



# Voltage Dependent Resistor

压敏电阻

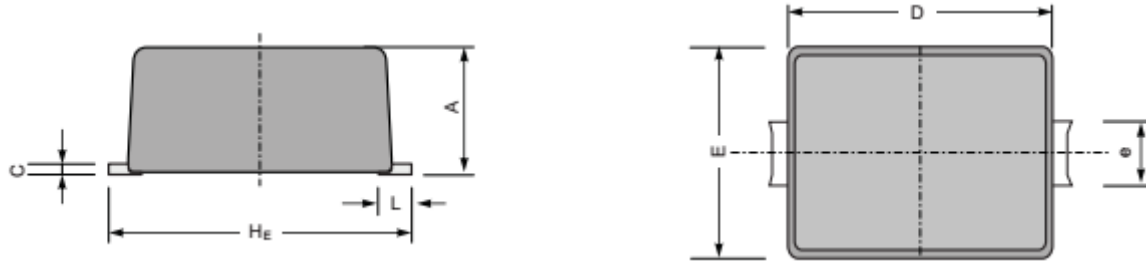
方形贴片 Series

1. Appearance 外形尺寸

1-1. Marking 标志

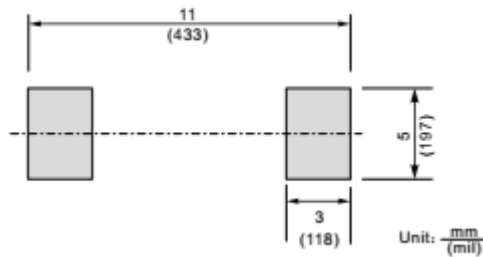
WLR-07D (4032SV) 471KH (SV)

1-2. Dimensional Drawing (mm) 尺寸



UNIT		A	H <sub>E</sub>	D	E	e	C	L
mm	max	4.2	11	10	8.7	2.7	0.15 (ref)	0.5 (ref)
	min	3.8	10.6	9.6	8.3	2.3		
mil	max	165	433	394	343	106	9.8 (ref)	20 (ref)
	min	150	417	378	302	90.5		

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



2. Part numbering 命名方式

WLR	07D (4032SV)		471		KH		(SV)
Plastic Varistors 塑封 压敏电阻器系列	Product Size 产品尺寸 mm		Varistor Voltage 压敏电压 V		Tolerance 压敏电压允差		Package 包装方式
			470	47	KH	±10%	SV-编带
	4032	10.0*8.5	271	270			
	07D	芯片尺寸	471	470			

### 3. Electrical characteristics 电气参数 (Ta=25°C)

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 <sub>ACRMS</sub> [V]	V <sub>DC</sub> [V]	1 time[A]	2 times[A]	(1 time)[J]	[mW]
WLR07D-221KHSV	140	180	1750	1200	18.0	250
WLR07D-241KHSV	150	180	1750	1200	18.5	250
WLR07D-271KHSV	175	225	1750	1250	21.0	250
WLR07D-331KHSV	210	270	1750	1250	22.0	250
WLR07D-361KHSV	230	300	1750	1250	23.0	250
WLR07D-391KHSV	250	320	1750	1250	25.0	250
WLR07D-431KHSV	275	350	1750	1250	29.0	250
WLR07D-471KHSV	300	385	1750	1250	31.0	250
WLR07D-511KHSV	320	415	1750	1250	33.0	250
WLR07D-561KHSV	350	460	1750	1250	33.0	250
WLR07D-621KHSV	385	505	1750	1250	35.0	250
WLR07D-681KHSV	420	560	1750	1250	35.0	250
WLRV4032-221KH	140	180	2000	1500	18.0	250
WLRV4032-241KH	150	200	2000	1500	18.5	250
WLRV4032-271KH	175	225	2000	1500	21.0	250
WLRV4032-331KH	210	270	2000	1500	22.0	250
WLRV4032-361KH	230	300	2000	1500	23.0	250
WLRV4032-391KH	250	320	2000	1500	25.0	250
WLRV4032-431KH	275	350	2000	1500	29.0	250
WLRV4032-471KH	300	385	2000	1500	31.0	250
WLRV4032-511KH	320	415	2000	1500	33.0	250
WLRV4032-561KH	350	460	2000	1500	33.0	250
WLRV4032-621KH	385	505	2000	1500	35.0	250
WLRV4032-681KH	420	560	2000	1500	35.0	250

Part No. 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	Class Current 电流等级 (8/20 $\mu$ s)	Capacitance 电容量
	[V]( $\pm$ 10%)	[V]	[A]	@1kHz [pF]
WLR07D-221KHSV	220	360	10	250
WLR07D-241KHSV	240	395	10	200
WLR07D-271KHSV	270	455	10	170
WLR07D-331KHSV	330	550	10	150
WLR07D-361KHSV	360	595	10	140
WLR07D-391KHSV	390	650	10	130
WLR07D-431KHSV	430	710	10	110
WLR07D-471KHSV	470	775	10	100
WLR07D 511KHSV	510	845	10	90
WLR07D-561KHSV	560	920	10	80
WLR07D-621KHSV	620	1020	10	75
WLR07D-681KHSV	680	1120	10	70
WLRSV4032-221KH	220	360	10	250
WLRSV4032-241KH	240	395	10	200
WLRSV4032-271KH	270	455	10	170
WLRSV4032-331KH	330	550	10	150
WLRSV4032-361KH	360	595	10	140
WLRSV4032-391KH	390	650	10	130
WLRSV4032-431KH	430	710	10	110
WLRSV4032-471KH	470	775	10	100
WLRSV4032-511KH	510	845	10	90
WLRSV4032-561KH	560	920	10	80
WLRSV4032-621KH	620	1020	10	75
WLRSV4032-681KH	680	1120	10	70

**4.Features 特点**

- Improved component design in a compact case. 改善产品的设计空间
- High surge current capability of up to 1.75 kA. 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

**5.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

**6.Applicable standards 参照标准**

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

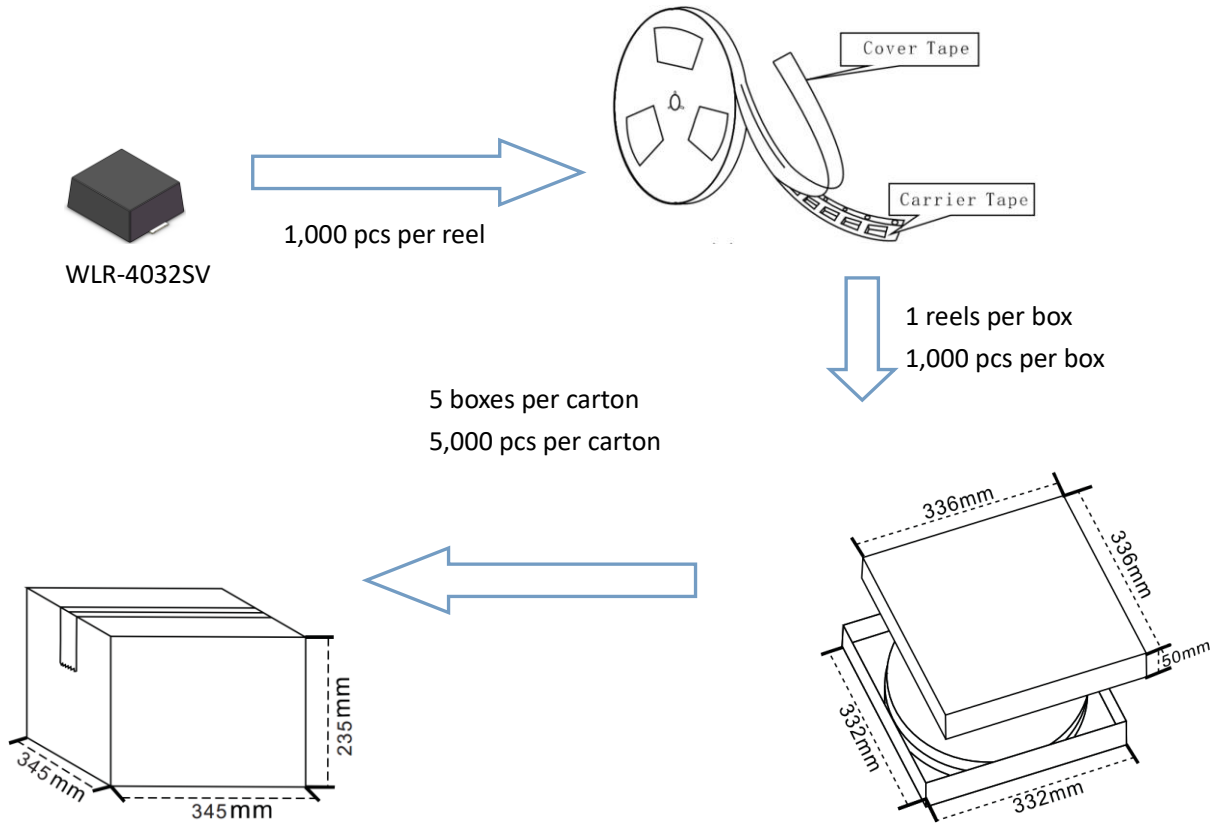
**7.General technical data 技术要求**

Parameter 项目	Value 范围	Unit 单位
Operating temperature 工作温度	-55 to +125	°C
Storage temperature 贮存温度	-25 to +45	°C
Electric strength 电气强度	≥2.5	kV <sub>RMS</sub>
Insulation resistance 绝缘电阻	≥100	MΩ

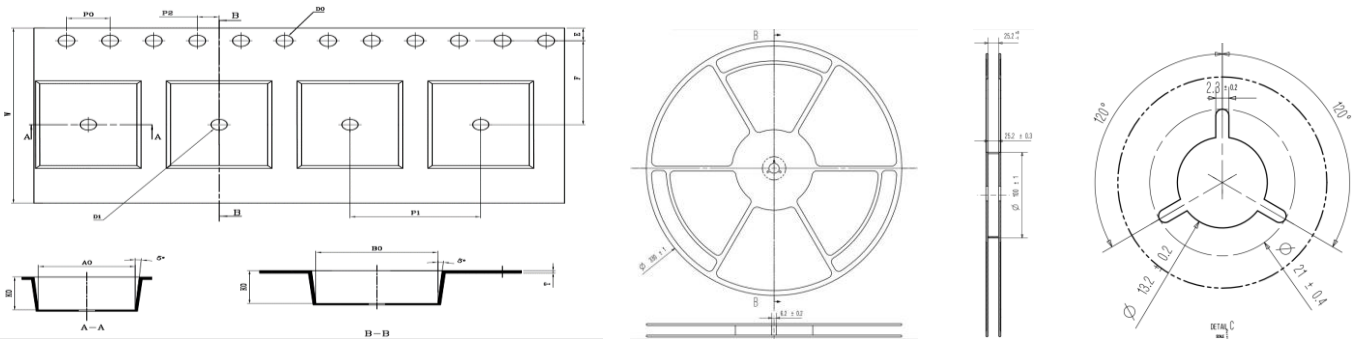
**8.Storage condition 贮存条件**

- As far as possible, the components should be employed within 24 months after delivery from factory. 从工厂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: - 25 up to + 45° C. 贮存温度在-25~45° C.
- Relative humidity: < 75 % 相对湿度 <75%。

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



Tape and reel data(Units:mm)



尺寸测量位	W	E	F	D0	D1	PO	P1	P2	A0	B0	KO	T	10PO
规范值	24.0±0.1	1.75±0.10	11.5±0.10	1.50 <sup>+0.10</sup> / <sub>-0</sub>	1.50 <sup>+0.1</sup> / <sub>-0</sub>	4.0±0.1	12.0±0.1	2.0±0.1	8.90±0.1	11.20±0.1	4.50±0.1	0.35±0.05	40.0±0.2