



CyberTAN 建漢科技股份有限公司



模造品/零組件承認申請表

文管編號: RBS9510115

- GP RoHS (單一物料 系列承認) 一般物料 計劃負責人: 賴淑珍
 NEW APPROVAL RE-SUBMIT: SECOND SOURCE: (原因: _____)
 承認單位: 研發處 工程設計管理部
 業務/產品管理部 產品工程部 其他: _____ 部

*原料號	2365-0001015R	*新料號	
品名	ROHS ANTENNA C120-510239-A 2.4GHZ-2.5GHZ 1.8DBI WITH 1.13 CABLE L=120mm+/- 3mm COLOR=BLACK WHAYU	品名	
製造商	譚裕 DA149	製造商	
原供應商	譚裕 DA149	送樣廠商	
型號	C120-510239-A	型號	
適用機種	WRT54G V8(WG414-P-LS)	*確認適用機種	
送樣順序	驗證項目	會簽意見	
一. <input checked="" type="checkbox"/> 研發處 <input type="checkbox"/> 業務/產品管理部 <input type="checkbox"/> 產品工程部	1.外觀.尺寸 OK 2. 3. 重量: 7.33 g 適用範圍	◎判定: <input checked="" type="checkbox"/> 合格 <input type="checkbox"/> 不合格 <input type="checkbox"/> 條件性的承認 ◎說明: <input type="checkbox"/> 是否需製造部試裝或會簽 <input type="checkbox"/> 是否需研發原計劃工程師會簽 <input type="checkbox"/> 是否需業務/產品管理部會簽 簽章: 賴淑珍	
二. 會簽單位 <input type="checkbox"/> 產品工程部 <input type="checkbox"/> 研發原計劃人 <input type="checkbox"/> 業務/產品	1. 2. 3. 適用範圍	◎判定: <input checked="" type="checkbox"/> 合格 <input type="checkbox"/> 不合格 <input type="checkbox"/> 其他 ◎說明: 3份測試圖 主管: 張以輝 簽章: 張以輝	
三. 送樣單位 ● 提供樣品日期 10/17/2006 ● 索取樣品數量: 10 PCS ● 索取量試數量: 10 PCS 主管: 岳立洋 填表人: 賴淑珍		<input checked="" type="checkbox"/> 研發處 <input checked="" type="checkbox"/> 合格 <input type="checkbox"/> 不合格 <input type="checkbox"/> 產品工程部 <input type="checkbox"/> 合格 <input type="checkbox"/> 不合格 <input type="checkbox"/> 業務/產品管理部 <input type="checkbox"/> 合格 <input type="checkbox"/> 不合格 主管: 岳立洋 10/23	
代用料備註欄	代用機種		

- 1.* 由研發單位填寫
2. 送承認物料須為合格供應商。
3. 送樣流程: 1st: 研發處/業務/產品管理部→D.C.C.
2nd & 替代料: 採購部 →產品工程部/研發處/業務/產品管理部/→D.C.C
4. 承認書分發單位: DCC
5. 環保(GP/RoHS)零組件需檢附零件承認書與環保(GP/RoHS)相關文件 Hard copy 與電子檔各一份。
6. 環保保證書(共 2 頁)需為供應商簽名蓋章之正本。



WHA YU INDUSTRIAL CO., LTD. (HEAD OFFICE)
 DONGGUAN AEON TECH CO.,LTD.(CHINA)
 TAI HWA ELECTRONIC CO., LTD.(CHINA)
 SHANGHAI HUA YU ELECTRONIC CO., LTD.(CHINA)
 SU ZHOU AEON TECH CO., LTD. (CHINA)

SPECIFICATION FOR APPROVAL

CUSTOMER: 建漢科技股份有限公司

PART NAME: RF Antenna Cable Assembly

PART NO.:

REVISION:

W. Y. P/NO.: C120-510239-A

REV.: XI

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :		
DATE :	10/03-	

WHA YU GROUP

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

謙裕實業股份有限公司

Address: No. 326, Sec. 2, Kung Tao 5 Road, Hsin Chu City, Taiwan, R.O.C.

Tel: +886-3-5714225(REP.) Fax: + 886-3-5713853 · + 886-3-5723600

DONGGUAN AEON TECH CO.,LTD.(CHINA)

東莞台霖電子通訊有限公司

Address: Lakeside Industrial Park, Da Ling Shan Town, Dong Guan City, Guangdong, China

Tel: + 86-769-85655858 Fax: + 86-769-8565525

TAI HWA ELECTRONIC FACTORY

台樺電業製品廠

Address: Pak Ho District, Hou Street Town, Dong Guan City, Guangdong, China

Tel: + 86-769-85599375 · + 86-769-85912375 Fax: + 86-769-85599376

HUA HONG INTERNATIONAL LTD.

華弘國際有限公司

Address: Rm.1103A, President Commercial Centre, 608 Nathan Road, Mong Kok, Kowloon, Hong Kong

Tel: + 86-852-27712210 Fax: + 86-852-23843747

SHANGHAI HUA YU ELECTRONIC CO., LTD. (CHINA)

上海謙裕電子有限公司

Address: 3586, Wai Qing Song Road, Qing Pu County, Shanghai China

Tel: + 86-21-59741348 · + 86-21-59744101-4 Fax: + 86-21-59741347

SU ZHOU AEON TECH CO., LTD. (CHINA)

蘇州華廣電通有限公司

Address: Limin North Road, LiLi Town, LiLi Industrial Park, LinHu Economic Zone

Wujiang City, Jiangsu Province, China

Tel: + 86-512-63627980 Fax: + 86-512-63627981

Contents

<i>Item</i>	<i>Description</i>	<i>Page</i>
1.	天線規格表 1
2.	成品圖 2
3.	測試報告 3~8
4.	Cable 規格 9~11
5.	SGS 測試 12~41
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RF Antenna Cable Assembly

Specification

1. Electrical Properties :

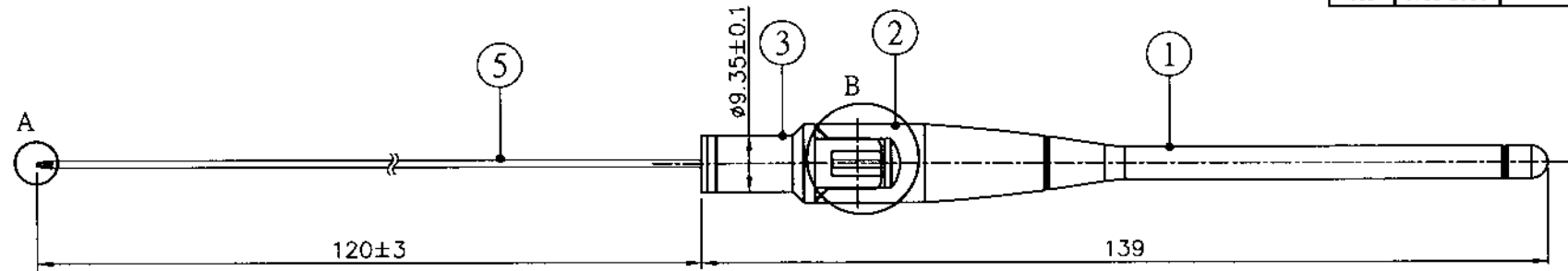
- 1.1 Frequency Range.....2.4GHz ~ 2.5GHz
- 1.2 Impedance 50Ω Nominal
- 1.3 VSWR1.92 Max.
- 1.4 Return Loss.....-10 dB Maximum
- 1.5 Radiation Omni-directional
- 1.6 Gain(peak).....2 dBi
- 1.7 Cable Loss.....0.65dB
- 1.8 Polarization.....Linear Vertical
- 1.9 Admitted Power..... 1W

2. Physical Properties :

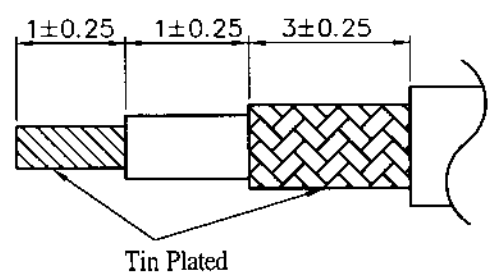
- 2.1 Cable.....φ1.13 Coaxial Cable
- 2.2 Antenna Cover.....TPE
- 2.3 Antenna Base..... PC
- 2.4 Operating Temp.-20°C ~ +65°C
- 2.5 Storage Temp.-30°C ~ +75°C
- 2.6 ColorBlack

CG-

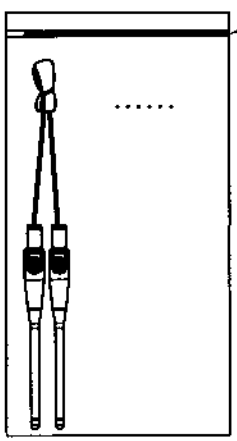
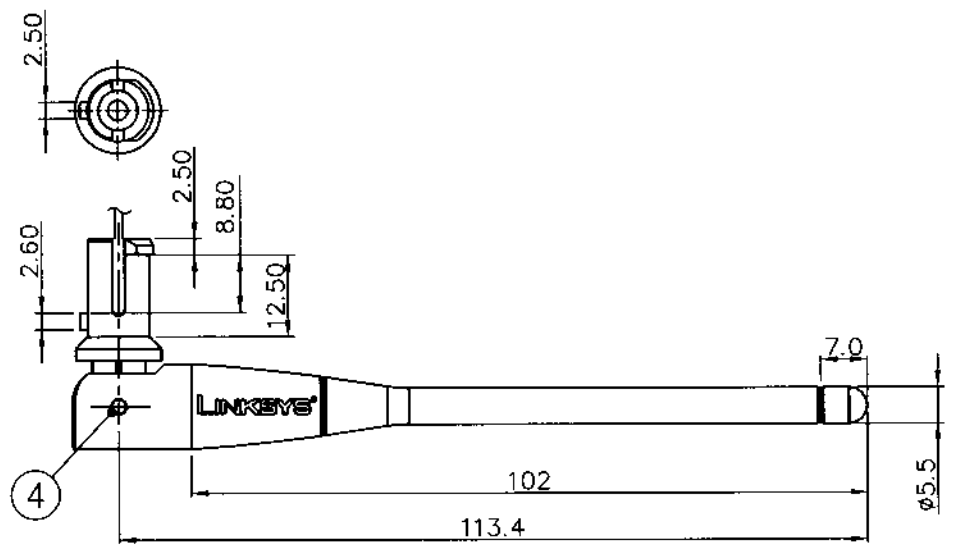
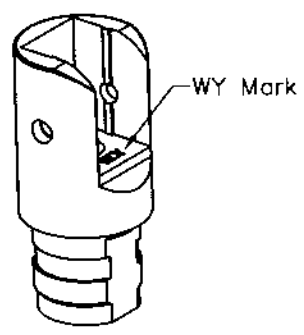
REV	DATE	DESCRIPTION
X1	9/18-2006	New Issue



Detail A



Detail B



PE Bag
Shrink Line

Note : 成品淨重7.33g

NO	DESCRIPTION	QTY	REMARK
5	Cable	1	∅1.13 Coaxial Cable
4	Rivet	2	POM ; Black
3	Bottom Base	1	PC ; Color : Black
2	Upper Base	1	PC ; Color : Black
1	Antenna Cap	1	TPE ; Color : Black

CUSTOMER'S SINGATURE

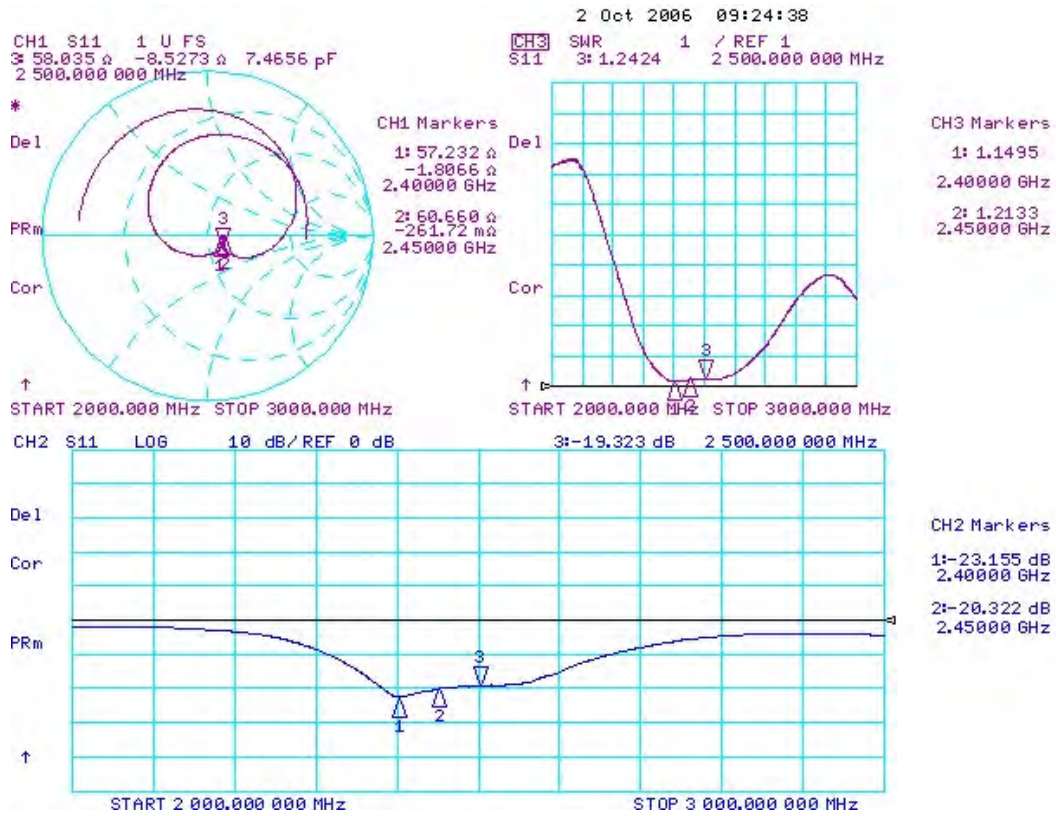
XXX	±2.0	APPROVED	9/10
XX	±1.0	CHECKED	9/10
X	±0.5	DRAWING	程淑娟
.X	±0.2		
.XX	±0.1		

CUSTOMER: 建漢科技股份有限公司		
PART NO :		
PARTNAME: RF Antenna Cable Assembly		
W.Y P/NO : C120-510239-A		
REV	UNIT	FILE :
X1	m/m	SHEET : 1/1

Wha Yu INDUSTRIAL CO.,LTD.
譚裕實業股份有限公司
 THIS DRAWING, AND ITS INHERANT DESIGN CONCEPTS, ARE THE PROPERTY OF WHA YU AND AS SUCH MAY NOT BE COPIED, REPRODUCED, OR GIVEN TO THIRD PARTIES WITHOUT THE WRITTEN CONSENT OF WHA YU.

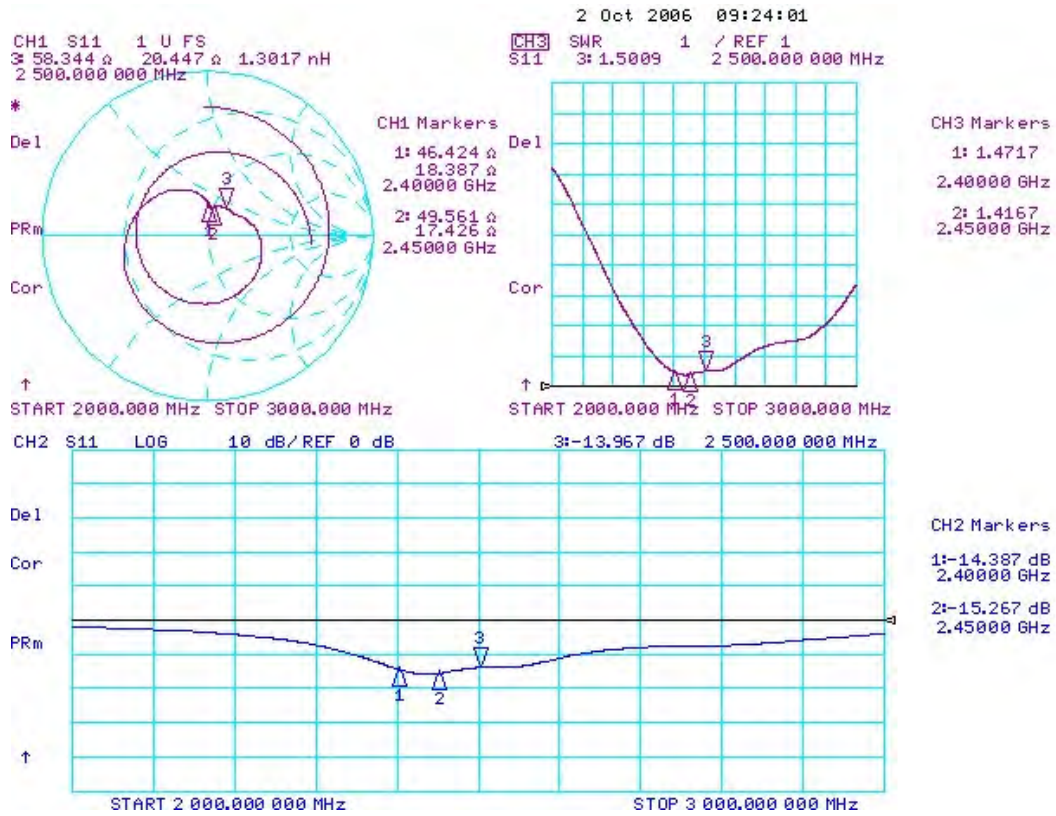
RF Antenna Assembly
P/NO :C120-510239-A SPEC : 2.4GHz

1. 單獨天線電測



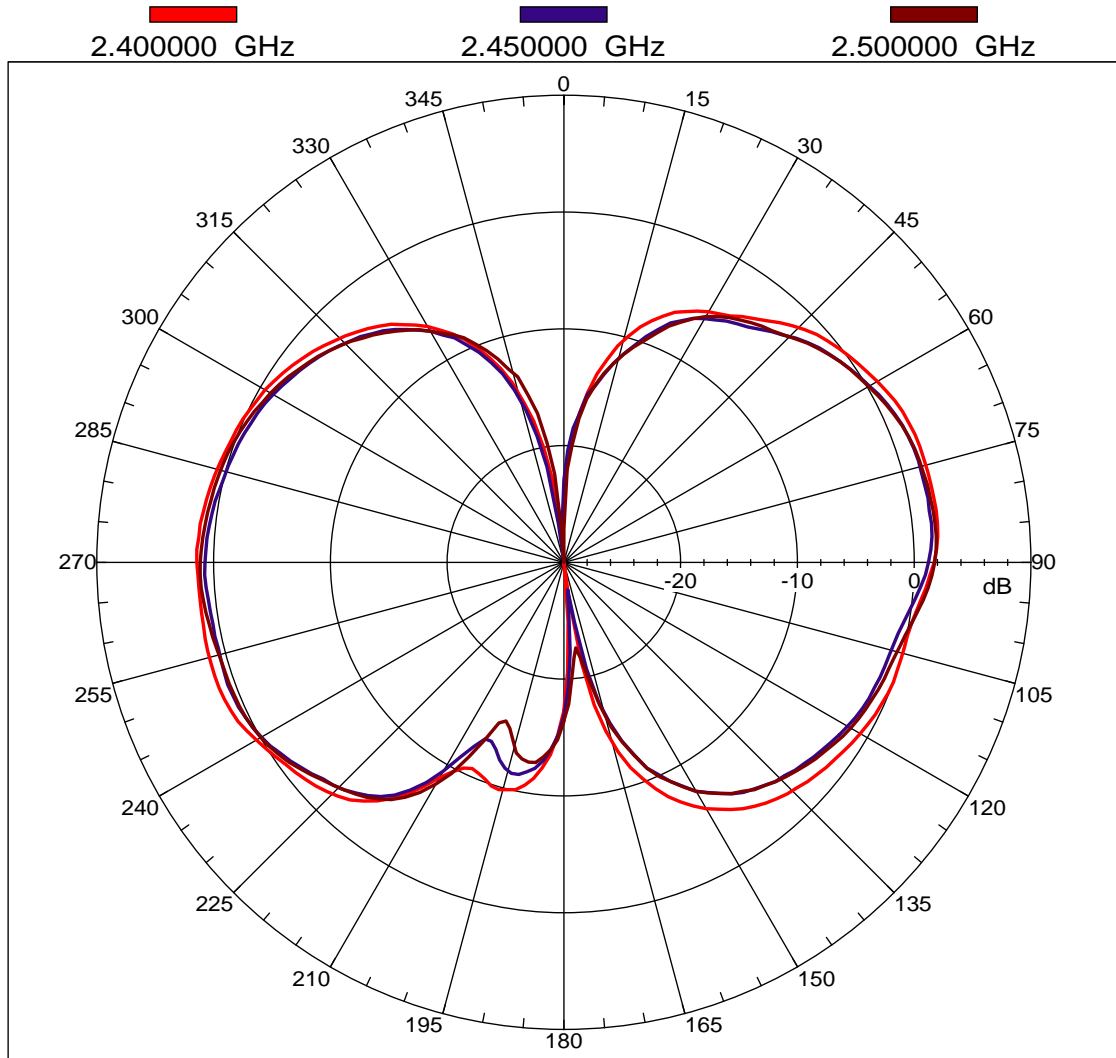
RF Antenna Assembly
P/NO :C120-510239-A SPEC : 2.4GHz

2.搭配 PCB 電測



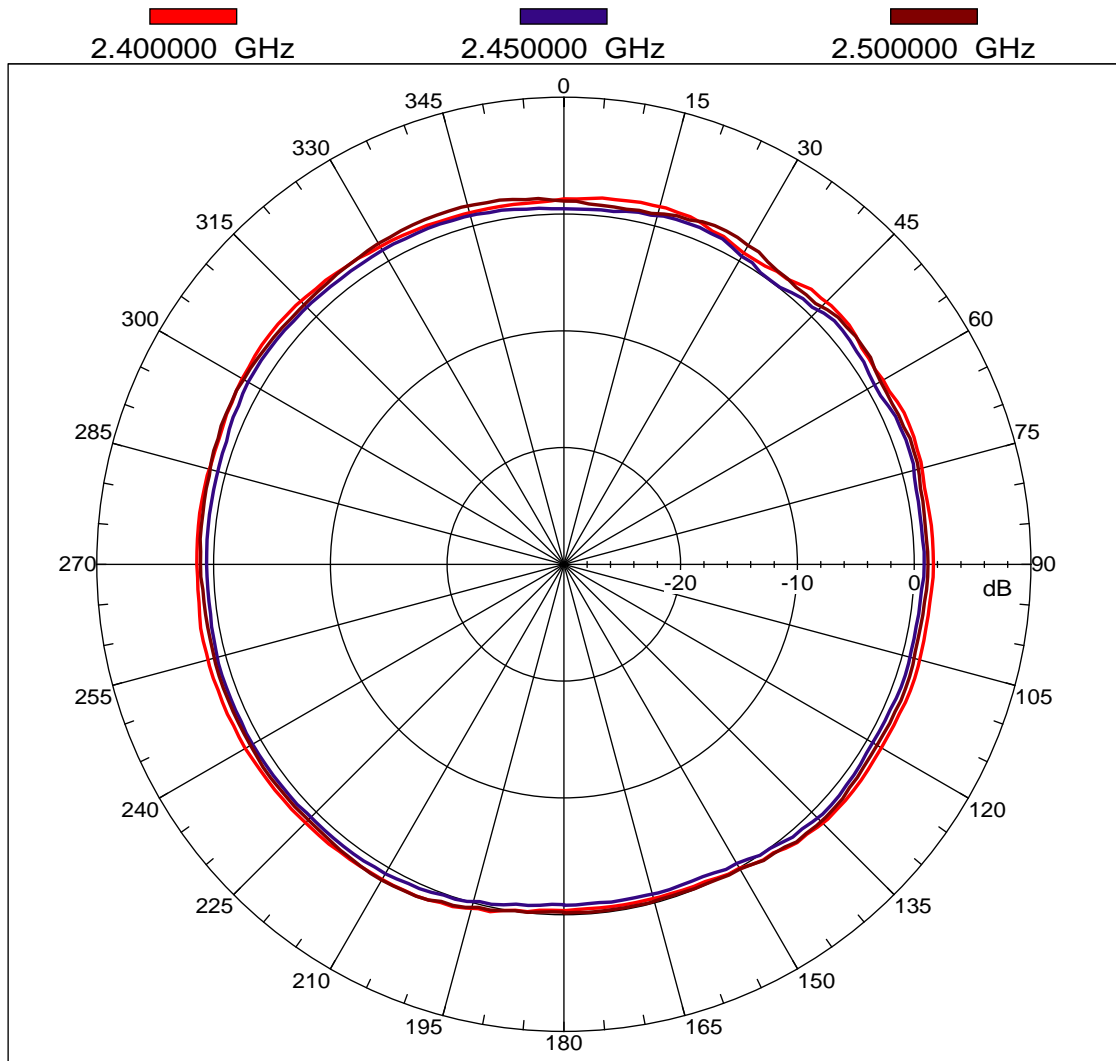
1. 單獨天線場型

Far-field amplitude of C120-510239-A-Free-H.nsi



2006/10/3

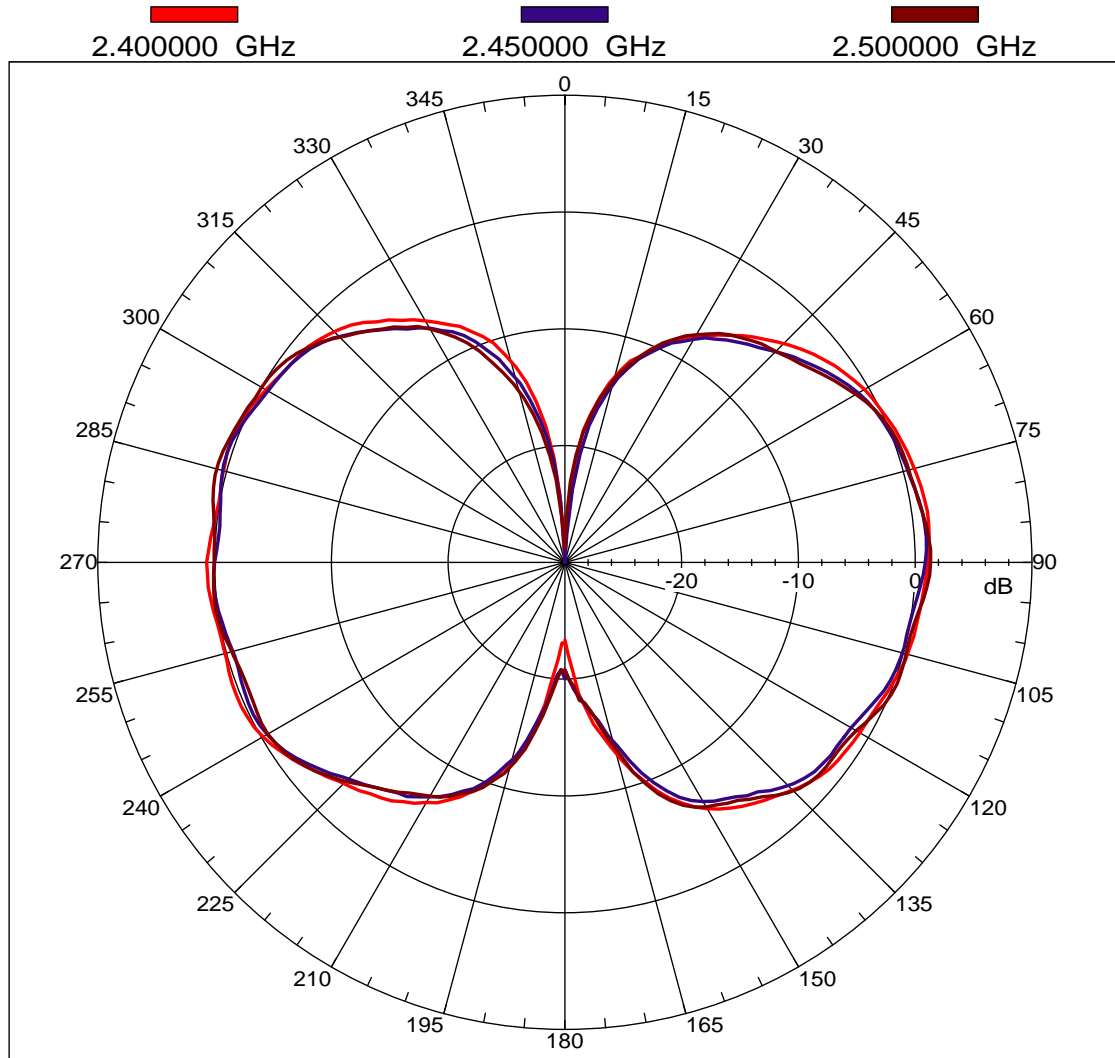
Far-field amplitude of C120-510239-A-Free-V.nsi



2006/10/3

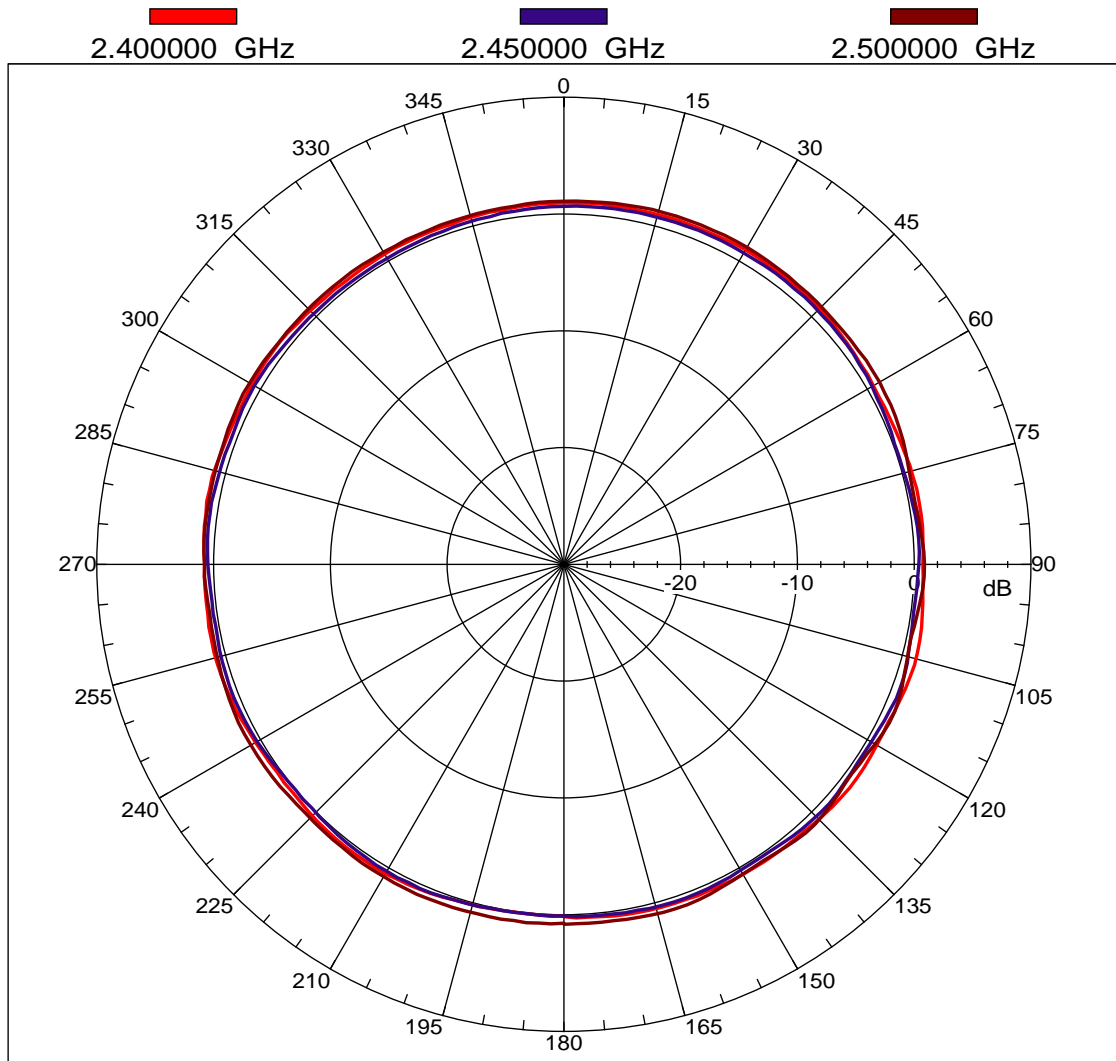
2. 搭配 PCB 場型

Far-field amplitude of C120-510239-A-PCB-H.nsi



2006/10/3

Far-field amplitude of C120-510239-A-PCB-V.nsi



2006/10/3

WRT54G v8 fixed antenna (WY), PN:2365-00001015R

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

Tr1 S11 SWR 1.000/ Ref 1.000 [F2]



Tr2 S11 Smith (R+jX) Scale 1.000U [F2]

Point	Frequency (GHz)	Real (R)	Imaginary (jX)
1	2.4120000	62.346 Ω	-8.2472 Ω
2	2.4500000	66.368 Ω	-11.189 Ω
3	2.4720000	66.064 Ω	-14.339 Ω



Format

SWR

Log Mag

Phase

Group Delay

Smith

Polar

Lin Mag

SWR

Real

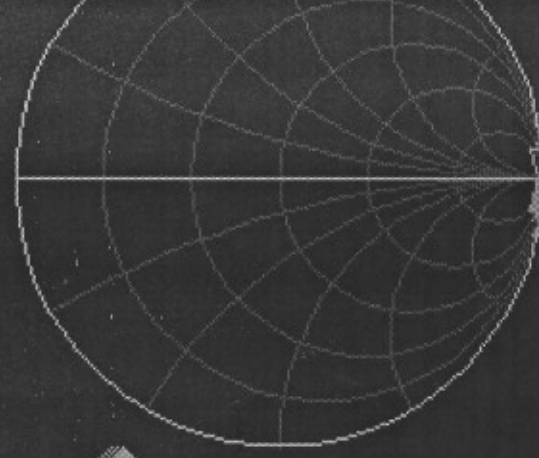
Imaginary

Tr3 S11 Log Mag 10.00dB/ Ref 0.000dB [F2]



Tr4 S22 Smith (R+jX) Scale 1.000U [F2]

Point	Frequency (GHz)	Real (R)	Imaginary (jX)
1	2.4120000	2.8563 kΩ	-3.9503 kΩ
2	2.4500000	4.6648 kΩ	-2.3541 kΩ
3	2.4720000	3.8534 kΩ	-1.9271 kΩ



1 Start 1.5 GHz

IFBW 70 kHz

Stop 5 GHz PExt Cor

Meas

Stop

ExtRef

Ready

Svc

2006-10-17 18:31

Date : 2005/02/02

Our Spec. No. WS05-M016

MESSRS.

SPECIFICATION
FOR
HIGH FREQUENCY COAXIAL CABLE
" KHCX - 32AWG - SB - TA " GRAY

SHOWA ELECTRIC WIRE & CABLE CO., LTD.

TORANOMON

TOKYO JAPAN

T. Mori

T. Mori
Manager, Engineering Section
Engineering Dept.
Electronic Wire Business Unit

1. 適用(SCOPE)

本仕様書は電子機器などの内部配線に使用される細径同軸“KHCX-32AWG-SB-TA”の構造と特性について定める。

This specification covers the construction and characteristics of coaxial cable “KHCX-32AWG-SB-TA” for internal wiring of electronic equipment.

2. ケーブル型名の説明 (EXPLANATION OF CABLE TYPE)

KHCX-32AWG-SB-TA

(1) (2) (3) (4)

(1) ケーブル略称 (Cable Abbreviation)

(2) 導体サイズ (Conductor Size)

(3) Inner Conductor Type (4) Outer Conductor Type.

3. 構造(CONSTRUCTION)

項目 Item		要求特性 Requirement
内部導体 Inner conductor	材質 Material	銀めっき軟銅線 Silver coated annealed copper wire
	構成 Stranding	7/0.08mm
	外径 Diameter	標準 0.24mm Nom. 0.24mm
絶縁体 Insulation	材質 Material	FEP
	色別 Color	自然色 Natural
	厚さ Thickness	標準 0.22mm Nom. 0.22mm
	外径 Diameter	0.68 +0.04/ -0.02mm
外部導体 Outer conductor	材質 Material	錫めっき銅合金線編組 Tinned copper alloy wire braid shield
	構成 Stranding	16/4/0.05 mm
	編組密度 Coverage	Approx. 90%
シース Sheath	材質 Material	FEP
	色別 Color	灰・白・黒 Gray・White・Black
	厚さ Thickness	標準 0.10mm Nom. 0.10mm
仕上外径 Overall diameter		1.13mm +0.08/ -0.05mm
概算質量 Approximate mass		3 kg/km

4. 特性 (CHARACTERISTICS)

項目 Item	単位 Unit	要求特性 Requirements
導体抵抗 Conductor Resistance	Ω /km	597 以下 (20°C) Max. 520 (at 20°C)
絶縁抵抗 Insulation Resistance	M Ω km	1,500 以上 (DC 500V 1 分間充電後, 20°C) Min. 1,500 (After charge DC 500V for 1 min. at 20°C)
耐電圧 Dielectric Strength	-	絶縁体 : AC.1.5kV/0.15 秒間 (スパークテスト) Dielectric core : No breakdown at AC.1.5kV for 0.15sec by spark test.
		シース : AC.1.5kV/0.15 秒間 (スパークテスト) Jacket : No breakdown at AC.1.5kV for 0.15sec by spark test.
		内部導体-外部導体間 : AC.500V/1 分間 No breakdown at AC.500V for 1 min between outer conductor and inner conductor.
静電容量 Capacitance	pF/m	標準 98 (at 1kHz) Nom. 98 (at 1kHz)
特性インピーダンス Characteristic Impedance	Ω	50 \pm 2 (at TDR)
減衰量 Attenuation	dB/m	2.0GHz : 2.9 以下 Max.2.9 2.4GHz : 3.2 以下 Max.3.2 3.0GHz : 3.7 以下 Max.3.7 4.0GHz : 4.3 以下 Max.4.3 5.0GHz : 4.8 以下 Max.4.8 6.0GHz : 5.3 以下 Max.5.3
VSWR	--	2.4~2.5GHz : 1.20 以下 Max.1.20 4.8~6.0GHz : 1.40 以下 Max.1.40
耐はんだ性 Heat resistance for solder	--	絶縁体およびシースの寸法変化は 0.2mm 以下のこと。 Shrink and expansion of dielectric core or jacket should not be more than 0.2mm. 試験条件(test condition) : 255°C \pm 5°C * 3 sec.

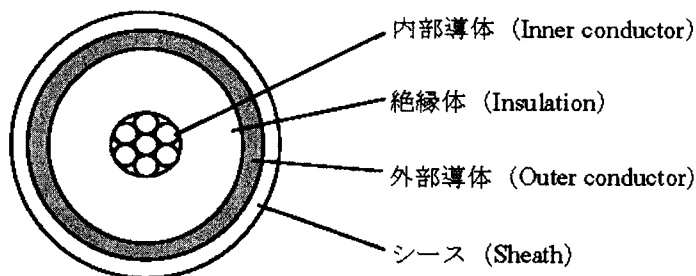


図 1 .ケーブル構造図

Fig.1. Cable Cross-Section

SGS Test Report

Product : RF Antenna

Contents

No	Description		Report No.	Page
1	Cable	φ 1.13mm Cable	CE/2006/11286	P.13~17
2	Antenna Body	TPE EL-550	CE/2006/14410 GZ0605064879/CHEM	P.18~24
3	Antenna Base	PC -110	KE/2006/10319 GZ0605064879/CHEM	P.25~26 P.23~24
4	Rivet	POM ; Black	SH6053394/CHEM	P.27~28
5	Ground Tube	Tin Plated + POM	CE/2006/35000 CE/2006/34999	P.29~41

Result for RoHS : PASS

Test Report

SHOWA ELECTRIC WIRE & CABLE CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444, JAPAN

Report No. : CE/2006/11286
Date : 2006/01/12
Page : 1 of 5

The following merchandise was (were) submitted and identified by the client as :

Type of Product : COAXIAL CABLE
Style/Item No : KHCX-32AWG-SB-TA GRAY PANTONE COOL GRAY 9C
Sample Received : 2006/01/05
Testing Date : 2006/01/05 TO 2006/01/12

=====

Test Result : - Please see the next page -


Daniel Yeh, M.R. / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.

Test Report

SHOWA ELECTRIC WIRE & CABLE CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444, JAPAN

Report No. : CE/2006/11286
Date : 2006/01/12
Page : 2 of 5

Test Result

PART NAME NO.1 : GRAY PLASTIC JACKET
PART NAME NO.2 : SILVER COLORED METAL NET
PART NAME NO.3 : TRANSPARENT PLASTIC
PART NAME NO.4 : SILVER COLORED METAL WIRE(CORE)

Test Item (s):	Unit	Method	MDL	Result			
				No.1	No.2	No.3	No.4
Monobromobiphenyl	%	With reference to USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	N.D.	N.D.	N.D.	N.D.
Dibromobiphenyl	%		0.0005	N.D.	N.D.	N.D.	N.D.
Tribromobiphenyl	%		0.0005	N.D.	N.D.	N.D.	N.D.
Tetrabromobiphenyl	%		0.0005	N.D.	N.D.	N.D.	N.D.
Pentabromobiphenyl	%		0.0005	N.D.	N.D.	N.D.	N.D.
Hexabromobiphenyl	%		0.0005	N.D.	N.D.	N.D.	N.D.
Heptabromobiphenyl	%		0.0005	N.D.	N.D.	N.D.	N.D.
Octabromobiphenyl	%		0.0005	N.D.	N.D.	N.D.	N.D.
Nonabromobiphenyl	%		0.0005	N.D.	N.D.	N.D.	N.D.
Decabromobiphenyl	%		0.0005	N.D.	N.D.	N.D.	N.D.
Total PBBs (Polybrominated biphenyls)/Sum of above	%		-	N.D.	N.D.	N.D.	N.D.
Monobromobiphenyl ether	%		With reference to USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	N.D.	N.D.	N.D.
Dibromobiphenyl ether	%	0.0005		N.D.	N.D.	N.D.	N.D.
Tribromobiphenyl ether	%	0.0005		N.D.	N.D.	N.D.	N.D.
Tetrabromobiphenyl ether	%	0.0005		N.D.	N.D.	N.D.	N.D.
Pentabromobiphenyl ether	%	0.0005		N.D.	N.D.	N.D.	N.D.
Hexabromobiphenyl ether	%	0.0005		N.D.	N.D.	N.D.	N.D.
Heptabromobiphenyl ether	%	0.0005		N.D.	N.D.	N.D.	N.D.
Octabromobiphenyl ether	%	0.0005		N.D.	N.D.	N.D.	N.D.
Nonabromobiphenyl ether	%	0.0005		N.D.	N.D.	N.D.	N.D.
Decabromobiphenyl ether	%	0.0005		N.D.	N.D.	N.D.	N.D.
Total PBBEs(PBDEs) (Polybrominated biphenyl ethers)/Sum of above	%	-		N.D.	N.D.	N.D.	N.D.
Total of Mono to Nona-brominated biphenyl ether. (Note 4)	%	-		N.D.	N.D.	N.D.	N.D.

Test Report

SHOWA ELECTRIC WIRE & CABLE CO., LTD.
 NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
 105-8444, JAPAN

Report No. : CE/2006/11286
 Date : 2006/01/12
 Page : 3 of 5

Test Item (s):	Unit	Method	MDL	Result			
				No.1	No.2	No.3	No.4
Chromium VI (Cr+6)	ppm	UV-VIS after reference to US EPA 3060A.	2	N.D.	N.D.	N.D.	N.D.
Cadmium (Cd)	ppm	ICP-AES after reference to EN 1122, method B:2001 or other acid digestion.	2	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	ppm	ICP-AES after reference to US EPA 3050B or other acid digestion.	2	N.D.	N.D.	N.D.	N.D.

- NOTE: (1) N.D. = Not detected (<MDL)
 (2) ppm = mg/kg
 (3) MDL = Method Detection Limit
 (4) Decabromodiphenyl ether (DecaBDE) in polymeric applications is exempted by Commission Decision of 13 Oct 2005 amending Directive 2002/95/EC notified under document 2005/717/EC.
 (5) PBBEs=PBDEs=Polybrominated Diphenyl Ethers=PBDOs=PBBOs.
 (6) " - " = Not Regulation

Test Report

SHOWA ELECTRIC WIRE & CABLE CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444, JAPAN

Report No. : CE/2006/11286
Date : 2006/01/12
Page : 4 of 5



Test Report

SHOWA ELECTRIC WIRE & CABLE CO., LTD.
NO. 1-8, TORANOMON 1-CHOME, MINATO-KU, TOKYO
105-8444, JAPAN

Report No. : CE/2006/11286
Date : 2006/01/12
Page : 5 of 5



Test Report

DSM ENGINEERING PLASTIC

Report No. : CE/2006/14410

Date : 2006/01/23

Page : 1 of 5

The following merchandise was (were) submitted and identified by the client as :

Type of Product : ARNITEL EL550 NC
Buyer/Order No : SONY
Sample Received : 2006/01/16
Testing Date : 2006/01/16 TO 2006/01/23

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Test Result : - Please see the next page -


Daniel Yeh, M.R. / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.

Test Report

DSM ENGINEERING PLASTIC

Report No. : CE/2006/14410

Date : 2006/01/23

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Test Result

PART NAME NO.1 : WHITE PLASTIC PELLETS

Test Item (s):	Unit	Method	MDL	Result
				No. 1
Monobromobiphenyl	%	With reference to USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	N.D.
Dibromobiphenyl	%		0.0005	N.D.
Tribromobiphenyl	%		0.0005	N.D.
Tetrabromobiphenyl	%		0.0005	N.D.
Pentabromobiphenyl	%		0.0005	N.D.
Hexabromobiphenyl	%		0.0005	N.D.
Heptabromobiphenyl	%		0.0005	N.D.
Octabromobiphenyl	%		0.0005	N.D.
Nonabromobiphenyl	%		0.0005	N.D.
Decabromobiphenyl	%		0.0005	N.D.
Total PBBs (Polybrominated biphenyls)/Sum of above	%		-	N.D.
Monobromobiphenyl ether	%	With reference to USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	N.D.
Dibromobiphenyl ether	%		0.0005	N.D.
Tribromobiphenyl ether	%		0.0005	N.D.
Tetrabromobiphenyl ether	%		0.0005	N.D.
Pentabromobiphenyl ether	%		0.0005	N.D.
Hexabromobiphenyl ether	%		0.0005	N.D.
Heptabromobiphenyl ether	%		0.0005	N.D.
Octabromobiphenyl ether	%		0.0005	N.D.
Nonabromobiphenyl ether	%		0.0005	N.D.
Decabromobiphenyl ether	%		0.0005	N.D.
Total PBBEs(PBDEs) (Polybrominated biphenyl ethers)/Sum of above	%		-	N.D.
Total of Mono to Nona-brominated biphenyl ether. (Note 4)	%		-	N.D.