HITACHI

2SC5025

Silicon NPN Epitaxial

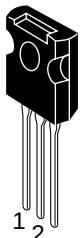
Application

High frequency amplifier

Features

- Excellent high frequency characteristics
  f_T = 1.2 GHz typ
- Low output capacitance
  Cob = 5.0 pF typ

TO–126FM



1. Emitter
2. Collector
3. Base

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}	3.5	V
Collector current	I_C	0.3	A
Collector peak current	ic(peak)	0.5	A
Collector power dissipation	P_C	1	W
Collector power dissipation	P_C*1	5	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 emitter breakdown voltage	$V_{(BR)CEO}$	20	—	—	V	I_C = 10 mA, R_{BE} = ∞
Collector cutoff current	I_{CBO}	—	—	1.0	mA	V_{CB} = 25 V, I_E = 0
Emitter cutoff current	I_{EBO}	—	—	1.0	mA	V_{EB} = 3 V, I_C = 0
DC current transfer ratio	h_{FE}	40	—	200		V_{CE} = 5 V, I_C = 50 mA
Base to emitter voltage	V_{BE}	—	—	1.2	V	V_{CE} = 5 V, I_C = 300 mA
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	2.0	V	I_C = 300 mA, I_B = 60 mA
Gain bandwidth product	f_T	—	1.2	—	GHz	V_{CE} = 5 V, I_C = 100 mA
Collector output capacitance	Cob	—	5.0	—	pF	V_{CB} = 10 V, I_E = 0, f = 1 MHz
Input capacitance	Cib	—	10	—	pF	V_{EB} = 2 V, I_C = 0, f = 1 MHz

See characteristic curves of 2SC3652.

Maximum Collector Power Dissipation Curve