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PNP Silicon Planar Transistor

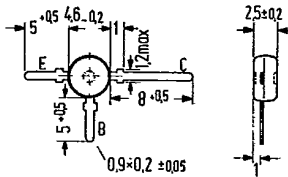
BF 968

SIEMENS AKTIENGESELLSCHAFT D

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
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**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	$\mu\text{A}$

**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