

isc Silicon NPN Power Transistor
BDY61
DESCRIPTION

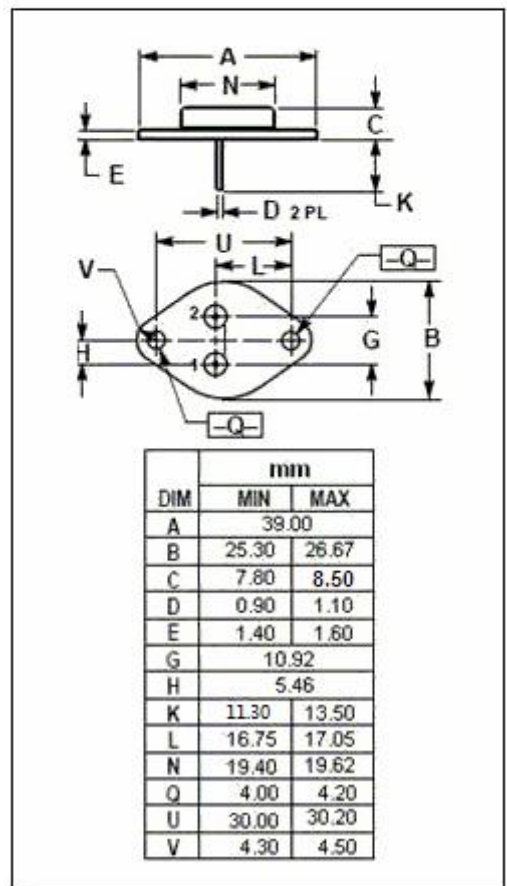
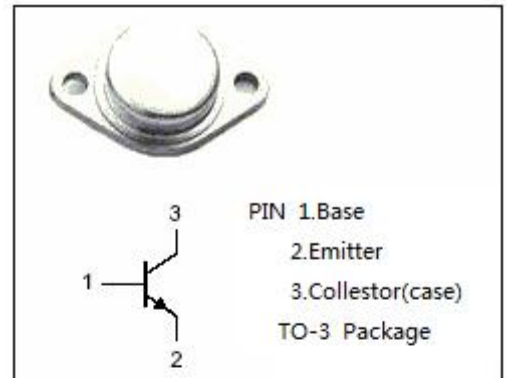
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 60V$ (Min)
- Low Collector-Emitter Saturation Voltage
- Excellent Safe Operating Area
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Peak	8	A
I_B	Base Current-Continuous	3	A
P_C	Collector Power Dissipation @ $T_C=25^\circ C$	50	W
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature	-65~150	$^\circ C$



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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	$I_C= 10\text{mA}$; $I_B= 0$	60			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E= 1\text{mA}$; $I_C= 0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 4\text{A}$; $I_B= 0.4\text{A}$			2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 1\text{A}$; $V_{CE}= 5\text{V}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}= 100\text{V}$; $I_E= 0$			100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 5\text{V}$; $I_C= 0$			100	μA
h_{FE-1}	DC Current Gain	$I_C= 1\text{A}$; $V_{CE}= 2\text{V}$	40		300	
h_{FE-2}	DC Current Gain	$I_C= 4\text{A}$; $V_{CE}= 2\text{V}$	20			
f_T	Current-Gain—Bandwidth Product	$I_C= 1\text{A}$; $V_{CE}= 5\text{V}$	30			MHz

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