承　　認　　書

APPROVAL SHEET

CUSTOMER:　MAP ELECTRONICS CO., LTD

CUSTOMER MODEL NO.:　MEGWX-2102SAXX-920

DESCRIPTION: Waterproof Replacement Antenna

REV.: 08

DATE: 2017/6/28

M.A.P electronics co., ltd.
Material All Procurement

for reference only

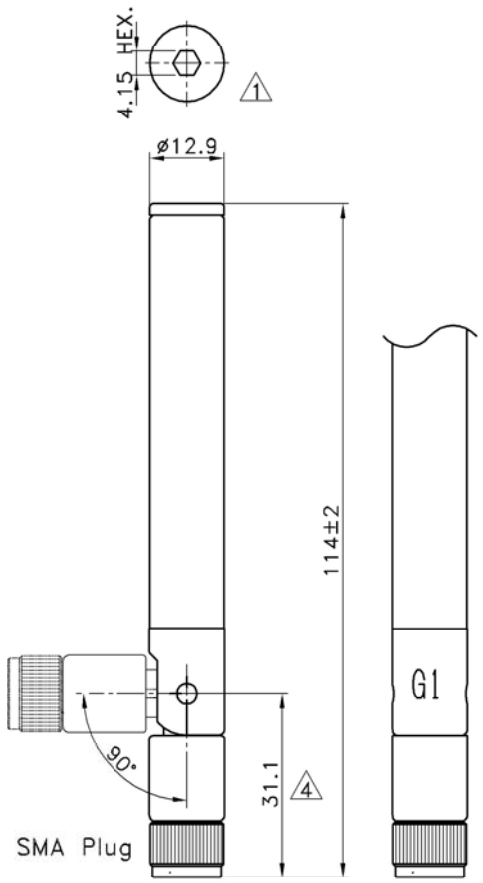
Index.

Item	
1. Specification	2
・Drawing	2
・Connector	4
・Cable	5
2. Test report	6
・Electrical test	6
・Pattern test	7
3. Packing	9

Modification History:

Rev.	Date	Content
00	2013/10/17	
01	2014/6/18	增加俯視圖
02	2015/8/19	新增 Wave Length,Type/Peak Gain
03	2015/9/7	2D Patten Test Instrument，Peak Gain值表
04	2016/3/10	增加包裝說明
05	2016/4/14	增加天線顏色
06	2016/5/4	增加呎吋標示
07	2016/10/12	修改電氣規格
08	2017/6/28	圖面增加Test Ground Size,變更防水等級

REV	ZONE	DESCRIPTION	ECN NO.	ENG	APPROVED	DATE
1	2E	增加俯視圖	103061101	KEVIN VICTOR	ERIC	2014/6/18
2	3B	新增Wave Length,Type/ Peak Gain	104081101	KYLIU	VICTOR	2015/08/20
3	3A	增加天線顏色	105041305	KYLIU	VICTOR	2016/04/14
4	2B	增加尺吋標示	105042903	KYLIU	VICTOR	2016/05/04
5	4B	修改電氣規格	105100701	KYLIU	VICTOR	2016/10/13
6	4B	增加Test Ground Size 變更防水等級	106062002	KYLIU	VICTOR	2017/6/28



Electrical Properties	
Frequency Range	900~940MHz
Impedance	50Ω
V.S.W.R.	<2.0
Radiation	Omni
Gain(Max.)	3dBi 未滿
Peak Gain	2.08 dBi
Polarization	Vertical
Wave Length , type	1/4λ , Whip
Test Ground Size	140*58*28mm
Mechanical Properties	
Antenna Radome	PC
Connector	SMA Plug
Ingress Protection	IP-X7
Weight	17 g (est)
Operating Temp	−40℃～+85℃

5 2 6 6 3

UNLESS OTHERWISE SPECIFIED TOLERANCES ON
X ± 1
X.X ± 0.5
X.XX ± 0.25
ANG. ± 2.0°
THIRD ANGLE PROJECTION

DRAWN BY: KAY
DESIGNED BY: ZIXUAN
CHECKED BY: KYLIU
APPOVED BY: VICTOR

MATERIAL:
FINISH: BLACK
SCALE:1/1;UNIT:mm
DATE: 2013/10/17
REV: 06

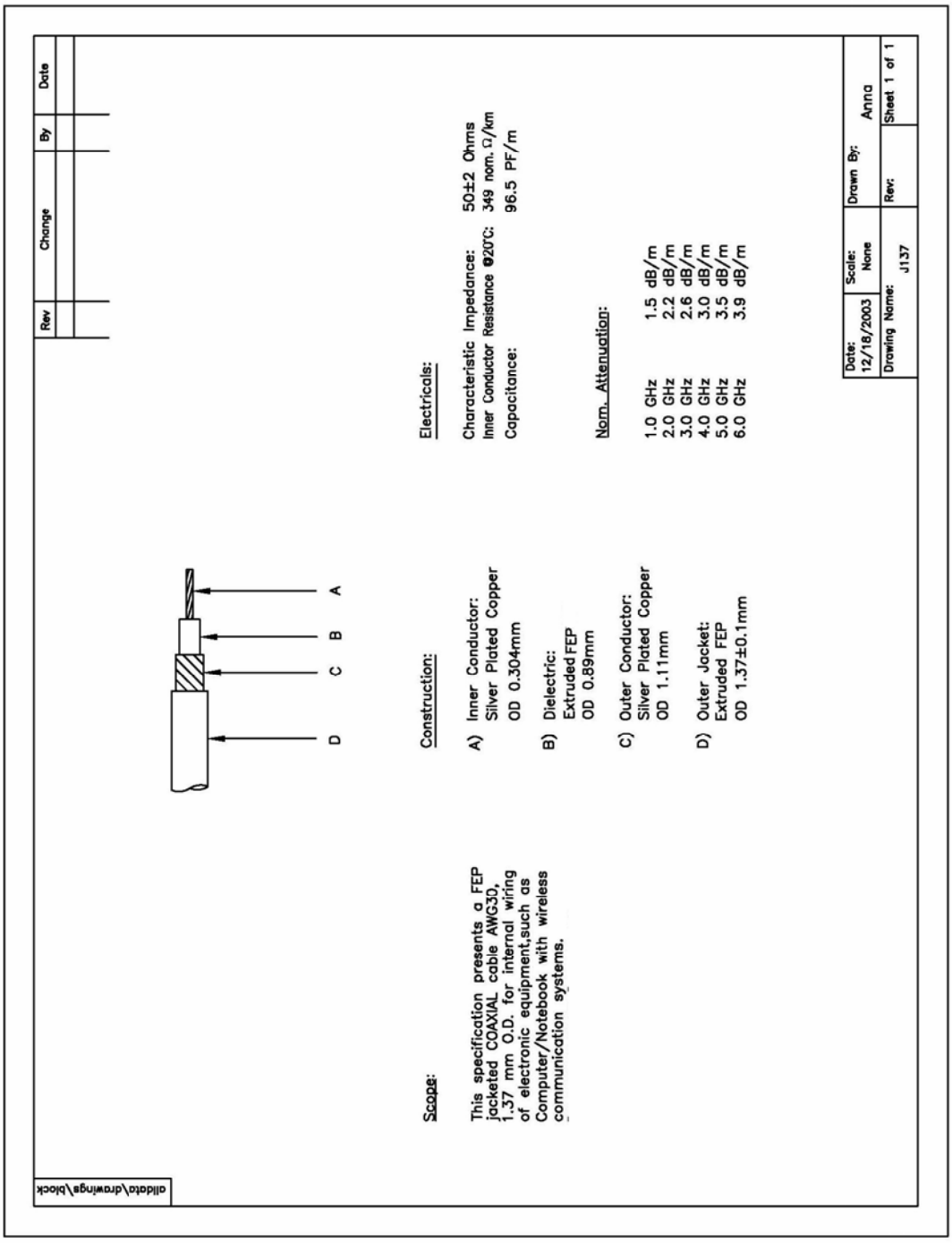
TITLE : Waterproof Replacement Antenna
DRAW NO. :
PART NO. : MEGWX-2102SAXX-920

MAP electronics co., ltd. Material All Procurement

FM0414-02

Electrical Properties	
Frequency Range	900~940MHz
Impedance	50Ω
V.S.W.R.	≤2.0
Radiation	Omni
Gain(Max.)	3dBi 未滿
Peak Gain	2.08 dBi
Polarization	Vertical
Wave Length , type	1/4λ , Whip
Test Ground Size	140*58*28mm
Mechanical Properties	
Antenna Radome	PC
Connector	SMA Plug
Ingress Protection	IP-X7
Weight	17 g (est)
Operating Temp	－40℃～＋85℃

Connector		SMA
Specification Data	1） Impedance	50 ohm
	2） Frequency Range	0~6GHz
	3） Working Voltage	≦250 Vrms
	4） Dielectric Withstanding	≦670Vrms
	5） Voltage Insulation Resistance	≧2000 Mega ohm
	6） Contact Resistance	Center contact: 3.0 Milliohms (Max.) Outer contact: 2.0 Milliohms (Max.)
	7） Recommended coupling nut torqu	4.0 in. 1bs
	8） Coupling nut retention force	≧50 1bs (222N)
	9） Contact captivation force	≧5 1bs (22.2N)
	10） Durability (mating)	≧500 cycles
Environmental Data	1） Thermal Shock	MIL-STD-202,Method 107, Condition B
	2） Corrosion	MIL-STD-202,Method 101, Condition B
	3） Shock	MIL-STD-202,Method 213, Condition I
	4） Vibration	MIL-STD-202,Method 204, Condition D
	5） Moisture Resistance	MIL-STD-202,Method 106
Material Specifications	Material Data	Material
	1） Body	Brass
	2） Contact	Brass
	3） Insulator	Teflon or Delrin

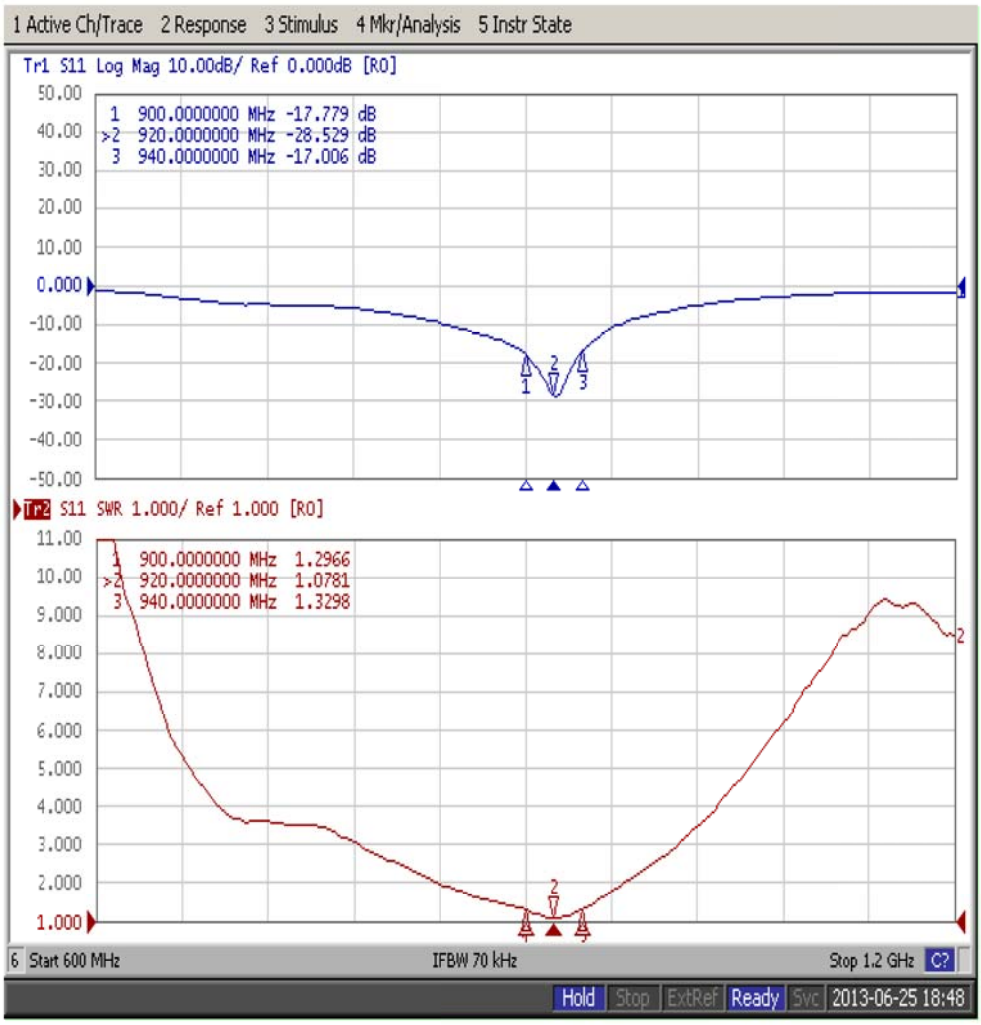


Model. **MEGWX-2102SAXX-920**

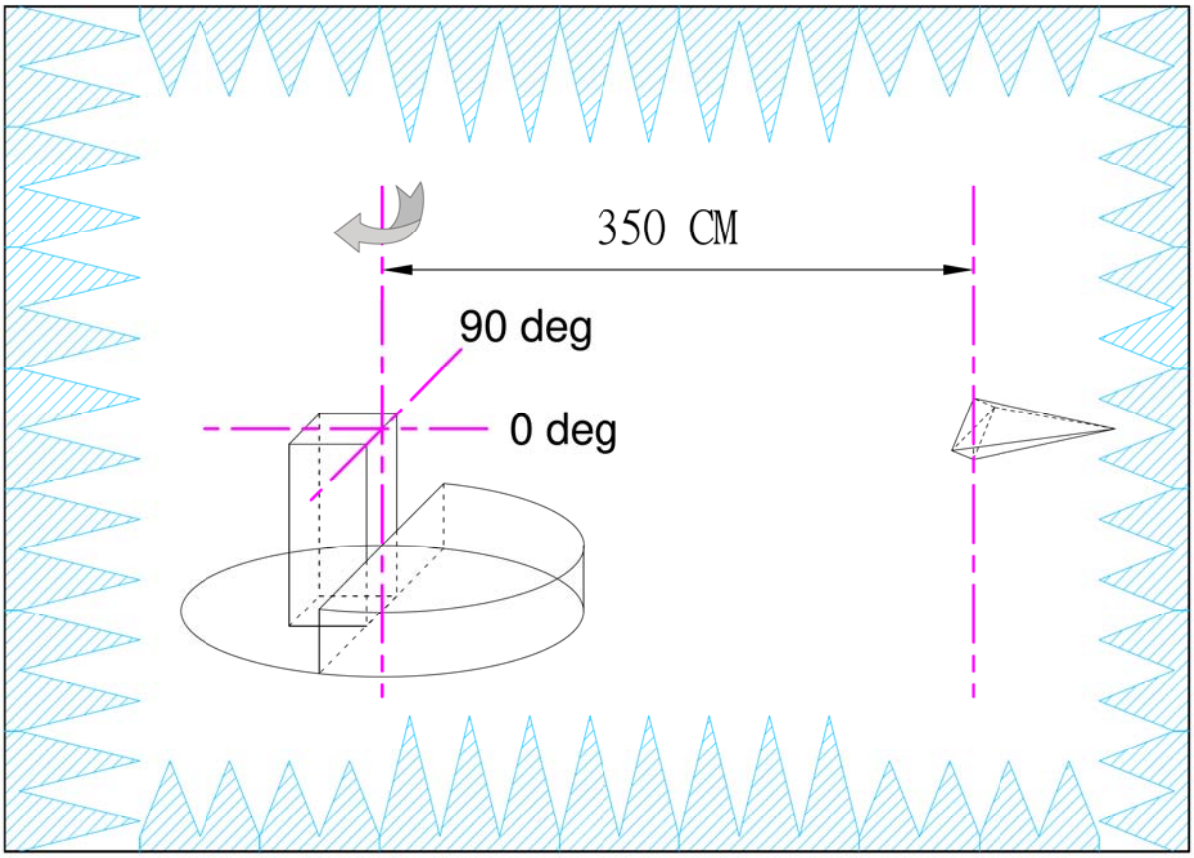
Test Report **Return loss/V.S.W.R**

Return loss

V.S.W.R.



2.2 2D Patten Test Instrument



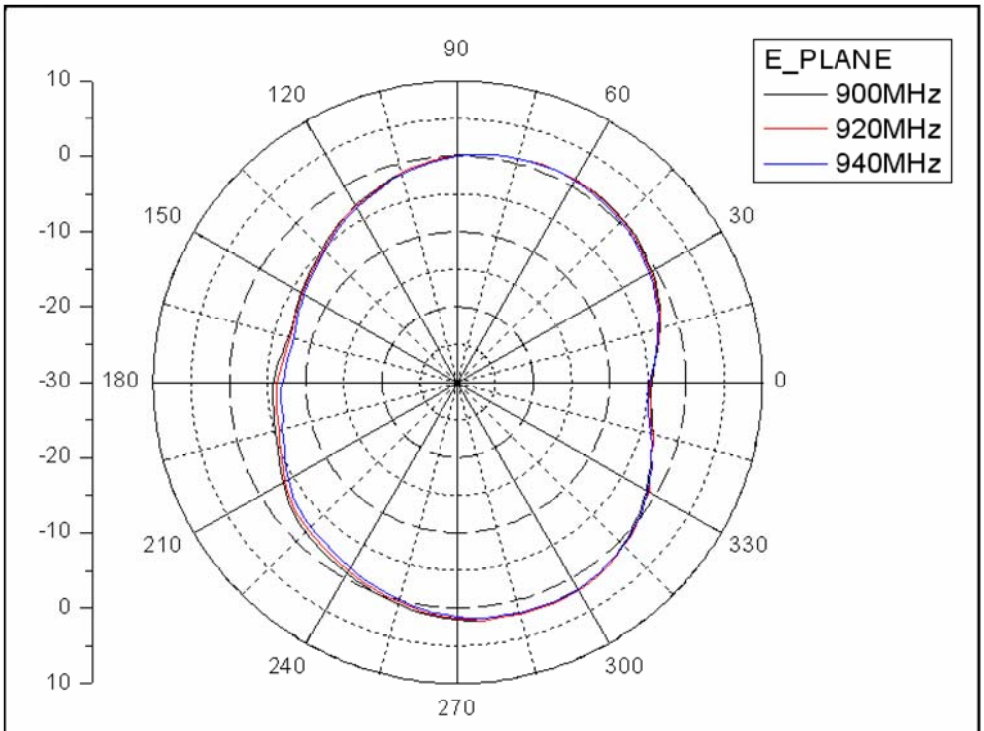
Test Equipment

Anechoic chamber: 100MHz~6GHz 8*6*6m (※ 1m Quiet zone at 800MHz)
Soure Antenna: ETS-3164 Dual Polarized Horn
Network Analyzer: Agilent E5071B 100kHz~8.5GHz

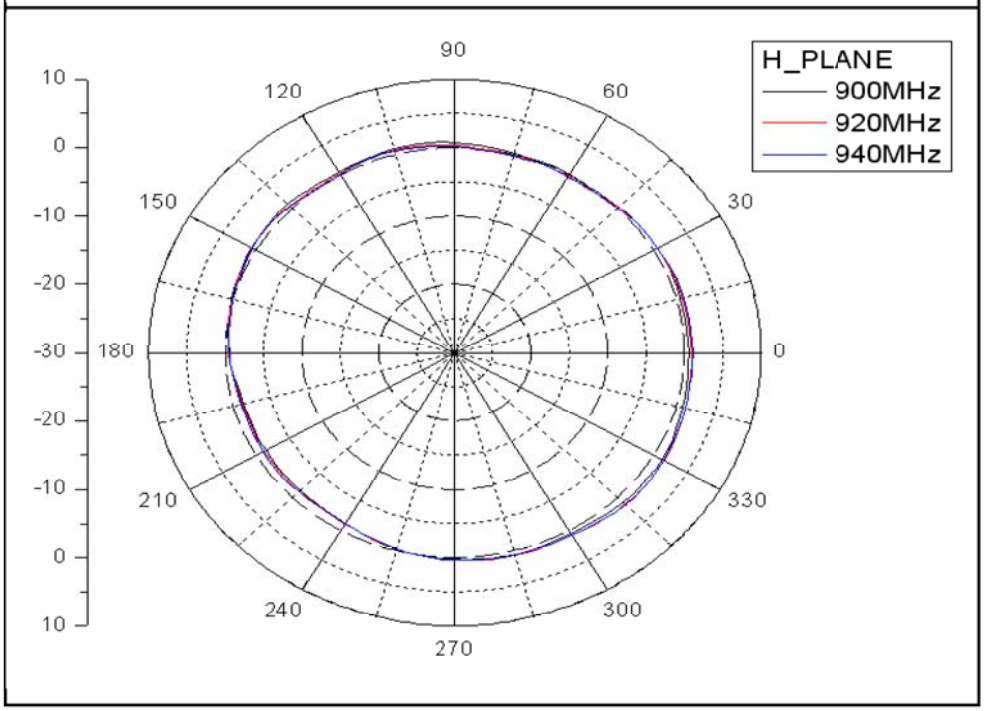
Model NO. MEGWX-2102SAXX-920

2D Patterns **Pattern Test**

E-plane



H-plane



Frequency	900	920	940
H-plane	1.17	2.08	0.94
E-plane	0.74	1.82	1.08