
2SC4928

Silicon NPN Triple Diffused

HITACHI

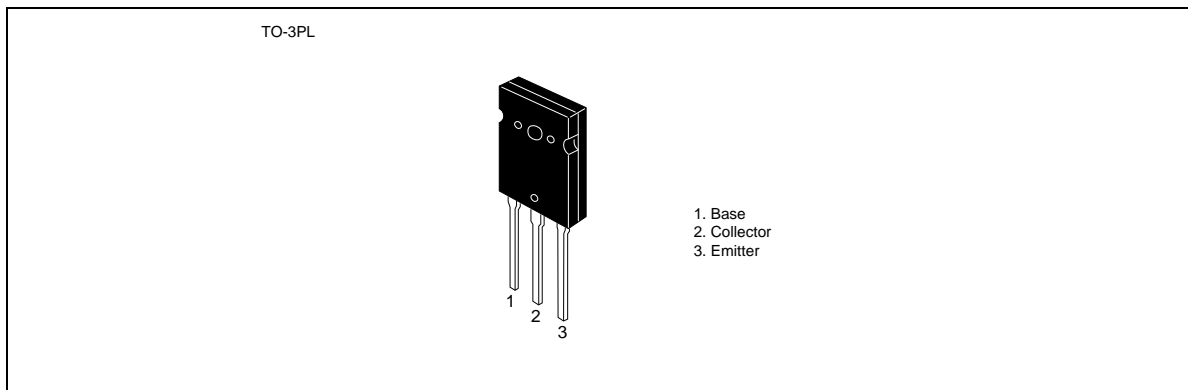
Application

Character display horizontal deflection output

Features

- High speed switching time: 0.5 μ s max
- High breakdown voltage, high current: $V_{CBO} = 1500$ V, $I_C = 15$ A
- Suitable for large size CRT display

Outline



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Absolute Maximum Ratings (Ta = 25°C)

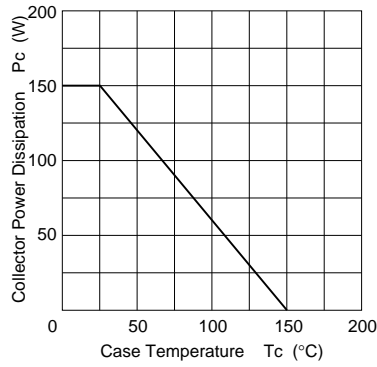
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	1500	V
Collector to emitter voltage	V_{CEO}	800	V
Emitter to base voltage	V_{EBO}	6	V
Collector current	I_C	15	A
Collector surge current	$I_{C(surge)}$	20	A
Collector power dissipation	P_C^{*1}	150	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

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

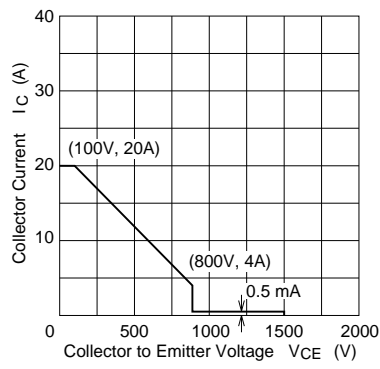
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to 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	μA	$V_{CE} = 1500\text{ V}$, $R_{BE} = 0$
DC current transfer ratio	h_{FE}	—	—	38	—	$V_{CE} = 5\text{ V}$, $I_C = 1\text{ A}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	5	V	$I_C = 12\text{ A}$, $I_B = 3\text{ A}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	$I_C = 12\text{ A}$, $I_B = 3\text{ A}$
Fall time	t_f	—	—	0.5	μs	$I_{CP} = 8\text{ A}$, $I_{B1} = 1.4\text{ A}$, $I_{B2} \cong -2.5\text{ A}$, $f_H = 31.5\text{ kHz}$

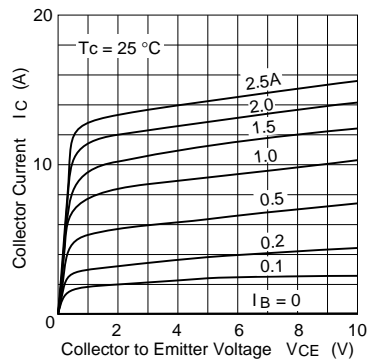
Maximum Collector Power Dissipation Curve



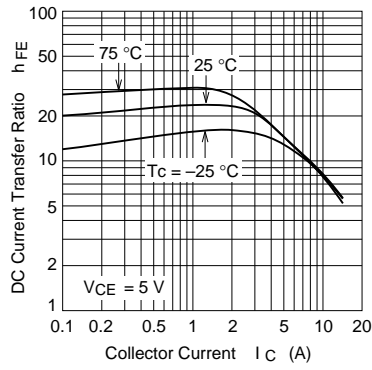
Area of Safe Operation



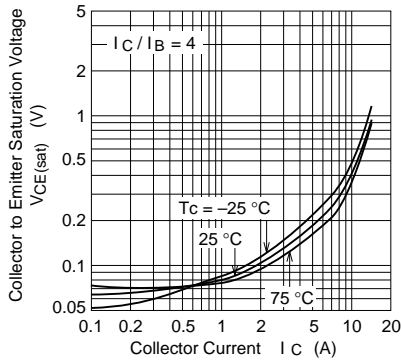
Typical Output Characteristics



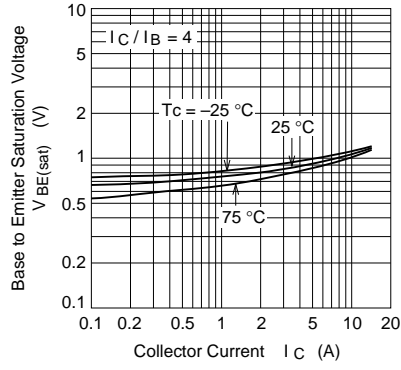
DC Current Transfer Ratio
vs. Collector Current



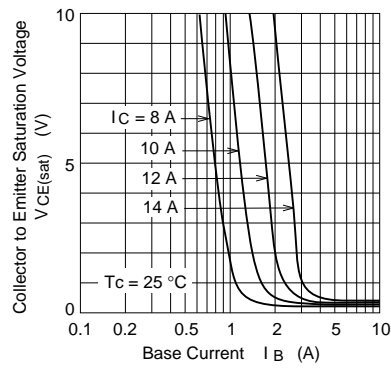
Collector to Emitter Saturation Voltage
vs. Collector Current



Base to Emitter Saturation Voltage
vs. Collector Current



Collector to Emitter Saturation Voltage
vs. Base Current



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