

Features

- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates Compliant. See Ordering Information)
- Glass Passivated Chip
- Ultra Fast Switching For High Efficiency
- For Surface Mounted Applications
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- AEC-Q101 qualified

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 28°C/W Junction to Lead(Note 3)
- Thermal Resistance: 75°C/W Junction to Ambient(Note 3)

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| US1MHE3 | US1M | 1000V | 700V | 1000V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

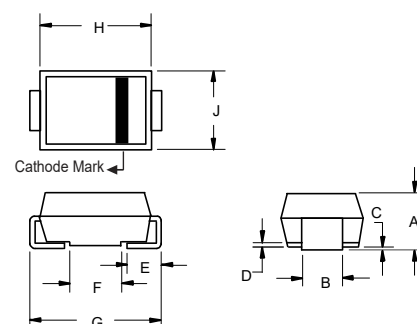
| | | | |
|---|-------------|--------------|--|
| Average Forward Current | $I_{F(AV)}$ | 1.0A | $T_L=110^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 30A | 8.3ms, Half Sine |
| Maximum Instantaneous Forward Voltage | V_F | 1.7V | $I_{FM}=1.0\text{A}; T_J=25^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5μA 100μA | $T_J=25^\circ\text{C};$ $T_J=125^\circ\text{C}$ |
| Maximum Reverse Recovery Time | t_{rr} | 75ns | $I_F=0.5\text{A}; I_R=1.0\text{A};$ $I_{rr}=0.25\text{A}$ |
| Typical Junction Capacitance | C_J | 10pF | Measured at 1.0MHz, $V_R=4.0\text{V}$ |

Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
3. Mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas.

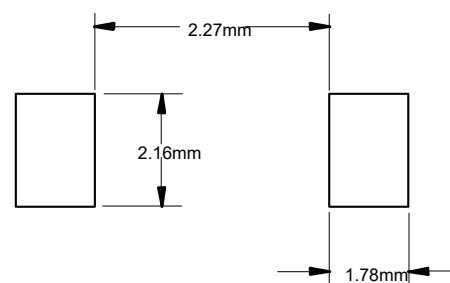
1 Amp Ultra Fast Rectifier 1000 Volts

SMA (DO-214AC)



| DIMENSIONS | | | | | |
|------------|--------|-------|-------|-------|------|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | 0.075 | 0.096 | 1.90 | 2.44 | |
| B | 0.050 | 0.064 | 1.27 | 1.63 | |
| C | 0.002 | 0.008 | 0.051 | 0.203 | |
| D | --- | 0.020 | --- | 0.51 | |
| E | 0.030 | 0.060 | 0.76 | 1.52 | |
| F | 0.065 | 0.091 | 1.65 | 2.32 | |
| G | 0.189 | 0.220 | 4.80 | 5.59 | |
| H | 0.157 | 0.187 | 4.00 | 4.75 | |
| J | 0.090 | 0.115 | 2.25 | 2.92 | |

SUGGESTED SOLDER PAD LAYOUT



Curve Characteristics

Fig. 1 - Forward Current Derating Curve

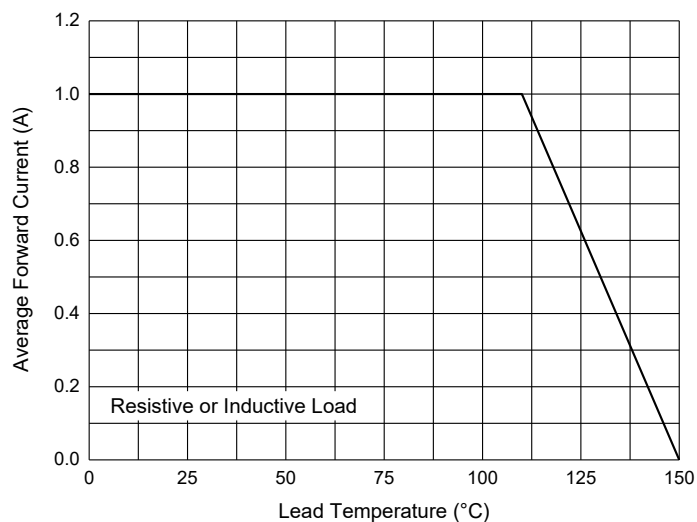


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

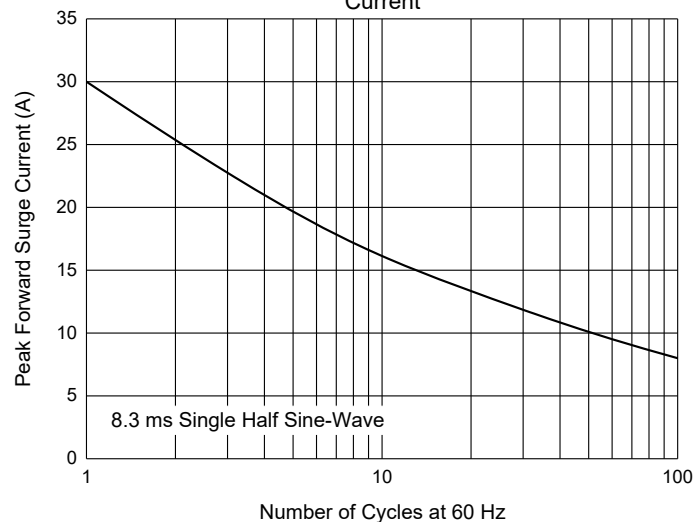


Fig. 3 - Typical Instantaneous Forward Characteristics

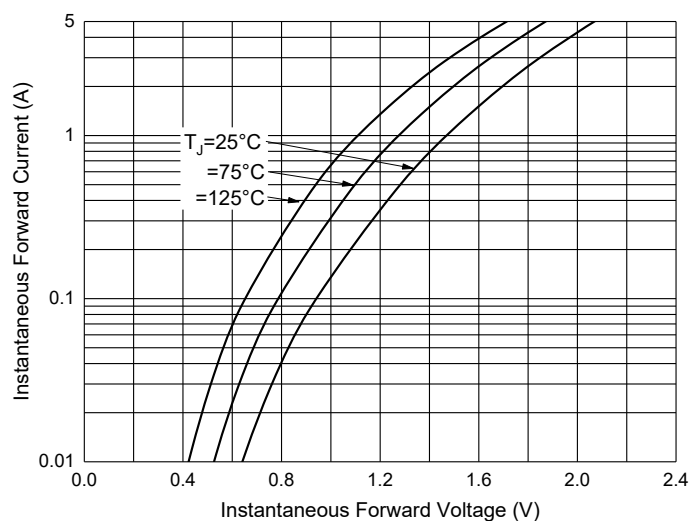
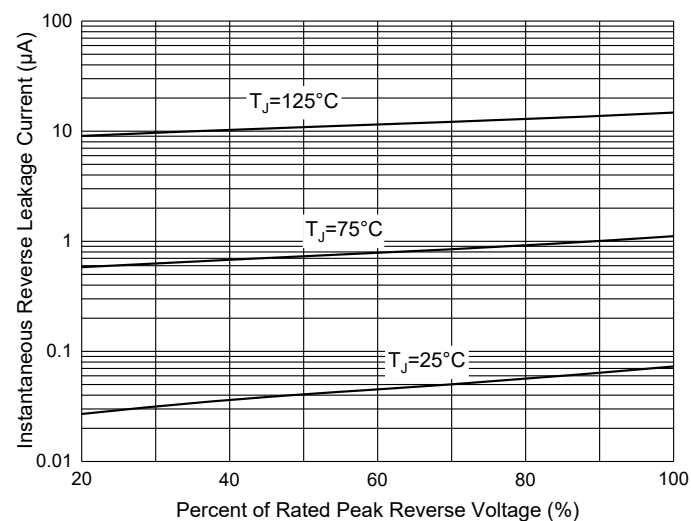


Fig. 4 - Typical Reverse Leakage Characteristics



Ordering Information

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 5Kpcs/Reel |

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