

MezzoStak® 0.5mm Mezzanine Connectors

INNOVATIVE DESIGN TO MEET DEMANDING SITUATIONS

Amphenol’s 0.5mm fine pitch mezzanine connector is suitable for a wide range of high reliability applications and demanding environments while providing a precise mating interface with extra housing guidance.

- Reduced product mix simplifies customer connector qualification, documentation and maintenance
- Two versions – supplemental PCB hold-downs or pegs for short overall length
- Hermaphroditic design, able to “mates to itself”



TARGET MARKETS



FEATURES

- Consolidates connector selection and documentation
- Guidance “scoops” feature
- Polarization feature
- PCIe® G2, supported by signal integrity reports and S-parameter models
- Compliant with Micro SATA requirements in Serial ATA
- 0.5mm high density contact pitch in two rows

BENEFITS

- Reduces engineering costs
- Easy, and reliable mating capabilities even when mis-aligned
- Prevents mis-mating
- Ensures high speed
- Meets international standards and quality
- 7 Stack heights: 4mm to 7mm (0.5mm increments)
- 6 Sizes: 20 to 90 positions (10 position increments)

TECHNICAL INFORMATION

MATERIAL

- 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+ Gb/s capable
 - Impedance: 100Ω ± 10 @ 50ps edge
 - Insertion Loss: < 1dB to 5+GHz
 - NEXT and FEXT: < / = 1.0 @ 50ps edge (10-90%)

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.

SPECIFICATION

- 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

ENVIRONMENTAL

- Operating Temperature Range: -40°C – +125°C
- Processing Temperature: 260°C peak for 30 seconds

TARGET MARKETS/APPLICATIONS



Motor Vehicle



Networking



Portable and Mobile Electronic Equipment

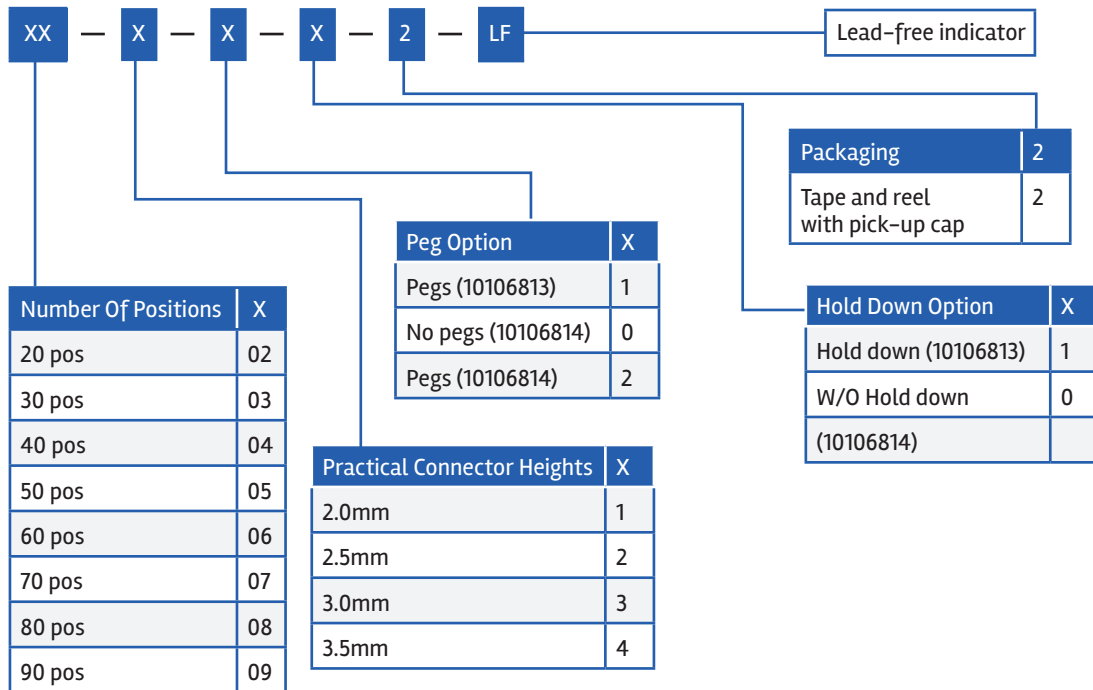


Automatic Identification & Data Capture
Metering and Energy
POS & Handheld Terminal
Sensor
Military



Medical

BASE PART NUMBER



| mm/inch | 10106813 Standard Length | | | 10106814 Short Length | |
|---------|-----------------------------|--------------|--------------|--------------------------|--------------|
| | Dim. J | Dim. A | Dim. B | Dim. A | Dim. B |
| 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 |

PART NUMBERS

| Number Of Positions | Product Height | With Pegs | With Hold Down | Part Numbers |
|---------------------|----------------|-----------|----------------|-------------------|
| 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 | 2.0mm | 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 |
| 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 |

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