

## 2SC4529

**Silicon NPN Epitaxial  
VHF Wide Band Amplifier**

### Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rating	Unit
Collector to base voltage	V <sub>CBO</sub>	30	V
Collector to emitter voltage	V <sub>CEO</sub>	20	V
Emitter to base voltage	V <sub>EBO</sub>	3	V
Collector current	I <sub>C</sub>	300	mA
Collector peak current	i <sub>C(peak)</sub>	500	mA
Collector power dissipation	P <sub>C</sub>	1	W
	P <sub>C</sub> <sup>*1</sup>	5	
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

Note: 1. Value at T<sub>C</sub> = 25°C.

### Electrical Characteristics (Ta = 25°C)

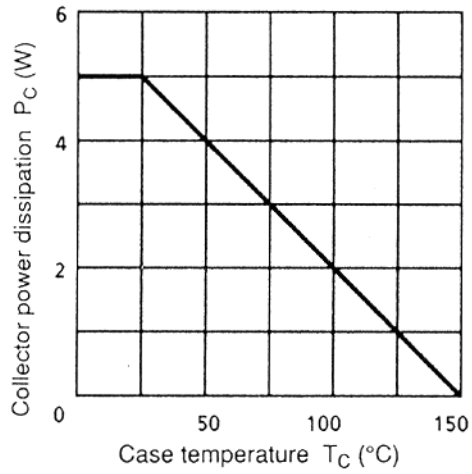
Item	Symbol	Min	Typ	Max	Unit	Test condition
Collector to base breakdown voltage	V <sub>(BR)CBO</sub>	30	—	—	V	I <sub>C</sub> = 100 μA, I <sub>E</sub> = 0
Collector to emitter breakdown voltage	V <sub>(BR)CEO</sub>	20	—	—	V	I <sub>C</sub> = 1 mA, R <sub>BE</sub> = ∞
Collector cutoff current	I <sub>CBO</sub>	—	—	1.0	μA	V <sub>CB</sub> = 25 V, I <sub>E</sub> = 0
Emitter cutoff Current	I <sub>EBO</sub>	—	—	10	μA	V <sub>EB</sub> = 3 V, I <sub>C</sub> = 0
DC current transfer ratio	h <sub>FE</sub>	50	—	200		V <sub>CE</sub> = 5 V, I <sub>C</sub> = 50 mA
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	—	—	1.0	V	I <sub>C</sub> = 100 mA, I <sub>B</sub> = 10 mA
Gain bandwidth product	f <sub>T</sub>	1.5	2.2	—	GHz	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 50 mA
Collector output capacitance	C <sub>ob</sub>	—	4.7	—	pF	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz

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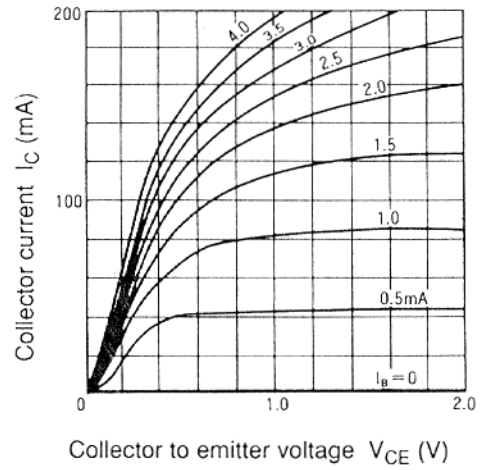


1. Emitter
2. Collector
3. Base

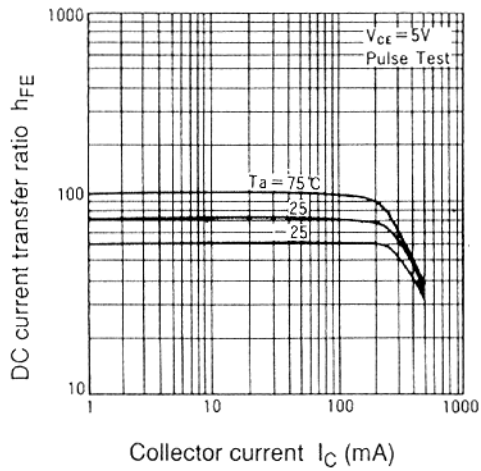
Maximum Collector Dissipation Curve



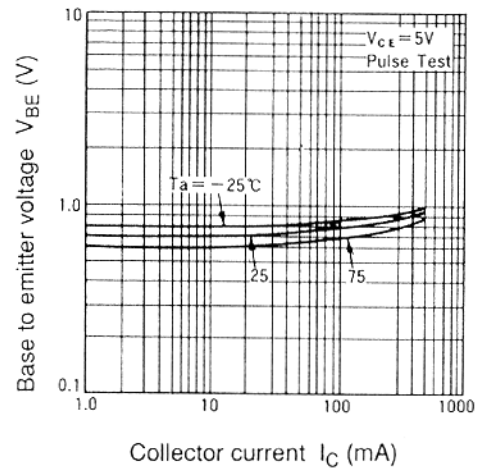
Typical Output Characteristics



DC Current Transfer Ratio vs. Collector Current

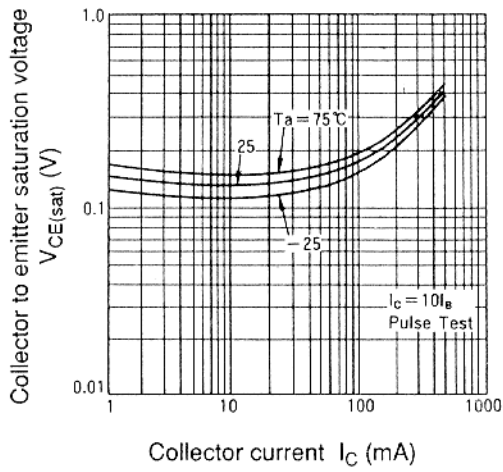


Base to Emitter Voltage vs. Collector Current

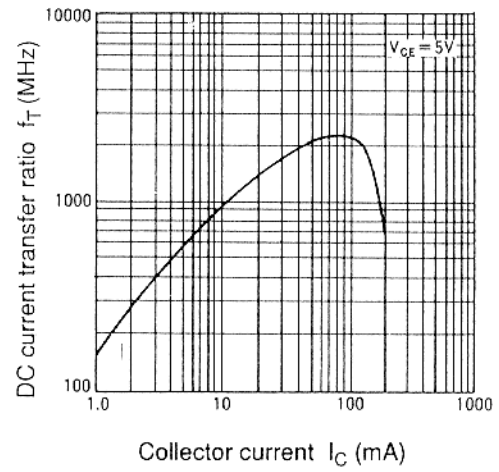


## 2SC4529

Collector to Emitter Saturation Voltage vs. Collector Current



Gain Bandwidth Product vs. Collector Current



Collector Output Capacitance vs. Collector to Base Voltage

