



規格承認書
Specification for Approval

客 戶：永 洋
Customer
品 名：2.4GHz 2 . 3 5dBi ANTENNA WHITE
ANT-WIFI-2.35dBi-C:驛陸,剝皮鍍錫,Cable=160mm,白色 GY111HT467-012

Part name
料 號：GY111HT467-012

Part No.
客戶料號：11320Y11065A1

Customer Part No.
Rev.(版本): 01

客戶承認印 CUSTOMER APPROVED BY		
APPROVAL	CHIEF	SUPERVISOR
Approval No.		
Model		
Part No.		

CHIEF	SALES	R&D	DESIGN
Andy	Teri Tseng	Tammy	River
Date: 2010/10/18		Date: 2010/10/18	
驛陸科技股份有限公司 WIESON TECHNOLOGIES CO., LTD.			



WIESON
TECHNOLOGIES
CO., LTD.

SPECIFICATION LIST

TYPE OF PRODUCT

ANTENNA

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WIESON

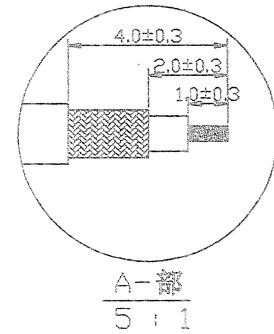
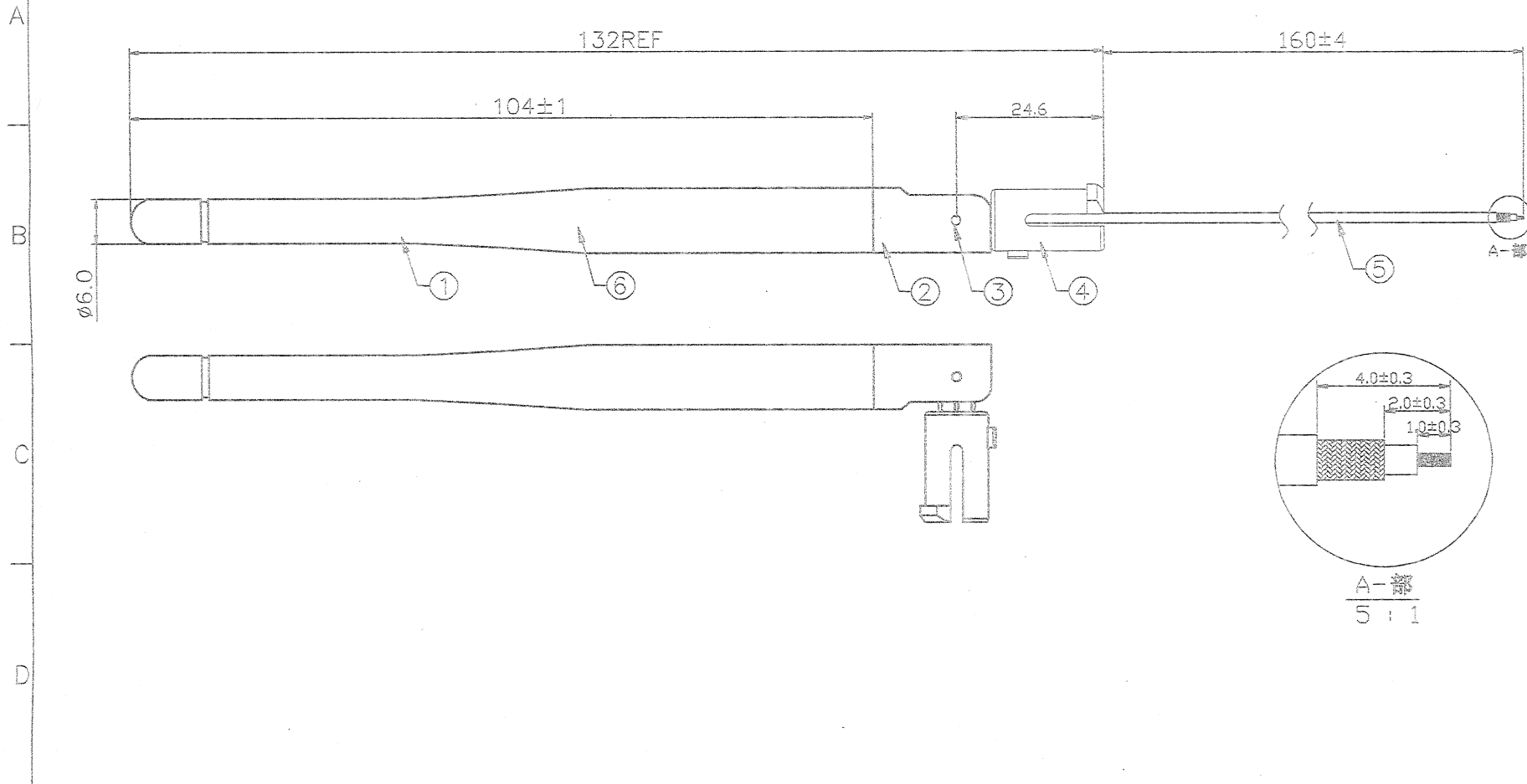


				Approvals	
Rev	Date	Description	Edited by	Prepared :	River
01	2010/10/18	ISSUE	River	Checked :	Tammy
02	2011/02/08	ADD CHAMBER TEST RESULT	Jerry	Approved :	Andy
				Issued No :	
				Sheet :	1 OF 18

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RoHS Compliant

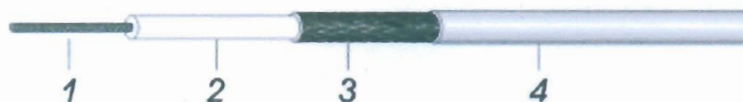
REV	DATE	DESCRIPTION	NAME
01	10.10.08	NEW RELEASE	



⑦									
⑥	G014C-1222012	COPPER TUBE,TINNED PLATED	1	WIESON	WIESON TECHNOLOGIES CO., LTD	PART NO.: GY111HT467-012			
⑤	GMINI-178B01D11SX	MINI COAXIAL CABLE OD:1.13mm,32AWG*1C+BRAID+FEP,BLACK JACKET,	1		TITLE: 2.4G ANTENNA				
④	CMY111-C031402A	BASE-2,PC:WHITE(DS-525)	1						
③	G0102-7801033	FIXED PIN,POM:WHITE	2		DRAWN BY	River(WSC)	DRAWING NO.	GY111HT467-012	
②	BASE-1	BASE-1,PC:WHITE(DS-418)	1		CHECKED BY		DRAWING SIZE	NONE	
①	COVER	COVER,TPE;WHITE(DS-417)	1		APPROVED BY		UNIT		
NO.	ITEM	DESCRIPTION	QTY		SORTING NO.	WSC	PAGE	1	1



SFF-50-0.6 (1.13)



型号 Cable Type	SFF-50-0.6	1.13(Tx)
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结构 Structure

1	内导体 Inner conductor Ømm	Cu-silverplated 7×0.08±0.008
2	绝缘体 Dielectric Ømm	FEP 0.68±0.05
3	编织层 Braid conductor	Tinned copper 16×4/0.05±0.008
4	护套 Jacket Ømm	FEP 1.13±0.08

电性能参数 Electrical Characteristics

电容 Capacitance(pF/m)	98
阻抗 Impedance(ohm)	50±2.0
速率 Velocity(%)	70
弯曲半径 Bending radius(mm)	12
检验电压 Working voltage (KVMS)	1.0
工作温度范围 Operating Temp. (°C)	-55 to 125

衰减(典型值) Attenuation(Typical)(≧dB/m)

频率 Frequency	Cable+接头
1 GHz	2.2
2 GHz	3.1
3 GHz	3.9
4 GHz	4.5
5 GHz	5
6 GHz	5.5

应用 Application

应用于高频传输，特别是发报机、接收器、电脑、无线电设备、视频信号、射频信号传输。同轴电缆保证各式机械、热力、电子设备中能达到GHz高频层次的应用。

Coaxial cables are used in high frequency transmission, especially for transmitters and receivers, computers, radio and TV transmissions. The varied mechanical, thermal and electronic properties of Coaxial cables mean that they can be used up into the GHz levels, as per cable type.

Panlite L-1250Z 100

Category	Unit	Test Method	Condition	L-1250Z 100
Melt volume flow rate	cm ³ /10min	ISO 1133	300deg.C load 1.2kg	8
Density	kg/m ³	ISO 1183	-	1200
Water absorption rate	%	ISO 62	in water 23deg.C 24h	0.2
Light transmission	%	ASTM D 1003	thickness 3mm	88
Refractive index	-	ASTM D 542	-	1.585
Tensile modulus	MPa	ISO 527-1 and ISO 527-2	1mm/min	2400
Tensile stress at yield	MPa		50mm/min	61
Tensile strain at yield	%		50mm/min	6
Nominal tensile strain at break	%		50mm/min	>50
Flexural modulus	MPa	ISO 178	2mm/min	2350
Flexural strength	MPa		2mm/min	93
Charpy impact strength	kJ/m ²	ISO 179	unnotched	NB
			notched	76
Heat deflection temperature	deg.C	ISO 75-1 and ISO 75-2	1.80MPa	129
			0.45MPa	142
Vicat softening temperature	deg.C	ISO 306	50deg.C/h 50N	149
Mold shrinkage	%	In-house method	parallel	0.5-0.7
			vertical	0.5-0.7
Coefficient of linear expansion	×10 ⁻⁴ /k	ISO 11359-2	parallel	0.7
			vertical	0.7
Specific inductive capacity	-	IEC 60250	100Hz	3.1
	-		1MHz	3
Dielectric loss tangent	×10 ⁻⁴	IEC 60250	100Hz	10
	×10 ⁻⁴		1MHz	90
Volume resistivity	ohm-m	IEC 60093	-	>1×10 ¹³
Surface resistivity	ohm	IEC 60093	-	>1×10 ¹⁵
Withstand voltage	MV/m	IEC 60243-1	short time test	30
Tracking resistance	-	IEC 60112	-	250
Flammability	-	UL 94	-	V-2(0.40mm) HB(1.5mm)
Temperature index	deg.C	UL 746B	electric 1.47mmt	125
			impact 1.47mmt	115
			non-impact 1.47mmt	125

* The values listed are specification values, not certified values.

PEEK 材質記明



70-1 HWACHI-DONG, YEOSU-SI, JEOLLANAM-DO. KOREA HTTP://WWW.CHEMWTDE.COM

Fax : (061)680-8070

Tel : (061)680-1669,1594

CERTIFICATE OF ANALYSIS

Customer	YOSON INTERNATIONAL CO.,LTD			
Product/Grade	Lot No.	Quantity(Kg)	Date of Issue	Shipment No.
PBT KEYFLEX BT1063D 25KG BAG	A7F0631	9000.000	2007.11.09	20216745

TYPICAL VALUES

Test Item	Test Method	Remark	Unit	Spec	Results
Low Temp Imp'	ASTM D256	Izod Notched 1/4"	kg cm/cm	Min.3.0	5.9
Melt Flow Index	ASTM D1238	230°C x 2.16kg	g/10min	21.00~27.00	26.29
Shore Hardness	ASTM D2240		shore-D	59.0~64.0	60.9
Yield strength	ASTM D638	250 mm/min	kg/cm ²	180~240	189
Flexural Modulus	ASTM D790	15 mm/min	kg/cm ²	2800~3600	3270
DSC	LSYQAYD032		°C	211.0~217.0	213.4
Yellow Index	ASTM D1925	CIE(C,2°)YI	%	Max.50.00	23.00

WE HEREBY CERTIFY THAT ABOVE-MENTIONED TEST RESULTS ARE CORRECT AND MEET OUR SPECIFICATIONS.

YEOSU SPECIALTY POLYMERS PLANT

Jae Seo Ko

APPROVED BY D.H CHU
Q.A. MANAGER

铁耐克-C® (TENAC-C®) 性能 (ASTM)

项目	测试方法 (ASTM)	单位	等级	标准等级				
				高粘度型	中等粘度型		高流动型	
				3510	4520	5520	7520	8520
比重	D 792	-	-	1.41	1.41	1.41	1.41	1.41
吸湿率	D 570	%	-	0.2	0.2	0.2	0.2	0.2
机械性能	抗拉强度	D 638	MPa	61	61	61	61	61
	延伸率	D 638	%	75	60	61	61	61
	抗挠强度	D 790	MPa	88	88	88	88	88
	抗挠系数	D 790	MPa	2600	2600	2620	2630	2630
	悬臂梁式冲击强度 (带缺口)	D 256	J/m	78	59	59	59	39
	洛氏硬度	D 785	M-scale	78	80	80	80	80
			R-scale	-	115	115	115	115
磨耗率	D 1044	mg/1000次	14	14	14	14	14	
熔流指数	D 1238	gr/10min	2.8	9	15	30	45	
热性能	线性膨胀系数	(TMA)	$\times 10^{-5} \text{cm/cm}^{\circ}\text{C}$	10	10	10	10	10
	热变形温度	D 645	$^{\circ}\text{C}(1.82\text{MPa})$	110	110	110	110	110
			$^{\circ}\text{C}(0.45\text{MPa})$	158	158	158	158	158
阻燃性	(UL 94)	-	HB	HB	HB	HB	HB	
成型收缩率	(融化成方法)	%	1.6-2.0	1.6-2.0	1.6-2.0	1.6-2.0	1.6-2.0	
特点				高抗冲击、高延伸率等级，具有较高的分子量。	标准流动等级，具有最小的注塑模垢。	与4520类似，但具有较高的流动性和最小的注塑模垢。	高流动等级，具有最小的注塑模垢。	超高流动等级，具有最小的注塑模垢。


项目	测试方法 (ASTM)	单位	等级	HC 系列		高循环等级	耐气候性等级			
				中等粘度型	高流动型	高流动型	高粘度型	中等粘度型		高流动型
				HC450	HC750	7554	3513	4513	4563	7513
比重	D 792	-	-	1.41	1.41	1.41	1.41	1.41	1.41	
吸湿率	D 570	%	-	0.2	0.2	0.2	0.2	0.2	0.2	
机械性能	抗拉强度	D 638	MPa	65	65	60	60	60	60	
	延伸率	D 638	%	60	50	50	75	55	55	
	抗挠强度	D 790	MPa	95	98	90	88	88	88	
	抗挠系数	D 790	MPa	2890	2990	2630	2600	2600	2600	
	悬臂梁式冲击强度 (带缺口)	D 256	J/m	69	59	39	69	59	59	
	洛氏硬度	D 785	M-scale	-	-	80	78	80	80	
			R-scale	-	-	115	-	115	115	
磨耗率	D 1044	mg/1000times	-	-	14	14	14	14		
熔流指数	D 1238	gr/10min	8	30	30	3	9	9		
热性能	线性膨胀系数	(TMA)	$\times 10^{-5} \text{cm/cm}^{\circ}\text{C}$	-	-	10	10	10	10	
	热变形温度	D 645	$^{\circ}\text{C}(1.82\text{MPa})$	124	124	110	110	110	110	
			$^{\circ}\text{C}(0.45\text{MPa})$	163	163	158	158	158	158	
阻燃性	(UL 94)	-	HB	HB	HB	-	-	-		
成型收缩率	(融化成方法)	%	1.6-2.0	1.6-2.0	1.5-1.9	1.6-2.0	1.6-2.0	1.6-2.0		
特点				革新共聚物，对标准等级的物理性能有所增强。	高流动等级，具有录像机卷轴所需性能。	耐气候性等级，含有紫外线吸收剂和其他添加剂，因而具有良好的耐气候性。				

- 请注意，所有的数据和数值都是用所示试验方法获得的典型结果，只能作为等级选择的基本参考，而不能作为任何形式的产品规格或保证。如有更改，恕不另行通知。
- 处理和使用之前必须阅读相关的MSDS，并一定要遵守重要注意事项。
- 铁耐克或铁耐克-C用于接触食品的用途之前，应当与旭化成联系。



南铜实业有限公司 产品质量合格证书

编号:12-28

产品名称		铅黄铜		牌号	Hpb59-1		规格		状态	合格
化 学 成 份 % (重量)										
铜 (Cu)	铁 (Fe)	锡 (Sn)	镍 (Ni)	锑 (Sb)	铅 (Pb)	铬 (Cr)	镉 (Cd)	汞 (Hg)	铝 (Al)	锌 (Zn)
58.5~59.0	≦0.30	≦0.20	≦0.15		3.0~3.9				≦0.15	余量
力 学 性 能							备 注			
抗拉强度 N/mm ²		延伸率 %		硬度值 HRB						
567.5		8		78						

检验员:肖芬芬

质检员:阳六容

技术质量部:曾国



I. SUMMARY :

This report to account for the measurement setup and result of the Antenna.

1. The measurement setup includes s-parameter, pattern, and gain measurement.
2. The measured data for Antenna are presented and analysis.

II. S-PARAMETER MEASUREMENT :

A. Reflection coefficient :

(a) Instrument : Network Analyzer.

(b) Setup :

- (1) Calibrate the Network Analyzer by one port calibration using O.S.L. calibration kits.
- (2) Connect the antenna under test to the Network Analyzer.
- (3) Measure the S11(reflection coefficient) shown in Fig. 1.
- (4) Generally, the S11 is less than -10dB to ensure the 90% power into antenna and only less than 10% power back to system.

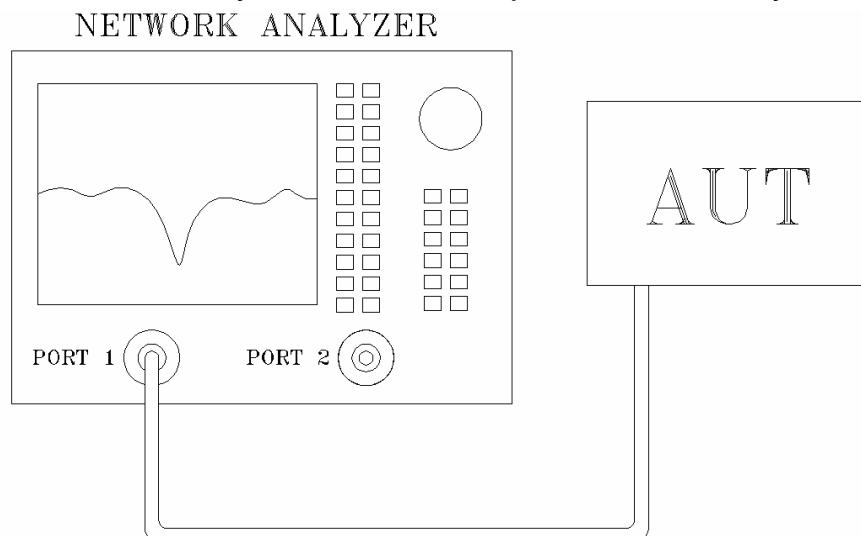


Fig.1 Antenna measured in Network Analyzer

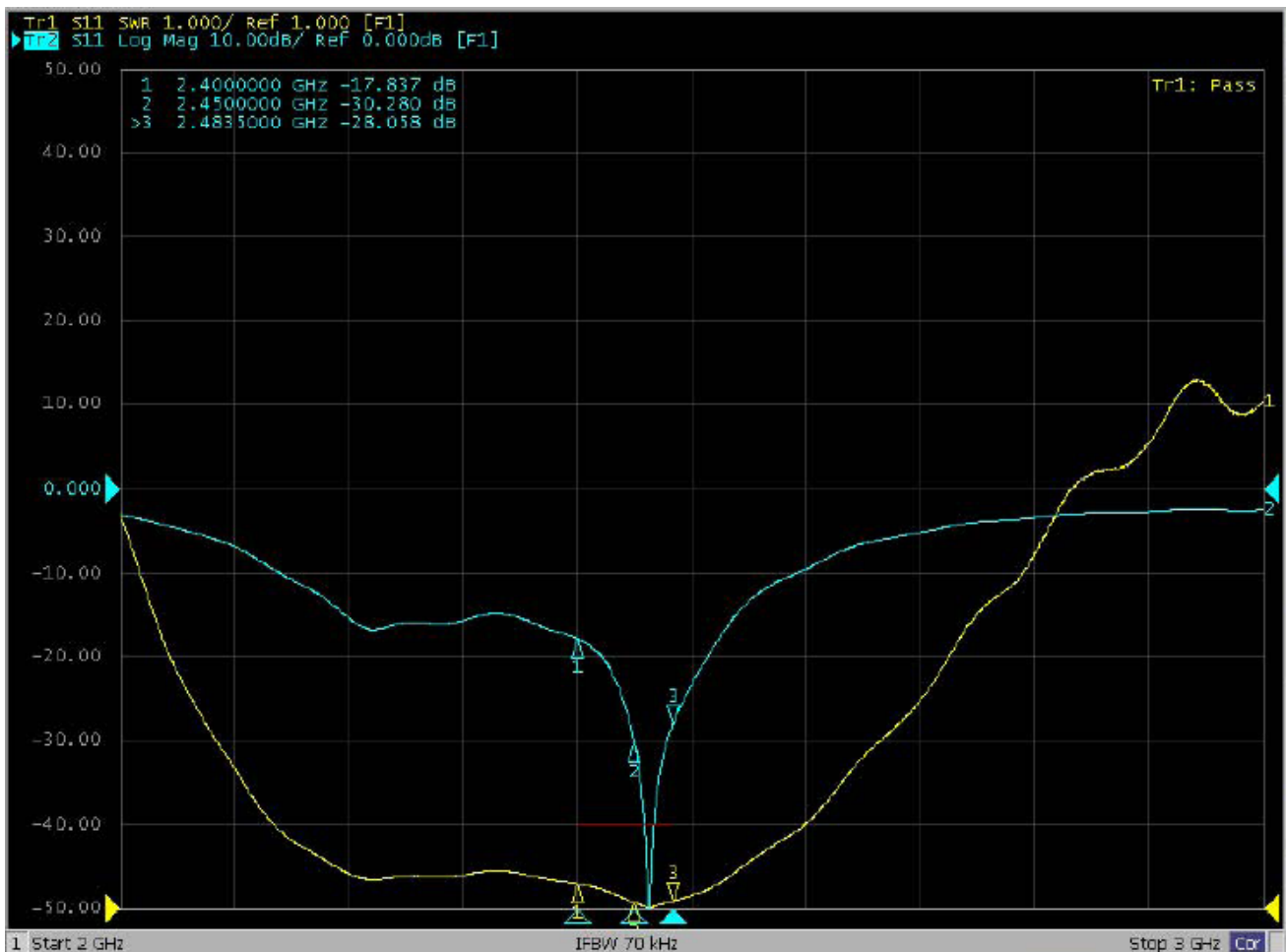


III. S-PARAMETER TEST RESULT :

Antenna Retune Loss

(a) Antenna :

Sample \ Frequency	2.4GHz	2.45GHz	2.4835GHz
1	-17.837dB	-30.28dB	-28.058dB



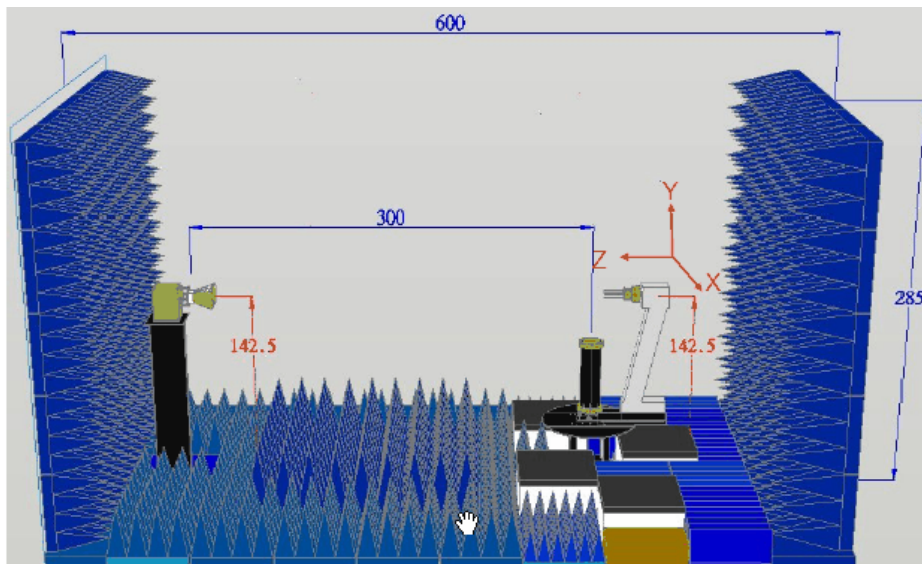


IV. THE TEST INFORMATION IN ANECHOIC CHAMBER

A. Scope

This statement of work defines the requirements of a far-field antenna measurement range, which includes

- (1) One 325 cm (W) x 285 cm (H) x 640 cm (L) Antenna Measurement Anechoic Chamber, detailed requirements refer section 2.0 .
- (2) One Far-field Antenna Measurement System with spinning linear CP measurement capabilities, detailed requirement refer section 3.0 .
- (3) One broad-band transmitted antenna, detailed requirements refer section 8.0 .
- (4) Three NRL-4433 standard gain antennas, detailed requirements refer section 9.0 .



B. Antenna Measurement Anechoic Chamber

Fully anechoic chamber with dimension 325 cm in width, 285 cm in height and 640 cm in length. The quiet zone of this Chamber shall be greater than



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MEASUREMENT AND PERFORMANCE

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70 cm @ 0.9 GHz, 50 cm @1.8 GHz, 44 cm @2.4 GHz, 28 cm @5.8 GHz, 16 cm @18 GHz. Contractor should be aware of this anechoic chamber is going to be used for performing far-field antenna measurement.

C. Electrical specifications

Frequency Range: 800 MHz to 18 GHz,

Quiet zone size: >70 cm @ 0.9 GHz, >50 cm @1.8 GHz, >44 cm @2.4 GHz,

>28 cm @5.8 GHz, >16 cm @18 GHz.

Quiet zone ripple: < +/- 0.5 dB @1.5~2.4 GHz, < +/- 0.25 dB @2.4~18GHz

Field Probing Frequency	Peak-to-Peak Amplitude Ripple (within specified Quiet Zone Area)	Quiet Zone Size (cm)	Compliant
0.9 GHz	< 0.8 dB	70	Yes
1.575 GHz	< 0.6 dB	55	Yes
1.8 GHz	< 0.5 dB	50	Yes
2.45 GHz	< 0.4 dB	44	Yes
4.8 GHz	< 0.3 dB	31	Yes
5.8 GHz	< 0.3 dB	28	Yes



D. Absorbers

We shall design and install proper absorbers on the inner walls of the chamber to guarantee the electrical specifications . However, the absorbers height shall be no less than 24" which enables the space in the chamber to be around 203 cm (W) x 163 cm (H) x 533 cm (L). All the absorber used shall meet NRL-8093 fire retardant regulations

E. Far-field Antenna Measurement System

We shall supply all the hardware and software which are capable of characterizing antenna radiation patterns from 30 KHz to 6 GHz or 18GHz using the existed Agilent 5230A PNA-L or Agilent 8753ES Vector Network Analyzer. The system shall be able to automatically measure and plot single axis amplitude and phase antenna patterns in either Cartesian or polar formats.

F. Far-field measurement software

The software consists of the control or data acquisition software and the data plotting software.

(1) The data acquisition software shall at least be capable of the following functions:

- *measuring single frequency per cut - single axis (azimuth); system can automatically switch frequency at the end of a scan.
- *measuring data in Uni-direction or bi-direction
- *measuring data at least with azimuth 360 degrees. (+/- 180 degrees or 0-360 degrees)
- *real time plot in Cartesian or polar format
- *screen shows real time angle position



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- *system automatically calculates S/N ratio level based on measured signal fluctuation
- *function to set positioner zero position
- *operator can set data taking velocity and data sampling interval
- *entry to allow positioner offset to any angle

(2) The data plotting software shall at least be capable of the following functions:

- *Editing plot data
- *plotting data in Cartesian, Polar or delimited ASCII output with header information
- *plotting data in linear or dB scales
- *normalizing data to peak (dB), standard gain reference (dBi), or no normalization
- *overlying data, (drag and drop capability is preferable)
- *outputting data to any Windows supported printers

G. Broadband Transmitted antenna

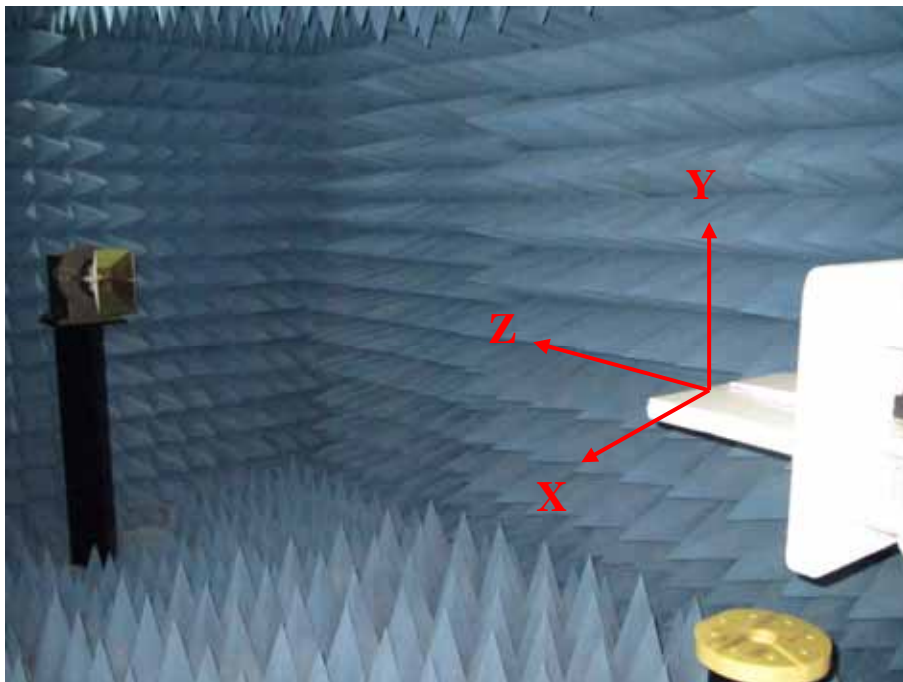
We shall provide a linear-polarized broadband antenna with the specifications better than those listed hereafter in this article, Frequency: 1-18 GHz, Gain: >12 dBi @10 GHz, VSWR:<2,0:1, Front to Back Ratio > 20 dB

H. NRL4433 Standard Gain Horns

We shall provide one WR-430, WR-187 one DRH0118 standard gain horns which meets the specifications of NRL-4433 report. The operating frequency of WR-430 standard gain horn is from 1.7 to 2.6 GHz, and WR-187 from 3.95 to 5.85 GHz, and DRH-0118 from 0.8 to 18GHz. We shall also provide NRL-4433 theoretical gain curves and tables for the standard gain horns.



V. CHAMBER TEST PICTURE





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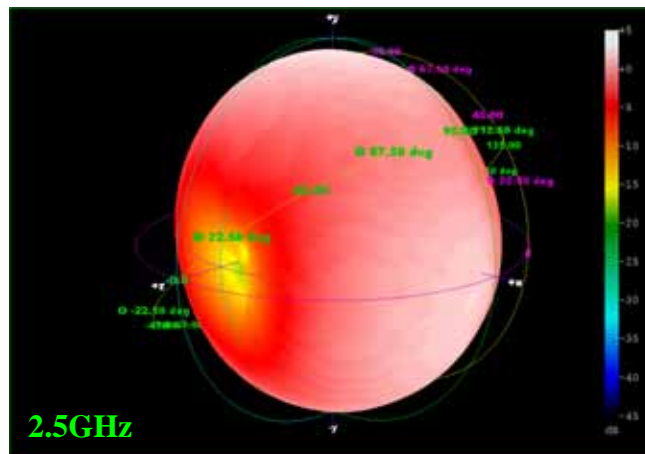
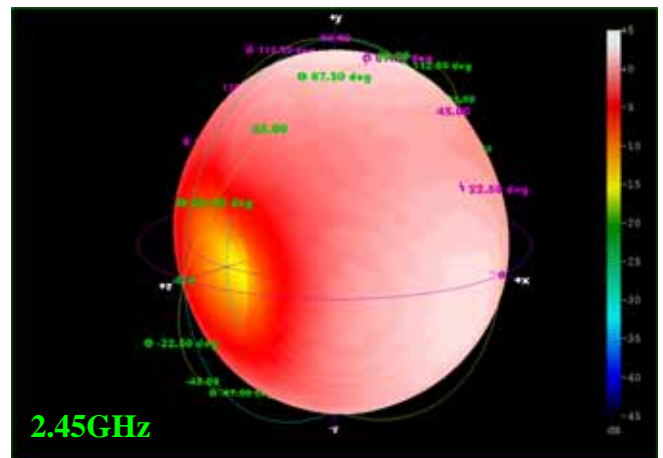
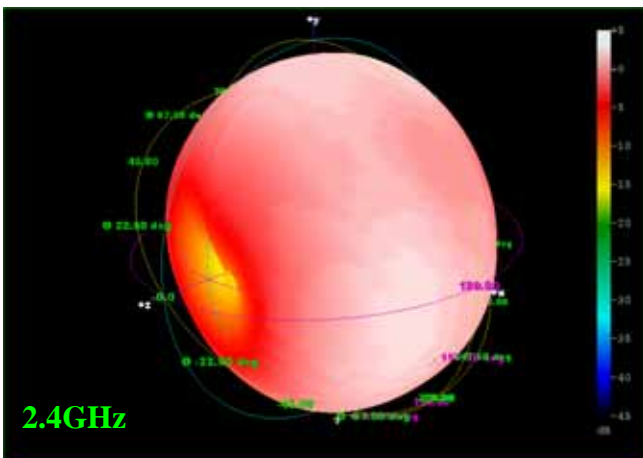
MEASUREMENT AND PERFORMANCE

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VI. CHAMBER TEST RESULT

Frequency (GHz)	2.4	2.45	2.5
Peak Gain (dBi)	1.79	2.35	2.24
Avg. Gain (dBi)	-1.18	-1.03	-1.45
Efficiency(%)	76	79	72

Antenna Pattern



Advance Multimedia Internet Technology Inc.

限用物質承諾保證書

Guarantee of Hazardous Substances

聯陸科技股份有限公司

供應商名稱 (Supplier's Name): WIESON TECHNOLOGIES CO., LTD

本公司特此保證：保證供應給永洋科技股份有限公司的產品滿足以下列出的有害物質限值的要求，並於製程中不使用該項物質：

We warrant that all the products supplied to Advance Multimedia Internet Technology Inc. satisfy the following threshold requirements concerning hazardous substances, and the use of these substances used in the production of supplied products are in compliance with such threshold requirements:

有害物質名稱	Name of hazardous substance	永洋針對ROHS規定 限定值 (limit for RoHS) ppm (mg/kg)	SONY SS-00259限 定值 (limit for SONY -00259) ppm (mg/kg)
鎘及其混合物	Cadmium and its compounds (Cd)	80 Solder:75ppm	Plastics/Wire 5ppm Solder:20ppm
鉛及其混合物	Lead and its compounds (Pb)	800 *鋼(steel) 3500 *鋁(aluminum) 4000 *銅(copper) 4%	Plastic/Painting/W ire 100ppm Solder:1000ppm
汞及其混合物	Mercury and its compounds (Hg)	800	0
六價鉻及其混合物	Chromium VI and its compounds (Cr ⁺⁶)	800	0
多溴聯苯(PBB)	Polybrominated Biphenyls (PBB)	800	0
多溴二苯醚	Polybromodiphenyl ether (PBDE)	800	0
鎘+鉛+汞+六價鉻	Cd+ Pb+ Hg+ Cr ⁺⁶	Packaging: 80	Packaging: 100

所有乾電池及蓄電池之產品應符合以下規定：

汞及其混合物	Mercury and its compounds (Hg)	5PPM 25mg/cell	5PPM 1 PPM (供中國用的 錳電池及鹼錳電池)
鎘及其混合物	Cadmium and its compounds (Cd)	250PPM	0
鉛及其混合物	Lead and its compounds (Pb)	4,000PPM	4,000PPM

所有樣品必須依照RoHS Homogenous的定義拆解測試

Entire Specimen shall be follow the destruct testing of RoHS Homogenous.

BUREAU VERITAS
Certification



Certification

Awarded to

WIESON TECHNOLOGIES (DONG GUAN) CO., LTD.

HUAN GANG, HOUIE TOWN, DONGGUAN CITY, GUANGDONG, P. R.CHINA.

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

STANDARD

ISO 14001 : 2004

SCOPE OF SUPPLY

DESIGNING, MANUFACTURING AND SALES OF ELECTRONIC AND AUTOMOTIVE CONNECTORS, CABLES, WIRE HARNESS, FIBER PASSIVE COMPONENTS, RF AND ANTENNA PRODUCTS, PLASTIC INJECTION, STAMPING PARTS, TOOLING MOLD.

Original Approval Date: **30 DECEMBER 2003**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate is valid until: **18 SEPTEMBER 2009**

To check this certificate validity please call: **852 - 2815 2092**

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation

Certificate Number: 271022 *Date:* 14 FEBRUARY 2008

Fanny Zou
South District Manager



For Bureau Veritas Certification
(Holding) S.A. using the
accreditation certificate number
008

008

MANAGING OFFICE ADDRESS:
Bureau Veritas Certification (Holding) S.A.
2nd Floor, Tower Bridge Court
224-226 Tower Bridge Road
London SE1 2TX

ISSUING OFFICE ADDRESS:
Bureau Veritas Certification (HK) Limited
Rm 23- 25,10/F., Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay, Kowloon,
Hong Kong



BUREAU VERITAS
Certification



Certification

Awarded to

WIESON TECHNOLOGIES (DONG GUAN) CO., LTD.

HUAN GANG, HOUIE TOWN, DONGGUAN CITY, GUANGDONG, P.R. CHINA.

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

STANDARD

ISO 9001 : 2008

SCOPE OF SUPPLY

DESIGNING, MANUFACTURING AND SALES OF ELECTRONIC AND AUTOMOTIVE CONNECTORS, CABLES, WIRE HARNESS, FIBER PASSIVE COMPONENTS, RF AND ANTENNA PRODUCTS, CAR AUDIO AND VIDEO, PLASTIC INJECTION, STAMPING PARTS, TOOLING MOLD, LED LIGHTING, HOME STERO.

Original Approval Date: **20 MARCH 2006**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate is valid until: **23 DECEMBER 2011**

To check this certificate validity please call (+86 20 8130 0800)

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation

Certificate Number: 272375 Date : 22 JANUARY 2009

Fanny Zou
South District Manager

