To our customers,

Old Company Name in Catalogs and Other Documents

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

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

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2SB955(K)

Silicon PNP Triple Diffused

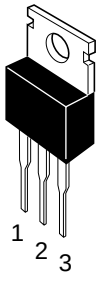
ADE-208-863 (Z)
1st. Edition
September 2000

Application

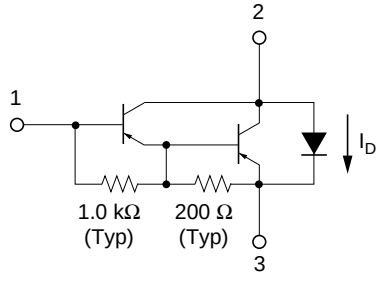
Power switching complementary pair with 2SD1126(K)

Outline

TO-220AB



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



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rating	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
C to E diode forward current	I_D*[1]	10	A
Collector power dissipation	P_C*[2]	50	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

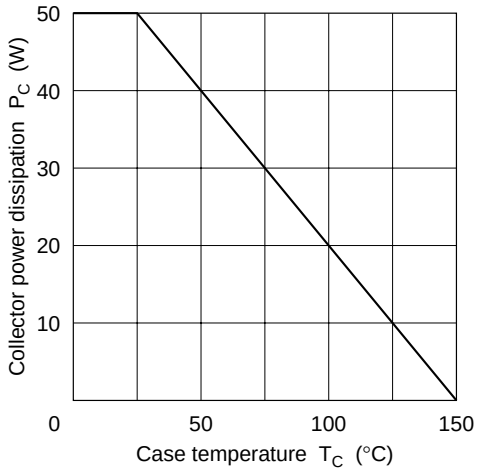
Notes: 1. Value at T_C = 25°C
2. PW ≤ 1 ms 1 shot

Electrical Characteristics (Ta = 25°C)

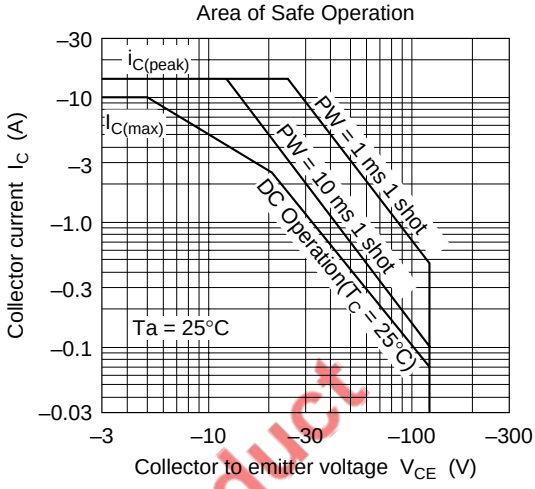
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	–120	—	—	V	I_C = –25 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	–7	—	—	V	I_E = –200 mA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	–100	µA	V_{CB} = –120 V, I_E = 0
	I_{CEO}	—	—	–10	µA	V_{CE} = –100 V, R_{BE} = ∞
DC current transfer ratio	h_{FE}	1000	—	20000		V_{CE} = –3 V, I_C = –5 A*[1]
Collector to emitter saturation voltage	$V_{CE(sat)1}$	—	—	–1.5	V	I_C = –5 A, I_B = –10 mA*[1]
	$V_{CE(sat)2}$	—	—	–3.0	V	I_C = –10 A, I_B = –0.1 A*[1]
Base to emitter saturation voltage	$V_{BE(sat)1}$	—	—	–2.0	V	I_C = –5 A, I_B = –10 mA*[1]
	$V_{BE(sat)2}$	—	—	–3.5	V	I_C = –10 A, I_B = –0.1 A*[1]
C to E diode forward voltage	V_D	—	—	3.0	V	I_D = 10 A*[1]
Turn on time	t_{on}	—	0.8	—	µs	V_{CC} = –30 V
Turn off time	t_{off}	—	4.0	—	µs	I_C = –5 A, I_{B1} = $-I_{B2}$ = –10 mA

Note: 1. Pulse test

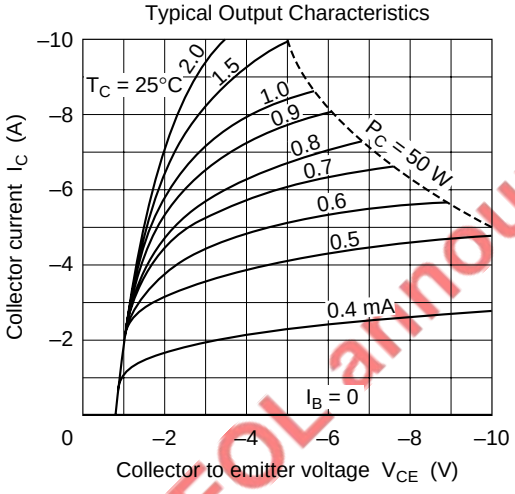
Maximum Collector Dissipation Curve



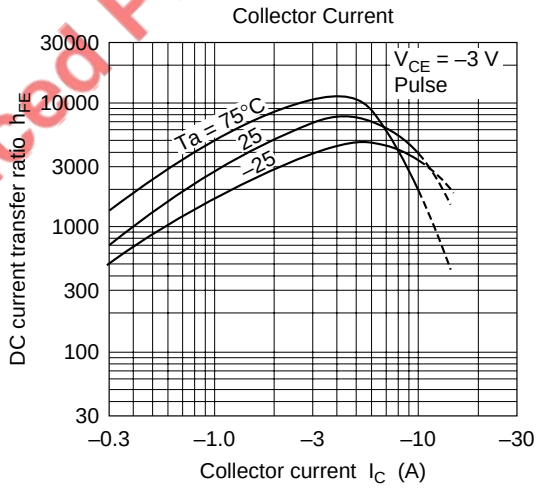
Area of Safe Operation



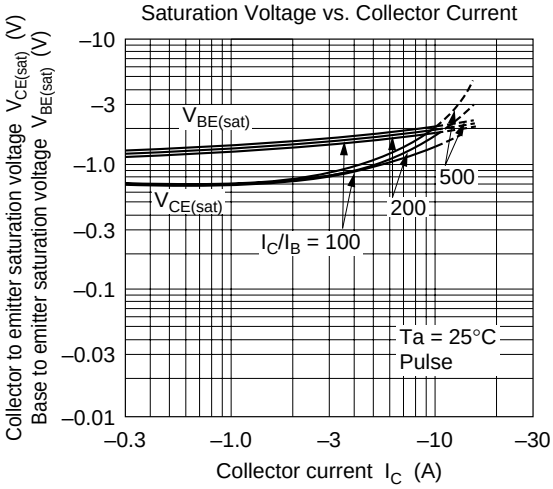
Typical Output Characteristics



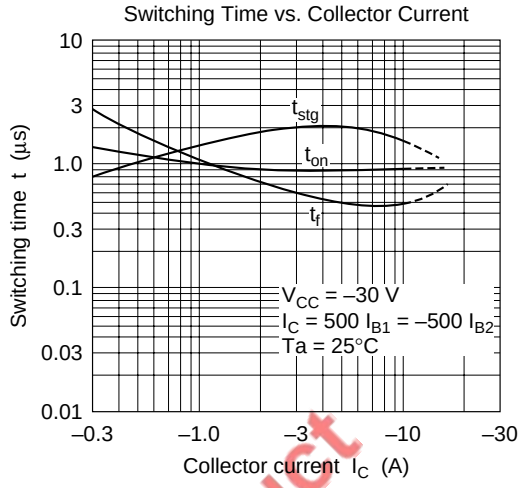
DC Current Transfer Ratio vs. Collector Current



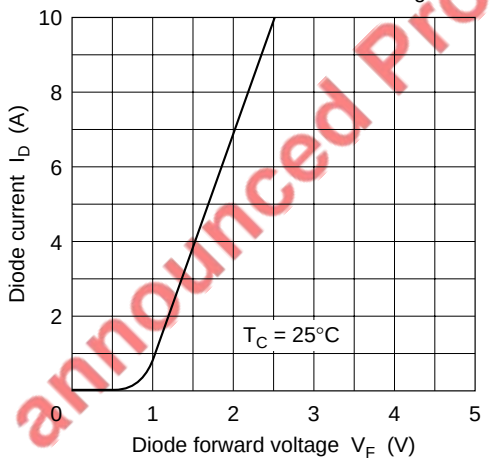
Saturation Voltage vs. Collector Current



Switching Time vs. Collector Current



Diode Current vs. Forward Voltage



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