



# FFM101M THRU FFM107M SPECIFICATIONS

Rev. A

## 1A SURFACE MOUNT FAST RECOVERY RECTIFIERS

|      |              | <table border="1"> <thead> <tr> <th rowspan="2">Dim.</th> <th colspan="2">Value In[mm]</th> <th rowspan="2">Typ.</th> </tr> <tr> <th>Min.</th> <th>Max.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>0.14[3.58]</td> <td>0.154[3.91]</td> <td>---</td> </tr> <tr> <td>B</td> <td>0.098[2.49]</td> <td>0.10[2.79]</td> <td>---</td> </tr> <tr> <td>C</td> <td>0.055[1.40]</td> <td>0.07[1.80]</td> <td>---</td> </tr> <tr> <td>D</td> <td>0.053[1.35]</td> <td>0.037[0.94]</td> <td>---</td> </tr> <tr> <td>E</td> <td>0.040[0.25]</td> <td>0.023[0.56]</td> <td>---</td> </tr> <tr> <td>F</td> <td>0.049[0.48]</td> <td>0.028[0.71]</td> <td>---</td> </tr> </tbody> </table> |      | Dim. | Value In[mm] |  | Typ. | Min. | Max. | A | 0.14[3.58] | 0.154[3.91] | --- | B | 0.098[2.49] | 0.10[2.79] | --- | C | 0.055[1.40] | 0.07[1.80] | --- | D | 0.053[1.35] | 0.037[0.94] | --- | E | 0.040[0.25] | 0.023[0.56] | --- | F | 0.049[0.48] | 0.028[0.71] | --- |
|------|--------------|--|------|------|--------------|--|------|------|------|---|------------|-------------|-----|---|-------------|------------|-----|---|-------------|------------|-----|---|-------------|-------------|-----|---|-------------|-------------|-----|---|-------------|-------------|-----|
| Dim. | Value In[mm] |  | Typ. |      |              |  |      |      |      |   |            |             |     |   |             |            |     |   |             |            |     |   |             |             |     |   |             |             |     |   |             |             |     |
|      | Min.         | Max.   |      |      |              |  |      |      |      |   |            |             |     |   |             |            |     |   |             |            |     |   |             |             |     |   |             |             |     |   |             |             |     |
| A    | 0.14[3.58]   | 0.154[3.91]  | ---  |      |              |  |      |      |      |   |            |             |     |   |             |            |     |   |             |            |     |   |             |             |     |   |             |             |     |   |             |             |     |
| B    | 0.098[2.49]  | 0.10[2.79]   | ---  |      |              |  |      |      |      |   |            |             |     |   |             |            |     |   |             |            |     |   |             |             |     |   |             |             |     |   |             |             |     |
| C    | 0.055[1.40]  | 0.07[1.80]   | ---  |      |              |  |      |      |      |   |            |             |     |   |             |            |     |   |             |            |     |   |             |             |     |   |             |             |     |   |             |             |     |
| D    | 0.053[1.35]  | 0.037[0.94]  | ---  |      |              |  |      |      |      |   |            |             |     |   |             |            |     |   |             |            |     |   |             |             |     |   |             |             |     |   |             |             |     |
| E    | 0.040[0.25]  | 0.023[0.56]  | ---  |      |              |  |      |      |      |   |            |             |     |   |             |            |     |   |             |            |     |   |             |             |     |   |             |             |     |   |             |             |     |
| F    | 0.049[0.48]  | 0.028[0.71]  | ---  |      |              |  |      |      |      |   |            |             |     |   |             |            |     |   |             |            |     |   |             |             |     |   |             |             |     |   |             |             |     |
|      |              | <p><b>PRODUCT FEATURES</b></p> <ol style="list-style-type: none"> <li>1. FLAMMABILITY CLASSIFICATION: 94V-0</li> <li>2. BUILT-IN STRAIN RELIEF</li> <li>3. LOW PROFILE</li> <li>4. FAST SWITCHING</li> <li>5. CASE: MOLDED PLASTIC, SOD-123</li> <li>6. DIMENSIONS IN INCHES AND (MILLIMETERS)</li> <li>7. POLARITY: INDICATED BY CATHODE BAND</li> <li>8. WEIGHT : 0.04 GRAMS</li> <li>9. ROHS</li> </ol>   |      |      |              |  |      |      |      |   |            |             |     |   |             |            |     |   |             |            |     |   |             |             |     |   |             |             |     |   |             |             |     |

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED STORAGE AND OPERATING TEMPERATURE RANGE -55°C TO + 150°C. SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%

| RATINGS   |  | SYMBOL | VALUE | UNITS |
|---|--|--------|-------|-------|
| MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT @ TL=90°C                     |  | IO     | 1     | A     |
| PEAK FWD SURGE CURRENT, 8.3ms HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD |  | IFSM   | 30    | A     |
| TYPICAL JUNCTION CAPACITANCE(NOTE 1)                                    |  | CJ     | 15    | pF    |
| TYPICAL THERMAL RESISTANCE (NOTE 2)                                     |  | Rqja   | 30    | °C/W  |
| MAXIMUM FORWARD VOLTAGE   |  | VF     | 1.3   | V     |
| MAXIMUM REVERSE CURRENT @ 25°C  |  | IR     | 5     | uA    |

1. MEASURED @ 1.0 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 V
2. THERMAL RESISTANCE FROM JUNCTION TO TERMINAL 5.0mm<sup>2</sup> (.013 mm THICK) LAND AREAS
3. MAXIMUM FORWARD VOLTAGE AT IO DC

| PART NUMBER | MAX RECURRENT PK REV VOLTAGE VRRM (V) | MAX RMS VOLTAGE VRMS (V) | MAX DC BLOCKING VOLTAGE VDC (V) | MAX REV RECOVERY TIME TRR (nS) |
|-------------|---------------------------------------|--------------------------|---------------------------------|--------------------------------|
| FFM101M     | 50                                    | 35                       | 50                              | 150                            |
| FFM102M     | 100                                   | 70                       | 100                             | 150                            |
| FFM103M     | 200                                   | 140                      | 200                             | 150                            |
| FFM104M     | 400                                   | 280                      | 400                             | 150                            |
| FFM105M     | 600                                   | 420                      | 600                             | 250                            |
| FFM106M     | 800                                   | 560                      | 800                             | 500                            |
| FFM107M     | 1000                                  | 700                      | 1000                            | 500                            |

## RATING AND CHARACTERISTIC CURVES

FIG. 1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

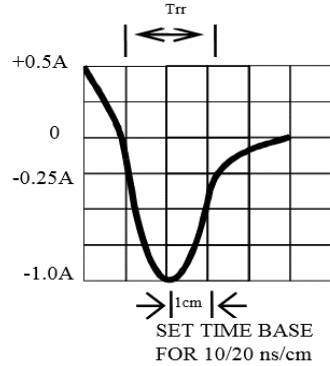
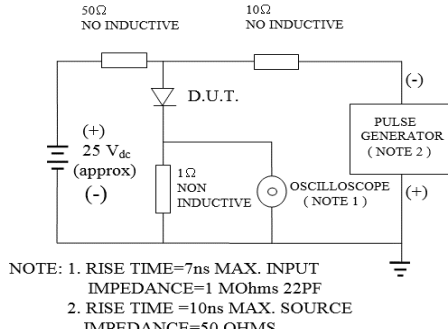


FIG. 2-MAXIMUM CURRENT DERATING CURVE

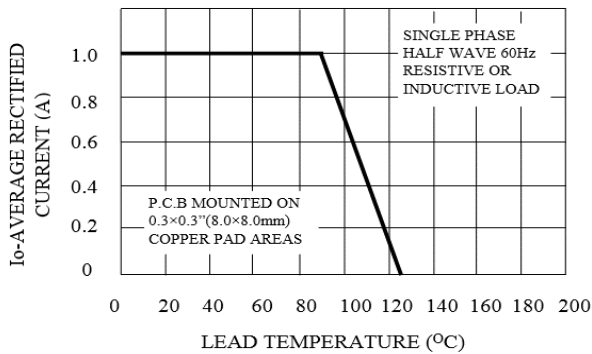


FIG. 3-TYPICAL JUNCTION CAPACITANCE

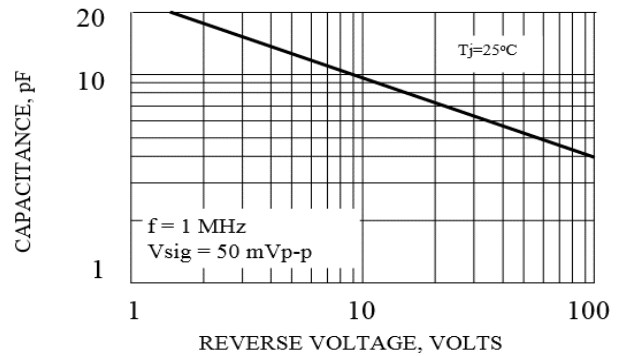


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

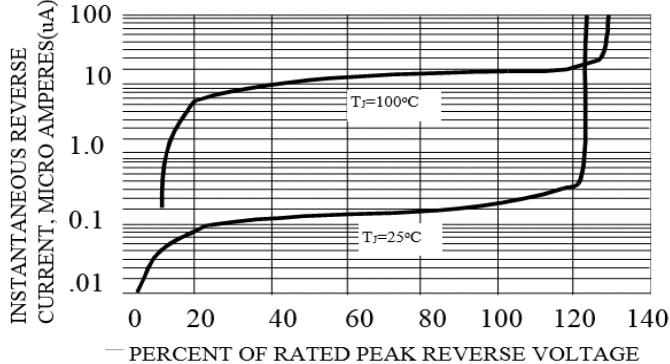
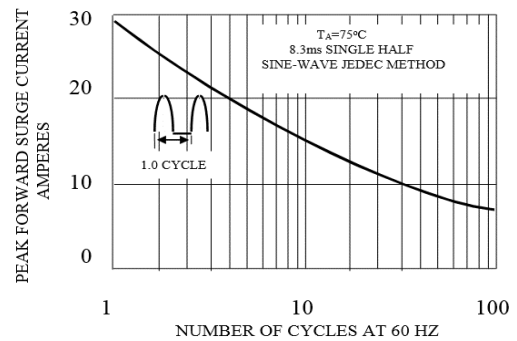


Fig. 5-MAXIMUM FORWARD SURGE CURRENT





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FIG. 6-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

