

2SD2046

Silicon NPN Epitaxial, Darlington

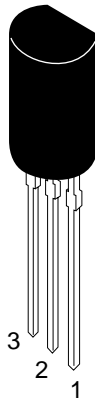
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Application

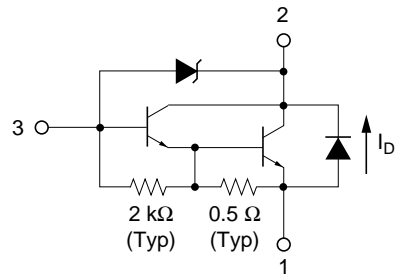
Low frequency power amplifier

Outline

TO-92MOD



- 1. Emitter
- 2. Collector
- 3. Base



Absolute Maximum Ratings (Ta = 25°C)

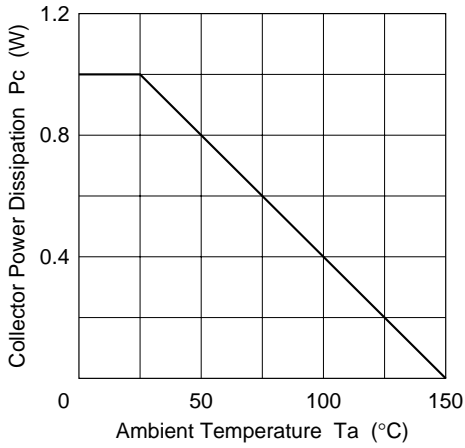
Item	Symbol	Rated	Unit
Collector to base voltage	V _{CBO}	50	V
Emitter to base voltage	V _{EBO}	7	V
Collector current	I _C	1.5	A
Collector peak current	i _{c (peak)}	3.0	A
Collector power dissipation	P _C	1.0	W
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C
E to C diode forward current	I _D	1.5	A

Electrical Characteristics (Ta = 25°C)

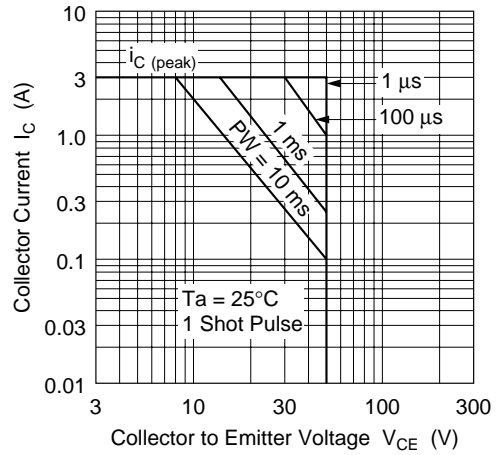
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage (Zener breakdown voltage)	V _{(BR)CBO} (V _Z)	50	60	70	V	I _C = 0.1 mA, I _E = ∞
Collector to emitter breakdown voltage	V _{(BR)CEO}	50	—	—	V	I _C = 10 mA, R _{BE} = ∞
Emitter to base breakdown voltage	V _{(BR)EBO}	7	—	—	V	I _E = 50 mA, I _C = 0
Collector cutoff current	I _{CEO}	—	—	10	μA	V _{CE} = 40 V, R _{BE} = ∞
DC current transfer ratio	h _{FE}	2000	—	10000		V _{CE} = 3 V, I _C = 1 A* ¹
Collector to emitter saturation voltage	V _{CE(sat)1}	—	—	1.5	V	I _C = 1 A, I _B = 1 mA* ¹
	V _{CE(sat)2}	—	—	2.0	V	I _C = 1.5 A, I _B = 1.5 mA* ¹
Base to emitter saturation voltage	V _{BE(sat)1}	—	—	2.0	V	I _C = 1 A, I _B = 1 mA* ¹
	V _{BE(sat)2}	—	—	2.5	V	I _C = 1.5 A, I _B = 1.5 mA* ¹
E to C diode forward voltage	V _D	—	—	3.0	V	I _D = 1.5 A* ¹

Note: 1. Pulse test

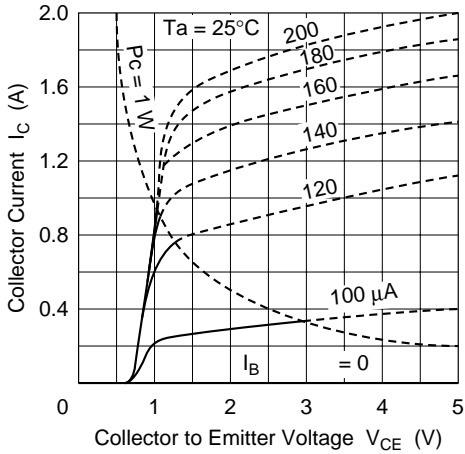
Maximum Collector Dissipation Curve



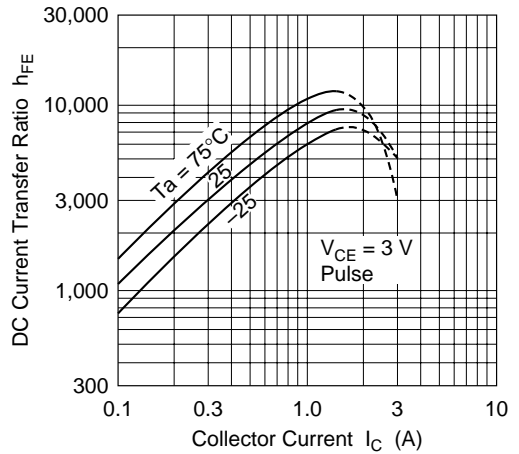
Area of Safe Operation

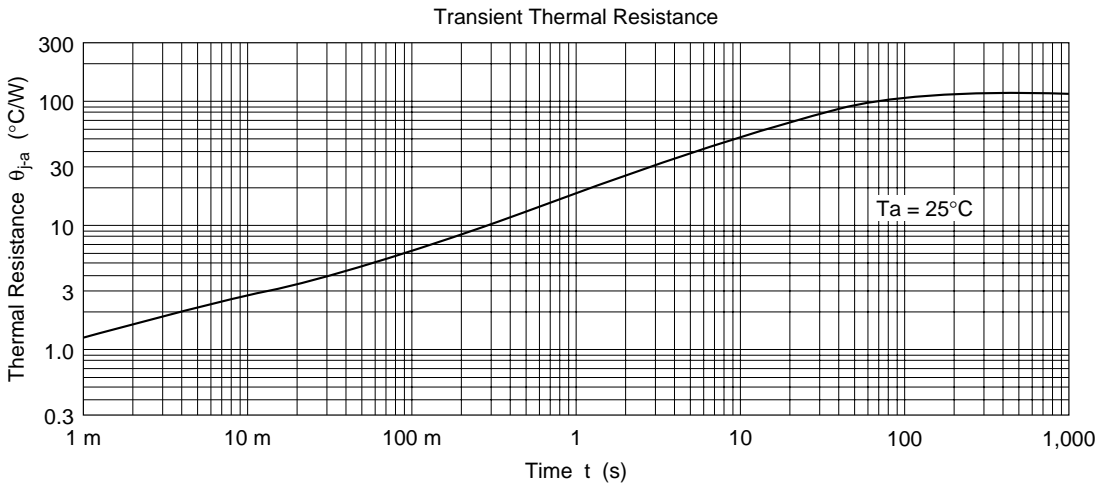
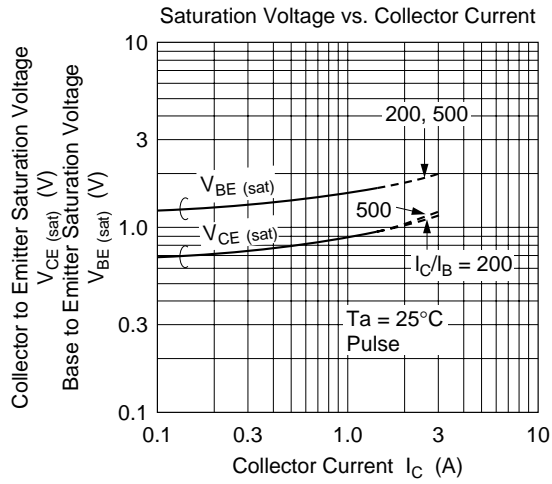


Typical Output Characteristics



DC Current Transfer Ratio vs. Collector Current







Hitachi Code	TO-92 Mod
JEDEC	—
EIAJ	Conforms
Weight (reference value)	0.35 g

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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/>
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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) 778322

Hitachi Asia Pte. Ltd.
16 Collyer Quay #20-00
Hitachi Tower
Singapore 049318
Tel: 535-2100
Fax: 535-1533

Hitachi Asia Ltd.
Taipei Branch Office
3F, Hung Kuo Building, No.167,
Tun-Hwa North Road, Taipei (105)
Tel: <886> (2) 2718-3666
Fax: <886> (2) 2718-8180

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
Telex: 40815 HITEC HX

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