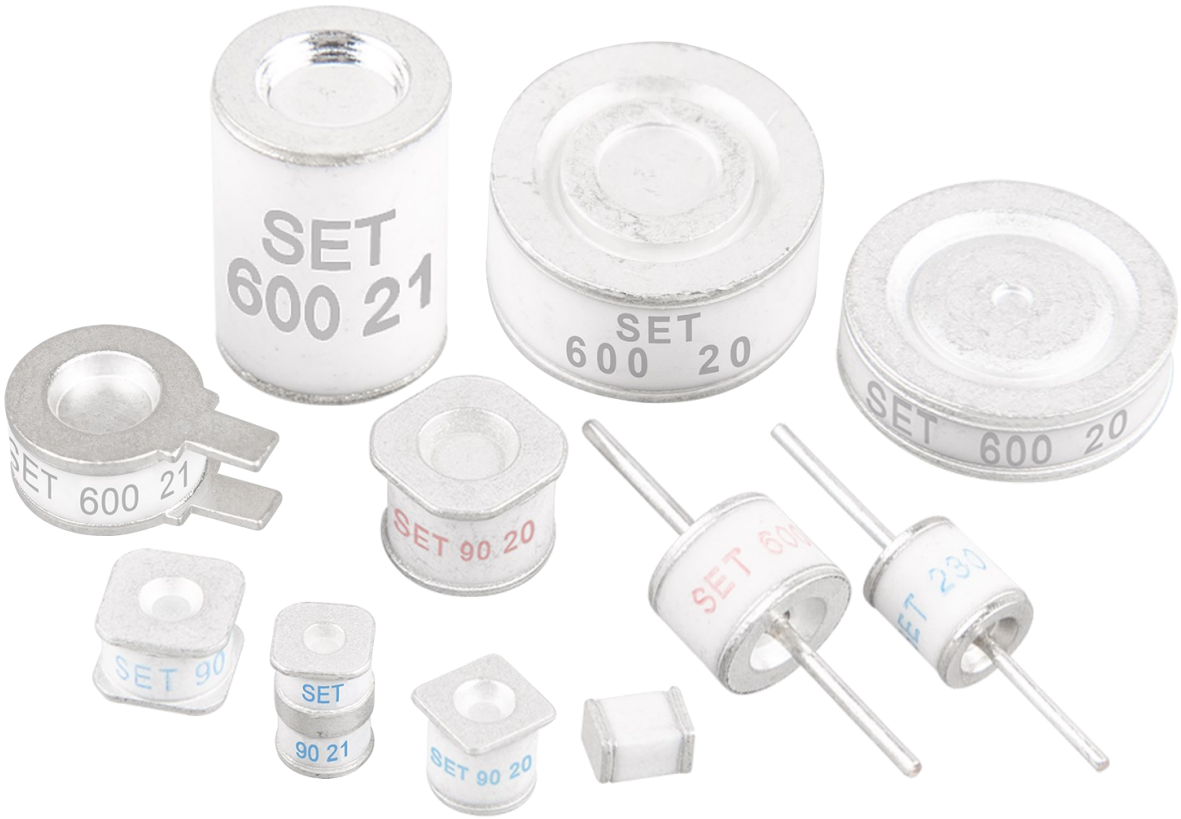
气体放电管
Gas Discharge Tube (GDT)



特征 Features

- 快速响应 Fast Response
- 性能稳定 Stable Performance Over Surfaces Life
- 高通流 High Current Rating
- 低电容 Low Capacitance
- 高绝缘 High Insulation Resistance
- 符合RoHS & REACH要求 RoHS & REACH Compliant

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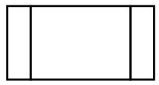
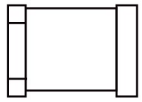
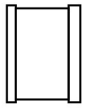
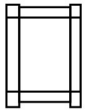
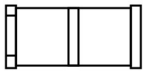
气体放电管特性与型号概览
Gas Discharge Tube (GDT) Features & Model List Overview

直流击穿电压 DC Spark-over Voltage (V) \ 型号 Model	13	14	15	16	17	19	18	20	21
2000	○	○	○	○	○	○	○	○	○
1500	○	○	○	○	SD	SM	○	○	○
1200	○	○	○	○	SD	○	SS	○	○
1000	○	○	○	○	SD	SM	SS	○	○
800	○	○	○	SN	SD	SM	SS	○	○
600	○	SW	SX	SN	SD	SM	SS	SC	TZ
470	○	○	○	○	○	SM	SS	○	TZ
420	SZ	SW	SX	SN	SD	SM	SS	SC	TZ
350	○	○	○	SN	SD	SM	SS	○	TZ
300	SZ	SW	SX	SN	○	○	SS	SC	○
250	○	○	○	○	○	SM	SS	○	○
230	○	SW	SX	SN	SD	SM	SS	SC	TZ
200	SZ	SW	SX	SN	SD	SM	SS	SC	TZ
150	SZ	SW	SX	SN	SD	SM	SS	SC	TZ
90	SZ	SW	SX	SN	SD	SM	SS	SC	TZ
75	○	○	○	SN	SD	○	SS	○	TZ
70	○	○	○	SN	○	SM	○	○	○
尺寸 Size (mm)	1.6 × 1.6 × 3.2	3.2 × 2.5 × 2.5	4.5 × 3.2 × 2.7	5 × 5 × 4.2	Φ5 × 5	Φ9.3 × 6	6.2 × 6.2 × 4.2	8.3 × 8.3 × 6	Φ5 × 7.6
冲击放电电流 Impulse Discharge Current (kA)	0.5	1	1 / 2	5	5	20	5	20	5 / 10
产品结构 Product Structure	 贴片结构（全方） SMD Shape (Square)				 贴片结构（一端是正方形，另一端是圆形） SMD Shape (One end is square and the other is round)		 贴片结构（两端为正方形，中间圆形） SMD Shape (Middle circle and square at both ends)	 贴片形状（八边形） SMD Shape (Octagon)	 贴片结构（一端是正方形，另一端和中间是圆形） SMD Shape (One end is square and the other is round)
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气体放电管
Gas Discharge Tube (GDT)

气体放电管特性与型号概览
Gas Discharge Tube (GDT) Features & Model List Overview

直流击穿电压 DC Spark-over Voltage (V) \ 型号 Model	22	23	26	27	29	31	32	24	25
3600	SF	SE	○	○	○	○	○	○	○
3000	SF	SE	○	○	○	○	○	○	○
2500	SF	SE	○	○	○	○	SPI	○	○
2000	○	○	SPA	○	○	○	○	○	○
1500	SF	SE	SPA	SPB	SPC	SPJ	SPI	○	○
1400	○	○	○	○	○	○	○	○	○
1000	○	○	○	SPB	SPC	SPJ	SPI	○	○
800	SF	SE	SPA	SPB	SPC	SPJ	SPI	○	○
600	SF	SE	SPA	SPB	SPC	SPJ	SPI	TB	TR
470	SF	SE	SPA	○	○	○	○	TB	TR
420	○	○	○	○	○	○	○	TB	TR
350	SF	SE	SPA	SPB	SPC	SPJ	SPI	TB	TR
300	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	SPJ	○	○	○
230	SF	SE	○	○	SPC	SPJ	○	TB	TR
200	○	○	○	○	○	○	○	○	○
150	SF	SE	○	○	SPC	○	○	TB	TR
90	SF	SE	○	SPB	SPC	○	○	TB	TR
75	○	○	○	○	○	○	○	○	○
70	○	○	○	○	○	○	○	○	○
尺寸 Size (mm)	Φ5.5 × 6	Φ8 × 6	Φ11.8 × 16	Φ11.8 × 6.2	Φ11.8 × 4.2	Φ16 × 4.5	Φ16 × 8	Φ6 × 8.5	Φ8 × 10
冲击放电电流 Impulse Discharge Current (kA)	3 / 5 / 10	5 / 10 / 20	30	20			40	5 / 10	5 / 10 / 20
产品结构 Product Structure	轴向形状 Axial Shape							径向形状 Radial Shape	

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气体放电管
Gas Discharge Tube (GDT)

产品描述 Description

气体放电管是一种在金属电极和金属化陶瓷的空间里，充入一定比例的惰性气体或其它混合气体等放电介质，经过高温封接而成单间隙或多间隙的开关型防护器件。当被保护的电路或设备受到浪涌冲击时，放电管将从高阻抗状态变为低阻抗状态并释放浪涌能量，降低电路残压，进而保护设备或人身免受瞬态过电压的危害。赛尔特公司的气体放电管产品电压70 ~ 4500 V，通流（@8/20 μs）0.5 ~ 200 kA全系列覆盖，被广泛应用在信号、电源及各类端口的过压防护；安规认证包括：UL、CUL、TUV，同时满足RoHS、REACH要求。

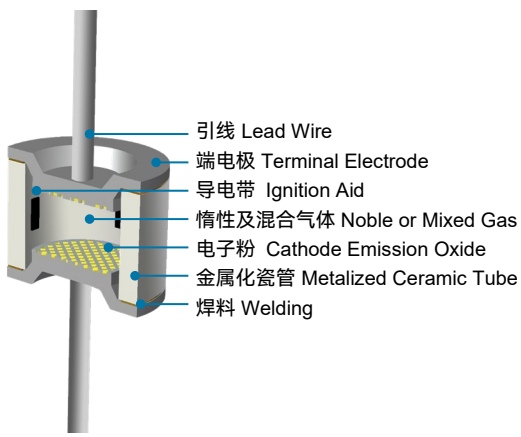
The Gas Discharge Tube (GDT) is a protective device which is filled with certain proportion of noble gas, or mixed gas or other discharge media in the space between metal electrodes and metalized ceramics, and then sealed at high temperature to form a single-gap or multi-gap switch type protective device. When the protected circuit or equipment suffers to surge, GDT will change from high impedance state to low impedance state and release the surge energy to reduce the residual voltage of the circuit, and then protect the equipment or human body from the hazard of transient overvoltage. SETsafe | SETfuse GDT product the voltage range 70 to 4500 V, and surge current (@8/20 μs) range 0.5 to 200 kA. It is widely used in the overvoltage protection of signals, power supplies and various ports; safety regulations Certificates include UL, cUL, TUV, and it meets for RoHS & REACH requirements.

应用 Applications

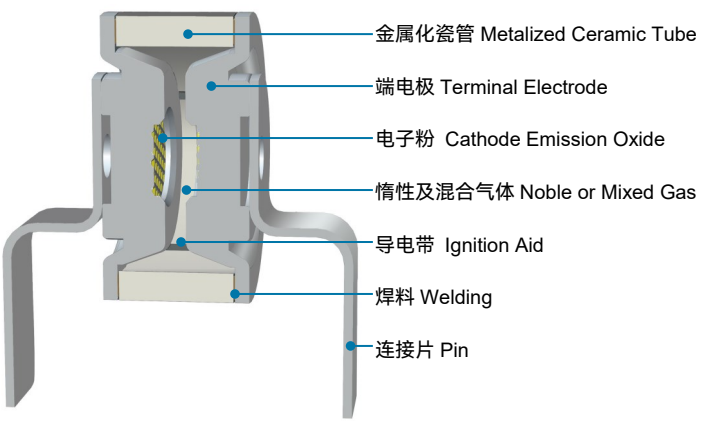
- 宽带 WLAN xDSL
- 有线电视 CATV
- 配线架 MDF
- 数据端口 Ethernet
- 基站 BTS (Base Station)
- 天线 Antenna and RF
- 电源 Power Supply
- 消费类电子 Consumer Electronics
- 交流电源的N-PE保护 N-PE Protection in AC Power

结构图 Structure

中小通流 Small and Medium Surge GDT



大通流 Heavy Surge GDT



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编码系统 Part Numbering System

中小通流 Small and Medium Surge GDT

SE 601 H - L

- L：引线类型 Lead Type
  (L：带引线；空白：无引线；贴片：SMD) (L: Lead Wire, Blank: without Lead Wire, SMD)
- H：冲击放电电流 Impulse Discharge Current
  (I_n = T: 3 kA, A: 5 kA, M: 10 kA, H: 20 kA)
- 601：直流击穿电压（100V/s）D.C. Spark-over Voltage (100 V/s)
  (601: 60×10^1)
- SE：产品系列（见气体放电管特性型号概览）
  Product Series (Ref. GDT Features & Model List Overview)

大通流 Heavy Surge GDT

SP I 601 D - XX

- XX：连接片类型 Pin Type
  (A：无连接片；B：单连接片；C：双连接片；0，1，2 .....各种不同连接片)
  (A: No Pin, B: Single Pin, C: Double Pins, 0,1, 2.....with Different Pins)
- D：标称放电电流 Nominal Discharge Current
  (I_n = H: 20 kA, D: 40 kA, E: 50 kA, F: 60 kA)
- 601：直流击穿电压（100 V/s）D.C. Spark-over Voltage (100 V/s)
  (601: 60×10^1)
- I：产品结构（见气体放电管特性型号概览）
  Product Structure (Ref. GDT Features & Model List Overview)
- SP：产品系列：SP系列
  Product Series (SP Series)

产品分类 Product Category

中小通流 Small and Medium Surge GDT 系列 Series	大通流 Heavy Surge GDT 系列 Series
SZ、SW、SX、SN、SD、SS、SM、SC、SF、SE、TB、TR。	SPA、SPB、SPC、SPJ、SPI。

GDT

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安规认证 Agency Approvals

认证标志 Agency Mark	标准 Standards	认证号 File No.	类别 Category
	UL 497B	E513446	QVGQ2
	UL1449	E322662	VZCA2
	EN 61643-311	No.B107221001 Rev.00	N/A
	EN 61643-311	No.B107221002 Rev.00	N/A
	EN 61643-311	No.B107221003 Rev00	N/A
	EN 61643-311	认证中 On-going	N/A

GDT

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术语 Glossary

项目 Item	描述 Description
V_s	**直流击穿电压 D.C.Spark-over Voltage** 气体放电管两端施加一个缓慢上升使其击穿的直流电压 The voltage at which the gas discharge tube sparks over with slowly increasing d.c. voltage . — (IEC 61643—311)
V	**冲击击穿电压 Impulse Spark-over Voltage** 从施加给定波形的冲击起直至开始有电流流通的这段时间内，气体放电管两端子上出现的最高电压。 The highest Voltage which appears across the terminals of a gas discharge tube in the period between the application of an impulse of given wave-shape and the time when current begins to flow. — (ITU - T K.12)
V_a	**弧光电压 arc Voltage** 在低阻抗或正常动作状态下,弧光电流流过气体放电管时的电压降。 Voltage drop across the GDT during arc current flow. — (IEC 61643 - 311)
V_{gl}	**辉光电压 Glow Voltage** 辉光电流流经期间,跨越 GDT 的电压降的峰值，它有时也被称为辉 光模式电压。 He peak value of the voltage drop across the GDT when a glow-current is flowing. It is sometimes called the glow mode voltage. — (ITU - T K.12)
8/20 μs	**8/20 冲击电流 8/20 Current Impulse** 一个上升时间为8 μs,半峰值时间为20 μs的冲击电流波形。 Current impulse with a nominal virtual front time of 8 μs and a nominal time to half-value of 20 μs. — (IEC 61643 - 11)
1.2/50 μs	**1.2/50 Voltage Impulse** 一个上升时间为1.2 μs，半峰值时间为50 μs的冲击电压波形。 Voltage impulse with a nominal virtual front time of 1.2 μs and a nominal time to half-value of 50 μs. — (IEC 61643 - 11)
I	**交流放电电流 Alternating Discharge Current** 流经气体放电管的近似正弦交流电流的有效值。 The r.m.s. value of an approximately sinusoidal alternating current passing through the gas discharge tube. — (ITU - T K.12)
I_n	**标称放电电流 Nominal Discharge Current** 允许通过气体放电管波形为8/20 μs冲击电流值。 Crest value of the current through the GDT having a current waveshape of 8/20 μs. — (IEC 61643 - 11)
I_{max}	**最大放电电流 Maximum Discharge Current** 允许通过气体放电管波形为8/20 μs冲击电流最大值，该由制造厂商自行规定，一般I_{max}大于I_n。 Crest value of a current through the GDT having an 8/20 μs waveshape and magnitude according to the manufacturers specification. I_{max} is equal to or greater than I_n. — (IEC 61643 - 11)

GDT

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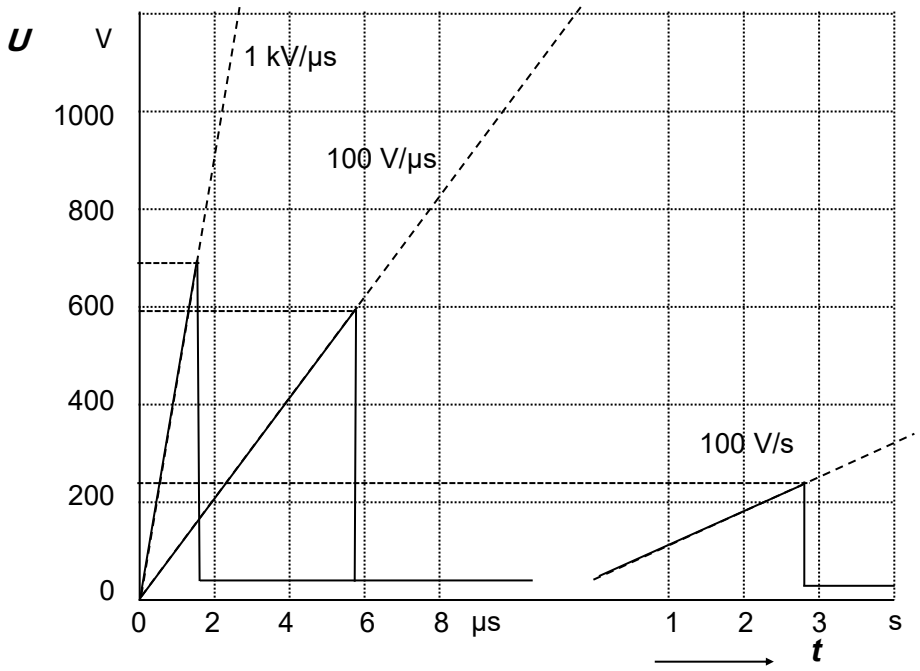
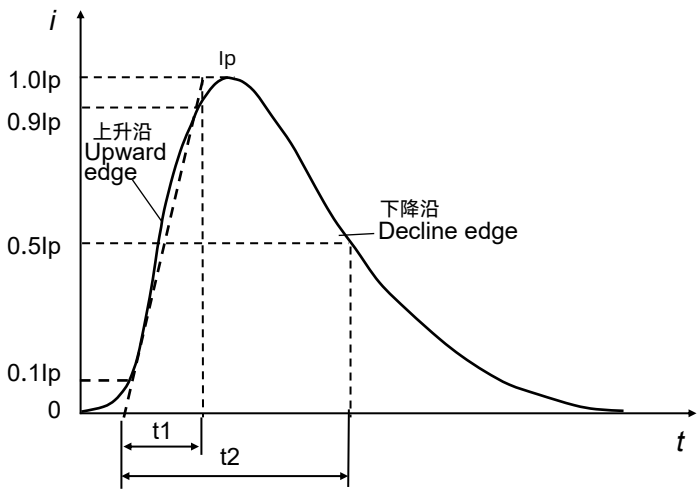
击穿电压参考曲线（参照230 VDC）
Performance Curve for Spark-over Voltage



动态响应
Dynamic Response
冲击击穿电压
Impulse Spark-over Voltage
(100 V/μs、1 kV/μs)

静态响应
Static Response
直流击穿电压
D.C.Spark-over Voltage(100 V/s)

冲击电流的参考曲线
Performance Curve for Impulse Discharge Current



Ip: 峰值电流 Peak current
t1: 上升时间微秒 Rise time in μs
t2: 至半峰值的延迟时间微秒
Decay time to half value in μs

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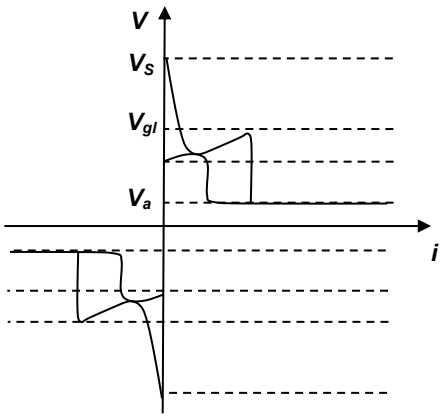
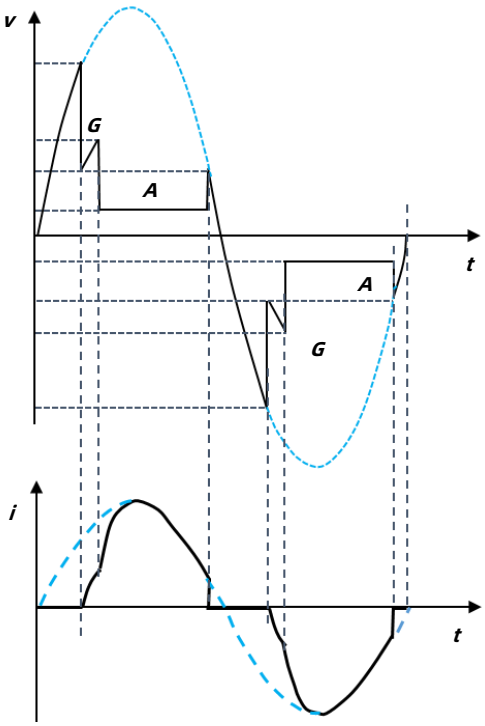
气体放电管
Gas Discharge Tube (GDT)

电气特性 Electrical Characteristics



电压和电流之间的关系
Relationship between Current and Voltage

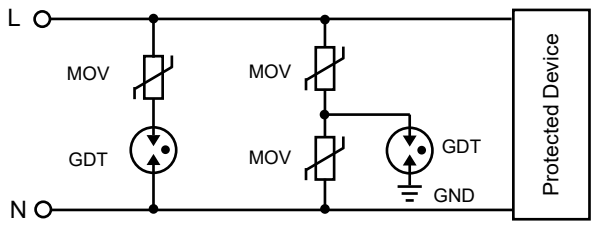
V_s : 击穿电压 Spark - over Voltage
V_{gl} : 辉光电压 Glow Voltage
V_a : 弧光电压 Arc Voltage
G : 辉光模式 Glow Mode
A : 弧光模式 Arc Mode



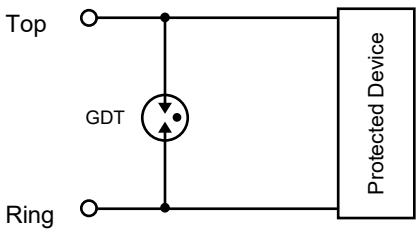
电压和电流的时间变化模式
Time Variation Patterns of Voltage and Current

应用案例 Application Example

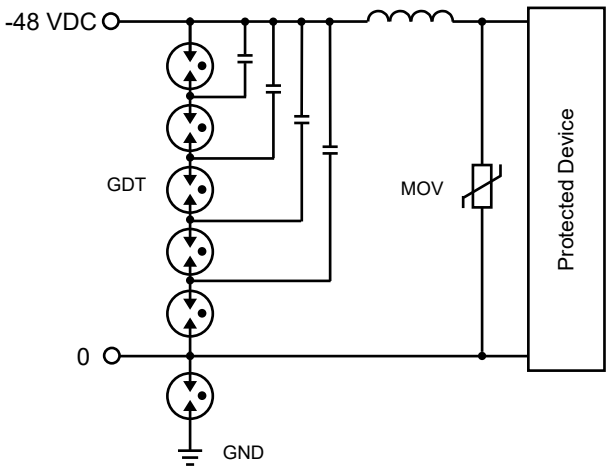
交流电源保护 AC Power Protection



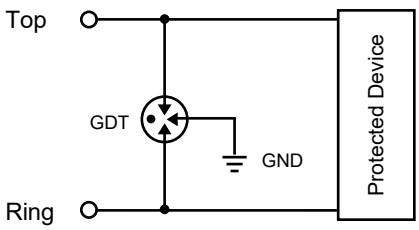
二极气体放电管信号线路保护
2-Electrod GDT Signal Circuit Protection



直流电源保护 DC Power Protection



三极气体放电管信号线路保护
3-Electrod GDT Signal Circuit Protection



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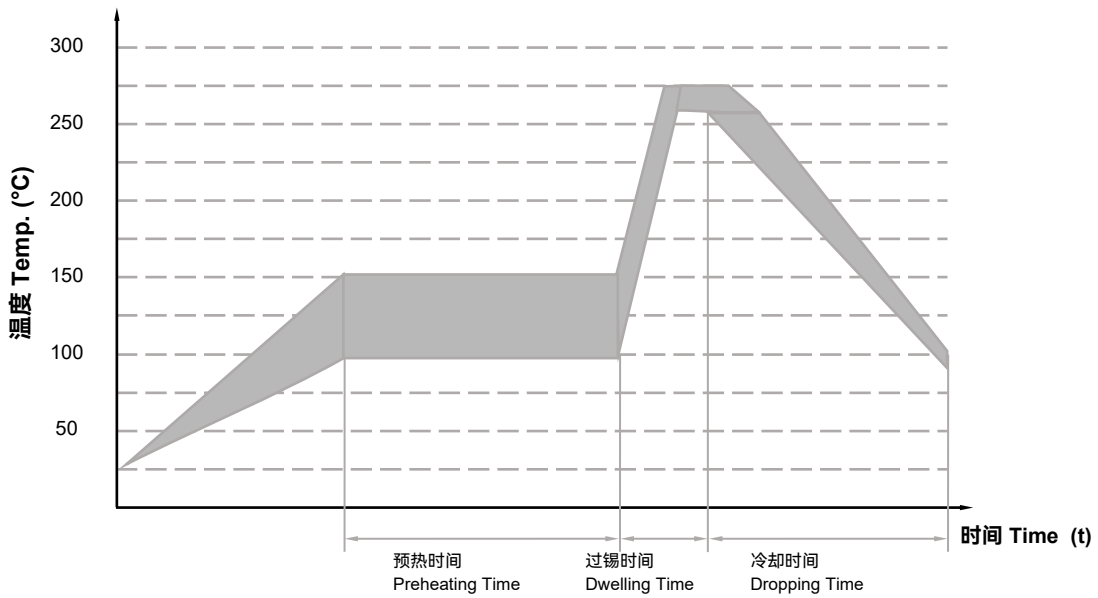
手工焊接推荐参数 Recommended Hand-solder Parameters

项目 Items	条件 Condition
铬铁温度 Iron Temperature	350 °C (Max.)
焊接时间 Soldering Time	4 s (Max.)
焊接点离产品本体位置 Space between Soldering Point and the Bottom of Product	2 mm (Min.)

波峰焊曲线（参考）Wave Soldering Parameters (Reference)



项目 Item	温度 Temp. (°C)	时间 Time (s)
预热 Preheating	90 ~ 150	< 150
过锡 Dwelling	255 ~ 280	3 ~ 10

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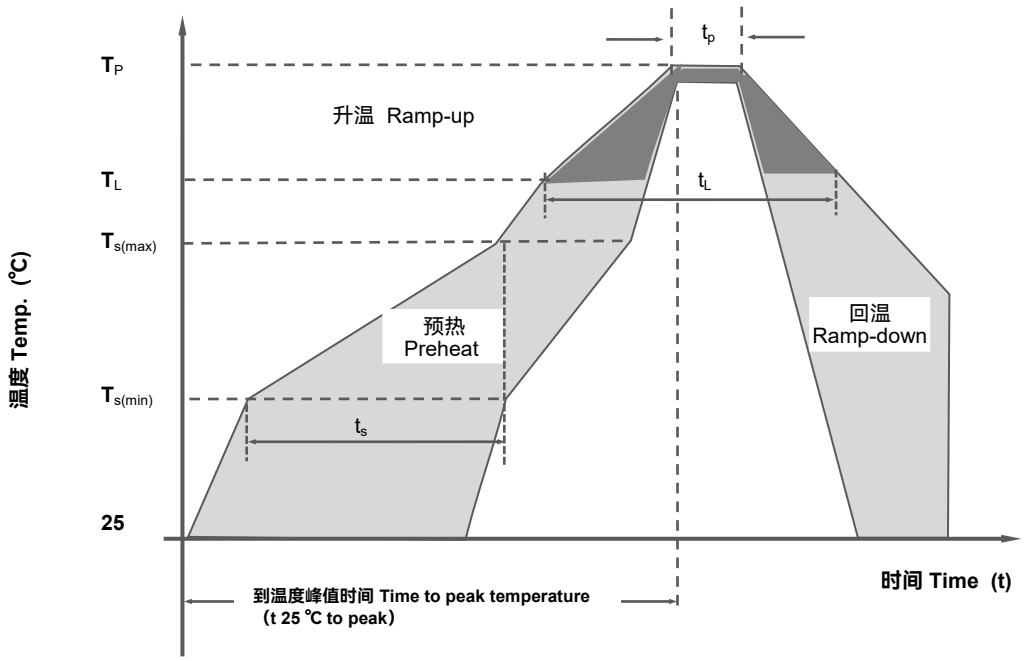
回流焊参数（参考） Reflow Soldering Parameters (Reference)



回流焊条件 Reflow Condition		无铅产线 Pb-Free Assembly
预热 Pre Heat	最低温度 Temp. Min $T_{s(min)}$	150 ℃
	最高温度 Temp. Max $T_{s(max)}$	200 ℃
	最低温到最高温时间 Time (Min to Max) t_s	(60 ~ 180) s
平均温升率(熔化温度至峰值) Average ramp up rate (Liquidus Temp (T_L) to peak)		3 ℃/second max
预热温区温升率 $T_{s(max)}$ to TL Ramp-up Rate		5 ℃/second max
洄流焊 Re-flow	熔化温度 Temperature (T_L) (Liquidus)	217 ℃
	熔化时间 Temperature (t_L)	(60 ~ 150) s
最高温度 Peak Temperature (T_P)		(255 ~ 260) ℃
最高温度的维持时间 Time within 5 ℃ of actual peak Temperature (t_P)		≈ 10 s
回温速率 Ramp-down Rate		6 ℃/second max
从25 ℃到最高温度时间 Time 25 ℃ to peak Temperature (T_P)		8 minutes max
不超过 Do not exceed		260 ℃

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注意

ATTENTION

使用方法 Usage

1. 在电源线路中最大运行电压超过气体放电管的最小开启电压，不能使用气体放电管。
   Do not operate gas discharge tube in power supply networks, whose maximum operation voltage exceeds the minimum Spark - overvoltage of the gas discharge tube.
2. 气体放电管在长时间电流压力下会变热（起火），这种过载将使连接器失效或器件损坏。
   Gas discharge tube may become hot in the event of longer periods of current stress (burn risk). In the event of overload the connectors may fail or the component may be destroyed.
3. 如果气体放电管的接触有缺陷，超载的电流能引产生火花和大的噪音。
   If the contacts of the surge arresters are defective, current load can cause sparks and loud noises.
4. 气压在55 kPa 到106 kPa，对应海拔为+5000 m到− 500 m。
   Air pressure is 55 kPa to 106 kPa. These values represent an altitude of +5000 m to –500 m, respectively.

更换 Replace

气体放电管是不可返修的产品,安全起见，建议采用同类型产品进行更换。
GDT is a non-repairable product. For safety sake, please use equivalent GDT for replacement.

存贮 Storage

要包装好的放电管应置于干燥、通风和无腐蚀的环境中。
The packaged GDT should be placed in a dry, ventilation and non-corrosive environment.

安装位置 Installation Position

不要将陶瓷气体放电管安装在人体可碰触到的位置。
Do not install the GDT where the human body may touch it.

机械应力 Mechanical Stress

装配时不要采取敲击等暴力动作，以免产品失效。
Do not take violent action such as knocking when assembling to avoid product failure.

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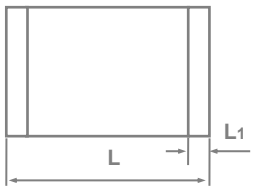
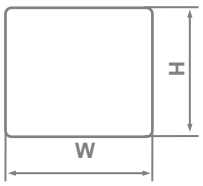
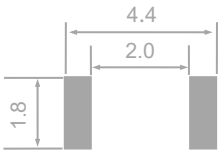
气体放电管
Gas Discharge Tube (GDT)







焊盘推荐尺寸
Recommended Pad Size (mm)

尺寸 Dimensions (mm)

L	W	H	L_1
3.2 ± 0.3	1.6 ± 0.2	1.6 ± 0.2	0.4

技术参数 Specifications

型号 Model	直流击穿电压 D.C.Spark-over Voltage @100V/s	电压范围 Tolerance of V_s	冲击击穿电压 Impulse Spark-over Voltage @1kV/μs	弧光电压 Arc Voltage @1 A	冲击放电电流 Impulse Discharge Current @8/20μs	交流放电电流 Alternating Discharge Current @50Hz 1 s	绝缘电阻 Insulation Resistance		电容 Capacitance 0.5VDC @1MHz	安规认证 Agency Approvals	
	V_s	V_s	V	V_a	I_n	I	V_{DC}	IR	C		
	V	V	V	V	kA	A (r.m.s.)	V	GΩ	(pF)	UL497B	TUV
SZ091Z - SMD	90	63 ~ 118	≤ 900	≈ 8	0.5	0.5	50	≥ 1	≤ 0.5	●	○
SZ151Z - SMD	150	105 ~ 195	≤ 900	≈ 8	0.5	0.5	50	≥ 1	≤ 0.5	●	○
SZ201Z - SMD	200	120 ~ 280	≤ 900	≈ 10	0.5	0.5	100	≥ 1	≤ 0.5	●	○
SZ231Z - SMD	230	153 ~ 300	≤ 1000	≈ 10	0.5	0.5	100	≥ 1	≤ 0.5	●	○
SZ301Z - SMD	300	210 ~ 390	≤ 1100	≈ 10	0.5	0.5	100	≥ 1	≤ 0.5	●	○
SZ351Z - SMD	350	245~ 455	≤ 1200	≈ 10	0.5	0.5	100	≥ 1	≤ 0.5	●	○
SZ401Z - SMD	400	280 ~ 520	≤ 1200	≈ 12	0.5	0.5	100	≥ 1	≤ 0.5	●	○
SZ471Z - SMD	470	330 ~ 610	≤ 1400	≈ 12	0.5	0.5	100	≥ 1	≤ 0.5	●	○

备注 Note:

1.以上参数基于ITU－T K12 & IEC61643.311的标准。The above parameters based on ITU - T K12 & IEC61643.311 standards.

2.“●”表示产品已通过认证。 Means GDT has gained the certification.

“O”表示产品即将申请认证。 Means GDT product is planned to apply for certification.

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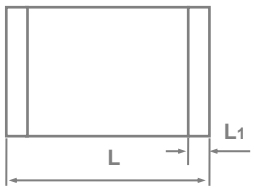
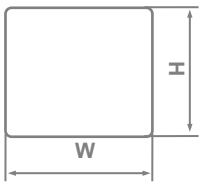
气体放电管
Gas Discharge Tube (GDT)

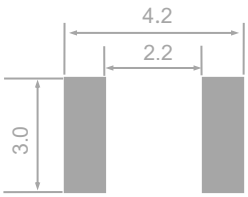
SW系列 Series





尺寸 Dimensions (mm)

L	W	H	L_1
3.2 ± 0.3	2.5 ± 0.2	2.5 ± 0.2	0.4



焊盘推荐尺寸
Recommended Pad Size (mm)

GDT

技术参数 Specifications

型号 Model	直流击穿电压 D.C.Spark-over Voltage @100V/s	电压范围 Tolerance of V_s	冲击击穿电压 Impulse Spark-over Voltage @1kV/μs	弧光电压 Arc Voltage @1 A	冲击放电电流 Impulse Discharge Current @8/20μs	交流放电电流 Alternating Discharge Current @50Hz 1 s	绝缘电阻 Insulation Resistance		电容 Capacitance 0.5VDC @1MHz	安规认证 Agency Approvals	
	V_s	V_s	V	V_a	I_n	I	V_{DC}	IR	C	UL	TUV
	V	V	V	V	kA	A (r.m.s.)	V	GΩ	(pF)	UL497B	TUV
SW075Y - SMD	75	57 ~ 93	≤ 650	≈ 8	1	1	50	≥ 1	≤ 0.6	●	○
SW091Y - SMD	90	72 ~ 108	≤ 600	≈ 8	1	1	50	≥ 1	≤ 0.6	●	○
SW151Y - SMD	150	120 ~ 180	≤ 600	≈ 8	1	1	50	≥ 1	≤ 0.6	●	○
SW201Y - SMD	200	160 ~ 240	≤ 700	≈ 10	1	1	100	≥ 1	≤ 0.6	●	○
SW231Y - SMD	230	184 ~ 280	≤ 700	≈ 10	1	1	100	≥ 1	≤ 0.6	●	○
SW301Y - SMD	300	240 ~ 360	≤ 800	≈ 10	1	1	100	≥ 1	≤ 0.6	●	○
SW351Y - SMD	350	280 ~ 420	≤ 1000	≈ 10	1	1	100	≥ 1	≤ 0.6	●	○
SW401Y - SMD	400	320 ~ 480	≤ 1000	≈ 10	1	1	100	≥ 1	≤ 0.6	●	○
SW421Y - SMD	420	336 ~ 504	≤ 1000	≈ 12	1	1	100	≥ 1	≤ 0.6	●	○
SW471Y - SMD	470	376 ~ 564	≤ 1200	≈ 12	1	1	100	≥ 1	≤ 0.6	●	○
SW601Y - SMD	600	480 ~ 720	≤ 1400	≈ 15	1	1	100	≥ 1	≤ 0.6	●	○

备注 Note:

1.以上参数基于ITU - T K12 & IEC61643.311的标准。The above parameters based on ITU - T K12 & IEC61643.311 standards.

2.“●”表示产品已通过认证。 Means GDT has gained the certification.

“O”表示产品即将申请认证。 Means GDT product is planned to apply for certification.

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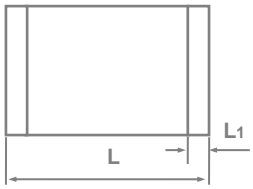
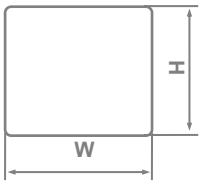
气体放电管
Gas Discharge Tube (GDT)

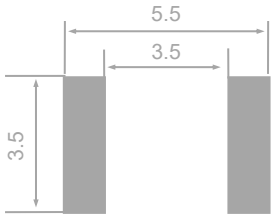
SX系列 Series





尺寸 Dimensions (mm)

L	W	H	L_1
4.5 ± 0.3	3.2 ± 0.2	2.7 ± 0.2	0.4



焊盘推荐尺寸
Recommended Pad Size (mm)

技术参数 Specifications

型号 Model	直流击穿电压 D.C.Spark-over Voltage @100V/s	电压范围 Tolerance of V_s	冲击击穿电压 Impulse Spark-over Voltage @1kV/μs	弧光电压 Arc Voltage @1 A	冲击放电电流 Impulse Dicharge Current @8/20μs	交流放电电流 Alternating Discharge Current @50Hz 1 s	绝缘电阻 Insulation Resistance		电容 Capacitance 0.5VDC @1MHz	安规认证 Agency Approvals	
	V_s	V_s	V	V_a	I_n	I	V_{DC}	IR	C	UL	TÜVRheinland
	V	V	V	V	kA	A (r.m.s.)	V	GΩ	(pF)	UL497B	TUV
SX091Y - SMD	90	72 ~ 108	≤ 600	≈8	1	1	50	≥ 1	≤ 0.6	●	○
SX151Y - SMD	150	120 ~ 180	≤ 600	≈ 8	1	1	50	≥ 1	≤ 0.6	●	○
SX201Y - SMD	200	160 ~ 240	≤ 700	≈ 10	1	1	100	≥ 1	≤ 0.6	○	○
SX231Y - SMD	230	184 ~ 280	≤ 700	≈ 10	1	1	100	≥ 1	≤ 0.6	●	○
SX301Y - SMD	300	240 ~ 360	≤ 800	≈ 10	1	1	100	≥ 1	≤ 0.6	○	○
SX351Y - SMD	350	280 ~ 420	≤ 1000	≈ 10	1	1	100	≥ 1	≤ 0.6	●	○
SX401Y - SMD	400	320 ~ 480	≤ 1000	≈ 12	1	1	100	≥ 1	≤ 0.6	○	○
SX421Y - SMD	420	336 ~ 504	≤ 1000	≈ 12	1	1	100	≥ 1	≤ 0.6	○	○
SX471Y - SMD	470	376 ~ 564	≤ 1200	≈ 12	1	1	100	≥ 1	≤ 0.6	●	○
SX601Y - SMD	600	480 ~ 720	≤ 1400	≈ 15	1	1	100	≥ 1	≤ 0.6	○	○
SX091X - SMD	90	72 ~ 108	≤ 600	≈ 8	2	2	50	≥ 1	≤ 0.6	●	○
SX151X - SMD	150	120 ~ 180	≤ 600	≈ 8	2	2	50	≥ 1	≤ 0.6	●	○
SX201X - SMD	200	160 ~ 240	≤ 700	≈ 10	2	2	100	≥ 1	≤ 0.6	○	○
SX231X - SMD	230	184 ~ 280	≤ 700	≈ 10	2	2	100	≥ 1	≤ 0.6	●	○
SX301X - SMD	300	240 ~ 360	≤ 800	≈ 10	2	2	100	≥ 1	≤ 0.6	○	○
SX351X - SMD	350	280 ~ 420	≤ 1000	≈ 10	2	2	100	≥ 1	≤ 0.6	●	○
SX401X - SMD	400	320 ~ 480	≤ 1000	≈ 12	2	2	100	≥ 1	≤ 0.6	○	○
SX421X - SMD	420	336 ~ 504	≤ 1000	≈ 12	2	2	100	≥ 1	≤ 0.6	○	○
SX471X - SMD	470	376 ~ 564	≤ 1200	≈ 12	2	2	100	≥ 1	≤ 0.6	●	○
SX601X - SMD	600	480 ~ 720	≤ 1400	≈ 15	2	2	100	≥ 1	≤ 0.6	○	○

备注 Note:

1.以上参数基于ITU－T K12 & IEC61643.311的标准。The above parameters based on ITU - T K12 & IEC61643.311 standards.

2.“●”表示产品已通过认证。 Means GDT has gained the certification.

“O”表示产品即将申请认证。 Means GDT product is planned to apply for certification.

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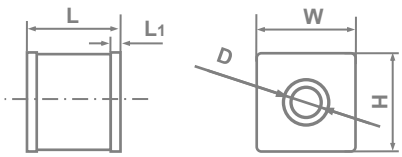
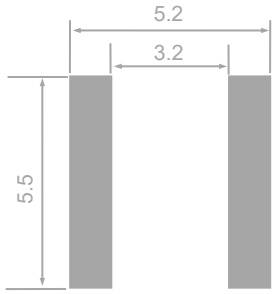
气体放电管
Gas Discharge Tube (GDT)

SN系列 Series



尺寸 Dimensions (mm)

L	W	H
4.2 ± 0.3	5.0 ± 0.2	5.0 ± 0.2
D	L_1	
Φ1.4	0.5	



焊盘推荐尺寸
Recommended Pad Size (mm)

技术参数 Specifications

型号 Model	直流击穿电压 D.C.Spark-over Voltage @100V/s	电压范围 Tolerance of V_s	冲击击穿电压 Impulse Spark-over Voltage @1kV/μs	弧光电压 Arc Voltage @1 A	冲击放电电流 Impulse Discharge Current @8/20μs	交流放电电流 Alternating Discharge Current @50Hz 1 s	绝缘电阻 Insulation Resistance		电容 Capacitance 0.5VDC @1MHz	安规认证 Agency Approvals	
	V_s	V_s	V	V_a	I_n	I	V_{DC}	IR	C	UL	TÜVRheinland
	V	V	V	V	kA	A (r.m.s.)	V	GΩ	(pF)	UL497B	TUV
SN071A - SMD	70	52 ~ 88	≤ 600	≈ 8	5	5	25	≥ 1	≤ 1.0	●	○
SN075A - SMD	75	57 ~ 93	≤ 650	≈ 8	5	5	25	≥ 1	≤ 1.0	●	○
SN091A - SMD	90	72 ~ 108	≤ 600	≈ 8	5	5	50	≥ 1	≤ 1.0	●	○
SN151A - SMD	150	120 ~ 180	≤ 600	≈ 8	5	5	50	≥ 1	≤ 1.0	●	○
SN201A - SMD	200	160 ~ 240	≤ 700	≈ 10	5	5	100	≥ 1	≤ 1.0	●	○
SN231A - SMD	230	184 ~ 280	≤ 700	≈ 10	5	5	100	≥ 1	≤ 1.0	●	○
SN301A - SMD	300	240 ~ 360	≤ 800	≈ 10	5	5	100	≥ 1	≤ 1.0	●	○
SN351A - SMD	350	280 ~ 420	≤ 1000	≈ 10	5	5	100	≥ 1	≤ 1.0	●	○
SN401A - SMD	400	320 ~ 480	≤ 1000	≈ 10	5	5	100	≥ 1	≤ 1.0	●	○
SN421A - SMD	420	336 ~ 504	≤ 1000	≈ 12	5	5	100	≥ 1	≤ 1.0	●	○
SN471A - SMD	470	376 ~ 564	≤ 1020	≈ 12	5	5	100	≥ 1	≤ 1.0	●	○
SN601A - SMD	600	480 ~ 720	≤ 1400	≈ 15	5	5	100	≥ 1	≤ 1.0	●	○
SN801A - SMD	800	640 ~ 960	≤ 1600	≈ 15	5	5	100	≥ 1	≤ 1.0	●	○

备注 Note:

1.以上参数基于ITU－T K12 & IEC61643.311的标准。The above parameters based on ITU - T K12 & IEC61643.311 standards.

2.“●”表示产品已通过认证。 Means GDT has gained the certification.

“O”表示产品即将申请认证。 Means GDT product is planned to apply for certification.

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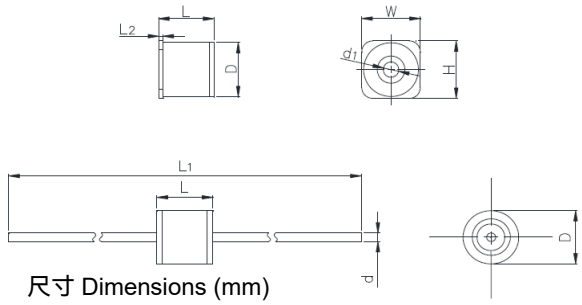
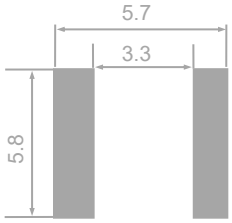
气体放电管
Gas Discharge Tube (GDT)

SD系列 Series



尺寸 Dimensions (mm)

L	L_1	H	W
5.0 ± 0.3	62.0 ± 3.0	5.3 ± 0.2	5.3 ± 0.2
L_2	D	d	d_1
0.5	Φ5.0 ± 0.2	Φ0.8	Φ1.4



焊盘推荐尺寸
Recommended Pad Size (mm)

技术参数 Specifications

型号 Model	直流击穿电压 D.C.Spark-over Voltage @100V/s	电压范围 Tolerance of V_s	冲击击穿电压 Impulse Spark-over Voltage @1kV/μs	弧光电压 Arc Voltage @1 A	冲击放电电流 Impulse Discharge Current @8/20μs	交流放电电流 Alternating Discharge Current @50Hz 1 s	绝缘电阻 Insulation Resistance		电容 Capacitance 0.5VDC @1MHz	安规认证 Agency Approvals	
	V_s	V_s	V	V_a	I_n	I	V_{DC}	IR	C	UL	TUV
	V	V	V	V	kA	A (r.m.s.)	V	GΩ	(pF)	UL497B	TUV
SD071A - *	70	52 ~ 88	≤ 600	≈ 8	5	5	25	≥ 1	≤ 1.0	●	○
SD075A - *	75	57 ~ 93	≤ 650	≈ 8	5	5	25	≥ 1	≤ 1.0	●	○
SD091A - *	90	72 ~ 108	≤ 600	≈ 8	5	5	50	≥ 1	≤ 1.0	●	○
SD151A - *	150	120 ~ 180	≤ 600	≈ 8	5	5	50	≥ 1	≤ 1.0	●	○
SD201A - *	200	160 ~ 240	≤ 700	≈ 10	5	5	100	≥ 1	≤ 1.0	○	○
SD231A - *	230	184 ~ 280	≤ 700	≈ 10	5	5	100	≥ 1	≤ 1.0	●	○
SD251A - *	250	200 ~ 300	≤ 800	≈ 10	5	5	100	≥ 1	≤ 1.0	●	○
SD351A - *	350	280 ~ 420	≤ 1000	≈ 10	5	5	100	≥ 1	≤ 1.0	●	○
SD421A - *	420	336 ~ 504	≤ 1000	≈ 12	5	5	100	≥ 1	≤ 1.0	●	○
SD471A - *	470	376 ~ 564	≤ 1200	≈ 12	5	5	100	≥ 1	≤ 1.0	●	○
SD601A - *	600	480 ~ 720	≤ 1400	≈ 15	5	5	100	≥ 1	≤ 1.0	●	○
SD801A - *	800	640 ~ 960	≤ 1600	≈ 15	5	5	100	≥ 1	≤ 1.0	●	○

备注 Note:

1.以上参数基于ITU－T K12 & IEC61643.311的标准。The above parameters based on ITU - T K12 & IEC61643.311 standards.

2.“●”表示产品已通过认证。 Means GDT has gained the certification.

“O”表示产品即将申请认证。 Means GDT product is planned to apply for certification.

3.“*”表示不同引脚；“SMD”表示贴片结构；“L”表示径向型引脚。
Means different wire, such as “SMD” means SMD shape, “L” means lead wire.

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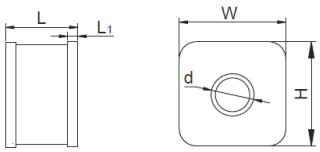
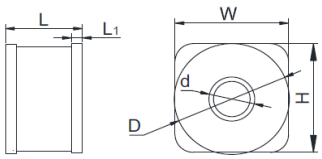
气体放电管
Gas Discharge Tube (GDT)

"F" Type Devices



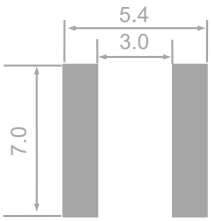
"C" Type Devices



尺寸 Dimensions (mm)

L	W	H
4.2 ± 0.3	6.2 ± 0.2	6.2 ± 0.2
D	**L_1**	**d**
Φ6.2 ± 0.2	0.6	Φ2.5

焊盘推荐尺寸 Recommended Pad Size (mm)



技术参数 Specifications

型号 Model	直流击穿电压 D.C.Spark-over Voltage @100V/s	电压范围 Tolerance of V_s	冲击击穿电压 Impulse Spark-over Voltage @1kV/μs	弧光电压 Arc Voltage @1 A	冲击放电电流 Impulse Discharge Current @8/20μs	交流放电电流 Alternating Discharge Current @50Hz 1 s	绝缘电阻 Insulation Resistance		电容 Capacitance 0.5VDC @1MHz	安规认证 Agency Approvals		
	V_s	V_s	V	V_a	I_n	I	V_{DC}	IR	C			
	V	V	V	V	kA	A (r.m.s.)	V	GΩ	(pF)	UL497B	UL1449	TUV
SS071A - SMD	70	52 ~ 88	≤ 600	≈ 8	5	5	25	≥ 1	≤ 1.0	●	N/A	○
SS075A - SMD	75	57 ~ 93	≤ 650	≈ 8	5	5	25	≥ 1	≤ 1.0	●	N/A	○
SS091A - SMD	90	72 ~ 108	≤ 600	≈ 8	5	5	50	≥ 1	≤ 1.0	●	N/A	○
SS151A - SMD	150	120 ~ 180	≤ 600	≈ 8	5	5	50	≥ 1	≤ 1.0	●	N/A	○
SS201A - SMD	200	160 ~ 240	≤ 700	≈ 10	5	5	100	≥ 1	≤ 1.0	●	N/A	○
SS231A - SMD	230	184 ~ 280	≤ 700	≈ 10	5	5	100	≥ 1	≤ 1.0	○	N/A	○
SS301A - SMD	300	240 ~ 360	≤ 800	≈ 10	5	5	100	≥ 1	≤ 1.0	●	N/A	○
SS351A - SMD	350	280 ~ 420	≤ 1000	≈ 10	5	5	100	≥ 1	≤ 1.0	●	N/A	○
SS401A - SMD	400	320 ~ 480	≤ 1000	≈ 10	5	5	100	≥ 1	≤ 1.0	○	N/A	○
SS421A - SMD	420	336 ~ 504	≤ 1000	≈ 10	5	5	100	≥ 1	≤ 1.0	●	N/A	○
SS471A - SMD	470	376 ~ 564	≤ 1200	≈ 12	5	5	100	≥ 1	≤ 1.0	○	N/A	○
SS601A - SMD	600	480 ~ 720	≤ 1400	≈ 15	5	5	100	≥ 1	≤ 1.0	●	N/A	○
SS801A - SMD	800	640 ~ 960	≤ 1600	≈ 15	5	5	100	≥ 1	≤ 1.0	●	N/A	○
SS122A - SMD	1200	960 ~ 1440	≤ 2400	≈ 15	5	5	100	≥ 1	≤ 1.0	N/A	○	○

备注 Note:

1.以上参数基于ITU－T K12 & IEC61643.311的标准。The above parameters based on ITU - T K12 & IEC61643.311 standards.

2."●"表示产品已通过认证。 Means GDT has gained the certification.

"O"表示产品即将申请认证。 Means GDT product is planned to apply for certification.

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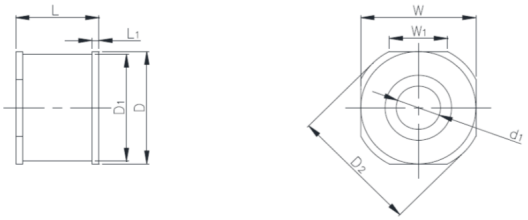
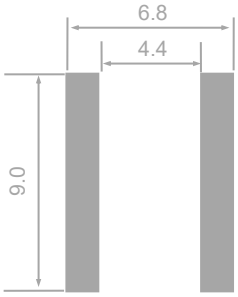
气体放电管
Gas Discharge Tube (GDT)

SM系列 Series



尺寸 Dimensions (mm)

L	W	D	D_1
6.0 ± 0.5	8.3 ± 0.3	Φ8.3 ± 0.3	Φ7.9 ± 0.3
L_1	W_1	D_2	d_1
0.5	4.2	Φ9.3 ± 0.3	3.2



焊盘推荐尺寸
Recommended Pad Size (mm)

技术参数 Specifications

型号 Model	直流击穿电压 D.C.Spark-over Voltage @100V/s	电压范围 Tolerance of V_s	冲击击穿电压 Impulse Spark-over Voltage @1kV/μs	弧光电压 Arc Voltage @1 A	冲击放电电流 Impulse Discharge Current @8/20μs	交流放电电流 Alternating Discharge Current @50Hz 1 s	绝缘电阻 Insulation Resistance		电容 Capacitance 0.5VDC @1MHz	安规认证 Agency Approvals	
	V_s	V_s	V	V_a	I_n	I	V_{DC}	IR	C	UL	TUV
	V	V	V	V	kA	A (r.m.s.)	V	GΩ	(pF)	UL497B	TUV
SM071H - SMD	70	52 ~ 88	≤ 600	≈ 8	20	20	25	≥ 1	≤ 1.5	●	●
SM075H - SMD	75	57 ~ 93	≤ 650	≈ 8	20	20	25	≥ 1	≤ 1.5	●	●
SM091H - SMD	90	72 ~ 108	≤ 600	≈ 8	20	20	50	≥ 1	≤ 1.5	●	●
SM151H - SMD	150	120 ~ 180	≤ 600	≈ 8	20	20	50	≥ 1	≤ 1.5	●	●
SM231H - SMD	230	184 ~ 280	≤ 700	≈ 10	20	20	100	≥ 1	≤ 1.5	●	●
SM251H - SMD	250	200 ~ 300	≤ 800	≈ 10	20	20	100	≥ 1	≤ 1.5	●	●
SM351H - SMD	350	280 ~ 420	≤ 1000	≈ 10	20	20	100	≥ 1	≤ 1.5	●	●
SM421H - SMD	420	336 ~ 504	≤ 1000	≈ 12	20	20	100	≥ 1	≤ 1.5	●	●
SM471H - SMD	470	376 ~ 564	≤ 1200	≈ 12	20	20	100	≥ 1	≤ 1.5	●	●
SM601H - SMD	600	480 ~ 720	≤ 1400	≈ 15	20	20	100	≥ 1	≤ 1.5	●	●
SM801H - SMD	800	640 ~ 960	≤ 1600	≈ 15	20	20	100	≥ 1	≤ 1.5	●	●

备注 Note:

1.以上参数基于ITU－T K12 & IEC61643.311的标准。The above parameters based on ITU - T K12 & IEC61643.311 standards.

2.“●”表示产品已通过认证。 Means GDT has gained the certification.

“O”表示产品即将申请认证。 Means GDT product is planned to apply for certification.

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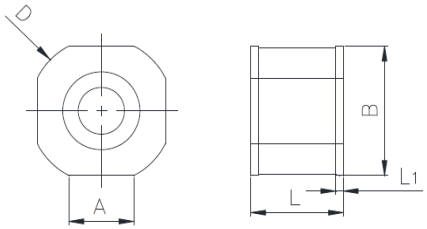
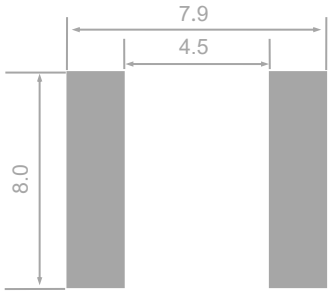
气体放电管
Gas Discharge Tube (GDT)



尺寸 Dimensions (mm)

D	B	L
Φ9.3 ± 0.2	8.3 ± 0.2	6.0 ± 0.2
L_1	A	
0.5	4.2	



焊盘推荐尺寸
Recommended Pad Size (mm)

技术参数 Specifications

型号 Model	直流击穿电压 D.C.Spark-over Voltage @100V/s	电压范围 Tolerance of V_s	冲击击穿电压 Impulse Spark-over Voltage @1kV/μs	弧光电压 Arc Voltage @1 A	冲击放电电流 Impulse Discharge Current @8/20μs	交流放电电流 Alternating Discharge Current @50Hz 1 s	绝缘电阻 Insulation Resistance		电容 Capacitance 0.5VDC @1MHz	安规认证 Agency Approvals	
	V_s	V_s	V	V_a	I_n	I	V_{DC}	IR	C	UL	TÜVRheinland
	V	V	V	V	kA	A (r.m.s.)	V	GΩ	(pF)	UL497B	TUV
SC071H - SMD	70	52 ~ 88	≤ 600	≈ 8	20	20	25	≥ 1	≤ 1.5	●	○
SC075H - SMD	75	57 ~ 93	≤ 650	≈ 8	20	20	25	≥ 1	≤ 1.5	●	○
SC091H - SMD	90	72 ~ 108	≤ 600	≈8	20	20	50	≥ 1	≤ 1.5	●	○
SC151H - SMD	150	120 ~ 180	≤ 600	≈8	20	20	50	≥ 1	≤ 1.5	●	○
SC201H - SMD	200	160 ~ 240	≤ 700	≈10	20	20	100	≥ 1	≤ 1.5	○	○
SC231H - SMD	230	184 ~ 280	≤ 700	≈10	20	20	100	≥ 1	≤ 1.5	●	○
SC251H - SMD	250	200 ~ 300	≤ 700	≈10	20	20	100	≥ 1	≤ 1.5	●	○
SC301H - SMD	300	240 ~ 360	≤ 800	≈10	20	20	100	≥ 1	≤ 1.5	○	○
SC351H - SMD	350	280 ~ 420	≤ 1000	≈10	20	20	100	≥ 1	≤ 1.5	●	○
SC421H - SMD	420	366 ~ 504	≤ 1000	≈12	20	20	100	≥ 1	≤ 1.5	●	○
SC471H - SMD	470	376 ~ 564	≤ 1200	≈12	20	20	100	≥ 1	≤ 1.5	●	○
SC601H - SMD	600	480 ~ 720	≤ 1400	≈15	20	20	100	≥ 1	≤ 1.5	●	○
SC801H - SMD	800	640 ~ 960	≤ 1600	≈ 15	20	20	100	≥ 1	≤ 1.5	●	○

备注 Note:

1.以上参数基于ITU - T K12 & IEC61643.311的标准。The above parameters based on ITU - T K12 & IEC61643.311 standards.

2.“●”表示产品已通过认证。Means GDT has gained the certification.

“O”表示产品即将申请认证。Means GDT product is planned to apply for certification.

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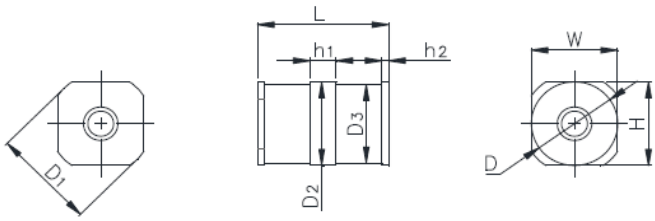
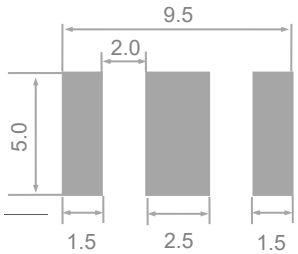
气体放电管
Gas Discharge Tube (GDT)



尺寸 Dimensions (mm)

L	W	H	D	D_1
7.6 ± 0.2	5.0 ± 0.2	5.0 ± 0.2	Φ5.0 ± 0.2	Φ6.0
h_1	h_2	D_2	D_3	
1.5	0.4	Φ5.0 ± 0.2	Φ4.7 ± 0.2	



焊盘推荐尺寸
Recommended Pad Size (mm)

技术参数 Specifications

型号 Model	直流击穿电压 D.C.Spark-over Voltage @100V/s	电压范围 Tolerance of V_s	冲击击穿电压 Impulse Spark-over Voltage @1kV/μs	弧光电压 Arc Voltage @1 A	冲击放电电流 Impulse Discharge Current @8/20μs	交流放电电流 Alternating Discharge Current @50Hz 1 s	绝缘电阻 Insulation Resistance		电容 Capacitance 0.5VDC @1MHz	安规认证 Agency Approvals	
	V_s	V_s	V	V_a	I_n	I	V_{DC}	IR	C	UL	TÜVRheinland
	V	V	V	V	kA	A (r.m.s.)	V	GΩ	(pF)	UL497B	TUV
TZ071A - *	70	53 ~ 88	≤ 650	≈ 8	5	5	25	≥ 1	≤ 1.0	●	○
TZ075A - *	75	57 ~ 93	≤ 650	≈ 8	5	5	25	≥ 1	≤ 1.0	●	○
TZ091A - *	90	72 ~ 108	≤ 600	≈ 8	5	5	50	≥ 1	≤ 1.0	●	○
TZ151A - *	150	120 ~ 180	≤ 600	≈ 8	5	5	50	≥ 1	≤ 1.0	●	○
TZ231A - *	230	184 ~ 280	≤ 700	≈ 10	5	5	100	≥ 1	≤ 1.0	●	○
TZ251A - *	250	200 ~ 300	≤ 700	≈ 10	5	5	100	≥ 1	≤ 1.0	●	○
TZ351A - *	350	280 ~ 420	≤ 1000	≈ 10	5	5	100	≥ 1	≤ 1.0	●	○
TZ421A - *	420	336 ~ 504	≤ 1000	≈ 12	5	5	100	≥ 1	≤ 1.0	●	○
TZ471A - *	470	376 ~ 564	≤ 1200	≈ 12	5	5	100	≥ 1	≤ 1.0	●	○
TZ601A - *	600	480 ~ 720	≤ 1400	≈ 15	5	5	100	≥ 1	≤ 1.0	●	○
TZ071M - *	70	53 ~ 88	≤ 650	≈ 8	10	10	25	≥ 1	≤ 1.0	●	○
TZ075M - *	75	57 ~ 93	≤ 650	≈ 8	10	10	25	≥ 1	≤ 1.0	●	○
TZ091M - *	90	72 ~ 108	≤ 600	≈ 8	10	10	50	≥ 1	≤ 1.0	●	○
TZ151M - *	150	120 ~ 180	≤ 600	≈ 8	10	10	50	≥ 1	≤ 1.0	●	○
TZ231M - *	230	184 ~ 280	≤ 700	≈ 10	10	10	100	≥ 1	≤ 1.0	●	○
TZ251M - *	250	200 ~ 300	≤ 700	≈ 10	10	10	100	≥ 1	≤ 1.0	●	○
TZ351M - *	350	280 ~ 420	≤ 1000	≈ 10	10	10	100	≥ 1	≤ 1.0	●	○
TZ421M - *	420	336 ~ 504	≤ 1000	≈ 12	10	10	100	≥ 1	≤ 1.0	●	○
TZ471M - *	470	376 ~ 564	≤ 1200	≈ 12	10	10	100	≥ 1	≤ 1.0	●	○
TZ601M - *	600	480 ~ 720	≤ 1400	≈ 15	10	10	100	≥ 1	≤ 1.0	●	○

备注 Note:

1.以上参数基于ITU-T K12 & IEC61643.311的标准。The above parameters are based on ITU-T K12 & IEC61643.311 standards.

2.“●”表示产品已通过认证。Means that the product has passed the certification.

“O” 表示产品即将申请认证。Means that the product plans to apply for certification.

3.“*”表示不同引脚,“SMD”表示贴片结构,“L”表示径向型引脚。

“*” Indicates different pin, such as “SMD” means SMD Structure, “L” means Radial Shape pin.

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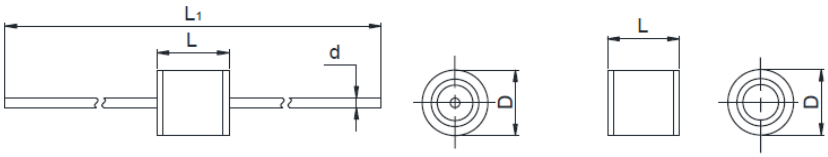
气体放电管
Gas Discharge Tube (GDT)



尺寸 Dimensions (mm)

L_1	L	D	d
62.0 ± 3.0	6.0 ± 0.5	Φ5.5 ± 0.5	0.8 ± 0.05

技术参数 Specifications

型号 Model	直流击穿电压 D.C.Spark-over Voltage @100V/s	电压范围 Tolerance of V_s	冲击击穿电压 Impulse Spark-over Voltage @1kV/μs	弧光电压 Arc Voltage @1 A	冲击放电电流 Impulse Discharge Current @8/20μs	交流放电电流 Alternating Discharge Current @50Hz 1 s	绝缘电阻 Insulation Resistance		电容 Capacitance 0.5VDC @1MHz	安规认证 Agency Approvals		
	V_s	V_s	V	V_a	I_n	I	V_{DC}	IR	C	UL		TUV
	V	V	V	V	kA	A (r.m.s.)	V	GΩ	(pF)	UL497B	UL1449	TUV
SF075A - *	75	57 ~ 93	≤ 650	≈ 8	5	5	50	≥ 1	≤ 1.0	●	N/A	●
SF091A - *	90	72 ~ 108	≤ 700	≈ 8	5	5	50	≥ 1	≤ 1.0	●	N/A	●
SF151A - *	150	120 ~ 180	≤ 700	≈ 8	5	5	50	≥ 1	≤ 1.0	●	N/A	●
SF231A - *	230	184 ~ 280	≤ 700	≈ 10	5	5	100	≥ 1	≤ 1.0	●	N/A	●
SF351A - *	350	280 ~ 420	≤ 1000	≈ 10	5	5	100	≥ 1	≤ 1.0	●	N/A	●
SF471A - *	470	376 ~ 564	≤ 1200	≈ 12	5	5	100	≥ 1	≤ 1.0	●	N/A	●
SF601A - *	600	480 ~ 720	≤ 1400	≈ 15	5	5	100	≥ 1	≤ 1.0	●	N/A	●
SF801A - *	800	640 ~ 960	≤ 1600	≈ 15	5	5	100	≥ 1	≤ 1.0	○	○	●
SF152A - *	1500	1200 ~ 1800	≤ 2400	≈ 15	5	5	100	≥ 1	≤ 1.0	N/A	○	●
SF075M - *	75	57 ~ 93	≤ 650	≈ 8	10	5	50	≥ 1	≤ 1.0	●	N/A	●
SF091M - *	90	72 ~ 108	≤ 700	≈ 15	10	5	50	≥ 1	≤ 1.0	●	N/A	●
SF151M - *	150	120 ~ 180	≤ 700	≈ 15	10	5	50	≥ 1	≤ 1.0	●	N/A	●
SF231M - *	230	184 ~ 280	≤ 700	≈ 15	10	5	100	≥ 1	≤ 1.0	●	N/A	●
SF351M - *	350	280 ~ 420	≤ 1000	≈ 15	10	5	100	≥ 1	≤ 1.0	●	N/A	●
SF471M - *	470	376 ~ 564	≤ 1200	≈ 15	10	5	100	≥ 1	≤ 1.0	●	N/A	●
SF601M - *	600	480 ~ 720	≤ 1400	≈ 15	10	5	100	≥ 1	≤ 1.0	●	N/A	●
SF252T - *	2500	2000 ~ 3000	≤ 4000	≈ 15	3	1	100	≥ 1	≤ 1.0	N/A	●	●
SF302T - *	3000	2400 ~ 3600	≤ 4500	≈ 15	3	1	100	≥ 1	≤ 1.0	N/A	●	●
SF362T - *	3600	2880 ~ 4320	≤ 5000	≈ 15	3	1	100	≥ 1	≤ 1.0	N/A	●	●

备注 Note:

1.以上参数基于ITU－T K12 & IEC61643.311的标准。The above parameters based on ITU - T K12 & IEC61643.311 standards.

2.“●”表示产品已通过认证。Means GDT has gained the certification.

“O”表示产品即将申请认证。Means GDT product is planned to apply for certification.

3.“*”表示不同引脚，“放空”表示无引脚，“L”表示长引脚。

Means different wire type, such as “null” means without wire, “L” means lead wire.

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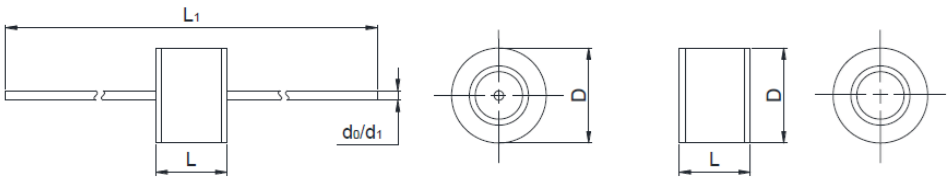
气体放电管
Gas Discharge Tube (GDT)



尺寸 Dimensions (mm)

L_1	L	D	d_0 ①	d_1 ②
62.0 ± 3.0	6.0 ± 0.5	Φ8.0 ± 0.5	0.8 ± 0.05	1.0 ± 0.05

Note:

① 该尺寸针对I_n = 10 kA及以下。This dimension is for I_n = 10 kA & below.

② 该尺寸针对I_n = 20 kA。 This dimension is for I_n = 20 kA.

技术参数 Specifications

型号 Model	直流击穿电压 D.C.Spark-over Voltage @100V/s	电压范围 Tolerance of V_s	冲击击穿电压 Impulse Spark-over Voltage @1kV/μs	弧光电压 Arc Voltage @1 A	冲击放电电流 Impulse Discharge Current @8/20μs	交流放电电流 Alternating Discharge Current @50Hz 1 s	绝缘电阻 Insulation Resistance		电容 Capacitance 0.5VDC @1MHz	安规认证 Agency Approvals		
	V_s	V_s	V	V_a	I_n	I	V_{DC}	IR	C			
	V	V	V	V	kA	A (r.m.s.)	V	GΩ	(pF)	UL497B	UL1449	TUV
SE075M - *	75	57~ 93	≤ 650	≈ 8	10	10	50	≥ 1	≤ 1.5	●	N/A	●
SE091M - *	90	72 ~ 108	≤ 700	≈ 8	10	10	50	≥ 1	≤ 1.5	●	N/A	●
SE151M - *	150	120 ~ 180	≤ 700	≈ 8	10	10	50	≥ 1	≤ 1.5	●	N/A	●
SE231M - *	230	184 ~ 280	≤ 700	≈ 10	10	10	100	≥ 1	≤ 1.5	●	N/A	●
SE351M - *	350	280 ~ 420	≤ 1000	≈ 10	10	10	100	≥ 1	≤ 1.5	●	N/A	●
SE471M - *	470	376 ~ 564	≤ 1200	≈ 12	10	10	100	≥ 1	≤ 1.5	●	N/A	●
SE601M - *	600	480 ~ 720	≤ 1400	≈ 15	10	10	100	≥ 1	≤ 1.5	●	N/A	●
SE801M - *	800	640 ~ 960	≤ 1600	≈ 15	10	10	100	≥ 1	≤ 1.5	○	○	●
SE102M - *	1000	800 ~ 1200	≤ 2000	≈ 15	10	10	100	≥ 1	≤ 1.5	N/A	●	●
SE152M - *	1500	1200 ~ 1800	≤ 2400	≈ 15	10	10	100	≥ 1	≤ 1.5	N/A	●	●
SE075H - *	75	57~ 93	≤ 650	≈ 8	10	10	50	≥ 1	≤ 1.5	●	N/A	●
SE091H - *	90	72 ~ 108	≤ 700	≈ 15	20	20	50	≥ 1	≤ 1.5	●	●	●
SE151H - *	150	120 ~ 180	≤ 700	≈ 15	20	20	50	≥ 1	≤ 1.5	●	N/A	●
SE231H - *	230	184 ~ 280	≤ 700	≈ 15	20	20	100	≥ 1	≤ 1.5	●	N/A	●
SE351H - *	350	280 ~ 420	≤ 1000	≈ 15	20	20	100	≥ 1	≤ 1.5	●	N/A	●
SE471H - *	470	376 ~ 564	≤ 1200	≈ 15	20	20	100	≥ 1	≤ 1.5	●	N/A	●
SE601H - *	600	480 ~ 720	≤ 1400	≈ 15	20	20	100	≥ 1	≤ 1.5	●	●	●
SE801H - *	800	640 ~ 960	≤ 1600	≈ 15	20	20	100	≥ 1	≤ 1.5	○	●	●
SE252A - *	2500	2000 ~ 3000	≤ 4000	≈ 15	5	5	100	≥ 1	≤ 1.5	N/A	●	●
SE302A - *	3000	2400 ~ 3600	≤ 4500	≈ 15	5	5	100	≥ 1	≤ 1.0	N/A	●	●
SE362A - *	3600	2880 ~ 4320	≤ 5000	≈ 15	5	5	100	≥ 1	≤ 1.5	N/A	○	●

备注 Note:

1.以上参数基于ITU－T K12 & IEC61643.311的标准。The above parameters based on ITU - T K12 & IEC61643.311 standards.

2.“●”表示产品已通过认证。Means GDT has gained the certification.

“O”表示产品即将申请认证。Means GDT product is planned to apply for certification.

3.“*”表示不同引脚，“放空”表示无引脚，“L”表示长引脚。

Means different wire type, such as “null” means without wire, “L” means lead wire.

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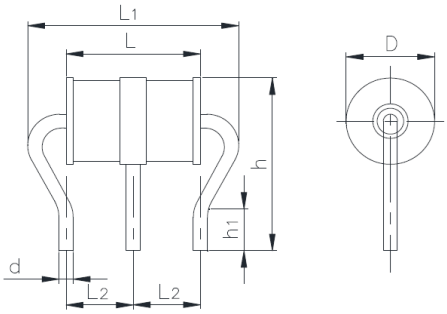
气体放电管
Gas Discharge Tube (GDT)

TB系列 Series



尺寸 Dimensions (mm)

D	h	L	d	h_1	L_1	L_2
Φ6.0 ± 0.2	10.0 ± 1.0	8.5 ± 0.2	Φ0.8 ± 0.1	2.5	12 Max	4.4 ± 0.3

技术参数 Specifications

型号 Model	直流击穿电压 D.C.Spark-over Voltage @100V/s	电压范围 Tolerance of V_s	冲击击穿电压 Impulse Spark-over Voltage @1kV/μs	弧光电压 Arc Voltage @1 A	冲击放电电流 Impulse Discharge Current @8/20μs	交流放电电流 Alternating Discharge Current @50Hz 1 s	绝缘电阻 Insulation Resistance		电容 Capacitance 0.5VDC @1MHz	安规认证 Agency Approvals	
	V_s	V_s	V	V_a	I_n	I	V_{DC}	IR	C		
	V	V	V	V	kA	A (r.m.s.)	V	GΩ	(pF)	UL497B	TUV
TB071A - L	70	52 ~ 88	≤ 600	≈ 8	5	5	50	≥ 1	≤ 1.0	●	○
TB091A - L	90	72 ~ 108	≤ 600	≈ 8	5	5	50	≥ 1	≤ 1.0	●	○
TB151A - L	150	120 ~ 180	≤ 600	≈ 8	5	5	50	≥ 1	≤ 1.0	●	○
TB231A - L	230	184 ~ 280	≤ 700	≈ 10	5	5	100	≥ 1	≤ 1.0	●	○
TB351A - L	350	280 ~ 420	≤ 1000	≈ 10	5	5	100	≥ 1	≤ 1.0	●	○
TB421A - L	420	336 ~ 504	≤ 1000	≈ 12	5	5	100	≥ 1	≤ 1.0	●	○
TB471A - L	470	376 ~ 564	≤ 1200	≈ 12	5	5	100	≥ 1	≤ 1.0	●	○
TB601A - L	600	480 ~ 720	≤ 1400	≈ 15	5	5	100	≥ 1	≤ 1.0	●	○
TB071M - L	70	52 ~ 88	≤ 600	≈ 8	10	5	50	≥ 1	≤ 1.0	●	○
TB075M - L	75	57 ~ 93	≤ 650	≈ 8	10	5	50	≥ 1	≤ 1.0	●	○
TB091M - L	90	72 ~ 108	≤ 600	≈ 8	10	10	50	≥ 1	≤ 1.0	●	○
TB151M - L	150	120 ~ 80	≤ 600	≈ 8	10	10	50	≥ 1	≤ 1.0	●	○
TB231M - L	230	184 ~ 280	≤ 700	≈ 10	10	10	100	≥ 1	≤ 1.0	●	○
TB251M - L	250	200 ~ 300	≤ 700	≈ 10	10	10	100	≥ 1	≤ 1.0	●	○
TB351M - L	350	280 ~ 420	≤ 1000	≈ 10	10	10	100	≥ 1	≤ 1.0	●	○
TB421M - L	420	336 ~ 504	≤ 1000	≈ 12	10	10	100	≥ 1	≤ 1.0	●	○
TB471M - L	470	376 ~ 564	≤ 1200	≈ 12	10	10	100	≥ 1	≤ 1.0	●	○
TB601M - L	600	480 ~ 720	≤ 1400	≈ 15	10	10	100	≥ 1	≤ 1.0	●	○

备注 Note:

1.以上参数基于ITU - T K12 & IEC61643.311的标准。The above parameters based on ITU - T K12 & IEC61643.311 standards.

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Means different wire type, such as “null”means without wire, “L” means lead wire.

4. 冲击放电电流值指两端对地同时放电电流值。

Impulse discharge current value refers to the current value of simultaneous discharge of both ends to the ground.

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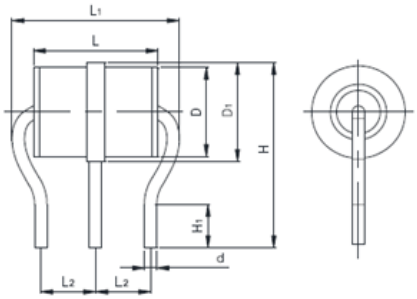

尺寸 Dimensions (mm)

D	H	L	d
Φ7.2 ± 0.2	15.0 ± 1.0	10.0 ± 0.2	Φ1.0± 0.1
D_1	H_1	L_1	L_2
Φ8.0 ± 0.2	3.5	13.4Max	4.4 ± 0.3

技术参数 Specifications

型号 Model	直流击穿电压 D.C.Spark-over Voltage @100V/s	电压范围 Tolerance of V_s	冲击击穿电压 Impulse Spark-over Voltage @1kV/μs	弧光电压 Arc Voltage @1 A	冲击放电电流 Impulse Discharge Current @8/20μs	交流放电电流 Alternating Discharge Current @50Hz 1 s	绝缘电阻 Insulation Resistance		电容 Capacitance 0.5VDC @1MHz	安规认证 Agency Approvals	
	V_s	V_s	V	V_a	I_n	I	V_{DC}	IR	C	UL	TUV
	V	V	V	V	kA	A (r.m.s.)	V	GΩ	(pF)	UL497B	TUV
TR071M - L	70	52~ 88	≤ 600	≈ 8	10	10	50	≥ 1	≤ 1.0	●	○
TR091M - L	90	72 ~ 108	≤ 600	≈ 8	10	10	50	≥ 1	≤ 1.0	●	○
TR151M - L	150	120 ~ 180	≤ 600	≈ 8	10	10	50	≥ 1	≤ 1.0	●	○
TR231M - L	230	184 ~ 280	≤ 700	≈ 10	10	10	100	≥ 1	≤ 1.0	●	○
TR351M - L	350	280 ~ 420	≤ 1000	≈ 12	10	10	100	≥ 1	≤ 1.0	●	○
TR421M - L	420	336 ~ 504	≤ 1000	≈ 12	10	10	100	≥ 1	≤ 1.0	●	○
TR471M - L	470	376 ~ 564	≤ 1200	≈ 12	10	10	100	≥ 1	≤ 1.0	●	○
TR601M - L	600	480 ~ 720	≤ 1400	≈ 15	10	10	100	≥ 1	≤ 1.0	●	○
TR071H - L	70	52~ 88	≤ 600	≈ 8	20	10	50	≥ 1	≤ 1.0	●	○
TR075H - L	75	57~ 93	≤ 650	≈ 8	20	10	50	≥ 1	≤ 1.0	●	○
TR091H - L	90	72 ~ 108	≤ 600	≈ 8	20	10	50	≥ 1	≤ 1.0	●	○
TR151H - L	150	120 ~ 180	≤ 600	≈ 8	20	10	50	≥ 1	≤ 1.0	●	○
TR231H - L	230	184 ~ 280	≤ 700	≈ 10	20	10	100	≥ 1	≤ 1.0	●	○
TR251H - L	250	200 ~ 300	≤ 700	≈ 10	20	10	100	≥ 1	≤ 1.0	●	○
TR351H - L	350	280 ~ 420	≤ 1000	≈ 12	20	20	100	≥ 1	≤ 1.0	●	○
TR421H - L	420	336 ~ 504	≤ 1000	≈ 12	20	10	100	≥ 1	≤ 1.0	●	○
TR471H - L	470	376 ~ 564	≤ 1200	≈ 12	20	10	100	≥ 1	≤ 1.0	●	○
TR601H - L	600	480 ~ 720	≤ 1400	≈ 15	20	10	100	≥ 1	≤ 1.0	●	○

备注 Note:

1.以上参数基于ITU－T K12 & IEC61643.311的标准。The above parameters based on ITU - T K12 & IEC61643.311 standards.

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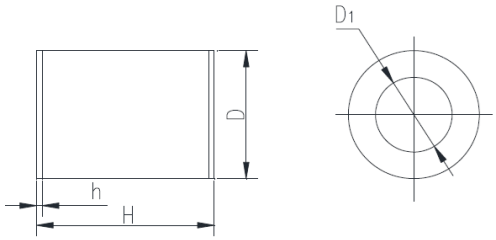
气体放电管
Gas Discharge Tube (GDT)

SPA系列 Series



尺寸 Dimensions (mm)

D	D_1	H	h
Φ11.8 ± 0.3	Φ6.9	16.0 ± 0.5	0.5

技术参数 Specifications

型号 Model			SPA351D-XX	SPA601D-XX	SPA801D-XX	SPA152H-XX	SPA202H-XX	单位 Units
类别 Category			II	II	II	II	II	
应用 Application			N - PE	N - PE	N - PE	N - PE	N - PE	
标称直流击穿电压（100 V/s） Nominal D.C. Spark-over Voltage (100 V/s)			350	600	800	1500	2000	V
直流击穿电压（100 V/s） D.C.Spark-over Voltage (100 V/s)			280 ~ 420	480 ~ 720	640 ~ 960	1200 ~ 1800	1600 ~ 2400	V
冲击击穿电压（1 kV/μs） Impulse Spark-over Voltage @1 kV/μs			< 900	< 1400	< 1600	< 2800	< 4000	V
GB/T18802.311								
标称放电电流 I_n Nominal Impulse Discharge Current @8/20 μs			40	40	40	20	20	kA
最大放电电流 I_{max} Maximum Impulse Discharge Current @8/20 μs			60	60	60	40	40	kA
Class II（符合 Comply with IEC61643-11）								
最大持续工作电压 U_c Max Continuous Operating Voltage Uc 50/60 Hz			110	255	255	320	440	Vrms
续流遮断能力 I_f Follow Current Cut-off Ability AC 50/60 Hz			100	100	100	100	100	Arms
标称放电电流 I_n Nominal Discharge Current @8/20 μs			20	20	20	20	20	kA
最大放电电流 I_{max} Maximum Discharge Current @8/20 μs			40	40	40	40	40	kA
绝缘电阻（100 VDC） Insulation Resistance (100 VDC)			> 1000	> 1000	> 1000	> 1000	> 1000	MΩ
电容100 kHz Capacitance at 100 kHz			< 5	< 5	< 5	< 5	< 5	pF
安规认证 Agency Approvals	UL1449		●	●	●	○	○	
	TUV		○	○	○	○	○	

备注 Notes:

引脚的方式可根据客户的需求订制。Pin type can be customized.

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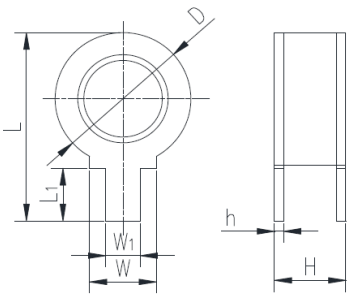
气体放电管
Gas Discharge Tube (GDT)

SPB系列 Series



尺寸 Dimensions (mm)

D	H	L	W	W_1	L_1	h
Φ11.8 ± 0.3	6.2 ± 0.2	16.8 ± 0.2	5.8	3.0	4.7	0.8

技术参数 Specifications

型号 Model			SPB091H - XX	SPB151H - XX	SPB351H - XX	SPB601H - XX	单位 Units
类别 Category			II	II	II	II	
应用 Application			N - PE	N - PE	N - PE	N - PE	
标称直流击穿电压（100 V/s） Nominal D.C. Spark-over Voltage (100 V/s)			90	150	350	600	V
直流击穿电压（100 V/s） D.C.Spark-over Voltage (100 V/s)			72 ~ 108	120 ~ 180	280 ~ 420	480 ~ 720	V
冲击击穿电压（1 kV/μs） Impulse Spark-over Voltage @1 kV/μs			< 600	< 600	< 900	< 1400	V
GB/T18802.311							
标称放电电流 I_n Nominal Impulse Discharge Current @8/20 μs			20	20	20	20	kA
最大放电电流 I_{max} Maximum Impulse Discharge Current @8/20 μs			40	40	40	40	kA
Class II（符合 Comply with IEC61643-11）							
最大持续工作电压 U_c Max Continuous Operating Voltage Uc 50/60 Hz			-	-	110	255	Vrms
续流遮断能力 I_f Follow Current Cut-off Ability AC 50/60 Hz			-	-	100	100	Arms
标称放电电流 I_n Nominal Discharge Current @8/20 μs			-	-	20	20	kA
最大放电电流 I_{max} Maximum Discharge Current @8/20 μs			-	-	40	40	kA
绝缘电阻 Insulation Resistance			> 1000	> 1000	> 1000	> 1000	MΩ
电容100 kHz Capacitance at 100 kHz			< 5	< 5	< 5	< 5	pF
安规认证 Agency Approvals	UL1449		●	○	●	●	
	TUV		○	○	○	○	

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技术参数 Specifications

型号 Model			SPB801H - XX	SPB102H - XX	SPB152H - XX	SPB202H - XX	单位 Units
类别 Category			II	II	II	II	
应用 Application			N - PE	N - PE	N - PE	N - PE	
标称直流击穿电压（100 V/s） Nominal D.C. Spark-over Voltage (100 V/s)			800	1000	1500	2000	V
直流击穿电压（100 V/s） D.C.Spark-over Voltage (100 V/s)			640 ~ 960	800 ~ 1200	1200 ~ 1800	1600 ~ 2400	V
冲击击穿电压（1 kV/μs） Impulse Spark-over Voltage @1 kV/μs			< 1600	< 2000	< 2800	< 4000	V
GB/T18802.311							
标称放电电流 I_n Nominal Impulse Discharge Current @8/20 μs			20	20	20	20	kA
最大放电电流 I_{max} Maximum Impulse Discharge Current @8/20 μs			40	40	40	40	kA
Class II（符合 Comply with IEC61643-11）							
最大持续工作电压 U_c Max Continuous Operating Voltage Uc 50/60 Hz			255	275	320	440	Vrms
续流遮断能力 I_f Follow Current Cut-off Ability AC 50/60 Hz			100	100	100	100	Arms
标称放电电流 I_n Nominal Discharge Current @8/20 μs			20	20	20	20	kA
最大放电电流 I_{max} Maximum Discharge Current @8/20 μs			40	40	40	40	kA
绝缘电阻（100 VDC） Insulation Resistance (100 VDC)			> 1000	> 1000	> 1000	> 1000	MΩ
电容100 kHz Capacitance at 100 kHz			< 5	< 5	< 5	< 5	pF
安规认证 Agency Approvals	UL1449		●	●	●	○	
	TUV		○	○	○	○	

备注 Notes:
引脚的方式可根据客户的需求订制。Pin type can be customized.

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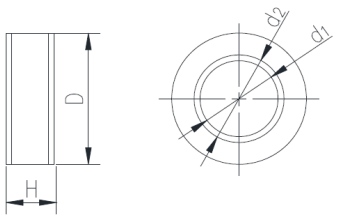
气体放电管
Gas Discharge Tube (GDT)



尺寸 Dimensions (mm)

D	H	d_1	d_2
Φ11.8 ± 0.3	4.2 ± 0.6	Φ8.5	Φ6.95

技术参数 Specifications

型号 Model			SPC091H - XX	SPC151H - XX	SPC231H - XX	SPC351H - XX	单位 Units
类别 Category			II	II	II	II	
应用 Application			N - PE	N - PE	N - PE	N - PE	
标称直流击穿电压（100 V/s） Nominal D.C. Spark-over Voltage (100 V/s)			90	150	230	350	V
直流击穿电压（100 V/s） D.C.Spark-over Voltage (100 V/s)			72 ~ 108	120 ~ 180	184 ~ 280	280 ~ 420	V
冲击击穿电压（1 kV/μs） Impulse Spark-over Voltage @1 kV/μs			<600	<600	<700	<800	V
GB/T18802.311							
标称放电电流 I_n Nominal Impulse Discharge Current @8/20 μs			20	20	20	20	kA
最大放电电流 I_{max} Maximum Impulse Discharge Current @8/20 μs			40	40	40	40	kA
Class II （符合 Comply with IEC61643-11）							
最大持续工作电压 U_c Max Continuous Operating Voltage Uc 50/60 Hz			-	-	-	110	Vrms
续流遮断能力 I_f Follow Current Cut-off Ability AC 50/60 Hz			-	-	-	100	Arms
标称放电电流 I_n Nominal Discharge Current @8/20 μs			-	-	-	20	kA
最大放电电流 I_{max} Maximum Discharge Current @8/20 μs			-	-	-	40	kA
绝缘电阻 Insulation Resistance			> 1000	> 1000	> 1000	> 1000	MΩ
电容100 kHz Capacitance at 100 kHz			< 5	< 5	< 5	< 5	pF
安规认证 Agency Approvals	UL1449		○	○	○	○	
	TUV		○	○	○	○	

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技术参数 Specifications

型号 Model			SPC601H - XX	SPC801H - XX	SPC102H - XX	SPC152H - XX	单位 Units
类别 Category			II	II	II	II	
应用 Application			N - PE	N - PE	N - PE	N - PE	
标称直流击穿电压（100 V/s） Nominal D.C. Spark-over Voltage (100 V/s)			600	800	1000	1500	V
直流击穿电压（100 V/s） D.C.Spark-over Voltage (100 V/s)			480 ~ 720	640 ~ 960	800 ~ 1200	1200 ~ 1800	V
冲击击穿电压（1 kV/μs） Impulse Spark-over Voltage @1 kV/μs			< 1400	< 1600	< 2000	< 2800	V
GB/T18802.311							
标称放电电流 I_n Nominal Impulse Discharge Current @8/20 μs			20	20	20	20	kA
最大放电电流 I_{max} Maximum Impulse Discharge Current @8/20 μs			40	40	40	40	kA
Class II（符合 Comply with IEC61643-11）							
最大持续工作电压 U_c Max Continuous Operating Voltage Uc 50/60 Hz			255	255	275	320	Vrms
续流遮断能力 I_f Follow Current Cut-off Ability AC 50/60 Hz			100	100	100	100	Arms
标称放电电流 I_n Nominal Discharge Current @8/20 μs			20	20	20	20	kA
最大放电电流 I_{max} Maximum Discharge Current @8/20 μs			40	40	40	40	kA
绝缘电阻（100 VDC） Insulation Resistance (100 VDC)			> 1000	> 1000	> 1000	> 1000	MΩ
电容100 kHz Capacitance at 100 kHz			< 5	< 5	< 5	< 5	pF
安规认证 Agency Approvals	UL1449		●	○	●	○	
	TUV		○	○	○	○	

备注 Notes:

引脚的方式可根据客户的需求订制。Pin type can be customized.

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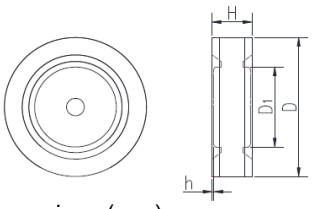
气体放电管
Gas Discharge Tube (GDT)

SPJ 系列 Series



尺寸 Dimensions (mm)

D	D_1	H	h
Φ16.0 ± 0.3	Φ9.2	4.5 ± 0.6	0.2

技术参数 Specifications

型号 Model			SPJ351D - XX	SPJ601D - XX	SPJ801D - XX	SPJ102H - XX	SPJ152H - XX	单位 Units
类别 Category			II	I & II	I & II	I & II	II	
应用 Application			N - PE	N - PE	N - PE	N - PE	N - PE	
标称直流击穿电压（100 V/s） Nominal D.C. Spark-over Voltage (100 V/s)			350	600	800	1000	1500	V
直流击穿电压（100 V/s）			280 ~ 420	480 ~ 720	640 ~ 960	800 ~ 1000	1200 ~ 1800	V
冲击击穿电压（1 kV/μs） Impulse Spark-over Voltage @1 kV/μs			< 900	< 1400	< 1600	< 2000	< 2800	V
GB/T18802.311								
标称放电电流 I_n Nominal Impulse Discharge Current @8/20 μs			40	40	40	20	20	kA
最大放电电流 I_{max} Maximum Impulse Discharge Current @8/20 μs			60	60	60	40	40	kA
Class II （符合 Comply with IEC61643-11）								
最大持续工作电压 U_c Max Continuous Operating Voltage Uc 50/60 Hz			110	255	255	275	320	Vrms
续流遮断能力 I_f Follow Current Cut-off Ability AC 50/60 Hz			100	100	100	100	100	Arms
标称放电电流 I_n Nominal Discharge Current @8/20 μs			20	20	20	20	20	kA
最大放电电流 I_{max} Maximum Discharge Current @8/20 μs			40	40	40	40	40	kA
绝缘电阻（100 VDC） Insulation Resistance (100 VDC)			> 1000	> 1000	> 1000	> 1000	> 1000	MΩ
电容100 kHz Capacitance at 100 kHz			< 7	< 7	< 7	< 7	< 7	pF
安规认证 Agency Approvals	UL1449		○	●	●	○	●	
	TUV		○	○	○	○	○	

备注 Notes:

引脚的方式可根据客户的需求订制。Pin type can be customized.

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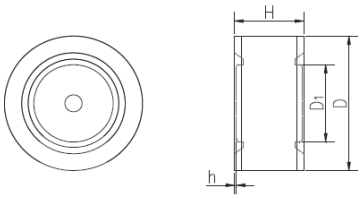

尺寸 Dimensions (mm)

D	D_1	H	h
Φ16.0 ± 0.3	Φ9.2	8.0 ± 0.6	0.2

技术参数 Specifications

型号 Model			SPI351D - XX	SPI601D - XX	SPI801D - XX	SPI152H - XX	SPI252H - XX	单位 Units
类别 Category			II	I & II	I & II	II	II	
应用 Application			N - PE	N - PE	N - PE	N - PE	N - PE	
标称直流击穿电压（100 V/s） Nominal D.C. Spark-over Voltage (100 V/s)			350	600	800	1500	2500	V
直流击穿电压（100 V/s）			280 ~ 420	480 ~ 720	640 ~ 960	1200 ~ 1800	2000 ~ 3000	V
冲击击穿电压（1 kV/μs） Impulse Spark-over Voltage @1 kV/μs			< 800	< 1200	< 1600	< 2800	< 4500	V
GB/T18802.311								
标称放电电流 I_n Nominal Impulse Discharge Current @8/20 μs			40	40	40	20	20	kA
最大放电电流 I_{max} Maximum Impulse Discharge Current @8/20 μs			80	80	80	40	40	kA
Class II（符合 Comply with IEC61643-11）								
最大持续工作电压 U_c Max Continuous Operating Voltage Uc 50/60 Hz			110	255	255	320	440	Vrms
续流遮断能力 I_f Follow Current Cut-off Ability AC 50/60 Hz			100	100	100	100	100	Arms
标称放电电流 I_n Nominal Discharge Current @8/20 μs			30	30	30	20	20	kA
最大放电电流 I_{max} Maximum Discharge Current @8/20 μs			60	60	60	40	40	kA
绝缘电阻（100 VDC） Insulation Resistance (100 VDC)			> 1000	> 1000	> 1000	> 1000	> 1000	MΩ
电容100 kHz Capacitance at 100 kHz			< 8	< 8	< 8	< 8	< 8	pF
安规认证 Agency Approvals	UL1449		○	●	●	○	●	
	TUV		○	●	●	●	●	

备注 Notes:

引脚的方式可根据客户的需求订制。Pin type can be customized.

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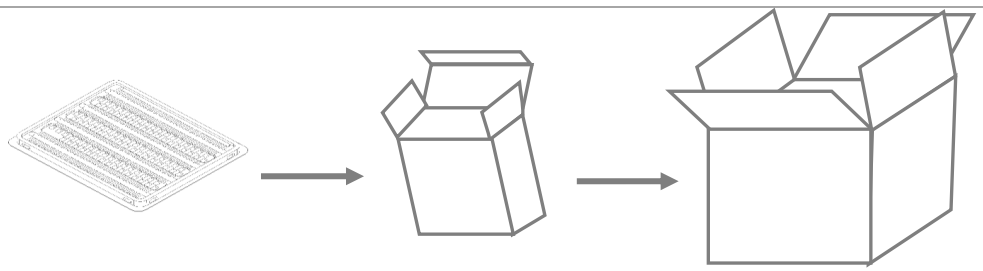
包装信息 Packaging Information

1、PC盒包装（插件产品）
PC Box Package (Leaded Type Shaped Lead Devices)

系列 Series	尺寸 Dimensions (mm)			数量 Quantity (PCS)		
	PC盒 Box	内盒 Inner Box	外箱 Carton	PC盒 Box	内盒 Inner Box	外箱 Carton
SE	215 × 205 × 10.5	230 × 210 × 60	440 × 250 × 325	100	500	5000
SF	215 × 205 × 10.5	230 × 210 × 60	440 × 250 × 325	100	500	5000
TB	215 × 205 × 11.5	230 × 210 × 60	440 × 250 × 325	100	500	5000
TR	215 × 205 × 11.5	230 × 210 × 60	440 × 250 × 325	100	500	5000
备注：包装尺寸与数量仅供参考。 Notes: Packaging dimensions and quantity are for reference only.						

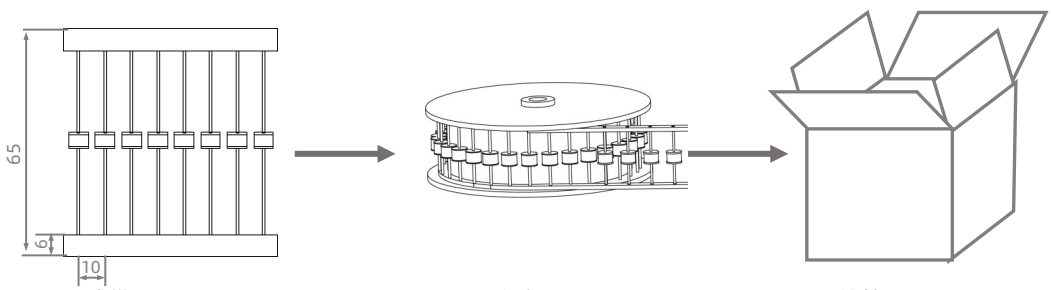


PC盒 Box　　内盒 Inner Box　　外箱 Carton

请参考技术规格书的包装信息。 Please refer to the specifications for the packaging details.

2、编带包装（插件产品）
Taping Package (Leaded Type Straight Axial Devices)

系列 Series	尺寸 Dimensions (mm)		数量 Quantity (PCS)	
	卷盘 Reel	外箱 Carton	卷盘 Reel	外箱 Carton
SE	Φ340 × 73	360 × 360 × 360	1000	4000
SF	Φ340 × 73	360 × 360 × 360	1250	5000
备注：包装尺寸与数量仅供参考。 Notes: Packaging dimensions and quantity are for reference only.				



编带Tape　　卷盘 Reel　　外箱 Carton

单位Unit: mm.

请参考技术规格书的包装信息。 Please refer to the specifications for the packaging details.

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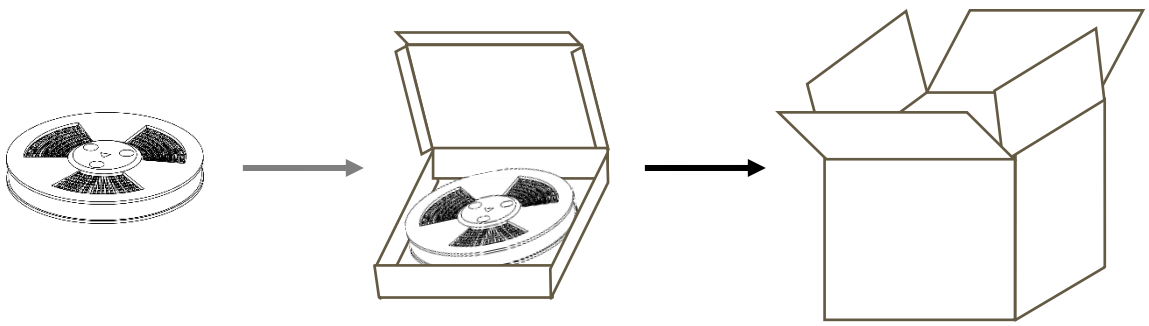
3、编带包装（SMD产品） Taping Package (SMD GDT)

系列 Series	尺寸 Dimensions (mm)			数量 Quantity (PCS)		
	卷盘 Reel	内盒 Inner Box	外箱 Carton	每卷 Reel	内盒 Inner Box	外箱 Carton
SZ	Φ178 × 12.8	200 × 200 × 20	200 × 200 × 180	3000	3000	24000
SW	Φ330 × 12.8	340 × 340 × 40	360 × 360 × 360	2500	5000	40000
SX	Φ330 × 12.8	340 × 340 × 40	360 × 360 × 360	2500	5000	40000
SN	Φ330 × 16.8	340 × 340 × 40	360 × 360 × 360	1000	2000	14000
SD	Φ330 × 16.8	340 × 340 × 40	360 × 360 × 360	1000	2000	14000
SM	Φ330 × 16.8	340 × 340 × 40	360 × 360 × 360	600	1200	8400
SS	Φ330 × 16.8	340 × 340 × 40	360 × 360 × 360	800	1600	11200
SC	Φ330 × 16.8	340 × 340 × 40	360 × 360 × 360	600	1200	48400
TZ	Φ330 × 16.8	340 × 340 × 40	360 × 360 × 360	1000	2000	14000

备注：包装尺寸与数量仅供参考。
Notes: Packaging dimensions and quantity are for reference only.



每卷 Reel　　内盒 Inner Box　　外箱 Carton

请参考技术规格书的包装信息。 Please refer to the specifications for the packaging details.

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