

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

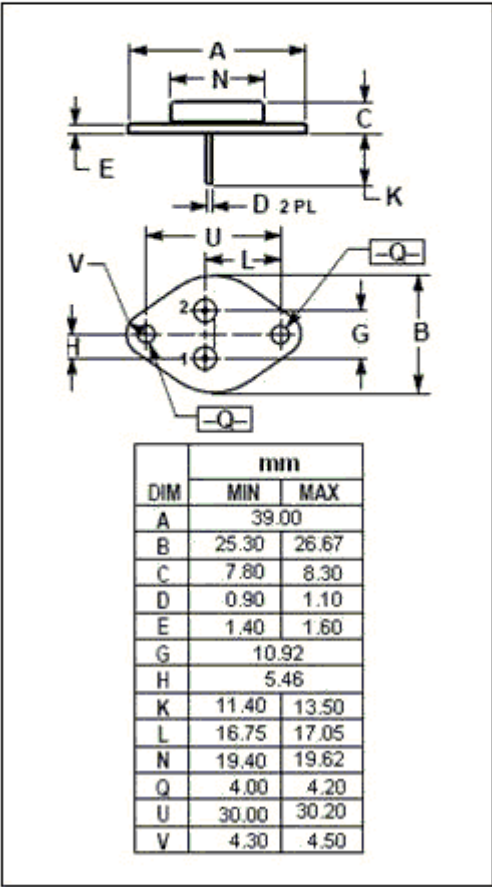
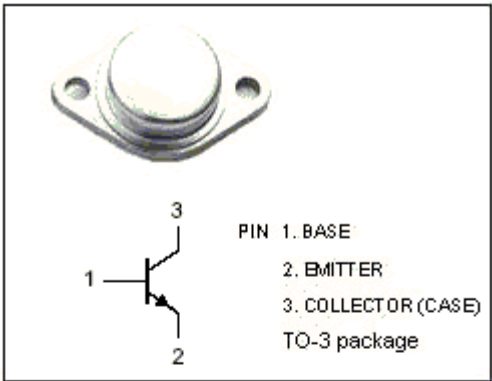
- Designed for high current, high speed, high power applications.

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

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 @ $T_C=25^{\circ}C$	120	W
T_j	Junction Temperature	200	$^{\circ}C$
T_{stg}	Storage Temperature Range	-65~200	$^{\circ}C$

THERMAL CHARACTERISTICS

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



ISC Silicon NPN Power Transistor**BUV42A****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 0.2A; I _B = 0; L= 25mH	300			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 50mA; I _C = 0	7			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 0.4A			0.9	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 4A; I _B = 0.4A			1.3	V
I _{CER}	Collector Cutoff Current	V _{CE} = 400V; R _{BE} = 10 Ω V _{CE} = 400V; R _{BE} = 10 Ω; T _C =100°C			0.5 2.5	mA
I _{CEV}	Collector Cutoff Current	V _{CE} = 400V; V _{BE} = -1.5V V _{CE} = 400V; V _{BE} = -1.5V; T _C =100°C			0.5 2.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			1.0	mA