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# 2SC3380

Silicon NPN Triple Diffused

# HITACHI

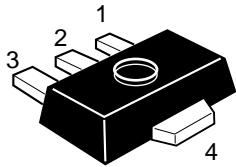
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## Application

- High frequency high voltage amplifier
- High voltage switch

## Outline

UPAK



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

## 2SC3380

### Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	300	V
Collector to emitter voltage	$V_{CEO}$	300	V
Emitter to base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	100	mA
Collector power dissipation	$P_C^{*1}$	1	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

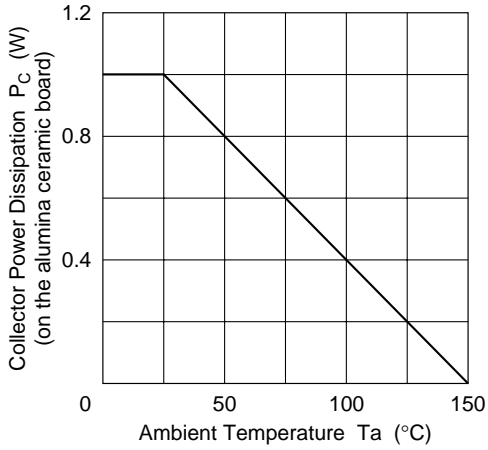
Note: 1. Value on the alumina ceramic board (12.5 × 20 × 0.7 mm)

### Electrical Characteristics (Ta = 25°C)

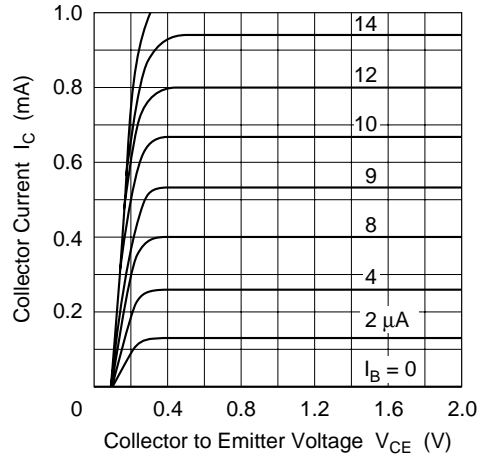
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	300	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	300	—	—	V	$I_C = 1 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	V	$I_E = 10 \mu A, I_C = 0$
Collector cutoff current	$I_{CEO}$	—	—	1	$\mu A$	$V_{CE} = 250 \text{ V}, R_{BE} = \infty$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.5	V	$I_C = 20 \text{ mA}, I_B = 2 \text{ mA}$
DC current transfer ratio	$h_{FE}$	30	—	200		$V_{CE} = 20 \text{ V}, I_C = 20 \text{ mA}$
Gain bandwidth product	$f_T$	—	80	—	MHz	$V_{CE} = 20 \text{ V}, I_C = 20 \text{ mA}$
Collector output capacitance	Cob	—	—	4	pF	$V_{CB} = 20 \text{ V}, I_E = 0, f = 1 \text{ MHz}$

Note: Marking is "AS".

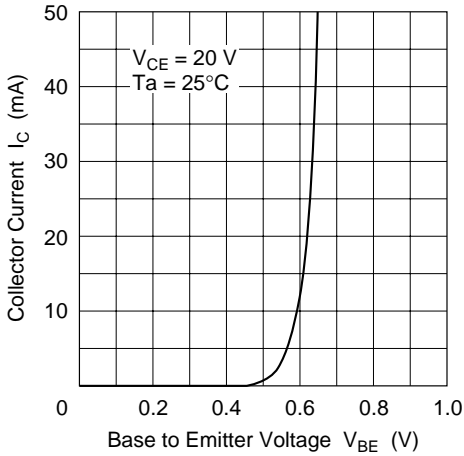
Maximum Collector Dissipation Curve



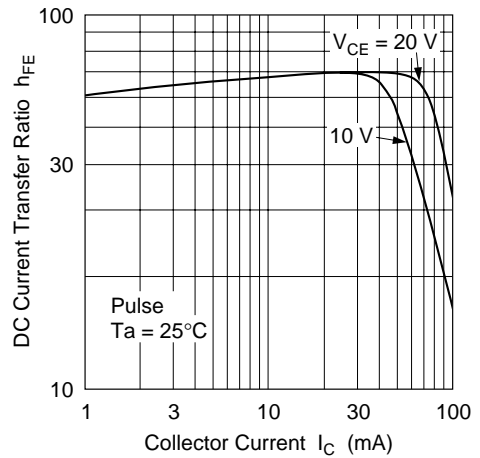
Typical Output Characteristics

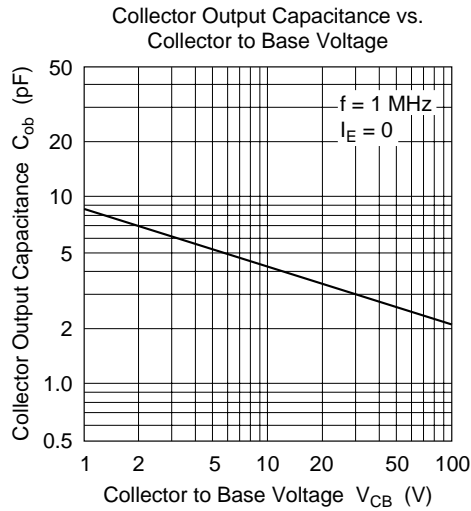
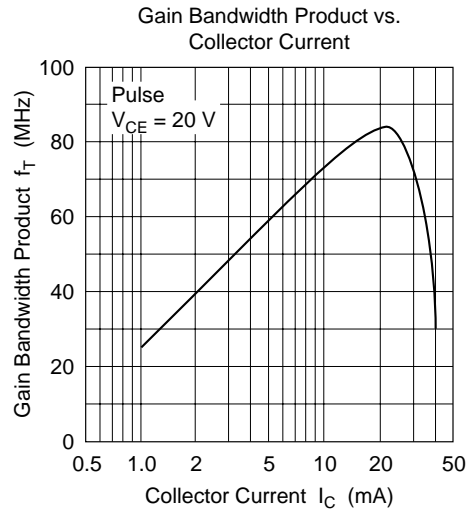
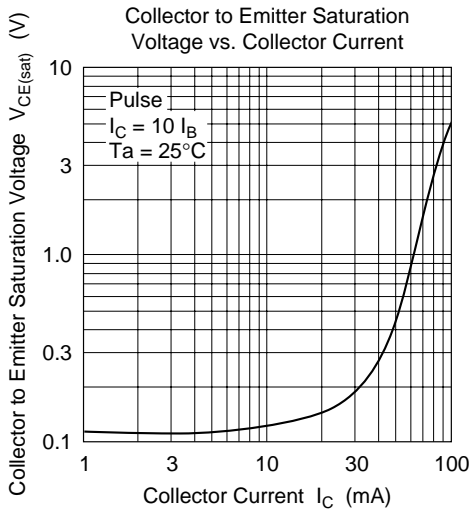


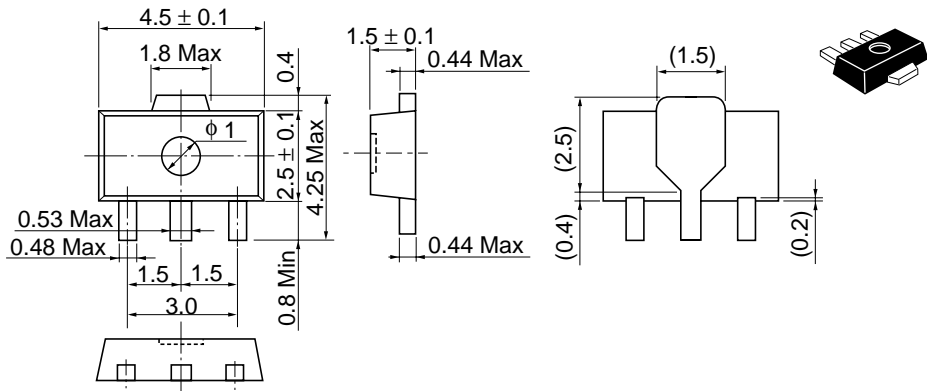
Typical Transfer Characteristics



DC Current Transfer Ratio vs. Collector Current







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

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