Storage & Server IO

Amphenol ICC

SAS/PCIe 5.0 (U.2 & U.3) Connectors

HIGH SPEED DESIGN WITH FLEXIBILITIES

SAS/PCIe 5.0 (U.2 & U.3) connectors comes with 32GT/s (PCIe lanes) and 24Gb/s (SAS lanes) speeds to meet the demands of next-generation servers. The 68-position, SAS/PCIe receptacle and header enables implementation of high speed Serial Attached SCSI (SAS) hard disk drive (HDD) interface as well as Peripheral Component Express (PCIe)-based devices. The molded guide post allows device plug and receptacle to self-align during mating process. With a halogen-free high temperature thermoplastic, these connectors are made to withstand diverse conditions. It also offers a durability of 500 mating cycles.

- Compatible with SFF8639 specification
- Capable of meeting 24Gb/s SSDs and HDDs or PCIe based devices at 32GT/s
- Footprint backward compatible to 12G, 6G and 3G SAS connectors

TARGET MARKETS

FEATURES

- Receptacles are inter-mateable with unshielded dual port SFF8680 (SAS 3.0/SAS 4.0) connectors
- SAS/PCIe connectors enable SFF8630, SFF8680 and SFF8432 interfaces
- Backward compatible with 12Gb/s, 6Gb/s SAS, SATA and 3Gb/s SFF8482 connectors
- Supports up to 6 port 32GT/s PCIe based devices
- Supports both SAS and SATA drives
- Staggered contact lengths
- Stamped clips act as connector retainers for robust PCB attachment
- Molded guideposts help mating halves to self-align by providing angled lead-ins

BENEFITS

- Offers flexibility in component selection
- Implementation of high speed SSDs (Solid State Drives) and HDDs (Hard Disk Drives) allows compatibility between unshielded dual and multiport interfaces
- Same interface can be used for cost-effective storage HDDs as well as higher performance server SSDs
- Improves performance and faster file transfers
- Addresses the needs of both mission critical and bulk storage applications
- Provides sequential contact mating for hot plugging
- Provide additional mechanical strength after soldering
- Compensates for connector misalignment

TECHNICAL INFORMATION

MATERIAL

- Contact Base Metal: Copper alloy
- Contact Area Plating: Gold over nickel
- Solder Tail Plating: Tin over nickel
- Retainer Clip Base Metal: Copper alloy
- Retainer Plating: Tin over nickel
- Housing: Halogen-free high temperature thermoplastic (UL94V-0), black

ELECTRICAL PERFORMANCE

- Contact Resistance: 30mΩ max. for signal contacts. Per EIA 364-23
- Current Rating: 1.5A min. per contact with temperature rise not exceeding 30°C (power pins only: P1-P15). Per EIA 364-70B
- Insulation Resistance: 1000MΩ min. per EIA 364-21

MECHANICAL PERFORMANCE

- Durability: 500 mating cycles
- Mating Force: 59N max.
- Unmating Force: 6N min.

ENVIRONMENTAL

- Humidity: 96 hours at 40°C with 90-95% relative humidity. Per EIA 364-31, Method II, test condition A
- Temperature Life: 85°C for 500 hours. Per EIA 364-17 test condition III, method A
- Thermal Shock: 10 cycles between -55°C to +85°C. Per EIA 364-32, test condition I
- Mixed Flow Gas: Expose ½ samples unmated for 7 days and then mated for 7 additional days; the other ½ samples are exposed mated for 14 days. Per EIA 364-65, class II A exposed mated for 14 days. Per EIA 364-65, class II A

SPECIFICATIONS

- Amphenol Product Specification: S-PSAS-004

PACKAGING

- Tape and Reel
- Tray

TARGET MARKETS/APPLICATIONS

Processor and Storage Blade
Mezzanine Card

HDD
HDD Carrier
External Storage System
Interposer Card
Server
Storage Server
Processor and Storage Blade

PART NUMBERS

SAS/PCIe 5.0 Receptacle

Application	Orientation	Termination Type	Retainers	Height (mm)	Mount Type	Impedance	Part Numbers
U.2 & U.3	Vertical	SMT	SMT	8.15	Top mount	85Ω	PSAS5F3130021TR

SAS/PCIe 5.0 Header

Application	Orientation	Termination Type	Retainers	Height (mm)	Mount Type	Impedance	Part Numbers
U.2 & U.3	Right Angle	SMT	SMT	4.9	Top mount	85Ω	PSAS5M2130021TR

Note: More options are available upon request. Please contact your local sales representative.

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