

### Features

- Fails short circuit when surged in excess of ratings
- Low voltage overshoot
- High repetitive surge current capability
- Low on - state voltage
- P0080TA~P3500TA are also available in SMA package



**DO-214AC  
(SMA)**

### Main Applications

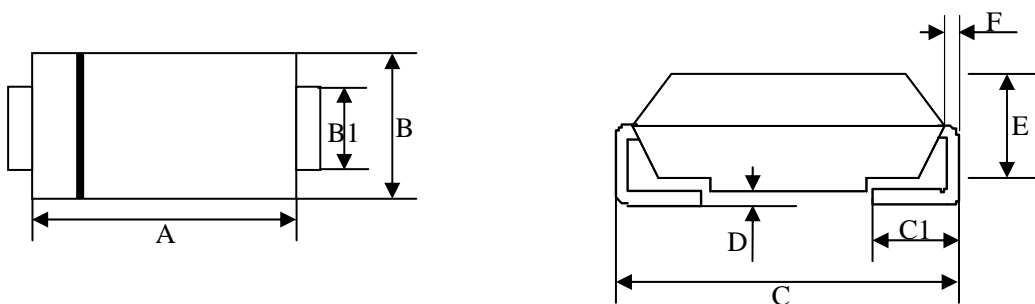
- Customer Premises Equipment (CPE)
- Modems, Line cards, DSL, ISDN, T - 1/E - 1
- Data lines and security systems
- Fax machines, Telephones etc.

### Thermal Considerations

| Type Number                                  | Symbol          | Value        | Units |
|--|-----------------|--------------|-------|
| Operating Junction Storage Temperature Range | $T_{J, TG}$     | -40 to + 150 | °C    |
| Storage Temperature Range                    | $T_S$           | -40 to + 150 | °C    |
| Thermal Resistance: Junction to Ambient      | $R_{\theta JA}$ | 120          | °C/W  |

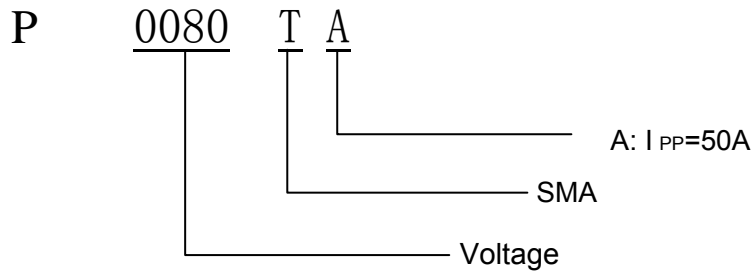
### Package Dimensions

#### DO-214AC/SMA



| Dim                 |     | A     | B     | B1    | C     | C1    | D     | E     | F     |
|---------------------|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| Millimeters<br>(mm) | Min | 3.99  | 2.54  | 1.25  | 4.93  | 0.76  | -     | 1.98  | 0.152 |
|                     | Max | 4.50  | 2.79  | 1.65  | 5.28  | 1.52  | 0.203 | 2.29  | 0.305 |
| Inches<br>(inch)    | Min | 0.157 | 0.100 | 0.049 | 0.194 | 0.030 | -     | 0.078 | 0.006 |
|                     | Max | 0.177 | 0.110 | 0.065 | 0.208 | 0.060 | 0.008 | 0.090 | 0.012 |

### Ordering Information



### Electrical Characteristics (*T<sub>Ambient</sub>*=25°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             |
| P0080TA     | 6                | 25             | 50             | 800            | 2.2            | 4              | 50             |

### Surge Ratings

| Series | I <sub>PP</sub><br>2x10 $\mu$ S<br>Amps | I <sub>PP</sub><br>8x20 $\mu$ S<br>Amps | I <sub>PP</sub><br>10x160 $\mu$ S<br>Amps | I <sub>PP</sub><br>10x560 $\mu$ S<br>Amps | I <sub>PP</sub><br>10x1000 $\mu$ S<br>Amps | I <sub>TSM</sub><br>50/60Hz<br>Amps | di/dt<br>Amps/ $\mu$ S |
|--------|---|---|---|---|--|-------------------------------------|------------------------|
| A      | 150                                     | 150                                     | 90  | 50  | 45   | 20                                  | 500                    |

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

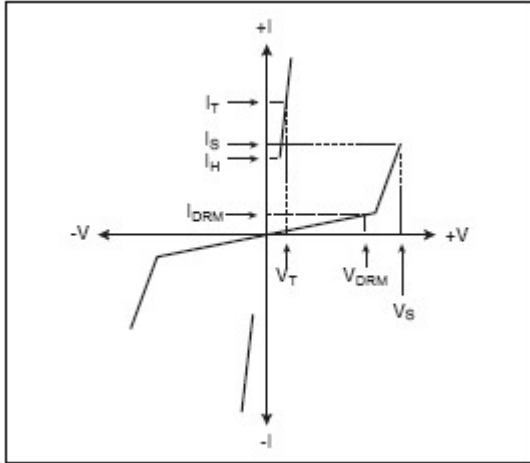
2. I<sub>PP</sub> ratings applicable over temperature range of - 40°C to +85°C

3. The device must initially be in thermal equilibrium with - 40°C < T<sub>J</sub> < +150°C

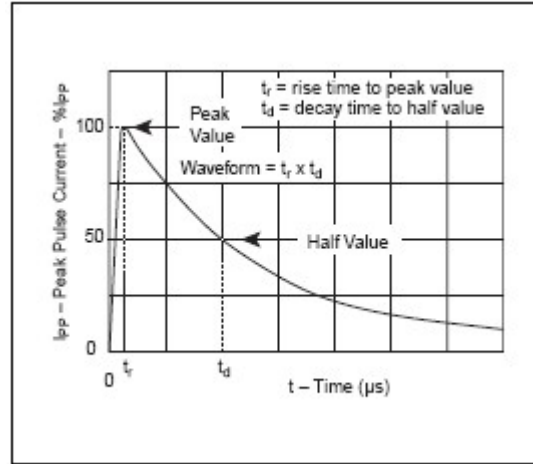
4. Current waveform and voltage waveform in  $\mu$ S.

## Typical Characteristics Curves

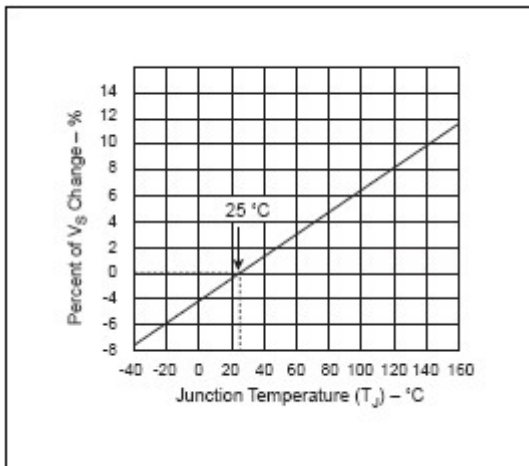
**Fig 1. V-I Characteristics**



**Fig 2.  $t_r \times t_d$  Pulse Wave-form**



**Fig 3. Normalized  $V_S$  Change versus Junction Temperature**



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

