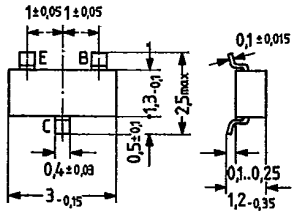
PNP Silicon Planar Transistor

BF 767

BF 767 is a PNP silicon planar transistor including passivated surface in TO 236 plastic package (23 A 3 DIN 41869). The transistor is particularly suitable for use in low-noise, gain-controlled VHF and UHF input stages for film circuits. The transistor is marked on its package with the code letters "LG".

Type	Mark	Ordering code
BF 767	LG	Q62702-F553



Approx. weight 0.02 g Dimensions in mm

Maximum ratings

Collector-emitter voltage	$-V_{CEO}$	30	V
Collector-base voltage	$-V_{CBO}$	30	V
Emitter-base voltage	$-V_{EBO}$	3	V
Collector current	$-I_C$	20	mA
Base current	$-I_B$	5	mA
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	−55 to +125	°C
Total power dissipation (T_{SB} = 65 °C)	P_{tot}	200	mW

Thermal resistance

Junction to ambient air	R_{thJA}	<500	K/W
Junction to substrate back[1]	R_{thJSB}	<400	K/W

1) Ceramic substrate 0.7 mm; 2.5 cm^2 area

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

Collector cutoff current ($-V_{CBO}$ = 15 V)	$-I_{CBO}$	<100	nA
DC current gain ($-V_{CE}$ = 10 V; $-I_C$ = 3 mA)	h_{FE}	60 (>15)	–
Emitter cutoff current ($-I_C$ = 0; $-V_{EB}$ = 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	950	MHz
Collector-base capacitance ($-V_{CB}$ = 10 V; f = 1 MHz)	C_{CBO}	0.32	pF
Power gain ($-I_C$ = 3 mA; $-V_{CB}$ = 10 V; f = 800 MHz, R_L = 500 Ω)	G_{pb}	13	dB
Collector current[1] (f = 800 MHz, V_{CC} = 12 V, R_C = 1 kΩ R_g = 60 Ω, R_L = 500 Ω)	I_C	7	mA
Noise figure ($-I_C$ = 3 mA; $-V_{CB}$ = 10 V; R_g = 60 Ω f = 800 MHz)	NF	3.7	dB
(f = 200 MHz)	NF	2.9	dB

for 30 dB regulation to minor values

Total perm. power dissipation versus temperature