

# SUPER-FAST RECOVERY RECTIFIERS

REV:1.01

|                            |                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                           |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Features                   | <p>Ultrafast 35 Nanosecond Recovery Time</p> <p>175° C Operating Junction Temperature</p> <p>Popular TO-220AB Package</p> <p>Epoxy Meets UL94 ,V0 @ 1/8"</p> <p>High Temperature Glass Passivated Junction</p> <p>Low Forward Voltage</p> <p>Low Leakage Current</p> <p>Reverse Voltage to 600 Volts</p> <p>Pb-Free Packages are Available</p>          | <p><b>Typical Reference Data</b></p> <p>VRRM= 200V<br/>IF(AV)= 10A</p> <p>VRRM= 400V<br/>IF(AV)= 10A</p> <p>VRRM= 600V<br/>IF(AV)=10A</p> |
| Mechanical Characteristics | <ul style="list-style-type: none"> <li>• Case: Epoxy, Molded</li> <li>• Weight: 1.9 grams (approximately)</li> <li>• Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable</li> <li>• Lead Temperature for Soldering Purposes: 260° C Max. for 10 Seconds</li> <li>• Shipped 50 units per plastic tube</li> </ul> |                                                                                                                                           |

## MAXIMUM RATINGS

| Rating                                                                                                  |          |              |     |     |   |
|---------------------------------------------------------------------------------------------------------|----------|--------------|-----|-----|---|
| Peak Repetitive Reverse Voltage                                                                         | VRRM     | 200          | 400 | 600 | V |
| Working Peak Reverse Voltage                                                                            | VWRM     |              |     |     |   |
| DC Blocking Voltage                                                                                     | VR       |              |     |     |   |
| Average Rectified Forward Current                                                                       | IF(AV)   | 5            |     |     | A |
| Total Device, (Rated VR), TC = 150                                                                      |          | 10           |     |     |   |
| Peak Repetitive Forward Current                                                                         | IFM      | 16           |     |     | A |
| (Rated VR, Square Wave, 20 kHz), TC = 150                                                               |          |              |     |     |   |
| Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz) | IFSM     | 100          |     |     | A |
| Operating Junction Temperature and Storage Temperature                                                  | TJ, Tstg | - 65 to +175 |     |     |   |

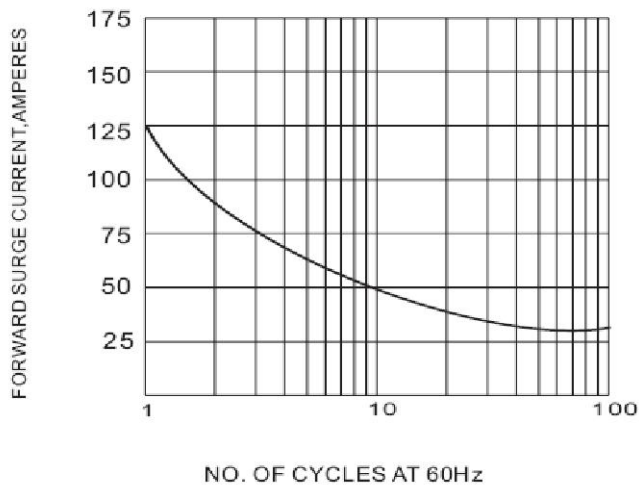
## THERMAL CHARACTERISTICS( Per Diode Leg)

|                                              |       |     |     |    |
|----------------------------------------------|-------|-----|-----|----|
| Maximum Thermal Resistance, Junction to Case | Rθ JC | 3.0 | 2.0 | mW |
|----------------------------------------------|-------|-----|-----|----|

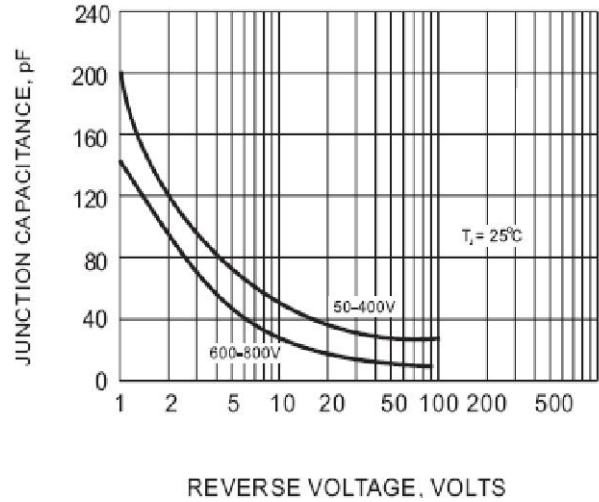
## ELECTRICAL CHARACTERISTICS(Per Diode Leg)

|                                           |     |     |     |     |     |
|-------------------------------------------|-----|-----|-----|-----|-----|
| Maximum Instantaneous Forward Voltage (1) | VF  | 1.1 | 1.4 | 1.7 | V   |
| (IF = 8.0 Amps, TC = 25° C)               |     |     |     |     |     |
| Maximum Instantaneous Reverse Current (1) | IR  | 800 | 800 | 800 | μ A |
| (Rated dc Voltage, TJ = 150° C)           |     |     |     |     |     |
| (Rated dc Voltage, TJ = 25° C)            |     | 10  | 10  | 10  |     |
| Maximum Reverse Recovery Time             | Trr | 35  |     |     | ns  |
| (IF = 0.5 A, IR = 1.0 A, IREC = 0.25 A)   |     |     |     |     |     |

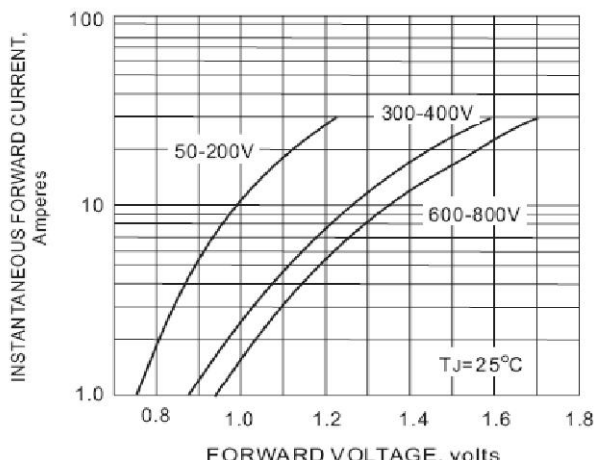
(1) Pulse Test: Pulse Width = 300μ s, Duty Cycles ≤ 2.0%.



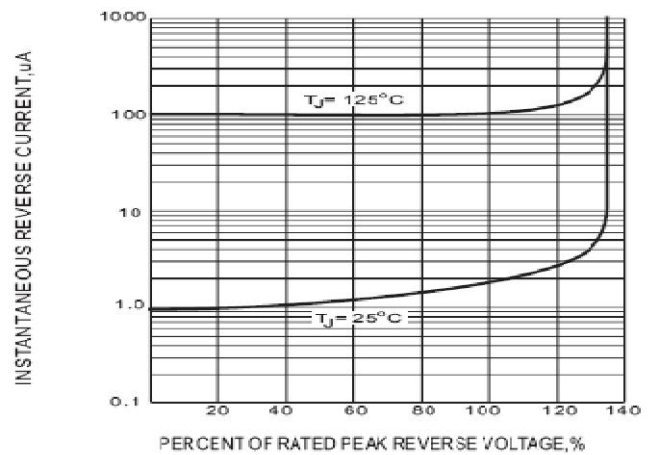
**Fig 1 PEAK FORWARD SURGE CURRENT**



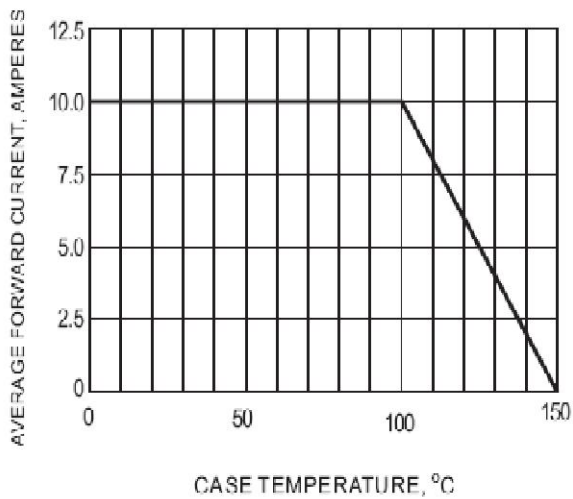
**Fig 2 TYPICAL JUNCTION CAPACITANCES**



**Fig 3 FORWARD CHARACTERISTICS**

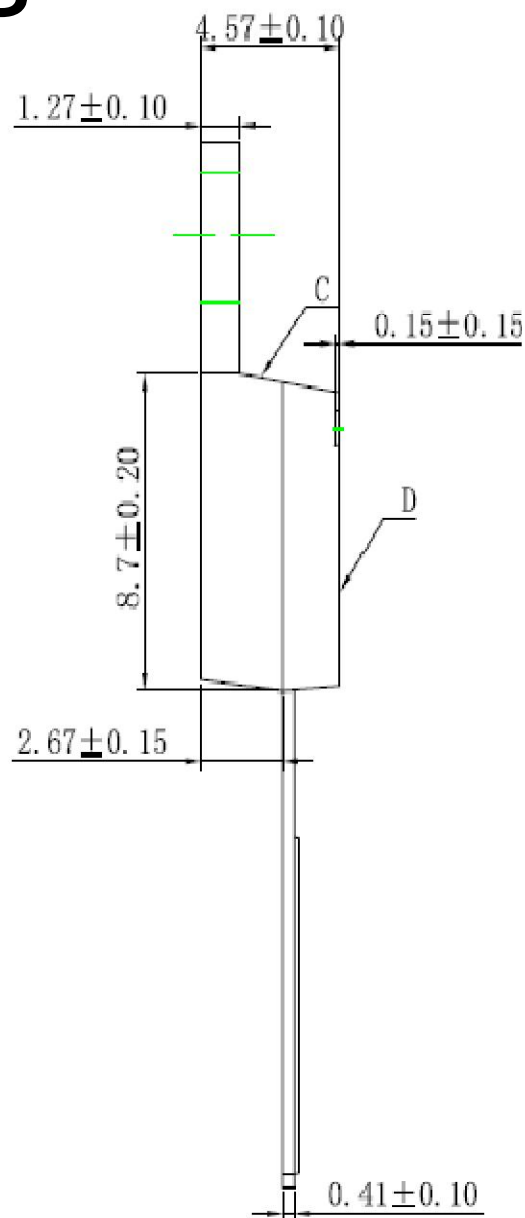
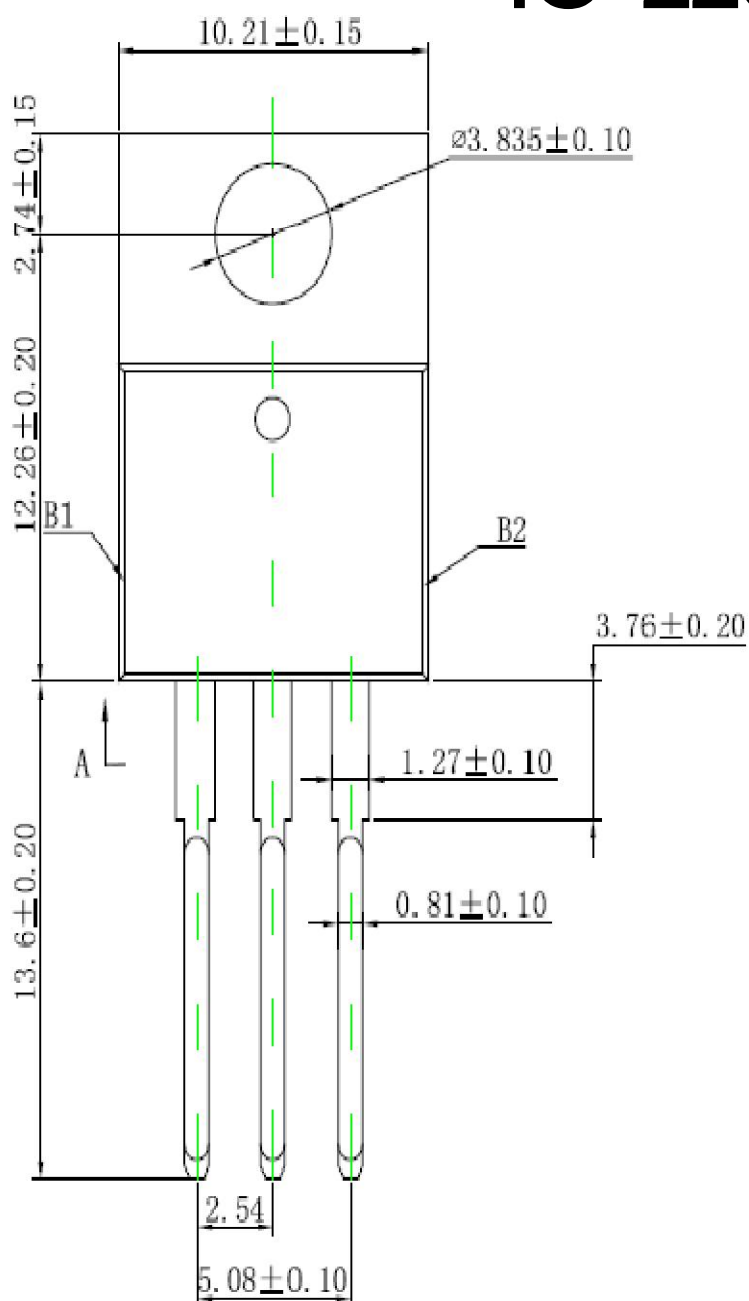


**Fig 4 TYPICAL REVERSE CHARACTERISTICS**



**Fig 5 FORWARD CURRENT DERATING CURVE**

# TO-220AB

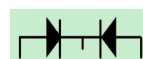


**注意事项:**

- XXXX代表日期码，第一码表示公元年的最后一码，第二码表示生产时当月码 (A, B, C... 为一月，二月，三月...)，第三，四码表示大量生产时批次码。  
例如:2009年第一月生产的，D/C为9AXX。
- 包装及出货:ROHS, 30PCS/管, 0.6K/BOX, 1.8K (1.8K BOXEX)/CARTON, BOXEX及 CARTON。

**ASEMI**

**MUR1020CT**



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修订内容