HITACHI

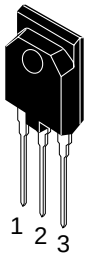
2SC4745

Silicon NPN Triple Diffused
Character Display Horizontal Deflection Output

Feature

- High speed switching
  t_f = 0.2 µs typ
- High breakdown voltage
  V_{CBO} = 1500 V
- Isolated package; TO-3PFM

TO-3PFM



1. Base
2. Collector
3. Emitter

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	1500	V
Collector to emitter voltage	V_{CEO}	800	V
Emitter to base voltage	V_{EBO}	6	V
Collector current	I_C	6	A
Collector peak current	$i_{C(peak)}$	7	A
Collector surge current	$i_{C(surge)}$	16	A
Collector power dissipation	P_C*1	50	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

Note: 1. Value at T_C = 25°C.

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test condition
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	800	—	—	V	I_C = 10 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	6	—	—	V	I_E = 10 mA, I_C = 0
Collector cutoff current	I_{CES}	—	—	500	µA	V_{CE} = 1500 V, R_{BE} = 0
DC current transfer ratio	h_{FE}	7	—	30		V_{CE} = 5 V, I_C = 1 A
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	5	V	I_C = 5 A, I_B = 1 A
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	I_C = 5 A, I_B = 1 A

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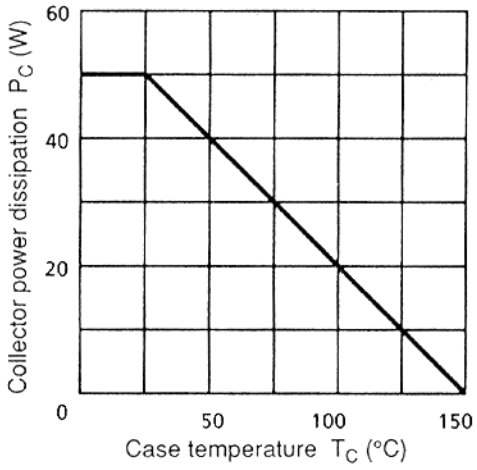
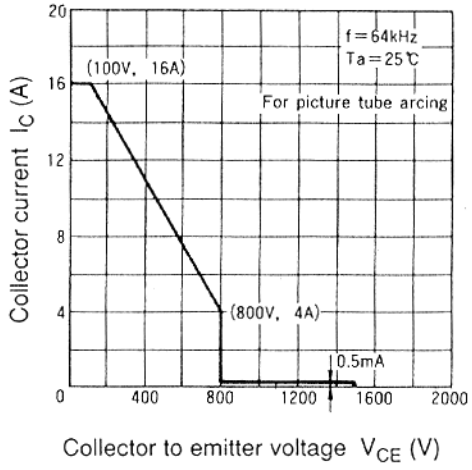
Electrical Characteristics (Ta = 25°C) (cont)

Item	Symbol	Min	Typ	Max	Unit	Test condition
Fall time	t_f	—	0.2	0.4	µs	I_{CP} = 5 A, I_{B1} = 1 A, f_H = 64 kHz

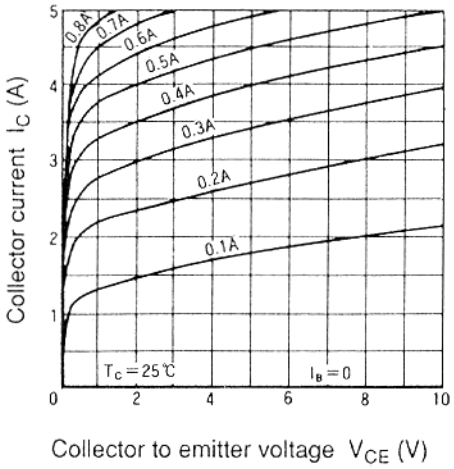
Maximum Collector Dissipation Curve



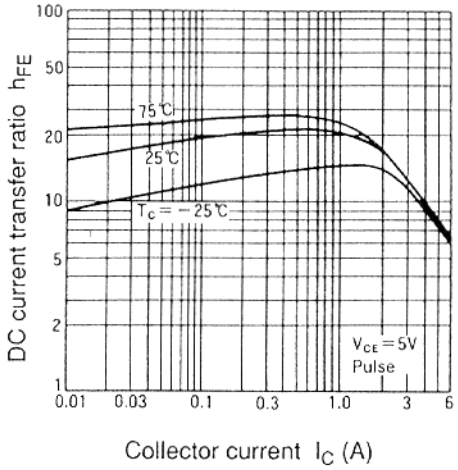
Area of Safe Operation



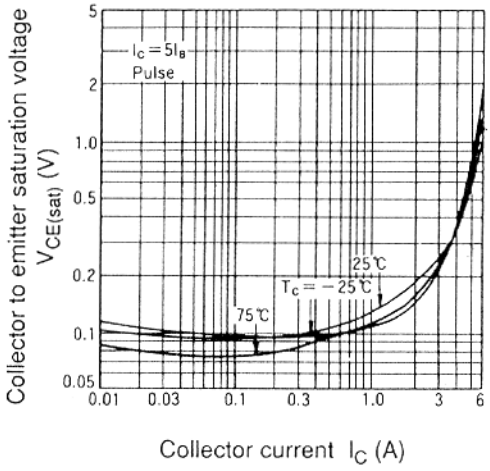
Typical Output Characteristics



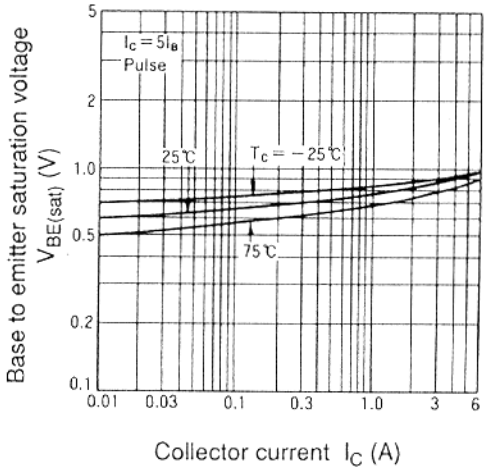
DC Current Transfer Ratio vs. Collector Current



Collector to Emitter Saturation Voltage vs. Collector Current



Base to Emitter Saturation Voltage vs. Collector Current



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Collector to Emitter Saturation Voltage
vs. Base Current