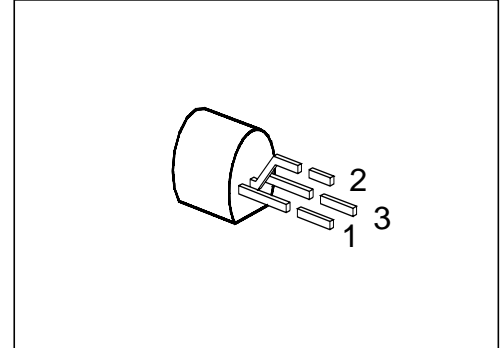


PNP Silicon RF Transistor

BF 506

- For VHF mixer and oscillator stages



Type	Marking	Ordering Code	Pin Configuration			Package ¹⁾
			1	2	3	
BF 506	–	Q62702-F534	C	B	E	TO-92

Maximum Ratings

Parameter	Symbol	Values	Unit
Collector-emitter voltage	V_{CE0}	35	V
Collector-base voltage	V_{CB0}	40	
Emitter-base voltage	V_{EB0}	4	
Collector current	I_C	30	mA
Base current	I_B	5	
Total power dissipation, $T_A \leq 45\text{ °C}$	P_{tot}	300	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	– 55 ... + 150	

Thermal Resistance

Junction - ambient	$R_{th\ JA}$	≤ 350	K/W
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¹⁾ For detailed information see chapter Package Outlines.

Electrical Characteristics

at $T_A = 25\text{ °C}$, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

DC Characteristics

Collector-emitter breakdown voltage $I_C = 2\text{ mA}$	$V_{(BR) CE0}$	35	–	–	V
Collector-base breakdown voltage $I_C = 10\text{ }\mu\text{A}$	$V_{(BR) CB0}$	40	–	–	
Emitter-base breakdown voltage $I_E = 10\text{ }\mu\text{A}$	$V_{(BR) EB0}$	4	–	–	
Collector cutoff current $V_{CB} = 20\text{ V}$	I_{CB0}	–	–	100	nA
DC current gain $I_C = 3\text{ mA}$, $V_{CE} = 10\text{ V}$	h_{FE}	25	–	–	–

AC Characteristics

Transition frequency $I_C = 2\text{ mA}$, $V_{CE} = 10\text{ V}$, $f = 100\text{ MHz}$	f_T	–	550	–	MHz
Collector-emitter capacitance $V_{CB} = 10\text{ V}$, $V_{BE} = 0\text{ V}$, $f = 1\text{ MHz}$	C_{ce}	–	0.12	–	V
Noise figure $I_C = 2\text{ mA}$, $V_{CB} = 10\text{ V}$, $f = 200\text{ MHz}$ $R_S = 60\text{ }\Omega$	F	–	3	–	dB