
 WIESON TECHNOLOGIES CO., LTD.	SPECIFICATION AND PERFORMANCE	TYPE OF PRODUCT
		SAS CONN
		SPEC NO. G1213-ZC

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1. Scope :

This specification covers the requirements for product performance, test methods and quality assurance provisions of **SFF-8482 Connector**

The following parts numbers are applied to this specification.

A. G1213 SERIES

2. Reference 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.

A. SFF-8482

3. Material of Components :

- A. Housing : Thermoplastic, UL94V-0 Rated
- B. Contact : Copper Alloy
- C. Lock : Copper Alloy

4. Design and Construction :


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

5. Ratings :

- A. Voltage : 100Vrms Max.
- B. Current : 1.5A Max
- C. Temperature range : -20°C to +85°C


6. Performance and Test Descriptions :

The product is designed to meet the electrical, mechanical and environmental performance requirements specified in paragraph 7. Unless otherwise specified, all tests are performed at ambient environmental conditions.


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7. Test Requirements and Procedures Summary :


Electrical Performance		
Test Description	Test Procedures & Condition	Requirements
Low Level Contact Resistance	EIA-364-23 Subject mated connectors to closed circuit current of 100 mA maximum at 20 mV maximum.	30mΩ Max.(Initial) Δ15mΩ Max. (Final)
Insulation Resistance	EIA-364-21 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector assemblies. (a) Test Voltage: 500Vdc for 1 min.	1,000 MΩ minimum
Dielectric Withstanding Voltage	EIA-364-21 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector assemblies. (a) Test voltage: 500Vac at seal level (b) Test Duration: 60 seconds	(a) No flashover, no spark over, no excess leakage, no breakdown. (b) Current leakage: 0.5 mA max.
Temperature Rise	EIA-364-70 Mated connectors, test according to the condition listed below : (a) Wire contact pins P1, P2, P8 and P9 in parallel for power Wire contact pins P4, P5, P6, P10 and P12 in parallel for return. (b) Supply 6 Amp total DC current to the power pins in parallel, returning from the parallel ground pins Measure and record the temperature after 96 hours (45 minutes ON and 15 minutes OFF per hour) in ambient condition of 25C still air	The ΔT shall not exceed +30°C.

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Mechanical Performance		
Test Description	Test Procedures & Condition	Requirements
Connector Mate and Unmate Forces	EIA-364-13 Mate and unmate connectors at a rate of 25mm per minute.	For backplane Mate - 25N max Unmate - 5N min For cable Mate - 50N max Unmate - 20N min
Durability	EIA-364-09 Mate and unmate connectors at a maximum rate of 200 cycles per hour. Backplane - 500 Cycles Cable - 25 Cycles	(a) No evidence of damage. (b) 15 mΩ maximum change from initial Contact Resistance.
Vibration	EIA-364-28, test condition VII, letter D Mated connectors, test according to the condition listed below : (a) Frequency : 20 ~ 500 Hz (b) PSD value : 3.1 Grms minimum (c) Duration : 15 minutes in each of 3 mutually perpendicular directions.	(a) No discontinuities of 1μs or longer duration. (b) No evidence of damage. (c) 15 mΩ maximum change from initial Contact Resistance.
Mechanical Shock	EIA-364-27, condition H Mated connectors, test according to the condition listed below : (a) Test condition : Condition A (b) Peak acceleration : 50 G's (c) Normal duration : 11 ms (d) Times : 3 shocks in each direction applied along three mutually perpendicular planes, total 18 shocks.	(a) No discontinuities of 1μs or longer duration. (b) No evidence of damage. (c) 15 mΩ maximum change from initial Contact Resistance.

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Environmental Performance		
Test Description	Test Procedures & Condition	Requirements
Temperature Life	EIA-364-17 Subject mated connectors should be tested according to the condition listed below: (a) Temperature: 85±5°C (b) Duration: 500 hours	(a) No evidence of damage. (b) 15 mΩ maximum change from initial Contact Resistance.
Thermal Shock	EIA-364-32 Subject mated connectors should be tested according to the condition listed below: (a) Temperature: -55 ~ 85°C (b) Duration: Exposure time at temperature extreme 30 minutes, 10 cycles	(a) No evidence of damage. (b) 15 mΩ maximum change from initial Contact Resistance.
Cyclic Temperature and Humidity	EIA-364-31, Method II Test Condition A Subject mated connectors should be tested according to the condition listed below: (a) Temperature: 40°C (b) Relative Humidity: 90 ~ 95% (c) Duration: 96 hours	(a) No evidence of damage. (b) 15 mΩ maximum change from initial Contact Resistance.
	Subject unmated connectors should be tested according to the condition listed below: (a) Temperature: 40°C (b) Relative Humidity: 90 ~ 95% (c) Duration: 96 hours	(a) No evidence of damage. (b) Conform to item of Dielectric withstanding voltage and insulation resistance.
Solder ability	J-STD 002D Subject unmated connectors should be tested according to the condition listed below: (a) Steam Aging Temperature: 90 ~ 96°C (b) Steam Aging Duration: 8 hours±15 min. (c) Soldering Temperature : 245±5°C (d) Soldering Time: 4 ~ 5 seconds (e) Flux: Standard flux #2	A continuous solder coating free from defects for a minimum 95% of the critical area.

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Test Description	Test Procedures & Condition	Requirements
Resistance to Soldering Heat (DIP)	EIA-364-56 Un-mated connectors, test according to the condition listed below : (a) Temperature : 260±5°C (b) Duration : 10±2 seconds (c) Flux : ROM0	(a) No evidence of damage. (b) 15 mΩ maximum change from initial Contact Resistance.
Resistance to Soldering Heat (SMD)	JSTD-020D Subject the sample to 3 cycles of the appropriate reflow conditions as defined in Table 5-2 and Figure 5-1.	(a) No evidence of damage. (b) 15 mΩ maximum change from initial Contact Resistance.

Note: Shall meet visual requirements, show no physical damage, and shall meet requirements of additional tests as specified in Test Sequence in paragraph 8.



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8. Product Qualification and Requalification Test Sequence :

A. Sample Selection :

Test samples shall be prepared in accordance with applicable Instruction Sheets and shall be selected at random from current production.

B. Test Sequence :

Test Description Sequence	Test Group								
	1	2	3	4	5	6	7	8	9
Examination of product	1,5	1,5	1,5	1,7	1,6	1,3	1,7	1,3	1,3
Low Level Contact Resistance	2,4	2,4	2,4		2,5		2,6		
Insulation Resistance				2,5					
Dielectric Withstanding Voltage				3,6					
Temperature Rise						2			
Mate and Unmate Forces							3,5		
Durability							4		
Vibration					3				
Mechanical Shock					4				
Temperature Life	3								
Thermal Shock		3							
Humidity			3	4					
Resistance to Soldering Heat								2	
Solder ability									2
Sample Size per Test Group	5	5	5	5	5	5	5	5	5
Note : Numbers indicate sequence in which tests are performed.									

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9. Quality Assurance Provisions :

Unless otherwise specified, in the contract or purchase order, we will be responsible for the quality of the part as it is delivered to client. We will be responsible for having controlled processes to ensure product is in total compliance with this specification. Failing lots shall be subject to return or other corrective action.

Further, WIESON will not substitute components of the assembly (connector, cable, etc.) without prior written approval from client. Any such substitutions shall be submitted to client for approval prior to implementation. Substitution shall be deemed as any change in WIESON different than those previously submitted to and approved by client.

A. Re-qualification Testing :

If changes significantly affecting form, fit or function are made to the product or manufacturing process, product assurance shall coordinate requalification testing, consisting of all or part of the original testing sequence as determined by development/product, quality and reliability engineering.

B. Re-testing :

Connectors stored for a period of more than 12 months after the release of the lot shall be tested prior to delivery.

C. Acceptance :

Acceptance is based on verification that the product meets the requirements of paragraph 7. Failures attributed to equipment, test setup or operator deficiencies shall not disqualify the product. When product failure occurs, corrective action shall be taken and samples resubmitted for qualification. Test to confirm corrective action is required before resubmittal.

D. Inspection Data :

Inspection and test data shall be recorded, evaluated, and maintained as evidence of performance to these provisions.

E. Quality Conformance Inspection :

Applicable WIESON quality inspection plan will specify the sampling acceptable quality level to be used. Dimensional and functional requirements shall be in accordance with the applicable product drawing and this specification.

F. Preparation for Delivery :

Overall packaging shall be sufficient to protect against damage or loss during shipment from WIESON to destination specified in the purchase order.