

# B5817PL THRU B5819PL

## Schottky Barrier Diodes



### Features

- 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: B5817PL---K2; B5818PL---K3 ; B5819PL---K4

### Maximum Ratings

| Symbol                                                | Rating                                                                                     | Rating      | Unit        |               |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------|-------------|---------------|
| $V_{RMS}$                                             | Maximum RMS Voltage                                                                        | B5817PL     | 14          |               |
|                                                       |                                                                                            | B5818PL     | 21          |               |
|                                                       |                                                                                            | B5819PL     | 28          |               |
| $V_{RRM}$                                             | Repetitive Reverse Voltage                                                                 | B5817PL     | 20          |               |
|                                                       |                                                                                            | B5818PL     | 30          |               |
|                                                       |                                                                                            | B5819PL     | 40          |               |
| $I_{F(AV)}$                                           | Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_L=90^{\circ}C$ | 1.0         | A           |               |
| $I_{FSM}$                                             | Surge Forward Current at $T_L=70^{\circ}C, 8.3ms$                                          | 30          | A           |               |
| $R_{\theta JA}$<br>$R_{\theta JC}$<br>$R_{\theta JL}$ | Typical Thermal Resistance(Note2)                                                          |             | 88          | $^{\circ}C/W$ |
|                                                       |                                                                                            |             | 43          | $^{\circ}C/W$ |
|                                                       |                                                                                            |             | 30          | $^{\circ}C/W$ |
| $P_D$                                                 | Power Dissipation                                                                          | 1.14        | W           |               |
| $T_J$                                                 | Junction Temperature                                                                       | -65 to +125 | $^{\circ}C$ |               |
| $T_{STG}$                                             | Storage Temperature                                                                        | -65 to +125 | $^{\circ}C$ |               |

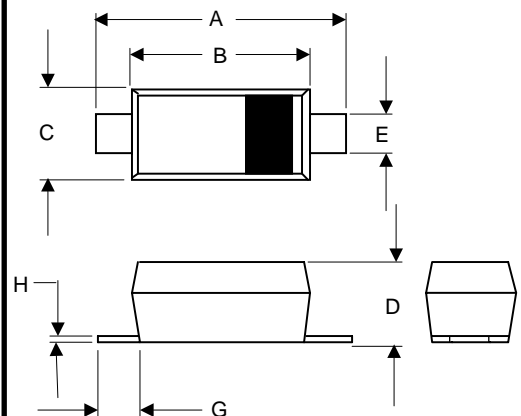
### Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter                                         | Min                  | Typ | Max  | Units |     |
|--------|---------------------------------------------------|----------------------|-----|------|-------|-----|
| $V_F$  | Forward Voltage (@1A dc)                          | B5817PL              | --- | 0.45 | V     |     |
|        |                                                   | B5818PL              | --- | 0.56 |       |     |
|        |                                                   | B5819PL              | --- | 0.60 |       |     |
| $I_R$  | Leakage Current                                   |                      |     |      | mA    |     |
|        |                                                   | @ $T_A=25^{\circ}C$  | --- | 0.1  |       | --- |
|        |                                                   | @ $T_A=100^{\circ}C$ | --- | 9.0  |       | --- |
| $C_j$  | Typical Junction Capacitance @ $f=1.0MHz, V_r=4V$ | ---                  | 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.

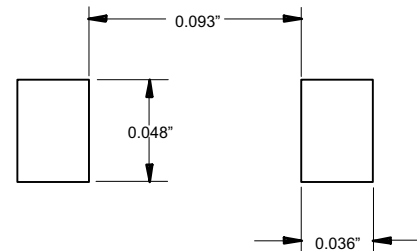
## Schottky Barrier Diodes 20 to 40 Volts

### 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   | .053  | 0.90  | 1.35  |      |
| E   | .020   | .041  | 0.50  | 1.05  |      |
| G   | .010   | ----- | 0.25  | ----- |      |
| H   | -----  | .010  | ----- | .25   |      |

### SUGGESTED SOLDER PAD LAYOUT



# B5817PL-B5819PL

Fig. 1-TYPICAL FORWARD CURRENT

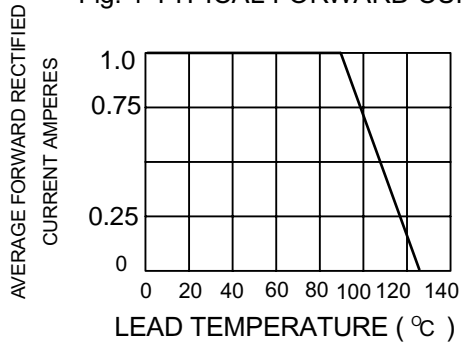


Fig. 2-TYPICAL FORWARD CHARACTERISTICS

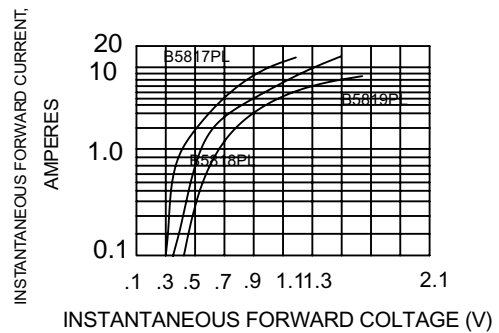


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

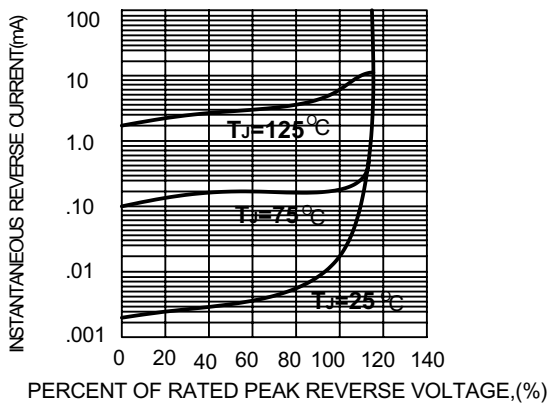


Fig. 4-FORWARD SURGE CURRENT

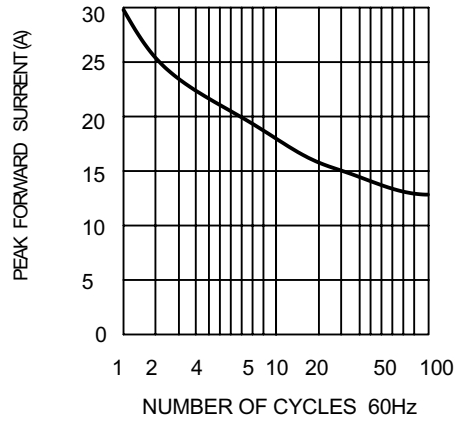


Fig. 5-TYPICAL JUNCTION CAPACITANCE

