



## NPN BU911

### HIGH VOLTAGE POWER DARLINGTON

The BU911 are high voltage, silicon NPN transistors in monolithic Darlington mounted in Jedec TO-220 plastic package.

They are designed for applications such as electronic ignition, DC and AD motor controls, solenoid drivers, etc.

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings	Value	Unit	
$V_{CEO}$	Collector-Emitter Voltage	400	V	
$V_{CES}$	Collector-Emitter Voltage ( $V_{BE}=0$ )	450	V	
$V_{EBO}$	Emitter-Base Voltage	5	V	
$I_C$	Collector Current	$I_C$	6	A
		$I_{CM}$	10	A
$I_B$	Base Current	1	A	
$P_D$	Total Device Dissipation @ $T_C = 25^\circ$	60	Watts	
$T_J$	Junction Temperature	150	$^\circ\text{C}$	
$T_{Stg}$	Storage Temperature range	-65 to +150	$^\circ\text{C}$	

#### THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJ-c}$	Thermal Resistance, Junction to case	70	K/W

#### ELECTRICAL CHARACTERISTICS

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

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=400\text{ V}, I_B=0\text{V}$	-	-	1	mA
$I_{CES}$	Collector Cutoff Current	$V_{CE}=450\text{ V}, V_{BE}=0$	-	-	1	mA
		$V_{CE}=450\text{ V}, V_{BE}=0, T_C=125^\circ\text{C}$	-	-	5	
$I_{EBO}$	Emitter Cutoff Current	$V_{BE}=5.0\text{ V}, I_C=0$	-	-	5	mA
$V_{CEO(sus)}$	Collector- Emitter sustaining Voltage (1)	$I_C=100\text{ mA}$	400	-	-	V

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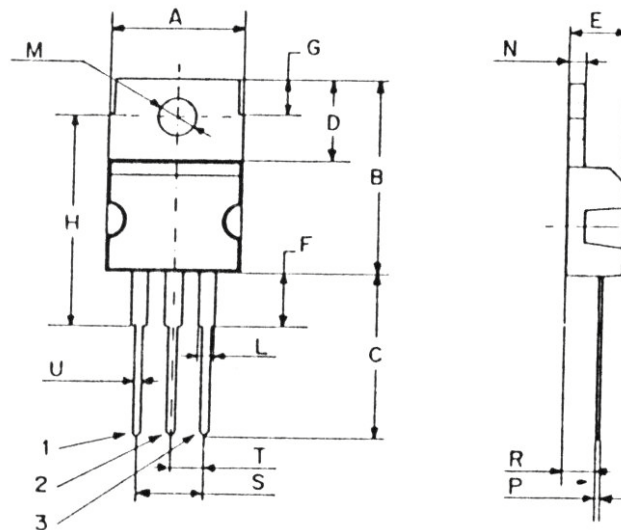
Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
$V_F$	Diode forward Voltage	$I_F=4\text{ A}$	-	-	2.5	V
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (1)	$I_C=2.5\text{ A}, I_B=50\text{ mA}$	-	-	1.8	V
		$I_C=4\text{ A}, I_B=200\text{ mA}$	-	-	1.8	
$V_{BE(SAT)}$	Base-Emitter saturation Voltage (1)	$I_C=2.5\text{ A}, I_B=50\text{ mA}$	-	-	2.2	V
		$I_C=4\text{ A}, I_B=200\text{ mA}$	-	-	2.5	

(1) Pulse conditions :  $t_p < 300\ \mu\text{s}$ , duty cycle =1.5%

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## MECHANICAL DATA CASE TO-220

DIMENSIONS		
	mm	inches
A	9,86	0,39
B	15,73	0,62
C	13,37	0,52
D	6,67	0,26
E	4,44	0,17
F	4,21	0,16
G	2,99	0,11
H	17,21	0,68
L	1,29	0,05
M	3,6	0,14
N	1,36	0,05
P	0,46	0,02
R	2,1	0,08
S	5	0,19
T	2,52	0,098
U	0,79	0,03



Pin 1 :	base
Pin 2 :	Collector
Pin 3 :	emitter

*Information furnished is believed to be accurate and reliable. However, CS assumes no responsibility for the consequences of use of such information nor for errors that could appear.*

Data are subject to change without notice.