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## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: [info@chipsmall.com](mailto:info@chipsmall.com) Web: [www.chipsmall.com](http://www.chipsmall.com)

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# Low $V_F$ Silicon Power Schottky Diode

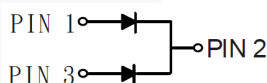
$$V_{RRM} = 40 \text{ V}$$

$$I_{F(AV)} = 160 \text{ A}$$

## Features

- High Surge Capability
- Isolated to Plate
- Not ESD Sensitive

TO-249AB Package



Maximum ratings, at  $T_j = 25^\circ\text{C}$ , unless otherwise specified ("R" devices have leads reversed)

| Parameter                              | Symbol    | Conditions | FST16040L  | Unit             |
|--|-----------|------------|------------|------------------|
| Maximum recurrent peak reverse voltage | $V_{RRM}$ |            | 40         | V                |
| Maximum RMS voltage                    | $V_{RMS}$ |            | 28         | V                |
| Maximum DC blocking voltage            | $V_{DC}$  |            | 40         | V                |
| Operating temperature                  | $T_j$     |            | -55 to 150 | $^\circ\text{C}$ |
| Storage temperature                    | $T_{stg}$ |            | -55 to 150 | $^\circ\text{C}$ |

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

| Parameter  | Symbol      | Conditions   | FST16040L | Unit |
|--|-------------|--|-----------|------|
| Average forward current (per pkg)  | $I_{F(AV)}$ | $T_C = 100^\circ\text{C}$                          | 160       | A    |
| Peak forward surge current (per leg)   | $I_{FSM}$   | $t_p = 8.3 \text{ ms}$ , half sine                 | 1000      | A    |
| Maximum instantaneous forward voltage (per leg)                              | $V_F$       | $I_{FM} = 80 \text{ A}$ , $T_j = 25^\circ\text{C}$ | 0.60      | V    |
| Maximum instantaneous reverse current at rated DC blocking voltage (per leg) | $I_R$       | $T_j = 25^\circ\text{C}$                           | 2         | mA   |
|  |             | $T_j = 100^\circ\text{C}$                          | 200       |      |

## Thermal characteristics

|   |                 |  |      |                    |
|---|-----------------|--|------|--------------------|
| Maximum thermal resistance, junction - case (per leg) | $R_{\theta JC}$ |  | 0.50 | $^\circ\text{C/W}$ |
|---|-----------------|--|------|--------------------|

Figure .1-Typical Forward Characteristics

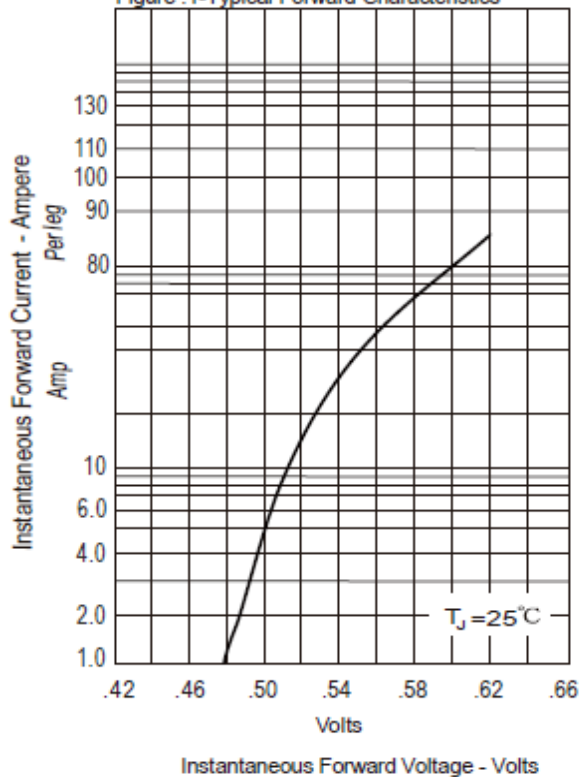


Figure .2- Forward Derating Curve

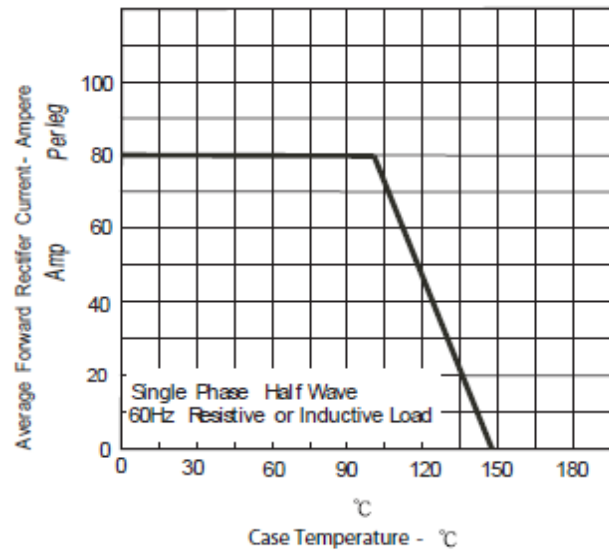


Figure .4- Typical Reverse Characteristics

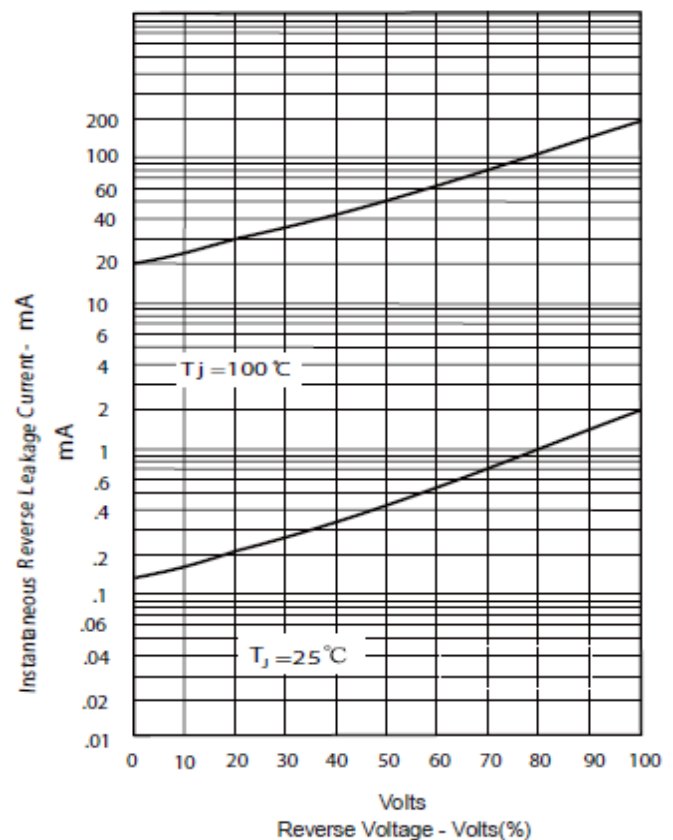
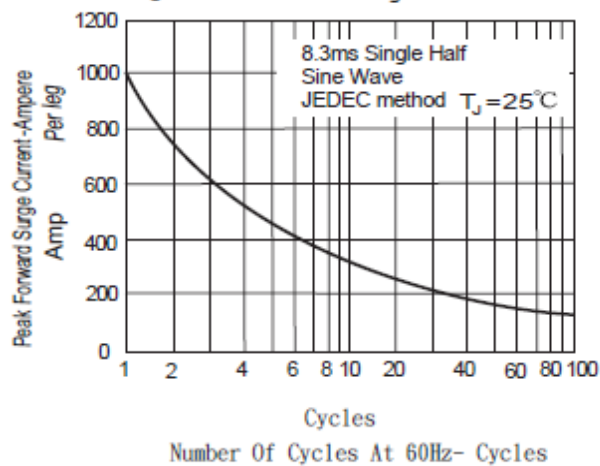
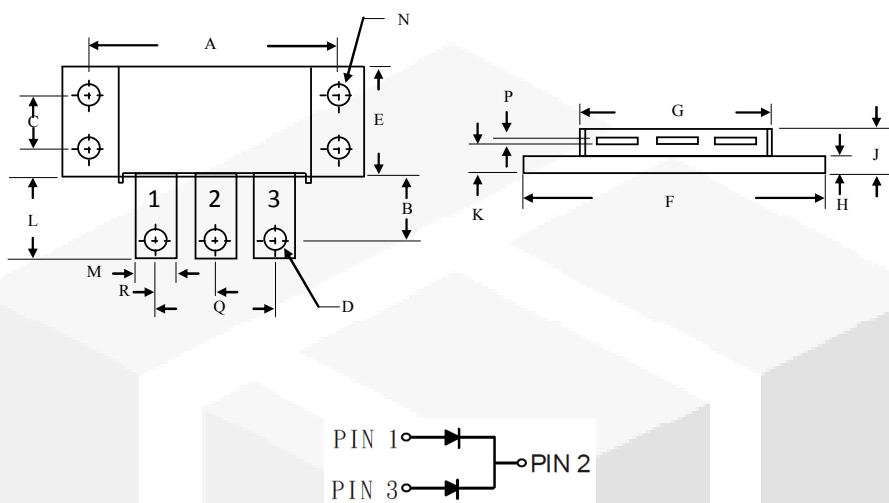


Figure.3-Peak Forward Surge Current



## Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



|   | Inches |       | Millimeters |       |
|---|--------|-------|-------------|-------|
|   | Min    | Max   | Min         | Max   |
| A | 1.995  | 2.005 | 50.67       | 50.93 |
| B | 0.300  | 0.325 | 7.62        | 8.26  |
| C | 0.495  | 0.505 | 12.57       | 12.83 |
| D | 0.182  | 0.192 | 4.62        | 4.88  |
| E | 0.990  | 1.010 | 25.15       | 26.65 |
| F | 2.390  | 2.410 | 60.71       | 61.21 |
| G | 1.495  | 1.525 | 37.90       | 38.70 |
| H | 0.114  | 0.122 | 2.90        | 3.10  |
| J | -----  | 0.420 | -----       | 10.67 |
| K | 0.256  | 0.275 | 6.5         | 7.0   |
| L | 0.490  | 0.510 | 12.45       | 12.95 |
| M | 0.330  | 0.350 | 8.38        | 8.90  |
| N | 0.175  | 0.195 | 4.45        | 4.95  |
| P | 0.035  | 0.045 | 0.89        | 1.14  |
| R | 0.445  | 0.455 | 11.30       | 11.56 |
| Q | 0.890  | 0.910 | 22.61       | 23.11 |