

## 2SC4829

Silicon NPN Epitaxial

### Application

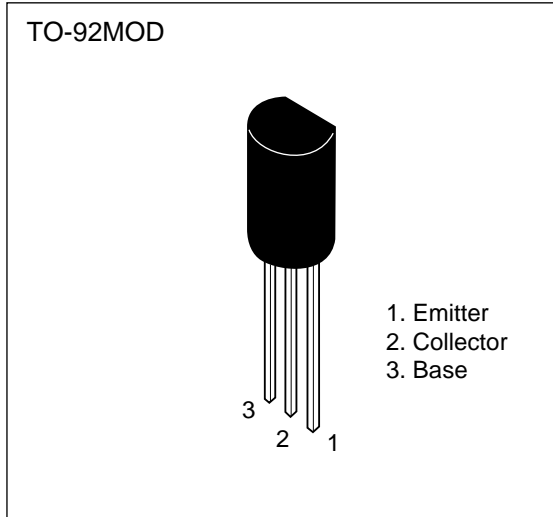
High frequency amplifier

### Features

- Excellent high frequency characteristics  
 $f_T = 1100$  MHz typ
- High voltage and low output capacitance  
 $V_{CEO} = 100$  V,  $C_{ob} = 4.2$  pF typ
- Suitable for wide band video amplifier

### Ordering Information

	$h_{FE}$		
2SC4829B	60	to	120
2SC4829C	100	to	200



**Table 1 Absolute Maximum Ratings** ( $T_a = 25^\circ\text{C}$ )

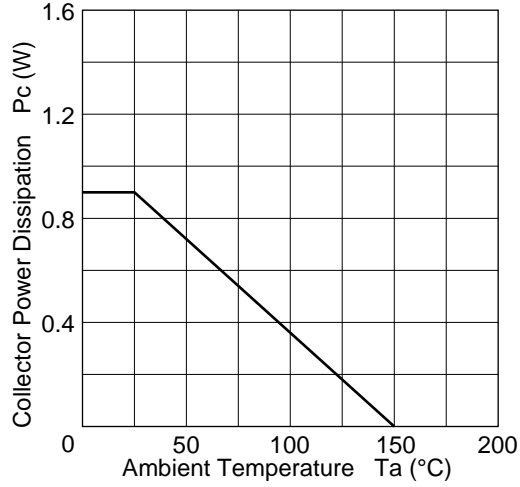
Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	100	V
Collector to emitter voltage	$V_{CEO}$	100	V
Emitter to base voltage	$V_{EBO}$	3	V
Collector current	$I_C$	0.2	A
Collector peak current	$i_c(\text{peak})$	0.5	A
Collector power dissipation	$P_C$	0.9	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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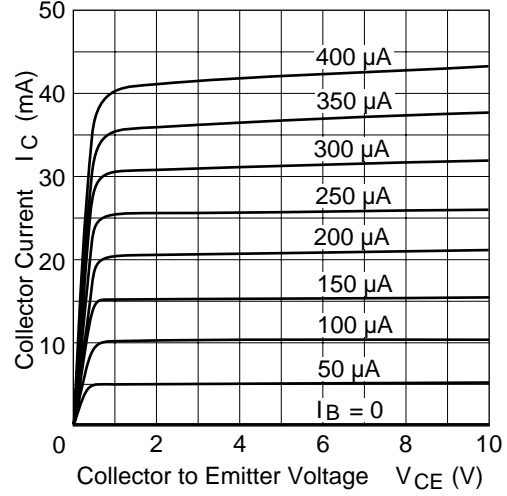
**Table 2 Electrical Characteristics (Ta = 25°C)**

Item		Symbol	Min	Typ	Max	Unit	Test condition
Collector to base breakdown voltage		$V_{(BR)CBO}$	100	—	—	V	$I_C = 10 \mu A,$ $I_E = 0$
Collector to emitter breakdown voltage		$V_{(BR)CEO}$	100	—	—	V	$I_C = 1 \text{ mA},$ $R_{BE} = \infty$
Emitter cutoff current		$I_{EBO}$	—	—	10	$\mu A$	$V_{EB} = 3 \text{ V},$ $I_C = 0$
Collector cutoff current		$I_{CBO}$	—	—	1.0	$\mu A$	$V_{CB} = 80 \text{ V},$ $I_E = 0$
DC current transfer ratio	2SC4829B	$h_{FE}$	60	—	120		$V_{CE} = 10 \text{ V},$ $I_C = 10 \text{ mA}$
	2SC4829C	$h_{FE}$	100	—	200		
Base to emitter voltage		$V_{BE}$	—	—	1.0	V	$V_{CE} = 10 \text{ V},$ $I_C = 10 \text{ mA}$
Collector to emitter saturation voltage		$V_{CE(sat)}$	—	—	1.0	V	$I_C = 100 \text{ mA}$ $I_B = 10 \text{ mA}$
Gain bandwidth product		$f_T$	800	1100	—	MHz	$V_{CE} = 10 \text{ V}$ $I_E = 100 \text{ mA}$
Collector output capacitance		$C_{ob}$	—	4.2	6.0	pF	$V_{CB} = 30 \text{ V},$ $I_E = 0,$ $f = 1 \text{ MHz}$

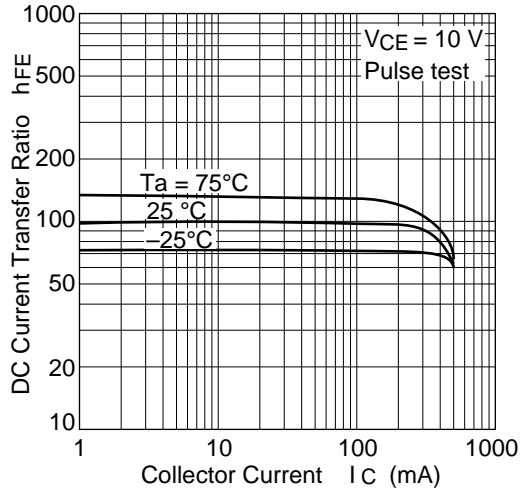
Maximum collector power dissipation curve



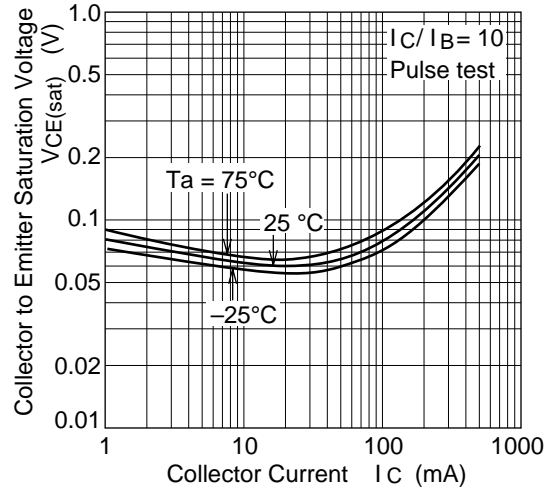
Typical output characteristics



DC current transfer ratio vs. collector current

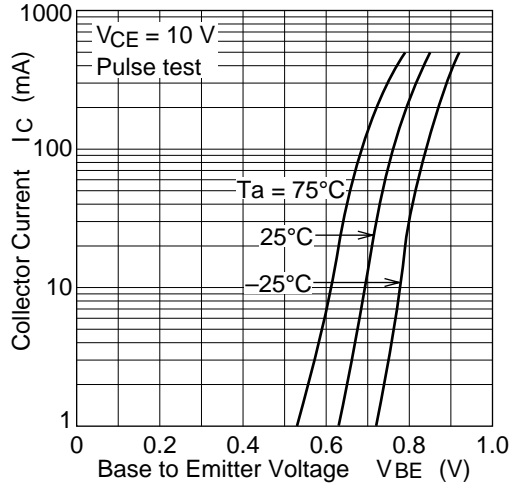


Collector to emitter saturation voltage vs. collector current

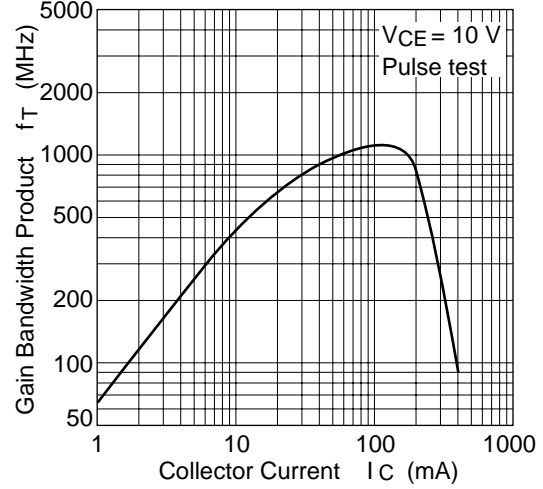


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Collector current vs. base to emitter voltage



Gain bandwidth product vs. collector current



Collector output capacitance vs. collector to base voltage

