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

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Keep safety first in your circuit designs!

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2SB1392

Silicon PNP Triple Diffused

RENESAS

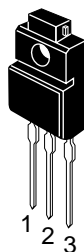
ADE-208-872 (Z)
1st. Edition
September 2000

Application

Low frequency power amplifier

Outline

TO-220FM



1. Base
2. Collector
3. Emitter

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

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-70	V
Collector to emitter voltage	V_{CEO}	-60	V
Emitter to base voltage	V_{EBO}	-5	V
Collector current	I_C	-4	A
Collector peak current	$I_{C(\text{peak})}$	-8	A
Collector power dissipation	P_C	2	W
	P_C^{*1}	25	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Note: 1. Value at $T_C = 25^\circ\text{C}$.

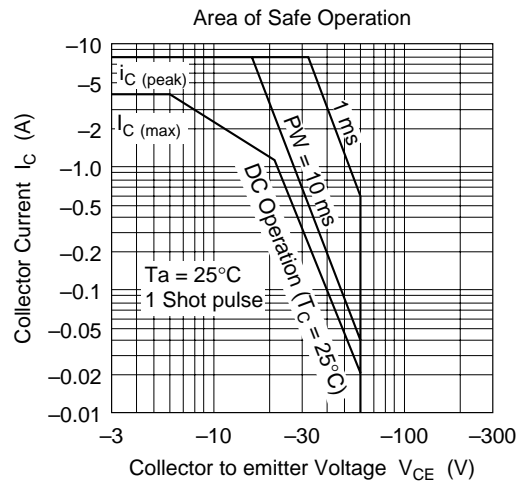
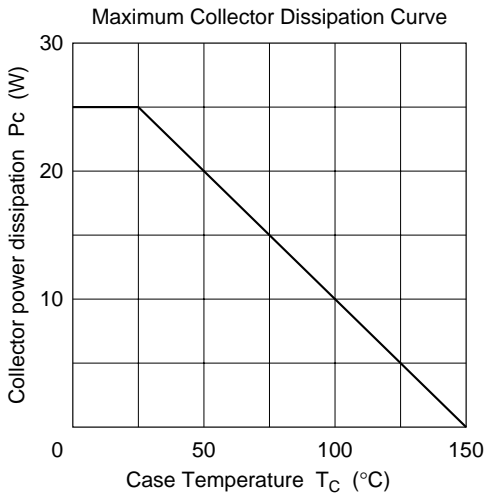
Electrical Characteristics (Ta = 25°C)

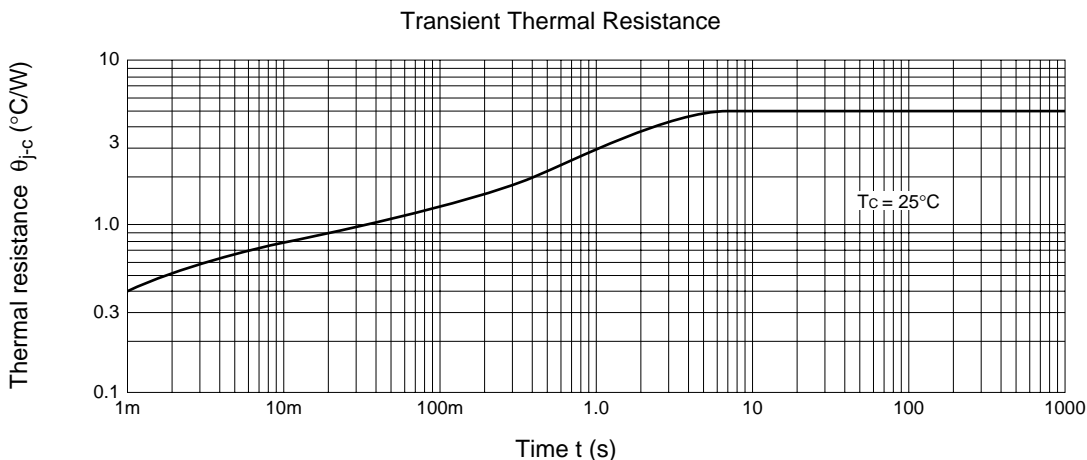
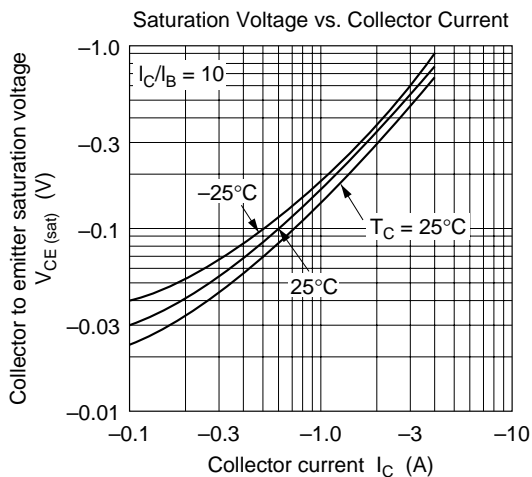
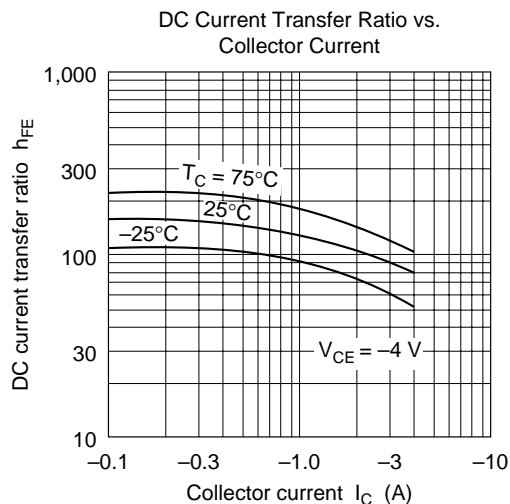
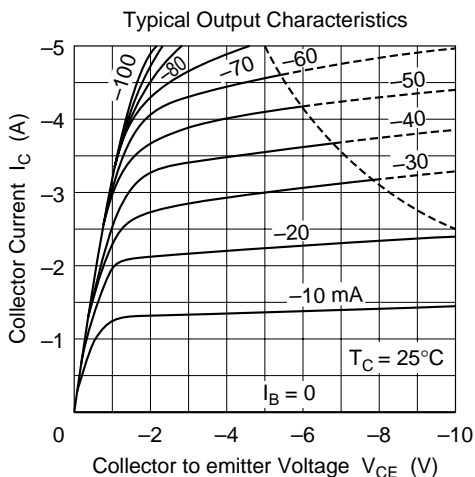
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-70	—	—	V	$I_C = -10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-60	—	—	V	$I_C = -50 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-5	—	—	V	$I_E = -10 \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	-10	μA	$V_{CB} = -50 \text{ V}, I_E = 0$
	I_{CEO}	—	—	-10		$V_{CE} = -50 \text{ V}, R_{BE} = \infty$
DC current transfer ratio	h_{FE1}^{*2}	60	—	200		$V_{CE} = -4 \text{ V}, I_C = -1 \text{ A}^{*1}$
	h_{FE2}	35	—	—		$V_{CE} = -4 \text{ V}, I_C = -0.1 \text{ A}^{*1}$
Base to emitter voltage	V_{BE}	—	—	-1.0	V	$V_{CE} = -4 \text{ V}, I_C = -1 \text{ A}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	-1.0	V	$I_C = -2.0 \text{ A}, I_B = -0.2 \text{ A}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	-1.2	V	$I_C = -2.0 \text{ A}, I_B = -0.2 \text{ A}^{*1}$

Notes: 1. Pulse test.

2. The 2SB1392 is grouped by h_{FE1} as follows.

B	C
60 to 120	100 to 200





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