

2SD2381

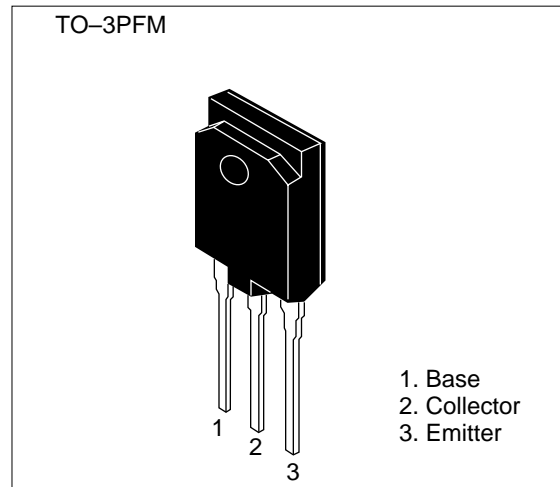
Silicon NPN Triple Diffused

Application

Color television horizontal deflection output

Features

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



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	$i_{c(peak)}$	3.5	A
Collector surge current	$i_{c(surge)}$	10	A
Collector power dissipation	P_C^{*1}	40	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

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

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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}	—	—	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	μs	$I_{CP} = 2.75 \text{ A}$, $I_{B1} = 0.6 \text{ A}$ $I_{B2} \approx -1.3 \text{ A}$, $f_H = 15.75 \text{ kHz}$

See characteristic curves of 2SD2294.

