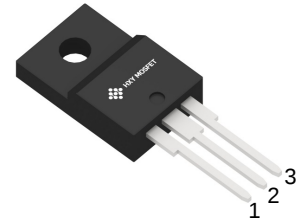


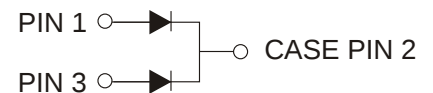


## Features

- 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 unless 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<br>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                          | MURF1620CT |
|-------------------------------------------------------------------|------------|---------|------------------------------------------|------------|
| 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 | $I_{RRM1}$ | $\mu A$ | $V_{RM}=V_{RRM}$<br>$T_a=25^{\circ}C$    | 10         |
|                                                                   | $I_{RRM2}$ |         | $V_{RM}=V_{RRM}$<br>$T_a=125^{\circ}C$   | 100        |
| Reverse Recovery Time                                             | $T_{rr}$   | ns      | $I_F=0.5A$ $I_{RM}=1A$<br>$I_{RR}=0.25A$ | 35         |



## Typical Characteristics

FIG1:Io -Tc Curve

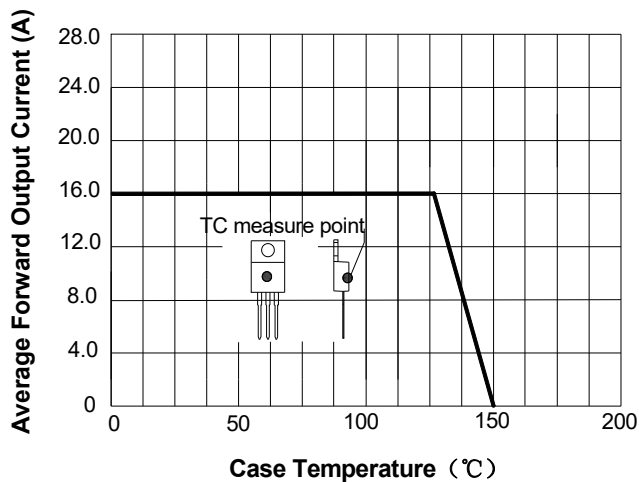


FIG2: Surge Forward Current Capability

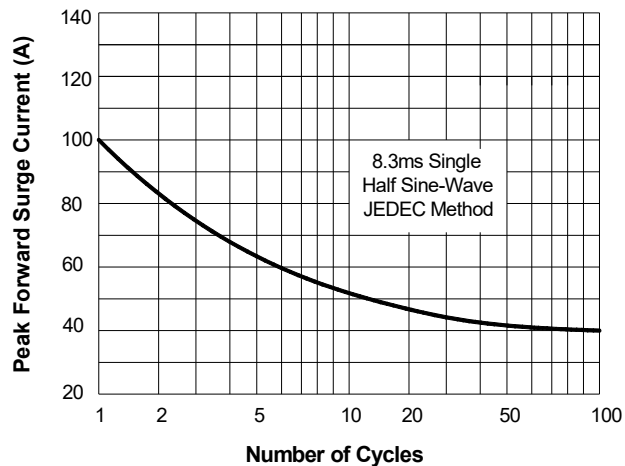


FIG3: Forward Voltage

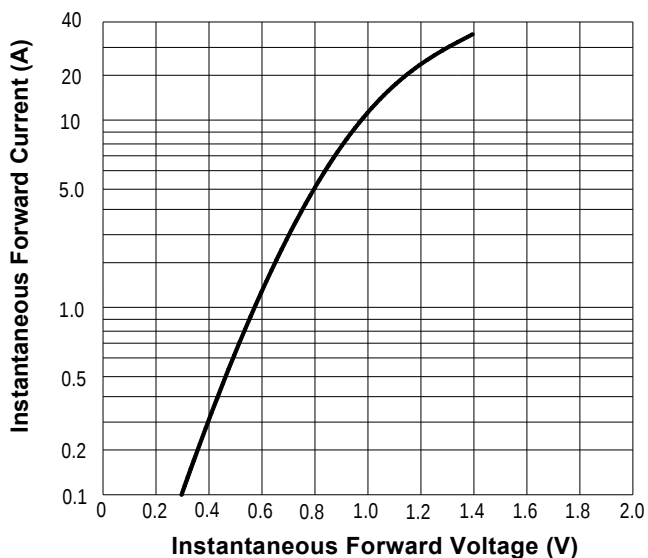


FIG.4: Instantaneous Reverse Characteristics

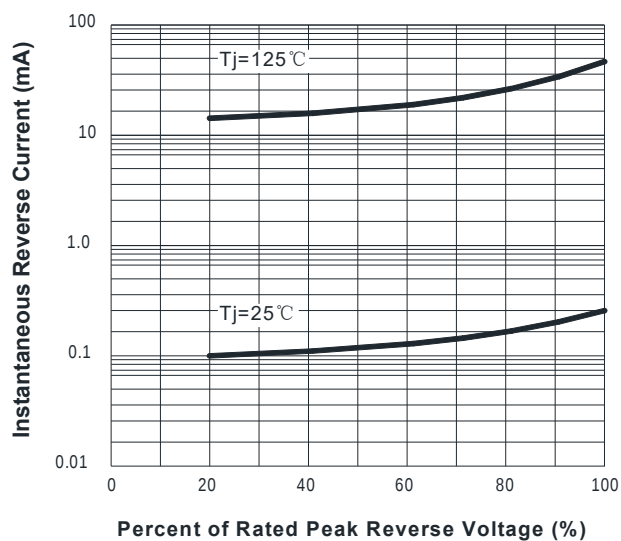
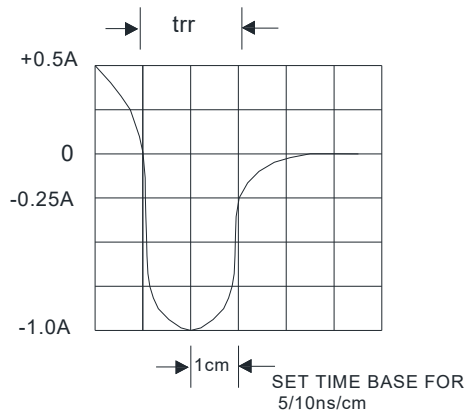
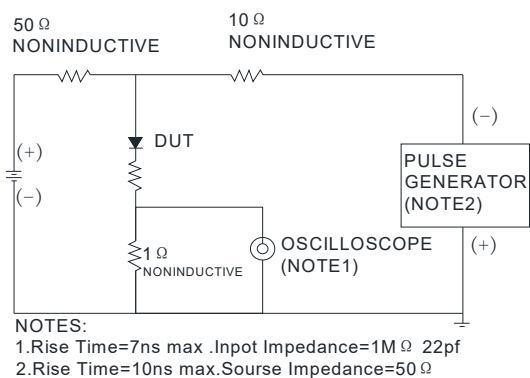
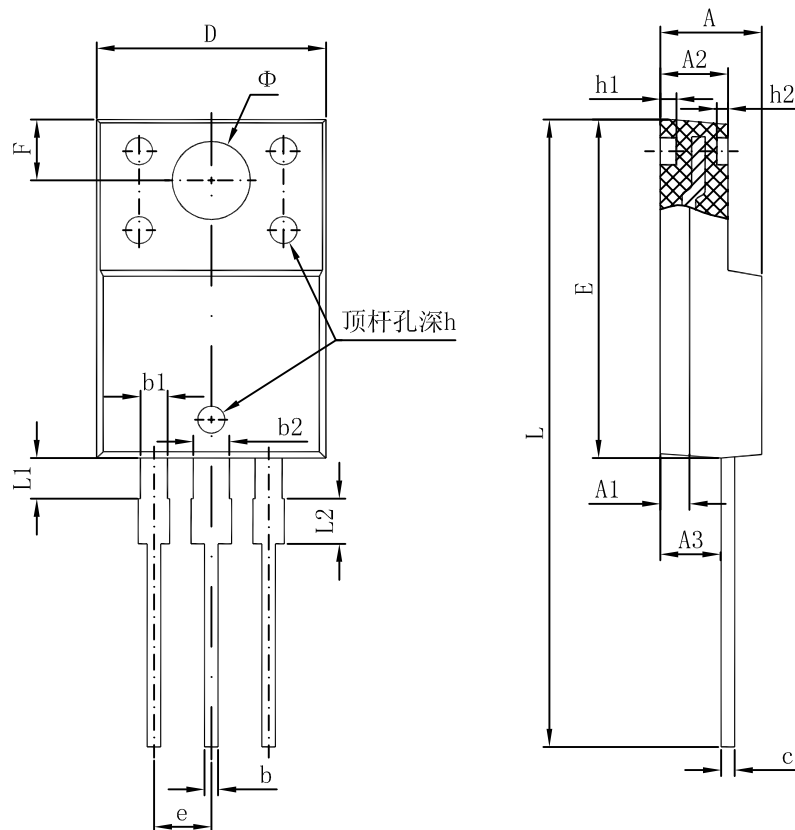


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time





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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