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

PRODUCT SPECIFICATION

PRODUCT SERIES NAME：A1254 SERIES | PAGE： 1/6

Index

			APPROVED	CHECKED	WRITTEN
			BY	BY	BY
			Jack Yin	***Lailin***	***Haisen Li***
A1	REVISE	2020.05.13			
A0	NEW RELEASE	2010.07.12			
REV.	DESCRIPTION	DATE	DOCUMENT NO: PS-A1254-001		

PRODUCT SPECIFICATION

PRODUCT SERIES NAME：A1254 SERIES

1.SCOPE:

This product specification contains the test results that general performances of A1254 SMT SERIES connector were examined.

2.PART NAME & PART NUMBERS

Part name	Part number
Housing	A1254H
Terminal	A1254-T
Wafer	A1254WR-S

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	Gold over Nickel/Tin over Nicke
Wafer	Post	Brass	Gold over Nickel
	Body	Nylon 6T	UL94V-0
	Tab	Brass	Gold over Nickel

4. RATINGS & APPLICABLE WIRES

Item	Standard		
Rated Voltage (max.)	125V AC DC		Insulation O.D. 0.90mm (max.)
Rated Current (max.) and Applicable Wires	AWG #28	1.0A AC DC	
	AWG #30	1.0A AC DC	
	AWG #32	0.8A AC DC	
Ambient Temperature Range	-40℃~105℃*		

*: Including terminal temperature rise

PRODUCT SPECIFICATION

PRODUCT SERIES NAME：A1254 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	0.20 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
(6)	Wire strip length	1.2-1.7 mm ref.
(7)	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	
#28	A1254-T	0.80±0.15	0.64~0.73	1.00(Max)	1.25(max)	1.00(min)
#30			0.58~0.67		1.20(max)	0.50(min)
#32			0.53~0.62		1.15(max)	0.40(min)

6. PERFORMANCE

6.1 ELECTRICAL PERFORMANCE

Test Description		Procedure	Requirement
6-1-1	Contact Resistance	Mate connectors, measure by dry circuit, 20mV max. 10mA. (Based upon MIL-STD-202)	20mΩ max.
6-1-2	Insulation Resistance	Mate connectors, apply 500V DC between adjacent terminal or ground. (Based upon MIL-STD-202 , test method 302 , condition B)	100MΩ min.
6-1-3	Dielectric Withstanding Voltage	Mate connectors, apply 500V AC (rms) for 1 minute between adjacent terminal or ground. (Based upon MIL-STD-202 , test method 301)	No Breakdown

PRODUCT SPECIFICATION

PRODUCT SERIES NAME： A1254 SERIES

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. (Based upon JIS C5402 6.8)	AWG #28	9.8N/1.0kgf min.
			AWG #30	4.9N/0.5kgf min.
			AWG #32	4.0N/0.4kgf 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 30 cycles repeatedly by the rate of 10 cycles per minute	Contact Resistance	30mΩ max.
6-2-6	Vibration	Amplitude: 1.52mm P-P Sweep time: 10-55-10 Hz in 1 minute Amplitude : 1.5 mm X.Y.Z. axes (Based upon MIL-STD-202 Method 201A)	Appearance	No Damage
			Contact Resistance	30mΩ max.
			Discontinuity	1μsec. max.

PRODUCT SPECIFICATION

PRODUCT SERIES NAME：A1254 SERIES

6.3 ENVIRONMENTAL PERFORMANCE AND OTHERS

Test Description		Procedure		Requirement
6-3-1	Temperature Rise	Carrying rated current load. (Based upon UL 498)	Temperatur e Rise	30°C max.
6-3-2	Humidity	Temperature: 40 ± 2°C Relative Humidity: 90 ~ 95% Duration: 240 hours (Based upon JIS C0022/MIL-STD-202 Method 103B Cond. B)	Appearance	No Damage
			Contact Resistance	30mΩ max.
			Insulation Resistance	50MΩ min.
			Dielectric Withstandin g	Must meet 6-1-3
6-3-3	Temperature Cycling	25 cycles of: a) - 55°C 30 minutes b) +85°C 30 minutes (Based upon JIS C0025)	Appearance	No Damage
			Contact Resistance	30mΩ max.
6-3-4	Salt Spray	24 hours exposure to a salt spray from the 5 % solution at 40 ± 2°C. (Based upon JIS C0023/MIL-STD-202 Method 101D Cond. B)	Appearance	No Damage
			Contact Resistance	30mΩ max.
6-3-5	Solderability	Soldering Time: 3~5 sec. Solder Temperature: 240 ± 5°C	Solder Wetting	95% of immersed area must show no voids, pin holes
6-3-6	Resistance to Soldering Heat	High temperature resistant materials Soldering Time:3~5 sec. Solder Temperature: 260 ± 5°C	Appearance	No Damage

PRODUCT SPECIFICATION

PRODUCT SERIES NAME： A1254 SERIES | PAGE： 6/6

7. INSERTION AND WITHDRAWAL FORCE

unit: kgf

Number of Circuits		At initial		At 50th
		I.F. (max)	W.F. (min)	W.F. (min)
Single Row	2	1.20	0.20	0.15
	3	1.60	0.30	0.25
	4	2.20	0.40	0.35
	5	2.60	0.50	0.45
	6	3.00	0.60	0.55
	7	3.40	0.70	0.65
	8	3.80	0.80	0.75
	9	4.20	0.90	0.85
	10	4.60	1.00	0.95
	11	5.00	1.10	1.00
	12	5.40	1.20	1.10
	13	5.80	1.30	1.20
	14	6.20	1.40	1.30
	15	6.60	1.50	1.40
	20	8.20	2.00	1.90
	30	12.00	3.00	2.90