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# 2SD2103

Silicon NPN Triple Diffused

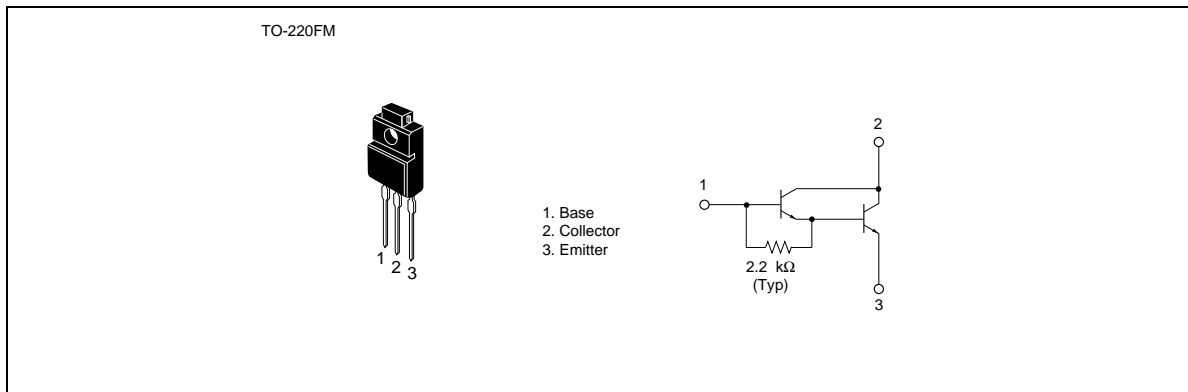
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### Application

Low frequency power amplifier

### Outline



## 2SD2103

### Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	60	V
Collector to emitter voltage	$V_{CEO}$	60	V
Emitter to base voltage	$V_{EBO}$	7	V
Collector current	$I_C$	8	A
Collector peak current	$I_{C(peak)}$	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

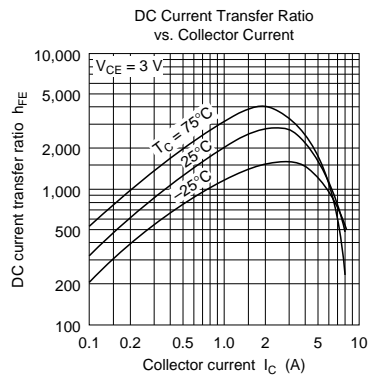
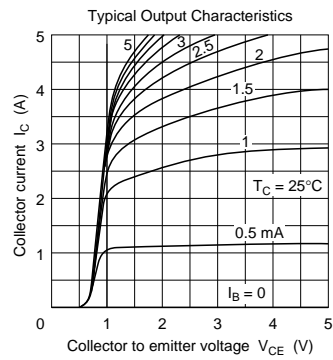
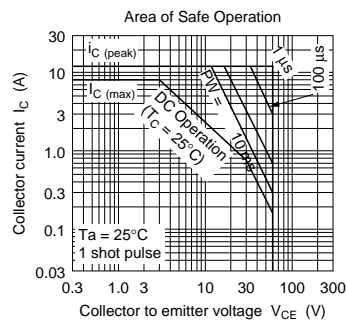
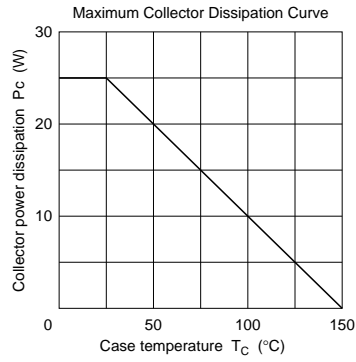
Note: 1. Value at  $T_C = 25^\circ\text{C}$ .

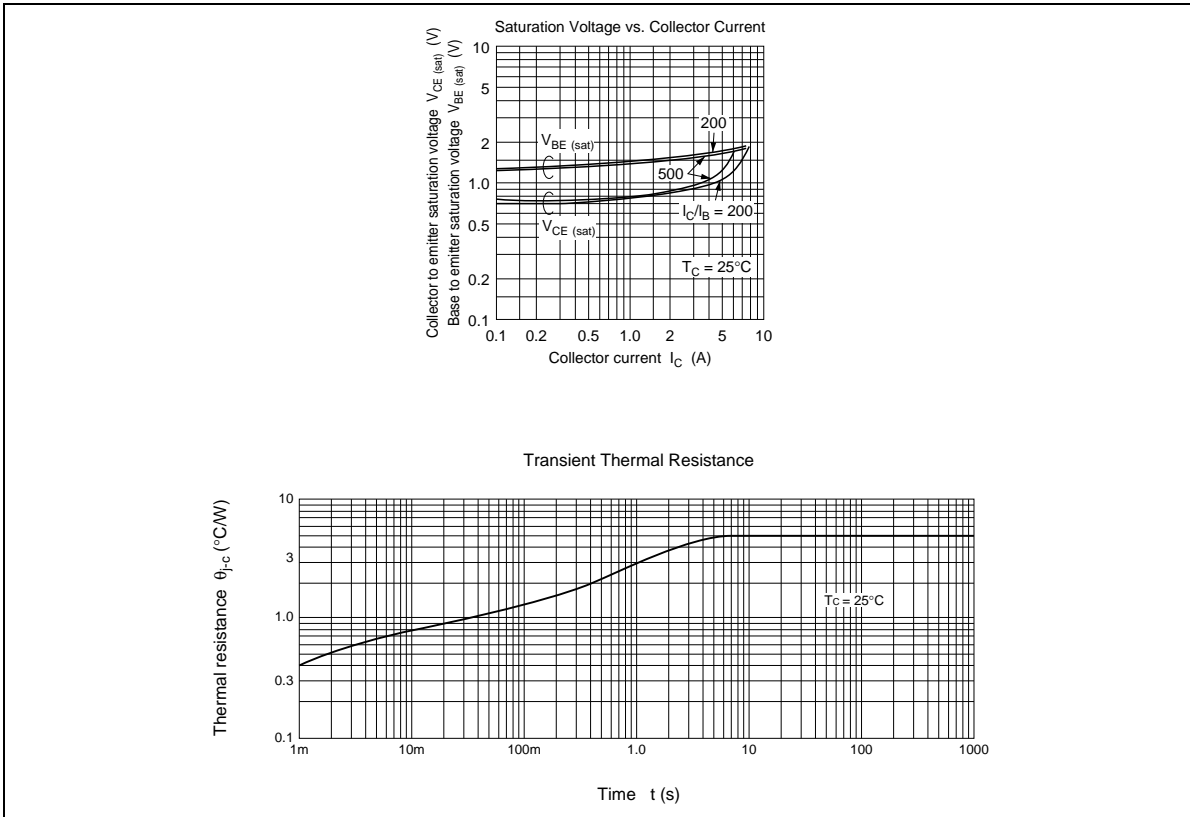
### Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	60	—	—	V	$I_C = 0.1 \text{ mA}, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	60	—	—	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	$\mu\text{A}$	$V_{CB} = 50 \text{ V}, I_E = 0$
	$I_{CEO}$	—	—	10		$V_{CE} = 50 \text{ V}, R_{BE} = \infty$
DC current transfer ratio	$h_{FE}$	1000	—	20000		$V_{CE} = 3 \text{ V}, I_C = 4 \text{ A}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)1}$	—	—	1.5	V	$I_C = 4 \text{ A}, I_B = 8 \text{ mA}^{*1}$
	$V_{CE(sat)2}$	—	—	3.0		$I_C = 8 \text{ A}, I_B = 80 \text{ mA}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)1}$	—	—	2.0	V	$I_C = 4 \text{ A}, I_B = 8 \text{ mA}^{*1}$
	$V_{BE(sat)2}$	—	—	3.5		$I_C = 8 \text{ A}, I_B = 80 \text{ mA}^{*1}$

Note: 1. Pulse test.

See switching characteristic curve of 2SD1572.





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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