



ENGINEERING DEPT.	PRODUCT SPECIFICATION	SPEC.NO.: SPCI032D
REVISIONS	ECN09218	For CI94 Series Serial ATA System
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1. SCOPE:

This specification contains the test requirement of subject connectors when tested under the condition and procedure with terminals crimped on the specified maximum size wire

2. APPLICABLE STANDARDS:

MIL - STD - 202 Methods for test of connectors for electronic equipment
MIL - STD - 1344 Test methods for electrical connectors
EIA-364 Test sequence & procedures for electrical connectors

3. APPLICABLE SERIES NO: CI94 Series

4. SHAPE, CONSTRUCTION AND DIMENSIONS

See attached drawings

5. MATERIALS

See attached drawings

6. ACCOMMODATED P.C.BOARD

6.1 Thickness: 0.8 mm (.031") ~ 1.6 mm (.063")
6.2 P.C. Board Layout: See attached drawings



REVIEWED : Alex APPROVED : David VERIFIED : Eisley

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7. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
7.1	Rated current and voltage		1.5A DC @ 25°C 15V DC
7.2	Contact current rating (Power segment)	Mount the connector to a test PCB Wire power pins P1, P2, P8, and P9 in parallel for power Wire ground pins P4, P5, P6, P10, and P12 in parallel for return Supply 6A total DC current to the power pins in parallel, returning from the parallel ground pins Record temperature rise when thermal equilibrium is reached	1.5A per pin Minimum. The temperature rise above ambient shall not exceed 30°C at any point in the connector when contact positions are powered. The ambient condition is still air at 25°C
7.3	Low level contact resistance(LLCR)	EIA 364-23 Subject mated contacts assembled in housing to 20 mV maximum open circuit at 100 mA maximum.	Initially 30mΩ Maximum Resistance increase 15mΩ Maximum after stress
7.4	Dielectric withstanding voltage	EIA 364-20 Method B Test between adjacent contacts of mated and unmated connector assemblies	The dielectric shall withstand 500Vac for 1 minute at sea level
7.5	Insulation resistance	EIA 364-21 After 500 VDC for 1 minute, measure the insulation resistance between the adjacent of mated and unmated connector assemblies	1000 MΩ Minimum

8. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Wire size	Specified wire size	Accepts AWG#18~#22
8.2	Terminal crimp Tensile strength	When crimped AWG#18 size wire When crimped AWG#20 size wire When crimped AWG#22 size wire	More than 9.0 Kgf More than 7.0 Kgf More than 5.0 Kgf
8.3	Terminal insertion force	Insertion speed 25± 3 mm per minute into housing	Less than 1.0 Kgf
8.4	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 4.0 Kgf

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	ITEM	TEST CONDITION	REQUIREMENT
8.5	Insertion force	EIA 364-13 Measure the force necessary to mate the connector assemblies at a max. rate of 12.5mm per minute	5.0 Kgf maximum
8.6	Removal force	EIA 364-13 Measure the force necessary to unmate the connector assemblies at a max. rate of 12.5mm per minute	Without Metal Latch: 1.0 Kgf minimum through 50 cycles With Metal Latch: No damage and no disconnect through 50 cycles
8.7	Durability	EIA 364-09 50 cycles for internal cabled application; 500 cycle for back plane / blind mate application. Test done at a maximum rate of 200 cycle per hour.	No physical damage Contact resistance: Less than twice of initial

9. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Vibration	1.5 mm 10-55-10 HZ / minute each 2 hours for X , Y and Z directions	Appearance: No damage Discontinuity: 1 micro second max.
9.2	Solder ability	Soldering time: 5 ± 0.5 second Soldering pot: 230 ± 5°C	Minimum: 90% of immersed area
9.3	Resistance to soldering heat	Soldering time: 5 ± 0.5 second Soldering pot: 260 ± 5°C	No damage
9.4	Heat aging	85 ± 2°C , 96 hours	No damage
9.5	Humidity	40 ± 2°C , 90-95% RH , 96 hours measurement must be taken within 30 min. after tested	Appearance: No damage Contact resistance: Less than twice of initial Dielectric strength: To pass para 7-4

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	ITEM	TEST CONDITION	REQUIREMENT
9.6	Temperature cycling	One cycle consists of : (1)-55 ⁺⁰ / ₋₃ °C , 30 min. (2)Room temp. 10-15 min. (3) 85 ⁺³ / ₋₀ °C , 30 min. (4)Room temp. 10-15 min.	Appearance: No damage Contact resistance: Less than twice of initial
9.7	Salt spray	Temperature: 35 ± 3°C Solution: 5 ± 1% Spray time: 48 ± 4 hours Measurement must be taken after water rinse	Appearance: No damage Contact resistance: Less than twice of initial

10. OPERATING TEMPERATURE RANGE: -35 to + 85°C

STORAGE TEMPERATURE RANGE: -35 to + 85°C