

isc Silicon NPN Power Transistor

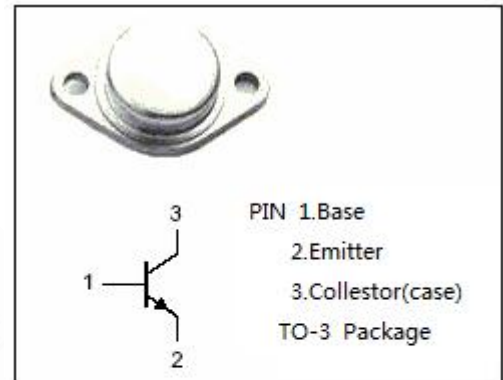
2SD203

DESCRIPTION

- Excellent Safe Operating Area
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 100V(\text{Min.})$
- Low Collector Saturation Voltage-
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

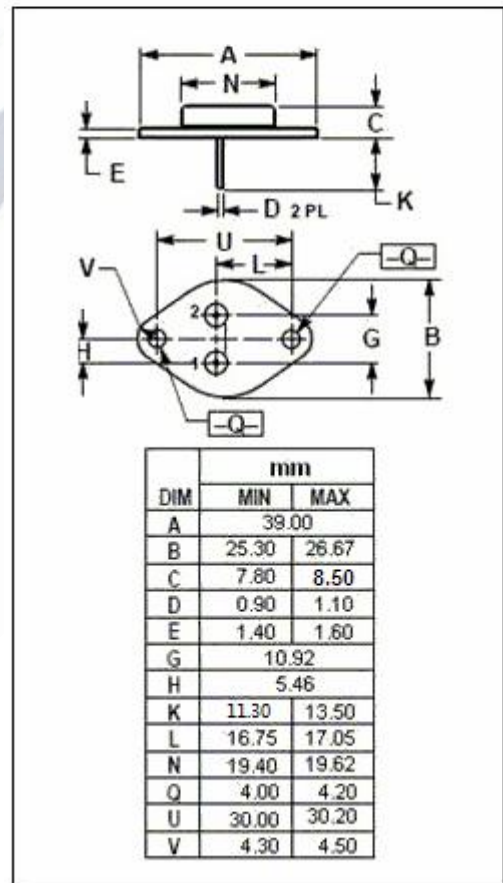
APPLICATIONS

- Designed for power amplifier and switching applications



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

SYMBOL	PARAMETER	MAX	UNIT
V_{CBO}	Collector-Base Voltage	130	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	6	A
I_{CP}	Collector Current-Peak	10	A
P_C	Collector Power Dissipation @ $T_c=25^{\circ}C$	50	W
T_j	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-65~150	$^{\circ}C$



isc Silicon NPN Power Transistor**2SD203****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=10\text{mA}; I_B=0$	100		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.3\text{A}$		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=6\text{A}; I_B=0.6\text{A}$		2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.3\text{A}$		1.5	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=100\text{V}; I_B=0$		1.0	mA
I_{CBO}	Collector Cutoff Current	$V_{CB}=130\text{V}; I_E=0$		0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5.0\text{V}; I_C=0$		0.1	mA
h_{FE-1}	DC Current Gain	$I_C=3\text{A}; V_{CE}=4\text{V}$	20	100	
h_{FE-2}	DC Current Gain	$I_C=6\text{A}; V_{CE}=4\text{V}$	5		
f_T	Current Gain-Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=10\text{V}; f=0.5\text{MHz}$	3.0		MHz