

isc Silicon NPN Darlington Power Transistor

BU921P

DESCRIPTION

- High Voltage
- DARLINGTON

APPLICATIONS

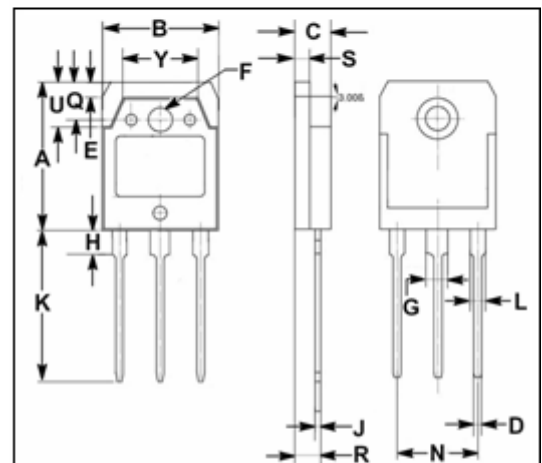
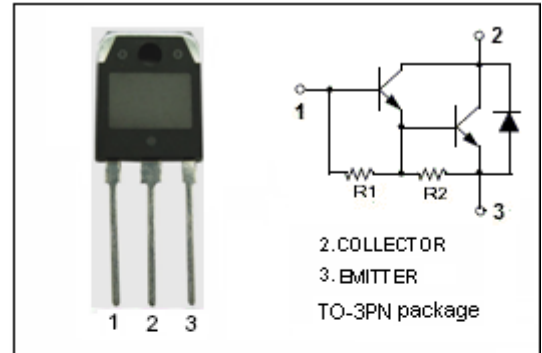
- Designed for automotive ignition applications and inverter circuits for motor control.

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CES</sub>	Collector-Emitter Voltage V <sub>BE</sub> = 0	450	V
V <sub>CEO</sub>	Collector-Emitter Voltage	400	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current	10	A
I <sub>CM</sub>	Collector Current-peak	15	A
I <sub>B</sub>	Base Current	5	A
P <sub>C</sub>	Collector Power Dissipation @T <sub>C</sub> =25°C	105	W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-65~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	1.2	°C/W



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

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## ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=0.1\text{A}; I_B=0$	400			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=50\text{mA}$			1.8	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=7\text{A}; I_B=140\text{mA}$			1.8	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=50\text{mA}$			2.2	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	$I_C=7\text{A}; I_B=140\text{mA}$			2.5	V
$I_{CES}$	Collector Cutoff Current	$V_{CE}=450\text{V}; V_{BE}=0$ $V_{CE}=450\text{V}; V_{BE}=0; T_j=125^{\circ}\text{C}$			0.25 0.5	mA
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=400\text{V}; I_B=0$			0.25	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			50	mA
$V_{ECF}$	C-E Diode Forward Voltage	$I_F=7\text{A}$			2.5	V