



**THE DATASHEET OF  
10106813-071112LF**



# MEZZOSTAK<sup>®</sup> 0.5MM MEZZANINE CONNECTORS

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

## OVERVIEW

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 for short overall length.



## 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
- High Speeds, including PCIe<sup>®</sup>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 90 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



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**MEZZANINE CONNECTORS**

## TECHNICAL INFORMATION

### MATERIALS

- Housing: LCP UL94V-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: 0.50A (de-rated)
- DWV: 500V
- Voltage Rating: 50V
- Contact resistance: 30mΩ max.
- Signal Integrity  
(Differential pairs; 7mm stack height; Connectors with SMT pads and anti-pads/voids underneath)
  - 5+ Gbs capable
  - Impedance: 100Ω +/- 10 @ 50 ps edge
  - Insertion loss: < 1dB to 5+ GHz
  - NEXT and FEXT: < /= 1.0 @ 50 ps edge (10-90%)

### ENVIRONMENTAL

- 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: 1.0mm min.
- SMT lead co-planarity: 0.08mm max.

### SPECIFICATIONS

- Product specification: GS-12-577  
Packaging specification: GS-14-1320
- Drawing numbers:  
10106813 (Standard); 10106814 (Short length)
- UL and CSA

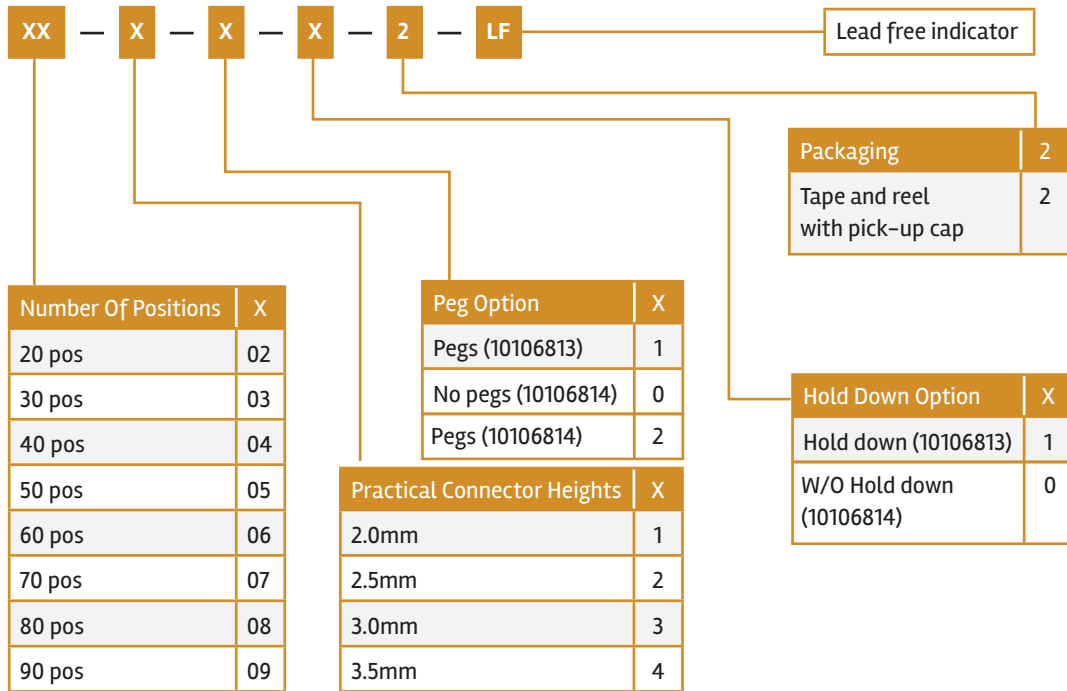
### PACKAGING

- Tape and reel, pickup cap pre-installed

#### Disclaimer

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**BASE PART NUMBER**



mm/inch	10106813 Standard Length			10106814 Short Length	
	Number Of Positions	Dim. J	Dim. A	Dim. B	Dim. A
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
80	N.A	N.A	N.A	22.50 / .885	19.50 / .767
90	N.A	N.A	N.A	25.00 / .984	22.00 / .866

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## PART NUMBERS

Number Of Positions	Product Height	With Hold Down	With Pegs	Part References
20	2.0mm	Y	Y	10106813-021112LF
20	3.0mm	Y	Y	10106813-023112LF
20	3.5mm	Y	Y	10106813-024112LF
30	2.0mm	Y	Y	10106813-031112LF
30	3.0mm	Y	Y	10106813-033112LF
30	3.5mm	Y	Y	10106813-034112LF
40	2.0mm	Y	Y	10106813-041112LF
40	3.0mm	Y	Y	10106813-043112LF
40	3.5mm	Y	Y	10106813-044112LF
50	2.0mm	Y	Y	10106813-051112LF
50	3.0mm	Y	Y	10106813-053112LF
50	3.5mm	Y	Y	10106813-054112LF
60	2.0mm	Y	Y	10106813-061112LF
60	3.0mm	Y	Y	10106813-063112LF
60	3.5mm	Y	Y	10106813-064112LF
70	2.0mm	Y	Y	10106813-071112LF
70	3.0mm	Y	Y	10106813-073112LF
70	3.5mm	Y	Y	10106813-074112LF
70	2.0mm	Y	Y	10106813-171112LF
70	3.0mm	Y	Y	10106813-173112LF
70	3.5mm	Y	Y	10106813-174112LF

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**PART NUMBERS**

Number Of Positions	Product Height	With Hold Down	With Pegs	Part References
20	2.0mm	N	N	10106814-021002LF
20	3.0mm	N	N	10106814-023002LF
20	3.5mm	N	N	10106814-024002LF
30	2.0mm	N	N	10106814-031002LF
30	3.0mm	N	N	10106814-033002LF
30	3.5mm	N	N	10106814-034002LF
40	2.0mm	N	N	10106814-041002LF
40	3.0mm	N	N	10106814-043002LF
40	3.5mm	N	N	10106814-044002LF
50	2.0mm	N	N	10106814-051002LF
50	3.0mm	N	N	10106814-053002LF
50	3.5mm	N	N	10106814-054002LF
60	2.0mm	N	N	10106814-061002LF
60	3.0mm	N	N	10106814-063002LF
60	3.5mm	N	N	10106814-064002LF
70	2.0mm	N	N	10106814-071002LF
70	3.0mm	N	N	10106814-073002LF
70	3.5mm	N	N	10106814-074002LF
80	3.0mm	N	N	10106814-083002LF
80	3.0mm	N	Y	10106814-083202LF
90	3.0mm	N	N	10106814-093002LF
90	3.0mm	N	Y	10106814-093202LF



For more information,  
please contact: [Communications@fci.com](mailto:Communications@fci.com)  
or visit us at [www.fci.com](http://www.fci.com)

**Disclaimer**

Please note that the above information is subject to change without notice.

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