



## FAST RECOVER RECTIFIER

FR601 THRU FR607

VOLTAGE RANGE  
CURRENT

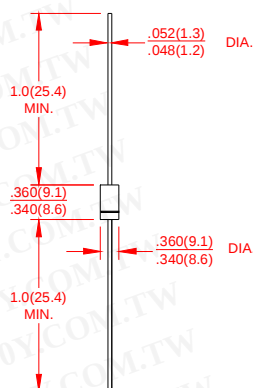
50 to 1000 Volts  
6.0Ampere

### FEATURES

- Low coat construction
- Fast switching for high efficiency.
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:  
260°C/10 secods/.375"(9.5mm)lead length at 5 lbs(2.3kg) tension

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.042ounce, 1.19 grams



R-6

Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

|                                                                                                        | SYMBOLS                | FR 601         | FR 602 | FR 603 | FR 604 | FR 605 | FR 606 | FR 607 | UNITS |    |
|--------------------------------------------------------------------------------------------------------|------------------------|----------------|--------|--------|--------|--------|--------|--------|-------|----|
| Maximum Repetitive Peak Reverse Voltage                                                                | V <sub>RRM</sub>       | 50             | 100    | 200    | 400    | 600    | 800    | 1000   | Volts |    |
| Maximum RMS Voltage                                                                                    | V <sub>RMS</sub>       | 35             | 70     | 140    | 280    | 420    | 560    | 700    | Volts |    |
| Maximum DC Blocking Voltage                                                                            | V <sub>DC</sub>        | 50             | 100    | 200    | 400    | 600    | 800    | 1000   | Volts |    |
| Maximum Average Forward Rectified Current<br>0.375”(9.5mm) lead length at T <sub>A</sub> = 75°C        | I <sub>(AV)</sub>      | 6.0            |        |        |        |        |        |        | Amp   |    |
| Peak Forward Surge Current<br>8.3mS single half sine wave superimposed on<br>rated load (JEDEC method) | I <sub>FSM</sub>       | 300            |        |        |        |        |        |        | Amps  |    |
| Maximum Instantaneous Forward Voltage @ 6.0A                                                           | V <sub>F</sub>         | 1.3            |        |        |        |        |        |        | Volts |    |
| Maximum DC Reverse Current at Rated<br>DC Blocking Voltage                                             | T <sub>A</sub> = 25°C  | I <sub>R</sub> | 10     |        |        |        |        |        |       | μA |
|                                                                                                        | T <sub>A</sub> = 100°C |                | 500    |        |        |        |        |        |       |    |
| Maximum Reverse Recovery Time (Note 3) T <sub>J</sub> =25°C                                            | t <sub>rr</sub>        | 150            |        |        |        | 250    | 500    |        | ns    |    |
| Typical Junction Capacitance (Note 1)                                                                  | C <sub>J</sub>         | 150            |        |        |        |        |        |        | pF    |    |
| Typical Thermal Resistance (Note 2)                                                                    | R <sub>θJA</sub>       | 10             |        |        |        |        |        |        | °C/W  |    |
| Operating Junction Temperature Range                                                                   | T <sub>J</sub>         | (-55 to +150)  |        |        |        |        |        |        | °C    |    |
| Storage Temperature Range                                                                              | T <sub>STG</sub>       | (-55 to +150)  |        |        |        |        |        |        | °C    |    |

#### Notes:

- 1.Measured at 1.0MHz and Applied Reverse Voltage of 4.0Volts.
- 2 Thermal Resistance from junction to Ambient at .375"(9.5mm)lead length, P.C.board mounted.
- 3.Reverse Recovery Test Conditions: $I_f = 0.5\text{mA}$ ,  $I_r = 1.0\text{mA}$ ,  $I_{rr} = 0.25\text{A}$

勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-34970699  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)



## FAST RECOVER RECTIFIER

FR601 THRU FR607

VOLTAGE RANGE  
CURRENT

50 to 1000 Volts  
6.0 Ampere

### RATING AND CHARACTERISTIC CURVES FR601 THRU FR607

FIG.1-TYPICAL FORWARD CURRENT  
DERATING CURVE

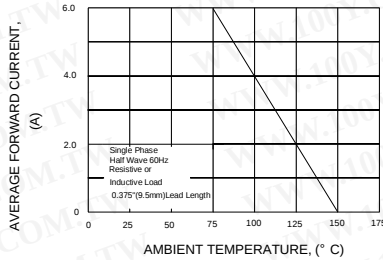


FIG.2-MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT

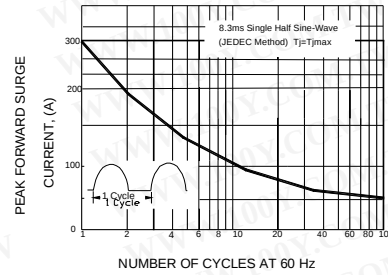


FIG.3-TYPICAL INSTANTANEOUS  
FORWARD CHARACTERISTICS

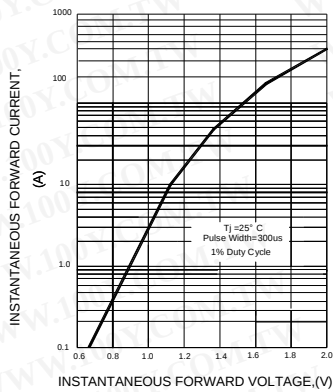


FIG.4-TYPICAL REVERSE  
CHARACTERISTICS

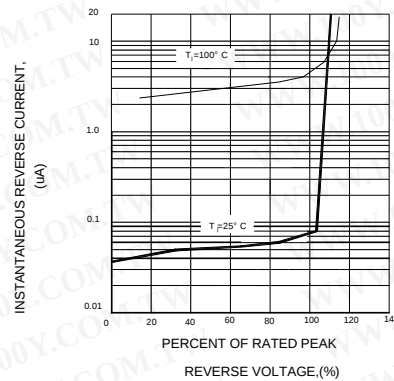


FIG.5-TYPICAL JUNCTION CAPACITANCE

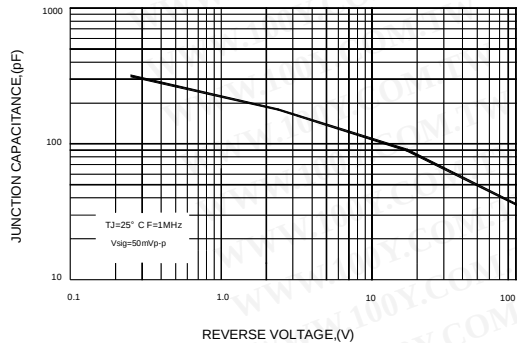
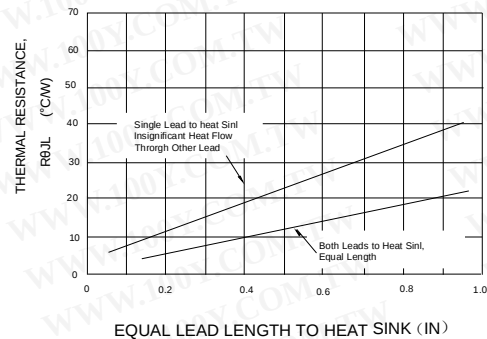


FIG.6-TYPICAL THERMAL RESISTANCE  
VS LEAD LENGTH



勝特力材料 886-3-5753170  
勝特力电子(上海) 86-21-34970699  
勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)