

ISC Silicon NPN Power Transistor

BU931ZPFI

DESCRIPTION

- High Voltage
- DARLINGTON
- Integrated High Voltage Zener

APPLICATIONS

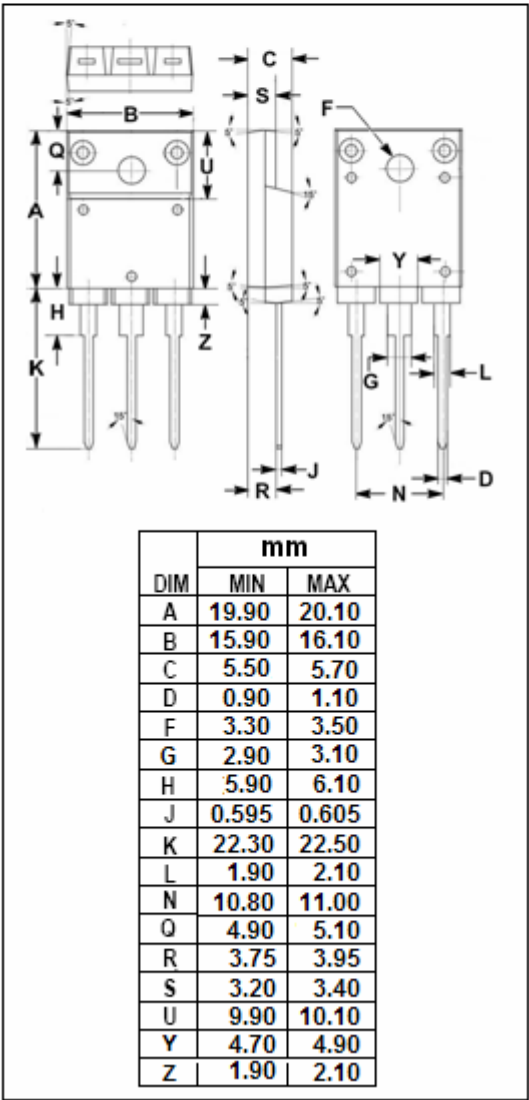
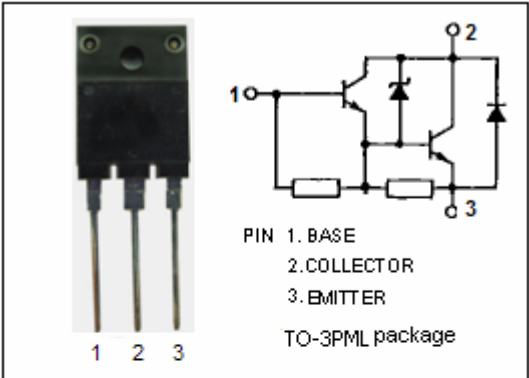
- Application in high performance electronic car ignition

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	350	V
V _{CER}	Collector-Emitter Voltage (R _{BE} =100 Ω)	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°C	60	W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-40~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	2.08	°C/W



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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