

Features

- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates Compliant. See Ordering Information)
- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Super Fast Recovery Time For High Efficiency
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

Maximum Ratings

- Operating Junction Temperature Range: -50°C to +150°C
- Storage Temperature Range: -50°C to +150°C
- Maximum Thermal Resistance: 15°C/W Junction to Lead

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| US1Q | US1Q | 1200V | 840V | 1200V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|---------------------------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 1.0A | $T_A=55^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 30A | 8.3ms, Half Sine |
| Maximum Instantaneous Forward Voltage | V_F | 1.90V | $I_{FM}=1.0A$; $T_J=25^\circ\text{C}^*$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5.0 μA 30 μA | $T_J=25^\circ\text{C}$; $T_J=125^\circ\text{C}$ |
| Maximum Reverse Recovery Time | t_{rr} | 75ns | $I_F=0.5A$; $I_R=1.0A$; $I_{rr}=0.25A$ |
| Typical Junction Capacitance | C_J | 45pF | Measured at 1.0MHz; $V_R=4.0V$ |

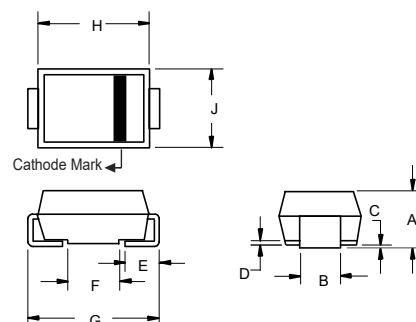
*Pulse Test: Pulse Width 200 μsec , Duty Cycle 2%

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.

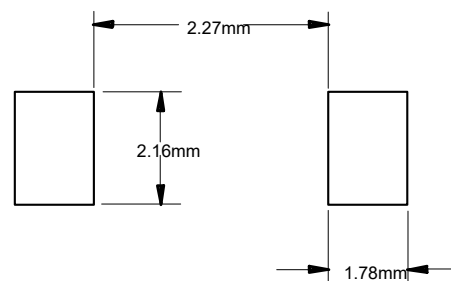
1 Amp Ultra Fast Rectifier 1200 Volts

SMA (DO-214AC)



| 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

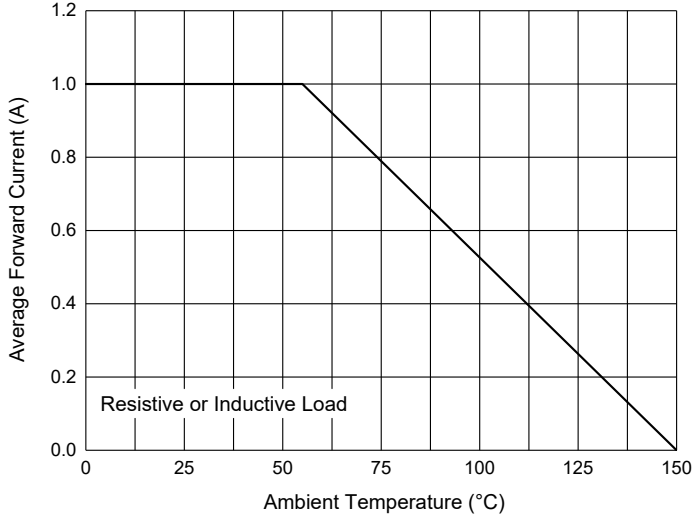


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

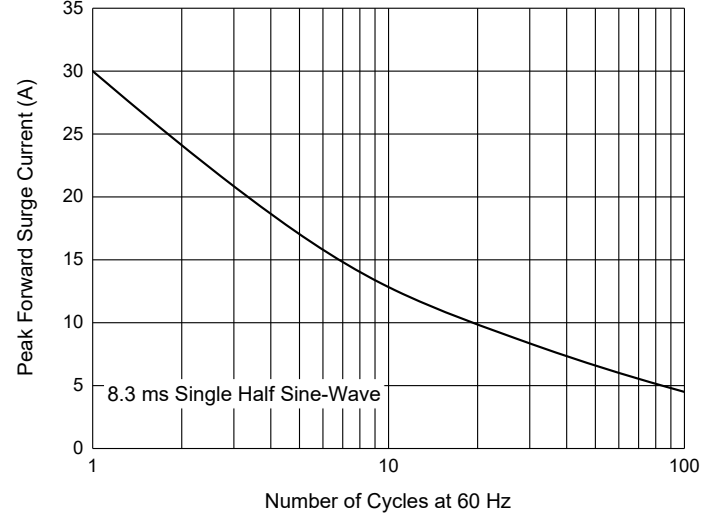


Fig. 3 - Typical Instantaneous Forward Characteristics

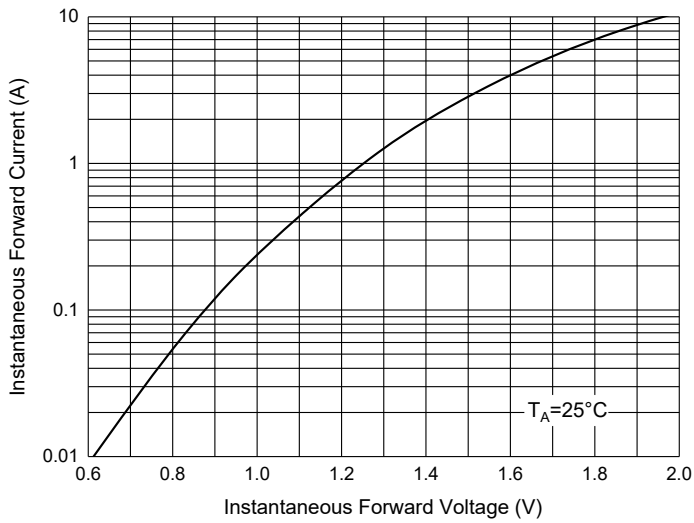
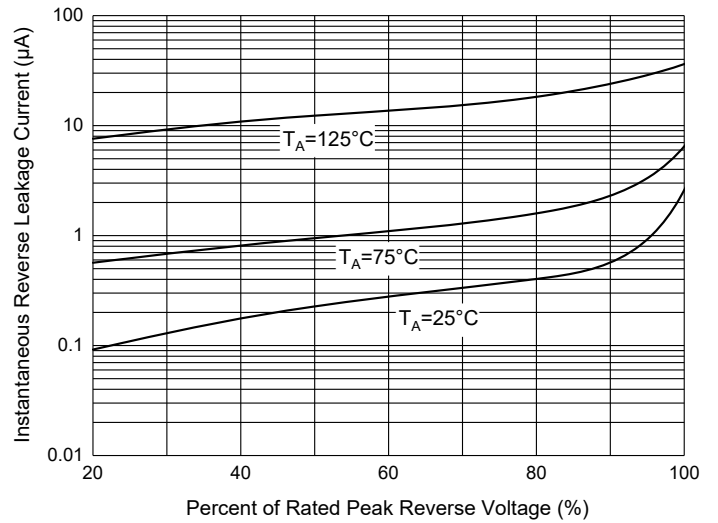


Fig. 4 - Typical Reverse Leakage Characteristics



Ordering Information

| Device | Packing |
|---------|-----------------------|
| US1Q-TP | Tape&Reel: 5Kpcs/Reel |

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