2SC4259

Silicon NPN Epitaxial

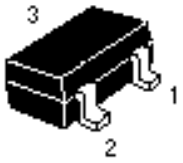
HITACHI

Application

UHF RF amplifier

Outline

CMPAK



1. Emitter
2. Base
3. Collector

Absolute Maximum Ratings (Ta = 25°C)

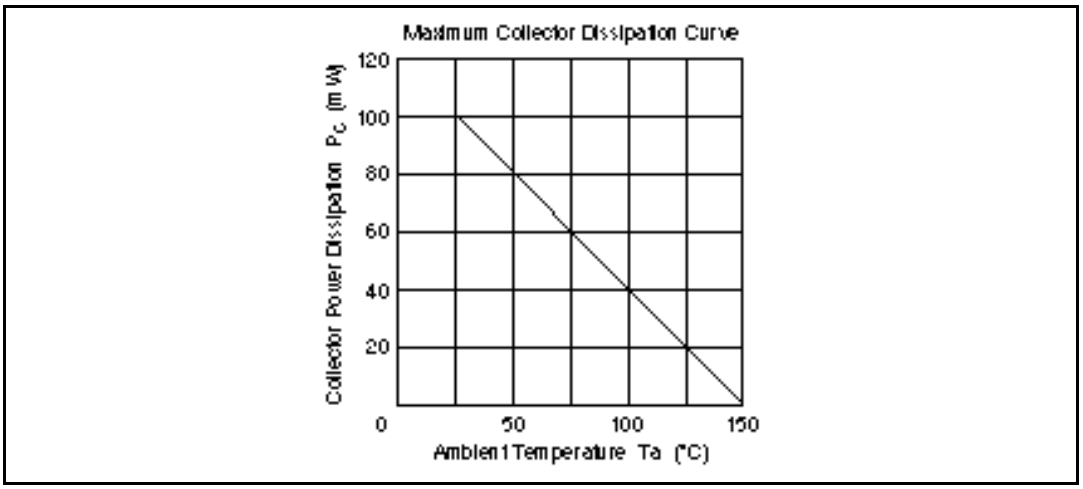
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	25	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	20	mA
Collector power dissipation	P_C	100	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	I_C = 10 µA, I_E = 0
Collector cutoff current	I_{CBO}	—	—	0.3	µA	V_{CB} = 15 V, I_E = 0
	I_{CEO}	—	—	10	µA	V_{CE} = 25 V, R_{BE} = ∞
Emitter cutoff current	I_{EBO}	—	—	1.0	µA	V_{EB} = 3 V, I_C = 0
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	5.0	V	I_C = 10 mA, I_B = 1 mA
DC current transfer ratio	h_{FE}	50	—	180		V_{CE} = 5 V, I_C = 2 mA
Collector output capacitance	Cob	—	0.6	0.9	pF	V_{CB} = 10 V, I_E = 0, f = 1MHz
Gain bandwidth product	f_T	0.7	1.0	—	GHz	V_{CE} = 5 V, I_C = 2 mA
Power gain	PG	10	15	—	dB	V_{CC} = 4 V, I_C = 2 mA, f = 900 MHz
Noise figure	NF	—	3.0	4.5	dB	V_{CC} = 4 V, I_C = 2 mA, f = 900 MHz
AGC voltage	V_{AGC}	1.8	—	2.7	V	V_{CC} = 4 V, I_C = 2 mA, f = 900 MHz, P_{in} = –50 dBm, GR = 30 dB

Note: Marking is “UI–”.

See characteristic curves of 2SC4229.



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