

**isc Silicon NPN Power Transistor**
**BUV52A**
**DESCRIPTION**

- High Current Capability
- Low Collector Saturation Voltage-  
:  $V_{CE(sat)} = 0.9V$  (Max.) @  $I_C = 7A$
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

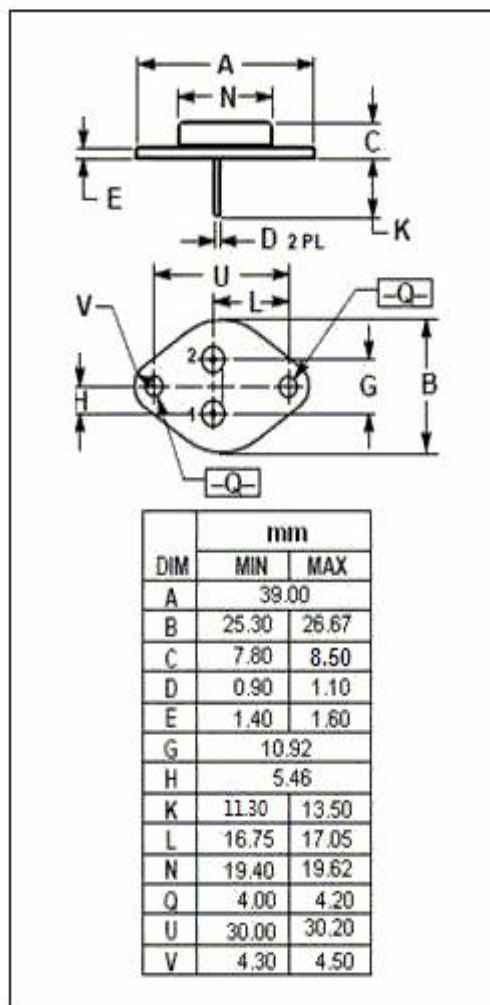
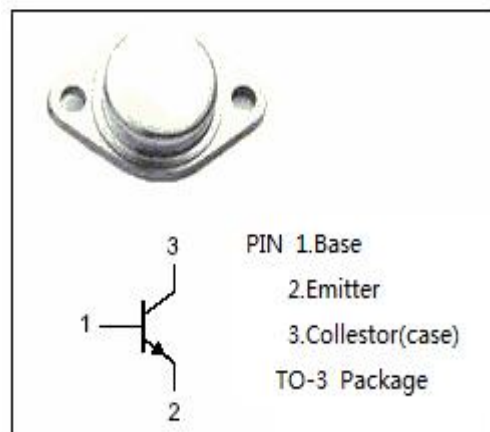
- Designed for high current, high speed, high power applications.

**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CEV}$	Collector-Emitter Voltage ( $V_{BE} = -1.5V$ )	400	V
$V_{CEO}$	Collector-Emitter Voltage	300	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	20	A
$I_{CM}$	Collector Current-Peak	30	A
$I_B$	Base Current-Continuous	4	A
$I_{BM}$	Base Current-peak	6	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ C$	150	W
$T_j$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature Range	-65~150	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.17	°C/W



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**ELECTRICAL CHARACTERISTICS**

 T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 50mA; I <sub>B</sub> = 0	300		V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 50mA; I <sub>C</sub> = 0	7		V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 7A; I <sub>B</sub> = 0.7A I <sub>C</sub> = 7A; I <sub>B</sub> = 0.7A; T <sub>C</sub> = 100°C		0.9 1.9	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 7A; I <sub>B</sub> = 0.7A I <sub>C</sub> = 7A; I <sub>B</sub> = 0.7A; T <sub>C</sub> = 100°C		1.3 1.3	V
I <sub>CER</sub>	Collector Cutoff Current	V <sub>CE</sub> = V <sub>CEV</sub> ; R <sub>BE</sub> = 10 Ω V <sub>CE</sub> = V <sub>CEV</sub> ; R <sub>BE</sub> = 10 Ω; T <sub>C</sub> =100°C		0.5 2.5	mA
I <sub>CEV</sub>	Collector Cutoff Current	V <sub>CE</sub> = V <sub>CEV</sub> ; V <sub>BE</sub> = -1.5V V <sub>CE</sub> = V <sub>CEV</sub> ; V <sub>BE</sub> = -1.5V; T <sub>C</sub> =100°C		0.5 2.0	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0		1.0	mA

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