



# MSRTA400120(A) thru MSRTA400160(A)

## Silicon Standard Recovery Diode

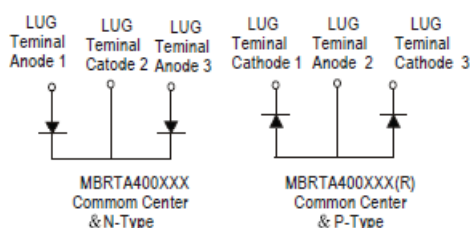
$V_{RRM} = 600\text{ V} - 1600\text{ V}$

$I_F = 400\text{ A}$

### Features

- High Surge Capability
- Types up to 1600 V  $V_{RRM}$

Heavy Three Tower Package



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

| Parameter                                            | Symbol     | Conditions                                                 | MSRTA400120(A) | MSRTA400140(A) | MSRTA400160(A) | Unit               |
|------------------------------------------------------|------------|------------------------------------------------------------|----------------|----------------|----------------|--------------------|
| Repetitive peak reverse voltage                      | $V_{RRM}$  |                                                            | 1200           | 1400           | 1600           | V                  |
| RMS reverse voltage                                  | $V_{RMS}$  |                                                            | 848            | 990            | 1131           | V                  |
| DC blocking voltage                                  | $V_{DC}$   |                                                            | 1200           | 1400           | 1600           | V                  |
| Continuous forward current                           | $I_F$      | $T_C \leq 125\text{ }^{\circ}\text{C}$                     | 400            | 400            | 400            | A                  |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ }^{\circ}\text{C}$ , $t_p = 8.3\text{ ms}$ | 4150           | 4150           | 4150           | A                  |
| Operating temperature                                | $T_j$      |                                                            | -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     | $^{\circ}\text{C}$ |

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

| Parameter             | Symbol | Conditions                                                 | MSRTA400120(A) | MSRTA400140(A) | MSRTA400160(A) | Unit          |
|-----------------------|--------|------------------------------------------------------------|----------------|----------------|----------------|---------------|
| Diode forward voltage | $V_F$  | $I_F = 400\text{ A}$ , $T_j = 25\text{ }^{\circ}\text{C}$  | 1.2            | 1.2            | 1.2            | V             |
| Reverse current       | $I_R$  | $V_R = 600\text{ V}$ , $T_j = 25\text{ }^{\circ}\text{C}$  | 25             | 25             | 25             | $\mu\text{A}$ |
|                       |        | $V_R = 600\text{ V}$ , $T_j = 150\text{ }^{\circ}\text{C}$ | 10             | 10             | 10             | mA            |

### Thermal characteristics

|                                     |            |  |      |      |      |                      |
|-------------------------------------|------------|--|------|------|------|----------------------|
| Thermal resistance, junction - case | $R_{thJC}$ |  | 0.14 | 0.14 | 0.14 | $^{\circ}\text{C/W}$ |
|-------------------------------------|------------|--|------|------|------|----------------------|



# MSRTA400120(A) thru MSRTA400160(A)

Figure .1- Typical Forward Characteristics

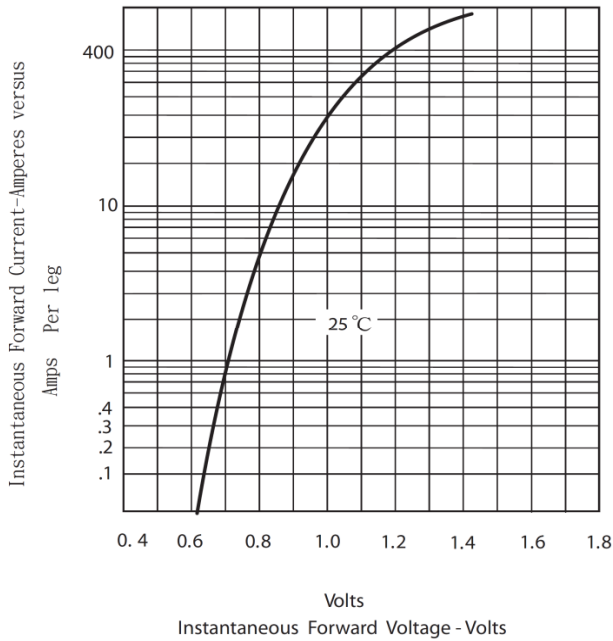


Figure.2 Forward Derating Curve

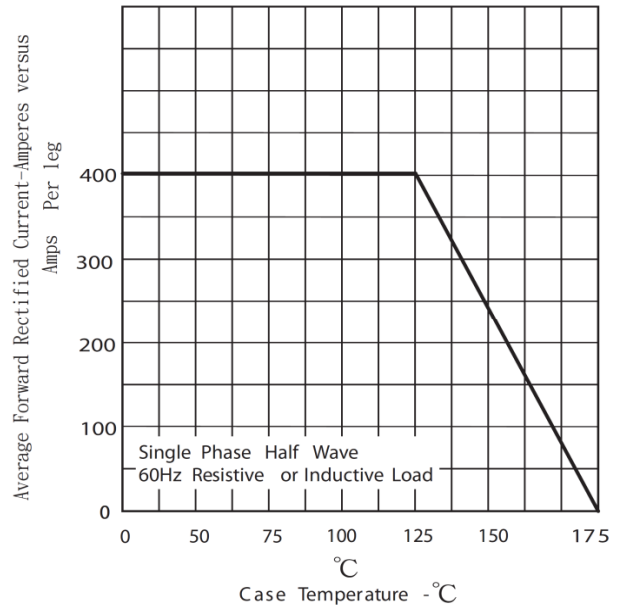


Figure.3-Peak Forward Surge Current

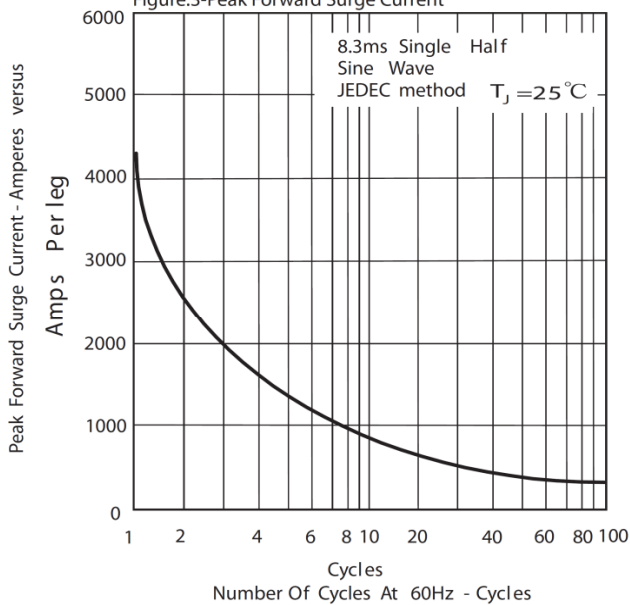


Figure .4 -Typical Reverse Characteristics

