

# Approval Sheet

for

## Low Ohm Wire Resistors

### MCW series

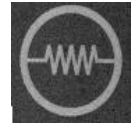
**$\pm 1\%$  &  $\pm 2\%$  &  $\pm 3\%$  &  $\pm 5\%$**

**YAGEO CORPORATION**

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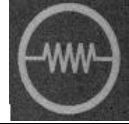
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Rev.	Description	Issue Date	Drawn	Approved
00	issue new spec.	Sep 19, 2010	Eric Han	Ken Hsu
01	Change W-type Specification	July 4, 2011	Eric Han	Ken Hsu
02	Add new Pitch N=16.0±0.2mm	July 13, 2011	Eric Han	Ken Hsu
03	Add new Pitch P=11.5±0.2mm	July 14, 2011	Eric Han	Ken Hsu
04	Add new Diameter ØD =2.5±0.2mm	July 14, 2011	Eric Han	Ken Hsu
05	Add new Pitch P=8.0±0.2mm	Nov 14, 2011	Eric Han	Ken Hsu
06	Add new Pitch L=30.0±0.2mm	Apr 05, 2012	Eric Han	Ken Hsu
07	Add new Tolerance=±1%	Jun 28,2012	Eric Han	Ken Hsu
08	Add new Pitch T=5.5±0.2mm	Apr 02, 2013	Eric Han	Ken Hsu
09	Add new Tolerance H=±3%	Apr 10, 2013	Eric Han	Ken Hsu
10	Add pitch U=15mm and V=32mm; deleted the performance test items.	Jan. 03, 2015	Feng Ye	Flora Shen
11	Add pitch P=11mm type	Jul. 08, 2015	Feng Ye	Flora Shen
12	Add MCW-25 type	Sep. 14, 2015	Feng Ye	Flora Shen
13	Add Pitch=15.5mm type	Feb. 02, 2016	Feng Ye	Flora Shen
14	Add MCW-'T' type: Sn plating and H=2.5+/-0.5mm	Jun 17, 2016	Feng Ye	Flora Shen
15	Revised the tolerance of wire diameter from ±0.02mm to ±0.05mm	Jul. 20, 2016	Feng Ye	Flora Shen
16	Add 'M' & 'N' in 9 <sup>th</sup> code.	Nov. 28, 2016	Feng Ye	Flora Shen

<b>Description</b>	Manganese Copper Wire			
<b>Series</b>	MCW	MCW	16	



**1. PRODUCT :**

The Low Ohm Wire Resistors are suitable for high power current detection, it is non-inductive type; Low Ohm Wire Resistors meet EU-RoHS requirements.



**2. PART NUMBER :**

Part number of the MCW resistor is identified by the name, size, tolerance, packing style, temperature coefficient, forming type, measure code, pitch code and resistance value.

Example :

<b>MCW</b> (1)	<b>P</b> (2)	<b>08</b> (3)	<b>J</b> (4)	<b>B</b> (5)	<b>-</b> (6)	<b>M</b> (7)	<b>A</b> (8)	<b>B</b> (9)	<b>R068</b> (10)	<b>A</b> (11)
Series Name	Type	Diameter	Resistance Tolerance	Packing Style	Temperature Coefficient of Resistance	Forming Type	Measuring point	Pitch	Resistance value	Multiplier

(1) Series Name: MCW: Manganese Copper Wire, Cu Ni wire, Nickel-copper, others upon request

(2) Type: P : Sn plating  
 - : without sn plating  
 H: Sn plating and H=4.0+/-0.5mm  
 T: Sn plating and H=2.5+/-0.5mm

(3) Diameter : 06 = 0.6mm 08=0.8mm 10=1.0mm 12=1.2mm 14=1.4mm 15=1.5mm  
 16 = 1.6mm 18=1.8 mm 20=2.0mm 25=2.5mm 26=2.6mm

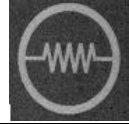
(4) Tolerance : F=±1% G=±2% H=±3% J=±5% - = base on Spec

(5) Packaging Type: B= Bulk Packing

(6) Temperature Coefficient : E = ±50PPM/°C F = ±100PPM/°C G = ±200PPM/°C '- '=base on spec.  
 M=±50PPM/°C with CuMn alloy, N=±50PPM/°C with CuNi alloy

Wire Material	TCR
CN30/ CN ALLOY	±200PPM/°C
CM / CN49	±50PPM/°C
NCH-1	±100PPM/°C

(7) Special Type : M = M-Type Forming for Bulk  
 B = B-Type Forming for Bulk  
 W= W-Type Forming for Bulk  
 K = K-Type Forming for Bulk  
 N = N-Type Forming for Bulk



(8) Measuring Point : A = 0 mm · B = 0.2 mm · C = 0.4 mm · D = 0.5 mm · E = 0.6 mm · F = 0.7 mm  
 G = 0.8 mm · H = 0.9 mm · J = 1.0 mm · K = 1.1 mm · L = 1.2 mm · M = 1.3 mm  
 N = 1.4 mm · P = 1.5 mm · Q = 1.6 mm · R = 1.7 mm · S = 1.8 mm · T = 1.9 mm  
 U = 2.0 mm · V = 2.5 mm · W = 3.0 mm

(9) Pitch : A = 5±0.2mm · B = 7.5±0.2mm · C = 10±0.2mm · D = 12.5±0.2mm · E = 15±0.2mm  
 F = 17.0±0.2mm · G = 20±0.2mm · H = 22.5±0.2mm · J = 25.0±0.2mm · K = 7.2 ±0.2mm  
 M = 3.0 ±0.2mm · N = 16.0±0.2mm · P = 11.5±0.2mm · Q = 8.0±0.2mm · L = 30.0±0.2mm  
 T = 5.5±0.2mm · U = 14.0±0.5mm · V = 32±1.0mm · W = 12.0±0.2mm Y = 6.2±0.2mm  
 Z = 11±0.2mm S = 15.5±0.2mm

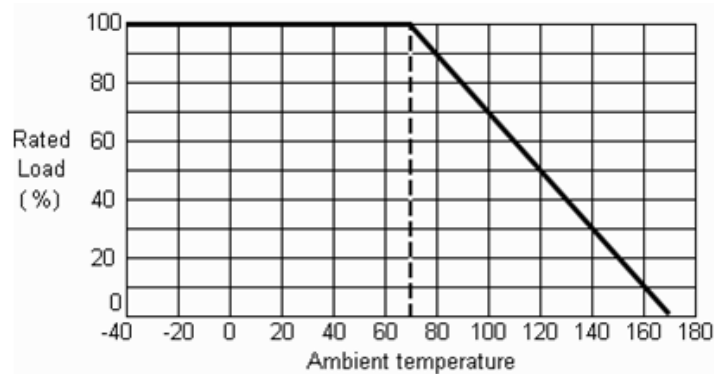
(10) Resistance : Resistance range : R0014 ~ R078, Max 4 digits

(11) Multiplier : A =  $\cdot 10^{-1}$  B =  $\cdot 10^{-2}$  C =  $\cdot 10^0$

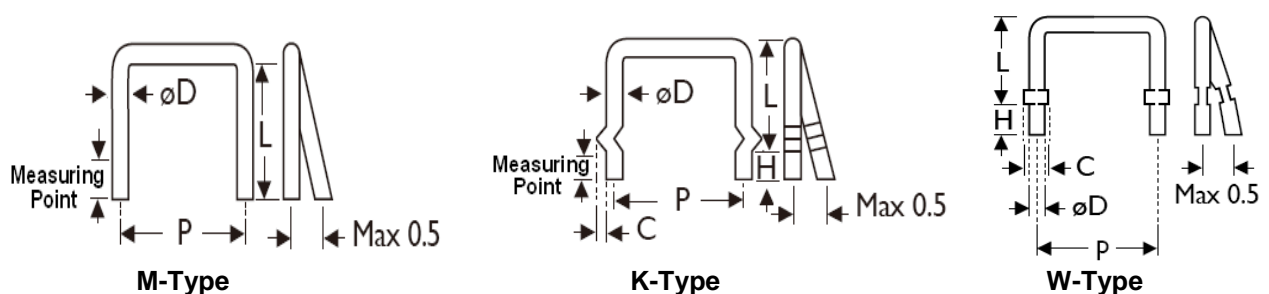
### 3. ELECTRICAL CHARACTERISTICS

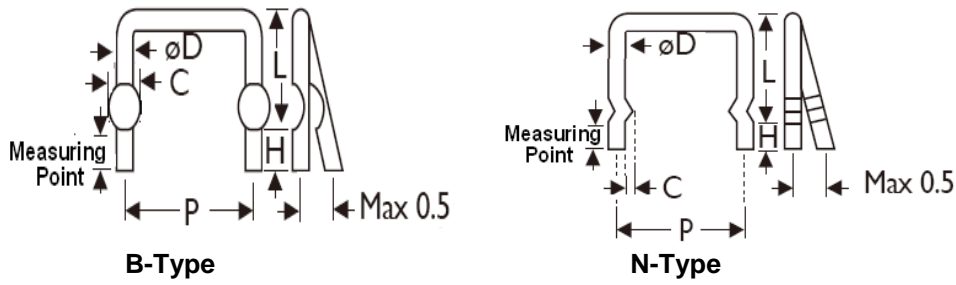
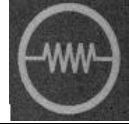
STYLE	MCW
Resistance Range	0.0014Ω ~ 0.078Ω (family value, each type is different)
Operating Temp. Range	-40 °C to + 170 °C
Temperature Coefficient	±50 ppm /°C, ±100 ppm /°C, ±200 ppm /°C

### 4. DERATING CURVE



### 5. DIMENSIONS





STYLE		DIMENSION			
Type	Rated Current	øD	C	H	P, L
MCW-06	3.0A	0.6±0.05	0.9±0.1	3.0±0.5 (Standard, Others on request)	P & L could be designed by customer's requirement
MCW-08	4.5A	0.8±0.05	1.1±0.1		
MCW-10	5.5A	1.0±0.05	1.3±0.1		
MCW-12	7.0A	1.2±0.05	1.5±0.1		
MCW-14	8.0A	1.4±0.05	1.7±0.1		
MCW-15	8.5A	1.5±0.05	1.8±0.2		
MCW-16	9.5A	1.6±0.05	1.9±0.2		
MCW-18	11A	1.8±0.05	2.2±0.2		
MCW-20	12A	2.0±0.05	2.5±0.2		
MCW-25	16A	2.5±0.05	3.0±0.2		
MCW-26	18A	2.6±0.05	3.2±0.2		

## 7. PACKING METHODS

TYPE	PACKAGE	QTY/PACKAGE
MCW	BULK	1000PCS

## 8. Plant Address

- A. China Dongguan Plant  
7-1, Gaoli Road, Gaoli Industrial Zone  
Tangxia Zhen, Dongguan, Guangdong, China  
(廣東省東莞市塘廈鎮高麗工業區高麗路 7-1 號)  
Tel. 86-769-8772 0275  
Fax. 86-769-8772 0275 #4333
- B. China Mudu Plant  
No.158, Jinchang Road, No.1 Building of NanBangIND.Zone,  
Mu Du New District, Suzhou, China  
(江蘇省蘇州市木瀆新區金長路 158 號南濱工業區 1 號)  
Tel. 86-512-66518889  
Fax. 86-512-66519889

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