FKN1WS Fusible Wire Wound Resistors

Feature

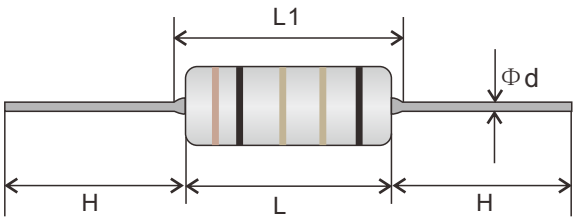
Ⅰ Function as a resistor in normal operation condition.

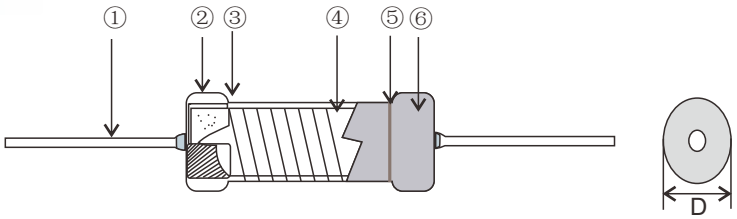
Ⅱ Quick fusing protects circuit from excessive over load.

Ⅲ 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.

Ⅳ Approvals awarded; UL 1412 File No.E341249.

Dimensions And Construction





①	②	③	④	⑤	⑥
Lead wire	Cap	Ceramic base	wire wound	marking or color code	insulation coat

Type	Dimensions(mm)					Weight(g) (1000pcs)
	L±1.0	L1 Max	D±0.5	Φd±0.05	H±3	
FKN 1WS	9.0	10.0	3.50	0.56	26.0	500

For other specification, please contact with our engineer kh@khxcom.com

Approvals Awarded

UL 1412 File NO.E341249, CQC08001024453, In accordance with RoHS and REACH

Reference Standards

JIS C 5201-1

Ordering Information

Example:

FKN	01S	J	R100	T
(1)	(2)	(3)	(4)	(5)
Series Name	Power Rating	Resistance Tolerance	Resistance	Packing

(1)Type: FKN SERIES

(2)Power Rating: 01S=1WS

(3)Tolerance: J=±5%

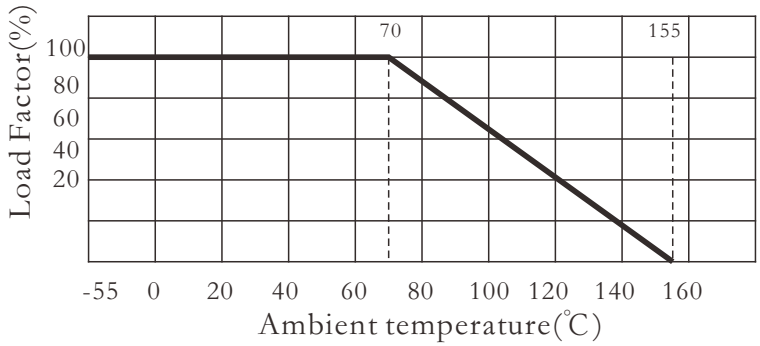
(4)Resistance Value:R100=0.1R、1R00=1Ω、10R0=10Ω、100R0=100Ω

(5)Packing:T=Tape,P=In bulk

Power And Resistance etc

Type	Resistance Range(Ω) J±5%(E24)	MaxWorking Voltage	MaxOverload Voltage	Dielectric Withstanding Voltage	T.C.R
FKN 1WS	1~100Ω	50V	100V	300V	±3000PPM/℃

Derating Curve



Fusing Characteristics

FUSING characteristics （Residual resistance≥100 times nominal resistance）

Type	Resistance Range	$\sqrt{48PR}$	$\sqrt{36PR}$	$\sqrt{25PR}$	Fusing Time
FKN 1WS	1~100Ω	1~10Ω	4.7~56Ω	10~100Ω	30s Max.

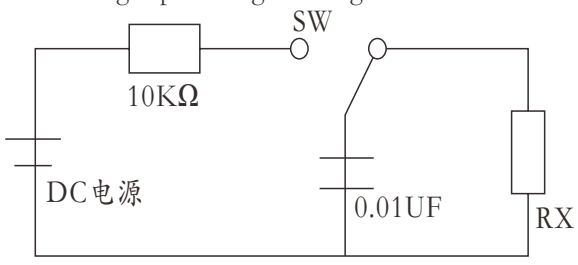
Fusing characteristics can be fixed according to customers needs, more inquiry please contact with our engineer kh@khxcom.com

Pulse Voltage Overload test

(1) Wire-wound type Fusible Resistor can bear a dozen times or higher impulse voltage when it works.

(2) When the power grid meet the lighting induction, surge disturbtance can be avoided. and make the product using savely.

Single-pulse high-voltage overload



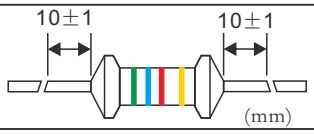
Measure Rx before test, swith for left handside to test under DC3KV for 2.5 seconds and then swith to left handside to break for 2.5seconds, Repeat 10 times, and than off the measureto cool down for 30-45 minutes, Measure the resistance△R/R≤(±3%+0.05Ω)

Soft Short-Circuit Test

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.

Peformance

Test Items	Performance Requirements	Test Methods(JIS C 5201-1)
Dc resistance	Allowed under r rate tolerance	
T.C.R.	Within specified T.C.R	Room temperature+100℃
Short time overload	±(2%+0.05Ω)	4 times the rated power for 5 seconds
Fusing characteritic	Fusing time is within 60s	Constant current: fusing current=$\sqrt{R\times P\times 25}/R$ Rated power×25
Dielectric withstanding voltage	No evidence of flashoo-ver mechanical damage arctin or insulation breakdown	Resistors shall be clamped in v-block and shall be test at specified in the above list ror 60 seconds
Load life in humidity	±(5%+0.1Ω)	Rated voltage at 40℃,95%RH for 1,000 hours
Moisture resistance	±(1%+0.05Ω)	40℃,95%RH for 240 hours
Adhesion of solderability	95% surface of terminal covered by solder	260℃ ±5℃ (℃) 5s±0.5s (sec)
Resistance to soldering heat	±(1%+0.05Ω)	260℃ ±5℃ for 10 seconds 350℃ ±10℃ for 3.5 seconds
Tance to solven	No deterioration of pro-tective coating and markings	Add thinner in 3 minutes
Load life	±(5%+0.05Ω)以内 Within ±(5%+0.05Ω)	70℃ 1000h rated voltage
Insulation resistance	>1000MΩ	500V insulation test 1min.