

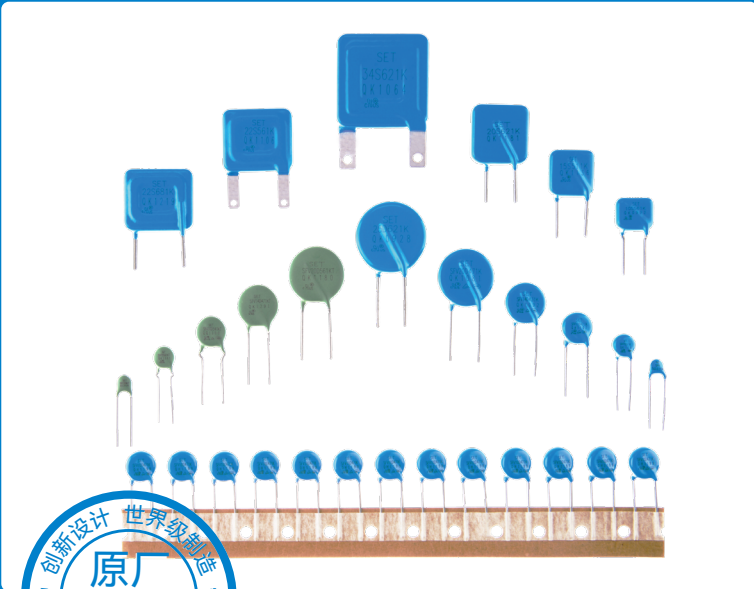
MOV

压敏电阻

Metal Oxide Varistor (MOV)

- 高通流密度: 7000 A/cm²
- 限制电压比可低至1.9
- 符合IEC 62368.1-2018 附录G.8.1
- 工作温度可至135 °C
- 通过UL、TUV、CQC安规认证

High Surge Current Density: 7000 A/cm²
Voltage Clamping Ratio Can Be Low to 1.9
Comply with G.8.1 of IEC 62368.1-2018
Operation Temp. Can Be High to 135 °C,
Comply with UL, TUV, CQC



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

SET safe | SET fuse

赛尔特

WHAT

CAN DO FOR YOU

赛尔特设计、制造、销售业界领先的**电路控制及安全保护元器件**、提供**电路安全解决方案**。

2000年成立于中国厦门。产品销往40多个国家和地区，与世界500强的部分企业有深远的合作，首创、独创多个产品；取得CCC、UL、cUL、VDE、TUV、PSE、KC等认证，符合RoHS、REACH，获得IATF16949、ISO9001、ISO14001、ISO45001、GB/T29490管理体系认证，参与多项电路保护元器件的国家、国际标准制定、修订。

赛尔特(SETsafe | SETfuse)产品的主要应用市场：通信、防雷器、电源、新能源、照明、家电、移动设备、医疗。

MISSION

PROVIDING A TOTAL SOLUTION FOR HIGH STANDARD SAFETY CIRCUIT PROTECTION.

SETsafe | SETfuse was established in 2000 in Xiamen, China. We have a presence in more than 40 countries and regions recognising our products. Some of the world's 500 fortune companies are our valuable customers. We have pioneered, innovated & developed several products exclusively. Products are compliance with CCC, UL, cUL, VDE, TUV, PSE, KC, IATF16949, ISO9001, ISO14001, ISO45001, GB/T29490 certificates. We are in one of the core participating teams for revising and setting several national & international standards in the field of Circuit Protection.

SETsafe | SETfuse Key Markets: Telecom, Surge Protector, Power, New Energy, Lighting, Home Appliances, Mobile Devices, Medical.

过温保护

Over Temperature Protection

ATCO

温度保险丝 Thermal-Link

1



DC-ATCO

直流温度保险丝 Thermal-Link

2



OTCO

温度保险丝 Thermal-Link

3



TMS

热保护器 Thermal Protector

4



过电压保护

Over Voltage Protection

TVS Diodes

瞬态电压抑制二极管 Transient Voltage Suppression Diodes

1



GDT

气体放电管 Gas Discharge Tube

2



MOV

压敏电阻 Metal Oxide Varistor

3



TFMOV

热保护型压敏电阻 Thermal Fuse & MOV

4



TFMOV

热保护型压敏电阻 Thermally Protected Varistors

5



过电压保护

Over Voltage Protection

SPD-M

电涌保护模块 Surge Protective Device Module

6



SPD

低压电源系统 Low-voltage Power Systems

7



SPD

光伏供电系统 PV System

8



SPD

室外照明系统 Outdoor Lighting

9



SPD

信号通信系统 Signaling Networks

10



过电流保护

Over Current Protection

Mini Fuses

小型熔断器 Miniature Fuses

1



TRXF

热保护型熔断电阻器 Thermal-Link & Fusing Resistor

2



TPR

热保护型熔断电阻器 Thermally Protected Resistor

3



NTC

抑制浪涌电流NTC热敏电阻器 Inrush Current Limiting NTC Thermistor

4



LV Fuses

低压熔断器 Low Voltage Fuses

5



主动保护

Active Protection

iTCO

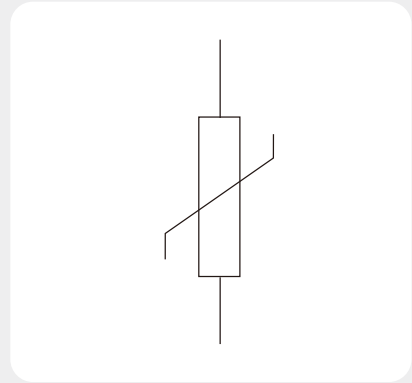
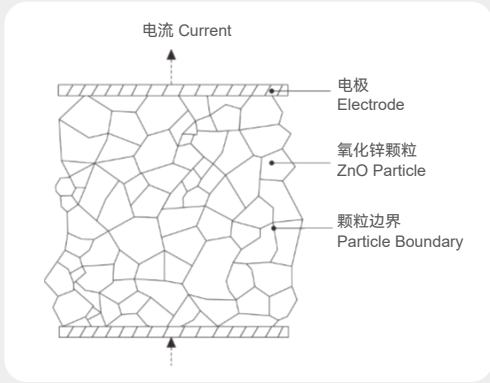
受控熔断器 Iode Thermal-Link

1

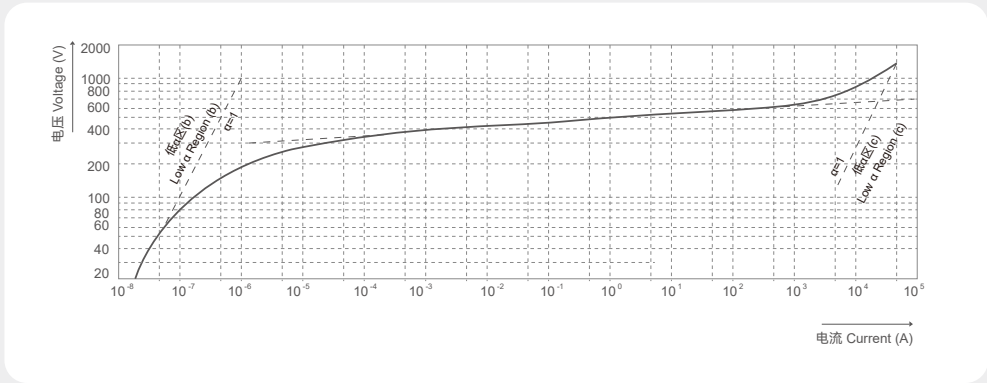


结构 Structure

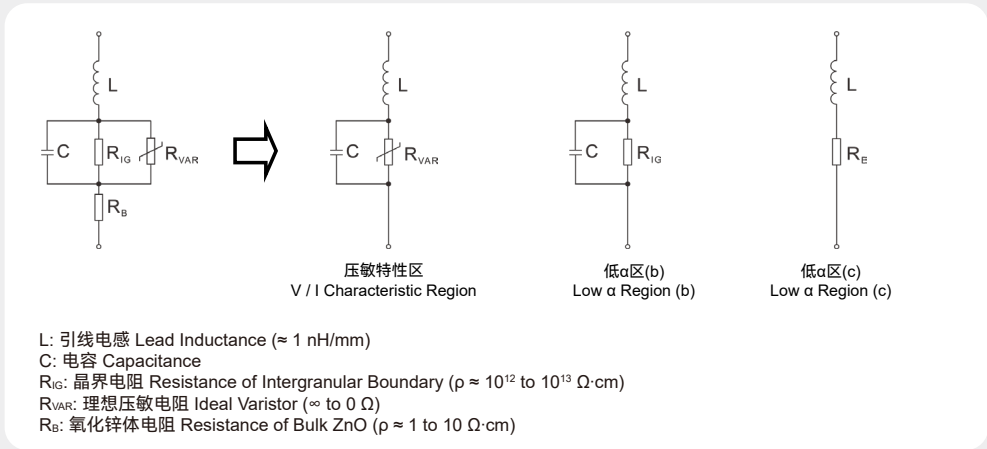
符号 Symbol



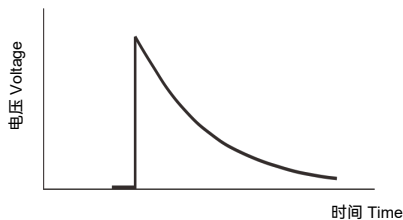
伏安特性曲线图 V / I Characteristic Curve



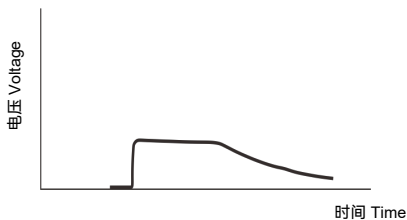
等效电路 Equivalent Circuits



工作原理 Operation Principle

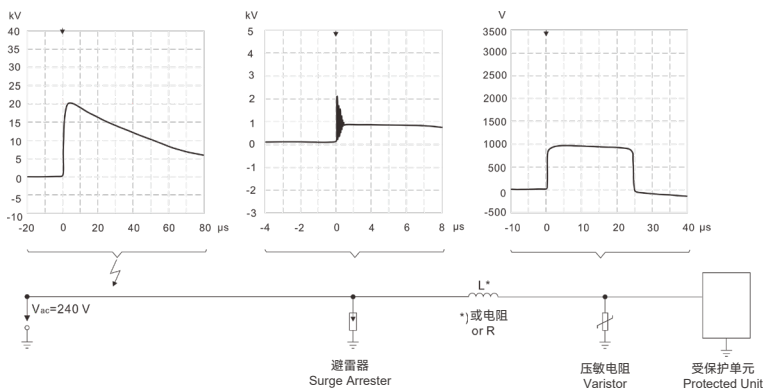


雷电过电压 Lightning Over-voltage

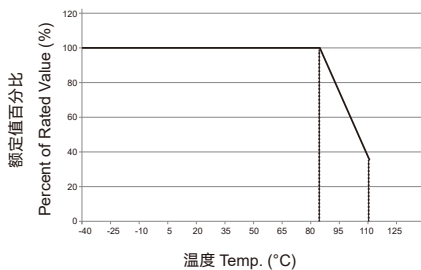


通过压敏电阻的箝制电压 Clamping Voltage by Varistor

逐级保护 Stepwise Protection



温度降额曲线 Temp. Derating Curves

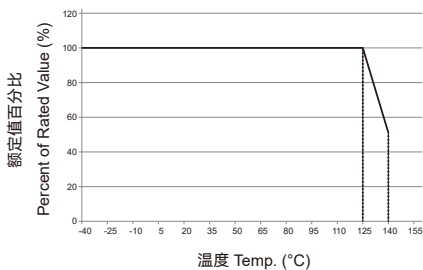


常温系列温度降额曲线

For Normal Temp. Series Products

备注: 应用环境温度超过85 °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 85 °C, the peak surge current and energy rating should be reduced as shown in above figure.



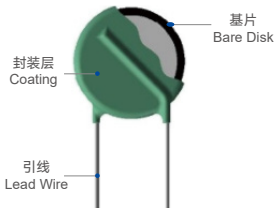
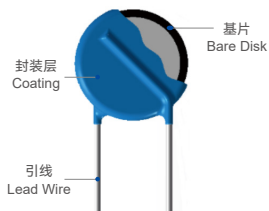
高温系列温度降额曲线

For High Temp. Series Products

备注: 应用环境温度超过125 °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: For high temp. series, when ambient temp. exceeds 125 °C, the peak surge current and energy rating should be reduced as shown in the above figure.

产品结构 Product Structure



主要原材料明细 Main Material List

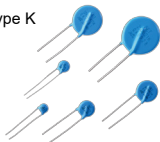
零件名 Part Name	压敏电阻 Varistor Bare Disk	包封层 Coating	引线 Lead
材质 materials	氧化锌 ZnO	环氧树脂 Epoxy Resin	CP线 Tin-plated Copper Clad Steel Wire

主要原材料明细 Main Material List

零件名 Part Name	压敏电阻 Varistor Bare Disk	包封层 Coating	引线 Lead
材质 materials	氧化锌 ZnO	硅树脂 Silicon Resin	CP线 Tin-plated Copper Clad Steel Wire

关键特性 Key Features

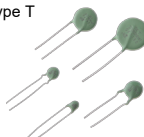
Type K



标准型压敏电阻用于常规过压保护。
Standard type MOV for common over-voltage protection.

- 压敏电压 Varistor Voltage: (22 - 1800) V
- 最大放电电流 Max. Discharge Current (8/20 μ s): (500 - 20000) A

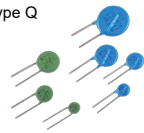
Type T



高温型压敏电阻适用于如LED照明、开关电源等高温环境。
High temp. type MOV for high ambient temp. environment such as LED lighting, switched-mode power supply and so on.

- 压敏电压 Varistor Voltage: (22 - 1800) V
- 最大放电电流 Max. Discharge Current (8/20 μ s): (500 - 20000) A

Type Q



高可靠型压敏电阻具有耐多次冲击的能力，满足IEC 61000-4-5。
High-impact type MOV with multiple surge withstanding capability, complies with IEC 61000-4-5.

- 压敏电压 Varistor Voltage: (22 - 1200) V
- 最大放电电流 Max. Discharge Current (8/20 μ s): (2000 - 20000) A

Type H



高能型压敏电阻具有高浪涌电流耐受能力，适用于浪涌保护器，满足IEC 61643-1。
High energy type MOV with high surge withstanding capability for SPD applications, complies with IEC 61643-1.

- 压敏电压 Varistor Voltage: (82 - 820) V
- 最大放电电流 Max. Discharge Current (8/20 μ s): (6000 - 60000) A
- 最大冲击电流 Max. Peak Current (10/350 μ s): 5000 A

安规认证 Agency certification



应用 Applications		地区 Region	推荐规格 Recommended Model	参数要求 Parameter Requirement	符合标准 Designed to Standards
LED电源适配器 LED Driver		全球 Global World	10D201 - 10D681 or 14D201 - 14D621	满足6 kV浪涌抗扰度水平 6 kV Surge Immunity Level	IEC 61000-4-5
开关电源 Switched-mode Power Supply (SMPS)		全球 Global World	10D201 - 10D621	满足4.5 kV浪涌抗扰度水平 4.5 kV Surge Immunity Level	IEC 61000-4-5, ANNEX Q of IEC 60950
通讯电源 Telecom Power		全球 Global World	14D820 or 15S820	浪涌等级 Surge Level: ≥3 kA 限制电压 Limiting Voltage: ≤300 V	IEEE C62.41
防雷插座 Surge Protector		美洲 America	14D201 or 20D201	浪涌等级 Surge Level: ≥6 kV / 3 kA 限制电压 Limiting Voltage: ≤500 V	UL 1449 4th Edition TYPE 3 SPD
		欧洲 Europe	14D471 or 20D471	浪涌等级 Surge Level: ≥6 kV / 3 kA 限制电压 Limiting Voltage: ≤1000 V	IEC 61643-11:2012 CLASS III
电涌保护器 Surge Protective Device		美洲 America	20D201 or 25D201	浪涌等级 Surge Level: ≥10 kA 限制电压 Limiting Voltage: ≤500 V	UL 1449 4th Edition TYPE 5 SPD
		欧洲 Europe	25D431 - 25D821 or 34S431 - 34S821	浪涌等级 Surge Level: ≥20 kA 限制电压 Limiting Voltage: ≤2000 V	IEC 61643-11:2012 CLASS II

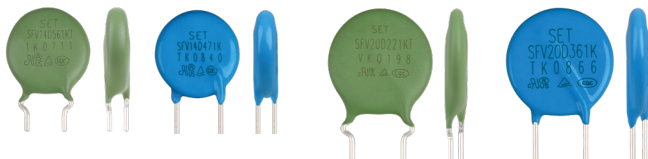
应用 Applications

7D 系列 Series



节能灯
Energy Saving Lamp

14D & 20D 系列 Series



防雷插座
Surge Protectors

10D 系列 Series



彩电
Colour TV



电饭煲
Rice Cooker



豆浆机
Soybean Milk Machine



开关电源
Switched-mode Power Supply (SMPS)

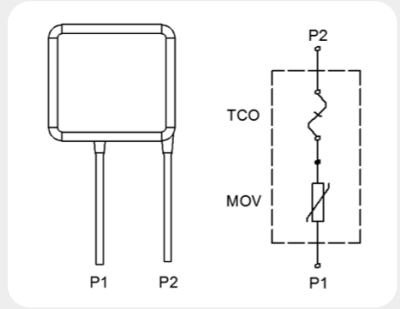
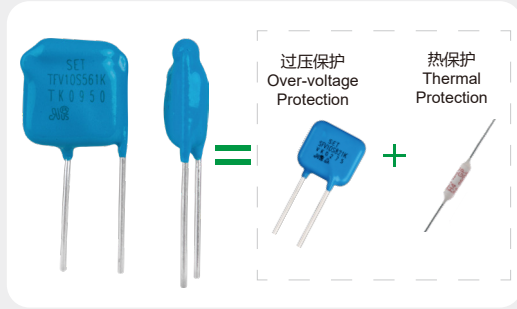


空调
Air-condition

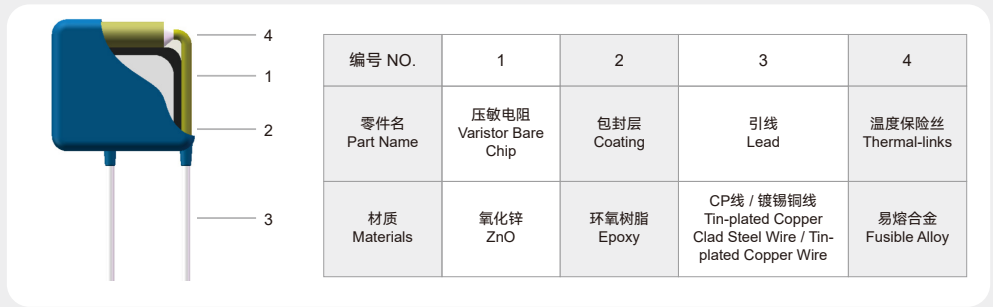
TFV Series

设计 Design

电气原理图 Schematics



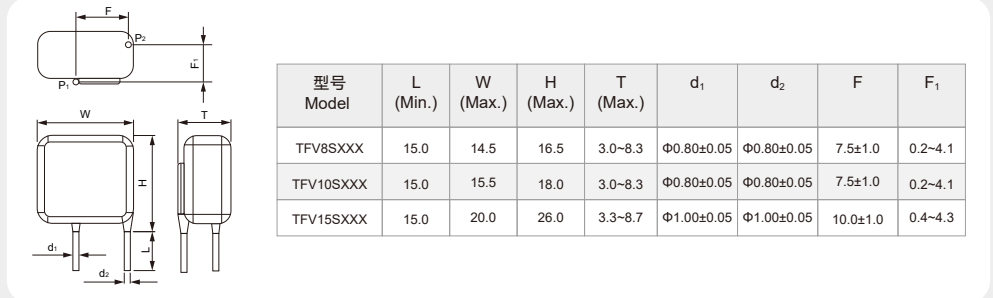
结构图 Structure














技术参数 Specification

系列 Series	标称压敏电压 Nominal Varistor Voltage (V)	标称放电电流 Normal Discharge Current (8/20 μ s) I_n (kA)	最大放电电流 Max. Discharge Current (8/20 μ s) I_{max} (kA)	上限类别温度 Upper Category Temp. ($^{\circ}$ C)	受限电流 Limited Current (A)
TFV8S	820~821	1.5	3.5	105	5.0
TFV10S	820~821	2.5	5.0	105	5.0
TFV15S	820~821	5.0	10.0	105	5.0

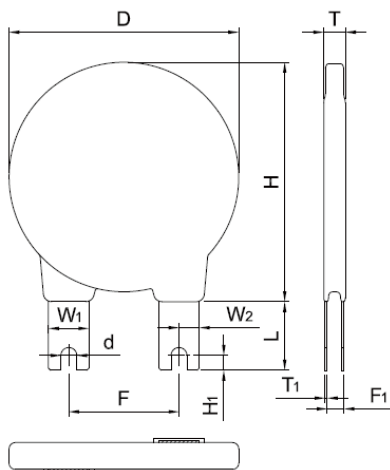
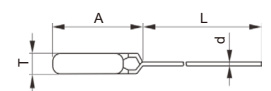
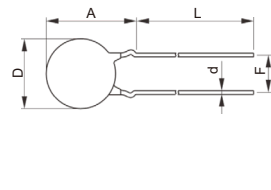
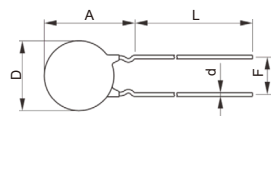
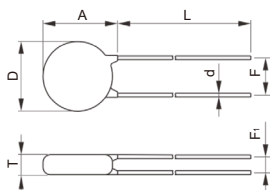
尺寸 Dimensions (mm)



技术参数 Specification










图例 Images	系列 Series	标称压敏电压 Nominal Varistor Voltage (V)	最大峰值电流 Max. Peak Current (1 time, 8/20 μ s) (kA)	上限类别温度 Upper Category Temp. ($^{\circ}$ C)	安规认证 Agency Approvals
	7D	220 ~ 821	0.5 ~ 1.75	85 / 105 / 125	
	10D	220 ~ 122	1.0 ~ 3.5	85 / 105 / 125	
	14D	220 ~ 122	2.0 ~ 6.0	85 / 105 / 125	
	20D	220 ~ 122	3.0 ~ 10.0	85 / 105 / 125	
	25D	220 ~ 122	3.0 ~ 20.0	85	
	53D	820 ~ 122	70.0	85	

型号 Model	L (Min.)	H (Max.)	T (Max.)	D (Max.)	d	F	F ₁	A (Max.)
SFV7DXXXK	20.0	12.0	4.1~7.6	9.0	Φ0.60±0.05	5.0±1.0	1.0~5.9	12.5
SFV7DXXXKT	7.0	12.0	4.5~8.0	9.0	Φ0.60±0.05	5.0±1.0	1.0~5.9	13.5
SFV10DXXXK	20.0	15.5	4.5~10.1	12.5	Φ0.80±0.05	7.5±1.0	1.1~8.1	17.5
SFV10DXXXKT	7.0	15.5	4.9~10.5	12.5	Φ0.80±0.05	7.5±1.0	1.1~8.1	17.5
SFV14DXXXK	20.0	18.5	4.7~10.5	16.5	Φ0.80±0.05	7.5±1.0	1.1~8.5	21.5
SFV14DXXXKT	7.0	18.5	4.9~10.9	16.5	Φ0.80±0.05	7.5±1.0	1.1~8.5	21.5
SFV20DXXXK	20.0	25.5	5.3~11.1	23.0	Φ1.00±0.05	10.0±1.0	1.3~9.1	27.5
SFV20DXXXKT	7.0	25.5	5.3~11.5	23.0	Φ1.00±0.05	10.0±1.0	1.3~9.1	27.5
SFV25DXXXK	20.0	32.0	5.5~11.7	28.0	Φ1.20±0.05	10.0±1.0	1.3~9.3	35.0

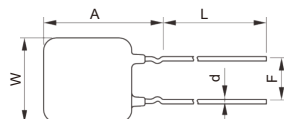
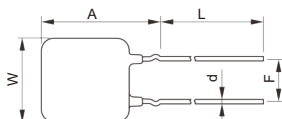
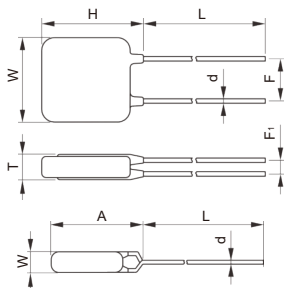


型号 Model	L (Min.)	W ₁	W ₂	H (Max.)	H ₁	T (Max.)
SFV53DXXXK	16.0	9.7±0.5	4.85±0.05	64.0	3.6±0.3	4.3 - 11.2
	T ₁	D	d	F	F ₁	/
	0.5±0.1	56.5	Φ3.80±0.2	25.4±1.0	0.7 - 9.0	/

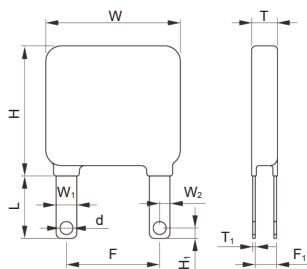
技术参数 Specification

图例 Images	系列 Series	标称压敏电压 Nomimal Varistor Voltage (V)	最大放电电流 Max. Discharge Current (8/20 μs)	上限类别温度 Upper Category Temp. (°C)	安规认证 Agency Approvals
	10S	220 ~ 821	2.0 ~ 5.0	85	
	15S	220 ~ 122	3.0 ~ 10.0	85	
	20S	220 ~ 122	3.0 ~ 15.0	85	
 	25S	220 ~ 122	3.0 ~ 25.0	85	
	34S	220 ~ 122	20.0 ~ 40.0	85	

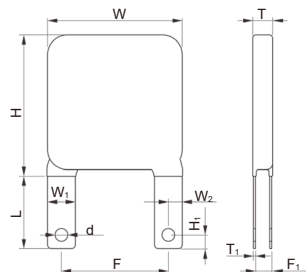
型号 Model	L (Min.)	W (Max.)	H (Max.)	T (Max.)	d	F	F ₁	A (Max.)
SFV10SXXXX	20.0	14.5	15.0	4.5~8.3	Φ0.80±0.05	7.5±0.10	1.1~6.4	17.5
SFV15SXXXX	20.0	17.0	20.0	4.9~8.7	Φ1.00±0.05	10.0±1.0	1.2~6.7	22.5
SFV20SXXXX	20.0	22.0	26.0	5.0~11.4	Φ1.00±0.05	10.0±1.0	1.2~9.1	27.5
SFV25SXXXX	20.0	28.0	30.0	6.6~13.0	Φ1.20±0.05	18.0±1.0	2.0~10.3	/



型号 Model	L	W	W ₁	W ₂	H (Max.)	H ₁
SFV25SXXXX	12.0±3.0	28.0	4.0±0.5	2.00±0.05	30.0	2.00±0.05
	T (Max.)	T ₁	d	F	F ₁	/
	4.2~10.6	0.50±0.05	Φ2.50±0.05	18.0±1.0	0.8~8.6	/

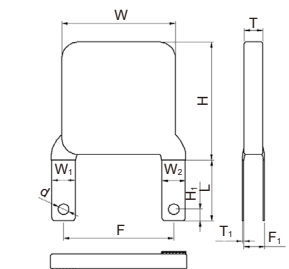


型号 Model	L (Min.)	W	W ₁	W ₂	H (Max.)	H ₁
SFV34SXXXX	10.0±3.0	36.0	6.00±0.05	4.85±0.05	40.0	3.50±0.05
	T (Max.)	T ₁	d	F	F ₁	/
	4.3~11.1	0.50±0.05	Φ3.20±0.05	25.4±1.0	0.9~8.8	/



NEW

型号 Model	L (Min.)	W	W ₁	W ₂	H (Max.)	H ₁
SFV40SXXXX	15.0	45.0	7.0±0.5	7.0±0.05	55	3.5±0.05
	T (Max.)	T ₁	d	F	F ₁	/
	4.4~8.9	0.50±0.05	Φ4.0±0.05	40.0±1.0	0.9~6.6	/



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20+

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更新 Update: Jun 2, 2022

SET safe | *SET fuse*
赛尔特