



TIGER ELECTRONIC CO.,LTD

US1A THRU US1M

1.0 AMP. HIGH EFFICIENT RECOVERY SURFACE MOUNT RECTIFIERS

Voltage Range
50 to 1000 VOLTS
Current
1.0 Amperes

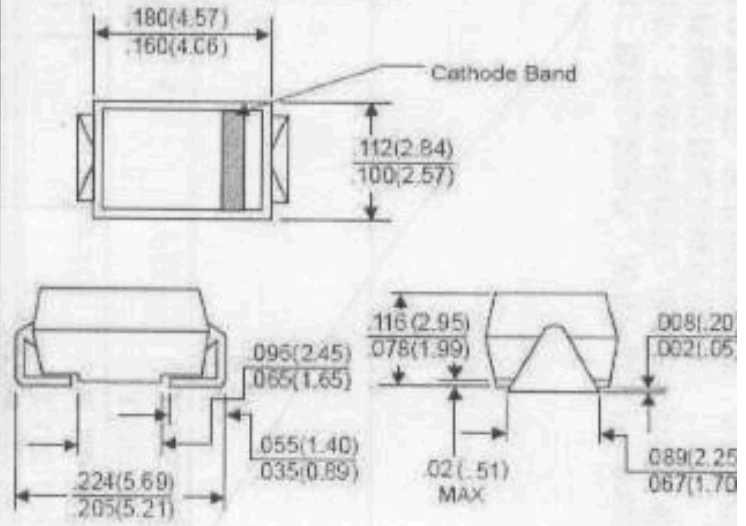
Features

- Glass passivated junction chip
- For surface mounted application
- Low profile package
- Built-in strain relief
- Ideal for automated placement
- Easy pick and place
- Ultrafast recovery time for high efficiency
- Low forward voltage, low power loss
- High temperature soldering guaranteed:
260°C/10 seconds on terminals
- Plastic material used carries Underwriters
Laboratory Classification 94V0

Mechanical Data

- Cases: Molded plastic
- Terminals: Solder plated, solderable per
MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Weight: 0.064 gram

SMA-W



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

| Type Number | Symbol | US1A | US1B | US1D | US1G | US1J | US1K | US1M | Units | |
|--|------------------------------------|------|------|------|--------------|------|------|------|--------------------------------|---|
| Maximum Recurrent 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 @ $T_L=110^\circ\text{C}$ | $I_{(AV)}$ | 1.0 | | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single -half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 30 | | | | | | | | A |
| Maximum Instantaneous Forward Voltage @ 1.0A | V_F | | 1.0 | | | | 1.7 | | V | |
| Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$ | I_R | | | | 5.0 | | | | μA μA | |
| Maximum Reverse Recovery Time (Note 1) | T_{rr} | | 50 | | | | 75 | | nS | |
| Typical Junction Capacitance (Note 2) | C_j | | 15 | | | | 10 | | pF | |
| Maximum Thermal Resistance (Note 3) | $R_{\theta JA}$ $R_{\theta JL}$ | | | | 75 27 | | | | $^\circ\text{C/W}$ | |
| Operating Temperature Range | T_J | | | | -55 to +150 | | | | $^\circ\text{C}$ | |
| Storage Temperature Range | T_{STG} | | | | -55 to + 150 | | | | $^\circ\text{C}$ | |

- Notes:
1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
 2. Measured at 1 MHz and Applied $V_R=4.0$ Volts
 3. P.C.B. Mounted on $0.2 \times 0.2"$ ($5.0 \times 5.0\text{mm}$) Copper Pad Area.