

## 5 GHz Broadband Subscriber Antenna

### MA-WA58-1X

MARS 5 GHz Broadband High Gain Antenna covers the full 5 GHz spectrum- from lower to higher UNII band-including its unlicensed part.

#### Additional Features:

- exceptionally high gain of 23 dBi over the entire frequency band
- diamond shape provides for highest range of ETSI standards, up to TS5
- light weight and durable construction
- DC grounded for lightning protection to meet local electrical building codes
- antenna has a customized version with an optional enclosure for the customer's OEM radio/CPE



#### Specifications:

<i>Electrical</i>	
Frequency range	4.9-5.875 GHz
GAIN, typ.	23 dBi @5.15 - 5.875 21 dBi @4.9 - 5.15
VSWR, max.	1.5@5.15- 5.875 1.9:1@4.9 – 5.15
Polarization	Linear, Vertical
3 dB Beam-Width, H-Plane, typ.	10.5°
3 dB Beam-Width, E-Plane, typ.	10.5°
Side Lobes, min.	-23 dB
Cross Polarization, min.	-24 dB
Front to Back Ratio, min.	-30 dB
Input power, max	30 Watt
Input Impedance	50 Ohm
Lightning Protection	DC Grounded
<i>Mechanical</i>	
Dimensions (HxWxD)	305 x 305 x 15 mm (12" x 12" x 0.6")
Weight	840 gr.
Connector	N-Type, Female
Back Plane	Aluminum; protected through chemical passivation
Radome	UV Protected Polycarbonate
Mount	See Ordering Options
<i>Environmental</i>	
Operating Temperature Range	- 40°C to + 65°C
Vibration	According to IEC 60721-3-4
Wind Load	200 km/h (survival)
Flammability	UL94
Water Proofing	IP-67
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)
Salt Fog	According to IEC 68-2-11
Ice and Snow	25mm radial (survival)
Service Life	>10 years
<i>Standard Compliance</i>	
4.9-5.15 GHz ETSI EN 302 085 V1.2.3 – TS1, TS2, TS3	
5.15 – 5.875 GHz ETSI EN 302 085 V1.2.3 – TS1, TS2, TS3, TS4, TS5	

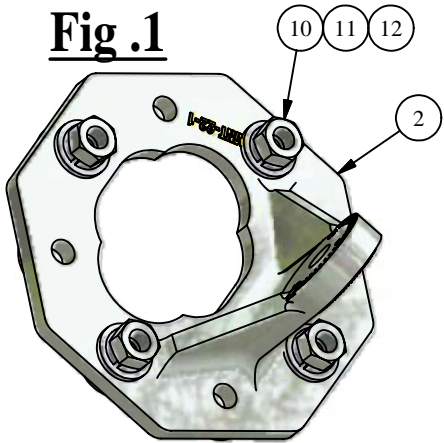
#### Ordering Options:

MA-WA58-1X PM	Antenna with integral Pole Mount includes stainless steel brackets
MA-WA58-1X MNT	Antenna Suited for MNT-2 (optional wall/pole adjustable mount)
MA-WA58-1X BRF	Antenna Suited for Enclosure

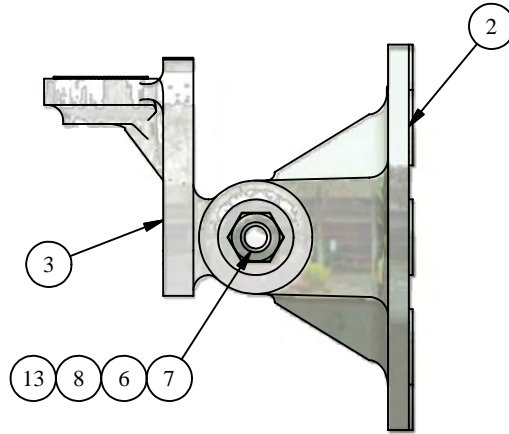
Specifications subject to change without notice

# Mounting instructions - Azimuth and Elevation Adjustable Mount MNT-22

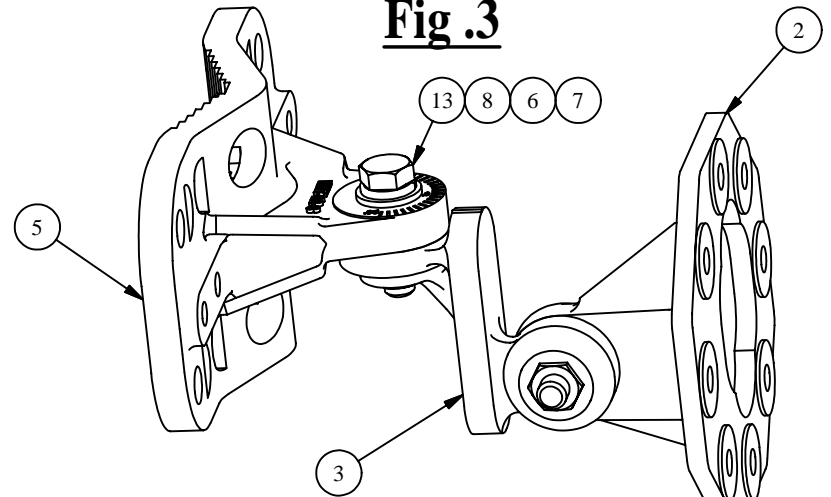
**Fig .1**



**Fig .2**



**Fig .3**



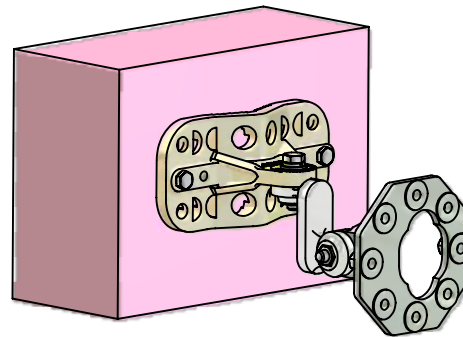
1. Place item No.2 on the antenna, as illustrated in the drawing. Align with the screw holes.
2. Connect item No. 2 to the antenna with spring washers (11), flat washer (10) and nuts (12).
3. Tighten the nuts at a torque of 30 In\*Lbs.

4. Connect item No. 3 to item No. 2 ONLY as illustrated in Fig.2, with items 6,7,8,13. Leave screw slightly loose.

5. Connect item No. 3 to item No. 5 as illustrated, with items 6,7,8,13. Leave screw slightly loose.

**Fig .5**

## Wall Mounting



6. Attach items No. 4 and 5 to the pole as illustrated, and connect them using items No. 6,7,9.
7. Adjust the desired angle, and fully tighten the loose screws (paragraph 4,5).
8. Tighten the nuts at a torque of 30 In\*Lbs.

NOTE :

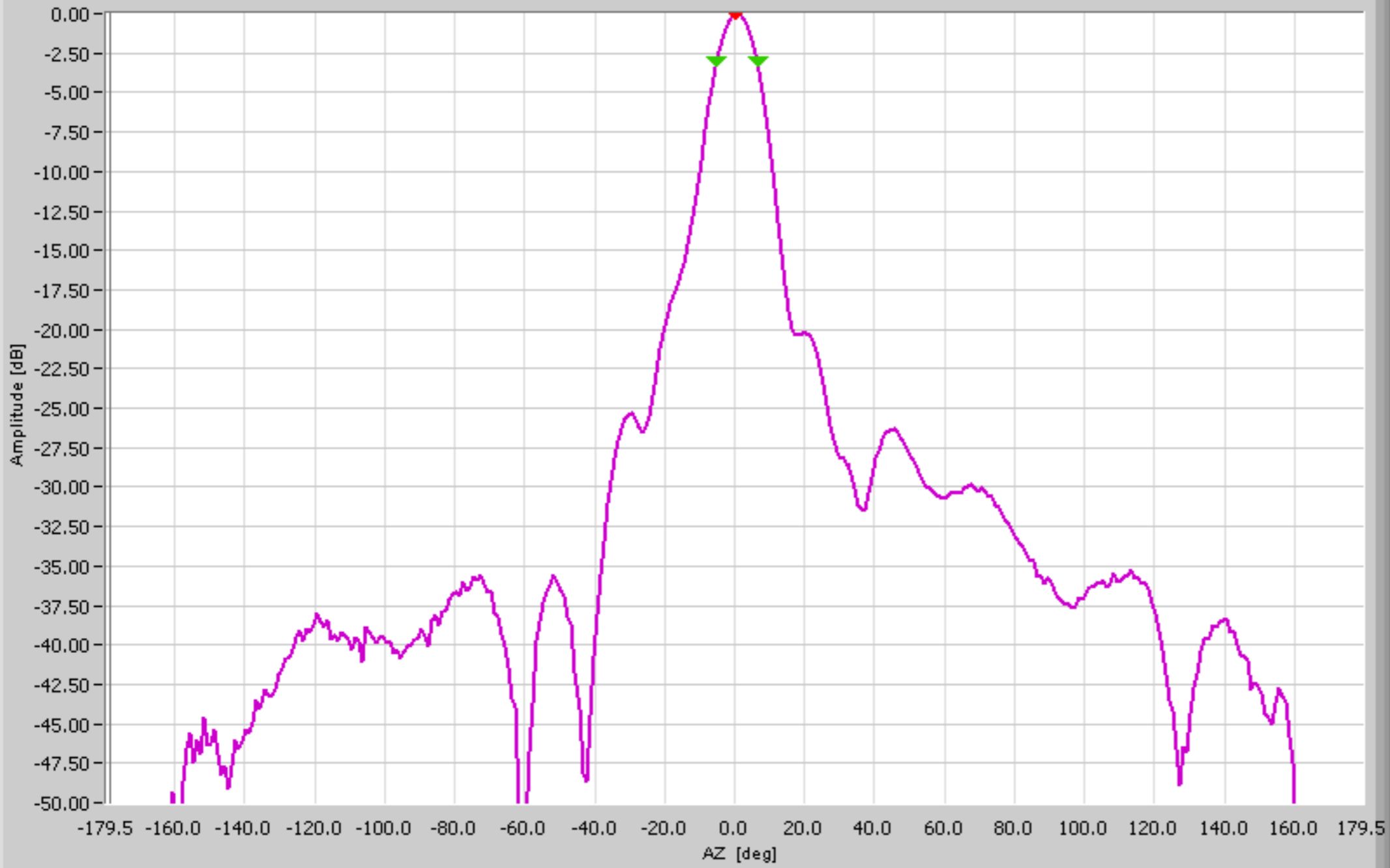
1. MOUNT MNT-22 SUITABLE FOR POLES Ø1"-4".

Parts List		
ITEM	QTY	DESCRIPTION
1	1	POLE 1"-4" (NOT SUPPLIED)
2	1	MNT-22-1
3	1	MNT-22-2
4	1	MNT-22-4
5	1	MNT-22-3
6	4	Helical Spring Lock Washer St. St. #5/16
7	4	Plain Washer St. St. #5/16
8	2	Hex Cap Screw St. St. NC 5/16-18 x 1.25"
9	2	Hex Cap Screw St. St. NC 5/16-18 x 5"
10	4	Plain Washer St. St. #1/4
11	2	Helical Spring Lock Washer St. St.#1/4
12	4	Hex Nut St. St. NC 1/4-20
13	2	Hex Nut St. St. NC 5/16-18

Operator: MARS

# MA-WA58-1X E-Plane

MARS ANTENNAS & RF SYSTEMS  
MARS ANTENNAS RANGE



Side lobes Database Az.Ratio

No.	Ampl	Deg

AZ [deg]

Amplitude [dB]

Phase [deg]

- Amplitude [dB]
- Phase [deg]
- Not Aligned
- Normalized
- Phase wrapped
- Log Display
- No Skirt

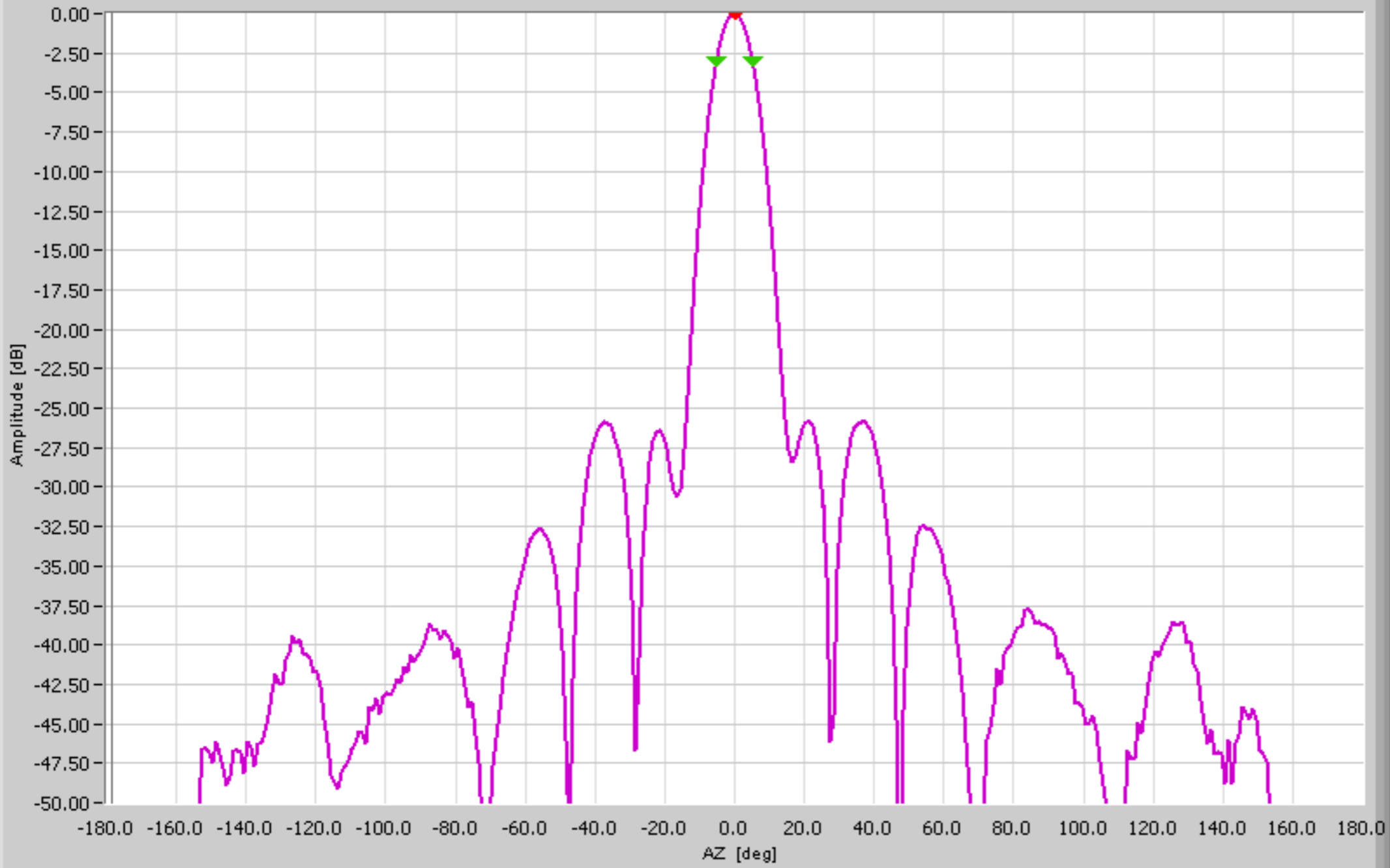
MA-WA58-1X MNT sn 3 -178.50 -58.47

A	P	File Name	ROLL [deg]	Freq. [GHz]	POL [deg]	Ch.	Beam	Switch	Beam Peak [dB]			Beam Width [deg]			Null Depth [dB]		GainA dBi
									Value	[deg]	P	Value	At dB	P	Value	[deg]	
		MA-WA58-1X MNT sn 33917-CAL.nf	90.00	5.500 G	90.00	CH1			23.28	0.50	P	11.50	3.00	P		23.28	

Operator: MARS

# MA-WA58-1X H-Plane

MARS ANTENNAS & RF SYSTEMS  
MARS ANTENNAS RANGE



Side lobes Database Az.Ratio

No.	Ampl	Deg

AZ [deg]

Amplitude [dB]

Phase [deg]

- Amplitude [dB]
- Phase [deg]
- Not Aligned
- Normalized
- Phase wrapped
- Log Display
- No Skirt

MA-WA58-1X MNT sn 3 -178.50 -55.71

A	P	File Name	ROLL [deg]	Freq. [GHz]	POL [deg]	Ch.	Beam		Switch		Beam Peak [dB]		Beam Width [deg]		Null Depth [dB]		GainA dBi
							Value	[deg]	Value	[deg]	Value	[deg]	Value	[deg]			
		MA-WA58-1X MNT sn 33917-CAL.nf	0.00	5.500 G	0.00	CH1	23.20	0.50	P	10.32	3.00	P					23.28