2SC4829

Silicon NPN Epitaxial

HITACHI

ADE-208-1123 (Z)
1st. Edition
Mar. 2001

Application

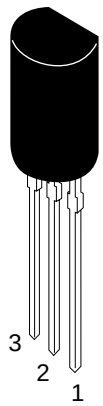
High frequency amplifier

Features

- High frequency characteristics
  f_T = 1100 MHz Typ
- High voltage and small output capacitance
  V_{CEO} = 100 V, Cob = 4.2 pF Typ
- Suitable for wide band video amplifier

Outline

TO-92MOD



1. Emitter
2. Collector
3. Base

Hitachi semiconductor

Ordering Information

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

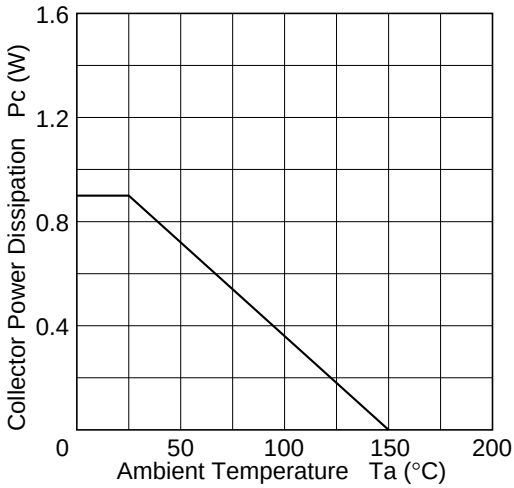
Absolute Maximum Ratings (Ta = 25°C)

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	$i_{C\ (peak)}$	0.5	A
Collector power dissipation	P_C	0.9	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

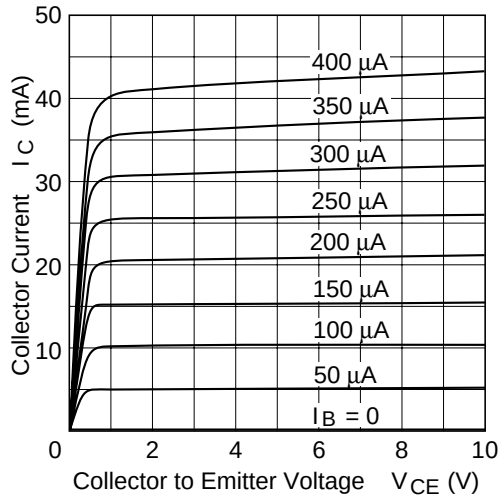
Electrical Characteristics (Ta = 25°C)

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

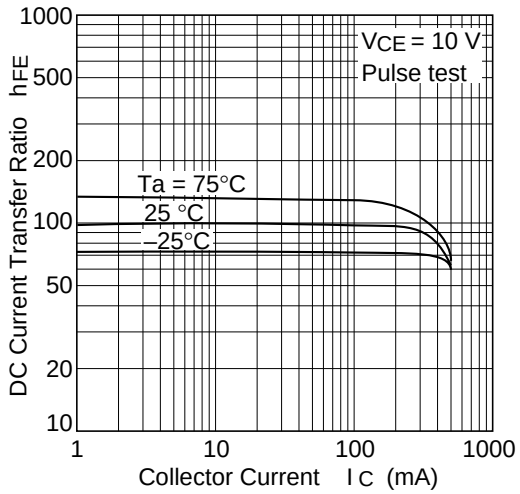
Maximum Collector Dissipation Curve



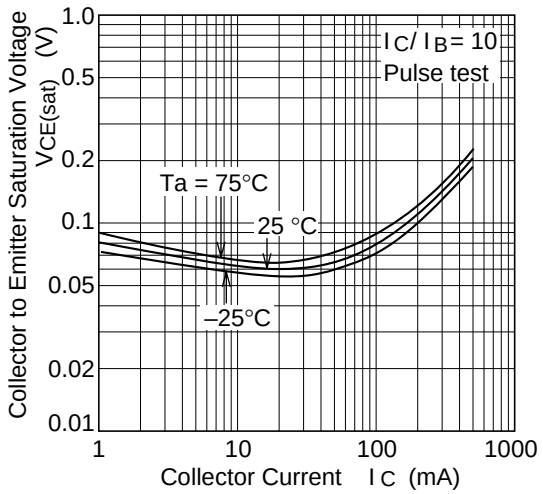
Typical Output Characteristics



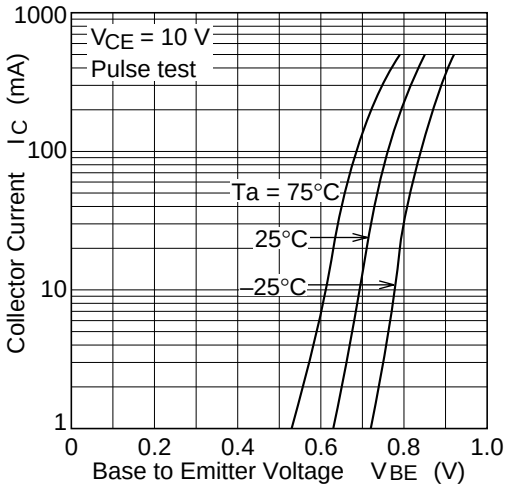
DC Current Transfer Ratio vs. Collector Current



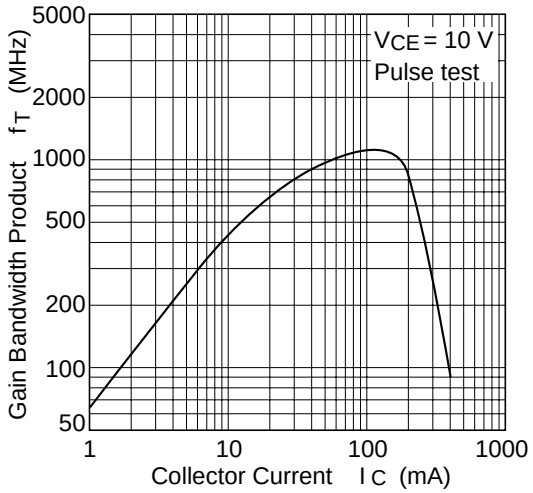
Collector to Emitter Saturation Voltage vs. Collector Current



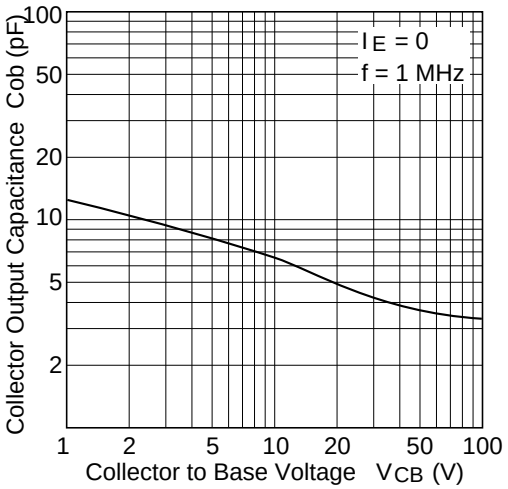
Collector Current vs.
Base to Emitter Voltage



Gain Bandwidth Product vs.
Collector Current

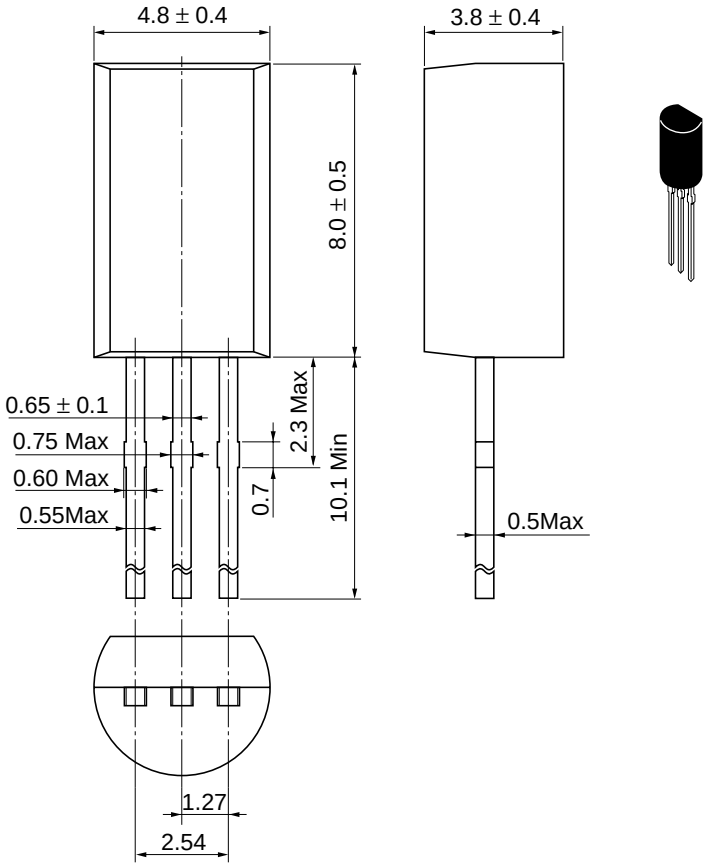


Collector Output Capacitance vs.
Collector to Base Voltage



Package Dimensions

As of January, 2001
Unit: mm



Hitachi Code	TO-92 Mod
JEDEC	—
EIAJ	Conforms
Mass (reference value)	0.35 g

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