

2SB1391

Silicon PNP Triple Diffused

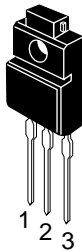
HITACHI

Application

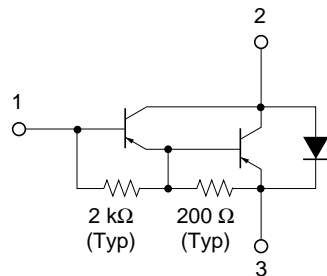
Power switching

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	-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	Tstg	-55 to +150	°C

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

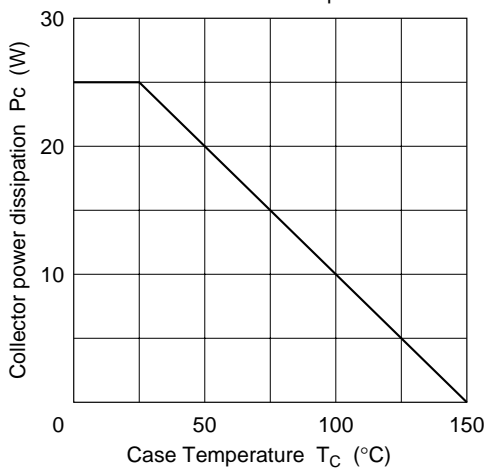
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-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		$V_{CE} = -3\text{ V}$, $I_C = -4\text{ A}^{*1}$
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		$I_C = -8\text{ A}$, $I_B = -80\text{ mA}^{*1}$

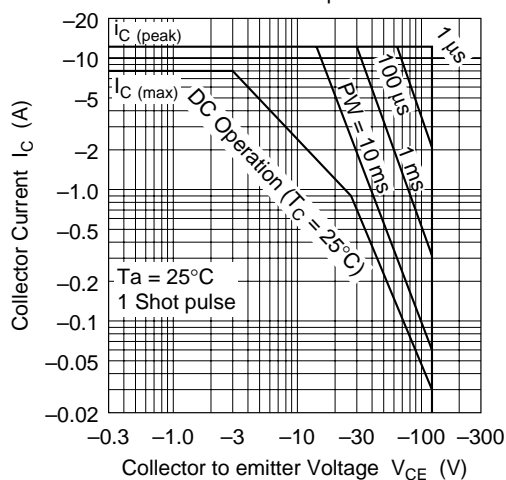
Note: 1. Pulse test.

See switching characteristic curve of 2SB791(K).

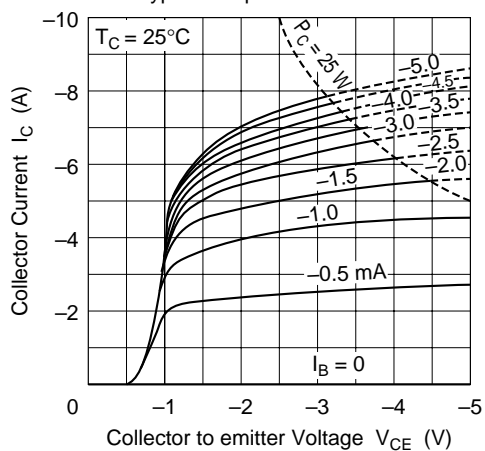
Maximum Collector Dissipation Curve



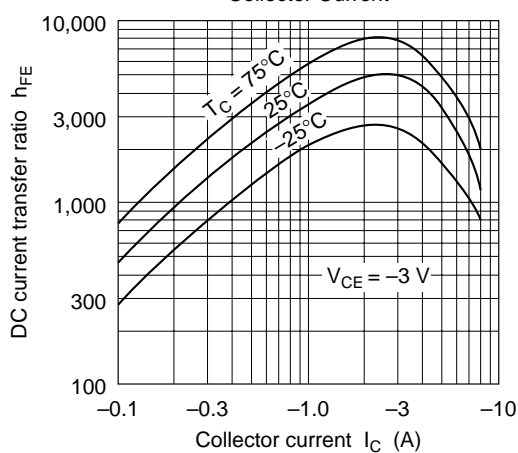
Area of Safe Operation

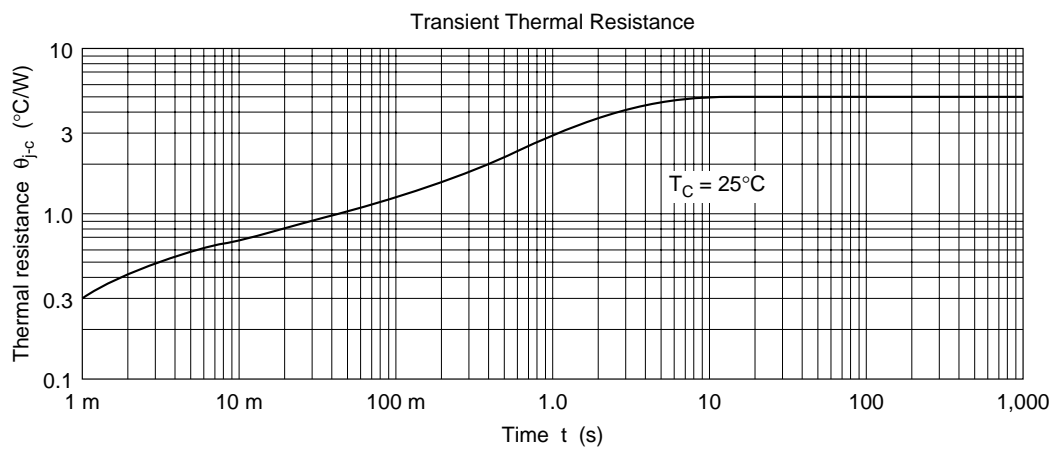
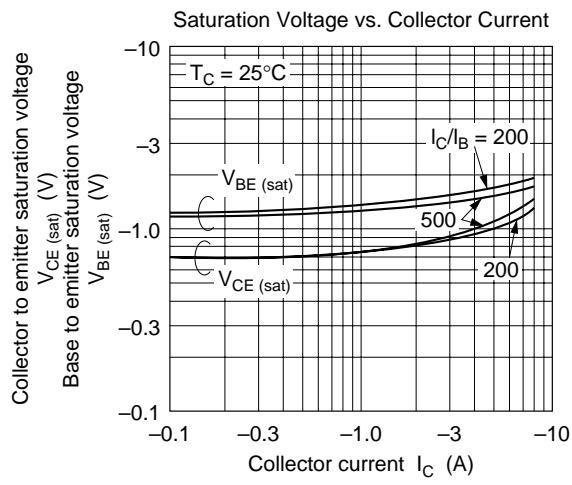


Typical Output Characteristics

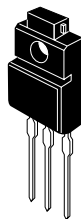
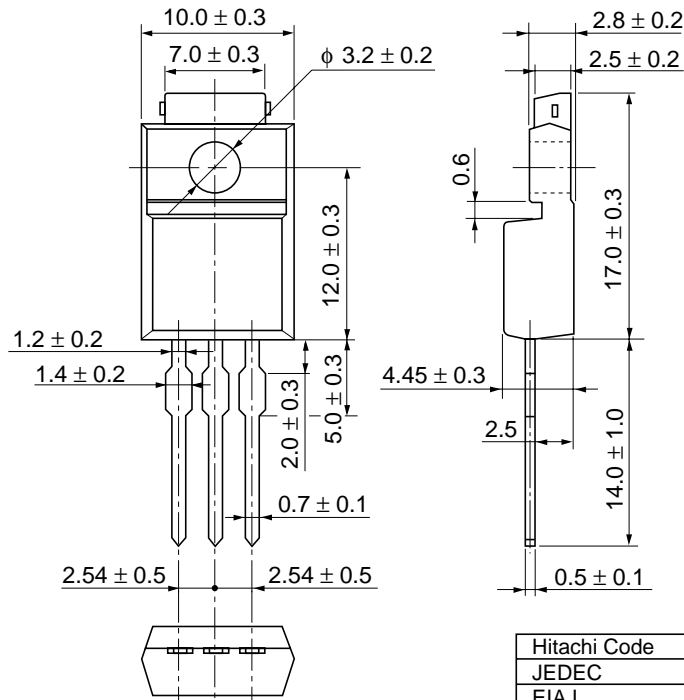


DC Current Transfer Ratio vs. Collector Current





Unit: mm



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

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