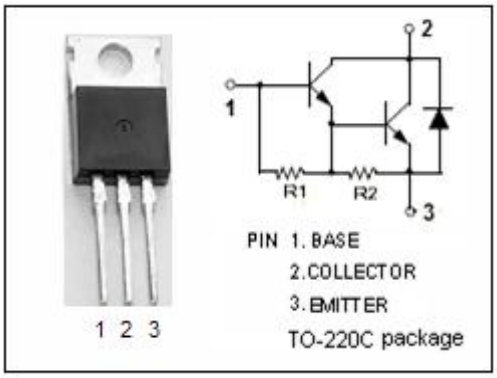
isc Silicon Darlington NPN Power Transistor — BU522B



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

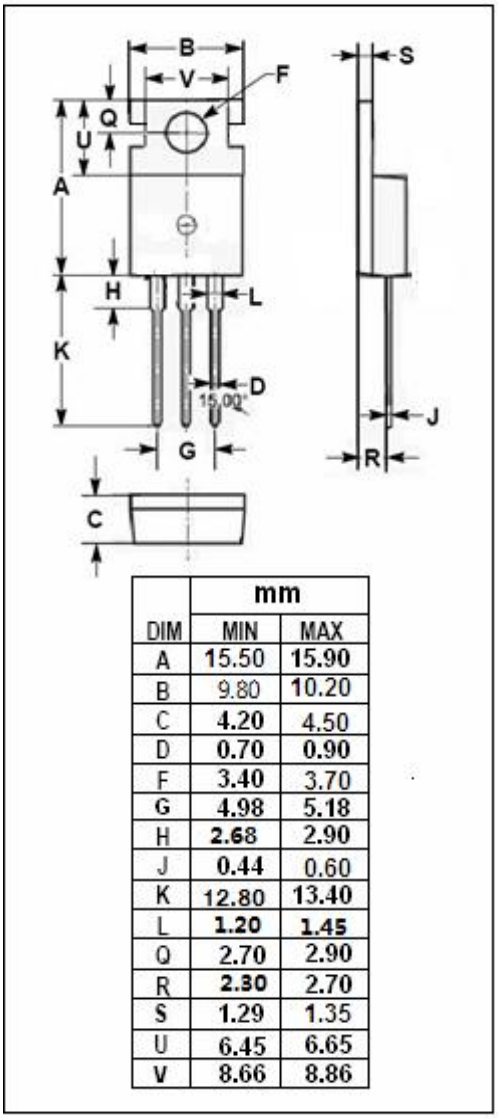
- Designed for use in ignition circuit.

ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

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℃	75	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

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



DIM	mm MIN	mm 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℃ 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}= 270Ω			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