

isc Silicon Darlington NPN Power Transistor

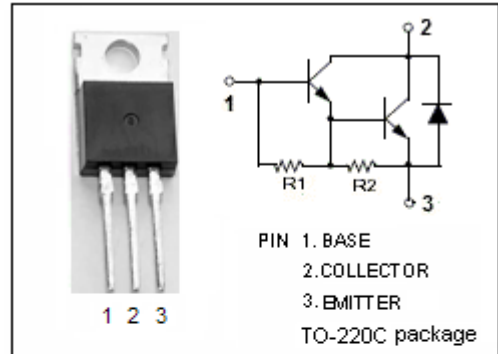
BU522

DESCRIPTION

- High Voltage
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 2.5V @ I_C = 4A$

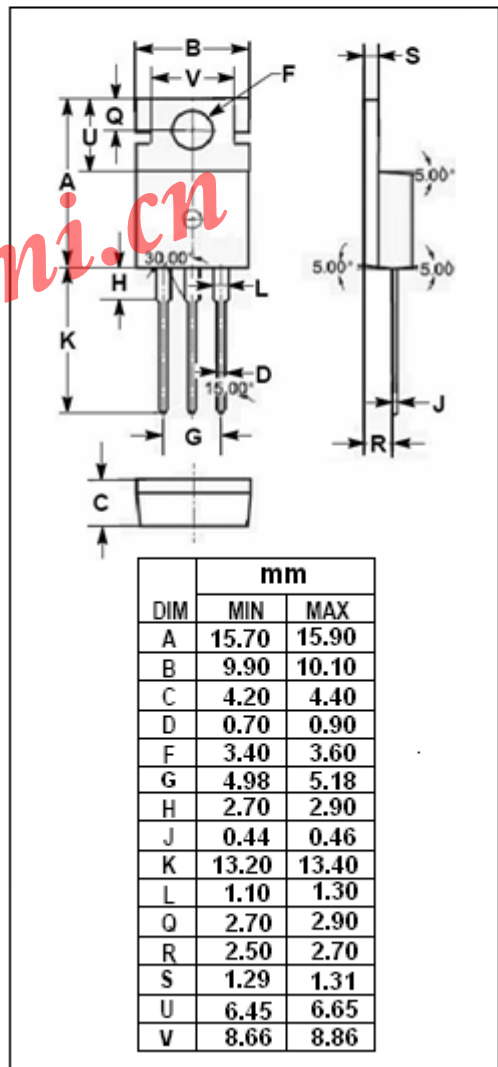
APPLICATIONS

- Designed for use in ignition circuit.



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CER(SUS)}$	Collector-Emitter Voltage	350	V
V_{CER}	Collector-Emitter Voltage	375	V
V_{CBO}	Collector-Base Voltage	400	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	$^{\circ}C/W$

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{\text{CER(SUS)}}$	Collector-Emitter Sustaining Voltage	$I_C=1.0\text{A}; R_{\text{BE}}=270\ \Omega$	350			V
$V_{\text{CE(sat)}}$	Collector-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=80\text{mA}$			2.5	V
$V_{\text{BE(sat)}}$	Base-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=80\text{mA}$			2.5	V
I_{CER}	Collector Cutoff Current	$V_{\text{CR}}=350\text{V}; R_{\text{BE}}=270\ \Omega$			1.0	mA
I_{CBO}	Collector Cutoff Current	$V_{\text{CB}}=400\text{V}; I_E=0$			1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{\text{EB}}=5\text{V}; I_C=0$			40	mA
h_{FE}	DC Current Gain	$I_C=2.5\text{A}; V_{\text{CE}}=5\text{V}$	250			
f_{T}	Current-Gain—Bandwidth Product	$I_C=0.3\text{A}; V_{\text{CE}}=5\text{V}$		7.5		MHz
C_{OB}	Output Capacitance	$I_E=0; V_{\text{CB}}=10\text{V}; f_{\text{test}}=0.1\text{MHz}$		150		pF