
2SC3338

Silicon NPN Epitaxial

HITACHI

ADE-208-1081 (Z)

1st. Edition

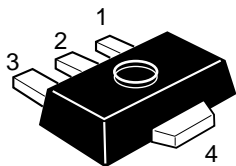
Mar. 2001

Application

UHF / VHF wide band amplifier

Outline

UPAK



- 1. Base
- 2. Collector
- 3. Emitter
- 4. Collector (Flange)

Note: Marking is "AR".

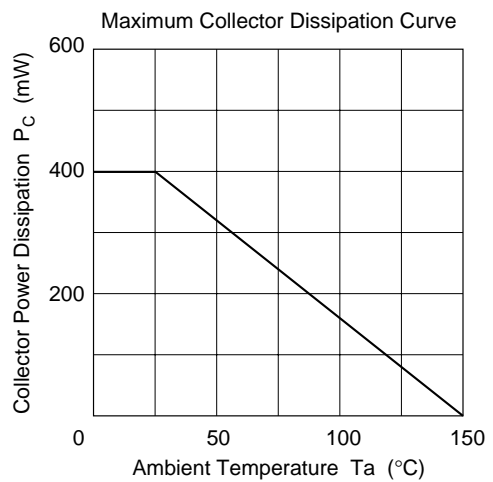
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	20	V
Collector to emitter voltage	V_{CEO}	12	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_{C}	50	mA
Collector power dissipation	P_{C}	400	mW
Junction temperature	T_{j}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics ($T_a = 25^\circ\text{C}$)

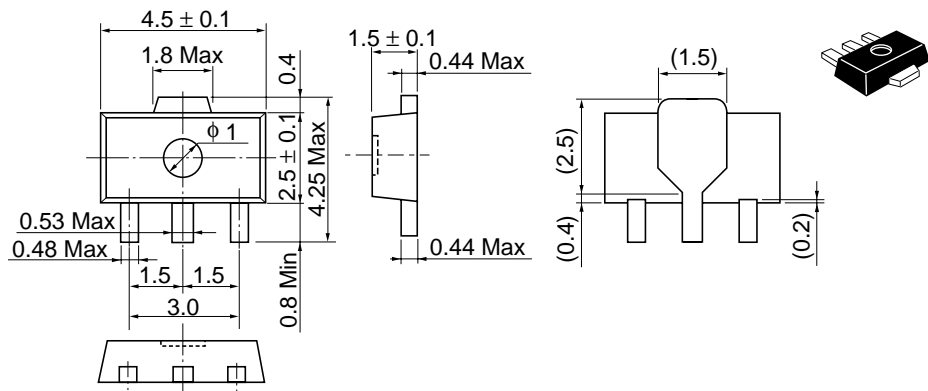
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(\text{BR})\text{CBO}}$	20	—	—	V	$I_{\text{C}} = 10\text{ }\mu\text{A}$, $I_{\text{E}} = 0$
Collector to emitter breakdown voltage	$V_{(\text{BR})\text{CEO}}$	12	—	—	V	$I_{\text{C}} = 1\text{ mA}$, $R_{\text{BE}} = \infty$
Emitter cutoff current	I_{EBO}	—	—	10	μA	$V_{\text{EB}} = 3\text{ V}$, $I_{\text{C}} = 0$
Collector cutoff current	I_{CBO}	—	—	0.5	μA	$V_{\text{CB}} = 15\text{ V}$, $I_{\text{C}} = 0$
DC current transfer ratio	h_{FE}	30	90	200		$V_{\text{CE}} = 5\text{ V}$, $I_{\text{C}} = 20\text{ mA}$
Collector output capacitance	C_{ob}	—	1.0	1.5	pF	$V_{\text{CB}} = 5\text{ V}$, $I_{\text{E}} = 0$, $f = 1\text{ MHz}$
Gain bandwidth product	f_{T}	3.5	4.5	—	GHz	$V_{\text{CE}} = 5\text{ V}$, $I_{\text{C}} = 20\text{ mA}$
Power gain	PG	—	8.2	—	dB	$V_{\text{CE}} = 5\text{ V}$, $I_{\text{C}} = 20\text{ mA}$, $f = 900\text{ MHz}$
Noise figure	NF	—	2.0	—	dB	$V_{\text{CE}} = 5\text{ V}$, $I_{\text{C}} = 5\text{ mA}$, $f = 900\text{ MHz}$

See characteristic curves of 2SC3127.



Package Dimensions

As of January, 2001
Unit: mm



Hitachi Code	UPAK
JEDEC	—
EIAJ	Conforms
Mass (reference value)	0.050 g

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