



Features

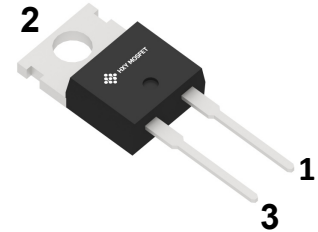
- High frequency operation
- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

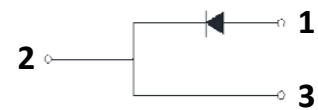
Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical Data

- **Package:** TO-220C-2L
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked



TO-220C-2L



Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | MUR810 | MUR815 | MUR820 | MUR840 | MUR860 |
|--|------------------|------------------|------------|--------|--------|--------|--------|
| Device marking code | | | MUR810 | MUR815 | MUR820 | MUR840 | MUR860 |
| Repetitive Peak Reverse Voltage | VRRM | V | 100 | 150 | 200 | 400 | 600 |
| Average Rectified Output Current @60Hz half sine-wave, R-load, Tc(FIG.1) | Io | A | 8 | | | | |
| Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Ta=25°C | IFSM | A | 100 | | | | |
| Current Squared Time @ 1ms≤t≤8.3ms Tj=25°C | I ² t | A ² s | 41 | | | | |
| Storage Temperature | Tstg | °C | -55 ~ +150 | | | | |
| Junction Temperature | Tj | °C | -55 ~ +150 | | | | |

Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | MUR810 | MUR815 | MUR820 | MUR840 | MUR860 |
|---|--------|------|-----------------------------|--------|--------|--------|--------|--------|
| Maximum instantaneous forward voltage drop per diode | VFM | V | IFM=8.0A | 0.975 | | | 1.3 | 1.5 |
| Maximum DC reverse current at rated DC blocking voltage per diode | IRRM1 | uA | VRM=VRRM Ta=25°C | 10 | | | | |
| | IRRM2 | | VRM=VRRM Ta=125°C | 500 | | | | |
| Reverse Recovery Time | Trr | ns | IF=0.5A IRM=1A IRR=0.25A | 50 | | | | |

Thermal Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | MUR810 | MUR815 | MUR820 | MUR840 | MUR860 |
|--------------------|---------------------------|-------|--------|--------|--------|--------|--------|
| Thermal Resistance | Between junction and case | RθJ-C | °CW | 2.0 | | | |



Characteristics (Typical)

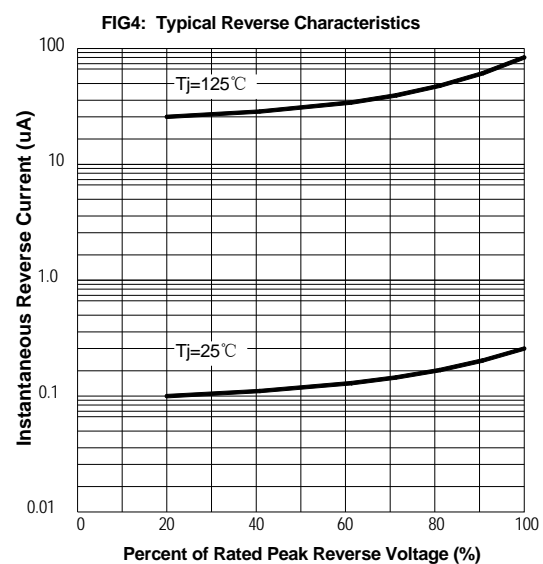
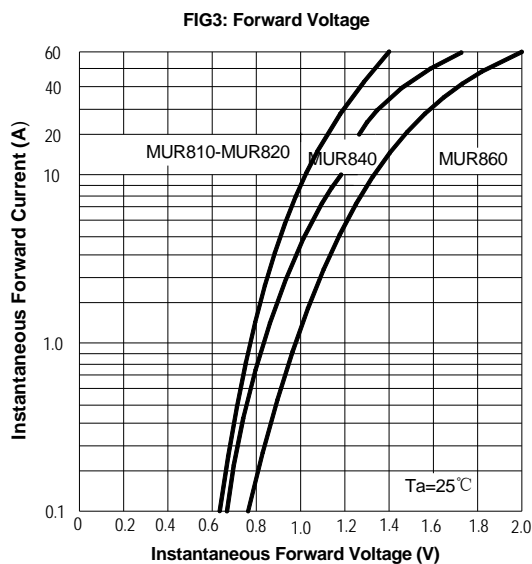
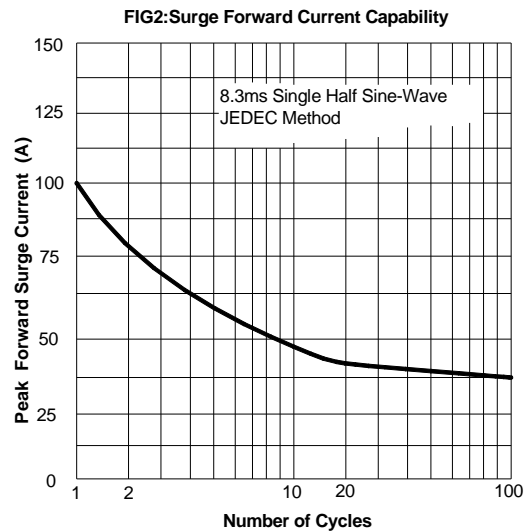
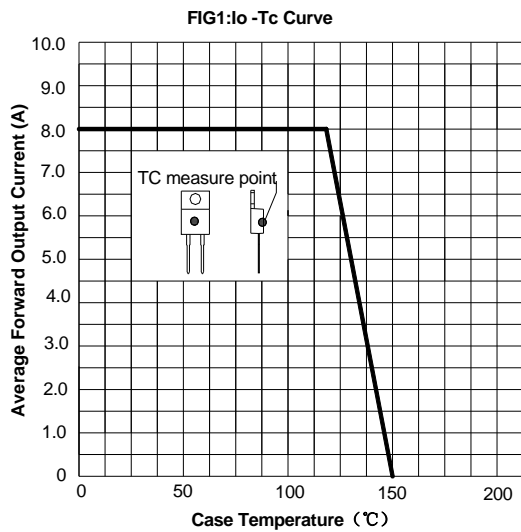
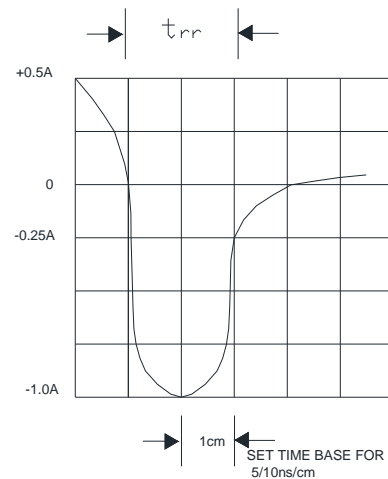
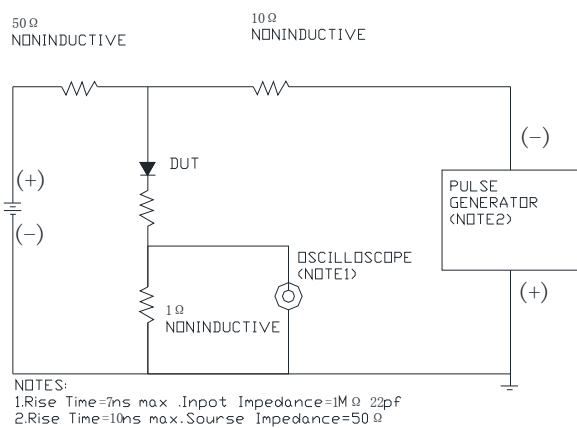
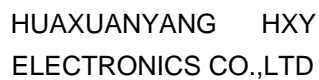


FIG.5 Diagram of circuit and Testing wave form of reverse recovery time



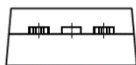


MUR810-MUR860

Ultra-Fast Recovery Rectifier Diodes

Package Information

TO-220C-2L



| SYMBOL | DIMENSIONS | | | NOTES |
|--------|------------|-------|-------|-------|
| | MIN. | NOM. | MAX. | |
| A | 4,24 | 4,44 | 4,64 | |
| A1 | 1.15 | 1.27 | 1.40 | |
| A2 | 2.30 | 2.48 | 2.70 | |
| b | 0.70 | 0.80 | 0.90 | |
| b1 | 1.20 | 1.55 | 1.75 | |
| b2 | 1,20 | 1,45 | 1,70 | |
| c | 0.40 | 0.50 | 0.60 | |
| D | 14,70 | 15,37 | 16,00 | 4 |
| D1 | 8,82 | 8,92 | 9,02 | |
| D2 | 12.43 | 12.73 | 12.83 | 5 |
| E | 9,96 | 10,16 | 10,36 | 4,5 |
| E1 | 6,86 | 7,77 | 8,89 | 5 |
| E3* | 8.70REF. | | | |
| e | 2.54BSC | | | |
| e1 | 5.08BSC | | | |
| H1 | 6.30 | 6.45 | 6.60 | 5,6 |
| L | 13,47 | 13,72 | 13,97 | |
| L1 | 3.60 | 3.80 | 4.00 | |
| ØP | 3.75 | 3.84 | 3.93 | |
| Q | 2.60 | 2,80 | 3,00 | |
| Q1* | 1.73REF. | | | |
| R* | 1.82REF. | | | |



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