

isc Silicon NPN Power Transistor
BDY26C
DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 180V(\text{Min.})$
- 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

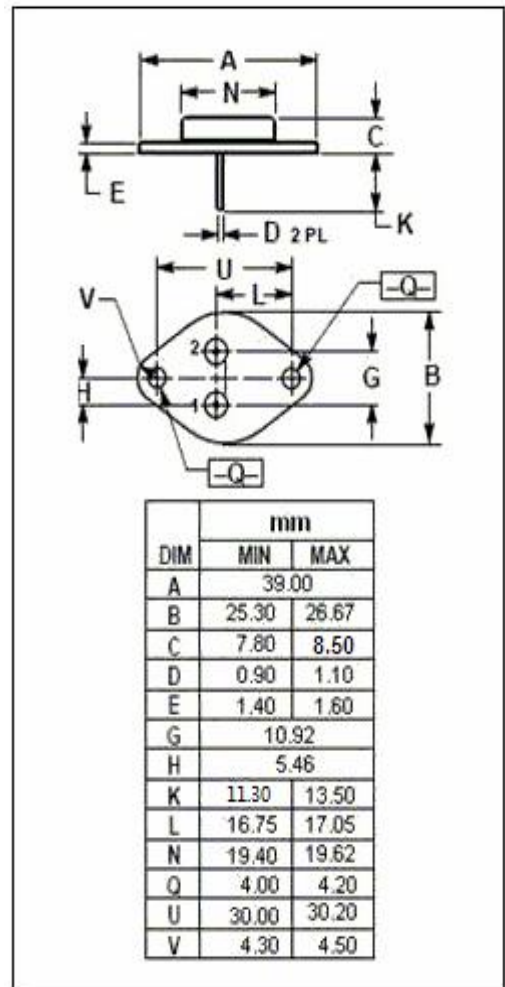
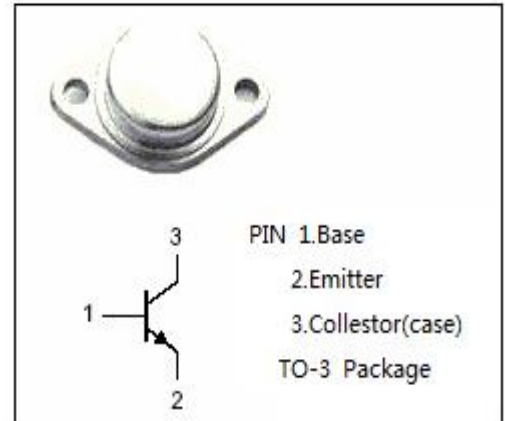
- Designed for LF signal power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	300	V
V_{CEO}	Collector-Emitter Voltage	180	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	$^\circ\text{C/W}$



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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	$I_C= 50\text{mA}; I_B= 0$	180			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C= 1\text{mA}; I_E= 0$	300			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 2\text{A}; I_B= 0.25\text{A}$			0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 2\text{A}; I_B= 0.25\text{A}$			1.2	V
I_{CES}	Collector Cutoff Current	$V_{CE}= 250\text{V}; V_{BE}= 0$			1.0	mA
I_{CEO}	Collector Cutoff Current	$V_{CE}= 180\text{V}; I_B= 0$			1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 10\text{V}; I_C= 0$			1.0	mA
h_{FE}	DC Current Gain	$I_C= 2\text{A}; V_{CE}= 4\text{V}$	75		180	
f_T	Current Gain-Bandwidth Product	$I_C= 0.5\text{A}; V_{CE}= 15\text{V}; f=10\text{MHz}$	10			MHz

Switching Times

t_{on}	Turn-On Time	$I_C= 5\text{A}; I_B= 1\text{A}$			1	μs
t_{off}	Turn-Off Time	$I_C= 5\text{A}; I_{B1}= 1\text{A}; I_{B2}= -0.5\text{A}$			6	μs

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