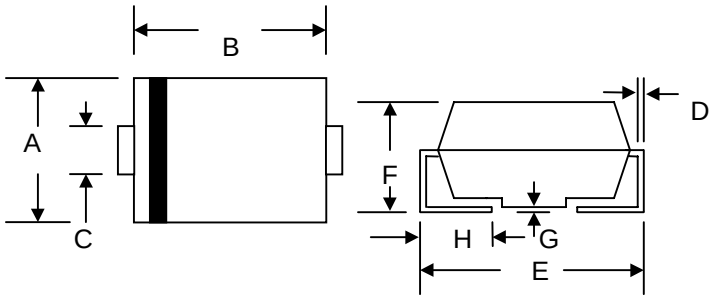
# M1 – M7

## 1.0A SURFACE MOUNT GLASS PASSIVATED RECTIFIER

## Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop
- Surge Overload Rating to 30A Peak
- Low Power Loss
- Built-in Strain Relief
- Plastic Case Material has UL Flammability Classification Rating 94V-O




## Mechanical Data

- Case: Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.064 grams (approx.)

| SMA/DO-214AC | | |
|---|---|---|
| **Dim** | **Min** | **Max** |
| **A** | 2.50 | 2.90 |
| **B** | 4.00 | 4.60 |
| **C** | 1.40 | 1.60 |
| **D** | 0.152 | 0.305 |
| **E** | 4.80 | 5.28 |
| **F** | 2.00 | 2.44 |
| **G** | 0.051 | 0.203 |
| **H** | 0.76 | 1.52 |
| **All Dimensions in mm** | | |

## Maximum Ratings and Electrical Characteristics @$T_A$=25°C unless otherwise specified

| Characteristic | Symbol | M1 | M2 | M3 | M4 | M5 | M6 | M7 | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current @$T_L$ = 100°C | $I_O$ | 1.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 30 | | | | | | | A |
| Forward Voltage @$I_F$ = 1.0A | $V_{FM}$ | 1.10 | | | | | | | V |
| Peak Reverse Current @$T_A$ = 25°C<br>At Rated DC Blocking Voltage @$T_A$ = 125°C | $I_{RM}$ | 5.0<br>200 | | | | | | | μA |
| Reverse Recovery Time (Note 1) | $t_{rr}$ | 2.5 | | | | | | | μS |
| Typical Junction Capacitance (Note 2) | $C_j$ | 15 | | | | | | | pF |
| Typical Thermal Resistance (Note 3) | $R_{\theta JL}$ | 30 | | | | | | | K/W |
| Operating and Storage Temperature Range | $T_j$, $T_{STG}$ | -65 to +175 | | | | | | | °C |

Note: 1. Measured with $I_F$ = 0.5A, $I_R$ = 1.0A, $I_{rr}$ = 0.25A,
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
3. Mounted on P.C. Board with 8.0mm$^2$ land area.

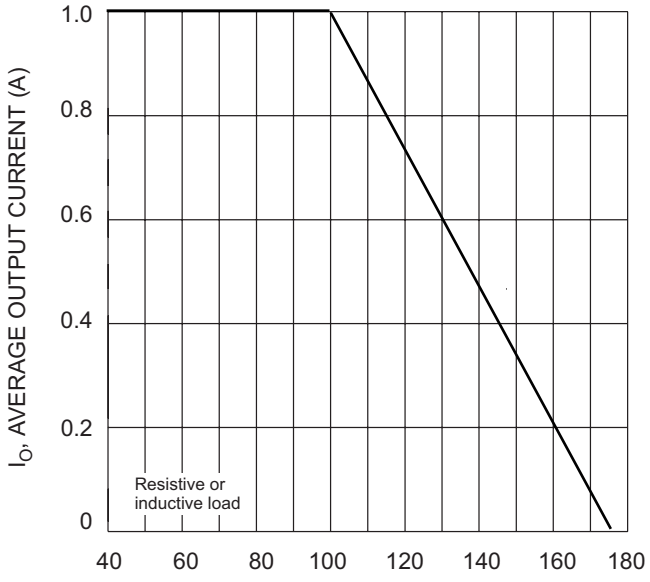



Fig. 1 Forward Current Derating Curve

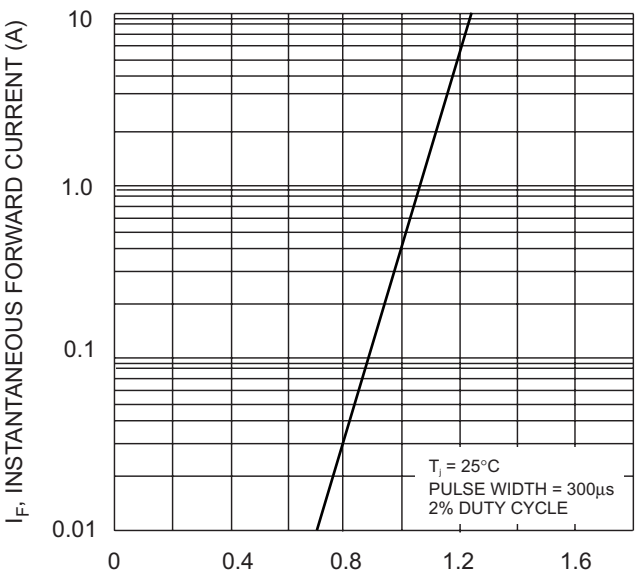



Fig. 2 Typical Forward Characteristics

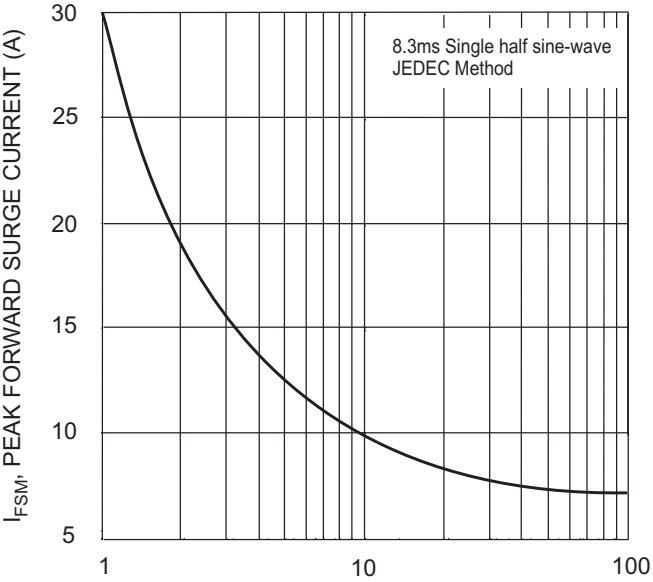



Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

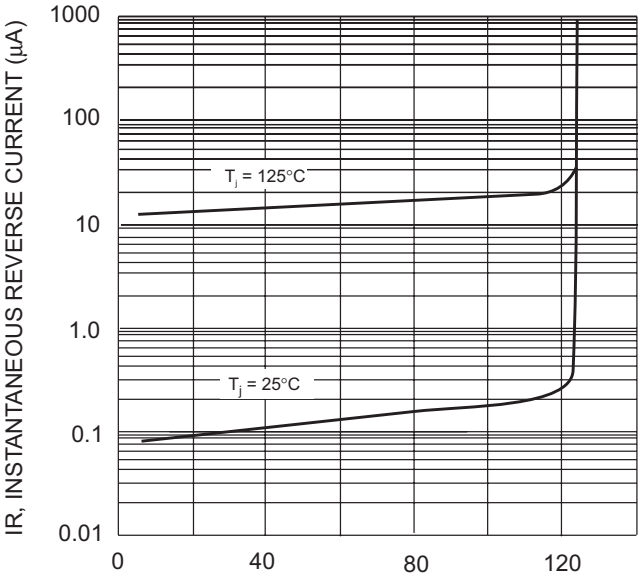



Fig. 4 Typical Reverse Characteristics

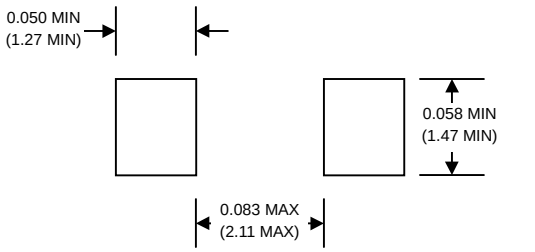
 

## ORDERING INFORMATION

| Product No.◆ | Package Type | Shipping Quantity |
|---|---|---|
| M1-T1 | SMA | 1800/Tape & Reel |
| **M1-T3** | SMA | 5000/Tape & Reel |
| M2-T1 | SMA | 1800/Tape & Reel |
| **M2-T3** | SMA | 5000/Tape & Reel |
| M3-T1 | SMA | 1800/Tape & Reel |
| **M3-T3** | SMA | 5000/Tape & Reel |
| M4-T1 | SMA | 1800/Tape & Reel |
| **M4-T3** | SMA | 5000/Tape & Reel |
| M5-T1 | SMA | 1800/Tape & Reel |
| **M5-T3** | SMA | 5000/Tape & Reel |
| M6-T1 | SMA | 1800/Tape & Reel |
| **M6-T3** | SMA | 5000/Tape & Reel |
| M7-T1 | SMA | 1800/Tape & Reel |
| **M7-T3** | SMA | 5000/Tape & Reel |

Products listed in **bold** are WTE **Preferred** devices.
◆T1 suffix refers to a 7" reel. T3 suffix refers to a 13" reel.
Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

## RECOMMENDED FOOTPRINT



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