To our customers,

Old Company Name in Catalogs and Other Documents

On April 1st, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

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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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

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2SD1489

Silicon NPN Epitaxial

RENESAS

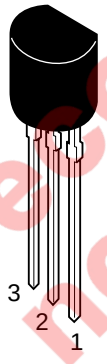
ADE-208-1156A (Z)
2nd. Edition
Mar. 2001

Application

- Low frequency power amplifier

Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	20	V
Collector to emitter voltage	V_{CEO}	16	V
Emitter to base voltage	V_{EBO}	6	V
Collector current	I_C	2	A
Collector power dissipation	P_C	0.75	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

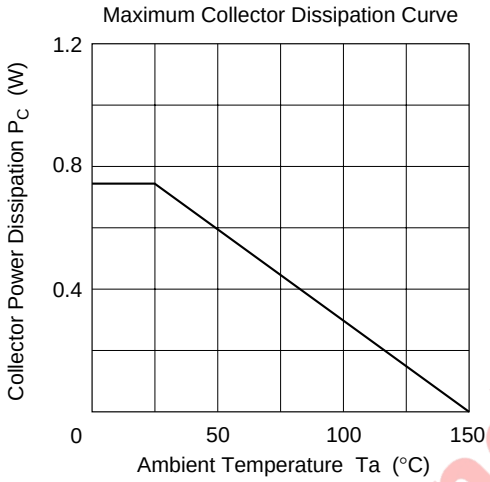
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	20	—	—	V	I_C = 10 µA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	16	—	—	V	I_C = 1 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	6	—	—	V	I_E = 10 µA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	2	µA	V_{CB} = 16 V, I_E = 0
Emitter cutoff current	I_{EBO}	—	—	0.2	µA	V_{EB} = 6 V, I_C = 0
DC current transfer ratio	h_{FE}*[1]	100	—	500		V_{CE} = 2 V, I_C = 0.1 A
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	0.3	V	I_C = 1 A, I_B = 0.1 A
Gain bandwidth product	f_T	—	80	—	MHz	V_{CE} = 2 V, I_C = 10 mA
Collector output capacitance	Cob	—	20	—	pF	V_{CB} = 10 V, I_E = 0, f = 1 MHz

Note: 1. The 2SD1489 is grouped by h_{FE} as follows.

B	C	D
100 to 200	160 to 320	250 to 500

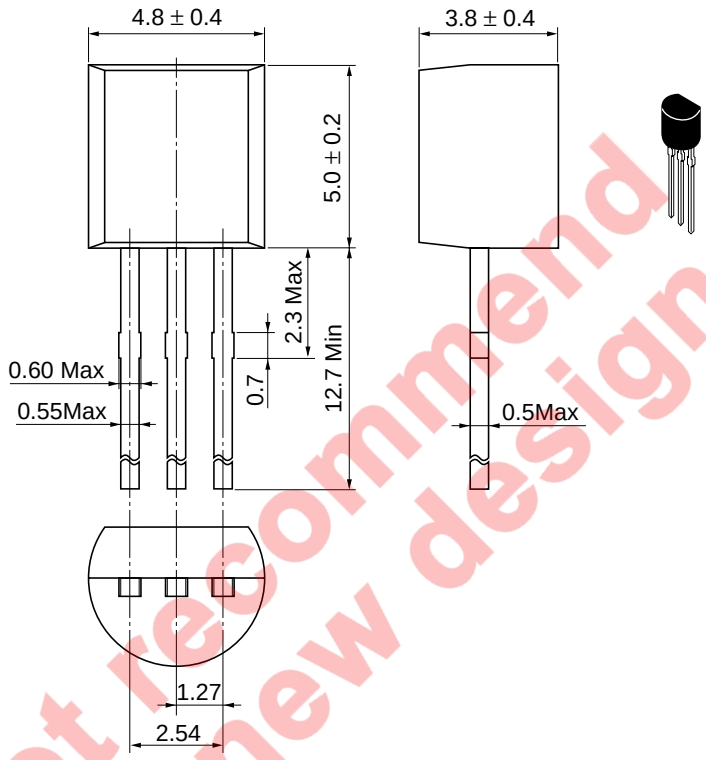
See characteristic curves of 2SD787.



Package Dimensions

As of January, 2001

Unit: mm



Hitachi Code	TO-92 (1)
JEDEC	Conforms
EIAJ	Conforms
Mass (reference value)	0.25 g

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