
2SB1403

Silicon PNP Triple Diffused

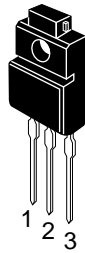
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Application

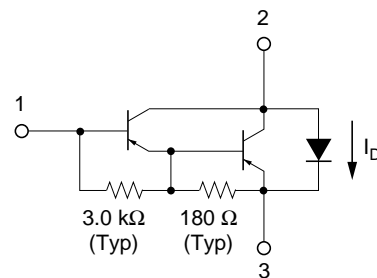
Low frequency power amplifier

Outline

TO-220FM



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



2SB1403

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	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	-6	A
Collector peak current	$I_{C(\text{peak})}$	-12	A
Collector power dissipation	P_C	2	W
	P_C^{*1}	25	
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C
C to E diode forward current	I_D^{*1}	6	A

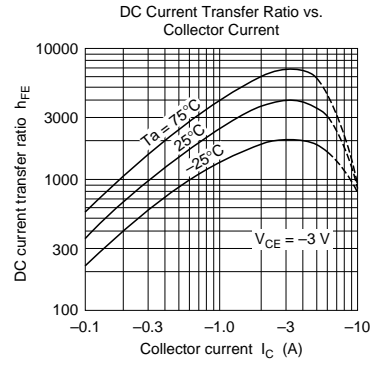
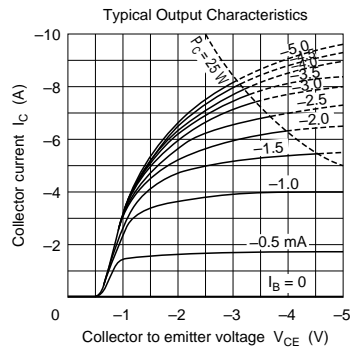
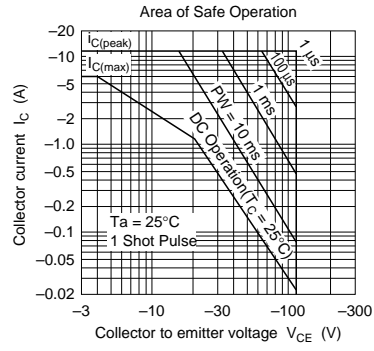
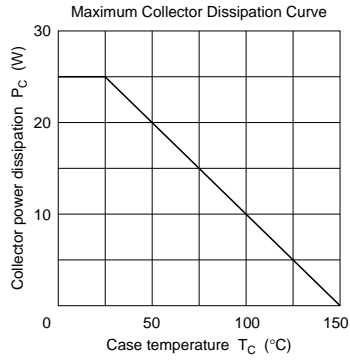
Note: 1. Value at $T_c = 25^\circ\text{C}$.

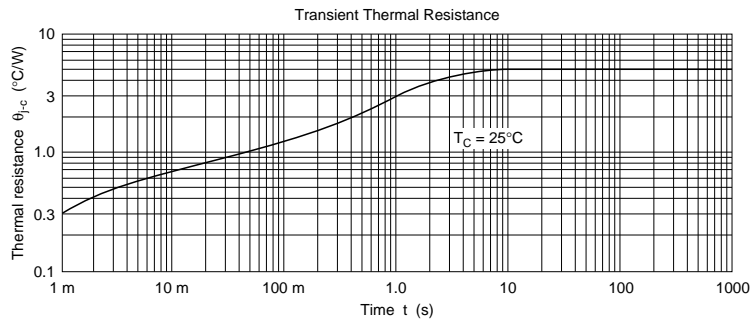
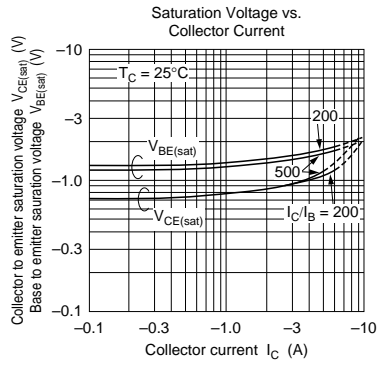
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-120	—	—	V	$I_C = -0.1 \text{ mA}, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-120	—	—	V	$I_C = -25 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-7	—	—	V	$I_E = -50 \text{ mA}, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	-10	μA	$V_{CB} = -100 \text{ V}, I_E = 0$
	I_{CEO}	—	—	-10		$V_{CE} = -100 \text{ V}, R_{BE} = \infty$
DC current transfer ratio	h_{FE}	1000	—	20000		$V_{CE} = -3 \text{ V}, I_C = -3 \text{ A}^{*1}$
Collector to emitter saturation voltage	$V_{CE(\text{sat})1}$	—	—	-1.5	V	$I_C = -3 \text{ A}, I_B = -6 \text{ mA}^{*1}$
	$V_{CE(\text{sat})2}$	—	—	-3.0		$I_C = -6 \text{ A}, I_B = -60 \text{ mA}^{*1}$
Base to emitter saturation voltage	$V_{BE(\text{sat})1}$	—	—	-2.0	V	$I_C = -3 \text{ A}, I_B = -6 \text{ mA}^{*1}$
	$V_{BE(\text{sat})2}$	—	—	-3.5		$I_C = -6 \text{ A}, I_B = -60 \text{ mA}^{*1}$
C to E diode forward voltage	V_D	—	—	3.0	V	$I_D = 6 \text{ A}^{*1}$

Note: 1. Pulse test.

See switching characteristic curve of 2SB1106.





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HITACHI

Hitachi, Ltd.

Semiconductor & IC Div.
Nippon Bldg., 2-6-2, Ohte-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
Brisbane, CA. 94005-1835
U S A
Tel: 415-589-8300
Fax: 415-583-4207

Hitachi Europe GmbH
Electronic Components Group
Continental Europe
Dornacher Straße 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
Maidenhead
Berkshire SL6 8YA
United Kingdom
Tel: 0628-585000
Fax: 0628-778322

Hitachi Asia Pte. Ltd.
16 Collyer Quay #20-00
Hitachi Tower
Singapore 0104
Tel: 535-2100
Fax: 535-1533

Hitachi Asia (Hong Kong) Ltd.
Unit 706, North Tower,
World Finance Centre,
Harbour City, Canton Road
Tsim Sha Tsui, Kowloon
Hong Kong
Tel: 27359218
Fax: 27306071