

**isc Silicon NPN Power Transistor**

**2SD211**

**DESCRIPTION**

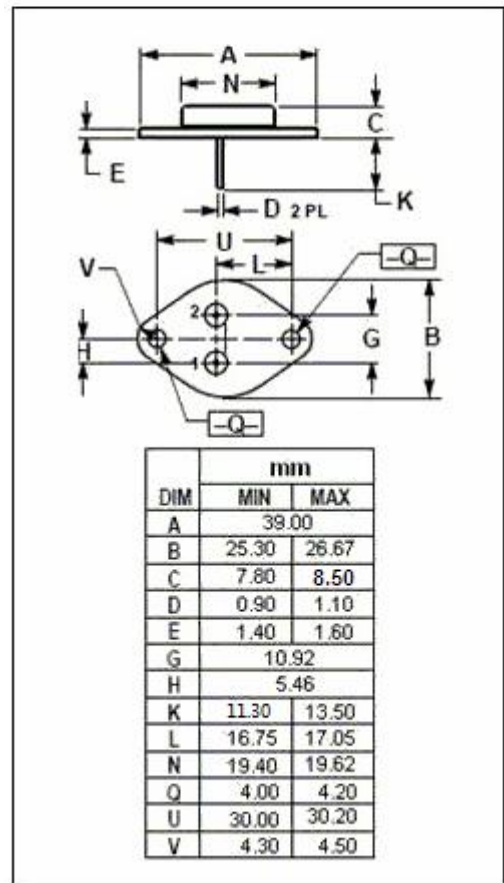
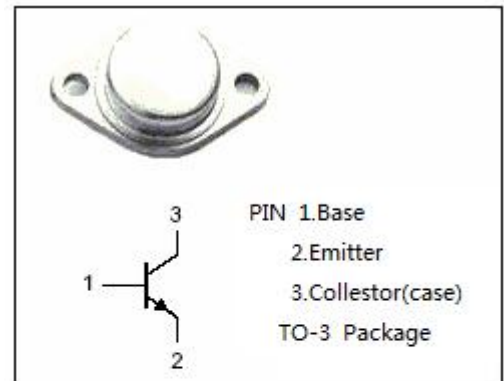
- Excellent Safe Operating Area
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 40V(\text{Min.})$
- Low Collector Saturation Voltage-
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for high power amplifier and switching applications

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

SYMBOL	PARAMETER	MAX	UNIT
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	40	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	10	A
$I_{CP}$	Collector Current-Peak	20	A
$P_C$	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	100	W
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$



**isc Silicon NPN Power Transistor****2SD211****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=10\text{mA}; I_B=0$	40		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=0.5\text{A}$		1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=0.5\text{A}$		2.0	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=40\text{V}; I_B=0$		1.0	mA
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=60\text{V}; I_E=0$		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	$I_C=1\text{A}; V_{CE}=4\text{V}$	60	200	
$h_{FE-2}$	DC Current Gain	$I_C=5\text{A}; V_{CE}=4\text{V}$	30		
$f_T$	Current Gain-Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=10\text{V}; f=1.0\text{MHz}$	8.0		MHz

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