

## MUR1620D thru MUR1660D

Pb Free Plating Product

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16.0 Ampere Dual Doubler Polarity Ultra Fast Recovery Rectifier

**Features**

- \* Fast switching for high efficiency
- \* Low forward voltage drop
- \* High current capability
- \* Low reverse leakage current
- \* High surge current capability

**Application**

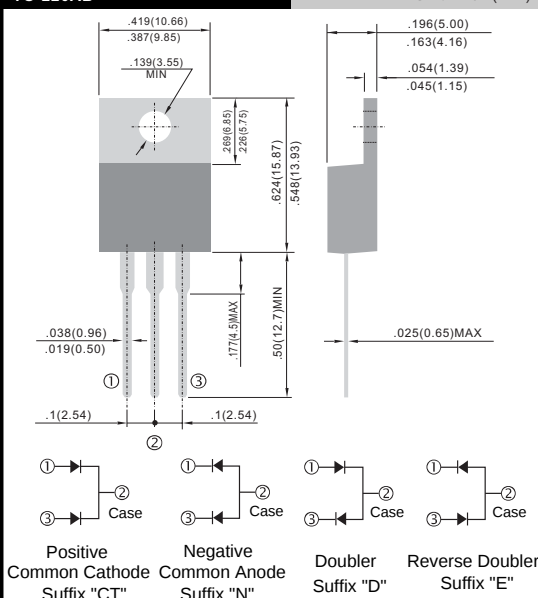
- \* Automotive Environment(Inverters/Converters)
- \* Plating Power Supply, SMPS and UPS
- \* Car Audio Amplifier and Sound Device System

**Mechanical Data**

- \* Case: TO-220AB Heatsink
- \* 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: 2.03 gram approximately

TO-220AB

Unit : inch (mm)

**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%.

|                                                                                                         | SYMBOL                            | MUR1620CT<br>MUR1620N<br>MUR1620D<br>MUR1620E | MUR1640CT<br>MUR1640N<br>MUR1640D<br>MUR1640E | MUR1660CT<br>MUR1660N<br>MUR1660D<br>MUR1660E | UNIT     |
|---------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                                  | V <sub>RRM</sub>                  | 200                                           | 400                                           | 600                                           | V        |
| Maximum RMS Voltage                                                                                     | V <sub>RMS</sub>                  | 140                                           | 280                                           | 420                                           | V        |
| Maximum DC Blocking Voltage                                                                             | V <sub>DC</sub>                   | 200                                           | 400                                           | 600                                           | V        |
| Maximum Average Forward Rectified Current T <sub>c</sub> =100°C                                         | I <sub>F(AV)</sub>                | 16.0                                          |                                               |                                               | A        |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)       | I <sub>FSM</sub>                  | 175                                           | 150                                           |                                               | A        |
| Maximum Instantaneous Forward Voltage @ 8.0 A                                                           | V <sub>F</sub>                    | 0.98                                          | 1.3                                           | 1.7                                           | V        |
| Maximum DC Reverse Current @T <sub>J</sub> =25°C<br>At Rated DC Blocking Voltage @T <sub>J</sub> =125°C | I <sub>R</sub>                    | 10.0<br>250                                   |                                               |                                               | uA<br>uA |
| Maximum Reverse Recovery Time (Note 1)                                                                  | T <sub>rr</sub>                   | 35                                            |                                               |                                               | nS       |
| Typical junction Capacitance (Note 2)                                                                   | C <sub>J</sub>                    | 90                                            |                                               |                                               | pF       |
| Typical Thermal Resistance (Note 3)                                                                     | R <sub>θJC</sub>                  | 2.2                                           |                                               |                                               | °CW      |
| Operating Junction and Storage Temperature Range                                                        | T <sub>J</sub> , T <sub>STG</sub> | -55 to + 150                                  |                                               |                                               | °C       |

NOTES : (1) Reverse recovery test conditions I<sub>F</sub> = 0.5A, R = 1.0A, I<sub>rr</sub> = 0.25A.

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

(3) Thermal Resistance junction to case.

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FIG.1 - FORWARD CURRENT DERATING CURVE

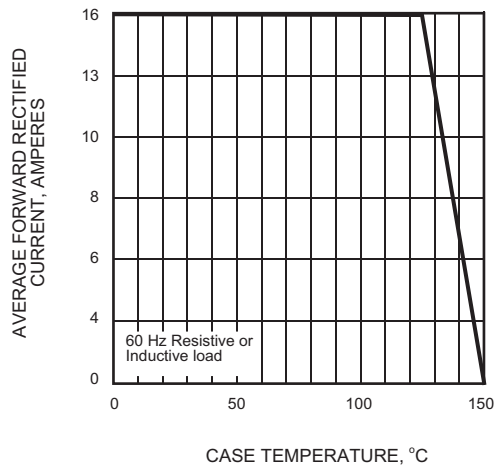


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

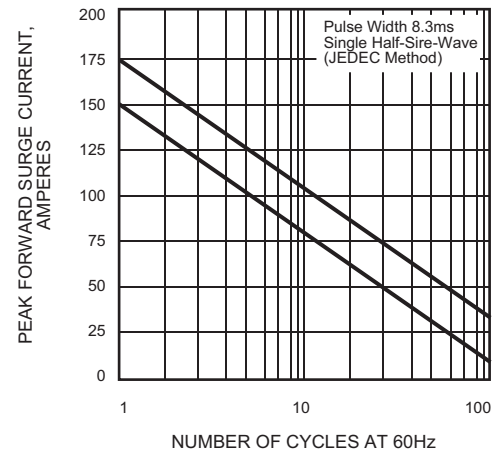


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

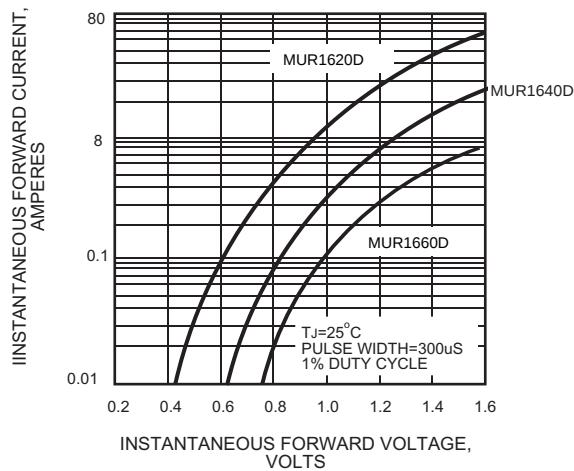


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

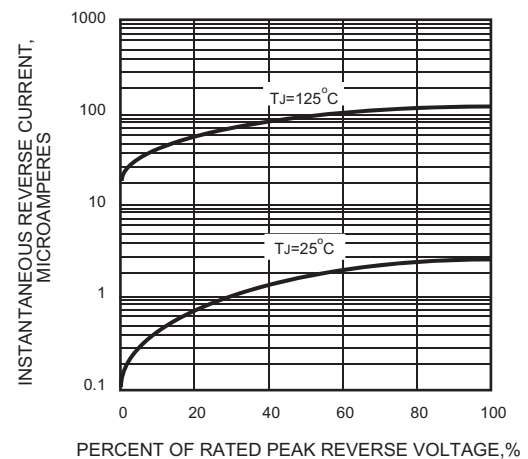


FIG.5 - TYPICAL JUNCTION CAPACITANCE

