

2SC4742

Silicon NPN Triple Diffused
Character Display Horizontal Deflection Output

Feature

- High breakdown voltage
 $V_{CES} = 1500\text{ V}$
- Built-in damper diode type

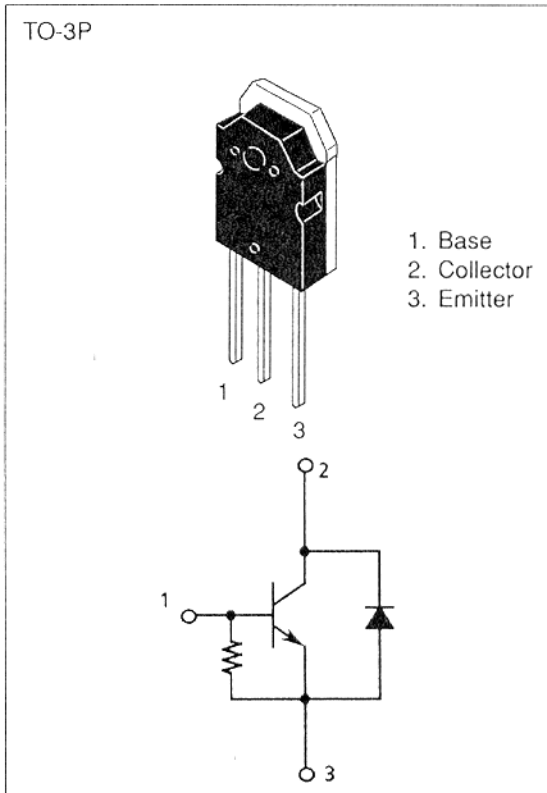
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

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_{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 ($T_a = 25^\circ\text{C}$)

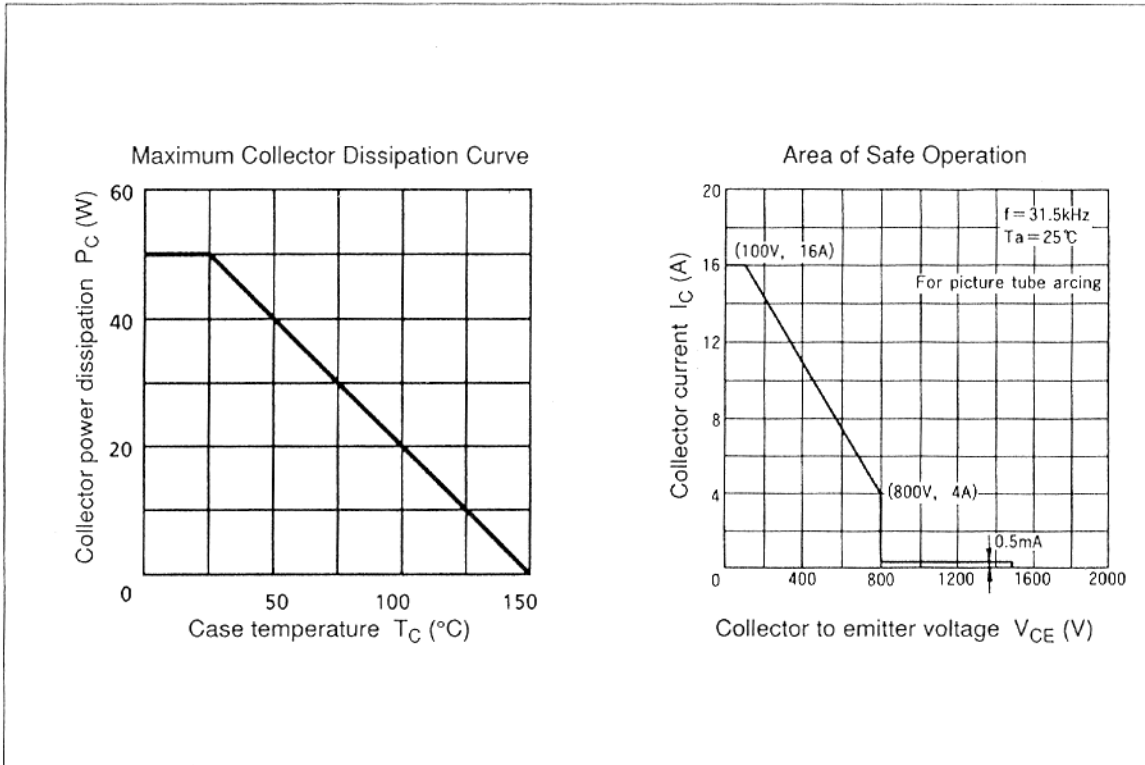
Item	Symbol	Min	Typ	Max	Unit	Test condition
Emitter to base breakdown voltage	$V_{(BR)EBO}$	6	—	—	V	$I_E = 400\text{ mA}$, $I_C = 0$
Collector cutoff current	I_{CES}	—	—	500	μA	$V_{CE} = 1500\text{ V}$, $R_{BE} = 0$
DC current transfer ratio	h_{FE}	—	—	25		$V_{CE} = 5\text{ V}$, $I_C = 1\text{ A}$
Collector 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	$I_F = 6\text{ A}$



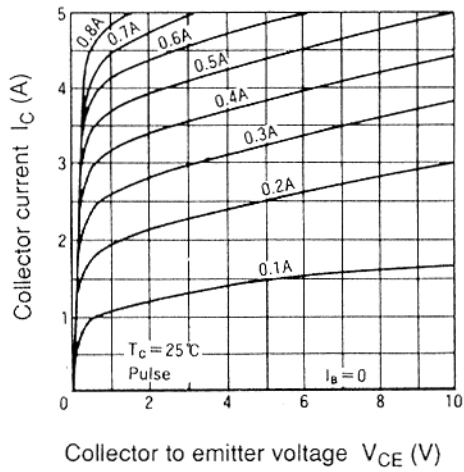
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Electrical Characteristics ($T_a = 25^\circ\text{C}$) (cont)

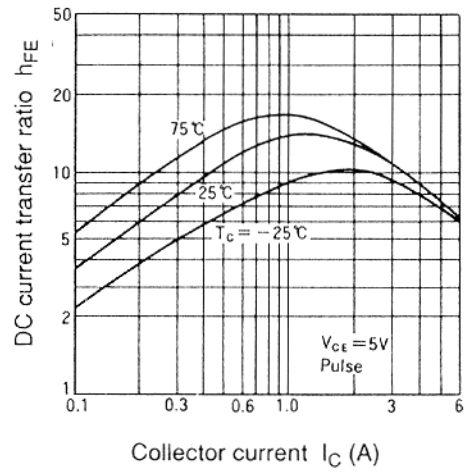
Item	Symbol	Min	Typ	Max	Unit	Test condition
Fall time	t_f	—	—	0.4	μs	$I_{CP} = 5\text{ A}$, $I_{B1} = 1\text{ A}$, $I_{B2} = -2\text{ A}$



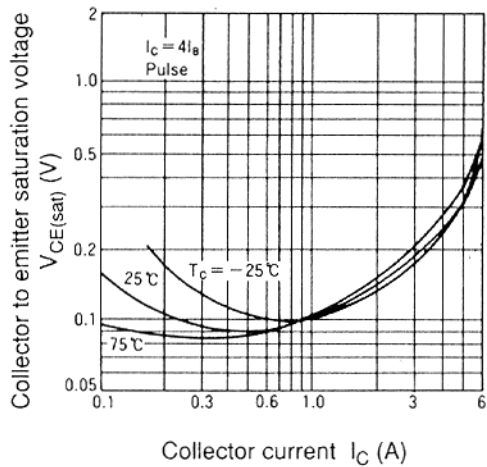
Typical Output Characteristics



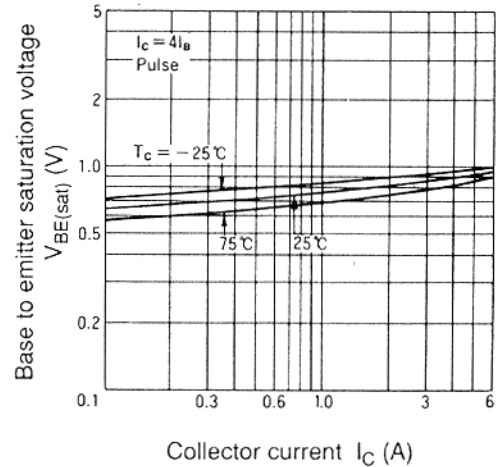
DC Current Transfer Ratio vs. Collector Current



Collector to Emitter Saturation Voltage vs. Collector Current



Base to Emitter Saturation Voltage vs. Collector Current



2SC4742

