
FCC Test Report

Report No.: AGC11421009SZ07F2B

FCC ID : YZR-S100

PRODUCT DESIGNATION : GSM and GPRS Digital Mobile Phone

BRAND NAME : N/A

MODEL NAME : S100

CLIENT : Shenzhen E-SURE Technology Co., Ltd

DATE OF ISSUE : Sep.29, 2010

STANDARD(S) : FCC Part 15 Rules

Attestation of Global Compliance Co., Ltd.

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VERIFICATION OF COMPLIANCE

Applicant:	Shenzhen E-SURE Technology Co., Ltd
	NO.1918 Block A Galaxy Century Building FuTian District 518026 ShenZhen City China
Manufacturer:	Shenzhen E-SURE Technology Co., Ltd
	NO.1918 Block A Galaxy Century Building FuTian District 518026 ShenZhen City China
Product Description:	GSM and GPRS Digital Mobile Phone
Brand Name:	N/A
Model Name:	S100
FCC ID	YZR-S100
Report Number:	AGC11421009SZ07F2B
Date of Test:	Sep.25, 2010 to Sep.29, 2010

WE HEREBY CERTIFY THAT:

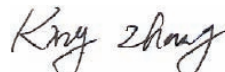
The above equipment was tested by Attestation of Global Compliance Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC Rules Part 15.247.

Checked By:



Catherine Chen Sep.29, 2010

Authorized By



King Zhang Sep.29, 2010

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1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

The EUT is a **GSM and GPRS Digital MOBILE PHONE** designed as an “Communication Device”. It is designed by way of utilizing the FHSS technology to achieve the system operation.

A major technical description of EUT is described as following:

Operation Frequency	2.402 GHz to 2.480GHz
Rated Output Power	-1.53 dBm
Modulation	GFSK
Number of channels	79
Antenna Designation	Integrated Antenna
Power Supply	Internal Lion Composite Battery DC 3.4~4.2V
Travel Adapter	Output :DC5.2V

1.2 TABLE OF CARRIER FREQUENCIES

Frequency Band	Channel Number	Frequency
2400~2483.5MHZ	0	2402MHZ
	1	2403MHZ
	:	:
	38	2440 MHZ
	39	2441 MHZ
	40	2442 MHZ
	:	:
	77	2479 MHZ
	78	2480 MHZ

1.3 RECEIVER INPUT BANDWIDTH AND BEHAVIOUR FOR REPEATED SINGLE OR MULTIPLE PACKETS

The input bandwidth of the receiver is 1MHZ, In every connection one Bluetooth device is the master and the other one is slave. The master determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master. Additionally the type of connection (e.g. single or multislot packet) is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also the slave of the connection will use these settings.

Repeating of a packet has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case. That means, a repeated packet will not be send on the same frequency, it is send on the next frequency of the hopping sequence.

1.4 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: YZR-S100** filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.

1.5 TEST METHODOLOGY

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

1.6 TEST FACILITY

All measurement facilities used to collect the measurement data are located at
Attestation of Global Compliance Co., Ltd.
2F., No.2 Building, Huafeng No.1 Technical Industrial Park, Sanwei, Xixiang, Baoan District, Shenzhen
The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003.
FCC register No.: 259865

1.7 SPECIAL ACCESSORIES

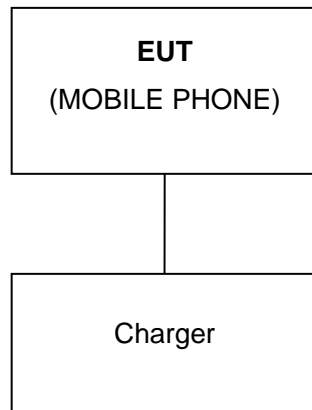
Not available for this EUT intended for grant.

1.8 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

2. SYSTEM TEST CONFIGURATION

2.1 CONFIGURATION OF TESTED SYSTEM



2.2 EQUIPMENT USED IN TESTED SYSTEM

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID
1	MOBILE PHONE	N/A	S100	YZR-S100
2	Charger	N/A	S100	--

3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.207	Conduction Emission	Compliant
§15.209	Radiated Emission	Compliant
§15.247	Maximum Output Power	Compliant
§15.247	20 dB Bandwidth	Compliant
§15.247	Band Edges	Compliant
§15.247	Spurious Emission	Compliant
§15.247	Frequency Separation	Compliant
§15.247	Number of Hopping Frequency	Compliant
§15.247	Time of Occupancy	Compliant

4. DESCRIPTION OF TEST MODES

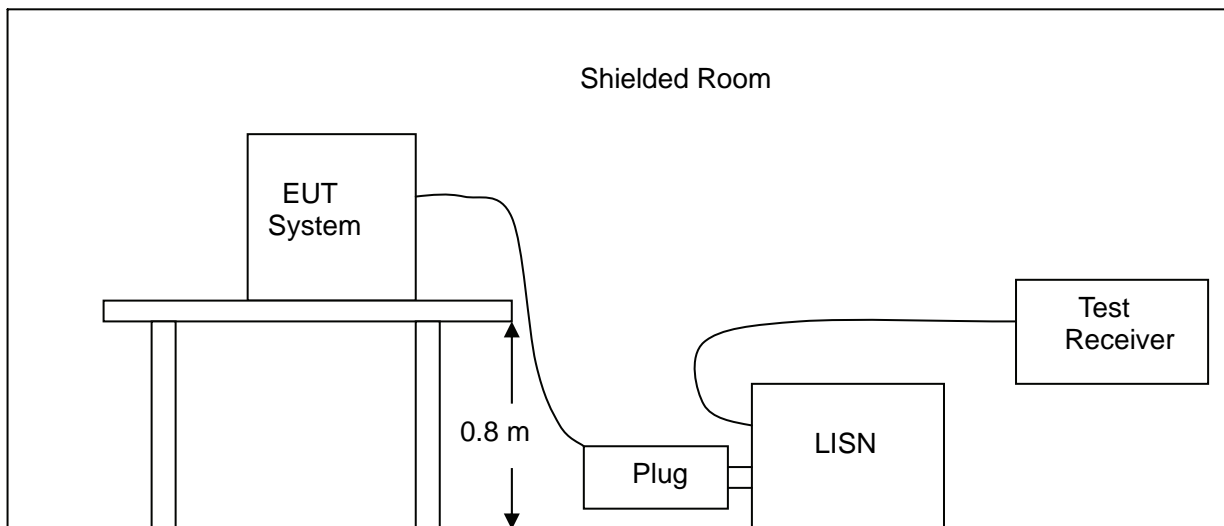
1. The EUT has been set to operate continuously on the lowest,middle and highest operation frequency individually.
2. The EUT stays in continuous transmitting mode on the operation frequency being set.

5. CONDUCTION EMISSIONS

5.1 MEASUREMENT PROCEDURE

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system; a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4.
2. Support equipment, if needed, was placed as per ANSI C63.4.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
4. The EUT received AC120V through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8. Following is charging mode test data and It is the worst.

5.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



5.3 MEASUREMENT EQUIPMENT USED

Conducted Emission Test Site				
Name of Equipment	Manufacturer	Model	Serial Number	Cal. Date
EMI Test Receiver	Rohde & Schwarz	ESCI	N/A	06/29/2010
LISN 1	Rohde & Schwarz	ESH3-Z5	N/A	06/29/2010
50 Ω Coaxial Switch	Anritsu	MP59B	M20531	06/29/2010

5.4 LIMITS AND MEASUREMENT RESULT

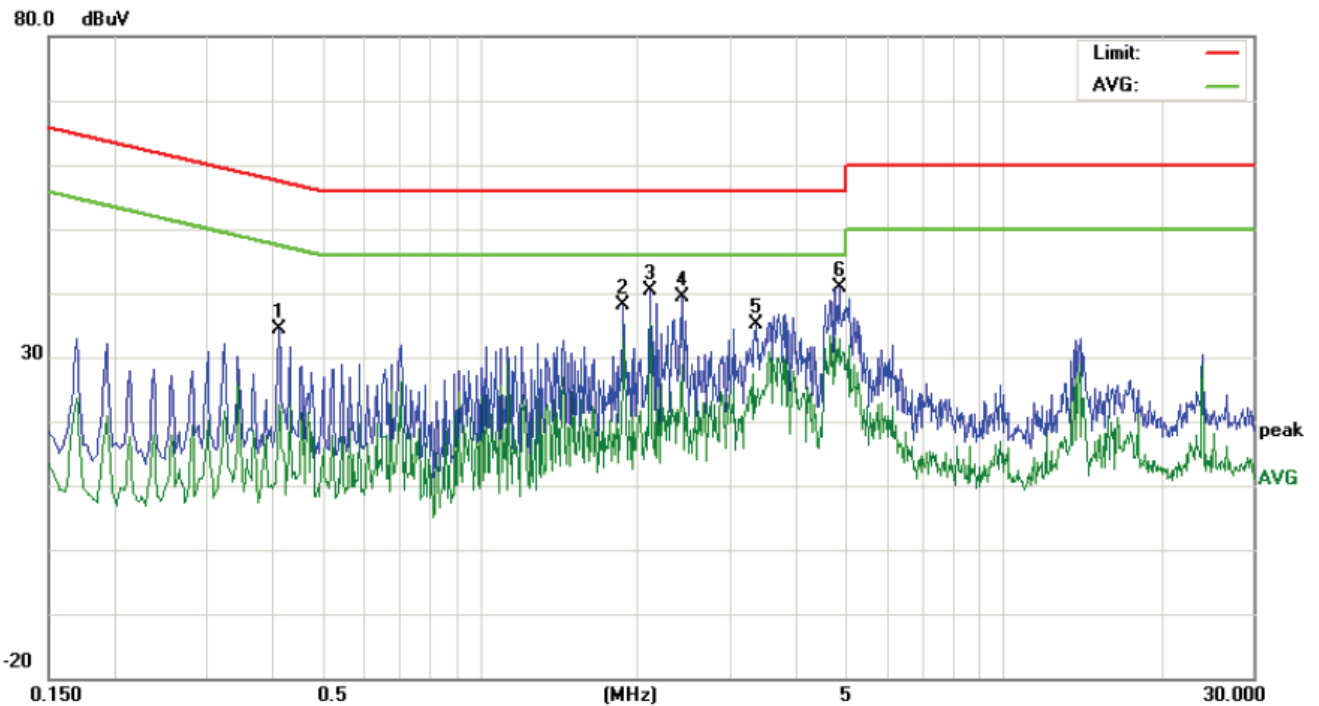
LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

1**Note: 1. The lower limit shall apply at the transition frequency.

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

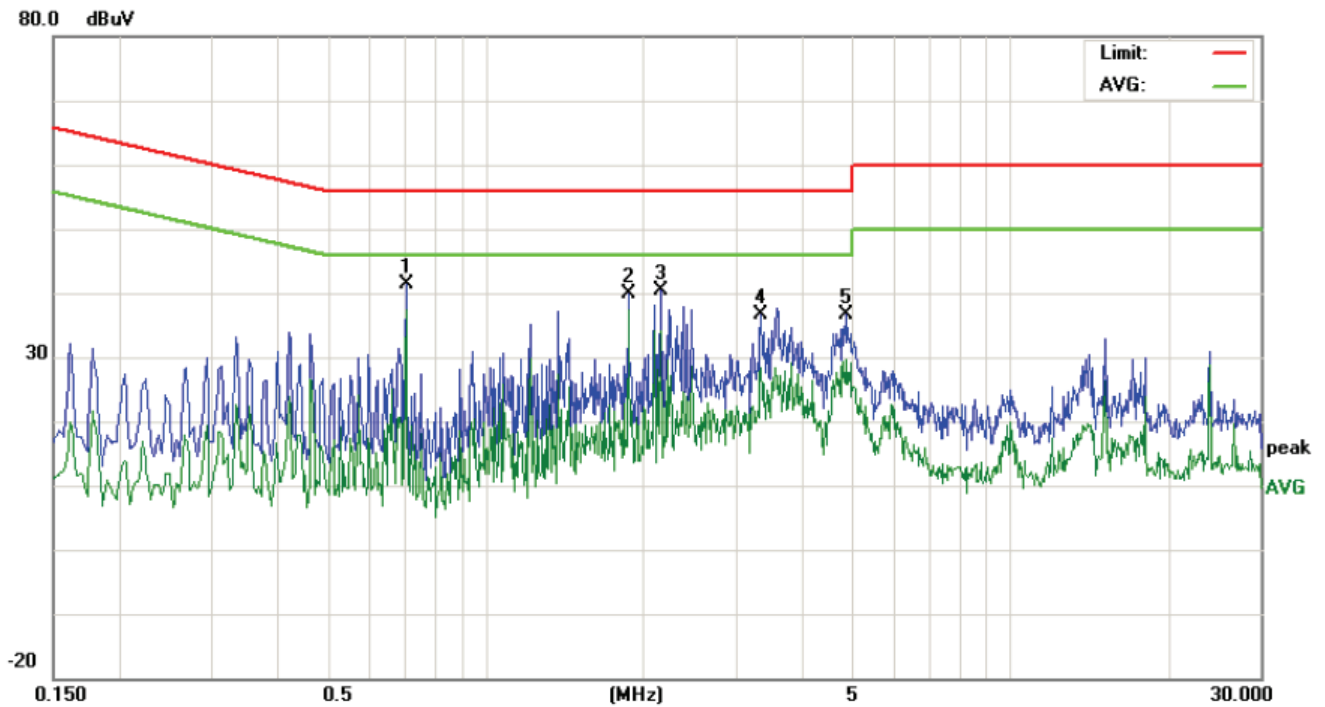
TEST RESULT OF LINE –L CONDUCTED EMISSION TEST



Site: Conduction Phase: L Temperature: 26
Limit: FCC Class B Conduction Power: AC 120V/60Hz Humidity: 60 %
EUT: Mobile Phone
M/N: S100
Mode:
Note:

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor (dB)	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.4140	24.06		12.25	10.26	34.32		22.51	57.57	47.57	-23.25	-25.06	P	
2	1.8780	26.97		22.17	11.26	38.23		33.43	56.00	46.00	-17.77	-12.57	P	
3	2.1140	29.09		23.95	11.33	40.42		35.28	56.00	46.00	-15.58	-10.72	P	
4	2.4420	27.89		17.55	11.40	39.29		28.95	56.00	46.00	-16.71	-17.05	P	
5	3.3660	23.44		11.26	11.59	35.03		22.85	56.00	46.00	-20.97	-23.15	P	
6	4.8620	28.85		20.92	12.03	40.88		32.95	56.00	46.00	-15.12	-13.05	P	

TEST RESULT OF LINE –N CONDUCTED EMISSION TEST



Site: Conduction

Phase: **N**

Temperature: 26

Limit: FCC Class B Conduction

Power: AC 120V/60Hz

Humidity: 60 %

EUT: Mobile Phone

M/N: S100

Mode:

Note:

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.7060	30.79		26.90	10.51	41.30		37.41	56.00	46.00	-14.70	-8.59	P	
2	1.8700	28.74		26.03	11.26	40.00		37.29	56.00	46.00	-16.00	-8.71	P	
3	2.1660	29.03		22.74	11.34	40.37		34.08	56.00	46.00	-15.63	-11.92	P	
4	3.3620	25.02		16.78	11.59	36.61		28.37	56.00	46.00	-19.39	-17.63	P	
5	4.8940	24.61		17.59	12.04	36.65		29.63	56.00	46.00	-19.35	-16.37	P	

6. MAXIMUM OUTPUT POWER

6.1 MEASUREMENT PROCEDURE

CONDUCTED METHOD

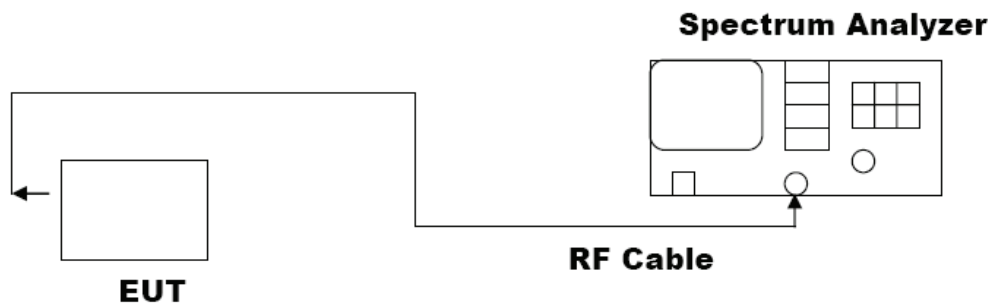
1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
4. Set SPA Centre Frequency = Operation Frequency, RBW= 3 MHz, VBW= 3 MHz.
5. Set SPA Trace 1 Max hold, then View.

RADIATED METHOD

According to ANSI C63.4:2003

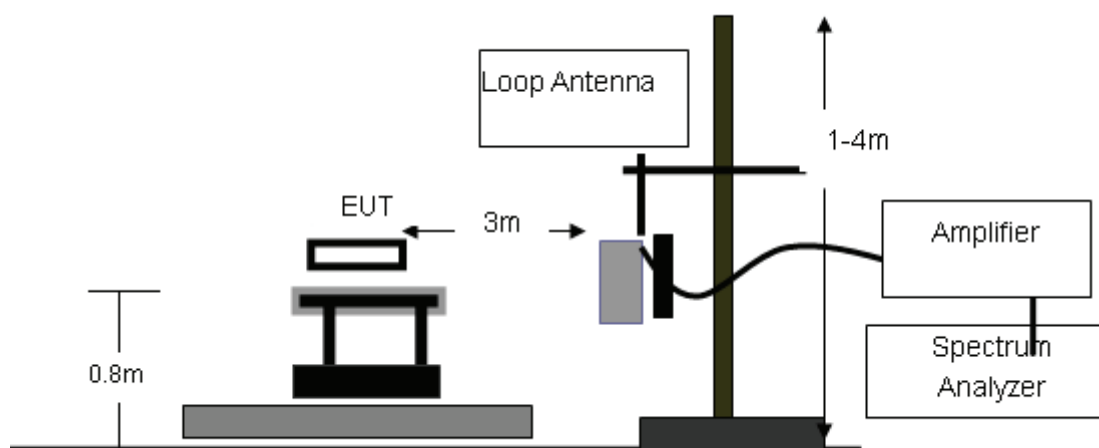
6.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

CONDUCTED METHOD

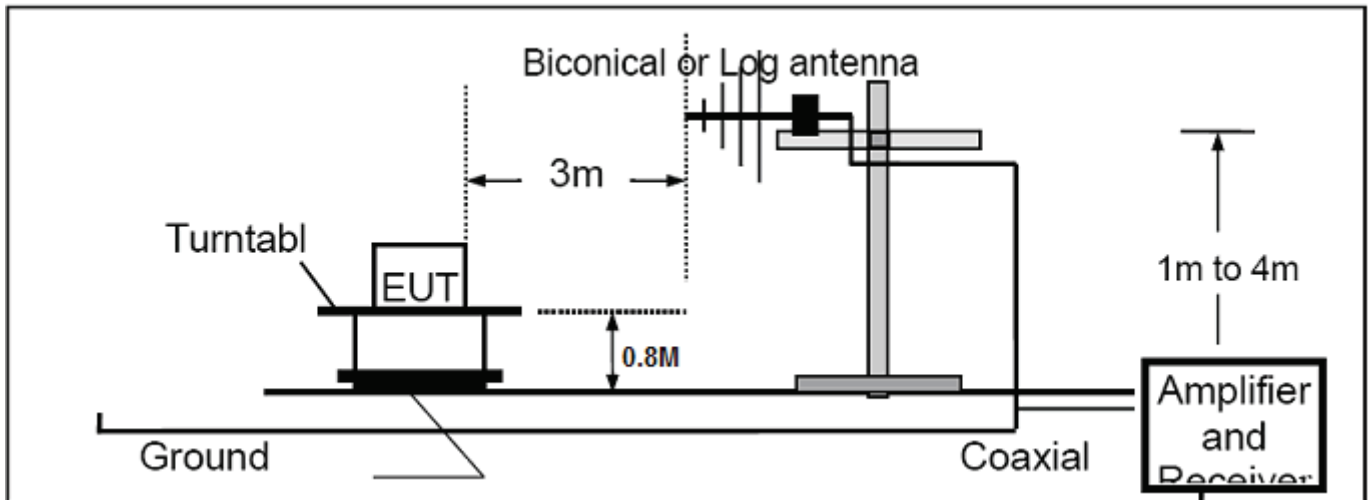


RADIATED EMISSION TEST SETUP

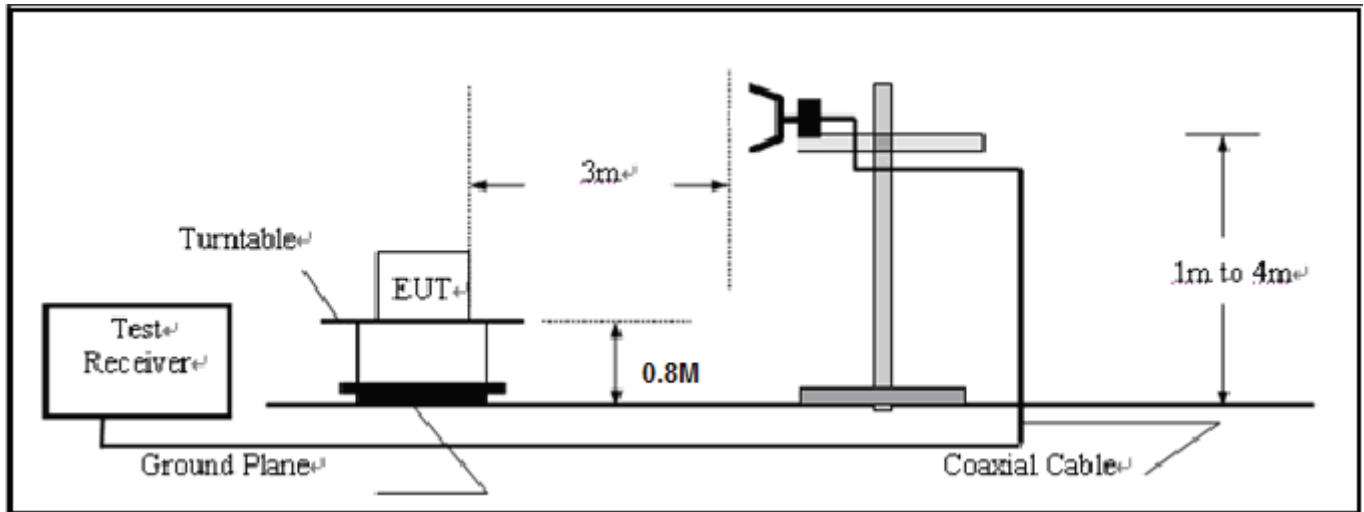
RADIATED EMISSION TEST SETUP BELOW 30MHz



RADIATED MISSION TEST SETUP 30MHz-1000MHz

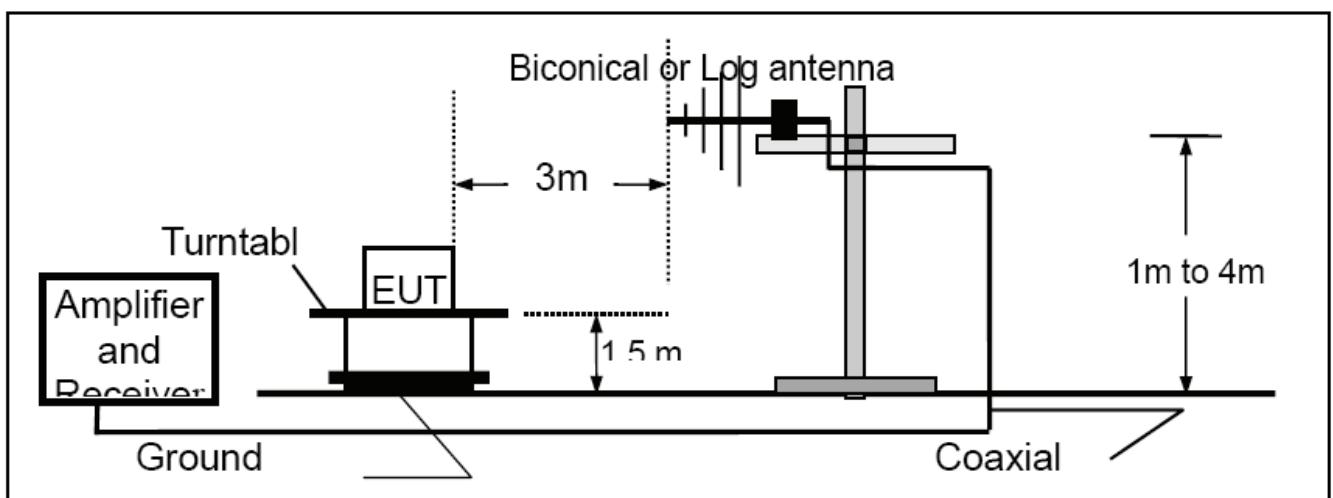


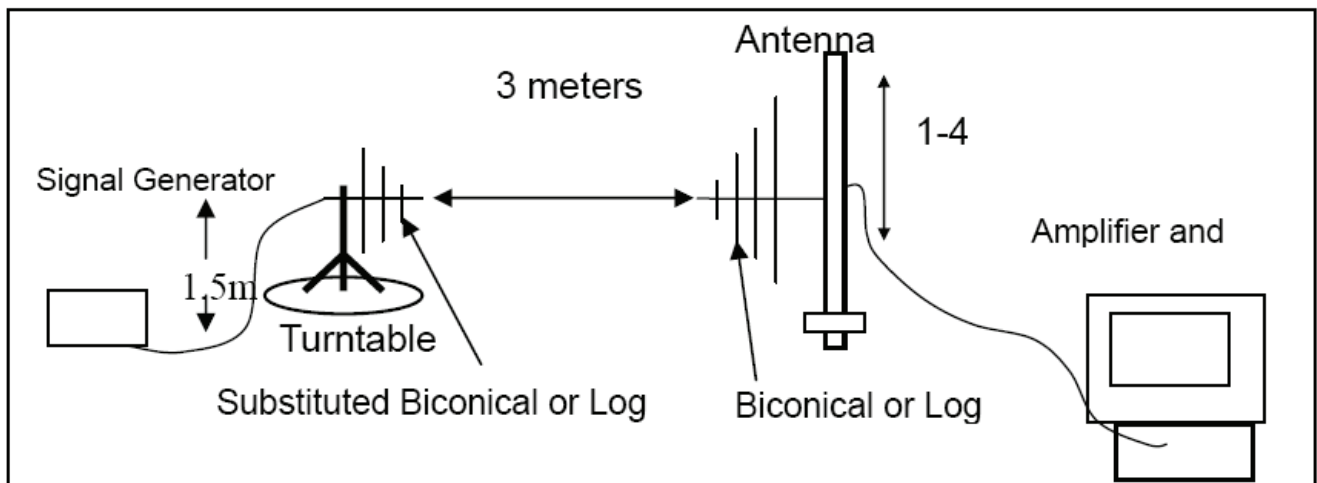
RADIATED MISSION TEST SETUP ABOVE 1000MHz



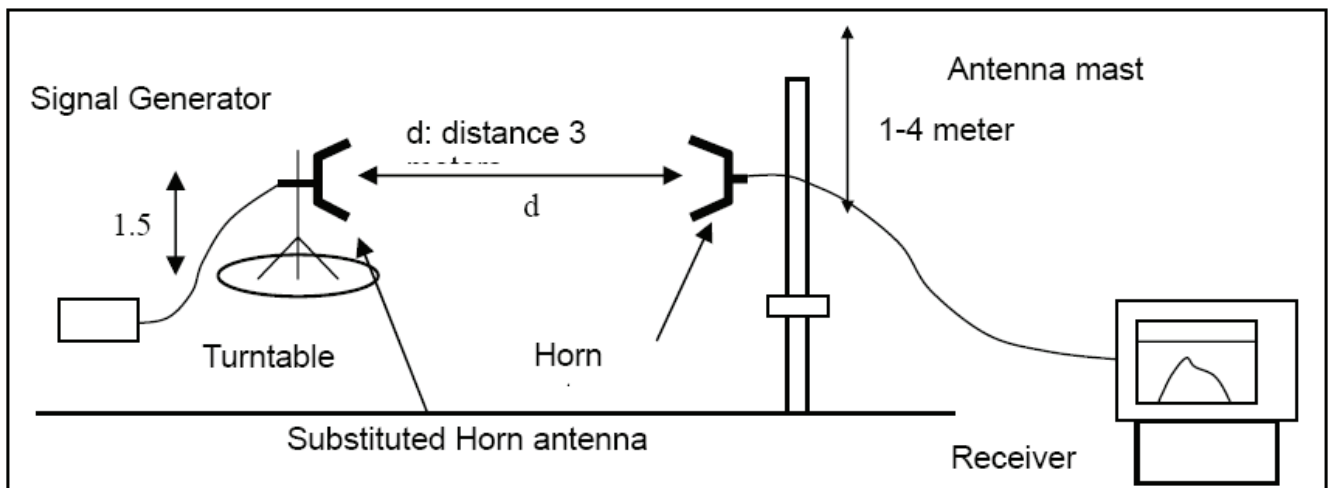
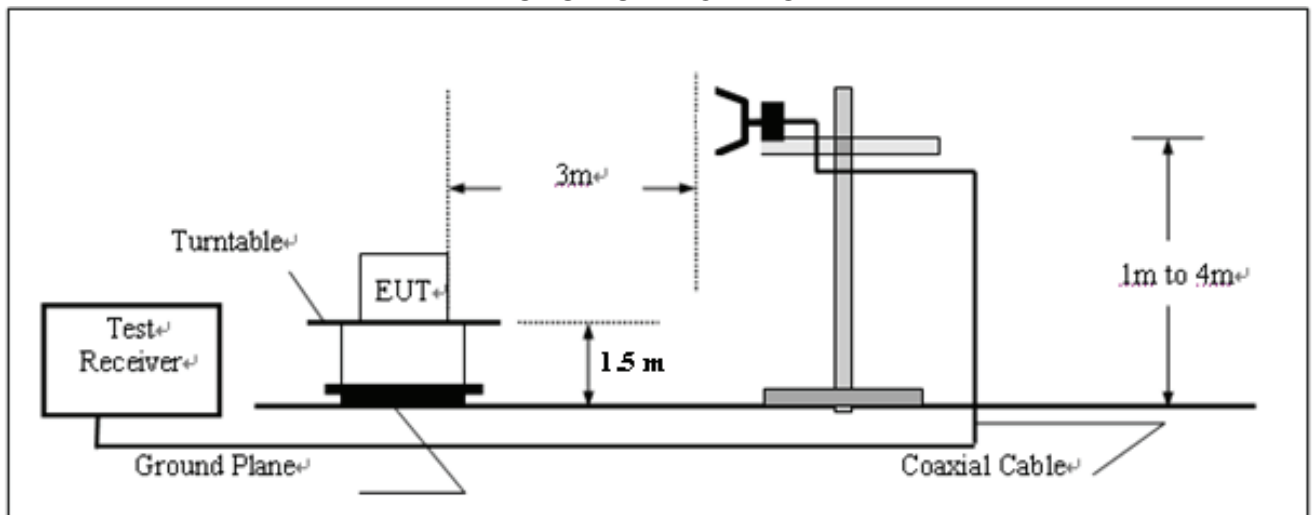
EIRP TEST SETUP

TEST SETUP BELOW 1GHZ





TEST SETUP ABOVE 1GHZ



6.3 MEASUREMENT EQUIPMENT USED

Description	Manufacturer	Model	SERIAL NUMBER	Cal. Date	Cal. Due
Spectrum Analyzer	Agilent	E4440A	N/A	06/29/2010	06/28/2011
Amplifier	EM	EM30180	0607030	06/29/2010	06/28/2011
Horn Antenna	EM	EM-AH-1018 0	N/A	06/29/2010	06/28/2011
EMI Test Receiver	Rohde & Schwarz	ESCI	N/A	06/29/2010	06/28/2011
Amplifier	EM	EM30180	N/A	06/29/2010	06/28/2011
Biological Antenna	A.H. Systems Inc.	SAS-521-4	N/A	06/29/2010	06/28/2011
Loop Antenna	Daze	ZN30900N	SEL0097	06/29/2010	06/28/2011
Isolation Transformer	LETEAC	LTBK	--	06/08/2010	06/07/2011

6.4 LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT				
Applicable Limits	Frequency	Measurement Result		
		EIRP (dBm)	Conducted (dBm)	Criteria
30 dBm	2.402GHz	-2.21	-3.25	PASS
30 dBm	2.441GHz	-1.53	-2.69	PASS
30 dBm	2.480GHz	-2.74	-3.77	PASS

7. 20 DB BANDWIDTH

7.1 MEASUREMENT PROCEDURE

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Centre Frequency = Operation Frequency, RBW= 100 KHz, VBW= 100 KHz.
4. Set SPA Trace 1 Max hold, then View.

7.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The Same as described in Section 6.2

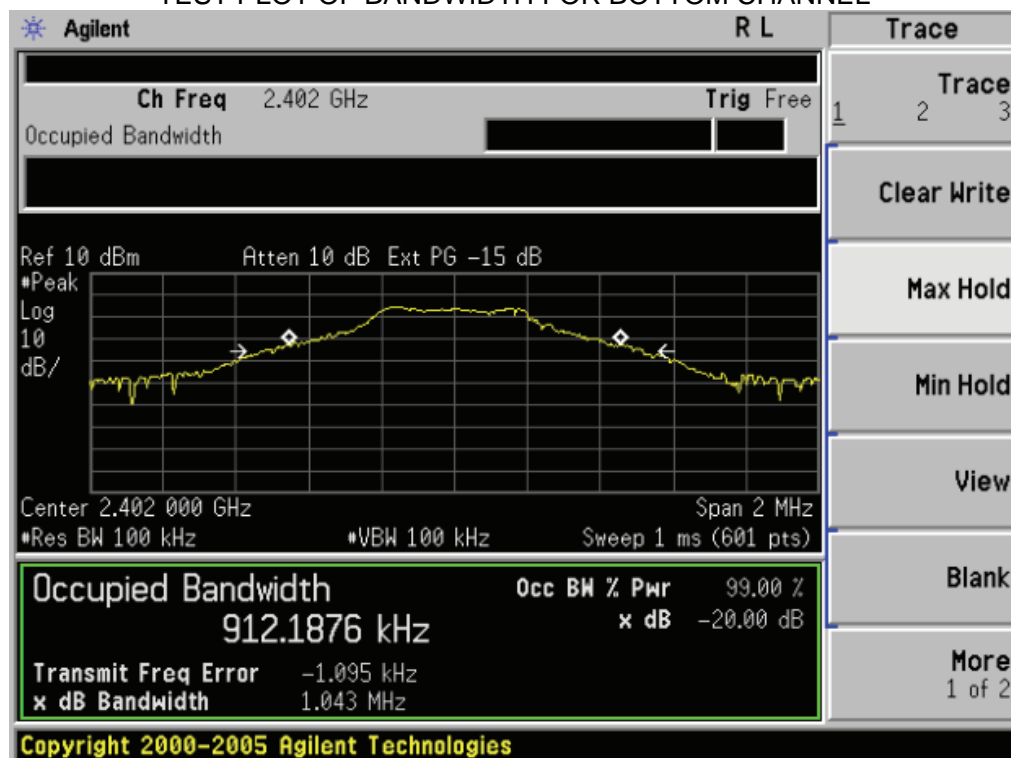
7.3 MEASUREMENT EQUIPMENT USED

The same as described in Section 6.3

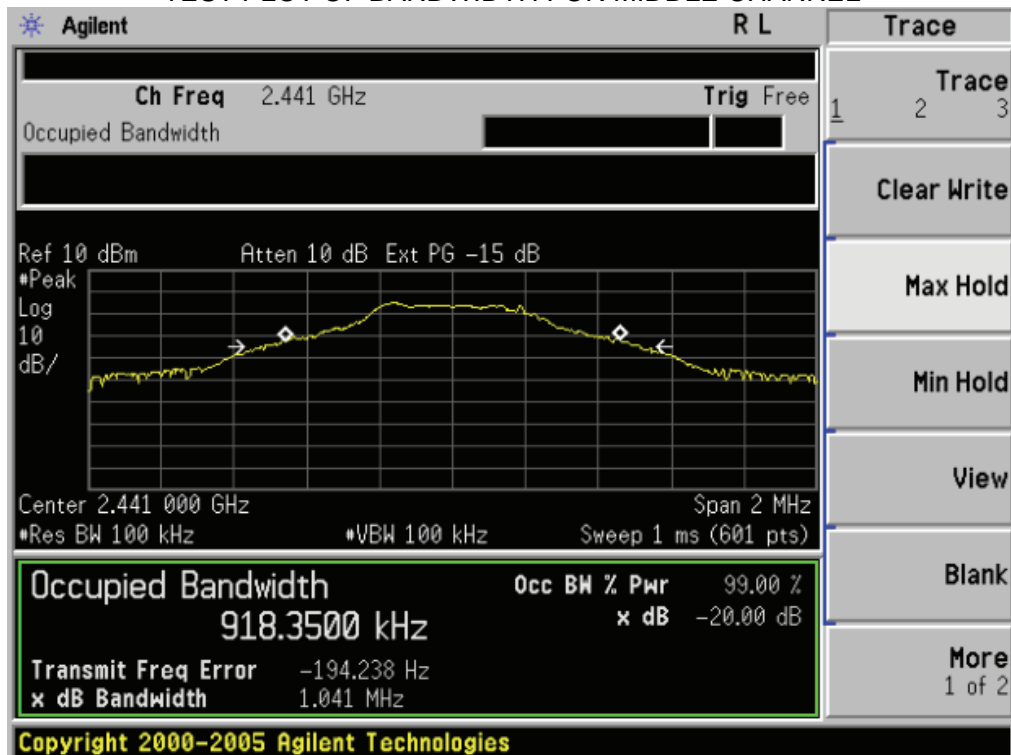
7.4 LIMITS AND MEASUREMENT RESULTS

LIMITS AND MEASUREMENT RESULT			
Applicable Limits	Measurement Result		
	Test Data (MHz)		Criteria
--	Bottom Channel	1.043	PASS
	Middle Channel	1.041	PASS
	Top Channel	1.054	PASS

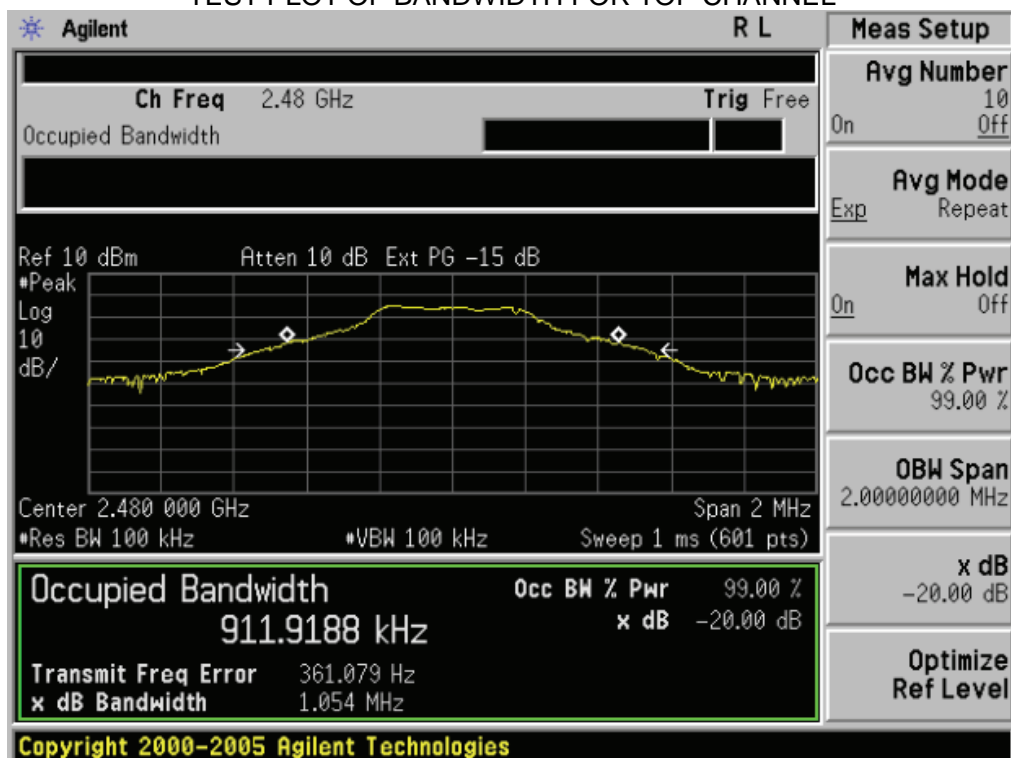
TEST PLOT OF BANDWIDTH FOR BOTTOM CHANNEL



TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



TEST PLOT OF BANDWIDTH FOR TOP CHANNEL

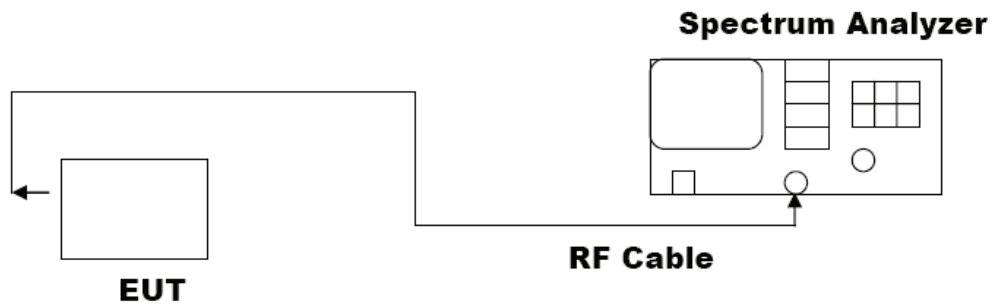


8. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY (N/A)

8.1 MEASUREMENT PROCEDURE

- (1). The EUT was placed on a turn table which is 0.8m above ground plane.
- (2). Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- (3). Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- (4). Set SPA Centre Frequency = Operation Frequency, RBW= 3 KHz,
VBW= 10 KHz., Sweep time= Auto
- (5). Set SPA Trace 1 Max hold, then View.

8.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



8.3 MEASUREMENT EQUIPMENT USED

SHIELDING ROOM					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4440A	N/A	06/29/2010	06/28/2011

8.4 LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT			
Applicable Limits	Measurement Result		
	Test Data (dBm/3KHz)		Criteria
8 dBm / 3KHz	Bottom Channel	--	--
	Middle Channel	--	--
	Top Channel	--	--

9. OUT OF BAND EMISSION

9.1 MEASUREMENT PROCEDURE

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Centre Frequency = Operation Frequency, RBW= 100 KHz, VBW= 100 KHz.
4. Set SPA Trace 1 Max hold, then View.

9.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The Same as described in section 6.2

1. Conducted test setup
2. Radiated Emission test Setup below 1GHz and Above 1GHz

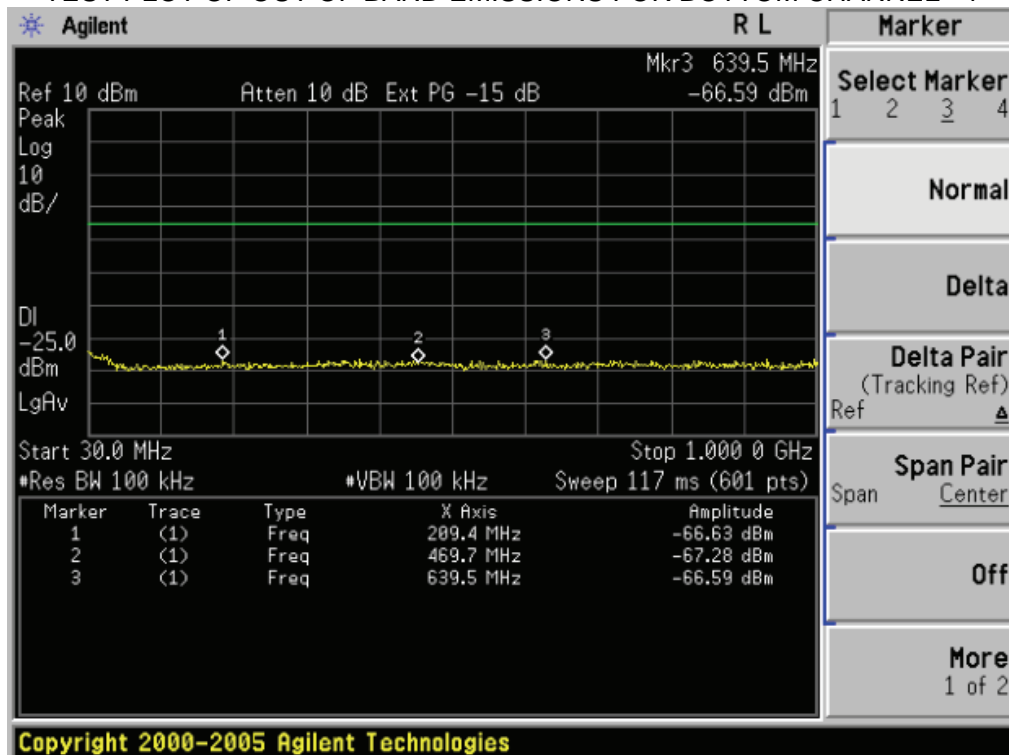
9.3 MEASUREMENT EQUIPMENT USED

The Same as described in section 6.3

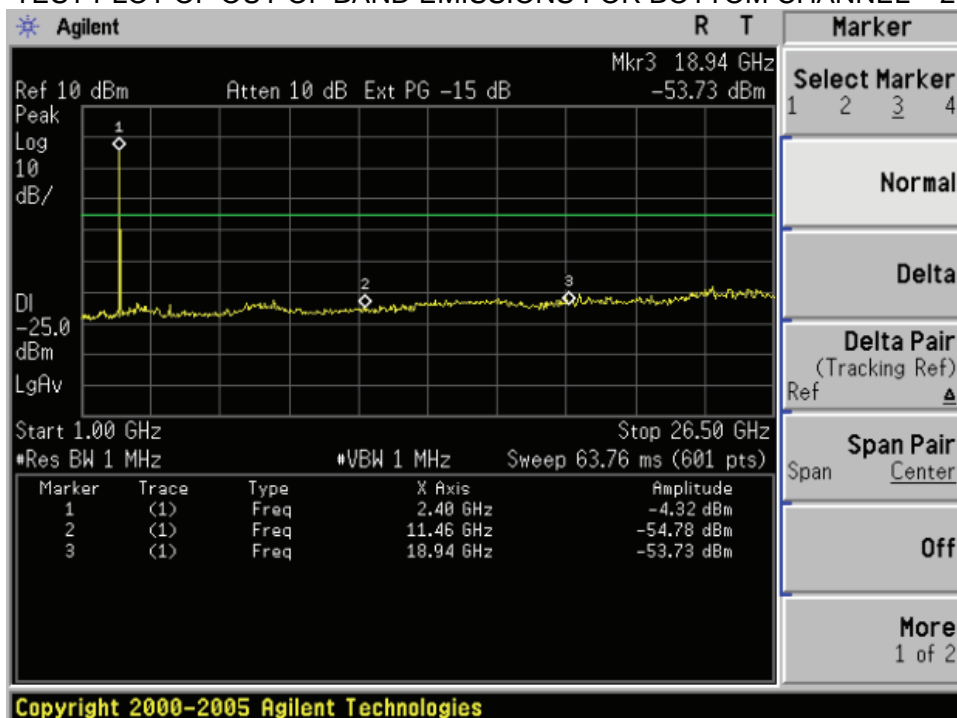
9.4 LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT		
Applicable Limits	Measurement Result	
	Test Data	Criteria
In any 100 KHz Bandwidth Outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produce by the intentional radiator shall be at least 20 dB below that in 100KHz bandwidth within the band that contains the highest level of the desired power. In addition, radiation emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in§15.209(a))	At least -20dBc than the limit Specified on the BOTTOM Channel	PASS
	At least -20dBc than the limit Specified on the TOP Channel	PASS

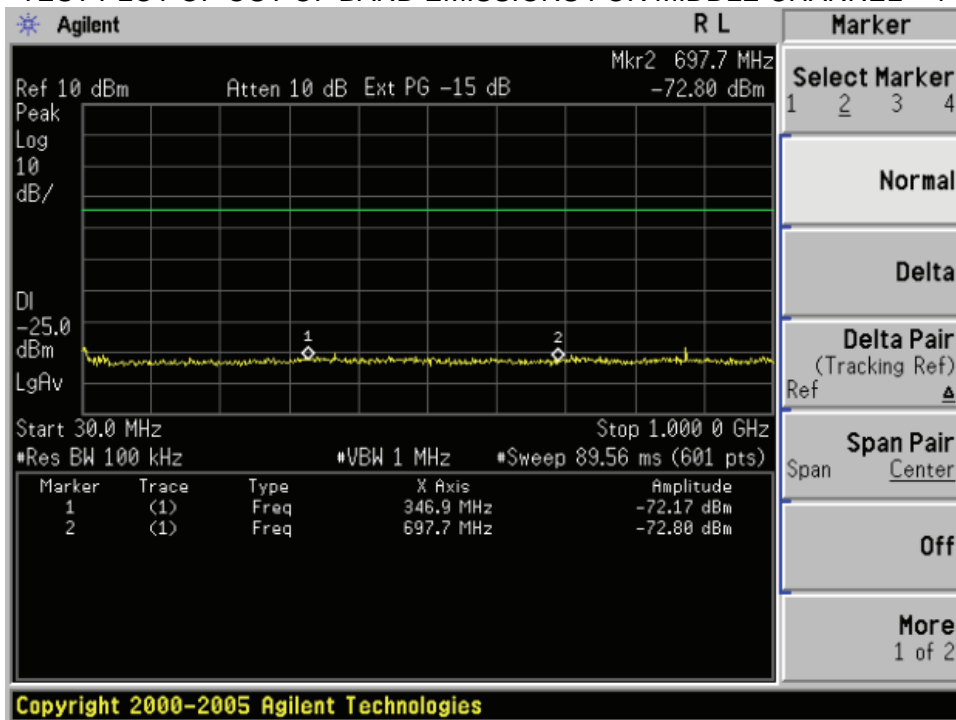
TEST PLOT OF OUT OF BAND EMISSIONS FOR BOTTOM CHANNEL - 1



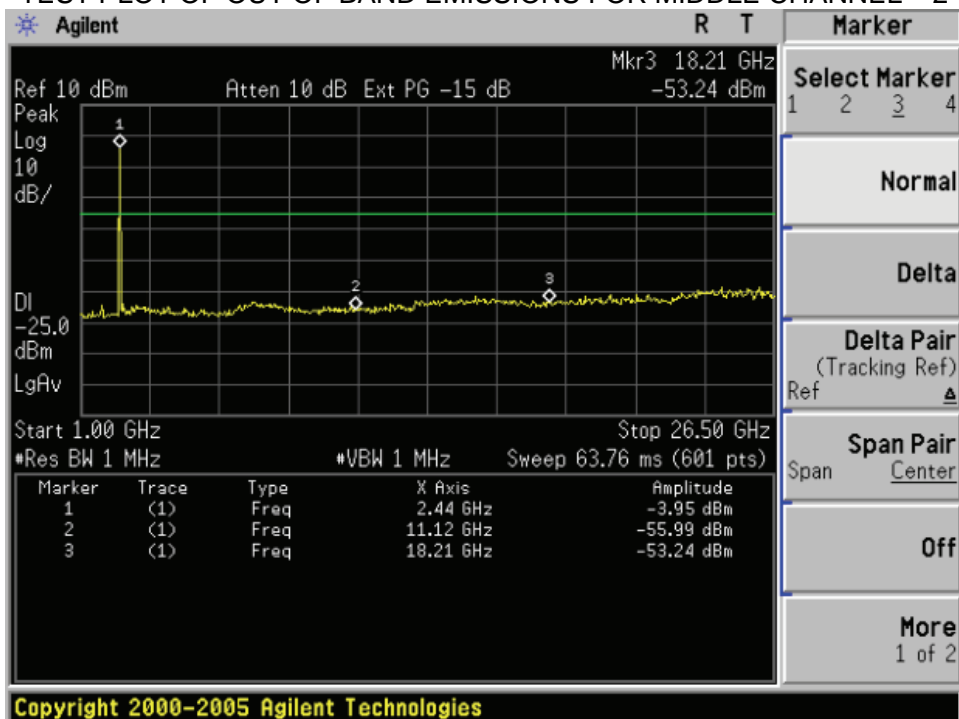
TEST PLOT OF OUT OF BAND EMISSIONS FOR BOTTOM CHANNEL - 2



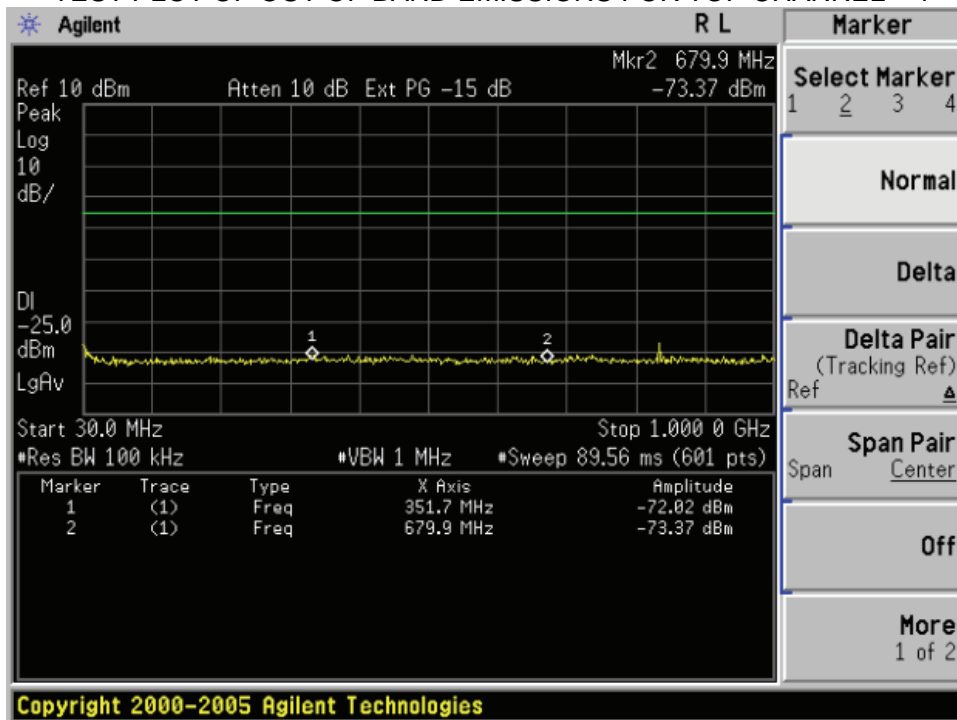
TEST PLOT OF OUT OF BAND EMISSIONS FOR MIDDLE CHANNEL – 1



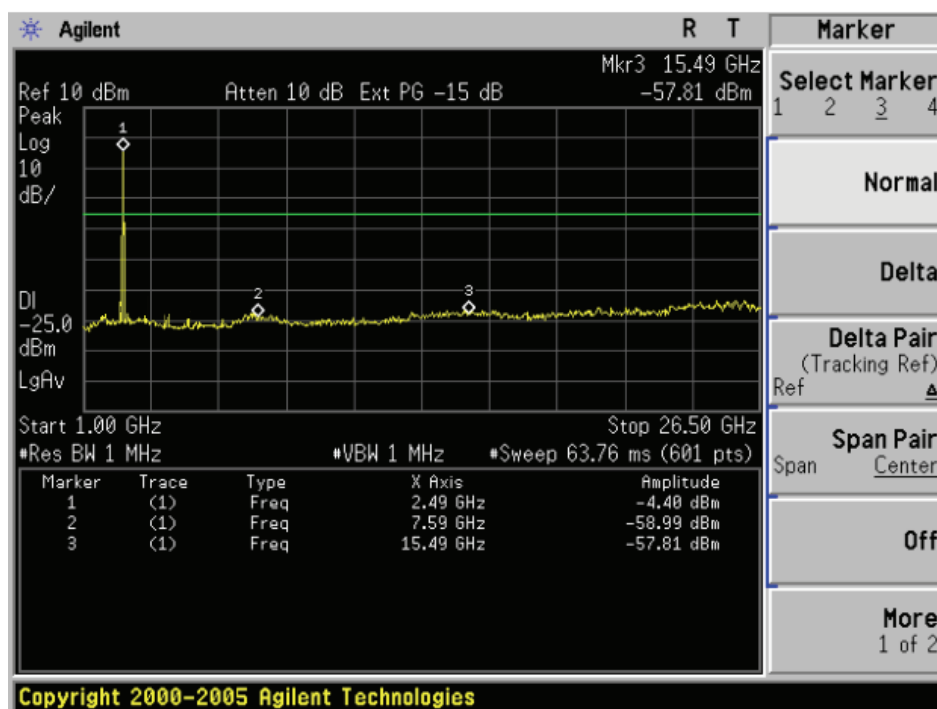
TEST PLOT OF OUT OF BAND EMISSIONS FOR MIDDLE CHANNEL – 2



TEST PLOT OF OUT OF BAND EMISSIONS FOR TOP CHANNEL – 1



TEST PLOT OF OUT OF BAND EMISSIONS FOR TOP CHANNEL – 2



RADIATED EMISSION BELOW 30MHZ

No emission found between lowest internal used/generated frequency to 30MHz.

RADIATED EMISSION BELOW 1GHZ

EUT	Mobile Phone	Model Name	S100
Temperature	26° C	Relative Humidity	55%
Pressure	960hPa	Test Voltage	AC120V/60Hz
Test Mode	BT2402MHZ		

Freq. (MHZ)	Ant.Pol. H/V	Detector (PK/QP)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
31.61	H	Peak	12.36	19.84	32.2	40	-7.8
117.3	H	Peak	9.68	17.94	27.62	43.5	-15.88
172.26	H	Peak	8.34	19.8	28.14	43.5	-15.36
416.38	H	Peak	4.07	21.23	25.3	46	-20.7
728.4	H	Peak	2.12	26.24	28.36	46	-17.64
956.35	H	Peak	1.69	30.39	32.08	46	-13.92
52.63	V	Peak	22.11	8.71	30.82	40	-9.18
72.03	V	Peak	21.86	9.05	30.91	40	-9.09
120.53	V	Peak	17.24	18.35	35.59	43.5	-7.91
170.65	V	Peak	11.62	19.84	31.46	43.5	-12.04
684.75	V	Peak	0.94	26.14	27.08	46	-18.92
940.18	V	Peak	1.06	30.29	31.35	46	-14.65

EUT	Mobile Phone	Model Name	S100
	26° C	Relative Humidity	55%
Pressure	960hPa	Test Voltage	AC120V/60Hz
Test Mode	BT2441MHZ		

Freq. (MHZ)	Ant.Pol. H/V	Detector (PK/QP)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
--	H	Peak	--	--	--	--	--
--	H	Peak	--	--	--	--	--
--	V	Peak	--	--	--	--	--
--	V	Peak	--	--	--	--	--

EUT	Mobile Phone	Model Name	S100
Temperature	26° C	Relative Humidity	55%
Pressure	960hPa	Test Voltage	AC120V/60Hz
Test Mode	BT2480MHZ		

Freq. (MHZ)	Ant.Pol. H/V	Detector (PK/QP)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
--	H	Peak	--	--	--	--	--
--	H	Peak	--	--	--	--	--
--	V	Peak	--	--	--	--	--
--	V	Peak	--	--	--	--	--

Note: This Handheld EUT was tested in 3 orthogonal positions and the worst-case data was presented.
Note: "--" means the mode at least have 20dB margin.

RADIATED EMISSION ABOVE 1GHZ

EUT	Mobile Phone	Model Name	S100
Temperature	26° C	Relative Humidity	55%
Pressure	960hPa	Test Voltage	AC120V/60Hz
Test Mode	BT2402MHZ		

Freq. (MHZ)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Result		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin
					Peak (dBuV/m)	AV (dBuV/m)			
1321	H	56.36	--	-10.47	45.89	--	74	54	-8.11
1576	H	56.01	--	-10.42	45.59	--	74	54	-8.41
1923	H	54.79	--	-9.13	45.66	--	74	54	-8.34
2546	H	53.36	--	-8.17	45.19	--	74	54	-8.81
--	H	--	--	--	--	--	--	--	--
1365	V	55.91	--	-10.17	45.74	--	74	54	-8.26
1753	V	55.40	--	-10.03	45.37	--	74	54	-8.63
2137	V	55.27	--	-9.89	45.38	--	74	54	-8.62
2655	V	54.36	--	-8.92	45.44	--	74	54	-8.56
--	V	--	--	--	--	--	--	--	--

EUT	Mobile Phone	Model Name	S100
Temperature	26° C	Relative Humidity	55%
Pressure	960hPa	Test Voltage	AC120V/60Hz
Test Mode	BT2441MHZ		

Freq. (MHZ)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Result		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin
					Peak (dBuV/m)	AV (dBuV/m)			
--	H	--	--	--	--	--	--	--	--
--	H	--	--	--	--	--	--	--	--
--	V	--	--	--	--	--	--	--	--
--	V	--	--	--	--	--	--	--	--

EUT	Wireless Body Scale	Model Name	BS 2.4
Temperature	26° C	Relative Humidity	55%
Pressure	960hPa	Test Voltage	AC120V/60Hz
Test Mode	BT2480MHZ		

Freq. (MHZ)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Factor (dB)	Result		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin
					Peak (dBuV/m)	AV (dBuV/m)			
--	H	--	--	--	--	--	--	--	--
--	H	--	--	--	--	--	--	--	--
--	V	--	--	--	--	--	--	--	--
--	V	--	--	--	--	--	--	--	--

Note: This Handheld EUT was tested in 3 orthogonal positions and the worst-case data was presented.
Note: "--" means the mode at least have 20dB margin.

10 BAND EDGE EMISSION

10.1 MEASUREMENT PROCEDURE

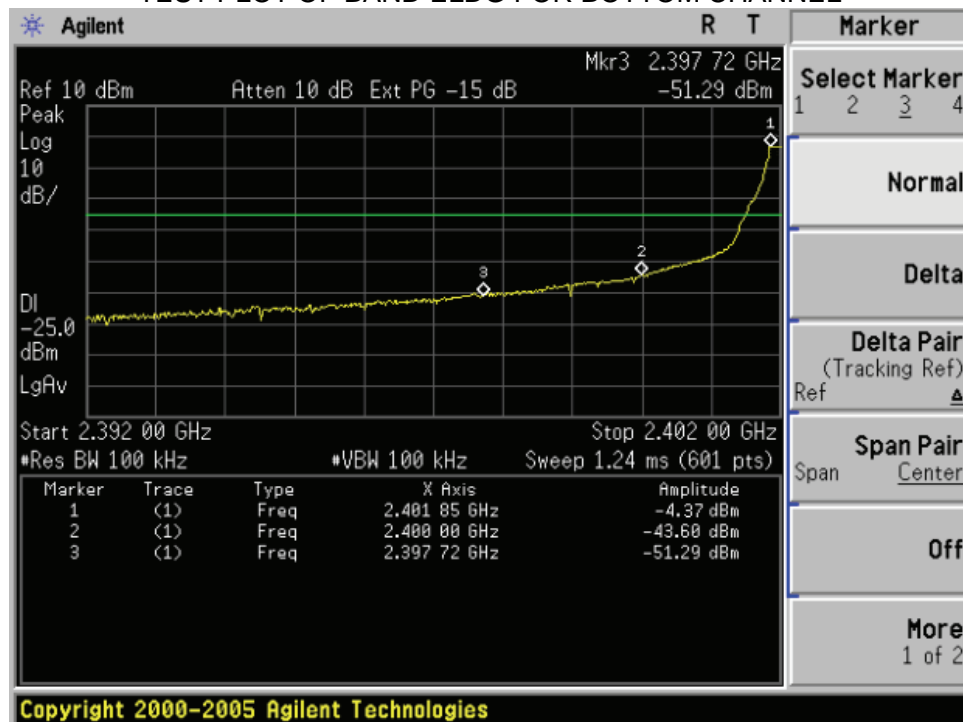
1. Set the EUT Work on the top, the bottom operation frequency individually.
2. Set SPA Start or Stop Frequency = Operation Frequency, RBW= 100 KHz, VBW= 100KHz.
3. The band edges was measured and recorded.

10.2 TEST SET-UP

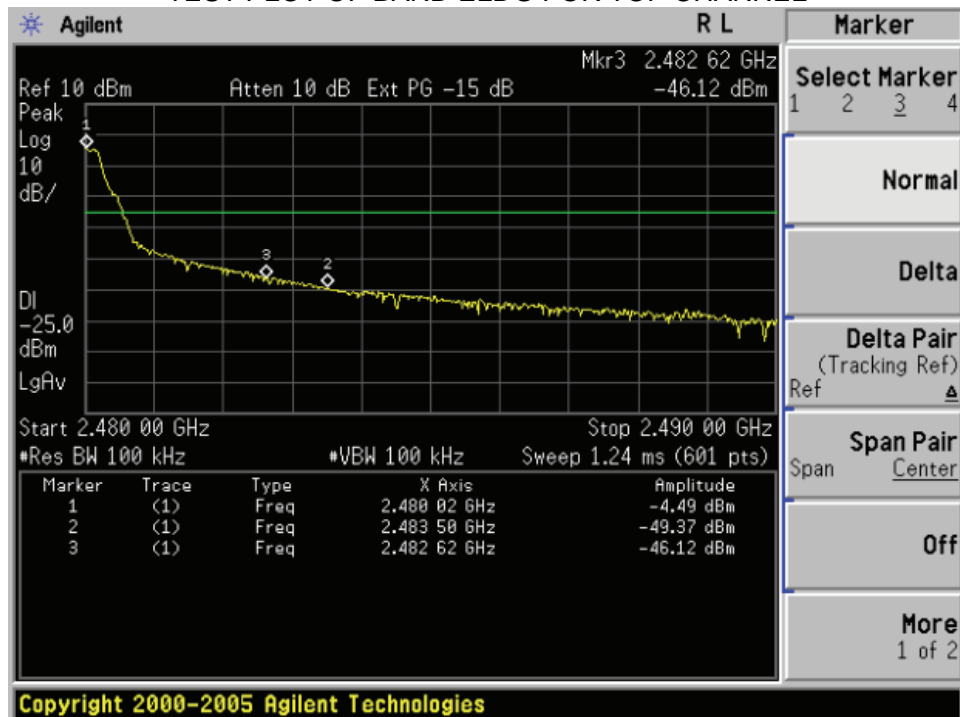
The Same as described in section 6.2

10.3 TEST RESULT

TEST PLOT OF BAND ELDG FOR BOTTOM CHANNEL



TEST PLOT OF BAND ELDG FOR TOP CHANNEL



11 NUMBER OF HOPPING FREQUENCY

11.1 MEASUREMENT PROCEDURE

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer Start = 2.4GHz Stop = 2.4835GHz
4. Set the Spectrum Analyzer as RBW = 300KHZ,VBW = 820KHz

11.2 TEST SETUP (BLOCK DIAGRAM OF CONFIGURATION)

Same as described in section 6.2

1. Conducted Method.

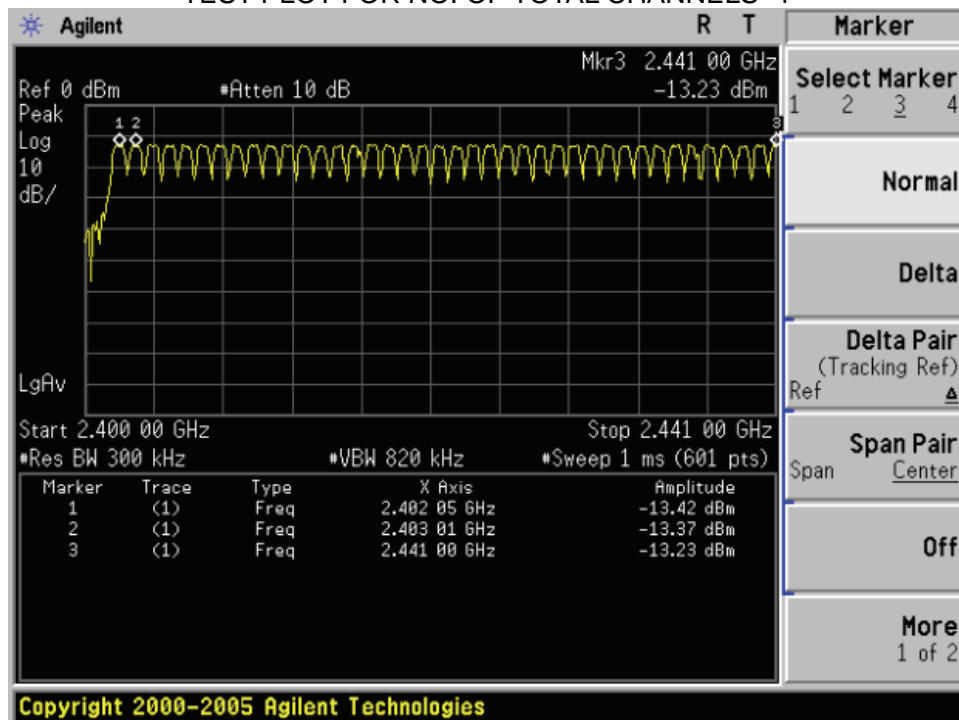
11.3 MEASUREMENT EQUIPMENT USED

The Same as described in section 6.3

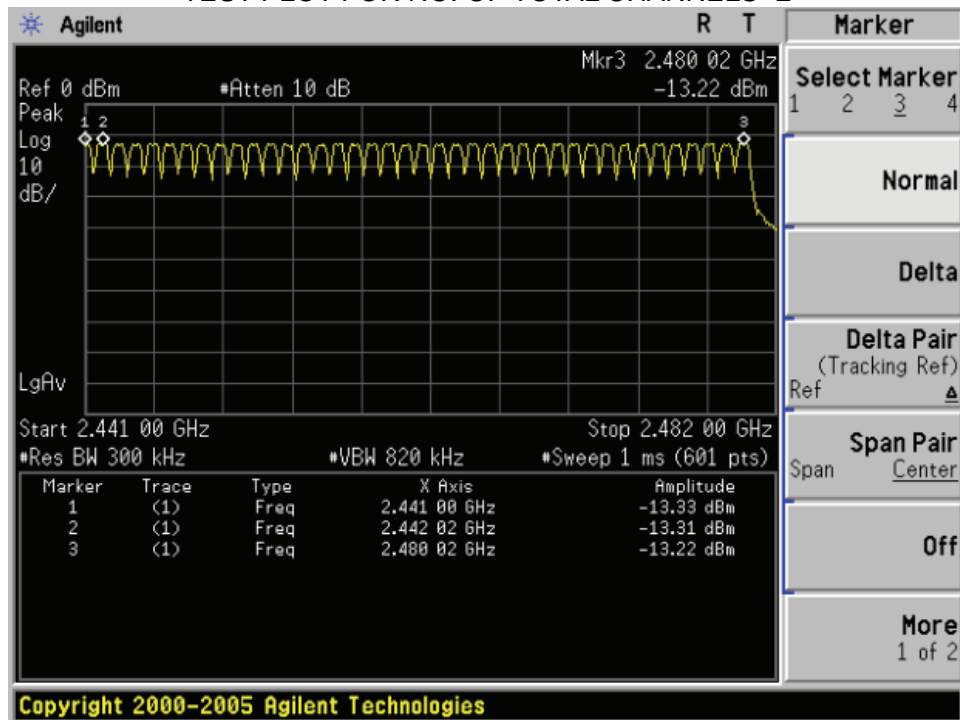
11.4 LIMITS AND MEASUREMENT RESULT

TOTAL NO. OF HOPPING CHANNEL	LIMIT (NO. OF CH)	MEASUREMENT (NO. OF CH)	RESULT
	>=15	79	PASS

TEST PLOT FOR NO. OF TOTAL CHANNELS -1



TEST PLOT FOR NO. OF TOTAL CHANNELS -2



12 TIME OF OCCUPANCY (DWELL TIME)

12.1 MEASUREMENT PROCEDURE

1. Place the EUT on the table and set it in transmitting mode
2. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum analyzer
3. Set center frequency of spectrum analyzer = Operating frequency
4. Set the spectrum analyzer as RBW, VBW=1MHz, Span = 0 Hz,

12.2 TEST SETUP (BLOCK DIAGRAM OF CONFIGURATION)

Same as described in section 6.2
Conducted Method

12.3 MEASUREMENT EQUIPMENT USED

The same as described in section 6.3

12.4 LIMITS AND MEASUREMENT RESULT

The dwell time = Time Slot Length * Hop Rate / Number of Hopping Channels * 0.4 * 79

L-CH:

DH1 Time Slot = $0.370 \text{ (ms)} * (1600 / (2 * 79)) * 31.6 = 117.34 \text{ (ms)}$

DH3 Time Slot = $1.627 \text{ (ms)} * (1600 / (4 * 79)) * 31.6 = 259.20 \text{ (ms)}$

DH5 Time Slot = $2.860 \text{ (ms)} * (1600 / (6 * 79)) * 31.6 = 307.20 \text{ (ms)}$

M-CH:

DH1 Time Slot = $0.373 \text{ (ms)} * (1600 / (2 * 79)) * 31.6 = 119.46 \text{ (ms)}$

DH3 Time Slot = $1.620 \text{ (ms)} * (1600 / (4 * 79)) * 31.6 = 260.32 \text{ (ms)}$

DH5 Time Slot = $2.860 \text{ (ms)} * (1600 / (6 * 79)) * 31.6 = 306.13 \text{ (ms)}$

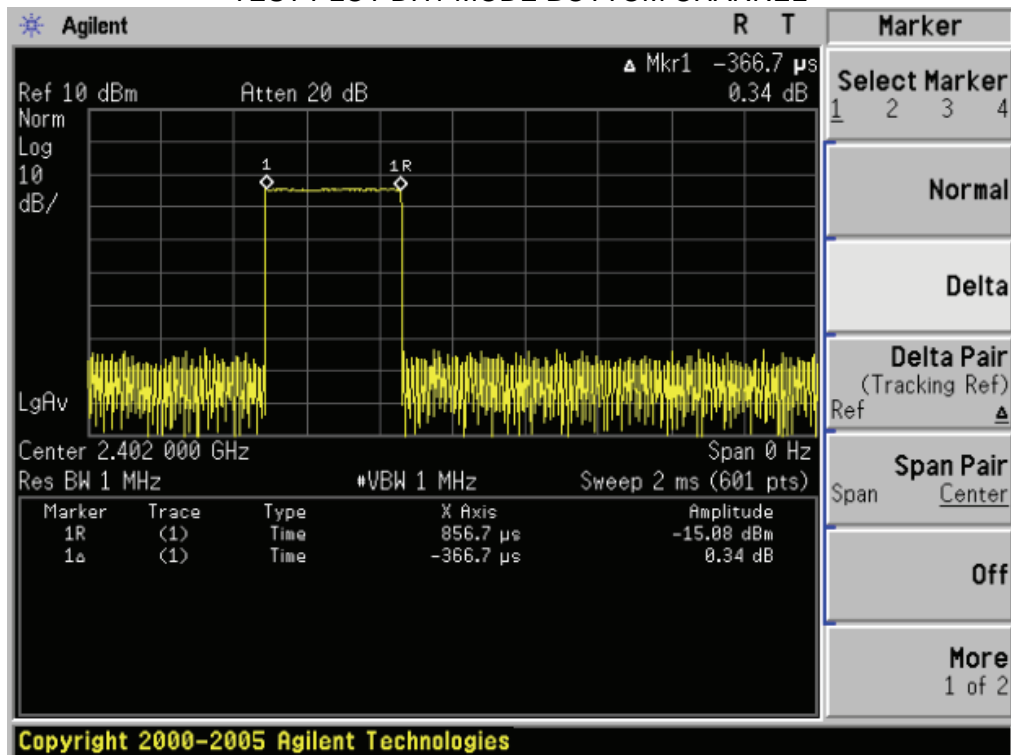
H-CH:

DH1 Time Slot = $0.370 \text{ (ms)} * (1600 / (2 * 79)) * 31.6 = 118.40 \text{ (ms)}$

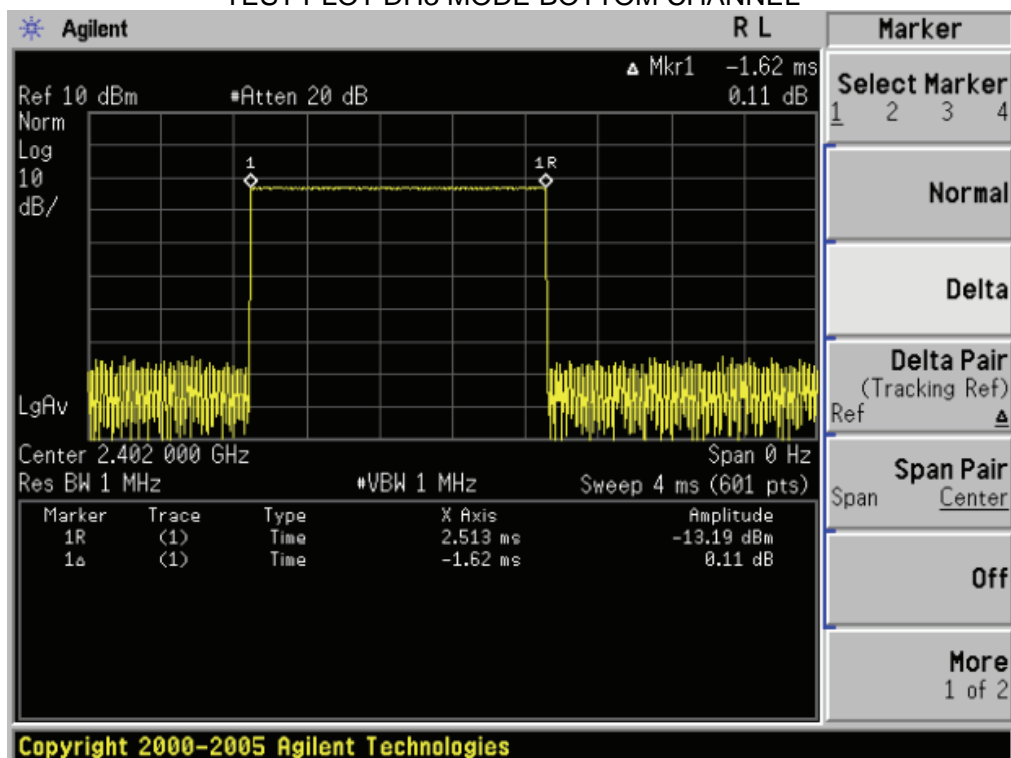
DH3 Time Slot = $1.627 \text{ (ms)} * (1600 / (4 * 79)) * 31.6 = 260.32 \text{ (ms)}$

DH5 Time Slot = $2.850 \text{ (ms)} * (1600 / (6 * 79)) * 31.6 = 305.07 \text{ (ms)}$

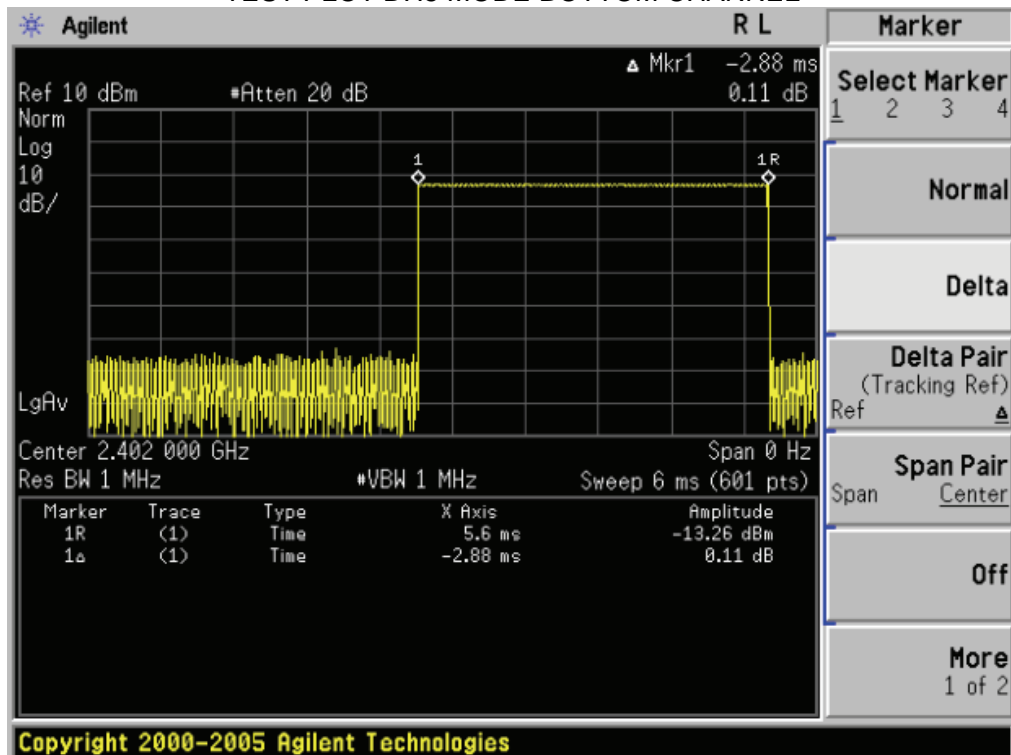
TEST PLOT DH1 MODE BOTTOM CHANNEL



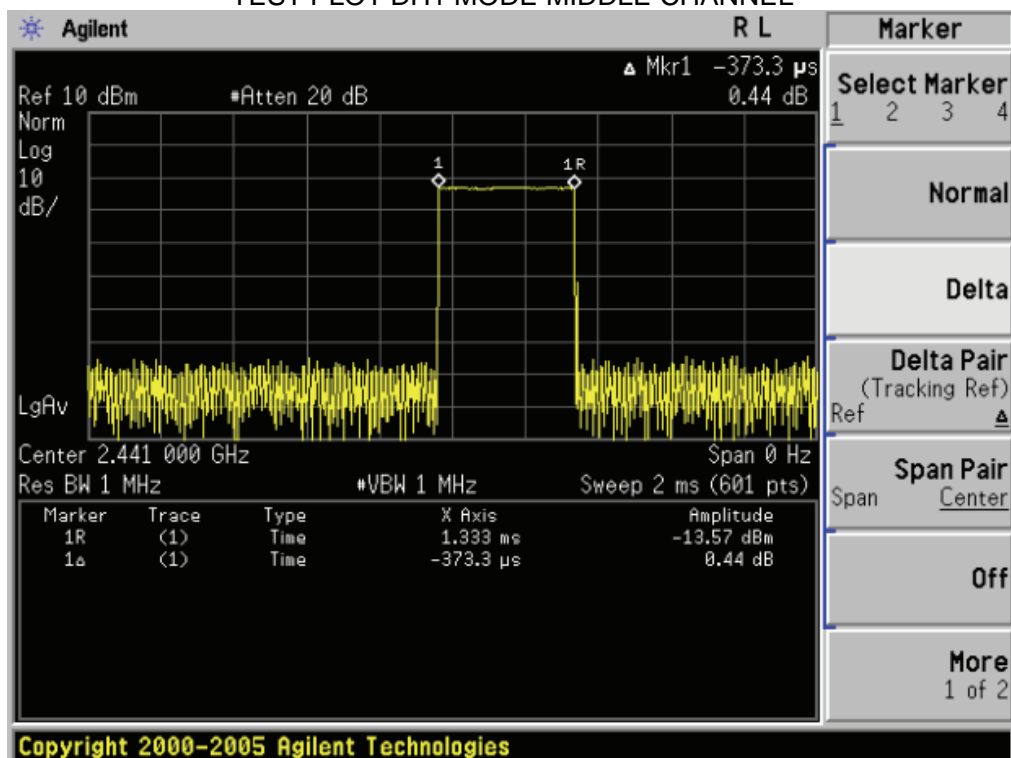
TEST PLOT DH3 MODE BOTTOM CHANNEL



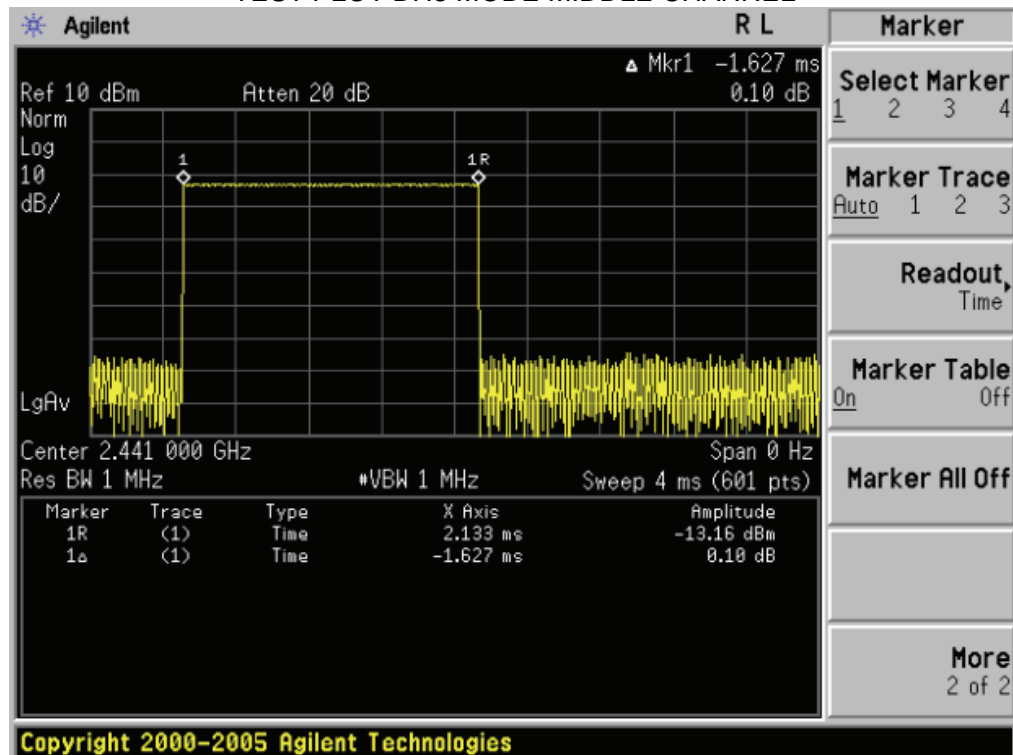
TEST PLOT DH5 MODE BOTTOM CHANNEL



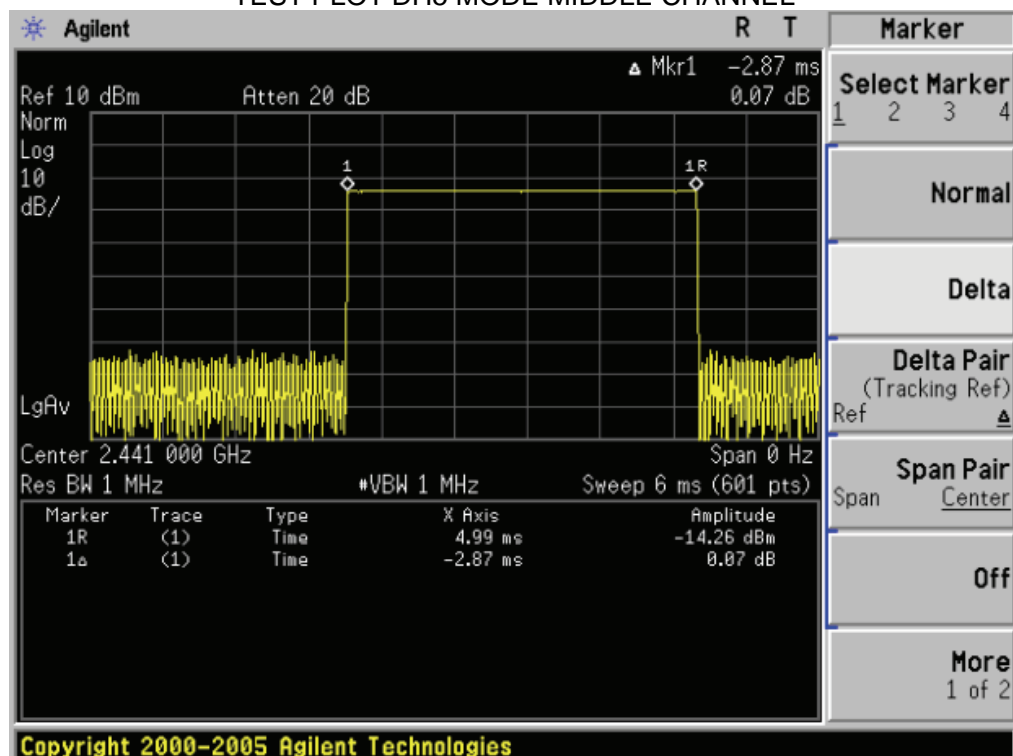
TEST PLOT DH1 MODE MIDDLE CHANNEL



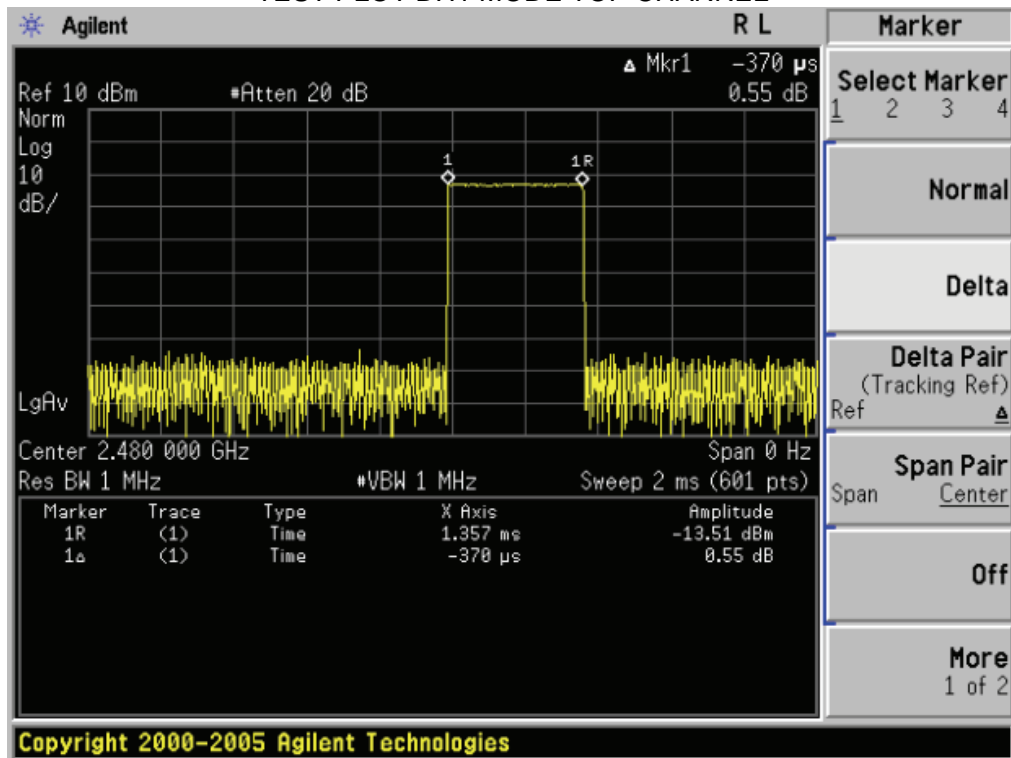
TEST PLOT DH3 MODE MIDDLE CHANNEL



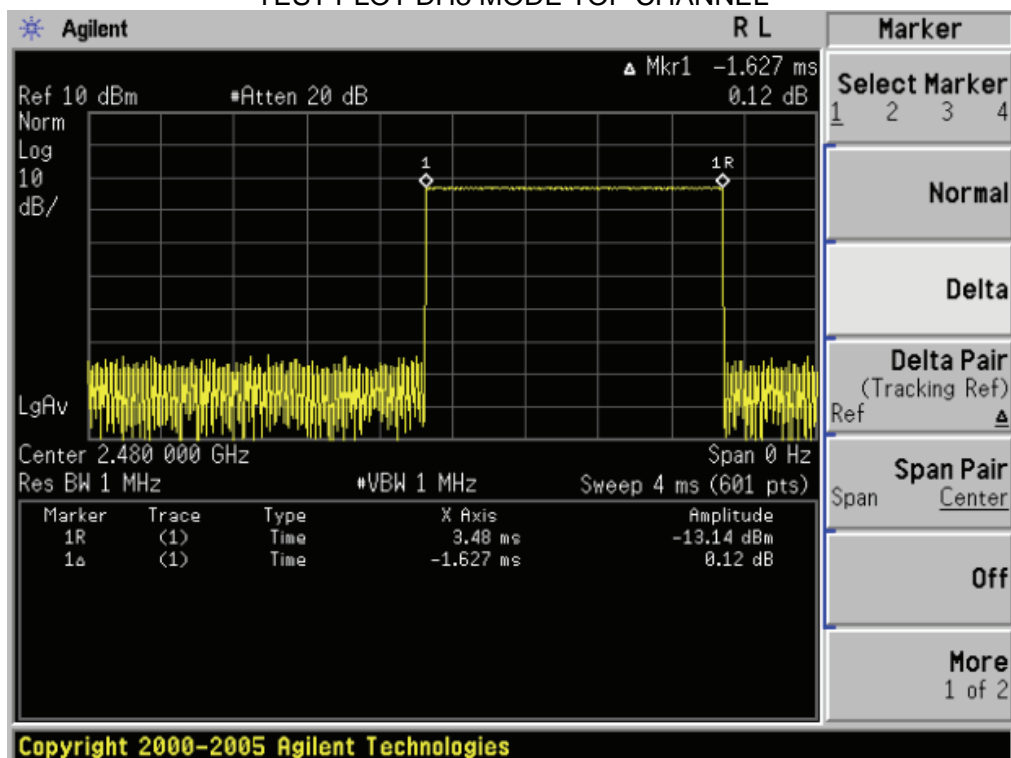
TEST PLOT DH5 MODE MIDDLE CHANNEL



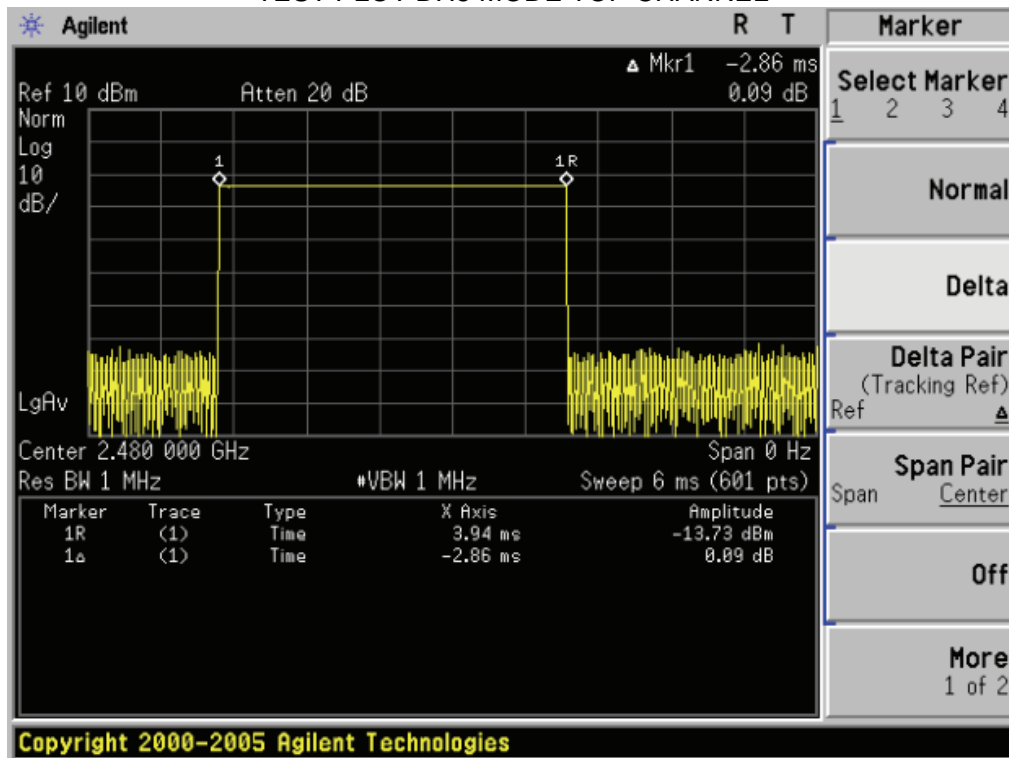
TEST PLOT DH1 MODE TOP CHANNEL



TEST PLOT DH3 MODE TOP CHANNEL



TEST PLOT DH5 MODE TOP CHANNEL



13. FREQUENCY SEPARATION

13.1 MEASUREMENT PROCEDURE

1. Place the EUT on the table and set it in transmitting mode
2. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum analyzer
3. Set center frequency of spectrum analyzer = Middle of Operating frequency
4. Set the spectrum analyzer as RBW, VBW=100KHz, Span = 5 MHz,

13.2 TEST SETUP (BLOCK DIAGRAM OF CONFIGURATION)

Same as described in section 6.2

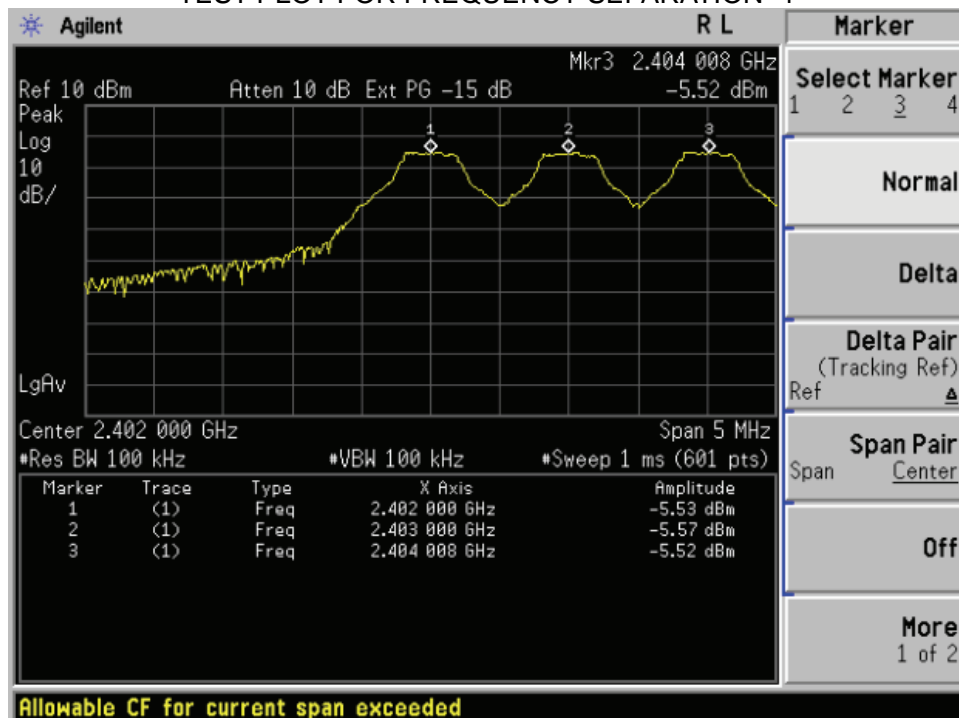
13.3 MEASUREMENT EQUIPMENT USED

The same as described in section 6.3

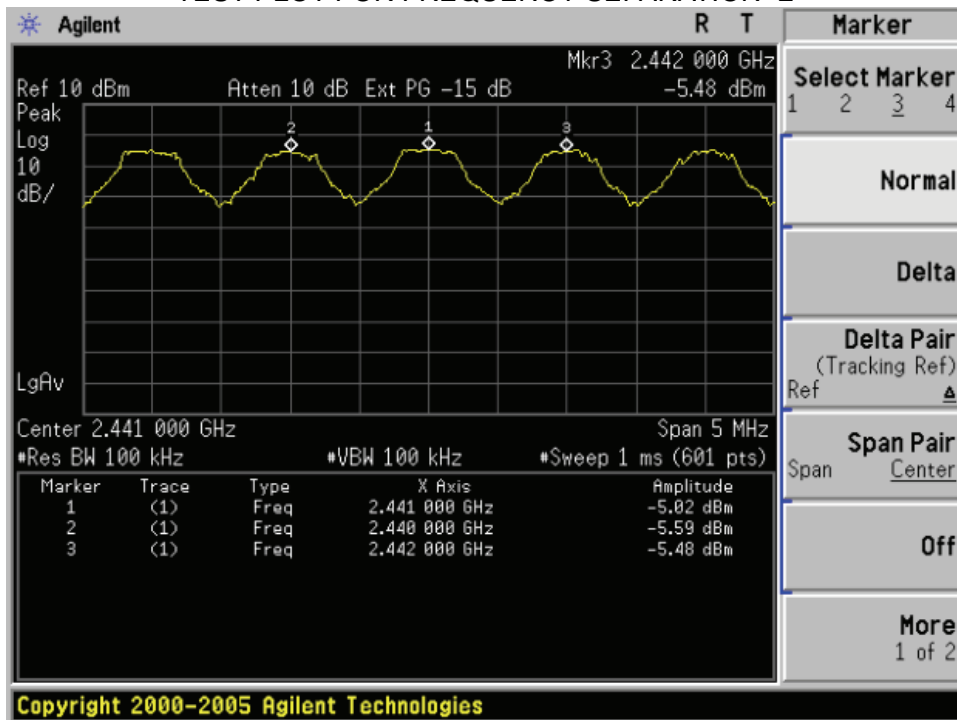
13.4 LIMITS AND MEASUREMENT RESULT

CHANNEL	CHANNEL SEPARATION	LIMIT	RESULT
	KHz	KHz	
CH01-CH02	1000	≥25 KHz or 2/3 20 dB BW	Pass
CH39-CH40	1000		
CH78-CH79	1008		

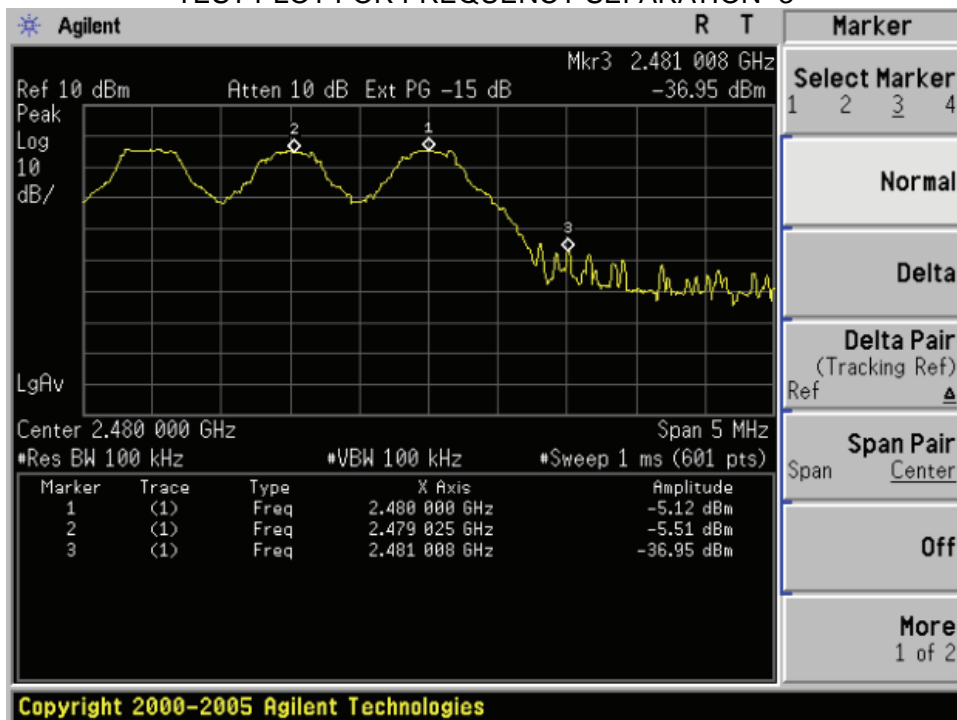
TEST PLOT FOR FREQUENCY SEPARATION -1



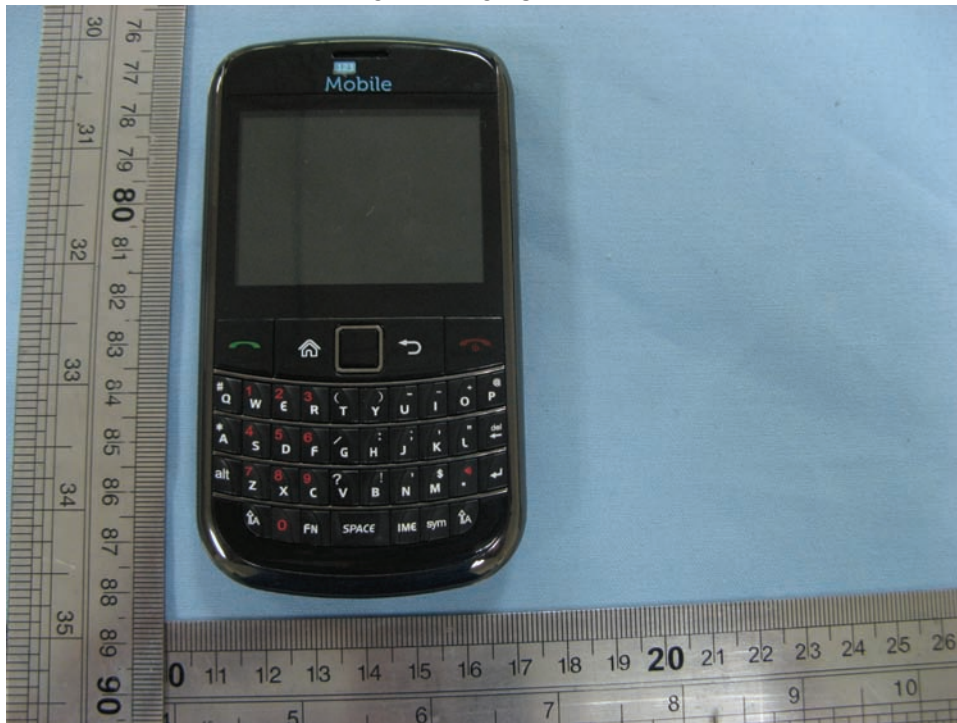
TEST PLOT FOR FREQUENCY SEPARATION -2



TEST PLOT FOR FREQUENCY SEPARATION -3



APPENDIX I
PHOTOGRAPHS OF THE EUT
TOP VIEW OF SAMPLE



BOTTOM VIEW OF SAMPLE



LEFT VIEW OF SAMPLE



RIGHT VIEW OF SAMPLE



FRONT VIEW OF SAMPLE



BACK VIEW OF SAMPLE



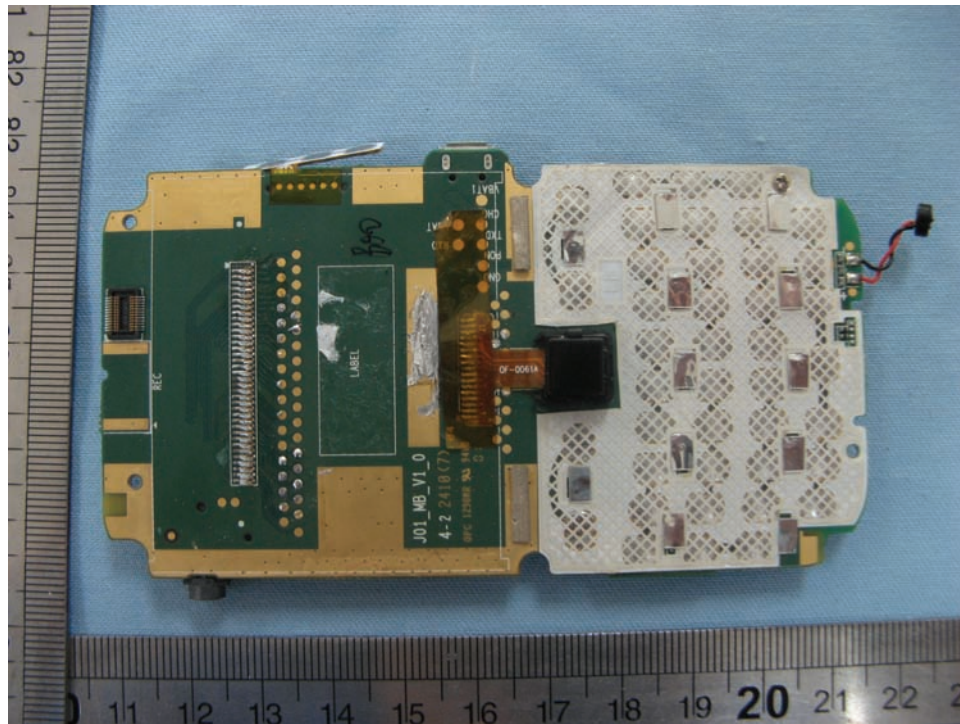
INTERNAL PHOTO OF SAMPLE – 1



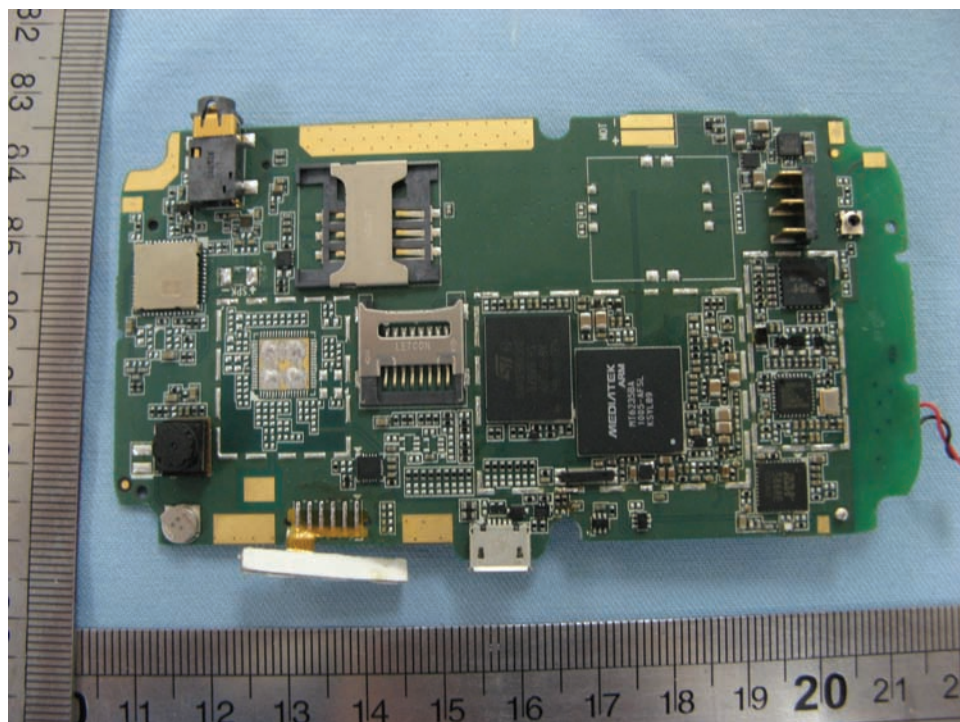
INTERNAL PHOTO OF SAMPLE – 2



PCB PHOTO OF SAMPLE – 1



PCB PHOTO OF SAMPLE – 2



PPENDIX II
PHOTOGRAPHS OF THE TEST SETUP
CONDUCTED EMISSION TEST



RADIATED EMISSION TEST SETUP



----END OF REPORT----