

CORE MICRO PRODUCTS >

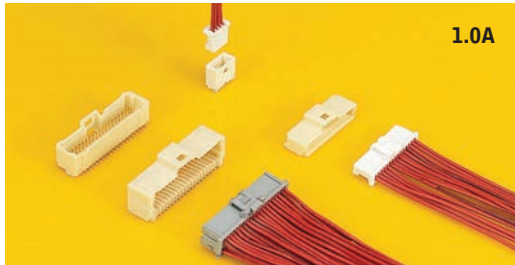
*FFC/FPC, Board-to-Board, Microminiature Wire-to-Board
and Memory Card Connectors*



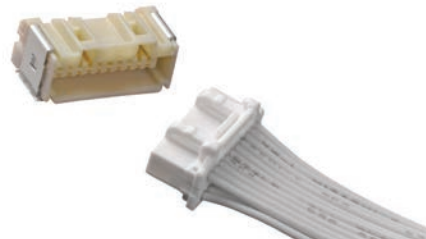
molex®



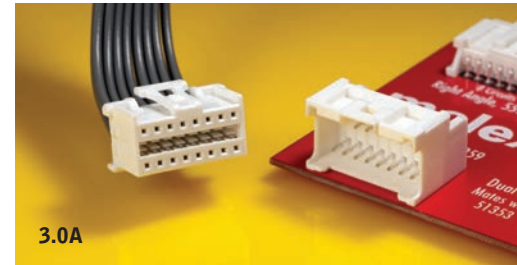
Core Micro Product (CMP) Families



Pico-Clasp™ 1.00mm



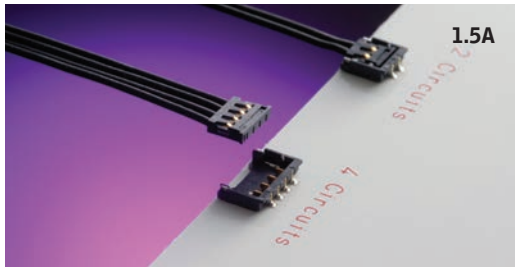
Duo-Clasp™ 1.25mm



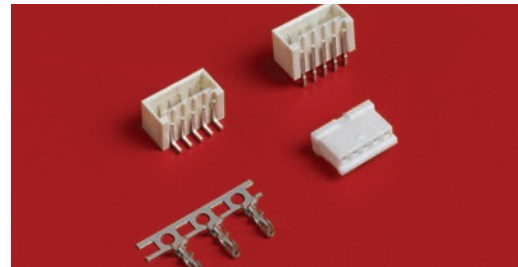
MicroClasp™ 2.00mm



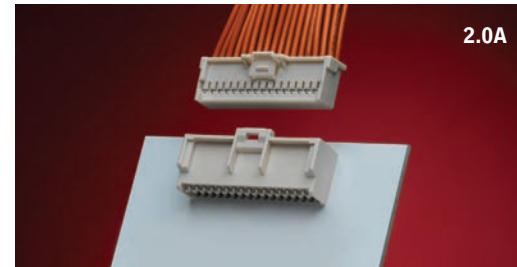
Micro-Latch™ 2.00mm



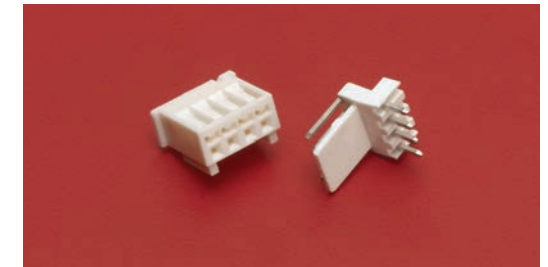
Pico-EZmate™ 1.20mm



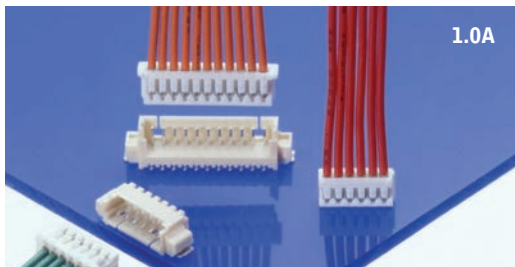
Pico-SPOX™ 1.50mm



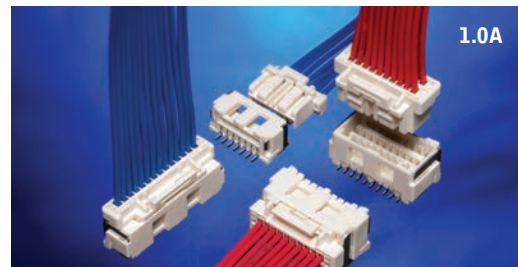
iGrid™ 2.00mm



Mini-Latch™ 2.50mm



PicoBlade™ 1.25mm



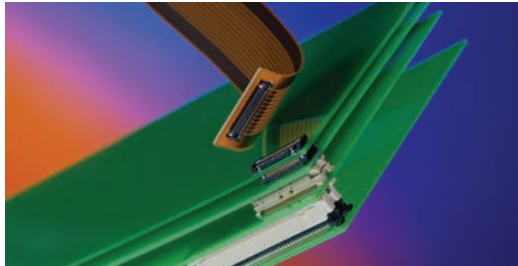
CLIK-Mate™



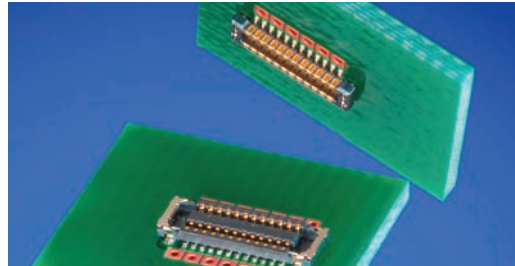
microSD Memory



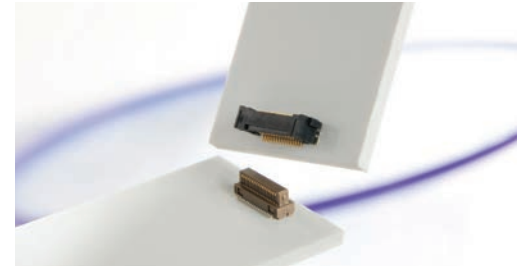
Core Micro Product (CMP) Families



SlimStack™ Family



SlimStack™ 0.40mm



SlimStack™ 0.50mm



SlimStack™ 0.635mm



0.20mm FFC/FPC



0.25mm FFC/FPC Front Flip



0.30mm FFC/FPC BackFlip™



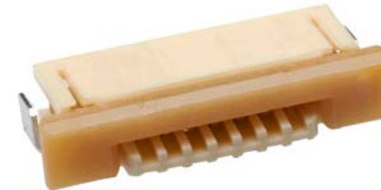
0.3mm FFC/FPC Front Flip



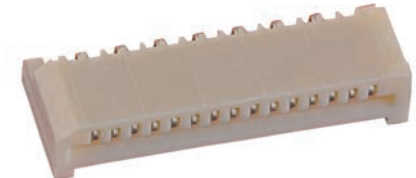
0.50mm FFC/FPC BackFlip



0.50mm FFC/FPC ZIF



1.00m FFC ZIF



1.00mm FFC Non-ZIF



Molex Core Micro Products of board-to-board, FFC/FPC, microminiature wire-to-board and memory card connectors offer long-term availability and support across a wide variety of industries.

Molex offers one of the most complete ranges of microminiature fine pitch connectors to support designers and manufacturers across a wide variety of global markets and industries such as mobile phone, consumer electronics, computers/PC and tablet devices, data/telecom, industrial, military/aerospace and medical.

The 160+ series numbers listed in this sales brochure have the long term availability and support to ensure a smooth launch and long product life cycle of our board-to-board, FFC/FPC, microminiature wire-to-board and memory card connectors.

**Core Micro Products
FFC/FPC, Board-to-Board, Microminiature
Wire-to-Board
and Memory Card
Connectors**

Applications



• Data/Telecom

- NIC
- Modems
- Daughter Cards
- Power Supplies
- Switches
- Routers
- Motherboards
- Monitors
- Solid State Drives
- Optical Disk Drives
- RAID's
- IP Telephony Phones
- Video Conference Devices



• Consumer

- Tablets/e-Readers
- Smartphones
- Computers
- Appliances
- GPS
- Wireless Devices
- Fitness Equipment
- Video/audio Devices
- Music Players
- Flat Panel TV
- Digital Cameras
- Printers
- Gaming



• Military/Aerospace

- Weapon - Scope Finders
- Mobile PC
- 2way Radio's
- Military ATV's
- Night vision - Viewfinders
- Instrument panels
- GPS/Satellite Tracking Device
- Helmet Electronic headsets
- Data Communication Devices
- Video Surveillance Equip
- Radar communication Equip.
- Video Display Panels
- Satellite Communication



• Other

- Solid State Lighting
- POS Devices
- Security Systems
- Vending Machines
- ATM Machines
- Office Equipment
- Mobile Computing
- Handheld Scanners
- Smoke/ Fire protection Monitors
- Video Broadcasting Equipment
- Electronic Locking Systems
- Handheld Self Defense Products
- Commercial Thermostats



• Medical

- Handheld Patient Metering
- Hospital Monitoring Equipment
- Medical Instrumentation
- Drug Infusion Pumps
- Wireless Telemetry Devices
- Audio Hearing Instruments
- Medical Imaging Equipment
- Home Patient Monitoring
- Biomedical Devices
- Mobile PC/Medical Tablets
- Portable Electronic Defibrillators
- Laboratory Instrumentation
- Medical Sensing Devices



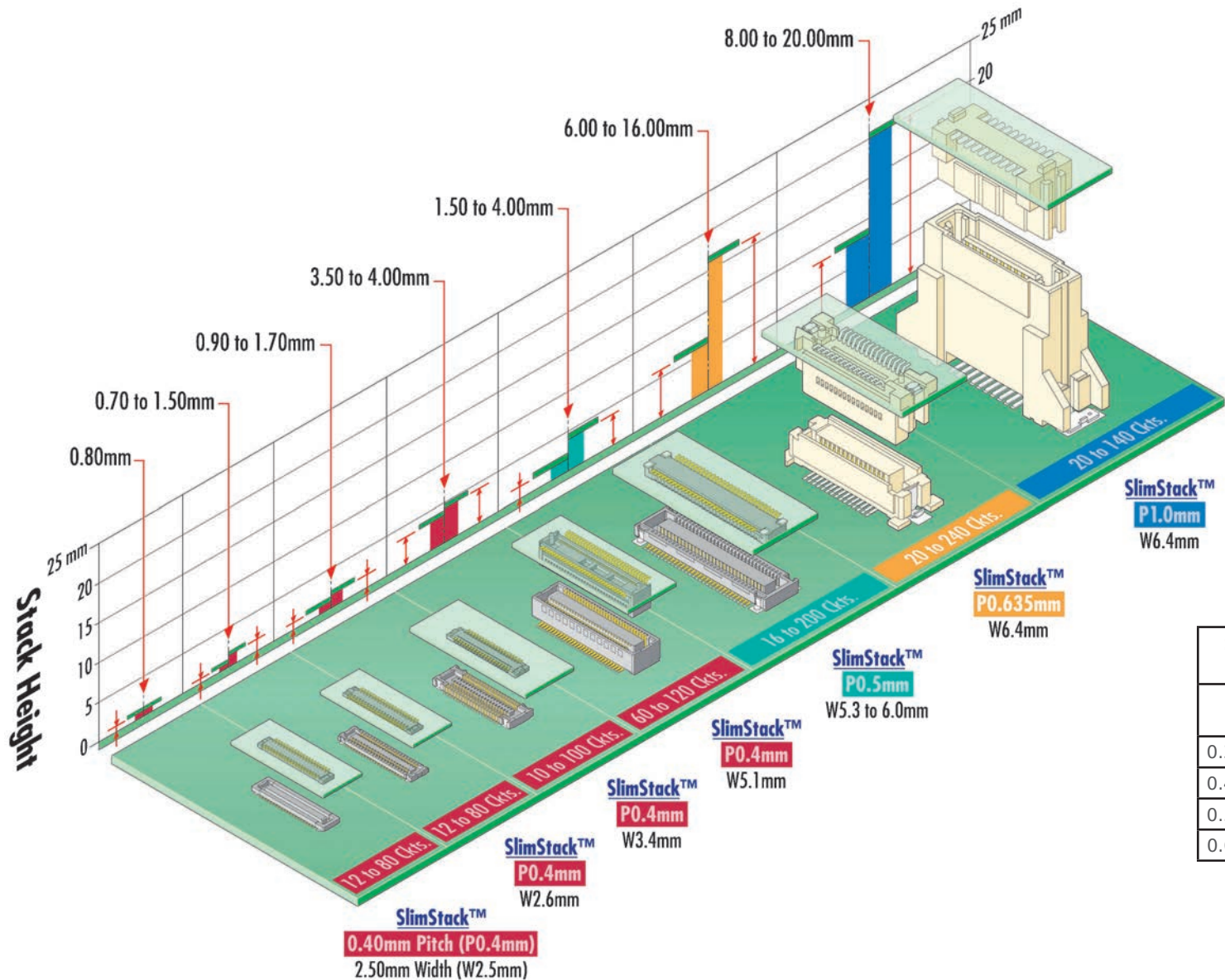
• Industrial

- Utility Meters
- Industrial PC's
- Industrial Servers
- Farming Equipment
- GPS Mapping Devices
- Handheld Industrial Tools
- Automation controls
- Instrumentation Panels
- Testing Equipment
- Electronic Servo Motors
- Industrial Charging
- Robotic Equipment
- HVAC Controls



**• Automotive and
Transportation**

- Info-tainment
- External cameras
- Electronic Mirrors
- Wireless FOB
- Interior Controls
- Diagnostic/Sensing Devices
- Electronic Control Modules
- Internet Radio
- Electronic Keys
- Telematics
- NAT - 2way radios
- NAT - Communication Boards
- NAT - Multimedia Hubs



SlimStack Board-to-Board Signal Integrity Performance Chart			
Pitch	Max Speed	Insertion Loss	Return Loss
0.35mm	18-21 Gbps	<= -0.5dB	<= - 11.5dB
0.4mm	8-21 Gbps	<= -3.0dB	<= - 10.8dB
0.5mm	5-6 Gbps	<= -1.8dB	<= - 10.0dB
0.635mm	2.5 -3 Gbps	<= -3.0dB	<= - 10.8dB

SlimStack™ Board-to-Board Connectors

					Contact Type			Receptacle Terminal Type		Retention Feature Type			Other	
Mated Height (mm)	Mated Width (mm)	Receptacle Series	Plug Series	Circuits	Gold Plated Contact (Improve Signal Integrity)	Dual Contact Design (Increase Reliability)	Single Contact Design (Basic Solution)	Narrow Width Recept Terminal (Maximize PCB Space Saving)	J-Lead Recept Terminal - (Space Saving PCB Design)	Housing Fitting Nail (Increase PCB Retention)	High Retention Force Contact (Good for Shock/Vibe)	Housing Bottom Mold (Ease of Routing PCB Traces)	Right Angle Solution (Design Flexibility)	Common Connector Design (Multiple Stack Heights)

0.40mm Pitch SMT Board-to-Board Connectors

0.70	2.60	503304	503308	12 to 60	■	■		■		■				■
0.70	2.60	503548	503552	6 to 18	■	■		■		■	■			
0.80	2.50	503772	503776	10 to 60	■	■		■		■				
0.90	3.40	501591	501594	10 to 70	■		■		■	■		■		
1.00	2.60	502426	502430	8 to 80	■		■	■		■		■		■
1.00	2.60	503489	503308	30 to 60	■	■		■		■		■		■
1.30	3.40	501527	501531	20 to 90	■		■		■	■		■		
1.50	2.60	502426	503460	80	■		■	■		■		■		■
1.50	2.60	503105	503108	30 to 50	■		■	■				■		
1.50	3.40	51338	55909	10 to 100	■		■		■	■				■
1.80	4.20	500913	55909	24 to 100	■		■			■				■
2.00	3.40	51338	501745	12 to 80	■		■		■	■				■
2.30	4.20	500913	501745	30 to 60	■		■			■				■
3.20	4.35	54552	503376	30 to 40	■		■			■			■	
4.00	5.10	54684	501017	24 to 100	■		■							

0.50mm Pitch SMT Board-to-Board Connectors

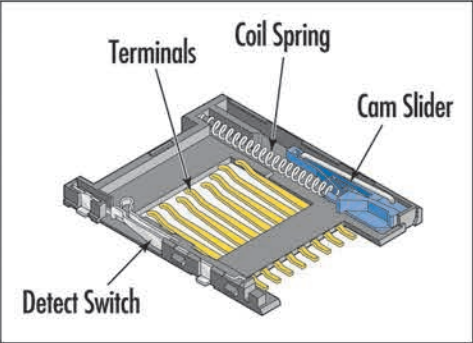
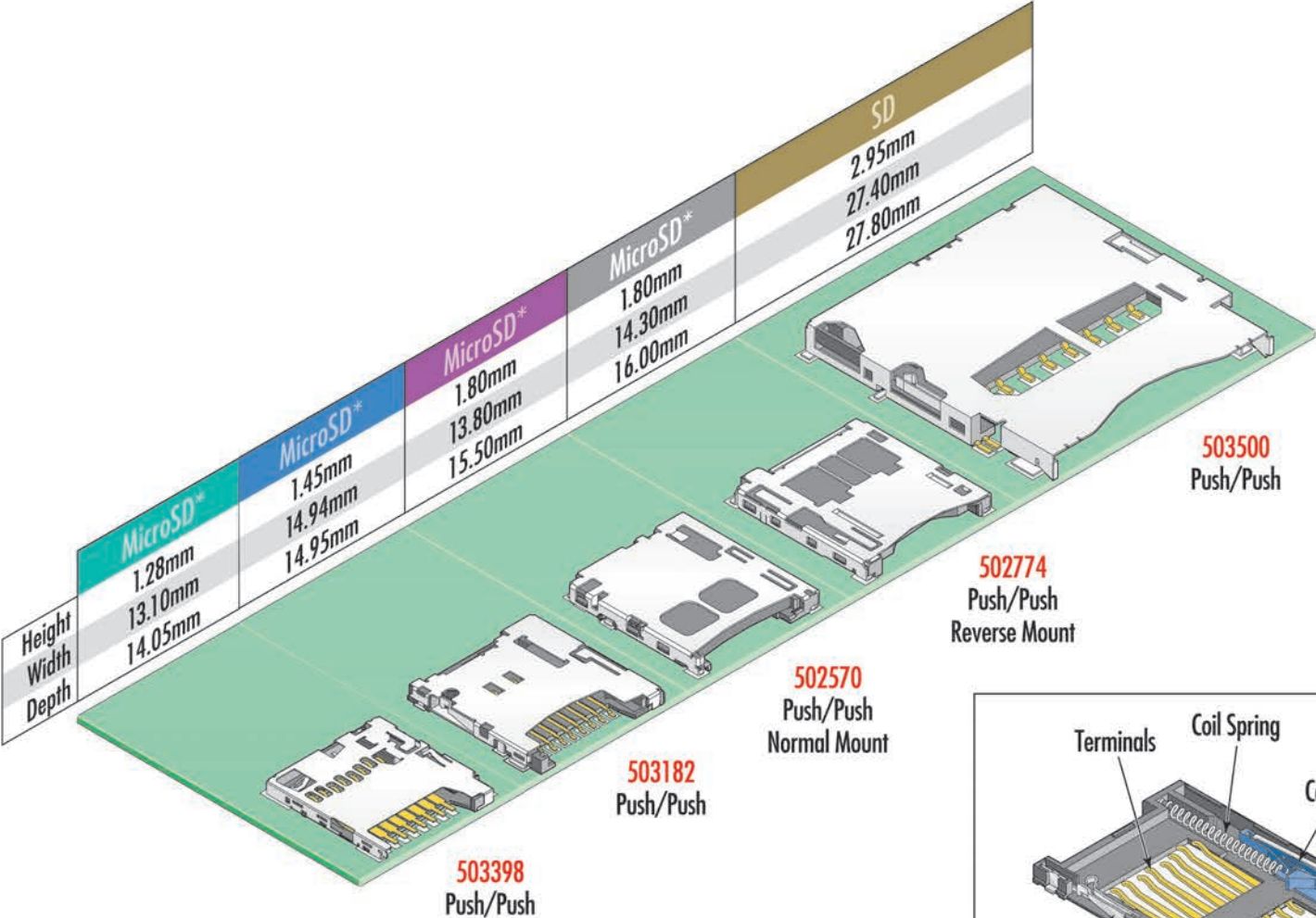
1.50	6.00	54722	55560	16 to 80	■		■							
2.00	6.00	54363	55650	20 to 60	■		■			■				
2.50	5.30	54102	53885 /500334	16 to 70	■		■							
3.00	5.40	52991	53748	20 to 80	■		■							■
4.00	5.40	52991	53916 /501920	20 to 80	■		■							■

0.635mm Pitch SMT Board-to-Board Connectors

6.00	6.40	52885	55091	20 to 160	■		■			■				■
7.00	6.40	52885	53625	30 to 240	■		■			■				■
8.00	6.40	52885	53647	20 to 160	■		■			■				■
9.00	6.40	52885	53649	30 to 100	■		■			■				■
10.00	6.40	52885	53627	20 to 140	■		■			■				■
12.00	6.40	52901	55091	20 to 140	■		■			■				■
13.00	6.40	52901	53625	30 to 140	■		■			■				■
14.00	6.40	52901	53647	20 to 140	■		■			■				■
15.00	6.40	52901	53649	30 to 100	■		■			■				■
16.00	6.40	52901	53627	20 to 140	■		■			■				■

0.80mm Pitch SMT Board-to-Board Connectors

4.70	5.10	52465	53309	10 to 40			■						■	
4.50	5.10	52465	53307	10 to 40			■							



MicroSD* — with shell removed,
Typical Push/Push Actuator

* MicroSD is a trademark of SD Card Association

Memory Card Connectors

Height (mm)	Depth (mm)	Width (mm)	Order No.	Circuits	Normal Mounting Style (Easy PCB Assembly)	Push-Push Actuator (User Friendly Design)	Detect Switch Feature (Card Presence Verification)
-------------	------------	------------	-----------	----------	---	---	--

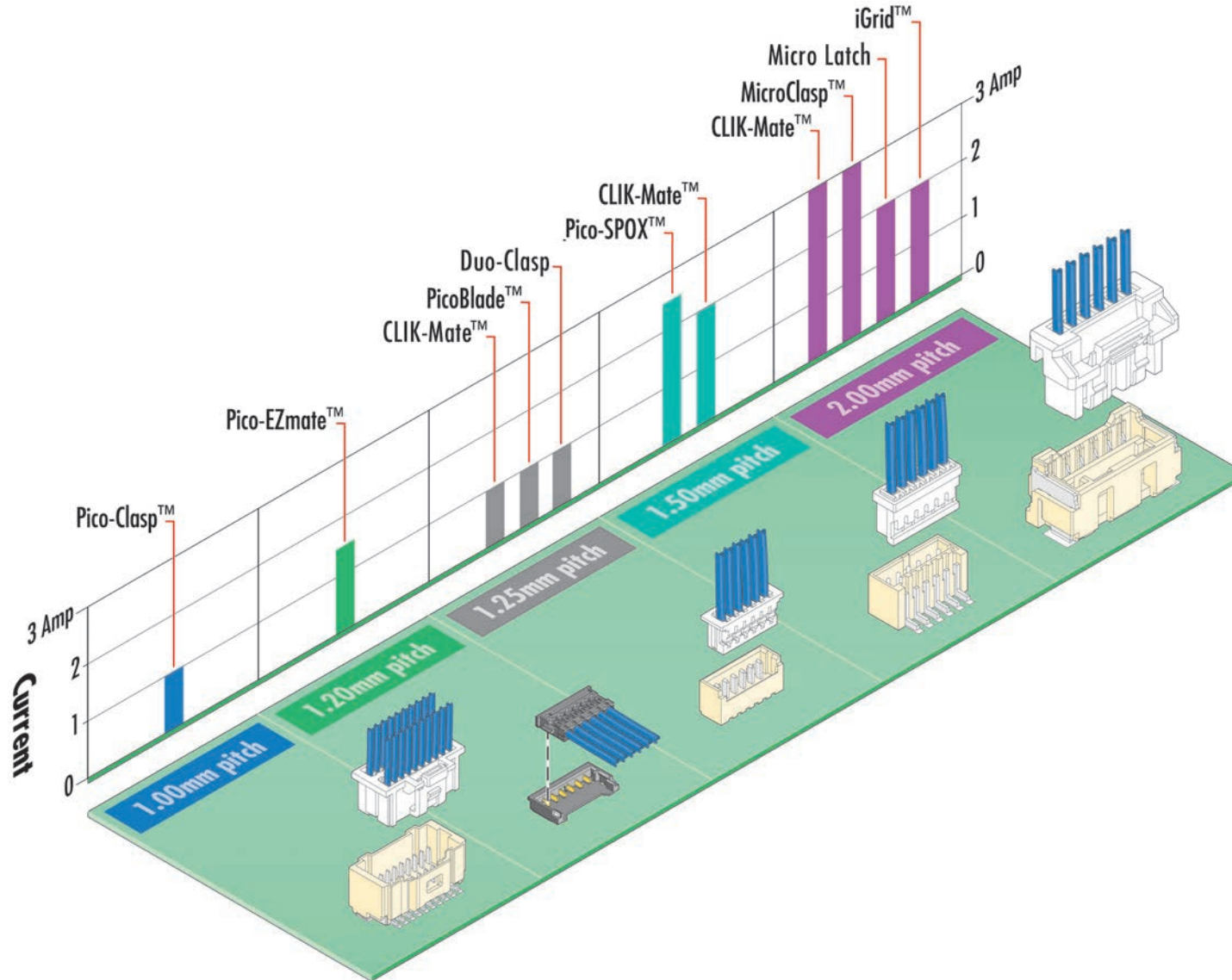
1.10mm Pitch microSD* Memory Card Connectors

1.28	13.35	13.10	503398-1892	8	■	■	■
1.45	15.67	14.94	503182-1852	8	■	■	■
1.80	15.50	13.80	502570-0893	8	■	■	■
1.80	16.00	14.30	502774-0891	8		■	■

2.50mm Pitch SD Memory Card Connectors

2.95	27.40	27.40	503500-0991	9	■	■	■
------	-------	-------	-------------	---	---	---	---

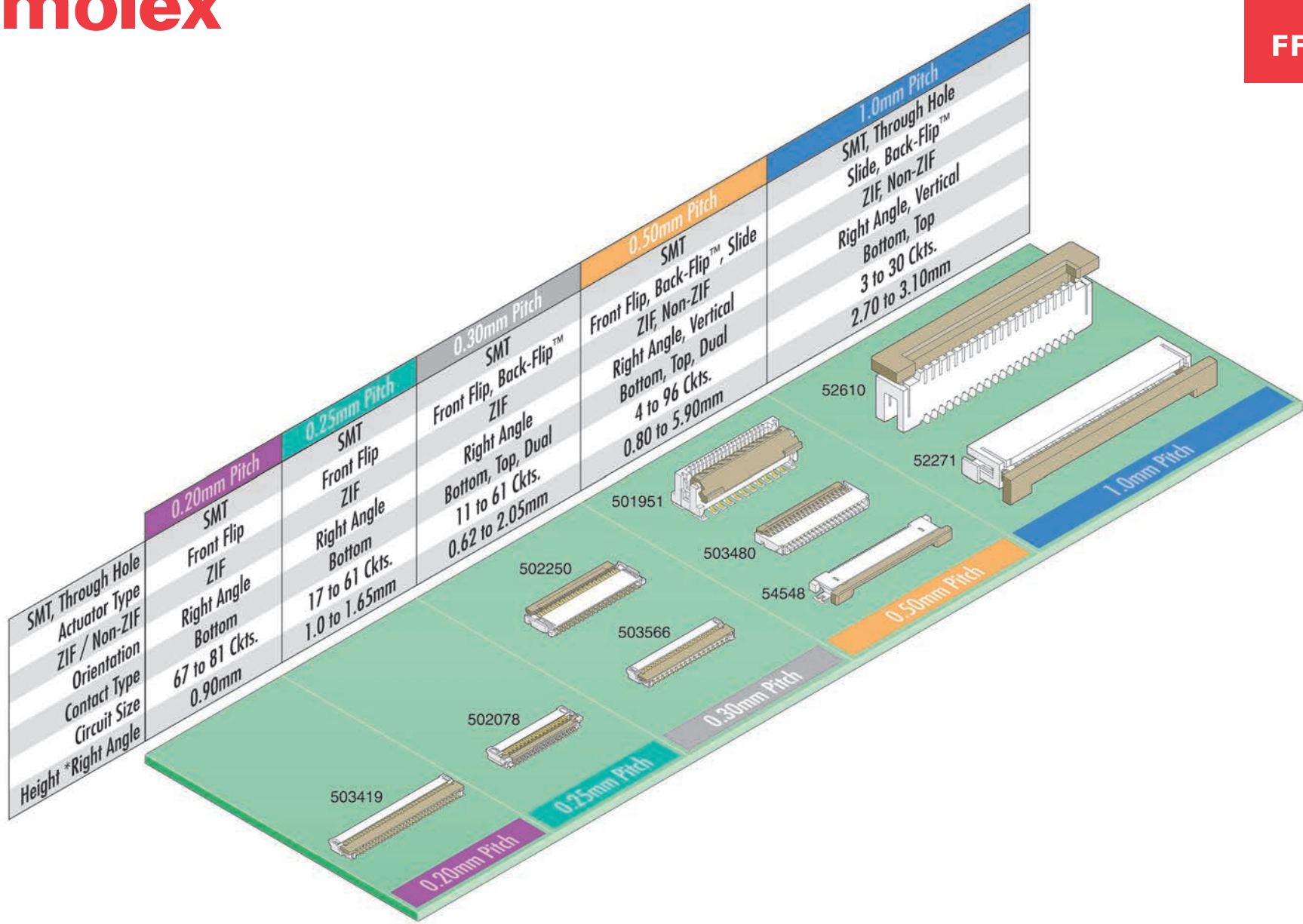
*microSD is a trademark of SD Card Association



**Product
Microminiature
Wire-to-Board
Connectors**

Microminiature Wire-to-Board Connectors

Product Family	Circuits	Rows	Contact Plating	Current (Max.)	Vertical Through Hole Header	Vertical SMT Header	Right Angle Through Hole Header	Right Angle SMT Header	Receptacle Crimp Housing	Receptacle Crimp Terminal	Wire Size (AWG)	Plug Crimp Housing	Plug Crimp Terminal
1.00mm Pitch Microminiature Wire-to-Board Connectors													
Pico-Clasp™	2 to 15	Single	Tin	1.0A	N/A	501331	N/A	501568	501330	501334-0000	28-32	N/A	N/A
	3-5 (outer lock)	Single	Tin	1.0A	N/A	501940	N/A	501953	501939	501334-0000	28-32	N/A	N/A
	20 to 50	Dual	Gold	1.0A	N/A	501190	N/A	501571	501189	501193-2000	28-32	N/A	N/A
1.20mm Pitch Microminiature Wire-to-Board Connectors													
Pico-EZmate™	2 to 6	Single	Gold	1.5A	N/A	N/A	N/A	78171	78172	78172-04XX	28-30	N/A	N/A
1.25mm Pitch Microminiature Wire-to-Board Connectors													
PicoBlade™	2 to 15	Single	Tin	1.0A	53047	53398	53048	53261	51021	50079-8000	26-28	51047-XX00	50125-8000
										50058-8000	28-32	51047-XX00	50133-8000
CLIK-Mate™	2 to 15	Single	Tin	1.0A	N/A	502382	N/A	502386	502380	502381-0000	26-28	N/A	N/A
DuoClasp	20 to 40	Dual	Gold	1.0A	N/A	501931	N/A	502046	503110	501930	26-28	N/A	N/A
1.50mm Pitch Microminiature Wire-to-Board Connectors													
CLIK-Mate™	2 to 15	Single	Tin	2.0A	503159	502584	503175	502585	502578	502579-0000	24-28	N/A	N/A
	8 to 32	Dual	Tin	1.0A/2.0A	N/A	503154	N/A	503148	503149		24-28	N/A	N/A
PicoSpox	2 to 15	Single	Tin	2.5A	N/A	87437	N/A	87438	87439	87421	24-30	N/A	N/A
2.00mm Pitch Microminiature Wire-to-Board Connectors													
MicroClasp™	2 to 15	Single	Tin	3.0A	55932	N/A	55935	N/A	51382	56134-9000	22-28	N/A	N/A
	20 to 40	Dual	Tin	3.0A	N/A	55763	N/A	N/A	51242	56134-9000	22-28	N/A	N/A
	8 to 40	Dual	Tin	3.0A	55917	N/A	55959	N/A	51353	56134-9000	22-28	N/A	N/A
Micro-Latch™	2 to 15	Single	Tin	2.0A	53253	N/A	53254	N/A	51065	50212-8X00	24-30	N/A	N/A
CLIK-Mate™	4 to 15	Single	Tin	3.0A	N/A	502443	N/A	502494	502439	502438-0000	22-26	N/A	N/A
iGrid™	10 to 40	Dual	Tin	2.0A	501645	N/A	501876	N/A	501646	501647-1000	22-26	N/A	N/A
										501648-1000	26-28	N/A	N/A
Board-In	2 to 15	Single	Tin	2.0A	N/A	N/A	N/A	N/A	N/A	N/A	26-30	51015	50034
2.50mm Pitch Microminiature Wire-to-Board Connectors													
Mini-Latch™	2 to 15	Single	Tin	3.0A	5045	N/A	5046	N/A	51191	50802-8000	22-28	5240	0870-0102
Board-In	2 to 16	Single	Tin	4.0A	N/A	N/A	N/A	N/A	N/A	N/A	20-24	51035	50097
4.00mm Pitch Microminiature Wire-to-Board Connectors													
Board-In	2 to 15	Single	Tin	5.0A	N/A	N/A	N/A	N/A	N/A	N/A	18-22	51036	50098
Stand-alone Strain Relief Terminal													
Board-In	N/A	N/A	Tin	Wire Dependent	N/A	N/A	N/A	N/A	N/A	N/A	18-22	N/A	5298



FFC/FPC Connectors

					Contact Type			Actuator Type			Plating Type		Other	
Height (mm)	Depth (mm)	Series	FPC Thickness (mm)	Circuits	Top Contact Style	Bottom Contact Style	Dual Contact Style (Better Design Flexibility)	Front Flip Actuator (Smaller PCB Footprint)	BackFlip™ Actuator (Ease of Use)	Push-Pull Actuator - Basic Solutions	Gold Contact Plating (Improve Reliability)	Tin or Tin Bismuth, Sn, SnBi, SnAgBi Contact Plating (Low Cost)	Flex Circuit Alignment Style (Locking and Retention)	Space Available Under FPC (Maximize PCB Area)

0.20mm Pitch SMT FFC/FPC Connectors

0.90	2.85	503419	0.20	67,71		■		■			■		Ears	
------	------	--------	------	-------	--	---	--	---	--	--	---	--	------	--

0.25mm Pitch SMT FFC/FPC Connectors

1.00	2.75 2.98	502078	0.20	13 to 61		■		■			■			
1.65	2.98	503320	0.20	25 to 41		■		■			■			■

0.30mm Pitch SMT FFC/FPC Connectors

0.90	4.19	502250	0.20	17 to 51			■		■		■		Notch	
0.95	2.85	503566	0.20	9 to 51		■		■			■		Ears	
1.15	3.80	502598	0.20	23 to 51			■		■		■			
1.20	4.60	503425	0.20	61,75			■		■		■		Notch	
1.80	3.85	501912	0.20	15 to 51		■		■			■			■

0.50mm Pitch SMT FFC/FPC Right Angle Connectors

0.80	3.20	501461	0.12	4 to 8		■			■		■		Notch	
1.00	4.00	503480	0.30	4 to 32			■		■		■			
1.20	4.05	51281	0.30	5 to 26			■				■			
1.20	3.85	54548	0.30	4 to 26		■					■			
1.20	3.85	54550	0.30	4 to 26	■					■	■			
2.00	5.20	52435	0.30	21 to 30	■					■	■			
2.00	5.20	52437	0.30	21 to 30		■				■	■			
2.00	5.00	52745	0.30	4 to 20	■					■	■			
2.00	5.00	52746	0.30	4 to 20		■				■	■			
2.00	5.60	54104	0.30	30 to 50	■					■	■			
2.00	5.60	54132	0.30	30 to 50		■				■	■			
2.00	5.60	503366	0.30	60,80		■		■			■		Ears	
2.50	5.30	502790	0.30	30 to 80		■		■			■		Ears	
4.85	8.00	501864	0.30	30,50,80		■					■			

FFC/FPC Connectors

					Contact Type			Actuator Type			Plating Type		Other	
Height (mm)	Depth (mm)	Series	FPC Thickness (mm)	Circuits	Top Contact Style	Bottom Contact Style	Dual Contact Style (Better Design Flexibility)	Front Flip Actuator (Smaller PCB Footprint)	BackFlip™ Actuator (Ease of Use)	Push-Pull Actuator - Basic Solutions	Gold Contact Plating (Improve Reliability)	Tin, Tin Bismuth or Tin Silver Bismuth Contact Plating (Low Cost)	Flex Circuit Alignment Style (Locking and Retention)	Space Available Under FPC (Maximize PCB Area)

0.50mm Pitch FFC/FPC Vertical SMT Connectors

3.90	3.40	52559	0.30	6 to 40						■	■			
4.05	4.50	501951	0.30	20 to 70				■			■			
7.45	4.55	501786	0.30	30,50,80							■			

1.00mm Pitch FFC/FPC Right Angle SMT Connectors

2.70	7.60	52207	0.30	3 to 30	■					■	■	■		
3.00	7.40	52271	0.30	4 to 30		■				■	■	■		
3.10	6.80	52852	0.30	4 to 30		■						■		
3.10	6.80	52793	0.30	4 to 30	■							■		

1.00mm Pitch FFC/FPC Vertical SMT Connectors

5.10	4.50	52808	0.30	4 to 30								■		
5.75	4.50	52610	0.30	5 to 30						■	■	■		

1.00mm Pitch FFC/FPC Right Angle Through Hole Connectors

3.60	6.70	52807	0.30	3 to 30	■							■		
------	------	-------	------	---------	---	--	--	--	--	--	--	---	--	--

1.00mm Pitch FFC/FPC Vertical Through Hole Connectors

5.20	3.50	52030	0.30	4 to 30						■		■		
5.40	3.00	52806	0.30	3 to 30								■		

1.25mm Pitch FFC/FPC Vertical Through Hole Connectors

7.50	5.00	5597	0.30	3 to 30						■		■		
------	------	------	------	---------	--	--	--	--	--	---	--	---	--	--



SlimStack™ Board-to-Board Solutions

51338	501017
52465	501527
52885	501531
52901	501591
52991	501594
53307	501745
53309	502426
53625	502430
53627	503105
53647	503108
53649	503304
53748	503308
54102	503376
54363	503460
54552	503489
54684	503548
54722	503552
55091	503772
55560	503776
55650	53885/500334
55909	53916/501920
500913	

FFC/FPC Connector Solutions

51281	54548
52030	54550
52207	503419
52271	501461
52435	501786
52437	501864
52559	501912
52610	501951
52745	502078
52746	502250
52793	502598
52806	502790
52807	503320
52808	503366
52852	503425
54104	503480
54132	503566

Memory Card Solutions

503182	503500
503398	502570
502774	

Microminiature Wire-to-Board Solutions

5046	501189
5045	501190
5241	501193
5298	501330
50058	501331
50079	501334
50098	501568
50125	501571
50133	501645
50212	501646
50802	501647
51021	501648
51036	501876
51047	501930
51065	501931
51191	501939
51242	501940
51353	501953
51382	502046
53047	502380
53048	502381
53253	502382
53254	502386
53261	502438
53398	502439
55763	502443
55917	502494
55932	502578
55935	502579
55959	502584
56134	502585
78171	503110
78172	503148
87437	503149
87438	503154
87439	503159
87421	503175