

Omnidirectional UHF Marine Antenna

BS[G]SN-S[X]

PANORAMA ANTENNAS

- UHF omni-directional antenna
- 1" 14 TPI marine mount
- Optional GPS/GNSS - 26dB LNA
- Integrated coaxial cables



The BS[G]SN-S[X] range antenna is an omni-directional antenna range for UHF radios. It is available in versions covering 380-400MHz, 410-430MHz or 450-470MHz and can be supplied with optional GPS/GNSS with 26dB LNA gain and advanced filtering to combat noise.

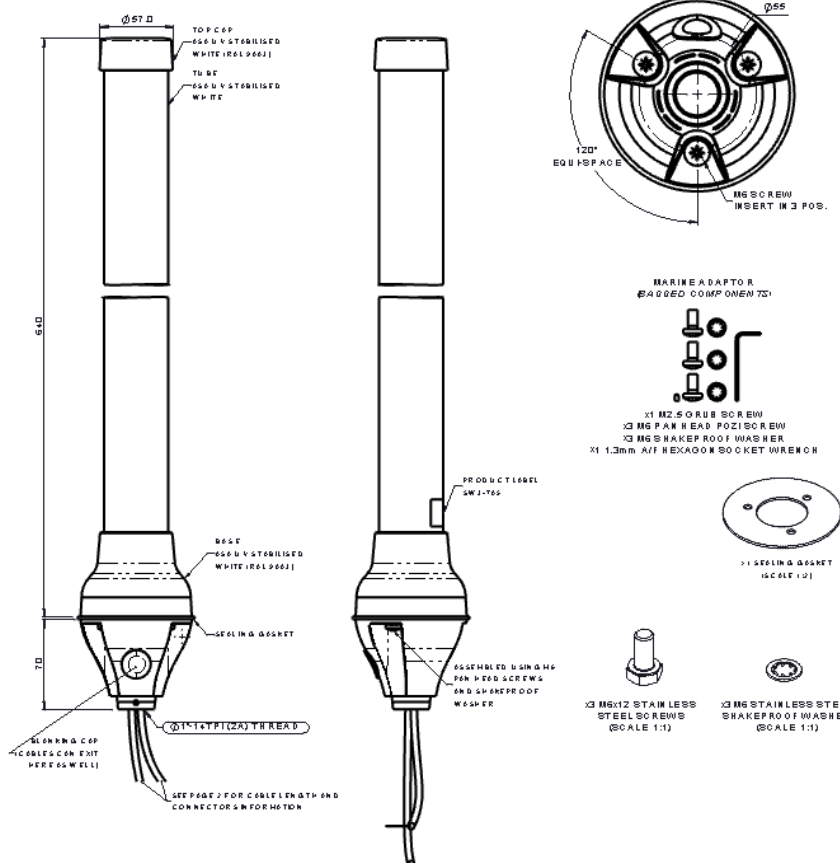
The omni-directional radiation pattern allows easy placement of the antenna in an elevated position, without requiring directional alignment.

The BS[G]SN variants are intended for marine applications and are supplied with SAB-315 1" 14 TPI marine adapter suitable for mounting to marine bases like the Panorama NDRS-SL ratchet base (supplied separately). The antenna range can also be directly panel / deck mounted.

The weather and corrosion resistant design along with IP67 rating make the BS[G]SN variants of the antenna very suitable for marine and coastal applications.

Technical Drawing

BS[G]SN-S[X] Shown



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Product Data

Part No.		BSSN-S1-5SP	BSSN-S2-5SP	BSSN-S4-5SP
Electrical Data				
Frequency Range (MHz)	Element 1	380 - 400	410 - 430	450 - 470
Operational Band	Element 1	S1	S2	S4
Peak Realised Gain: Isotropic*	Element 1		4.5dBi	
Typical VSWR**			<2.5:1	
Typical Efficiency*			71%	
Polarisation			Vertical	
Pattern			Omni-directional	
Impedance			50Ω	
Max Input Power (W)			25	
Mechanical Data				
Dimensions (mm)	Height Excl Brkt		640 (25.2")	
	Diameter		87 (3.4")	
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			Panel or marine base mount	
Adapter			SAB-315 1" 14 TPI adapter for marine mounting	
Cable Data				
Cables	Type		CS23	
	Diameter (mm)		5 (0.2")	
	Length (m)		5 (16.4')	
	Termination		SMA plug (m)	

* Peak gain and efficiency based on BSS-S4 measured in free space with 0.75m (2.5') of CS23 cable. Efficiency represents average efficiency across stated band.

** Typical VSWR measured in free space with 0.75m (2.5') of CS23 cable

***The stainless steel components of the SAB-315 marine adapter are 316 stainless steel

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Product Data

Part No.				
		BSGSN-S1-5SP	BSGSN-S2-5SP	BSGSN-S4-5SP
Electrical Data				
Frequency Range (MHz)	Element 1	380 - 400	410 - 430	450 - 470
	Element 2		1559-1612	
Operational Band	Element 1	S1	S2	S4
	Element 2		GPS-GNSS	
Peak Gain: Isotropic*	Element 1		4.5dBi	
Typical VSWR**			<2.5:1	
Typical Efficiency*			> 71%	
Polarisation			Vertical	
Pattern			Omni-directional	
Impedance			50Ω	
Max Input Power (W)			25	
GPS/GNSS Data				
Frequency Range (MHz)			1559-1612	
Typical VSWR			<2.5:1	
LNA Gain			26dB (+/-3)	
Polarisation			RHCP	
Operating Voltage / current			3-5 VDC <20ma	
Mechanical Data				
Dimensions (mm)	Height Excl Brkt		640 (25.2")	
	Diameter		87 (3.4")	
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			Panel or marine base mount	
Adapter			SAB-315 1" 14 TPI adapter for marine mounting	
Cable Data				
Cables	Type	CS23		
	Diameter (mm)	5 (0.2")		
	Length (m)	5 (16.4')		
	Termination	SMA plug (m)		
GPS/GNSS Cables	Type	CS29		
	Diameter (mm)	5 (0.2")		
	Length (m)	5 (16.4')		
	Termination	SMA plug (m)		

* Peak gain and efficiency based on BSS-S4 measured in free space with 0.75m (2.5') of CS23 cable. Efficiency represents average efficiency across stated band.

** Typical VSWR measured measured in free space with 0.75m (2.5') of CS23 cable

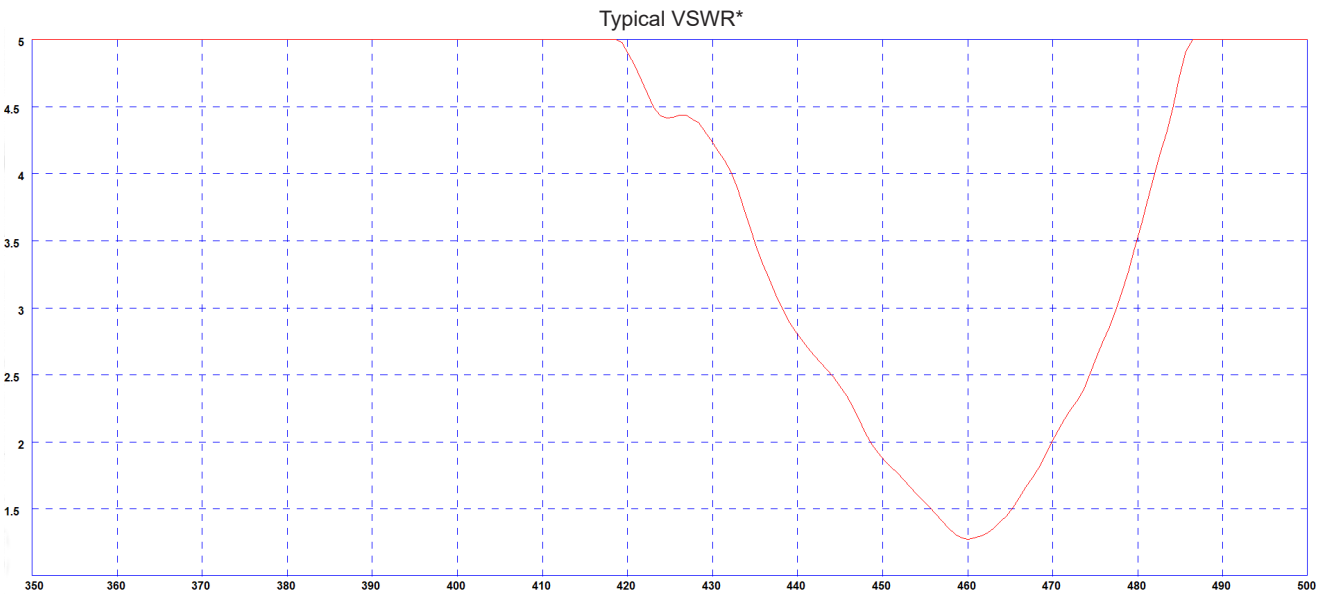
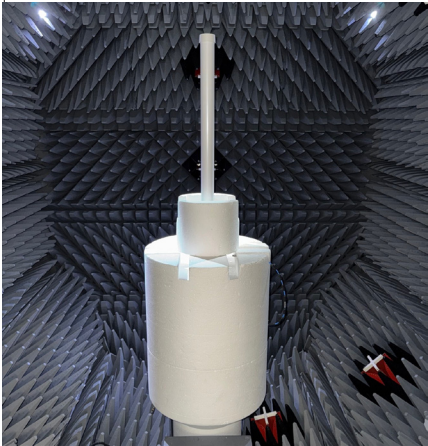
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Electrical Data in
Free Space

Measurement Conditions	UHF Antenna			
BSS-S4 Measured in free space with 0.75m (2.5') of CS23 cable.	Frequency Range (MHz)	Band	Peak Gain (dBi)	Efficiency (%)
	450-470	S4	4.5	71



*VSWR measured in free space with 0.75m (2.5') of CS23 cable

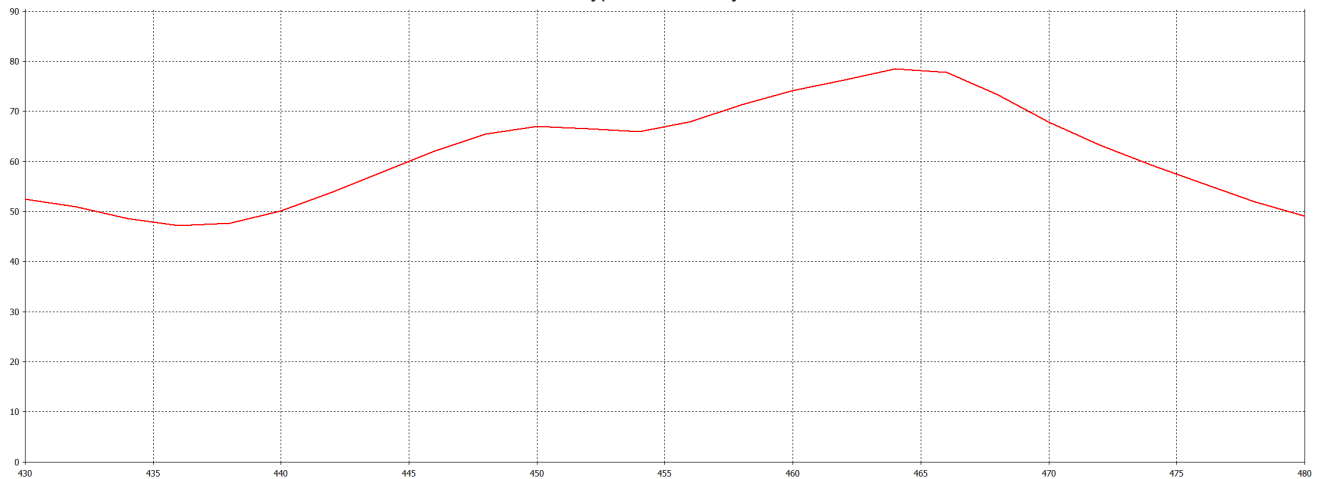
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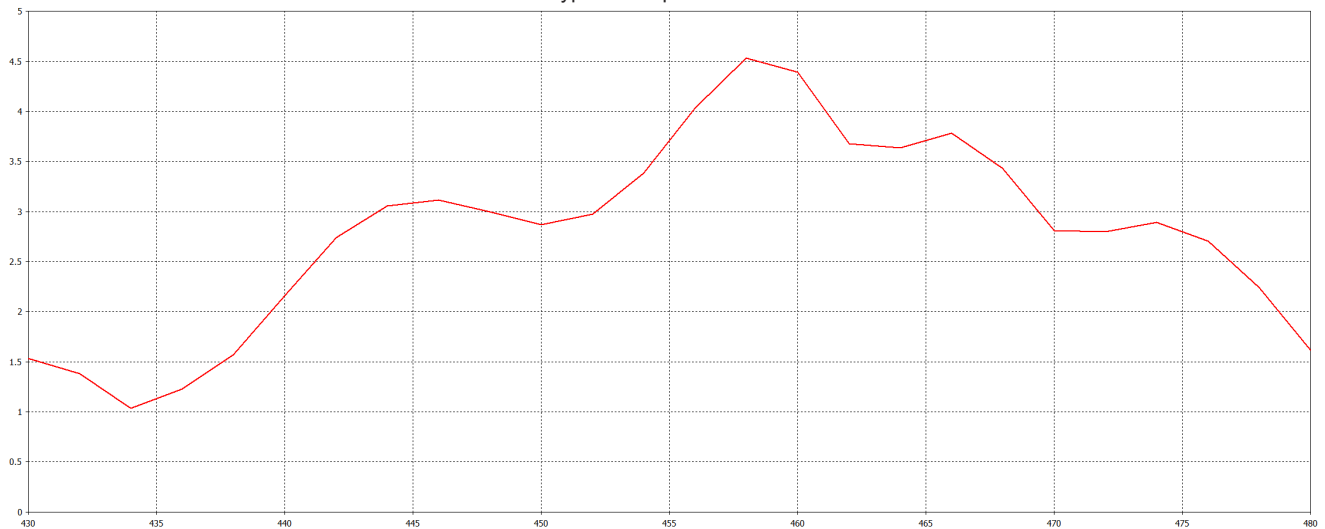
Electrical Data Cell -
Free Space

Typical Efficiency*



*Efficiency measured in free space with 0.75m (2.5') of CS23 cable

Typical Swept Peak Gain*



*Peak Gain measured in free space with 0.75m (2.5') of CS23 cable

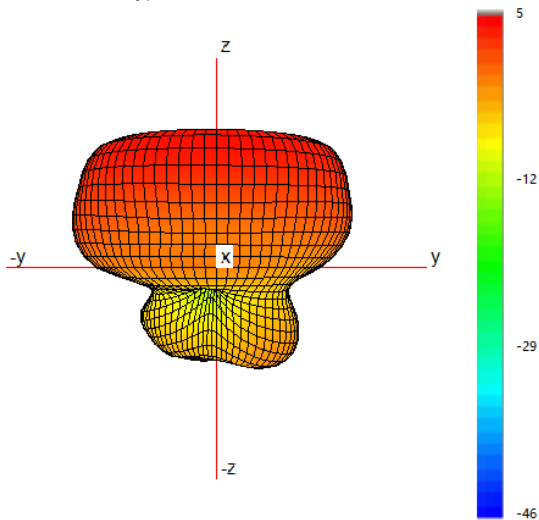
Omnidirectional UHF Marine Antenna

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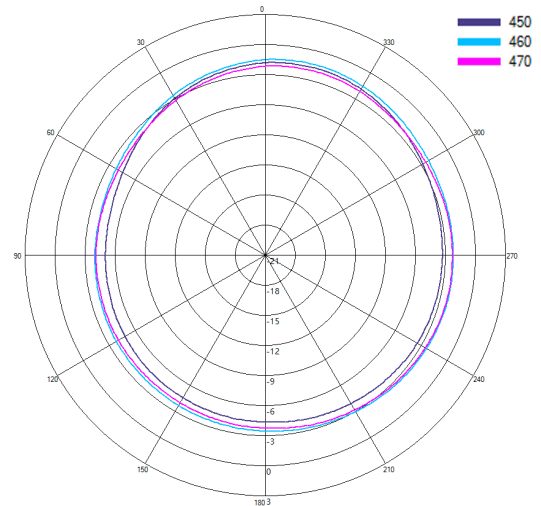
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Electrical Data Cell -
Free Space

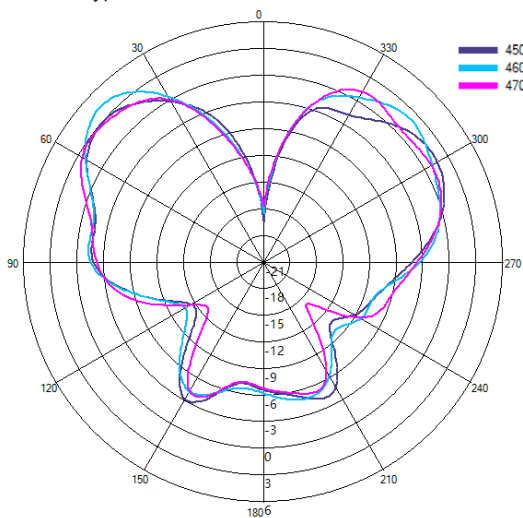
Typical 3D Pattern- Cell - 460 MHz



Typical H Plane- Cell - Patterns- 450-470MHz



Typical E Plane- Cell - Patterns- 450-470MHz



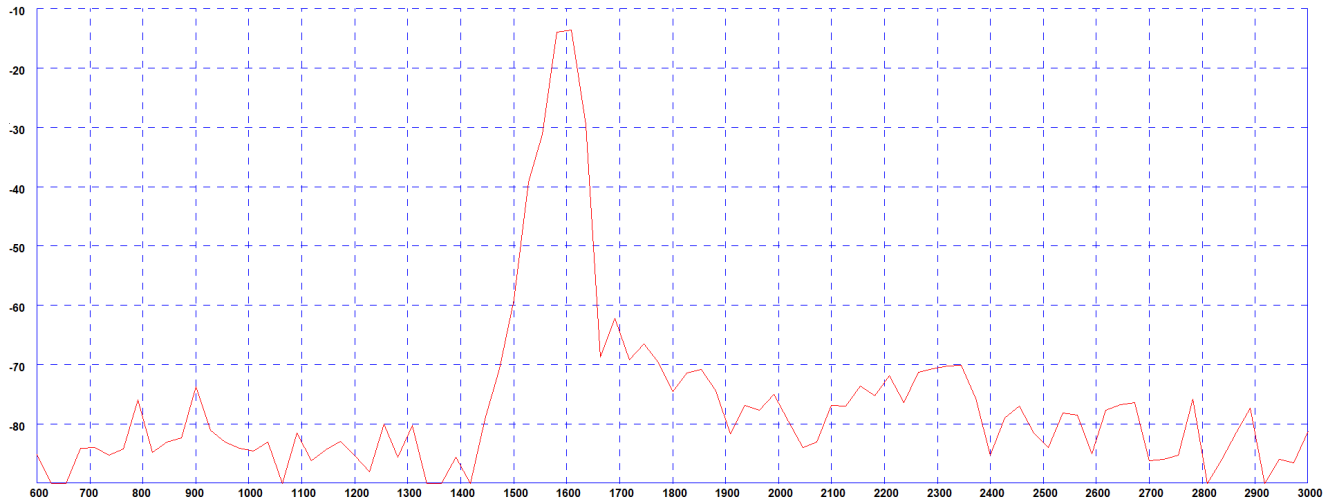
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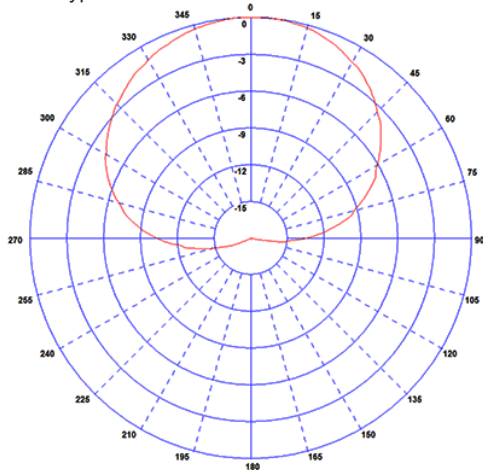
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Electrical Data- L1 GPS/GNSS

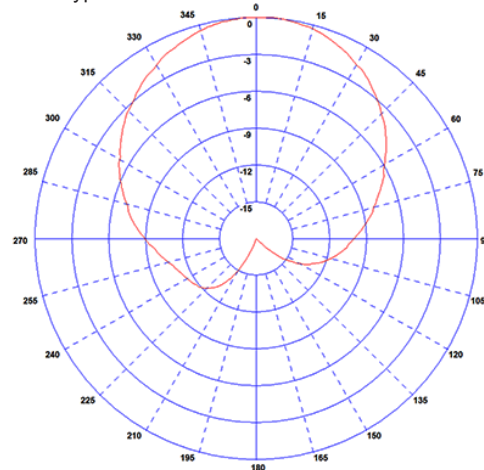
Swept Peak Gain GPS/GNSS



Typical E Plane Pattern - GPS/GNSS 1575 MHz



Typical E Plane Pattern - GPS/GNSS 1602 MHz



GPS/GNSS Measurements taken on 190x190mm (7.4" x 7.4") ground plane excluding cable loss