

isc Silicon NPN Power Transistor
BD315
DESCRIPTION

- Excellent Safe Operating Area
- DC Current Gain- $h_{FE}=25(\text{Min.})@I_C = 8A$
- Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})}=1.0\text{ V}(\text{Max})@I_C = 8A$
- Complement to Type BD316
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

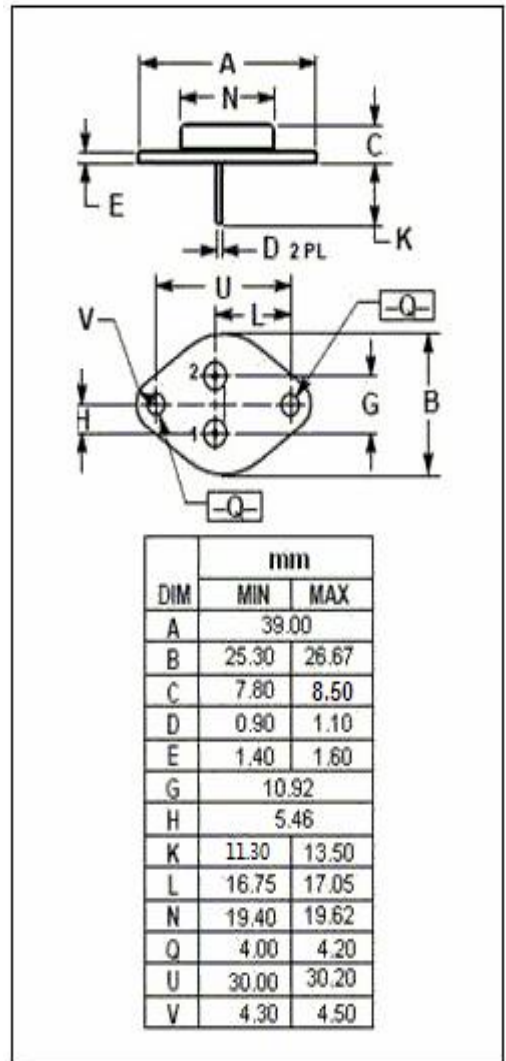
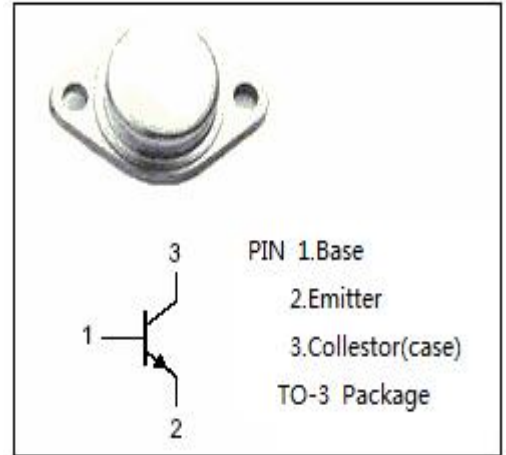
- Designed for high quality amplifiers operating up to 100 watts into 4 ohm load.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	16	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	5	A
P_C	Collector Power Dissipation@ $T_C=25^\circ\text{C}$	200	W
T_J	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{th-j-c}	Thermal Resistance, Junction to Case	0.875	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C =30mA; I _B =0	80		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 8A; I _B = 0.8A		1.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 8A; I _B = 0.8A		1.8	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 8A; V _{CE} = 2V		1.5	V
I _{CB0}	Collector Cutoff Current	V _{CB} = 80V; I _B =0		1.0	mA
I _{EB0}	Emitter Cutoff Current	V _{EB} = 7V; I _C =0		1.0	mA
h _{FE-1}	DC Current Gain	I _C = 8A; V _{CE} = 4V	25		
h _{FE-2}	DC Current Gain	I _C = 10A; V _{CE} = 4V	15		
f _T	Current Gain-Bandwidth Product	I _C = 1A; V _{CE} = 20V	1		MHz

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