



Silizium-Planardioden für Rundfunk- und Fernseh-tuner

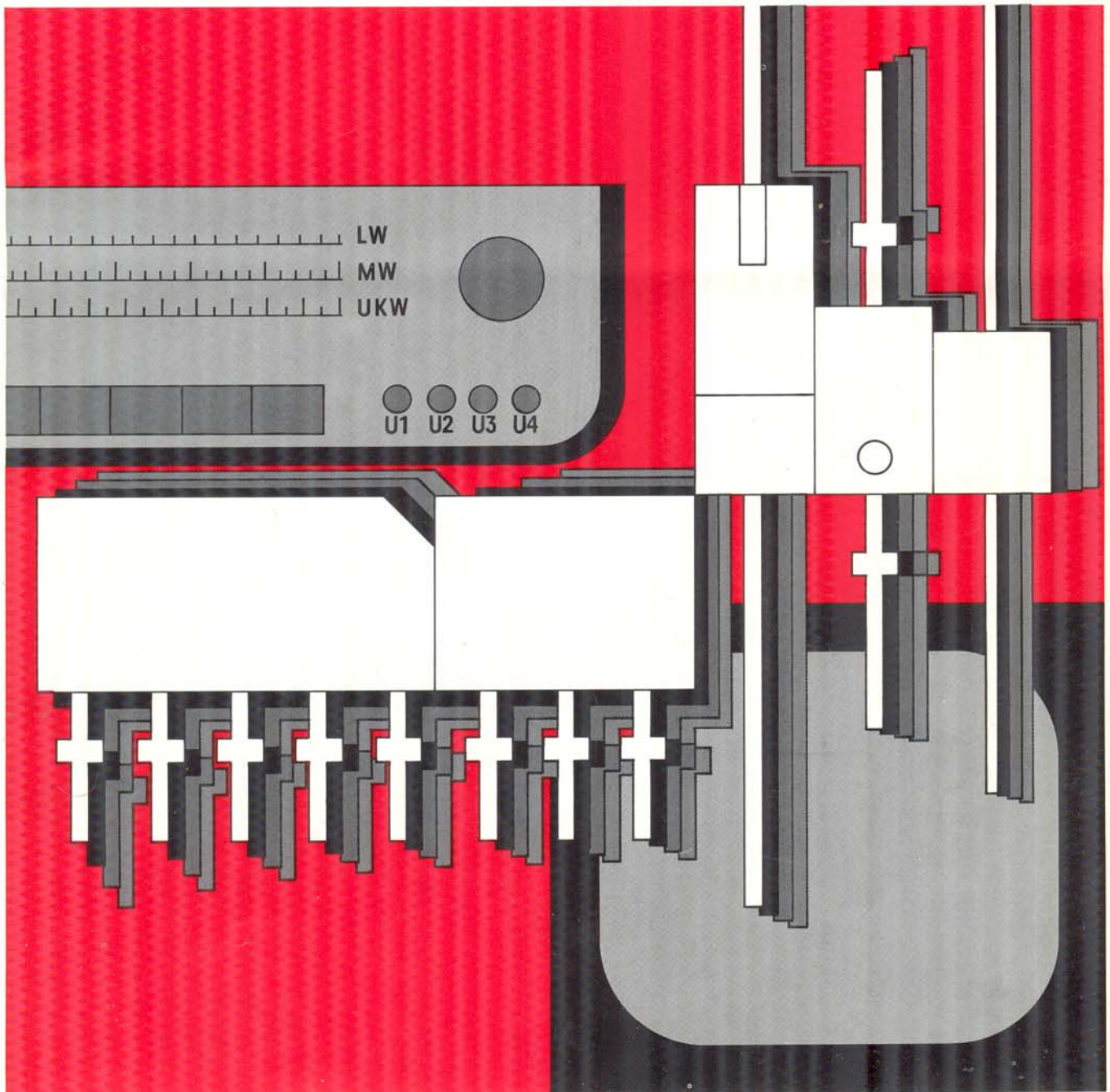
Silicon planar diodes for tuners in radio and TV receivers

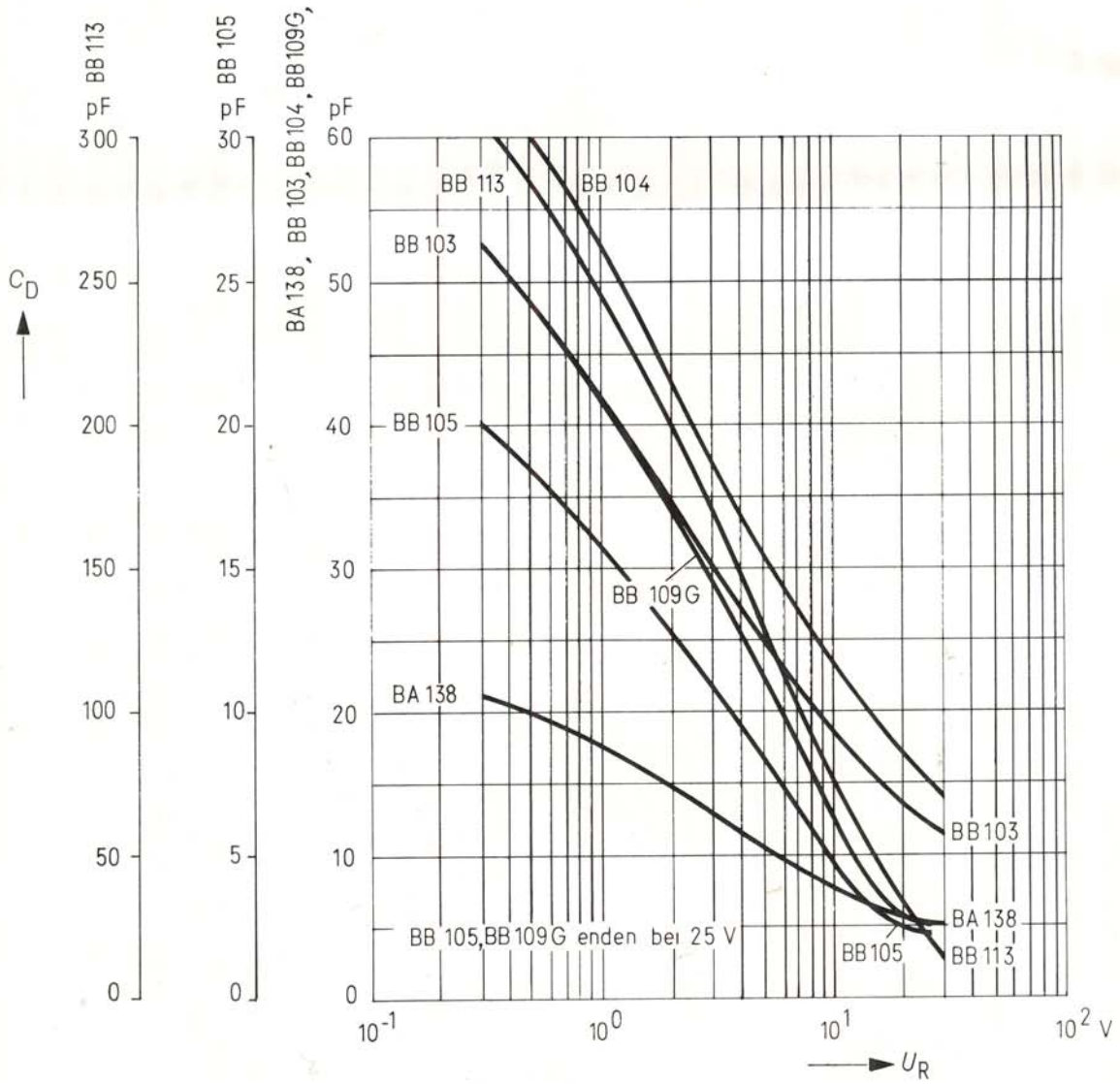
Frequenzwahl
frequency selection

AM Radio	BB 113
FM Radio	BB 103, BB 104, BA 138
VHF TV	BA 138, BB 105 G, BB 109 G
UHF TV	BB 105 A, BB 105 B

Verstärkungsregelung
gain control

FM Radio	BA 379
VHF TV	BA 379
UHF TV	BA 379





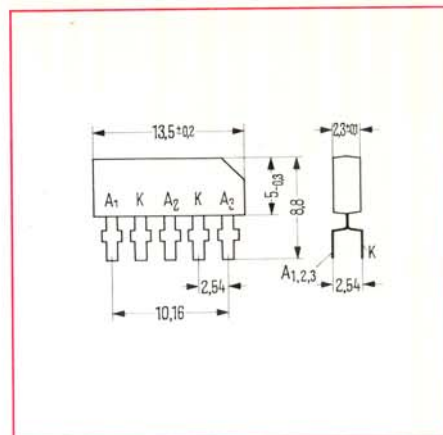
BB 113

Dreifach AM-Abstimm-diode mit gemeinsamer Kathode in Kunststoffumhüllung.

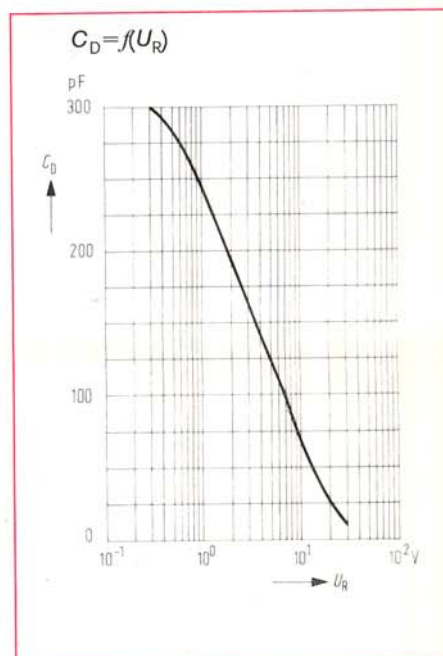
Daten gelten für jede der drei gleichen Teildioden.

Triple-AM-tuning diode with common cathode in a plastic package.

Data are valid for each of the three identical diodes.



		BB 113	
Sperrspannung	U_R	32 V	V_R reverse voltage
Diodenkapazität ($U_R=1V$)	C_{D1V}	230-280 pF	C_{D1V} diode capacitance ($V_R=1V$)
	($U_R=10 V$) C_{D10V}	>55 pF	($V_R=10V$) C_{D10V}
	($U_R=30V$) C_{D30V}	<13 pF	($V_R=30V$) C_{D30V}
Diodengüte	Q	>400	Q quality factor
($C_D=200pF, f=0,5 MHz$)			($C_D=200pF, f=0,5 MHz$)
Kapazitätstoleranz der Teildioden untereinander ($U_R=1V$)	IKI ¹⁾	6%	IKI ¹⁾ capacitance tolerance of partial diodes ($V_R=1V$)
Zusätzlicher Gleichlauf- fehler	S ²⁾	s. Kurve see curve	S ²⁾ additional tracking error



$$1) K = \left(\frac{C_n - C_m}{C_m} \right) U_R = 1V$$

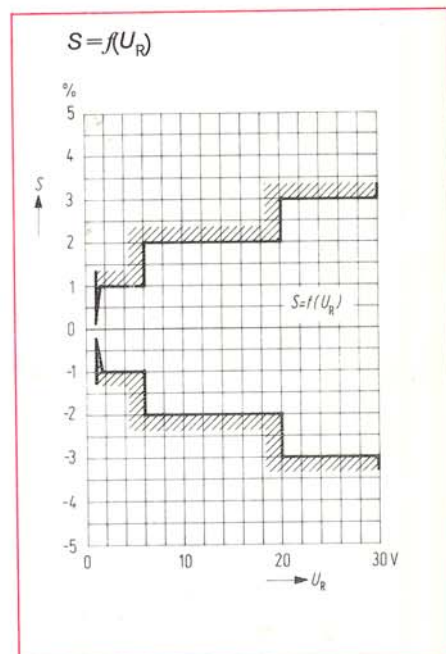
$$1) K = \left(\frac{C_n - C_m}{C_m} \right) V_R = 1V;$$

$$2) S = \left(\frac{C_n - C_m}{C_m} \right) U_R - K$$

$$2) S = \left(\frac{C_n - C_m}{C_m} \right) V_R - K;$$

C_n, C_m sind die Kapazitätswerte zweier beliebiger Teildioden einer BB 113 bei der Spannung U_R .

C_n, C_m are the capacitance values of any two partial diodes of one BB 113 at the voltage V_R .



BA 138

VHF-Abstimm-diode im Glasgehäuse
51 A 2 DIN 41880 (DO-7)

VHF tuning diode in glass case (DO-7).

BB 103

UKW-Abstimm-diode im Glasgehäuse
51 A 2 DIN 41880 (DO-7)

FM tuning diode in glass case (DO-7).

BB 104

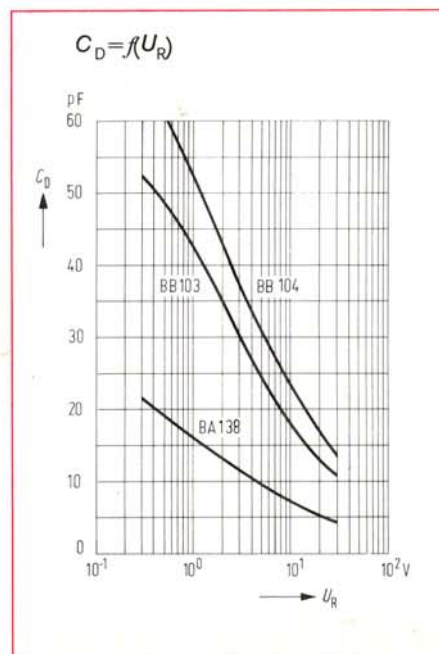
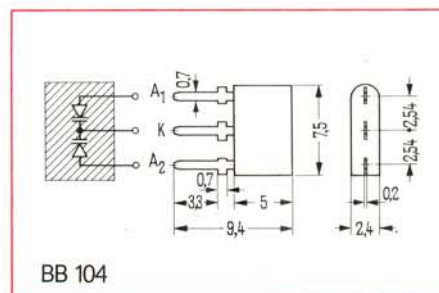
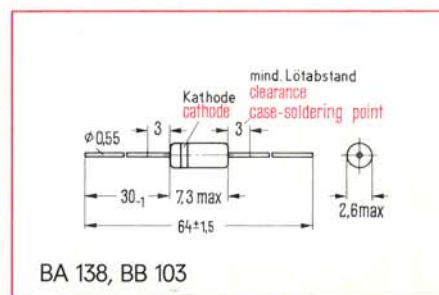
Zweifach-UKW-Abstimm-diode mit
gemeinsamer Kathode im Plastikgehäuse.
Daten gelten für jede Teildiode.

Double FM tuning diode with common
cathode in plastic case. Data are valid
for each partial diode.

	BA 138	BB 103	BB 104		
Sperrspannung U_R	30 V	30 V	30 V	V_R reverse voltage	
Diodenkapazität				diode capacitance	
Gruppierung	grün ($U_R=3V$) $C_{D,3V}$	11,5pF	27-31pF	34-39pF	$C_{D,3V}$ green ($V_R=3V$)
	blau ($U_R=3V$) $C_{D,3V}$	12,5pF	29-33pF	37-42pF	$C_{D,3V}$ blue ($V_R=3V$)
	grün ($U_R=30V$) $C_{D,30V}$	3,8-4,9pF	11pF	14pF	$C_{D,30V}$ green ($V_R=30V$)
	rot ($U_R=30V$) $C_{D,30V}$	4,4-4,9pF	-	-	$C_{D,30V}$ red ($V_R=30V$)
	blau ($U_R=30V$) $C_{D,30V}$	4,4-5,5pF	11,8pF	15pF	$C_{D,30V}$ blue ($V_R=30V$)
Kapazitätsverhältnis $\frac{C_{D,3V}}{C_{D,30V}}$	2,4-2,75	2,5-2,8	2,4-2,8	$\frac{C_{D,3V}}{C_{D,30V}}$ capacitance ratio	
Serienwiderstand T_S ($U_R=3V$)	<1,2 Ω	<0,5 Ω	<0,4 Ω	T_S series resistance ($V_R=3V$)	

Kapazitätsgruppen sind farbig gekennzeichnet.

Capacitance groups are colour coded.



BB 105 A

für UHF-Kanalwähler bis 790 MHz

for UHF tuners up to 790 MHz

BB 105 B

für UHF-Kanalwähler bis 860 MHz

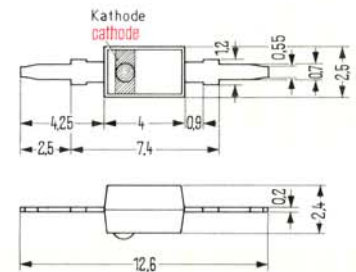
for UHF tuners up to 860 MHz

BB 105 G

für VHF-Kanalwähler

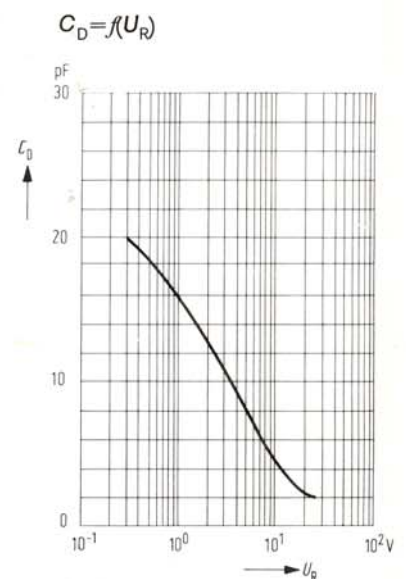
for VHF tuners

	BB 105 A	BB 105 B	BB 105 G	
Spitzensperrespannung U_{RM}	30 V	30 V	30 V	V_{RM} peak reverse voltage
Diodenkapazität ($U_R=3V$) $C_{D 3V}$	11,5pF	10,8pF	11,5pF	diode capacitance ($V_R=3V$) $C_{D 3V}$
($U_R=25V$) $C_{D 25V}$	2,3-2,8pF	2-2,3pF	1,8-2,8pF	($V_R=25V$) $C_{D 25V}$
Kapazitätsverhältnis $\frac{C_{D 3V}}{C_{D 25V}}$	4-5	4,5-6	4-6	capacitance ratio $\frac{C_{D 3V}}{C_{D 25V}}$
Serienwiderstand ($C_D=9pF$) r_s	<0,8 Ω	<0,8 Ω	<1,2 Ω	series resistance ($C_D=9pF$) r_s
Gleichlaufpaarung $\Delta C/C$	$\pm 1,5\%$	$\pm 1,5\%$	$\pm 3\%$	capacitance match $\Delta C/C$



UHF-VHF-Abstimmioden in Plastik-
umhüllung (SOD 23). BB 105 G ist grün
gekennzeichnet.

UHF-VHF tuning diodes in plastic
package (SOD 23). BB 105 G with green colour dot.

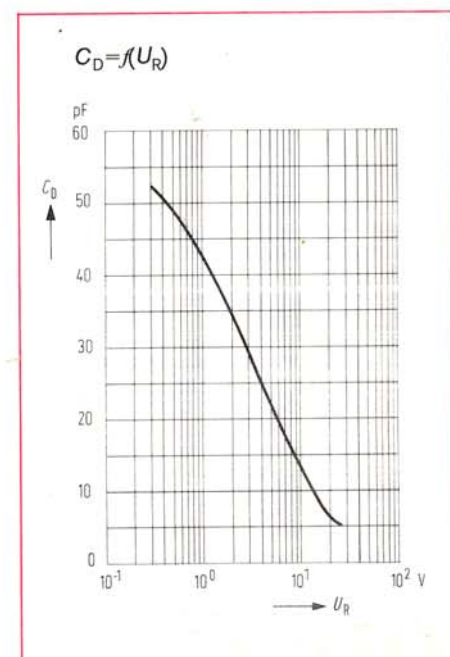
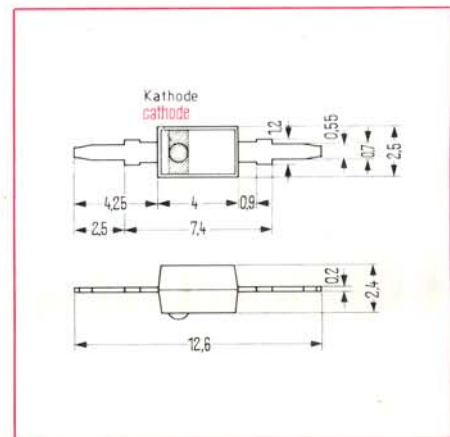


BB 109 G

VHF-Abstimm-diode in Plastik-hüllung
(SOD-23) mit großer Kapazitätsvariation

VHF tuning diode in plastic package
SOD 23 with large capacitance variation.

		BB 109 G	
Spitzensperrspannung	U_{RM}	30 V	V_{RM} peak reverse voltage
Diodenkapazität	$(U_R=3V)$ $C_{D 3V}$	26-32 pF	$C_{D 3V}$ diode capacitance ($V_R=3V$)
	$(U_R=25V)$ $C_{D 25V}$	4,3-6 pF	$C_{D 25V}$ ($V_R=25V$)
Kapazitätsverhältnis	$\frac{C_{D 3V}}{C_{D 25V}}$	5-6,5	$\frac{C_{D 3V}}{C_{D 25V}}$ capacitance ratio
	r_s	<0,5 Ω	r_s series resistance ($C_D=12$ pF)
Serienwiderstand ($C_D=12$ pF)	$\Delta C/C$	$\pm 1,5\%$	$\Delta C/C$ capacitance match
Gleichlaufpaarung			



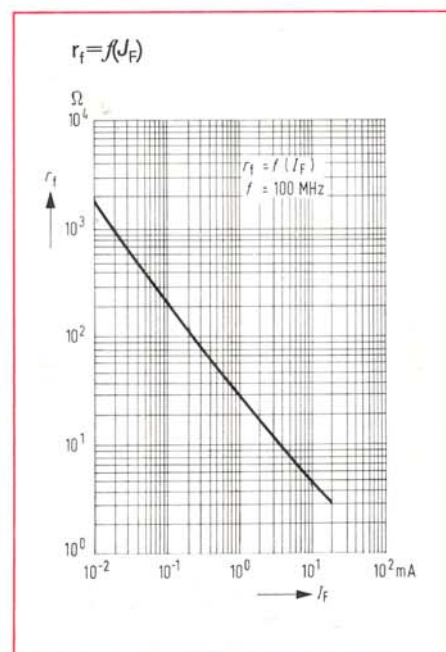
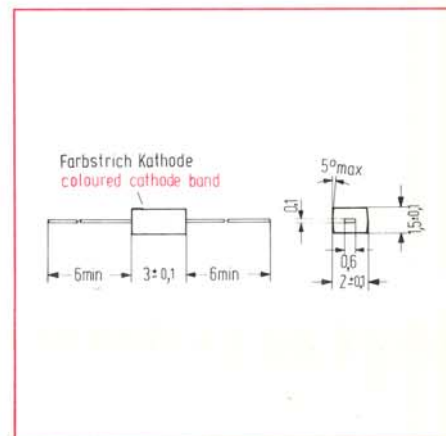
BA 379

Silizium-PIN-Diode
 Regelbarer HF-Widerstand im
 Kunststoff-Bandleitungsgehäuse,
 insbesondere für Dämpfungsnetz-
 werke in grobsignalfesten UKW-
 und Fernsehunern.

Silicon PIN-diode

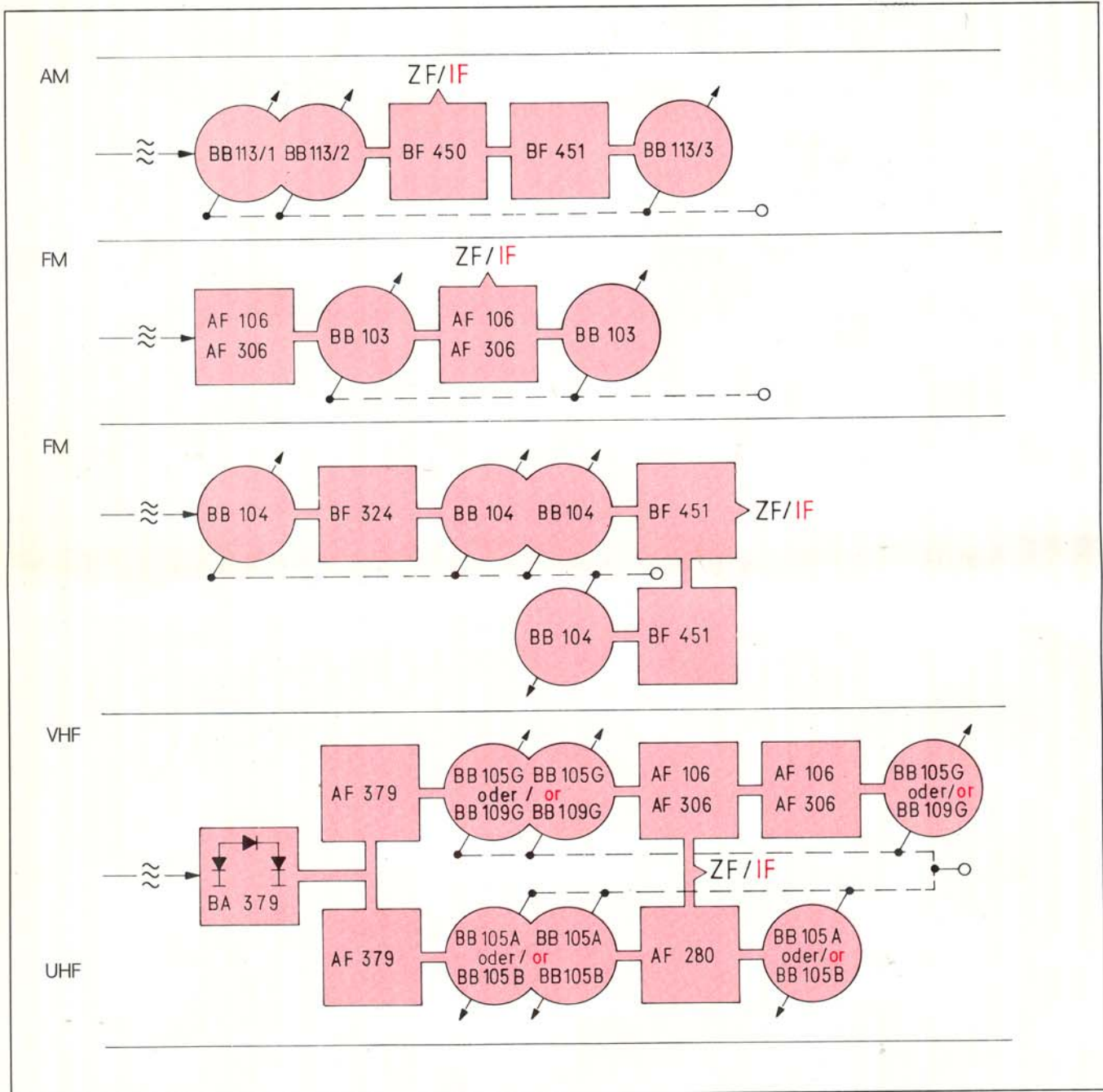
Current controlled RF-resister in
 plastic stripline package especially
 designed for ago networks in FM-
 radio and VHF-UHF TV tuners.

		BA 379	
Sperrspannung	U_R	30 V	V_R reverse voltage
Flußstrom ($U_F=1V$)	J_F	20 mA	J_F forward current
Sperrstrom ($U_R=10V$)	J_R	$<1 \mu A$	J_R reverse leakage current
Diodenkapazität			C_D diode capacitance
($U_R=1V, f=900 \text{ MHz}$)	C_D	0,34pF	($V_R=1V, f=100 \text{ MHz}$)
($U_R=0V, f=900 \text{ MHz}$)	C_D	0,3pF	($V_R=0V, f=900 \text{ MHz}$)
Durchlaufwiderstand			r_f forward series resistance
($J_F=10 \text{ mA}, f=100 \text{ MHz}$)	r_f	$<6,5 \Omega$	($J_F=10 \text{ mA}, f=100 \text{ MHz}$)
Sperrimpedanz			$ Z_r $ reverse cutoff impedance
($U_R=1V, f=100 \text{ MHz}$)	$ Z_r $	$>2,5 \text{ k}\Omega$	($V_R=1V, f=100 \text{ MHz}$)
Zulässige Störspannung für 1% Kreuzmodulation	$U_{\text{Stör}}$	1V	V_{dist} disturbing voltage limit for 1% cross modulation



Bewährte Schaltungskonzepte mit Abstimmtdioden

Approved circuit concepts with tuning diodes



„Liefermöglichkeiten und technische Änderungen vorbehalten“.

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