Disc Varistor 圆盘型压敏电阻

FEATURES 特征

* Wide operating voltages ranging from 5Vrms to 1000Vrms (6Vdc to 1465Vdc).
  工作电压范围宽从 5Vrms 至 1000Vrms（6Vdc 至 1465Vdc）。
* Fast response time of less than 25nS, instantly clamping the transient over voltage.
  响应时间快速，在不到 25 纳秒的时间内可立即钳制瞬态过电压。
* High surge current handling capability.
  高浪涌电流处理能力。
* High energy absorption capability.
  高能量吸收能力。
* Low clamping voltages, providing better surge protection
  低钳位电压，提供更好的电涌保护。
* Low capacitance values, providing digital switching circuitry protection.
  低电容值，提供数字开关电路保护。
* High insulation resistance, preventing electric arching to the adjacent devices or circuits.
  高绝缘电阻，防止电弧向相邻的设备或电路放电。

APPLICATIONS 应用领域

* Transistor, Diode, IC, Thyristor or Triac semiconductor protection.
  提供晶体管，二极管，IC，晶闸管或双向晶闸管等半导体的保护。
* Surge protection in consumer electronics.
  提供消费电子产品的电涌保护。
* Surge protection in industrial electronics.
  提供工业电子的电涌保护。
* Surge protection in electronic home appliances, gas and petroleum appliances.
  电子家用电器，天然气和石油用具中的电涌保护。
* Relay and electromagnetic valve surge absorption.
  继电器和电磁阀浪涌的吸收。

General Characteristics Definition 一般特性定义

*Operating Temperature 工作温度: -40 ℃ ~ +130℃
*Storage Temperature 贮存温度: -40 ℃ ~ +85 ℃
*Working Surface Temperature 工作表面温度: +130℃
*Insulation Resistance 绝缘电阻: > 100MΩ
*Coating (Epoxy Resin)涂层(环氧树脂): Flame-Retardant to 阻燃符合 UL 94 V-0

Material 材料

*Coating 涂层: Epoxy Resin 环氧树脂

*Lead Wire 导线: The Copper Wire or tin-plated copper clad steel wire 铜线或镀锡铜包钢线

*Electrode 电极: Silver Solder 银焊料

*Disk 瓷片: Zinc Oxide 氧化锌

JYH HSU（JEC）料号编码：JEC10D471KS0820

JEC□□D□□□K □ □ □ □

Brand Mark :JYH HSU（JEC）(智旭)
品牌商标

Size(mm) : 05mm to 32mm
尺寸

Type: D: Disk , S: Square
类型 **圆盘型** **方 型**

Varistor Voltage : 180L(18V) to 821K(820V)
压敏电压

Tolerance : K±10%, L±15%, M±20%
公差

Coating 涂层: Sapce is 85℃
"H"is High Surge Code
B:2KV/1KA E:4KV/2KA
S:6KV/3KA Y:10KV/5KA

Short leg 短脚选择: NO : □

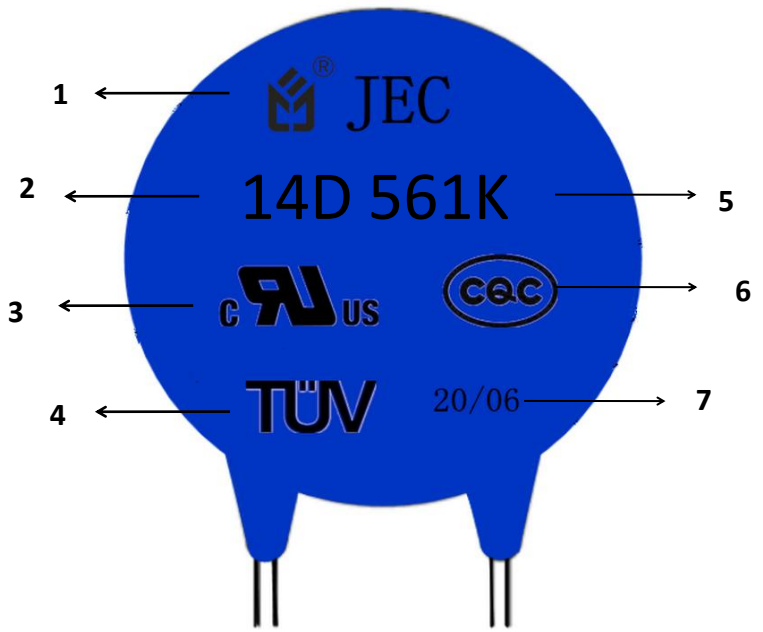
Foot distance 脚距 :05mm to 10mm

Lead Form :**导线脚形状**
S:Straight（直脚）; C:Crimped（外弯）;
I:Inner（ **内弯** ）;Y:Y kink （ **前后弯** ）;
T: Taping （编带）

MARKING 标志

1 JYH HSU (JEC) Logo **智旭商标**
2 Disk Size **瓷片尺寸**
3 CUL Accreditation Logo (CUL 认证标志)
4 TÜV Accreditation Logo (TÜV 认证标志)
5 Varistor Voltage "H" is High Surge Code, not "H" is Standard Surge
压敏电压**有"H"为高浪涌代码, 无"H"为标准浪涌**
6 CQC Accreditation Logo (CQC 认证标志)
7 Production Time Code 生产时间码
8 "B" 2KV-1KA "E" 4KV-2KA "S" 6KV-3KA "Y" 10KV-5KA

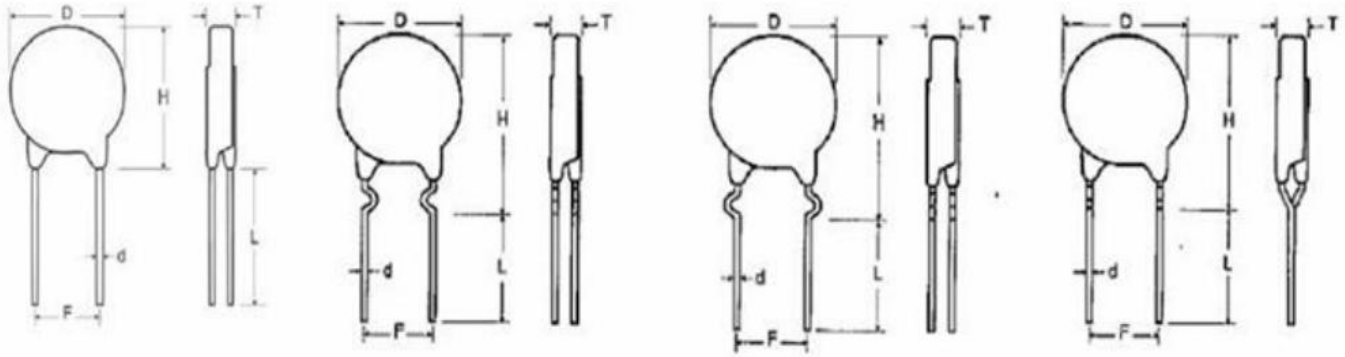
A	B	C	D	E
15-20 次	20-30 次	30-40 次	40-50 次	> 60 次



Prouduct Shape 产品外型

Dimensions 外型尺寸

S Type(Straight Lead) I Type(Inner Crimped Lead) C Type(Out Crimped Lead) Y Lead Type(Y Kink Lead)



Unit: mm

承认规格详细参数 (Approved Spec. Data)

规格型号	压敏电压	最大使用电压	通流(A) 8/20μS	Dmax 直径	Tmax 厚度	F±0.8 脚距	Hmax 高度	L MINmm 脚长	d±0.05 线径	备注
07D220K	19.8-24.2	14VAC-18VDC	250	8.5	4.0	5.0	11.0	25.0	0.6	
07D330K	29.7-36.3	20VAC-26VDC	250	8.5	4.0	5.0	11.0	25.0	0.6	
07D390K	35.1-42.9	28VAC-31VDC	250	8.5	4.0	5.0	11.0	25.0	0.6	
14D561K	504-616	350VAC-460VDC	4500	16.0	6.0	7.5	18.0	25.0	0.8	
14D751K	675-825	460VAC-615VDC	4500	16.0	6.5	7.5	18.0	25.0	0.8	

TYPE

Series 序列	Varistor Voltage 压敏电压	T Max. 厚度	D Max. 直径	H Max. 高度		L min. 脚长	F ±0.8 脚距	d ± 0.05 导线直径
				S	I / C / Y			
05D	180K～680K	4.0	6.5	10.5	13.0	25.0	5.0	0.6
	820K～151K	4.5						
	181K～271K	5.0						
	301K～391K	5.5						
	431K～561K	6.0						
	621K～751K	6.5						
07D	180K～390K	4.0	8.5	11.0	14.0	25.0	5.0	0.6
	470K～820K	4.5						
	101K～271K	5.0						
	331K～391K	5.5						
	431K～561K	6.0						
	621K～821K	6.5						
10D	180K～680K	4.0	12.0	14.0	17.0	25.0	7.5	0.8
	820K～151K	5.0						
	181K～271K	5.5						
	331K～391K	6.0						
	431K～561K	6.5						
	621K～751K	7.0						
	821K～112K	7.5						
14D	180K～680K	4.5	16.0	18.0	21.0	25.0	7.5	0.8
	820K～271K	5.0						
	331K～391K	5.5						
	431K～561K	6.0						
	621K～781K	6.5						
	821K～112K	8.0						
	122K～182K	11.5						
20D	180K～680K	4.5	22.0	25.0	28.0	25.0	10.0	1.0
	820K～151K	5.0						
	181K～271K	5.2						
	331K～391K	5.5						
	431K～561K	6.5						
	621K～781K	7.0						
	821K～112K	8.5						
	122K～182K	12.0						
25D	180K～680K	5.5	28.0	32.0	34.0	25.0	10.0±1.0	1.0
	820K～151K	6.0						
	181K～271K	6.5						
	331K～391K	7.0						
	431K～561K	7.5						
	621K～781K	8.5						
	821K～122K	10.5						
	142K～182K	13.0						

ELECTRICAL PARAMETER 测试参数(例：组合波 471KBC)

电性规格项目 Specifications Item		性能要求 REQ	单位 Unit	说明及测试方法 Description and test method
1	MAX ALLOWABLE VOLTAGE 可容许之最大电压	300	VAC 交流	压敏电阻能够长期承受的最大持续正弦交流电压有效值或最大直流电压。 The maximum continuous sinusoidal AC voltage effective value or maximum DC voltage that the varistor can withstand for a long time.
		385	VDC 直流	
2	VARISTOR VOLTAGE 压敏电压	423-517	(V)	压敏电阻中电流 1mA 直流电流时，压敏电阻两电极间的电压降。 At 1mA DC current in the varistor, the voltage drop between the two electrodes of the varistor.
3	RATED WATTAGE 额定功率及脉冲电流稳定性	0.25	(W) 及 10^4次	在波形为 8/20μs、时间间隔为 6.3sec、次数为 10^4的电流脉冲群作用下，压敏电阻器能承受最大平均功率。“能够承受”指：冲击后的压敏电压 U1mA 与冲击前的相比不大于±10%，且不能发生目视可见的机械损伤。 Under the action of a current pulse group with a waveform of 8/20 μs, a time interval of 6.3sec, and a frequency of 10^4, the varistor can withstand the maximum average power. Can bear is mean that: The varistor voltage (U1mA) after impact and the change before impact are not greater than ±10%, and no visually visible mechanical damage can occur.
4	MAX CLAMPING VOLTAGE 最大抑制电压	775	(V)	波形为 8/20μs、峰值为 10A 的浪涌电流流入压敏电阻器时，两电极间的电压峰值。 When a surge current with a waveform of 8/20μs and a peak value of 10A flows into the varistor, the peak voltage between the two electrodes.
5	WITHSTANDING SURGE CURRENT 突波电流耐量 最大峰值电流	2KV/1KA	40 Times 间隔 60 秒	压敏电阻能够承受的波形为 1.2/50μs +8/20μs 的最大浪涌电流峰值。4 个相位角 0/90/180/270 冲击后的压敏电压 U1mA 与冲击前的相比不大于±10%，且不能发生目视可见的机械损伤。 The varistor can withstand the maximum surge current peak with a waveform of 1.2/50μs + 8/20μs. The varistor voltage (U1mA) after being impacted by 4 phase angles of 0/90/180/270 is not more than ±10% from that before the impact, and no mechanical damage can be seen visually.

	电性规格项目 Specifications Item	性能要求 REQ	单位 Unit	说明及测试方法 Description and test method
6	MAX ENERGY 最大能量	44	JOULE	对压敏电阻施加一次 10/1000μs 方波电流时它能够承受最大浪涌能量。能够承受指：冲击后的压敏电压 U1mA 与冲击前的相比不大于±10%，且不能发生目视可见的机械损伤。 It can withstand the maximum surge energy when applying a square wave current (10/1000μs) to the varistor. Can bear is mean that: The varistor voltage (U1mA) after impact and the change before impact are not greater than ±10%, and no visually visible mechanical damage can occur.
7	TEMPERATURE COEFFICIENT 电压温度系数	0~0.05	%/℃	$\frac{U_{1mA}(25℃)-U_{1mA}(85℃)}{U_{1mA}(25℃)}\times\frac{1}{60}\times 100\%$
8	TYPICAL CAPACITANCE 电容量(参考值) (reference)	105	PF	频率 Frequency：1kHz±10%、 信号电平 Signal level≤1VRMS 、零偏压 Zero bias。
9	LEAKAGE CURRENT 漏电流	≤ 20	μA	两端被施加最大持续直流工作电压时，流过压敏电阻的电流。When the maximum continuous DC working voltage is applied to both ends, the current flows through the varistor.
10	Impulse Response Time 响应时间	< 25	nSec	
11	包封材料 Coating materials	蓝色阻燃型环氧树脂（符合 UL 94 V-0 标准要求） Blue flame retardant epoxy resin (in accordance with UL 94 V-0 standard requirements)		
12	主要材料 Main material	氧化锌 Zinc Oxide		
13	外观 outward appearance	无污迹、无裂纹、标志清晰 No smudges, no cracks, clear signs		
14	标准测试环境条件 Standard test environmental conditions	除非另有规定，所有项目的测试应在以下环境条件下进行 Unless otherwise specified, all items should be tested under the following environmental conditions： 温度 temperature：5~35℃，相对湿度 Relative humidity：45~85%RH		

05D Standard & High Surge 标准品和高能品浪涌

产品型号 Part Number	最大允许回路电压 Maximum Allowable Voltage		压敏电压 Varistor Voltage	最大限制电压 Maximum Clamping Voltage		最大峰值电流 8/20μS Withstanding Surge Current		能量/耐量 Energy 10/1000μS		最大额定功率 Rated Power	电容量（参考值）Typical Capacitance (Reference)
标准系列 Standard	AC (V)	DC (V)	V0.1mA(V)	IP(A)	VC(V)	标准系列 I(A) Standard	高焦耳 I(A) High Surge	标准系列 (J) Standard	高焦耳 (H) High Surge	(W)	1KHz(PF)
JEC-05D180K	11	14	18(15.3~20.7)	1	40	100	250	0.4	0.6	0.01	1400
JEC-05D220K	14	18	22(19.8~24.2)	1	48	100	250	0.5	0.7	0.01	1150
JEC-05D270K	17	22	27(24.3-29.7)	1	60	100	250	0.6	0.9	0.01	930
JEC-05D330K	20	26	33(29.7~36.3)	1	73	100	250	0.8	1.1	0.01	760
JEC-05D390K	25	31	39(35.1~42.9)	1	80	100	250	0.9	1.2	0.01	640
JEC-05D470K	30	38	47(42.3~51.7)	1	104	100	250	1.1	1.5	0.01	530
JEC-05D560K	35	45	56(50.4~61.6)	1	123	100	250	1.3	1.8	0.01	450
JEC-05D680K	40	56	68(61.2~74.8)	1	145	100	250	1.6	2.2	0.01	370
JEC-05D820K	50	65	82(73.8~90.2)	5	150	400	800	2.5	4.0	0.1	300
JEC-05D101K	60	85	100(90~110)	5	177	400	800	3.0	4.1	0.1	250
JEC-05D121K	75	100	120(108~132)	5	210	400	800	4.0	4.9	0.1	210
JEC-05D151K	95	125	150(135~165)	5	260	400	800	4.1	6.5	0.1	165
JEC-05D181K	115	150	180(162~198)	5	320	400	800	4.9	7.5	0.1	140
JEC-05D201K	130	170	200(185~225)	5	355	400	800	6.5	8.5	0.1	125
JEC-05D221K	140	180	220(198~242)	5	380	400	800	7.5	9.0	0.1	110
JEC-05D241K	150	200	240(216~264)	5	415	400	800	8.0	10.5	0.1	100
JEC-05D271K	175	225	270(243~297)	5	475	400	800	8.5	11.0	0.1	95
JEC-05D301K	190	250	300(270~330)	5	520	400	800	9.0	12.0	0.1	85
JEC-05D331K	210	275	330(297~363)	5	570	400	800	9.5	13.0	0.1	75
JEC-05D361K	230	300	360(324~396)	5	620	400	800	10.0	16.0	0.1	70
JEC-05D391K	250	320	390(351~429)	5	675	400	800	12.0	17.0	0.1	65
JEC-05D431K	275	350	430(387~473)	5	745	400	800	13.0	20.0	0.1	60
JEC-05D471K	300	385	470(423~517)	5	810	400	800	15.0	21.0	0.1	55
JEC-05D511K	320	415	510(459~561)	5	845	400	800	16.0	22.5	0.1	50
JEC-05D561K	350	460	560(504~616)	5	920	400	800	16.5	24.0	0.1	45
JEC-05D621K	385	505	620(558~682)	5	1025	400	800	21.0	25.0	0.1	40
JEC-05D681K	420	560	680(612~748)	5	1120	400	800	22.0	29.0	0.1	35
JEC-05D751K	460	615	750(675~825)	5	1240	400	800	22.4	32.0	0.1	30

07D Standard & High Surge 标准和高浪涌

产品型号 Part Number		最大允许回路电压 Maximum Allowable Voltage		压敏电压 Varistor Voltage	最大限制电压 Maximum Clamping Voltage		最大峰值电流 8/20μS Withstanding Surge Current		能量/耐量 Energy 10/1000μS		最大额定功率 Rated Power	电容量（参考值） Typical Capacitance (Reference)
标准系列 Standard	高焦尔 High Surge	AC (V)	DC (V)	V1mA(V)	IP(A)	VC(V)	标准系列 I(A) Standard	高焦耳 I(A) High Surge	标准系列 (J) Standard	高焦耳 (H) High Surge	(W)	1KHz(PF)
JEC-07D180K	JEC-07D180KH	11	14	18(15.3~20.7)	2.5	36	250	500	0.9	2.0	0.02	2800
JEC-07D220K	JEC-07D220KH	14	18	22(19.8~24.2)	2.5	43	250	500	1.1	2.4	0.02	2300
JEC-07D270K	JEC-07D270KH	17	22	27(24.3-29.7)	2.5	53	250	500	1.4	3.0	0.02	1800
JEC-07D330K	JEC-07D330KH	20	26	33(29.7~36.3)	2.5	65	250	500	1.7	3.5	0.02	1500
JEC-07D390K	JEC-07D390KH	25	31	39(35.1~42.9)	2.5	77	250	500	2.1	4.0	0.02	1300
JEC-07D470K	JEC-07D470KH	30	38	47(42.3~51.7)	2.5	93	250	500	2.5	5.0	0.02	1100
JEC-07D560K	JEC-07D560KH	35	45	56(50.4~61.6)	2.5	110	250	500	3.1	6.0	0.02	890
JEC-07D680K	JEC-07D680KH	40	56	68(61.2~74.8)	2.5	135	250	500	3.6	7.0	0.02	740
JEC-07D820K	JEC-07D820KH	50	65	82(73.8~90.2)	10	135	1200	1750	5.5	10	0.25	600
JEC-07D101K	JEC-07D101KH	60	85	100(90~110)	10	165	1200	1750	6.5	12	0.25	500
JEC-07D121K	JEC-07D121KH	75	100	120(108~132)	10	200	1200	1750	7.8	12	0.25	420
JEC-07D151K	JEC-07D151KH	95	125	150(135~165)	10	250	1200	1750	9.7	13	0.25	330
JEC-07D181K	JEC-07D181KH	115	150	180(162~198)	10	300	1200	1750	11.7	16	0.25	280
JEC-07D201K	JEC-07D201KH	130	170	200(185~225)	10	330	1200	1750	13	17	0.25	250
JEC-07D221K	JEC-07D221KH	140	180	220(198~242)	10	360	1200	1750	14	19	0.25	230
JEC-07D241K	JEC-07D241KH	150	200	240(216~264)	10	395	1200	1750	15	21	0.25	210
JEC-07D271K	JEC-07D271KH	175	225	270(243~297)	10	455	1200	1750	18	24	0.25	185
JEC-07D301K	JEC-07D301KH	190	250	300(270~330)	10	505	1200	1750	20	26	0.25	165
JEC-07D331K	JEC-07D331KH	210	275	330(297~363)	10	550	1200	1750	23	28	0.25	150
JEC-07D361K	JEC-07D361KH	230	300	360(324~396)	10	595	1200	1750	25	32	0.25	140
JEC-07D391K	JEC-07D391KH	250	320	390(351~429)	10	650	1200	1750	25	35	0.25	130
JEC-07D431K	JEC-07D431KH	275	350	430(387~473)	10	710	1200	1750	28	40	0.25	115
JEC-07D471K	JEC-07D471KH	300	385	470(423~517)	10	775	1200	1750	30	42	0.25	105
JEC-07D511K	JEC-07D511KH	320	415	510(459~561)	10	845	1200	1750	30	45	0.25	100
JEC-07D561K	JEC-07D561KH	350	460	560(504~616)	10	920	1200	1750	30	49	0.25	90
JEC-07D621K	JEC-07D621KH	385	505	620(558~682)	10	1025	1200	1750	33	55	0.25	80
JEC-07D681K	JEC-07D681KH	420	560	680(612~748)	10	1120	1200	1750	33	60	0.25	75
JEC-07D751K	JEC-07D751KH	460	615	750(675~825)	10	1240	1200	1750	65	67	0.25	70
JEC-07D781K	JEC-07D781KH	485	640	780(702~858)	10	1290	1200	1750	65	67	0.25	70
JEC-07D821K	JEC-07D821KH	510	670	820(738~902)	10	1355	1200	1750	65	70	0.25	60

10D Standard & High Surge 标准和高浪涌

产品型号 Part Number		最大允许回路电压 Maximum Allowable Voltage		压敏电压 Varistor Voltage	最大限制电压 Maximum Clamping Voltage		最大峰值电流 8/20μS Withstanding Surge Current		能量/耐量 Energy 10/1000μS		最大额定功率 Rated Power	电容量（参考值） Typical Capacitance (Reference)
标准系列 Standard	高焦尔 High Surge	AC (V)	DC (V)	V1mA(V)	IP(A)	VC(V)	标准系列 I(A) Standard	高焦耳 I(A) High Surge	标准系列 (J) Standard	高焦耳 (H) High Surge	(W)	1KHz(PF)
JEC-10D180K	JEC-10D180KH	11	14	18(15.3~20.7)	5	36	500	1000	2.1	3	0.05	5600
JEC-10D220K	JEC-10D220KH	14	18	22(19.8~24.2)	5	43	500	1000	2.5	5	0.05	4500
JEC-10D270K	JEC-10D270KH	17	22	27(24.3~29.7)	5	53	500	1000	3.0	6	0.05	3700
JEC-10D330K	JEC-10D330KH	20	26	33(29.7~36.3)	5	65	500	1000	4.0	7	0.05	3000
JEC-10D390K	JEC-10D390KH	25	31	39(35.1~42.9)	5	77	500	1000	4.6	9	0.05	2400
JEC-10D470K	JEC-10D470KH	30	38	47(42.3~51.7)	5	93	500	1000	5.5	11	0.05	2100
JEC-10D560K	JEC-10D560KH	35	45	56(50.4~61.6)	5	110	500	1000	7.0	13	0.05	1800
JEC-10D680K	JEC-10D680KH	40	56	68(61.2~74.8)	5	135	500	1000	8.2	15	0.05	1500
JEC-10D820K	JEC-10D820KH	50	65	82(73.8~90.2)	25	135	2500	3500	12	17	0.4	1200
JEC-10D101K	JEC-10D101KH	60	85	100(90~110)	25	165	2500	3500	15	18	0.4	1000
JEC-10D121K	JEC-10D121KH	75	100	120(108~132)	25	200	2500	3500	18	21	0.4	830
JEC-10D151K	JEC-10D151KH	95	125	150(135~165)	25	250	2500	3500	22	25	0.4	670
JEC-10D181K	JEC-10D181KH	115	150	180(162~198)	25	300	2500	3500	27	30	0.4	560
JEC-10D201K	JEC-10D201KH	130	170	200(185~225)	25	330	2500	3500	30	35	0.4	500
JEC-10D221K	JEC-10D221KH	140	180	220(198~242)	25	360	2500	3500	32	39	0.4	450
JEC-10D241K	JEC-10D241KH	150	200	240(216~264)	25	395	2500	3500	35	42	0.4	420
JEC-10D271K	JEC-10D271KH	175	225	270(243~297)	25	455	2500	3500	37	49	0.4	370
JEC-10D301K	JEC-10D301KH	190	250	300(270~330)	25	505	2500	3500	40	54	0.4	330
JEC-10D331K	JEC-10D331KH	210	275	330(297~363)	25	550	2500	3500	43	58	0.4	300
JEC-10D361K	JEC-10D361KH	230	300	360(324~396)	25	595	2500	3500	47	65	0.4	280
JEC-10D391K	JEC-10D391KH	250	320	390(351~429)	25	650	2500	3500	60	70	0.4	260
JEC-10D431K	JEC-10D431KH	275	350	430(387~473)	25	710	2500	3500	65	80	0.4	230
JEC-10D471K	JEC-10D471KH	300	385	470(423~517)	25	775	2500	3500	67	85	0.4	210
JEC-10D511K	JEC-10D511KH	320	415	510(459~561)	25	845	2500	3500	69	90	0.4	200
JEC-10D561K	JEC-10D561KH	350	460	560(504~616)	25	920	2500	3500	70	92	0.4	180
JEC-10D621K	JEC-10D621KH	385	505	620(558~682)	25	1025	2500	3500	72	95	0.4	160
JEC-10D681K	JEC-10D681KH	420	560	680(612~748)	25	1120	2500	3500	75	98	0.4	150
JEC-10D751K	JEC-10D751KH	460	615	750(675~825)	25	1240	2500	3500	77	100	0.4	140
JEC-10D781K	JEC-10D781KH	485	640	780(702~858)	25	1290	2500	3500	80	105	0.4	130
JEC-10D821K	JEC-10D821KH	510	670	820(738~902)	25	1355	2500	3500	85	110	0.4	120
JEC-10D911K	JEC-10D911KH	550	745	910(819~1001)	25	1500	2500	3500	93	130	0.4	110
JEC-10D102K	JEC-10D102KH	625	825	1000(900~1100)	25	1650	2500	3500	102	140	0.4	100
JEC-10D112K	JEC-10D112KH	680	895	1100(990~1210)	25	1815	2500	3500	115	150	0.4	90

14D Standard & High Surge 标准和高浪涌

产品型号 Part Number		最大允许回路电压 Maximum Allowable Voltage		压敏电压 Varistor Voltage	最大限制电压 Maximum Clamping Voltage		最大峰值电流 8/20μS Withstanding Surge Current		能量/耐量 Energy 10/1000μS		最大额定功率 Rated Power	电容量（参考值） Typical Capacitance (Reference)
标准系列 Standard	高焦尔 High Surge	AC (V)	DC (V)	V1mA(V)	IP(A)	VC(V)	标准系列 I(A) Standard	高焦耳 I(A) High Surge	标准系列 (J) Standar	高焦耳 (H) High Surge	(W)	1KHz(PF)
JEC-14D180K	JEC-14D180KH	11	14	18(15.3~20.7)	10	36	1000	2000	4	7	0.1	11000
JEC-14D220K	JEC-14D220KH	14	18	22(19.8~24.2)	10	43	1000	2000	5	8	0.1	9100
JEC-14D270K	JEC-14D270KH	17	22	27(24.3~29.7)	10	53	1000	2000	6	10	0.1	7400
JEC-14D330K	JEC-14D330KH	20	26	33(29.7~36.3)	10	65	1000	2000	8	12	0.1	6100
JEC-14D390K	JEC-14D390KH	25	31	39(35.1~42.9)	10	77	1000	2000	9	13	0.1	5100
JEC-14D470K	JEC-14D470KH	30	38	47(42.3~51.7)	10	93	1000	2000	10	17	0.1	4300
JEC-14D560K	JEC-14D560KH	35	45	56(50.4~61.6)	10	110	1000	2000	11	20	0.1	3600
JEC-14D680K	JEC-14D680KH	40	56	68(61.2~74.8)	10	135	1000	2000	14	24	0.1	2900
JEC-14D820K	JEC-14D820KH	50	65	82(73.8~90.2)	50	135	4500	6000	22	27	0.6	2400
JEC-14D101K	JEC-14D101KH	60	85	100(90~110)	50	165	4500	6000	28	33	0.6	2000
JEC-14D121K	JEC-14D121KH	75	100	120(108~132)	50	200	4500	6000	32	40	0.6	1700
JEC-14D151K	JEC-14D151KH	95	125	150(135~165)	50	250	4500	6000	40	53	0.6	1300
JEC-14D181K	JEC-14D181KH	115	150	180(162~198)	50	300	4500	6000	50	60	0.6	1100
JEC-14D201K	JEC-14D201KH	130	170	200(185~225)	50	330	4500	6000	57	70	0.6	1000
JEC-14D221K	JEC-14D221KH	140	180	220(198~242)	50	360	4500	6000	60	78	0.6	830
JEC-14D241K	JEC-14D241KH	150	200	240(216~264)	50	395	4500	6000	63	84	0.6	740
JEC-14D271K	JEC-14D271KH	175	225	270(243~297)	50	455	4500	6000	70	99	0.6	670
JEC-14D301K	JEC-14D301KH	190	250	300(270~330)	50	505	4500	6000	77	108	0.6	610
JEC-14D331K	JEC-14D331KH	210	275	330(297~363)	50	550	4500	6000	85	115	0.6	560
JEC-14D361K	JEC-14D361KH	230	300	360(324~396)	50	595	4500	6000	93	130	0.6	510
JEC-14D391K	JEC-14D391KH	250	320	390(351~429)	50	650	4500	6000	100	140	0.6	460
JEC-14D431K	JEC-14D431KH	275	350	430(387~473)	50	710	4500	6000	115	155	0.6	230
JEC-14D471K	JEC-14D471KH	300	385	470(423~517)	50	775	4500	6000	125	175	0.6	430
JEC-14D511K	JEC-14D511KH	320	415	510(459~561)	50	845	4500	6000	126	180	0.6	390
JEC-14D561K	JEC-14D561KH	350	460	560(504~616)	50	920	4500	6000	127	185	0.6	360
JEC-14D621K	JEC-14D621KH	385	505	620(558~682)	50	1025	4500	6000	128	190	0.6	320
JEC-14D681K	JEC-14D681KH	420	560	680(612~748)	50	1120	4500	6000	130	200	0.6	290
JEC-14D751K	JEC-14D751KH	460	615	750(675~825)	50	1240	4500	6000	143	210	0.6	270
JEC-14D781K	JEC-14D781KH	485	640	780(702~858)	50	1290	4500	6000	148	220	0.6	260
JEC-14D821K	JEC-14D821KH	510	670	820(738~902)	50	1355	4500	6000	157	235	0.6	240
JEC-14D911K	JEC-14D911KH	550	745	910(819~1001)	50	1500	4500	6000	175	255	0.6	220
JEC-14D102K	JEC-14D102KH	625	825	1000(900~1100)	50	1650	4500	6000	190	280	0.6	200
JEC-14D112K	JEC-14D112KH	680	895	1100(990~1210)	50	1815	4500	6000	213	310	0.6	180
JEC-14D122K	JEC-14D122KH	750	990	1200(1080~1320)	50	1980	4500	6000	232	324	0.6	160
JEC-14D142K	JEC-14D142KH	880	1140	1400(1260~1540)	50	2310	4500	6000	238	327	0.6	150
JEC-14D152K	JEC-14D152KH	900	1200	1500(1350~1650)	50	2475	4500	6000	240	329	0.6	140
JEC-14D162K	JEC-14D162KH	1000	1280	1600(1400~1760)	50	2640	4500	6000	243	331	0.6	140
JEC-14D182K	JEC-14D182KH	1100	1465	1800(1620~1980)	50	2970	4500	6000	250	335	0.6	130

20D Standard & High Surge 标准和高浪涌

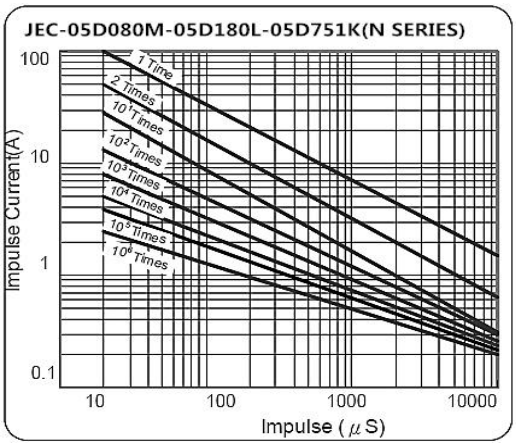
产品型号 Part Number		最大允许回路电压 Maximum Allowable Voltage		压敏电压 Varistor Voltage	最大限制电压 Maximum Clamping Voltage		最大峰值电流 8/20μS Withstanding Surge Current		能量/耐量 Energy 10/1000μS		最大额定功率 Rated Power	电容量（参考值） Typical Capacitance (Reference)
标准系列 Standard	高焦尔 High Surge	AC (V)	DC (V)	V1mA(V)	IP(A)	VC(V)	标准系列 I(A) Standard	高焦耳 I(A) High Surge	标准系列 (J) Standard	高焦耳 (H) High Surge	(W)	1KHz(PF)
JEC-20D180K	JEC-20D180KH	11	14	18(15.3~20.7)	20	36	2000	3000	11	13	0.2	28500
JEC-20D220K	JEC-20D220KH	14	18	22(19.8~24.2)	20	43	2000	3000	14	16	0.2	18500
JEC-20D270K	JEC-20D270KH	17	22	27(24.3-29.7)	20	53	2000	3000	16	19	0.2	13000
JEC-20D330K	JEC-20D330KH	20	26	33(29.7~36.3)	20	65	2000	3000	23	24	0.2	11500
JEC-20D390K	JEC-20D390KH	25	31	39(35.1~42.9)	20	77	2000	3000	26	28	0.2	8500
JEC-20D470K	JEC-20D470KH	30	38	47(42.3~51.7)	20	93	2000	3000	30	34	0.2	7400
JEC-20D560K	JEC-20D560KH	35	45	56(50.4~61.6)	20	110	2000	3000	41	46	0.2	6500
JEC-20D680K	JEC-20D680KH	40	56	68(61.2~74.8)	20	135	2000	3000	46	49	0.2	5800
JEC-20D820K	JEC-20D820KH	50	65	82(73.8~90.2)	100	135	6500	10000	38	56	1.0	4900
JEC-20D101K	JEC-20D101KH	60	85	100(90~110)	100	165	6500	10000	45	70	1.0	4000
JEC-20D121K	JEC-20D121KH	75	100	120(108~132)	100	200	6500	10000	55	85	1.0	3300
JEC-20D151K	JEC-20D151KH	95	125	150(135~165)	100	250	6500	10000	70	106	1.0	2700
JEC-20D181K	JEC-20D181KH	115	150	180(162~198)	100	300	6500	10000	85	130	1.0	2200
JEC-20D201K	JEC-20D201KH	130	170	200(185~225)	100	330	6500	10000	95	140	1.0	2000
JEC-20D221K	JEC-20D221KH	140	180	220(198~242)	100	360	6500	10000	100	155	1.0	1800
JEC-20D241K	JEC-20D241KH	150	200	240(216~264)	100	395	6500	10000	108	168	1.0	1650
JEC-20D271K	JEC-20D271KH	175	225	270(243~297)	100	455	6500	10000	127	190	1.0	1500
JEC-20D301K	JEC-20D301KH	190	250	300(270~330)	100	505	6500	10000	136	210	1.0	1300
JEC-20D331K	JEC-20D331KH	210	275	330(297~363)	100	550	6500	10000	150	228	1.0	1200
JEC-20D361K	JEC-20D361KH	230	300	360(324~396)	100	595	6500	10000	163	255	1.0	1100
JEC-20D391K	JEC-20D391KH	250	320	390(351~429)	100	650	6500	10000	180	275	1.0	1000
JEC-20D431K	JEC-20D431KH	275	350	430(387~473)	100	710	6500	10000	190	305	1.0	930
JEC-20D471K	JEC-20D471KH	300	385	470(423~517)	100	775	6500	10000	220	350	1.0	850
JEC-20D511K	JEC-20D511KH	320	415	510(459~561)	100	845	6500	10000	225	360	1.0	780
JEC-20D561K	JEC-20D561KH	350	460	560(504~616)	100	920	6500	10000	230	380	1.0	710
JEC-20D621K	JEC-20D621KH	385	505	620(558~682)	100	1025	6500	10000	235	390	1.0	650
JEC-20D681K	JEC-20D681KH	420	560	680(612~748)	100	1120	6500	10000	240	400	1.0	600
JEC-20D751K	JEC-20D751KH	460	615	750(675~825)	100	1240	6500	10000	255	420	1.0	530
JEC-20D781K	JEC-20D781KH	485	640	780(702~858)	100	1290	6500	10000	265	440	1.0	510
JEC-20D821K	JEC-20D821KH	510	670	820(738~902)	100	1355	6500	10000	282	460	1.0	500
JEC-20D911K	JEC-20D911KH	550	745	910(819~1001)	100	1500	6500	10000	310	510	1.0	440
JEC-20D102K	JEC-20D102KH	625	825	1000(900~1100)	100	1650	6500	10000	342	565	1.0	400
JEC-20D112K	JEC-20D112KH	680	895	1100(990~1210)	100	1815	6500	10000	383	620	1.0	360
JEC-20D122K	JEC-20D122KH	750	990	1200(1080~1320)	100	1980	6500	10000	408	660	1.0	350
JEC-20D142K	JEC-20D142KH	880	1140	1400(1260~1540)	100	2310	6500	10000	532	784	1.0	340
JEC-20D152K	JEC-20D152KH	900	1200	1500(1350~1650)	100	2474	6500	10000	572	854	1.0	330
JEC-20D162K	JEC-20D162KH	1000	1280	1600(1400~1760)	100	2640	6500	10000	606	896	1.0	330
JEC-20D182K	JEC-20D182KH	1100	1465	1800(1620~1980)	100	2970	6500	10000	625	990	1.0	320

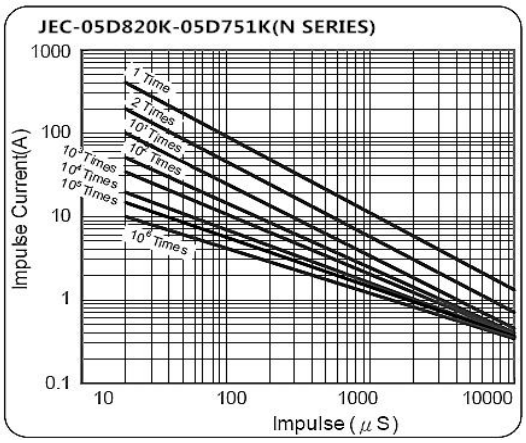
25D Standard & High Surge 标准和高浪涌

产品型号 Part Number		最大允许回路电压 Maximum Allowable Voltage		压敏电压 Varistor Voltage	最大限制电压 Maximum Clamping Voltage		最大峰值电流 8/20μS Withstanding Surge Current		能量/耐量 Energy 10/1000μS		最大额定功率 Rated Power	电容量（参考值） Typical Capacitance (Reference)
标准系列 Standard	高焦尔 High Surge	AC (V)	DC (V)	V1mA(V)	IP(A)	VC(V)	标准系列 I(A) Standard	高焦耳 I(A) High Surge	标准系列 (J) Standard	高焦耳 (H) High Surge	(W)	1KHz(PF)
JEC-25D180K	JEC-25D180KH	11	14	18(15.3~20.7)	30	36	4500	8000	20	24	0.25	45000
JEC-25D220K	JEC-25D220KH	14	18	22(19.8~24.2)	30	43	4500	8000	25	30	0.25	29000
JEC-25D270K	JEC-25D270KH	17	22	27(24.3-29.7)	30	53	4500	8000	30	36	0.25	26500
JEC-25D330K	JEC-25D330KH	20	26	33(29.7~36.3)	30	65	4500	8000	35	42	0.25	18000
JEC-25D390K	JEC-25D390KH	25	31	39(35.1~42.9)	30	77	4500	8000	40	48	0.25	13500
JEC-25D470K	JEC-25D470KH	30	38	47(42.3~51.7)	30	93	4500	8000	50	60	0.25	11500
JEC-25D560K	JEC-25D560KH	35	45	56(50.4~61.6)	30	110	4500	8000	60	72	0.25	10500
JEC-25D680K	JEC-25D680KH	40	56	68(61.2~74.8)	30	135	4500	8000	70	84	0.25	9050
JEC-25D820K	JEC-25D820KH	50	65	82(73.8~90.2)	150	135	15000	20000	80	96	1.2	7700
JEC-25D101K	JEC-25D101KH	60	85	100(90~110)	150	165	15000	20000	100	120	1.2	6300
JEC-25D121K	JEC-25D121KH	75	100	120(108~132)	150	200	15000	20000	120	144	1.2	5200
JEC-25D151K	JEC-25D151KH	95	125	150(135~165)	150	250	15000	20000	160	192	1.2	4300
JEC-25D181K	JEC-25D181KH	115	150	180(162~198)	150	300	15000	20000	175	210	1.2	3500
JEC-25D201K	JEC-25D201KH	130	170	200(185~225)	150	330	15000	20000	190	228	1.2	3200
JEC-25D221K	JEC-25D221KH	140	180	220(198~242)	150	360	15000	20000	200	240	1.2	2900
JEC-25D241K	JEC-25D241KH	150	200	240(216~264)	150	395	15000	20000	220	264	1.2	2650
JEC-25D271K	JEC-25D271KH	175	225	270(243~297)	150	455	15000	20000	255	306	1.2	2400
JEC-25D301K	JEC-25D301KH	190	250	300(270~330)	150	505	15000	20000	275	330	1.2	2100
JEC-25D331K	JEC-25D331KH	210	275	330(297~363)	150	550	15000	20000	300	360	1.2	1900
JEC-25D361K	JEC-25D361KH	230	300	360(324~396)	150	595	15000	20000	330	396	1.2	1750
JEC-25D391K	JEC-25D391KH	250	320	390(351~429)	150	650	15000	20000	360	432	1.2	1600
JEC-25D431K	JEC-25D431KH	275	350	430(387~473)	150	710	15000	20000	380	456	1.2	1500
JEC-25D471K	JEC-25D471KH	300	385	470(423~517)	150	775	15000	20000	400	480	1.2	1400
JEC-25D511K	JEC-25D511KH	320	415	510(459~561)	150	845	15000	20000	420	504	1.2	1250
JEC-25D561K	JEC-25D561KH	350	460	560(504~616)	150	920	15000	20000	440	528	1.2	1150
JEC-25D621K	JEC-25D621KH	385	505	620(558~682)	150	1025	15000	20000	450	540	1.2	1050
JEC-25D681K	JEC-25D681KH	420	560	680(612~748)	150	1120	15000	20000	460	552	1.2	950
JEC-25D751K	JEC-25D751KH	460	615	750(675~825)	150	1240	15000	20000	510	612	1.2	850
JEC-25D781K	JEC-25D781KH	485	640	780(702~858)	150	1290	15000	20000	530	636	1.2	850
JEC-25D821K	JEC-25D821KH	510	670	820(738~902)	150	1355	15000	20000	570	684	1.2	500
JEC-25D911K	JEC-25D911KH	550	745	910(819~1001)	150	1500	15000	20000	620	744	1.2	700
JEC-25D102K	JEC-25D102KH	625	825	1000(900~1100)	150	1650	15000	20000	685	822	1.2	650
JEC-25D112K	JEC-25D112KH	680	895	1100(990~1210)	150	1815	15000	20000	720	864	1.2	600
JEC-25D122K	JEC-25D122KH	750	990	1200(1080~1320)	150	1980	15000	20000	795	954	1.2	550
JEC-25D142K	JEC-25D142KH	880	1140	1400(1260~1540)	150	2310	15000	20000	850	1020	1.2	500
JEC-25D162K	JEC-25D162KH	1000	1280	1600(1400~1760)	150	2640	15000	20000	970	1164	1.2	450
JEC-25D182K	JEC-25D182KH	1100	1465	1800(1620~1980)	150	2970	15000	20000	1092	1310	1.2	400

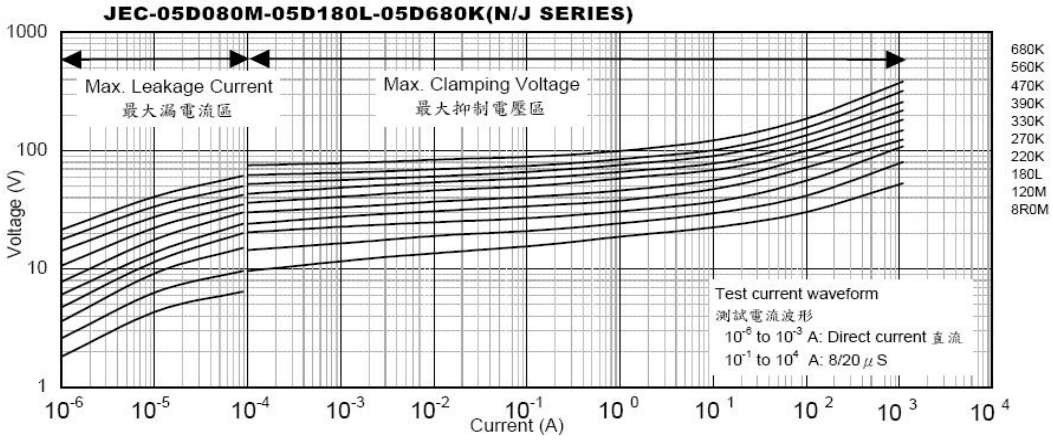
05D Surge Life Time Ratings N (Standard) / K (Low Capacitance) Series

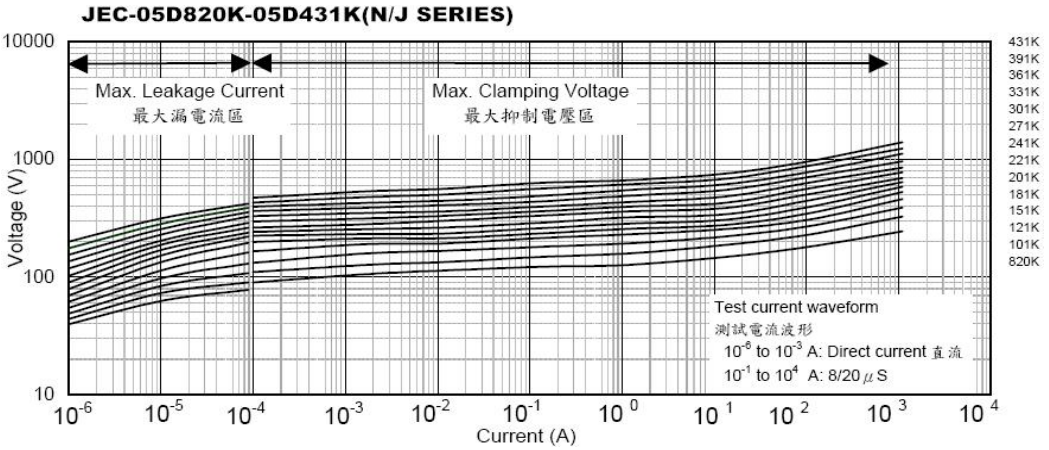
05D 浪涌寿命等级 N (标准) / K(低电容)系列

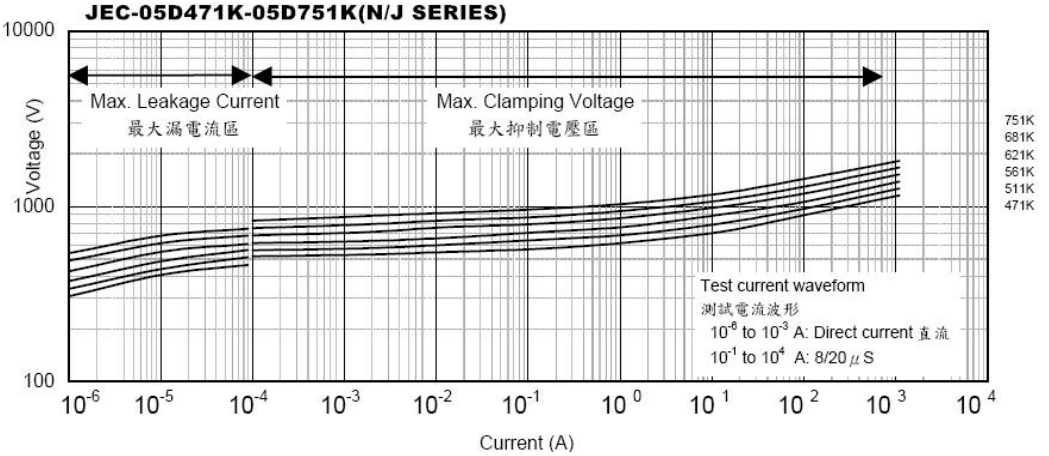




05D V-I CURVE 电压-电流曲线

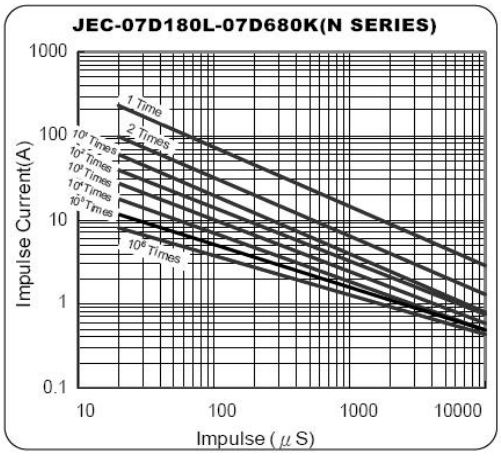


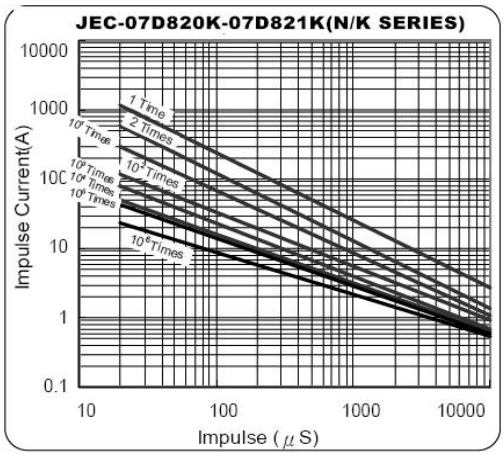




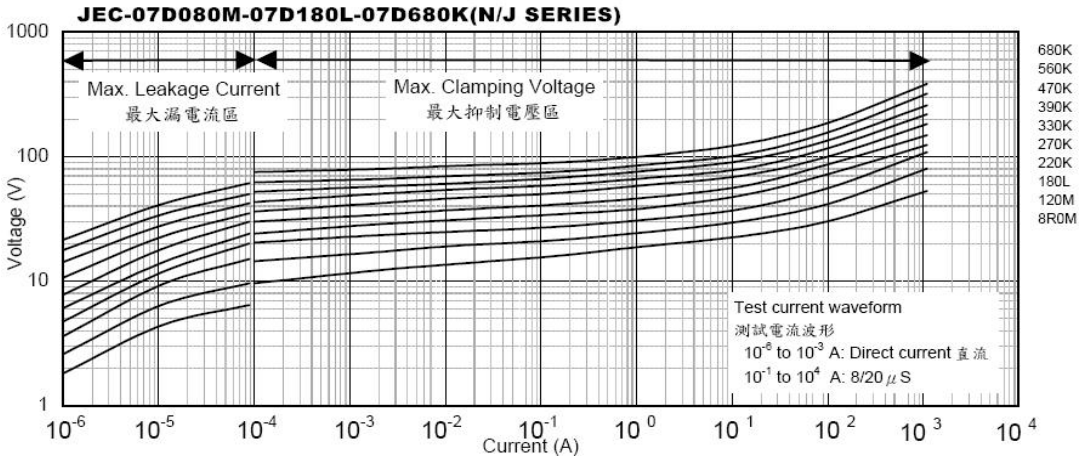
07D Surge Life Time Ratings N (Standard) / K (Low Capacitance) Series

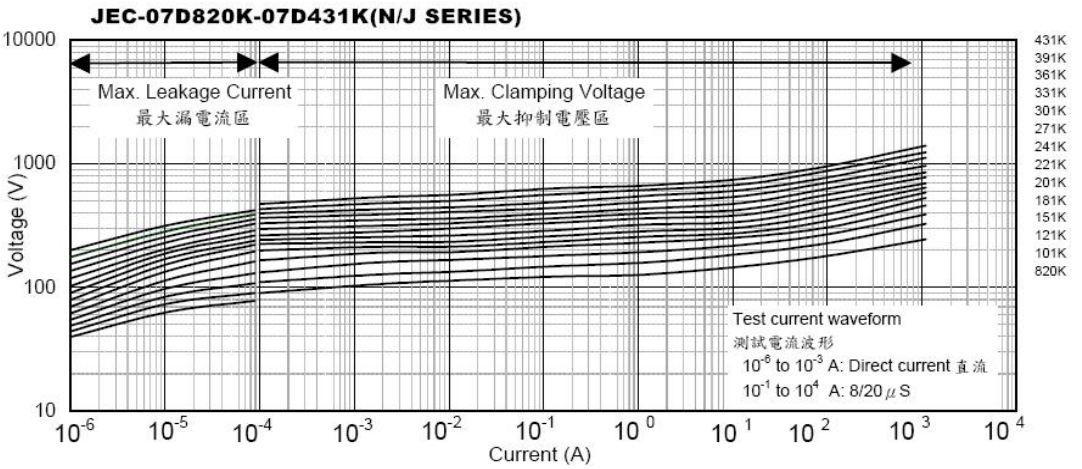
07D 浪涌寿命等级 N (标准) / K(低电容)系列

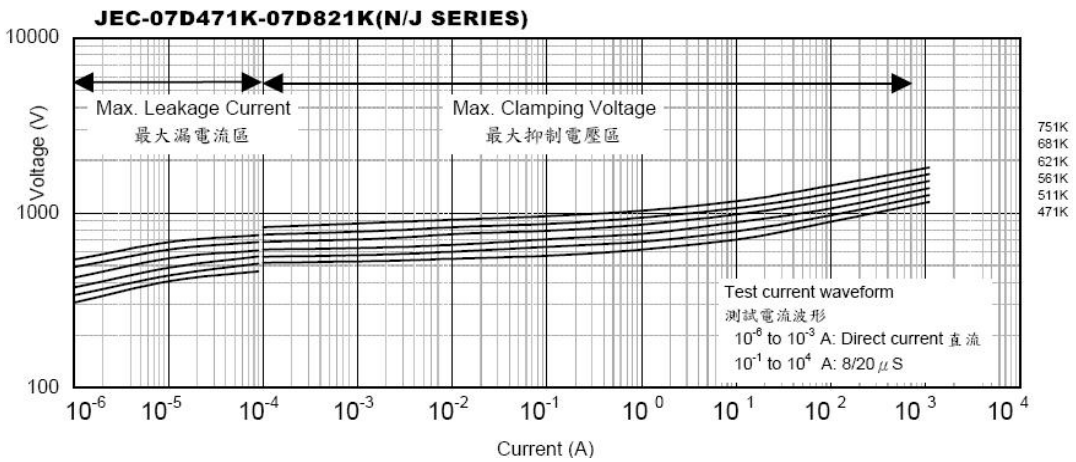




07D V-I CURVE 电压-电流曲线

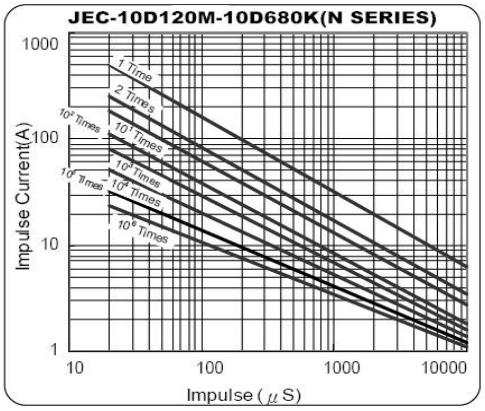


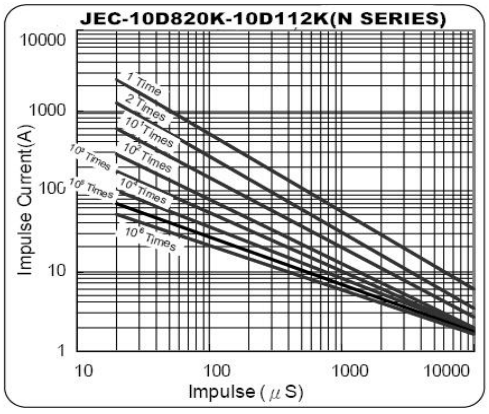




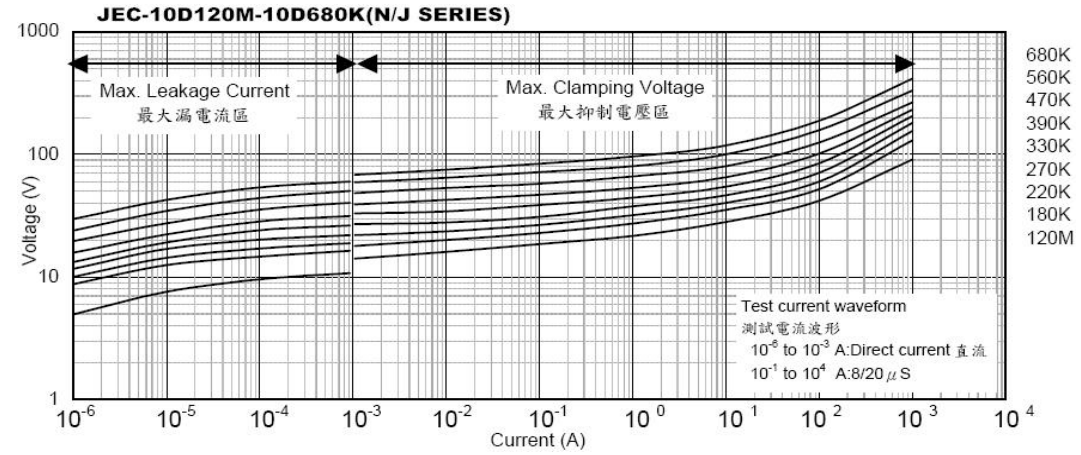
10D Surge Life Time Ratings N (Standard) / K (Low Capacitance) Series

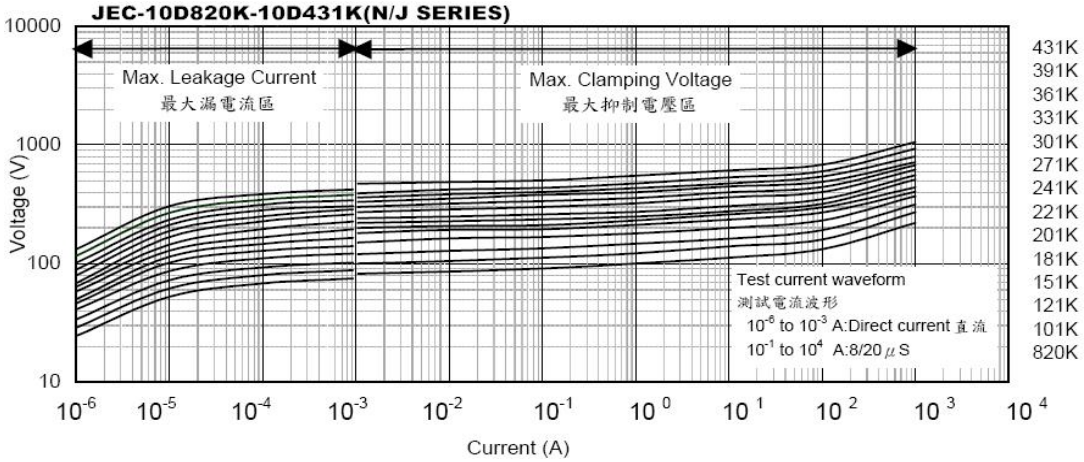
10D 浪涌寿命等级 N (标准) / K(低电容)系列

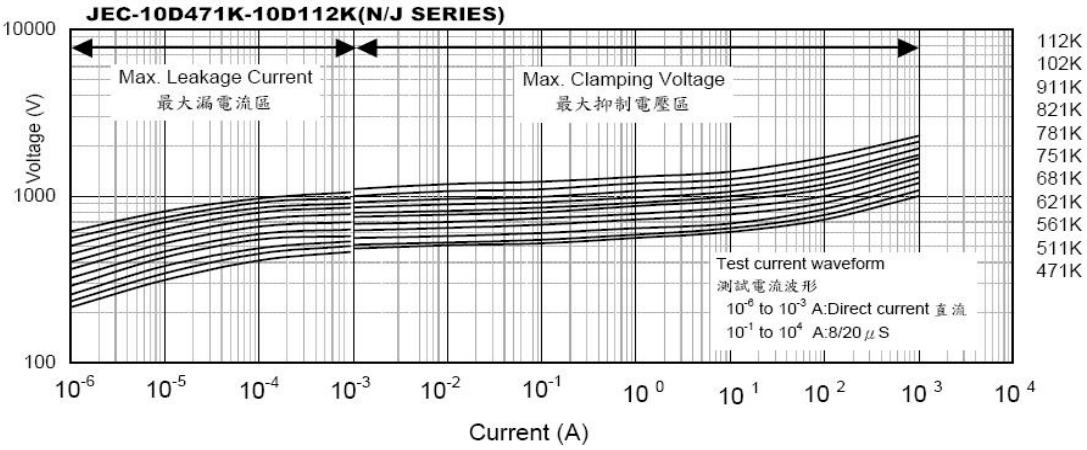




10D V-I CURVE 电压-电流曲线

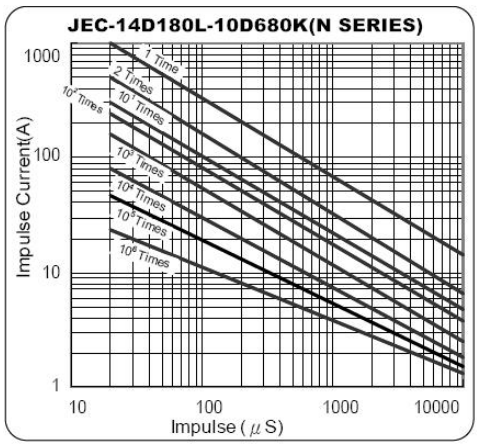


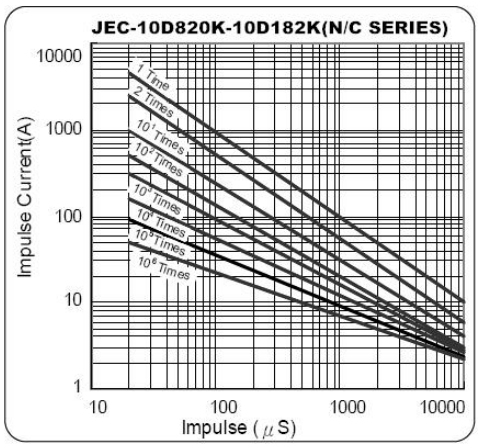




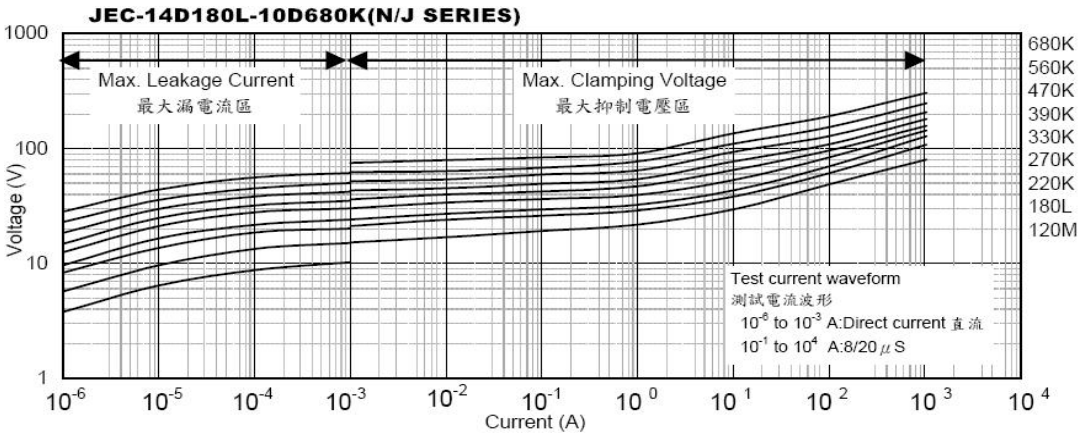
14D Surge Life Time Ratings N (Standard) / K (Low Capacitance) Series

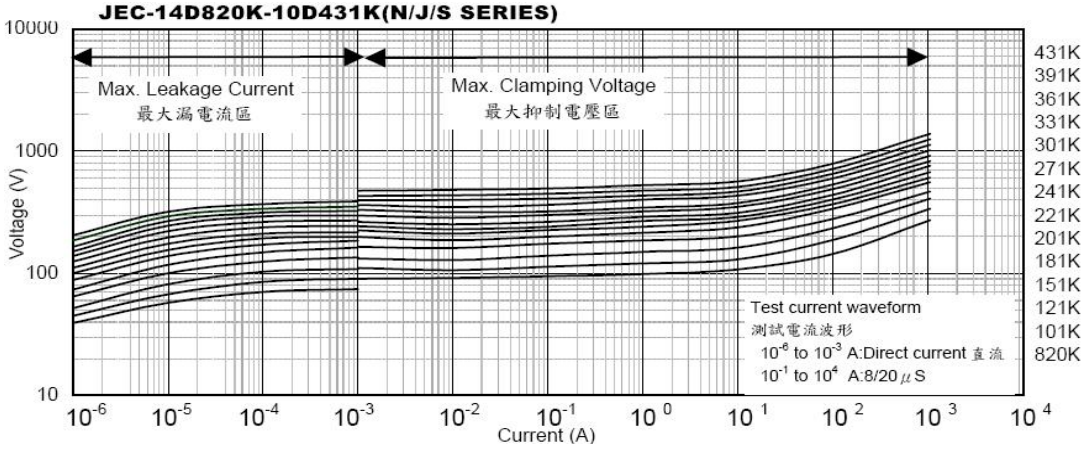
14D 浪涌寿命等级 N (标准) / K(低电容)系列

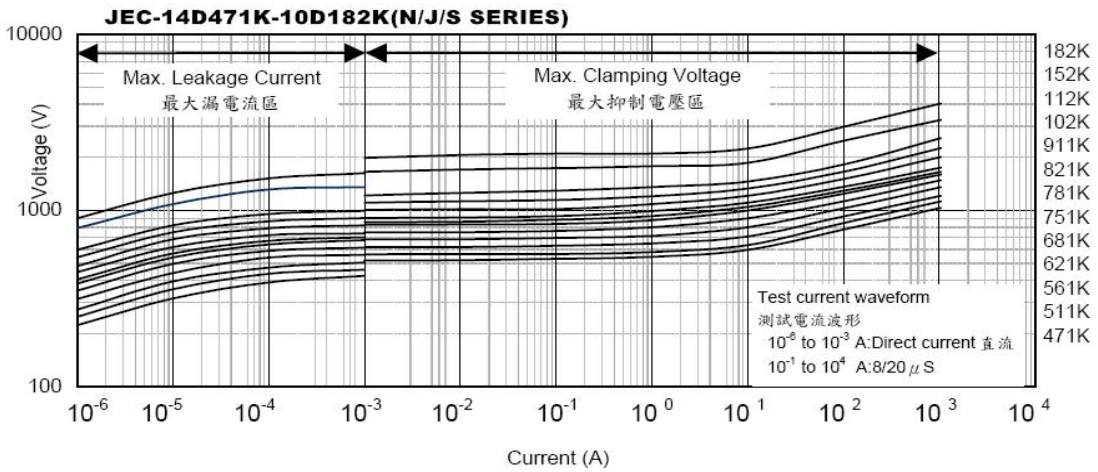




14D V-I CURVE 电压-电流曲线

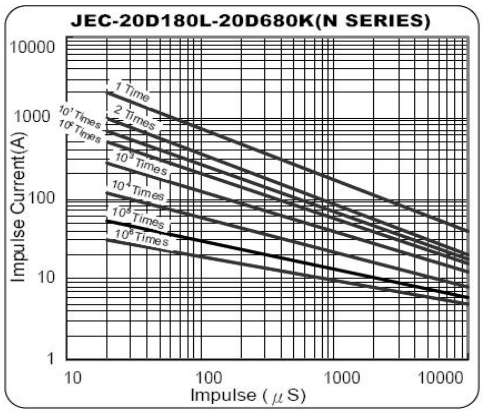


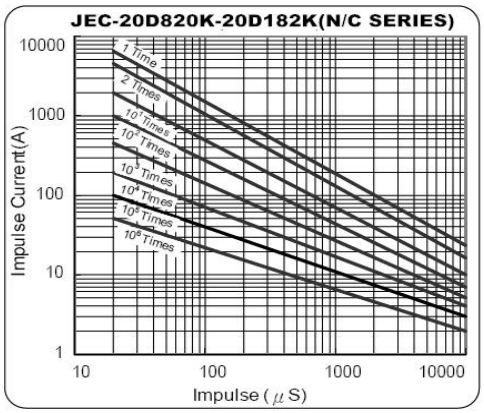




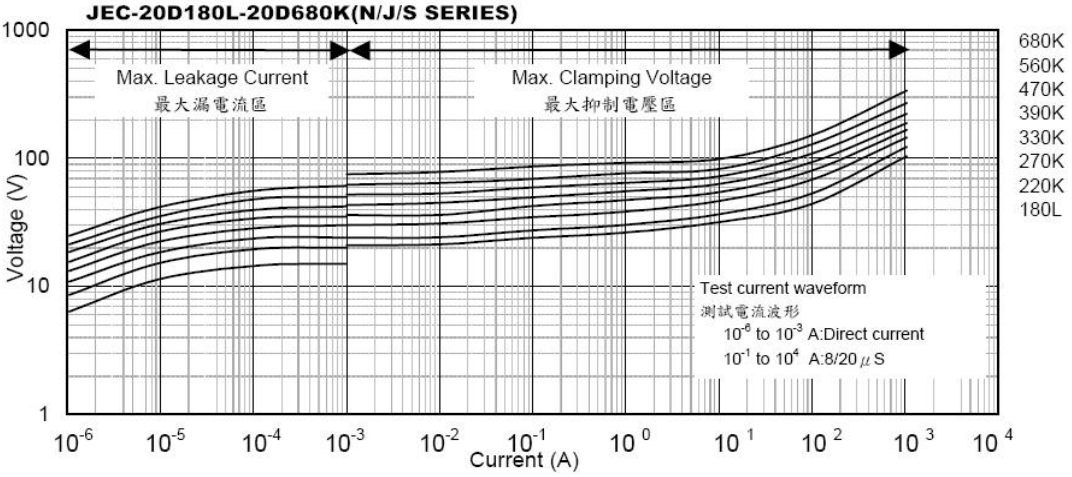
20D Surge Life Time Ratings N (Standard) / K (Low Capacitance) Series

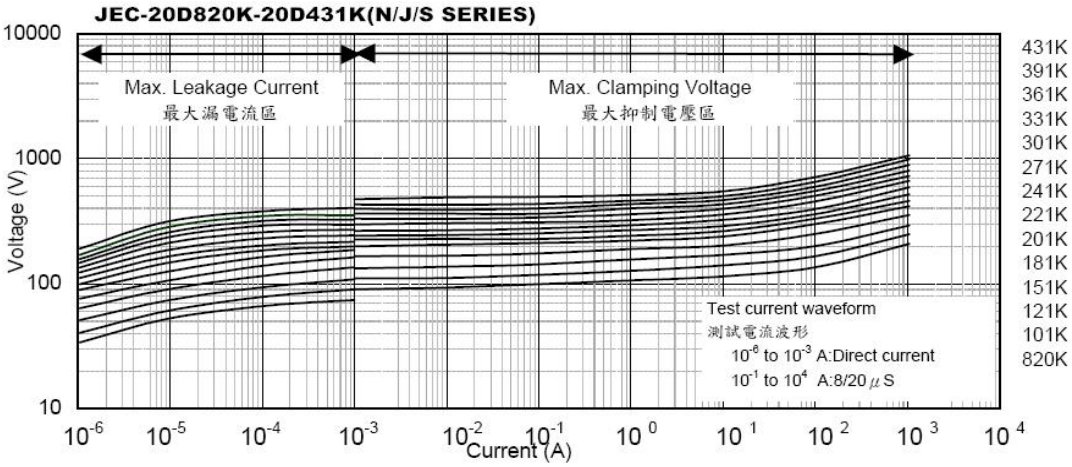
20D 浪涌寿命等级 N (标准) / K(低电容)系列

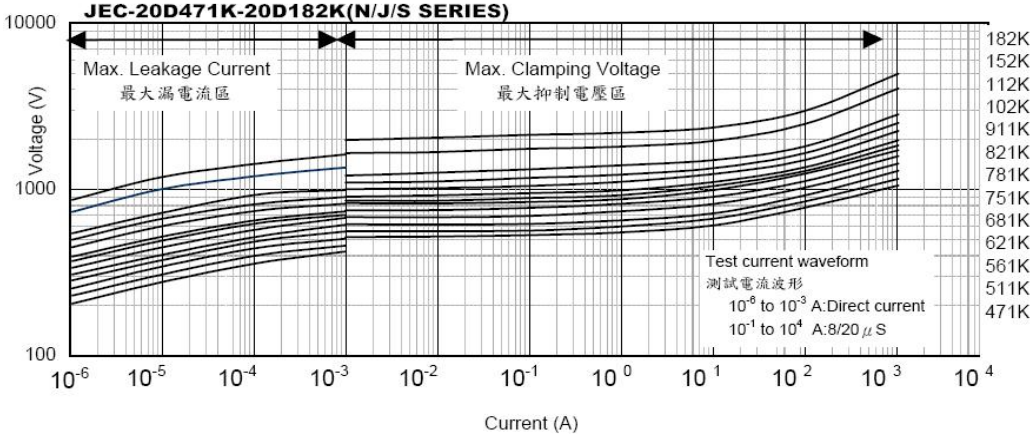




20D V-I CURVE 电压-电流曲线







各认证标示及证书编号 ：

05D Approval Standard and File Number

Certified Model No.	UL E486000	CQC 190012551485	TÜV B 105842 0001 Rev. 00
JEC-05D180K	YES	YES	YES
JEC-05D220K	YES	YES	YES
JEC-05D270K	YES	YES	YES
JEC-05D330K	YES	YES	YES
JEC-05D390K	YES	YES	YES
JEC-05D470K	YES	YES	YES
JEC-05D560K	YES	YES	YES
JEC-05D680K	YES	YES	YES
JEC-05D820K	YES	YES	YES
JEC-05D101K	YES	YES	YES
JEC-05D121K	YES	YES	YES
JEC-05D151K	YES	YES	YES
JEC-05D181K	YES	YES	YES
JEC-05D201K	YES	YES	YES
JEC-05D221K	YES	YES	YES
JEC-05D241K	YES	YES	YES
JEC-05D271K	YES	YES	YES
JEC-05D301K	YES	YES	YES
JEC-05D331K	YES	YES	YES
JEC-05D361K	YES	YES	YES
JEC-05D391K	YES	YES	YES
JEC-05D431K	YES	YES	YES
JEC-05D471K	YES	YES	YES
JEC-05D511K	YES	YES	YES
JEC-05D561K	YES	YES	YES
JEC-05D621K	YES	YES	YES
JEC-05D681K	YES	YES	YES
JEC-05D751K	/		
JEC-05D821K	/		

07DApproval Standard and File Number

Certified Model No.	cULus UL,CUL E486000	UL E486000	CQC 19001221471	TÜV B 105842 0001 Rev. 00
JEC-07D180K	YES	YES	YES	YES
JEC-07D220K	YES	YES	YES	YES
JEC-07D270K	YES	YES	YES	YES
JEC-07D330K	YES	YES	YES	YES
JEC-07D390K	YES	YES	YES	YES
JEC-07D470K	YES	YES	YES	YES
JEC-07D560K	YES	YES	YES	YES
JEC-07D680K	YES	YES	YES	YES
JEC-07D820K	YES	YES	YES	YES
JEC-07D101K	YES	YES	YES	YES
JEC-07D121K	YES	YES	YES	YES
JEC-07D151K	YES	YES	YES	YES
JEC-07D181K	YES	YES	YES	YES
JEC-07D201K	YES	YES	YES	YES
JEC-07D221K	YES	YES	YES	YES
JEC-07D241K	YES	YES	YES	YES
JEC-07D271K	YES	YES	YES	YES
JEC-07D301K	YES	YES	YES	YES
JEC-07D331K	YES	YES	YES	YES
JEC-07D361K	YES	YES	YES	YES
JEC-07D391K	YES	YES	YES	YES
JEC-07D431K	YES	YES	YES	YES
JEC-07D471K	YES	YES	YES	YES
JEC-07D511K	YES	YES	YES	YES
JEC-07D561K	YES	YES	YES	YES
JEC-07D621K	YES		YES	YES
JEC-07D681K	YES		YES	YES
JEC-07D751K	/		YES	YES
JEC-07D821K	/		YES	YES

10D Approval Standard and File Number

Certified Model No.	cULus UL,CUL E486000		CQC 19001221472	TÜV B 105842 0001 Rev.00
JEC-10D180K	YES		YES	YES
JEC-10D220K	YES		YES	YES
JEC-10D270K	YES		YES	YES
JEC-10D330K	YES		YES	YES
JEC-10D390K	YES		YES	YES
JEC-10D470K	YES		YES	YES
JEC-10D560K	YES		YES	YES
JEC-10D680K	YES		YES	YES
JEC-10D820K	YES		YES	YES
JEC-10D101K	YES		YES	YES
JEC-10D121K	YES		YES	YES
JEC-10D151K	YES		YES	YES
JEC-10D181K	YES		YES	YES
JEC-10D201K	YES		YES	YES
JEC-10D221K	YES		YES	YES
JEC-10D241K	YES		YES	YES
JEC-10D271K	YES		YES	YES
JEC-10D301K	YES		YES	YES
JEC-10D331K	YES		YES	YES
JEC-10D361K	YES		YES	YES
JEC-10D391K	YES		YES	YES
JEC-10D431K	YES		YES	
JEC-10D471K	YES	3KA/6KV	YES	
JEC-10D511K	YES	3KA/6KV	YES	
JEC-10D561K	YES	3KA/6KV	YES	
JEC-10D621K	YES	3KA/6KV	YES	
JEC-10D681K	YES	3KA/6KV	YES	
JEC-10D751K	YES		YES	
JEC-10D821K	YES		YES	
JEC-10D911K	YES		YES	
JEC-10D102K	YES		YES	
JEC-10D112K	YES		YES	

14D Approval Standard and File Number

Certified Model No.	cULus UL,CUL E486000		CQC 19001221473	TÜV B 105842 0001 Rev.00
JEC-14D180K	YES		YES	YES
JEC-14D220K	YES		YES	YES
JEC-14D270K	YES		YES	YES
JEC-14D330K	YES		YES	YES
JEC-14D390K	YES		YES	YES
JEC-14D470K	YES		YES	YES
JEC-14D560K	YES		YES	YES
JEC-14D680K	YES		YES	YES
JEC-14D820K	YES	3KA/6KV	YES	YES
JEC-14D101K	YES	3KA/6KV	YES	YES
JEC-14D121K	YES	3KA/6KV	YES	YES
JEC-14D151K	YES	3KA/6KV	YES	YES
JEC-14D181K	YES	3KA/6KV	YES	YES
JEC-14D201K	YES	3KA/6KV	YES	YES
JEC-14D221K	YES	3KA/6KV	YES	YES
JEC-14D241K	YES	3KA/6KV	YES	YES
JEC-14D271K	YES	3KA/6KV	YES	YES
JEC-14D301K	YES	3KA/6KV	YES	YES
JEC-14D331K	YES	3KA/6KV	YES	YES
JEC-14D361K	YES	3KA/6KV	YES	YES
JEC-14D391K	YES	3KA/6KV	YES	YES
JEC-14D431K	YES	3KA/6KV	YES	YES
JEC-14D471K	YES	3KA/6KV	YES	YES
JEC-14D511K	YES	3KA/6KV	YES	YES
JEC-14D561K	YES	3KA/6KV	YES	YES
JEC-14D621K	YES	3KA/6KV	YES	YES
JEC-14D681K	YES	3KA/6KV	YES	YES
JEC-14D751K	YES	3KA/6KV	YES	YES
JEC-14D821K	YES	3KA/6KV	YES	YES
JEC-14D911K	YES	3KA/6KV	YES	YES
JEC-14D102K	YES		YES	YES
JEC-14D112K	YES		YES	YES
JEC-14D152K	YES		/	YES
JEC-14D182K	YES		YES	YES

20D Approval Standard and File Number

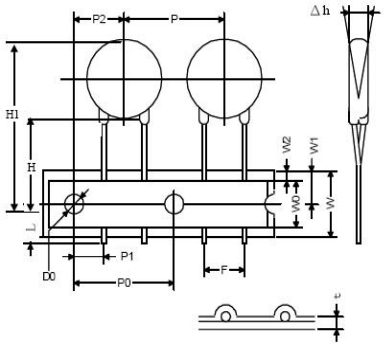
Certified Model No.	c UL us UL,CUL E486000		CQC 19001221470	TÜV B 105842 0001 Rev.00
JEC-20D180K	YES		YES	YES
JEC-20D220K	YES		YES	YES
JEC-20D270K	YES		YES	YES
JEC-20D330K	YES		YES	YES
JEC-20D390K	YES		YES	YES
JEC-20D470K	YES		YES	YES
JEC-20D560K	YES		YES	YES
JEC-20D680K	YES		YES	YES
JEC-20D820K	YES		YES	YES
JEC-20D101K	YES	3KA/6KV	YES	YES
JEC-20D121K	YES	3KA/6KV	YES	YES
JEC-20D151K	YES	3KA/6KV	YES	YES
JEC-20D181K	YES	3KA/6KV	YES	YES
JEC-20D201K	YES	3KA/6KV	YES	YES
JEC-20D221K	YES	3KA/6KV	YES	YES
JEC-20D241K	YES	3KA/6KV	YES	YES
JEC-20D271K	YES	3KA/6KV	YES	YES
JEC-20D301K	YES	3KA/6KV	YES	YES
JEC-20D331K	YES	3KA/6KV	YES	YES
JEC-20D361K	YES	3KA/6KV	YES	YES
JEC-20D391K	YES	3KA/6KV	YES	YES
JEC-20D431K	YES	3KA/6KV	YES	YES
JEC-20D471K	YES	3KA/6KV	YES	YES
JEC-20D511K	YES	3KA/6KV	YES	YES
JEC-20D561K	YES	3KA/6KV	YES	YES
JEC-20D621K	YES	3KA/6KV	YES	YES
JEC-20D681K	YES	3KA/6KV	YES	YES
JEC-20D751K	YES	3KA/6KV	YES	YES
JEC-20D821K	YES	3KA/6KV	YES	YES
JEC-20D911K	YES	3KA/6KV	YES	YES
JEC-20D102K	YES		YES	YES
JEC-20D112K	YES		YES	YES
JEC-20D122K	YES		YES	YES
JEC-20D152K	YES		/	YES
JEC-20D182K	YES		YES	YES

25D Approval Standard and File Number

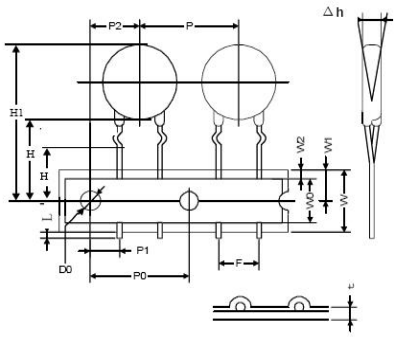
Certified Model No.	UL E486000	CQC 19001221474	TÜV B 105842 0001 Rev.00
JEC-25D180K	/	YES	YES
JEC-25D220K	/	YES	YES
JEC-25D270K	/	YES	YES
JEC-25D330K	/	YES	YES
JEC-25D390K	/	YES	YES
JEC-25D470K	/	YES	YES
JEC-25D560K	/	YES	YES
JEC-25D680K	/	YES	YES
JEC-25D820K	/	YES	YES
JEC-25D101K	/	YES	YES
JEC-25D121K	/	YES	YES
JEC-25D151K	/	YES	YES
JEC-25D181K	/	YES	YES
JEC-25D201K	YES	YES	YES
JEC-25D221K	YES	YES	YES
JEC-25D241K	YES	YES	YES
JEC-25D271K	YES	YES	YES
JEC-25D301K	YES	YES	YES
JEC-25D331K	YES	YES	YES
JEC-25D361K	YES	YES	YES
JEC-25D391K	YES	YES	YES
JEC-25D431K	YES	YES	YES
JEC-25D471K	YES	YES	YES
JEC-25D511K	YES	YES	YES
JEC-25D561K	YES	YES	YES
JEC-25D621K	YES	YES	YES
JEC-25D681K	YES	YES	YES
JEC-25D751K	YES	YES	YES
JEC-25D781K	YES	YES	YES
JEC-25D821K	YES	YES	YES
JEC-25D911K	YES	YES	YES
JEC-25D102K	/	YES	YES
JEC-25D112K	/	YES	YES
JEC-25D122K	/	YES	YES
JEC-25D142K	/	YES	YES
JEC-25D162K	/	YES	YES
JEC-25D182K	/	YES	YES

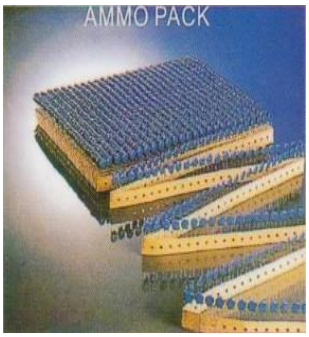
Dimension - TA / TR / CA / CR Ammo & Reel Series
包装尺寸 卷轴系列

Straight Leads (5D,7D,10D)

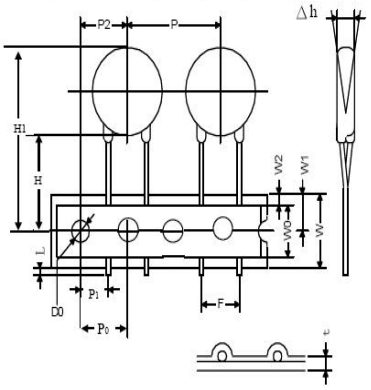


Crimped Leads (5D,7D,10D)

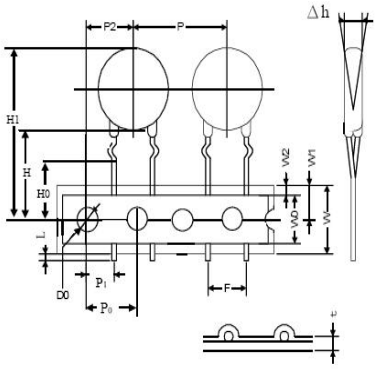




Straight Leads (10D,14D,20D)



Crimped Leads (10D,14D,20D)

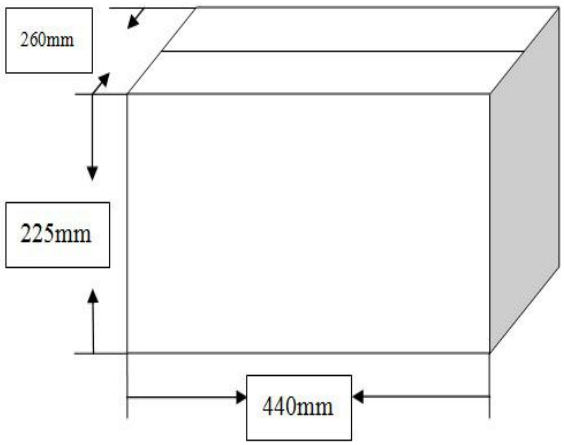


Unit: pcs

Ammo	
Box	Carton
2000	10000
1500	7500
2000	10000
1500	7500
500	5000
500	5000
500	5000
400	2800
300	2100

P	P0	P1	P2	F	W	W0	W1
12.7±1.0	12.7±0.3	3.85±0.7	6.35±1.3	5.0±0.5	18.0±1.0	12.5max.	9.0±0.5
W2	H	H0	H1	Δh	L	D0	t
3.0max.	20.0±2.0	16.0±1.0	32.0max	0±2	1.0max.	4.0±0.2	0.6±0.3

Packing Specifications /Bulk Packing Dimension /Quantity per Packing Method
包装规格/散装包装尺寸/每种包装数量



Quantity Per Packing Method
各种包装的数量

Dimension	Part No.	Ammo	
		Box	Carton
05D 07D	180L to 561K	1,500	15,000
05D 07D	621k to 821K	1,300	13,000
10D	180L to 471K	1,000	10,000
	511k to 821K	800	8000
14D	180L to 471K	1,000	10,000
	511k to 821K	800	8,000
20D	180L to 471K	500	5,000
	511k to 821K	300	5,000

存储条件：

1. 储存温度 Storage temperature： -10℃~+40℃
2. 相对湿度 Relative humidity： ≦75%RH
3. 不要将本产品存放在有腐蚀性气体或是阳光直接照射的环境中保管。
   Do not store this product in an environment with corrosive gas or direct sunlight。
4. 存储期限 Storage period：1 年(1 year)

Mechanical Ratings 实验标准方法

Test Parameter 测试参数	Test Condition / Description 测试条件/说明			Performance Requirements 性能要求
Terminal Pull Strength 端子拉力	After gradually applying the load specified below and keeping the unit fixed for ten seconds, the terminal shall be visually examined for any damage. 在逐渐施加以下指定的负载并保持装置固定十秒钟后，应目视检查端子是否有损坏。	Diameter 线径线径	Loading 负载	No visible damage 无明显损坏
		0.6mm	1.0 Kg	
		0.8mm	1.0 Kg	
		1.0mm	2.0 Kg	
Terminal Bending Strength 端子弯曲强度	The unit shall be secured with its terminal kept vertical and the weight 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. 固定装置时，端子应保持垂直，并在轴向上施加以下指定的重量。端子应在一个方向上逐渐弯曲至90°，然后在相反方向上是否的损坏。	Diameter	Loadin	No visible damage 无明显损坏
		0.6mm	0.5 Kg	
		0.8mm	0.5 Kg	
		1.0mm	1.0 Kg	
Vibration 振动试验	The Specimen shall be vibrated by its lead wires with a total amplitude of 1.5 ㎜ and a varying frequency of 10~55~10HZ(each minutes) for a period of 2 hours respectively in each X,Yand Z directions. 试样应通过其引线以总振幅 1.5 ㎜和 10 -55-10 Hz（每分钟）的变化频率在 X，Y 和 Z 三个轴向上分别振动 2 小时。			No visible damage 无明显损坏 △VB/VB%≦±5%
Soldering-solderability 可焊性试验	After dipping the terminal to depth of approximately 3 ㎜ from the specimen in a soldering bath of 260℃ for 10±1(D5: 5±1) seconds. Thereafter the terminal shall b e visually examined. 将样品端子浸入 260℃的锡槽中约 3 mm 的深度 10±1 秒（05D 系列：5±1 秒）。之后对端子进行外观检查。			Terminations shall be uniformly tinned 端子应均匀镀锡
Soldering- Resistance to Solder Heat 焊锡-耐焊锡热	After preheating the specimen, the specimen shall be completely immersed into a soldering bath having a temperature of 260±5℃ for 10±1 (D5: 5±1) seconds or iron of 400±5℃ for 3±0.5 seconds. There after the change of Vb and mechanical damage shall be examined. 样品预热后，将样品完全浸入温度为 260±5℃的锡炉中 10±1 秒（05D 系列：5±1 秒），或烙铁 400±5℃接触 3±0.5 秒。检查 Vb 变化后并应检查机械损伤。			No visible damage 无明显损坏 △VB/VB%≦±5%

ENVIRONMENTAL RATINGS 环境评级

<table>
<tr><td>Dry Heat Loading
干热加载</td><td>The specimen shall be applied continuously the maximum allowable voltage at the specified conditions for specified period and then stored at room temperature and normal humidity over 2 hours. Thereafter, the change of Vb and mechanical damage shall be examined.
样品应在规定的条件下连续施加最大允许电压以规定的时间，然后在室温和常湿下保存 2 小时。之后检查 Vb 的变化和机械损伤。
Ambient temp 环境温度：125±2℃; Period 时间：1000±24hours.</td><td>△VB/VB%≦±10%</td></tr>
<tr><td>High Temperature Storage
高温储存</td><td>In a drying oven without load. 無负载的干燥箱中
Ambient temp 环境温度：125±2 ℃; period 时间：1000±24hours</td><td>△VB/VB%≦±5%</td></tr>
<tr><td>Damp Heat Loading
湿热负荷</td><td>The specimen shall be applied continuously the maximum allowable voltage at the specified conditions for specified period and then stored at room temperature and normal humidity over 2 hours. Thereafter, the change of Vb and mechanical damage shall be examined.
样品应在规定的条件下连续施加最大允许电压于规定的时间，之后在室温和常湿下保存 2 小时。 此后，应检查 Vb 的变化和机械损伤。
Ambient condition 环境条件：40±2℃, 90 to 95%R.H.; period 时间：1000±24 hours</td><td>△VB/VB%≦±10%</td></tr>
<tr><td>Temperature Cycle
温度循环</td><td>Condition the specimen to each temperature form step 1 to step 4 in this order for the period shown in the table of specifications. The change of Vb and mechanical damage shall be examined after 2 hours.
在规格表中所示的时段内，按照步骤 1 至步骤 4 的顺序将样品的环境调节至各个温度。
2 小时后应检查 Vb 的变化和机械损伤。
<table>
<tr><th>Step</th><th>Temp°C</th><th>Period</th></tr>
<tr><td>1</td><td>-40±3°C</td><td>30 min.</td></tr>
<tr><td>2</td><td>Room Temp</td><td>15 min.</td></tr>
<tr><td>3</td><td>85+2°C</td><td>30 min.</td></tr>
<tr><td>4</td><td>Room Temp</td><td>15 min.</td></tr>
</table></td><td>No visible damage
无明显损坏
△VB/VB%≦±10%</td></tr>
<tr><td>Surge Lifetime Rating
浪涌寿命评级</td><td>The change of Vb shall be measured after the impulse listed below is applied 10,000 times continuously with the interval of ten seconds at room temperature.
在室温下，以 10 秒钟的间隔连续施加 10,000 次以后述的脉冲后，应测量 Vb 的变化。</td><td>No visible damage
无明显损坏
△VB/VB%≦±10%</td></tr>
<tr><td>Voltage Proof
耐电压</td><td>Voltage 电压：2500VAC, Leakage Current 漏电流≦0.5Ma, Time 時間：60 Sec.秒</td><td>No Breakdown
无故障</td></tr>
</table>

Reliability Test 可靠性测试

产品特性 Product Features

编号 Number		项目 Item	性能要求 Performance requirements	说明及测试方法 Description and test method
环境特性 Environmental characteristics	1.1	气候顺序 Climatic order	$\frac{\Delta U_{1mA}}{U_{1mA}} \leq \pm 5\%$ 无明显机械损伤 No obvious mechanical damage	IEC 68-2-4, 试验 Method Db 干热 Dry heat: (125±2℃)×16hrs, 循环湿热 Circulating damp heat: 一个循环 One cycle (55±2℃)×24hrs、95~100%RH 寒冷 Cold: (-40±2℃)×2hrs, 循环湿热 Circulating damp heat: 一次 One cycle (55±2℃) ×24hrs,、 95~100%RH、剩余的循环 5 次 Remaining cycles, 24hrs/循环。
	1.2	稳态湿热 Steady damp heat	$\frac{\Delta U_{1mA}}{U_{1mA}} \leq \pm 5\%$ 无明显机械损伤 No obvious mechanical damage	IEC68-2-3 温度 Temperature./时间 Time: (40±2℃)/500hrs、 湿度 Humidity: 90~95%RH。
	1.3	温度快速变化 Rapid temperature changes	$\frac{\Delta U_{1mA}}{U_{1mA}} \leq \pm 5\%$ 无明显机械损伤 No obvious mechanical damage	IEC 68-2-14, 试验 Method Na TA=- 40℃, TB= +125℃; 共五个循环, 每个极限温度下放置 30 分钟 A total of five cycles, each placed at the limit temperature for 30 minutes。
	1.4	上限类别温度耐久性 Upper end category temperature durability	$\frac{\Delta U_{1mA}}{U_{1mA}} \leq \pm 10\%$ 无明显机械损伤 No obvious mechanical damage	IEC 68-2-2 温度 Temperature: 125℃±2℃、 时间 Time: 1000hrs。 电压 Voltage: 最大持续工作电压 Maximum continuous working voltage (AC 交流)。
	1.5	湿热环境耐久性 Durability in a hot and humid environment	$\frac{\Delta U_{1mA}}{U_{1mA}} \leq \pm 10\%$ 无明显机械损伤 No obvious mechanical damage	IEC68-2-3 温度 Temperature: 125℃±2℃、 时间 Time: 500hrs、 湿度 Humidity: 90~95%RH。 电压 Voltage: 最大持续工作电压 Maximum continuous working voltage (AC 交流)。

编号 Number		项目 Item	性能要求 Performance requirements	说明及测试方法 Description and test method
机械特性 Mechanical properties	2.1	振动 vibration	$\frac{\Delta U_{1mA}}{U_{1mA}} \leq \pm 5\%$ 无明显机械损伤 No obvious mechanical damage $\frac{\Delta U_{1mA}}{U_{1mA}} \leq \pm 5\%$	IEC68-2-6, 试验 Test Fc 方法 Method B4 总持续时间 Total duration：6hrs (三个方向 Three directions 每方向各 each direction 2hrs)。 频率范围 Frequency Range：10 Hz ~ 55 Hz、振幅 Amplitude：0.75mm 或加速度 Acceleration 98 m/s2
	2.2	冲击 Shock	无明显机械损伤 No obvious mechanical damage	IEC 68-2-27, Test Ea 脉冲波形 Pulse waveform：半正弦波 Semi sine wave、 加速度 acceleration：490m/s^2 脉冲宽度 Pulse Width：11ms，三个方向 Three directions，每方向各 each direction 6 次 Times。
	2.3	可焊性 Solderability	浸渍部分 95%被焊锡覆盖 95% of the dipped part is covered by solder	IEC 68-2-20, 试验 Test Ta 方法 Method 1 槽温 Tin bath temperature：235±5℃ 浸渍时间 Dipping time：2±0.5sec
	2.4	耐焊接热 Resistance to Soldering heat	无明显机械损伤 No obvious mechanical damage	IEC 68-2-20, 试验 Test Tb 方法 Method 1A 锡温 Solder temperature：260℃、持续时间 duration：5 sec
	2.5	引出端强度 Terminal strength	$\frac{\Delta U_{1mA}}{U_{1mA}} \leq \pm 5\%$ 无明显机械损伤 No obvious mechanical damage	IEC68-2-21, 试验 Test Ua 拉伸 Stretch - 力量 Force：10 N (ø 0.6 和ø 0.8mm 引线 lead wire)、20N(ø 1.0mm 引线)持续时间 duration:10 sec. 弯折 Bend - 力量 Force：5 N (ø 0.6 和ø 0.8mm 引线 leadwire)、10N(ø 1.0mm 引线 leadwire)弯折次数 Bending times：2 次
总体特性 General characteristics	3.1	使用温度范围 Operating temperature range	(-40℃ ～ +125℃)	压敏电阻无须降额使用的温度范围 Temperature range for varistor without derating
	3.2	贮存温度范围 Storage temperature range	(-40℃ ～ +150℃)	压敏电阻无负载情况下 Varistor without load
	3.3	绝缘耐压 Insulation withstand voltage	≥2500VAC	压敏电阻的电极引线与其包封层表面之间，1 min。 Between the electrode lead of the varistor and the surface of the encapsulation layer

使用须知 Usage Notice

为避免因 MOV 而引起的火灾或劣化而导致其它设备的损坏,请参考并遵守以下原则:
To avoid fire caused by MOV, or damage to other equipment due to deterioration please refer to and observe the following principles:

1) 当压敏电阻器流入高电流或高电压时,MOV 本身可能被损坏、升温、冒烟、着火并发生爆裂。
When high current or high voltage flows into the varistor, the MOV itself may be damaged, heat up, smoke, catch fire and burst。
为避免此种情况,可在 MOV 两端或电源两端安装保险丝或断电器;
To avoid this, fuses or circuit breakers can be installed on both ends of the MOV or power supply;

以下规格之保险丝仅供参考使用:

直径 Diameter	05D	07D	10D	14D	20D
保险丝之额定电流 Rated current of fuse	1-2A	2-3A	3-5A	3-10A	5-15A

2) 勿使压敏电阻器所流入的电流及能量超过其额定值。
Do not allow the current and energy flowing into the varistor to exceed its rated value。

3) 注明的 JEC 产品商标名称和标记皆为本公司申请。
The indicated JEC product brand names and marks are only applied by my company。
使用或销售未明确指定用于此类应用的 JEC 产品的客户自行承担风险。
Customers who use or sell JEC products that are not specifically designated for such applications are at their own risk。

4) 所有 JEC 产品之规格和数据如有更改, 恕不另行通知,
All JEC product specifications and data are subject to change without notice,

5) 关于产品对特定应用的适用性,客户有责任确认具有产品规范中所述特性的产品适用于特定应用。参数数据表和/或规范中提供的数据可能因不同的应用而不同,性能可能随时间而变化。所有操作参数,包括典型参数,必须由客户的技术专家。产品规格不会扩大或以其他方式修改 JEC 采购条款和条件,包括但不限于其中所述的保证。
Regarding the suitability of products for specific applications, it is the customer's responsibility to confirm that products with the characteristics described in the product specifications are suitable for specific applications。

6) 请勿将易燃性物质置于压敏电阻器附近。Do not place flammable substances near the varistor。

7) 压敏电阻器仅可散发少量的热能, 因此不适合用于经常有突发热量产生的设备内。
Varistors can only dissipate a small amount of heat energy, so they are not suitable for use in equipment that often generates sudden heat。
此外,压敏电阻器所在的工作环境温度越高其所散发热能的比例就越小。
In addition, the higher the operating temperature of the varistor, the smaller the proportion of heat dissipated。

如在瞬时间有较大的热量作用于压敏电阻上, 有可能因此热能不能在脉冲时间内散发出去而导致压敏电阻器损坏。
If a large amount of heat acts on the varistor in an instant, it is possible that the heat energy cannot be dissipated within the pulse time, causing damage to the varistor。

8) 焊接时, 请注意不要将压敏电阻器的焊接点及树脂涂料被熔化。
When soldering, please be careful not to melt the solder joints of the varistor and the resin coating。

材料类别政策 Material category policy

JEC 所有产品特此证明皆符合 RoHS 规範(符合欧盟议会和欧盟理事会指令 2011/65/EU 中定义和限制于 2011 年 6 月 8 日),关于限制在电气和电子设备中使用某些有害物质及 REACH 的规定。我们确认所有 JEC 产品皆符合 IEC 标准。

All JEC products hereby certify that they are RoHS compliant (in accordance with the definitions and restrictions of the European Parliament and the European Council Directive 2011/65/EU that on June 8, 2011), regarding the restriction of the use of certain hazardous substances in electrical and electronic equipment, and REACH regulations。 We confirm that all JEC products comply with IEC standards。

All JEC products hereby certify that they are RoHS compliant (in accordance with the definitions and restrictions of the European Parliament and the European Council Directive 2011/65/EU, on June 8, 2011), regarding the restriction of the use of certain hazardous substances in electrical and electronic equipment, and REACH regulations。 We confirm that all JEC products comply with IEC standards。