

isc Silicon Darlington NPN Power Transistor

BU522B

DESCRIPTION

- High Voltage
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 2.0V @ I_C = 4A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

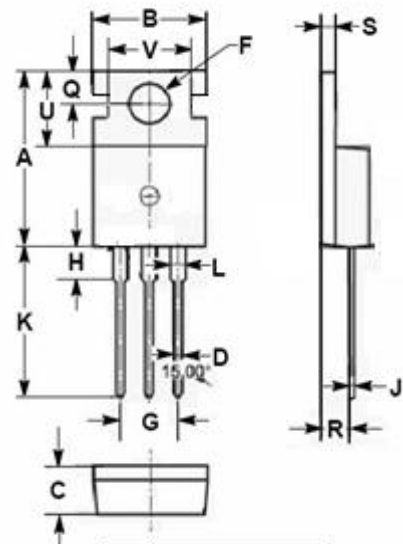
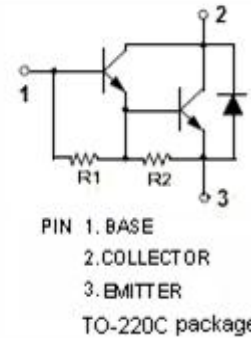
- Designed for use in ignition circuit.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CER(SUS)}$	Collector-Emitter Voltage	425	V
V_{CER}	Collector-Emitter Voltage	450	V
V_{CBO}	Collector-Base Voltage	475	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	7	A
I_B	Base Current	2	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ C$	75	W
T_j	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.67	$^\circ C/W$



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

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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CER(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	425			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 80mA			2.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 4A; I _B = 80mA			2.5	V
I _{CER}	Collector Cutoff Current	V _{CR} = 425V; R _{BE} = 270 Ω			1.0	mA
I _{CBO}	Collector Cutoff Current	V _{CB} = 475V; I _E = 0			1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			40	mA
h _{FE}	DC Current Gain	I _C = 2.5A; V _{CE} = 5V	250			
f _T	Current-Gain—Bandwidth Product	I _C = 0.3A; V _{CE} = 5V		7.5		MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} = 0.1MHz		150		pF

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