BergStak HS™ 0.80mm Board–to–Board Connector

FLEXIBLE SOLUTION FOR HIGH SPEED APPLICATION

BergStak HS™ connector family is known for its fast data transmission, high signal quality, and time–proven reliability under extended periods of application. BergStak HS™ 0.80mm connector family with 0.80mm pitch enables high–speed data applications with up to PCIe® Gen 5 32Gb/s.

- Free pin use of 5mm stack height
- Can use same layout as BergStak
- Meet SAS 4.0 and PCIe® Gen 5 standards
- Environment friendly with RoHS and low–halogen compliance

TARGET MARKETS

FEATURES

- High speed performance up to 32Gb/s
- 120 positions, with options from 40 to 140
- 5mm stack height, with options for 5mm and 12mm
- Available in single GND and double GND
- UL94V–0 high temperature LCP material
- Scoop–proof housings
- Lead–free and RoHS compliant

BENEFITS

- Meets SAS 4.0 and PCIe® Gen 5 standards
- Application flexibility

- Design flexibility
- With–stand harsh environment
- Enables easy manual assembly
- Meets environmental, health and safety requirements

TECHNICAL INFORMATION

MATERIAL

- Housing: Glass filled LCP (UL94V-0, MSL level 1)
- Contact Base Metal
  - Receptacles: Copper Alloy, High Spring
  - Headers: Copper Alloy
- Plating:
  - Solder area finish in matte pure tin over nickel
  - Contact area plating gold

ELECTRICAL PERFORMANCE

- Current Rating: 0.8A per contact
- Contact Resistance: 50mΩ max.
- Signal Integrity for SAS 4.0
  - Data Rate: up to 24Gb/s
  - Multiline Crosstalk: < 0.5% at 20ps (20-80%)
  - Differential Impedance: 100Ω
  - Single Ended Impedance: 50Ω
- Signal Integrity for PCIe® Gen 5
  - Data Rate: Up to 32Gb/s
  - Multiline Crosstalk: < 0.5% at 15ps (20-80%)
  - Differential Impedance: 85Ω
- Single Ended Impedance: 42.5Ω

MECHANICAL PERFORMANCE

- Durability: 100 cycles
- Mating Force:0.9N max. /contact
- Un-mating Force: 0.1N min. /contact
- Gauge Retention Force: >0.1N

ENVIRONMENTAL

- Mixed Flow Gas: Duration 7 days
- Vibration Sinusoidal: 11.95g
- Temperature Life : 125°C for 96 hours

SPECIFICATIONS

- Amphenol Product Specification: GS-12-1499

PACKAGING

- Tape & Reel

TARGET MARKETS/APPLICATIONS

Server
Storage

Industrial automation
PLC
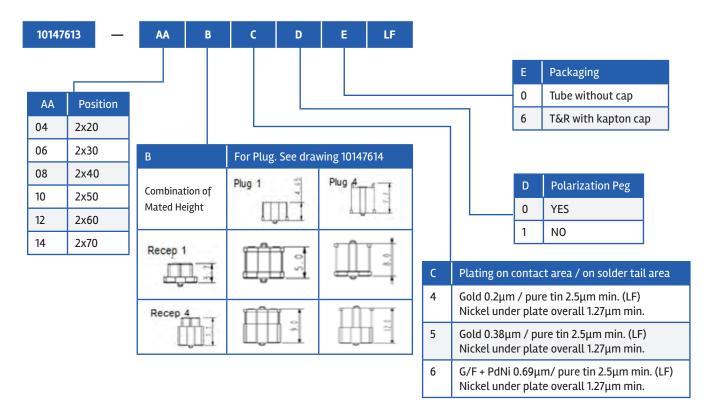
Medical

PART NUMBERS

Description	Part Numbers
BergStak HS™ 0.80mm Header 120P	10147614-121406LF
BergStak HS™ 0.80mm Receptacle 120P	10147613-121406LF

Remark: More options can be extended according to market needs

▶ BergStak HS™ 0.80mm Board-to-Board Connector

PART NUMBER SELECTOR

10147613	—	AA	B	C	D	E	LF

AA	Position
04	2x20
06	2x30
08	2x40
10	2x50
12	2x60
14	2x70

B	For Plug. See drawing 10147614
Combination of Mated Height	

E	Packaging
0	Tube without cap
6	T&R with kapton cap

D	Polarization Peg
0	YES
1	NO

C	Plating on contact area / on solder tail area
4	Gold 0.2µm / pure tin 2.5µm min. (LF) Nickel under plate overall 1.27µm min.
5	Gold 0.38µm / pure tin 2.5µm min. (LF) Nickel under plate overall 1.27µm min.
6	G/F + PdNi 0.69µm/ pure tin 2.5µm min. (LF) Nickel under plate overall 1.27µm min.

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