

isc Silicon NPN Power Transistor

BUX20A

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 125V(\text{Min})$
- High Current Capability
- Good Linearity of h_{FE}

APPLICATIONS

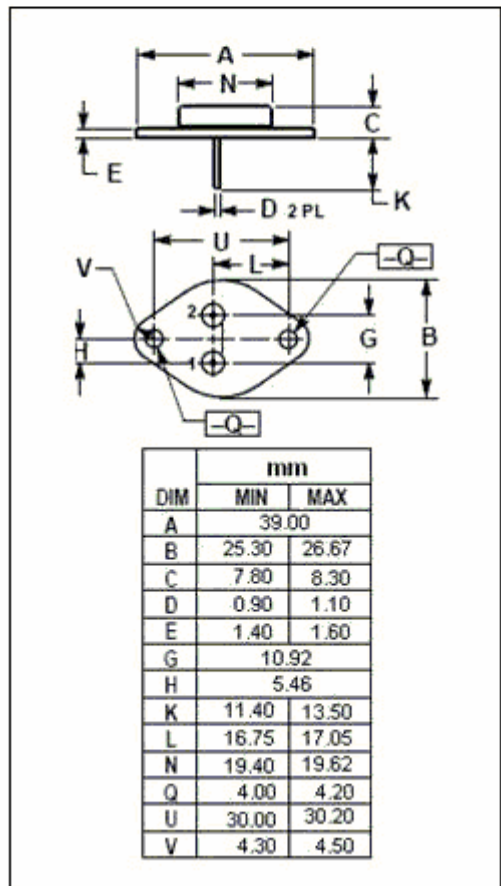
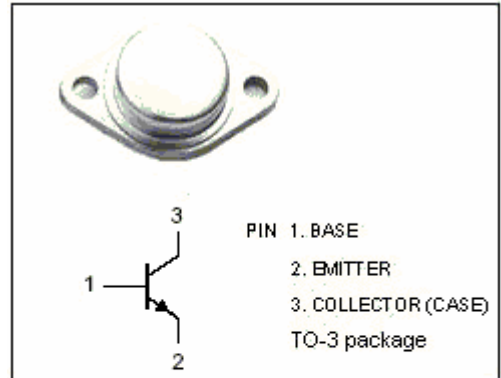
- Designed for switching and linear applications in military and industrial equipment.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	160	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	125	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	40	A
I_{CM}	Collector Current-Peak	50	A
I_B	Base Current-Continuous	8	A
P_C	Collector Power Dissipation @ $T_C=100^\circ\text{C}$	140	W
T_J	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.7	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**BUX20A****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	$I_C=200\text{mA}; I_B=0$	125			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=20\text{A}; I_B=2\text{A}$			0.6	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=40\text{A}; I_B=4\text{A}$			1.2	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=40\text{A}; I_B=4\text{A}$			2.0	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=100\text{V}; I_B=0$			3.0	mA
I_{CEX}	Collector Cutoff Current	$V_{CE}=160\text{V}; V_{BE}=-1.5\text{V}$ $V_{CE}=160\text{V}; V_{BE}=-1.5\text{V}; T_C=125^\circ\text{C}$			3.0 12	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=8\text{V}; I_C=0$			5.0	mA
h_{FE-1}	DC Current Gain	$I_C=20\text{A}; V_{CE}=2\text{V}$	20		60	
h_{FE-2}	DC Current Gain	$I_C=40\text{A}; V_{CE}=4\text{V}$	10			
f_T	Current-Gain—Bandwidth Product	$I_C=2\text{A}; V_{CE}=15\text{V}; f_{test}=10\text{MHz}$	50			MHz