

## isc Silicon NPN Power Transistors

2SD583

## DESCRIPTION

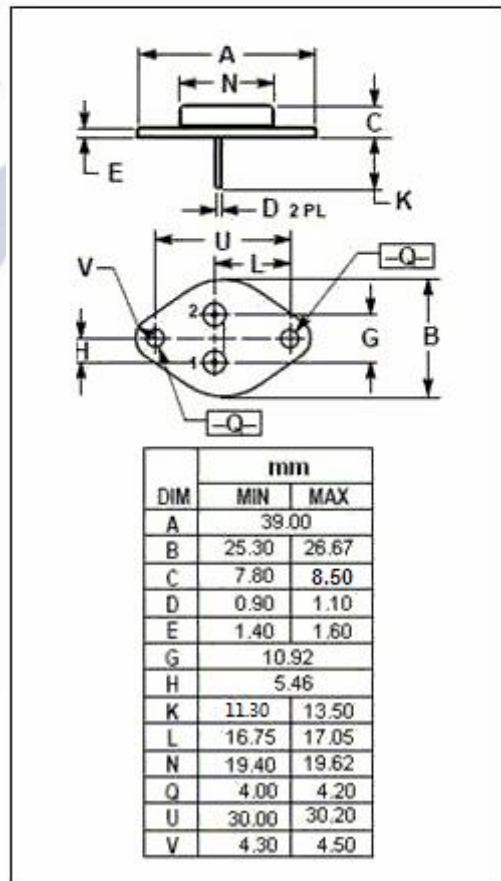
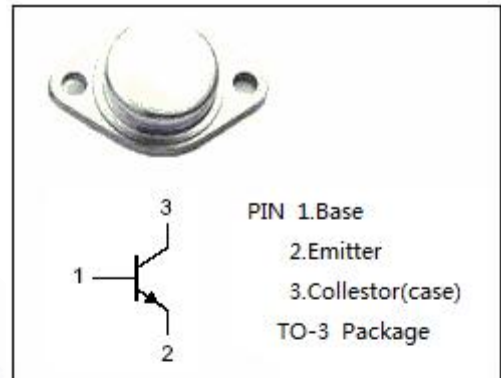
- High Current Capability
- Excellent Safe Operating Area
- High DC current Gain
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Designed for high power audio, disk head positioners and other linear applications

ABSOLUTE MAXIMUM RATINGS( $T_C=25^{\circ}\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	250	V
$V_{CEO}$	Collector-Emitter Voltage	250	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	15	A
$I_{CM}$	Collector Current-Peak	25	A
$I_B$	Base Current-Continuous	5	A
$P_D$	Total Power Dissipation @ $T_C=25^{\circ}\text{C}$	150	W
$T_j$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-65~150	$^{\circ}\text{C}$



**isc Silicon NPN Power Transistors****2SD583****ELECTRICAL CHARACTERISTICS****T<sub>j</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 50mA ; I <sub>B</sub> = 0	250		V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 8A; I <sub>B</sub> = 0.8A		1.4	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 15A; I <sub>B</sub> = 3A		4.0	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = 8A ; V <sub>CE</sub> = 4V		2.2	V
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 250V; I <sub>B</sub> = 0		0.5	mA
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 250V; I <sub>E</sub> = 0		0.1	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> =0		0.1	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 2A ; V <sub>CE</sub> = 5V	60	200	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 8A ; V <sub>CE</sub> = 5V	30		
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 1A ; V <sub>CE</sub> = 10V; f <sub>test</sub> = 1.0MHz	4		MHz