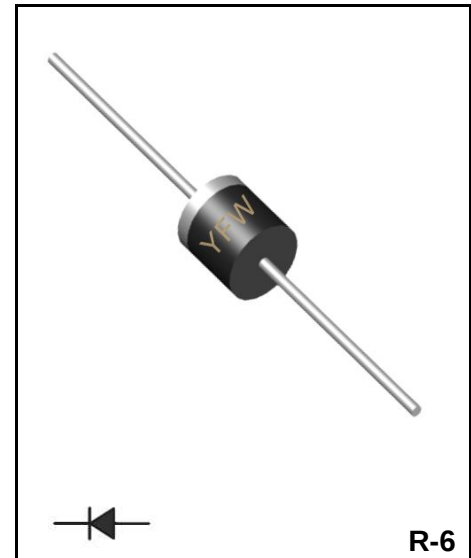


**Fast Recovery Silicon Rectifiers**
**Reverse Voltage - 100 to 1000 V**
**Forward Current – 6 A**
**FEATURES**

- ◆For surface mounted applications
- ◆Low profile package
- ◆Open Junction chip
- ◆Ideal for automated placement
- ◆Lead free in comply with EU RoHS 2011/65/EU directives

**MECHANICAL DATA**

- ◆Case: R-6
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 2.05g /0.072oz


**Maximum Ratings and Electrical characteristics**

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter                                                                                                                       | Symbols         | FR602      | FR603 | FR604 | FR605 | FR606 | FR607 | Units                |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------|------------|-------|-------|-------|-------|-------|----------------------|
| Maximum Repetitive Peak Reverse Voltage                                                                                         | $V_{RRM}$       | 100        | 200   | 400   | 600   | 800   | 1000  | V                    |
| Maximum RMS voltage                                                                                                             | $V_{RMS}$       | 70         | 140   | 280   | 420   | 560   | 700   | V                    |
| Maximum DC Blocking Voltage                                                                                                     | $V_{DC}$        | 100        | 200   | 400   | 600   | 800   | 1000  | V                    |
| Maximum Average Forward Rectified Current at $T_c = 100\text{ }^{\circ}\text{C}$                                                | $I_{F(AV)}$     | 6.0        |       |       |       |       |       | A                    |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load                                              | $I_{FSM}$       | 250.0      |       |       |       |       |       | A                    |
| Maximum Instantaneous Forward Voltage at 6.0A                                                                                   | $V_F$           | 1.28       |       |       |       |       |       | V                    |
| Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$<br>at Rated DC Blocking Voltage $T_a=125\text{ }^{\circ}\text{C}$ | $I_R$           | 10<br>500  |       |       |       |       |       | $\mu\text{A}$        |
| Maxinum reverse recovery time <sup>(Note 1)</sup>                                                                               | $T_{rr}$        | 150        |       |       | 250   | 500   |       | nS                   |
| Typical Junction Capacitance <sup>( Note 2)</sup>                                                                               | $C_j$           | 100.0      |       |       |       |       |       | pF                   |
| Typical Thermal Resistance                                                                                                      | $R_{\theta JA}$ | 40.0       |       |       |       |       |       | $^{\circ}\text{C/W}$ |
| Operating and Storage Temperature Range                                                                                         | $T_j, T_{stg}$  | -55 ~ +150 |       |       |       |       |       | $^{\circ}\text{C}$   |

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) Reverse recovery time test condition:  $I_F=0.5\text{A}$   $I_R=1.0\text{A}$   $I_{rr}=0.25\text{A}$

Ratings and Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

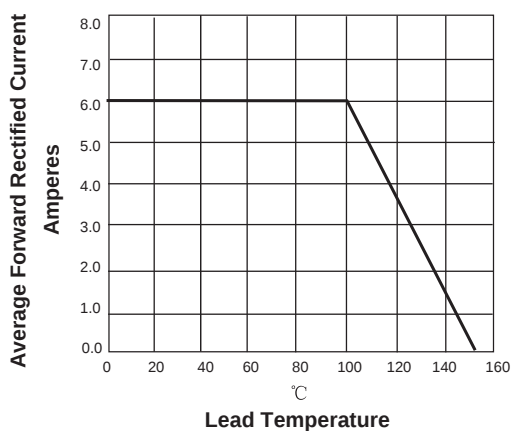


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

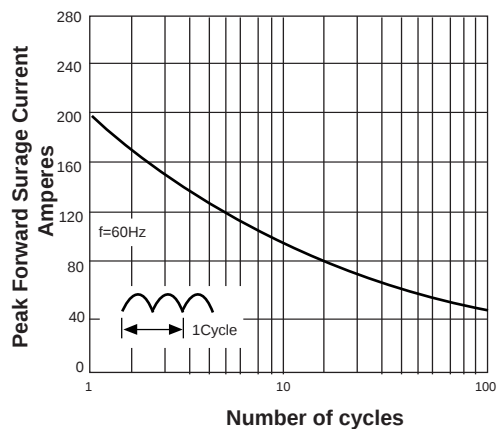


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

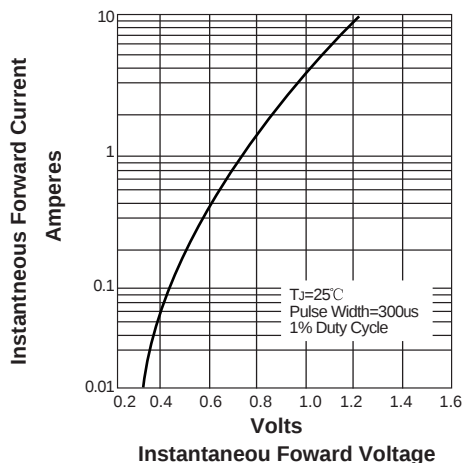
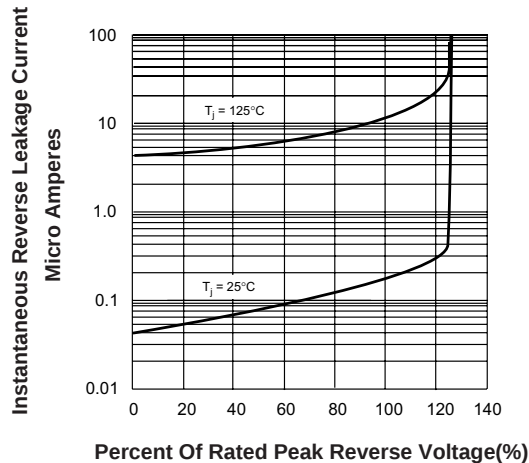


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



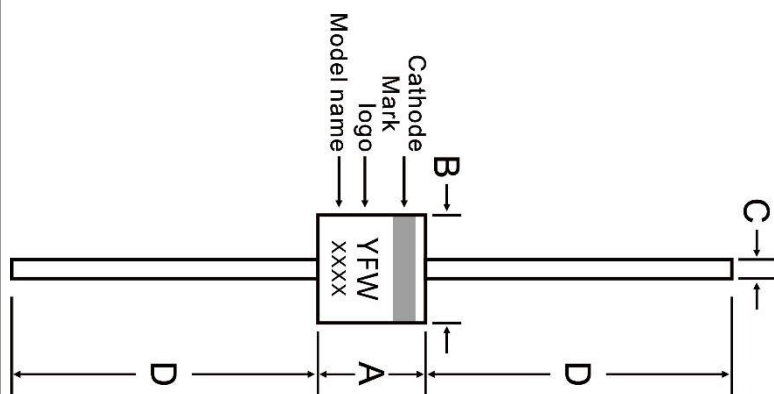
### Ordering information

| Package | Packing Description | Packing Quantity                |
|---------|---------------------|---------------------------------|
| R-6     | bulk                | 100PCS/Inner Box 5000PCS/Carton |
|         | ammo pack           | 500PCS/Box 5000PCS/Carton       |

### Package Dimensions

#### R-6

| Dim. | Millimeter(mm) |      | INCHES |       |
|------|----------------|------|--------|-------|
|      | Min.           | Max. | Min.   | Max.  |
| A    | 8.60           | 9.10 | 0.340  | 0.360 |
| B    | 8.60           | 9.10 | 0.340  | 0.360 |
| C    | 1.20           | 1.30 | 0.048  | 0.052 |
| D    | 25.40          | -    | 1.00   | -     |



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