

# SM5817PL THRU SM5819PL

## Schottky Barrier Diodes 20 to 40 Volts

### Features

- High Surge Capability
- Low Forward Voltage
- Low Profile Package

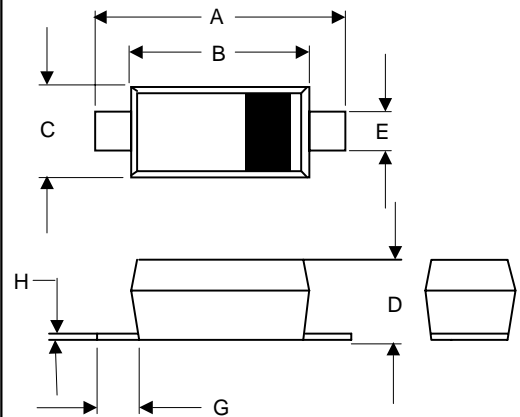
### Mechanical Data

- Packaging: Powerlite-123
- Marking Code: SM5817PL---K2; SM5818PL---K3 ; SM5819PL---K4
- x Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

### Maximum Ratings

| Symbol          | Rating   | Rating      | Unit          |
|-----------------|--|-------------|---------------|
| $V_{RMS}$       | Maximum RMS Voltage  | SM5817PL    | 14            |
|                 |  | SM5818PL    | 21            |
|                 |  | SM5819PL    | 28            |
| $V_{RRM}$       | Repetitive Reverse Voltage   | SM5817PL    | 20            |
|                 |  | SM5818PL    | 30            |
|                 |  | SM5819PL    | 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             |
| $R_{\theta JL}$ | Typical Thermal Resistance <sup>(1)</sup>  | 80          | $^{\circ}C/W$ |
| $T_J$           | Junction Temperature   | -65 to +125 | $^{\circ}C$   |
| $T_{STG}$       | Storage Temperature  | -65 to +125 | $^{\circ}C$   |

### Powerlite-123



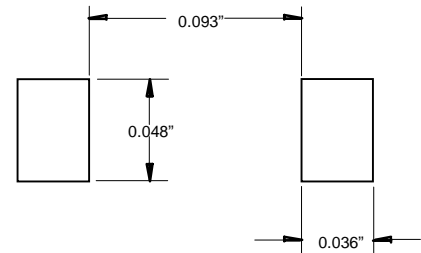
| DIM | DIMENSIONS |       |       |       | NOTE |
|-----|------------|-------|-------|-------|------|
|     | INCHES     |       | MM    |       |      |
|     | MIN        | MAX   | MIN   | MAX   |      |
| A   | .140       | .152  | 3.55  | 3.85  |      |
| B   | .100       | .112  | 2.55  | 2.85  |      |
| C   | .055       | .071  | 1.40  | 1.80  |      |
| D   | .037       | .053  | 0.95  | 1.35  |      |
| E   | .020       | .039  | 0.50  | 1.00  |      |
| G   | .010       | ----- | 0.25  | ----- |      |
| H   | -----      | .008  | ----- | .20   |      |

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

| Symbol | Parameter   | Min                  | Typ | Max  | Units |
|--------|---|----------------------|-----|------|-------|
| $V_F$  | Forward Voltage (@1A dc)                          | SM5817PL             | --- | 0.45 | ---   |
|        |   | SM5818PL             | --- | 0.56 | ---   |
|        |   | SM5819PL             | --- | 0.60 | ---   |
| $I_R$  | Leakage Current                                   |                      | --- | 0.1  | 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    |

Tnote: Thermal Resistance: PC Board Mounted on 0.2\*0.2"(5\*5mm) copper pad area.

### SUGGESTED SOLDER PAD LAYOUT



# SM5817PL-SM5819PL

Fig. 1-TYPICAL FORWARD CURRENT

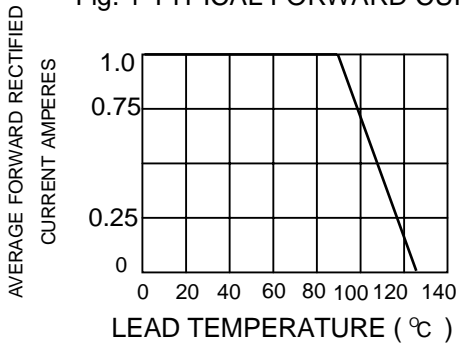


Fig. 2-TYPICAL FORWARD CHARACTERISTICS

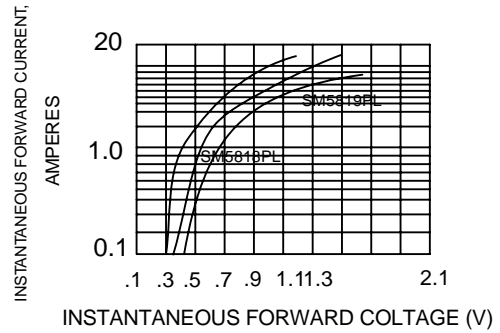


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

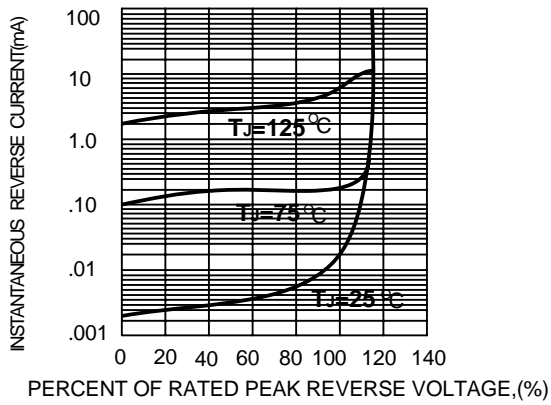


Fig. 4-FORWARD SURGE CURRENT

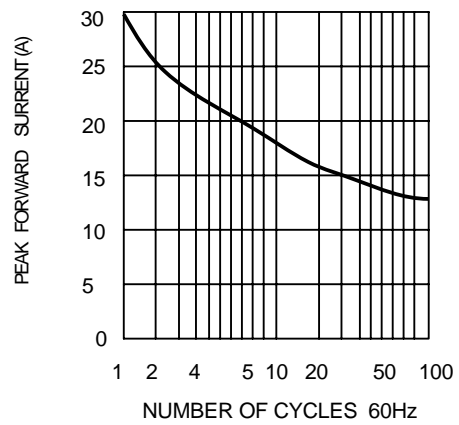


Fig. 5-TYPICAL JUNCTION CAPACITANCE

