

# MEZZOSTAK™ 0.5MM MEZZANINE CONNECTORS

Hermaphroditic, “mates-to-itself” design improves business

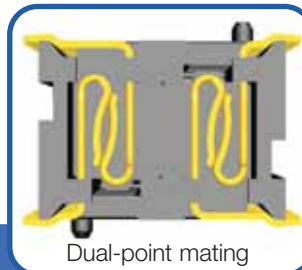
## DESCRIPTION

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

Innovative hermaphroditic design provides a precise mating interface with extra housing guidance.

Reduced product mix simplifies customer connector qualification, documentation and maintenance.

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



Dual-point mating



Guidance Scoops



## FEATURES & BENEFITS

- Hermaphroditic design “mates to itself”
  - Consolidates connector selection and documentation
  - Reduces Component Engineering costs
- Easy, Reliable Mating
  - Guidance “scoops” permit easy mating when mis-aligned
  - Polarization prevents mis-mating
  - Dual-point, long wipe contacts
- High un-mating force insures connection security
- Extreme operating temperature range assures reliable performance between -40°C and 125°C.
- Precise 0.08mm maximum SMT lead co-planarity eases attachment of connector leads to PCBs
- Footprint compatible with major competitors.
- High Speeds, including PCIe®G2, supported by signal integrity reports and S-parameter models
- 0.5mm high density contact pitch in two rows
  - 7 Stack heights: 4mm to 7mm (0.5mm increments)
  - 6 Sizes: 20 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
- Military
- Communications and Networking
- Data and mass-storage
- Motor Vehicle
- Metering and Energy

™

**MEZZ** Select



**TECHNICAL INFORMATION**

**MATERIALS**

- Housing: LCP, 94V-0, Color: Black
- Contacts: Copper alloy
- Plating: Performance-based with gold
- All Materials lead-free RoHS compatible per GS-22-008

**ELECTRICAL PERFORMANCE**

- Current rating per contact: 0.50 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)
  - 5+ 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°C +125°C
- Processing Temperature: 260°C peak for 30 seconds

**MECHANICAL PERFORMANCE**

- Durability: 50 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

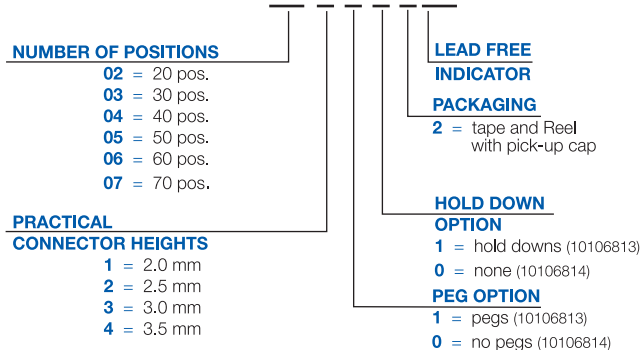
**SPECIFICATIONS**

- Product Specification: GS-12-577  
Packaging Specification: GS-14-1320
- Drawing Numbers:  
10106813 (Standard); 10106814 (Short Length)
- UL and CSA

**PACKAGING**

- Tape and reel, pickup cap pre-installed

**BASE PART NUMBER - XX X X X 2 LF**



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

For footprint dimensions and status of product release see customer drawings: [www.fciconnect.com/mezzostak](http://www.fciconnect.com/mezzostak)

mm/inch	10106813 standard length			10106814 short length	
	dim. J	dim. A	dim. B	dim. A	dim. B
number of positions					
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



## PART NUMBERS

Part References	Number of Positions	Product Height	With Hold Down
10106813-021112LF	20	2.0mm	Y
10106813-023112LF	20	3.0mm	Y
10106813-024112LF	20	3.5mm	Y
10106813-031112LF	30	2.0mm	Y
10106813-033112LF	30	3.0mm	Y
10106813-034112LF	30	3.5mm	Y
10106813-041112LF	40	2.0mm	Y
10106813-043112LF	40	3.0mm	Y
10106813-044112LF	40	3.5mm	Y
10106813-051112LF	50	2.0mm	Y
10106813-053112LF	50	3.0mm	Y
10106813-054112LF	50	3.5mm	Y
10106813-061112LF	60	2.0mm	Y
10106813-063112LF	60	3.0mm	Y
10106813-064112LF	60	3.5mm	Y
10106813-071112LF	70	2.0mm	Y
10106813-073112LF	70	3.0mm	Y
10106813-074112LF	70	3.5mm	Y
10106813-174112LF	70	3.5mm	Y
10106814-021002LF	20	2.0mm	N
10106814-023002LF	20	3.0mm	N
10106814-024002LF	20	3.5mm	N
10106814-031002LF	30	2.0mm	N
10106814-033002LF	30	3.0mm	N
10106814-034002LF	30	3.5mm	N
10106814-041002LF	40	2.0mm	N
10106814-043002LF	40	3.0mm	N
10106814-044002LF	40	3.5mm	N
10106814-051002LF	50	2.0mm	N
10106814-053002LF	50	3.0mm	N
10106814-054002LF	50	3.5mm	N
10106814-061002LF	60	2.0mm	N
10106814-063002LF	60	3.0mm	N
10106814-064002LF	60	3.5mm	N
10106814-071002LF	70	2.0mm	N
10106814-073002LF	70	3.0mm	N
10106814-074002LF	70	3.5mm	N
10106814-083002LF	80	3.0mm	N
10106814-083202LF	80	3.0mm	N
10106814-093002LF	90	3.0mm	N
10106814-093202LF	90	3.0mm	N

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Please note that the information in this datasheet is subject to change without notice.  
 Visit [www.fciconnect.com/mezzostak](http://www.fciconnect.com/mezzostak) for additional technical information.

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