

2SB739

Silicon PNP Epitaxial

REJ03G0650-0200
(Previous ADE-208-1030)
Rev.2.00
Aug.10.2005

Application

- Low frequency power amplifier
- Complementary pair with 2SD787 and 2SD788

Outline

RENESAS Package code: PRSS0003DC-A
(Package name: TO-92 Mod)



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}	-20	V
Emitter to base voltage	V_{EBO}	-6	V
Collector current	I_C	-2	A
Collector power dissipation	P_C	0.9	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics

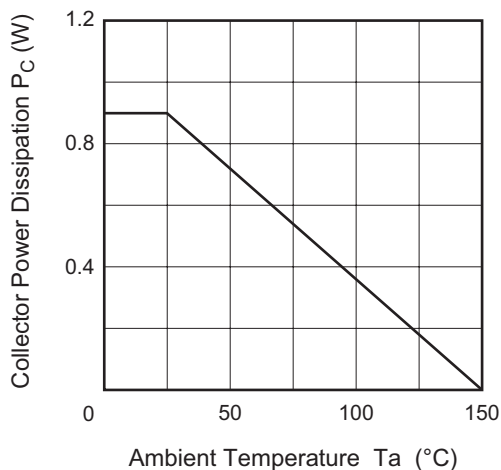
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-20	—	—	V	$I_C = -10\ \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-20	—	—	V	$I_C = -1\ mA, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-6	—	—	V	$I_E = -10\ \mu A, I_C = 0$
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}	160	—	320		$V_{CE} = -2\ V, I_C = -0.1\ A$
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	—	150	—	MHz	$V_{CE} = -2\ V, I_C = -10\ mA$
Collector output capacitance	C_{ob}	—	50	—	pF	$V_{CB} = -10\ V, I_E = 0,$ $f = 1\ MHz$

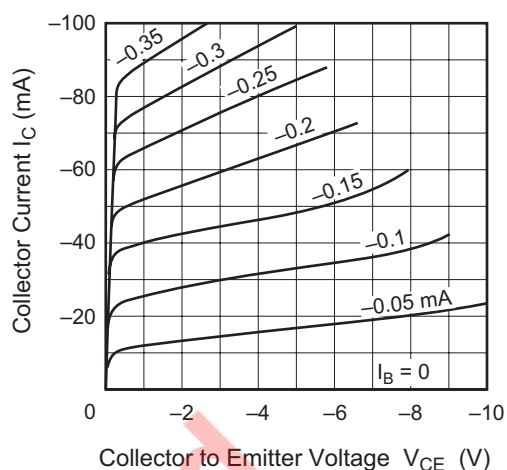
Not recommend
for new design

Main Characteristics

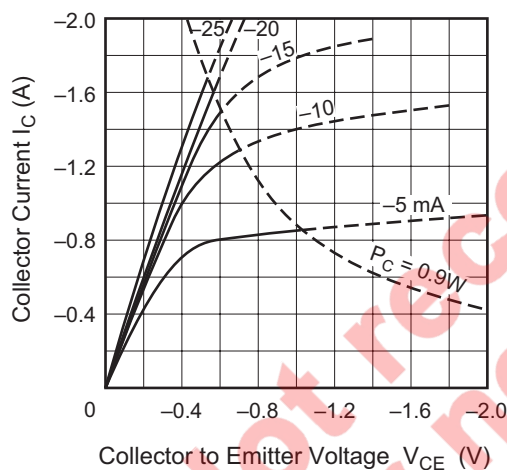
Maximum Collector Dissipation Curve



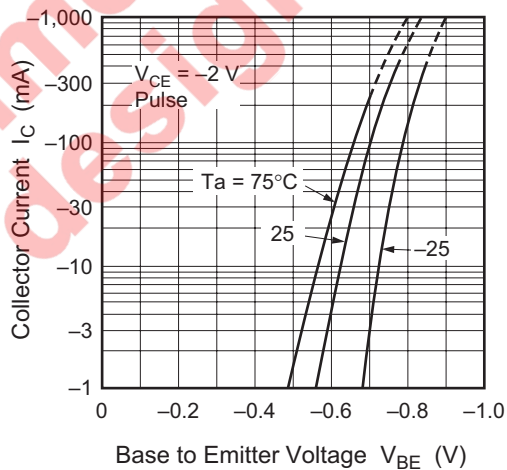
Typical Output Characteristics (1)



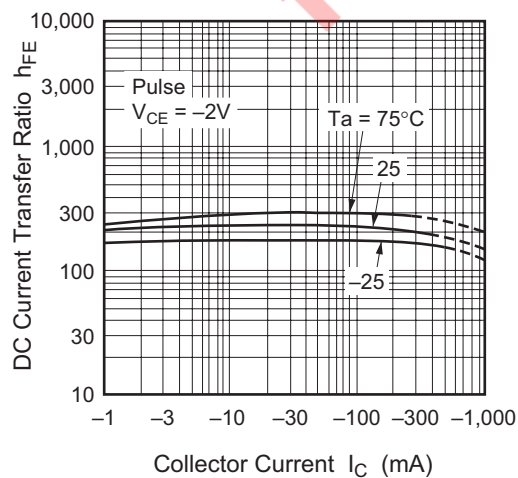
Typical Output Characteristics (2)



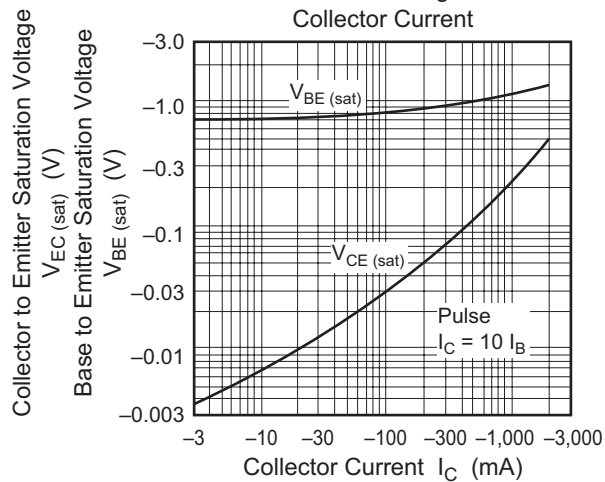
Typical Transfer Characteristics

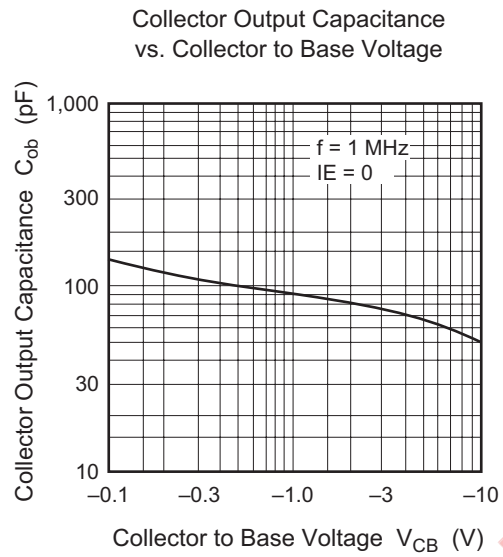


DC Current Transfer Ratio vs. Collector Current



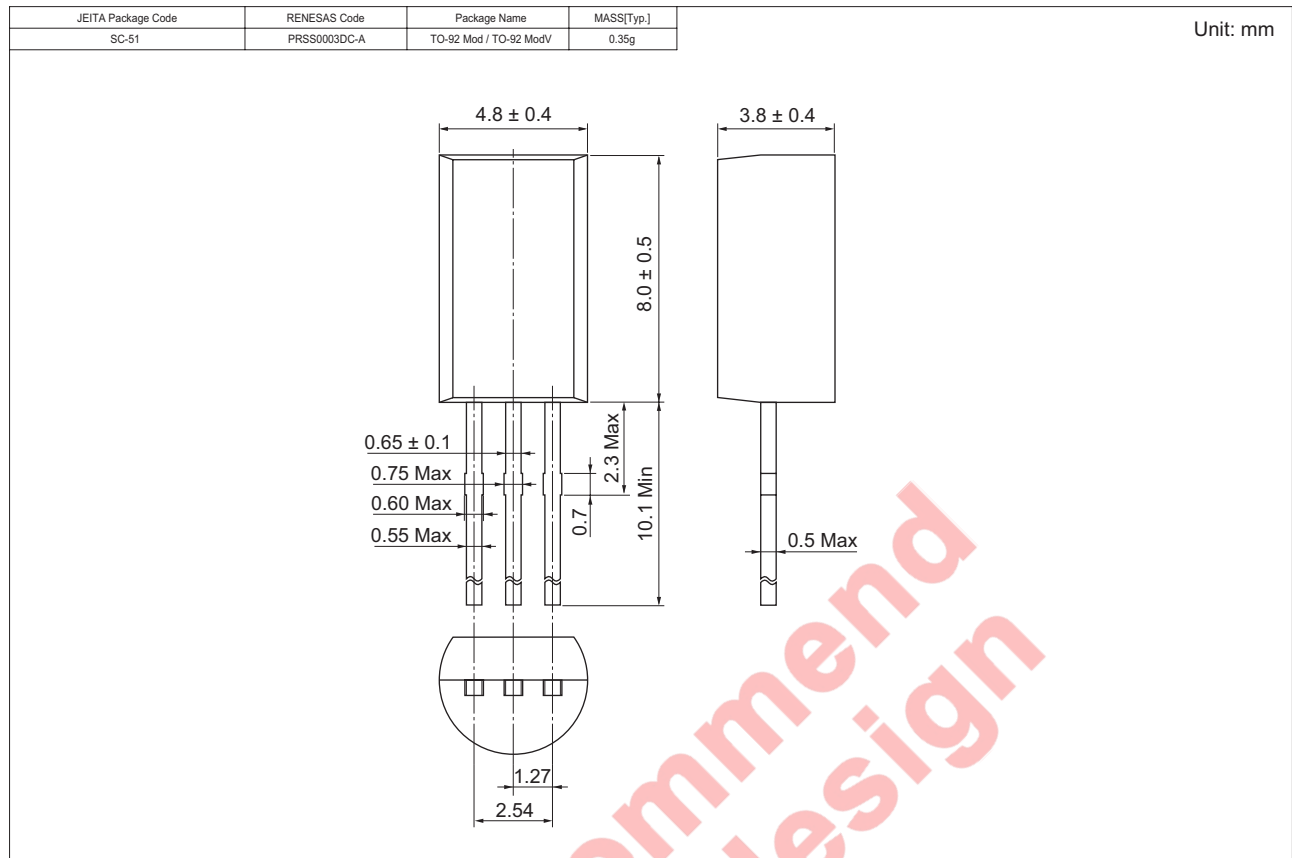
Saturation Voltage vs. Collector Current





Not recommended
for new design

Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SB739CTZ-E	2500	Hold Box, Radial 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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