

isc Silicon NPN Power Transistor
BUY24
DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 60V(\text{Min.})$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 1.0V @ I_C = 5A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

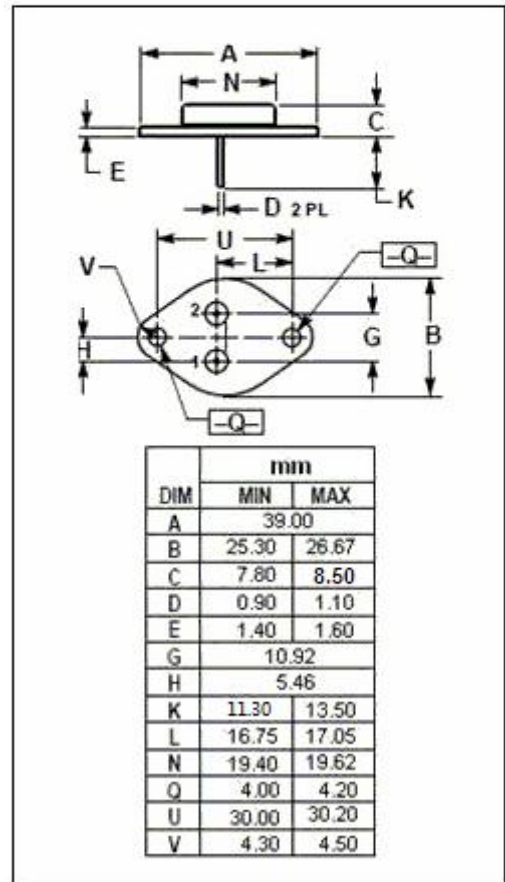
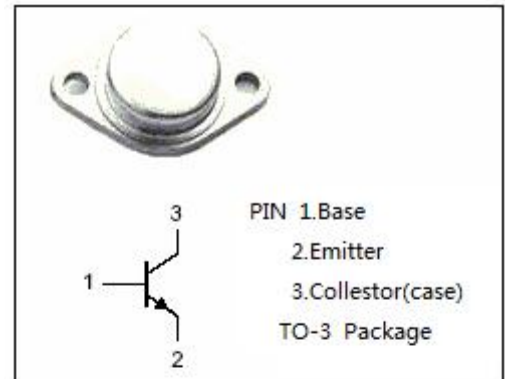
- Designed for use switching and general purpose applications.

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

SYMBOL	PARAMETER	MAX	UNIT
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	5	A
P_C	Collector Power Dissipation @ $T_C < 75^\circ\text{C}$	15	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	5.0	$^\circ\text{C/W}$



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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	60			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	120			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1m A; I _C = 0	6			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 2A; I _B = 0.2A			0.6	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A			1.0	V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _C = 2A; I _B = 0.2A			1.2	V
V _{BE(sat)-2}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A			1.3	V
I _{CBO}	Collector Cutoff Current	V _{CB} =60V; I _E = 0 V _{CB} =60V; I _E = 0; T _C = 125°C			10 1.0	μ A mA
h _{FE-1}	DC Current Gain	I _C = 0.5A ; V _{CE} = 2V	45			
h _{FE-2}	DC Current Gain	I _C = 2A; V _{CE} = 2V	40			
h _{FE-3}	DC Current Gain	I _C = 5A; V _{CE} = 2V		40		

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