

ORDERING GUIDE



1 Series	MNPO Metal Nano Pin Offset	MNSO Metal Nano Socket Offset
2 Number Of Contacts	09 15 21 25 31 37 51 65 69 85	
3 Termination Type	FF Flex Tail	
4 Shell Material & Finish	N Aluminum Shell, Electroless Nickel Plated B Aluminium Shell, Black Anodized T Titanium Shell, Unplated	CD Aluminium shell, Cadmium Plated S Stainless Steel Shell, Passivated
5 Common Options	ETH End Threaded Hole, #0-80 NTH Non-Threaded Holes For Mounting To The Board YY Non Standard Hardware (threaded holes, thumb screws, #2-56 screw) HT High Temp. Epoxy CS Customer Supplied Material	EJS End Jack Screw RH RoHS Compliant
6 Mod Codes	M10 Keyed M50 Space Grade Nano-D, SPT1	M30 Ground Spring M53 Space Grade Nano-D, SPT2
7 Special Instructions	YYY Describe anything that is not covered in standard options	

DUAL ROW FLEX TAIL (TYPE FF)

Flex Tail Bi-Lobe[®] nanos protect connectivity in critical applications with a low-profile, ruggedized design that serves well in high-reliability environments. The contacts are arranged on .025" (.64 mm) centerlines and the SMT tails are formed in an hourglass shape that allows a double-sided flex circuit to slide between the two rows. Spring tension holds the flex in place during the soldering process. They feature Omnetics' gold-plated Flex Pin contact system. These durable, lightweight connectors serve the most demanding applications and intermate with Omnetics QPL versions of MIL-DTL-32139. They are available with retention screws for a positive lock and come in standard sizes ranging from 9 to 85 positions. Custom configurations are also available.



Electro-Mechanical Specifications

TYPE	PERFORMANCE
Durability	> 2000 Mating Cycles min
Temperature	-55°C to +125 °C (200 °C w/HTE)
Current rating	1 Amp per contact
Voltage Rating (DWV)	250 VAC RMS Sea Level
Insulation Resistance	5,000 Megohms @ 100 VDC
Shock	100 g's discontinuity < 10 nanoseconds
Vibration	20 g's discontinuity < 10 nanoseconds
Thermal Vacuum Outgassing	1.0% max TML, 0.1% VCM
Contact Resistance	71 milliohms (71 mV) max @ 1 Amp
Mating/Unmating Force	2.5 oz. (.71g) typical per contact

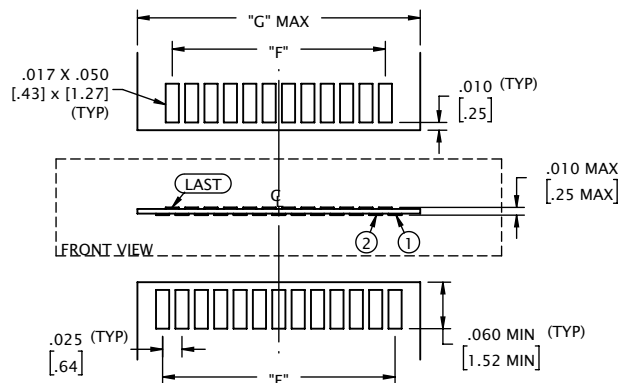
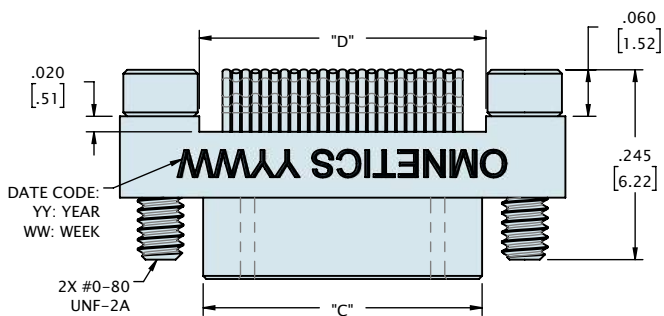
Material Specifications

TYPE	PERFORMANCE
Contact	Copper Alloy Per MIL-DTL-32139
Contact Finish	Gold per ASTM B488, Type II, Class 1.27, Code C Over Nickel Underplate
Insulator	Thermoplastic per MIL-M-24519
Encapsulant	Epoxy

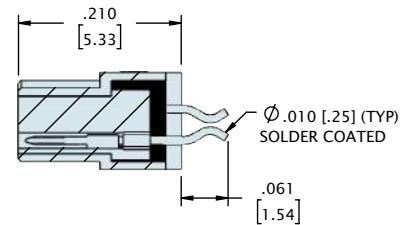
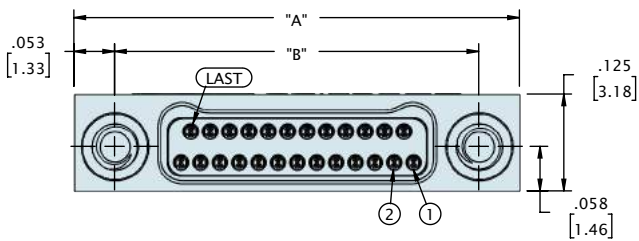
Shell Options

TYPE	PERFORMANCE
Aluminum 6061	Electroless Nickel per SAE-AMS-2404
Stainless Steel, 300 Series	Passivated per SAE-AMS-2700

DUAL ROW FLEX TAIL (TYPE FF)



SUGGESTED PAD LAYOUT

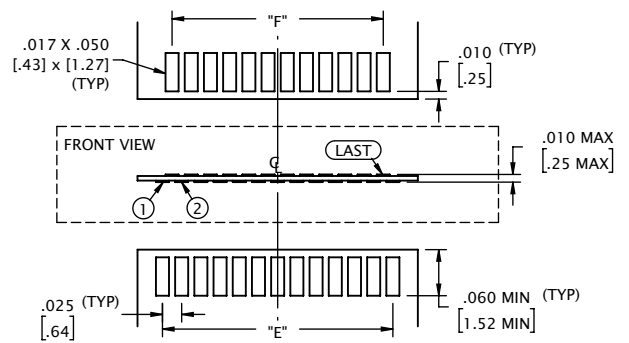
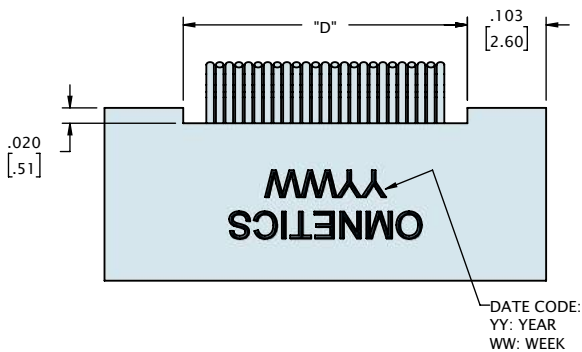


JACKSCREW NOT SHOWN FOR CLARITY

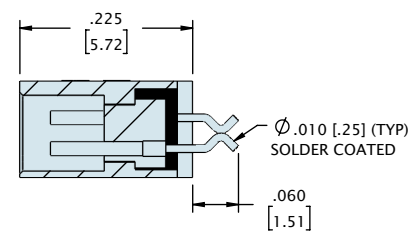
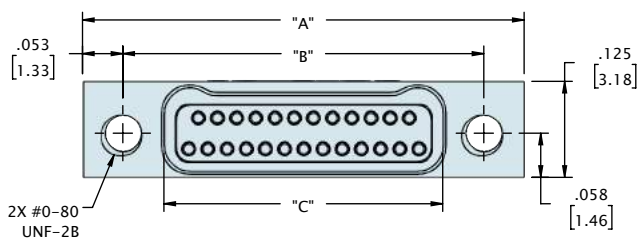
CONTACTS	"A"	"B"	"C"	"D"	"E"	"F"	"G"
09	.375 [9.53]	.270 [6.86]	.160 [4.06]	.170 [4.32]	.100 [2.54]	.075 [1.90]	.165 [4.19]
15	.450 [11.43]	.345 [8.76]	.235 [5.97]	.245 [6.22]	.175 [4.45]	.150 [3.81]	.240 [6.10]
21	.525 [13.34]	.420 [10.67]	.310 [7.87]	.320 [8.13]	.250 [6.35]	.225 [5.71]	.315 [8.00]
25	.575 [14.61]	.470 [11.94]	.360 [9.14]	.370 [9.40]	.300 [7.62]	.275 [6.98]	.365 [9.27]
31	.650 [16.51]	.545 [13.84]	.435 [11.05]	.445 [11.30]	.375 [9.52]	.350 [8.89]	.440 [11.18]
37	.725 [18.42]	.620 [15.75]	.510 [12.95]	.520 [13.21]	.450 [11.43]	.425 [10.79]	.515 [13.08]
51	.900 [22.86]	.795 [20.19]	.685 [17.40]	.695 [17.65]	.625 [15.87]	.600 [15.24]	.690 [17.53]
65	1.075 [27.31]	.970 [24.64]	.860 [21.84]	.870 [22.10]	.800 [20.32]	.775 [19.68]	.865 [21.97]
69	1.125 [28.58]	1.020 [25.91]	.910 [23.11]	.920 [23.37]	.850 [21.59]	.825 [20.96]	.915 [23.24]
85	1.325 [33.66]	1.220 [30.99]	1.110 [28.19]	1.120 [28.45]	1.050 [26.67]	1.025 [26.03]	1.115 [28.32]

DIMENSIONS IN [] ARE IN MILLIMETERS AND ARE FOR REFERENCE ONLY

DUAL ROW FLEX TAIL (TYPE FF)



SUGGESTED PAD LAYOUT



CONTACTS	"A"	"B"	"C"	"D"	"E"	"F"
09	.375 [9.53]	.270 [6.86]	.163 [4.14]	.170 [4.32]	.100 [2.54]	.075 [1.91]
15	.450 [11.43]	.345 [8.76]	.238 [6.05]	.245 [6.22]	.175 [4.45]	.150 [3.81]
21	.525 [13.34]	.420 [10.67]	.313 [7.95]	.320 [8.13]	.250 [6.35]	.225 [5.72]
25	.575 [14.61]	.470 [11.94]	.363 [9.22]	.370 [9.40]	.300 [7.62]	.275 [6.99]
31	.650 [16.51]	.545 [13.84]	.438 [11.13]	.445 [11.30]	.375 [9.53]	.350 [8.89]
37	.725 [18.42]	.620 [15.75]	.513 [13.03]	.520 [13.21]	.450 [11.43]	.425 [10.80]
51	.900 [22.86]	.795 [20.19]	.688 [17.48]	.695 [17.65]	.625 [15.88]	.600 [15.24]
65	1.075 [27.31]	.970 [24.64]	.863 [21.92]	.870 [22.10]	.800 [20.32]	.775 [19.69]
85	1.325 [33.66]	1.220 [30.99]	1.113 [28.27]	1.120 [28.45]	1.050 [26.67]	1.025 [26.04]

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