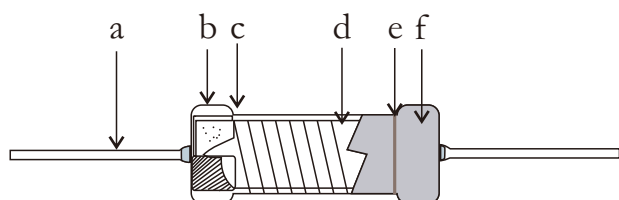




● Features

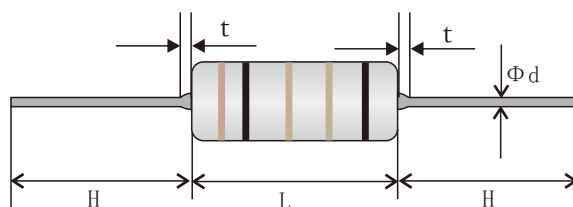
- I Function as a resistor in normal operation condition.
- II Quick fusing protects circuit from excessive over load.
- III Approvals awarded; UL 1412 File No.E341249.
- IV Products meet EU-RoHS.

● Construction



a	Lead wire
b	Cap
c	Ceramic base
d	Wire wound
e	Marking or color code
f	Insulation coat

● Dimensions



Type	power (W)	Dimensions(mm)					Weight(g) (1000pcs)
		$L \pm 1.0$	t Max	$D \pm 0.5$	$\Phi d \pm 0.05$	$H \pm 3$	
FKN 14	1/4	6.50	1.5	2.5	0.50	25.0	140
FKN 12	1/2	8.0	2.0	3.0	0.60	25.0	360
FKN 01	1	10.0	2.5	3.5	0.70	30.0	540
FKN02	2	12.0	2.5	4.5	0.70	30.0	860
FKN 03	3	15.0	2.5	5.0	0.75	30.0	1500
FKN 05	5	17.0	2.5	6.0	0.75	30.0	2100
FKN 7	7	22.0	2.5	7.0	0.75	30.0	2600
FKN 10	10	24.0	2.5	8.0	0.80	30.0	3900

For other specification, please contact with our engineer kwx@kwxcom.com

● Ordering Information

Example:

FKN	14	J	R100	NH
(1)	(2)	(3)	(4)	(5)
Series Name	Power Rating	Resistance Tolerance	Resistance	Lead wire

(1)Type: FKN SERIES

(2)Power Rating: 14=1/4W、12=1/2W、01=1W、02=2W、03=3W

(3)Tolerance: J= $\pm 5\%$

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

(5)Lead wire: Heat plated

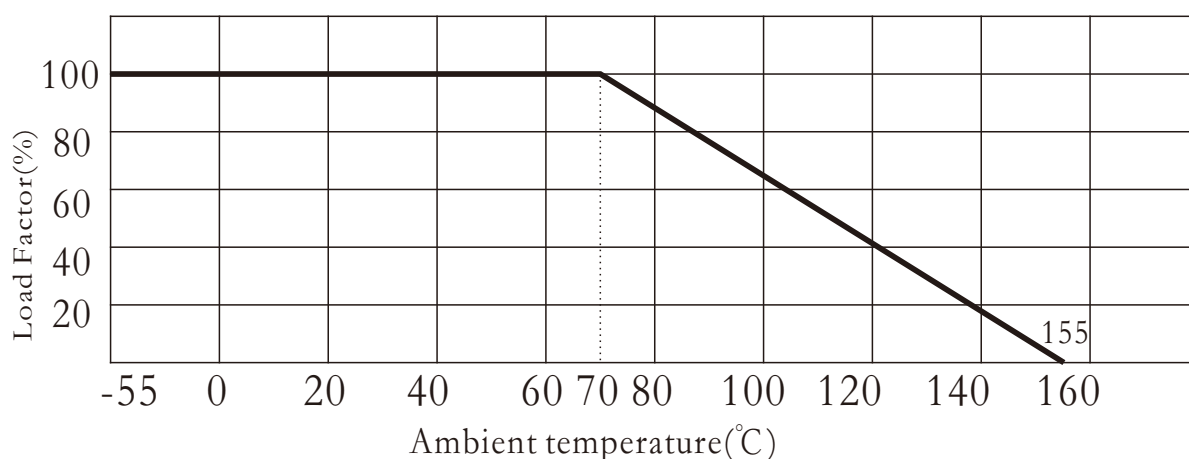
Reference Standards

JISC 5201-1

Applications And Ratings

Type	power (W)	Resistance Range(Ω)	MaxWorking Voltage	MaxOverload Voltage	Dielectric Withstanding Voltage	T.C.R
		J $\pm$ 5%(E24)				
FKN 14	1/4	0.1~100 Ω	$\sqrt{PR}$	150V	200V	$\pm 100\text{PPM}/^{\circ}\text{C}$
FKN 12	1/2	0.1~100 Ω	$\sqrt{PR}$	300V	250V	
FKN0 1	1	0.1~100 Ω	$\sqrt{PR}$	300V	300V	
FKN 02	2	0.1~100 Ω	$\sqrt{PR}$	300V	300V	
FKN 03	3	0.1~1000 Ω	$\sqrt{PR}$	300V	400V	
FKN 05	5	0.1~1000 Ω	$\sqrt{PR}$	500V	500V	
FKN 7	7	0.1~1000 Ω	$\sqrt{PR}$	1000V	700V	
FKN 10	10	0.1~1000 Ω	$\sqrt{PR}$	1000V	700V	

Derating Curve



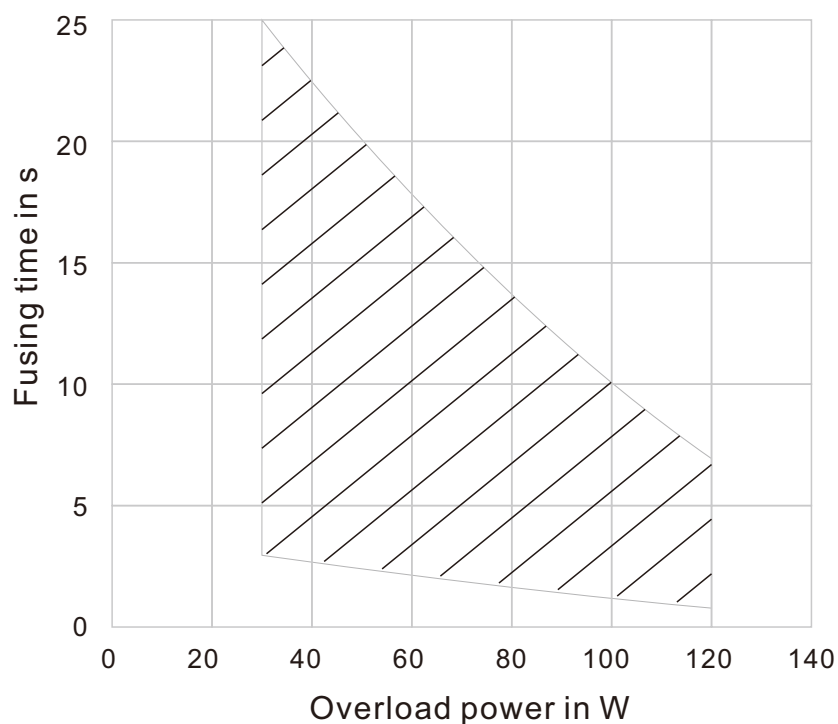
Fusing Characteristics(reference)

FUSING characteristics (Residual resistance ≥ 50000 times nominal resistance)

Type	power (W)	Resistance Range	$\sqrt{48PR}$	$\sqrt{36PR}$	$\sqrt{25PR}$	Fusing Time
FKN 14	1/4	0.1~100 Ω	0.1~10 Ω	4.7~56 Ω	10~100 Ω	30 S MAX
FKN 12	1/2	0.1~100 Ω	0.1~10 Ω	4.7~56 Ω	10~100 Ω	30 S MAX
FKN 01	1	0.1~100 Ω	0.1~10 Ω	4.7~56 Ω	10~100 Ω	30 S MAX
FKN 02	2	0.1~100 Ω	0.1~10 Ω	4.7~56 Ω	10~100 Ω	30 S MAX
FKN 03	3	0.1~1000 Ω	0.1~10 Ω	4.7~56 Ω	10~1000 Ω	30 S MAX
FKN 05	5	0.1~1000 Ω	0.1~10 Ω	4.7~56 Ω	10~1000 Ω	30 S MAX
FKN 7	7	0.1~1000 Ω	0.1~10 Ω	4.7~56 Ω	10~1000 Ω	30 S MAX
FKN 10	10	0.1~1000 Ω	0.1~10 Ω	4.7~56 Ω	10~1000 Ω	30 S MAX

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

Fusing Curve



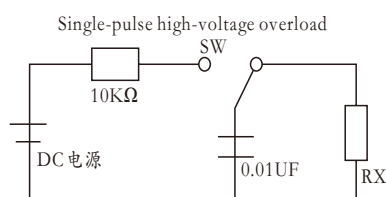
The Fusing curve is different from each other. More information, please contact with our engineer kwx@kwxcom.com

Performance

Test Items	Performance Requirements	Test Methods(JIS C 5201-1)
Resistance	Within specified tolerance	Measuring points are 10mm from the end cap
T.C.R.	Within specified T.C.R	Room temperature+100℃
Short time overload	$\pm (2\%R + 0.05\Omega)$	4 times the rated power for 5 seconds
Load life	$\pm (5\%R + 0.1\Omega)$	Rated voltage at 70℃ for 1,000 hours 1.5hr ON/0.5hr OFF Cycles
Load life in humidity	$\pm (5\%R + 0.1\Omega)$	Rated voltage at 40℃ ,95%RH for 1,000 hours
Moisture resistance	$\pm (1\%R + 0.05\Omega)$	40℃ ,95%RH for 240 hours
Temperature cycle	$\pm (1\%R + 0.05\Omega)$	At -55℃ for 30min, time at +25℃ for 10-15min, time at +155℃ for 30min, time at +25℃ for 10-15min, total 5cycles.
Solderability	95%(min)coverage	Temp. of solder 245℃ $\pm 5^\circ\text{C}$ duration of immersion 3s $\pm 0.5\text{s}$
Resistance to soldering heat	$\pm (1\%R + 0.05\Omega)$	260℃ $\pm 5^\circ\text{C}$ for 10 seconds 350℃ $\pm 10^\circ\text{C}$ for 3.5 seconds
Insulation resistance	$> 1,000\text{M}\Omega$	500V insulation test 1min.

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 disturbance can be avoided. and make the product using safely.



Measure Rx before test, switch for left handside to test under DC3KV for 2.5 seconds and then switch 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 $\Delta R/R \leq (\pm 3\% + 0.05\Omega)$