四川航昱微电子科技有限公司

® SICHUAN HANYU MICROELECTRONICS TECHNOLOGY CO.，LTD.

SPECIFICATION FOR APPROVAL

承认书

Spec. No.: HYV6355 Series　　Issued Date: 2024-04-24

CUSTOMER:
客 户

PART NAME: SMD Plastic Varistors
名 称 SMD 塑封压敏电阻器

APPLICATION: Absorb the surge voltage
用 途 吸收浪涌电压

PART NO.:
料 号 HYV6355 series

UL FILE NO:
UL 证书号

CUSTOMER PART NO.:
客户料号

客户承认 CUSTOMER CONFIRM			
承认章 STAMP	核准 APPROVE	审核 CHECK	经办人 SIGNATURE

公司名称： 四川航昱微电子科技有限公司
SICHUAN HANGYU MICROELECTRONICS TECHNOLOGY CO.，LTD.

公司地址： 四川省泸州市江阳区利民路二段9号

电　　话：19182727601

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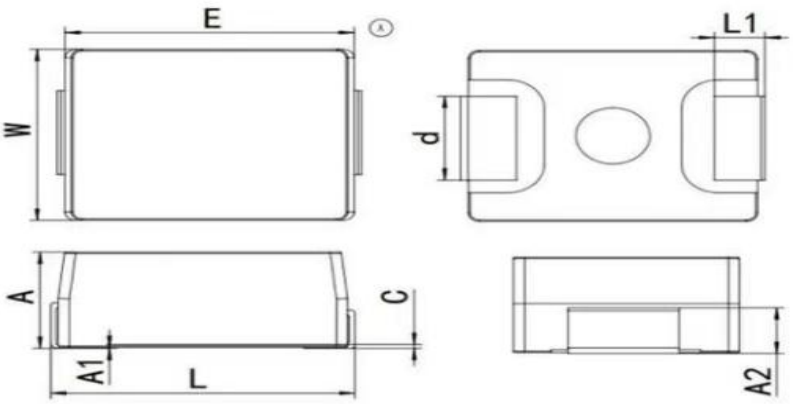
Part No: HYV6355 series	Rev: 0/A (2024-04-24)

1. Appearance 外形尺寸

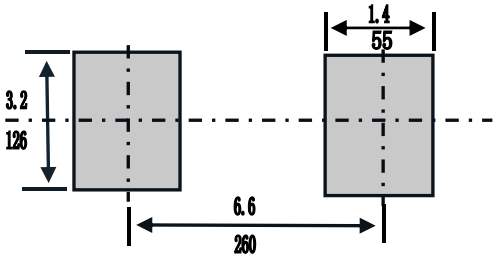
1-1. Marking 标志	Logo 公司商标 V6355-471 Product Spec. 产品规格 240602 Batch no. 生产批号

1-2. Dimensional Drawing (mm)尺寸



UNIT		E	W	A	L	A1	A2	d	L1	C
mm	max	17.0	15.5	4.5	17.5	0.15	2.6	6.5	5.5	0.25
	min	15.0	13.5	3.9	15.5	0.10	1.8	5.5	4.5	0.15

1-3. Recommended solder pad layout(mm) 焊盘布局（暂时不明）



unit: mm (mil)

2. Part numbering 命名方式

HY	V	6355	471	K	J
Blue Sky Logo	Plastic Varistors	Product Size 产品尺寸 mm	Varistor Voltage 压敏电压 V	Tolerance 压敏电压允差	High flux energy 高通流能量
航昱微 Logo	塑封压敏电阻	16.0*14.0	470	±10%	J-高焦耳 H—高能

Part No: HYV6355 series	Rev: 1/A (2024-04-24)

3. Electrical Characteristics 电气参数

(Ta=25℃)

SMD Types 产品型号	Maximum Allowable Voltage 可容许最大电压		Withstanding Surge Current (8/20 μs) 突波电流耐量		Energy 能量 (10/1000μs)	Rated Power 额定功率
	V_{ACRMS}[V]	V_{DC}[V]	1 time[A]	2 times[A]	(1 time)[J]	[mW]
HYV6355-221KJ	140	180	4500	2500	60	0.6
HYV6355-241KJ	150	200	4500	2500	63	0.6
HYV6355-271KJ	175	225	4500	2500	70	0.6
HYV6355-331KJ	210	275	4500	2500	85	0.6
HYV6355-361KJ	230	300	4500	2500	93	0.6
HYV6355-391KJ	250	320	4500	2500	100	0.6
HYV6355-431KJ	275	350	4500	2500	115	0.6
HYV6355-471KJ	300	385	4500	2500	125	0.6
HYV6355-511KJ	320	415	4500	2500	125	0.6
HYV6355-561KJ	350	455	4500	2500	125	0.6
HYV6355-621KJ	385	505	4500	2500	125	0.6
HYV6355-681KJ	420	560	4500	2500	130	0.6
HYV6355-751KJ	460	615	4500	2500	143	0.6
HYV6355-781KJ	485	640	4500	2500	150	0.6
HYV6355-821KJ	510	670	4500	2500	157	0.6
HYV6355-911KJ	550	745	4500	2500	175	0.6

Part No: HYV6355 series	Rev: 1/A (2024-04-24)

SMD Types 产品型号	Maximum Allowable Voltage 可容许最大电压		Withstanding Surge Current (8/20 μs) 突波电流耐量		Energy 能量 (10/1000μs)	Rated Power 额定功率
	V_{ACRMS}[V]	V_{DC}[V]	1 time[A]	2 times[A]	(1 time)[J]	[mW]
HYV6355-221KH	140	180	6500	4000	60	0.6
HYV6355-241KH	150	200	6500	4000	63	0.6
HYV6355-271KH	175	225	6500	4000	70	0.6
HYV6355-331KH	210	275	6500	4000	85	0.6
HYV6355-361KH	230	300	6500	4000	93	0.6
HYV6355-391KH	250	320	6500	4000	100	0.6
HYV6355-431KH	275	350	6500	4000	115	0.6
HYV6355-471KH	300	385	6500	4000	125	0.6
HYV6355-511KH	320	415	6500	4000	125	0.6
HYV6355-561KH	350	455	6500	4000	125	0.6
HYV6355-621KH	385	505	6500	4000	125	0.6
HYV6355-681KH	420	560	6500	4000	130	0.6
HYV6355-751KH	460	615	6500	4000	143	0.6
HYV6355-781KH	485	640	6500	4000	150	0.6
HYV6355-821KH	510	670	6500	4000	157	0.6
HYV6355-911KH	550	745	6500	4000	175	0.6

Part No: HYV6355 series	Rev: 1/A (2024-04-24)

3. Electrical characteristics 电气参数

(Ta=25℃)

SMD Types 产品型号	Varistor Voltage at 1 mA 压敏电压	Max Clamping Voltage at Class Current 最大抑制电压	Capacitance 电容量
	[V](±10%)	[V]	@1kHz [pF]
HYV6355-221KJ	220	360	1000
HYV6355-241KJ	240	395	900
HYV6355-271KJ	270	455	740
HYV6355-331KJ	330	550	650
HYV6355-361KJ	360	595	560
HYV6355-391KJ	390	650	510
HYV6355-431KJ	430	710	460
HYV6355-471KJ	470	775	430
HYV6355-511KJ	510	845	430
HYV6355-561KJ	560	925	360
HYV6355-621KJ	620	1025	320
HYV6355-681KJ	680	1120	290
HYV6355-751KJ	750	1240	270
HYV6355-781KJ	780	1290	270
HYV6355-821KJ	820	1355	240
HYV6355-911KJ	910	1500	220

Part No: HYV6355 series	Rev: 1/A (2024-04-24)

SMD Types 产品型号	Varistor Voltage at 1 mA 压敏电压	Max Clamping Voltage at Class Current 最大抑制电压	Capacitance 电容量
	[V](±10%)	[V]	@1kHz [pF]
HYV6355-221KH	220	360	1000
HYV6355-241KH	240	395	900
HYV6355-271KH	270	455	740
HYV6355-331KH	330	550	650
HYV6355-361KH	360	595	560
HYV6355-391KH	390	650	510
HYV6355-431KH	430	710	460
HYV6355-471KH	470	775	430
HYV6355-511KH	510	845	430
HYV6355-561KH	560	925	360
HYV6355-621KH	620	1025	320
HYV6355-681KH	680	1120	290
HYV6355-751KH	750	1240	270
HYV6355-781KH	780	1290	270
HYV6355-821KH	820	1355	240
HYV6355-911KH	910	1500	220

Part No: HYV6355 series	Rev: 1/A (2024-04-24)

4. Mechanical Characteristics 机械性能

Item 指标项目	Specification 技术要求	Description 说明
Tensile 引出端拉伸强度	The lead wire is not broken and the resistor is not damaged. Pressure sensitive voltage change rate within ±5%. 引线无断裂，电阻器无损伤。压敏电压变化率在±5%以内。	Referring to GBT10193-1997(4.10) , UA1 UUB UC and Ud are quoted in IEC 43-2-21 to carry out the strength test of the leading end. 10 n tensile force . 参照 GBT10193-1997 第 4.10，引用 IEC 43-2-21 中规定 Ua1、Ub、Uc 和 Ud 进行引出端强度试验。 引出端施加10N拉力。
Vibration 振动	No significant mechanical damage. The rate of change of voltage is less than 10% . 无明显机械损伤。压敏电压变化率小于10%。	The test sample should be tested according to the GB 2423.10 Test Fe, the frequency is 10-55 Hz, the displacement amplitude is 0.75 mm, along the test sample x, Y two directions vibration 2Hr. 试验样品应根据GB 2423.10试验Fe进行试验，频率为10-55Hz，位移幅值为0.75mm,沿试验样品X, Y两个方向各振动2Hr。
Solderability 可焊性	About 95 % of the lead end is evenly covered by solder. Not less than 90 % of wetting force. 引线末端约95%被焊锡均匀覆盖。不小于润湿力的90。	Referring to GBT10193-1997(4.11) , IEC 43-2-20 test method is used to insert the varistor (5 + 1) mm / s ~ (20 + 1) mm / s) into the molten solder at the temperature of (235±0.5) ° C for 5 S. 参照GBT10193-1997第4.11，引用IEC 43-2-20的试验方法，焊料温度（235 ±0.5）℃，将压敏电阻器以（5+1）mm/s～（20+1）mm/s的速度侵入熔融焊料中1.5至规定的深度，并保持5 S。
Welding heat resistance 耐焊接热	No significant mechanical damage. Pressure sensitive voltage change rate within ±5 %. 无明显机械损伤。压敏电压变化率在±5%以内。	According to 4.12 of GBT10193-1997 and the test Tb method stipulated in IEC 43-2-20, the pins of the psa were impregnated in a welding groove at (260±5) ℃ for (10+1) s. 参照GBT10193-1997第4.12，引用IEC 43-2-20规定试验Tb方法，将压敏电阻器的引脚侵渍于（260±5）℃的焊槽中，持续（10+1）s。

Part No: HYV6355 series	Rev: 1/A (2024-04-30)

5. Environmentalb 耐候特性

Characteristicsvv 项 目	Test Methods 试验方法	Specifications 性能要求
High Temperature Storage 高温存储	The specimen shall be subjected to 125±2℃ for 1000 hours in a thermostatic bath without load and then be stored at room temperature and normal humidity for 1 to 2 hours. The change of V1mA shall be measured. 在 125±2℃无负荷存放 1000 小时,其后在室温状态下,1 到 2 小时以内, 测量 V1mA。	|Δ1mA/V1mA| ≤10%
Humidity Storage 湿热湿热	The specimen shall be subjected to 40±2℃,90～95%RH for 1000hours without load and then stored at room temperature and normal humidity for 1 to 2 hours. The change of V1mA shall be measured. 在温度为 40±2℃,湿度为 90～95%RH 中无负荷放置 1000 小时,其后在室温状态下,1 小时以上 2 小时以内测量 V1mA。	|ΔV1mA/V1mA| ≤10%
Low Temperature Storage 低温存储	The specimen shall be subjected to -40±2℃, for 1000 hours with-out load and then stored at room temperature and normal humidity for 1 to 2 hours. The change of V1mA shall be measured. 在温度为-40±2℃,无负荷放置1000 小时其后在室温状态,1 到2 小时以内测量 V1mA。	|ΔV1mA/V1mA| ≤10%
Temperature Cycle 温度快速变化	The specimen shall be subjected to -40±2℃, then to 125±2℃.At each temperature the specimen shall be stored for 30 minutes. The temperature cycle shall be applied for 5 times. 下限类别温度-40±2℃,上限类别温度 125±2℃,共五个循环,每个极限温度下放置 30 分钟,进行外观检查和 V1mA 测量。	No remarkable mechanical damage |ΔV1mA/V1mA| ≤10% 无可见损伤
High Temperature Load 高温负荷	After being continuously applied the max. allowable voltage at 125±2℃ for 1000 hours and then stored at room temperature and normal humidity for 1 to 2hours.Thereafter, the change of V1mA shall be measured. 在 125±2℃的温度下,施加最大连续电压 1000 小时；然后,在室温状态下,1 到 2 小时以内进行 V1mA 测量。	|ΔV1mA/V1mA| ≤10%
Humidity Load 湿热负荷	The specimen shall be subjected to 40±2℃,90～95%RH and the max. allow able voltage for 1000 hours and then stored at room temperature and normal humidity for 1to 2hours. Thereafter, the change of V1mA shall be measured. 在温度为 40±2℃,湿度为 90～95%RH 中,施加最大连续电压 1000 小时,其后在室温状态下,1 到 2 小时以内测量 V1mA。	|ΔV1mA/V1mA| ≤10%

Part No: HYV6355 series	Rev: 1/A (2024-04-24)

6.Features 特点

- Improved component design in a compact case. 改善产品的设计空间
- High surge current capability. 提供更高的产品通流量
- Superior performance at high temperature. 在更高温下使用
- Better stability and reliability under hot and humid conditions
  在湿热条件下有更好的稳定性和可靠性
- SMD mountable disk varistors, suitable for lead-free reflow / wave soldering.
  片式封装结构更适合回流焊和波峰焊

7.Applications 应用领域

- Power supplies for telecommunication systems. 通讯设备功率电源
- Protection for LED circuits. LED 电路保护
- Protection for consumer, industrial equipment. 消费类、工业类设备保护
- Protection for automotive electronics. 自动化设备保护

8.Applicable standards 参照标准

- UL1449
- TUV
- CQC (GB/T10193, GB/T10194, GB4943.1, GB8898)

9.General technical data 技术要求

Parameter 项目	Value 范围	Unit 单位
Operating temperature 工作温度	-10 to +125	℃
Storage temperature 贮存温度	-10 to +45	℃
Electric strength 电气强度	≥2.5	kV_{RMS}
Insulation resistance 绝缘电阻	≥100	MΩ

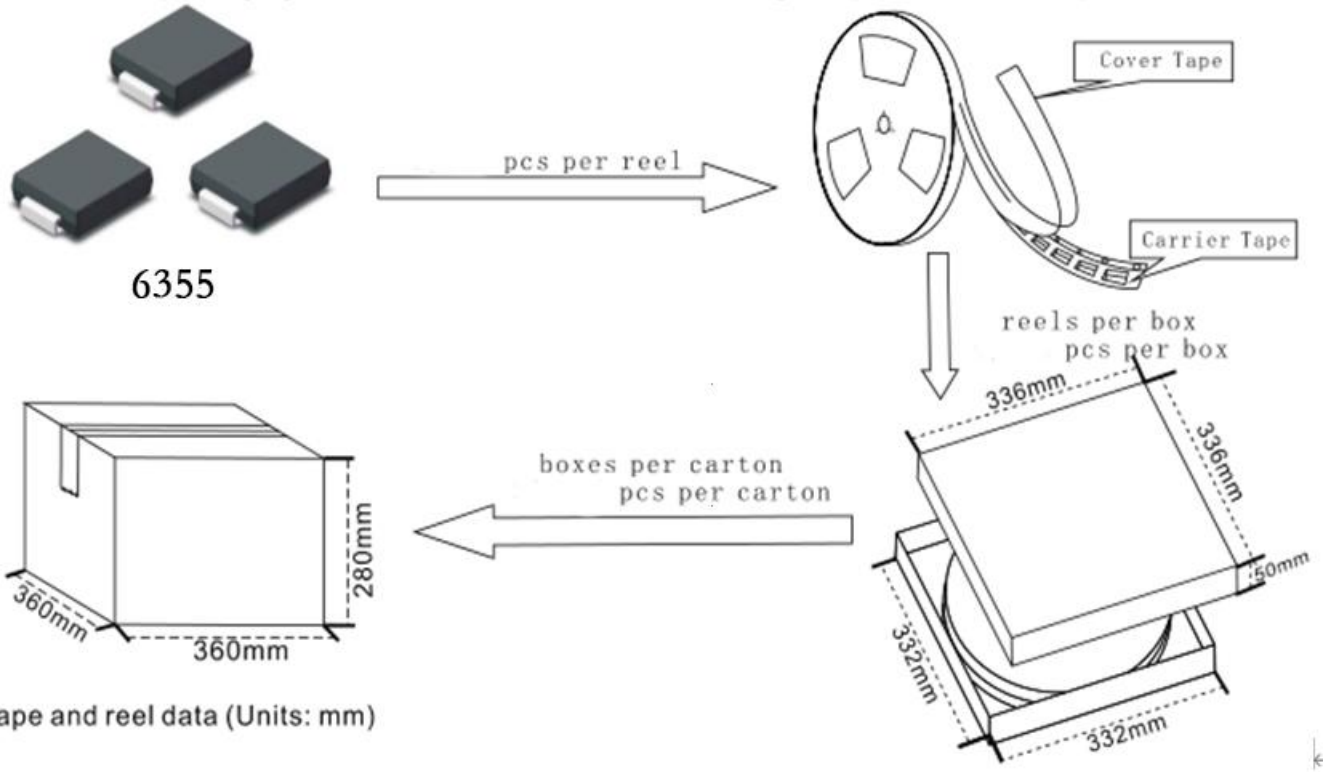
10.Storage condition 贮存条件

- As far as possible, the components should be employed within 24 months after delivery . 从入库到使用时间不大于 24 个月。
- They should be left in their original packing to avoid soldering problems due to oxidized contacts. 为防止出现焊接问题产品尽量在使用前保持原包装。
- Storage temperature: - 10 up to + 45° C. 贮存温度在-10~45° C.
- Relative humidity: < 75 % 相对湿度 <75%。

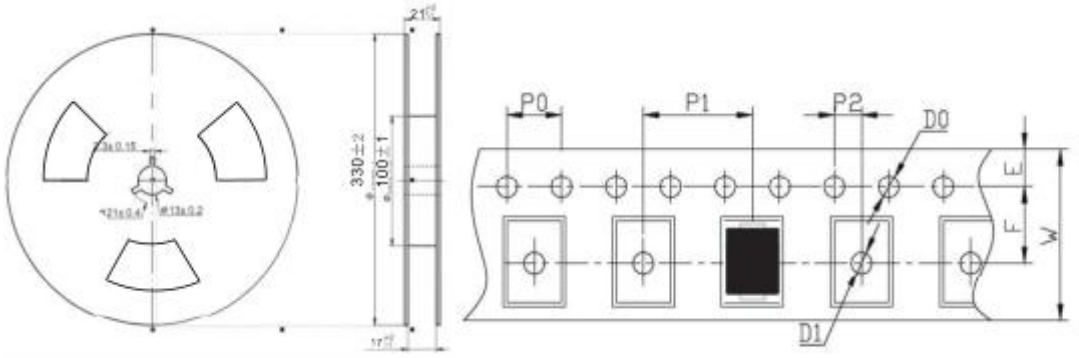
Part No: HYV6355 series	Rev: 1/A (2024-04-24)

11. The method of packaging and dimension are shown as below figure.
(Dimension in mm) 编带尺寸

1.The method of packaging and dimension are shown as below figure. (Dimension in mm)



2. Tape and reel data (Units: mm)



尺寸测量位	W	E	F	D0	D1	P0	P1	P2	T	t1	A0	B0	K0	10P0
规范值 mm														

Revision History 修订履历表

Revise Page **变更页次**	**Revise Contents** **变更内容**	**Revis ate** **变更日期**	**Revision No.** **变更后版次**	**Signature** **负责人**
全部	首次发行	2024-04-24	0/A	朱同江