

2SA1193(K)

Silicon PNP Epitaxial, Darlington

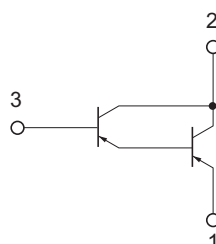
REJ03G0641-0200
(Previous ADE-208-1013)
Rev.2.00
Aug.10.2005

Application

High gain amplifier

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_{CB0}	-60	V
Collector to emitter voltage	V_{CEO}	-60	V
Emitter to base voltage	V_{EBO}	-7	V
Collector current	I_C	-0.5	A
Collector peak current	$i_{C(peak)}$	-1.0	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

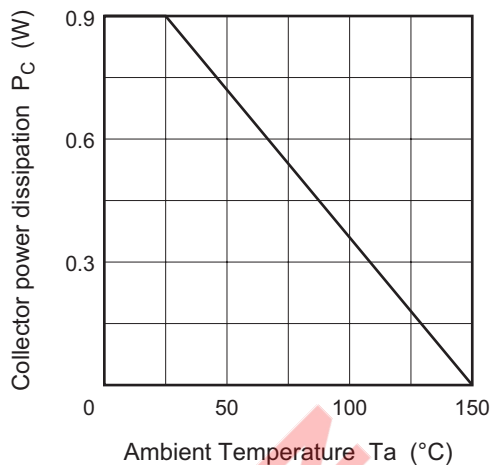
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-60	—	—	V	$I_C = -1 \text{ mA}$, $R_{BE} = \infty$
Collector cutoff current	I_{CBO}	—	—	-1.0	μA	$V_{CB} = -60 \text{ V}$, $I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	-1.0	μA	$V_{EB} = -7 \text{ V}$, $I_C = 0$
DC current transfer ratio	h_{FE}	2000	—	—		$V_{CE} = -3 \text{ V}$, $I_C = -250 \text{ mA}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	-1.5	V	$I_C = -250 \text{ mA}$, $I_B = -0.5 \text{ mA}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	-2.0	V	
Turn on time	t_{on}	—	0.3	—	μs	$I_C = -250 \text{ mA}$
Turn off time	t_{off}	—	0.9	—	μs	$I_{B1} = -I_{B2} = -0.5 \text{ mA}$

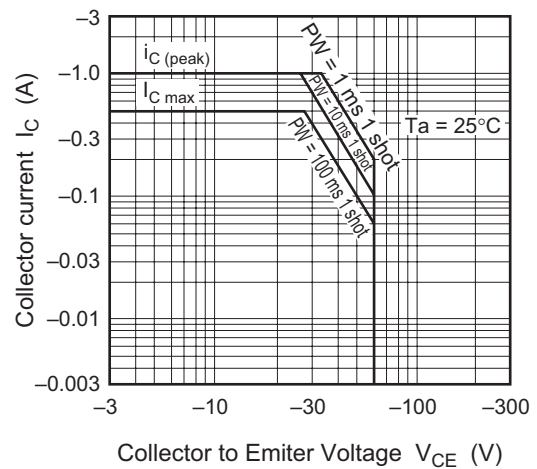
Note: 1. Pulse test

Not recommend
for new design

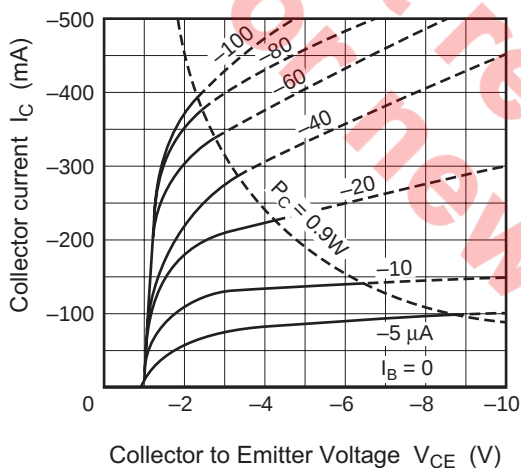
Maximum Collector Dissipation Curve



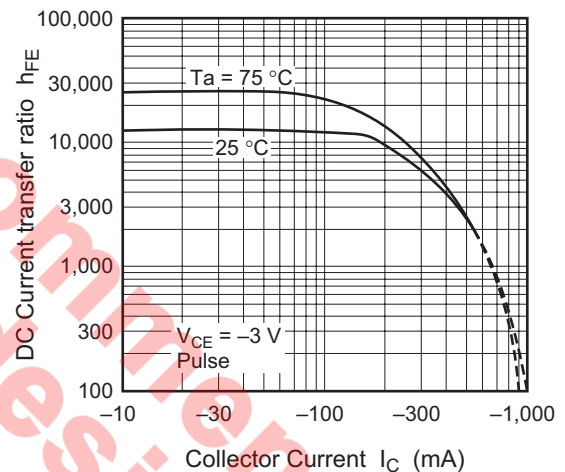
Area of Safe Operation



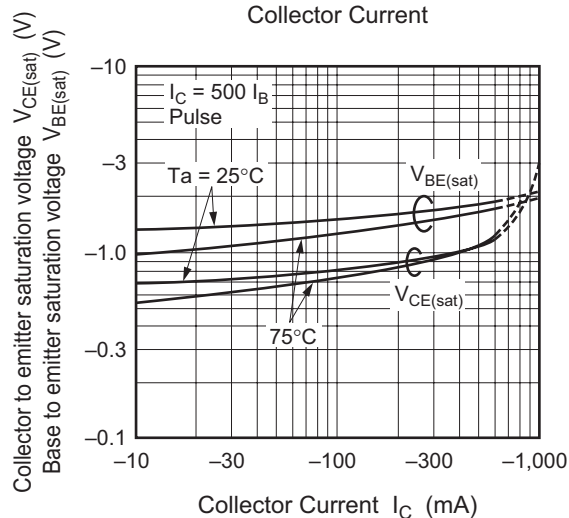
Typical Output Characteristics



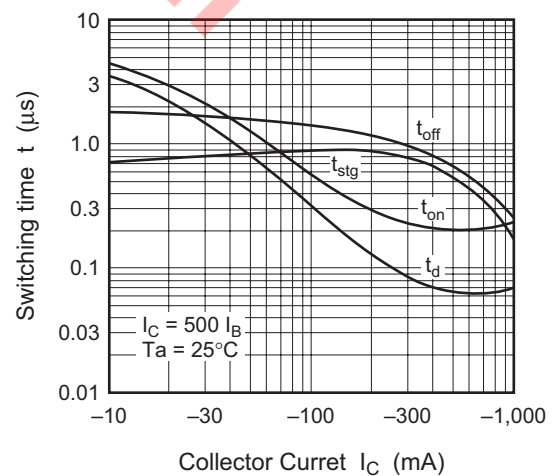
DC Current Transfer Ratio vs. Collector Current



Saturation Voltage vs. Collector Current

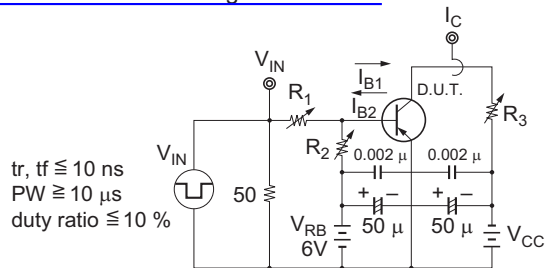


Switching Time vs. Collector Current

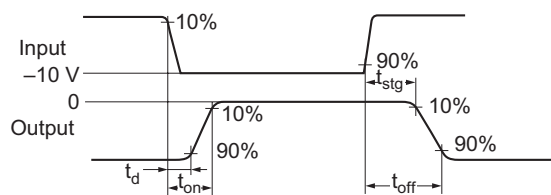


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Switching Time Test Circuit

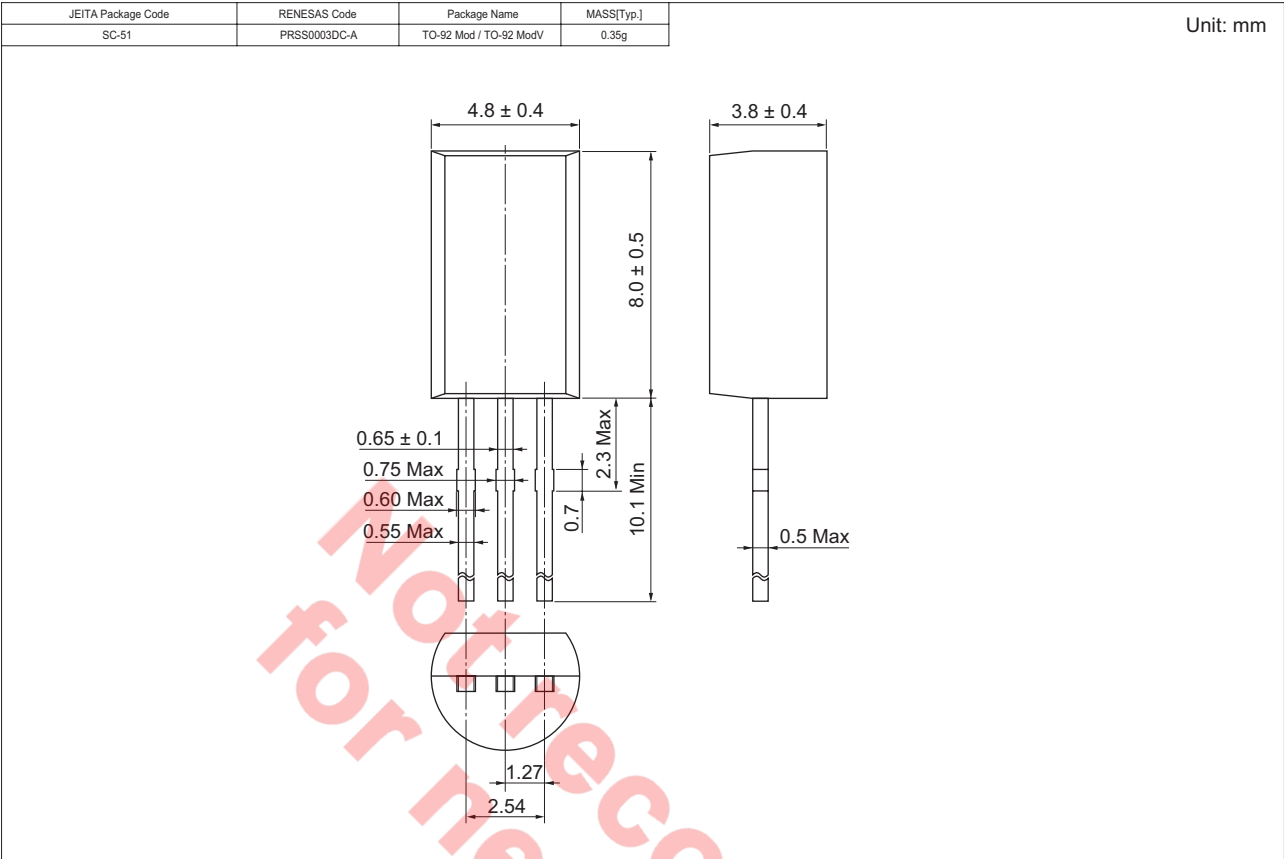


Response Waveform



Not recommend
for new design

2SA1193(K) 供应商



Ordering Information

Part Name	Quantity	Shipping Container
2SA1193KTZ-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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