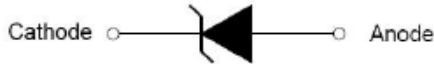


**SMA**

**Features**

Low forward voltage drop  
 Guarding protection  
 Glass passivated junction  
 High current capability  
 High efficiency operation  
 Extremely low thermal resistance  
 Halogen free and RoHS compliant

**Mechanical Data**

CASE: SMAJ(DO-214AC) Molded Plastic  
 Polarity: Color band denotes cathode end  
 Mounting position: ANY  
 Weight: 0.0025 ounces, 0.071 gram

**Maximum Ratings & Electrical Characteristics**

(Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.)

| CHARACTERISTICS  | SYMBOL          | SS54A         | SS56A | SS510A      | UNITS              |
|--|-----------------|---------------|-------|-------------|--------------------|
|  | Marking         | SS54          | SS56  | SS510       |                    |
| Maximum repetitive peak reverse voltage  | $V_{RRM}$       | 40            | 60    | 100         | V                  |
| Maximum RMS voltage  | $V_{RWS}$       | 28            | 42    | 70          | V                  |
| Maximum DC blocking voltage  | $V_{DC}$        | 40            | 60    | 100         | V                  |
| Maximum average forward rectified current at $T_L=90^\circ\text{C}$                                    | $I_{F(AV)}$     | 5.0           |       |             | A                  |
| Peak forward surge current 8.3ms single half-sine-wave   | $I_{FSM}$       | 70            |       |             | A                  |
| Maximum instantaneous forward voltage at $I_{FM}=5.0\text{A}$ (NOTE1)                                  | $V_F$           | 0.55          | 0.70  | 0.85        | V                  |
| Maximum DC reverse current $T_J=25^\circ\text{C}$ at rated DC blocking voltage $T_J=125^\circ\text{C}$ | $I_R$           | 0.5<br>50.0   |       | 0.1<br>10.0 | m A                |
| Maximum thermal resistance   | $R_{\theta JL}$ | 60            |       |             | $^\circ\text{C/W}$ |
| Operating temperature range  | $T_J$           | -55 ---- +125 |       |             | $^\circ\text{C}$   |
| Storage temperature range  | $T_{STG}$       | -55 ---- +150 |       |             | $^\circ\text{C}$   |

NOTE: 1. Pulse test: Pulse width 300us, duty cycle 1 %

**Summary of Packing Options**

| Package | Packing Description | Packing Quantity | Industry Standard |
|---------|---------------------|------------------|-------------------|
| SMA     | Tape/Reel, 11" reel | 5000             | EIA-481-1         |

## Ratings and Characteristic Curves

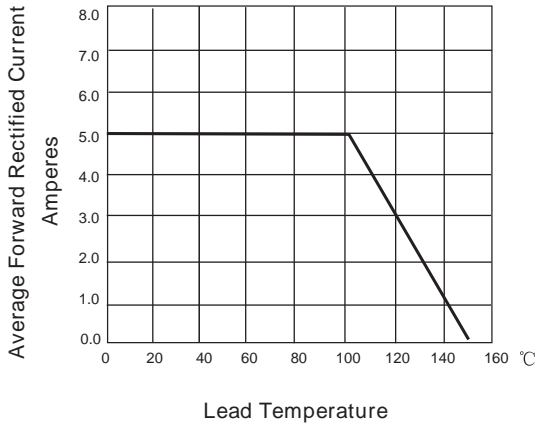


FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

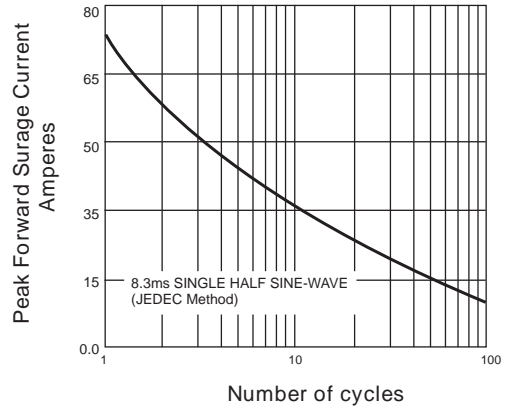


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

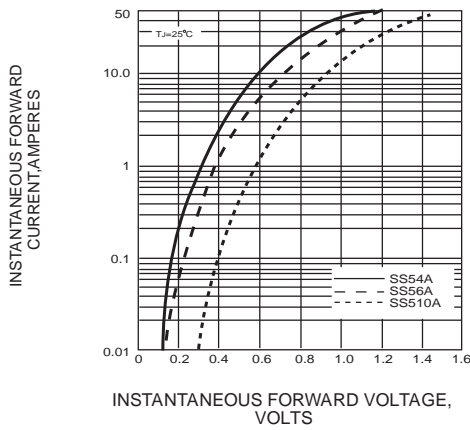


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

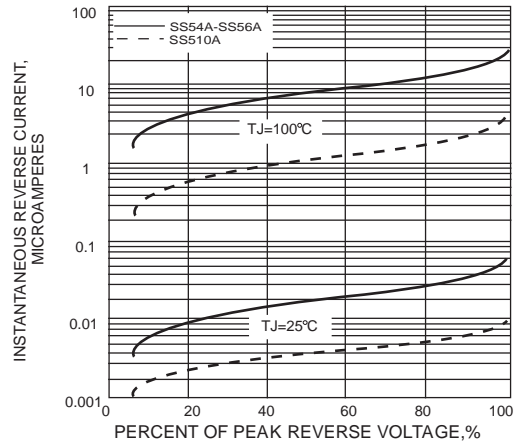


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

## Package Outline Dimensions: SMA(DO-214AC)

| Dim | Millimeters |      | Inches |       |
|-----|-------------|------|--------|-------|
|     | Min         | Max  | Min    | Max   |
| L   | 4.1         | 4.3  | 0.161  | 0.169 |
| D   | 2.5         | 2.7  | 0.098  | 0.106 |
| D1  | 1.3         | 1.5  | 0.051  | 0.059 |
| T   | 4.8         | 5.2  | 0.189  | 0.205 |
| T1  | 0.9         | 1.5  | 0.035  | 0.060 |
| d   | -           | 0.2  | -      | 0.008 |
| H   | 2.05        | 2.35 | 0.081  | 0.093 |
| H1  | 2.0         | 2.2  | 0.079  | 0.087 |

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