描述 / Descriptions

TO-263 塑封封装 肖特基二极管。
Schottky Barrier Diode in a TO-263 Plastic Package.

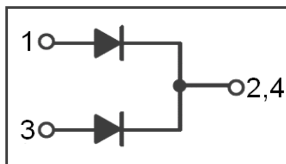
特征 / Features

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≤200℃，在太阳能旁路应用模式、ESD 能力达到±30KV。
Trench MOS Schottky technology, Low forward voltage drop, low power losses, High efficiency operation, TJ ≤200 °C max. in solar bypass mode application,ESD ability to achieve ±30KV.

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：Anode　　PIN 2、4：Cathode　　PIN 3：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℃)

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	$I_{F(AV)}$	2×15	A
Non Repetitive Peak Surge Current	I_{FSM}	240	A
Thermal Resistance Junction to Case	$R_{\theta Jc}$	1.8	℃/W
Operating junction and storage temperature range (AC mode)	T_j T_{stg}	-65～+175	℃
Junction temperature in DC forward current without reverse bias, t≤1 h	T_j max. (1)	≤200	℃

Notes：
（1）2 bypass diode thermal test，DC forward current without reverse bias

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
Breakdown voltage	V_{BR}	I_R=1mA(T_A=25℃)	45			V
Forward Voltage	V_F （Note 1）	I_F =5A(T_A =25℃)		0.35		V
		I_F =7.5A(T_A =25℃)		0.37		V
		I_F =15A(T_A =25℃)		0.45	0.50	V
		I_F =5A(T_A =125℃)		0.24		V
		I_F =7.5A(T_A =125℃)		0.30		V
		I_F =15A(T_A =125℃)		0.42		V
Instantaneous Reverse Current	I_R （Note 2）	V_R=45V(T_A =25℃)		100	200	μA
		V_R=45V(T_A =125℃)		30	50	mA

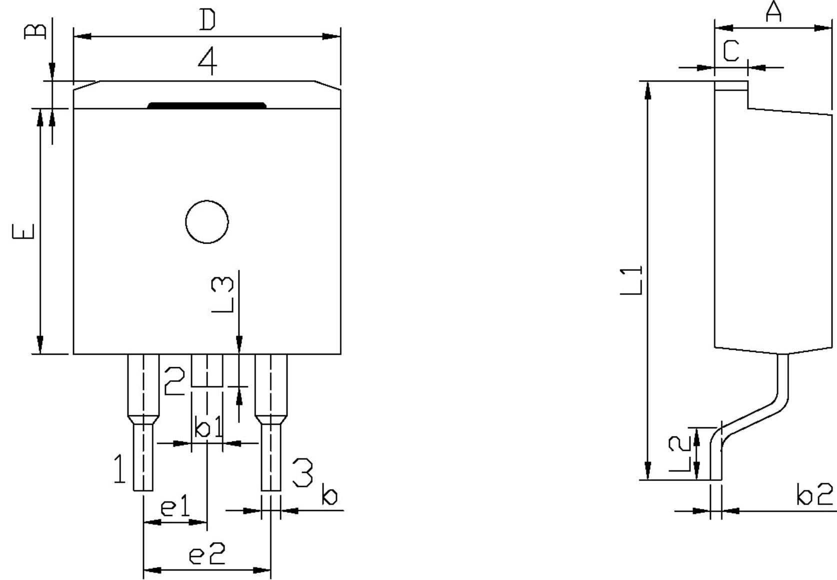
Notes：

(1) Pulse test: 300 μs pulse width, 1 % 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

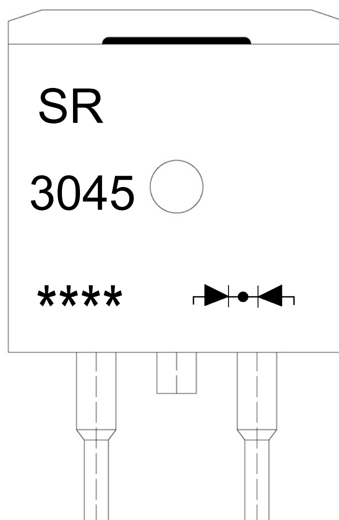


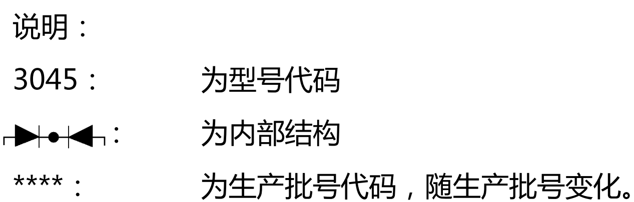
单位：mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	4.30	4.70	E	9.00	9.40
B	1.00	1.40	e1	2.34	2.74
b	0.70	0.90	e2	4.88	5.28
b1	1.15	1.35	L1	15.00	16.00
b2	0.40	0.60	L2	2.24	2.84
C	1.20	1.40	L3	1.20	1.60
D	9.80	10.20			

TO-263

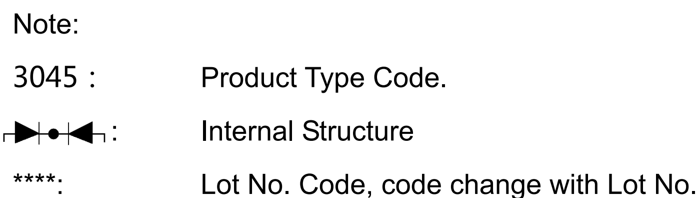
印章说明 / Marking Instructions





说明：

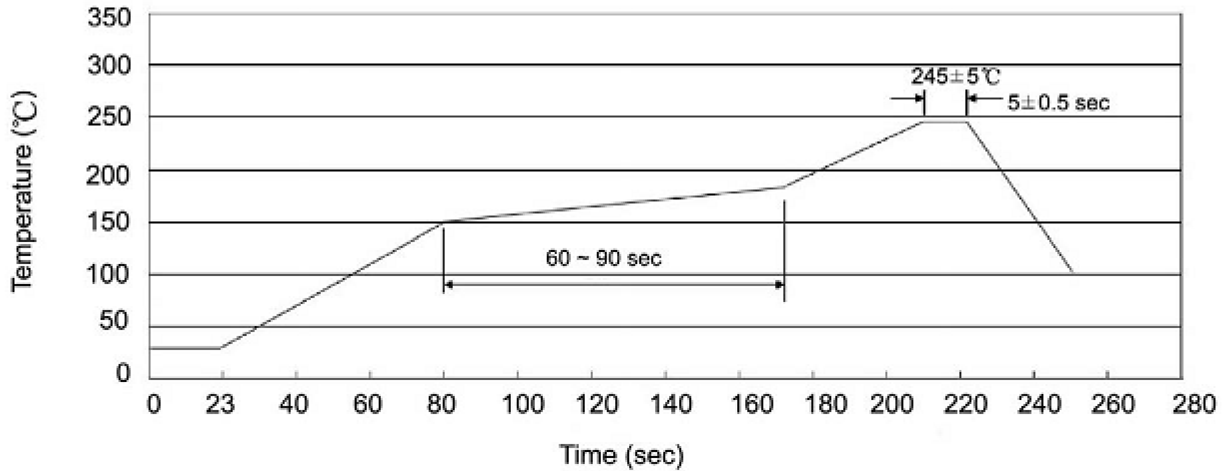
3045：	为型号代码
:	为内部结构
****：	为生产批号代码，随生产批号变化。



Note:

3045：	Product Type Code.
:	Internal Structure
****:	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：
1、预热温度 25 ~ 150℃，时间 60 ~ 90sec;
2、峰值温度 245±5℃，时间持续为 5±0.5sec;
3、焊接制程冷却速度为 2 ~ 10℃/sec.

Note:
1.Preheating:25~150℃, Time:60~90sec.
2.Peak Temp.:245±5℃, Duration:5±0.5sec.
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.

套管包装 / TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm^3)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-263	50	20	1,000	5	5,000	532×33×7.0	555×164×50	575×290×180

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-263	800	1	800	5	4,000	13″ ×24	360×360×50	385×257×392

使用说明 / Notices