

isc Silicon NPN Power Transistor

BUV10

DESCRIPTION

- High Switching Speed
- High Current Capability

APPLICATIONS

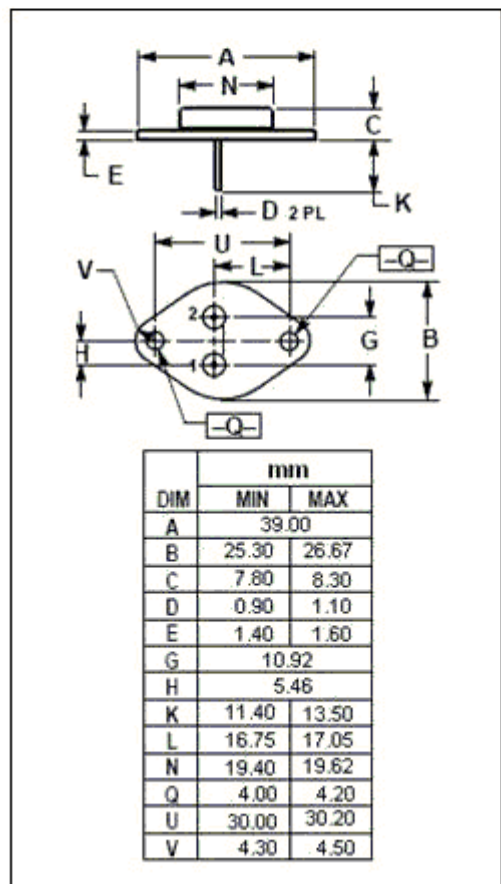
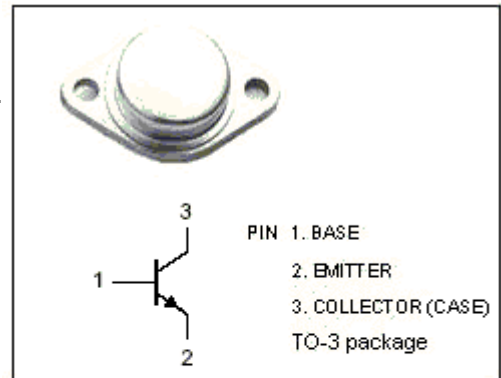
- Designed for high current,high speed,high power applications.

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	160	V
V _{CEX}	Collector-Emitter Voltage V _{BE} = -1.5V	160	V
V _{CER}	Collector-Emitter Voltage R _{BE} = 100Ω	140	V
V _{CEO}	Collector-Emitter Voltage	125	V
V _{EBO}	Emitter-Base Voltage	7	V
I _C	Collector Current-Continuous	25	A
I _{CM}	Collector Current-Peak	30	A
I _B	Base Current-Continuous	6	A
P _C	Collector Power Dissipation @T _C =25°C	150	W
T _j	Junction Temperature	200	°C
T _{stg}	Storage Temperature Range	-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance,Junction to Case	1.0	°C/W



isc Silicon NPN Power Transistor

BUV10

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	$I_C=0.2\text{A}; I_B=0; L=25\text{mH}$	125			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=50\text{mA}; I_C=0$	7			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=1\text{A}$			1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=20\text{A}; I_B=2\text{A}$			2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=1\text{A}$			1.5	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=100\text{V}; I_B=0$			1.5	mA
I_{CEX}	Collector Cutoff Current	$V_{CE}=160\text{V}; V_{BE}=-1.5\text{V}$ $V_{CE}=160\text{V}; V_{BE}=-1.5\text{V}; T_C=125^\circ\text{C}$			1.5 6.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			0.5	mA
h_{FE-1}	DC Current Gain	$I_C=10\text{A}; V_{CE}=4\text{V}$	20		60	
h_{FE-2}	DC Current Gain	$I_C=20\text{A}; V_{CE}=4\text{V}$	10			
f_T	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=15\text{V}$	8			MHz