

# Schottky Rectifier Module Type 120 A

 $V_{RRM} = 180 \text{ V}$ 
 $I_{F(AV)} = 120 \text{ A}$ 

## Features

- High Surge Capability
- Type 180 V  $V_{RRM}$
- Isolation Type Package
- Electrically Isolated Base Plate
- Not ESD Sensitive


**SOT-227 Package**


## Maximum ratings

| Parameter                              | Symbol    | Conditions | Value      | Unit |
|--|-----------|------------|------------|------|
| Maximum recurrent peak reverse voltage | $V_{RRM}$ |            | 180        | V    |
| Maximum DC blocking voltage            | $V_{DC}$  |            | 180        | V    |
| Maximum RMS Voltage                    | $V_{RMS}$ |            | 126        | V    |
| Operating temperature                  | $T_j$     |            | -40 to 150 | °C   |
| Storage temperature                    | $T_{stg}$ |            | -40 to 150 | °C   |

## Electrical characteristics at 25 °C, unless otherwise specified

| Parameter  | Symbol      | Conditions                                    | Value | Unit |
|--|-------------|---|-------|------|
| Average forward current (per pkg)  | $I_{F(AV)}$ | $T_C = 110 \text{ °C}$                        | 120   | A    |
| Peak forward surge current (per leg)   | $I_{FSM}$   | 8.3 ms, half sine                             | 800   | A    |
| Maximum instantaneous forward voltage* (per leg)                             | $V_F$       | $I_{FM} = 60 \text{ A}, T_j = 25 \text{ °C}$  | 0.92  | V    |
|  |             | $I_{FM} = 60 \text{ A}, T_j = 125 \text{ °C}$ | 0.82  | V    |
| Maximum instantaneous reverse current at rated DC blocking voltage (per leg) | $I_R$       | $T_j = 25 \text{ °C}$                         | 3     | mA   |
|  |             | $T_j = 100 \text{ °C}$                        | 10    | mA   |
|  |             | $T_j = 150 \text{ °C}$                        | 30    | mA   |
| Isolation voltage  | $V_{ISO}$   | A.C. 1 minute                                 | 2500  | V    |

## Thermal characteristics

|   |                 |  |      |      |
|---|-----------------|--|------|------|
| Maximum thermal resistance junction to case (per leg) | $R_{\theta jc}$ |  | 0.80 | °C/W |
|---|-----------------|--|------|------|

\* Pulse Test: Pulse width 300  $\mu\text{s}$ , Duty < 2 %

Figure.1 - Typical Forward Characteristics

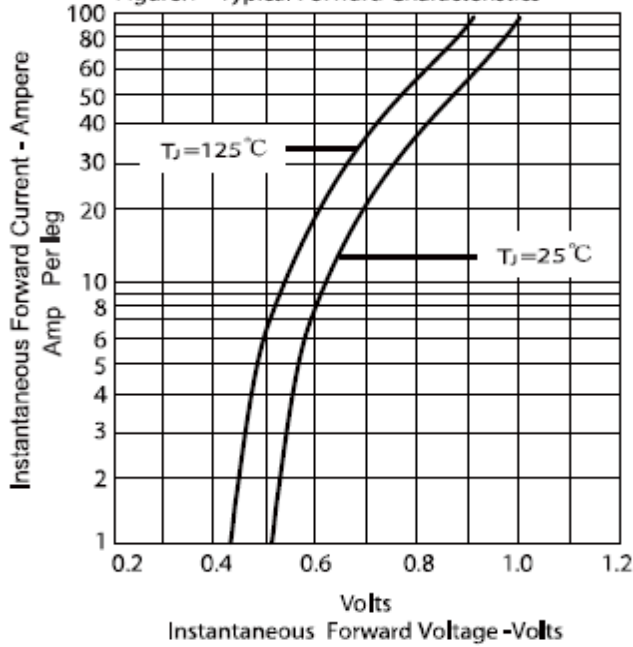


Figure .2- Forward Derating Curve

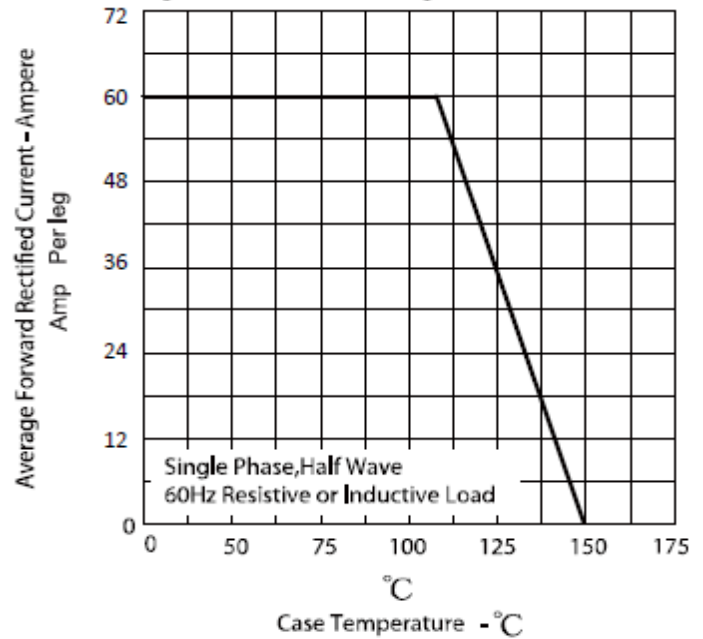


Figure.3 - Peak Forward Surge Current

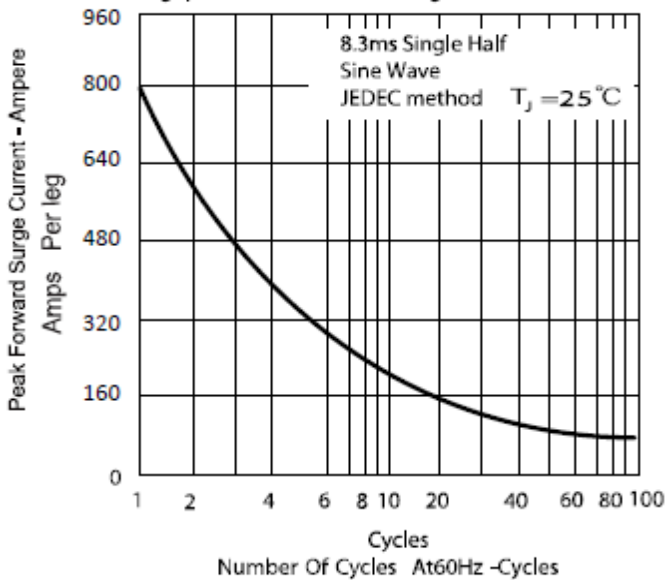
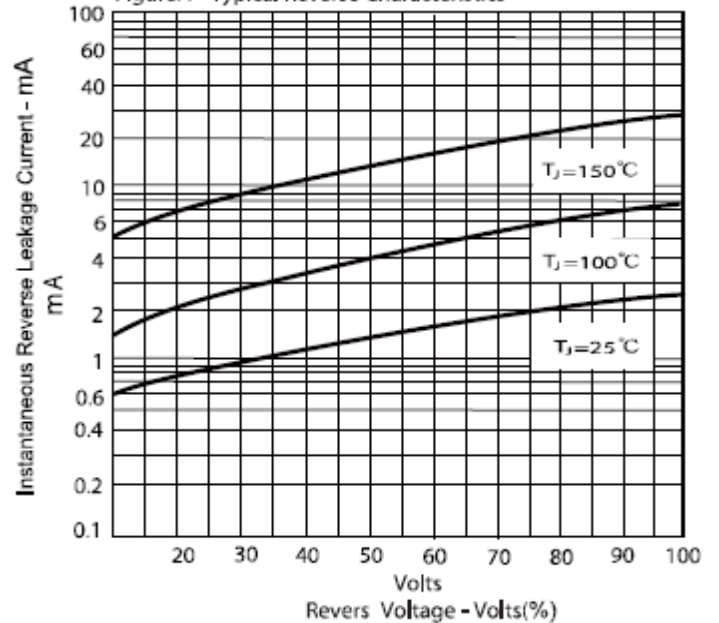


Figure.4 - Typical Reverse Characteristics



**Package dimensions and terminal configuration**

Product is marked with part number and terminal configuration.



| DIMENSIONS |        |       |       |       |
|------------|--------|-------|-------|-------|
| DIM        | INCHES |       | MM    |       |
|            | MIN    | MAX   | MIN   | MAX   |
| A          | .500   | .519  | 12.70 | 13.20 |
| B          | .307   | .322  | 7.80  | 8.20  |
| C          | .029   | .033  | .75   | .84   |
| D          | .077   | .082  | 1.95  | 2.10  |
| E          | 1.487  | 1.502 | 37.80 | 38.20 |
| F          | 1.250  | 1.258 | 31.75 | 32.00 |
| G          | .931   | .956  | 23.65 | 24.30 |
| H          | .996   | 1.007 | 25.30 | 25.60 |
| I          | .586   | .594  | 14.90 | 15.10 |
| J          | .492   | .516  | 12.50 | 13.10 |
| K          | .161   | .169  | 4.10  | 4.30  |
| L          | .161   | .169  | 4.10  | 4.30  |
| M          | .181   | .191  | 4.60  | 4.95  |
| N          | .165   | .177  | 4.20  | 4.50  |
| O          | 1.184  | 1.192 | 30.10 | 30.30 |
| P          | M4*8   |       |       |       |