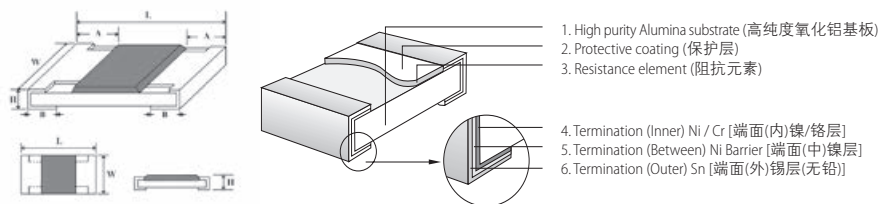


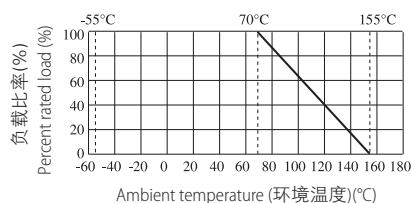
## Feature (特性)

- High power in standard size  
标准尺寸，高功率
- Suitable for both wave & re-flow soldering  
适合波峰焊与回流焊
- Application: AV adapters, LCD back-light, camera  
strobe etc. 适用于AV适配器, LCD背光电路,  
照相机快门等

## Figures (型状)



## Derating Curve &amp; Specification (降功率曲线及性能)



| Type 类型     | L(mm)     | W(mm)                                  | H(mm)     | A(mm)     | B(mm)     |
|-------------|-----------|----------------------------------------|-----------|-----------|-----------|
| HP02 (0402) | 1.00±0.10 | 0.50±0.05                              | 0.35±0.05 | 0.20±0.10 | 0.25±0.10 |
| HP03 (0603) | 1.60±0.10 | 0.80±0.10                              | 0.45±0.10 | 0.30±0.20 | 0.30±0.20 |
| HP05 (0805) | 2.00±0.15 | 1.25 <sup>+0.15</sup> <sub>-0.10</sub> | 0.55±0.10 | 0.40±0.20 | 0.40±0.20 |
| HP06 (1206) | 3.10±0.15 | 1.55 <sup>+0.15</sup> <sub>-0.10</sub> | 0.55±0.10 | 0.45±0.20 | 0.45±0.20 |
| HP07 (1210) | 3.10±0.10 | 2.60±0.20                              | 0.55±0.10 | 0.50±0.25 | 0.50±0.20 |
| HP10 (2010) | 5.00±0.10 | 2.50±0.20                              | 0.55±0.10 | 0.60±0.25 | 0.50±0.20 |
| HP11 (1812) | 4.50±0.20 | 3.20±0.20                              | 0.55±0.20 | 0.50±0.20 | 0.50±0.20 |
| HP12 (2512) | 6.35±0.10 | 3.20±0.20                              | 0.55±0.10 | 0.60±0.25 | 0.50±0.20 |
| SP12 (2512) | 6.35±0.10 | 3.20±0.15                              | 1.10±0.10 | 0.60±0.25 | 1.80±0.20 |

\*Special offered 特别提供: HP12 B:1.80±0.25mm

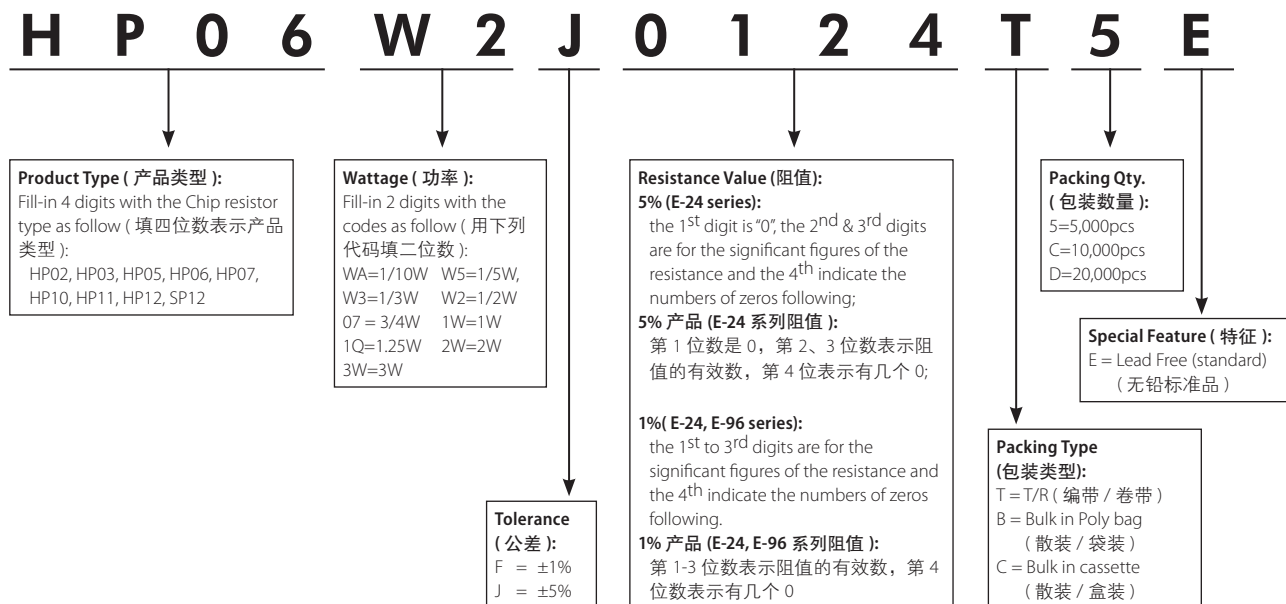
| Type 类型 | Size 尺寸     | Power Rating at 70°C 功率 | Resistance Range of 1% & 5% 1% & 5% 的阻值范围 | Max. Working Voltage 最大工作电压 | Max. Overload Voltage 最大过负荷电压 | Dielectric Withstanding Voltage 绝缘耐压 | Operating Temperature 工作温度范围 |
|---------|-------------|-------------------------|-------------------------------------------|-----------------------------|-------------------------------|--------------------------------------|------------------------------|
| HP02    | 0402 (1005) | 1/10W                   | 1Ω~10M<br>0Ω                              | 50V                         | 100V<br>Rmax=10mΩ, Imax=3A    | 100V                                 | -55°C~155°C                  |
| HP03    | 0603 (1608) | 1/5W                    | 0.1Ω~10M<br>0Ω                            | 75V                         | 150V<br>Rmax=8mΩ, Imax=5A     | 300V                                 | -55°C~155°C                  |
| HP05    | 0805 (2012) | 1/3W                    | 10mΩ~10M<br>0Ω                            | 150V                        | 300V<br>Rmax=5mΩ, Imax=6A     | 500V                                 | -55°C~155°C                  |
| HP06    | 1206 (3216) | 1/2W                    | 10mΩ~10M<br>0Ω                            | 200V                        | 400V<br>Rmax=5mΩ, Imax=10A    | 500V                                 | -55°C~155°C                  |
| HP07    | 1210 (3225) | 3/4W                    | 0.1Ω~10M<br>0Ω                            | 200V                        | 500V<br>Rmax=4mΩ, Imax=12A    | 500V                                 | -55°C~155°C                  |
| HP10    | 2010 (5025) | 1W                      | 10mΩ~10M<br>0Ω                            | 200V                        | 500V<br>Rmax=5mΩ, Imax=12A    | 500V                                 | -55°C~155°C                  |
| HP11    | 1812 (4532) | 1.25W                   | 0.1Ω~10M<br>0Ω                            | 200V                        | 500V<br>Rmax=5mΩ, Imax=12A    | 500V                                 | -55°C~155°C                  |
| HP12    | 2512 (6432) | 2W                      | 10mΩ~10M<br>0Ω                            | 250V                        | 500V<br>Rmax=5mΩ, Imax=16A    | 500V                                 | -55°C~155°C                  |
| SP12    | 2512 (6432) | 3W                      | 1Ω~10M                                    | 250V                        | 500V                          | 500V                                 | -55°C~155°C                  |

### Performance Specifications (性能)

|                         |      |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                 |        |                                                                                                  |
|-------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|--------|--------------------------------------------------------------------------------------------------|
| Temperature coefficient | 温度系数 | HP02: $1\Omega \leq R \leq 10\Omega$ : $\pm 400$ ppm/ $^{\circ}\text{C}$<br>$10\Omega < R \leq 100\Omega$ : $\pm 200$ ppm/ $^{\circ}\text{C}$<br>$100\Omega < R \leq 10\text{M}$ : $\pm 100$ ppm/ $^{\circ}\text{C}$                                                                                                                                                                                                  | Short-time overload             | 短时间过负荷 | $\pm 5\%$ : $\pm(2.0\% + 0.1\Omega)$ Max.(最大)<br>$\pm 1\%$ : $\pm(1.0\% + 0.1\Omega)$ Max.(最大)   |
|                         |      | HP03: $0.1\Omega \leq R < 0.2\Omega$ : $\pm 200$ ppm/ $^{\circ}\text{C}$<br>$0.2\Omega \leq R \leq 10\text{M}$ : $\pm 100$ ppm/ $^{\circ}\text{C}$                                                                                                                                                                                                                                                                    |                                 |        |                                                                                                  |
|                         |      | HP05: $10\text{m}\Omega \leq R \leq 15\text{m}\Omega$ : $\pm 800$ ppm/ $^{\circ}\text{C}$<br>$15\text{m}\Omega < R \leq 25\text{m}\Omega$ : $\pm 600$ ppm/ $^{\circ}\text{C}$<br>$25\text{m}\Omega < R \leq 50\text{m}\Omega$ : $\pm 400$ ppm/ $^{\circ}\text{C}$<br>$50\text{m}\Omega < R < 0.1\Omega$ : $\pm 200$ ppm/ $^{\circ}\text{C}$<br>$0.1\Omega \leq R \leq 10\text{M}$ : $\pm 100$ ppm/ $^{\circ}\text{C}$ | Dielectric withstanding voltage | 绝缘耐压   | No Evidence of flashover, mechanical damage, arcing or insulation breakdown<br>无击穿, 电弧及可见机械性损伤   |
|                         |      | HP06: $10\text{m}\Omega \leq R < 15\text{m}\Omega$ : $\pm 700$ ppm/ $^{\circ}\text{C}$<br>$15\text{m}\Omega \leq R < 30\text{m}\Omega$ : $\pm 400$ ppm/ $^{\circ}\text{C}$<br>$30\text{m}\Omega \leq R < 50\text{m}\Omega$ : $\pm 300$ ppm/ $^{\circ}\text{C}$<br>$50\text{m}\Omega \leq R < 0.1\Omega$ : $\pm 150$ ppm/ $^{\circ}\text{C}$<br>$0.1\Omega \leq R \leq 10\text{M}$ : $\pm 100$ ppm/ $^{\circ}\text{C}$ |                                 |        |                                                                                                  |
|                         |      | HP07, HP11, SP12: $\pm 100$ ppm/ $^{\circ}\text{C}$                                                                                                                                                                                                                                                                                                                                                                   | Terminal bending                | 端子弯曲   | $\pm(1.0\% + 0.05\Omega)$ Max.(最大)                                                               |
|                         |      | HP10: $10\text{m}\Omega \leq R < 15\text{m}\Omega$ : $0 \sim +800$ ppm/ $^{\circ}\text{C}$<br>$15\text{m}\Omega \leq R < 50\text{m}\Omega$ : $0 \sim +600$ ppm/ $^{\circ}\text{C}$<br>$50\text{m}\Omega \leq R < 10\text{M}$ : $\pm 100$ ppm/ $^{\circ}\text{C}$                                                                                                                                                      |                                 |        |                                                                                                  |
|                         |      | HP12: $10\text{m}\Omega \leq R < 20\text{m}\Omega$ : $0 \sim +800$ ppm/ $^{\circ}\text{C}$<br>$20\text{m}\Omega \leq R \leq 50\text{m}\Omega$ : $0 \sim +400$ ppm/ $^{\circ}\text{C}$<br>$50\text{m}\Omega < R \leq 10\text{M}$ : $\pm 75$ ppm/ $^{\circ}\text{C}$                                                                                                                                                    | Soldering heat                  | 耐焊接热   | $\pm(1.0\% + 0.05\Omega)$ Max.(最大)                                                               |
|                         |      |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                 |        |                                                                                                  |
|                         |      |                                                                                                                                                                                                                                                                                                                                                                                                                       | Solderability                   | 可焊性    | Min. 95% Coverage (最少 95% 覆盖率)                                                                   |
|                         |      |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                 |        |                                                                                                  |
|                         |      |                                                                                                                                                                                                                                                                                                                                                                                                                       | Temperature cycling             | 温度循环   | $\pm 5\%$ : $\pm(1.0\% + 0.05\Omega)$ Max.(最大)<br>$\pm 1\%$ : $\pm(0.5\% + 0.05\Omega)$ Max.(最大) |
|                         |      |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                 |        |                                                                                                  |
|                         |      |                                                                                                                                                                                                                                                                                                                                                                                                                       | Humidity (Steady state)         | 恒定湿热   | $\pm 5\%$ : $\pm(3.0\% + 0.1\Omega)$ Max.(最大)<br>$\pm 1\%$ : $\pm(0.5\% + 0.1\Omega)$ Max.(最大)   |
|                         |      |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                 |        |                                                                                                  |
|                         |      |                                                                                                                                                                                                                                                                                                                                                                                                                       | Load life in humidity           | 湿度寿命   | $\pm 5\%$ : $\pm(3.0\% + 0.1\Omega)$ Max.(最大)<br>$\pm 1\%$ : $\pm(1.0\% + 0.1\Omega)$ Max.(最大)   |
|                         |      |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                 |        |                                                                                                  |
|                         |      |                                                                                                                                                                                                                                                                                                                                                                                                                       | Load life                       | 负载寿命   | $\pm 5\%$ : $\pm(3.0\% + 0.1\Omega)$ Max.(最大)<br>$\pm 1\%$ : $\pm(1.0\% + 0.1\Omega)$ Max.(最大)   |
|                         |      |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                 |        |                                                                                                  |

### Ordering Procedure (Example: High Power HP06 1/2W 5% 120K $\Omega$ T/R-5000)

订购方式 (例如: 高功率 HP06 1/2W 5% 120K $\Omega$  T/R-5000)



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