

PNP Silicon Planar Transistor

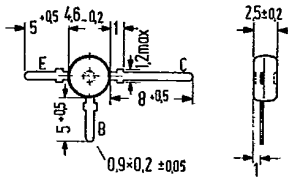
BF 968

SIEMENS AKTIENGESELLSCHAFT

for input stages up to 900 MHz

BF 968 is a PNP silicon UHF planar transistor with passivated surface in a low-capacitance plastic package similar to TO 119 (50 B 3 DIN 41 867). The transistor is particularly suitable for use in low noise, gain-controlled input stages up to 900 MHz in tuners with diode tuning.

Type	Ordering code
BF 968	Q62702-F612



Approx. weight 0.25 g Dimensions in mm

Maximum ratings

Collector-emitter voltage	$-V_{CEO}$	35	V
Collector-base voltage	$-V_{CBO}$	40	V
Emitter-base voltage	$-V_{EBO}$	3	V
Collector current	$-I_C$	30	mA
Base current	$-I_B$	5	mA
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55 to +150	°C
Total power dissipation	P_{tot}	160	mW

Thermal resistance

Junction to ambient air	R_{thJA}	600	K/W
-------------------------	------------	-----	-----

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

Collector cutoff current ($-V_{CBO} = 15\text{ V}$)	$-I_{CBO}$	1 (<100)	nA
DC current gain ($-V_{CE} = 10\text{ V}; -I_C = 1\text{ mA}$)	h_{FE}	60 (>25)	-
Emitter cutoff current ($-I_C = 0; -V_{BE} = 3\text{ V}$)	$-I_{EBO}$	<10	μA

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

Transition frequency ($-I_C = 3\text{ mA}; -V_{CE} = 10\text{ V}; f = 100\text{ MHz}$)	f_T	1.1	GHz
Reverse transfer capacitance ($-V_{CE} = 1\text{ V}; f = 1\text{ MHz}$)	C_{12b}	0.1	pF
Collector-base capacitance ($-V_{CB} = 10\text{ V}; f = 1\text{ MHz}$)	$-C_{CBO}$	0.45	pF
Power gain ($-I_C = 3\text{ mA}; -V_{CB} = 10\text{ V}; f = 800\text{ MHz}; R_L = 500\ \Omega$)	G_{pb}	14.5	dB
Noise figure ($-I_C = 3\text{ mA}; -V_{CB} = 10\text{ V}; f = 800\text{ MHz}; R_g = 60\ \Omega$)	NF	3 (<4)	dB
Collector current for G_{pbmax} ($V_{CC} = 12\text{ V}; R_{CC} = 1\text{ k}\Omega; f = 800\text{ MHz}; R_L = 500\ \Omega$)	I_C	3.5	mA