

2SC4529

Silicon NPN Epitaxial
VHF Wide Band Amplifier

Absolute Maximum Ratings (Ta = 25°C)

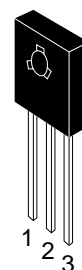
Item	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	300	mA
Collector peak current	$i_{C(peak)}$	500	mA
Collector power dissipation	P_C	1	W
	P_C^{*1}	5	
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Note: 1. Value at $T_C = 25^\circ\text{C}$.

Electrical Characteristics (Ta = 25°C)

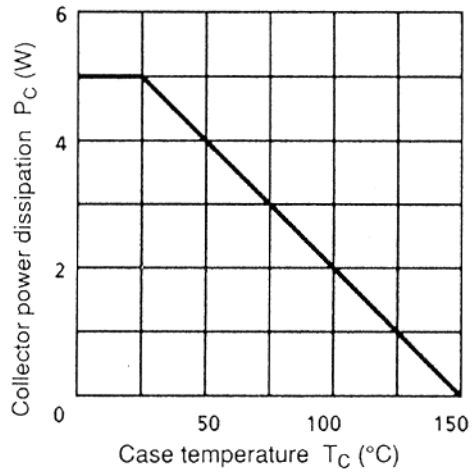
Item	Symbol	Min	Typ	Max	Unit	Test condition
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	$I_C = 100 \mu\text{A}$, $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	20	—	—	V	$I_C = 1 \text{ mA}$, $R_{BE} = \infty$
Collector cutoff current	I_{CBO}	—	—	1.0	μA	$V_{CB} = 25 \text{ V}$, $I_E = 0$
Emitter cutoff Current	I_{EBO}	—	—	10	μA	$V_{EB} = 3 \text{ V}$, $I_C = 0$
DC current transfer ratio	h_{FE}	50	—	200		$V_{CE} = 5 \text{ V}$, $I_C = 50 \text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.0	V	$I_C = 100 \text{ mA}$, $I_B = 10 \text{ mA}$
Gain bandwidth product	f_T	1.5	2.2	—	GHz	$V_{CE} = 5 \text{ V}$, $I_C = 50 \text{ mA}$
Collector output capacitance	C_{ob}	—	4.7	—	pF	$V_{CB} = 10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$

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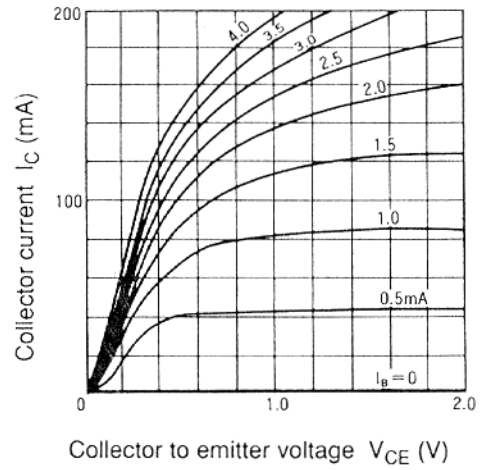


1. Emitter
2. Collector
3. Base

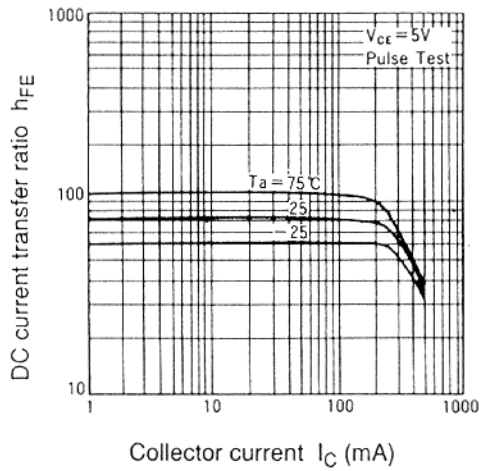
Maximum Collector Dissipation Curve



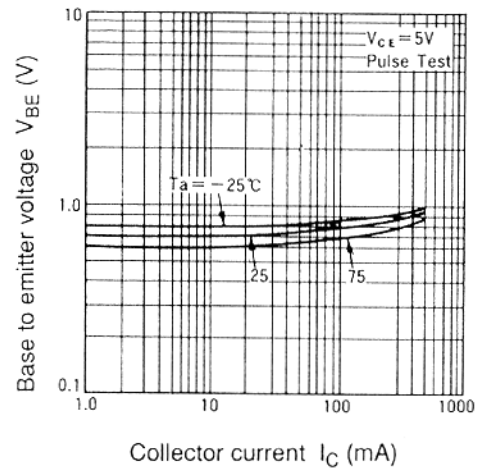
Typical Output Characteristics



DC Current Transfer Ratio vs. Collector Current

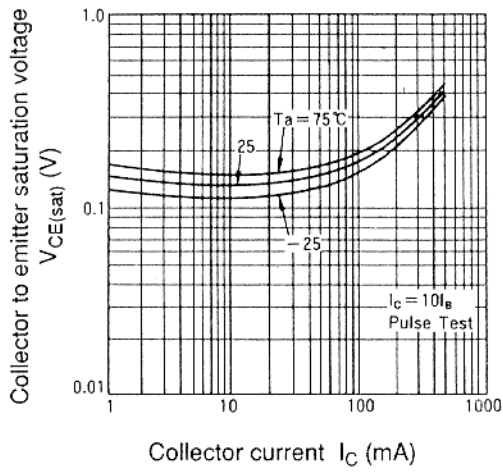


Base to Emitter Voltage vs. Collector Current

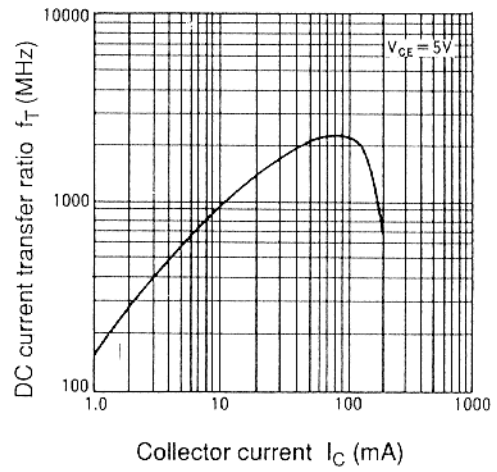


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Collector to Emitter Saturation Voltage vs. Collector Current



Gain Bandwidth Product vs. Collector Current



Collector Output Capacitance vs. Collector to Base Voltage

