

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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EOL announced Product

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Renesas Technology Home Page: <http://www.renesas.com>

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

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2SD1126(K)

Silicon NPN Triple Diffused

RENESAS

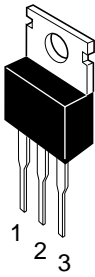
ADE-208-904 (Z)
1st. Edition
September 2000

Application

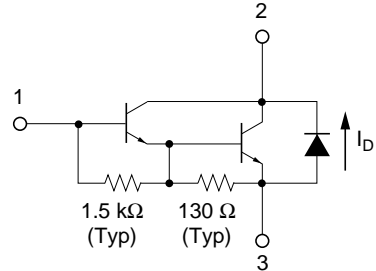
Power switching

Outline

TO-220AB



1. Base
2. Collector (Flange)
3. Emitter



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	120	V
Collector to emitter voltage	V_{CEO}	120	V
Emitter to base voltage	V_{EBO}	7	V
Collector current	I_C	10	A
Collector peak current	$I_{C(peak)}$	15	A
Collector power dissipation	P_C^{*1}	50	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C
C to E diode forward current	I_D	10	A

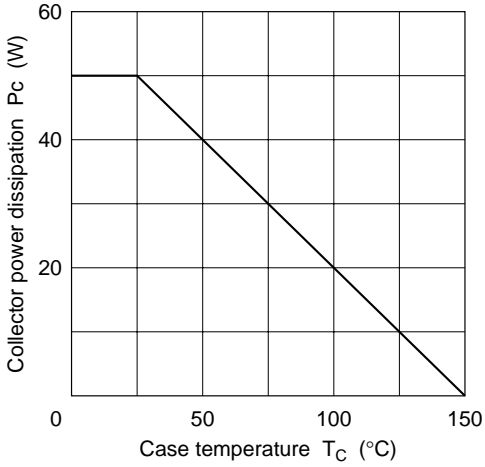
Note: 1. Value at $T_C = 25^\circ\text{C}$.

Electrical Characteristics (Ta = 25°C)

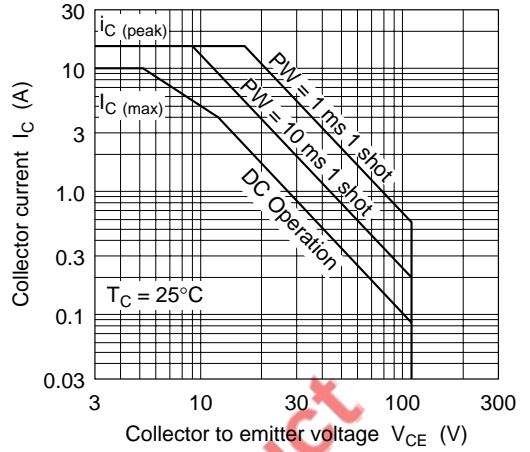
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	120	—	—	V	$I_C = 25\text{ mA}$, $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	7	—	—	V	$I_E = 200\text{ mA}$, $I_C = 0$
Collector cutoff current	I_{CBO}	—	—	100	μA	$V_{CB} = 120\text{ V}$, $I_E = 0$
	I_{CEO}	—	—	10	μA	$V_{CE} = 100\text{ V}$, $R_{BE} = \infty$
DC current transfer ratio	h_{FE}	1000	—	2000		$V_{CE} = 3\text{ V}$, $I_C = 5\text{ A}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)1}$	—	—	1.5	V	$I_C = 5\text{ A}$, $I_B = 10\text{ mA}^{*1}$
	$V_{CE(sat)2}$	—	—	3.0	V	$I_C = 10\text{ A}$, $I_B = 0.1\text{ A}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)1}$	—	—	2.0	V	$I_C = 5\text{ A}$, $I_B = 10\text{ mA}^{*1}$
	$V_{BE(sat)2}$	—	—	3.5	V	$I_C = 10\text{ A}$, $I_B = 0.1\text{ A}^{*1}$
C to E diode forward voltage	V_D	—	—	3.0	V	$I_D = 10\text{ A}^{*1}$
Turn on time	t_{on}	—	0.8	—	μs	$I_C = 5\text{ A}$, $I_{B1} = -I_{B2} = 10\text{ mA}$
Turn off time	t_{off}	—	8.0	—	μs	

Note: 1. Pulse test.

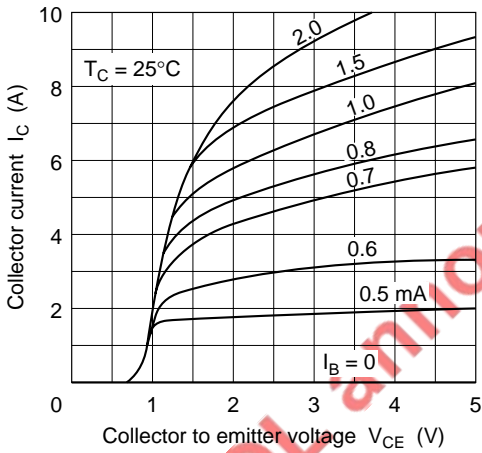
Maximum Collector Dissipation Curve



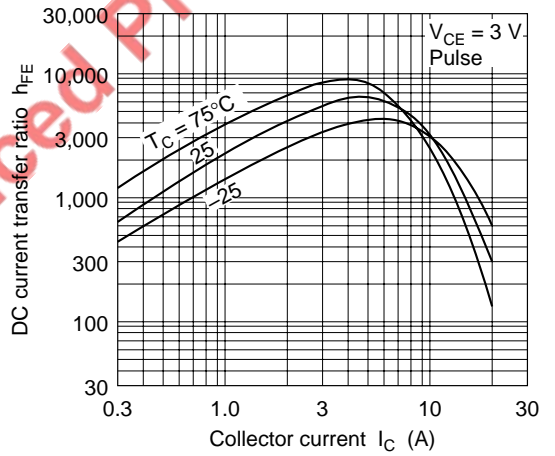
Area of Safe Operation

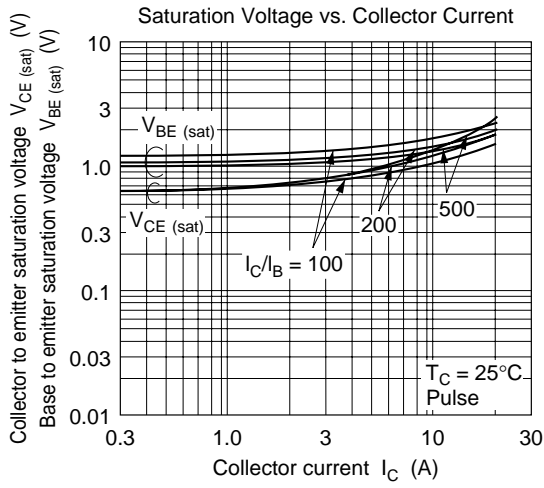


Typical Output Characteristics



DC Current Transfer Ratio vs. Collector Current





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