TFV

热保护型压敏电阻
Thermal Fuse Varistor

- 过温保护，高可靠性
- 标称放电电流 (I_n): 1.5 / 2.5 / 5 kA
- 遥信和失效指示（可选）
- 密封材料阻燃等级 V0 (UL 94)
- 通过UL / TUV / CQC认证

- Over-temperature Protection, High Reliability
- Nominal Discharge Current (I_n): 1.5 / 2.5 / 5 kA
- Remote Signal Contact for Failure Indication (Optional)
- Epoxy Sealing Material, Flame-retardant to V0 (UL 94)
- Comply with UL/TUV/CQC

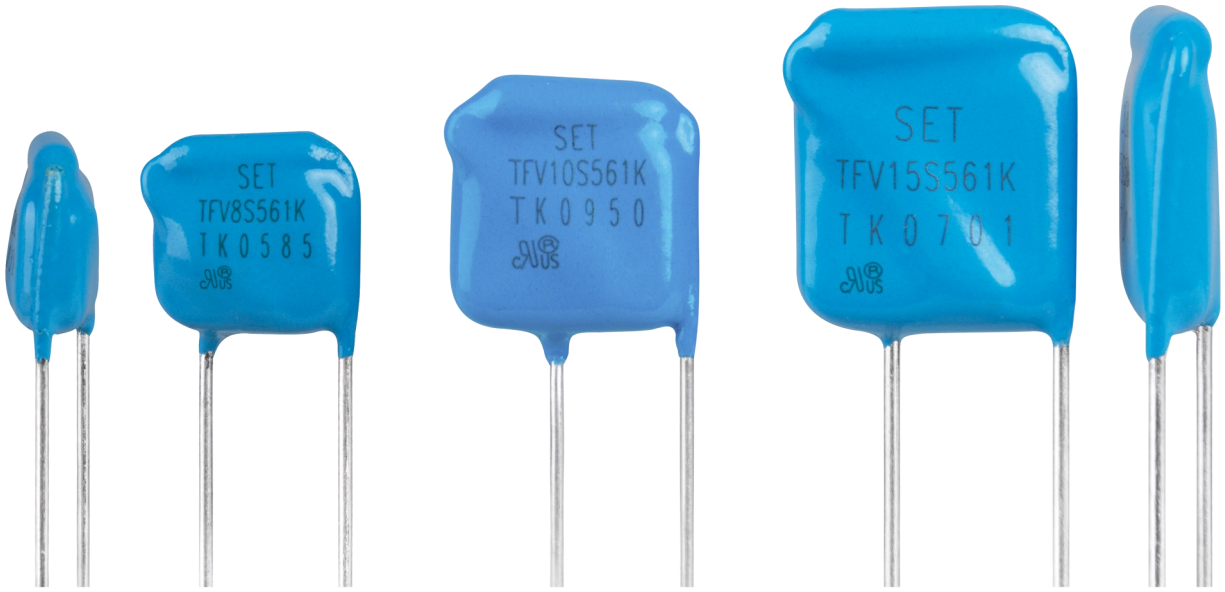
SET safe | SET fuse

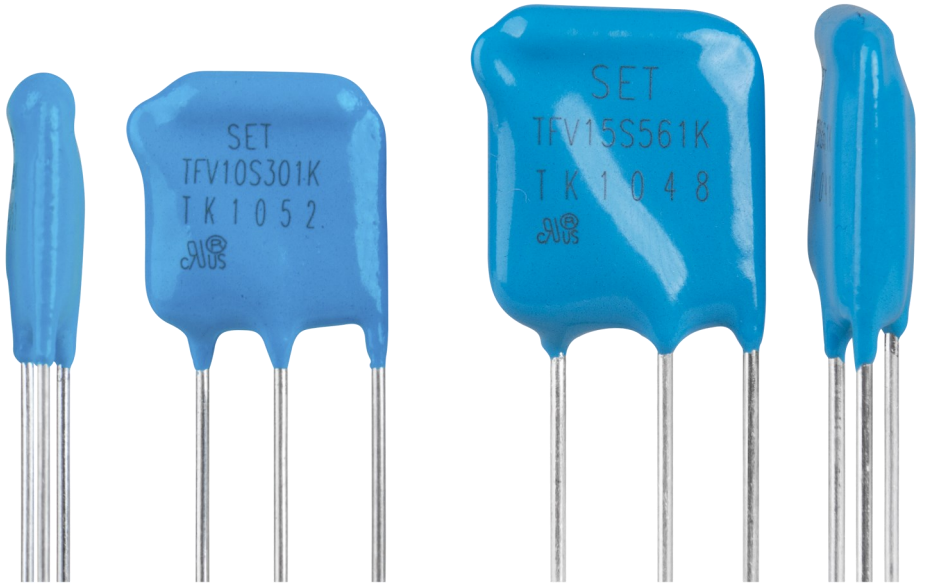
赛尔特

制造电路控制及安全保护元器件 提供电路安全解决方案

Providing a Total Solution for High Standard Safety Circuit Protection

热保护型压敏电阻
Thermal Fuse Varistor (TFV)





TFV

特点 Feature

- 专利产品 Patented Product
- 具有热保护功能的压敏电阻 Thermal Protection Varistor
- 热保护元件内置，更省空间 Thermal Protection Elements Are Built In To Save Space
- 三引线版本可用于指示用途
  Three-lead Version Available For Indication Purpose
- 低漏电流 Low Leakage
- 工作温度 Operating Temp. Range：（-40 ~ 105）° C
- 满足RoHS & REACH要求 RoHS & REACH Compliant

应用 Applications

- 电源 Power Supplies
- 家用电器 Home Electrical Appliances
- 工业设备 Industrial Devices
- 防雷插座 Surge Protectors
- 通讯设备 Telecom Devices
- 交流保护模块 AC Panel Protection Modules
- 交流功率表 AC Power Meters
- 接地故障电流互感器 GFCI (Ground Fault Current Interrupter)
- 不间断电源 UPS (Uninterruptable Power Supply)
- 逆变器 Inverters

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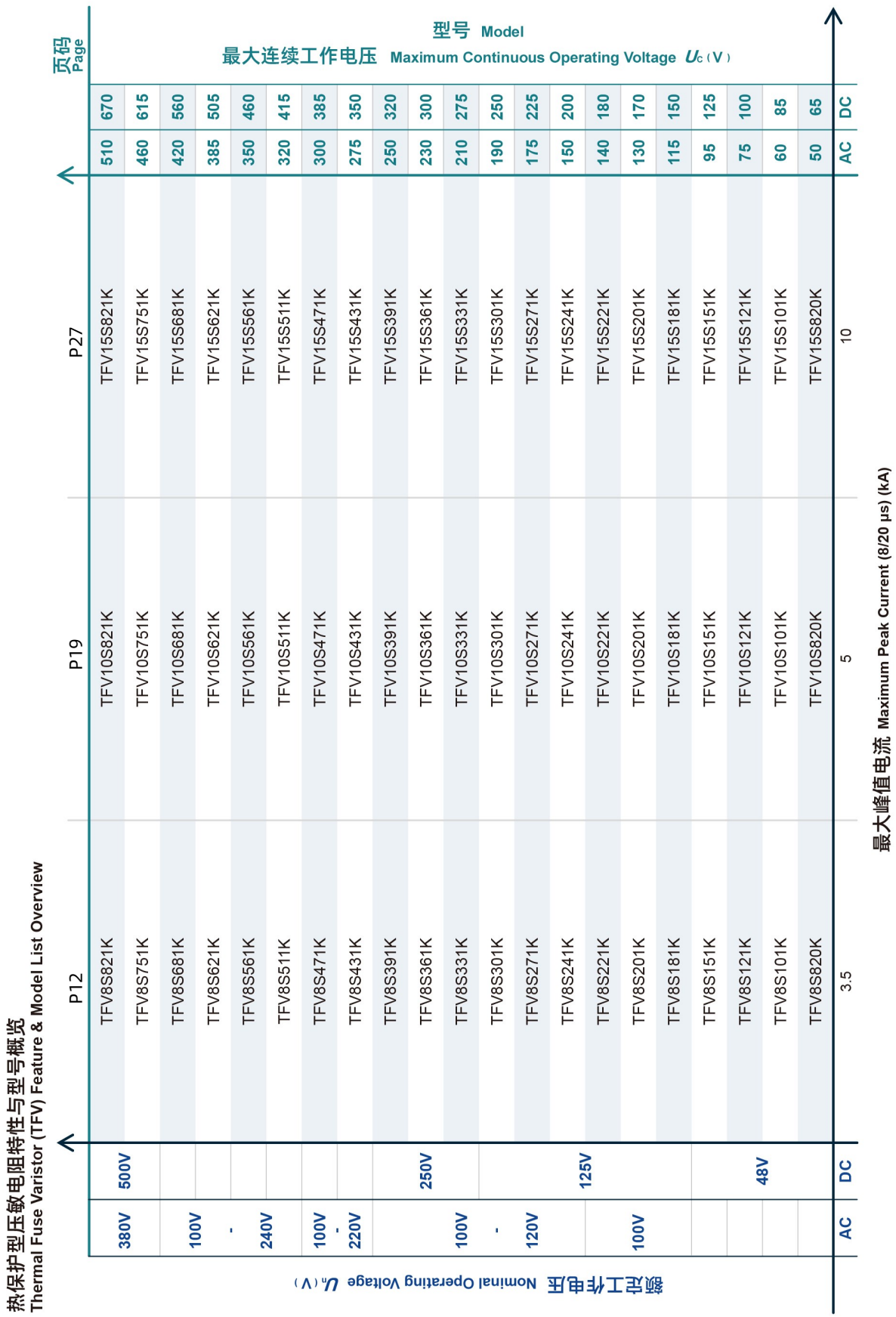
热保护型压敏电阻
Thermal Fuse Varistor (TFV)

热保护型压敏电阻特性与型号概览
Thermal Fuse Varistor (TFV) Feature & Model List Overview



TFV

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热保护型压敏电阻
Thermal Fuse Varistor (TFV)

安规信息 Agency Information

认证信息 Agency Infor-mation	UL				CUL		TUV				CQC			
类别 Category	VZCA2				VZCA8		/				/			
系列 Series	标称压敏电压 Nominal Varistor Voltage	上限类别温度 UCT	标准 Standards	认证号 File NO.	标准 Standards	认证号 File NO.	标称压敏电压 Nominal Varistor Voltage	上限类别温度 UCT	标准 Standards	认证号 File NO.	标称压敏电压 Nominal Varistor Voltage	上限类别温度 UCT	标准 Standards	认证号 File NO.
TFV8S	820 - 821	105 °C	UL 1449 4th Edition	E322662	CSA C22.2 No.269.5-17	E322662	820 - 821	105 °C	EN iEC 61051-1:2018 IEC 61051-2:1991+A1 IEC 61051-2-2:1991 Annex G.8.1 of IEC 62368-1:2018	J 50554061	820 - 821	105 °C	GB/T 10193-1997 GB/T 10194-1997 GB 4943.1-2011 GB 8898-2011	On-going
TFV10S	820 - 821	105 °C					820 - 821	105 °C	EN iEC 61051-1:2018 IEC 61051-2:1991+A1 IEC 61051-2-2:1991 Annex G.8.1 of IEC 62368-1:2018	J 50554091	820 - 821	105 °C	GB/T 10193-1997 GB/T 10194-1997 GB 4943.1-2011 GB 8898-2011	On-going
TFV15S	820 - 821	105 °C					820 - 821	105 °C	EN iEC 61051-1:2018 IEC 61051-2:1991+A1 IEC 61051-2-2:1991 Annex G.8.1 of IEC 62368-1:2018	J 50554141	820 - 821	105 °C	GB/T 10193-1997 GB/T 10194-1997 GB 4943.1-2011 GB 8898-2011	On-going

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热保护型压敏电阻
Thermal Fuse Varistor (TFV)

术语 Glossary

项目 Item	描述 Description
V_N	**标准压敏电压 Nominal Varistor Voltage** 在规定持续时间的脉冲电流下测得MOV两端的电压。 Voltage, at specified D.C. current used as a reference point in the component characteristics.
I_L	**漏电流 Leakage Current** 在25℃或规定的其它温度下，施加最大直流电压时，通过压敏电阻器中的电流。 Current passing through the varistor at the max. D.C. voltage, and at a temp. of 25 °C, or any other specified temp.
UCT	**上限类别温度 Upper Category Temp.** 压敏电阻器设计所确定的能够连续工作的最高环境温度。 Max. ambient temp. for which a varistor has been designed to operate continuously.
LCT	**下限类别温度 Lower Category Temp.** 压敏电阻器设计所确定的能够连续工作的最低环境温度。 Minimum ambient temp. at which a varistor has been designed to operate continuously.
Max. Peak Current	**最大峰值电流 Max. Peak Current** 在环境温度25℃时，对于规定的脉冲次数而言，压敏电阻器中允许通过的每个脉冲的最大电流值。 Max. current per pulse, which may be passed by a varistor at an ambient temp. of 25 °C, for a given number of pulses.
V_C	**箝制电压 Clamping Voltage** 规定脉冲峰值电流及规定波形下测得MOV两端的电压峰值。 Peak voltage developed across the varistor terminations under standard atmospheric conditions, when passing an 8/20 μs class current pulse.
Voltage Proof	**耐电压 Voltage Proof** 连续可施加在压敏电阻器引出端和导电性安装之间的最大峰值电压。 Max. peak voltage, which may be applied under continuous operating conditions between the varistor terminations and any conducting mounting surface (Applicable only to insulated varistors).
C_V	**电容量 Capacitance** MOV两端之间的电容量，其测量应在规定的正弦频率和电压以及规定的温度下进行。除非另有规定，推荐采用25℃下,1 $V_{r.m.s}$,1 kHz的信号。 Capacitance across the MOV measured at a specified frequency and voltage.
V_{ac}	**最大连续交流电压 Max. Continuous a.c. Voltage** 在环境温度25℃时，可以施加在元件上连续工作的、波形基本是正弦波（总谐波畸变小于5%）的最大交流电压有效值。当温度高于25℃时，详细规范应给出降额曲线。 Max. a.c. r.m.s. voltage of a substantially sinusoidal waveform (less than 5% total harmonic distortion) which can be applied to the component under continuous operating conditions at 25 °C.
V_{dc}	**最大连续直流电压 Max. Continuous d.c. Voltage** 在环境温度25℃时，可以施加在元件上连续工作的最大直流电压（波纹小于5%）。当温度高于25℃时，详细规范应给出降额曲线。 Max. d.c. voltage (with less than 5% ripple) which can be applied to the component under continuous operating conditions at an ambient temp. of 25 °C.
I_n	**标称放电电流 Nominal Discharge Current** 流过SPD具有8/20 μs波形的电流峰值，用于II级试验的SPD分级以及I级、II级试验的SPD的预处理试验。 Crest value of the current through the SPD having a current waveshape of 8/20 μs.
I_{max}	**最大放电电流 Max. Discharge Current** 流过SPD，具有8/20 μs波形电流的峰值，其值按II级动作负载的程序确定。I_{max}大于I_n。 Crest value of a current through the SPD having an 8/20 μs waveshape and magnitude according to the manufacturers specification. I_{max} is equal to or greater than I_n.

TFV

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Thermal Fuse Varistor (TFV)

T_f	**额定动作温度 Rated function Temp.** 通不超过10 mA的探测电流时，测得的使温度保险丝导电状态改变的温度。 The Temp. of the TCO which causes it to change its state of conductivity with a detection current up to 10 mA as the only load.
T_h	**保持温度 Holding Temp.** 持续负载额定电流168小时不断开，产品本体表面温度最高。 The Max. temp. of product body surface at which a TCO will not change its state of conductivity when conducting rated current for 168 h.
U_r	**额定电压 Rated Voltage** 温度保险丝分类用，允许用于电路并安全断开的最高电压。 The voltage used to classify a TCO, which is the maximum voltage that TCO allows to carry and is able to cut off the circuit safely.

TFV

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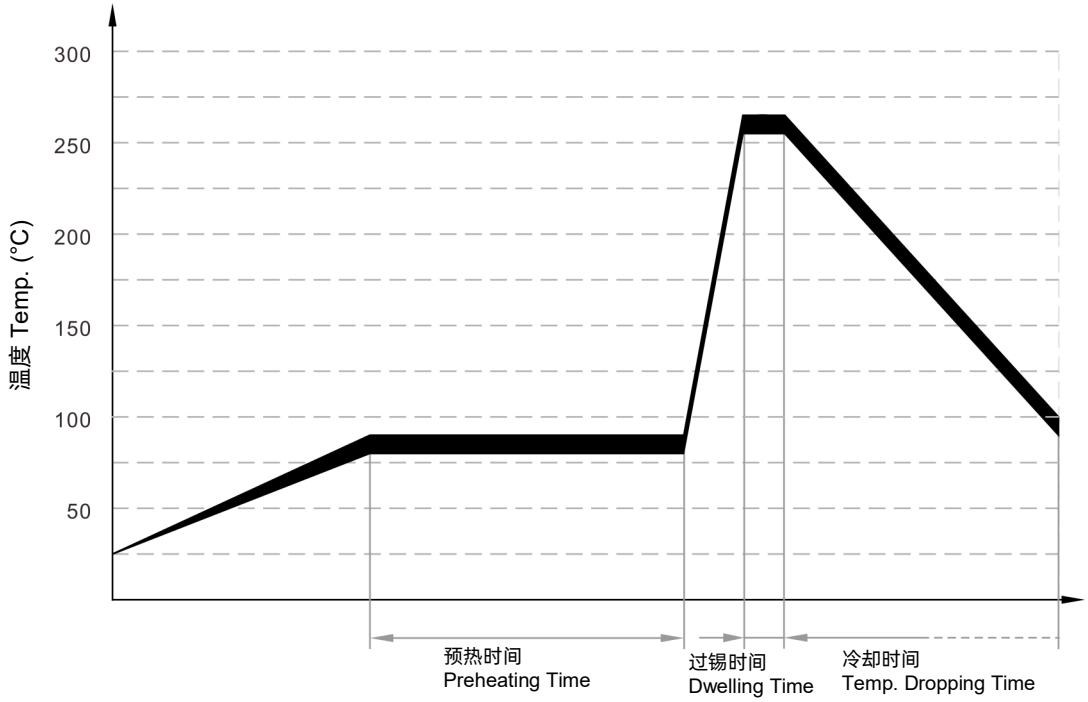
焊接参数 Soldering Parameters

波峰焊参数 Wave Soldering Parameters

本波峰焊参数仅供参考，实际使用时应做相关的试验进行验证 。
The wave soldering parameters are for reference only. When MOV is for practice use, some related validation is recommended.



波峰焊曲线 Wave Soldering Curve

项目 Item	温度 Temp. (°C)	时间 Time (s)
预热 Preheating	80 ~ 90	60 ~ 150
过锡 Dwelling	260 ± 5	2 ~ 4
冷却时间 Cooling Time	≤ 80	10

手工焊参数 Recommended Hand-Soldering Parameters

项目Item	条件Condition
烙铁头部温度 Temp. of Solder Head	350 °C (max.)
焊接时间 Soldering Time	2 seconds (max.)
引脚外露脚长度 Distance between Soldering Point and Coating	2 mm (min.)

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热保护型压敏电阻
Thermal Fuse Varistor (TFV)

注意
ATTENTION

使用 Usage

1. 请不要强烈的振动、冲击或施加压力，以免压敏电阻表面树脂或元件产生裂痕。
   Please do not apply severe vibration, shock or pressure to MOV, to avoid surface resin or ele ment cracking.
2. 对引线进行弯曲加工或切断加工时，请固定元件端引线。卤折弯距离引线绝缘覆盖部分至少2 mm。
   Please fix lead wires when bending or cutting. The distance between the bending point and the sealing of MOV shall be greater than 2 mm.
3. 为了降低产品的表面温升，建议波峰焊前在产品上增加隔热罩。
   In order to reduce the surface temperature rise, adding heat insulated shroud is recommended before wave .
4. 以上曲线仅供参考，使用前请确认，以免损伤温度保险丝。
   This curve is for reference only. Please confirm before production to avoid damaging the integrated Thermal Fuse .

更换 Replacement

如发现压敏电阻外观有损伤，请更换。
If varistor is visually damaged, please replace it.

贮存 Storage

1. 存储温度： Storage Temp. Range: (-40 to ~ 125) °C
2. 相对湿度： Relative Humidity: ≤75% RH

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热保护型压敏电阻
Thermal Fuse Varistor (TFV)

3. 热保护型压敏电阻的贮存应避免高温、高湿、日光直射和腐蚀性气体的场合，避免影响引脚可焊性，产品购入后请于1年内使用完。
   Please store TFMOV without high temp, high humidity or corrosive gas. to avoid reducing the solderability of the pins,please use them up within 1year after receiving the goods.

不适宜环境条件 Environmental Conditions

1. 压敏电阻不应直接暴露在露天工作。
   Varistor should not be exposed to the open air.
2. 压敏电阻应避免在雨水，水蒸汽等高温高湿的条件下工作。
   Varistor should avoid rain, water vapor or other condition of high temp. and high humidity.
3. 压敏电阻应避免在沙尘、盐雾、有害气体的条件下工作。
   Varistor should avoid sand dust, salt spray, or other harmful gases.

压敏电阻的固有电容 Max. Typical Capacitance of Varistor

压敏电阻的固有电容最大参考值已在规格表中列出，供设计师在高频电路中选用时参考。
The typical capacitance of varistor is listed in the specifications. Designers may refer to it when designing MOV in high frequency circuit.

安装 Installation

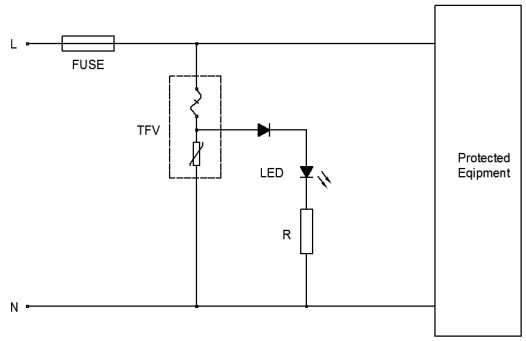
机械应力 Mechanical Stress

应用案例 Application Examples

以下应用案件展示了TFV 指示引线如何显示热保护元件已断开。这意味着电路不再受MOV保护。
The application examples below show how the indicator lead on the TFV can be used to indicate that the thermal element has been opened. This signifies that the circuit is no longer protected from transients by the MOV.

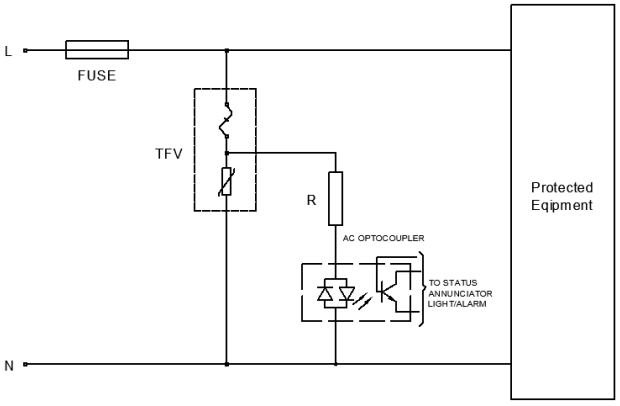
应用案例1 Application Example 1

在这种情况下，LED通常开启，并且在热元件打开时关闭。
In this case, the LED is normally on, and is off when the thermal element opens.



应用案例2 Application Example 2

该电路利用光耦合器在TFV热保护压敏电阻和指示或报警电路之间提供电流隔离。
This circuit utilizes an optocoupler to provide galvanic isolations between the TFV varistor and the indicating or alarm circuitry.



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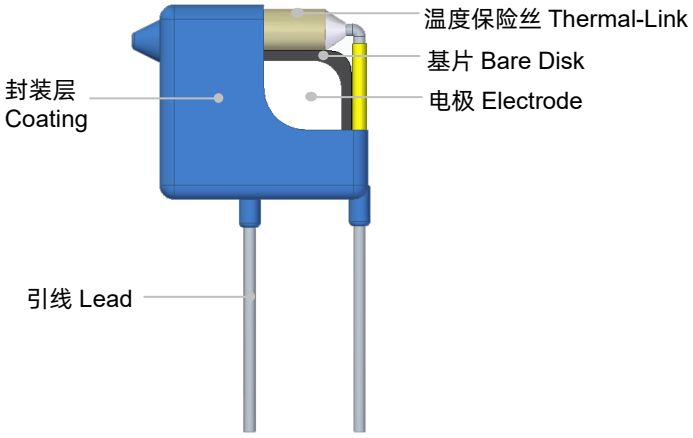
热保护型压敏电阻
Thermal Fuse Varistor (TFV)

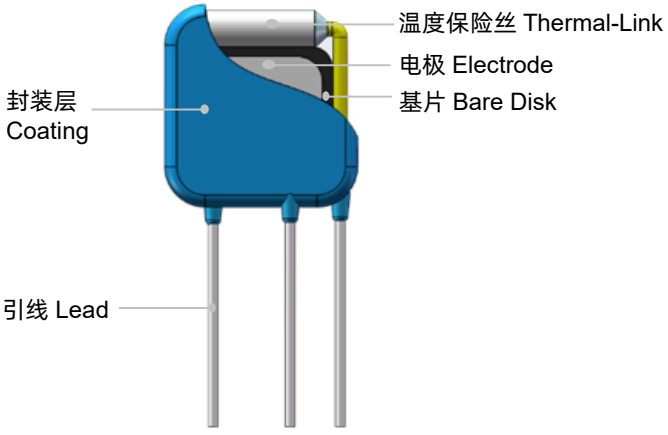
简介 Description

TFV 系列由压敏电阻和热保护元件组成。内置的热保护元件可快速响应压敏电阻的温度变化提供即时的热保护，集成式结构较传统分离结构具有更低的电感和更好的抑制浪涌过电压能力。

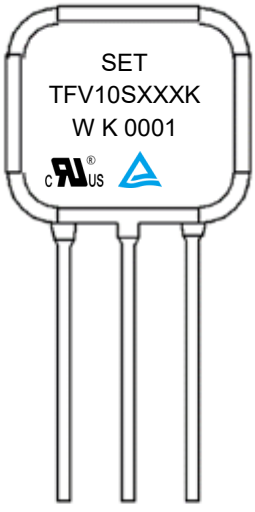
TFV series consists of Metal Oxide Varistor&Thermal Protection Element. The built-in thermal protection element can quickly respond to the Overtemperature of the varistor to provide instant protection.The integrated struduce of TFV has lower inductance and better ability to suppress surge and overvoltage .

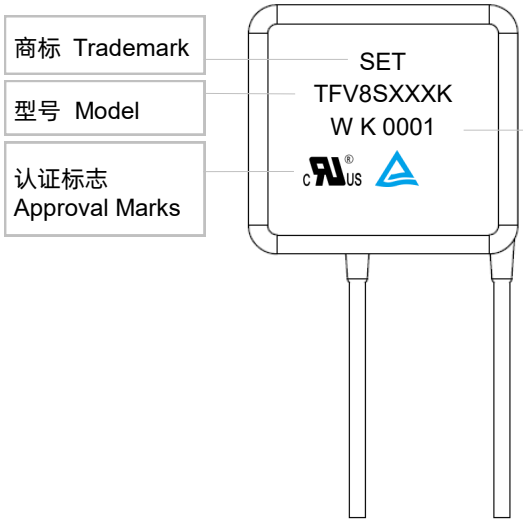
产品结构 Product Structure





产品标识 Marking





年份代码 Year Code	2000—A …… 2022—W
浪涌等级	K:标准型 Standard Type
流水号	(E.G.: 0001)

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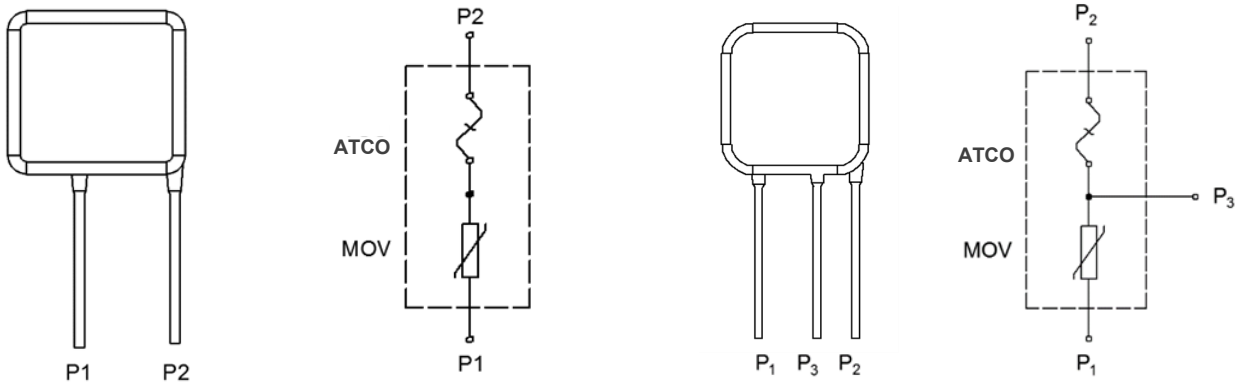
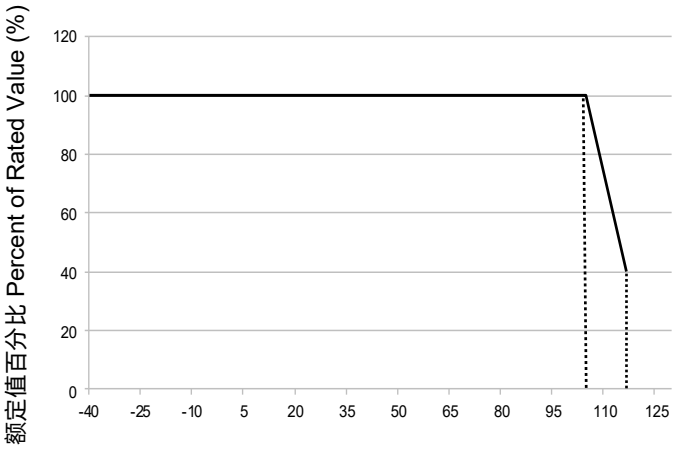
电气原理图 Schematics



温度降额曲线 Temp. Derating Curve



常温系列温度降额曲线
For Normal Temp. Series

备注：应用环境温度超过105 °C 时，峰值电流和能量额定值应按照上述曲线相应的降低。
Note: When ambient temp. exceeds 105 °C, the peak surge current and energy rating should be reduced as shown in left curve.

技术参数 General Technical Data

项目 Item	值 Value	单位 Unit
工作温度 Operating Temp.	-40 ~ +105	°C
存储温度 Storage Temp.	-40 ~ +125	°C
耐电压 Voltage Proof	≥2500	V_{ac}
绝缘电阻 Insulation Resistance	≥100	MΩ

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型号说明 Part Numbering System

TFV 8S 471 - K 3 P K A BUL - 001

流水号 Other Options

包装 & 引脚长度 Packaging & Lead Length

散装：散装+标准长度（L28）
BUL: Bulk + Standard Lead Length (Normal L28)

引脚类型 Lead Types

A: 直线型引线 Straight Lead

浪涌等级 Surge Level

K: 标准型 Standard Type

工作温度 Operating Temp.

P: 环氧树脂包封 Epoxy Coating 105 °C

引线 Lead

2: 2 PIN
3: 3 PIN

电压公差 Voltage Tolerance

K : ±10%
J : ±5%
S : 特殊定制 Special Tolerance

标称压敏电压 Nominal Varistor Voltage

220: 22×10^0 = 22V
471: 47×10^1 = 470 V
122: 12×10^2 = 1200 V

形状 Disk Shape

S: 正方形 Square

基片尺寸 Bare Disk Dimension

8: 8×10 mm

产品类别 Product Category

压敏电阻
Setfuse Varistor

*更多细节请参照包装信息
*For More Details Refer To Packaging Information.

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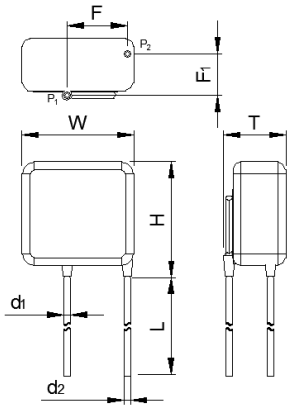
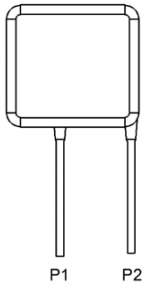
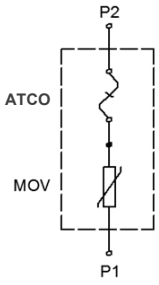
热保护型压敏电阻
Thermal Fuse Varistor (TFV)

TFV8S 系列 Series

尺寸 Dimensions (mm)







型号 Model	L (Min.)	W (Max.)	H (Max.)	T (Max.)	d_1	d_2	F	F_1
TFV8S820K	15	15.5	16.5	4.4	0.80±0.05	0.80±0.05	7.5±1.0	0.2 ~ 2.2
TFV8S101K	15	15.5	16.5	4.6	0.80±0.05	0.80±0.05	7.5±1.0	0.3 ~ 2.3
TFV8S121K	15	15.5	16.5	4.8	0.80±0.05	0.80±0.05	7.5±1.0	0.4 ~ 2.4
TFV8S151K	15	15.5	16.5	5.1	0.80±0.05	0.80±0.05	7.5±1.0	0.6 ~ 2.6
TFV8S181K	15	15.5	16.5	4.5	0.80±0.05	0.80±0.05	7.5±1.0	0.3 ~ 2.3
TFV8S201K	15	15.5	16.5	4.6	0.80±0.05	0.80±0.05	7.5±1.0	0.4 ~ 2.4
TFV8S221K	15	15.5	16.5	4.7	0.80±0.05	0.80±0.05	7.5±1.0	0.4 ~ 2.4
TFV8S241K	15	15.5	16.5	4.8	0.80±0.05	0.80±0.05	7.5±1.0	0.5 ~ 2.5
TFV8S271K	15	15.5	16.5	5.0	0.80±0.05	0.80±0.05	7.5±1.0	0.6 ~ 2.6
TFV8S301K	15	15.5	16.5	5.2	0.80±0.05	0.80±0.05	7.5±1.0	0.6 ~ 2.6
TFV8S331K	15	15.5	16.5	5.4	0.80±0.05	0.80±0.05	7.5±1.0	0.7 ~ 2.7
TFV8S361K	15	15.5	16.5	5.6	0.80±0.05	0.80±0.05	7.5±1.0	0.8 ~ 2.8
TFV8S391K	15	15.5	16.5	5.7	0.80±0.05	0.80±0.05	7.5±1.0	0.9 ~ 2.9
TFV8S431K	15	15.5	16.5	6.0	0.80±0.05	0.80±0.05	7.5±1.0	1.0 ~ 3.0
TFV8S471K	15	15.5	16.5	6.2	0.80±0.05	0.80±0.05	7.5±1.0	1.1 ~ 3.1
TFV8S511K	15	15.5	16.5	6.4	0.80±0.05	0.80±0.05	7.5±1.0	1.2 ~ 3.2
TFV8S561K	15	15.5	16.5	6.7	0.80±0.05	0.80±0.05	7.5±1.0	1.4 ~ 3.4
TFV8S621K	15	15.5	16.5	7.1	0.80±0.05	0.80±0.05	7.5±1.0	1.5 ~ 3.5
TFV8S681K	15	15.5	16.5	7.4	0.80±0.05	0.80±0.05	7.5±1.0	1.7 ~ 3.7
TFV8S751K	15	15.5	16.5	7.9	0.80±0.05	0.80±0.05	7.5±1.0	1.6 ~ 3.9
TFV8S821K	15	15.5	16.5	8.3	0.80±0.05	0.80±0.05	7.5±1.0	2.1 ~ 4.1

备注：以上数据仅供参考
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热保护型压敏电阻
Thermal Fuse Varistor (TFV)

TFV8S 系列 Series

技术参数 Specification

型号 Model	最大连续工作电压 Max. Continuous Operating Voltage		压敏电压 Varistor Voltage @1 mA DC		箝制电压 Clamping Voltage (Max.)		最大峰值电流 Max. Discharge Current (8/20 μs)		最大能量 Max. Energy (10/1000 μs)	静态电容 Typical Capacitance (For reference only) @1 kHz	安规认证 Agency Approvals			
	Vac	Vdc	Min.	Max.	V_C	I_P	I_n	I_{max}	(J)	(pF)	UL	cUL	TUV	CQC
	(V)	(V)	(V)	(V)	(V)	(A)	(kA)	(kA)						
TFV8S820K	50	65	74	90	135	25	1.5	3.5	14	1200	●	●	●	○
TFV8S101K	60	85	90	110	165	25	1.5	3.5	17	1000	●	●	●	○
TFV8S121K	75	100	108	132	200	25	1.5	3.5	20	830	●	●	●	○
TFV8S151K	95	125	135	165	250	25	1.5	3.5	25	670	●	●	●	○
TFV8S181K	115	150	162	198	300	25	1.5	3.5	30	560	●	●	●	○
TFV8S201K	130	170	180	220	340	25	1.5	3.5	35	500	●	●	●	○
TFV8S221K	140	180	198	242	360	25	1.5	3.5	39	450	●	●	●	○
TFV8S241K	150	200	216	264	395	25	1.5	3.5	42	420	●	●	●	○
TFV8S271K	175	225	243	297	455	25	1.5	3.5	49	370	●	●	●	○
TFV8S301K	190	250	270	330	500	25	1.5	3.5	54	330	●	●	●	○
TFV8S331K	210	275	297	363	550	25	1.5	3.5	58	300	●	●	●	○
TFV8S361K	230	300	324	396	595	25	1.5	3.5	65	280	●	●	●	○
TFV8S391K	250	320	351	429	650	25	1.5	3.5	70	260	●	●	●	○
TFV8S431K	275	350	387	473	710	25	1.5	3.5	80	230	●	●	●	○
TFV8S471K	300	385	423	517	775	25	1.5	3.5	85	210	●	●	●	○
TFV8S511K	320	415	459	561	845	25	1.5	3.5	90	200	●	●	●	○
TFV8S561K	350	460	504	616	925	25	1.5	3.5	92	180	●	●	●	○
TFV8S621K	385	505	558	682	1025	25	1.5	3.5	95	160	●	●	●	○
TFV8S681K	420	560	612	748	1120	25	1.5	3.5	98	150	●	●	●	○
TFV8S751K	460	615	675	825	1240	25	1.5	3.5	100	130	●	●	●	○
TFV8S821K	510	670	738	902	1355	25	1.5	3.5	110	120	●	●	●	○

备注 Note: ● 已认证 Approved ○ 无认证 Unauthorized

TFV

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技术参数 Specification

型号 Model	受限电流 Limited Current	额定动作温度 Rated Function Temp.	熔断温度 Fuse Temp.	保持温度 Holding Temp.	额定电压 Rated Voltage	
	(A)	T_f (°C)	(°C)	T_h (°C)	AC (V)	DC (V)
TFV8S820K	5	145	140±2	121	250	50
TFV8S101K	5	145	140±2	121	250	50
TFV8S121K	5	145	140±2	121	250	50
TFV8S151K	5	145	140±2	121	250	50
TFV8S181K	5	145	140±2	121	250	50
TFV8S201K	5	145	140±2	121	250	50
TFV8S221K	5	145	140±2	121	250	50
TFV8S241K	5	145	140±2	121	250	50
TFV8S271K	5	145	140±2	121	250	50
TFV8S301K	5	145	140±2	121	250	50
TFV8S331K	5	145	140±2	121	250	50
TFV8S361K	5	145	140±2	121	250	50
TFV8S391K	5	145	140±2	121	250	50
TFV8S431K	5	145	140±2	121	250	50
TFV8S471K	5	145	140±2	121	250	50
TFV8S511K	5	145	140±2	121	250	50
TFV8S561K	5	145	140±2	121	250	50
TFV8S621K	5	145	140±2	121	250	50
TFV8S681K	5	145	140±2	121	250	50
TFV8S751K	5	145	140±2	121	250	50
TFV8S821K	5	145	140±2	121	250	50

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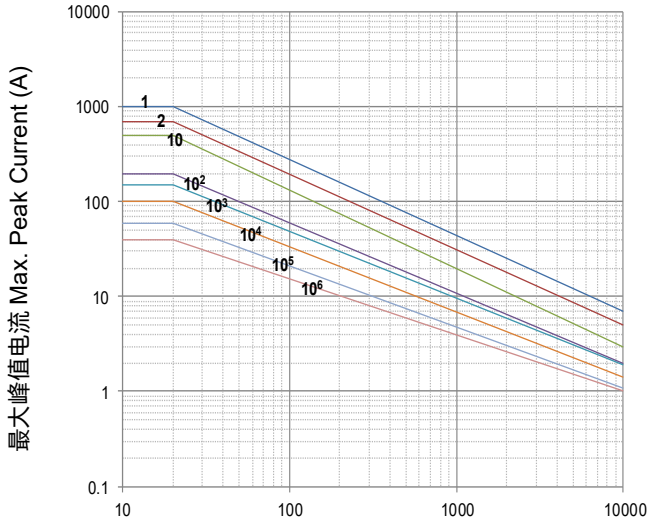
性能曲线（仅供参考）Performance Curve (For reference only)

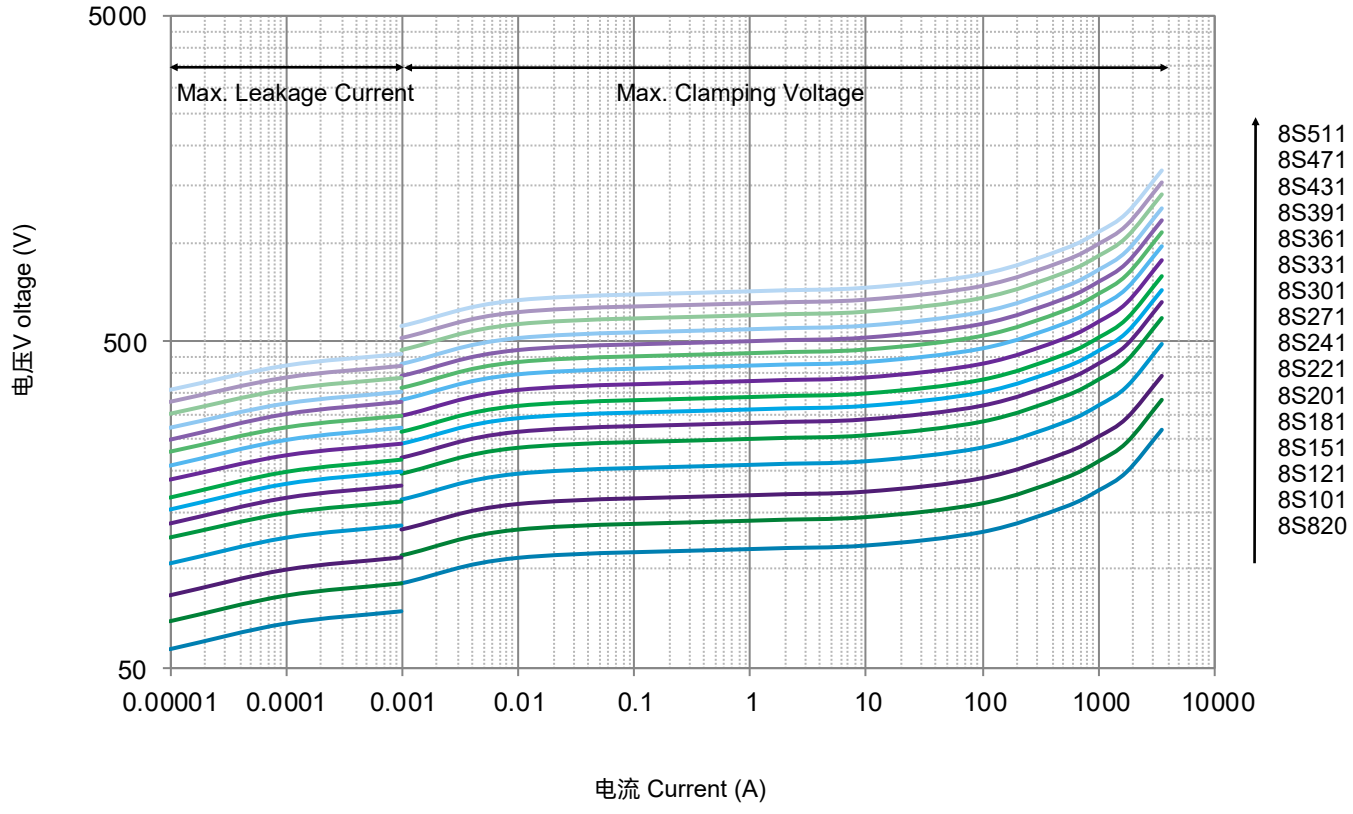
- 最大峰值电流降额曲线 Max. Peak Current Derating Curves



TFV8S820K to TFV8S821K

备注：1,2,10,10^2,10^3,10^4,10^5,10^6 表示重复冲击的次数． Note: 1,2,10,10^2,10^3,10^4,10^5,10^6 Stand for Repetitions.

- 伏安特性曲线 Voltage-Current Characteristic Curves



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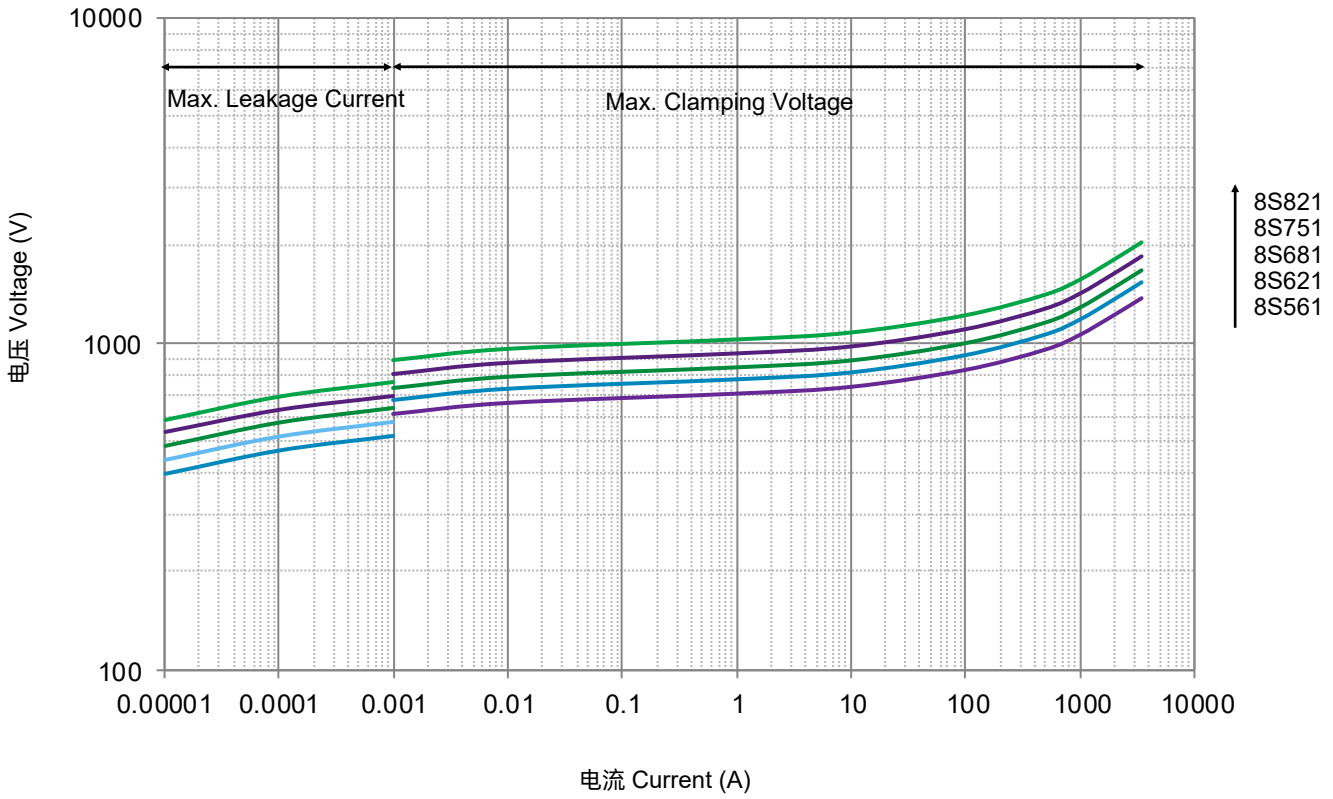
- 伏安特性曲线 Voltage-Current Characteristic Curves



TFV

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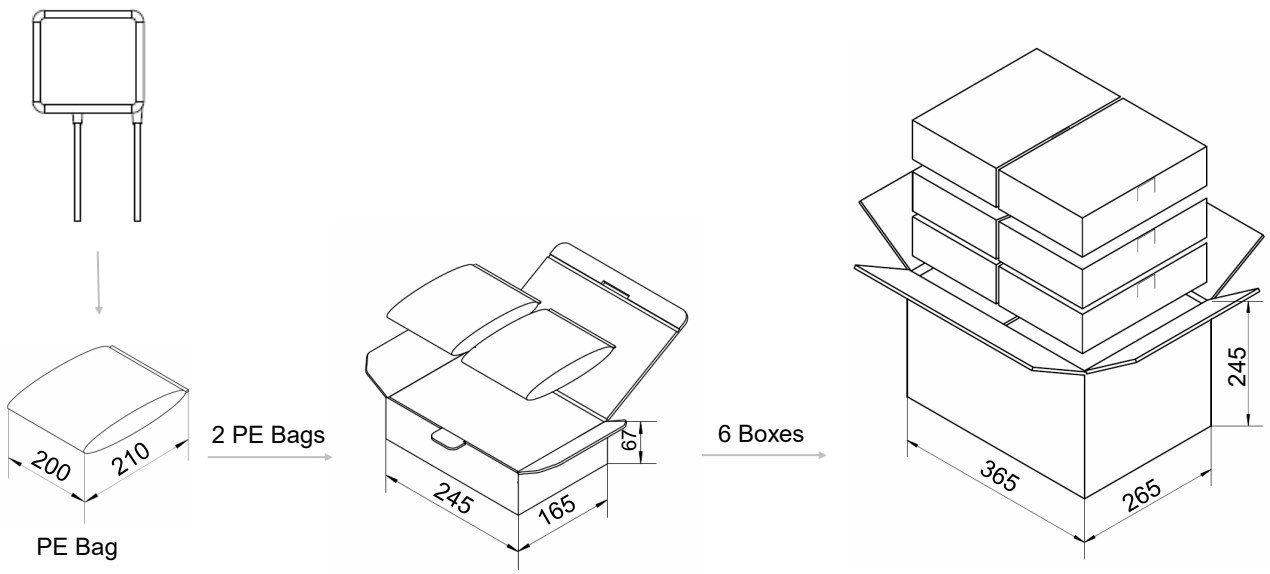
包装 Packaging Information

- 散装包装 Bulk Packaging (Code: BUL)
- 散装包装数量和重量 Bulk Packaging Quantity & Weight.

系列 Series	标称压敏电压 Nominal Varistor Voltage	PE袋 PE Bag	数量/盒 Box	数量/箱 Carton	毛重/箱 (365*265*245) G. W. / Carton
	(V)	(PCS)	(PCS)	(PCS)	(kg)±10%
8S	820 ~ 561	400	800	4800	8 ~ 14
	621 ~ 821	250	500	3000	11 ~ 14

备注：其他引脚长度的包装请咨询赛尔特.
Note: Other lead length packaging information, please contact SETsafe | SETfuse.

单位 Dimensions (mm)



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型号说明 Part Numbering System

TFV 10 S 471 - K 3 P K A BUL - 001

流水号 Other Options

包装 & 引脚长度 Packaging & Lead Length

散装：散装+标准长度（L28）
BUL: Bulk + Standard Lead Length (Normal L28)

引脚类型 Lead Types

A: 直线型引线 Straight Lead

浪涌等级 Surge Level

K: 标准型 Standard Type

工作温度 Operating Temp.

P: 环氧树脂包封 Epoxy Coating 105 °C

引线 Lead

2: 2 PIN
3: 3 PIN

电压公差 Voltage Tolerance

K : ±10%
J : ±5%
S : 特殊定制 Special Tolerance

标称压敏电压 Nominal Varistor Voltage

220: 22×10^{0} = 22V
471: 47×10^{1} = 470 V
122: 12×10^{2} = 1200 V

形状 Disk Shape

S: 正方形 Square

基片尺寸 Bare Disk Dimension

10: 10×12 mm

产品类别 Product Category

压敏电阻
Setfuse Varistor

*更多细节请参照包装信息
*For More Details Refer To Packaging Information.

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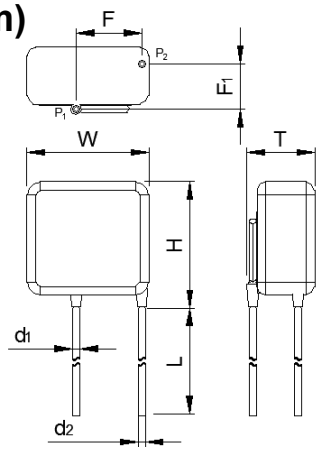
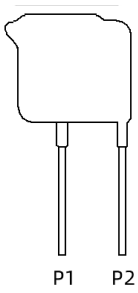
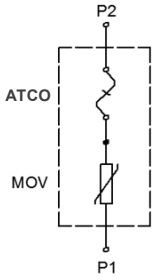
尺寸 Dimensions (mm)







型号 Model	L (Min.)	W (Max.)	H (Max.)	T (Max.)	d_1	d_2	F	F_1
TFV10S820K	15	16.5	18	4.4	0.80±0.05	0.80±0.05	7.5±1.0	0.2 ~ 2.2
TFV10S101K	15	16.5	18	4.6	0.80±0.05	0.80±0.05	7.5±1.0	0.3 ~ 2.3
TFV10S121K	15	16.5	18	4.8	0.80±0.05	0.80±0.05	7.5±1.0	0.4 ~ 2.4
TFV10S151K	15	16.5	18	5.1	0.80±0.05	0.80±0.05	7.5±1.0	0.6 ~ 2.6
TFV10S181K	15	16.5	18	4.5	0.80±0.05	0.80±0.05	7.5±1.0	0.3 ~ 2.3
TFV10S201K	15	16.5	18	4.6	0.80±0.05	0.80±0.05	7.5±1.0	0.4 ~ 2.4
TFV10S221K	15	16.5	18	4.7	0.80±0.05	0.80±0.05	7.5±1.0	0.4 ~ 2.4
TFV10S241K	15	16.5	18	4.8	0.80±0.05	0.80±0.05	7.5±1.0	0.5 ~ 2.5
TFV10S271K	15	16.5	18	5.0	0.80±0.05	0.80±0.05	7.5±1.0	0.6 ~ 2.6
TFV10S301K	15	16.5	18	5.2	0.80±0.05	0.80±0.05	7.5±1.0	0.6 ~ 2.6
TFV10S331K	15	16.5	18	5.4	0.80±0.05	0.80±0.05	7.5±1.0	0.7 ~ 2.7
TFV10S361K	15	16.5	18	5.6	0.80±0.05	0.80±0.05	7.5±1.0	0.8 ~ 2.8
TFV10S391K	15	16.5	18	5.7	0.80±0.05	0.80±0.05	7.5±1.0	0.9 ~ 2.9
TFV10S431K	15	16.5	18	6.0	0.80±0.05	0.80±0.05	7.5±1.0	1.0 ~ 3.0
TFV10S471K	15	16.5	18	6.2	0.80±0.05	0.80±0.05	7.5±1.0	1.1 ~ 3.1
TFV10S511K	15	16.5	18	6.4	0.80±0.05	0.80±0.05	7.5±1.0	1.2 ~ 3.2
TFV10S561K	15	16.5	18	6.7	0.80±0.05	0.80±0.05	7.5±1.0	1.4 ~ 3.4
TFV10S621K	15	16.5	18	7.1	0.80±0.05	0.80±0.05	7.5±1.0	1.5 ~ 3.5
TFV10S681K	15	16.5	18	7.4	0.80±0.05	0.80±0.05	7.5±1.0	1.7 ~ 3.7
TFV10S751K	15	16.5	18	7.9	0.80±0.05	0.80±0.05	7.5±1.0	1.6 ~ 3.9
TFV10S821K	15	16.5	18	8.3	0.80±0.05	0.80±0.05	7.5±1.0	2.1 ~ 4.1

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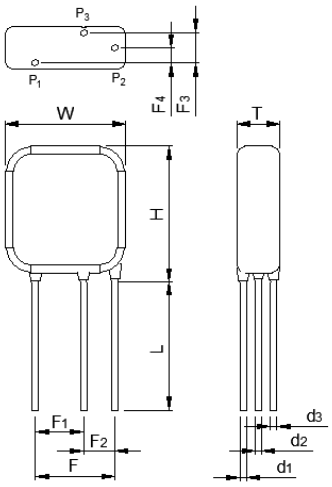
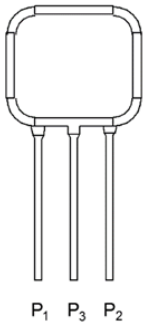
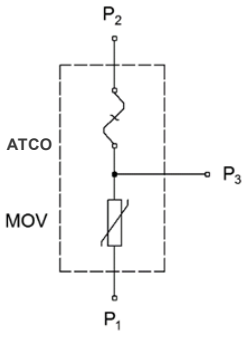
热保护型压敏电阻
Thermal Fuse Varistor (TFV)

TFV10S 系列 Series

尺寸 Dimensions (mm)







型号 Model	L (Min.)	W (Max.)	H (Max.)	T (Max.)	d_1	d_2	d_3	F	F_1	F_2	F_3	F_4
TFV10S820	15	16.5	18	4.4	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	1.2 ~ 2.6	0.2 ~ 2.2
TFV10S101	15	16.5	18	4.6	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	1.3 ~ 2.8	0.3 ~ 2.3
TFV10S121	15	16.5	18	4.8	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	1.4 ~ 3.0	0.4 ~ 2.4
TFV10S151	15	16.5	18	5.1	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	1.5 ~ 3.3	0.6 ~ 2.6
TFV10S181	15	16.5	18	4.5	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	1.3 ~ 2.8	0.3 ~ 2.3
TFV10S201	15	16.5	18	4.6	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	1.4 ~ 2.9	0.4 ~ 2.4
TFV10S221	15	16.5	18	4.7	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	1.5 ~ 3.0	0.4 ~ 2.4
TFV10S241	15	16.5	18	4.8	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	1.6 ~ 3.1	0.5 ~ 2.5
TFV10S271	15	16.5	18	5.0	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	1.7 ~ 3.3	0.6 ~ 2.6
TFV10S301	15	16.5	18	5.2	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	1.8 ~ 3.5	0.6 ~ 2.6
TFV10S331	15	16.5	18	5.4	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	1.9 ~ 3.6	0.7 ~ 2.7
TFV10S361	15	16.5	18	5.6	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	2.0 ~ 3.8	0.8 ~ 2.8
TFV10S391	15	16.5	18	5.7	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	2.0 ~ 4.0	0.9 ~ 2.9
TFV10S431	15	16.5	18	6.0	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	2.2 ~ 4.2	1.0 ~ 3.0
TFV10S471	15	16.5	18	6.2	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	2.4 ~ 4.4	1.1 ~ 3.1
TFV10S511	15	16.5	18	6.4	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	2.6 ~ 4.6	1.2 ~ 3.2
TFV10S561	15	16.5	18	6.7	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	2.9 ~ 4.9	1.4 ~ 3.4
TFV10S621	15	16.5	18	7.1	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	3.2 ~ 5.2	1.5 ~ 3.5
TFV10S681	15	16.5	18	7.4	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	3.6 ~ 5.6	1.7 ~ 3.7
TFV10S751	15	16.5	18	7.9	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	4.0 ~ 6.0	1.6 ~ 3.9
TFV10S821	15	16.5	18	8.3	0.80±0.05	0.80±0.05	0.80±0.05	10.0±1.0	5.0±1.0	5.0±1.0	4.4 ~ 6.4	2.1 ~ 4.1

备注： 以上数据仅供参考

Note:The above data is for reference only.

TFV

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热保护型压敏电阻
Thermal Fuse Varistor (TFV)

TFV10S 系列 Series

技术参数 Specification

型号 Model	最大连续工作电压 Max. Continuous Operating Voltage		压敏电压 Varistor Voltage @1 mA DC		箝制电压 Clamping Voltage (Max.)		最大峰值电流 Max. Discharge Current (8/20 μs)		最大能量 Max. Energy (10/1000 μs)	静态电容 Typical Capacitance (For reference only) @1 kHz	安规认证 Agency Approvals			
	Vac	Vdc	Min.	Max.	V_C	I_P	I_n	I_{max}	(J)	(pF)				
	(V)	(V)	(V)	(V)	(V)	(A)	(kA)	(kA)			UL	cUL	TUV	CQC
TFV10S820K	50	65	74	90	135	50	2.5	5	27	2400	●	●	●	○
TFV10S101K	60	85	90	110	165	50	2.5	5	33	2000	●	●	●	○
TFV10S121K	75	100	108	132	200	50	2.5	5	40	1700	●	●	●	○
TFV10S151K	95	125	135	165	250	50	2.5	5	53	1300	●	●	●	○
TFV10S181K	115	150	162	198	300	50	2.5	5	60	1100	●	●	●	○
TFV10S201K	130	170	180	220	340	50	2.5	5	70	1000	●	●	●	○
TFV10S221K	140	180	198	242	360	50	2.5	5	78	900	●	●	●	○
TFV10S241K	150	200	216	264	395	50	2.5	5	84	830	●	●	●	○
TFV10S271K	175	225	243	297	455	50	2.5	5	99	740	●	●	●	○
TFV10S301K	190	250	270	330	500	50	2.5	5	108	670	●	●	●	○
TFV10S331K	210	275	297	363	550	50	2.5	5	115	610	●	●	●	○
TFV10S361K	230	300	324	396	595	50	2.5	5	130	560	●	●	●	○
TFV10S391K	250	320	351	429	650	50	2.5	5	140	510	●	●	●	○
TFV10S431K	275	350	387	473	710	50	2.5	5	155	460	●	●	●	○
TFV10S471K	300	385	423	517	775	50	2.5	5	175	430	●	●	●	○
TFV10S511K	320	415	459	561	845	50	2.5	5	180	390	●	●	●	○
TFV10S561K	350	460	504	616	925	50	2.5	5	185	360	●	●	●	○
TFV10S621K	385	505	558	682	1025	50	2.5	5	190	320	●	●	●	○
TFV10S681K	420	560	612	748	1120	50	2.5	5	200	290	●	●	●	○
TFV10S751K	460	615	675	825	1240	50	2.5	5	210	270	●	●	●	○
TFV10S821K	510	670	738	902	1355	50	2.5	5	220	260	●	●	●	○

备注 Note: ● 已认证 Approved ○ 无认证 Unauthorized

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技术参数 Specification

型号 Model	受限电流 Limited Current	额定动作温度 Rated Function Temp.	熔断温度 Fuse Temp.	保持温度 Holding Temp.	额定电压 Rated Voltage	
	(A)	T_f (°C)	(°C)	T_h (°C)	AC (V)	DC (V)
TFV10S820K	5	145	140±2	121	250	50
TFV10S101K	5	145	140±2	121	250	50
TFV10S121K	5	145	140±2	121	250	50
TFV10S151K	5	145	140±2	121	250	50
TFV10S181K	5	145	140±2	121	250	50
TFV10S201K	5	145	140±2	121	250	50
TFV10S221K	5	145	140±2	121	250	50
TFV10S241K	5	145	140±2	121	250	50
TFV10S271K	5	145	140±2	121	250	50
TFV10S301K	5	145	140±2	121	250	50
TFV10S331K	5	145	140±2	121	250	50
TFV10S361K	5	145	140±2	121	250	50
TFV10S391K	5	145	140±2	121	250	50
TFV10S431K	5	145	140±2	121	250	50
TFV10S471K	5	145	140±2	121	250	50
TFV10S511K	5	145	140±2	121	250	50
TFV10S561K	5	145	140±2	121	250	50
TFV10S621K	5	145	140±2	121	250	50
TFV10S681K	5	145	140±2	121	250	50
TFV10S751K	5	145	140±2	121	250	50
TFV10S821K	5	145	140±2	121	250	50

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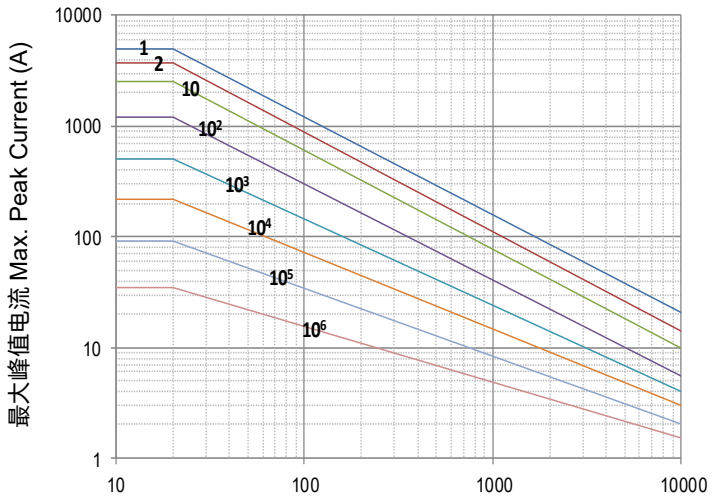
性能曲线（仅供参考）Performance Curve (For reference only)

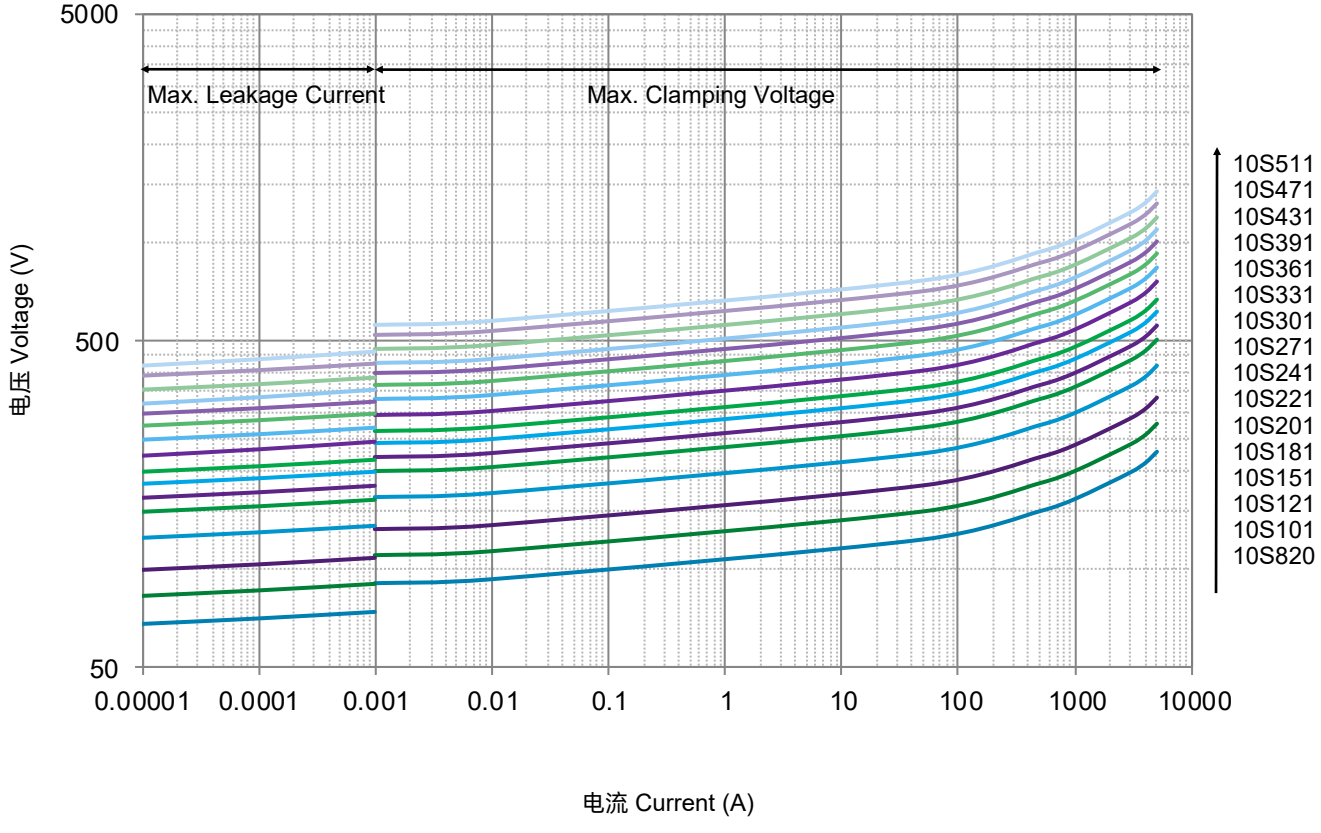
- 最大峰值电流降额曲线 Max. Peak Current Derating Curves



TFV10S820K to TFV10S821K

备注：1,2,10,10^2,10^3,10^4,10^5,10^6 表示重复冲击的次数． Note: 1,2,10,10^2,10^3,10^4,10^5,10^6 Stand for Repetitions.

- 伏安特性曲线 Voltage-Current Characteristic Curves



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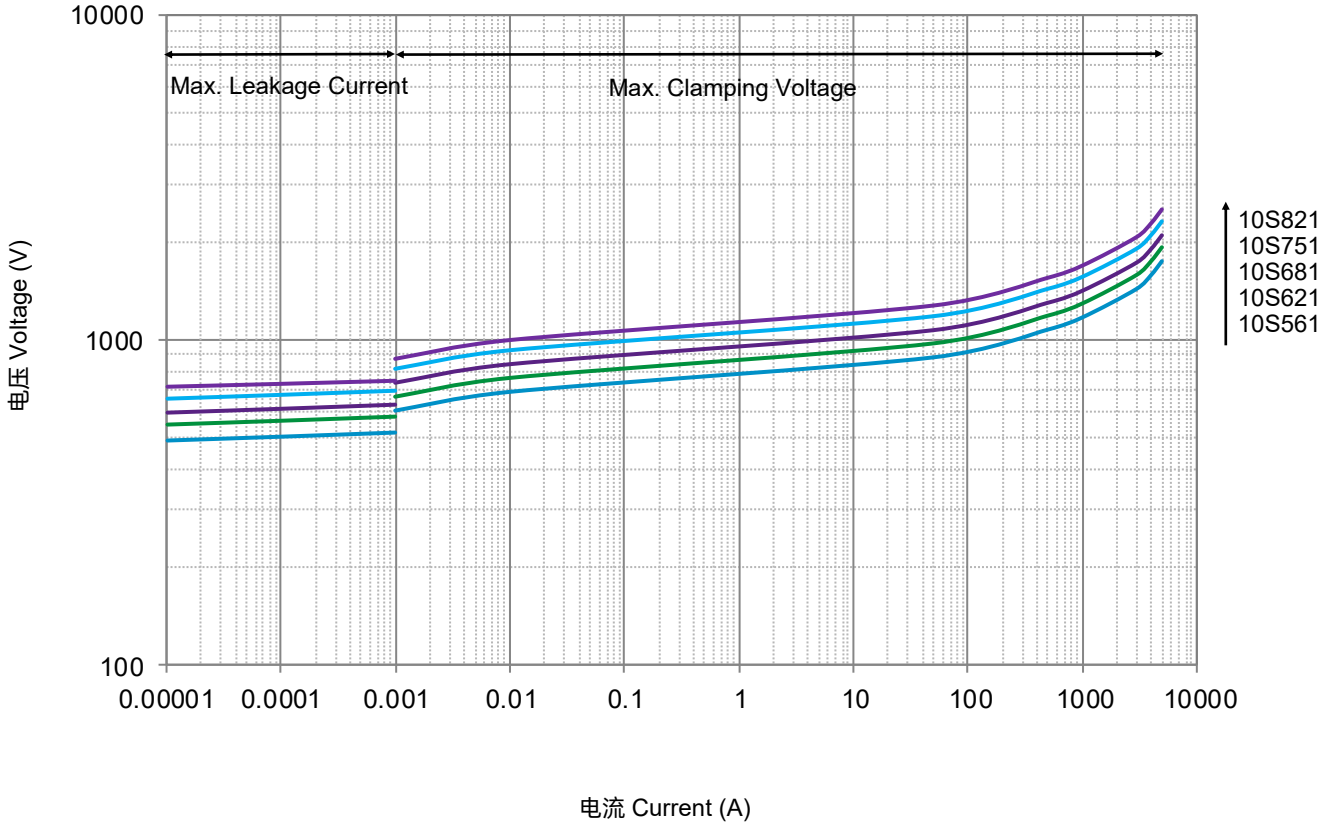
- 伏安特性曲线 Voltage-Current Characteristic Curves



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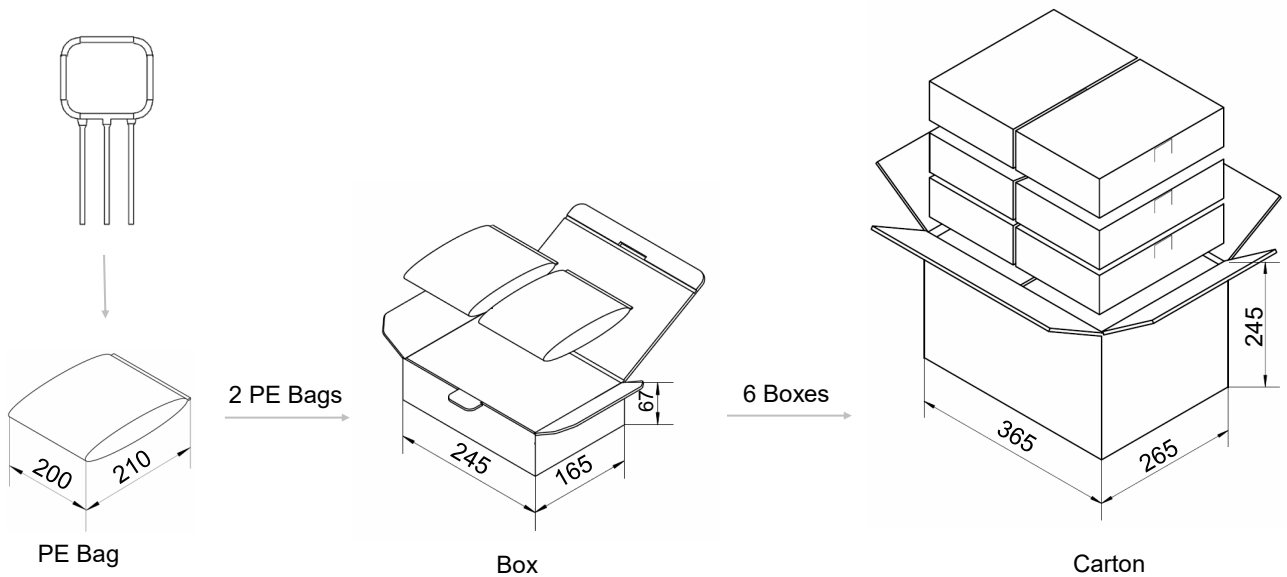
包装 Packaging Information

- 散装包装 Bulk Packaging (Code: BUL)
- 散装包装数量和重量 Bulk Packaging Quantity & Weight.

系列 Series	标称压敏电压 Nominal Varistor Voltage	PE袋 PE Bag	数量/盒 Box	数量/箱 Carton	毛重/箱 (365*265*245) G. W. / Carton
10S	(V)	(PCS)	(PCS)	(PCS)	(kg)±10%
	820 ~ 561	400	800	4800	9 ~ 15
	621 ~ 821	250	500	3000	12 ~ 15

备注：其他引脚长度的包装请咨询赛尔特.
Note: Other lead length packaging information, please contact SETsafe | SETfuse.

单位 Dimensions (mm)



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型号说明 Part Numbering System

TFV 15 S 471 - K 3 P K A BUL - 001

流水号 Other Options

包装 & 引脚长度 Packaging & Lead Length

散装：散装+标准长度（L28）
BUL: Bulk + Standard Lead Length (Normal L28)

引脚类型 Lead Types

A: 直线型引线 Straight Lead

浪涌等级 Surge Level

K: 标准型 Standard Type

工作温度 Operating Temp.

P: 环氧树脂包封 Epoxy Coating 105 °C

引线 Lead

2: 2 PIN
3: 3 PIN

电压公差 Voltage Tolerance

K : ±10%
J : ±5%
S : 特殊定制 Special Tolerance

标称压敏电压 Nominal Varistor Voltage

220: 22×10^{0} = 22V
471: 47×10^{1} = 470 V
122: 12×10^{2} = 1200 V

形状 Disk Shape

S: 正方形 Square

基片尺寸 Bare Disk Dimension

15: 15×15mm

产品类别 Product Category

压敏电阻
Setfuse Varistor

*更多细节请参照包装信息
*For More Details Refer To Packaging Information.

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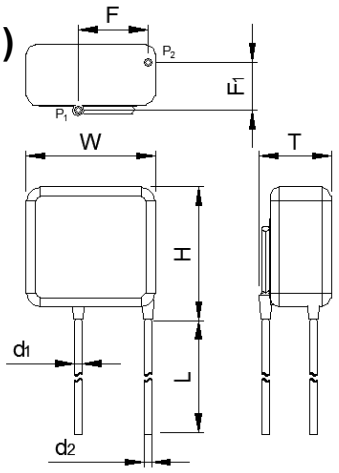
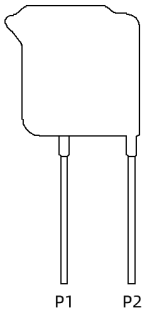
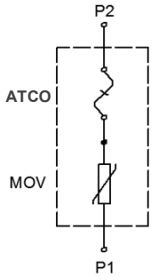
热保护型压敏电阻
Thermal Fuse Varistor (TFV)

TFV15S 系列 Series

尺寸 Dimensions (mm)







型号 Model	L (Min.)	W (Max.)	H (Max.)	T (Max.)	d_1	d_2	F	F_1
TFV15S820K	15	21	26	4.8	1.00±0.05	1.00±0.05	10.0±1.0	0.4 ~ 2.4
TFV15S101K	15	21	26	5.0	1.00±0.05	1.00±0.05	10.0±1.0	0.5 ~ 2.5
TFV15S121K	15	21	26	5.2	1.00±0.05	1.00±0.05	10.0±1.0	0.6 ~ 2.6
TFV15S151K	15	21	26	5.5	1.00±0.05	1.00±0.05	10.0±1.0	0.8 ~ 2.8
TFV15S181K	15	21	26	4.9	1.00±0.05	1.00±0.05	10.0±1.0	0.5 ~ 2.5
TFV15S211K	15	21	26	5.0	1.00±0.05	1.00±0.05	10.0±1.0	0.6 ~ 2.6
TFV15S221K	15	21	26	5.1	1.00±0.05	1.00±0.05	10.0±1.0	0.6 ~ 2.6
TFV15S241K	15	21	26	5.2	1.00±0.05	1.00±0.05	10.0±1.0	0.7 ~ 2.7
TFV15S271K	15	21	26	5.4	1.00±0.05	1.00±0.05	10.0±1.0	0.8 ~ 2.8
TFV15S301K	15	21	26	5.6	1.00±0.05	1.00±0.05	10.0±1.0	0.9 ~ 2.9
TFV15S331K	15	21	26	5.8	1.00±0.05	1.00±0.05	10.0±1.0	0.9 ~ 2.9
TFV15S361K	15	21	26	6.0	1.00±0.05	1.00±0.05	10.0±1.0	1.0 ~ 3.0
TFV15S391K	15	21	26	6.1	1.00±0.05	1.00±0.05	10.0±1.0	1.1 ~ 3.1
TFV15S431K	15	21	26	6.4	1.00±0.05	1.00±0.05	10.0±1.0	1.2 ~ 3.2
TFV15S471K	15	21	26	6.6	1.00±0.05	1.00±0.05	10.0±1.0	1.3 ~ 3.3
TFV15S511K	15	21	26	6.8	1.00±0.05	1.00±0.05	10.0±1.0	1.5 ~ 3.5
TFV15S561K	15	21	26	7.1	1.00±0.05	1.00±0.05	10.0±1.0	1.6 ~ 3.6
TFV15S621K	15	21	26	7.5	1.00±0.05	1.00±0.05	10.0±1.0	1.8 ~ 3.8
TFV15S681K	15	21	26	7.8	1.00±0.05	1.00±0.05	10.0±1.0	1.9 ~ 3.9
TFV15S751K	15	21	26	8.3	1.00±0.05	1.00±0.05	10.0±1.0	2.1 ~ 4.1
TFV15S821K	15	21	26	8.7	1.00±0.05	1.00±0.05	10.0±1.0	2.3 ~ 4.3

备注：以上数据仅供参考
The above data is for reference only.

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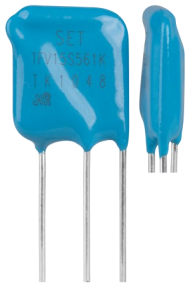
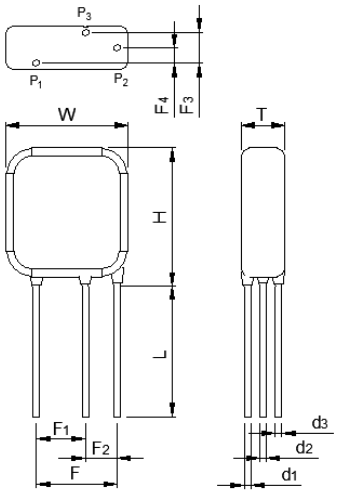
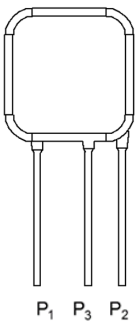
热保护型压敏电阻
Thermal Fuse Varistor (TFV)

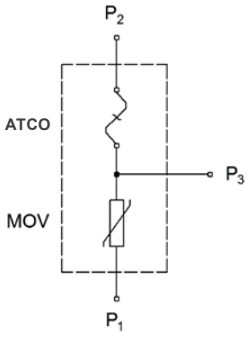
TFV15S 系列 Series

尺寸 Dimensions (mm)









型号 Model	L (Min.)	W (Max.)	H (Max.)	T (Max.)	d_1	d_2	d_3	F	F_1	F_2	F_3	F_4
TFV15S820	15	21	26	4.8	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	1.2 ~ 2.6	0.4 ~ 2.4
TFV15S101	15	21	26	5.0	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	1.3 ~ 2.8	0.5 ~ 2.5
TFV15S121	15	21	26	5.2	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	1.4 ~ 3.0	0.6 ~ 2.6
TFV15S151	15	21	26	5.5	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	1.5 ~ 3.3	0.8 ~ 2.8
TFV15S181	15	21	26	4.9	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	1.3 ~ 2.8	0.5 ~ 2.5
TFV15S211	15	21	26	5.0	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	1.4 ~ 2.9	0.6 ~ 2.6
TFV15S221	15	21	26	5.1	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	1.5 ~ 3.0	0.6 ~ 2.6
TFV15S241	15	21	26	5.2	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	1.6 ~ 3.1	0.7 ~ 2.7
TFV15S271	15	21	26	5.4	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	1.7 ~ 3.3	0.8 ~ 2.8
TFV15S301	15	21	26	5.6	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	1.8 ~ 3.5	0.9 ~ 2.9
TFV15S331	15	21	26	5.8	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	1.9 ~ 3.6	0.9 ~ 2.9
TFV15S361	15	21	26	6.0	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	2.0 ~ 3.8	1.0 ~ 3.0
TFV15S391	15	21	26	6.1	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	2.0 ~ 4.0	1.1 ~ 3.1
TFV15S431	15	21	26	6.4	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	2.2 ~ 4.2	1.2 ~ 3.2
TFV15S471	15	21	26	6.6	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	2.4 ~ 4.4	1.3 ~ 3.3
TFV15S511	15	21	26	6.8	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	2.6 ~ 4.6	1.5 ~ 3.5
TFV15S561	15	21	26	7.1	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	2.9 ~ 4.9	1.6 ~ 3.6
TFV15S621	15	21	26	7.5	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	3.2 ~ 5.2	1.8 ~ 3.8
TFV15S681	15	21	26	7.8	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	3.6 ~ 5.6	1.9 ~ 3.9
TFV15S751	15	21	26	8.3	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	4.0 ~ 6.0	2.1 ~ 4.1
TFV15S821	15	21	26	8.7	1.00±0.05	1.00±0.05	1.00±0.05	12.5±1.0	7.5±1.0	5.0±1.0	4.4 ~ 6.4	2.3 ~ 4.3

备注： 以上数据仅供参考

Note:The above data is for reference only.

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热保护型压敏电阻
Thermal Fuse Varistor (TFV)

TFV15S 系列 Series

技术参数 Specification

型号 Model	最大连续工作电压 Max. Continuous Operating Voltage		压敏电压 Varistor Voltage @1 mA DC		箝制电压 Clamping Voltage (Max.)		最大峰值电流 Max. Discharge Current (8/20 μs)		最大能量 Max. Energy (10/1000 μs)	静态电容 Typical Capacitance (For reference only) @1 kHz	安规认证 Agency Approvals			
	Vac	Vdc	Min.	Max.	V_C	I_P	I_n	I_{max}	(J)	(pF)				
	(V)	(V)	(V)	(V)	(V)	(A)	(kA)	(kA)			UL	cUL	TUV	CQC
TFV15S820K	50	65	74	90	135	75	5	10	43	4000	●	●	●	○
TFV15S101K	60	85	90	110	165	75	5	10	53	3200	●	●	●	○
TFV15S121K	75	100	108	132	200	75	5	10	64	2700	●	●	●	○
TFV15S151K	95	125	135	165	250	75	5	10	85	2200	●	●	●	○
TFV15S181K	115	150	162	198	300	75	5	10	96	1800	●	●	●	○
TFV15S201K	130	170	180	220	340	75	5	10	102	1600	●	●	●	○
TFV15S221K	140	180	198	242	360	75	5	10	125	1450	●	●	●	○
TFV15S241K	150	200	216	264	395	75	5	10	134	1350	●	●	●	○
TFV15S271K	175	225	243	297	455	75	5	10	158	1200	●	●	●	○
TFV15S301K	190	250	270	330	500	75	5	10	173	1050	●	●	●	○
TFV15S331K	210	275	297	363	550	75	5	10	185	1000	●	●	●	○
TFV15S361K	230	300	324	396	595	75	5	10	208	900	●	●	●	○
TFV15S391K	250	320	351	429	650	75	5	10	224	800	●	●	●	○
TFV15S431K	275	350	387	473	710	75	5	10	248	750	●	●	●	○
TFV15S471K	300	385	423	517	775	75	5	10	280	680	●	●	●	○
TFV15S511K	320	415	459	561	845	75	5	10	300	630	●	●	●	○
TFV15S561K	350	460	504	616	925	75	5	10	310	580	●	●	●	○
TFV15S621K	385	505	558	682	1025	75	5	10	310	530	●	●	●	○
TFV15S681K	420	560	612	748	1120	75	5	10	320	500	●	●	●	○
TFV15S751K	460	615	675	825	1240	75	5	10	335	430	●	●	●	○
TFV15S821K	510	670	738	902	1355	75	5	10	350	400	●	●	●	○

备注 Note: ● 已认证 Approved ○ 无认证 Unauthorized

TFV

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技术参数 Specification

型号 Model	受限电流 Limited Current	额定动作温度 Rated Function Temp.	熔断温度 Fuse Temp.	保持温度 Holding Temp.	额定电压 Rated Voltage	
	(A)	T_f (°C)	(°C)	T_h (°C)	AC (V)	DC (V)
TFV15S820K	5	145	140±2	118	250	50
TFV15S101K	5	145	140±2	118	250	50
TFV15S118K	5	145	140±2	118	250	50
TFV15S151K	5	145	140±2	118	250	50
TFV15S181K	5	145	140±2	118	250	50
TFV15S201K	5	145	140±2	118	250	50
TFV15S221K	5	145	140±2	118	250	50
TFV15S241K	5	145	140±2	118	250	50
TFV15S271K	5	145	140±2	118	250	50
TFV15S301K	5	145	140±2	118	250	50
TFV15S331K	5	145	140±2	118	250	50
TFV15S361K	5	145	140±2	118	250	50
TFV15S391K	5	145	140±2	118	250	50
TFV15S431K	5	145	140±2	118	250	50
TFV15S471K	5	145	140±2	118	250	50
TFV15S511K	5	145	140±2	118	250	50
TFV15S561K	5	145	140±2	118	250	50
TFV15S621K	5	145	140±2	118	250	50
TFV15S681K	5	145	140±2	118	250	50
TFV15S751K	5	145	140±2	118	250	50
TFV15S821K	5	145	140±2	118	250	50

TFV

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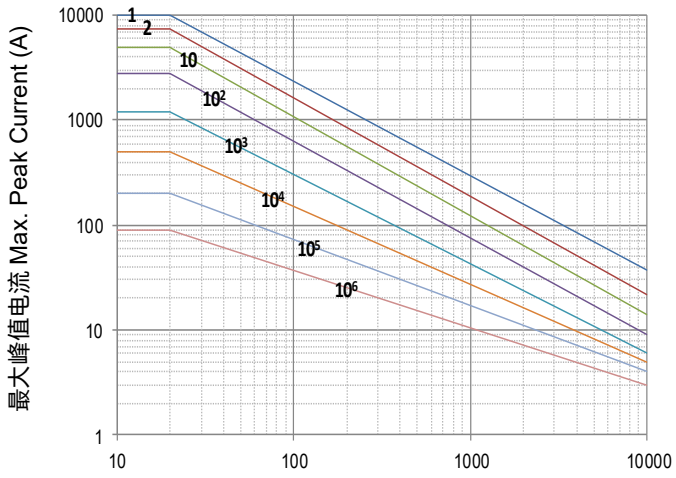
性能曲线（仅供参考）Performance Curve (For reference only)

- 最大峰值电流降额曲线 Max. Peak Current Derating Curves

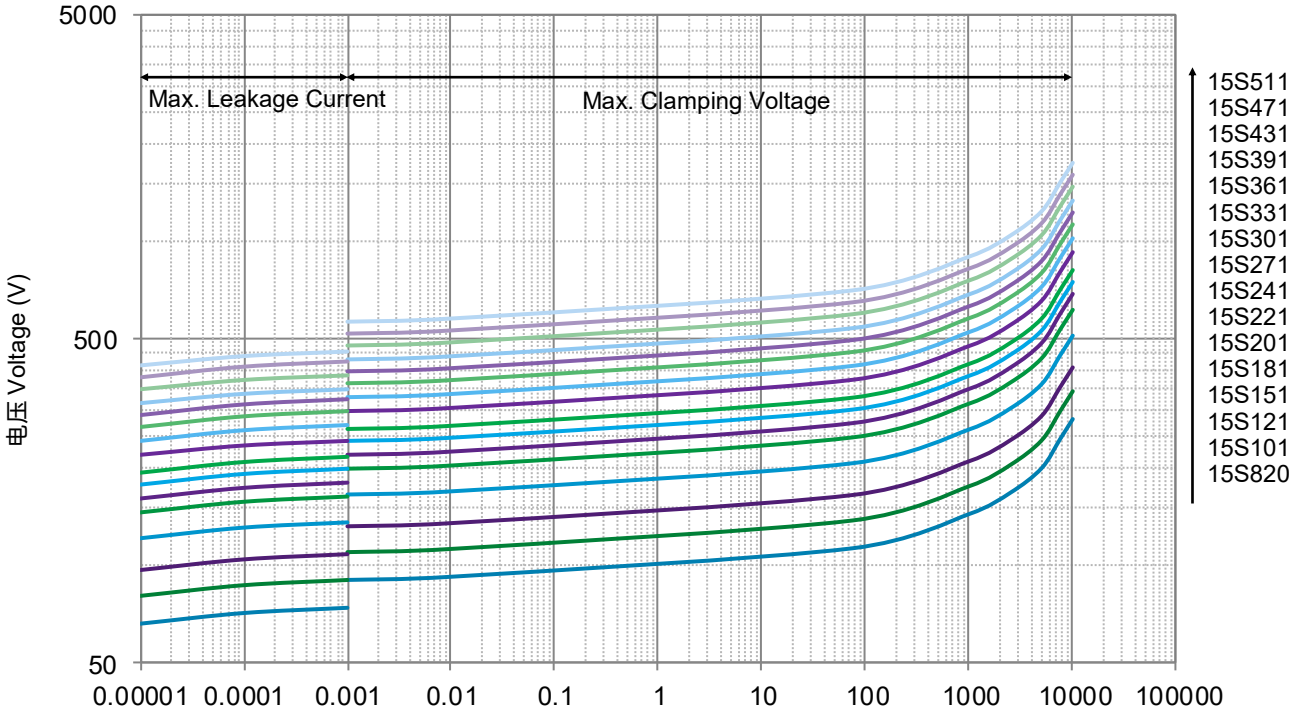


脉冲持续时间 Impulse Duration (μs)

TFV15S820K to TFV15S821K

备注：1,2,10,10^2,10^3,10^4,10^5,10^6 表示重复冲击的次数． Note: 1,2,10,10^2,10^3,10^4,10^5,10^6 Stand for Repetitions.

- 伏安特性曲线 Voltage-Current Characteristic Curves



电流 Current (A)

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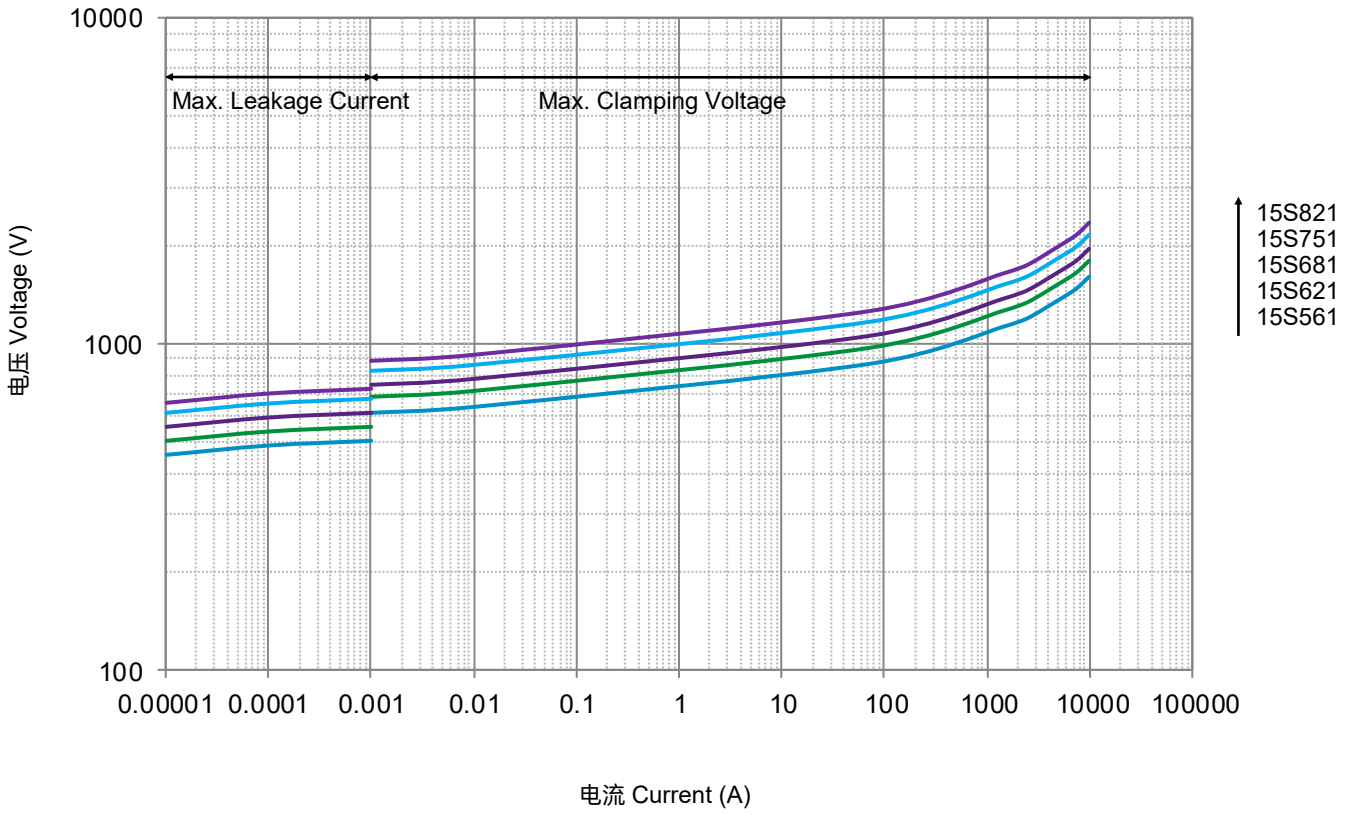
- 伏安特性曲线 Voltage-Current Characteristic Curves



TFV

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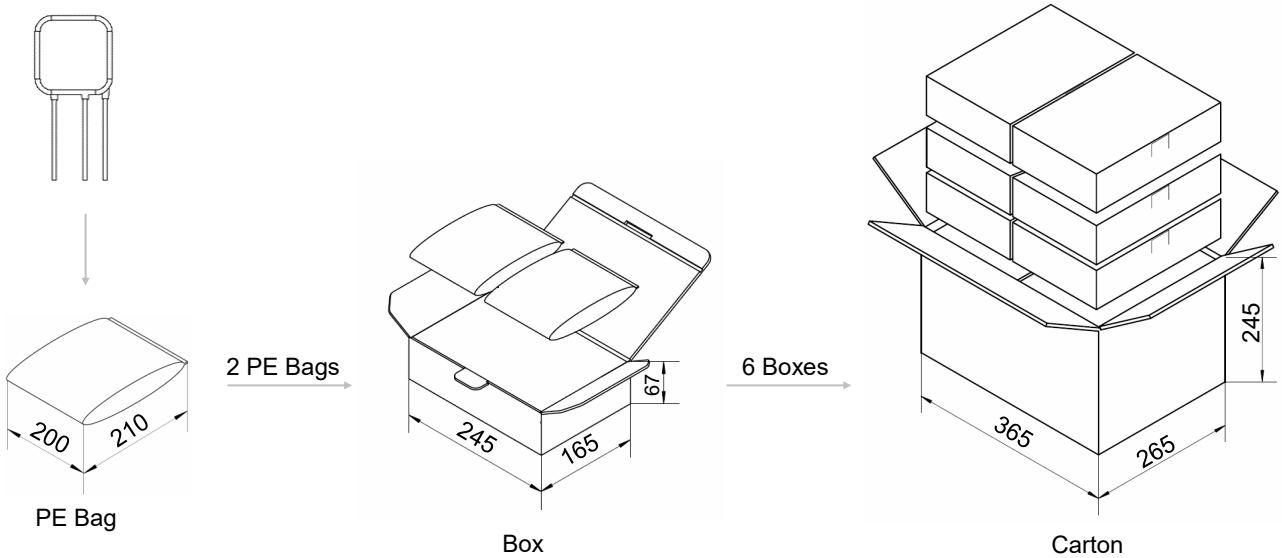
包装 Packaging Information

- 散装包装 Bulk Packaging (Code: BUL)
- 散装包装数量和重量 Bulk Packaging Quantity & Weight.

系列 Series	标称压敏电压 Nominal Varistor Voltage	PE袋 PE Bag	数量/盒 Box	数量/箱 Carton	毛重/箱 (365*265*245) G. W. / Carton
15S	(V)	(PCS)	(PCS)	(PCS)	(kg)±10%
	820 ~ 361	200	400	2400	5 ~ 10
	391 ~ 561	150	300	1800	7 ~ 11
	621 ~ 821	100	200	1200	6 ~ 10

备注：其他引脚长度的包装请咨询赛尔特.

单位 Dimensions (mm)



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