

CHIP RESISTORS

晶片電阻

The chip resistor is metal glazed thick film on high purity ceramic substrate and overcoated by protective glass paste, it provides uniform quality and stable characteristic. Latest automated system plus high technology enable us to tum out quality product with competitive price.

晶片電阻是採用精純氧化鋁結晶陶瓷基板印上高品質金屬厚膜導體，外層塗上玻璃銻保護體，產生出均勻晶體的品質及穩定的特性。最新自動化設備，大量生產，品質穩定及價格合理化，符合新時代電子印刷基板廣泛使用。

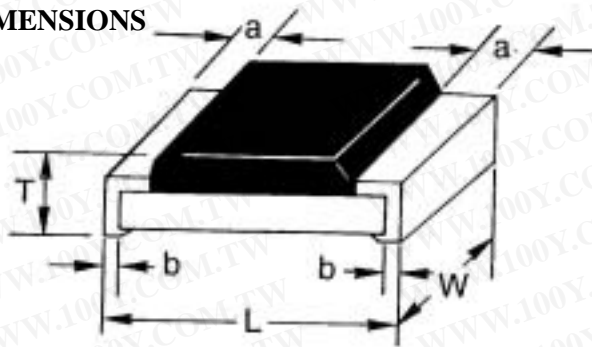
FEATURES

1. Miniature size can compact. P.C. Board.
2. 8mm tape earrier packaging available for automatic surface mounting.
3. Excellent mechanical strength and electrical stability.
4. Reducing assembly costs.

特 性

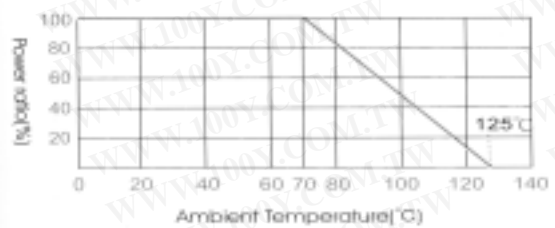
1. 小型化適用於高精密電子產品之小型基板。
2. 8mm 帶裝方式適用於自動表面粘著。
3. 具有高強度安定性和高信賴性。
4. 降低裝配費用。

DIMENSIONS



STYLE	DIMENSIONS: (mm)				
	L	W	a	b	T
0402	1.00±0.10	0.50±0.05	0.20±0.10	0.25±0.10	0.35±0.05
0603	1.60±0.10	0.85±0.10	0.30±0.20	0.30±0.20	0.45±0.05
0805	2.10±0.10	1.30±0.10	0.40±0.20	0.40±0.20	0.50±0.05
1206	3.10±0.10	1.60±0.10	0.50±0.25	0.50±0.25	0.55±0.05
1210	3.10±0.10	2.60±0.10	0.50±0.25	0.40±0.20	0.55±0.05
2010	5.00±0.10	2.50±0.10	0.60±0.25	0.40±0.20	0.55±0.05
2512	6.35±0.10	3.20±0.10	0.60±0.25	0.40±0.20	0.55±0.05

DERATING CURVE







RATING

TYPE	Rated Power at 70	Max. Working Voltage	Max. Overload Voltage	Resistance Range		Operating Temp Range
				1%,E-96	5%,E- 24	
0402	1/16W	25V	50V	100 -100K	2 -5.6M	-55 ~ +125
0603	1/10W	50V	100V	10 -1M	1 -10M	-55 ~ +125
0805	1/8W	150V	300V	10 -1M	1 -10M	-55 ~ +125
1206	1/4W	200V	400V	10 -1M	1 -10M	-55 ~ +125
1210	1/3W	200V	400V	10 -1M	1 -10M	-55 ~ +125
2010	1/2W	200V	400V	10 -1M	1 -10M	-55 ~ +125
2512	1W	200V	400V	10 -1M	1 -10M	-55 ~ +125

CHARACTERISTICS

TEST ITEM	DESCRIPTION	TEST METHODS
Temperature	Temp:-55 ~+125	JIS C 5202.....clause 5.2
Coefficient of resistance	Requirement: 5% 1 ~10 ±400PPM/ 11 ~10M ±200PPM/ 1% 10 ~1m ±100PPM/	Natural resistance change per temperature degree centigrade. $\frac{R2-R1}{R1(t2-t1)} \times 10^6 \text{ (PPM/)}$
Short-Time Over load	(WV)=2.5 \overline{WR} ON 5 secs Requirement: ± (2.0%±0.1) Max	JIS C 5202.....clause 5.5 permanent resistance change after the application of a potential of 2.5 time RCWV. Or the max. Over load voltage respectively specified in the above list, whichever less for 5 secs
Strength Bending	Y/X=5/90mm FOR 10 secs Requirement : ± (1.0%±0.05) Max	JIS C 5202.....clause 6.1.4 Bending Test: y/x=90mm 1 time
Resistance to Soldering Heat	Test Temp:260 ±5 For 10secs Requirement : ± (1.0%±0.05) Max	JIS C 5202.....clause 6.4 Test Temperature: 260±5 Dip time:10 secs
Temp cycling	-55 (30mins) → +25 (10~15mins) +125 (30mins) → +25 10~15mins)5cycles Requirement : ± (1.0%±0.05) Max	JIS C 5202.....clause 7.4 Resistance change after continuous five cycles for duty cycle specified below
Humidity (steady state)	Temp: 40 ±2 R.H:90~95% Continuous 1000 hrs Requirement:±(3.0%±0.1) Max	JIS C 5202.....clause 7.5 Temporary resistance change after 1000 hours exercise in a humidity test chamber controlled at 40±2 and 90% to 95% relative humidity.
Loading Life in Moisture	Temp: 40 ±2 R.H:90~95% (WV)= \overline{WR} ON-1.5hrs OFF-0.5hr Continuous 1000 hrs Requirement:±(3.0%±0.1) Max	JIS C 5202.....clause 7.9 Resistance change after 1000 hours (1.5h "on" 0.5h "off") at RCWV or max. less in a humidity chamber controlled at 40±2 and 90% to 95% relative humidity.
Load Life	Temp : 70 ±2 (WV)= \overline{WR} Countinuous 1000hrs ON-1.5hrs OFF-0.5hr Requirement : ±(3.0% ± 0.1) Max	JIS C 5202.....clause 7.10 Resistance change after 1000 hours operating at RCWV or max. RCWV, whichever less with duty cycle of 1.5h "on" , 0.5h "off" at 70±2 ambient

PARTS NUMBER SYSTEM

0603	1002	F	R																					
<table border="1"> <tr><th>Size</th></tr> <tr><td>0402</td></tr> <tr><td>0603</td></tr> <tr><td>0805</td></tr> <tr><td>1206</td></tr> <tr><td>1210</td></tr> <tr><td>2010</td></tr> <tr><td>2512</td></tr> </table>	Size	0402	0603	0805	1206	1210	2010	2512	<table border="1"> <tr><th>Resistance Value</th></tr> <tr><td>please refer to marking explanation.</td></tr> <tr><td>ooo=jumper 0 ohm</td></tr> </table>	Resistance Value	please refer to marking explanation.	ooo=jumper 0 ohm	<table border="1"> <tr><th>Tolerance</th></tr> <tr><td>F=±1%</td></tr> <tr><td>J=±5%</td></tr> <tr><td>B=±0.1%</td></tr> <tr><td>ON request</td></tr> </table>	Tolerance	F=±1%	J=±5%	B=±0.1%	ON request	<table border="1"> <tr><th>Standard Packing</th></tr> <tr><td>R=Paper tape reel</td></tr> <tr><td>K=Embossed plastic tape reel</td></tr> <tr><td>B=Bulk bag</td></tr> <tr><td>please refer to packaging explanation</td></tr> </table>	Standard Packing	R=Paper tape reel	K=Embossed plastic tape reel	B=Bulk bag	please refer to packaging explanation
Size																								
0402																								
0603																								
0805																								
1206																								
1210																								
2010																								
2512																								
Resistance Value																								
please refer to marking explanation.																								
ooo=jumper 0 ohm																								
Tolerance																								
F=±1%																								
J=±5%																								
B=±0.1%																								
ON request																								
Standard Packing																								
R=Paper tape reel																								
K=Embossed plastic tape reel																								
B=Bulk bag																								
please refer to packaging explanation																								
 <p>0603 0805 1206 1210 2010 2512</p> <p>5% marking Value 10K</p>	 <p>0805 1206 1210 2010 2512</p> <p>1% marking Value-10K</p>	 <p>0603 EIA-96 marking</p> <p>1% marking Value-12.4K</p>	 <p>0402</p> <p>NO marking</p>																					

MARKING EXPLANATION

- 5% tolerance: 3 digits, first two digits are significant figures, third digit is number of zeros.
. Letter R is decimal point.
- 1% tolerance: 4 digits, first three digits are significant figures, Letter R is decimal point.
- 0603 1%: EIA-96 marking
- 0402 no marking

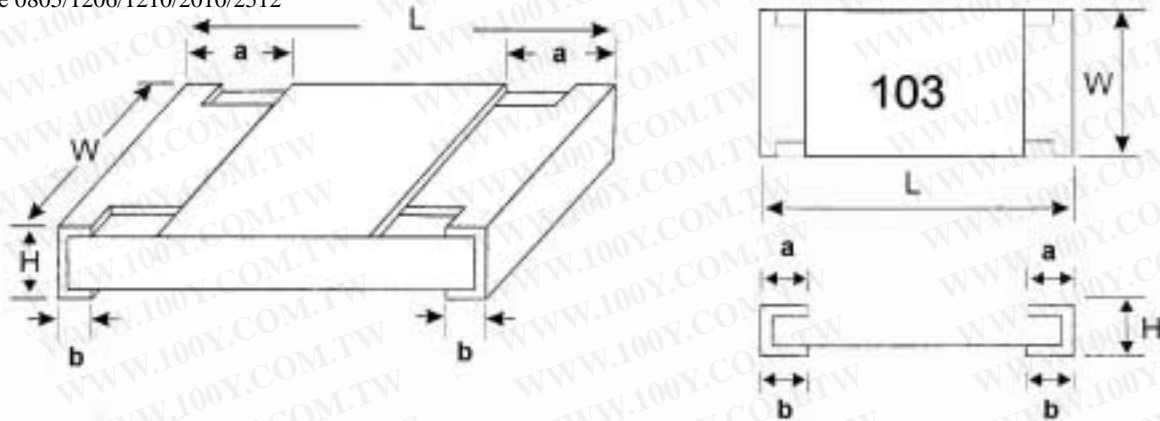
勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-54151736
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-54151736
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

THICK FILM LOW OHM CHIP RESISTORS

Features

1. Most suitable as resistor for current detection in power source circuits, motor circuits, etc
2. Type 0805/1206/1210/2010/2512



Unit:mm

TYPE	L	W	H	a	b
0805	2.00 ± 0.15	1.25 ± 0.15	0.50 ± 0.15	0.35 ± 0.15	0.35 ± .015
1206	3.10 ± 0.15	1.55 ± 0.15	0.60 ± 0.15	0.45 ± 0.20	0.45 ± 0.20
1210	3.10 ± 0.15	2.50 ± 0.15	0.55 ± .015	0.50 ± 0.20	0.50 ± 0.20
2010	5.00 ± 0.20	2.50 ± 0.20	0.55 ± 0.10	0.60 ± 0.20	0.60 ± 0.20
2512	6.30 ± 0.20	3.20 ± 0.20	0.55 ± 0.10	0.60 ± 0.20	0.60 ± 0.20

RATINGS

Type	Power Rating at 70	Rate Current Voltage(Vw)	Max working Voltage(Vw)	Max Over Load Voltage(Vw)	TCR (PPM/)	Resistance Tolerance (%)	Resistance Range ()	Operating Temperature ()
0805	0.125w	0.19V~1.22V	0.61V	1.22V	± 800	± 1%	0.02~0.99	-55 ~ +125
					± 1500	± 5%	0.02~0.99	
1206	0.25w	0.27V~1.74V	0.87V	1.74V	± 800	± 1%	0.02~0.99	-55 ~ +125
					± 1500	± 5%	0.02~0.99	
1210	0.33w	0.31V~1.98V	0.99V	1.98V	± 800	± 1%	0.02~0.99	-55 ~ +125
					± 1500	± 5%	0.02~0.99	
2010	0.5w	0.38V~2.44V	1.22V	2.44V	± 800	± 1%	0.02~0.99	-55 ~ +125
					± 1500	± 5%	0.02~0.99	
2512	1.0w	0.54V~3.46V	1.73V	3.46V	± 800	± 1%	0.02~0.99	-55 ~ +125
					± 1500	± 5%	0.02~0.99	

RATED RESISTANCE

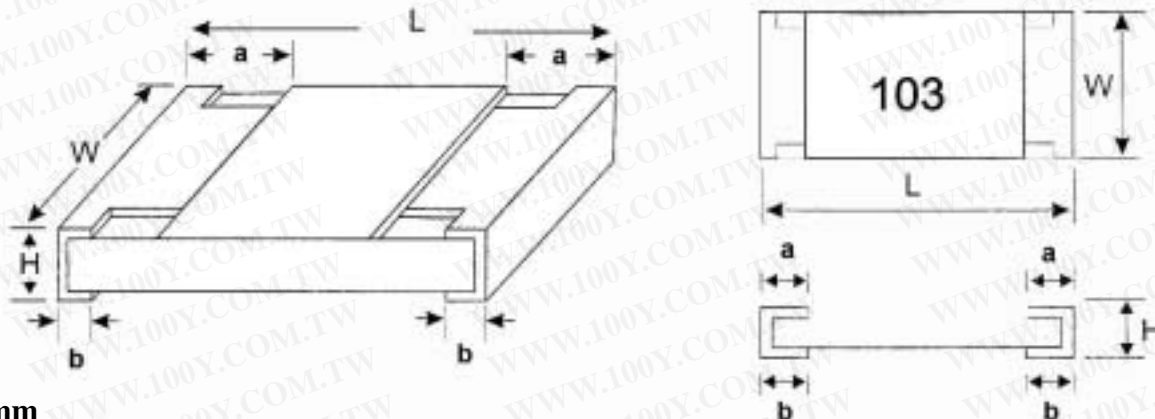
Resistance	Code	Resistance	Code	Resistance	Code	Resistance	Code	Resistance	Code
50m	R050	90m	R090	0.20	R200	0.43	R430	0.75	R750
56m	R056	0.10	R100	0.22	R220	0.47	R470	0.80	R800
60m	R060	0.11	R110	0.25	R250	0.50	R500	0.90	R900
65m	R065	0.12	R120	0.27	R270	0.56	R560		
68m	R068	0.13	R130	0.30	R300	0.60	R600		
70m	R070	0.15	R150	0.33	R330	0.65	R650		
75m	R075	0.16	R160	0.36	R360	0.68	R680		

THICK FILM HIGH OHM CHIP RESISTORS

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-54151736
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

Features

1. Designed for use in compact instrumentation i .e.pyroelectric sensor etc.
2. Type 0402/0603/0805/1206/1210/2010/2512



Unit:mm

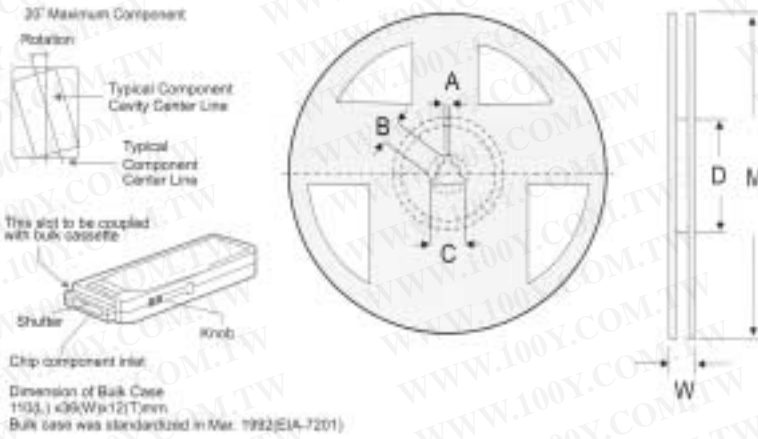
Type	L	W	H	a	b
0402	1.00 ± 0.10	0.50 ± 0.05	0.30 ± 0.05	0.25 ± 0.10	0.25 ± .010
0603	1.55 ± 0.15	0.08 ± 0.15	0.40 ± 0.10	0.30 ± 0.15	0.30 ± .015
0805	2.00 ± 0.15	1.25 ± 0.15	0.50 ± 0.15	0.35 ± 0.15	0.35 ± .015
1206	3.10 ± 0.15	1.55 ± 0.15	0.55 ± 0.15	0.45 ± 0.20	0.45 ± 0.20
1210	3.10 ± 0.15	2.50 ± 0.15	0.55 ± .015	0.50 ± 0.20	0.50 ± 0.20
2010	5.00 ± 0.20	2.50 ± 0.20	0.55 ± .010	0.60 ± 0.20	0.60 ± 0.20
2512	6.30 ± 0.20	3.20 ± 0.20	0.55 ± .010	0.60 ± 0.20	0.60 ± 0.20

RATINGS

Type	Power Rating at 70	Max Working Voltage (Vw)	Max Over Load Voltage(Vw)	TCR (PPM/)	Resistance Tolerance (%)	Resistance Range ()	Operating Temperature ()
0402	0.0625W	25V	50V	± 200	± 1 %	1M~10M	-55 ~ +125
					± 5 %	10.1M~54M	
					± 10%	10.1M~54M	
0603	0.1W	50V	100V	± 200	± 1 %	10.1M~54M	-55 ~ +125
					± 5 %	10.1M~100M	
					± 10%	10.1M~100M	
0805	0.125W	150V	300V	± 200	± 1 %	10.1M~54M	-55 ~ +125
					± 5 %	10.1M~100M	
					± 10%	10.1M~100M	
1206	0.25W	200V	400V	± 200	± 1 %	10.1M~54M	-55 ~ +125
					± 5 %	10.1M~100M	
					± 10%	10.1M~100M	
1210	0.33W	200V	400V	± 200	± 1 %	10.1M~54M	-55 ~ +125
					± 5 %	10.1M~100M	
					± 10%	10.1M~100M	
2010	0.5W	200V	400V	± 200	± 1 %	10.1M~54M	-55 ~ +125
					± 5 %	10.1M~100M	
					± 10%	10.1M~100M	
2512	1.0W	200V	400V	± 200	± 1 %	10.1M~54M	-55 ~ +125
					± 5 %	10.1M~100M	
					± 10%	10.1M~100M	

PACKAGING

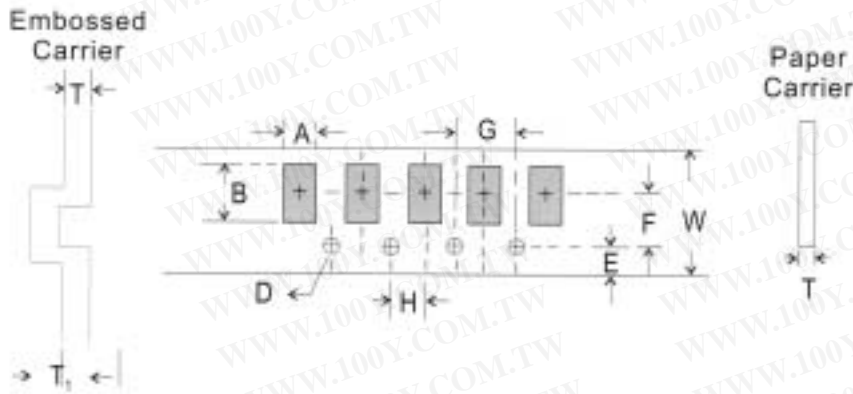
REEL DIMENSION(mm)



Unit:mm

TYPE	SIZE		A	B	C	D	W	M
0402	7"	10K/Reel	2.0±0.5	13.5±2.0	21±0.5	60±0.5	12.5±2.0	178±2.0
0603	7"	5K/Reel	2.0±0.5	13.5±2.0	21±0.5	60±0.5	12.5±2.0	254±2.0
0805	10"	10K/Reel	2.0±0.5	13.5±2.0	21±0.5	80±0.5	12.5±2.0	330±2.0
1206	13"	20K/Reel	2.0±0.5	13.5±2.0	21±0.5	80±0.5	12.5±2.0	178±2.0
1210	7"	5K/Reel	2.0±0.5	13.5±2.0	21±0.5	60±0.5	12.5±2.0	178±2.0
2010	7"	4K/Reel	2.0±0.5	13.5±2.0	21±0.5	60±0.5	16.0±2.0	178±2.0
2512	7"	4K/Reel	2.0±0.5	13.5±2.0	21±0.5	60±0.5	16.0±2.0	178±2.0

TAPING SPECIFICATION



PACKAGING	SIZE	A	B	W	E	F	G	H	T	D
Paper Type	0402	0.70±0.1	1.2±0.1	8.0±0.2	1.75±0.1	3.5±0.05	2.0±0.1	2.0±0.05	0.45±0.10	1.5+0.1 -0
	0603	1.05±0.2	1.8±0.2	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.60±0.10	1.5+0.1 -0
	0805	1.55±0.2	2.30±0.2	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.75±0.10	1.5+0.1 -0
	1206	1.90±0.2	3.5±0.2	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.75±0.10	1.5+0.1 -0
	1210	2.85±0.2	3.5±0.2	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.75±0.10	1.5+0.1 -0