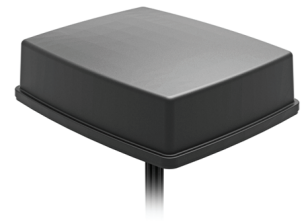




Netz 9IN1

5G NR MIMO, 2.4/5.0/6.0 GHz ISM MIMO and
GNSS Screw Mount

Part #: TBD



Description

The Netz 9IN1 is a MIMO technology solution by Maxtena that combines 5G NR, MIMO, 2.4/5.0/6.0 GHz ISM MIMO antennas, with GNSS. Our 9 in 1 solution is ideal for high data throughput and streaming, video, industrial and IOT applications. It offers a low profile design with easy mounting and integrated SMA connectors. The antenna is designed with rugged ABS plastic black housing and is ideal for the most demanding environmental challenges. This screw mount antenna is easy to install with maximum durability. The Netz 9IN1 has nine cables with a SMA-Male standard connector, 3m standard cable length and is fully customizable by offering additional connector types, cable lengths and cable types.

Electrical Specification

Parameter		Specification	
Cable 1 - 5G NR Antenna	Frequency Range	617-960 MHz	1427-2690 MHz
	Return Loss	-14.2 dB	-15.4 dB
	VSWR	1.6:1	1.6:1
	Efficiency	40.0%	45.7%
	Peak Gain	3.0 dBi	5.0 dBi
	Average Gain	-4.1 dB	-3.4 dB
	Frequency Range	3300-5000 MHz	5150-5925 MHz
	Return Loss	-18.3 dB	-9.2 dB
	VSWR	1.3:1	2.1:1
	Efficiency	44.2%	36.8%
	Peak Gain	4.6 dBi	5.0 dBi
	Average Gain	-3.6 dB	-4.4 dB
	Impedance	50 Ω	
	Polarization	Linear	
	Radiation Pattern	Omni-Directional	
	Max. Input Power	25 W	

Features

- Screw Mount
- High Performance
- Ground Plane Independent
- Cable 1-4: 5G NR (617-960, 1427-2690, 3300-5000 and 5150-5925 MHz)
- Cable 5-8: 2.4/5.0/6.0 GHz ISM (2410-2490 and 4920-7125 MHz)
- Cable 9: GPS/GLONASS/BeiDou/Galileo/QZSS (1561-1606 MHz)
- 199 x 167 x 54 mm
- Customized Cable and Connector

Applications

- Fleet Management
- Commercial Transport
- HD Video Monitoring
- Buses, Train & Commercial Applications
- Smart Cities



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Parameter		Specification	
Cable 2 - 5G NR Antenna	Frequency Range	617-960 MHz	1427-2690 MHz
	Return Loss	-12.8 dB	-15.3 dB
	VSWR	1.9:1	1.6:1
	Efficiency	34.1%	48.2%
	Peak Gain	1.1 dBi	4.8 dBi
	Average Gain	-4.8 dB	-3.2 dB
	Frequency Range	3300-5000 MHz	5150-5925 MHz
	Return Loss	-18.5 dB	-10.8 dB
	VSWR	1.4:1	1.9:1
	Efficiency	43.7%	37.8%
	Peak Gain	5.1 dBi	5.0 dBi
	Average Gain	-3.6 dB	-4.3 dB
	Impedance	50 Ω	
	Polarization	Linear	
	Radiation Pattern	Omni-Directional	
	Max. Input Power	25 W	
Cable 3 - 5G NR Antenna	Frequency Range	617-960 MHz	1427-2690 MHz
	Return Loss	-12.7 dB	-14.6 dB
	VSWR	1.9:1	1.6:1
	Efficiency	36.4%	45.6%
	Peak Gain	3.0 dBi	4.9 dBi
	Average Gain	-4.4 dB	-3.5 dB
	Frequency Range	3300-5000 MHz	5150-5925 MHz
	Return Loss	-19.7 dB	-13.5 dB
	VSWR	1.3:1	1.6:1
	Efficiency	41.2%	38.7%
	Peak Gain	4.5 dBi	4.8 dBi
	Average Gain	-3.9 dB	-4.1 dB
	Impedance	50 Ω	
	Polarization	Linear	
	Radiation Pattern	Omni-Directional	
	Max. Input Power	25 W	



Parameter		Specification		
Cable 4 - 5GNR Antenna	Frequency Range	617-960 MHz		1427-2690 MHz
	Return Loss	-11.8 dB		-15.4 dB
	VSWR	1.9:1		1.5:1
	Efficiency	35.8%		55.4%
	Peak Gain	2.3 dBi		5.1 dBi
	Average Gain	-4.5 dB		-2.6 dB
	Frequency Range	3300-5000 MHz		5150-5925 MHz
	Return Loss	-20.5 dB		-12.8 dB
	VSWR	1.3:1		1.6:1
	Efficiency	51.0%		44.6%
	Peak Gain	5.2 dBi		5.0 dBi
	Average Gain	-2.9 dB		-3.5 dB
	Impedance	50 Ω		
	Polarization	Linear		
	Radiation Pattern	Omni-Directional		
	Max. Input Power	25 W		
Cable 5 -ISM Antenna	Frequency Range	2410-2490 MHz	4920-5925 MHz	5925-7125 MHz
	Band	2.4 GHz	5.0 GHz	6.0 GHz
	Return Loss	-13.9 dB	-23.7 dB	-14.1 dB
	VSWR	1.5:1	1.2:1	1.5:1
	Efficiency	55.6%	51.9%	37.5%
	Peak Gain	4.3 dBi	6.7 dBi	6.3 dBi
	Average Gain	-2.6 dB	-2.8 dB	-3.2 dB
	Impedance	50 Ω		
	Polarization	Linear		
	Radiation Pattern	Omni-Directional		
	Max. Input Power	25 W		
Cable 6 - ISM Antenna	Frequency Range	2410-2490 MHz	4920-5925 MHz	5925-7125 MHz
	Band	2.4 GHz	5.0 GHz	6.0 GHz
	Return Loss	-14.9 dB	-21.6 dB	-14.1 dB
	VSWR	1.5:1	1.2:1	1.6:1
	Efficiency	50.0%	49.7%	41.1%
	Peak Gain	4.1 dBi	6.8 dBi	6.1 dBi
	Average Gain	-3.0 dB	-3.0 dB	-2.8 dB
	Impedance	50 Ω		
	Polarization	Linear		
	Radiation Pattern	Omni-Directional		
	Max. Input Power	25 W		

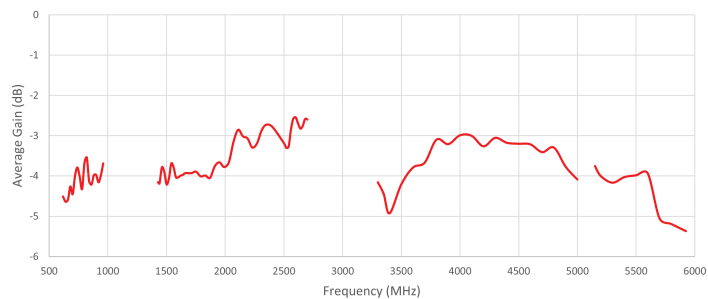
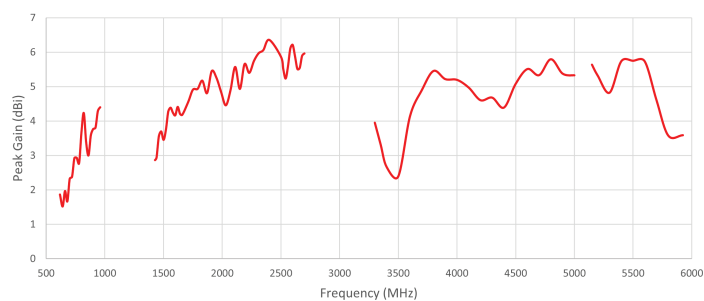
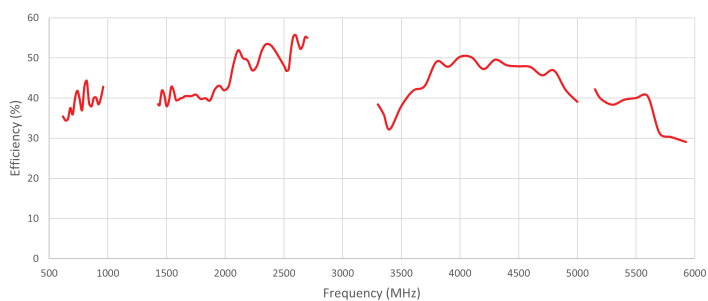
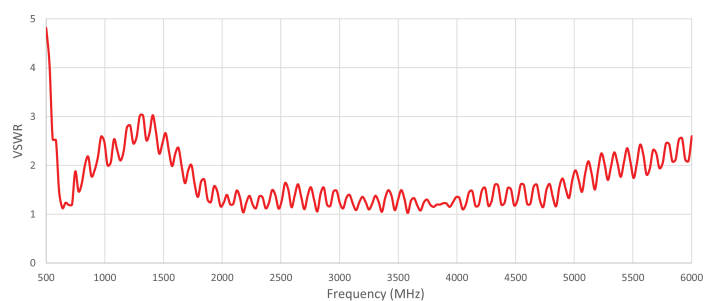
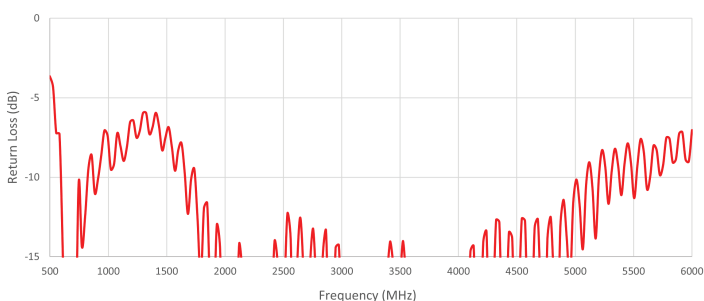


Parameter		Specification		
Cable 7 - ISM Antenna	Frequency Range	2410-2490 MHz	4920-5925 MHz	5925-7125 MHz
	Band	2.4 GHz	5.0 GHz	6.0 GHz
	Return Loss	-14.1 dB	-22.4 dB	-14.2 dB
	VSWR	1.5:1	1.2:1	1.6:1
	Efficiency	58.0%	49.7%	36.5%
	Peak Gain	4.4 dBi	6.7 dBi	5.6 dBi
	Average Gain	-2.4 dB	-3.0 dB	-3.3 dB
	Impedance	50 Ω		
	Polarization	Linear		
	Radiation Pattern	Omni-Directional		
	Max. Input Power	25 W		
Cable 8 - ISM Antenna	Frequency Range	2410-2490 MHz	4920-5925 MHz	5925-7125 MHz
	Band	2.4 GHz	5.0 GHz	6.0 GHz
	Return Loss	-13.3 dB	-18.5 dB	-15.2 dB
	VSWR	1.6:1	1.3:1	1.5:1
	Efficiency	52.2%	44.0%	33.8%
	Peak Gain	4.2 dBi	8.0 dBi	6.6 dBi
	Average Gain	-2.8 dB	-3.6 dB	-3.6 dB
	Impedance	50 Ω		
	Polarization	Linear		
	Radiation Pattern	Omni-Directional		
	Max. Input Power	25 W		
Cable 9 - GNSS Active Antenna	Frequency Range	1561.098 MHz	1575.42 MHz	1598-1606 MHz
	Band	1561 MHz	1575 MHz	1602 MHz
	Passive Gain	-0.4 dBi	0.7 dBi	2.0 dBi
	Impedance	50 Ω		
	Radiation Pattern	Hemispherical		
	Voltage Range	1.5 – 3.6 V		
	Active Gain	14 dB @ 2.7V		
	Noise Figure	1.5 dB @ 2.7V		
	Current Consumption	4 mA @ 2.7V		
	Power Consumption	10.8 mW @ 2.7V		
	Saw Filter Type	Pre-Filter		
	Out of Band Rejection	43 dBc		
	ESD Protection	2 kV		

Mechanical Specification

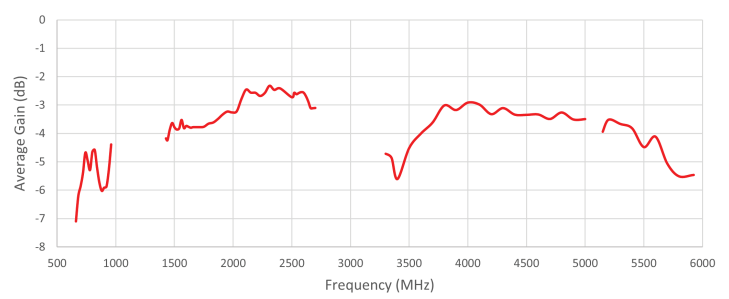
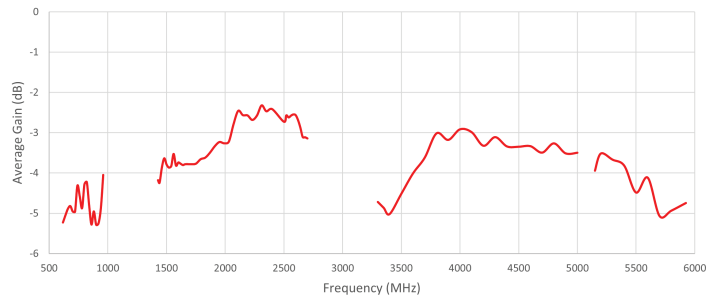
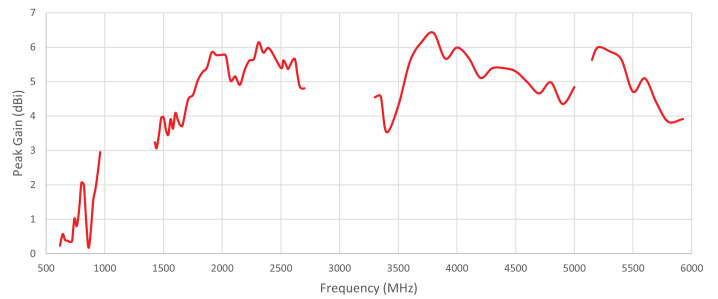
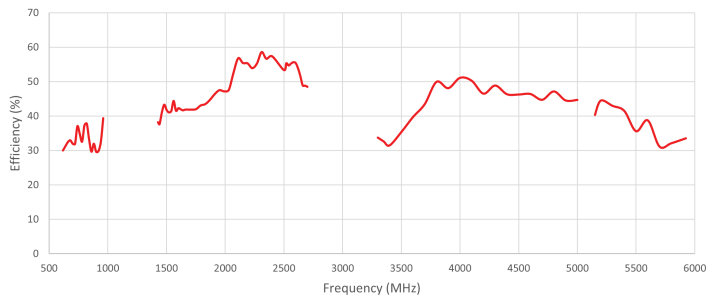
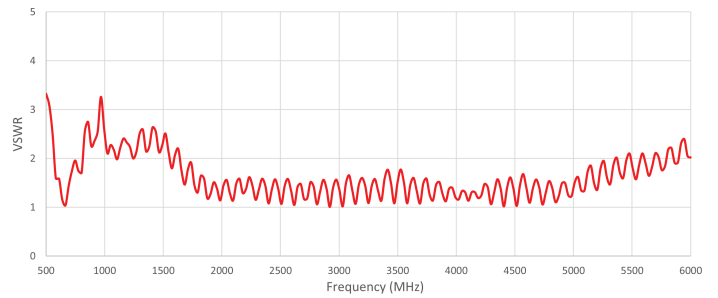
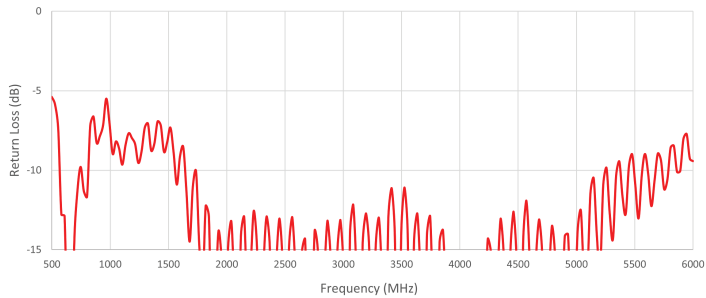
Parameter	Specification
Antenna Dimensions	199 x 167 x 54 mm
Operating Temperature	-40°C to + 85°C
Mounting Type	Screw Mount
Connector	SMA-Male / SMA-Male RP Standard
Cable	D302 / LL100
Radome	ASA / White, Black
Substance Compliance	RoHS
Certificates	IP67, IP69

Cable 1: 5GNR-1

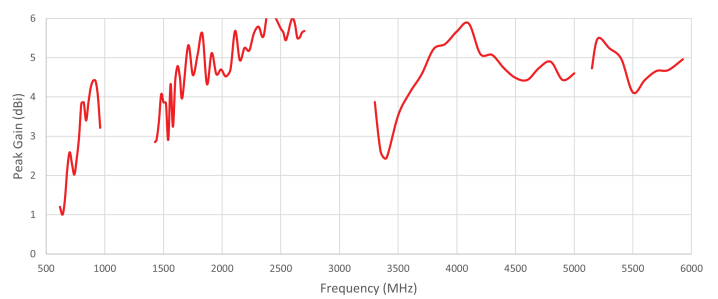
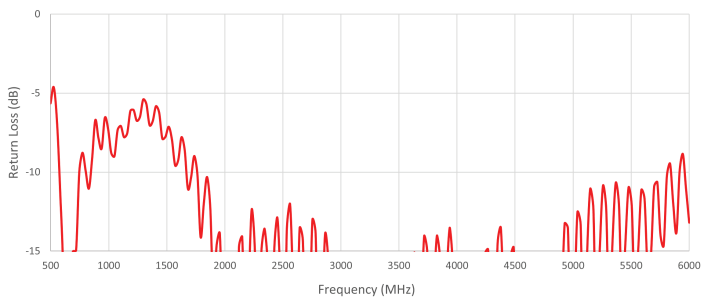
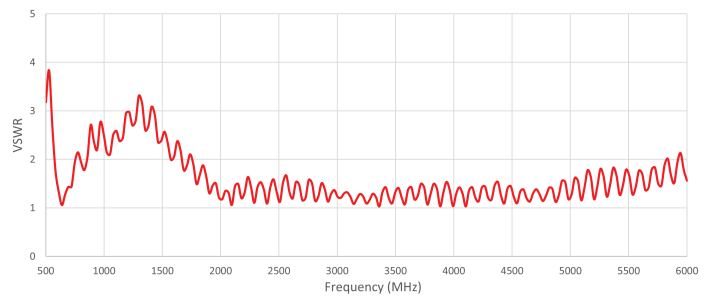
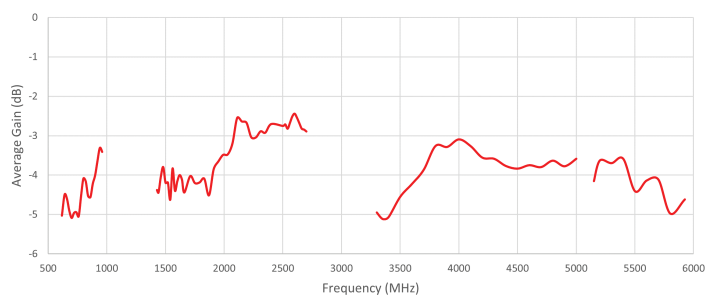


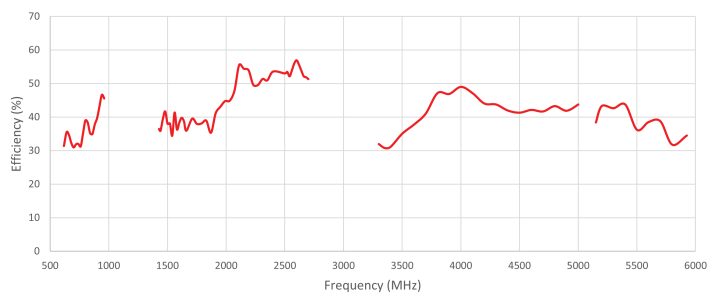
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Cable 2: 5GNR-2

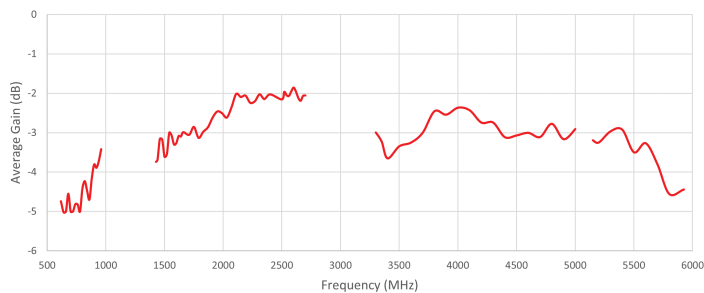
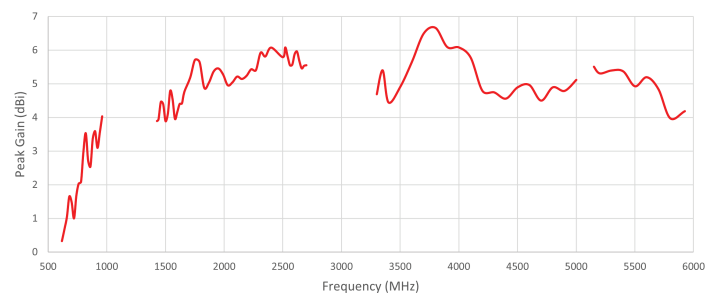
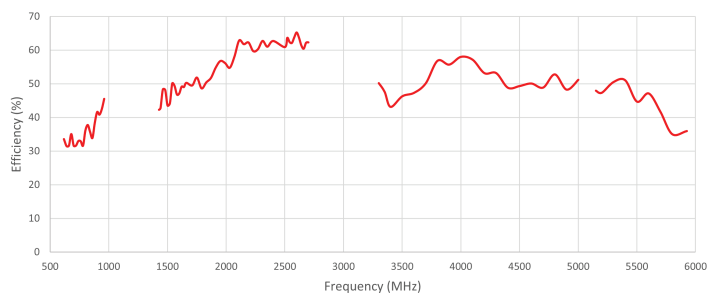
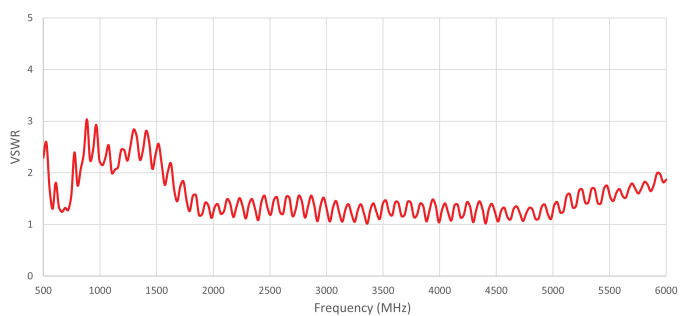
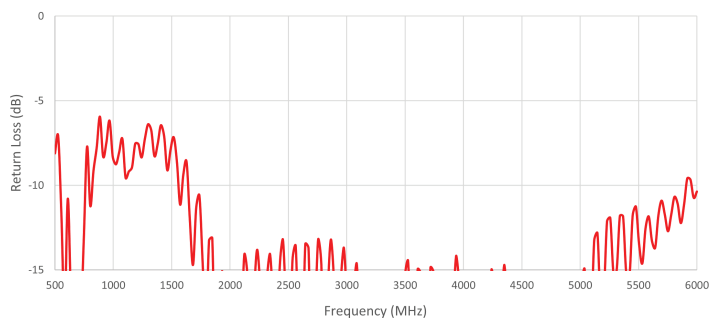


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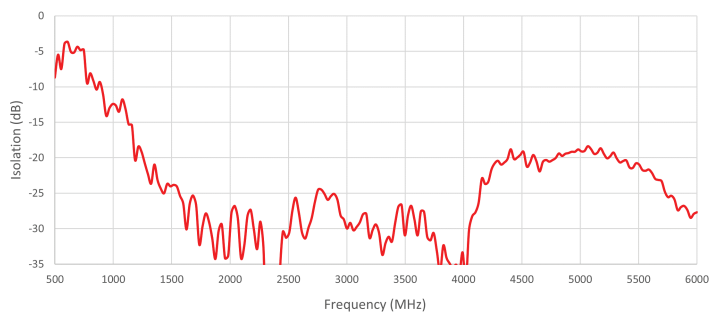




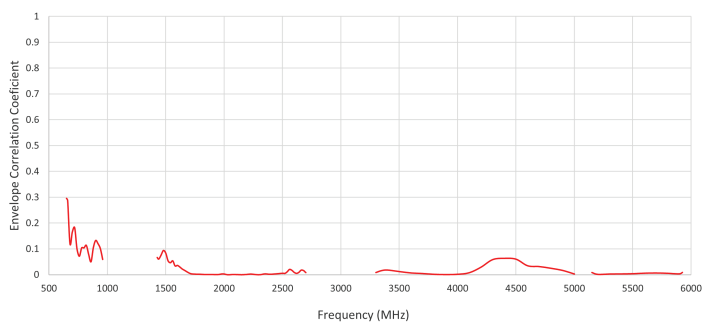
Cable 4: 5GNR-4



Isolation for Cable-1 and Cable-2: (5GNR)

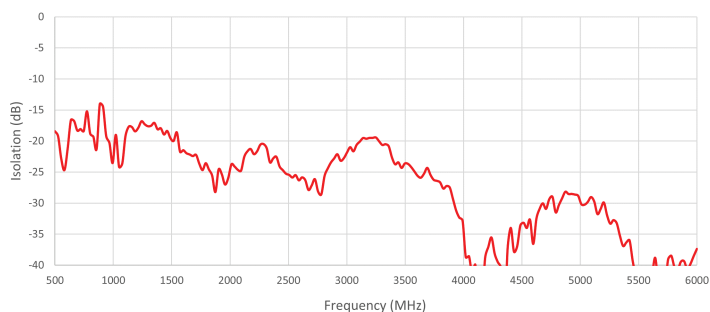


Envelope Correlation Coefficient for Cable-1 and Cable-2: (5GNR)

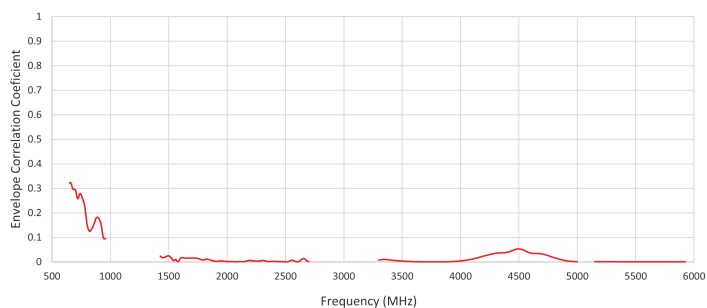


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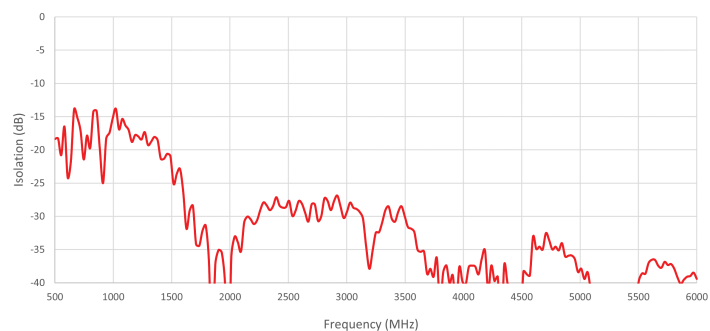
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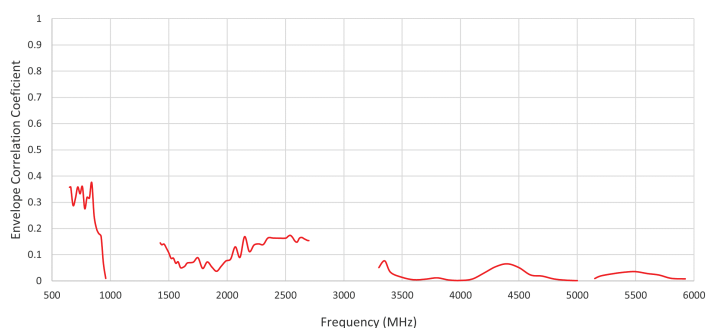
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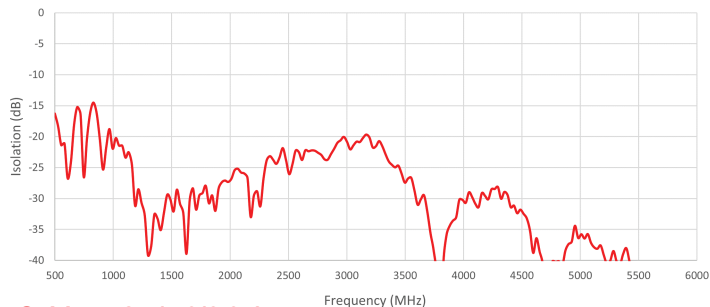
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Envelope Correlation Coefficient for Cable-1 and Cable-4: (5GNR)



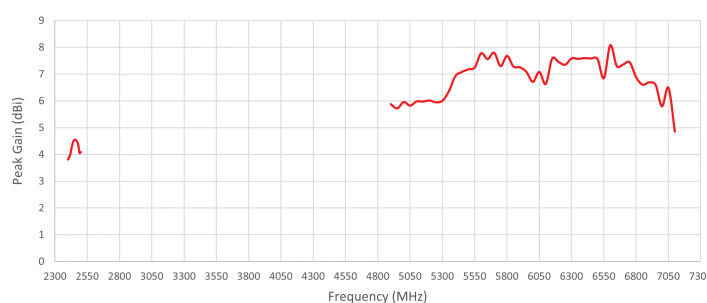
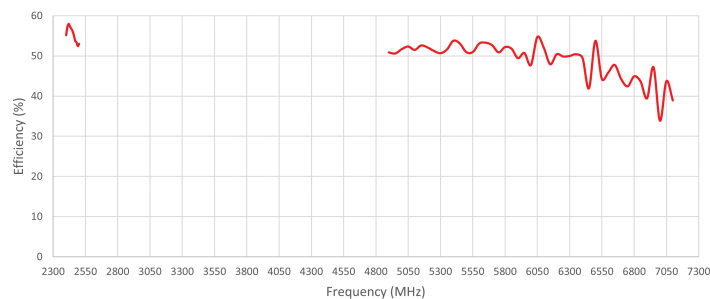
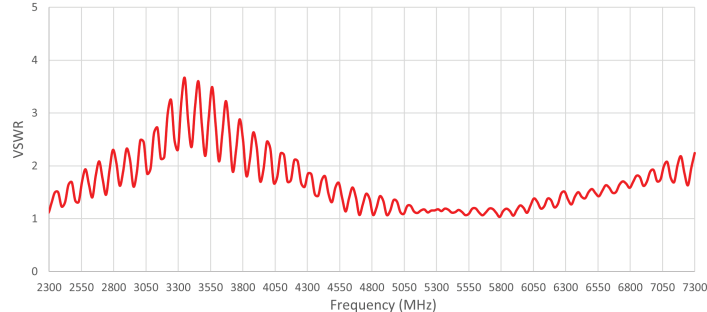
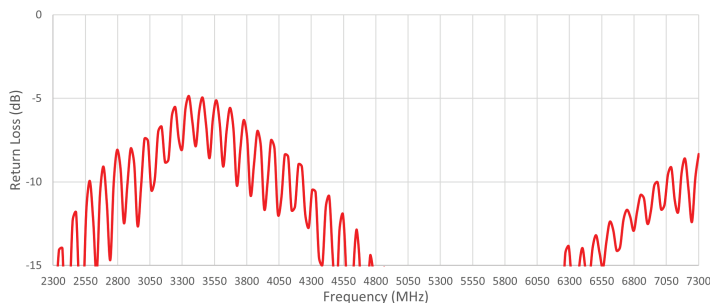
Isolation for Cables Cable-2 and Cable-3: (5GNR)



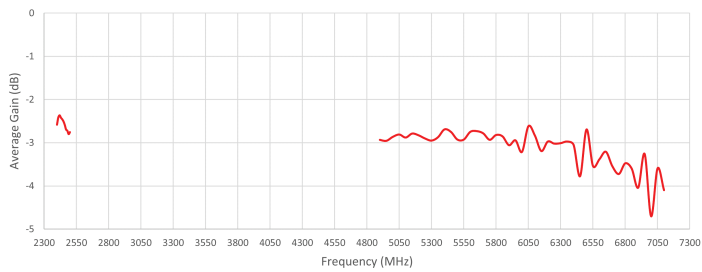
Envelope Correlation Coefficient for Cable-2 and Cable-3: (5GNR)



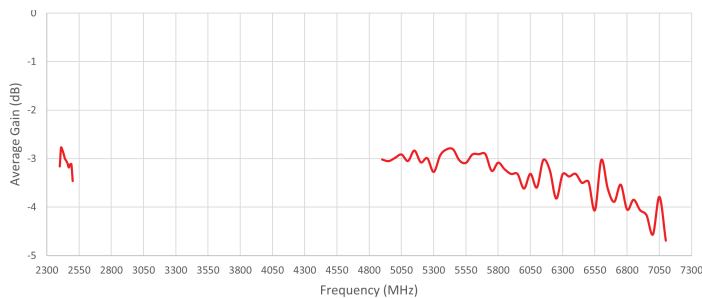
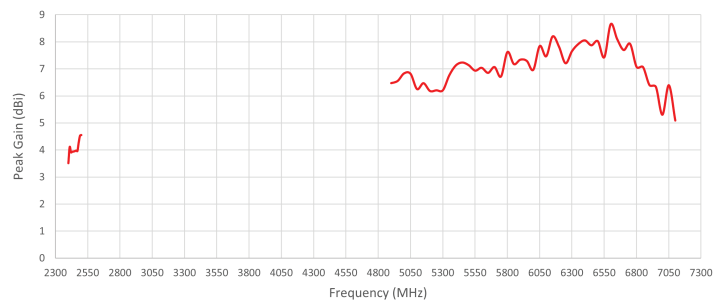
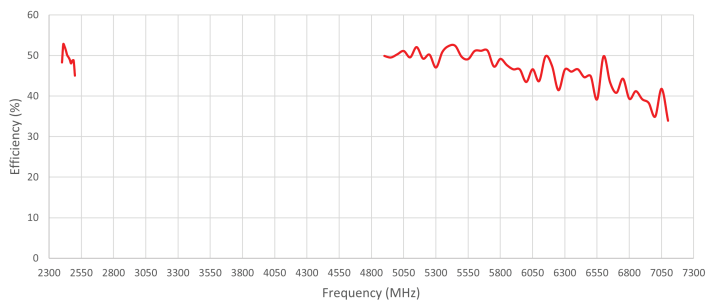
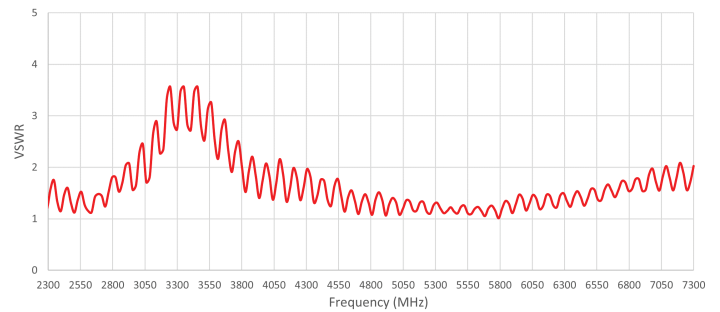
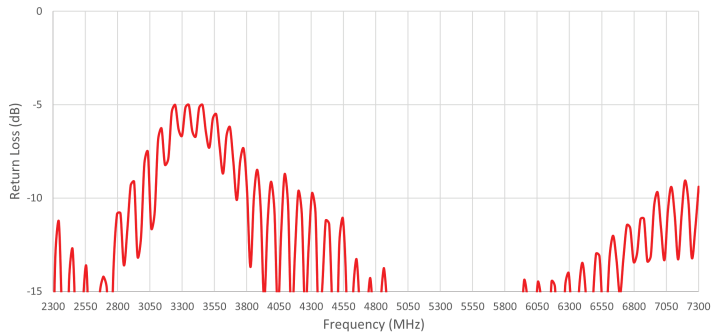
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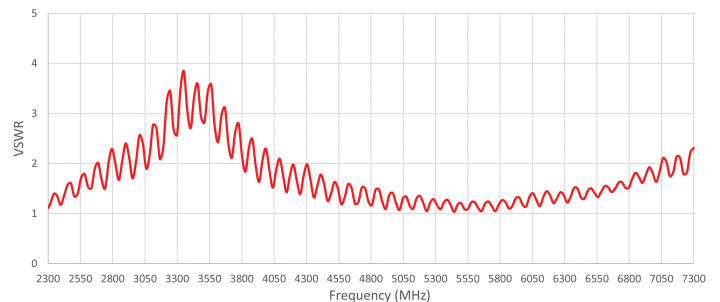
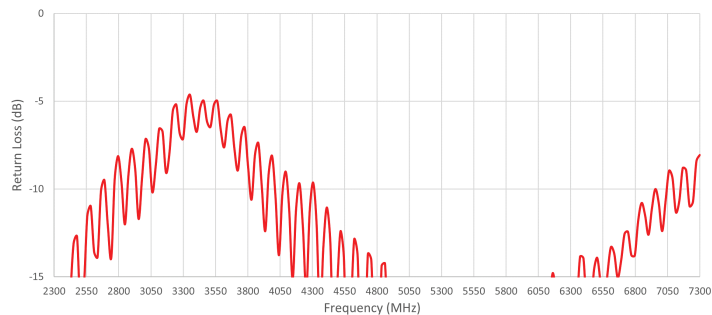
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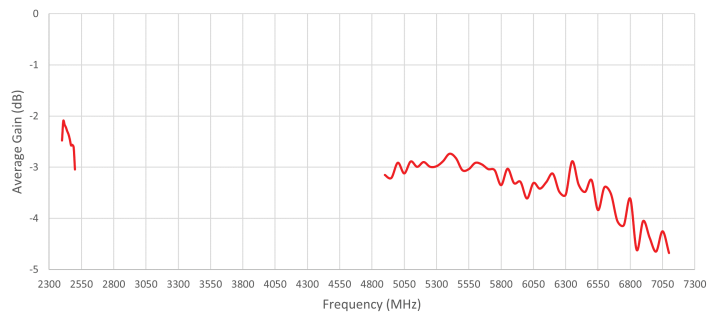
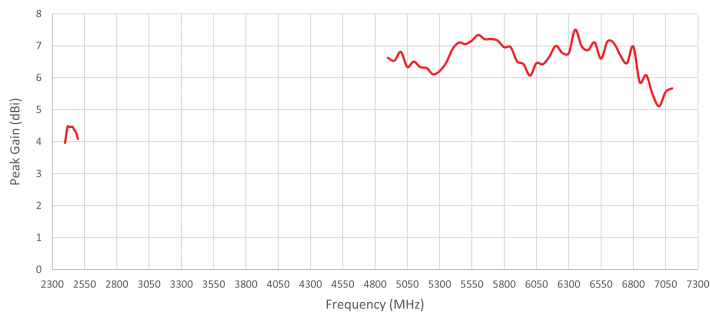
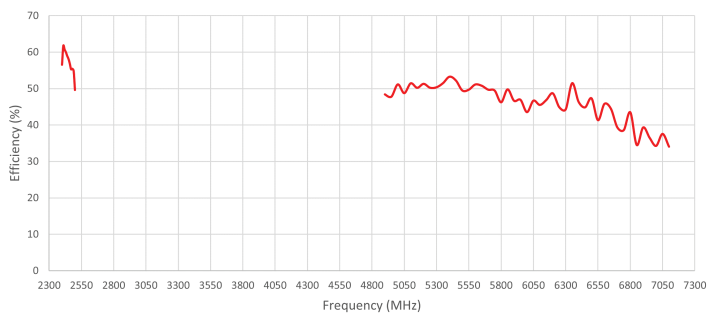


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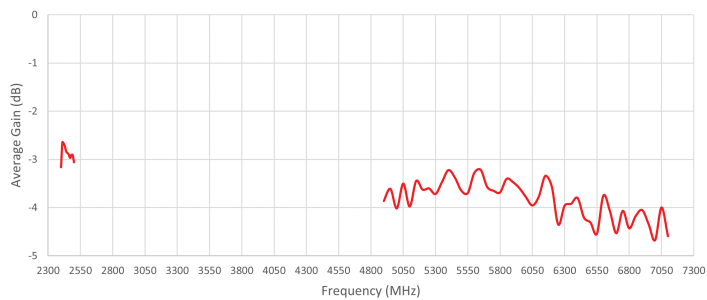
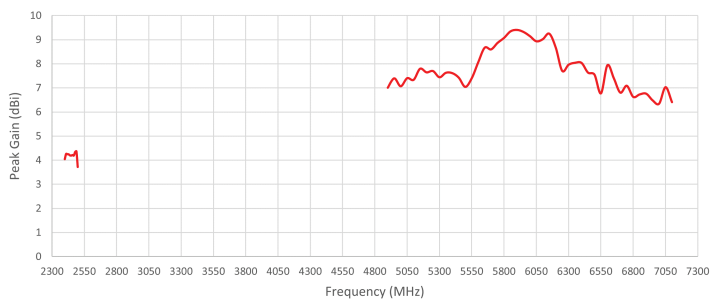
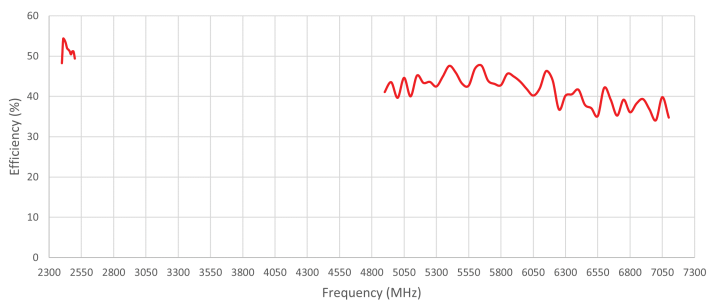
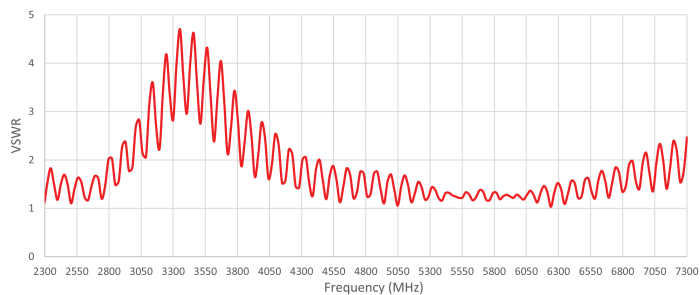
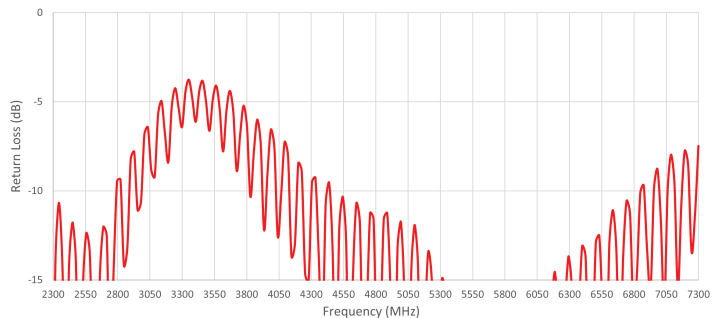


Cable 7: 2.4/5.0/6.0-1



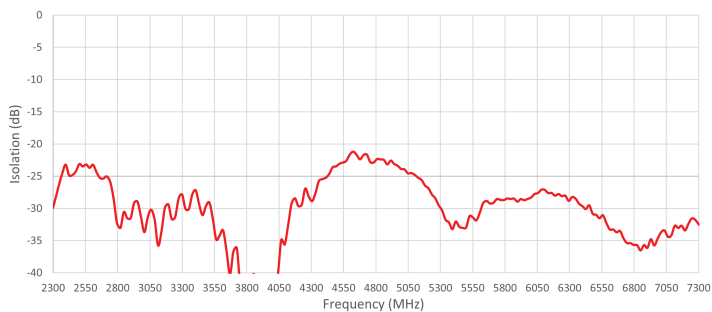


Cable 8: 2.4/5.0/6.0-1

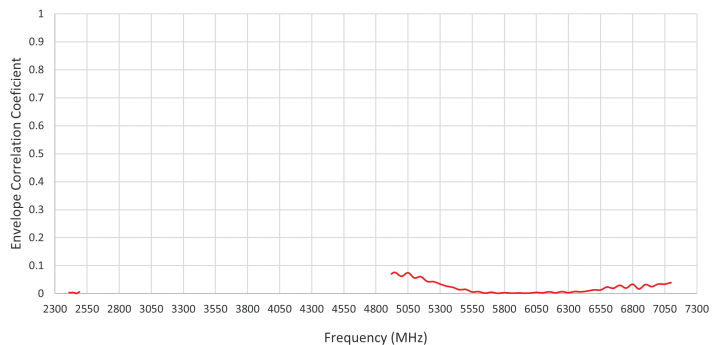


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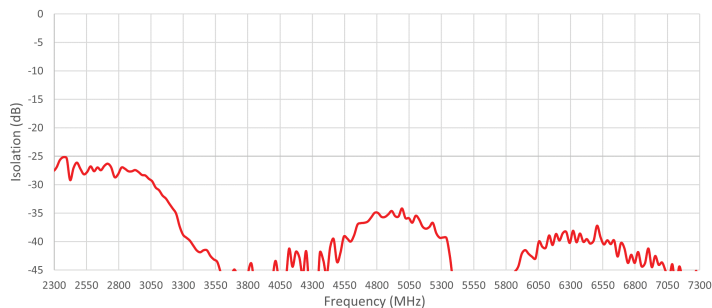
Isolation for Cable-5 and Cable-6: (2.4/5.0/6.0 GHz ISM)



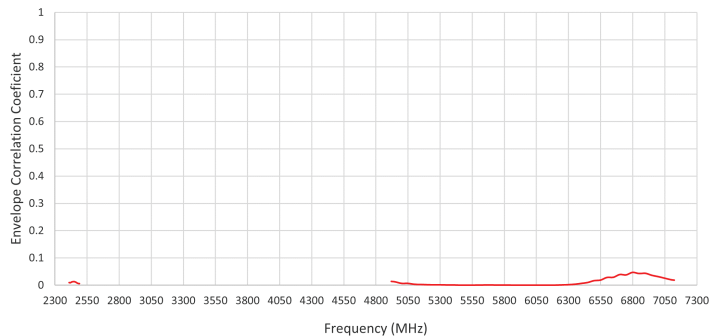
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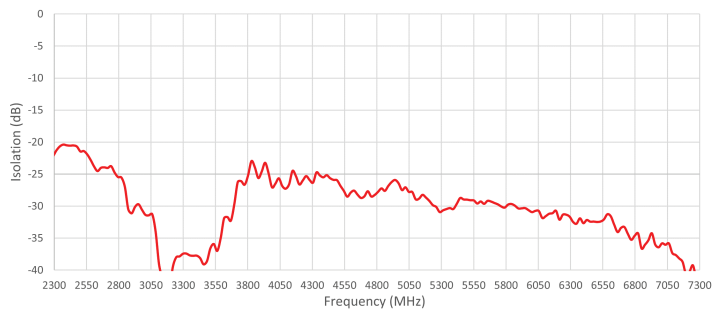
Isolation for Cables Cable-5 and Cable-7: (2.4/5.0/6.0 GHz ISM)



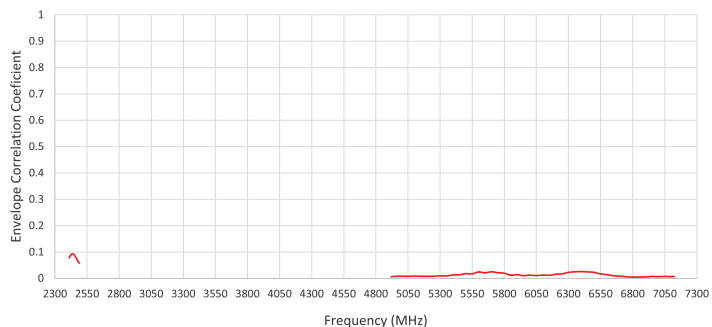
Envelope Correlation Coefficient for Cable-5 and Cable-7: (2.4/5.0/6.0 GHz ISM)



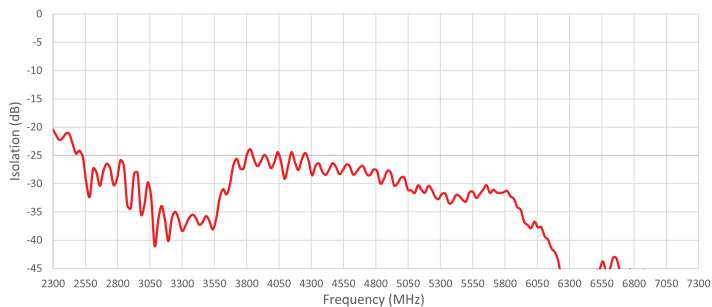
Isolation for Cables Cable-5 and Cable-8: (2.4/5.0/6.0 GHz ISM)



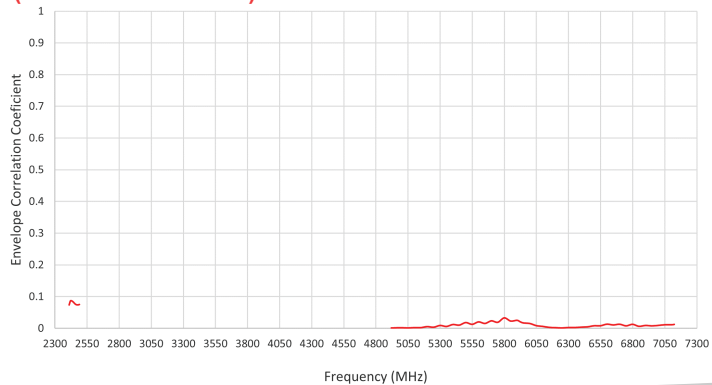
Envelope Correlation Coefficient for Cable-5 and Cable-8: (2.4/5.0/6.0 GHz ISM)



Isolation for Cables Cable-6 and Cable-7: (2.4/5.0/6.0 GHz ISM)



Envelope Correlation Coefficient for Cable-6 and Cable-7: (2.4/5.0/6.0 GHz ISM)



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