

## Silicon Power Schottky Diode

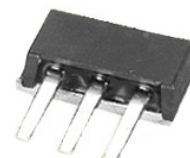
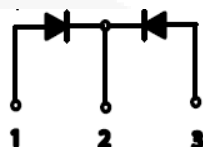
$V_{RRM} = 20\text{ V} - 40\text{ V}$

$I_F = 80\text{ A}$

### Features

- High Surge Capability
- Types from 20 V to 40V  $V_{RRM}$
- Types up to 100V  $V_{RRM}$

D61-3SM Package



### Maximum ratings, at $T_j = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

| Parameter                                            | Symbol     | Conditions                                                 | FST8320SM  | FST78330SM | FST8335SM  | FST8340SM  | Unit               |
|------------------------------------------------------|------------|------------------------------------------------------------|------------|------------|------------|------------|--------------------|
| Repetitive peak reverse voltage                      | $V_{RRM}$  |                                                            | 20         | 30         | 35         | 40         | V                  |
| RMS reverse voltage                                  | $V_{RMS}$  |                                                            | 14         | 21         | 35         | 28         | V                  |
| DC blocking voltage                                  | $V_{DC}$   |                                                            | 20         | 30         | 35         | 40         | V                  |
| Continuous forward current                           | $I_F$      | $T_C \leq 110\text{ }^{\circ}\text{C}$                     | 80         | 80         | 80         | 80         | A                  |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ }^{\circ}\text{C}$ , $t_p = 8.3\text{ ms}$ | 800        | 800        | 800        | 800        | A                  |
| Operating temperature                                | $T_j$      |                                                            | -40 to 175 | -40 to 175 | -40 to 175 | -40 to 175 | $^{\circ}\text{C}$ |
| Storage temperature                                  | $T_{stg}$  |                                                            | -40 to 175 | -40 to 175 | -40 to 175 | -40 to 175 | $^{\circ}\text{C}$ |

### Electrical characteristics, at $T_j = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

| Parameter             | Symbol | Conditions                                                | FST8320SM | FST8330SM | FST8335SM | FST78340SM | Unit |
|-----------------------|--------|-----------------------------------------------------------|-----------|-----------|-----------|------------|------|
| Diode forward voltage | $V_F$  | $I_F = 80\text{ A}$ , $T_j = 25\text{ }^{\circ}\text{C}$  | 0.65      | 0.65      | 0.65      | 0.65       | V    |
| Reverse current       | $I_R$  | $V_R = 20\text{ V}$ , $T_j = 25\text{ }^{\circ}\text{C}$  | 1.5       | 1.5       | 1.5       | 1.5        | mA   |
|                       |        | $V_R = 20\text{ V}$ , $T_j = 125\text{ }^{\circ}\text{C}$ | 500       | 500       | 500       | 500        |      |

### Thermal characteristics

|                                     |            |  |     |     |     |     |                      |
|-------------------------------------|------------|--|-----|-----|-----|-----|----------------------|
| Thermal resistance, junction - case | $R_{thJC}$ |  | 1.2 | 1.2 | 1.2 | 1.2 | $^{\circ}\text{C/W}$ |
|-------------------------------------|------------|--|-----|-----|-----|-----|----------------------|

Figure .1-Typical Forward Characteristics

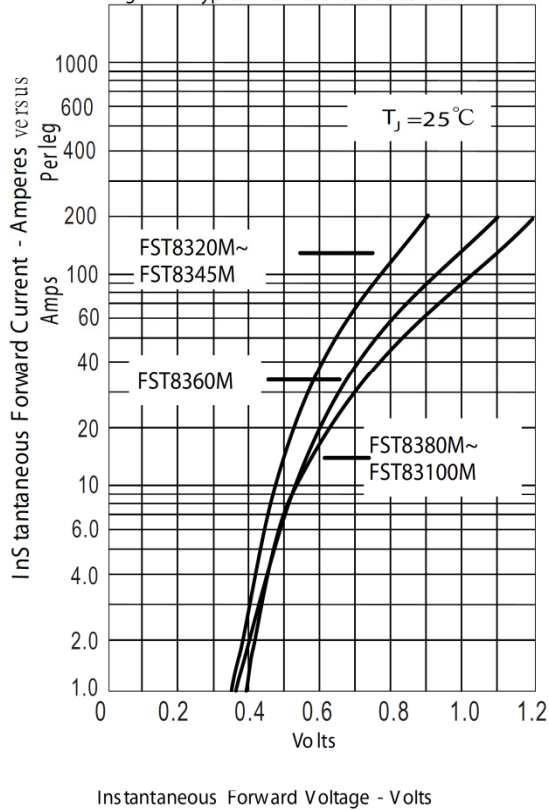
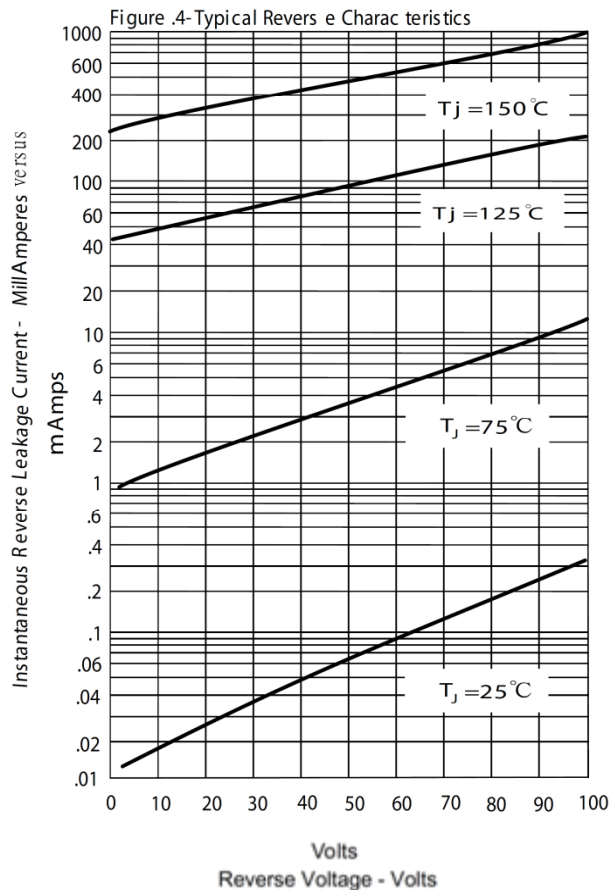
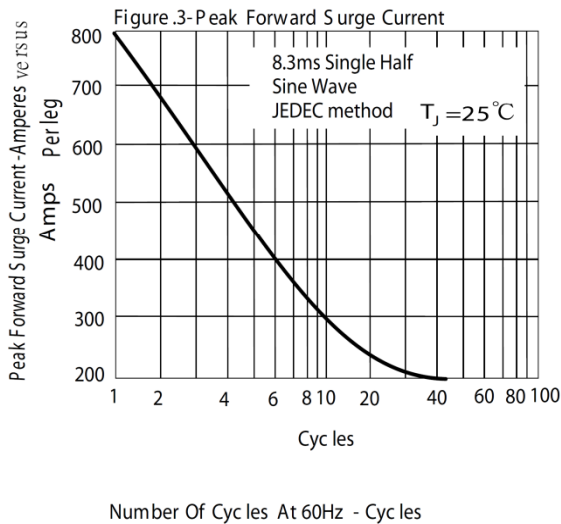
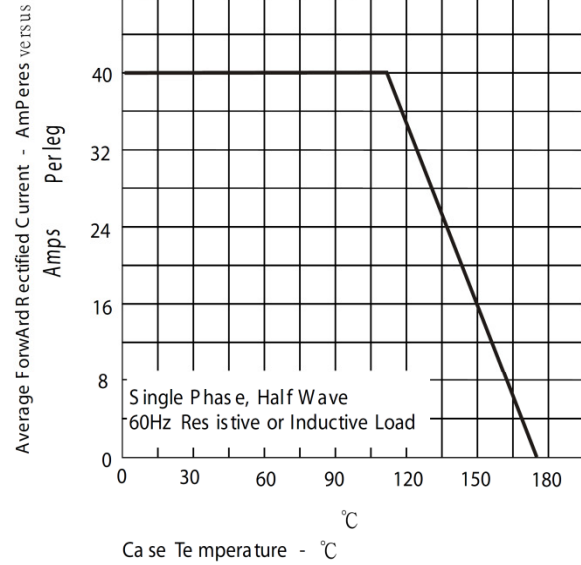


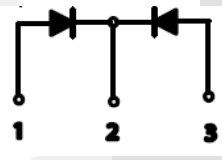
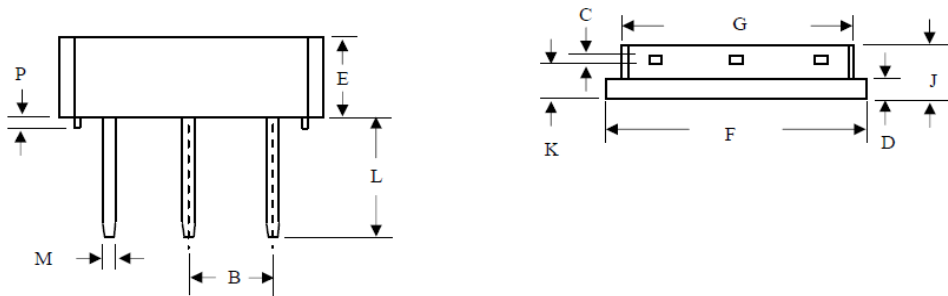
Figure .2- Forward Derating Curve



## Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.

### MINI MODE D61 - 3SM



|   | Inches |       | Millimeters |       |
|---|--------|-------|-------------|-------|
|   | Min    | Max   | Min         | Max   |
| B | 0.200  | NOM   | 5.08        | NOM   |
| C | 0.027  | 0.037 | 0.69        | 0.94  |
| D | 0.088  | 0.098 | 2.24        | 2.49  |
| E | 0.350  | 0.370 | 8.89        | 9.40  |
| F | 0.777  | 0.797 | 19.74       | 20.24 |
| G | 0.695  | 0.715 | 17.65       | 18.16 |
| J | 0.240  | 0.260 | 6.10        | 6.60  |
| K | 0.115  | 0.135 | 2.92        | 3.43  |
| L | 0.457  | 0.477 | 11.61       | 12.12 |
| M | 0.065  | 0.085 | 1.65        | 2.16  |
| P | 0.015  | 0.025 | 0.38        | 0.64  |