

## 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)

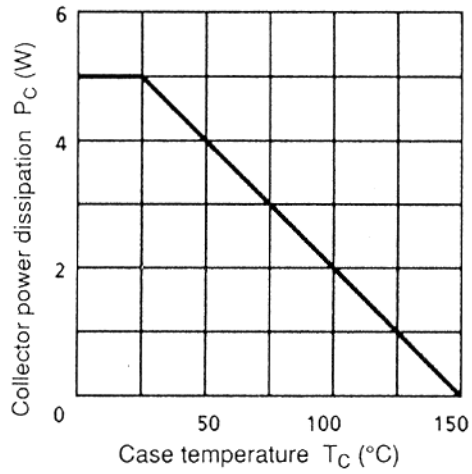
Item	Symbol	Min	Typ	Max	Unit	Test condition
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	$I_C = 100 \mu\text{A}$ , $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	20	—	—	V	$I_C = 1 \text{ mA}$ , $R_{BE} = \infty$
Collector cutoff current	$I_{CBO}$	—	—	1.0	$\mu\text{A}$	$V_{CB} = 25 \text{ V}$ , $I_E = 0$
Emitter cutoff Current	$I_{EBO}$	—	—	10	$\mu\text{A}$	$V_{EB} = 3 \text{ V}$ , $I_C = 0$
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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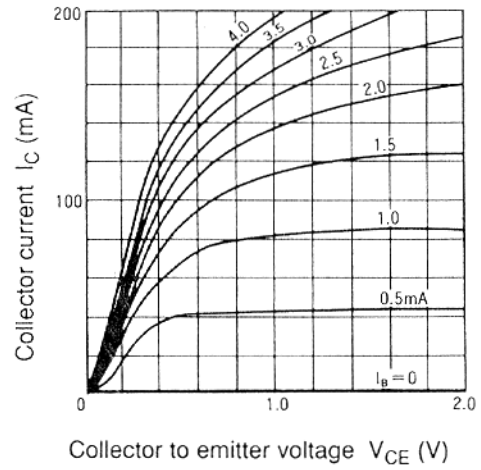


1. Emitter
2. Collector
3. Base

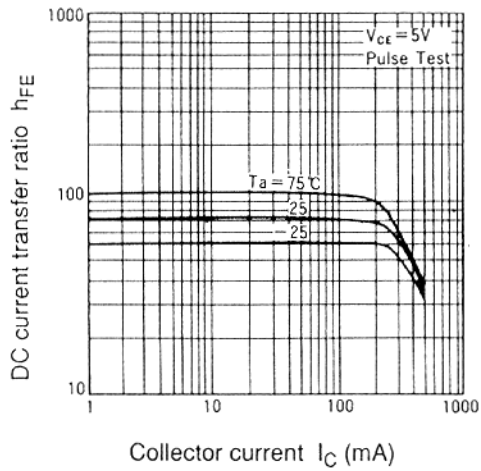
Maximum Collector Dissipation Curve



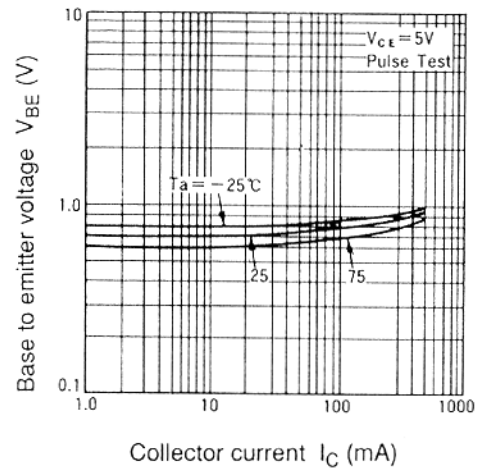
Typical Output Characteristics



DC Current Transfer Ratio vs. Collector Current

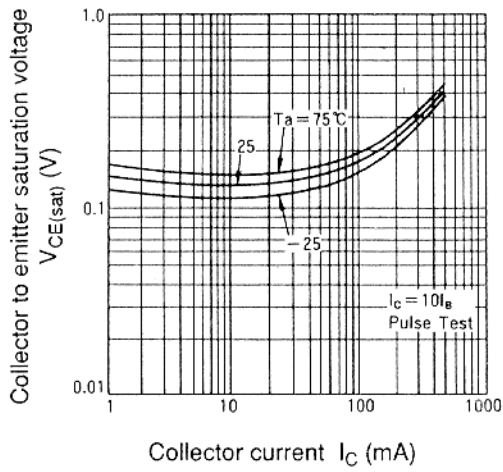


Base to Emitter Voltage vs. Collector Current

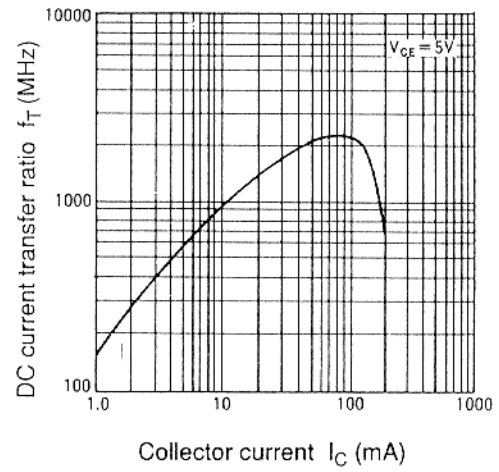


## 2SC4529

Collector to Emitter Saturation Voltage vs. Collector Current



Gain Bandwidth Product vs. Collector Current



Collector Output Capacitance vs. Collector to Base Voltage

