

SK0200250

'Mallard' Antenna 9 in 1 Black incl 5m Coax Cables

SureAntennas®



- 9 Functions In 1 Antenna
- ESN Transition Antenna Supporting Tetra
- 2x2 MiMo Wideband 2G 3G 4G 5G
- Ultra-Wide Bandwidth 698MHz – 6000Mhz
- 4x4 MiMo Dual Band WiFi
- Low Profile OEM Styled Sharkfin
- Simple Single Hole Installation
- 2x GPS/GNSS Ports DC Isolated
- CE Directive 2014/53/EU Compliant

This 'Mallard' is supplied as a kit with all coax cables to support general SMA connections, mostly suited to vehicle routers, and your existing Tetra Radio as this kit included the correct GPS adaptor cables to support Motorola and Sepura Tetra radios to give a complete transition solution.

With market leading isolation to support ESN, aswell as your current Tetra radio, there is no need to fit two antennas to your vehicle. With many fitting kit options available there is no reason to drill unwanted holes to the roof of your car. Contact Sure Antennas for many optional fitting accessories.

Designed as a multi-function antenna the Mallard supports 2x2 MiMo from 698MHz to 6GHz with a minimum 4dBi gain across the whole band. With the additional functionality of 4x4 MiMo 2.4/5.8GHz WiFi function, 2x GPS/GNSS Ports, and Tetra, this antenna would be an ideal solution for future proofing your new vehicle installations for ESN.

With a single hole installation, and so many potential frequency functions on offer, this antenna would help reduce installation costs and protect your vehicles resale value. Available with an option of 3m or 5m low loss coax extension cables all terminated and labeled for ease of installation.

Additional Part Number Options

SK0200251	Mallard Antenna 9 in 1 incl 4m Coax Cables Black- Tetra
SK0200252	Mallard Antenna 9 in 1 incl 3m Coax Cables Black- Tetra
SK0200310	Mallard Antenna 9 in 1 incl 5m Coax Cables White- Tetra
SK0200311	Mallard Antenna 9 in 1 incl 4m Coax Cables White- Tetra
SK0200312	Mallard Antenna 9 in 1 incl 3m Coax Cables White- Tetra

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Technical Specifications

Electrical Data	TETRA	2G 3G 4G 5G	WiFi
Frequency Range (MHz)	380 - 430 MHz	698-6000 MHz	2.4 GHz & 5.8GHz
Band	TETRA	2x2 MiMo 2G 3G 4G 5G	4x4 MiMo Dual Band WiFi
VSWR	<2.1:1 TYPICALY 1.5:1	<2.1:1 TYPICALY 1.5:1	<2.1:1 TYPICALY 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			
Frequency Range (MHz)	1562-1612		
VSWR	<2:1		
Gain	26dB		
Polarisation	Right Hand Circular		
Operating Voltage	3-5v DC (fed via coax)		
Cable	2x 230mm RG316 Terminated to SMA (m)		
Mechanical Data			
Dimensions (mm)	H80xW70xL230 *		
Operating Temp (°C)	-40 / +80°C (-40° / 176°F)		
Material	ABS/PC		
Colour	Black		
Weight (g)	310		
Ingress Protection	IP66		
Cable Data			
Cable Type	RG316	RG316	RG316
length	280mm	160mm	200mm
Diameter	2.8	2.8	2.8
Termination	TNC (f)	SMA (f)	SMA (m) Reverse Polarity
Mounting Data			
Mounting Type	Panel mount		
Mounting Hole (mm)	15mm		
Max Panel Thickness (mm)	10mm		

Subject to change without prior notice. *excluding external antenna



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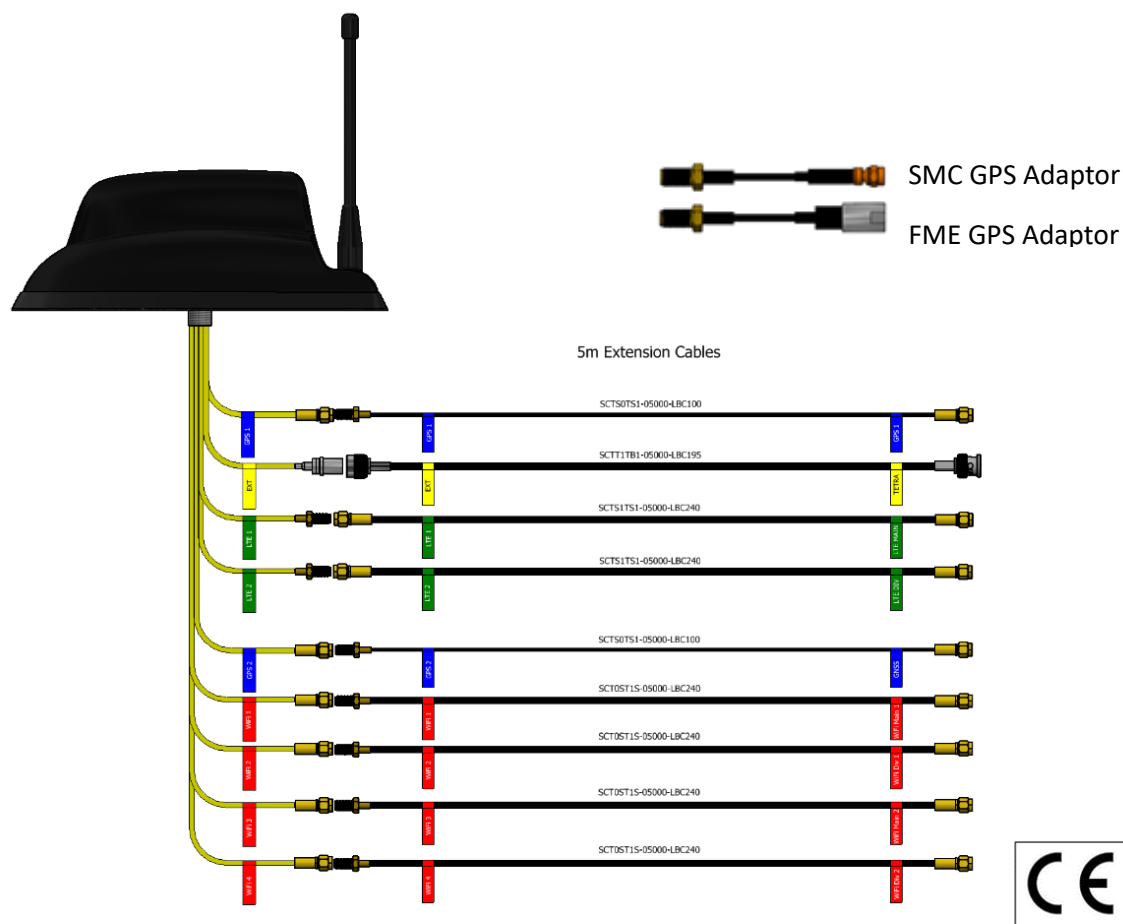
'Mallard' Antenna 9 in 1 Black incl 5m Coax Cables



Supplied Coax Extension Cables

Coax Cables	2x LTE	4x WiFi	1x GPS	1x Tetra	1x GPS
Cable Type	SBC240	SBC240	SBC100	SBC195	SBC100
length	5m or 3m	5m or 3m	5m or 3m	5m or 3m	5m or 3m
Diameter (mm)	6.1	6.1	2.8	4.95	2.8
Min. Bend Radius (mm)	30	30	14	25	14
Operating Temp. °C	-40-80	-40-80	-40-80	-40-80	-40-80
Termination	SMA (m)	SMA Reverse Polarity (m)	SMA (m)	BNC (m)	SMA (m) – Motorola and Sepura adaptors supplied.
Labeling	LTE M & LTE A	WiFi M & WiFi A	GPS	TETRA	GPS TETRA

Technical Drawing


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Mallard Antenna Dimensions



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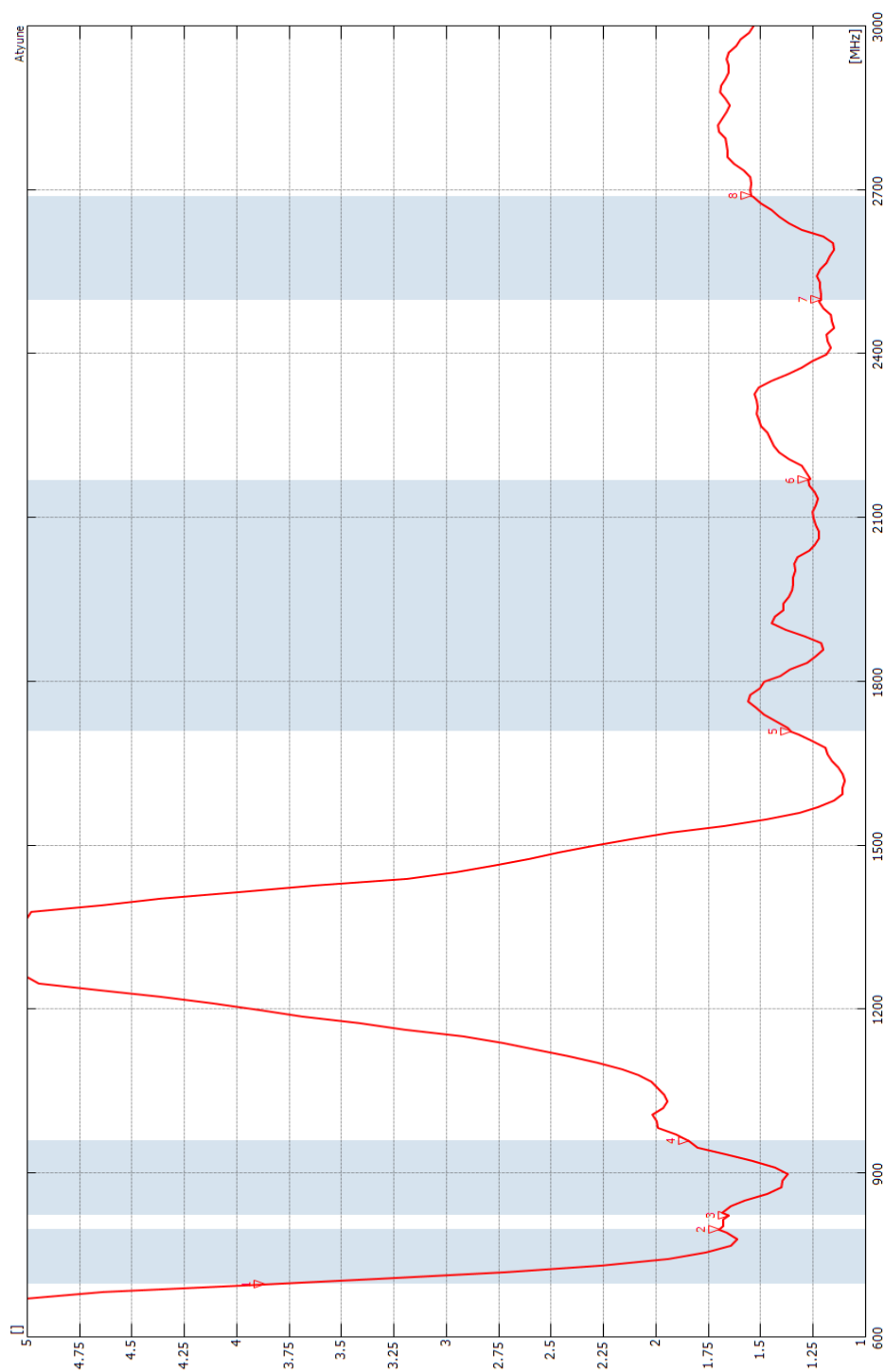


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LTE VSWR Plot



MARKERS:	MHz	MHz	MHz
lte mallard.s2p - S11			
1:	698	3.87	3: 824 1.65
2:	798	1.70	4: 960 1.85
			5: 1710 1.36
			6: 2170 1.27
			7: 2500 1.22
			8: 2690 1.54

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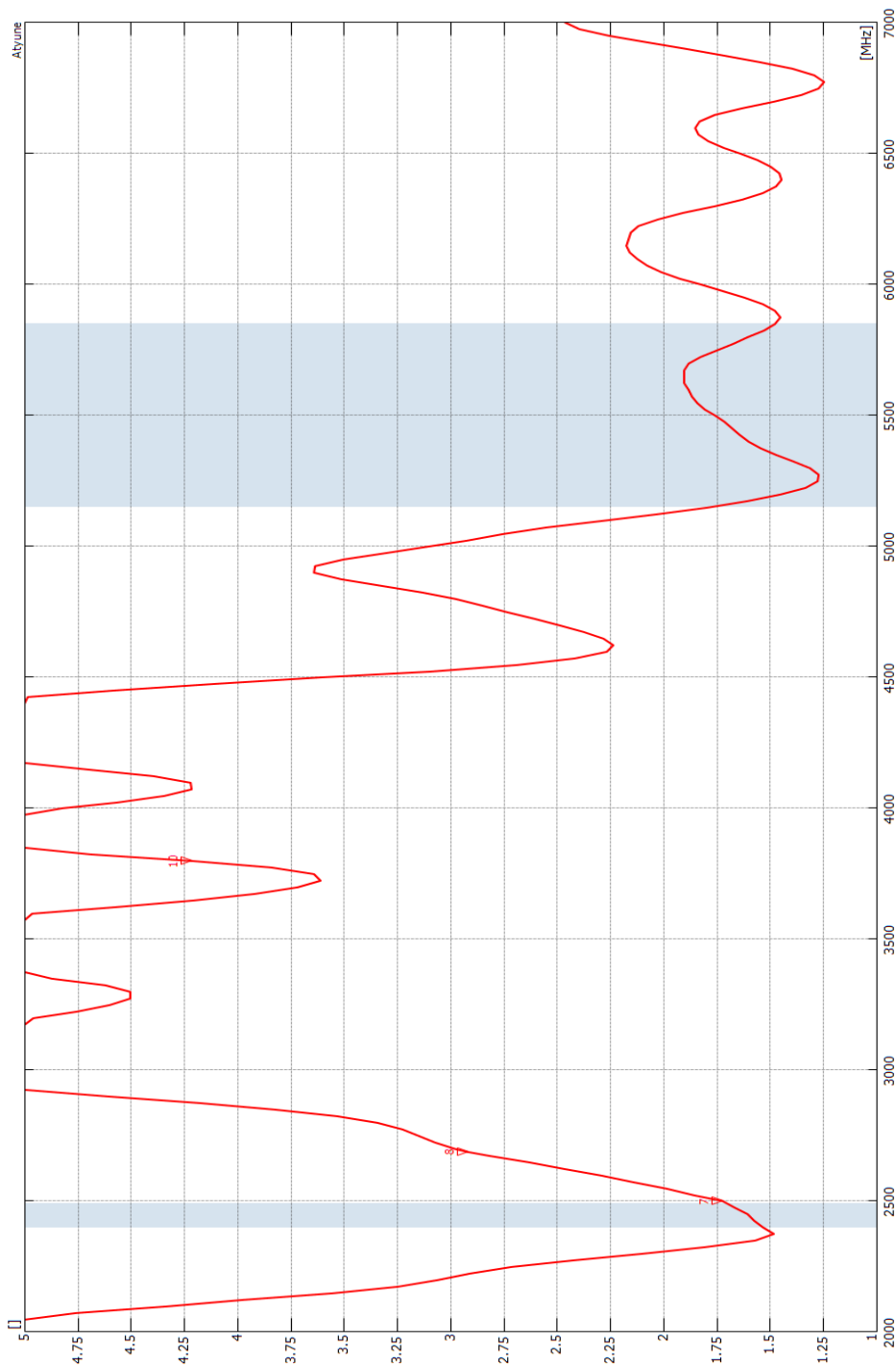



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WiFi VSWR Plot



MARKERS: MHz

dual wifi:sp - S11

1: 2500	1.73	3: 3400	5.74
2: 2690	2.92	4: 3800	4.22

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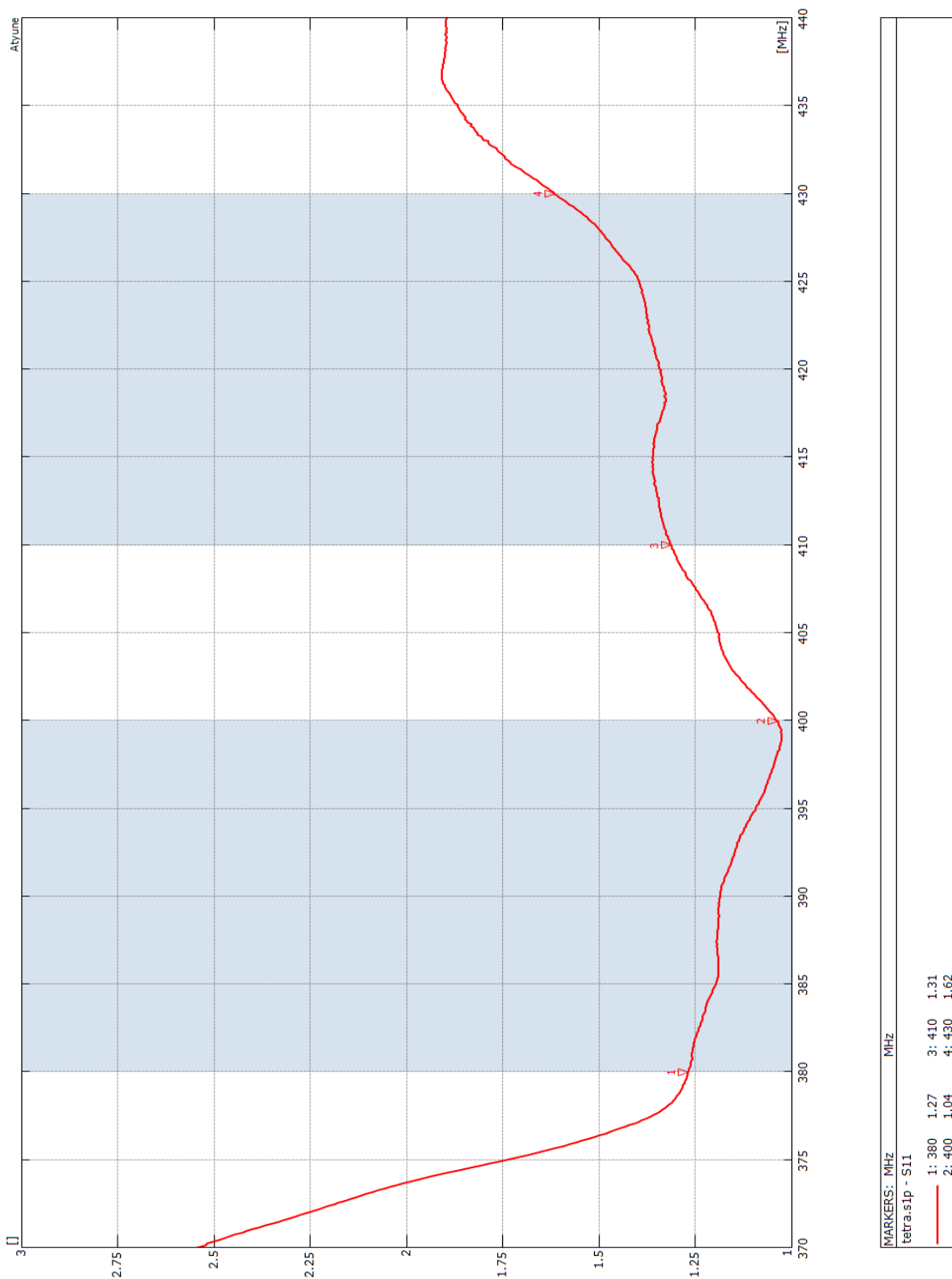



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TETRA VSWR Plot



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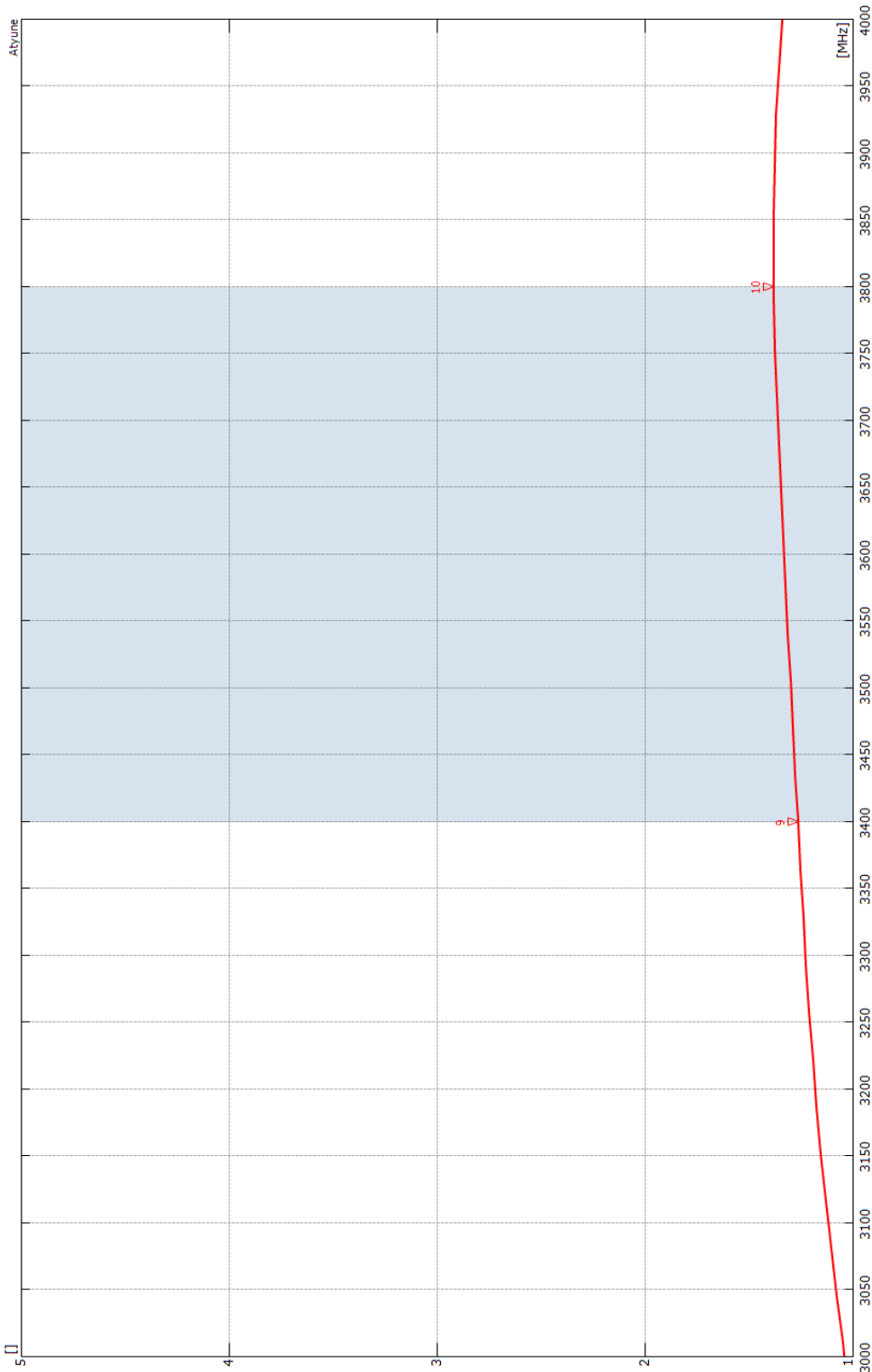



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5G VSWR Plot



MARKERS: MHz		MHz	MHz	MHz	MHz	MHz
LTE DATA HFSS.s1p - S11						
1: 698		2.91	3: 824	1.46	5: 1710	1.14
2: 798		1.59	4: 960	2.02	6: 2170	1.60
					7: 2500	1.47
					8: 2690	1.28
					9: 3400	1.27
					10: 3800	1.38

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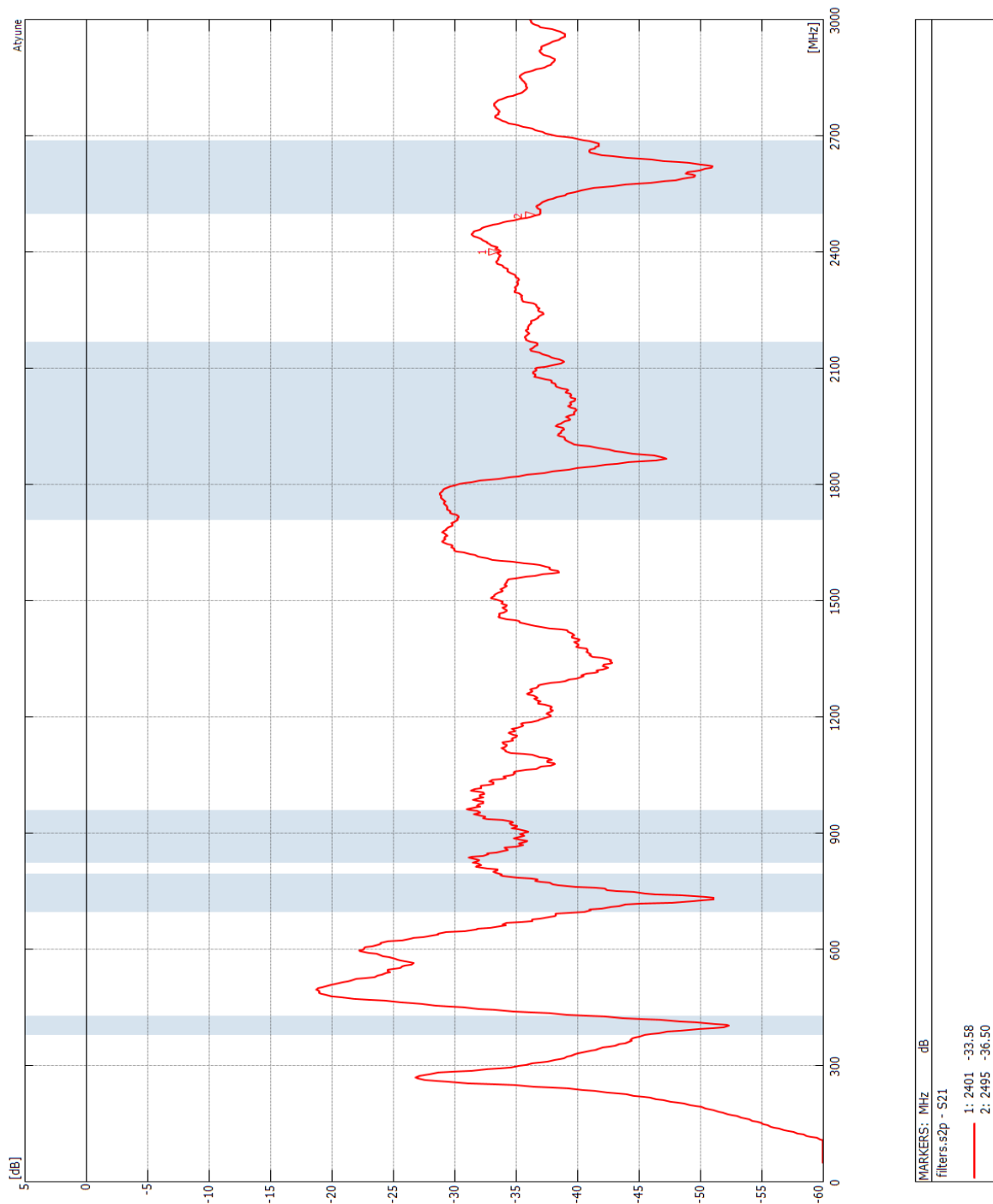


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TETRA & LTE Isolation



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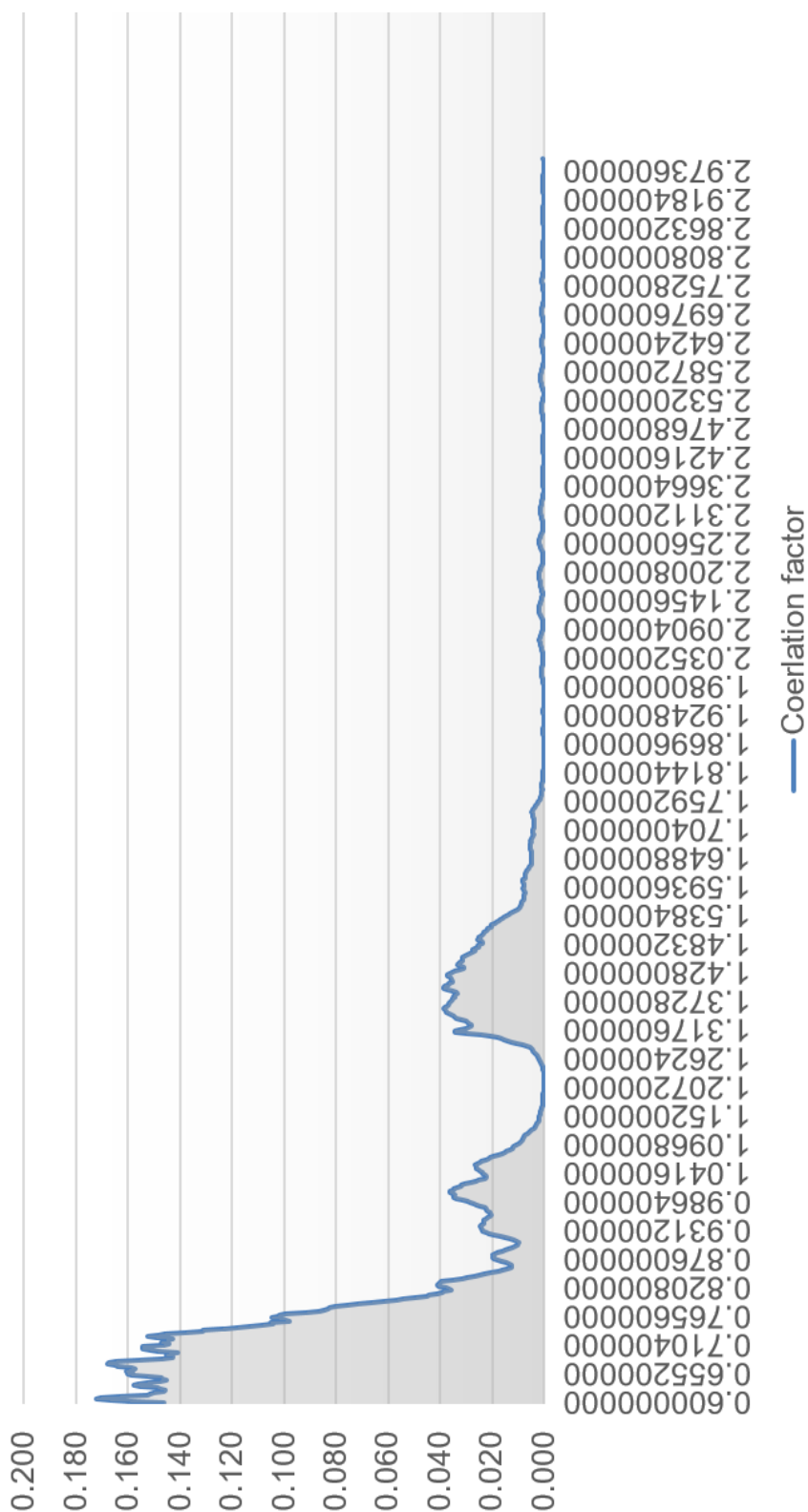
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LTE Correlation Coefficient

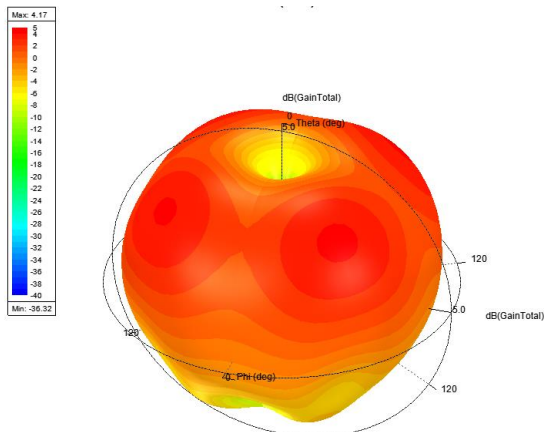


Subject to change without prior notice.

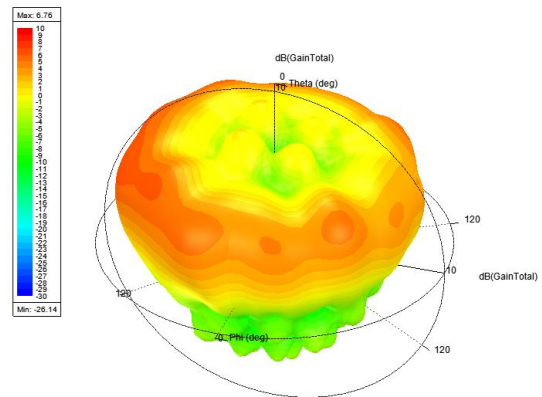


Antenna 3D Gain Plots

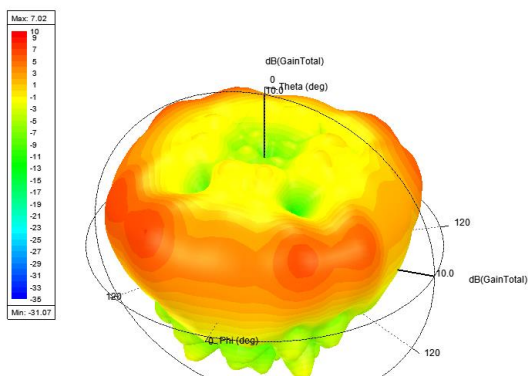
0.82 GHz



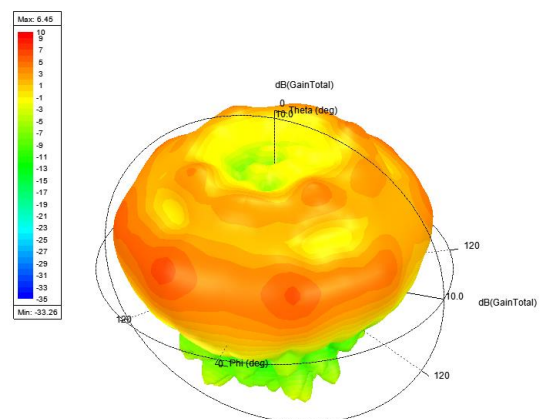
1.82 GHz



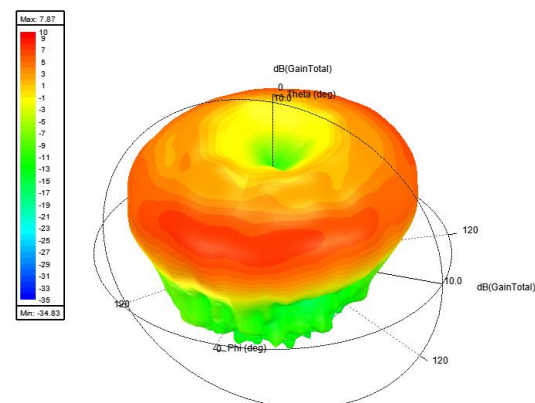
2.14 GHz



2.6 GHz



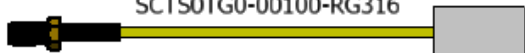
3.6 GHz



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Optional Installation Accessories

0250-MP074.01	Mallard Thread Extender M14x1.5	
SK0229200	WiFi Adaptor Cable 500mm Panasonic CF33 Havis Dock RP SMA - TNC	
SK0229201	LTE Adaptor Cable 500mm Panasonic CF33 Havis Dock SMA - TNC	
SK0229202	GPS Adaptor Cable 500mm Panasonic CF33 Havis Dock SMA - TNC	
SK0125500	GPS Adaptor Cable 10mm Handsfree R5 SMA - Blue Fakra	
SK0125501	WiFi/Bluetooth Adaptor Cable 10mm Handsfree R5 RP SMA - Water Blue Fakra	
SCTS0TG0-00100-RG316	GPS Adaptor Cable 10mm Cleartone SMA – GT5	
ST50S0	GPS or LTE 50 ohm Terminations : SMA Female	
ST500S	WiFi 50 ohm Terminations : SMA Female RP	
Other optional custom coax cables are available, please contact us for more information.		