

## 2510 SERIES

勝特力材料 886-3-5753170  
勝特力电子(上海) 86-21-34970699  
勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

Scope: This specification covers the 2.54mm spacing WIRE TO BOARD Connector series.

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Note: 以上测试视公司之测试条件/能力而定。

FILE NO	ENS008	APPROVAL	CHECK	DRAWING
ECR/N NO	New spec			

[1. Product name and part number]

Product Name	Part Number
Terminal	2510-T
Housing	2510-NY
Wafer Assembly S.T (DIP) 180°	2510-NA
Wafer Assembly R.A (DIP) 90°	2510-NAW

[2. Ratings and applicable wires]

ITEM	STANDARD
Rated Voltage(max.)	250V DC,AC(rms)
Rated Current(max.)	2.5A (AWG #22~24)
Applicable wires	AWG#22~#28
Insulation O.D	ø1.50mm(max.)
Ambient Temperature	-25°C~ +85°C*

\* : Including terminal temperature rise.

[3. Performance]

3-1. Electrical Performance

ITEM		Test condition	Requirement
3-1-1	Contact resistance	Mate connectors, measure by dry circuit, 20mV MAX., 10mA. Mated Length : 50mm (AWG #22) (Based upon JIS C5402 5.4)	20mΩ(max.)
3-1-2	Insulation resistance	Mate connectors, apply 500V DC between adjacent terminals or ground. (Based upon JIS C5402 5.2/MIL-STD-202 method 302 condition B)	1000MΩ(min.)
3-1-3	Dielectric strength	Mate connectors, apply 1500V AC for 1 minute between adjacent terminal or ground. (Based upon JIS C5402 5.1/MIL-ST-202 Method 301)	No breakdown and flashover
3-1-4	Contact resistance on crimped portion	Crimp the maximum applicable wire on to the terminal, measure by dry circuit, 20mV MAX., 10mA. Wire Length : 50mm (AWG #22)	20mΩ(max.)

### 3-2. Mechanical Performance

ITEM		Test condition	Requirement					
3-2-1	Insertion force and withdrawal force	Insert and withdraw connectors at a speed of 25±3mm/minute	Refer to paragraph 5					
3-2-2	Crimping pull out force	Fix the crimped terminal, apply axial pull out force on the wire at a speed of 25±3mm/minute (Based upon JIS C5402 6.22)	Wire size	#22	#24	#26	#28	
			1	width	1.5±0.1			
			height	0.73 ~0.75	0.71 ~0.73	0.69 ~0.71	0.67 ~0.69	
			2	width	1.75			
			height	1.47	1.45	1.43	1.41	
			Crimp strength	4.0kg min	3.0kg min	2.0kg min	1.5kg min	
1: CONDUCTOR(mm) 2: INSULATION(mm)								
3-2-3	Terminal insertion force	Insert the crimped terminal into the housing at a speed of 25±3mm/minute	1.5kgf (max.)					
3-2-4	Terminal/Housing retention force	Apply axial pull out force at a speed of 25±3mm/minute on the terminal assembled in the housing.	2.0kgf (min.)					
3-2-5	Pin retention force	Apply axial push force at a speed of 25±3mm/minute on the contact pin assembled in the base wafer.	1.5kgf (min.)					

### 3-3. Environmental Performance and Others

ITEM		Test condition	Requirement	
3-3-1	Repeated insertion/withdrawal	Mate connector up to 30 cycles repeatedly at a rate of 10 cycles/minute. After which test the contact resistance	Contact resistance	40mΩ (max.)
3-3-2	Temperature rise	Apply rated current load on mated connector in series-connection. Measure change of temperature on contact using thermocouples for 4 hours. (Based upon UL 1977)		30°C (max.)

3-3-3	Vibration	Amplitude: 1.52mm Sweep time: 10-55-10Hz/minute Duration: 2 Hours in each X.Y.Z axlals (Based upon MIL-STD-202 method 201)	Appearance	No Damage
			Contact Resistance	40mΩ (max.)
			Discontinuity	1μ sec (max.)
3-3-4	Shock	50G, 3 strokes in each X.Y.Z. axlals. (based upon JIS C0041)	Appearance	No Damage
			Contact Resistance	40mΩ (max.)
			Discontinuity	1μ sec (max.)
3-3-5	Heat resistance	Mated connector shall be placed in an oven for 96±4 hours at +85±2°C. (based upon JIS C5402 7.8)	Appearance	No Damage
			Contact Resistance	40mΩ (max.)
3-3-6	Cold resistance	Mated connector shall be placed in a temperature chamber for 96hours at -25±3°C (based upon JIS C5402 7.9)	Appearance	No Damage
			Contact Resistance	40mΩ (max.)
3-3-7	Humidity	Mated connector shall be placed in a humidity chamber on the following conditions. Temperature: 40±2°C Relative humidity: 90~95% Duration : 240 Hours (Based upon MIL-STD-202 Method 103 conditions.A)	Appearance	No Damage
			Contact Resistance	40mΩ (max.)
			Dielectric strength	Must meet 3-1-3
			Insulation resistance	1000MΩ (min.)
3-3-8	Temperature cycling	Mated connector shall be set to temperature cycling for 5 cycles of which 1 cycle consists of: 1>. +25°C ~ 3 minutes 2>. -25°C ~ 30 minutes 3>. +25°C ~ 3 minutes 4>. +85°C ~ 30 minutes (Based upon JIS C5402 7.2)	Appearance	No Damage
			Contact Resistance	40mΩ (max.)
			Dielectric strength	Must meet 3-1-3
			Insulation resistance	1000MΩ (min.)

3-3-9	Salt spray	Mated connector shall be placed in a salt spray chamber on the following conditions. (Based upon JIS C5402 7.1/MIL-STD-202 Method 101 Condition B) Salt Solution Density : 5±1% Temperature : 35±2°C Duration : 48±4 Hours	Appearance	No Damage
			Contact Resistance	40mΩ (max.)
3-3-10	Solderability	Immerse fluxed soldered section of contact pin into a solder bath for 3±0.5sec, temperature:230±5°C	95% of immersed area must show no voids nor pin holes.	
3-3-11	Resistance to soldering heat	Mated connector shall be dipped on solder bath for 5±1sec, temperature:260±5°C	No Damage in appearance	

[4. Insertion force and withdrawal force]

[UNIT:Kgf]

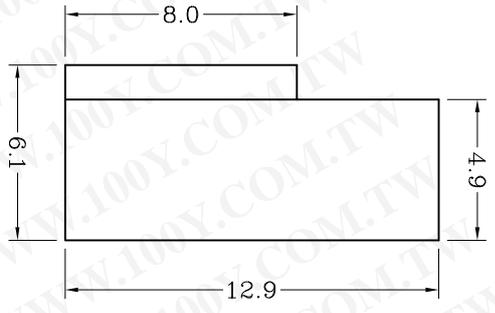
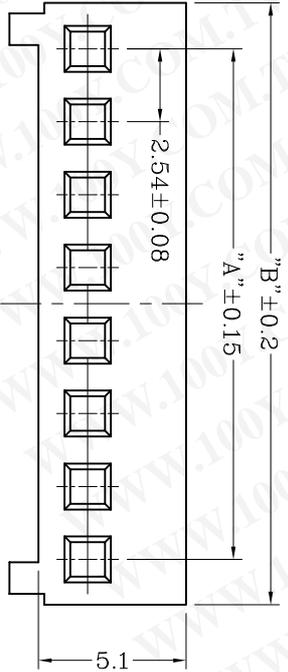
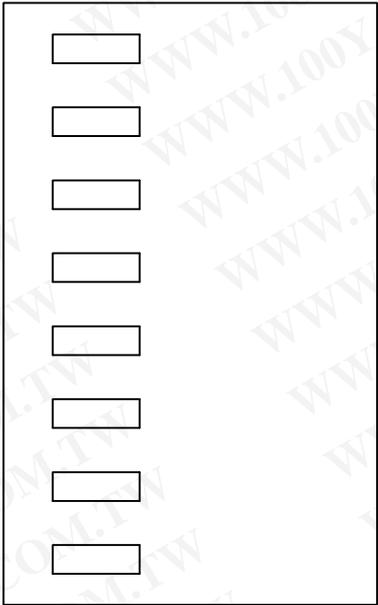
Circuits	Insertion (MAX.)	Withdrawal (MIN.)		
	Initial	Initial	10th	30th
2	1.50	0.72	0.60	0.50
3	1.95	0.88	0.74	0.60
4	2.40	1.04	0.88	0.70
5	2.85	1.20	1.02	0.80
6	3.30	1.36	1.16	0.90
7	3.75	1.52	1.30	1.00
8	4.20	1.68	1.44	1.10
9	4.65	1.84	1.58	1.20
10	5.10	2.00	1.72	1.30
11	5.55	2.16	1.86	1.40
12	6.00	2.32	2.00	1.50
13	6.45	2.48	2.14	1.60
14	6.90	2.64	2.28	1.70
15	7.35	2.80	2.42	1.80
16	7.80	2.96	2.56	1.90
17	8.25	3.12	2.70	2.00
18	8.70	3.28	2.84	2.10
19	9.15	3.44	2.98	2.20
20	9.60	3.60	3.12	2.30

[5. Product shape, Dimensions and materials]

Refer to the drawing

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Part No.	DIM.A	DIM.B
2510-2Y	2.54	5.80
2510-3Y	5.08	8.34
2510-4Y	7.62	10.88
2510-5Y	10.16	13.42
2510-6Y	12.70	15.96
2510-7Y	15.24	18.50
2510-8Y	17.78	21.04
2510-9Y	20.32	23.58
2510-10Y	22.86	26.12
2510-11Y	25.40	28.66
2510-12Y	27.94	31.20
2510-13Y	30.48	33.74
2510-14Y	33.02	36.28
2510-15Y	35.56	38.82
2510-16Y	38.10	41.36
2510-17Y	40.64	43.90
2510-18Y	43.18	46.44
2510-19Y	45.72	48.98
2510-20Y	48.26	51.52



- 技术参数 SPECIFICATIONS  
 ◆ 间距: 2.54 Pitch: 2.54  
 ◆ 极数: 2~20 Poles: 2~20  
 ◆ 适用线规: AWG#28~#22  
 ◆ Applicable Wire: AWG#28~#22  
 ◆ 额定电压: 250V DC,AC(rms)  
 ◆ Rated voltage: 250V DC,AC(rms)  
 ◆ 额定电流: 2.5A AC,DC  
 ◆ Rated Current: 2.5A AC,DC  
 ◆ 耐压值: 1500V AC/minute  
 ◆ Withstand voltage: 1500V AC/min.  
 ◆ 工作温度: -25°C ~ +85°C  
 ◆ Working Temp: -25°C ~ +85°C  
 ◆ 绝缘电阻: ≥1000 MΩ  
 ◆ Insulation resistance: ≥1000 MΩ  
 ◆ 接触电阻: ≤20mΩ  
 ◆ Contact resistance: ≤20mΩ
- 材料 MATERIAL  
 ◆ Housing: Nylon66, UL94-V0



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 子有限公司

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X ± 0.15	X° ± 2°	MM						2510-nY				1/1	
XX ± 0.08	X° ± 1°	SIZE											
		A4											

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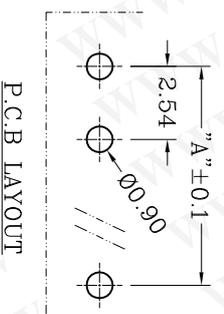
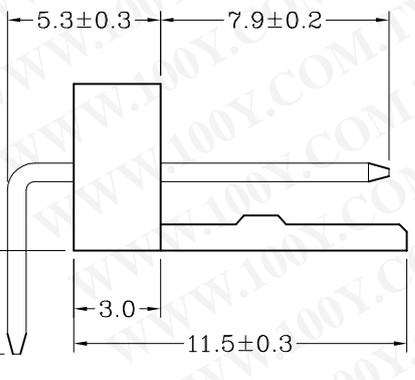
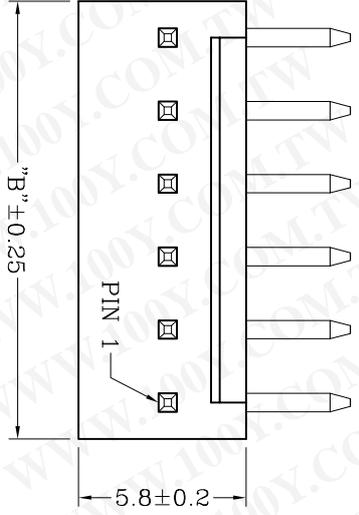
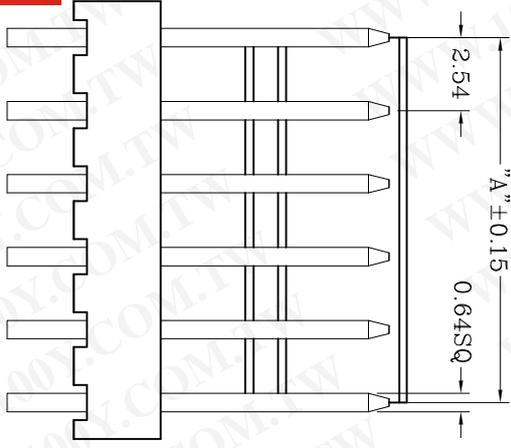


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X ± 0.15	X° ± 2°	SIZE	A4
XX ± 0.08	X° ± 1°	APPROVE	

DRAWN		DATE	
CHECK		DATE	
APPROVE		DATE	

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SHEET	
1/1	

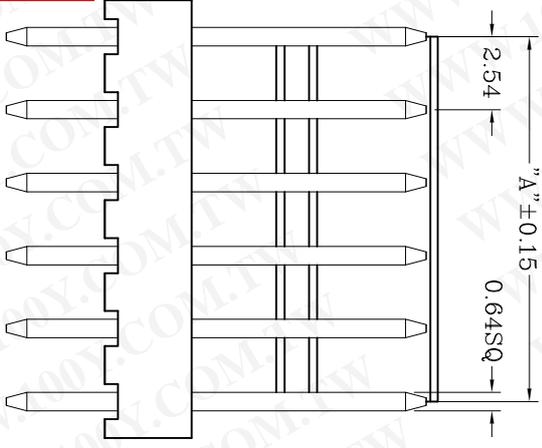
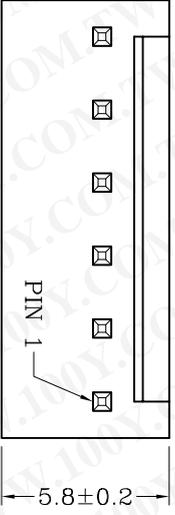


Part No.	DIM.A	DIM.B	Part No.	DIM.A	DIM.B
2510-2AW	2.54	5.08	2510-10AW	22.86	25.40
2510-3AW	5.08	7.62	2510-11AW	25.40	27.94
2510-4AW	7.62	10.16	2510-12AW	27.94	30.48
2510-5AW	10.16	12.70	2510-13AW	30.48	33.02
2510-6AW	12.70	15.24	2510-14AW	33.02	35.56
2510-7AW	15.24	17.78	2510-15AW	35.56	38.10
2510-8AW	17.78	20.32	2510-16AW	38.10	40.64
2510-9AW	20.32	22.86	2510-20AW	48.26	50.80

- 技术参数 SPECIFICATIONS
- 间距: 2.54 Pitch: 2.54
  - 极数: 2~20 Poles: 2~20
  - 适用线规: AWG#28~#22
  - Applicable Wire: AWG#28~#22
  - 额定电压: 250V DC, AC(rms)
  - Rated voltage: 250V DC, AC(rms)
  - 额定电流: 2.5A AC, DC
  - Rated Current: 2.5A AC, DC
  - 耐压值: 1500V AC/minute
  - Withstand voltage: 1500V AC/min.
  - 工作温度: -25°C ~ +85°C
  - Working Temp: -25°C ~ +85°C
  - 绝缘电阻: ≥1000 MΩ
  - Insulation resistance: ≥1000 MΩ
  - 接触电阻: ≤20mΩ
  - Contact resistance: ≤20mΩ

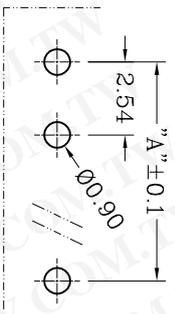
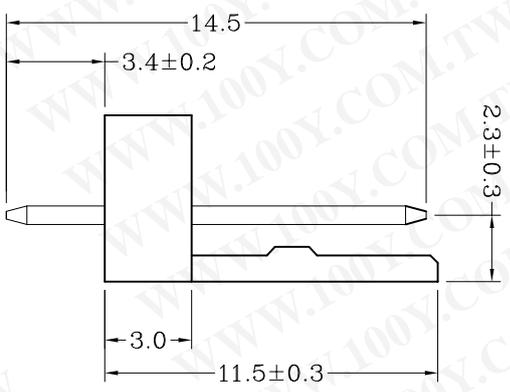
- 材料 MATERIAL
- Wafer: 尼龙66 (Nylon66), UL94-V0
  - PIN: 黄铜 Brass

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Part No.	DIM.A	DIM.B
2510-2AW	2.54	5.08
2510-3AW	5.08	7.62
2510-4AW	7.62	10.16
2510-5AW	10.16	12.70
2510-6AW	12.70	15.24
2510-7AW	15.24	17.78
2510-8AW	17.78	20.32
2510-9AW	20.32	22.86

Part No.	DIM.A	DIM.B
2510-10AW	22.86	25.40
2510-11AW	25.40	27.94
2510-12AW	27.94	30.48
2510-13AW	30.48	33.02
2510-14AW	33.02	35.56
2510-15AW	35.56	38.10
2510-16AW	38.10	40.64
2510-20AW	48.26	50.80



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 ◆ 极数: 2~20 Poles: 2~20  
 ◆ 适用线规: AWG#28~#22  
 ◆ Applicable Wire: AWG#28~#22  
 ◆ 额定电压: 250V DC,AC(rms)  
 ◆ Rated voltage: 250V DC,AC(rms)  
 ◆ 额定电流: 2.5A AC,DC  
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 ◆ Withstand voltage: 1500V AC/min.  
 ◆ 工作温度: -25°C ~ +85°C  
 ◆ Working Temp: -25°C ~ +85°C  
 ◆ 绝缘电阻: ≥1000 MΩ  
 ◆ Insulation resistance: ≥1000 MΩ  
 ◆ 接触电阻: ≤20mΩ  
 ◆ Contact resistance: ≤20mΩ

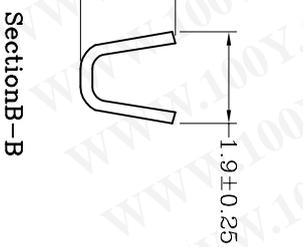
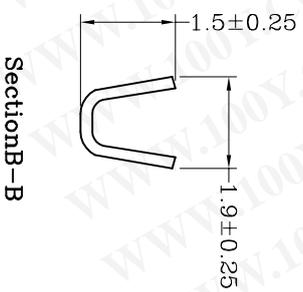
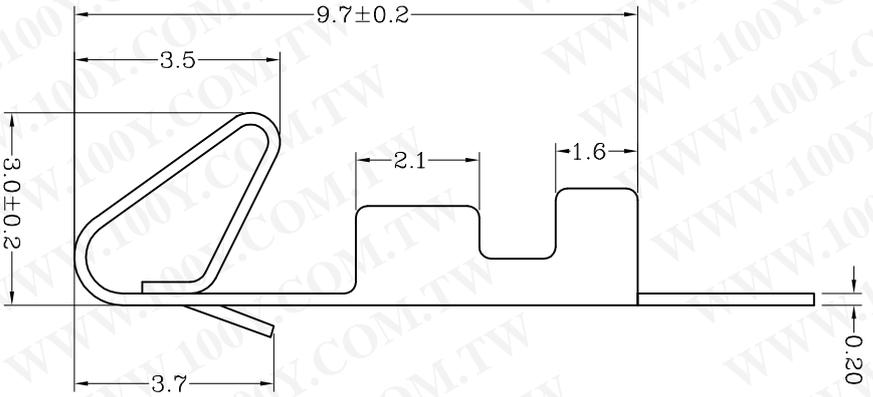
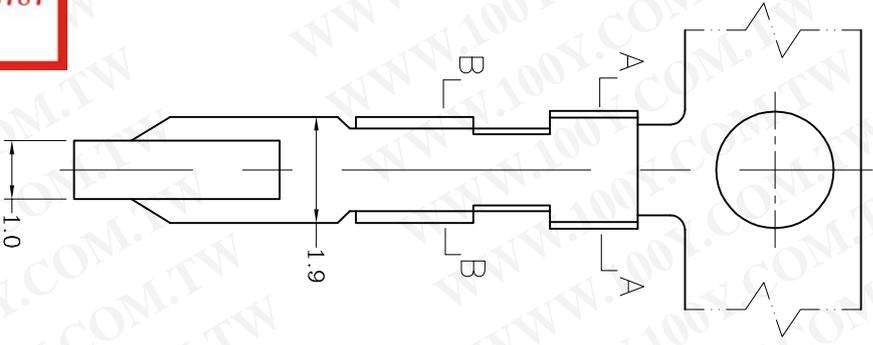
- 材料 MATERIAL  
 ◆ Wafer: 尼龙66 (Nylon66), UL94-V0  
 ◆ PIN: 黄铜Brass



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GENERAL TOLERANCE		SCALE		DRAWN		DATE		DWG. NO.		TITLE		REV.	
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X ± 0.15	X° ± 2°	SIZE	A4									1/1	
XX ± 0.08	X° ± 1°												

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Notes:

1. MATERIAL: PHOSPHOR BRONZE, JIS C5191H, HV 200 $\pm$ 15°
2. Along any portion of strip, allowable camber is 0.04mm per 1000mm length max. And allowable twist is 45° per 1000mm length max.
3. All corners and radians have a maximum Radius of 0.1mm unless otherwise specified.

4. P/N:

2510 - T

Model \_\_\_\_\_  
Terminal \_\_\_\_\_

GENERAL TOLERANCE		SCALE		DRAWN		DATE		DWG. NO.		TITLE		REV.	
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X	± 0.20	XXX	± 0.05	UNIT	MM	APPROVE	DATE	PARTS NO.				SHEET	
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XX	± 0.08	X°	± 1°										