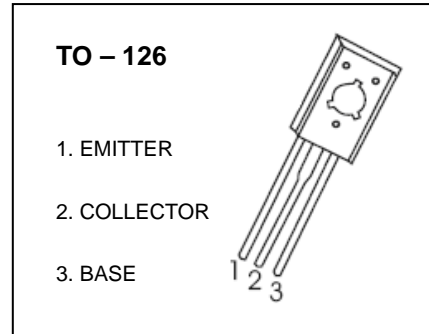
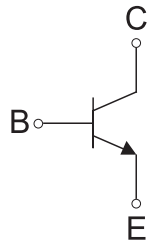


## 2SD2583 TRANSISTOR (NPN)

### FEATURES

- LOW  $V_{CE(sat)}$
- High DC Current Gain

### Equivalent Circuit



### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	30	V
$V_{CEO}$	Collector-Emitter Voltage	30	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current	5	A
$P_C$	Collector Power Dissipation	1	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	125	$^{\circ}\text{C}/\text{W}$
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

$T_a=25\text{ }^\circ\text{C}$  unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
<b>Collector-base breakdown voltage</b>	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	30			V
<b>Collector-emitter breakdown voltage</b>	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	30			V
<b>Emitter-base breakdown voltage</b>	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	6			V
<b>Collector cut-off current</b>	$I_{CBO}$	$V_{CB}=30\text{V}, I_E=0$			0.1	$\mu\text{A}$
<b>Emitter cut-off current</b>	$I_{EBO}$	$V_{EB}=6\text{V}, I_C=0$			0.1	$\mu\text{A}$
<b>DC current gain</b>	$h_{FE(1)}$	$V_{CE}=2\text{V}, I_C=1\text{A}$	150		600	
	$h_{FE(2)}$	$V_{CE}=2\text{V}, I_C=4\text{A}$	50			
<b>Collector-emitter saturation voltage</b>	$V_{CE(sat)1}$	$I_C=1\text{A}, I_B=0.05\text{A}$			0.15	V
	$V_{CE(sat)2}$	$I_C=2\text{A}, I_B=0.1\text{A}$			0.25	V
	$V_{CE(sat)3}$	$I_C=4\text{A}, I_B=0.2\text{A}$			0.5	V
<b>Base-emitter saturation voltage</b>	$V_{BE(sat)}$	$I_C=2\text{A}, I_B=0.1\text{A}$			1.5	V
<b>Collector output capacitance</b>	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		77		pF
<b>Transition frequency</b>	$f_T$	$V_{CE}=10\text{V}, I_C=50\text{mA}$		120		MHz

