

isc Silicon NPN Darlington Power Transistor

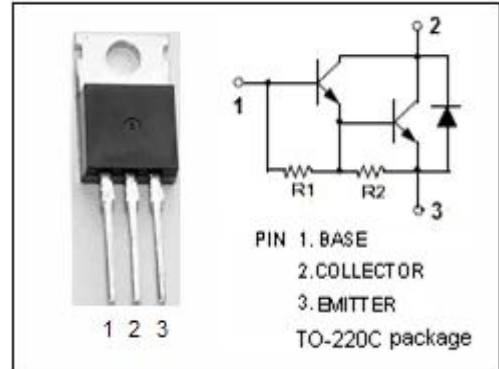
BU912

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 450V(\text{Min})$
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

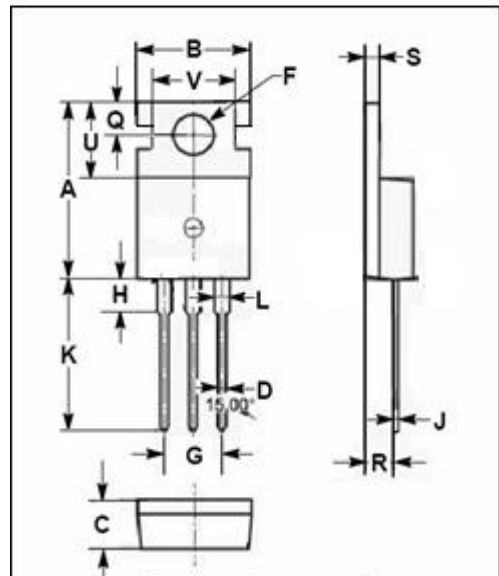
APPLICATIONS

- Designed for applications such as electronic ignition, DC and AC motor controls, solenoid drivers, etc.



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	450	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current	1	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	60	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

THERMAL CHARACTERISTICS

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

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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA ; I _B = 0	450			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 2.5A; I _B = 50mA			1.8	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 0.2A			1.8	V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _C = 2.5A; I _B = 50mA			2.2	V
V _{BE(sat)-2}	Base-Emitter Saturation Voltage	I _C = 4A; I _B = 0.2A			2.5	V
I _{CES}	Collector Cutoff Current	V _{CE} = 500V; V _{BE} = 0 V _{CE} = 500V; V _{BE} = 0, T _C = 125°C			1 5	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 450V; I _B = 0			1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			5	mA
V _{ECF}	C-E Diode Forward Voltage	I _F = 4A			2.5	V

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