

PHILIPS

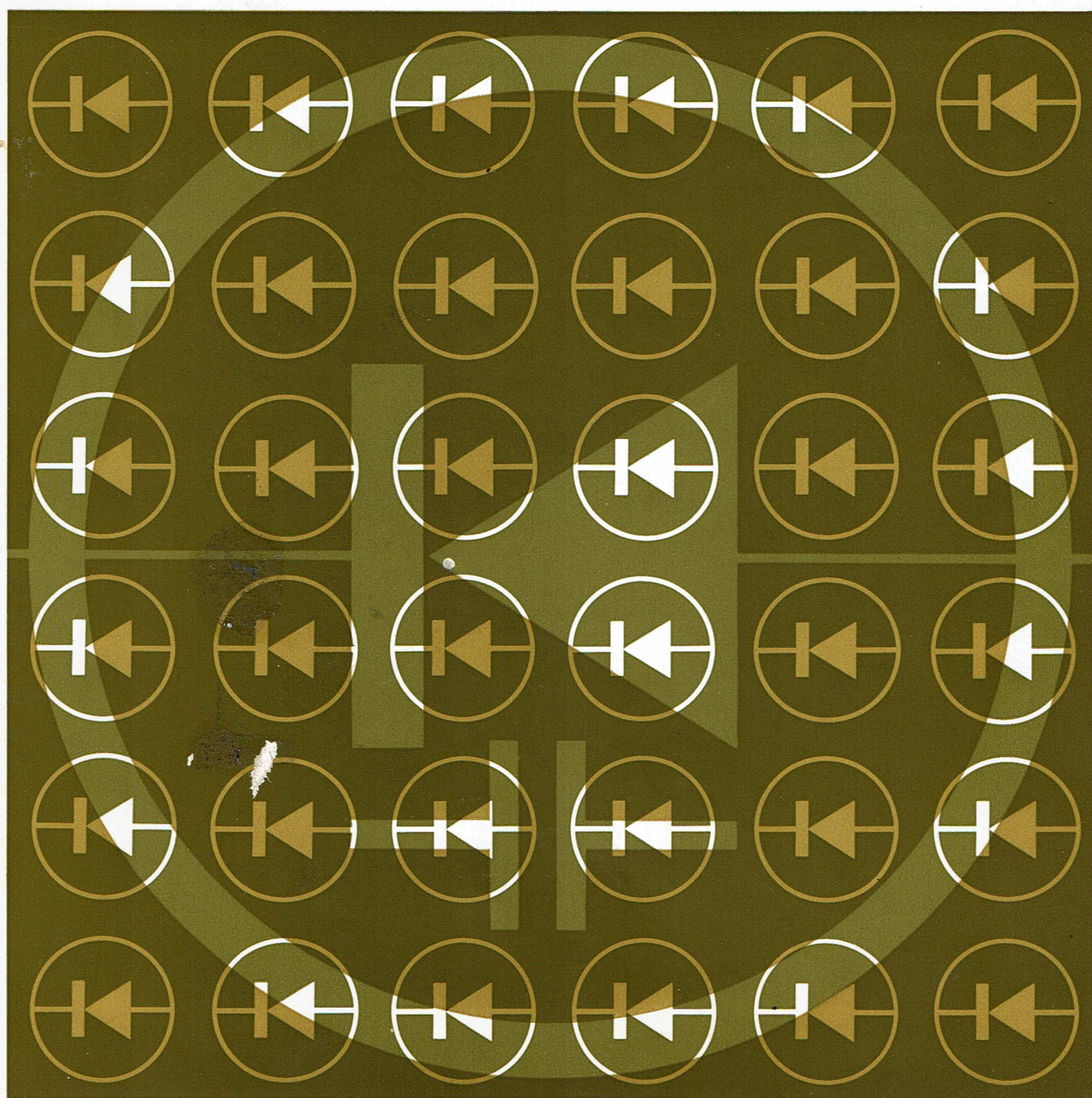
PRODUCT NEWS



ELECTRONIC COMPONENTS
AND MATERIALS

VARIABLE CAPACITANCE TUNING DIODES

1971/72



VARIABLE CAPACITANCE TUNING DIODES

for a.m., f.m. radio & v.h.f., u.h.f. tv

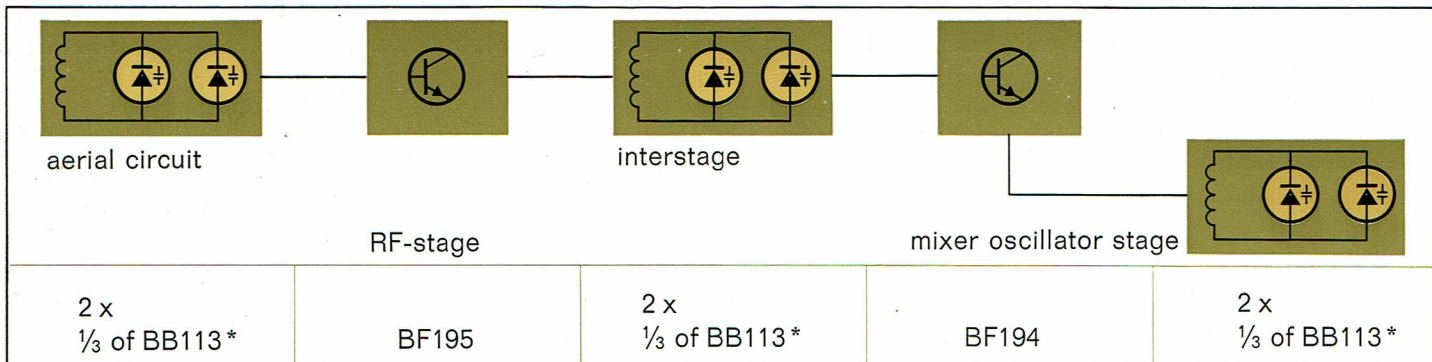
FEATURES:

- easy, preset electronic tuning
 - few and simple mechanical parts
 - small and light
 - ideal for remote control
 - excellent device matching
-

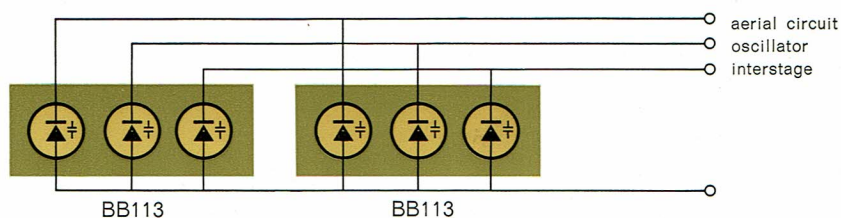
preferred types for:

A.M. tuner	BB113
F.M. tuner	BB104, BB110
V.H.F. tuner	BB105G, BB106
U.H.F. tuner	BB105A, BB105B
V.H.F. switching	BA182
Automatic frequency control	BA102, BB117
See data sheets for full details	

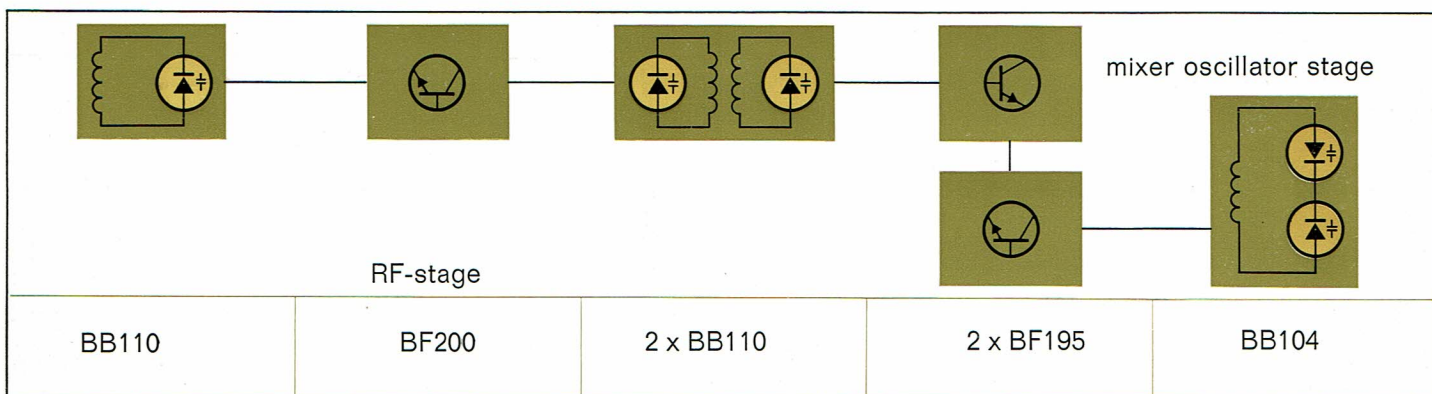
AM FRONT END



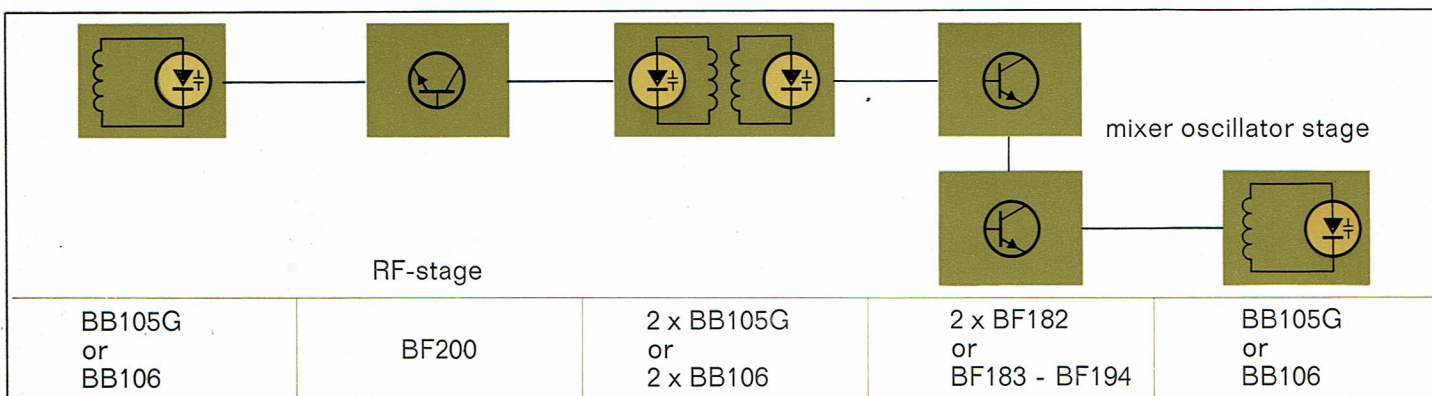
* Connected as at right



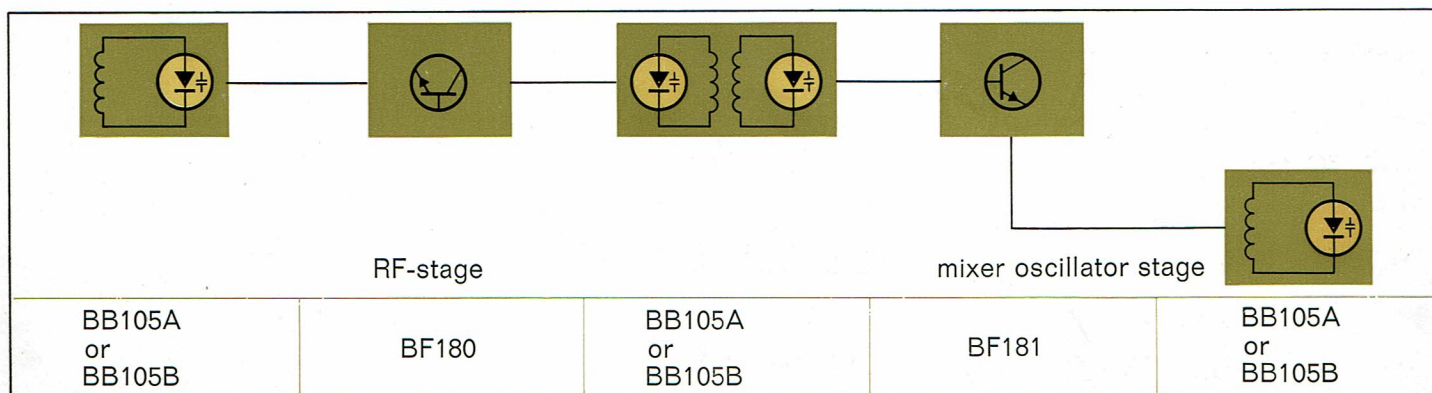
FM FRONT END



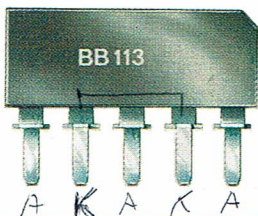
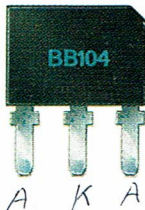
VHF



UHF



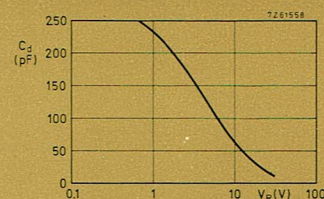
RATINGS

APPLICATION		TYPE	ENVELOPE	V _R max	T _j max	
RADIO	Long wave Medium wave Short wave	radio receivers	BB113		32 V	80 °C
	F.M. radio receivers		BB104B		30 V	100 °C
			BB104G		30 V	100 °C
			BB110B		30 V	100 °C
			BB110G		30 V	100 °C
TELEVISION	V.H.F. { Band I to 88 MHz Band III to 230 MHz		BB106		28 V	60 °C
	V.H.F. { Band I to 88 MHz Band III to 230 MHz		BB105G		28 V	60 °C
	U.H.F. Band IV & V to 790 MHz		BB105A		28 V	60 °C
	U.H.F. Band IV & V to 860 MHz		BB105B		28 V	60 °C
	V.H.F. switching		BA182		35 V	100 °C
AFC	Automatic frequency control radio & television	BA102		20 V	90 °C	
		BB117		20 V	60 °C	

CHARACTERISTICS

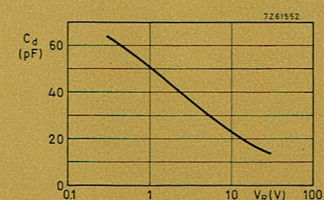
I_R at $V_R = V_R \max$ $T_j = T_j \max$	C_d at $V_R =$	r_D	Remarks	Control range
$< 200 \text{ nA}$	230–280 pF 1 V	$< 13 \text{ pF}$ 30 V	$< 4 \Omega$ at $C_d = 200 \text{ pF}$	
$< 200 \text{ nA}$	37–42 pF 3 V	14 pF 30 V	$< 0.4 \Omega$ at $C_d = 38 \text{ pF}$	
$< 200 \text{ nA}$	34–39 pF 3 V	14 pF 30 V	$< 0.4 \Omega$ at $C_d = 38 \text{ pF}$	
$< 200 \text{ nA}$	29–33 pF 3 V	11 pF 30 V	$< 0.4 \Omega$ at $C_d = 30 \text{ pF}$	
$< 200 \text{ nA}$	27–31 pF 3 V	11 pF 30 V	$< 0.4 \Omega$ at $C_d = 30 \text{ pF}$	
$< 200 \text{ nA}$	$> 20 \text{ pF}$ 3 V	4.0–5.6 pF 25 V	$< 0.6 \Omega$ at $C_d = 25 \text{ pF}$	
$< 500 \text{ nA}$	17.5 pF 1 V	1.8–2.8 pF 25 V	$< 1.2 \Omega$ at $C_d = 9 \text{ pF}$	
$< 500 \text{ nA}$	17 pF 1 V	2.3–2.8 pF 25 V	$< 0.7 \Omega$ at $C_d = 9 \text{ pF}$	
$< 500 \text{ nA}$	17.5 pF 1 V	2.0–2.3 pF 25 V	$< 0.7 \Omega$ at $C_d = 9 \text{ pF}$	
$< 1 \mu\text{A}$ at $T_j = 60^\circ\text{C}$	1.9 pF 0.5 V	0.8 pF 20 V	$< 0.7 \Omega$ at $I_F = 5 \text{ mA}$	
$< 5 \mu\text{A}$ at $T_j = 80^\circ\text{C}$	20–45 pF 4 V		$< 3 \Omega$ at $V_R = 4 \text{ V}$	
$< 500 \text{ nA}$	11.5 pF 3 V	2.2–5.0 pF 15 V	$< 1.2 \Omega$ at $C_d = 9 \text{ pF}$	

Triple diode with common cathode. Data apply to each diode separately.

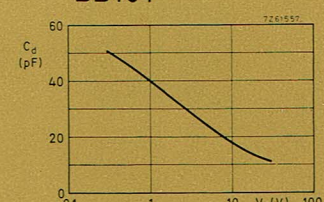


BB113

Double diode with common cathode. Data apply to each diode separately.

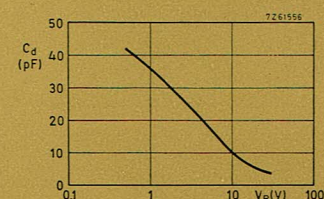


BB104



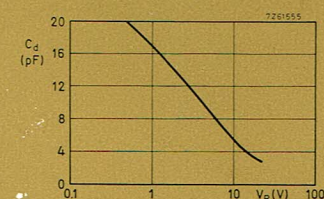
BB110

Delivered in units of 12 diodes (such as 12-BB105A).

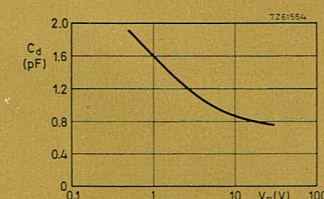


BB106

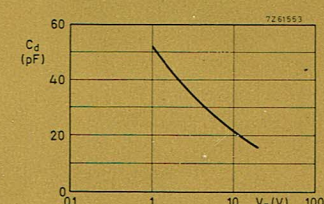
In the voltage range 0.5 V to 28 V the capacitance deviation between any two of the twelve diodes is max. 3% for BB105A max. 3% for BB105B max. 6% for BB105G max. 3% for BB106



BB105



BA182



BA102

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