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Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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2SD1472

Silicon NPN Epitaxial, Darlington

REJ03G0792-0300

Rev.3.00

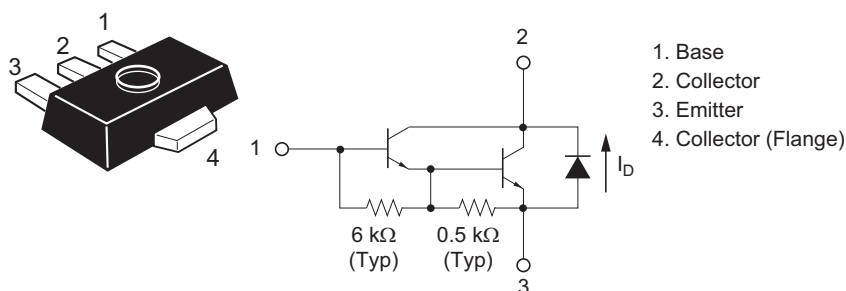
Nov 30, 2007

Application

Low frequency power amplifier

Outline

RENESAS Package code: PLZZ0004CA-A
(Package name: UPAK[®])



Note: Marking is "CT".

*UPAK is a trademark of Renesas Technology Corp.

Absolute Maximum Ratings

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

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	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$
E to C diode forward current	I_D	1.5	A

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

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

Electrical Characteristics

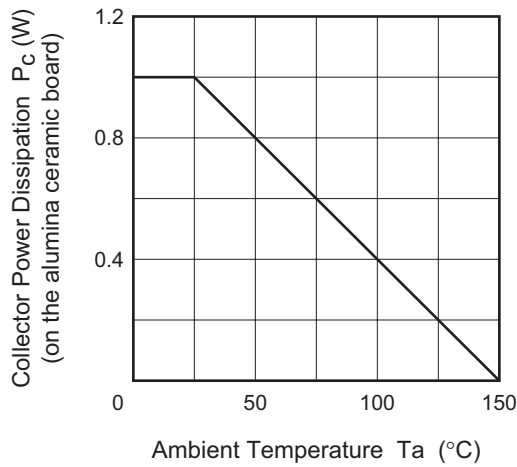
(Ta = 25°C)

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

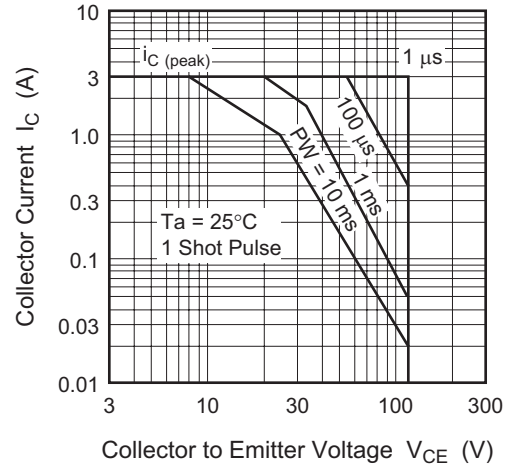
Notes: 1. Pulse test

Main Characteristics

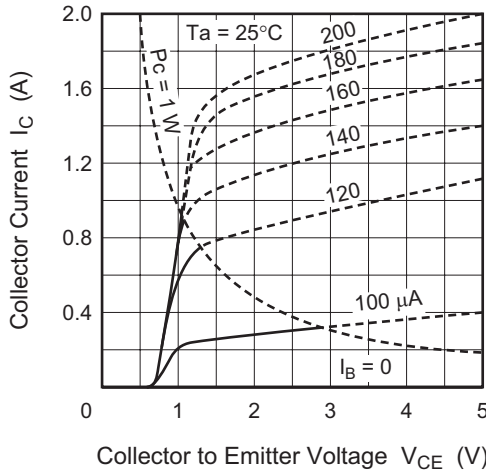
Maximum Collector Dissipation Curve



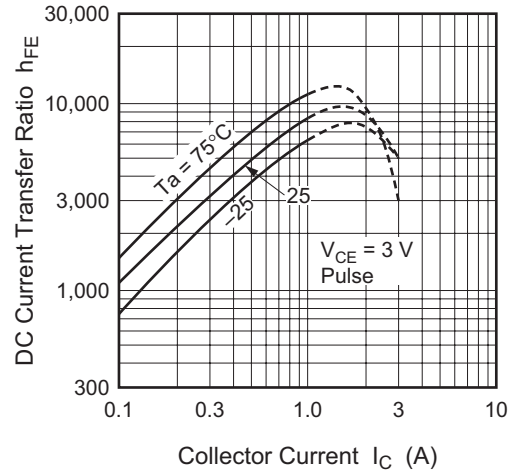
Area of Safe Operation



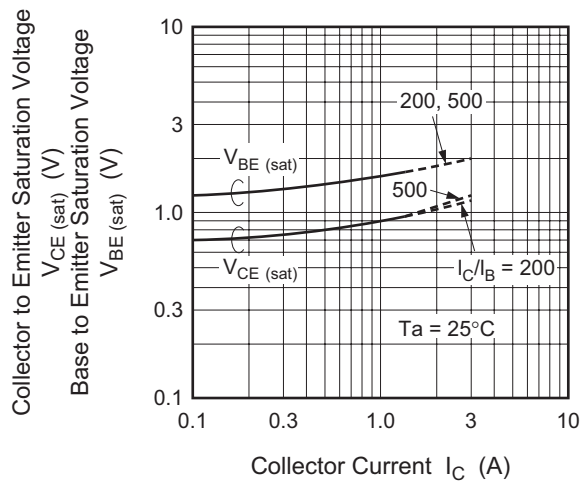
Typical Output Characteristics

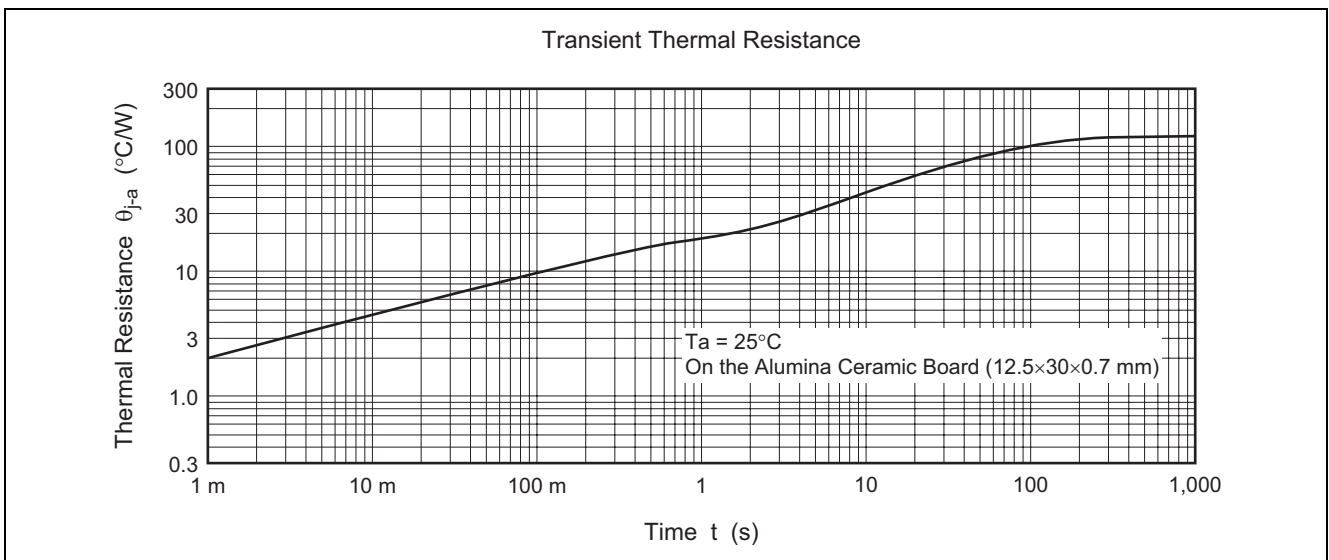


DC Current Transfer Ratio vs. Collector Current



Saturation Voltage vs. Collector Current





Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]	Unit: mm
UPAK	SC-62	PLZZ0004CA-A	UPAK / UPAKV	0.050g	

The drawing shows three views of the package:

- Top View:** Overall width is 4.5 ± 0.1 mm. The lead width is 1.8 Max mm. The lead thickness is 0.4 mm. The lead length is 2.5 ± 0.1 Max mm. The lead pitch is 1.5 mm. The lead width at the base is 0.53 Max mm and 0.48 Max mm. The lead thickness at the base is 0.8 Min mm. The lead length at the base is 4.25 Max mm. The lead width at the base is 3.0 mm.
- Side View:** The lead height is 1.5 ± 0.1 mm. The lead thickness is 0.44 Max mm. The lead length is 0.44 Max mm.
- Bottom View:** The lead width is (1.5) mm. The lead thickness is (0.4) mm. The lead length is (0.2) mm.

Ordering Information

Part Name	Quantity	Shipping Container
2SD1472CTTR-E	1000	ϕ 178 mm Reel, 12 mm Emboss Taping

Note: For some grades, production may be terminated. Please contact the Renesas sales office to check the state of production before ordering the product.

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