

5D Series

产品简介

压敏电阻的本身是由氧化锌颗粒组成的矩阵结构。颗粒之间的晶界类似双向 PN 结的电气特性，当低电压时，这些晶界处于高阻抗状态，当电压高时，又会处于击穿状态，是一种非线性器件。



应用领域:

抑制消费类电子产品及工业用电子设备主电源所窜入的浪涌电流。如 LED 照明、电度表、开关电源、排插等。

通讯等有线网络设备窜入的浪涌电流。

房舍装置以及瓦斯和油类设施上所装置的电子器材的浪涌保护

抑制电子线路内发生的浪涌

照相器材用于限压开关

Product Profile

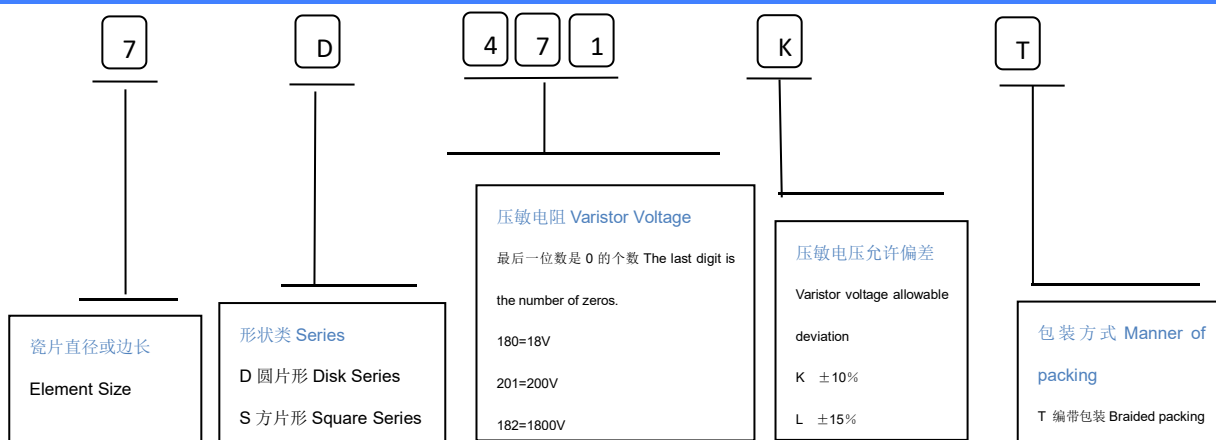
The body of varistor is a matrix structure composed of zinc oxide particles. The grain boundaries between particles are similar to the electrical characteristics of bidirectional PN junctions. When the voltage is low, these grain boundaries are in the high impedance state, and when the voltage is high, they will be in the breakdown state, which is a kind of non-linear device.

Application

Suppresses surge current from the main power supply of consumer electronics and industrial electronic equipment. Such as LED lighting, watt-hour meter, switching power supply, layout and so on.

Surge protection of electronic equipment on building installations and gas and oil installations Suppression of Surges in Electronic Circuits Photographic equipment for voltage limiting switches

产品料号代码 HOW TO ORDER



产品外形 Product Shape

Bulk Straight 标准外形	Cutting Straight 切短脚	Out Forming 外弯脚	Y-Forming Y 型脚	Cutting Bending 折脚

口 K 的详解 Detailed explanation of

□ 中的内容 The content of the blank box	K		KJ		KH		KH+
产品级别	普通型		加强型		超强型		定制型
Product Level	conventional type		Reinforced type		Superstrong type		Customized
性能参数	1 次脉冲最大电	电压冲击 15 次	1 次脉冲最大电	电流冲击 15 次	1 次脉冲最大电	电压冲击 40 次	超出左边栏的脉冲
property parameter	流	Impulse voltage15	流	Impulse current	流	Impulse voltage40	标准的特殊规格
	Withstanding	Times	Withstanding	15	Withstanding	Times	Super high Energy
	surge	(1.2/50μs)	surge	Times (8/20μs)	surge	(1.2/50μs)	
	Current		Current		Current		
	(Imax)		(Imax)		(Imax)		
	(A)	(V)	(A)	(A)	(A)	(V)	
5D	400	1000	800	250	800	1000	举例 1 Example
7D	1200	2000	1750	500	1750	2000	14D 满足 20D 的脉
10D	1500	4000	3500	1500	3500	4000	冲性能要求 14D
14D	4500	6000	6000	3000	6000	6000	instead of 20D
20D	6500	10000	10000	5000	10000	10000	举例 2 Example
符合国际和国	IEC61051-1 GB/T10193		包含左栏, 并增加以下标准:		包含左栏, 并增加以下标准:		14D561KH+ 能 达
家标准	IEC61051-2 GB/T10194		Include the left column and add the		Include the left column and add the		到 6KV/3KA 100
Compliance with	IEC61051-2-2 GBT10195		following criteria:		following criteria:		次
international and	CSA-C22.2		IEC60950-1:2005/Annex Q		IEC61000-4-5 GB/T17626.5		14D561KH+ reach
national standards	UL1449 第三版 The third edition of		GB4943.1-2011		IEC61643-331		6KV/3KA 100times
	UL1449		GB8898-2011		GB/T18802.331		
			UL1449 第 4 版 The fourth				
			edition of UL1449				

备注:1 上表仅适用于压敏电压 82V 以上规格的产品。2 上表电压冲击 15 次/40 次仅适用于压敏电压 430V 及以上规格的产品。

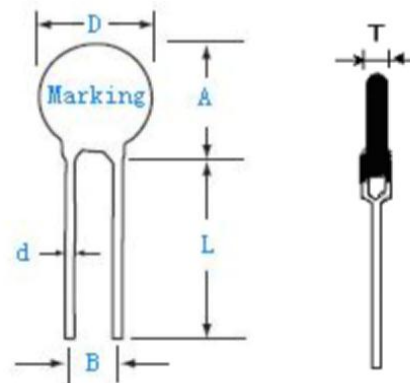
Remarks: 1 The above table is only applicable to products with voltage sensitive voltage of more than 82V.

2The above table voltage shock 15 times/40 times only applies to products with voltage sensitive voltage 430V or above.

产品尺寸

单位 (UNIT) :mm

A _μ	9.5Max _μ	T (thickness) _μ
B _μ	5±1 _μ	180K--201K:5.0.....221K--331K:5.5 _μ 361K--471K:6.0.....511K--561K:6.5 _μ 621K--681K:7.0.....
d _μ	0.57±0.05 _μ	
D _μ	7.5Max _μ	
L _μ	25Min _μ	



5D 系列 电气参数 5D Series Electrical Parameters

型号规格 Part NO	压敏电压 Varistor Voltage		最大允许使用电压 Maximum allowable voltage		最大限制电压 Maximum Limited Voltage	通流容量 Withstanding Surge current (8/20 μ s) times		静态功率 Rated Wattage	能量耐量 Energy (2ms)		静态电容量 (参考值) Typical Capacitance
			AC	DC		V5A	1t		2t	10/1000	
	(V)	(V)		(V)	(A)	(W)	(A)		(PF)		
5D180L	18	16-21	11	14	40	100	50	0.01	0.4	0.3	1.4k
5D220K	22	20-24	14	18	48	100	50	0.01	0.5	0.4	1.15k
5D270K	27	24-30	17	22	60	100	50	0.01	0.6	0.5	930
5D330K	33	30-36	20	26	73	100	50	0.01	0.8	0.6	760
5D390K	39	35-43	25	31	86	100	50	0.01	0.9	0.8	640
5D470K	47	42-52	30	38	104	100	50	0.01	1.1	1.0	530
5D560K	56	50-62	35	45	123	100	50	0.01	1.3	1.0	450
5D680K	68	61-75	40	56	150	100	50	0.01	1.6	1.2	370
5D820K	82	74-90	50	65	145	400	200	0.1	2.5	1.7	300
5D101K	100	90-100	60	85	175	400	200	0.1	3.0	2.0	250
5D121K	120	108-132	75	100	210	400	200	0.1	4.0	2.5	210
5D151K	150	135-165	95	125	260	400	200	0.1	4.8	3.0	165
5D181K	180	162-198	115	150	320	400	200	0.1	5.9	3.6	140
5D201K	200	185-225	130	170	355	400	200	0.1	6.5	4.0	125
5D221K	220	198-242	140	180	380	400	200	0.1	7.0	4.5	110
5D241K	240	216-264	150	200	415	400	200	0.1	8.0	5.0	100
5D271K	270	243-297	175	225	475	400	200	0.1	8.5	6.0	95
5D301K	300	270-330	195	250	520	400	200	0.1	9.0	6.5	85
5D331K	330	297-363	215	275	570	400	200	0.1	9.5	7.0	75
5D361K	360	324-396	230	300	620	400	200	0.1	10.0	7.5	70
5D391K	390	351-429	250	320	675	400	200	0.1	12.0	8.0	65
5D431K	430	387-473	275	350	745	400	200	0.1	13.0	9.0	60
5D471K	470	423-517	300	385	810	400	200	0.1	15.0	10	55
5D511K	510	459-561	320	410	845	400	200	0.1	16.0	11	50
5D561K	560	504-616	350	455	920	400	200	0.1	16.0	11	45
5D621K	620	558-682	385	505	1025	800	600	0.1	24.0	18	75
5D681K	680	612-748	385	560	1125	800	600	0.1	24.0	19	68

注：压敏电压测试电流 DC1Ma 工作环境温度：-45℃~+85℃ 加强型温度：-45℃~+125℃压敏电压温度变化率：<0.05/℃

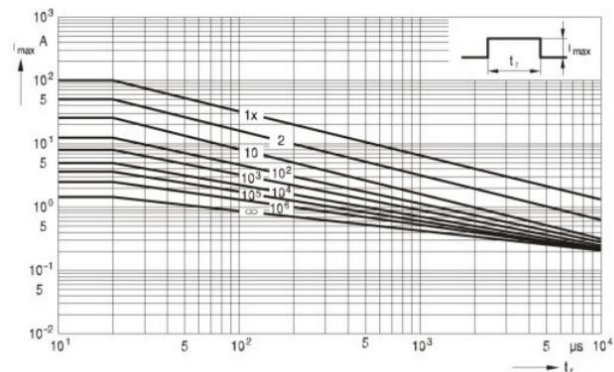
Note: Voltage-sensitive voltage test current DC1Ma working environment temperature: - 45 ~85, intensified temperature: - 45 +125, temperature change rate of voltage-sensitive voltage: < 0.05/.

降额曲线图 Reduction curve

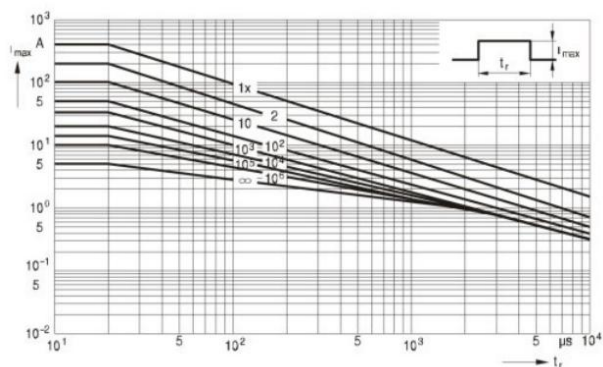
横轴是冲击时间即浪涌波形宽度，纵轴是冲击电流峰值，
线上的数字是冲击次数

Maximum Surge current $i_{\max} = f(t_r, \text{pulses train})$

5D180L-5D680K



5D820K-5D681K



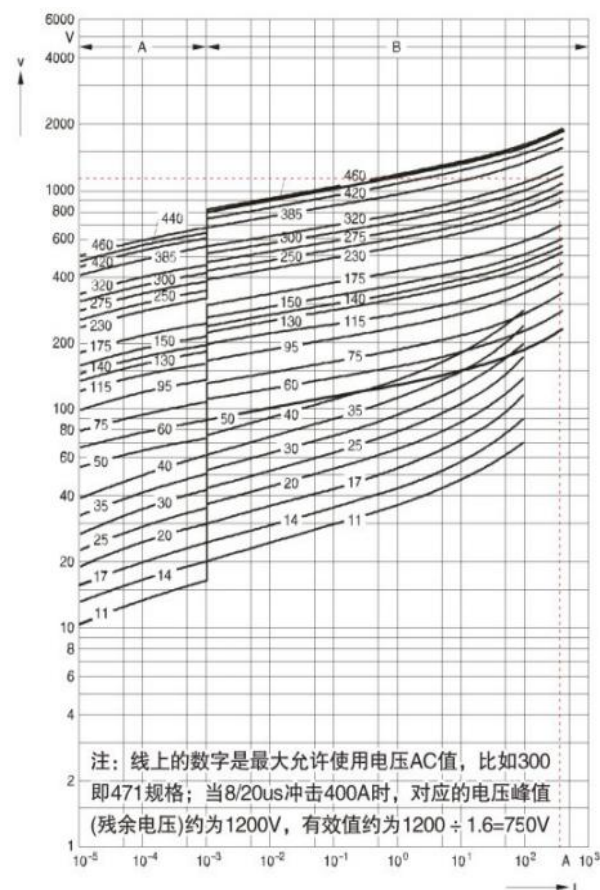
伏安特性图 v/i characteristics

A 区是泄露电流图，A=Leakage current

B 区是冲击电流与限制电流对称区

B=Protection level for worst-case varistor tolerances

5D180L-5D681K



Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.