

Silicon Power Schottky Diode

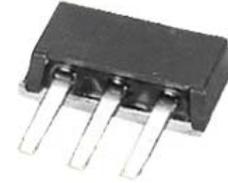
$V_{RRM} = 10\text{ V} - 100\text{ V}$

$I_F = 60\text{ A}$

Features

- High Surge Capability
- Types up to 100 V V_{RRM}

D61-3SM Package



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

| Parameter | Symbol | Conditions | FST6340SM | FST6345SM | FST6360SM | FST6380SM | FST63100SM | Unit |
|--|------------|--|------------|------------|------------|------------|------------|------|
| Repetitive peak reverse voltage | V_{RRM} | | 40 | 45 | 60 | 80 | 100 | V |
| RMS reverse voltage | V_{RMS} | | 28 | 32 | 42 | 56 | 70 | V |
| DC blocking voltage | V_{DC} | | 40 | 45 | 60 | 80 | 100 | V |
| Continuous forward | I_F | $T_C \leq 105\text{ °C}$ | 60 | 60 | 60 | 60 | 60 | A |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ °C}$, $t_p = 8.3\text{ ms}$ | 600 | 600 | 600 | 600 | 600 | A |
| Operating temperature | T_j | | -40 to 125 | °C |
| Storage temperature | T_{stg} | | -40 to 125 | °C |

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

| Parameter | Symbol | Conditions | FST6340SM | FST6345SM | FST6360SM | FST6380SM | FST63100SM | Unit |
|-----------------------|--------|---|-----------|-----------|-----------|-----------|------------|------|
| Diode forward voltage | V_F | $I_F = 60\text{ A}$, $T_j = 25\text{ °C}$ | 0.55 | 0.55 | 0.75 | 0.84 | 0.84 | V |
| Reverse current | I_R | $V_R = 10\text{ V}$, $T_j = 25\text{ °C}$ | 3 | 3 | 3 | 3 | 3 | mA |
| | | $V_R = 10\text{ V}$, $T_j = 125\text{ °C}$ | 500 | 500 | 500 | 500 | 500 | |

Thermal characteristics

| | | | | | | | | |
|-------------------------------------|------------|--|-----|-----|-----|-----|-----|------|
| Thermal resistance, junction - case | R_{thJC} | | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | °C/W |
|-------------------------------------|------------|--|-----|-----|-----|-----|-----|------|

Figure .1- Typical Forward Characteristics

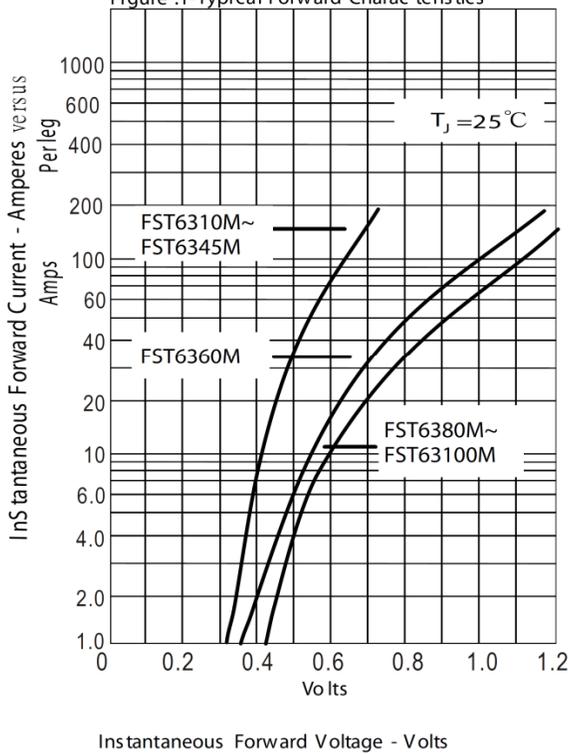


Figure .2- Forward Derating Curve

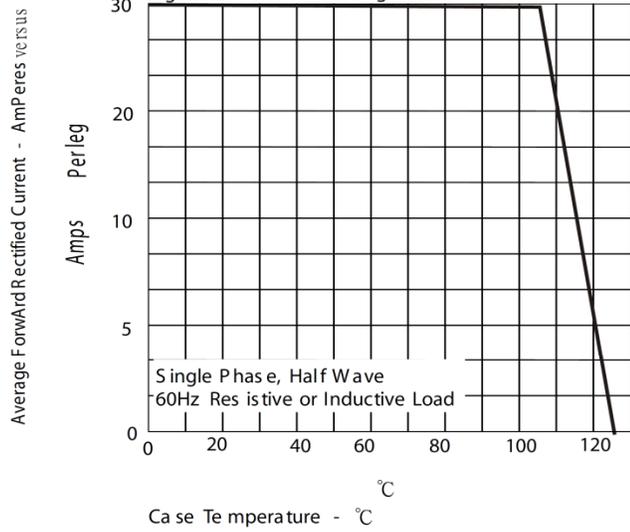


Figure .4- Typical Reverse Characteristics

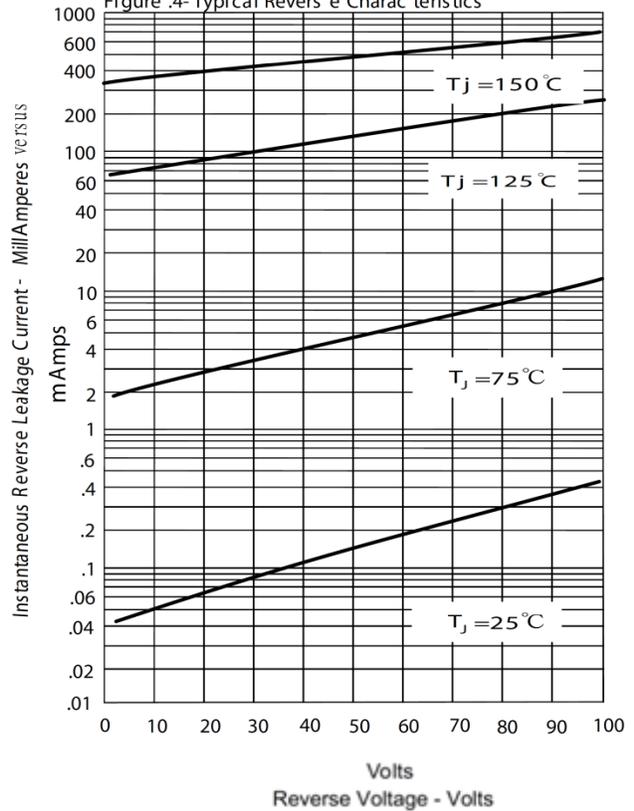


Figure .3- Peak Forward Surge Current

