

压敏电阻器

Voltage Varistor

过压保护型压敏电阻器

Series Overvoltage Protection Varistor

● 应用范围 Applications

- ◎ 晶体管、二极管、IC、可控硅和半导体开关元件以及各种电子设备过压保护
- ◎ 家用电器、工业电器、继电器和电子阀的浪涌吸收
- ◎ 静电放电和噪音信号消除
- ◎ 漏电保护开关过电压保护
- ◎ 电话机、程控交换机等通讯设备防雷及过电压保护

- ◎ Overvoltage protection for transistors, diodes, ICs, thyristors, semiconductor switching devices, and various electronic equipment.
- ◎ Surge absorption for household appliances, industrial electrical equipment, relays, and electronic valves.
- ◎ Electrostatic discharge and noise signal elimination.
- ◎ Overvoltage protection for leakage protection switches.
- ◎ Lightning and overvoltage protection for telephones, stored program control (SPC), and other communication equipment.

● 特点

- ◎ 尺寸小，通流容量和能量耐量大
- ◎ 环氧树脂绝缘包封
- ◎ 响应时间：<25 ns
- ◎ 使用环境温度：-40°C ~ +85°C
- ◎ 绝缘阻抗 $\geq 500 \text{ M}\Omega$
- ◎ 压敏电压温度系数：-0.5%/°C
- ◎ 芯片直径为(mm)：5、7、10、14、20、25、32、40、50
- ◎ 压敏电压的允许偏差为：K $\pm 10\%$ 、L $\pm 15\%$

● Features

- ◎ Compact size, high current capacity and high energy tolerance.
- ◎ Epoxy resin insulated encapsulation.
- ◎ Response time < 25 ns.
- ◎ Operating environment temperature: -40°C to +85°C.
- ◎ Insulation resistance $\geq 500 \text{ M}\Omega$.
- ◎ Voltage temperature coefficient of varistor: -0.5%/°C.
- ◎ Chip diameters available (mm): 5, 7, 10, 14, 20, 25, 32, 40, 50.
- ◎ Allowable voltage value tolerance for varistors: K $\pm 10\%$, L $\pm 15\%$.

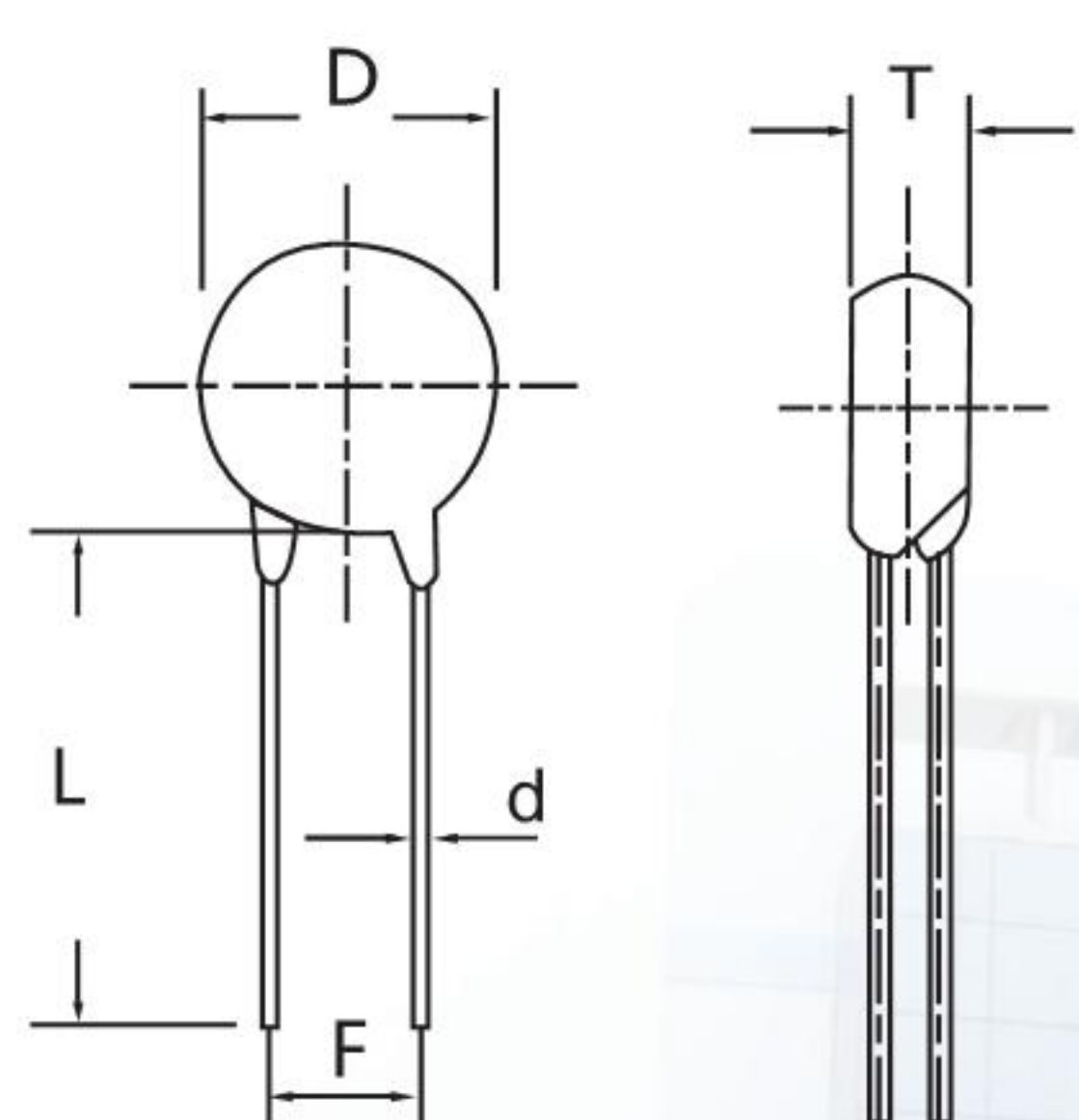
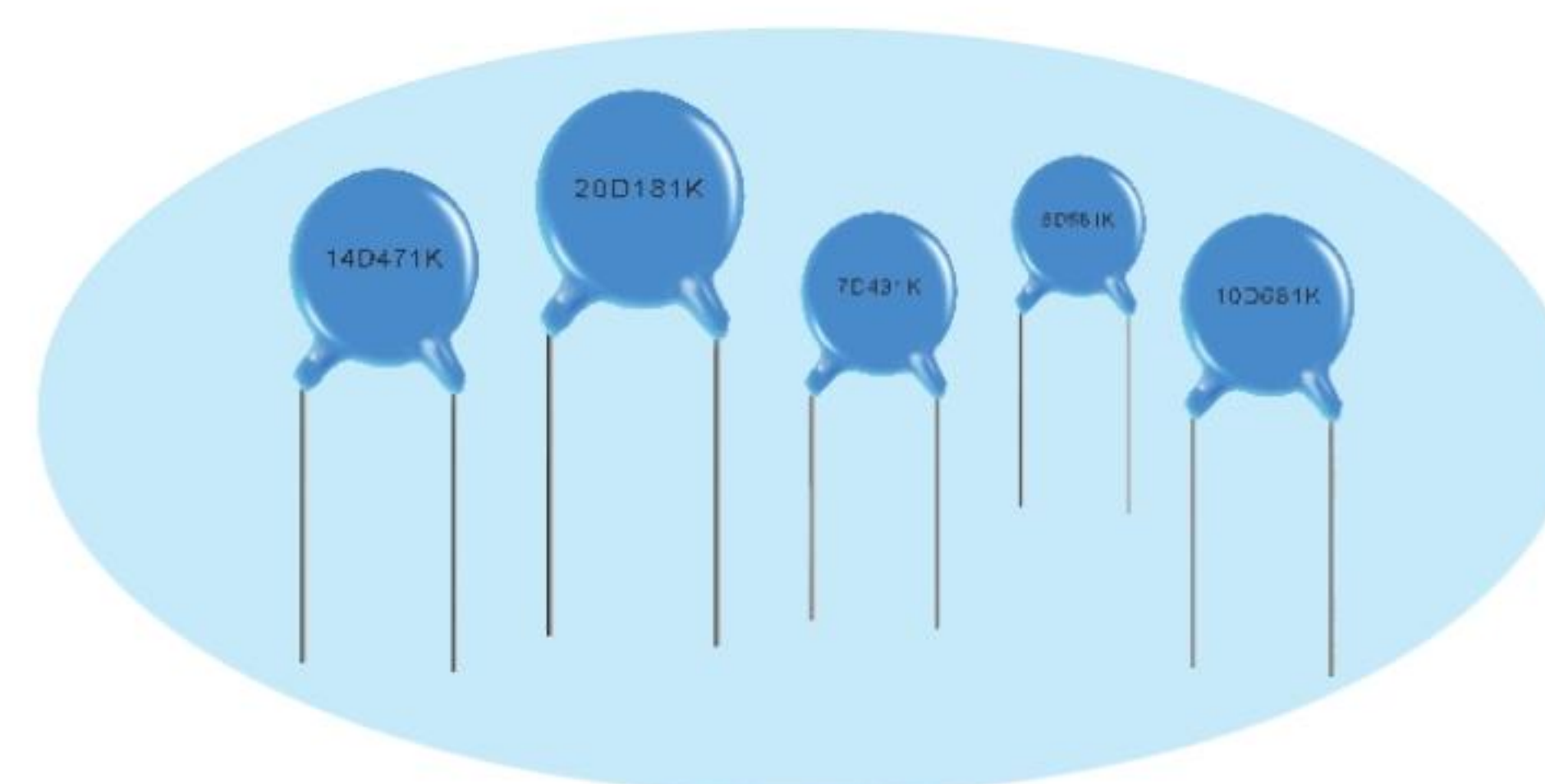


图1 diagram 1

见图1 See diagram 1

规格 Part No.	产品尺寸 Product Dimensions (mm)				
	Dmax	Tmax	Lmin	F ± 1	d ± 0.1
05D	7.5	6	20	5	0.6
07D	9	6	20	5	0.6
10D	14	8	25	7.5	0.8
14D	17	12	25	7.5	0.8
20D	25	12	25	10	1.0
25D	30	12	25	12.5	1.0

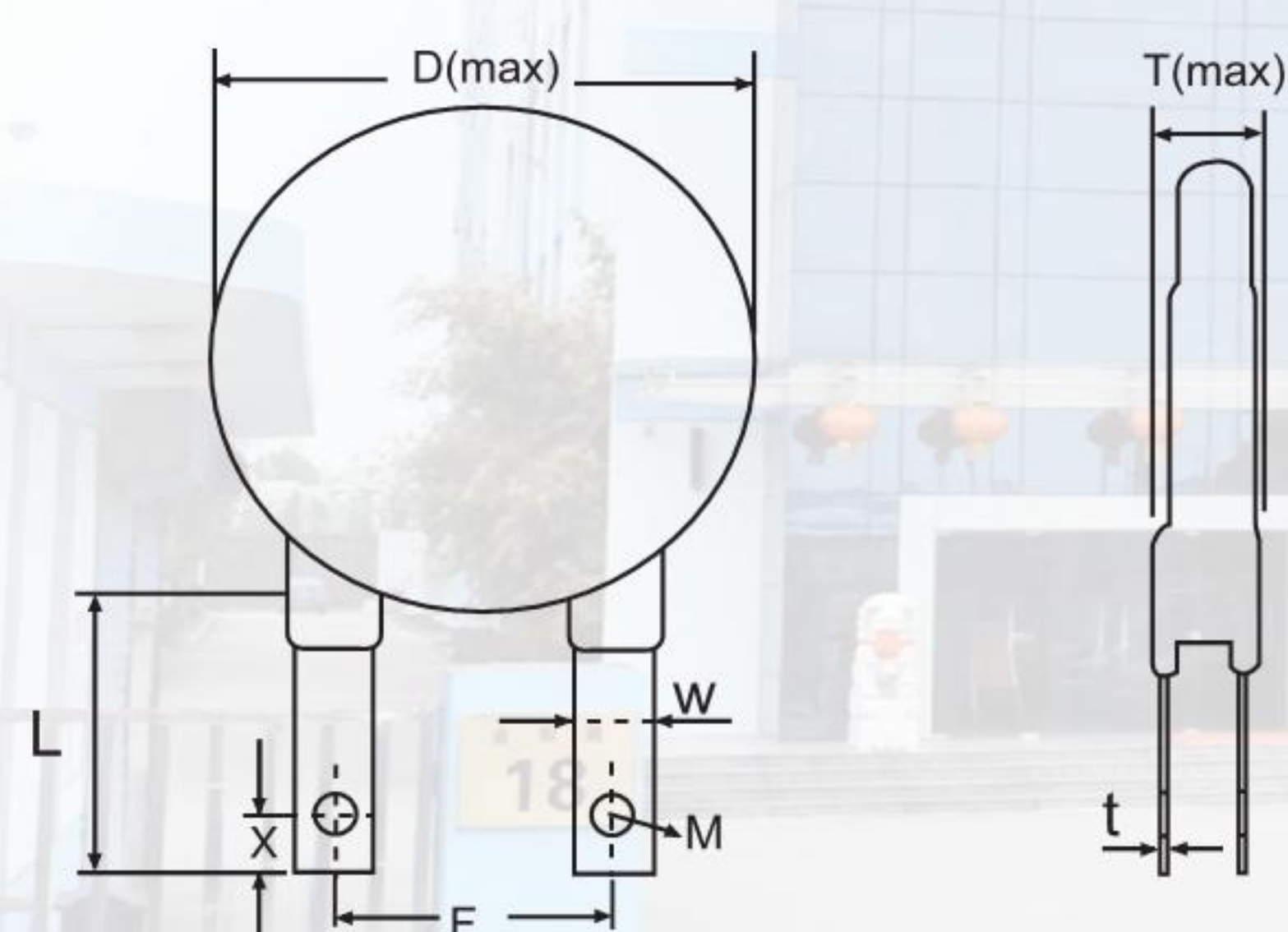


图2 diagram 2

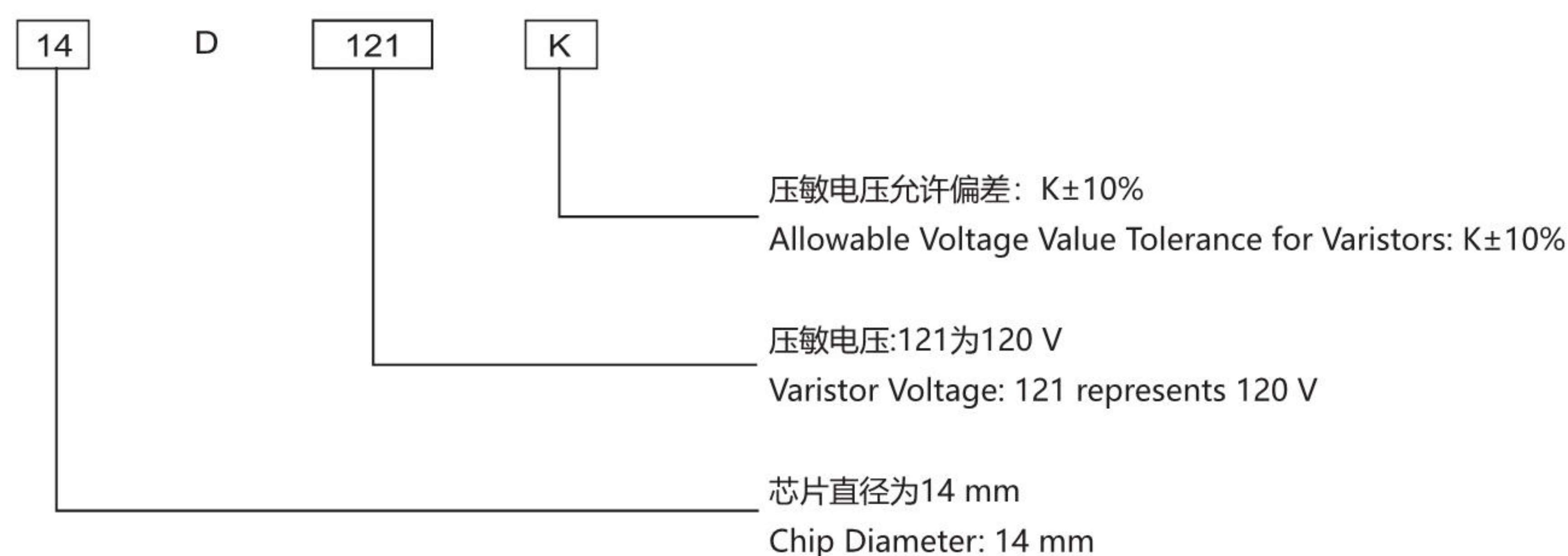
见图2 See diagram 2

规格 Part No.	产品尺寸 Product Dimensions (mm)							
	Dmax	Tmax	Lmin	F ± 1	W ± 0.5	t ± 0.1	M ± 0.5	X ± 0.3
32D	39	14.5	25	25	7.0	0.5	3.8	3.4
40D	46	15	25	25	7.0	0.5	3.8	3.4
50D	56	16	16.5	25	8.0	0.5	3.8	3.4

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● 产品标志说明 Marking Instruction



● 主要技术参数 Main Technical Specifications

型 号 Part No.	最大连续工作电压 Max allowable Operating Voltage		压敏电压 Varistor Voltage	最大限制电压 Max Clamping Voltage		通流容量 Capacity withstand in Surge Current (8/20us)		最大能量 Max Energy (J)		额定功率 Rated Power	电容量 Capacitance
	AC (V)	DC (V)	V 1mA (V)	Vp (A)	Ip (A)	1次 Once (A)	2次 Twice (A)	10/1000 us	2 ms	W	1KHZ (pF)
05D180K	11	14	18(16-20)	40	1	250	125	0.6	0.5	0.01	1400
05D220K	14	18	22(20-24)	48	1	250	125	10.7	0.7	0.01	1150
05D270K	17	22	27(24-30)	60	1	250	125	0.9	0.8	0.01	930
05D330K	20	26	33(30-36)	73	1	250	125	1.1	0.9	0.01	760
05D390K	25	31	39(35-43)	86	1	250	125	1.2	1.1	0.01	640
05D470K	30	38	47(42-52)	104	1	250	125	1.5	1.4	0.01	530
05D680K	40	56	68(61-75)	145	1	250	145	2.2	2.0	0.01	370
05D391K	250	320	390(351-429)	675	5	800	600	17	12	0.10	65
05D471K	300	385	470(423-517)	810	5	800	600	21	15	0.10	55
05D511K	320	415	510(459-561)	845	5	800	600	22.5	16	0.10	50
05D651K	350	460	560(504-616)	920	5	800	600	24	17	0.10	45
07D180K	11	14	18(16-20)	36	2.5	500	250	2.0	1.0	0.02	2800
07D220K	14	18	22(20-24)	43	2.5	500	250	2.0	1.3	0.02	2300
07D330K	20	26	33(30-36)	65	2.5	500	250	4.0	1.9	0.02	1500
07D390K	25	31	39(35-43)	77	2.5	500	250	4.0	2.3	0.02	1300
07D470K	30	38	47(42-52)	93	2.5	500	250	4.0	2.8	0.02	1100
07D560K	35	45	56(50-62)	110	2.5	500	252	4.0	3.3	0.02	890
07D680K	40	56	68(61-75)	135	2.5	500	250	4.0	4.1	0.02	740
07D820K	50	65	82(74-90)	135	10	1750	1250	4.0	4.8	0.25	600
07D151L	95	125	150(135-165)	250	10	1750	1250	13	9.0	0.25	330
07D201L	130	170	200(185-225)	340	10	1750	1250	17.5	12.5	0.25	250
07D221K	140	180	220(198-242)	360	10	1750	1250	19	13.5	0.25	230
07D271K	175	225	270(243-297)	455	10	1750	1250	24	17	0.25	185
07D331K	210	275	330(297-363)	550	10	1750	1250	28	20	0.25	150
07D361K	230	300	360(324-396)	595	10	1750	1250	32	23	0.25	140
07D391K	250	320	390(351-429)	650	10	1750	1250	35	25	0.25	130
07D471K	300	385	470(423-571)	775	10	1750	1250	45	30	0.25	105
07D511K	320	415	510(495-561)	845	10	1750	1250	49	32	0.25	100

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型 号 Part No.	最大连续工作电压 Max allowable Operating Voltage		压敏电压 Varistor Voltage	最大限制电压 Max Clamping Voltage		通流容量 Capacity withstand in Surge Current (8/20us)		最大能量 Max Energy (J)		额定功率 Rated Power	电容量 Capacitance
	AC (V)	DC (V)	V 1mA (V)	Vp (A)	Ip (A)	1次 Once (A)	2次 Twice (A)	10/1000 us	2ms	W	1KHZ (pF)
07D561K	350	460	560(504-616)	920	10	1750	1250	55	35	0.25	90
07D681K	420	560	680(612-748)	1120	10	1750	1250	60	42	0.25	75
10D220K	14	18	22(20-24)	43	5	1000	500	5.0	2.6	0.05	4500
10D330K	20	26	33(30-36)	65	5	1000	500	7.0	3.9	0.05	3000
10D390K	25	31	39(35-43)	77	5	1000	500	9.0	4.7	0.05	2400
10D470K	30	38	47(42-52)	93	5	1000	500	11.0	5.6	0.05	2100
10D680K	40	56	68(61-75)	135	5	1000	500	15.0	8.1	0.05	1500
10D820K	50	65	82(74-90)	135	25	3500	2500	17.0	9.8	0.4	1200
10D151K	95	125	150(135-165)	250	25	3500	2500	25	18	0.4	670
10D201K	130	170	200(185-225)	340	25	3500	2500	35	25	0.4	500
10D361K	230	300	360(324-396)	595	25	3500	2500	65	45	0.4	280
10D391K	250	320	390(351-429)	650	25	3500	2500	70	50	0.4	260
10D471K	300	385	470(423-517)	775	25	3500	2500	85	60	0.4	210
10D511K	320	415	510(459-561)	845	25	3500	2500	92	67	0.4	200
10D561K	350	460	560(504-616)	925	25	3500	2500	92	67	0.4	180
10D681K	420	560	680(612-748)	1120	25	3500	2500	92	67	0.4	150
10D911K	550	745	910(819-1001)	1500	25	3500	2500	130	90	0.4	110
14D220K	14	18	22(20-24)	43	10	2000	1000	8.0	5.7	0.10	9100
14D330K	20	26	33(30-36)	65	10	2000	1000	12.0	8.4	0.10	6100
14D470K	30	38	47(42-52)	93	10	2000	1000	17.0	11.9	0.10	4300
14D820K	50	65	82(74-90)	135	50	6000	5000	27.0	20.5	0.60	2400
14D151K	95	125	150(135-165)	250	50	6500	5000	53	37.5	0.60	1300
14D201K	130	170	200(185-225)	340	50	6500	5000	70	50	0.60	1000
14D221K	140	180	220(198-242)	360	50	6500	5000	78	55	0.60	900
14D241K	150	200	240(216-264)	395	50	6500	5000	84	60	0.60	830
14D361K	230	300	360(324-396)	595	50	6500	5000	130	90	0.60	560
14D391K	250	320	390(351-429)	650	50	6500	5000	140	100	0.60	510
14D471K	300	385	470(423-517)	775	50	6500	5000	175	125	0.60	430
14D511K	320	415	510(459-561)	845	50	6500	5000	190	136	0.60	390
14D681K	420	560	680(612-748)	1120	50	6500	5000	190	136	0.60	290
14D821K	510	670	820(738-902)	1355	50	6500	5000	235	165	0.60	240
14D911K	550	745	910(819-1001)	1500	50	6500	5000	255	180	0.60	220
20D390K	25	31	39(35-43)	77	20	3000	2000	28.0	24.0	0.20	8500
20D151K	95	125	150(135-165)	250	100	13000	7000	106	75.0	1.00	2700
20D241K	150	200	240(216-264)	395	100	13000	7000	168	120	1.00	1650
20D361K	230	300	360(324-396)	595	100	15000	7000	255	180	1.00	1100
20D391K	250	320	390(351-429)	650	100	13000	7000	275	195	1.00	1000
20D431K	275	350	430(387-473)	710	100	13000	7000	305	215	1.00	930
20D471K	300	385	470(423-517)	775	100	13000	7000	350	250	1.00	850
20D511K	320	415	510(459-561)	845	100	13000	7000	382	273	1.00	780

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	AC (V)	DC (V)	V 1mA (V)	Vp (A)	Ip (A)	1次 Once (A)	2次 Twice (A)	10/1000 us	2 ms	W	1KHZ (pF)
20D681K	420	560	680(612-748)	1120	100	10000	7000	380	273	1.00	600
20D911K	550	745	910(819-1001)	1500	100	10000	7000	510	360	1.00	440
25D201K	130	170	200(185-225)	340	150	20000	14000	190.0	140.0		3200
25D241K	150	200	240(216-264)	395	150	20000	14000	220.0	160.0		2650
25D391K	250	320	390(351-429)	650	150	20000	14000	360.0	260.0		1600
25D471K	300	385	470(423-517)	775	150	20000	14000	440.0	300.0		1400
25D561K	350	460	560(504-616)	925	150	20000	14000	440.0	300.0		1150
25D681K	420	560	680(612-748)	1120	150	20000	14000	460.0	320.0		950
25D911K	550	745	910(819-1001)	1500	150	20000	14000	620.0	430.0		700
32D121K	75	100	120(108-132)	200	40	8000	5000		80	0.25	10000
32D181K	115	150	180(162-198)	340	40	8000	5000		100	0.25	7000
32D201K	130	170	200(180-220)	340	200	15000	10000		200	1.00	4600
32D271K	175	225	270(243-297)	455	200	15000	10000		240	1.00	3400
32D391K	250	320	390(351-429)	650	200	15000	10000		330	1.00	2300
32D471K	300	385	470(423-517)	775	200	15000	10000		360	1.00	2100
32D561K	350	455	560(504-616)	945	200	15000	10000		390	1.00	1700
32D621K	380	505	620(558-682)	1025	200	15000	10000		390	1.00	1500
32D681K	420	560	680(612-748)	1120	200	15000	10000		400	1.00	1300
32D821K	510	670	820(738-902)	1355	200	15000	10000		500	1.00	1200
32D911K	550	745	910(819-1001)	1500	200	15000	10000		550	1.00	1100
32D112K	680	895	1100(990-1210)	1815	200	15000	10000		650	1.00	900
40D121K	75	100	120(108-132)	200	100	15000	10000		120	0.30	16000
40D181K	115	150	180(162-198)	300	100	15000	10000		140	1.20	10000
40D201K	130	170	200(180-220)	340	250	30000	20000		270	1.20	6200
40D271K	175	225	270(243-297)	455	250	30000	20000		300	1.20	4800
40D391K	250	320	390(354-429)	650	250	40000	25000		370	1.20	3400
40D471K	300	385	470(423-517)	775	250	40000	25000		430	1.20	2800
40D681K	420	560	680(612-748)	1025	250	40000	25000		600	1.20	1900
40D911K	550	745	910(819-1001)	1500	250	40000	25000		750	1.20	1500
40D112K	680	895	1100(989-1210)	1815	250	40000	25000		900	1.20	1200
50D201K	130	170	200(180-220)	340	300	40000	25000		310	1.40	12000
50D271K	175	225	270(243-297)	455	300	40000	25000		380	1.40	7500
50D391K	250	320	390(351-429)	650	300	50000	30000		490	1.40	4100
50D471K	300	385	470(423-517)	775	300	50000	30000		590	1.40	3400
50D681K	420	560	680(612-748)	1120	300	50000	30000		830	1.40	2550
50D911K	550	745	910(819-1001)	1500	300	50000	30000		960	1.40	2100
50D112K	680	895	1100(990-1210)	1815	300	50000	30000		1100	1.40	1750

车用NTC温度传感器

Automotive NTC Temperature Sensor

采用多项具有自主知识产权核心技术生产的NTC温度传感器具有测温精度高、反应速度快、一致性好、可靠性高、使用寿命长等特点，被广泛应用于各类乘用车、工程、商务以及新能源汽车。

Manufactured with proprietary core technologies, our automotive NTC temperature sensors deliver high temperature measurement accuracy, fast response time, excellent consistency, high reliability, and extended service life.

They are widely applied in passenger vehicles, commercial vehicles, engineering vehicles, and electric vehicles.

