

MiMo 2.4/5.0GHz Sharkfin Antenna

SHK[G][X]-24-58

- Up to 5x 2.4/5.0GHz elements
- Optional GPS/GNSS element with 26dB gain
- Sleek sharkfin housing



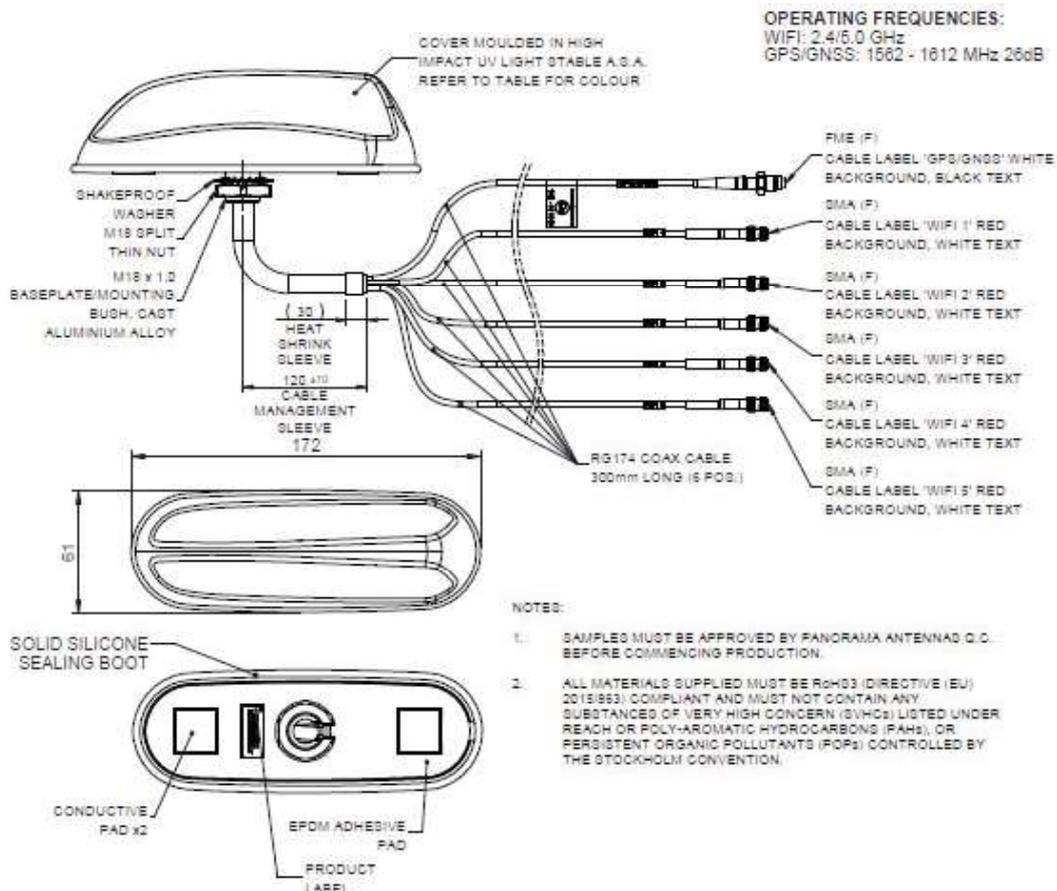
The SHK[G][X]-24-58 range combines up to 5x 2.4/5.0GHz elements with an optional active GPS/GNSS element with 26dB gain in a sleek sharkfin housing.

The antenna features 2, 3 or 4x 2.4/5.0GHz elements configured polarised at +/-45 degrees for MiMo applications and an optional additional 5th 2.4/5.0GHz element in the SHKG5-24-58 version which is vertically polarised for sensor, Bluetooth or similar applications.

The sharkfin antenna styling is both discreet and robust featuring a low profile UV resistant fin housing and IP66 ingress protection rating.

Technical Drawing

SHKG5-24-58 Shown



MiMo 2.4/5.0GHz Sharkfin Antenna

SHK[G][X]-24-58

Product Data

Part No.

SHKG5-24-58

SHKG5W-24-58

SHK5-24-58

SHK5W-24-58

Frequency range (MHz)	Elements 1-4	4x 2396-2485 / 4900-6000MHz		
	Element 5	1x 2396-2485 / 4900-6000MHz		
	Element 6	1562-1612MHz	-	
Operational bands	Element 1-4	4x 2.4/5.0GHz		
	Element 5	1x 2.4/5.0GHz		
	Element 6	GPS/GNSS		
Nominal Impedance	Elements 1-5	50 Ohms		
Typical VSWR*	Elements 1-5	<2:1		
Radiation pattern	Elements 1-5	Omni-Directional		
Nominal polarisation	Elements 1-4	+/- 45deg		
	Element 5	Vertical		
Peak gain (excl cable loss)+	2.4GHz	6dBi (Elements 1-4) 4dBi (Element 5)		
	5.0GHz	8dBi (Elements 1-4) 5dBi (Element 5)		
Isolation Elements 1-4 (worst case)**	2.4GHz	>15dB		
	5.0GHz	>17dB		
Efficiency - excluding cable loss (elements 1-4)				>70%
Correlation co-efficient (all bands)				<0.1
Max input power (W)				20 Watts

GPS/GNSS Data

Frequency range (MHz)	1562-1612
Typical LNA gain (dB)	26 +/- 3
Typical Current (mA)	15
Nominal Operating Voltage	3-5 V DC

Mechanical Data

Dimensions (mm)	Height	50 (1.96")		
	Width	61 (2.4")		
	Length	172 (6.77")		
Operating temp (°C)	-40° / +80°C (-40° / 176°F)			
Material	ASA			
Colour	Black	White	Black	White
IP Rating	IP66			

Mounting Data

Fixing	Panel Mount
Hole diameter (mm)	18 (3/4")

Cable & Connector Data

Cable Type	FR RG174 (Both meet EN6722 / EN45545-2)		
Diameter (mm)	2.8 (0.1")		
Length (m)	0.3 (1')		
Connector	SMA (f) x5 WiFi FME (f) GNSS	SMA (f) x5 WiFi	

† Peak gain derived from CST Microwave Studio on a 600x600mm (2'x2') ground plane and excludes cable loss.

* Typical VSWR measured on a 600x600mm (2'x2') ground plane excluding cable loss.

**Typical isolation measured on a 600x600mm (2'x2') ground plane excluding cable loss.

MiMo 2.4/5.0GHz Sharkfin Antenna

SHK[G][X]-24-58

Part No.		SHKG4-24-58	SHKG4W-24-58	SHK4-24-58	SHK4W-24-58
Frequency range (MHz)	Elements 1-4	4x 2396-2485 / 4900-6000MHz			
	Element 5	1562-1612MHz			-
Operational bands	Element 1-4	4x 2.4/5.0GHz			
	Element 5	GPS/GNSS			
Nominal Impedance	Elements 1-4	50 Ohms			
Typical VSWR*	Elements 1-4	<2:1			
Radiation pattern	Elements 1-4	Omni-Directional			
Nominal polarisation	Elements 1-4	+/- 45deg			
Peak gain (excl cable loss)+	2.4GHz	6dBi (Elements 1-4)			
	5.0GHz	8dBi (Elements 1-4)			
Isolation Elements 1-4 (worst case)**	2.4GHz	>15dB			
	5.0GHz	>17dB			
Efficiency - excluding cable loss (elements 1-4)		>70%			
Correlation co-efficient (all bands)		<0.1			
Max input power (W)		20 Watts			
GPS/GNSS Data					
Frequency range (MHz)		1562-1612			
Typical LNA gain (dB)		26 +/- 3			
Typical Current (mA)		15			
Nominal Operating Voltage		3-5 V DC			
Mechanical Data					
Dimensions (mm)	Height	50 (1.96")			
	Width	61 (2.4")			
	Length	172 (6.77")			
Operating temp (°C)		-40° / +80°C (-40° / 176°F)			
Material		ASA			
Colour		Black	White	Black	White
IP Rating		IP66			
Mounting Data					
Fixing		Panel Mount			
Hole diameter (mm)		18 (3/4")			
Cable & Connector Data					
Cable Type		FR RG174 (Both meet EN6722 / EN45545-2)			
Diameter (mm)		2.8 (0.1")			
Length (m)		0.3 (1')			
Connector		SMA (f) x4 WiFi FME (f) GNSS		SMA (f) x4 WiFi	

+ Peak gain derived from CST Microwave Studio on a 600x600mm (2'x2') ground plane and excludes cable loss.

* Typical VSWR measured on a 600x600mm (2'x2') ground plane excluding cable loss.

**Typical isolation measured on a 600x600mm (2'x2') ground plane excluding cable loss.

MiMo 2.4/5.0GHz Sharkfin Antenna

SHK[G][X]-24-58

Part No.		SHKG3-24-58	SHKG3W-24-58	SHK3-24-58	SHK3W-24-58
Frequency range (MHz)	Elements 1-3	3x 2396-2485 / 4900-6000MHz			
	Element 4	1562-1612MHz			
Operational bands	Element 1-3	3x 2.4/5.0GHz			
	Element 4	GPS/GNSS			
Nominal Impedance	Elements 1-3	50 Ohms			
Typical VSWR*	Elements 1-3	<2:1			
Radiation pattern	Elements 1-3	Omni-Directional			
Nominal polarisation	Elements 1-3	+/- 45deg			
Peak gain (excl cable loss)†	2.4GHz	6dBi (Elements 1-3)			
	5.0GHz	8dBi (Elements 1-3)			
Isolation Elements 1-3 (worst case)**	2.4GHz	>15dB			
	5.0GHz	>17dB			
Efficiency - excluding cable loss (elements 1-3)		>70%			
Correlation co-efficient (all bands)		<0.1			
Max input power (W)		20 Watts			
GPS/GNSS Data					
Frequency range (MHz)		1562-1612			
Typical LNA gain (dB)		26 +/- 3			
Typical Current (mA)		15			
Nominal Operating Voltage		3-5 V DC			
Mechanical Data					
Dimensions (mm)	Height	50 (1.96")			
	Width	61 (2.4")			
	Length	172 (6.77")			
Operating temp (°C)		-40° / +80°C (-40° / 176°F)			
Material		ASA			
Colour		Black	White	Black	White
IP Rating		IP66			
Mounting Data					
Fixing		Panel Mount			
Hole diameter (mm)		18 (3/4")			
Cable & Connector Data					
Cable Type		FR RG174 (Both meet EN6722 / EN45545-2)			
Diameter (mm)		2.8 (0.1")			
Length (m)		0.3 (1')			
Connector		SMA (f) x3 WiFi FME (f) GNSS		SMA (f) x3 WiFi	

† Peak gain derived from CST Microwave Studio on a 600x600mm (2'x2') ground plane and excludes cable loss.

* Typical VSWR measured on a 600x600mm (2'x2') ground plane excluding cable loss.

**Typical isolation measured on a 600x600mm (2'x2') ground plane excluding cable loss.

MiMo 2.4/5.0GHz Sharkfin Antenna

SHK[G][X]-24-58

Part No.		SHKG2-24-58	SHKG2W-24-58	SHK2-24-58	SHK2W-24-58
Frequency range (MHz)	Elements 1-2	2x 2396-2485 / 4900-6000MHz			
	Element 3	1562-1612MHz			-
Operational bands	Element 1-2	2x 2.4/5.0GHz			
	Element 3	GPS/GNSS			
Nominal Impedance	Elements 1-2	50 Ohms			
Typical VSWR*	Elements 1-2	<2:1			
Radiation pattern	Elements 1-2	Omni-Directional			
Nominal polarisation	Elements 1-2	+/- 45deg			
Peak gain (excl cable loss)+	2.4GHz	6dBi (Elements 1-2)			
	5.0GHz	8dBi (Elements 1-2)			
Isolation Elements 1-2 (worst case)**	2.4GHz	>15dB			
	5.0GHz	>17dB			
Efficiency - excluding cable loss (elements 1-2)		>70%			
Correlation co-efficient (all bands)		<0.1			
Max input power (W)		20 Watts			
GPS/GNSS Data					
Frequency range (MHz)		1562-1612			
Typical LNA gain (dB)		26 +/- 3			
Typical Current (mA)		15			
Nominal Operating Voltage		3-5 V DC			
Mechanical Data					
Dimensions (mm)	Height	50 (1.96")			
	Width	61 (2.4")			
	Length	172 (6.77")			
Operating temp (°C)		-40° / +80°C (-40° / 176°F)			
Material		ASA			
Colour		Black	White	Black	White
IP Rating		IP66			
Mounting Data					
Fixing		Panel Mount			
Hole diameter (mm)		18 (3/4")			
Cable & Connector Data					
Cable Type		FR RG174 (Both meet EN6722 / EN45545-2)			
Diameter (mm)		2.8 (0.1")			
Length (m)		0.3 (1')			
Connector		SMA (f) x2WiFi FME (f) GNSS		SMA (f) x2 WiFi	

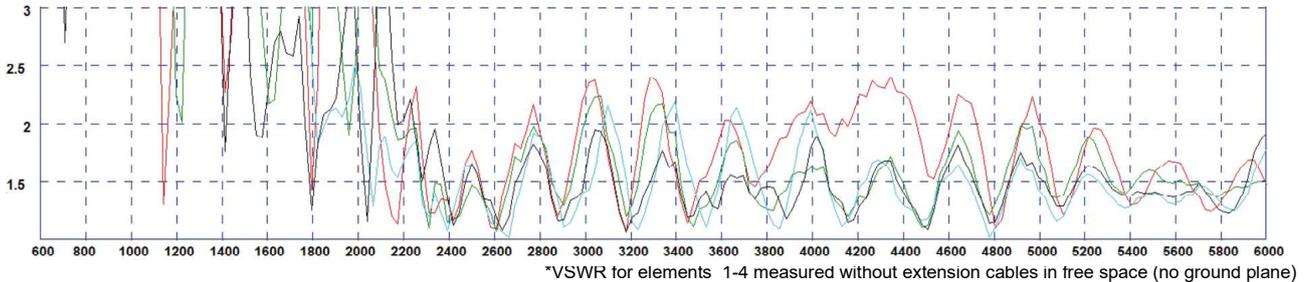
+ Peak gain derived from CST Microwave Studio on a 600x600mm (2'x2') ground plane and excludes cable loss.

* Typical VSWR measured on a 600x600mm (2'x2') ground plane excluding cable loss.

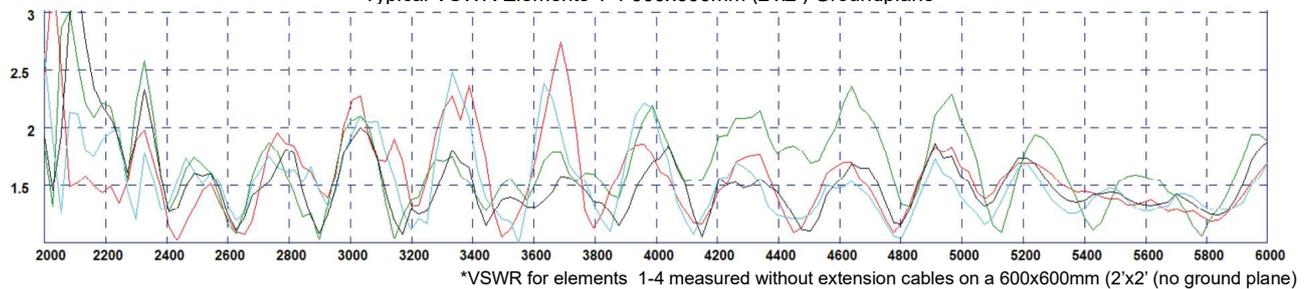
**Typical isolation measured on a 600x600mm (2'x2') ground plane excluding cable loss.

Electrical Data

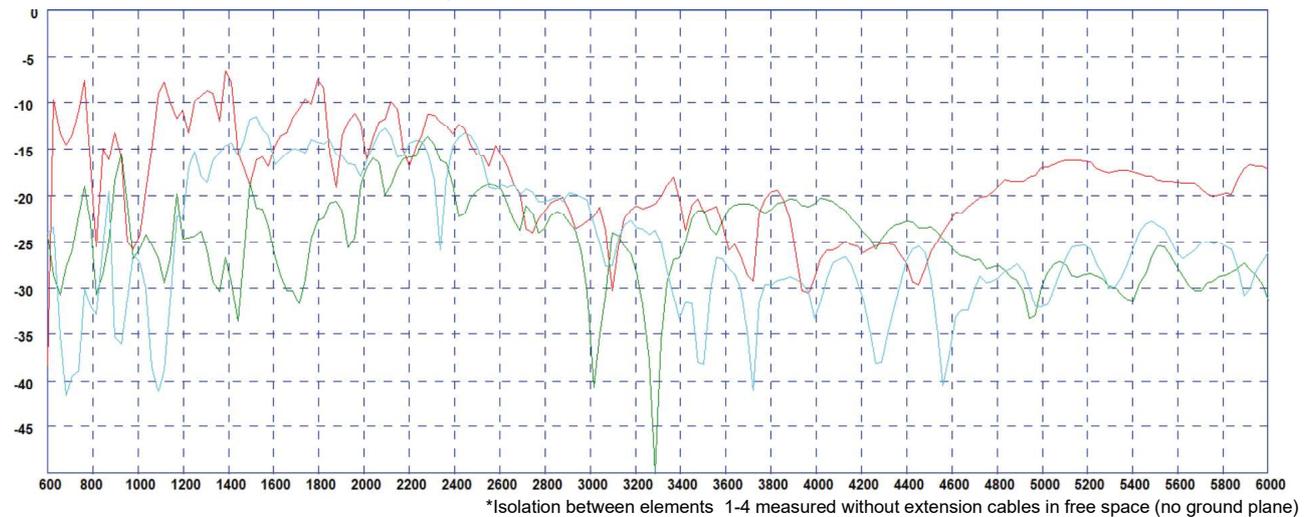
Typical VSWR Elements 1-4 No Groundplane*



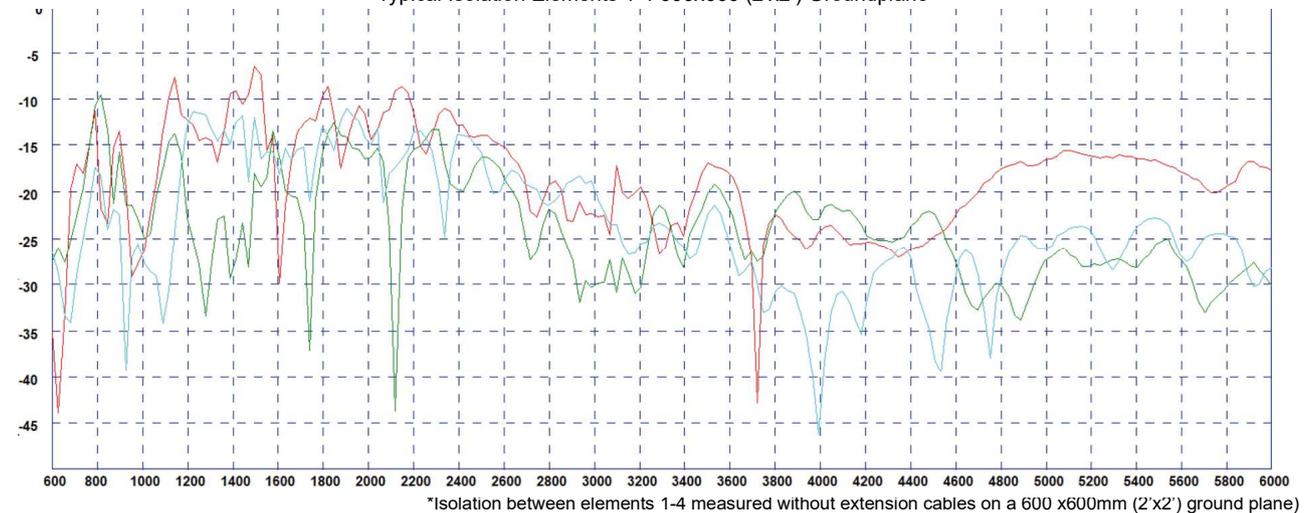
Typical VSWR Elements 1-4 600x600mm (2'x2') Groundplane*



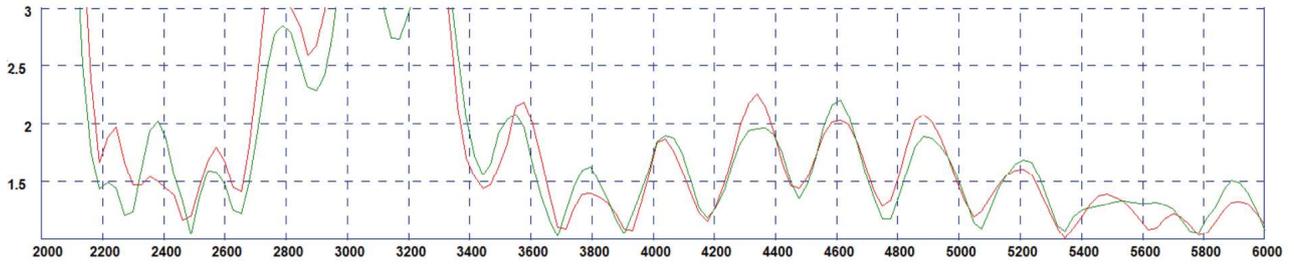
Typical Isolation Elements 1-4 No Groundplane*



Typical Isolation Elements 1-4 600x600 (2'x2') Groundplane*



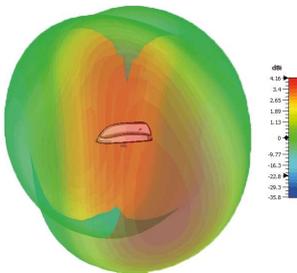
Typical VSWR Element 5*



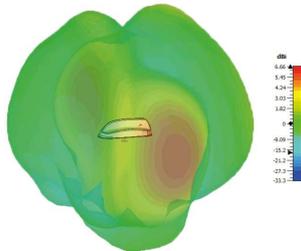
*VSWR for element 5 measured without extension cables in free space (Green Trace) and on a 600x600mm (2'x2') ground plane (red trace)

Radiation Patterns

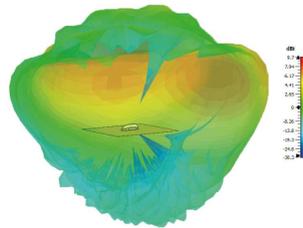
Typical 3D Pattern Elements 1-4 No GP
2.45GHz*



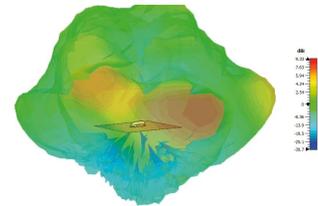
Typical 3D Pattern Elements 1-4 No GP
5.4GHz*



Typical 3D Pattern Elements 1-4
600x600mm 2.45GHz*



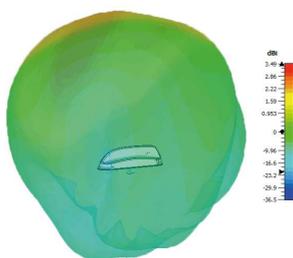
Typical 3D Pattern Elements 1-4
600x600mm 5.4GHz*



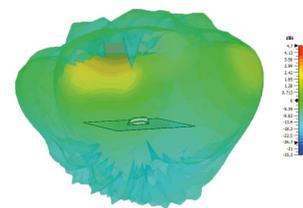
Typical 3D Pattern Elements 5 No GP
2.45GHz*



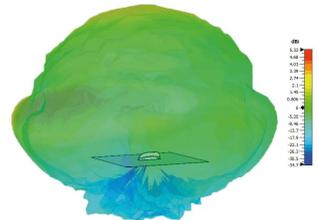
Typical 3D Pattern Element 5 No GP
5.4GHz*



Typical 3D Pattern Element 5 600x600mm
2.45GHz*



Typical 3D Pattern Elements 5
600x600mm 5.4GHz*



Typical E Plane Pattern GPS 1575MHz*

