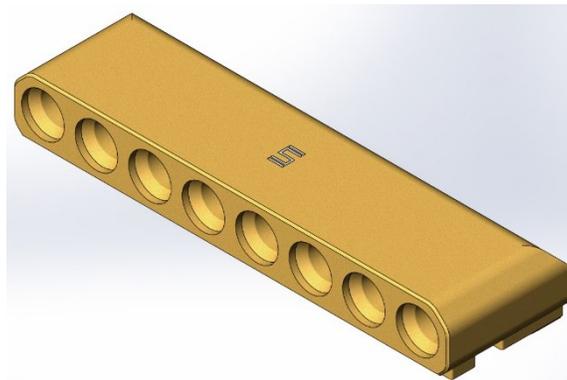




## RF Characterization Report

**GPPC-PS-1-08-EG-RA-SM**



Test Date: Mar 2024

**Description:**  
**Magnum RF™ Ganged, Multi-Position SMPM Block,**  
**Right Angle Orientation, Surface-Mount Termination**

**Series:** SMPM

**Description:** Magnum RF™ Ganged, Multi-Position SMPM Block, Right Angle Orientation, Surface-Mount Termination

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**Series:** SMPM

**Description:** Magnum RF™ Ganged, Multi-Position SMPM Block, Right Angle Orientation, Surface-Mount Termination

## Test Setup Information

### Scope:

Provide standing wave ratio, return loss, insertion loss and Isolation performance parameters for the GPPC Series Magnum RF™ Ganged, Multi-Position SMPM Block, right angle orientation, surface-mount termination.

### 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:

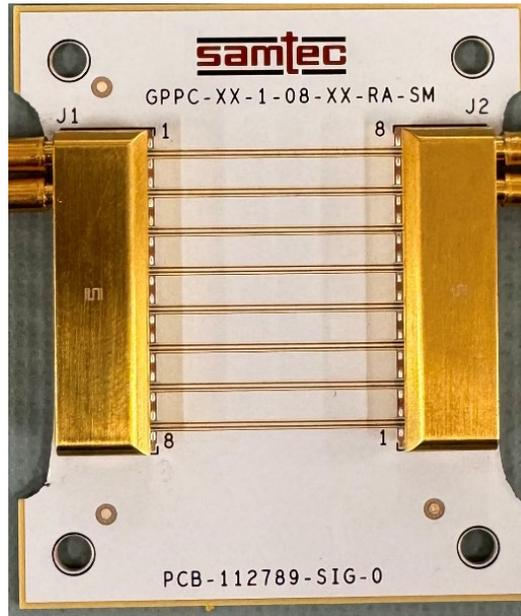
SMPM adapters CentricRF C4391 were used for the measurement, the adapter effects were removed from the measurement using Keysight AFR in PLTS.

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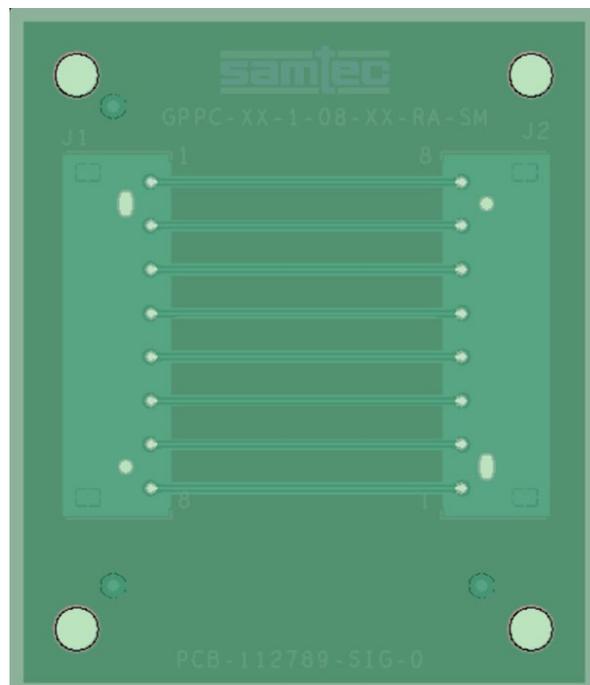
**PCB-112789-SIG-0 Test Fixtures**

Shown below is a photograph of the test board.



**PCB-112789-SIG-0 PCB Layout**

Artwork of the PCB design is shown below.



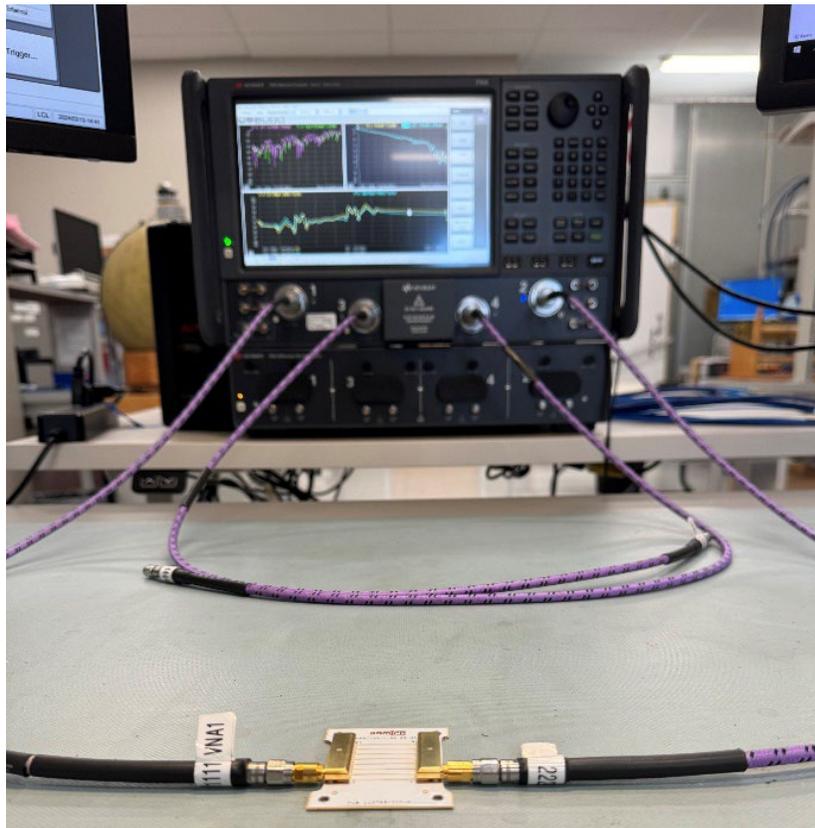
**Series:** SMPM

**Description:** Magnum RF™ Ganged, Multi-Position SMPM Block, Right Angle Orientation, Surface-Mount Termination

### GPPC-PS-1-08-EG-RA-SM Test Definition

Part Number	End 1
GPPC-PS-1-08-EG-RA-SM	SMPM Plug

### Connector Under Test:



**Series:** SMPM

**Description:** Magnum RF™ Ganged, Multi-Position SMPM Block, Right Angle Orientation, Surface-Mount Termination

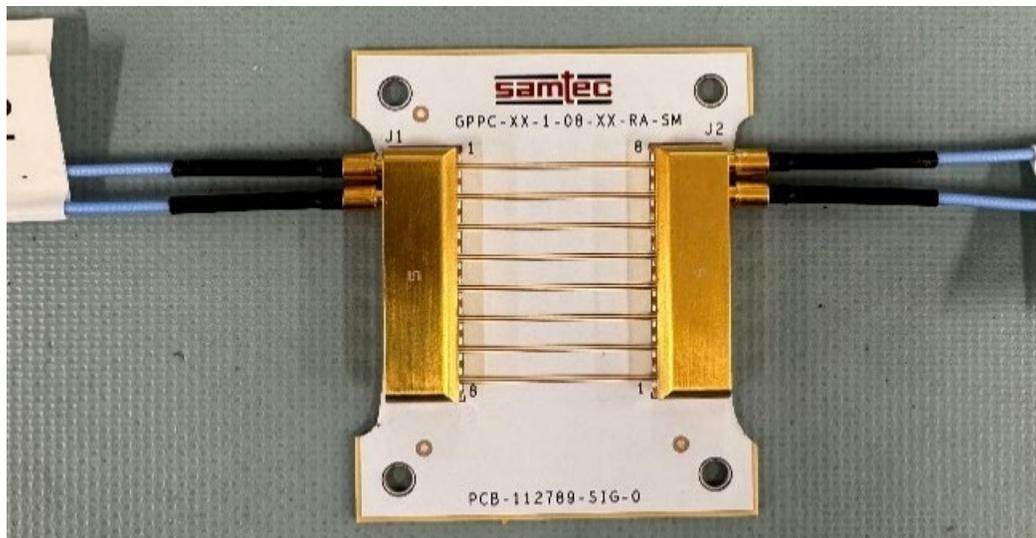
**Results: GPPC-PS-1-08-EG-RA-SM**

The post processed results include one GPPC-PS-1-08-EG-RA-SM connector, launch, and 0.5" of PCB trace to minimize the effects of the test setup.

For the isolation measurements, adaptor cable assemblies where required due to the connectors .140" centerline spacing.



Cable assemblies used for isolation testing



Isolation testing setup

**Series:** SMPM

**Description:** Magnum RF™ Ganged, Multi-Position SMPM Block, Right Angle Orientation, Surface-Mount Termination

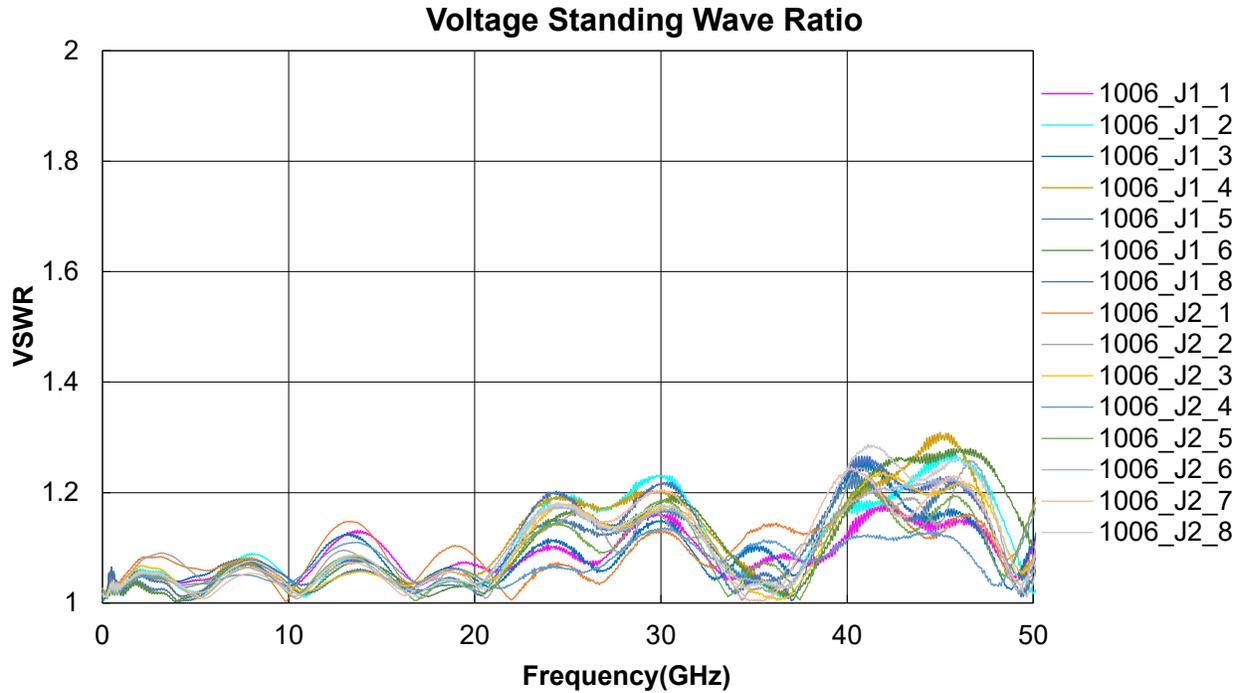
<b>Description: 50 Ohm SMPM Plug</b>			
<b>Sample</b>	<b>SWR(max)</b>	<b>RL(dB, max)</b>	<b>IL(dB, min)</b>
1006_J1_1	1.18@42.09GHz	-21.69@42.09GHz	-1.13@50.00GHz
1006_J1_2	1.27@45.45GHz	-18.42@45.45GHz	-1.12@50.00GHz
1006_J1_3	1.26@40.47GHz	-18.87@40.47GHz	-1.13@50.00GHz
1006_J1_4	1.31@45.00GHz	-17.47@45.00GHz	-1.13@50.00GHz
1006_J1_5	1.24@40.47GHz	-19.55@40.47GHz	-1.15@50.00GHz
1006_J1_6	1.28@45.73GHz	-18.22@45.73GHz	-1.11@50.00GHz
1006_J1_8	1.27@40.48GHz	-18.57@40.48GHz	-1.14@50.00GHz
1006_J2_1	1.20@41.60GHz	-20.76@41.60GHz	-1.16@50.00GHz
1006_J2_2	1.26@46.56GHz	-18.84@46.56GHz	-1.11@50.00GHz
1006_J2_3	1.24@41.76GHz	-19.45@41.76GHz	-1.12@50.00GHz
1006_J2_4	1.16@50.00GHz	-22.79@50.00GHz	-1.15@50.00GHz
1006_J2_5	1.21@41.11GHz	-20.51@41.11GHz	-1.17@50.00GHz
1006_J2_6	1.22@44.73GHz	-19.91@44.73GHz	-1.14@50.00GHz
1006_J2_7	1.25@40.24GHz	-19.18@40.24GHz	-1.12@50.00GHz
1006_J2_8	1.29@41.12GHz	-18.02@41.12GHz	-1.12@50.00GHz

<b>Description: 50 Ohm SMPM Plug</b>	
<b>Sample</b>	<b>Isolation (Max)</b>
1006_J1_1_2	-58.24 dB@28.51GHz
1006_J1_2_3	-57.42 dB@28.22GHz
1006_J1_3_4	-57.83 dB@28.31GHz
1006_J1_4_5	-59.10 dB@28.31GHz
1006_J1_5_6	-58.66 dB@28.40GHz
1006_J1_6_7	-57.68 dB@28.22GHz
1006_J1_7_8	-59.24 dB@28.24GHz

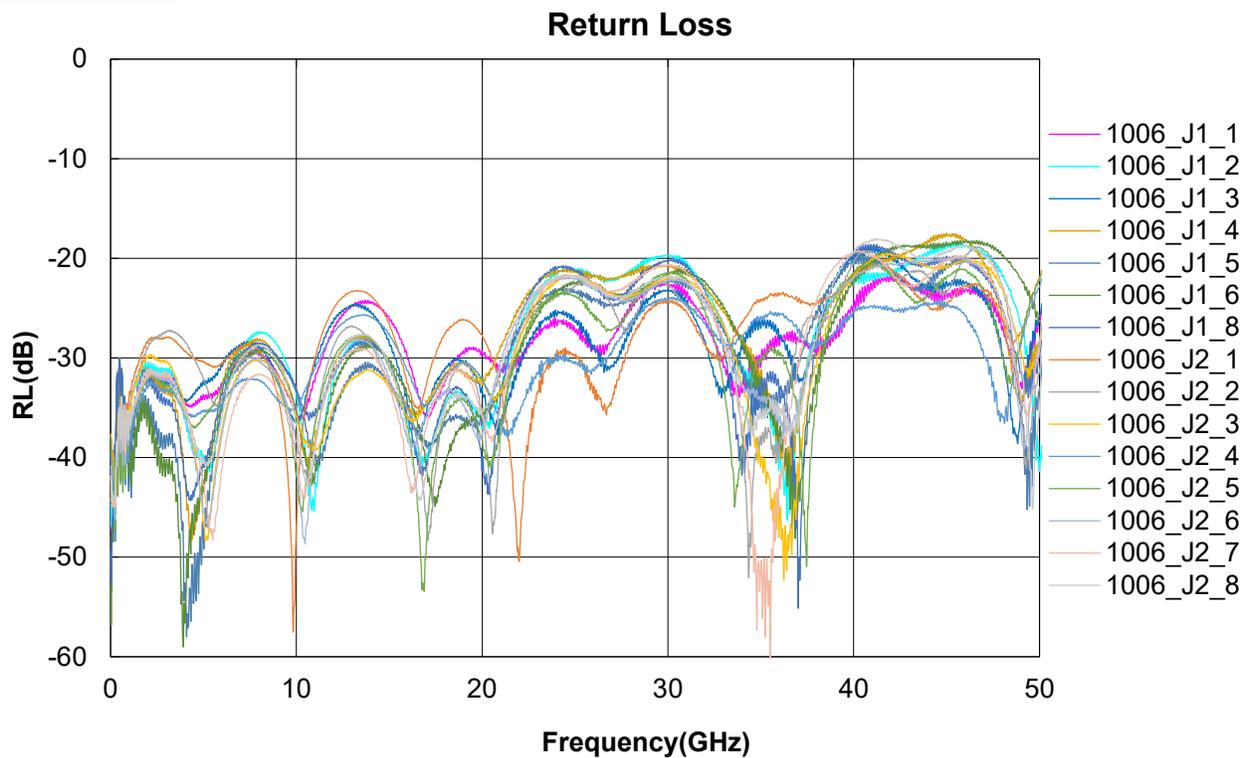
Series: SMPM

Description: Magnum RF™ Ganged, Multi-Position SMPM Block, Right Angle Orientation, Surface-Mount Termination

VSWR



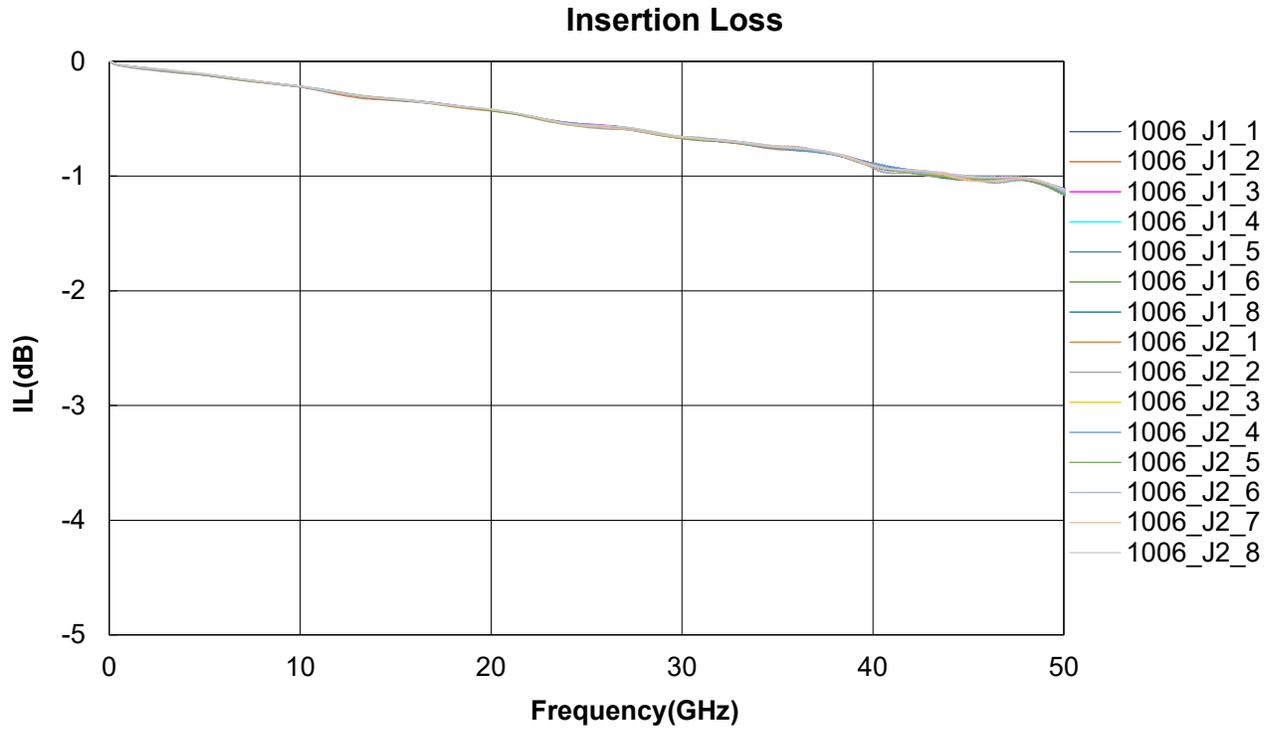
Return Loss



Series: SMPM

Description: Magnum RF™ Ganged, Multi-Position SMPM Block, Right Angle Orientation, Surface-Mount Termination

Insertion Loss



Isolation

