MiMo 4G/5G Omni Antenna

BS[G]M-450-6-60

- 2x2 MiMo 450-470/617-960/1427-6000MHz 4G/5G
- Wall, rail or mast mount
- Optional GPS/GNSS - 26dB LNA
- Integrated coaxial cables

The BS[G]M-450-6-60 antenna is a MiMo omni-directional broad band antenna range for 4G/5G devices. It covers 450-470/617-960/1427-6000MHz and is suitable for external or internal installation.

The mounting bracket enables simple walll mounting using the supplied screws and wall plugs and mast/rail mounting using the supplied clamps.

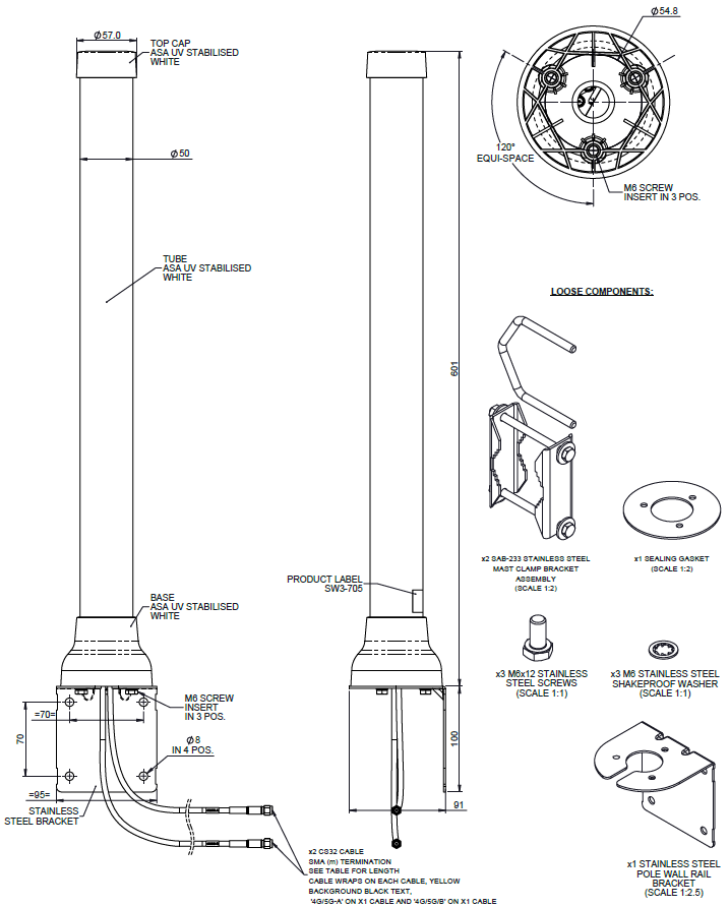
The omni-directional radiation pattern allows easy placement of the antenna in an elevated position, without requiring directional alignment.

The BSGM type is supplied with an integrated GPS/GNSS module with 26dB LNA gain and advanced filtering to combat noise.

This antenna is an ideal solution for IoT use in industrial and domestic environments for cellular modems/routers and Machine to Machine (M2M) wireless connectivity applications. The weather and corrosion resistant design also makes the antenna suitable for certain marine and costal applications and a 1”-14TPI adapter (P/N: SAB-315) is available for fitment to standard marine bases.

Technical Drawing

BSM-450-6-60-5SP Shown



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BS[G]M-450-6-60

PANORAMA ANTENNAS

Product Data

Part No.					
		BSGM-450-6-60-5SP	BSGM-450-6-60-05NJ	BSM-450-6-60-5SP	BSM-450-6-60-05NJ
Electrical Data					
Frequency Range (MHz)	Elements 1&2	450-470 / 617-960 / 1427-6000			
	Element 3	1559-1612		-	
Operational Band	Elements 1&2	460/2G/3G/4G/5G			
	Element 3	GPS-GNSS		-	
Peak Realised Gain: Isotropic* Elements 1 & 2	450-470MHz	2dBi			
	617-960MHz	3dBi			
	1427-2700 MHz	6dBi			
	3400-4200MHz	6dBi			
	4.9-6GHz	6dBi			
Typical VSWR**		<2.5:1			
Correlation Co-efficient		< 0.1			
Polarisation		Vertical			
Pattern		Omni-directional			
Impedance		50Ω			
Max Input Power (W)		10			
GPS/GNSS Data					
Frequency Range (MHz)		1559-1612		-	
Typical VSWR		<2.5:1		-	
LNA Gain		26dB (+/-3)		-	
Polarisation		RHCP		-	
Operating Voltage		3-5 VDC <20ma		-	
Mechanical Data					
Dimensions (mm)	Height Excl Brkt	601 (23.66”)			
	Diameter	86 (3.38”)			
Operating Temp (°C)		-40° / +85°C (-40° / 185°F)			
Material		ASA, Stainless Steel			
Material Approvals		Radome ASA Material - UL 746C F1, UL 94-HB			
Colour		White & Natural			
Ingress Protection		IP67			
Mounting Data					
Fixing		Wall, Mast, Rail or Panel Mount (1”-14TPI Marine Adapter Available -PN: SAB-315)			
Max Mast / Rail Diameter (mm)		50 (1.96”)			
Cable Data					
4G/5G Cables	Type	CS32 (EN45545-2 & UN ECE R118 Compliant)			
	Diameter (mm)	5 (0.19”)			
	Length (m)	5 (17’)	0.5 (1’ 6”)	5 (17’)	0.5 (1’ 6”)
	Termination	SMA (m)	N(f)	SMA (m)	N(f)
GPS/GNSS Cables	Type	CS29 FR (EN45545-2 & UN ECE R118 Compliant)		-	
	Diameter (mm)	5 (0.19”)		-	
	Length (m)	5 (17’)	0.5 (1’ 6”)	-	
	Termination	SMA (m)	N(f)	-	

* Peak gain simulated in CST microwave studio in free space excluding cable loss ** Typical VSWR measured with 0.5m of cable in free space.

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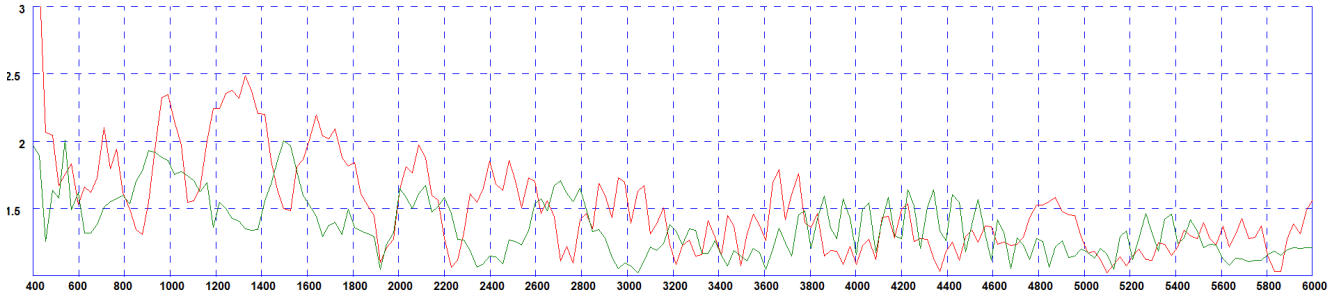
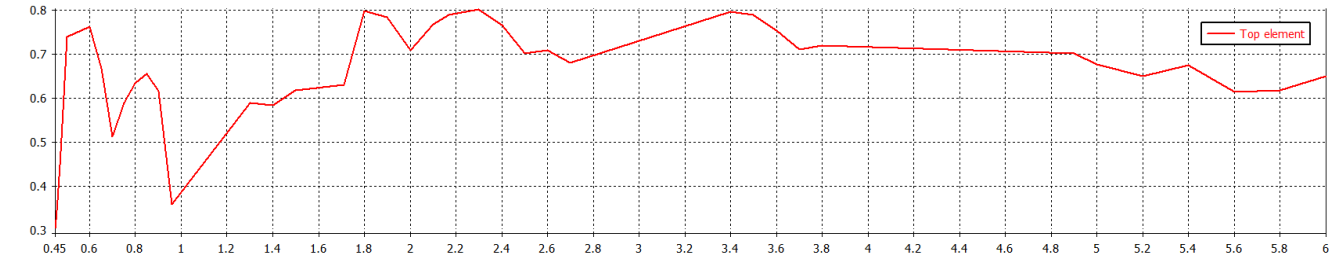
Electrical Data

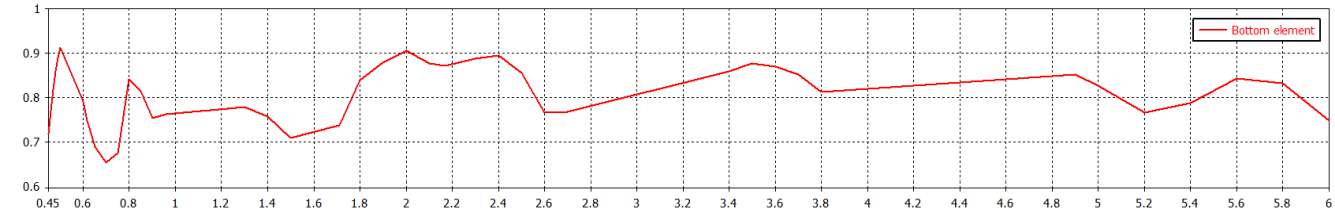
Typical VSWR*



*Red Plot =VSWR top element measured on supplied bracket with 5m (16') of CS32 cable. Green Plot = VSWR bottom element measured on supplied bracket with 5m (16') of CS32 cable.

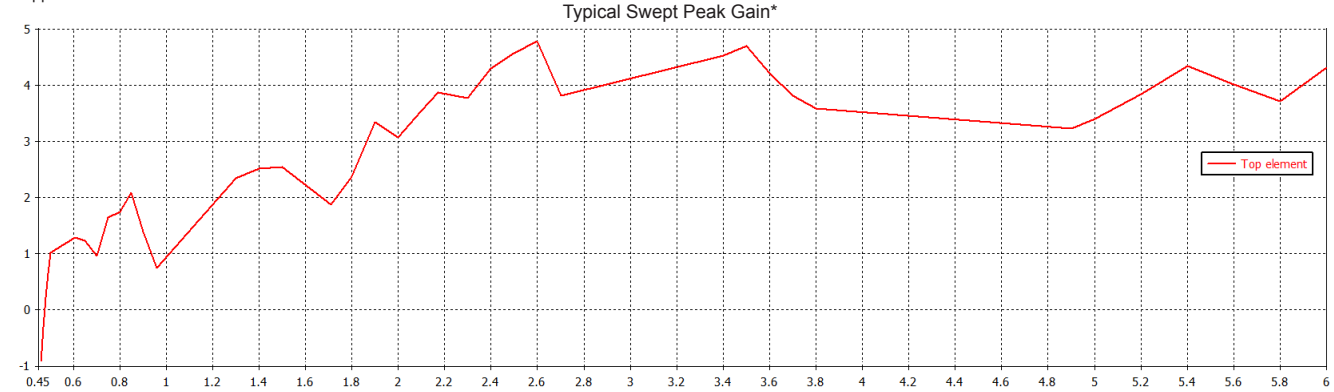
Typical Efficiency*

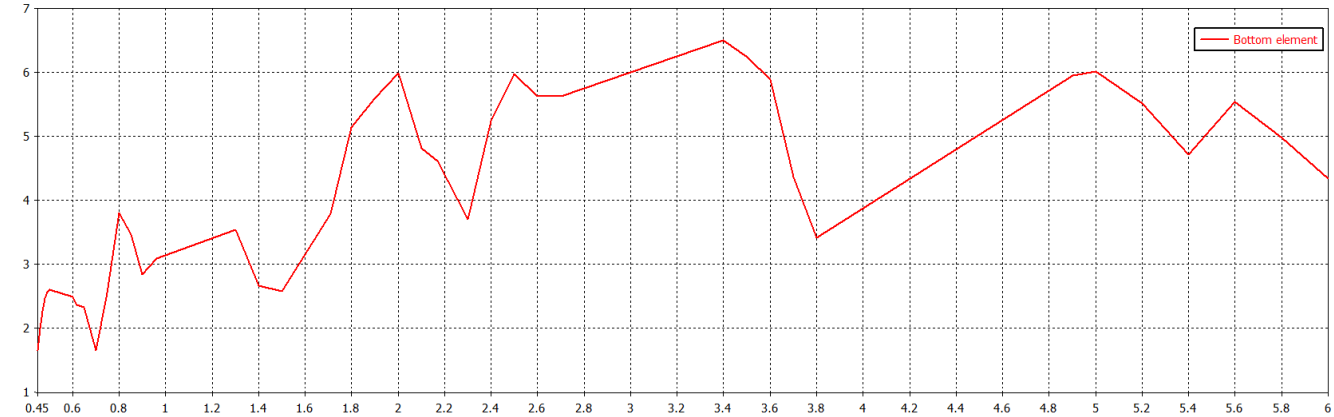




*Top Plot = Efficiency top element simulated in CST Microwave Studio on supplied bracket without cable. Bottom Plot = Efficiency bottom element simulated in CST Microwave Studio on supplied bracket without cable.

Typical Swept Peak Gain*





*Top Plot =Peak gain top element simulated in CST Microwave Studio on supplied bracket without cable. Bottom Plot = Peak gain bottom element simulated in CST Microwave Studio on supplied bracket without cable.

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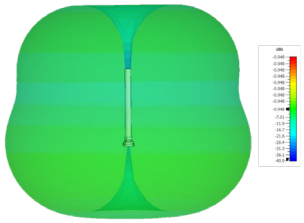
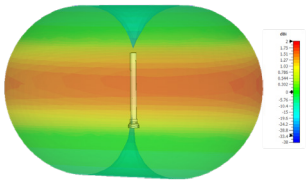
PANORAMA ANTENNAS

3D Patterns - 4G/5G

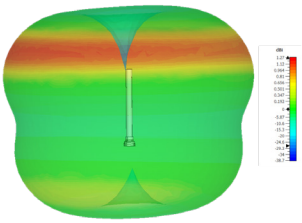
3D Plot Top Element (460 MHz)



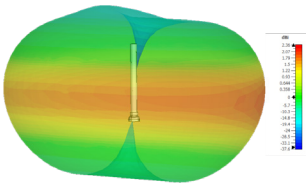
3D Plot Bottom Element (460 MHz))



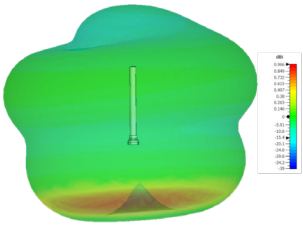
3D Plot Top Element (617 MHz)



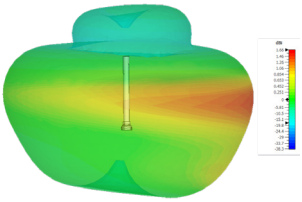
3D Plot Bottom Element (617 MHz)



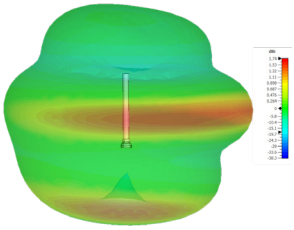
3D Plot Top Element (700 MHz)



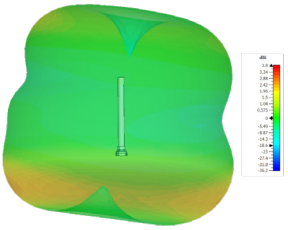
3D Plot Bottom Element (700 MHz)



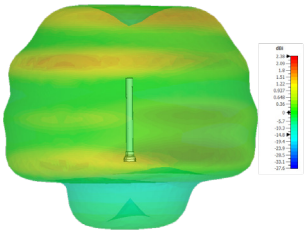
3D Plot Top Element (800 MHz)



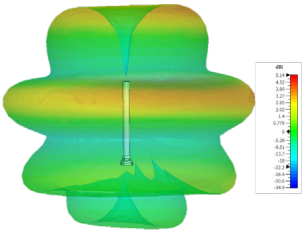
3D Plot Bottom Element (800 MHz)



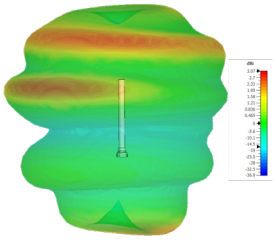
3D Plot Top Element (1800 MHz)



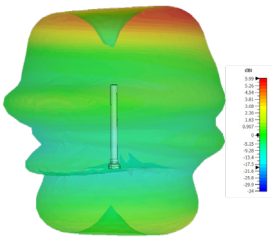
3D Plot Bottom Element (1800 MHz)



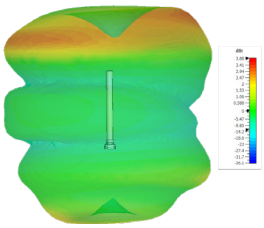
3D Plot Top Element (2000 MHz)



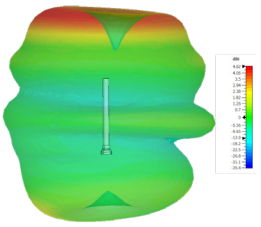
3D Plot Bottom Element (2000 MHz)



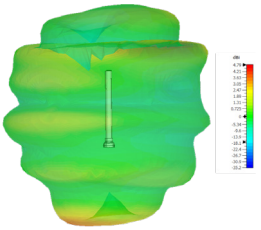
3D Plot Top Element (2170 MHz)



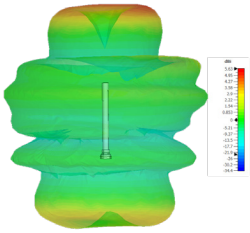
3D Plot Bottom Element (2170 MHz)



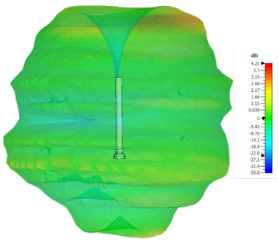
3D Plot Top Element (2600 MHz)



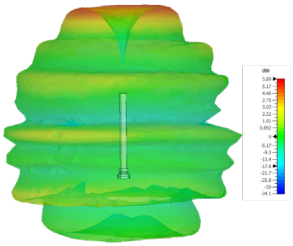
3D Plot Bottom Element (2600 MHz)



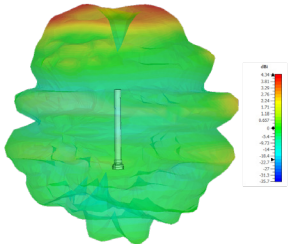
3D Plot Top Element (3600 MHz)



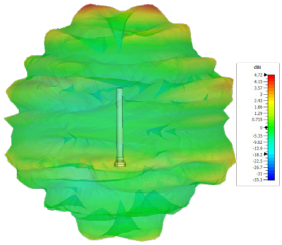
3D Plot Bottom Element (3600 MHz)



3D Plot Top Element (5400 MHz)



3D Plot Bottom Element (5400 MHz)



All measurements simulated in CST Microwave Studio without cable