



## TO-126 Plastic-Encapsulated Transistors

### 2SD2583 TRANSISTOR (NPN)

#### FEATURES

Power dissipation

$$P_{CM}: 1 \text{ W (Tamb=25°C)}$$

Collector current

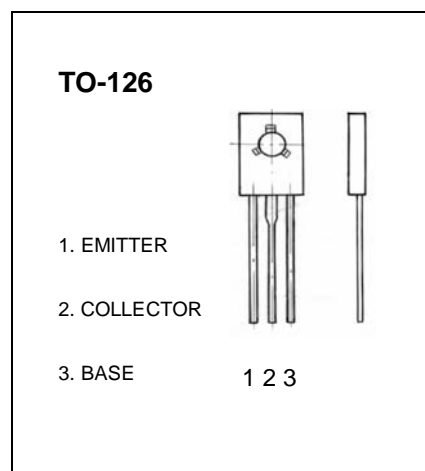
$$I_{CM}: 5 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 30 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55°C \text{ to } +150°C$$



#### ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=0.1\text{mA}, I_E=0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=0.1\text{mA}, I_C=0$	6			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=30\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=6\text{V}, I_C=0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=2\text{V}, I_C=1\text{A}$	150		600	
	$h_{FE(2)}$	$V_{CE}=2\text{V}, I_C=4\text{A}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1\text{A}, I_B=50\text{mA}$ $I_C=2\text{A}, I_B=100\text{mA}$ $I_C=4\text{A}, I_B=200\text{mA}$			0.15 0.25 0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=2\text{A}, I_B=100\text{mA}$			1.5	V
Transition frequency	$f_T$	$V_{CE}=10\text{V}, I_C=50\text{mA}$		120		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		77		pF