2SC5237

Silicon NPN Epitaxial

HITACHI

Application

High frequency amplifier

Features

- Excellent high frequency characteristics
  f_T = 400 MHz typ
- High voltage and low output capacitance
  V_{CEO} = 250 V, Cob = 3.5 pF typ
- Suitable for wide band video amplifier

Outline

TO-126FM

1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	250	V
Collector to emitter voltage	V_{CEO}	250	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	150	mA
Collector peak current	$I_{C(peak)}$	300	mA
Collector power dissipation	P_C	1.4	W
		8*[1]	
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

Note: 1. T_C = 25°C

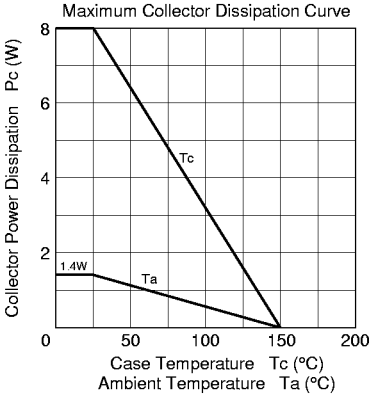
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	250	—	—	V	I_C = 10 µA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	250	—	—	V	I_C = 1 mA, R_{BE} = ∞
Collector cutoff current	I_{CBO}	—	—	1.0	µA	V_{CB} = 200 V, I_E = 0
Emitter cutoff current	I_{EBO}	—	—	10	µA	V_{EB} = 3 V, I_C = 0
DC current transfer ratio	h_{FE}*[1]	60	—	200	—	V_{CE} = 10 V, I_C = 10 mA
Base to emitter voltage	V_{BE}	—	—	1.0	V	V_{CE} = 10 V, I_C = 50 mA
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.0	V	I_C = 50 mA, I_B = 5 mA
Gain bandwidth product	f_T	300	400	—	MHz	V_{CE} = 30 V, I_C = 50 mA
Collector output capacitance	Cob	—	3.5	5.0	pF	V_{CB} = 30 V, I_E = 0, f = 1 MHz

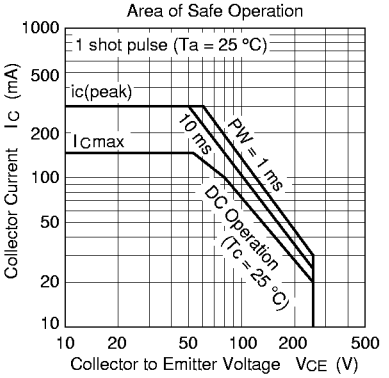
Note: 1. The 2SC2537 is grouped by h_{FE} and its specification is as follows.

B	C
60 to 120	100 to 200

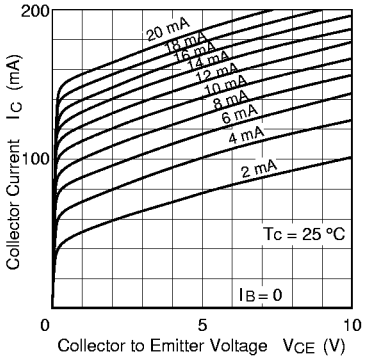
Maximum Collector Dissipation Curve



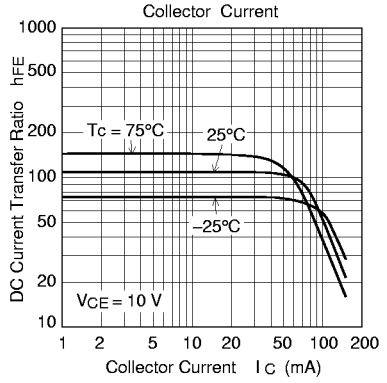
Area of Safe Operation



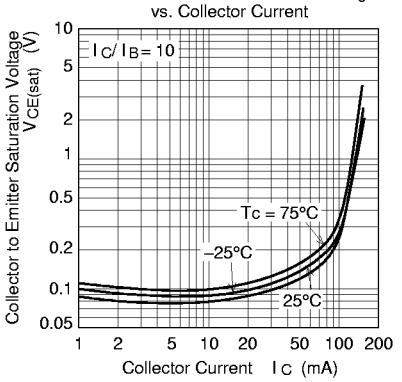
Typical Output Characteristics



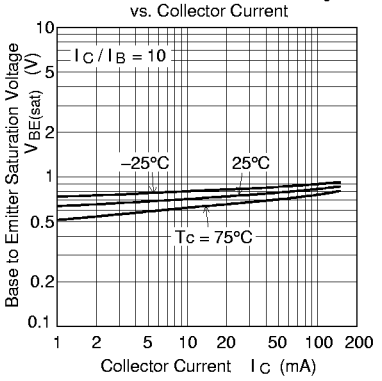
DC Current Transfer Ratio vs.
Collector Current



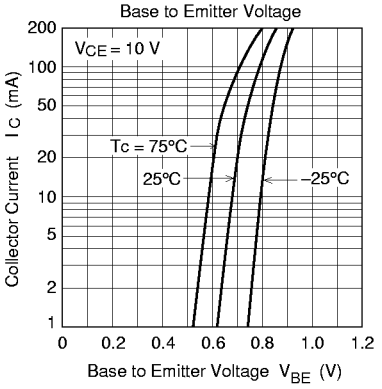
Collector to Emitter Saturation Voltage
vs. Collector Current



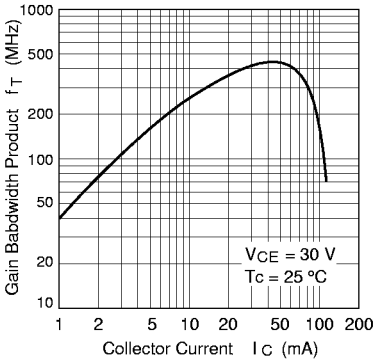
Base to Emitter Saturation Voltage
vs. Collector Current



Collector Current vs.
Base to Emitter Voltage



Gain Bandwidth Product vs.
Collector Current



Collector Output Capacitance
vs. Collector to Base Voltage