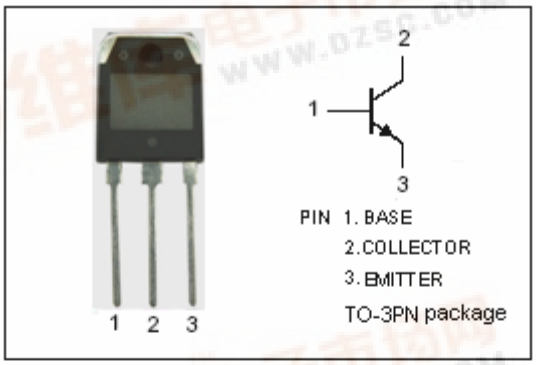
isc Silicon NPN Power Transistors BUW131/A

DESCRIPTION

- High Switching Speed
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 450V (Min)-BUW131
  500V (Min)-BUW131A

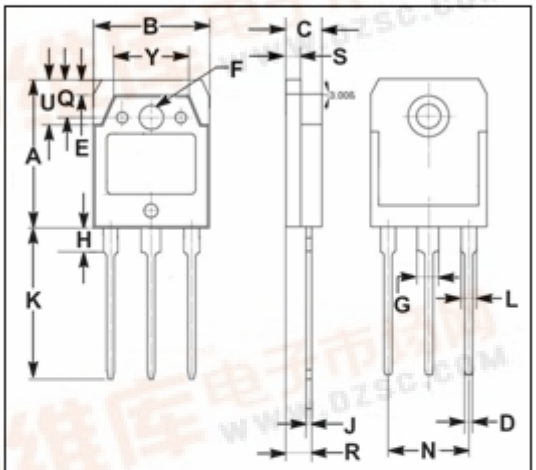


APPLICATIONS

- 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)	BUW131	850	V
		BUW131A	1000	
V_{CEO}	Collector-Emitter Voltage	BUW131	450	V
		BUW131A	500	
V_{EBO}	Emitter-Base Voltage		6	V
I_C	Collector Current-Continuous		8	A
I_{CM}	Collector Current-Peak		16	A
I_B	Base Current		6	A
I_{BM}	Base Current-Peak		12	A
P_C	Collector Power Dissipation @T_C=25℃		125	W
T_j	Junction Temperature		200	℃
T_{stg}	Storage Temperature Range		-65~200	℃



DIM	mm MIN	MAX
A	19.90	20.10
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	3.10
H	3.20	3.40
J	0.595	0.605
K	20.50	20.70
L	1.90	2.10
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.005
U	5.90	6.10
Y	9.90	10.10

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	1.0	℃/W

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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	BUW131	I_C= 0.1A ; I_B= 0; L= 10mH	450			V
		BUW131A		500			
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	BUW131	I_C= 3A; I_B= 0.4A			1.0	V
		BUW131A	I_C= 3A; I_B= 0.6A			1.0	
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	BUW131	I_C= 5A; I_B= 0.66A			2.5	V
		BUW131A	I_C= 5A; I_B= 1A			2.5	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	BUW131	I_C= 5A; I_B= 0.66A			1.5	V
		BUW131A	I_C= 5A; I_B= 1A			1.5	
I_{CEV}	Collector Cutoff Current		V_{CE}=$V_{CESMmax}$;V_{BE}=-1.5V V_{CE}=$V_{CESMmax}$;V_{BE}=-1.5V;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= 5A ; V_{CE}= 5V	5			
C_{OB}	Output Capacitance		I_E= 0 ; V_{CB}= 10V; f_{test}= 1kHz			200	pF
Switching Times , Resistive Load							
t_{on}	Turn-On Time		I_C= 3A ;I_{B1}= 0.4A;I_{B2}= -0.8A		0.35		μs
t_{stg}	Storage Time				1.2		μs
t_f	Fall Time				0.1		μs