PNP Silicon Planar Transistor

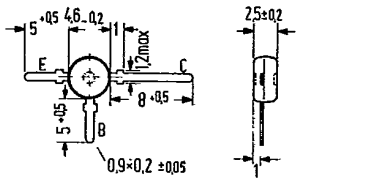
BF 968

SIEMENS AKTIENGESELLSCHAF 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

Static characteristics (T_{amb} = 25 °C)

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

Dynamic characteristics (T_{amb} = 25 °C)

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