

2SB1399

Silicon PNP Triple Diffused

HITACHI

ADE-208-873 (Z)

1st. Edition

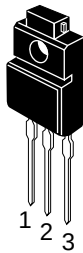
Sep. 2000

Application

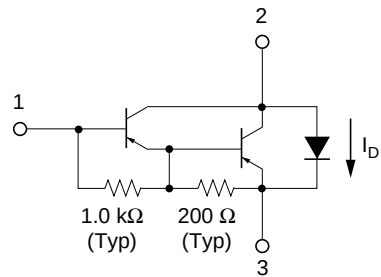
Low frequency power amplifier

Outline

TO-220FM



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



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	−10	A
Collector peak current	$I_{C\ (peak)}$	−15	A
Collector power dissipation	P_C	2	W
	P_C^{*1}	30	
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C
C to E diode forward current	I_D^{*1}	10	A

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

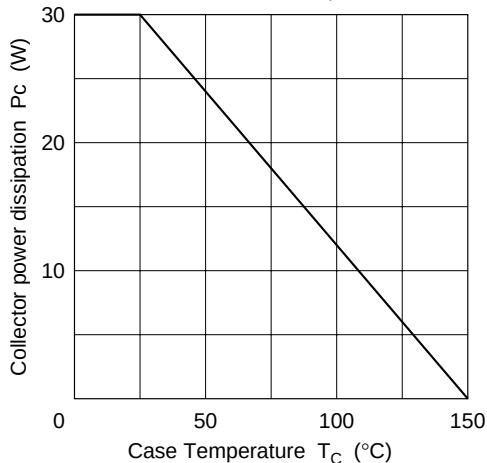
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	−120	—	—	V	$I_C = -0.1\ mA, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	−120	—	—	V	$I_C = -25\ mA, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	−7	—	—	V	$I_E = -50\ mA, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	−10	μA	$V_{CB} = -100\ V, I_E = 0$
	I_{CEO}	—	—	−10		$V_{CE} = -100\ V, R_{BE} = \infty$
DC current transfer ratio	h_{FE}	1000	—	20000		$V_{CE} = -3\ V, I_C = -5\ A^{*1}$
Collector to emitter saturation voltage	$V_{CE\ (sat)1}$	—	—	−1.5	V	$I_C = -5\ A, I_B = 10\ mA^{*1}$
	$V_{CE\ (sat)2}$	—	—	−3.0		$I_C = -10\ A, I_B = -100\ mA^{*1}$
Base to emitter saturation voltage	$V_{BE\ (sat)1}$	—	—	−2.0	V	$I_C = -5\ A, I_B = 10\ mA^{*1}$
	$V_{BE\ (sat)2}$	—	—	−3.5		$I_C = -10\ A, I_B = -100\ mA^{*1}$
C to E diode forward voltage	V_D	—	—	3.0	V	$I_D = 10\ A^{*1}$

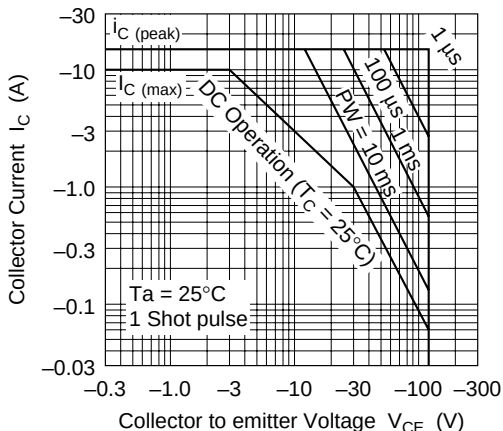
Note: 1. Pulse Test.

See switching characteristic curve of 2SB955(K).

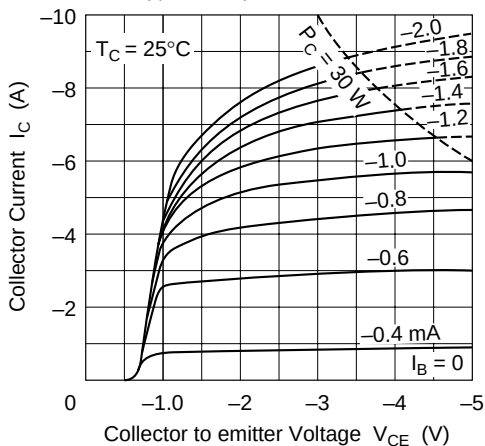
Maximum Collector Dissipation Curve



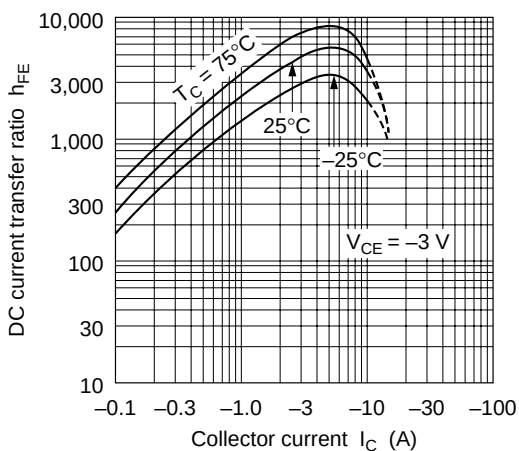
Area of Safe Operation

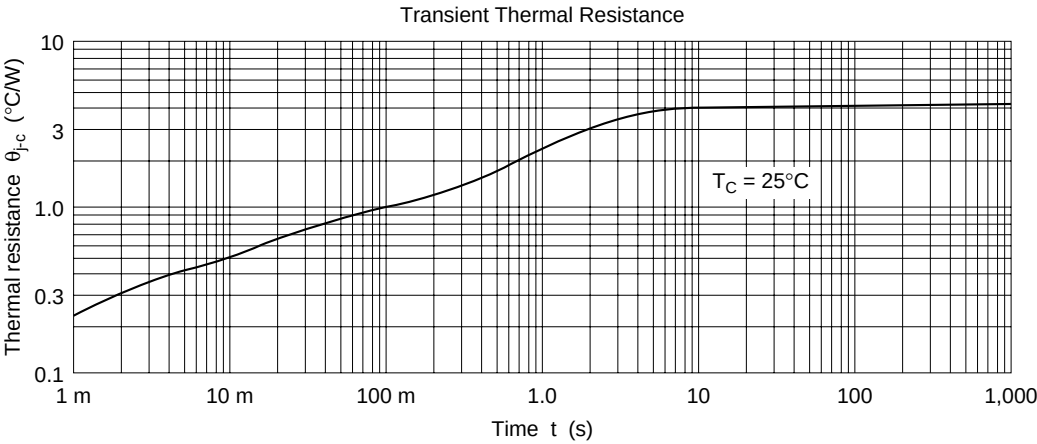
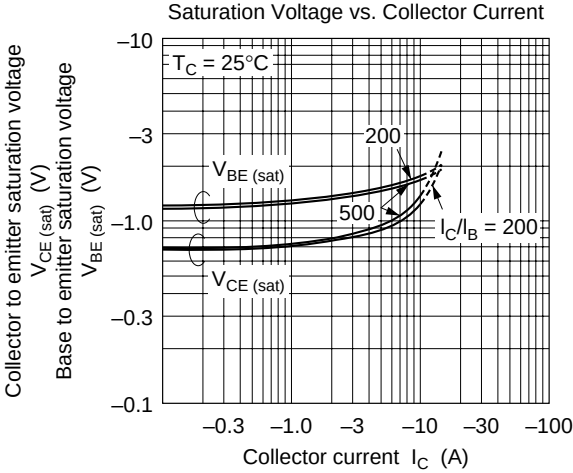


Typical Output Characteristics

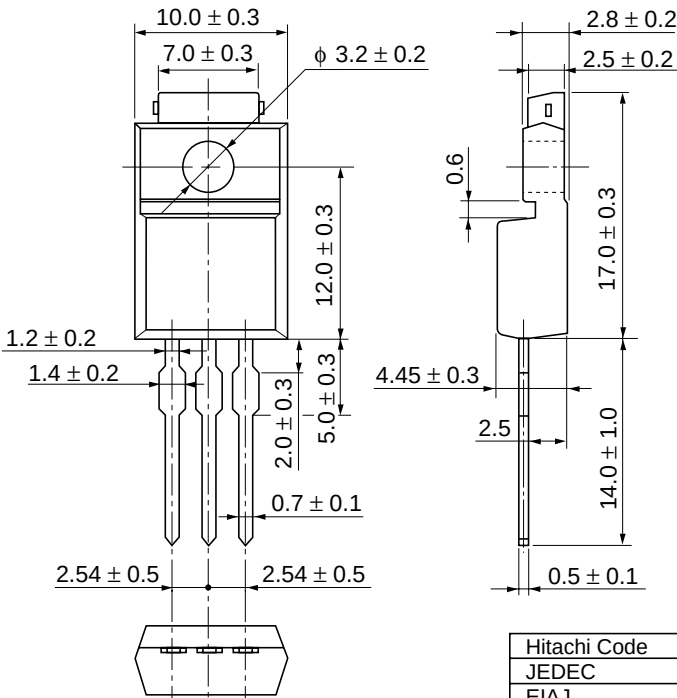


DC Current Transfer Ratio vs. Collector Current

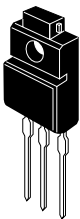




Package Dimensions



Unit: mm



Hitachi Code	TO-220FM
JEDEC	—
EIAJ	Conforms
Mass (reference value)	1.8 g

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