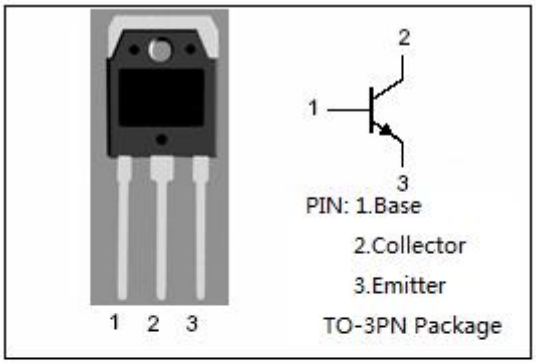
isc Silicon NPN Power Transistor — BUW133A

DESCRIPTION

- High Switching Speed
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 500V
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

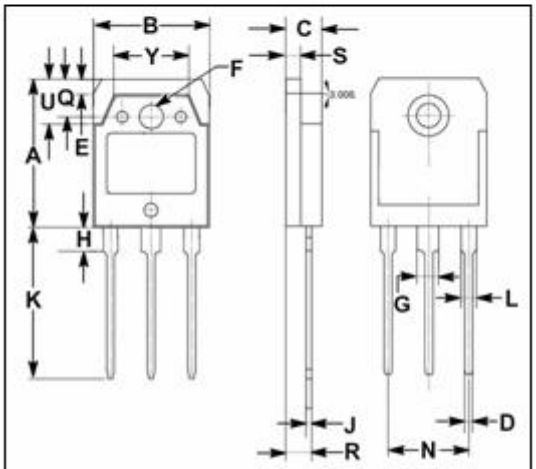
- Designed for use in very fast switching applications in inductive circuits.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	MAX	UNIT
V_{CES}	Collector- Emitter Voltage (V_{BE}= 0)	1000	V
V_{CEO}	Collector-Emitter Voltage	500	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current	10	A
I_{BM}	Base Current-Peak	15	A
P_C	Collector Power Dissipation @T_C=25℃	135	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	0.93	℃/W



DIM	mm MIN	mm MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 50mA ; I_B= 0	500			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 1A			2.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 10A; I_B= 2A			3.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 10A; I_B= 2A			1.5	V
I_{CBO}	Collector-Base Cutoff Current	V_{CB}=V_{CBO}; I_E= 0 V_{CB}=V_{CBO}; I_E= 0;T_J=100℃			0.25 1.5	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C= 0			1	mA
h_{FE}	DC Current Gain	I_C= 15A ; V_{CE}= 5V	5			
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 10V; f_{test}= 1kHz			400	pF
Switching Times , Resistive Load						
t_{on}	Turn-On Time	I_C= 10A ;I_{B1}= 1A;I_{B2}= -2A		0.4		μs
t_{stg}	Storage Time			1.3		μs
t_f	Fall Time			0.15		μs

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