## Features

- For Surface Mount Application
- Fast Recovery Time For High Efficiency
- Glass Passivated Junction
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. “Green” Device (Note 1)
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant(Note 2)("P" Suffix Designates Compliant. See Ordering Information)

# 1.5 Amp Fast Recovery Rectifier 400 to 1000 Volts

## Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Typical Thermal Resistance: 20°C/W Junction to Case(Note 3)
- Typical Thermal Resistance: 30°C/W Junction to Lead(Note 3)
- Typical Thermal Resistance: 65°C/W Junction to Ambient(Note 3)

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|---|---|---|---|---|
| FSM154PL | F154 | 400V | 280V | 400V |
| FSM155PL | F155 | 600V | 420V | 600V |
| FSM157PL | F157 | 1000V | 700V | 1000V |

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

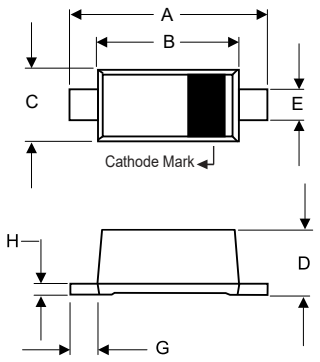
| | | | |
|---|---|---|---|
| Average Forward Current | $I_{F(AV)}$ | 1.5A | $T_L$=90ºC |
| Peak Forward Surge Current | $I_{FSM}$ | 45A | 8.3ms,Half Sine |
| Maximum Instantaneous Forward Voltage | $V_F$ | 1.30V | $I_{FM}$=1.5A; $T_J$=25ºC |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$ | 5.0μA<br>100μA | $T_J$=25ºC;<br>$T_J$=125ºC |
| Maximum Reverse Recovery Time<br>FSM154PL<br>FSM155PL<br>FSM157PL | $t_{rr}$ | <br>150ns<br>250ns<br>500ns | $I_F$=0.5A; $I_R$=1.0A; Irr=0.25A |
| Typical Junction Capacitance<br>FSM154PL<br>FSM155PL~FSM157PL | $C_J$ | <br>15pF<br>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 Exemptions Applied, See EU Directive Annex 7a.

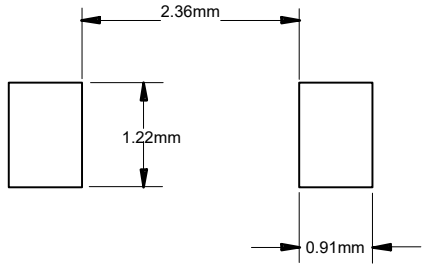
3. Mounted on P.C.B With 3mm*3mm Copper Pad Areas.

## 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

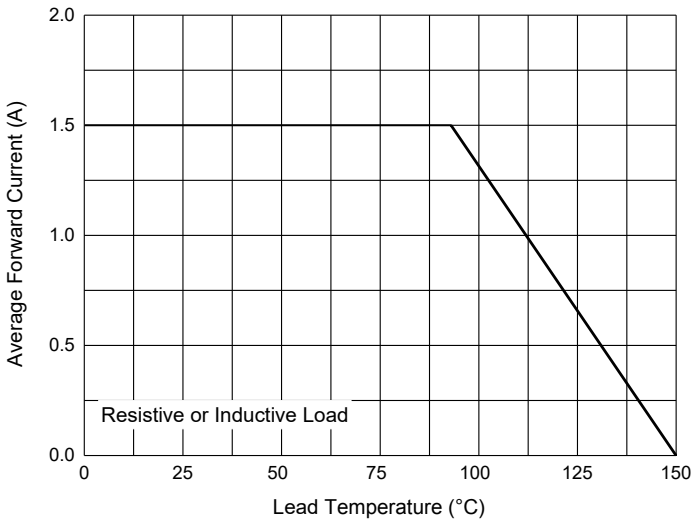



Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

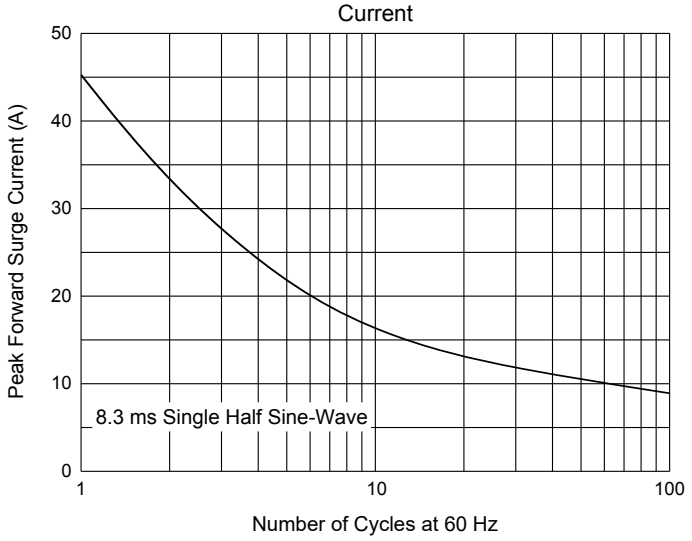



Fig. 3 - Typical Instantaneous Forward Characteristics

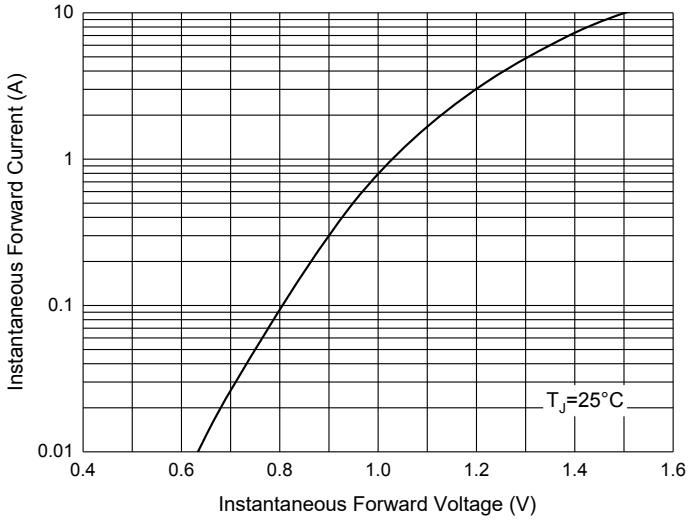
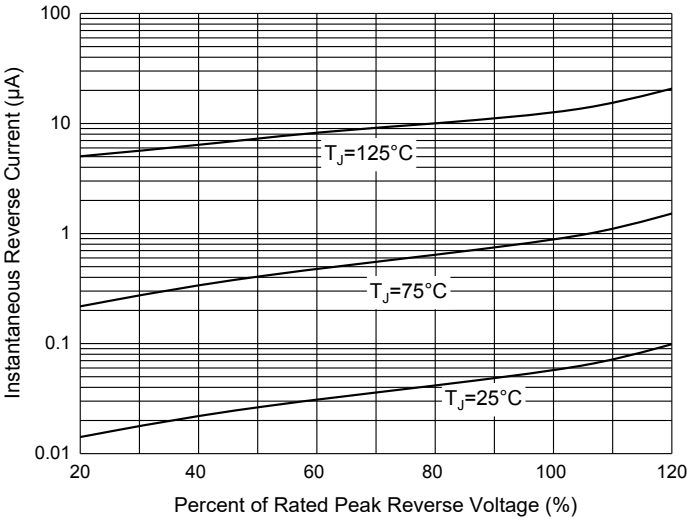



Fig. 4 - Typical Reverse Characteristics



## Ordering Information

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

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