

isc Silicon NPN Darlington Power Transistor
BU921PFI
DESCRIPTION

- High Voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

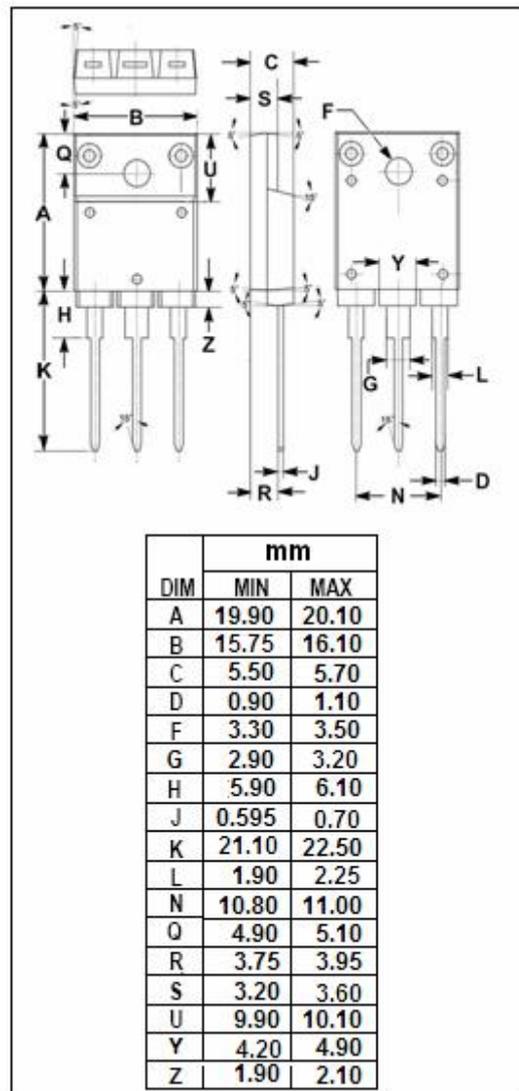
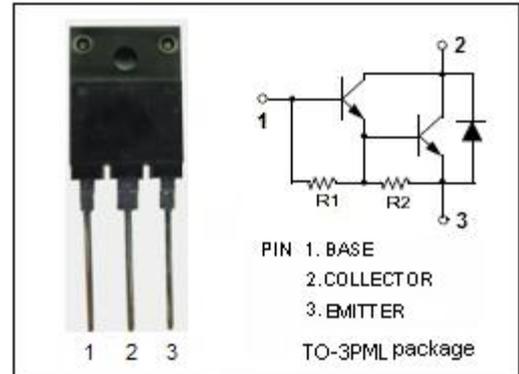
- Designed for automotive ignition applications and inverter circuits for motor control.

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage $V_{BE}=0$	450	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	10	A
I_{CM}	Collector Current-peak	15	A
I_B	Base Current	5	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	55	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.27	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	400			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 50mA			1.8	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 7A; I _B = 140mA			1.8	V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 50mA			2.2	V
V _{BE(sat)-2}	Base-Emitter Saturation Voltage	I _C = 7A; I _B = 140mA			2.5	V
I _{CES}	Collector Cutoff Current	V _{CE} = 450V; V _{BE} = 0 V _{CE} = 450V; V _{BE} = 0; T _j = 125°C			0.25 0.5	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 400V; I _B = 0			0.25	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			50	mA
V _{ECF}	C-E Diode Forward Voltage	I _F = 7A			2.5	V

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