

# 2SD1472

Silicon NPN Epitaxial, Darlington

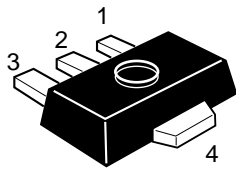
# HITACHI

## Application

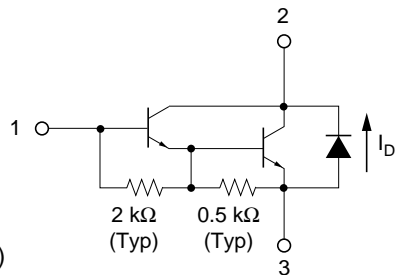
Low frequency power amplifier

## Outline

UPAK



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



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

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	120	V
Collector to emitter voltage	$V_{CEO}$	120	V
Emitter to base voltage	$V_{EBO}$	7	V
Collector current	$I_C$	1.5	A
Collector peak current	$i_{C(\text{peak})}^{*1}$	3.0	A
Collector power dissipation	$P_C^{*2}$	1.0	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C
E to C diode forward current	$I_D$	1.5	A

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

2. Value on the alumina ceramic board (12.5 x 30 x 0.7 mm)

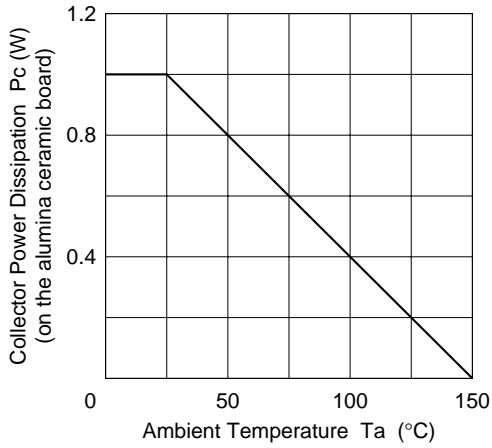
**Electrical Characteristics** (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	120	—	—	V	$I_C = 0.1$ mA, $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	120	—	—	V	$I_C = 10$ mA, $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	7	—	—	V	$I_E = 50$ mA, $I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	1.0	$\mu$ A	$V_{CB} = 100$ V, $I_E = 0$
	$I_{CEO}$	—	—	10	$\mu$ A	$V_{CE} = 100$ V, $R_{BE} = \infty$
DC current transfer ratio	$h_{FE}$	2000	—	30000		$V_{CE} = 3$ V, $I_C = 1$ A <sup>*1</sup>
Collector to emitter saturation voltage	$V_{CE(\text{sat})1}$	—	—	1.5	V	$I_C = 1$ A, $I_B = 1$ mA <sup>*1</sup>
	$V_{CE(\text{sat})2}$	—	—	2.0	V	$I_C = 1.5$ A, $I_B = 1.5$ mA <sup>*1</sup>
Base to emitter saturation voltage	$V_{BE(\text{sat})1}$	—	—	2.0	V	$I_C = 1$ A, $I_B = 1$ mA <sup>*1</sup>
	$V_{BE(\text{sat})2}$	—	—	2.5	V	$I_C = 1.5$ A, $I_B = 1.5$ mA <sup>*1</sup>
E to C diode forward voltage	$V_D$	—	—	3.0	V	$I_D = 1.5$ A <sup>*1</sup>

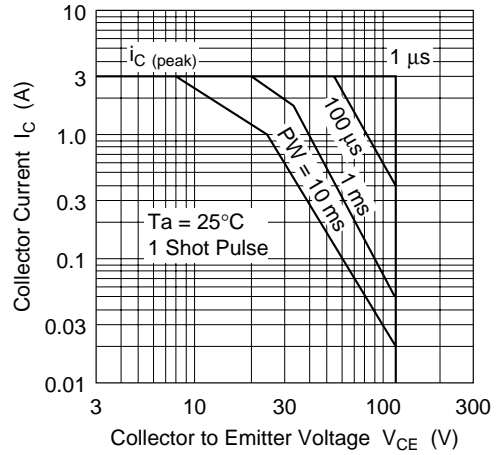
Notes: 1. Pulse test

2. Marking is "CT".

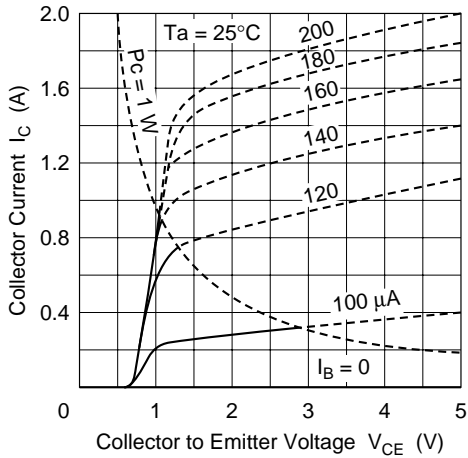
Maximum Collector Dissipation Curve



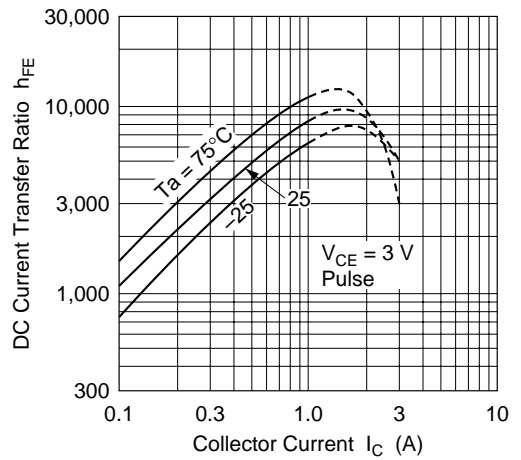
Area of Safe Operation

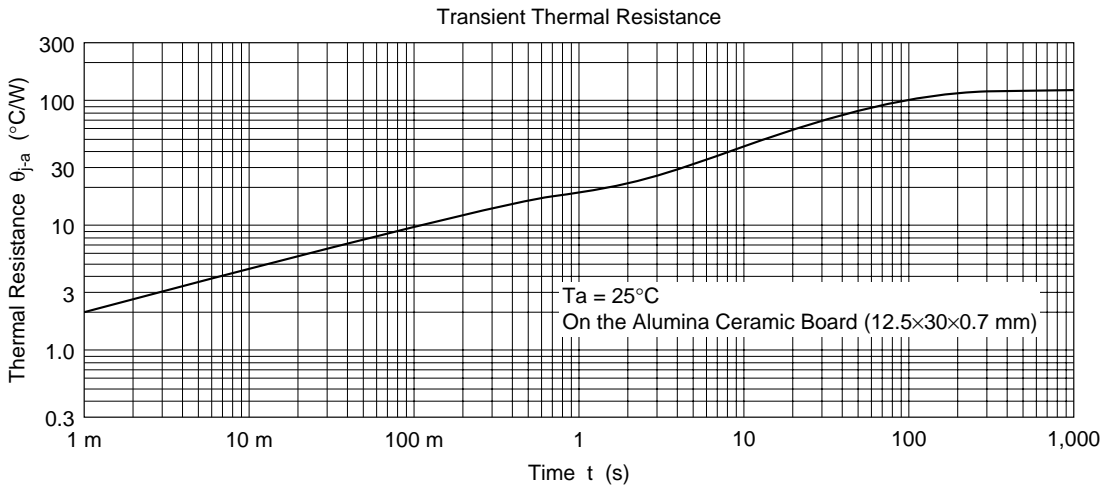
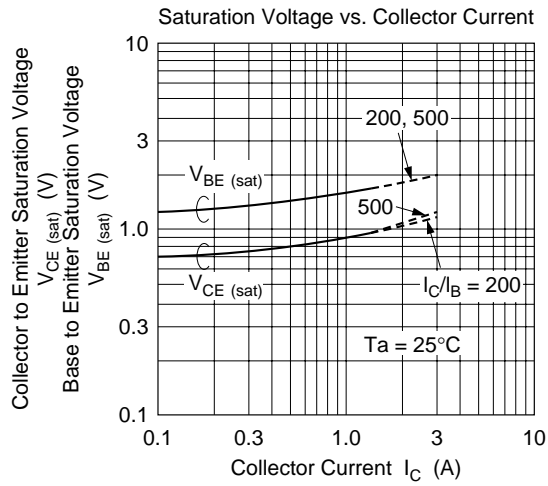


Typical Output Characteristics



DC Current Transfer Ratio vs. Collector Current







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

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