

isc Silicon NPN Power Transistor
BDY27
DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 200V(\text{Min.})$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 0.6V(\text{Max}) @ I_C = 2A$
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

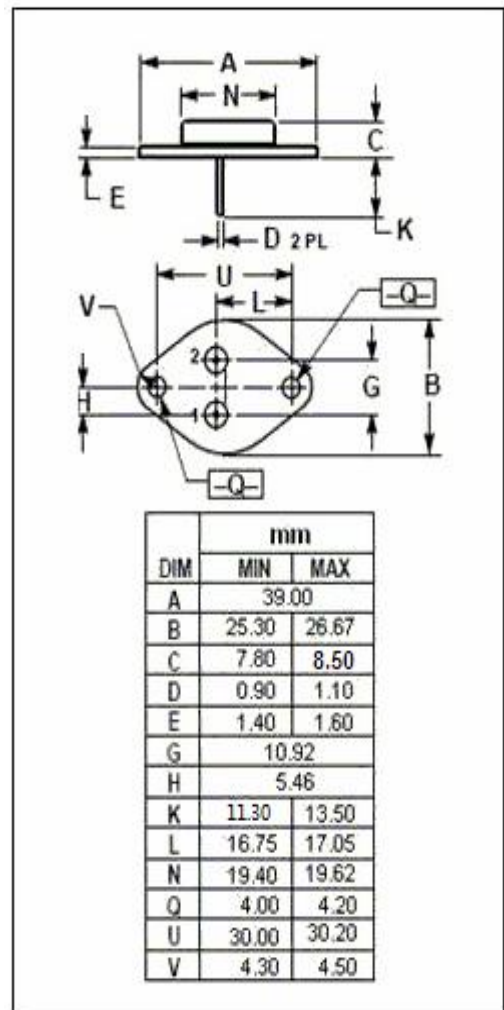
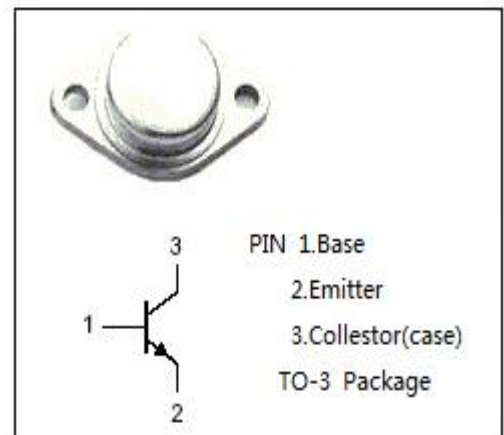
- Designed for LF signal power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	400	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	6	A
I_B	Base Current	3	A
P_C	Collector Power Dissipation@ $T_C = 25^\circ\text{C}$	87.5	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	2.0	$^\circ\text{C}/\text{W}$



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ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 50mA; I _B = 0	200			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	400			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2A; I _B = 0.25A			0.6	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 2A; I _B = 0.25A			1.2	V
I _{CES}	Collector Cutoff Current	V _{CE} = 300V; V _{BE} = 0			1.0	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 200V; I _B = 0			1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 10V; I _C = 0			1.0	mA
h _{FE}	DC Current Gain	I _C = 2A; V _{CE} = 4V	15		100	
f _T	Current Gain-Bandwidth Product	I _C = 0.5A; V _{CE} = 15V; f=10MHz	10			MHz
Switching Times						
t _{on}	Turn-On Time	I _C = 5A; I _B = 1A			0.5	μs
t _{off}	Turn-Off Time	I _C = 5A; I _{B1} = 1A; I _{B2} = -0.5A			2.0	μs

◆ h_{FE} Classifications

A	B	C
15-45	30-90	75-100

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