



# THE DATASHEET OF UFM16PL-TP



## Features

- Halogen Free. "Green" Device (Note 1)
- Ultra Fast Recovery
- High Reliability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance: 80°C/W Junction to Ambient

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| UFM11PL         | U1             | 50V                                    | 35V                 | 50V                         |
| UFM12PL         | U2             | 100V                                   | 70V                 | 100V                        |
| UFM13PL         | U3             | 200V                                   | 140V                | 200V                        |
| UFM14PL         | U4             | 400V                                   | 280V                | 400V                        |
| UFM15PL         | U5             | 600V                                   | 420V                | 600V                        |
| UFM16PL         | U6             | 800V                                   | 560V                | 800V                        |
| UFM17PL         | U7             | 1000V                                  | 700V                | 1000V                       |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

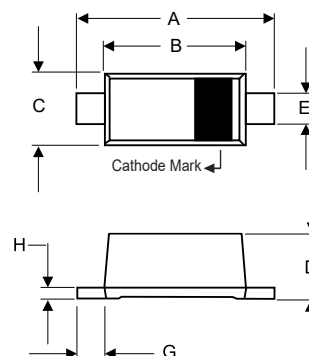
|   |             |            |  |
|---|-------------|------------|--|
| Average Forward Current                                 | $I_{F(AV)}$ | 1.0A       | $T_L=90^\circ\text{C}$                             |
| Peak Forward Surge Current                              | $I_{FSM}$   | 30A        | 8.3ms, Half Sine                                   |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | 1.0V       | $I_{FM}=1.0A;$<br>$T_A=25^\circ\text{C}$           |
| UFM11PL-UFM13PL   |             | 1.4V       |  |
| UFM14PL<br>UFM15PL-UFM17PL                              |             | 1.7V       |  |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 10 $\mu$ A | $T_A=25^\circ\text{C};$<br>$T_A=125^\circ\text{C}$ |
|   |             | 50 $\mu$ A |  |
| Maximum Reverse Recovery Time                           | $T_{RR}$    | 35ns       | $I_F=0.5A; I_R=1.0A;$<br>$I_{rr}=0.25A$            |
| UFM11PL-UFM13PL<br>UFM14PL                              |             | 50ns       |  |
| UFM15PL-UFM17PL   |             | 75ns       |  |
| Typical Junction Capacitance                            | $C_J$       | 20pF       | 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 Recovery Silicon Rectifier 50 to 1000 Volts

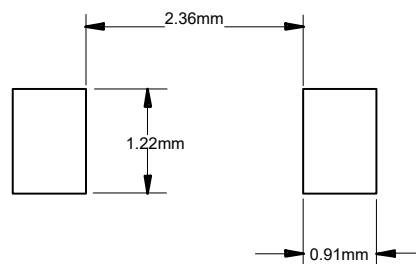
## SOD-123FL



## DIMENSIONS

| DIM | INCHES |       | MM   |      | NOTE |
|-----|--------|-------|------|------|------|
|     | MIN    | MAX   | MIN  | MAX  |      |
| A   | 0.130  | 0.152 | 3.30 | 3.85 |      |
| B   | 0.100  | 0.122 | 2.55 | 3.10 |      |
| C   | 0.055  | 0.075 | 1.40 | 1.90 |      |
| D   | 0.035  | 0.053 | 0.90 | 1.35 |      |
| E   | 0.020  | 0.041 | 0.50 | 1.05 |      |
| G   | 0.010  | ----  | 0.25 | ---- |      |
| H   | ----   | 0.010 | ---- | 0.25 |      |

## Suggested Solder Pad Layout



## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

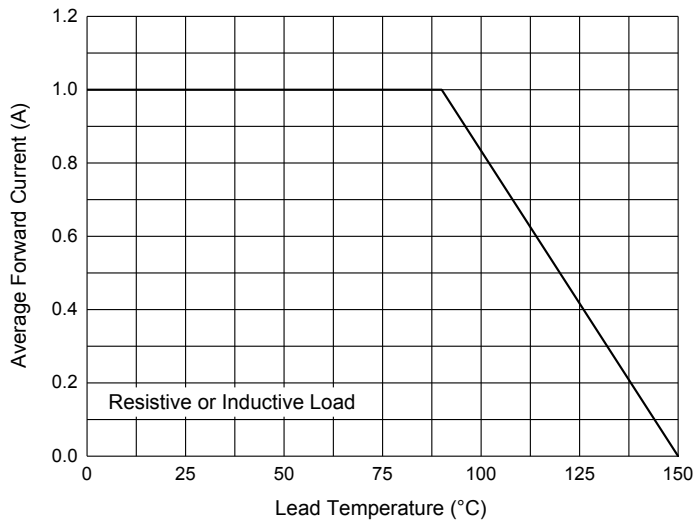


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

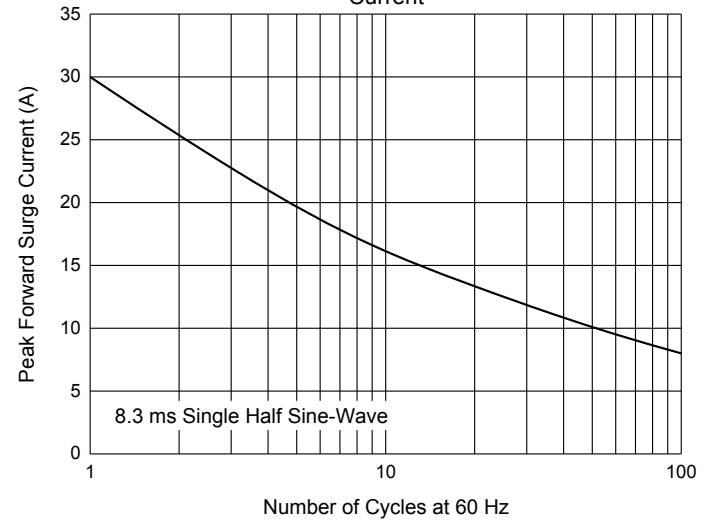


Fig. 3 - Typical Instantaneous Forward Characteristics

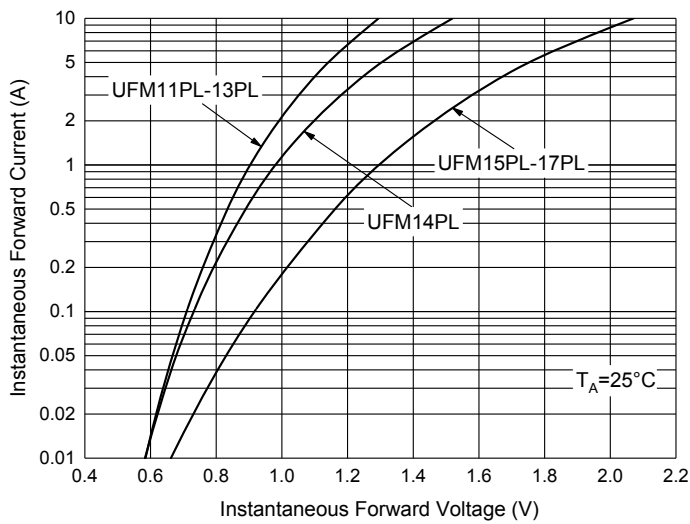
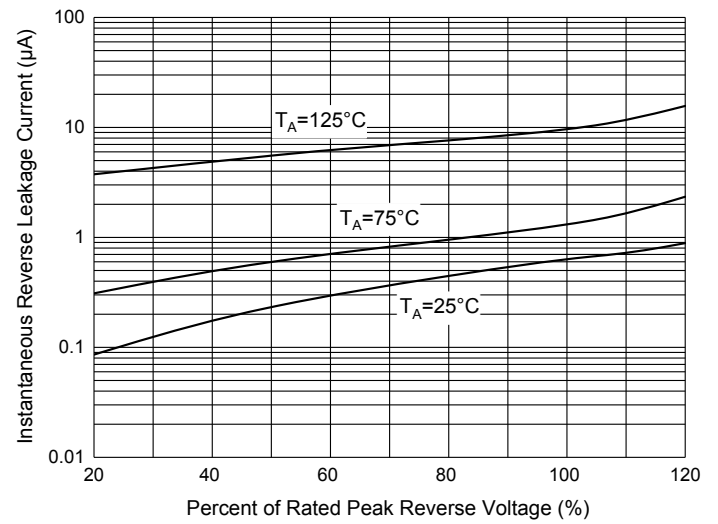


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

| Device         | Packing                 |
|----------------|-------------------------|
| Part Number-TP | Tape&Reel: 2.5Kpcs/Reel |

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