Elektronische Bauelemente

# SMPD560L

**Voltage 60V, 5Amp**

**Low VF Planar MOS Barrier Schottky Rectifier**

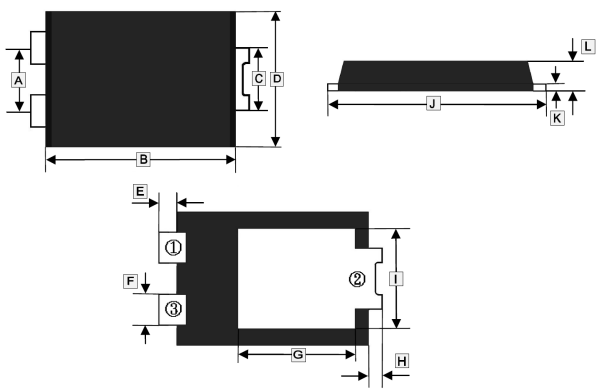
RoHS Compliant Product

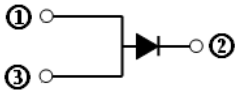
A suffix of “-C” specifies halogen free

## FEATURES

- Planar MOS Schottky Technology
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Epitaxial Construction

**TO-277D**




| REF. | Millimeter | | REF. | Millimeter | |
|---|---|---|---|---|---|
| | Min. | Max. | | Min. | Max. |
| A | 1.65 | 1.95 | G | 3.25 | 3.85 |
| B | 5.3 | 5.5 | H | 0.45 | 0.65 |
| C | 1.7 | 1.9 | I | 2.9 | 3.2 |
| D | 3.8 | 4.2 | J | 6.4 | 6.6 |
| E | 0.45 | 0.65 | K | 0.3 | 0.45 |
| F | 0.8 | 1.0 | L | 1.0 | 1.2 |

## PACKAGE INFORMATION

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

## ORDER INFORMATION

| Part Number | Type |
|---|---|
| SMPD560L | Lead (Pb)-free |
| SMPD560L-C | Lead (Pb)-free and Halogen-free |

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25℃ ambient temperature unless otherwise s pecified. Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, de-rate current by 20%.)

| Parameter | Symbol | Ratings | Unit |
|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 60 | V |
| Working Peak Reverse Voltage | $V_{RWM}$ | 60 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 60 | V |
| Maximum RMS Rectified Voltage | $V_{RMS}$ | 42 | V |
| Maximum Average Forward Rectified Current | $I_F$ | 5 | A |
| Peak Forward Surge Current, 8.3 ms single half sine-wave | $I_{FSM}$ | 80 | A |
| Voltage Rate of Chance (Rated $V_R$) | dv/dt | 10000 | V/μs |
| Typical Thermal Resistance from Junction-Ambient | $R_{\theta JA}$ | 80 | ℃/W |
| Typical Thermal Resistance from Junction-Lead | $R_{\theta JL}$ | 10 | ℃/W |
| Operating and Storage Temperature Range | $T_J$,$T_{STG}$ | -55~150 | ℃ |

## ELECTRICAL CHARACTERISTICS

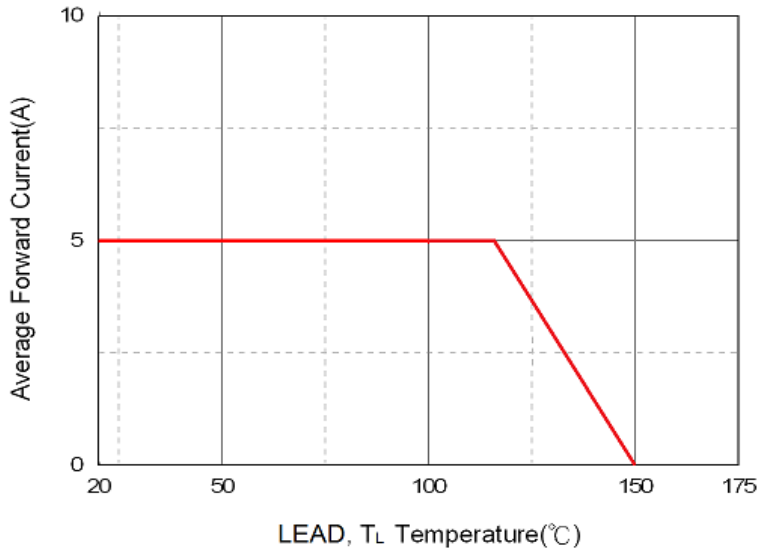
| Parameter | Symbol | Typ. | Max. | Unit | Test Conditions |
|---|---|---|---|---|---|
| Maximum Instantaneous Forward Voltage | $V_F$ | 0.47 | 0.51 | V | $I_F$=3A, $T_J$=25℃ |
| | | 0.56 | 0.59 | | $I_F$=5A, $T_J$=25℃ |
| | | 0.54 | 0.58 | | $I_F$=5A, $T_J$=125℃ |
| Maximum DC Reverse Current @Rated DC Blocking Voltage [2] | $I_R$ | - | 0.2 | mA | $T_J$=25℃ |
| | | - | 20 | | $T_J$=100℃ |
| Typical Junction Capacitance [1] | $C_J$ | 180 | - | pF | |

Notes:

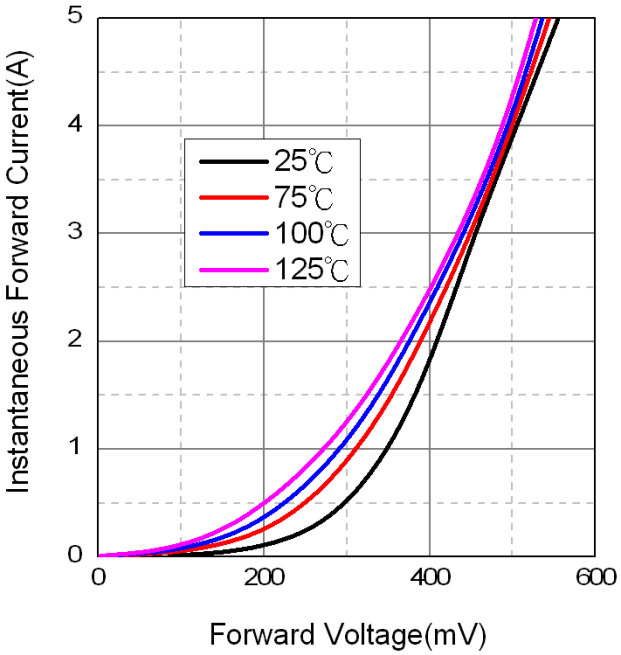
1. Measured at 1MHz and applied reverse voltage of 5V D.C.
2. Pulse Test: Pulse Width=300μs, Duty Cycle≦2%.

## RATINGS AND CHARACTERISTIC CURVES

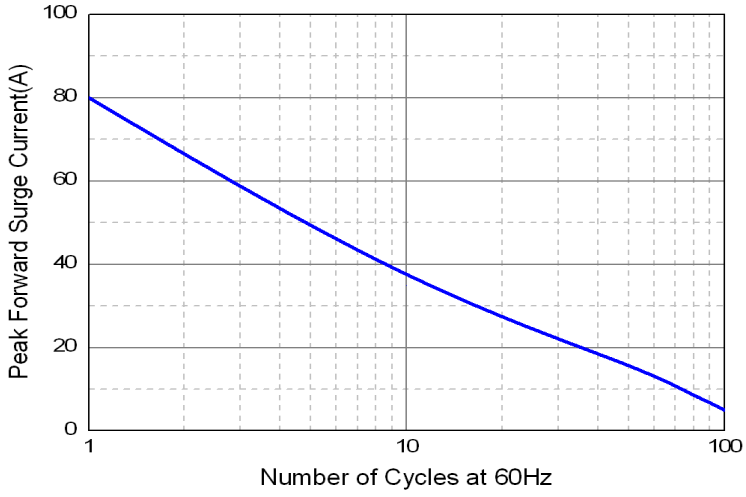
Typical Forward Current Derating Curve



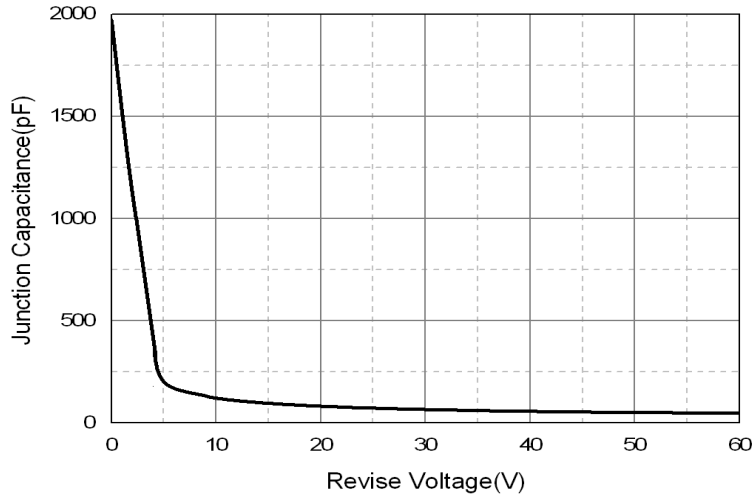

Typical Forward Characteristic




Maximum Non-Repetitive Forward Surge Current




Typical Junction Capacitance




Typical Reverse Characteristic