



## 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. Compliance to RoHS.

#### 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	6	A	
$I_{CM}$	Collector Current Peak	10	A	
$I_B$	Base Current	1	A	
$P_D$	Total Device Dissipation	@ $TC = 25^\circ$	60	W
$T_J$	Junction Temperature	150	$^\circ C$	
$T_{Stg}$	Storage Temperature Range	-65 to +150	$^\circ C$	

#### THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJ-c}$	Thermal Resistance, Junction to case	2.08	$^\circ C/W$



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### ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = 400V, I_B = 0$	-	-	1	mA
$I_{CES}$	Collector Cutoff Current	$V_{CE} = 400V, V_{BE} = 0$	-	-	1	mA
		$V_{CE} = 400V, V_{BE} = 0$ $T_C = 125^\circ C$	-	-	5	
$I_{EBO}$	Emitter Cutoff Current	$V_{BE} = 5 V, I_C = 0$	-	-	5	mA
$V_{CEO}$	Collector-Emitter Sustaining Voltage	$I_C = 100 mA, I_B = 0$	400	-	-	V
$V_F$	Diode Forward Voltage	$I_F = 4 A$	-	-	2.5	V
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage (*)	$I_C = 2.5 A, I_B = 50 mA$	-	-	1.8	V
		$I_C = 4 A, I_B = 200 mA$	-	-	1.8	
$V_{BE(SAT)}$	Base-Emitter Saturation Voltage (*)	$I_C = 2.5 A, I_B = 50 mA$	-	-	2.2	V
		$I_C = 4 A, I_B = 200 mA$	-	-	2.5	

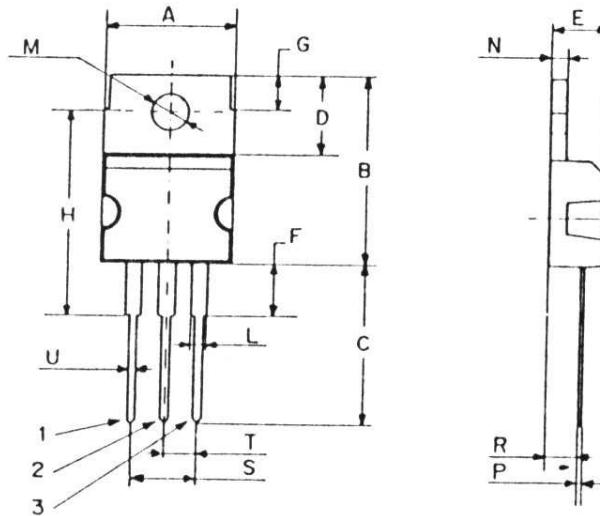
(\*) Pulse conditions :  $t_p < 300 \mu s$ , duty cycle = 1.5%



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### MECHANICAL DATA CASE TO-220

DIMENSIONS (mm)		
	Min.	Max.
A	9,90	10,30
B	15,65	15,90
C	13,20	13,40
D	6,45	6,65
E	4,30	4,50
F	2,70	3,15
G	2,60	3,00
H	15,75	17,15
L	1,15	1,40
M	3,50	3,70
N	-	1,37
P	0,46	0,55
R	2,50	2,70
S	4,98	5,08
T	2,49	2,54
U	0,70	0,90



Pin 1 :	Base
Pin 2 :	Collector
Pin 3 :	Emitter
Case :	Collector

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