

**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**

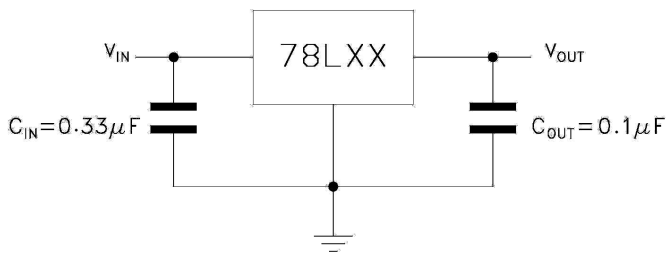
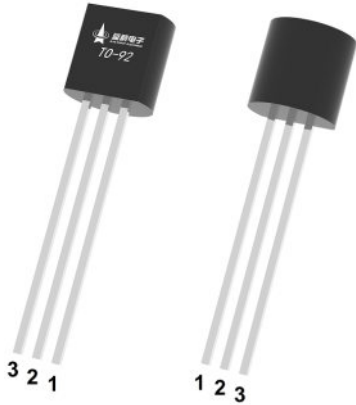
三端稳压调整器，输出电流高达 100mA, 内设过热保护和短路限制。

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**

PIN1 : IN

PIN 2 : GND

PIN 3 : OUT

**印章代码 / Marking**

见印章说明。

See Marking Instructions.

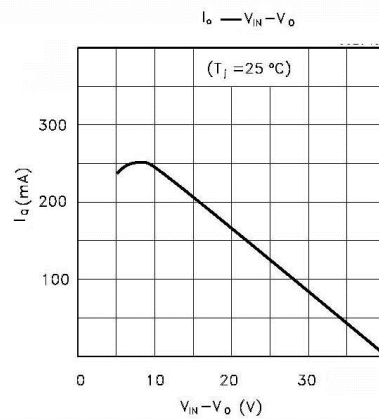
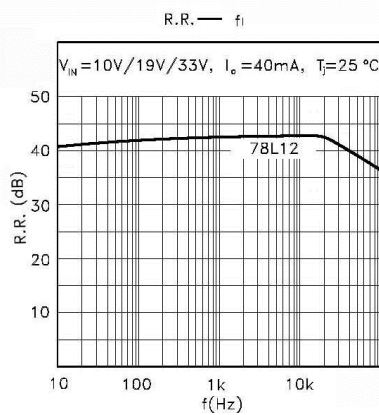
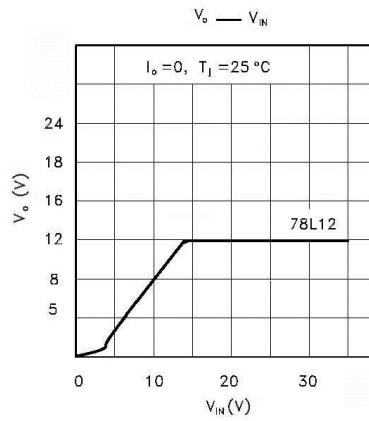
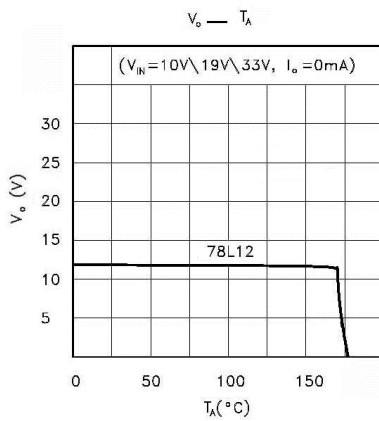
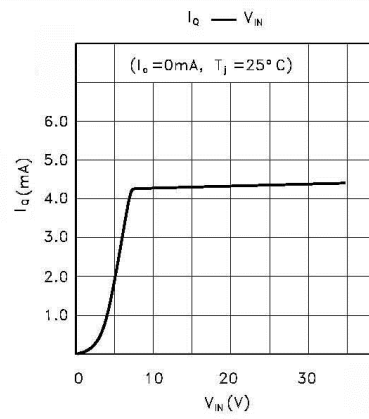
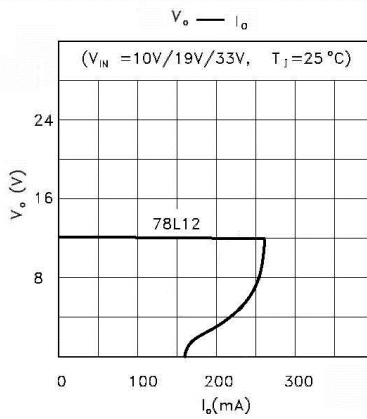
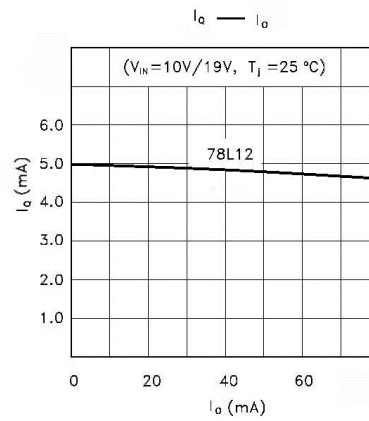
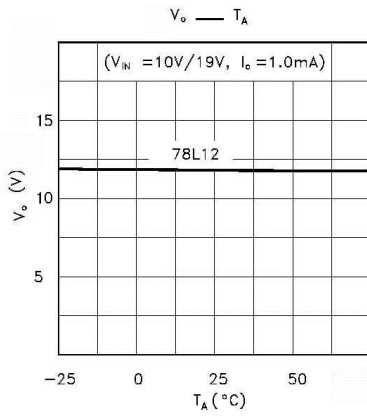
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Input voltage	$V_I$	35	V
Output current	$I_O$	100	mA
Operating temperature range	$T_{OPR}$	-40~125	°C
Power Dissipation	$P_D$	500	mW
Storage temperature range	$T_{stg}$	-65~150	°C
Junction temperature range	$T_J$	150	°C

**电性能参数 / Electrical Characteristics(Ta=25°C ,  $V_I=19V, I_O=40mA$  , 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	$V_O$	$I_O=40mA$ $T_J=25^\circ C$	11.5	12	12.5	V
		$I_O=1mA$ to 40mA $V_I=14V$ to 27V	11.4	12	12.6	V
		$I_O=1mA$ to 70mA $V_I=19V$	11.4	12	12.6	V
Input regulation	$\Delta V_O$	$V_I=14.5V$ to 27V $T_J=25^\circ C$		55	250	mV
		$V_I=16V$ to 27V $T_J=25^\circ C$		49	200	mV
Ripple rejection	RR	$V_I=15V$ to 25V $T_J=25^\circ C$ $f=120Hz$	37	42		dB
Output regulation	$\Delta V_O$	$I_O=1mA$ to 100mA $T_J=25^\circ C$		22	100	mV
		$I_O=1mA$ to 40mA $T_J=25^\circ C$		13	50	mV
Output noise voltage	$V_N$	$f=10Hz$ to 100KHz $T_J=25^\circ C$		70		$\mu V$
Dropout voltage	$V_D$	$T_J=25^\circ C$		1.7		V
Bias current	$I_Q$	$T_J=25^\circ C$		4.3	6.5	mA
		$T_J=125^\circ C$			6.0	mA
Bias current change	$\Delta I_Q$	$V_I=16V$ to 27V			1.5	mA
		$I_O=1mA$ to 40mA			0.1	mA

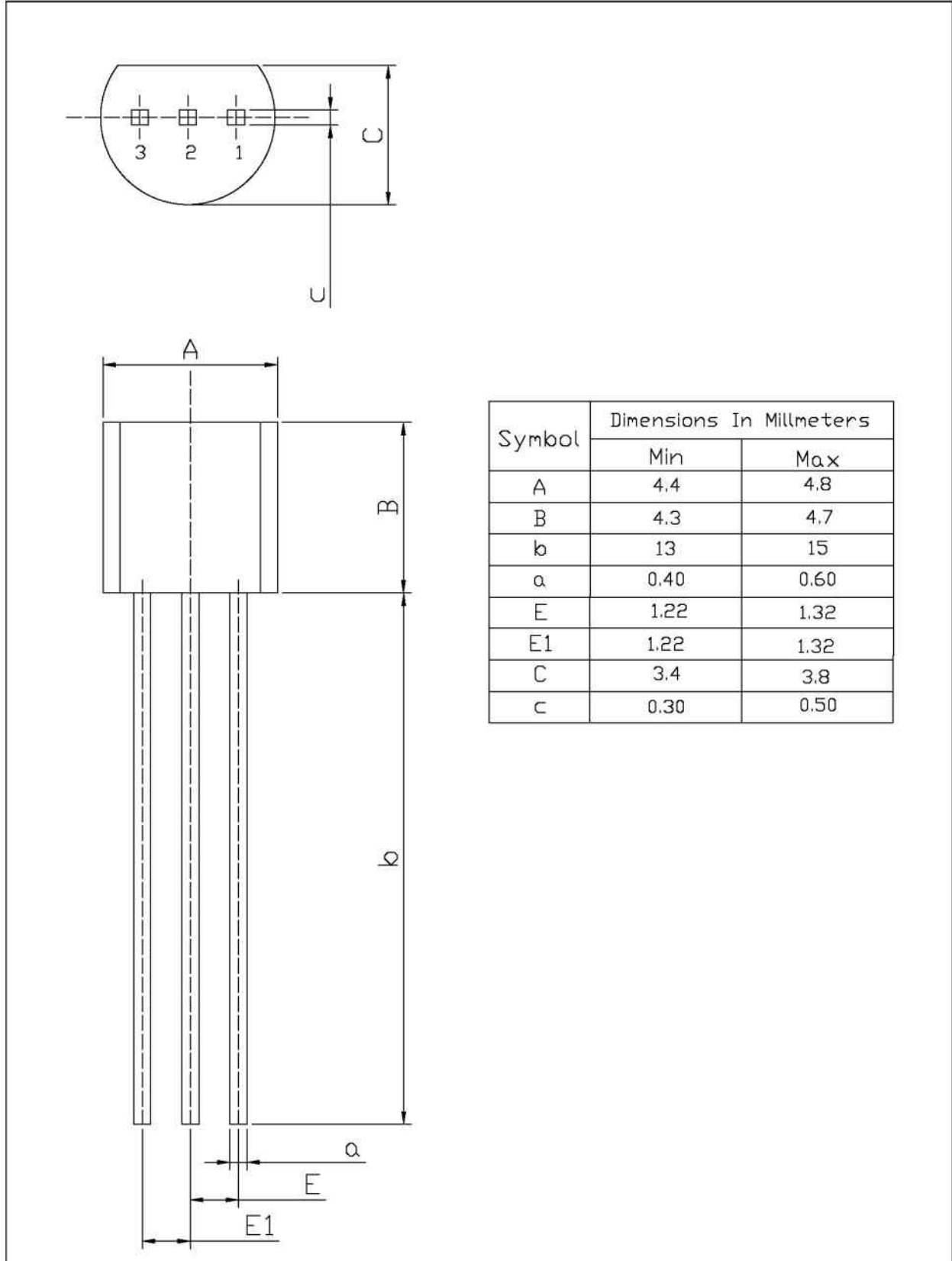
**电参数曲线图 / Electrical Characteristic Curve**



外形尺寸图 / Package Dimensions

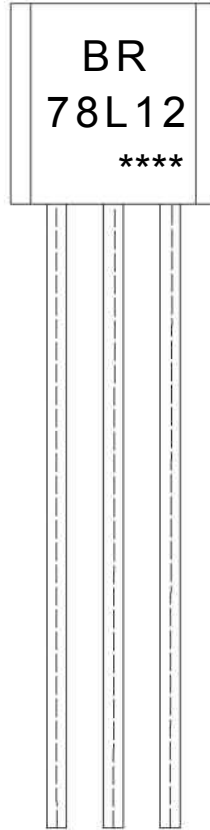
TO-92

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

78L12： 为产品型号

\*\*\*\*： 为生产批号代码，随生产批号变化

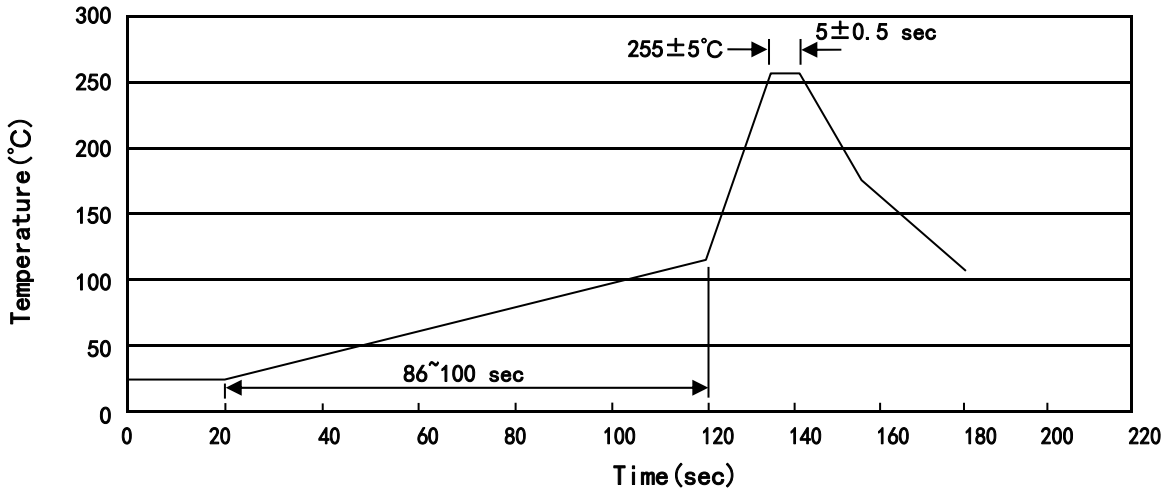
Note:

BR: Company Code

78L12: 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
	1,000	10	10,000	10	100,000	135×190	237×172×102	560×245×375

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	小箱 480×346×235, 大箱 547×407×268

使用说明 / Notices