



WHA YU INDUSTRIAL CO., LTD.(HEAD OFFICE)

DONGGUAN AEON TECH CO.,LTD.(CHINA)

SPECIFICATION FOR APPROVAL

CUSTOMER: ASKEY COMPUTER CORPORATION

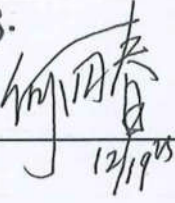
PART NAME: RF Antenna Assembly

PART NO.:

REVISION:

W. Y. P/NO.: C407-511064-A(SZ2312-032)

REV.: XI

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :	 12/13/05	
DATE :	 12/19/05	

WHA YU GROUP

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RF Antenna Assembly

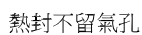
Specification

1. Electrical Properties :

- 1.1 Frequency Range..... 902~928 MHz
- 1.2 Impedance 50Ω Nominal
- 1.3 VSWR2.0:1 Max.
- 1.4 Return Loss9.54 dB Min.
- 1.5 Peak Gain 2.0 dBi Max.
- 1.6 Radiation Omni-directional
- 1.7 Admitted Power..... 1 W
- 1.8 Polarization..... Linear
- 1.9 Cable..... RG-178 Cable
- 1.10 Connector.....SMA Straight Plug Reverse

2. Physical Properties :

- 2.1 Operating Temp. -20 ~ +60 °C
- 2.2 Storage Temp. -20 ~ +60 °C



Packing : 10 pcs/bag

備註:防水等級IP66

6	Cable	RG-178 Cable	1	
5	Connector	SMA Straight Plug Reverse;抗UV	1	
4	Rivet	POD,Color:White[白色]	2	
3	Antenna Base	(CM-1649)PC+PBT;抗UV;Color:White[白色]	1	
2	Antenna Base	(CD-384)PC;抗UV;Color:White[白色]	1	
1	Antenna Body	(CD-383)TPE;抗UV;Color:White[白色]	1	
NO		DESCRIPTION	Q'TY	REMARK

XXX, ±5.0	APPROVED	CUSTOMER: 亞旭	
XX, ±3.0		PART NO :	
X, ±1.0	CHECKED	PART NAME: RF Antenna Assembly	
.X ±0.5		W.Y P/UNIT: C407-511064-A	
.XX ±0.2	DRAWING	REV	UNIT
 		FILE : SZ2312-032	
		X1 mm	SHEET : 1/1



Wha Yu Group

THIS DRAWING, AND IT'S INHERANT DESIGN CONCEPTS,
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CUSTOMER'S SIGNATURE

TNP-22014

Antenna Test Report

Version: V 1.01

Released Date: 2022/10/27

Prepared By: Xiao dong

Reviewed By: Daniel



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- Specification
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- Return Loss Results
- Isolation Results
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- 2D Radiation Pattern Results
- Results Summary (return loss, isolation, peak gain, efficiency)



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Revision History

Released Date	Version	Record
2022/10/12	1.00	Antenna Testing Report New Project
2022/10/27	1.01	Optimized Antenna Gain



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Specification

Requirements of Antenna Design

RF Function	Number of ANT	Frequency Band	Remark
Lora	1	902~928 MHz	

Requirements of Measurement

Test Item	Specification	Remark
VSWR	≤ 2.0	
Peak gain	≤ 2.0 dBi	
Efficiency	> 75 %	



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Antenna Placement & Solution



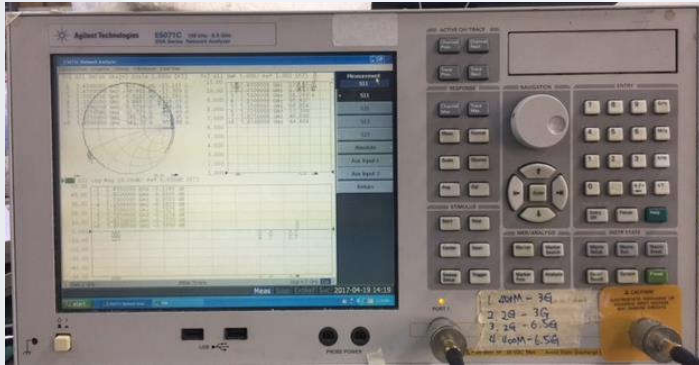
Antenna

Antenna	ANT Type	Size (L * W * H)	Cable Length (mm)	Cable Type
Lora	Dipole	NA	NA	NA



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Test Setup for S-parameter Measurement



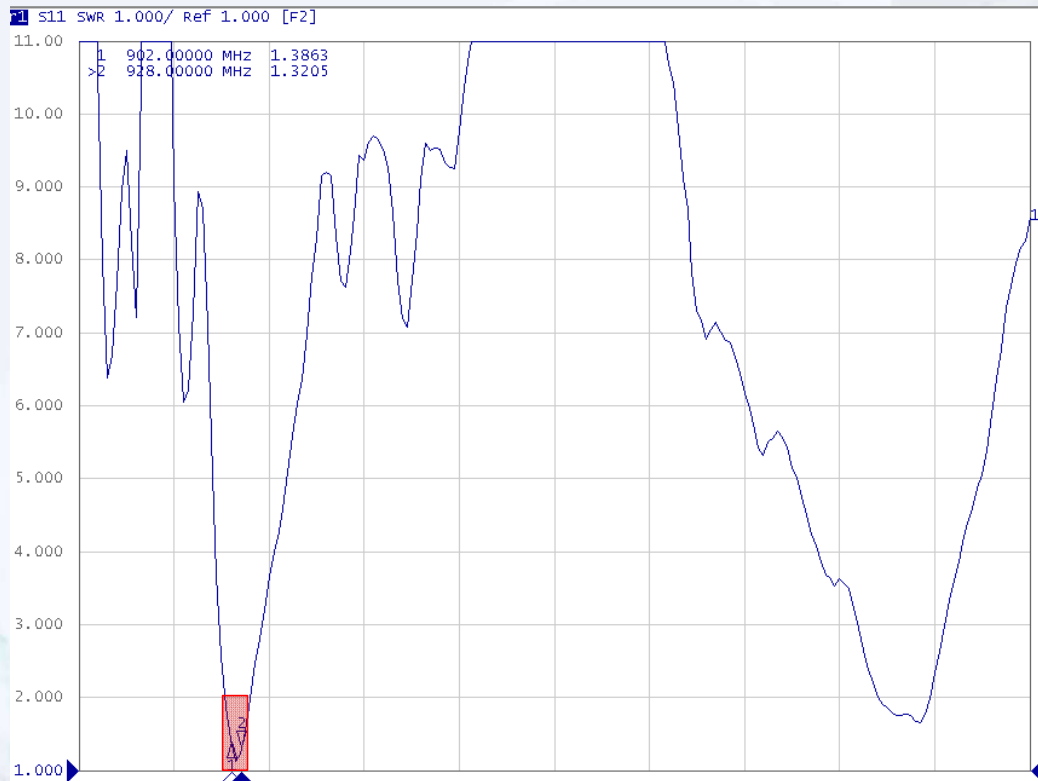
Equipment	Brand	Model	S/N
Network Analyzer	Keysight	E5071C	MY46107744



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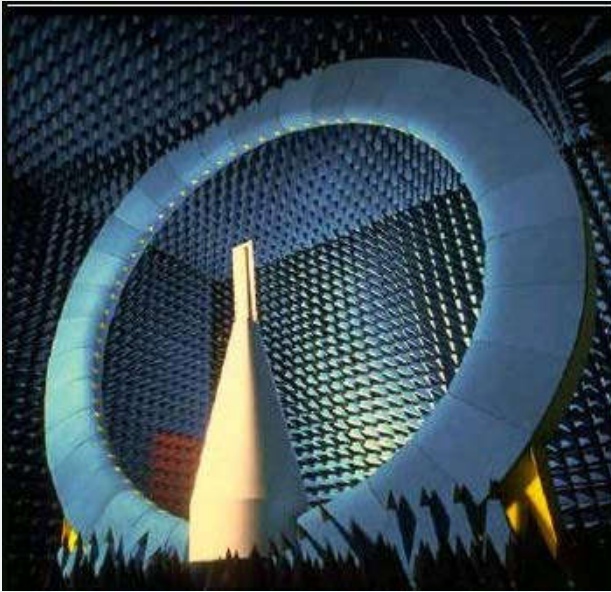
VSWR Results

Antenna (902~928 MHz)

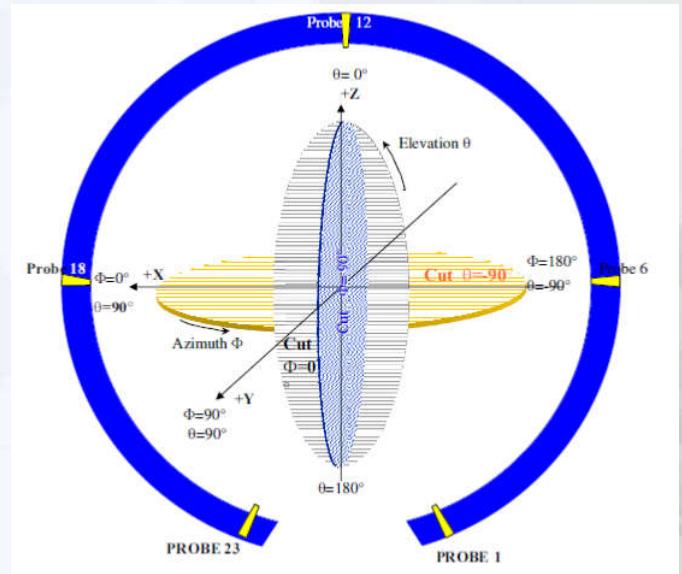


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Chamber Information



Chamber	Brand	Model	Location
SATIMO	SATIMO	SG-24	Suzhou TLSZ

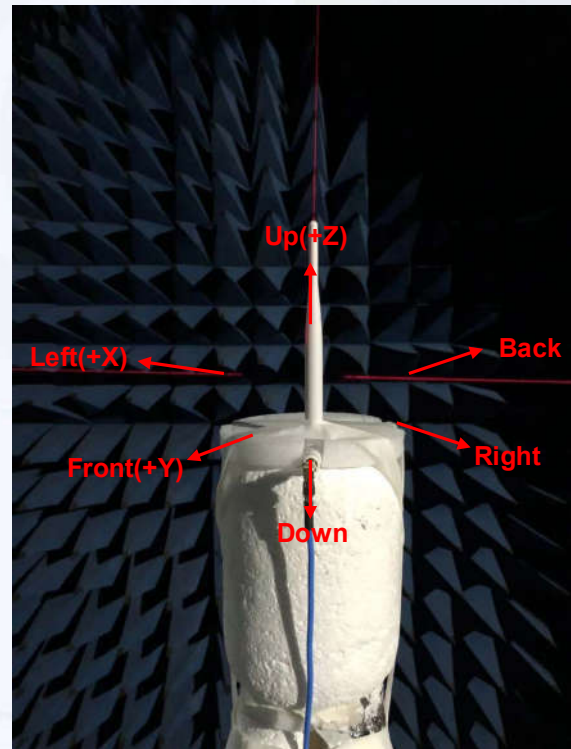
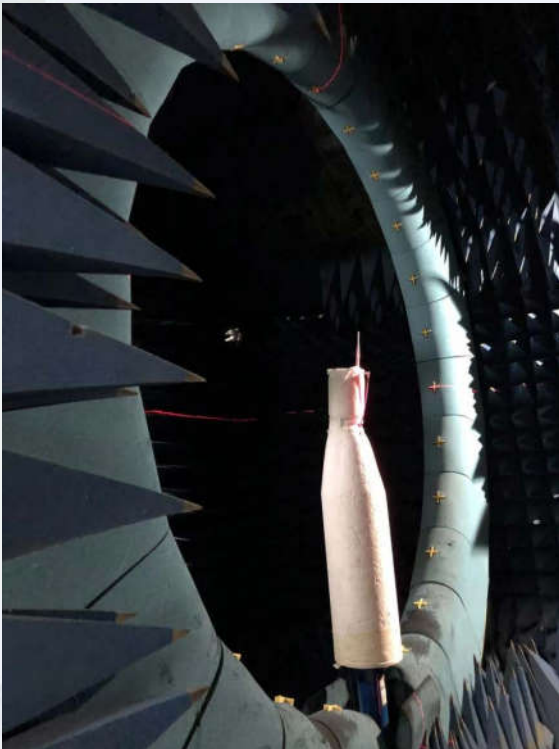


	θ	ϕ
Total angle	175°	360°
How many angle scan one point	5°	5°
Total scan point	36	73



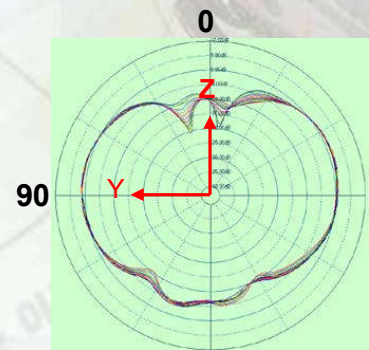
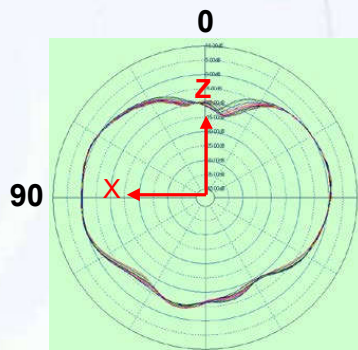
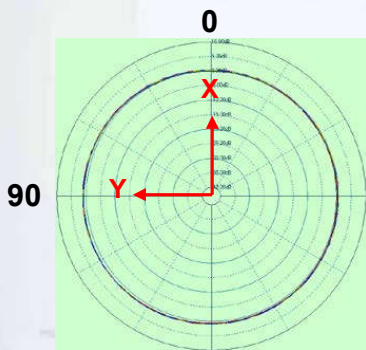
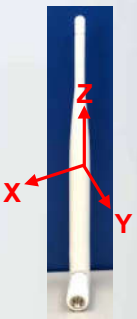
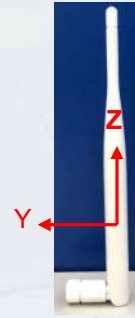
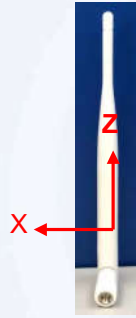
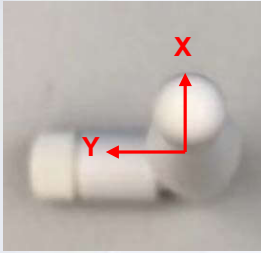
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Test Setup for Radiation Pattern Measurement



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2D Radiation Pattern Results



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Results Summary

VSWR

Frequency	Antenna
902 MHz	1.38
928 MHz	1.32



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Results Summary

Peak gain & Efficiency –Antenna

Frequency	Peak Gain (dBi)	Efficiency (%)
902MHz	1.11	76
904MHz	1.22	76
906MHz	1.30	77
908MHz	1.40	77
910MHz	1.48	78
912MHz	1.54	79
914MHz	1.57	80
916MHz	1.57	80
918MHz	1.57	80
920MHz	1.55	80
922MHz	1.50	80
924MHz	1.43	80
926MHz	1.39	79
928MHz	1.30	79



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