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1. Scope:

This Product Specification covers the requirement of Slim SAS cable assemblies on product performance, test methods and quality assurance provisions

2. Product Application & Features:

The Slim SAS cable assembly is designed for in the servers, Data storage, Workstation, etc.

Product Features:

- Smaller size connector and cable saves device space.
- Provide 4 channels signal transmission as per industry standard.
- Data speed: support UPI 11.2GT/s, SAS4.0 24Gbps, Open CAPI 25Gbps and PCIe4.0 16Gbps per lane.
- Meet SAS4.0 and SlimSAS SFF-8654 Specification.

3. Ratings:

Voltage Rating:	30 VAC /contact;
Current:	0.5 A /contact;
Insulation Resistance:	10MegaOhm;
Withstanding Voltage:	300V DC 1 minute ;
Durability:	250 cycles

4. Electrical Performance

Item 项目	Description 项目描述	Test Condition 测试条件	Requirement 规格要求
4.1	Low Level Contact Resistance 接触阻抗	(EIA 364-6) 320 mV DC, 10 mA	80mohm max. initial (初始值最大80毫欧), 20mohm maximum after stress test (测试后与初始值差最大20毫欧)
4.2	Insulation Resistance 绝缘阻抗	(EIA 364-21) Testing by applying the specified voltage (DC 100 V) between adjacent contacts for one minute.	10MegaOhm Minimum
4.3	Dielectric withstanding voltage	(EIA 364-20) Testing by applying the specified voltage (AC 300 V) between adjacent contacts for one minute.	No defect between adjacent contacts

5. Mechanical Performance

Item 项目	Description 项目描述	Test Condition 测试条件	Requirement 规格要求
5.1	Mating Force	(EIA 364-13) Measuring the required force for complete mated to the mated connector at 25±3mm/minutes.	55.5N maximum
5.2	Unmating Force	(EIA 364-13) Measuring the required force for complete disengagement from the mated connector at 25±3mm/minutes	49N maximum
5.3	Durability	(EIA 364-09) Engage and disengage the receptacle connector which is soldered to the test board and its mating plug cable for 250 cycles at the speed of 25±3mm/minutes along the mating direction by the push-push machine.	No damage
5.4	Vibration	(EIA 364-28) test condition VII test condition letter D 15 minutes in each of 3 mutually perpendicular directions.	No damage No discontinuity longer than 1 microsecond allowed 20 milliohms maximum change from initial (baseline) contact resistance



5.5

Mechanical Shock

EIA-364-27
test condition letter H
3 shocks in each axis (18)

No damage
20 milliohms maximum
change from initial
(baseline) contact
resistance

6. Environmental Performance

Item 项目	Description 项目描述	Test Condition 测试条件	Requirement 规格要求
6.1	Cyclic Temperature & Humidity	EIA-364-31 Method III Subject unmated specimens to 10 Cycles (10 days) between 25° and 65° C at 80-100% RH	None
6.2	Thermal Shock	EIA-364-32 , Method A, test condition I (-55°C to 80°C), test duration A-3 (100 cycles)	None
6.3	Temperature Life	EIA-364-17, method A (No electrical load), Test Condition 2 (70°C), test time condition C, (500hrs)	None

7. High frequency Performance

Item 项目	Description 项目描述	Test Condition 测试条件	Requirement 规格要求
7.1	Differential Impedance	Rise time of 70ps (20 % - 80 %)	100 ohms Nominal
7.2	SCD21-SDD2 1	100 MHz - 9 GHz	-10 dB
7.3	Differential Mode Return Loss (SDD22)	Measured at 100 MHz - 9 GHz	Max(-10, Min (-3.9, -7.9+13.3-log10 (freq in GHz/3))
7.4	Common Mode Return Loss (SCD22)	Measured at 100 MHz - 9 GHz	Max(-10, Min (-3.9, -7.9+13.3-log10 (freq in GHz/3))
7.5	Differential to Common Mode Conversion (SCD21)	Measured at 100 MHz - 9 GHz	-18 dB
7.6	Differential Insertion Loss	Measured at 10 MHz – 4.5 GHz Measured at 4.5 GHz - 9 GHz	10 MHz–4.5 GHz :-6 dB 4.5 GHz-9 GHz: -11 dB
7.7	Insertion Loss to Crosstalk Ration (ICR)	Measured at 100 MHz - 6 GHz	-15 dB

8. Test Sequence and Sample Quantity/测试顺序及样品数量

Test Item 测试项目	Group (测试分组)						
	A	B	C	D	E	F	G
Examination of product	1,9	1	1	1,5	1,5	1,5	1
Low Level Contact Resistance	2,8	2,4	2,4	2,4	2,4	2,4	
Insulation Resistance	3						
Dielectric Withstanding Voltage	4						
Mating/Unmating force	5,7						
Durability	6						
Vibration		3					
Mechanical Shock			3				
Cyclic Temperature & Humidity				3			
Thermal Shock					3		
Temperature Life						3	
Differential Impedance							2
SCD21-SDD21							3
Differential Mode Return Loss (SDD22)							4
Common Mode Return Loss (SCD22)							5
Differential to Common Mode Conversion (SCD21)							6
Differential Insertion Loss							7
Insertion Loss to Crosstalk Ration (ICR)							8
Sample QTY(PCS)	5	5	5	5	5	5	3

The number of group is test sequence 测试分组中的序号为试验顺序.