

isc Silicon NPN Power Transistor

2N3583

DESCRIPTION

- Continuous Collector Current- $I_C = 1A$
- Power Dissipation- $P_D = 35W @ T_C = 25^\circ C$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 5.0 V(\text{Max}) @ I_C = 1A$

APPLICATIONS

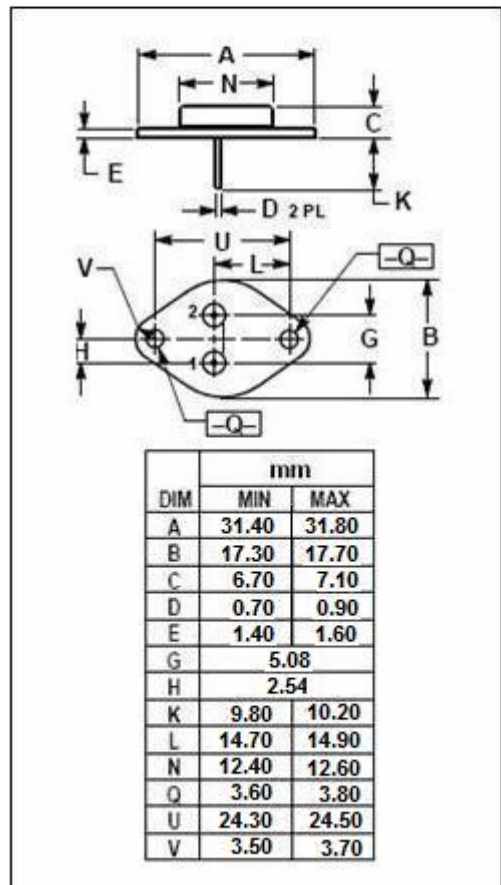
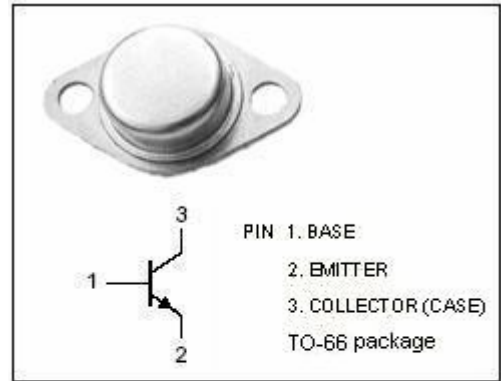
- Designed for high-speed switching and linear amplifier application for high-voltage operational amplifiers, switching regulators, converters, deflection stages and high fidelity amplifiers.

ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ C$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	250	V
V_{CEO}	Collector-Emitter Voltage	175	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	1.0	A
I_{CM}	Collector Current-Peak	5.0	A
I_B	Base Current	1.0	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ C$	35	W
T_J	Junction Temperature	200	$^\circ C$
T_{stg}	Storage Temperature	-65~200	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	5.0	$^\circ C/W$



isc Silicon NPN Power Transistor**2N3583****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}; I_B=0$	175		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}; I_B=0.125\text{A}$		5.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=1\text{A}; V_{CE}=10\text{V}$		1.4	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=150\text{V}; I_B=0$		10	mA
I_{CEX}	Collector Cutoff Current	$V_{CE}=225\text{V}; V_{BE(off)}=1.5\text{V}$ $V_{CE}=225\text{V}; V_{BE(off)}=1.5\text{V}, T_C=150^\circ\text{C}$		1.0 3.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=6\text{V}; I_C=0$		5.0	mA
h_{FE-1}	DC Current Gain	$I_C=0.1\text{A}; V_{CE}=10\text{V}$	40		
h_{FE-2}	DC Current Gain	$I_C=0.5\text{A}; V_{CE}=10\text{V}$	40	200	
h_{FE-3}	DC Current Gain	$I_C=1\text{A}; V_{CE}=10\text{V}$	10		