

1. 適用範圍 / SCOPE

此份規格書涵蓋 HTE0805/1206/1508/2010/2512/3008/3015/3618/3921-series 金屬陶瓷電流感測電阻元件相關規格。

This specification covers HTE0805/1206/1508/2010/2512/3008/3015/3618/3921-series, which are Metal Foil Current Sensing Resistor.

2. 產品型號/TYPE NUMBER

| | | | | | | | |
|------------|--|----------|------------|-------------|----------|----------|----------|
| HTE | 0805/1206/1508/2010/2512 /3008/3015/3618/3921 | M | xWx | Rxxx | * | * | * |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |

- (1) 產品系列號 / SERIES NUMBER : Ex.HTE0805 = 長電極/ long electrode ; 兩端子 / two terminal ; 有側導 / side electrode ; 尺寸 / size “0.08×0.05”
- (2) 產品材質 / Material : M = 錳銅合金 / MnCu alloy
- (3) 產品瓦特數 / Power Rating : Ex. 1W0=1.0 Watt
- (4) 產品阻值 / Nominal Resistance Value : Ex. 5mΩ →R005 ;10mΩ →R010
- (5) 元件電阻偏差值 / Resistance Tolerance : Ex. D=±0.5% ; F=±1%
- (6) 產品碼/Product code:Ex. G→Dimension size ; blank→Original design
- (7) 產品碼/Product code:Ex. S→Special design ; blank→Original design

3. 產品尺寸 / PRODUCT DIMENSIONS

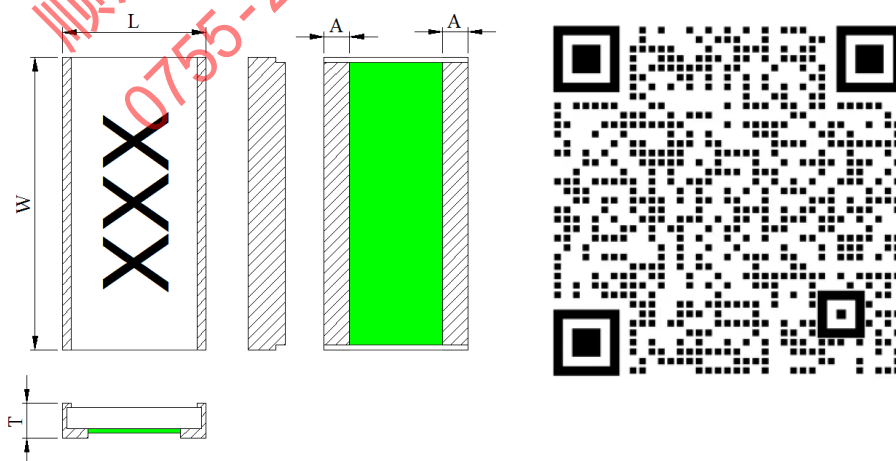


圖 1 / Fig.1

Unit(mm)

| Part Number | W | L | T | A |
|---------------------------------|-----------|-----------|-----------|-----------|
| HTE0805M1W0-series R001~R100 | 2.10±0.20 | 1.35±0.20 | 0.65±0.20 | 0.43±0.20 |

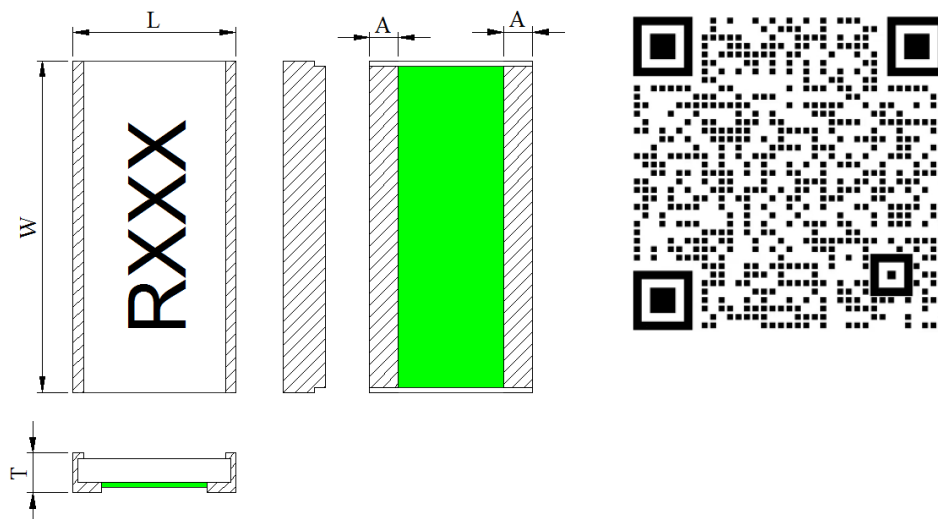


圖 2 / Fig.2

Unit(mm)

| Part Number | W | L | T | A |
|-------------------------------------|-----------|-----------|-----------|-----------|
| HTE1206M1W5-series R001 | 3.30±0.20 | 1.70±0.20 | 0.65±0.20 | 0.55±0.30 |
| HTE1206M1W5-series R002*S~R004*S | 3.30±0.20 | 1.70±0.20 | 0.65±0.20 | 0.40±0.20 |
| HTE1206M1W5-series R005~R100 | 3.30±0.20 | 1.70±0.20 | 0.65±0.20 | 0.40±0.20 |

| Part Number | W | L | T | A |
|-------------------------------------|-----------|-----------|-----------|-----------|
| HTE1508M2W0-series R001*GS | 3.80±0.20 | 2.20±0.20 | 0.65±0.20 | 0.61±0.20 |
| HTE1508M2W0-series R002*G~R100*G | 3.80±0.20 | 2.20±0.20 | 0.65±0.20 | 0.61±0.20 |

| Part Number | W | L | T | A |
|---------------------------------|-----------|-----------|-----------|-----------|
| HTE2010M2W0-series 0M50 | 5.10±0.20 | 2.60±0.20 | 0.65±0.20 | 0.95±0.20 |
| HTE2010M2W0-series R001*S | 5.10±0.20 | 2.60±0.20 | 0.65±0.20 | 0.65±0.20 |
| HTE2010M2W0-series R002~R100 | 5.10±0.20 | 2.60±0.20 | 0.65±0.20 | 0.65±0.20 |

| Part Number | W | L | T | A |
|---------------------------------|-----------|-----------|-----------|-----------|
| HTE2512M3W0-series R001*S | 6.40±0.30 | 3.20±0.30 | 0.65±0.20 | 0.60±0.20 |
| HTE2512M3W0-series R002~R100 | 6.40±0.30 | 3.20±0.30 | 0.65±0.20 | 0.60±0.20 |

| Part Number | W | L | T | A |
|---------------------------------|-----------|-----------|-----------|-----------|
| HTE3008M3W0-series R001*S | 7.60±0.30 | 2.60±0.30 | 0.65±0.20 | 0.68±0.30 |
| HTE3008M3W0-series R002~R100 | 7.60±0.30 | 2.60±0.30 | 0.65±0.20 | 0.68±0.30 |

| Part Number | W | L | T | A |
|---------------------------------|-----------|-----------|-----------|-----------|
| HTE3015M4W0-series R001*S | 7.70±0.30 | 3.90±0.30 | 0.65±0.20 | 0.70±0.30 |
| HTE3015M4W0-series R002~R100 | 7.70±0.30 | 3.90±0.30 | 0.65±0.20 | 0.70±0.30 |

| Part Number | W | L | T | A |
|---------------------------------|-----------|-----------|-----------|-----------|
| HTE3618M4W0-series R001*S | 9.10±0.30 | 4.60±0.30 | 0.65±0.20 | 0.80±0.30 |
| HTE3618M4W0-series R002~R100 | 9.10±0.30 | 4.60±0.30 | 0.65±0.20 | 0.80±0.30 |

| Part Number | W | L | T | A |
|---------------------------------|------------|-----------|-----------|-----------|
| HTE3921M5W0-series R001*S | 11.10±0.40 | 5.10±0.30 | 0.65±0.20 | 0.90±0.30 |
| HTE3921M5W0-series R002~R100 | 11.10±0.40 | 5.10±0.30 | 0.65±0.20 | 0.90±0.30 |

4. 產品結構及使用材料說明 (參考圖 3) / STRUCTURE & MATERIAL (Ref to Fig.3)

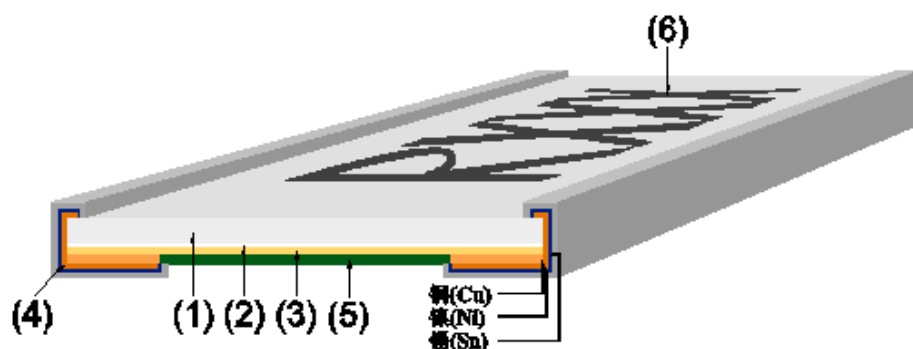
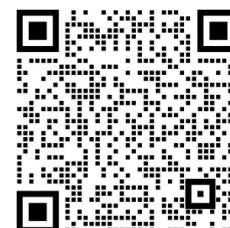


圖 3 / Fig.3

4.1 基板 / Substrate(1) : 氧化鋁陶瓷基板 / Alumina Ceramic

4.2 粘著層 / Adhesion layer(2) : 環氧樹脂 / Epoxy



- 4.3 電阻本體 / Resistive element(3) : 銅合金 / Cu – alloy
- 4.4 端電極 / Terminal electrode(4) : 錫、鎳、銅 / Sn、Ni、Cu
- 4.5 保護防焊層 / Protective coating(5) : 防火級環氧樹脂,符合 UL- 94-V0 要求(綠色) /
Flame-retardant epoxy, meets UL- 94-V0 requirements(green)
- 4.6 文印防焊層 / Marking coating(6) : 防火級環氧樹脂,符合 UL- 94-V0 要求(黑色) /
Flame-retardant epoxy, meets UL- 94-V0 requirements (black)



5. 電氣特性 / ELECTRICAL CHARACTERISTICS

| Part Number | Resistance Value (mΩ) | Power Rating (Watt) | Resistance Tolerance (%) | TCR (ppm/°C) |
|---------------------------------|-----------------------|---------------------|--------------------------|--------------|
| HTE0805M1W0-series R001~R100 | 1~9 | 1.0 | ±1%(F) | ±100 |
| | 10~100 | 1.0 | ±0.5%(D) / ±1%(F) | ±50 |

| Part Number | Resistance Value (mΩ) | Power Rating (Watt) | Resistance Tolerance (%) | TCR (ppm/°C) |
|---------------------------------|-----------------------|---------------------|--------------------------|--------------|
| HTE1206M1W5-series R001~R100 | 1~9 | 1.5 | ±1%(F) | ±100 |
| | 10~100 | 1.5 | ±0.5%(D) / ±1%(F) | ±50 |

| Part Number | Resistance Value (mΩ) | Power Rating (Watt) | Resistance Tolerance (%) | TCR (ppm/°C) |
|-------------------------------------|-----------------------|---------------------|--------------------------|--------------|
| HTE1508M2W0-series R001*G~R100*G | 1~9 | 2.0 | ±1%(F) | ±100 |
| | 10~100 | 2.0 | ±0.5%(D) / ±1%(F) | ±50 |

| Part Number | Resistance Value (mΩ) | Power Rating (Watt) | Resistance Tolerance (%) | TCR (ppm/°C) |
|---------------------------------|-----------------------|---------------------|--------------------------|--------------|
| HTE2010M2W0-series 0M50~R100 | 0.5 | 2.0 | ±3%(H) | ±150 |
| | 1~9 | 2.0 | ±1%(F) | ±100 |
| | 10~100 | 2.0 | ±0.5%(D) / ±1%(F) | ±50 |

| Part Number | Resistance Value (mΩ) | Power Rating (Watt) | Resistance Tolerance (%) | TCR (ppm/°C) |
|---------------------------------|-----------------------|---------------------|--------------------------|--------------|
| HTE2512M3W0-series R001~R100 | 1~9 | 3.0 | ±1%(F) | ±100 |
| | 10~100 | 3.0 | ±0.5%(D) / ±1%(F) | ±50 |

| Part Number | Resistance Value (mΩ) | Power Rating (Watt) | Resistance Tolerance (%) | TCR (ppm/°C) |
|---------------------------------|-----------------------|---------------------|--------------------------|--------------|
| HTE3008M3W0-series R001~R100 | 1~9 | 3.0 | ±1%(F) | ±100 |
| | 10~100 | 3.0 | ±0.5%(D) / ±1%(F) | ±50 |

| Part Number | Resistance Value (mΩ) | Power Rating (Watt) | Resistance Tolerance (%) | TCR (ppm/°C) |
|---------------------------------|-----------------------|---------------------|--------------------------|--------------|
| HTE3015M4W0-series R001~R100 | 1~9 | 4.0 | ±1%(F) | ±100 |
| | 10~100 | 4.0 | ±0.5%(D) / ±1%(F) | ±50 |

| Part Number | Resistance Value (mΩ) | Power Rating (Watt) | Resistance Tolerance (%) | TCR (ppm/°C) |
|---------------------------------|-----------------------|---------------------|--------------------------|--------------|
| HTE3618M4W0-series R001~R100 | 1~9 | 4.0 | ±1%(F) | ±100 |
| | 10~100 | 4.0 | ±0.5%(D) / ±1%(F) | ±50 |

| Part Number | Resistance Value (mΩ) | Power Rating (Watt) | Resistance Tolerance (%) | TCR (ppm/°C) |
|---------------------------------|-----------------------|---------------------|--------------------------|--------------|
| HTE3921M5W0-series R001~R100 | 1~9 | 5.0 | ±1%(F) | ±100 |
| | 10~100 | 5.0 | ±0.5%(D) / ±1%(F) | ±50 |

規格外阻值可依客戶需求提供 / We can provide other resistance value per request

6. 產品特性及信賴性測試規範 / PRODUCT CHARACTERISTICS AND RELIABILITY TEST STANDARD

| 測試方法 Parameter | 條件 Conditions | 允收標準 Requirements |
|--|--|---|
| 瞬間過載測試 / Short Time Over Load | $P = 2.5P_r$; $T = 25 \pm 2^\circ\text{C}$, $t = 5\text{sec.}$ | $\pm(1.0\% + 0.5\text{m}\Omega)$ IEC60115-1 4.13 |
| 高溫測試 / High Temp. Exposure | $T = +155 \pm 2^\circ\text{C}$; $t = 1000\text{h}$ | $\pm(1.0\% + 0.5\text{m}\Omega)$ IEC60115-1 4.25 |
| 低溫測試 / Low Temp. Storage | $T = -55 \pm 2^\circ\text{C}$; $t = 1000\text{h}$ | $\pm(1.0\% + 0.5\text{m}\Omega)$ IEC60115-1 4.25 |
| 濕度負載壽命測試 / Moisture Load Life (60°C、95%RH) | $V_{\text{test}} = V_{\text{max}}$; $T = 60 \pm 2^\circ\text{C}$; $\text{RH} = 95\%$; $t = 90\text{min ON}$, 30min OFF , 1000h | $\pm(2.0\% + 0.5\text{m}\Omega)$ IEC60115-1 4.25 |
| 冷熱衝擊測試 / Thermal Shock | $[-55^\circ\text{C } 30\text{min.} \rightarrow \text{R.T. } 3\text{min.} \rightarrow +155^\circ\text{C } 30\text{min.}$ $\rightarrow \text{R.T. } 3\text{min.}]$, 100 個連續循環 / 100Cycles | $\pm(1.0\% + 0.5\text{m}\Omega)$ IEC60115-1 4.19 |

| | | |
|------------------------------------|--|--|
| 在 70°C 下負載壽命測試 / Load Life at 70°C | V _{test} = V _{max} ; T=70±2°C ;t= 90min ON , 30min OFF,1000h | ±(2.0%+0.5mΩ) IEC60115-1 4.25 |
| 可焊性測試 / Solderability | 浸入錫爐 / Dip into solder at T = 245±5°C , t = 3±1sec. | 錫涵蓋面積/The covered area >95% IEC60115-1 4.17 |
| 抗焊熱性測試 / Resistance to Solder Heat | 經熱風式迴焊爐 / Through Reflow Parts are subjected to 3 reflow cycles. | ±(1.0%+0.5mΩ) IEC60115-1 4.18 |
| 機械衝擊測試 / Mechanical Shock | 加速度 a =100G , 振幅時間 t =6ms a =100G , t =6ms | ±(1.0%+0.5mΩ) IEC60115-1 4.21 |
| 基板彎曲測試 / Substrate Bending | 兩支撐點間距 / Span between fulcrums : 90mm ; 振幅 / Bend Width: 2mm ; 測試板/Test board: 玻璃纖維板/ Glass-Epoxy Board ; 厚度 / Thickness : 1.6mm | ±(1.0%+0.5mΩ) IEC60115-1 4.33 |

7. 環境特性 / ENVIRONMENTAL CHARACTERISTIC

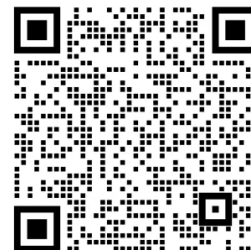
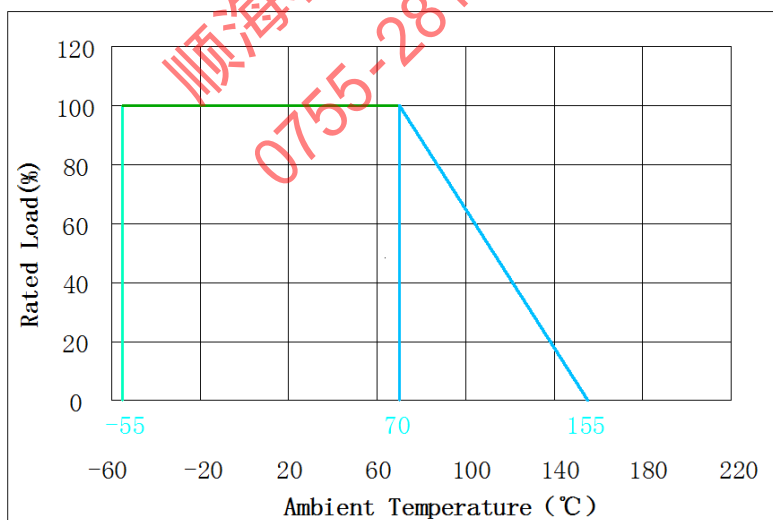
7-1 操作溫度範圍: -55°C ~ 155°C / Operating Temperature:-55°C ~ 155°C

額定功率溫度衰變曲線 / Typical Thermal Derating Curve

額定功率乃指於 70 °C 以內可連續滿額功率使用的術語。

下圖為當操作溫度高於 70°C 時的可使用功率衰減曲線。

Power rating is based on continuous full load operation at rated ambient temperature of 70 °C. For resistors operated at ambient temp. in excess of 70 °C, the max. load shall be derated in accordance with the following curve.



7-2 存儲條件 / STORAGE CONDITIONS

在溫度+10°C ~ 40°C、相對濕度 ≤ 75% 的密閉條件下可存放 2 年。 /

Under airtight in temperature +10°C ~ 40°C、relative humidity ≤ 75% can store 2 years.

在溫度+10°C ~ 60°C、相對濕度為 95% 的非露天下最多可存放 30 天。 /

Without dew in temperature +10°C ~ 60°C、relative humidity be 95% maximum value for 30days.

8. 焊錫墊尺寸及焊接條件 / SOLDER PAD SIZE AND WELDING CONDITIONS

8-1 建議如下圖焊接方式焊接，並滿足所要求的尺寸。 / Propose that the following picture installation way is installed, and satisfied the required size.

| Part Number | P | W | D | Loading |
|---------------------------------|--------|--------|--------|---------|
| HTE0805M1W0-series R001~R100 | 0.60mm | 2.30mm | 1.10mm | 1.0w |



| Part Number | P | W | D | Loading |
|-------------------------------------|--------|--------|--------|---------|
| HTE1206M1W5-series R001 | 0.50mm | 3.68mm | 1.35mm | 1.5w |
| HTE1206M1W5-series R002*S~R004*S | 0.60mm | 3.68mm | 1.30mm | 1.5w |
| HTE1206M1W5-series R005~R100 | 0.60mm | 3.68mm | 1.30mm | 1.5w |

| Part Number | P | W | D | Loading |
|-------------------------------------|--------|--------|--------|---------|
| HTE1508M2W0-series R001*GS | 0.70mm | 4.26mm | 1.45mm | 2.0w |
| HTE1508M2W0-series R002*G~R100*G | 0.70mm | 4.26mm | 1.45mm | 2.0w |

| Part Number | P | W | D | Loading |
|---------------------------------|--------|--------|--------|---------|
| HTE2010M2W0-series 0M50 | 0.55mm | 5.75mm | 2.48mm | 2.0w |
| HTE2010M2W0-series R001*S | 1.00mm | 5.75mm | 2.25mm | 2.0w |
| HTE2010M2W0-series R002~R100 | 1.00mm | 5.75mm | 2.25mm | 2.0w |

| Part Number | P | W | D | Loading |
|---------------------------------|--------|--------|--------|---------|
| HTE2512M3W0-series R001*S | 1.40mm | 7.25mm | 2.35mm | 3.0w |
| HTE2512M3W0-series R002~R100 | 1.40mm | 7.25mm | 2.35mm | 3.0w |

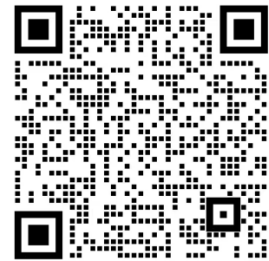
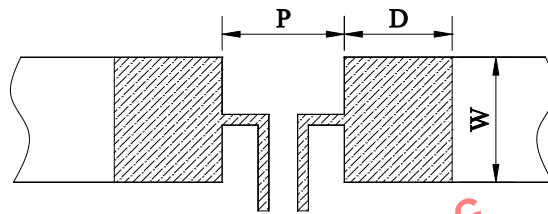
| Part Number | P | W | D | Loading |
|---------------------------------|--------|--------|--------|---------|
| HTE3008M3W0-series R001*S | 0.95mm | 8.63mm | 2.28mm | 3.0w |
| HTE3008M3W0-series R002~R100 | 0.95mm | 8.63mm | 2.28mm | 3.0w |

| Part Number | P | W | D | Loading |
|---------------------------------|--------|--------|--------|---------|
| HTE3015M4W0-series R001*S | 1.70mm | 8.74mm | 2.55mm | 4.0w |
| HTE3015M4W0-series R002~R100 | 1.70mm | 8.74mm | 2.55mm | 4.0w |

| Part Number | P | W | D | Loading |
|---------------------------------|--------|---------|--------|---------|
| HTE3618M4W0-series R001*S | 2.10mm | 10.35mm | 2.70mm | 4.0w |
| HTE3618M4W0-series R002~R100 | 2.10mm | 10.35mm | 2.70mm | 4.0w |

| Part Number | P | W | D | Loading |
|---------------------------------|--------|---------|--------|---------|
| HTE3921M5W0-series R001*S | 2.40mm | 12.65mm | 2.80mm | 5.0w |
| HTE3921M5W0-series R002~R100 | 2.40mm | 12.65mm | 2.80mm | 5.0w |

loading : 適用於本公司建議焊墊設計並使用於限定穩定電流下 /
suit for specific pad layout and specific steady current



8-2 建議客戶焊接參數 / Recommended Customer Soldering Parameters

8-2-1 回流焊溫度曲線 / Solder reflow Temperature condition (圖 4 / Fig.4)

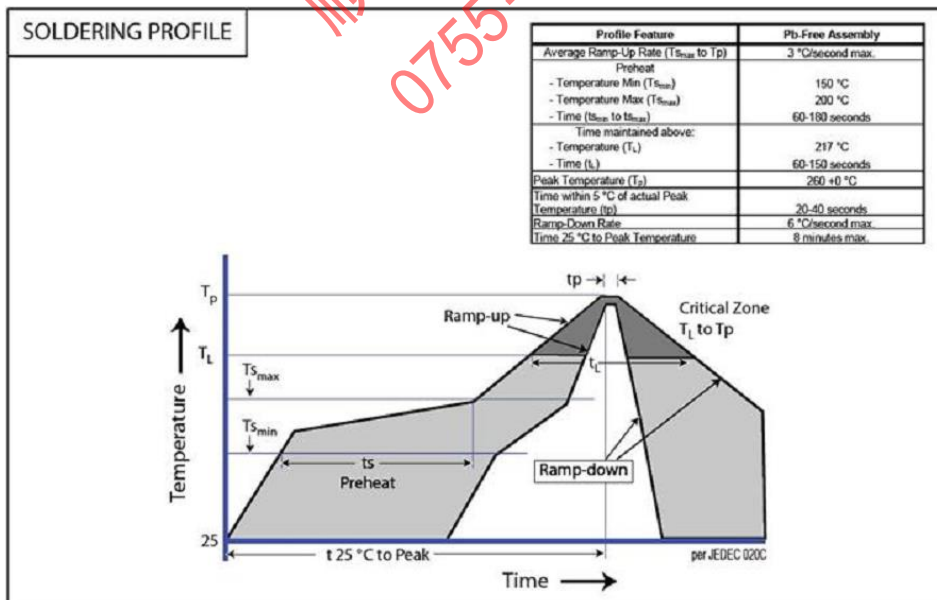


圖4 / Fig.4

8-2-2 允許烙鐵焊接條件(熱風設備) / Rework temperature (hot air equipment) : 350°C,
3~5seconds

8-2-3 焊接方法建議 / Recommended reflow methods

焊接熱源方式可用紅外線, 熱蒸氣, 熱風. / IR, vapor phase oven, hot air oven
如果焊錫溫度超過允許最高溫度, 則產品本身會有功能損壞的疑慮. / If reflow temperatures
exceed the recommended profile, devices may not meet the performance requirements.

9. 批量生產後出貨測試項目 / Lot ACCEPTANCE TEST REQUIREMENTS

每一批生產均須作入庫檢驗, 每一批生產單量不可超過500Kpcs. /

Qualification shall consist of passing a program of following tests. Parts shall be pulled from
each lot and maximum lot quantity shall be within 500Kpcs.

9-1 外觀 / Visual

方法 / Procedure : 利用放大鏡進行檢查 / Visual

標準 / Acceptance Criteria : 不能有髒汙、不潔、文印錯誤、破損等 / No parts are outstandingly
stained

9-2 尺寸 / Dimensions

方法 / Procedure : 使用合適且經校正的尺規 / As appropriate, calipers, micrometers,
optical comparator, or approved gages

標準 / Acceptance Criteria : 尺寸均在規定標準範圍內 / No parts outside specific dimensions

9-3 單體元件電阻(Ro) / Resistance (Ro)

方法 / Procedure : 在 25°C 下利用四線量測技術量測之 / Resistance shall be measured with 25
°C in the 4-wire resistance test

標準 / Acceptance Criteria : 電阻值均在規定標準範圍內 / The resistance of the test device shall
be within the limits specified

9-4 電阻溫度係數 / TCR

方法 / Procedure : 利用四線法量測出元件分別在 25°C 及125°C 下的電阻值, 並將其帶入下面公
式中即可得出 TCR值 / Getting the sampling device resistance values measured in 25°C and
125°C and put them in to the following equation to calculate the TCR

標準 / Acceptance Criteria : 溫度係數值均在規定標準範圍內 / All parts must within the specific
 $TCR = (R_b - R_a) / R_a \times 1 / (T_b - T_a) \times 10^6$

9-5 絕緣電阻 / Insulation resistance (Ri)

方法 / Procedure : 利用絕緣測試儀量測 / Resistance between protective layer and resistive shall
be measured by high ohm meter

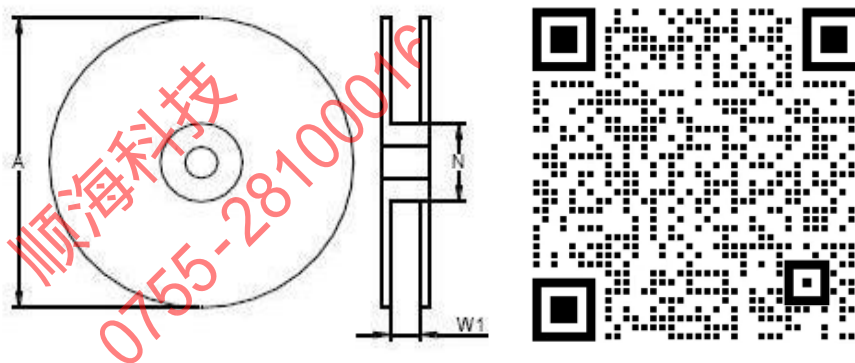
標準 / Acceptance Criteria : 防焊層與電阻本體絕緣電阻至少高於100MΩ / The resistance of the
test device shall over 100MΩ

10. 包裝訊息 / PACKAGING INFORMATION

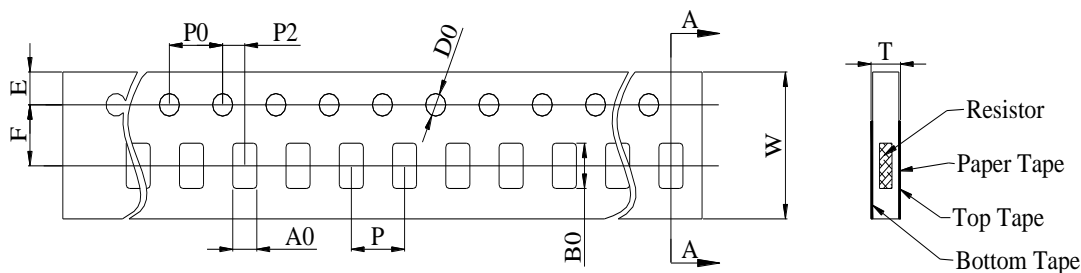
10-1 包裝數量、重量 / QUANTITY & WEIGHT

| 型號 / Type Number | 數量 / Quantity (pcs) | 重量 / Weight (g) |
|-----------------------|---------------------|-----------------|
| HTE0805M1W0-series | 5,000 | 150±30 |
| HTE1206M1W5-series | 5,000 | 160±40 |
| HTE1508M2W0-series(G) | 4,000 | 180±40 |
| HTE2010M2W0-series | 4,000 | 210±40 |
| HTE2512M3W0-series | 4,000 | 270±50 |
| HTE3008M3W0-series | 4,000 | 340±50 |
| HTE3015M4W0-series | 2,000 | 360±50 |
| HTE3618M4W0-series | 2,000 | 440±50 |
| HTE3921M5W0-series | 2,000 | 510±60 |

10-2 捲輪規格 / Reel & Tape specifications



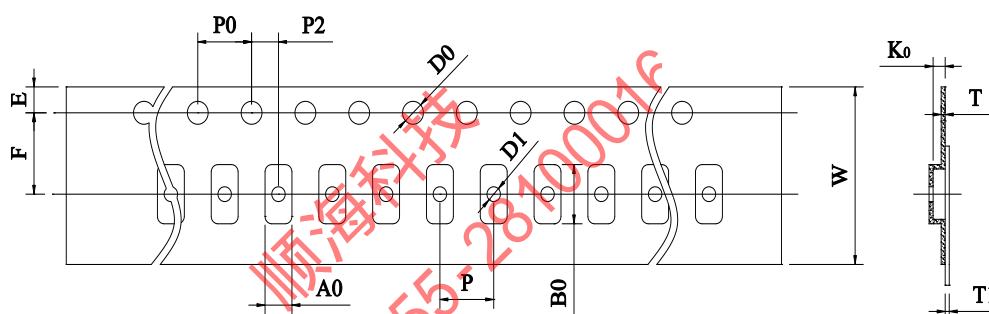
| 型號 / Type Number | A±5 (mm) | N±2 (mm) | W1±1 (mm) |
|-----------------------|----------|----------|-----------|
| HTE0805M1W0-series | 178 | 60 | 9.0 |
| HTE1206M1W5-series | 178 | 60 | 9.0 |
| HTE1508M2W0-series(G) | 178 | 60 | 13 |
| HTE2010M2W0-series | 178 | 60 | 13 |
| HTE2512M3W0-series | 178 | 60 | 13 |
| HTE3008M3W0-series | 178 | 60 | 17 |
| HTE3015M4W0-series | 178 | 60 | 17 |
| HTE3618M4W0-series | 178 | 60 | 17 |
| HTE3921M5W0-series | 178 | 60 | 24.5 |



Unit(mm)

| HTE0805M1W0-series | | | | | | | |
|--------------------|-------------|----|-------------|----|-------------|----|-------------|
| W | 8.00 ± 0.30 | P0 | 4.00 ± 0.10 | P | 4.00 ± 0.10 | P2 | 2.00 ± 0.10 |
| A0 | 1.55 ± 0.10 | B0 | 2.30 ± 0.10 | D0 | 1.50 ± 0.10 | F | 3.50 ± 0.10 |
| E | 1.75 ± 0.10 | T | 0.87 ± 0.10 | / | / | / | / |

| HTE1206M1W5-series | | | | | | | |
|--------------------|-------------|----|-------------|----|-------------|----|-------------|
| W | 8.00 ± 0.30 | P0 | 4.00 ± 0.10 | P | 4.00 ± 0.10 | P2 | 2.00 ± 0.10 |
| A0 | 2.05 ± 0.20 | B0 | 3.65 ± 0.20 | D0 | 1.50 ± 0.10 | F | 3.50 ± 0.10 |
| E | 1.75 ± 0.10 | T | 0.87 ± 0.10 | / | / | / | / |



Unit(mm)

| HTE1508M2W0-series(G) | | | | | | | |
|-----------------------|--------------|----|-------------|----|-------------|----|-------------|
| W | 12.00 ± 0.40 | P0 | 4.00 ± 0.10 | P | 4.00 ± 0.10 | P2 | 2.00 ± 0.10 |
| A0 | 2.30 ± 0.20 | B0 | 4.10 ± 0.20 | D0 | 1.50 ± 0.10 | F | 5.50 ± 0.10 |
| E | 1.75 ± 0.10 | T | 0.25 ± 0.10 | T1 | Max. 0.1 | K0 | 0.75 ± 0.20 |

| HTE2010M2W0-series | | | | | | | |
|--------------------|--------------|----|-------------|----|-------------|----|-------------|
| W | 12.00 ± 0.30 | P0 | 4.00 ± 0.10 | P | 4.00 ± 0.10 | P2 | 2.00 ± 0.10 |
| A0 | 2.85 ± 0.20 | B0 | 5.45 ± 0.20 | D0 | 1.50 ± 0.10 | F | 5.50 ± 0.10 |
| E | 1.75 ± 0.10 | T | 0.25 ± 0.10 | T1 | Max. 0.1 | K0 | 0.80 ± 0.20 |

| HTE2512M3W0-series | | | | | | | |
|--------------------|--------------|----|-------------|----|-------------|----|-------------|
| W | 12.00 ± 0.30 | P0 | 4.00 ± 0.10 | P | 4.00 ± 0.10 | P2 | 2.00 ± 0.10 |
| A0 | 3.40 ± 0.20 | B0 | 6.75 ± 0.20 | D0 | 1.50 ± 0.10 | F | 5.50 ± 0.10 |
| E | 1.75 ± 0.10 | T | 0.25 ± 0.10 | T1 | Max. 0.1 | K0 | 1.00 ± 0.20 |

| HTE3008M3W0-series | | | | | | | |
|--------------------|--------------|----|-------------|----|-------------|----|-------------|
| W | 16.00 ± 0.30 | P0 | 4.00 ± 0.10 | P | 4.00 ± 0.10 | P2 | 2.00 ± 0.10 |
| A0 | 2.80 ± 0.20 | B0 | 8.00 ± 0.20 | D0 | 1.50 ± 0.10 | F | 7.50 ± 0.10 |
| E | 1.75 ± 0.10 | T | 0.30 ± 0.10 | T1 | Max. 0.1 | K0 | 0.80 ± 0.20 |

| HTE3015M4W0-series | | | | | | | |
|--------------------|--------------|----|-------------|----|-------------|----|-------------|
| W | 16.00 ± 0.30 | P0 | 4.00 ± 0.10 | P | 8.00 ± 0.10 | P2 | 2.00 ± 0.10 |
| A0 | 4.15 ± 0.20 | B0 | 7.95 ± 0.20 | D0 | 1.50 ± 0.10 | F | 7.50 ± 0.10 |
| E | 1.75 ± 0.10 | T | 0.30 ± 0.10 | T1 | Max. 0.1 | K0 | 0.90 ± 0.20 |

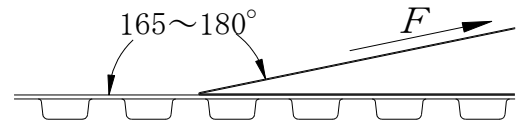
| HTE3618M4W0-series | | | | | | | |
|--------------------|--------------|----|-------------|----|-------------|----|-------------|
| W | 16.00 ± 0.30 | P0 | 4.00 ± 0.10 | P | 8.00 ± 0.10 | P2 | 2.00 ± 0.10 |
| A0 | 4.85 ± 0.20 | B0 | 9.35 ± 0.20 | D0 | 1.50 ± 0.10 | F | 7.50 ± 0.10 |
| E | 1.75 ± 0.10 | T | 0.30 ± 0.10 | T1 | Max. 0.1 | K0 | 0.90 ± 0.20 |

| HTE3921M5W0-series | | | | | | | |
|--------------------|--------------|----|--------------|----|-------------|----|--------------|
| W | 24.00 ± 0.30 | P0 | 4.00 ± 0.10 | P | 8.00 ± 0.10 | P2 | 2.00 ± 0.10 |
| A0 | 5.50 ± 0.20 | B0 | 11.50 ± 0.20 | D0 | 1.50 ± 0.10 | F | 11.50 ± 0.10 |
| E | 1.75 ± 0.10 | T | 0.30 ± 0.10 | T1 | Max. 0.1 | K0 | 0.90 ± 0.20 |

10-3 密封膠膜剝離強度要求 / Peeling Strength of Seal Tape

F = 剝離強度 : 0.1 – 1.0N (10 - 100gf)

F = Peeling Strength: 0.1 – 1.0N (10 - 100gf)



11. 其他 / OTHERS

11-1 如果在使用中有超出本規格書的要求，必須經由雙方協商確認。 / In the event that an impropriety is found beyond this specification, it shall be fixed by mutual agreement between the parties.

11-2 如果本規格書有不適當的情況，必須通過雙方協商並由本公司修改。 / In the event that an impropriety is found in this specification, Juneway Electronic Technology Co., Ltd. shall amend it by mutual agreement between the parties.

