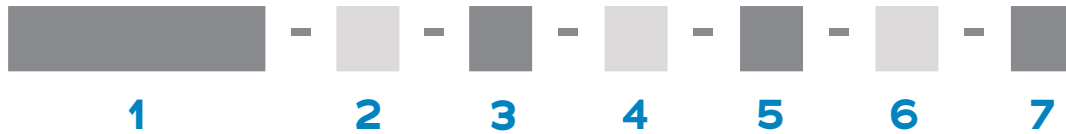


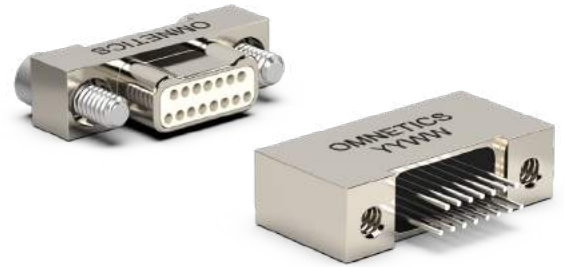
## ORDERING GUIDE



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

## DUAL ROW STRAIGHT TAIL (TYPE DD)

The Dual Row Bi-Lobe<sup>®</sup> nanos are tiny and powerful, with ruggedized features that make them suitable for high-reliability applications in medical, military, and other rigorous environments. They feature straight tails (integral or crimped) for vertical thru-hole mounting to fine pitch flex circuits. Straight solid tails are commonly used in ultra-fine wire wrap terminations, such as in electrophysiology applications. The connectors are designed on .025" (.64 mm) centerlines and feature Omnetics' gold-plated Flex Pin contact system. 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

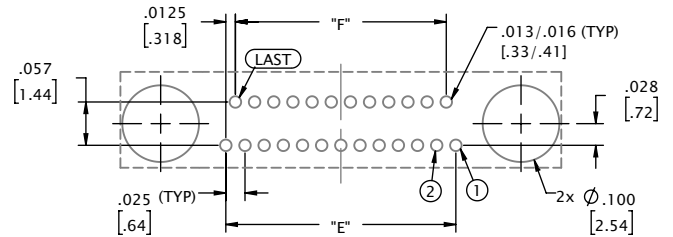
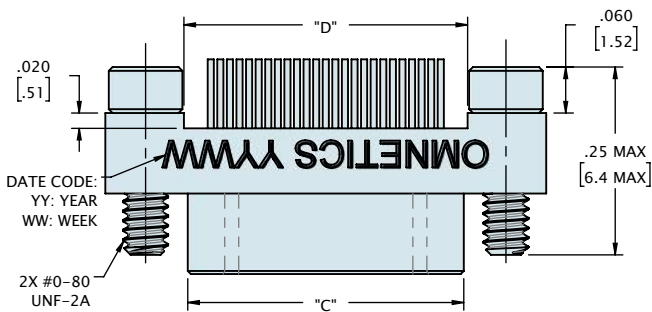
### Material Specifications

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

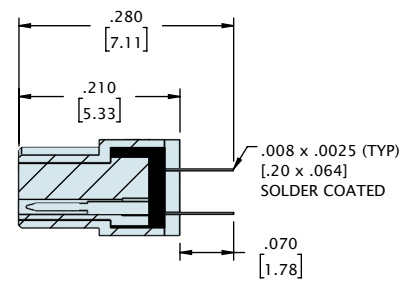
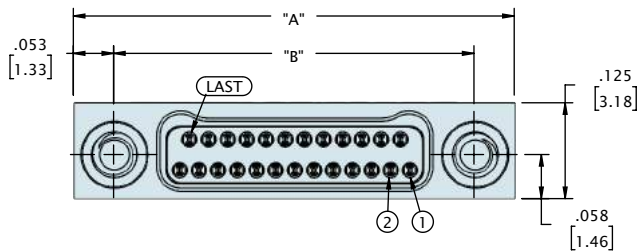
### Shell Options

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

# DUAL ROW STRAIGHT TAIL (TYPE DD)



**SUGGESTED PAD LAYOUT  
(VIEW FROM MOUNTING SIDE OF BOARD)**

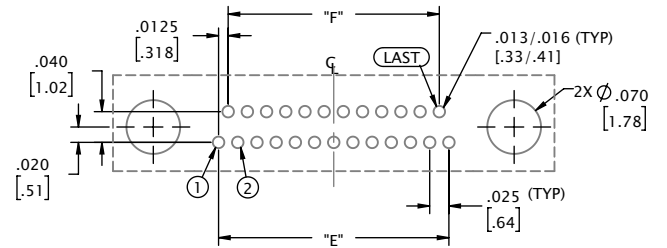
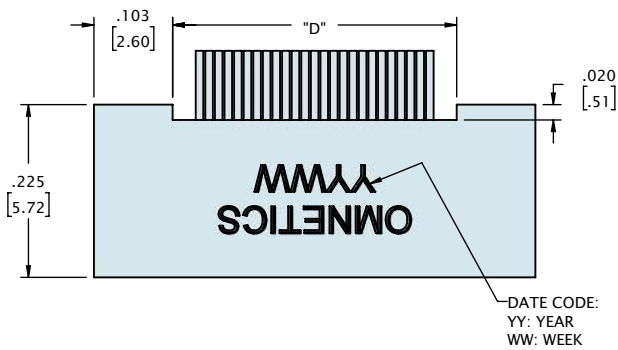


JACKSCREW NOT SHOWN FOR CLARITY

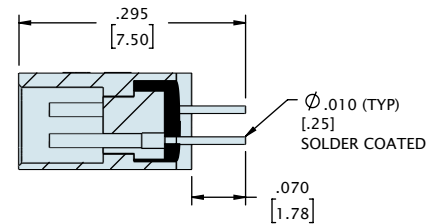
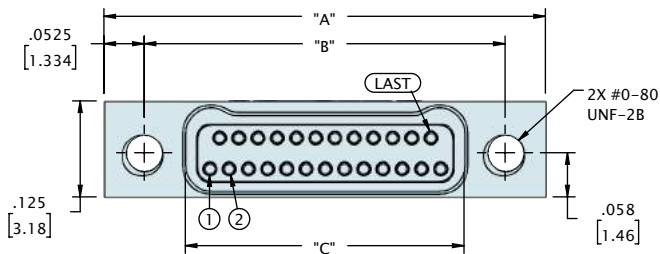
CONTACTS	"A"	"B"	"C"	"D"	"E"	"F"
09	.375 [9.53]	.270 [6.86]	.160 [4.06]	.170 [4.32]	.100 [2.54]	.075 [1.91]
15	.450 [11.43]	.345 [8.76]	.235 [5.97]	.245 [6.22]	.175 [4.45]	.150 [3.81]
21	.525 [13.34]	.420 [10.67]	.310 [7.87]	.320 [8.13]	.250 [6.35]	.225 [5.72]
25	.575 [14.61]	.470 [11.94]	.360 [9.14]	.370 [9.40]	.300 [7.62]	.275 [6.99]
31	.650 [16.51]	.545 [13.84]	.435 [11.05]	.445 [11.30]	.375 [9.53]	.350 [8.89]
37	.725 [18.42]	.620 [15.75]	.510 [12.95]	.520 [13.21]	.450 [11.43]	.425 [10.80]
51	.900 [22.86]	.795 [20.19]	.685 [17.40]	.695 [17.65]	.625 [15.88]	.600 [15.24]
65	1.075 [27.31]	.970 [24.64]	.860 [21.84]	.870 [22.10]	.800 [20.32]	.775 [19.69]
85	1.325 [33.66]	1.220 [30.99]	1.110 [28.19]	1.120 [28.45]	1.050 [26.67]	1.025 [26.04]

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

# DUAL ROW STRAIGHT TAIL (TYPE DD)



**SUGGESTED PAD LAYOUT**  
**(VIEW FROM MOUNTING SIDE OF BOARD)**



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]

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