



TAOGLAS®



Datasheet

Part No:
MA890.A.B1VW.001

Description:
4in1 Screw mount 600-6000MHz(1-4) 3m TGC-200 SMA(M)

Features:

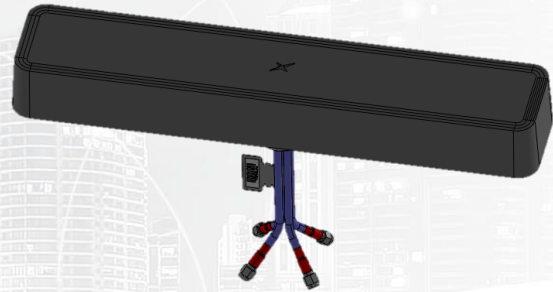
Low-profile Housing with Screw Mount
4* 5G MIMO 617 to 960MHz/1710 to 2690MHz/ 3300 to 6000MHz
Worldwide 5G/4G Bands including 3G and 2G
IP69K Waterproof Enclosure
Dims: 350mm * 70mm * 40mm
3m Low Loss TGC-200 with SMA(M) connectors
Custom Cables and Connectors Available
RoHS & Reach Compliant

1. Introduction	3
2. Specifications	4
3. Antenna Characteristics	6
4. Test Setup	9
5. Mechanical Drawing	10
6. Packaging	11
<hr/>	
Changelog	12

Taoglas makes no warranties based on the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Taoglas reserves all rights to this document and the information contained herein. Reproduction, use or disclosure to third parties without express permission is strictly prohibited.



1. Introduction



The Taoglas MA890 is a permanent mount antenna designed to cover 5G and 4G cellular bands between 617MHz up to 6GHz. The MA890 is a 4-in-1 antenna with 4 5G MIMO Antennas in one compact enclosure, which has been designed with the future of 5G cellular connectivity in mind. With 5G becoming more prevalent in use it is important to have an antenna that can cover multiple different frequency bands for various uplink and downlink requirements, increasing throughput for a device.

Typical applications include:

- Digital Signage
- Transportation and Autonomous Vehicles
- Private 5G Networks
- Public Safety and First Responders

The MA890 has a robust enclosure for applications which may require installation in harsh environments. It is also IP69K waterproof rated so it is ideal for mounting in areas not protected from rainfall such as on the roof of a bus stop or a digital display.

For further information, please contact your regional Taoglas customer support team.

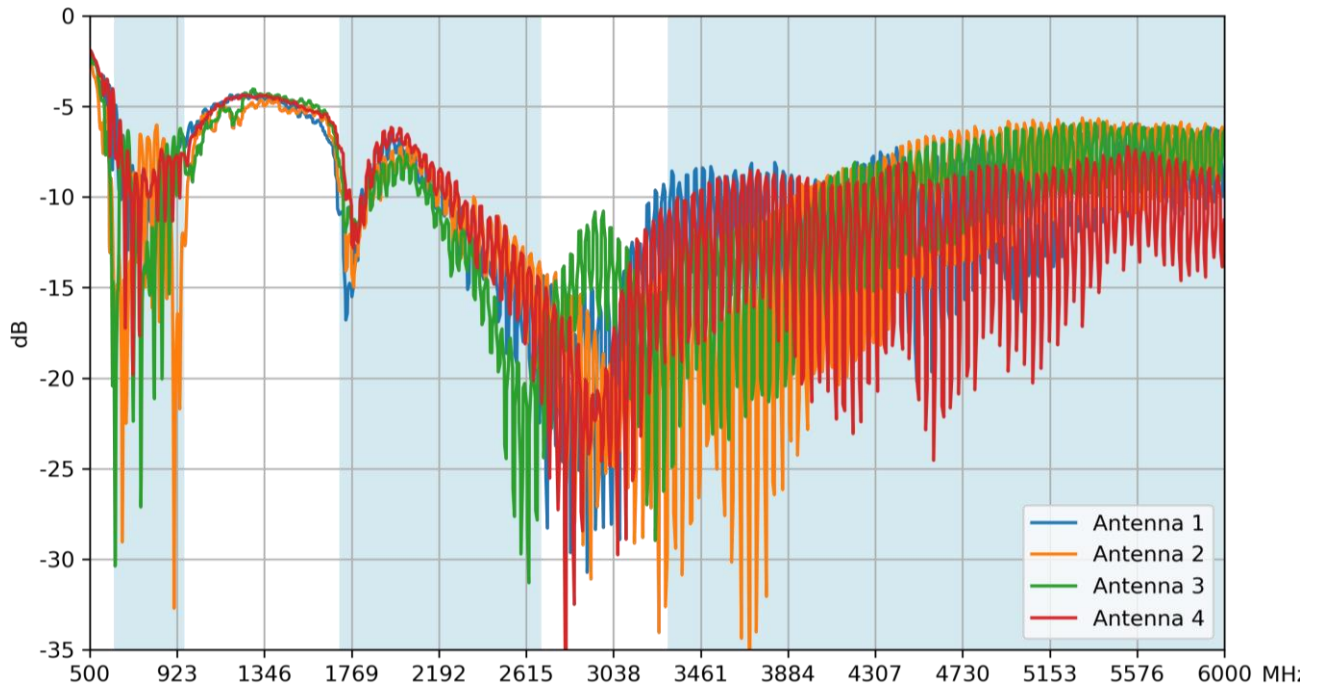
2. Specifications

5G/4G MIMO									
Band	Frequency (MHz)		Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. Input Power
5G Low Band	617~960	Antenna 1	47.1	-3.27	3.47	50Ω	Linear	Omni	2W
		Antenna 2	51.7	-2.86	4.65				
		Antenna 3	47.6	-3.22	4.07				
		Antenna 4	46.4	-3.34	4.72				
5G Medium Band	1710~2690	Antenna 1	37.1	-4.31	4.70				
		Antenna 2	40.1	-3.97	3.99				
		Antenna 3	40.5	-3.92	4.67				
		Antenna 4	36.1	-4.43	5.24				
5G High Band	3300~6000	Antenna 1	22.4	-6.50	4.96				
		Antenna 2	23.9	-6.22	4.10				
		Antenna 3	22.0	-6.58	3.75				
		Antenna 4	23.9	-6.21	5.44				
Mechanical									
Dimensions					350 x 70 x 40mm				
Weight					TBD				
Connector					SMA				
Cable					TGC-200				
Environmental									
Waterproof Rating					IP69K				
Temperature Range					-40°C~85°C				

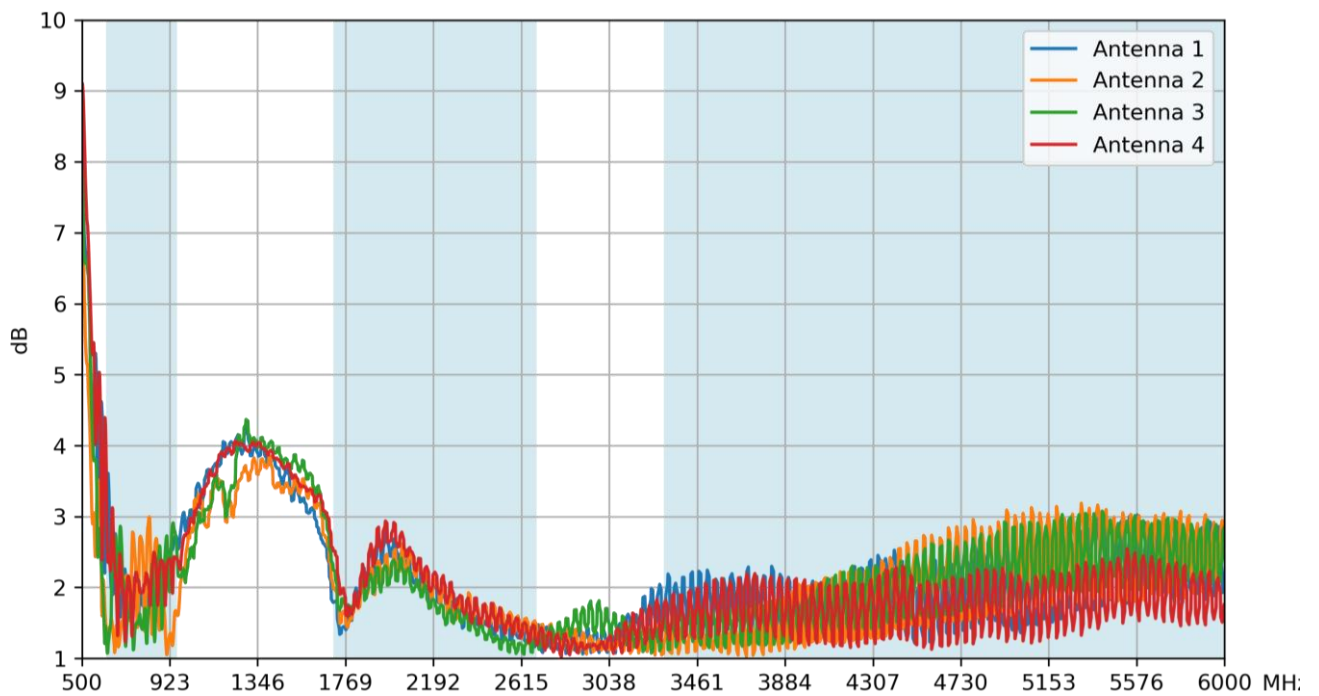
5G/4G Bands			
Band Number	5GNR / FR1 / LTE / LTE-Advanced / WCDMA / HSPA / HSPA+ / TD-SCDMA		
	Uplink	Downlink	Covered
1	UL: 1920 to 1980	DL: 2110 to 2170	✓
2	UL: 1850 to 1910	DL: 1930 to 1990	✓
3	UL: 1710 to 1785	DL: 1805 to 1880	✓
4	UL: 1710 to 1755	DL: 2110 to 2155	✓
5	UL: 824 to 849	DL: 869 to 894	✓
7	UL: 2500 to 2570	DL: 2620 to 2690	✓
8	UL: 880 to 915	DL: 925 to 960	✓
9	UL: 1749.9 to 1784.9	DL: 1844.9 to 1879.9	✓
11	UL: 1427.9 to 1447.9	DL: 1475.9 to 1495.9	✗
12	UL: 699 to 716	DL: 729 to 746	✓
13	UL: 777 to 787	DL: 746 to 756	✓
14	UL: 788 to 798	DL: 758 to 768	✓
17	UL: 704 to 716	DL: 734 to 746	✓
18	UL: 815 to 830	DL: 860 to 875	✓
19	UL: 830 to 845	DL: 875 to 890	✓
20	UL: 832 to 862	DL: 791 to 821	✓
21	UL: 1447.9 to 1462.9	DL: 1495.9 to 1510.9	✗
22	UL: 3410 to 3490	DL: 3510 to 3590	✓
23	UL: 2000 to 2020	DL: 2180 to 2200	✓
24	UL: 1625.5 to 1660.5	DL: 1525 to 1559	✓
25	UL: 1850 to 1915	DL: 1930 to 1995	✓
26	UL: 814 to 849	DL: 859 to 894	✓
27	UL: 807 to 824	DL: 852 to 869	✓
28	UL: 703 to 748	DL: 758 to 803	✓
29	UL: -	DL: 717 to 728	✓
30	UL: 2305 to 2315	DL: 2350 to 2360	✓
31	UL: 452.5 to 457.5	DL: 462.5 to 467.5	✗
32	UL: -	DL: 1452 - 1496	✗
35		1850 to 1910	✓
38		2570 to 2620	✓
39		1880 to 1920	✓
40		2300 to 2400	✓
41		2496 to 2690	✓
42		3400 to 3600	✓
43		3600 to 3800	✓
48		3550 to 3700	✓
66	UL: 1710-1780	DL: 2110-2200	✓
71		617 to 698	✓
74/75/76		1427 to 1518	✓
78		3300 to 3800	✓
79		4400 to 5000	✓
85	698-716	728-746	✓

3. Antenna Characteristics

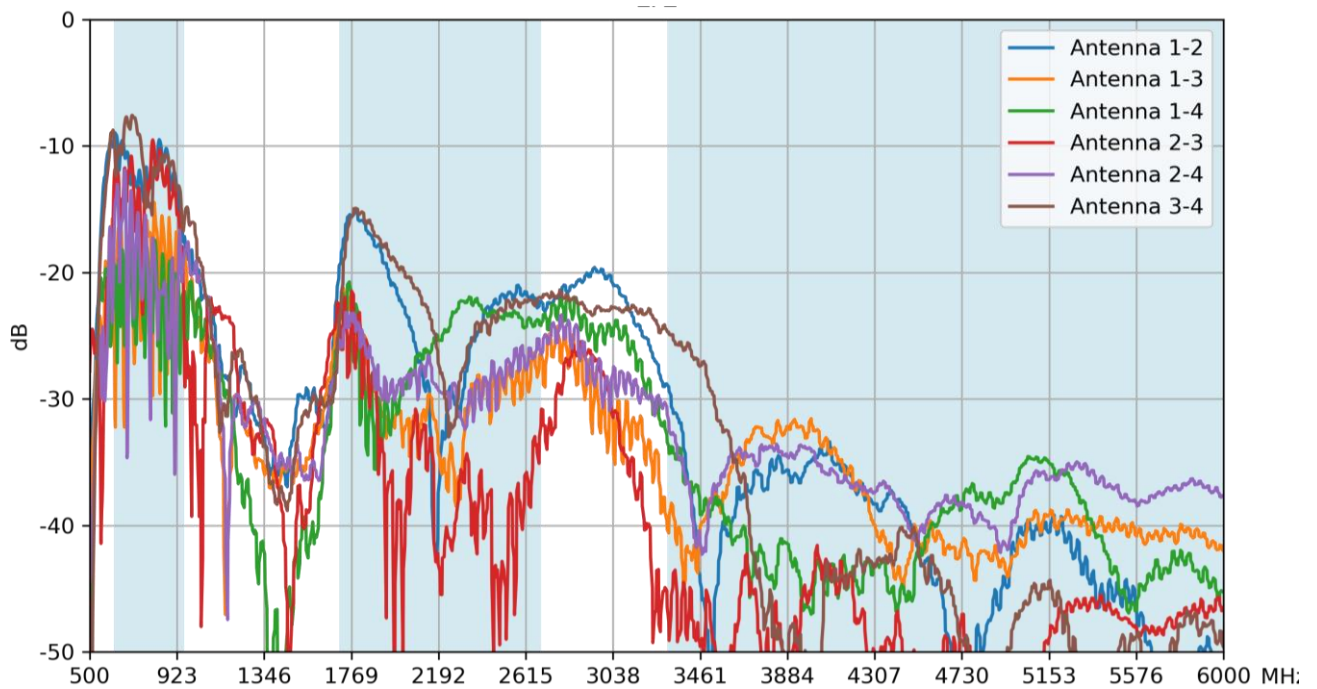
3.1 Return Loss



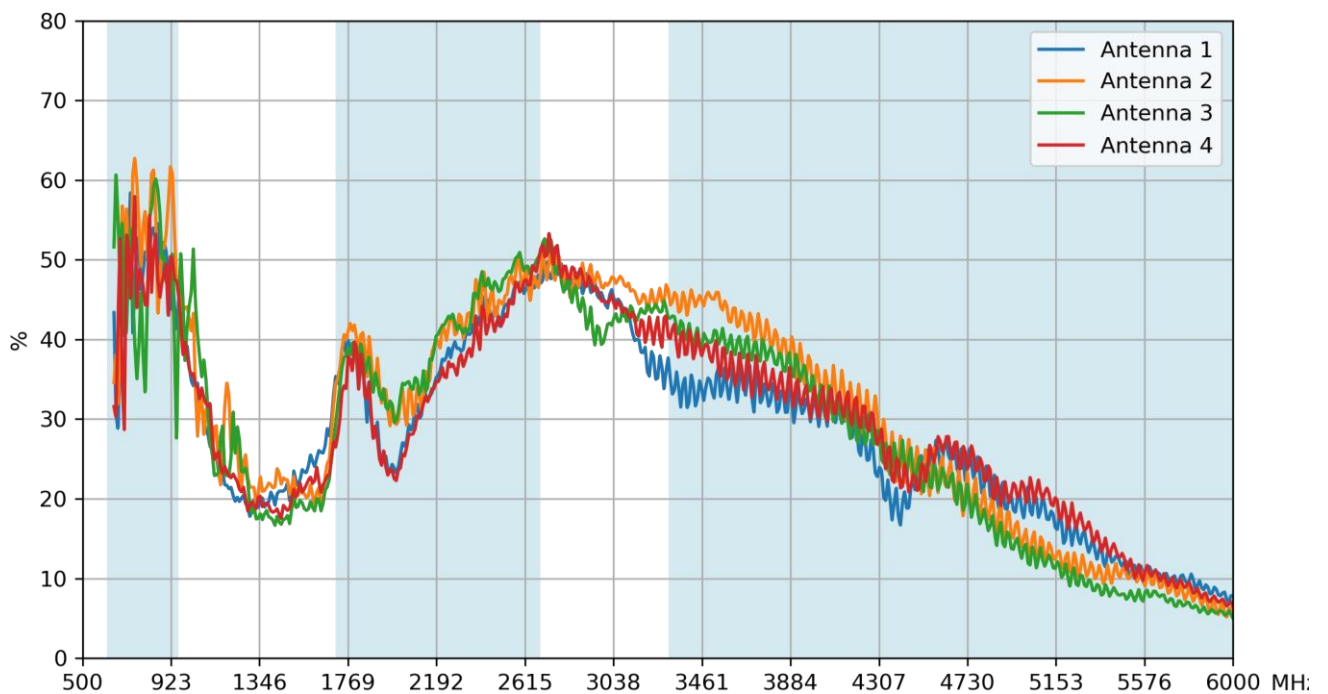
3.2 VSWR



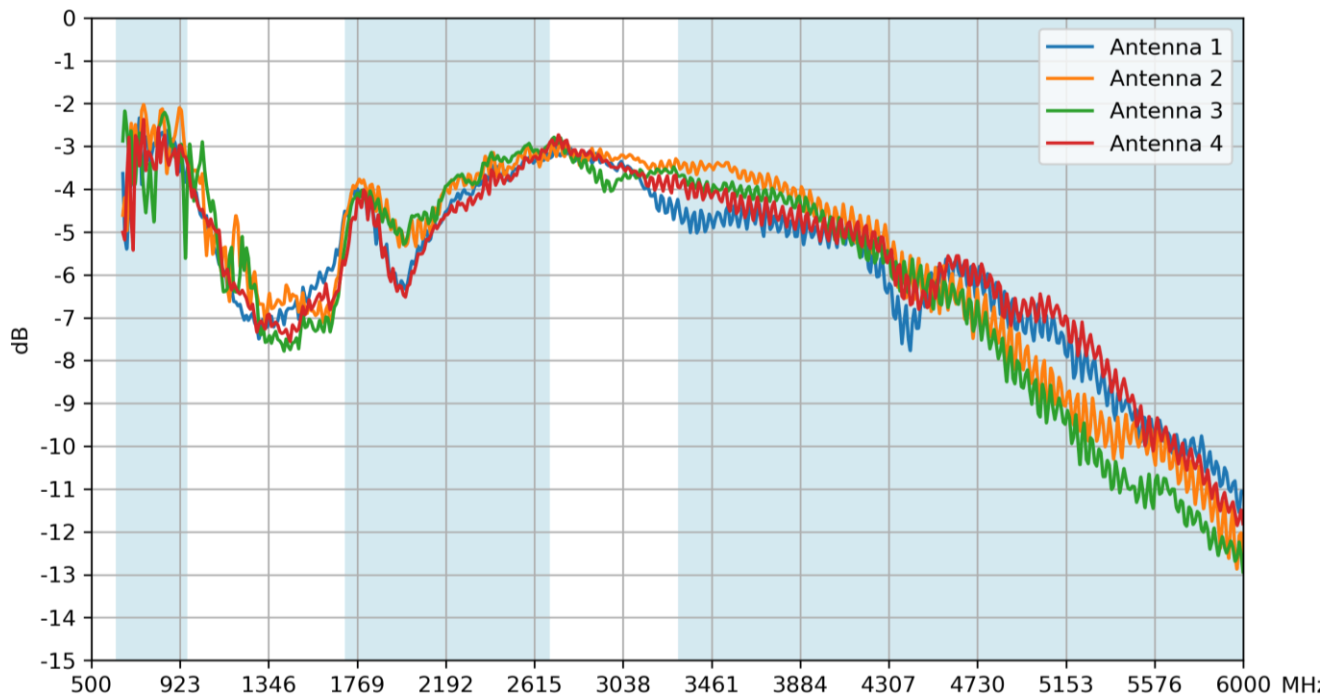
3.3 Isolation



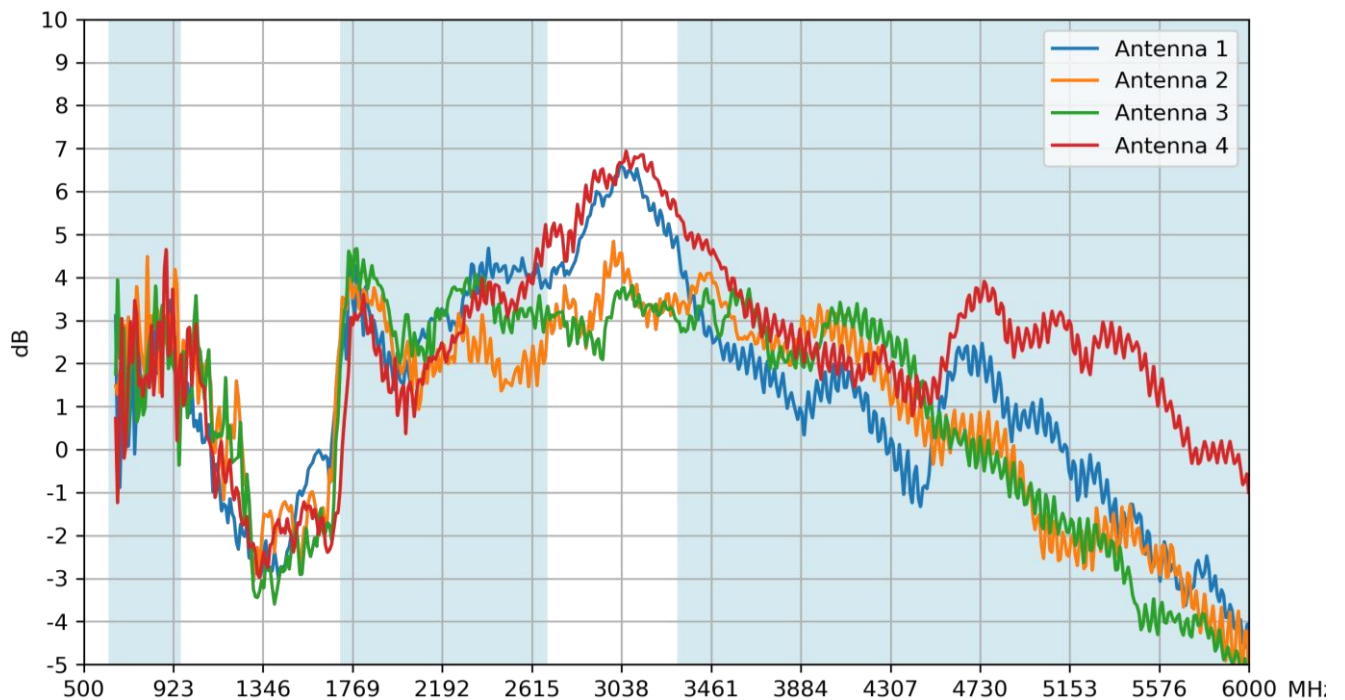
3.4 Efficiency



3.5 Average Gain

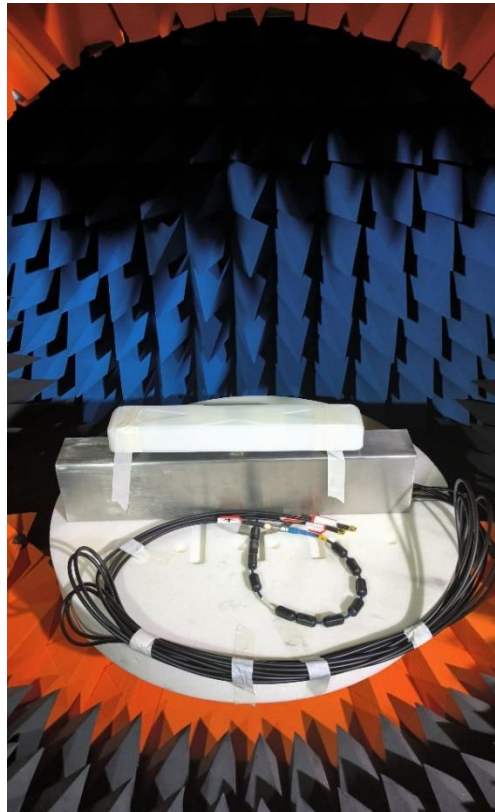


3.6 Peak Gain



4. Test Setup


4.1 Test Setup



5. Mechanical Drawing (Units: mm)

ISO NO.: EDW
 STATE: Draft
 NOTES: 1.All material must be RoHS compliant.
 2.The connector orientation has a fixed position to the antenna as per drawing.
 3.All dimensions are for reference only.

QUOTATION ONLY

APPROVED BY:	 <small>The drawing and its related design contents are property of Taoglas, not to be copied or given to third parties without the written consent of Taoglas.</small>			
CHECK BY:				
DRAWN BY: ERIC				
DATE: 2022/9/2				
UNLESS OTHERWISE SPECIFIED TOLERANCES ON:	MM 0.400 HOLE 0.400 POSITION 0.400	TITLE : 4in1 Screwmount 600-6000MHz(1-4) 3m TGC-200 SMA(M)		
THIRD ANGLE PROJECTION	UNIT: mm	SCALE: 1:3	PAGES: 1/1	REV:
PART NO. : MAB90.A.B1VW.001				

6. Packaging

TBD

Changelog for the datasheet

SPE-22-8-107 – MA890.A.B1VW.001

Revision: A (Original First Release)

Date:	2022-09-19
Notes:	Initial Release
Author:	Gary West

Previous Revisions



TAOGLAS®

www.taoglas.com

