

isc Silicon PNP Power Transistor

BD316

DESCRIPTION

- Excellent Safe Operating Area
- DC Current Gain- $h_{FE} = 25(\text{Min.}) @ I_C = -8A$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = -1.0 V(\text{Max}) @ I_C = -8A$
- Complement to Type BD315
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

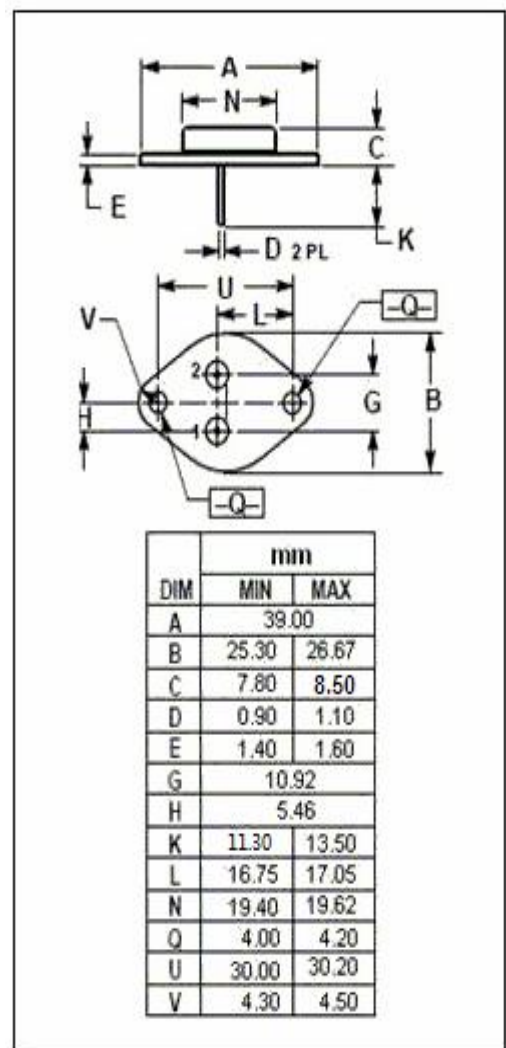
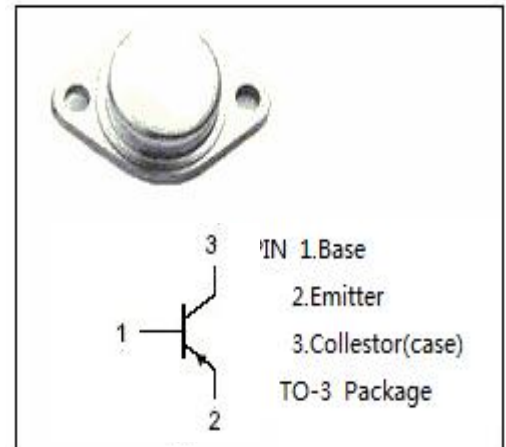
- Designed for high quality amplifiers operating up to 100 watts into 4 ohm load.

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

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@ $T_C = 25^\circ C$	200	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	0.875	$^\circ C/W$



isc Silicon PNP Power Transistor**BD316****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=-30\text{mA}$; $I_B=0$	-80		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=-8\text{A}$; $I_B=-0.8\text{A}$		-1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=-8\text{A}$; $I_B=-0.8\text{A}$		-1.8	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=-8\text{A}$; $V_{CE}=-2\text{V}$		-1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=-80\text{V}$; $I_B=0$		-1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=-7\text{V}$; $I_C=0$		-1.0	mA
h_{FE-1}	DC Current Gain	$I_C=-8\text{A}$; $V_{CE}=-4\text{V}$	25		
h_{FE-2}	DC Current Gain	$I_C=-10\text{A}$; $V_{CE}=-4\text{V}$	15		
f_T	Current Gain-Bandwidth Product	$I_C=-1\text{A}$; $V_{CE}=-20\text{V}$	1		MHz

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