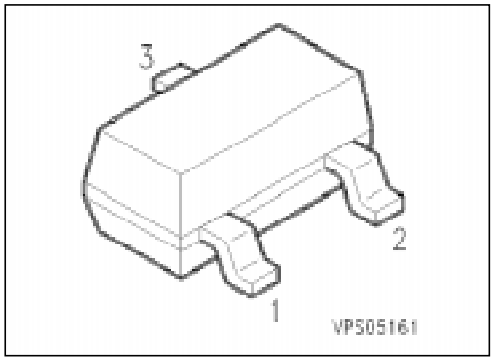
SIEMENS

PNP Silicon RF Transistor — BF 569

- For oscillators, mixers and self-oscillating mixer stages in UHF TV tuners



Type	Marking	Ordering Code (tape and reel)	Pin Configuration 1	2	3	Package[1]
BF 569	LHs	Q62702-F869	B	E	C	SOT-23

Maximum Ratings

Parameter	Symbol	Values	Unit
Collector-emitter voltage	V_{CE0}	35	V
Collector-base voltage	V_{CB0}	40	
Emitter-base voltage	V_{EB0}	3	
Collector current	I_C	30	mA
Base current	I_B	5	
Total power dissipation, $T_A \leq 25$ °C	P_{tot}	280	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	– 55 … + 150	

Thermal Resistance

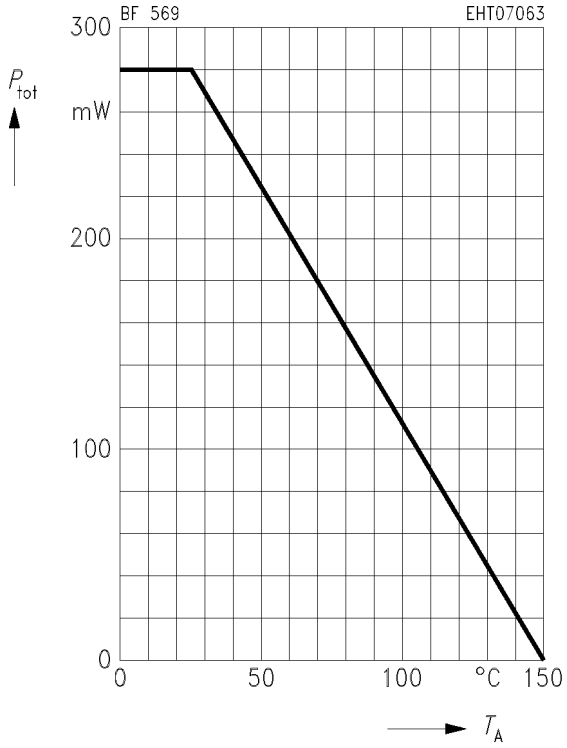
Junction - ambient[2]	$R_{th\ JA}$	≤ 450	K/W

1) For detailed information see chapter Package Outlines.
2) Package mounted on alumina 15 mm × 16.7 mm × 0.7 mm.

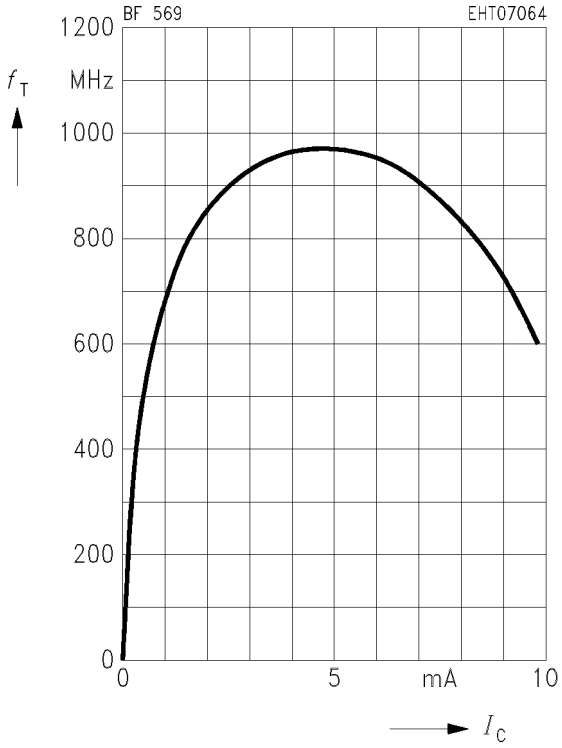
Electrical Characteristics
at T_A = 25 °C, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Collector-emitter breakdown voltage I_C = 1 mA, I_B = 0	$V_{(BR)\,CE0}$	35	–	–	V
Collector cutoff current V_{CB} = 20 V, I_E = 0	I_{CB0}	–	–	100	nA
DC current gain I_C = 3 mA, V_{CE} = 10 V	h_{FE}	20	50	–	–
AC Characteristics					
Transition frequency I_C = 3 mA, V_{CE} = 10 V, f = 100 MHz	f_T	–	950	–	MHz
Collector-base capacitance V_{CB} = 10 V, V_{BE} = 0 V, f = 1 MHz	C_{cb}	–	0.32	–	pF
Collector-emitter capacitance V_{CE} = 10 V, V_{BE} = 0 V, f = 1 MHz	C_{ce}	–	0.15	–	
Noise figure I_C = 3 mA, V_{CB} = 10 V, f = 800 MHz R_S = 60 Ω	F	–	4.5	–	dB
Common base power gain I_C = 3 mA, V_{CB} = 10 V, f = 800 MHz R_L = 500 Ω	G_p	–	14.8	–	

Total power dissipation $P_{tot} = f(T_A)$



Transition frequency $f_T = f(I_C)$
V_{CE} = 10 V, f = 100 MHz



Collector-base capacitance $C_{cb} = f(V_{CB})$
f= 1 MHz