

# SM5817PL THRU SM5819PL

## Schottky Barrier Diodes 20 to 40 Volts

### Features

- Halogen free available upon request by adding suffix "-HF"
- High Surge Capability
- Low Forward Voltage
- Low Profile Package
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)

### Mechanical Data

- Packaging: SOD-123FL
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking Code: SM5817PL---K2; SM5818PL---K3 ; SM5819PL---K4

### Maximum Ratings

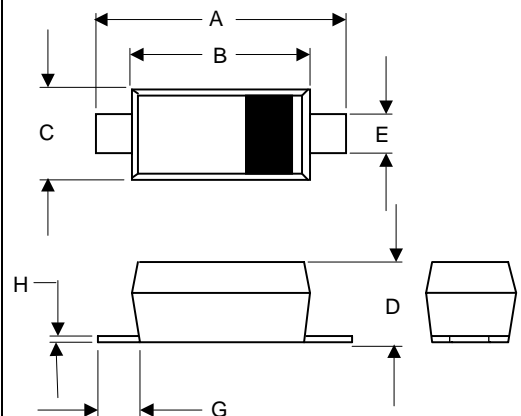
| Symbol            | Rating                            | Rating                           | Unit  |                |   |
|-------------------|-----------------------------------|----------------------------------|---|----------------|---|
| V <sub>RMS</sub>  | Maximum RMS Voltage               | SM5817PL<br>SM5818PL<br>SM5819PL | 14<br>21<br>28  | V              |   |
|                   | V <sub>RRM</sub>                  | Repetitive Reverse Voltage       | SM5817PL<br>SM5818PL<br>SM5819PL  | 20<br>30<br>40 | V |
|                   |                                   | I <sub>F(AV)</sub>               | Rectified Current (Average) Half Wave Rectification with Resist. Load at T <sub>L</sub> =90°C | 1.0            | A |
| I <sub>FSM</sub>  |                                   |                                  | Surge Forward Current at ,T <sub>L</sub> =70°C,8.3ms  | 30             | A |
| R <sub>thJA</sub> | Typical Thermal Resistance(Note2) |                                  | 88  | °C/W           |   |
| R <sub>thJC</sub> |                                   | 43                               | °C/W  |                |   |
| R <sub>thJL</sub> |                                   | 30                               | °C/W  |                |   |
| P <sub>D</sub>    | Power Dissipation                 |                                  | 1.14  | W              |   |
| T <sub>J</sub>    | Junction Temperature              |                                  | -65 to +125   | °C             |   |
| T <sub>STG</sub>  | Storage Temperature               |                                  | -65 to +125   | °C             |   |

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

| Symbol         | Parameter  | Min                    | Typ | Max  | Units |    |
|----------------|--|------------------------|-----|------|-------|----|
| V <sub>F</sub> | Forward Voltage (@1A dc)                                   | SM5817PL               | --- | 0.45 | ---   | V  |
|                |  | SM5818PL               | --- | 0.56 | ---   |    |
|                |  | SM5819PL               | --- | 0.60 | ---   |    |
| I <sub>R</sub> | Leakage Current  |                        |     |      |       |    |
|                |  | @T <sub>A</sub> =25°C  | --- | 0.1  | ---   | mA |
|                |  | @T <sub>A</sub> =100°C | --- | 9.0  | ---   | mA |
| C <sub>J</sub> | Typical Junction Capacitance @f=1.0MHz, V <sub>r</sub> =4V | ---                    | 110 | ---  | pF    |    |

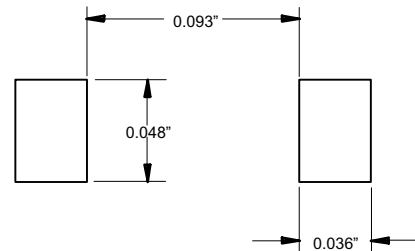
Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.  
2. Thermal Resistance : PC Board Mounted on 0.2\*0.2"(5\*5mm) copper pad area.

### SOD-123FL



| DIM | INCHES |       | MM    |       | NOTE |
|-----|--------|-------|-------|-------|------|
|     | MIN    | MAX   | MIN   | MAX   |      |
| A   | .140   | .152  | 3.55  | 3.85  |      |
| B   | .100   | .122  | 2.55  | 3.10  |      |
| C   | .055   | .075  | 1.40  | 1.90  |      |
| D   | .035   | .047  | 0.90  | 1.20  |      |
| E   | .020   | .041  | 0.50  | 1.05  |      |
| G   | .010   | ----- | 0.25  | ----- |      |
| H   | -----  | .010  | ----- | .25   |      |

### SUGGESTED SOLDER PAD LAYOUT



# SM5817PL-SM5819PL



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Fig. 1-TYPICAL FORWARD CURRENT

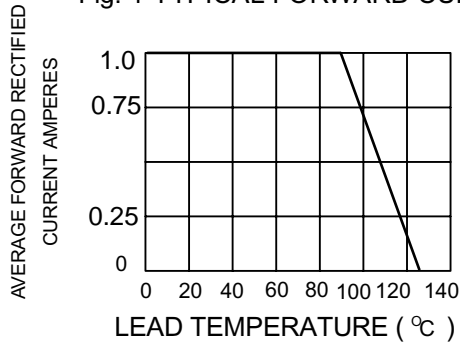


Fig. 2-TYPICAL FORWARD CHARACTERISTICS

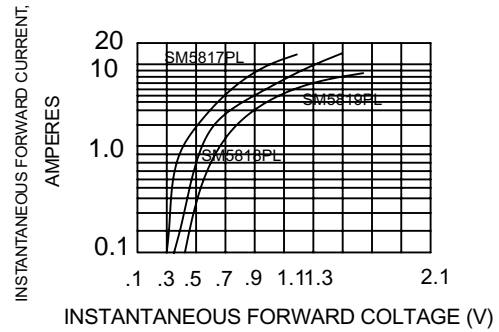


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

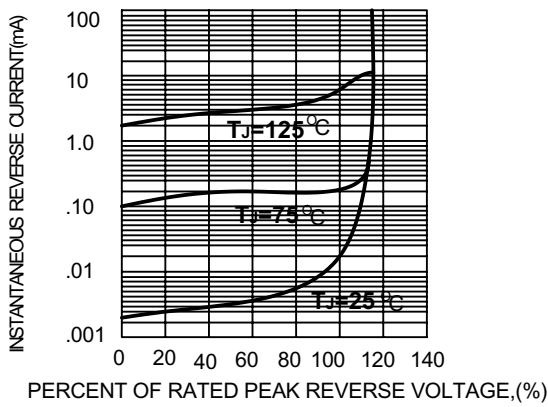


Fig. 4-FORWARD SURGE CURRENT

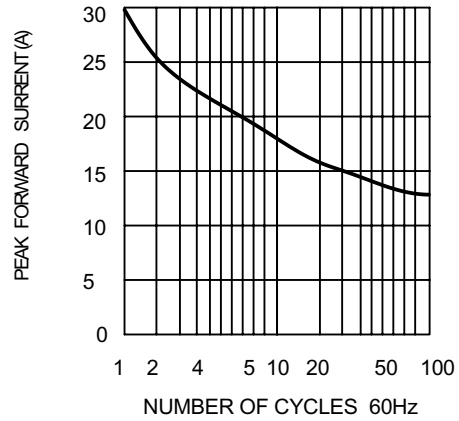
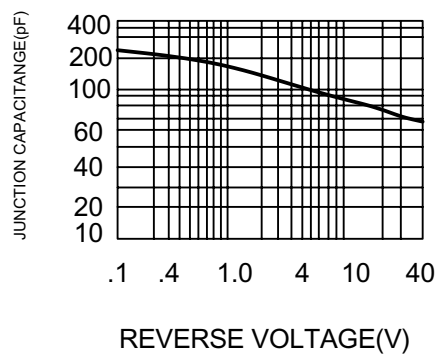


Fig. 5-TYPICAL JUNCTION CAPACITANCE





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Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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