

/ Descriptions

TO-277
TO-277 Plastic package ultrafast recovery diode .

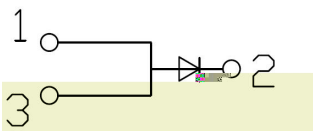
/ Features

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.

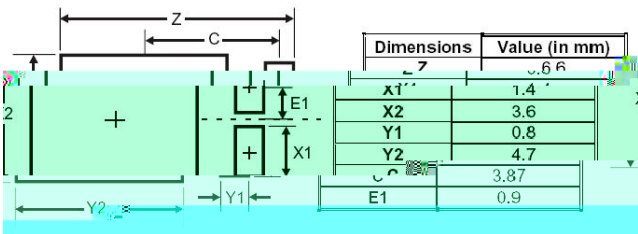
/ Equivalent Circuit



/ Pinning



PIN1 Anode PIN 2 Cathode PIN 3 Anode



Suggested Pad layout

/ h_{FE} Classifications & Marking

See Marking Instructions.

/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

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	$R_{\theta JA}$ Note 1	76	/W

/Notes

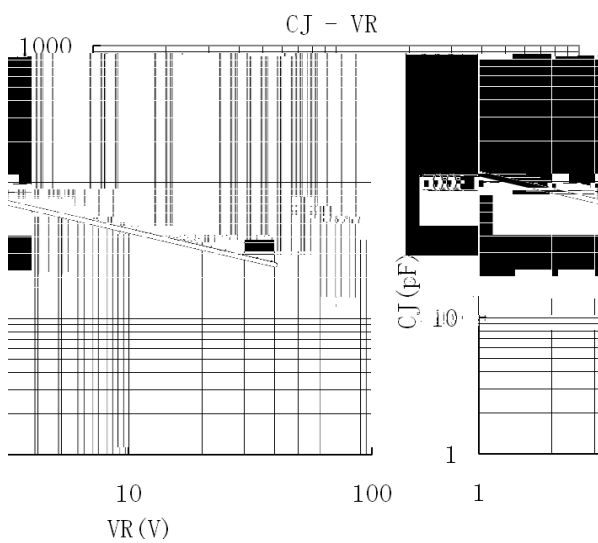
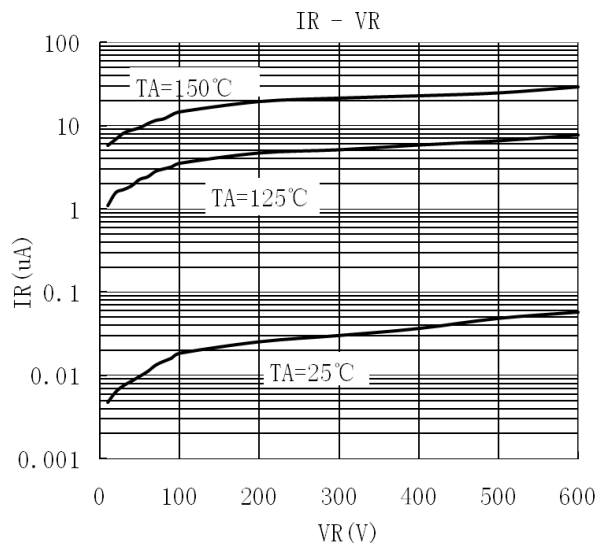
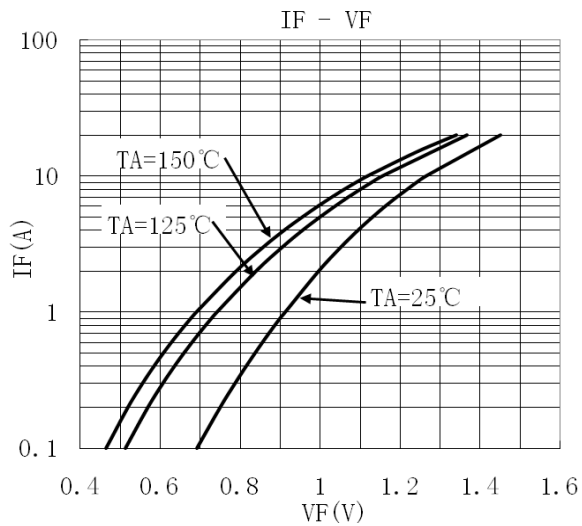
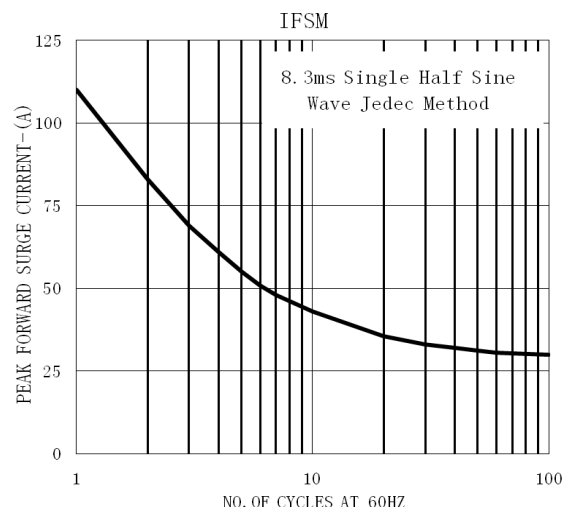
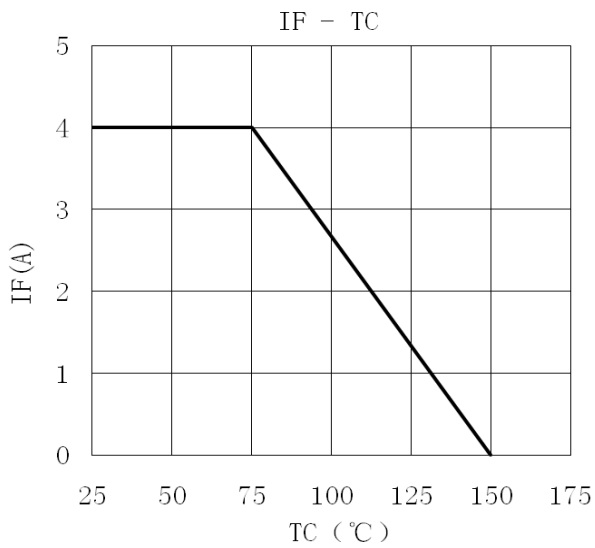
1. FR-4 PCB 2

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

/ Electrical Characteristics($T_a=25^\circ\text{C}$)

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

/ **Electrical Characteristic Curve**



/ Package Dimensions



/ **Marking Instructions**



MUR460

Note:

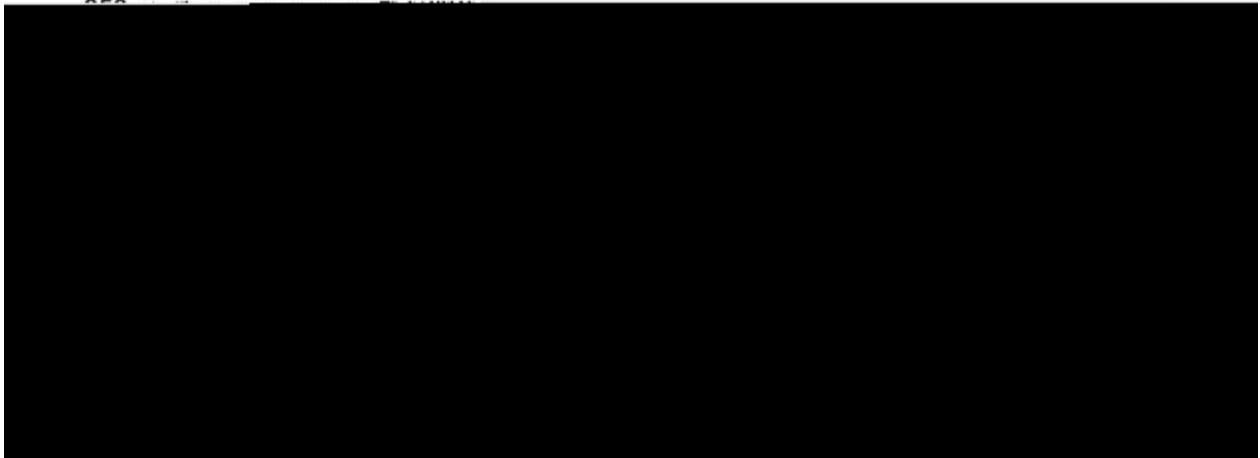
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****:

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**