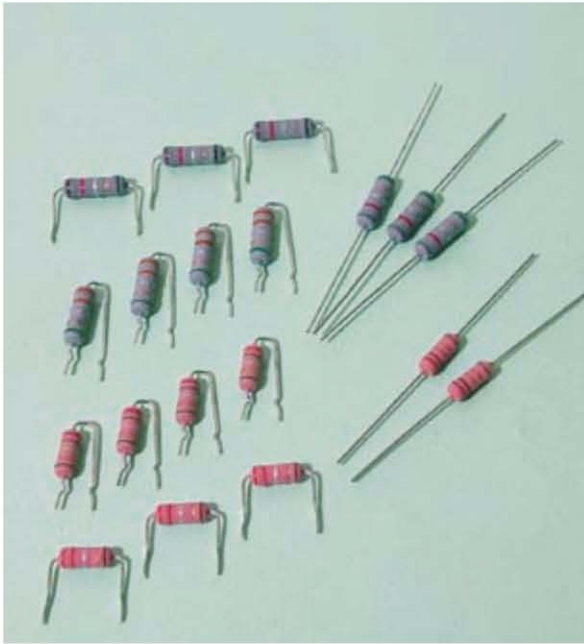


線繞電阻器

STANDARD TYPE
標準品 灰色
MINIATURE TYPE
小型品 粉紅色



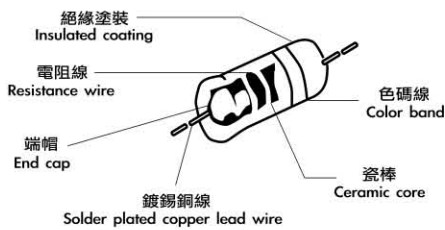
● 特點

- 線繞電阻是由電阻線纏繞瓷棒而成
- 雜音低
- 阻值公差：±2%, ±5%
- 第5道色碼用於識別KNP（有感），NKNP（無感）

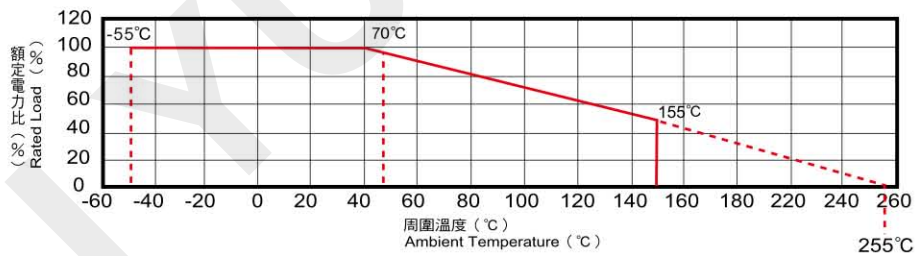
● Features

- The fabric of wirewound Resistor is to wind the resistance wire on a ceramic core.
- Low noise
- Resistance tolerance : ±2%, ±5%
- There are 5 color bands on surface. KNP and NKNP are distinguished by the 5th color band.

● 結構圖 Construction

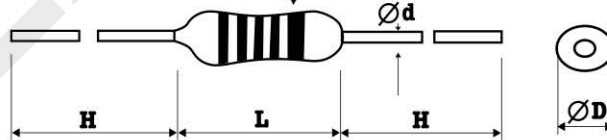


● 負載遞減曲線 Power Derating Curve



● 規格 Specifications

第5道色碼，「黑色」表示有感線繞，「綠色」表示無感線繞電阻
The 5th color band; KNP type in "Black", NKNP type in "Green"



電阻表面塗裝 Coating Color: 標準品以「灰色」表示，小型品以「粉紅色」表示
Standard type in "Gray" color, Mini-type in "Pink" color

額定功率 Power Rating		尺寸 (公釐) Dimension (mm)				KNP 阻值範圍 (Ω) Resistance Range (Ω)	NKNP 阻值範圍 (Ω) Resistance Range (Ω)	耐電壓 Dielectric Withstanding Voltage
標準品 STD type	小型品 Mini-type	ØD	L	H	Ød			
1/4W	1/2WS	2.5±0.5	6.3±0.5	28±3	0.56±0.05	0.05Ω~20Ω	0.05Ω~6Ω	200V
1/2W	1WS	3.5±0.5	9.0±1.0	28±3	0.56±0.05/0.8±0.1	0.05Ω~200Ω	0.05Ω~50Ω	250V
1W	2WS	4.5±0.5	11±1.0	30±3	0.80±0.1	0.05Ω~250Ω	0.05Ω~50Ω	350V
2W	3WS	5.2±0.5	15±1.0	33±3	0.80±0.1	0.05Ω~250Ω	0.05Ω~50Ω	350V
3W	5WS	6±1.0	17±1.0	45±3	0.80±0.1	0.1Ω~300Ω	0.1Ω~100Ω	500V
5W		8±1.0	24±1.0	43±3	0.80±0.1	0.1Ω~300Ω	0.1Ω~100Ω	500V

* 額定電壓 = $\sqrt{\text{額定功率} \times \text{阻抗值}}$ ，額定電壓相當於其最大電壓

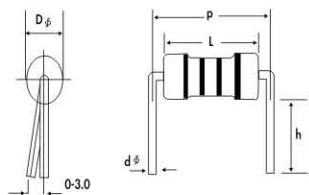
* $RCWV = \sqrt{\text{Power rating} \times \text{Resistance value}}$ or max RCWV listed above whichever less.

* 5W以上功率可依客戶要求訂制

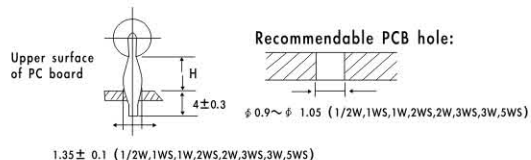
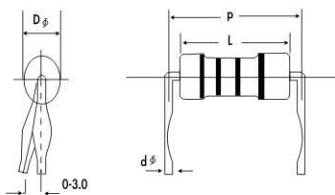
線繞電阻器

● 成型型式 Form Type

M 型 M Type

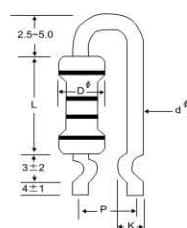


MG型 MG Type

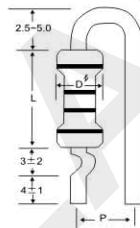


額定功率 Power Rating		$L \pm 1$	$D\phi \pm 0.5$	$H \pm 2$	$h \pm 2$	$d\phi \pm 0.1$	P
標準品 STD type	小型品 Mini-type						
1/2W	1WS	9	3.5	7	11	$0.56 \pm 0.05 / 0.8$	$12.5 \pm 1 / 15 \pm 1$
1W	2WS	11	4.5	7	11	0.8	15 ± 2
2W	3WS	15	5.2	7	11	0.8	20 ± 2
3W	5WS	17	6 ± 1.0	10	15	0.8	25 ± 2
5W		24	8 ± 1.0	10	15	0.8	30 ± 2

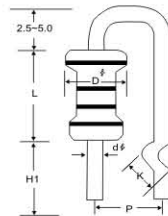
FKK型 FKK Type



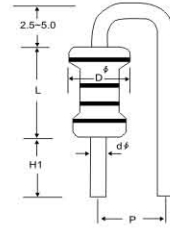
FKN型 FKN Type



FNK型 FNK Type



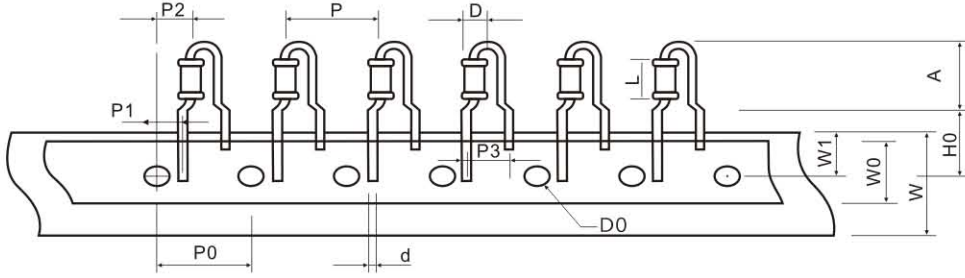
FNN型 FNN Type



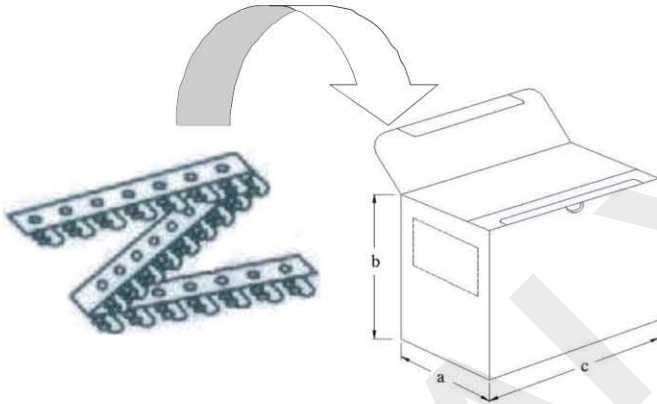
額定功率 Power Rating		$L \pm 1$	$D\phi \pm 0.5$	$H1 \pm 2$	$d\phi \pm 0.1$	$P \pm 2$	$K \pm 0.5$
標準品 STD type	小型品 Mini-type						
1/4W	1/2WS	6.3 ± 0.5	2.5	5.0 ± 1	0.56 ± 0.05	6.5	1.5
1/2W	1WS	9	3.5	$7.5 / 4.0 \pm 1$	0.8	6.5	1.5
1W	2WS	11	4.5	7.5	0.8	10	1.5
2W	3WS	15	5.2	7.5	0.8	10	1.5
3W	5WS	17	6 ± 1.0	10	0.8	12	1.5
5W		24	8 ± 1.0	10	0.8	15	1.5

線繞電阻器

● 立式帶狀 FT TYPE



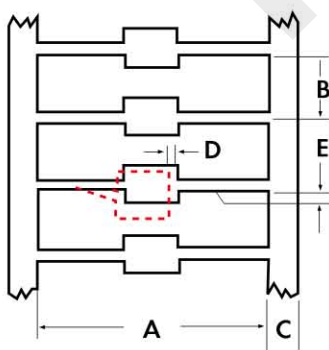
型名	尺寸 (mm)													
	D	L	d	A	P	P0	P1	P2	P3	H0	D0	W	W0	W1
1/4W / 1/2WS	2.5±0.5	6.0±0.5	0.60±0.05	11.5±0.5	12.7±1.0	12.7±0.3	3.85±0.7	6.3±0.5	5.0±0.8	16.5±0.5	4.0±0.2	18.0±1.0	13.0±1.0	9.0±0.5
1/2W / 1WS	3.5±0.5	9.0±1.0	0.60±0.05	14.5±0.5	12.7±1.0	12.7±0.3	3.85±0.7	6.3±0.5	5.0±0.8	16.5±0.5	4.0±0.2	18.0±1.0	13.0±1.0	9.0±0.5
1W / 2WS	4.5±0.5	11±1.0	0.8±0.1	22±0.5	12.7±1.0	12.7±0.3	3.85±0.7	6.3±0.5	5.0±0.8	16.5±0.5	4.0±0.2	18.0±1.0	13.0±1.0	9.0±0.5



額定功率 Power Rdtng		包裝數量 Quantity (PCS)	尺寸 Dimensions (mm)		
標準品 STD type	小型品 Mini type		a	b	c
1/4W	1/2WS	3000	46	130	325
1/2W	1WS	2500			
1W	2WS	1500	49	130	325

● 帶狀&包裝說明 Specifications of Tape & Packing

帶狀 Tape

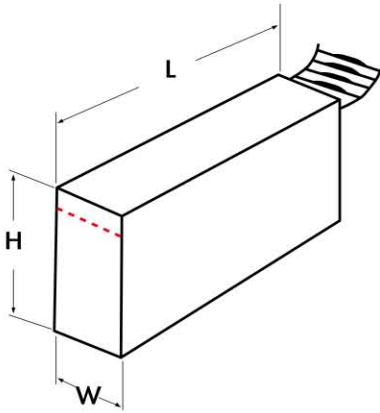


額定功率 Power Rating	Size Type	A±1 (mm)	B±0.5 (mm)	C±1 (mm)	D Max	E Max
		1/4W(1/2WS)	T-52	52	5	6
1/2W(1WS)	T-52	52	5	6	0.6	1.2
1W(2WS)	T-52	52	5	6	0.6	1.2
	T-63	63	5	6	0.6	1.2
2W(3WS)	T-52	52	10	6	0.6	1.2
	T-63	63	10	6	0.6	1.2
	T-73	73	10	6	0.6	1.2
3W(5WS)	T-73	73	10	6	0.6	1.2

線繞電阻器

● 帶狀&包裝說明 Specifications of Tape & Packing

包裝 Packing



額定功率 Power Rating		Type/Size	數量 Quantity(pcs)	W±5 (mm)	L±5 (mm)	H±5 (mm)
標準品 STD type	小型品 Mini-type					
1/4W	1/2WS	T-52	5000	77	260	112
1/2W	1WS	T-52	2000	77	260	95
1W	2WS	T-52	1000	77	260	95
		T-63	1000	77	260	85
2W	3WS	T-52	1000	85	260	112
		T-63	1000	85	260	85
		T-73	1000	100	260	95
3W	5WS	T-73	1000	100	260	95

● 品名構成 Product Identification

KNP(NKNP) 2W 15Ω J(±5%) P(F)型
 種類 額定功率 公稱抵抗值 容許誤差值 形狀
 Type Power Rating Resistance Tolerance Form

容許誤差值 Tolerance

G	J
±2%	±5%

形狀 Form

P型	M型	MG型	FKK型	FKN型
FNK型	FNN型	T52	T63	T73

線繞電阻器

● 特性 Characteristics

特性項目 Item	規格值 Specification	試驗方式 Test Method	JIS.C.5202
使用溫度範圍 Operating Temperature Range	-40°C ~ +255°C		
絕緣電阻 Insulation Resistance	10000MΩ minimum		
耐電壓 Dielectric Withstanding Voltage	無燒損或絕緣性破壞 No flashover or insulation damage	加AC電壓於各規格中持續1分鐘 AC Potential respectively specified in the list for 60 seconds	
溫度係數 Temperature Coefficient	±350PPM/°C (±500PPM/°C < 1Ω)	試驗溫度：室溫 + 100°C Test Temperature: Room Temperature + 100°C	
短時間過負荷 Short Time Over Load	±(2% + 0.05Ω)	額定電壓的2.5倍，5秒 2.5 times rated voltage for 5 seconds	
溫度循環 Temperature Cycling	±(5% + 0.1Ω)	-55°C ~ 155°C，5次循環 -55°C ~ 155°C for 5 cycles	
耐濕負荷 Load Life in Moisture	±5%	在溫度40°C，溼度95%RH環境額定電壓1.5小時「ON」，0.5小時「OFF」持續1000小時 Rated voltage 1.5hr "on", 0.5hr "off" at 40°C, 95% RH for 1000 hrs.	
負荷壽命 Load Life	±5%	在溫度70°C環境，額定電壓1.5小時「ON」，0.5小時「OFF」持續1000小時 Rated voltage 1.5hr "on", 0.5hr "off" at 70°C for 1000 hrs.	
焊錫性 Solderability	覆蓋至少95% At least 95% coverage	溫度260°C，10秒 260°C for 10 seconds	
焊錫耐熱 Heat Resistance of Solder	±(1% + 0.05Ω)	溫度350°C，3.5秒 350°C for 3.5 seconds	