



Part No. System

标准料号系统



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The standard Part No. includes 14 digits with the following explanation (标准料号包括 14 位数字, 注释如下):

1. 1st~4th digits (第 1 位 ~ 第 4 位):
 - a) This is to indicate the SMD Resistor size. Example (表示晶片电阻的尺寸, 例如): 1206, TC05 or HV03;
 - b) For Resistor Network & Coated type, the 1st~3rd digits are to indicate the product type and the 4th digit is the special feature. Example: RNLA = Resistor Newtork Circuit A type; CFRF = Carbon Film Fixed Resistors Non-Flame type; MORI = Metal Oxide Film Fixed Resistor Non-Inductive type. 网络电阻和涂装型电阻第 1 位到第 3 位表示产品类型, 第 4 位表示特殊形态, 如 : RNLA = 网络电阻 A 型 ; CFRF = 不燃性碳膜电阻器 ; MORI = 无感型金属氧化膜电阻器。
 - c) For Cement Fixed Resistors, these 4 digits are to indicate the product type but if the product type has only 3 digits, the 4th digit will be "0". Example: PRW0=PRW type; PRWC=PRWC type. 水泥型前 4 位表示产品类型, 如果产品只有 3 个字母, 第 4 位为 0, 例 : PRW0=PRW 型 ; PRWC=PRWC 型。
2. 5th~6th digits (第 5 位 ~ 第 6 位):
 - a) This is to indicate the wattage or power rating. To distinguish the sizes and the numbers, the following codes are used, and please refer to the following chart for details: W = Normal Size; S = Small Size; U = Ultra Small Size; "1" ~ "G" to denotes "1" ~ "16" as Hexadecimal: 表示产品标识功率, 为区别不同尺寸, 同时使用以下字母, 如 : W = 正常尺寸 ; S = 小尺寸 ; U = 超小尺寸 ; "1" ~ "G" 代表 "1" ~ "16" 为 16 进制。

1/16W ~ 1/2W (<1W)

| Wattage 功率 | 1/2 | 1/3 | 1/4 | 1/5 | 1/6 | 1/7 | 1/8 | 1/9 | 1/10 | 1/11 | 1/12 | 1/13 | 1/14 | 1/15 | 1/16 |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|
| Normal Size 正常尺寸 | W2 | W3 | W4 | W5 | W6 | W7 | W8 | W9 | WA | WB | WC | WD | WE | WF | WG |
| Small Size 小尺寸 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | SA | SB | SC | SD | SE | SF | SG |
| Ultra Small Size 超小尺寸 | U2 | U3 | U4 | U5 | U6 | U7 | U8 | U9 | UA | UB | UC | UD | UE | UF | UG |

1W ~ 16W (≥1W)

| Wattage 功率 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|-----------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Normal Size 正常尺寸 | IW | 2W | 3W | 4W | 5W | 6W | 7W | 8W | 9W | AW | BW | CW | DW | EW | FW | GW |
| Small Size 小尺寸 | 1S | 2S | 3S | 4S | 5S | 6S | 7S | 8S | 9S | AS | BS | CS | DS | ES | FS | GS |
| Ultra Small Size 超小尺寸 | 1U | 2U | 3U | 4U | 5U | 6U | 7U | 8U | 9U | AU | BU | CU | DU | EU | FU | GU |

- b) For power rating less than 1W, the 5th digit will be the letters W, S or U to represent the size required & the 6th digit will be a number or a letter code. Example: WA = 1/10W; U2 = 1/2W-SS (功率小于 1 瓦 , 第 5 位用 W, S 或 U 表示尺寸要求, 第 6 位将是数字或字母, 例 : WA = 1/10W; U2 = 1/2W-SS.)
- c) For power rating of 1W to 16W, the 5th digit will be a number or a letter code and the 6th digit will be the letters of W, S or U. Example: AW = 10W; 3S = 3W-S. 当功率为 1 到 16 瓦 , 第 5 位将是数字或字母, 第 6 位是 W, S 或 U. 例 : AW = 10W; 3S = 3W-S.
- d) For power rating between 17W to 99W, the 5th & 6th digits will show the whole numbers of the power rating itself. Example: 20 = 20W; 75 = 75W. 当功率在 17 瓦 ~99 瓦之间第 5 位至第 6 位全部表示功率。例 : 20 = 20W; 75 = 75W.
- e) For power rating of 100W & over, the 5th & 6th digits will be indicated with "00" and the actual wattage being indicated at the last 3 digits (12th~14th) of the Part No. 当大于 100 瓦时第 5 位和第 6 位表示为 "00" 实际功率表示在料号最后 3 位 (12 位 ~ 14 位)
- f) For special power ratings, the following codes are to be used (特殊功率用下列数字表示):

| | | |
|--|--|--------------|
| 1). WH = 1/32W (10P8 Chip Network 网络电阻) | 2). 07 = 3/4W [Chip 2010 size (晶片 2010 尺寸)] | 10). 3A=3.5W |
| 3). 04 = 0.4W-SS (0.4 watt Ultra Small size 超小尺寸) | 4). 06 = 0.6W-S (0.6 watt Small size 小尺寸) | |
| 5). 2A = 2.5W 6). 6A = 6.5W 7). WK=2/3W | 8). 1A=1.5W 9). 1.25W=1Q | |
- g) For Resistor Network, since the power rating is fixed as 1/8W for A circuit & 1/5W for B circuit, the 5th & 6th digit is to be used to denote the number of pins required. Example: 09 = 9pins; 12 = 12pins. (网络电阻功率固定为 1/8W 或 1/5W, 故第 5 位和第 6 位用来表示所需要的 pins 数 . 例 : 09 = 9pins; 12 = 12pins.)
- h) For Jumper Wires the 5th & 6th digits will be indicated with "00" (跳线电阻的第 5 位、第 6 位用 "00" 来表示)
- i) For Thin Film Chip Resistors, these 2 digits will be used to indicated the requested Temperature coefficient: 对于薄膜晶片电阻产品 , 这两位用来表示产品的温度系数要求 :

| | | |
|----------------|----------------|----------------|
| 1). 05 = 5PPM | 2). 10 = 10PPM | 3). 15 = 15PPM |
| 4). 25 = 25PPM | | 5). 50 = 50PPM |
- The 7th digit is to denote the Resistance Tolerance. The following letter code is to be used for indicating the standard Resisance Tolerance. As for Metal Film Fixed Resistor products, it is also to denote the standard PPM as follows (第 7 位表示阻值误差。下列数码用来表示标准误差, 用于金属膜产品时, 同时用来表示标准 PPM, 如下):

B = ±0.1% (15PPM)

G = ±2% (100PPM)

W = ±0.05%

C = ±0.25% (25PPM)

J = ±5% (200PPM)

L = ±0.01%

D = ±0.5% (50PPM)

K = ±10%

F = ±1% (50PPM)

Remark: if it is not one of the above standard "tolerance-TCR", the requirement should be clearly stated when placing order. Example: ±1% (25PPM), the 7th digit still shows "F" but separately note the requirement of "25PPM".

注: 如果一个不是上述标准 "公差-PPM" 的要表示清楚
例 : ±1% (25PPM), 第 7 位要标示 "F" 并另注 "25PPM"

4. The 8th to 11th digits is to denote the Resistance Value (第 8 位 ~ 第 11 位表示阻值):

- For the standard resistance values of E-24 series in 2% & 5% & 10% tolerance, the 8th digit is "0", the 9th & 10th digits are to denote the significant figures of the resistance and the 11th digit is the number of zeros following (对于 E-24 系列的 2%、5%、10% 产品, 第 8 位数是 0, 第 9 位数和第 10 位数表示阻值的有效数, 第 11 位表示有几个 0).
- For the standard resistance values of E-96 series in $\leq 1\%$ tolerance, the 8th digit to the 10th digits are to denote the significant figures of the resistance and the 11th digit is the number of zeros following (对于 E-96 系列 $\leq 1\%$ 的产品, 第 8 位数到第 10 位数表示阻值的有效数, 第 11 位数表示有几个 0).
- For the code to the significant figures to E-24 & E-96 series, please refer to page 170 & 171 of the standards Resistance Value list. (有效数 E-24 和 E-96 系列, 请参考 170 页和 171 页标准阻值表)
- The following numbers and the letter codes is to be used to indicate the number of zeros in the 11th digit:

以下数字及字母用来表示第 11 位数有几个 0:

$$\begin{array}{llllll} 0 = 10^0 & 1 = 10^1 & 2 = 10^2 & 3 = 10^3 & 4 = 10^4 & 5 = 10^5 \\ J = 10^{-1} & K = 10^{-2} & L = 10^{-3} & M = 10^{-4} & N = 10^{-5} & P = 10^{-6} \end{array}$$

- For Cement Resistors the 8th digit will be coded with "W" or "P" to denote Wire-wound type or Power Film type respectively of the Cement Fixed Resistor product. The 9th to 11th please refer to point 4.a (水泥电阻第 8 位数 "W" 或 "P" 用来表示绕线型或切割型, 第 9 位数到第 11 位数请参考 4.a)

Example (例):

E-24 series 系列

0120 = 12 ohm
0123 = 12K ohm
012J = 1.2 ohm

E-96 series 系列

1210 = 121 ohm
1302 = 13K ohm
196J = 19.6 ohm

Cement Resistors 水泥型固定电阻值

W120 = 12 ohm Wire-wound type 绕线型
W12J = 1.2 ohm Wire-wound type 绕线型
P273 = 27 kohm Powe Film type 切割型

5. The 12th, 13th & 14th digits (第 12 位数、13 位数和 14 位数):

- The 12th digit is to denote the Packaging type with the following codes (第 12 位数表示包装方式, 采用如下代码):

$$\begin{array}{ll} A = \text{Tape / Box (Ammo Pack)} & C = \text{Bulk in Cassette (for Chip product)} \\ B = \text{Bulk / Box} & T = \text{Tape / Reel} \\ P = \text{Tape / Box of PT-26 product} & \end{array}$$

- The 13th digit is normally to indicate the Packing Quantity of Tape/Box or Tape/Reel packaging types. Except for Chip products Bulk packing, this digit should be filled "0" or other products with "Bulk/Box" packaging requirement. The following letter codes is to be used for some packaging quantities (第 13 位数一般表示包装数量对于 T/B 或 T/R 型, 除了晶片散装外, 其他产品的散装包装用 "0" 表示数量。下列字母说明包装数量).

$$\begin{array}{llllll} A = 500\text{pcs (只)} & P = 1500\text{pcs (只)} & B = 2,500\text{pcs (只)} & C = 10,000\text{pcs (只)} & N = 12,500\text{pcs (只)} & E = 15,000\text{pcs (只)} \\ D = 20,000\text{pcs (只)} & G = 25,000\text{pcs (只)} & L = 45,000\text{pcs (只)} & H = 50,000\text{pcs (只)} & J = 60,000\text{pcs (只)} & \end{array}$$

Example (例):

CHIP product (晶片产品)

TD = T/R-20,000
TE = T/R-15,000
T4 = T/R-4,000

Other products (其它产品)

A5 = T/B-5,000
TB = T/R-2,500
B0 = B/B (可提供标准包装)

- For the Forming type products, the 13th & 14th digits are used to denote the forming types of the product with the following letter codes (对于成型产品第 13 位数和第 14 位数用来表示成型产品, 如下字母表示):

$$\begin{array}{ll} MF = M \text{ type with Flattened lead wire (M 型打扁加工)} & F0 = F \text{ type 型} \\ MK = M \text{ type with Kinked lead wire (M 型打弯加工)} & F1 = F1 \text{ type 型} \\ ML = M \text{ type with normal lead wire (M 型加工)} & F2 = F2 \text{ type 型} \\ MC = M \text{ type with bending lead wire (M 型打弯加工)} & F3 = F3 \text{ type 型} \end{array}$$

- For power rating over 100watt, the 12th to the 14th digits are to denote the actual wattage of the products (当功率超过 100W 时, 它的第 12 位数到 14 位数用来表示产品的实际功率):

Example (例): 100 = 100watt (瓦) 150 = 150watt (瓦) 225 = 225watt (瓦) A00=1000watt (瓦) A50=1500watt (瓦)
C00=2000watt (瓦) C50=2500watt (瓦) D00=3000watt (瓦) E00=4000watt (瓦) F00=5000watt (瓦)

- For some products, the 14th digit alone can use to denote special features or additional information with the following codes (对于某些产品第 14 位可以显示特性和附加信息, 如下字母):

$$\begin{array}{llll} P = \text{Panaser type (Panaser 型)} & 1 = \text{Avisert 1 type (Avisert 1 型)} & 2 = \text{Avisert 2 type (Avisert 2 型)} \\ 3 = \text{Avisert 3 type (Avisert 3 型)} & A = \text{CO 1/4W - A type (切割型 CO 1/4W-A 型)} & B = \text{CO 1/4W - B type (切割型 CO 1/4W-B 型)} \\ E = \text{used to denote the "Environment Protection, lead Free type" of SMD category resistors (now, this became the Standard type of SMD)} & & & \end{array}$$

(晶片电阻, 晶片排阻及网络电阻器 " 环保无铅型 ")

- For some products, the 14th digit alone can use to denote special features or additional information with the following codes (对于某些产品第 14 位可以显示特性和附加信息, 如下字母):

$$\begin{array}{llll} B=1/32W & C=1/16W & F=1/10W & G=1/8W \\ H=1/6W & J=1/4W & K=1/3W & M=1/2W \\ N=3/4W & P=1W & S=Special & \end{array}$$