

8000-321 'Sandcastle' Multifunction 18-in-1 Antenna

**5 YEARS
WARRANTY**



The '**Sandcastle**' is a low-profile, multifunction antenna designed for blue-light and amber-light vehicle fleets, combining up to 18 functions within a single panel-mounted unit. With optional fitting kits, the 'Sandcastle' can be installed using the existing OEM mounting hole, preventing the need to drill additional holes and maintaining OEM functions.

This variant supports **18 Functions** including **TETRA, 9x LTE, 4x WiFi and 4x GPS**

The Sandcastle portfolio includes variants that are **ESN-ready** and fully compatible with **current Airwave system**, making it ideal for future proofing your fleet for the upcoming transition to LTE.

Also Available in White: Part No. 8000-221



Part No.	Cable Kit Options
SK010035	Product Kit : Generic 18 in 1 Sandcastle Cable Kit 5m : Terminated
SK010033	Product Kit : Generic 18 in 1 Sandcastle Cable Kit 3m : Terminated

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Technical Specifications

Part No.	8000-321		
Electrical Data	TETRA	Cellular	Dual Band Wi-Fi
Frequency Range (MHz)	380-430 MHz	698-960 MHz 1710-2700 MHz	2.4 GHz & 5.8 GHz
Input Power	10W	10W	10W
Gain	4dBi*	Minimum 4dBi*	Minimum 4dBi*
VSWR	< 2.5:1	< 2.5:1	< 2.5:1
Impedance	50Ω	50Ω	50Ω
Cable Type	RG316	RG316	RG316
Termination	TNC (f)	SMA (f)	SMA (m) Reverse Polarity
Electrical Data	GPS	LTE	
Frequency Range (MHz)	1562-1612 MHz	700-960 MHz 1700-6000 MHz	
Input Power	-	10W	
Gain	>26dB	Minimum 4dBi*	
VSWR	< 2.5:1	< 2.5:1	
Impedance	-	50Ω	
Cable Type	RG316	RG316	
Termination	SMA (m)	SMA (f)	
Mechanical Data			
Dimensions (mm)	H76 x W197 x L227 **		
Operating Temp (°C)	-40 / +80°C (-40° / 176°F)		
Material	ABS		
Colour	Black		
Weight (g)	600		
Cable Data			
Length (mm)	300	300	300
Diameter	2.8	2.8	2.8
Mounting Data			
Mounting Type	Panel Mount with Adhesive Pad		
Mounting Hole (mm)	19mm		

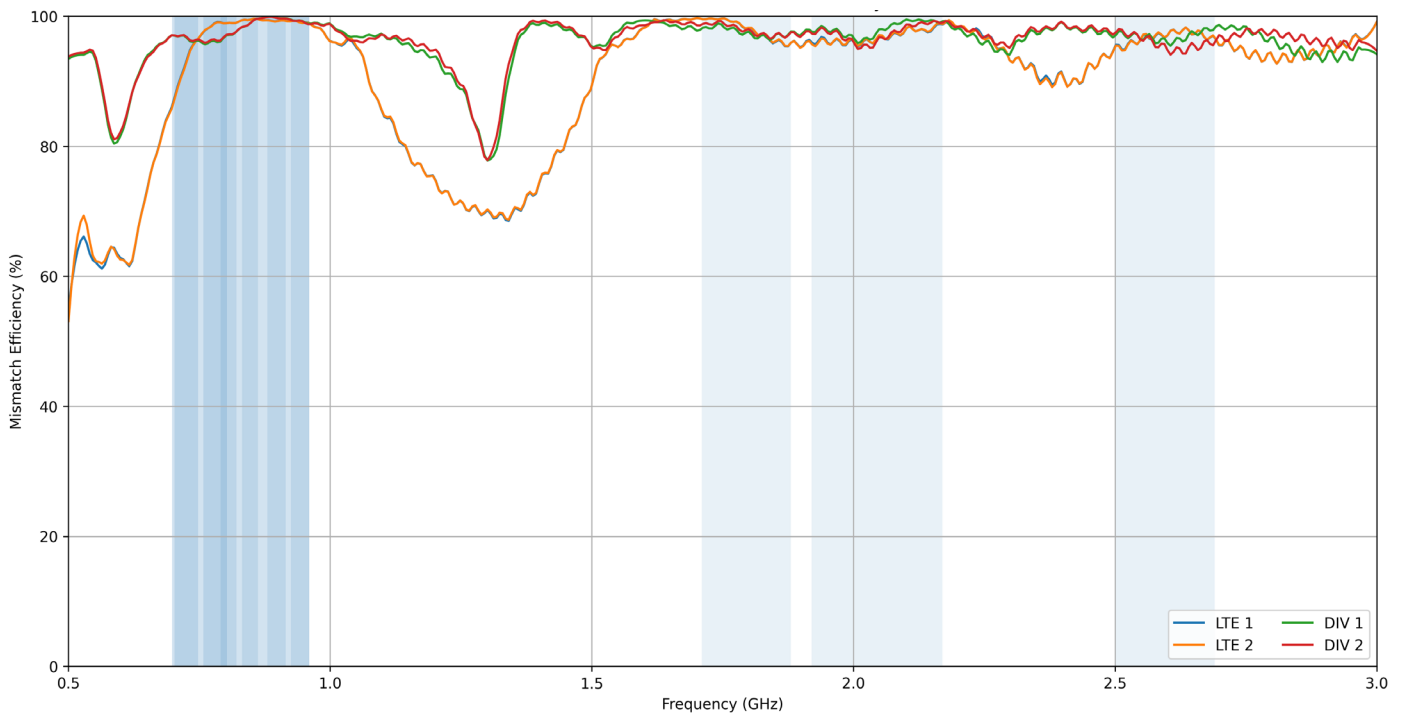
Subject to change. *Ground plane dependent

The diagram illustrates a vehicle-mounted communication system. A central black unit is mounted on a vehicle roof. Various antennas are connected to this unit via cables. The connections are labeled as follows:

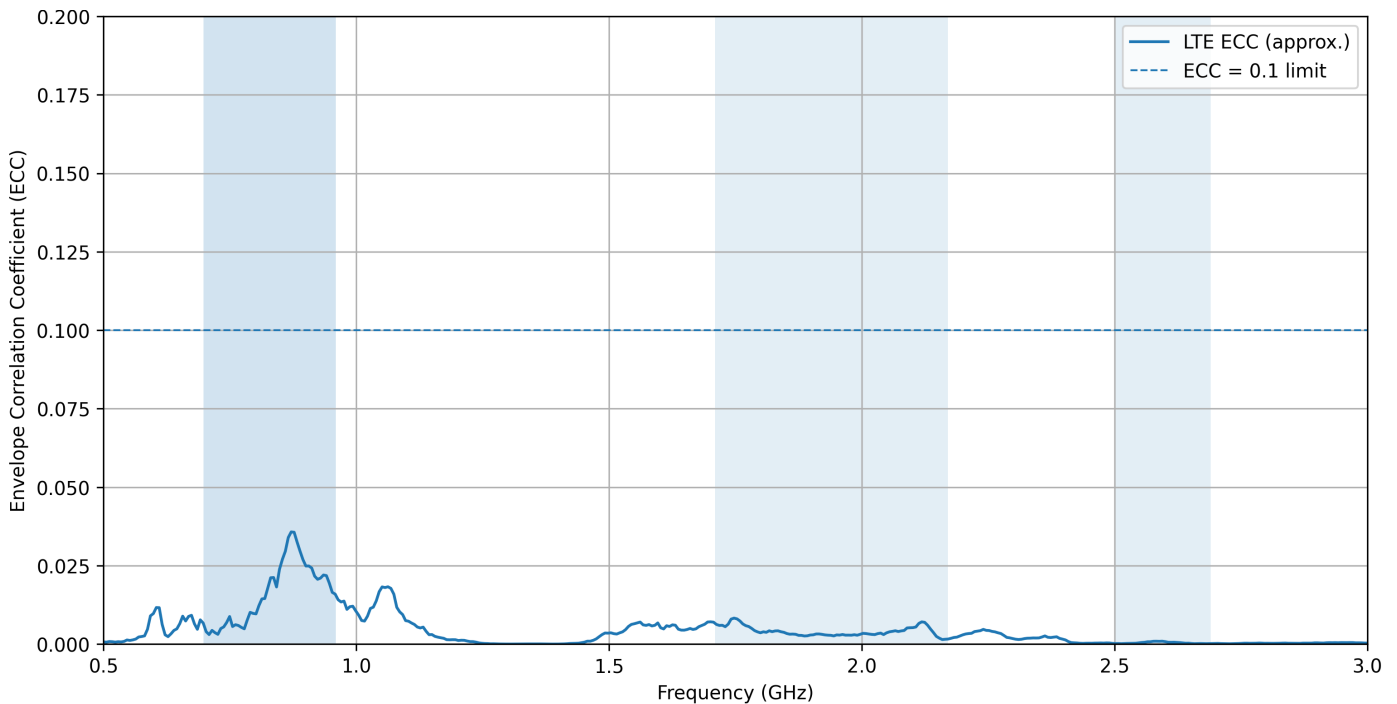
- EXT** (Yellow)
- GPS 2** (Blue)
- CELL 2** (Green)
- LTE 5** (Green)
- LTE 2** (Green)
- CELL 2** (Green)
- LTE 1** (Green)
- LTE 4** (Green)
- LTE 3** (Green)
- LTE 6** (Green)
- WiFi 1** (Red)
- WiFi 2** (Red)
- GPS 1** (Blue)
- CELL 1** (Green)
- WiFi 3** (Red)
- WiFi 4** (Red)
- GPS 3** (Blue)
- GPS 4** (Blue)
- TETRA** (Yellow)
- GPS 2** (Blue)
- CELL 2** (Green)
- LTE 5** (Green)
- LTE 2** (Green)
- CELL 2** (Green)
- LTE 1** (Green)
- LTE 4** (Green)
- LTE 3** (Green)
- LTE 6** (Green)
- WiFi 1** (Red)
- WiFi 2** (Red)
- GPS 1** (Blue)
- CELL 1** (Green)
- WiFi 3** (Red)
- WiFi 4** (Red)
- GPS 3** (Blue)
- GPS 4** (Blue)

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LTE / DIV Ports – Mismatch Efficiency



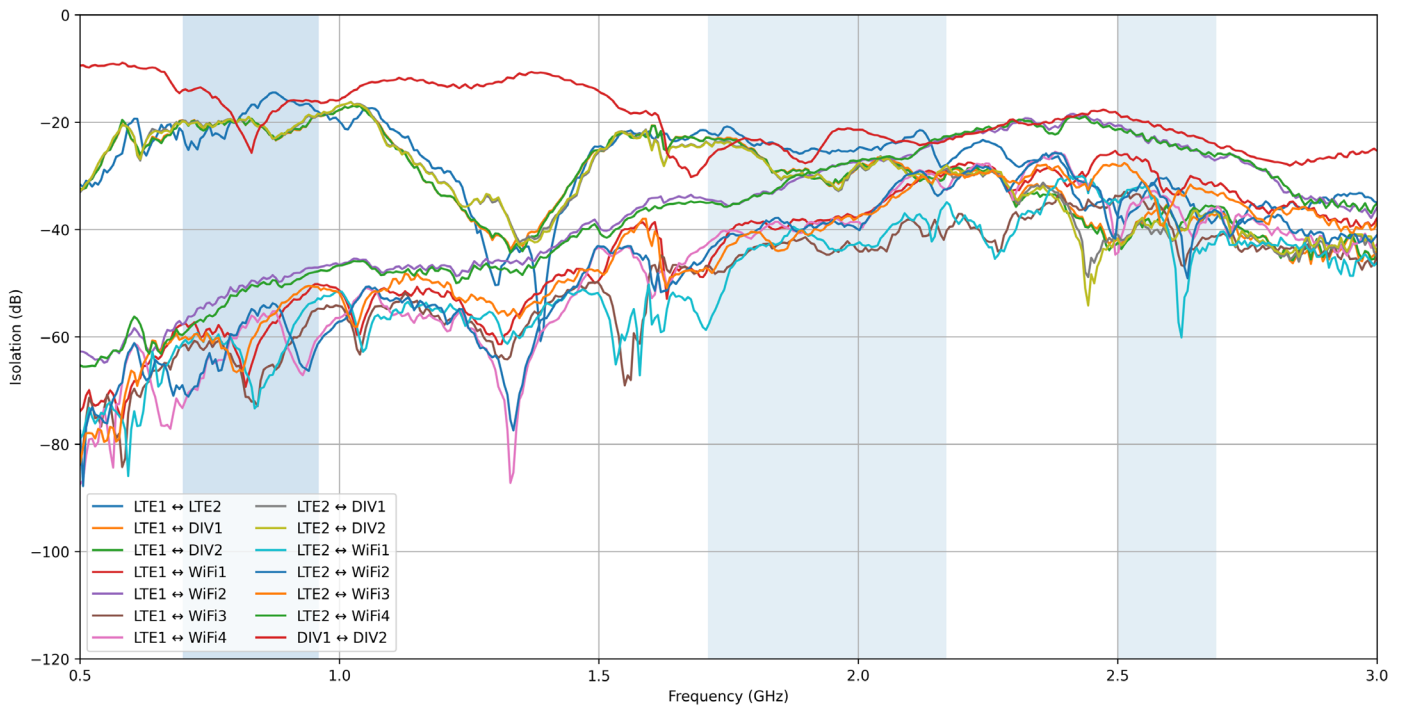
LTE ECC (Cut at 3 GHz)



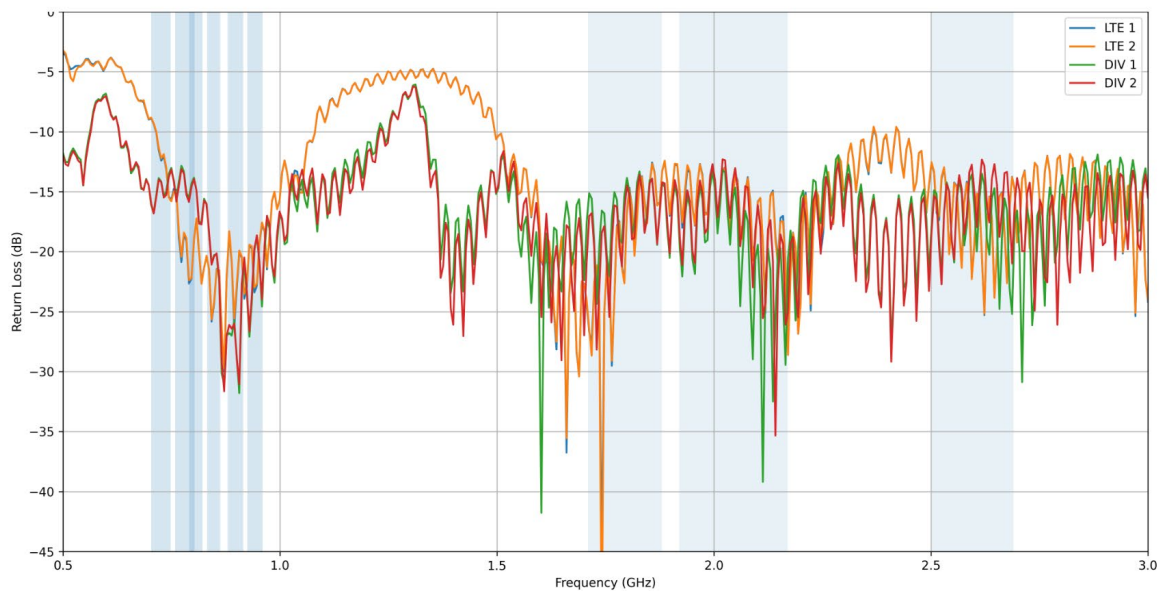
LTE Port Isolation (Cut at 3 GHz)

Subject to change without prior notice.

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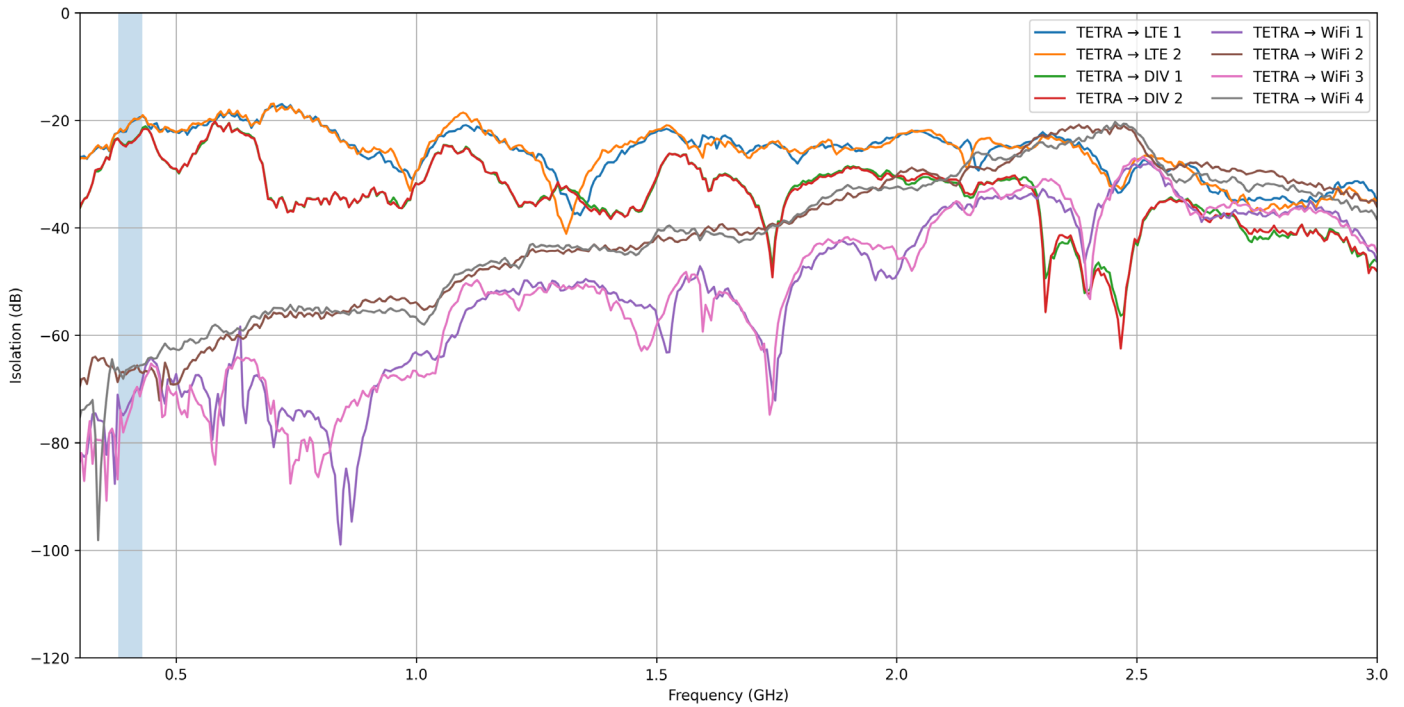
LTE Return Loss



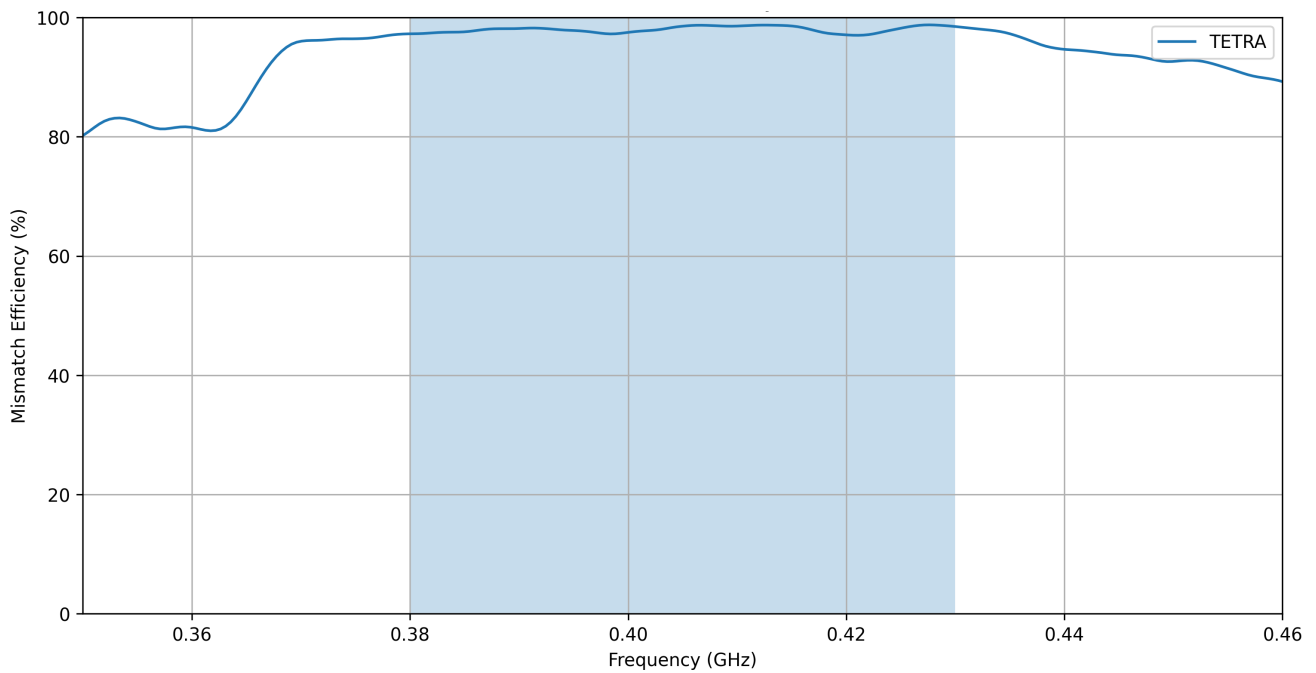
TETRA Port Isolation to All Other Parts (S21)

Subject to change without prior notice.

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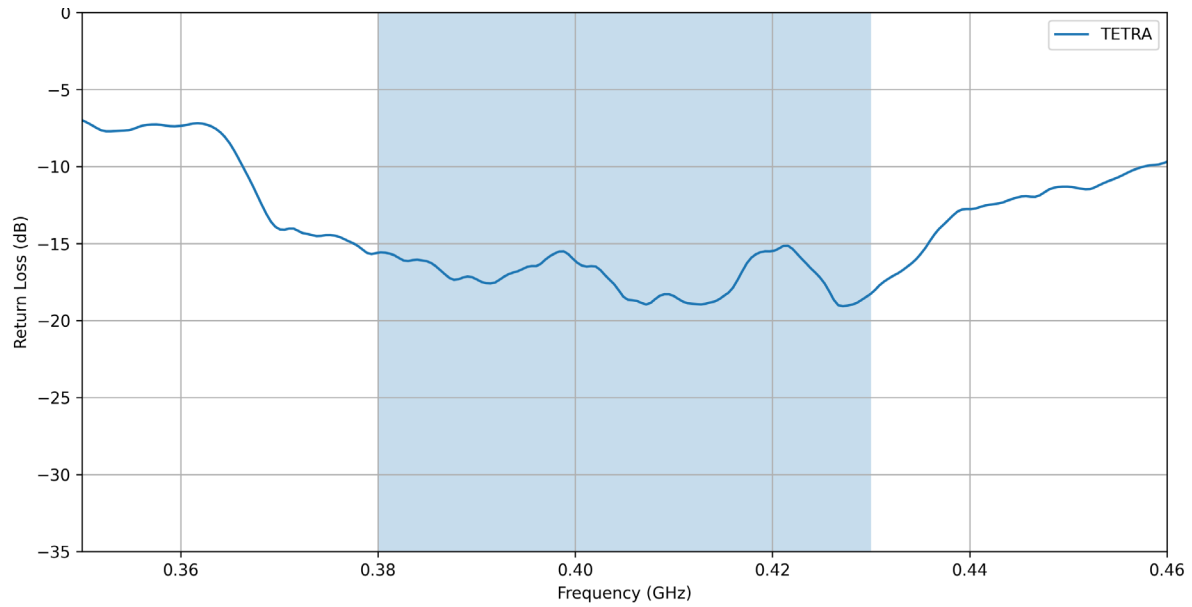


TETRA Port -Mismatch Efficiency (380-430 MHz)

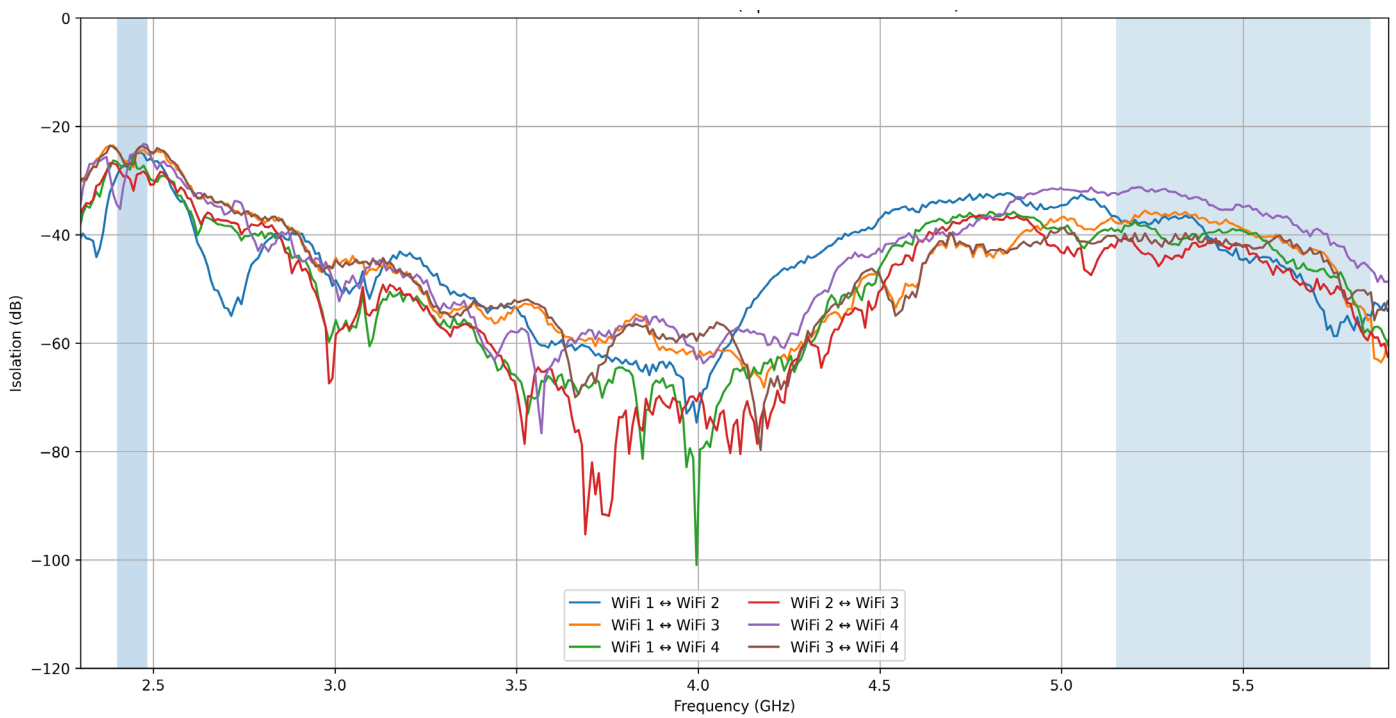


Subject to change without prior notice.

TETRA Antenna – Return Loss (380-430 MHz)

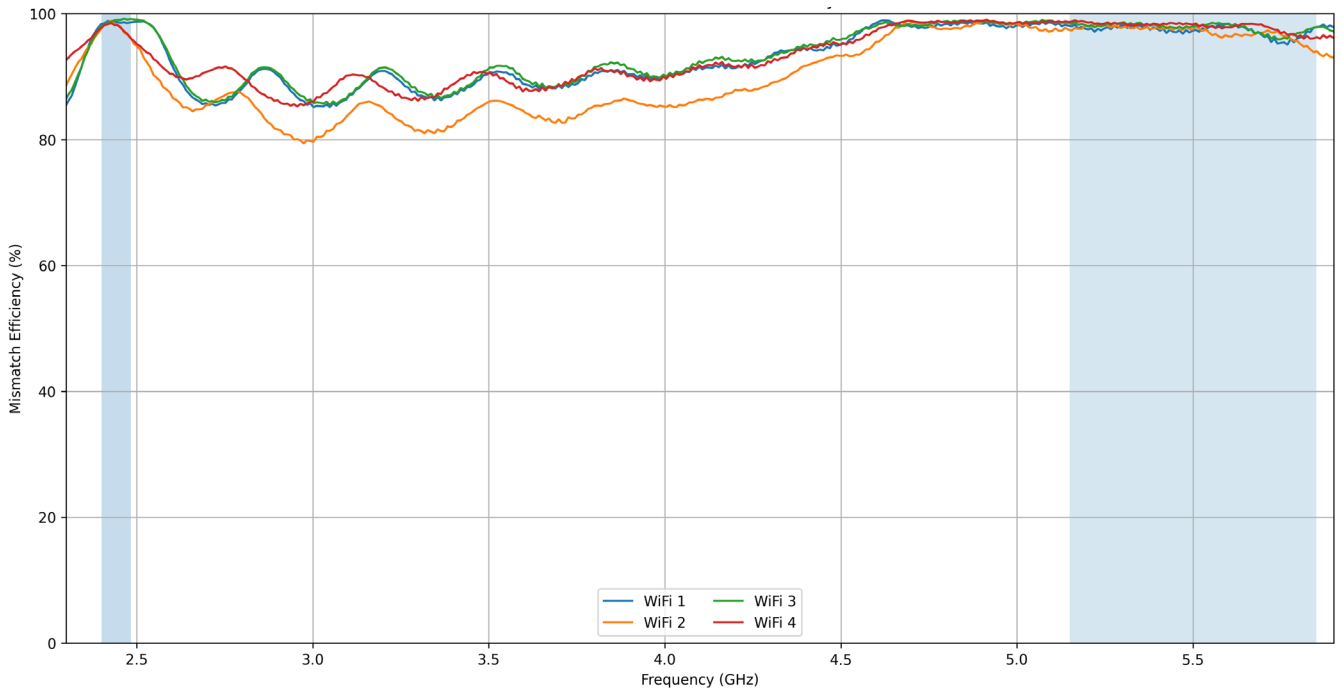


WiFi Port-to-Port Isolation (Updated Measurements)

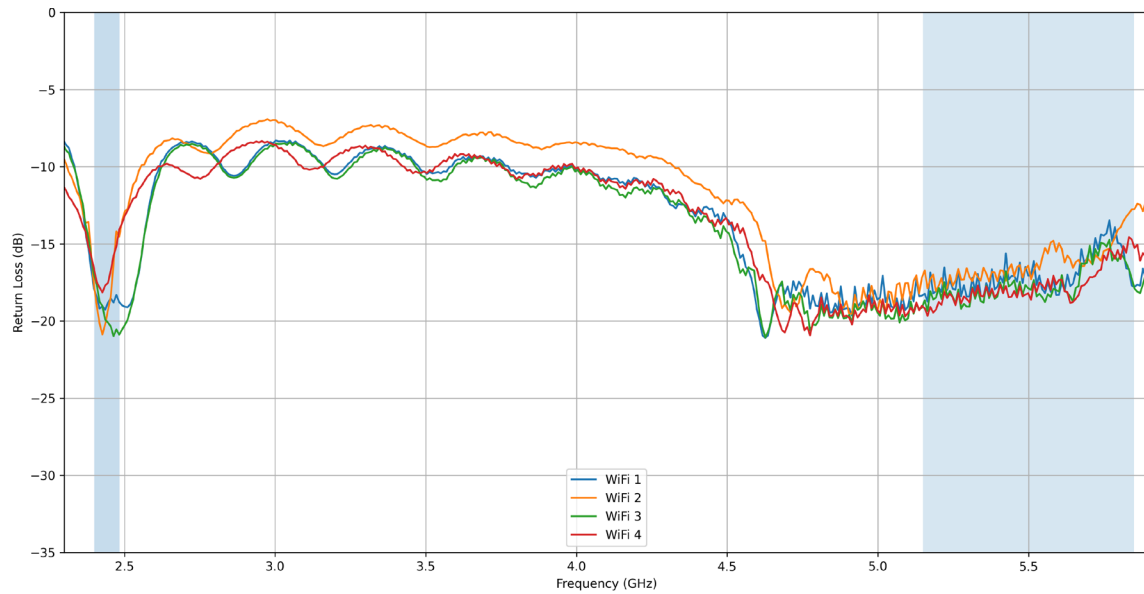


Subject to change without prior notice.

WiFi Ports -Mismatch Efficiency



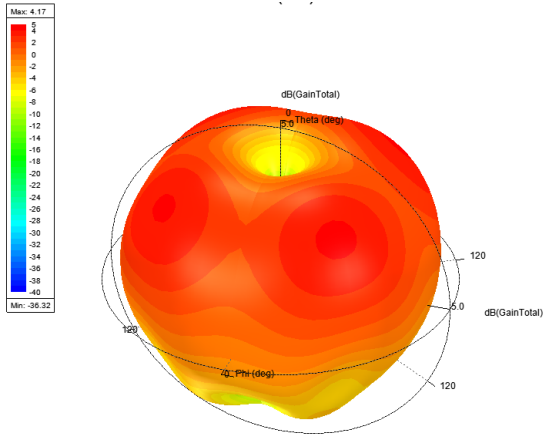
WiFi Antenna – Dual-Band Return Loss



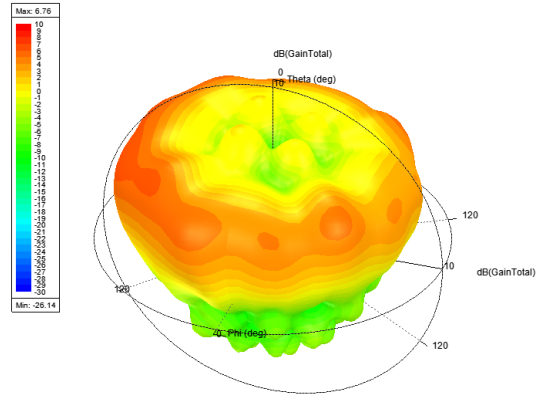
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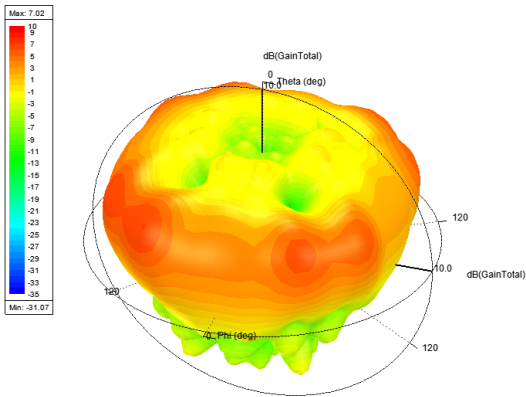
820MHz



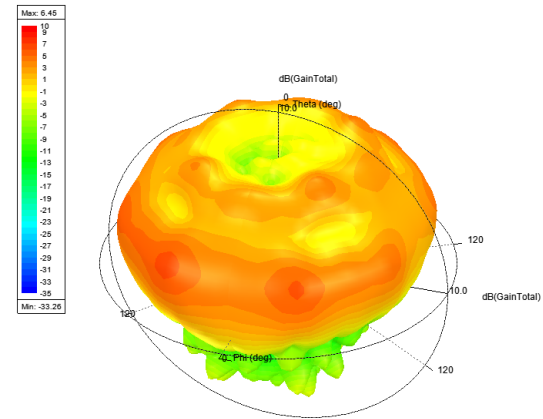
1820MHz



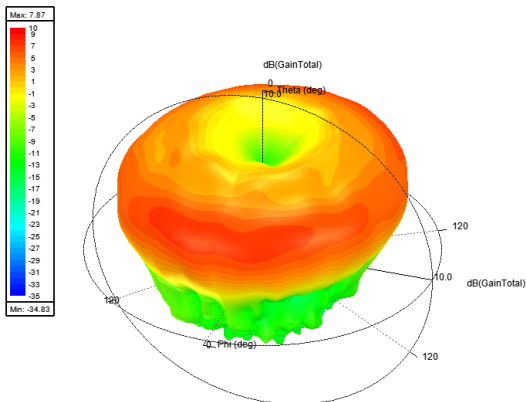
2140MHz



2600MHz



3600MHz



Subject to change without prior notice.

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