2SC3380

Silicon NPN Triple Diffused

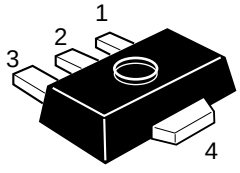
HITACHI

Application

- High frequency high voltage amplifier
- High voltage switch

Outline

UPAK



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

Hitachi semiconductor

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

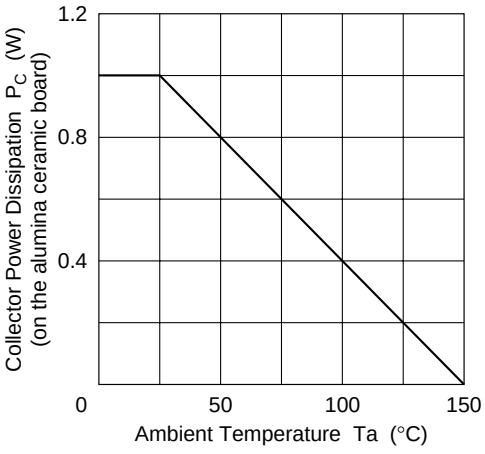
Note: 1. Value on the alumina ceramic board (12.5 × 20 × 0.7 mm)

Electrical Characteristics (Ta = 25°C)

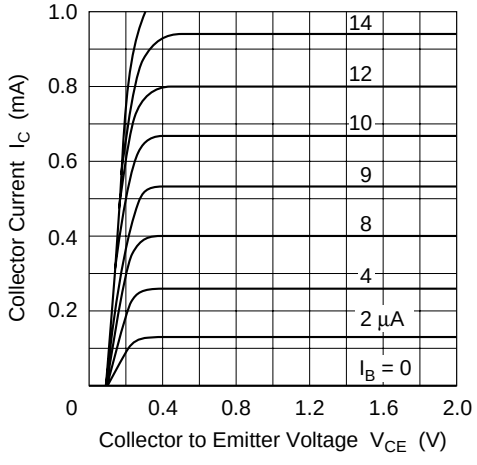
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	300	—	—	V	I_C = 10 µA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	300	—	—	V	I_C = 1 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	V	I_E = 10 µA, I_C = 0
Collector cutoff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

Note: Marking is “AS”.

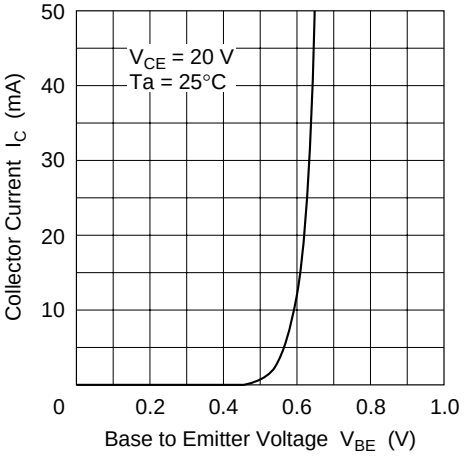
Maximum Collector Dissipation Curve



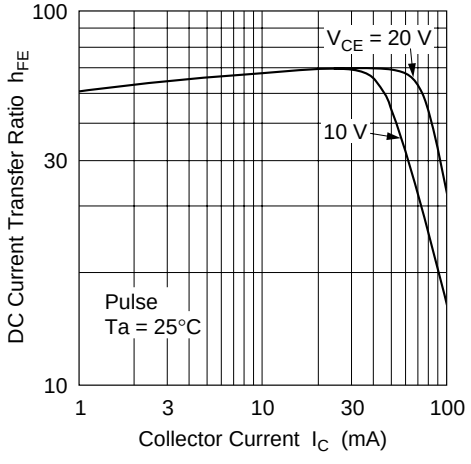
Typical Output Characteristics



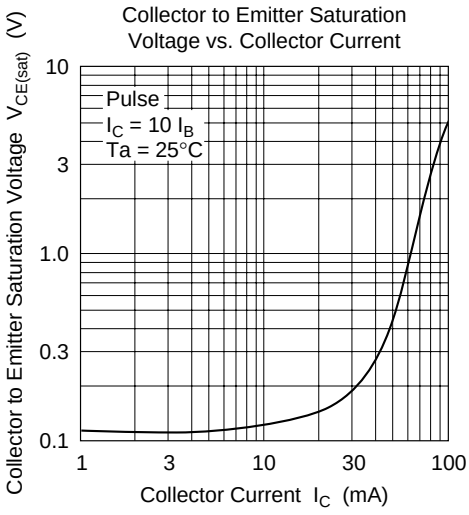
Typical Transfer Characteristics



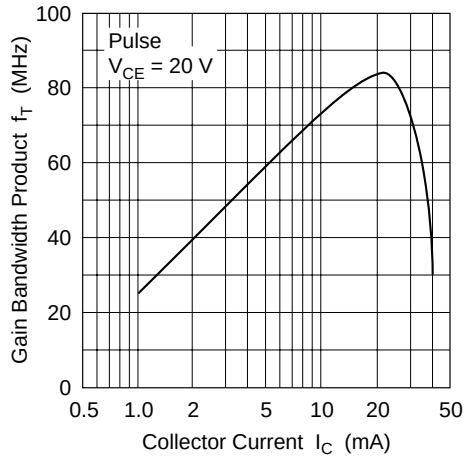
DC Current Transfer Ratio vs.
Collector Current



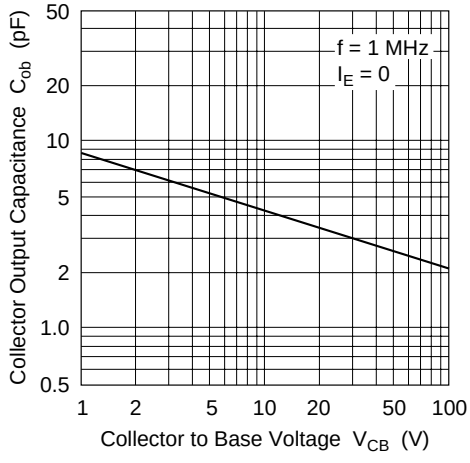
Collector to Emitter Saturation Voltage vs. Collector Current



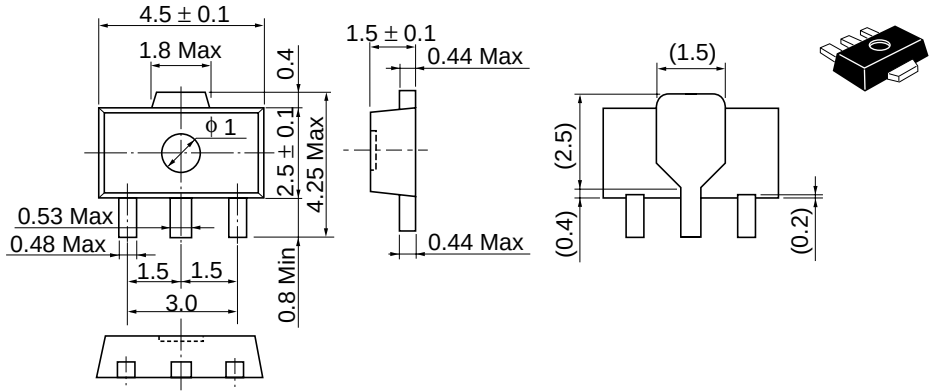
Gain Bandwidth Product vs. Collector Current



Collector Output Capacitance vs. Collector to Base Voltage



Unit: mm



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

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