

## Silicon Standard Recovery Diode

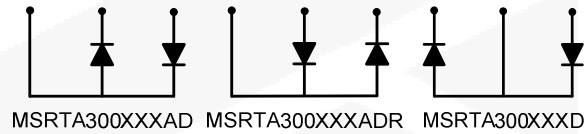
$$V_{RRM} = 1200 \text{ V} - 1600 \text{ V}$$

$$I_{F(AV)} = 300 \text{ A}$$

### Features

- High Surge Capability
- Types from 1200 V to 1600 V  $V_{RRM}$
- Isolation Type Package
- Electrically Isolated Base Plate
- Not ESD Sensitive

Heavy Three Tower Package



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

| Parameter                       | Symbol    | Conditions | MSRTA300120(A)D | MSRTA300140(A)D | MSRTA300160(A)D | Unit             |
|---------------------------------|-----------|------------|-----------------|-----------------|-----------------|------------------|
| Repetitive peak reverse voltage | $V_{RRM}$ |            | 1200            | 1400            | 1600            | V                |
| DC blocking voltage             | $V_{DC}$  |            | 1200            | 1400            | 1600            | V                |
| Operating temperature           | $T_j$     |            | -55 to 150      | -55 to 150      | -55 to 150      | $^\circ\text{C}$ |
| Storage temperature             | $T_{stg}$ |            | -55 to 150      | -55 to 150      | -55 to 150      | $^\circ\text{C}$ |

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

| Parameter                                                                    | Symbol      | Conditions                                          | MSRTA300120(A)D | MSRTA300140(A)D | MSRTA300160(A)D | Unit          |
|------------------------------------------------------------------------------|-------------|-----------------------------------------------------|-----------------|-----------------|-----------------|---------------|
| Average forward current (per leg)                                            | $I_{F(AV)}$ | $T_C = 125^\circ\text{C}$                           | 300             | 300             | 300             | A             |
| Peak forward surge current (per leg)                                         | $I_{FSM}$   | $t_p = 8.3 \text{ ms}$ , half sine                  | 3800            | 3800            | 3800            | A             |
| Maximum instantaneous forward voltage (per leg)                              | $V_F$       | $I_{FM} = 300 \text{ A}$ , $T_j = 25^\circ\text{C}$ | 1.1             | 1.1             | 1.1             | V             |
| Maximum instantaneous reverse current at rated DC blocking voltage (per leg) | $I_R$       | $T_j = 25^\circ\text{C}$                            | 20              | 20              | 20              | $\mu\text{A}$ |
|                                                                              |             | $T_j = 150^\circ\text{C}$                           | 10              | 10              | 10              | mA            |

### Thermal characteristics

|                                                       |                 |  |      |      |      |                    |
|-------------------------------------------------------|-----------------|--|------|------|------|--------------------|
| Maximum thermal resistance, junction - case (per leg) | $R_{\theta jc}$ |  | 0.28 | 0.28 | 0.28 | $^\circ\text{C/W}$ |
|-------------------------------------------------------|-----------------|--|------|------|------|--------------------|

Figure .1- Typical Forward Characteristics

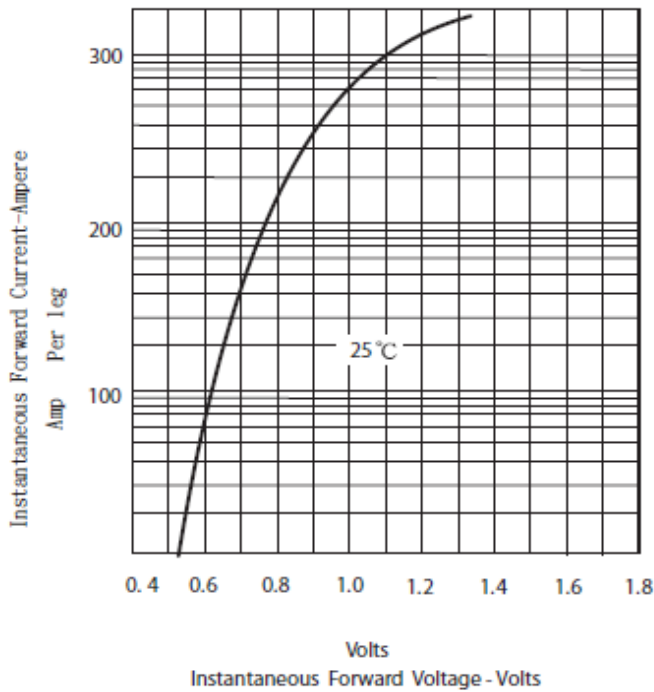


Figure.2 Forward Derating Curve

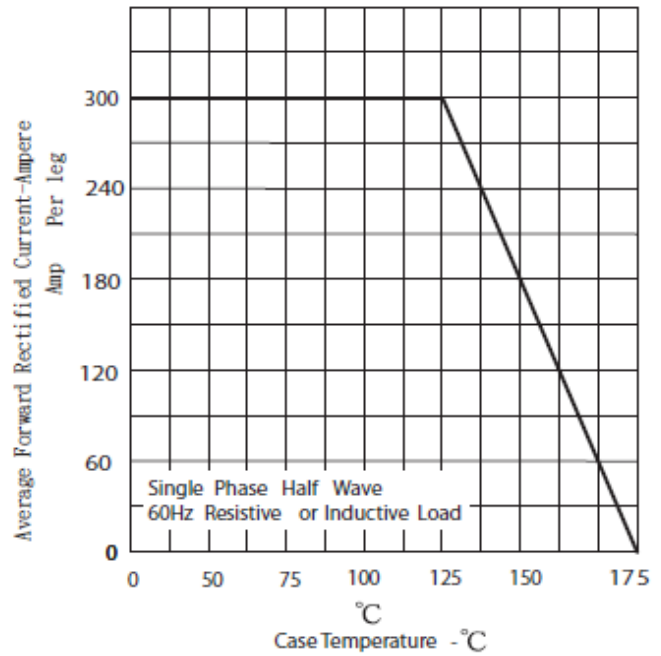


Figure.3-Peak Forward Surge Current

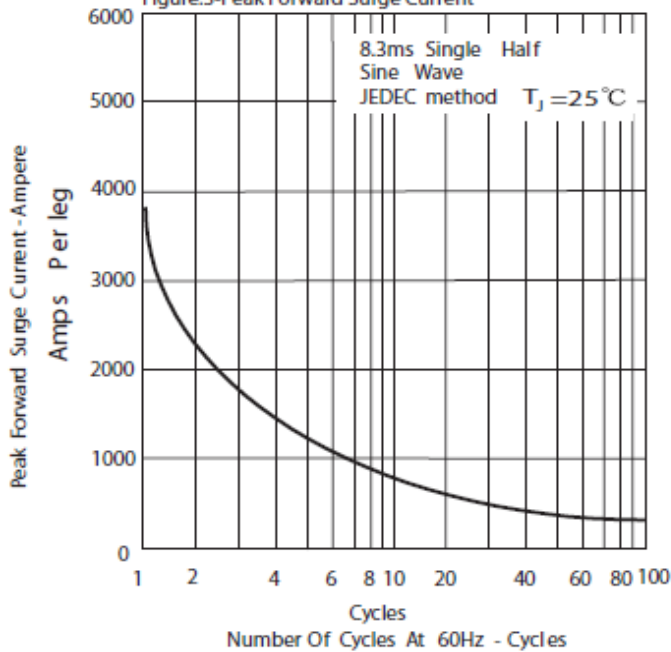
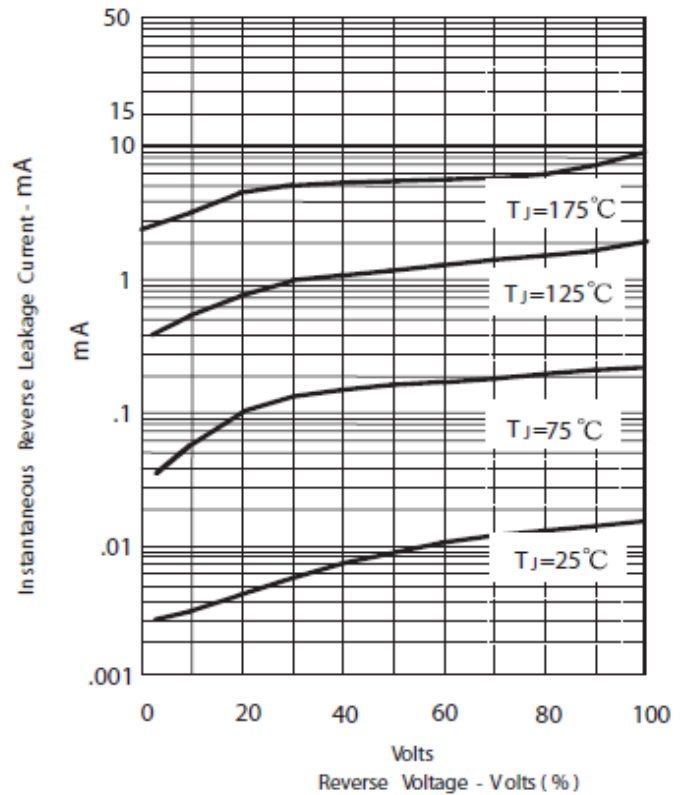
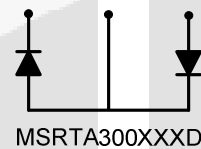
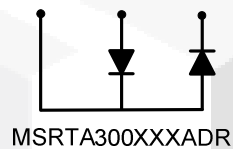
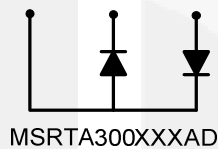
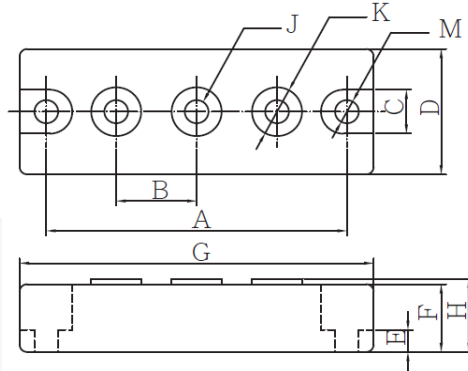


Figure .4-Typical Reverse Characteristics



## Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



| DIMENSIONS |                 |       |       |       |      |
|------------|-----------------|-------|-------|-------|------|
| DIM        | INCHES          |       | MM    |       | NOTE |
|            | MIN             | MAX   | MIN   | MAX   |      |
| A          | 3.150           | NOM   | 80.01 | NOM   |      |
| B          | .872            | .892  | 22.15 | 22.65 |      |
| C          | .465            | .479  | 11.82 | 12.18 |      |
| D          | 1.337           | 1.356 | 33.95 | 34.45 |      |
| E          | .230            | .234  | 5.84  | 6.16  |      |
| F          | .725            | REF   | 18.42 | REF   |      |
| G          | 3.668           | 3.768 | 93.17 | 95.71 |      |
| H          | ----            | .791  | ---   | 20.10 |      |
| J          | 1/4-20 UNC FULL |       |       |       |      |
| K          | .509            | .538  | 12.92 | 13.68 | Ø    |
| M          | .238            | .258  | 6.05  | 6.55  | Ø    |