

### Features

- Fails short circuit when surged in excess of ratings
- Low voltage overshoot
- High repetitive surge current capability
- Low on - state voltage



**DO-214AA  
(SMB)**

### Main Applications

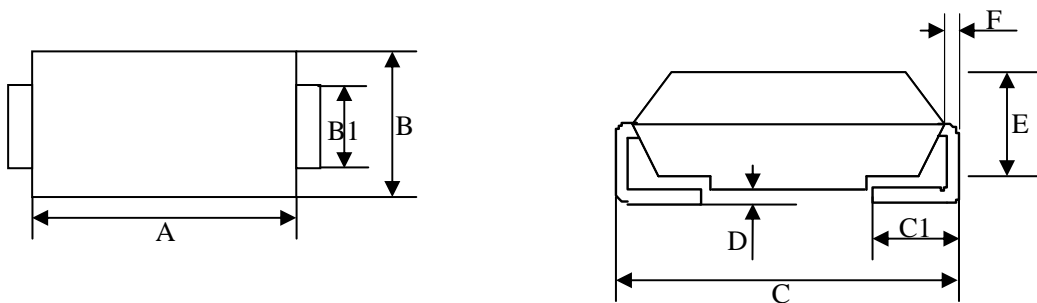
- Customer Premises Equipment (CPE)
- Modems, Line cards, DSL, ISDN, T - 1/E - 1
- Data lines and security systems
- Fax machines, Telephones etc.

### Thermal Ratings

Type Number	Symbol	Value	Units
Operating Junction Temperature Range	$T_J$	-40 to + 150	°C
Storage Temperature Range	$T_S$	-65 to + 150	°C
Thermal Resistance: Junction to Ambient	$R_{\theta JA}$	90	°C/W

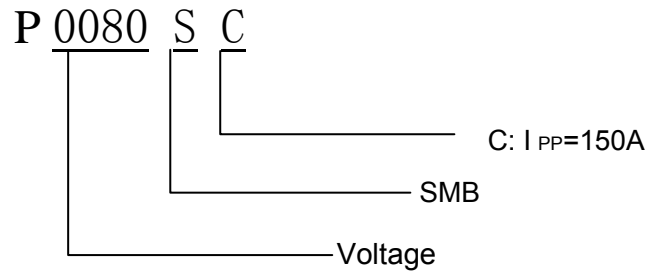
### Package Dimensions

#### DO-214AA/SMB



Dim		A	B	B1	C	C1	D	E	F
Millimeters (mm)	Min	4.06	3.30	1.95	5.21	0.76	-	2.13	0.152
	Max	4.57	3.94	2.20	5.59	1.52	0.203	2.44	0.305
Inches (inch)	Min	0.16	0.13	0.077	0.205	0.03	-	0.084	0.006
	Max	0.18	0.155	0.086	0.22	0.06	0.008	0.096	0.012

### Ordering Information



### Electrical Characteristics ( $T_A=25^{\circ}\text{C}$ unless noted otherwise)

Part Number	V <sub>DRM</sub>	V <sub>S</sub>	I <sub>H</sub>	I <sub>S</sub>	I <sub>T</sub>	V <sub>T</sub>	C <sub>o</sub>	
	V min	V max	mA min	mA max	A max	V max	pF min	pF max
P0080SC	6	25	50	800	2.2	4	45	100

Note: 1. V<sub>DRM</sub>@I<sub>DRM</sub>=5 $\mu$ A, V<sub>S</sub>@100V/ $\mu$ s, V<sub>T</sub>@I<sub>T</sub>=2.2A, C<sub>o</sub>@1MHz,2V

### Surge Ratings

Series	I <sub>PP</sub> 2x10 $\mu$ s Amps	I <sub>PP</sub> 8x20 $\mu$ s Amps	I <sub>PP</sub> 10x160 $\mu$ s Amps	I <sub>PP</sub> 10x560 $\mu$ s Amps	I <sub>PP</sub> 10x1000 $\mu$ s Amps	I <sub>TSM</sub> 50/60Hz Amps	di/dt A/ $\mu$ s
A	150	150	90	50	50	20	500
B	250	250	150	100	75	25	500
C	500	400	200	150	100	30	500

Note: 1. Peak pulse current rating (I<sub>PP</sub>) is non - repetitive and guaranteed for the life of the product.

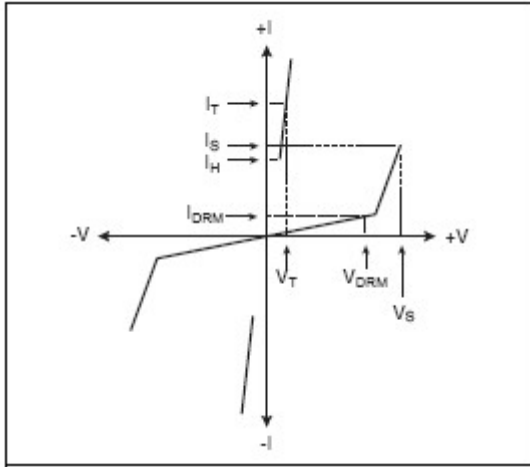
2. I<sub>PP</sub> ratings applicable over temperature range of - 40 $^{\circ}$ C to +85 $^{\circ}$ C

3. The device must initially be in thermal equilibrium with - 40 $^{\circ}$ C < T<sub>J</sub> < +150 $^{\circ}$ C

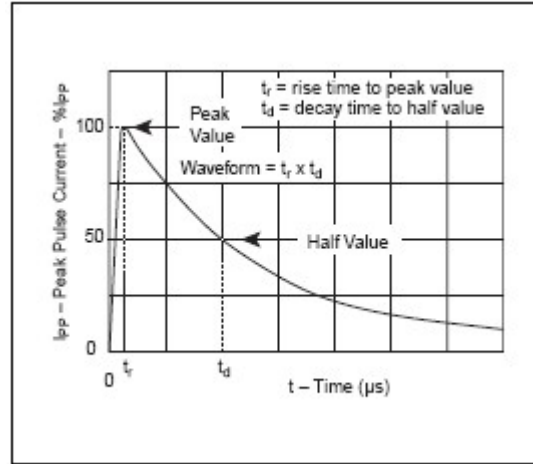
4. Current waveform and voltage waveform in  $\mu$ s.

**Typical Characteristics Curves**

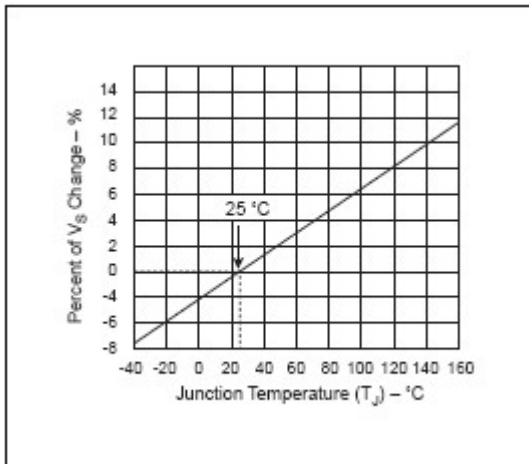
**Fig 1. V-I Characteristics**



**Fig 2. tr x td Pulse Wave-form**



**Fig 3. Normalized V<sub>S</sub> Change versus Junction Temperature**



**Fig 4. Normalized DC Holding Current Versus Case Temperature**

