承　　認　　書

APPROVAL SHEET

CUSTOMER:　MAP ELECTRONICS CO., LTD

CUSTOMER MODEL NO.:　MEGHX-321XSAAX-920

JOYMAX MODEL NO.:

DESCRIPTION: #321X Replacement Antenna

REV.:　00

DATE: 2016/10/7

Customer Approval	Joymax Approval

MAP electronics co., ltd.
Material All Procurement

Index.

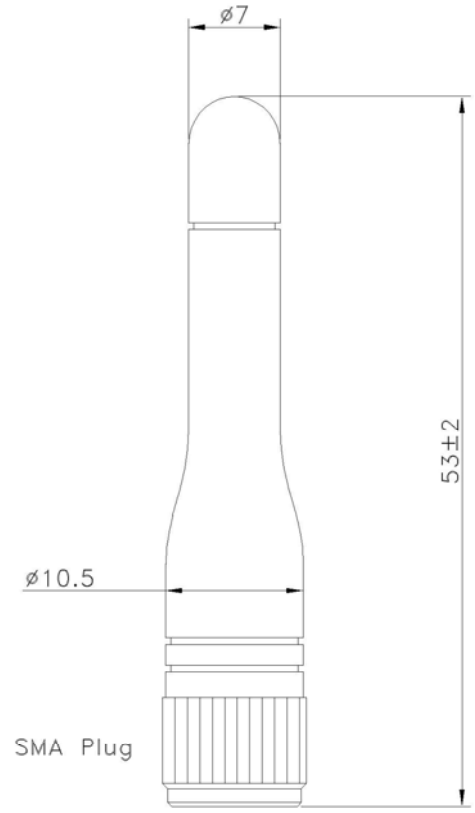
Modification History:

Rev.	Date	Content
00	2016/10/7	

1. Specification

1.1 Drawing

REV	ZONE	DESCRIPTION	ECN NO.	ENG	APPROVED	DATE



Electrical Properties	
Frequency Range	900~930MHz
Impedance	50Ω
V.S.W.R.	≤2.0
Radiation	Omni
Gain(Max.)	3dBi未滿
Polarization	Vertical
Wave Length, Type	1/2 λ, Helical
Beam Width(+/-3dB)	42°@E-Plane 360°@H-Plane
Test Ground Size	113*87*25mm
Mechanical Properties	
Radome Material	TPE
Connector Type	SMA Plug
IP Level	IP-65
Dimension	L=53mm
Weight	9 g (est)
Operating Temp	−30℃～+70℃
Storage Temp	−30℃～+70℃

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

DRAWN BY: YING
DESIGNED BY:
CHECKED BY: KYLIU
APPOVED BY: VICTOR

MATERIAL:
FINISH:
SCALE:2/1;UNIT:mm
DATE: 2016/10/12
REV: 00

TITLE : #321X Replacement Antenna
DRAW NO. : SSP-140522
PART NO. : MEGHX-321XSAAX-920

MAP electronics co., ltd. Material All Procurement

FM0414-02

1. Specification

1.1 Drawing

Electrical Properties	
Frequency Range	900~930MHz
Impedance	50Ω
V.S.W.R.	≤2.0
Radiation	Omni
Gain(Max.)	3dBi未滿
Polarization	Vertical
Wave Length, Type	1/2 λ, Helical
Beam Width(+/-3dB)	42°@E-Plane 360°@H-Plane
Test Ground Size	113*87*25mm
Mechanical Properties	
Radome Material	TPE
Connector Type	SMA Plug
IP Level	IP-65
Dimension	L=53mm
Weight	9 g (est)
Operating Temp	－30℃～＋70℃
Storage Temp	－30℃～＋70℃

1.2 Connector SMA

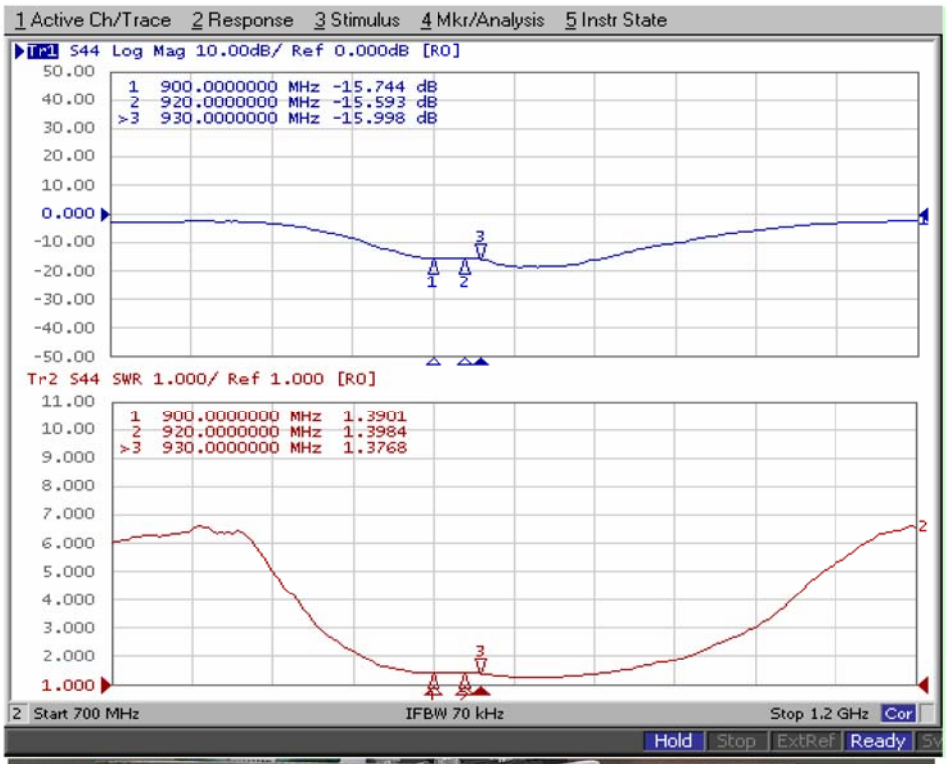
Specification Data	1） Impedance	50 ohm
	2） Frequency Range	0~6GHz
	3） Working Voltage	≦250 Vrms
	4） Dielectric Withstanding	≦670Vrms
	5） Voltage Insulation Resistance	≧2000 Mega ohm
	6） Contact Resistance	Center contact: 3.0 Milliohms (Max.) Outer contact: 2.0 Milliohms (Max.)
	7） Recommended coupling nut torque	4.0~8.8 in. lbs (0.45~0.99Nm)
	8） Coupling nut retention force	≧50 lbs (222N)
	9） Contact captivation force	≧5 lbs (22.2N)
	10） Durability (mating)	≧500 cycles

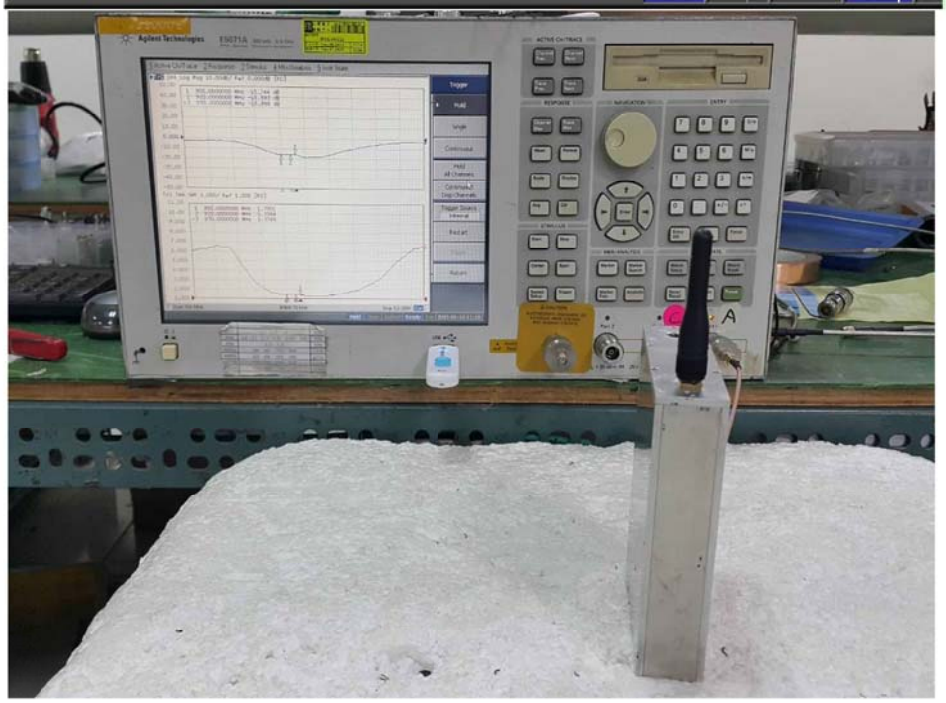
Environmental Data	1） Operating Temperature	－65℃～＋165℃
	2） Thermal Shock	MIL-STD-202,Method 107, Condition B
	3） Corrosion	MIL-STD-202,Method 101, Condition B
	4） Shock	MIL-STD-202,Method 213, Condition I
	5） Vibration	MIL-STD-202,Method 204, Condition D
	6） Moisture Resistance	MIL-STD-202,Method 106

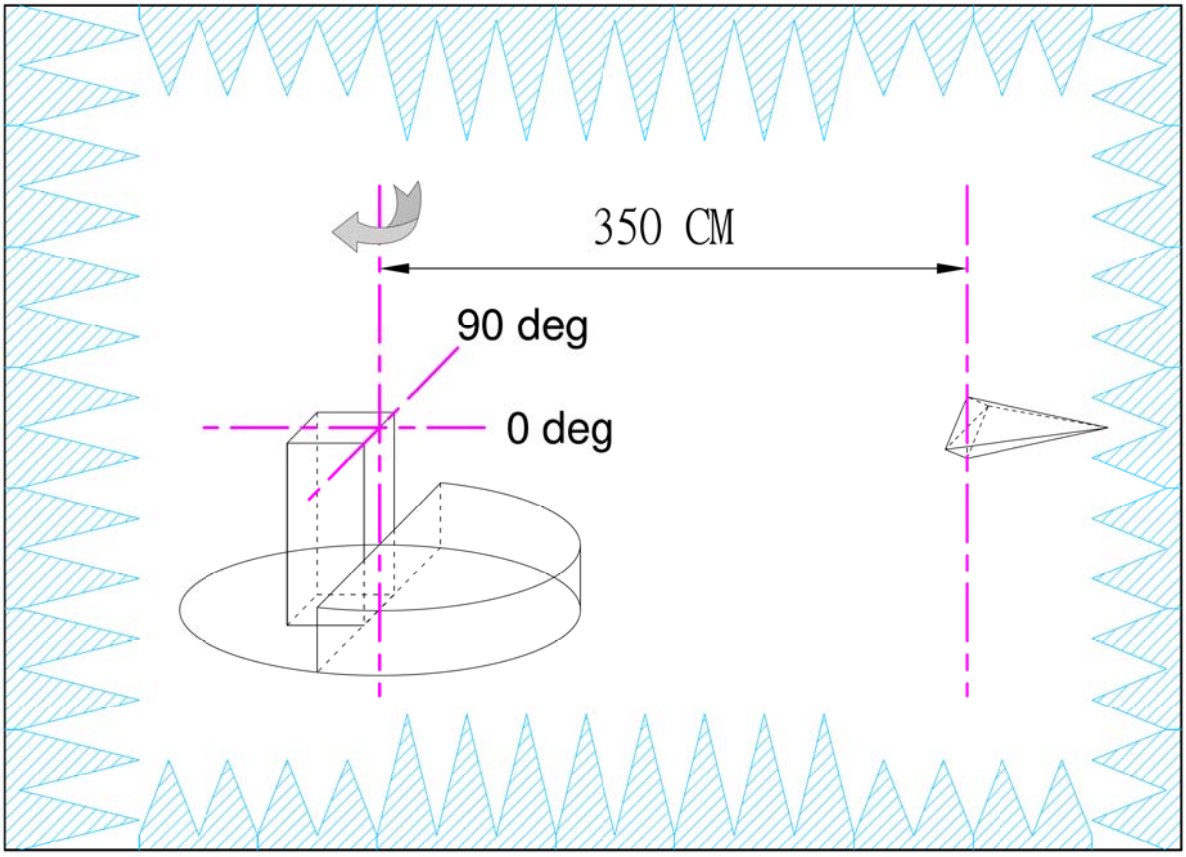
Material Specifications	Material Data	Material
	1） Body	Brass
	2） Contact	Brass
	3） Insulator	Teflon or Delrin

Return loss

V.S.W.R.



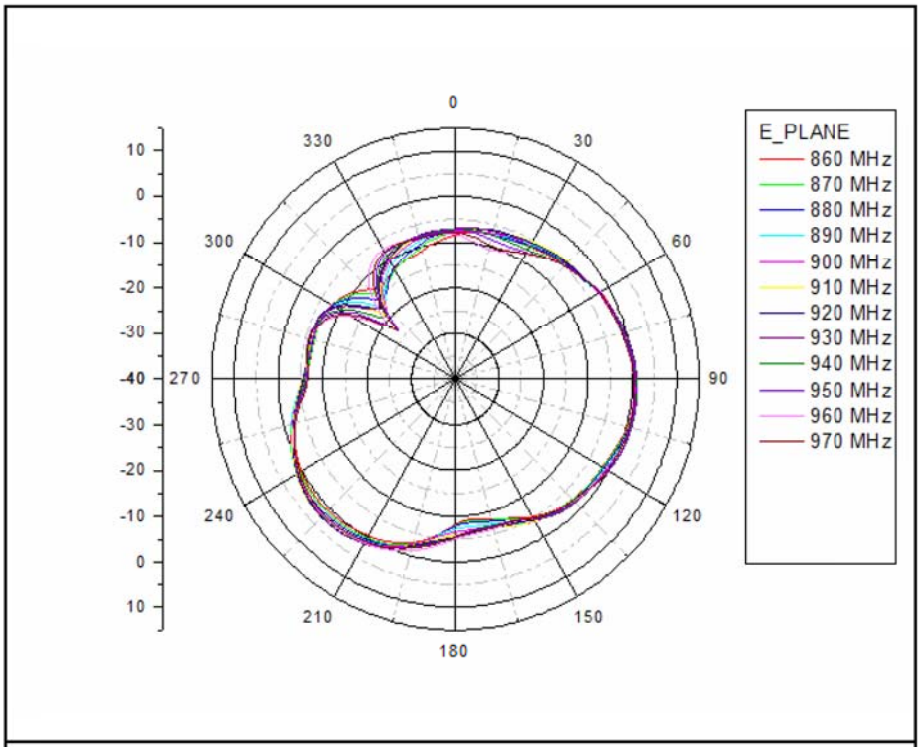




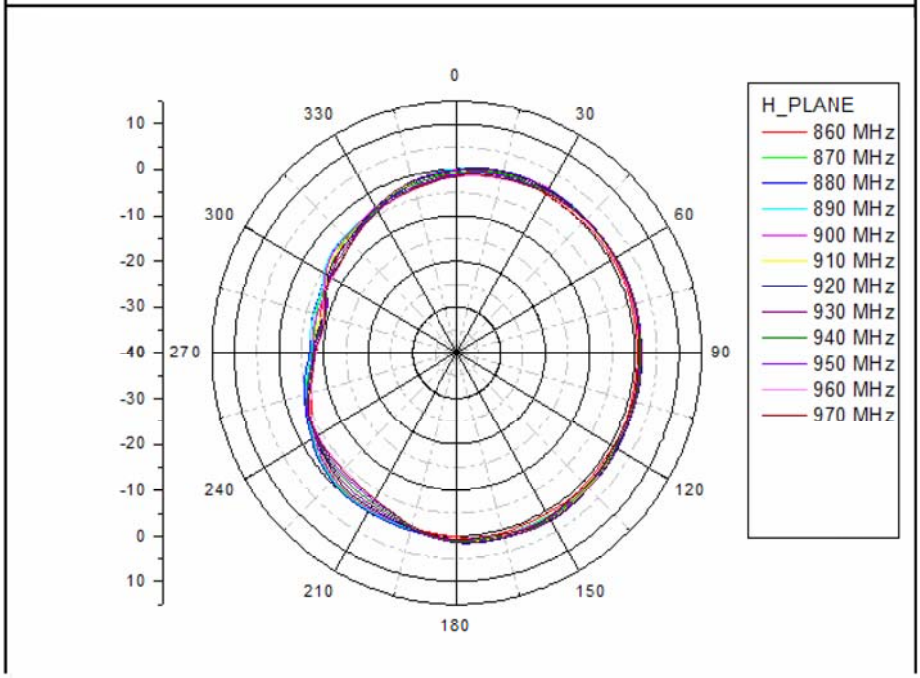
Test Equipment

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

E-plane



H-plane



	900 MHz	910 MHz	920 MHz	930 MHz
E plane	2.5	2.76	2.77	2.66
H plane	1.74	2	2.36	2.24