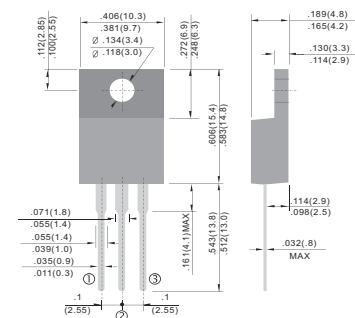


## Pb Free Plating Product

## MUR1620FCA thru MUR16120FCA



## 16.0 Ampere Insulated Dual Common Anode Ultra Fast Recovery Rectifiers

| Features                                                    | ITO-220AB/TO-220F-3L                                                               | Unit:inch(mm) |
|-------------------------------------------------------------|------------------------------------------------------------------------------------|---------------|
| ※ ThinkSemi latest&matured process FRD/FRED                 |  |               |
| ※ Low forward voltage drop                                  |                                                                                    |               |
| ※ High current capability                                   |                                                                                    |               |
| ※ Low reverse leakage current                               |                                                                                    |               |
| ※ High surge current capability                             |                                                                                    |               |
| Application                                                 |                                                                                    |               |
| ※ Automotive Inverters and Solar Inverters                  |                                                                                    |               |
| ※ Car Audio Amplifiers and Sound Device Systems             |                                                                                    |               |
| ※ Plating Power Supply, Motor Control, UPS and SMPS etc.    |                                                                                    |               |
| Mechanical Data                                             |                                                                                    |               |
| ※ Case: Isolated fully plastic ITO-220AB/TO-220F-3L package |                                                                                    |               |
| ※ Epoxy: UL 94V-0 rate flame retardant                      |                                                                                    |               |
| ※ Terminals: Solderable per MIL-STD-202 method 208          |                                                                                    |               |
| ※ Polarity: As marked on diode body                         |                                                                                    |               |
| ※ Mounting position: Any                                    |                                                                                    |               |
| ※ Weight: 2.0 gram approximately                            |                                                                                    |               |

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| PARAMETER                                                                                                            | SYMBOL          | MUR1620FCA  | MUR1630FCA<br>MUR1640FCA | MUR1660FCA | MUR1680FCA | MUR16100FCA | MUR16120FCA | UNIT |
|----------------------------------------------------------------------------------------------------------------------|-----------------|-------------|--------------------------|------------|------------|-------------|-------------|------|
| Maximum Recurrent Peak Reverse Voltage                                                                               | VRRM            | 200         | 400                      | 600        | 800        | 1000        | 1200        | V    |
| Maximum RMS Voltage                                                                                                  | VRMS            | 140         | 280                      | 420        | 560        | 700         | 840         | V    |
| Maximum DC Blocking Voltage                                                                                          | VDC             | 200         | 400                      | 600        | 800        | 1000        | 1200        | V    |
| Maximum Average Forward Rectified Current TC=125℃<br>(Total Device 2x8.0A=16.0A)                                     | IF(AV)          | 16.0        |                          |            |            |             |             | A    |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)(Per Diode/Per Leg) | IFSM            | 160         |                          |            |            |             |             | A    |
| Maximum Instantaneous Forward Voltage @8.0A(Per Diode/Per Leg)                                                       | VF<br>(Typical) | 0.90-1.10   | 1.10-1.40                | 1.40-1.80  | 1.40-1.80  |             |             | V    |
| Maximum DC Reverse Current @TJ=25℃<br>At Rated DC Blocking Voltage @TJ=125℃                                          | IR              | 5.0<br>500  |                          |            |            |             | µA<br>µA    |      |
| Maximum Reverse Recovery Time (Note1)                                                                                | Trr             | 35-50       |                          |            | 50-75      |             |             | nS   |
| Typical Junction Capacitance (Note 2)                                                                                | CJ              | 80          |                          |            |            |             | pF          |      |
| Typical Thermal Resistance (Note 3)                                                                                  | RθJC            | 3.0         |                          |            |            |             |             | ℃/W  |
| Operating Junction and Storage Temperature Range                                                                     | TJ,TSTG         | -55 to +175 |                          |            |            |             |             | ℃    |

Note:(1)Reverse recovery test conditions IF = 0.5A, IR = 1.0A, Irr = 0.25A.

Note:(2)Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

Note:(3)Thermal Resistance junction to case.

FIG.1 - FORWARD CURRENT DERATING CURVE

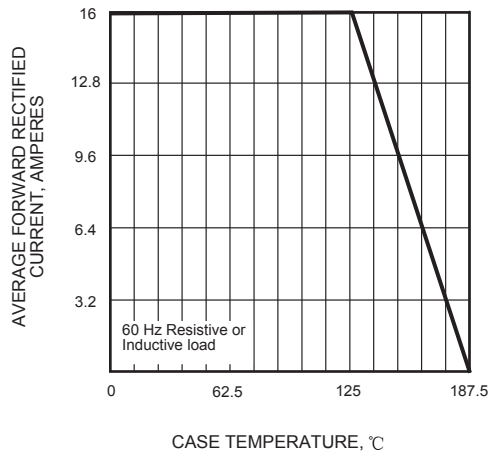


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

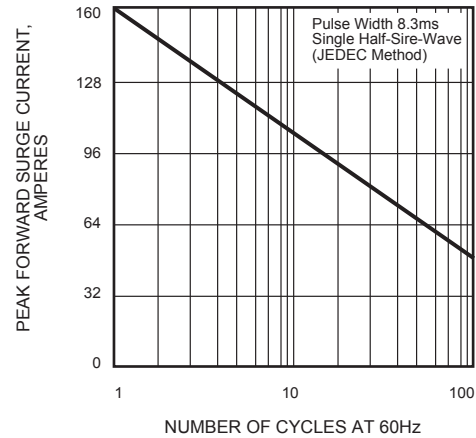


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

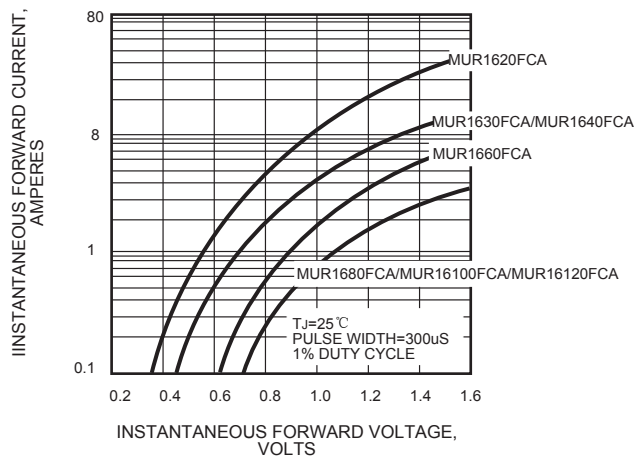


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

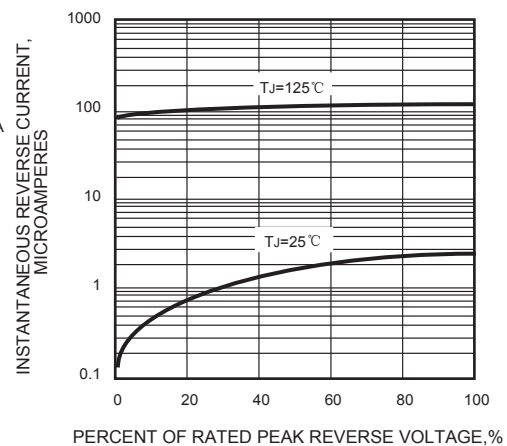


FIG.5 - TYPICAL JUNCTION CAPACITANCE

