

Type KW5S2R Series /Gas Discharge Tube贴片氣體放電管



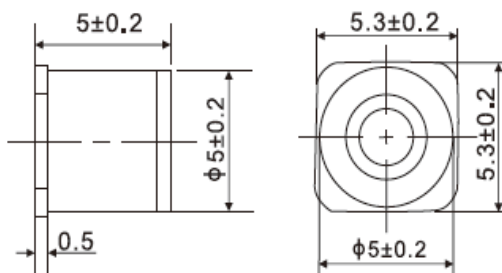
**Features**产品特征

- ➔ Non-Radioactive  
非引线式
- ➔ Low insertion loss  
低插入损耗
- ➔ Excellent response to fast rising transients  
对快速上升瞬态极好的响应
- ➔ 5KA surge capability tested with 8/20µs pulse as defined by IEC 61000-4-5  
根据IEC 61000-4-5的定义，测试8/20µs脉冲的5KA冲击能力
- ➔ RoHS compliant  
通过无铅认证
- ➔ Ultra low capacitance  
超低电容

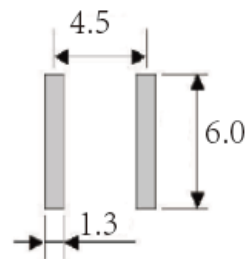
**Applications**产品应用

- ➔ Communication equipment  
通信设备
- ➔ Test equipment  
测试设备
- ➔ Broadband equipment  
宽带设备
- ➔ Power supplies  
电源供应器
- ➔ CATV equipment  
有线电视设备
- ➔ Data lines  
数据传输线
- ➔ ADSL equipment,including ADSL2+  
ADSL设备,包括ADSL2 +
- ➔ Telecom SLIC protection  
电信SLIC保护

**Dimensions**(Unit:mm)尺寸 (单位: mm)



**Recommended Land Pattern**焊盘尺寸



Recommended Pad Size

**Agency Approvals**认证

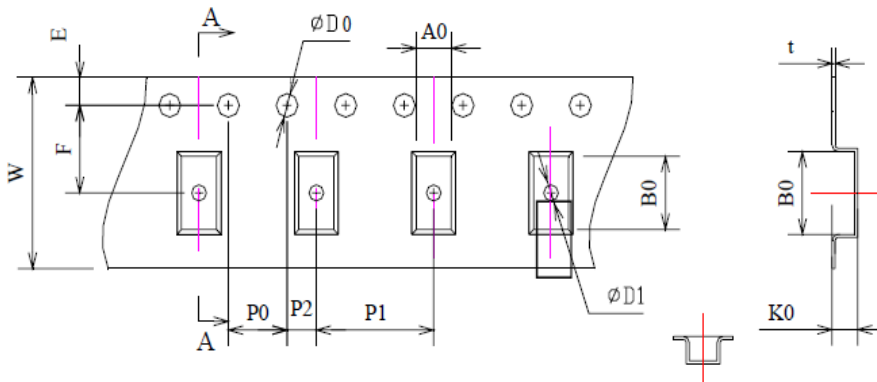
Icon	Description
RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003
	Mean Lead free
	Compliance with UL497B,Certificated E324754

Type KW5S2R Series

Electrical Specifications 电气特性

Catalog Number	DC Spark-Over Voltage 100V/s Vs(V)	Impulse Spark-Over 1KV/μs Vis(V)Max	Nom Impulse Discharge Current 10×700μs(KV)	Nom Impulse Discharge Current 8×20μs(KA)	Insulation Resistance		Capacitance C 1MHz < 6V pF Max
					Min. MΩ	DC V	
KW5S2R75	75V±30%	700	5.0	5.0	1000	50	1
KW5S2R90	90V±30%	700	5.0	5.0	1000	50	1
KW5S2R150	150V±30%	700	5.0	5.0	1000	50	1
KW5S2R230	230V±20%	600	5.0	5.0	1000	100	1
KW5S2R350	350V±20%	800	5.0	5.0	1000	100	1
KW5S2R470	470V±20%	900	5.0	5.0	1000	250	1
KW5S2R600	600V±20%	1200	5.0	5.0	1000	250	1
KW5S2R1000	1000V±20%	1800	5.0	5.0	1000	250	1

Packaging and Type Designation 包装和型号名称



符号	尺寸 (mm)
W±0.3	16
A0±0.1	5.6
B0±0.1	5.5
K0±0.1	5.6
P0±0.1	4
P1±0.1	8
P2±0.1	2
T±0.05	0.5
E±0.1	1.75
F±0.1	7.5
D0±0.1	1.5

Formation of Type Designation 类型命名的形成

Example: KW - 5 - S - 2R-90- \* - \* - \*  
① ② ③ ④ ⑤ ⑥⑦⑧

Symbols 符号表

① Company code	KW=Kingwahoo product
② Rated diameter	3=3mm diameter 4=4mm diameter 5=5mm diameter ...
③ Load Configuration	A=Axial loads M=Radial loads 1 E=Radial Loads 2 S=SMD structure B=No loads
④ Electrode amount	2R=2electrode device 3R=3 electrode device
⑤ DC Spark-over Voltage	75=75V 90=90V...
⑥ Surge rating	L=0.5KA T=1KA U=1.5KA N=2KA S=2.5KA R=5KA M=10KA H=20KA W: > 20KA
⑦ Fail safe(FS)	F=With Fail Safe O=Without Fail Safe
⑧ Package	B=Bulk Packing R=Reel Taping S=SMD Taping O=No Require

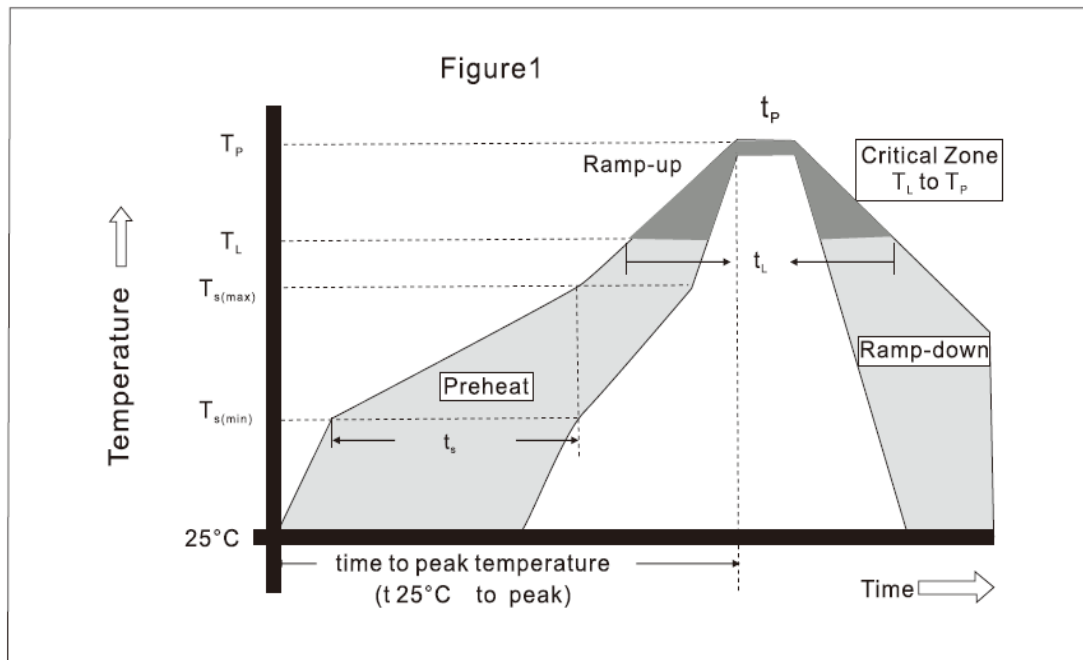
Packaging

On Taping:KW5S2R series-1500pcs Per Reel,6000PCS in box,24000pcs Outer box.

Type KW5S2R Series

Soldering Parameters 焊接参数

Reflow Condition 回流条件		Pb-Free assembly 无铅制程
Heat Pre	Temperature Min( $T_s$ )	150°C
	Temperature Max( $T_s$ )	200°C
	Time(Min to Max)( $t_s$ )	60-180secs
Average ramp up rate(Liquidus) $T_L$ to peak		3°C/second max
$T_s$ (max)to $T_L$ -Ramp-up Rate		5°C/second max
Reflow	-Temperature( $T_L$ )(Liquidus)	217°C
	Time(Min to Max)( $t_L$ )	60-150 seconds
Peak Temperature( $T_p$ )		260 <sup>-0/-5</sup> °C
Time within 5°C of actual peak Temperature( $t_p$ )		8-20 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature( $T_p$ )		8 minutes max.
Do not exceed		260°C



Type KW5S2R Series

**Solderability test可焊性试验**

Solderability	
Solder Pot Temperature	245±5°C
Sloder Dwell Time	4-6 seconds

**Environmental Reliability Characteristics环境可靠性条件**

Testing items	Technical standards
High Temperature Storage Test	Temperature:85°C Time:2H
Low Temperature Storage Test	Temperature:-40°C Time:2H
Vibration	Frequency:100-500Hz Amplitude:0.15mm Time:45mins
Resistance of soldering heat	Temperature:260±5°C Time of dip soldering:10s,1 time

**Temperature Range温度范围**

- Operating temp range:-55°C to +125°C
- Storage temp range:-40°C to +85°C