

## 2SC4743

### Silic on NPN Triple Diffused Character Display Horizontal Deflection Output

#### Feature

- High speed switching time  
 $t_f = 0.4 \mu\text{s max}$
- High breakdown voltage  
 $V_{CBO} = 1500 \text{ V}$

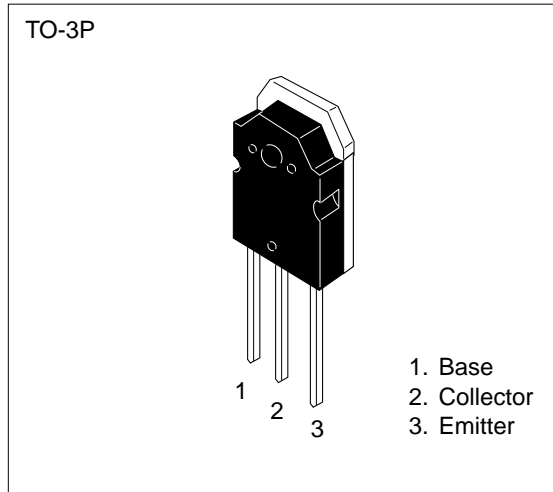
#### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

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	$i_{C(\text{peak})}$	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	$^\circ\text{C}$

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

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

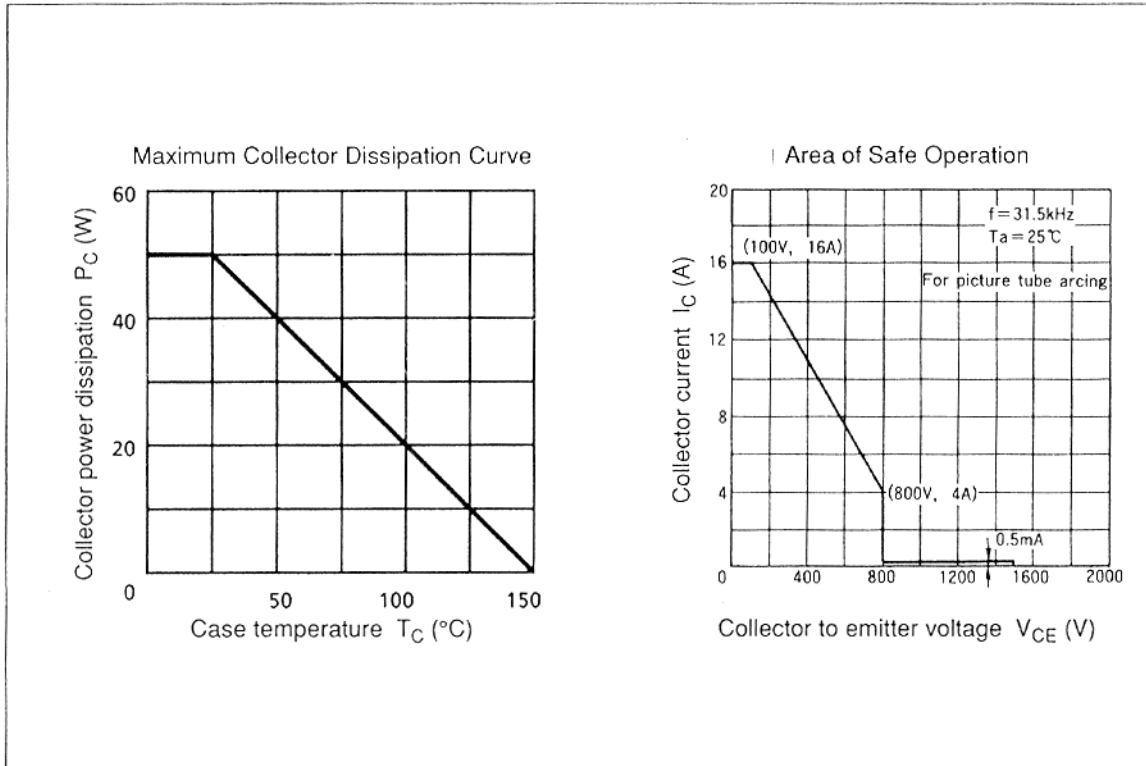
Item	Symbol	Min	Typ	Max	Unit	Test condition
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	800	—	—	V	$I_C = 10 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	6	—	—	V	$I_E = 10 \text{ mA}, I_C = 0$
Collector cutoff current	$I_{CES}$	—	—	500	$\mu\text{A}$	$V_{CE} = 1500 \text{ V}, R_{BE} = 0$
DC current transfer ratio	$h_{FE}$	15	—	30		$V_{CE} = 5 \text{ V}, I_C = 1 \text{ A}$
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	$I_C = 5 \text{ A}, I_B = 1.25 \text{ A}$



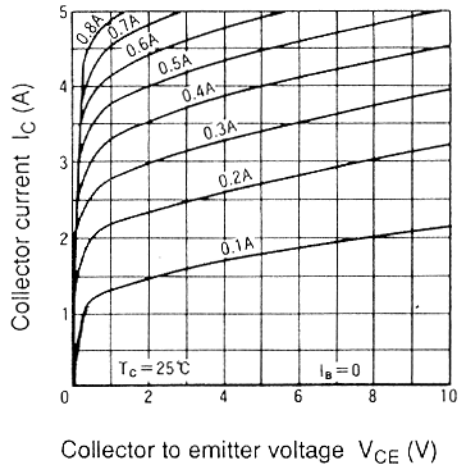
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### Electrical Characteristics (Ta = 25°C) (cont)

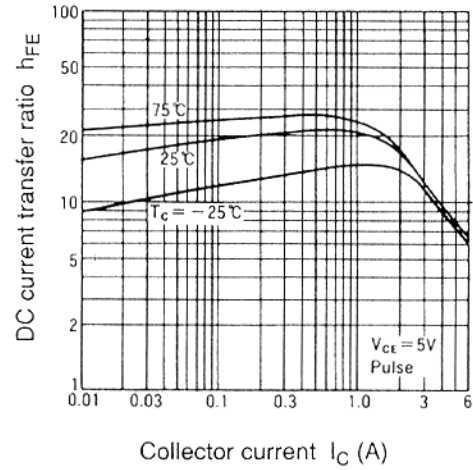
Item	Symbol	Min	Typ	Max	Unit	Test condition
Fall time	$t_f$	—	0.2	0.4	$\mu\text{s}$	$I_{CP} = 5 \text{ A}$ , $I_{B1} = 1 \text{ A}$ , $f_H = 31.5 \text{ kHz}$



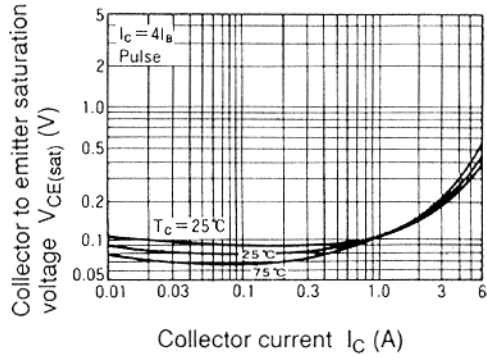
Typical Output Characteristics



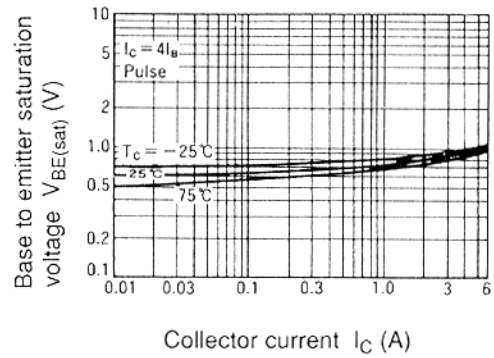
DC Current Transfer Ratio vs. Collector Current



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

