

LV40100BCT

Rev.E May.-2016

描述 / Descriptions

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

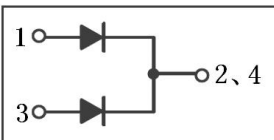
特征 / Features

低正向压降，低功耗损失，高效率。
Low forward voltage drop, low power losses, High efficiency operation.

用途 / Applications

用于高频率逆变器，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 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°C)

| 参数 Parameter | 符号 Symbol | 数值 Rating | 单位 Unit |
|--|-----------------------------------|--------------|------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RM} V_{RSM} V_{DC} | 100 | V |
| RMS Reverse Voltage | V_{RMS} | 70 | V |
| Average Rectified Forward Current | $I_{F(AV)}$ | 2×20 | A |
| Non Repetitive Peak Surge Current | I_{FSM} | 300 | A |
| Thermal Resistance Junction to Case | $R_{\theta Jc}$ | 1.8 | °C/W |
| Junction and Storage Temperature Range | T_j T_{stg} | -40~+150 | °C |

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 |
|-------------------------------|-------------------|----------------------------|------------|------------|------------|------------|
| Reverse Voltage | V_{BR} | $I_R=1mA(Ta=25^\circ C)$ | 100 | | | V |
| Forward Voltage | V_F | $I_F=5A(Ta=25^\circ C)$ | | 0.45 | | V |
| | | $I_F=10A(Ta=25^\circ C)$ | | 0.54 | | V |
| | | $I_F=20A(Ta=25^\circ C)$ | | 0.67 | 0.75 | V |
| | | $I_F=5A(Ta=125^\circ C)$ | | 0.38 | | V |
| | | $I_F=10A(Ta=125^\circ C)$ | | 0.49 | | V |
| | | $I_F=20A(Ta=125^\circ C)$ | | 0.62 | 0.65 | V |
| Instantaneous Reverse Current | I_R (Note 1) | $V_R=100V(Ta=25^\circ C)$ | | 30 | 200 | μA |
| | | $V_R=100V(Ta=125^\circ C)$ | | 20 | 45 | mA |

注/Notes:

- 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.
- 除非特别注明,数值为一个芯片的参数。/ Unless otherwise noted, values for the parameters of a single chip

电参数曲线图 / Electrical Characteristic Curve

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

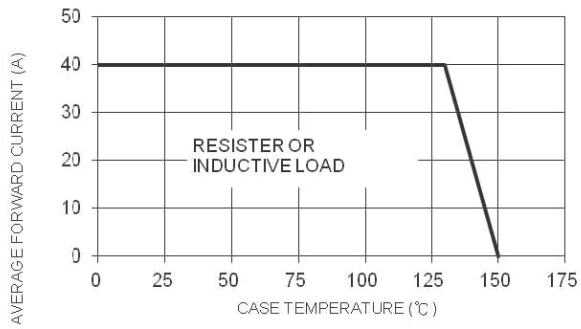


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

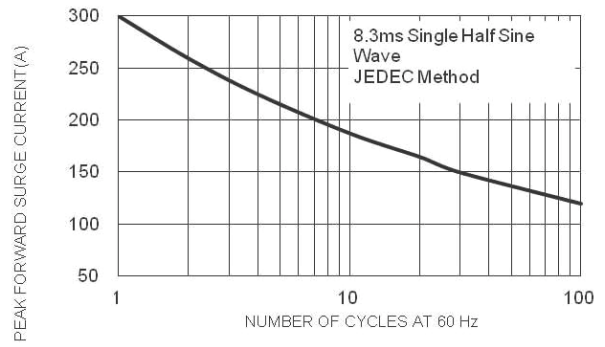


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

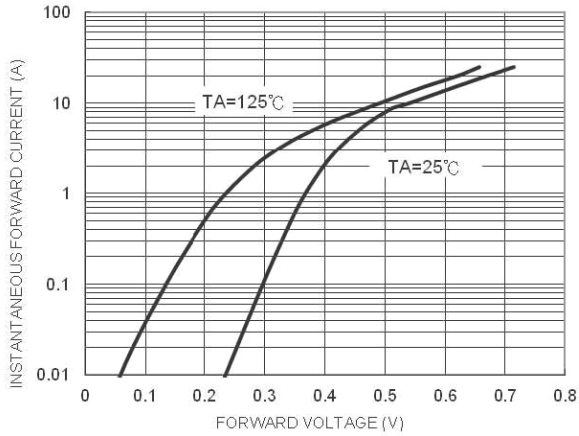
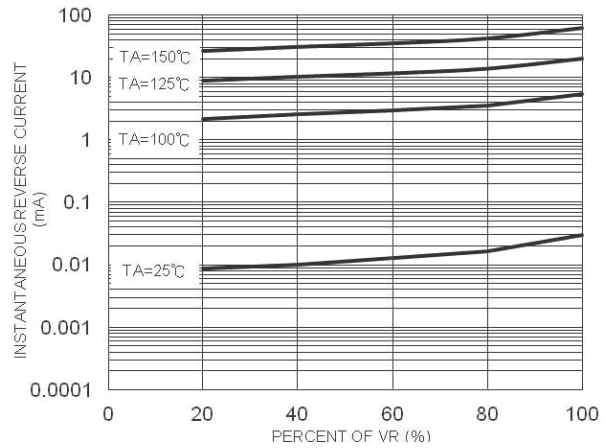
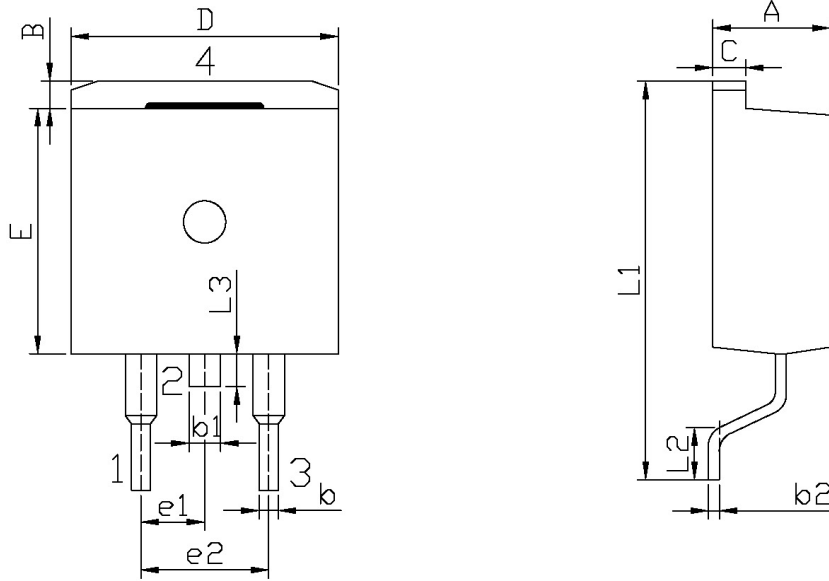


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



外形尺寸图 / Package Dimensions

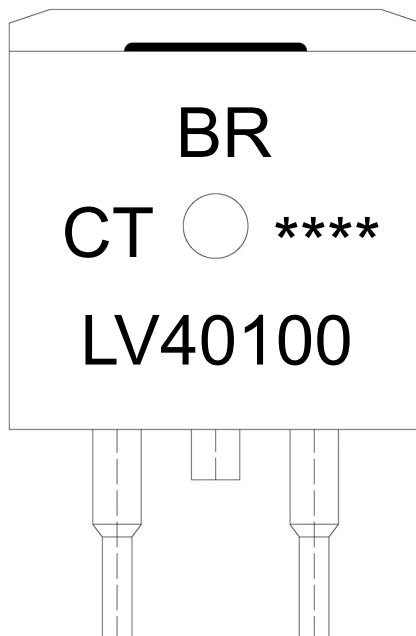


单位: mm

| 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 | | | |

TQ-263

印章说明 / Marking Instructions



说明：

BR： 为公司代码

LV40100： 为产品型号

CT： 为内部结构

****： 为生产批号代码，随生产批号变化。

Note:

BR: Company Code

LV40100: Product Type.

CT: Internal Structure

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

波峰焊温度曲线图(无铅) / Temperature Profile for Dip 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.

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" x24 | 360×360×50 | 385×257×392 |

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 |

使用说明 / Notices