

MUR460E

Rev.G Oct.-2018

/ Descriptions

TO-277

TO-277 Plastic package ultrafast recovery diode .

/ Features

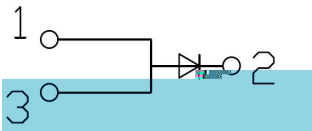
Silicon epitaxial process to produce ultrafast recovery diode with low reverse leakage current and high reliability. HF Product.

/ Applications

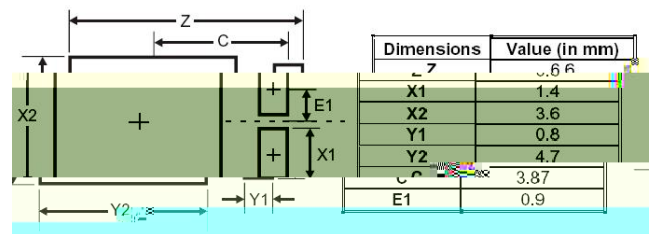
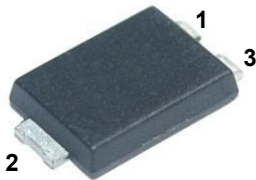
PFC

For high frequency,high voltage,high current rectifier diode,freewheeling diode, PFC circuit.

/ Equivalent Circuit



/ Pinning



PIN1 Anode PIN 2 Cathode PIN 3 Anode

Suggested Pad layout

/ h_{FE} Classifications & Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

| Parameter | Symbol | Rating | Unit |
|---|------------------------------------|---------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage Peak Reverse Voltage | V_{RRM} V_{RWM} V_{RM} | 600 | V |
| RMS Reverse voltage | $V_{R(RMS)}$ | 420 | V |
| Average Rectified Forward Current | $I_{F(AV)}$ | 4 | A |
| Non-Repetitive Peak Forward Surge Current | I_{FSM} | 110 | A |
| Junction Temperature Range | T_j | -55 150 | |
| Storage Temperature Range | T_{stg} | -55 150 | |
| Typical Thermal Resistance | R_{JA} Note 1 | 76 | /W |

/Notes

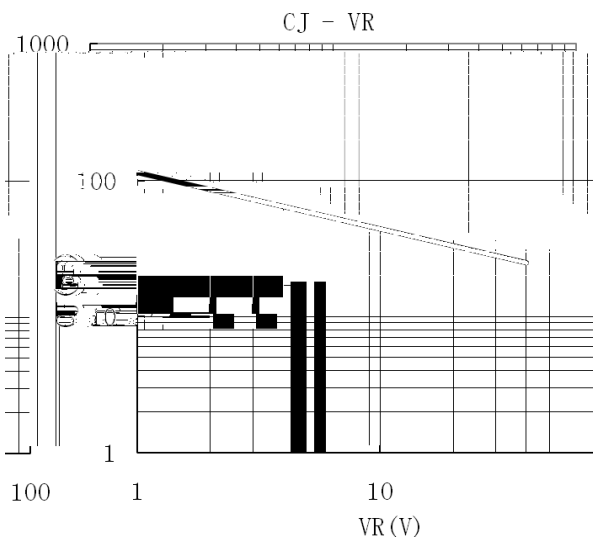
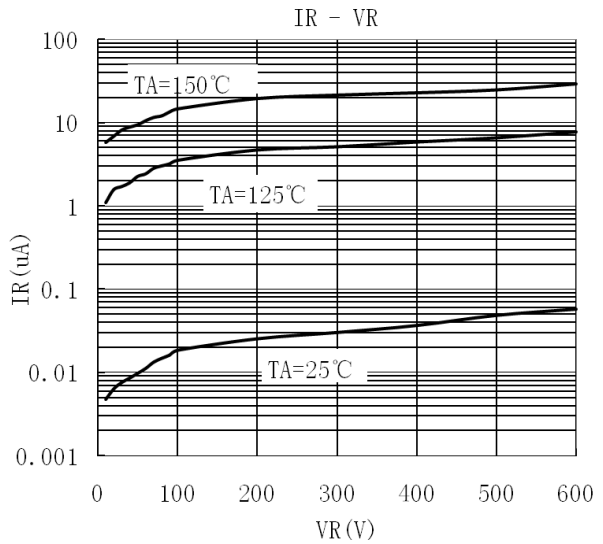
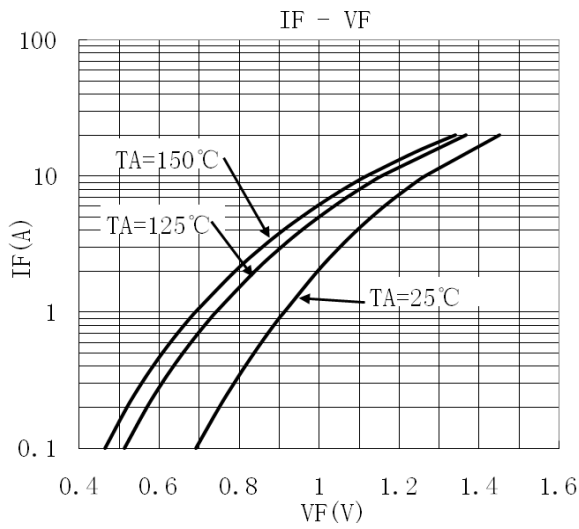
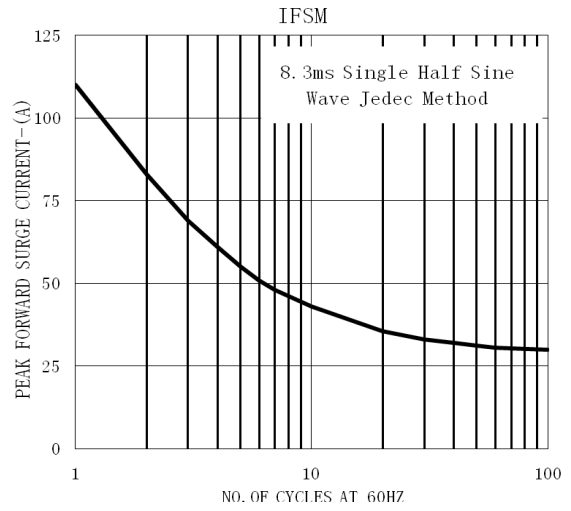
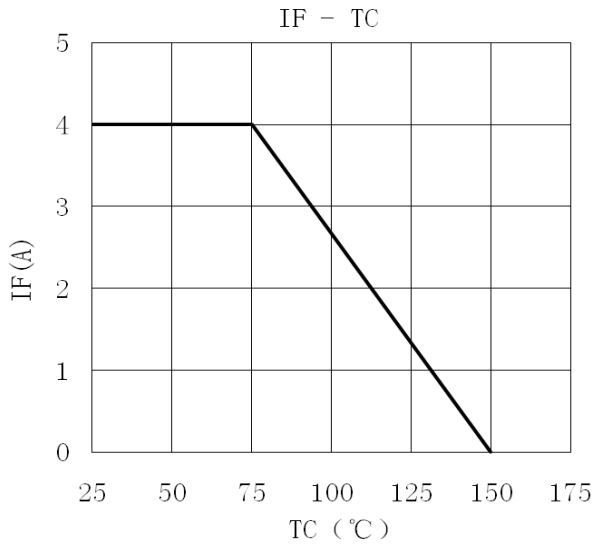
1. FR-4 PCB 2

FR-4 PCB, 2oz. Copper, minimum recommended pad layout per.

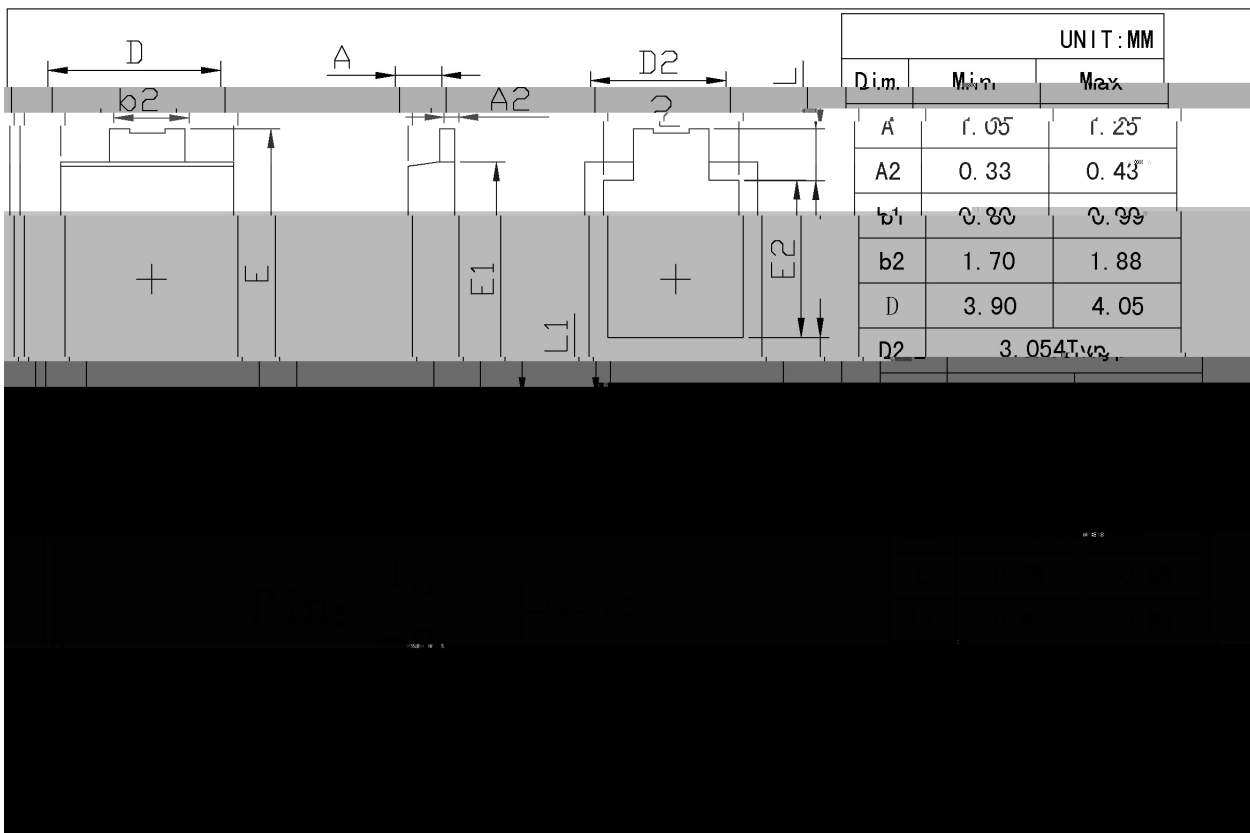
/ Electrical Characteristics(Ta=25)

| Parameter | Symbol | Test Conditions | Rating | Unit |
|-------------------------------|----------|---|--------|---------|
| Reverse Voltage | V_R | $I_R=1mA$ | 600 | V |
| Forward voltage | V_F | $I_F=1A \quad T_a=25$ | 1.1 | |
| | | $I_F=1A \quad T_a=125$ | 0.85 | |
| | | $I_F=4A \quad T_a=25$ | 1.28 | |
| Instantaneous Reverse Current | I_R | $T_a=25$ | 10 | μA |
| | | $T_a=150$ | 250 | |
| Reverse Recovery Time | t_{rr} | $I_F=0.5A \quad I_R=1A$ $I_{rr}=0.25A$ | 50 | ns |

/ Electrical Characteristic Curve



/ Package Dimensions



/ **Marking Instructions**



MUR460

Note:

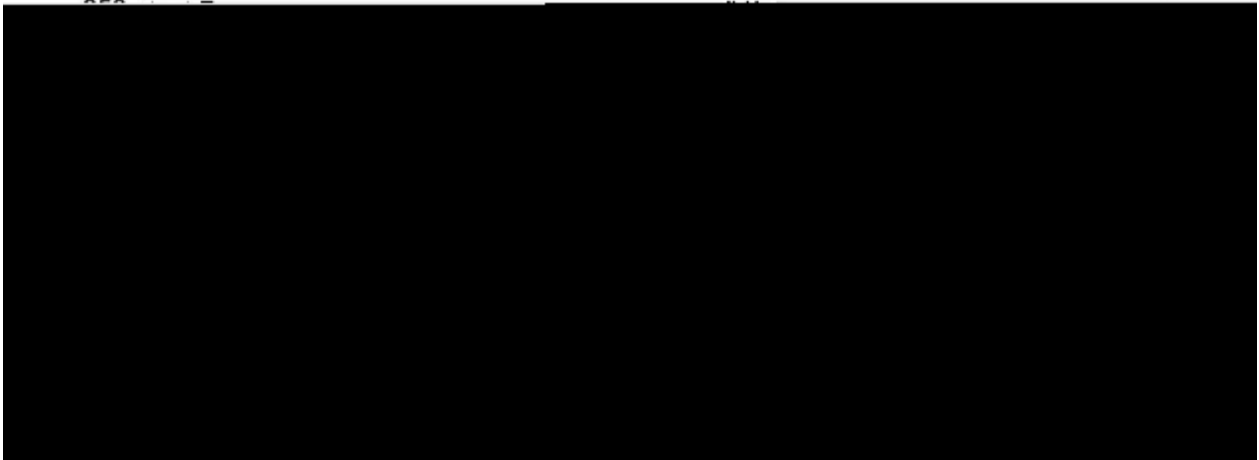
MUR460

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Product Type.

Lot No. Code, code change with Lot No.

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- | | | | |
|---|---------|-----------|---|
| 1 | 150 180 | 60 90sec; | 1.Preheating:150~180 , Time:60~90sec. |
| 2 | 245±5 | 5±0.5sec; | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 | 2 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

| Package Type 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: mm ³) | | |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|---|-------------|-------------|
| | Units/Reel 只/卷盘 | Reels/Inner Box 卷盘/盒 | Units/Inner Box 只/盒 | Inner Boxes/Outer Box 盒/箱 | Units/Outer Box 只/箱 | Reel | Inner Box 盒 | Outer Box 箱 |
| TO-277 | 5,000 | 3 | 15,000 | 6 | 90,000 | 13 ×12 | 360×360×50 | 380×335×366 |

/ Notices