



Micro Commercial Components



Micro Commercial Components  
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## SMA6F5.0A THRU SMA6F13A

### Features

- For surface mounted applications in order to optimize board space
- Glass passivated junction
- Excellent clamping capability
- High Temp Soldering: 260°C / 40 Seconds At Terminals
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Halogen free available upon request by adding suffix "-HF"

### Mechanical Data

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Polarity: Indicated by cathode band except bi-directional types

### Maximum Rating:

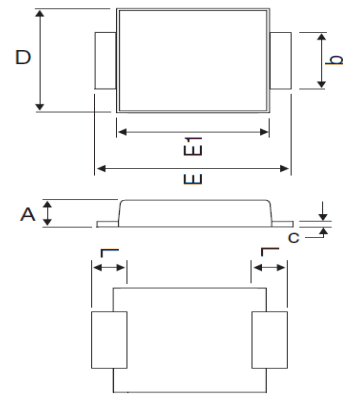
- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

|                                          |                  |             |           |
|------------------------------------------|------------------|-------------|-----------|
| Peak Pulse Current on 10/1000µs Waveform | I <sub>PPM</sub> | See Table 1 | Note 2    |
| Peak Pulse Power Dissipation             | P <sub>PPM</sub> | Min 600 W   | Note 2, 4 |

- Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.
2. Non-repetitive current pulse, per Fig.4 and derated above T<sub>A</sub>=25°C per Fig.1.
3. Lead temperature at T<sub>L</sub> = 75°C
4. Peak pulse power waveform is 10/1000µs.

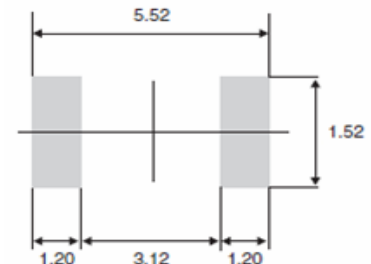
## 600 Watt Transient Voltage Suppressors 5.0 to 13 Volts

### DO-221AC (SMA-FL)



| DIMENSIONS |        |      |      |      |      |
|------------|--------|------|------|------|------|
| DIM        | INCHES |      | MM   |      | NOTE |
|            | MIN    | MAX  | MIN  | MAX  |      |
| A          | .035   | .059 | 0.90 | 1.50 |      |
| b          | .049   | .065 | 1.25 | 1.65 |      |
| C          | .006   | .016 | 0.15 | 0.40 |      |
| D          | .089   | .116 | 2.25 | 2.95 |      |
| E          | .188   | .220 | 4.80 | 5.60 |      |
| E1         | .156   | .181 | 3.95 | 4.60 |      |
| L          | .030   | .059 | 0.75 | 1.50 |      |

### SUGGESTED SOLDER PAD LAYOUT



## SMA6F5.0A thru SMA6F13A

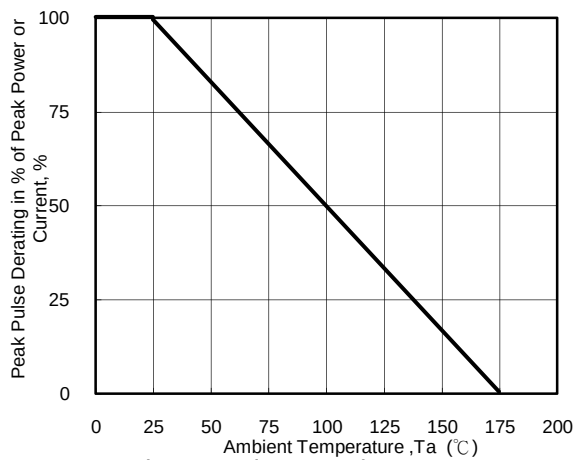


Fig. 1 - Pulse Derating Curve

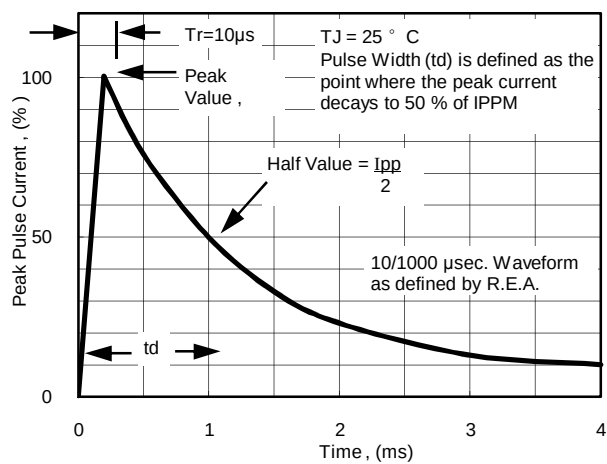


Fig. 2 - Pulse Waveform

# SMA6F5.0A thru SMA6F13A

| SMA6F<br>PART NUMBER | DEVICE MARKING<br>CODE | REVERSE<br>STAND- OFF<br>VOLTAGE<br>$V_{RWM}(V)$ | BREAKDOWN<br>VOLTAGE<br>$V_{BR}(V) @ I_T$ |       | TEST<br>CURRENT<br>$I_T (mA)$ | MAXIMUM<br>CLAMPING<br>VOLTAGE<br>$@ I_{pp} V_c(V)$ | PEAK<br>PULSE<br>CURRENT<br>$I_{pp} (A)$ | REVERSE<br>LEAKAGE<br>@ $V_{RWM} I_R$<br>( $\mu A$ ) |
|----------------------|------------------------|--------------------------------------------------|-------------------------------------------|-------|-------------------------------|-----------------------------------------------------|------------------------------------------|------------------------------------------------------|
|                      |                        |                                                  | MIN                                       | MAX   |                               |                                                     |                                          |                                                      |
| SMA6F5.0A            | SUA                    | 5.0                                              | 6.40                                      | 7.07  | 10                            | 9.2                                                 | 68.0                                     | 800                                                  |
| SMA6F12A             | SUJ                    | 12                                               | 13.30                                     | 14.70 | 1                             | 18.5                                                | 31.0                                     | 5.0                                                  |
| SMA6F13A             | SUG                    | 13                                               | 14.40                                     | 15.90 | 1                             | 20.4                                                | 29.0                                     | 5.0                                                  |

## Ordering Information :

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel:10Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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