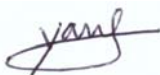


Specifications of Ceramic Patch Ant.

MESSRS. (주)아이디로

ITEM : Air Patch Antenna
PART NAME : MACRO4016-919
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

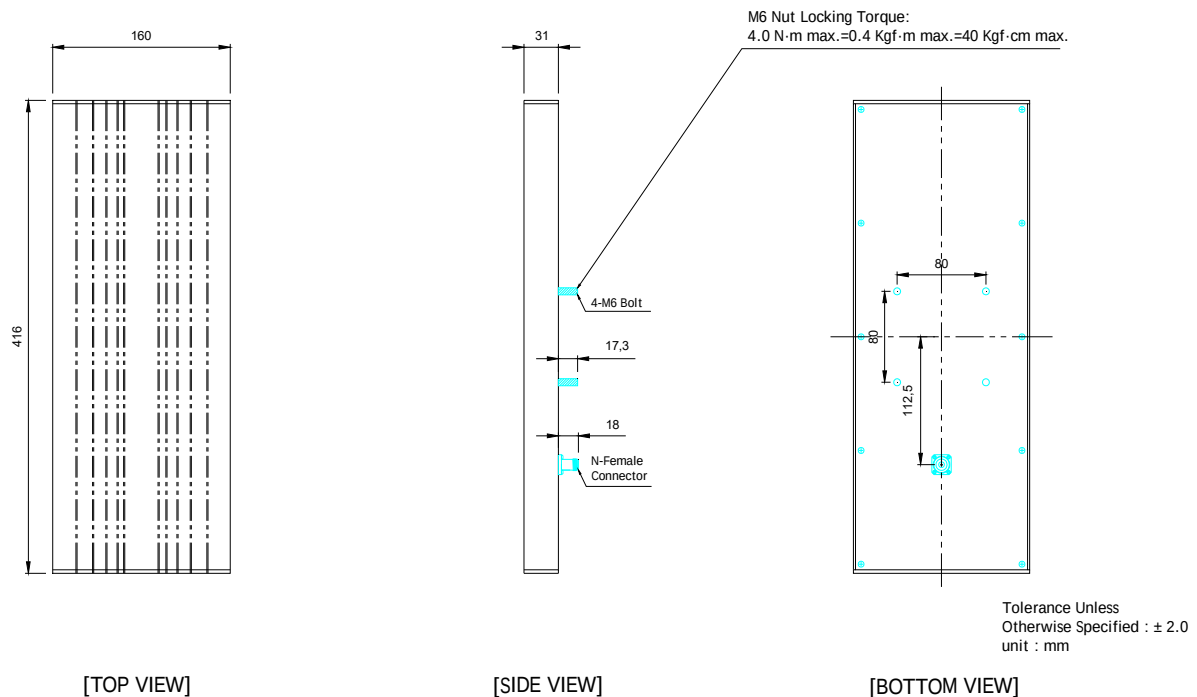
Title	RFID Air Patch Ant. Preliminary Specification
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Date	February 24, 2021

1. Electrical Specifications.

NO.	Parameter	Spec.	Unit	Remark
1	Center Frequency	919.0	MHz	
2	Peak Gain	6.0 typ.	dBi	@ LMR cable 5M
3	Polarization	RHCP		
4	Beam Width	39 typ.	Deg.	
5	Band Width	100 typ.	MHz	
6	VSWR	2.0 : 1 max.	Ratio	
7	Impedance	50	Ohm	

2. Mechanical Dimensions & Photo.

2-1. Mechanical Dimensions. (unit:mm)

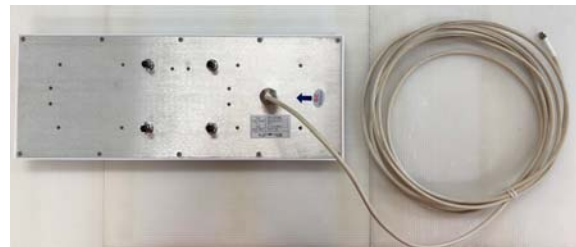


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2-2. Photo. (Cable Ass'y)

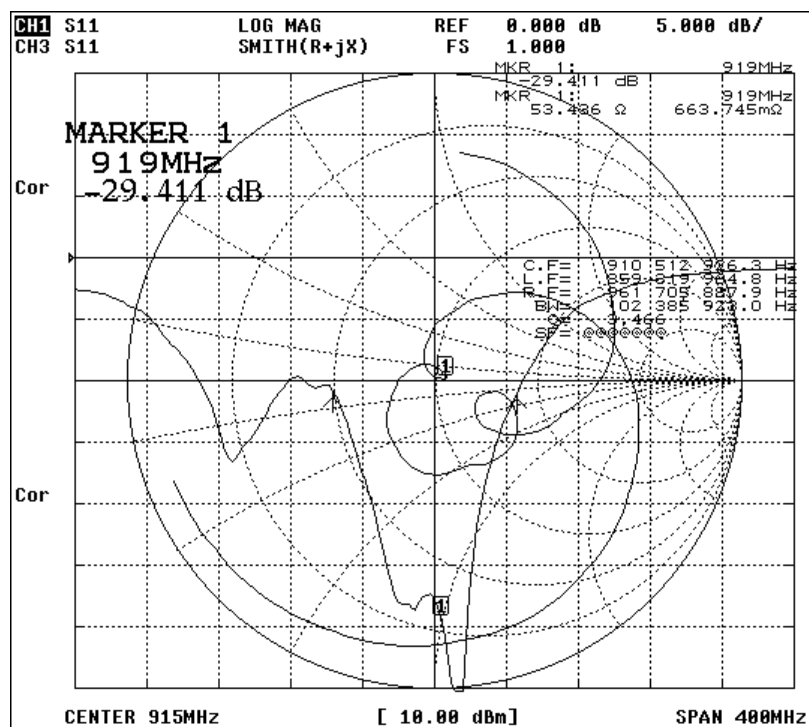


[TOP VIEW]



[BOTTOM VIEW]

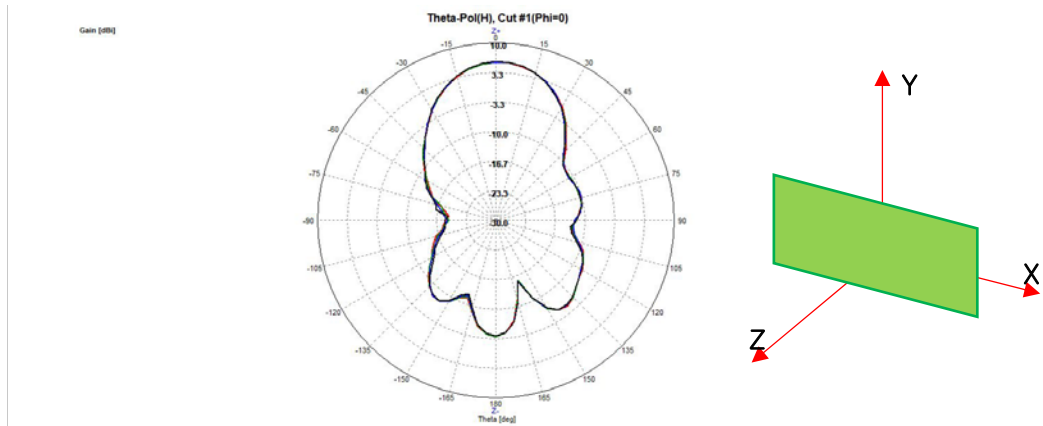
3. S11 Measurement Data.



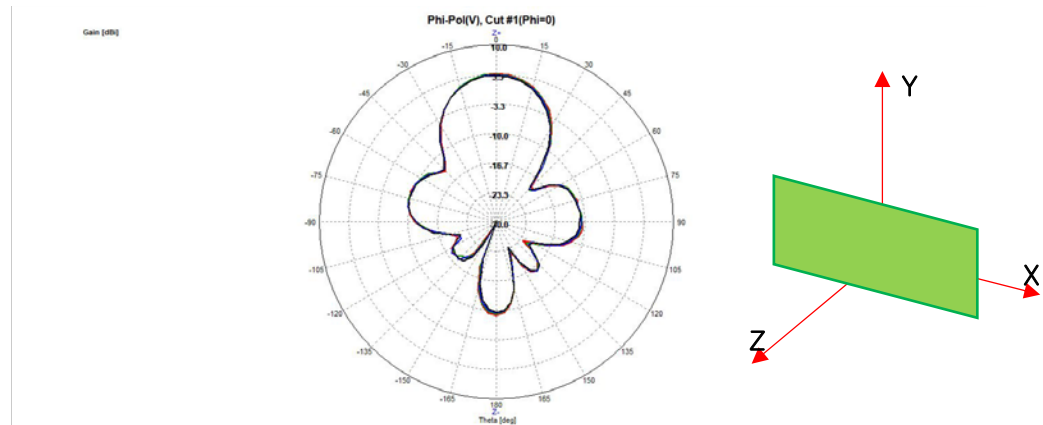
Title	RFID Air Patch Ant. Preliminary Specification
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4. Radiation Patterns.

4-1. H-Pol. (Frequency 917.0, 919.0, 921.0, 923.0 MHz)



4-2. V-Pol. (Frequency 917.0, 919.0, 921.0, 923.0 MHz)

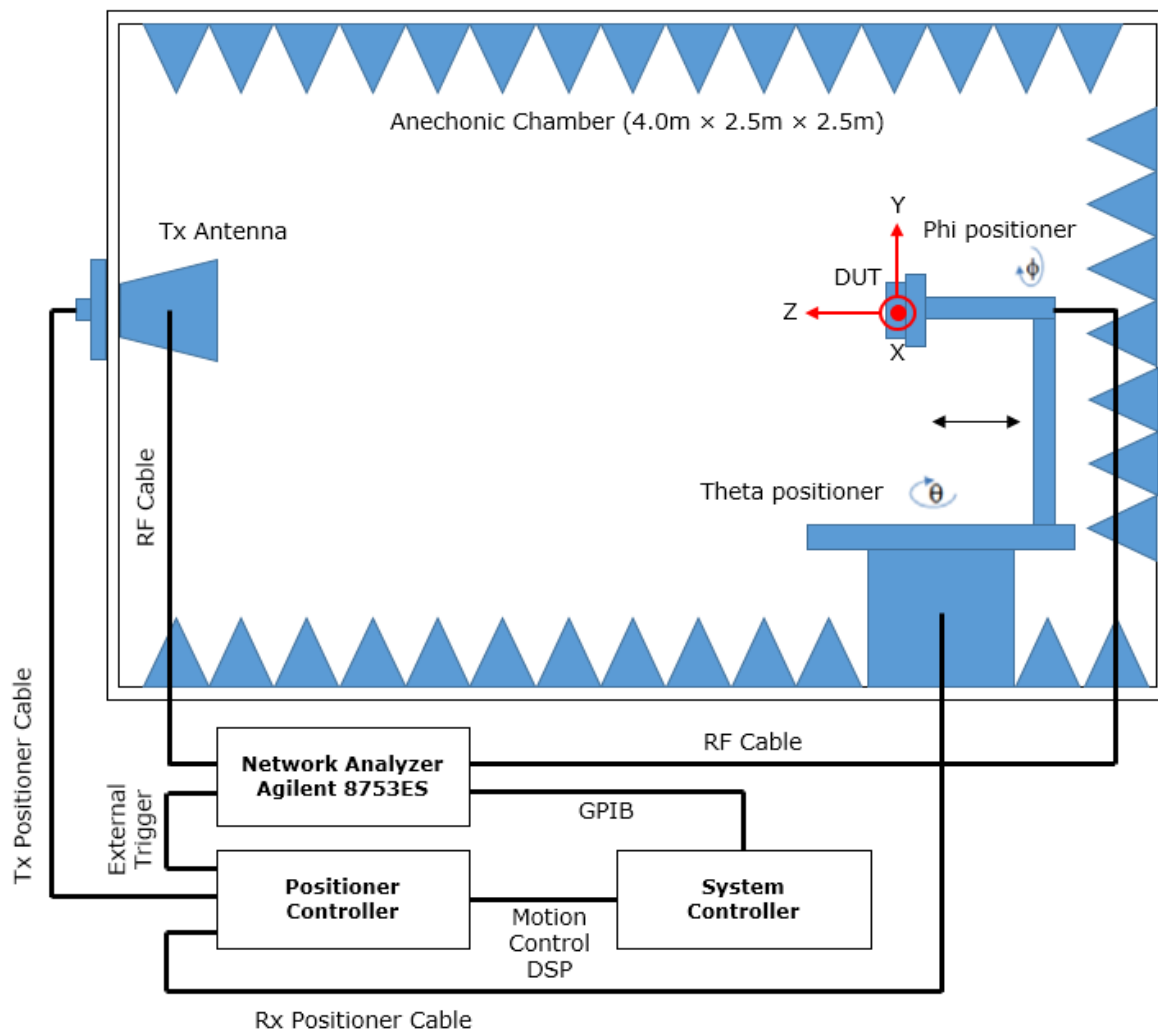


4-3. Gain Test Data

Source Antenna Polarization	Gain			
	917.0 MHz	919.0 MHz	921.0 MHz	923.0 MHz
H-Pol. (dBi)	5.64	5.70	5.70	5.80
V-Pol. (dBi)	3.45	3.38	3.16	3.09

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4-4. Gain Measurement System



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4-5. 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	