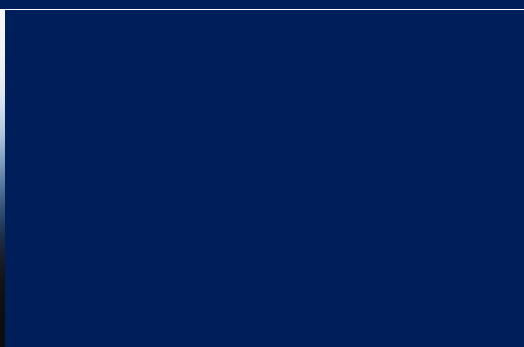


MicroStac[®] 0.8 mm Mezzanine Connector System





MicroStac® - 0.8 mm Mezzanine Connector System

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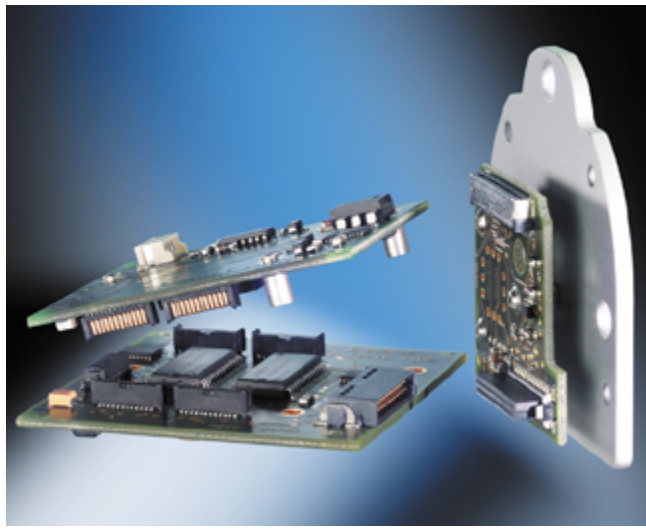
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Applications

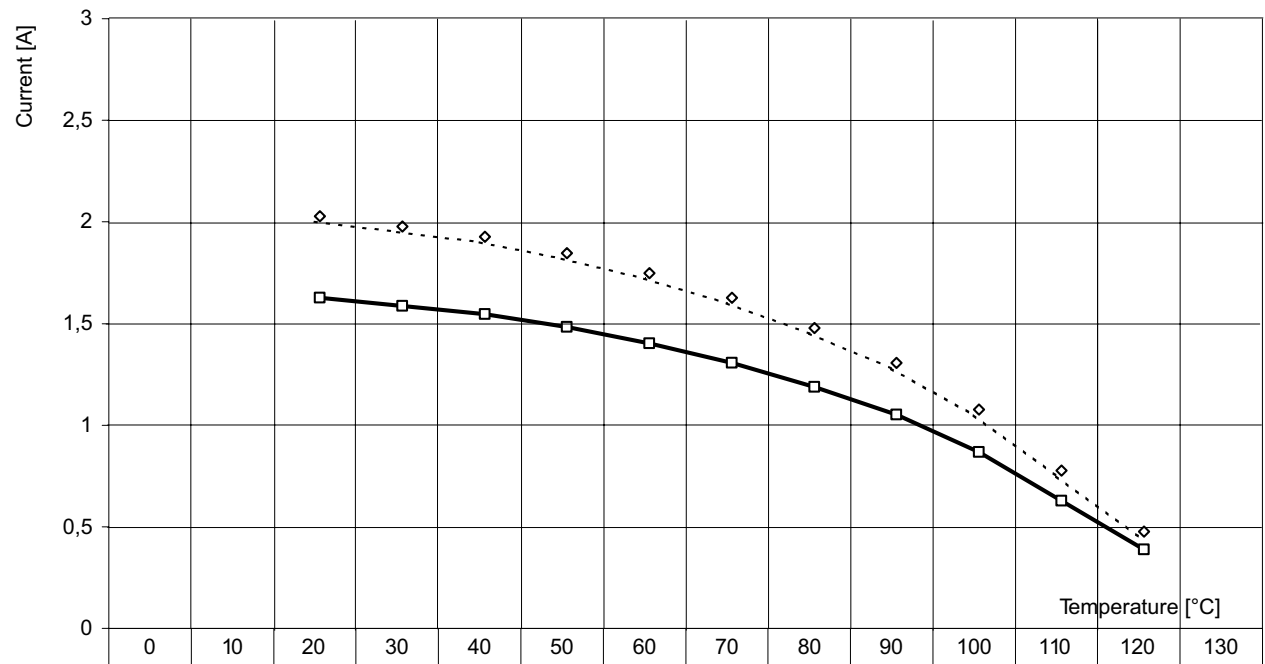


- Sensor engineering: Light barriers, switches
- Medical engineering: Intensive medical equipment, portable diagnostics
- Mobile communication: Mobile phones, PDAs, organizer, memory modules
- Car electronics: Car radios, mobile car phones, mobile car office equipment
- Control engineering: Mini PLCs, fieldbus modules, mini solenoid systems
- Facility management: 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.

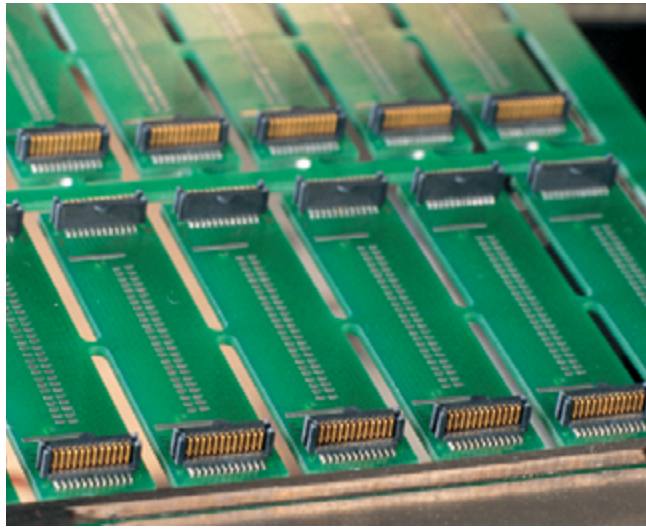


Basecurve[A]			2	1,95	1,9	1,82	1,72	1,6	1,45	1,28	1,05	0,75	0,45	
Derating curve[A]			1,6	1,56	1,52	1,456	1,376	1,28	1,16	1,024	0,84	0,6	0,36	



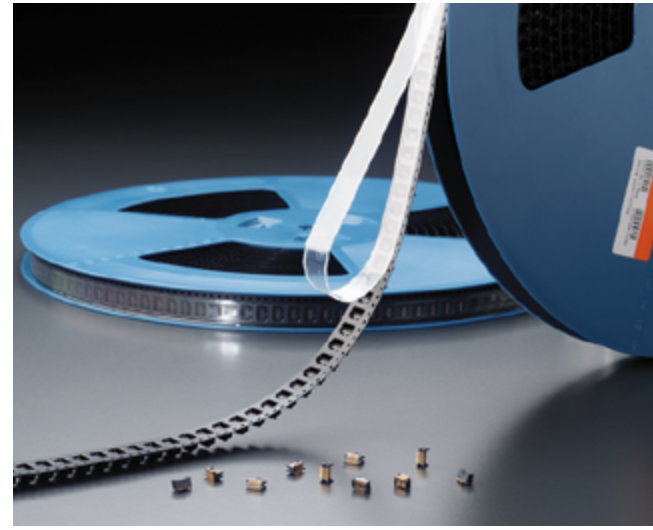
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Technical Features



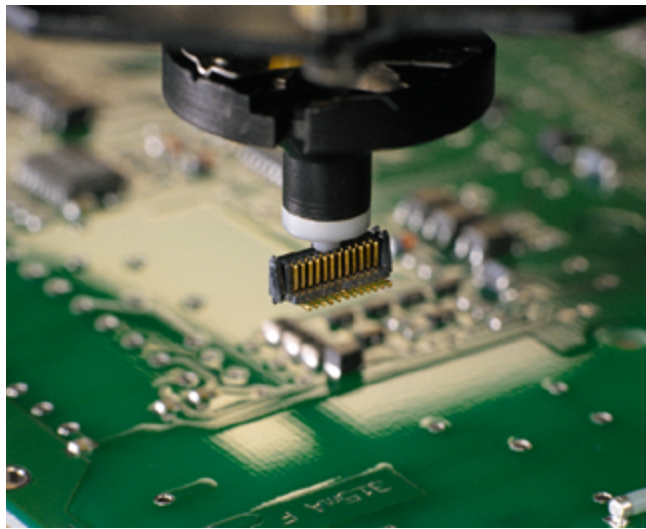
Controlled SMT Reflow Soldering Process

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



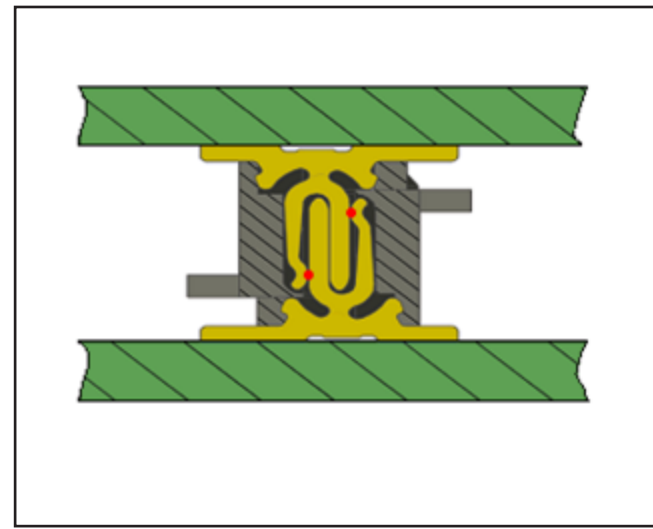
Safe Packaging for Fully Automated Assembly

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

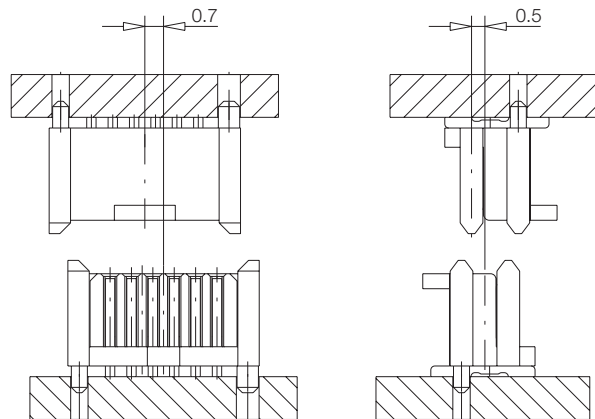
The MicroStac contacts are based on a patented hermaphroditic contact design with two contact points for compensation of tolerances.
Patent-no.: DE 19 809 881; US 6.379.170



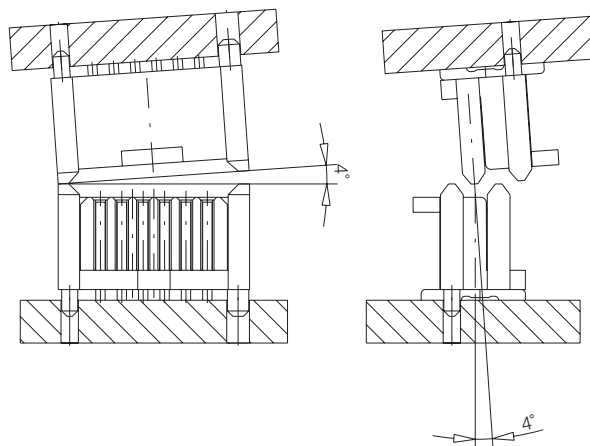
MicroStac® - 0.8 mm Mezzanine Connector System

Mating Conditions

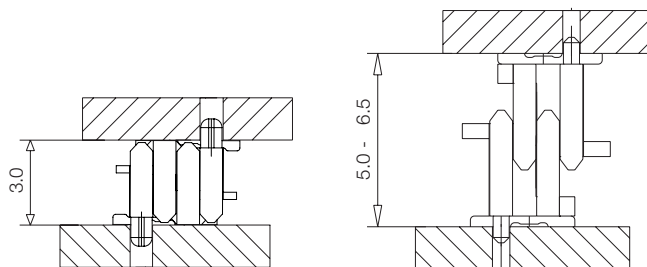
Allowed misalignment tolerances longitudinal: ± 0.7 mm, transverse: ± 0.5 mm



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		0.4 mm
Voltage rating	IEC 60664	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

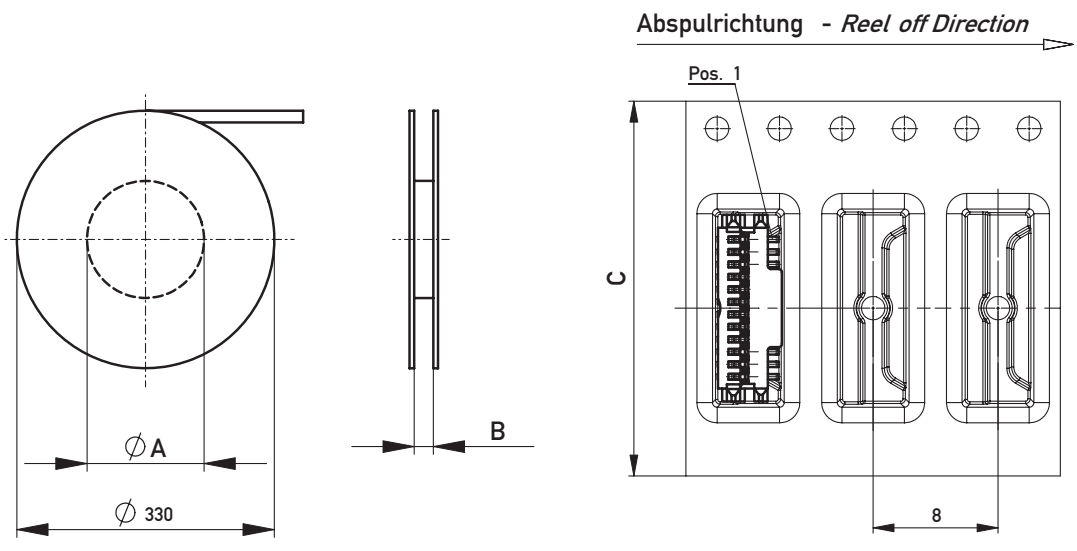
	Standard	Single and Dual Row Connectors
Number of Pins		6, 9, 10, 12, 14, 50, 54
Process-conditions		
Solder temperature max.	IEC 68-2-20	
Hand soldering temperature max.		3.5 s at 350 °C
Dip soldering temperature max.		10 s at 260 °C
Reflow soldering temperature max.	JEDEC J-STD-020C	20 - 40 s at 260 °C
Coplanarity		< 0.1 mm
Housing materials		
Plastic material		PPA
CTI value	IEC 60112	CTI > 600
UL flame rating		UL 94 V-0
UL file		E 171666
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



MicroStac® - 0.8 mm Mezzanine Connector System

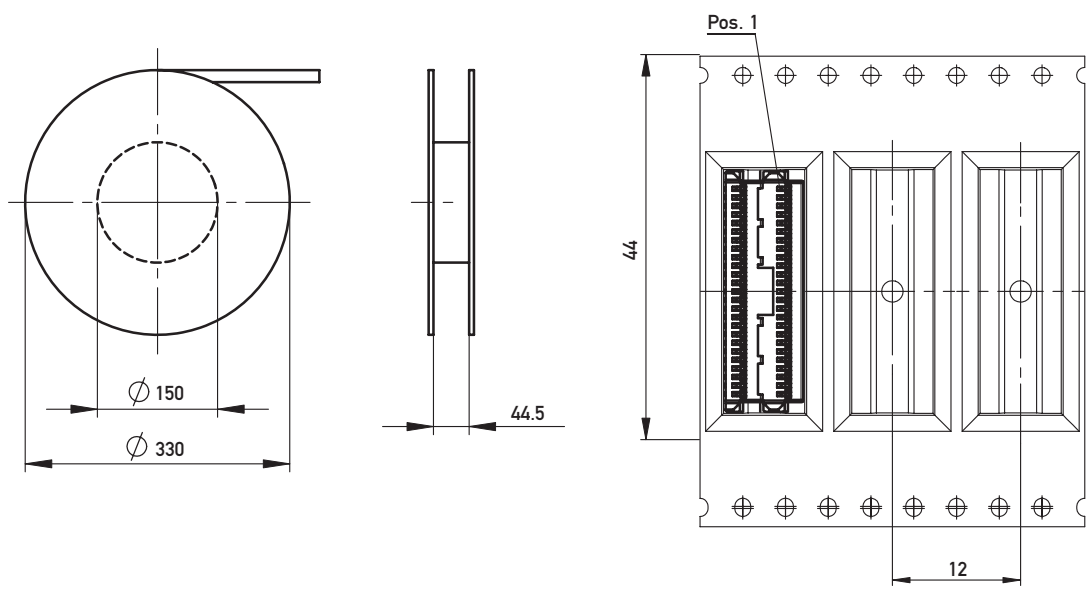
Packaging

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



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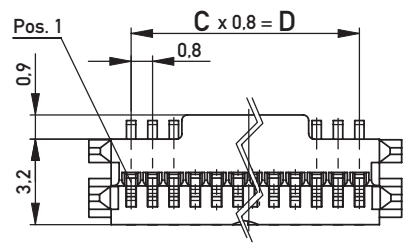
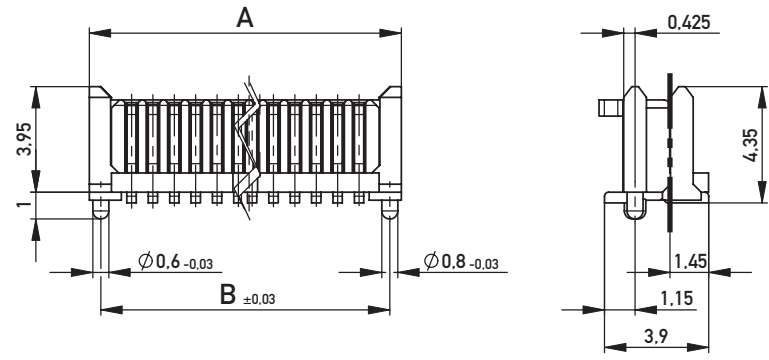
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Vertical Single Row Connectors

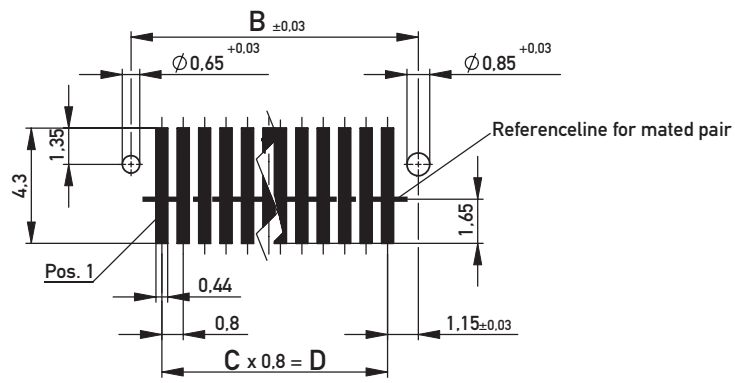


- Pitch 0.8 mm
- SMT process compatible
- Hermaphroditic contact design, two contact points
- One part number for interconnection saving admin and logistic costs
- Integrated pick and place pad and very low weight for high speed assembly
- Positioning pegs
- Secure standing while solder process, large 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



14	13.56	12.7	13	10.4
12	11.96	11.1	11	8.8
10	10.36	9.5	9	7.2
6	7.16	6.3	5	4
No. of contacts	A	B	C	D

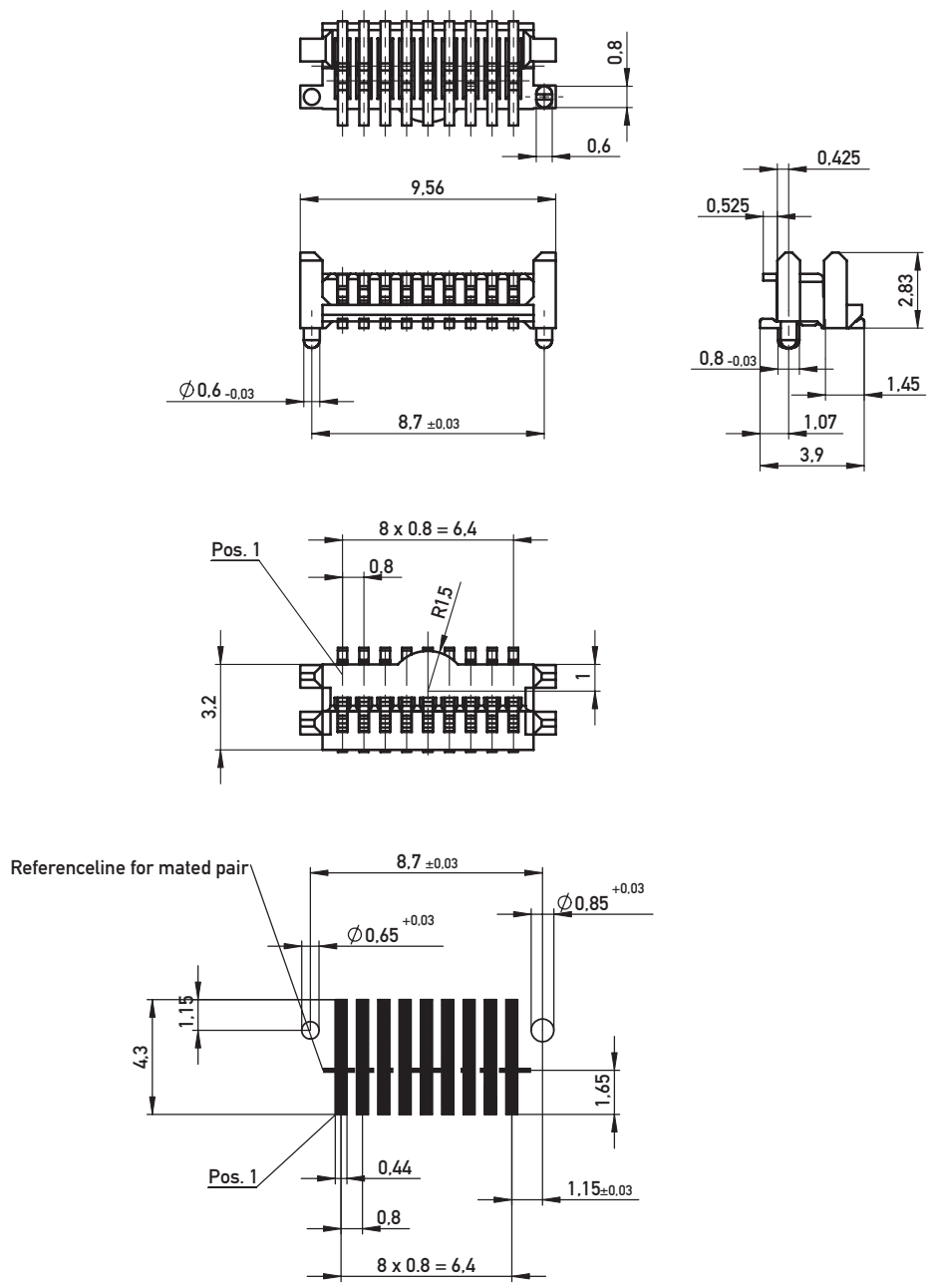




MicroStac® - 0.8 mm Mezzanine Connector System

Vertical Single Row Connectors

Dimensional Drawing for Versions with 3 mm Mated Stacking Height



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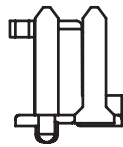

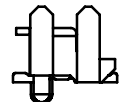

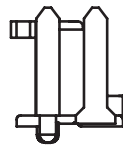


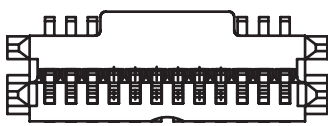
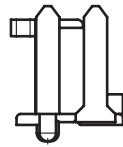
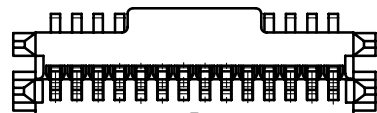
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MicroStac® - 0.8 mm Mezzanine Connector System

Vertical Single Row Connectors

Ordering Information

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



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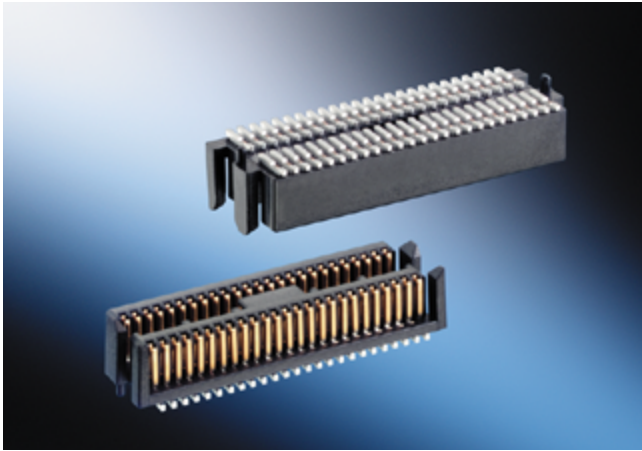
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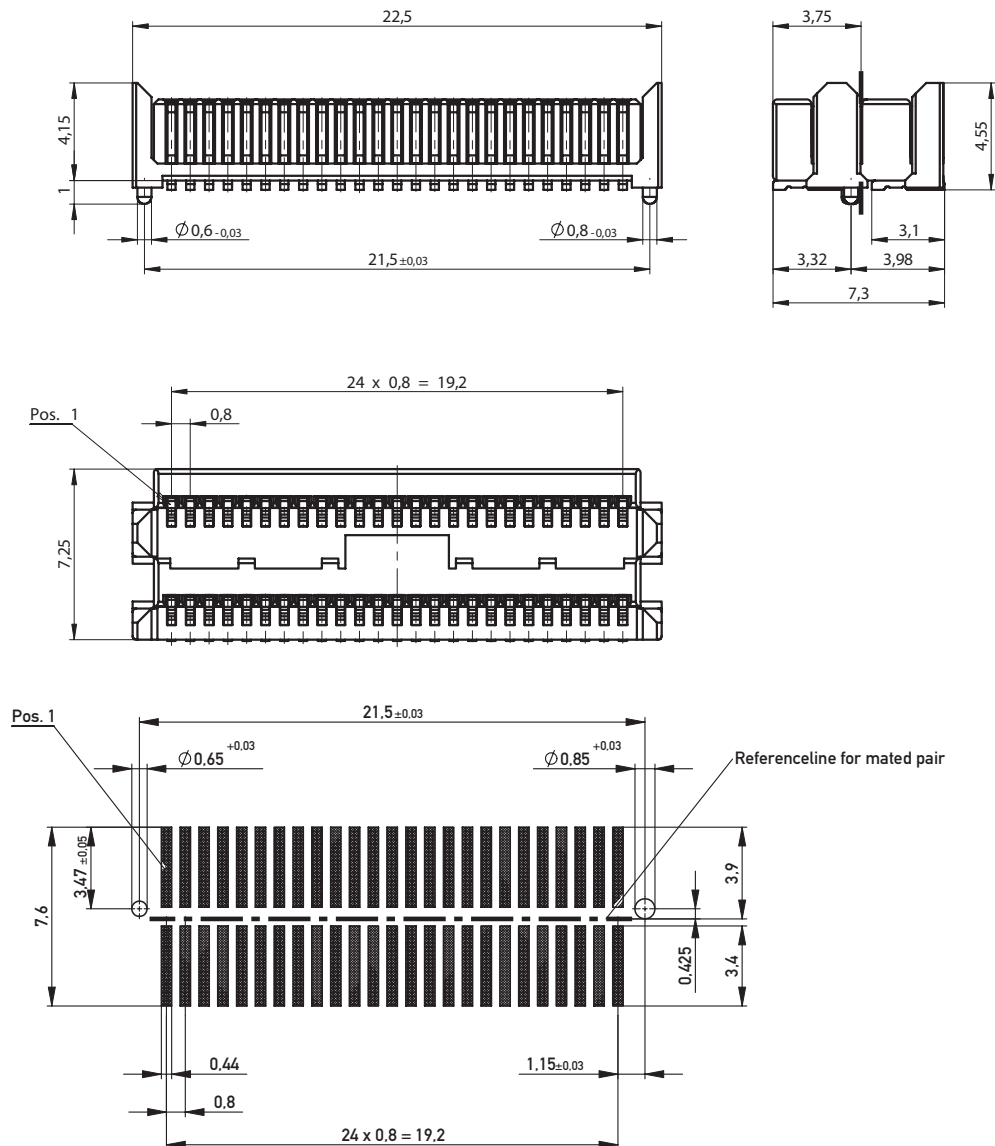
MicroStac® - 0.8 mm Mezzanine Connector System

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

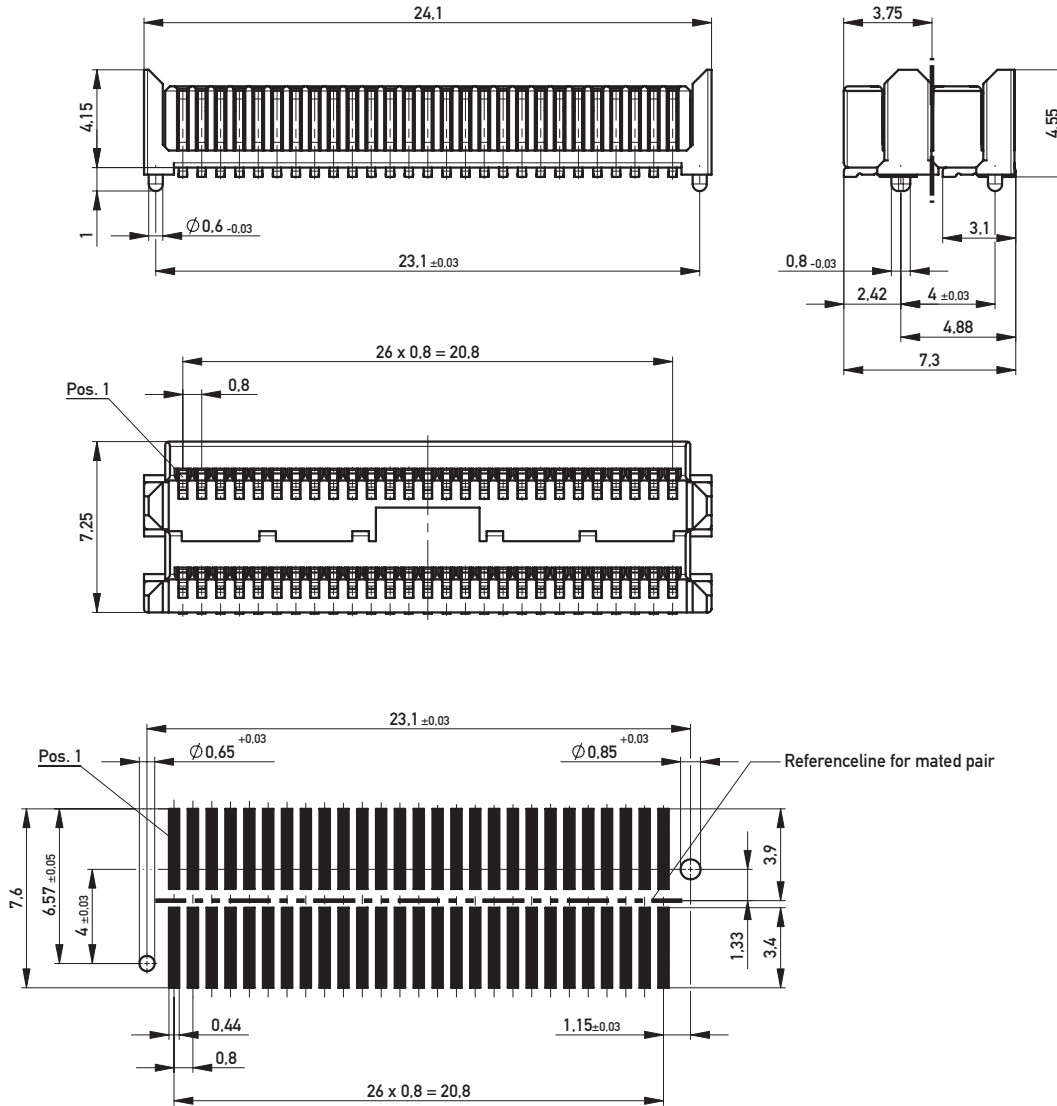


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Vertical Dual Row Connectors



Dimensional Drawing for 54 Pin Version with 5 mm Mated Stacking Height

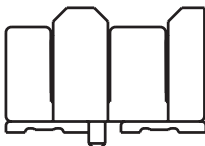
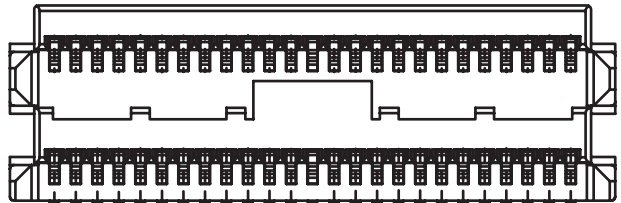
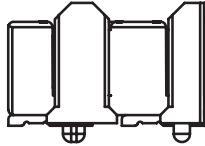
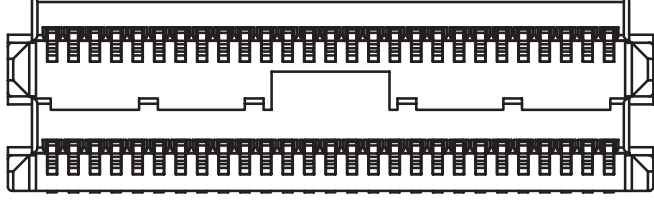




MicroStac® - 0.8 mm Mezzanine Connector System

Vertical Dual Row Connectors

Ordering Information

Number of Pins	Mated Stacking Height	Termination	Class	Packaging	Part Number
					
50	5 mm	SMT	4	Tape and reel/800 pcs	114713
					
54	5 mm	SMT	4	Tape and reel/800 pcs	354000



MicroStac® - 0.8 mm Mezzanine Connector System

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114713	13
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354000	13
354863	10



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