

2SC2899

Silicon NPN Triple Diffused

HITACHI

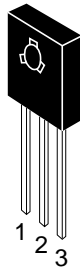
ADE-208-889 (Z)
1st. Edition
Sep. 2000

Application

High speed and high voltage switching

Outline

TO-126 MOD



1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

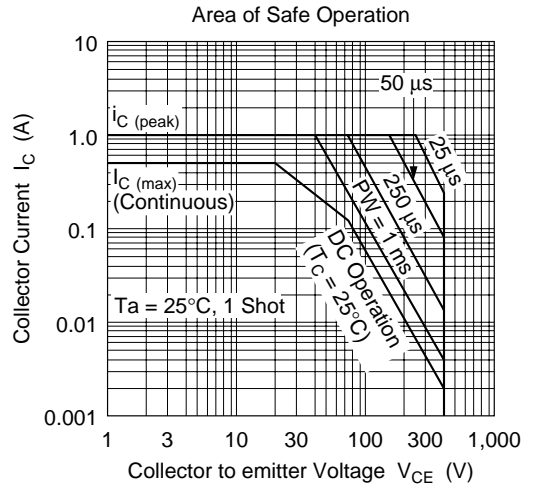
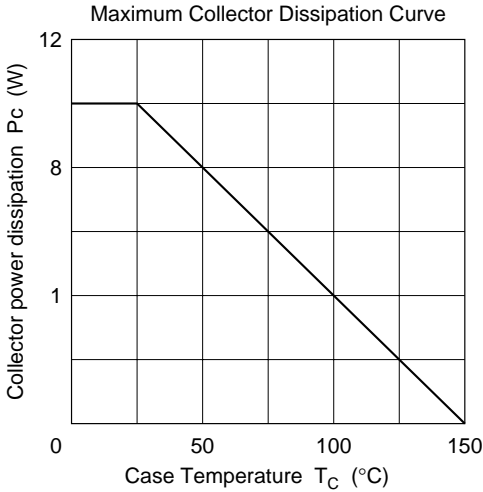
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	500	V
Collector to emitter voltage	V_{CEO}	400	V
Emitter to base voltage	V_{EBO}	10	V
Collector current	I_{C}	0.5	A
Collector peak current	$I_{\text{C(peak)}}$	1.0	A
Collector power dissipation	P_{C}	0.75	W
	P_{C}^{*1}	10	W
Junction temperature	T_{j}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

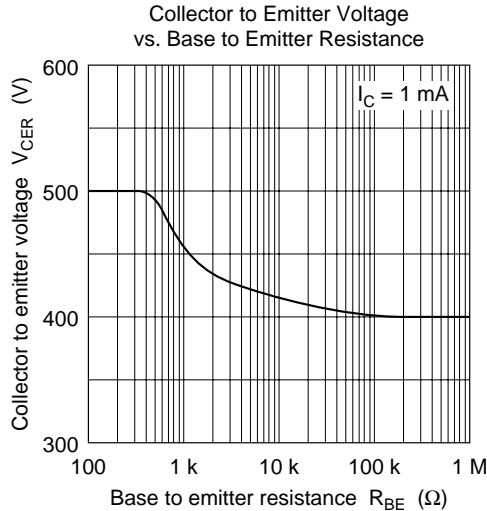
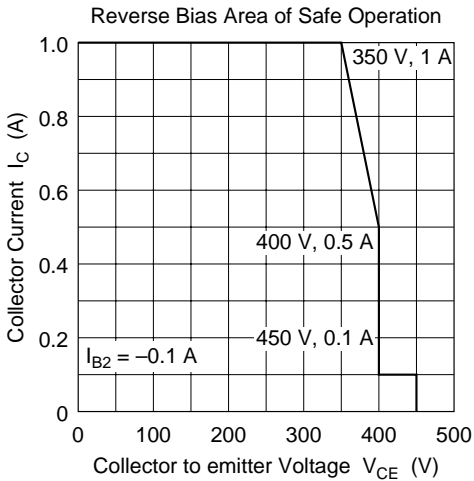
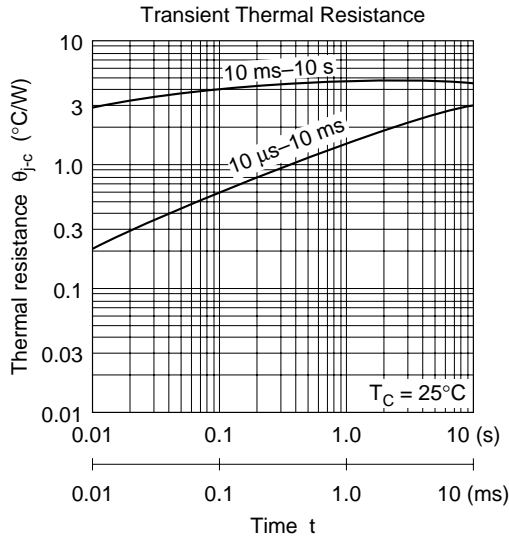
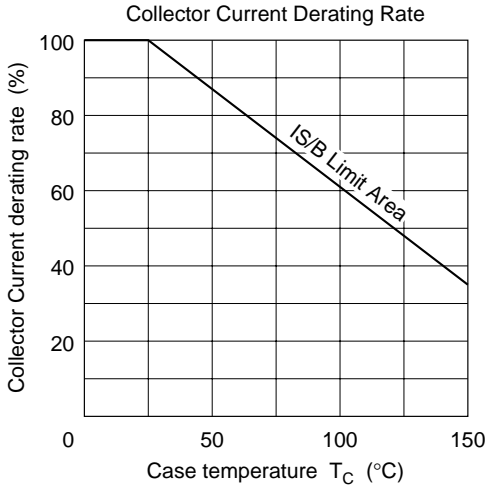
Note: 1. Value at $T_{\text{c}} = 25^\circ\text{C}$.

Electrical Characteristics (Ta = 25°C)

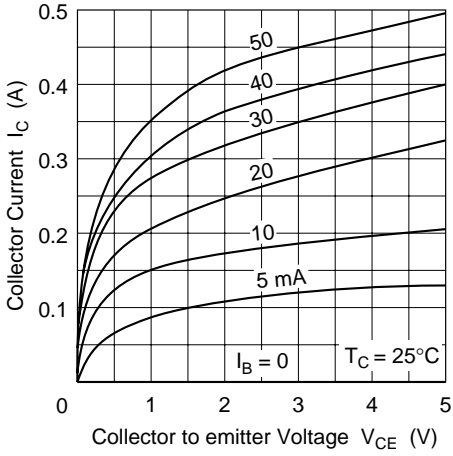
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter sustain voltage	$V_{CEO(sus)}$	400	—	—	V	$I_C = 0.1 \text{ A}$, $R_{BE} = \infty$, $L = 100 \text{ mH}$
	$V_{CEX(sus)}$	400	—	—	V	$I_C = 0.5 \text{ A}$, $I_{B1} = -I_{B2} = 0.1 \text{ A}$, $V_{BE} = -5 \text{ V}$, $L = 180 \mu\text{H}$, Clamped
Emitter to base breakdown voltage	$V_{(BR)EBO}$	10	—	—	V	$I_E = 10 \text{ mA}$, $I_C = 0$
Collector cutoff current	I_{CBO}	—	—	20	μA	$V_{CB} = 400 \text{ V}$, $I_C = 0$
	I_{CEO}	—	—	50	μA	$V_{CE} = 350 \text{ V}$, $R_{BE} = \infty$
DC current transfer ratio	h_{FE1}	15	—	—		$V_{CE} = 5 \text{ V}$, $I_C = 0.25 \text{ A}^{*1}$
	h_{FE2}	7	—	—		$V_{CE} = 5 \text{ V}$, $I_C = 0.5 \text{ A}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.0	V	$I_C = 0.25 \text{ A}$, $I_B = 0.05 \text{ A}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	
Turn on time	t_{on}	—	—	1.0	μs	$I_C = 0.5 \text{ A}$, $I_{B1} = -I_{B2} = 0.1 \text{ A}$,
Storage time	t_{stg}	—	—	2.0	μs	$V_{CC} \cong 150 \text{ V}$
Fall time	t_f	—	—	1.0	μs	

Note: 1. Pulse test

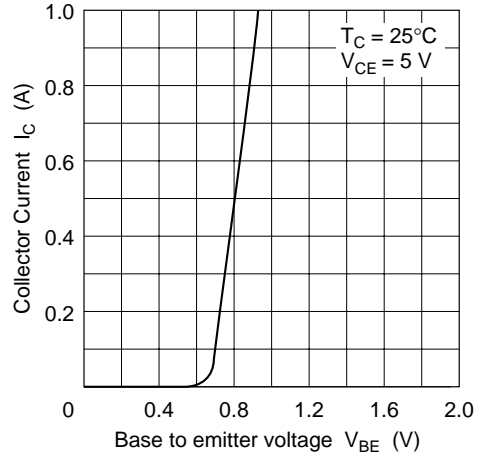




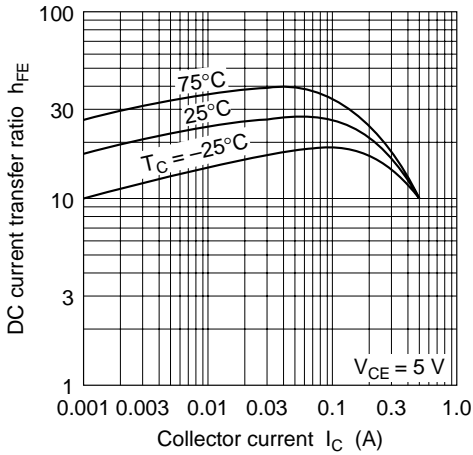
Typical Output Characteristics



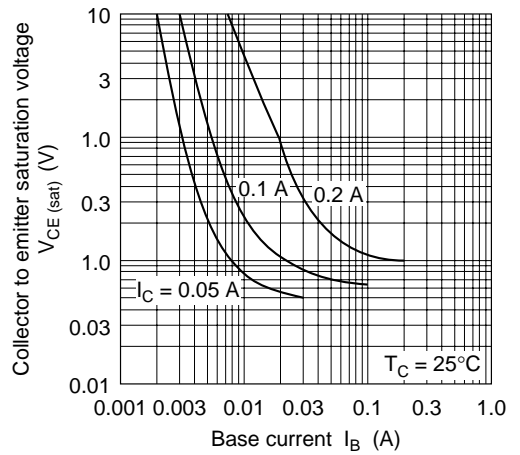
Typical Transfer Characteristics

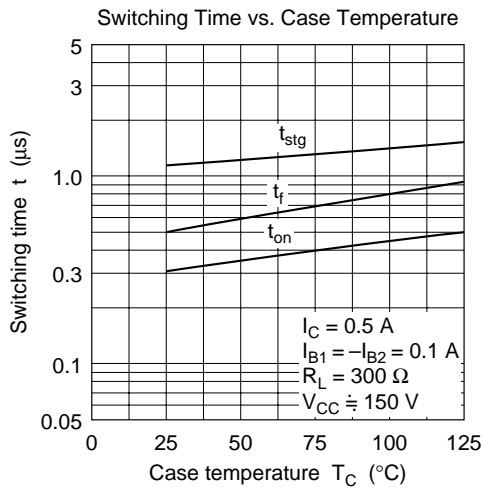
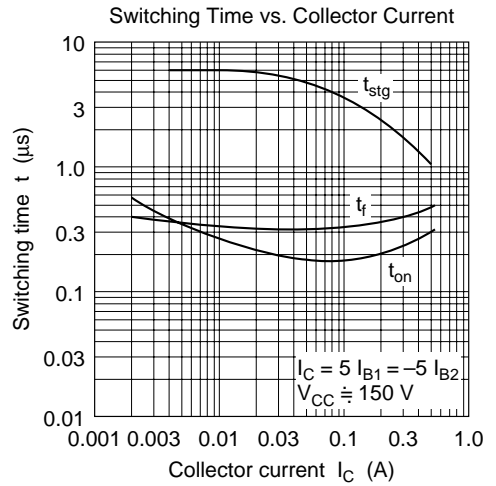
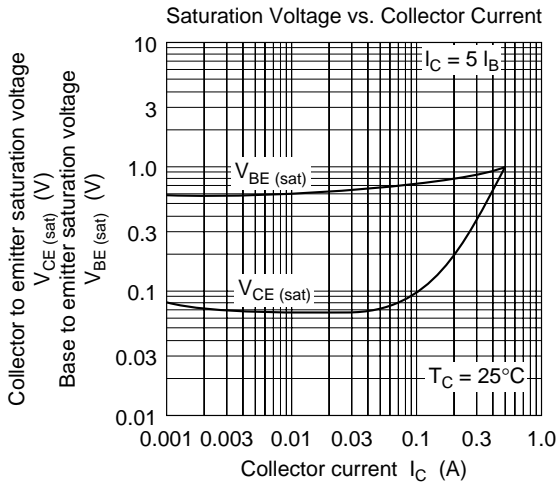


DC Current Transfer Ratio vs. Collector Current



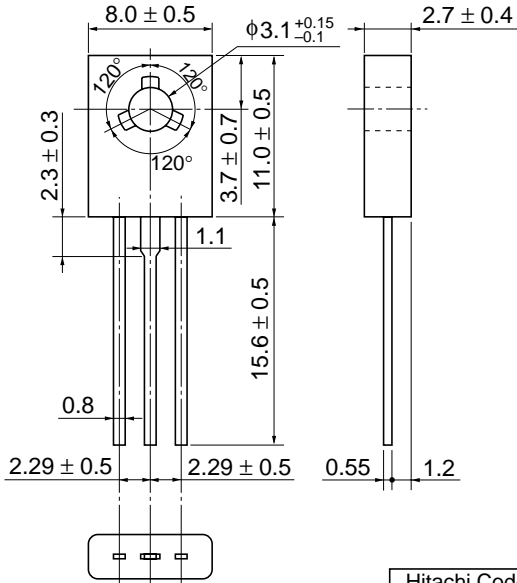
Collector to Emitter Saturation Voltage vs. Base Current





Package Dimensions

Unit: mm



Hitachi Code	TO-126 Mod
JEDEC	—
EIAJ	—
Mass (reference value)	0.67 g

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HITACHI

Hitachi, Ltd.

Semiconductor & Integrated Circuits.
Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan
Tel: Tokyo (03) 3270-2111 Fax: (03) 3270-5109

URL	North America	: http://semiconductor.hitachi.com/
	Europe	: http://www.hitachi-eu.com/hel/ecg
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For further information write to:

Hitachi Semiconductor
(America) Inc.
179 East Tasman Drive,
San Jose, CA 95134
Tel: <1> (408) 433-1990
Fax: <1> (408) 433-0223

Hitachi Europe GmbH
Electronic Components Group
Dornacher Straße 3
D-85622 Feldkirchen, Munich
Germany
Tel: <49> (89) 9 9180-0
Fax: <49> (89) 9 29 30 00

Hitachi Europe Ltd.
Electronic Components Group.
Whitebrook Park
Lower Cookham Road
Maidenhead
Berkshire SL6 8YA, United Kingdom
Tel: <44> (1628) 585000
Fax: <44> (1628) 585160

Hitachi Asia Ltd.
Hitachi Tower
16 Collyer Quay #20-00,
Singapore 049318
Tel: <65>-538-6533/538-8577
Fax : <65>-538-6933/538-3877
URL : <http://www.hitachi.com.sg>

Hitachi Asia Ltd.
(Taipei Branch Office)
4/F, No. 167, Tun Hwa North Road,
Hung-Kuo Building,
Taipei (105), Taiwan
Tel: <886>-(2)-2718-3666
Fax : <886>-(2)-2718-8180
Telex : 23222 HAS-TP
URL : <http://www.hitachi.com.tw>

Hitachi Asia (Hong Kong) Ltd.
Group III (Electronic Components)
7/F., North Tower,
World Finance Centre,
Harbour City, Canton Road
Tsim Sha Tsui, Kowloon,
Hong Kong
Tel : <852>-(2)-735-9218
Fax : <852>-(2)-730-0281
URL : <http://www.hitachi.com.hk>

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