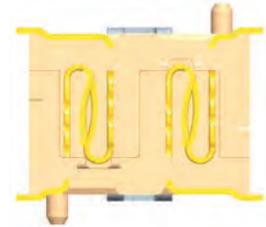


PRELIMINARY DATA SHEET

MEZZOSTAK™ 0.5MM HERMAPHRODITIC CONNECTORS

Robust, miniature mezzanine design reduces total costs



Unique dual-point contacts

DESCRIPTION

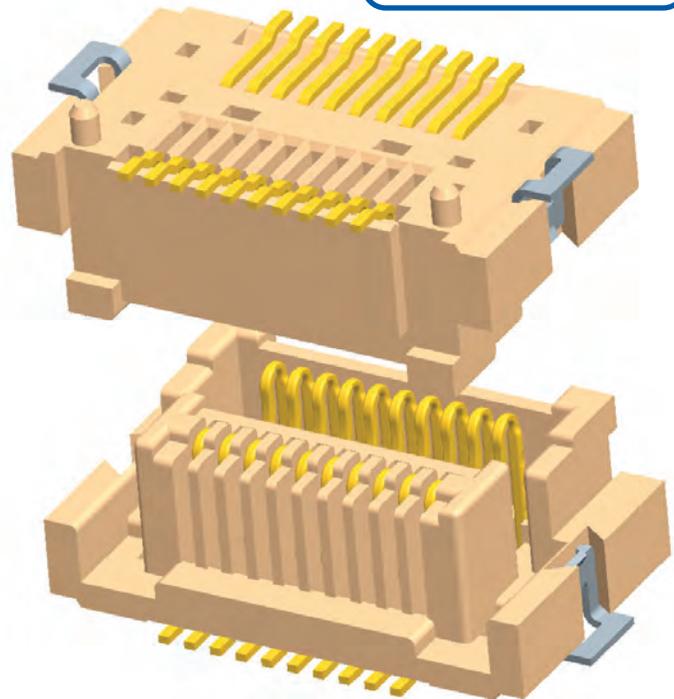
Robust, high density, 0.5mm pitch mezzanine connector suitable for a wide range of high reliability applications and demanding environments.

Innovative hermaphroditic design provides a precise mating interface. Reduced product mix simplifies customer connector qualification, documentation and maintenance.

Precisely oriented surface-mount solder leads and hold-downs enable highest quality assembly to printed circuit boards

Two versions offer a choice between supplemental PCB hold-downs or short overall length.

MezzoStak™ connectors are supported by MezzSelect™ services and web-based design tools.



FEATURES & BENEFITS

- ▶ Hermaphroditic design “mates to itself”
 - Consolidates connector selection and documentation
 - Polarization prevents mis-mating
- ▶ Pressure-managed, dual-point contact mating interface provides easier use, fault tolerance and added reliability.
- ▶ Long 1mm minimum wipe assures reliable contact and accommodates system mechanical tolerances.
- ▶ Tactile feedback signals effective mating
- ▶ Extreme operating temperature range assures reliable performance between -40 and 125 degrees C.
- ▶ Precise 0.08mm maximum SMT lead co-planarity eases attachment of connector leads to PCBs
- ▶ Optional hold-downs increase strength of PCB solder attachment
- ▶ Footprint compatible with major competitors
- ▶ 0.5mm high density contact pitch in two rows
 - 7 Stack heights: 4mm to 7mm (0.5mm increments)
 - 7 Sizes: 10 to 70 positions (10 position increments)

TARGET MARKETS / APPLICATIONS

- ▶ Portable and mobile electronic equipment
- ▶ Medical and Instrumentation
- ▶ Point-of-Sale/Retail equipment
- ▶ Hand-held terminals
- ▶ Automatic Identification and Data Capture
- ▶ Sensors
- ▶ Motor-vehicle
- ▶ Military
- ▶ Communications and Networking
- ▶ Data and mass-storage

TECHNICAL INFORMATION

MATERIALS

- Housing: LCP, 94V-0, Color: Natural
- Contacts: Copper Alloy
- Plating: Performance-based with noble metal
- All Materials lead-free RoHS compatible per GS-22-008

ELECTRICAL PERFORMANCE

- Current rating per contact: 0.35 amps (de-rated)
- DWV: 500 volts
- Voltage Rating: 50 volts
- Contact resistance: 30 milliohm maximum
- Signal Integrity
 - (Differential pairs; 7mm stack height; Connectors with SMT pads and anti-pads/voids underneath)
 - 10+ Gbs capable
 - Impedance: 100 Ohms +/- 10% @ 50 ps edge
 - Insertion Loss: < 1 dB to 5+ GHz
 - NEXT and FEXT: <= 1.0% @ 50 ps edge (10-90%)

ENVIRONMENTAL PERFORMANCE

- Operating Temperature: -40 to +125 deg.C
- Processing Temperature: 260 deg.C peak for 30 seconds

MECHANICAL PERFORMANCE

- Durability: 30 mating cycles in environment
- Mating Force: 42g max per contact pair
- Un-mating force: 25g min per contact pair
- Wipe length: 1.0 mm minimum
- SMT lead co-planarity: 0.08mm maximum

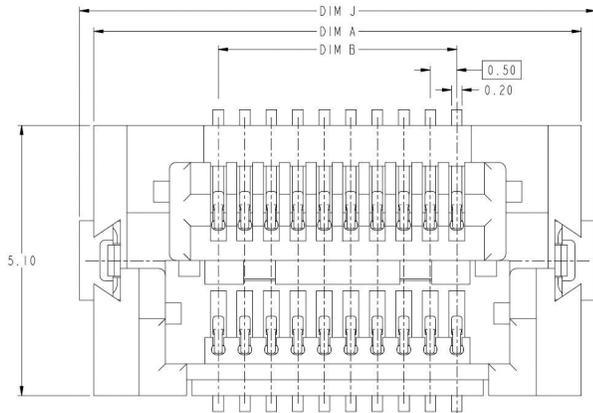
SPECIFICATIONS

- Product Specification: GS-12-577; Packaging Specification: GS-14-1320
- Drawing Numbers: 10090503 (Standard); 10090504 (Short Length)
- UL and CSA pending

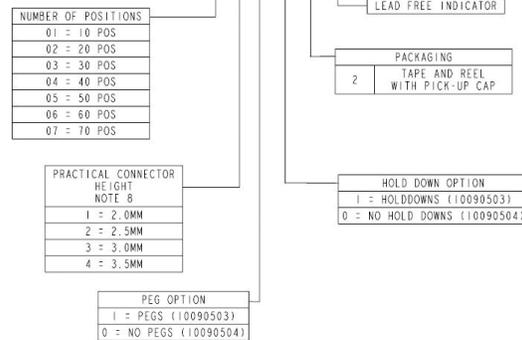
PACKAGING

- Tape and reel, pickup cap pre-installed

10090503 Standard, with alignment pegs and metal hold-downs



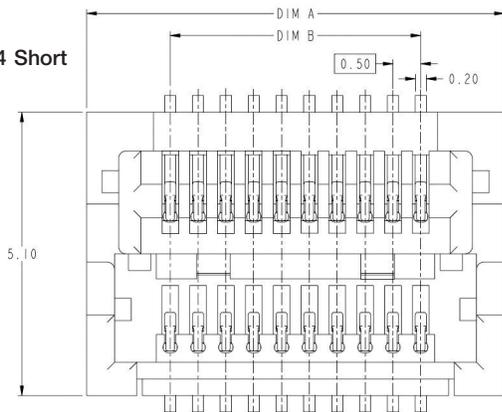
BASE PART NUMBER-XX X X X 2 LF



Add practical connector heights of two mated connectors to determine final PCB stack height

PCB footprint dimensions available on customer drawing at: www.fci.com/mezzostak

10090504 Short



MM/IN	10090503 STANDARD LENGTH			10090504 SHORT LENGTH	
	NUMBER OF POSITIONS	DIM J	DIM A	DIM B	DIM A
10	7.24/.285	6.70/.274	2.00/.078	5.00/.197	2.00/.078
20	9.74/.383	9.20/.362	4.50/.177	7.50/.295	4.50/.177
30	12.24/.482	11.70/.461	7.00/.276	10.00/.394	7.00/.276
40	14.74/.580	14.20/.559	9.50/.374	12.50/.492	9.50/.374
50	17.24/.679	16.70/.657	12.00/.472	15.00/.591	12.00/.472
60	19.74/.777	19.20/.756	14.50/.571	17.50/.689	14.50/.571
70	22.24/.876	21.70/.854	17.00/.669	20.00/.787	17.00/.669

MezzoStak™ is a trademark under registration of FCI