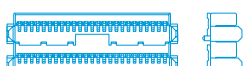


MicroStac

0.8 mm Connectors



Full-Scale MicroStac 50 Pins

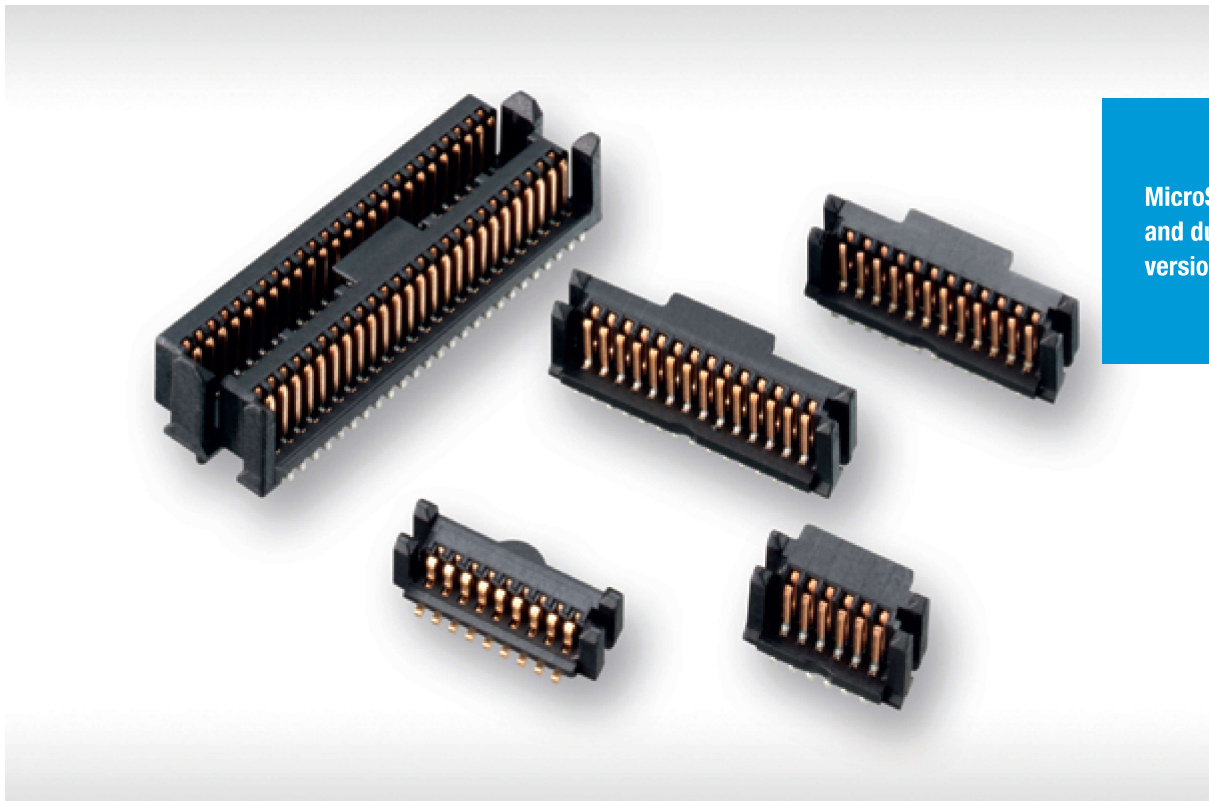
ED. 12 | 11.2016

Catalog E 074521

MicroStac - 0.8 mm Connectors

MEZZANIN CONNECTOR SYSTEM

GENERAL



MicroStac single- and dual-row versions

MicroStac connector series features hermaphroditic mating design within a pitch of 0.8 mm. Connectors and its mating connectors are identical. This reduces the bill of material and also storage and handling costs. Two contact points between mated contacts and the wipe length of up to 1.5 mm ensure a high reliability.

The design calls for fast, fully automatic SMT assembly. MicroStac connectors are available for Board-to-Board heights of 3 mm and 5 mm. Despite its small size, MicroStac contacts offer large radiating surfaces to provide a high current rating.

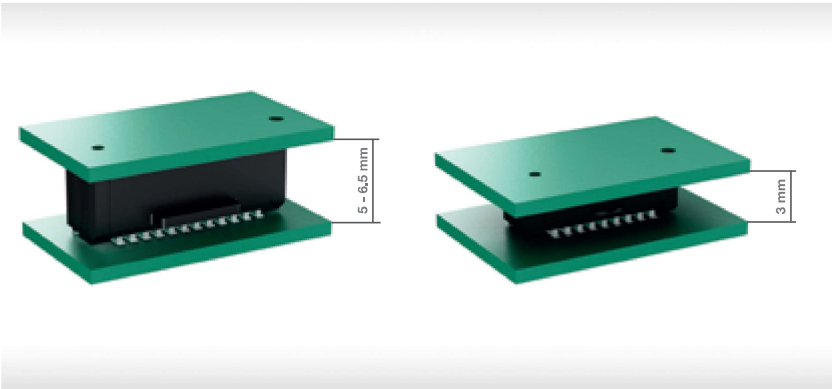
MicroStac - 0.8 mm Connectors

CONCEPT —

■

FEATURES

Pitch	0.8 mm
No. of Pins	6, 9, 10, 12, 14, 50, 54
Current rating per contact	up to 2.7 A
Termination technology	SMT
Applications	Stacked boards (Mezzanine)
Board-to-Board height	3 mm, 5 mm
Weight	0.18 g (6-pin version)
Connectors	Single row connectors Dual row connectors



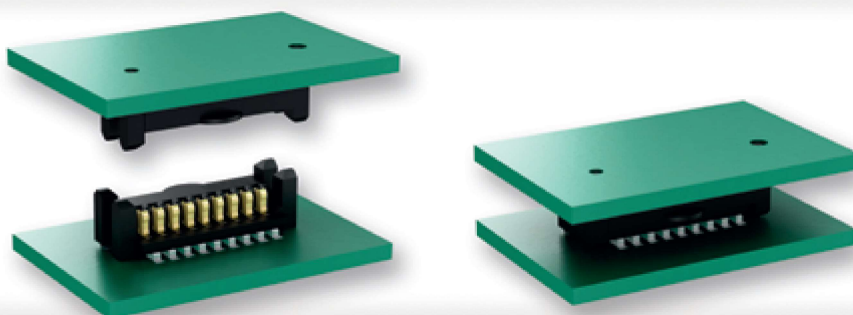
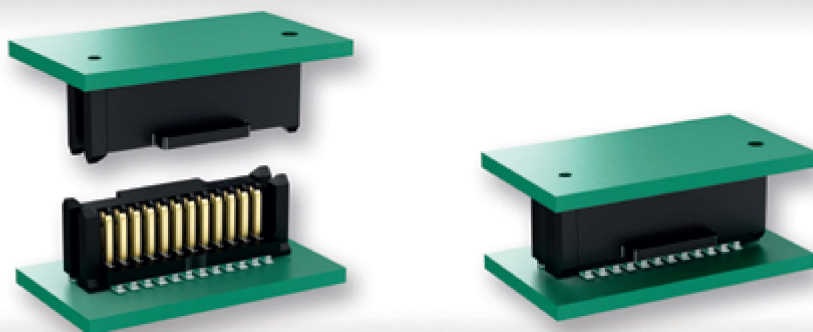
Wipe length
5 mm board height: 1.5 mm
3 mm board height: 0 mm

MicroStac - 0.8 mm Connectors

CONCEPT

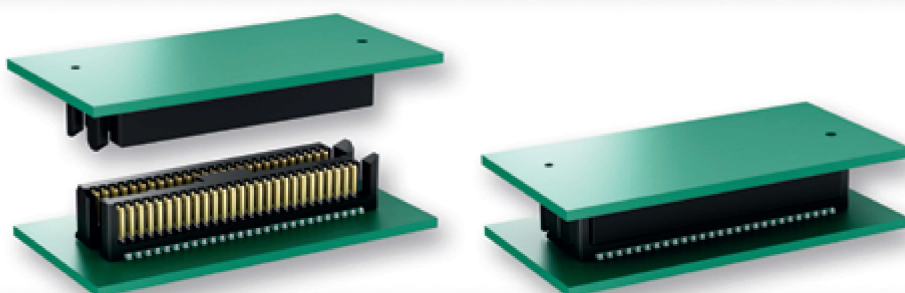
CAPABILITIES

Stacked boards
(Mezzanine)
single row version
(5 mm board height)



Stacked boards
(Mezzanine)
single row version
(3 mm board height)

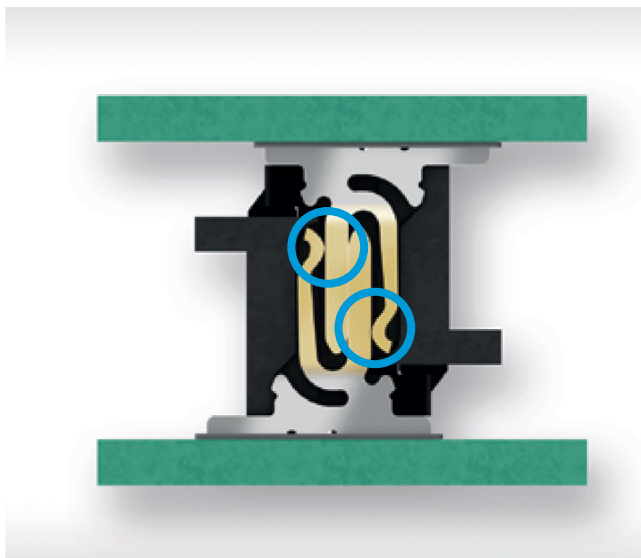
Stacked boards
(Mezzanine)
dual row version
(5 mm board height)



MicroStac - 0.8 mm Connectors

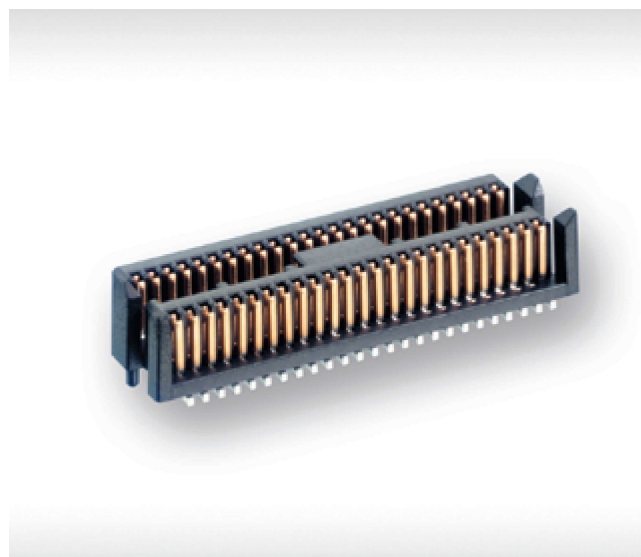
ADVANTAGES

CONTACT DESIGN



- no difference between male and female connector
- contacts are based on a patented contact design; Patent-No.: DE 19 809 881; US 6,379,170
- two contact points for compensation of tolerances

EASY ASSEMBLY

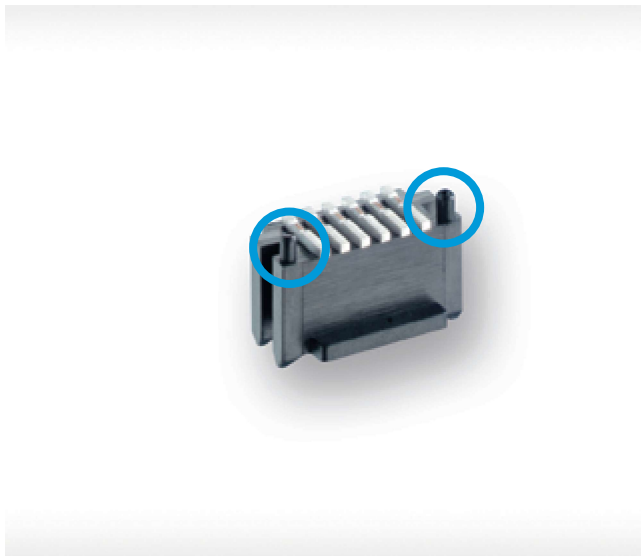


- integrated pick and place surface for automatic assembly
- pick and place surface will hinge away when mated the first time (2-row versions)

MicroStac - 0.8 mm Connectors

ADVANTAGES

LOCATING PEGS



- geometrically heterogeneous locating pegs for precise positioning on the circuit board
- enables best possible compensation of PCB holes for both positive and negative tolerances

PROCESSING

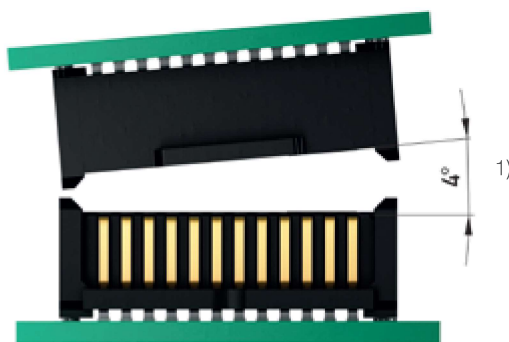


- tape and reel packaging for transport safe packaging and fully automatic assembly
- fully automatic assembly and reflow soldering for efficient processing on modern assembly lines

MicroStac - 0.8 mm Connectors

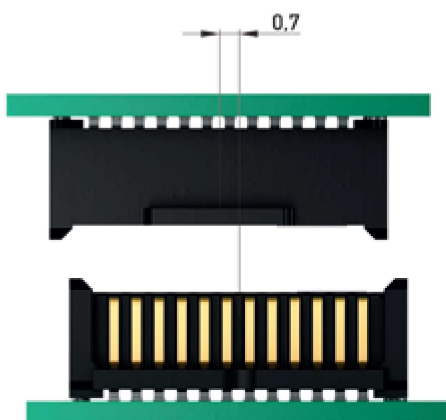
MATING CONDITIONS FOR SINGLE ROW VERSIONS

ALLOWED INCLINATION FOR A SECURE SELF-CENTERING



1) depends on No. of Pins and misalignment tolerance

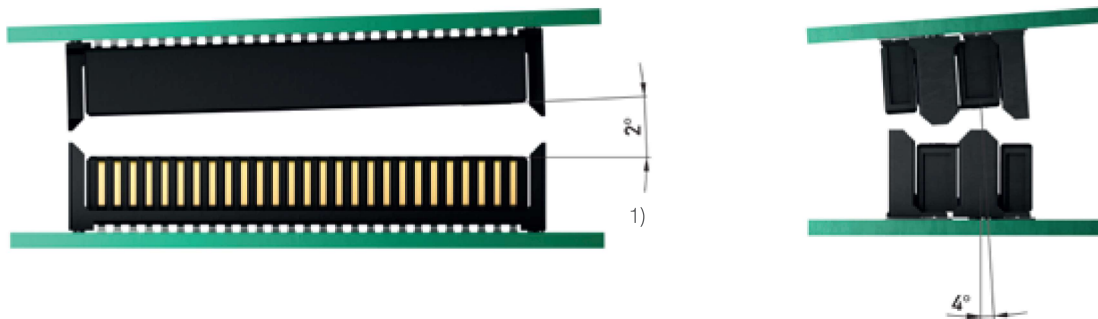
ALLOWED MISALIGNMENT TOLERANCES FOR A SECURE SELF-CENTERING



MicroStac - 0.8 mm Connectors

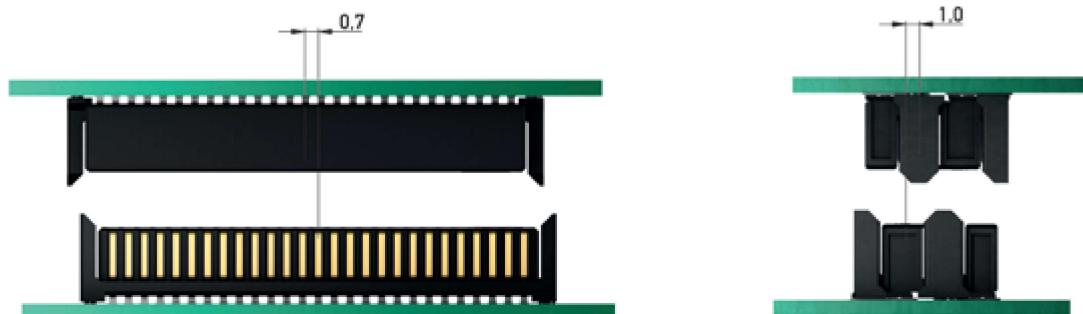
MATING CONDITIONS FOR DUAL ROW VERSIONS

ALLOWED INCLINATION FOR A SECURE SELF-CENTERING



1) depends on No. of Pins and misalignment tolerance

ALLOWED MISALIGNMENT TOLERANCES FOR A SECURE SELF-CENTERING



MicroStac - 0.8 mm Connectors

CHARACTERISTICS —

TECHNICAL DATA

Description	Standard	Single- and Dual-Row Connectors
Climate category	DIN EN 60068-1 test b	-55 / 125 / 21
Temperature range		-55 / 125 °C
Current rating per contact	IEC60512 test 5b	50-pin version at 20 °C ambient temperature: 1.6 A
Air- and creepage distance		contact - contact min. 0.4 mm
Operating voltage	IEC 60664	The permissible operating voltages depend on the customer application and on the applicable or specified safety requirements. Insulation coordination according to IEC 60664-1 has to be regarded for the complete electrical device. Therefore, the maximum creepage and clearance distances of the mated connectors are specified for consideration as a part of the whole current path. In practice, reductions in creepage or clearance distances may occur due to the conductive pattern of the printed board or the wiring used, and have to be taken into account separately. As a result the creepage and clearance distances for the application may be reduced compared to those of the connector.
Dielectric strength	IEC 60512 test 4a	contact – contact 500 V _{rms}
Contact resistance	IEC 60512 test 2a	< 10 mΩ
Insulation resistance	IEC 60512 test 3a	> 10 ⁴ MΩ
Vibration, sine	IEC 60512 test 6d	10 – 2000 Hz 20 g
Contact disturbance (while vibration test)	IEC 60512 test 2e	< 1 μs
Shock halfsine	IEC 60512 test 6c	50 g 11 ms
Contact disturbance (while shock test)	IEC 60512 test 2e	< 1 μs

MicroStac - 0.8 mm Connectors

CHARACTERISTICS —

Description	Standard	Single- and Dual-Row Connectors
Mechanical operation	IEC 60512 test 9a	< 10 mating cycles
Insertion and withdrawal force	IEC 60512 test 13b	3 mm stack height: max. 4 N per contact 5 mm stack height: max. 2 N per contact
Gauge retention force	IEC 60512 test 16e	> 0.15 N
Processing Conditions		
Hand soldering temperature max.	IEC 60068-2-20	3.5 s at 350 °C
Dip soldering temperature max.	IEC 60068-2-20	10 s at 260 °C
Reflow soldering temperature max.	JEDEC J-STD-020	20 - 40 s at 260 °C
Coplanarity		< 0.1 mm
Housing Material		
Insulation body		PPA
CTI value	IEC 112	> 600
UL flame rating		UL 94 V-0
UL file plastic material		E171666
Contact Material		
Base material		Cu alloy
Mating area		gold plating
Termination area		Sn
Environment Compatibility		
Recycling		no flame-retardent additives, no toxic additives allow easy recycling

MicroStac - 0.8 mm Connectors

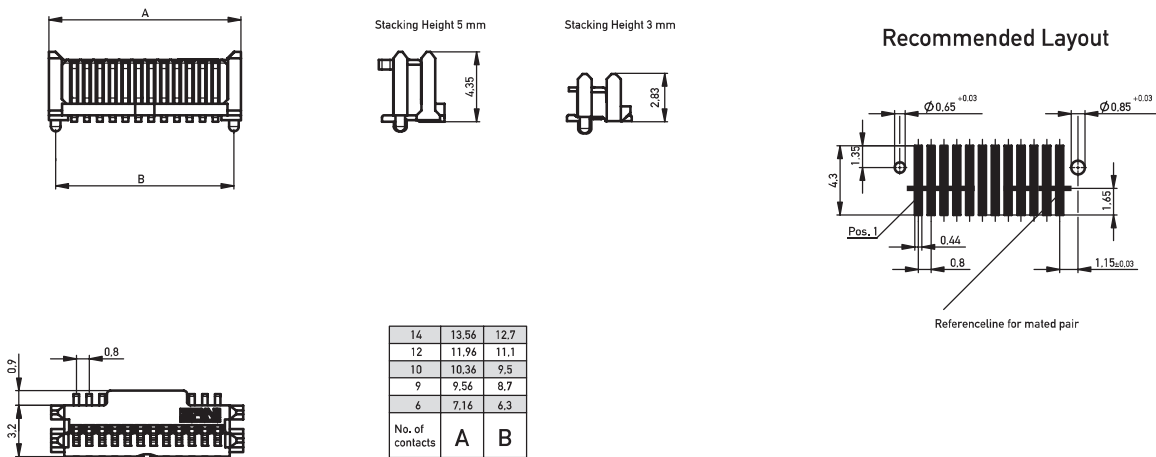
VERTICAL MALE, SINGLE ROW

PRODUCT SPECIFICATION



- pitch 0.8 mm
- SMT process compatible
- two contact points
- one part number for interconnection saving admin and logistic costs
- mated stacking height: 3 mm (wipe length: 0 mm) or 5 mm (wipe length: 1.5 mm)
- anti-magnetic versions available

DIMENSIONAL DRAWINGS



MicroStac - 0.8 mm Connectors

VERTICAL MALE, SINGLE ROW



ORDERING INFORMATION

No. of Pins	Mated Stacking Height	Termination	Packaging	Part Number
6	5	SMT	Tape and reel	114711
9	3	SMT	Tape and reel	224920
10	5	SMT	Tape and reel	354863
12	5	SMT	Tape and reel	114712
14	5	SMT	Tape and reel	284257

Anti-magnetic Versions

No. of Pins	Mated Stacking Height	Termination	Packaging	Part Number
12	5	SMT	Tape and reel	254168