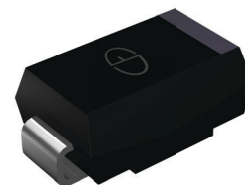


Features

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Low forward voltage drop
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals



Package: DO-214AC (SMA)

Mechanical Data

- Case: Molded plastic, SMA
- Terminals: Solder plated, solderable per MIL-STD-750, method 2026 guaranteed
- Polarity: Color band denotes cathode end
- Packaging: 12mm tape per EIA STD RS-481
- Weight: 0.002 ounce, 0.064 gram

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or

inductive load. For capacitive load, derate current by 20%.

| | Symbol | M1 | M2 | M3 | M4 | M5 | M6 | M7 | Unit |
|--|-----------------|-------------|-----|-----|-----|-----|-----|------|--------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current at $T_L=75^\circ\text{C}$ | $I_{F(AV)}$ | 1.0 | | | | | | | A |
| Peak Forward Surge Current, (8.3ms single half-sine-wave superimposed on rated load, JEDEC method) | I_{FSM} | 30 | | | | | | | A |
| Maximum Forward Voltage at 1.0A | V_F | 1.1 | | | | | | | V |
| Maximum Reverse Current at $T_A=25^\circ\text{C}$ | I_R | 5.0 | | | | | | | μA |
| Rated DC Blocking Voltage $T_A=125^\circ\text{C}$ | | 100 | | | | | | | |
| Typical Junction Capacitance (Note 1) | C_J | 12 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta JA}$ | 28 | | | | | | | $^\circ\text{C/W}$ |
| Maximum Reverse Recovery Time (Note 3) | T_{RR} | 2.5 | | | | | | | μs |
| Operating Junction Temperature Range | T_J | -55 to +150 | | | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

Notes:

1, Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2, Thermal resistance from junction to ambient mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas

3, Reverse recovery test condition: $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{RR}=0.25\text{A}$.

Ratings and Characteristic Curves

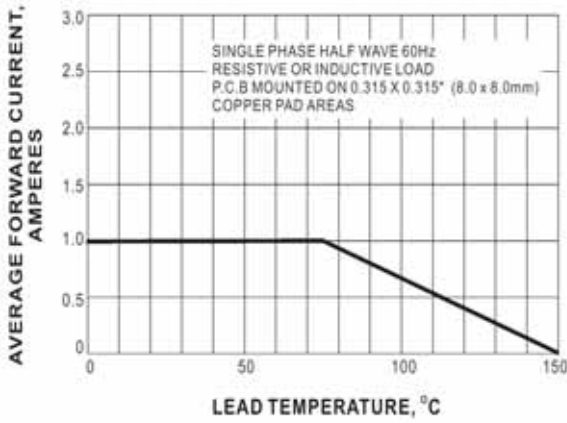


Fig.1-FORWARD CURRENT DERATING CURVE

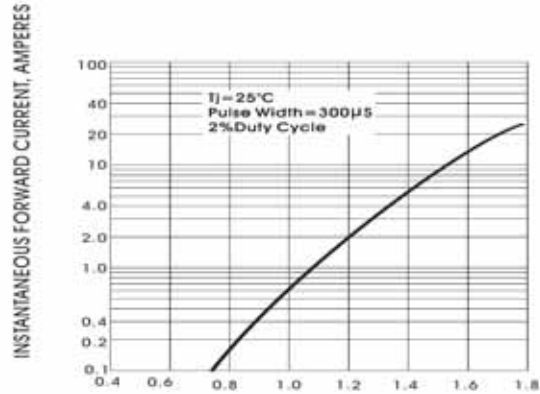


Fig. 2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER ELEMENT

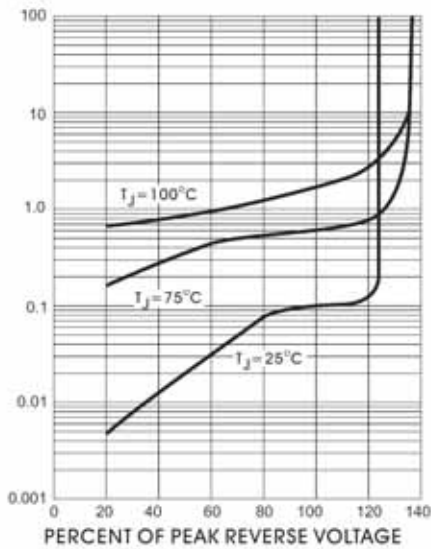


Fig. 3- TYPICAL REAK REVERSE CHARACTERISTICS

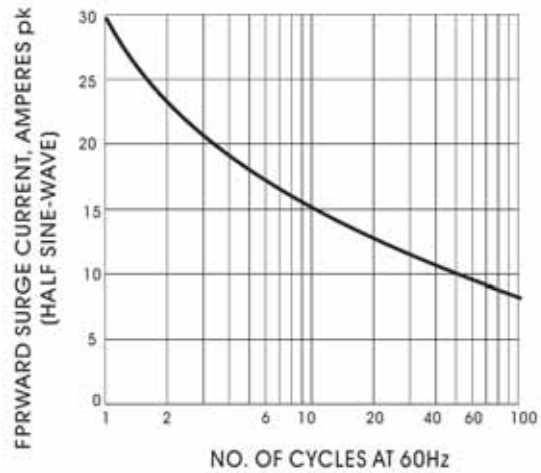


Fig. 4- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

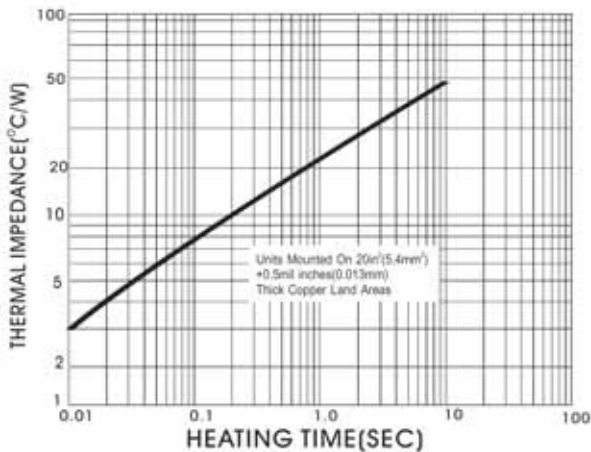


Fig. 5- TRANSIENT THERMAL IMPEDANCE

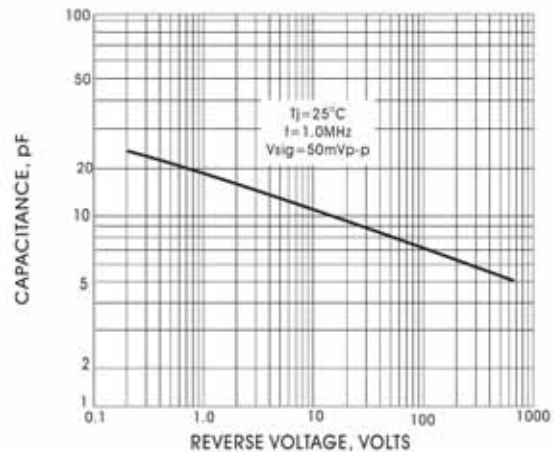
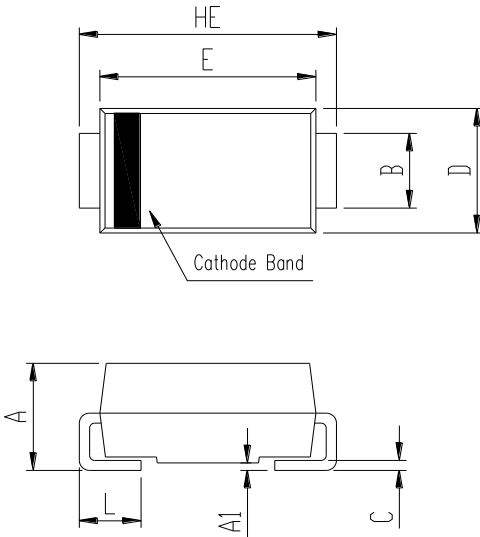


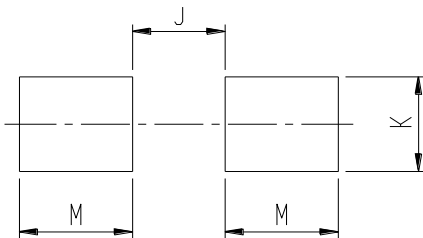
Fig. 6- TYPICAL JUNCTION CAPACITANCE PER ELEMENT

Package Outline Dimensions DO-214AC (SMA)



| SMA (DO-214AC) | | | | |
|----------------|-------------|------|--------|-------|
| DIM | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| A | 1.90 | 2.25 | 0.075 | 0.089 |
| A1 | 0.00 | 0.20 | 0.000 | 0.008 |
| B | 1.27 | 1.63 | 0.050 | 0.064 |
| C | 0.15 | 0.31 | 0.006 | 0.012 |
| D | 2.40 | 2.65 | 0.094 | 0.104 |
| E | 4.00 | 4.60 | 0.157 | 0.181 |
| HE | 4.80 | 5.20 | 0.189 | 0.205 |
| L | 0.80 | 1.50 | 0.031 | 0.059 |

Recommended Pad Layout



| Recommended Pad Layout (Reference ONLY) | | | | |
|---|-------------|------|--------|-------|
| DIM | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| J | - | 2.20 | - | 0.087 |
| K | 1.72 | - | 0.068 | - |
| M | 2.00 | - | 0.079 | - |