長江連接器有限公司
CHANGJIANG CONNECTORS CO.,LTD.

PRODUCT SPECIFICATION

PRODUCT SERIES NAME：A1255 SERIES | PAGE ： 1/6

Index

			APPROVED	CHECKED	WRITTEN
			BY	BY	BY
			Jack Yin	***Diankui Wan***	***Xi Chen***
A0	NEW RELEASE	2023/4/10			
REV.	DESCRIPTION	DATE	DOCUMENT NO: PS-A1255-001		

PRODUCT SPECIFICATION

PRODUCT SERIES NAME：A1255 SERIES

1.SCOPE:

This specification covers the requirements for product performance of 1.25 mm pitch wire to board connector series.

2.PART NAME & PART NUMBERS

Part name	Part number
Housing	A1255H A1255HA
Terminal	A1255-T
Wafer	A1255WR-S/WRA-S/WVA-S/WVC

3. CONSTRUCTION. DIMENSIONS . MATERIAL & SURFACE FINISH

Construction and dimensions shall be in accordance with the referenced drawings.
Material and surface finish shall be as specified below.

Part name		Material	Surface finish
Housing		Nylon 66	UL94V-0
Terminal		Phosphor bronze	Tin-plated
Wafer (SMT)	Post	Phosphor Bronze	Tin-plated
	Body	Nylon 6T/LCP	UL94V-0

4. RATINGS & APPLICABLE WIRES

Item	Standard					
Rated Voltage (Max.)	150V AC DC					Insulation O.D. 1.00mm Max.
Rated Current (Max.) and Applicable Wires	No.of circuits	Wire size (AWG)				
		#26	#28	#30	#32	
	circuits	1.0				
Ambient Temperature Range	-40℃~105℃*					

Note: Do not branch in parallel current which exceeds the rated current

*: Including terMinal temperature rise

PRODUCT SPECIFICATION

PRODUCT SERIES NAME：A1255 SERIES | PAGE ： 3/6

5. CONDITIONS：

The conditions shall be in accordance with the referenced data of next table.

Number	Item	Requirement
(1)	Bend up	4°Max.
	Bend down	4°Max.
	Twisting	3°Max.
	Rolling	8°Max.
(2)	Bell mouth (flare)	0.2-0.5 mm
(3)	Cut-off tab length	0.2 mm Max.
(4)	Extruded wire length	0-0.3 mm
(5)	Seam	Seam shall not be opened and no wire allowed out of crimping area
	Wire strip length	1.27-1.7 mm ref.
(8)	Lance height	0.3 mm ref.

After crimping，the crimped areas [(5)、(6)] should be as follows.

Wire Size (AWG)	Terminal Part Number	Conductor(mm)		Insulation(mm)		Crimp Strength (kgf)
		Crimp Width	Crimp Height	Crimp Width	Crimp Height	
#26	A1255-T	0.85±0.15	0.64-0.73	1.00(max)	1.25 (max)	1.00(Min.)
#28						
#30			0.58-0.67		1.20 (max)	0.50(Min.)
#32			0.53-0.62		1.15 (max)	0.40(Min.)

The crimp width at the conductor part & crimp height at the insulation part is a reference value, so adjust it according to a wire to be used。

6. PERFORMANCE

6.1 ELECTRICAL PERFORMANCE

Test Description		Procedure	Requirement
6-1-1	Contact Resistance	Mate connectors, measure by dry circuit, 20mV Max. 10mA.	30mΩ Max.
6-1-2	Insulation Resistance	Mate connectors, apply 500V DC between adjacent terminal or ground.	500MΩ Min.
6-1-3	Dielectric Withstanding Voltage	Mate connectors, apply 500V AC (rms) for 1 minute between adjacent terminal or ground.	No Breakdown and Flashover

6.2 MECHANICAL PERFORMANCE

Test Description		Procedure		Requirement
6-2-1	Insertion & Withdrawal Force	Insert and withdraw connectors at the speed rate of 25 ± 3mm/minute.		Refer to section 7
6-2-2	Crimping Pull Out Force	Fix the crimped terminal, apply axial pull out force on the wire at the speed rate of 25 ± 3mm/minute.	AWG #26	1.0kgf Min.
			AWG #28	1.0kgf Min.
			AWG #30	0.50kgf Min.
			AWG #32	0.40kgf Min.
6-2-3	Terminal/Housing Retention Force	Apply axial pull out force at the speed rate of 25 ± 3mm/minute on the terminal assembled in the housing.		0.5kgf Min.
6-2-4	Header Terminal Retention Force	Apply axial push force at the speed rate of 25 ± 3mm/minute.		0.5kgf Min.
6-2-5	Durability	When mated up to 50 cycles by therate of 10 cycles per minute	Contact Resistance	40mΩ Max.
6-2-6	Vibration	Amplitude: 1.5mm P-P Sweep time: 10-55-10 Hz in 1 minute Duration: 2 hours in eachX.Y.Z. axes	Appearance	No Damage
			Contact Resistance	40mΩ Max.
			Discontinuity	1μsec. Max.

PRODUCT SPECIFICATION

6.3 ENVIRONMENTAL PERFORMANCE AND OTHERS

Test Description		Procedure		Requirement
6-3-1	Temperature Rise	Carrying rated current load.	Temperature Rise	30°C Max.
6-3-2	Thermal shock	High temperature: 85 ± 3 ℃ Time: 30 minutes Low temperature: - 55 ± 3 ℃ Time: 30 minutes Test round: 25cycles	Appearance	No Damage
			Contact Resistance	40mΩ Max.
			Insulation Resistance	250MΩ Min.
			Dielectric Withstanding Voltage	Must meet 6-1-3
6-3-3	Humidity	Temperature: 40 ± 2°C Relative Humidity: 90~95% Duration: 240 hours	Appearance	No Damage
			Contact Resistance	40mΩ Max.
			Insulation Resistance	250MΩ Min.
			Dielectric Withstanding Voltage	Must meet 6-1-3
6-3-4	Salt Spray	24 hours exposure to a salt spray from the 5 % solution at 35 ± 2℃.	Appearance	No Damage
			Contact Resistance	40mΩ Max.
6-3-5	Solderability	Soldering Time: 5± 0.5 sec. Solder Temperature: 240 ± 5℃	Solder Wetting	95% of immersed area must show no voids, pin
6-3-6	Resistance to Soldering Heat	Normal materials Soldering Time:3~5 sec. Solder Temperature: 250± 5°C	Appearance	No Damage

PRODUCT SPECIFICATION

PRODUCT SERIES NAME：A1502 SERIES

7. INSERTION AND WITHDRAWAL FORCE

PREPLATED TIN

unit: kgf

Number of Circuits	Insertion (Max.)	Withdrawal (Min.)	
	1 th	1 th	50 th
2P	1.50	0.10	0.05
3P	2.00	0.20	0.10
4P	2.50	0.20	0.20
5P	3.00	0.30	0.30
6P	3.50	0.40	0.40
7P	4.00	0.50	0.50
8P	4.50	0.60	0.60
9P	5.00	0.70	0.70
10P	5.50	0.80	0.80
11P	6.00	1.00	0.90
12P	6.50	1.20	1.15
13P	7.00	1.30	1.25
14P	7.50	1.40	1.35
15P	8.00	1.50	1.45
20P	8.50	1.60	1.55
25P	9.00	1.80	1.75
30P	10.00	2.50	2.45