

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

Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Maximum Thermal Resistance: 30°C/W Junction to Lead

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| US1A | US1A | 50V | 35V | 50V |
| US1B | US1B | 100V | 70V | 100V |
| US1C | US1C | 150V | 105V | 150V |
| US1D | US1D | 200V | 140V | 200V |
| US1G | US1G | 400V | 280V | 400V |
| US1J | US1J | 600V | 420V | 600V |
| US1K | US1K | 800V | 560V | 800V |
| US1M | US1M | 1000V | 700V | 1000V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

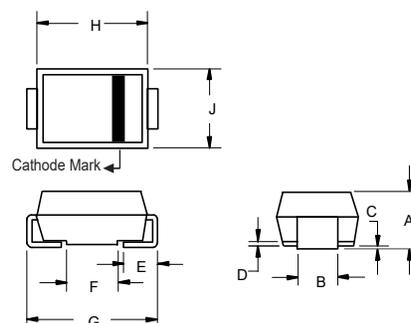
| | | | |
|---|-------------|------------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 1.0A | $T_L=110^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 30A | 8.3ms, Half Sine |
| Current Squared Time | I^2t | 3.735A ² /s | |
| Maximum Instantaneous Forward Voltage | V_F | 1.0V 1.4V 1.7V | $I_{FM}=1.0A$; $T_A=25^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5.0μA 50μA | $T_A=25^\circ\text{C}$; $T_A=100^\circ\text{C}$ |
| Maximum Reverse Recovery Time | t_{rr} | 50ns 75ns | $I_F=0.5A$; $I_R=1.0A$; $I_{rr}=0.25A$ |
| Typical Junction Capacitance | C_J | 20pF 10pF | Measured at 1.0MHz, $V_R=4.0V$ |

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.

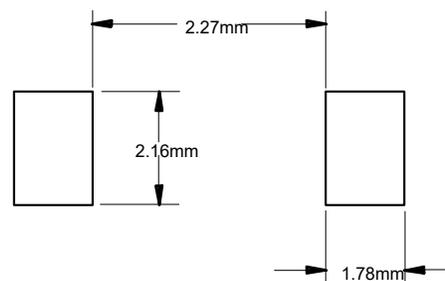
1 Amp Ultra Fast Rectifier 50 to 1000 Volts

SMA (DO-214AC)



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-----------|-----------|-----------|------|
| | INCHES | | MM | | |
| A | MIN 0.075 | MAX 0.090 | MIN 1.90 | MAX 2.29 | |
| B | MIN 0.050 | MAX 0.064 | MIN 1.27 | MAX 1.63 | |
| C | MIN 0.002 | MAX 0.008 | MIN 0.051 | MAX 0.203 | |
| D | --- | MAX 0.020 | --- | MAX 0.51 | |
| E | MIN 0.030 | MAX 0.060 | MIN 0.76 | MAX 1.52 | |
| F | MIN 0.065 | MAX 0.091 | MIN 1.65 | MAX 2.32 | |
| G | MIN 0.189 | MAX 0.220 | MIN 4.80 | MAX 5.59 | |
| H | MIN 0.157 | MAX 0.187 | MIN 4.00 | MAX 4.75 | |
| J | MIN 0.090 | MAX 0.115 | MIN 2.25 | MAX 2.92 | |

SUGGESTED SOLDER PAD LAYOUT



Curve Characteristics

Fig. 1 - Forward Current Derating Curve

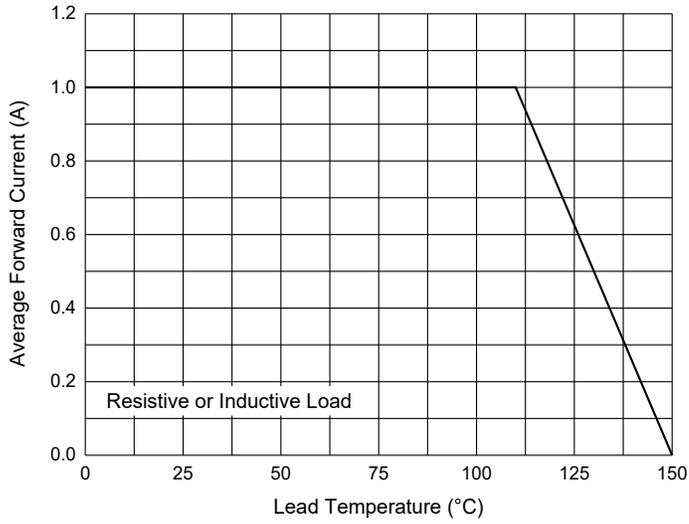


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

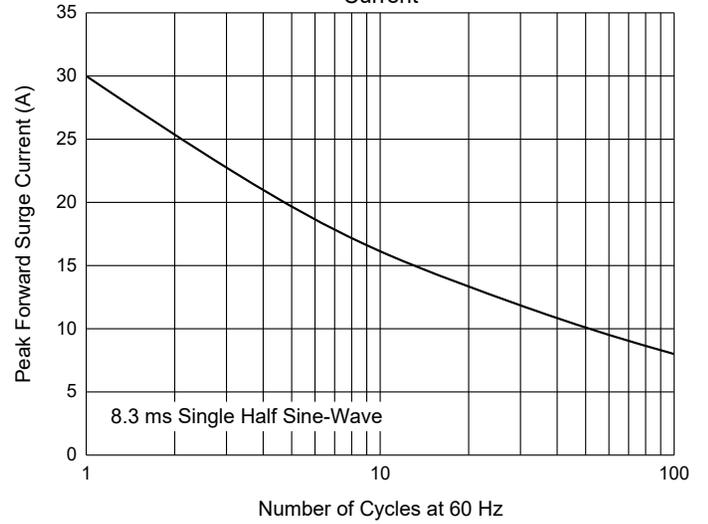


Fig. 3 - Typical Instantaneous Forward Characteristics

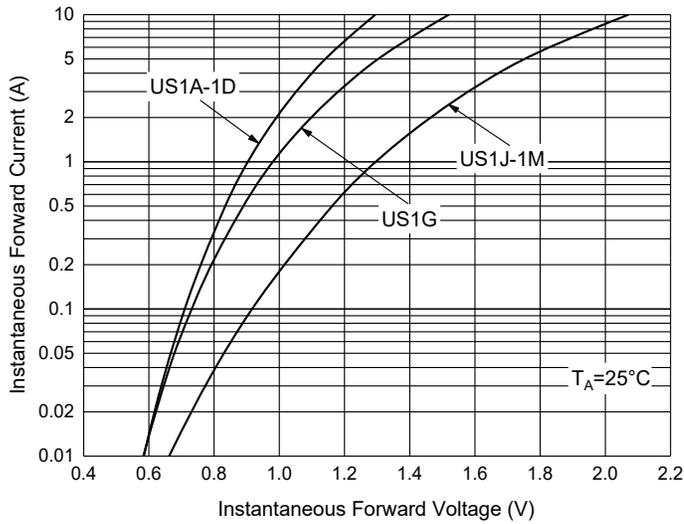
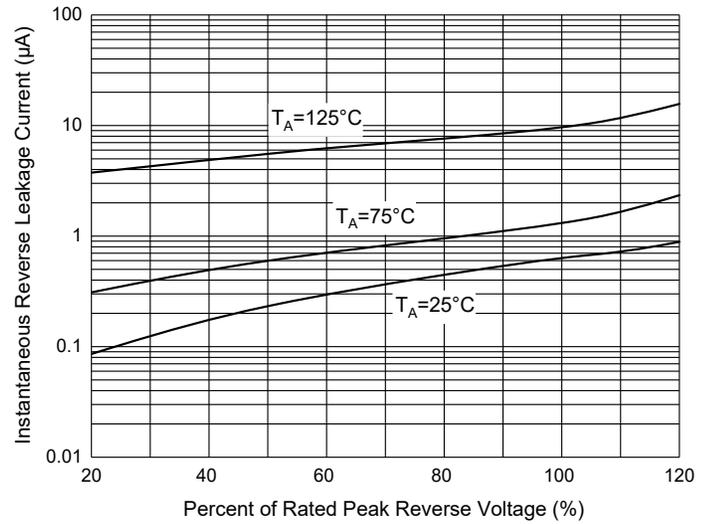


Fig. 4 - Typical Reverse Leakage Characteristics



Ordering Information

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

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