

/ Descriptions

TO-277

Schottky diode in a TO-277 Plastic Package.

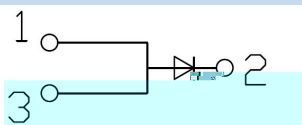
/ Features

High Forward Surge Capability, Ultra Low Forward Voltage Drop, Excellent High Temperature Stability. HF Product.

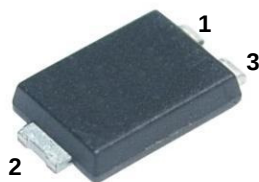
/ Applications

For use in low voltage,high frequency inverters, free wheeling, and polarity protection applications.

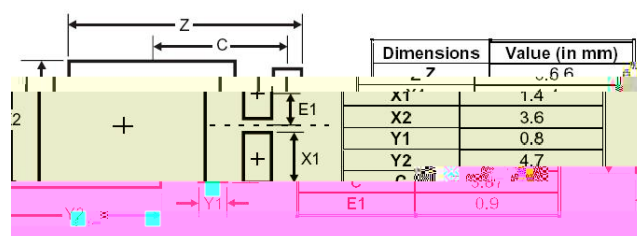
/ Equivalent Circuit



/ 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}	45	V
RMS Reverse voltage	$V_{R(RMS)}$	36	V
Average Rectified Output Current	I_O	10	A
Non-Repetitive Peak Forward Surge Current	I_{FSM}	200	A
Repetitive peak avalanche power	P_{ARM}	20000	W
Junction Temperature Range	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C
Typical Thermal Resistance	$R_{\theta JA}$ Note 1	78	°C/W

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Voltage	V_R	$I_R=0.3mA$	45			V
Forward voltage	V_F	$I_F=2A$ $T_j=25^{\circ}C$		0.31	0.35	V
		$I_F=10A$ $T_j=25^{\circ}C$		0.45	0.51	V
		$I_F=10A$ $T_j=125^{\circ}C$		0.43	0.47	V
Instantaneous Reverse Current	I_R Note 2	$V_R=45V$ $T_j=25^{\circ}C$			150	uA
		$V_R=45V$ $T_j=100^{\circ}C$		16	30	mA
		$V_R=45V$ $T_j=125^{\circ}C$		50	100	mA

/Notes

1. FR-4 PCB 2

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

layout per.

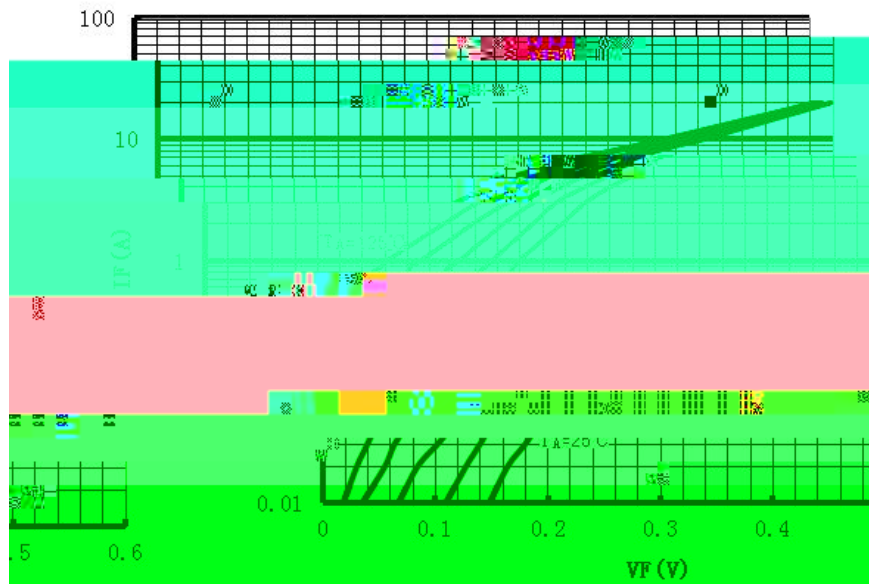
2.

/Short duration pulse test used to minimize self-heating

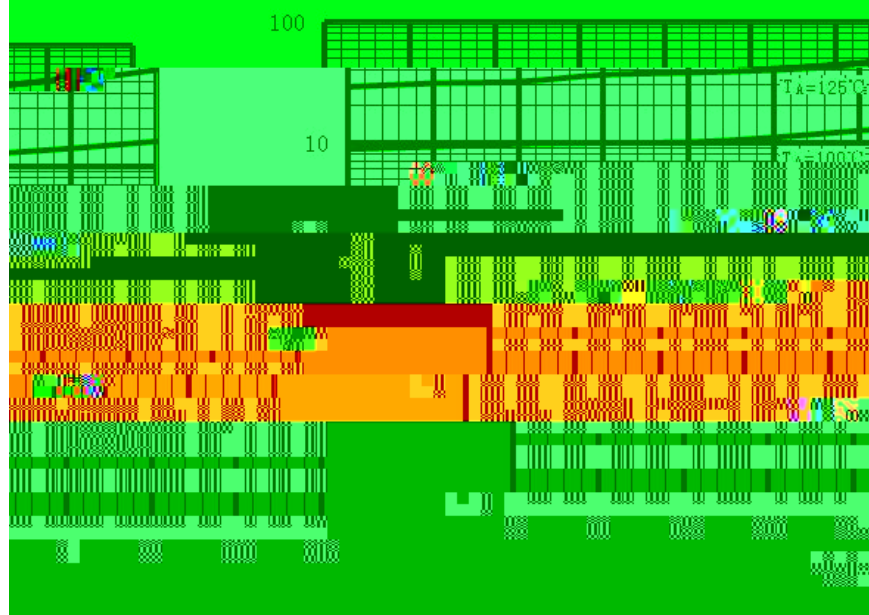
effect.

/ Electrical Characteristic Curve

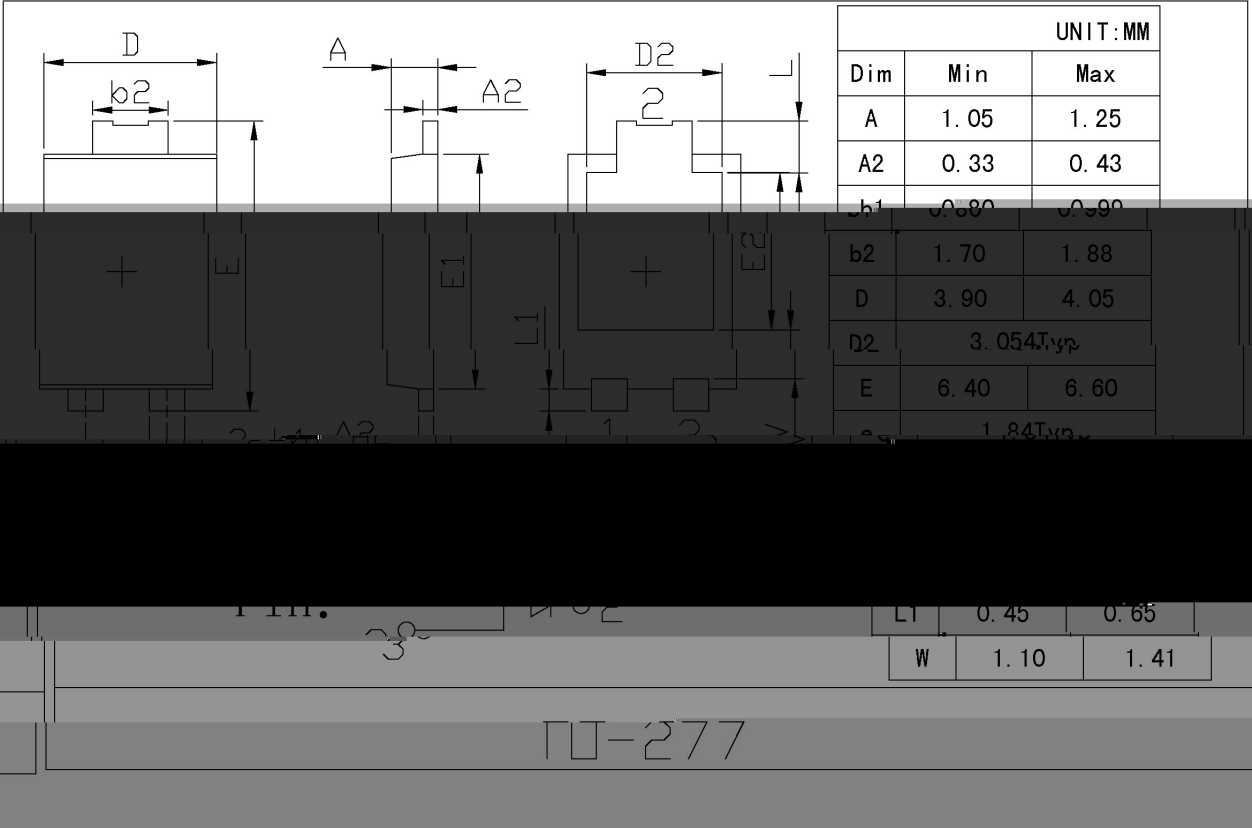
VF-IF



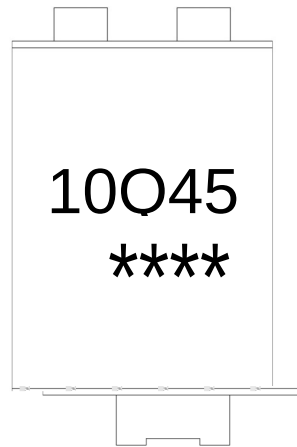
VR-IR



/ Package Dimensions



/ Marking Instructions



10Q45

Note:

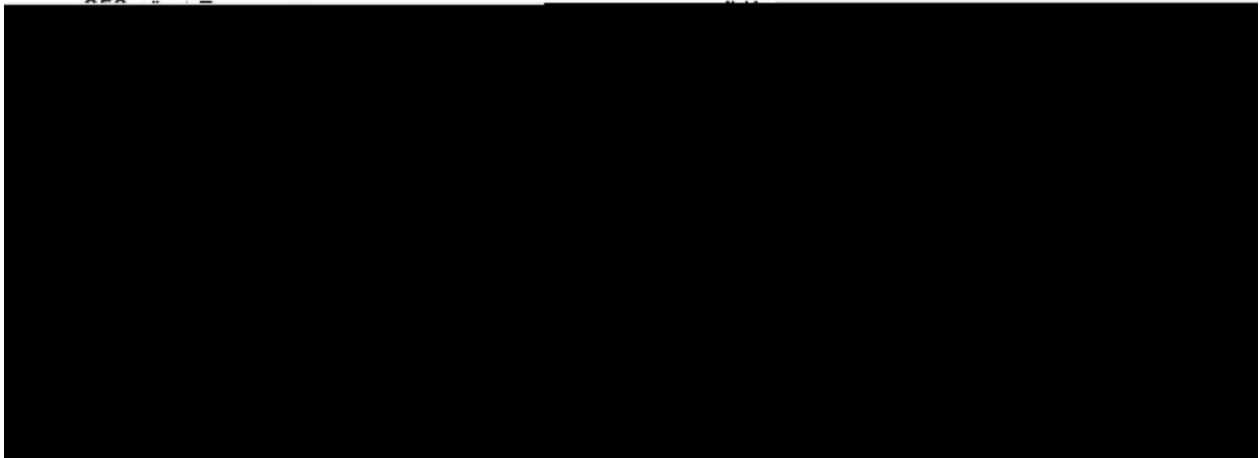
10Q45

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