

零組件承認/申請報告書

編號：E7229

2003/11/27

Alpha P/N：505900023410		申請者：陳紹偉	主管：鄒貴賢
零組件品名：ANT. 2.4GHZ THW0234A (GRAY)			
原製造廠商：WANSHIH(577800)		原廠編號：THW0234A	
在台代理商：萬旭		連絡人：吳志修	電話：02-22988066 #323
應用機種：DVC-1100			
COMMENTS：			
測試結果	TEST OK! 1 ST SOURCE 主 管：王椅楠 ☒ 承辦者：周禎義 ☐ 測試人： 日期：2003/11/21		
機構	R&D	PM	
生技	資材	品管	
結果	☒ 合格 ☐ 否決 ☐ 其它	審核	王椅楠 2003/11/21

承 認 書
SPECIFICATION FOR APPROVAL

客 戶
CUSTOMER

明泰科技股份有限公司

日 期
DATE

92 年 10 月 24 日

品 名
DESCRIPTION

2.4 GHz WSS001 ,
1/4λ Monopole Antenna (Gray)

客 戶 料 號
CUSTOMER P/N

成 品 編 號
Part No.

THW0234A



萬旭電業股份有限公司

WANSHIH ELECTRONIC CO., LTD.

台北縣五股鄉五工六路 72 號 3 樓

3F 72 WU KONG 6TH RD., WU KU INDUSTRIAL DISTRICT

TAIPEI HSIEN, TAIWAN, R.O.C.

TEL : (02) 22988066 (5 LINE) FAX : (02) 22981102

Table of Contents

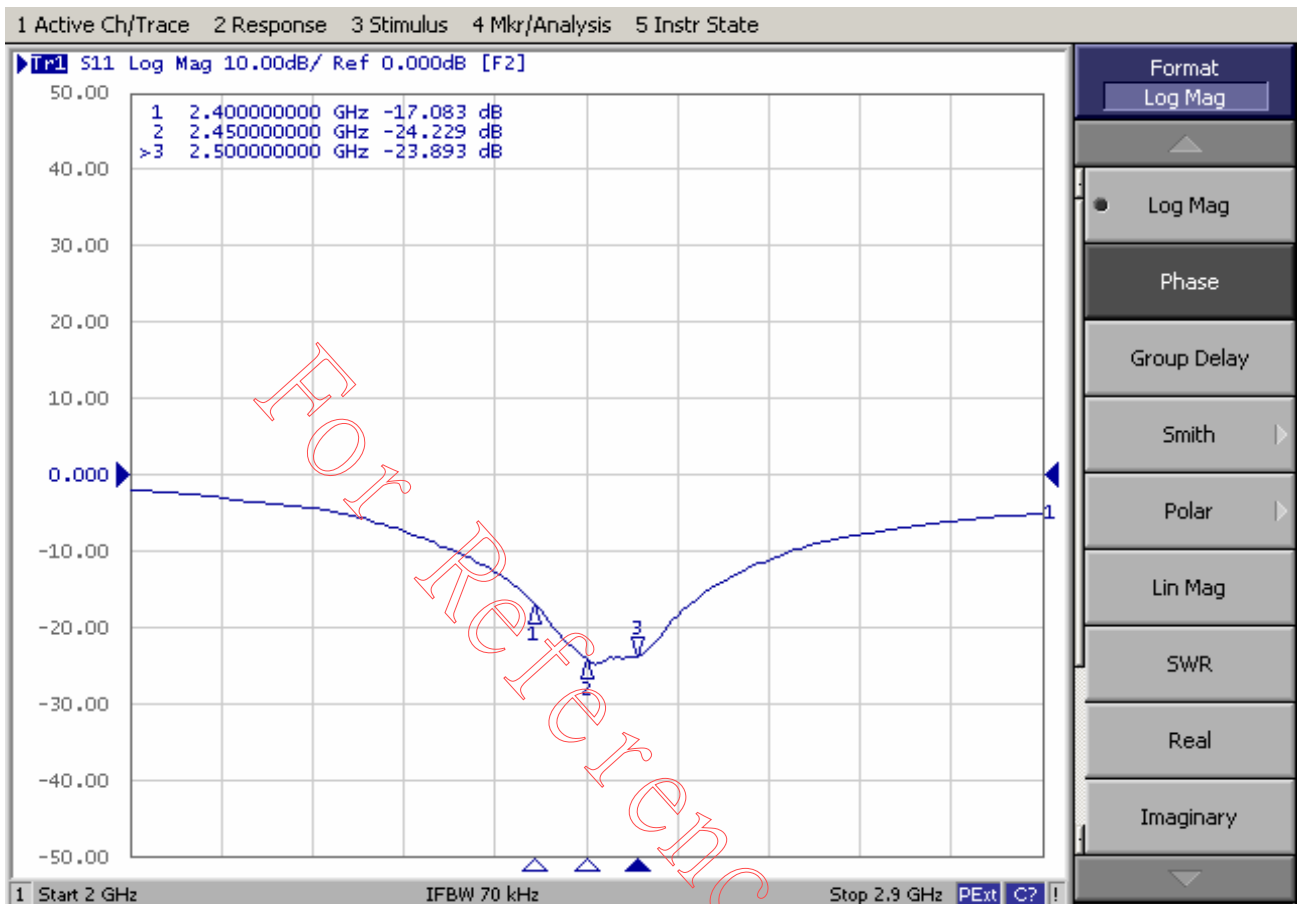
Table of Contents		1
Specification		2
Antenna Drawing		3
Electrical Properties		
Return Loss		4
V.S.W.R		5
Radiation Pattern		6-7
Material Data Sheet		
Coaxial Cable		8-10
Housing		11
Hinge		12

SPECIFICATION

- | | |
|-------------------------------|---|
| 1. Description | : 2.45GHz Swivel Type Antenna,
1/4λ Monopole Antenna |
| 2. Customer | : 明泰科技股份有限公司. |
| 3. Model No. | : WSS001 |
| 4. Part No. | : THW0234 |
| 5. Standard | : IEEE 802.11b/g Wireless LAN |
| 6. Antenna Profile | : 137 mm (see Drawing) |
| 7. Color | : Gary(424U) |
| 8. Electrical Characteristics | |
| Operating Frequency | : 2.4~2.5Ghz |
| Antenna Type | : 1/4λ Monopole Sleeve |
| Polarization Type | : Linear |
| Type of Radiation | : Toroidal |
| Peak Gain | : 2.0 dBi Typical |
| Impedance | : 50 Ohm nominal |
| V.S.W.R. | : 2.0:1 Max. |
| 9. Mechanical Characteristics | |
| Connector | : RP-SMA(M) |
| Core | : N/A |
| 10. Raw Material | |
| Coaxial Cable | : MIL-C-17 RG-178 B/U |
| Housing | : TPU |
| Hinge | : Polycarbonate |

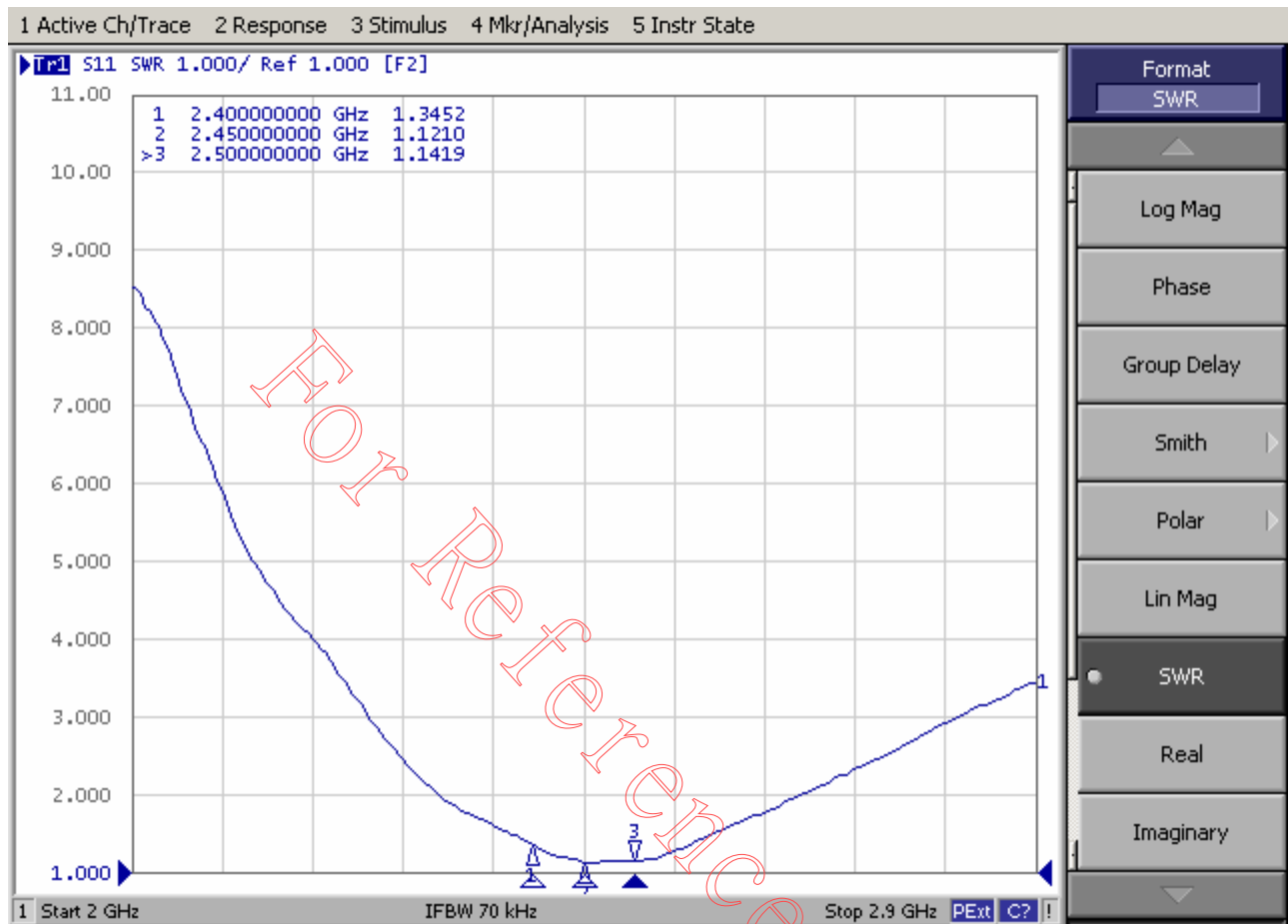
Electrical Properties

Return Loss



Electrical Properties

V.S.W.R



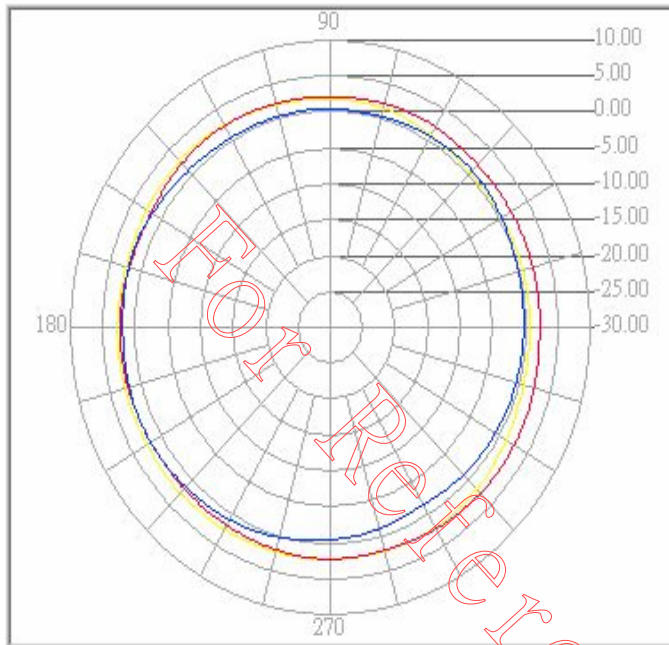
Electrical Properties

Radiation Pattern – H Plane

Model No: THW0234A1

Antenna Position: Vertical

Test Mode: H-PLANE



Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
2400.00	2.85	134.85	1.98
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
2450.00	2.75	324.12	2.23
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
2490.00	2.15	164.54	0.63

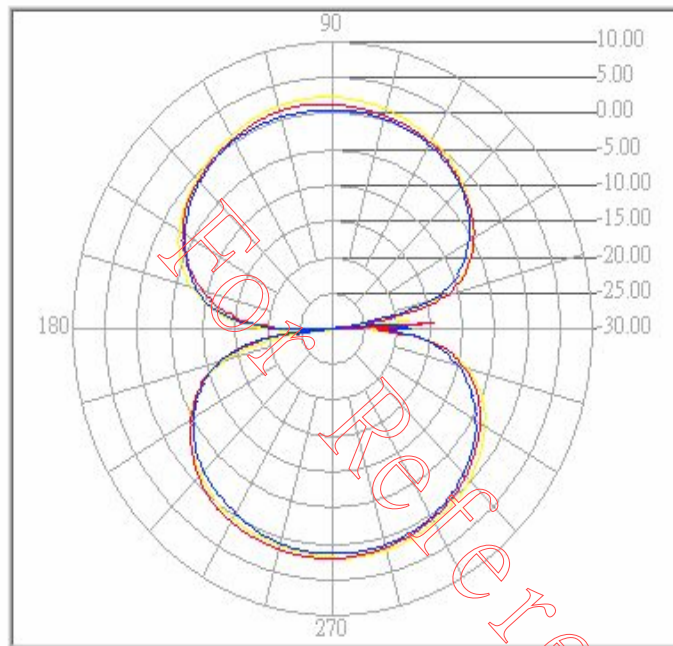
Electrical Properties

Radiation Pattern – E Plane

Model No: THW0234A1

Antenna Position: Horizontal

Test Mode: E-PLANE



Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
2400.00	2.35	94.05	-0.87
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
2450.00	2.06	267.20	-1.20
Freq(MHz)	peak(dBi)	Angle(o)	Avg(dBi)
2490.00	1.37	272.18	-1.82

Material Data Sheet

RG-178 Coaxial Cable

SPECIFICATION FOR APPROVAL

DOCUMENT: A30178B001

STYLE : 200°C 30V
RG-178B/U

SIZE: 7/0.102 SCCS

RECOGNIZED:

WONDERFUL WIRE CABLE CO.,LTD

OFFICE : 72WU KONG 6TH ROAD,
WU KU IND. DISTRICT
TAIPEI HSIEN,TAIWAN

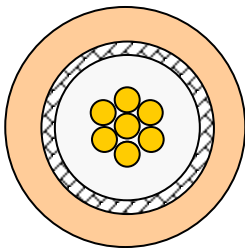
FACTORY : 17 PEI YUAN ROAD,
CHUNG-LI IND. PARK
TAIWAN, R.O.C.

TEL : (02)22988033
FAX : (02)22988031-2

TEL : (03)4527777
FAX : (03)4517214

WONDERFUL HI-TECH CABLE CO., LTD

SPECIFICATION

STYLE	200°C 30V COAXIAL	DOCUMENT NO : A30178B001
SIZE	RG-178B/U	ESTABLISHED DATE: 2003/02/13
STANDARD: MIL-C-17		
Conductor	Size	AWG 30
	Material	Silver-Coated Copper Clad Steel
	Conductors No.	7
	Conductors Size	mm 0.102
	O.D.	mm 0.30
Insulation	Average Thickness	mm 0.28
	Diameter	mm 0.86
	Material	---- FEP
	Color	---- Clear
Braid	Material	---- Silver-Coated Copper
	Construction	mm 16 / 3 / 0.10
	Coverage	% 95
Jacket	Average Thickness	mm 0.25
	Diameter	mm 1.80 ±0.05
	Material	---- FEP
	Color	---- Brown
Marking		
Drawing		

AK001/210X297/1.0

PAGE : 1

EDITION : 1.0

REVISED DATE :

MAKER : C.Y.CHEN

CONFIRM : S.N.WONG

APPROVAL : W.J.WANG

WONDERFUL HI-TECH CO., LTD

SPECIFICATION

Electrical & Physical Properties						
Item			RG-178B/U			
Rating Temp Voltage			200℃ 30V			
Conductor Resistance			335.0 OHM/KM/20℃ MAX.			
Insulation Resistance			3000 MEGA OHM/KM MIN.			
Dielectric Strength			AC 1.0 KV/Minute			
Spark Test			2.0 KV			
Insulation	Unaged	Tensile Strength	2500 PSI MIN.(1.76 Kg / m m ²)			
		Elongation	200% MIN.			
	Aged	Tensile Strength	UNAGED MIN.75%(168HRS×232℃)			
		Elongation	UNAGED MIN.75%(168HRS×232℃)			
Jacket	Unaged	Tensile Strength	2500 PSI MIN.(1.76 Kg / m m ²)			
		Elongation	200% MIN.			
	Aged	Tensile Strength	UNAGED MIN.75%(168HRS×232℃)			
		Elongation	UNAGED MIN.75%(168HRS×232℃)			
Nom. Impedance			50 Ohms			
Nom. Capacitance			95.8 pF/m			
Nom. Vel. of Prop.			69.5%			
VSWR (0-6GHz)			UNDER 1.3			
Attenuation (dB/100m)	100MHz	900MHz	1.8GHz	2.4GHz	5.2GHz	6GHz
	46	155	295	340	505	550

AK001/210X297/1.0

PAGE : 2

EDITION : 1.1

REVISED DATE :

MAKER : C.Y.CHEN

CONFIRM : S.N.WONG

APPROVAL : W.J.WANG

Housing Material Data Sheet

- Housing(外套)- TPU

Elastogran GmbH
Geschäftsbereich TPU-Elastomere



Elastogran GmbH · Postfach 1140 · 49440 Lemförde · Germany
WQJ COMPANY LTD.

P.O. BOX 36 - 431
RC TAOYUAN HSIEN

BASF Gruppe

Date 18.07.2001
No. 62046

Inspection Certificate EN 10 204-3.1 B (DIN 50048)

Product : ES 95 A 50 000 S No.: 15002939
Batch : 207672
Basic-Batch 207673

Property	Test method	Unit	Value
Dichte	DIN 53479	g/cm ³	1,24
Shore-Haerte D	DIN 53505	-	50
Zugfestigkeit	DIN 53504	MPa	53
Reißdehnung	DIN 53504	%	550
Abrieb	DIN 53516	mm ³	22

Dichte = Density/Densité, Shore Härte = Shore hardness/Shore Dureté, Zugfestigkeit = Tensile strength/Resistance traction,
Reißdehnung = Elongation at break/Allongement rupture, Weissenhofwiderstand = Tear strength, Abrieb = Abrasion loss/Abrasion

The stated values are measured from a representative batch (basic batch) of every product campaign.

Test platens are injection moulded from dry granulate with less than 0,05 % water content. Test platens tempered 20 hrs. at 100 °C,
then cooled to 23 °C / 50 % RH before testing. Test specimen cut from test platens.

We hereby certify, that the material described above complies with the terms of the order contract.

Hübner Scheute

Works Inspector

The above information is derived from our quality checks. It does not relieve the purchaser from examining the product upon delivery
and gives no assurance of suitability of the product for any particular purpose.

Landwehrweg
49440 Lemförde
Deutschland
Telefon (0 54 43) 12-0
Teletax (0 54 43) 12-25 55

Bankverbindung: Commerzbank AG, Osnabrück
(BLZ 265 400 70) Kto.-Nr. 53 5600100
IBAN: DE 36 2654 0070 0535 0001 00
S.W.I.F.T.-Code: Cobade333
Postbank München
(BLZ 700 100 80) Kto.-Nr. 1532 91-803

Sitz der Gesellschaft: 49448 Lemförde
Geschäftsführer:
Gerhard H.-J. Hellmann (Sprecher);
Reinhard Leppkes
Registriergericht: Amtsgericht Diepholz
Eintragungsnummer: HRB 2183

- Hinge(上座/下座)- PC

DYNACHEM

TEIJIN POLYCARBONATE SINGAPORE PTE LTD.

152 BEACH ROAD #17-03/04
GATEWAY EAST SINGAPORE 189721

TELEPHONE: 298-8381
FAX : 298-6652

Date: OCT. 28, 2002

Att: To Whom it May Concern

CERTIFICATE OF ANALYSIS

COMMODITY: TEIJIN PANLITE (Polycarbonate Resin)

Grade No: L1250Y
Colour No: NAT
Lot No: S4E02911

ITEM	UNIT	TEST METHOD	TEIJIN POLYCARBONATE QUALITY STANDARD	TEST RESULT
IMPACT STRENGTH (IZOD NOTCHED 3.2mm thick)	K gfm / cm	ASTM D256	280	PASS
FLEXURAL MODULUS	K gf / cm ²	ASTM D790	22,700±1,500	PASS
TENSILE STRENGTH (AT BREAK)	K gf / cm ²	ASTM D638	830±140	PASS

NOTE: ALL FIGURES ENTERED IN THIS LIST ARE SUBJECT TO OUR STANDARD TEST METHOD AND MAY NOT BE APPLICABLE FOR PRODUCTS THAT ARE USED UNDER DIFFERENT CONDITIONS.

Teijin Polycarbonate Pte Ltd

Chia Ling Chen

Y. SUZUKI
LOGISTICS MANAGER (SALES)