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# 2SD2381

Silicon NPN Triple Diffused

## HITACHI

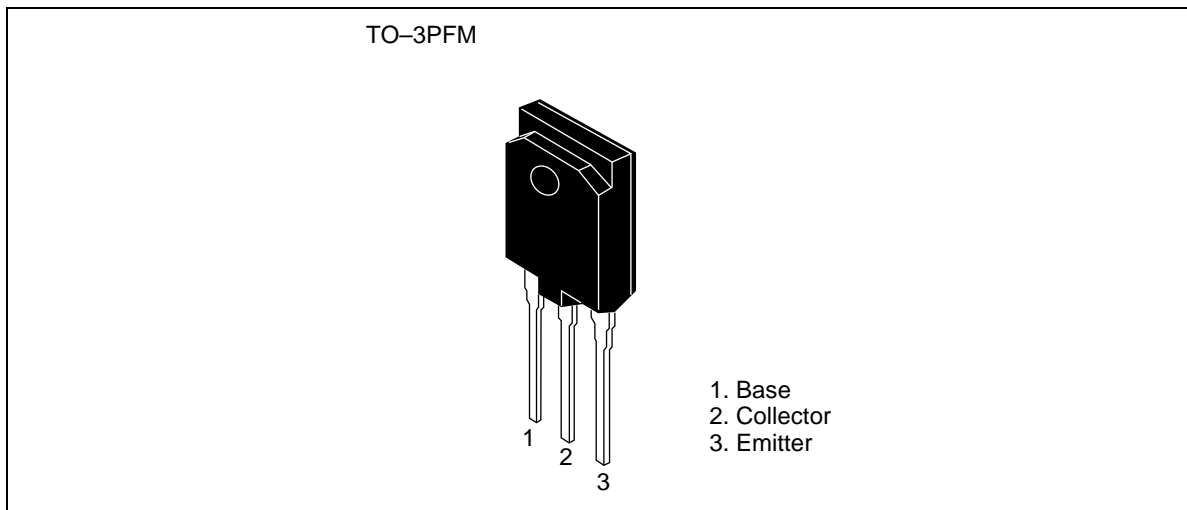
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### Application

Color television horizontal deflection output

### Features

- High breakdown voltage  
 $V_{CBO} = 1500 \text{ V}$



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### Absolute Maximum Ratings (Ta = 25°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	$I_C$	3	A
Collector peak current	ic(peak)	3.5	A
Collector surge current	ic(surge)	10	A
Collector power dissipation	$P_{C1}$	40	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

Note: 1. Value at Tc = 25°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	$\mu\text{A}$	$V_{CE} = 1500 \text{ V}, R_{BE} = 0$
DC current transfer ratio	$h_{FE}$	—	—	30	—	$V_{CE} = 5 \text{ V}, I_C = 0.3 \text{ A}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	5	V	$I_C = 2.5 \text{ A}, I_B = 0.8 \text{ A}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	$I_C = 2.5 \text{ A}, I_B = 0.8 \text{ A}$
Fall time	$T_f$	—	—	1.0	$\mu\text{s}$	$I_{CP} = 2.75 \text{ A}, I_{B1} = 0.6 \text{ A}$ $I_{B2} \leq -1.3 \text{ A},$ $f_H = 15.75 \text{ kHz}$

See characteristic curves of 2SD2294.

Maximum Collector Power Dissipation Curve

