



EZ25SK-B Series

热保护压敏电阻 TcoMOV

Thermally Protective Metal Oxide Varistor

目录

1 适用范围 Scope	2
2 术语 Glossary	2
3 型号说明 Part Number System	2
4 安规认证 Agency Approvals	2
5 结构尺寸 Structure and Dimension	2
5.1 电路图 Circuit Diagrams	3
6 技术参数 Specifications	4
7 检验 Inspection	6
7.1 大气条件 Atmospheric Conditions	6
7.2 常规检验项目 Routine Inspection Items	6
7.3 机械特性 Mechanical Performances	7
7.5 最大放电电流试验 Maximum Discharge Current Test	7
8 标示及包装 Marks and Package	8



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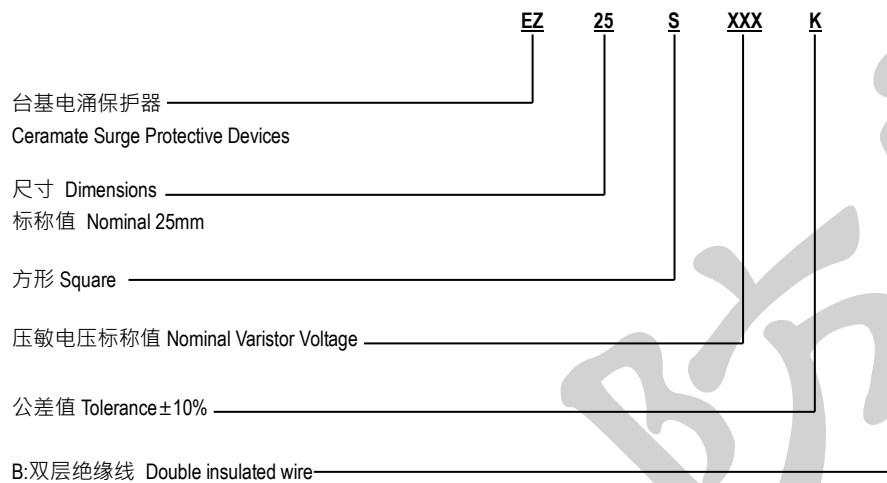
1 适用范围 Scope

本承认书适用于型号为 EZ25S 系列的热保护型压敏电阻。
The specification is applicable for EZ25S Series varistors with thermal protection.

2 术语 Glossary

参考标准 Reference Standards
UL1449 5th ed (2021), GB/T18802.11-2020
IEC 61643-11:2011, IEC 61051-1:2007, IEC 61051-2:1991

3 型号说明 Part Number System



4 安规认证 Agency Approvals

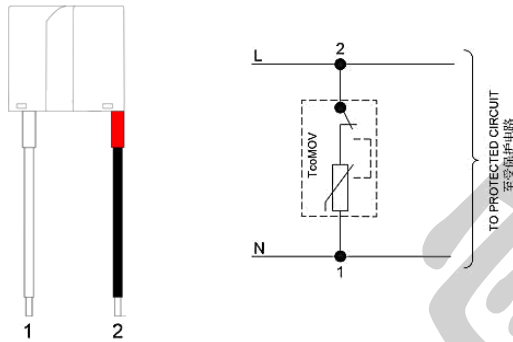
认证机构 Agency	标准 Standards	认证号 File NO.	类别 Category
UL	UL 1449 5 th	E315429	4CA
cUL	CSA C22.2 NO.269.5-17	E315429	5
CE	低压指令 Low Voltage Directive 2014/35/EU	自我宣告 Declaration by manufacturer	附录 I, IV Annex I, IV

EZ25S621K/821K/112K 认证

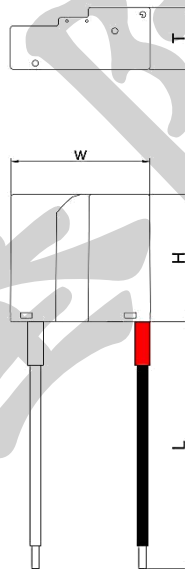
认证机构 Agency	标准 Standards	认证号 File No.	类别 Category
UL	UL 1449 5 th	E315429	4CA
cUL	UL CSA C22.2 NO.269.5-17	E315429	5
CE	TUV 低压指令 Low Voltage Directive 2014/35/EU	AN 50622293 AN 50622336	附录 I Annex I
TUV	EN 61643-11:2012+A11 IEC 61643-11:2011	R 50622285	II类 Class II
TUV	EN 61643-31:2019 IEC 61643-31:2018	R 50622329	II类 Class II

5 结构尺寸 Structure and Dimension

5.1 电路图 Circuit Diagrams



5.2 尺寸 Dimension (mm)



Unit: mm

W:28±1.0	H:25.5±1.0	L: 50+20-0
25S270K-25S241K		25S271K-25S112K
T:9.55±1.0		T:12.45±1.0

6 技术参数 Specifications

技术术语 Glossary of Terms		技术参数 Specifications	参照标准 Referencem Standards
工作温度 Operation Temp. Range		-40°C~+85°C	IEC 61051
存储温度 Storage Temp. Range		-40°C~+125°C	IEC 61051
压敏电压 Varistor Voltage (Vn)		* V	IEC 61051
漏电流 Leakage Current (75% of Vn)		≤20μA	IEC 61051
最大连续工作电压 Maximum Continuous Operating Voltage		AC: * V/DC: * V	IEC 61051
电压保护水平 Voltage protection level		* V	IEC 61643-11 GB 18802.1
标称放电电流 Nominal Discharge Current (In)		* kA (8/20μs)	IEC 61643-11
最大放电电流 Maximum Discharge Current, (Imax)		* kA (8/20μs)	IEC 61643-11
绝缘电压 (引脚与外壳间) Dielectric Voltage(Between Leads and Enclosure)		≥2500V,1minute	IEC 61051
遥信开关额定值 Remote Controll Switch Rating		30Vdc, 0.2A	IEC 61643-11
引脚拉力试验 Lead Pull Test		∅0.5mm 10N ∅1.2mm 35N	IEC 61643-11
暂时过电压特性 Temporary Overvoltage (TOV) Characteristic	用户装置内的低压系统故障 LV-system faults in consumer installation	Ur/5sec. 耐受模式 Withstand Mode	IEC 61643-11
	配电系统的低压系统故障和缺零 LV-system faults in distribution system and loss neutral	Ur /10A/120min 安全失效模式 Safe Failure Mode	IEC 61643-11



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型号 PART NUMBER	最大连续 工作电压 Maximum Continuous Operating Voltage		压敏电压 Varistor Voltage		仅宣告 I _n Only I _n declared		仅宣告 I _{max} Only I _{max} declared
	U _c		V _n		标称放 电电流 Nominal Discharge Current	测量限 制电压 Measured Limiting Voltage	最大放 电电流 Maximum Discharge Current
	AC (V)	DC (V)	(V)		In, 15 times	MLV/Up	I _{max} , 1 time
			Min.	Max.	(kA)	(V)	(kA)
25S820K	50	65	74	90	10	420	20
25S101K	60	85	90	110		450	
25S121K	75	100	108	132		500	
25S151K	95	125	135	165		570	
25S181K	115	150	162	198		640	
25S201K	130	170	185	225		680	
25S221K	140	180	198	242		700	
25S241K	150	200	222	270		730	
25S271K	180	225	256	310		800	
25S301K	190	250	270	330		820	
25S331K	210	275	297	363		870	
25S361K	230	300	324	396		920	
25S391K	250	320	362	440		1000	
25S431K	275	350	387	473		1100	
25S471K	300	385	423	517		1200	
25S511K	320	415	459	561		1280	
25S561K	350	460	504	616		1400	
25S621K	385	505	558	682		1490/1480	
25S681K	420	560	612	748		1570	
25S751K	460	615	675	825		1670	
25S781K	485	640	702	858		1730	
25S821K	510	670	738	902		1790/1830	
25S911K	550	745	819	1001		1900	
25S112K	680	895	990	1210		2260/2630	

7 检验 Inspection

7.1 大气条件 Atmospheric Conditions

温度 Temperature : 15 °C - 35 °C

相对湿度 Relative Humidity : 45%-75%

大气压力 Air pressure: 86 kPa to 106 kPa

7.2 常规检验项目 Routine Inspection Items

序号 No.	项目 Items	试验要求 Test Requirement	参考标准 Reference Standards	抽样频率和 接受标准 AQL
1	外观 Appearance	壳体无穿孔,飞边;引脚镀层良好,无氧化发黑等情况。 The case without perforation, flash; the pin coating is good and no oxidative blackening.	ISO 2768-1 GB/T 1804	G-II AQL=1.0
2	尺寸 Dimension	用游标卡尺测量引脚外露长度,尺寸范围 参照 4.4。 Use vernier caliper to measure the Pin out Length, size range reference 4.4.	ISO 2768-1 GB/T 1804	S-2 AQL=0.65
3	压敏电压 Varistor Voltage	1 mA 的直流电流通过压敏电阻时测压敏电阻两端的电压,需满足在电压范围内。 The Voltage shall be to meet the specified value when it across the varistor measured at 1 mA of DC current.	IEC 61051	G-II AQL=0.25
5	介电耐压 Dielectric Voltage	在引脚和外壳间施加工频电压≥2500 V,1 分钟。 Subject the voltage no less than 2500 V, last for 1 minute between leads and enclosure.	IEC 61051	S-2 AQL=1.0
6	标称放电电流试验 Nominal Discharge Current Test	参见第 7 章节《检验》第 7.4 条 Reference 7.4 of the chapter 7 《Inspection》	UL 1449	3 PCS/Lot AC=0
7	最大放电电流试验 Maximum Discharge Current Test	参见第 7 章节《检验》第 7.5 条 Reference 7.5 of the chapter 7 《Inspection》	UL 1449	3 PCS/Lot AC=0

7.3 机械特性 Mechanical Performances

序号 No.	项目 Items	试验方法 Test methods/conditions	参考标准 Reference Standards	抽样频率和 接受标准 AQL
1	拉力 Pull	<p>将待测试产品安装于测试架上,将$\phi 1.2\text{mm}$ 或$\phi 0.5\text{mm}$ 的引线分别与 35N 或 10N 的砝码挂钩绑牢,施加拉力时应无冲击,时间为 1min,方向为引线的轴向方向,然后轻放法码。</p> <p>Install the product on the test shelf, each metal pin is then subjected to a pull of the value 35N for $\phi 1.2\text{mm}$ pin and 10N for $\phi 0.5\text{mm}$ pin. The pull is applied without jerks for 1 min in the direction of the axis of the metal pin. Then release the weights slightly.</p>	IEC 61643-11	<p>3 pcs/Lot, AC=0</p> <p>在试验过程中, 插入接线端子中的引线应没有移动或任何损坏的迹象。</p> <p>During the test, there shall be no movement of the metal pin in the terminal or any indication of damage.</p>

7.4 标称放电电流试验 Nominal Discharge Current Test

电涌保护器施加 15 次 8/20us 电流电涌。在施加此电涌电流波时, 样品不加交流电。施加 15 次电涌时应分成 3 个序次, 每个序次 5 次电涌。在每次施加电涌后的 1 秒钟之内必须施加 MCOV 60 ± 15 秒。每个序次 5 次电涌施加后, 样品应停留 30 ± 5 分钟。第 15 次电涌施加后, 应重新施加 MCOV 至少 15 分钟。每次施加电涌时量测测量限制电压 (MLV), 计算 15 次数值的平均值 (10V 位数四舍五入)。

The samples shall be subjected to fifteen 8/20us current surges. During the application of these surges the samples are unenergized. Surges shall be applied in three groups of five surges. Within 1 second after the application of each surge, the specified MCOV shall be applied for 60 seconds ± 5 seconds. After each group of 5 surges, the samples shall rest for 30 minutes ± 5 minutes. After the 15th surge, the MCOV shall be re-applied for at least 15 minutes. Measure Measured Limiting Voltage (MLV) during each surge and compute the average of the 15 values to obtain the MLV rating (rounding to the nearest 10 V).

判定标准: 产品在测试中与测试后不能有可见可闻的损坏, 且每只样品的每个 MLV 值在平均 MLV 的 $\pm 10\%$ 以内。

Pass Criteria: During and following the surge test, there shall not have visible or smelt (or both) damage, and each Measured Limiting Voltage (MLV) per sample was within $\pm 10\%$ of the Average MLV of the 15 MLVs for that specific sample.

7.5 最大放电电流试验 Maximum Discharge Current Test

未测试过的电涌保护器应施加 1 次 8/20us 电流电涌。在施加此电涌电流波时, 样品不加交流电。在施加电涌后重新施加 MCOV 至少 15 分钟。

Previously untested sample shall be subjected to one 8/20us current surges. During the application of these surges the samples are unenergized. After the application of surge, the specified MCOV shall be applied for at least 15 minutes.

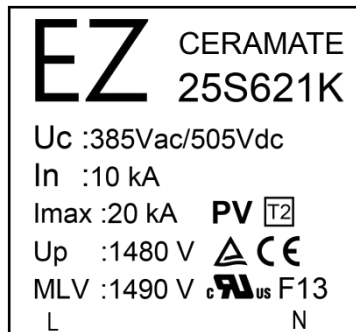
判定标准: 产品在测试中与测试后不能有可见可闻的损坏, 且测试前后 MOV 压敏电压的变化率 $< 10\%$ 。

Pass Criteria: During and following the surge test, there shall not have visible or smelt (or both) damage, and the variation rate of the varistor voltage shall be less than 10%

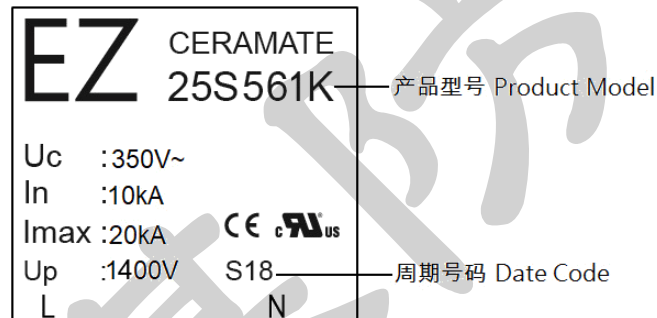
8 标示及包装 Marks and Package

8.1 本体标示 Product Marking:

EZ25S621K/821K/112K



其他型号 Other models



8.2 包装标签 Package Marking:

- (a). 产品编号 ID No.
- (b). 品名规格 Part No.
- (c). 品种 Model
- (d). 批号 Lot No.
- (e). 数量 Quantity
- (f). 生产周期 Date Code