Specifications of Ceramic Patch Ant.

ITEM : Ceramic Patch Antenna

PART NAME : MPAC24SA915P-TA

MODEL NAME

FEATURES : Antenna dimension is as small as Teflon antenna
Using high quality factor dielectric
Provide highly stabilized performance

DATE : January 30, 2020

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

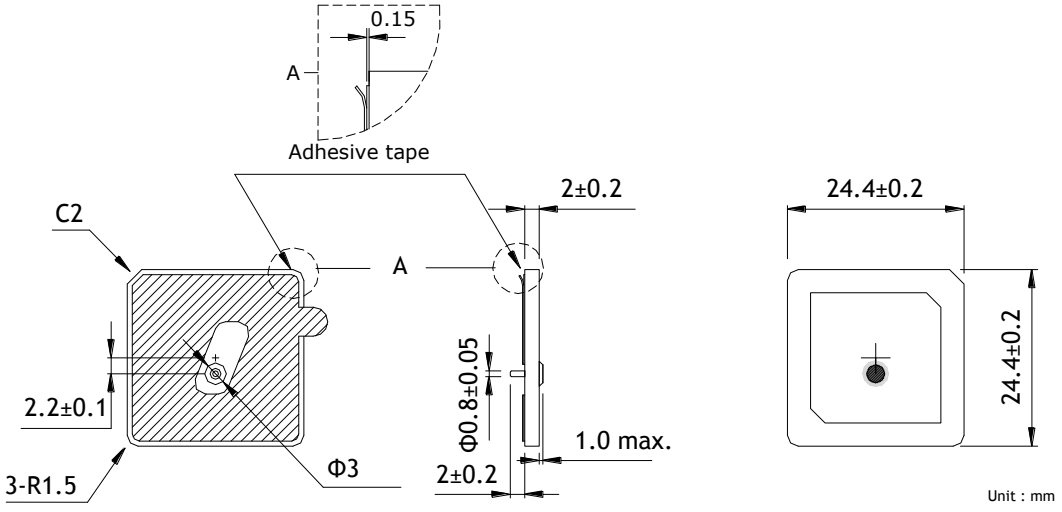
Title	RFID Ceramic Patch Ant. Specification
Document Number	MACQM730-05-20XXX
Date	January 30, 2020

1. Electrical Specifications.

NO.	Parameter	Spec.			Unit	Remark
		Ant. Element	PCB & Cable Ass'y	Set Ass'y		
1	Center Frequency		915.0 ± 2		MHz	
2	Peak Gain	typ.	-6.5 typ.	typ.	dBiL	
		typ.	-4.5 typ.	typ.	dBic	
3	Polarization		RHCP			
4	Beam Width	typ.	100 typ.	typ.	Deg.	@ -3 dB B.W
5	Band Width	typ.	3 typ.	typ.	MHz	@ -10 dB R.L
6	VSWR	max.	2.0 : 1 max.	max.	Ratio	
7	Impedance		50		Ohm	

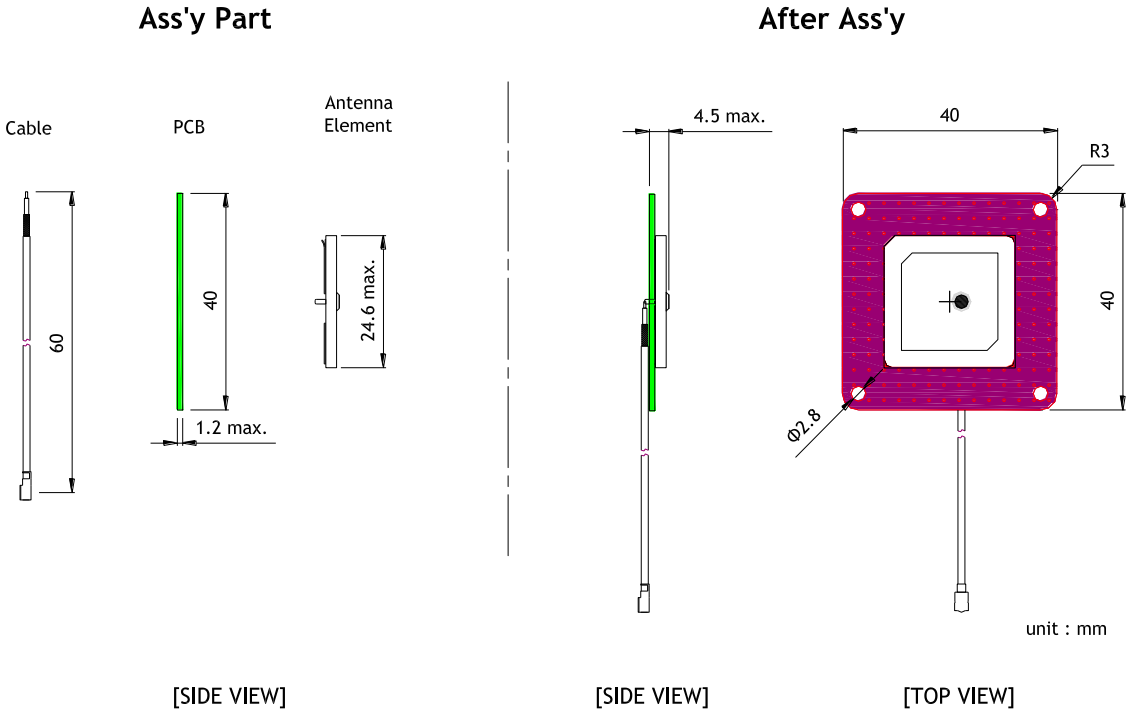
2. Mechanical Dimensions. (unit : mm)

2-1. Antenna Element (The color of ceramic substrates can be changed.)

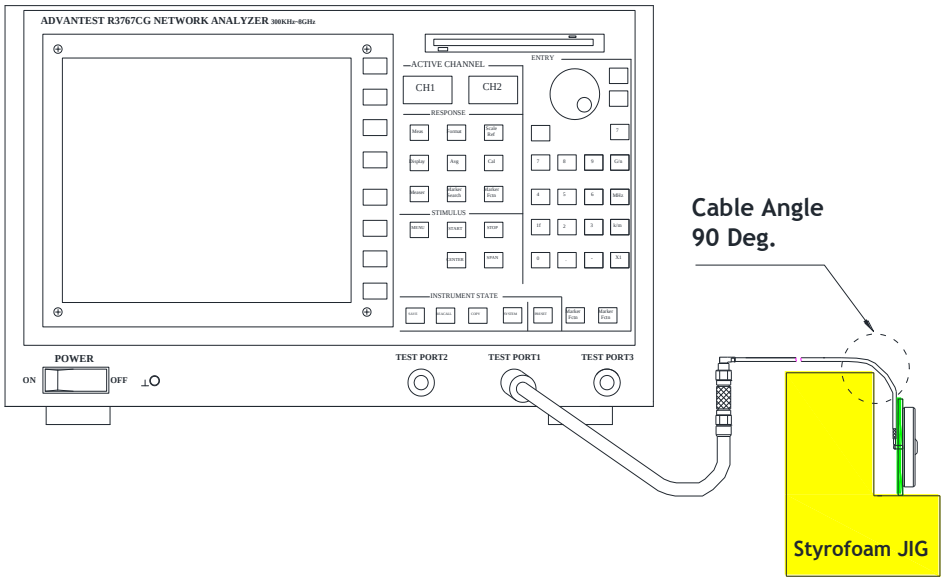


[BOTTOM VIEW] [SIDE VIEW] [TOP VIEW]

2-2. PCB & Cable Ass'y

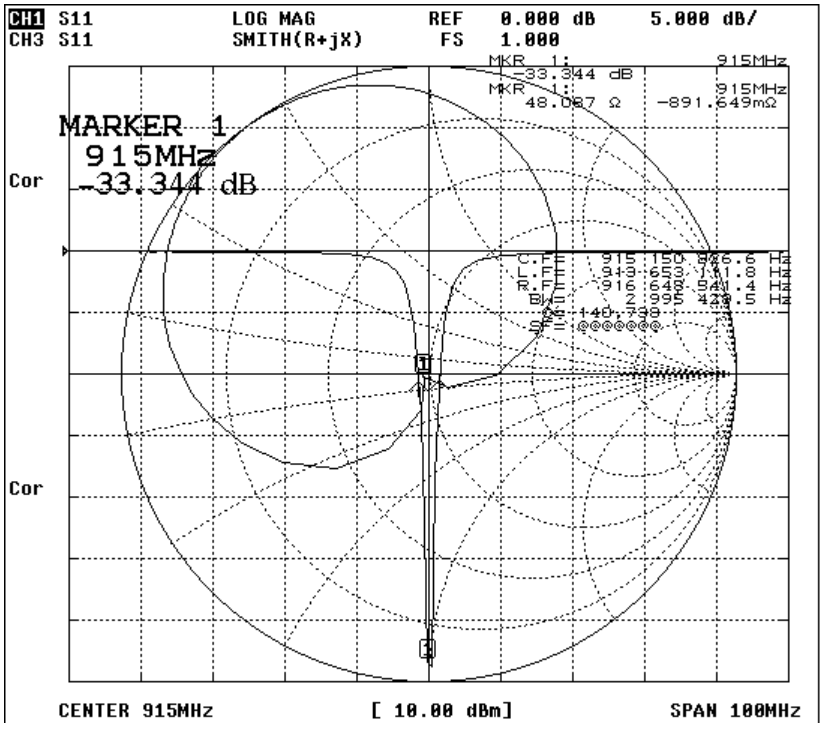


3. Test Fixture.



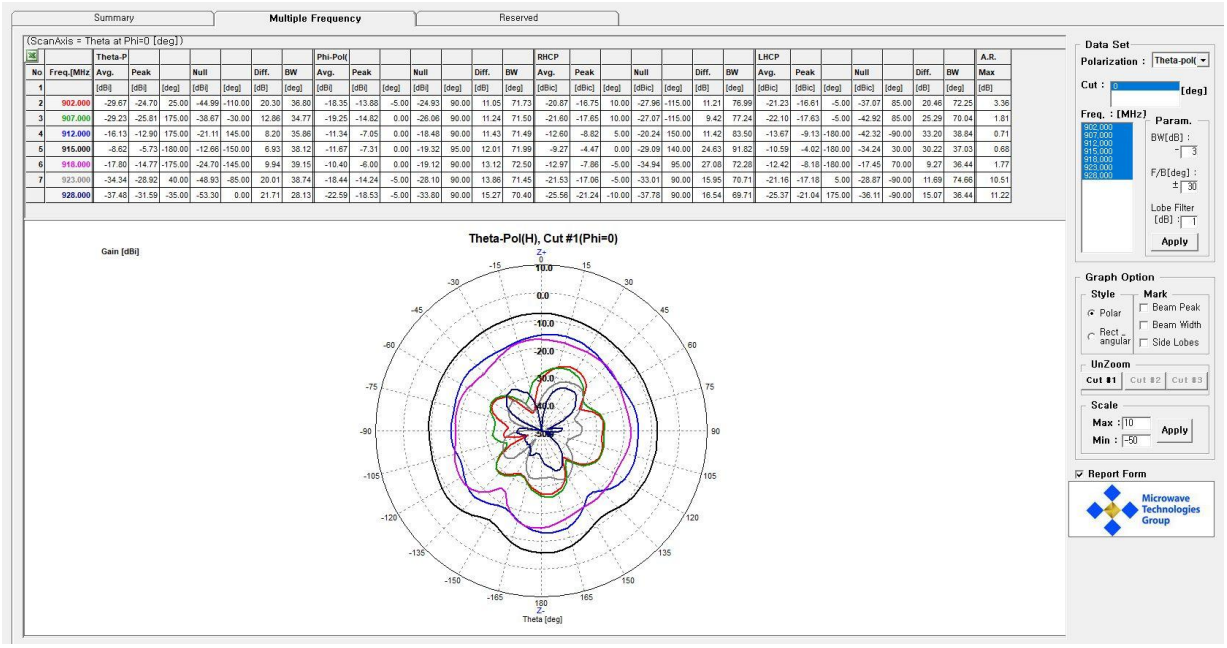
4. S11 Measurement Data.

4-1. PCB & Cable Ass'y

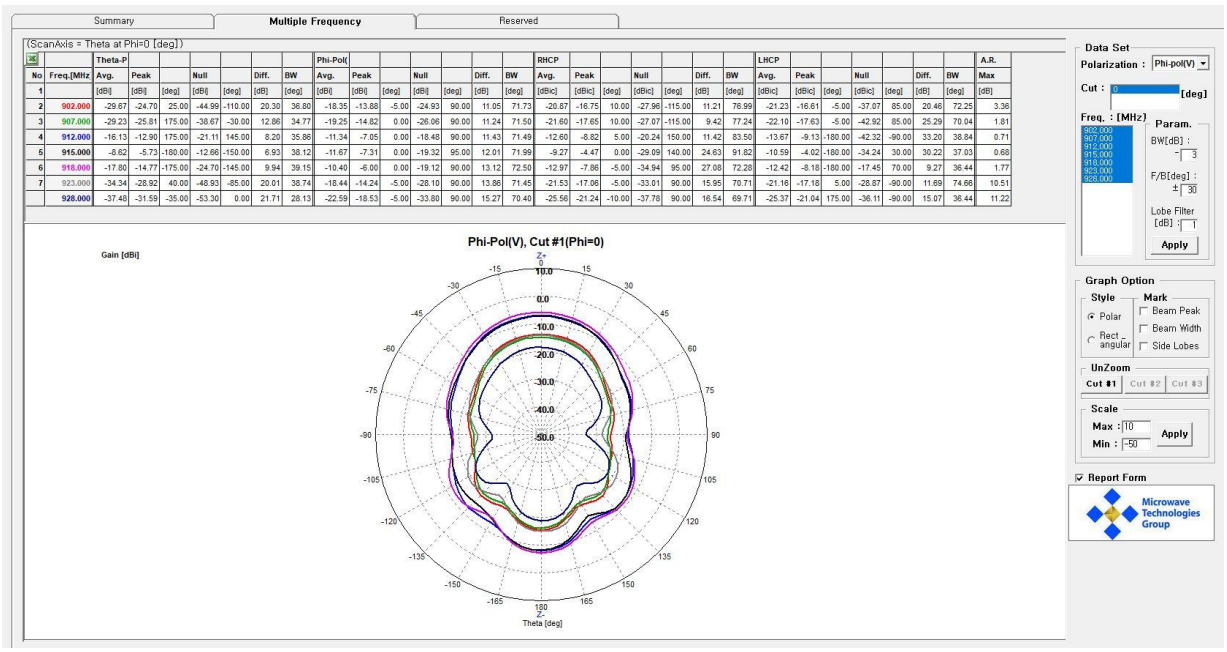


5. Radiation Patterns.

5-1. H-Pol. (Frequency 902.0, 907.0, 912.0, 915.0, 918.0, 923.0, 928.0 MHz)



5-2. V-Pol. (Frequency 902.0, 907.0, 912.0, 915.0, 918.0, 923.0, 928.0 MHz)



5-3. Gain Test Data

Source Antenna Polarization	Frequency						
	902.0 MHz	907.0 MHz	912.0 MHz	915.0 MHz	918.0 MHz	923.0 MHz	928.0 MHz
H-pol (dBiL)	-24.70	-25.81	-12.90	-5.73	-14.77	-28.92	-31.59
V-pol (dBiL)	-13.88	-14.82	-7.05	-7.31	-6.00	-14.24	-18.53
RHCP (dBic)	-16.75	-17.65	-8.82	-4.47	-7.86	-17.06	-21.24

5-4. 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	