



# Specifications of Ceramic Patch Ant.

**For: Trimble**

**ITEM :** Ceramic Patch Antenna  
**PART NAME :** MPAC29SE921P-TA  
**MODEL NAME**  
**FEATURES :** Antenna dimension is as small as Teflon antenna  
Using high quality factor dielectric  
Provide highly stabilized performance  
**DATE :** July 12, 2013  
**QUANTITY :** 2 Pcs

AWT/MAC technologies Inc.		
DRAWN	CHECKED	APPROVED
		<i>P. Lee</i>



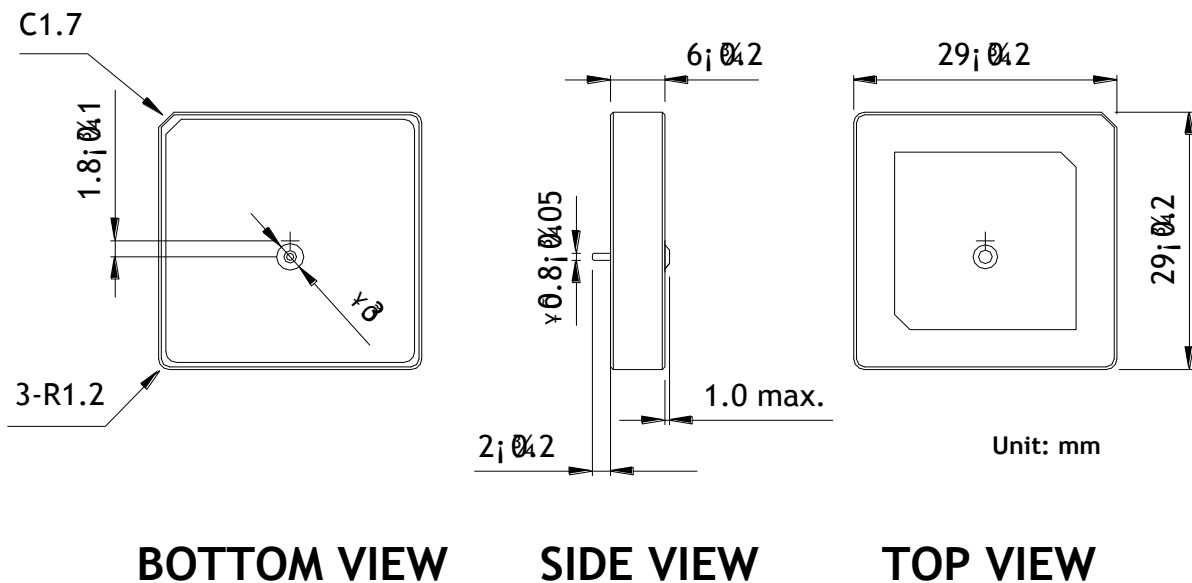
Title	RFID Ceramic Patch Ant. Sample Specification
Document Number	ACQM730-05-13079
Date	July 12, 2013

## 1. Electrical Specifications.

NO.	Parameter	Spec.			Unit	Remark
		Ant. Element	PCB & Cable Ass'y	Set Ass'y		
1	Center Frequency		921.0 ± 2		MHz	
2	Band Width	min.	3 min.	min.	MHz	@ -10 dB R.L
3	VSWR	max.	2.0 : 1 max.	max.	Ratio	
4	Impedance		50		Ohms	
5	Peak Gain	min.	-3.0 min	min.	dBiL	.
6	Polarization		RHCP			

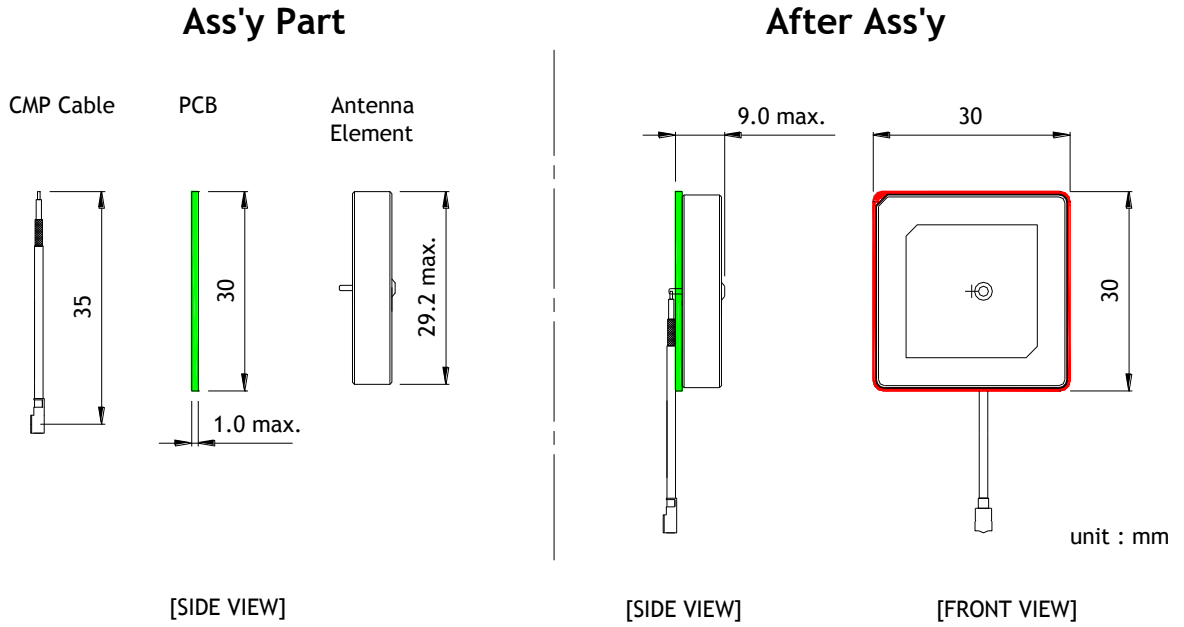
## 2. Mechanical Dimensions. (unit : mm)

### 2-1. ANTENNA ELEMENT

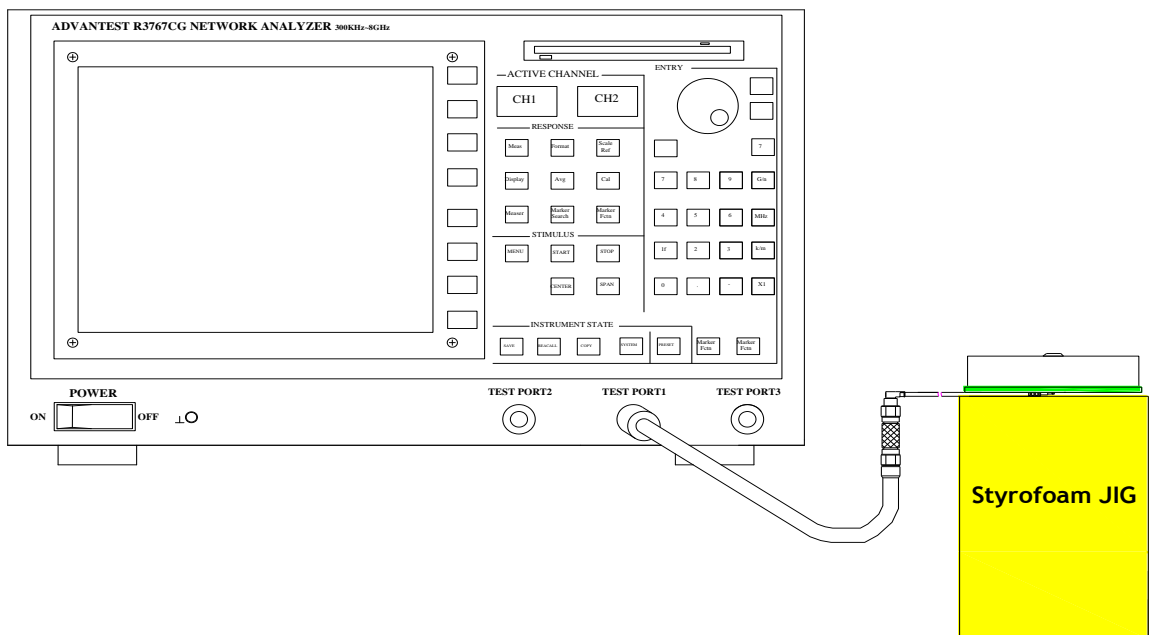


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## 2-2. PCB & Cable Ass'y



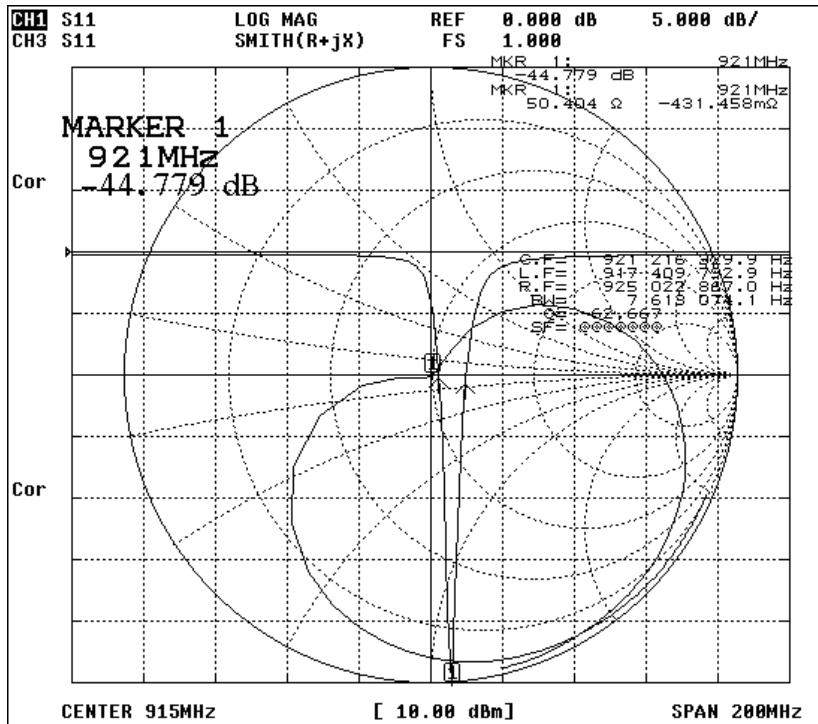
## 3. Test Fixture.



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## 4. S11 Measurement Data.

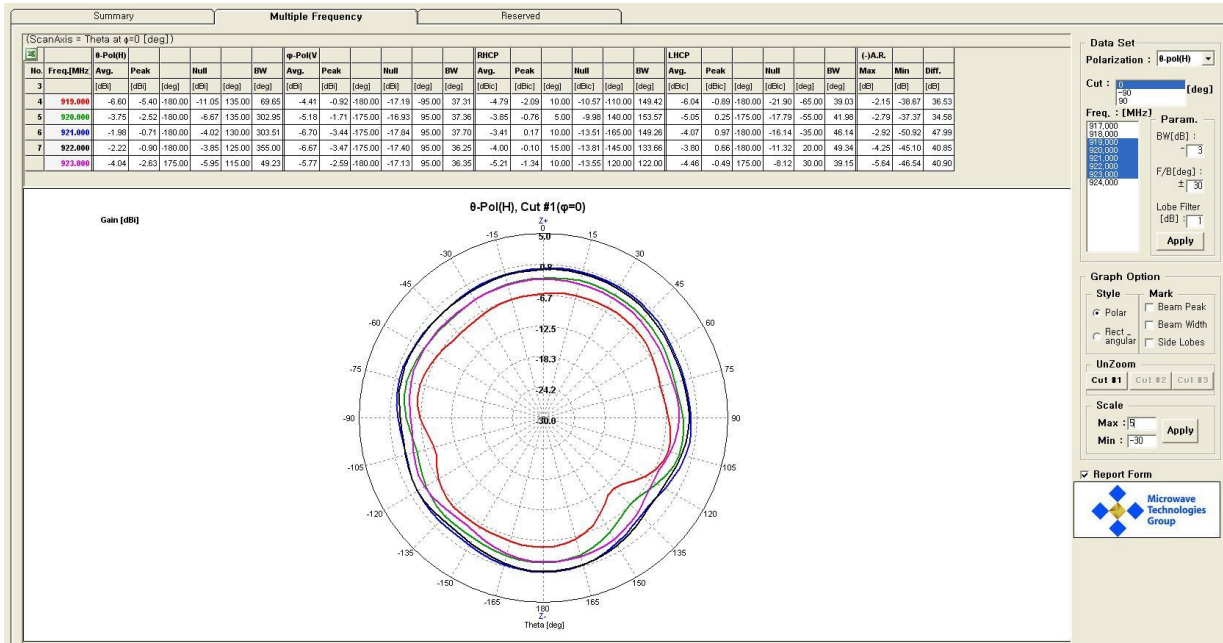
### 4-1. PCB & Cable Ass'y



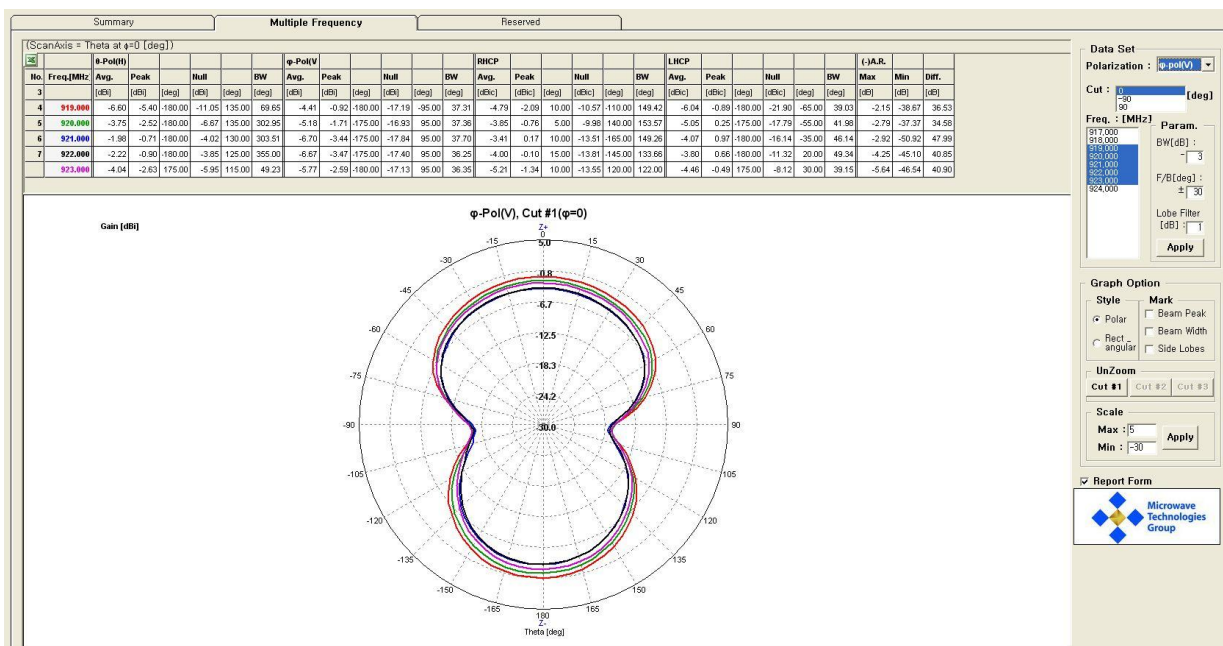
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## 5. Radiation Patterns. (Tested on: July 12, 2013)

### 5-1. H-Pol. (Frequency 919.0, 920.0, 921.0, 922.0, 923.0 MHz)



### 5-2. V-Pol. (Frequency 919.0, 920.0, 921.0, 922.0, 923.0 MHz)



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### 5-3. Gain Test Data

Source Antenna Polarization	Gain				
	919.0 MHz	920.0 MHz	921.0 MHz	922.0 MHz	923.0 MHz
H-Pol. (dBiL)	-5.40	-2.52	-0.71	-0.90	-2.63
V-Pol. (dBiL)	-0.92	-1.71	-3.44	-3.47	-2.53
RHCP(dBic)	-2.09	-0.76	0.17	-0.10	-1.34

### 5-4. List of utilized test equipments

NO	Equipments & Precision	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	12/08/22	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	13/06/10	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	