

M1~M7 Surface Mount Standard Rectifiers

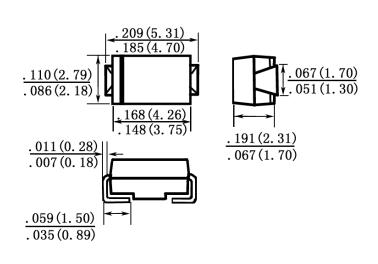
DO-214AC (SMA)

FEATURES

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

MECHANICAL DATA

Case: Molded plastic, SMX 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



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

Single phase, half wave, $60H_Z$, resistive or inductive load.

For capacitive load, derate current by 20%.

| | Symbols | M1 | M2 | М3 | M4 | M5 | M6 | M7 | Units |
|--------------------------------------------------|---------------------|-------------|-----|-----|-----|-----|-----|------|------------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current | Т | 1.0 | | | | | | | Атр |
| at T _L =75 | I _(AV) | | | | | | | | |
| Peak Forward Surge Current, | | | | | | | | | |
| 8.3ms single half-sine-wave | I _{FSM} 30 | | | | | | | | Amp |
| superimposed on rated load (JEDEC method) | | | | | | | | | |
| Maximum Forward Voltage at 1.0A | V _F | 1.1 | | | | | | | Volts |
| Maximum Reverse Current at T _A =25 | т | 5.0 100 | | | | | | | μАтр |
| at Rated DC Blocking Voltage T _A =125 | I _R | | | | | | | | |
| Typical Junction Capacitance (Note 1) | CJ | 12 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta JA}$ | 28 | | | | | | | / W |
| Maximum Reverse Recovery Time (Note 3) | T _{RR} | 2.5 | | | | | | | μS |
| Operating Junction Temperature Range | T _J | -55 to +150 | | | | | | | |
| Storage Temperature Range | Tstg | -55 to +150 | | | | | | | |

NOTES:

1- Measured at 1 MH_Z 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 Conditions : $I_F=0.5A$ $I_R=1A$ $I_{RR}=0.25A$.





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Characteristic Curves (T_A=25 $^{\circ}$ C unless otherwise noted)

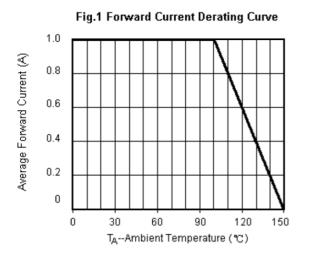


Fig.3 Typical Instantaneous Forward Characteristics

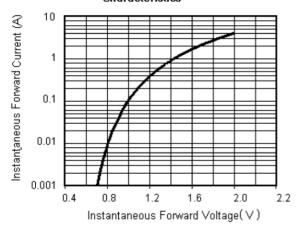
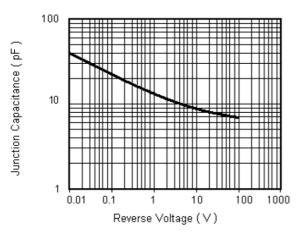


Fig.5 Typical Junction Capacitance



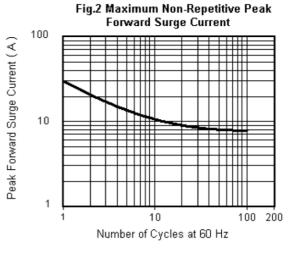
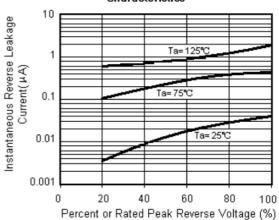
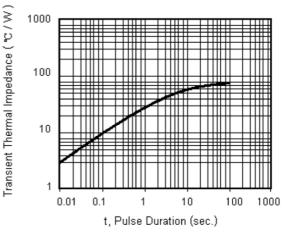


Fig.4 Typical Reverse Leakage Characteristics









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