## Features

- Halogen Free. “Green” Device (Note 1)
- Glass Passivated Chip
- Super Fast Switching For High Efficiency
- Low Reverse Leakage Current
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

# 2 Amp Ultra Fast Rectifier 50 to 1000 Volts

## Maximum Ratings

- Operating Junction Temperature Range: -50ºC to +150ºC
- Storage Temperature Range: -50ºC to +150ºC
- Maximum Thermal Resistance; 20°C/W Junction to Lead

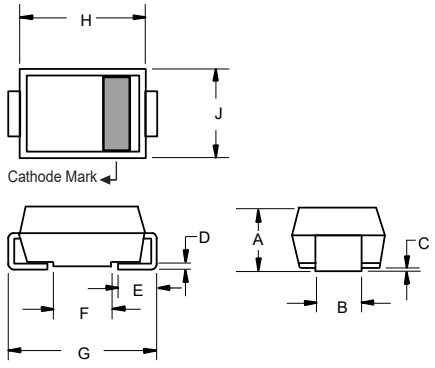
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|---|---|---|---|---|
| US2A | US2A | 50V | 35V | 50V |
| US2B | US2B | 100V | 70V | 100V |
| US2C | US2C | 150V | 105V | 150V |
| US2D | US2D | 200V | 140V | 200V |
| US2G | US2G | 400V | 280V | 400V |
| US2J | US2J | 600V | 420V | 600V |
| US2K | US2K | 800V | 560V | 800V |
| US2M | US2M | 1000V | 700V | 1000V |

### Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|---|---|---|
| Average Forward Current | $I_{F(AV)}$ | 2.0A | $T_L$=110ºC |
| Peak Forward Surge Current | $I_{FSM}$ | 50A | 8.3ms,Half Sine |
| Maximum Instantaneous Forward Voltage<br>US2A-US2D<br>US2G<br>US2J-US2M | $V_F$ | 1.0V<br>1.4V<br>1.65V | $I_{FM}$=2.0A;<br>$T_J$=25ºC |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$ | 5.0μA<br>200μA(Max)<br>16μA(Typ) | $T_J$=25ºC;<br>$T_J$=125ºC<br>$T_J$=125ºC |
| Maximum Reverse Recovery Time<br>US2A-US2G<br>US2J-US2M | $T_{RR}$ | 50ns<br>75ns | $I_F$=0.5A; $I_R$=1.0A;<br>Irr=0.25A |
| Typical Junction Capacitance | $C_J$ | 28pF | Measured at 1.0MHz<br>$V_R$=4.0V |

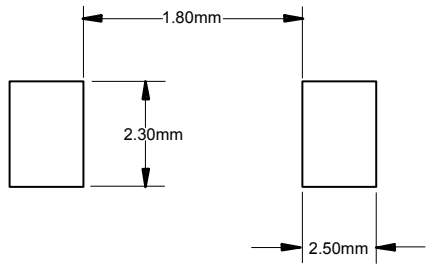
Note:
1.Halogen free "Green"products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2.High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.

## SMB (DO-214AA)




| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | 0.079 | 0.103 | 2.00 | 2.62 | |
| B | 0.075 | 0.087 | 1.91 | 2.21 | |
| C | 0.002 | 0.008 | 0.05 | 0.20 | |
| D | 0.006 | 0.012 | 0.15 | 0.31 | |
| E | 0.030 | 0.060 | 0.76 | 1.52 | |
| F | 0.065 | 0.091 | 1.65 | 2.32 | |
| G | 0.200 | 0.220 | 5.08 | 5.59 | |
| H | 0.160 | 0.191 | 4.06 | 4.85 | |
| J | 0.130 | 0.155 | 3.30 | 3.94 | |

**Solder Pad Layout**



## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

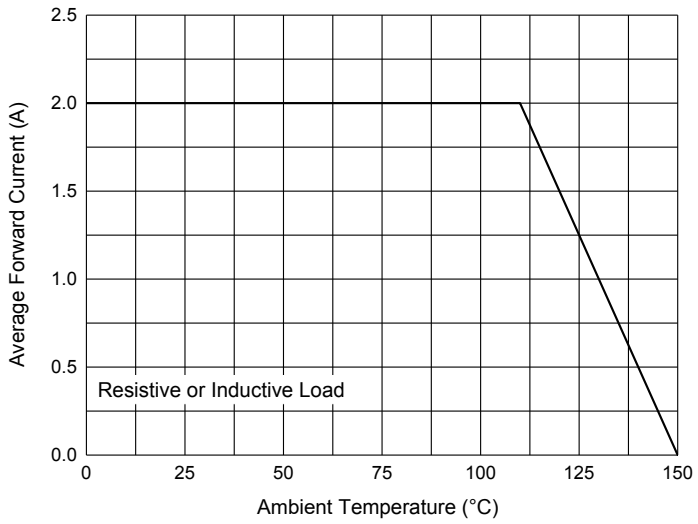



Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

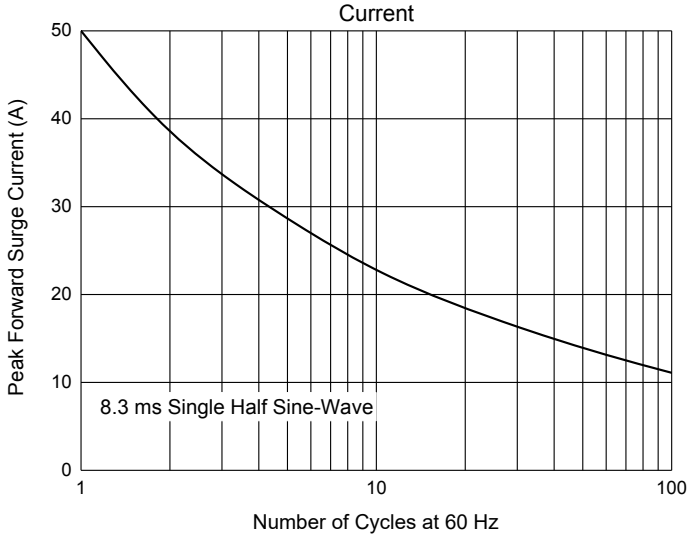



Fig. 3 - Typical Instantaneous Forward Characteristics

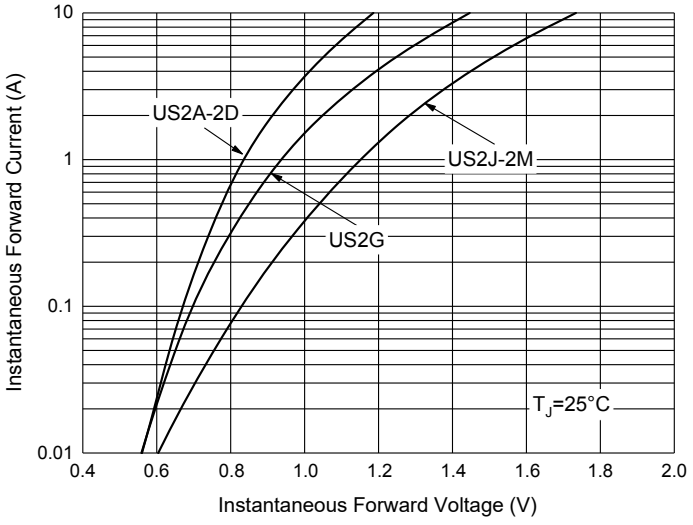
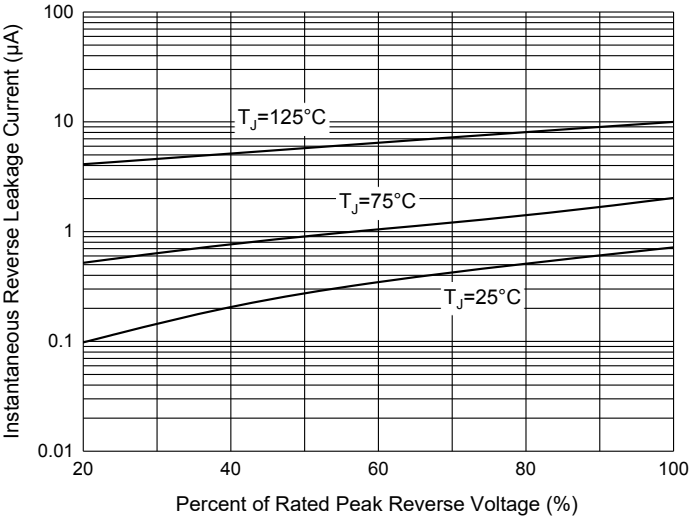



Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

| Device | Packing |
|---|---|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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