
2SD975

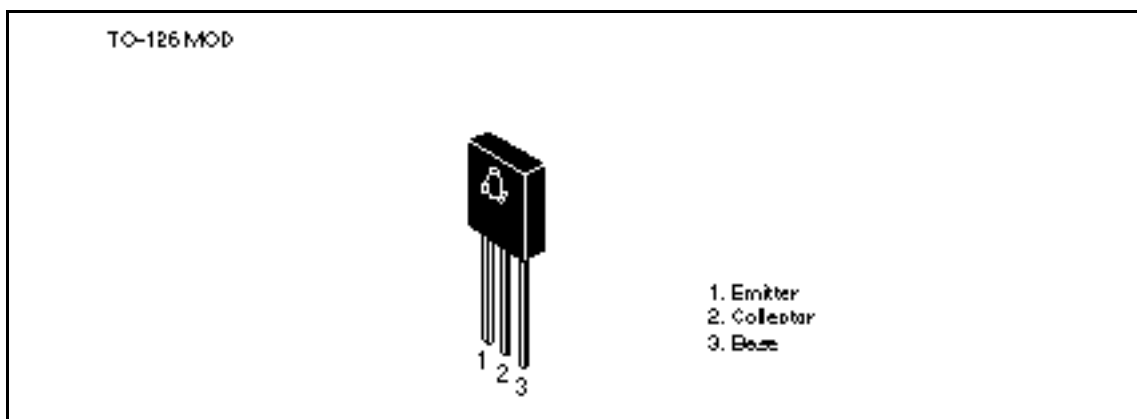
Silicon NPN Epitaxial

HITACHI

Application

Power switching / TV horizontal deflection output

Outline



Absolute Maximum Ratings (Ta = 25°C)

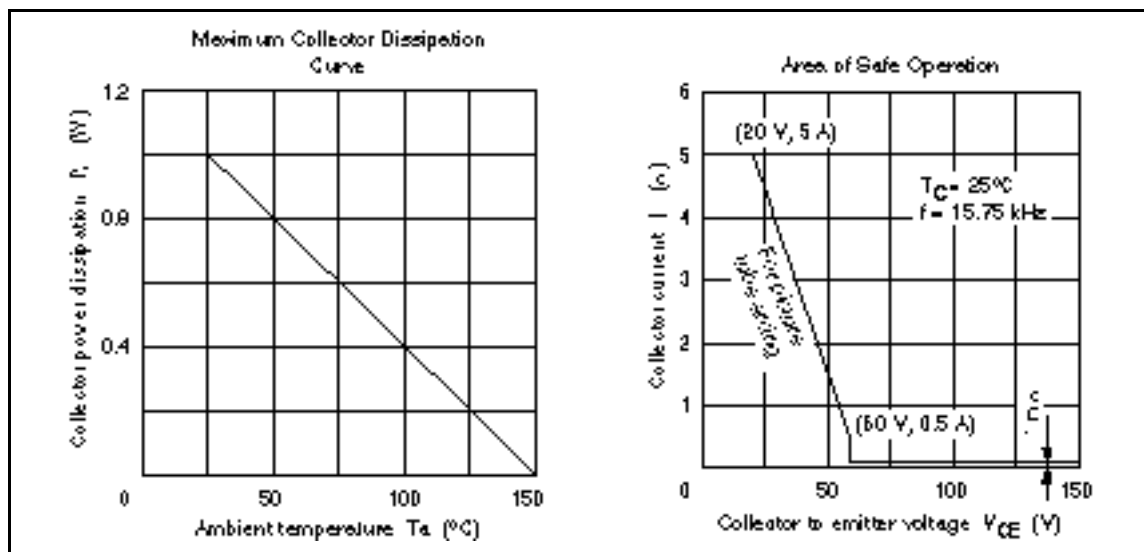
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	150	V
Collector to emitter voltage	V_{CEO}	60	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I_C	2	A
Collector peak current	$I_{C(peak)}$	2.5	A
Collector surge current	$I_{C(surge)}$	5	A
Collector power dissipation	P_C	1.0	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

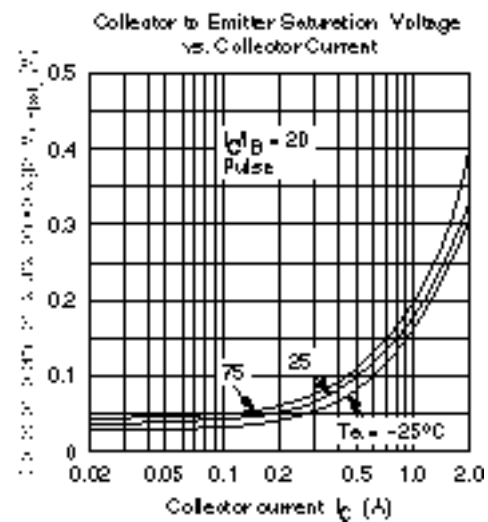
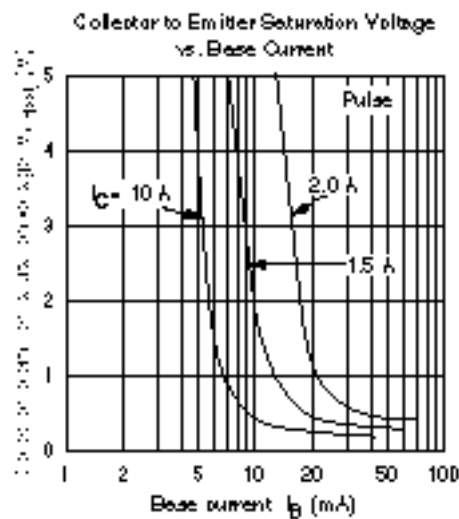
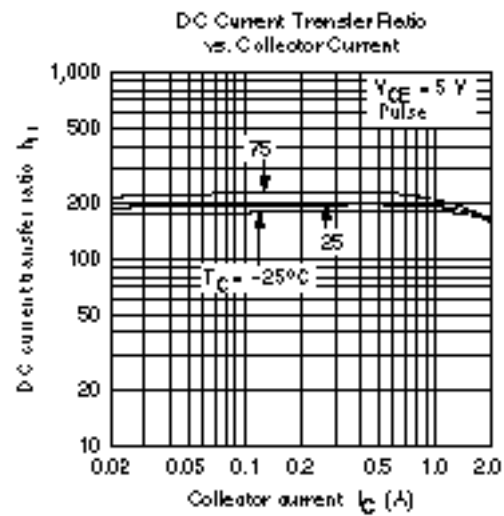
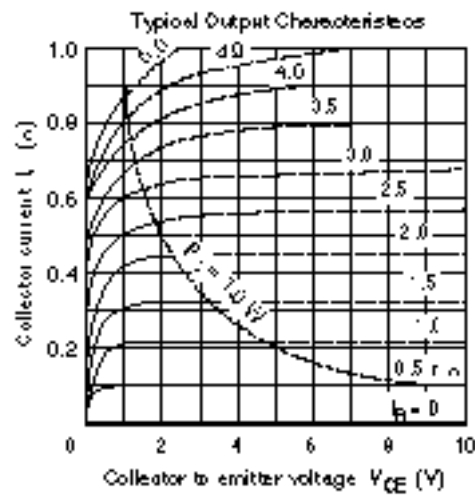
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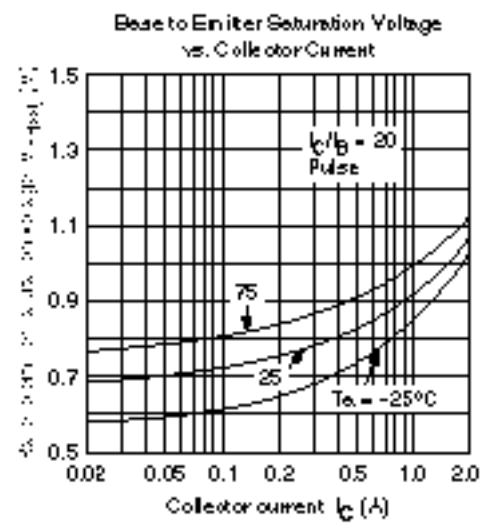
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	150	—	—	V	$I_C = 1 \text{ mA}$, $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	60	—	—	V	$I_C = 10 \text{ mA}$, $R_{BE} = \bullet$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	V	$I_E = 1 \text{ mA}$, $I_C = 0$
Collector cutoff current	I_{CBO}	—	—	1.0	μA	$V_{CB} = 100 \text{ V}$, $I_E = 0$
DC current transfer ratio	h_{FE}	150	—	—		$V_{CE} = 5 \text{ V}$, $I_C = 1.5 \text{ A}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	0.5	V	$I_C = 1.5 \text{ A}$, $I_B = 0.05 \text{ A}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.3	V	
Fall time	t_f	—	—	0.6	μs	$I_C = 1.5 \text{ A}$, $I_{B1} = -I_{B2} = 50 \text{ mA}$

Note: 1. Pulse test.







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HITACHI

Hitachi, Ltd.

Semiconductor & IC Div.

Nippon Bldg., 2-6-2, Ohite-machi, Chiyoda-ku, Tokyo 100, Japan

Tel Tokyo (03) 3270-2111

Fax (03) 3270-5109

For further information write to:

Hitachi America, Ltd.

Semiconductor & IC Div.

2000 Sierra Point Parkway

Berkeley, CA 94705-1835

U.S.A.

Tel 415-589-8300

Fax 415-583-4207

Hitachi Europe GmbH

Electronic Components Group

Continental Europe

Dannebrogstrasse 3

D-85622 Feldkirchen

München

Tel 089-9 91 80-0

Fax 089-9 29 30 00

Hitachi Europe Ltd.

Electronic Components Div.

Northern Europe Headquarters

Whitebrook Park

Lower Cookham Road

High Wycombe

Berkshire SL6 8YA

United Kingdom

Tel 0628-885000

Fax 0628-778322

Hitachi Asia Pte. Ltd.

45 Collyer Quay #20-00

Hitachi Tower

Singapore 0404

Tel 535-2100

Fax 535-1533

Hitachi Asia (Hong Kong) Ltd.

Unit 705, North Tower,

World Finance Centre,

Harbour City, Canton Road

Tsim Sha Tsui, Kowloon

Hong Kong

Tel 27359218

Fax 27308074