

# 合金片式固定電阻器 METAL STRIP CHIP RESISTOR

## 合金片式固定電阻器 METAL STRIP CHIP RESISTOR



### ● 特長 FEATURES

- \* 最高功率可達3W High power up to 3W
- \* 最低TCR為 ±50 PPM/°C Lowest TCR from ±50 PPM/°C
- \* 適應再流焊與波峰焊 Suit for reflow and wave flow solder.
- \* 適于作電流探測用電阻器  
如電源電路、發動機用電路等 Current detecting resistors for power supply, motor circuits, etc
- \* 裝配成本低, 并與自動裝貼設備匹配 Low assembly cost, suit for automatic SMT equipment.
- \* 機械强度高、高頻特性優越 Superior mechanical and frequency characteristics.
- \* 符合RoHS指令要求 RoHS compliant

### ● 應用領域 Applications

開關電源、音頻設備的過電流保護、電壓調節器、電源轉換器、充電器、汽車引擎控制器、便携式設備等  
Switching Power Supply, Over Current Protection in Audio Application, Voltage Regulation Module (VRM), DC-DC Converter, Charger, Automotive Engine Control, Portable Devices etc

### ● 品名構成 TYPE DESIGNATION

例 Example

M G N 1 2 H R 0 3 F G T  
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① 產品代號 Product Code
合金片式固定電阻器 Metal strip chip fixed resistor

② 額定功率系列代號 Power Rating Series Code	
代號 Code	額定功率系列 Power rating series
C	1W
K	1.5W
L	2W
M	2.5W
N	3W

③ 型號代號 Type Code	
代號 Code	型號 Type
06	1206
10	1210
12	2512

④ 電阻溫度系數代號 Resistance Temperature Coefficient Code	
代號 Code	T.C.R
H	±50ppm/°C
X	±75ppm/°C
K	±100ppm/°C

⑤ 電阻值代號 Resistance Value Code
單位Ω, 小數點用R表示; 單位mΩ, 小數點用M表示; Units: Ω Decimal point should be expressed by "R"; Units: mΩ Decimal point should be expressed by "M"; 例如Example: R003=0.003Ω R22=0.22Ω R10=0.10Ω R047=0.047Ω M50=0.50mΩ 2M50=2.50mΩ

⑥ 電阻值誤差精度代號 Resistance Tolerance Code	
代號 Code	誤差精度 Tolerance
F	±1%
G	±2%
H	±3%
J	±5%

⑦ 產品外形結構 Product Construction	
代號 Code	結構 Construction
\	結構1 Construction 1
G	結構2 Construction 2

⑧ 包裝方式代號 Packing Style Code	
代號 Code	包裝方法 Packing Style
T	編帶包裝 Tape & Reel
B	塑料盒包裝 Bulk Case
C	塑料袋散裝 Case

\* 產品標記表示方法請與廠家聯系

• 結構及規格尺寸 CONSTRUCTION AND DIMENSION

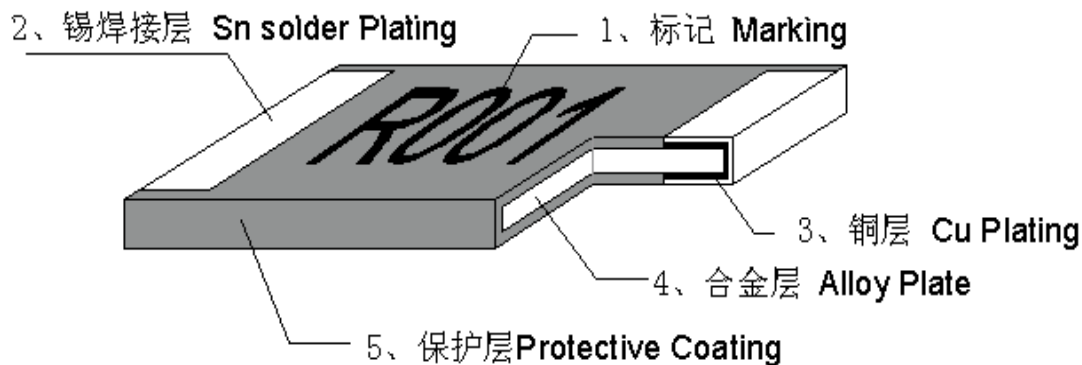


圖1：結構1部件圖 Fig1:Construction 1 Part Figure

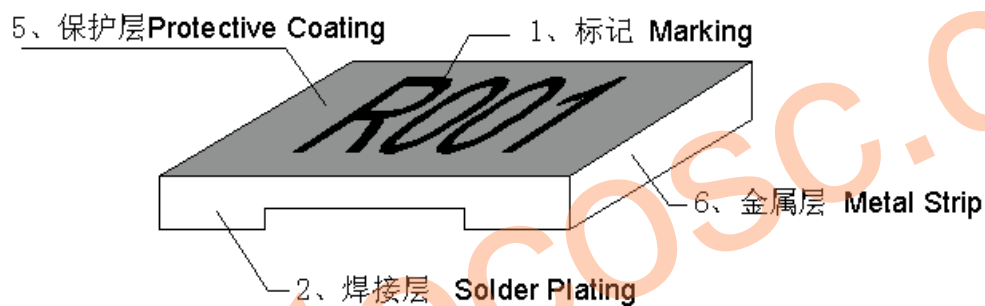


圖2：結構2部件圖 Fig2:Construction 2 Part Figure

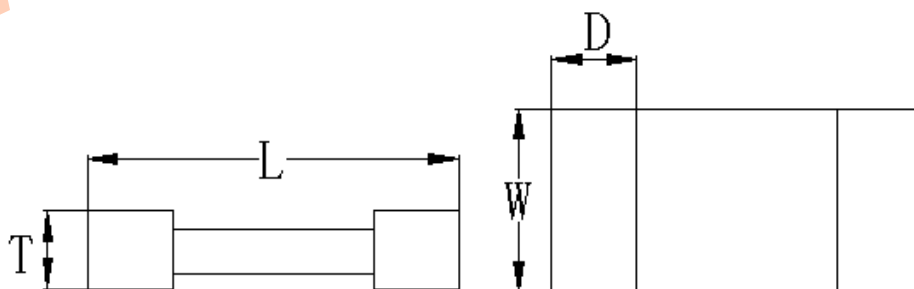


圖3：結構1、2尺寸圖 Fig3:Construction 1、2 Dimension Figure

## 合金片式固定電阻器

## METAL STRIP CHIP RESISTOR

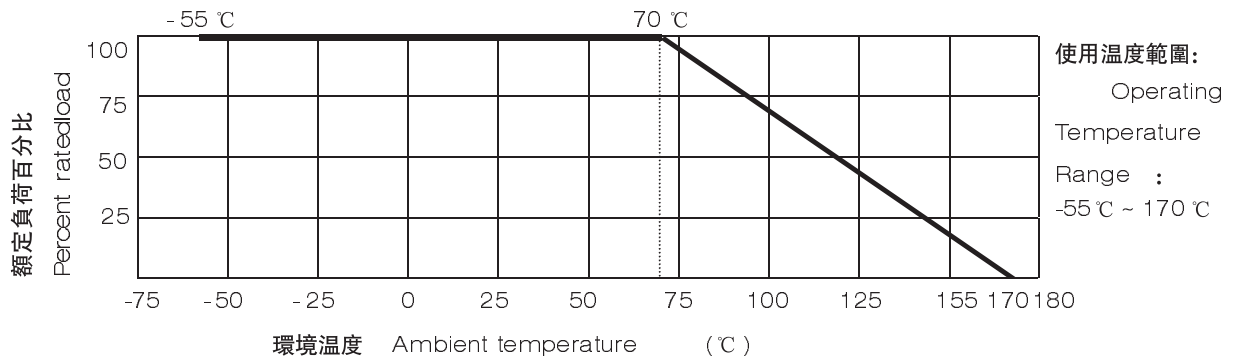
- 結構1尺寸 Construction 1 Dimensions:

規格型號 Part Number	Resistance(m $\Omega$ )	L (mm)	W(mm)	T (mm)	D (mm)
MG□12□0M50□□	0.50	6.35±0.254	3.18±0.254	1.40±0.20	1.425±0.377
MG□12□0M75□□	0.75	6.35±0.254	3.18±0.254	1.00±0.20	1.425±0.377
MG□12□R001□□	1.00	6.35±0.254	3.18±0.254	0.80±0.20	1.425±0.377
MG□12□1M50□□	1.50	6.35±0.254	3.18±0.254	0.65±0.20	1.425±0.377
MG□12□R002□□	2.00	6.35±0.254	3.18±0.254	0.50±0.20	1.425±0.377
MG□12□2M50□□	2.50	6.35±0.254	3.18±0.254	1.00±0.20	1.425±0.377
MG□12□R003□□	3.00	6.35±0.254	3.18±0.254	0.70±0.20	1.425±0.377
MG□12□R004□□	4.00	6.35±0.254	3.18±0.254	0.60±0.20	1.425±0.377
MG□12□R005□□	5.00	6.35±0.254	3.18±0.254	0.50±0.20	1.425±0.377
MG□12□R006□□	6.00	6.35±0.254	3.18±0.254	0.50±0.20	1.425±0.377
MG□12□6M50□□	6.50	6.35±0.254	3.18±0.254	0.45±0.20	1.425±0.377
MG□12□R007□□	7.00	6.35±0.254	3.18±0.254	0.45±0.20	1.425±0.377
MG□10□□□□□□	1.0~10	5.08±0.254	2.54±0.15	0.60±0.20	1.665±0.625
MG□06□□□□□□	1.0~10	3.20±0.254	1.60±0.104	0.60±0.20	0.980±0.380

- 結構2尺寸 Construction 2 Dimensions:

規格型號 Part Number	Resistance(m $\Omega$ )	L (mm)	W(mm)	T (mm)	D (mm)
MG□12□0M50□G□	0.50	6.35±0.254	3.18±0.35	0.60±0.20	2.675±0.254
MG□12□0M75□G□	0.75	6.35±0.254	3.18±0.35	0.60±0.20	2.475±0.254
MG□12□□□□G□	1.0~1.5	6.35±0.254	3.18±0.35	0.60±0.20	1.425±0.254
MG□12□□□□G□	2.0~3.0	6.35±0.254	3.18±0.35	0.60±0.20	1.175±0.254
MG□12□R004□G□	4.0	6.35±0.254	3.18±0.35	0.60±0.20	2.175±0.254
MG□12□□□□G□	5.0~6.0	6.35±0.254	3.18±0.35	0.60±0.20	1.925±0.254
MG□12□R007□G□	7.0	6.35±0.254	3.18±0.35	0.60±0.20	1.425±0.254
MG□12□□□□G□	8.0~20	6.35±0.254	3.18±0.35	0.60±0.20	1.175±0.254

• 負荷下降曲線 DERATING CURVE



\* 當電阻使用的環境溫度超過70°C時，其額定負荷(額定功率或額定電流)按上述曲線下降。  
For resistors operated in ambient over 70°C, rated load (power rating or current rating) shall be derated in accordance with the above figure.

• 額定值及特性 Ratings and Characteristics

項目 Item	1206	2010	2512								
額定功率 Power Rating	1W	1.5W	1W			2W	2.5W	3W			
阻值範圍 Resistance Range(mΩ)	1.0~10.0	1.0~10.0	1.0~5.0	6.0~10.0	11.0~50.0	0.5~2.0	7.0~10.0	4.0~6.0	1.0~3.0	3.0	0.5~0.75
電阻溫度係數 Resistance Temperature Coefficient (PPM/°C)	±50		±100	±75			±50				±100
阻值誤差精度 Resistance Tolerance	±1% ±2% ±3% ±5%										
使用溫度範圍 Operating Temperature Range	-55°C ~ +170°C										
特性 Characteristics	見特性 Refer to Characteristics										

注：額定電壓=√額定功率×標稱電阻值，額定電流=√額定功率/標稱電阻值。  
Note: Rating Voltage V = √Power Rating × Resistance Value,  
Rating Current I = √Power Rating / Resistance Value

# 合金片式固定電阻器

## METAL STRIP CHIP RESISTOR

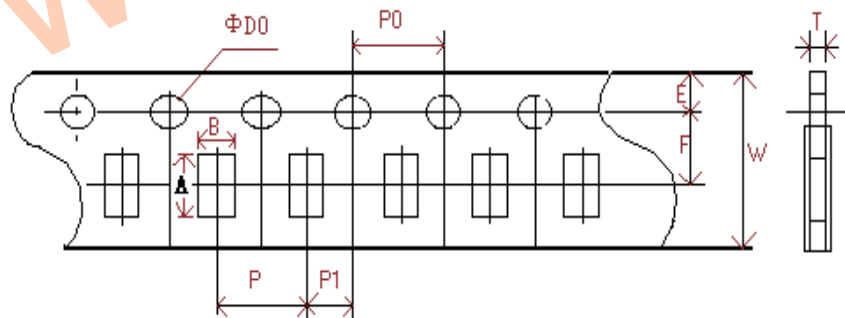
- 特性 (2512) Characteristics (2512)

項目 Item	標準 Specifications	測試方法 Test Methods
電阻溫度係數 T.C.R	在規定值內 within specified T.C.R	( MLT-STD-202F-Method 304 ) -55°C~+125°C
熱衝擊 Thermal Shock	無可見損傷No mechanical damage $\Delta R \leq \pm (1.0\%R + 0.5m\Omega)$	( MLT-STD-202F-Method 107G ) -55°C~150°C 100個循環 -55°C~150°C 100cycles
短時間過負載 Short Time Overload	無可見損傷No mechanical damage $\Delta R \leq \pm (1.0\%R + 0.5m\Omega)$	( JISC5202 ) 2.5倍額定電流或最大過負載電流 ( 取最小者 ) 保持5秒 2.5×RatedCurrentorMaxOverloadCurrent, whicheverislower, for5seconds
耐焊接熱 Resistance to Soldering Heat	無可見損傷No mechanical damage $\Delta R \leq \pm (1.0\%R + 0.5m\Omega)$	( MLT-STD-202F-Method 210E ) 260°C ± 5°C 10 ± 1秒 260°C ± 5°C 10s ± 1s
70°C 耐久性 Load Life	無可見損傷No mechanical damage $\Delta R \leq \pm (1.0\%R + 0.5m\Omega)$	( MLT-STD-202F-Method 108A ) 70°C ± 2°C 1000小時 額定電壓 通1.5小時, 斷0.5小時 70°C ± 2°C 1000h Rated voltage 1.5h on/0.5h off
可焊性 Solder-ability	可焊面積 > 95% 95% Cover Min	( MLT-STD-202F-Method 208H ) 235°C ± 5°C 2 ± 0.5秒 235°C ± 5°C 2s ± 0.5s
高溫試驗 Resistance to Dry Heat	無可見損傷No mechanical damage $\Delta R \leq \pm (1.0\%R + 0.5m\Omega)$	( JISC 5202 ) +155°C, 96小時 +155°C, 96h

- 包裝 Packaging

- 編帶包裝 Tape and reel
- 紙帶編帶 Paper taping

1206:



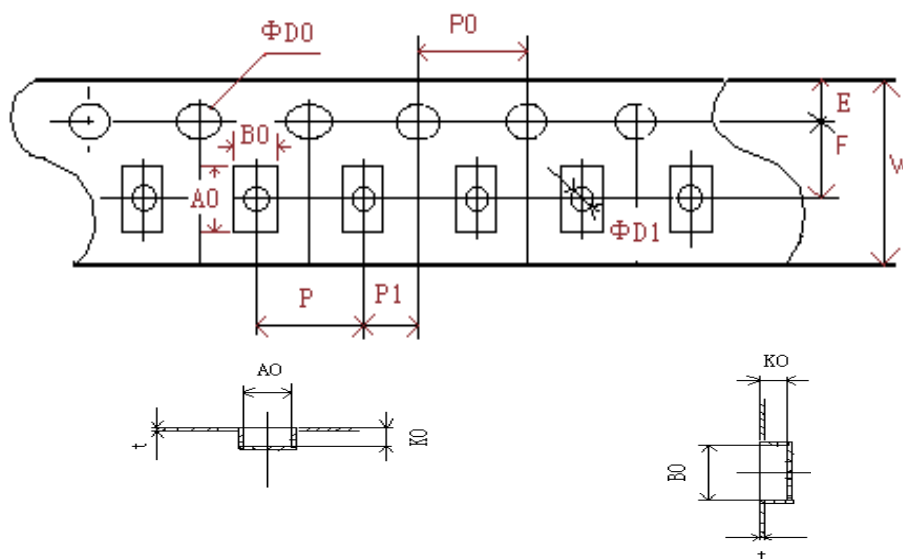
單位 unite: mm

型號 Type	A	B	W	F	E
1206	3.50±0.2	1.90±0.2	8.0±0.20	3.50±0.05	1.75±0.1

型號 Type	P	P0	P1	ΦD0	F
1206	4.0±0.1	4.0±0.1	2.0±0.05	1.50±0.1	0.75±0.1

● 塑料帶編帶 Embossed tapping

2010、2512:



單位 unit: mm

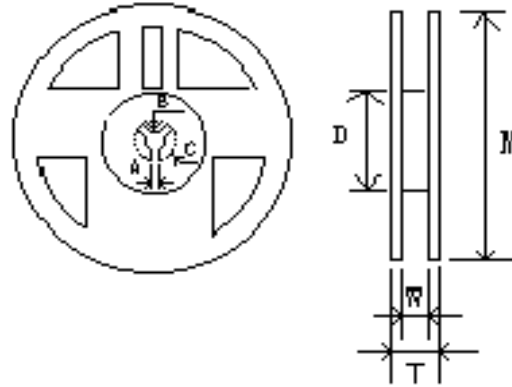
型號 Type	A0	B0	W	F	E	t	
2010	5.45±0.10	2.77±0.10	12.00±0.10	5.50±0.10	1.75±0.10	0.24±0.05	
2512	0.50mΩ	6.70±0.10	3.40±0.10	12.00±0.10	5.50±0.10	1.75±0.10	\
	0.75mΩ	6.80±0.20	3.50±0.10	12.00±0.10	5.50±0.10	1.75±0.10	\
	1~10mΩ	6.70±0.10	3.40±0.10	12.00±0.10	5.50±0.10	1.75±0.10	\

單位 unit: mm

型號 Type	P	P0	P1	ΦD0	ΦD1	K0	
2010	4.00±0.10	4.00±0.10	2.00±0.05	1.50±0.10/-0	1.50±0.10	0.84±0.10	
2512	0.50mΩ	4.00±0.10	4.00±0.05	2.00±0.05	1.50±0.10	1.40 Min	1.40±0.10
	0.75mΩ	4.00±0.10	4.00±0.05	2.00±0.05	1.50±0.10	1.40 Min	1.35±0.10
	1~10mΩ	4.00±0.10	4.00±0.05	2.00±0.05	1.50±0.10	1.40 Min	0.80±0.10

# 合金片式固定電阻器 METAL STRIP CHIP RESISTOR

- 卷盤 Reel

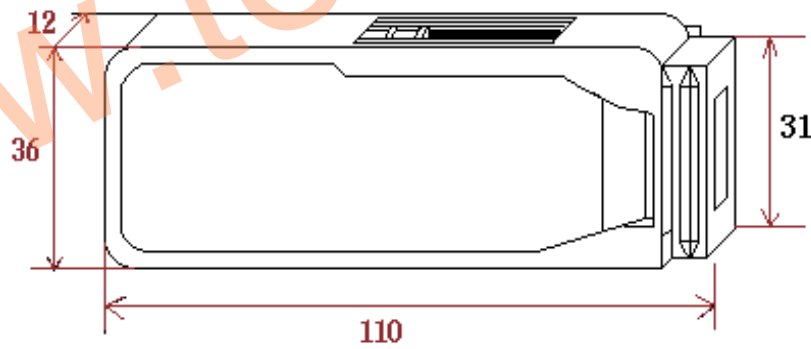


單位unit: mm

型號 Type	M	W	T	A	B	C	D
1206	178 ±2.0	9.5 ±1.0	12.5 ±1.5	2.0 ±0.5	13.0 ±0.5	21.0 ±0.5	80.0 ±2.0
2010 2512	178 ±2.0	13.0 ±0.5	15.5 ±1.5	2.0 ±0.5	13.0 ±0.5	21.0 ±0.5	57.0 ±2.0

- 塑料盒包裝 Bulk case

單位unit: mm



- 包裝數量 Packaging quantity

包裝方法 Packaging style	編帶 Tape and reel		塑料盒 Bulk case			塑料袋散裝 Bulk	
型號 Type	1206	2010 2512	1206	2010	2512	1206	2010 2512
數量 ( PCS ) Quantity	5000	4000	5000	1500	1000	≤10000	≤4000