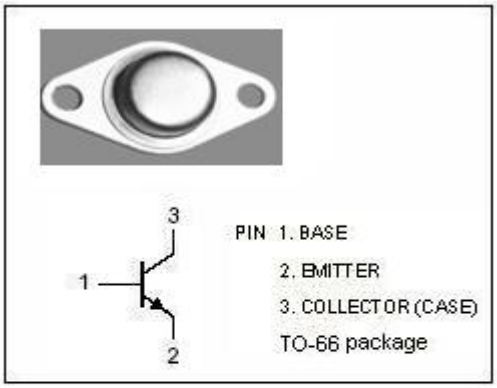
isc Silicon NPN Power Transistor — BUX65

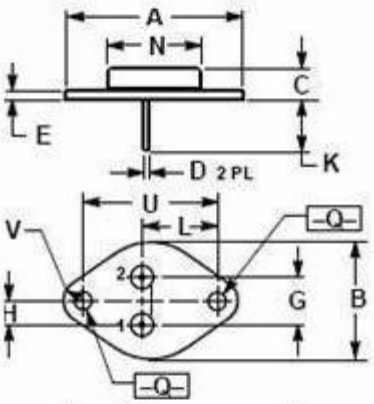
DESCRIPTION

- 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



DIM	mm MIN	MAX
A	31.40	31.80
B	17.30	17.70
C	6.70	7.10
D	0.70	0.90
E	1.40	1.60
G	5.08	
H	2.54	
K	9.80	10.20
L	14.70	14.90
N	12.40	12.60
Q	3.60	3.80
U	24.30	24.50
V	3.50	3.70

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	70	W
T_J	Junction Temperature	200	℃
T_{stg}	Storage Temperature	-65~200	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	3.0	℃/W

isc Silicon NPN Power Transistor BUX65

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

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