

# 16x16 Butler Matrix

## MIMO RF Test Platform



### Description:

Spectrum Control's 16x16 Butler matrix is a high-performance module, supporting RF technologies including 5G, WiFi, Bluetooth and their associated frequency bands from 0.7 to 6 GHz. It transfers the signal reciprocally from any of 16 input ports to any of 16 output ports, with high phase accuracy, amplitude balance, low insertion loss, and high port-to-port isolation.

### Features:

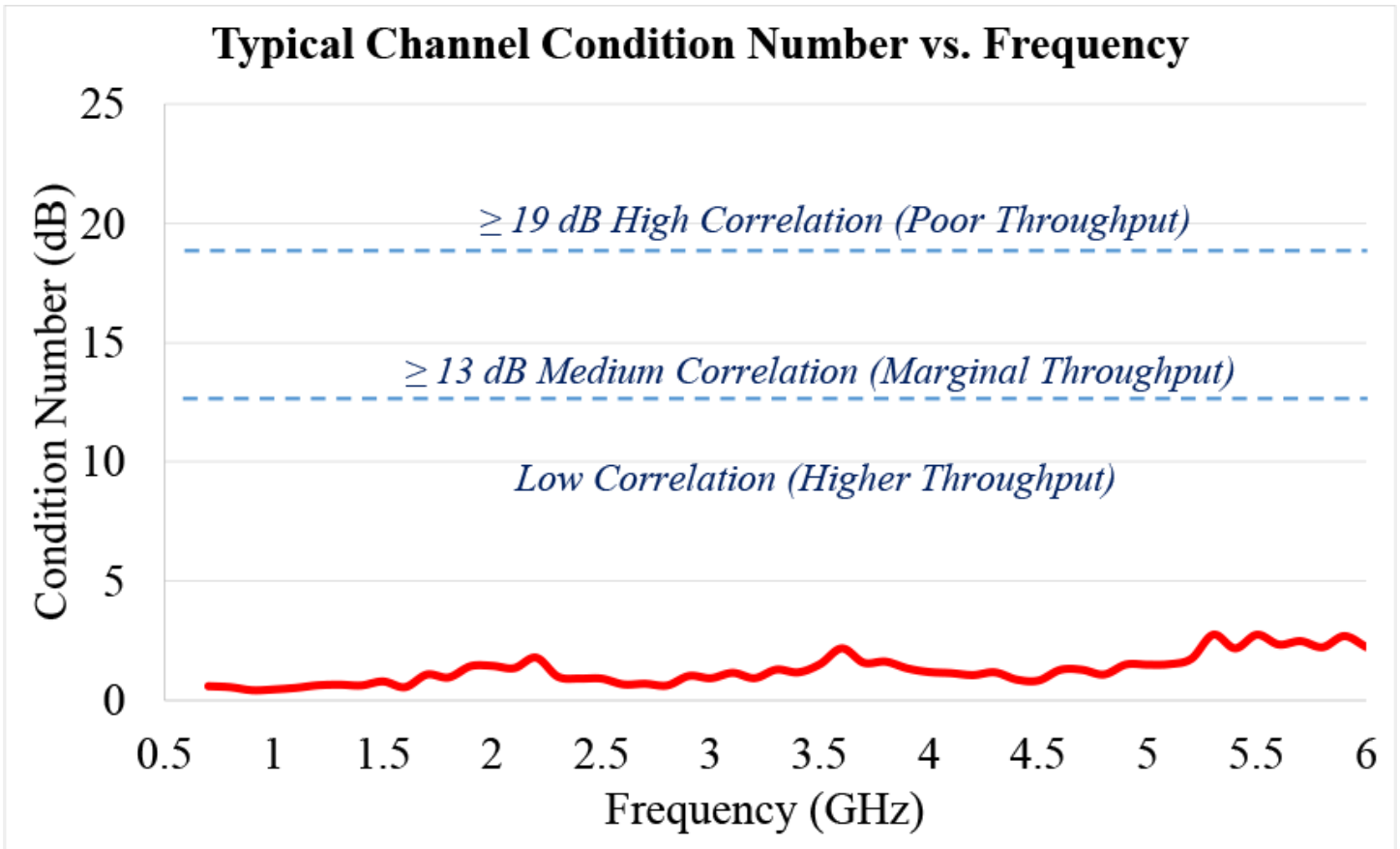
- 16x16 port design
- Reciprocal signal path
- Excellent channel condition number
- Technology agnostic
- Wide frequency range (3.5 octaves)

### Applications:

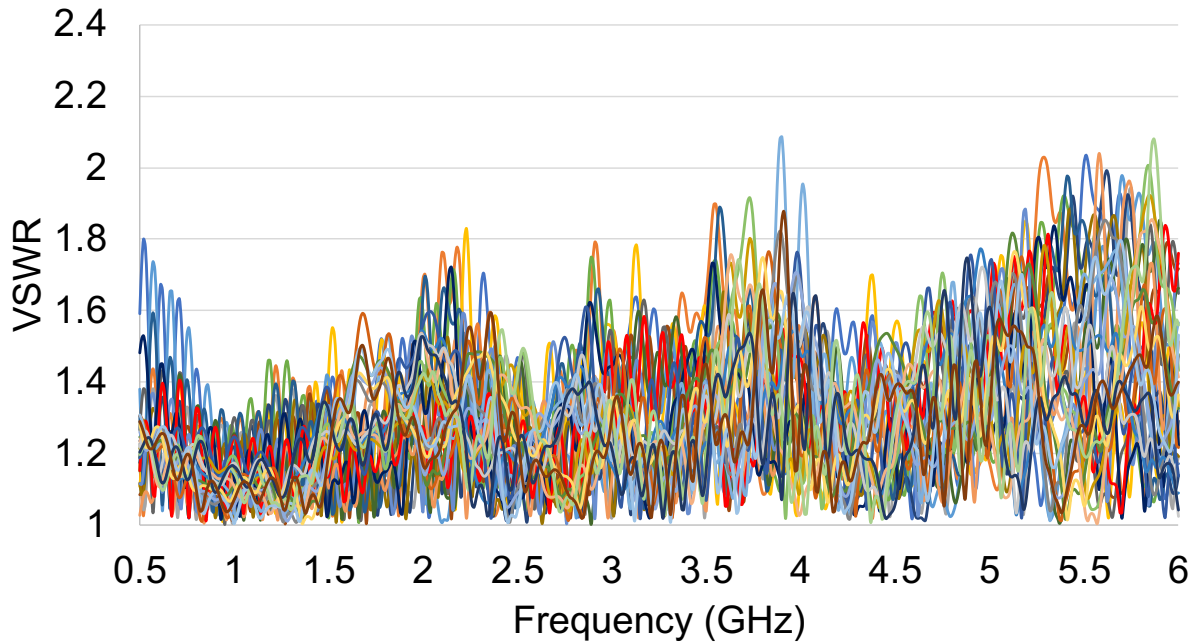
- RF MIMO Test for 5G, WiFi, Bluetooth
- Create ideal channel for best MIMO performance
- Addition of programmable attenuators allows easy degradation of the channel number for Throughput vs Channel Testing.

Model	F min (GHz)	F max (GHz)	Insertion Loss (dB)	VSWR	Output Phase Accuracy	RF Input Power (dBm)	Isolation (dB)	Dimension (inch)
8401-16-5	0.7 2.0	2.0 6.0	14 typ. / 18 max 18 typ. / 24 max	2.0:1 max 2.2:1 max	± 20° max at 3.25 GHz	37	20 typ. / 10 min 17 typ. / 10 min*	19 × 20 × 1.75

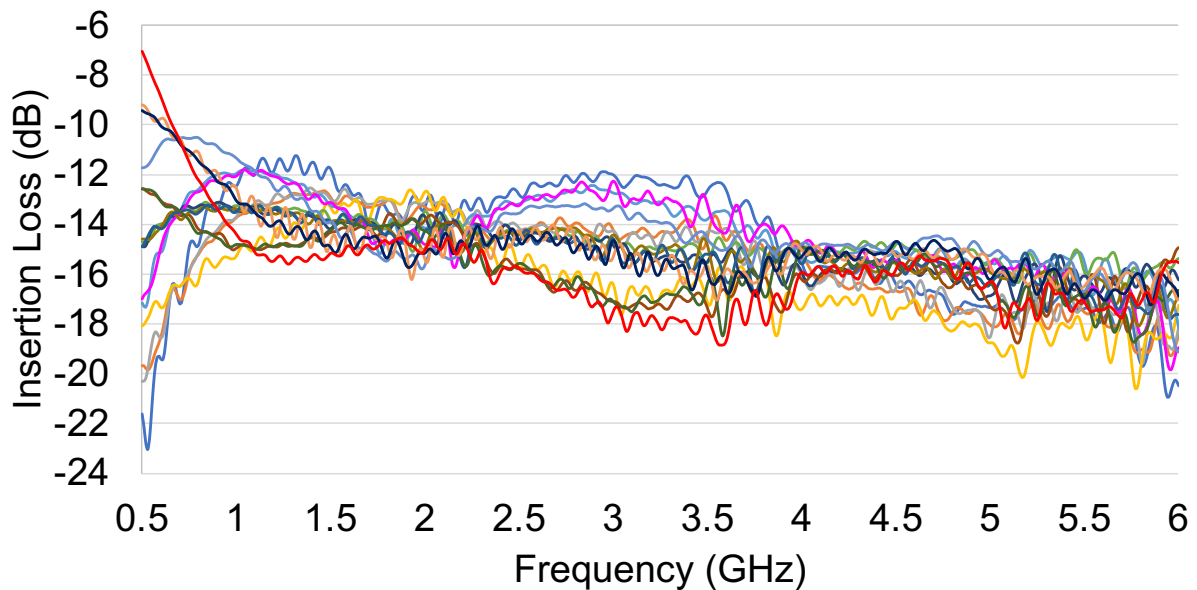
Isolation: \* 3.4 – 4.0 GHz: 17 typ. / 8 dB min // 5.6 – 6.0 GHz: 17 typ. / 8 dB min



Typical VSWR of Model 8401-16-5



Typical Insertion Loss From Input A1  
Model 8401-16-5



## Typical Isolation Between Output Ports Model 8401-16-5

