

isc Silicon NPN Power Transistor

BUX65

DESCRIPTION

- High Collector-Emitter Sustaining Voltage-
:V_{CEO(SUS)}= 500V(Min.)
- Fast Switching Speed
- High Reliability
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

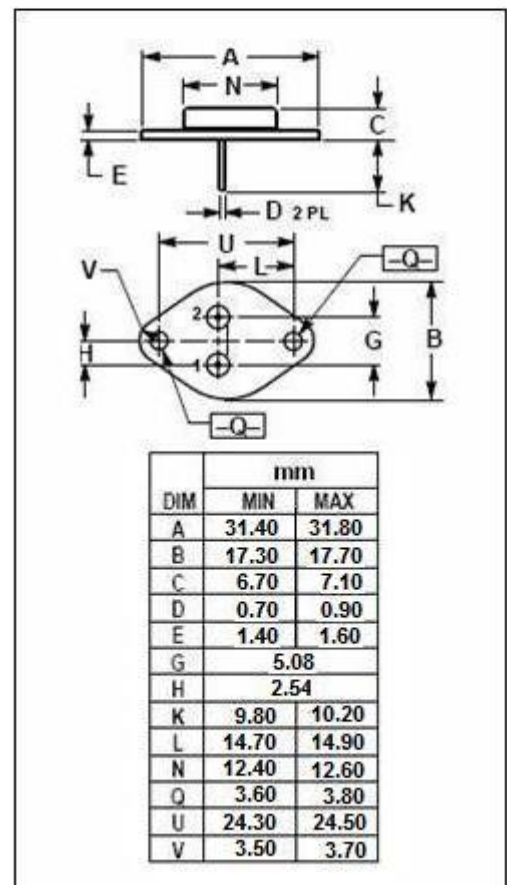
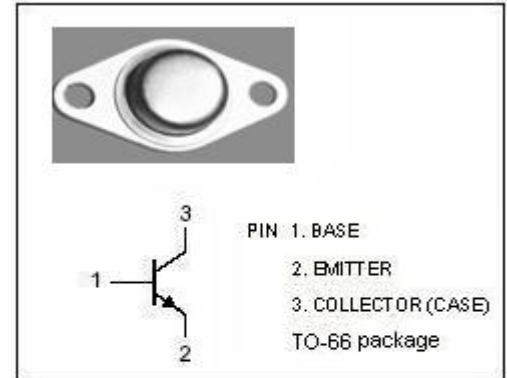
- Designed for use in high frequency and efficiency converters, switching regulators and motor control

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	500	V
V _{CEO}	Collector-Emitter Voltage	500	V
V _{EBO}	Emitter-Base Voltage	6	V
I _c	Collector Current-Continuous	3	A
P _c	Collector Power Dissipation@T _c =25°C	70	W
T _J	Junction Temperature	200	°C
T _{stg}	Storage Temperature	-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	3.0	°C/W



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}; I_B=0$	500			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=0.1\text{mA}; I_E=0$	500			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=0.1\text{mA}; I_C=0$	6			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}; I_B=0.2\text{A}$			0.8	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.3\text{A}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=1\text{A}; I_B=0.2\text{A}$			1.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=500\text{V}; I_E=0$			100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=7\text{V}; I_C=0$			100	μA
h_{FE}	DC Current Gain	$I_C=1\text{A}; V_{CE}=4\text{V}$	20		80	
f_T	Current-Gain—Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=10\text{V}$	8			MHz

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