2SC5273

Silicon NPN Triple Diffused

HITACHI

ADE-208-897 (Z)
1st. Edition
Sep. 2000

Application

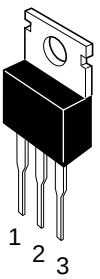
High voltage amplifier

Features

- High brakedown voltage
  $V_{(BR)CEO}$ = 1300 V min

Outline

TO-220AB



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

Hitachi semiconductor

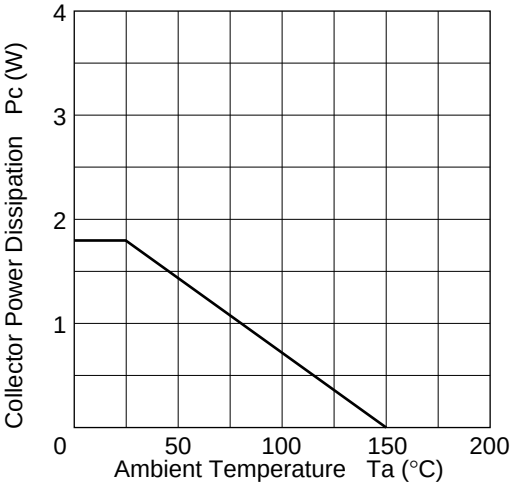
Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	1300	V
Collector to emitter voltage	V_{CEO}	1300	V
Emitter to base voltage	V_{EBO}	6	V
Collector current	I_C	30	mA
Collector peak current	$I_{C(peak)}$	60	mA
Collector power dissipation	P_C	1.8	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

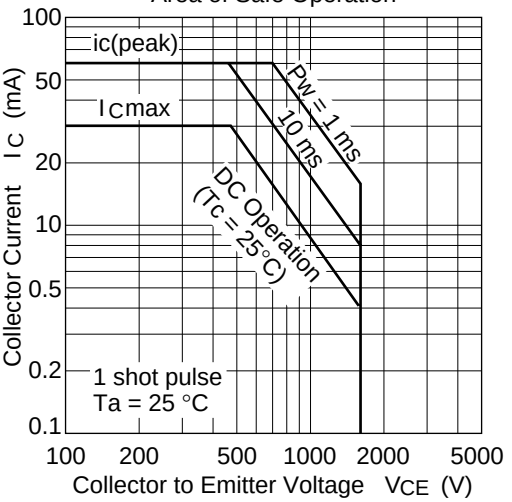
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector cutoff current	I_{CES}	—	—	10	µA	V_{CE} = 1300 V, R_{BE} = 0
Collector cutoff current	I_{CEO}	—	—	100	µA	V_{CE} = 1300 V, R_{BE} = ∞
Emitter cutoff current	I_{EBO}	—	—	10	µA	V_{EB} = 6 V, I_C = 0
DC current transfer ratio	h_{FE}	10	—	—		V_{CE} = 5 V, I_C = 1 mA
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	5.0	V	I_C = 10 mA, I_B = 2 mA
Gain bandwidth product	f_T	—	5.5	—	MHz	V_{CE} = 20 V, I_C = 1 mA
Collector output capacitance	Cob	—	3.4	—	pF	V_{CB} = 100 V, I_E = 0, f = 1 MHz

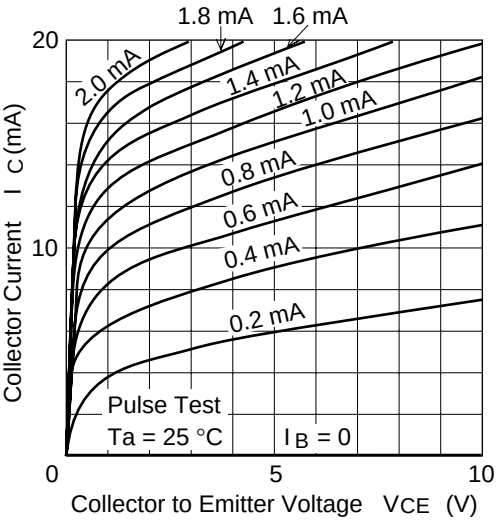
Maximum Collector Power Dissipation Curve



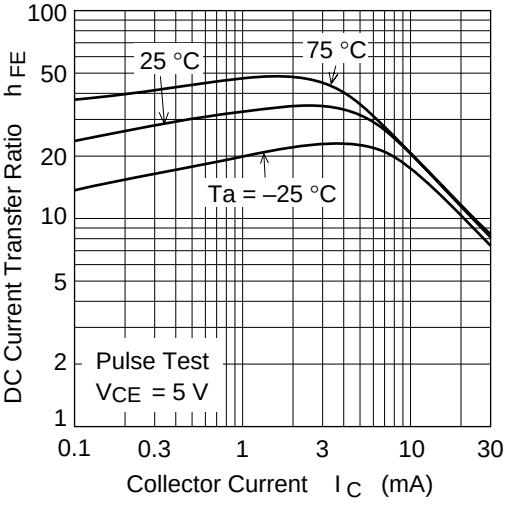
Area of Safe Operation



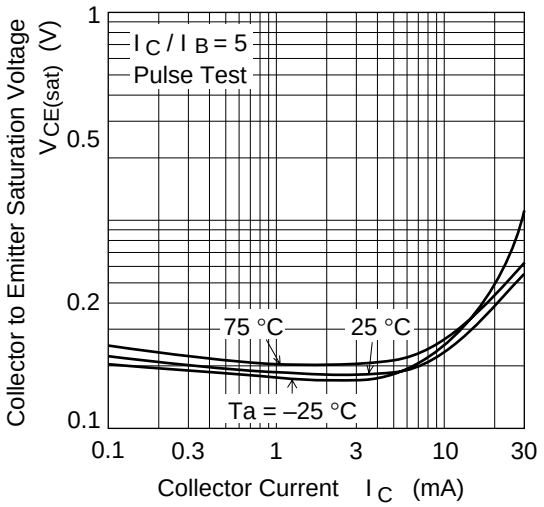
Typical Output Characteristics



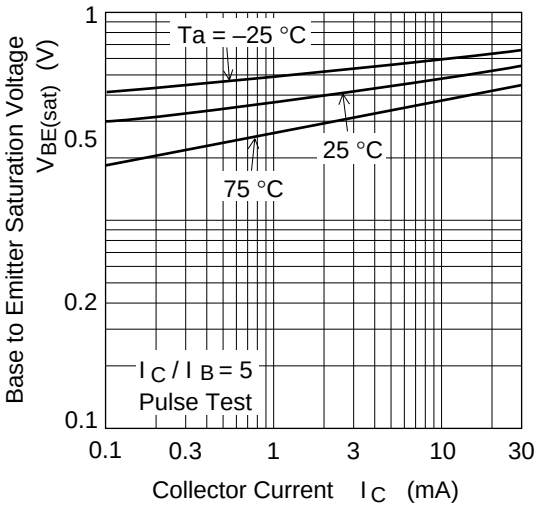
DC Current Transfer Ratio vs. Collector Current



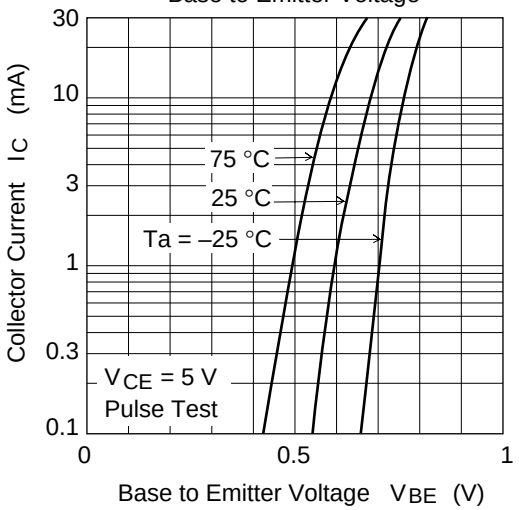
Collector to Emitter Saturation Voltage vs. Collector Current



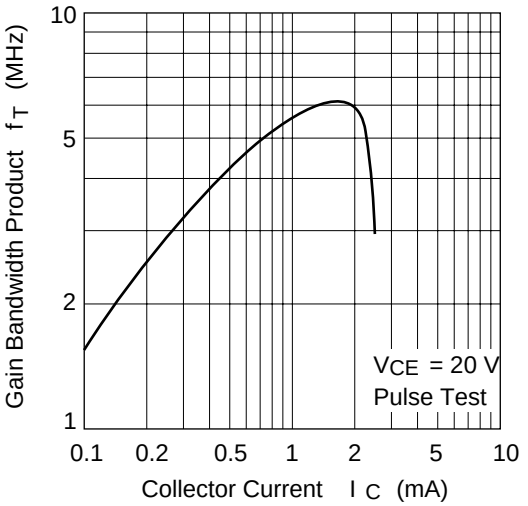
Base to Emitter Saturation Voltage vs. Collector Current

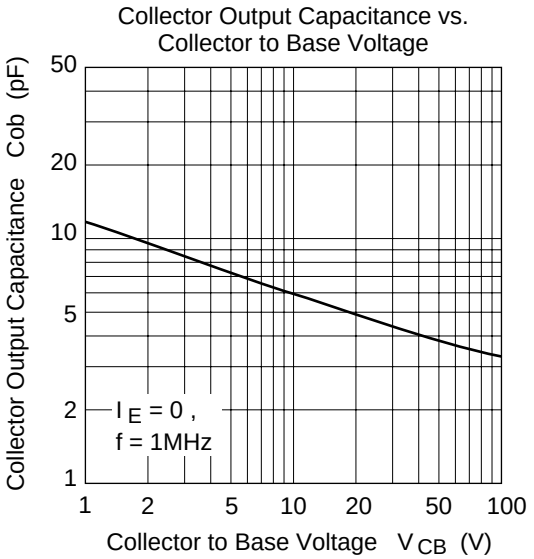


Collector Current vs. Base to Emitter Voltage



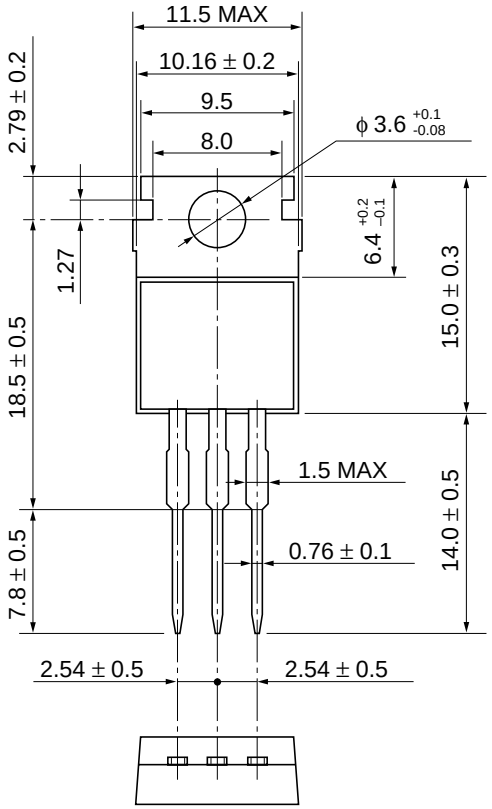
Gain Bandwidth Product vs. Collector Current

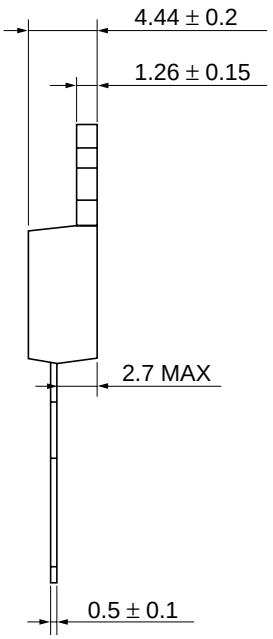


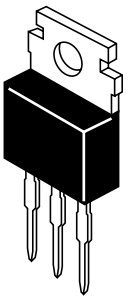

Collector Output Capacitance vs.
Collector to Base Voltage
Collector Output Capacitance Cob (pF)
50
20
10
5
2
1
I E = 0 ,
f = 1MHz
1
2
5
10
20
50
100
Collector to Base Voltage V CB (V)

Package Dimensions

Unit: mm







Hitachi Code	TO-220AB
JEDEC	Conforms
EIAJ	Conforms
Mass (reference value)	1.8 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
NorthAmerica : http://semiconductor.hitachi.com/
Europe : http://www.hitachi-eu.com/hel/ecg
Asia : http://sicapac.hitachi-asia.com
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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 Straβe 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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