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# 2SC4880

Silicon NPN Triple Diffused

## HITACHI

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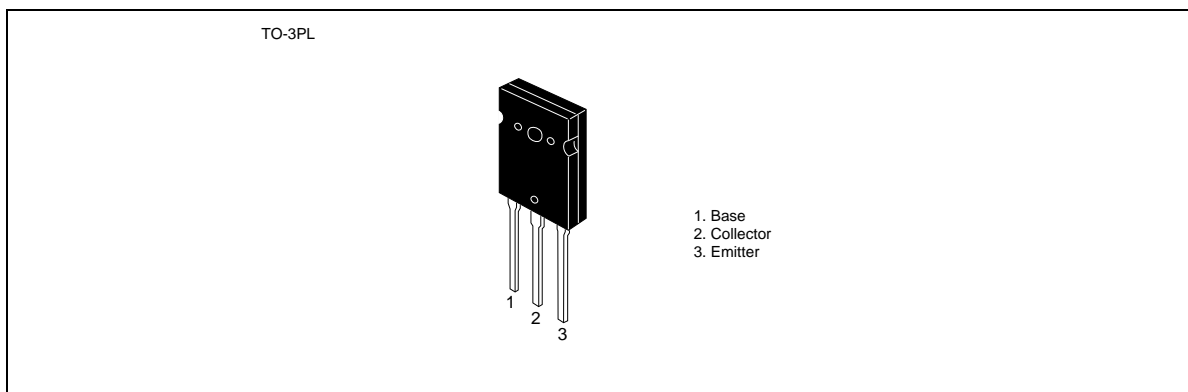
### Application

TV/character display horizontal deflection output

### Features

- High speed switching  
 $t_r \leq 0.5 \mu\text{s}$
- High breakdown voltage  
 $V_{\text{CBO}} = 1700 \text{ V}$

### Outline



## 2SC4880

### Absolute Maximum Ratings (Ta = 25°C)

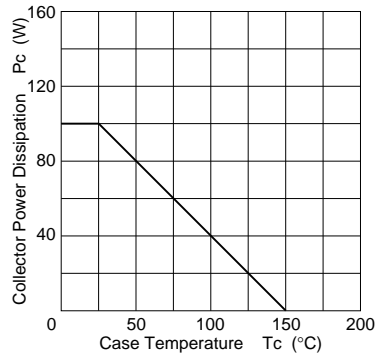
Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	1700	V
Collector to emitter voltage	$V_{CEO}$	900	V
Emitter to base voltage	$V_{EBO}$	6	V
Collector current	$I_C$	12	A
Collector surge current	$I_{C(surge)}$	20	A
Collector power dissipation	$P_C^{*1}$	100	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

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

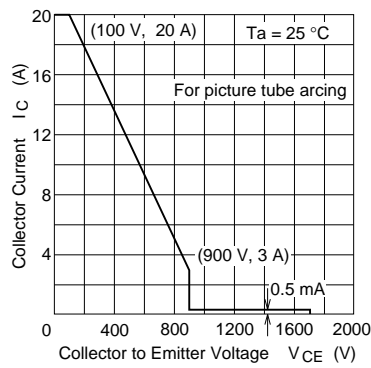
### Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	900	—	—	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	$\mu\text{A}$	$V_{CE} = 1700\text{ V}$ , $R_{BE} = 0$
DC current transfer ratio	$h_{FE}$	—	—	35		$V_{CE} = 5\text{ V}$ , $I_C = 1\text{ A}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	5	V	$I_C = 10\text{ A}$ , $I_B = 2.5\text{ A}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	$I_C = 10\text{ A}$ , $I_B = 2.5\text{ A}$
Fall time	$t_f$	—	—	0.5	$\mu\text{s}$	$I_{CP} = 8\text{ A}$ , $I_{B1} = 1.4\text{ A}$ $I_{B2} \cong -2.5\text{ A}$ , $f_H = 31.5\text{ kHz}$

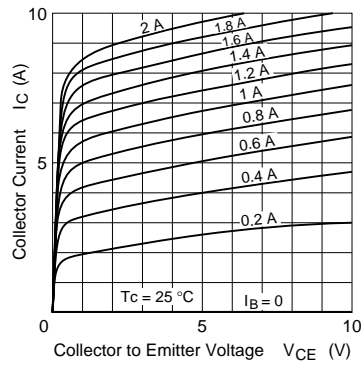
Maximum Collector Power Dissipation Curve



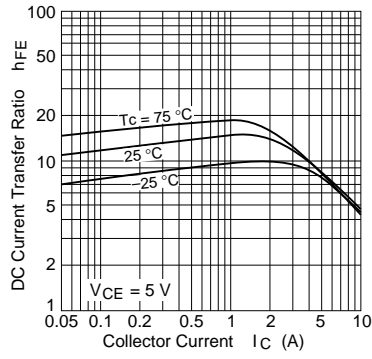
Maximum Safe Operation Area



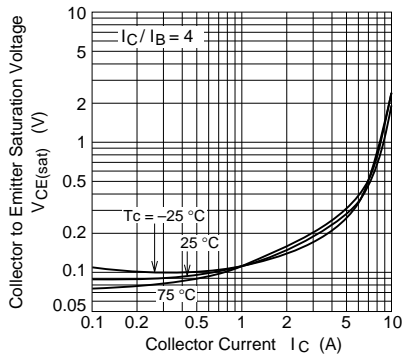
Typical Output Characteristics



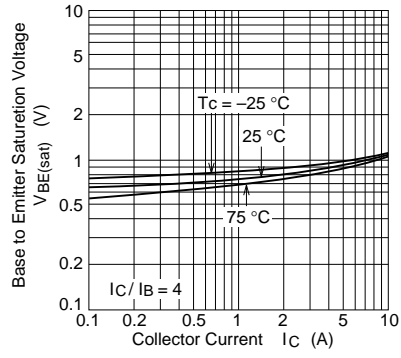
DC Current Transfer Ratio vs. Collector Current



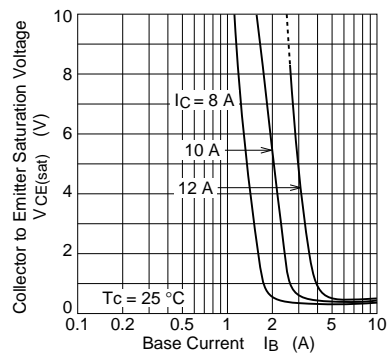
Collector to Emitter Saturation Voltage vs. Collector Current



Base to Emitter Saturation Voltage  
vs. Collector Current



Collector to Emitter Saturation Voltage  
vs. Base Current



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