

LV10L45E

Rev.G Oct.-2018

/ Descriptions

TO-277

Schottky diode in a TO-277 Plastic Package.

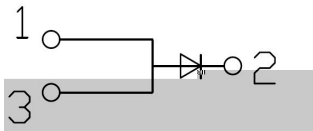
/ Features

High Forward Surge Capability, Ultra Low Forward Voltage Drop $V_F(\text{typ})=0.26\text{V}$, Excellent High Temperature Stability. HF Product.

/ Applications

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

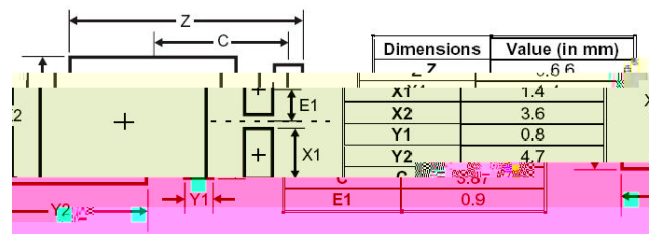
/ Equivalent Circuit



/ 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	$V_{R(RMS)}$	42	V
Average Rectified Output Current	I_O	10	A
Non-Repetitive Peak Forward Surge Current	I_{FSM}	275	A
Repetitive peak avalanche power	P_{ARM}	30000	W
Junction Temperature Range	T_J $V_R \leq 80\%V_{RRM}$	150	°C
Storage Temperature Range	T_{stg}	-55 150	°C
Typical Thermal Resistance	R_{JA} ^{Note 1}	73	°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	$I_F=2A$ $T_J=25^\circ C$		0.39	0.43	V
		$I_F=2A$ $T_J=125^\circ C$		0.26		V
		$I_F=10A$ $T_J=25^\circ C$		0.49	0.52	V
		$I_F=10A$ $T_J=125^\circ C$		0.41	0.44	V
Instantaneous Reverse Current	I_R ^{Note 2}	$V_R=45V$ $T_J=25^\circ C$		3	15	uA
		$V_R=45V$ $T_J=100^\circ C$			5	mA
		$V_R=45V$ $T_J=125^\circ C$			10	mA

Notes

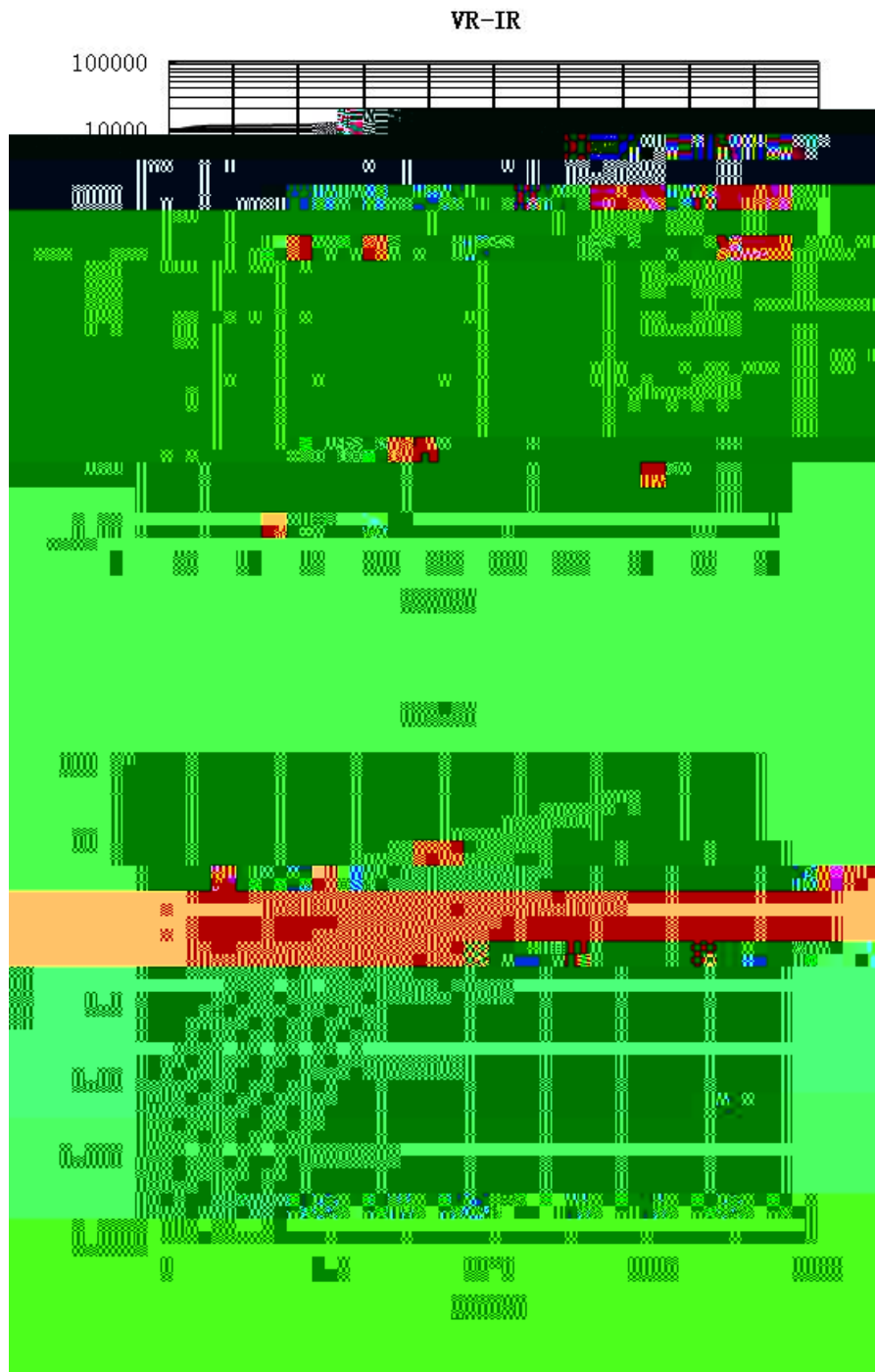
/FR-4 PCB, 2oz. Copper, minimum recommended pad

layout per.

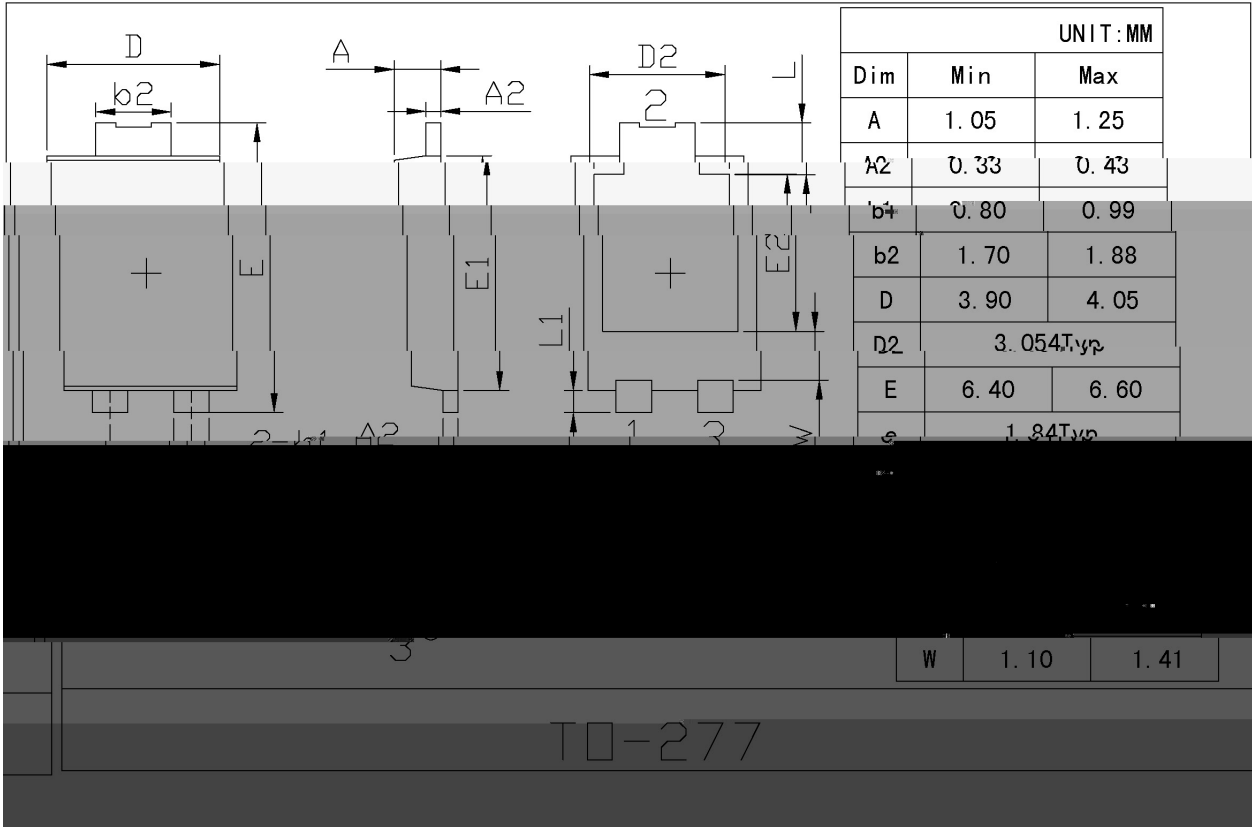
Short duration pulse test used to minimize self-heating

effect.

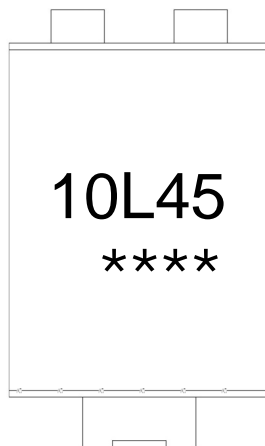
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



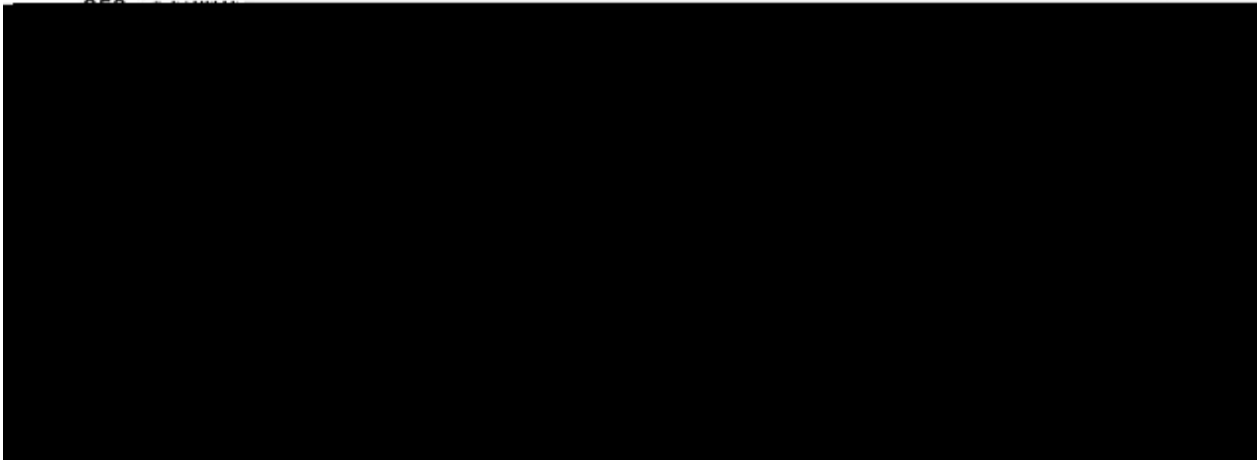
Note:

Product Type.

****:

Lot No. Code, code change with Lot No.

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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