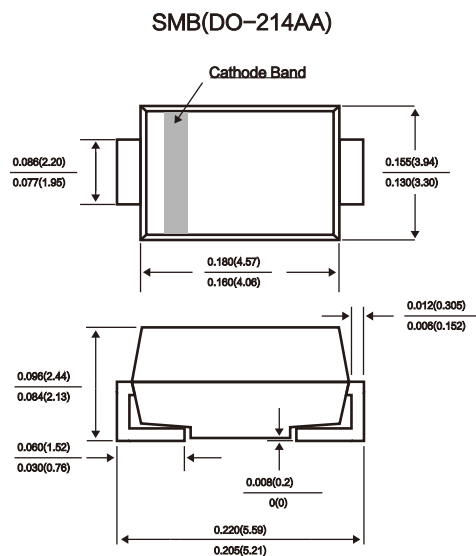


### Features

- Low voltage overshoot
- Low on-state voltage
- Does not degrade surge capability after multiple surge events within limit
- Fails short circuit when surged in excess of ratings
- Low Capacitance

### Mechanical Data

- Case: SMA/DO-214AC, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.064 grams (approx.)



Dimensions in inches and (millimeters)

### SurgeRatings

| Series | 2/10 S <sup>1</sup> | 8/20 S <sup>1</sup>   | 10/160 S <sup>1</sup> | 10/560 S <sup>1</sup> | 10/1000 S <sup>1</sup> | 5/310 S <sup>1</sup>  | I <sub>TSM</sub><br>50/60 Hz | di/dt |
|--------|---------------------|-----------------------|-----------------------|-----------------------|------------------------|-----------------------|------------------------------|-------|
|        | 2/10 S <sup>2</sup> | 1.2/50 S <sup>2</sup> | 10/160 S <sup>2</sup> | 10/560 S <sup>2</sup> | 10/1000 S <sup>2</sup> | 10/700 S <sup>2</sup> |                              |       |
|        | A min               | A min                 | A min                 | A min                 | A min                  | A min                 |                              |       |
| A      | 150                 | 150                   | 90                    | 50                    | 45                     | 50                    | 20                           | 500   |

Notes:

1. Current waveform in  $\mu$ s
2. Voltage waveform in  $\mu$ s

- Peak pulse current rating ( $I_{PP}$ ) is repetitive and guaranteed for the life of the product.
- $I_{PP}$  ratings applicable over temperature range of -40°C to +85°C
- The device must initially be in thermal equilibrium with -40°C <  $T_J$  < +150°C

### Thermal Considerations

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

| Part Number | $V_{DRM}$<br>@ $I_{DRM}=5\text{ A}$ | $V_S$<br>@100V/ S | $V_T$<br>@ $I_T=2.2\text{ A}$ | $I_S$  | $I_T$ | $I_H$  | $C_0$<br>@1MHz |        |
|-------------|-------------------------------------|-------------------|-------------------------------|--------|-------|--------|----------------|--------|
|             | V min                               | V max             | V max                         | mA max | A max | mA min | pF min         | pF max |
| P0080SA     | 6                                   | 25                | 4                             | 800    | 2.2   | 50     | 25             | 150    |
| P0300SA     | 25                                  | 40                | 4                             | 800    | 2.2   | 50     | 15             | 140    |
| P0640SA     | 58                                  | 77                | 4                             | 800    | 2.2   | 150    | 40             | 60     |
| P0720SA     | 65                                  | 88                | 4                             | 800    | 2.2   | 150    | 35             | 60     |
| P0900SA     | 75                                  | 98                | 4                             | 800    | 2.2   | 150    | 25             | 55     |
| P1100SA     | 90                                  | 130               | 4                             | 800    | 2.2   | 150    | 30             | 50     |
| P1300SA     | 120                                 | 160               | 4                             | 800    | 2.2   | 150    | 25             | 45     |
| P1500SA     | 140                                 | 180               | 4                             | 800    | 2.2   | 150    | 25             | 40     |
| P1800SA     | 170                                 | 220               | 4                             | 800    | 2.2   | 150    | 25             | 35     |
| P2000SA     | 180                                 | 220               | 4                             | 800    | 2.2   | 150    | 20             | 35     |
| P2300SA     | 190                                 | 260               | 4                             | 800    | 2.2   | 150    | 25             | 35     |
| P2600SA     | 220                                 | 300               | 4                             | 800    | 2.2   | 150    | 20             | 35     |
| P3100SA     | 275                                 | 350               | 4                             | 800    | 2.2   | 150    | 20             | 35     |
| P3500SA     | 320                                 | 400               | 4                             | 800    | 2.2   | 150    | 20             | 35     |
| P4000SA     | 360                                 | 460               | 4                             | 800    | 2.2   | 150    | 20             | 35     |
| P4500SA     | 400                                 | 540               | 4                             | 800    | 2.2   | 150    | 20             | 35     |
| P5000SA     | 440                                 | 600               | 4                             | 800    | 2.2   | 150    | 20             | 35     |

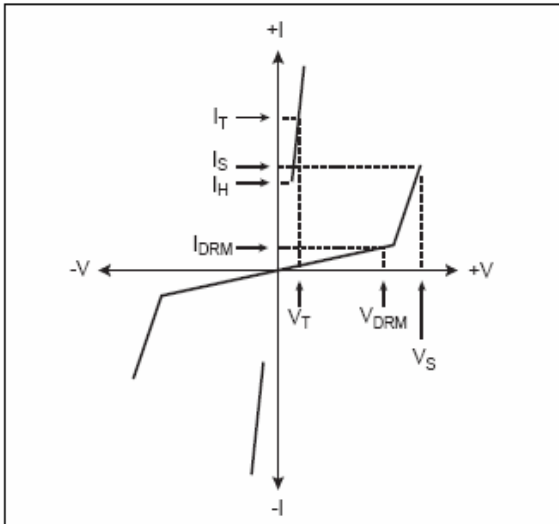


Figure1 V-I Characteristics

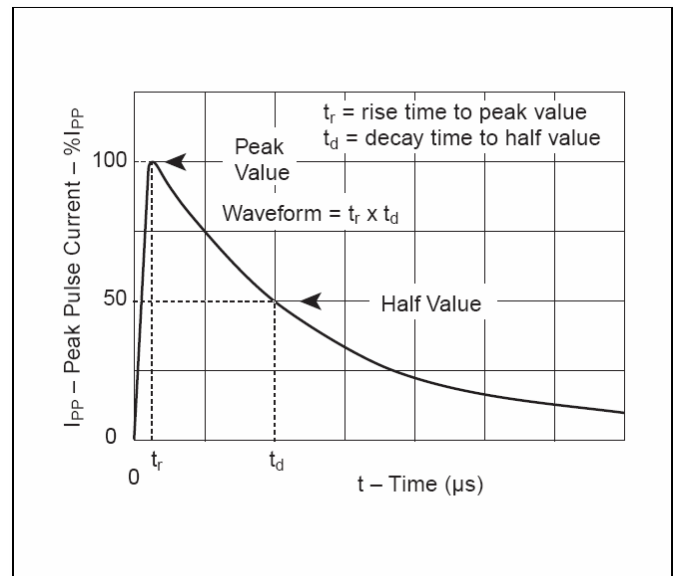


Figure2  $t_r \times t_d$  Pulse Wave-form

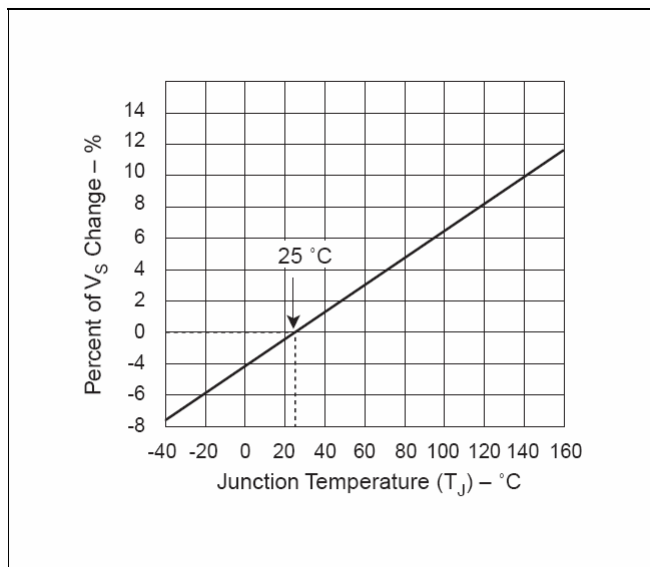


Figure3  
Normalized  $V_S$  Change versus Junction Temperature

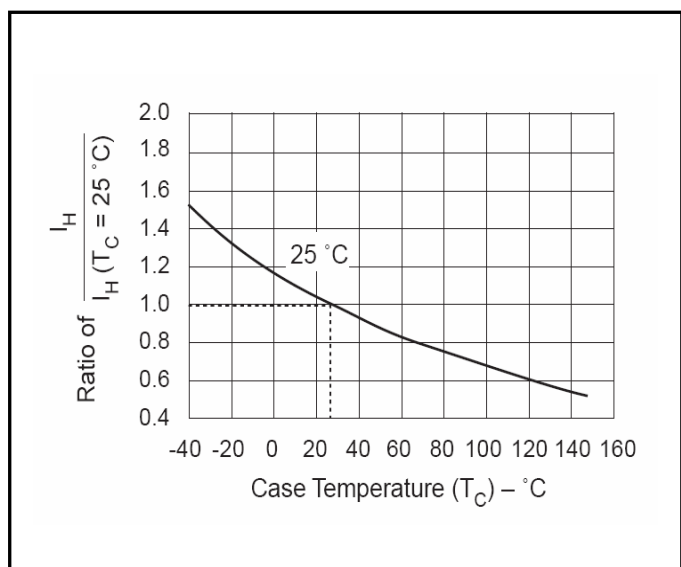


Figure4  
Normalized DC Holding Current