



FCC RADIO TEST REPORT

FCC ID: OLEU830

Of

Product Name: 3G MOBILE PHONE

Brand Name: unnecto™

Model No.: U-830-2

Series Model: N/A

Test Report Number: STS1408040F03

Issued for

PARKTEL FZE

**WARE HOUSE NO: FF01,ROUND ABOUT NO: 05,JEBEL ALI FREEZONE DUBAI
U.A.E**

Issued by

Shenzhen STS Test Services Co., Ltd.

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All Test Data Presented in this report is only applicable to presented Test sample.

TEST RESULT CERTIFICATION

Applicant's name : PARKTEL FZE
Address : WARE HOUSE NO: FF01, ROUND ABOUT NO: 05, JEBEL ALI
 FREEZONE DUBAI U.A.E
Manufacture's Name : RUNSHENG MANAGEMENT COMPANY LIMITED
Address : ROOM 901, FOOK LEE COMMERCIAL CENTRE, 33
 LOCKHART ROAD, WANCHAI, HONG KONG

Product description

Product name..... : 3G MOBILE PHONE
Model and/or type reference : U-830-2
Serial Model..... : N/A

Standards : FCC Part15.247

Test procedure ANSI C63.10-2003

This device described above has been tested by STS, 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..... : Sep 02, 2014 ~ Sep 09, 2014

Date of Issue : Sep 10, 2014

Test Result : **Pass**

Testing Engineer :



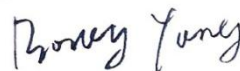
(Tony Liu)

Technical Manager :



(Vita Li)

Authorized Signatory :



(Bovey Yang)



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)	10
2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS	11
3 . EMC EMISSION TEST	12
3.1 CONDUCTED EMISSION MEASUREMENT	12
3.1.1 POWER LINE CONDUCTED EMISSION LIMITS	12
3.1.2 TEST RESULTS	13
3.2 RADIATED EMISSION MEASUREMENT	15
3.2.1 RADIATED EMISSION LIMITS	15
3.2.2 TEST PROCEDURE	16
TX B/G/N(20M) MODE USED RATES 1M/6M/54M	16
3.2.3 DEVIATION FROM TEST STANDARD	16
3.2.4 TEST SETUP	17
3.2.5 EUT OPERATING CONDITIONS	18
3.2.6 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)	19
3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)	20
3.2.8 TEST RESULTS (ABOVE 1000 MHZ)	22
3.2.9 TEST RESULTS (BAND EDGE)	31
4.1 APPLIED PROCEDURES / LIMIT	37
4.1.1 TEST PROCEDURE TX B/G/N(20M) MODE USED RATES 1M/6M/54M	37
4.1.2 DEVIATION FROM STANDARD	37
4.1.3 TEST SETUP	37
4.1.4 EUT OPERATION CONDITIONS	37
4.1.5 TEST RESULTS	38
5. POWER SPECTRAL DENSITY TEST	47
5.1 APPLIED PROCEDURES / LIMIT	47
5.1.1 TEST PROCEDURE	47
5.1.2 DEVIATION FROM STANDARD	47
5.1.3 TEST SETUP	47
5.1.4 EUT OPERATION CONDITIONS	47

Table of Contents	Page
5.1.5 TEST RESULTS	48
6.1 APPLIED PROCEDURES / LIMIT	54
6.1.1 TEST PROCEDURE	54
6.1.2 DEVIATION FROM STANDARD	54
6.1.3 TEST SETUP	54
6.1.4 EUT OPERATION CONDITIONS	54
6.1.5 TEST RESULTS	55
7.1 APPLIED PROCEDURES / LIMIT	61
7.1.1 TEST PROCEDURE	61
7.1.2 DEVIATION FROM STANDARD	61
7.1.3 TEST SETUP	61
7.1.4 EUT OPERATION CONDITIONS	61
7.1.5 TEST RESULTS	62
8. ANTENNA REQUIREMENT	63
8.1 STANDARD REQUIREMENT	63
8.2 EUT ANTENNA	63
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)	Conducted Spurious Emission	PASS	
15.247 (e)	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	3G MOBILE PHONE	
Trade Name	unnecto TM	
Model Name	U-830-2	
Serial Model	N/A	
Model Difference	Only difference in model name	
Product Description	The EUT is a 3G MOBILE PHONE	
	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(20/40MHz):300/150/144.44/130/117/115.56/104/86.67/78/52/6.5Mbps
	Number Of Channel	802.11b/g/n20: 11CH 802.11n 40: 7CH
	Antenna Designation:	Please see Note 3.
	Antenna Gain (dBi)	0 dBi
Channel List	Please refer to the Note 2.	
Ratings	DC 3.7V from battery	
Adapter	Power supply and ADP (rating) : Input:100-240V AC,50/60Hz 0.15A Output:5.0V,550mA	
Battery	Rated Voltage: 3.7V Charge Limit: 4.2V capacity :2000mAh	
Hardware version number	A80B_MB_ V1.1	
Software versioning number	GST_A80_M20_W982P_324_V01	
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		

Channel List for 802.11n(40MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
03	2422	06	2437	09	2452		
04	2427	07	2442				
05	2432	08	2447				

3.

Table for Filed Antenna

Ant .	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
A	N/A	N/A	PIFA Antenna	NA	0	N/A

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly 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	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n(20)CH1/ CH6/ CH11
Mode 5	Link Mode

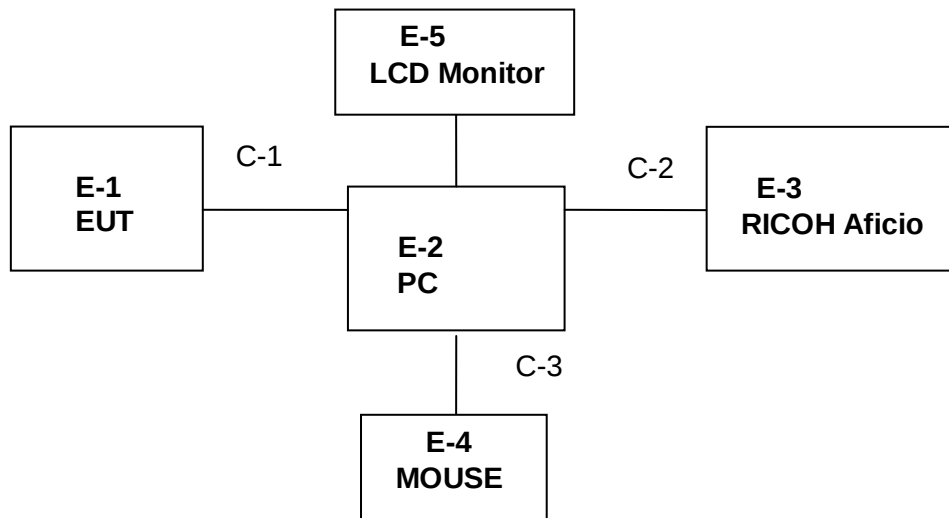
For Conducted Emission	
Final Test Mode	Description
Mode 5	Link Mode

For Radiated Emission	
Final Test Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n(20) CH1/ CH6/ CH11
Mode 5	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	3G MOBILE PHONE	unnecto ™	U-830-2	N/A	EUT
E-2	Adapter	unnecto ™	CU-830	N/A	
E-3	Earphone	N/A	N/A	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	YES	1.5m	
C-2	NO	NO	1.2m	

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	2014.07.06	2015.07.05	1 year
2	Test Receiver	R&S	ESPI	101318	2014.06.07	2015.06.06	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2014.07.06	2015.07.05	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2014.06.07	2015.06.06	1 year
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	2014.06.07	2015.06.06	1 year
6	Horn Antenna	EM	EM-AH-10180	2011071402	2014.07.06	2015.07.05	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2014.07.06	2015.07.05	1 year
8	Amplifier	EM	EM-30180	060538	2013.12.22	2014.12.21	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2014.06.08	2015.06.07	1 year
10	Power Meter	R&S	NRVS	100696	2014.07.06	2015.07.05	1 year
11	Power Sensor	R&S	URV5-Z4	0395.1619.05	2014.07.06	2015.07.05	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	2014.06.06	2015.06.05	1 year
2	LISN	R&S	ENV216	101313	2014.08.24	2015.08.23	1 year
3	LISN	EMCO	3816/2	00042990	2014.08.24	2015.08.23	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2014.06.07	2015.06.06	1 year
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	2014.06.07	2015.06.06	1 year
6	Absorbing clamp	R&S	MOS-21	100423	2014.06.08	2015.06.07	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

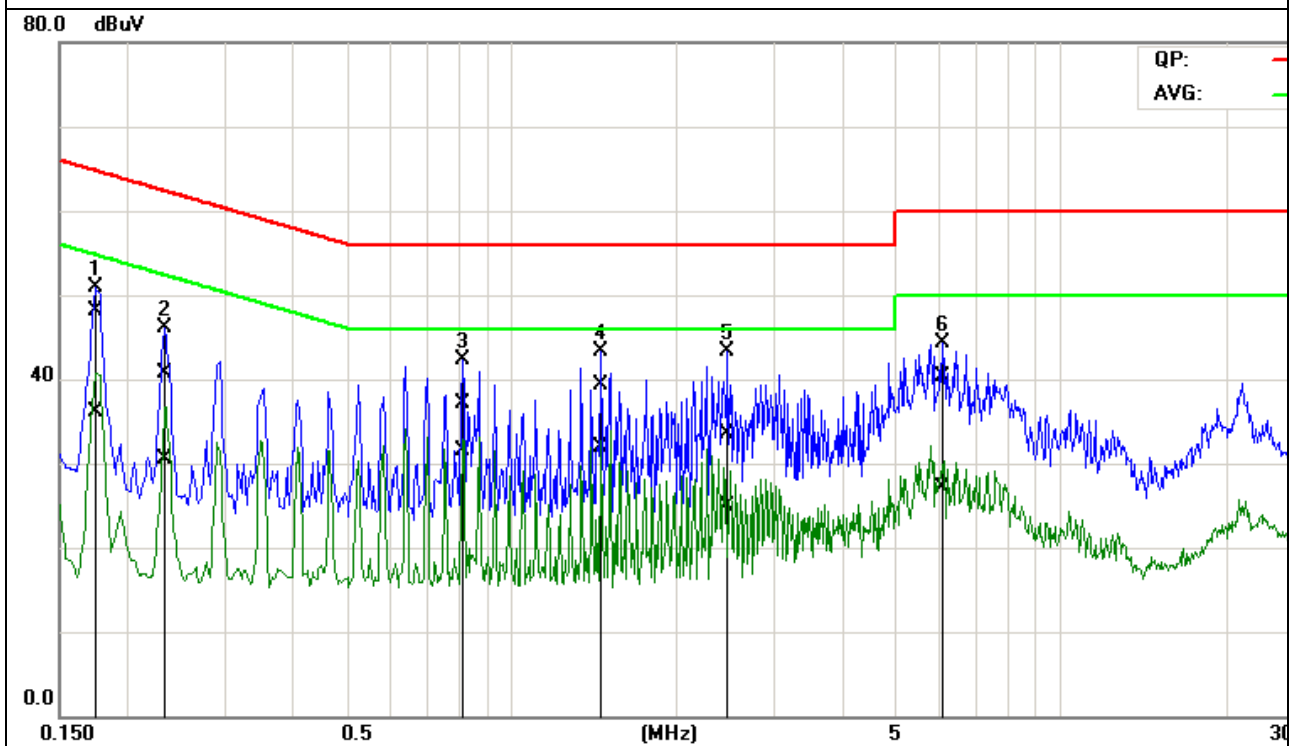
3.1.2 TEST RESULTS

EUT :	3G MOBILE PHONE	Model Name. :	U-830-2
Temperature :	23 °C	Relative Humidity :	50%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 5V from Adapter AC 120V/60Hz	Test Mode :	Link Mode

Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
0.1744	28.48	16.47	19.71	48.19	36.18	64.75	54.75	-16.56	-18.57	Pass
0.2324	21.05	10.89	19.62	40.67	30.51	62.36	52.36	-21.69	-21.85	Pass
0.8152	17.35	11.75	19.84	37.19	31.59	56.00	46.00	-18.81	-14.41	Pass
1.4526	19.50	12.05	19.88	39.38	31.93	56.00	46.00	-16.62	-14.07	Pass
2.4991	13.60	4.86	19.99	33.59	24.85	56.00	46.00	-22.41	-21.15	Pass
6.1490	19.80	6.60	20.41	40.21	27.01	60.00	50.00	-19.79	-22.99	Pass

Remark:

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

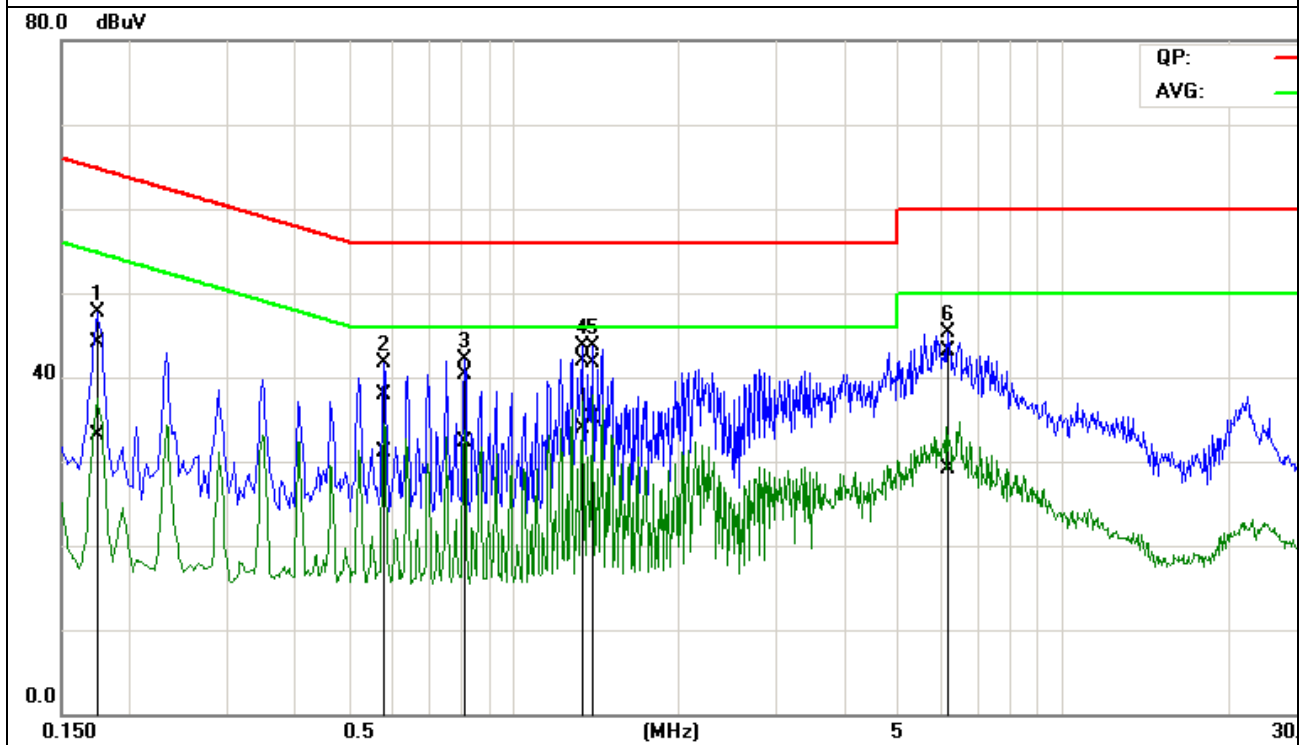


EUT :	3G MOBILE PHONE	Model Name. :	U-830-2
Temperature :	23 °C	Relative Humidity :	50%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 5V from Adapter AC 120V/60Hz	Test Mode :	Link Mode

Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
0.1737	24.41	13.38	19.69	44.10	33.07	64.78	54.78	-20.68	-21.71	Pass
0.5784	18.12	11.34	19.85	37.97	31.19	56.00	46.00	-18.03	-14.81	Pass
0.8134	20.43	12.47	19.83	40.26	32.30	56.00	46.00	-15.74	-13.70	Pass
1.3372	22.13	14.11	19.87	42.00	33.98	56.00	46.00	-14.00	-12.02	Pass
1.3932	21.80	15.29	19.88	41.68	35.17	56.00	46.00	-14.32	-10.83	Pass
6.1887	22.65	8.71	20.42	43.07	29.13	60.00	50.00	-16.93	-20.87	Pass

Remark:

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



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

Tx B/G/N(20m) Mode Used Rates 1m/6m/54m

- 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:

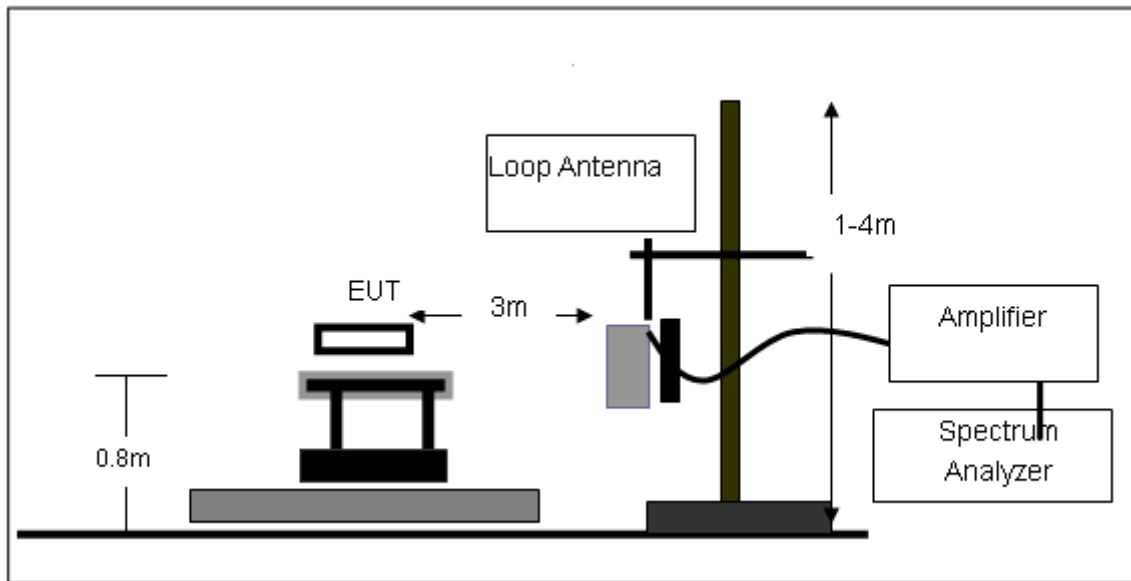
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

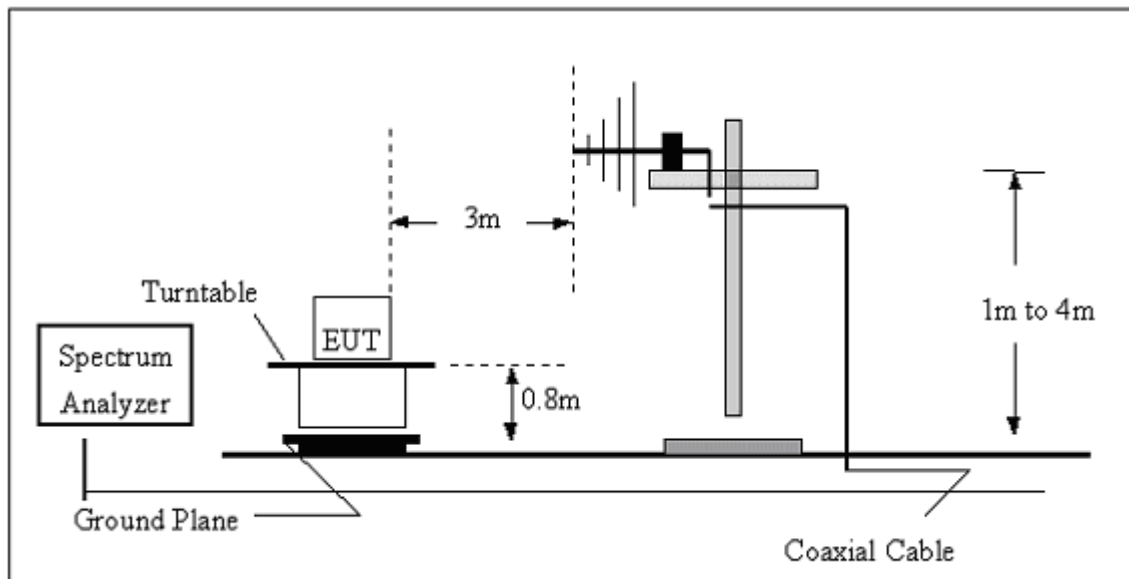
No deviation

3.2.4 TEST SETUP

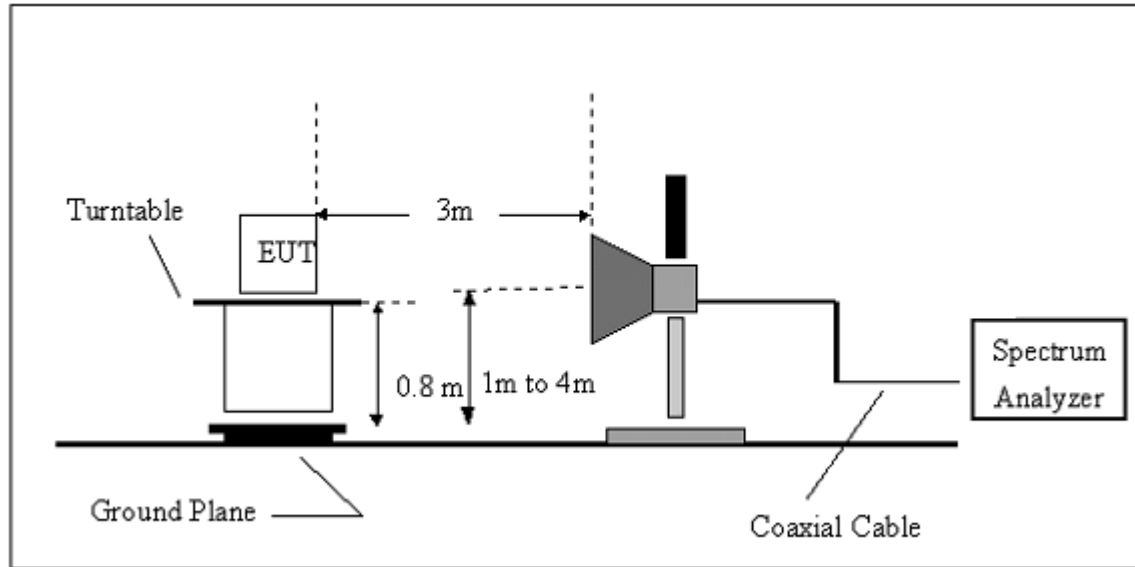
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.6 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)

EUT:	3G MOBILE PHONE	Model Name. :	U-830-2
Temperature:	20 °C	Relative Humidity:	48%
Pressure:	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	Link mode	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance/test distance})$ (dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.

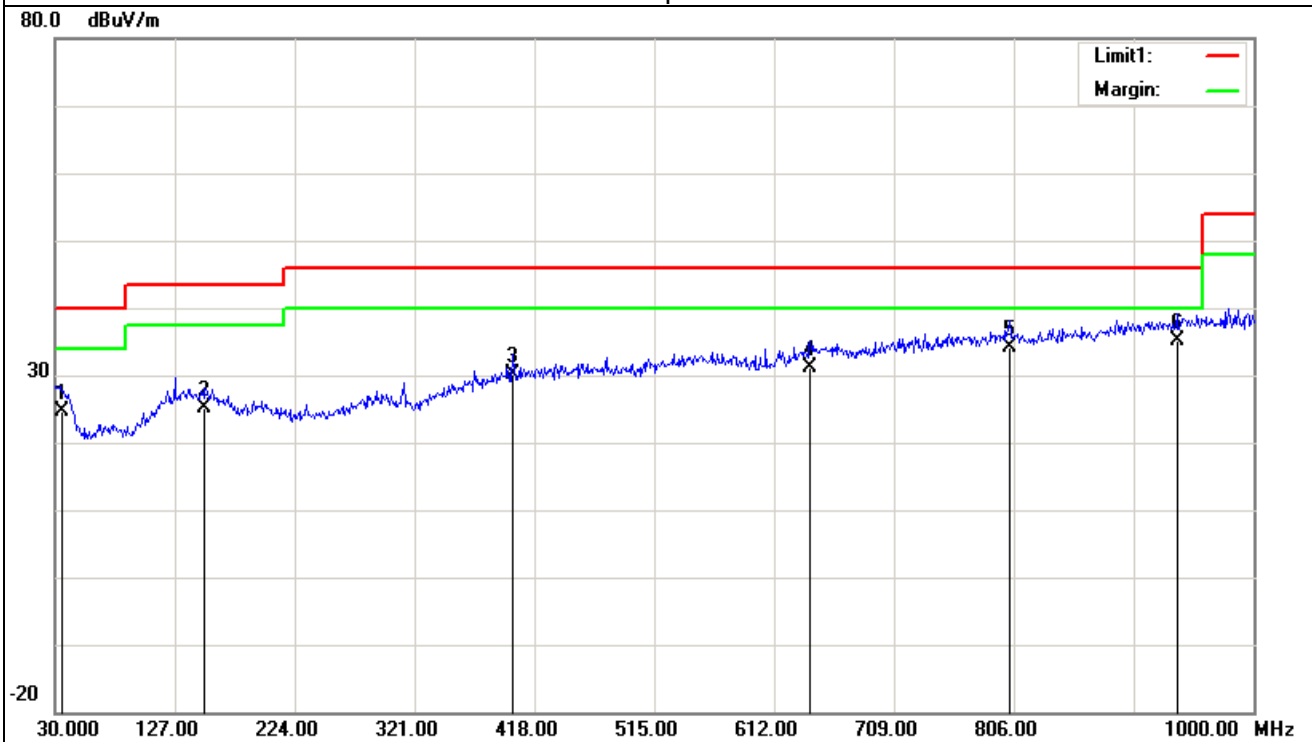
3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	Link mode	Polarization :	Horizontal

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
35.8200	9.89	14.66	24.55	40.00	-15.45	300	198	QP
151.2500	10.46	14.56	25.02	43.50	-18.48	100	197	QP
400.5400	11.97	18.14	30.11	46.00	-15.89	100	52	QP
641.1000	9.56	21.48	31.04	46.00	-14.96	100	209	QP
803.0900	10.65	23.41	34.06	46.00	-11.94	100	277	QP
937.9200	10.15	24.97	35.12	46.00	-10.88	200	315	QP

Remark:

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

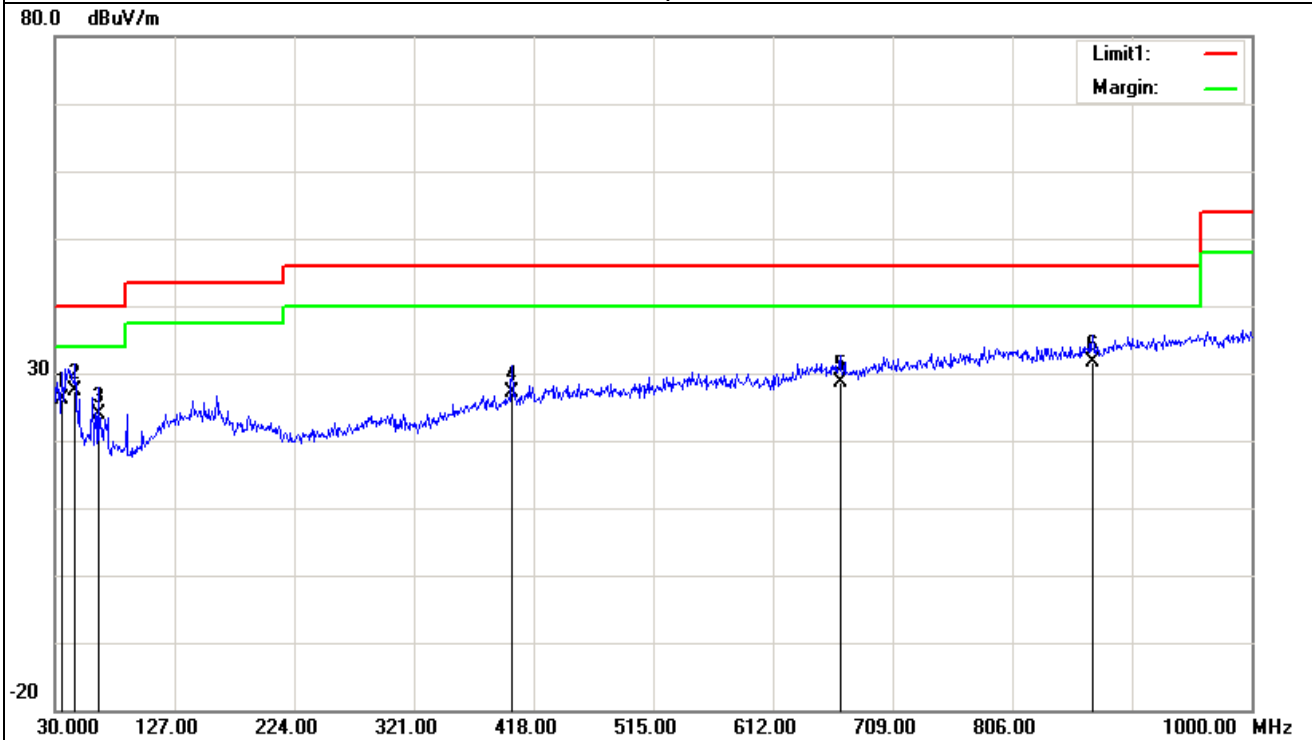


EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	Link mode	Polarization :	Vertical

Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
35.8200	11.44	14.66	26.10	40.00	-13.90	100	312	QP
46.4900	16.93	10.38	27.31	40.00	-12.69	100	353	QP
64.9200	15.35	8.63	23.98	40.00	-16.02	100	107	QP
400.5400	9.01	18.14	27.15	46.00	-18.85	200	268	QP
666.3200	7.01	21.55	28.56	46.00	-17.44	100	309	QP
870.9900	8.05	23.63	31.68	46.00	-14.32	300	186	QP

Remark:

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



3.2.8 TEST RESULTS (ABOVE 1000 MHZ)

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH1 (802.11b Mode)/2412	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4824.082	41.23	10.44	51.67	74	-22.33	peak
4824.099	37.43	10.44	47.87	54	-6.13	AVG
7236.050	42.21	12.39	54.6	74	-19.4	peak
7236.116	36.54	12.39	48.93	54	-5.07	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH1 (802.11b Mode)/2412	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4874.090	42.23	10.4	52.63	74	-21.37	peak
4874.071	38.45	10.4	48.85	54	-5.15	AVG
7311.146	41.32	12.75	54.07	74	-19.93	peak
7311.104	37.23	12.75	49.98	54	-4.02	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH6 (802.11b Mode)/2437	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4874.119	43.21	10.4	53.61	74	-20.39	peak
4874.109	37.54	10.4	47.94	54	-6.06	AVG
7311.121	42.32	12.75	55.07	74	-18.93	peak
7311.123	37.21	12.75	49.96	54	-4.04	AVG

Remark:

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

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH6 (802.11b Mode)/2437	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4924.060	41.78	10.39	52.17	74	-21.83	peak
4934.110	38.67	10.44	49.11	54	-4.89	AVG
7386.066	42.18	12.68	54.86	74	-19.14	peak
7386.130	36.59	12.68	49.27	54	-4.73	AVG

Remark:

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

No emission detected above 18GHz

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH11 (802.11b Mode)/2462	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4924.134	42.34	10.39	52.73	74	-21.27	peak
4924.046	38.21	10.39	48.6	54	-5.4	AVG
7386.063	42.23	12.68	54.91	74	-19.09	peak
7386.120	37.34	12.68	50.02	54	-3.98	AVG

Remark:

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

2. No emission detected above 18GHz

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH11 (802.11b Mode)/2462	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4924.092	43.12	10.39	53.51	74	-20.49	peak
4924.109	38.34	10.39	48.73	54	-5.27	AVG
7386.139	47.25	12.68	59.93	74	-14.07	peak
7386.105	37.13	12.68	49.81	54	-4.19	AVG

Remark:

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

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH1 (802.11g Mode)/2412	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4824.099	43.21	10.44	53.65	74	-20.35	peak
4824.165	38.34	10.44	48.78	54	-5.22	AVG
7236.172	41.43	12.39	53.82	74	-20.18	peak
7236.129	37.54	12.39	49.93	54	-4.07	AVG

Remark:

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

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH1 (802.11g Mode)/2412	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4824.131	42.32	10.44	52.76	74	-21.24	peak
4824.066	39.23	10.44	49.67	54	-4.33	AVG
7236.047	43.45	12.39	55.84	74	-18.16	peak
7236.053	38.54	12.39	50.93	54	-3.07	AVG

Remark:

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

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH6 (802.11g Mode)/2437	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4874.070	43.21	10.4	53.61	74	-20.39	peak
4874.133	38.64	10.4	49.04	54	-4.96	AVG
7311.127	42.75	12.75	55.5	74	-18.5	peak
7311.147	37.44	12.75	50.19	54	-3.81	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH6 (802.11g Mode)/2437	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4874.066	43.32	10.4	53.72	74	-20.28	peak
4874.128	39.21	10.4	49.61	54	-4.39	AVG
7311.054	43.26	12.75	56.01	74	-17.99	peak
7311.124	37.43	12.75	50.18	54	-3.82	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH11 (802.11g Mode)/2462	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4924.050	42.43	10.39	52.82	74	-21.18	peak
4924.048	38.43	10.39	48.82	54	-5.18	AVG
7386.092	43.21	12.68	55.89	74	-18.11	peak
7386.062	37.82	12.68	50.5	54	-3.5	AVG

Remark:

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

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH11(802.11g Mode)/2462	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4924.133	41.21	10.39	51.6	74	-22.4	peak
4924.098	37.34	10.39	47.73	54	-6.27	AVG
7386.078	43.24	12.68	55.92	74	-18.08	peak
7386.085	37.42	12.68	50.1	54	-3.9	AVG

Remark:

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

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH1(802.11n Mode)/20MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4824.094	43.21	10.44	53.65	74	-20.35	peak
4824.110	39.34	10.44	49.78	54	-4.22	AVG
7236.067	42.35	12.39	54.74	74	-19.26	peak
7236.063	38.21	12.39	50.6	54	-3.4	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH1(802.11n Mode)/20MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4824.140453	42.23	10.44	52.67	74	-21.33	peak
4824.127152	39.21	10.44	49.65	54	-4.35	AVG
7236.04785	43.43	12.39	55.82	74	-18.18	peak
7236.085901	38.12	12.39	50.51	54	-3.49	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH6(802.11n Mode)/20MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4874.119	45.32	10.4	55.72	74	-18.28	peak
4874.118	39.23	10.4	49.63	54	-4.37	AVG
7311.041	42.54	12.75	55.29	74	-18.71	peak
7311.048	36.43	12.75	49.18	54	-4.82	AVG

Remark:

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

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	CH6(802.11n Mode)/20MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4874.097	44.23	10.4	54.63	74	-19.37	peak
4874.126	36.22	10.4	46.62	54	-7.38	AVG
7311.103	45.53	12.75	58.28	74	-15.72	peak
7311.093	37.62	12.75	50.37	54	-3.63	AVG

Remark:

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

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
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
4924.100653	43.23	10.39	53.62	74	-20.38	peak
4924.11014	39.15	10.39	49.54	54	-4.46	AVG
7386.102014	43.67	12.68	56.35	74	-17.65	peak
7386.160993	39.21	12.68	51.89	54	-2.11	AVG

Remark:

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

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
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
4924.092666	42.34	10.39	52.73	74	-21.27	peak
4924.147256	38.43	10.39	48.82	54	-5.18	AVG
7386.145527	41.32	12.68	54	74	-20	peak
7386.142998	38.21	12.68	50.89	54	-3.11	AVG

Remark:

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

3.2.9 TEST RESULTS (BAND EDGE)

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V FROM ADAPTER WITH AC 120V/60HZ
Test Mode :	CH1(802.11b Mode)	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2399.9	71.21	-13	58.21	74	-15.79	peak
2399.9	65.45	-13	52.45	54	-5.54	AVG
2400	72.32	-12.99	59.33	74	-14.67	peak
2400	67.24	-12.99	54.25	54	-5.74	AVG

Remark:

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

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V FROM ADAPTER WITH AC 120V/60HZ
Test Mode :	CH1(802.11b Mode)	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2399.9	73.43	-13	60.43	74	-13.57	peak
2399.9	62.23	-13	49.23	54	-4.77	AVG
2400	72.45	-12.99	59.46	74	-14.54	peak
2400	63.43	-12.99	50.44	54	-3.56	AVG

Remark:

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

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V FROM ADAPTER WITH AC 120V/60HZ
Test Mode :	CH11(802.11b Mode)	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2483.5	71.54	-12.78	58.76	74	-15.24	peak
2483.5	60.32	-12.78	47.54	54	-6.46	AVG
2483.6	72.56	-12.77	59.79	74	-14.21	peak
2483.6	63.54	-12.78	50.76	54	-3.24	AVG

Remark:

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

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V FROM ADAPTER WITH AC 120V/60HZ
Test Mode :	CH11(802.11b Mode)	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2483.5	72.54	-12.78	59.76	74	-14.24	peak
2483.5	64.34	-12.78	51.56	54	-2.44	AVG
2483.6	73.54	-12.77	60.77	74	-13.23	peak
2483.6	64.45	-12.77	51.68	54	-2.32	AVG

Remark:

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

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V FROM ADAPTER WITH AC 120V/60HZ
Test Mode :	CH1(802.11g Mode)	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2399.9	72.21	-13	59.21	74	-14.79	peak
2399.9	63.43	-13	50.43	54	-3.57	AVG
2400	71.15	-12.99	58.16	74	-15.84	peak
2400	64.43	-12.99	51.44	54	-2.56	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V FROM ADAPTER WITH AC 120V/60HZ
Test Mode :	CH1(802.11gMode)	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2399.9	71.23	-13	58.23	74	-15.77	peak
2399.9	63.21	-13	50.21	54	-3.79	AVG
2400	71.25	-12.99	58.26	74	-15.74	peak
2400	64.24	-12.99	51.25	54	-2.75	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V FROM ADAPTER WITH AC 120V/60HZ
Test Mode :	CH11(802.11g Mode)	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2483.5	72.35	-12.78	59.57	74	-14.43	peak
2483.5	63.56	-12.78	50.78	54	-3.22	AVG
2483.6	72.64	-12.77	59.87	74	-14.13	peak
2483.6	63.64	-12.77	50.87	54	-3.13	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V FROM ADAPTER WITH AC 120V/60HZ
Test Mode :	CH11(802.11g Mode)	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2483.5	71.54	-12.78	58.76	74	-15.24	peak
2483.5	62.43	-12.78	49.65	54	-4.35	AVG
2483.6	72.65	-12.77	59.88	74	-14.12	peak
2483.6	62.34	-12.77	49.57	54	-4.43	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V FROM ADAPTER WITH AC 120V/60HZ
Test Mode :	CH1(802.11n Mode)/20MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2399.9	72.45	-13	59.45	74	-14.55	peak
2399.9	63.26	-13	50.26	54	-3.74	AVG
2400	73.22	-12.99	60.23	74	-13.77	peak
2400	63.54	-12.99	50.55	54	-3.45	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V FROM ADAPTER WITH AC 120V/60HZ
Test Mode :	CH1(802.11n Mode)/20M	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2399.9	71.32	-13	58.32	74	-15.68	peak
2399.9	64.34	-13	51.34	54	-2.66	AVG
2400	72.35	-12.99	59.36	74	-14.64	peak
2400	63.45	-12.99	50.46	54	-3.54	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V FROM ADAPTER WITH AC 120V/60HZ
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
2483.5	72.43	-12.78	59.65	74	-14.35	peak
2483.5	63.75	-12.78	50.97	54	-3.03	AVG
2483.6	71.32	-12.77	58.55	74	-15.45	peak
2483.6	62.35	-12.77	49.58	54	-4.42	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V FROM ADAPTER WITH AC 120V/60HZ
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
2483.5	72.34	-12.78	59.56	74	-13.55	peak
2483.5	62.32	-12.78	49.54	54	-4.46	AVG
2483.6	73.22	-12.78	60.44	74	-13.55	peak
2483.6	62.2	-12.78	49.42	54	-4.58	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

4. CONDUCTED SPURIOUS EMISSIONS

4.1 APPLIED PROCEDURES / LIMIT

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. Attenuation below the general limits specified in Section 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)).

4.1.1 TEST PROCEDURE

Tx B/G/N(20m) Mode Used Rates 1m/6m/54m

Spectrum Parameter	Setting
Detector	Peak
Start Frequency	30 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

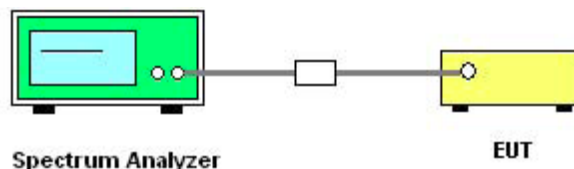
For Band edge

Spectrum Parameter	Setting
Attenuation	Auto
Start/Stop Frequency	Lower Band Edge: 2300 – 2430 MHz Upper Band Edge: 2450 – 2500 MHz
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ω; the path loss as the factor is calibrated to correct the reading. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

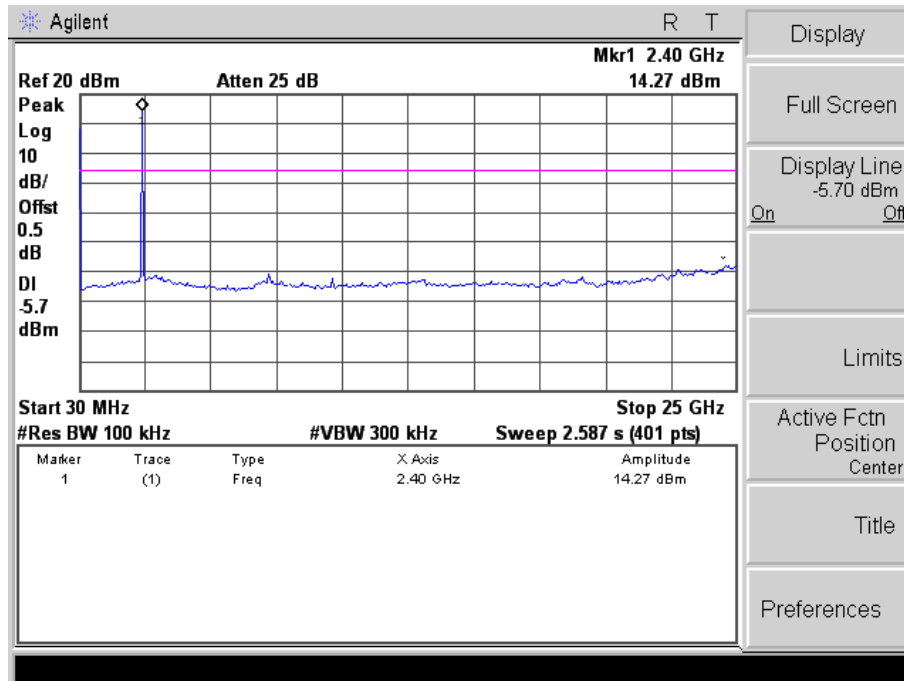
4.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

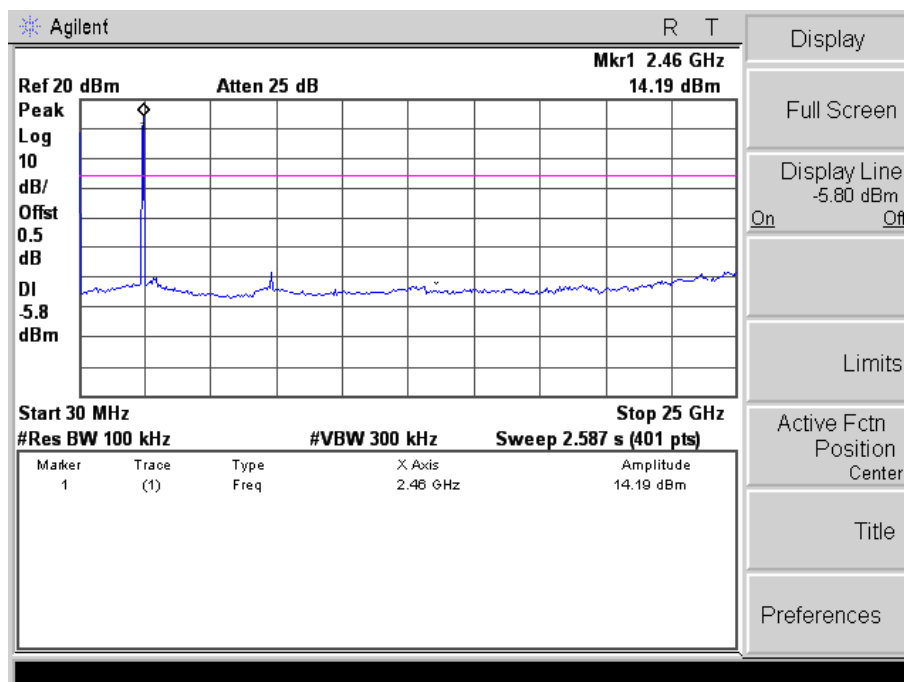
4.1.5 TEST RESULTS

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1015 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	TX b Mode /CH01, CH06, CH11		

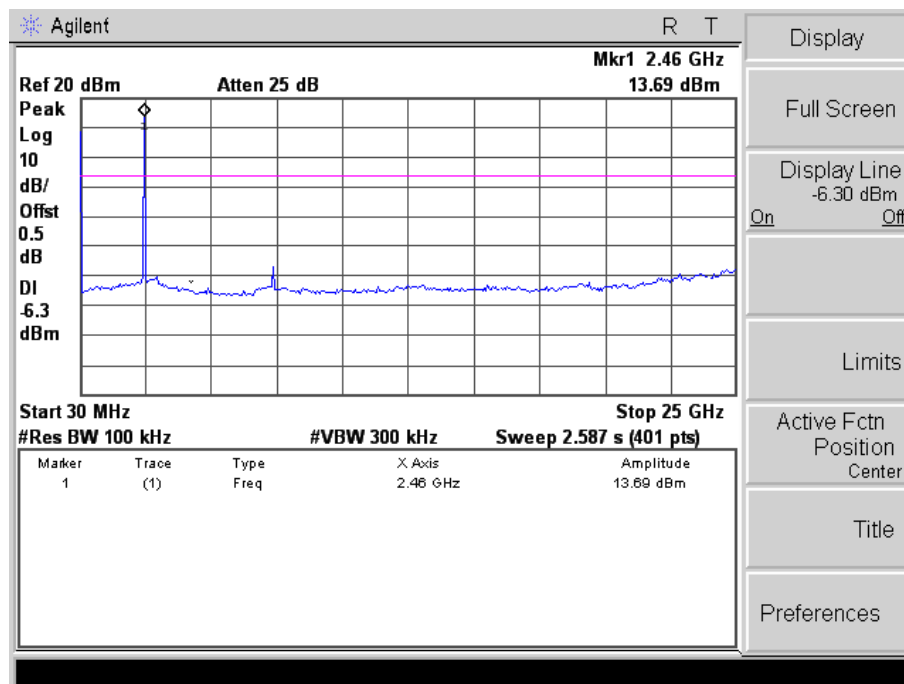
CH 01



CH 06

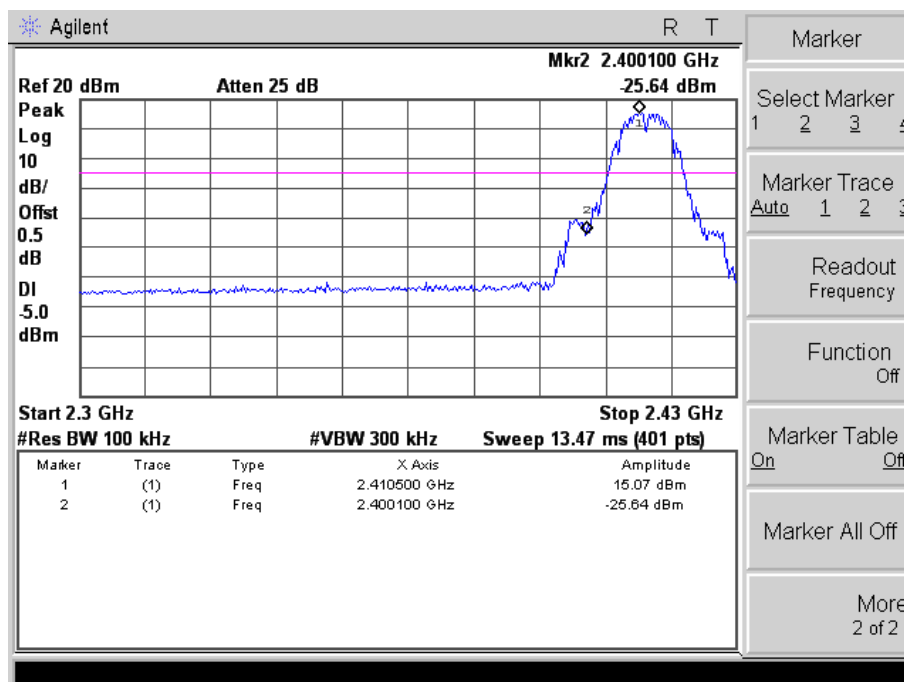


CH 11

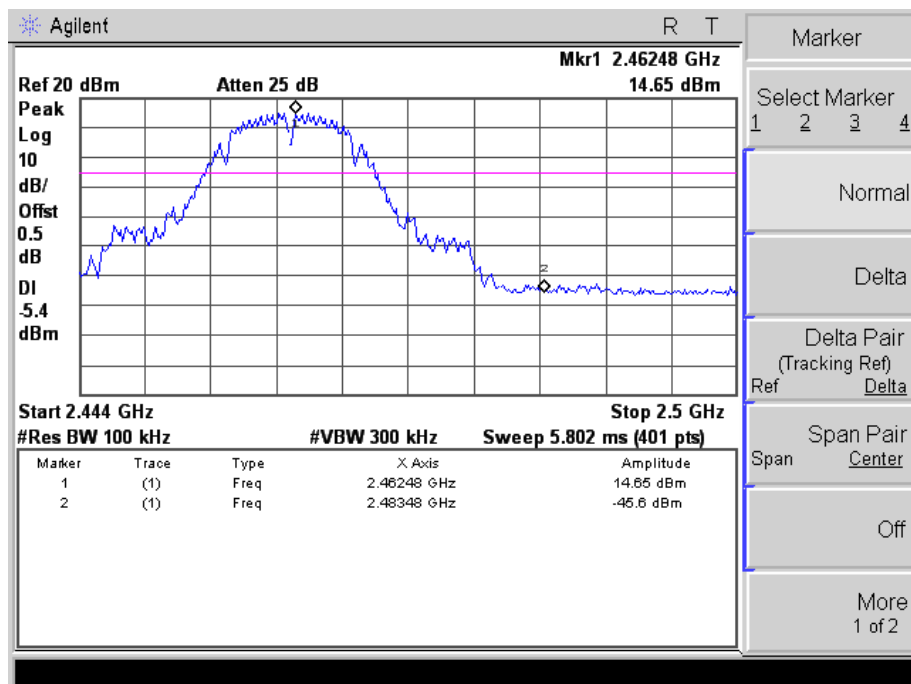


Band edge

CH 01

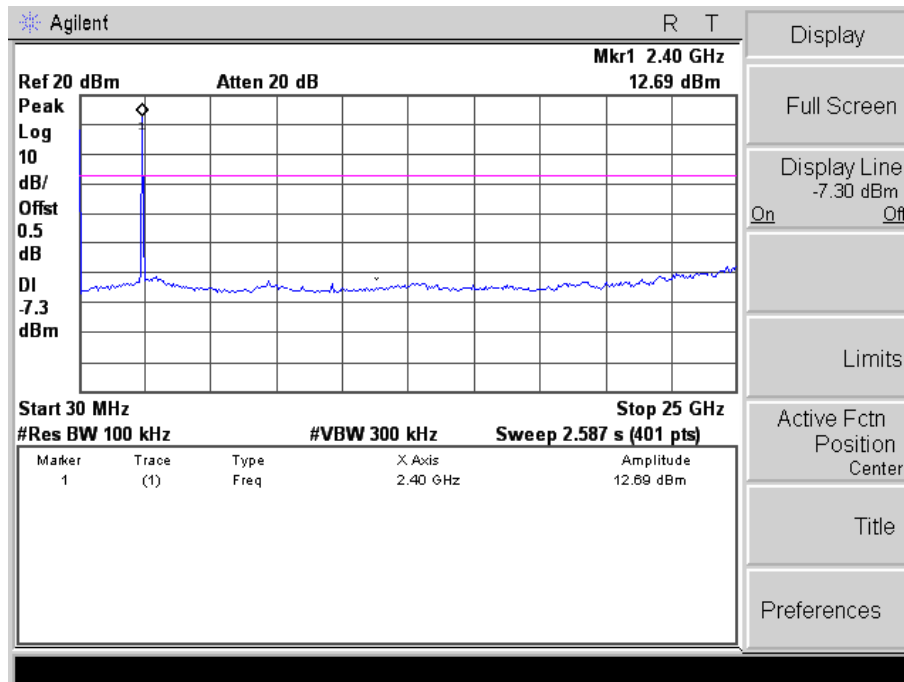


CH 11

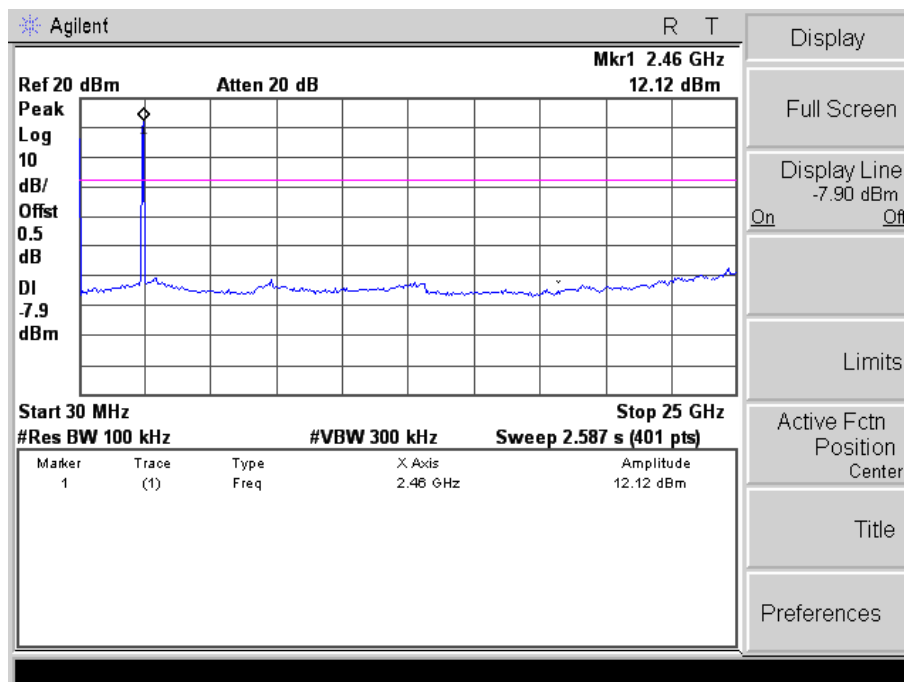


EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1015 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	TX g Mode /CH01, CH06, CH11		

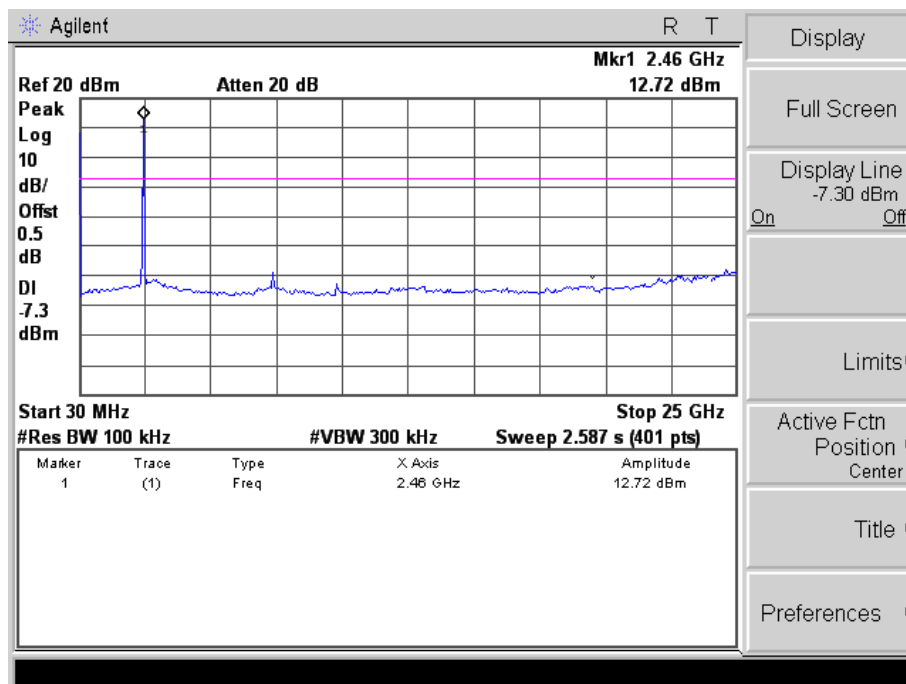
CH 01



CH 06

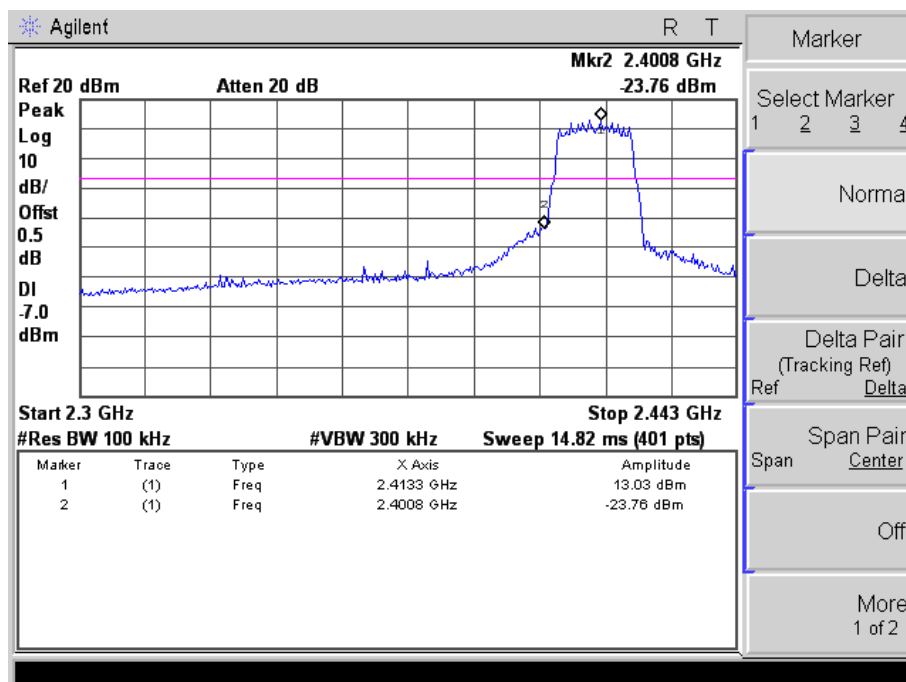


CH 11

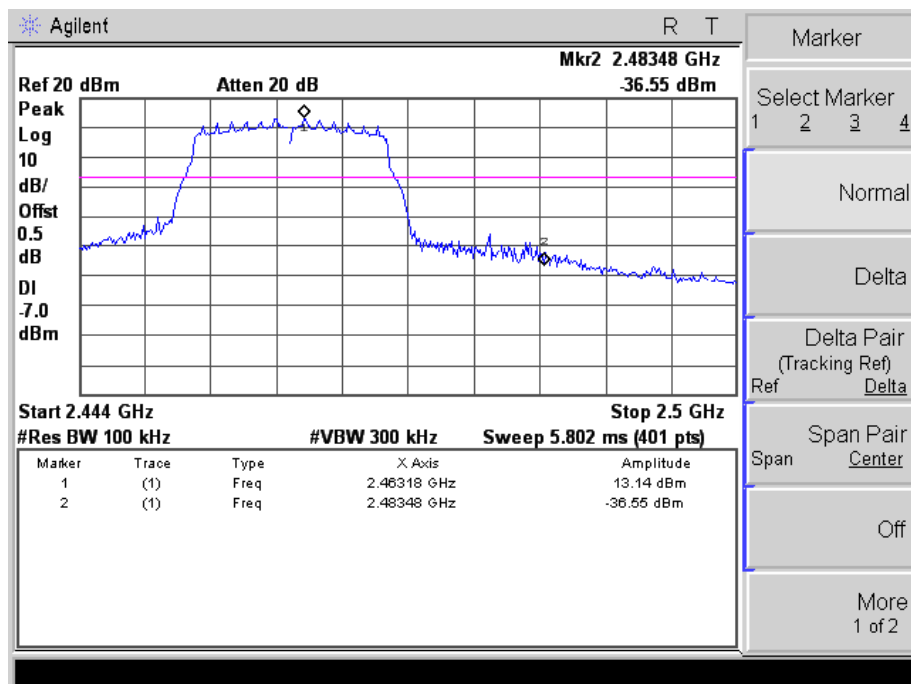


Band edge

CH 01

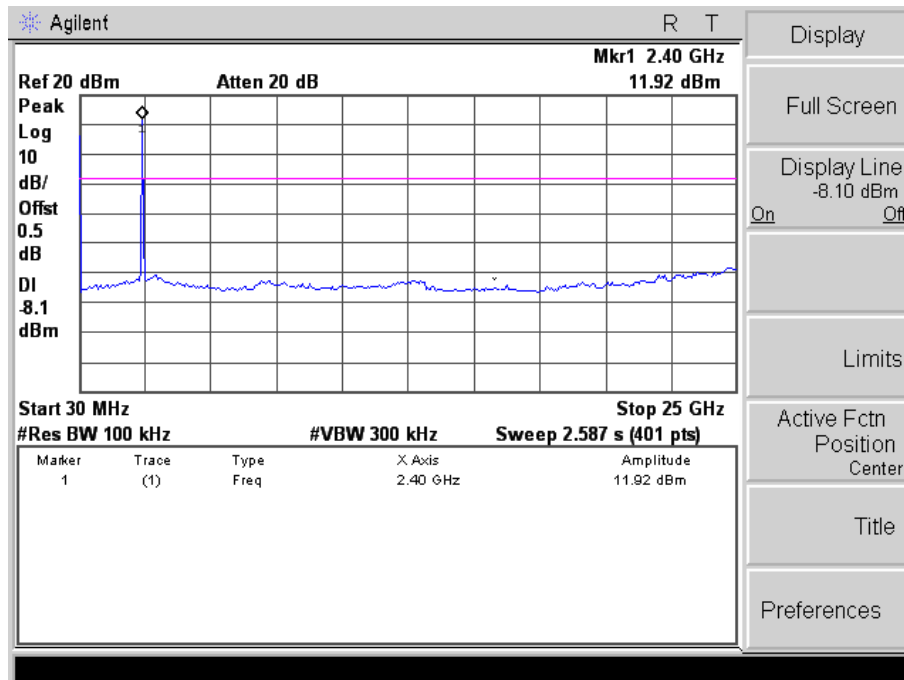


CH11

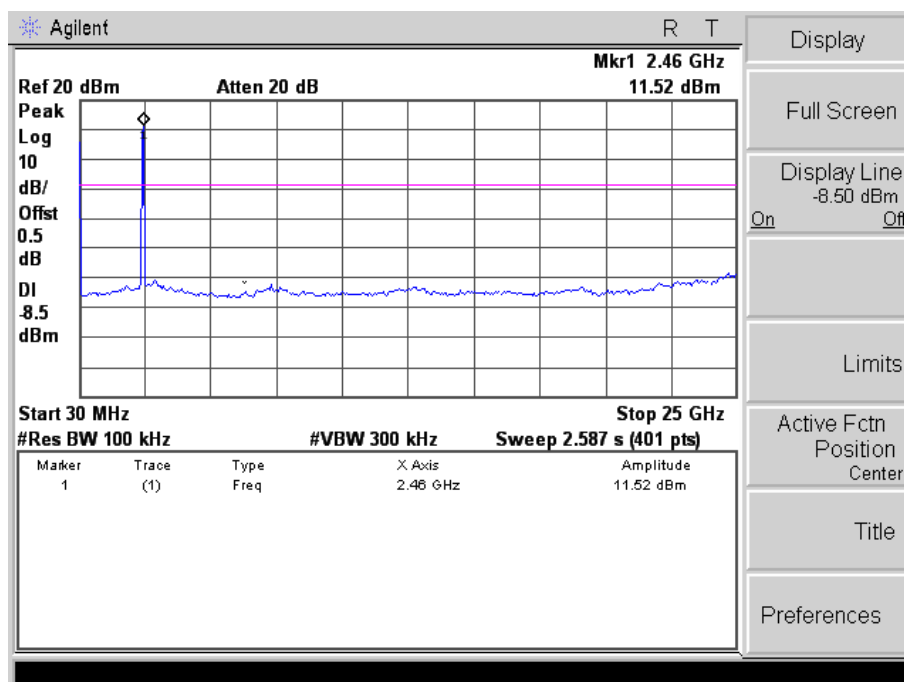


EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1015 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	TX n Mode(20M) /CH01, CH06, CH11		

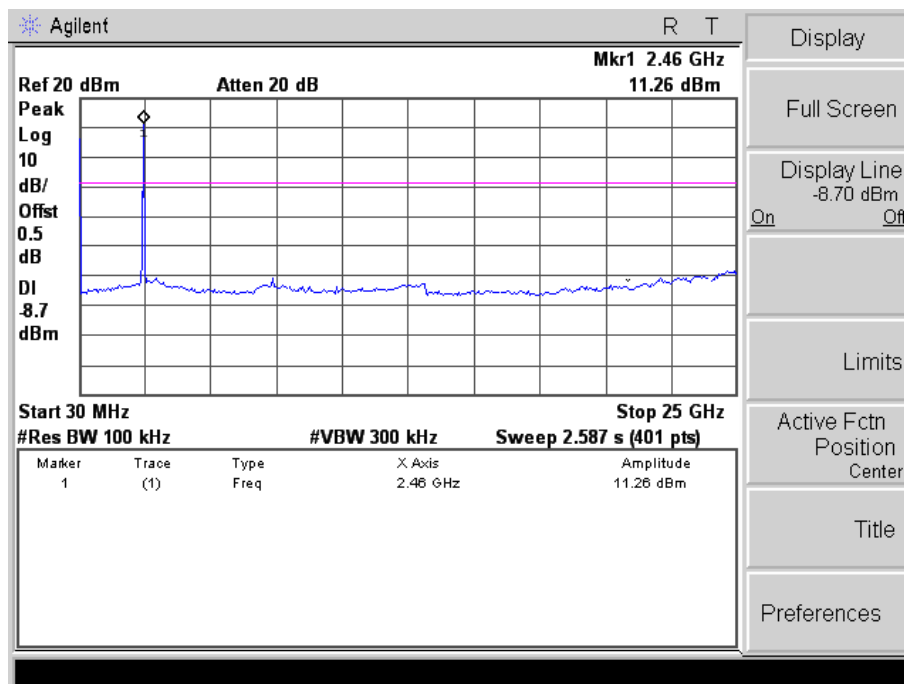
CH 01



CH 06

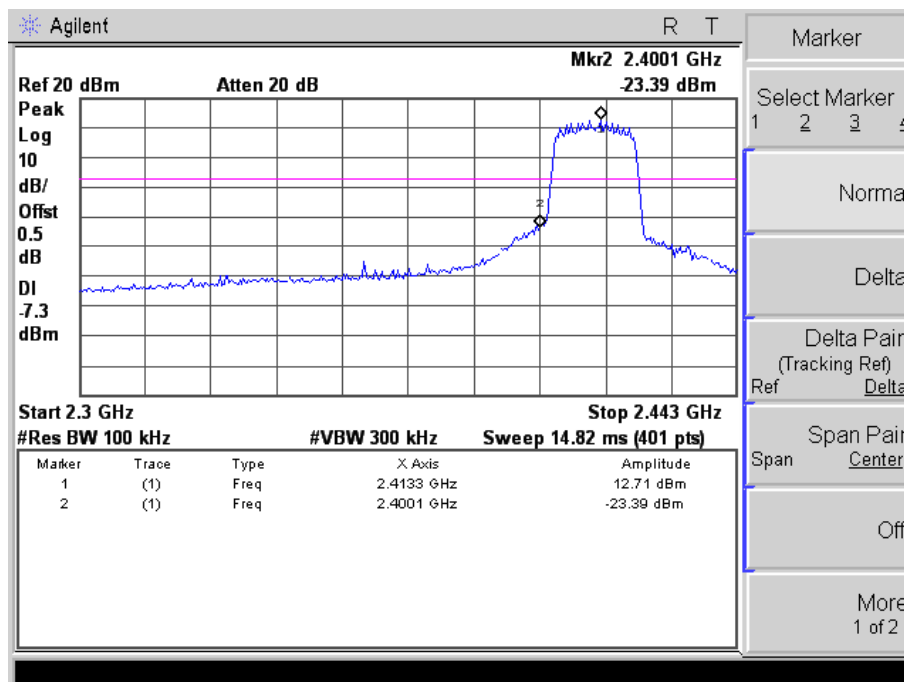


CH 11

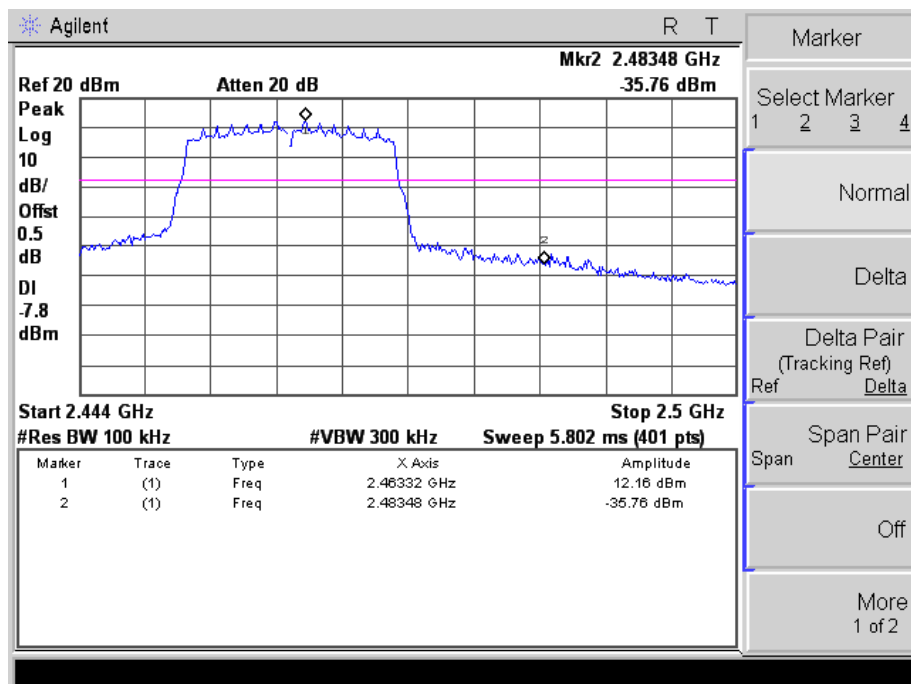


Band edge

CH 01



CH 11



5. POWER SPECTRAL DENSITY TEST

5.1 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

5.1.1 TEST PROCEDURE

TX B/G/N(20M) Mode Used Rates 1M/6M/54M

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 ≥ 3 kHz.
4. Set the VBW $\geq 3 \times$ 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.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP



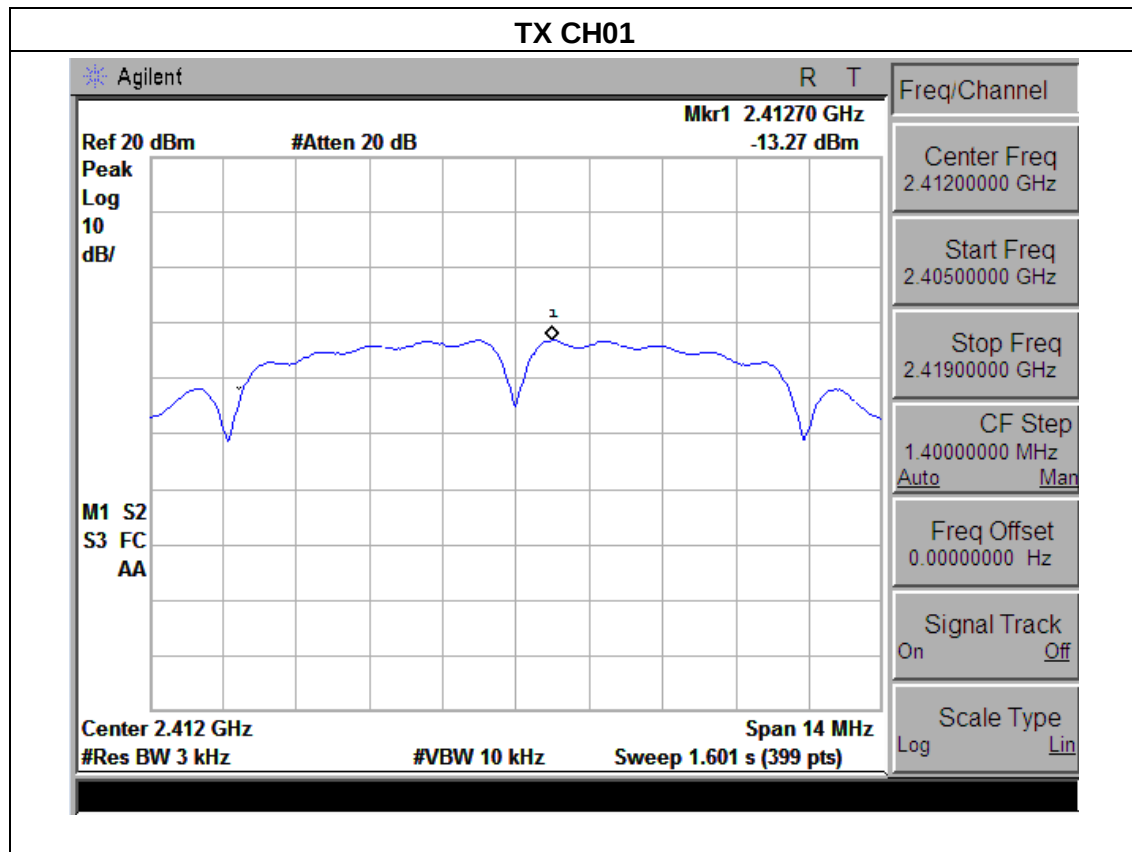
5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

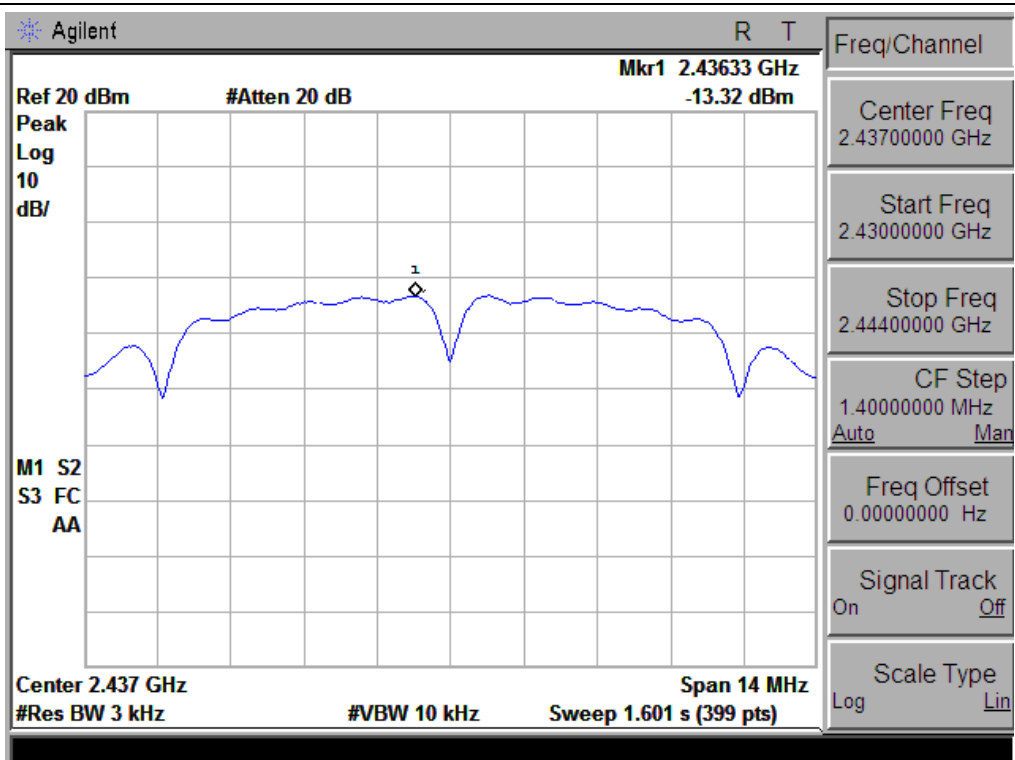
5.1.5 TEST RESULTS

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1015 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	TX b Mode /CH01, CH06, CH11		

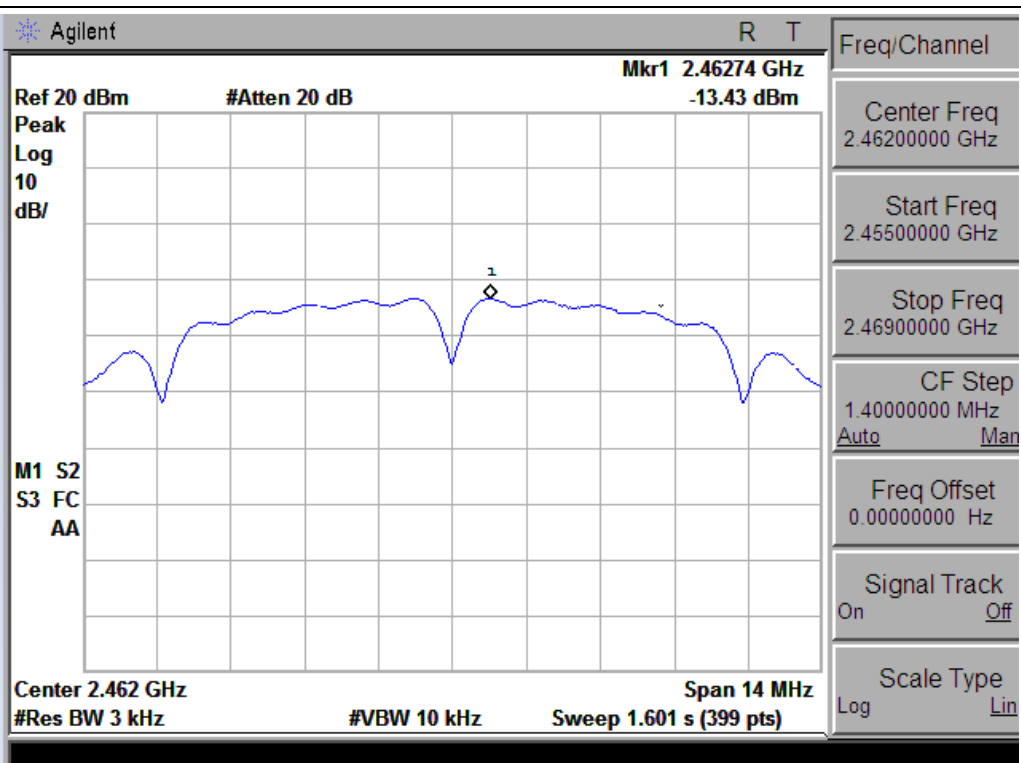
Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-12.27	8	PASS
2437 MHz	-13.32	8	PASS
2462 MHz	-13.43	8	PASS



TX CH06

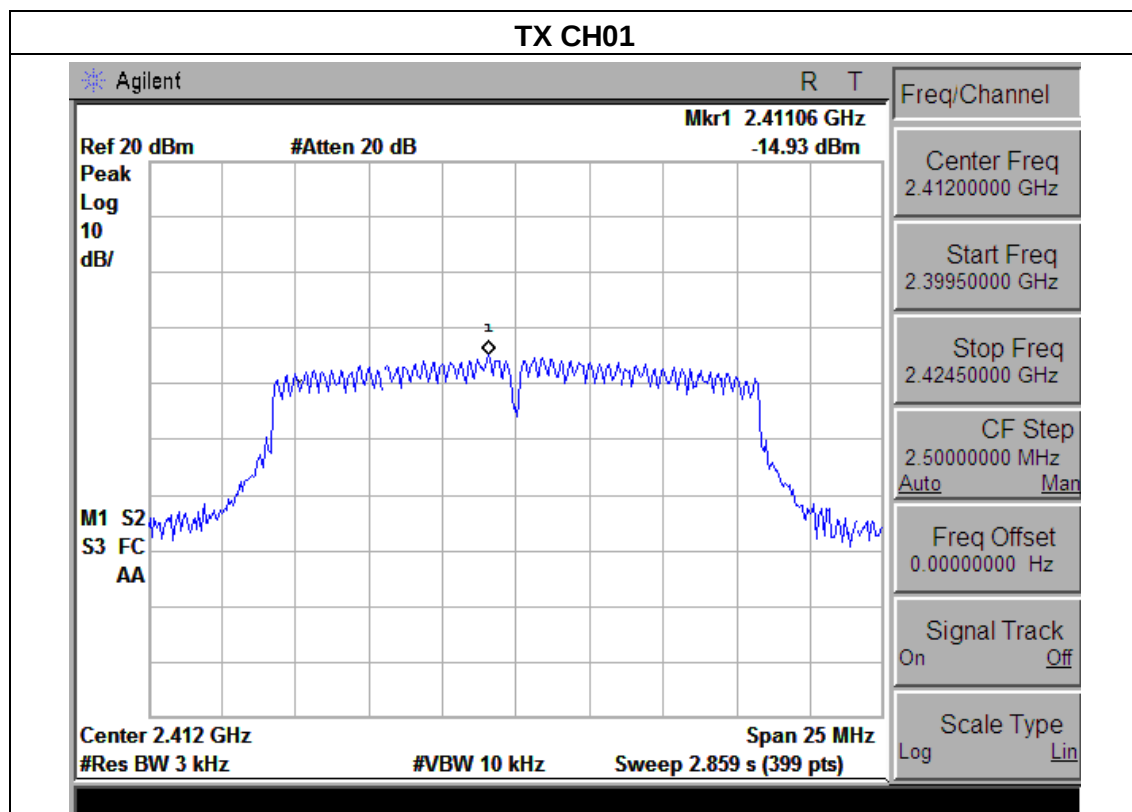


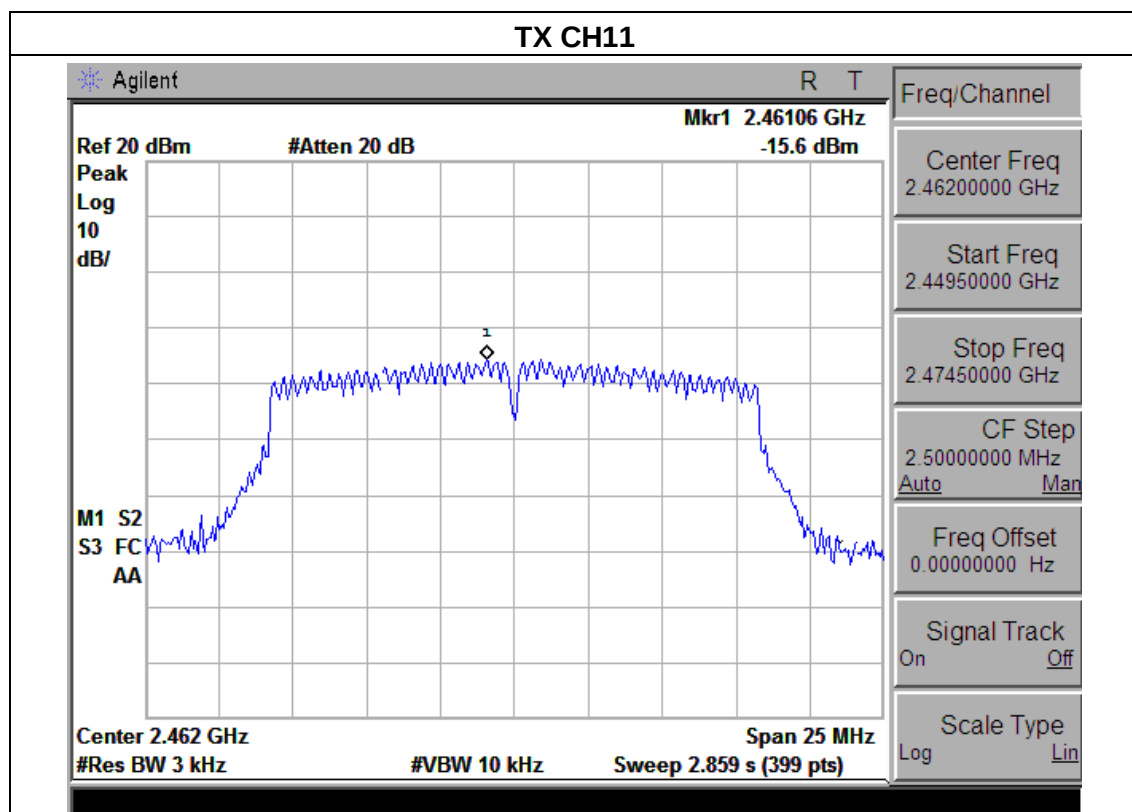
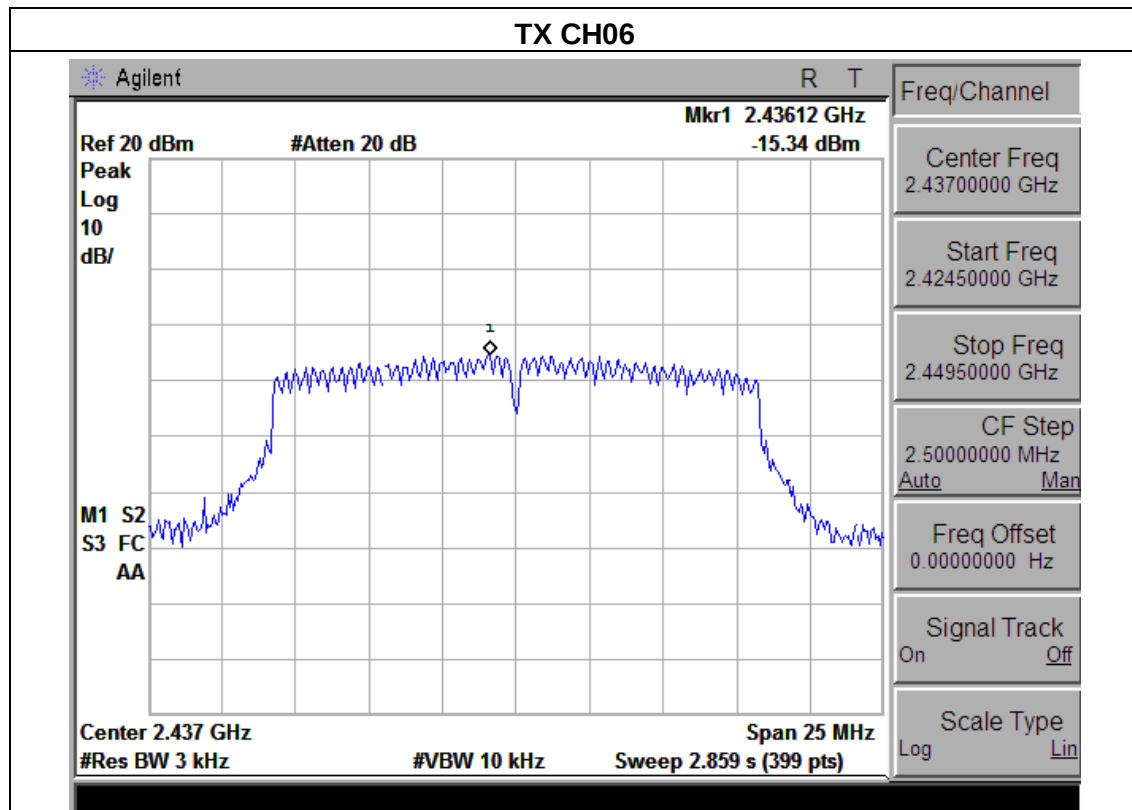
TX CH11



EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1015 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	TX g Mode /CH01, CH06, CH11		

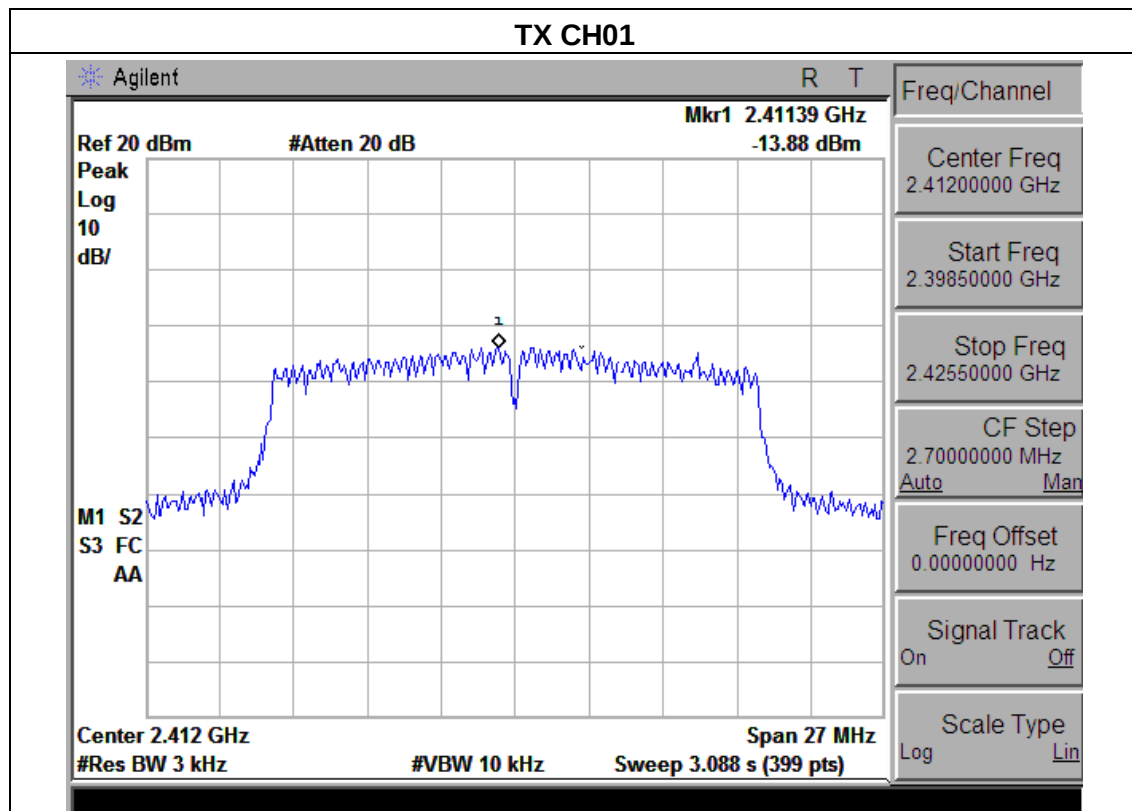
Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-14.93	8	PASS
2437 MHz	-15.34	8	PASS
2462 MHz	-15.6	8	PASS

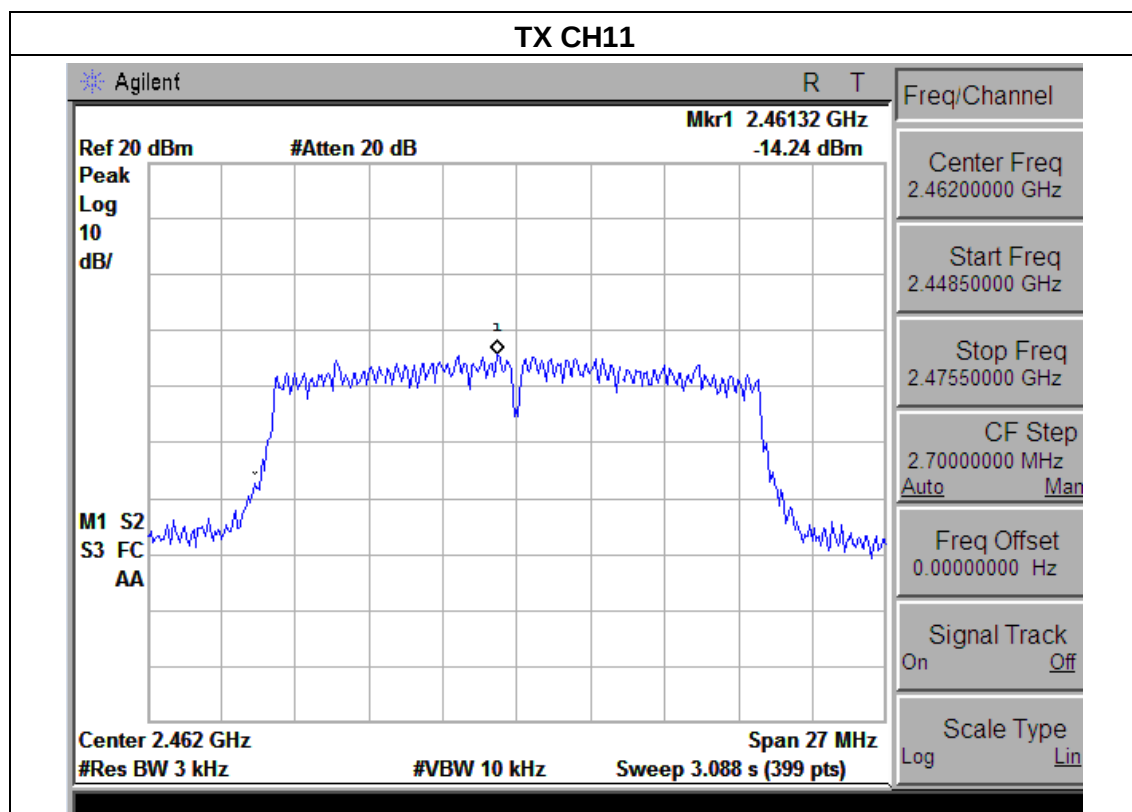
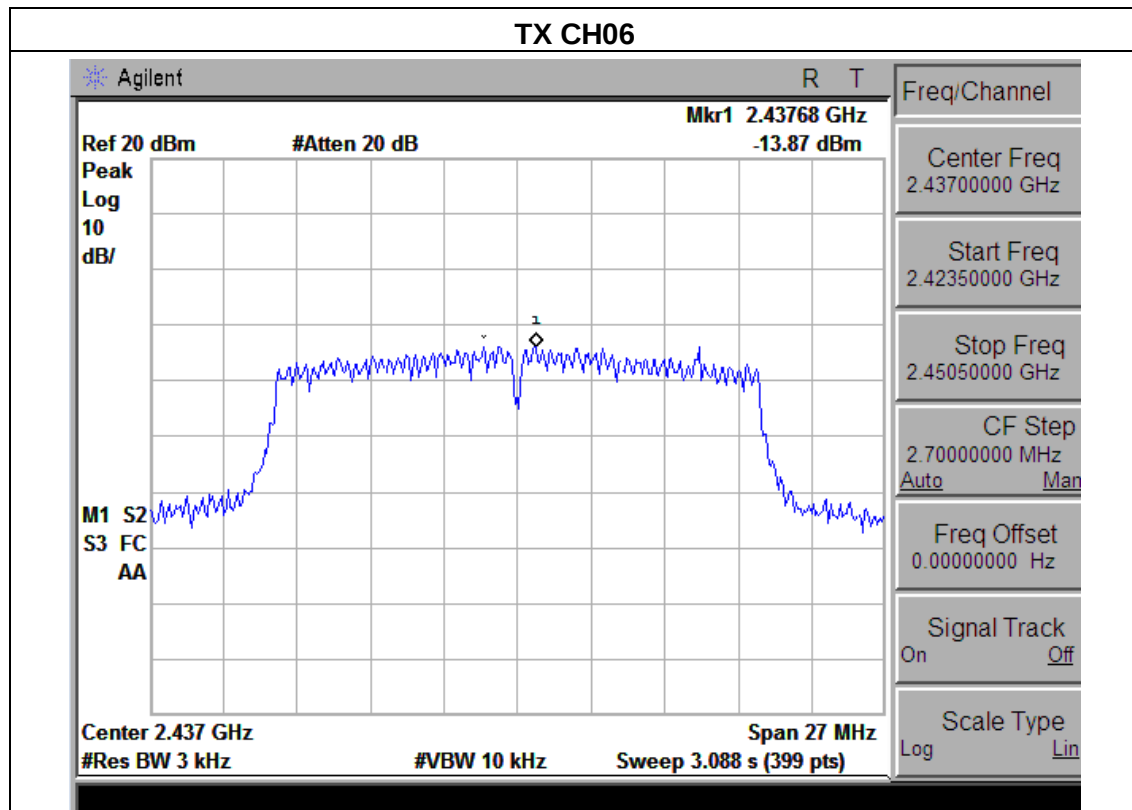




EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1015 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	TX n Mode(20M) /CH01, CH06, CH11		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-13.88	8	PASS
2437 MHz	-13.87	8	PASS
2462 MHz	-14.24	8	PASS





6. BANDWIDTH TEST

6.1 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

6.1.1 TEST PROCEDURE

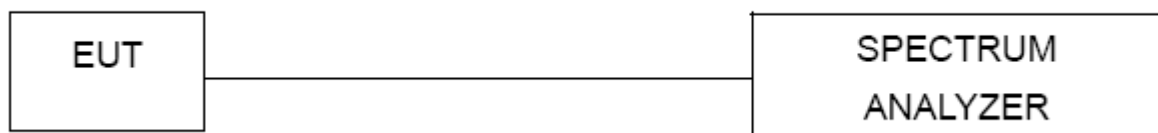
TX B/G/N(20M) Mode Used Rates 1M/6M/54M

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times$ 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 frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION CONDITIONS

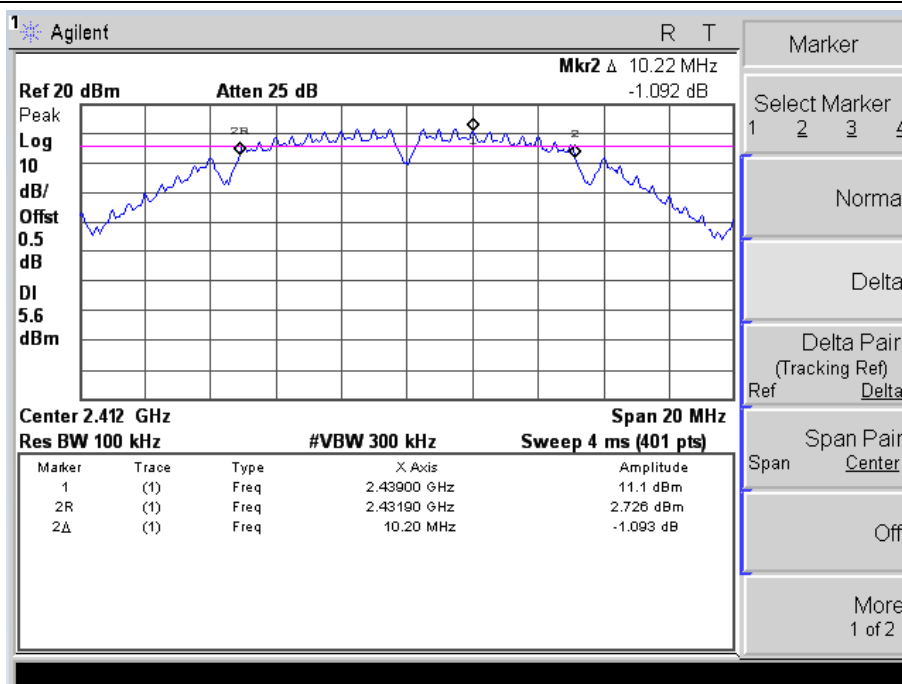
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 TEST RESULTS

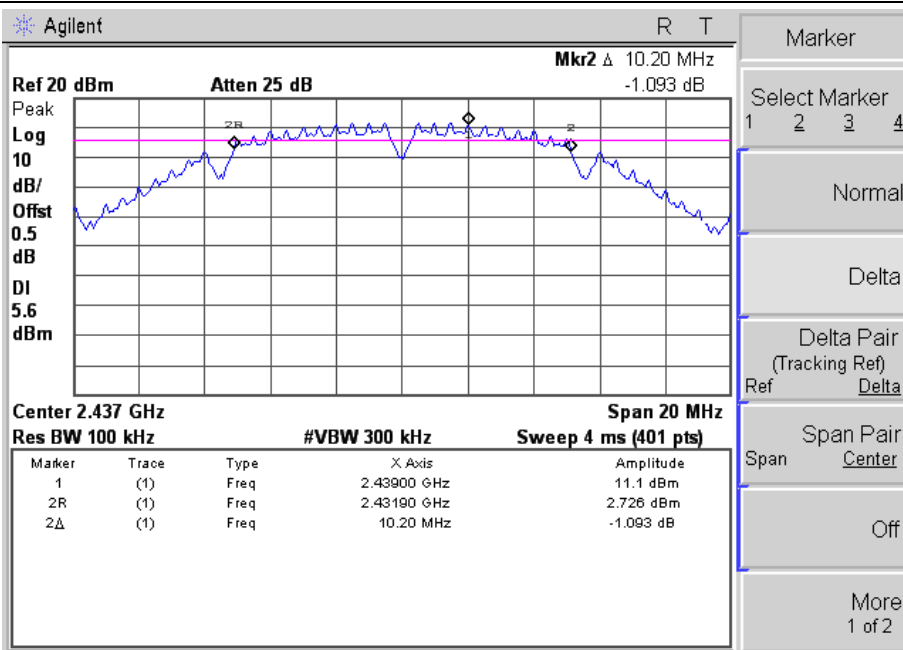
EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	TX b Mode /CH01, CH06, CH11		

Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	10.22	>=500KHz	PASS
2437 MHz	10.15	>=500KHz	PASS
2462 MHz	10.20	>=500KHz	PASS

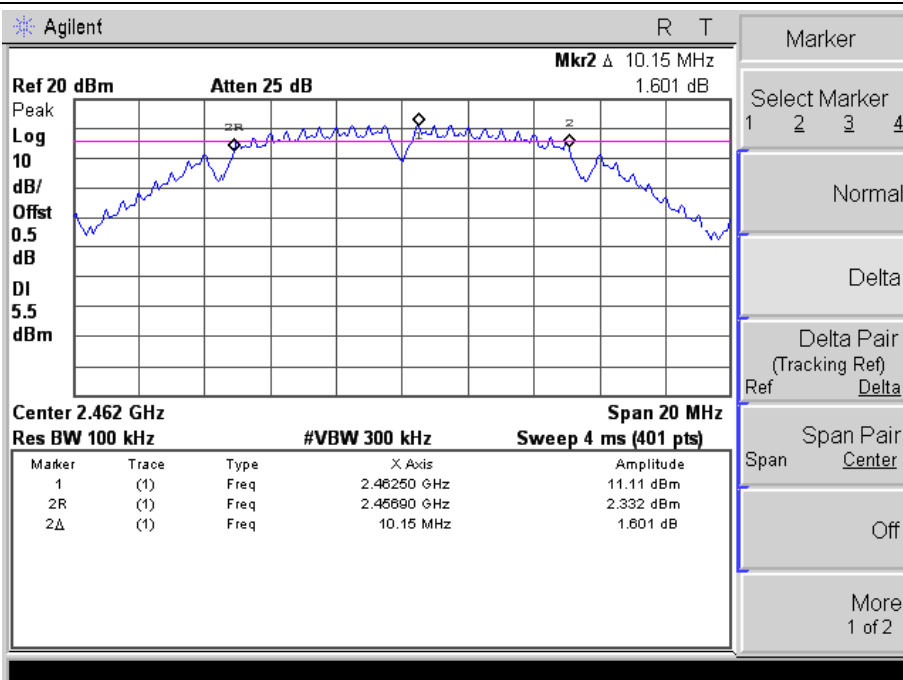
TX CH 01



TX CH 06

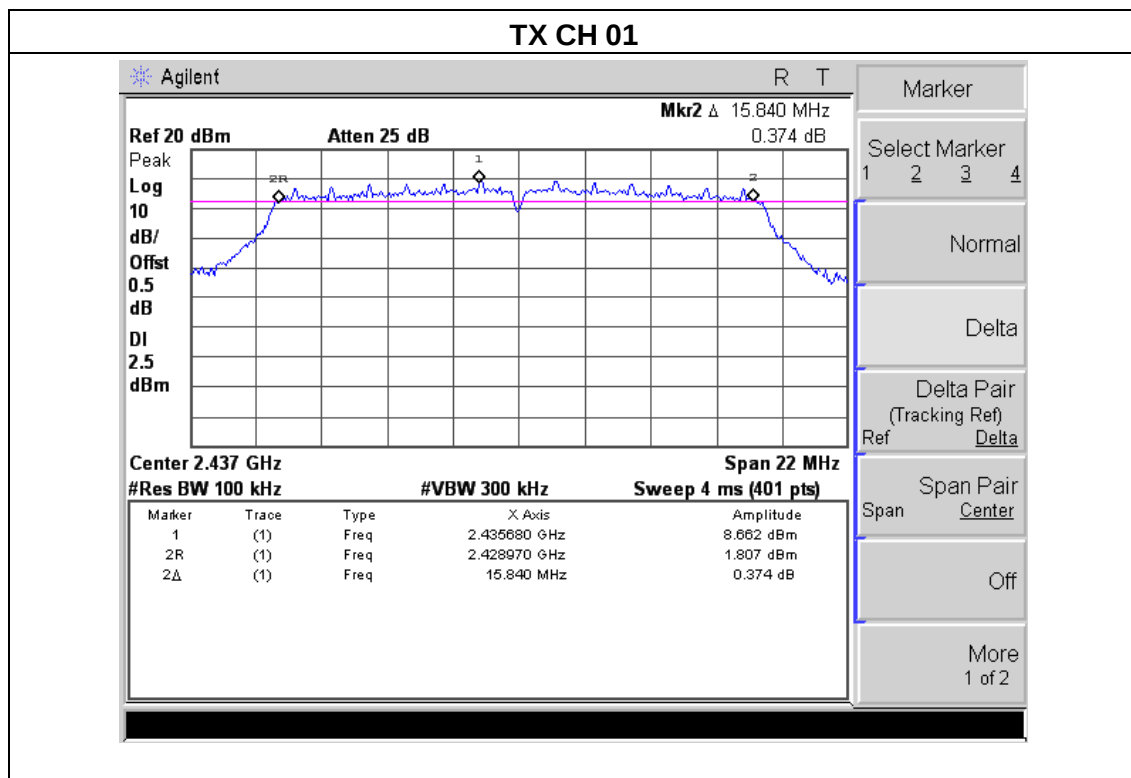


TX CH 11

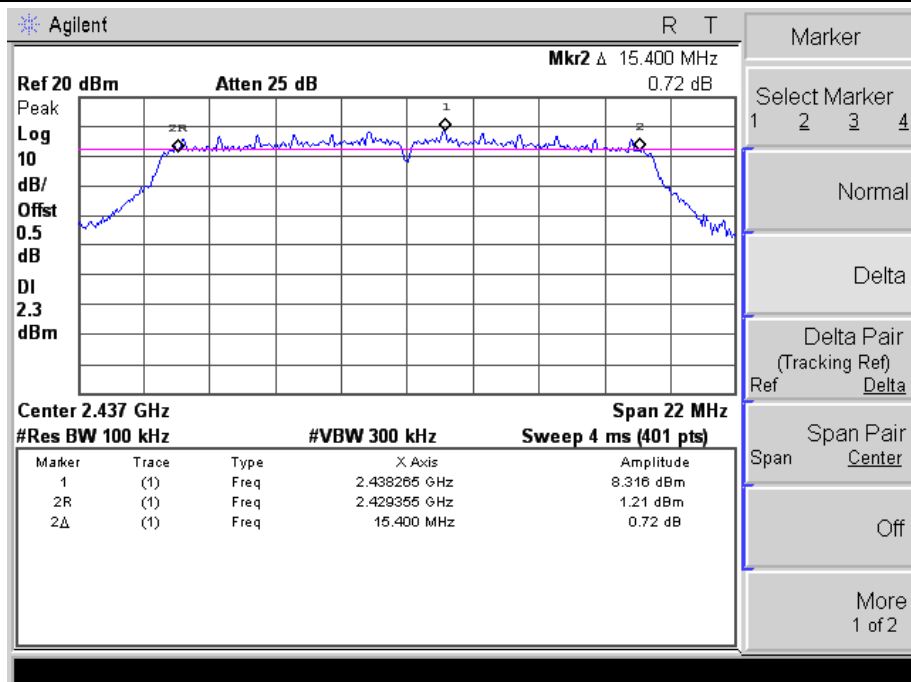


EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	TX g Mode /CH01, CH06, CH11		

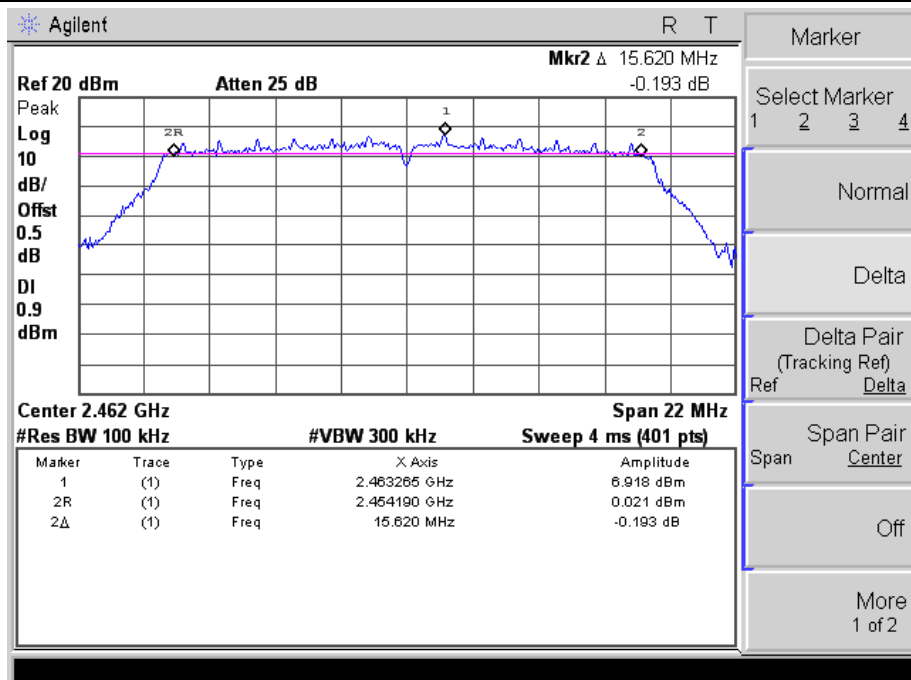
Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	15.84	>=500KHz	PASS
2437 MHz	15.40	>=500KHz	PASS
2462 MHz	15.62	>=500KHz	PASS



TX CH 06

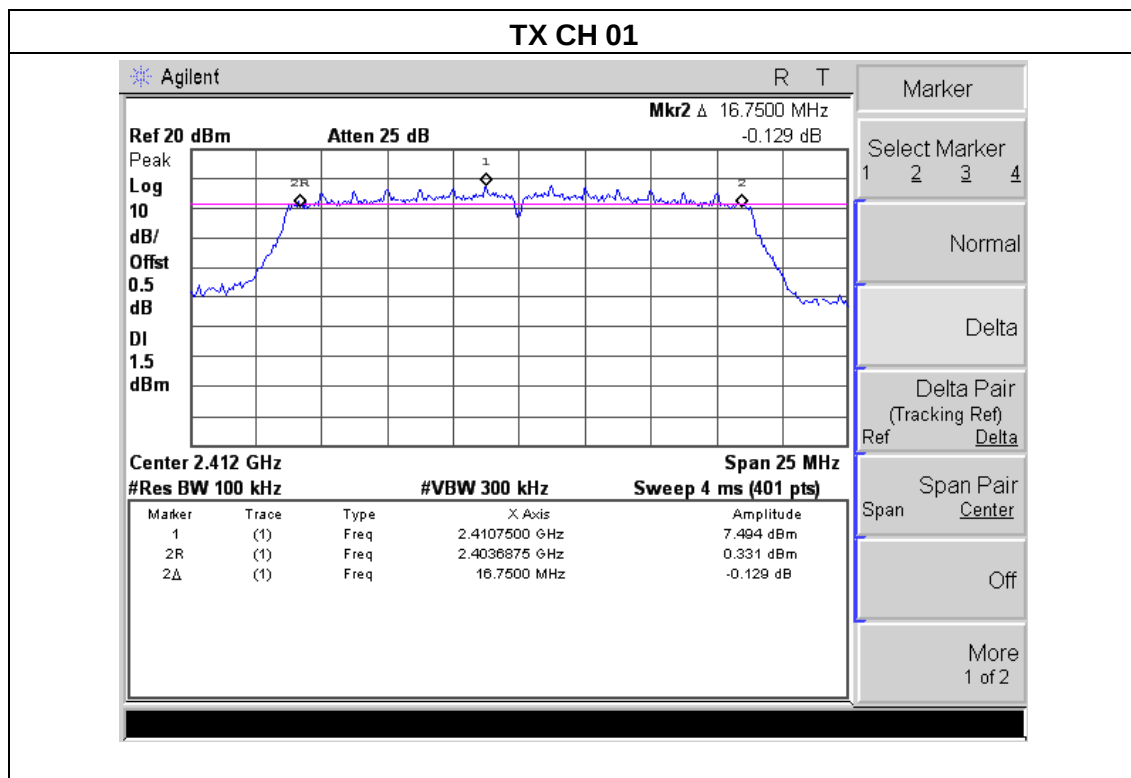


TX CH 11

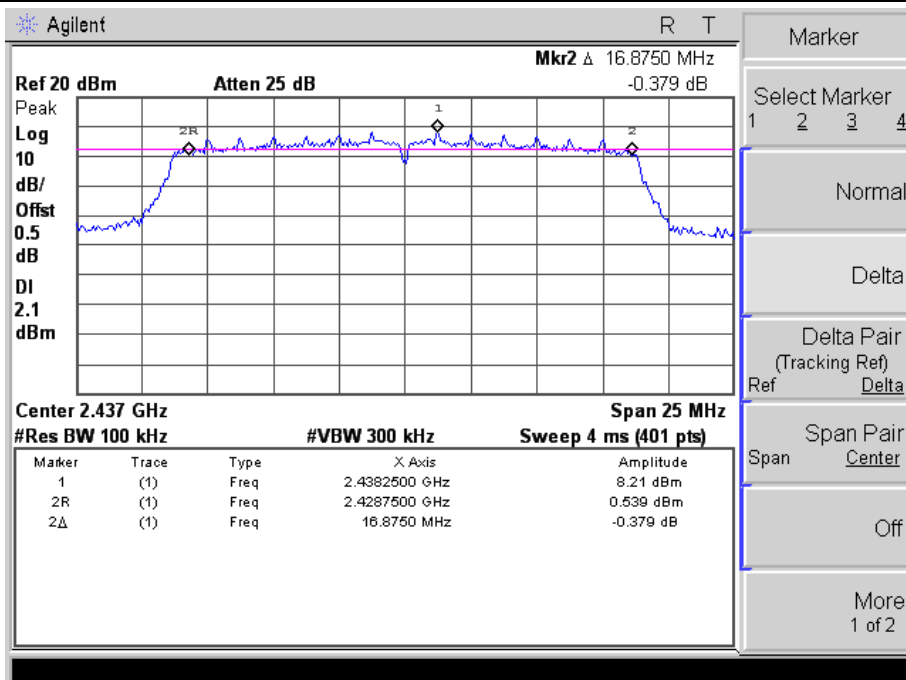


EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	TX n Mode(20M) /CH01, CH06, CH11		

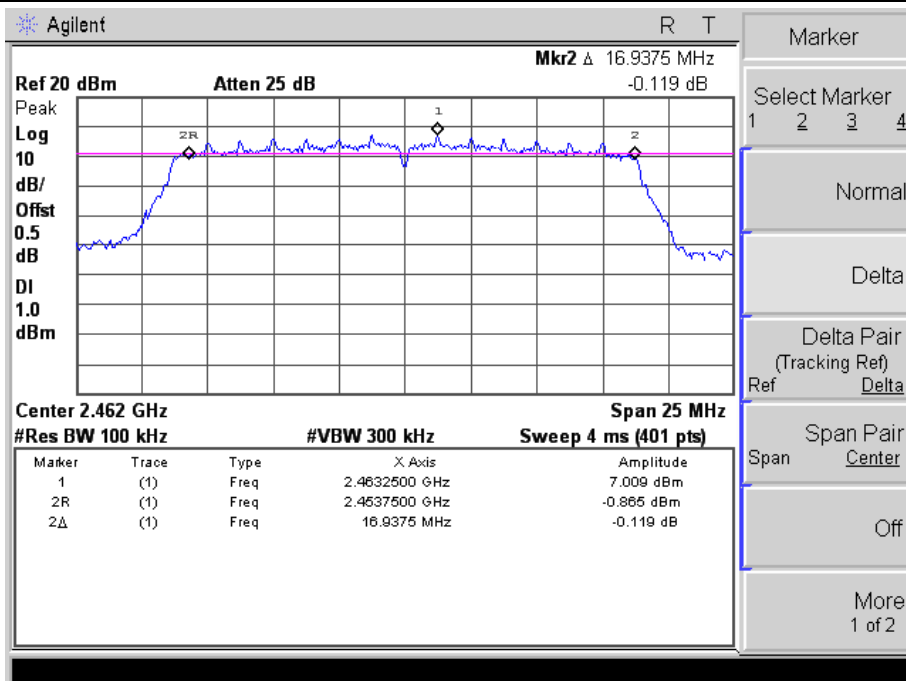
Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	16.75	>=500KHz	PASS
2437 MHz	16.87	>=500KHz	PASS
2462 MHz	16.93	>=500KHz	PASS



TX CH 06



TX CH 11



7. PEAK OUTPUT POWER TEST

7.1 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

7.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the Power meter
- b. TX B/G/N(20M) Mode Used Rates 1M/6M/54M

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



7.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

7.1.5 TEST RESULTS

EUT :	3G MOBILE PHONE	Model Name :	U-830-2
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 5V from Adapter with AC 120V/60Hz
Test Mode :	TX b/g/n(20M) Mode /CH01, CH06, CH11		

TX 802.11b Mode			
Test Channe	Frequency	Peak Conducted Output Power	LIMIT
	(MHz)	(dBm)	dBm
CH01	2412	14.21	30
CH06	2437	14.35	30
CH11	2462	14.18	30
TX 802.11g Mode			
CH01	2412	13.23	30
CH06	2437	13.32	30
CH11	2462	13.34	30
TX 802.11n20 Mode			
CH01	2412	11.11	30
CH06	2437	11.07	30
CH11	2462	11.06	30

8. ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

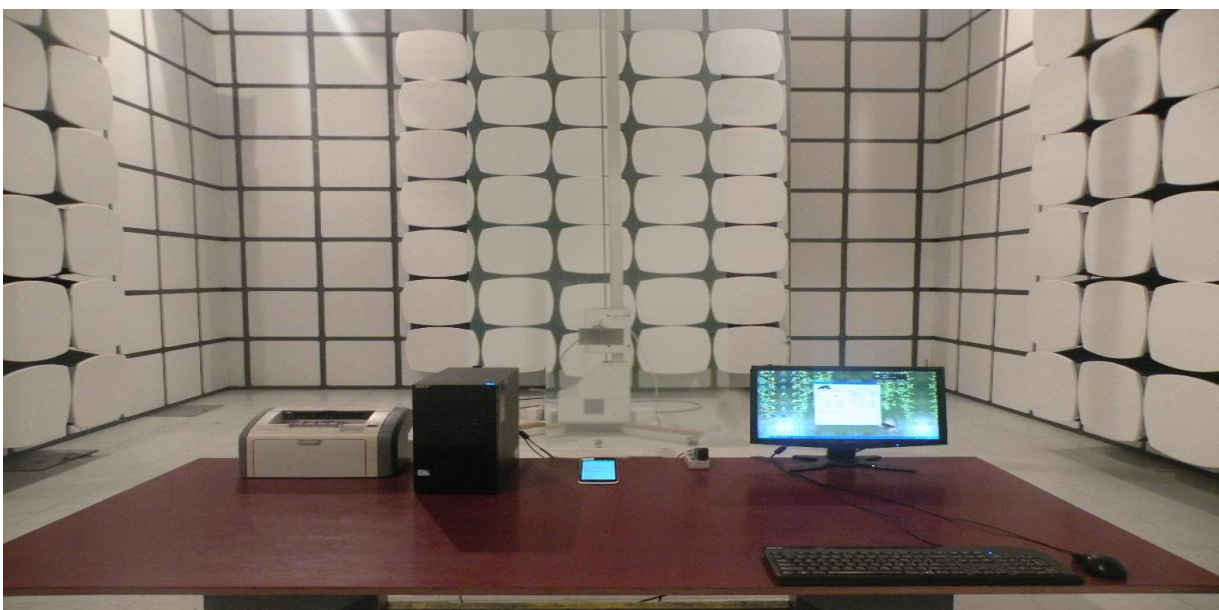
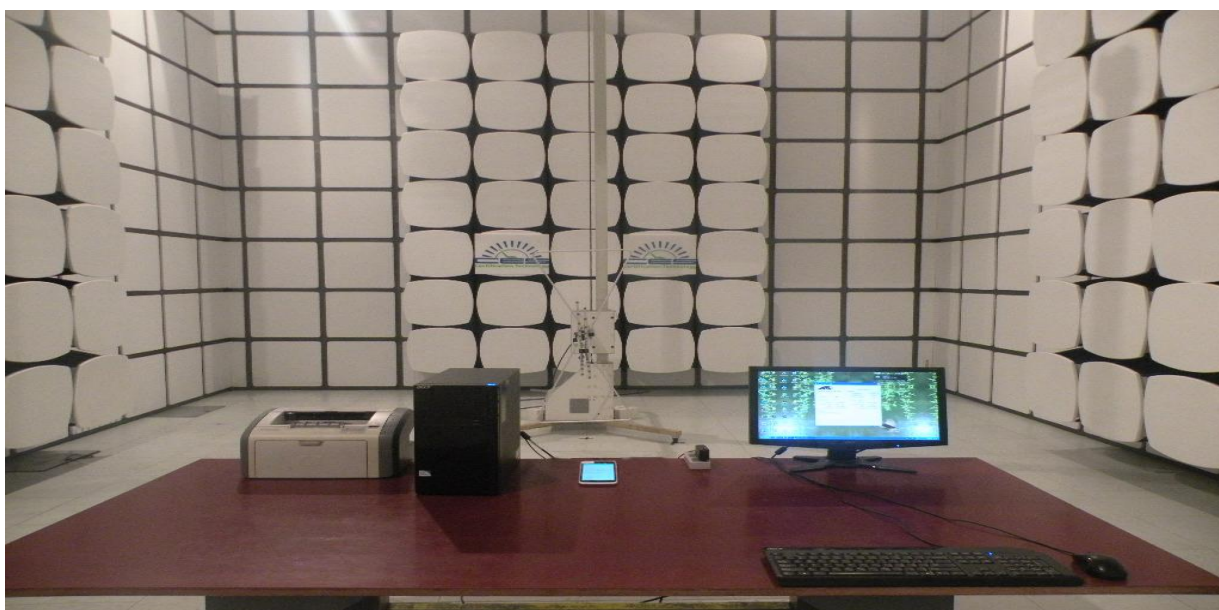
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

8.2 EUT ANTENNA

The EUT antenna is PIFA Antenna. It comply with the standard requirement.

TEST SETUP

Radiated Measurement Photos



Conducted Measurement Photos

