



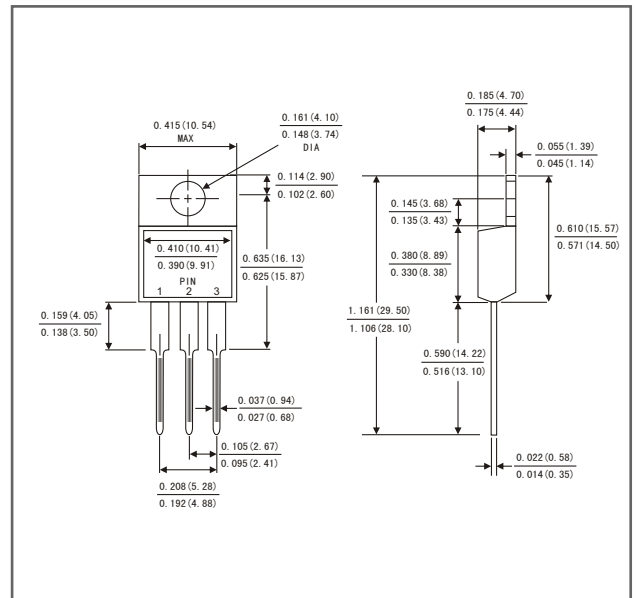
# MUR1620ACTG THRU MUR1660ACTG

Glass Passivated Super Fast Rectifier

**Reverse Voltage: 20 to 600 Volts**  
**Forward Current: 16.0 Ampere**

## Package outline

### TO-220AB



Dimensions in inches and (millimeters)

## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Low forward voltage drop
- Single rectifier construction
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed: 260°C/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

## Mechanical data

- Case: JEDEC TO-220AC molded plastic body
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: As marked
- Mounting Position: Any
- Weight: 0.08 ounce, 2.24 gram

## Maximum Ratings And Electrical Characteristics

- Ratings at 25°C ambient temperature unless otherwise specified.
- Single phase, half wave, resistive or inductive load.
- For capacitive load, derate by 20%.

|  | Symbols                | MUR 1620ACTG | MUR 1640ACTG | MUR 1660ACTG | Units |
|--|------------------------|--------------|--------------|--------------|-------|
| Maximum repetitive peak reverse voltage  | V <sub>RRM</sub>       | 200          | 400          | 600          | Volts |
| Maximum RMS voltage  | V <sub>RMS</sub>       | 140          | 280          | 420          | Volts |
| Maximum DC blocking voltage  | V <sub>DC</sub>        | 200          | 400          | 600          | Volts |
| Maximum average forward rectified current(see Fig.1)   | Per leg                | 8.0          |              |              | Amps  |
|  | Total device           | 16.0         |              |              |       |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>       | 150          |              |              | Amps  |
| Maximum instantaneous forward voltage at 10.0 A(Note 1 )   | V <sub>F</sub>         | 0.975        | 1.3          | 1.5          | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)                       | T <sub>A</sub> = 25°C  | 5            | 10           |              | uA    |
|  | T <sub>A</sub> = 125°C | 500          |              |              |       |
| Maximum Reverse Recovery Time (Note 2)   | T <sub>rr</sub>        | 35           |              |              | ns    |
| Typical thermal resistance (Note 3)  | R <sub>θJC</sub>       | 2.5          |              |              | °C/W  |
| Operating junction temperature range   | T <sub>J</sub>         | -65 to +175  |              |              | °C    |
| Storage temperature range  | T <sub>STG</sub>       | -65 to +175  |              |              | °C    |

- Notes: 1. Pulse test: 300µs pulse width, 1% duty cycle  
 2. Reverse recovery test conditions I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A  
 3. Thermal resistance from junction to case

## Rating and characteristic curves

FIG.1-FORWARD CURRENT DERATING CURVE

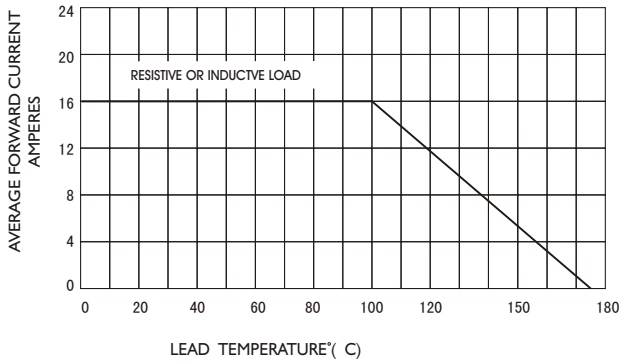


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

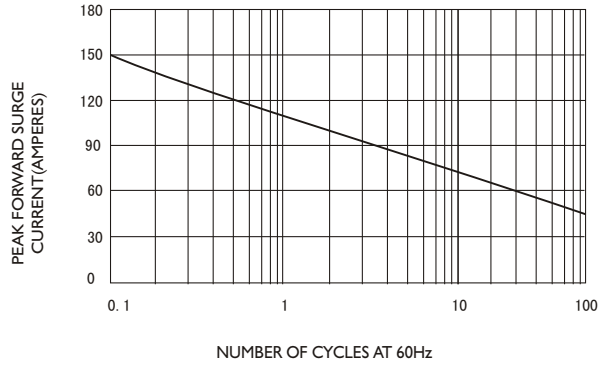


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

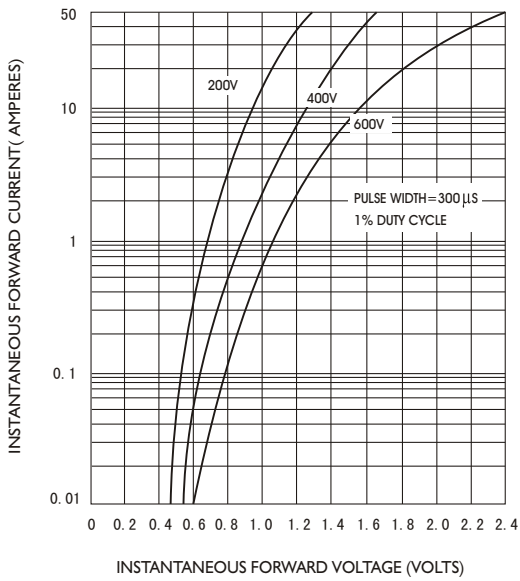


FIG.4-TYPICAL REVERSE CHARACTERISTICS

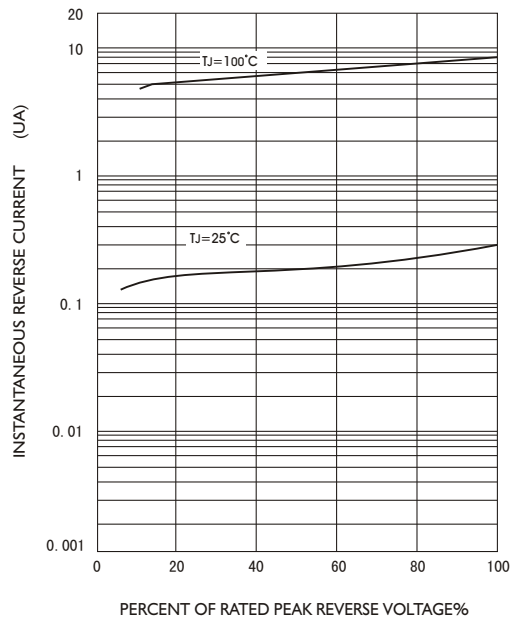


FIG.5-TYPICAL JUNCTION CAPACITANCE

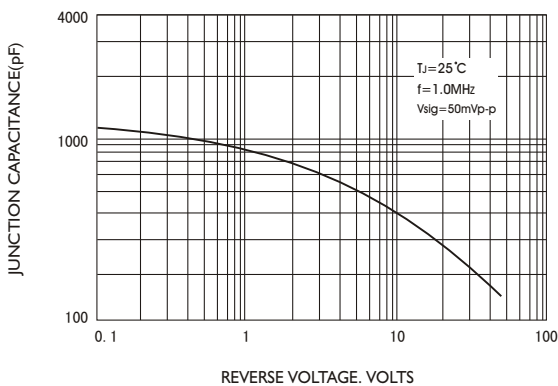
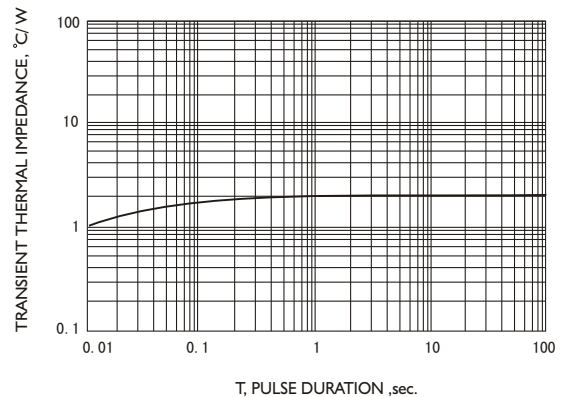
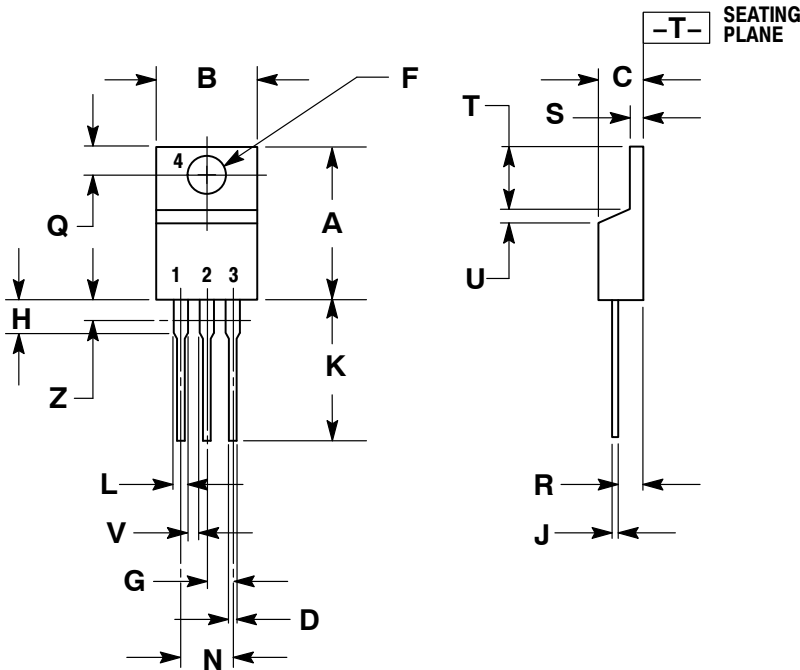


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



TO-220AB



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. DIMENSION Z DEFINES A ZONE WHERE ALL BODY AND LEAD IRREGULARITIES ARE ALLOWED.

| DIM | INCHES |       | MILLIMETERS |       |
|-----|--------|-------|-------------|-------|
|     | MIN    | MAX   | MIN         | MAX   |
| A   | 0.570  | 0.620 | 14.48       | 15.75 |
| B   | 0.380  | 0.405 | 9.66        | 10.28 |
| C   | 0.160  | 0.190 | 4.07        | 4.82  |
| D   | 0.025  | 0.035 | 0.64        | 0.88  |
| F   | 0.142  | 0.161 | 3.61        | 4.09  |
| G   | 0.095  | 0.105 | 2.42        | 2.66  |
| H   | 0.110  | 0.155 | 2.80        | 3.93  |
| J   | 0.014  | 0.025 | 0.36        | 0.64  |
| K   | 0.500  | 0.562 | 12.70       | 14.27 |
| L   | 0.045  | 0.060 | 1.15        | 1.52  |
| N   | 0.190  | 0.210 | 4.83        | 5.33  |
| Q   | 0.100  | 0.120 | 2.54        | 3.04  |
| R   | 0.080  | 0.110 | 2.04        | 2.79  |
| S   | 0.045  | 0.055 | 1.15        | 1.39  |
| T   | 0.235  | 0.255 | 5.97        | 6.47  |
| U   | 0.000  | 0.050 | 0.00        | 1.27  |
| V   | 0.045  | ---   | 1.15        | ---   |
| Z   | ---    | 0.080 | ---         | 2.04  |

STYLE 6:

- PIN 1. ANODE
- 2. CATHODE
- 3. ANODE
- 4. CATHODE