HITACHI

2SC5024

Silicon NPN Epitaxial

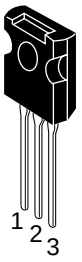
Application

High frequency amplifier

Features

- Excellent high frequency characteristics
  f_T = 300 MHz typ
- High breakdown voltage and low output capacitance
  V_{CEO} = 200 V, Cob = 5.0 pF typ
- Suitable for wide band video amplifier
- Complimentary pair of 2SA1889

TO–126FM



1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	200	V
Collector to emitter voltage	V_{CEO}	200	V
Emitter to base voltage	V_{EBO}	4	V
Collector current	I_C	0.2	A
Collector peak current	ic(peak)	0.5	A
Collector power dissipation	P_C	1.4	W
Collector power dissipation	P_C*1	8	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

Note: 1. Value at T_C = 25°C.

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Electrical Characteristics (Ta = 25°C)

Item		Symbol	Min	Typ	Max	Unit	Test Conditions
Collector to base breakdown voltage		$V_{(BR)CBO}$	200	—	—	V	I_C = 10 µA, I_E = 0
Collector to emitter breakdown voltage		$V_{(BR)CEO}$	200	—	—	V	I_C = 1 mA, R_{BE} = ∞
Emitter to base breakdown voltage		$V_{(BR)EBO}$	4	—	—	V	I_E = 10 µA, I_C = 0
Collector cutoff current		I_{CBO}	—	—	10	µA	V_{CB} = 160 V, I_E = 0
DC current transfer ratio	2SC5024B	h_{FE}	60	—	120		V_{CE} = 5 V, I_C = 10 mA
	2SC5024C	h_{FE}	100	—	200		
Base to emitter voltage		V_{BE}	—	—	1.0	V	V_{CE} = 5 V, I_C = 30 mA
Collector to emitter saturation voltage		$V_{CE(sat)}$	—	—	1.0	V	I_C = 30 mA, I_B = 3 mA
Gain bandwidth product		f_T	200	300	—	MHz	V_{CE} = 20 V, I_C = 30 mA
Collector output capacitance		Cob	—	5.0	—	pF	V_{CB} = 30 V, I_E = 0, f = 1 MHz

See characteristic curves of 2SC4704.

Maximum Collector Power Dissipation Curve