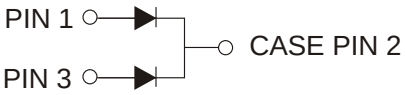
# MURF1620CTG

## Super Fast Recovery Rectifier Diodes

### Features

- High frequency operation
- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7 s, per JESD 22-B106


**TO-220F(TO-220FP)**




### Maximum Ratings (Ta=25°C nless otherwise noted)

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $V_{RRM}$ | Peak repetitive reverse voltage | 200 | V |
| $I_O$ | Average rectified output current@ Per leg | 16 | A |
| $I_{FSM}$ | Non-Repetitive peak forward surge current 8.3ms half sine wave | 100 | A |
| $R_{\Theta JC}$ | Thermal Resistance Between junction and case | 2.0 | °C/W |
| $T_j$ | Operating Junction Temperature Range | -55 ~ +150 | °C |
| $T_{stg}$ | Storage Temperature Range | -55 ~ +150 | °C |

### Electrical Characteristics (Ta=25°C unless otherwise specified)

| Parameter | Symbol | Unit | Test Conditions | MURF1620CTG |
|---|---|---|---|---|
| Maximum instantaneous forward voltage drop per diode | VFM | V | $I_{FM}$=8.0A | 1.0 |
| Maximum DC reverse current at rated DC blocking voltage per diode | $I_{RRM1}$ | uA | $V_{RM}=V_{RRM}$ $T_a$=25℃ | 10 |
| | $I_{RRM2}$ | | $V_{RM}=V_{RRM}$ $T_a$=125℃ | 100 |
| Reverse Recovery Time | Trr | ns | $I_F$=0.5A $I_{RM}$=1A $I_{RR}$=0.25A | 35 |

## Typical Characteristics

**FIG1:Io -Tc Curve**

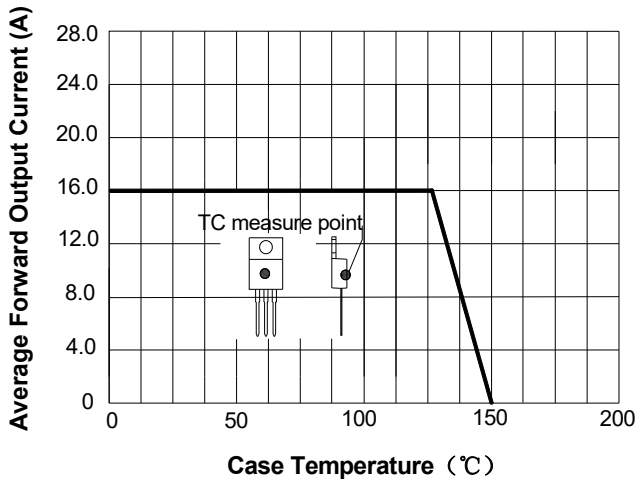



**FIG2:Surge Forward Current Capability**

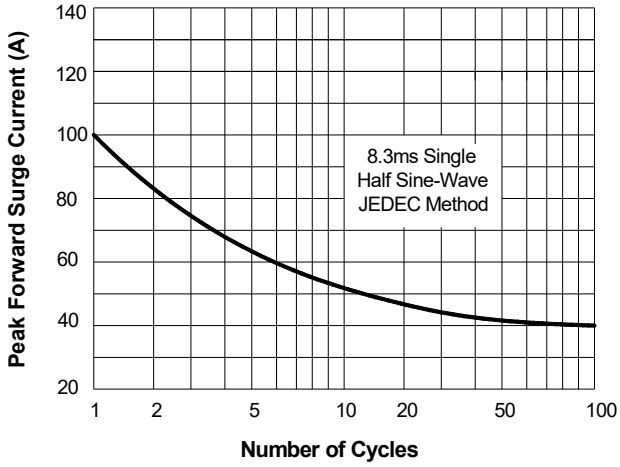



**FIG3: Forward Voltage**

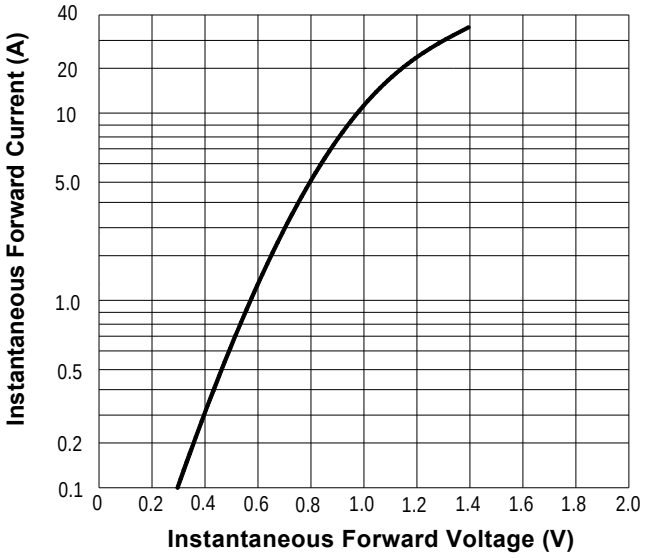



**FIG.4: Instantaneous Reverse Characteristics**

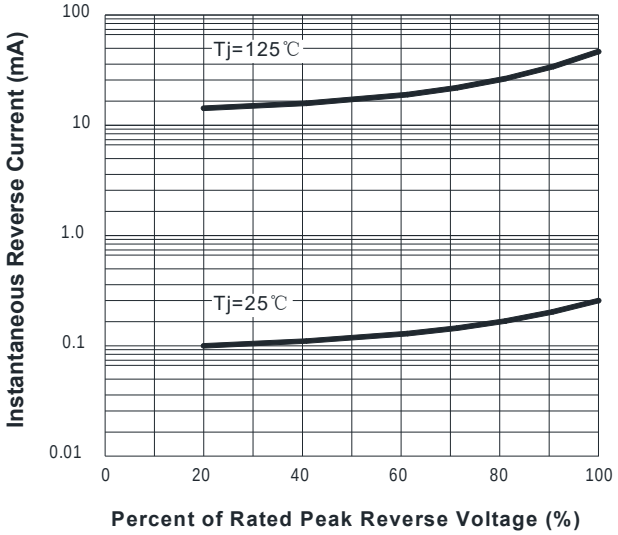
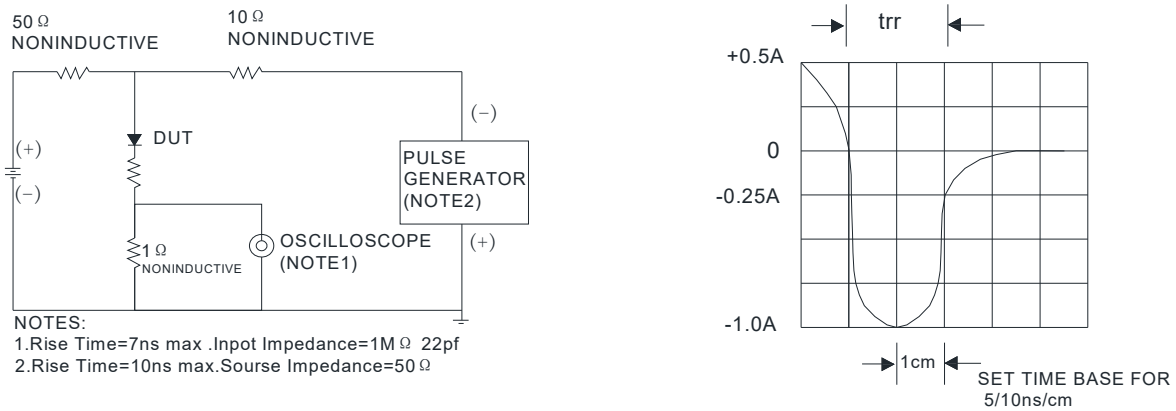
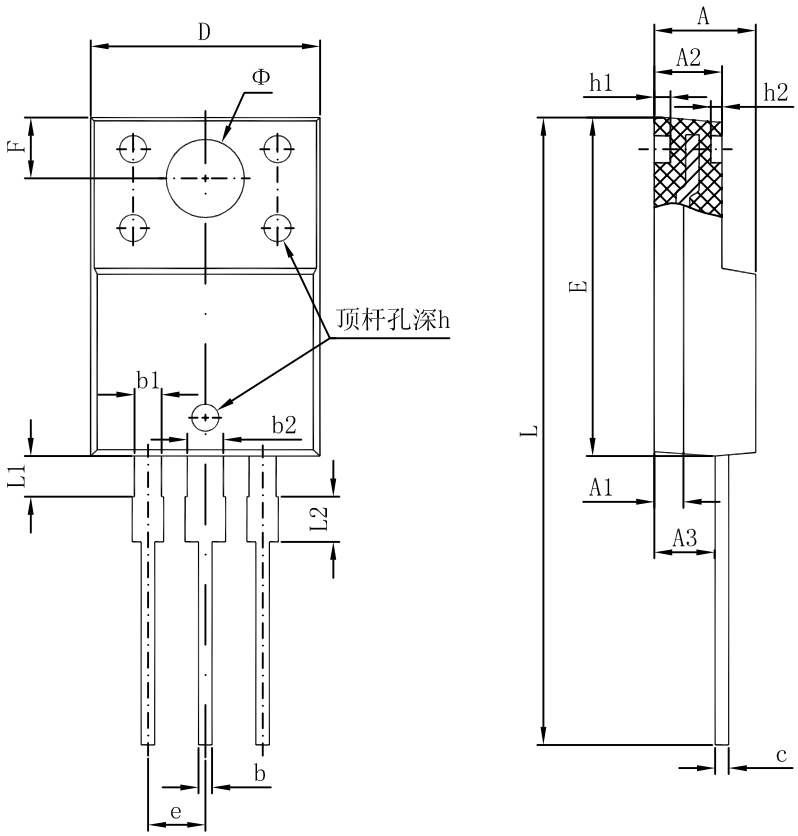



**FIG.5: Diagram of circuit and Testing wave form of reverse recovery time**



## Package Information
## TO-220F(TO-220FP)




| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|---|---|---|---|---|
| | Min. | Max. | Min. | Max. |
| A | 4.300 | 4.700 | 0.169 | 0.185 |
| A1 | 1.300 REF. | | 0.051 REF. | |
| A2 | 2.800 | 3.200 | 0.110 | 0.126 |
| A3 | 2.500 | 2.900 | 0.098 | 0.114 |
| b | 0.500 | 0.750 | 0.020 | 0.030 |
| b1 | 1.100 | 1.350 | 0.043 | 0.053 |
| b2 | 1.500 | 1.750 | 0.059 | 0.069 |
| c | 0.500 | 0.750 | 0.020 | 0.030 |
| D | 9.960 | 10.360 | 0.392 | 0.408 |
| E | 14.800 | 15.200 | 0.583 | 0.598 |
| e | 2.540 TYP. | | 0.100 TYP. | |
| F | 2.700 REF. | | 0.106 REF. | |
| Φ | 3.500 REF. | | 0.138 REF. | |
| h | 0.000 | 0.300 | 0.000 | 0.012 |
| h1 | 0.800 REF. | | 0.031 REF. | |
| h2 | 0.500 REF. | | 0.020 REF. | |
| L | 28.000 | 28.400 | 1.102 | 1.118 |
| L1 | 1.700 | 1.900 | 0.067 | 0.075 |
| L2 | 1.900 | 2.100 | 0.075 | 0.083 |

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