

Datasheet for 76650-0146

General Information

Kit Part Number:	76650-0146
Connector Type:	Board-to-Board, Wire-to-Board, Wire-to-Wire
Solution:	Blind-Mate Connectors
Molex Family:	EBBI™ 50D, Micro-Fit 3.0™, Mini-Fit BMI™, Multi BMI, SPOX BMI™, Micro-Fit 3.0 BMI™
Certificates:	N/A
Country of Origin:	Kit assembled in U.S.A

Specifications

Circuit Size:	4, 50, 6, 80
Current Rating:	1, 3, 5, 8-12A
Mounting Style:	Non-Mounted, Panel Mount, PCB
Orientation:	Assorted Vertical, Plugs, Receptacles, Right Angle Headers
Pitch:	1.27mm (.050)" - 4.2mm (.165)"
Tool Included:	No
Voltage Rating:	250V, 30V, 600V
Wire Gauge (AWG):	24-18, 24-20, 24-22, 28-22

Product Highlights

SPOX BMI™ connectors offer self-aligning features in one of the smallest blind-mate packages available. The unique low-profile design of the SPOX™ Blind-Mate Interface (BMI) allows for a mated stack distance of only 11.00mm (0.430"). Utilizing proven SPOX™ style contacts for high reliability, the products are suitable for situations requiring highly reliable tin interfaces. The Molex EBBI™ 50D series meets the market demand for low-cost, unshielded, high density, leaf-style connectors. Leaf-style terminals are arranged in two rows on 1.27mm (.050") spacing within a polarized "D"- shaped housing for rugged mechanical protection. Housings are made of high-temperature, UL 94V-0 thermoplastic. Terminals are plated with 30 micro-inches min. gold in the mating area for long term reliability and durability. The Mini-Fit BMI™ is designed for high current/ high density applications requiring the blind mating of modules, subassemblies or printed circuit boards. The Mini-Fit BMI™ allows a misalignment of up to 2.54 (.100"). It is appropriate for both power and signal applications as it can carry currents of up to 9.0A per circuit and has a 10mW contact resistance. Micro-Fit 3.0 BMI™ 3.00mm (.118") pitch connectors are the perfect choice when you need compact connectors that carry up to 5 amperes of current.

Features and Benefits

- First-mate/last-break circuits provide sequential engagement of contacts for design flexibility
- Robust alignment features virtually eliminate contact damage
- Very low profile
- Panel mounting feature permits up to 3.00mm (.120") misalignment in horizontal and vertical directions permitting blind mating of products as connectors can self align
- Anti-fishhooking design
- Polarized guide posts on ends provide generous 2.0mm (0.078") radial lead-in for blind mating
- Chamfered lead-in on tails for PCB mounting
- Press-fit retention pegs for mechanical hold down before and after processing
- Surface Mount Compatible
- Polarized D-shape leaf contact for parallel board packaging
- Mates to standard 1.57mm (.062") PCB card edge

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- Positive housing locks to mate with Mini- Fit Jr.™
- Fully isolated terminals to protect contacts
- Uses low engagement force terminals
- Receptacle floats in panel cutout up to 1.27mm (.050") in any direction
- Innovative panel mounting design holds connectors firmly in place
- Use standard Micro-Fit 3.0™ terminals to reduce inventory
- Fully polarized to prevent mismating
- 4 points of contact for optimum reliability
- Locking tang secures terminal in housing
- Fully isolated contacts prevent terminal damage
- Box-type spring contact for high normal force

Applications

- Telecommunications
- Hubs
- Servers
- Routers
- Other Markets
- Fan-tray assemblies
- Low-current blind-mating applications
- Lower-current power supply applications
- Consumer (General)
- Vending and Gaming
- Business Machines
- High-End Computer
- Production Equipment
- Security and Alarms
- Vending and Gaming
- White Goods
- High End Computer
- Business Machines
- Storage
- Energy and Power
- Environmental Equipment and Controls
- Production Equipment
- Broadcast Equipment
- Telecom Infrastructure
- Personal Computers
- Computers and Workstations
- Handheld Devices
- Office Equipment
- Fan Tray Assemblies
- Power Supplies
- Gaming and Vending

Bill of Materials

Molex Part No.	Description	Quantity
45627-0002	SPOX™ Male Terminal, 24-22 AWG	20
08-70-1040	Mini-SPOX™ Female Terminal, 28-22 AWG	30
45626-0001	2.50mm (.098") Pitch SPOX BMI™ Plug, Dual Row, Panel Mount, 6 Circuits	3
45579-0001	2.50mm (.098") Pitch SPOX BMI™ Receptacle, Panel Mount, 6 Circuits	5
71660-7050	1.27mm (.050") Pitch EBBI™ 50D Receptacle, Vertical, Blind-Mate, 50 Circuits	1
71661-7080	1.27mm (.050") Pitch EBBI™ 50D Blind Mate Vertical Plug, 80 Circuits	1
71660-7080	1.27mm (.050") Pitch EBBI™ 50D Blind Mate Vertical Receptacle, 80 Circuits	1
71661-7050	1.27mm (.050") Pitch EBBI™ 50D Plug, Vertical, Blind-Mate, 50 Circuits	1
15-06-0040	4.20mm (.165") Pitch Mini-Fit BMI™ Receptacle Panel Mount, 4 Circuits	2
15-06-0060	4.20mm (.165") Pitch Mini-Fit BMI™ Receptacle Panel Mount, 6 Circuits	2
15-06-0045	4.20mm (.165") Pitch Mini-Fit BMI™ Plug Panel Mount, 4 Circuits	2
15-06-0065	4.20mm (.165") Pitch Mini-Fit BMI™ Plug Panel Mount, 6 Circuits	2
15-24-6040	4.20mm (.165") Pitch Mini-Fit BMI™ Header, Right Angle, 4 Circuits, Tin Plating	2
15-24-6060	4.20mm (.165") Pitch Mini-Fit BMI™ Header, Right Angle, 6 Circuits, Tin Plating	2
15-24-6046	4.20mm (.165") Pitch Mini-Fit BMI™ Header, Vertical, 4 Circuits, Tin Plating	2
15-24-6066	4.20mm (.165") Pitch Mini-Fit BMI™ Header, Vertical, 6 Circuits, Tin Plating	2
15-24-7040	4.20mm (.165") Pitch Mini-Fit BMI™ Receptacle Header, Vertical, 4 Circuits	1
15-24-7060	4.20mm (.165") Pitch Mini-Fit BMI™ Receptacle Header, Vertical, 6 Circuits	1
39-00-0039	Crimp Type Female Socket Terminal, 24-18 AWG	25
39-00-0041	1.57mm (.062") Diameter Crimp Type Male Pin Terminal, 24-18 AWG	25
43031-0007	Micro-Fit 3.0™ Crimp Terminal, Male, 24-20 AWG	10
44133-0400	Micro-Fit 3.0 BMI™ Receptacle, Panel Mount, 4 Circuits	1
44133-0600	Micro-Fit 3.0 BMI™ Receptacle, Panel Mount, 6 Circuits	1
44300-0400	Micro-Fit 3.0 BMI™ Plug, Panel Mount, 4 Circuits	1
44300-0600	Micro-Fit 3.0 BMI™ Plug, Panel Mount, 6 Circuits	1
44428-0401	Micro-Fit 3.0 BMI™ Header, Right Angle, 4 Circuits	1
44428-0601	Micro-Fit 3.0 BMI™ Header, Right Angle, 6 Circuits	1
44432-0401	3.00mm (.118") Pitch Micro-Fit 3.0 BMI™ Header, Vertical, 4 Circuits	1
44432-0601	3.00mm (.118") Pitch Micro-Fit 3.0 BMI™ Header, Vertical, 6 Circuits	1
44764-0401	Micro-Fit 3.0 BMI™ Receptacle Header, Right Angle, 4 Circuits	1
44764-0601	Micro-Fit 3.0 BMI™ Receptacle Header, Right Angle, 6 Circuits	1
44769-0401	Micro-Fit 3.0 BMI™ Receptacle Header, Vertical, 4 Circuits	1
44769-0601	Micro-Fit 3.0 BMI™ Receptacle Header, Vertical, 6 Circuits	1

Recommended Molex Tool

Molex Part No.	Description
63811-5200 (not included in kit)	Click for more info
63813-1400 (not included in kit)	Click for more info