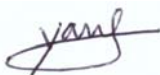


Specifications of Ceramic Patch Ant.

MESSRS. (주)아이디로

ITEM : Ceramic Patch Antenna
PART NAME : MACRO100-919
MODEL NAME
FEATURES : 900 MHz ISM Band
Provide highly stabilized performance
Rectangular microstrip patch antenna
DATE : February 24, 2021
QUANTITY : pcs

SUPPLIER : MAC technologies Inc.		
DRAWN	CHECKED	APPROVED
		

 **mac technologies**

615, Cheongju Techno S Tower, 530, Jikji-daero,

Heungdeok-gu, Cheongju-si, Chungbuk, KOREA, 28578

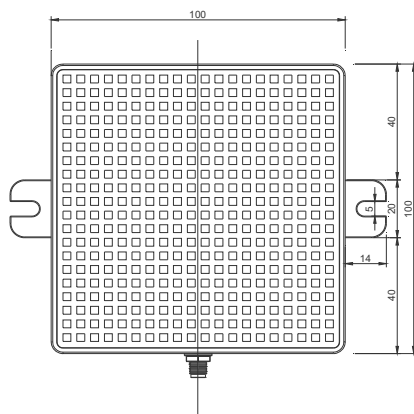
Tel : +82 43 275 2485 Fax : +82 43 275 2487

Title	RFID Ceramic Patch Ant. Preliminary Specification
Document Number	MACQM730-05-21XXX
Date	February 24, 2021

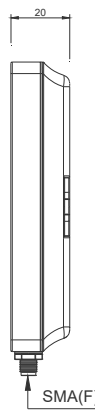
1. Electrical Specifications.

NO.	Parameter	Spec.	Unit	Remark
1	Center Frequency	919.0 ± 3	MHz	
2	Peak Gain	2.0 typ.	dBi	
		4.0 typ.	dBic	
3	Polarization	RHCP		
4	Beam Width	90 typ.	Deg.	
5	Band Width	18 typ.	MHz	
6	VSWR	2.0 : 1 max.	Ratio	
7	Impedance	50	Ohm	

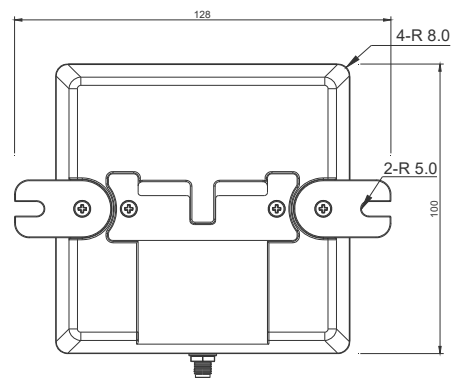
2. Mechanical Dimensions. (unit : mm)



[TOP VIEW]



[SIDE VIEW]

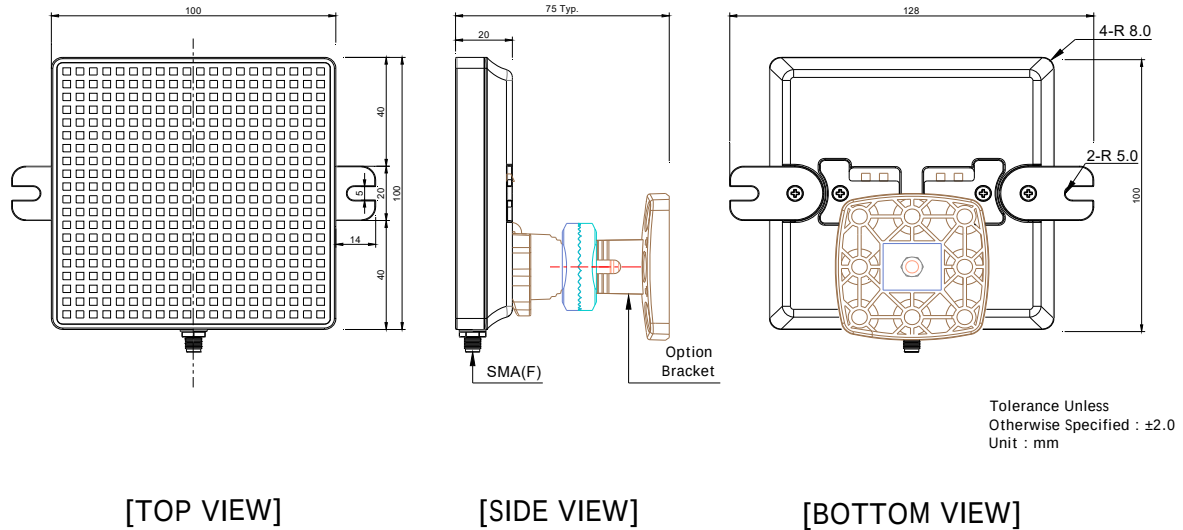


Tolerance Unless
Otherwise Specified : ±2.0
Unit : mm

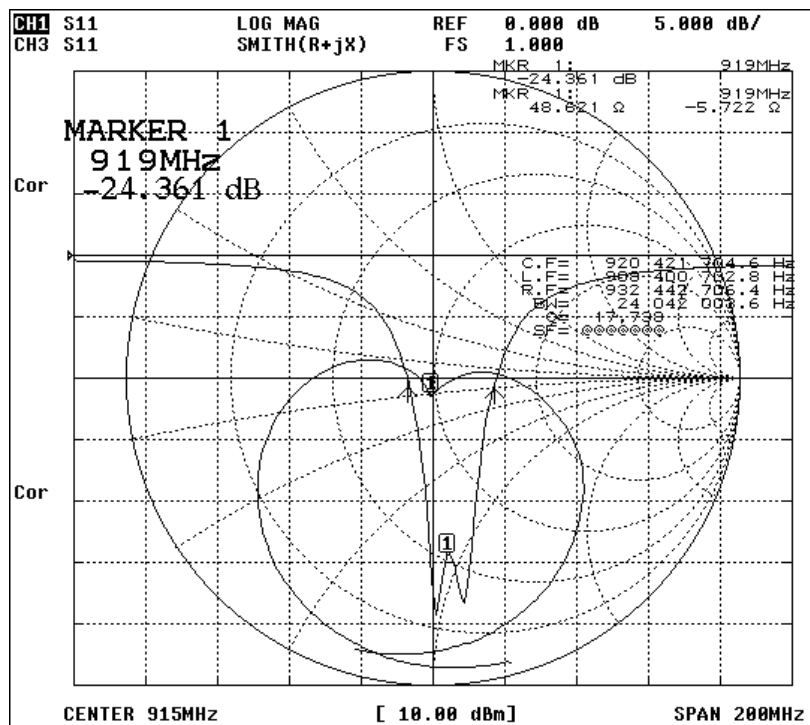
[BOTTOM VIEW]

Title	RFID Ceramic Patch Ant. Preliminary Specification
Document Number	MACQM730-05-21XXX
Date	February 24, 2021

3. Option : Antenna Attachment Bracket



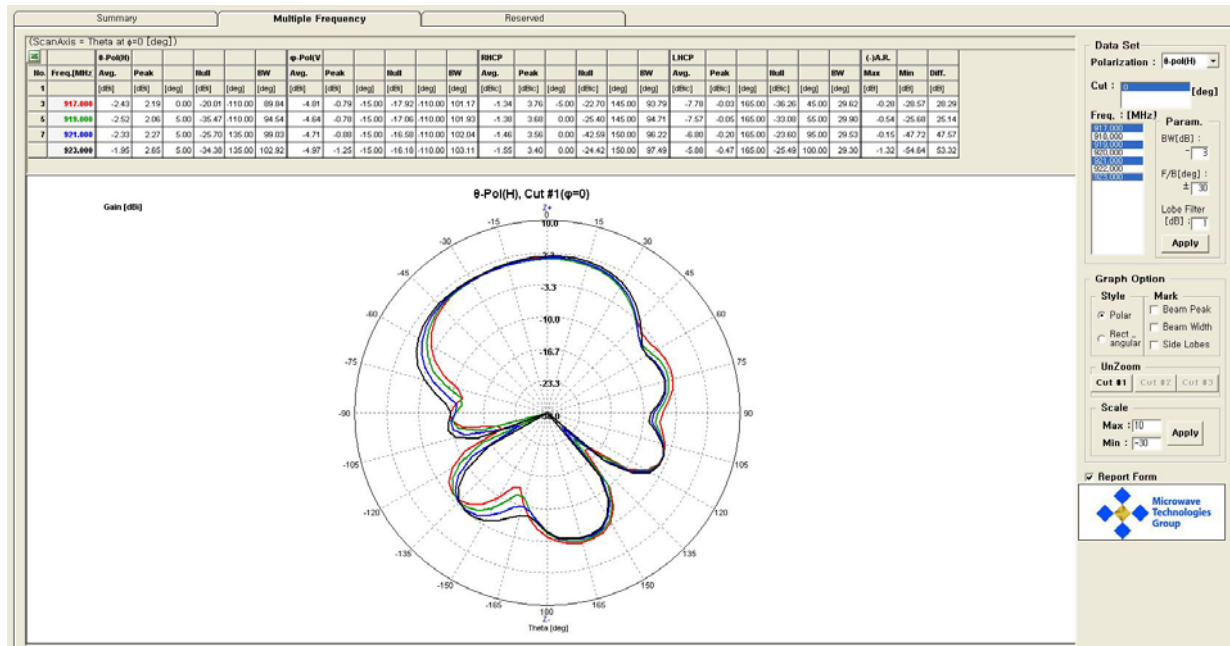
4. S11 Measurement Data.



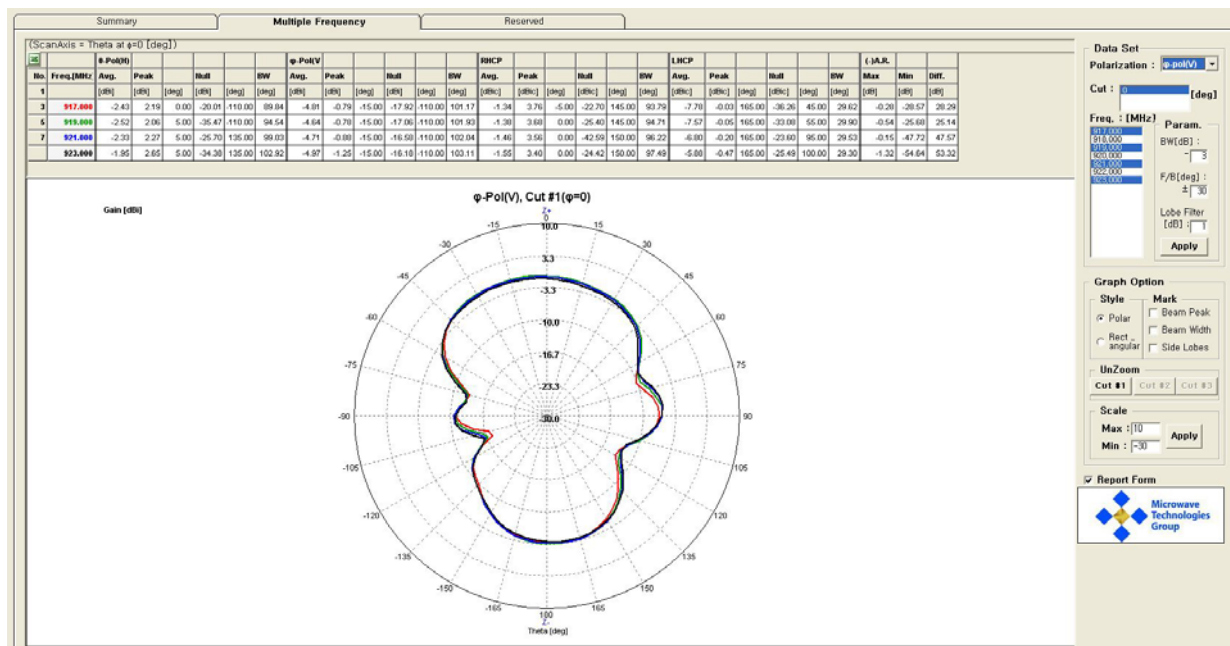
Title	RFID Ceramic Patch Ant. Preliminary Specification
Document Number	MACQM730-05-21XXX
Date	February 24, 2021

5. Radiation Patterns.

5-1. H-Pol. (Frequency 917.0, 919.0, 921.0, 923.0 MHz)



5-2. V-Pol. (Frequency 917.0, 919.0, 921.0, 923.0 MHz)

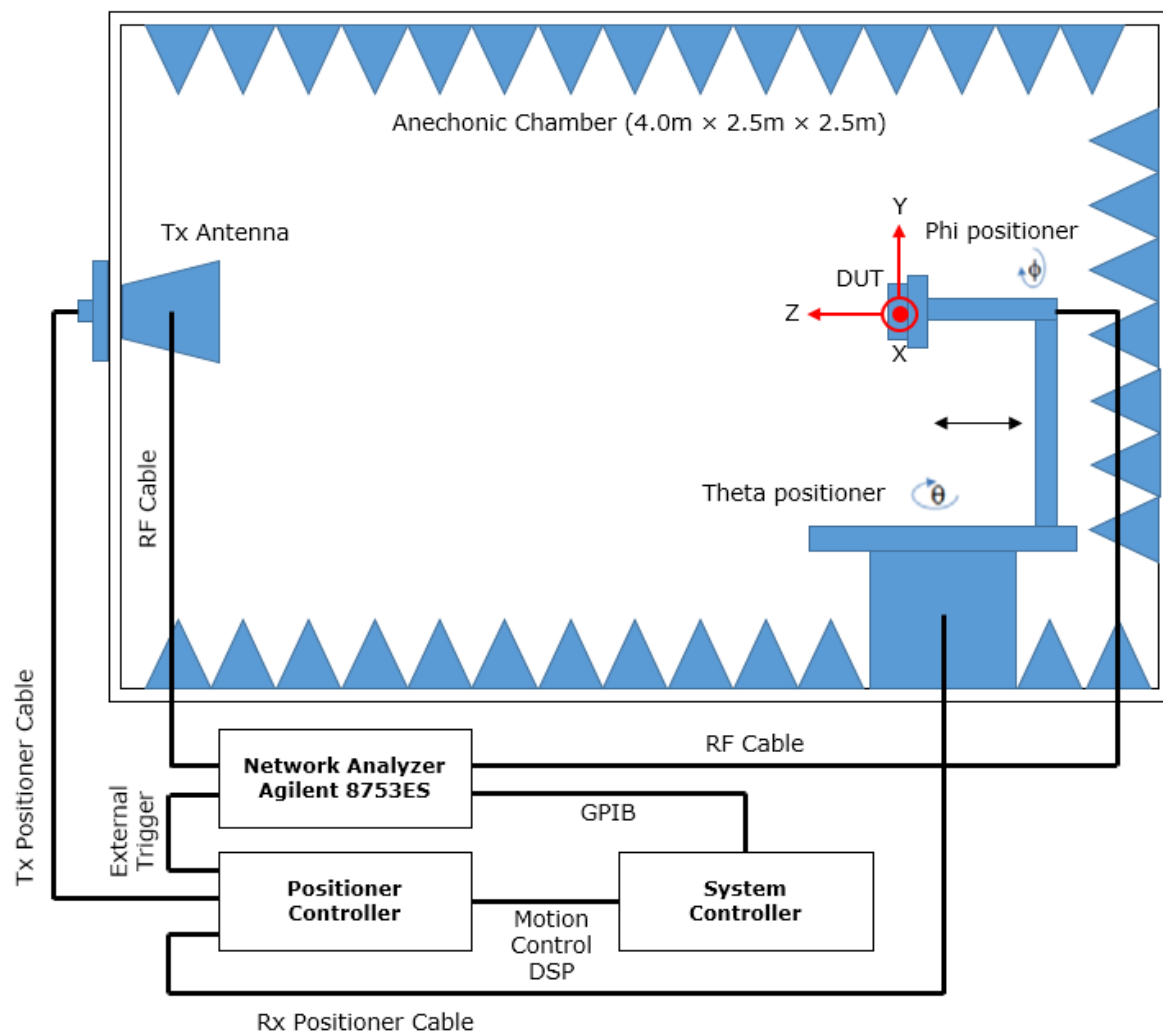


Title	RFID Ceramic Patch Ant. Preliminary Specification
Document Number	MACQM730-05-21XXX
Date	February 24, 2021

5-3. Gain Test Data

Source Antenna Polarization	Gain			
	917.0 MHz	919.0 MHz	921.0 MHz	923.0 MHz
H-Pol. (dBi)	2.19	2.06	2.27	2.65
V-Pol. (dBi)	-0.79	-0.78	-0.88	-1.25
RHCP (dBic)	3.76	3.68	3.56	3.40

5-4. Gain Measurement System



Title	RFID Ceramic Patch Ant. Preliminary Specification
Document Number	MACQM730-05-21XXX
Date	February 24, 2021

5-5. List of Equipments (MAC technologies Inc.)

NO	Equipments	Maker	Model No.	S/N	Calibration Date	Specification	Note
1	Anechoic Chamber	MTG	Mobile Chamber	-	N/A	4.0 m X 2.5 m X 2.5 m (0.4 ~ 3 GHz)	
2	Network Analyzer	Agilent	8753ES	US39173213	16/08/23	30 KHz ~ 6 GHz	
3	Dual-Polarization Horn Antenna with RF Switch	MTG	QRH-004060/ RSW-001060		-	0.4 MHz ~ 6 GHz	Source
4	Calibration Antenna	Schwarzbeck Mess - Elektronik	BBHA 9120 A	1201	10/04/30	0.7 MHz ~ 3 GHz	Reference
5	Absorber Installation	EMERSON & CUMING	SABS-003 18"			Reflectivity : -25 dB @ 0.8 GHz -30 dB @ 1.0 GHz	