



FCC RADIO TEST REPORT

FCC ID: 2ACEVF2BRIOF25

Product : Mobile phone

Trade Name : F2 mobile

Model Name : BRIO F25

Serial Model : N/A

Report No. : BZT140520F02

Prepared for

IED CONEXION VIRTUAL S.A. DE C.V.

Iztacalco MZ 146 LT 4 D Col. La Florida de Ciudad Azteca C.P. 55120.
Municipio, Ecatepec de Morelos, Edo. De Mexico

Prepared by

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TEST RESULT CERTIFICATION

Applicant's name : IED CONEXION VIRTUAL S.A. DE C.V.
Address : Iztacalco MZ 146 LT 4 D Col. La Florida de Ciudad Azteca C.P.
55120. Municipio, Ecatepec de Morelos, Edo. De Mexico
Manufacture's Name : Shenzhen Kaliho Technology Development Limited
Address : Rm1901, Block A, The Stars Plaza, Huaqiang North Rd., Futian
District, Shenzhen, China

Product description

Product name..... : Mobile phone
Band name : F2 mobile
Model and/or type reference : BRIO F25

Standards : FCC Part15.247

Test procedure ANSI C63.4-2003

This device described above has been tested by BZT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test..... :

Date (s) of performance of tests..... : May 06, 2014 ~ May 20, 2014

Date of Issue : May 20, 2014

Test Result : **Pass**

Testing Engineer : Lynn Chen
(Lynn Chen)

Technical Manager : Carlen Liu
(Carlen Liu)

Authorized Signatory : Tommy Zhang
(Tommy Zhang)

Table of Contents

	Page
1 . SUMMARY OF TEST RESULTS	5
1.1 TEST FACILITY	6
1.2 MEASUREMENT UNCERTAINTY	6
2 . GENERAL INFORMATION	7
2.1 GENERAL DESCRIPTION OF EUT	7
2.2 DESCRIPTION OF TEST MODES	9
2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	10
2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)	11
2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS	12
3 . EMC EMISSION TEST	13
3.1 CONDUCTED EMISSION MEASUREMENT	13
3.1.1 POWER LINE CONDUCTED EMISSION LIMITS	13
3.1.2 TEST PROCEDURE	14
3.1.3 DEVIATION FROM TEST STANDARD	14
3.1.4 TEST SETUP	14
3.1.5 EUT OPERATING CONDITIONS	14
3.1.6 TEST RESULTS	15
3.2 RADIATED EMISSION MEASUREMENT	17
3.2.1 RADIATED EMISSION LIMITS	17
3.2.2 TEST PROCEDURE	18
3.2.3 DEVIATION FROM TEST STANDARD	18
3.2.4 TEST SETUP	19
3.2.5 EUT OPERATING CONDITIONS	20
3.2.6 TEST RESULTS	21
4 . POWER SPECTRAL DENSITY TEST	30
4.1 APPLIED PROCEDURES / LIMIT	30
4.1.1 TEST PROCEDURE	30
4.1.2 DEVIATION FROM STANDARD	30
4.1.3 TEST SETUP	30
4.1.4 EUT OPERATION CONDITIONS	30
4.1.5 TEST RESULTS	31
5 . BANDWIDTH TEST	37
5.1 APPLIED PROCEDURES / LIMIT	37
5.1.1 TEST PROCEDURE	37
5.1.2 DEVIATION FROM STANDARD	37
5.1.3 TEST SETUP	37

Table of Contents

	Page
5.1.4 EUT OPERATION CONDITIONS	37
5.1.5 TEST RESULTS	38
6 . PEAK OUTPUT POWER TEST	44
6.1 APPLIED PROCEDURES / LIMIT	44
6.1.1 TEST PROCEDURE	44
6.1.2 DEVIATION FROM STANDARD	44
6.1.3 TEST SETUP	44
6.1.4 EUT OPERATION CONDITIONS	44
6.1.5 TEST RESULTS	45
7 . 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE	46
7.1 DEVIATION FROM STANDARD	46
7.2 TEST SETUP	46
7.3 EUT OPERATION CONDITIONS	46
7.4 TEST RESULTS	47
8 . ANTENNA REQUIREMENT	51
8.1 STANDARD REQUIREMENT	51
8.2 EUT ANTENNA	51
9 . EUT TEST PHOTO	52
APPENDIX-PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS	

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247 (a)(2)	6dB Bandwidth	PASS	
15.247 (b)	Peak Output Power	PASS	
15.247 (c)	Radiated Spurious Emission	PASS	
15.247 (d)	Power Spectral Density	PASS	
15.205	Band Edge Emission	PASS	
15.203	Antenna Requirement	PASS	

NOTE:

(1) "N/A" denotes test is not applicable in this Test Report

1.1 TEST FACILITY

BZT Testing Technology Co., Ltd

Add.:1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.

FCC Registration No.: 701733

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately **95 %** .

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 1.38\text{dB}$
2	RF power,conducted	$\pm 0.16\text{dB}$
3	Spurious emissions,conducted	$\pm 0.21\text{dB}$
4	All emissions,radiated(<1G)	$\pm 4.68\text{dB}$
5	All emissions,radiated(>1G)	$\pm 4.89\text{dB}$
6	Temperature	$\pm 0.5^{\circ}\text{C}$
7	Humidity	$\pm 2\%$

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Mobile phone																								
Trade Name	F2 mobile																								
Model Name	BRIO F25																								
Serial Model	N/A																								
Model Difference	N/A.																								
Product Description	<p>The EUT is a Mobile phone</p> <table border="1"> <tr> <td>Operation Frequency:</td><td>802.11b/g/n 20:2412~2462 MHz</td></tr> <tr> <td>Modulation Type:</td><td>CCK/OFDM/DBPSK/DAPSK</td></tr> <tr> <td>Bit Rate of Transmitter</td><td>802.11b:11/5.5/2/1 Mbps 802.11g:54/48/36/24/18/12/9/6Mbps 802.11n(20):300/150/144.44/130/117/115.56/104/86.67/78/52/6.5Mbps</td></tr> <tr> <td>Number Of Channel</td><td>802.11b/g/n20: 11CH</td></tr> <tr> <td>Antenna Designation:</td><td>Please see Note 3.</td></tr> <tr> <td>Peak Output Power(Conducted):</td><td>802.11b: 9.42 dBm (Max.) 802.11g: 8.77 dBm (Max.) 802.11n(20MHz): 8.81 dBm (Max.)</td></tr> <tr> <td>Antenna Gain (dBi)</td><td>1.0 dBi</td></tr> </table> <table border="1"> <tr> <td>Operation Frequency:</td><td>2402~2480 MHz</td></tr> <tr> <td>Modulation Type:</td><td>FHSS</td></tr> <tr> <td>Bit Rate of Transmitter</td><td>GFSK</td></tr> <tr> <td>Number Of Channel</td><td>79 CH</td></tr> <tr> <td>Antenna Gain(Peak)</td><td>1.0dBi</td></tr> </table> <p>Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.</p>	Operation Frequency:	802.11b/g/n 20:2412~2462 MHz	Modulation Type:	CCK/OFDM/DBPSK/DAPSK	Bit Rate of Transmitter	802.11b:11/5.5/2/1 Mbps 802.11g:54/48/36/24/18/12/9/6Mbps 802.11n(20):300/150/144.44/130/117/115.56/104/86.67/78/52/6.5Mbps	Number Of Channel	802.11b/g/n20: 11CH	Antenna Designation:	Please see Note 3.	Peak Output Power(Conducted):	802.11b: 9.42 dBm (Max.) 802.11g: 8.77 dBm (Max.) 802.11n(20MHz): 8.81 dBm (Max.)	Antenna Gain (dBi)	1.0 dBi	Operation Frequency:	2402~2480 MHz	Modulation Type:	FHSS	Bit Rate of Transmitter	GFSK	Number Of Channel	79 CH	Antenna Gain(Peak)	1.0dBi
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Number Of Channel	79 CH																								
Antenna Gain(Peak)	1.0dBi																								
Channel List	Please refer to the Note 2.																								
Ratings	DC 5V from adapter and 3.7V from battery																								
Adapter	DC 5V 500mA																								
Battery	DC 3.7V																								
Connecting I/O Port(s)	Please refer to the User's Manual																								

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.

Channel List for 802.11b/g/n(20MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3.

Table for Filed Antenna

Ant .	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
A	N/A	N/A	FIFA Antenna	N/A	1.0	N/A

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

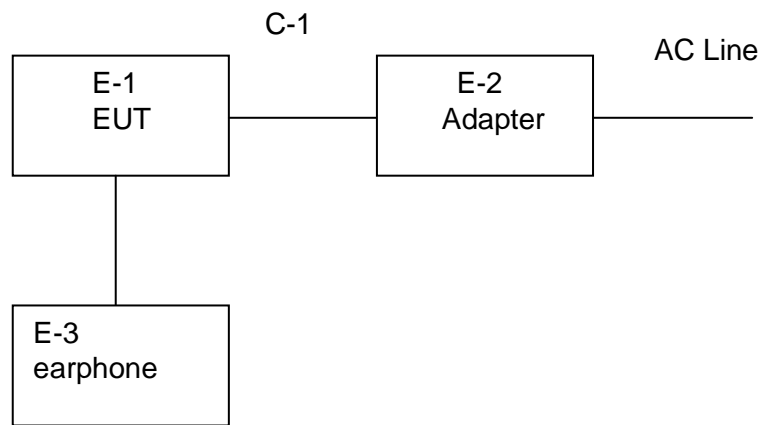
Pretest Mode	Description
Mode 1	Link Mode

For Conducted Emission	
Final Test Mode	Description
Mode 1	Link Mode

For Radiated Emission	
Final Test Mode	Description
Mode 1	Link Mode

Note:

- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Mobile phone	F2 mobile	BRIO F25	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	1M	

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4407B	MY45108040	2013.07.06	2014.07.05	1 year
2	Test Receiver	R&S	ESPI	101318	2013.06.07	2014.06.06	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2013.07.06	2014.07.05	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2013.06.07	2014.06.06	1 year
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	2013.06.07	2014.06.06	1 year
6	Horn Antenna	EM	EM-AH-10180	2011071402	2013.07.06	2014.07.05	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2013.07.06	2014.07.05	1 year
8	Amplifier	EM	EM-30180	060538	2013.12.22	2014.12.21	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2013.06.08	2014.06.07	1 year
10	Power Meter	R&S	NRVS	100696	2013.07.06	2014.07.05	1 year
11	Power Sensor	R&S	URV5-Z4	0395.1619.05	2013.07.06	2014.07.05	1 year

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2013.06.06	2014.06.05	1 year
2	LISN	R&S	ENV216	101313	2013.08.24	2014.08.23	1 year
3	LISN	EMCO	3816/2	00042990	2013.08.24	2014.08.23	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2013.06.07	2014.06.06	1 year
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	2013.06.07	2014.06.06	1 year
6	Absorbing clamp	R&S	MOS-21	100423	2013.06.08	2014.06.07	1 year

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	73.00	60.00	56.00	46.00	CISPR
5.0 -30.0	73.00	60.00	60.00	50.00	CISPR

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

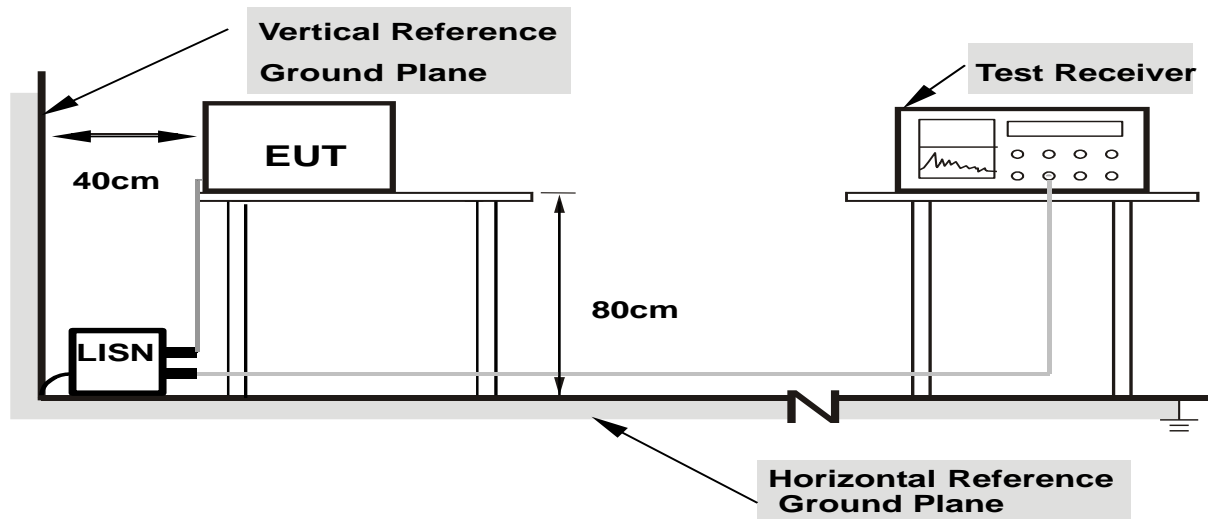
3.1.2 TEST PROCEDURE

- The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

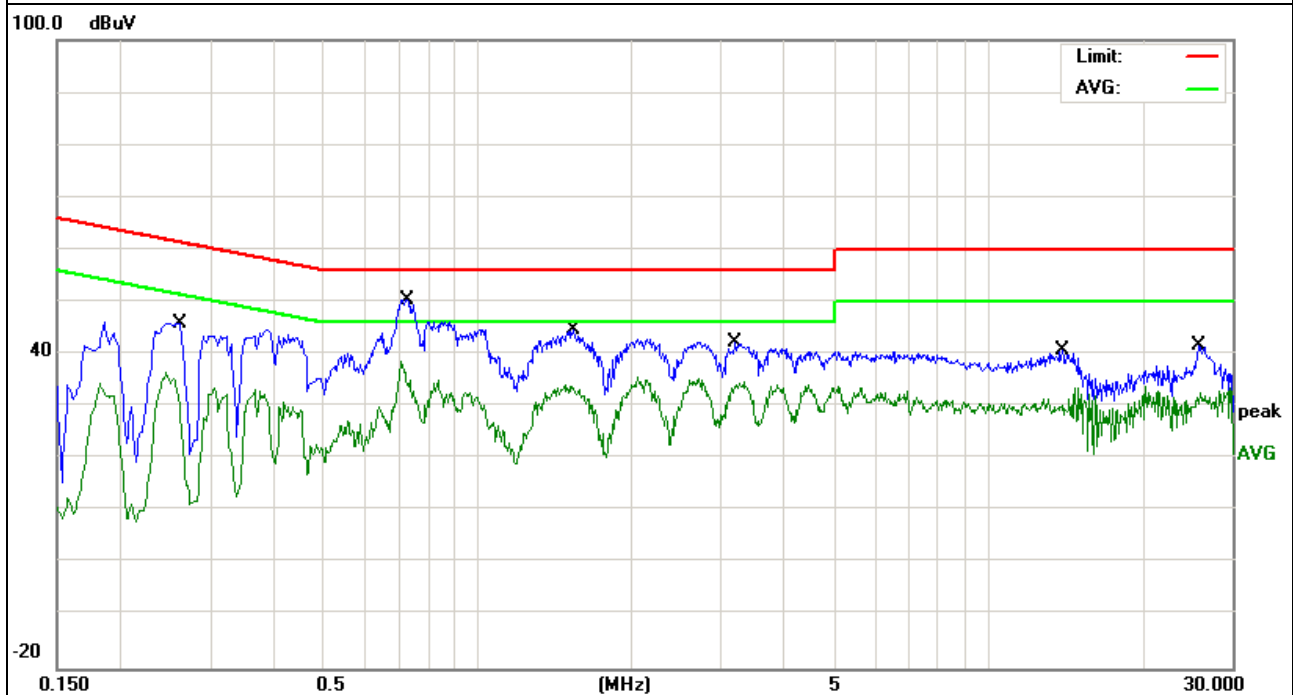
3.1.6 TEST RESULTS

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 5V from adapter AC120V/60Hz	Test Mode :	Mode 1

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.262	36.45	9.51	45.96	61.36	-15.4	QP
0.262	26.89	9.51	36.4	51.36	-14.96	AVG
0.73	40.88	9.54	50.42	56	-5.58	QP
0.73	29.23	9.54	38.77	46	-7.23	AVG
1.542	34.97	9.56	44.53	56	-11.47	QP
1.542	24.45	9.56	34.01	46	-11.99	AVG
3.206	32.74	9.58	42.32	56	-13.68	QP
3.206	25.05	9.58	34.63	46	-11.37	AVG
13.9859	30.85	9.82	40.67	60	-19.33	QP
13.9859	23.84	9.82	33.66	50	-16.34	AVG
25.814	31.23	10.28	41.51	60	-18.49	QP
25.814	22.44	10.28	32.72	50	-17.28	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

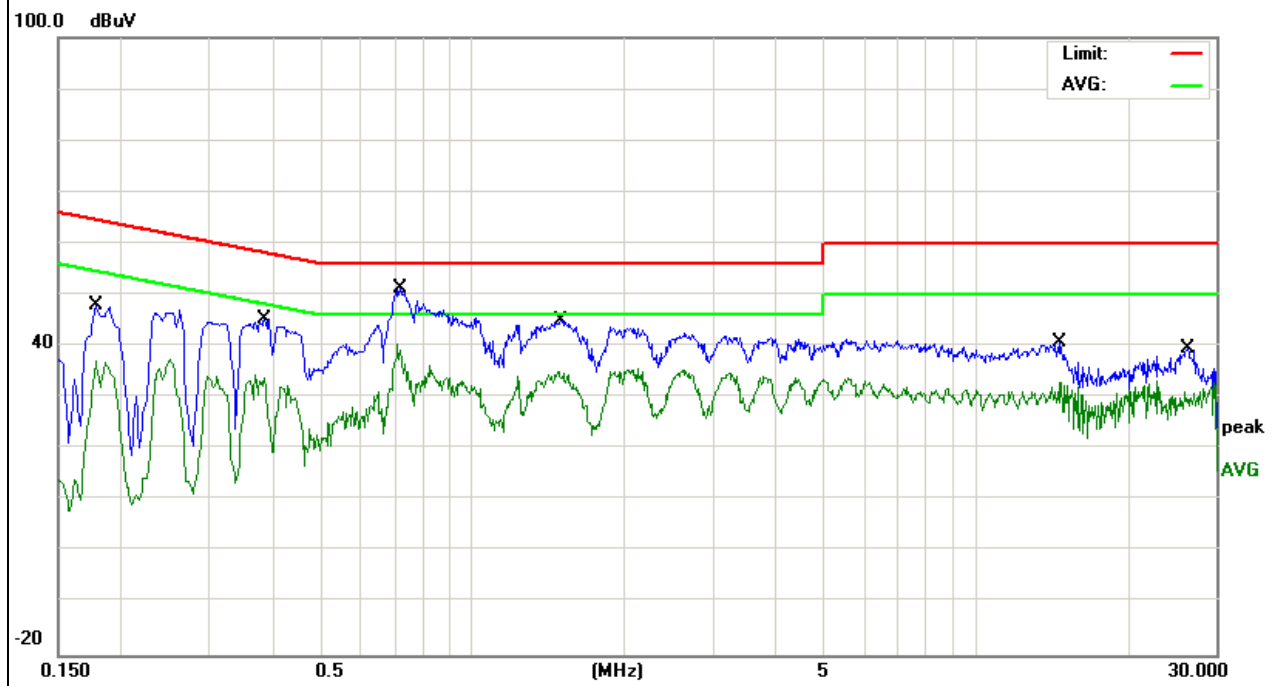


EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 5V from adapter AC120V/60Hz	Test Mode :	Mode 1

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Detector Type
0.178	38.5	9.57	48.07	64.57	-16.5	QP
0.178	27.49	9.57	37.06	54.57	-17.51	AVG
0.386	35.85	9.52	45.37	58.15	-12.78	QP
0.386	24.8	9.52	34.32	48.15	-13.83	AVG
0.718	41.6	9.54	51.14	56	-4.86	QP
0.718	30.98	9.54	40.52	46	-5.48	AVG
1.498	35.4	9.56	44.96	56	-11.04	QP
1.498	25.55	9.56	35.11	46	-10.89	AVG
14.6019	31	9.83	40.83	60	-19.17	QP
14.6019	23.17	9.83	33	50	-17	AVG
26.322	29.33	10.28	39.61	60	-20.39	QP
26.322	20.82	10.28	31.1	50	-18.9	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (dBuV/m) (at 3M)		Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

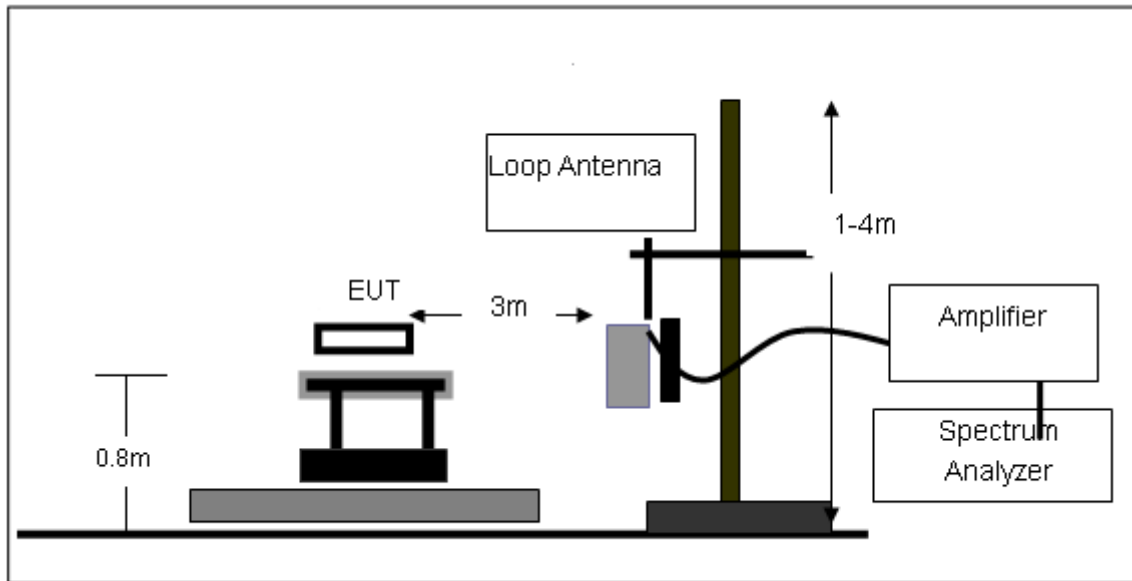
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

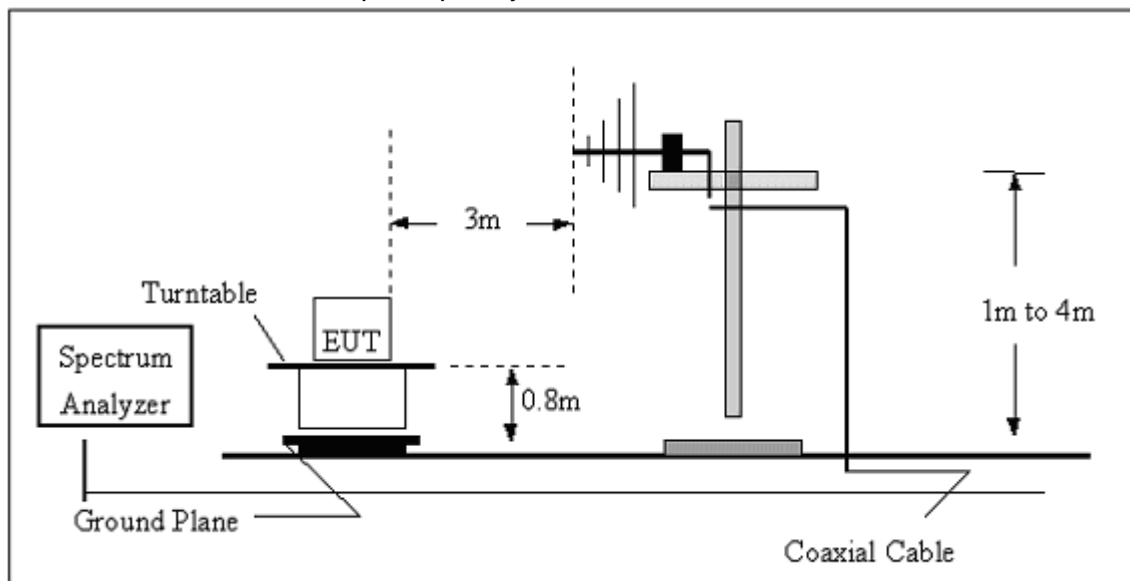
No deviation

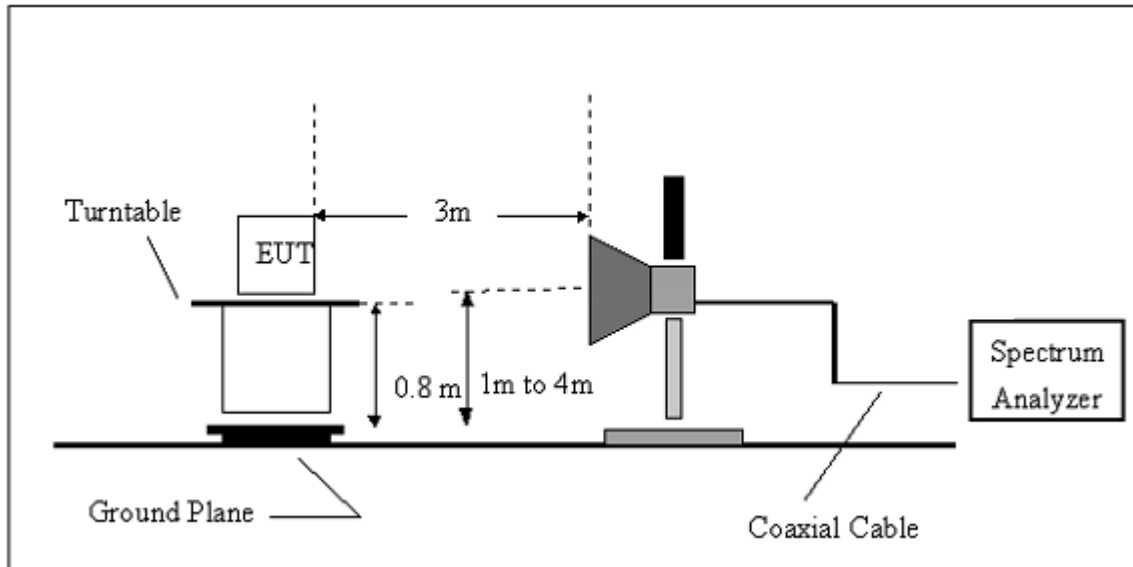
3.2.4 TEST SETUP

(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz**3.2.5 EUT OPERATING CONDITIONS**

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.6 TEST RESULTS

Radiated Spurious Emission (Transmitting)

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH1 (802.11b Mode)/2412	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.5	47.43	10.44	57.87	74	-16.13	peak
4824.5	35.35	10.44	45.79	54	-8.21	AVG
7236.76	48.71	12.75	61.46	74	-12.54	peak
7236.76	31.26	12.75	44.01	54	-9.99	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH1 (802.11b Mode)/2412	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.5	46.38	10.44	56.82	74	-17.18	peak
4824.5	29.77	10.44	40.21	54	-13.79	AVG
7236.76	43.17	12.75	55.92	74	-18.08	peak
7236.76	25.43	12.75	38.18	54	-15.82	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH6 (802.11b Mode)/2437	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.24	49.31	10.38	59.69	74	-14.31	peak
4874.24	33.22	10.38	43.6	54	-10.4	AVG
7311.36	42.34	12.68	55.02	74	-18.98	peak
7311.36	28.17	12.68	40.85	54	-13.15	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH6 (802.11b Mode)/2437	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.24	51.22	10.38	61.6	74	-12.4	peak
4874.24	33.22	10.38	43.6	54	-10.4	AVG
7311.36	41.77	12.68	54.45	74	-19.55	peak
7311.36	30.43	12.68	43.11	54	-10.89	AVG

Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH11 (802.11b Mode)/2462	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.15	50.18	10.33	60.51	74	-13.49	peak
4924.15	31.89	10.33	42.22	54	-11.78	AVG
7386.31	41.28	12.71	53.99	74	-20.01	peak
7386.31	29.31	12.71	42.02	54	-11.98	AVG

Remark:

- Factor = Antenna Factor + Cable Loss – Pre-amplifier.
- No emission detected above 18GHz

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH11 (802.11b Mode)/2462	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.15	47.38	10.33	57.71	74	-16.29	peak
4924.15	32.17	10.33	42.5	54	-11.5	AVG
7386.31	45.72	12.71	58.43	74	-15.57	peak
7386.31	30.81	12.71	43.52	54	-10.48	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH1 (802.11g Mode)/2412	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.5	45.38	10.44	55.82	74	-18.18	peak
4824.5	31.26	10.44	41.7	54	-12.3	AVG
7236.76	42.27	12.75	55.02	74	-18.98	peak
7236.76	30.17	12.75	42.92	54	-11.08	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH1 (802.11g Mode)/2412	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.5	41.64	10.44	52.08	74	-21.92	peak
4824.5	26.82	10.44	37.26	54	-16.74	AVG
7236.76	39.83	12.75	52.58	74	-21.42	peak
7236.76	28.63	12.75	41.38	54	-12.62	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 12V
Test Mode :	CH6 (802.11g Mode)/2437	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.24	50.32	10.38	60.7	74	-13.3	peak
4874.24	33.47	10.38	43.85	54	-10.15	AVG
7311.36	45.21	12.68	57.89	74	-16.11	peak
7311.36	29.37	12.68	42.05	54	-11.95	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 12V
Test Mode :	CH6 (802.11g Mode)/2437	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.24	44.23	10.38	54.61	74	-19.39	peak
4874.24	31.66	10.38	42.04	54	-11.96	AVG
7311.36	46.23	12.68	58.91	74	-15.09	peak
7311.36	28.45	12.68	41.13	54	-12.87	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH11 (802.11g Mode)/2462	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.15	43.43	10.33	53.76	74	-20.24	peak
4924.15	30.05	10.33	40.38	54	-13.62	AVG
7386.31	42.41	12.71	55.12	74	-18.88	peak
7386.31	25.42	12.71	38.13	54	-15.87	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH11(802.11g Mode)/2462	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.15	51.45	10.33	61.78	74	-12.22	peak
4924.15	32.37	10.33	42.7	54	-11.3	AVG
7386.31	43.31	12.71	56.02	74	-17.98	peak
7386.31	30.25	12.71	42.96	54	-11.04	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH1(802.11n Mode)/20MHz	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.5	48.894	10.44	59.334	74	-14.666	peak
4824.5	31.42	10.44	41.86	54	-12.14	AVG
7236.76	44.22	12.75	56.97	74	-17.03	peak
7236.76	29.24	12.75	41.99	54	-12.01	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH1(802.11n Mode)/20MHz	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.50	51.37	10.44	61.81	74	-12.19	peak
4824.50	31.45	10.44	41.89	54	-12.11	AVG
7236.76	46.34	12.75	59.09	74	-14.91	peak
7236.76	30.92	12.75	43.67	54	-10.33	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH6(802.11n Mode)/20MHz	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.24	48.26	10.38	58.64	74	-15.36	peak
4874.24	33.31	10.38	43.69	54	-10.31	AVG
7311.64	45.18	12.68	57.86	74	-16.14	peak
7311.64	32.34	12.68	45.02	54	-8.98	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH6(802.11n Mode)/20MHz	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.24	46.64	10.38	57.02	74	-16.98	peak
4874.24	25.31	10.38	35.69	54	-18.31	AVG
7311.64	44.38	12.68	57.06	74	-16.94	peak
7311.64	25.48	12.68	38.16	54	-15.84	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH11(802.11n Mode)/20MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4924.14	46.13	10.33	56.46	74	-17.54	peak
4924.14	30.32	10.33	40.65	54	-13.35	AVG
7386.28	36.43	12.71	49.14	74	-24.86	peak
7386.28	28.32	12.71	41.03	54	-12.97	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	CH11(802.11n Mode)/20MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4924.14	47.23	10.33	57.56	74	-16.44	peak
4924.14	31.28	10.33	41.61	54	-12.39	AVG
7386.28	39.36	12.71	52.07	74	-21.93	peak
7386.28	28.34	12.71	41.05	54	-12.95	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

3.2.7. POWER SPECTRAL DENSITY TEST

3.3 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

3.3.1 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$
4. Set the VBW $\geq 3 \times \text{RBW}$.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

3.3.2 DEVIATION FROM STANDARD

No deviation.

3.3.3 TEST SETUP



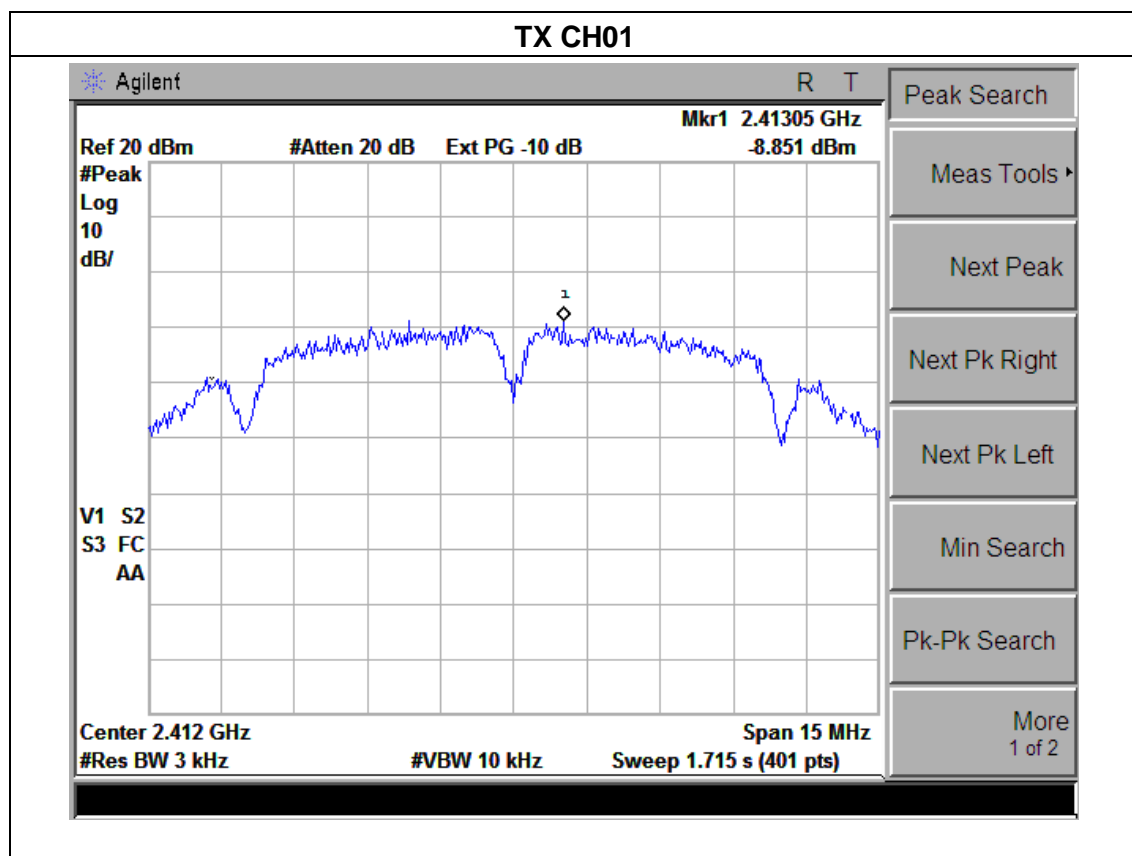
3.3.4 EUT OPERATION CONDITIONS

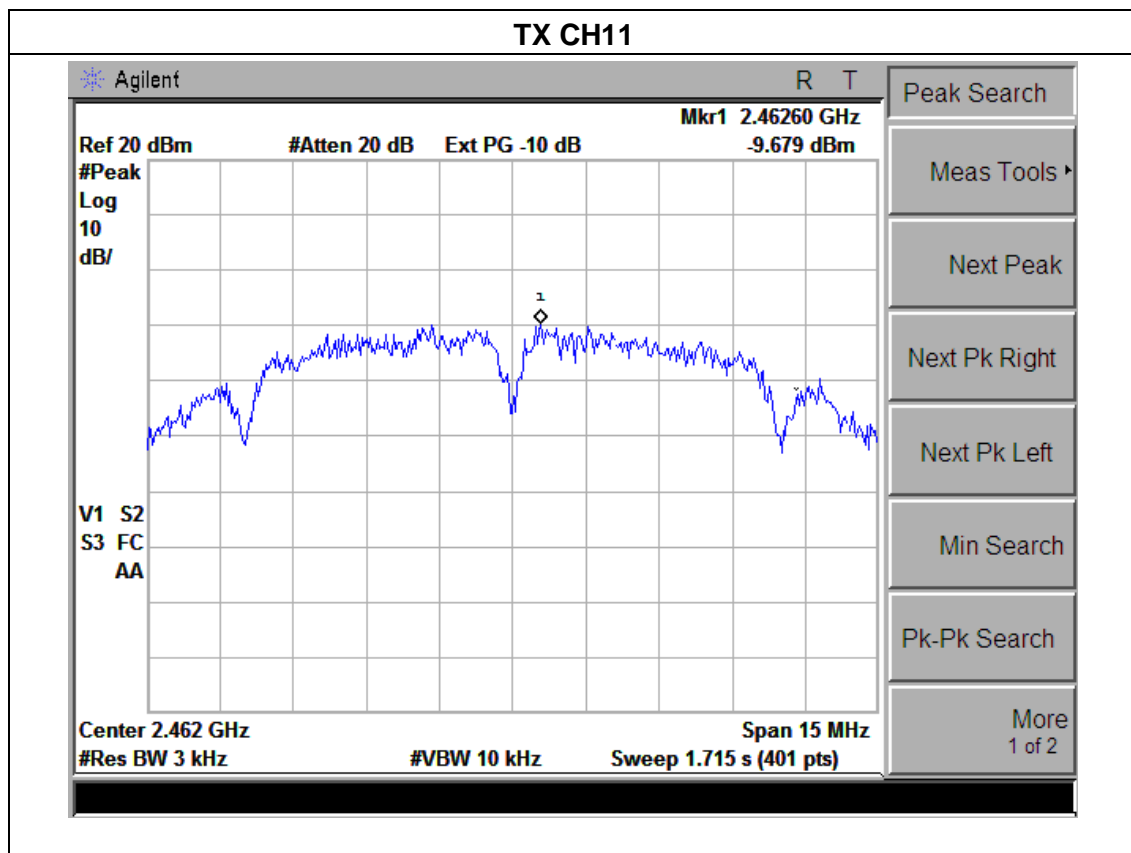
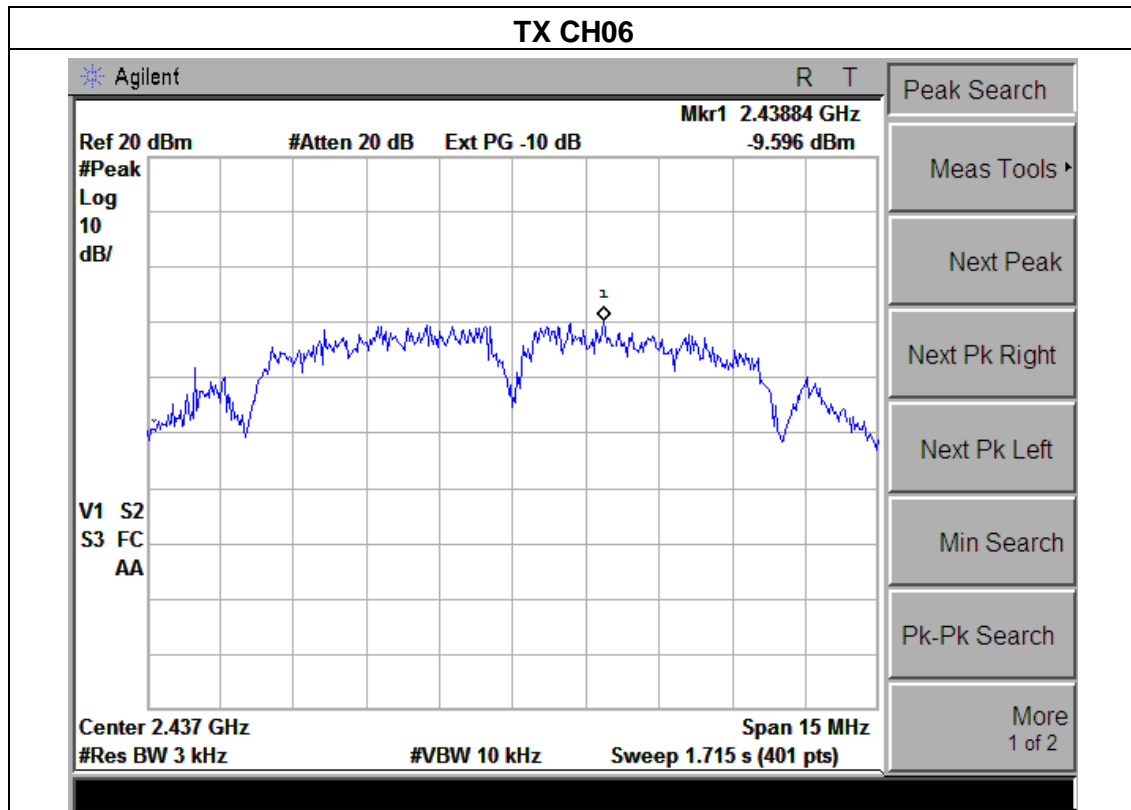
The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

3.3.5 TEST RESULTS

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	60%
Pressure :	1015 hPa	Test Voltage :	DC 5V from adapter AC120V/60Hz
Test Mode :	TX b Mode /CH01, CH06, CH11		

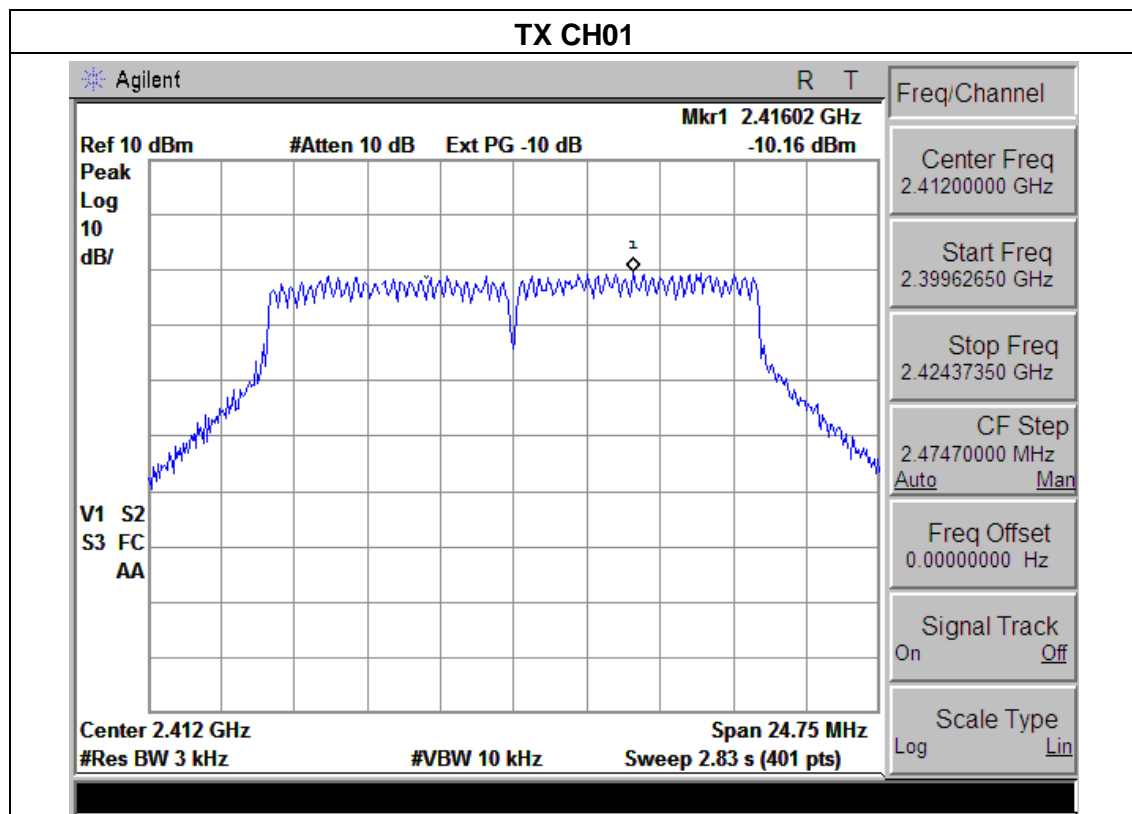
Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-8.851	8	PASS
2437 MHz	-9.596	8	PASS
2462 MHz	-9.679	8	PASS

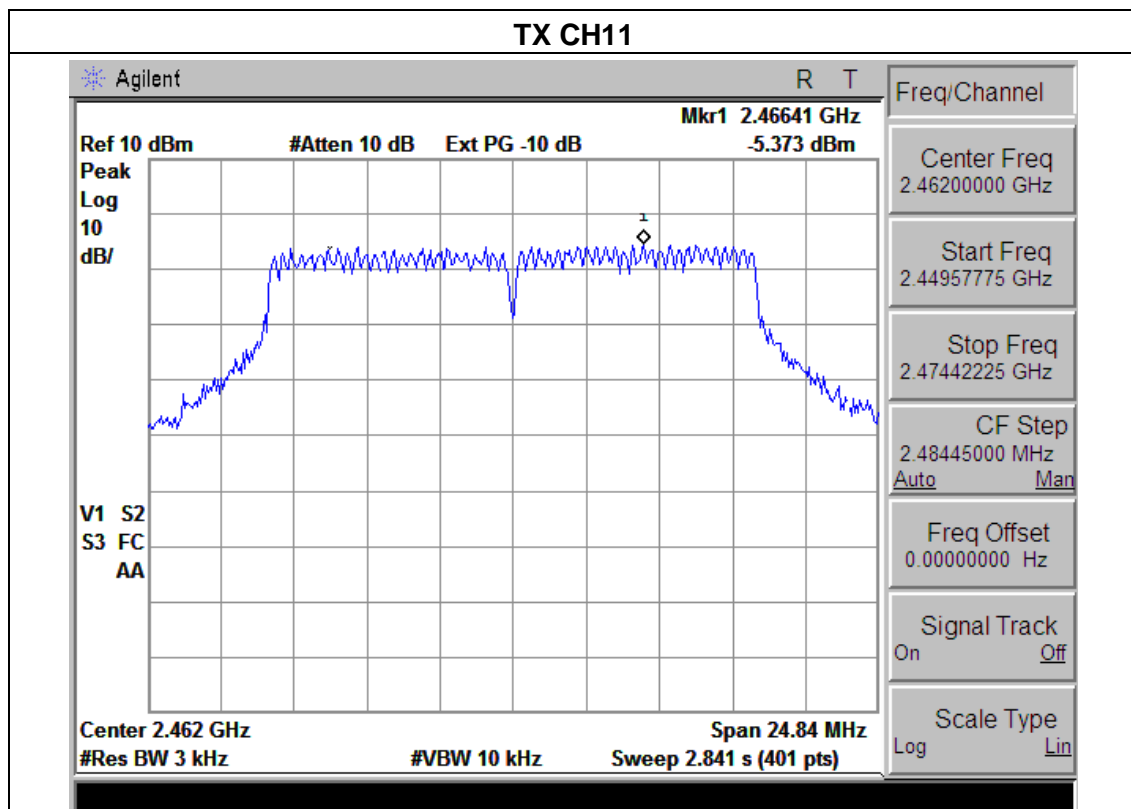
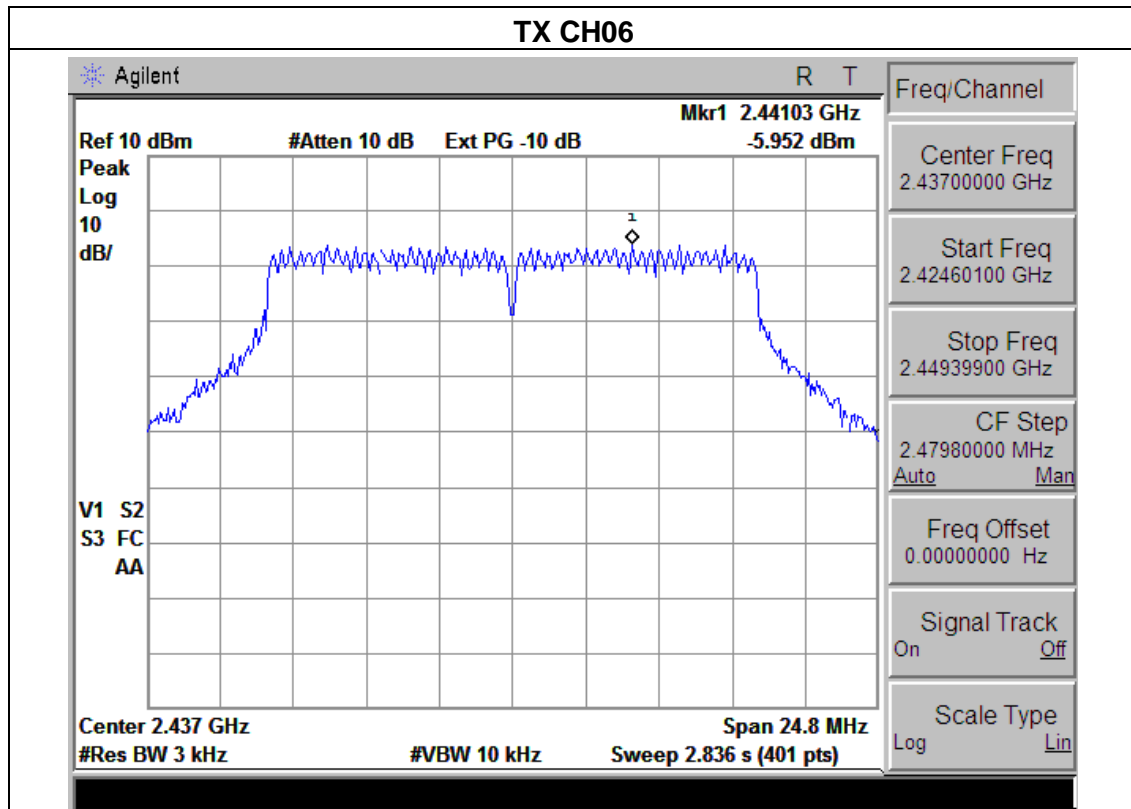




EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	60%
Pressure :	1015 hPa	Test Voltage :	DC 5V from adapter AC120V/60Hz
Test Mode :	TX g Mode /CH01, CH06, CH11		

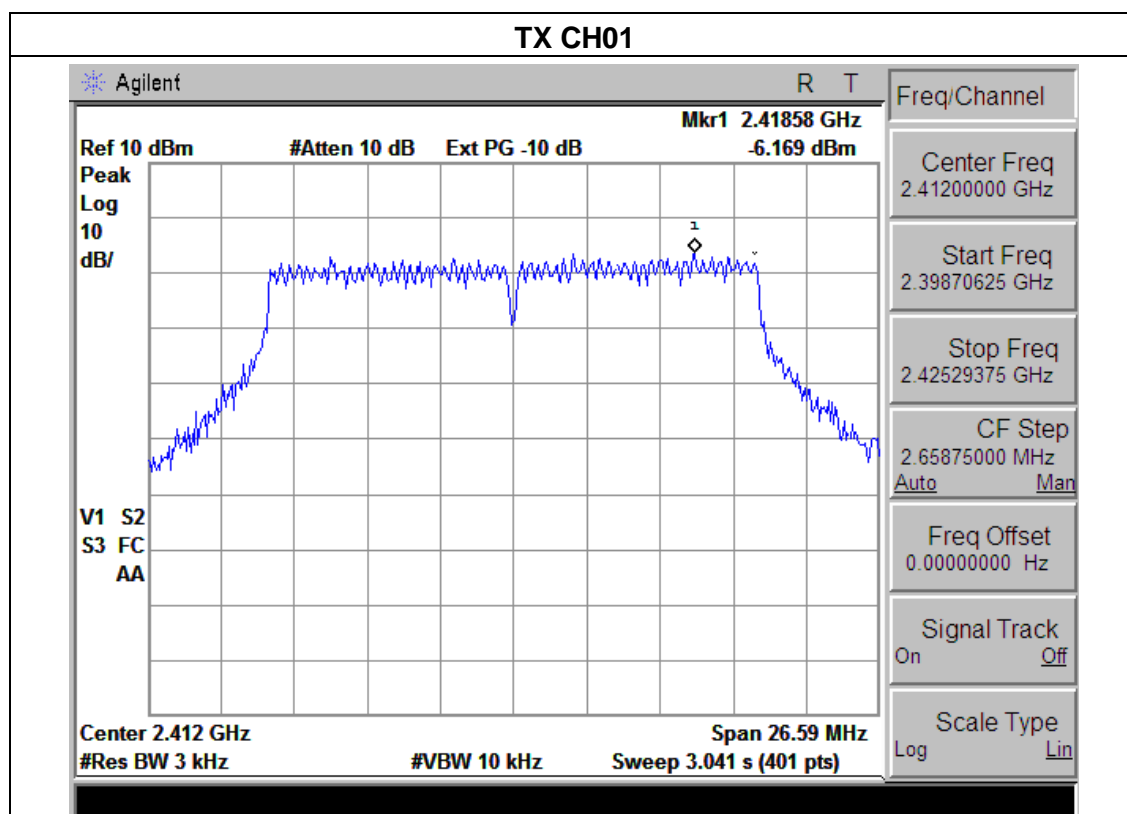
Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-10.16	8	PASS
2437 MHz	-5.952	8	PASS
2462 MHz	-5.373	8	PASS

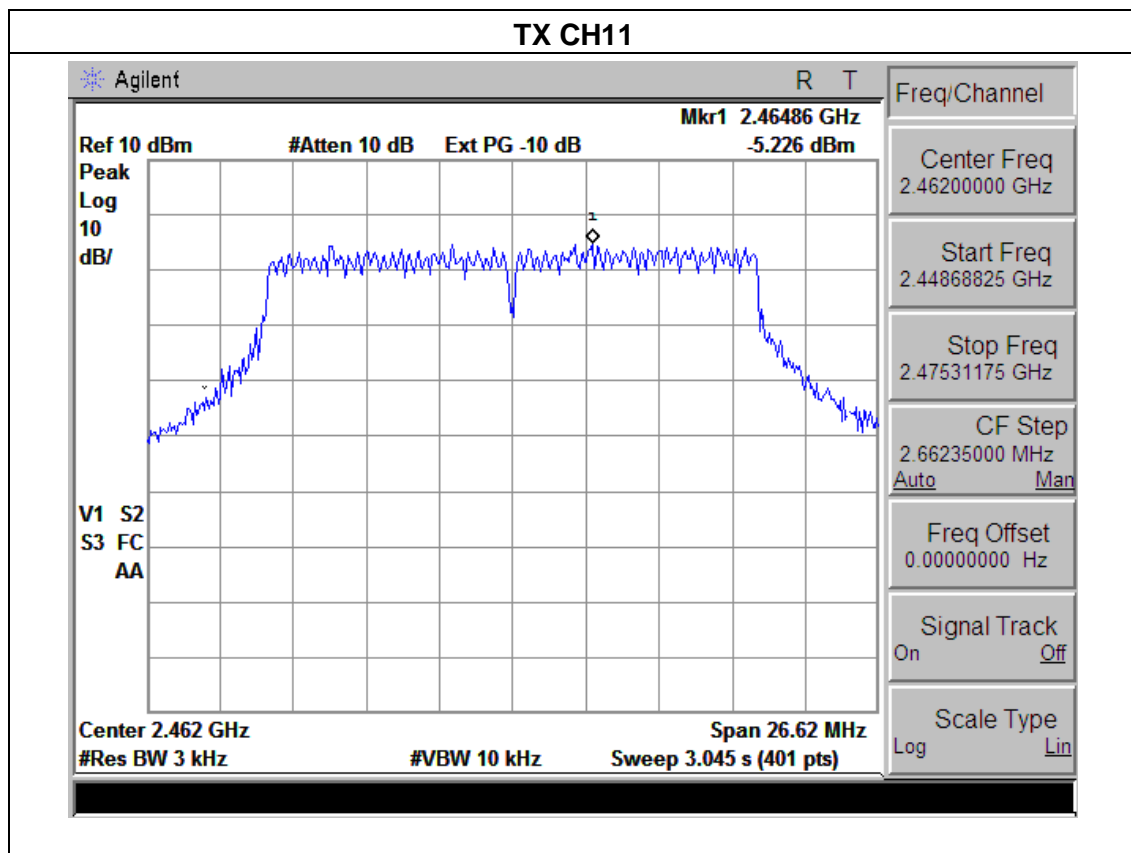
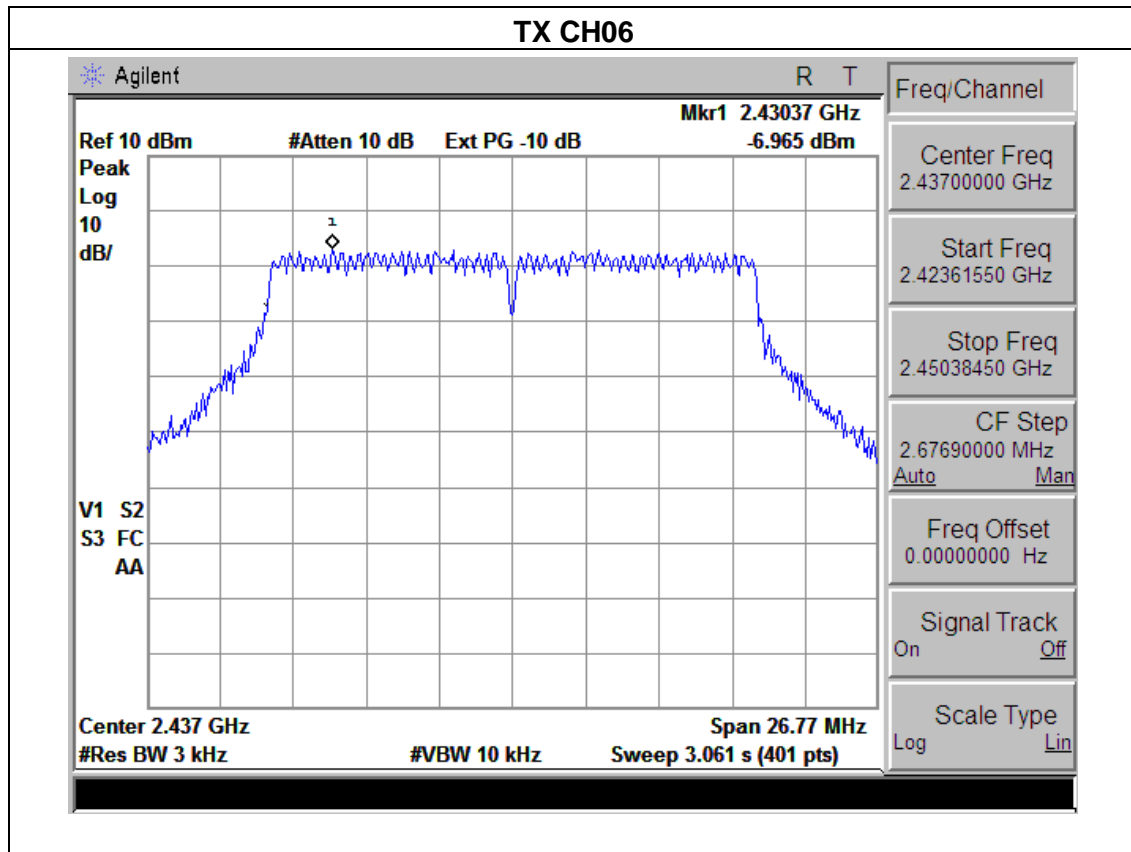




EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	60%
Pressure :	1015 hPa	Test Voltage :	DC 5V from adapter AC120V/60Hz
Test Mode :	TX n Mode (HT-20) /CH01, CH06, CH11		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-6.169	8	PASS
2437 MHz	-6.965	8	PASS
2462 MHz	-5.226	8	PASS





4. BANDWIDTH TEST

4.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	$\geq 500\text{KHz}$ (6dB bandwidth)	2400-2483.5	PASS

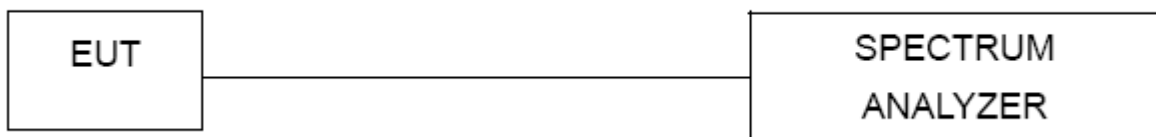
4.1.1 TEST PROCEDURE

1. Set RBW = 100 kHz
2. Set the video bandwidth (VBW) $\geq 3 \times \text{RBW}$.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



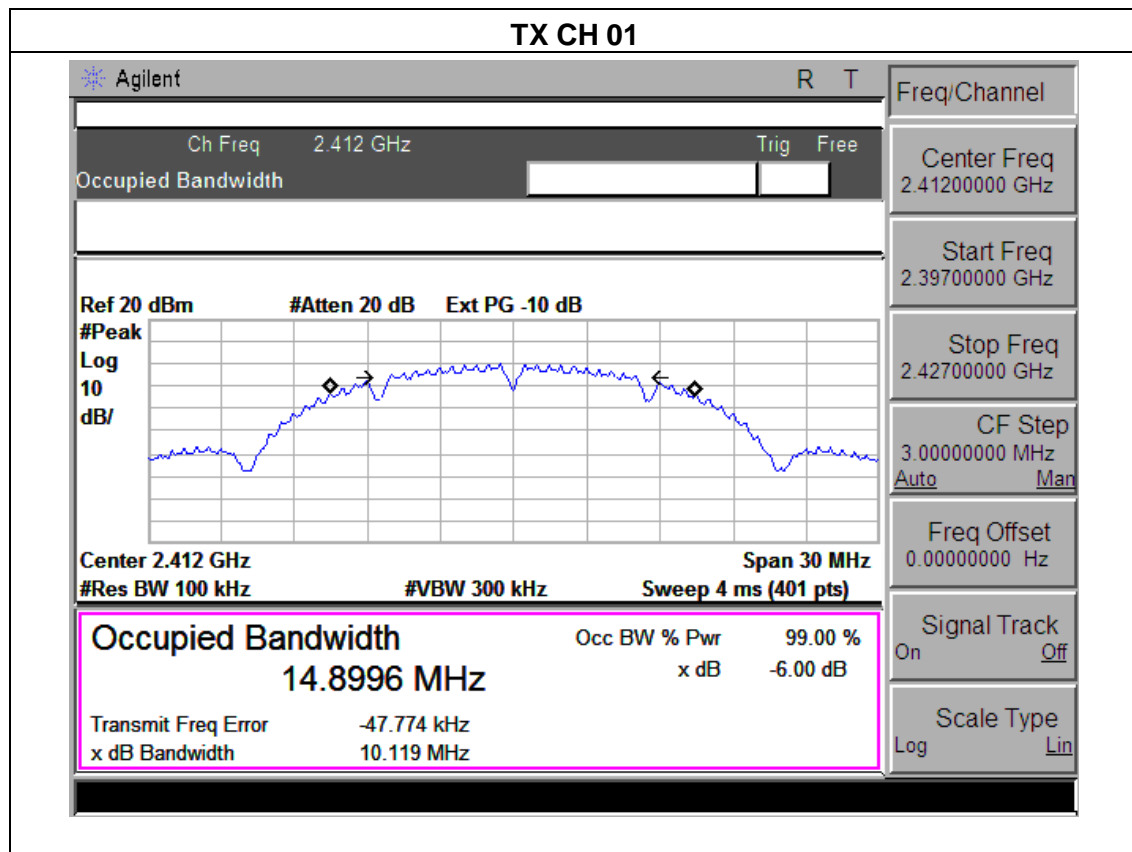
4.1.4 EUT OPERATION CONDITIONS

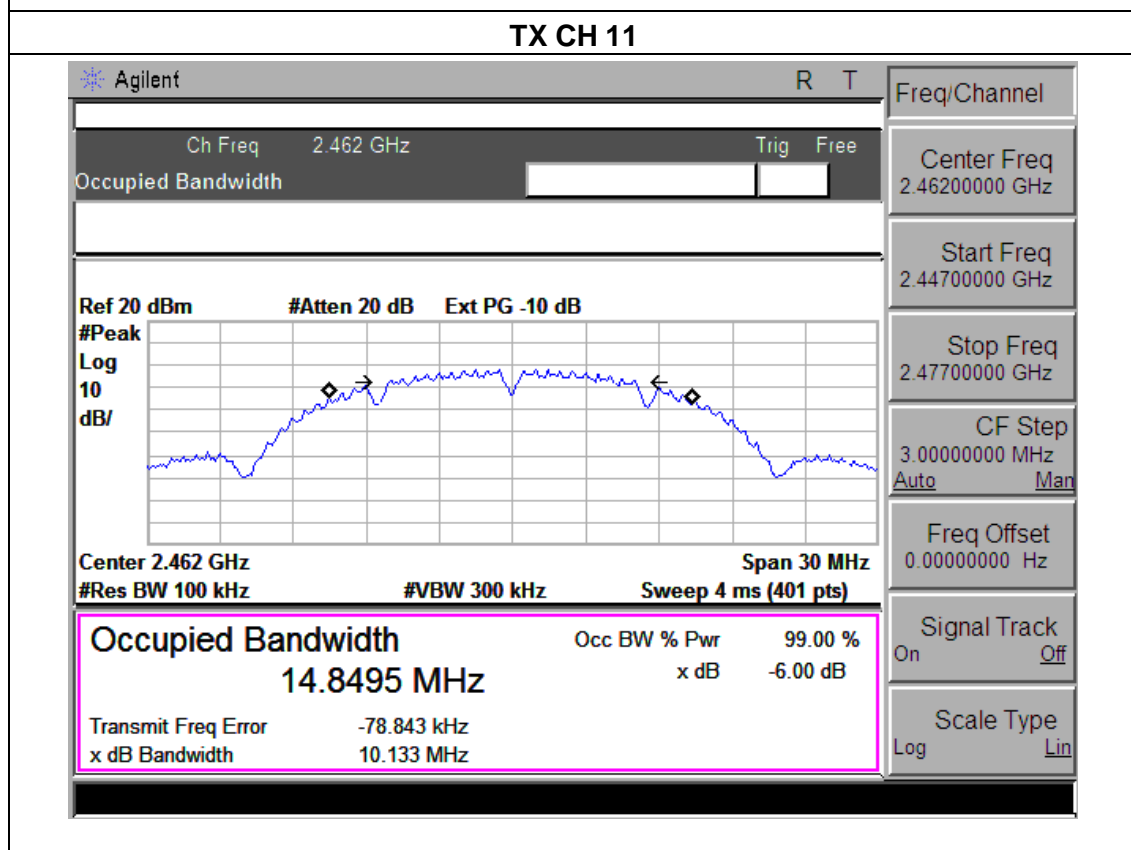
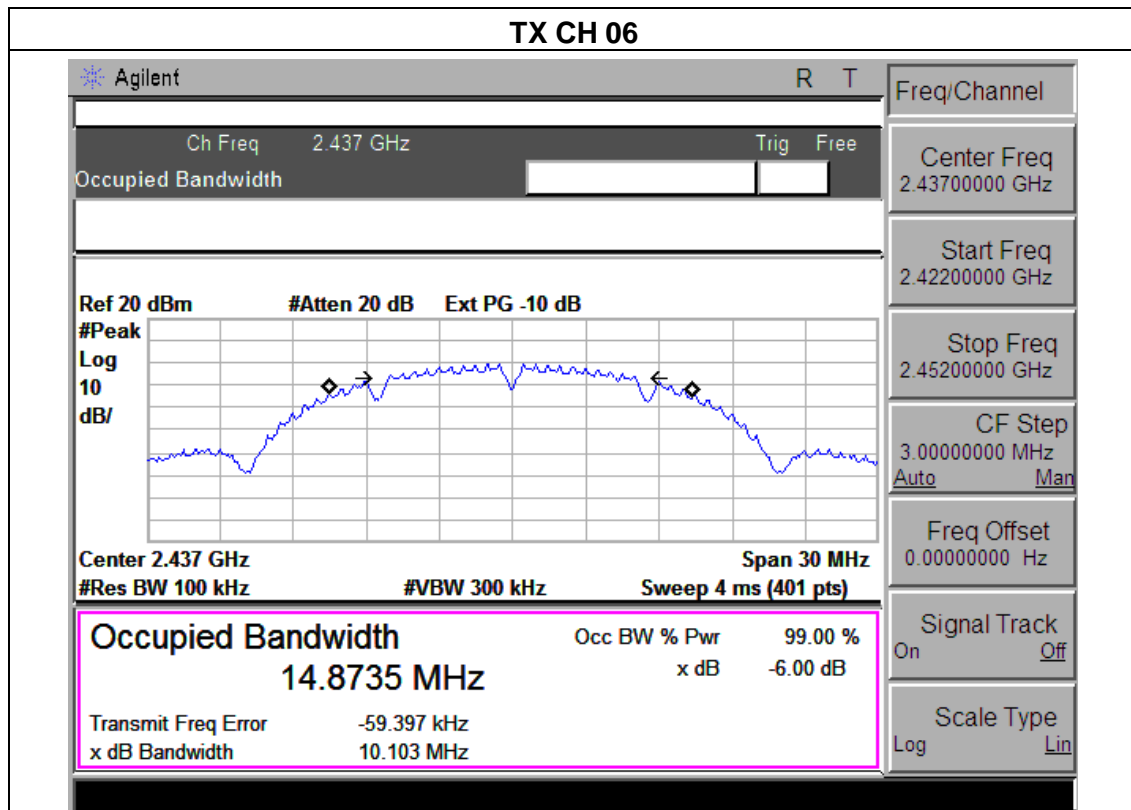
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

4.1.5 TEST RESULTS

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 5V from adapter AC120V/60Hz
Test Mode :	TX b Mode /CH01, CH06, CH11		

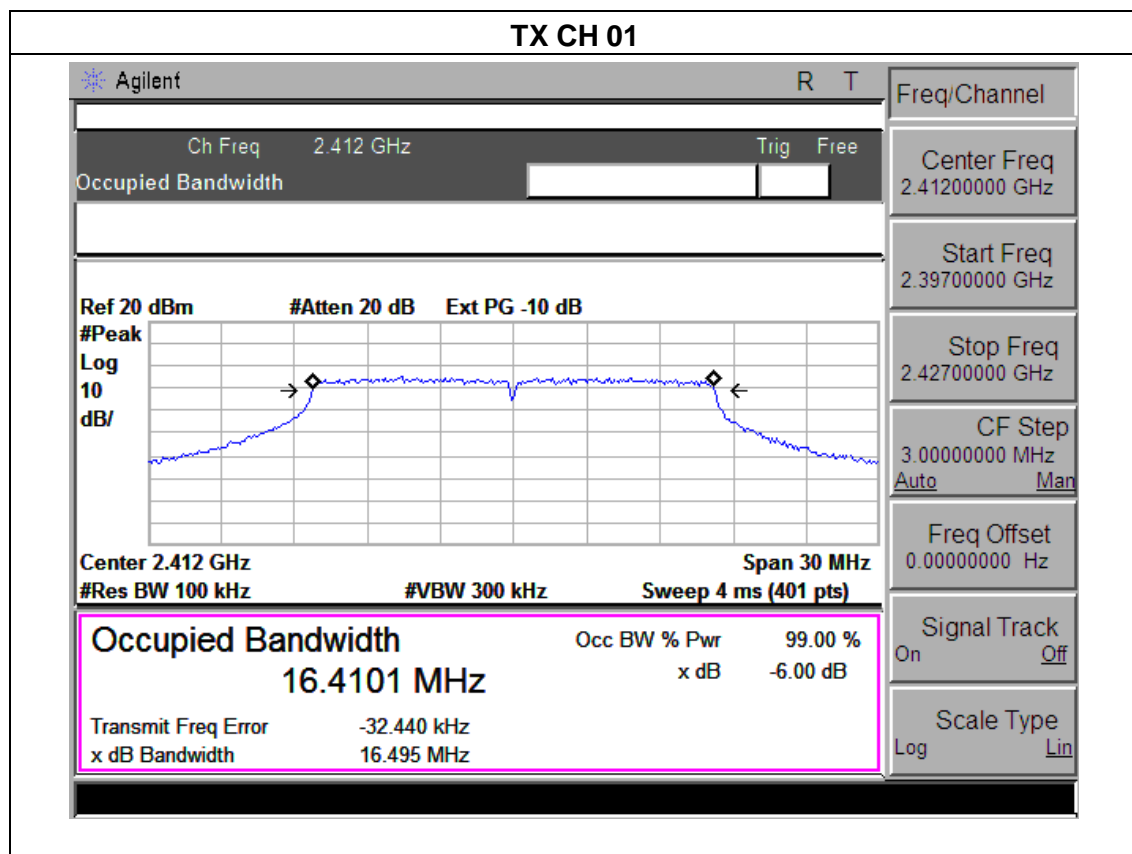
Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	10.119	>=500KHz	PASS
2437 MHz	10.103	>=500KHz	PASS
2462 MHz	10.133	>=500KHz	PASS

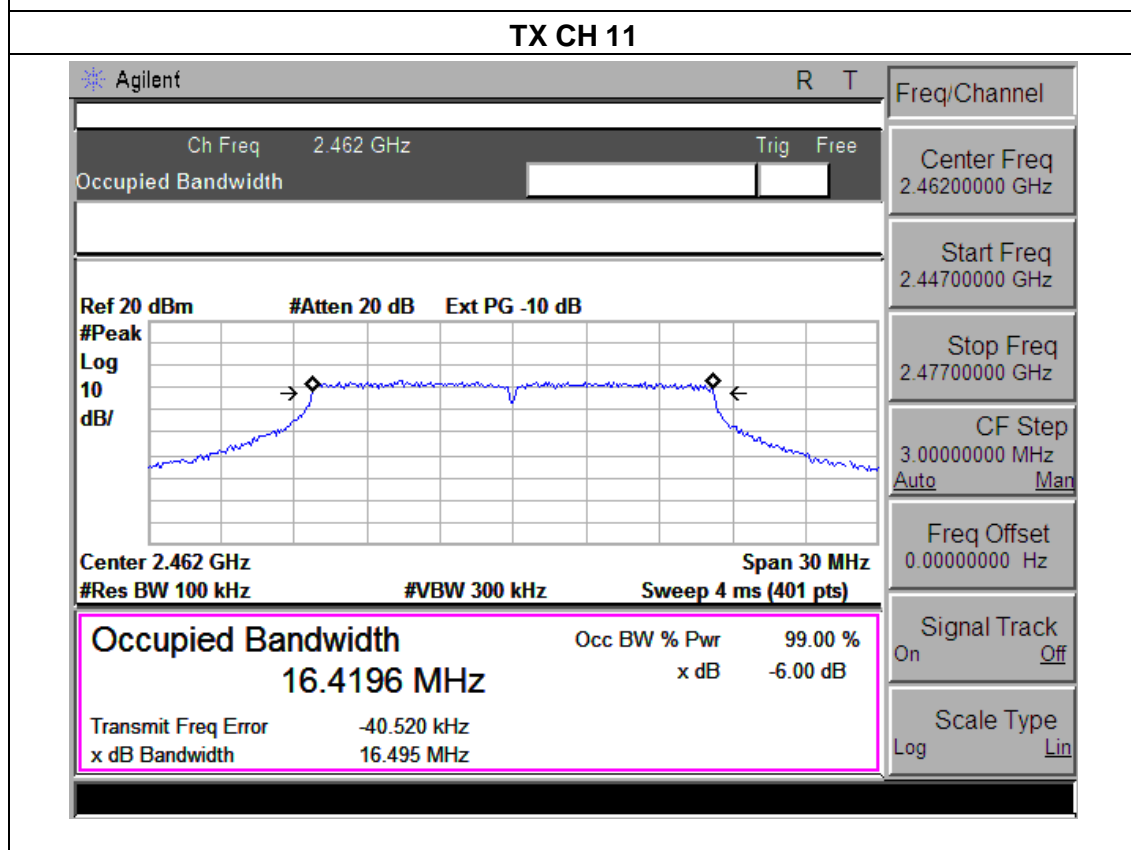
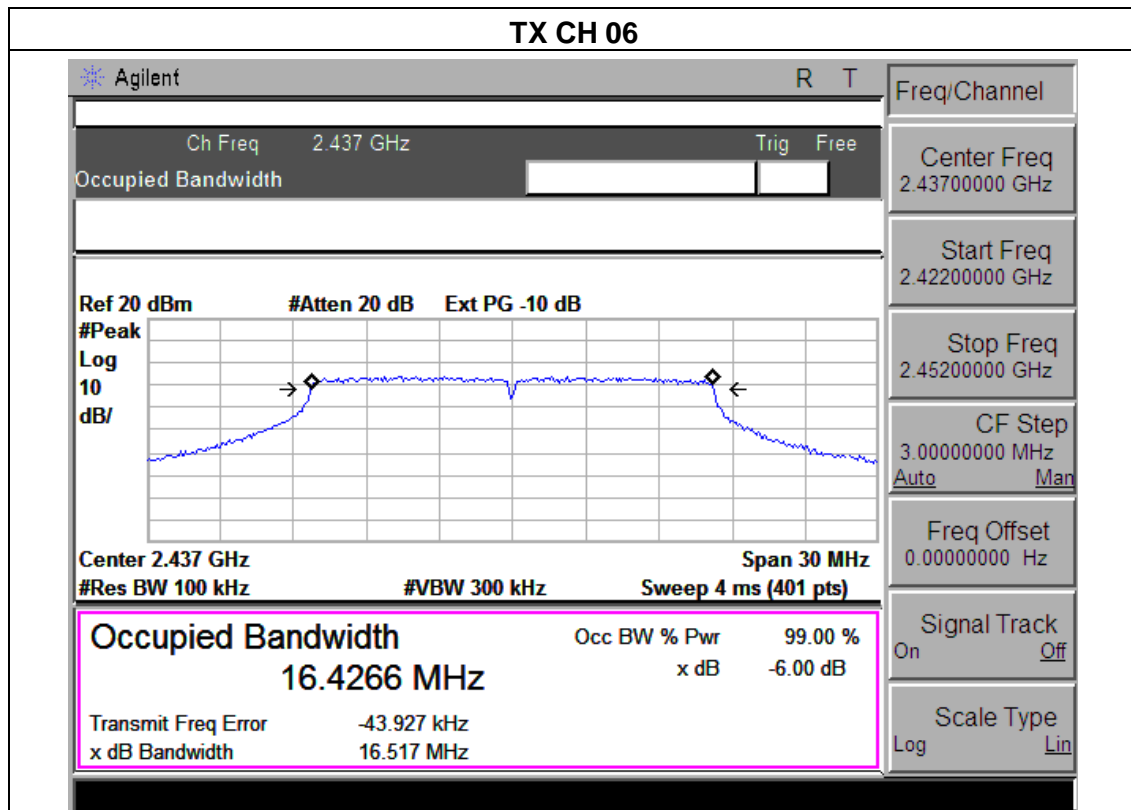




EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 5V from adapter AC120V/60Hz
Test Mode :	TX g Mode /CH01, CH06, CH11		

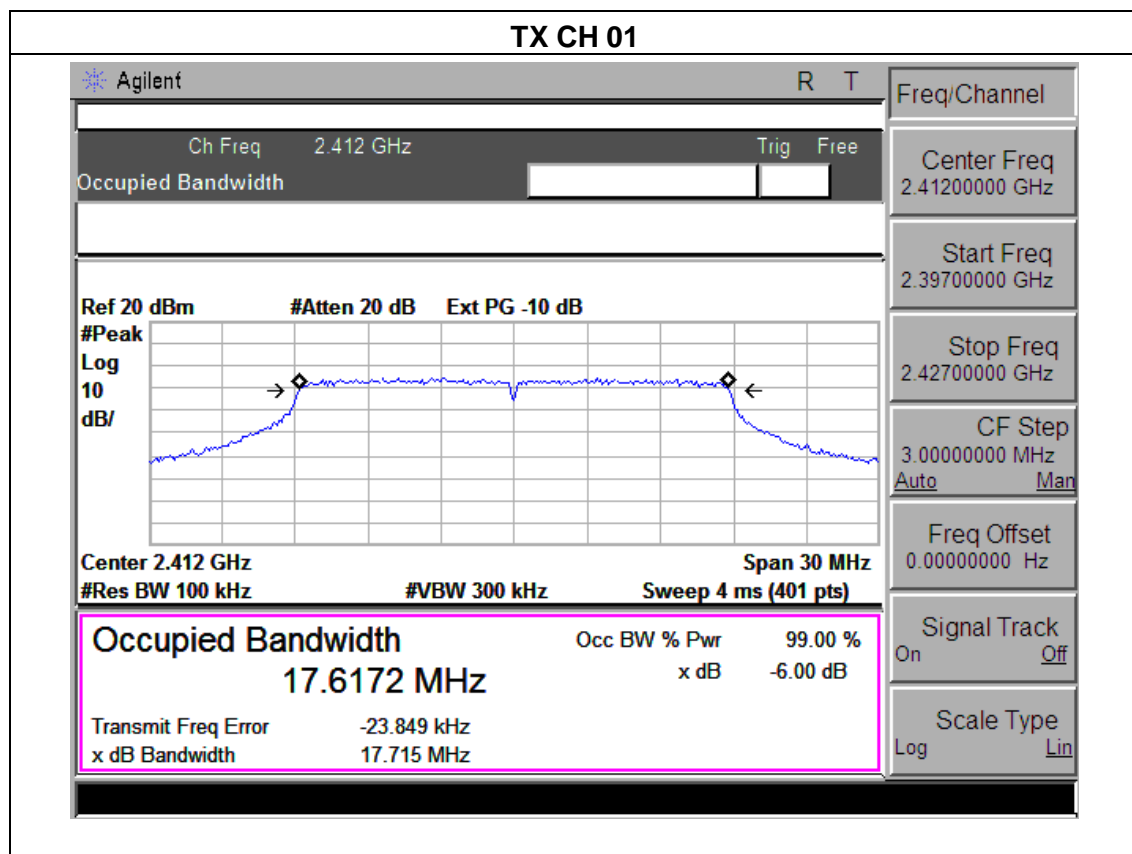
Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	16.495	>=500KHz	PASS
2437 MHz	16.517	>=500KHz	PASS
2462 MHz	16.495	>=500KHz	PASS

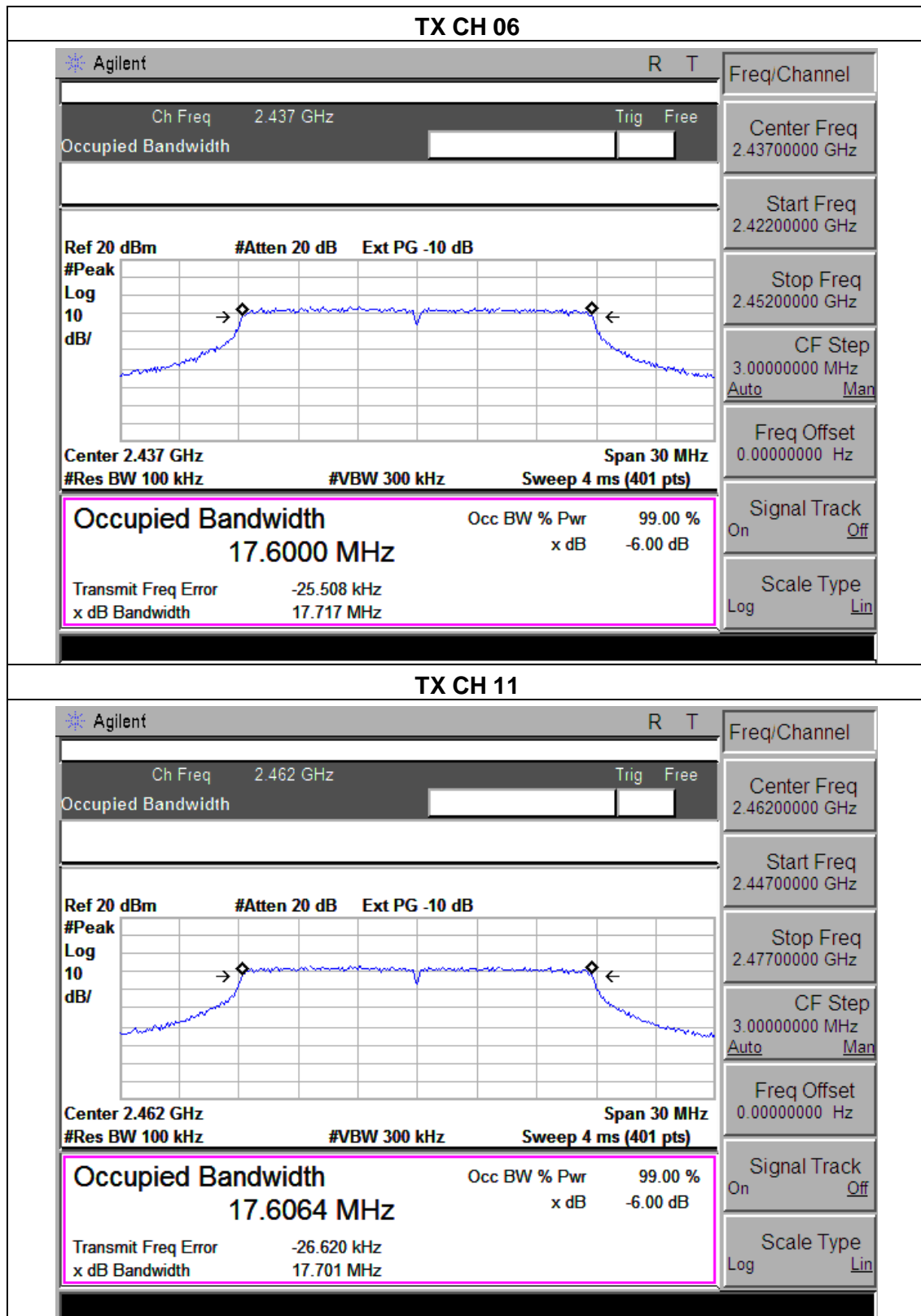




EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	20 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 5V from adapter AC120V/60Hz
Test Mode :	TX n Mode (HT-20) /CH01, CH06, CH11		

Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	17.715	>=500KHz	PASS
2437 MHz	17.717	>=500KHz	PASS
2462 MHz	17.701	>=500KHz	PASS





5. PEAK OUTPUT POWER TEST

5.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

5.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the Power meter

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP



5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 TEST RESULTS

EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 5V from adapter AC120V/60Hz
Test Mode :	TX b/g/n		

TX 802.11b Mode			
Test Channe	Frequency	Maximum Peak Conducted Output Power	LIMIT
	(MHz)	(dBm)	dBm
CH01	2412	9.42	30
CH06	2437	9.32	30
CH11	2462	9.23	30
TX 802.11g Mode			
CH01	2412	8.28	30
CH06	2437	8.18	30
CH11	2462	8.77	30
TX 802.11n20 Mode			
CH01	2412	8.37	30
CH06	2437	8.73	30
CH11	2462	8.81	30

6. 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE

APPLICABLE STANDARD

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated 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) (see §15.205(c)).

TEST PROCEDURE

- Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
- Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
- Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
- Repeat above procedures until all measured frequencies were complete.

6.1 DEVIATION FROM STANDARD

No deviation.

6.2 TEST SETUP



6.3 EUT OPERATION CONDITIONS

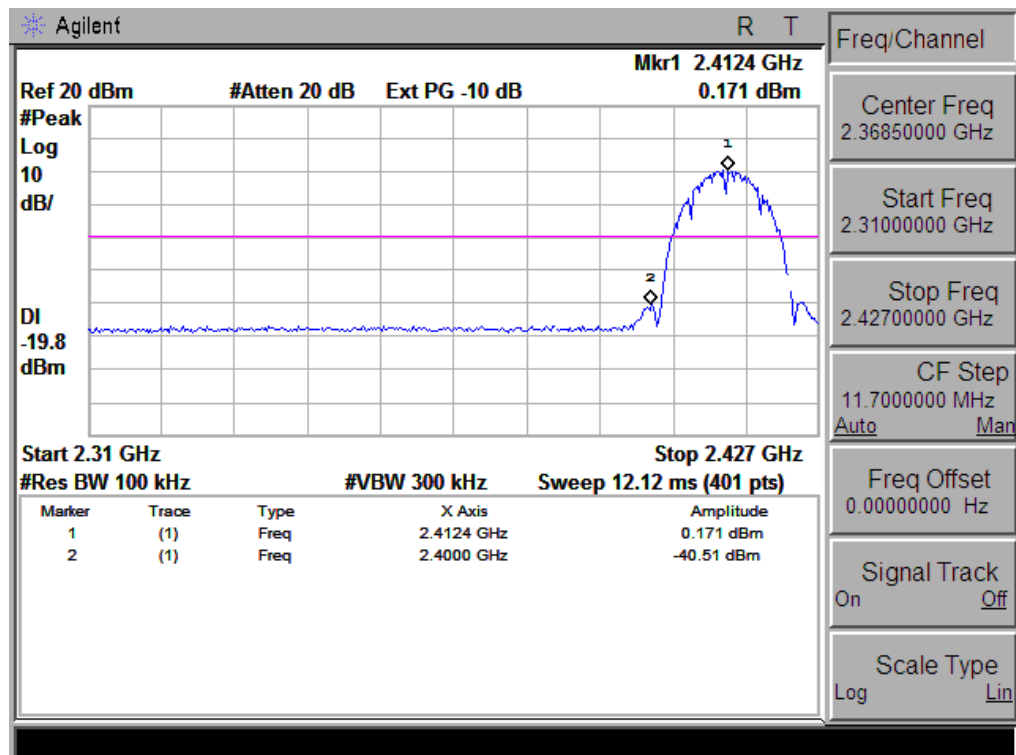
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.4 TEST RESULTS

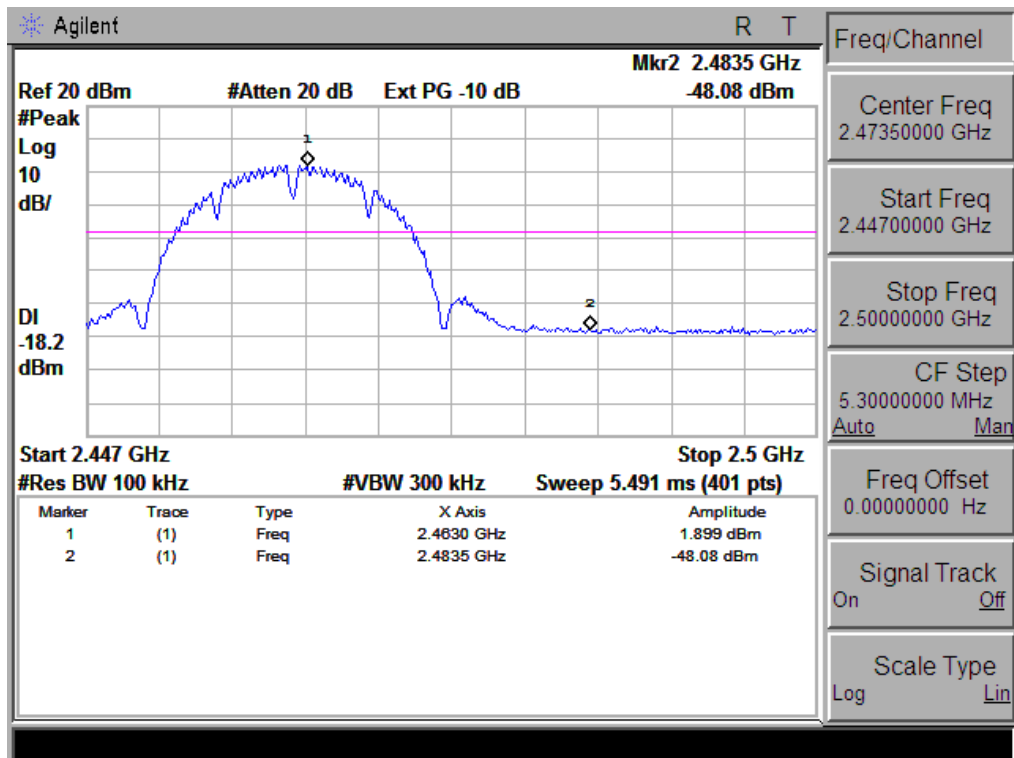
EUT :	Mobile phone	Model Name :	BRIO F25
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V

Frequency Band	Delta Peak to band emission (dBc)	> Limit (dBc)	Result
802.11b mode			
Left-band	40.681	20	Pass
Right-band	49.979	20	Pass
802.11g mode			
Left-band	32.612	20	Pass
Right-band	41.616	20	Pass
802.11n-HT20 mode			
Left-band	31.974	20	Pass
Right-band	43.088	20	Pass

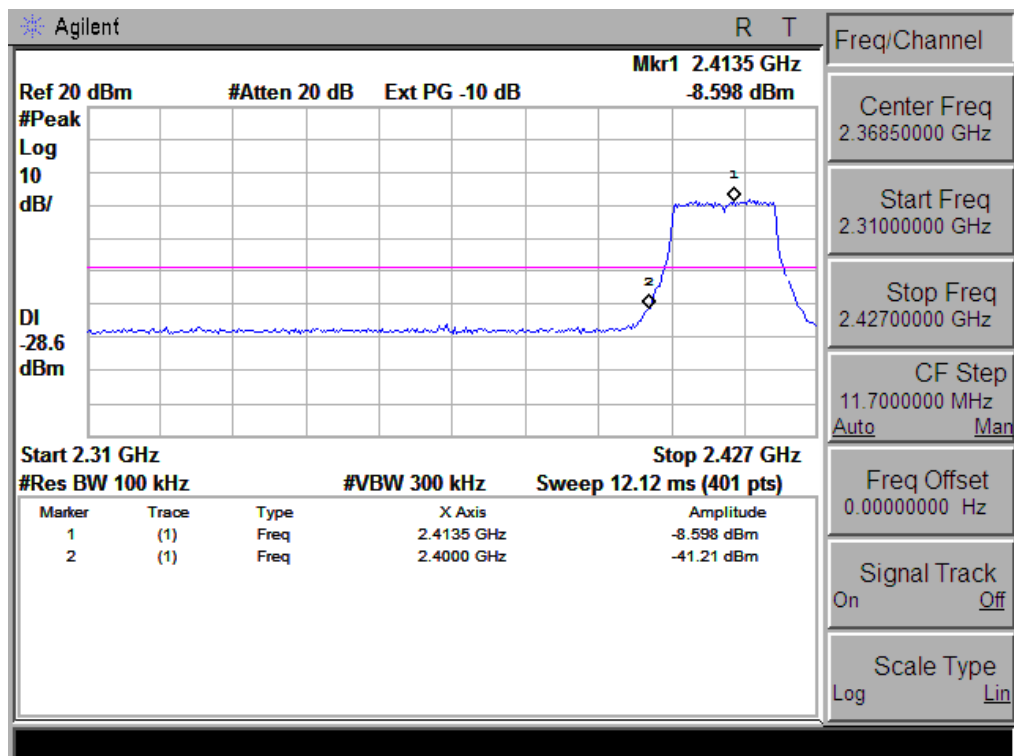
802.11b: Band Edge, Left Side



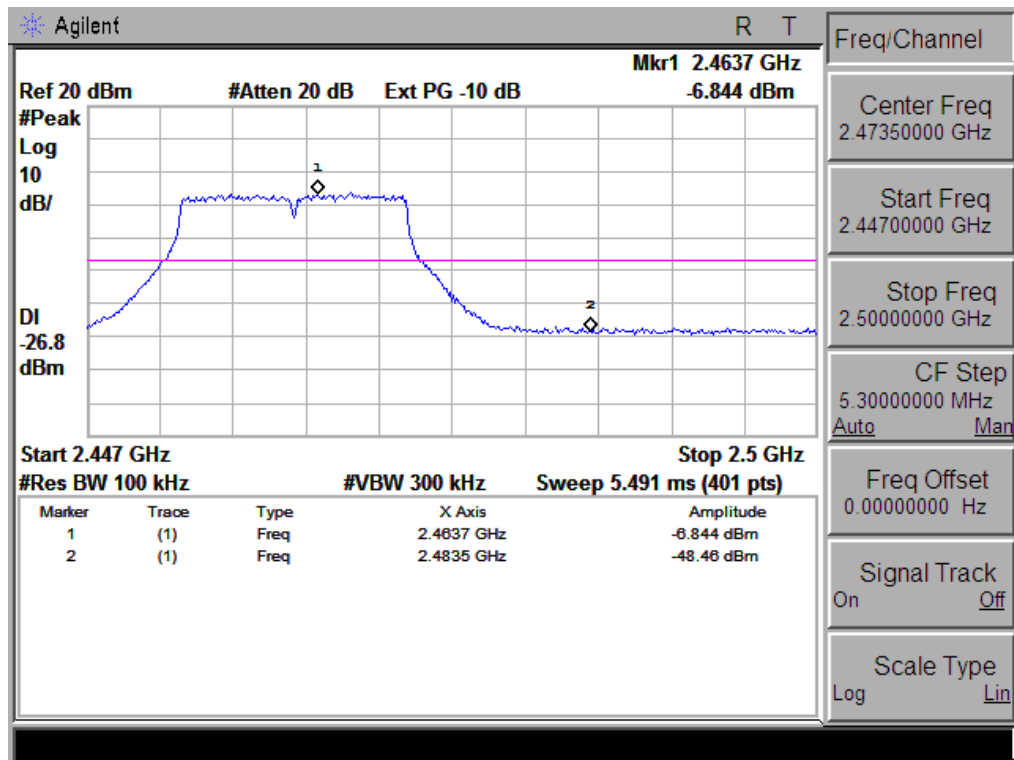
802.11b: Band Edge, Right Side



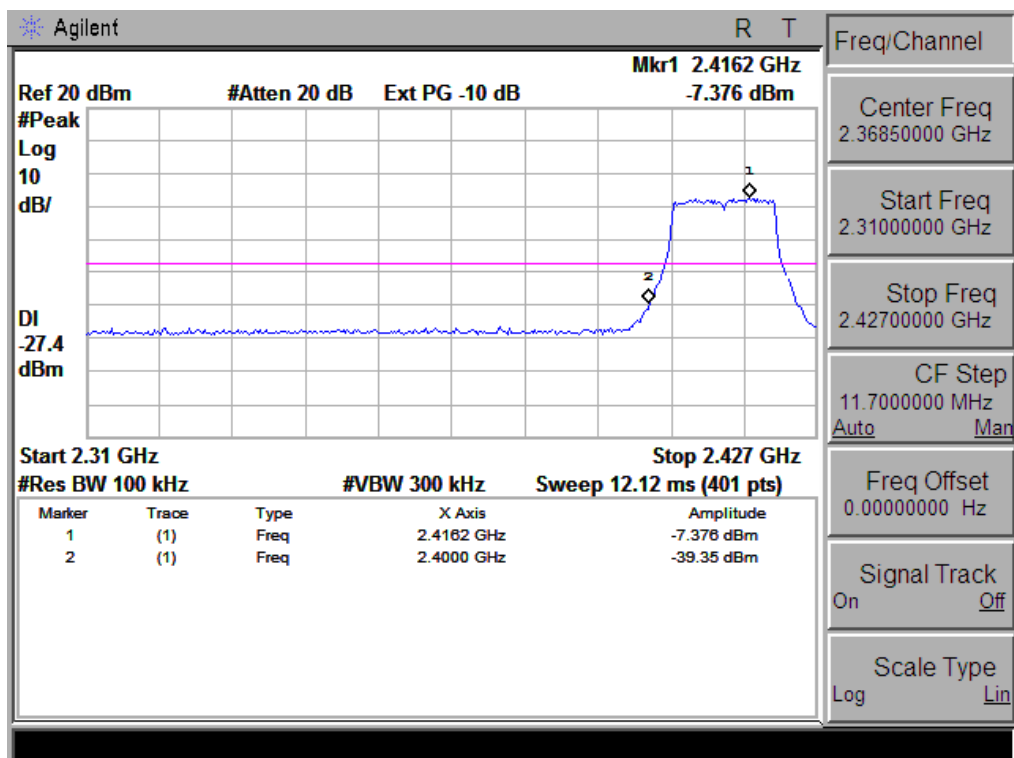
802.11g: Band Edge, Left Side



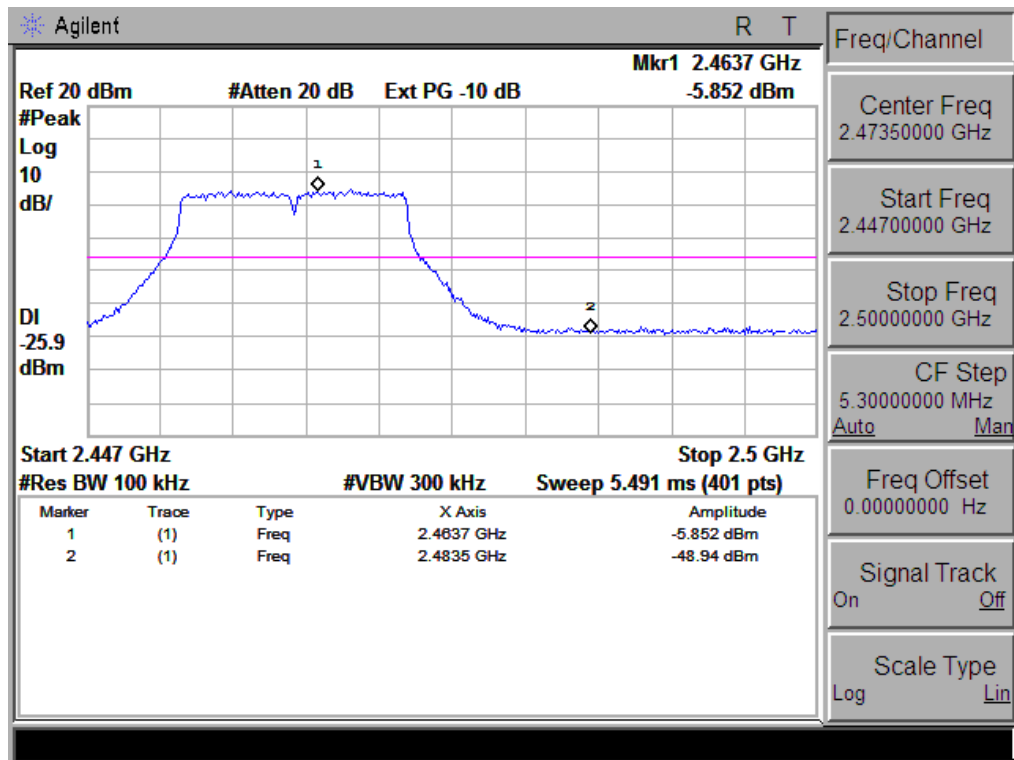
802.11g: Band Edge, Right Side



802.11n-HT20: Band Edge, Left Side



802.11n-HT20: Band Edge, Right Side



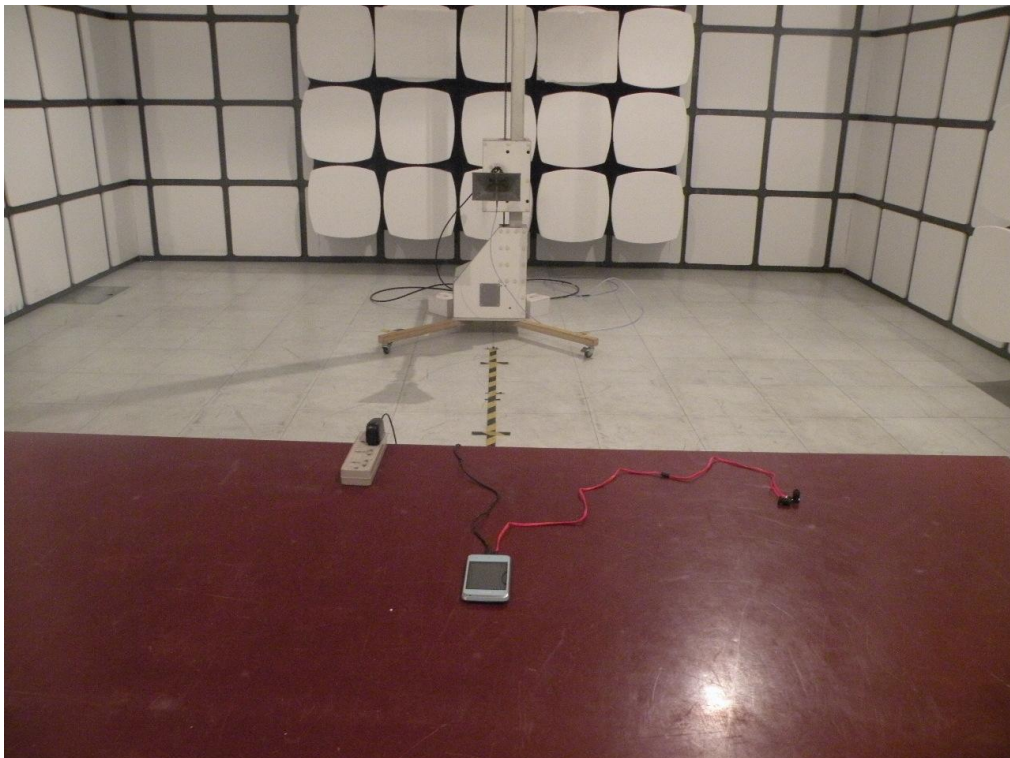
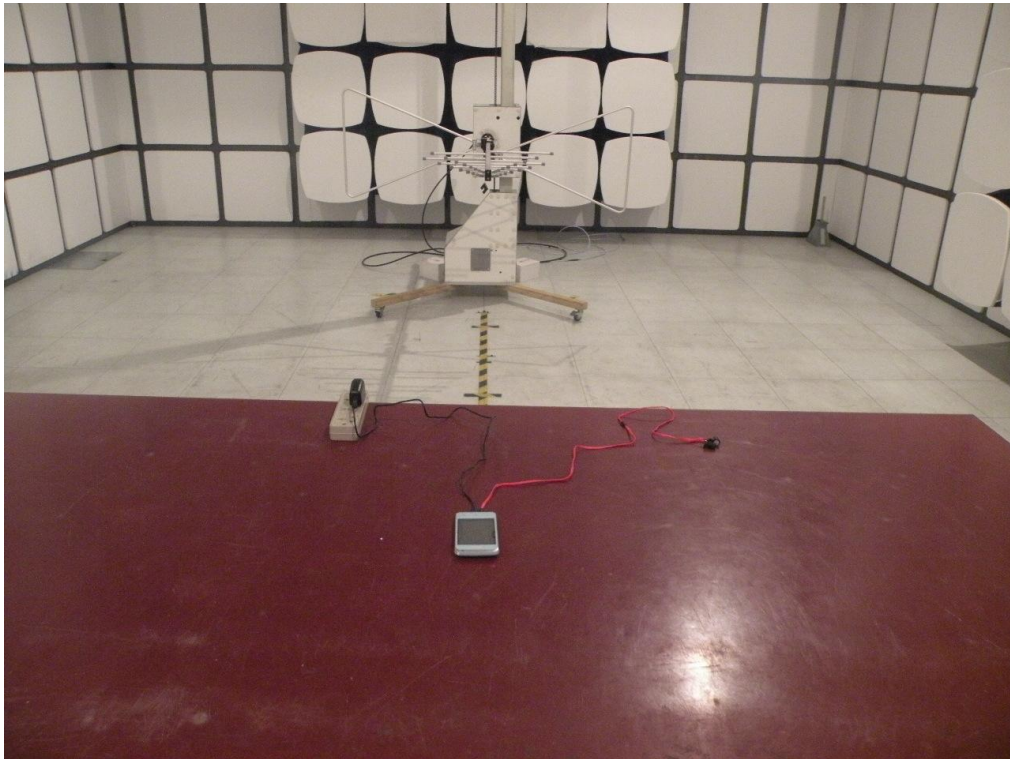
7. ANTENNA REQUIREMENT

7.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

7.2 EUT ANTENNA

The EUT antenna is Integrated antenna. It comply with the standard requirement.

8. EUT TEST PHOTO**Radiated Measurement Photos**

Conducted Measurement Photos

