

isc Silicon NPN Power Transistor

2SD214

DESCRIPTION

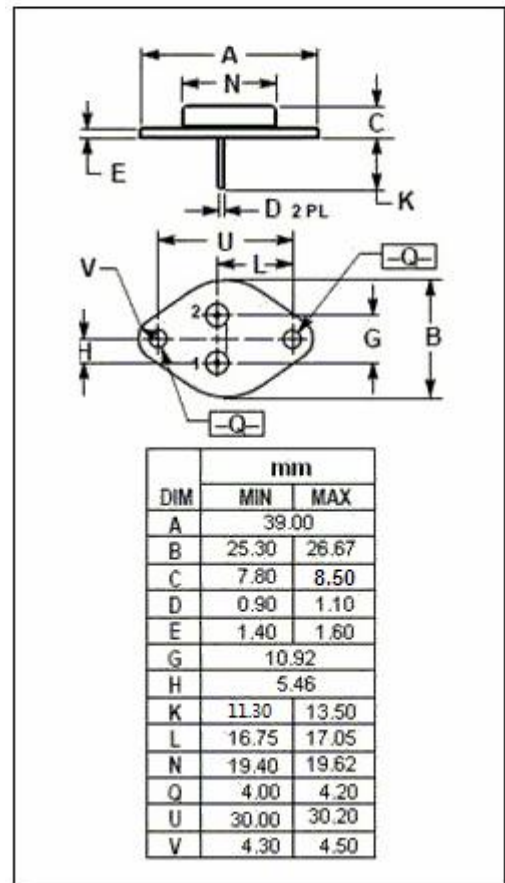
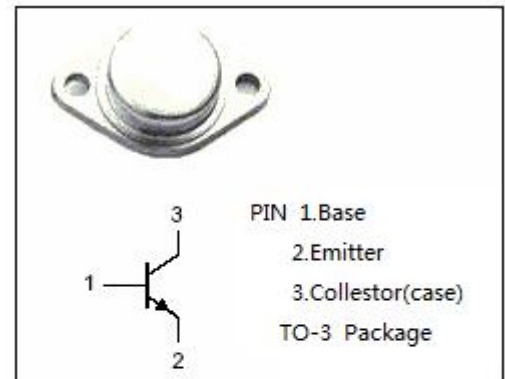
- Excellent Safe Operating Area
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 100V(\text{Min.})$
- Low Collector Saturation Voltage-
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for high power amplifier and switching applications

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

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	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**2SD214****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = 10\text{mA}$; $I_B = 0$	100		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	$V_{CE} = 100\text{V}$; $I_B = 0$		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	$I_C = 1\text{A}$; $V_{CE} = 4\text{V}$	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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