

isc Silicon NPN Power Transistor

BUY55

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 125V(\text{Min.})$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 1.5V @ I_C = 7A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

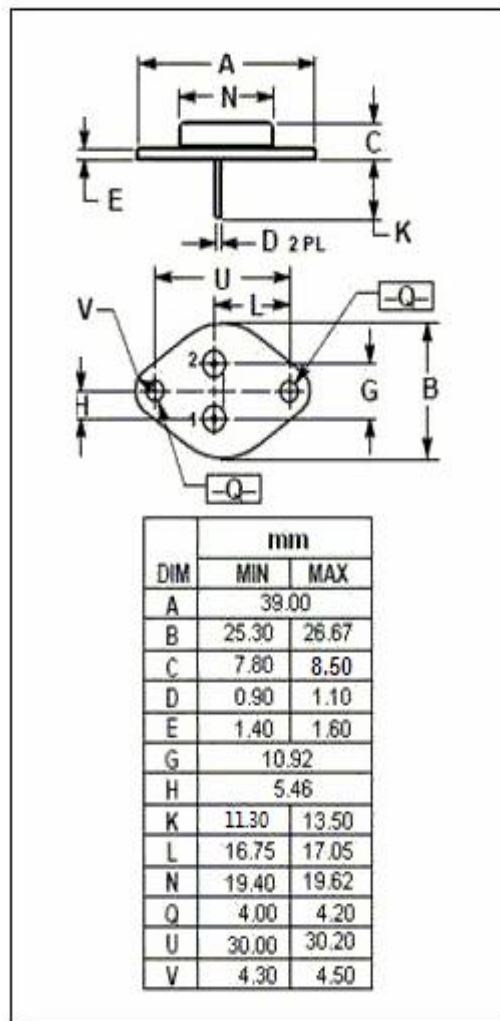
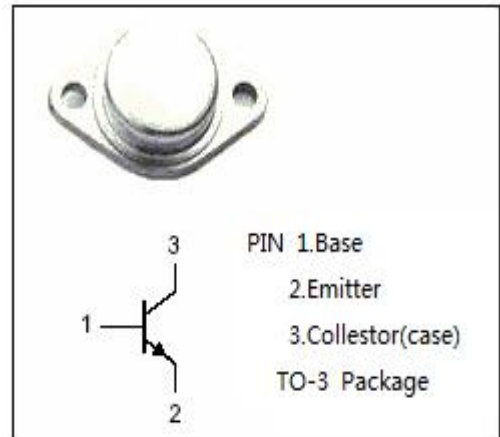
- Designed for general switching applications at higher outputs.

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

SYMBOL	PARAMETER	MAX	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CES}	Collector-Emitter Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	125	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation @ $T_c \leq 75^\circ C$	60	W
T_j	Junction Temperature	175	$^\circ C$
T_{stg}	Storage Temperature Range	-65~175	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.66	$^\circ C/W$



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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 = 20mA; I _B = 0	125			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	150			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	6			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 7A; I _B = 0.875A			1.5	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 7A; V _{CE} = 1.5V			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 150V; I _E = 0 V _{CB} = 150V; I _E = 0; T _C = 150°C			1.0 10	mA
I _{CES}	Collector Cutoff Current	V _{CE} = 150V; V _{BE} = 0 V _{CE} = 150V; V _{BE} = 0; T _C = 150°C			1.0 10	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			1.0	mA
h _{FE-1}	DC Current Gain	I _C = 2A; V _{CE} = 1.5V	25		160	
h _{FE-2}	DC Current Gain	I _C = 7A; V _{CE} = 1.5V	8			

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