

# LV40150FCT

Rev.F Mar.-2016

## 描述 / Descriptions

TO-220F 塑封封装 肖特基二极管。

Schottky Barrier Diode in a TO-220F Plastic Package.

## 特征 / Features

低正向压降，低功耗损失，高效率运行。

Low forward voltage drop, low power losses, High efficiency operation.

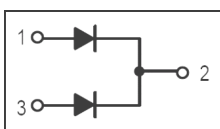
## 用途 / Applications

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 : Cathode

PIN 3 : Anode

## 放大及印章代码 / h<sub>FE</sub> 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	$V_{RM}$ $V_{RSM}$ $V_{DC}$	150	V
RMS Voltage	$V_{RMS}$	105	V
Average Rectified Output Current	$I_{F(AV)}$	$2 \times 20$	A
Non Repetitive Peak Surge Current	$I_{FSM}$	300	A
Thermal Resistance Junction to Case	$R_{\theta Jc}$	4.0	°C/W
Junction and Storage Temperature Range	$T_j$ $T_{stg}$	-40~+150	°C

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

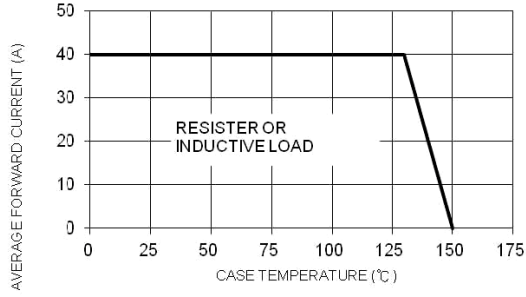
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Breakdown Voltage	$V_{BR}$	$I_R=1mA(Ta=25^\circ C)$	150			V
Forward Voltage	$V_F$	$I_F=5A(Ta=25^\circ C)$		0.68		V
		$I_F=10A(Ta=25^\circ C)$		0.76		V
		$I_F=20A(Ta=25^\circ C)$		0.89	1.05	V
		$I_F=5A(Ta=125^\circ C)$		0.56		V
		$I_F=10A(Ta=125^\circ C)$		0.63		V
		$I_F=20A(Ta=125^\circ C)$		0.73	0.85	V
Instantaneous Reverse Current	$I_R$ (Note 1)	$V_R=150V(Ta=25^\circ C)$		3.0	30	$\mu A$
		$V_R=150V(Ta=125^\circ C)$		5.0	15	mA

**注/Notes:**

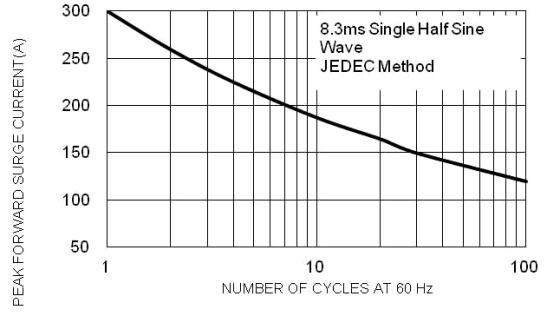
1. 使用极短的测试时间,以尽量减少自热效应。/Short duration pulse test used to minimize self-heating effect.
2. 除非特别注明,数值为一个芯片的参数。/ Unless otherwise noted, values for the parameters of a single chip

**电参数曲线图 / Electrical Characteristic Curve**

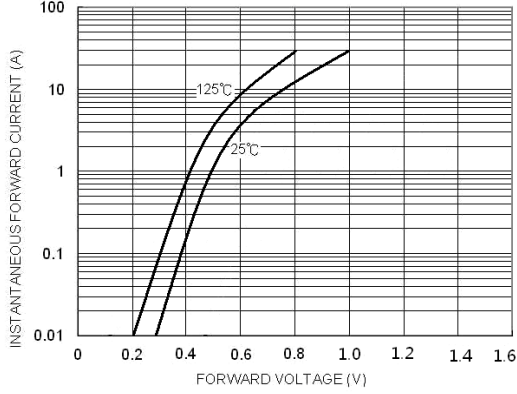
**FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE**



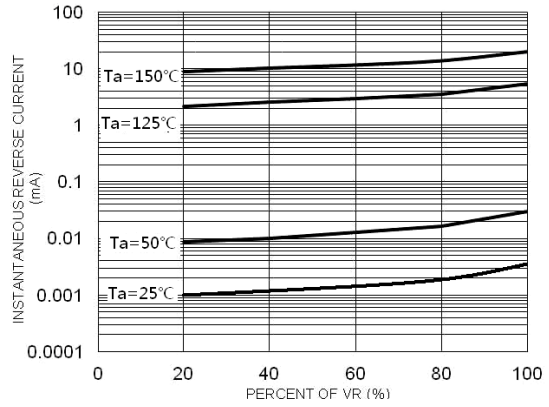
**FIG.2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG**



**FIG.3 TYPICAL FORWARD CHARACTERISTICS PER LEG**



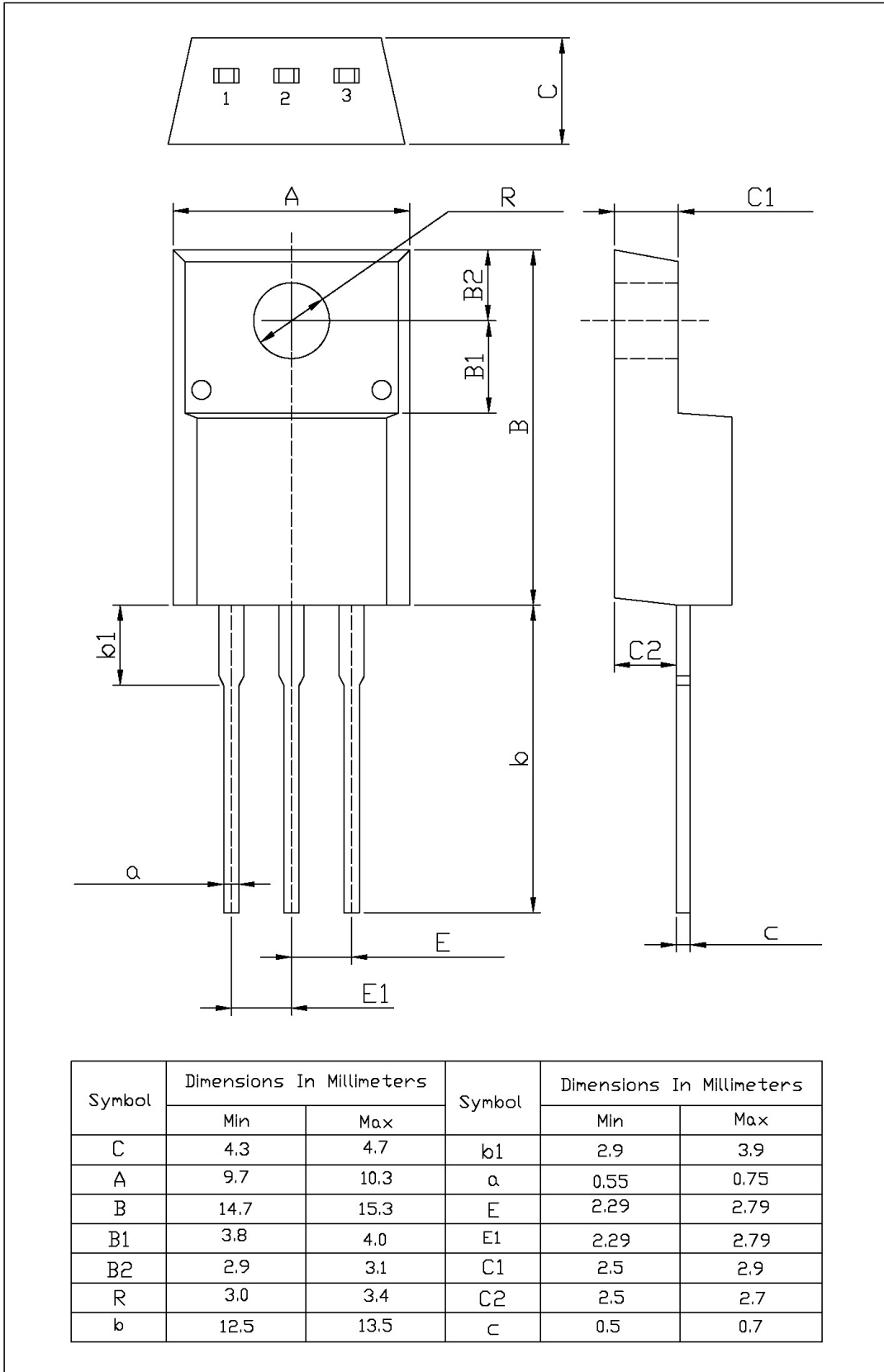
**FIG.4 TYPICAL REVERSE CHARACTERISTICS PER LEG**



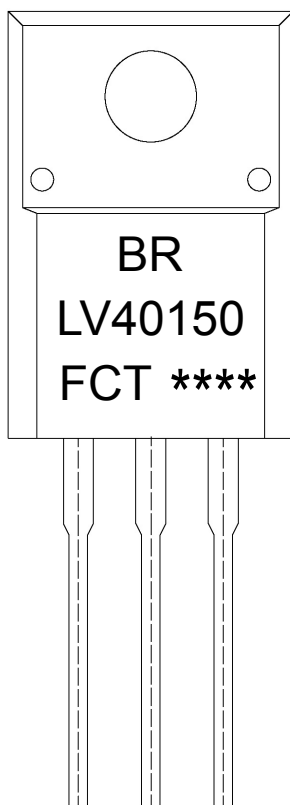
外形尺寸图 / Package Dimensions

TO-220F

单位: mm



## 印章说明 / Marking Instructions



说明：

BR： 为公司代码

LV40150： 为产品型号

F： 为封装代码

CT： 为内部结构

\*\*\*\*： 为生产批号代码，随生产批号变化。

Note:

BR: Company Code

LV40150 : Product Type

F: Package Code

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 255±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.:255±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：270±5°C

时间：10±1 sec.

Temp.:270±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 <sup>3</sup> )		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

套管包装 / TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	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-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

**使用说明 / Notices**