

Type KW4S2R Series /Gas Discharge Tube贴片氣體放電管



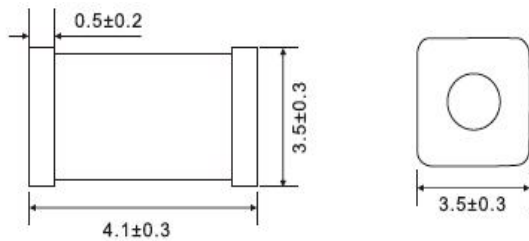
Features产品特征

- Small Size Design 4.1*3.5*3.5mm
小型设计 4.1*3.5*3.5mm
- Current Handling Capability 5KA@8/20μs
5 KA@8/20 μs电流处理能力
- Low Capacitance and Insertion Loss
低电容和低插入损耗
- Fast Response and Long Service Life
响应快, 使用寿命长
- Reliable to Protect Electrostatic Surge
可靠的静电浪涌保护
- Moisture sensitivity level:Level 1
湿度敏感等级:1级

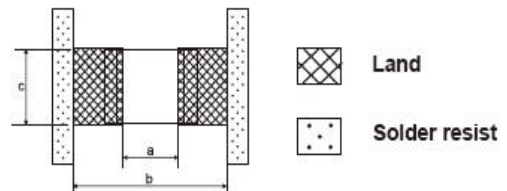
Applications产品应用

- CATV modem, Telecom protection
有线电视调制解调器, 电信的保护
- Hub protection, Security systems
中心保护, 安全系统
- Data acquisition and Audio systems
数据采集和音频系统
- Set-Top box protection
机顶盒的保护
- MDC/PCI modems
MDC / PCI调制解调器

Dimensions(Unit:mm)尺寸 (单位: mm)



Recommended Land Pattern焊盘尺寸



焊盘
阻焊板

Soldering Moder	Dimensions (mm)		
	a	b	c
Reflow Soldering	2.5	6.5~8.5	3.7
Flow Soldering	2.7	6.5~9.5	3.9

Agency Approvals认证

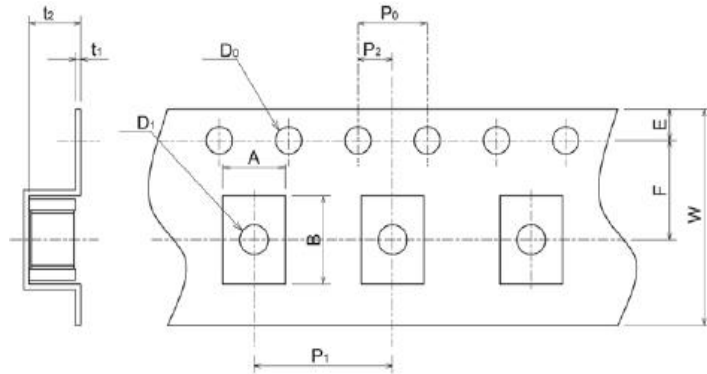
Icon	Description
RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003
Ⓜ	Mean Lead free

Type KW4S2R 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	
KW4S2R75	75V±30%	700	5.0	5.0	1000	50	1
KW4S2R90	90V±30%	700	5.0	5.0	1000	50	1
KW4S2R140	140V±30%	700	5.0	5.0	1000	50	1
KW4S2R150	150V±30%	700	5.0	5.0	1000	50	1
KW4S2R200	200V±20%	600	5.0	5.0	1000	100	1
KW4S2R230	230V±20%	600	5.0	5.0	1000	100	1
KW4S2R300	300V±20%	800	5.0	5.0	1000	100	1
KW4S2R350	350V±20%	800	5.0	5.0	1000	100	1
KW4S2R400	400V±20%	900	5.0	5.0	1000	100	1
KW4S2R420	420V±20%	900	5.0	5.0	1000	100	1
KW4S2R470	470V±20%	900	5.0	5.0	1000	250	1
KW4S2R600	600V±20%	1000	5.0	5.0	1000	250	1

Packaging and Type Designation 包装和型号名称



符号	尺寸 (mm)
A	3.9±0.2
B	4.5±0.2
W	12±0.3
F	5.5±0.05
E	1.75±0.1
P1	8.0±0.1
P2	2.0±0.05
P0	4.0±0.1
D0	φ1.5±0.1
D1	φ1.65±0.15
t1	0.30±0.1
t2	3.9±0.2

Formation of Type Designation 类型命名的形成

Example: KW - 4 - S - 2R-90- * - * - *
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

Symbols 符号表

① Company code	KW=Kingwahoo product
② Rated diameter	2=2mm diameter 3=3mm diameter 4=4mm diameter...
③ Load Configuration	A=Axial loads M=Radial loads 1 E=Radial Loads 2 S=SMD structure B=No load
④ Electrode amount	2R=2electrode device 3R=3 electrode device
⑤ DC Spark-over Voltage	75=75V 150=150V...
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 0=Without Fail Safe
⑧ Package	B=Bulk Packing R=Reel Taping S=SMD Taping 0=No Require

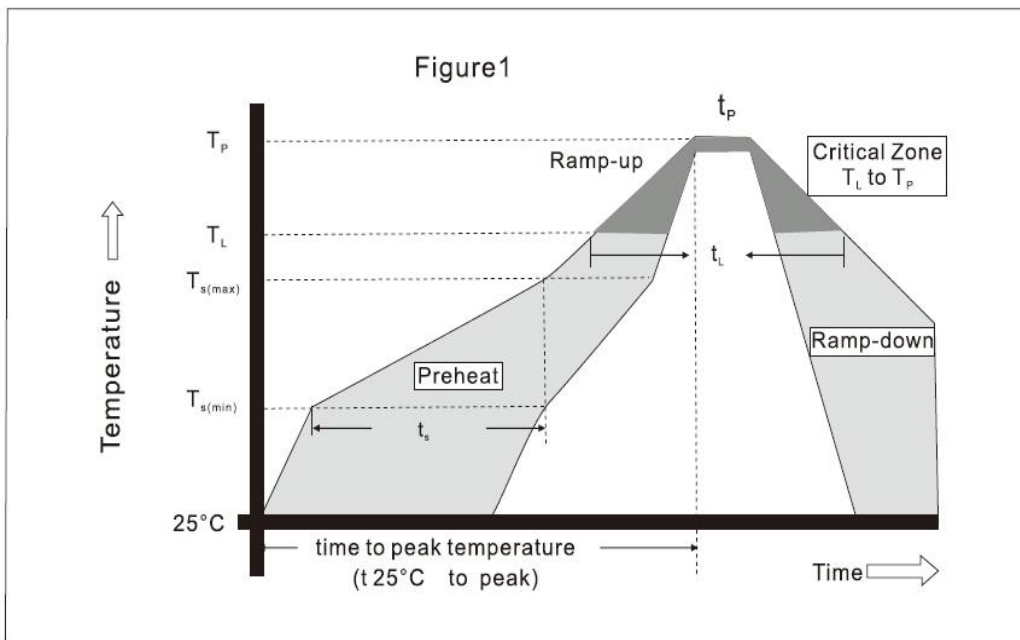
Packaging

On Taping: KW4S2R series-2000pcs Per Reel, 8000PCS in box, 40000pcs Outer box.

Type KW4S2R 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) Temp (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 ^{0/-5} °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 KW4S2R Series

Solderability test可焊性试验

Solderability	
Solder Pot Temperature	245±5℃
Solder 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℃ Time:2H
Low Temperature Storage Test	Temperature:-40℃ Time:2H
Vibration	Frequency:100-500Hz Amplitude:0.15mm Time:45mins
Resistance of soldering heat	Temperature:260±5℃ Time of dip soldering:10s, 1 time

Temperature Range温度范围

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