DATE :Jun . 24 , 2003

CUSTOMER: QUANTA COMPUTER INC.

APPROVAL REPORT

MODEL	EW1
DESCRIPTION	
SUPPLIER P/N	
CUSTOMER P/N	
FILE P/N	

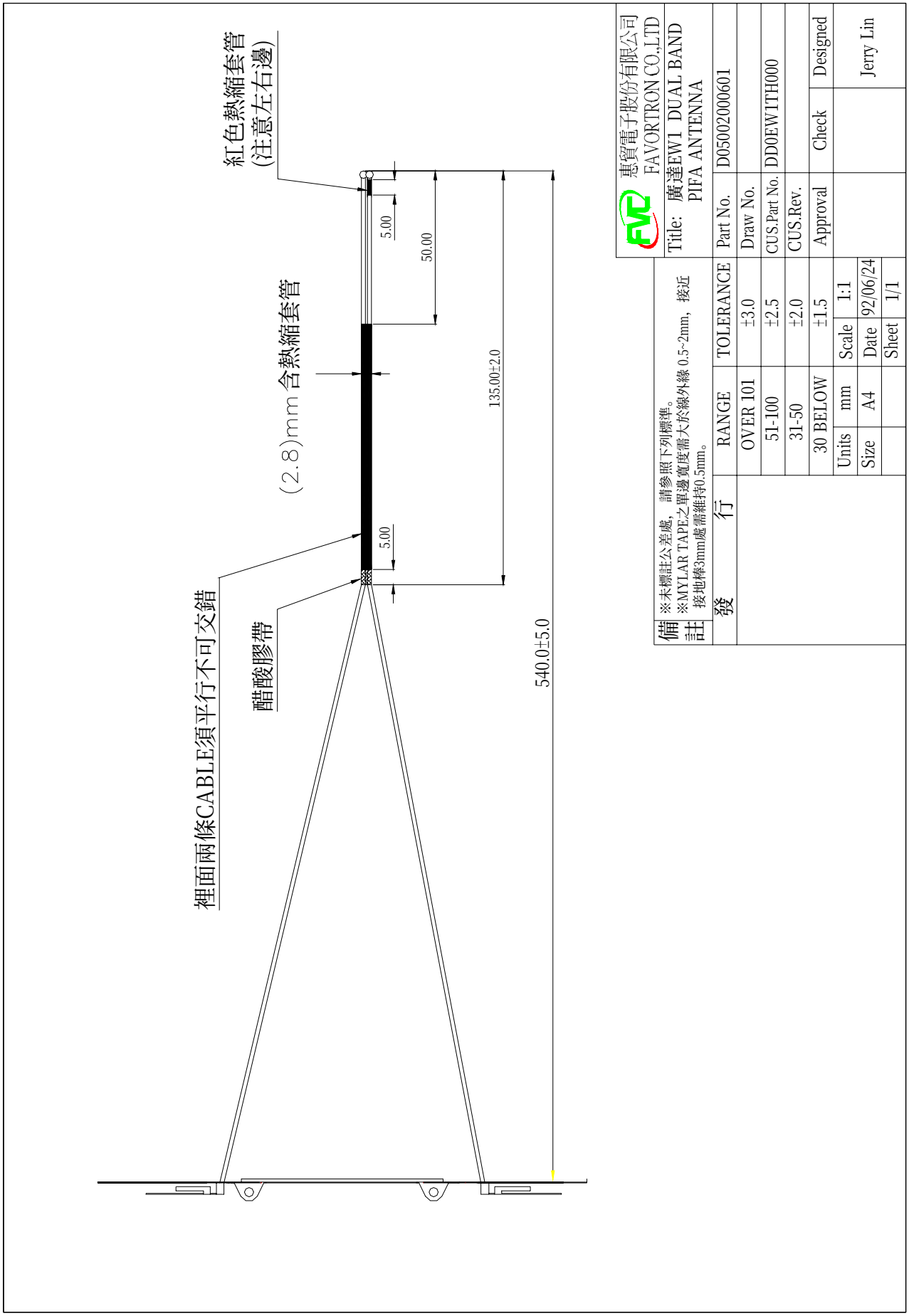
FAVORTRON			Customer	
Manager	**Supervisor**	**Engineer**		

惠貿電子股份有限公司
FAVORTRON CO., LTD

台北縣中和市中正路 866 號 17F TEL: (02) 8227-5669
17nd F, NO. 866, Jungjeng Rd., FAX: (02) 8227-5667
Junghe City, Taipei Hsien, Taiwan 235 R.O.C

1.Antenna Drawing

1.1 Drawing of EW1 PIFA Antenna



1.2 Drawing of 888z3.0 PCB (Hinge Cover) Antenna

B O M

ITEM	COMPONENT	Q'TY	DESCRIPTION	FVC P/N	REMARK
1	EW1 PIFA	1	160x4.8x6.3mm	F04001085001	
2	Conn+O1.5 Cable	2	I-pex + kurabe550mm 單頭	G04007171001	
3	TUBE	1	O1.5x5mm (RED)	B02009173999	
4	TUBE	1	O2.0X80mm (BLACK)	B02009172999	
5	醋酸膠帶	1	5x15mm	G01002157002	
6					
7					
8					
9					
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12					
13					
14					
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16					
17					
18					
19					
20					

發 行	備 註				
	Date	92/06/24	Sheet	1/1	

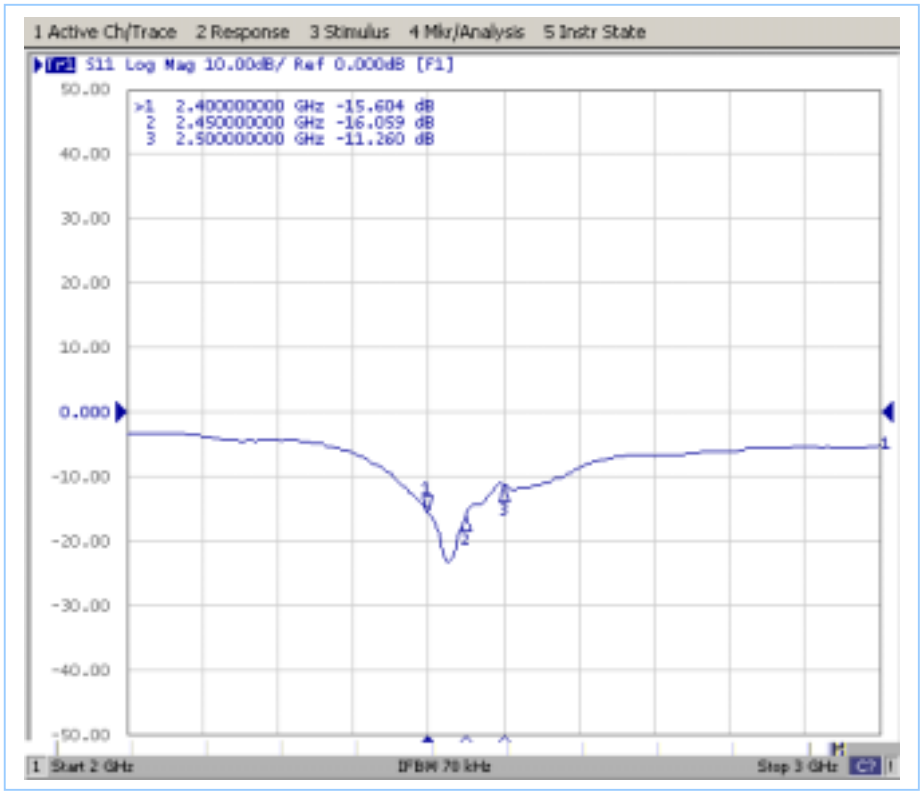
惠貿電子股份有限公司
FAVORTRON CO.,LTD

Title: 廣達EW1 DUAL BAND PIFA ANTENNA

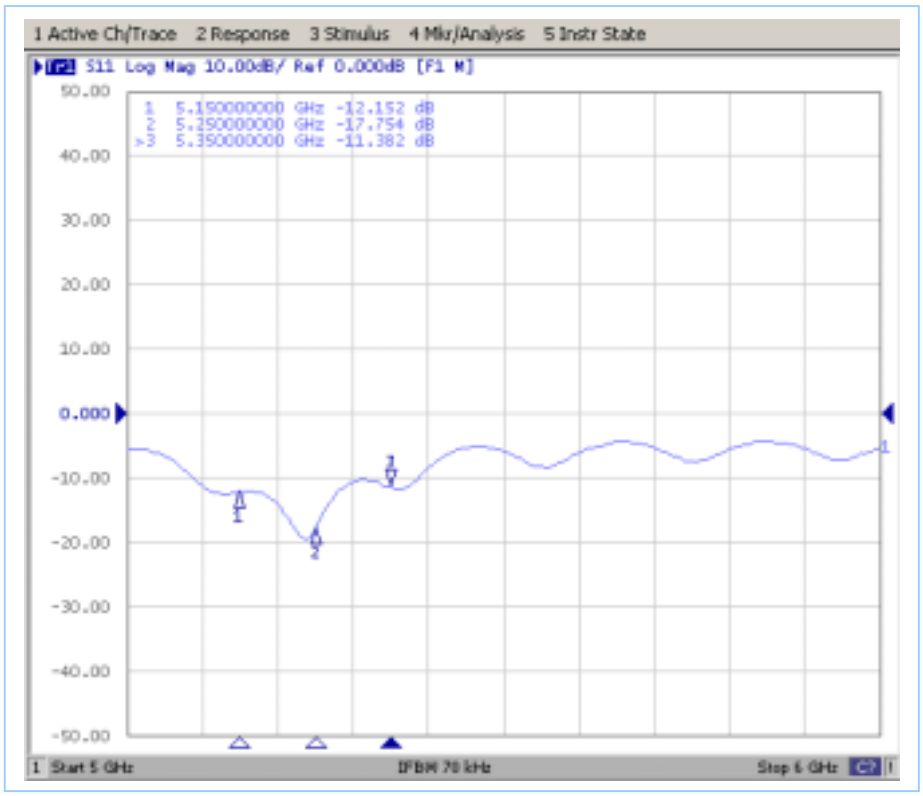
Part No.	D05002000601	
Draw No.		
CUS.Part No.	DD0EW1TH000	
CUS.Rev.		
Approval	Check	Designed
		Jerry Lin

1. EW1 W/L ANT. Return LOSS In Note Book

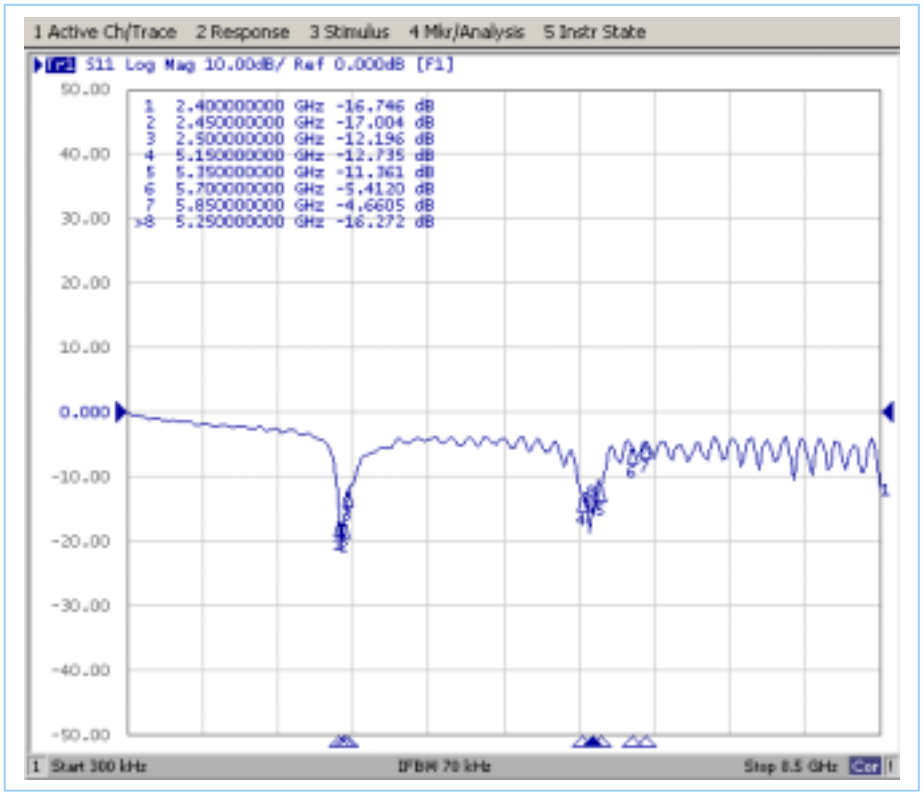
1.1 LCD Right Upper / PIFA ANT. / 2.4~2.5GHz



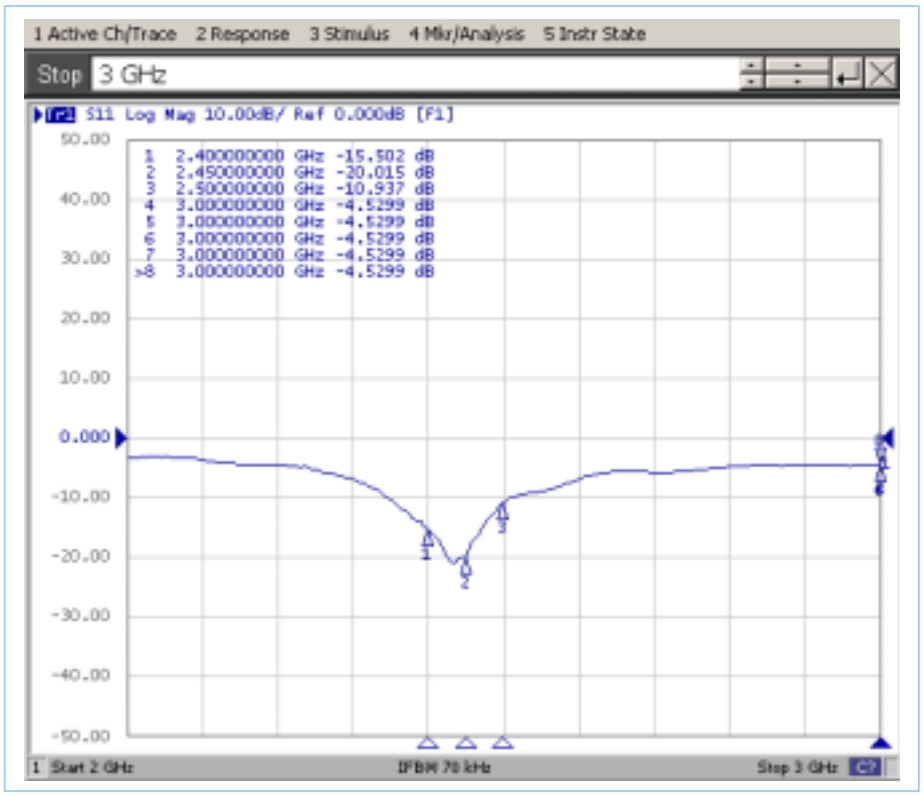
1.2 LCD Right Upper / PIFA ANT. / 5.15~5.35GHz



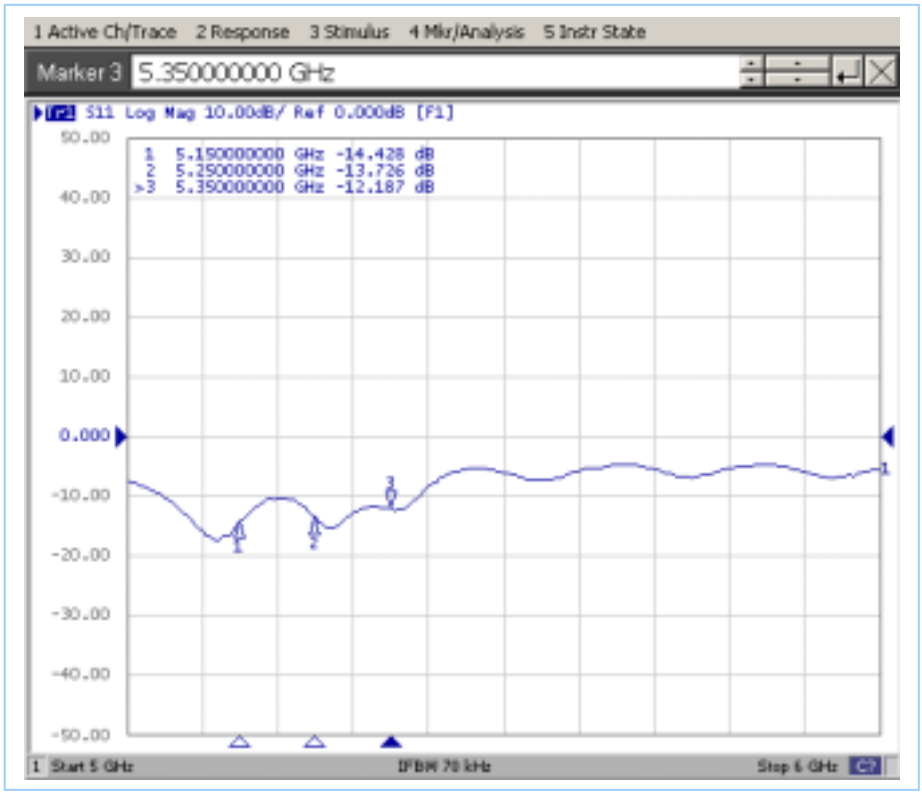
1.3 LCD Right Upper / PIFA ANT. / 2.4～2.5GHz & 5.15～5.35GHz



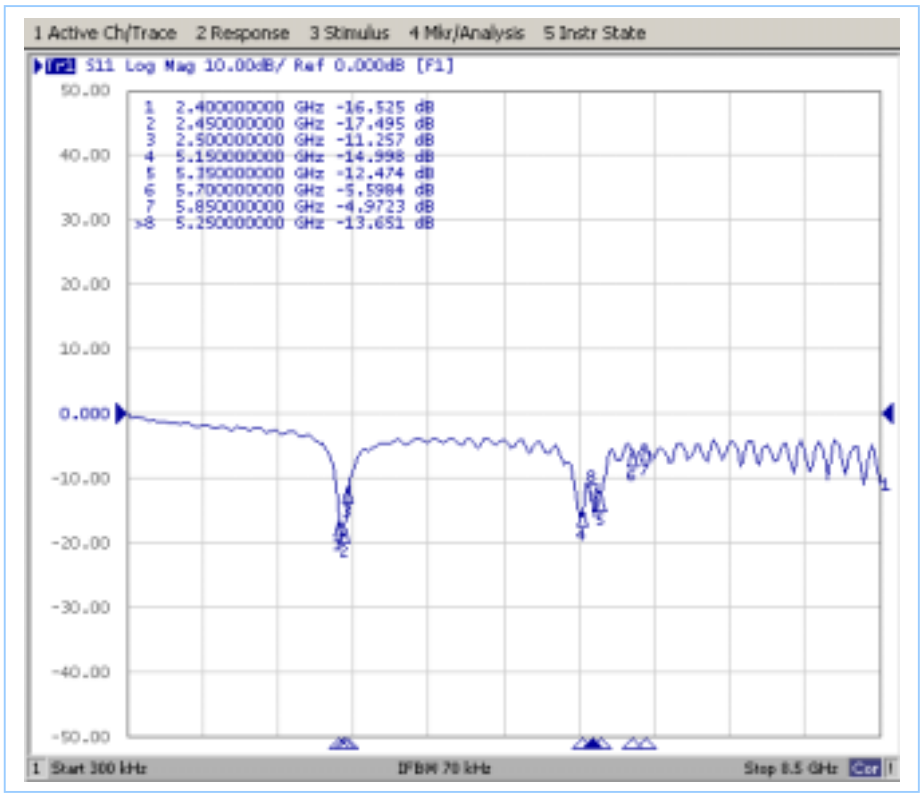
1.4 LCD Left Upper / PIFA ANT. / 2.4～2.5GHz



1.5 LCD Left Upper / PIFA ANT. / 5.15～5.35GHz

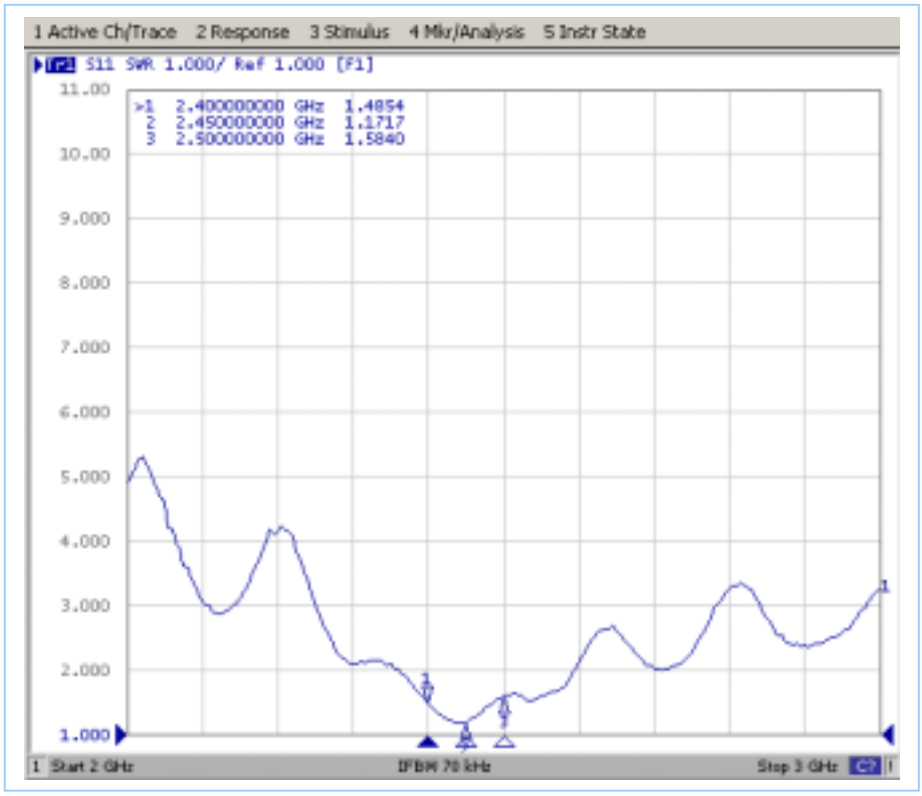


1.6 LCD Left Upper / PIFA ANT. / 2.4～2.5GHz & 5.15～5.35GHz

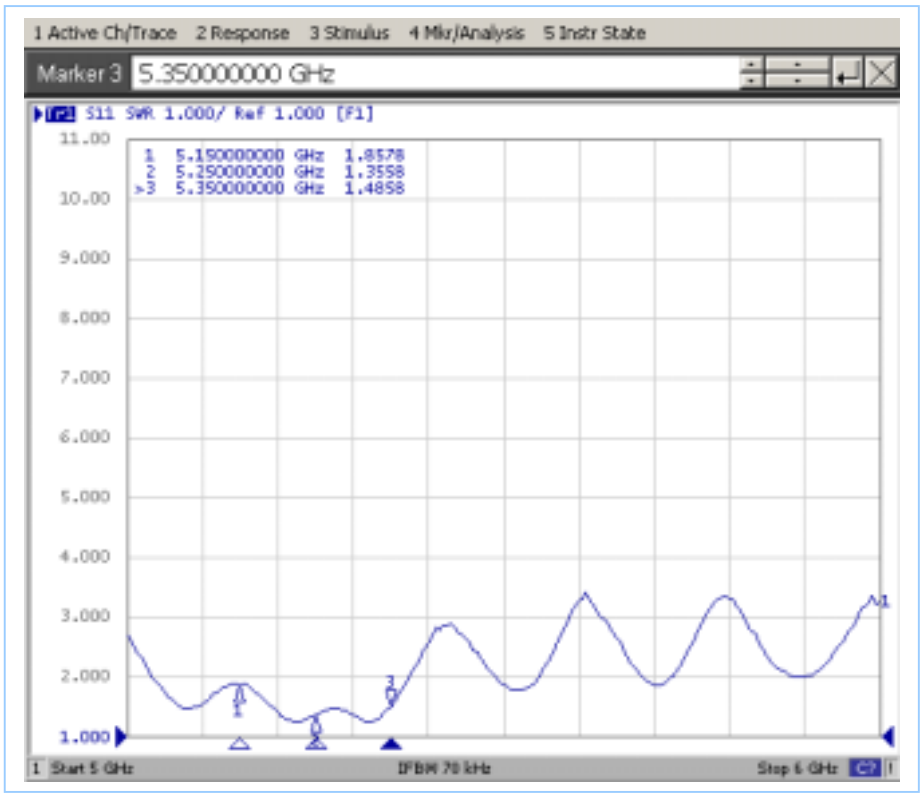


2. BTW30 PVT2 W/L ANT. VSWR In Note Book

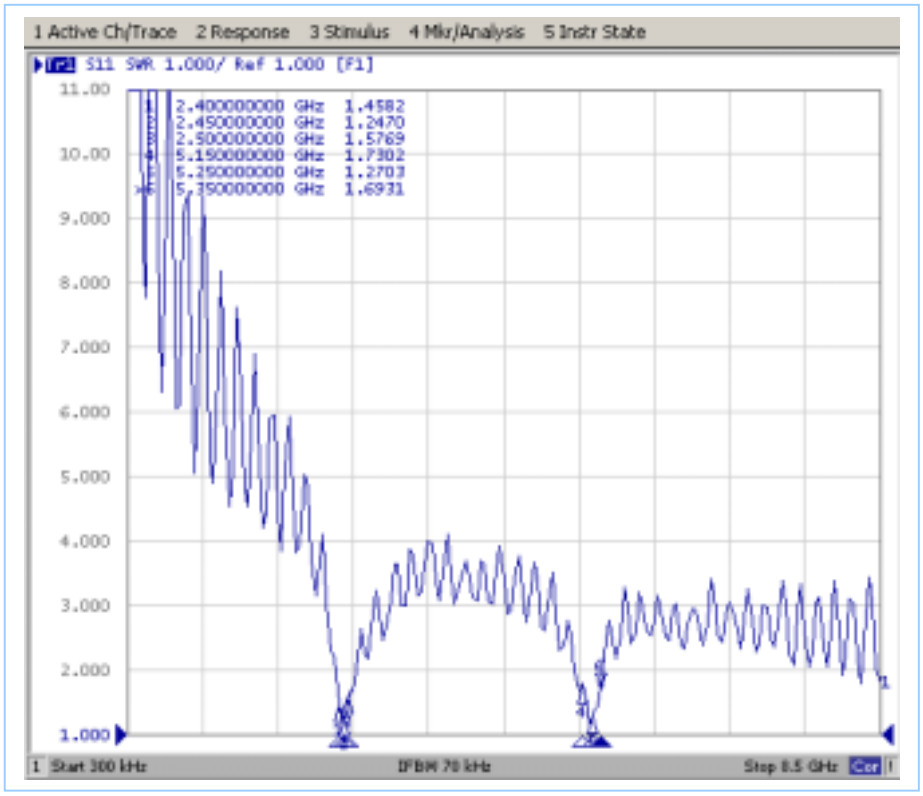
2.1 LCD Right Upper / PIFA ANT. / 2.4~2.5GHz



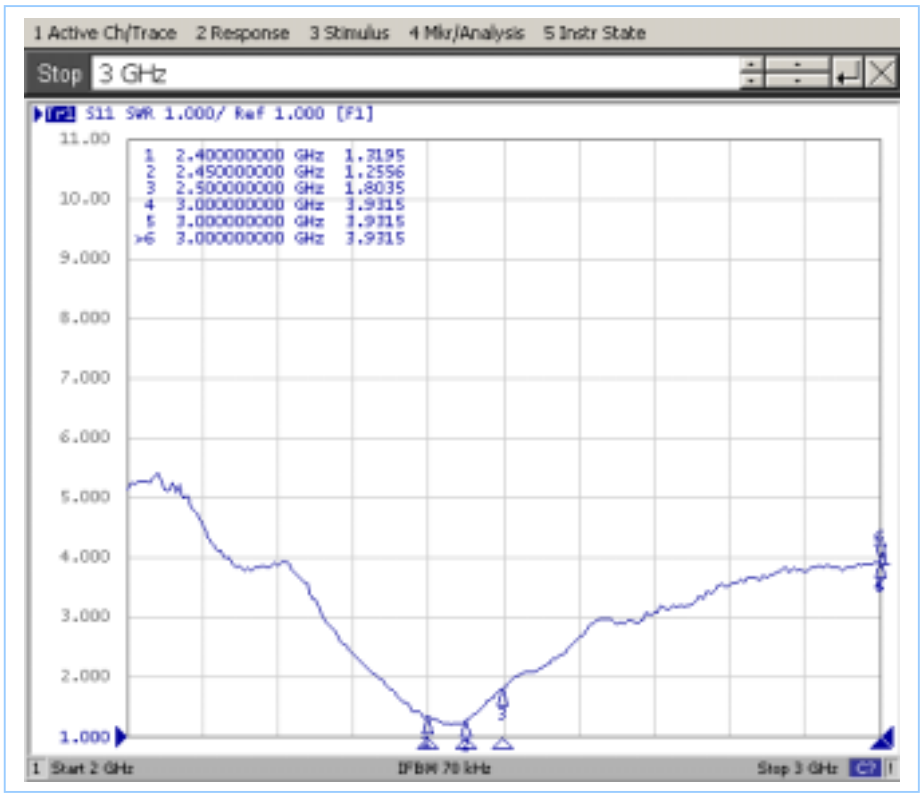
2.2 LCD Right Upper / PIFA ANT. / 5.15~5.35GHz



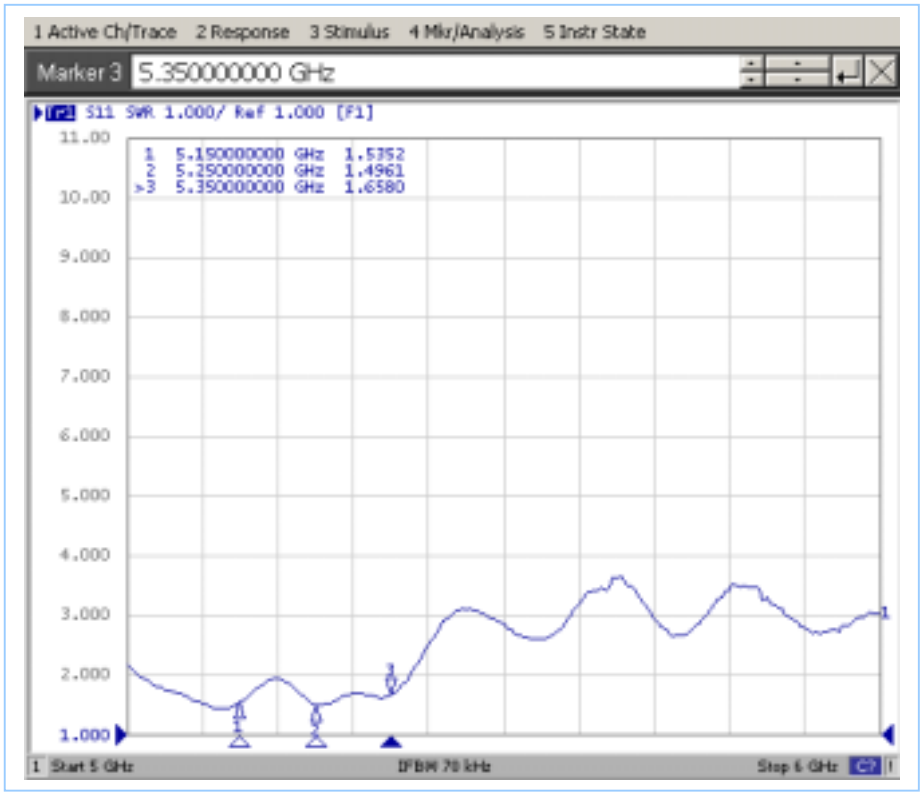
2.3 LCD Right Upper / PIFA ANT. / 2.4～2.5GHz & 5.15～5.35GHz



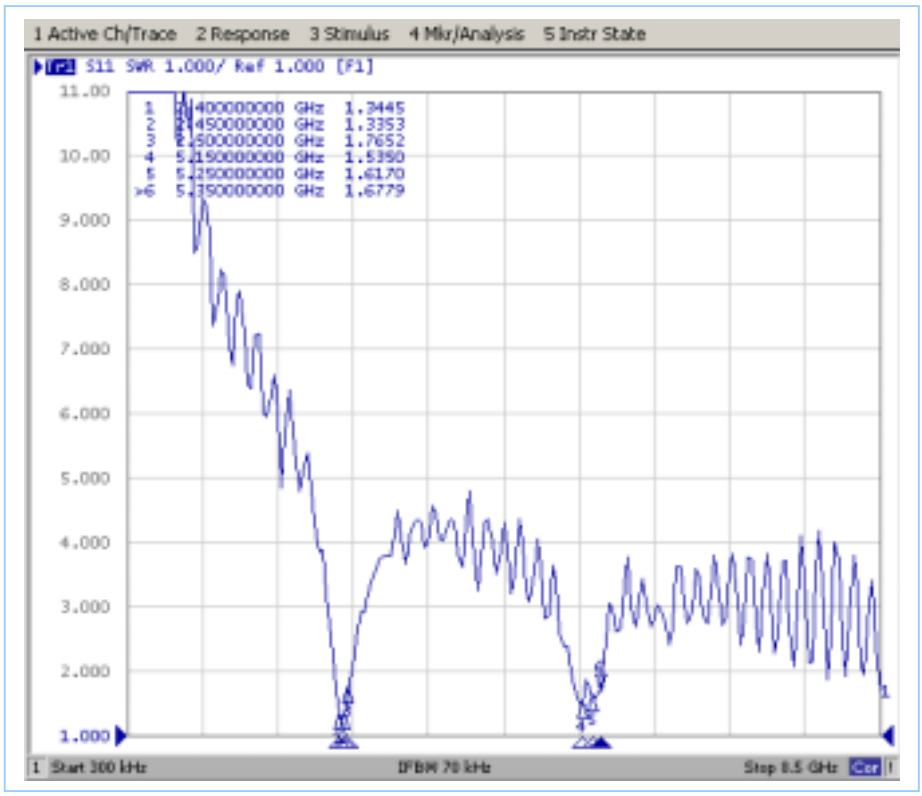
2.4 LCD Left Upper / PIFA ANT. / 2.4～2.5GHz



2.5 LCD Left Upper / PIFA ANT. / 5.15～5.35GHz

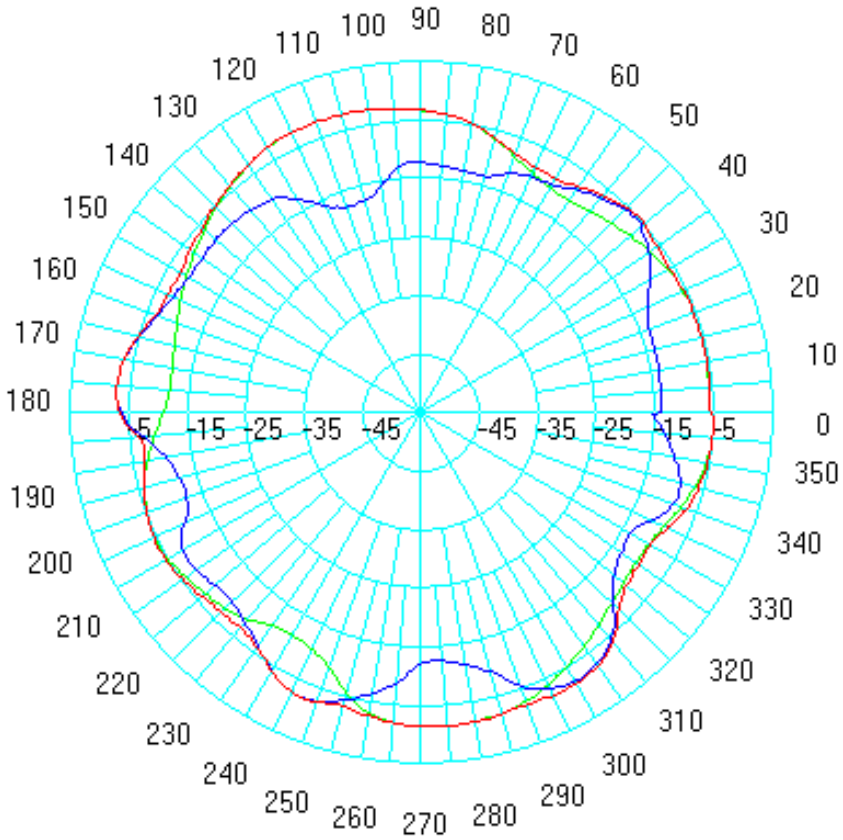


2.6 LCD Left Upper / PIFA ANT. / 2.4～2.5GHz & 5.15～5.35GHz



3. Gain & PATTERN – W/L / PIFA ANT.

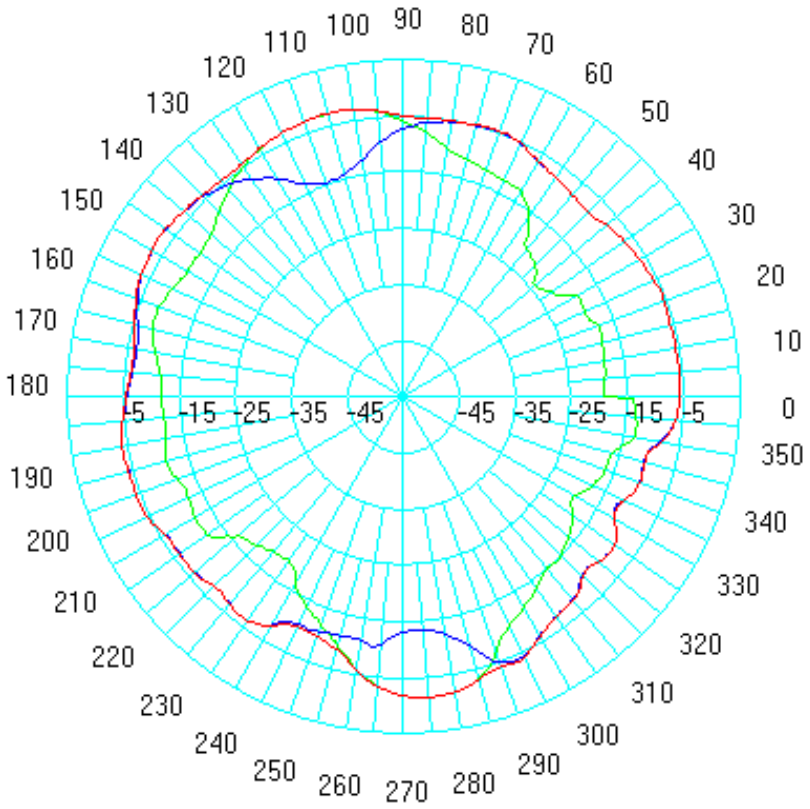
3.1.1 OPEN / 2.45GHz / LCD RIGHT UPPER



Gain data

Antenna	Gain of XY Plane(Azimuth)-Open		
	Frequency		2.45GHz
PIFA	H	Peak	-1.27
		Avg.	-6.52
	V	Peak	-2.19
		Avg.	-9.47
	H + V	Peak	-1.26
		Avg.	-4.9
		%>-5dBi	46.54%

3.1.2 OPEN / 5.25GHz / LCD RIGHT UPPER

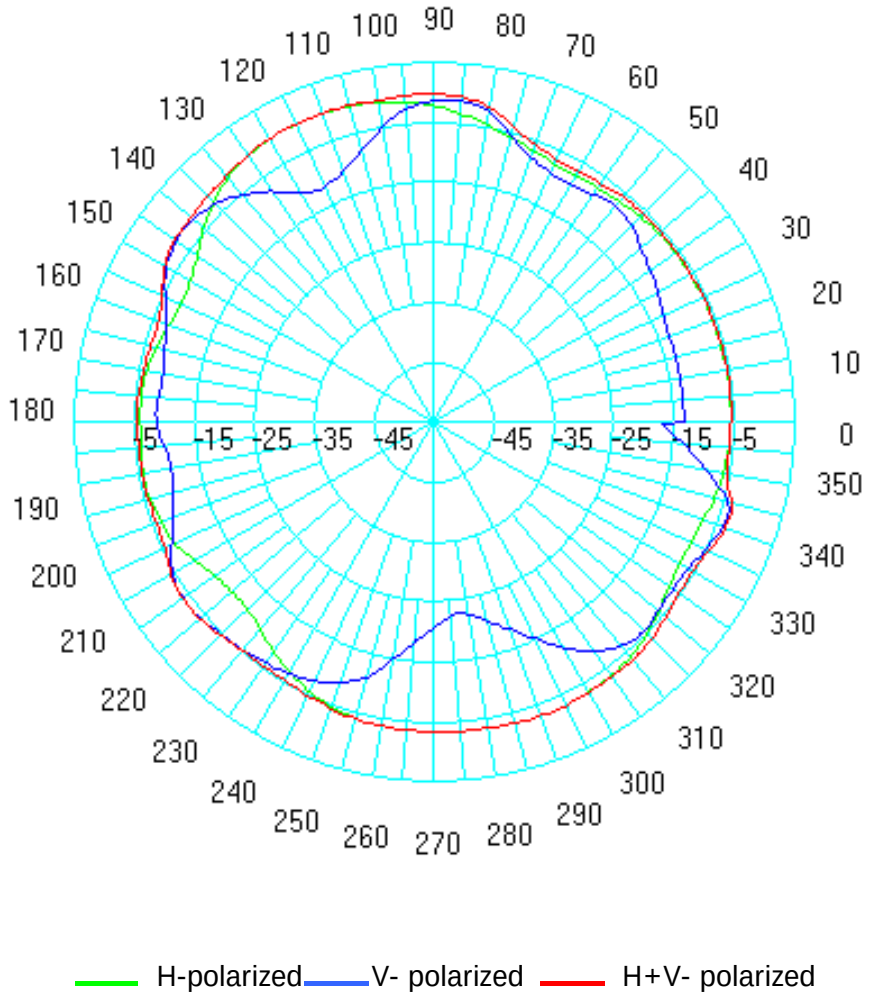


Gain data

Antenna	Gain of XY Plane(Azimuth)-Open		
	Frequency		5.25GHz
PIFA	H	Peak	-1.38
		Avg.	-9.36
	V	Peak	-2.95
		Avg.	-7.49
	H + V	Peak	-1.37
		Avg.	-5.77
		%>-5dBi	39.88%

4. Gain & PATTERN – W/L / PIFA ANT.

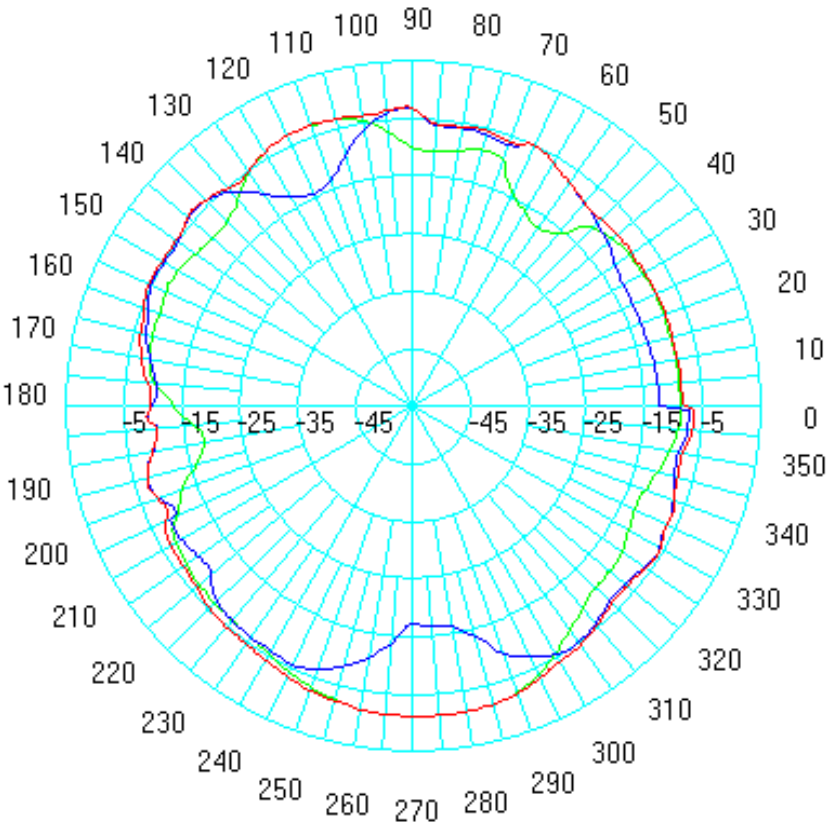
4.1.1 OPEN / 2.45GHz / LCD LEFT UPPER



Gain data

Antenna	Gain of XY Plane(Azimuth)-Open		
	Frequency		2.45GHz
PIFA	H	Peak	-0.13
		Avg.	-5.34
	V	Peak	-1.19
		Avg.	-8.94
	H + V	Peak	-0.12
		Avg.	-4.02
		%>-5dBi	54.29%

4.1.2 OPEN / 5.25GHz / LCD LEFT UPPER



H-polarized V- polarized H+V- polarized

Gain data

Antenna	Gain of XY Plane(Azimuth)-Open		
	Frequency		5.25GHz
PIFA	H	Peak	-1.11
		Avg.	-8.33
	V	Peak	-3.08
		Avg.	-8.64
	H + V	Peak	-1.11
		Avg.	-5.64
		%>-5dBi	40.17%

5.Technical Specification

- **Frequency (Beam Width) : 2.40 GHZ – 2.50 GHZ &**

  5.15 GHZ – 5.35 GHZ

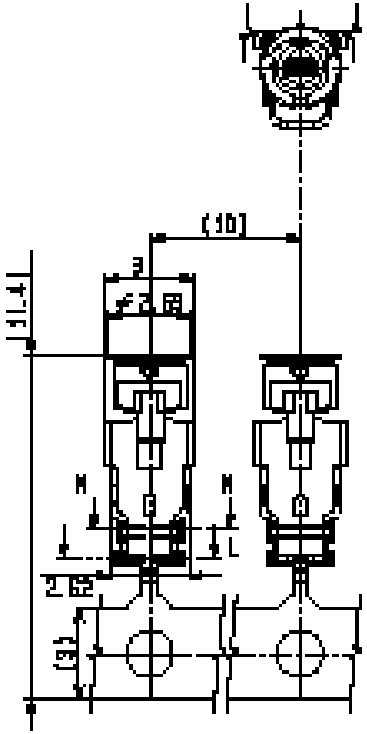
- **Return Loss : ≦ -10 dB**

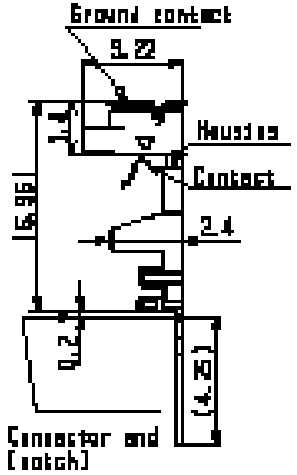
- **VSWR : ≦ 2.0**

- **Peak Gain : ≦ 3 dBi**

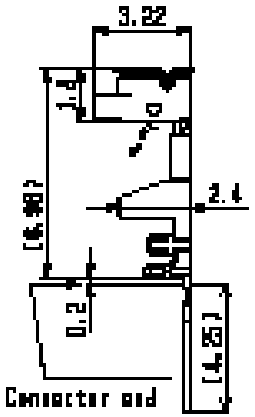
- **Average Gain : ≧ -5 dBi**

PART NO.
20278-**1R-**





Part No. 20274-101R-**
For hand tool
(with notch)



Part No. 20278-111R-**
For semi auto
termination machine
(without notch)

GENERAL TOLERANCE	
φ MAX.	±0.2
φ OVER MAX. 90	±0.3
90 OVER MAX. 120	±0.5
ANGLE	±2°

REV	ECN	BY	DATE	APP	REMARKS
4	22628	K.O	JUN/30/03	K.K	
3	21258	K.O	MAY/16/03	K.K	
2	21197	K.O	AUG/27/02	K.K	
1	21110	K.O	JUN/28/02	K.K	
0	21109	K.O	JUN/13/02		
RR	21148	K.O	JUN/24/02	K.K	
SD	21135	K.H	NOV/17/02	K.K	

REV. RECORD

REV	ECN	BY	DATE	APP	REMARKS
SERIES No.			2014		

DESIGNED BY K.Takayanagi DATE APR/13/03
CHECKED BY DATE
APPROVED BY K.Tanabashi DATE APR/13/03

CUSTOMER COPY

I-PEX Innovative and Reliable Electronics

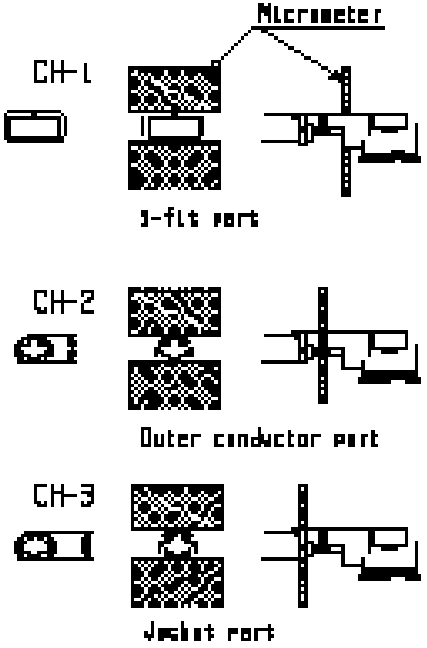
TITLE: MF series micro coaxial connector plug vertical

SCALE 5/1 UNIT mm DWG. No. 20278 SHEET 1/3 REV. 68

FORM REV.4

MAG T

Part No.	20278-1MR-01 / 20278-111R-01	20278-101R-11 / 20278-111R-19	20278-101R-32 / 20278-111R-32	20278-MUR-10 / 20278-111R-34
Applicable cable nominal diameter	2.09±0.1 1.36±0.1 1.16±0.1 φ0.81 φ0.65 φ0.4 MAX.0.70 (6)	1.55±0.1 0.625±0.1 1.7±0.1 φ1.13 φ0.68 φ0.4 MAX.0.70 (6)	2.09±0.1 1.35±0.1 1.18±0.1 φ1.32 φ0.65 MAX.0.70 (6)	2.09±0.1 RG178 B/U 1.36±0.1 1.16±0.1 φ1.4 φ0.81 MAX.0.70 (10)
Braided shield of Outer conductor [illegible]	Single / [illegible]	Single / [illegible]	Double / [illegible]	Single / [illegible]
P/N of Hand Tool / P/N of cord wire termination machine	<Under developing>	80387-033 / 50213-019	<Under developing>	<Under developing>
Sect. M-M	1.88 1.12	2.24 1.48	2.28 1.58	2.65 1.85
Sect. L-L	1.72 1.19	2.28 1.55	2.37 1.71	3.1 2.26
Crimp Height CH-1	Under developing	1.34~1.40	Under developing	Under developing
Crimp Height CH-2	Under developing	1.08~1.14	Under developing	Under developing
Crimp Height CH-3	Under developing	1.15~1.35	Under developing	Under developing



Crimp Height

GENERAL TOLERANCE	
6 MAX.	±0.2
6 OVER MAX.30	±0.3
30 OVER MAX.120	±0.5
ANGLE	±2°

DESIGNED BY DATE
CHECKED BY DATE
APPROVED BY DATE
CUSTOMER COPY

I-PEX Electronics and Metalworking Technology TOKYO, JAPAN

TITLE: MMF series micro coaxial connector plug vertical

SCALE 8/1 | UNIT mm | DWG. NO. 20278 | SHEET 2/3 | REV. 00

FORM REV.4

WAS T

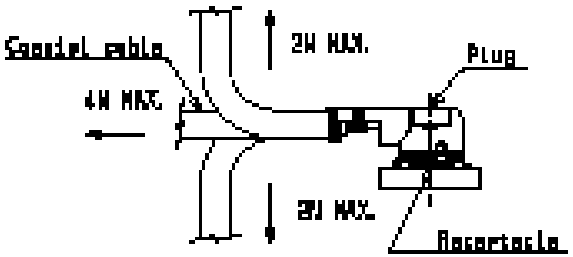
Notes

1. Material
 [1] Housing : PBT , UL94V-0 , black
 [2] Contact
  phosphor bronze
  gold plating
 [3] Ground contact
  phosphor bronze , gold plating
2. Packing : reel
3. Mating partner part No.
 : 20279-001E-01

1. 材 料
 [1] ハウジング:PBT, UL94V-0, 黒色
 [2] コンタクト
  :燐青銅
  :金メッキ
 [3] グランドコンタクト
  :りん青銅, 金メッキ
2. 梱包 : リール
3. 相手部品 part No.
 :20279-001E-01

4. Permissible load of cable at mating

コネクタかん合時のケーブルに対する荷重



5. Suggestions for mating & unmating operation.

5-1 Mating.
Please mate the connector straightly to vertical direction as much as possible, adjusting the mating axis of plug and receptacle.
An excessive slant angle mating may break the connector . Please don't do it.

5. コネクタかん合時および離脱時の注意

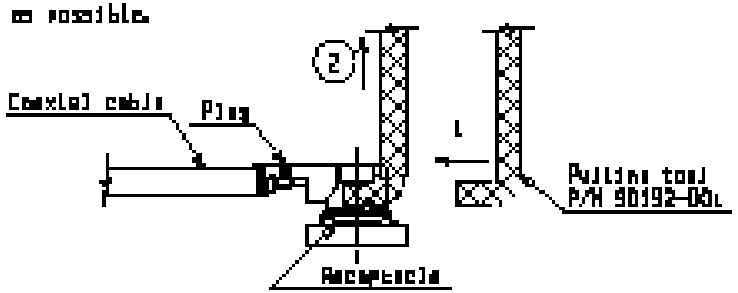
5-1 コネクタ挿入時
PlugとReceptacleのかん合軸を合わせてなるべく垂直に挿入して下さい。
無理な斜め挿入は行わないで下さい。
コネクタ破損の原因となりますので、無理なこじり操作は行わないで下さい。

5-2 Unmating.

5-2 コネクタ抜去時

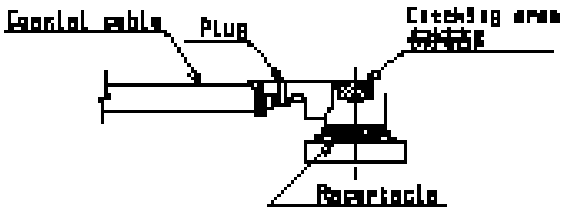
(1) In case of unmating by pulling tool.
Please use the pulling tool as the following drawing, and please pull plug to vertical direction as directly as possible.

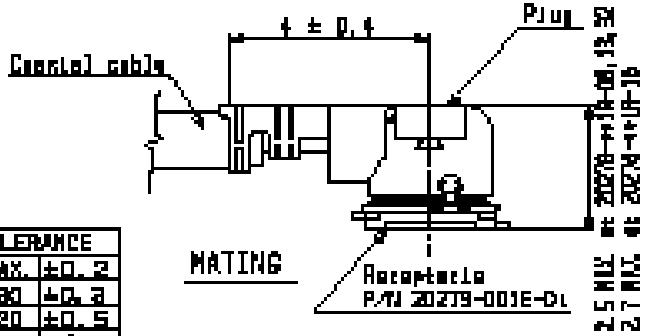
(1) 専用工具を用いる場合
下図のようにプルツールを使用し、なるべく垂直に抜いて下さい。



(2) In case of unmating directly by hand
Please catch the catching area of plug , and please pull plug to vertical direction as directly as possible.

(2) 手で抜く場合
下図の抜き部をつかみ、なるべく垂直に抜いて下さい。





GENERAL TOLERANCE	
6 MAX.	±0.2
6 OVER MAX.30	±0.3
30 OVER MAX.120	±0.5
ANGLE	±2°

DESIGNED BY	DATE	I-PEX Advanced Mechanical Drawing
CHECKED BY	DATE	TITLE: MHF series micro coaxial connector plug vertical
APPROVED BY	DATE	
CUSTOMER COPY		SCALE -/- · UNIT mm · DWG. No. 20278 · SHEET 1/1 · REV. A0

FORM REV.4 WAS T

TO: 高雄業務
From: 品質部門

KURABE INDUSTRIAL CO., LTD

SP3630M-X	FEP INSULATED HIGH-FREQUENCY COAXIAL CABLE (FWS 5022) UL 1979	PAGE	
PRODUCT STANDARD		ISSUED	11-12-2001
		REVISED	18-3-2002

1. SCOPE

This standard covers "FEP insulated High-Frequency coaxial cable".

These cable are approved by UL as Style 1979 AWM (File E-46702)

[UL1979:105℃, 30V]

Use: Internal wiring of Class 2 Circuits of Electronic Equipment.

2. CONSTRUCTION

Construction and dimensions of the cable are shown in Figure.1 and Table 1.

3. PERFORMANCE

Performance of the finished cable is shown in Table 2. The test methods are in accordance with applicable test methods described in JIS C 3005.

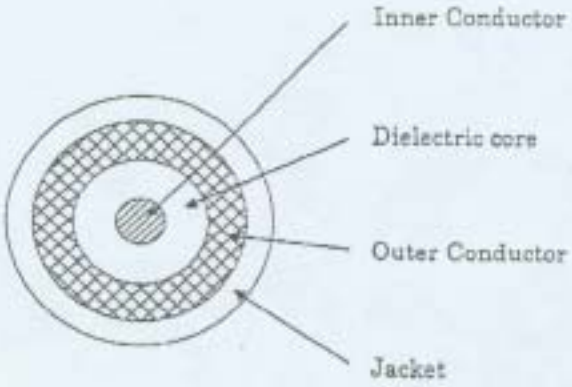


Figure 1.

NOTE :	MADE BY	T. Aki
	APPROVALS	T. Hasegawa

KURABE INDUSTRIAL CO., LTD

SP3830M-X	FEP INSULATED HIGH-FREQUENCY COAXIAL CABLE (FWS 5022) UL 1979	PAGE	
PRODUCT STANDARD		ISSUED	11-12-2001
		REVISED	18-3-2002

Table 1. Construction

Item		Unit	Specified Value
Inner Conductor	Material	—	Silver coated annealed copper wire
	Stranding	No./mm	7/0.08
	Dia.(approx.)		0.24
Dielectric Core	Material	—	FEP
	Thick.(nom.)	mm	0.22
	Dia.	mm	0.68±0.05
	Color	—	Natural
Outer Conductor	Material	—	Silver coated annealed copper wire
	Type	—	Braid (16/4/0.05)
	Dia.(approx)	mm	0.93
Jacket	Material	—	FEP
	Thick.(nom.)	mm	0.10
	Dia.	mm	1.13 +0.10/-0.06
	Color	—	Standard colors are white,black,blue,brown,and gray.

Table 2. Performance

Item	Unit	Specified Value	Note
Appearance	—	Faultless in visible	—
Inner conductor resistance	Ω/km	Max.597	at 20℃
Insulation resistance	MΩ·km	Min.1500	at 20℃
Dielectric strength	—	Dielectric core: No breakdown at AC1.5kV for 0.15sec.	Spark test
		Jacket: No breakdown at AC1.5kV for 0.15sec.	Spark test
		No breakdown at AC500V for 1min.	Outer conductor to inner conductor
Heat resistance for solder	—	Shrink or expansion of dielectric core are not more than 0.5mm	※
Capacitance	pF/m	nom. 98	at 1kHz
Characteristic impedance	Ω	50±2	TDR method
Attenuation (nom.)	dB/m	2.0	1.0GHz
		2.9	2.0GHZ
		3.6	3.0GHz
		4.2	4.0GHz
		4.7	5.0GHz
		5.2	6.0GHz

※ After immersion of dielectric core, 10mm into soldering pot which is 255℃±5℃ for 5 seconds, shrinkage or expansion of the dielectric core must not exceed 0.5mm.

NOTE :

MADE BY	T. Sakai
APPROVALS	[illegible]

계 약 번 호
CONTRACT NO : KTP3C2RFA

주 문 번 호
ORDER NO : ST3-99070KD

품 명
COMMODITY : TIN PLATE COIL

제 품 규 격
SPECIFICATION : JISG3303 SPTE-MR3

검 사 증 명 서
MILL TEST CERTIFICATE

수 요 가
CUSTOMER : HEMAR TRADING CO.LTD

주 문 자
SUPPLIER : SSANGYONG CORPORATION

포항종합제철주식회사
POSANG IRON & STEEL CO., LTD
(POHANG WORKS)

증명서 번호
CERTIFICATE NO : 991223-CSE-010-001

발 행 일 자
DATE OF ISSUE : DEC. 23. 1999

제 품 칫 수 DIMENSIONS	수량 (CRATE)	중 량 WEIGHT (KG)	제강번호 CHARGE NO	제품번호 PRODUCT NO	인장시험 TENSILE TEST YP	TS	El %	COATING WEIGHT Z G/M OUTER-SIDE SM	INNER-SIDE SM	HARD-NESS HR30T	C	Si	Mn	P	S	CHEMICAL COMPOSITION (%)					CEQ	REMARKS
0.25X920XC	1	4,100	68809	3TPL0274			0	3.24	3.21	59.0	200	TR	22	13	12						XX	
"	1	4,110	"	3TPL0275				"	"	"	"	"	"	"	"						XX	
"	1	3,930	"	3TPL0276				"	"	"	"	"	"	"	"						XX	
"	1	4,560	"	3TPL0277				"	"	"	"	"	"	"	"						XX	
"	1	4,310	68814	3TPL0278			0	3.07	3.11	54.9	200	TR	23	11	11						XX	
"	1	4,200	"	3TPL0279				"	"	"	"	"	"	"	"						XX	
*** SUB TOTAL (020)*	6			25,200 (KG)																		
0.30X908XC	1	4,170	70187	3TPL0336			0	3.17	3.34	57.5	300	S	23	15	8						XX	
"	1	3,420	"	3TPL0337				"	"	"	"	"	"	"	"						XX	
"	1	4,660	"	3TPL0338				"	"	"	"	"	"	"	"						XX	
"	1	4,310	"	3TPL0339				"	"	"	"	"	"	"	"						XX	
"	1	4,110	"	3TPL0340			0	3.09	3.26	55.4	"	"	"	"	"						XX	
"	1	4,170	"	3TPL0341				"	"	"	"	"	"	"	"						XX	
"	1	4,270	"	3TPL0342				"	"	"	"	"	"	"	"						XX	
"	1	4,060	"	3TPL0343				"	"	"	"	"	"	"	"						XX	
"	1	4,170	"	3TPL0344			0	3.18	3.31	54.2	"	"	"	"	"						XX	
"	1	4,270	"	3TPL0345				"	"	"	"	"	"	"	"						XX	
"	1	4,230	"	3TPL0346				"	"	"	"	"	"	"	"						XX	
"	1	3,850	"	3TPL0347				"	"	"	"	"	"	"	"						XX	
*** SUB TOTAL (030)*	12			49,690 (KG)																		
*** GRADE TOTAL ***	18			74,890 (KG)																		

SIGNATURE

SURVEYOR TO :

WE HEREBY CERTIFY THAT THE MATERIAL HEREIN HAS BEEN MADE BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND ALSO WITH THE REQUIREMENTS CALLED FOR BY THE ABOVE ORDER.

SIGNATURE

CHIEF OF PRODUCT INSPECTION SECTION

SUMIPAC 華友材料科技股份有限公司
Sumi-Pac Corp.
應用高分子製品事業部
台北市忠孝東路四段 285 號 6F
6F, 285 Chung Hsiao East Road, Section 4
Taipei, Taiwan, R.O.C.
TEL:(02)2776-2083 FAX:(02)2776-2084

TO : MRS.

DEC. 20, 2000

MATERIAL CERTIFICATION

WE CERTIFY HEREBY THAT SUMITUBE, MANUFACTURED BY " SUMIPAC CORPORATION " , DOES NOT CONTAIN ANY ODCs (OZONE-DEPLETED MATERIALS) , AND NEVER CONTAIN ODC's DURING MANUFACTURING PROCESS . BESIDES , SUMITUBE F32 CONFORM TO THE REQUIREMENT CONCERNING TOXICITY AS BELOW .

NAME OF PRODUCTS	SUMITUBE F32
MATERIAL GENERIC NAME	IRRADIATED FLEXIBLE HEAT-SHRINKABLE POLYOLEFIN TUBING (UL & CSA . 125 DEG. C AND 600V . VW-1 RATING)
MANUFACTURER	SUMIPAC CORPORATION
TOXICITY	SUMITUBE F32 CONTAINS FREE OF THE FOLLOWING MATERIALS : 1.TOXIC HEAVY METAL SOL. BARIUM (BA) SOL. LEAD (PB) SOL. CADMIUM (CD) SOL. ANTIMONY (SB) SOL. SELENIUM (SE) SOL. CHROMIUM (CR) SOL. MERCURY (HG) SOL. ARSENIC (AS) , AND ASBESTOS 2. BROMINATED MTAERIAL AS BELOW: PBBES PBBOS PBBS

HSI LING YU
MANAGER
SUMIPAC CORPORATION

TEL:(02)27521345
FAX:(02)27514226

SUMITOMO ELECTRIC INDUSTRIES LTD
IRRADIATED PRODUCTS DIV

E48762 (S)
(C–cont. from B card)

Irradiated flexible heat shrinkable polyolefin.

Sumitube F32	600	125	I	+	—	Yes
826 or Sumitube B2	600	125	I	+	—	Yes
Sumitube F5	600	125	I	+	—	Yes
939 or Sumitube F(Z)	600	105	I	+	—	Yes
940 or Sumitube F2(Z)	600	125	I	+	—	Yes
942 or Sumitube F4(Z)	300	125	I	+	—	Yes
958 or SM12	600	125	I	+	—	Yes
963 or SM23	600	125	I	+	—	Yes
938 or Sumitube F(TZ)	600	105	II	+	—	Yes

Report: February 16, 1973.

Replaces E48762C dated June 21, 1994.

(Cont. on D card)