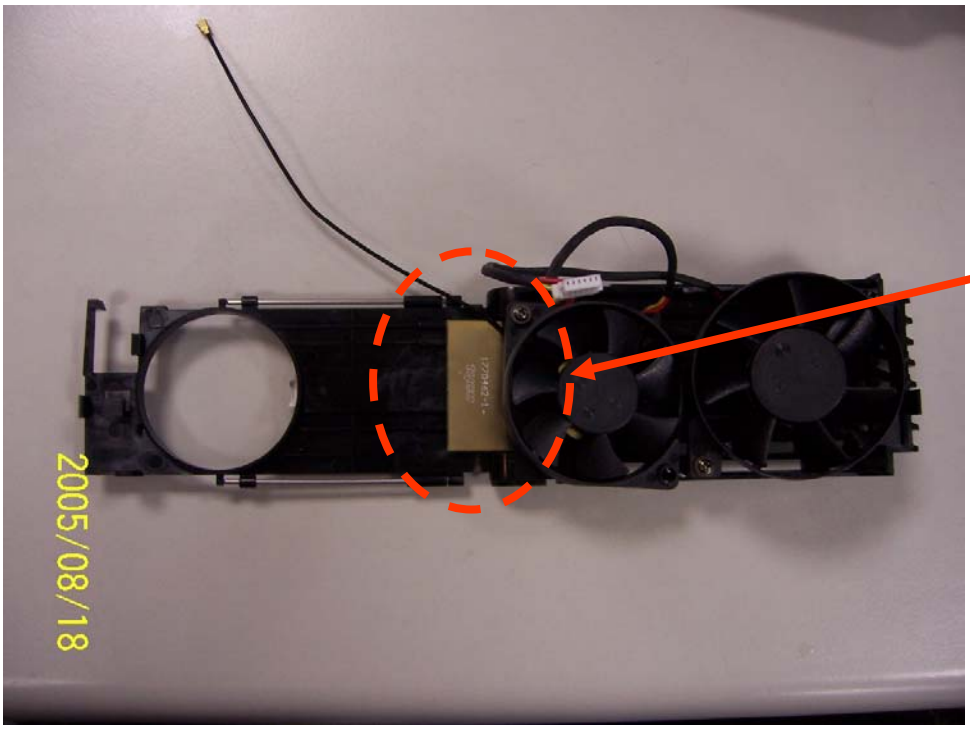
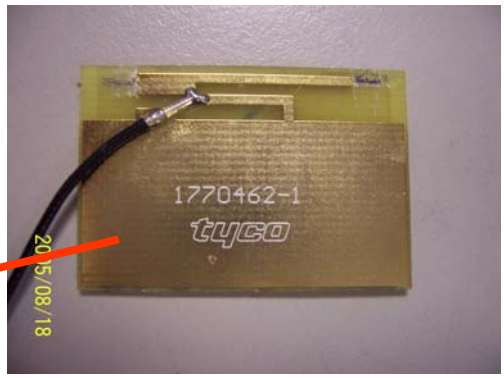
Antenna Product Spec.

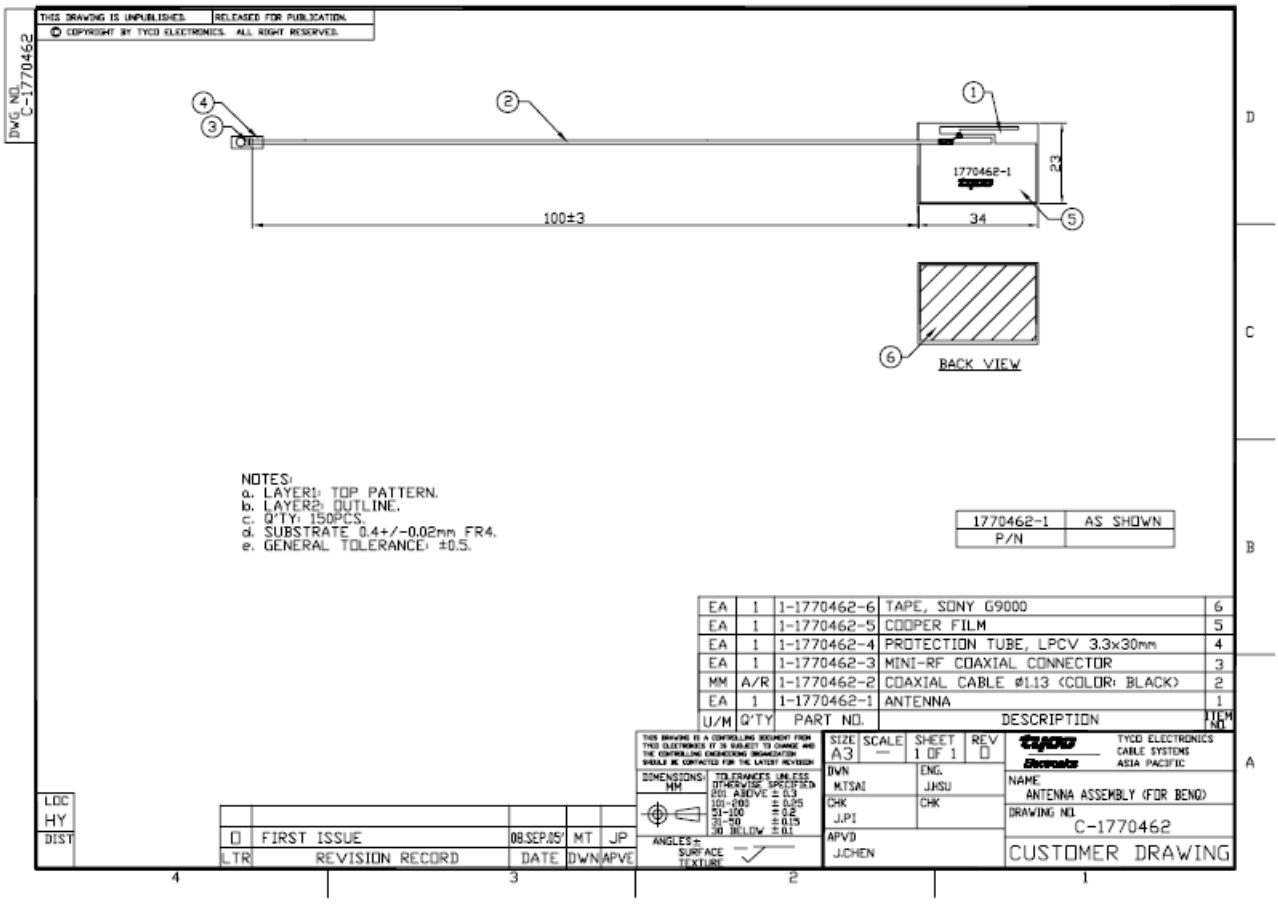
Customer Name	**BenQ Corporation**		
Date	2005/11/24		
Customer P/N			
Tyco P/N	1770462-1		
Description	**802.11 A+B+G WLAN Antenna**		
Version	2A	**Doc. Version**	3

1. Antenna Description



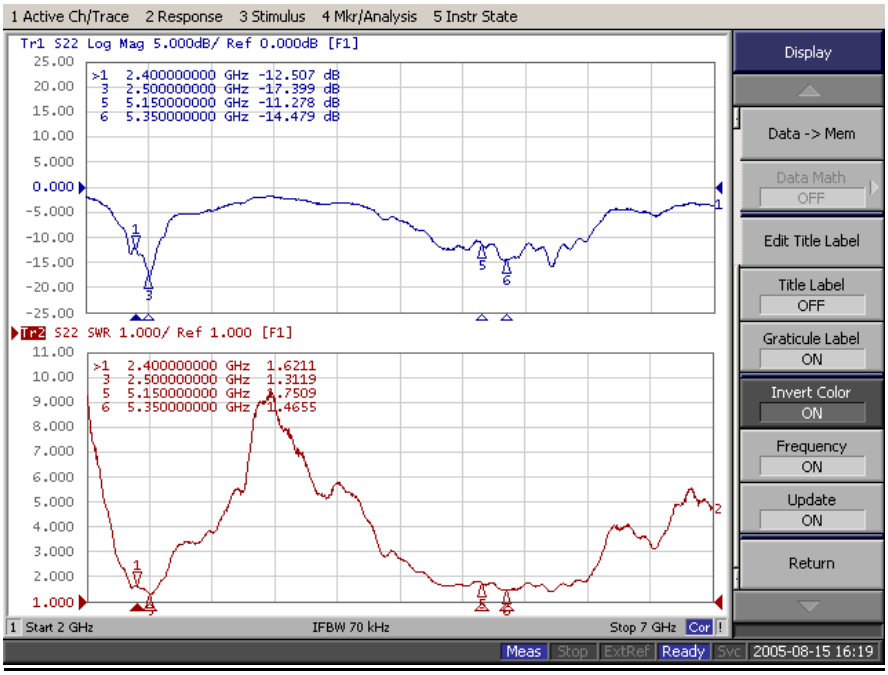


2. Outline drawing of antenna



3. Test Report

VSWR

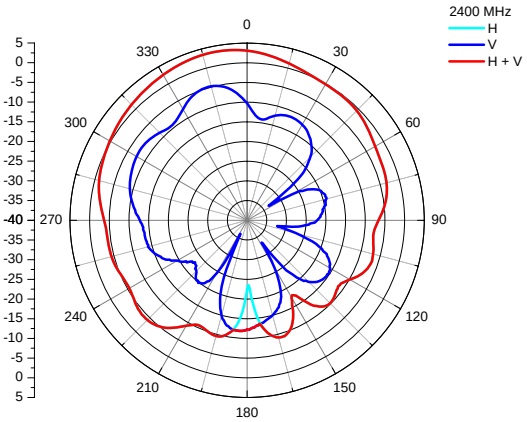


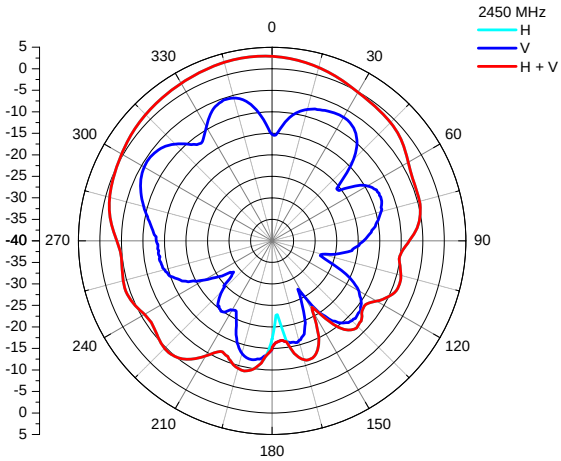
Gain

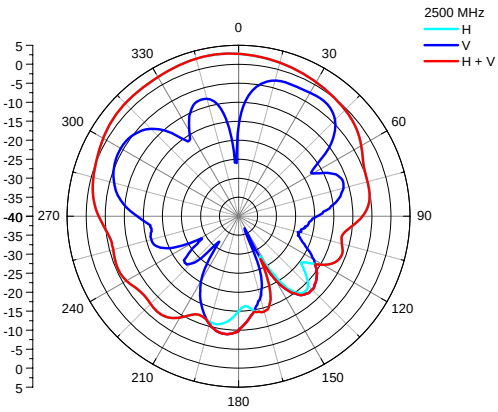
Channel (GHz)	2.40	2.45	2.50	4.9	5.15	5.25	5.35
Peak Gain (dBi)	2.81	0.70	1.80	1.31	-0.60	-0.93	1.19
Avg Gain (dBi)	-2.22	-2.84	-2.85	-2.70	-3.85	-3.84	-3.78

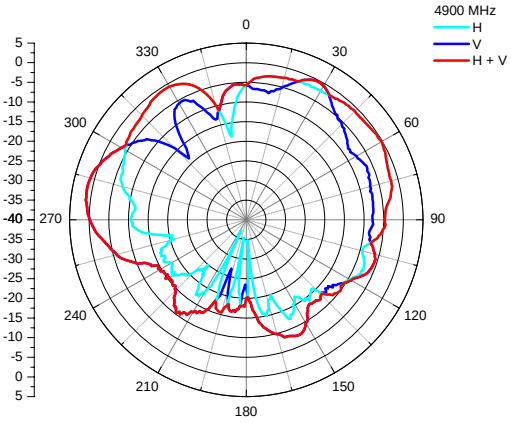
Channel (GHz)	5.47	5.6	5.725	5.85
Peak Gain (dBi)	-0.08	-0.35	-0.88	0.04
Avg Gain (dBi)	-3.97	-4.91	-6.14	-3.76

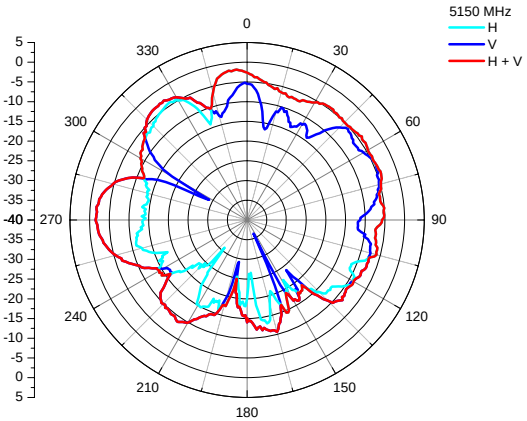
Gain Pattern

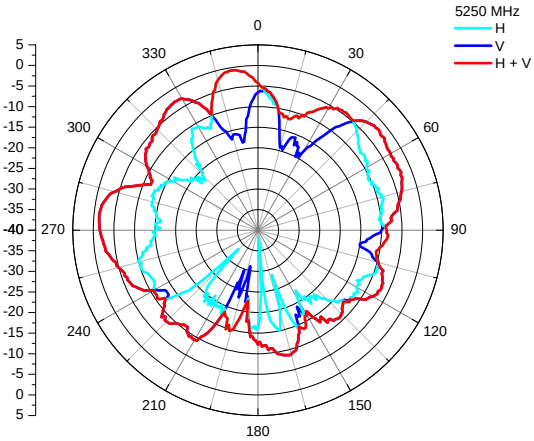


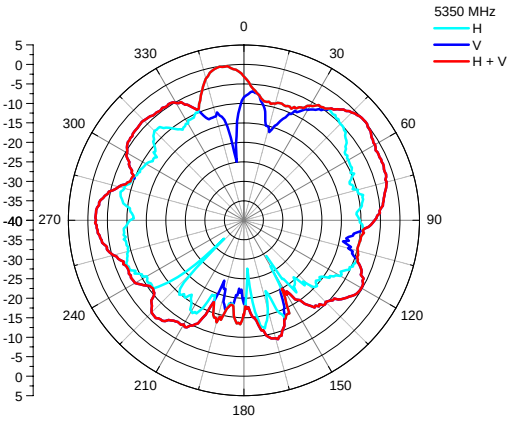


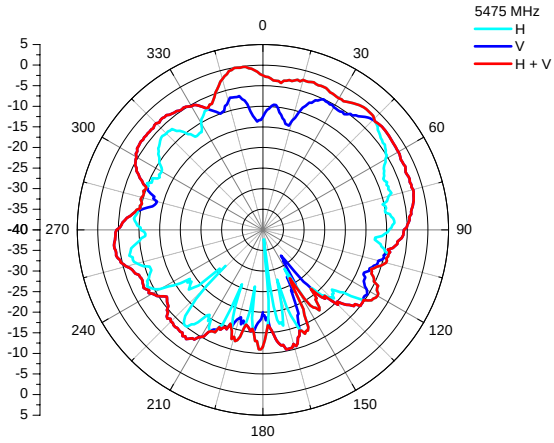


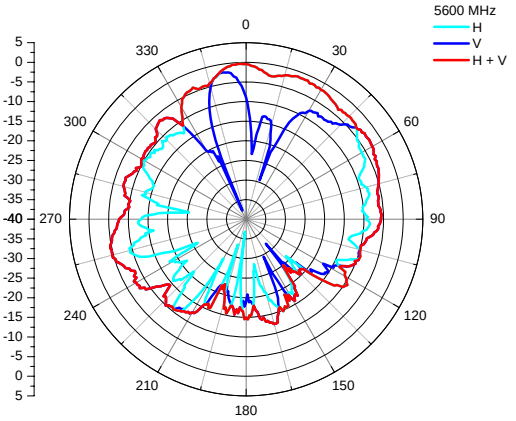


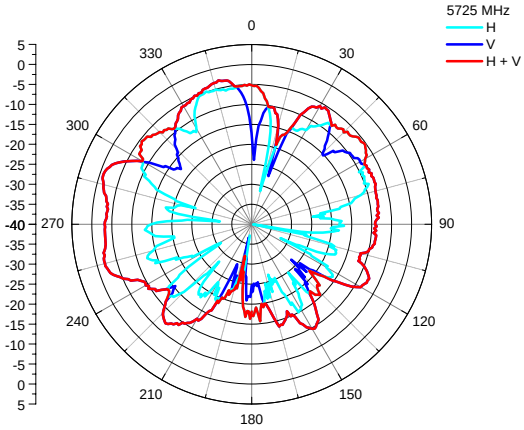


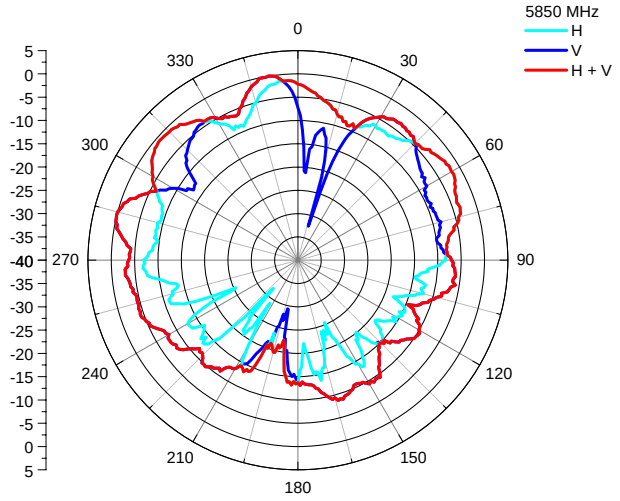



5350 MHz
H
V
H + V
0
30
60
90
120
150
180
210
240
270
300
330
5
0
-5
-10
-15
-20
-25
-30
-35
-40


5475 MHz
H
V
H + V
0
30
60
90
120
150
180
210
240
270
300
330
5
0
-5
-10
-15
-20
-25
-30
-35
-40


5600 MHz
H
V
H + V
0
30
60
90
120
150
180
210
240
270
300
330
5
0
-5
-10
-15
-20
-25
-30
-35
-40


5725 MHz
H
V
H + V
0
30
60
90
120
150
180
210
240
270
300
330
5
0
-5
-10
-15
-20
-25
-30
-35
-40


5850 MHz
H
V
H + V
0
30
60
90
120
150
180
210
240
270
300
330
5
0
-5
-10
-15
-20
-25
-30
-35
-40

4. Relative Documents ← Material Spec. data & Drawing

PCB Material

NAN YA PLASTICS CORPORATION
COPPER CLAD LAMINATE
QUALITY TEST REPORT

2, Chung-Yang Ind. Park,
Hsin-Kang Hsiang,
Jiayih, Taiwan

TEL:(05)3772111 FAX:(05)3771640

DATE:2005/08/23
PALLET NO:

CUSTOMER:
ORDER NO: HC8F1HE)
LOT NO: 5704253U
MATERIAL SPEC.: NP-140TL 1/1 0.15mm 1240mm x 1080mm CFHG
IPC DESIGNATION: L21 0060 H1/H1 C/A 48.8" x 42.5" (f x g)
REQUIREMENT: IPC-4101A
SPECIFICATION SHEET: IPC-4101A / 21
GLASS FIBER SOURCE: NAN YA

NAN YA PLASTICS
COPPER CLAD LAMINATE
QUALITY ASSURANCE

CHARACTERISTICS	UNIT	CONDITIONING	SPECIFICATION	RESULTS
VISUALS(SUB-/SURFACE)	-	IPC-4101A	A	OK
METAL THICKNESS	μm	IPC-4101A	Q:8.1~9.9/1;U:30.9~37.7/O:2:61.4~75.5 T:10.8~13.2/H:15.5~18.9/R:46.4~56.7 P:77.2~94.4/3:92.7~113.3/4:123.3~150.7	32.6
DIELECTRIC CONSTANT(1MHZ)		C 24/23/50	<5.4	4.46
SURFACE RESISTANCE	MΩ	C 96/35/90	<0.50mm 10^4↑ ≧0.50mm -----	7.0E6
SURFACE RESISTIVITY	MΩ	E 24/125	10^3↑	5.9E5
VOLUME RESISTANCE	MΩ-cm	C 96/35/90	<0.50mm 10^6↑ ≧0.50mm -----	5.4E9
VOLUME RESISIVITY	MΩcm	E 24/125	10^3↑	3.6E5
DISSIPATION FACTOR(1MHZ)		C 24/23/50	0.035↓ (CFRD、CFMD:0.020↓)	.025
ARC-RESISTANCE	sec	D48/50+D1/2 /23	60↑ (CFR5、CFM5:90↑)	122
THICKNESS	m/m	A	≦1.2mm CLASS C/M >1.2mm CLASS B/L	OK
THERMAL STRESS		288℃ x 10sec	NO BLISTER DELAMINATION	OK
PEEL STRENGTH	lb/in	AFTER THERMAL STRESS	Q、Toz:3.0↑ Hoz:4.5↑ 1、U、V、Roz:6.0↑ 2、O、Poz 8.0↑ 3、4oz 9.0↑	8.12
TG GLASS TRANSITION TEMP	℃	E-2/105	140±5	141.1
FLAMMABILITY	sec	C 24/23/50 E 24/125	94-V0 94-V0	OK

THIS IS TO CERTIFY THAT THE MATERIAL BEING FURNISHED TO YOU MEETS THE IPC-4101A、RoHS AND SS-00259.
THE RESULTS OF THIS QUALITY TEST REPORT IS PASS.

APPROVED BY : K. C. Cheng

Cable

SGS

Test Report

No. SH304946/CHEM Date: 6.17.2003

SUMITOMO ELECTRIC INTERCONNECT PRODUCTS (SUZHOU) LTD
NO. 232 JINFENG ROAD SND SUZHOU JIANGSU CHINA

The following sample(s) was/were submitted and identified on behalf of the applicant as:

Sample Description : 0.7D-S CABLE (SESZ)
Model : 0.7D-S CABLE

Sample Receiving Date : June 12, 2003
Testing Period : June 12 to June 17, 2003

Test Requested :1) To determine Cadmium Content on the submitted sample.
2) To determine Lead Content on the submitted sample.

Test Method :1) With reference to BS EN 1122:2001, Method B.
Analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES).
2) With reference to US EPA Method 3050B.
Analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometry (ICP-AES).

Test Results :

Element	A
Cadmium (Cd)	N.D.
Lead (Pb)	N.D.

(Result shown is of the total weight of sample)

Sample Description:
A. Grey plastic wire

Note : ppm = mg/kg
N.D.= not detected (Detection limit =<2ppm)

*** End of Report ***

Signed for and on behalf of
SGS-CSTC Chemical Laboratory

Ella Zhang
Supervisor

Connector

DOCUMENT CLASSIFICATION	TITLE	No.
Technical Report	MHF,MHFⅡ 環境負荷化学物質 調査報告 Investigation report of Chemical substance with Environmental Impact	IER-001-01464

1. 目的【Purpose】

御社よりお問い合わせのありました弊社コネクタ MHF, MHFⅡにおける
環境負荷化学物質調査について御報告致します。

This is the survey report for the evaluation of environmental load chemistry substance in MHF , MHFⅡ connector.

2. 製品【Product】

- MHF PLUG Vertical (Ground Contact : gold plating) ・・・ P/N 20278-1*1R-**
- MHF PLUG Vertical (Ground Contact : gold plating) ・・・ P/N 20351-1*1R-**
- MHF PLUG Vertical (Ground Contact : silver plating) ・・・ P/N 20308-1*1R-**
- MHF RECE. Vertical(Ground Contact : gold plating) ・・・ P/N 20279-001E-01
- MHF RECE. Vertical (Ground Contact : silver plating) ・・・ P/N 20314-001E-01
- MHFⅡ PLUG Vertical(Ground Contact : gold plating) ・・・ P/N 20311-0*1R-**
- MHFⅡ PLUG Vertical (Ground Contact : silver plating) ・・・ P/N 20312-0*1R-**

3. 調査結果【Investigation result】

Material	Cr	Cd	Hg	Pb	PBB	PBBDE
Connector	N/A	N/A	N/A	N/A	N/A	N/A
Packings／label	N/A	N/A	N/A	N/A	N/A	N/A