensender BF 1053 VHF demontieren.
- Die Fehlersuche beim BF 1053 VHF unterteilt sich in:
  - Überprüfen der Testpunkte TP 1 - TP 21 auf der Bestückungsseite der Leiterplatte. Dazu Verfahren wie im Abschnitt 'FEHLERSUCHE' auf Seite 7. Bei stark abweichenden Meßwerten Leiterplatte unter Zuhilfenahme des Stromlaufplanes reparieren
  - Durchführen der "PRÜF- UND ABGLEICHANWEISUNG"
- Taschensender BF 1053 VHF montieren.
- Taschensender BF 1053 VHF besprechen und mit Empfänger BFR 1051 (Kopfhörer) abhören. Funktionsüberprüfung mit anschließendem Abklopfen und Reichweitentest.

### 4.3. TROUBLESHOOTING

- Speak into the BF 1053 VHF pocket transmitter microphone and monitor the correct working of the system with the help of the BFR 1051 receiver (headphones). Performance test, incl. subsequent tapping and transmission range tests.
- Disassemble the BF 1053 VHF pocket transmitter.
- Troubleshooting procedures:
  - Check test points TP 1 - TP 21 on the component side of the PCB. Proceed as described in 'TROUBLESHOOTING' on page 7. For deviating test results, the PCB is to be repaired with the help of the circuit diagram.
  - Follow the "TEST AND ALIGNMENT PROCEDURES".
- Assemble the BF 1053 VHF pocket transmitter.
- Speak into the BF 1053 VHF pocket transmitter microphone and monitor the correct working of the system with the help of the BFR 1051 receiver (headphones). Performance test, incl. subsequent tapping and transmission range tests.



## 5. FEHLERSUCHE

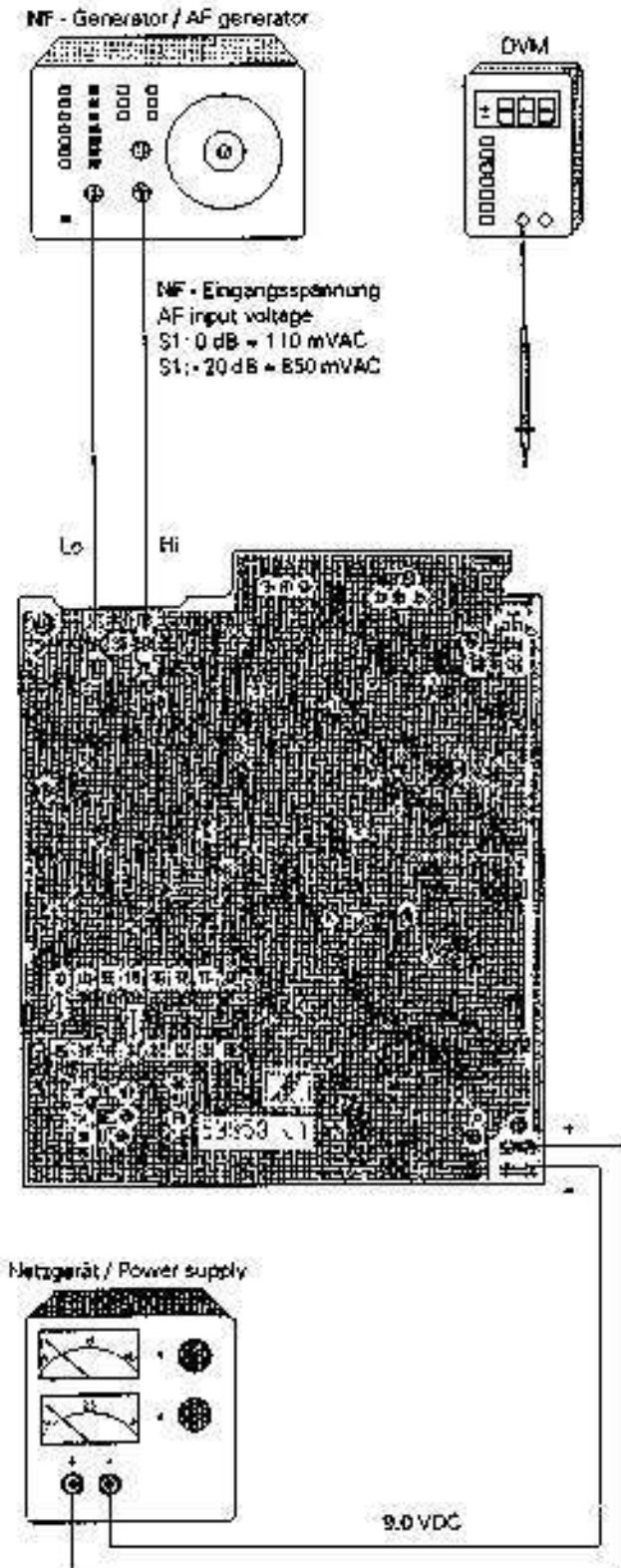
### 5.1. MESSAUFBAU I

- NF-Signal (1kHz) an TP 1 einspeisen (TP 2  $\perp$ ).
- Betriebsspannung (9,0 V) an Batteriekontakte anlegen.
- Ein / Aus Schalter S6 in Stellung "ON" bringen
- Kanalwahlschalter S5 in Stellung "1" bringen.
- Testpunkte mit Voltmeter ( $R_i \geq 1 \text{ M}\Omega / \text{V}$ ) überprüfen

## 5. TROUBLESHOOTING

### 5.1. TEST SET-UP I

- Input the AF (1kHz) via TP 1 (TP 2  $\perp$ ).
- Apply the operating voltage (9.0 V) to the battery contacts
- Set the ON/OFF switch S6 to "ON".
- Set the channel selector switch S5 to "1".
- Check the test points using the voltmeter ( $R_i \geq 1 \text{ M}\Omega / \text{V}$ ).



Testpunkt Test point	Sollwert (DC) Desired value (DC)	Sollwert (NF effektiv) Desired value (AF eff.)
TP 1	0.0 VDC	S1: 0 dB = 110 mVAC S1: -20 dB = 850 mVAC
TP 2	0.0 VDC	0.0 VAC
TP 3	0.5 VDC	107 mVAC
TP 4	3.9 VDC	715 mVAC
TP 5	4.0 VDC	795 mVAC
TP 6	3.7 VDC	815 mVAC
TP 7	0.0 VDC	0.0 VAC
TP 8	3.2 VDC	810 mVAC
TP 9	1.4 VDC	0.0 VAC
TP 10	4.25 VDC	0.0 VAC
TP 11	4.8 VDC	0.0 VAC
TP 12	0.5 VDC	0.0 VAC
TP 13	0.6 VDC	0.0 VAC
TP 14	0.6 VDC	0.0 VAC
TP 15	0.0 VDC	0.0 VAC
TP 16	2.2 $\pm$ 1.2 VDC	0.0 VAC
TP 17	5.0 VDC	0.0 VAC
TP 18	8.2 VDC	0.0 VAC
TP 19	0.0 VDC	0.0 VAC
TP 20	0.0 VDC	0.0 VAC
TP 21	8.8 VDC	0.0 VAC

## 6. MESSGERÄTE UND PRÜFMITTEL

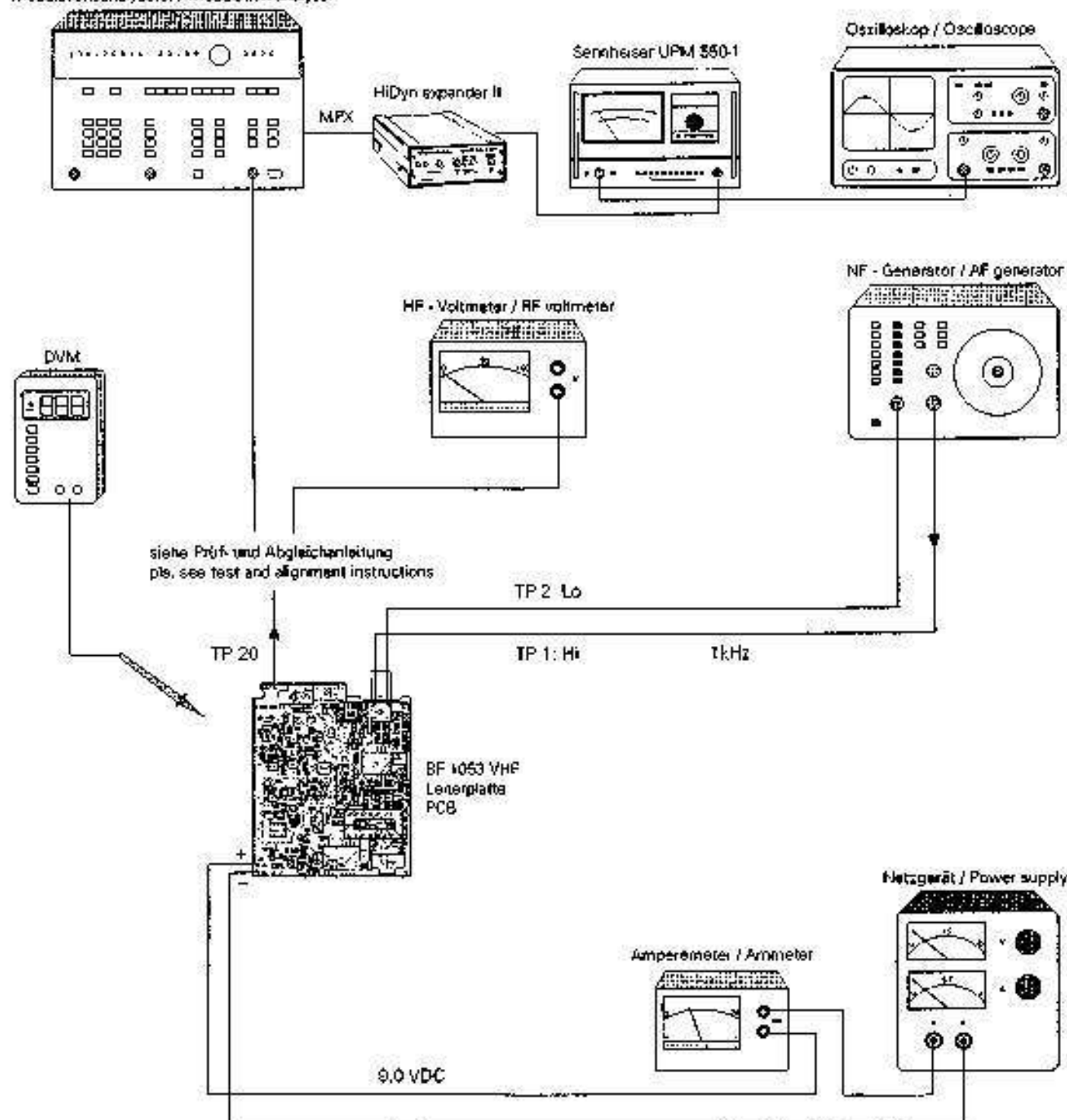
- 1 Modulationsanalysator (z.B. Rohde & Schwarz FAM)
- 1 NF-Signalgenerator (z.B. Leader LAG 126 S)
- 1 HF-Millivoltmeter (z.B. UPM 550 - 1)
- 1 HF-Millivoltmeter (z.B. Rohde & Schwarz)
- 1 HiDyn Expander II (z.B. Sennheiser Ident.-Nr. 49556)
- 1 Oszilloskop (z.B. Hameg 605)
- 1 Voltmeter Ri  $\geq 1 \text{ M}\Omega / \text{V}$  (z. B. Thandar TM 351)
- 1 Amperemeter (z.B. Thandar TM 351)
- 1 Netzgerät 0 - 30 V / 2 A

## 6. SPECIAL TOOLS AND EQUIPMENT

- 1 Modulation analyzer (e.g. Rohde & Schwarz FAM)
- 1 AF signal generator (e.g. Leader LAG 126 S)
- 1 AF millivoltmeter (e.g. UPM 550 - 1)
- 1 RF millivoltmeter (e.g. Rohde & Schwarz)
- 1 HiDyn expander II (e.g. Sennheiser Ident. No. 49556)
- 1 Oscilloscope (e.g. Hameg 605)
- 1 Voltmeter Ri  $\geq 1 \text{ M}\Omega / \text{V}$  (e.g. Thandar TM 351)
- 1 Ammeter (e.g. Thandar TM 351)
- 1 Power supply 0 to 30 V / 2 A

## 7. MESSAUFBAU II

Modulationsanalysator / Modulation analyzer



## 7. TEST SET-UP II



## 8. PRÜF - UND ABGLEICHANWEISUNG

Nach jedem Betätigen des Kanalwahlschalters S5 ist der Sender durch Aus- und Einschalten rückzusetzen!

Nr.	Messung, Einstellung	Signal-einpeisung	Vorbereitung, Geräte-einstellung	Messpunkt	Softwert	Einstellen	Bemerkungen
1	Stromaufnahme	NF-Signal 10 kHz, 100 mV Eff. TP 20 sonst: TP 20 wie Kanal 1	Erdringsspannung 0,0 V an 2. Antennekontakt einlegen laut Abs. 5.3. Sender S5 20V Kanalwahlschalter S5 20 Erdringsschalter S5 20	Amperemeter	40 - 50 mA		
2	HF - Pegel	wie 1.	HF - Voltmeter	TP 20	1,1 - 1,6 Veff an 50 Ω		
3	Senderfrequenz Kanal	wie 1.	Modulationsanalysator	TP 20	± 4 kHz		
3.1	Sendefrequenz Kanal 2	wie 1.	Kanalwahlschalter S5 2; Modulationsanalysator	TP 20	± 4 kHz		
4	VCO Abstimmspannung	wie 1.	Kanalwahlschalter S5 2 Dial Voltmeter	TP 18	± 2 V		
5	Nennhub	wie 1.	Modulationsanalysator	TP 20	± 40 kHz	R56	
5.1	Stromhub	NF-Signal 10 kHz, 100 mV Eff. sonst wie 1.	Empfindlichkeit S1 10 dB Modulationsanalysator	TP 20	± 50 mA		
6	NF - Frequenzgang	NF - Signal 5 mV, sonst wie 1.	Empfindlichkeit S1 - 20 dB; UPM 550 - 1 Anzeige auf 0 dB eichen	TP 20			
6.1	NF - Frequenzgang	NF - Signal 10 kHz, sonst wie 1.	UPM 550 - 1	TP 20	0 dB .. - 1,5 dB		
6.2	NF - Frequenzgang	NF - Signal 10 kHz, sonst wie 1.	UPM 550 - 1	TP 20	± 0,5		
7	Kirrfaktor	wie 1.	UPM 550 - 1	TP 20	typ. 0,3 %		
8	Bandbreite		Rescherzfilter S1 105 nach dem ersten Rescherzfilter Nach dem zweiten Rescherzfilter Sender-Belegbreite nach dem Empfänger Bandpassfunktion überlegen				

### NOTIZEN:

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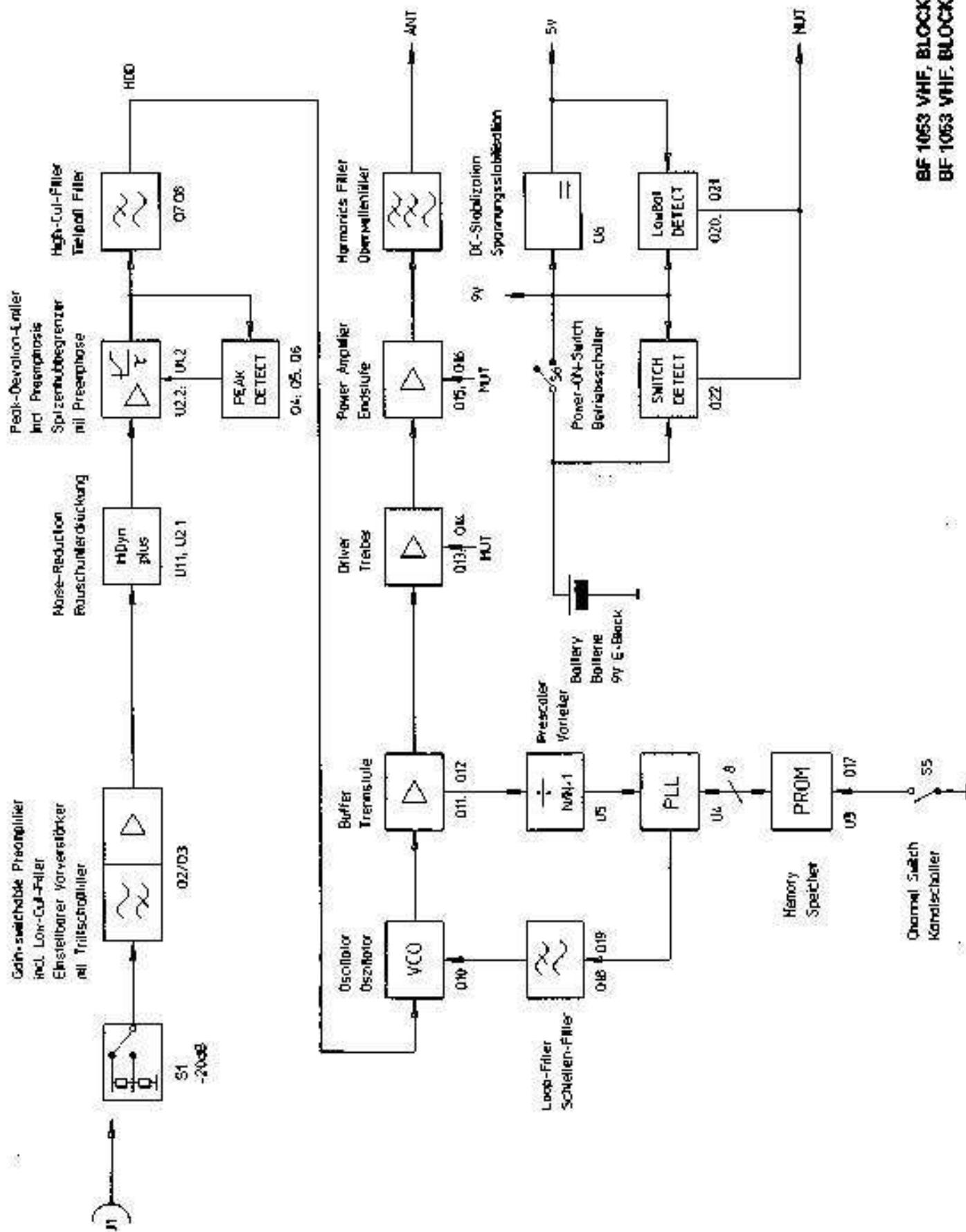
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## 8. TEST AND ALIGNMENT INSTRUCTIONS

After switching the channel selector switch S5 please reset the transmitter by switching off and on the unit!

No.	Measurement, adjustment	Signal input	Preparations, settings	Test point	Desired value	Adjuster	Remarks
1	Current consumption	Insert the AC plug into the AC socket. Max. TP 1 (TP 2) is set to 100 (200) mA.	Apply the operating voltage 8.5 V to the battery socket. Set the sensitivity switch S1 to 20 dB.	Antenna	40 - 80 mA		
2	RF level	as 1.	RF voltmeter	TP 20	1.1 - 1.6 Veff 90 Ω loaded		
3	Transmit frequency channel 1	as 1.	Modulation analyzer	TP 20	10.7 MHz		
3.1	Transmit frequency channel 2	as 1.	Channel selector S5 '2'; modulation analyzer	TP 20	1 ± 4 kHz		
4	VCO tuning voltage (V <sub>t</sub> )	as 1.	Channel selector S5 '1'; DC voltmeter	TP 15	0.30 - 2.0 V		
5	Nominal deviation	as 1.	Modulation analyzer	TP 20	± 40 kHz	R56	
5.1	Peak deviation	Audio signal 580 Hz, proceed as described in step 4.	Sensitivity switch S1 10 dB; modulation analyzer	TP 20	± 56 kHz		
6	Audio frequency response	Audio signal 5 mV, proceed as described in step 3.	Sensitivity switch S1 - 20 dB; calibrate UPM 550 - 1 (0 dB)	TP 20			
6.1	Audio frequency response	Audio signal 300 Hz, proceed as described in step 6.	UPM 550	TP 20	± 3 dB		
6.2	Audio frequency response	Audio signal 10 kHz, proceed as described in step 6.	UPM 550 - 1	TP 20	0 dB .. - 1.5 dB		
6.3	Audio frequency response	Audio signal 18 kHz, proceed as described in step 6.	UPM 550	TP 20	0 dB		
7	THD	as 1.	UPM 550 - 1	TP 20	typ. 0.3 %		
8	Performance test		Assemble the BF 1053 VHF kit. After the transmitter has been completely assembled it has to be checked for correct working with the BF 1051 receiver.				

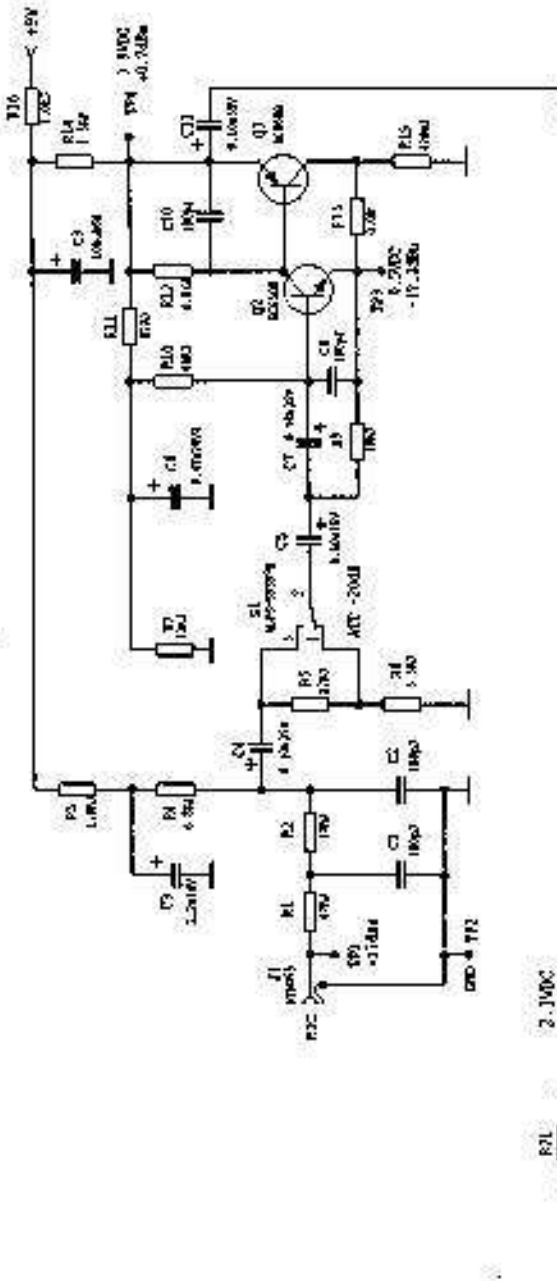
### NOTES:



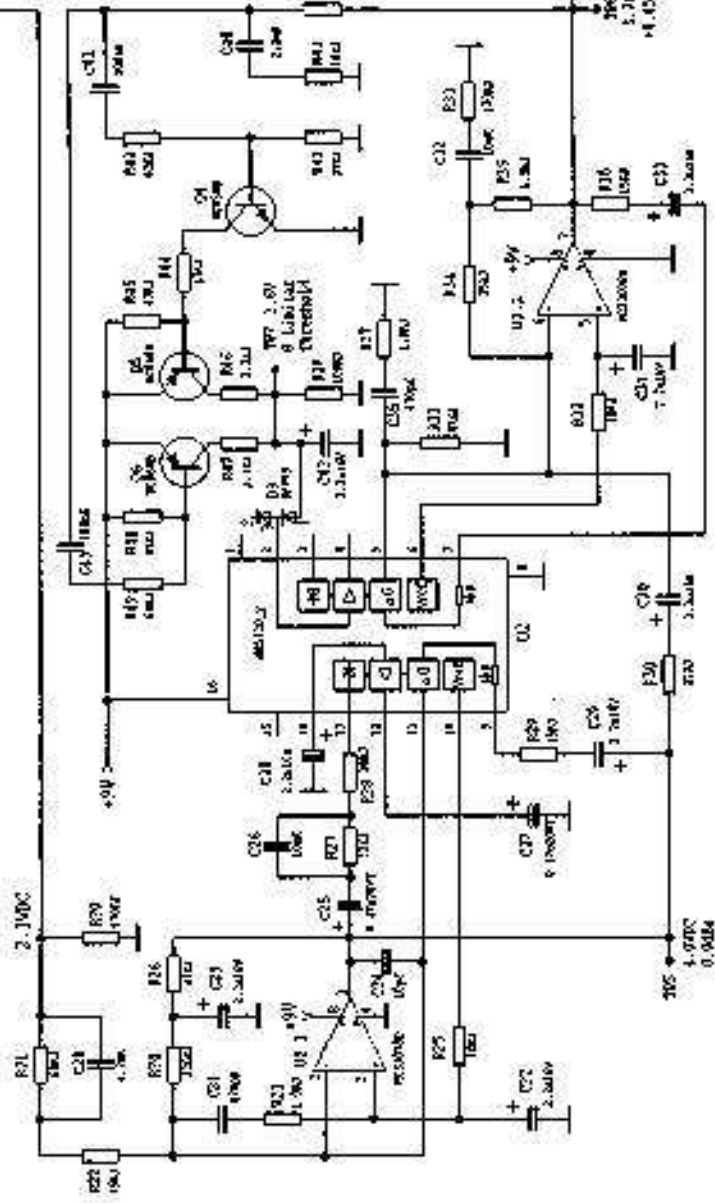
BF 1053 VHF, BLOCKSCHALTBILD  
BF 1053 VHF, BLOCK DIAGRAM

BF 1053 VHF, NF-TEIL, STROMLAUFPLAN  
 BF 1053 VHF, AF SECTION, CIRCUIT DIAGRAM

Mic-Preamplifier with Low-Cut



Remark: All audio levels given at 1kHz AF and Att-switch 'off' for nominal deviation of 40kHz (0dBu = 775mV)

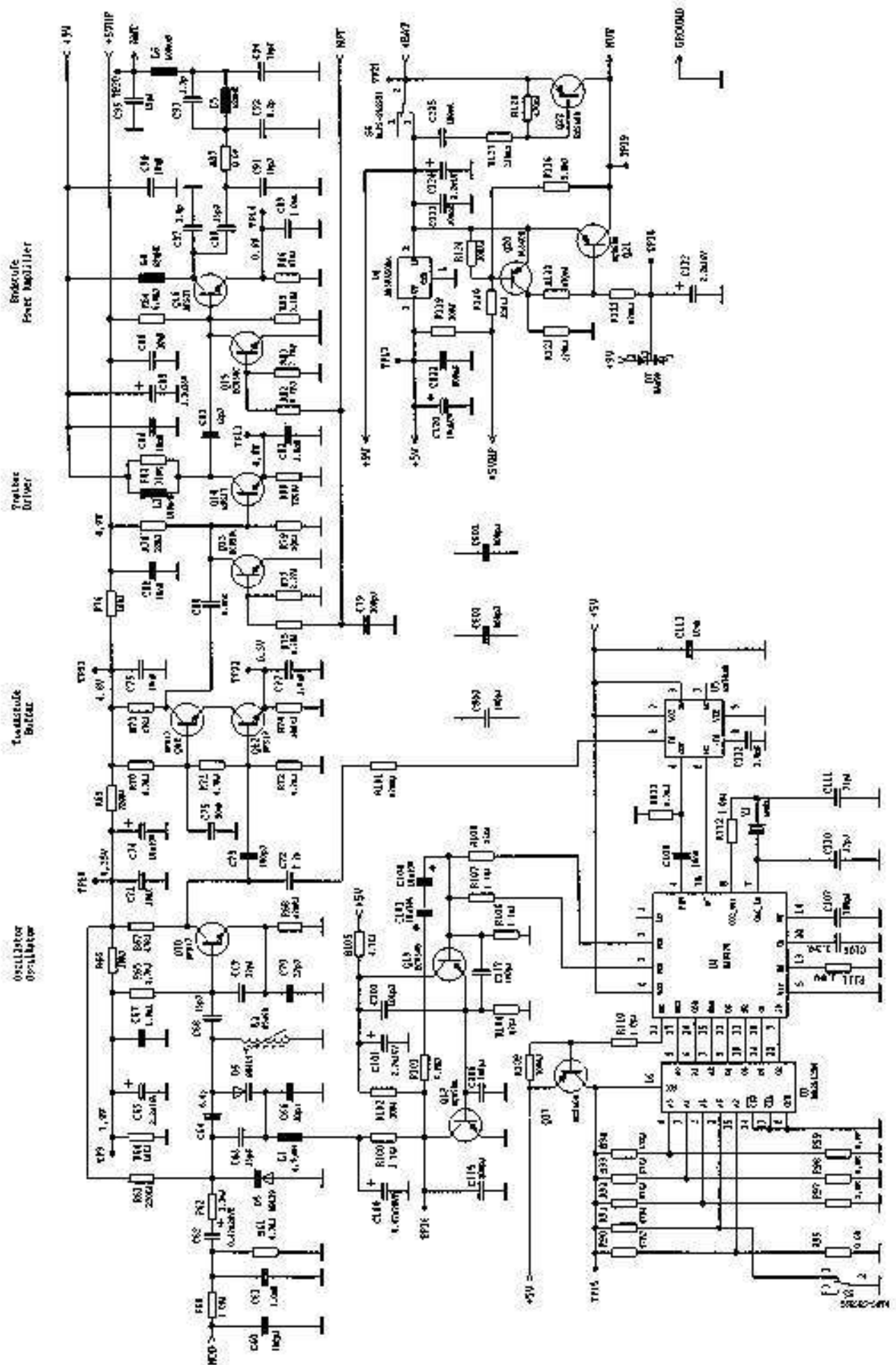


VCA

Compressor

Preamplifier/Peak-Limiter

Lowpass



BF 1053 VHF, HF-TEIL, STROMLAUFPLAN  
 BF 1053 VHF, RF SECTION, CIRCUIT DIAGRAM

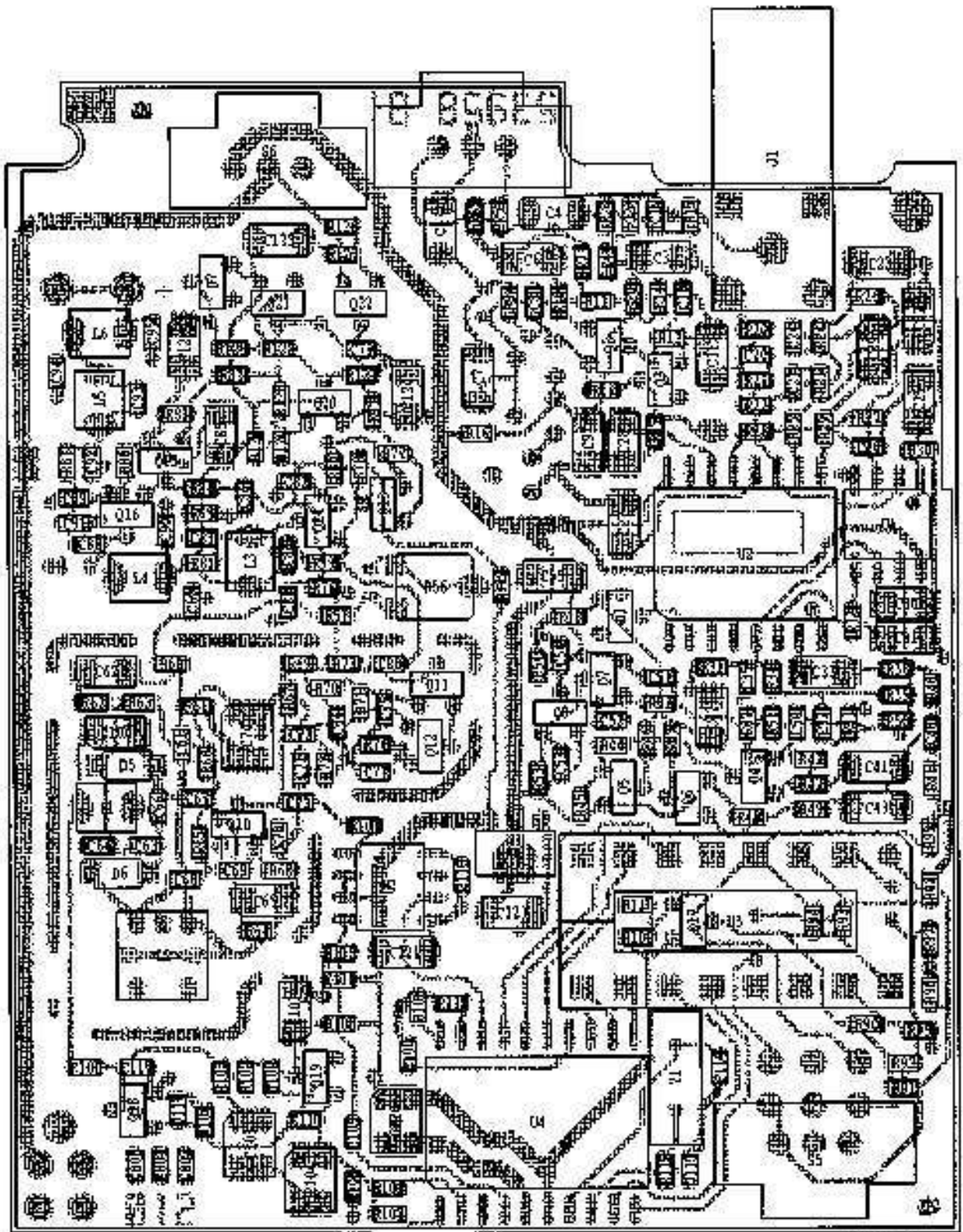
Receiver Preamp

9P 1053  
 9P 1053

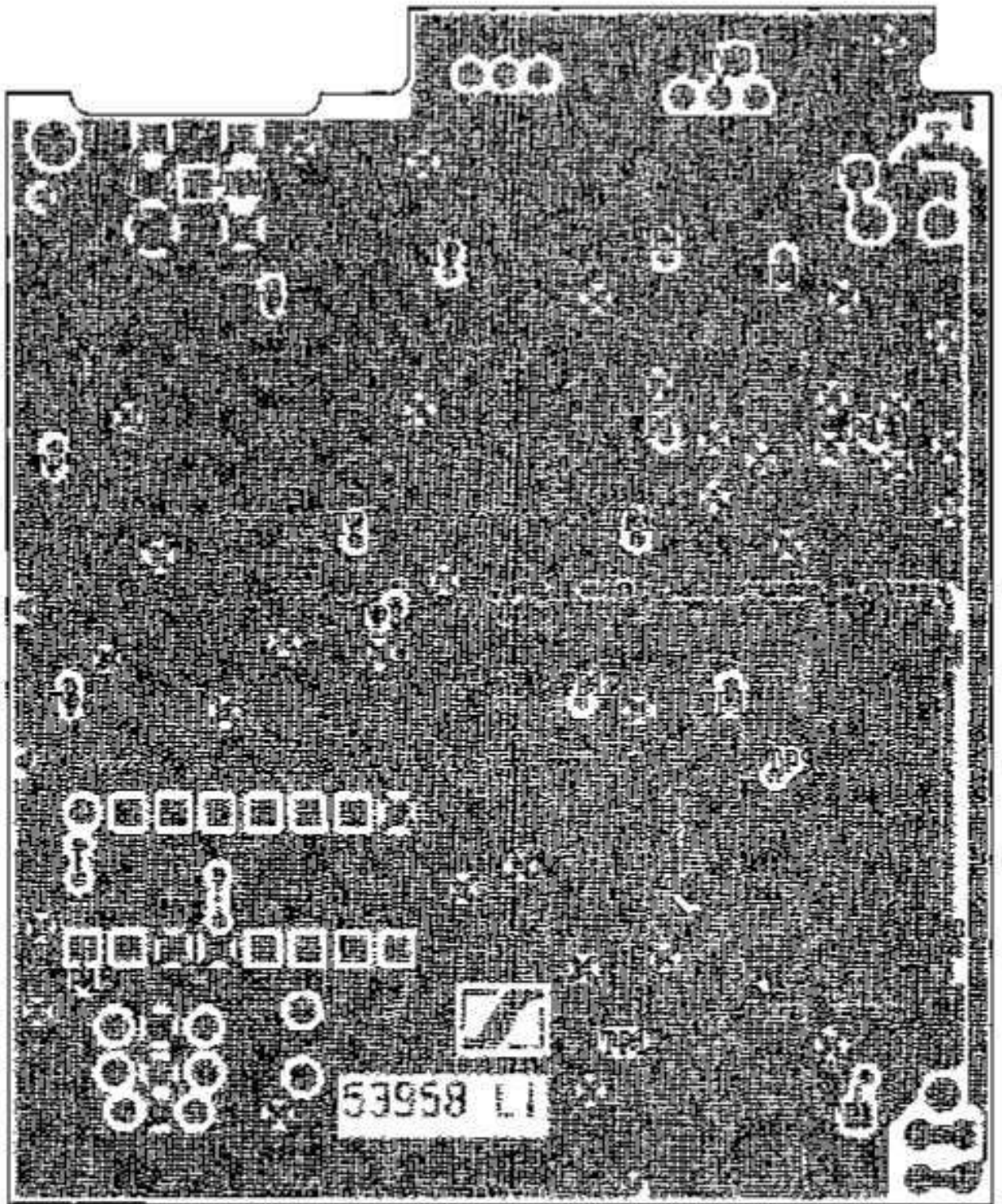
9P 1053

Channel Select  
 HeadLocator



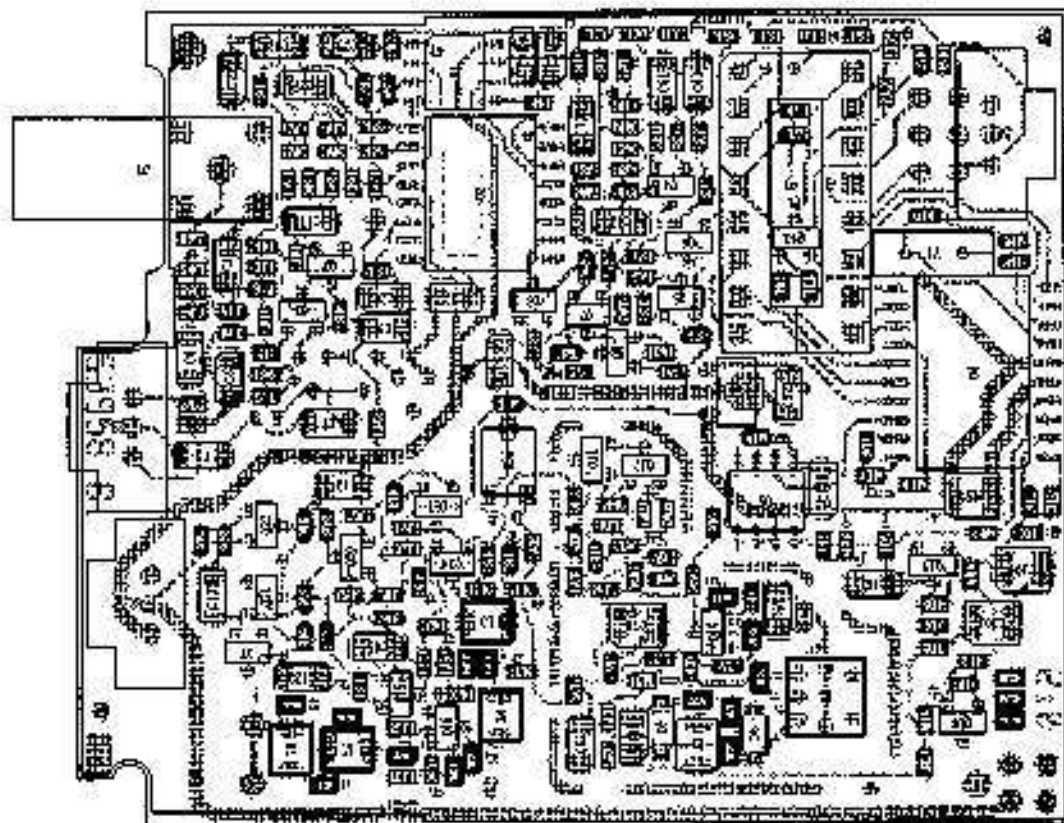


BF 1053 VHF, GEDRUCKTE SCHALTUNG, BESTÜCKUNGSSEITE  
 BF 1053 VHF, PRINTED CIRCUIT BOARD, COMPONENT SIDE



BF 1053 VHF, GEDRUCKTE SCHALTUNG, LÖTSEITE  
BF 1053 VHF, PRINTED CIRCUIT BOARD, SOLDER SIDE

Frequencybereich Frequency range	C800	C801	C802	C83	C64	C56	L2	C68	C69	C70	L3	R81	C83	L4	C87	C88	C91	C92	C93	L5	C94	L6	C95
132 - 144 MHz	-	100p	-	39p	8p2	68p	68p	15p	12p	22p	100n	330R	39p	100n	-	12p	15p	15p	3p3	100n	22p	150n	22p
169 - 184 MHz	100p	100p	100p	33p	6p8	82p	82p	15p	12p	22p	100n	330R	12p	68n	-	15p	18p	8p2	3p3	68n	18p	100n	15p
183 - 200 MHz	-	100p	100p	12p	4p7	47p	47p	18p	12p	18p	68n	330R	27p	68n	-	10p	5p6	2p7	2p7	68n	15p	100n	12p
199 - 217 MHz	100p	-	100p	8p2	3p3	27p	27p	18p	12p	18p	68n	330R	18p	47n	-	15p	22p	3p3	2p2	68n	12p	100n	30p
216 - 235 MHz	-	-	100p	39p	3p3	82p	82p	18p	12p	18p	47n	330R	33p	47n	-	10p	15p	12p	2p7	47n	18p	68n	8p2
234 - 260 MHz	100p	100p	-	15p	3p3	47p	47p	18p	12p	18p	47n	330R	22p	33n	-	18p	22p	5p6	2p2	47n	15p	68n	15p



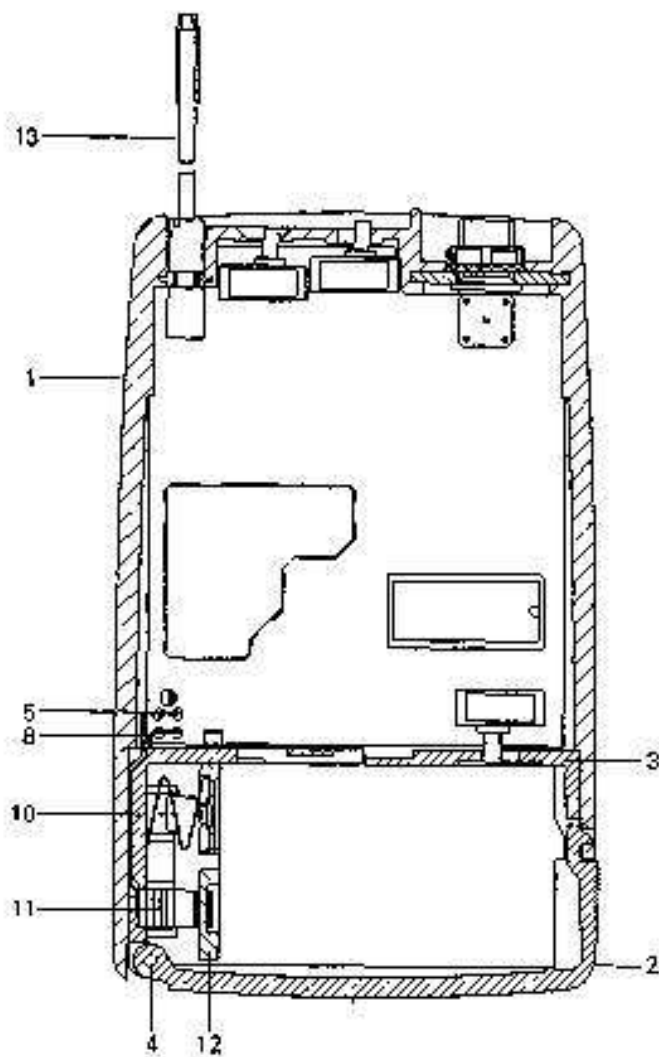
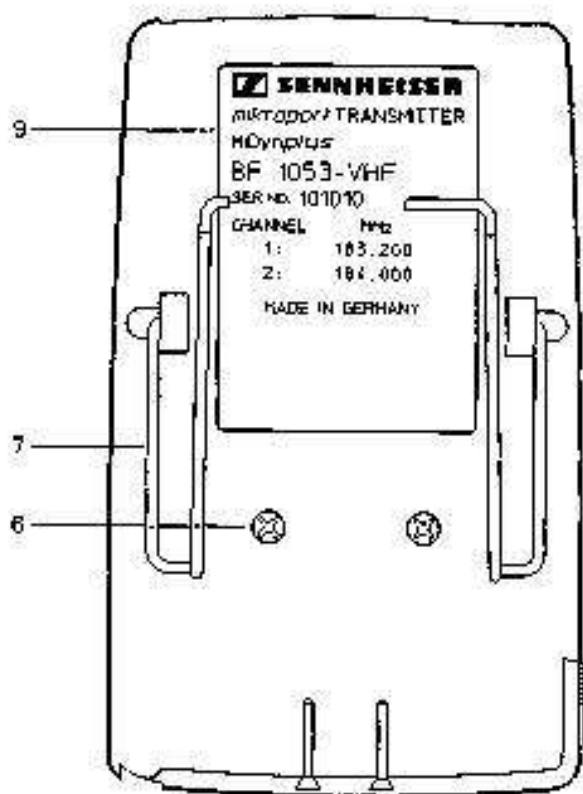
Typ Type	Kanalfrequenzen Channel frequencies	R95	R96	R97	R98	R99
A	169.605 / 170.245	-	-	-	-	- X - X - X
B	171.045 / 171.905	-	-	-	-	- X - X - X
C	173.800 / 174.100	-	-	X	X	- X - X - X
D	174.600 / 175.000	-	-	X	X	- X - X - X
E	181.900 / 182.600	-	-	X	X	- X - X - X
F	183.200 / 184.000	-	-	X	X	- X - X - X
G	198.250 / 198.700	-	-	X	X	- X - X - X
H	199.050 / 199.750	-	-	X	X	- X - X - X
I	175.600 / 175.975	-	-	-	-	- X - X - X
K	176.400 / 177.000	-	-	-	-	- X - X - X
L	176.500 / 177.100	-	-	-	-	- X - X - X
M	177.850 / 178.300	-	-	-	-	- X - X - X
N	183.600 / 183.975	-	-	-	-	- X - X - X
O	184.500 / 185.100	-	-	-	-	- X - X - X
P	185.860 / 186.300	-	-	-	-	- X - X - X
Q	196.225 / 197.825	-	-	-	-	- X - X - X
R	204.125 / 205.000	-	-	-	-	- X - X - X
S	213.575 / 216.875	-	-	-	-	- X - X - X
T	217.225 / 218.825	-	-	-	-	- X - X - X
U	234.025 / 236.575	-	-	-	-	- X - X - X
V	248.600 / 249.900	-	-	-	-	- X - X - X

X bestückt / equipped  
- nicht bestückt / not equipped

BF 1053 VHF, GEDRUCKTE SCHALTUNG, BESTÜCKUNGSVARIANTEN  
BF 1053 VHF, PRINTED CIRCUIT BOARD, VARIABLE COMPONENTS

## 12. EXPLOSIONSZEICHNUNG

## 12. EXPLODED VIEW





## 13. ERSATZTEILE

## 13. SPARE PARTS

POS	IDENT	BEZEICHNUNG	DESCRIPTION
001	52818	Gehäuse "SE-POWER-ATT"	Housing "SE-POWER-ATT"
002	52828	Batteriefklappe	Cover for battery compartment
003	52828	Chassis	Chassis
004	53059	Zylinderstift	Straight pin
005	52822	Kontaktfeder	Contact spring
006	37718	Blechschraube Sr2,2x6,5 DIN7981 (MOQ:10x)	Sheet metal screw Sr2.2x6.5 DIN7981 (MOQ:10x)
007	43965	Klammer	Clip
008	52920	Kontaktfeder	Contact spring
009	53438	Schild	Label
010	60383	Kontaktfeder komplett	Contact spring complete
011	20728	Kontaktfeder	Contact spring
012	21689	Kontaktfeder	Contact spring
013A	54179	Antenne 132-144MHz 460mm	Antenna 132-144MHz 460mm
013B	54180	Antenne 169-200MHz 320mm	Antenna 169-200MHz 320mm
013C	54181	Antenne 199-260MHz 260mm	Antenna 199-260MHz 260mm
AA001	40095	IC PROM 1Kx4 NB2S129N	IC PROM 1Kx4 NB2S129N
C001	45188	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C002	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C003	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C004	45086	SMD Kondensator TA-KO 100nF 35V (MOQ:50x)	SMD capacitor TA-KO 100nF 35V (MOQ:50x)
C005	45086	SMD Kondensator TA-KO 100nF 35V (MOQ:50x)	SMD capacitor TA-KO 100nF 35V (MOQ:50x)
C006	45050	SMD Kondensator TA-KO 470nF 20V	SMD Capacitor TA-KO 470nF 20V
C007	45086	SMD Kondensator TA-KO 100nF 35V (MOQ:50x)	SMD capacitor TA-KO 100nF 35V (MOQ:50x)
C008	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C009	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C010	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C011	45086	SMD Kondensator TA-KO 100nF 35V (MOQ:50x)	SMD capacitor TA-KO 100nF 35V (MOQ:50x)
C020	45188	SMD Kondensator KERKO 4,7nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 4.7nF 50V X7R (MOQ:50x)
C021	45193	SMD Kondensator KERKO 470pF 50V X7R (MOQ:50x)	SMD capacitor KERKO 470pF 50V X7R (MOQ:50x)
C022	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C023	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C024	45174	SMD Kondensator KERKO 10pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 10pF 50V NPO (MOQ:50x)
C025	45050	SMD Kondensator TA-KO 470nF 20V	SMD Capacitor TA-KO 470nF 20V
C026	45201	SMD Kondensator KERKO 10nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 10nF 50V X7R (MOQ:50x)
C027	45060	SMD Kondensator TA-KO 470nF 20V	SMD Capacitor TA-KO 470nF 20V
C028	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C029	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C030	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C031	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C032	45201	SMD Kondensator KERKO 10nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 10nF 50V X7R (MOQ:50x)
C033	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C035	45193	SMD Kondensator KERKO 470pF 50V X7R (MOQ:50x)	SMD capacitor KERKO 470pF 50V X7R (MOQ:50x)
C040	45197	SMD Kondensator KERKO 2,2nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 2.2nF 50V X7R (MOQ:50x)
C041	19480	SMD Kondensator KERKO 100nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 100nF 50V X7R (MOQ:50x)
C042	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C043	19480	SMD Kondensator KERKO 100nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 100nF 50V X7R (MOQ:50x)
C050	45195	SMD Kondensator KERKO 1nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 1nF 50V X7R (MOQ:50x)
C051	45195	SMD Kondensator KERKO 1nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 1nF 50V X7R (MOQ:50x)
C052	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C053	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C054	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C055	45050	SMD Kondensator TA-KO 470nF 20V	SMD Capacitor TA-KO 470nF 20V
C060	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C061	45195	SMD Kondensator KERKO 1nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 1nF 50V X7R (MOQ:50x)
C062	45050	SMD Kondensator TA-KO 470nF 20V	SMD Capacitor TA-KO 470nF 20V
C063A	45181	SMD Kondensator KERKO 39pF 50V NPO (MOQ:50x) 132-144,216-235 MHz	SMD capacitor KERKO 39pF 50V NPO (MOQ:50x) 132-144,216-235 MHz
C063B	45180	SMD Kondensator KERKO 33pF 50V NPO (MOQ:50x) 169-184 MHz	SMD capacitor KERKO 33pF 50V NPO (MOQ:50x) 169-184 MHz
C063C	45175	SMD Kondensator KERKO 12pF 50V NPO (MOQ:50x) 183-200 MHz	SMD capacitor KERKO 12pF 50V NPO (MOQ:50x) 183-200 MHz
C063D	45173	SMD Kondensator KERKO 8,2pF 50V NPO (MOQ:50x) 199-217 MHz	SMD capacitor KERKO 8.2pF 50V NPO (MOQ:50x) 199-217 MHz
C063E	45176	SMD Kondensator KERKO 15pF 50V NPO (MOQ:50x) 234-260 MHz	SMD capacitor KERKO 15pF 50V NPO (MOQ:50x) 234-260 MHz
C064A	45173	SMD Kondensator KERKO 8,2pF 50V NPO (MOQ:50x) 132-144 MHz	SMD capacitor KERKO 8.2pF 50V NPO (MOQ:50x) 132-144 MHz
C064B	45172	SMD Kondensator KERKO 6,8pF 50V NPO (MOQ:50x) 169-184 MHz	SMD capacitor KERKO 6.8pF 50V NPO (MOQ:50x) 169-184 MHz
C064C	45170	SMD Kondensator KERKO 4,7pF 50V NPO KEFQ (MOQ:50x) 183-200 MHz	SMD capacitor KERKO 4.7pF 50V NPO KEFQ (MOQ:50x) 183-200 MHz



POS	IDENT	BEZEICHNUNG	DESCRIPTION
C064D	4516B	SMD Kondensator KERKO 3,3pF 50V NPO (MOQ:50x) 199-217,234-260 MHz	SMD capacitor KERKO 3.3pF 50V NPO (MOQ:50x) 199-217,234-260 MHz
C064E	4516B	SMD Kondensator KERKO 3,3pF 50V NPO (MOQ:50x) 216-235 MHz	SMD capacitor KERKO 3.9pF 50V NPO (MOQ:50x) 216-235 MHz
C065	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C066A	45184	SMD Kondensator KERKO 68pF 50V NPO (MOQ:50x) 132-144 MHz	SMD capacitor KERKO 68pF 50V NPO (MOQ:50x) 132-144 MHz
C066B	4516B	SMD Kondensator KERKO 82pF 50V NPO (MOQ:50x) 169-184,216-235 MHz	SMD capacitor KERKO 82pF 50V NPO (MOQ:50x) 169-184,216-235 MHz
C066C	45162	SMD Kondensator KERKO 47pF 50V NPO (MOQ:50x) 183-200,234-260 MHz	SMD capacitor KERKO 47pF 50V NPO (MOQ:50x) 183-200,234-260 MHz
C066D	45179	SMD Kondensator KERKO 27pF 50V NPO (MOQ:50x) 199-217 MHz	SMD capacitor KERKO 27pF 50V NPO (MOQ:50x) 199-217 MHz
C067	45195	SMD Kondensator KERKO 1nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 1nF 50V X7R (MOQ:50x)
C068A	45178	SMD Kondensator KERKO 15pF 50V NPO (MOQ:50x) 132-144, 169-184 MHz	SMD capacitor KERKO 15pF 50V NPO (MOQ:50x) 132-144, 169-184 MHz
C068B	45177	SMD Kondensator KERKO 18pF 50V NPO (MOQ:50x) 183-260 MHz	SMD capacitor KERKO 18pF 50V NPO (MOQ:50x) 183-260 MHz
C069	45175	SMD Kondensator KERKO 12pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 12pF 50V NPO (MOQ:50x)
C070A	45178	SMD Kondensator KERKO 22pF 50V NPO (MOQ:50x) 132-144,169-184 MHz	SMD capacitor KERKO 22pF 50V NPO (MOQ:50x) 132-144,169-184 MHz
C070B	45177	SMD Kondensator KERKO 18pF 50V NPO (MOQ:50x) 183-260 MHz	SMD capacitor KERKO 18pF 50V NPO (MOQ:50x) 183-260 MHz
C071	45201	SMD Kondensator KERKO 10nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 10nF 50V X7R (MOQ:50x)
C072	45196	SMD Kondensator KERKO 2,2pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 2,2pF 50V NPO (MOQ:50x)
C073	45196	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C074	45010	SMD Kondensator TA-KO 10uF 4V ERO ETPW1	SMD capacitor TA-KO 10uF 4V ERO ETPW1
C075	45201	SMD Kondensator KERKO 10nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 10nF 50V X7R (MOQ:50x)
C076	45201	SMD Kondensator KERKO 10nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 10nF 50V X7R (MOQ:50x)
C077	45195	SMD Kondensator KERKO 1nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 1nF 50V X7R (MOQ:50x)
C079	45196	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C080	45195	SMD Kondensator KERKO 1nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 1nF 50V X7R (MOQ:50x)
C081	45201	SMD Kondensator KERKO 10nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 10nF 50V X7R (MOQ:50x)
C082	45195	SMD Kondensator KERKO 1nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 1nF 50V X7R (MOQ:50x)
C083A	45181	SMD Kondensator KERKO 39pF 50V NPO (MOQ:50x) 132-144 MHz	SMD capacitor KERKO 39pF 50V NPO (MOQ:50x) 132-144 MHz
C083B	45175	SMD Kondensator KERKO 12pF 50V NPO (MOQ:50x) 169-184 MHz	SMD capacitor KERKO 12pF 50V NPO (MOQ:50x) 169-184 MHz
C083C	45179	SMD Kondensator KERKO 27pF 50V NPO (MOQ:50x) 183-200 MHz	SMD capacitor KERKO 27pF 50V NPO (MOQ:50x) 183-200 MHz
C083D	45177	SMD Kondensator KERKO 18pF 50V NPO (MOQ:50x) 199-217 MHz	SMD capacitor KERKO 18pF 50V NPO (MOQ:50x) 199-217 MHz
C083E	45180	SMD Kondensator KERKO 33pF 50V NPO (MOQ:50x) 216-235 MHz	SMD capacitor KERKO 33pF 50V NPO (MOQ:50x) 216-235 MHz
C088F	45178	SMD Kondensator KERKO 22pF 50V NPO (MOQ:50x) 234-260 MHz	SMD capacitor KERKO 22pF 50V NPO (MOQ:50x) 234-260 MHz
C08A	45201	SMD Kondensator KERKO 10nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 10nF 50V X7R (MOQ:50x)
C08B	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C08C	45201	SMD Kondensator KERKO 10nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 10nF 50V X7R (MOQ:50x)
C088A	45175	SMD Kondensator KERKO 12pF 50V NPO (MOQ:50x) 132-144 MHz	SMD capacitor KERKO 12pF 50V NPO (MOQ:50x) 132-144 MHz
C088B	45176	SMD Kondensator KERKO 15pF 50V NPO (MOQ:50x) 169-184,199-217 MHz	SMD capacitor KERKO 15pF 50V NPO (MOQ:50x) 169-184,199-217 MHz
C088C	45174	SMD Kondensator KERKO 10pF 50V NPO (MOQ:50x) 183-200,216-235 MHz	SMD capacitor KERKO 10pF 50V NPO (MOQ:50x) 183-200,216-235 MHz
C088D	45177	SMD Kondensator KERKO 18pF 50V NPO (MOQ:50x) 234-260 MHz	SMD capacitor KERKO 18pF 50V NPO (MOQ:50x) 234-260 MHz
C089	45195	SMD Kondensator KERKO 1nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 1nF 50V X7R (MOQ:50x)
C090	45201	SMD Kondensator KERKO 10nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 10nF 50V X7R (MOQ:50x)
C091A	45176	SMD Kondensator KERKO 15pF 50V NPO (MOQ:50x) 132-144,183-200,216-235 MHz	SMD capacitor KERKO 15pF 50V NPO (MOQ:50x) 132-144,183-200,216-235 MHz
C091B	45177	SMD Kondensator KERKO 18pF 50V NPO (MOQ:50x) 169-184 MHz	SMD capacitor KERKO 18pF 50V NPO (MOQ:50x) 169-184 MHz
C091C	45178	SMD Kondensator KERKO 22pF 50V NPO (MOQ:50x) 199-217,234-260 MHz	SMD capacitor KERKO 22pF 50V NPO (MOQ:50x) 199-217,234-260 MHz
C092A	45176	SMD Kondensator KERKO 15pF 50V NPO (MOQ:50x) 132-144 MHz	SMD capacitor KERKO 15pF 50V NPO (MOQ:50x) 132-144 MHz
C092B	45173	SMD Kondensator KERKO 8,2pF 50V NPO (MOQ:50x) 169-184 MHz	SMD capacitor KERKO 8.2pF 50V NPO (MOQ:50x) 169-184 MHz
C092C	45171	SMD Kondensator KERKO 5,6pF 50V NPO (MOQ:50x) 183-200,234-260 MHz	SMD capacitor KERKO 5.6pF 50V NPO (MOQ:50x) 183-200,234-260 MHz
C092D	45168	SMD Kondensator KERKO 3,3pF 50V NPO (MOQ:50x) 199-217 MHz	SMD capacitor KERKO 3.3pF 50V NPO (MOQ:50x) 199-217 MHz

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C002E	45175	SMD Kondensator KERKO 12pF 50V NPO (MOQ:50x) 216-235 MHz	SMD capacitor KERKO 12pF 50V NPO (MOQ:50x) 216-235 MHz
C003A	45168	SMD Kondensator KERKO 3,3pF 50V NPO (MOQ:50x) 132-144,169-184 MHz	SMD capacitor KERKO 3.3pF 50V NPO (MOQ:50x) 132-144,169-184 MHz
C003B	45167	SMD Kondensator KERKO 2,7pF 50V NPO (MOQ:50x) 183-200,216-235 MHz	SMD capacitor KERKO 2.7pF 50V NPO (MOQ:50x) 183-200,216-235 MHz
C003C	45166	SMD Kondensator KERKO 2,2pF 50V NPO (MOQ:50x) 199-217,234-260 MHz	SMD capacitor KERKO 2.2pF 50V NPO (MOQ:50x) 199-217,234-260 MHz
C004A	45178	SMD Kondensator KERKO 22pF 50V NPO (MOQ:50x) 132-144 MHz	SMD capacitor KERKO 22pF 50V NPO (MOQ:50x) 132-144 MHz
C004B	45177	SMD Kondensator KERKO 18pF 50V NPO (MOQ:50x) 169-184 MHz	SMD capacitor KERKO 18pF 50V NPO (MOQ:50x) 169-184 MHz
C004C	45176	SMD Kondensator KERKO 15pF 50V NPO (MOQ:50x) 183-200,216-260 MHz	SMD capacitor KERKO 15pF 50V NPO (MOQ:50x) 183-200,216-260 MHz
C004D	45175	SMD Kondensator KERKO 12pF 50V NPO (MOQ:50x) 199-217 MHz	SMD capacitor KERKO 12pF 50V NPO (MOQ:50x) 199-217 MHz
C005A	45178	SMD Kondensator KERKO 22pF 50V NPO (MOQ:50x) 132-144 MHz	SMD capacitor KERKO 22pF 50V NPO (MOQ:50x) 132-144 MHz
C005B	45176	SMD Kondensator KERKO 15pF 50V NPO (MOQ:50x) 169-184,234-260 MHz	SMD capacitor KERKO 15pF 50V NPO (MOQ:50x) 169-184,234-260 MHz
C005C	45175	SMD Kondensator KERKO 12pF 50V NPO (MOQ:50x) 183-200 MHz	SMD capacitor KERKO 12pF 50V NPO (MOQ:50x) 183-200 MHz
C005D	45174	SMD Kondensator KERKO 10pF 50V NPO (MOQ:50x) 199-217 MHz	SMD capacitor KERKO 10pF 50V NPO (MOQ:50x) 199-217 MHz
C005E	45173	SMD Kondensator KERKO 8,2pF 50V NPO (MOQ:50x) 216-235 MHz	SMD capacitor KERKO 8.2pF 50V NPO (MOQ:50x) 216-235 MHz
C100	45050	SMD Kondensator TA-KO 470nF 20V	SMD Capacitor TA-KO 470nF 20V
C101	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C102	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C103	45010	SMD Kondensator TA-KO 10uF 4V ERO ETPW1	SMD capacitor TA-KO 10uF 4V ERO ETPW1
C104	45010	SMD Kondensator TA-KO 10uF 4V ERO ETPW1	SMD capacitor TA-KO 10uF 4V ERO ETPW1
C105	45197	SMD Kondensator KERKO 2,2nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 2.2nF 50V X7R (MOQ:50x)
C107	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C108	45201	SMD Kondensator KERKO 10nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 10nF 50V X7R (MOQ:50x)
C110	45180	SMD Kondensator KERKO 33pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 33pF 50V NPO (MOQ:50x)
C111	45180	SMD Kondensator KERKO 33pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 33pF 50V NPO (MOQ:50x)
C112	45195	SMD Kondensator KERKO 1nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 1nF 50V X7R (MOQ:50x)
C113	45201	SMD Kondensator KERKO 10nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 10nF 50V X7R (MOQ:50x)
C115	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C116	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C117	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x)	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x)
C120	45010	SMD Kondensator TA-KO 10uF 4V ERO ETPW1	SMD capacitor TA-KO 10uF 4V ERO ETPW1
C121	19480	SMD Kondensator KERKO 100nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 100nF 50V X7R (MOQ:50x)
C122	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C123	19480	SMD Kondensator KERKO 100nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 100nF 50V X7R (MOQ:50x)
C124	45043	SMD Kondensator TA-KO 2,2uF 16V IEC 384,3	SMD capacitor TA-KO 2.2uF 16V IEC 384,3
C125	19480	SMD Kondensator KERKO 100nF 50V X7R (MOQ:50x)	SMD capacitor KERKO 100nF 50V X7R (MOQ:50x)
C800	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x) 169-184,199-217,234-260 MHz	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x) 169-184,199-217,234-260 MHz
C801	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x) 132-144,169-200,234-260 MHz	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x) 132-144,169-200,234-260 MHz
C802	45186	SMD Kondensator KERKO 100pF 50V NPO (MOQ:50x) 169-235 MHz	SMD capacitor KERKO 100pF 50V NPO (MOQ:50x) 169-235 MHz
D003	32642	SMD Doppeldiode BAV99 SOT23	SMD diodes (twal) BAV99 SOT23
D006	45304	SMD Varicap BB419 SOD123	SMD Varicap BB419 SOT123
D006	45304	SMD Varicap BB419 SOD123	SMD Varicap BB419 SOT123
D007	32642	SMD Doppeldiode BAV99 SOT23	SMD diodes (twal) BAV99 SOT23
J001	45613	Buchse, Coax/Lemo	Socket, coax/lema
L001	32123	SMD Spule 4,7uH	SMD coil 4.7uH
L002A	45617	SMD HF-Spule SUMIDA CS4.S21 132-144 MHz	SMD RF coil SUMIDA CS4.S21 132-144 MHz
L002B	45489	SMD HF-Spule SUMIDA CS4.S20Y 169-217 MHz	SMD RF coil SUMIDA CS4.S20Y 169-217 MHz
L002C	45618	SMD HF-Spule SUMIDA CS4.S19 216-260 MHz	SMD RF coil SUMIDA CS.S19 216-260 MHz
L003A	46989	SMD Spule 100nH SUP8 132-144,169-184 MHz	SMD coil 100nH SUP8 132-144,169-184 MHz
L003B	45615	SMD Spule 68nH 183-217 MHz	SMD coil 68nH 183-217 MHz
L003C	45494	SMD Spule 47nH SUP8 216-260 MHz	SMD coil 47nH SUP8 216-260 MHz
L004A	46989	SMD Spule 100nH SUP8 132-144 MHz	SMD coil 100nH SUP8 132-144 MHz

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L004B	45315	SMD Spule 68nH 169-200 MHz	SMD coil 68nH 169-200 MHz
L004C	45494	SMD Spule 47nH SUP8 199-235 MHz	SMD coil 47nH SUP8 199-235 MHz
L004D	45493	SMD Spule 22nH SUP8 234-260 MHz	SMD coil 22nH SUP8 234-260 MHz
L005A	40989	SMD Spule 100nH SUP8 132-144 MHz	SMD coil 100nH SUP8 132-144 MHz
L005B	45615	SMD Spule 68nH 169-217 MHz	SMD coil 68nH 169-217 MHz
L005C	45494	SMD Spule 47nH SUP8 216-260 MHz	SMD coil 47nH SUP8 216-260 MHz
L006A	45495	SMD Spule 150nH SUP8 132-144 MHz	SMD coil 150nH SUP8 132-144 MHz
L006B	40989	SMD Spule 100nH SUP8 169-217 MHz	SMD coil 100nH SUP8 169-217 MHz
L006C	45615	SMD Spule 68nH 216-260 MHz	SMD coil 68nH 216-260 MHz
Q002	32467	SMD Transistor BC850B SOT23	SMD transistor BC850B SOT23
Q003	32468	SMD Transistor BC860B SOT23	SMD transistor BC860B SOT23
Q004	32467	SMD Transistor BC850B SOT23	SMD transistor BC850B SOT23
Q005	32468	SMD Transistor BC860B SOT23	SMD transistor BC860B SOT23
Q006	32468	SMD Transistor BC860B SOT23	SMD transistor BC860B SOT23
Q007	32467	SMD Transistor BC850B SOT23	SMD transistor BC850B SOT23
Q008	32468	SMD Transistor BC860B SOT23	SMD transistor BC860B SOT23
Q010	27023	SMD Transistor 6FS17 SOT23	SMD transistor 6FS17 SOT23
Q011	27023	SMD Transistor 6FS17 SOT23	SMD transistor 6FS17 SOT23
Q012	27023	SMD Transistor 6FS17 SOT23	SMD transistor 6FS17 SOT23
Q013	21165	SMD Transistor BC850C SOT23	SMD transistor BC850C SOT23
Q014	27023	SMD Transistor 6FS17 SOT23	SMD transistor 6FS17 SOT23
Q015	21165	SMD Transistor BC850C SOT23	SMD transistor BC850C SOT23
Q016	27023	SMD Transistor 6FS17 SOT23	SMD transistor 6FS17 SOT23
Q017	32468	SMD Transistor BC860B SOT23	SMD transistor BC860B SOT23
Q018	32467	SMD Transistor BC850B SOT23	SMD transistor BC850B SOT23
Q019	32467	SMD Transistor BC850B SOT23	SMD transistor BC850B SOT23
Q020	32468	SMD Transistor BC860B SOT23	SMD transistor BC860B SOT23
Q021	32468	SMD Transistor BC860B SOT23	SMD transistor BC860B SOT23
Q022	32468	SMD Transistor BC860B SOT23	SMD transistor BC860B SOT23
R001	45124	SMD Widerstand 47R 5% 0603 (MOQ:50x)	SMD resistor 47R 5% 0603 (MOQ:50x)
R002	45124	SMD Widerstand 47R 5% 0603 (MOQ:50x)	SMD resistor 47R 5% 0603 (MOQ:50x)
R003	45132	SMD Widerstand 1k 5% 0603 (MOQ:50x)	SMD resistor 1k 5% 0603 (MOQ:50x)
R004	45137	SMD Widerstand 6k8 5% 0603 (MOQ:50x)	SMD resistor 6k8 5% 0603 (MOQ:50x)
R005	45140	SMD Widerstand 22k 5% 0603 (MOQ:50x)	SMD resistor 22k 5% 0603 (MOQ:50x)
R006	45135	SMD Widerstand 3k3 5% 0603 (MOQ:50x)	SMD resistor 3k3 5% 0603 (MOQ:50x)
R007	45141	SMD Widerstand 33k 5% 0603 (MOQ:50x)	SMD resistor 33k 5% 0603 (MOQ:50x)
R009	45138	SMD Widerstand 10k 5% 0603 (MOQ:50x)	SMD resistor 10k 5% 0603 (MOQ:50x)
R010	45143	SMD Widerstand 68k 5% 0603 (MOQ:50x)	SMD resistor 68k 5% 0603 (MOQ:50x)
R011	45221	SMD Widerstand 82k 5% 0603 (MOQ:50x)	SMD resistor 82k 5% 0603 (MOQ:50x)
R012	45137	SMD Widerstand 6k8 5% 0603 (MOQ:50x)	SMD resistor 6k8 5% 0603 (MOQ:50x)
R013	45295	SMD Widerstand 0R 0603 (MOQ:50x)	SMD resistor 0R 0603 (MOQ:50x)
R014	45135	SMD Widerstand 3k3 5% 0603 (MOQ:50x)	SMD resistor 3k3 5% 0603 (MOQ:50x)
R015	45130	SMD Widerstand 470R 5% 0603 (MOQ:50x)	SMD resistor 470R 5% 0603 (MOQ:50x)
R016	45132	SMD Widerstand 1k 5% 0603 (MOQ:50x)	SMD resistor 1k 5% 0603 (MOQ:50x)
R018	45144	SMD Widerstand 100k 5% 0603 (MOQ:50x)	SMD resistor 100k 5% 0603 (MOQ:50x)
R020	45148	SMD Widerstand 470k 5% 0603 (MOQ:50x)	SMD resistor 470k 5% 0603 (MOQ:50x)
R021	45143	SMD Widerstand 68k 5% 0603 (MOQ:50x)	SMD resistor 68k 5% 0603 (MOQ:50x)
R022	45139	SMD Widerstand 15k 5% 0603 (MOQ:50x)	SMD resistor 15k 5% 0603 (MOQ:50x)
R023	45132	SMD Widerstand 1k 5% 0603 (MOQ:50x)	SMD resistor 1k 5% 0603 (MOQ:50x)
R024	45148	SMD Widerstand 220k 5% 0603 (MOQ:50x)	SMD resistor 220k 5% 0603 (MOQ:50x)
R025	45138	SMD Widerstand 10k 5% 0603 (MOQ:50x)	SMD resistor 10k 5% 0603 (MOQ:50x)
R026	45142	SMD Widerstand 47k 5% 0603 (MOQ:50x)	SMD resistor 47k 5% 0603 (MOQ:50x)
R027	45141	SMD Widerstand 33k 5% 0603 (MOQ:50x)	SMD resistor 33k 5% 0603 (MOQ:50x)
R028	45138	SMD Widerstand 10k 5% 0603 (MOQ:50x)	SMD resistor 10k 5% 0603 (MOQ:50x)
R029	45139	SMD Widerstand 15k 5% 0603 (MOQ:50x)	SMD resistor 15k 5% 0603 (MOQ:50x)
R030	45140	SMD Widerstand 22k 5% 0603 (MOQ:50x)	SMD resistor 22k 5% 0603 (MOQ:50x)
R031	45142	SMD Widerstand 47k 5% 0603 (MOQ:50x)	SMD resistor 47k 5% 0603 (MOQ:50x)
R032	45138	SMD Widerstand 10k 5% 0603 (MOQ:50x)	SMD resistor 10k 5% 0603 (MOQ:50x)
R033	45130	SMD Widerstand 470R 5% 0603 (MOQ:50x)	SMD resistor 470R 5% 0603 (MOQ:50x)
R034	45139	SMD Widerstand 15k 5% 0603 (MOQ:50x)	SMD resistor 15k 5% 0603 (MOQ:50x)
R035	45137	SMD Widerstand 6k8 5% 0603 (MOQ:50x)	SMD resistor 6k8 5% 0603 (MOQ:50x)
R036	45139	SMD Widerstand 15k 5% 0603 (MOQ:50x)	SMD resistor 15k 5% 0603 (MOQ:50x)
R037	45132	SMD Widerstand 1k 5% 0603 (MOQ:50x)	SMD resistor 1k 5% 0603 (MOQ:50x)
R040	45136	SMD Widerstand 4k7 5% 0603 (MOQ:50x)	SMD resistor 4k7 5% 0603 (MOQ:50x)



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R041	45136	SMD Widerstand 10k 5% 0603 (MOQ:50x)	SMD resistor 10k 5% 0603 (MOQ:50x)
R042	45221	SMD Widerstand 82k 5% 0603 (MOQ:50x)	SMD resistor 82k 5% 0603 (MOQ:50x)
R043	45142	SMD Widerstand 47k 5% 0603 (MOQ:50x)	SMD resistor 47k 5% 0603 (MOQ:50x)
R044	45142	SMD Widerstand 47k 5% 0603 (MOQ:50x)	SMD resistor 47k 5% 0603 (MOQ:50x)
R045	45142	SMD Widerstand 47k 5% 0603 (MOQ:50x)	SMD resistor 47k 5% 0603 (MOQ:50x)
R046	45135	SMD Widerstand 3k3 5% 0603 (MOQ:50x)	SMD resistor 3k3 5% 0603 (MOQ:50x)
R047	45135	SMD Widerstand 3k3 5% 0603 (MOQ:50x)	SMD resistor 3k3 5% 0603 (MOQ:50x)
R048	45142	SMD Widerstand 47k 5% 0603 (MOQ:50x)	SMD resistor 47k 5% 0603 (MOQ:50x)
R049	45143	SMD Widerstand 68k 5% 0603 (MOQ:50x)	SMD resistor 68k 5% 0603 (MOQ:50x)
R050	45136	SMD Widerstand 4k7 5% 0603 (MOQ:50x)	SMD resistor 4k7 5% 0603 (MOQ:50x)
R051	45137	SMD Widerstand 6k8 5% 0603 (MOQ:50x)	SMD resistor 6k8 5% 0603 (MOQ:50x)
R052	45141	SMD Widerstand 33k 5% 0603 (MOQ:50x)	SMD resistor 33k 5% 0603 (MOQ:50x)
R053	45144	SMD Widerstand 100k 5% 0603 (MOQ:50x)	SMD resistor 100k 5% 0603 (MOQ:50x)
R054	45136	SMD Widerstand 4k7 5% 0603 (MOQ:50x)	SMD resistor 4k7 5% 0603 (MOQ:50x)
R056	45009	SMD Trimwiderstand 50k	SMD resistor, variable 50k
R057	45141	SMD Widerstand 33k 5% 0603 (MOQ:50x)	SMD resistor 33k 5% 0603 (MOQ:50x)
R060	45132	SMD Widerstand 1k 5% 0603 (MOQ:50x)	SMD resistor 1k 5% 0603 (MOQ:50x)
R061	45136	SMD Widerstand 4k7 5% 0603 (MOQ:50x)	SMD resistor 4k7 5% 0603 (MOQ:50x)
R062	45134	SMD Widerstand 2k2 5% 0603 (MOQ:50x)	SMD resistor 2k2 5% 0603 (MOQ:50x)
R063	45146	SMD Widerstand 220k 5% 0603 (MOQ:50x)	SMD resistor 220k 5% 0603 (MOQ:50x)
R064	45139	SMD Widerstand 10k 5% 0603 (MOQ:50x)	SMD resistor 10k 5% 0603 (MOQ:50x)
R065	45136	SMD Widerstand 4k7 5% 0603 (MOQ:50x)	SMD resistor 4k7 5% 0603 (MOQ:50x)
R066	45139	SMD Widerstand 10k 5% 0603 (MOQ:50x)	SMD resistor 10k 5% 0603 (MOQ:50x)
R067	45124	SMD Widerstand 47R 5% 0603 (MOQ:50x)	SMD resistor 47R 5% 0603 (MOQ:50x)
R068	45130	SMD Widerstand 470R 5% 0603 (MOQ:50x)	SMD resistor 470R 5% 0603 (MOQ:50x)
R069	45128	SMD Widerstand 220R 5% 0603 (MOQ:50x)	SMD resistor 220R 5% 0603 (MOQ:50x)
R070	45136	SMD Widerstand 4k7 5% 0603 (MOQ:50x)	SMD resistor 4k7 5% 0603 (MOQ:50x)
R071	45136	SMD Widerstand 4k7 5% 0603 (MOQ:50x)	SMD resistor 4k7 5% 0603 (MOQ:50x)
R072	45136	SMD Widerstand 4k7 5% 0603 (MOQ:50x)	SMD resistor 4k7 5% 0603 (MOQ:50x)
R073	45124	SMD Widerstand 47R 5% 0603 (MOQ:50x)	SMD resistor 47R 5% 0603 (MOQ:50x)
R074	45125	SMD Widerstand 100R 5% 0603 (MOQ:50x)	SMD resistor 100R 5% 0603 (MOQ:50x)
R075	45135	SMD Widerstand 4k7 5% 0603 (MOQ:50x)	SMD resistor 4k7 5% 0603 (MOQ:50x)
R076	45120	SMD Widerstand 10R 5% 0603 (MOQ:50x)	SMD resistor 10R 5% 0603 (MOQ:50x)
R077	45134	SMD Widerstand 2k2 5% 0603 (MOQ:50x)	SMD resistor 2k2 5% 0603 (MOQ:50x)
R078	45140	SMD Widerstand 22k 5% 0603 (MOQ:50x)	SMD resistor 22k 5% 0603 (MOQ:50x)
R079	45138	SMD Widerstand 10k 5% 0603 (MOQ:50x)	SMD resistor 10k 5% 0603 (MOQ:50x)
R080	45128	SMD Widerstand 220R 5% 0603 (MOQ:50x)	SMD resistor 220R 5% 0603 (MOQ:50x)
R081	45123	SMD Widerstand 330R 5% 0603 (MOQ:50x)	SMD resistor 330R 5% 0603 (MOQ:50x)
R082	45135	SMD Widerstand 4k7 5% 0603 (MOQ:50x)	SMD resistor 4k7 5% 0603 (MOQ:50x)
R083	45134	SMD Widerstand 2k2 5% 0603 (MOQ:50x)	SMD resistor 2k2 5% 0603 (MOQ:50x)
R084	45137	SMD Widerstand 6k8 5% 0603 (MOQ:50x)	SMD resistor 6k8 5% 0603 (MOQ:50x)
R085	45135	SMD Widerstand 3k3 5% 0603 (MOQ:50x)	SMD resistor 3k3 5% 0603 (MOQ:50x)
R086	45124	SMD Widerstand 47R 5% 0603 (MOQ:50x)	SMD resistor 47R 5% 0603 (MOQ:50x)
R087	45285	SMD Widerstand 0R 0603 (MOQ:50x)	SMD resistor 0R 0603 (MOQ:50x)
R090	45142	SMD Widerstand 47k 5% 0603 (MOQ:50x)	SMD resistor 47k 5% 0603 (MOQ:50x)
R091	45142	SMD Widerstand 47k 5% 0603 (MOQ:50x)	SMD resistor 47k 5% 0603 (MOQ:50x)
R092	45142	SMD Widerstand 47k 5% 0603 (MOQ:50x)	SMD resistor 47k 5% 0603 (MOQ:50x)
R093	45142	SMD Widerstand 47k 5% 0603 (MOQ:50x)	SMD resistor 47k 5% 0603 (MOQ:50x)
R094	45142	SMD Widerstand 47k 5% 0603 (MOQ:50x)	SMD resistor 47k 5% 0603 (MOQ:50x)
R095	45285	SMD Widerstand 0R 0603 (MOQ:50x)	SMD resistor 0R 0603 (MOQ:50x)
R097	45285	SMD Widerstand 0R 0603 (MOQ:50x)	SMD resistor 0R 0603 (MOQ:50x)
R098	45285	SMD Widerstand 0R 0603 (MOQ:50x)	SMD resistor 0R 0603 (MOQ:50x)
R099	45285	SMD Widerstand 0R 0603 (MOQ:50x)	SMD resistor 0R 0603 (MOQ:50x)
R100	45134	SMD Widerstand 2k2 5% 0603 (MOQ:50x)	SMD resistor 2k2 5% 0603 (MOQ:50x)
R101	45130	SMD Widerstand 470R 5% 0603 (MOQ:50x)	SMD resistor 470R 5% 0603 (MOQ:50x)
R102	45138	SMD Widerstand 10k 5% 0603 (MOQ:50x)	SMD resistor 10k 5% 0603 (MOQ:50x)
R103	45137	SMD Widerstand 6k8 5% 0603 (MOQ:50x)	SMD resistor 6k8 5% 0603 (MOQ:50x)
R104	45142	SMD Widerstand 47k 5% 0603 (MOQ:50x)	SMD resistor 47k 5% 0603 (MOQ:50x)
R105	45136	SMD Widerstand 4k7 5% 0603 (MOQ:50x)	SMD resistor 4k7 5% 0603 (MOQ:50x)
R106	45292	SMD Widerstand 3M3 10% 0603 (MOQ:50x)	SMD resistor 3M3 10% 0603 (MOQ:50x)
R107	45292	SMD Widerstand 3M3 10% 0603 (MOQ:50x)	SMD resistor 3M3 10% 0603 (MOQ:50x)
R108	45140	SMD Widerstand 22k 5% 0603 (MOQ:50x)	SMD resistor 22k 5% 0603 (MOQ:50x)
R109	45144	SMD Widerstand 100k 5% 0603 (MOQ:50x)	SMD resistor 100k 5% 0603 (MOQ:50x)
R110	45132	SMD Widerstand 1k 5% 0603 (MOQ:50x)	SMD resistor 1k 5% 0603 (MOQ:50x)
R111	45150	SMD Widerstand 1M 5% 0603 (MOQ:50x)	SMD resistor 1M 5% 0603 (MOQ:50x)
R112	45132	SMD Widerstand 1k 5% 0603 (MOQ:50x)	SMD resistor 1k 5% 0603 (MOQ:50x)
R113	45136	SMD Widerstand 4k7 5% 0603 (MOQ:50x)	SMD resistor 4k7 5% 0603 (MOQ:50x)
R119	45120	SMD Widerstand 10R 5% 0603 (MOQ:50x)	SMD resistor 10R 5% 0603 (MOQ:50x)
R120	45146	SMD Widerstand 220k 5% 0603 (MOQ:50x)	SMD resistor 220k 5% 0603 (MOQ:50x)
R121	45146	SMD Widerstand 220k 5% 0603 (MOQ:50x)	SMD resistor 220k 5% 0603 (MOQ:50x)
R122	45148	SMD Widerstand 470k 5% 0603 (MOQ:50x)	SMD resistor 470k 5% 0603 (MOQ:50x)
R123	45148	SMD Widerstand 470k 5% 0603 (MOQ:50x)	SMD resistor 470k 5% 0603 (MOQ:50x)
R124	45144	SMD Widerstand 100k 5% 0603 (MOQ:50x)	SMD resistor 100k 5% 0603 (MOQ:50x)

POS	IDENT	BEZEICHNUNG	DESCRIPTION
R126	45150	SMD Widerstand 1M 5% 0603 (MOQ:50x)	SMD resistor 1M 5% 0603 (MOQ:50x)
R127	45146	SMD Widerstand 220k 5% 0603 (MOQ:50x)	SMD resistor 220k 5% 0603 (MOQ:50x)
R128	45148	SMD Widerstand 470k 5% 0603 (MOQ:50x)	SMD resistor 470k 5% 0603 (MOQ:50x)
S001	45230	Schiebeschalter	Slide switch
S005	45230	Schiebeschalter	Slide switch
S006	45230	Schiebeschalter	Slide switch
U001	41277	SMD IC MC33078D SO8 SUP8	SMD IC MC33078D SO8 SUP8
U002	45093	SMD IC NE572D SOL16	SMD IC NE572D SOL16
U003	40095	IC PROM 1Kx4 N825129N	IC PROM 1Kx4 N825129N
U004	45034	SMD IC CMOS NJ8820 MP20	SMD IC CMOS NJ8820 MP20
U005	45609	SMD IC NE701D SO8	SMD IC NE701D SO8
U006	43686	SMD IC RH5RA50AA.T2 SOT89	SMD IC RH5RA50AA.T2 SOT89
Y001	45309	Quarz 6MHz	Crystal 6MHz
ZZ020	52798	Bedenungsanleitung	Instructions for use