

NPN Silicon RF Transistors

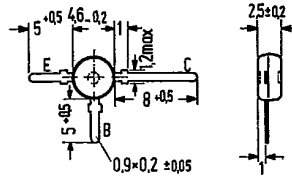
BF 362
BF 363

SIEMENS AKTIENGESELLSCHAFT

for UHF TV tuners

BF 362 and BF 363 are NPN silicon planar RF transistors in a plastic package similar to TO 119 (50 B3 DIN 41867). BF 362 is particularly suitable for gain-controlled input stages, and BF 363 for self-oscillating mixer stages in TV UHF tuners.

Type	Ordering code
BF 362	Q62702-F395
BF 363	Q62702-F396



Approx. weight 0.25 g Dimensions in mm

Maximum ratings

	BF 362, BF 363	
Collector-emitter voltage	V_{CEO}	20 V
Collector-base voltage	V_{CBO}	20 V
Emitter-base voltage	V_{EBO}	3 V
Collector current	I_C	20 mA
Junction temperature	T_j	125 °C
Storage temperature range	T_{stg}	-55 to +125 °C
Total power dissipation ($T_{amb} \leq 55^\circ\text{C}$)	P_{tot}	120 mW

Thermal resistance

Junction to ambient air	R_{thJA}	≤ 580 K/W
-------------------------	------------	----------------

Static characteristics ($T_{amb} = 25^\circ\text{C}$)

Base current ($I_E = 3 \text{ mA}; V_{CB} = 10 \text{ V}$)	I_B	< 150 μA
Base current ($I_E = 12 \text{ mA}; V_{CB} = 7 \text{ V}$)	I_B	< 1 mA
Base-emitter forward voltage ($I_C = 2 \text{ mA}; V_{CE} = 10 \text{ V}$)	V_{BE}	750 mV

T-31-15

BF 362
 BF 363

SIEMENS AKTIENGESELLSCHAFT

Dynamic characteristics ($T_{amb} = 25^{\circ}\text{C}$)		BF 362	BF 363		
Transition frequency ($I_C = 3 \text{ mA}; V_{CE} = 10 \text{ V}; f = 100 \text{ MHz}$)		f_T	800	600-820	MHz
Power gain ($I_C = 3 \text{ mA}; V_{CB} = 10 \text{ V}; f = 900 \text{ MHz}; R_g = 50 \Omega; R_L = 500 \Omega$)		G_p	> 11	> 11	dB
Noise figure ($I_C = 3 \text{ mA}; V_{CB} = 10 \text{ V}$) at $f = 500 \text{ MHz}; Y_g = 16.7 \text{ mS}$		NF	4	4	dB
at $f = 800 \text{ MHz}; Y_g = 16.7 \text{ mS}$		NF	4.5	5	dB
Short-circuit reverse transfer capacitance ($I_C = 1 \text{ mA}; V_{CE} = 10 \text{ V}; f = 1 \text{ MHz}$)		$-C_{12e}$	0.33	0.33	pF
Small-signal short-circuit reverse transfer admittance ($I_C = 3 \text{ mA}; V_{CB} = 10 \text{ V}; f = 900 \text{ MHz}$)		$ y_{12b} $	0.95	0.95	mS