

Silicon PNP Power Transistor

BDX16

DESCRIPTION

- Continuous Collector Current- $I_C = -3A$
- Collector Power Dissipation-
: $P_C = 25W @ T_C = 25^\circ C$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = -140V(\text{Min})$

APPLICATIONS

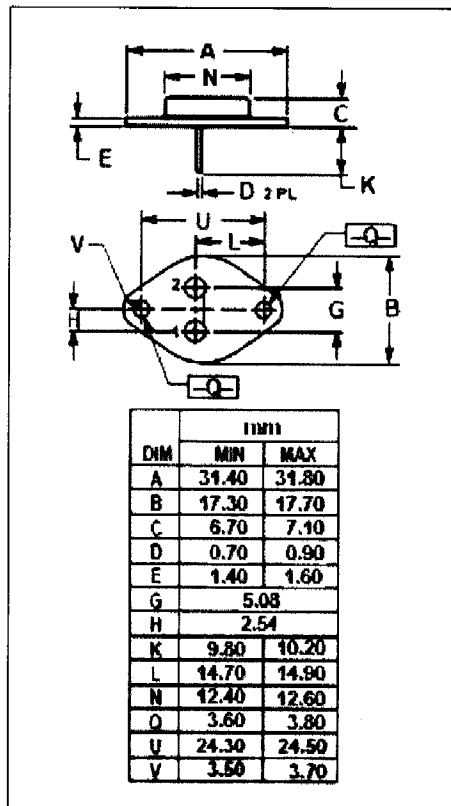
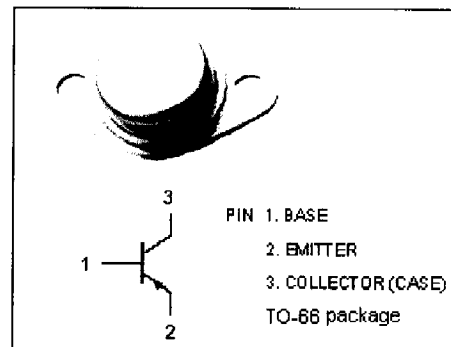
- Designed for use in general purpose switching and linear amplifier applications requiring high breakdown voltages.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-160	V
V_{CER}	Collector-Emitter Voltage $R_{BE} = 100 \Omega$	-150	V
V_{CEO}	Collector-Emitter Voltage	-140	V
V_{EBO}	Emitter-Base Voltage	-7	V
I_C	Collector Current-Continuous	-3	A
I_{CM}	Collector Current-Peak	-4	A
I_B	Base Current-Continuous	-2	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ C$	25	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	7.0	$^\circ C/W$



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ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -100\text{mA}; I_B = 0$	-140			V
$V_{(BR)CER}$	Collector-Emitter Breakdown Voltage	$I_C = -100\text{mA}; R_{BE} = 100\ \Omega$	-150			V
$V_{(BR)CEX}$	Collector-Emitter Breakdown Voltage	$I_C = -100\text{mA}; V_{BE} = 1.5\text{V}$	-160			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -0.5\text{A}; I_B = -50\text{mA}$			-1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -0.5\text{A}; V_{CE} = -4\text{V}$			-1.7	V
I_{CEX}	Collector Cutoff Current	$V_{CE} = -140\text{V}; V_{BE} = 1.5\text{V}$ $V_{CE} = -140\text{V}; V_{BE} = 1.5\text{V}; T_C = 150^\circ\text{C}$			-1.0 -5.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -7\text{V}; I_C = 0$			-1.0	mA
h_{FE}	DC Current Gain	$I_C = -0.5\text{A}; V_{CE} = -4\text{V}$	20		80	
f_T	Current Gain-Bandwidth Product	$I_C = -0.2\text{A}; V_{CE} = -10\text{V}$		4		MHz