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		Revised Edition	A2

变更履历：

版本号	变更内容	日期	制订	核准
A0	新版发行	2020/05/20	于小芳	Leo_he
A1	版本更新	2021-04-09	于小芳	Leo_he
A2	更改电流及工作温度	2021-10-12	于小芳	Leo_he

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Approval By	Check By	Originator By
Forest	**Jackson Wang**	**Ken**

1 Scope

This specification covers performance, tests and quality requirements for 1.2mm Pitch WTB Connector.

2. Applicable Documents

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies.

In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

EIA-364: ELECTRONICS INDUSTRIES ASSOCIATION REQUIREMENTS

3.Requirements

3.1 DESIGN AND CONSTRUCTIONS

Product shall be of the design, construction and physical dimensions specified on the applicable product drawing.

WB1202H-XXXXX			
NO	DIMENSIONS	MATERIAL	PLATING&COLOR
1	Housing	High-Temperature Plasti	UL94V-0 BLACK
2	Terminal	Copper Alloy	Gold and nickel plating
3	PEG	Copper Alloy	Gold and nickel plating

WB1201H-HXXXX&WB1201-TX			
NO	DIMENSIONS	MATERIAL	PLATING&COLOR
1	Housing	PA66	UL94V-0 BLACK
2	Terminal	Copper Alloy	Gold and nickel plating

3.2 RATINGS AND APPLICABLE WIRE

A. Working voltage less than 36 volts (per pin)

B. Current Rating: 50V AC/DC

C. Operation environment: : Temperature Rating-40℃ to +85℃

D. Current:

AWG #28 2.0A/1pin(Over 2 circuits shell be conduct by customer request)

AWG #30 1.5A/1pin(Over 2 circuits shell be conduct by customer request)

AWG #32 1.0A/1pin(Over 2 circuits shell be conduct by customer request)

4. Test Requirements and Procedures Summary

TEST		Test Procedure	Requirements
1	Visual and dimensional inspections	• Visual, dimensional and functional. • per applicable quality inspection. plan.	Product shall meet requirements of applicable product drawing and specification
Electrical Requirement			

2	Contact Resistance	Subject mated contacts assembled in housing to closed circuit of 10mA max. at open circuit voltage of 20mV max. (EIA-364-23)	20 m Ω Max.(initial)per contact 40 m Ω Max. (After test)
3	Insulation Resistance	Test between adjacent contacts of unmated connector assemblies apply a voltage of 500V DC for 1 minute (EIA-364-21)	100 MΩ Minimum
4	Dielectric withstanding Voltage	AC 500 V for 1 minute. Test between adjacent contacts of unmated connectors. (EIA-364-20)	No discharge, flash over or breakdown. Current leakage: 1 mA max.
5.0	Terminal Housing Retention Force (Board Side)	Apply axial pull out force at the speed rate of 25.4 ± 3 mm/minute. On the crimping assembled in the housing.(EIA-364-29)	0.25kgf Min/PIN
5.1	Crimping Housing Retention Force (Cable Side)	Apply axial pull out force at the speed rate of 25.4 ± 3 mm/minute. On the crimping assembled in the housing. (EIA-364-29)	0.5kgf Min

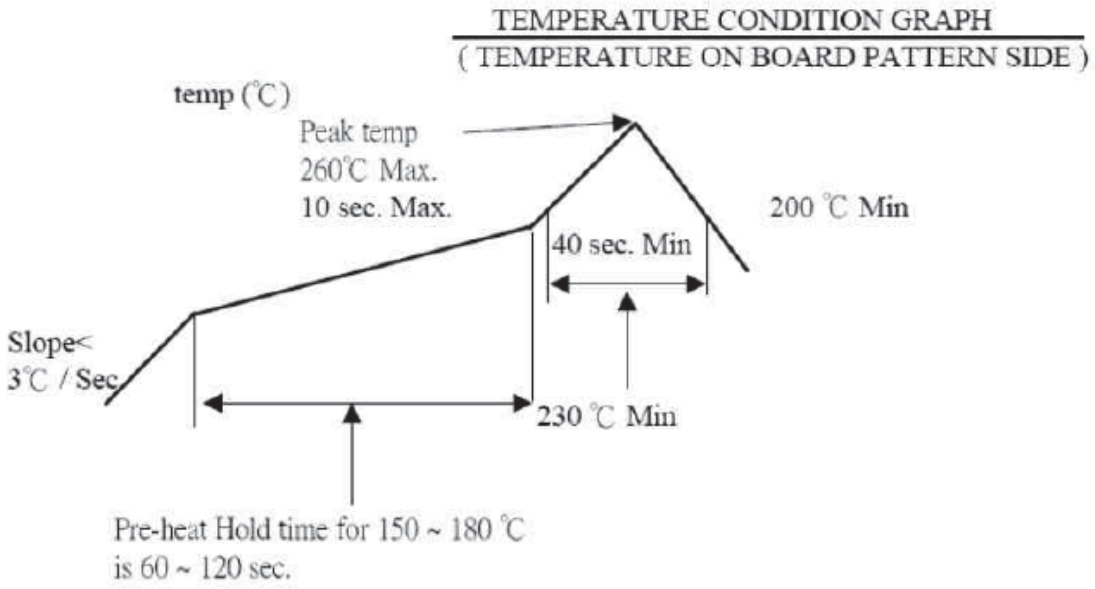
6	Mating / Unmating Forces	Mate and unmate connector (male to female) at a rate of 25.4 ± 3 mm (1 ± 1/8 inch) per minute. EIA-364-13	See Item 7
7	Durability	The sample should be mounted in the tester and fully mated and unmated the number of cycles specified at the rate of 25.4 ± 3mm/min. EIA-364-09	30 cycles
8	Vibration	Mate connectors and subject to the following vibration conditions for period of 2 hours in each of 3 mutually perpendicular axes passing DC 1mA during the test.Amplitude:1.5mm P-P frequency:10~55~10 Hz in 1 minute (EIA-364-28 Condition I)	Appearance：No Damage No discontinuities 1 microsecond Or longer duration. Discontinuity :1 μ secMAX Contact Resistance：40mΩ Max See Product Qualification and Test Sequence Group B
ENVIRONMENTAL			

9	Shock (Mechanical)	Mate The sample connectors shall and subject to the following shock condition.3 times of shocks shall be applied for each 6 directions along 3 mutually perpendicular axes, passing DC 1mA current during the test.(Total of 18 shocks) Peak value490m/s2 {50G} (EIA-364-27, test condition EIA 364-27-H	Appearance：No Damage No discontinuities 1 microsecond Or longer duration. Discontinuity :1 μ secMAX Contact Resistance：40mΩ Max See Product Qualification and Test Sequence GroupD
Environmental Performance			
10	Temperature Rise	Mate connector: measure the Temperature Rise at rated current until temperature stable. The ambient condition is still air at 25℃ EIA 364-70 Method B	Appearance：No Damage 30℃ max change allowed

11	Heat Resistance	Mate The sample connectors shall expose to +85 ± 2 ℃ for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room condition for 1to2 hours, after which the specified measurements shall be performed.	See Product Qualification and Test Sequence Group F
12	Cold Resistance	Mate The sample connectors shall expose to -40±2℃ for 96 hours. Upon completion of the exposure period, the test specimens shall be onditioned at ambient room condition for 1to2 hours, after which the specified measurements shall be performed.	See Product Qualification and Test Sequence Group G
13	Humidity	Mated Connector 40℃+/-2℃, 90~95% RH,96hours (EIA-364-31, Condition A Method ll)	See Product Qualification and Test Sequence Group A

14	Thermal Shock	Mate module and subject to follow condition for 5 cycles. 1 cycles: • -40 ℃, 30 minutes •+85 ℃, 30 minutes (EIA-364-32, test condition I)	See Product Qualification and Test Sequence Group I
15	Salt Spray	Subject mated/unmated connectors to 5% salt-solution concentration, 35℃+/-2℃ 24 hours (EIA-364-26)	See Product Qualification and Test Sequence Group J
16	Solder ability (Board side)	And then into solder bath, Temperature at 250±5℃,for 4-5sec (EIA-364-52).	Solder able area shall have minimum of 95% solder coverage.
17	Resistance to Soldering Heat (Board side)	Pre Heat：80℃~130℃,40~60sec. • Heat：245℃ Min.,3-6sec. • Peak Temp.：250℃Max,3-6sec. • crest： 2 times (EIA-364-56)	Shall meet visual requirement, show no physical damage.

五.REFLOW TEMPERATURE PROFILE



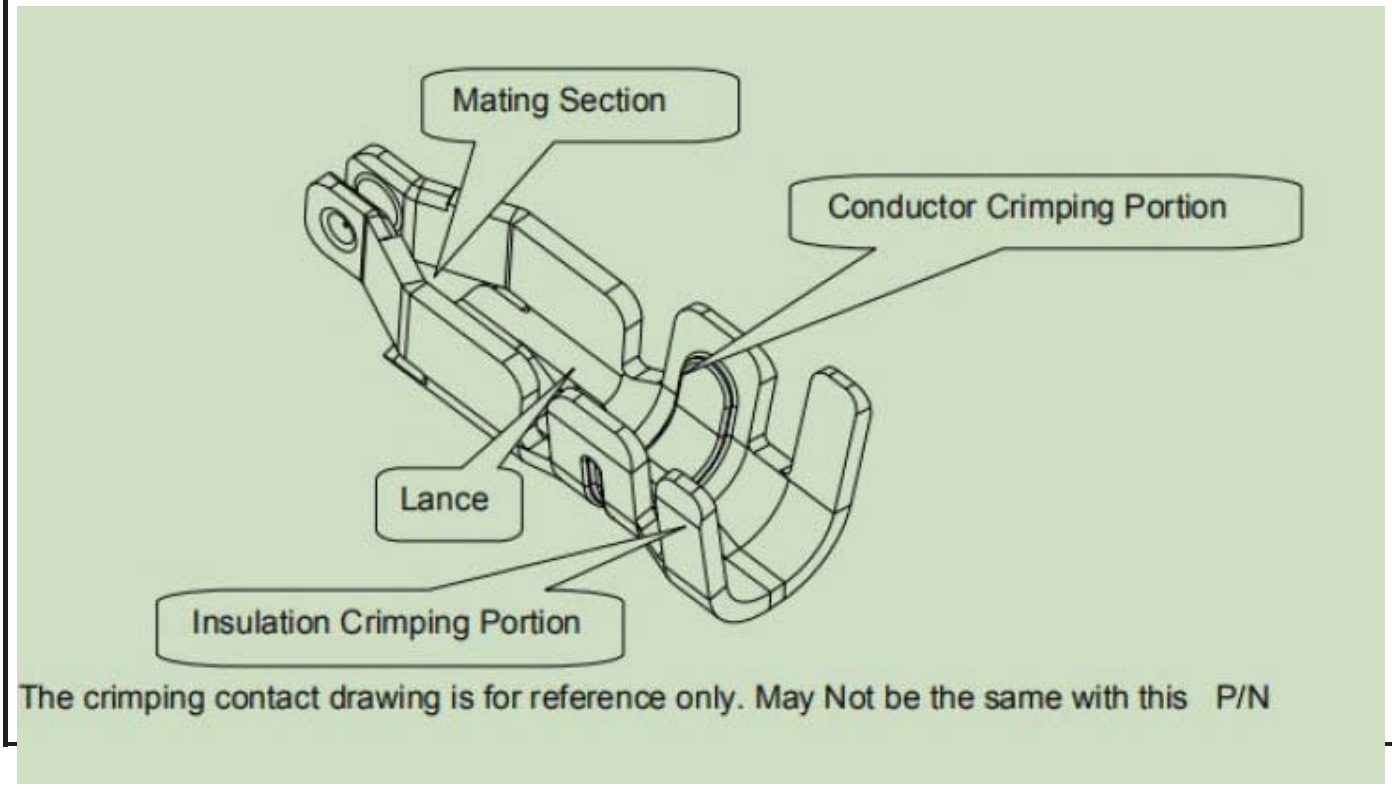
六. Product certification and test sequence

Test of Examination	Test Group											
	A	B	C	D	E	F	G	H	I	J	K	L
	Test Sequence											
1、Visual and dimensional	1,6	1,5	1,6	1,5	1,5	1,6	1,6	1,3	1,6	1,6	1,3	1,3
2、Contact Resistance	2,7	2,4	2,7	2,4	2,4	2,7	2,7		2,7	2,7		
3、Insulation Resistance	3,8					3,8	3,8		3,8	3,8		
4、Dielectric Withstanding	4,9					4,9	4,9		4,9	4,9		
5、Terminal Housing Retention								2				
6、Mating / Unmating Forces			3,5									
7、Durability			4									
8、Vibration		3										
9、Shock Mechanical				3								
10、Temperature Rise					3							
11、Heat Resistance						5						
12、Cold Resistance							5					
13、Humidity	5											
14、Thermal Shock									5			
15、Salt Spray										5		
16、Solder ability											2	
17、Resistance to Soldering												2
Sample Size	5	5	5	5	5	5	5	5	5	5	5	5

七、INSERTION/WITHDRAWAL FORCE

NO. OF Ckt	Mating(Max)		Unmating(Min)	
	1th	30th	1th	30th
2	2.0	2.0	0.40	0.15
3	2.0	2.0	0.40	0.15
4	2.5	2.5	0.40	0.15
5	2.5	2.5	0.35	0.15
6	2.0	2.0		
7-9	4.0	4.0		
10-14	5.0	5.0	0.80	0.40

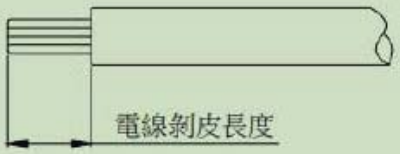
八. ANATOMY OF CRIMPING TERMINAL



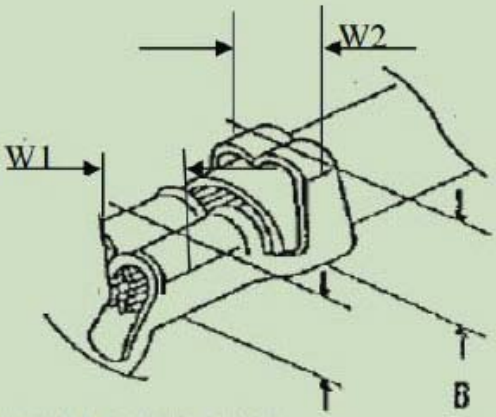
The crimping contact drawing is for reference only. May Not be the same with this P/N

九 CRIMPING CONDITION

Part Number	Wire Specification			Crimp Height (mm)		Crimp Width (mm)	
	UL Style (REF.)	AWG Size	Insulation OD(mm)	Conductor A	Insulation B	Conductor W1	Insulation W2
WB1201-Tx	UL3302 (Furukawa)	28	0.60	0.50~0.55	0.70~0.75	0.80~0.87	0.85~0.93
WB1201-Tx	UL3302 (Sumitomo)	30	0.70	0.43~0.48	0.72~0.77	0.80~0.87	0.85~0.93
WB1201-Tx	UL3302	32	0.55	0.33~0.38	0.65~0.70	0.70MAX	0.80MAX



Strip length



Note:

1、W1為芯線導體鉚壓後之寬度(Conductor Crimping Width)：W1值如上表(參考值)

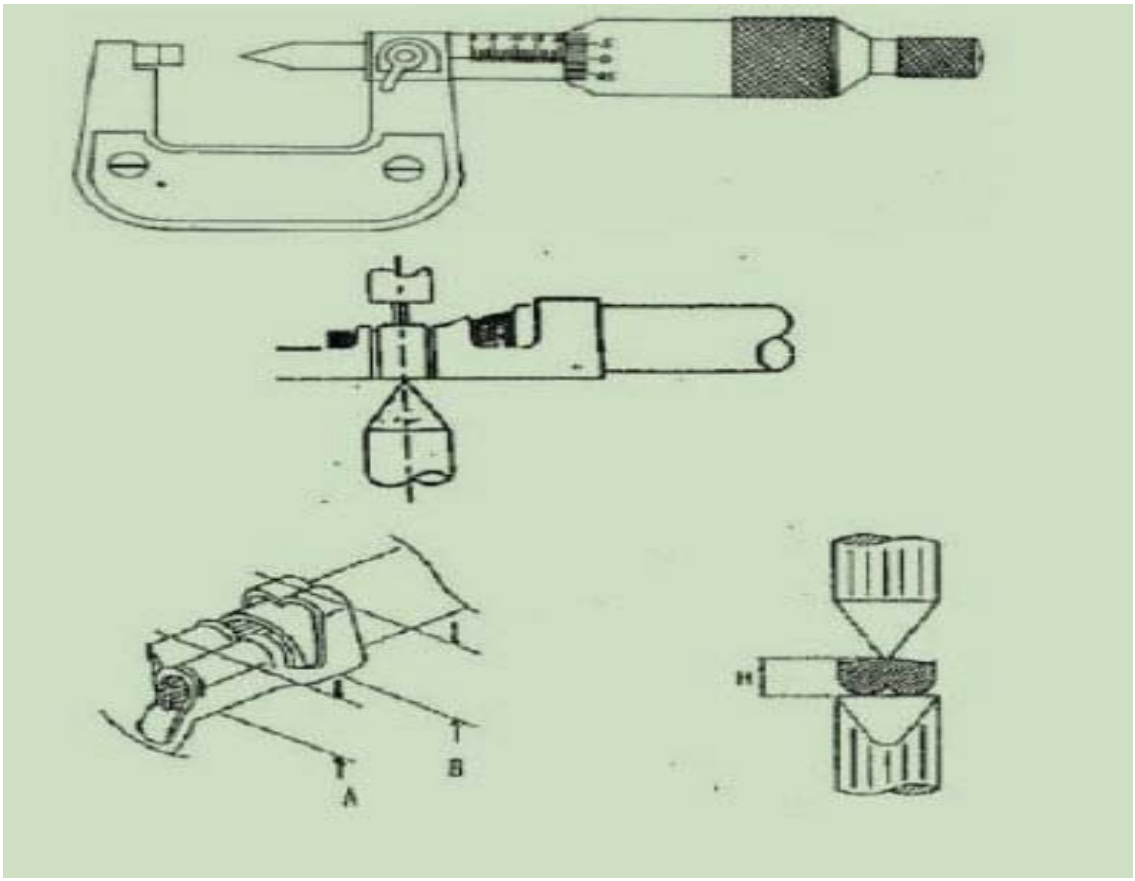
2、W2為電線外被部分鉚壓後之寬度(Insulation Crimping Width)：W2值如上表(參考值)

3、A為芯線導體鉚壓後之高度(Conductor Crimping height)：A值如上表(參考值)

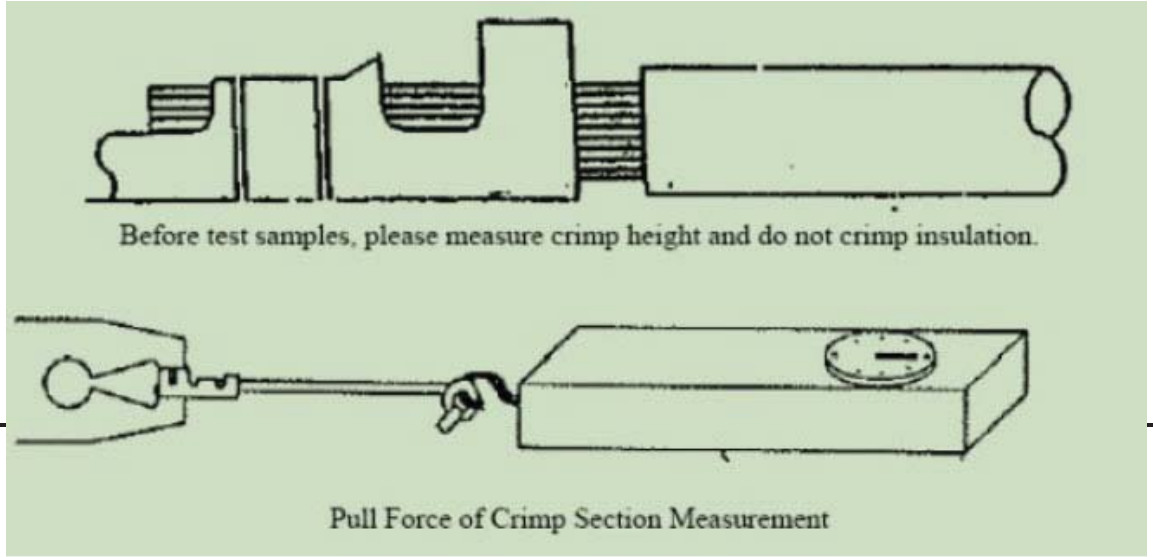
4、B為電線外被鉚壓後之高度(Insulation Crimping height)：B值如上表(參考值)

5、電線剝皮長度(Strip length)：0.7~1.0mm(參考值)

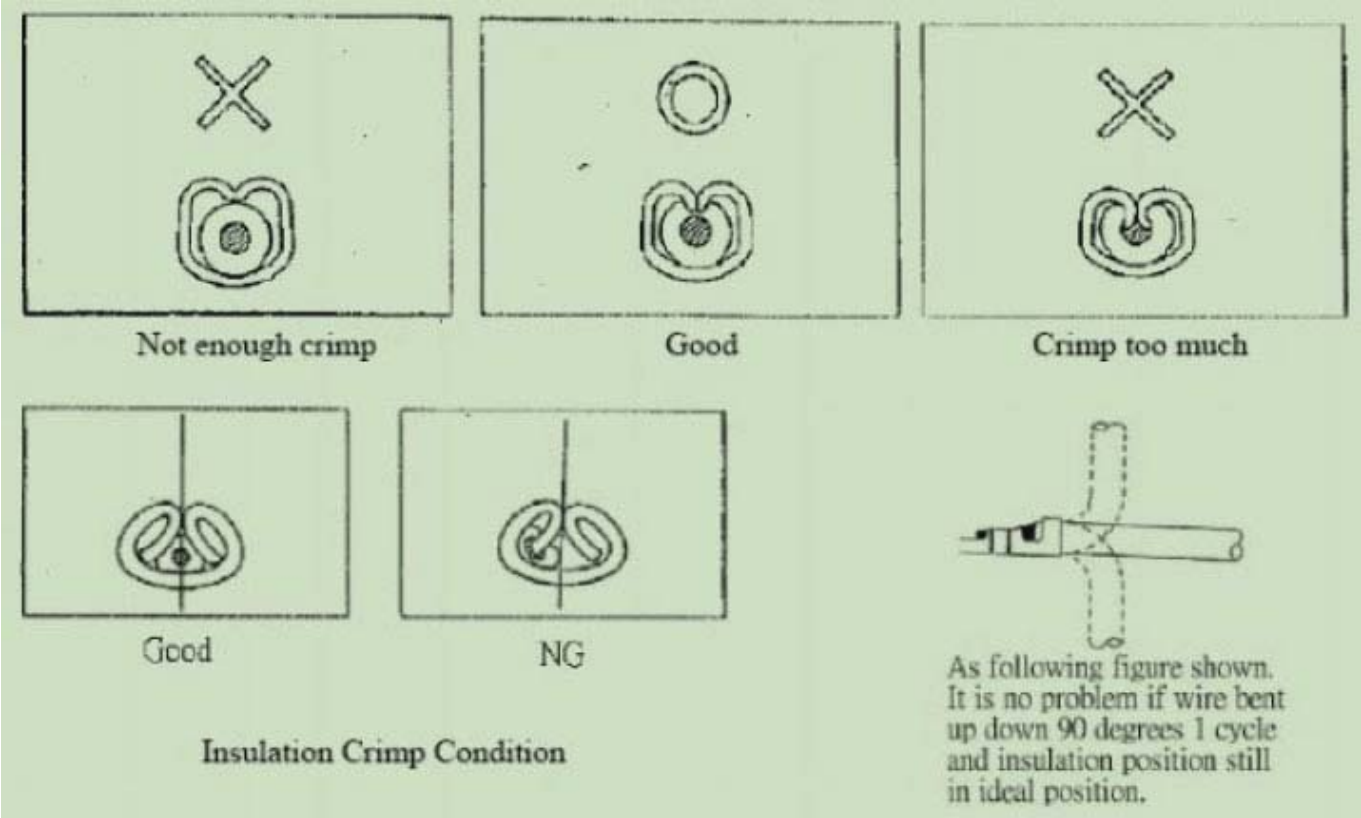
十 CRIMPING HEIGHT MEASUREMENT



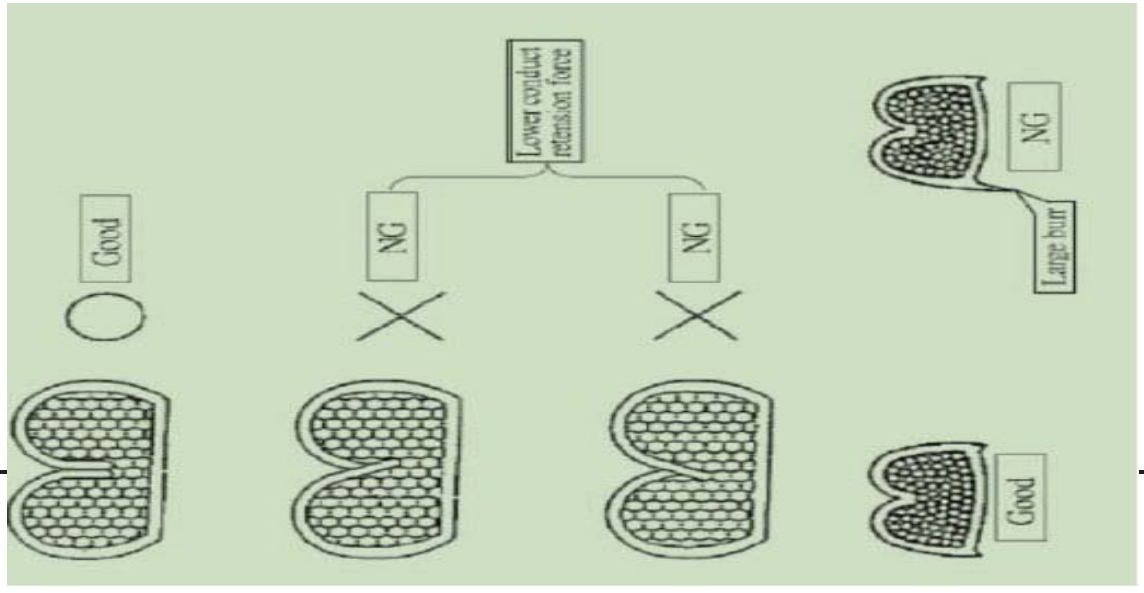
十一 PULL FORCE OF CRIMPING SECTION MEASUREMENT



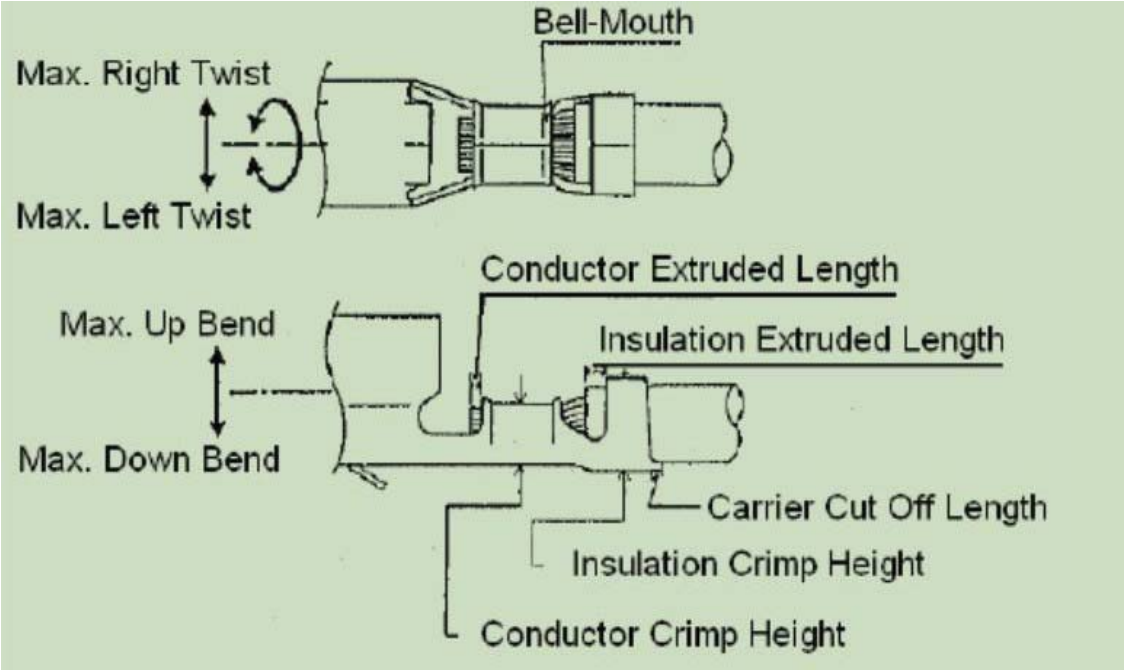
十二 STANDARD INSULATION CRIMPING



十三. CONDUCTORS CRIMPING CONDITION



十四 CRIMPING REQUIREMENT



Item	Range(Ref.)
Max. Up Bend	6°
Max. Down Bend	6°
Max. Left Twist	5°
Max. Right Twist	5°
Bell-Mouth Length	0.1~0.3mm
Carrier Cut Off Length	0~0.2mm
Conductor Extruded Length	0.05~0.2mm