

## Power Surface Mount Schottky Rectifier (15V, 120Amp)

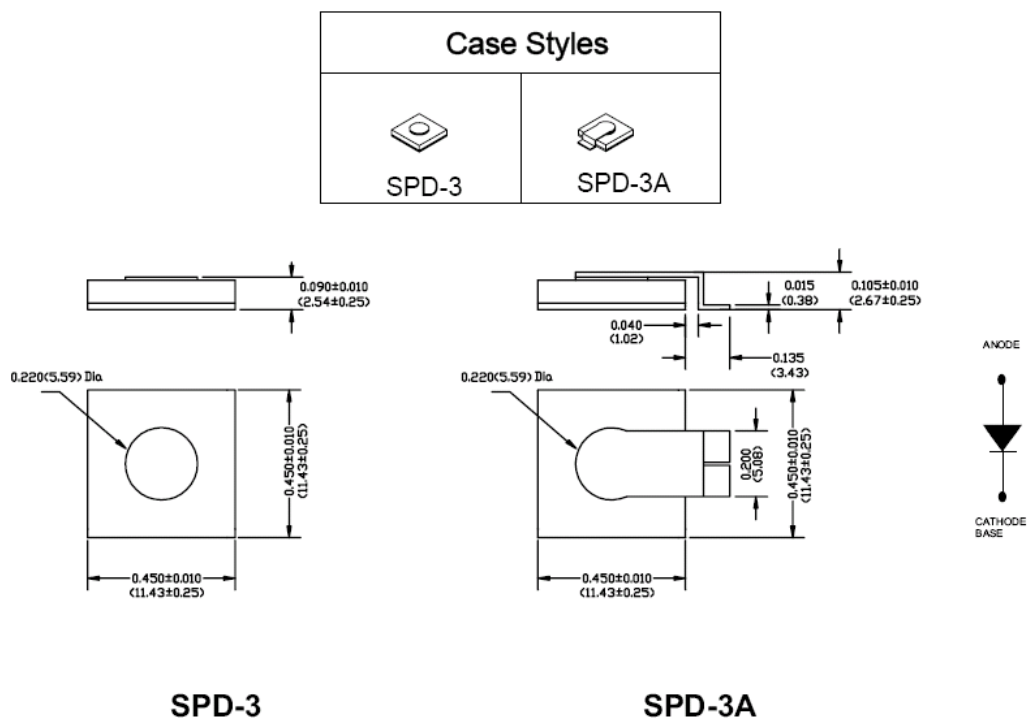
### Applications:

- Switching power supply
- Converters
- Reverse battery protection
- Redundant power subsystems
- Many other high current AC/DC power supplies

### Features:

- 100 °C T<sub>J</sub> operation
- Low forward voltage drop
- Low reverse leakage current
- High surge capacities
- High frequency operation
- Guaranteed reverse avalanche capability
- Low profile surface mount package
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Mechanical Dimensions: In Inches / mm



### Suffix “R” Denotes Reversed Polarity

**Maximum Ratings:**

| Characteristics  | Symbol      | Condition                             | Max. | Units |
|--|-------------|---------------------------------------|------|-------|
| Peak Inverse Voltage                                       | $V_{RWM}$   | -                                     | 15   | V     |
| Max. Average Forward Current                               | $I_{F(AV)}$ | 50% duty cycle, rectangular wave form | 120  | A     |
| Max. Peak One Cycle Non-Repetitive Surge Current (per leg) | $I_{FSM}$   | 8.3 ms, half Sine pulse               | 1650 | A     |

**Electrical Characteristics:**

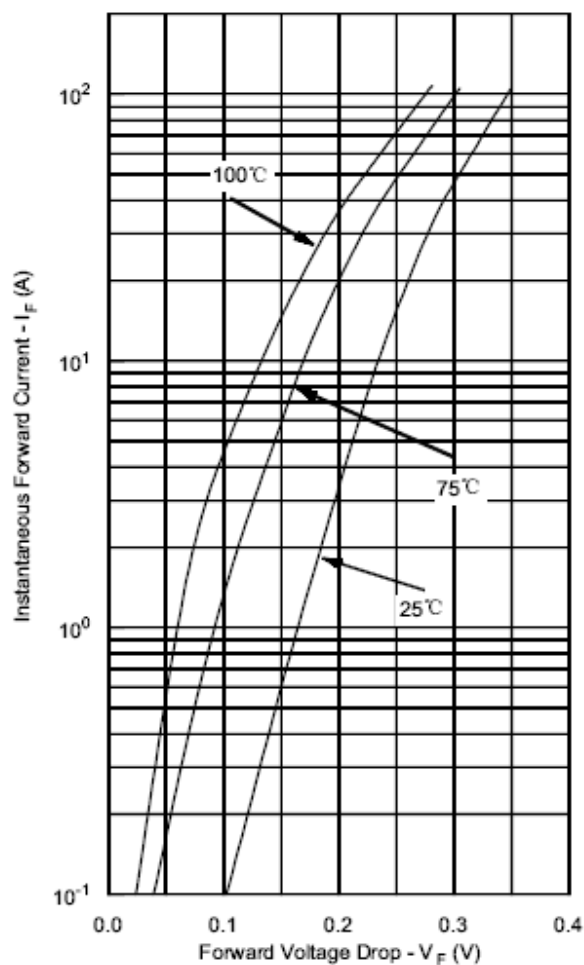
| Characteristics                     | Symbol   | Condition  | Max. | Units |
|-------------------------------------|----------|--|------|-------|
| Max. Forward Voltage Drop*          | $V_{F1}$ | @ 120A, Pulse, $T_J = 25\text{ }^\circ\text{C}$  | 0.41 | V     |
|                                     | $V_{F2}$ | @ 120A, Pulse, $T_J = 125\text{ }^\circ\text{C}$   | 0.37 | V     |
| Max. Reverse Current (per leg) *    | $I_{R1}$ | @ $V_R = \text{rated } V_R$ , Pulse, $T_J = 25\text{ }^\circ\text{C}$  | 40   | mA    |
|                                     | $I_{R2}$ | @ $V_R = \text{rated } V_R$ , Pulse, $T_J = 125\text{ }^\circ\text{C}$   | 2000 | mA    |
| Max. Junction Capacitance (per leg) | $C_J$    | @ $V_R = 5\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$<br>$f_{SIG} = 1\text{MHz}$ , $V_{SIG} = 50\text{mV(p-p)}$ | 7200 | pF    |

\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle < 2%

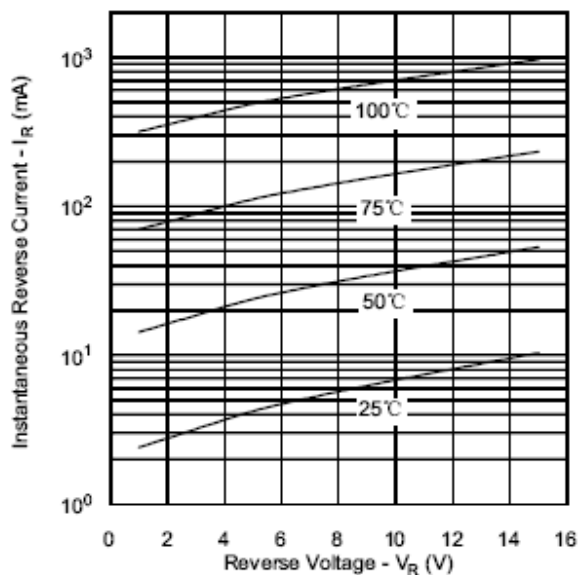
**Thermal-Mechanical Specifications:**

| Characteristics                             | Symbol          | Condition    | Specification | Units              |
|---|-----------------|--------------|---------------|--------------------|
| Max. Junction Temperature                   | $T_J$           | -            | -55 to +125   | $^\circ\text{C}$   |
| Max. Storage Temperature                    | $T_{stg}$       | -            | -55 to +100   | $^\circ\text{C}$   |
| Maximum Thermal Resistance Junction to Case | $R_{\theta JC}$ | DC operation | 0.20          | $^\circ\text{C/W}$ |
| Case Style                                  | SPD-3/A         |              |               |                    |

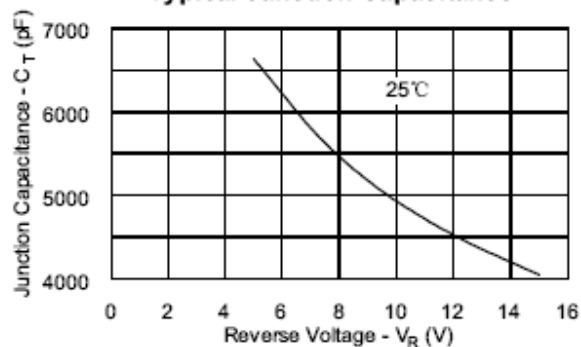
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



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