

**isc Silicon NPN Power Transistor**
**BUW44**
**DESCRIPTION**

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 400V(\text{Min.})$
- High Speed Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

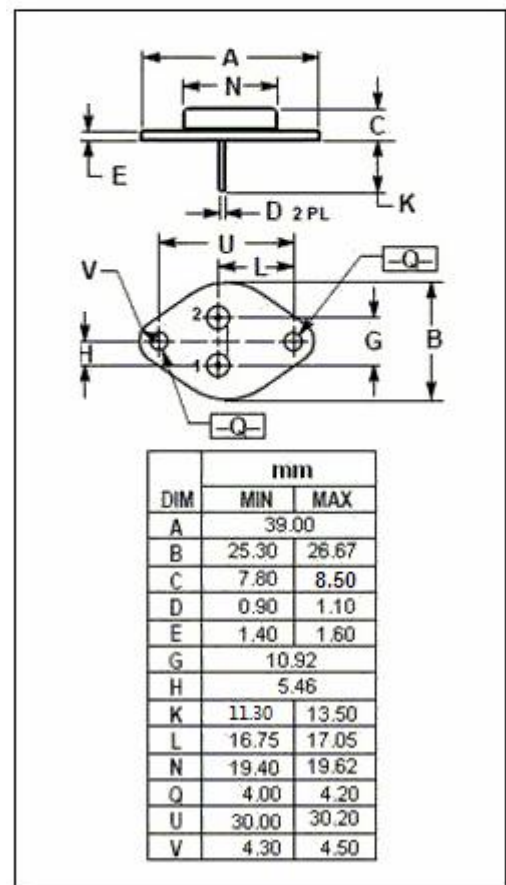
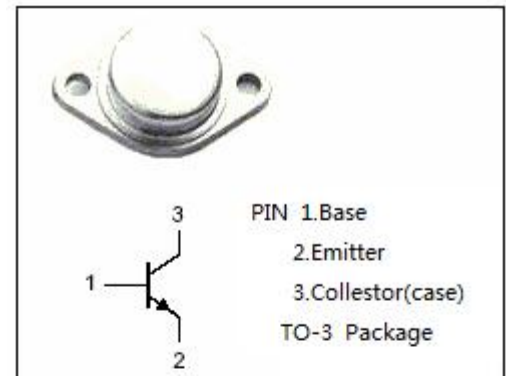
- Intended in fast switching applications for high output powers.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	500	V
$V_{CEO}$	Collector-Emitter Voltage	400	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	15	A
$I_{CM}$	Collector Current-Peak	30	A
$I_B$	Base Current-Continuous	10	A
$P_T$	Total Power Dissipation @ $T_C \leq 25^\circ\text{C}$	175	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	1.0	$^\circ\text{C}/\text{W}$



**isc Silicon NPN Power Transistor****BUW44****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	$I_C=50\text{mA}; I_B=0$	400			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=2\text{A}$			3.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=6\text{A}; I_B=1\text{A}$			1.5	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=2\text{A}$			1.8	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	$I_C=6\text{A}; I_B=1\text{A}$			1.4	V
$I_{EBO}$	Emitter cut-off current	$V_{EB}=7\text{V}; I_C=0$			1.0	mA
$I_{CES}$	Collector Cutoff Current	$V_{CE}=500\text{V}; V_{BE}=0$ $V_{CE}=500\text{V}; V_{BE}=0; T_C=125^\circ\text{C}$			0.5 3.0	mA
$h_{FE}$	DC Current Gain	$I_C=6\text{A}; V_{CE}=1.5\text{V}$	6			

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