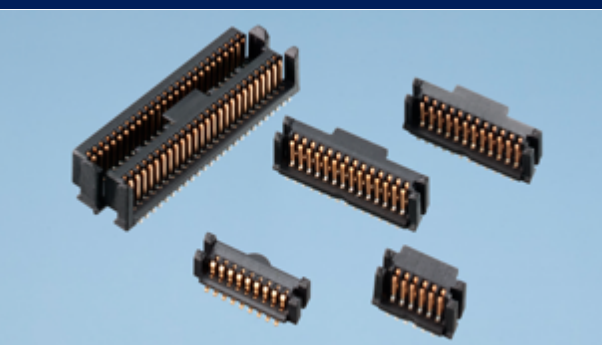
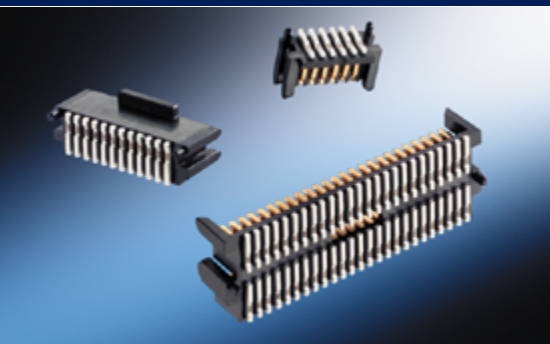




MicroStac[®] 0.8 mm Mezzanine Connector System





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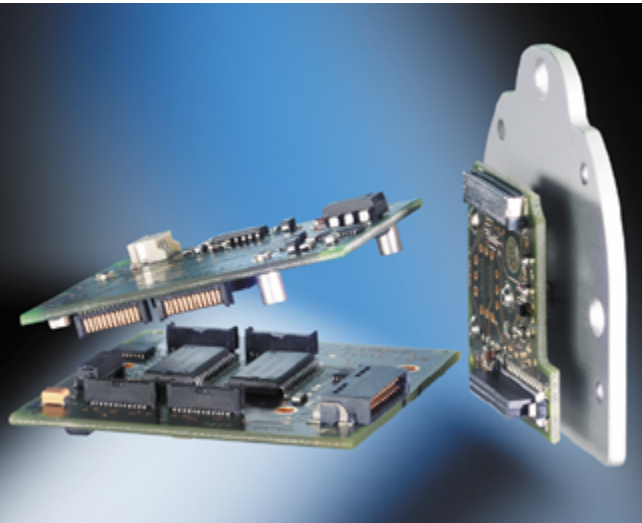
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MicroStac® - 0.8 mm Mezzanine Connector System

Applications



- Sensor engineering:

Medical engineering:

Mobile communication:

Car electronics:

Control engineering:

Facility management:
- Light barriers, switches

Intensive medical equipment, portable diagnostics

Mobile phones, PDAs, organizer, memory modules

Car radios, mobile car phones, mobile car office equipment

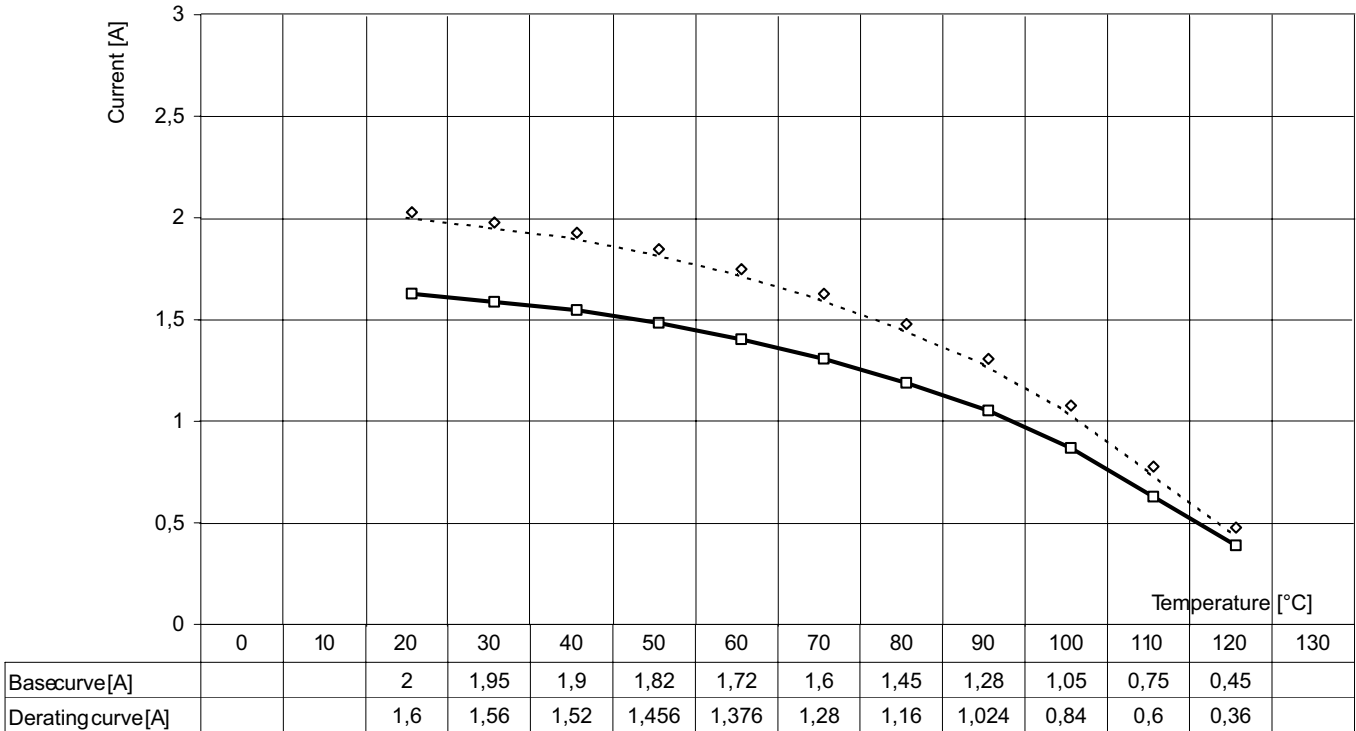
Mini PLCs, fieldbus modules, mini solenoid sytems

Signal and indicator devices, alarm systems and bus modules

Derating Curve

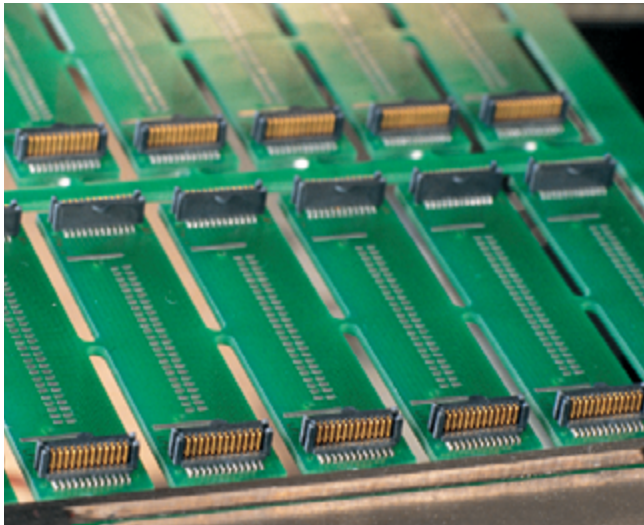
In spite of the small design of the ERNI MicroStac series, they reach a high current rating. The contacts feature large radiant surfaces to derive heat. The derating curve shows the 50pin version without PCB.

For further derating curves related to the according pin count see our webpage.



MicroStac® - 0.8 mm Mezzanine Connector System

Technical Features



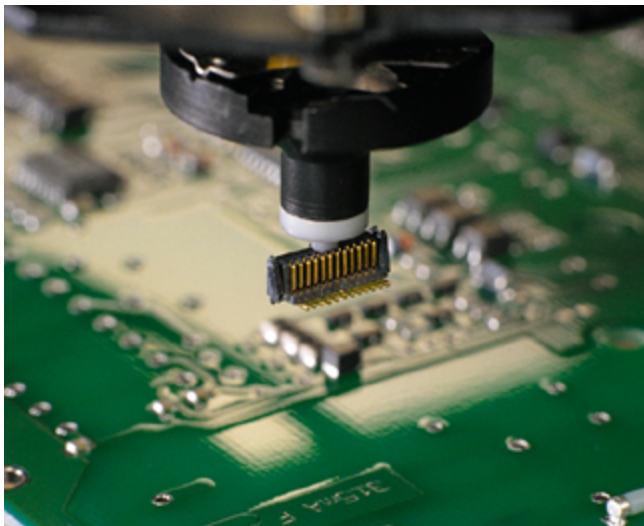
Controlled SMT Reflow Soldering Process

The heat-resistant thermoplastic insulation body and precision coplanar contacts permit a controlled SMT soldering process.



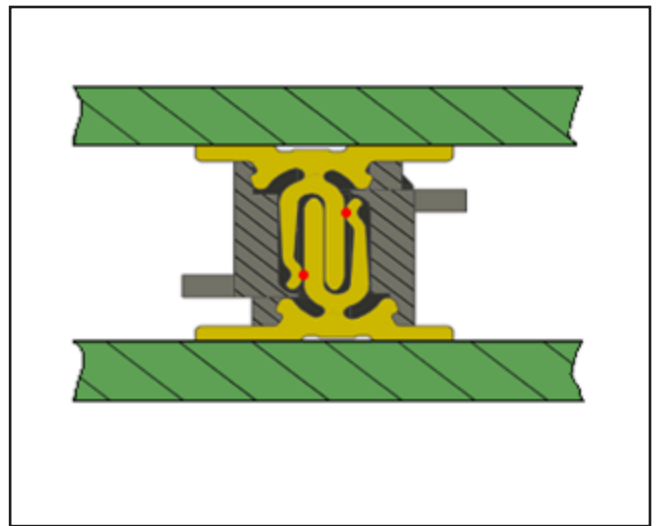
Safe Packaging for Fully Automated Assembly

The antistatic tape and reel packaging not only protects the high-precision contacts and coplanarity of our MicroStac connectors, but also permits placement of connectors by automated pick and place equipment.



Easy Recognition and Secure Handling

The black insulation body ensures easy visual recognition by the automatic pick and place equipment.

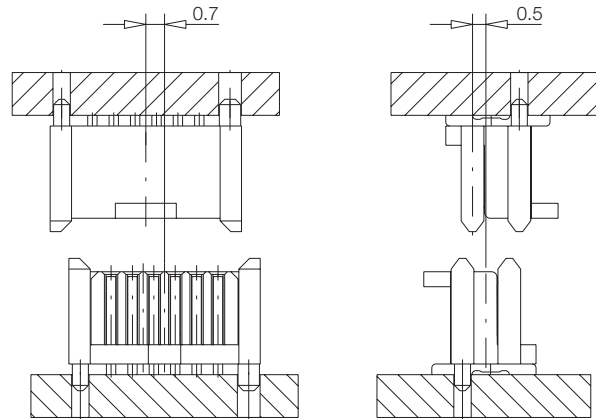


Contact Design for 5 mm Stacking Height

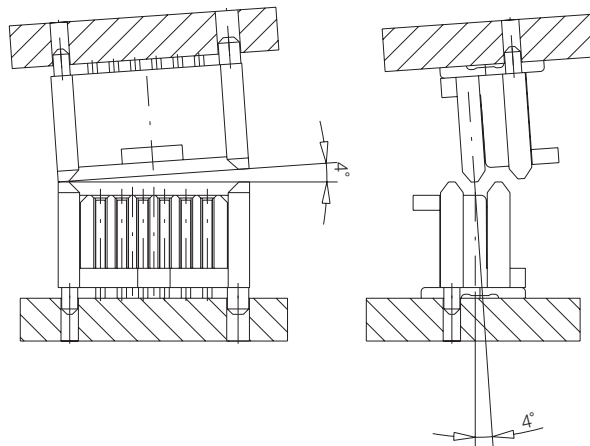
The MicroStac contacts are based on a patented hermaphroditic contact design with two contact points for compensation of tolerances.

Patent-no.: DE 19 809 881; US 6.379.170

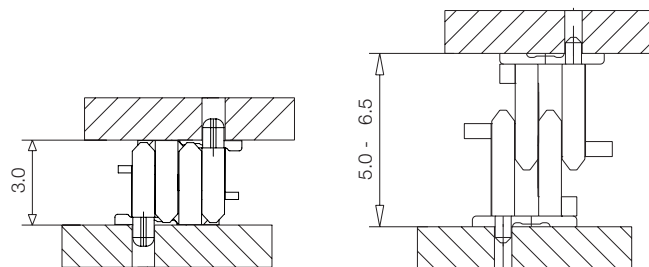
Allowed misalignment tolerances longitudinal: ± 0.7 mm, transverse: ± 0.5 mm



Allowed angular inclination tolerances longitudinal: $\pm 4^\circ$; transverse: $\pm 4^\circ$



Mated Stacking Heights: 3 mm (wipe length: 0 mm) or 5 mm (wipe length: 1.5 mm)



MicroStac® - 0.8 mm Mezzanine Connector System

Electrical and Mechanical Characteristics



Standard		Single and Dual Row Connectors
Number of Pins		6, 9, 10, 12, 14, 50, 54
Technical data		
Climate Category	DIN EN 60068-1 test b	-55/125/21
Temperature range		-55/125 °C
Current rating per contact		50 pin version: 1.6 A @ 20°C 1.3 A @ 70°C 0.8 A @ 100°C The mentioned current carrying capacity values are standard values, which are reached without taking any special measures. Significant higher values are possible, if pcb design matches the connector performance. For further information please contact your ERNI sales person.
Air – and creepage distance		
Voltage rating	IEC 60664	0.4 mm The permissible operating voltages depends 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	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
Mechanical operation (mating cycles)	IEC 60512 test 9a	< 10 mating cycles
Insertion and withdrawal force	IEC 60512 test 13b	3 mm Stacking Height : max. 4 N per contact 5 mm Stacking Height : max. 2 N per contact

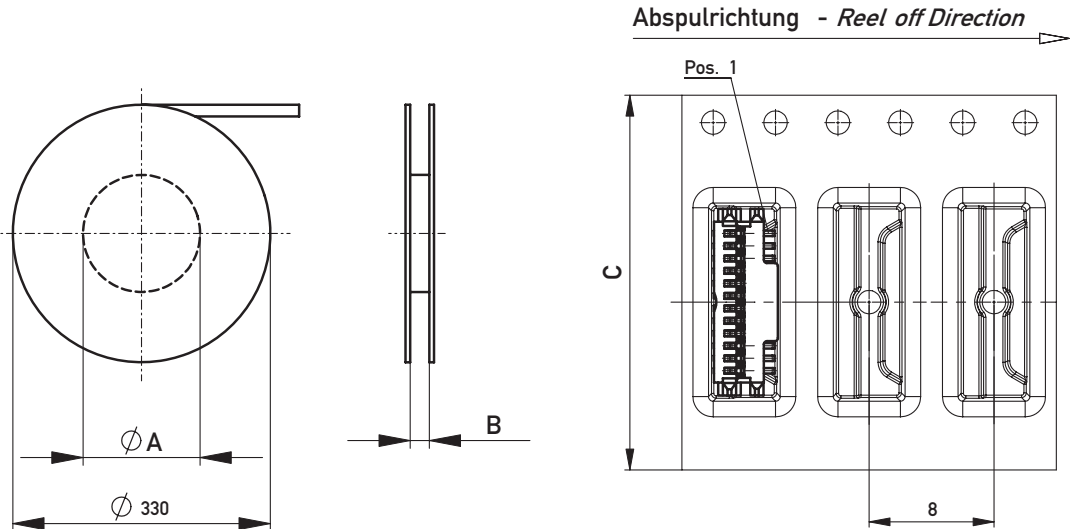
MicroStac® - 0.8 mm Mezzanine Connector System

Electrical and Mechanical Characteristics



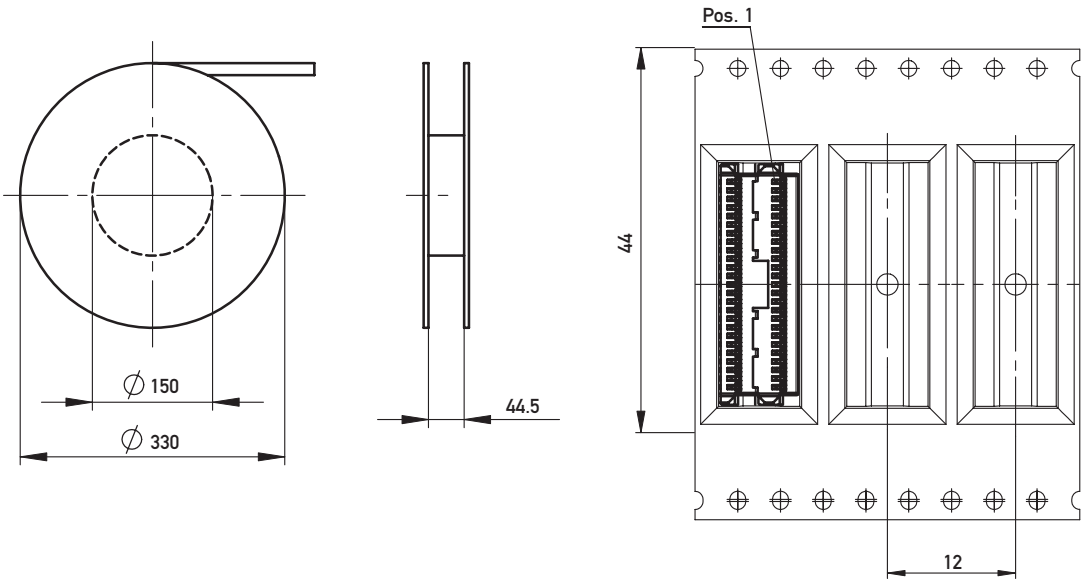
	Standard	Single and Dual Row Connectors
Number of Pins		6, 9, 10, 12, 14, 50, 54
Process-conditions		
Solder temperature max.	IEC 68-2-20	
Hand soldering temperature max.		3.5 s at 350 °C
Dip soldering temperature max.		10 s at 260 °C
Reflow soldering temperature max.	JEDEC J-STD-020C	20 - 40 s at 260 °C
Coplanarity		< 0.1 mm
Housing materials		
Plastic material		PA 46
CTI value	IEC 60112	CTI 225
UL flame rating		UL 94 V-0
UL file		E 47960
Contact materials		
Base material		Cu alloy
Mating area		gold plated
Termination area		Sn
Environment compatibility		
Recycling	no flame-retardent additives, no toxic additives allows easy recycling	

Single Row Connectors



14	150	24.5	24
12	150	24.5	24
10	150	24.5	24
9	150	16.5	16
6	100	16.5	16
Polzahl No. of Pins	A	B	C

Dual Row Connectors



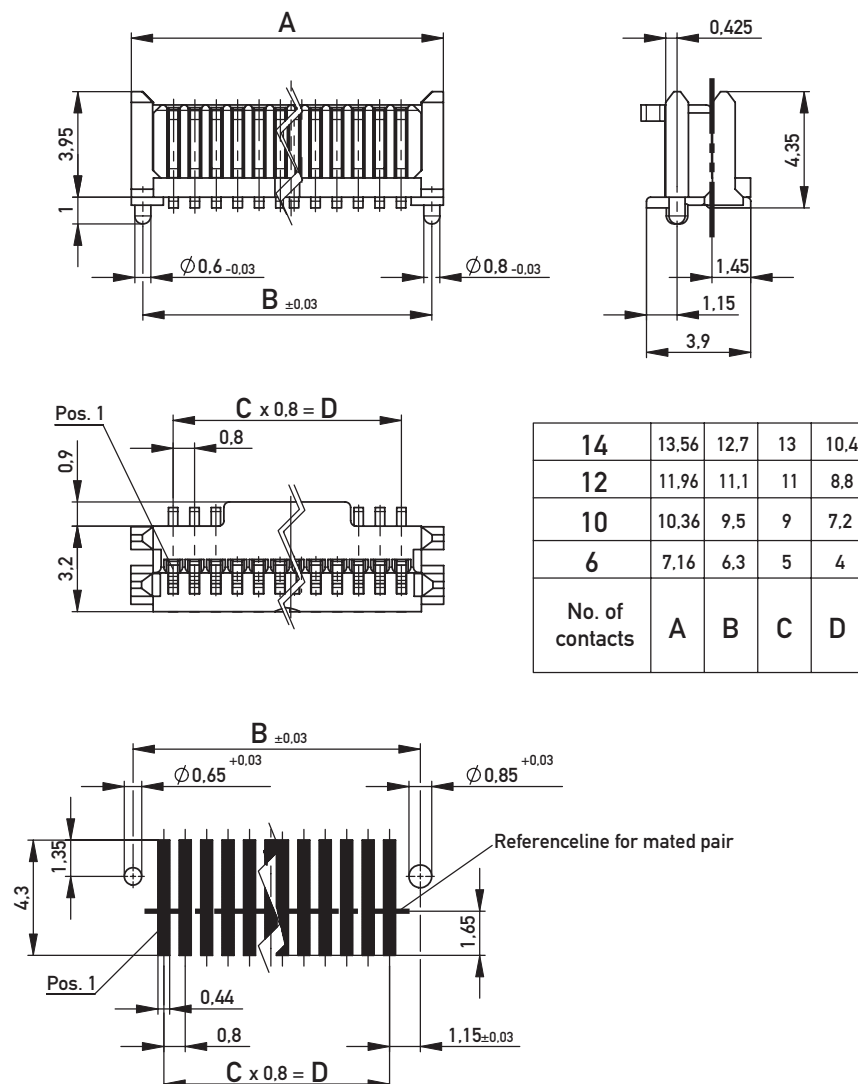
MicroStac® - 0.8 mm Mezzanine Connector System

Vertical Single Row Connectors

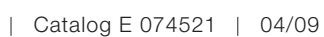


- Pitch 0.8 mm
- SMT process compatible
- Hermaphroditic contact design, two contact points
- One part number for interconnection saving admin and logistic costs
- Integrated pick and place pad and very low weight for high speed assembly
- Positioning pegs
- Secure standing while solder process, large solder pads
- Black insulation body and silver terminals for optical vision system (contrast measuring method)
- Polarization and pre-alignment while mating
- Mated stacking height: 3 mm (wipe length: 0 mm) or 5 mm (wipe length: 1.5 mm)

Dimensional Drawing for Versions with 5 mm Mated Stacking Height



Vertical Single Row Connectors

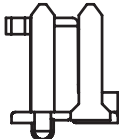
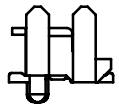
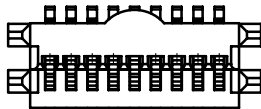
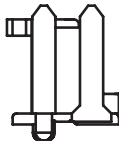
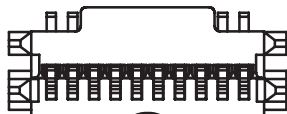
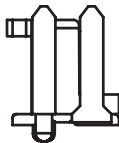
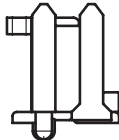
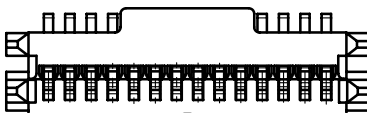


MicroStac® - 0.8 mm Mezzanine Connector System

Vertical Single Row Connectors

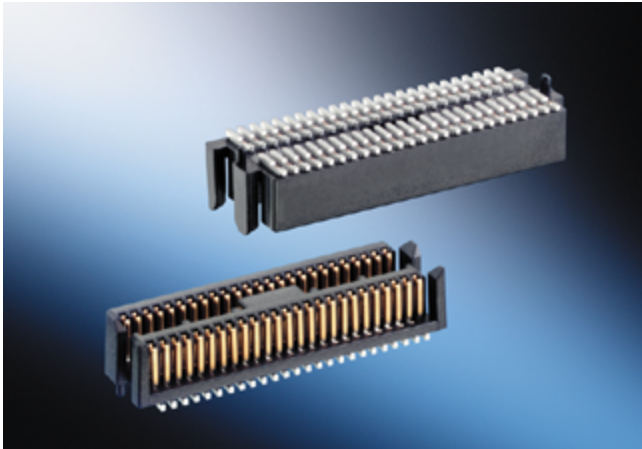


Ordering Information

Number of Pins	Mated Stacking Height	Termination	Class	Packaging	Part Number
	5 mm	SMT	4		114711
6	5 mm	SMT	4	Tape and reel/1700 pcs	114711
	3 mm	SMT	4		224920
9	3 mm	SMT	4	Tape and reel/1750 pcs	224920
	5 mm	SMT	4		354863
10	5 mm	SMT	4	Tape and reel/1300 pcs	354863
	5 mm	SMT	4		114712
12	5 mm	SMT	4	Tape and reel/1300 pcs	114712
	5 mm	SMT	4		284257
14	5 mm	SMT	4	Tape and reel/1300 pcs	284257

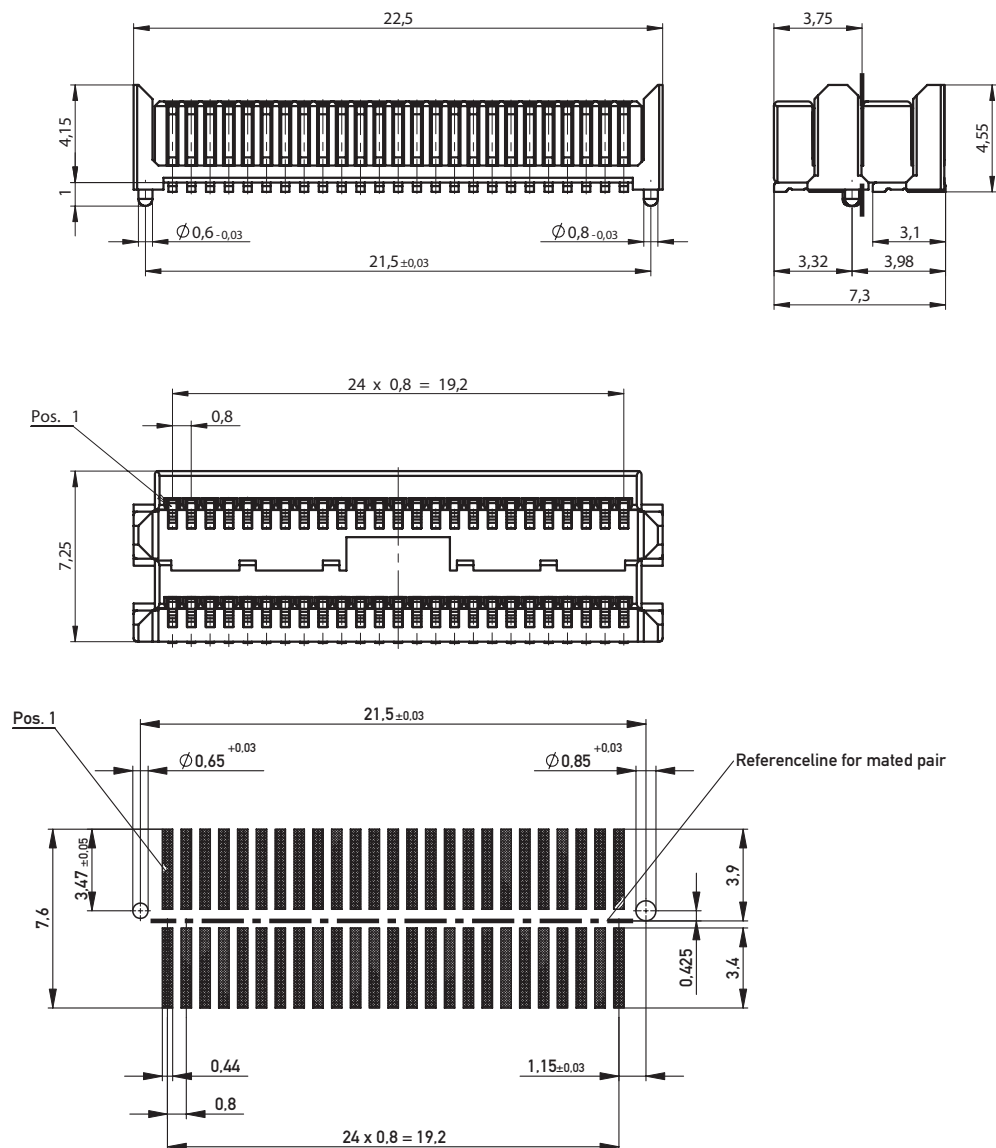
MicroStac® - 0.8 mm Mezzanine Connector System

Vertical Dual Row Connectors



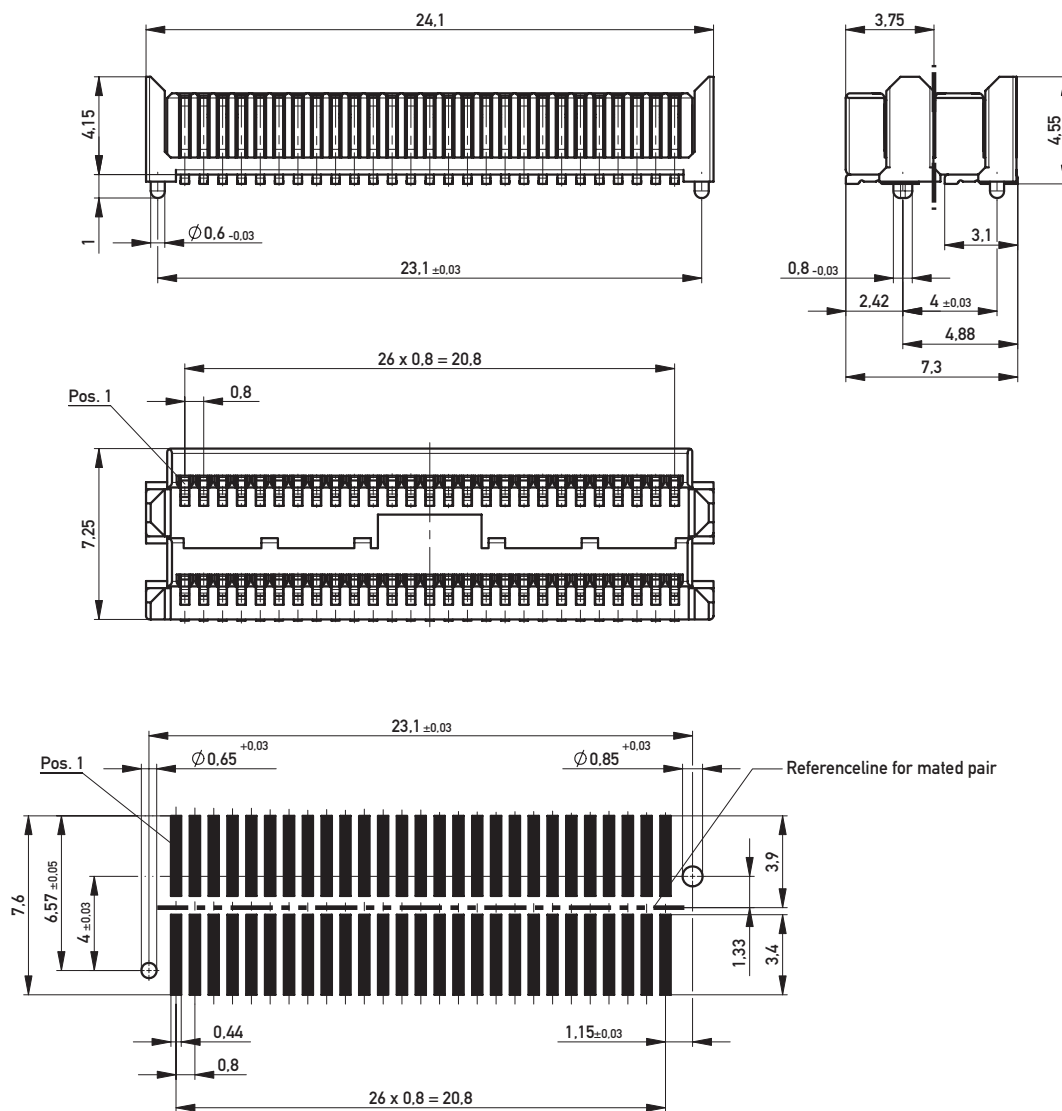
- Pitch 0.8 mm
- SMT process compatible
- Hermaphroditic contact design, two contact points
- One part number for interconnection saving admin and logistic costs
- Integrated pick and place pad and very low weight for high speed assembly
- Positioning pegs
- Secure standing while solder process, large solder pads
- Black insulation body and silver terminals for optical vision system (contrast measuring method)
- Polarization and pre-alignment while mating
- Mated stacking height: 5 mm (wipe length: 1.5 mm)

Dimensional Drawing for 50 Pin Version with 5 mm Mated Stacking Height



Dimensional Drawing

for 54 Pin Version with 5 mm Mated Stacking Height

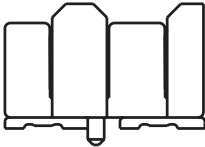
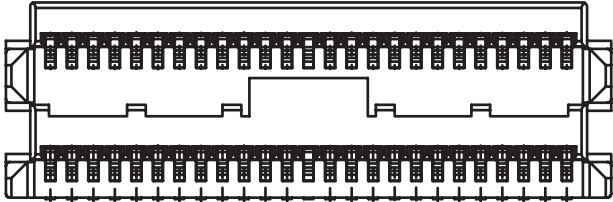
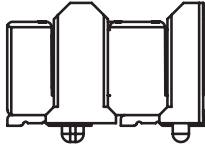
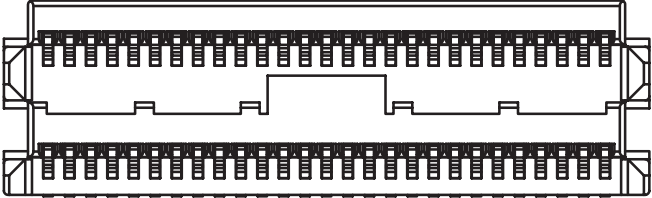


MicroStac® - 0.8 mm Mezzanine Connector System

Vertical Dual Row Connectors



Ordering Information

Number of Pins	Mated Stacking Height	Termination	Class	Packaging	Part Number
	5 mm	SMT	4	Tape and reel/800 pcs	
					114713
	5 mm	SMT	4	Tape and reel/800 pcs	
					354000



Part Number	Page
114711	10
114712	10
114713	13
224920	10
284257	10
354000	13
354863	10

[illegible]

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.





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