

isc Silicon NPN Power Transistor

BDY49

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 100V$ (Min)
- Excellent Safe Operating Area
- High Current Capability
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

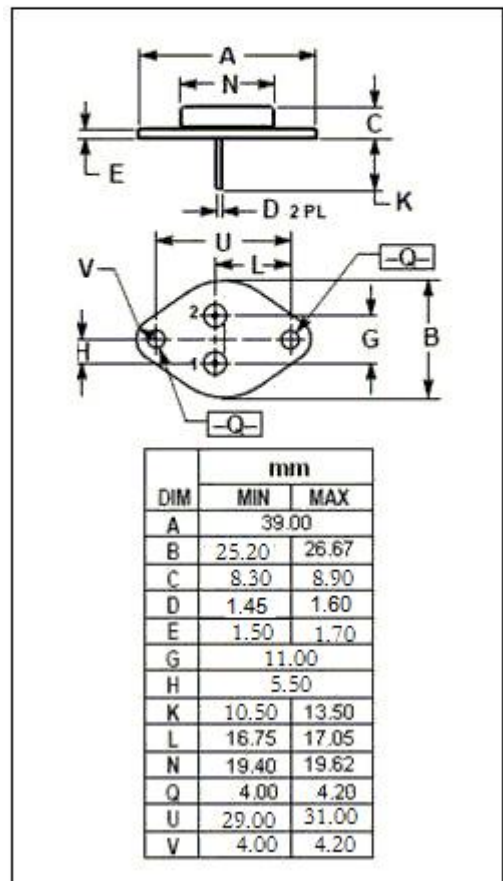
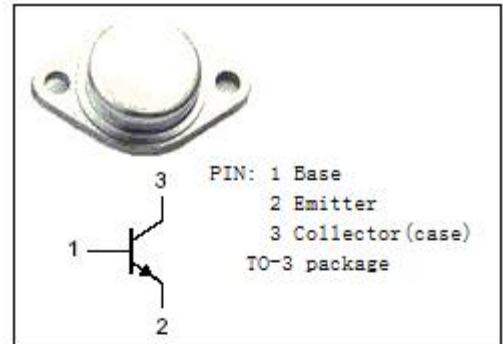
- Designed for high current, high speed, high power applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	30	A
I_B	Base Current-Continuous	8	A
P_C	Collector Power Dissipation	150	W
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$

HERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.7	$^\circ C/W$



ELECTRICAL CHARACTERISTICS

 T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _c =10A; I _B = 1A			1.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _c = 20A; I _B = 2A			1.5	V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _c =10A; I _B = 1A			1.5	V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _c = 20A; I _B = 2A			2.5	V
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _c = 30mA; I _B = 0	100			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	6			V
h _{FE-1}	DC Current Gain	I _c =1A; V _{CE} = 5V	60		200	
h _{FE-2}	DC Current Gain	I _c =10A; V _{CE} = 5V	30			
h _{FE-3}	DC Current Gain	I _c =20A; V _{CE} = 5V	10			
I _{CBO}	Collector Cutoff Current	V _{CB} =100V ; I _E = 0			100	uA
I _{EBO}	Emitter Cutoff Current	V _{EB} =6V; I _C = 0			100	uA
f _T	Current-Gain—Bandwidth Product	I _c = 0.1A; V _{CE} = 10V; f _{test} = 1.0MHz	3			MHz

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