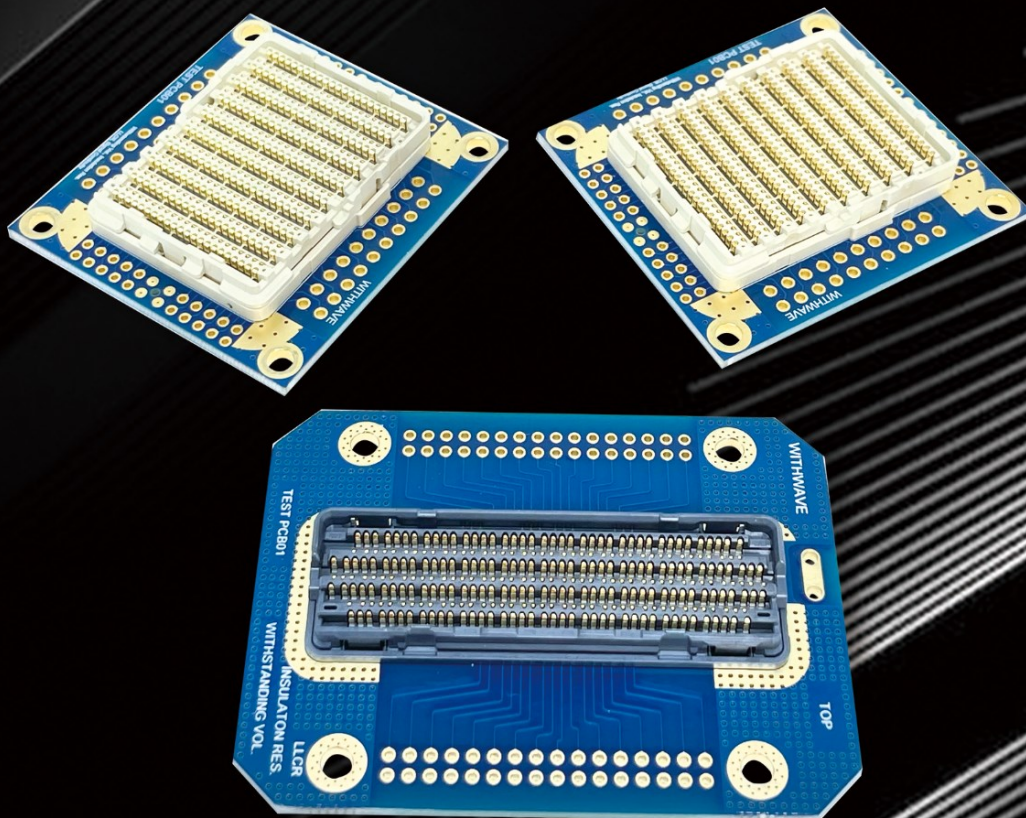


HSB Series

High Speed Board to Board Connector



Withwave's high-speed connectors are hermaphroditic and based on differential pair 100 Ohm (or 92 Ohm) nominal impedance, providing excellent high-bandwidth applications **56 Gbps NRZ, 112 Gbps PAM-4** with high pin count and high pitch depending on the product type.

These products are designed based on Surface Mount BGA Pin design technology.



HSB00
1.0 mm pitch
Differential 100ohm



HSB01, HSB02
0.9 mm pitch
Differential 92ohm



New Small Size

Benefits

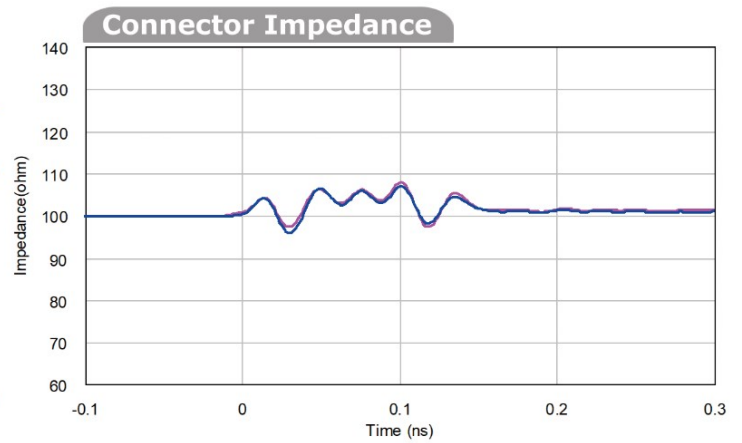
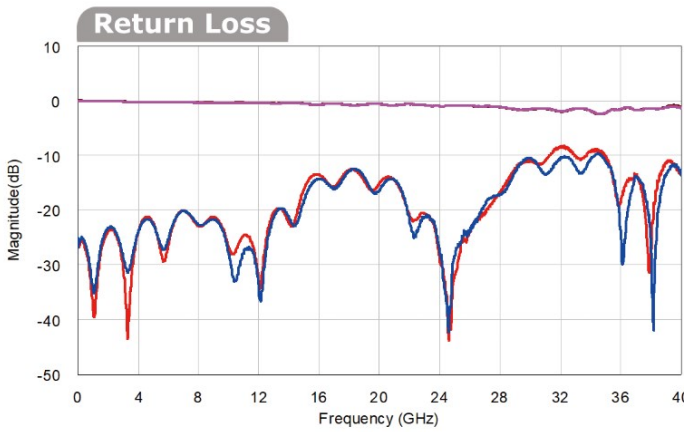
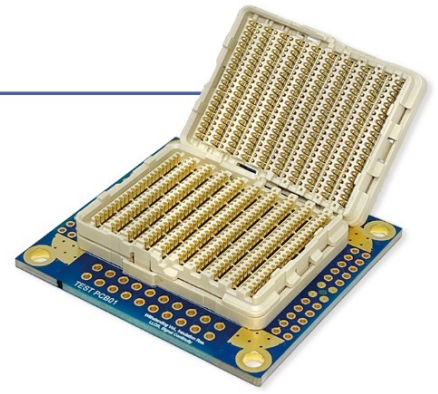
- Minimizes impedance discontinuities
- Excellent insertion and return loss performance
- Low crosstalk noise and resonances
- Biggest forced-offset (Rigid alignment) tolerance

Application

- Telecommunication and Data Embedded
- Data Servers and Storage
- Industrial Controls and Equipment
- Test & Measurement Electronics

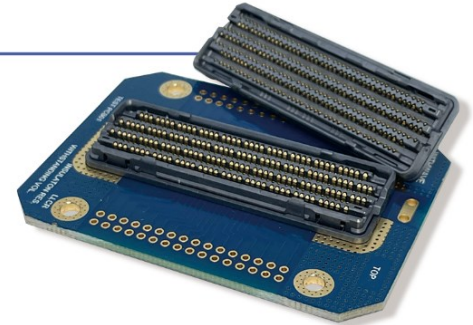
High speed connector 1.0 mm Pitch Systems

- Higher bandwidth applications 56 Gbps NRZ, 112 Gbps PAM-4
- Stack heights from 8.4mm
- Connector Size : 35.6mm x 26.6mm
- High pin counts : 418 total contacts (95 differential pairs)
- Pitch 1.0mm x 1.6mm
- Differential pair 100ohm nominal impedance
- Surface Mount BGA Pin Design

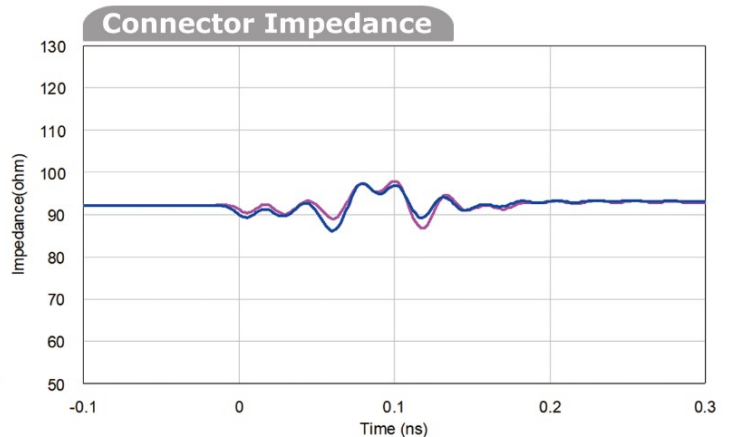
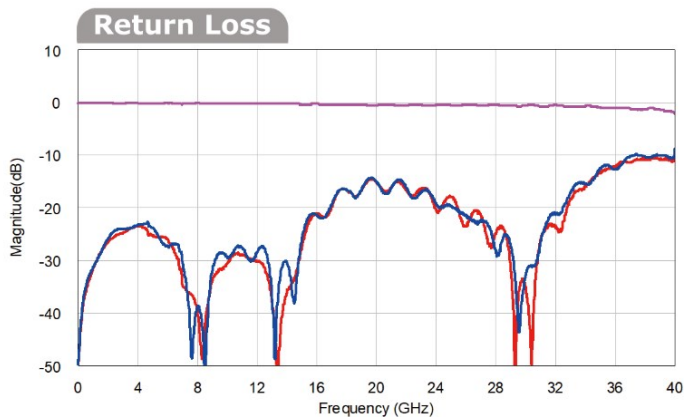


High speed connector 0.9 mm Pitch Systems

- Higher bandwidth applications 56 Gbps NRZ, 112 Gbps PAM-4
- Stack heights from 5.0mm
- Pitch 0.9mm x 1.5mm
- Differential pair 92ohm nominal impedance
- Surface Mount BGA Pin Design



Connector Size	High pin counts	Part No.
48.0 x 15.6	292 (66 Differential pairs)	HSB01_M292S01H050A
32.0 x 12.6	120 (25 Differential pairs)	HSB02_M120S01H050A



ELECTRICAL PERFORMANCE

Test items	International Standard	Test Condition
Contact Resistance (Low Level)	EIA-364-23	20 mV Max., 100 mA <10mΩ change from initial reading after environmental exposure>
Insulation Resistance	EIA-364-21	500Vrms (DC), 60Sec., 1000Mohm
Withstanding Voltage (Dielectric)	EIA-364-20	500Vrms (AC), 60Sec.
Temperature Rise	EIA-364-70 Test Condition 3	0.5A, Temperature rise : 30 °C

MECHANICAL PERFORMANCE

Test items	International Standard	Test Condition
Durability	EIA-364-09	200 Cycles
Mating Un-mating	EIA-364-13	Mating Force 0.45N max. per contact Un-mating Force 0.1N min. per contact

ENVIRONMENTAL

Test items	International Standard	Test Condition
Vibration	EIA-364-28 Test Condition III	15G, 15 – 2000 - 15Hz, 15minutes. (X, Y, Z) LLCR : <10mΩ change
Mechanical Shock	EIA-364-27 Test Condition A	490m/s ² (50G), Normal Duration of 11ms (X, Y, Z) LLCR : <10mΩ change
Thermal Shock	EIA-364-32 Method A Test condition I	-55°C ~ +85°C, 1/2 Hours, 25cycles LLCR : <10mΩ change
Temperature life	EIA-364-17	105 ± 2°C, 250Hours LLCR : <10mΩ change

MATERIAL

Housing	High-Temperature LCP, UL94V-01
Contacts	High performance Copper Alloy
Plating(s)	Contact Area Gold(Au) Nickel(Ni) Overall