

SAS/PCIe® 5.0 (U.2 & U.3) Connectors

HIGH-SPEED DESIGN WITH FLEXIBILITIES

SAS/PCIe® 5.0 (U.2 or U.3) connectors feature 32 Gb/s (PCIe® lanes) and 24 Gb/s (SAS lanes) speeds to meet the demands of next-generation servers. The 68-position, SAS/PCIe® receptacle and header enable implementation of high-speed Serial Attached SCSI (SAS) hard disk drive (HDD) interface as well as Peripheral Component Express (PCIe®)-based devices. The molded guidepost allows the device plug and receptacle to self-align during the 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 24 Gb/s SSDs and HDDs or PCIe® based devices at 32 Gb/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 interface
- Backward compatible with 12 Gb/s, 6 Gb/s SAS, SATA and 3 Gb/s SFF8482 connectors
- Supports up to 4~6 port 32 Gb/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 (UL 94 V-0), Black

ELECTRICAL PERFORMANCE

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

MECHANICAL PERFORMANCE

- Durability: 500 mating cycles
- Mating Force: 59 N max.
- Unmating Force: 6 N 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 Exposed mated for 14 days. per EIA 364-65, class II A

SPECIFICATIONS

- Amphenol Product Specification: SSAS009-E

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	Others	Part Numbers
U.2	Vertical	SMT	SMT	8.15 mm	Top Mount	85 Ω		PSAS5F3130021TR
U.2	Vertical	SMT	TH	8.15 mm	Top Mount	85 Ω		PSAS5F3130031TR
U.2	Vertical	SMT	SMT	8.15 mm	Top Mount	85 Ω		PSAS5F3130161TR
U.2	Vertical	SMT	TH	8.15 mm	Top Mount	85 Ω		PSAS5F3130171TR
U.2	Vertical	SMT	TH	8.15 mm	Top Mount	85 Ω	Widebase TH hold down	PSAS5F3130081TR
U.2	Vertical	SMT	SMT	8.15 mm	Top Mount	85 Ω	Slim body	PSAS5F3130191TR
U.2	Vertical	SMT	TH	8.15 mm	Top Mount	85 Ω	2.0 mm hold down	PSAS5F3130201TR
U.2 & U.3	RA	SMT	TH	0.35 mm	Sink Type	85 Ω	CEM 5.0, 0.5 R	PSAS5F2130021TR
U.2 & U.3	RA	SMT	TH	2.85 mm	Top Mount	85 Ω	CEM 5.0, 0.5 R	PSAS5F2130051TR
U.2	Vertical	SMT	SMT	8.15 mm	Top Mount	85 Ω		PSAS5F3130221TR
U.2	Vertical	SMT	TH	8.15 mm	Top Mount	85 Ω		PSAS5F3130241TR
U.2	Vertical	SMT	TH	8.15 mm	Top Mount	85 Ω	Widebase SMT hold down	PSAS5F3130151TR

Find part number details using the search box on www.amphenol-cs.com

SAS/PCIe® 5.0 Plug								
Application	Orientation	Termination Type	Retainers	Height (mm)	Mount Type	Impedance	Others	Part Numbers
U.2	R/A	SMT	TH	4.9 mm	Top Mount	85 Ω		PSAS5M2130221TR
U.2	R/A	SMT	SMT	4.4 mm	Sink Type	85 Ω		PSAS5M2130311TR
U.2	R/A	SMT	SMT	3.9 mm	Sink Type	85 Ω		PSAS5M2130401TR
U.2	R/A	SMT	SMT	2.47 mm	Sink Type	85 Ω		PSAS5M2130411TR
U.2	R/A	SMT	SMT	NA	Straddle Mount	92 Ω		PSAS5M2130332NT

Find part number details using the search box on www.amphenol-cs.com

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