
2SB1048

Silicon PNP Epitaxial, Darlington

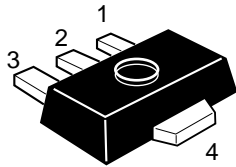
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Application

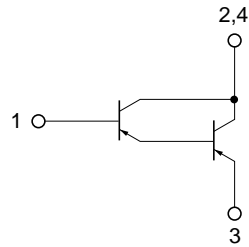
High gain amplifier

Outline

UPAK



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



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

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-60	V
Collector to emitter voltage	V_{CEO}	-60	V
Emitter to base voltage	V_{EBO}	-7	V
Collector current	I_{C}	-1	A
Collector peak current	$i_{\text{C(peak)}}^{*1}$	-2	A
Collector power dissipation	P_{C}^{*2}	1	W
Junction temperature	T_{j}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Notes: 1. $PW \leq 10$ ms, Duty cycle $\leq 20\%$

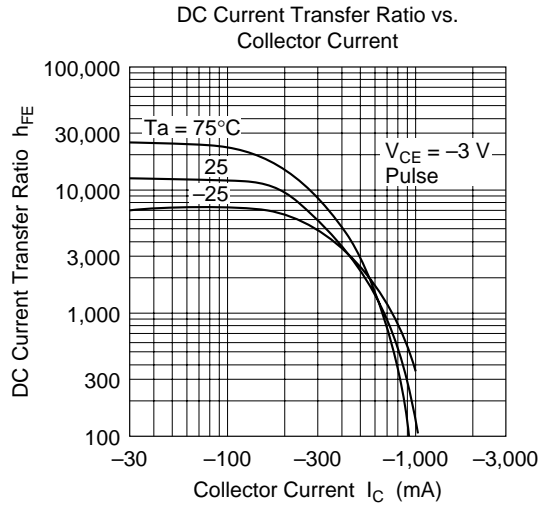
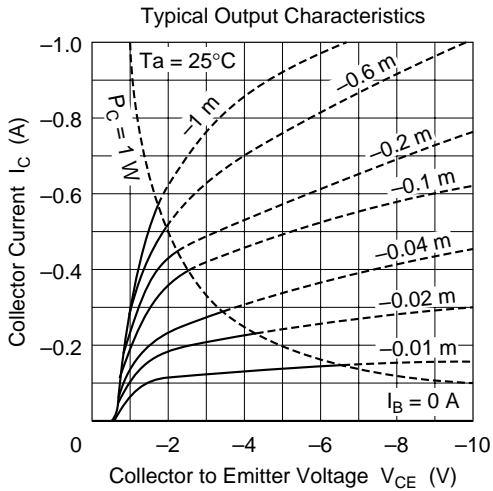
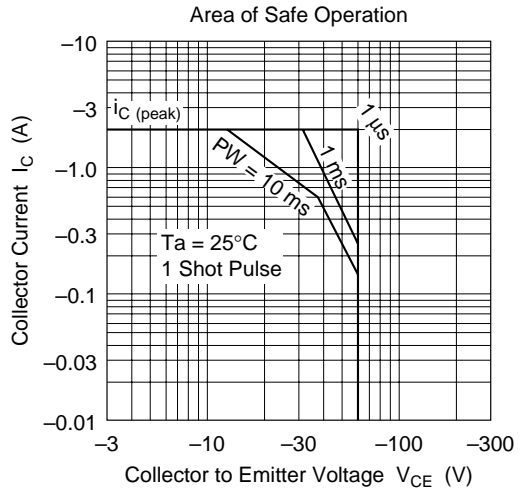
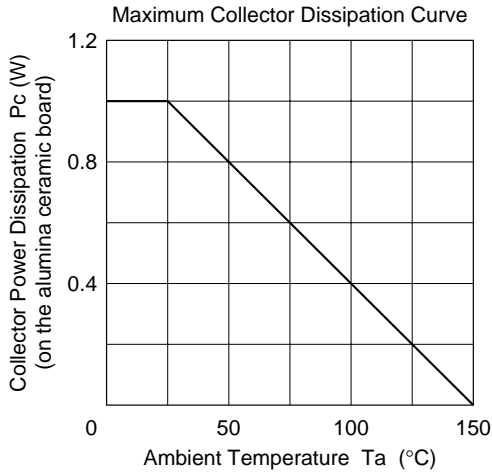
2. Value on the alumina ceramic board ($12.5 \times 30 \times 0.7$ mm)

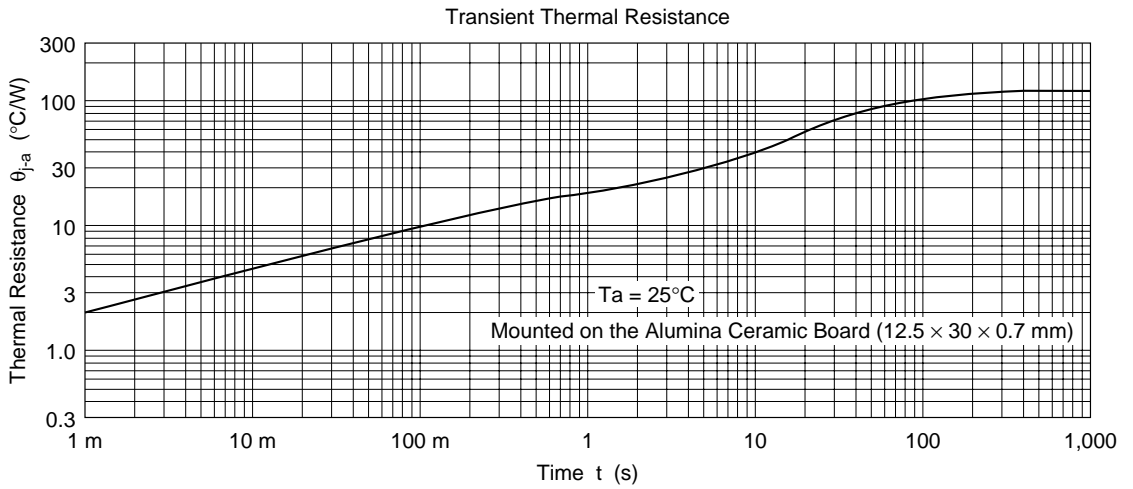
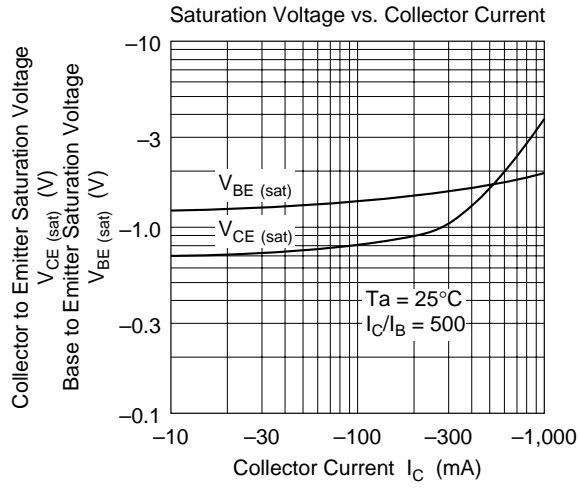
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

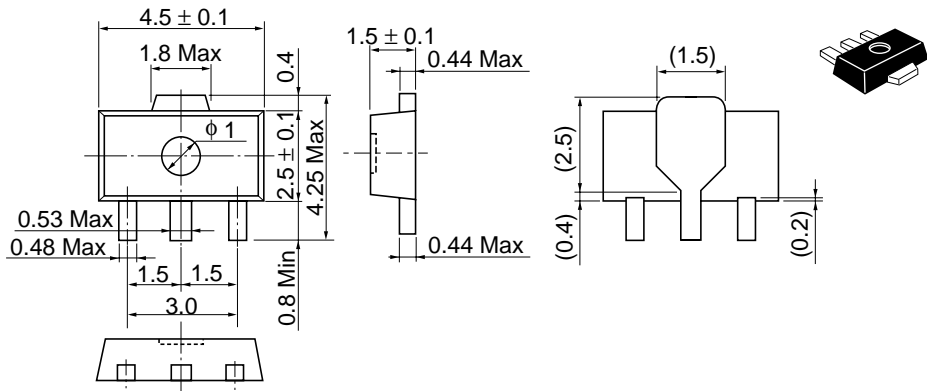
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(\text{BR})\text{CBO}}$	-60	—	—	V	$I_{\text{C}} = -10 \mu\text{A}$, $I_{\text{E}} = 0$
Collector to emitter breakdown voltage	$V_{(\text{BR})\text{CEO}}$	-60	—	—	V	$I_{\text{C}} = -1$ mA, $R_{\text{BE}} = \infty$
Collector cutoff current	I_{CBO}	—	—	-10	μA	$V_{\text{CB}} = -60$ V, $I_{\text{E}} = 0$
Emitter cutoff current	I_{EBO}	—	—	-10	μA	$V_{\text{EB}} = -7$ V, $I_{\text{E}} = 0$
DC current transfer ratio	h_{FE}	2000	—	100000		$V_{\text{CE}} = -3$ V, $I_{\text{C}} = -500$ mA ^{*1}
Collector to emitter saturation voltage	$V_{\text{CE(sat)}}$	—	—	-2.0	V	$I_{\text{C}} = -500$ mA, $I_{\text{B}} = -1$ mA ^{*1}
Base to emitter saturation voltage	$V_{\text{BE(sat)}}$	—	—	-2.0	V	$I_{\text{C}} = -500$ mA, $I_{\text{B}} = -1$ mA ^{*1}

Notes: 1. Pulse test

2. Marking is "BT"







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

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