描述 / Descriptions

TO-277 塑封封装 肖特基二极管。

TO-277 Plastic package Schottky diode.

特征 / Features

高正向浪涌能力，超低正向压降 V_F(typ)=0.21V，优异的高温稳定性。

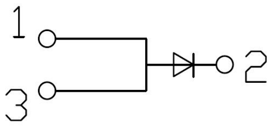
High Forward Surge Capability, Ultra Low Forward Voltage Drop V_F(typ)=0.21V, Excellent High Temperature Stability.

用途 / Applications

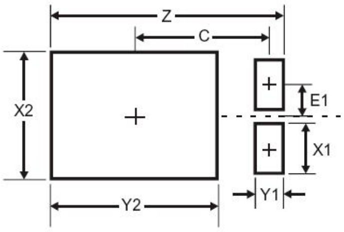
用于高频、低压、大电流整流二极管，续流二极管，保护二极管。

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

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



Dimensions	Value (in mm)
Z	6.6
X1	1.4
X2	3.6
Y1	0.8
Y2	4.7
C	3.87
E1	0.9

PIN1：Anode　　PIN 2：Cathode　PIN 3：Anode

Suggested Pad layout

放大及印章代码 / h_{FE} Classifications & Marking

见印章说明。See Marking Instructions.

极限参数 / Absolute Maximum Ratings(Ta=25℃)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage Peak Reverse Voltage	V_{RRM} V_{RWM} V_{RM}	50	V
RMS Reverse voltage	$V_{R(RMS)}$	35	V
Average Rectified Output Current	I_O	20	A
Non-Repetitive Peak Forward Surge Current	I_{FSM}	280	A
Repetitive peak avalanche power	P_{ARM}	30000	W
Junction Temperature Range	$T_{j\ MAX}$	150	℃
Storage Temperature Range	T_{stg}	-65～150	℃
Typical Thermal Resistance	$R_{\theta JA}$（Note 1）	73	℃/W

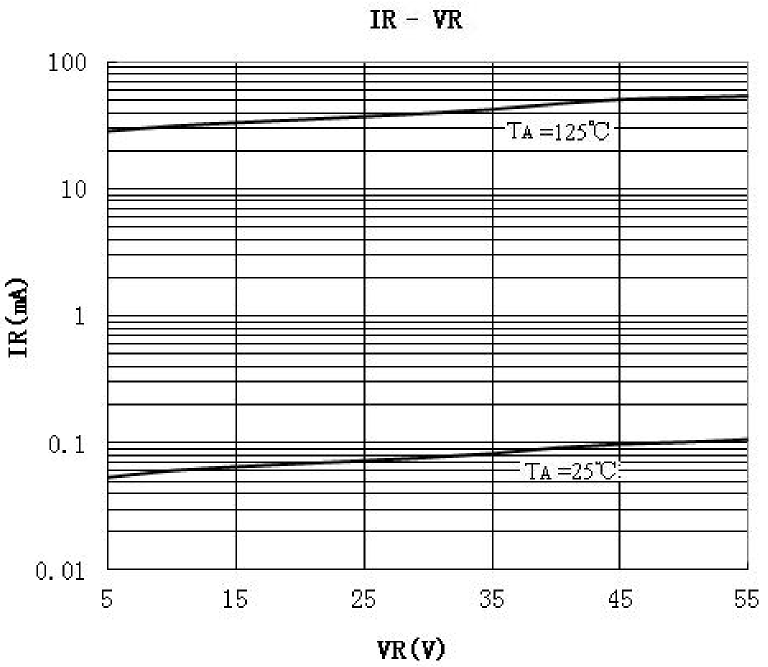
电性能参数 / Electrical Characteristics(Ta=25℃)

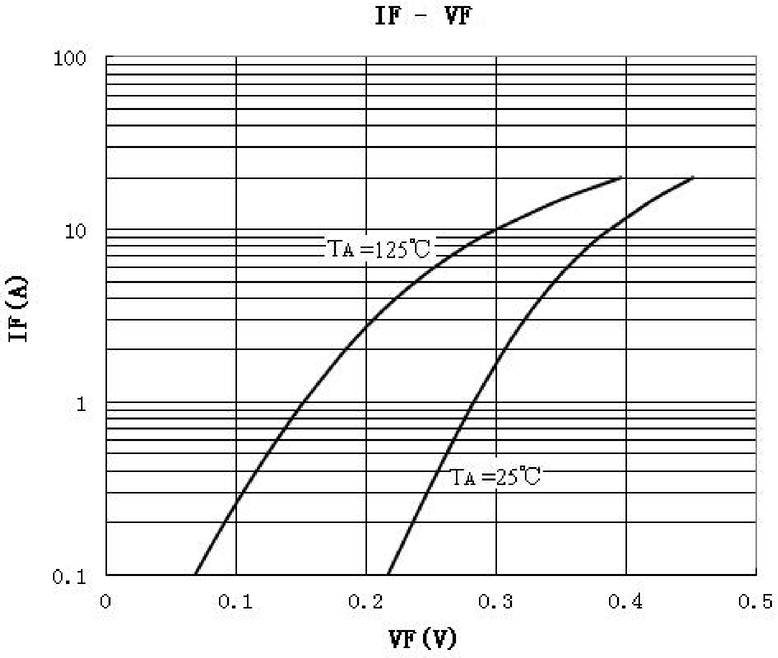
参数 Parameter	符号 Symbol	测试条件 Test Conditions		最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Reverse Voltage	V_R	I_R=0.3mA		50			V
Forward voltage	V_F	I_F=3A	T_J=25℃		0.32	0.42	V
		I_F=3A	T_J=125℃		0.21		V
		I_F=20A	T_J=25℃		0.45	0.50	V
		I_F=20A	T_J=125℃		0.40		V
Instantaneous Reverse Current	I_R（Note 2）	V_R=50V	T_J=25℃		100	150	uA
		V_R=50V	T_J=125℃		50	100	mA

注/Notes：

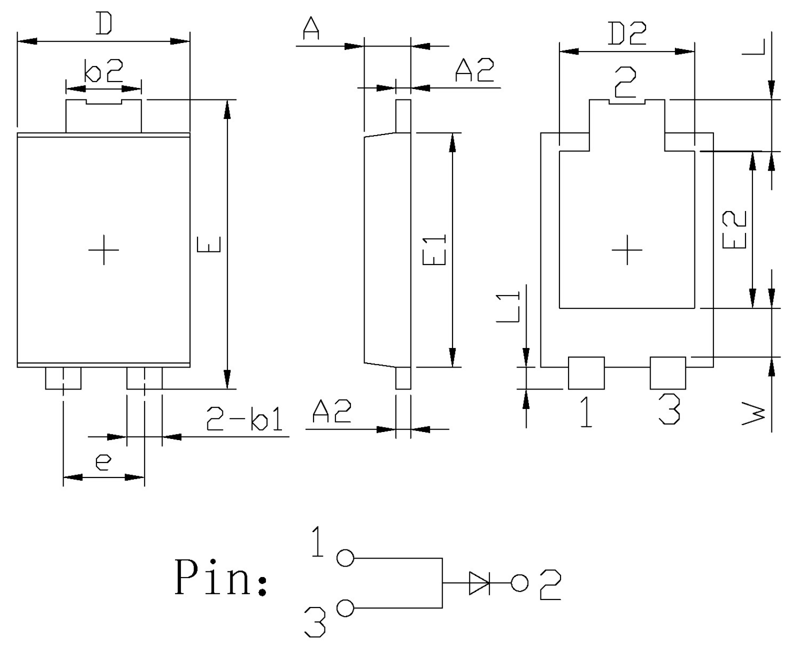
1. FR-4 PCB，2盎司铜，最低建议焊盘布局。/FR-4 PCB, 2oz. Copper, minimum recommended pad layout per.
2. 使用极短的测试时间，以尽量减少自热效应。/Short duration pulse test used to minimize self-heating effect.

电参数曲线图 / Electrical Characteristic Curve





外形尺寸图 / Package Dimensions



UNIT:MM		
Dim	Min	Max
A	1.05	1.25
A2	0.33	0.43
b1	0.80	0.99
b2	1.70	1.88
D	3.90	4.05
D2	3.054Typ	
E	6.40	6.60
e	1.84Typ	
E1	5.30	5.50
E2	3.549Typ	
L	0.75	0.95
L1	0.45	0.65
W	1.10	1.41

TO-277

印章说明 / Marking Instructions

说明：

20S50： 为型号代码

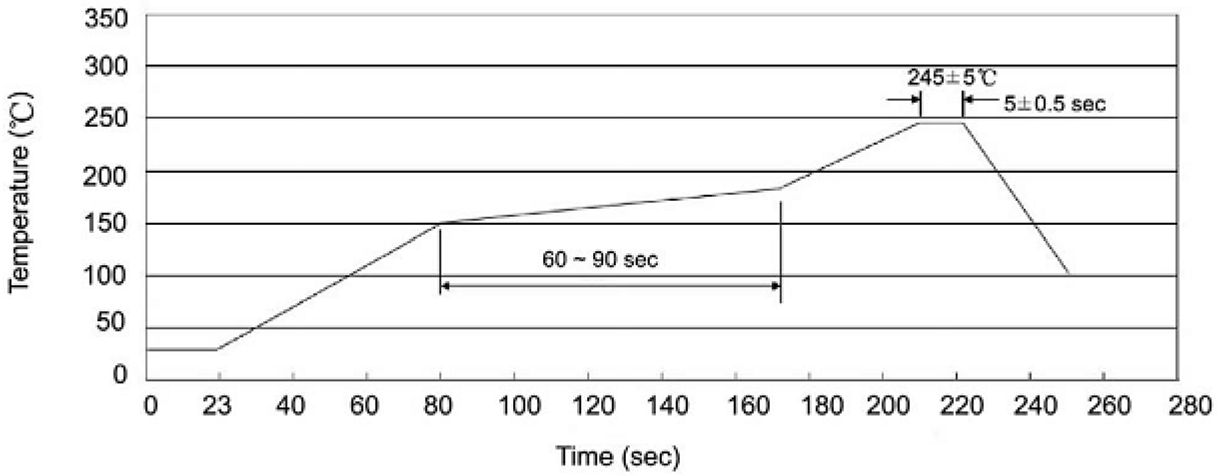
****： 为生产批号代码，随生产批号变化。

Note:

20S50： Product Type.

****: Lot No. Code, code change with Lot No.

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：	Note:
1、预热温度 25～150℃，时间 60～90sec;	1.Preheating:25~150℃, Time:60~90sec.
2、峰值温度 245±5℃，时间持续为 5±0.5sec;	2.Peak Temp.:245±5℃, Duration:5±0.5sec.
3、焊接制程冷却速度为 2～10℃/sec.	3. Cooling Speed: 2~10℃/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5℃　　时间：10±1 sec.　　Temp.:260±5℃　　Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / 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	5	75,000	13″ ×12	360×360×50	385×257×392

使用说明 / Notices