

PNP Silicon Planar Transistor

BF 968

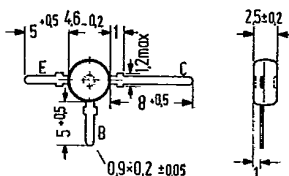
SIEMENS AKTIENGESELLSCHAFT

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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
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DC current gain

($-V_{CE} = 10\text{ V}$; $-I_C = 1\text{ mA}$)

h_{FE}	60 (>25)	-
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Emitter cutoff current

($-I_C = 0$; $-V_{BE} = 3\text{ V}$)

$-I_{EBO}$	<10	μA
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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
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Reverse transfer capacitance

($-V_{CE} = 1\text{ V}$; $f = 1\text{ MHz}$)

C_{12b}	0.1	pF
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Collector-base capacitance

($-V_{CB} = 10\text{ V}$; $f = 1\text{ MHz}$)

$-C_{CBO}$	0.45	pF
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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
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Noise figure

($-I_C = 3\text{ mA}$; $-V_{CB} = 10\text{ V}$; $f = 800\text{ MHz}$;

$R_g = 60\ \Omega$)

NF	3 (<4)	dB
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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
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