

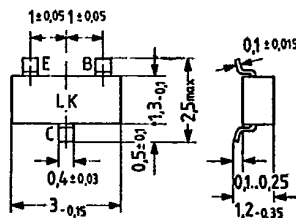
PNP Silicon Planar Transistor

BF 568

SIEMENS AKTIENGESELLSCHAFT

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 ( $T_{SB} = 60^\circ\text{C}$ )	$P_{tot}$	220	mW

Thermal resistance

Junction to ambient air	$R_{thJA}$	< 500	K/W
Junction to substrate back <sup>1)</sup>	$R_{thJSB}$	< 410	K/W

1) Ceramic substrate 0.7 mm 2.5 cm<sup>2</sup> area

**Static characteristics** ( $T_{amb} = 25^{\circ}\text{C}$ )

Collector cutoff current ( $-V_{CBO} = 15\text{ V}$ )  
 Emitter cutoff current ( $-V_{EBO} = 3\text{ V}$ )  
 DC current gain ( $-V_{CE} = 10\text{ V}; -I_C = 1\text{ mA}$ )

$-I_{CBO}$	1 (<100)	nA
$-I_{EBO}$	<10	$\mu\text{A}$
$h_{FE}$	60 (>25)	-

**Dynamic characteristics** ( $T_{amb} = 25^{\circ}\text{C}$ )

Transition frequency  
 ( $-I_C = 3\text{ mA}; -V_{CE} = 10\text{ V}; f = 100\text{ MHz}$ )  
 Collector-base capacitance  
 ( $-V_{CB} = 10\text{ V}; f = 1\text{ MHz}$ )  
 Power gain  
 ( $-I_C = 3\text{ mA}; -V_{CB} = 10\text{ V}; f = 800\text{ MHz}, R_L = 500\ \Omega$ )  
 Noise figure  
 ( $-I_C = 3\text{ mA}; -V_{CB} = 10\text{ V}; R_g = 60\ \Omega; f = 800\text{ MHz}$ )  
 ( $-I_C = 3\text{ mA}; -V_{CB} = 10\text{ V}; R_g = 60\ \Omega; f = 200\text{ MHz}$ )  
 Collector current for  $G_{pbmax}$   
 ( $V_{CC} = 12\text{ V}; R_{CC} = 1\text{ k}\Omega; f = 800\text{ MHz}; R_L = 500\ \Omega$ )

$f_T$	1.1	GHz
$C_{CBO}$	0.35	pF
$G_{pb}$	14.5	dB
NF	3 (<4)	dB
NF	2.5	dB
$I_C$	3.5	mA

