

isc Silicon NPN Power Transistor

BUV42A

DESCRIPTION

- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 0.9V(\text{Max.}) @ I_C = 4A$
- High Switching Speed

APPLICATIONS

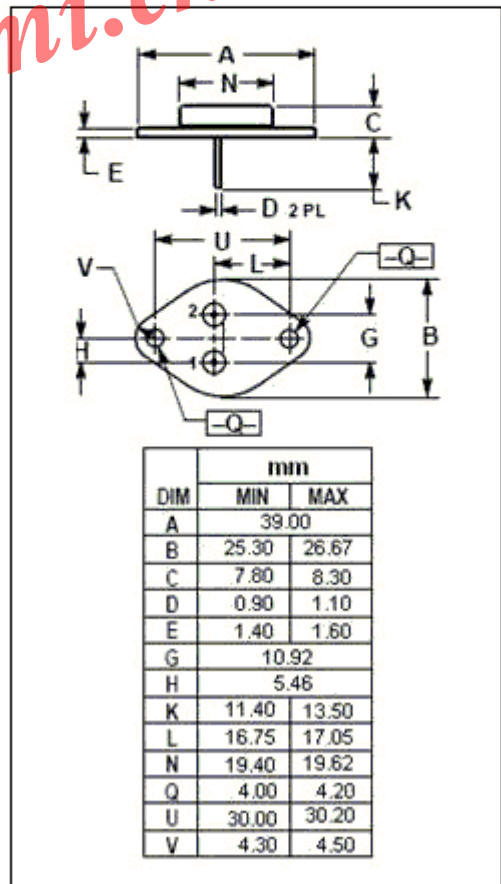
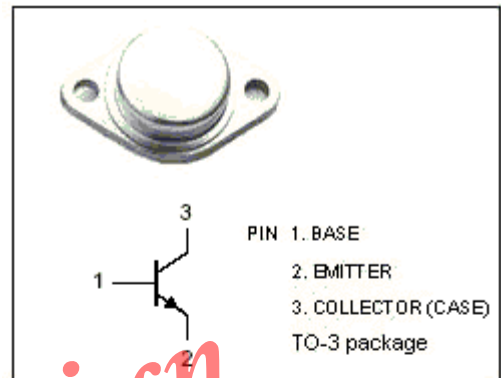
- Designed for high current, high speed, high power applications.

Absolute maximum ratings($T_a=25^\circ\text{C}$)

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	12	A
I_{CM}	Collector Current-Peak	18	A
I_B	Base Current-Continuous	2.5	A
I_{BM}	Base Current- Peak	4	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	120	W
T_j	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.46	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=0.2\text{A}; I_B=0; L=25\text{mH}$	300			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=50\text{mA}; I_C=0$	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=0.4\text{A}$			0.9	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=0.4\text{A}$			1.3	V
I_{CER}	Collector Cutoff Current	$V_{CE}=400\text{V}; R_{BE}=10\ \Omega$ $V_{CE}=400\text{V}; R_{BE}=10\ \Omega; T_C=100^{\circ}\text{C}$			0.5 2.5	mA
I_{CEV}	Collector Cutoff Current	$V_{CE}=400\text{V}; V_{BE}=-1.5\text{V}$ $V_{CE}=400\text{V}; V_{BE}=-1.5\text{V}; T_C=100^{\circ}\text{C}$			0.5 2.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			1.0	mA

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