2SD1209(K)

Silicon NPN Epitaxial, Darlington

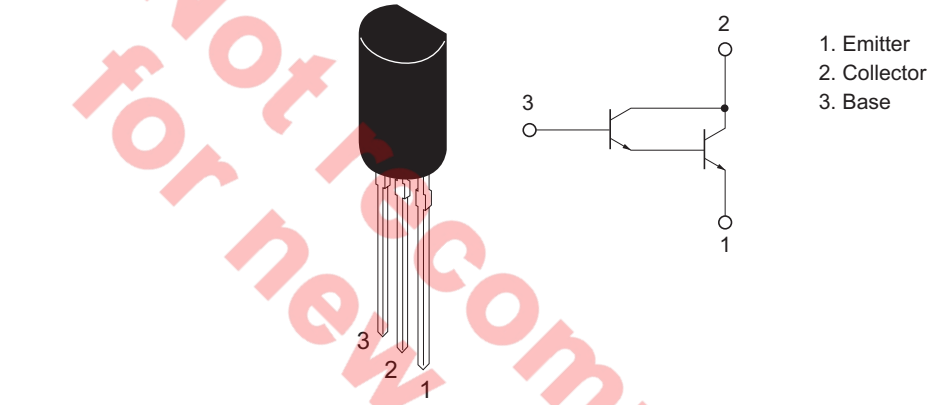
REJ03G0783-0200
(Previous ADE-208-1143)
Rev.2.00
Aug.10.2005

Application

- Low frequency power amplifier
- Complementary pair with 2SA1193(K)

Outline

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



Not recommend for new design

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	60	V
Collector to emitter voltage	V_{CEO}	60	V
Emitter to base voltage	V_{EBO}	7	V
Collector current	I_C	1	A
Collector peak current	$i_{C(peak)}$	2	A
Collector power dissipation	P_C	0.9	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

Electrical Characteristics

(Ta = 25°C)

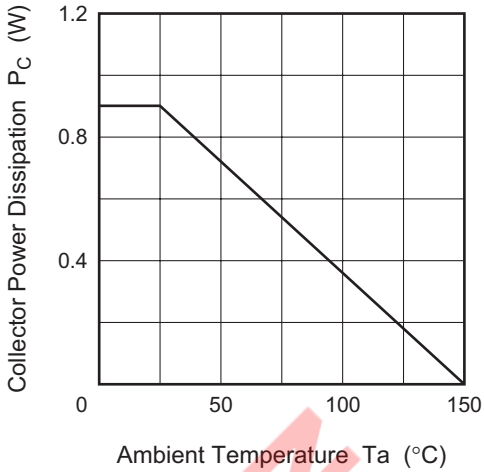
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	60	—	—	V	I_C = 0.1 mA, I_E = 0
Collector cutoff current	I_{CEO}	—	—	100	µA	V_{CE} = 60 V, R_{BE} = ∞
Emitter cutoff current	I_{EBO}	—	—	100	µA	V_{EB} = 7 V, I_C = 0
DC current transfer ratio	h_{FE}	4000	—	—		V_{CE} = 3 V, I_C = 0.5 A*[1]
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.5	V	I_C = 500 mA, I_B = 0.5 mA*[1]
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	2.0	V	I_C = 500 mA, I_B = 0.5 mA*[1]

Note: 1. Pulse test

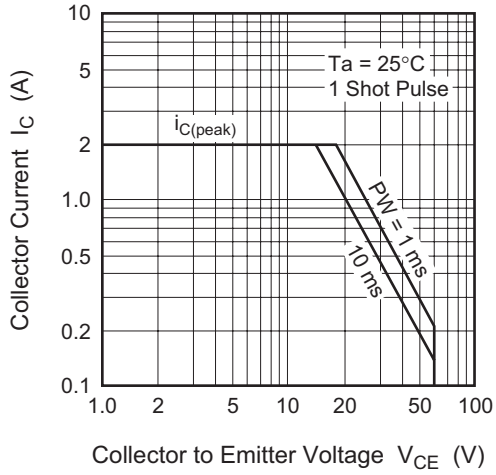
Not recommend for new design

Main Characteristics

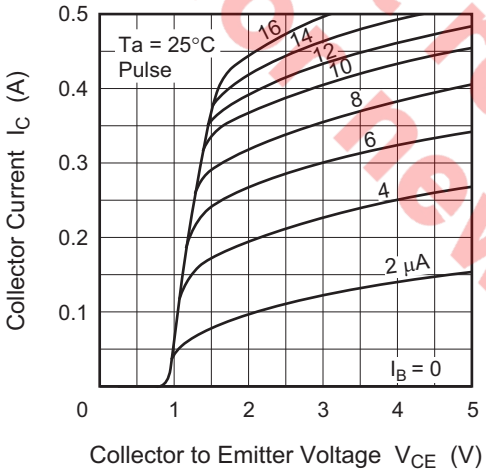
Maximum Collector Dissipation Curve



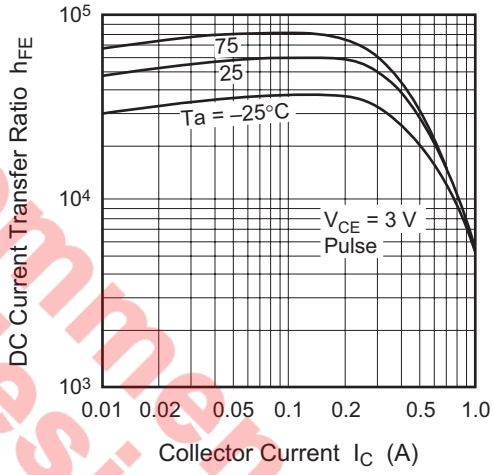
Area of Safe Operation



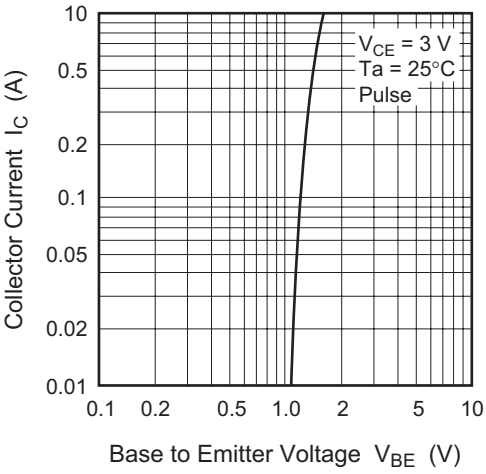
Typical Output Characteristics



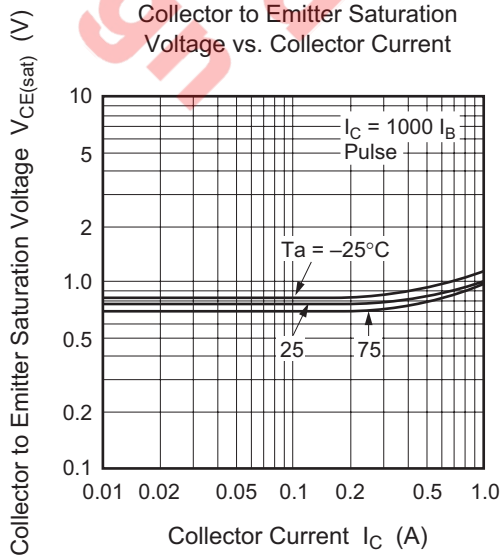
DC Current Transfer Ratio vs. Collector Current



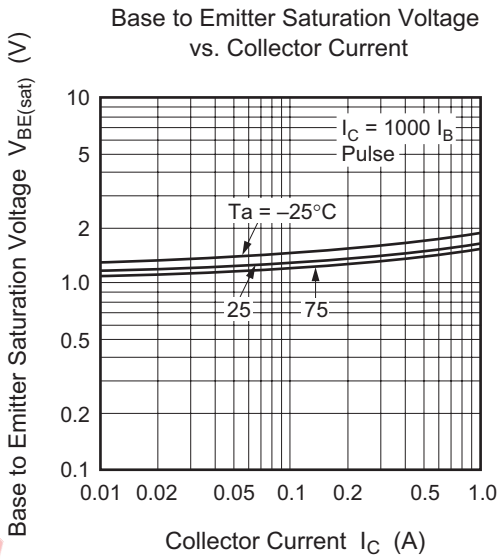
Typical Transfer Characteristics



Collector to Emitter Saturation Voltage vs. Collector Current



Not recommend for new design

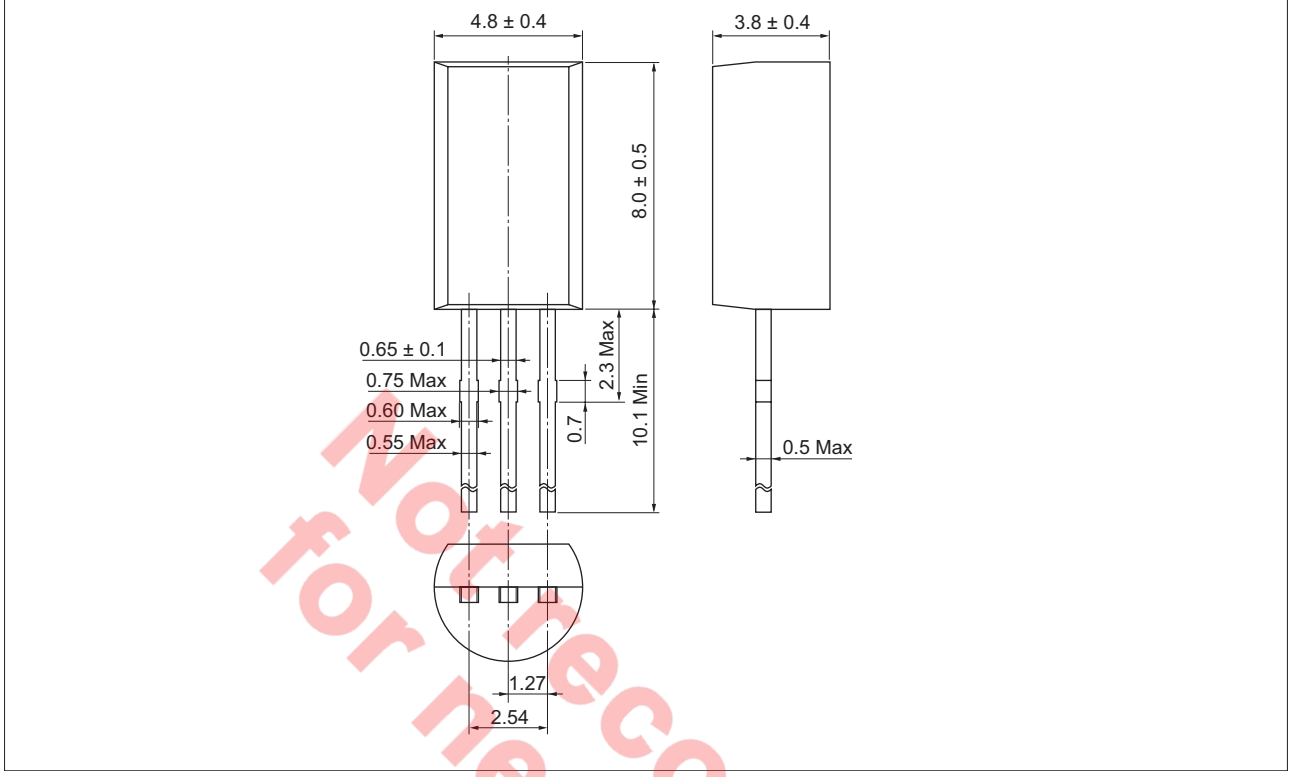


Not recommend for new design

Package Dimensions

JEITA Package Code	RENESAS Code	Package Name	MASS[Typ.]
SC-51	PRSS0003DC-A	TO-92 Mod / TO-92 ModV	0.35g

Unit: mm



Not recommend for new design

Ordering Information

Part Name	Quantity	Shipping Container
2SD1209KTZ-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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