

8000-311 Sandcastle 13-in-1 Multifunction MiMo Antenna

5 YEARS WARRANTY



The 'Sandcastle' is a multifunction antenna designed to **future-proof** blue-light and amber-light vehicle fleets, delivering **up to 18 functions** within a single, panel-mounted unit. This variant incorporates **13 functions**.

Equipped with six ultra-wideband cellular elements covering **700 MHz to 6 GHz**, the Sandcastle ensures reliable performance today while supporting future requirements for years to come. With a **minimum 4 dBi gain** across the band, it offers exceptional efficiency for all public safety applications.

This antenna is **ESN-ready** and fully compatible with **current Airwave systems**, making it ideal for agencies transitioning between networks. If the whip option is not required, the 'Sandcastle' can be installed as a **ground-plane-independent antenna**, simplifying installation.

Featuring integrated **GPS, MiMo dual-band Wi-Fi**, and an **optional TETRA whip**, the Sandcastle eliminates the need for multiple holes in the roof, requiring only a **single 19 mm mounting hole**. Additional variants are available, including low-loss coaxial cable fitting kits. **For more details, please contact us.**

Also Available in White: Part No. 8000-211



Part No.	Cable Kit Options
SK0200710	Product Kit : Sandcastle 13 in 1 Antenna : Black : 4x4 LTE/Cellular 6x6 Wi-Fi 2x GPS 1xTetra; - c/w 5m Low Loss Coax Extension Cables - Terminated
SK0200713	Product Kit : Sandcastle 13 in 1 Antenna : Black : 4x4 LTE/Cellular 6x6 Wi-Fi 2x GPS 1xTetra; - c/w 2m Low Loss Coax Extension Cables - Terminated

Additional options available upon request.

Technical Specifications

Part No.		800-311		
Electrical Data				
Frequency Range (MHz)	380 – 430 MHz	700 – 6000 MHz	2.4 GHz & 5.8 GHz	
Band	OPTIONAL TETRA WHIP	4x Wideband LTE 4x4 MiMo	4x Dual Band Wi-Fi 4x4 MiMo	
VSWR	<2.1:1 TYPICALLY 1.5:1	<2.1:1 TYPICALLY 1.5:1	<2.1:1 TYPICALLY 1.5:1	
Gain	5dBi	Minimum 4dBi	Minimum 4dBi	
Isolation	-	<-25dB	<-25dB	
Polarisation	Vertical	Vertical	Vertical	
Pattern	Omni-directional	Omni-directional	Omni-directional	
Impedance	50Ω	50Ω	50Ω	
Max. Power Input (W)	25W	10W	10W	
GPS/GLONASS Data				
Frequency Range (MHz)	1562 – 1612 MHz			
VSWR	<2:1			
Gain	26dB			
Polarisation	Right Hand Circular			
Operating Voltage	3-5v DC (fed via coax, each port is DC isolated)			
Cable	4x RG316 Terminated to SMA (m)			
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				
Cable Type	RG316	RG316	RG316	
Length (mm)	300	300	300	
Diameter	2.8	2.8	2.8	
Termination	TNC (f)	SMA (f)	SMA (m) Reverse Polarity	
Mounting Data				
Mounting Type	Panel Mount with Adhesive Pad			
Mounting Hole (mm)	19mm			

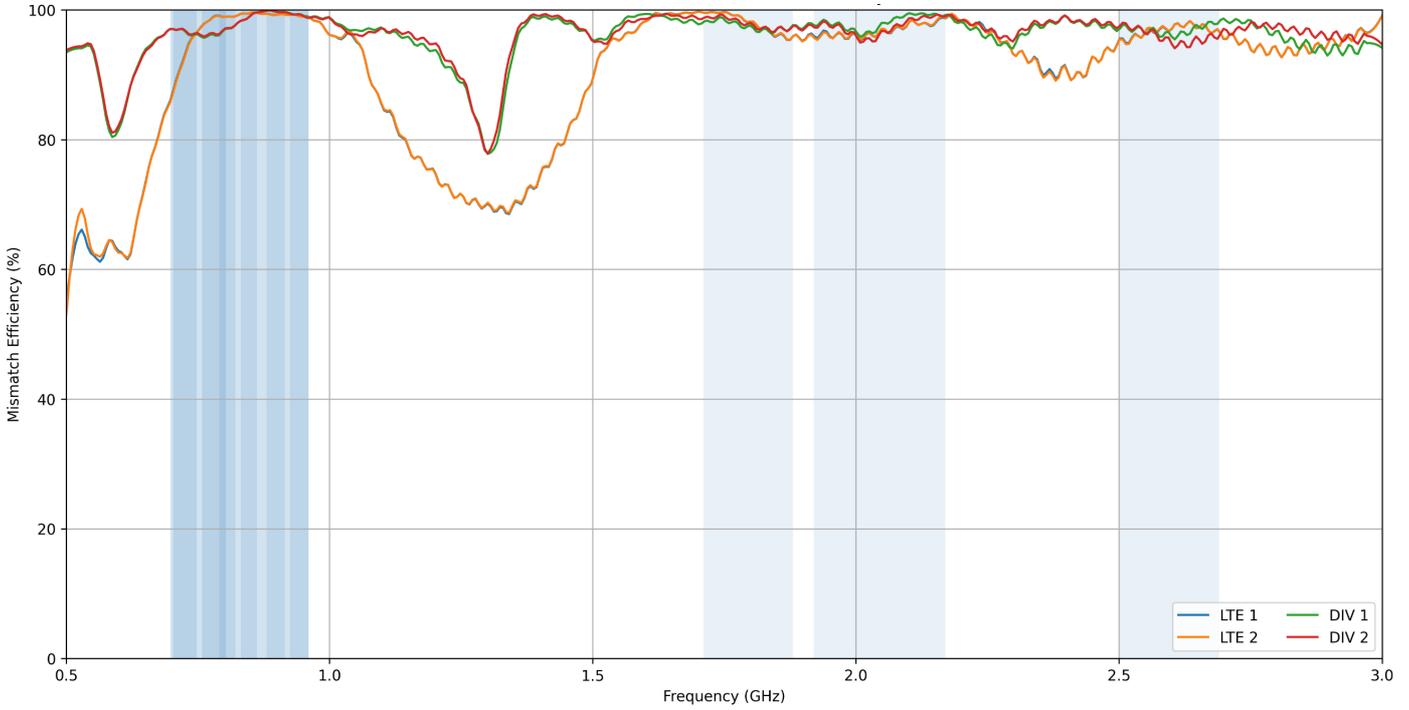
Subject to change. *Excluding optional whip.



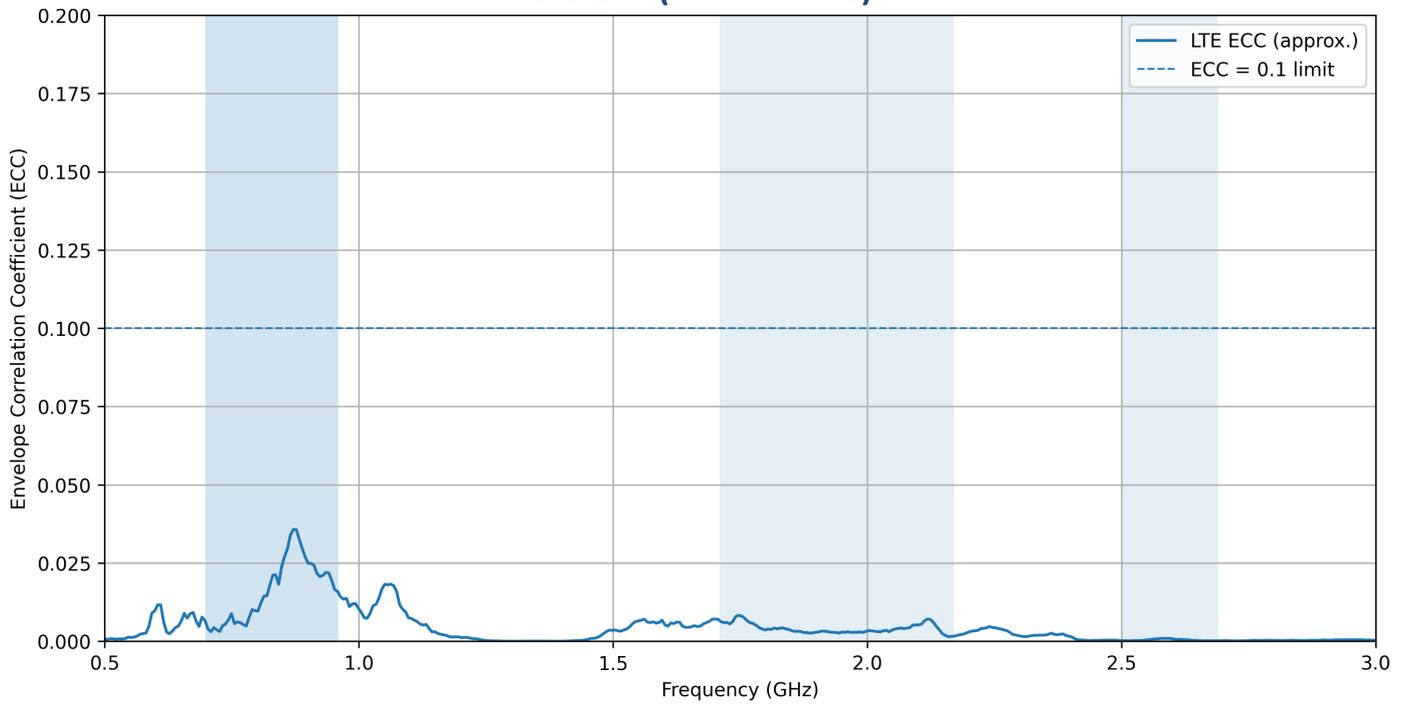
Cable Diagram



LTE / DIV Ports – Mismatch Efficiency

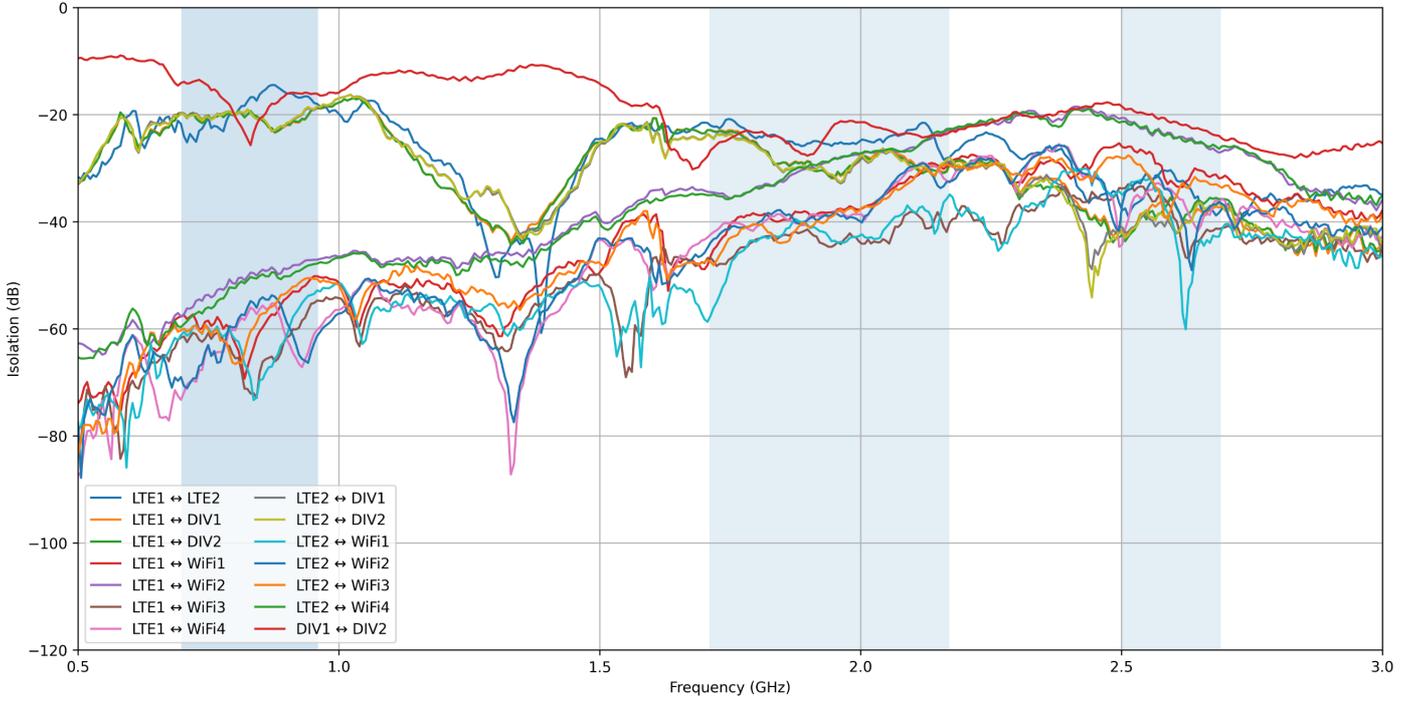


LTE ECC (Cut at 3 GHz)

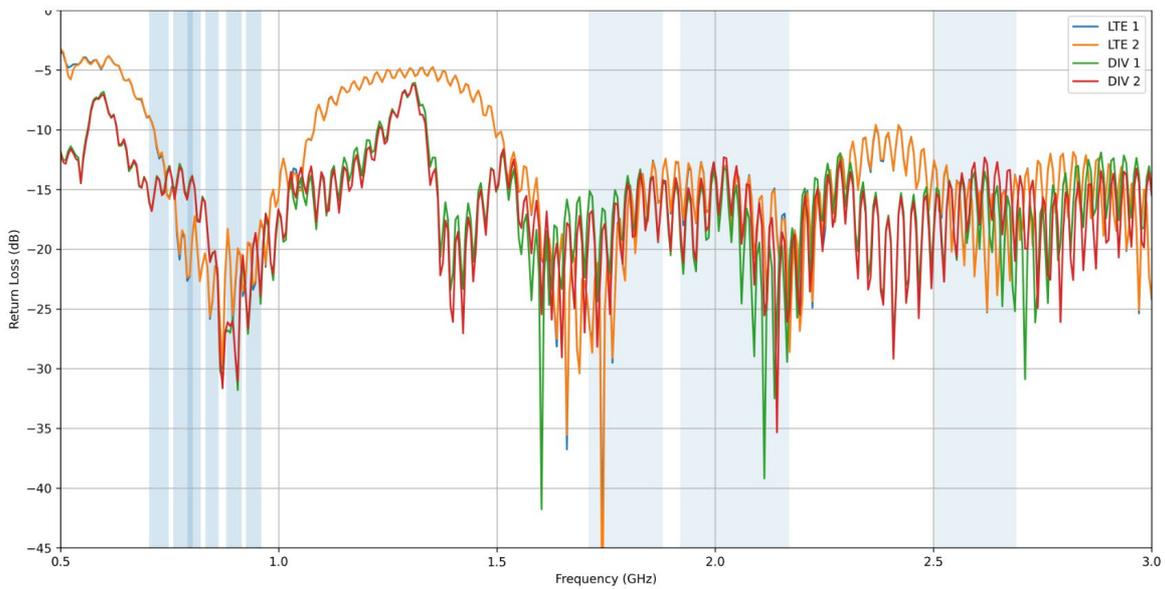


Subject to change without prior notice.

LTE Port Isolation (Cut at 3 GHz)

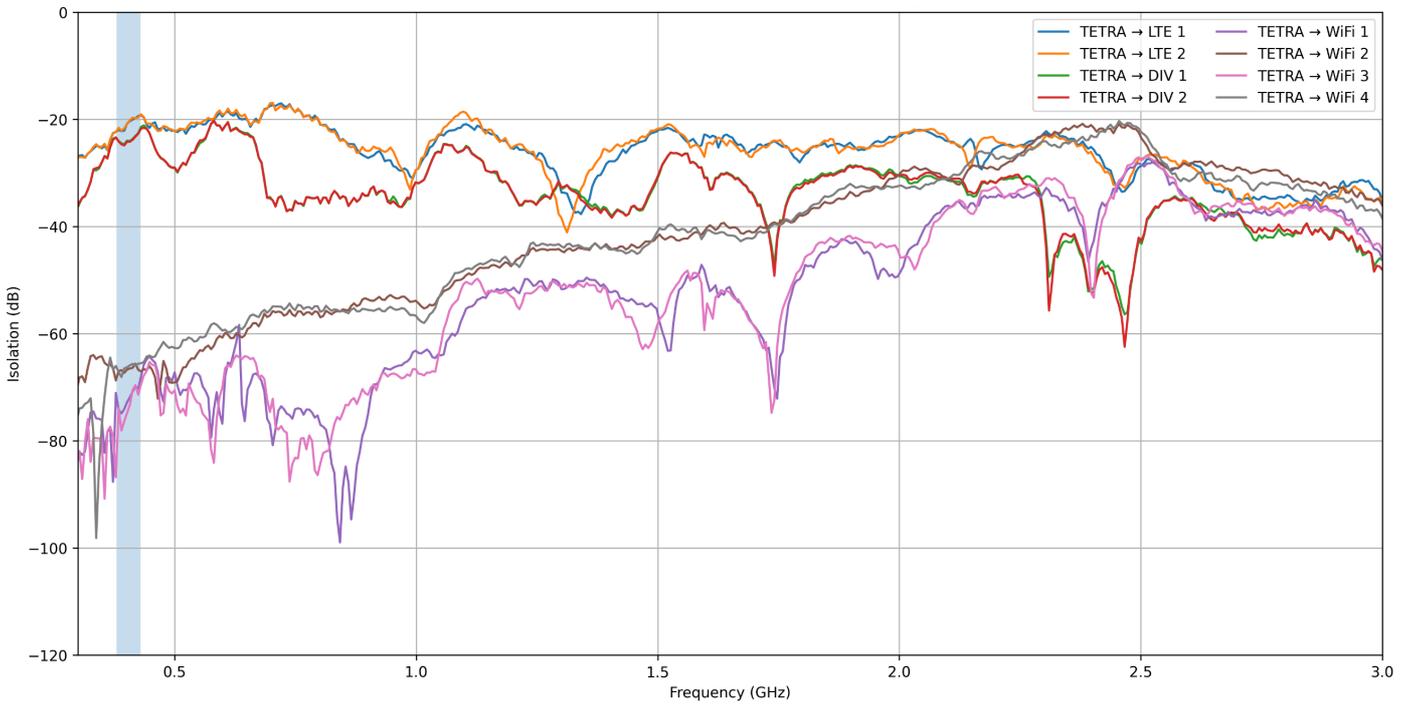


LTE Return Loss

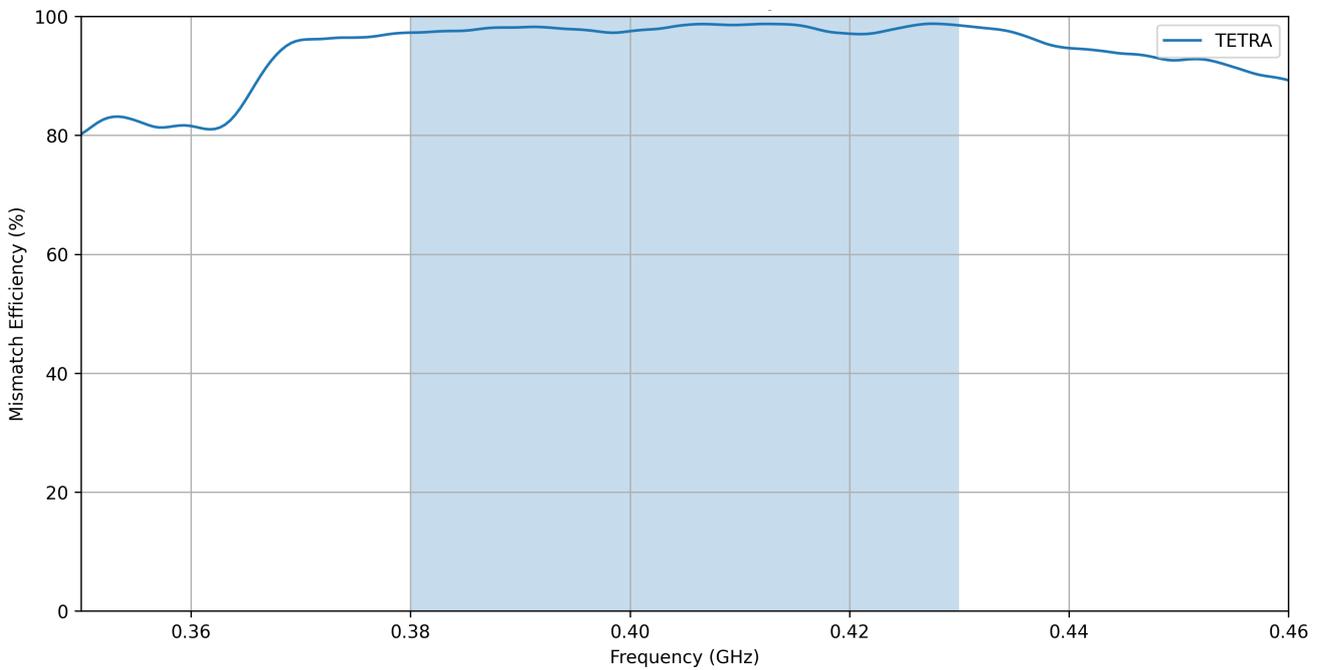


Subject to change without prior notice.

TETRA Port Isolation to All Other Parts (S21)

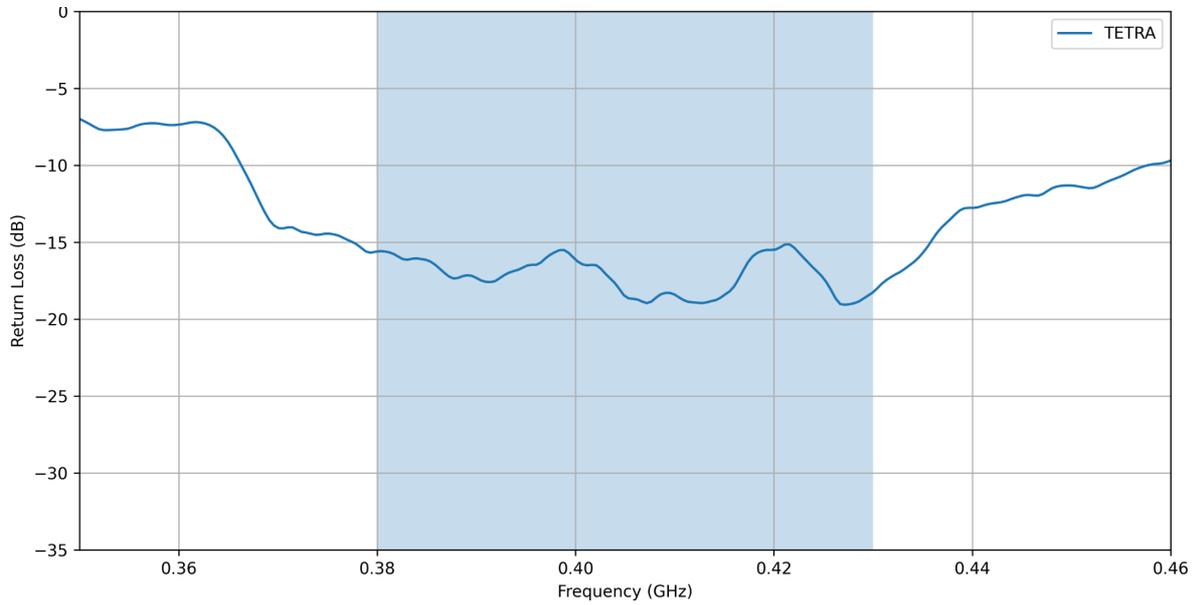


TETRA Port -Mismatch Efficiency (380-430 MHz)

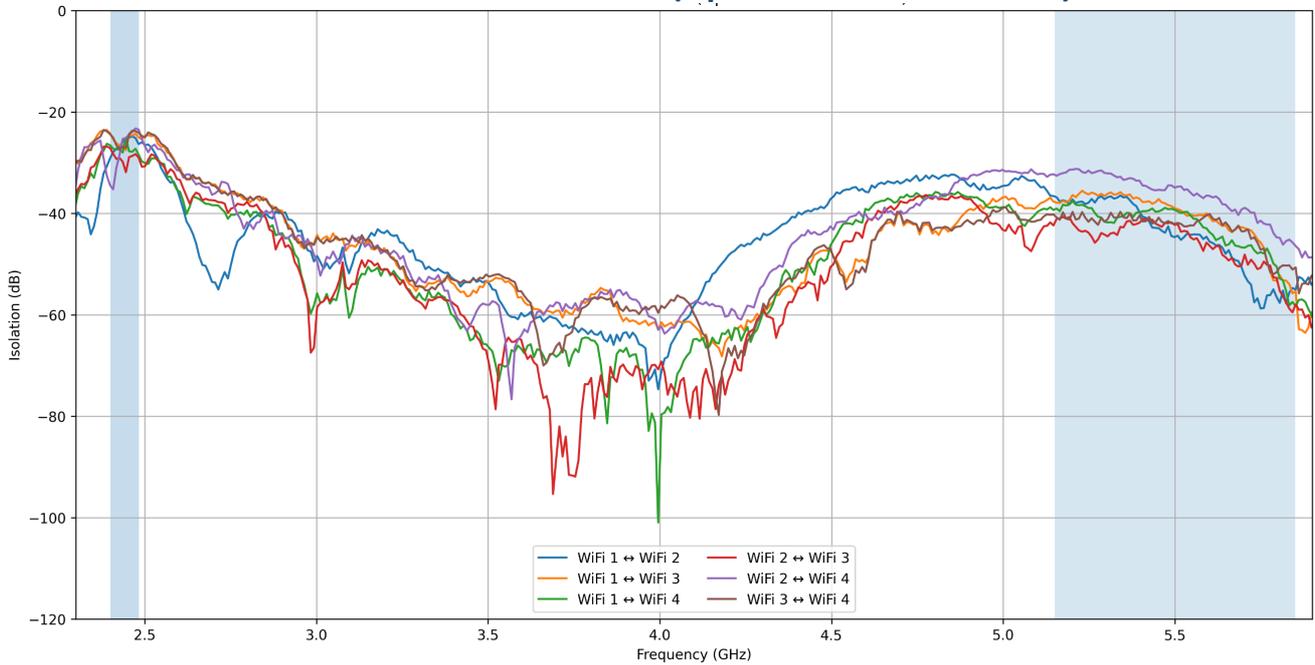


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TETRA Antenna – Return Loss (380-430 MHz)

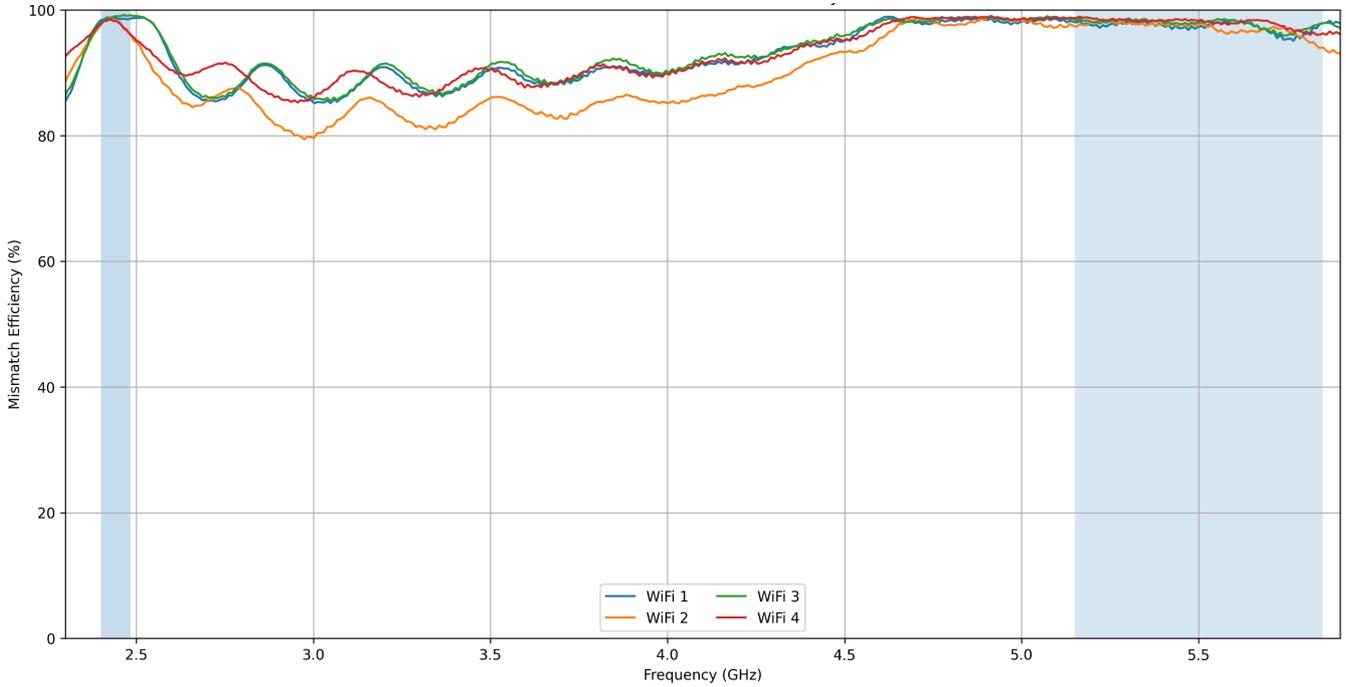


WiFi Port-to-Port Isolation (Updated Measurements)

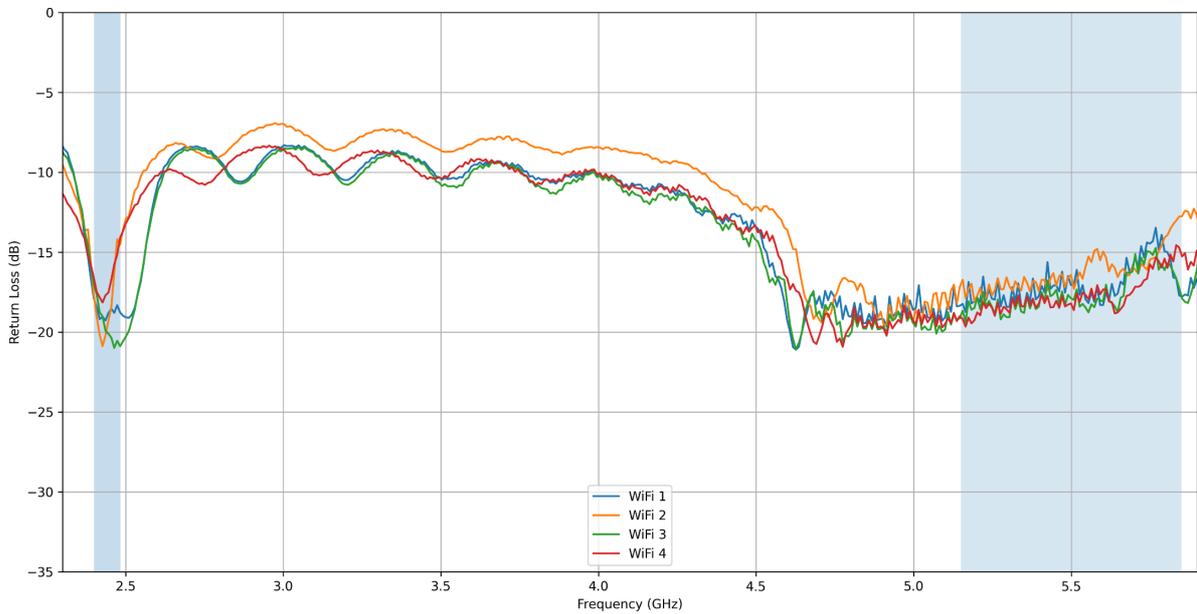


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WiFi Ports -Mismatch Efficiency



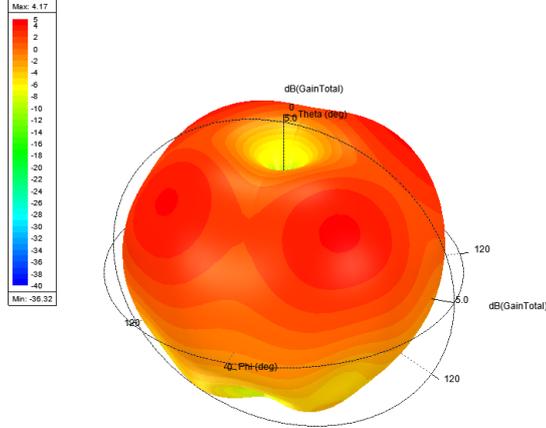
WiFi Antenna – Dual-Band Return Loss



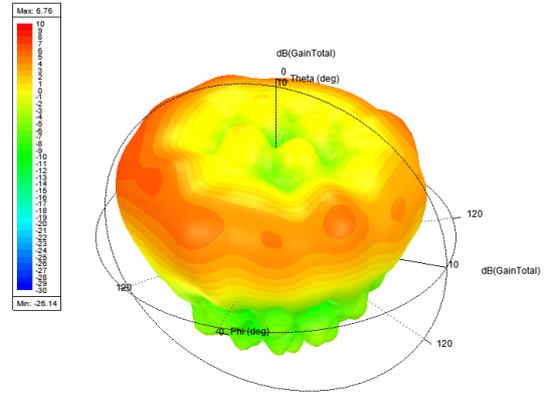
Subject to change without prior notice.

3D Radiation Pattern

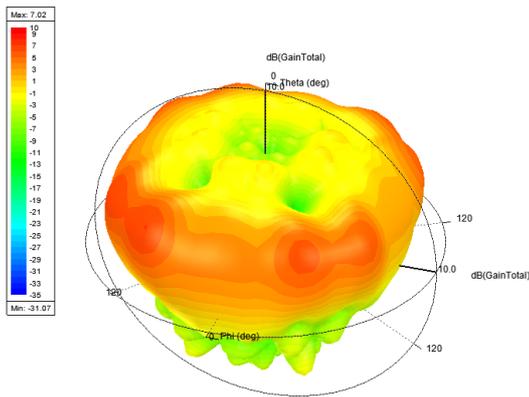
820MHz



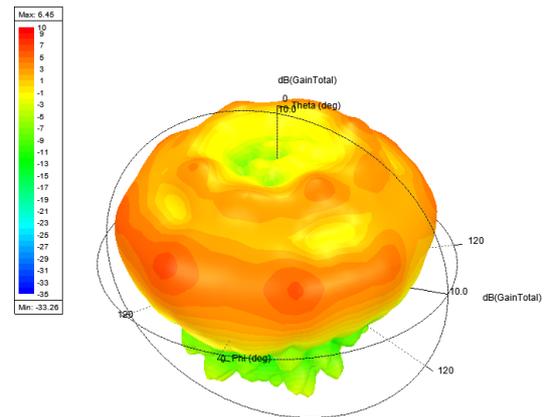
1820MHz



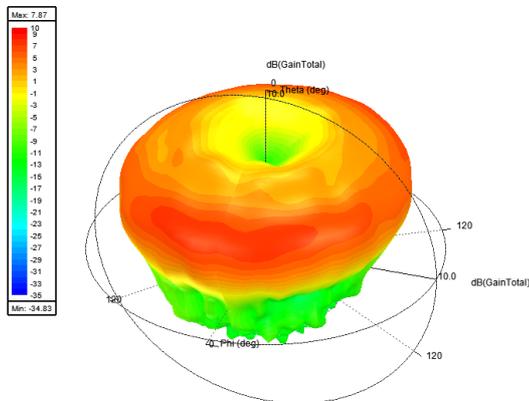
2140MHz



2600MHz



3600MHz



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