



All dimensions are in inches [mm]

**Interface**

According to Rosenberger WSMP™ Interface standards

**Documents**

PCB Layout B W1S204

**Material and plating**

**Connector parts**  
Body and contact **Material**  
Kovar® per ASTM F15

**Plating**  
Hard gold, 6µIN [0,15µm] min, over  
Nickel, 50µIN [1,27 µm] min

Dielectric Corning 7070 Glass

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# Technical Data Sheet

# Rosenberger

WSMP

Male Full Detent  
Edge Launch

W1S204-40ML5

## Electrical data

Impedance	50 Ω
Frequency	DC to 70 GHz
Return loss (typical)*	≥ 26 dB, DC to 26.5 GHz ≥ 19 dB, 26.5 to 65 GHz
Insertion loss	≤ 0.12 x $\sqrt{f(\text{GHz})}$ dB
Insulation resistance	≥ 3.5 x 10 <sup>3</sup> MΩ
Outer contact resistance	≤ 2.0 mΩ
Center contact resistance	≤ 6.0 mΩ
Test voltage (at sea level)	250 V rms
RF High Potential (at sea level)	150 V rms @ 5 MHz
RF-leakage	≥ -80 dB (typical mated pair)

\* Connector only, return loss in application depends decisively on PCB layout

## Mechanical data

Mating cycles	
- Full Detent	≥ 100
- Smooth Bore	≥ 500
- Ultra-Smooth Bore	≥ 500
Engagement force (typical)	
- Full Detent	2.5 lb <sub>f</sub> [11 N]
Disengagement force (typical)	
- Full Detent	4.5 lb <sub>f</sub> [20 N]

## Environmental data

Temperature range	-55°C to +165°C
Thermal shock	MIL-STD-202, Method 107, Condition B
Corrosion	MIL-STD-202, Method 101
Vibration	MIL-STD-202, Method 204, Condition D
Shock	MIL-STD-202, Method 213, Condition I
Moisture resistance	MIL-STD-202, Method 106, except Step 7B
Max soldering temperature	IEC 61760-1, +500°F [+260°C] for 10 seconds
2002/95/EC (RoHS)	compliant

## Tooling

N/A

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