

# 78L15

Rev.H Jun.-2024

## 描述 / Descriptions

TO-92 塑封封装电压调整器。Voltage Regulator in a TO-92 Plastic Package.

## 特征 / Features

三端稳压调整器，输出电流高达 100mA, 内设过热保护和短路限制。

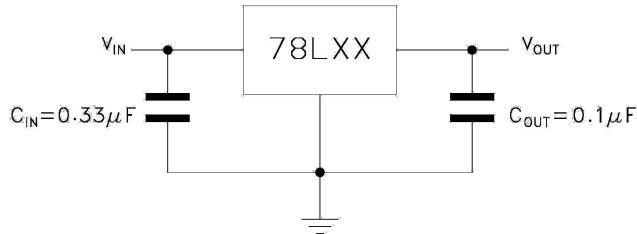
3-Terminal regulators, output current up to 100 mA, internal thermal overload protection and short-circuit limiting.

## 用途 / Applications

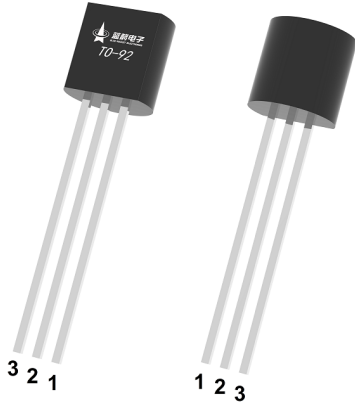
电压调整器。

Voltage Regulator.

## 内部等效电路/应用电路 / Equivalent Circuit or Application Circuit



## 引脚排列 / Pinning



PIN 1 : IN

PIN 2 : GND

PIN 3 : OUT

## 印章代码 / Marking

见印章说明。

See Marking Instructions.

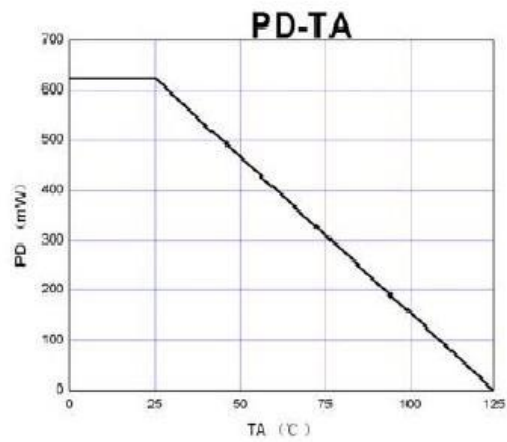
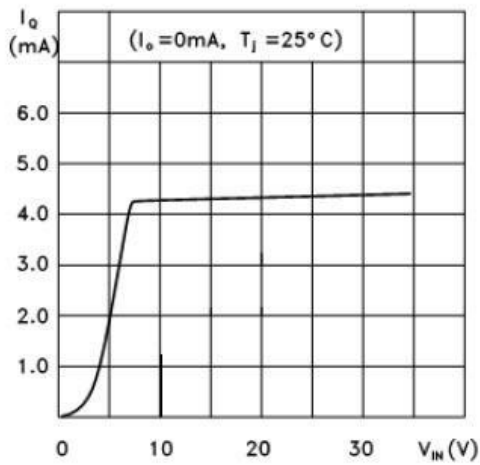
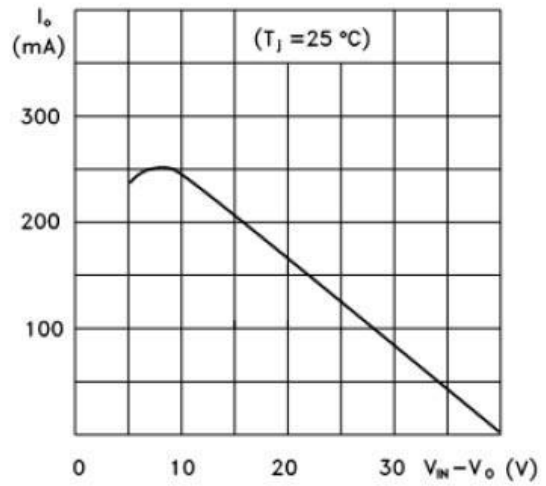
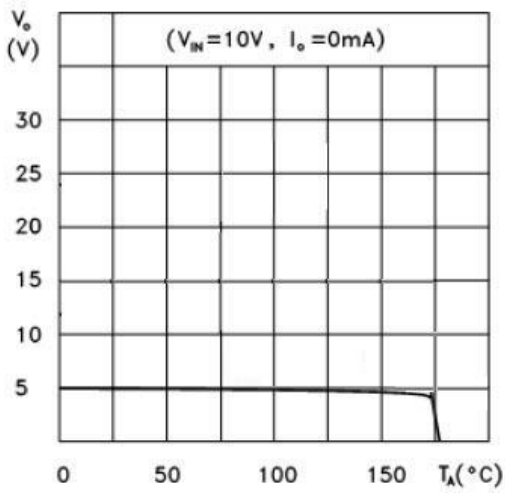
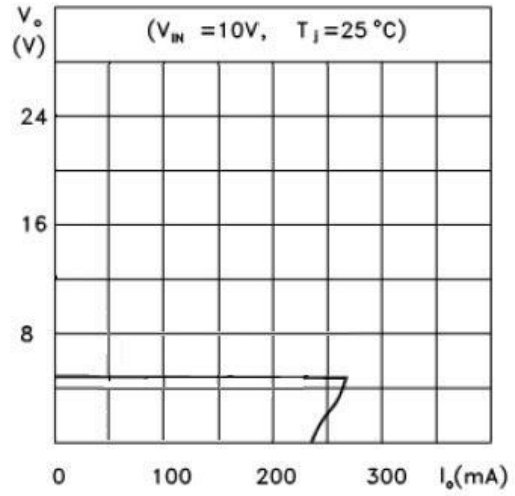
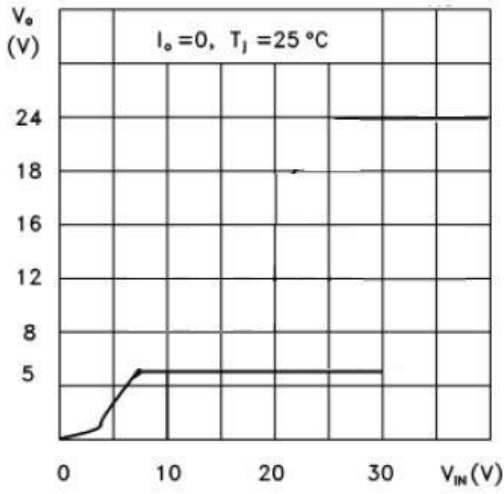
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Input voltage	V <sub>I</sub>	35	V
Output current	I <sub>O</sub>	100	mA
Operating Temperature Range	T <sub>OPR</sub>	-40~125	°C
Power Dissipation	P <sub>D</sub>	500	mW
Storage temperature range	T <sub>stg</sub>	-65~150	°C

**电性能参数 / Electrical Characteristics(Ta=25°C , Vi=23V,Io=40mA , unless otherwise specified)**

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
Output voltage	V <sub>O</sub>	I <sub>O</sub> =40mA T <sub>J</sub> =25°C	14.4	15	15.6	V
		I <sub>O</sub> =1mA to 40mA V <sub>I</sub> =17.5V to 30V	14.25		15.75	V
		I <sub>O</sub> =1mA to 70mA V <sub>I</sub> =23V	14.25		15.75	V
Input regulation	ΔV <sub>O</sub>	V <sub>I</sub> =17.5V T <sub>J</sub> =25°C			300	mV
		V <sub>I</sub> =20V T <sub>J</sub> =25°C			250	mV
Ripple rejection	RR	V <sub>I</sub> =18.5V to 28.5V T <sub>J</sub> =25°C f=120Hz	34	39		dB
Output regulation	ΔV <sub>O</sub>	I <sub>O</sub> =1mA to 100mA T <sub>J</sub> =25°C			150	mV
		I <sub>O</sub> =1mA to 40mA T <sub>J</sub> =25°C			75	mV
Output noise voltage	V <sub>N</sub>	f=10Hz to 100KHz T <sub>J</sub> =25°C		90		μV
Dropout voltage	V <sub>D</sub>	T <sub>J</sub> =25°C		1.7		V
Bias current	I <sub>Q</sub>	T <sub>J</sub> =25°C			6.5	mA
		T <sub>J</sub> =125°C			6	mA
Bias current change	ΔI <sub>Q</sub>	V <sub>I</sub> =20V to 30V			1.5	mA
		I <sub>O</sub> =1mA to 40mA			0.1	mA

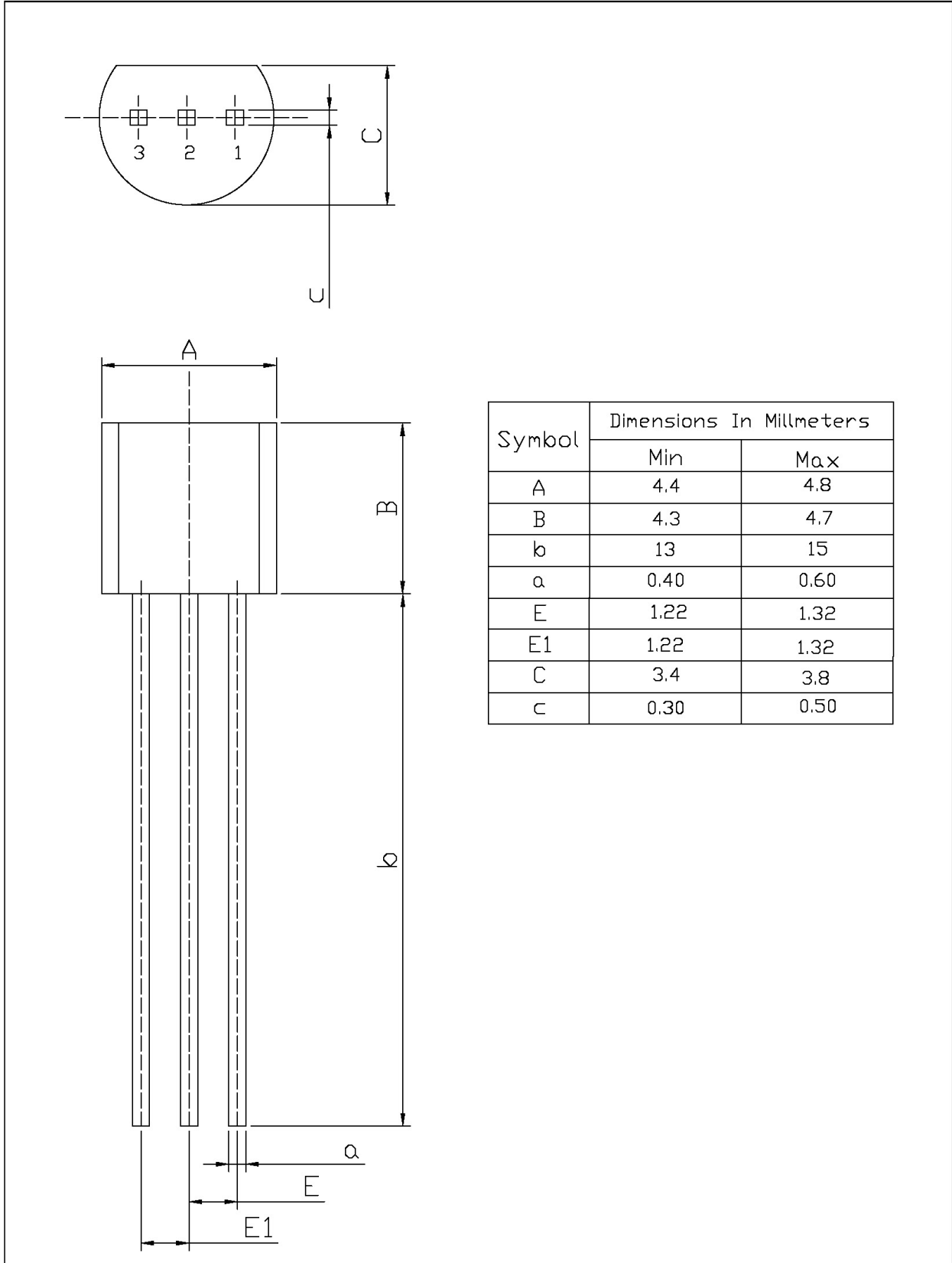
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

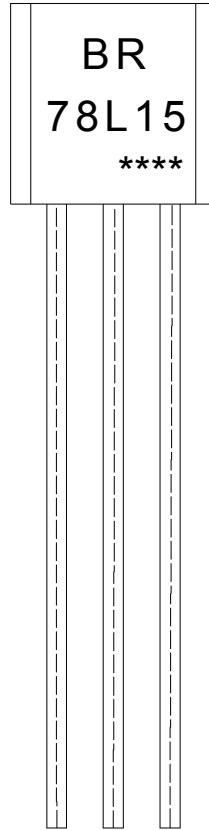
TO-92

Unit: mm



Symbol	Dimensions In Millimeters	
	Min	Max
A	4.4	4.8
B	4.3	4.7
b	13	15
a	0.40	0.60
E	1.22	1.32
E1	1.22	1.32
C	3.4	3.8
c	0.30	0.50

印章说明 / Marking Instructions



说明：

BR： 为公司代码

78L15： 为产品型号

\*\*\*\*： 为生产批号代码，随生产批号变化

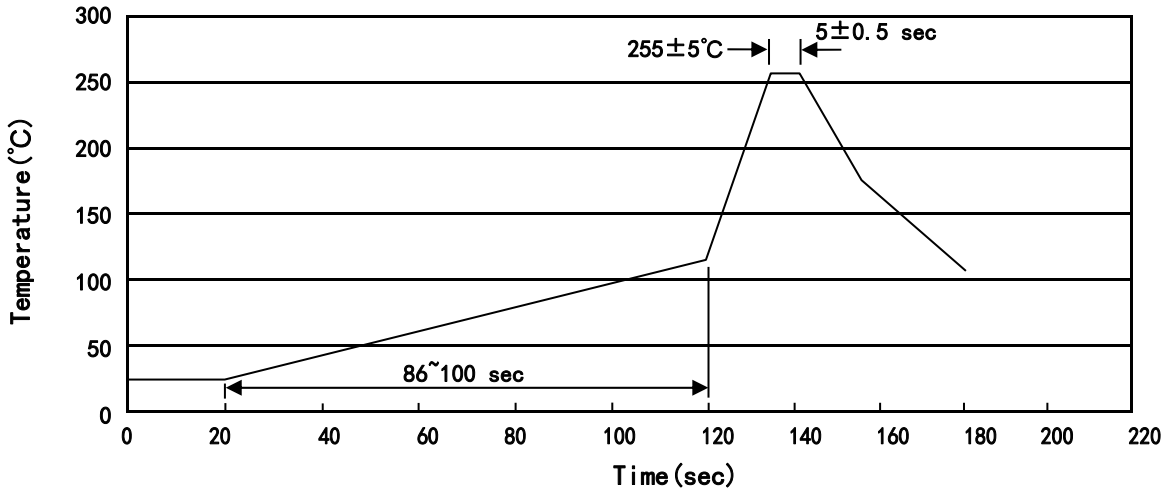
Note:

BR: Company Code

78L15: Product Type

\*\*\*\*: 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: mm3)		
	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-92	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195

编带包装 / AMMO

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)	
	Units/tape 只/纸带	Tape/Inner Box 纸带/盒	Rows/Inner Box 纸带层/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Inner Box 盒	Outer Box 箱
TO-92	3,000	1	120	10	30,000	328×230×42	480×346×235

**使用说明 / Notices**