帝科微 DIKEWEI

深圳市帝科微电子有限公司

DIKEWEI ELECTRONICS TECHNOLOGY., TLD. SHENZHEN

产品手册

PRODUCT SELECTING MANUAL

优良品质 · 诚信经营

一 起 携 手 · 共 创 辉 煌

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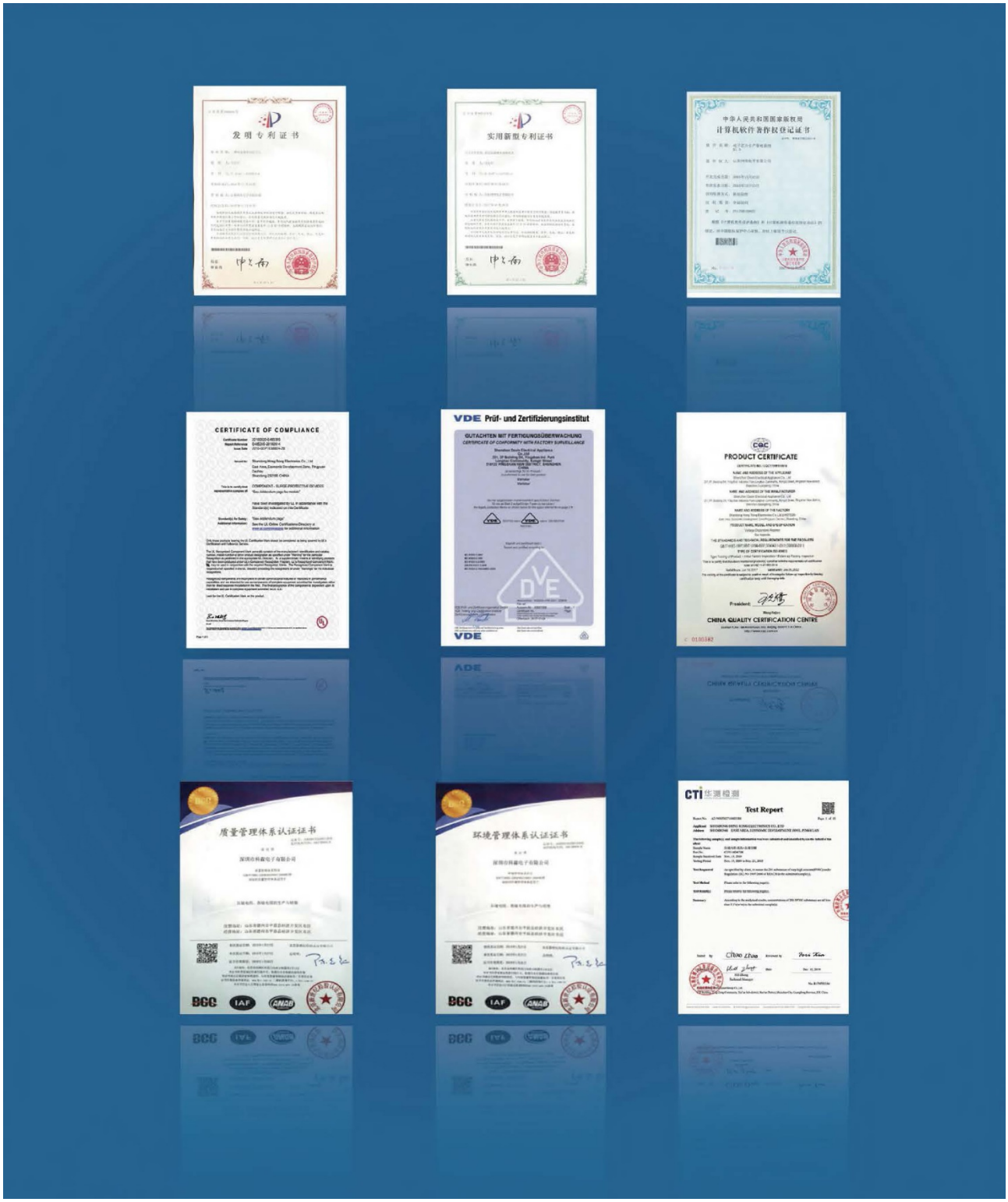
帝科微电子，是一家电路保护器件及光控器件的专业生产厂家，集产品研发、生产、销售、服务于一体的元器件制造企业。产品广泛用于家电、通讯、电源、LED、电脑、汽车、高铁、工控安防及医疗电子产品领域。公司具有先进的生产设备、高精度的测试仪器、专业的技术人员、优秀的管理人才及丰富的经营理念。

公司主要经营全系列压敏电阻：（MOV 插件压敏 18V-1800V，SMD3225、4032 系列大功率压敏电阻，SMD 防静电、压制浪涌型压敏电阻 0210-2220 系列）；NTC 负温度热敏电阻：（功率：MF72 系列，MF11 补偿型系列，测温型系列：MF51、MF52、MF53、MF58，定制型温度传感器）；PTC 正温度热敏电阻：（插件 MZ4、MZ5、MZ6、MZ8、MZ10、MZ12、MZ15、12P、15P、16P、18、20P 系列）；LDR 光敏电阻：（3mm、4mm、5mm、7mm、12mm、20mm、25mm 系列、贴片 0805，1206 光敏传感器）；PPTC 自恢复保险丝：（插件 6v、16v、30v、60v、72v、130v、250v、265、600v 系列；贴片 0603、0805、1206、1210、1812、2018、2920 系列、插件熔断保险丝系列、贴片 0603、1206、2410 系列、TVS 瞬态二极管插件、贴片系列；电容系列：（Y1、Y2、X2、CBB 系列）及代理销售二三极、集成 IC、等，专业为客户提供一站式元件配套服务。

公司发展至今，20 年诚信经营及生产，已拥有完整的可靠度实验室，先进的自动化生产设 备,建立了标准化的生产车间，通过 IS09001 质量体系认证，IS014001 环境管理体系认证；并获得多项国内安规认证：中国 CQC 认证；美国 UL 认证；德国 VDE 认证；加拿大 CUL 认证，产品符合 ROHS、REACH 环保指令。

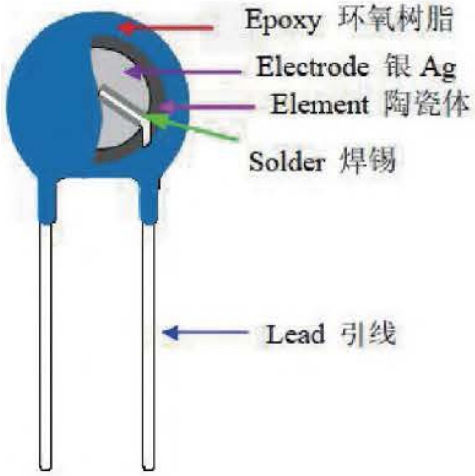
我们始终“质量，创新，求实，诚信”的宗旨，为广大客户提供优质服务和满意的产品，以更完美的管理与服务，赢得客户的支持与信赖，热烈欢迎新老客户携手合作、共创辉煌。


发明专利证书
实用新型专利证书
计算机软件著作权登记证书
CERTIFICATE OF COMPLIANCE
VDE Prüf- und Zertifizierungsinstitut
PRODUCT CERTIFICATE
CHINA QUALITY CERTIFICATION CENTRE
质量管理体系认证证书
环境管理体系认证证书
CTI 华测检测
Test Report

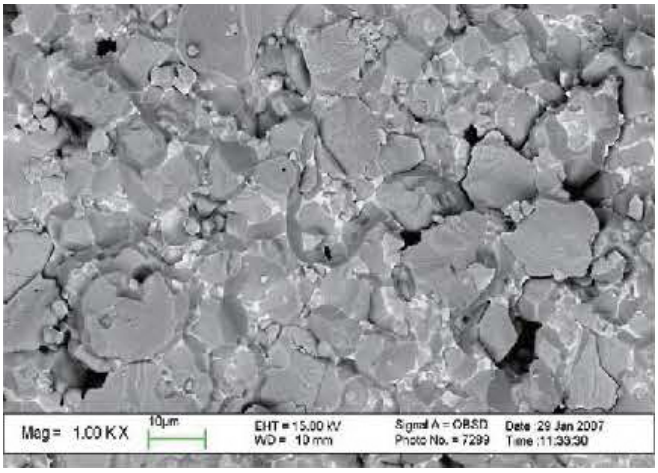
压敏电阻工作原理与专业术语

Working principle Of The Varistor And Professional Terms

压敏电阻元件，因为对电压具有非线性电阻变化在双向也有对称性，并且能对线路上的异常电压反应，吸收掉大部分的突波、浪涌能量，同时把异常电压抑制到安全范围使线路的安全性及稳定性提高。



(图 1：压敏电阻结构图)



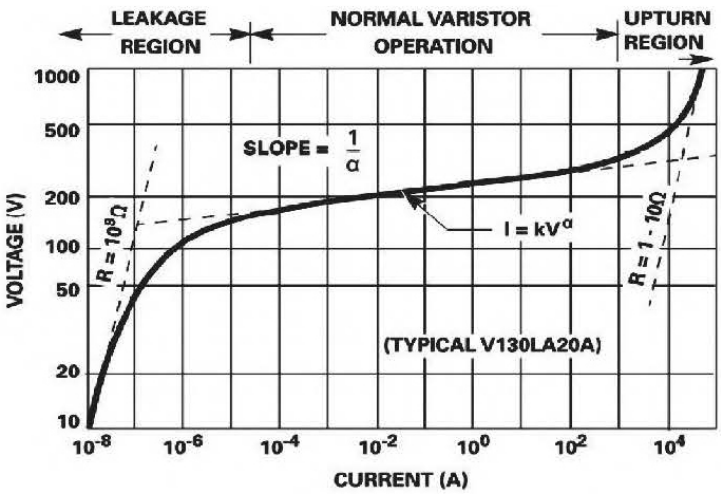
(图 2：电子显微镜下的压敏电阻)

压敏电阻保护原理 Varistor Protection Principle

压敏电阻在预备状态时，相对于受保护之电子元件而言，具有很高的电阻抗（MΩ级），并且不会影响原设计电路之特性，但当瞬间异常电压出现时，即超过压敏电阻动作电压时，该压敏电阻的阻抗会变低（只有数Ω），同时造成线路短，因此电子产品元件受到保护。

压敏电阻电气特性 Varistor Performance Characteristics

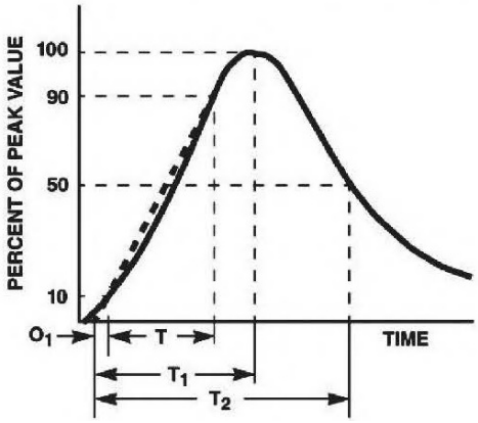
1、V-I Characteristics 电压电流特性曲线：



(图 3：电压电流特性曲线)

Leakage Region：漏电流区（预击穿区），压敏电阻器 V-I 特性近似成线性关系，此时压敏电阻呈高阻状态，处于绝缘可看作开路 Normal Varistor Operation：非线性区（工作区），此时压敏电阻 V-I 特性处于非线性状态 Upturn Region：上升区（大电流区），此时压敏电阻处低于阻抗状态，可看作短路状态 V-I 曲线可用函数表示：$I=KV^a$　K 表示常数，a 表示非线性指数（a=logI1/I2/logV1/V2）

2、Impulse Current Waveform 8/20us 冲击电流波形图



0_1 = Virtual Origin of Wave
T =Time from 10% to 90% of Peak
T_1 = Rise Time = 1.25 xT
T_2 = Decay Time
Example:
For an 8/20 μs Current Waveform:
8μs =T_1 = Rise Time
20μs =T_2 = Decay Time

（图 4： 8/20us 冲击波波形图）

3、Professional Term 专业术语：

3.1 压敏电压（V1mA）：按规定的直流参考电流 Io（例 Io=1mA$_{DC}$）流入压敏电阻器时，测量其两端的电压就称为压敏电压（V1mA）。

3.2 压敏电阻漏电流（I_L）：是指压敏电阻击穿导通以前，即电压低于 U1mA 时测量的电流。

3.3 最大容许电压（VDC/VAC）：可连续加于压敏电阻器两端而不导致产生劣化情况的最大工作电压，包括 VDC 和 VAC。

3.4 最大限制电压（Vc）：施加规定波形和幅值的冲击电流时（8/20us），在 MOV 两端测得的最大电压峰值。

3.5 最大电流耐量（Imax）：SPD（或 MOV）能承受的波形为 8/20 的最大冲击电流峰值；MOV（或 SPD）不发生实质性破坏（指 V1mA 的变化率在±10%以内）。

3.6 最大吸收能量（J）：是指 MOV 能够承受规定波形（10/1000us 或 2ms）的电流冲击一次的最大能量。

3.7 消耗功率（W）：在 85℃以交流电连续施加在压敏电阻上 1000 小时，压敏电压变化率在±10%以内的最大电力。

3.8 参考电容（PF）：在特定频率（1KHz 或 1MHz）和电压 1Vrms max 下所测得的电容值。

压敏电阻特性与应用介绍 Varistor Features And Application Is Introduced

■ Features 特性：

反应时间快速
良好的电压比
高稳定性的回路电压
优越的暂态电压吸收特性
优良的电压电流对称特性
过温条件下有稳定的限压

■ Application Is Introduced 应用介绍：

电信、移动通讯：手机、电话、传真、继电器接点保护等
家用电子、电器：彩电、冰箱、插座、洗衣机等
商用机器：影印机、ATM 机、火灾报警器、照明装备等
交通运输工具：汽车、火车、动车、飞机、船泊等
电力系统：避雷器、变压器、电力输送线等
工业机器：马达控制器、电源电路、三相整流线路

应用说明 Application Specifications

MODEL NUMBER ø5mm	MODEL NUMBER ø7mm	MODEL NUMBER ø10mm	MODEL NUMBER ø14mm	MODEL NUMBER ø20mm	主要用途 Recommended Application
VDK-05D180K	VDK-07D180K	VDK-10D180K	VDK-14D180K	VDK-20D180K	•Protection of various kinds of semiconductors •Protection of automobile equipment •Absorption of switching surge from various kinds of relays and electro-magnetic valves (DC below 48V) •Protection ofelectronic equipment from electronic discharge •Cellular phone •积体电路、电晶体等半导体元件保护 •汽车电装品 •DC 48V 以下激磁线圈如：继电器、电磁关等 •静电防制 •行动电话
VDK-05D220K	VDK-07D220K	VDK-10D220K	VDK-14D220K	VDK-20D220K	
VDK-05D270K	VDK-07D270K	VDK-10D270K	VDK-14D270K	VDK-20D270K	
VDK-05D330K	VDK-07D330K	VDK-10D330K	VDK-14D330K	VDK-20D330K	
VDK-05D390K	VDK-07D390K	VDK-10D390K	VDK-14D390K	VDK-20D390K	
VDK-05D470K	VDK-07D470K	VDK-10D470K	VDK-14D470K	VDK-20D470K	
VDK-05D560K	VDK-07D560K	VDK-10D560K	VDK-14D560K	VDK-20D560K	
VDK-05D680K	VDK-07D680K	VDK-10D680K	VDK-14D680K	VDK-20D680K	

MODEL NUMBER ø5mm	MODEL NUMBER ø7mm	MODEL NUMBER ø10mm	MODEL NUMBER ø14mm	MODEL NUMBER ø20mm	主要用途 Recommended Application
VDK-05D820K VDK-05D101K VDK-05D121K VDK-05D151K	VDK-07D820K VDK-07D101K VDK-07D121K VDK-07D151K	VDK-10D820K VDK-10D101K VDK-10D121K VDK-10D151K	VDK-14D820K VDK-14D101K VDK-14D121K VDK-14D151K	VDK-20D820K VDK-20D101K VDK-20D121K VDK-20D151K	•Telephone Communication line (DC 48V) •电话机用 DC 48V 通信回线用
VDK-05D181K VDK-05D201K VDK-05D221K	VDK-07D181K VDK-07D201K VDK-07D221K	VDK-10D181K VDK-10D201K VDK-10D221K	VDK-14D181K VDK-14D201K VDK-14D221K	VDK-20D181K VDK-20D201K VDK-20D221K	•AC 100V Line-Line Applications(Japan) •AC100 电源线间应用(日本)
VDK-05D241K VDK-05D271K VDK-05D301K	VDK-07D241K VDK-07D271K VDK-07D301K	VDK-10D241K VDK-10D271K VDK-10D301K	VDK-14D241K VDK-14D271K VDK-14D301K	VDK-20D241K VDK-20D271K VDK-20D301K	•AC 100V to 120V, Line-Line Applications(Japan., U.S., Canada) •AC100 至 120V 电源线间应用(日本、美国、加拿大等)
VDK-05D331K VDK-05D361K VDK-05D391K	VDK-07D331K VDK-07D361K VDK-07D391K	VDK-10D331K VDK-10D361K VDK-10D391K	VDK-14D331K VDK-14D361K VDK-14D391K	VDK-20D331K VDK-20D361K VDK-20D391K	•Telephone Line Application(250V Insulation Resistance Test Applicable) •电话机用(250V 绝缘阻抗测试)
VDK-05D431K VDK-O5D471K	VDK-07D431K VDK-07D471K	VDK-10D431K VDK-10D471K	VDK-14D431K VDK-14D471K	VDK-20D431K VDK-20D471K	•AC200/220V Line-Line Applications •AC100Vto220V Line-Ground Applications •AC200/220V 电源线间应用 •AC100 至 220V 电源与对地间应用
VDK-05D561K VDK-05D621K VDKHJ5D681K	VDK-07D561K VDK-07D621K VDK-07D681K	VDK-10D561K VDK-10D621K VDK-10D681K	VDK-14D561K VDK-14D621K VDK-14D681K	VDK-20D561K VDK-20D621K VDK-20D681K	• AC 240V Line-Line Applications(U.K.,Australia,Middle East Countries) •AC240V 电源线间应用(英国、中东、澳洲等国)
		VDK-10D751K VDK-10D781K VDK-10D821K	VDK-14D751K VDK-14D781K VDK-14D821K	VDK-20D751K VDK-20D781K VDK-20D821K	•AC 380V Line-Line and Line-Ground Applications •AC380V 电源线间及电源与对地间应用应用
		VDK-10D911K	VDK-14D911K	VDK-20D911K	•AC415V Line-Line and Line-Ground Applications •AC415V 电源线间及电源与对地间应用应用
		VDK-10D102K VDK-10D112K	VDK-14D102K VDK-14DU2K	VDK-20D102K VDK-20D112K	•AC480V Line-Line and Line-Ground Applications •AC480V 电源线间及电源与对地间应用应用
			VDK-14D182K	VDK-20D182K	•Line-Ground Applications(For AC 1200V Withstanding Test) •AC 1200V 电源与对地间间应用

保险丝之配用建议 Select of fuse in conformity to VDK Varistor

If conform with diameter *和压敏电阻器之本体大小配合时

Part No.	VDK 05D series	VDK 07D series	VDK 10D series	VDK 14D series	VDK 20D series
Fuse rating	1 to 2A	2 to 3A	3 to 5A	3 to 10A	3 to 15A

If conform with Max.peak current *和压敏电阻器之峰值电流配合时

Max. Peak Current 8/20us 1 time(A)	Up to 500	501 to 2000	2001 to 6000
Fuse rating	3A	5A	10A

型号说明 Explanation of Part Numbers

VDK □□ D □□□ K □□ □□

Common Code 产品类别代码	Chip Diameter 芯片直径	Chip.Shape 芯片形状	Varistor Voltage 压敏电阻动作电压	Tolerance 误差	HighSurge/Lead Style 高焦/脚型	Length/Packing 脚长/包装
VDK Metal, Oxide. Varistor, Surge, Absorber VDK 金属氧化物压敏电阻器	05 Φ5mm 07 Φ7mm 10 Φ10mm 14 Φ14mm 20 Φ20mm 25 Φ25mm 32 Φ32mm	圆形 Disc	例如 Examples: [4][7][0] $47\times10^0=47V$ [4][7][0] $47\times10^1=470V$ [4][7][0] $11\times10^2=1100V$	K±10% L±15% M±20% Or Customer Special Requirement	□空白常规 □J 高能品 □S 直脚 □K 外弯脚 □I 内弯脚 □H 高低脚	空白表散装 3.5±0.5mm 5.0±0.5mm 10.0±0.5mm □B 散装 □R 卷装 □A 盒装

Specifications 规格说明:

□Varistor Voltage Range
压敏电阻动作电压范围 18V~1800V(dc)

□Peak Current For 8/20us Current Wave
在 8/20us 电流波形最大通流量 100A~30000A

□Energy Range For 10/1000us Current Wave
在 10/1000us 电流波形的能量范围 0.4J~1092J

□Storage Temperature Range
储存温度范围 -40℃~125℃

□Operation Ambient Temperature Range
作业环境温度范围 -40℃~85℃

□Typical Response Time
反应时间 <25ns

□Insulation Resistance
绝缘电阻 ≧1000MΩ

05D Specifiation

Put “J” In Free Code Stands For High Surge Series

VDK Part Number		maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage(Max) 抵制电压 @(8/20)us		Maxlmum Peak Current 最大电流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us		Rated Power 消耗功率	TyplcalCapacltance (Reference) 参考电容值
Standard	High Surge	AC.rms	DC	$V_{0.1mA}$(V)	VC	IP	Standard	High Surge	Standard	High Surge	(W)	@1KHz(pF)
		(V)			(V)	(A)	(A)		(J)			
05D180K	J	11	14	18(14.4-21.6)	40	1	100 / 50×2	250 / 100×2	0.4	0.6	0.01	1400
05D220K	J	14	18	22(18.7-26)	48				0.5	0.7		1150
05D270K	J	17	22	27(23-31.1)	60				0.6	0.9		930
05D330K	J	20	26	33(29.5-36.5)	73				0.8	1.1		760
05D390K	J	25	31	39(35-43)	80				0.9	1.2		640
05D470K	J	30	38	47(42-52)	104				1.1	1.5		530
05D560K	J	35	45	56(50-62)	123				1.3	1.8		450
05D680K	J	40	56	68(61-75)	145	5	400 / 200×2	800 / 400×2	1.6	2.2	0.10	370
05D820K	J	50	65	82(74-90)	150				2.5	4.0		300
05D101K	J	60	85	100(90-110)	175				3.0	4.1		250
05D121K	J	75	110	120(108-132)	210				4.0	4.9		210
05D151K	J	95	125	150(135-165)	260				4.8	6.5		165
05D181K	J	115	150	180(162-198)	320				5.9	7.5		140
05D201K	J	130	170	200(185-225)	355				6.5	8.5		125
05D221K	J	140	180	220(198-242)	380				7.0	9.0		110
05D241K	J	150	200	240(216-264)	415				8.0	10.5		100
05D271K	J	175	225	270(243-297)	475				8.5	11.0		95
05D301K	J	190	250	300(270-330)	520				9.0	12.0		85
05D331K	J	210	275	330(297-363)	570				9.5	13.0		75
05D361K	J	230	300	360(324-396)	620				1.0	16.0		70
05D391K	J	250	320	390(351-429)	675				12.0	17.0		65
05D431K	J	275	350	430(387-473)	745				13.0	20.0		60
05D471K	J	300	385	470(423-517)	810				15.0	21.0		55
05D511K	J	320	415	510(459-561)	845				16.0	22.5		50
05D561K	J	350	460	560(504-616)	920				16.8	24.0		45
05D621K	J	385	505	620(558-682)	1025				17.7	26.6		40
05D681K	J	420	560	680(612-748)	1120				19.4	29.1		38
05D751K	J	460	615	750(675-825)	1240				22.4	32.0		30

07D Specifiation

Put “J” In Free Code Stands For High Surge Series

VDK Part Number		maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage(Max) 抵制电压 @(8/20)us		Maxlmum Peak Current 最大电流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us		Rated Power 消耗功率	TyplcalCapacltance (Reference) 参考电容值
Standard	High Surge	AC.rms	DC	$V_{0.1mA}$(V)	VC	IP	Standard	High Surge	Standard	High Surge	(W)	@1KHz(pF)
		(V)			(V)	(A)	(A)		(J)			
07D180K	J	11	14	18(14.4-21.6)	40	2.5	250 / 125×2	500 / 250×2	0.9	2.0	0.02	2800
07D220K	J	14	18	22(18.7-26)	48				1.1	2.4		2300
07D270K	J	17	22	27(23-31.1)	60				1.4	3.0		1800
07D330K	J	20	26	33(29.5-36.5)	73				1.7	3.5		1500
07D390K	J	25	31	39(35-43)	80				2.1	4.0		1300
07D470K	J	30	38	47(42-52)	104				2.5	5.0		1100
07D560K	J	35	45	56(50-62)	123				3.1	6.0		890
07D680K	J	40	56	68(61-75)	145				3.6	7.0		740
07D820K	J	50	65	82(74-90)	150	10	1200 / 600×2	1750 / 1200×2	5.5	10.0	0.25	600
07D101K	J	60	85	100(90-110)	175				6.5	12.0		500
07D121K	J	75	110	120(108-132)	210				7.8	13.0		420
07D151K	J	95	125	150(135-165)	260				9.7	15.0		330
07D181K	J	115	150	180(162-198)	320				11.7	16.0		280
07D201K	J	130	170	200(185-225)	355				13.0	17.0		250
07D221K	J	140	180	220(198-242)	380				14.0	19.0		230
07D241K	J	150	200	240(216-264)	415				15.0	21.0		210
07D271K	J	175	225	270(243-297)	475				18.0	24.0		185
07D301K	J	190	250	300(270-330)	520				20.0	26.0		165
07D331K	J	210	275	330(297-363)	570				23.0	28.0		150
07D361K	J	230	300	360(324-396)	620				24.0	32.0		140
07D391K	J	250	320	390(351-429)	675				26.0	35.0		130
07D431K	J	275	350	430(387-473)	745				28.0	40.0		115
07D471K	.1	300	385	470(423-517)	810				29.0	42.0		105
07D511K	J	320	415	510(459-561)	845				31.0	45.0		100
07D561K	J	350	460	560(504-616)	920				35.0	49.0		90
07D621K	J	385	505	620(558-682)	1025				38.0	55.0		80
07D681K	J	420	560	680(612-748)	1120				42.0	60.0		75
07D751K	J	460	615	750(675-825)	1240				45.0	64		70
07D781K	J	485	640	780(702-858)	1290				48.0	69		65
07D821K	J	510	670	820(738-902)	1355				52.0	73		60

10D Specifiation

Put “J” In Free Code Stands For High Surge Series

VDK Part Number		maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage(Max) 抵制电压 @(8/20)us		Maxlmum Peak Current 最大电流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us		Rated Power 消耗功率	TyplcalCapacltance (Reference) 参考电容值
Standard	High Surge	AC.rms	DC	$V_{0.1mA}$(V)	VC	IP	Standard	High Surge	Standard	High Surge	(W)	@1KHz(pF)
		(V)			(V)	(A)	(A)		(J)			
10D180K	J	11	14	18(14.4-21.6)	36	5	500 / 250×2	1000 / 500×2	2.1	3.0	0.05	5600
10D220K	J	14	18	22(18.7-26)	43				2.5	5.0		4500
10D270K	J	17	22	27(23-31.1)	53				3.0	6.0		3700
10D330K	J	20	26	33(29.5-36.5)	65				4.0	7.0		3000
10D390K	J	25	31	39(35-43)	77				4.6	9.0		2400
10D470K	J	30	38	47(42-52)	93				5.5	1L0		2100
10D560K	J	35	45	56(50-62)	110				7.0	13.0		180U
10D680K	J	40	56	68(61-75)	135				8.2	15.0		1500
10D820K	J	50	65	82(74-90)	135	25	2500 / 1250×2	3500 / 2500×2	12.0	17.0	0.40	1200
10D101K	J	60	85	100(90-110)	165				15.0	18.0		1000
10D121K	J	75	110	120(108-132)	200				18.0	21.0		830
10D151K	J	95	125	150(135-165)	250				22.0	25.0		670
10D181K	J	115	150	180(162-198)	300				27.0	30.0		560
10D201K	J	130	170	200(185-225)	340				M0	35.0		500
10D221K	J	140	180	220(198-242)	360				32.0	39.0		450
10D241K	J	150	200	240(216-264)	395				35.0	42.0		420
10D271K	J	175	225	270(243-297)	455				37.0	49.0		370
10D301K	J	190	250	300(270-330)	500				40.0	54.0		330
10D331K	J	210	275	330(297.363)	550				43.0	58.0		300
10D361K	J	230	300	360(324-396)	595				47.0	65.0		280
10D391K	J	250	320	390(351.429)	650				60.0	70.0		260
10D431K	J	275	350	430(387-473)	710				65.0	80.0		230
10D471K	J	300	385	470(423-517)	775				67.0	85.0		210
10D511K	J	320	415	510(459-561)	845				69.0	90.0		200
10D561K	J	35。	460	560(504-616)	925				70.0	92.0		180
10D621K	J	385	505	620(558-682)	1025				72.0	95.0		160
10D681K	J	420	560	680(612-748)	1120				75.0	98.0		150
10D751K	J	460	615	750(675-825)	1240				77.0	100.0		130
10D781K	J	485	640	780(702-858)	1290				80.0	105.0		125
10D821K	J	510	670	820(738-902)	1355				85.0	110.0		120
10D911K	J	550	745	910(819-1001)	1500				93.0	130.0		110
10D102K	J	625	825	1000(900-1100)	1650				102.0	140.0		100
10D112K	J	680	895	1100(990-1210)	1815				115.0	155.0		90

14D Specifiation

Put “J” In Free Code Stands For High Surge Series

VDK Part Number		maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage(Max) 抵制电压 @(8/20)us		Maxlmum Peak Current 最大电流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us		Rated Power 消耗功率	TyplcalCapacltance (Reference) 参考电容值
Standard	High Surge	AC.rms	DC	$V_{0.1mA}$(V)	VC	IP	Standard	High Surge	Standard	High Surge	(W)	@1KHz(pF)
		(V)			(V)	(A)	(A)		(J)			
14D180K	J	11	14	18(14.4-21.6)	36	10	1000 / 500×2	2000 / 1000×2	4.0	7.0	0.1	11100
14D220K	J	14	18	22(18.7-26)	43				5.0	8.0		9100
14D270K	J	17	22	27(23-31.1)	53				6.0	10.0		7400
I4D330K	J	20	26	33(29.5-36.5)	65				7.5	12.0		6100
14D390K	J	25	31	39(35-43)	77				8.6	13.0		5100
14D470K	J	30	38	47(42-52)	93				10.0	17.0		4300
14D560K	J	35	45	56(50-62)	110				11.0	20.0		3600
14D680K	J	40	56	68(61-75)	135				14.0	24.0		2900
14D820K	J	50	65	82(74-90)	135	50	4500 / 2500×2	6000 / 4500×2	22.0	27.0	0.60	2400
14D101K	J	60	85	100(90-110)	165				28.0	33.0		2000
14D121K	J	75	110	120(108-132)	200				32.0	40.0		1700
14D151K	J	95	125	150(135-165)	250				40.0	53.0		1300
14D181K	J	115	150	180(162-198)	300				50.0	60.0		1100
14D201K	J	130	170	200(185-225)	340				57.0	70.0		1000
14D221K	J	140	180	220(198-242)	360				60.0	78.0		900
14D241K	J	150	200	240(216-264)	395				63.0	84.0		830
14D271K	J	175	225	270(243-297)	455				70.0	99.0		740
14D301K	J	190	250	300(270-330)	500				77.0	108.0		670
14D331K	J	210	275	330(297-363)	550				85.0	115.0		610
14D361K	J	230	300	360(324-396)	595				93.0	130.0		560
14D391K	J	250	320	390(351-429)	650				100.0	140.0		510
14D431K	J	275	350	430(387-473)	710				115.0	155.0		460
14D471K	J	300	385	470(423-517)	775				118.0	175.0		430
14D511K	J	320	415	510(459-561)	845				121.0	180.0		390
14D561K	J	350	460	560(504-616)	925				125.0	185.0		360
14D621K	J	385	505	620(558-682)	1025				128.0	190.0		320
14D681K	J	420	560	680(612-748)	1120				130.0	200.0		290
14D751K	J	460	615	750(675-825)	1240				143.0	210.0		270
14D781K	J	485	640	780(702-858)	1290				148.0	220.0		260
14D821K	J	510	670	820(738-902)	1355				157.0	235.0		240
14D911K	J	550	745	910(819-1001)	1500				175.0	255.0		220
14D102K	J	625	825	1000(900-1100)	1650				190.0	280.0		200
14D112K	J	680	895	1100(990-1210)	1815				213.0	310.0		180
14D122K	J	750	990	1200(1080-1320)	1980				232.0	324.0		160
14D142K	.1	880	1140	1400(12604540)	2310				238.0	327.0		150
14D152K	J	900	1200	1500(1350-1650)	2475				240.0	329.0		130
14D162K	J	1000	1280	1600(1440-1760)	2640				243.0	331.0		140
14D182K	J	1100	1465	1800(1620-1980)	2970				250.0	335.0		130

20D Specifiation

Put “J” In Free Code Stands For High Surge Series

VDK Part Number		maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage(Max) 抵制电压 @(8/20)us		Maxlmum Peak Current 最大电流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us		Rated Power 消耗功率	TyplcalCapacltance (Reference) 参考电容值
Standard	High Surge	AC.rms	DC	$V_{0.1mA}$(V)	VC	IP	Standard	High Surge	Standard	High Surge	(W)	@1KHz(pF)
		(V)			(V)	(A)	(A)		(J)			
20D180K	J	11	14	18(14.4-21.6)	36	20	2000 / 1000×2	3000 / 2000×2	11.0	13.0	0.2	28500
20D220K	J	14	18	22(18.7-26)	43				14.0	16.0		18500
20D270K	J	17	22	27(23-31.1)	53				16.0	19.0		13000
20D330K	J	20	26	33(29.5-36.5)	65				23.0	24.0		11500
20D390K	J	25	31	39(35-43)	77				26.0	28.0		8500
20D470K	J	30	38	47(42-52)	93				30.0	34.0		7400
20D560K	J	35	45	56(50-62)	110				38.0	44.0		6500
20D680K	.1	40	56	68(61-75)	135				41.0	49.0		5800
20D820K	J	50	65	82(74-90)	135	100	6500 / 4500×2	10000 / 6500×2	45.0	56.0	1.00	4900
20D101K	J	60	85	100(90-110)	165				50.0	70.0		4000
20D121K	J	75	110	120(108-132)	200				55.0	85.0		3300
20D151K	J	95	125	150(135-165)	250				70.0	106.0		2700
20D181K	J	115	150	180(162-198)	300				85.0	130.0		2200
20D201K	J	130	170	200(185-225)	340				95.0	140.0		2000
20D221K	J	140	180	220(198-242)	360				100.0	155.0		1800
20D241K	J	150	200	240(216-264)	395				108.0	168.0		1650
20D271K	J	175	225	270(243-297)	455				127.0	190.0		1500
20D301K	J	190	250	300(270-330)	500				136.0	210.0		1300
20D331K	J	210	275	330(297-363)	550				150.0	228.0		1200
20D361K	J	230	300	360(324-396)	595				163.0	255.0		1100
20D391K	J	250	320	390(351-429)	650				180.0	275.0		1000
20D431K	J	275	350	430(387-473)	710				190.0	305.0		930
20D471K	J	300	385	470(423-517)	775				204.0	350.0		850
20D511K	J	320	415	510(459-561)	845				210.0	360.0		780
20D561K	J	350	460	560(504-616)	925				215.0	380.0		710
20D621K	J	385	505	620(558-682)	1025				224.0	390.0		650
20D681K	J	420	560	680(612-748)	1120				230.0	400.0		600
20D751K	J	460	615	750(675-825)	1240				255.0	420.0		530
20D781K	J	485	640	780(702-858)	1290				265.0	440.0		510
20D821K	J	510	670	820(738-902)	1355				282.0	460.0		500
20D911K	J	550	745	910(819-1001)	1500				310.0	510.0		440
20D102K	J	625	825	1000(900-1100)	1650				342.0	565.0		40
20D112K	J	680	895	1100(990-1210)	1815				383.0	620.0		360
20D122K	J	750	990	1200(1080-1320)	1980				408.0	660.0		350
20D142K	J	880	1140	1400(1260-1540)	2310				532.0	784.0		340
20D162K	J	1000	1280	1600(1440-1760)	2640				606.0	896.0		330
20D182K	J	1100	1465	1800(1620-1980)	2970				625.0	990.0		320

25D Specifiation

Put “J” In Free Code Stands For High Surge Series

VDK Part Number		maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage(Max) 抵制电压 @(8/20)us		Maxlmum Peak Current 最大电流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us		Rated Power 消耗功率	TyplcalCapacltance (Reference) 参考电容值
Standard	High Surge	AC.rms	DC	$V_{0.1mA}$(V)	VC	IP	Standard	High Surge	Standard	High Surge	(W)	@1KHz(pF)
		(V)			(V)	(A)	(A)		(J)			
25D180K	J	11	14	18(14.4-21.6)	36	30	3000 / 1500×2	4500 / 3000×2	13.0	20.0	0.40	45000
25D220K	J	14	18	22(18.7-26)	43				16.0	25.0		29000
25D270K	J	17	22	27(23-31.1)	53				19.0	30.0		26500
25D330K	J	20	26	33(29.5-36.5)	65				24.0	35.0		18000
25D390K	J	25	31	39(35-43)	77				28.0	40.0		13500
25D470K	J	30	38	47(42-52)	93				34.0	50.0		11500
25D560K	J	35	45	56(50-62)	110				41.0	60.0		10500
25D680K	J	40	56	68(61-75)	135				49.0	70.0		9050
25D820K	J	50	65	82(74-90)	135	150	15000 / 10000×2	18000 / 15000×2	56.0	80.0	1.00	7700
25D101K	J	60	85	100(90-110)	165				70.0	100.0		6300
25D121K	J	75	110	120(108-132)	200				85.0	120.0		5200
25D151K	J	95	125	150(135-165)	250				106.0	160.0		4300
25D181K	J	115	150	180(162-198)	300				130.0	175.0		3500
25D201K	J	130	170	200(185-225)	340				140.0	190.0		3200
25D221K	J	140	180	220(198-242)	360				155.0	200.0		2900
25D241K	J	150	200	240(216-264)	395				168.0	220.0		2650
25D271K	J	175	225	270(243-297)	455				190.0	255.0		2400
25D301K	J	190	250	300(270-330)	500				210.0	275.0		2100
25D331K	J	210	275	330(297-363)	550				228.0	300.0		1900
25D361K	J	230	300	360(324-396)	595				255.0	330.0		1750
25D391K	J	250	320	390(351-429)	650				275.0	360.0		1600
25D431K	J	275	3S0	430(387-473)	710				305.0	380.0		1500
25D471K	J	300	385	470(423-517)	775				350.0	400.0		1400
25D511K	J	320	415	510(459-561)	845				361.0	420.0		1250
25D561K	J	350	460	560(504-616)	925				380.0	440.0		1150
25D621K	J	385	505	620(558-682)	1025				396.0	450.0		1050
25D681K	J	420	560	680(612-748)	1120				408.0	460.0		950
25D751K	J	460	615	750(675-825)	1240				420.0	510.0		850
25D781K	J	485	640	780(702-858)	1290				440.0	530.0		800
25D821K	J	510	670	820(738-902)	1355				460.0	570.0		750
25D911K	J	550	745	910(819-1001)	1500				510.0	620.0		700
25D102K	J	625	825	1000(900-1100)	1650				565.0	685.0		650
25D112K	J	680	895	1100(990-1210)	1815				620.0	720.0		600
25D122K	J	750	990	1200(1080-1320)	1980				631.0	792.0		550
25D142K	J	880	1140	1400(1260-1540)	2310				697.0	850.0		500
25D162K	J	1000	1280	1600(1440-1760)	2640				805.0	970.0		450
25D182K	J	1100	1465	1800(1620-1980)	2970				896.0	1092.0		400

32D Specifiation

VDK Part Number	Maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage (Max.) 抵制电压 @(8/20)us		Maxlmum Peak Current 最大电流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us	Rated Power 消耗 功率	Typlcal Capacltance (Reference) 参考电容值
	AC.rms	DC	V0.1mA(V)	VC	IP	1time	2time	(J)	(W)	@1KHz(pF)
Standard	(V)			(V)	(A)	(A)				
VDK-32D201K	130	170	200(185-225)	340	200	25000	20000	250	1.2	5200
VDK-32D221K	140	180	220(198-242)	360				280		5100
VDK-32D241K	150	200	240(216-264)	395				290		5100
VDK-32D271K	175	225	270(243-297)	455				300		4800
VDK-32D331K	210	275	330(297-363)	550				360		4300
VDK-32D361K	230	300	360(324-396)	595				380		3900
VDK-32D391K	250	320	390(351-429)	650				400		3200
VDK-32D431K	275	350	430(387-473)	710				430		3100
VDK-32D471K	300	385	470(423-517)	775				460		2800
VDK-32D511K	320	415	510(459-561)	845				510		2700
VDK-32D561K	350	460	560(504^616)	925				540		2500
VDK-32D621K	385	505	620(558-682)	1025				570		2400
VDK-32D681K	420	560	680(612-748)	1120				600		2200
VDK-32D751K	460	615	750(675-825)	1240				620		2000
VDK-32D781K	485	640	780(702-858)	1290				660		1900
VDK-32D821K	510	670	820(738-902)	1355				700		1800
VDK-32D911K	550	745	910(819-1001)	1500				750		1300
VDK-32D951K	575	765	950(855-1045)	1570				780		1200
VDK-32D102K	625	825	1000(900-1100)	1650				810		1100
VDK-32D112K	680	895	1100(990-1210)	1815				910		1000
VDK-32D122K	750	990	1200(1080-1320)	1980				960		920
VDK-32D142K	880	1140	1400(1260-1540)	2310				1020	1.0	800
VDK-32D162K	1000	1280	1600(1440-1760)	2640				1080	1.0	700

15S Specifiation

VDK Part Number	Maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压		Clamping Voltage (Max.) 抵制电压 @(8/20)us		Maxlmum Peak Current 最大电流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us	Rated Power 消耗功率	Typlcal Capacltance (Reference) 参考电容值
Standard	AC.rms	DC	V0.1mA(V)		VC	IP	In	Imax	(J)	(W)	@1KHz(pF)
	(V)		min	max	(V)	(A)	(KA)				
15S220K	14	18	20	24	43	10	1.5	3	13	0.1	15000
15S270K	17	22	24	31	53	15	1.5	3	16	0.1	10500
15S330K	20	26	30	36	65	15	1.5	3	19	0.1	9300
15S390K	25	31	35	43	77	15	1.5	3	21	0.1	7000
15S470K	30	38	42	52	93	15	1.5	3	27	0. 1	6000
15S560K	35	45	50	62	110	15	1.5	3	32	0.1	5300
15S680K	40	56	61	75	135	15	1.5	3	41	0. 1	4700
15S820K	50	65	74	90	135	75	5	10	43	0.6	4000
15S101K	60	85	90	110	165	75	5	10	53	0.6	3200
15S121K	75	100	108	132	200	75	5	10	64	0.6	2700
15S151K	95	125	135	165	250	75	5	10	85	0.6	2200
15S181K	115	150	162	198	300	75	5	10	96	0.6	1800
15S201K	130	170	180	220	340	75	5	10	102	0.6	1600
15S221K	140	180	198	242	360	75	5	10	125	0.6	1450
15S241K	150	200	216	264	395	75	5	10	134	0.6	1350
15S271K	175	225	243	297	455	75	5	10	158	0.6	1200
15S301K	190	250	270	330	500	75	5	10	173	0.6	1050
15S331K	210	275	297	363	550	75	5	10	185	0.6	1000
15S361K	230	300	324	396	595	75	5	10	208	0.6	900
15S391K	250	320	351	429	650	75	5	10	224	0.6	800
15S431K	275	350	387	473	710	75	5	10	248	0.6	750
15S471K	300	385	423	517	775	75	5	10	280	0.6	680
15S511K	320	415	459	561	845	75	5	10	300	0.6	630
15S561K	350	460	504	616	925	75	5	10	310	0.6	580
15S621K	385	505	558	682	1025	75	5	10	310	0.6	530
15S681K	420	560	612	748	1120	75	5	10	320	0.6	500
15S751K	460	615	675	825	1240	75	5	10	335	0.6	430
15S821K	510	670	738	902	1355	75	5	10	350	0.6	400

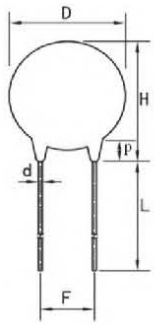
20S Specifiation

VDK Part Number	Maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压		Clamping Voltage (Max.) 抵制电压 @(8/20)us		Maxlmum Peak Current 最大电流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us	Rated Power 消耗功率	Typlcal Capacltance (Reference) 参考电容值
	AC.rms	DC	V0.1mA(V)		Vc	IP	In	Imax	(J)	(W)	@1KHz(pF)
Standard	(V)		min	max	(V)	(A)	(KA)				
20S220K	14	18	20	24	43	25	1.5	3	19	0.20	22200
20S270K	17	22	24	31	53	25	1.5	3	23	0.20	15600
20S330K	20	26	30	36	65	25	1.5	3	29	0.20	13800
20S390K	25	31	35	43	77	25	1.5	3	33	0.20	10200
20S470K	30	38	42	52	93	25	2.5	5	41	0.20	8880
20S560K	35	45	50	62	110	25	2.5	5	49	0.20	7800
20S680K	40	56	61	75	135	25	2.5	5	59	0.20	7000
20S820K	50	65	74	90	135	125	8	15	68	0.80	5880
20S101K	60	85	90	no	165	125	8	15	84	0.80	4800
20S121K	75	100	108	132	200	125	8	15	102	0.80	4000
20S151K	95	125	135	165	250	125	8	15	128	0.80	3200
20S181K	115	150	162	198	300	125	8	15	156	0.80	2650
20S201K	130	170	180	220	340	125	8	15	170	0.80	2400
20S221K	140	180	198	242	360	125	8	15	185	0.80	2160
20S241K	150	200	216	264	395	125	8	15	200	0.80	2000
20S271K	175	225	243	297	455	125	8	15	230	0.80	1800
20S301K	190	250	270	330	500	125	8	15	250	0.80	1560
20S331K	210	275	297	363	550	125	8	15	270	0.80	1440
20S361K	230	300	324	396	595	125	8	15	305	0.80	1320
20S391K	250	320	351	429	650	125	8	15	330	0.80	1200
20S431K	275	350	387	473	710	125	8	15	365	0.80	1160
20S471K	300	385	423	517	775	125	8	15	420	0.80	1020
20S511K	320	415	459	561	845	125	8	15	430	0.80	935
20S561K	350	460	504	616	925	125	8	15	455	0.80	850
20S621K	385	505	558	682	1025	125	8	15	465	0.80	780
20S681K	420	560	612	748	1120	125	8	15	480	0.80	720
20S751K	460	615	675	825	1240	125	8	15	500	0.80	635
20S821K	510	670	738	902	1355	125	8	15	520	0.80	600
20S9UK	550	745	819	1001	1500	125	8	15	550	0.80	525
20S102K	625	825	900	1100	1650	125	8	15	610	0.80	480
20S112K	680	895	990	1210	1815	125	8	15	675	0.80	430
20S122K	750	990	1080	1320	1980	125	8	15	740	0.80	380

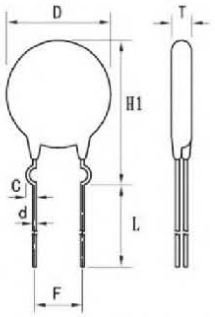
22L Specifiation

VDK Part Number	Maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压		Clamping Voltage (Max.) 抵制电压 @(8/20)us		Maxlmum Peak Current 最大电流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us	Rated Power 消耗功率	Typlcal Capacltance (Reference) 参考电容值
	AC.rms	DC	V0.1mA(V)		Vc	IP	In	Imax	(J)	(W)	@1KHz(pF)
Standard	(V)		min	max	(V)	(A)	(KA)				
22L220K	14	18	20	24	43	35	1.5	3	20	0.25	35000
22L270K	17	22	24	31	53	35	3	6	33	0.25	30000
22L330K	20	26	30	36	65	35	4	8	42	0.25	24500
22L390K	25	31	35	43	77	35	4	8	49	0.25	21000
22L470K	30	38	42	52	93	35	4	8	60	0.25	17250
22L560K	35	45	50	62	110	35	5	10	72	0.25	14500
22L680K	40	56	61	75	135	35	5	10	85	0.25	9500
22L820K	50	65	74	90	135	175	10	25	98	1.2	8800
22L101K	60	85	90	110	165	175	10	25	122	1.2	7200
22L121K	75	100	108	132	200	175	10	25	146	1.2	6000
22L151K	95	125	135	165	250	175	10	25	185	1.2	4400
22L181K	115	150	162	198	300	175	10	25	218	1.2	3650
22L201K	130	170	180	220	340	175	10	25	252	1.2	3300
22L221K	140	180	198	242	360	175	10	25	280	1.2	3000
22L241K	150	200	216	264	395	175	10	25	302	1.2	2800
22L271K	175	225	243	297	455	175	10	25	340	1.2	2450
22L301K	190	250	270	330	500	175	10	25	375	1.2	2200
22L331K	210	275	297	363	550	175	10	25	410	1.2	2050
22L361K	230	300	324	396	595	175	10	25	465	1.2	1850
22L391K	250	320	351	429	650	175	10	25	520	1.2	1700
22L431K	275	350	387	473	710	175	10	25	575	1.2	1600
22L471K	300	385	423	517	775	175	10	25	630	1.2	1450
22L511K	320	415	459	561	845	175	10	25	665	1.2	1300
22L561K	350	460	504	616	925	175	10	25	720	1.2	1200
22L621K	385	505	558	682	1025	175	10	25	790	1.2	1100
22L681K	420	560	612	748	1120	175	10	25	790	1.2	1000
22L751K	460	615	675	825	1240	175	10	25	825	1.2	900
22L821K	510	670	738	902	1355	175	10	20	840	1.2	800
22L911K	550	745	819	1001	1500	175	10	20	950	1.2	750
22L951K	575	780	855	1045	1570	175	10	20	980	1.2	700
22L102K	625	825	900	1100	1650	175	10	20	1040	1.2	660
22L112K	680	895	990	1210	1815	175	10	20	1130	1.2	615
22L122K	750	990	1150	1320	1980	175	10	20	1170	1.2	555

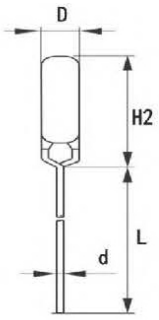
标准品尺寸规格 Dimension of Component for Standard Product



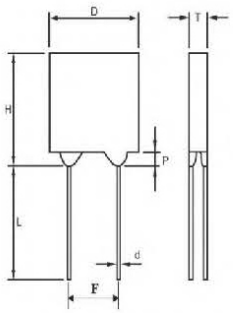
(图 1：直脚产品图)



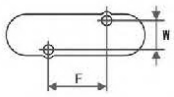
(图 2：外弯脚产品图)



(图 3：高低脚产品简图)



(图 4：方型产品图)



(图 5：脚距图)

Dimension Table 尺寸规格:

Unit:mm

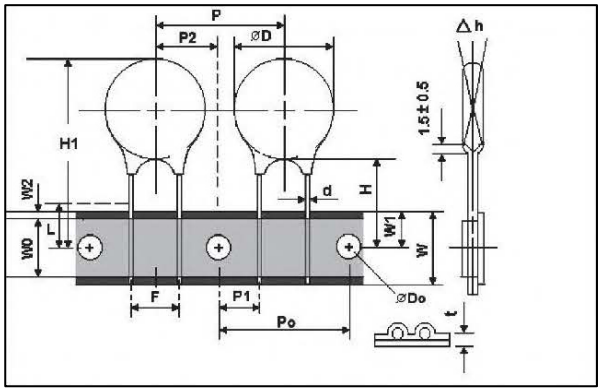
Sizes	MAX				Wire d±0.05	F±1.0	Lmin	C±0.4	Pmax
	D	H	H1	H2					
05D	7.5	10.5	13	13	0.6	5.0±1.0	20	1.2	3.0
07D	9	12	15	15	0.6	5.0±1.0	20	1.2	3.0
10D	12.5	16.5	19.5	19.5	0.8	7.5±1.0	20	1.8	3.0
14D	16.5	20	23.5	23.5	0.8	7.5±1.0	20	1.8	3.0
20D	23	26.5	29.5	29.5	0.8 1.0	7.5±1.0 10.0±1.0	20	2.0	3.0
25D	28	35.5	37.5	37.5	1.0	10.0±1.0 13.0±1.0	20	2.0	3.0
32D	35	37.5	-	-	1.2	20	20	-	3.0
15S	18	22.5	-	-	1.0	10.0±1.0	20	-	3.0
20S	23	27.5	-	-	1.0	10.0±1.0	20	-	3.0
22L	28*24	30	-	-	1.0	10.0±1.0	20	-	3.0

Product Thickness (Tmax) Table 成品厚度尺寸:

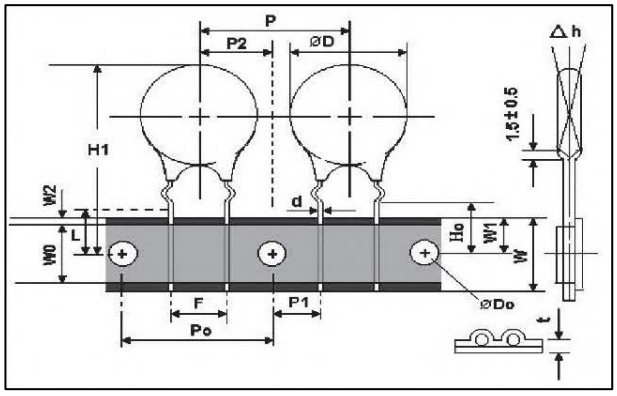
Unit:mm

Part Code	05D	07D	10D	14D	20D	25D	32D	15S	20S	22L	W (±1.0)
180K	3.4	3.6	4.0	4.1	4.4	-	-	-	-	-	1.3
220K	3.6	3.8	4.0	4.3	4.5	-	-	4.5	4.5	4.5	1.4
270K	3.8	4.0	43	4.5	4.8	-	-	4.6	4.6	4.6	1.5
330K	3.5	3.7	4.1	4.2	4.5	-	-	4.6	4.6	4.6	1.7
390K	3.7	3.9	43	4.4	4.7	-	--	4.8	4.8	4.8	1.8
470K	3.8	4.1	4.5	4.6	4.9	-	-	4.9	4.9	4.9	1.8
560K	3.8	4.2	4.5	4.7	4.7	6.2	-	4.9	4.9	4.9	1.9
680K	4.0	4.3	4.5	4.5	5.0	6.5	-	4.6	4.6	4.6	2.2
820K	3.3	3.5	3.9	4.0	4.3	5.3	-	4.7	4.7	4.7	1.6
101K	3.6	3.8	4.2	4.3	4.6	5.6	-	4.7	4.7	4.7	1.8
121K	3.8	4.0	4.4	4.5	4.8	5.8	-	4.8	4.8	4.8	2
151K	4.1	4.3	4.7	4.8	5.1	6.1	-	5.0	5.0	5.0	1.8
181K	3.2	3.4	3.8	3.9	4.2	5.2	-	4.6	4.6	4.6	1.6
201K	3.3	3.5	3.9	4.0	4.3	5.3	5.3	4.6	4.6	4.6	1.7
221K	3.4	3.6	4.0	4.1	4.4	5.4	5.4	4.6	4.6	4.6	1.7
241K	3.5	3.7	4.1	4.2	4.5	5.5	5.5	4.9	4.9	4.9	1.8
271K	3.7	3.9	4.2	4.3	4.6	5.6	5.6	5.0	5.0	5.0	1.9
301K	3.9	4.1	4.3	4.4	4.7	5.7	5.7	5.0	5.0	5.0	2.1
331K	4.0	4.2	4.5	4.6	4.9	5.9	5.9	5.2	5.2	5.2	2.2
361K	4.1	4.3	4.7	4.8	5.1	6.1	6.1	5.4	5.4	5.4	2.3
391K	4.2	4.4	4.8	4.9	5.2	6.2	6.2	53	5.3	5.3	2.5
431K	4.4	4.6	5.0	5.1	5.4	6.4	6.4	5.6	5.6	5.6	2.5
471K	4.8	5.0	5.2	5.5	5.8	6.8	6.8	6.0	6.0	6.0	2.6
511K	5.0	5.2	5.5	5.6	5.9	6.9	6.9	6.1	6.1	6.1	2.6
561K	5.2	5.4	5.7	5.8	6.1	7.1	7.1	6.3	6.3	6.3	2.8
621K	5.3	5.5	5.7	5.8	6.1	7.1	7.1	6.4	6.4	6.4	3
681K	5.4	5.6	5.8	5.9	6.2	7.2	7.2	6.5	6.5	6.5	3.2
751K	5.6	5.8	6.0	6.1	6.4	7.4	7.4	6.7	6.7	6.7	3.4
781K	-	6.0	63	6.4	6.7	7.7	7.7	6.9	6.9	6.9	3.7
821K	-	6.3	6.5	6.6	6.9	7.9	7.9	7.1	7.1	7.1	3.4
911K	-	-	6.6	6.7	7.0	8	8	7.2	7.2	7.2	3.7
I02K	-	-	7.0	7.1	7.4	8.2	8.2	7.6	7.6	7.6	4
112K	-	-	7.4	7.5	7.9	8.2	8.2	8.1	8.1	8.1	4.3
122K	-	-	-	7.7	8.1	8.4	8.4	8.3	8.3	8.3	5.2
142K	-	-	-	8.7	9.1	9.1	9.1	-	-	-	5.6
152K	-	-	-	9	9	9.1	9.1	-	-	-	6
162K	-	-	-	9.7	9.9	9.9	9.9	-	-	-	6.7
182K	-	-	-	9.7	10.1	10.1	-	-	-	-	7.4

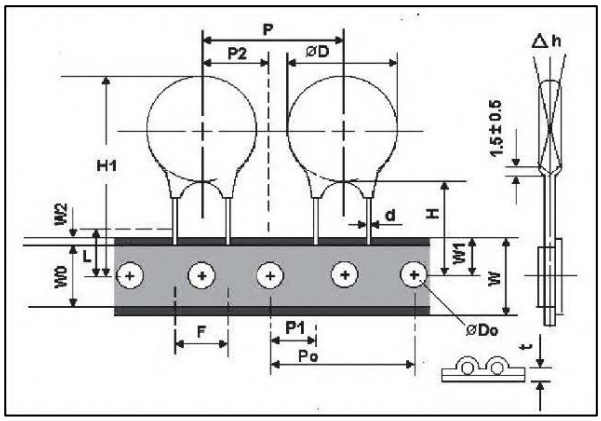
Tape and Reel Specifications 编带装尺寸规格



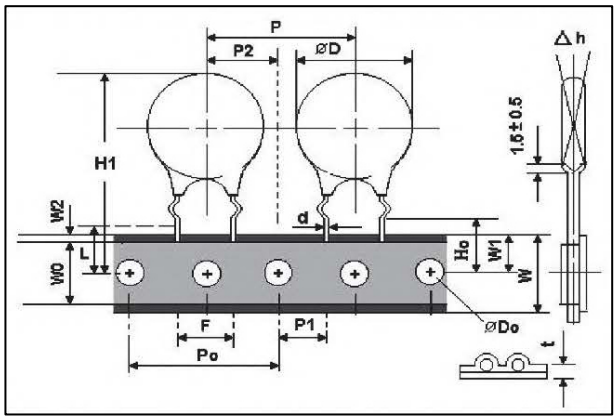
(图 1： Straight Leads 05\07D\10D)



(图 2： Crimped Leads 05D\07D\10D)



(图 3： Straight Leads 10D\14D\20D)



(图 4： Crimped Leads 10D\14D\20D)

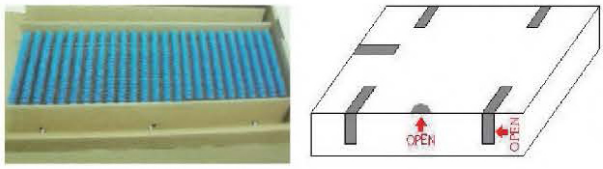
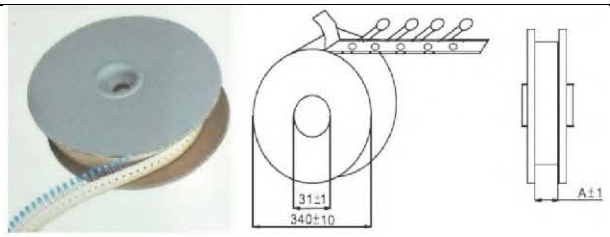
Symbol	PARAMETER	Series (Unit: mm)						
		05D series	07D series	10D series		14D series		20D series
P	Pictch of Componet	12.7±1.0	12.7±1.0	12.7±1.0	15.0±1.0	25.4±1.0	30±1.0	25.4±1.0
P_0	Feed Hole Pitch	12.7±0.3	12.7±0.3	12.7±0.3	15.0±0.3	25.4±0.3	15±0.3/30±0.3	12.7±0.3
P_1	Feed Hole Center to Lead	3.85±0.7	3.85±0.7	2.60±0.7	3.75±0.7	8.95±0.7	3.75±0.7	8.95±0.7
P_2	Hole Center to Component Center	6.35±0.7	6.35±0.7	12.7±0.7	7.5±1.3	12.7±0.7	7.5±0.7	12.7±0.7
F	Lead to Lead Distance	5.0±0.8	5.0±0.8	7.5±0.8	7.5±0.8	7.5±0.8	7.5±0.8	10/7.5±0.8
△h	Component Alignment	2.0 Max	2.0 Max	2.0 Max	2.0 Max	2.0 Max	2.0 Max	4.0 Max
W	Tape Width	$18.0^{+1.0}_{-0.5}$	$18.0^{+1.0}_{-0.5}$	$18.0^{+1.0}_{-0.5}$	$18.0^{+1.0}_{-0.5}$	$18.0^{+1.0}_{-0.5}$	$18.0^{+1.0}_{-0.5}$	$18.0^{+1.0}_{-0.5}$
W_0	Hold Down Tape Width	5.0MIN.	5.0MIN.	5.0M1N.	5.0M1N.	5.0MIN.	5.0MIN.	5.0MIN.
W_1	Hole Position	$9.0^{+0.75}_{-0.50}$	$9.0^{+0.75}_{-0.50}$	$9.0^{+0.75}_{-0.50}$	$9.0^{+0.75}_{-0.50}$	$9.0^{+0.75}_{-0.50}$	$9.0^{+0.75}_{-0.50}$	$9.0^{+0.75}_{-0.50}$
W_2	Hold Down Tape Position	3.0Max	3.0Max	3.0Max	3.0Max	3.0Max	3.0Max	3.0Max
H	Height from Tape Center to	$18.0^{+2.0}_{-0.0}$	$18.0^{+2.0}_{-0.0}$	$18.0^{+2.0}_{-0.0}$	$18.0^{+2.0}_{-0.0}$	$18.0^{+2.0}_{-0.0}$	$18.0^{+2.0}_{-0.0}$	$18.0^{+2.0}_{-0.0}$
H_0	Seating Plane Height	16.0±0.5	16.0±0.5	16.0±0.5	16.0±0.5	16.0±0.5	16.0±0.5	16.0±0.5
H_1	Component Height	29.0Max	32.0Max	36.0Max	36.0Max	40.0Max	40.0Max	40.0Max
D_0	Feed Hole Diameter	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2
t	Total Tape Thickness	0.7±0.2	0.7±0.2	0.7±0.2	0.7±0.2	0.7±0.2	0.7±0.2	0.7±0.2
L	Leagth of Clipped Lead	11.0Max	11.0Max	11.0Max	11.0Max	11.0Max	11.0Max	11.0Max

包装说明书 Packaging Specifications

Bulk Packaging 散装:

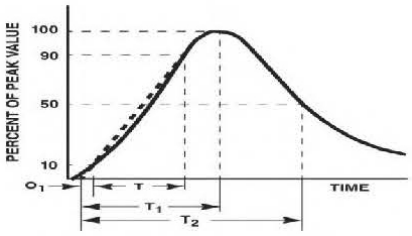
Series	Min./Plastic bag Quantity
05D	1000PCS
07D	1000PCS
10D	500PCS
14D	500PCS
20D	250PCS
25D	200PCS
32D	50PCS

Taping Packaging 编带包装:

Packing	Dimensions in mm	Series	Min Quantity(pcs)
Ammo		05D、07D	1500/1000
		10D、14D	1000/750
		20D	500/250
Reel		05D、07D	1500/1000
		10D、14D	1000/750
		20D	500/250

Or Customer Request

性能特性 Performance Characteristics (Electrical)

Test Item/Standard		Test Methods/Description 测试方法/说明	Specifications 规格值
Standard Test Condition 标准测试条件		Environmental conditions under which every measuring is done without doubt on the measurin results. Unless specified. Temperature humidity are 5 to 35℃ 45 to 85%RH. 原则上以室温 25℃，65%RH 为实验条件，判定上有疑义时以温度：室温 5-35℃、相对湿度：45-85%RH 为条件不特别限定。	-
Maximum Allowable Voltage 最大容许电压		The maximum sinusoidal RMS voltage or maximum DC voltage that can be applied continuously in the specified environmental Temperature range. 连续施以交流电压或直流电压之最大值	To meet the specified value 如规格表
Varistor Voltage 压敏电压		The voltage between two terminals with the specified measuring current C mA DC appliedis called Vc or VcmA, the measurement shall be made as fast as possible to avoid heat affection. 使用 C mA DC 之电流施以压敏电阻器测量两端之电压即为压敏电压或称 Vc。为了避免热效应影响，测量时间尽可能快。(一般为 40ms)	
Clamping Voltage 抑制电压		The maximum voltage between two terminals with the specified standard impulse current(8/20us) illustrated below applied. 使用一标准 8/20 规格脉冲电流通过压敏电阻器，此时两端之最大电压。 	
Maximum Peak Current 突波耐量 Withstanding Surge Current	2times 2 次	The maximum current within the varistor voltage change of ±10% with the standard impulse current(8/20us) applied two times with an interval of 5 minutes. 以 8/20 之标准波形电流加于压敏电阻器两端两次，中间间隔 5 分钟，使压敏电压偏移量在±10 以内之最大电流值。	
	1time 1 次	The maximum current within the varistor voltage change of ±10% with the standard impulse current (8/20us) applied one time. 以 8/20 之标准波形电流加与压敏电阻器两端一次，压敏电压偏移量在±10 以内之最大电流值。	
Maximum Energy 最大吸收能量		The maximum energy within the varistor voltage change of ±10% when one impulse of 2ms or 10/1000us is applied. 以 2ms 或 10/1000us 方波加于压敏电阻器上一次，压敏电压偏移量在±10%以内的能量。 E（能量）=Vm·Im·T Im：最大容许的方波电流 Vm：在 Im 时的最大抑制电压 T：突波电流的经过时间（有效波宽）	
Rated Power 消耗功率		The power that can be applied in the specified ambient temperature. 在 85±2℃的交流电连续施加于压敏电阻器上 1000 小时，压敏电压偏移量在±10%以内的最大电力。	
Capacitance 电容		Capacitance shall be measured at 1kHz±10%. 1Vrms max.(1 MHz below 100pF). 0V bias and 20±2℃. 电容应在 1KHz±10%，1Vrms max.，(>100pF 用 1MHz）0V bias 下测得且周围温度是 25±2℃。	
Dissipation Factor 消散要素		Dissipation Factor shall be measured at 1KHz±10%. 1Vrms max. (1MHz±10% below 100pF). OV bias and 20±2℃ 消散要素应在 1KHz±10%，1Vrms max.，0V bias 下测得且周围温度是 20±2℃。	To meet the specified value 如规格表
Temperature Coefficient of Varistor Voltage 电压温度系数		$\frac{V_C at85^\circ C - V_C at25^\circ C}{V_C at25^\circ C} \times \frac{1}{60} \times 100(\%/^\circ C)$	±0.05%/℃ max
Wirhstanding Voltage (Body Insulation) 封装树脂耐压（本体绝缘性）IEC 61051-1		The specified voltage shall be applied both terminals of the specimen connected together and metal foil closely wrapped round its body for at AC 2500V 1 minute. Electrical breakdown shall be examined. 将封装完成之成品于瓷片上有树脂封装部分，以金属线烧成紧密线圈状，于线圈出头端与引脚端输入电压 AC 2500V 1 分钟，看其电性崩溃情形。	No breakdown 无崩溃情形

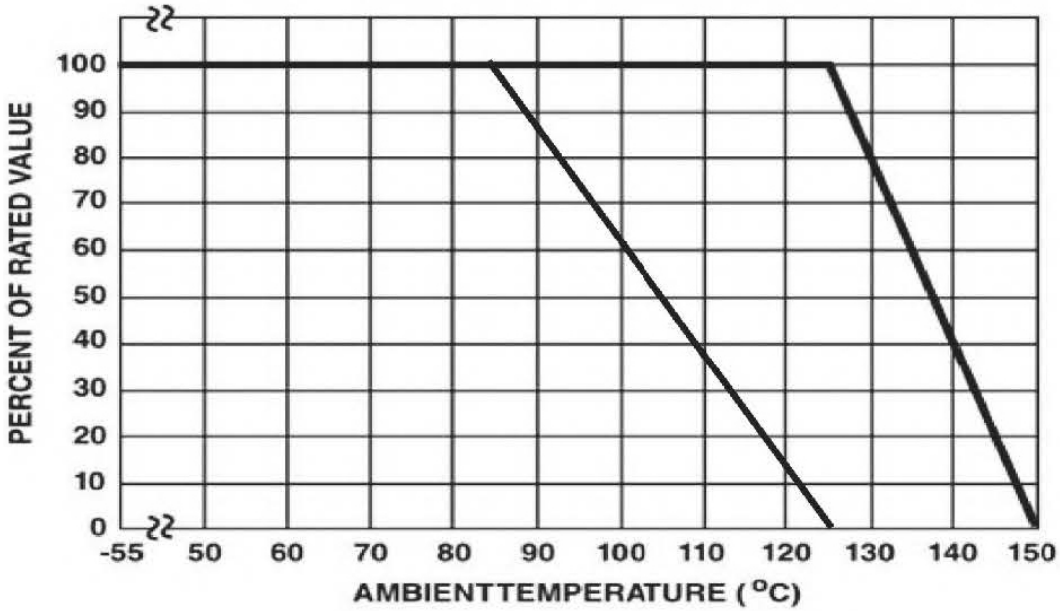
机械特性 Mechanical

Test Item/Standard 测试项目/标准	Test Methods 测试方法	Specifications 规格值
Robustness of Terminations (Tenaile) 端子印张强度 IEC 60068-2-21	After gradually applying the force specified below and keeping the unit fixed for the seconds, the terminal shall be visually examined for any damage. 将本体固定后，施予如下之作用力于引线上十秒钟，观察是否有损伤。 Terminal diameter 引线直径 / Force 作用力 Ø 0.6 mm — 4.9 N (0.5Kgf) Ø 0.8 mm — 4.9 N (0.5Kgf) Ø 1.0 mm — 9.8 N (1.0Kgf)	No outstanding damage 无外在损伤
Robustness of Terminations (Bending) 端子弯曲强度 IEC6006802-21	The unit shall be secured with its terminal kept vertical and the force specified below be applied in the axial direction. The terminal shall gradually be bent by 90° in one direction, then 90° in the opposite direction, and again back to the original position. The damage of the terminal shall be visually examined. 将本体固定好，施与引线保持水平用如下作用力，先以一方向弯曲 90°，再以反方向弯曲 90°回复原状。检查铜脚损伤情况。 Terminal diameter 引线直径 / Force 作用力 Ø 0.6 mm — 9.8 N (1.0Kgf) Ø 0.8 mm — 9.8 N (1.0Kgf) Ø 1.0 mm — 19.6 N (2.0Kgf)	No outstanding damage 无外在损伤
Vibration 耐振性 IEC60068-2-6	After repeadly applying a single harmonic vibration (amplitude: 0.75 mm) double amplitude: 1.5mm with 1 minute vibration frequency cycles (10 Hz to 55 Hz to 10 Hz) to each of three perpendicular directions for 2 hours. Thereafter, the unit shall be visually examined 将成品置于振动机上施与一单谐振动（振幅：0.75mm）和振幅 1.5mm，振动频率周期为 10 Hz to 55 Hz to 10 Hz 一分钟，对三个垂直方向各试验 2 小时。然后检查成品外在损伤情况。	
Soider adilty 焊接性 IEC 60068-2-20	After dipping the terminals to a depth of approximately 3mm from the body in a soldering bath of 250±5°C for 2±0.5 seconds, the terminal shall be visually examined. 将成品引线部分侵入温度为 260±5°C 锡炉中，侵入深度为离本体约 3mm 处，时间为 2±0.5 秒。	Approximately 95% of the terminals shall be covered with solder uni-formly 引脚约 95%沾满焊锡
Resistance to Soldering Heat 锡热抵抗力 IEC 60068-2-20	After each lead shall be dipped into a solder bath having a temperature 260±5°C to a point 2.0 to 2.5 mm from the body of the unit, using shiedig board (t=1.5mm), be held there for specified time (5D series: 5±1s and others: 10±1s), and then be stored at room temperature and humidity for 1 to 2 hours. The change of Vc and mechanical damages are examind. 将每一引线侵入温度为 260±5°C 锡炉中，侵入深度为离本体 2.0-2.5mm，侵入时间 5D 为 5±1s；其它为 10±1s,试验完后置于常温常湿中 1-2 小时,然后测量压敏电压变化量与外观。	△VcmA/VcmA≦±5% No outstanding damage 无外在损伤

环境特性 Environmental

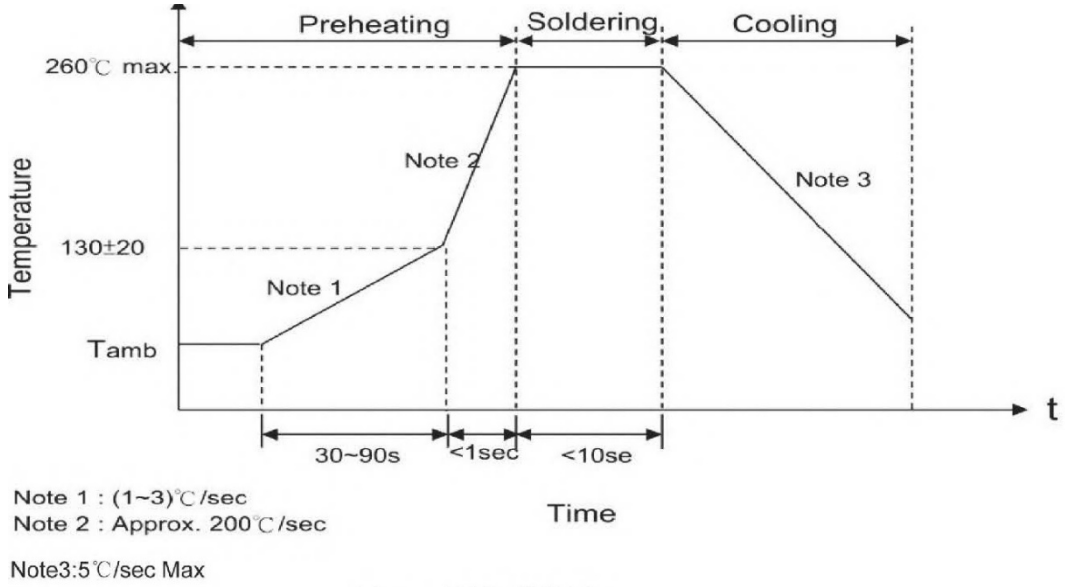
<table>
<tr><th>Test Item/Standard
测试项目/标准</th><th>Test Methods
测试方法</th><th>Specifications
规格值</th></tr>
<tr><td>High Temperature Storage/Dry Heat
高温储存
IEC 60068-2-2</td><td>The specimen shall be subjected to 125±2℃ for 1000 hours in a thermostatic bath without load and then stored at room temperature and humidity for 1 to 2 hours. Thereafter, the change of Vc shall be measured.
将成品置于无外加负载且温度为 125±2℃的烤箱中 1000 小时，试验后置于室温中 1-2 小时，然后测量其压敏电压变化值。</td><td rowspan="3">△VcmA/VcmA
二 ±5%</td></tr>
<tr><td>Damp Heat/ Humidity (Steady State)
耐湿性
IEC 60068-2-78</td><td>The specimen shall be subjected to 40±2℃, 90 to 95% RH for 1000 hours without load and then stored at room temperature and humidity for one to two hours. Thereafter, the change of Vc shall be measured.
将成品置于无外加负载且温度为 40±2℃，相对湿度为 90-95%恒温恒湿相中 1000 小时，试验后置于室温中 1-2 小时，然后测量其压敏电压变化值。</td></tr>
<tr><td>Temperature Cycle
温度周期
IEC 60068-2-14</td><td>The temperature cycle shown below shall be repeated five times and then stored at room temperature and humidity for one to two hours. The change of Vc and mechanical damage shall be examined.
以如下表的温度周期加于成品上五次，试验后置于室温中 1-2 小时，然后测量其压敏电压变化值。
<table>
<tr><th>Step</th><th>Temperature</th><th>Period (minutes)</th></tr>
<tr><td>1</td><td>-40±3</td><td>30±3</td></tr>
<tr><td>2</td><td>Room temperature</td><td>15±3</td></tr>
<tr><td>3</td><td>125±2</td><td>30±3</td></tr>
<tr><td>4</td><td>Room temperature</td><td>15±3</td></tr>
</table></td></tr>
<tr><td>High Temperature Load/Dry Heat Load 高温加载
MIL-STD-202-Method-108</td><td>After being continuously applied the Maximum Allowable Voltage at 85±2℃ for 1000 hours. The specimen shall be stored at room temperature and humidity for one to two hours Thereafter, the change of Vc shall be measured.
将成品接于外加最大容许电压且温度为 85±2℃的高温箱中 1000 小时，试验后置于室温中 1-2 小时，然后测量其压敏电压变化值。</td><td>△VcmA/VcmA
≦±10%</td></tr>
<tr><td>Damp Heat Load/Humidity Load
高湿加载
IEC 60068-2-3</td><td>The specimen shall be subjected to 40±2℃, 90 to 95% RH and the Maximum Allowable Voltage for 1000 hours and then stored at room temperature and humidity for one to two hours. Thereafter, the change of Vc shall be measured.
将成品接于外加最大容许电压且温度为 40±2℃，相对湿度为 90-95%恒温恒湿箱中 1000 小时，试验后置于室温中 1-2 小时，然后测量其压敏电压变化值。</td><td>△VcmA/VcmA
≦±10%</td></tr>
</table>

电流、能量、功率递减曲线 Current Energy and Power Derating Curve



(图 1：电流、能量、功率递减曲线)

推荐焊接条件 Soldering Recommendation Profile



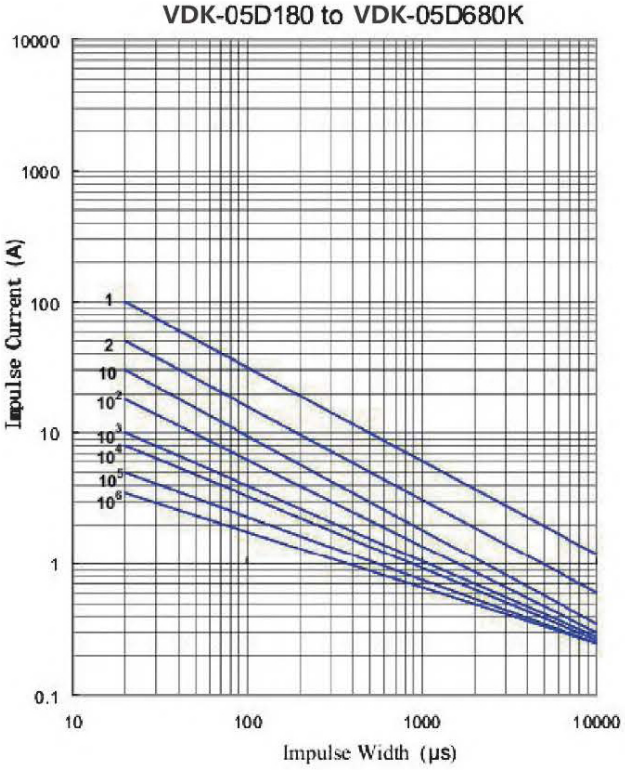
(图 2：波峰焊曲线图)

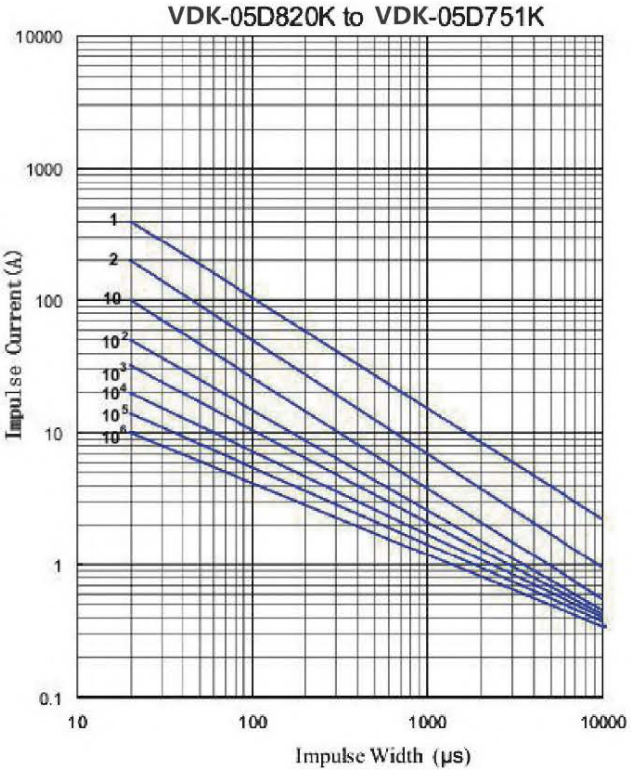
烙铁重工焊接条件 Recommendation Reworking Conditions with Soldering Iron

项目	条件
烙铁头部温度	360°C (max.)
焊接时间	3 sec (max.)
焊接位置与涂装层距离	2 mm (min.)

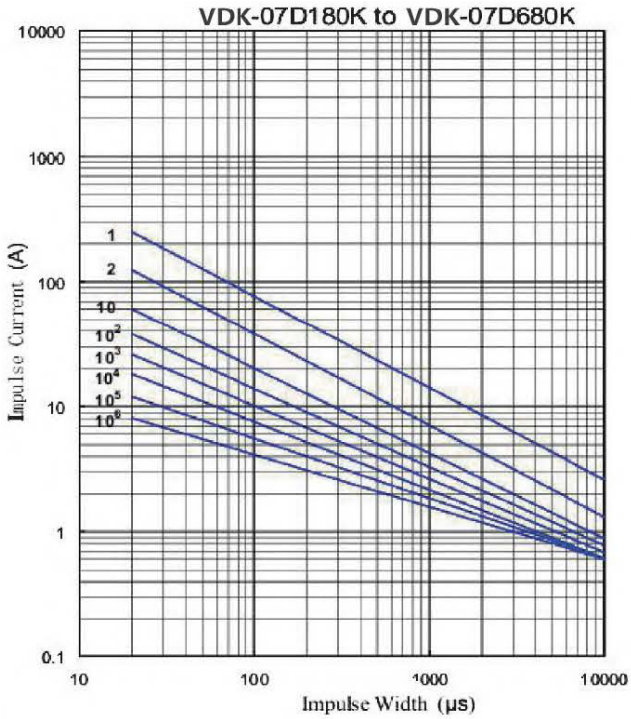
额定脉冲寿命次数曲线 Impulse Life Time Rating Curves

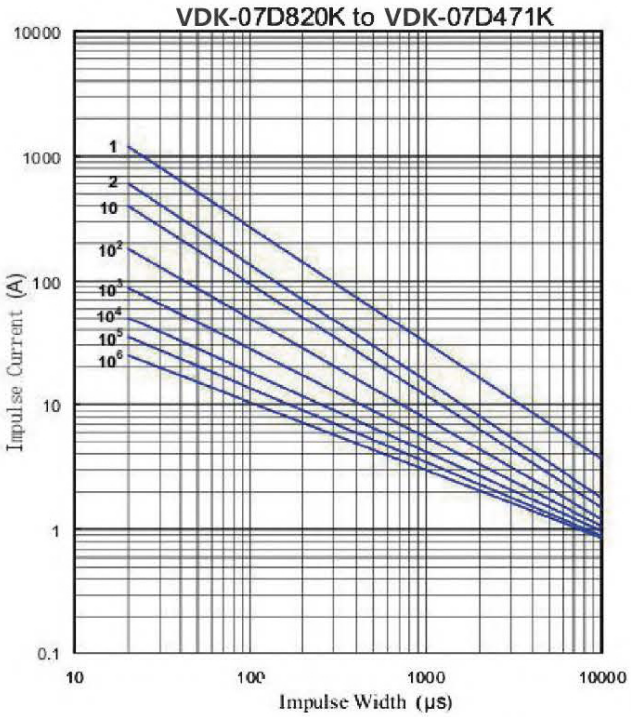
VDK-05D Series





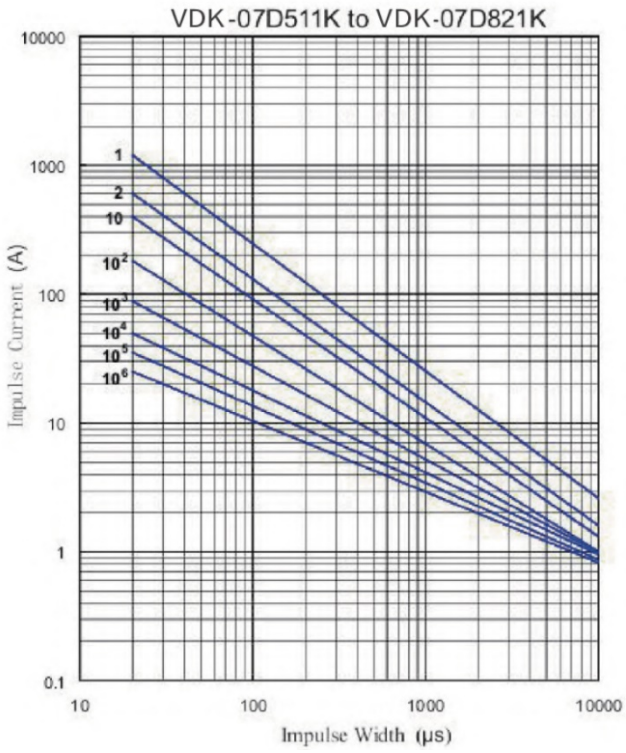
VDK-07D Series



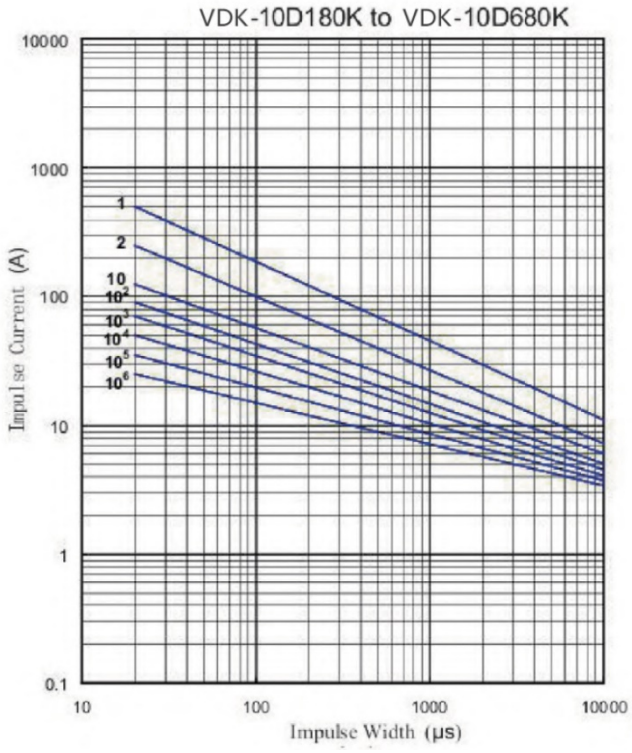


5 minutes interval: 2 times; 2 minutes interval up to:10 times; 10 secondes interval up to 10^6 times

VDK-07D Series



VDK-10D Series



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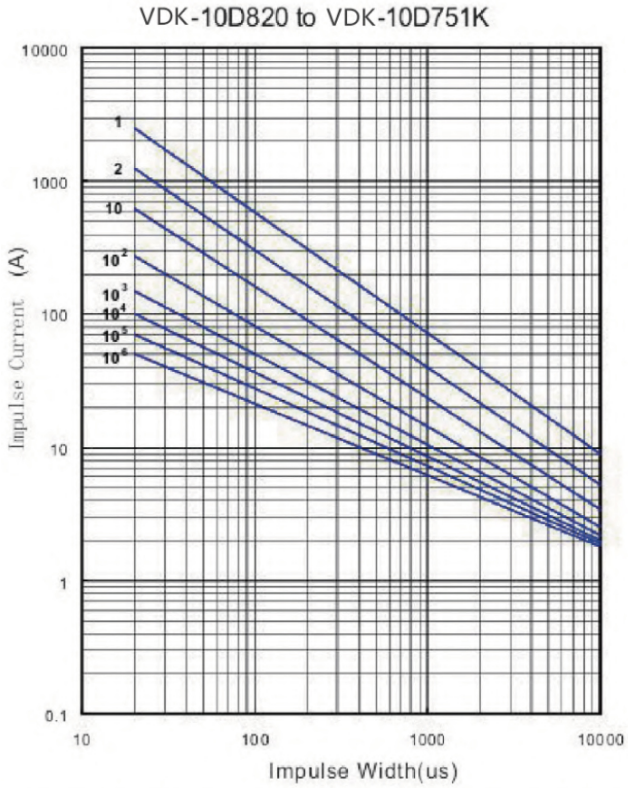

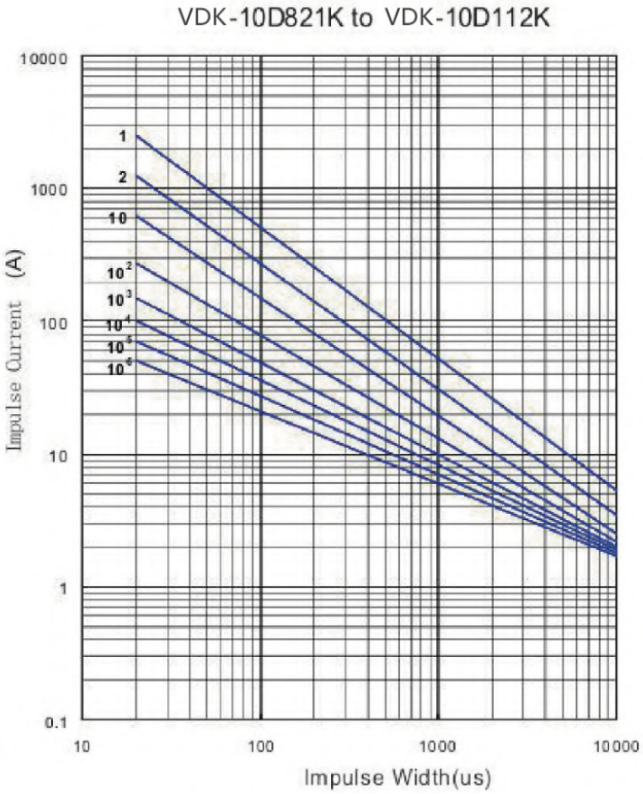

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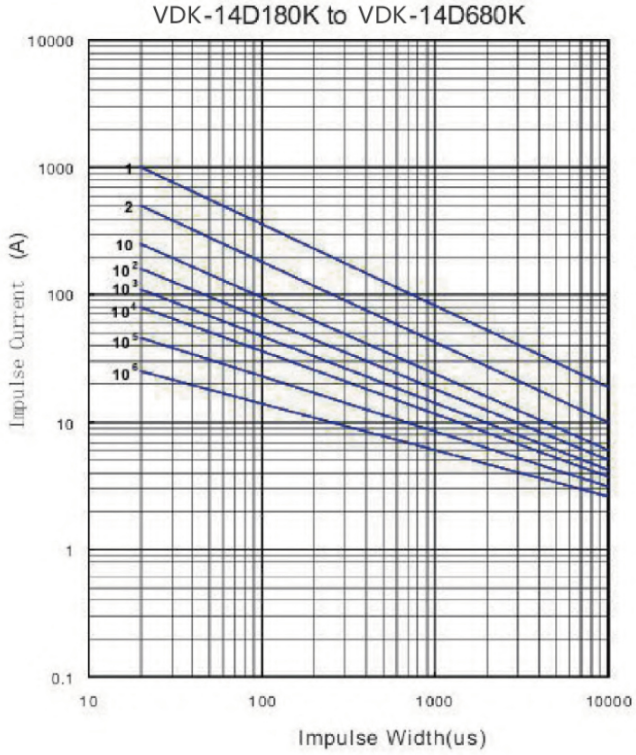
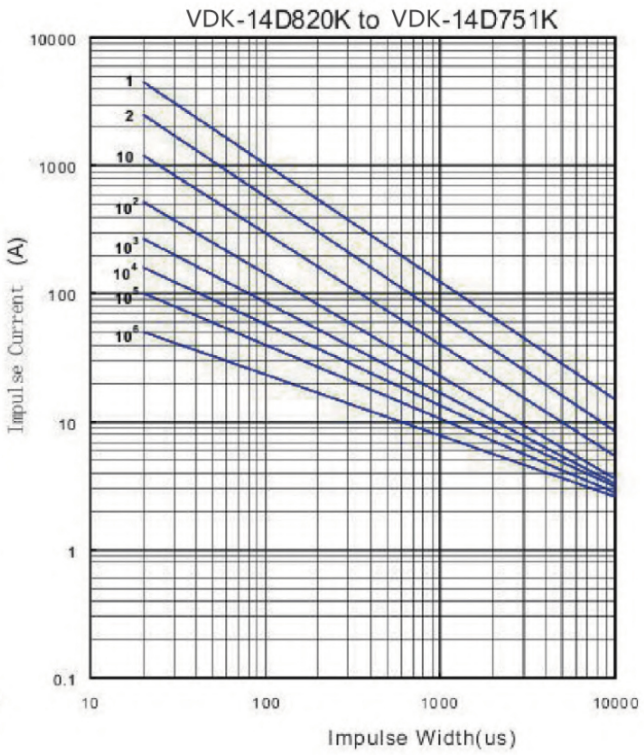
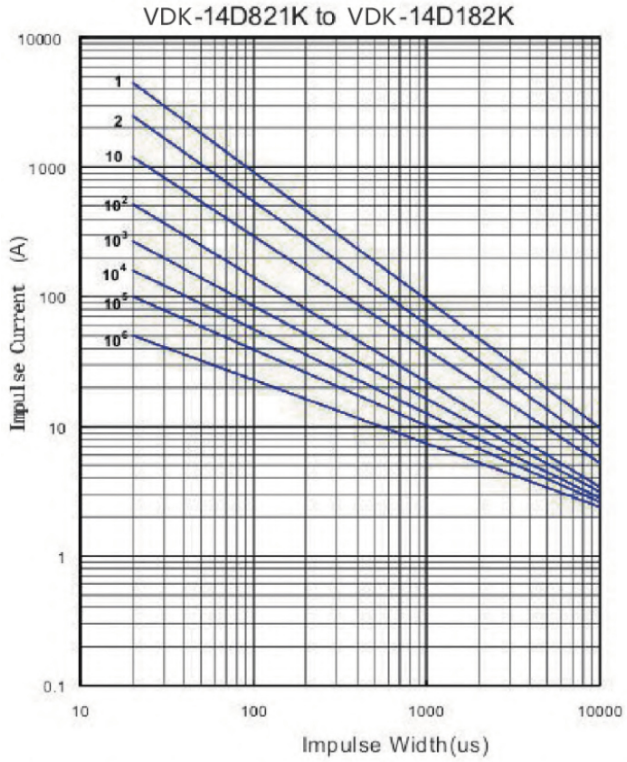
VDK-14D Series



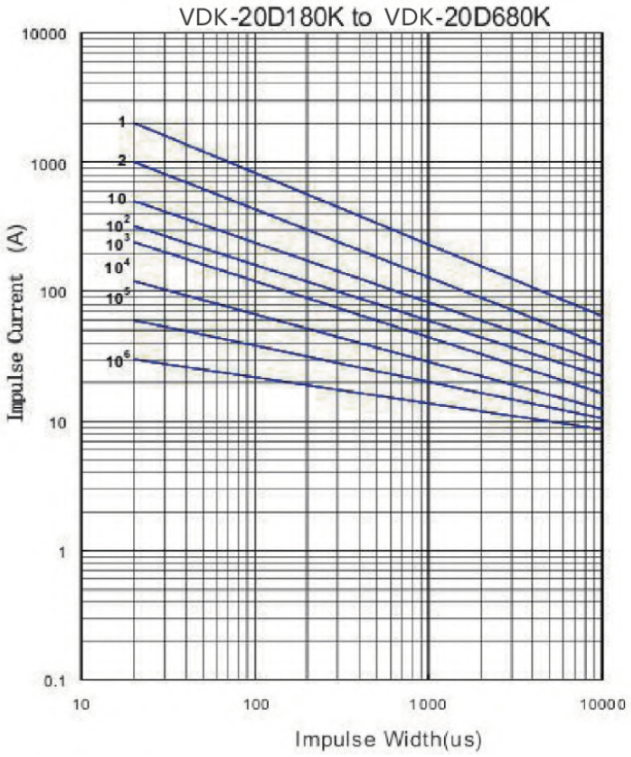
VDK-14D Series



VDK-14D Series

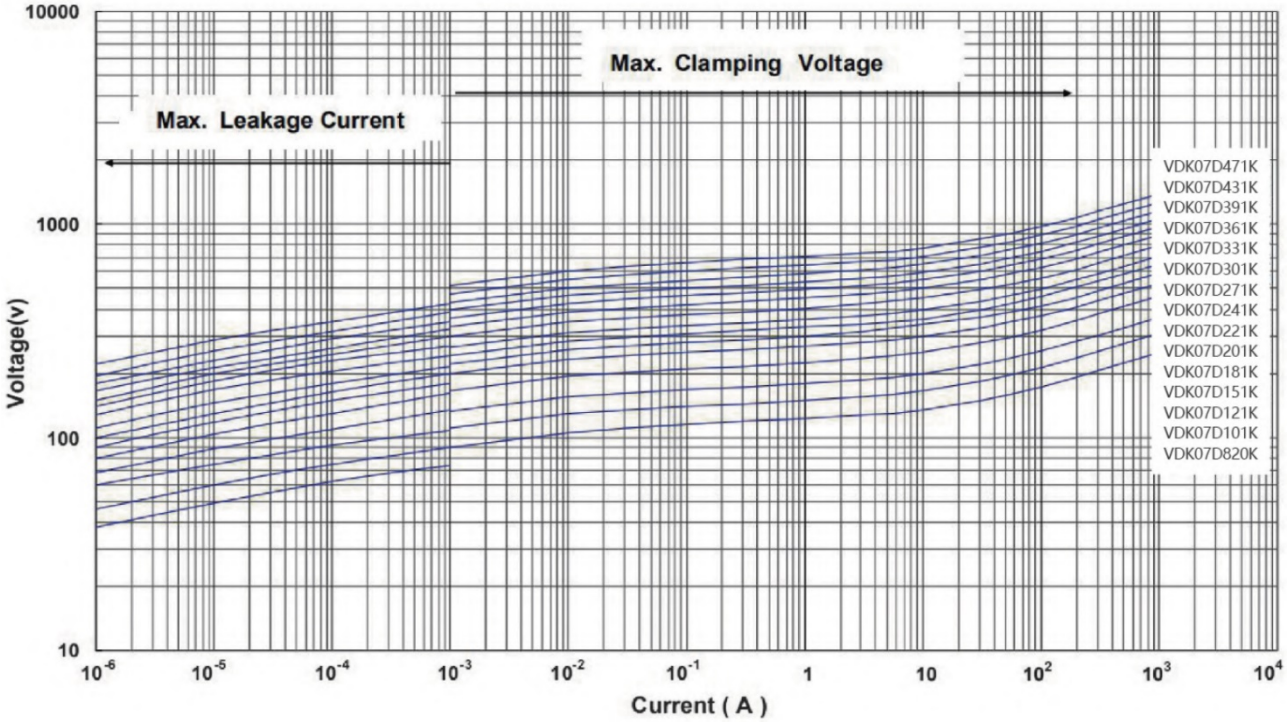


VDK-20D Series

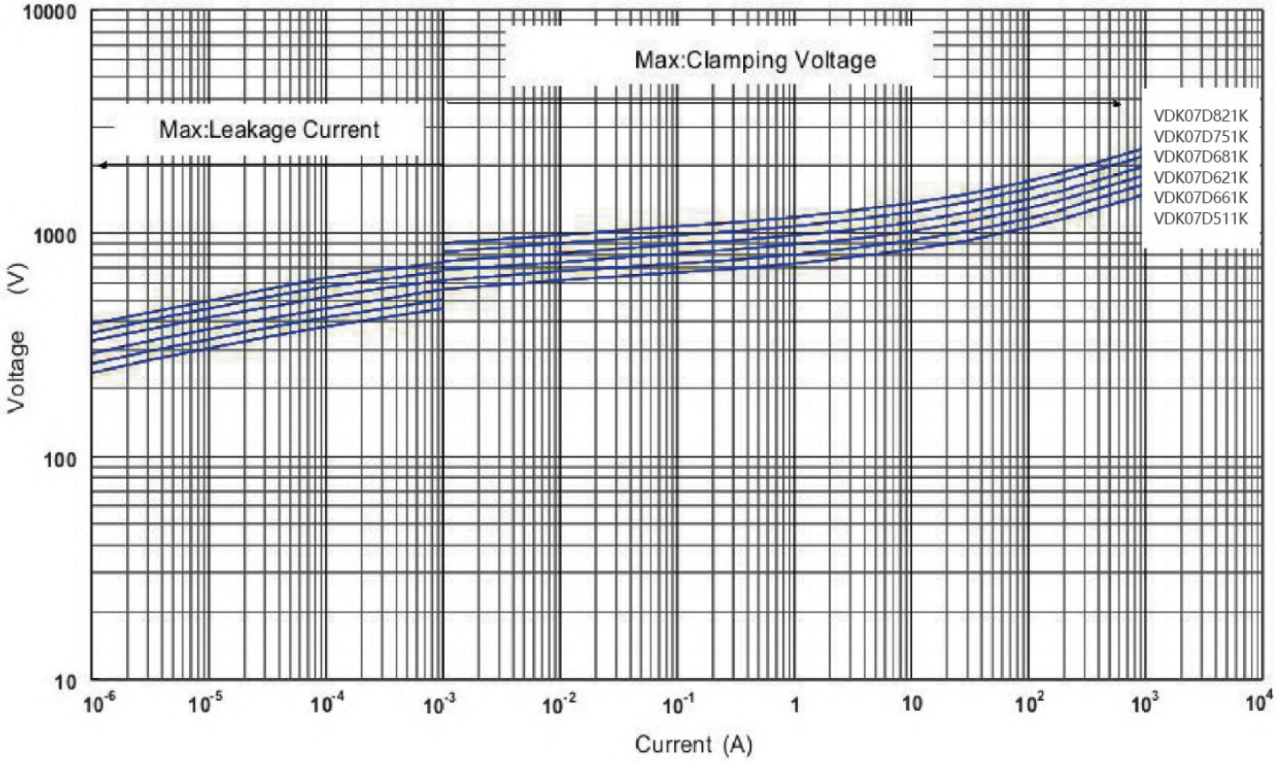


5 minutes interval: 2 times; 2 minutes interval up to:10 times; 10 secondes interval up to 10^6 times

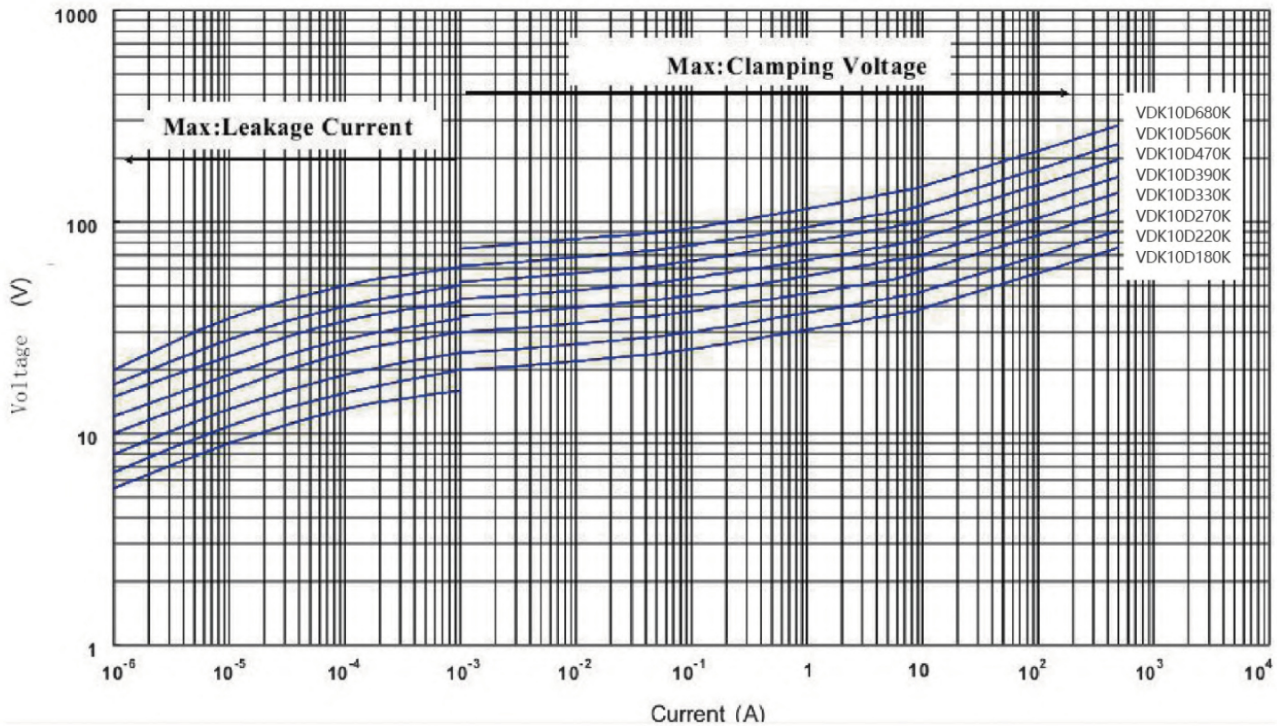
V-I Curve (VDK07D820K to VDK07D471K)



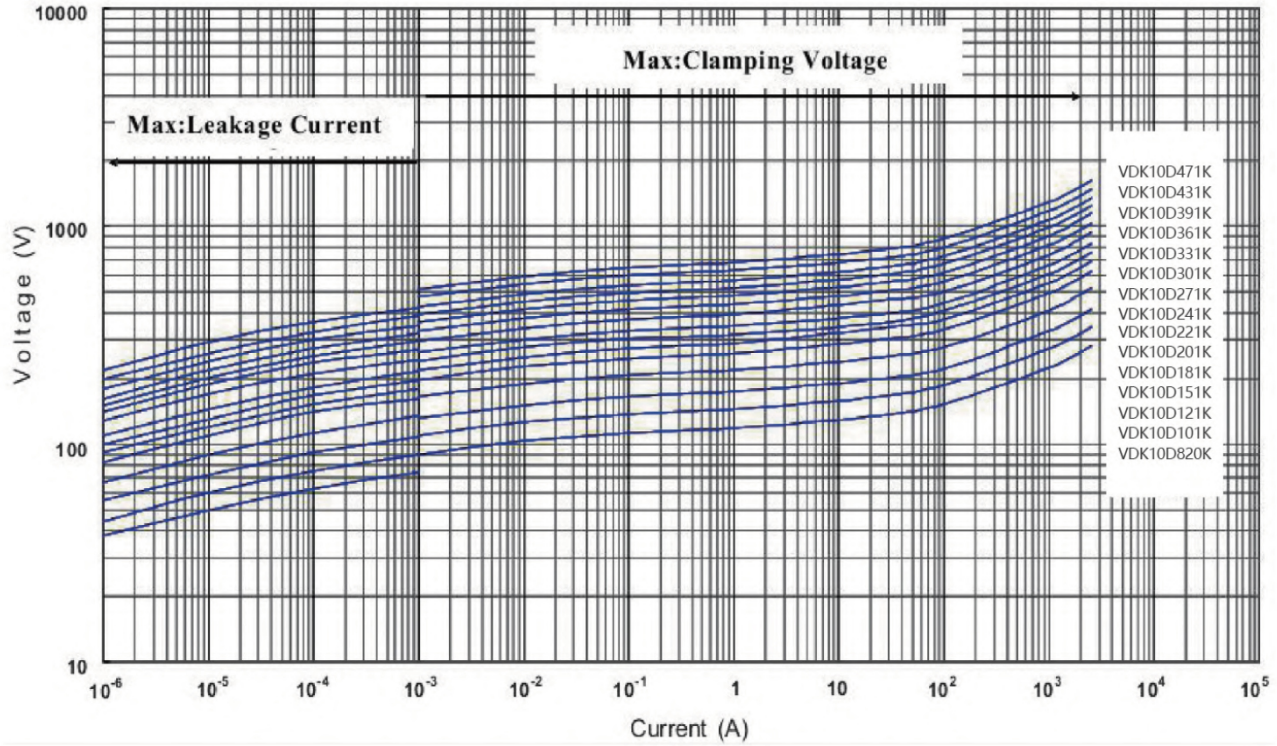
V-I Curve (VDK07D511K to VDK07D821K)



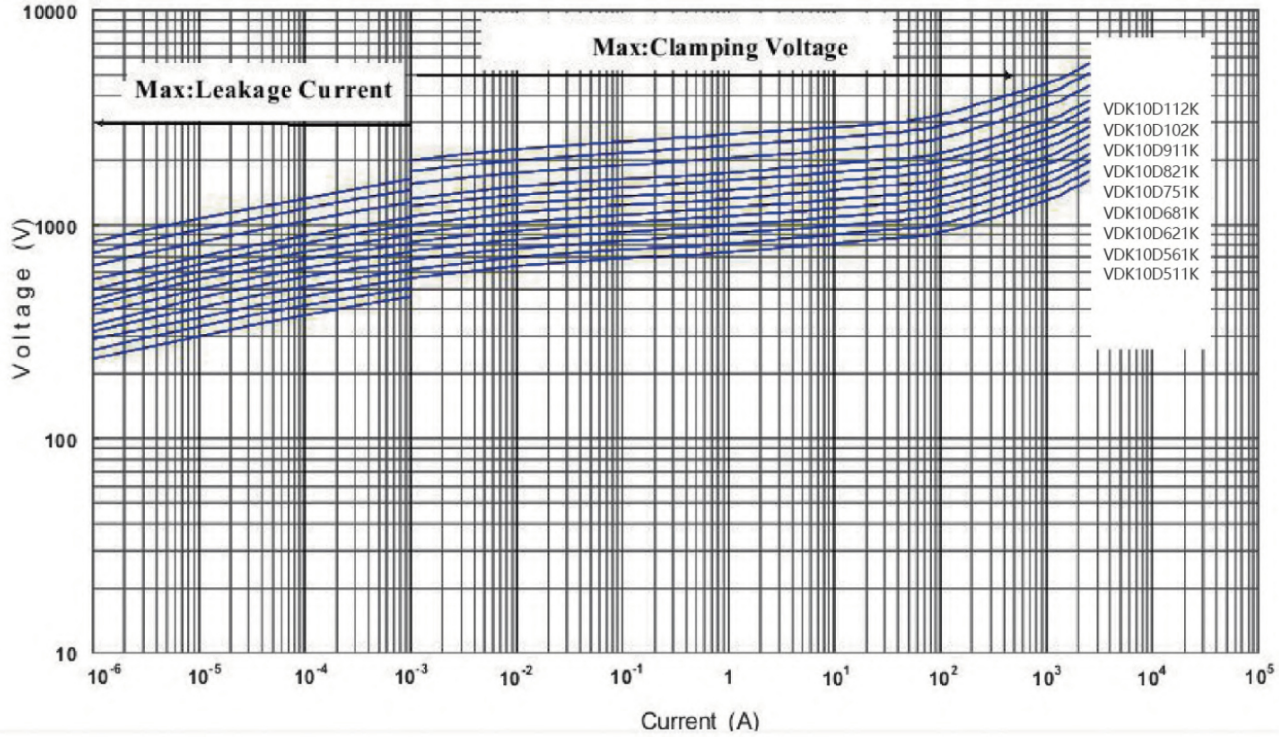
V-I Curve (VDK10D180K to VDK10D680K)



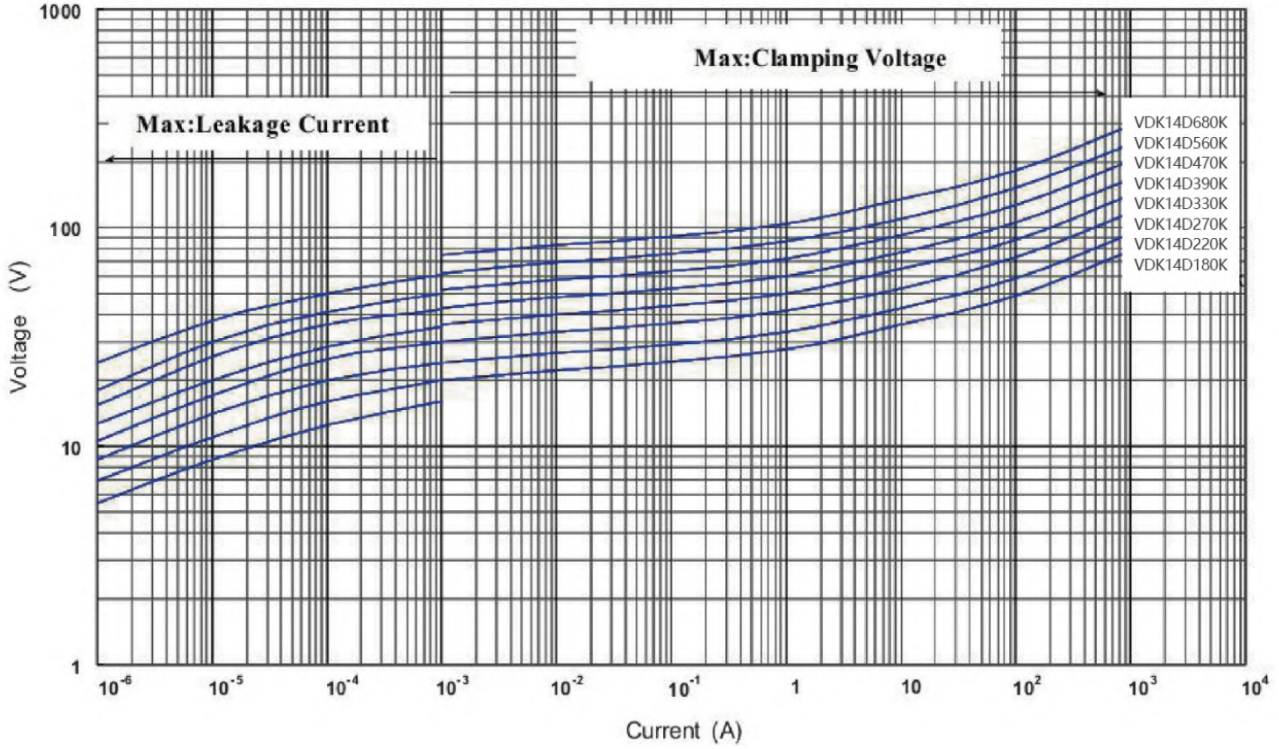
V-I Current (VDK10D820K to VDK10D471K)



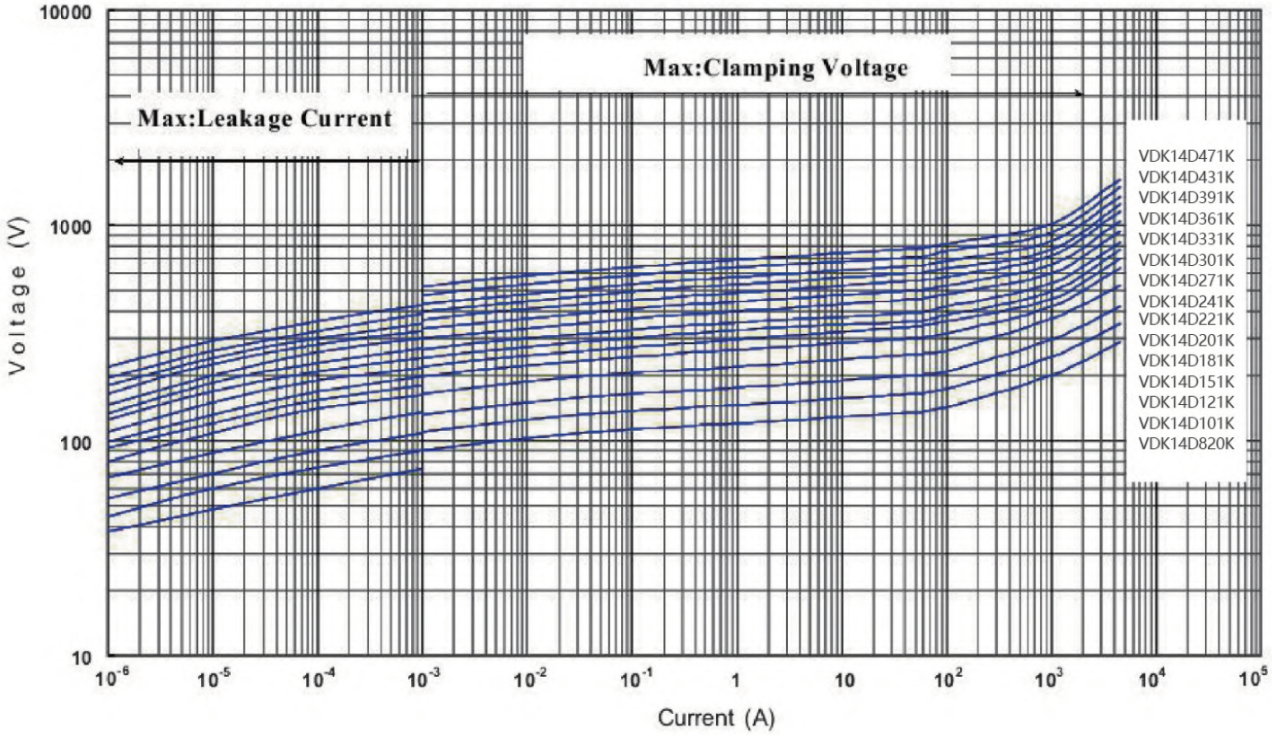
V-I Curve (VDK10D511K to VDK10D112K)



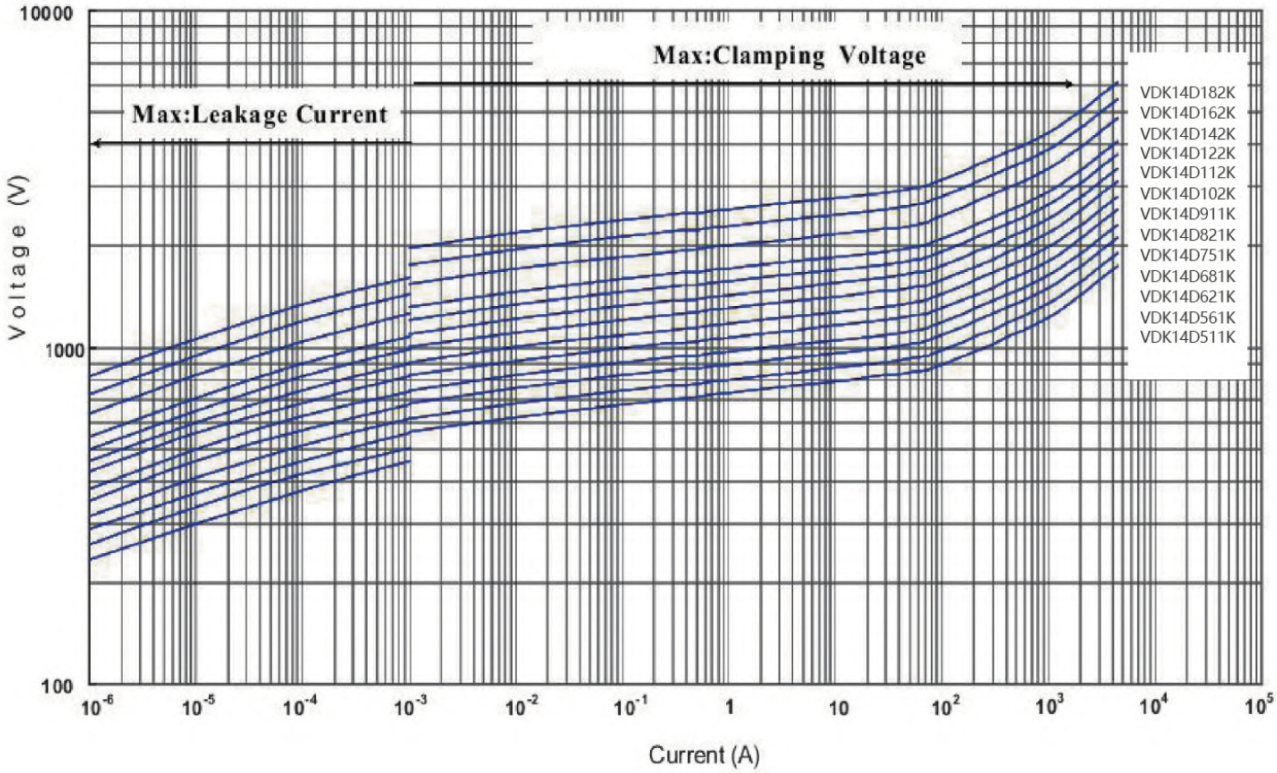
V-I Curve (VDK14D180K to VDK14D680K)



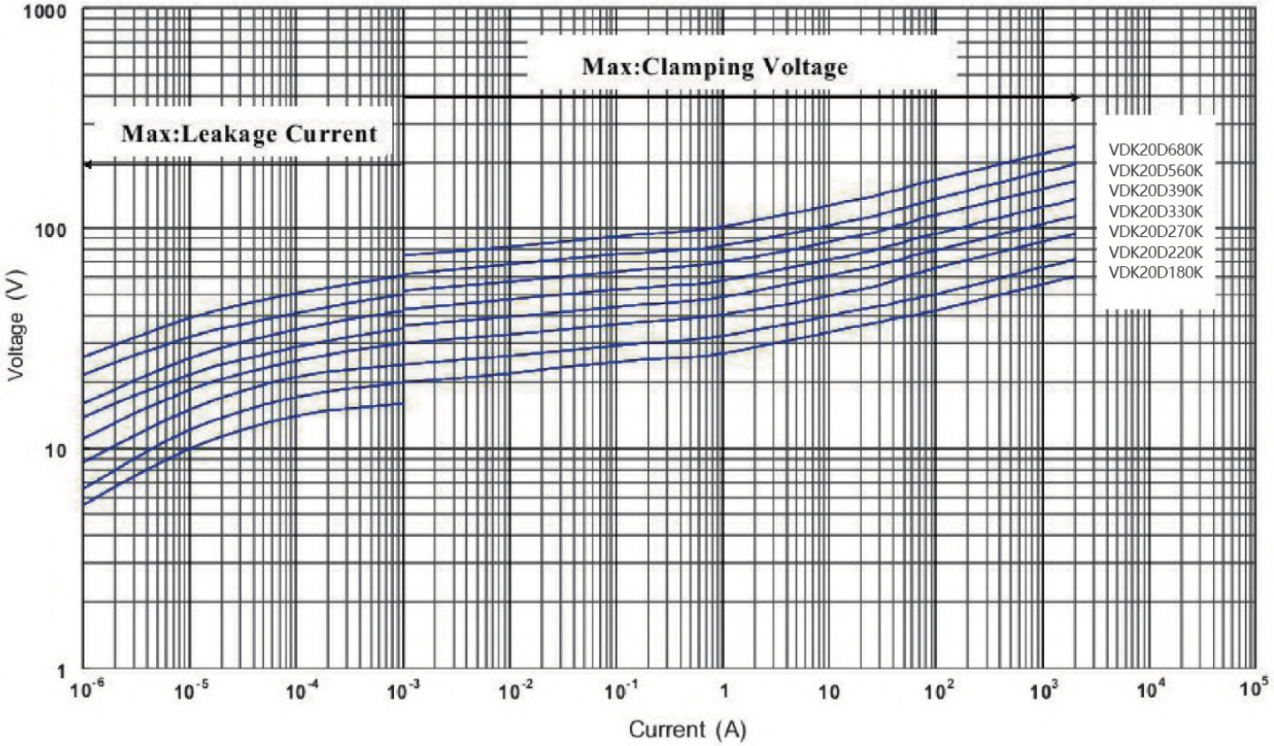
V-I (VDK14D820K to VDK14D471K)



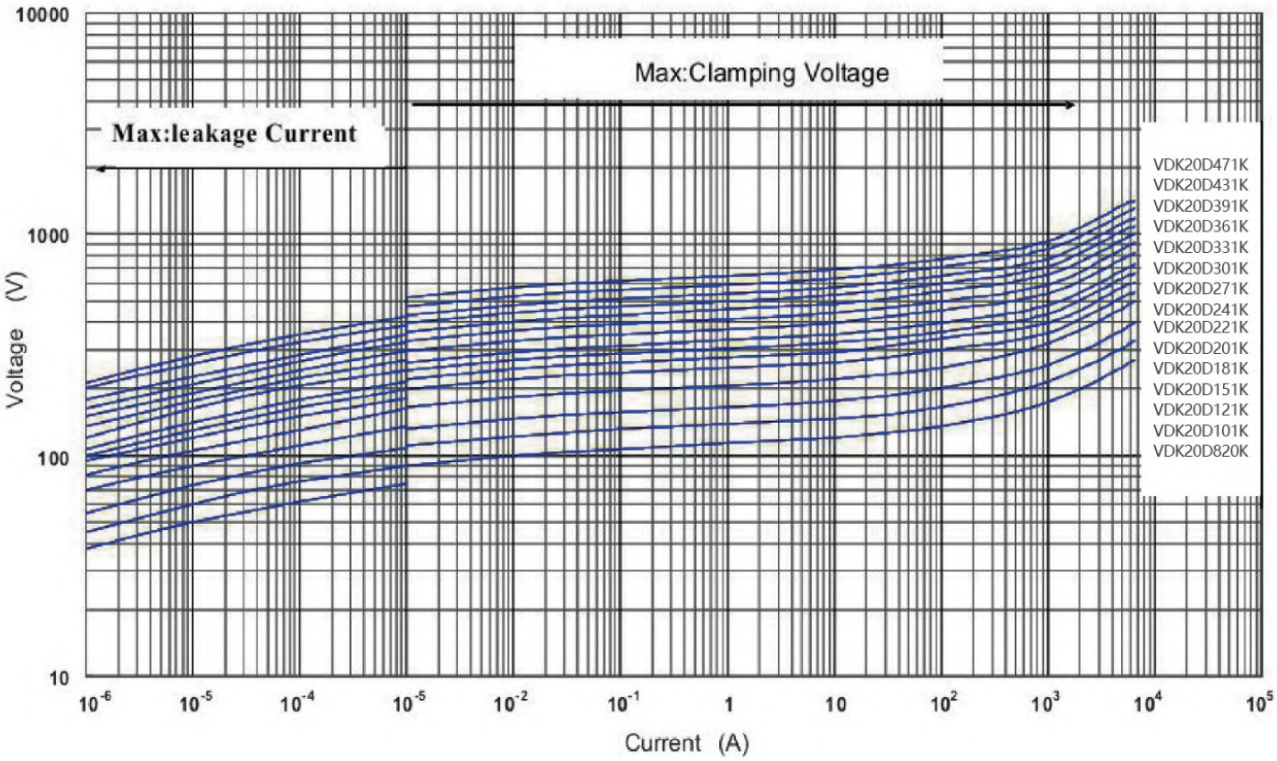
V-I (VDK14D511K to VDK14D182K)



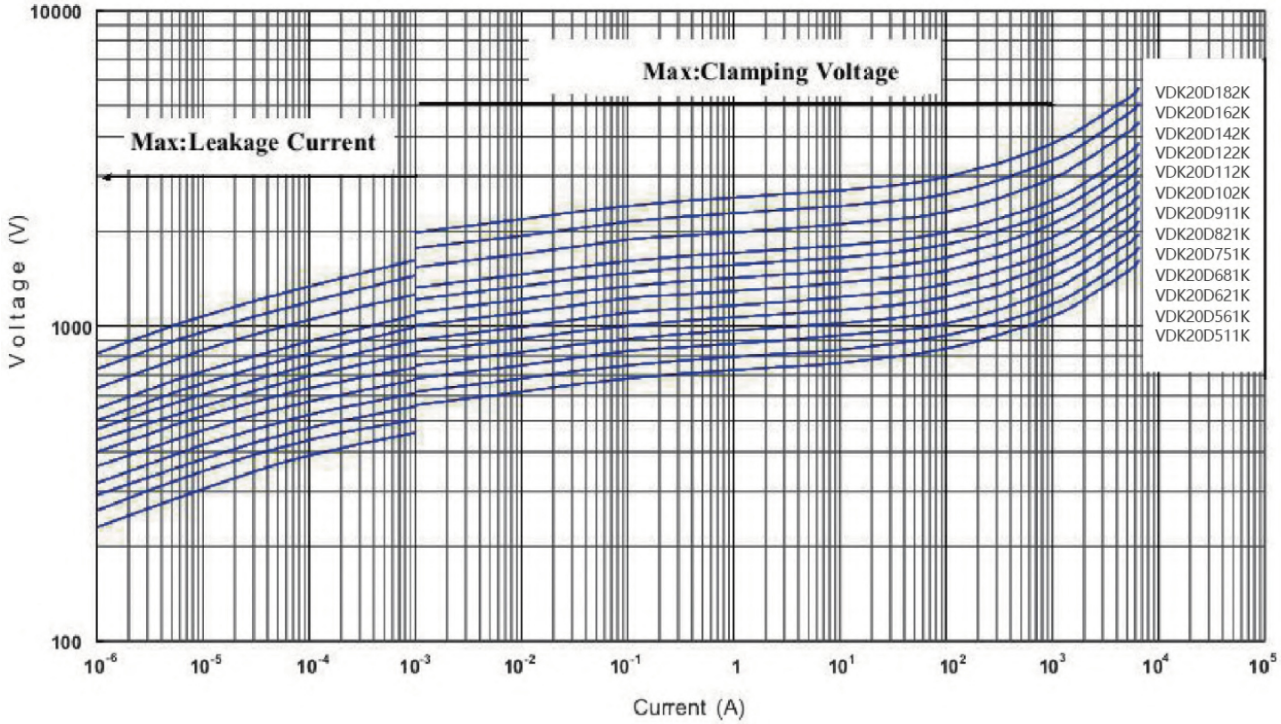
V-I (VDK20D180K to VDK20D680K)



V-I (VDK20D820K to VDK20D471K)



V-I (VDK20D511K to VDK20D182K)



SPD 系列规格说明 SPD Series Specifications

Explanation of Part Numbers 型号说明:

VDK	□ □	D	□ □ □	K	C	L
Common Code 产品类别代码	Chip Diameter 芯片直径	Chip. Shape 芯片形状	Varistor Voltage 压敏电阻动作电压	Tolerance 误差	Enclosure 包封材质	Tab Style 引出端形状
VDK Metal, Oxide. Varistor, Surge, Absorber VDK 金属氧化物压敏电阻器	25 Φ25mm 32 Φ32mm 40, Φ40mm .34 S34mm 53 Φ53mm 60 Φ60mm	D-Disc 圆形 B-Block 塑胶方 S-Square 方形	例如 Examples: 4 7 0 $47\times10^{0}=47V$ 4 7 1 $47\times10^{1}=470V$ 1 1 2 $11\times10^{2}=1100V$	K±10% L±15% M±20% Or Customer Special Requirement	C:Epoxy 环氧树脂 E:Plastic Case 注塑外壳	P Planet 平板型 L L Shape L 型 C Radial 圆型 T Vertical 盾型

Specifications 规格说明:

□Varistor Voltage Range 压敏电阻动作电压范围	56V~1800W
□Peak Current For 8/20us Current Wave 在 8/20us 电流波形最大通流量	5KA~100KA
□Energy Range For 10/1000us Current Wave 在 10/1000us 电流波形的能量范围	9.2J~2050J
□Storage Temperature Range 储存温度范围	-40℃~110℃
□Operation Ambient Temperature Range 作业环境温度范围	-40℃~85℃
□Typical Response Time 反应时间	<25ns
□Insulation Resistance 绝缘电阻	≧1000MΩ

应用领导域 Applications

- Protection Of Communication Against Lightning 通信电源防雷保护
- Industrial Power Distributors 工业配电柜
- Railway Highway and Air-signal 铁路、公路、航空信号系统
- Building Power Distributors Input Against Lightning 大楼供电电源入端防雷

25D Specifiation

VDK Part Number	Maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage (Max.) 抵制电压 @(8/20)us		Peak Current 通流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us	Rated Power 消耗功率	Typlcal Capacltance (Reference) 参考电容值
	AC.rms	DC	$V_{1.0mA}$(V)	VC	IP	Imax	In	(J)	(W)	@1KHz(pF)
Standard	(V)			(V)	(A)	(KA)				
25D560K	35	45	56(50-62)	110	30	6	3	60.0	0.25	10500
25D680K	40	56	68(61-75)	135	30	6	3	70.0	0.25	9050
25D820K	50	65	82(74-90)	135	150	15	7.5	80.0	1.0	7700
25D101K	60	85	100(90-110)	165	150	15	7.5	100.0	1.0	6300
25D121K	75	110	120(108-132)	200	150	15	7.5	120.0	1.0	5200
25D151K	95	125	150(135-165)	250	150	15	7.5	160.0	1.0	4300
25D181K	115	150	180(162-198)	300	150	15	7.5	175.0	1.0	3500
25D201K	130	170	200(185-225)	340	150	20	10	190.0	1.0	3200
25D221K	140	180	220(198-242)	360	150	20	10	200.0	1.0	2900
25D241K	150	200	240(216-264)	395	150	20	10	220.0	1.0	2650
25D271K	175	225	270(243-297)	455	150	20	10	255.0	1.0	2400
25D301K	190	250	300(270-330)	500	150	20	10	275.0	1.0	2100
25D331K	210	275	330(297-363)	550	150	20	10	300.0	1.0	1900
25D361K	230	300	360(324-396)	595	150	20	10	330.0	1.0	1750
25D391K	250	320	390(351-429)	650	150	20	10	360.0	1.0	1600
25D431K	275	350	430(387-473)	710	150	20	10	380.0	1.0	1500
25D471K	300	385	470(423-517)	775	150	20	10	400.0	1.0	1400
25D511K	320	415	510(459-561)	845	150	20	10	420.0	1.0	1250
25D561K	350	460	560(504-616)	925	150	20	10	440.0	1.0	1150
25D621K	385	505	620(558-682)	1025	150	20	10	450.0	1.0	1050
25D681K	420	560	680(612-748)	1120	150	20	10	460.0	1.0	950
25D751K	460	615	750(675-825)	1240	150	20	10	510.0	1.0	850
25D781K	485	640	780(702-858)	1290	150	20	10	530.0	1.0	800
25D821K	510	670	820(738-902)	1355	150	20	10	570.0	1.0	750
25D911K	550	745	910(819-1001)	1500	150	20	10	620.0	1.0	700
25D102K	625	825	1000(900-1100)	1650	150	20	10	685.0	1.0	650
25D112K	680	895	1100(990-1210)	1815	150	20	10	720.0	1.0	600
25D122K	750	990	1200(1080-1320)	1980	150	20	10	792.0	1.0	550
25D142K	880	1140	1400(1260-1540)	2310	150	15	7.5	850.0	1.0	500
25D162K	1000	1280	1600(1440-1760)	2640	150	15	7.5	970.0	1.0	450
25D182K	1100	1465	1800(1620-1980)	2970	150	15	7.5	1092.0	1.0	400

32D Specifiation

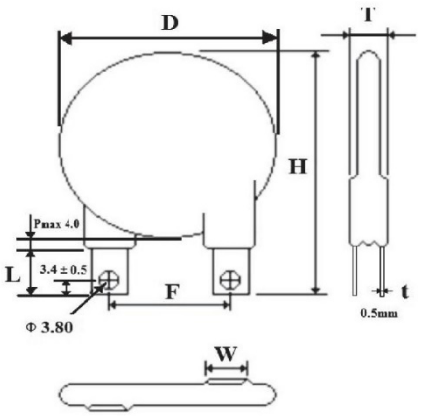
VDK Part Number	Maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage (Max.) 抵制电压 @(8/20)us		Peak Current 通流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us	Rated Power 消耗功率	Typlcal Capacltance (Reference) 参考电容值
	AC.rms	DC	$V_{1.0mA}$(V)	VC	IP	Imax	In	(J)	(W)	@1KHz(pF)
Standard	(V)			(V)	(A)	(KA)				
VDK-32D201K	130	170	200(185-225)	340	200	30	15	250	1.2	5200
VDK-32D221K	140	180	220(198-242)	360				270		5100
VDK-32D241K	150	200	240(216-264)	395				290		5100
VDK-32D271K	175	225	270(243-297)	455				300		4800
VDK-32D331K	210	275	330(297-363)	550				360		4300
VDK-32D361K	230	300	360(324-396)	595				380		3900
VDK-32D391K	250	320	390(351-429)	650				400		3200
VDK-32D431K	275	350	430(387-473)	710				430		3100
VDK-32D471K	300	385	470(423-517)	775				460		2800
VDK-32D511K	320	415	510(459-561)	845				510		2700
VDK-32D561K	350	460	560(504-616)	925				530		2500
VDK-32D621K	385	505	620 (558-682)	1025				570		2400
VDK-32D681K	420	560	680(612-748)	1120				600		2200
VDK-32D751K	460	615	750(675-825)	1240				620		2000
VDK-32D781K	485	640	780(702-858)	1290				660		1900
VDK-32D821K	510	670	820(738-902)	1355				700		1800
VDK-32D911K	550	745	910(819-1001)	1500				750		1300
VDK-32D951K	575	765	950(855-1045)	1570				780		1200
VDK-32D102K	625	825	1000(900-1100)	1650				810		1100
VDK-32D112K	680	895	1100(990-1210)	1815				910		1000
VDK-32D122K	750	990	1200(1080-1320)	1980				960		920
VDK-32D142K	880	1140	1400(1260-1540)	2310		15	7.5	1020	1.0	800
VDK-32D162K	1000	1280	1600(1440-1760)	2640		15	7.5	1080	1.0	700

Dimension Table Unit:mm	
D(max.)	36
H(max.)	56
F(±0.5)	25.4
t(±0.05)	0.5
L(min.)	14.5
W(±0.5)	7

(表一：基本尺寸表)

Tmax Table Unit:mm			
Model	T(max.)	Model	T(max.)
201K	6.2	681K	9.0
221K	6.3	751K	9.4
241K	6.4	781K	9.6
271K	6.6	821K	9.8
331K	6.9	911K	10.4
361K	7.1	951K	10.6
391K	7.3	102K	11.2
431K	7.5	112K	11.8
471K	7.8	122K	12.3
511K	8.0	142K	13.3
561K	8.4	162K	143
621K	8.7		

(表二：厚度尺寸表)



(图 1：32D 系列简图)

40D Specifiation

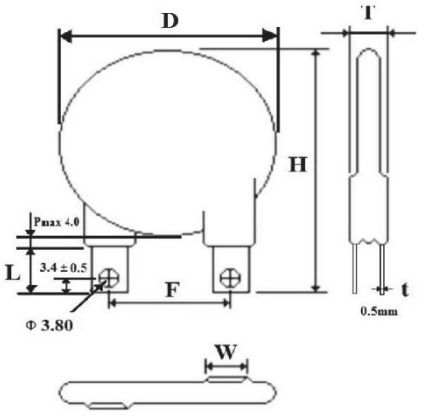
VDK Part Number	Maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage (Max.) 抵制电压 @(8/20)us		Peak Current 通流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us	Rated Power 消耗功率	Typlcal Capacltance (Reference) 参考电容值
	AC.rms	DC	$V_{1.0mA}$(V)	VC	IP	Imax	In	(J)	(W)	@1KHz(pF)
Standard	(V)			(V)	(A)	(KA)				
VDK-40D201K	130	170	200(185-225)	340				370		8400
VDK-40D201K	140	180	200(198-242)	360				410		8100
VDK-40D241K	150	200	240(216-264)	395				430		8000
VDK-40D271K	175	225	270(243-297)	455				470		7600
VDK-40D331K	210	275	330(297-363)	550				550		6700
VDK-40D361K	230	300	360(324-396)	595				570		6200
VDK-40D391K	250	320	390(351-429)	650				590		5100
VDK-40D431K	275	350	430(387-473)	710				660		4900
VDK-40D471K	300	385	470(423-517)	775				720		4300
VDK-40D511K	320	415	510(459-561)	845				770		4200
VDK-40D561K	350	460	560(504-616)	925				1150		3900
VDK-40D621K	385	505	620(558-682)	1025	300	40	20	860	1.4	3800
VDK-40D681K	420	560	680 (612-748)	1120				900		3500
VDK-40D751K	460	615	750(675-825)	1240				940		3200
VDK-40D781K	485	640	780(702-858)	1290				980		3000
VDK-40D821K	510	670	820(738-902)	1355				1080		2900
VDK-40D911K	550	745	910(819-1001)	1500				1150		2200
VDK-40D951K	575	765	950(855-1045)	1570				1200		2000
VDK-40D102K	625	825	1000(900-1100)	1650				1260		1800
VDK-40D112K	680	895	1100(990-1210)	1815				1380		1600
VDK-40D122K	750	990	1200(1080-1320)	1980				1460		1500
VDK-40D142K	880	1140	1400(1260-1540)	2310				1550		1300
VDK-40D162K	1000	1280	1600(1440-1760)	2640				1700		1150

Dimension Table Unit:mm	
D(max.)	45
H(max.)	60.3
F(±0.5)	25.4
t(±0.05)	0.5
L(min.)	14.5
W(±0.5)	7

(表一：基本尺寸表)

Tmax Table Unit:mm			
Model	T(max.)	Model	T(max.)
201K	6.2	681K	9.0
221K	6.3	751K	9.4
241K	6.4	781K	9.6
271K	6.6	821K	9.8
331K	6.9	911K	10.4
361K	7.1	951K	10.6
391K	7.3	102K	11.2
431K	7.5	112K	11.8
471K	7.8	122K	12.3
511K	8.0	142K	13.3
561K	8.4	162K	14.3
621K	8.7		

(表二：厚度尺寸表)



(图 1：40D 系列简图)

53D Specifiation

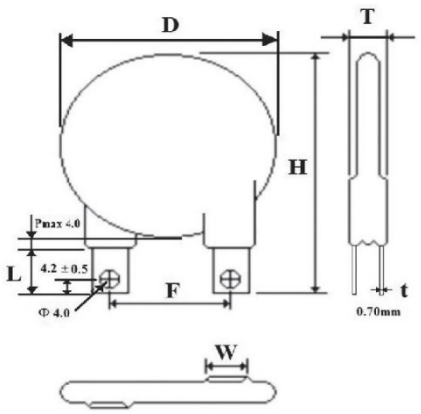
VDK Part Number	Maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage (Max.) 抵制电压 @(8/20)us		Peak Current 通流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us	Rated Power 消耗功率	Typlcal Capacltance (Reference) 参考电容值
	AC.rms	DC	$V_{1.0mA}$(V)	VC	IP	Imax	In	(J)	(W)	@1KHz(pF)
Standard	(V)			(V)	(A)	(KA)				
VDK-53D201K	130	170	200(185-225)	340				550		15000
VDK-53D221K	140	180	220(198-242)	360				560		13500
VDK-53D241K	150	200	240(216-264)	395				650		12500
VDK-53D271K	175	225	270(243-297)	455				700		11000
VDK-53D331K	210	275	330(297-363)	550				825		9000
VDK-53D361K	230	300	360(324-396)	595				850		8500
VDK-53D391K	250	320	390(351-429)	650				885		7500
VDK-53D431K	275	350	430(387-473)	710				990		7000
VDK-53D471K	300	385	470(423-517)	775				1080		6500
VDK-53D511K	320	415	510(459-561)	845				1150		6000
VDK-53D561K	350	460	560(504-616)	925				1200		5100
VDK-53D621K	385	505	620(558-682)	1025	500	70	35	1300	1.5	5000
VDK-53D681K	420	560	680 (612-748)	1120				1350		4500
VDK-53D751K	460	615	750(675-825)	1240				1400		4000
VDK-53D781K	485	640	780(702-858)	1290				1450		3900
VDK-53D821K	510	670	820(738-902)	1355				1600		3700
VDK-53D911K	550	745	910(819-1001)	1500				1700		3300
VDK-53D951K	575	765	950(855-1045)	1570				1800		3200
VDK-53D102K	625	825	1000(900-1100)	1650				1890		3000
VDK-53D112K	680	895	1100(990-1210)	1815				2050		2700
VDK-53D122K	750	990	1200(1080-1320)	1980				2160		2500
VDK-53D142K	880	1140	1400(1260-1540)	2310				2300		2150
VDK-53D162K	1000	1280	1600(1440-1760)	2640				2500		1900

Dimension Table Unit:mm	
D(max.)	60
H(max.)	78.2
F(±0.5)	25.4
t(±0.05)	0.7
L(min.)	14.5
W(±0.5)	7

(表一：基本尺寸表)

Tmax Table Unit:mm			
Model	T(max.)	Model	T(max.)
201K	6.3	681K	9.1
221K	6.4	751K	9.5
241K	6.5	781K	9.7
271K	6.7	821K	9.9
331K	7.0	911K	10.5
361K	7.2	951K	10.7
391K	7.4	102K	11.2
431K	7.6	112K	11.8
471K	7.9	122K	12.3
511K	8.1	142K	13.3
561K	8.4	162K	14.3
621K	8.8		

(表二：厚度尺寸表)



(图 1：53D 系列简图)

34S Specifiation

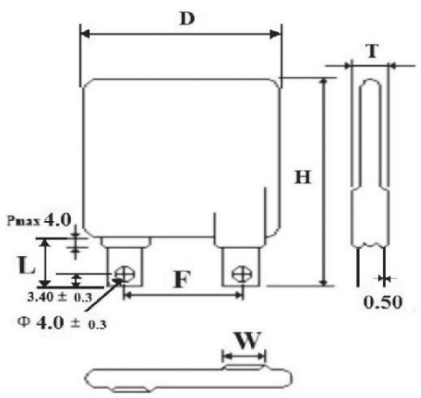
VDK Part Number	Maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage (Max.) 抵制电压 @(8/20)us		Peak Current 通流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us	Rated Power 消耗功率	Typlcal Capacltance (Reference) 参考电容值
	AC.rms	DC	$V_{1.0mA}$(V)	VC	IP	Imax	In	(J)	(W)	@1KHz(pF)
Standard	(V)			(V)	(A)	(KA)				
VDK-34S201K	130	170	200(185-225)	340				330		8000
VDK-34S221K	140	180	220(198-242)	360				360		7800
VDK-34S241K	150	200	240(216-264)	395				390		7600
VDK-34S271K	175	225	270(243-297)	455				420		7200
VDK-34S331K	210	275	330(297-363)	550				500		6400
VDK-34S361K	230	300	360(324-396)	595				510		6000
VDK-34S391K	250	320	390(351-429)	650				530		4800
VDK-34S431K	275	350	430(387-473)	710				600		4600
VDK-34S471K	300	385	470(423-517)	775				650		4100
VDK-34S511K	320	415	510(459-561)	845				700		4000
VDK-34S561K	350	460	560(504-616)	925				730		3800
VDK-34S621K	385	505	620(558-682)	1025	300	40	20	780	1.4	3600
VDK-34S681K	420	560	680 (612-748)	1120				810		3300
VDK-34S751K	460	615	750(675-825)	1240				850		3000
VDK-34S781K	485	640	780(702-858)	1290				930		2850
VDK-34S821K	510	670	820(738-902)	1355				970		2700
VDK-34S911K	550	745	910(819-1001)	1500				1050		2100
VDK-34S951K	575	765	950(855-1045)	1570				1080		1900
VDK-34S102K	625	825	1000(900-1100)	1650				1120		1700
VDK-34S112K	680	895	1100(990-1210)	1815				1250		1520
VDK-34S122K	750	990	1200(1080-1320)	1980				1340		1400
VDK-34S142K	880	1140	1400(1260-1540)	2310				1400		1250
VDK-34S162K	1000	1280	1600(1440-1760)	2640				1500		1100

Dimension Table Unit:mm	
D(max.)	35
H(max.)	56.6
F(±0.5)	25.4
t(±0.05)	0.5
L(min.)	14.5
W(±0.5)	7

(表一：基本尺寸表)

Tmax Table Unit:mm			
Model	T(max.)	Model	T(max.)
201K	6.3	681K	9.1
221K	6.4	751K	9.5
241K	6.5	781K	9.7
271K	6.7	821K	9.9
331K	7.0	911K	10.5
361K	7.2	951K	10.7
391K	7.4	102K	11.2
431K	7.6	112K	11.8
471K	7.9	122K	12.3
511K	8.1	142K	13.3
561K	8.4	162K	14.3
621K	8.8		

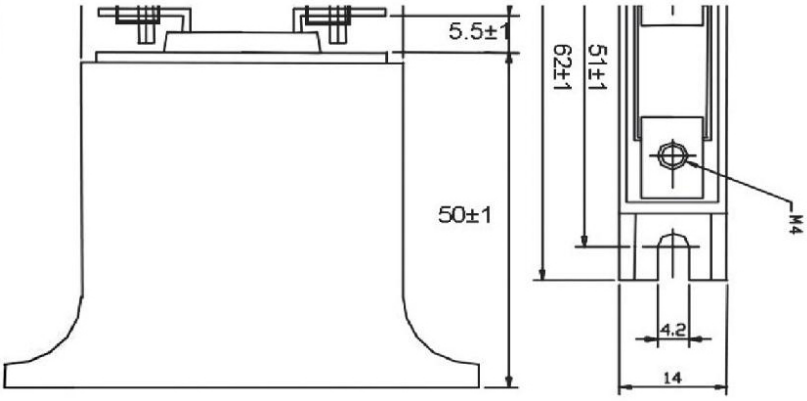
(表二：厚度尺寸表)



(图 1：34S 系列简图)

34B (BLOCK VARISTOR) Specification

VDK Part Number	Maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage (Max.) 抵制电压 @(8/20)us		Peak Current 通流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us	Rated Power 消耗功率	Typlcal Capacltance (Reference) 参考电容值
	AC.rms	DC	$V_{1.0mA}$(V)	VC	IP	Imax	In	(J)	(W)	@1KHz(pF)
Standard	(V)			(V)	(A)	(KA)				
VDK-34B201K	130	170	200(185-225)	340	300	40	20	330	1.4	8000
VDK-34B221K	140	180	220(198-242)	360				360		7800
VDK-34B241K	150	200	240(216-264)	395				390		7600
VDK-34B271K	175	225	270(243-297)	455				420		7200
VDK-34B331K	210	275	330(297-363)	550				500		6400
VDK-34B361K	230	300	360(324-396)	595				510		6000
VDK-34B391K	250	320	390(351-429)	650				530		4800
VDK-34B431K	275	350	430(387-473)	710				600		4600
VDK-34B471K	300	385	470(423-517)	775				650		4100
VDK-34B511K	320	415	510(459-561)	845				700		4000
VDK-34B561K	350	460	560(504-616)	925				730		3800
VDK-34B621K	385	505	620(558-682)	1025				780		3600
VDK-34B681K	420	560	680 (612-748)	1120				810		3300
VDK-34B751K	460	615	750(675-825)	1240				850		3000
VDK-34B781K	485	640	780(702-858)	1290				930		2850
VDK-34B821K	510	670	820(738-902)	1355				970		2700
VDK-34B911K	550	745	910(819-1001)	1500				1050		2100
VDK-34B951K	575	765	950(855-1045)	1570				1080		1900
VDK-34B102K	625	825	1000(900-1100)	1650				1120		1700
VDK-34B112K	680	895	1100(990-1210)	1815				1250		1520

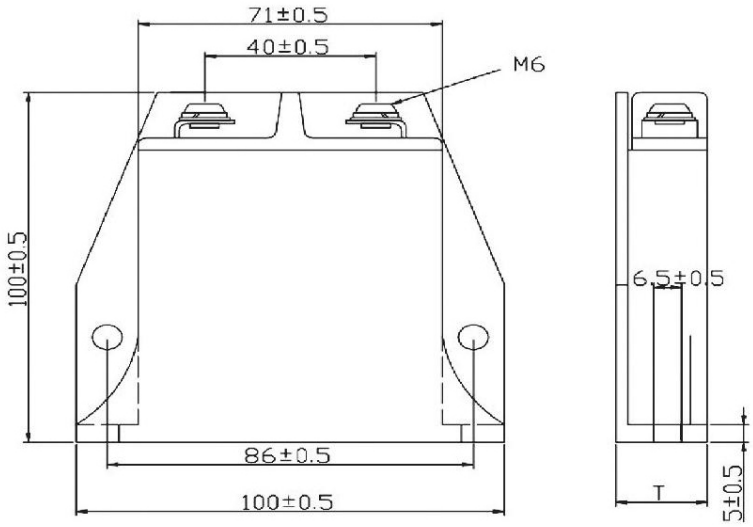


注：未注明公差 0±.5mm

(图 1：34B 系列简图)

60B (BLOCK VARISTOR) Specification

VDK Part Number	Maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage (Max.) 抵制电压 @(8/20)us		Peak Current 通流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us	Rated Power 消耗功率	Typlcal Capacltance (Reference) 参考电容值
	AC.rms	DC	$V_{1.0mA}$(V)	VC	IP	Imax	In	(J)	(W)	@1KHz(pF)
Standard	(V)			(V)	(A)	(KA)				
VDK-60B201K	130	170	200(185-225)	340	500	70	35	550	1.6	15000
VDK-60B221K	140	180	220(198-242)	360				600		13000
VDK-60B241K	150	200	240(216-264)	395				650		12500
VDK-60B271K	175	225	270(243-297)	455				700		11000
VDK-60B331K	210	275	330(297-363)	550				825		9000
VDK-60B361K	230	300	360(324-396)	595				850		8500
VDK-60B391K	250	320	390(351-429)	650				885		7500
VDK-60B431K	275	350	430(387-473)	710				990		7000
VDK-60B471K	300	385	470(423-517)	775				1080		6500
VDK-60B511K	320	415	510(459-561)	845				1150		6000
VDK-60B561K	350	460	560(504-616)	925				1200		5300
VDK-60B621K	385	505	620(558-682)	1025				1300		5000
VDK-60B681K	420	560	680 (612-748)	1120				1350		4500
VDK-60B751K	460	615	750(675-825)	1240				1400		4000
VDK-60B781K	485	640	780(702-858)	1290				1450		3900
VDK-60B821K	510	670	820(738-902)	1355				1600		3700
VDK-60B911K	550	745	910(819-1001)	1500				1700		3300
VDK-60B951K	575	765	950(855-1045)	1570				1800		3200
VDK-60B102K	625	825	1000(900-1100)	1650				1890		3000
VDK-60B112K	680	895	1100(990-1210)	1815				2050		2700

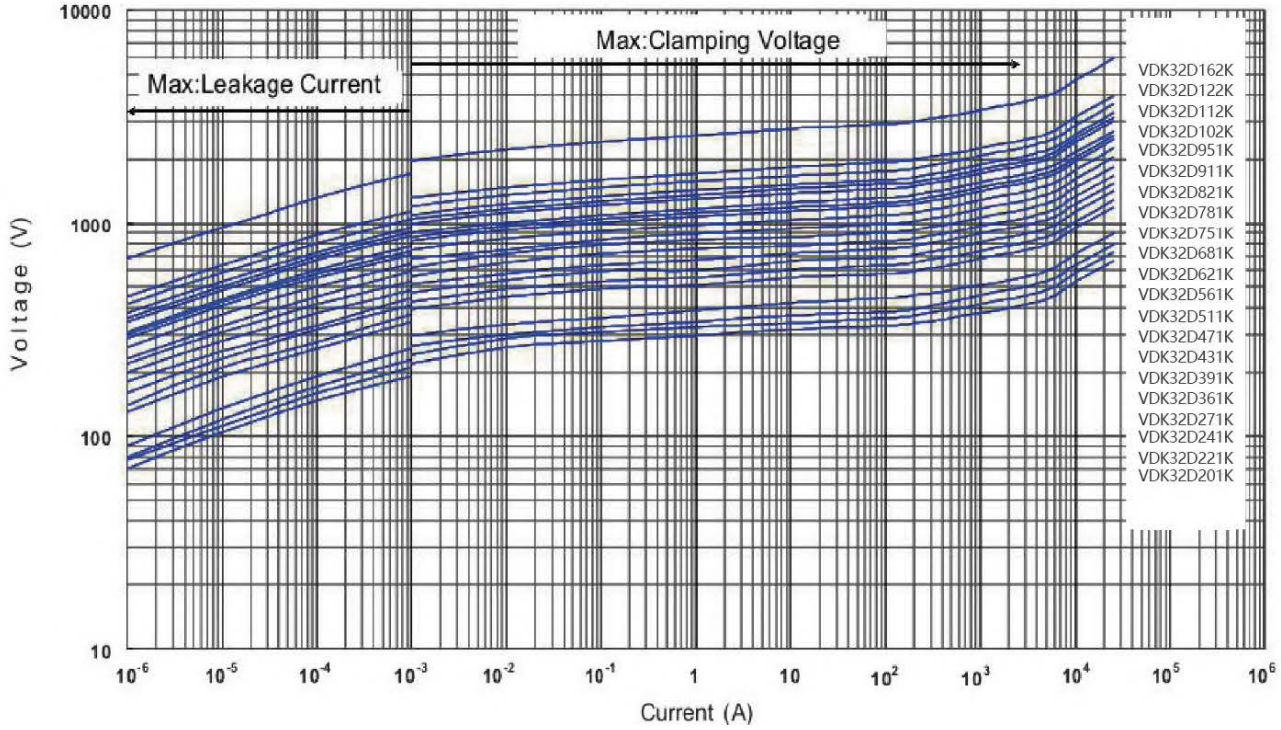


注：未注明公差 0±.5mm

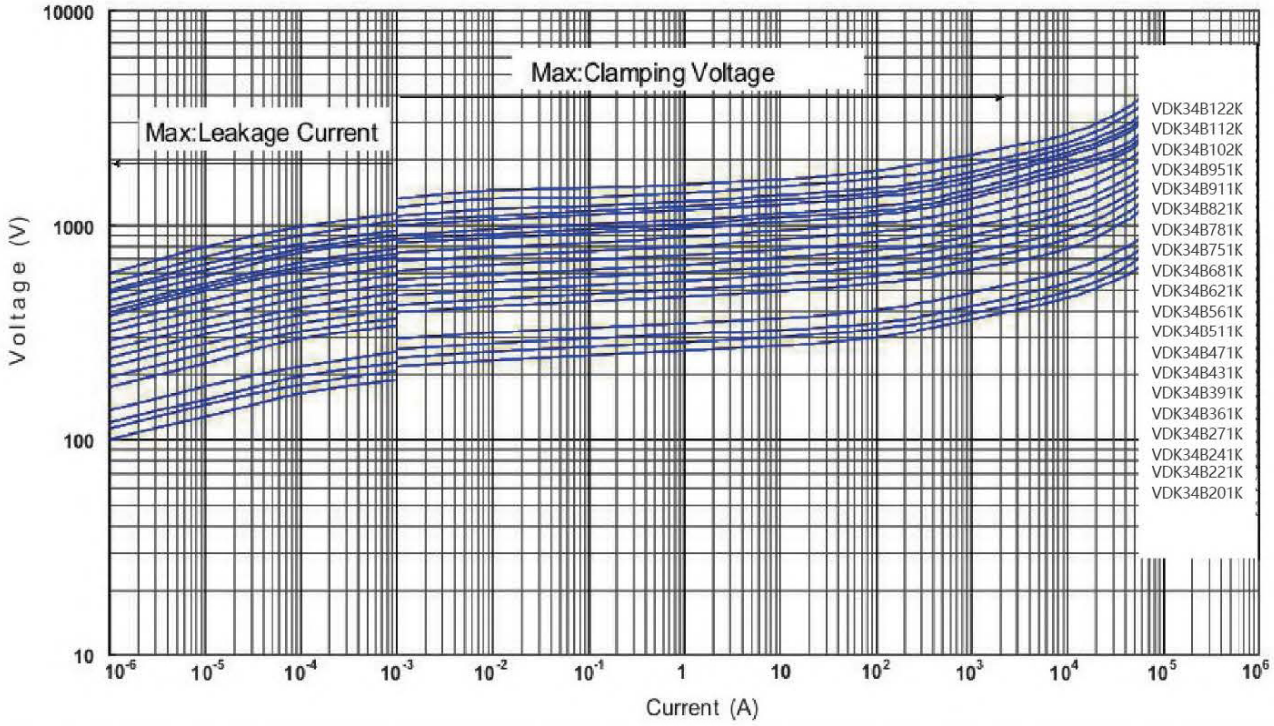
(图 1：60B 系列简图)

V-I Curve 电压电流特性曲线:

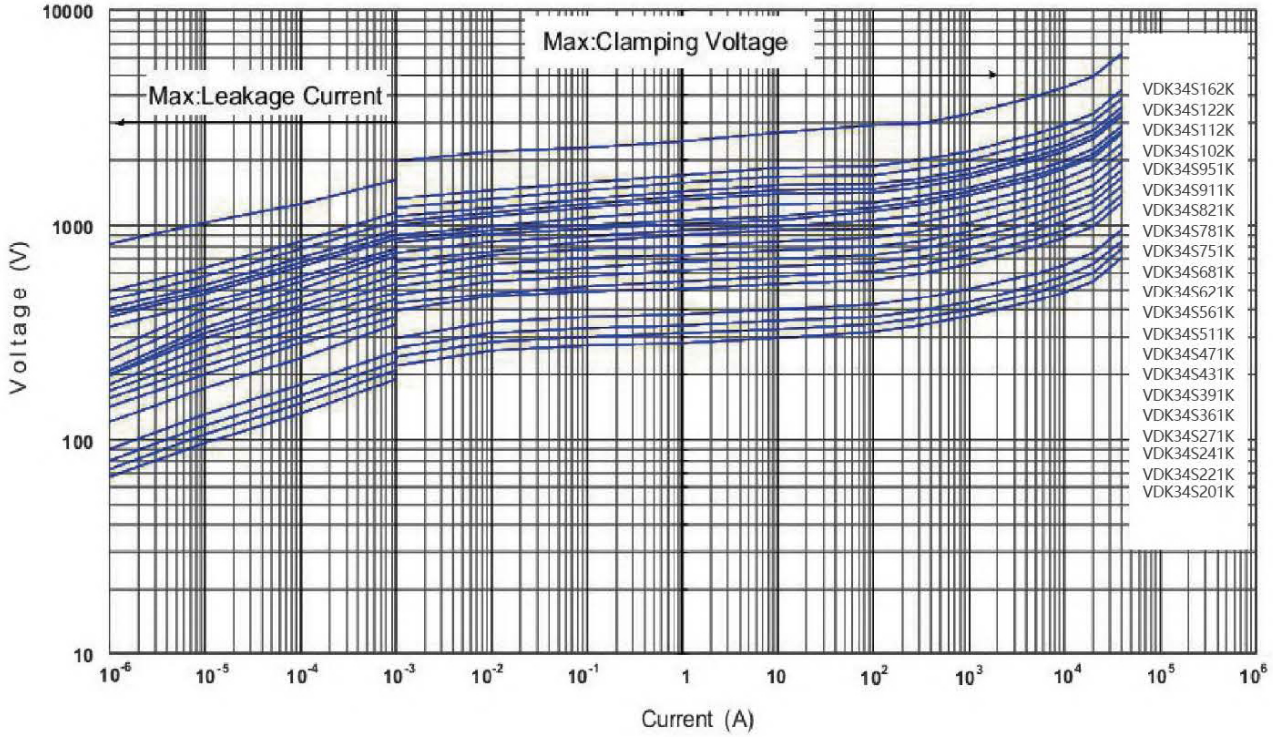
V-I Curve (VDK32D201K~VDK32D162)



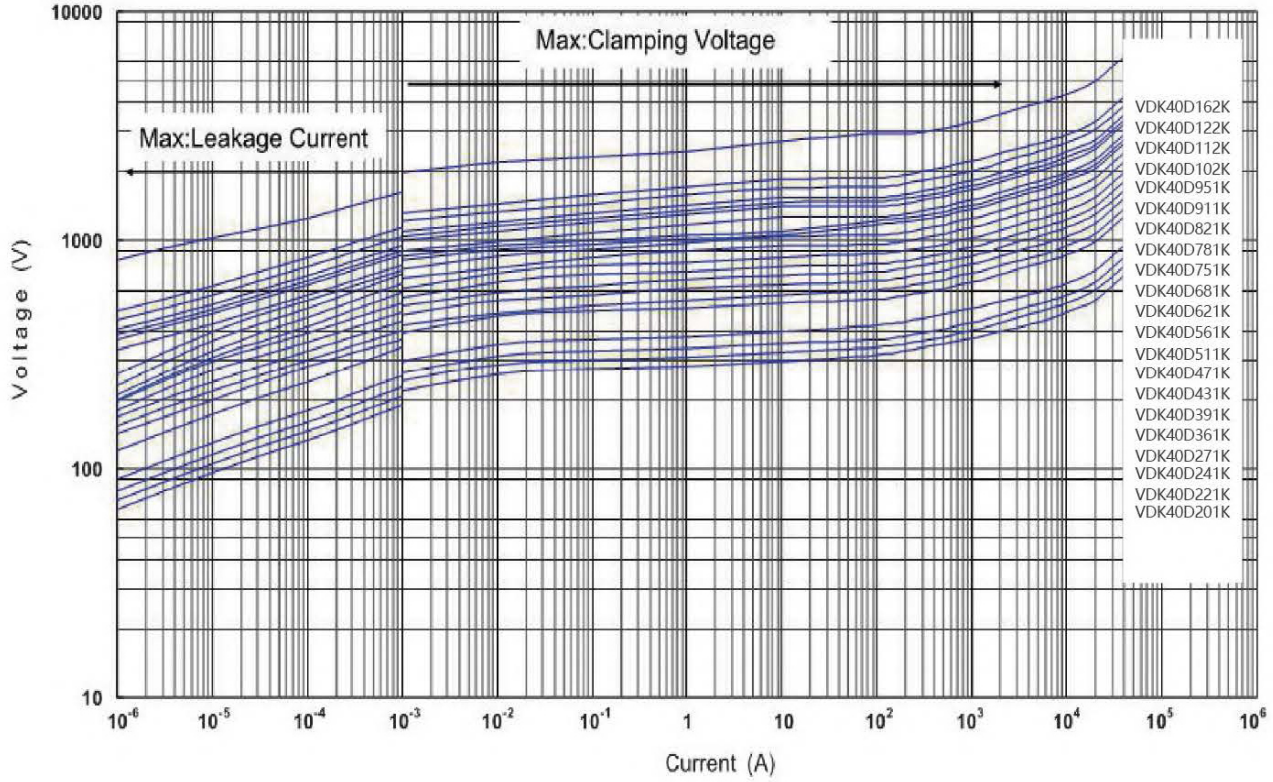
V-I Curve (VDK34B201K- VDK 34B122K)



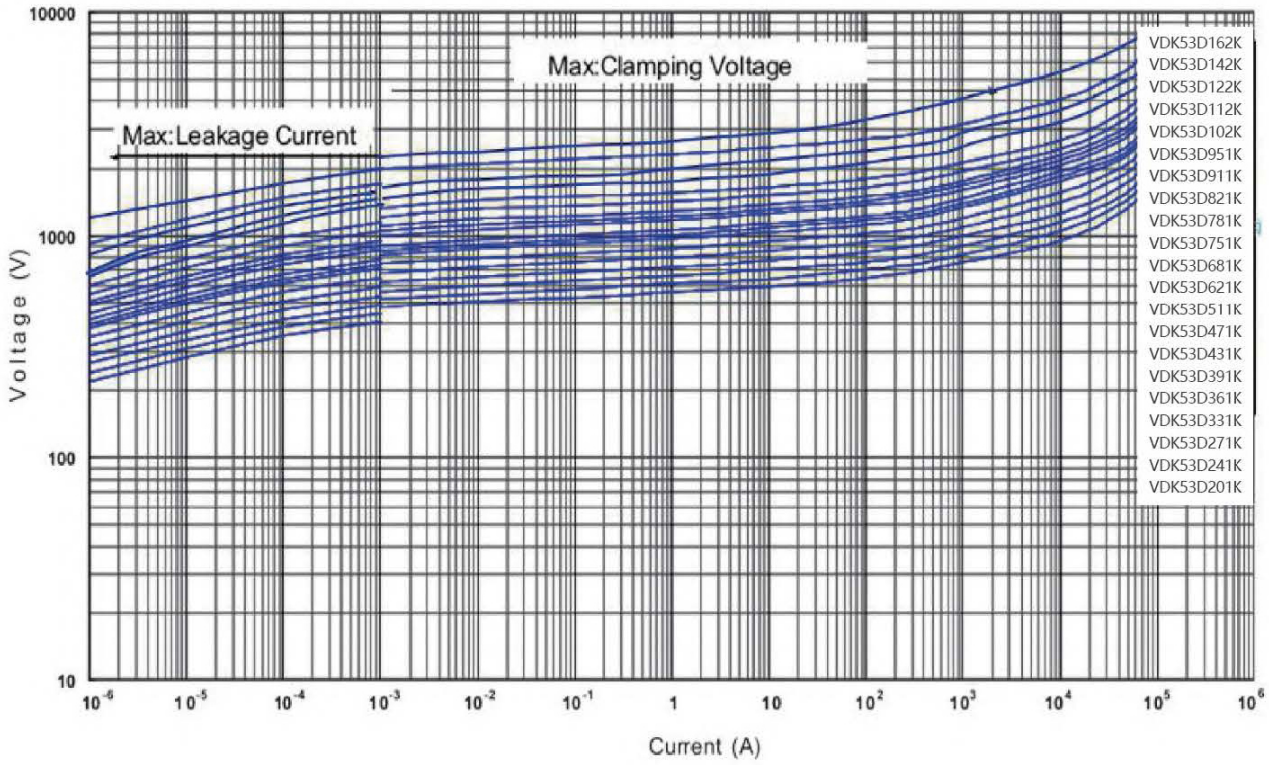
V-I Curve (VDK34S201K- VDK34S162K)



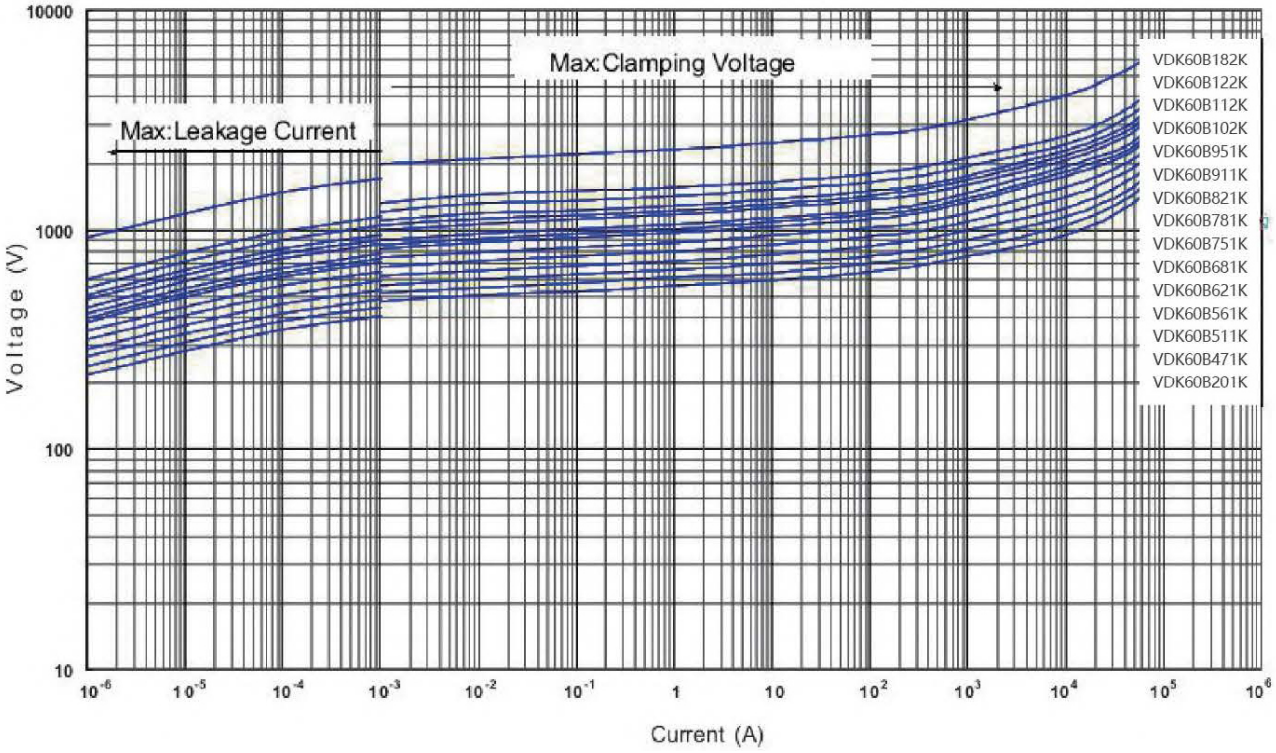
V-I Curve (VDK40D201K - VDK40D162K)



V-I Curve (VDK53D201K~VDK53D162K)



V-I Curve (VDK60B201K - VDK60B112K)



机械特性/环境特性 SPD Series Specifications Mechanical / Environmental

<table>
<tr><th>试验项目</th><th>测试标准</th><th>试验条件/方法</th><th>性能要求</th></tr>
<tr><td></td><td></td><td>渐近的方式施加指定的重量，并且在一固定位置维持 10±1 秒。</td><td></td></tr>
<tr><td>引线拉力试验</td><td>IEC 60068-2-21</td><td><table><tr><th>引线截面积</th><th>引线直径</th><th>引线直接下拉力</th></tr><tr><td>(nm^2)</td><td>(mm)</td><td>(Kg)</td></tr><tr><td>0.5<S≦1.2</td><td>0.8<d≦1.25</td><td>2.0</td></tr><tr><td>1.2<S</td><td>1.25<d</td><td>4.0</td></tr></table></td><td>$|\Delta V_{1mA}/V_{1mA}|\leq\pm5\%$
无外观损伤</td></tr>
<tr><td>振荡试验
(可选)</td><td>IEC 60068-2-6</td><td>频率范围：10 ~ 55 Hz
振幅：0.75mm 或 98 m/S^2
持续时间：6 小时（3x2 小时）</td><td>$|\Delta V_{1mA}/V_{1mA}|\leq\pm5\%$
无外观损伤</td></tr>
<tr><td>可焊性试验</td><td>IEC 60068-2-20</td><td>245±3°C , 3±0.3 秒（适用于导线连接结构）</td><td>着锡面积≥95%</td></tr>
<tr><td>耐焊接热试验</td><td>IEC 60068-2-20</td><td>260±3°C,10±1 秒</td><td>$|\Delta V_{1mA}/V_{1mA}|\leq\pm5\%$
无外观损伤</td></tr>
<tr><td>高温存储试验</td><td>IEC 60068-2-2</td><td>110±5°C x 1000±24 小时</td><td>$|\Delta V_{1mA}/V_{1mA}|\leq\pm5\%$
无外观损伤</td></tr>
<tr><td>稳态湿热试验</td><td>IEC 60068-2-78</td><td>试验分 a、b 两组：
a. 40±2°C, 90 ~ 95 % RH, 1000 小时
b. 40±2°C, 90 ~ 95 % RH, 10% V_{DC}, 1000 小时</td><td>$|\Delta V_{1mA}/V_{1mA}|\leq\pm5\%$
无外观损伤
绝缘阻抗≥100MΩ</td></tr>
<tr><td>温度急变试验
（可选）</td><td>IEC 60068-2-14</td><td>温度急变按下表条件循环五个周期。<table><tr><th>步骤</th><th>温度(°C)</th><th>时间(分钟)</th></tr><tr><td>1</td><td>-40±3</td><td>30±3</td></tr><tr><td>2</td><td>室温</td><td>15±3</td></tr><tr><td>3</td><td>85±2</td><td>30±3</td></tr><tr><td>4</td><td>室温</td><td>15±3</td></tr></table></td><td>$|\Delta V_{1mA}/V_{1mA}|\leq\pm5\%$
无外观损伤</td></tr>
<tr><td>高温负荷试验</td><td>MIL-STD-202
Method 108</td><td>85±2°C, 1000±24 小时，施加 V_{DC} 或 V_{rms} （最大连续工作电压）</td><td>$|\Delta V_{1mA}/V_{1mA}|\leq\pm10\%$
无外观损伤</td></tr>
<tr><td>8/20ps 冲击动作负载试验</td><td>IEC 61643-11</td><td>a. 测量限制电压在 0.1In、0.2In、0.5In、1.0In、Imax
b. 动作负载试验：In*15 次</td><td>$|\Delta V_{1mA}/V_{1mA}|\leq\pm10\%$
无外观损伤</td></tr>
<tr><td>气候顺序试验</td><td>IEC 61051-1</td><td>a. 干燥高温 85°C, 16 小时
b. 湿气高温，第一次循环：温度 55°C，95RH，24 小时（IEC60068-2-30）
c. 低温-40°C, 2 小时
d. 湿气高温，再进行 5 次阚共 120 小时</td><td>$|\Delta V_{1mA}/V_{1mA}|\leq\pm10\%$
无外观损伤
绝缘阻抗≥100MΩ</td></tr>
<tr><td>耐压试验</td><td>IEC 61051-1</td><td>金属球法，2500 V_{ac} 1 分钟</td><td>无外观损伤</td></tr>
</table>

VDK 热保护系列 VDK'S Thermat Fuse Seriex

Explanation of Part Numbers 型号说明:

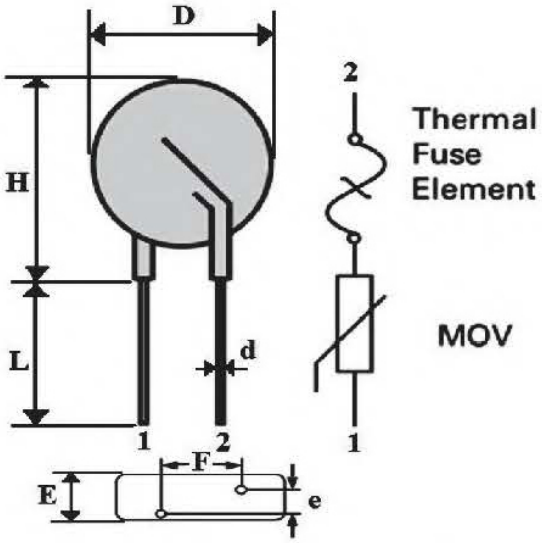
VDK	□ □	E	□ □ □	K
Common Code 产品类别代码	Chip Diameter 芯片直径	Series Designtor 设计类型	Varistor Voltage 压敏电阻动作电压	Tolerance 误差
VDK Metal Oxide Varistor Thermal Fuse series VDK 金属氧化物保护系列压敏电阻器	14 Φ14mm 20 Φ20mm 25 Φ25mm	E: 3-Leaded cov's Thermal Fuse Varistor series COV3 只脚热保护系列 N: 2-Leaded COV'S Thermal Fuse Varistor COV2 只脚热保护系列	例如 Examples: [4] [7] [0] $47\times10^{0}=47V$ [4] [7] [1] $47\times10^{1}=470V$	K±10% L±15% Or Customer Special Requirement

规格说明 Specifications

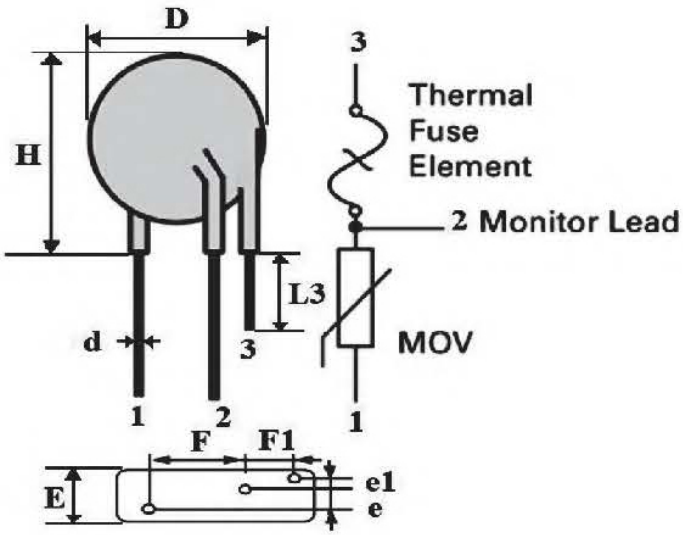
- 有两脚和三脚型，三脚型可以起到监控作用
- 本体尺寸：14mm, 20mm, 25mm,
- 工作电压范围：50VAC～750VAC
- 工作温度范围：-40°C ~+85°C
- 储存温度范围：-40°C ~+85°C
- 适用于波峰焊接

应用介绍 Application Is Introduced

- UPS 电源
- 电源供应器
- 照明
- 通信设备
- 智能控制型电表
- 光伏系统



(图 1： N Series 简图)



(图 2： E Series 简图)

一般尺寸 General Dimensions

Symbol		COV'S (E/N) Varistor Unit:mn					
		14E	14N	20E	20N	25E	25N
D(Max.)		19.0	19.0	24.0	24.0	29.0	29.0
H(Max.)		21.0	21.0	26.0	26.0	32.0	32.0
F(±1.0)		7.5	7.5	10	10/12.5	12.5	11.5
Fl(±1.0)		5.0	-	5.5	-	6.5 5	-
e	820K-121K	0.5	0.5	0.5	0.5	0.6	0.6
	151K-391K	1.0	1.0	1.0	1.0	2.0	2.0
	431K-621K	2.0	2.0	2.0	2.0	3.0	3.0
	681K-911K	4.6	4.6	4.6	4.6	4.6	4.6
	102K-122K	5.0	5.0	5.0	5.0	5.0	5.0
e1	820K-121K	1.0±0.5	-	1.0±0.5	-	1.0±0.5	-
	151K-391K						
	431K-621K						
	681K-911K						
	102K-122K						
E	820K-121K	8.8	8.8	9.0	9.0	11.0	11.0
	151K-391K	9.8	9.8	9.8	9.8	11.8	11.8
	431K-621K	11.5	11.5	11.5	11.5	13.5	13.5
	681K-911K	13.8	13.8	13.8	13.8	15.8	15.8
	102K-122K	16.0	16.0	16.0	16.0	18.0	18.0
L(Min)		20.0	20.0	20.0	20.0	20.0	20.0
L3(Min)		10.0	-	10.0	-	10.0	-
ød		0.8		1.0			

14 (E/N) Series Specification (5A/135°C)

VDK Part Number	Maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage (Max.) 抵制电压 @(8/20)us		Peak Current 通流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us		Rated Power 消耗功率	Typlcal Capacltance (Reference) 参考电容值
Standard	AC.rms	DC	V0.1mA(V)	VC	IP	Imax	In	(10/1000) us	2ms	(W)	@1KHz(pF)
	(V)			(V)	(A)	(KA)					
VDK-14(E/N)820K	50	65	82(74-90)	135	50	6	3	27.0	22.0	0.60	2400
VDK-14(E/N)101K	60	85	100(90-110)	165				33.0	28.0		2000
VDK-14(E/N)121K	75	110	120(108-132)	200				40.0	32.0		1700
VDK-14M(E/N)151K	95	125	150(135-165)	250				50.0	35.0		1300
VDK-14(E/N)181K	115	150	180(162-198)	300				58.0	40.0		1100
VDK-14(E/N)201K	130	170	200(185-225)	340				70.0	50.0		1000
VDK-14(E/N)221K	140	180	220(198-242)	360				78.0	55.0		900
VDK-14(E/N)241K	150	200	240(216-264)	395				85.0	60.0		830
VDK-14(E/N)271K	175	225	270(243-297)	455				100.0	70.0		740
VDK-14(E/N)301K	190	250	300(270-330)	500				107.0	75.0		670
VDK-14(E/N)331K	210	275	330(297-363)	550				115.0	80.0		610
VDK-14(E/N)361K	230	300	360(324-396)	595				125.0	9lh0		560
VDK-14(E/N)391K	250	320	390(351-429)	650				140.0	100.0		510
VDK-14(E/N)431K	275	350	430(387-473)	710				155.0	110.0		460
VDK-14(E/N)471K	300	385	470(423-517)	775				175.0	125.0		430
VDK-14(E/N)511K	320	415	510(459-561)	845				190.0	136.0		390
VDK-14(E/N)561K	350	460	560(504-616)	925				200.0	140.0		360
VDK-14(E/N)621K	385	505	620(558-682)	1025				210.0	150.0		320
VDK-14(E/N)681K	420	560	680(612-748)	1120				220.0	155.0		290
VDK-14(E/N)751K	460	615	750(675-825)	1240				225.0	160.0		270
VDK-14(E/N)781K	485	640	780(702-858)	1290				240.0	165.0		260
VDK-14(E/N)821K	510	670	820(738-902)	1355				245.0	170.0		240
VDK-14(E/N)911K	550	745	910(819-1001)	1500				255.0	180.0		220
VDK-14(E/N)102K	625	825	1000(900-1100)	1650				280.0	190.0		200
VDK-14(E/N)112K	680	895	1100(990-1210)	1815				310.0	205.0		180
VDK-14(E/N)122K	750	990	1200(1080-1320)	1980				338.0	215.0		150

20 (E/N) Series Specification (15A/135°C)

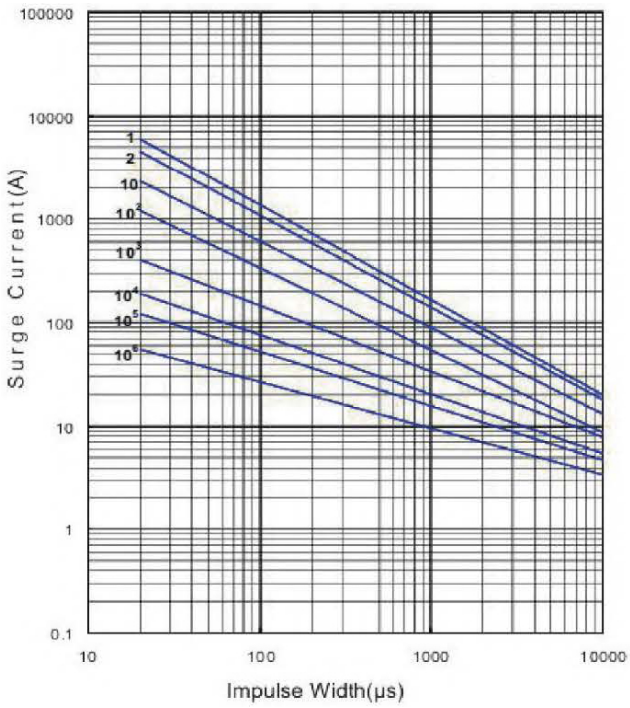
VDK Part Number	Maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage (Max.) 抵制电压 @(8/20)us		Peak Current 通流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us		Rated Power 消耗功率	Typlcal Capacltance (Reference) 参考电容值
Standard	AC.rms	DC	V0.1mA(V)	VC	IP	Imax	In	(10/1000) us	2ms	(W)	@1KHz(pF)
	(V)			(V)	(A)	(KA)					
VDK-20(E/N)820K	50	65	82(74-90)	135	100	6	3	56.0	42.0	1.00	4900
VDK-20(E/N)101K	60	85	100(90-110)	165				70.0	52.0		4000
VDK-20(E/N)121K	75	110	120(108-132)	200				85.0	63.0		3300
VDK-20(E/N)151K	95	125	150(135-165)	250				100.0	70.0		2700
VDK-20(E/N)181K	115	150	180(162-198)	300				110.0	80.0		2200
VDK-20(E/N)201K	130	170	200(185-225)	340				140.0	100.0		2000
VDK-20(E/N)221K	140	180	220(198-242)	360				155.0	110.0		1800
VDK-20(E/N)241K	150	200	240(216-264)	395				170.0	120.0		1650
VDK-20(E/N)271K	175	225	270(243-297)	455				190.0	135.0		1500
VDK-20(E/N)301K	190	250	300(270-330)	500				205.0	145.0		BOO
VDK-20(E/N)331K	210	275	330(297-363)	550				215.0	150.0		1200
VDK-20(E/N)361K	230	300	360(324-396)	595				225.0	160.0		1100
VDK-20(E/N)391K	250	320	390(351-429)	650				240.0	170.0		1000
VDK-20(E/N)431K	275	350	430(387-473)	710	100	10	5	270.0	190.0	1.00	930
VDK-20(E/N)471K	300	385	470(423-517)	775				350.0	250.0		850
VDK-20(E/N)511K	320	415	510(459-561)	845				380.0	270.0		780
VDK-20(E/N)561K	350	460	560(504-616)	925				400.0	280.0		710
VDK-20(E/N)621K	385	505	620(558-682)	1025				425.0	300.O		650
VDK-20(E/N)681K	420	560	680(612-748)	1120				435.0	310.0		600
VDK-20(E/N)751K	460	615	750(675-825)	1240				455.0	327.0		530
VDK-20(E/N)781K	485	640	780(702-858)	1290				461.0	335.0		510
VDK-20(E/N)821K	510	670	820(738-902)	1355				475.0	344.0		500
VDK-20(E/N)911K	550	745	910(819-1001)	1500				500.0	350.0		440
VDK-20(E/N)102K	625	825	1000(900-1100)	1650				560.0	400.0		400
VDK-20(E/N)112K	680	895	1100(990-1210)	1815				610.0	430.0		360
VDK-20(E/N)122K	750	990	1200(1080-1320)	1980				650.0	460.0		320

25 (E/N) Series Specification (15A/130°C)

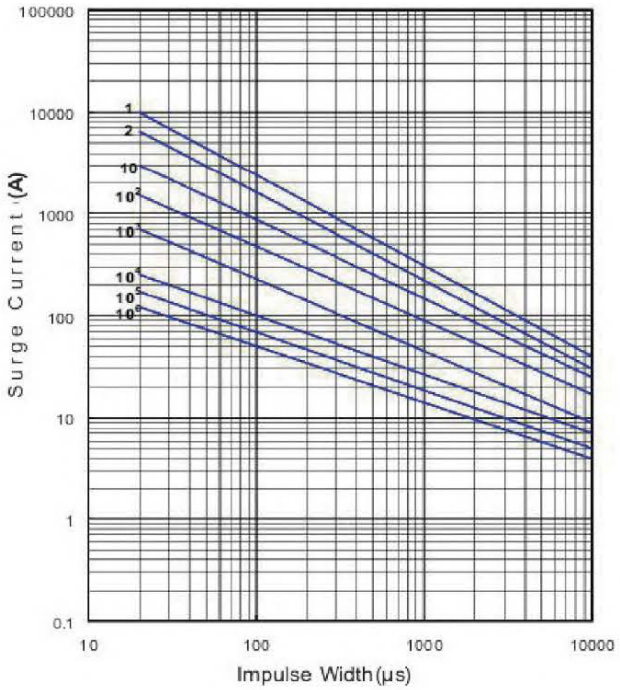
VDK Part Number	Maxlmum Allowable Voltage 最大允许电压		Varistor Voltage 压敏电阻器动作电压	Clamping Voltage (Max.) 抵制电压 @(8/20)us		Peak Current 通流耐量 (8/20)us		Maxlmum Energy 最大吸收能量 (10/1000)us		Rated Power 消耗功率	Typlcal Capacltance (Reference) 参考电容值
Standard	AC.rms	DC	V0.1mA(V)	VC	IP	Imax	In	(10/1000) us	2ms	(W)	@1KHz(pF)
	(V)			(V)	(A)	(KA)					
VDK-25(E/N)151K	95	125	150(135-165)	250				160.0	105.0		4300
VDK-25(E/N)181K	115	150	180(162-198)	300				175.0	120.0		3500
VDK-25(E/N)201K	130	170	200(185-225)	340				210.0	150.0		3200
VDK-25(E/N)221K	140	180	220(198-242)	360				230.0	165.0		2900
VDK-25(E/N)241K	150	200	240(216-264)	395				255.0	180.0		2650
VDK-25(E/N)271K	175	225	270(243-297)	455				285.0	205.0		2400
VDK-25(E/N)301K	190	250	300(270-330)	500				310.0	220.0		2100
VDK-25(E/N)331K	210	275	330(297-363)	550				325.0	231.0		1900
VDK-25(E/N)361K	230	300	360(324-396)	595				340.0	240.0		1750
VDK-25(E/N)391K	250	320	390(351-429)	650				360.0	250.0		1600
VDK-25(E/N)431K	275	350	430(387-473)	710				440.0	310.0		1500
VDK-25(E/N)471K	300	385	470(423-517)	775	150	20	10	490.0	345.0	1.20	1400
VDK-25(E/N)511K	320	415	510(459-561)	845				530.0	370.0		1250
VDK-25(E/N)561K	350	460	560(504-616)	925				560.0	390.0		1150
VDK-25(E/N)621K	385	505	620(558-682)	1025				590.0	410.0		1050
VDK-25(E/N)681K	420	560	680(612-748)	1120				620.0	430.0		950
VDK-25(E/N)751K	460	615	750(675-825)	1240				630.0	440.0		850
VDK-25(E/N)781K	485	640	780(702-858)	1290				675.0	470.0		800
VDK-25(E/N)821K	510	670	820(738-902)	1355				690.0	480.0		750
VDK-25(E/N)911K	550	745	910(819-1001)	1500				715.0	500.0		700
VDK-25(E/N)102K	625	825	1000(900-1100)	1650				750.0	505.0		650
VDK-25(E/N)112K	680	895	1100(990-1210)	1815				780.0	550.0		600
VDK-25(E/N)122K	750	990	1200(1080-1320)	1980				840.0	590.0		550

额定脉冲寿命次数曲线 Impulse Life Time Rating Curves

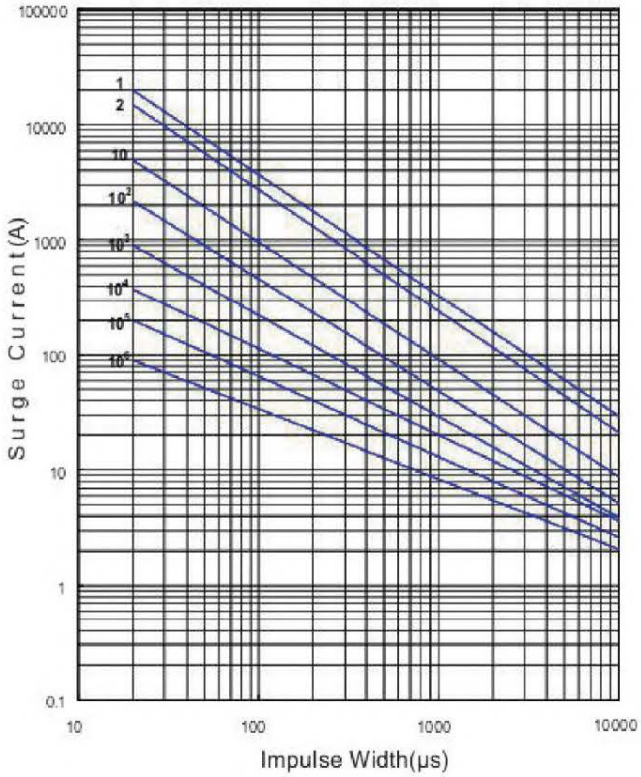
VDK14E/N820K~VDK14E/N122K



VDK20E/N820K~VDK20E/N122K

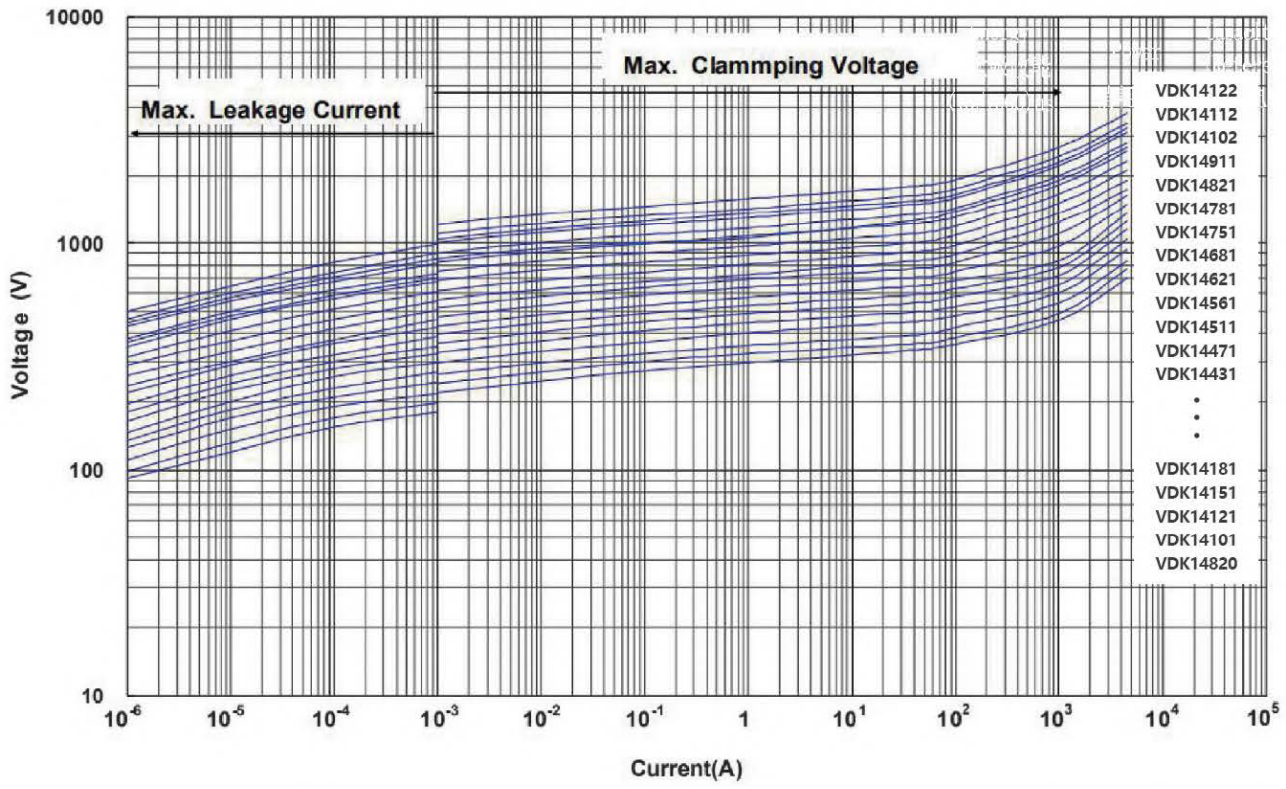


VDK25E/N151K~VDK25E/N122K

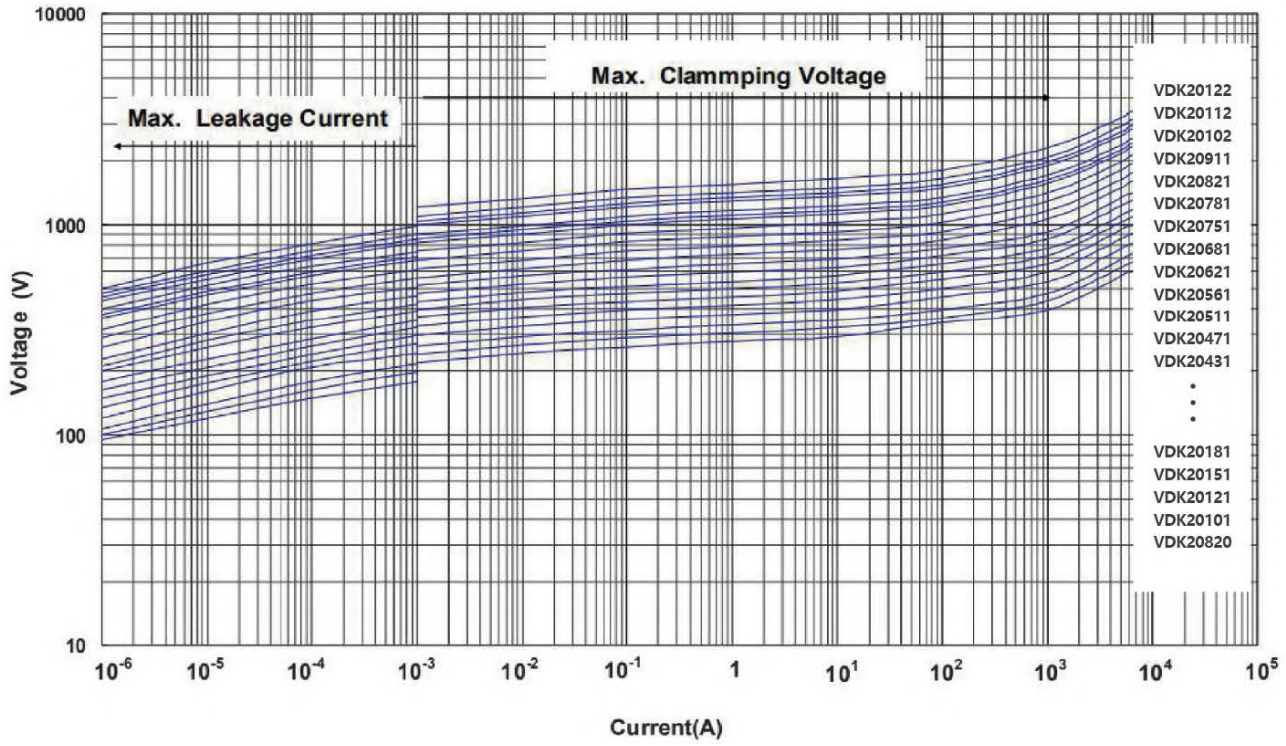


V-I Curve 电压电流特性曲线 V-I Curve

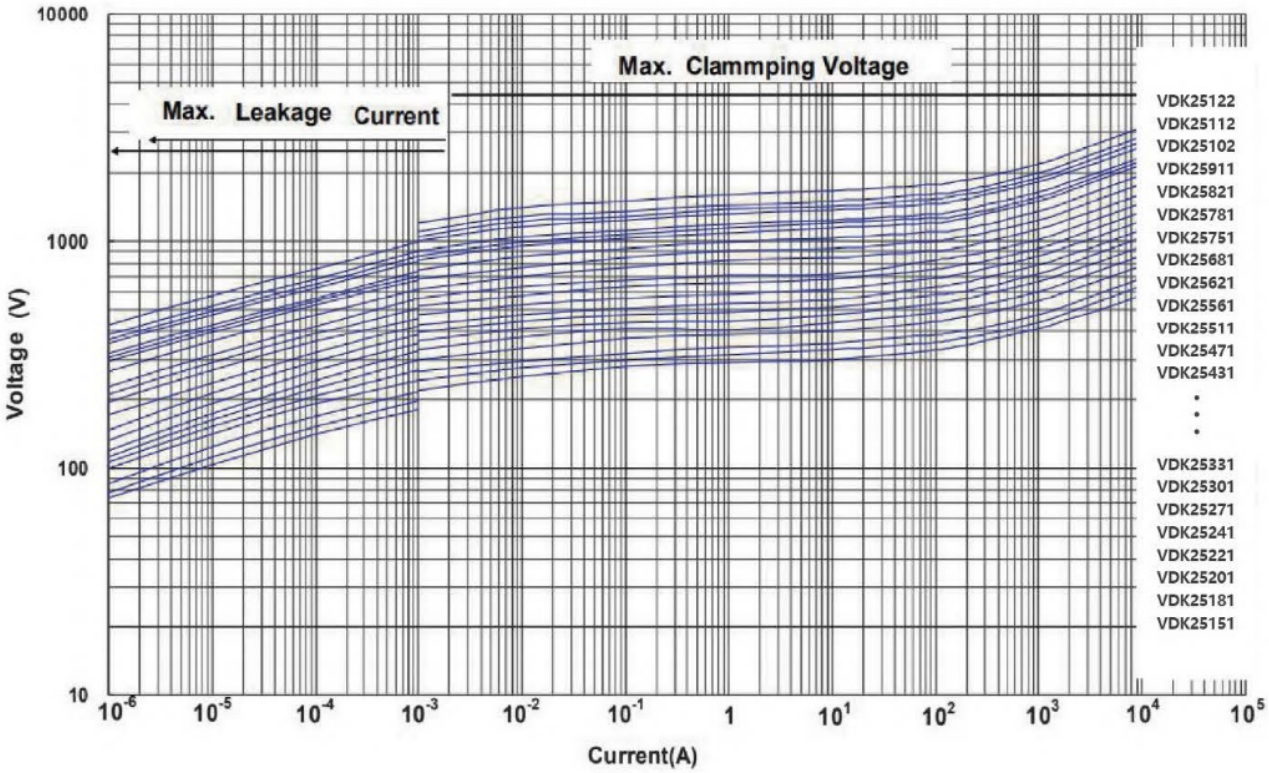
V-I Curve (VDK14E/N820K~VDK14E/N122K)



V-I Curve (VDK20E/N820K~VDK20E/N122K)



V-I Curve (VDK25E/N151K~VDK25E/N122K)



造粒站

压片站

排胶烧结站

涂银烘干站

铜浆生产站

分选站

三合一生产站

涂装站

排印测试站

成品加工站

外观全检站

品质检测站

TTK 压敏 3 参数测试系统

BS 压敏 3 参数测试系统

LCR 数字电桥

绝缘电阻测试仪

示波器

多温度记录仪

8/20μs 电流发生器

1.2/50μs 电流发生器

8/20μs 电流发生器

AC 交流电源

DC 直流电源

X 荧光光谱仪

PTC 加速老化箱

低温恒温恒湿箱

热稳定试验台

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