

FKN1WS 半短路线绕保险电阻

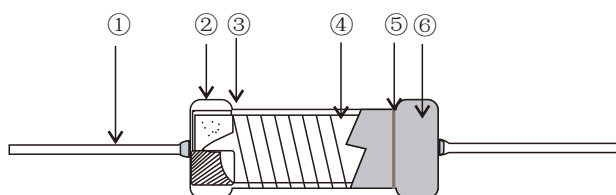


本体颜色: Body Color
 标准品: Standard (Gray 灰色、Green 绿色、Black 黑色可选)
 标示: Marking
 色环: Color Code
 (根据客户要求提供相应标识)
 (According to the customer request to provide corresponding identification)

特性 Feature

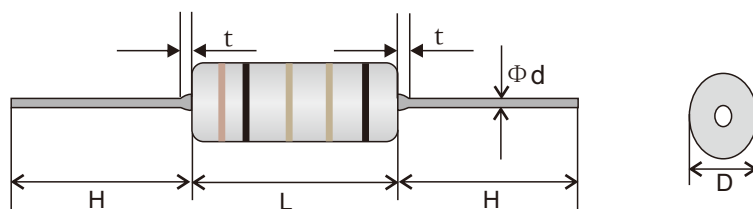
- (1) 正常情况下具备电阻功能。Function as a resistor in normal operation condition.
- (2) 异常过负荷时可快速熔断。Quick fusing protects circuit from excessive over load.
- (3) 在半短路电流条件下, 0.5A—0.7A, 电阻熔断, 雷击测试合格, 符合半短路线绕保险丝电阻要求。
 Under the condition of soft short-circuit current (0.5A-0.7A) and resistance fuses, a lightning strike testing qualified, meet the fuse resistance requirement of soft short-circuit.
- (4) 产品认证UL 1412 证书号 E341249。Approvals awarded; UL 1412 File No.E341249.

结构图 Construction



①	②	③	④	⑤	⑥
端子线	线帽	瓷棒	绕线	标示	绝缘涂料
Lead wire	Cap	Ceramic base	wire wound	marking or color code	insulation coat

尺寸 Dimensions



规格 Type	尺寸Dimensions(mm)					重量Weight(g) (1000pcs)
	L±1.0	t Max	D±0.5	Φd±0.05	H±3	
FKN 1WS	9.0	2.5	3.50	0.56	26.0	500

提供更多规格的产品, 请向我们的工程师咨询 kwx@kwxcom.com
 For other specification, please contact with our engineer kwx@kwxcom.com

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● 产品认证 Approvals Awarded

UL 1412 File NO.E341249, CQC08001024453, 符合RoHS和REACH

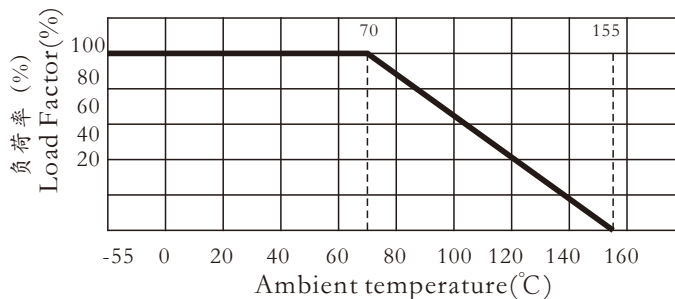
● 参考规格 Reference Standards

JIS C 5201-1

● 功率、阻值范围与耐电压 Power And Resistance etc

规格 Type	阻值范围 Resistance Range(Ω)	最高使用电压 MaxWorking Voltage	最高负荷电压 MaxOverload Voltage	耐电压Dielectric Withstanding Voltage	温度系数 T.C.R
	J \pm 5%(E24)				
FKN 1WS	1~100 Ω	50V	100V	300V	\pm 3000PPM/ $^{\circ}$ C

● 额定温度下降曲线图 Derating Curve



● 熔断特性 Fusing Characteristics (参考用 Preference)

FUSING characteristics 熔断特性 (Residual resistance \geq 100 times nominal resistance 残留阻值为公称阻值5万倍以上)

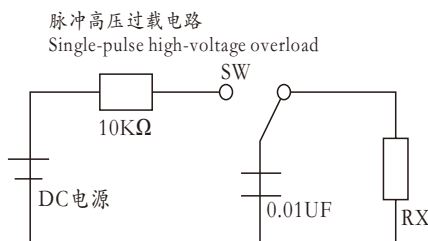
规格 Type	阻值范围 Resistance Range	$\sqrt{48PR}$	$\sqrt{36PR}$	$\sqrt{25PR}$	熔断时间 Fusing Time
FKN 1WS	1~100 Ω	1~10 Ω	4.7~56 Ω	10~100 Ω	30s Max.

产品熔断特性可由双方根据实际应用协商确定, 具体请向我们的工程师咨询

kwx@kwxcom.com Fusing characteristics can be fixed according to customers needs, more inquiry please contact with our engineer kwx@kwxcom.com

● 脉冲高压过载试验 Pulse Voltage Overload test

- (1) 绕线保险丝电阻, 在充电器工作时, 能够承受接通电源的瞬间产生的十几倍甚至几十倍的冲击电流, 并保证充电器内部及其它性能较弱的元器件不受损坏。
- (2) 当电网受到雷电感应的, 或供电线路中电感负载切断时自感电动势等兼脉冲产生的浪涌干扰, 绕线保险丝电阻器完全能够抑制冲击电流、浪涌电流对充电器的影响, 确保电器安全。
- (3) 浪涌电流, 是指电网中出现的时间象“浪”一样的由高压引起的大电流, 这种高压, 其脉宽为微秒, 峰值在0.8-3KV的高压脉冲, 大电流的强度最小为40安培, 最大为600安培, 持续时间最短为10微秒, 最长为100微秒。



试验前先量RX电阻值, DC2KV, 按左电路重复10次通过2.5秒, 断电2.5秒, 去掉试验电压后经30-45分钟后, 按规定测量电阻, $\Delta R/R \leq (\pm 3\% + 0.05\Omega)$

Measure Rx before test, swith for left handside to test under DC3KV for 2.5 seconds and then swith to left handside to break for 2.5seconds, Repeat 10 times, and than off the measure to cool down for 30-45 minutes, Measure the resistance $\Delta R/R \leq (\pm 3\% + 0.05\Omega)$

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● 半短路测试 Soft short-circuit test

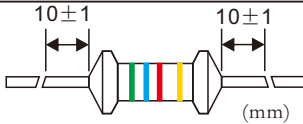
充电器等电源产品在半短路时电流只有0.5A——0.6A，在半短路状态下，保险丝电阻熔断，而抗雷击测试通过。我们的半短路保险丝电阻满足下列条件：

- 1、1A DC，10秒内熔断；500mA——700mA电流范围内熔断，时间小于5分钟。
- 2、抗雷击标准：单个电阻测试1.5KV，整机测试2KV。
- 3、整机施加AC142V,负载电阻250Ω，60秒内熔断;整机施加AC242V,负载电阻250Ω,10秒内熔断。
- 4、整机雷击测试按EN61000-4-5标准施加2KV雷击电压，电阻不开路。

Chargers and other power products in soft short circuit current is 0.5 A~0.6 A. In a short circuit condition, the fusible resistors fuse, and it can pass the lightning strike test. Our soft short circuit fuse resistor meet the following conditions:

- 1、1A DC, fuse in 10 seconds; Under the condition of 500 mA - 700 mA fuse current range, fuse time is less than 5 minutes.
- 2、Lightning strike voltage standard: Single resistor test 1.5KV, machine testing 2KV.
- 3、AC142V loaded on application unit, load resistance 250 Ω, fusing time is within 30s; AC242V loaded on application unit, load resistance 250 Ω, fusing time is within 5s.
- 4、Surge immunity test, surge voltage 2KV by the standard EN61000-4-5, the resistor is not open.

● 性能Performance

试验项目 Test Items	规格值 Performance Requirements	试验方法 Test Methods(JIS C 5201-1)
抵抗值 Dc resistance	须在规定之R值的容许差内 Allowed under r rate tolerance	
温度系数 T.C.R.	规定值内 Within specified T.C.R	室温+100℃ Room temperature+100℃
短时间过负荷 Short time overload	±(2%R+0.05Ω)	4倍额定功率，5秒 4 times the rated power for 5 seconds
熔断特性 Fusing characteritic	60秒内熔断 Fusing time is within 60s	恒流：熔断电流= $\sqrt{R \times P \times 25 / R}$ Rated power × 25
耐电压 Dielectric withstanding voltage	涂装不可损坏,绝缘不可破坏 No evidence of flashover or mechanical damage or insulation breakdown	电阻体置于v型槽上,依特性表之电压规定加压60秒 Resistors shall be clamped in v-block and shall be test at specified in the above list for 60 seconds
耐湿负荷寿命 Load life in humidity	±(5%R+0.1Ω)	额定电压40℃, 95% RH, 1000小时 Rated voltage at 40℃, 95%RH for 1,000 hours
耐湿性 Moisture resistance	±(1%R+0.05Ω)	40℃, 95% RH, 240小时 40℃, 95%RH for 240 hours
焊锡附着性 Adhesion of solderability	端子表面焊锡覆盖率95%以上 95% surface of terminal covered by solder	260℃ ± 5℃ (℃) 5s ± 0.5s (sec)
焊锡耐热 Resistance to soldering heat	±(1%R+0.05Ω)	260℃ ± 5℃ for 10 seconds(焊锡槽) 350℃ ± 10℃ for 3.5 seconds(手焊锡)
耐溶剂性 Tance to solven	涂漆及色码无脱落 No deterioration of protective coating and markings	放入稀释剂中 3分钟 Add thinner in 3 minutes
负荷寿命 Load life	±(5%R+0.05Ω)以内 Within ±(5%R+0.05Ω)	70℃ 1000小时 额定电压(90分钟on, 30分钟off) 70℃ 1000h rated voltage
绝缘电阻 Insulation resistance	> 1000MΩ	500V绝缘测试1分钟 500V insulation test 1min.

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● 料号编号 Ordering Information

例 example

FKN	01S	R100	J	T
型号 Type	额定功率 Rated Power	电阻值 (Ω) Resistance	误差值 Tolerance	包装 Packing
	01S:1WS	R100=0.1 1R00=1 10R0=10 1M00=1M	J±5%	T: 编带(Tape) P: 散装(In bulk)