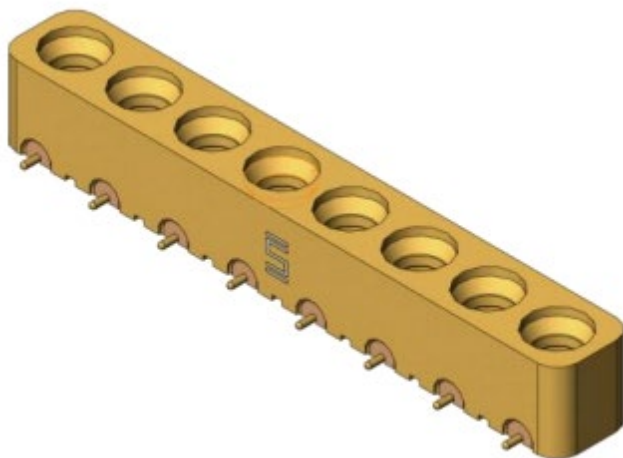




RF Characterization Report

GPPB-PF-1-08-EG-ST-SM-1N



Test Date: Aug 2022

Description
Magnum RF™ Ganged, Multi-Position SMPM Block,
Straight (Vertical), Surface Mount, 0.140" Pitch

Series: GPPB

Description: Magnum RF™ Ganged, Multi-Position SMPM Block, Straight (Vertical),
Surface Mount, 0.140" Pitch

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Series: GPPB

Description: Magnum RF™ Ganged, Multi-Position SMPM Block, Straight (Vertical),
Surface Mount, 0.140" Pitch

Test Setup Information

Scope:

Provide standing wave ratio, return loss, insertion loss and Isolation performance parameters for SMPM Plug, Magnum RF™ Ganged, Multi-Position SMPM Block.

Instrument Setup & Test Accessories:

Network Analyzer	Keysight PNA N5227B
Averaging Factor	1
Smoothing	Off
IF Bandwidth	700 Hz
Sweep Start	10 MHz
Sweep End	67 GHz
Points	6700
Test Cables	Gore 0F0CACB036.0-LF (DC to 67 GHz)

Calibration Type:

A Keysight mechanical calibration is performed using the Keysight 1.85 mm Mechanical Calibration kit.

Calibration Kit	Keysight 85058E 1.85mm Mechanical Calibration kit
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Adapter Use:

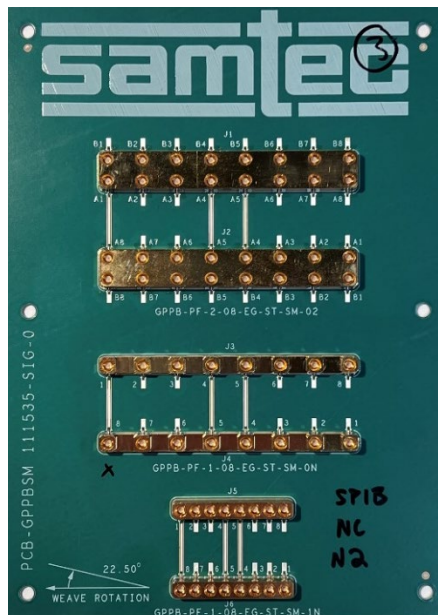
API 5299 1.85 mm Female to SMPM Female adapter was used for the measurements of GPPB-PF-1-08-EG-ST-SM-1N. The adapter effects were removed from the measurement using the Fixture Removal method.

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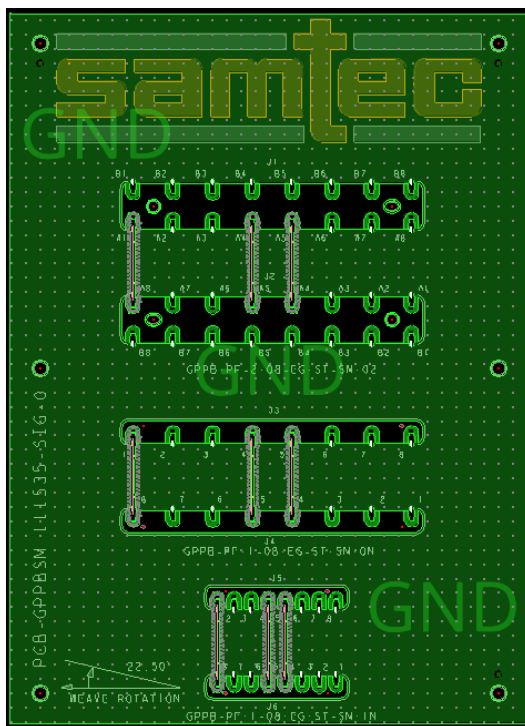
PCB-111535-SIG-0 Test Fixtures

Shown below is a photograph of the test board.



PCB-111535-SIG-0 PCB Layout

Artwork of the PCB design is shown below.



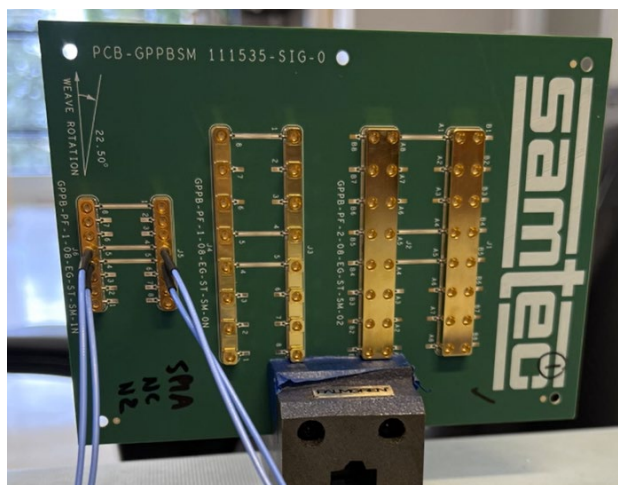
Series: GPPB

Description: Magnum RF™ Ganged, Multi-Position SMPM Block, Straight (Vertical), Surface Mount, 0.140" Pitch

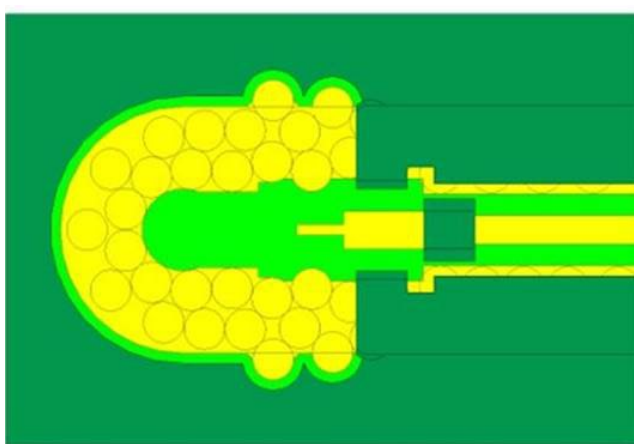
GPPB-PF-1-08-EG-ST-SM-1N Test Definition

Part Number	End 1
GPPB-PF-1-08-EG-ST-SM-1N	SMPM Plug

Connector Under Test:



A small resonance at 42GHz is visible on insertion loss plots for these connectors. This is the result of soldermask or trace resonances interacting with varying solder profiles. It is a PCB effect and not internal to the connector.



PCB Top Metal (Yellow) and Soldermask (Dark Green)

Series: GPPB

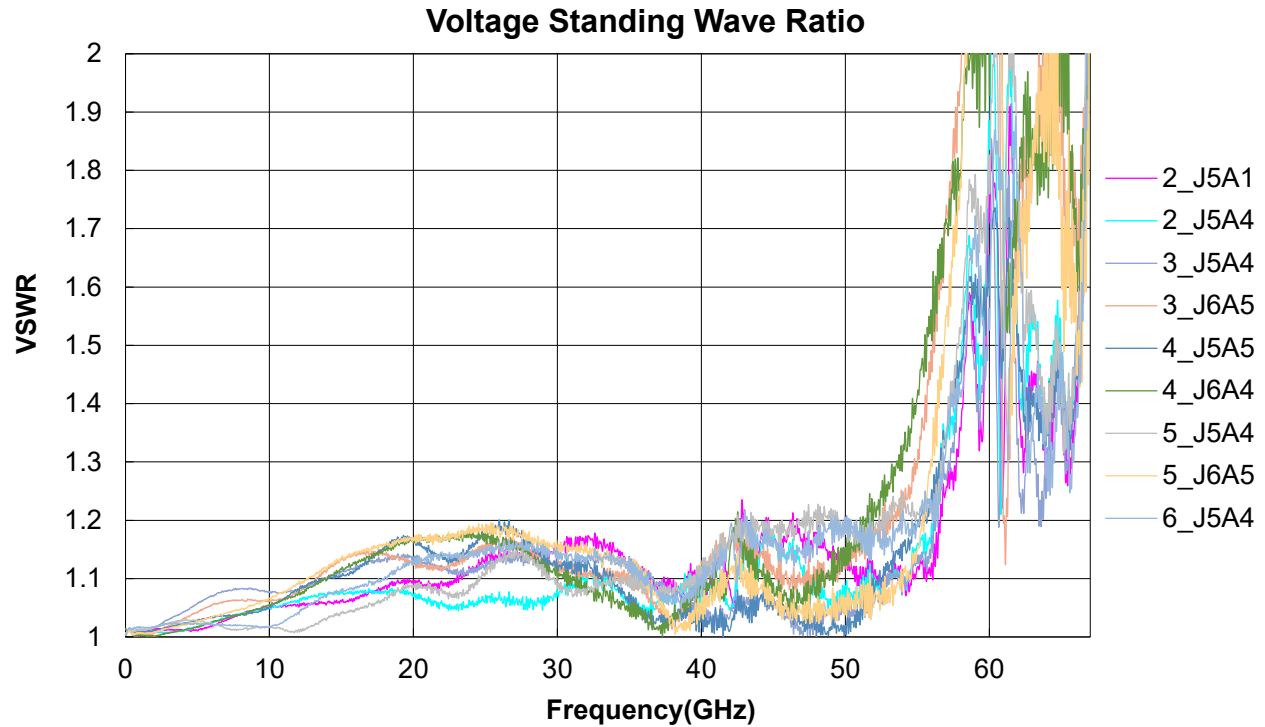
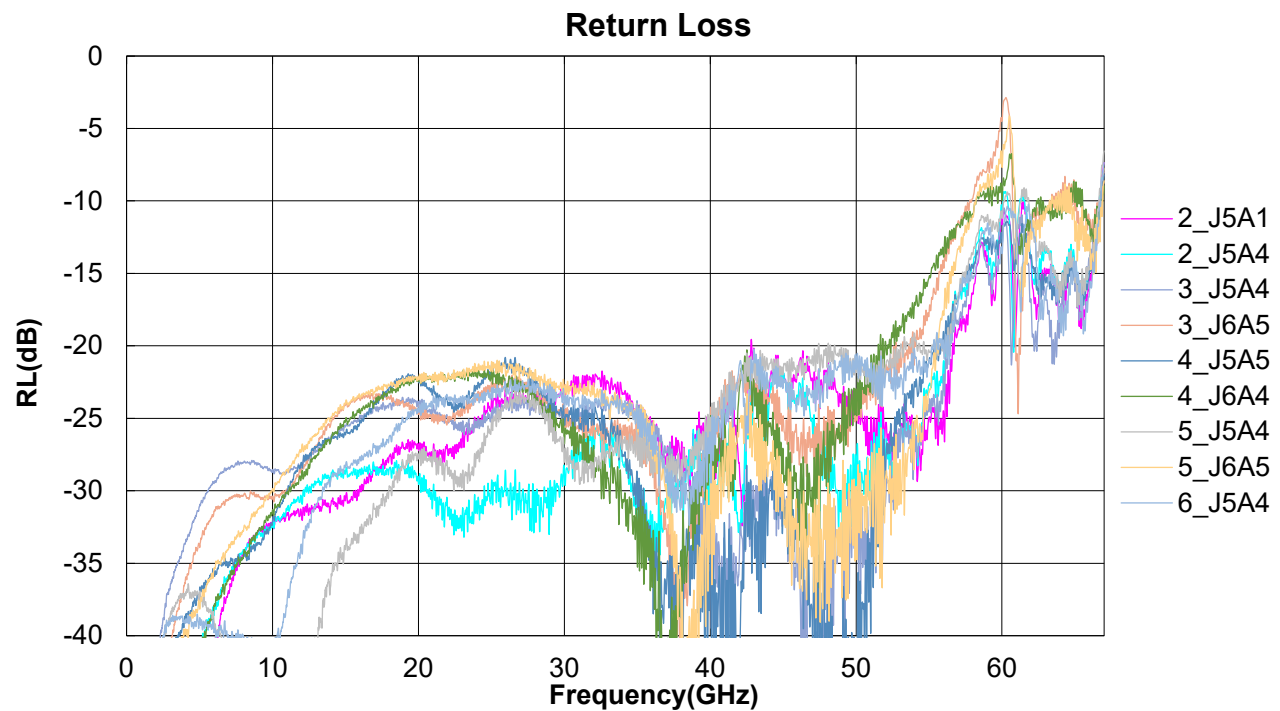
Description: Magnum RF™ Ganged, Multi-Position SMPM Block, Straight (Vertical),
Surface Mount, 0.140" Pitch

Results: GPPB-PF-1-08-EG-ST-SM-1N

The results just include GPPB-PF-1-08-EG-ST-SM-1N connector, fixture removal method remove all adapters effects.

Description: 50 Ohm SMPM Plug			
Sample	SWR	RL(dB, max)	IL(dB, min)
2_J5A1	2.00@66.77GHz	-7.36@67.00GHz	-4.92@60.76GHz
2_J5A4	2.00@60.09GHz	-7.84@66.98GHz	-6.91@60.58GHz
3_J5A4	2.00@66.79GHz	-8.00@67.00GHz	-5.26@60.40GHz
3_J6A5	2.00@58.06GHz	-2.86@60.27GHz	-5.64@60.39GHz
4_J5A5	2.00@66.79GHz	-8.21@67.00GHz	-4.21@60.54GHz
4_J6A4	2.00@58.46GHz	-6.73@60.67GHz	-4.23@60.65GHz
5_J5A4	2.00@60.32GHz	-6.56@67.00GHz	-7.42@60.56GHz
5_J6A5	2.00@58.31GHz	-4.13@60.51GHz	-7.11@60.54GHz
6_J5A4	2.00@66.79GHz	-7.36@67.00GHz	-4.60@61.22GHz

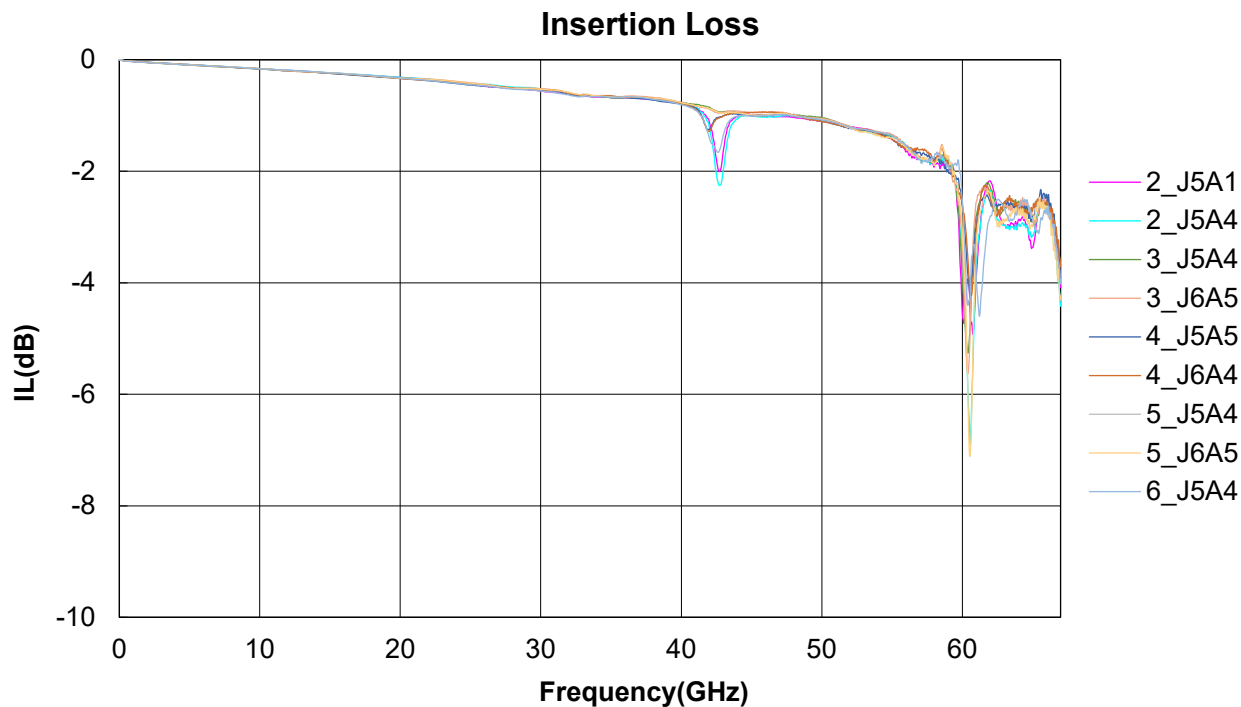
Description: 50 Ohm SMPM Plug	
Sample	Isolation (Max)
2_J5A4_J5A5	-31.60 dB@64.70GHz
3_J5A4_J5A5	-30.06 dB@64.73GHz
4_J5A4_J5A5	-31.59 dB@64.54GHz
5_J5A4_J5A5	-31.91 dB@64.67GHz
6_J5A4_J5A5	-31.21 dB@64.75GHz

Series: GPPB**Description:** Magnum RF™ Ganged, Multi-Position SMPM Block, Straight (Vertical),
Surface Mount, 0.140" PitchVSWRReturn Loss

Series: GPPB

Description: Magnum RF™ Ganged, Multi-Position SMPM Block, Straight (Vertical),
Surface Mount, 0.140" Pitch

Insertion Loss



Isolation

