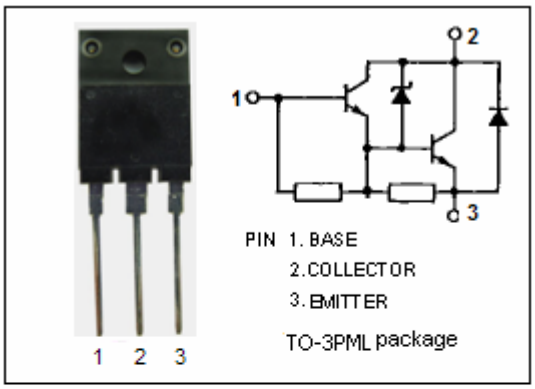
isc Silicon NPN Power Transistor BU931ZPFI



DESCRIPTION

- High Voltage
- DARLINGTON
- Integrated High Voltage Zener

APPLICATIONS

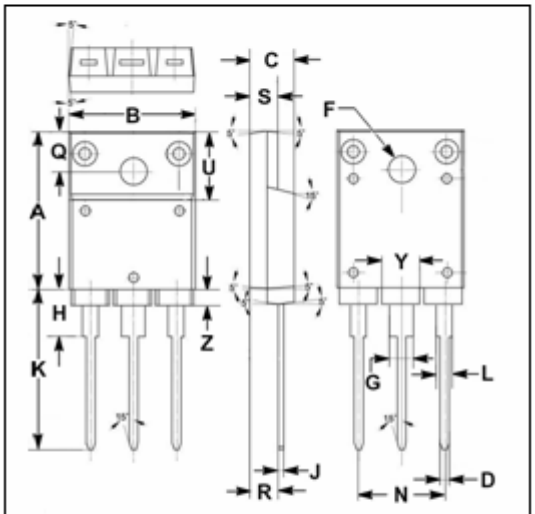
- Application in high performance electronic car ignition

ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	350	V
V_{CER}	Collector-Emitter Voltage (R_{BE}=100Ω)	350	V
V_{CES}	Collector-Emitter Voltage (V_{BE}=0)	350	V
V_{CEO}	Collector-Emitter Voltage	350	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	20	A
I_B	Base Current	5	A
P_C	Collector Power Dissipation @T_C=25℃	60	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-40~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	2.08	℃/W



DIM	mm MIN	MAX
A	19.90	20.10
B	15.90	16.10
C	5.50	5.70
D	0.90	1.10
F	3.30	3.50
G	2.90	3.10
H	5.90	6.10
J	0.595	0.605
K	22.30	22.50
L	1.90	2.10
N	10.80	11.00
Q	4.90	5.10
R	3.75	3.95
S	3.20	3.40
U	9.90	10.10
Y	4.70	4.90
Z	1.90	2.10

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V_{CL}	Clamping Voltage	I_C= 100mA; I_B= 0 I_C= 100mA; I_B= 0; T_J=125℃	350 350		500 500	V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 7A; I_B= 70mA			1.6	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 8 A; I_B= 100mA			1.8	V
$V_{CE(sat)-3}$	Collector-Emitter Saturation Voltage	I_C= 10 A; I_B= 150mA			2	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 8 A; I_B= 100mA			2.2	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 10A; I_B= 250mA			2.5	V
$V_{BE(on)-1}$	Base-Emitter On Voltage	I_C= 5A ; V_{CE}= 2V		1.67		V
$V_{BE(on)-2}$	Base-Emitter On Voltage	I_C= 10A ; V_{CE}= 2V		2		V
$I_{CE(off)}$	Collector Cutoff Current	V_{CC}= 16V;V_{BE}= 300mV;T_J= 125℃			0.5	mA
I_{CL}	Clamping Current	V_{CE}= 350V;I_B= 0			0.25	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			50	mA
h_{FE}	DC Current Gain	I_C= 5A ; V_{CE}= 2V	300			
V_{ECF}	C-E Diode Forward Voltage	I_F= 10A			2.5	V