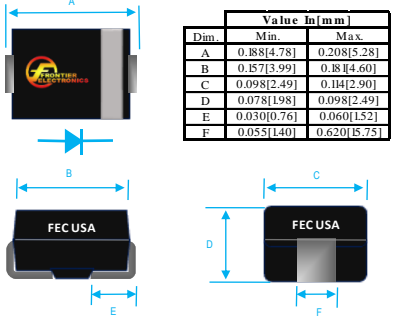


## 1A ULTRA FAST RECOVERY SURFACE MOUNT RECTIFIER

|  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">Dim</th> <th colspan="2">Value in (mm)</th> </tr> <tr> <th>Min</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>0.188[4.78]</td> <td>0.208[5.28]</td> </tr> <tr> <td>B</td> <td>0.157[3.99]</td> <td>0.181[4.60]</td> </tr> <tr> <td>C</td> <td>0.098[2.49]</td> <td>0.141[3.60]</td> </tr> <tr> <td>D</td> <td>0.078[1.98]</td> <td>0.098[2.49]</td> </tr> <tr> <td>E</td> <td>0.030[0.76]</td> <td>0.060[1.52]</td> </tr> <tr> <td>F</td> <td>0.055[1.40]</td> <td>0.020[0.51]</td> </tr> </tbody> </table> | Dim         | Value in (mm) |  | Min | Max | A | 0.188[4.78] | 0.208[5.28] | B | 0.157[3.99] | 0.181[4.60] | C | 0.098[2.49] | 0.141[3.60] | D | 0.078[1.98] | 0.098[2.49] | E | 0.030[0.76] | 0.060[1.52] | F | 0.055[1.40] | 0.020[0.51] | <b>PRODUCT FEATURES</b> <ol style="list-style-type: none"> <li>1. FLAMMABILITY CLASSIFICATION: 94V-0</li> <li>2. GLASS PASSIVATED CHIP JUNCTION</li> <li>3. BUILT-IN STRAIN RELIEF</li> <li>4. LOW PROFILE</li> <li>5. ULTRA FAST SWITCHING</li> <li>6. CASE: MOLDED PLASTIC, DO-214AC (SMA-F)</li> <li>7. POLARITY: INDICATED BY CATHODE BAND</li> <li>8. WEIGHT : 0.064 GRAMS</li> <li>9. ROHS</li> </ol> |
|--|-------------|---------------|--|-----|-----|---|-------------|-------------|---|-------------|-------------|---|-------------|-------------|---|-------------|-------------|---|-------------|-------------|---|-------------|-------------|---|
| Dim  |             | Value in (mm) |  |     |     |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |
|  | Min         | Max           |  |     |     |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |
| A  | 0.188[4.78] | 0.208[5.28]   |  |     |     |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |
| B  | 0.157[3.99] | 0.181[4.60]   |  |     |     |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |
| C  | 0.098[2.49] | 0.141[3.60]   |  |     |     |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |
| D  | 0.078[1.98] | 0.098[2.49]   |  |     |     |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |
| E  | 0.030[0.76] | 0.060[1.52]   |  |     |     |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |
| F  | 0.055[1.40] | 0.020[0.51]   |  |     |     |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |             |             |   |

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 0.375"(9.5mm) LEAD LENGTH @ TA=55°C | IO     | 1     | A     |
| TYPICAL JUNCTION CAPACITANCE(NOTE 1)  | CJ     | 15    | pF    |
| TYPICAL THERMAL RESISTANCE (NOTE 2)   | Rqja   | 13    | °C/W  |
| MAXIMUM REVERSE CURRENT @ 125 °C  | IR     | 250   | uA    |

1. CJ MEASURED @ 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS
2. THERMAL RESISTANCE FROM JUNCTION TO AMBIENT AND JUNCTION TO LEAD PCB MOUNTED ON 0.3×0.3"(8.0×8.0mm) COPPER PAD AREAS
3. REVERSE RECOVERY TEST CONDITIONS: IF=0.5A, IR=1.0A, IRR=0.25A
4. MAXIMUM FORWARD VOLTAGE @ IO DC

| PART NUMBER | MAX RECURRENT PK REV VOLTAGE VRRM (V) | MAX RMS VOLTAGE VRMS (V) | MAX DC BLOCKING VOLTAGE VDC (V) | MAX FWD VOLTAGE VF (V) | MAX REV CURRENT AT 25°C IR (uA) | MAX REVERSE RECOVERY TIME nS |
|-------------|---------------------------------------|--------------------------|---------------------------------|------------------------|---------------------------------|------------------------------|
| MURS105     | 50                                    | 35                       | 50                              | 0.875                  | 2                               | 25                           |
| MURS110     | 100                                   | 70                       | 100                             | 0.875                  | 2                               | 25                           |
| MURS115     | 150                                   | 105                      | 150                             | 0.875                  | 2                               | 25                           |
| MURS120     | 200                                   | 140                      | 200                             | 0.875                  | 2                               | 25                           |
| MURS140     | 400                                   | 280                      | 400                             | 1.25                   | 5                               | 50                           |
| MURS160     | 600                                   | 420                      | 600                             | 1.25                   | 5                               | 50                           |

## RATING AND CHARACTERISTIC CURVES

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

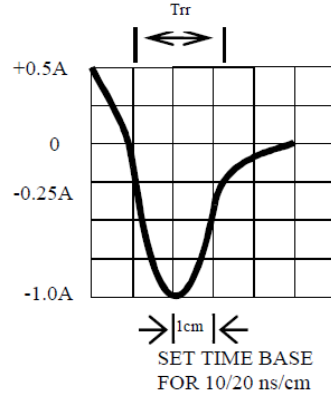
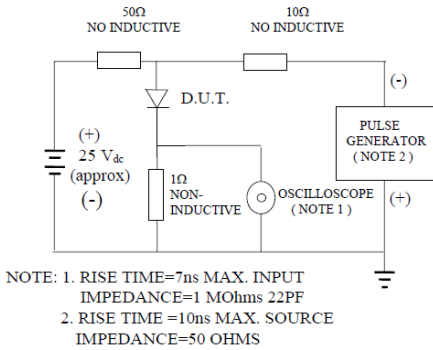


FIG. 2-TYPICAL FORWARD CURRENT DERATING CURVE

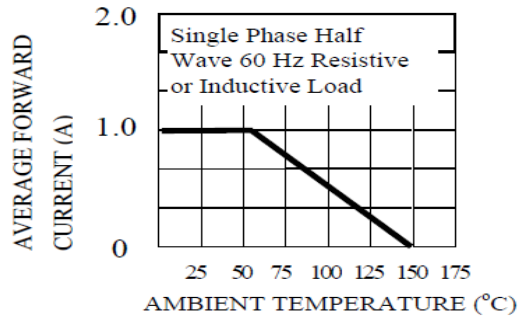


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

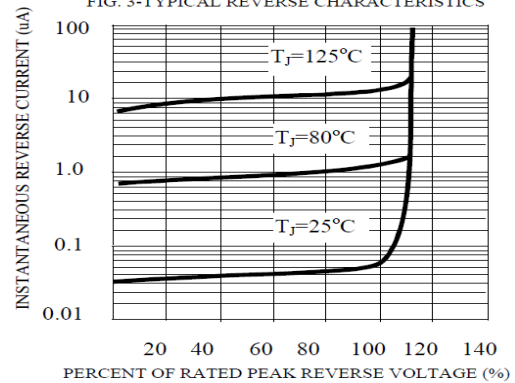


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

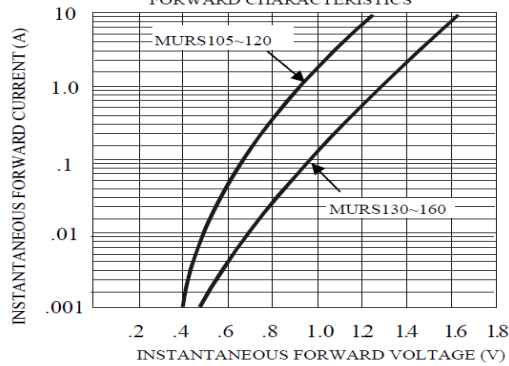
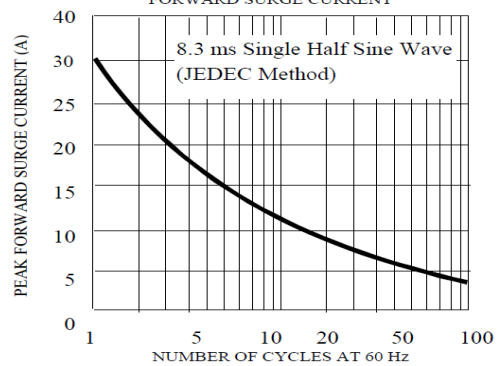


FIG. 5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT





# MURS105 THRU MURS160 SPECIFICATIONS

Rev. A

