

## 2SC4744

Silicon NPN Triple Diffused  
Character Display Horizontal Deflection Output

### Feature

- High breakdown voltage  
 $V_{CES} = 1500 \text{ V}$
- Built-in dampen diode type
- Isolated package; TO-3PFM

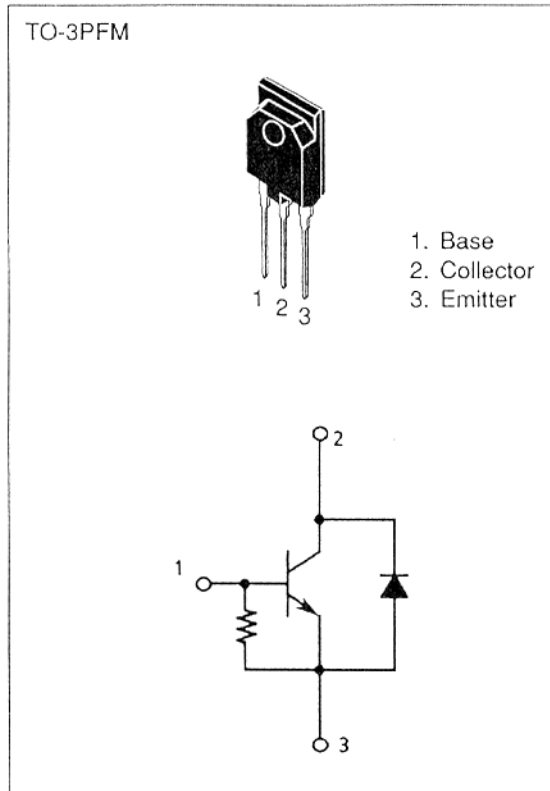
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Item	Symbol	Rating	Unit
Collector to emitter voltage	$V_{CES}$	1500	V
Emitter to base voltage	$V_{EBO}$	6	V
Collector current	$I_C$	6	A
Collector peak current	$i_{C(\text{peak})}$	7	A
Collector surge current	$i_{C(\text{surge})}$	16	A
Collector power dissipation	$P_C^{*1}$	50	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$	-55 to +150	$^\circ\text{C}$
C to E diode forward current	$I_D$	7	A

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

### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

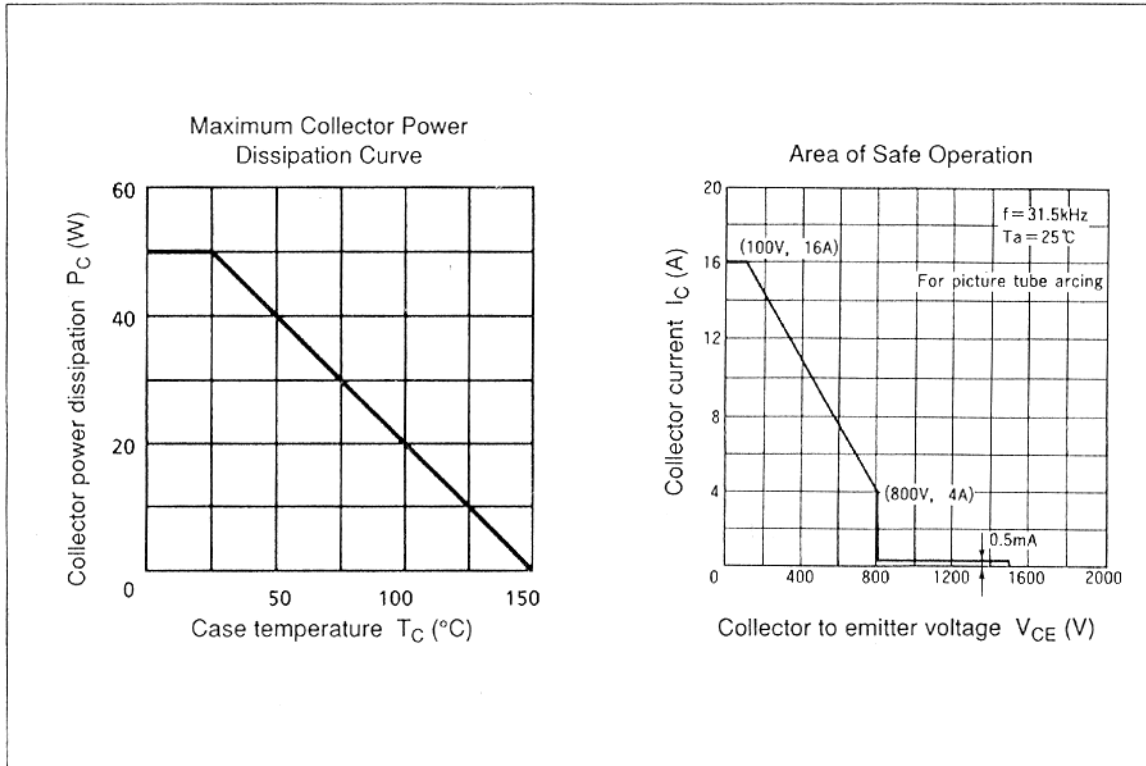
Item	Symbol	Min	Typ	Max	Unit	Test condition
Emitter to base breakdown voltage	$V_{(BR)EBO}$	6	—	—	V	$I_E = 400 \text{ mA}$ , $I_C = 0$
Collector cutoff current	$I_{CES}$	—	—	500	$\mu\text{A}$	$V_{CE} = 1500 \text{ V}$ , $R_{BE} = 0$
DC current transfer ratio	$h_{FE}$	—	—	25		$V_{CE} = 5 \text{ V}$ , $I_C = 1 \text{ A}$
Collector to emitter saturation voltage	$V_{CE(\text{sat})}$	—	—	2.0	V	$I_C = 5 \text{ A}$ , $I_B = 1.25 \text{ A}$
Base to emitter saturation voltage	$V_{BE(\text{sat})}$	—	—	1.5	V	$I_C = 5 \text{ A}$ , $I_B = 1.25 \text{ A}$
C to E diode forward voltage	$V_{ECF}$	—	—	2.0	V	$I_F = 6 \text{ A}$



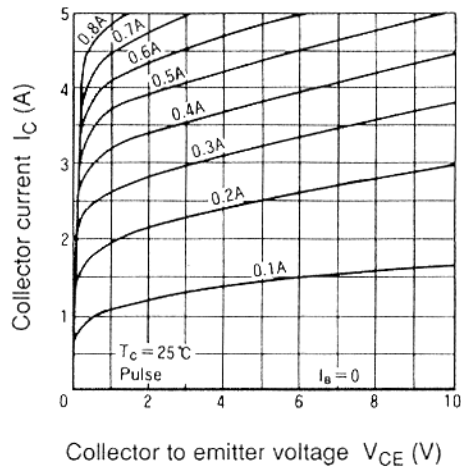
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### Electrical Characteristics (Ta = 25°C) (cont)

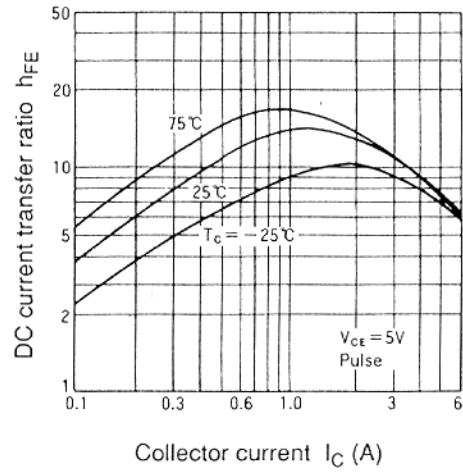
Item	Symbol	Min	Typ	Max	Unit	Test condition
Fall time	$t_f$	—	—	0.4	$\mu\text{s}$	$I_{CP} = 5 \text{ A}$ , $I_{B1} = 1 \text{ A}$ $I_{B2} = -2 \text{ A}$



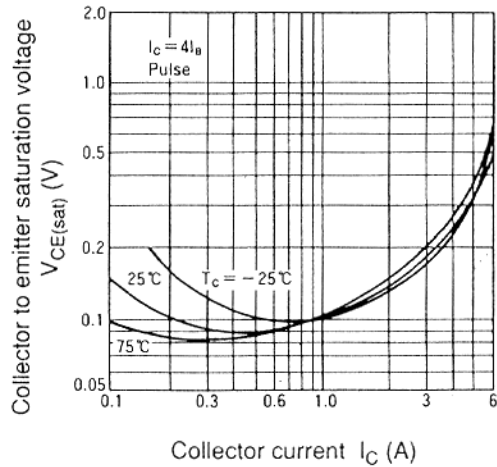
Typical Output Characteristics



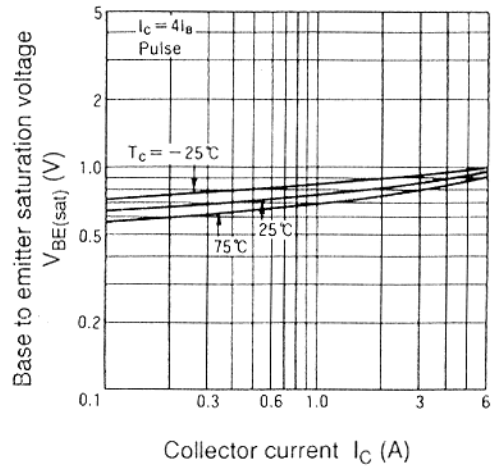
DC Current Transfer Ratio vs. Collector Current



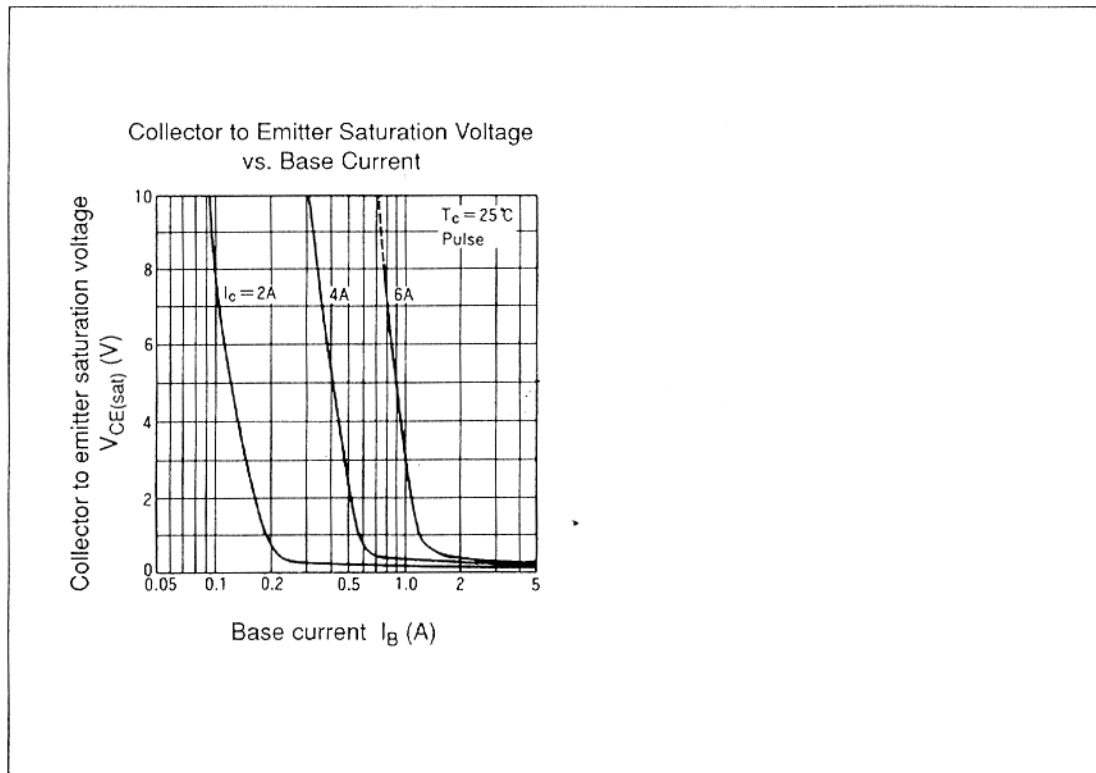
Collector to Emitter Saturation Voltage vs. Collector Current



Base to Emitter Saturation Voltage vs. Collector Current



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