

# 7815F

Rev.H Jun.-2024

## 描述 / Descriptions

TO-220F 塑封封装电压调整器。Voltage Regulator in a TO-220F Plastic Package.

## 特征 / Features

三端稳压调整器，输出电流高达 1.5A,内设过热保护和短路限制。

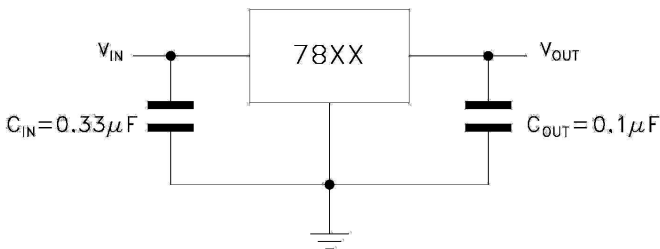
3-Terminal regulators ,output current up to 1.5A, internal thermal overload protection and short-circuit limiting.

## 用途 / Applications

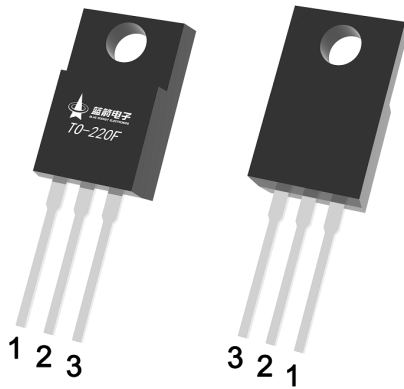
电压调整器。

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.

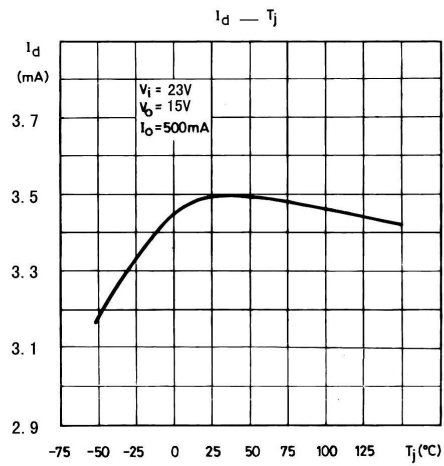
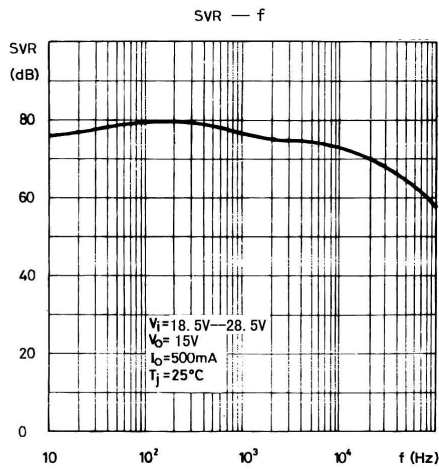
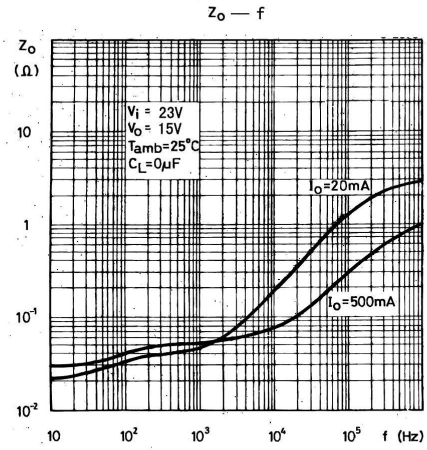
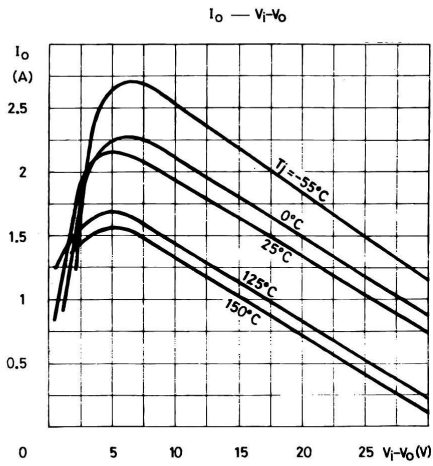
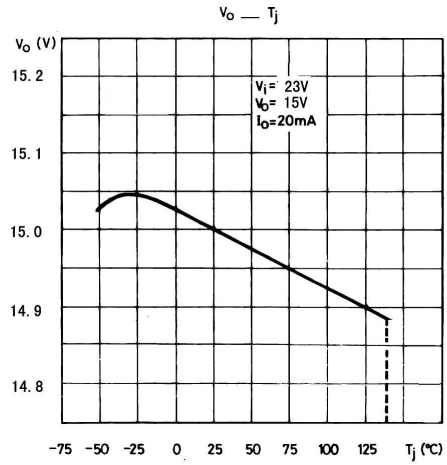
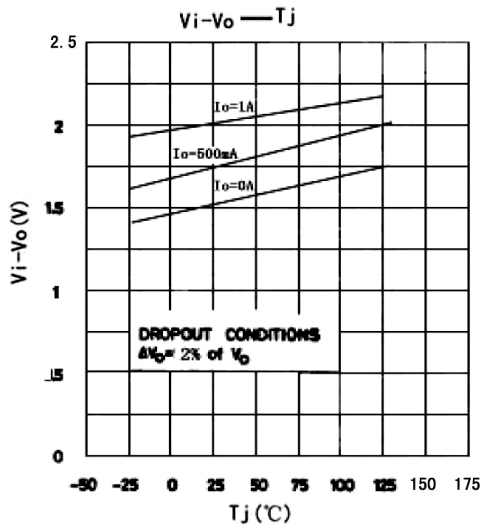
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Input voltage	V <sub>I</sub>	35	V
Thermal Resistance Junction-ambient	R <sub>θJA</sub>	60	°C/W
Thermal Resistance Junction-case	R <sub>θJC</sub>	5.0	°C/W
Operating Temperature Range	T <sub>OPR</sub>	-40~125	°C
Storage temperature range	T <sub>stg</sub>	-65~150	°C

**电性能参数 / Electrical Characteristics(Ta=25°C ,Vi=23V,Io=500mA , 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>	T <sub>j</sub> =25°C	14.4	15	15.6	V
		V <sub>i</sub> =17.5V-30V I <sub>o</sub> =5.0mA-1.0A PD≤15W	14.25	15	15.75	V
Load Regulation	ΔV <sub>O</sub>	T <sub>j</sub> =25 I <sub>o</sub> =5.0mA-1.5A			300	mV
		T <sub>j</sub> =25°C I <sub>o</sub> =250mA-750mA			150	mV
Line regulation	ΔV <sub>O</sub>	T <sub>j</sub> =25°C V <sub>i</sub> =17.5V-30V			300	mV
		T <sub>j</sub> =25°C V <sub>i</sub> =20V-26V			150	mV
Quiescent Current	I <sub>q</sub>	T <sub>j</sub> =25°C			8.0	mA
Quiescent Current Change	ΔI <sub>q</sub>	V <sub>i</sub> =17.5V-30V			1.0	mA
		I <sub>o</sub> =5.0mA-1.0A			0.5	mA
Output Voltage Drift	ΔV <sub>O</sub> /ΔT	I <sub>o</sub> =5.0mA		-1.0		mV/°C
Output Noise Voltage	e <sub>N</sub>	B=10Hz-100KHz T <sub>j</sub> =25°C		90		μV/V <sub>O</sub>
Supply Voltage Rejection	SVR	V <sub>i</sub> =18.5V-28.5V f=120Hz	54			dB
Dropout Voltage	V <sub>d</sub>	I <sub>o</sub> =1A T <sub>j</sub> =25°C		2.0		V
Output Resistance	R <sub>o</sub>	f=1.0KHz		19		mΩ
Short Circuit Current	I <sub>sc</sub>	V <sub>i</sub> =35V T <sub>j</sub> =25°C		0.23		A
Short Circuit Peak Current	I <sub>scp</sub>	T <sub>j</sub> =25°C		2.2		A

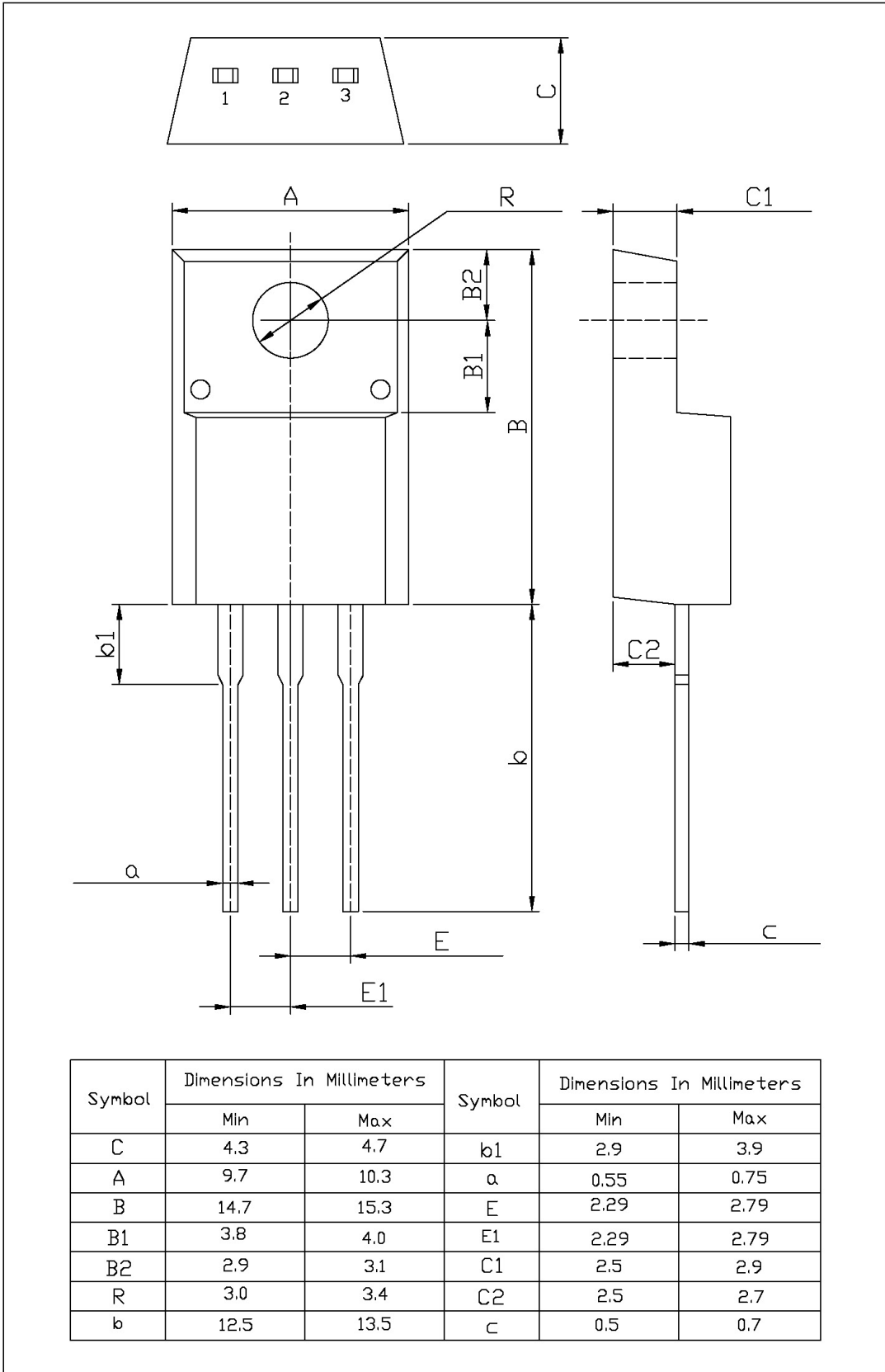
电参数曲线图 / Electrical Characteristic Curve



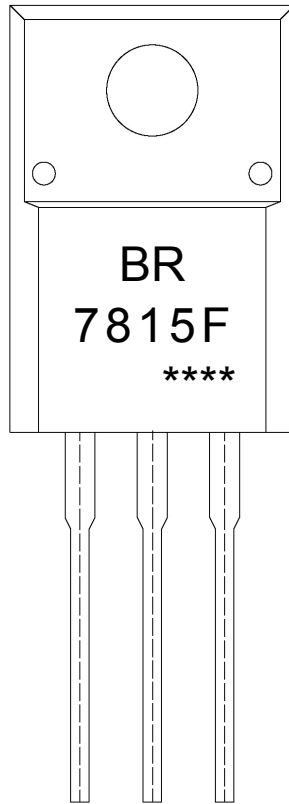
外形尺寸图 / Package Dimensions

TO-220F

单位: mm



印章说明 / Marking Instructions



说明：

BR： 为公司代码

7815F： 为产品型号

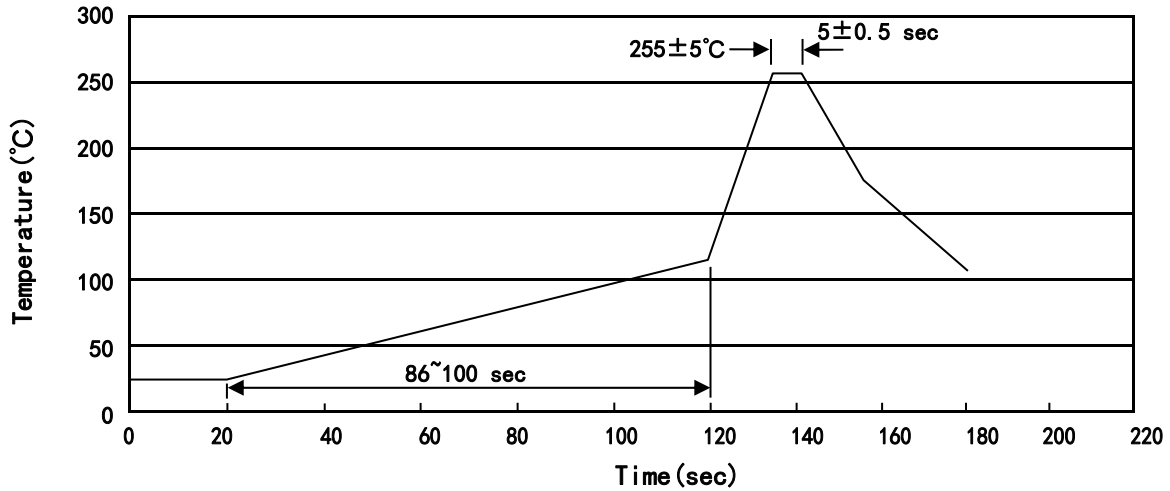
\*\*\*\*： 为生产批号代码，随生产批号变化

Note:

BR: Company Code

7815F: 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: 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**