

# MR2540

## AUTOMOTIVE TRANSIENT VOLTAGE SUPPRESSOR

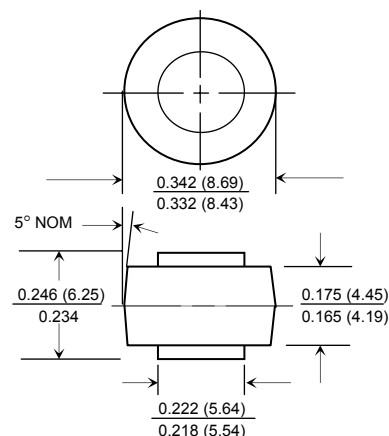
**V<sub>R</sub> : 20 Volts**  
**I<sub>o</sub> : 6 Amperes**

### FEATURES :

- \* Breakdown Voltage 24 to 32 Volts
- \* High Power capability
- \* Increased Capacity by Parallel Operation
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Terminals : Terminal are readily solderable
- \* Polarity : Cathode polarity band
- \* Mounting position : Any
- \* Weight : 1.624 grams



Dimensions in inches and ( millimeter )

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

| RATING                                                                                                              | SYMBOL                            | VALUE         | UNIT  |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|-------|
| Maximum DC Peak Repetitive Reverse Voltage                                                                          | V <sub>RRM</sub>                  | 20            | V     |
| Maximum Working Peak Reverse Voltage                                                                                | V <sub>RWM</sub>                  | 20            | V     |
| Maximum DC Blocking Voltage                                                                                         | V <sub>R</sub>                    | 20            | V     |
| Maximum Breakdown Voltage ( I <sub>R</sub> = 100 mA, T <sub>c</sub> = 25 °C ) <sup>(1)</sup>                        | V <sub>BR(max)</sub>              | 32            | V     |
| Minimum Breakdown Voltage ( I <sub>R</sub> = 100 mA, T <sub>c</sub> = 25 °C ) <sup>(1)</sup>                        | V <sub>BR(min)</sub>              | 24            | V     |
| Maximum Average Rectified Forward Current<br>( Single Phase, Resistive Load, 60 Hz, T <sub>c</sub> = 150 °C )       | I <sub>F(AV)</sub>                | 6             | A     |
| Maximum Repetitive Peak Reverse Surge Current<br>( Time Constant = 10 ms, Duty Cycle ≤ 1%, T <sub>c</sub> = 25 °C ) | I <sub>RSM</sub>                  | 85            | A     |
| Maximum Non-Repetitive Peak Surge Current<br>Surge Supplied at Rated Load Conditions, Halfwave, Single Phase        | I <sub>FSM</sub>                  | 800           | A     |
| Maximum Instantaneous Forward Voltage ( I <sub>F</sub> = 100 A, T <sub>c</sub> = 25 °C ) <sup>(1)</sup>             | V <sub>F</sub>                    | 1.1           | V     |
| Maximum Reverse Current ( V <sub>R</sub> = 20 V, T <sub>c</sub> = 25 °C )                                           | I <sub>R</sub>                    | 200           | nA    |
| Typical Breakdown Voltage Temperature Coefficient                                                                   | V <sub>(BR)TC</sub>               | 0.096         | %/°C  |
| Typical Forward Voltage Temperature Coefficient @ I <sub>F</sub> = 10 mA                                            | V <sub>FTC</sub>                  | 2.0           | mV/°C |
| Typical Thermal Resistance Junction to Case                                                                         | R <sub>θJC</sub>                  | 0.8           | °C/W  |
| Operating Junction and Storage Temperature Range                                                                    | T <sub>J</sub> , T <sub>STG</sub> | - 65 to + 175 | °C    |

Note : (1) Pulse Test : Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.