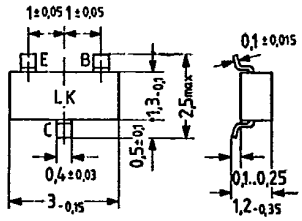
PNP Silicon Planar Transistor

BF 568

SIEMENS AKTIENGESELLSCHAF

BF 568 is a PNP silicon planar transistor with 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 of film circuits. The transistor is marked with the code letters "LK".

Type	Mark	Ordering code
BF 568	LK	Q62702-F626



Approx. weight 0.02 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 (T_{SB} = 60°C)	P_{tot}	220	mW

Thermal resistance

Junction to ambient air	R_{thJA}	<500	K/W
Junction to substrate back[1]	R_{thJSB}	<410	K/W

1) Ceramic substrate 0.7 mm 2.5 cm^2 area

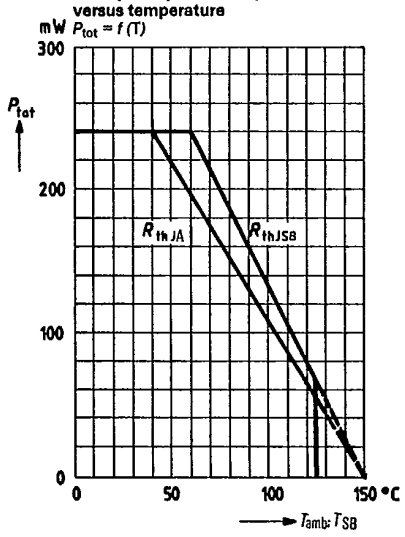
Static characteristics (T_{amb} = 25 °C)

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

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

Transition frequency ($-I_C$ = 3 mA; $-V_{CE}$ = 10 V; f = 100 MHz)	f_T	1.1	GHz
Collector-base capacitance ($-V_{CB}$ = 10 V; f = 1 MHz)	C_{CBO}	0.35	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; R_g = 60 Ω; f = 800 MHz)	NF	3 (<4)	dB
($-I_C$ = 3 mA; $-V_{CB}$ = 10 V; R_g = 60 Ω; f = 200 MHz)	NF	2.5	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

Total perm. power dissipation versus temperature
$P_{tot} = f(T)$



Perm. pulse load $\frac{r_{thJSB}}{R_{thJSB}} = f(t)$
D = parameter