

TO QUANTA COMPUTER CORPORATION
SPECIFICATION FOR APPROVAL

CUSTOMER DWG. NO./PART NO.: TBD REV.: N/A

DESCRIPTION: RF CABLE ASS'Y

FOXCONN PROD. NO.: WDAN-Q1KT5001 REV.: AX1

ATTACHMENTS:

- | | |
|---------------------------------------|---------------------|
| 1. RF CABLE ASSEMBLY DRAWING | <u>315-0900-097</u> |
| 2. DESIGN REVIEW FOR MATERIAL LIST... | <u>ML-097</u> |
| 3. PART DRAWING | <u>SGX0001-00</u> |
| | <u>703-3000-290</u> |
| | <u>014-0000-153</u> |
| | <u>040-0000-389</u> |

PLEASE RETURN TO US ONE COPY OF COVER PAGE OF THE
"SPECIFICATION FOR APPROVAL " WITH YOUR APPROVED SIGNATURES

APPROVED SIGNATURES		

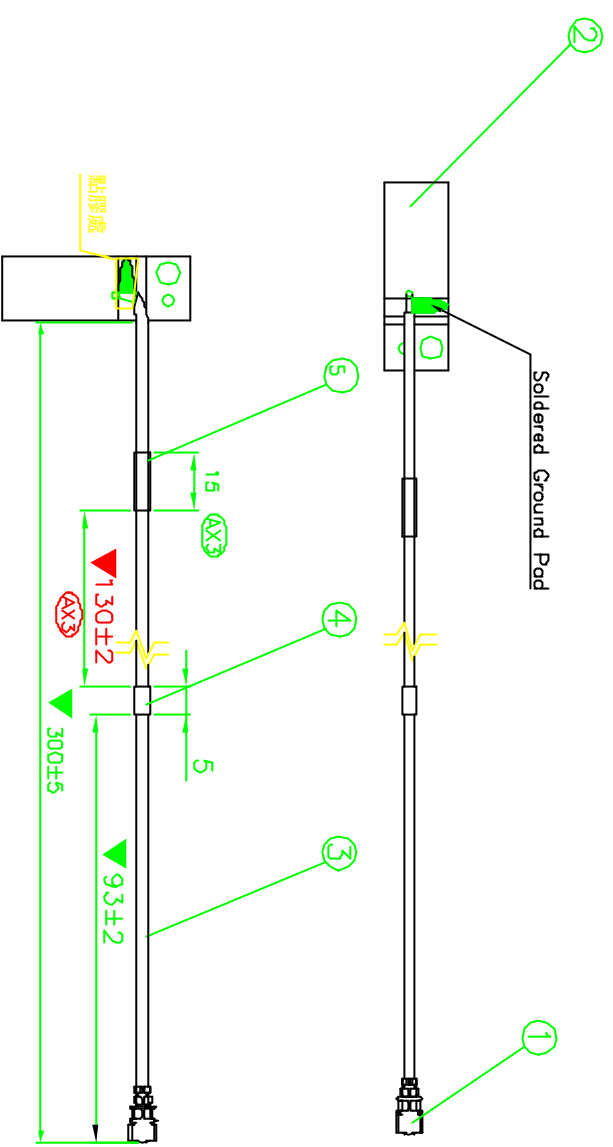
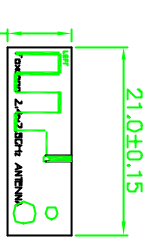


Hon Hai Precision Industry Co., Ltd.

2. TZU YU ST., TU-CHEN, TAIPEI HSIEN, 23606,
TAIWAN, R.O.C
TEL: (02) 2683466 (02) 2681477
TAIWAN, R.O.C
FAX: (02) 2687795 (02) 2683225
TLX. 32349 FOXCONNHH
UNIFORM INVOICE NUMBER: 04541302

Approved by: Sheng Checked by: _____ Prepared by: Paul Zhou

FILE NO.: SFA-097 REVISION NO.: AX1 DATE: Mac 5, 2002



- NOTES:
1. ALL DIMENSIONS SHALL BE INTERPRETED PER ANSI Y14.5M-1982.
 2. DIMENSIONS MARKED ▼ SHALL BE CHECKED.

REV	ECN. NO.	CAUSE	APPD.
AX1	IC021337	NEW ISSUE	J.C. YEN
AX2	IC024310	CHANGE R3, R18 TO ACETATE TAPE FOR FIXED POSITION	C.C. WANG
AX3			Sheng Tai

ITEM	DESCRIPTION	UNIT	QTY
⑤	ACETATE TAPE 15mm	mm	1
④	ACETATE TAPE	mm	5
③	30AWG SOLID COAXIAL CABLE	A/R	A/R
②	ANTENNA PCB	PCS	1
①	RF CONNECTOR	PCS	1

NAME(INTENDED USE)	QUANTA KT1 Left Antenna
PART NO.(INTENDED USE)	WDAN-Q1KT5001
APPD:	C.C. WANG
CHKD:	
DR:	Pqul Zhou
TITLE:	ANTENNA CABLE
DWG NO.:	315-0900-097

SCALE	SHEET	REV.
N/A	1/1	AX3

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DESIGN REVIEW FOR MATERIAL LIST

QUANTA P/N . TBD

NO : ML-097

DESCRIPTION . RF CABLE ASS'Y

PAGE . 1/1

ITEM	DESCRIPTION	SUPPLIER/AGENCY						QUANTA PART NUMBER	QUANTITY	REMARK
		SUPPLIER	SUPPLIER PART NO.	FOXCONN PART NO.	AVL	UL SUBMIT	CSA SUBMIT			
1	COAXIAL CABLE	HITACHI	OR HCM-40309/1	014-3031-153		N/A	N/A		A/R	
		ACTUONE	703-3000-290	703-3000-290		N/A	N/A		A/R	
2	RF CONN.	FOXCONN	SGX0001-00	SGX0001-00		N/A	N/A		1 PC	
3	PCB (LEFT)	FOXCONN	040-0001-893	040-0001-893		N/A	N/A		1 PC	

APPROVED BY: Sheng Tai 3/6/2002

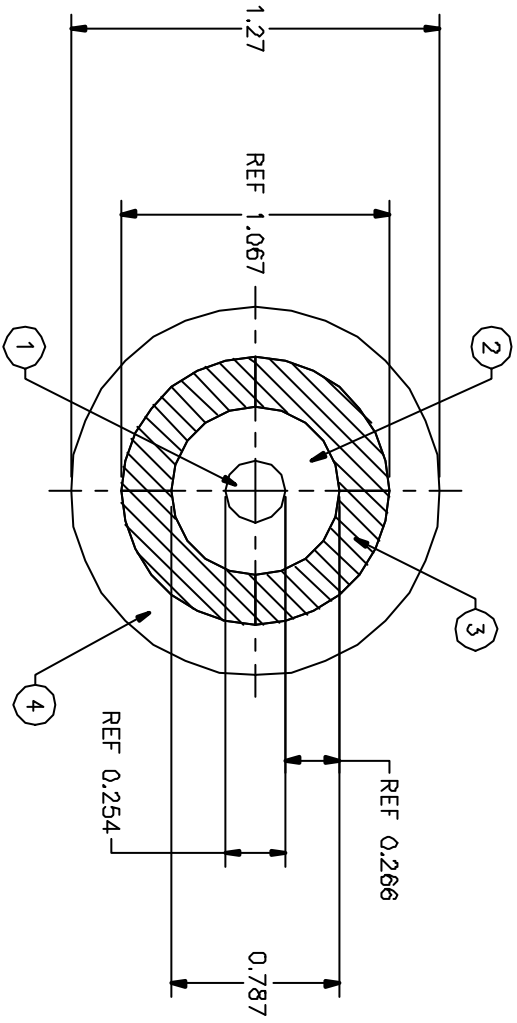
CHECKED BY: _____

PREPARED BY: Paul Zhou 3/5/2002

REV	ECN No.	APPL.	DATE
A	MC-01-0847	VINCENT	3/28/07
B	MC-01-0847	ALLEN	4/13/07
C	MC-01-1942		

ELECTRICAL	
IMPEDANCE	50 ohms
CAPACITANCE	30.5 pF/ft
CONDUCTOR RESISTANCE	860 ohms/KM
FREQUENCY (MHz)	ATTENUATION (dB/10ft)
500	3
1000	5
2000	8
3000	10

RATINGS	
TEMPERATURE:	200°C/105°C
VOLTAGE:	30V
UL STYLE:	1894/1943



NOTES

1. PRIMARY INSULATION CONCENTRICITY = 85% MIN
2. NN : JACKET COLOR CODE
 00--BLACK 01--BROWN 02--RED 03--ORANGE
 04--YELLOW 05--GREEN 06--BLUE 07--PURPLE
 08--GRAY 09--WHITE 10--CLEAR 99--NATURAL
3. BRAIDING COVERAGE TO BE 95 % MIN.
4. DIELECTRIC STRENGTH: 1.25KVAC/min
5. JACKET CONCENTRICITY = 80% MIN

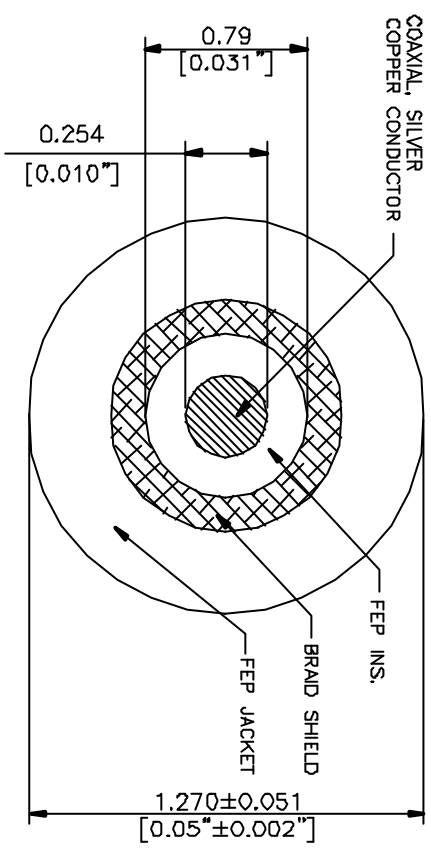
ITEM	QTY	PART No	DESCRIPTION
4	A/R	902-***1-*24	JACKET INSULATION, FEP #
3	A/R	904-44**-616	GENDS/ 44 AWG TINNED PLATED BRANDING
2	A/R	902-***1-*24	PRIMARY INSULATION, FEP #
1	A/R	904-30**-851	30 AWG, SOLID SILVER PLATED COPPER CLAD STEEL

BILL OF MATERIALS		UNITS		MATERIALS	
		mm		COAXIAL CABLE	FOXCONN
				SEE BOM	HON HAI PRESSION IND CO.,LTD
				SEE NOTES	
				703-30NN-290	

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DESIGN	CHECKED
DWG No.	703-3000-290
TITLE	RF CABLE
30 AWG, CONSTRUCTION	
SCALE	NONE
SHEET	1/1
REV.	C

REV.	EGN. NO	APPD
D	MC00176B	Lot 5/12/06

- NOTES:
1. CAPACTANCE: 30.5 pF/FT.
 2. CONDUCTOR RESISTANCE: 264 OHMS/M' AT 20°C.
 3. CONDUCTOR: 30 AWG,SOLID SP COPPERWELD 0.010" NOM. OD.
 4. INSULATION: 30AWG, FEP, 0.031" OD., 0.0107" AVG WALL
 5. BRAID SHIELD: 30AWG, 6 ENDS 44 AWG TINNED COPPER,95% MIN. COVERAGE.
 6. JACKET: 30AWG, FEP,0.050"±0.002" OD., 0.004" AVG WALL.
 7. TEMPERATURE RATING: -70°C~+200°C.
 8. NO MARKING.



014-3031-153	HITACHI, HCM-40309/1	30AWG	BLACK
FOXCONN P/N	VENDOR & P/N	AWG	JACKET COLOR
X±	X±		
.X±	.X±		
.XX± 0.05	.XX±		
.XXX±	.XXX±		
	UNITS [MM]		
	MAT'L		
	FINISH		
	QTY		
	NAME(INTENDED USE)		
	PART NO.(INTENDED USE)		
APPD: Sheng Tai			
CHKD:			
DR:Duke Du 1/17/2001			
	DWG NO: 014-0000-153		
	FOXCONN		
	HON HAI PRECISION IND. CO.,LTD.		
	TAIPEI, TAIWAN, R.O.C.		
	TITLE		
	COAXIAL CABLE		
	SCALE		
	N/A		
	SHEET		
	1/1		
	REV.		
	D		

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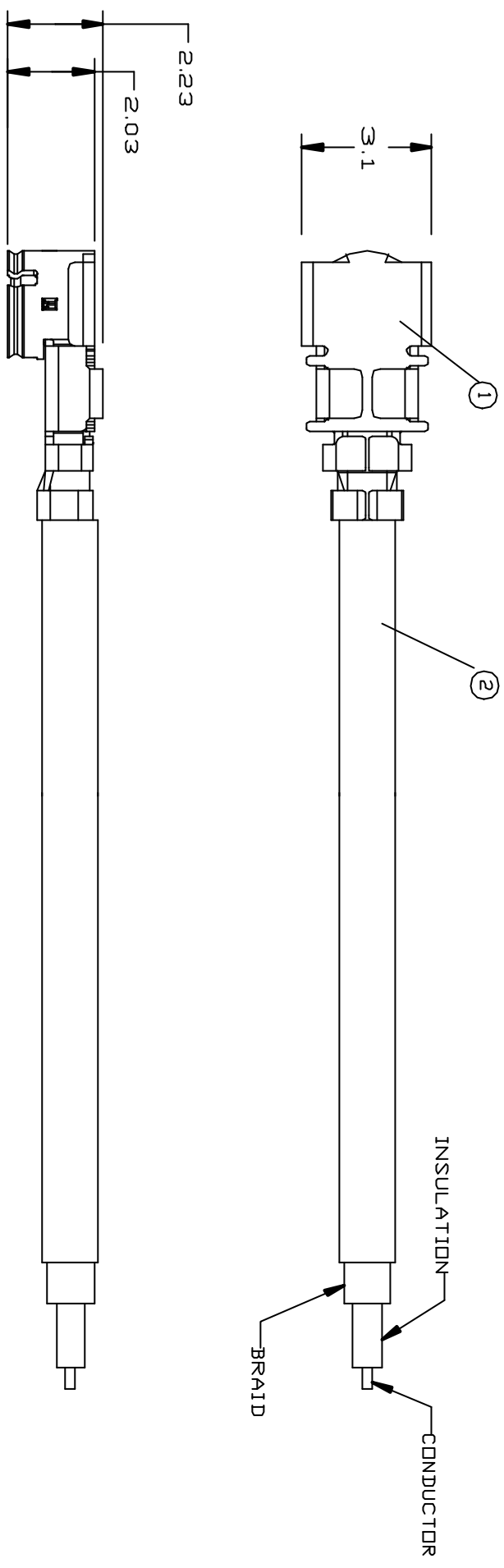
SCALE 10,000

GENERAL SPECIFICATION:

1. CONTACT RESISTANCE: 20 MILLIOHMS MAX.
2. INSULATION RESISTANCE: 500 MEGOHMS MIN.
3. WITHSTAND VOLTAGE 200 V_{AC}
4. CONNECTOR V.S.W.R.: 1.3 OR LESS AT DC TO 3 GHz
5. OPERATION TEMPERATURE: -40°C TO 90°C

RF CABLE ASSEMBLY MATERIAL:

1. CONTACT: COPPER ALLOY, GOLD PLATING
2. HOUSING: THERMOPLASTIC, UL 94V-0 RATED
3. METAL SHELL: COPPER ALLOY, SILVER PLATING
4. CABLE: 30AWG&32AWG SOLID COAXIAL CABLE.
5. PART NO. MATRIX: SGX0001-00



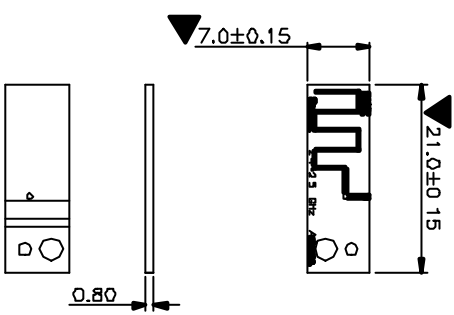
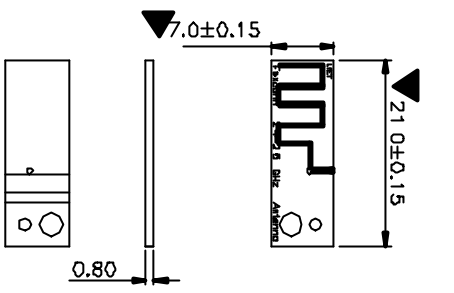
ITEM	PART NAME	FOXCONN PART NO.	EQUIVALENT VENDOR & PART NO.	Q'TY
2	WIRE	703-3000-291	30AWG SLD COAXIAL CABLE	A/R
1	RF CONN.	SGX0001-00	FOXCONN: EP01-025-001	1 PCS

X. ±	X. ±	UNITS	NAME/INTENDED USE	FOXCONN
X ± 0.1	.X ±	MAT'L	SGX0001-00	HON HAI PRECISION IND. CO., LTD. TAPPEI, TAIWAN, R.O.C.
.XX ± 0.1	.XX ±	SEE NOTES	PART NO./INTENDED USE	TITLE: RF CABLE ASSEMBLY
.XXX ±	.XXX ±	FINISH	SGX0001-00	
		Q'TY	APPD: D. KD	DWG NO: EP01-025-001
			CHKD:	SCALE SHEET REV.
			DR: D. KD 12/2/00	10:1 1/1 X2

REV.	ECN. NO.	APPD.
X2		D. KD

NOTES:

1. ALL DIMENSIONS SHALL BE INTERPRETED PER ANSI Y14.5M-1982.
2. DIMENSIONS MARKED ▼ SHALL BE CHECKED.
3. PCB'S MATERIAL : FR-4, THICKNESS 0.8MM.



REV.	EQU. NO.	APPD.
X1		

K.±	K.±	UNITS	mm
x± ±0.2	x±	MATL	
.xx± ±0.1	.xx±	FINISH	
.xxx±	.xxx±		

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NAME(INTENDED USE)	FOR QUANTA KTS
PART NO.(INTENDED USE)	
APPR:	Sheng Tai 3/5/06
CHKD:	
DR/Paul Zhou	3/5/02

DWG NO.:	040-0000-893
SCALE	N/A
SHEET	1/1
REV.	X1

ITEM	P/N	TYPE
1	040-0001-893	I
2	040-0002-893	II

TITLE: PCB ANTENNA

FOXCONN
HON HAI PRECISION IND. CO., LTD
TAIPEI, TAIWAN, R.O.C.

NOTES:

▲ UL MARKING.

2. RATING : UL 224, 125°C, 600V, VW-1
CSA, 125°C, 600V, OFT

3. DIELECTRIC STRENGTH : 500 V/MIL

4. VOLUME RESISTIVITY : 10^{14} OHM-CM.

5. TENSILE STRENGTH : 10.3 MPa (1500 psi) MIN..

6. PART NO. MATRIX: 080- A B CC - 620

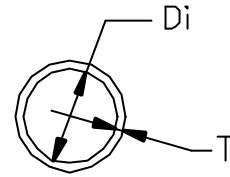
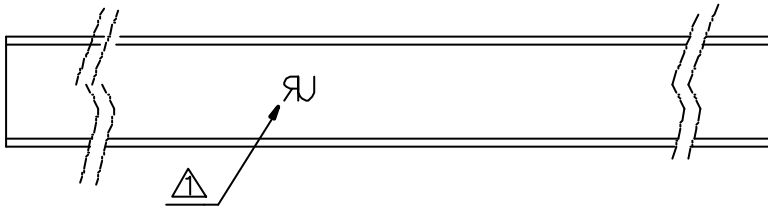
A: EQUIVALENT VENDER & PRODUCT

- A=0: SUMITUBE F2-*
- A=1: FAVORTRON FVC-2-*
- A=2: SUMITUBE F32-*
- A=3: CHANGBAO 102-*
- A=4: SUMITUBE F4-*
- A=5: HB T*φ

CC: INSIDE DIMENSION ID.

- B: COLOR
- B=0: BLACK.
- B=1: WHITE.
- B=2: RED.
- B=3: BLUE.
- B=4: GREEN.
- B=5: YELLOW.
- B=6: ORANGE.
- B=7: PURPLE.
- B=8: GRAY


REV.	ECN. NO.	APPD.
A	HC95121	JEFF C. 1/20/95
B	HC96190	C. CHEN 2/7/96
C	HC96670	C. CHEN 5/7/96
D	HC961695	CHARLES
E	HC971231	C. CHEN 6/18/97
F	MC991918	LAI 5/31/99
G	MC993360	LAI 10/16/99
H	MCD01163	LAI 4/11/2000
K		

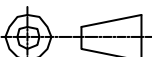


X.±	X°.±	UNITS mm	NAME(INTENDED USE)	FOXCONN HON HAI PRECISION IND. CO.,LTD. TAIPEI, TAIWAN, R.O.C.
.X± 0.2	.X°.±	MAT'L	PART NO.(INTENDED USE)	
.XX± 0.15	.XX°.±	FINISH	APPD: H.C.ZHENG 6/15'2001	TITLE: HEAT SHRINKABLE TUBE
.XXX±	.XXX°.±		Q'TY	CHKD:
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REV.	ECN.	NO.	APPD

080-**25-620	0.8	0.13	0.4	0.20
080-**24-620	14.0	0.30	7.0	0.64
080-**23-620	1.0	0.20	0.5	0.33
080-**22-620	50.0	0.40	25.0	0.87
080-**21-620	38.0	0.40	19.0	0.87
080-**20-620	30.0	0.40	15.0	0.87
080-**19-620	25.0	0.40	12.5	0.87
080-**18-620	22.0	0.40	11.0	0.77
080-**17-620	20.0	0.35	10.0	0.77
080-**16-620	18.0	0.35	9.0	0.77
080-**15-620	16.0	0.30	8.0	0.69
080-**14-620	12.0	0.25	6.0	0.56
080-**13-620	11.0	0.25	5.5	0.56
080-**12-620	10.0	0.25	5.0	0.56
080-**11-620	9.0	0.25	4.5	0.56
080-**10-620	8.0	0.25	4.0	0.56
080-**09-620	7.0	0.25	3.5	0.56
080-**08-620	6.0	0.25	3.0	0.56
080-**07-620	5.0	0.25	2.5	0.56
080-**06-620	4.0	0.25	2.0	0.44
080-**05-620	3.5	0.25	1.75	0.44
080-**04-620	3.0	0.25	1.50	0.44
080-**03-620	2.5	0.25	1.25	0.44
080-**02-620	2.0	0.25	1.00	0.44
080-**01-620	1.5	0.20	0.75	0.36

Part Number 	Inside Diameter, Di (min.)	Wall Thickness, T (nomi.)	Inside Diameter, Di (max.)	Wall Thickness, T (min.)
	As Supplied		After Shrinkage	

X.±	X°.±	UNITS mm	NAME(INTENDED USE)	FOXCONN		
.X± 0.2	.X°.±	MAT'L	PART NO.(INTENDED USE)	HON HAI PRECISION IND. CO.,LTD. TAIPEI, TAIWAN, R.O.C.		
.XX± 0.15	.XX°.±	FINISH		TITLE:	HEAT SHRINKABLE TUBE	
.XXX±	.XXX°.±		Q'TY	APPD:	DWG NO.:	
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			CHKD:			
			DR: H.C.ZHENG 6/15'2001			SCALE
				N/A	2/2	K

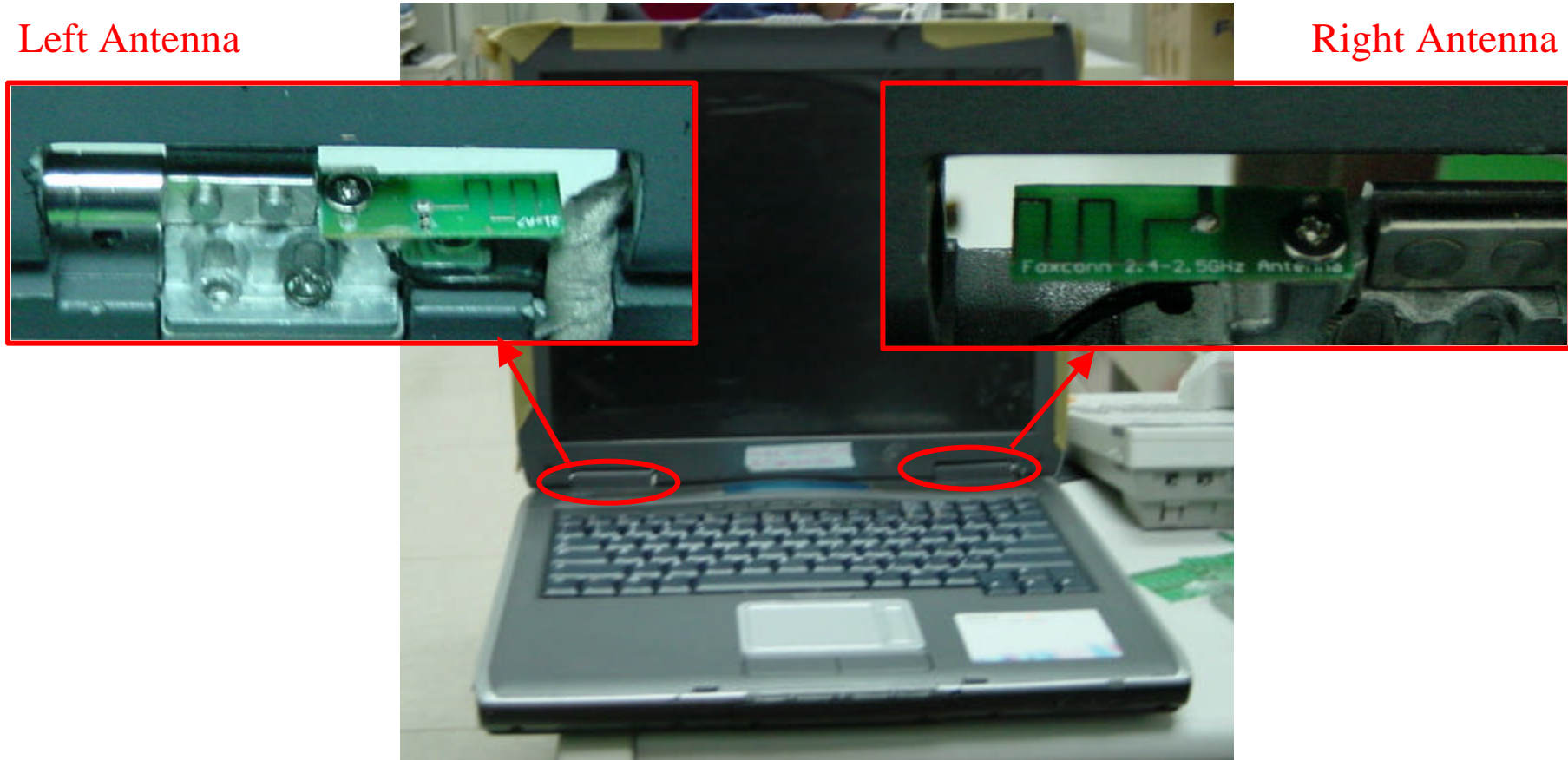
Quanta KT1,5 Antenna Test Report

Sheng Tai

Antenna Location

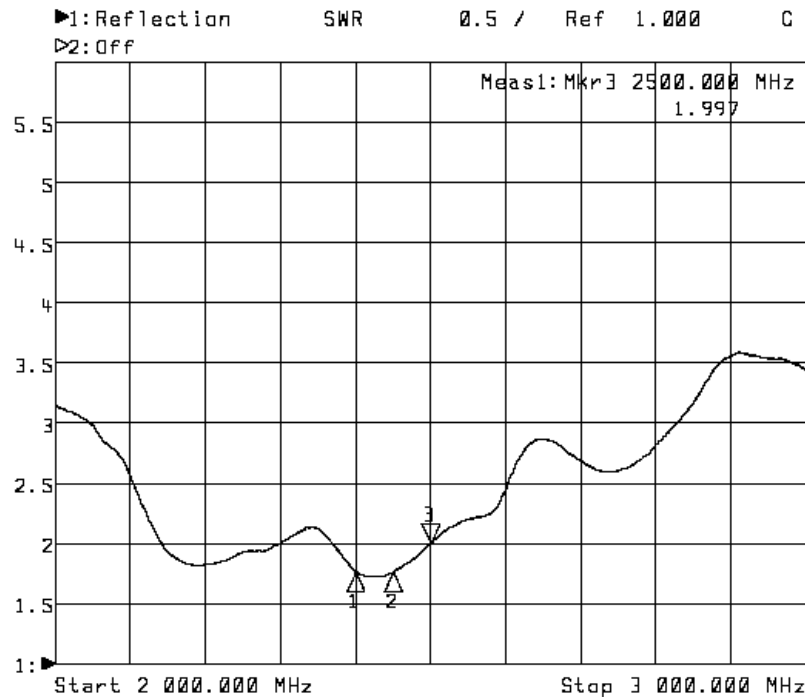
Left Antenna

Right Antenna



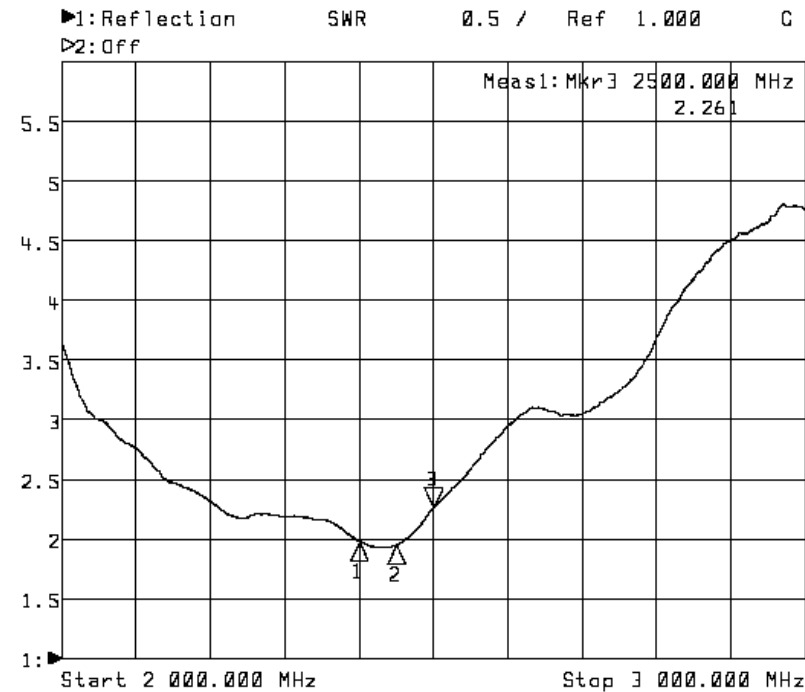
VSWR For Left 14" LCD

1. LCD Open



1: Mkr (MHz)	2: Mkr (MHz)	dB
1: 2400.0000		1.761
2: 2450.0000		1.760
3: 2500.0000		1.997

2. LCD Close

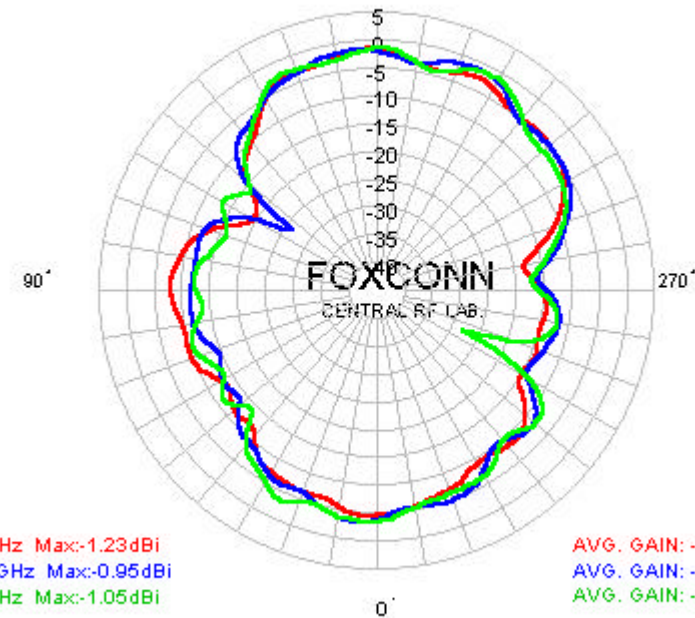
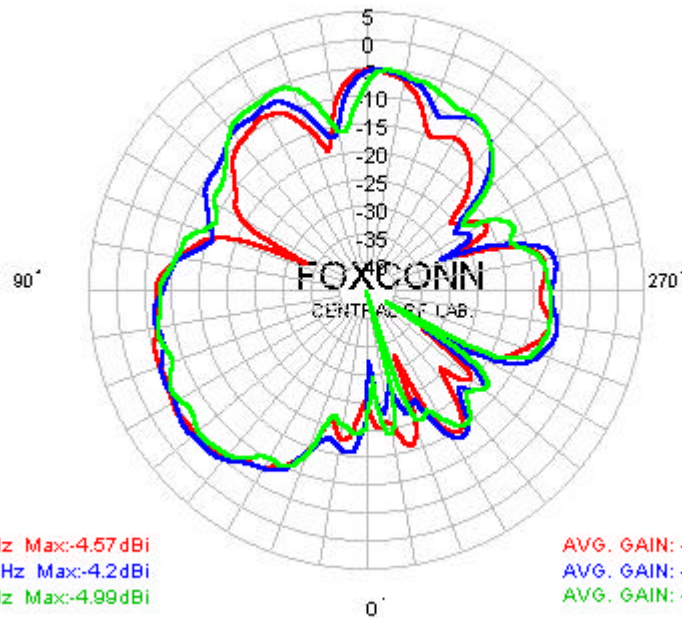


1: Mkr (MHz)	2: Mkr (MHz)	dB
1: 2400.0000		1.979
2: 2450.0000		1.948
3: 2500.0000		2.261

XY Plane Radiation Pattern For Left 14" LCD (Open)

HORIZONTAL POLARIZATION

VERTICAL POLARIZATION



Average Gain For Left 14" LCD Antenna (Open)

(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-10.51	-9.77	-9.98
XY--V	-6.70	-6.16	-6.21
Total Average Gain	-5.19	-4.59	-4.69

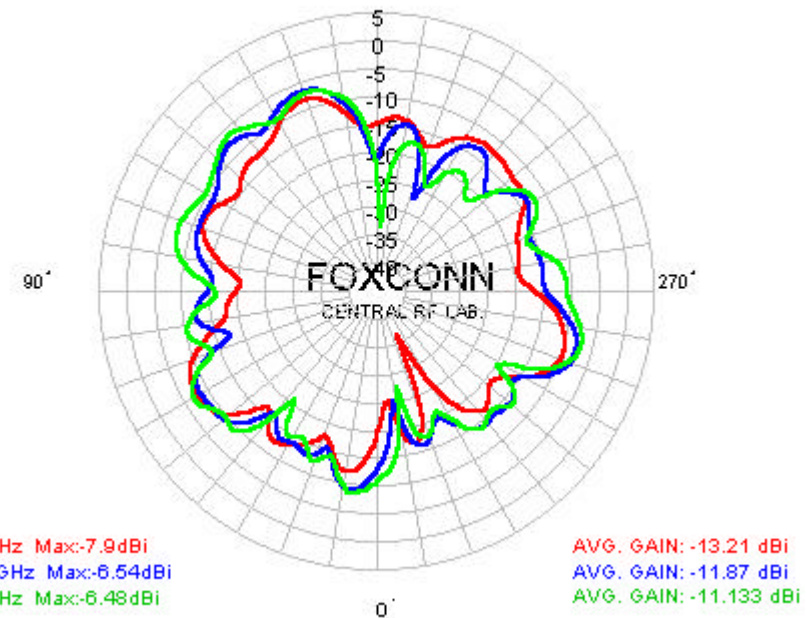
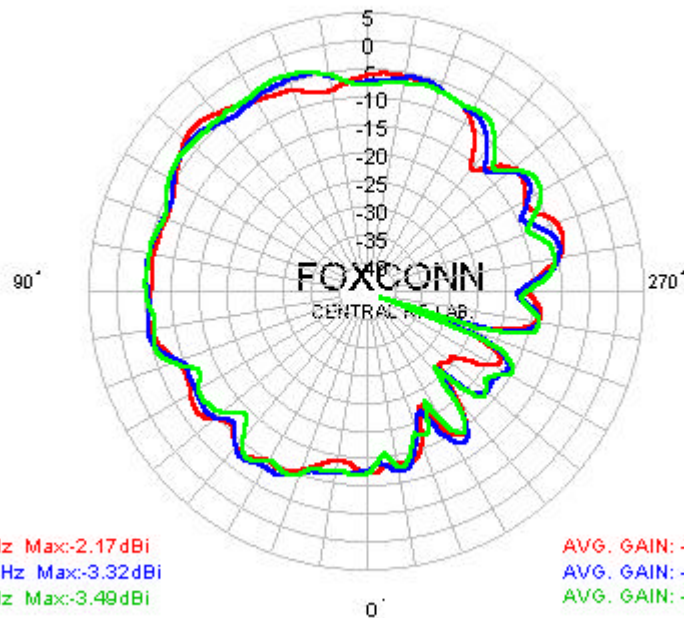
PEAK GAIN

(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-4.57	-4.20	-4.99
XY--V	-1.23	-0.95	-6.00

XY Plane Radiation Pattern For Left 14" LCD (Close)

HORIZONTAL POLARIZATION

VERTICAL POLARIZATION



Average Gain For Left 14" LCD Antenna (Close)

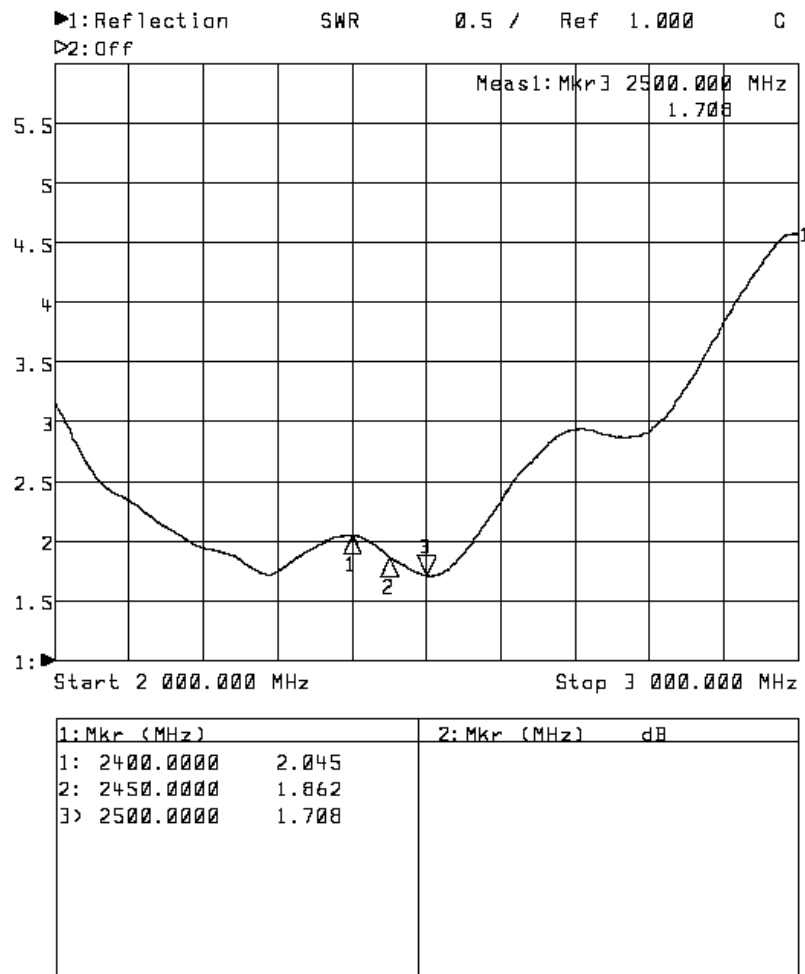
(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-8.34	-8.17	-8.10
XY--V	-13.21	-11.87	-11.13
Total Average Gain	-7.11	-6.63	-6.35

PEAK GAIN

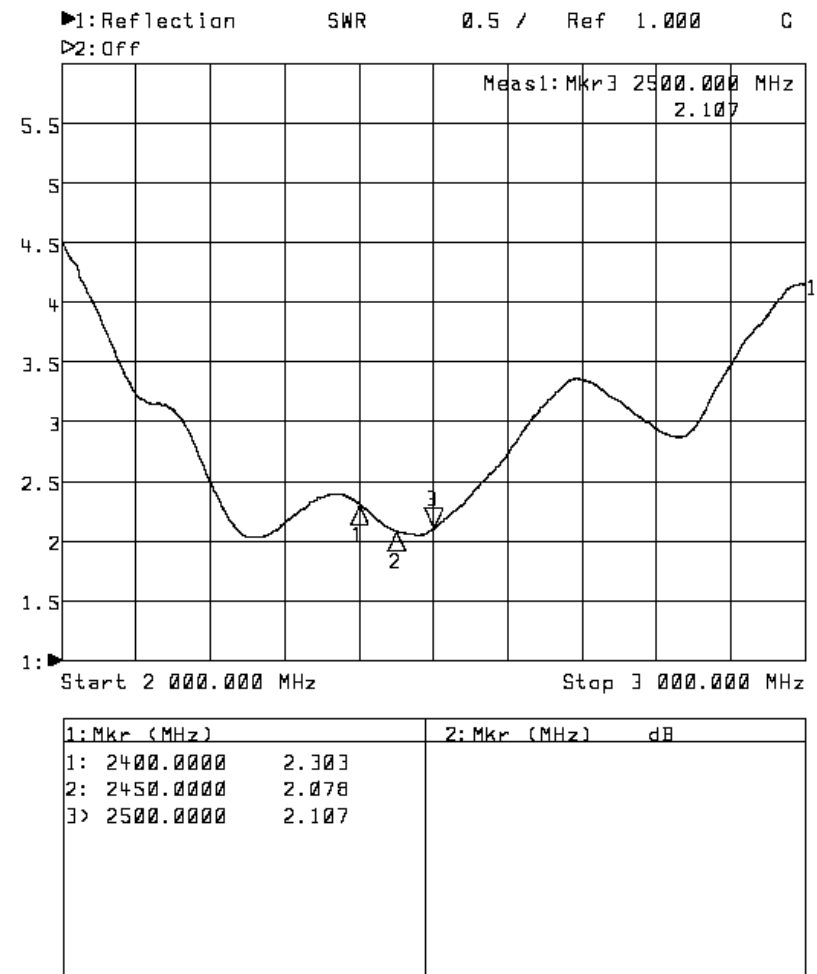
(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-2.17	-3.32	-3.49
XY--V	-7.90	-6.54	-6.48

VSWR For Left 15" LCD

1. LCD Open



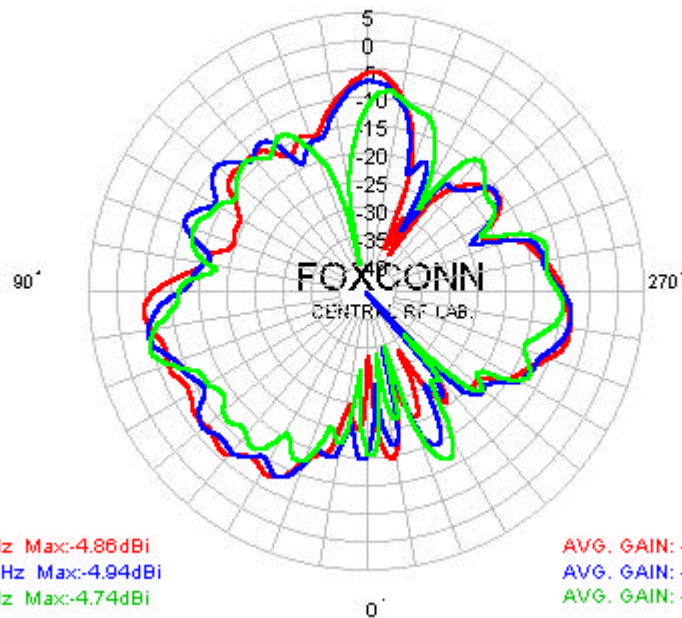
2. LCD Close



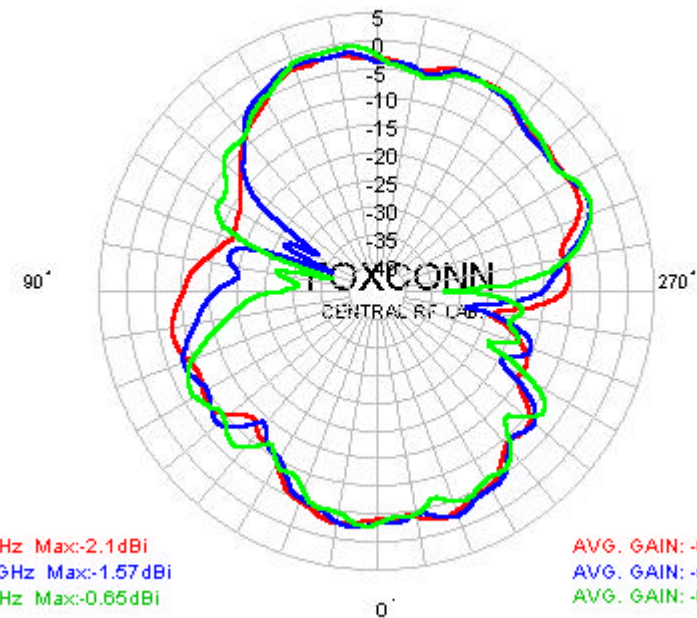
XY Plane Radiation Pattern For Left 15" LCD (Open)

HORIZONTAL POLARIZATION

VERTICAL POLARIZATION



AVG. GAIN: -11.26 dBi
AVG. GAIN: -11.556 dBi
AVG. GAIN: -12.902 dBi



AVG. GAIN: -6.052 dBi
AVG. GAIN: -5.937 dBi
AVG. GAIN: -6.032 dBi

Average Gain For Left 15" LCD Antenna (Open)

(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-11.26	-11.55	-12.90
XY--V	-6.05	-5.93	-6.03
Total Average Gain	-4.91	-4.88	-5.22

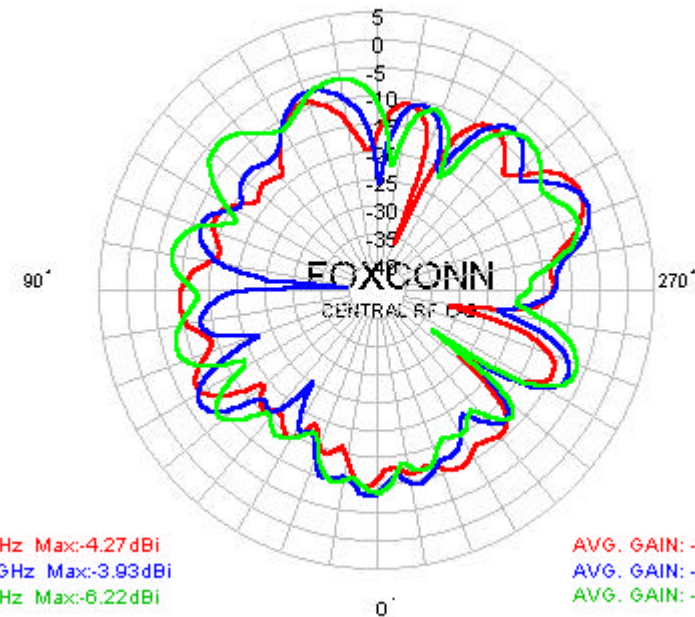
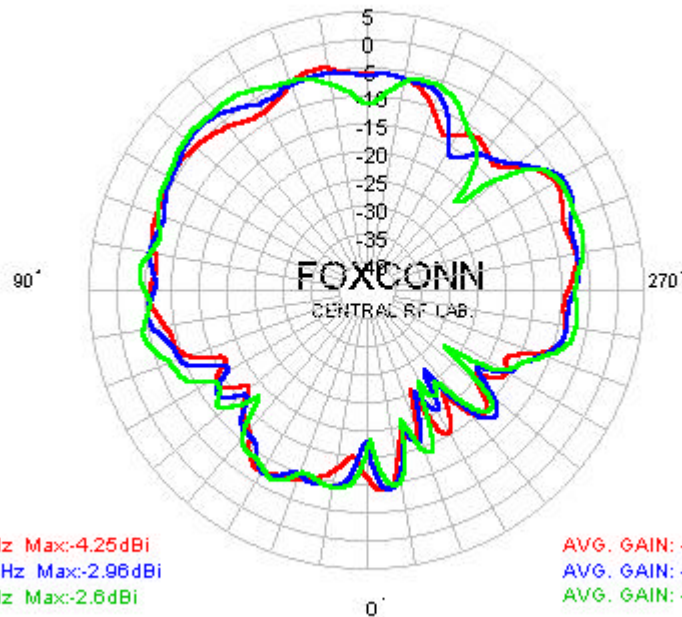
PEAK GAIN

(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-4.86	-4.94	-4.74
XY--V	-2.10	-1.57	-0.65

XY Plane Radiation Pattern For Left 15" LCD (Close)

HORIZONTAL POLARIZATION

VERTICAL POLARIZATION



Average Gain For Left 15" LCD Antenna (Close)

(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-8.35	-7.80	-7.23
XY--V	-11.55	-10.86	-10.15
Total Average Gain	-6.65	-6.06	-5.44

PEAK GAIN

(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-4.25	-2.96	-2.60
XY--V	-4.27	-3.93	-6.22

Summary Of Total Average Gain

14" LCD Open (Left)				15" LCD Open (Left)			
(dBi)	2400 MHz	2450 MHz	2500 MHz	(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-10.51	-9.77	-9.98	XY-H	-11.26	-11.55	-12.90
XY--V	-6.70	-6.16	-6.21	XY--V	-6.05	-5.93	-6.03
Total Average Gain	-5.19	-4.59	-4.69	Total Average Gain	-4.91	-4.88	-5.22
14" LCD Close (Left)				15" LCD Close (Left)			
(dBi)	2400 MHz	2450 MHz	2500 MHz	(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-8.34	-8.17	-8.10	XY-H	-8.35	-7.80	-7.23
XY--V	-13.21	-11.87	-11.13	XY--V	-11.55	-10.86	-10.15
Total Average Gain	-7.11	-6.63	-6.35	Total Average Gain	-6.65	-6.06	-5.44
14" LCD Open (Right)				15" LCD Open (Right)			
(dBi)	2400 MHz	2450 MHz	2500 MHz	(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-10.91	-10.57	-11.13	XY-H	-9.92	-10.49	-11.83
XY--V	-6.77	-6.33	-6.35	XY--V	-6.59	-6.26	-5.55
Total Average Gain	-5.35	-4.94	-5.10	Total Average Gain	-4.93	-4.87	-4.63
14" LCD Close (Right)				15" LCD Close (Right)			
(dBi)	2400 MHz	2450 MHz	2500 MHz	(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-12.35	-12.82	-13.86	XY-H	-12.99	-12.68	-12.15
XY--V	-9.18	-8.29	-9.68	XY--V	-8.21	-8.15	-8.16
Total Average Gain	-7.47	-6.98	-8.28	Total Average Gain	-6.96	-6.84	-6.70

Summary Of Peak Gain

14" LCD Open (Left)				15" LCD Open (Left)			
(dBi)	2400 MHz	2450 MHz	2500 MHz	(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-4.57	-4.20	-4.99	XY-H	-4.86	-4.94	-4.74
XY--V	-1.23	-0.95	-6.00	XY--V	-2.10	-1.57	-0.65
14" LCD Close (Left)				15" LCD Close (Left)			
(dBi)	2400 MHz	2450 MHz	2500 MHz	(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-2.17	-3.32	-3.49	XY-H	-4.25	-2.96	-2.60
XY--V	-7.90	-6.54	-6.48	XY--V	-4.27	-3.93	-6.22
14" LCD Open (Right)				15" LCD Open (Right)			
(dBi)	2400 MHz	2450 MHz	2500 MHz	(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-4.24	-2.64	-2.84	XY-H	-2.80	-2.80	-3.51
XY--V	-2.27	-1.86	-1.51	XY--V	-1.73	-1.97	-1.89
14" LCD Close (Right)				15" LCD Close (Right)			
(dBi)	2400 MHz	2450 MHz	2500 MHz	(dBi)	2400 MHz	2450 MHz	2500 MHz
XY-H	-6.65	-7.22	-8.09	XY-H	-6.96	-7.85	-5.89
XY--V	-4.84	-3.91	-6.17	XY--V	-3.44	-2.98	-2.58