

BergStak HS™ 0.80 mm 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™ 0.80 mm connector family with 0.80 mm pitch enables high-speed data applications with up to PCIe® Gen 5 32 Gb/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 32 Gb/s
- 120 positions, with options from 40 to 140
- 5mm stack height, with options for 5 mm and 12 mm
- 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 (U L94 V-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: 0.8 A per contact
- Contact Resistance: 50 mΩ max.
- Signal Integrity for SAS 4.0
 - Data Rate: up to 24 Gb/s
 - Multiline Crosstalk: < 0.5% at 20ps (20–80%)
 - Differential Impedance: 100 Ω
 - Single Ended Impedance: 50 Ω
- Signal Integrity for PCIe® Gen 5
 - Data Rate: Up to 32 Gb/s
 - Multiline Crosstalk: < 0.5% at 15ps (20–80%)
 - Differential Impedance: 85 Ω
- Single Ended Impedance: 42.5 Ω

MECHANICAL PERFORMANCE

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

ENVIRONMENTAL

- Mixed Flow Gas: Duration 7 days
- Vibration Sinusoidal: 11.95 g
- 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

▶ BergStak HS™ 0.80 mm 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	Plug 1	Plug 4	
Recep 1			
Recep 4			

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 0.2 µm / pure tin 2.5 µm min. (LF) Nickel under plate overall 1.27 µm min.
5	Gold 0.38 µm / pure tin 2.5 µm min. (LF) Nickel under plate overall 1.27 µm min.
6	G/F + PdNi 0.69µm/ pure tin 2.5 µm min. (LF) Nickel under plate overall 1.27 µm min.

Remark: More options can be extended according to market needs

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PART NUMBER SELECTOR

10193010	—	XXX	X	X	X	X	X	LF
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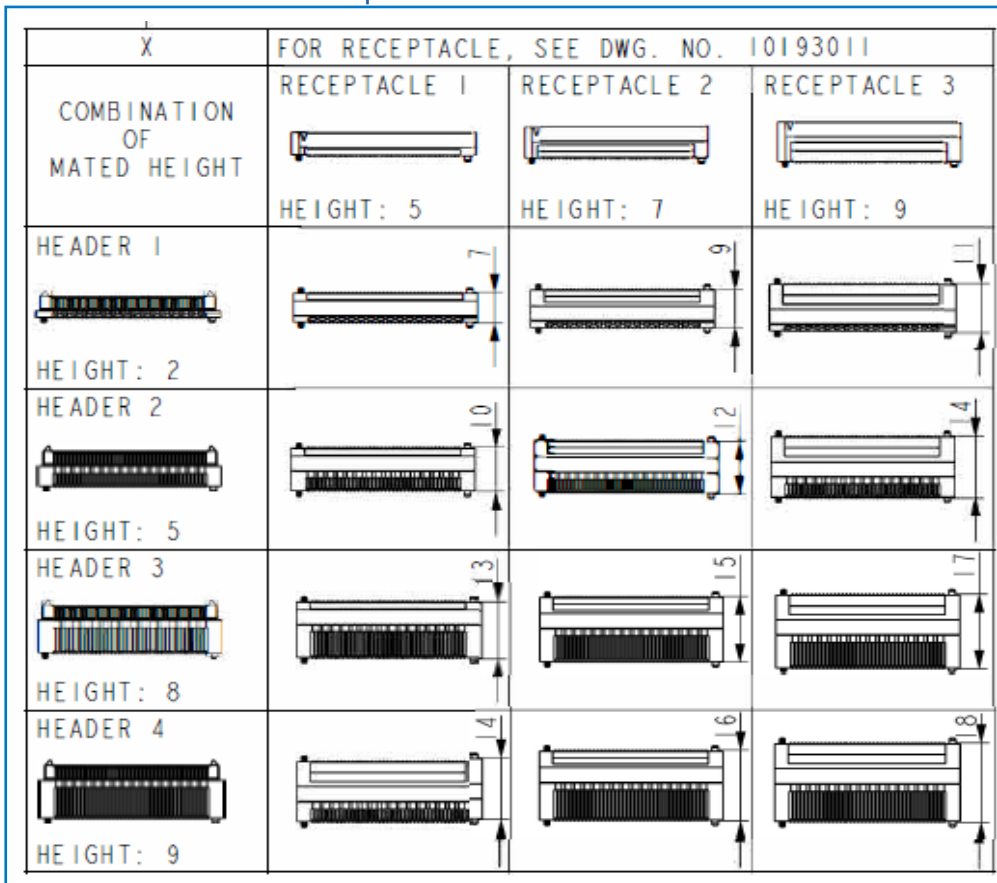
XX	Position
10	2X05
20	2X10
22	2X11
24	2X12
26	2X13
30	2X15
40	2X20
50	2X25
60	2X30
70	2X35
80	2X40
100	2X50
120	2X60
140	2X70
150	2X75
200	2X100

X	Date Code
/	Standard, not print D/C
P	Print Date Code

X	Packaging
0	T&P with kapton cap
1	T&P with plastic cap
2	T&P without cap

X	Feature
0	With PEG
2	Without PEG

X	Plating on contact area / on solder area
1	Gold 0.02 µm min. / Matte Tin
2	Gold 0.07 µm min. / Matte Tin
3	Gold 0.25 µm min. / Matte Tin
4	Gold 0.76 µm min. / Matte Tin



PART NUMBER SELECTOR

10193011 — XXX X X X X X LF

XX	Position	XX	Position
10	2X05	60	2X30
20	2X10	70	2X35
22	2X11	80	2X40
24	2X12	100	2X50
26	2X13	120	2X60
30	2X15	140	2X70
40	2X20	150	2X75
50	2X25	200	2X100

X	Date Code
/	Standard, not print D/C
P	Print Date Code

X	Packaging
0	T&P with kapton cap
1	T&P with plastic cap
2	T&P without cap

X	Feature
0	With PEG
2	Without PEG

X	Plating on contact area / on solder area
1	Gold 0.02 µm min. / Matte Tin
2	Gold 0.07 µm min. / Matte Tin
3	Gold 0.25 µm min. / Matte Tin
4	Gold 0.76 µm min. / Matte Tin

X	FOR RECEPTACLE, SEE DWG. NO. 10193011		
COMBINATION OF MATED HEIGHT	RECEPTACLE 1	RECEPTACLE 2	RECEPTACLE 3
HEIGHT: 5			
HEIGHT: 7			
HEIGHT: 9			
HEIGHT: 2			
HEIGHT: 5			
HEIGHT: 8			
HEIGHT: 9			

WHERE INNOVATION CONNECTS

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