

描述 / Descriptions

R-6 塑封封装 肖特基二极管。
Schottky Barrier Diode in a R-6 Plastic Package.

特征 / Features

沟槽 MOS 肖特基工艺、低正向压降，低功耗、高效率运行、芯片结温 $\leq 200^{\circ}\text{C}$ ，在太阳能旁路应用模式、ESD 能力达到 $\pm 30\text{KV}$ 。

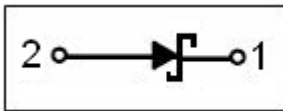
Trench MOS Schottky technology, Low forward voltage drop, low power losses, High efficiency operation, $T_J \leq 200^{\circ}\text{C}$ max. in solar bypass mode application, ESD ability to achieve $\pm 30\text{KV}$.

用途 / Applications

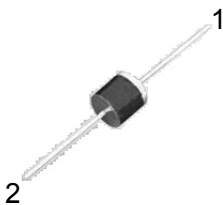
用于太阳能电池接线盒中的旁路保护二极管、高频率逆变器，开关电源，续流二极管，OR-ing 二极管，DC-DC 转换器和电池反向保护。

For use in solar cell junction box as a bypass diode for protection, high frequency inverters, switching power supplies, freewheeling diodes, OR-ing diode, dc-to-dc converters and reverse battery protection.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Cathode PIN 2 : Anode

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°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Maximum repetitive peak reverse voltage	V_{RRM}	45	V
Maximum RMS Voltage	V_{RMS}	31.5	V
Maximum Average forward current	$I_{F(AV)}$	15	A
Non Repetitive Peak Surge Current	I_{FSM}	240	A
Thermal Resistance Junction to Case ⁽¹⁾	$R_{\theta Jc}$	3.5	°C/W
Operating junction and storage temperature range (AC mode)	T_j T_{stg}	-55~+200	°C
Junction temperature in DC forward current without reverse bias, $t \leq 1$ h	T_j max. ⁽²⁾	≤ 200	°C

Notes :

(1) Measured at 1.0 MHz and applied reverse voltage of 4.0VDC.

(2) 2 bypass diode thermal test , DC forward current without reverse bias

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

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
Breakdown voltage	V_{BR}	$I_R=1mA$ (TA=25°C)	45			V
Forward Voltage	V_F (Note 1)	$I_F=5A$ (TA =25°C)		0.43		V
		$I_F=15A$ (TA =25°C)		0.53	0.55	V
		$I_F=5A$ (TA =125°C)		0.33		V
		$I_F=15A$ (TA =125°C)		0.48		V
Instantaneous Reverse Current	I_R (Note 2)	$V_R=45V$ (TA =25°C)		4	20	uA
		$V_R=45V$ (TA =125°C)		4.5	10	mA

Notes :

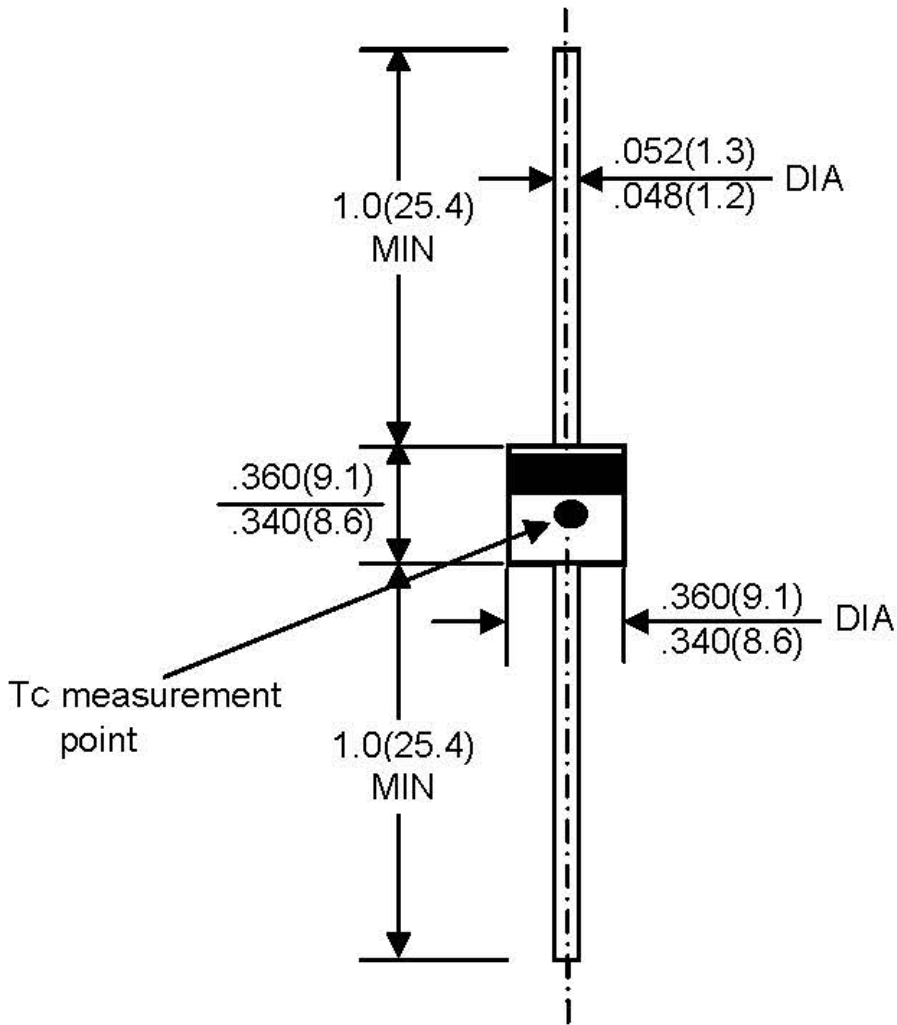
(1) Pulse test: 300 μ s pulse width, 2 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

(3) Unless otherwise noted, values for the parameters of a single chip

外形尺寸图 / Package Dimensions

R-6



Dimensions in inches and (millimeters)

印章说明 / Marking Instructions



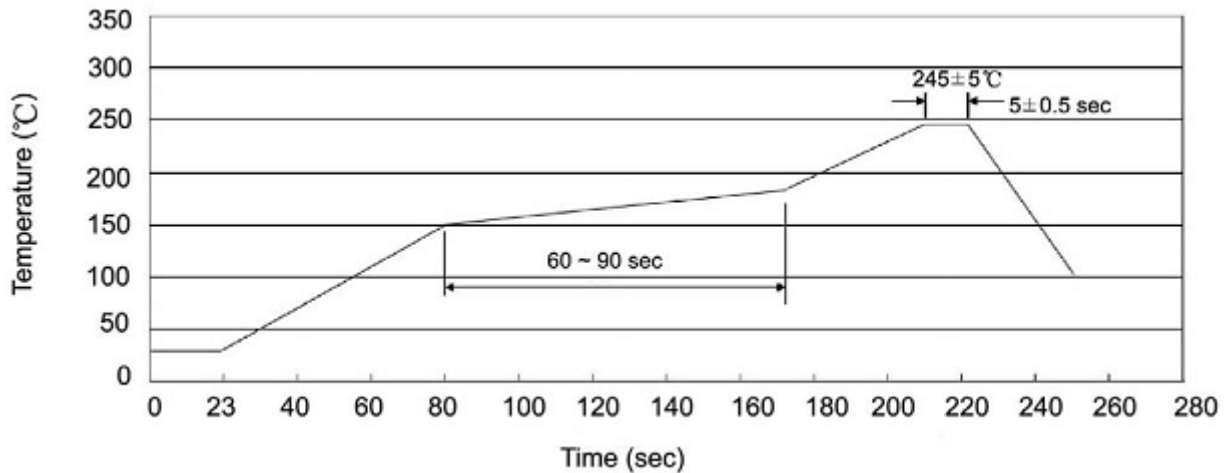
说明：

15T45： 为型号代码

Note:

15T45： Product Type Code.

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



说明：

- 1、预热温度 25~150°C，时间 60~90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2~10°C/sec.

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

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

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

包装规格 / Packaging SPEC.

散件包装 / BULK

Package Type 封装形式	Units 包装数量			Dimension 包装尺寸 (unit: mm ³)	
	Units/Bag 只/袋	Units/Outer Box 只/箱	Gross Weight/Kg 总重/千克	Inner Box 盒	Outer Box 箱
R-6	250	6,000	14	293×73×40	330×330×270

编带包装 / AMMO

Package Type 封装形式	Units 包装数量			Dimension 包装尺寸 (unit: mm ³)			
	Units/Tape 只/纸带	Units/Outer Box 只/箱	Gross Weight/Kg 总重/千克	Component Space 带宽	Tape Space 编带长	Inner Box 盒	Outer Box 箱
R-6	500	5,000	12	9.5	52	360×360×50	385×257×392

使用说明 / Notices