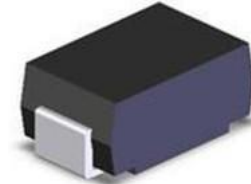


## Features

- 400 watts Peak Pulse Power (10/1000  $\mu$ s)
- Unidirectional and Bidirectional Protection
- Fast Response Time : Typically < 1ps
- Excellent Clamping Capability
- Glass Passivated Junction
- Built-in Strain relief
- Low inductance
- Low profile package
- High temperature solder:260°C/20 seconds at terminal



SMA  
DO-214AC

## Mechanical Characteristics

- JEDEC DO-214AC(SMAJ) package
- Molding compound flammability rating:  
UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel per EIA 481
- RoHS/WEEE Compliant

## Applications

- I/O Interfaces
- Power lines
- Automotive and Telecommunication
- Computers & Consumer Electronics
- Industrial Electronics

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 10/1000\mu s$ ) (see Note1,2& 3)	$P_{PPM}$	400	Watts
Peak pulse current (10/1000 $\mu$ s) (see Note2&3)	$I_{PPM}$	See Electrical Characteristics	A
Peak Forward surge current (see Note4&5)	$I_{FSM}$	40	A
Power Dissipation on infinite heat sink $T_A = 50^\circ C$ (Fig5)	$P_D$	1.0	W
Operating Junction Temperature range	$T_J$	-65 to + 150	$^\circ C$
Storage Temperature range	$T_{STG}$	-65 to + 150	$^\circ C$

**Note1:** Peak Pulse Power Rating as Pulse Width ,per Fig1.

**Note2:** Peak Pusle Power or Current Derated above  $T_A=25^\circ C$  Per Fig. 2 and Non-Repetitive Current Pulse,Per Fig.3.

**Note3:** Mounted on 5.0x5.0mm<sup>2</sup> copper pad to each terminal.

**Note4:** 8.3ms Single Half Sine Wave or Equivalent Square Wave

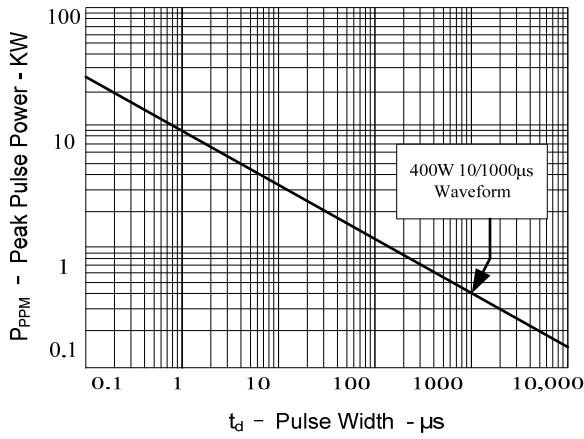
**Note5:** Maximum Forward Surge Current only for Unidirectional Device per Fig6.

**Electrical Characteristics**

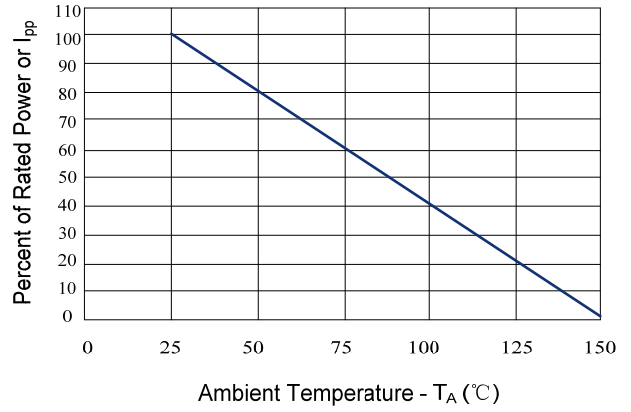
Part Number	Reverse Stand off Voltage $V_{RWM}$ (Volts)	Breakdown Voltage $V_{BR}(\text{Volts})@I_T$		Test Current $I_T$ (mA)	Maximum Clamping Voltage $V_c@I_{PP}$ (Volts)	Maximum Peak Pulse Current $I_{pp}$ (Amps)	Maximum Reverse Leakage $I_R@V_{RWM}$ ( $\mu\text{A}$ )
		MIN	MAX				
BTC900N	90	100	111	1	146	2.7	1

Typical Characteristics

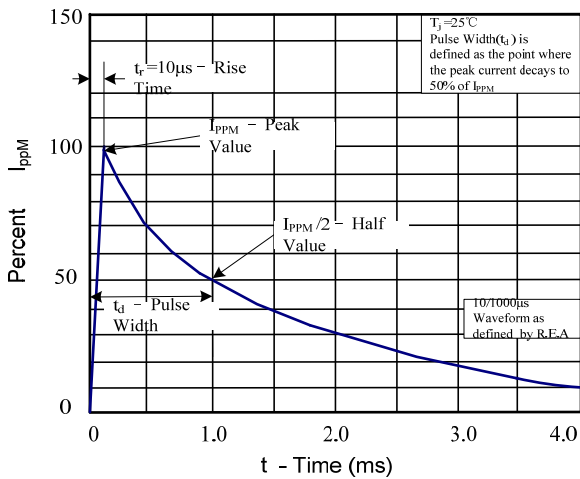
**Figure 1: Peak Pulse Power Rating Curve**



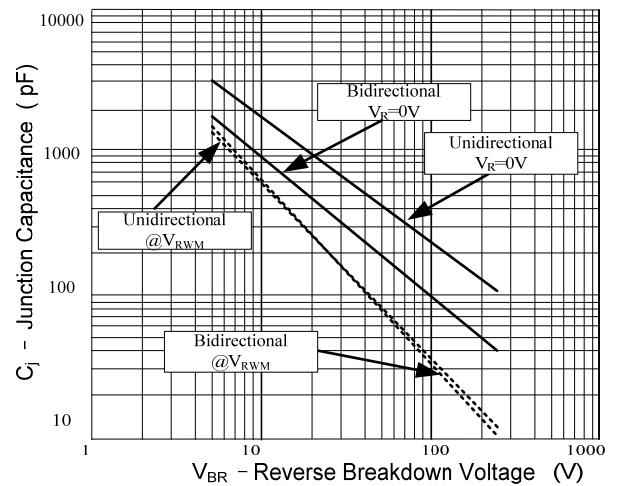
**Figure 2: Pulse Derating Curve**



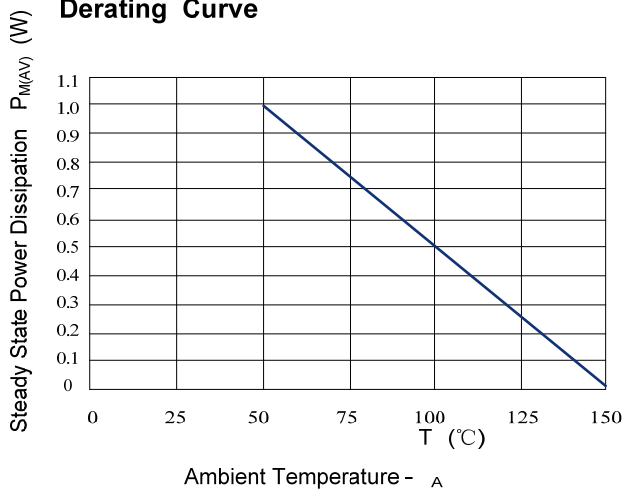
**Figure 3: Pulse Waveform**



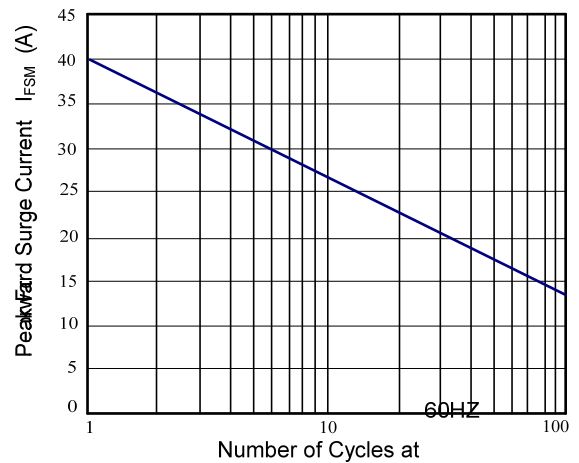
**Figure 4: Typical Junction Capacitance**



**Figure 5: Steady State Power Dissipation Derating Curve**

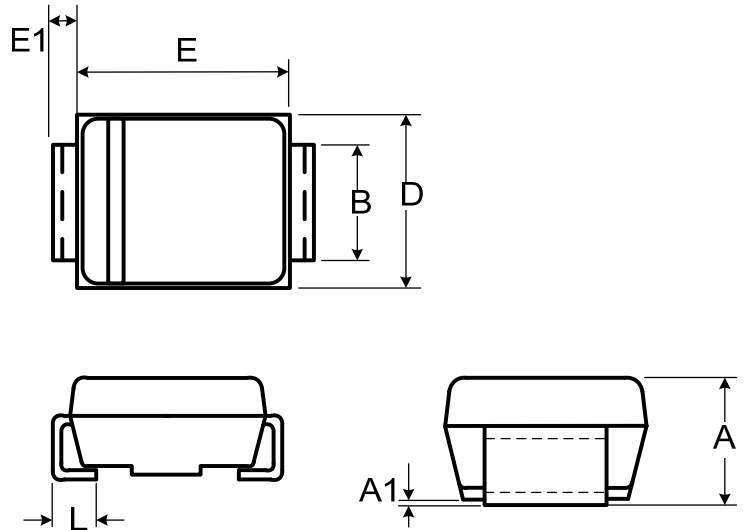


**Figure 6: Maximum Non-Repetitive Forward Surge Current Only Unidirectional**



Outline Drawing – SMA(DO-214AC)

Ref. (mm)	Millimeters	
	Min.	Max.
A	1.980	2.290
A1	-	0.203
B	1.250	1.650
E	3.990	4.500
E1	0.152	0.305
D	2.540	2.790
L	0.780	1.520



Packaging: 3,000/Tape & Reel