

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

**FEATURES**

- Schottky Barrier Chip
- High Thermal Reliability
- Patented Super Barrier Rectifier Technology
- High Forward Surge Capability
- Ultra Low Power Loss and High Efficiency
- Excellent High Temperature Stability
- Plastic Material-UL Flammability 94V-0

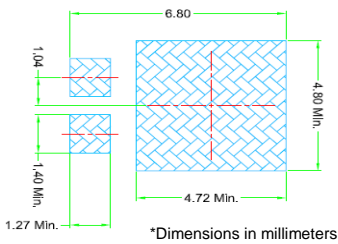
**PACKAGE INFORMATION**

| Package | MPQ | Leader Size |
|---------|-----|-------------|
| TO-277A | 5K  | 13 inch     |

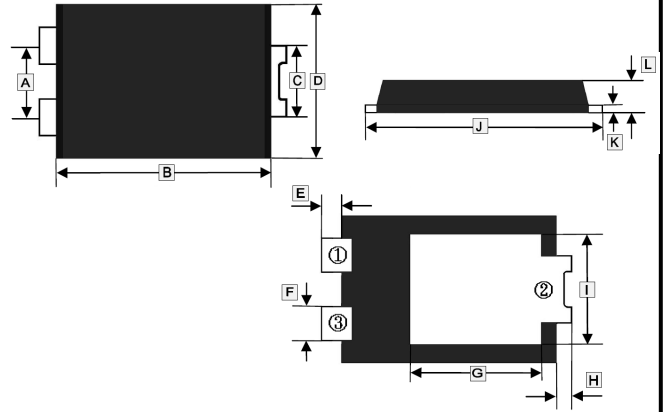
**ORDER INFORMATION**

| Part Number  | Type                            |
|--------------|---------------------------------|
| SMPA15100L-C | Lead (Pb)-free and Halogen-free |

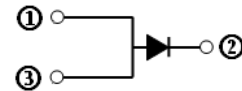
**Mounting Pad Layout**



**TO-277A**



| REF. | Millimeter |      | REF. | Millimeter |      |
|------|------------|------|------|------------|------|
|      | Min.       | Max. |      | Min.       | Max. |
| A    | 2.00       | 2.20 | G    | 4.05 TYP.  |      |
| B    | 5.90       | 6.30 | H    | 1.125 TYP. |      |
| C    | 1.85       | 2.25 | I    | 3.55       | 3.95 |
| D    | 4.10       | 4.50 | J    | 6.30       | 6.70 |
| E    | 0.206 TYP. |      | K    | 0.15       | 0.35 |
| F    | 1.00       | 1.40 | L    | 1.00       | 1.40 |



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

( $T_A=25^\circ\text{C}$ , unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, de-rate current by 20%.)

| Parameter  | Symbol          | Rating       | Unit                      |
|--|-----------------|--------------|---------------------------|
| Maximum Peak Repetitive Reverse Voltage  | $V_{RRM}$       | 100          | V                         |
| Maximum Working Peak Reverse Voltage   | $V_{RWM}$       | 100          |                           |
| Maximum DC Blocking Voltage  | $V_{DC}$        | 100          |                           |
| Maximum RMS Rectified Voltage  | $V_{RMS}$       | 70           |                           |
| Maximum Average Rectified Output Current <sup>1</sup>  | $I_F$           | 15           | A                         |
| Non-Repetitive Peak Forward Surge Current, 8.3ms single half sine-wave, superimposed on rated load (JEDEC method) <sup>2</sup> | $I_{FSM}$       | 250          | A                         |
| $I^2t$ Rating for Fusing @ $t < 8.3\text{ms}$  | $I^2t$          | 259.375      | $\text{A}^2\text{S}$      |
| Typical Thermal Resistance from Junction-Ambient   | $R_{\theta JA}$ | 110          | $^\circ\text{C}/\text{W}$ |
| Typical Thermal Resistance from Junction-Lead  | $R_{\theta JL}$ | 3.5          |                           |
| Operating Junction & Storage Temperature Range   | $T_J, T_{STG}$  | 150, -55~150 | $^\circ\text{C}$          |

Notes:

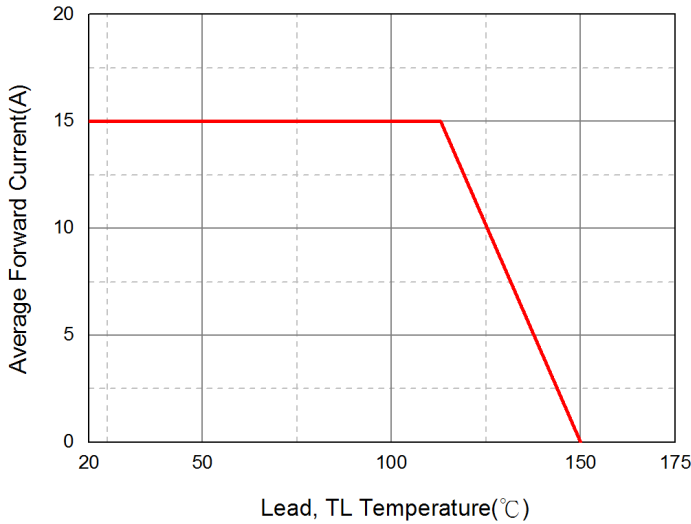
1. The data is tested on the condition that the ambient temperature is tested at a 9.5mm distance from the case.
2. FR-4 2oz 18.8mm x 14.4mm PCB with 5.6mm x 14.4mm copper pad.

**ELECTRICAL CHARACTERISTICS**

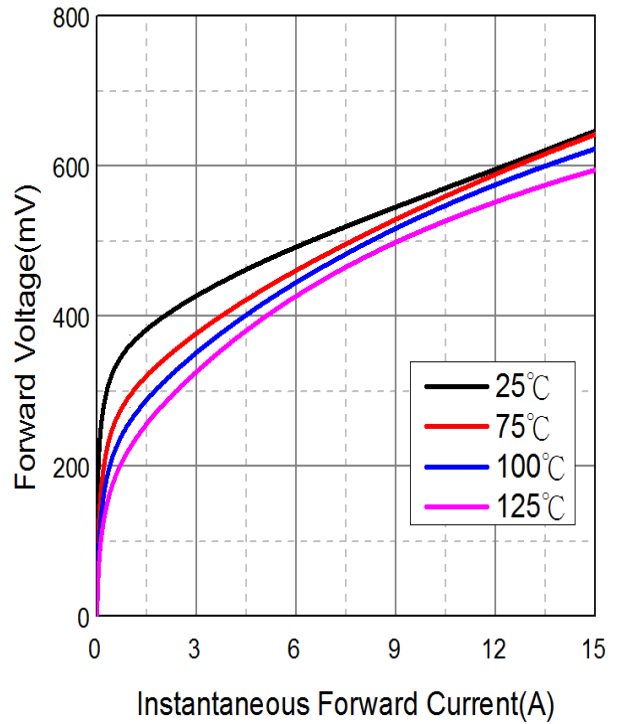
| Parameter  | Symbol | Typ. | Max. | Unit | Test Condition                         |
|--|--------|------|------|------|--|
| Forward Voltage Drop                             | $V_F$  | 0.38 | -    | V    | $I_F=1\text{A}, T_A=25^\circ\text{C}$  |
|  |        | 0.47 | -    | V    | $I_F=5\text{A}, T_A=25^\circ\text{C}$  |
|  |        | 0.65 | 0.7  | V    | $I_F=15\text{A}, T_A=25^\circ\text{C}$ |
| Peak Reverse Current @ Rated DC Blocking Voltage | $I_R$  | -    | 0.3  | mA   | $T_A=25^\circ\text{C}$                 |
|  |        | -    | 15   |      | $T_A=100^\circ\text{C}$                |

**CHARACTERISTIC CURVES**

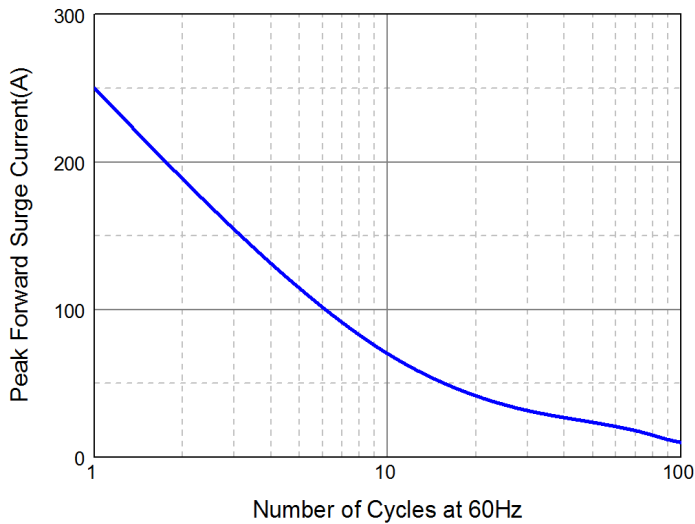
Typical Forward Current Derating Curve



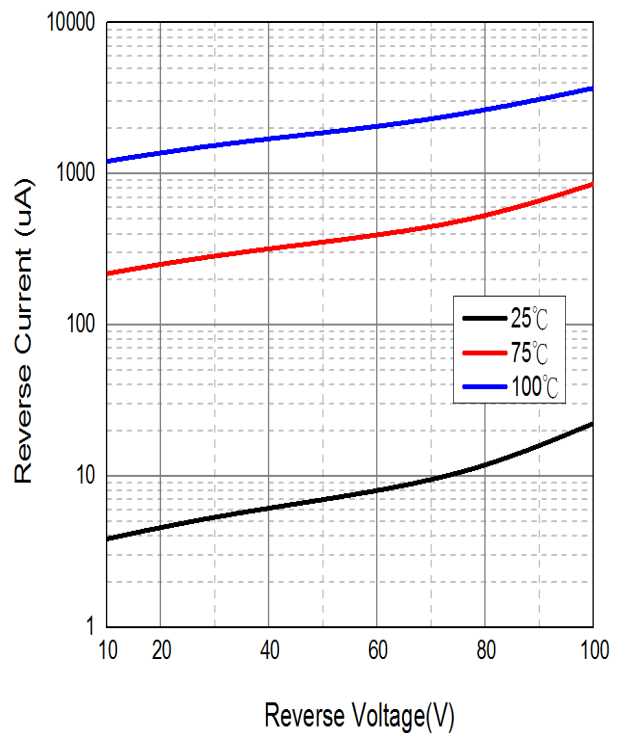
Typical Forward Characteristic



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

