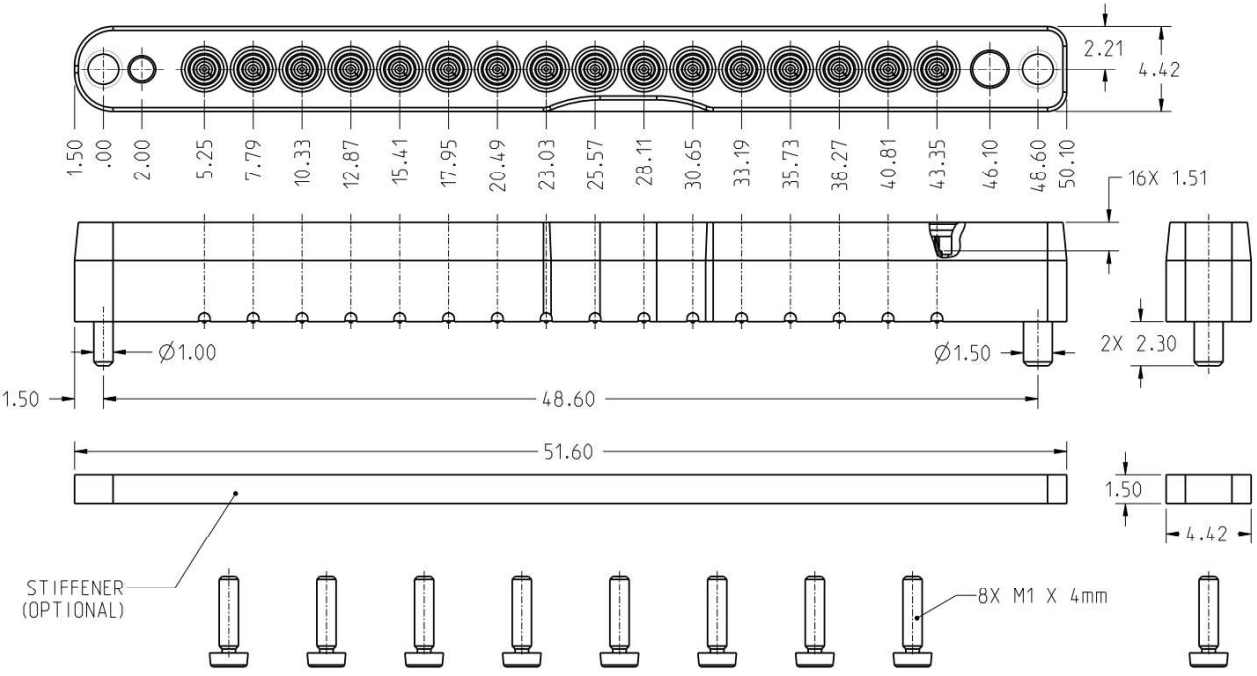
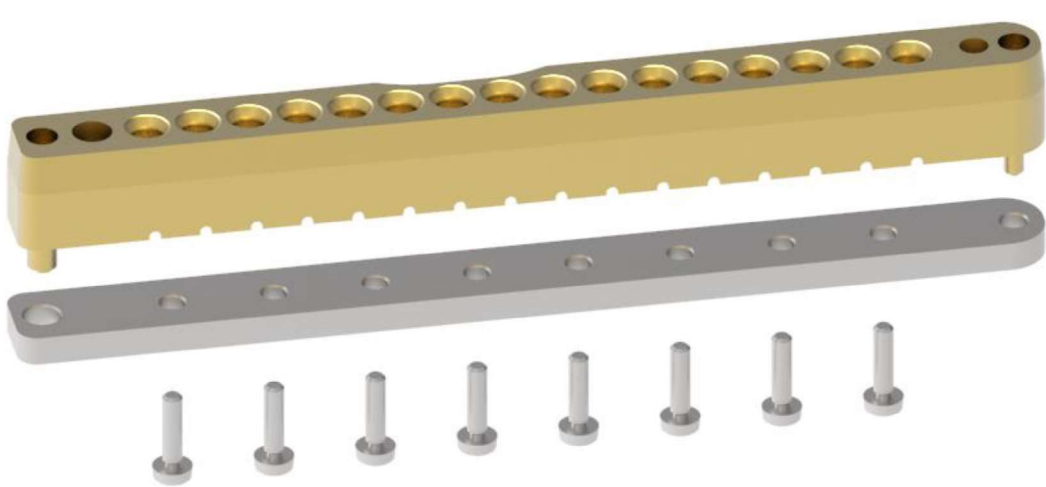


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08/01/2022

Technical Data Sheet		Rosenberger
SMPX	Vertical Male PCB Connector	W2S101-40ML3-XX
W2S101-40ML3-16  		
Rosenberger North America Akron, LLC P.O. Box 309 Akron, PA USA 17501 www.rosenbergerna.com		Tel. : +1.717.859.8900 Fax : +1.717.859.7044 Email : info@rosenbergerna.com
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Technical Data Sheet		Rosenberger
SMPX	Vertical Male PCB Connector	W2S101-40ML3-XX
W2S101-40ML3-08 Top view dimensions (mm): 1.50, .00, 2.00, 5.25, 7.79, 10.33, 12.87, 15.41, 17.95, 20.49, 23.03, 25.78, 28.28, 29.78. Overall width: 29.78. Pin pitch: 2.21. Pin diameter: 4.42. Side view dimensions (mm): 1.50, 28.28, 31.28. Pin diameter: Ø1.00, Ø1.50. Mounting hole diameter: 8X 1.51. Mounting hole pitch: 2X 2.30. Detail view dimensions (mm): 1.50, 4.42. STIFFENER (OPTIONAL) 4X M1 X 4mm 3D CAD model showing the connector assembly with a yellow housing, grey base, and four screws.		
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Technical Data Sheet

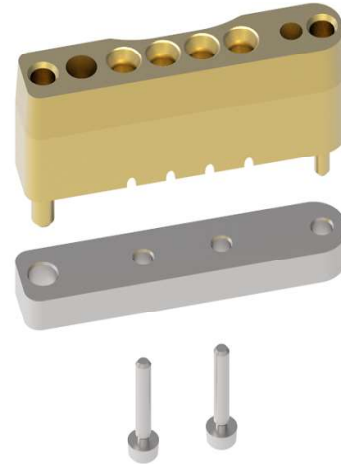
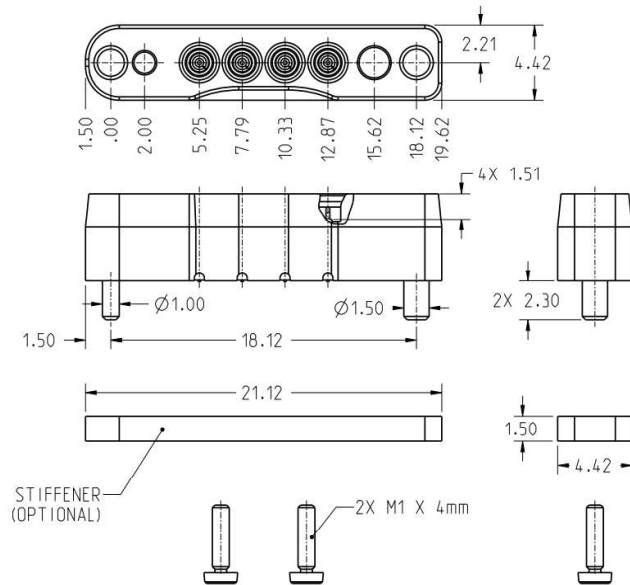
Rosenberger

SMPX

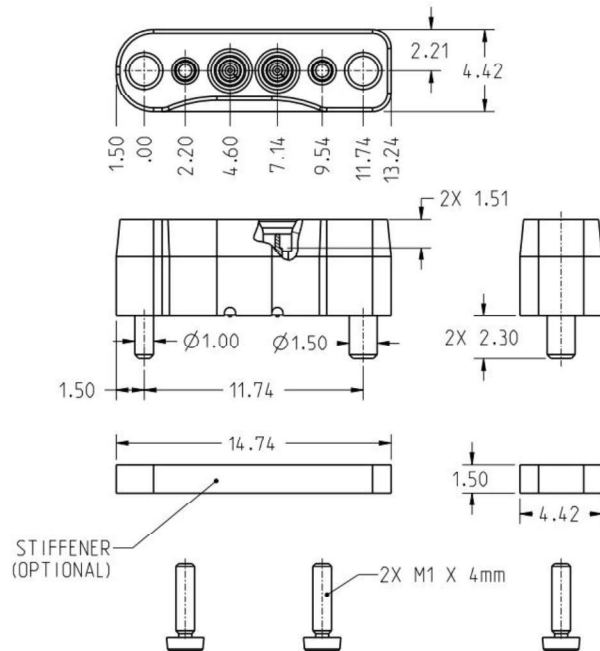
Vertical Male PCB Connector

W2S101-40ML3-XX

W2S101-40ML3-04



W2S101-40ML3-02



All dimensions are in mm

Unless otherwise specified tolerances are as follows: .XX±.025; XXX±.012

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P.O. Box 309 Akron, PA USA 17501
www.rosenbergerna.com

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Fax : +1.717.859.7044
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Technical Data Sheet		Rosenberger																																																																
SMPX	Vertical Male PCB Connector	W2S101-40ML3-XX																																																																
Interface According to Rosenberger SMPX Interface standards Material and plating <table><tr><th>Connector parts</th><th>Material</th><th>Plating</th></tr><tr><td>Body</td><td>Brass per ASTM B16</td><td>Hard Gold, 6µin min over Electroless Nickel, 80µin min</td></tr><tr><td>Pin</td><td>CuBe per ASTM B196</td><td>Hard Gold, 31µin min over Electroless Nickel, 80µin min</td></tr><tr><td>Front Insulator</td><td>ULTEM® 1000 or equivalent per ASTM D5205, PEI0113</td><td></td></tr><tr><td>Back Insulator</td><td>PEEK 1000 or equivalent Per ASTM 6262</td><td></td></tr><tr><td>Stiffener (Optional)</td><td>SST per ASTM A582</td><td>Passivated</td></tr><tr><td>M1 X 4mm Screw*</td><td>SST per ASTM A582</td><td>Passivated</td></tr></table> *Note: The screw sizes can be modified to accommodate variations in board thickness. The screw sizes listed above allow for board thickness of X.XX ± X.XX Electrical data (@ STP unless otherwise specified) <table><tr><td>Impedance</td><td>50 Ω</td></tr><tr><td>Frequency</td><td>DC to 110 GHz</td></tr><tr><td>Return Loss*</td><td>≤ 15 dB at 70 GHz</td></tr><tr><td>Insertion loss</td><td>≤ 0.1 dB x √f(GHz), DC to 70 GHz</td></tr><tr><td>Insulation resistance</td><td>≥ 5 GΩ</td></tr><tr><td>Center contact resistance</td><td>≤ xx mΩ</td></tr><tr><td>Outer contact resistance</td><td>≤ xx mΩ</td></tr><tr><td>Working Voltage</td><td>500 V rms</td></tr><tr><td>RF High Potential</td><td>xxx V rms @ 5 MHz</td></tr><tr><td>RF leakage</td><td>≥ xx dB</td></tr></table> Mechanical data <table><tr><td>Mating cycles (single channel)</td><td>≤ 10000</td></tr><tr><td>Engagement force (max)</td><td>0.9 lbf [4.0 N]</td></tr><tr><td>Disengagement force (min)</td><td>1.32 lbf [5.9 N]</td></tr><tr><td>PCB Installation Cycles</td><td>100 (Typical)</td></tr></table> Environmental data <table><tr><td>Temperature range</td><td>-40°C to +120°C</td></tr><tr><td>Thermal shock</td><td>MIL-STD-202 – 107, Condition B</td></tr><tr><td>Corrosion</td><td>MIL-STD-202 – 101, Condition B</td></tr><tr><td>Vibration</td><td>MIL-STD-202 – 204, Condition B</td></tr><tr><td>Shock</td><td>MIL-STD-202 – 213, Condition A</td></tr><tr><td>Moisture resistance</td><td>MIL-STD-202 – 106, except Step 7B</td></tr><tr><td>2002/95/EC (RoHS)</td><td>compliant</td></tr></table>				Connector parts	Material	Plating	Body	Brass per ASTM B16	Hard Gold, 6µin min over Electroless Nickel, 80µin min	Pin	CuBe per ASTM B196	Hard Gold, 31µin min over Electroless Nickel, 80µin min	Front Insulator	ULTEM® 1000 or equivalent per ASTM D5205, PEI0113		Back Insulator	PEEK 1000 or equivalent Per ASTM 6262		Stiffener (Optional)	SST per ASTM A582	Passivated	M1 X 4mm Screw*	SST per ASTM A582	Passivated	Impedance	50 Ω	Frequency	DC to 110 GHz	Return Loss*	≤ 15 dB at 70 GHz	Insertion loss	≤ 0.1 dB x √f(GHz), DC to 70 GHz	Insulation resistance	≥ 5 GΩ	Center contact resistance	≤ xx mΩ	Outer contact resistance	≤ xx mΩ	Working Voltage	500 V rms	RF High Potential	xxx V rms @ 5 MHz	RF leakage	≥ xx dB	Mating cycles (single channel)	≤ 10000	Engagement force (max)	0.9 lbf [4.0 N]	Disengagement force (min)	1.32 lbf [5.9 N]	PCB Installation Cycles	100 (Typical)	Temperature range	-40°C to +120°C	Thermal shock	MIL-STD-202 – 107, Condition B	Corrosion	MIL-STD-202 – 101, Condition B	Vibration	MIL-STD-202 – 204, Condition B	Shock	MIL-STD-202 – 213, Condition A	Moisture resistance	MIL-STD-202 – 106, except Step 7B	2002/95/EC (RoHS)	compliant
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Technical Data Sheet

Rosenberger

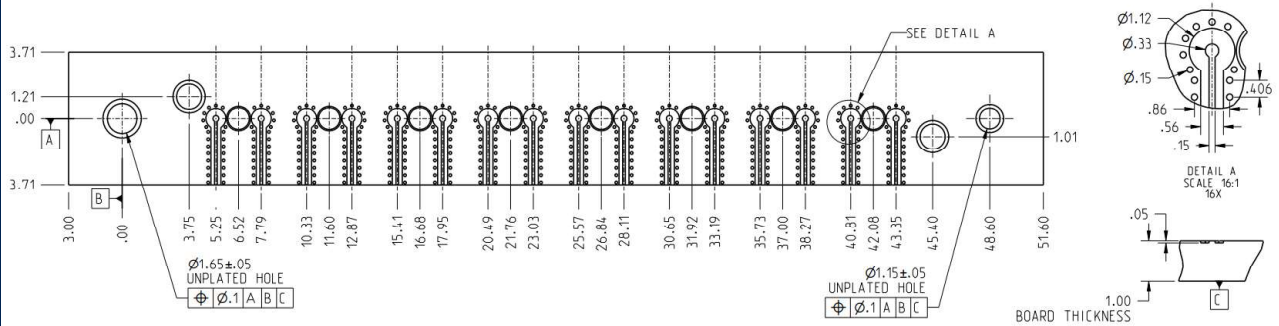
SMPX

Vertical Male PCB Connector

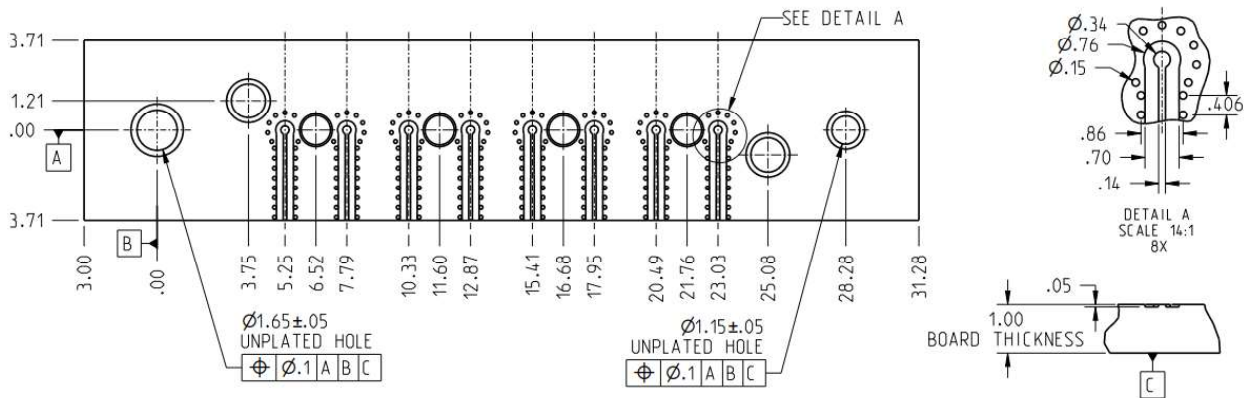
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PCB Footprint

W2S101-40ML3-16



W2S101-40ML3-08



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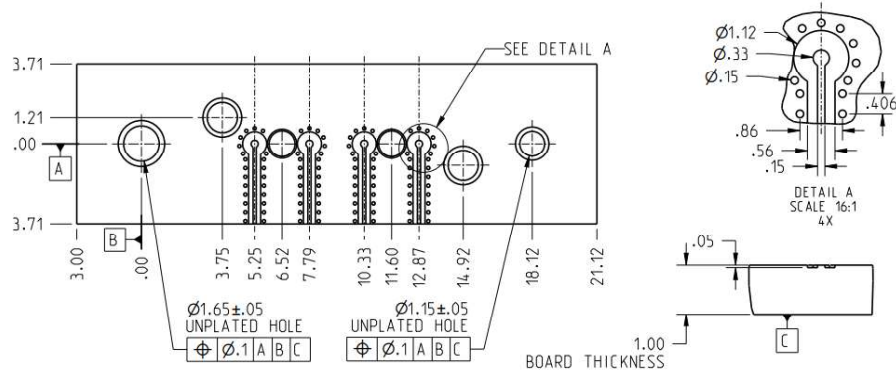
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SMPX

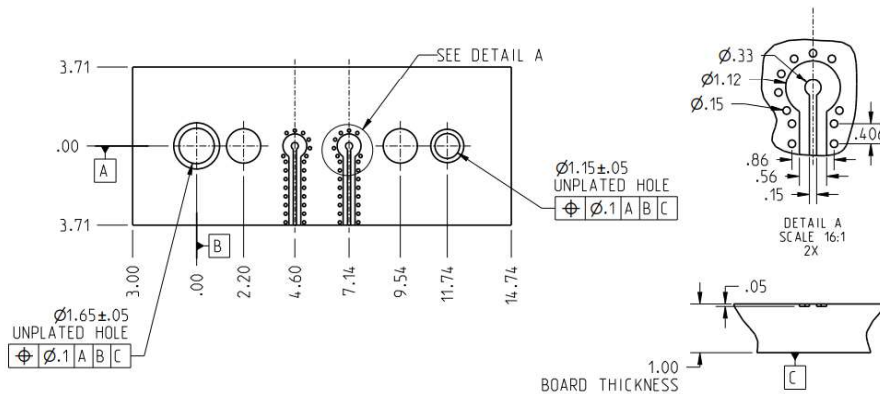
Vertical Male PCB Connector

W2S101-40ML3-XX

W2S101-40ML3-04



W2S101-40ML3-02



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Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
L. Weber	9/14/2023	E. Soubh	10/11/2023	201	Updated to SMPX	D.Hoeschen	10/28/2024
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