STSLAB-Radio Test Report

FCC RADIO TEST REPORT

FCC ID: 2AC343396993T702C

Of

Product Name:	**WCDMA Smart Phone**
Brand Name:	**Cellacom**
Model No.:	**T702c**
Series Model:	**T702x(x can be a~z any letter)**
Test Report Number:	**STS1409023F04**

Issued for

Cellacom incorporation

20955 pathfinder road, ste 200, diamond bar, ca 91765, USA

Issued by

Shenzhen STS Test Services Co., Ltd.

1/F, Building 2, Zhuoke Science Park, Chongqing Road, Fuyong, Baoan District, Shenzhen, China

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TEST RESULT CERTIFICATION

Applicant's name	:	Cellacom incorporation
Address	:	20955 pathfinder road, ste 200, diamond bar, ca 91765, USA
Manufacture's Name	:	Shenzhen Joinhold Communication Technology Ltd.
Address	:	Unit 3, Bldg. D2, TCL International E City, 1001 Zhongshanyuan Park Rd., Nanshan, Shenzhen, China

Product description

Product name	:	WCDMA Smart Phone
Model and/or type reference	:	Cellacom
Band name	:	T702c
Serial Model	:	T702x(x can be a~z any letter)
Ratings		DC 5V/1A
Standards	:	FCC Part15.247
Test procedure		ANSI C63.10-2009

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	:	18 Sep, 2014 ~24 Sep, 2014
Date of Issue	:	25 Sep, 2014
Test Result	:	**Pass**

Testing Engineer **:** (Tony Liu)

Technical Manager **:** (Vita Li)

Authorized Signatory **:** (Bovey Yang)

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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

Shenzhen STS Test Services Co., Ltd.
Add. : 1/F, Building 2, Zhuoke Science Park, Chongqing Road, Fuyong, Baoan District, Shenzhen, China.
FCC Registration No.: 842334

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**，where expended 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	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	WCDMA Smart Phone	
Trade Name	Cellacom	
Model Name	T702c	
Serial Model	T702x(x can be a~z any letter)	
Model Difference	Only difference in model name	
Product Description	The EUT is a WCDMA Smart 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(20MHz):115.56/104/86.67/78/52/6. Mbps
	Number Of Channel	802.11b/g/n20: 11CH
	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 0.2A Output:5.0V,550mA	
Battery	Rated Voltage: 3.7V Charge Limit: 4.2V capacity :1300mAh	
Hardware version number	--	
Software versioning number	--	
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	PIFA Antenna	NA	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	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n(20)CH1/ CH6/ CH11
Mode 4	Link Mode

For Conducted Emission	
Final Test Mode	Description
Mode 4	Link Mode

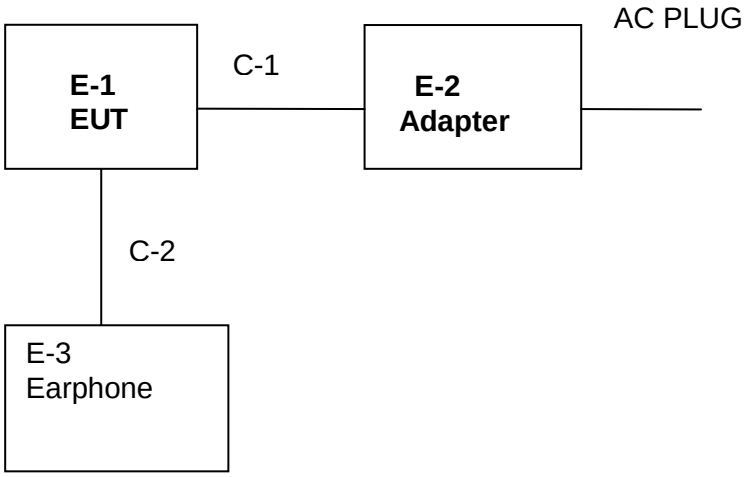
For Radiated Emission	
Final Test Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n CH1/ CH6/ CH11
Mode 4	Link Mode

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	WCDMA Smart Phone	Cellacom	T702c	N/A	EUT
E-2	Adapter	N/A	N/A	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.

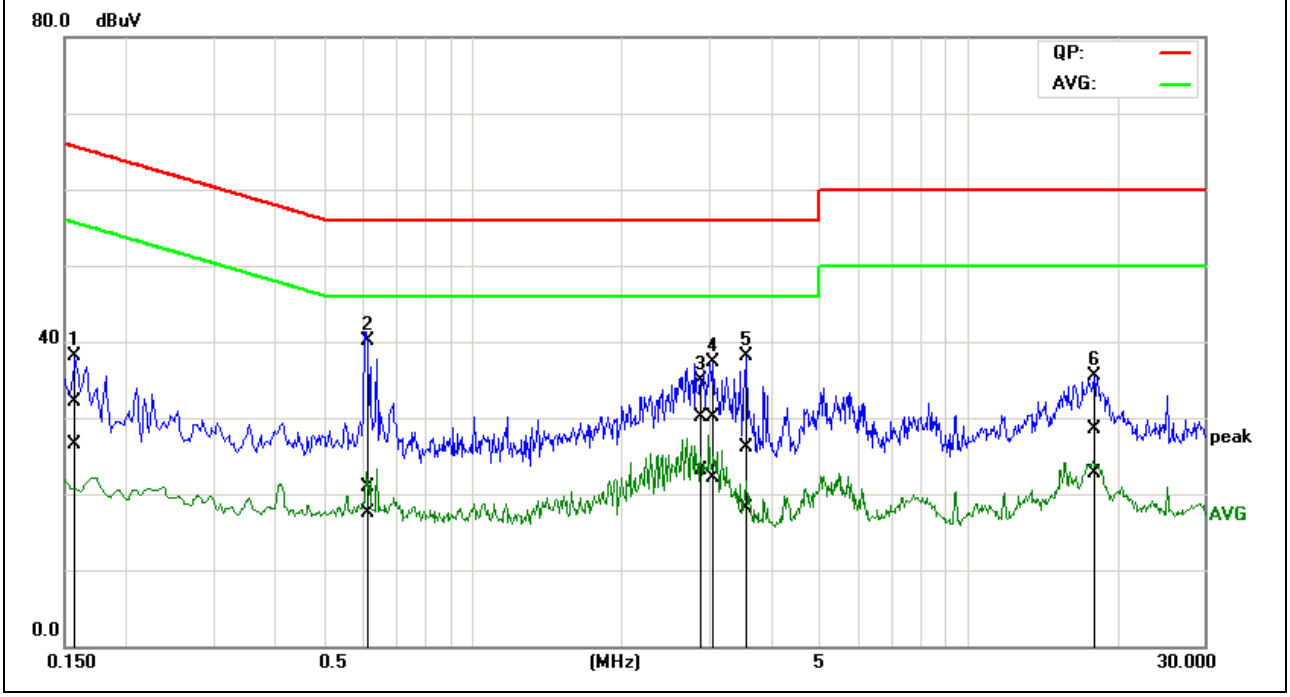
The following table is the setting of the receiver

3.1.2 TEST RESULTS

EUT：	WCDMA Smart Phone	Model Name. ：	T702c
Temperature：	23 ℃	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)	
0.1576	12.21	6.73	19.77	31.98	26.5	65.52	55.52	-33.54	-29.02	Pass
0.6187	1.13	-2.29	19.83	20.96	17.54	56	46	-35.04	-28.46	Pass
2.8702	10.17	3.15	20.04	30.21	23.19	56	46	-25.79	-22.81	Pass
3.0294	9.89	2.06	20.06	29.95	22.12	56	46	-26.05	-23.88	Pass
3.5499	6.02	-2.01	20.12	26.14	18.11	56	46	-29.86	-27.89	Pass
17.9398	7.49	1.78	21.01	28.5	22.79	60	50	-31.5	-27.21	Pass

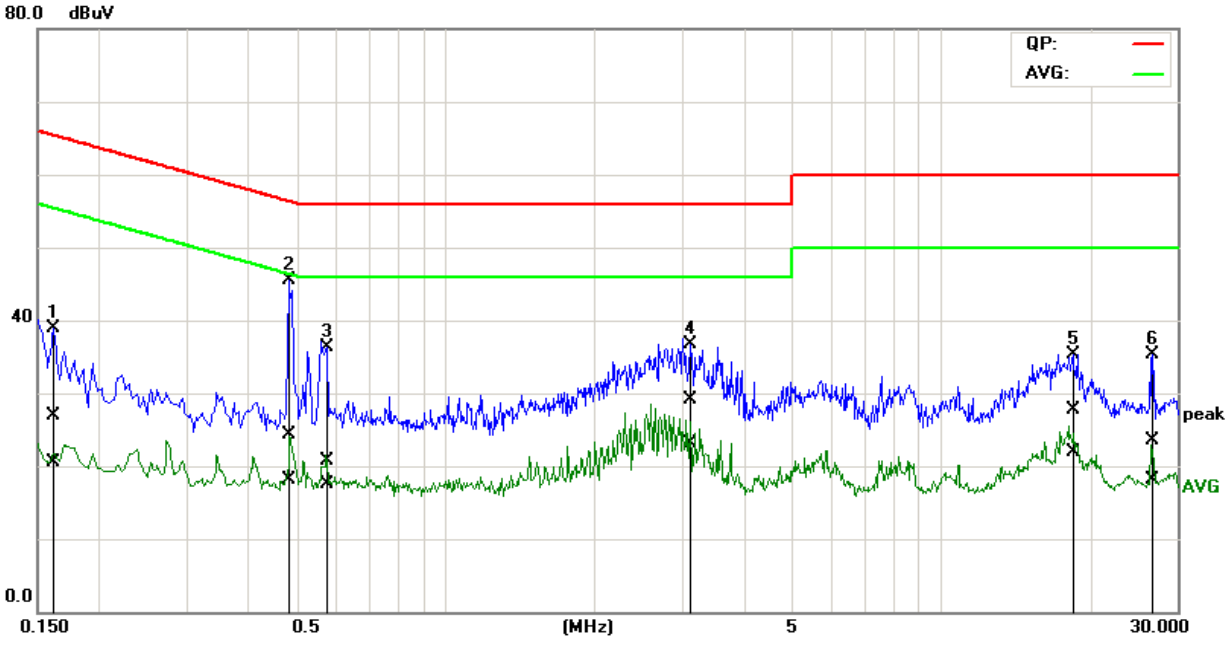
Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	WCDMA Smart Phone	Model Name. ：	T702c
Temperature：	23 ℃	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)	
0.1621	7.11	0.74	19.71	26.82	20.45	65.32	55.32	-38.5	-34.87	Pass
0.4803	4.46	-1.81	19.84	24.3	18.03	56.34	46.34	-32.04	-28.31	Pass
0.5696	0.79	-2.43	19.85	20.64	17.42	56	46	-35.36	-28.58	Pass
3.0738	8.99	3.17	20.09	29.08	23.26	56	46	-26.92	-22.74	Pass
18.4987	6.73	0.89	20.97	27.7	21.86	60	50	-32.3	-28.14	Pass
26.8165	2.15	-3.14	21.31	23.46	18.17	60	50	-36.54	-31.83	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

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:

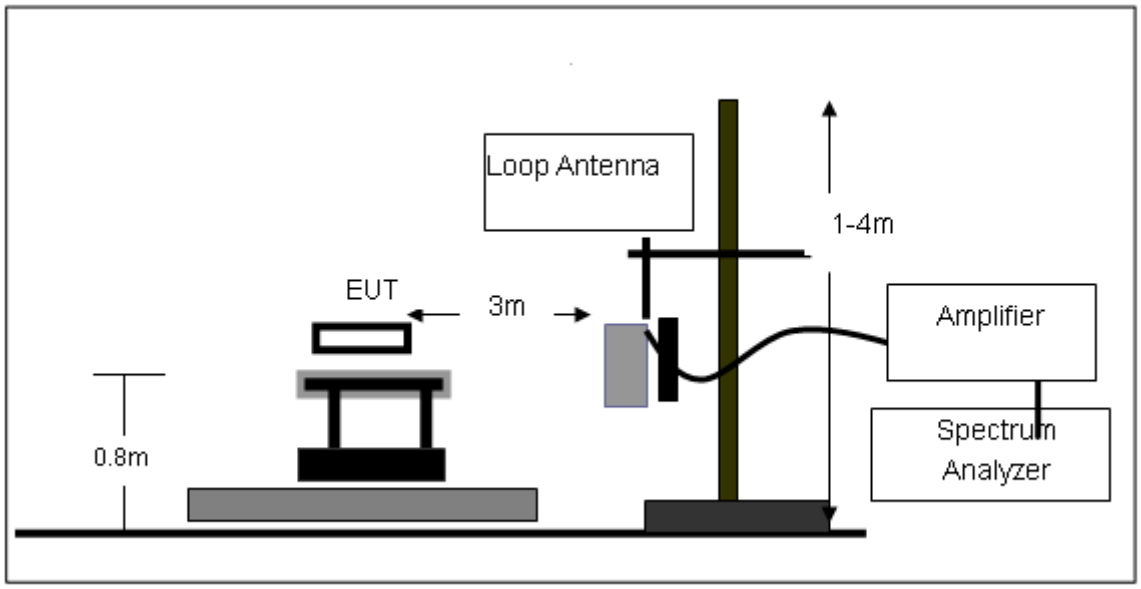
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

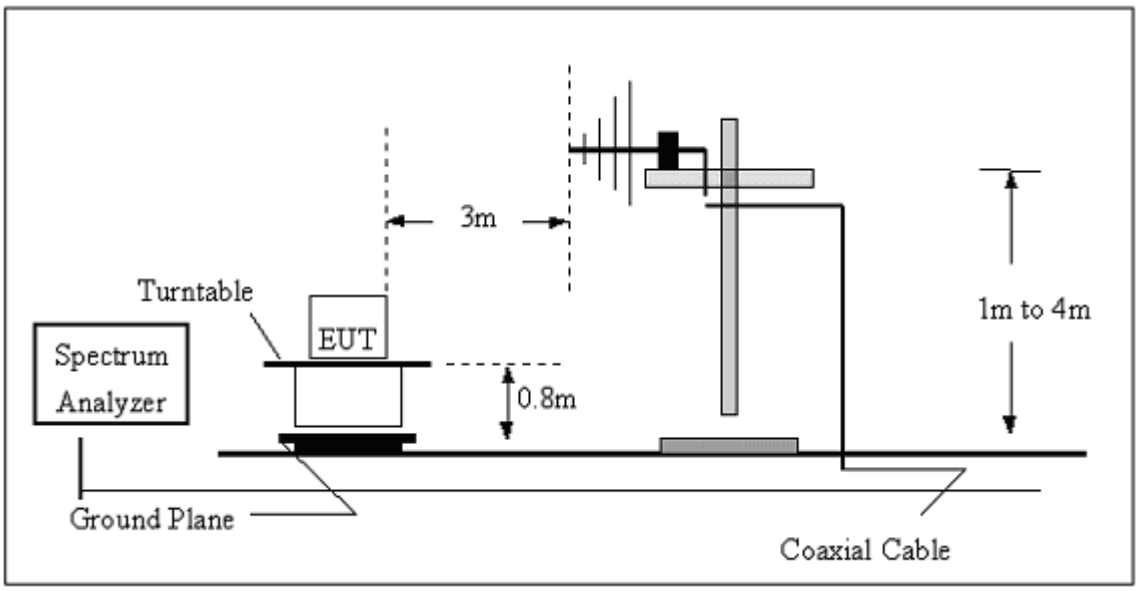
No deviation

3.2.4 TEST SETUP

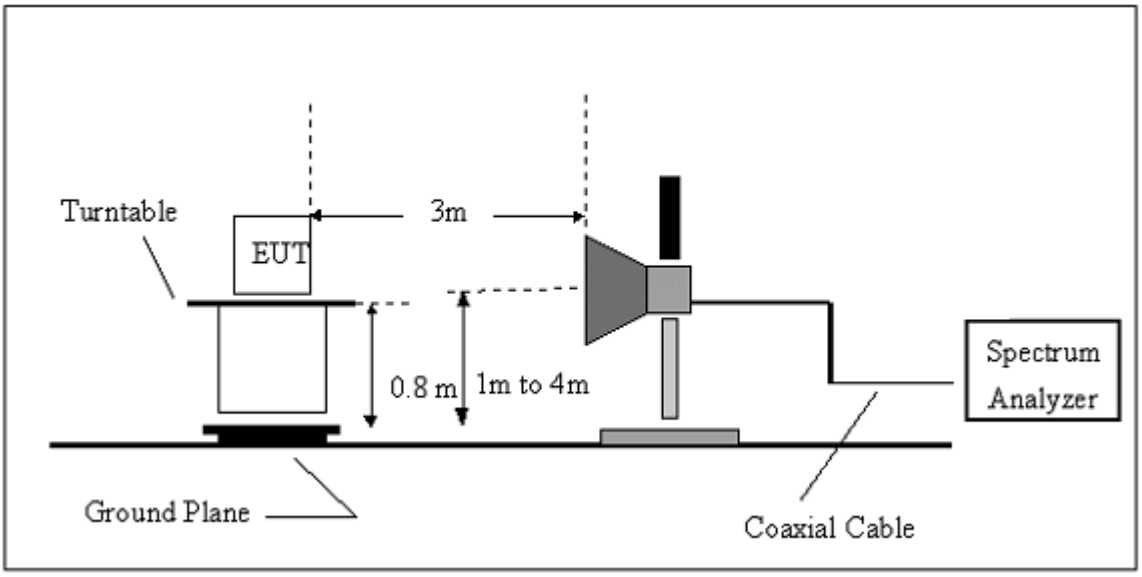
（A）Radiated Emission Test-Up Frequency Below 30MHz



（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：	WCDMA Smart Phone	Model Name. ：	T702c
Temperature：	20 ℃	Relative Humidtity：	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:

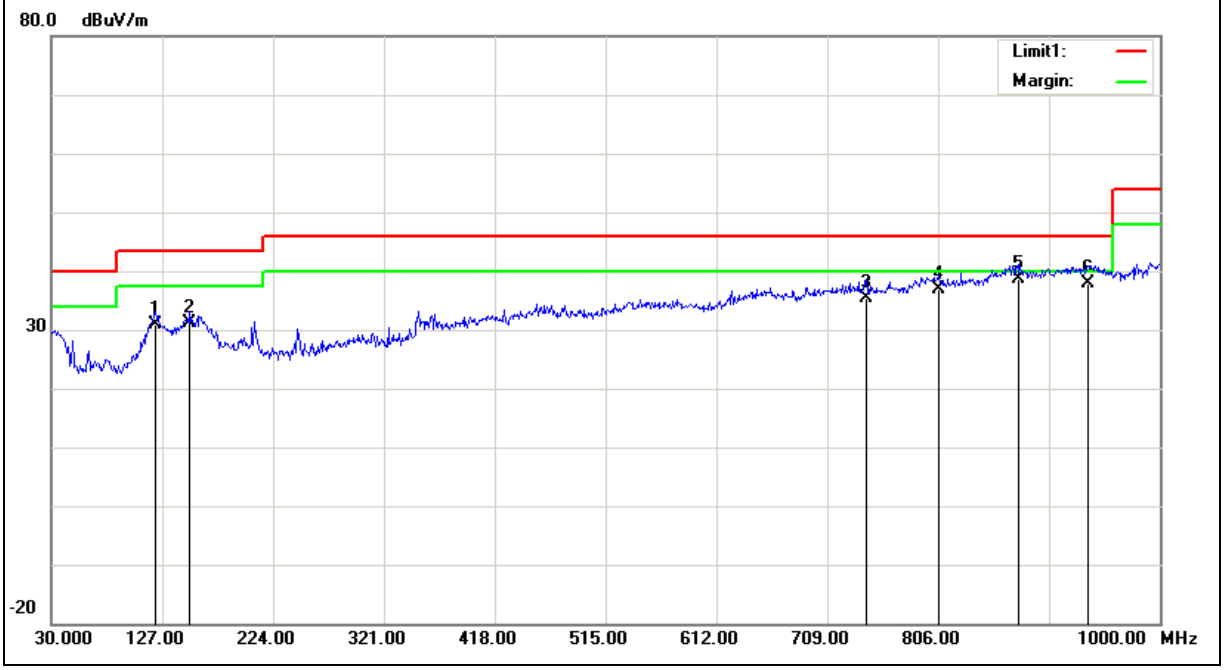
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
121.28	16.84	14.03	30.87	43.5	-12.63	400	110	QP
151.35	16.52	14.54	31.06	43.5	-12.44	300	24	QP
742.75	12.93	22.55	35.48	46	-10.52	200	154	QP
806.14	13.63	23.32	36.95	46	-9.05	300	360	QP
875.79	14.79	23.75	38.54	46	-7.46	200	48	QP
936.83	12.81	24.94	37.75	46	-8.25	100	15	QP

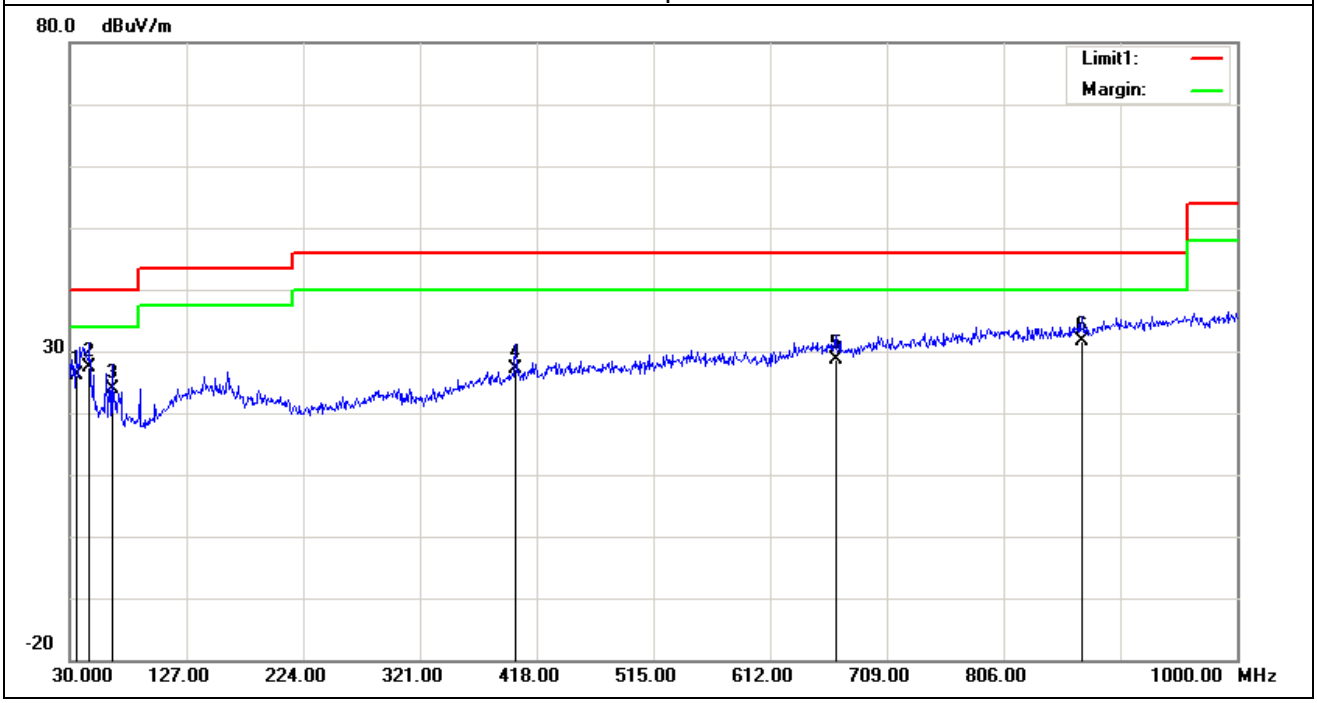
Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V from Adapter with AC 120V/60Hz
Test Mode ：	Link mode	Polarization：	Vertical

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
46.37	21.24	10.38	31.62	40	-8.38	100	254	QP
60.17	22.15	8.22	30.37	40	-9.63	200	14	QP
830.28	13.82	23.06	36.88	46	-9.12	300	360	QP
878.79	14.29	23.79	38.08	46	-7.92	200	98	QP
903.91	13.17	24.33	37.5	46	-8.5	300	10	QP
935.93	12.61	24.9	37.51	46	-8.49	400	65	QP

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



3.2.8 TEST RESULTS (ABOVE 1000 MHZ)

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4824.092	45.24	10.44	55.68	74	-18.32	peak
4824.127	42.43	10.44	52.87	54	-1.13	AVG
7236.103	44.57	12.39	56.96	74	-17.04	peak
7236.111	40.58	12.39	52.97	54	-1.03	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4874.067	46.94	10.4	57.34	74	-16.66	peak
4874.129	42.58	10.4	52.98	54	-1.02	AVG
7311.152	44.32	12.75	57.07	74	-16.93	peak
7311.083	40.89	12.75	53.64	54	-0.36	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4874.153	45.21	10.4	55.61	74	-18.39	peak
4874.083	42.97	10.4	53.37	54	-0.63	AVG
7311.061	42.37	12.75	55.12	74	-18.88	peak
7311.069	39.32	12.75	52.07	54	-1.93	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4924.099	46.03	10.39	56.42	74	-17.58	peak
4934.056	42.89	10.44	53.33	54	-0.67	AVG
7386.103	46.34	12.68	59.02	74	-14.98	peak
7386.114	40.29	12.68	52.97	54	-1.03	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						
No emission detected above 18GHz						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4924.120	46.91	10.39	57.3	74	-16.7	peak
4924.143	42.48	10.39	52.87	54	-1.13	AVG
7386.120	42.12	12.68	54.8	74	-19.2	peak
7386.052	38.37	12.68	51.05	54	-2.95	AVG

Remark:

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

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4924.114	45.33	10.39	55.72	74	-18.28	peak
4924.110	41.43	10.39	51.82	54	-2.18	AVG
7386.131	44.28	12.68	56.96	74	-17.04	peak
7386.091	40.16	12.68	52.84	54	-1.16	AVG

Remark:

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

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4824.118	45.27	10.44	55.71	74	-18.29	peak
4824.115	41.89	10.44	52.33	54	-1.67	AVG
7236.183	44.54	12.39	56.93	74	-17.07	peak
7236.153	39.63	12.39	52.02	54	-1.98	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4824.099	44.48	10.44	54.92	74	-19.08	peak
4824.062	41.87	10.44	52.31	54	-1.69	AVG
7236.128	45.81	12.39	58.2	74	-15.8	peak
7236.123	40.54	12.39	52.93	54	-1.07	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4874.103	45.34	10.4	55.74	74	-18.26	peak
4874.099	41.72	10.4	52.12	54	-1.88	AVG
7311.078	43.75	12.75	56.5	74	-17.5	peak
7311.127	40.21	12.75	52.96	54	-1.04	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4874.144	44.32	10.4	54.72	74	-19.28	peak
4874.134	41.67	10.4	52.07	54	-1.93	AVG
7311.097	43.19	12.75	55.94	74	-18.06	peak
7311.124	39.43	12.75	52.18	54	-1.82	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4924.111	43.43	10.39	53.82	74	-20.18	peak
4924.107	38.69	10.39	49.08	54	-4.92	AVG
7386.059	41.21	12.68	53.89	74	-20.11	peak
7386.140	38.39	12.68	51.07	54	-2.93	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4924.102	44.21	10.39	54.6	74	-19.4	peak
4924.121	41.61	10.39	52	54	-2	AVG
7386.123	43.24	12.68	55.92	74	-18.08	peak
7386.030	39.93	12.68	52.61	54	-1.39	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4824.124	45.21	10.44	55.65	74	-18.35	peak
4824.061	41.34	10.44	51.78	54	-2.22	AVG
7236.082	43.69	12.39	56.08	74	-17.92	peak
7236.107	39.47	12.39	51.86	54	-2.14	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4824.046361	44.23	10.44	54.67	74	-19.33	peak
4824.068159	41.21	10.44	51.65	54	-2.35	AVG
7236.058847	43.34	12.39	55.73	74	-18.27	peak
7236.061857	39.82	12.39	52.21	54	-1.79	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4874.130	42.32	10.4	52.72	74	-21.28	peak
4874.105	39.62	10.4	50.02	54	-3.98	AVG
7311.112	42.34	12.75	55.09	74	-18.91	peak
7311.071	38.43	12.75	51.18	54	-2.82	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4874.152	45.23	10.4	55.63	74	-18.37	peak
4874.131	42.29	10.4	52.69	54	-1.31	AVG
7311.119	42.73	12.75	55.48	74	-18.52	peak
7311.116	39.97	12.75	52.72	54	-1.28	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4924.108553	43.83	10.39	54.22	74	-19.78	peak
4924.040552	39.15	10.39	49.54	54	-4.46	AVG
7386.13502	42.67	12.68	55.35	74	-18.65	peak
7386.130162	39.89	12.68	52.57	54	-1.43	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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
4924.090437	44.56	10.39	54.95	74	-19.05	peak
4924.104923	42.43	10.39	52.82	54	-1.18	AVG
7386.068815	41.68	12.68	54.36	74	-19.64	peak
7386.13213	38.93	12.68	51.61	54	-2.39	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

3.2.9 TEST RESULTS (BAND EDGE)

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2399.9	68.21	-13	55.21	74	-18.79	peak
2399.9	64.79	-13	51.79	54	-5.54	AVG
2400	69.32	-12.99	56.33	74	-4.41	peak
2400	65.24	-12.99	52.25	54	-5.74	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2399.9	68.43	-13	55.43	74	-18.57	peak
2399.9	66.25	-13	53.25	54	-0.75	AVG
2400	68.45	-12.99	55.46	74	-18.54	peak
2400	65.53	-12.99	52.54	54	-1.46	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	67.54	-12.78	54.76	74	-19.24	peak
2483.5	64.32	-12.78	51.54	54	-2.46	AVG
2483.6	67.01	-12.77	54.24	74	-19.76	peak
2483.6	64.94	-12.78	52.16	54	-1.84	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	68.54	-12.78	55.76	74	-18.24	peak
2483.5	65.37	-12.78	52.59	54	-1.41	AVG
2483.6	67.54	-12.77	54.77	74	-19.23	peak
2483.6	64.45	-12.77	51.68	54	-2.32	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2399.9	68.21	-13	55.21	74	-18.79	peak
2399.9	65.71	-13	52.71	54	-1.29	AVG
2400	67.32	-12.99	54.33	74	-19.67	peak
2400	64.73	-12.99	51.74	54	-2.26	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FROM ADAPTER WITH AC 120V/60HZ
Test Mode ：	CH1(802.11gMode)	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2399.9	67.23	-13	54.23	74	-19.77	peak
2399.9	64.21	-13	51.21	54	-2.79	AVG
2400	67.25	-12.99	54.26	74	-19.74	peak
2400	63.24	-12.99	50.25	54	-3.75	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	67.35	-12.78	54.57	74	-19.43	peak
2483.5	63.56	-12.78	50.78	54	-3.22	AVG
2483.6	66.64	-12.77	53.87	74	-20.13	peak
2483.6	63.64	-12.77	50.87	54	-3.13	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	69.54	-12.78	56.76	74	-17.24	peak
2483.5	64.96	-12.78	52.18	54	-1.82	AVG
2483.6	65.65	-12.77	52.88	74	-21.12	peak
2483.6	62.34	-12.77	49.57	54	-4.43	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2399.9	66.46	-13	53.46	74	-20.54	peak
2399.9	63.26	-13	50.26	54	-3.74	AVG
2400	68.27	-12.99	55.28	74	-18.72	peak
2400	64.51	-12.99	51.52	54	-2.48	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2399.9	67.32	-13	54.32	74	-19.68	peak
2399.9	64.35	-13	51.35	54	-2.65	AVG
2400	68.35	-12.99	55.36	74	-18.64	peak
2400	64.81	-12.99	51.82	54	-2.18	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	66.43	-12.78	53.65	74	-20.35	peak
2483.5	64.02	-12.78	51.24	54	-2.76	AVG
2483.6	67.18	-12.77	54.41	74	-19.59	peak
2483.6	63.35	-12.77	50.58	54	-3.42	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	20 ℃	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	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	64.47	-12.78	60.45	74	-13.55	peak
2483.5	62.54	-12.78	46.84	54	-7.16	AVG
2483.6	65.32	-12.78	60.45	74	-13.55	peak
2483.6	62.54	-12.78	46.84	54	-7.16	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

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

.

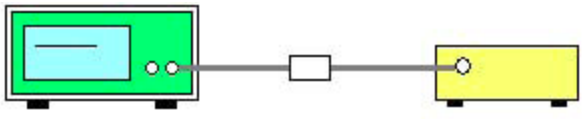
For Band edge

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 50Ohm; 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.

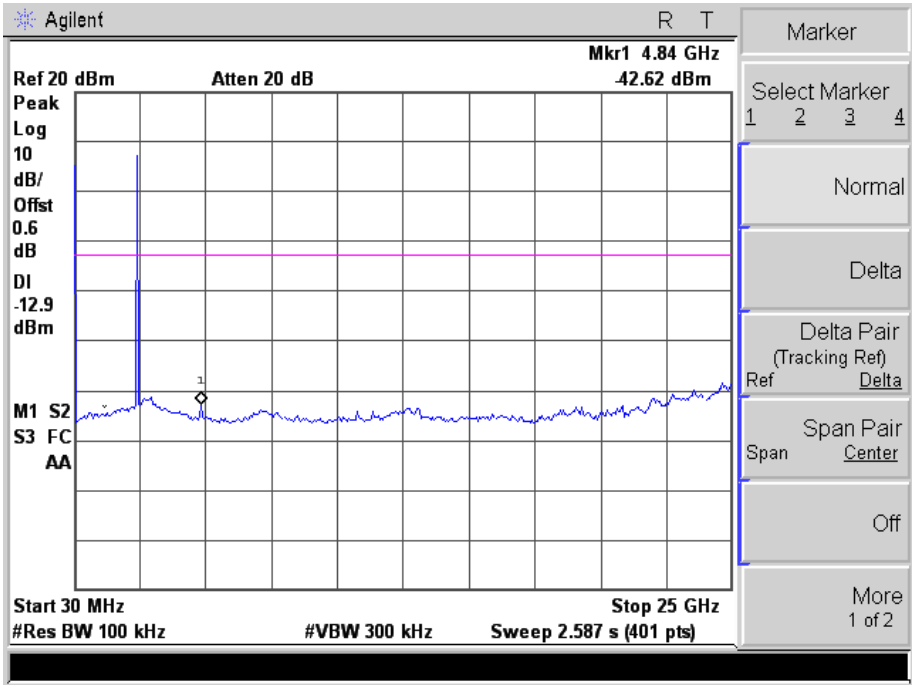
4.1.4 EUT OPERATION CONDITIONS

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.

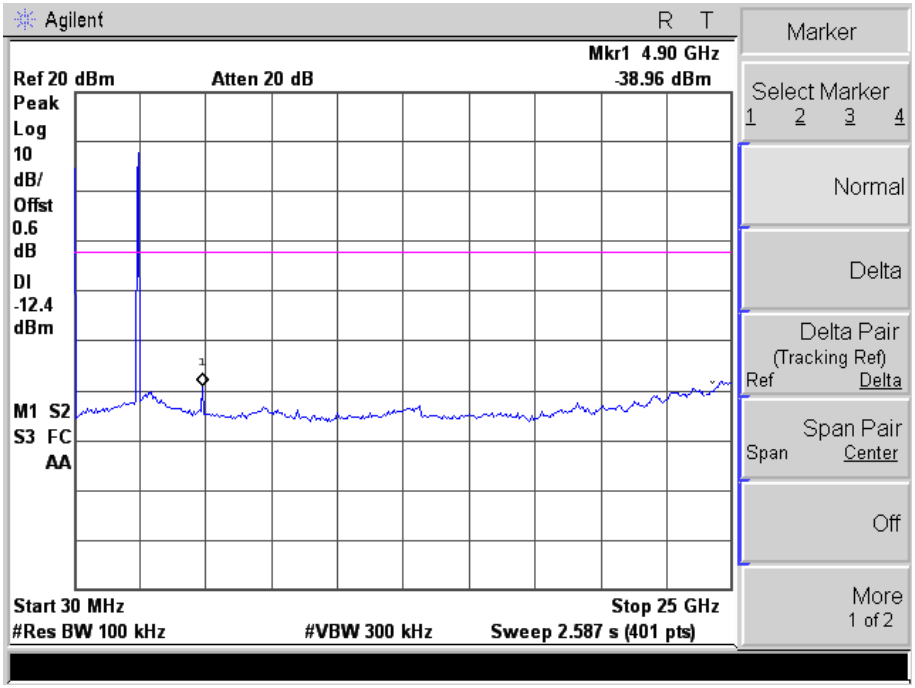
4.1.5 TEST RESULTS

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V from Adapter with AC 120V/60Hz
Test Mode ：	TX b Mode /CH01, CH06, CH11		

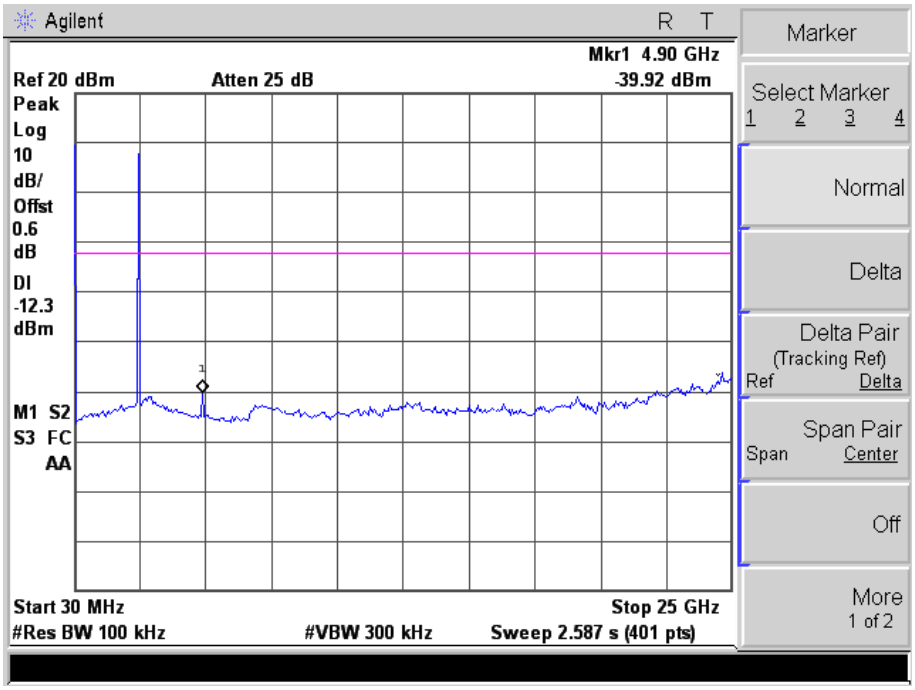
CH 01



CH 06

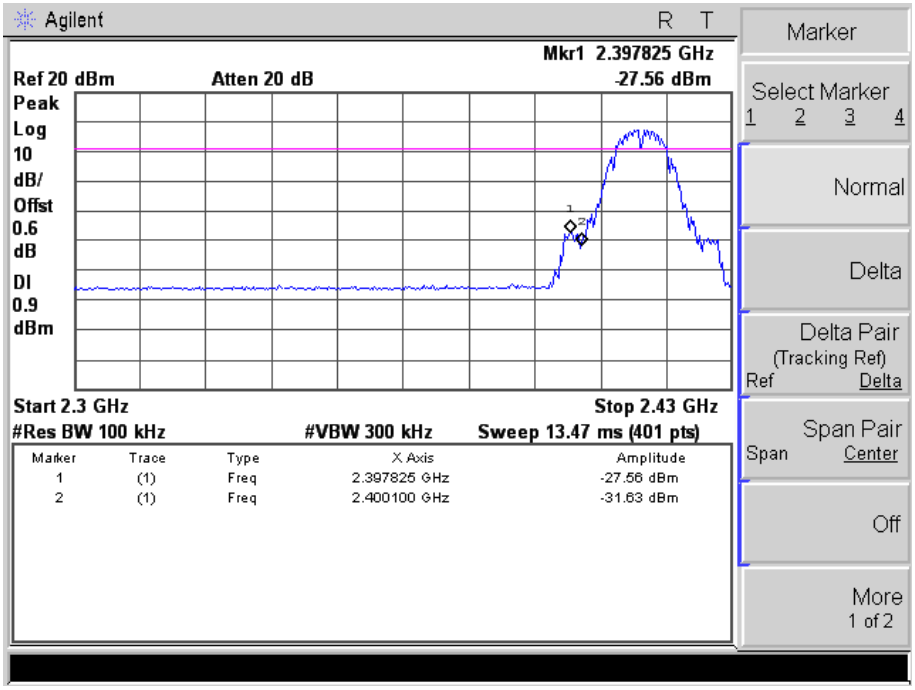


CH 11

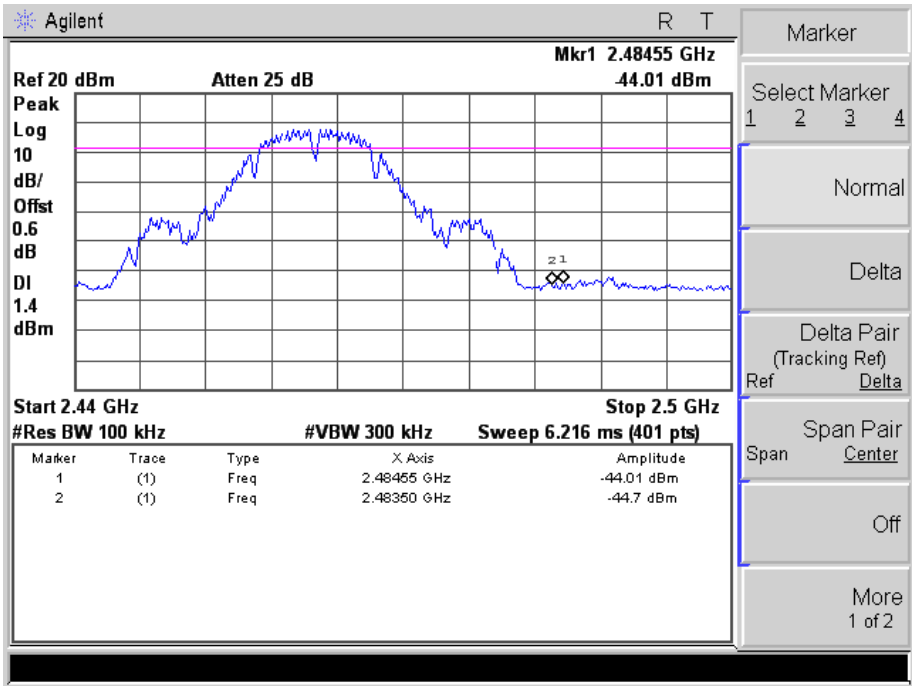


Band edge

CH 01

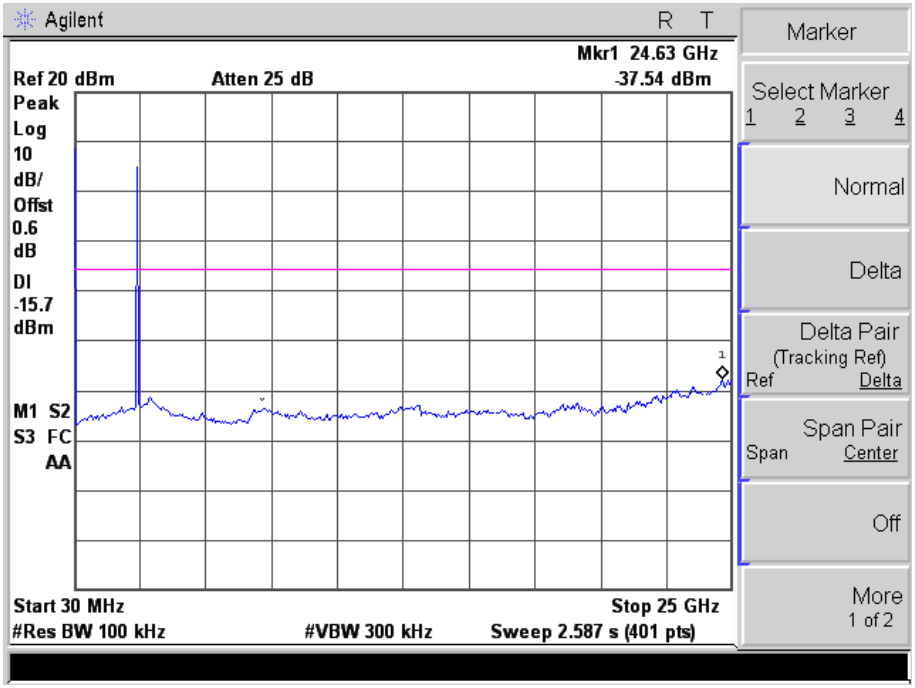


CH 11

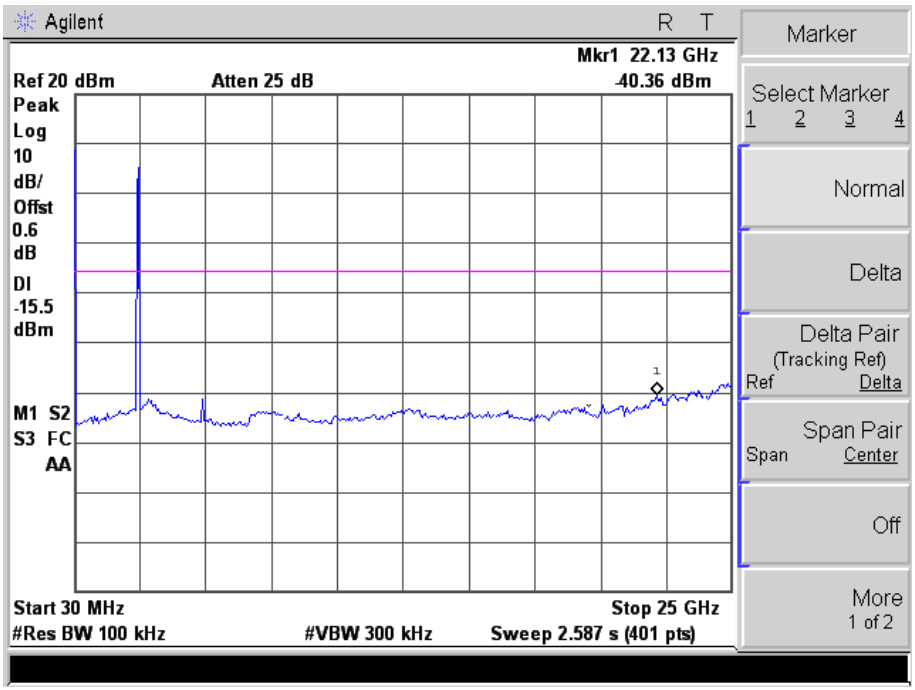

Agilent
R T
Mkr1 2.48455 GHz
Ref 20 dBm
Atten 25 dB
-44.01 dBm
Peak
Log
10
dB/
Offst
0.6
dB
Dl
1.4
dBm
Start 2.44 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 6.216 ms (401 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.48455 GHz -44.01 dBm
2 (1) Freq 2.48350 GHz -44.7 dBm
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref Delta
Span Pair
Span Center
Off
More
1 of 2

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V from Adapter with AC 120V/60Hz
Test Mode ：	TX g Mode /CH01, CH06, CH11		

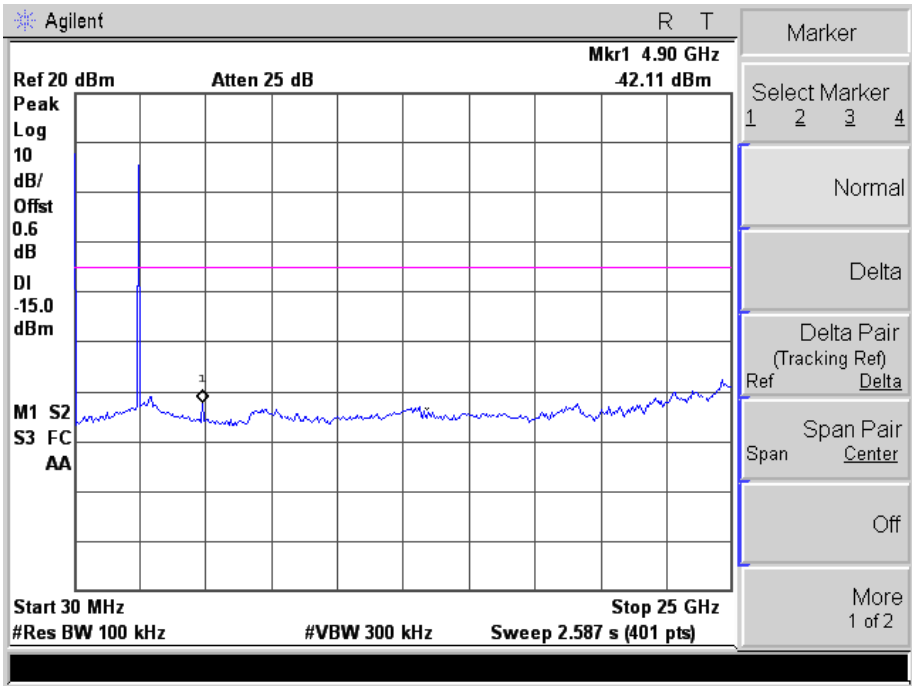
CH 01



CH 06

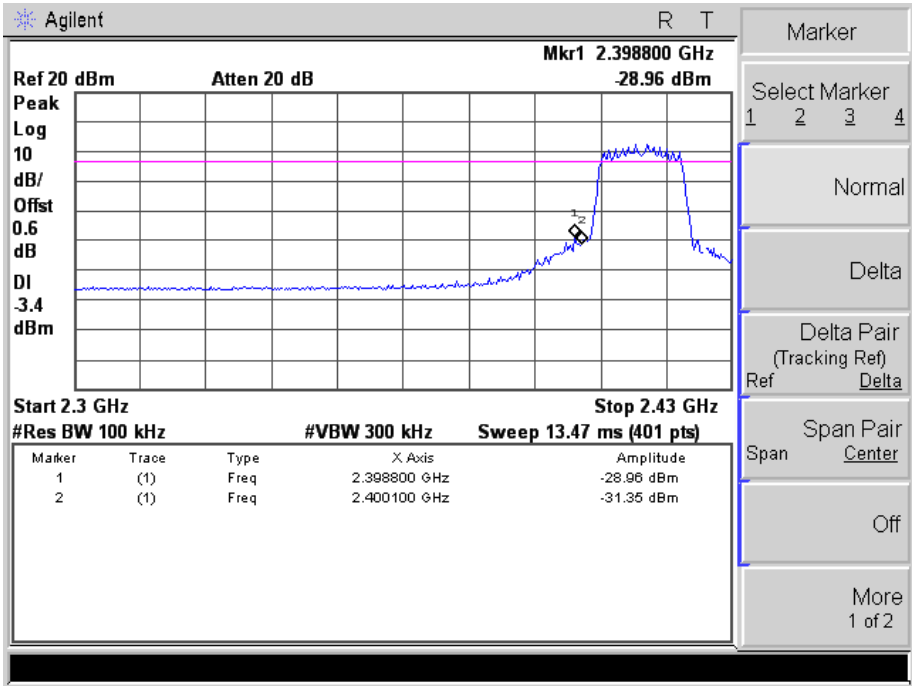


CH 11

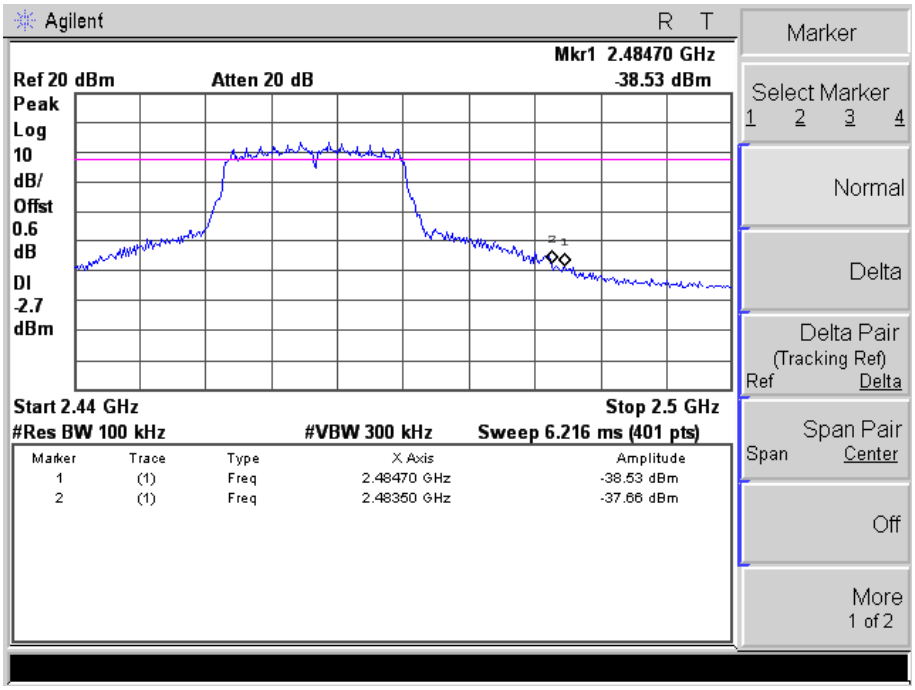


Band edge

CH 01

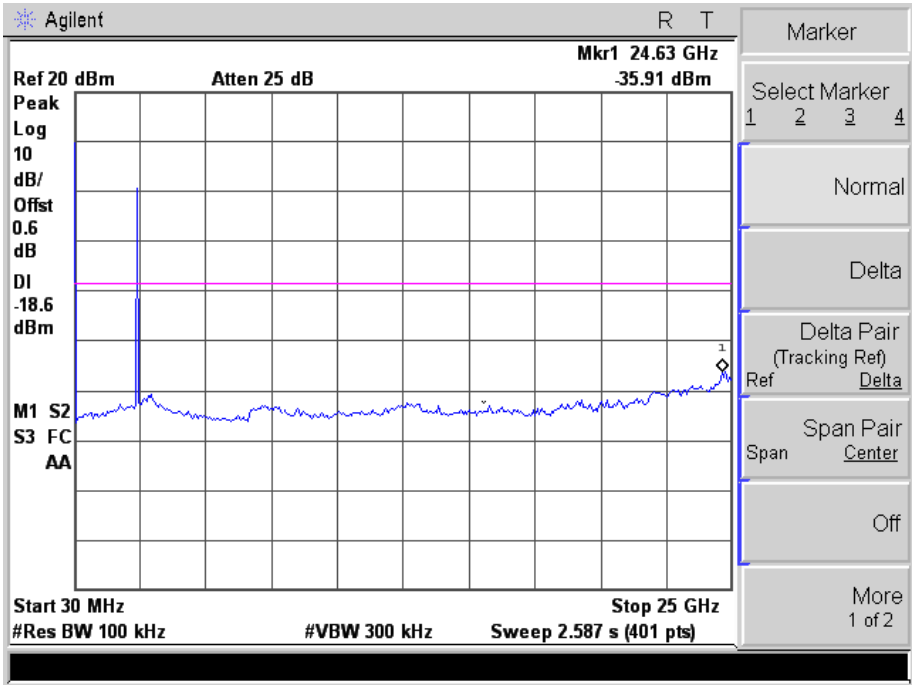


CH11

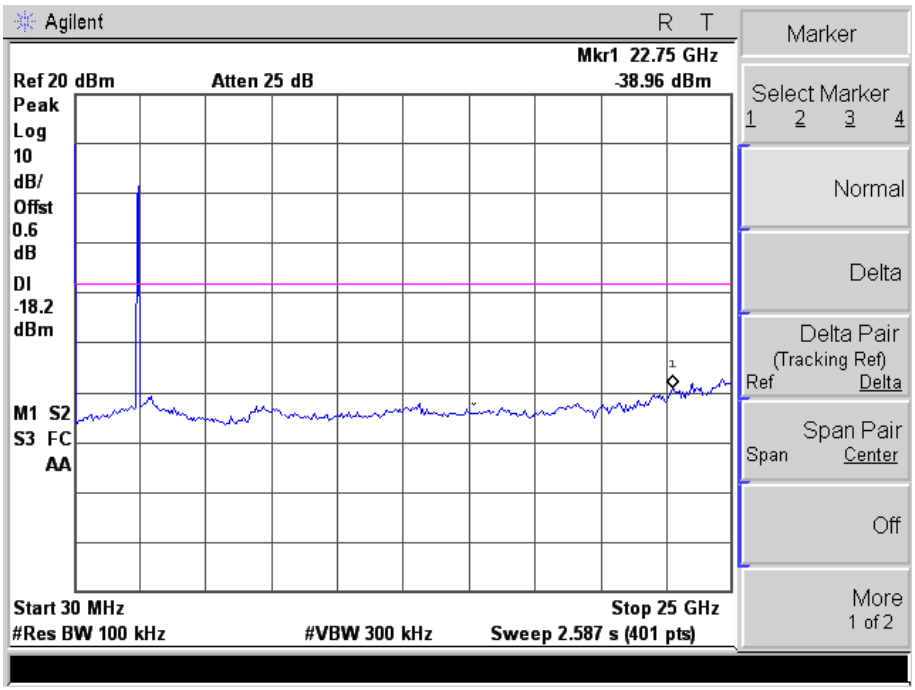

Agilent
R T
Mkr1 2.48470 GHz
Ref 20 dBm
Atten 20 dB
-38.53 dBm
Peak
Log
10
dB/
Offst
0.6
dB
Dl
-2.7
dBm
Start 2.44 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 6.216 ms (401 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.48470 GHz -38.53 dBm
2 (1) Freq 2.48350 GHz -37.66 dBm
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref Delta
Span Pair
Span Center
Off
More
1 of 2

EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	25 ℃	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		

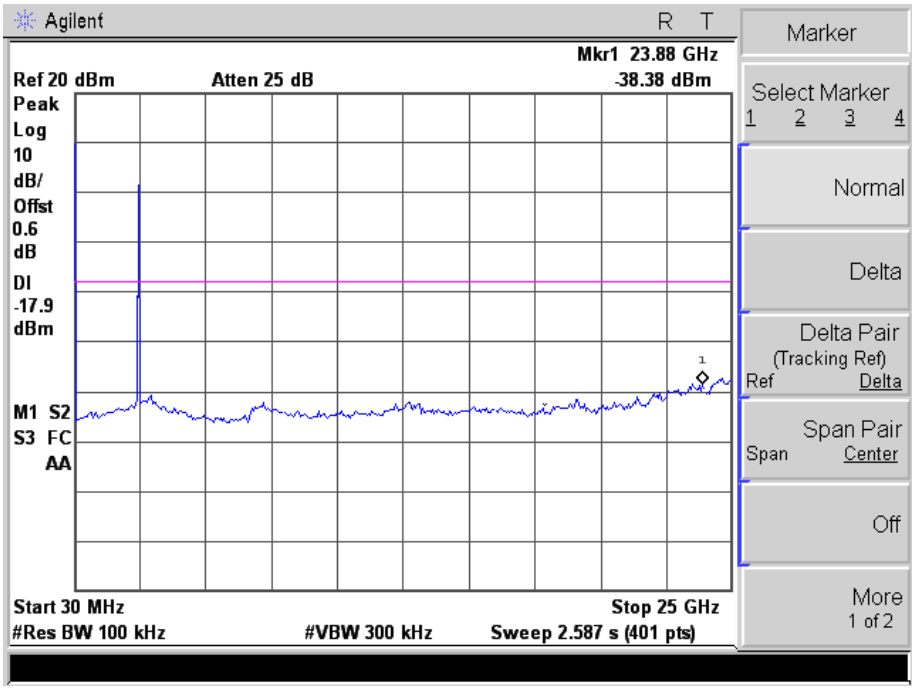
CH 01



CH 06

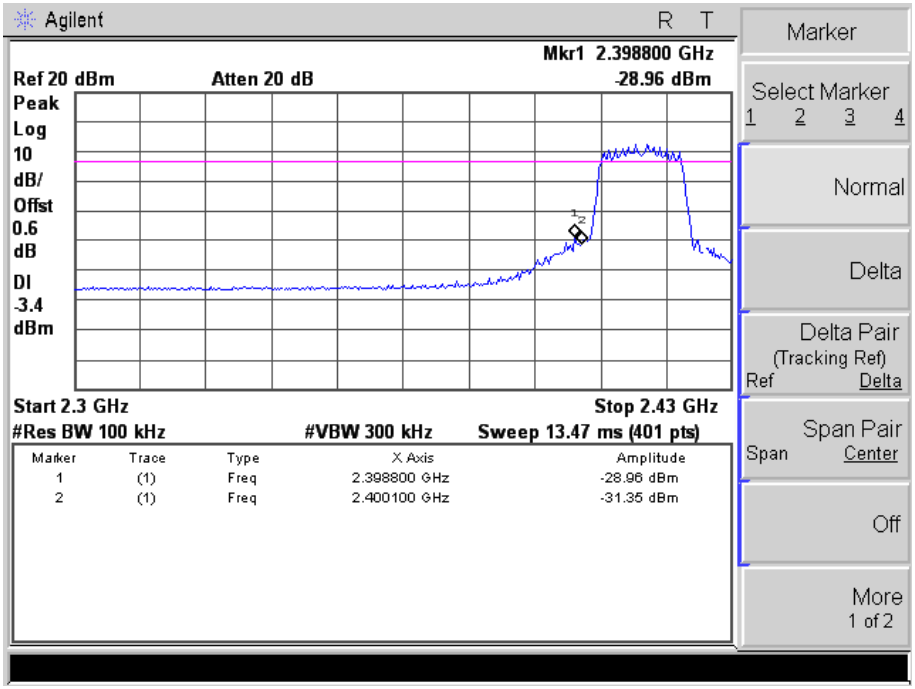


CH 11

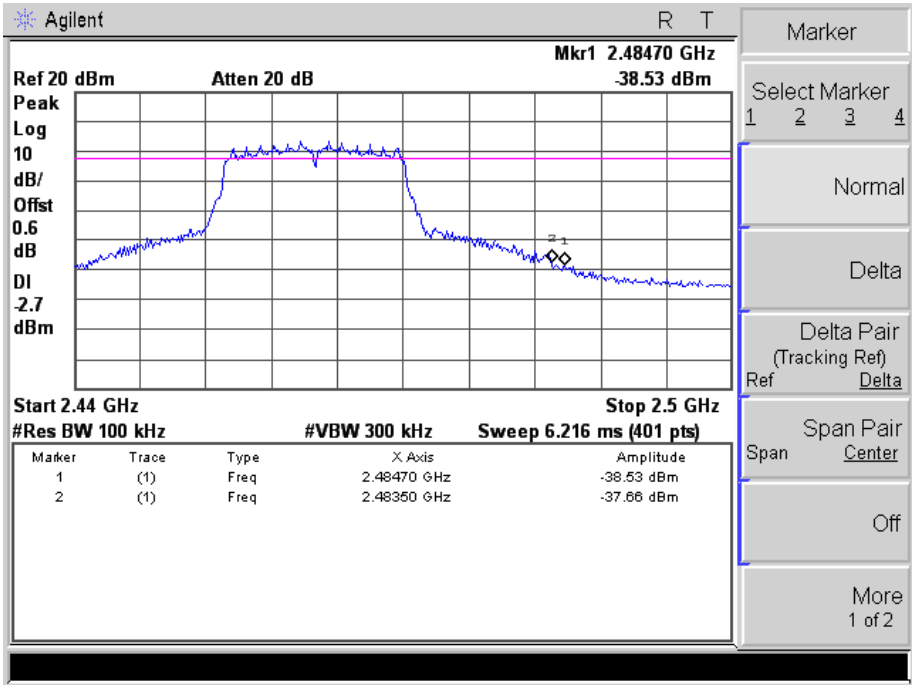


Band edge

CH 01



CH 11


Agilent
R T
Mkr1 2.48470 GHz
Ref 20 dBm
Atten 20 dB
-38.53 dBm
Peak
Log
10
dB/
Offst
0.6
dB
Dl
-2.7
dBm
Start 2.44 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 6.216 ms (401 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.48470 GHz -38.53 dBm
2 (1) Freq 2.48350 GHz -37.66 dBm
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref Delta
Span Pair
Span Center
Off
More
1 of 2

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

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 ≥ 3 x 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

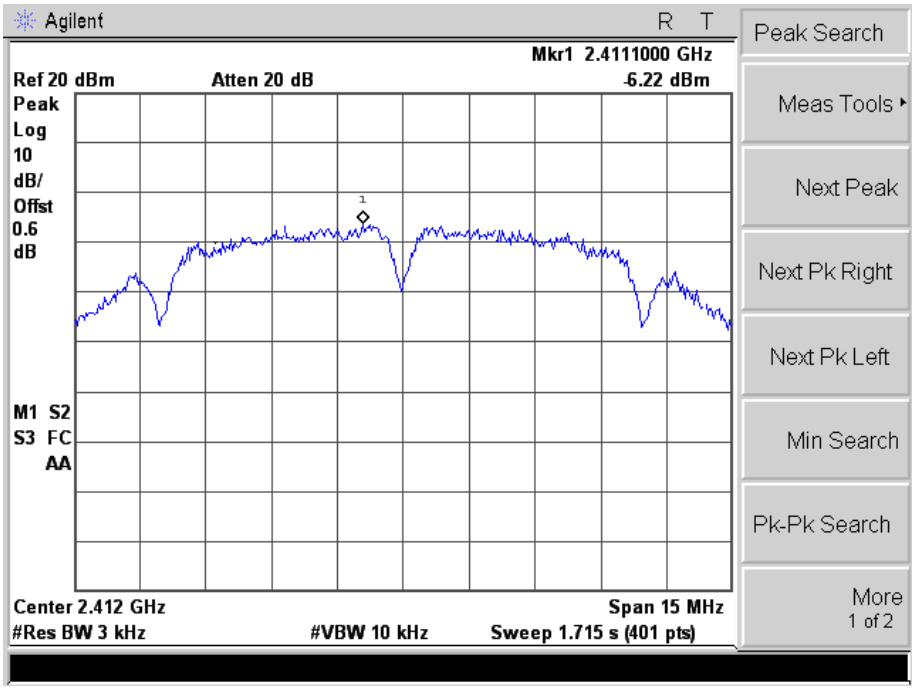
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 TEST RESULTS

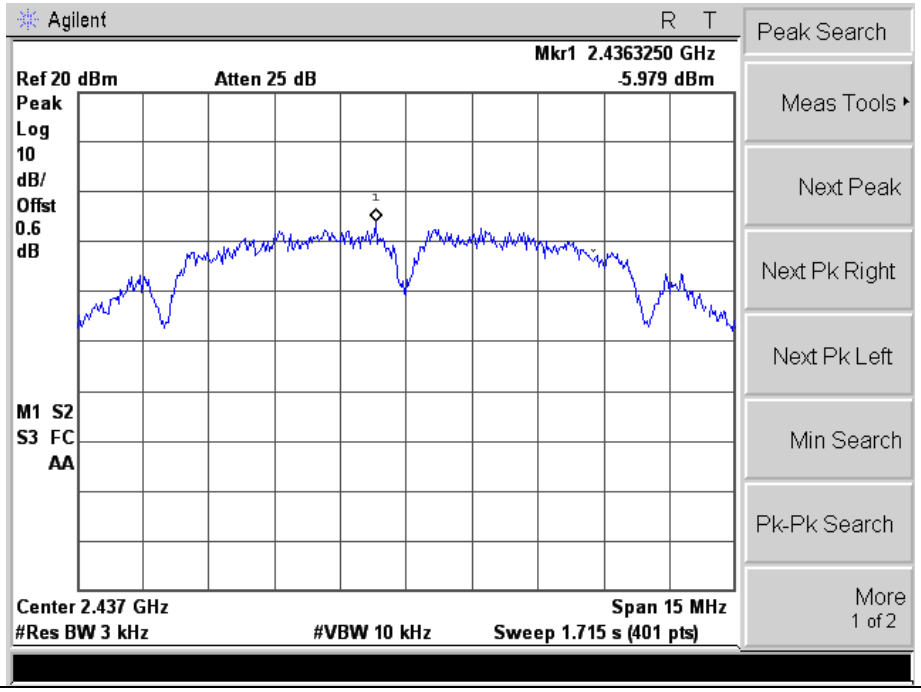
EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V from Adapter with AC 120V/60Hz
Test Mode ：	TX b Mode /CH01, CH06, CH11		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-6.22	8	**PASS**
2437 MHz	-5.979	8	**PASS**
2462 MHz	-5.813	8	**PASS**

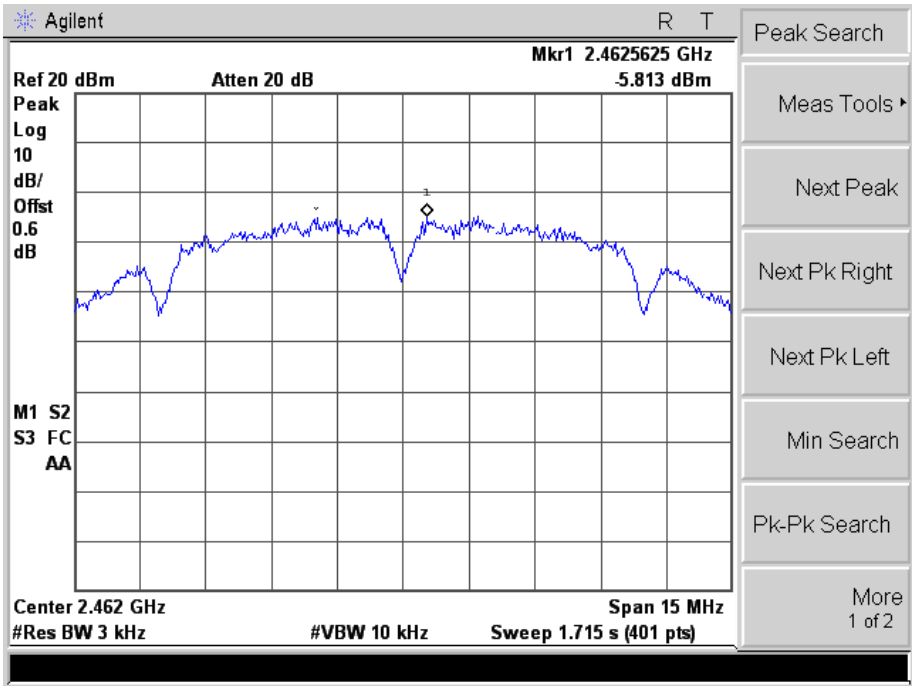
TX CH01



TX CH06



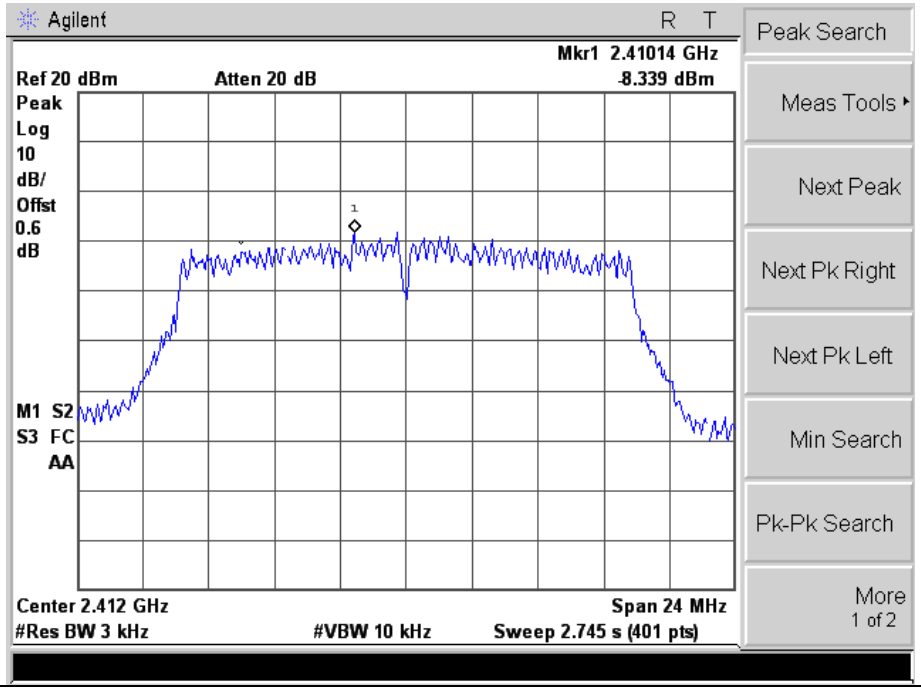
TX CH11



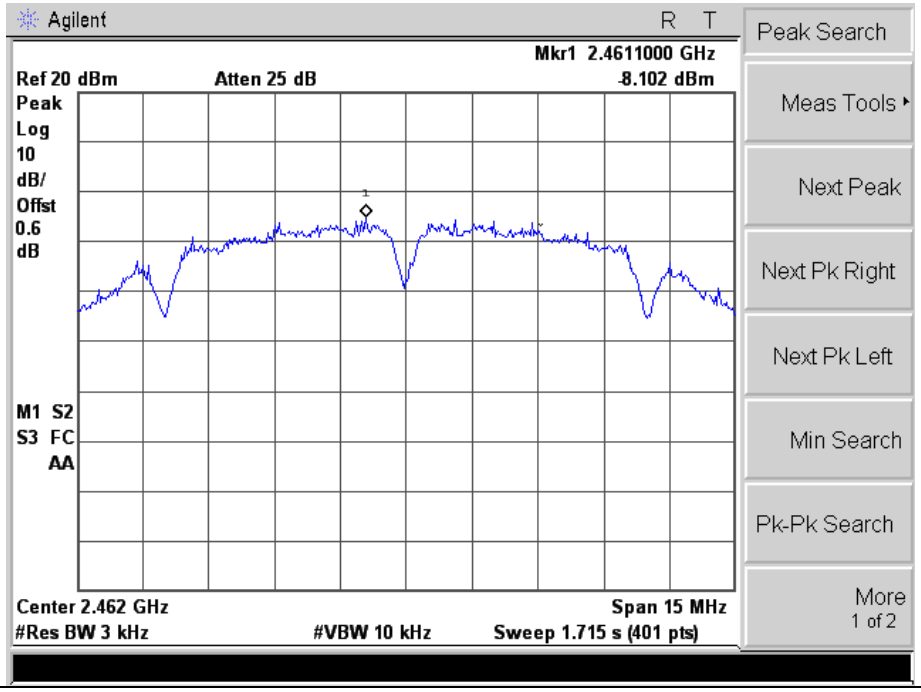
EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V from Adapter with AC 120V/60Hz
Test Mode ：	TX g Mode /CH01, CH06, CH11		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-8.339	8	**PASS**
2437 MHz	-8.102	8	**PASS**
2462 MHz	-7.885	8	**PASS**

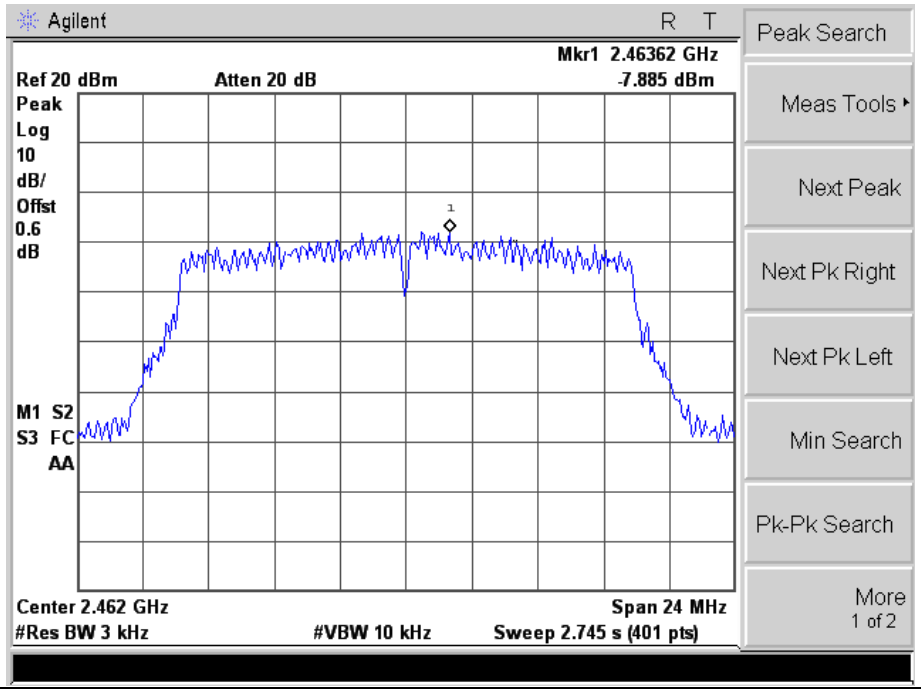
TX CH01



TX CH06



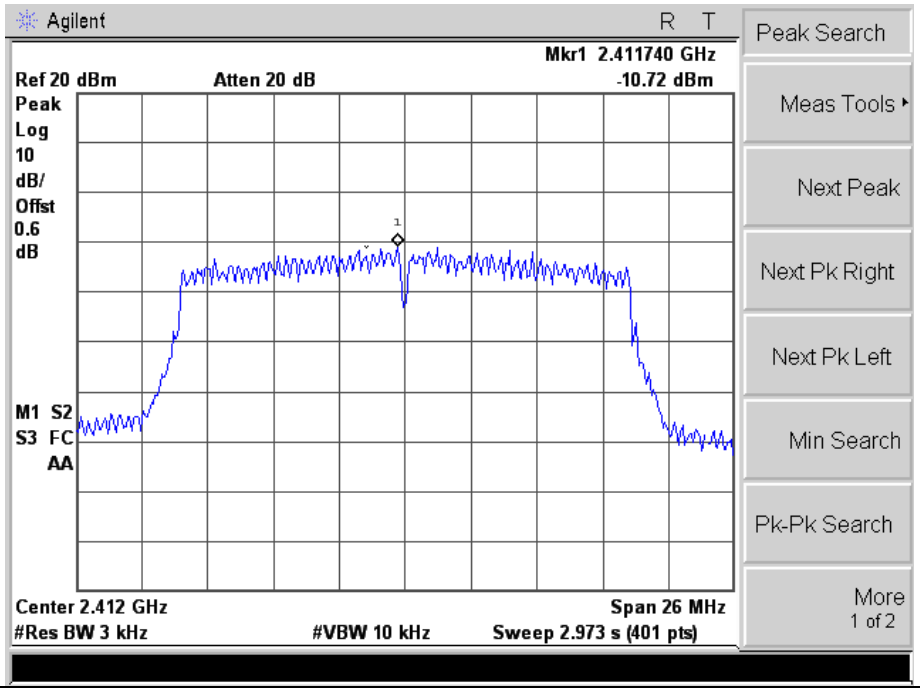
TX CH11



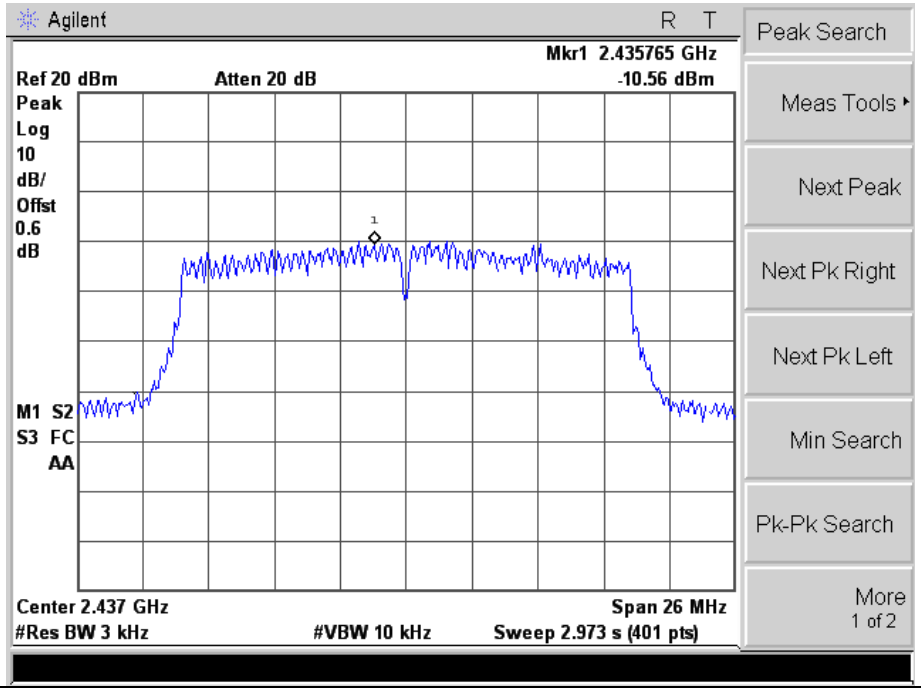
EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V from Adapter with AC 120V/60Hz
Test Mode ：	TX n Mode(20M) /CH01, CH06, CH11		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-10.72	8	**PASS**
2437 MHz	-10.56	8	**PASS**
2462 MHz	-10.11	8	**PASS**

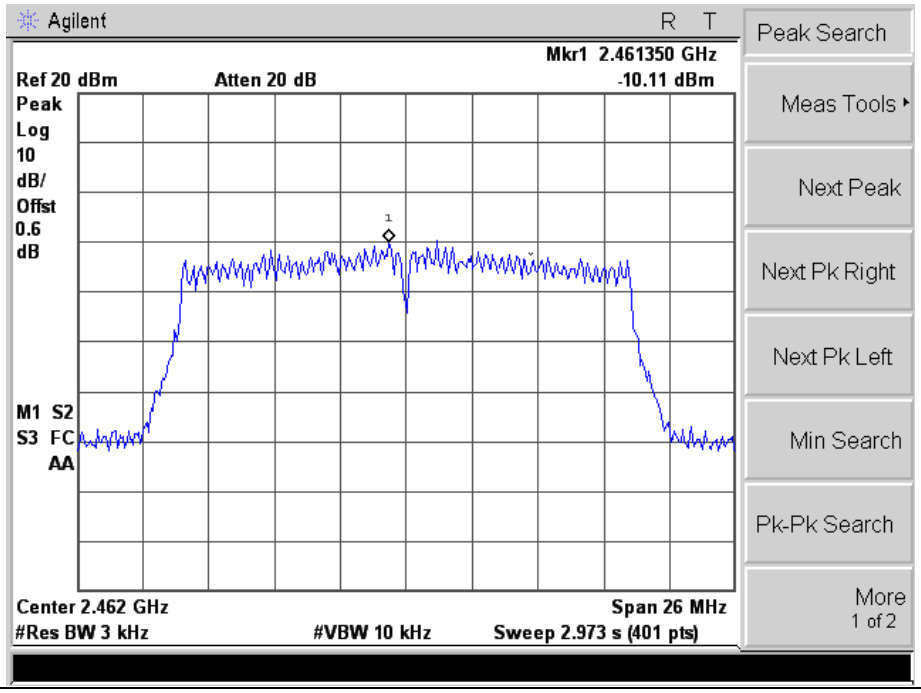
TX CH01



TX CH06



TX CH11



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	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

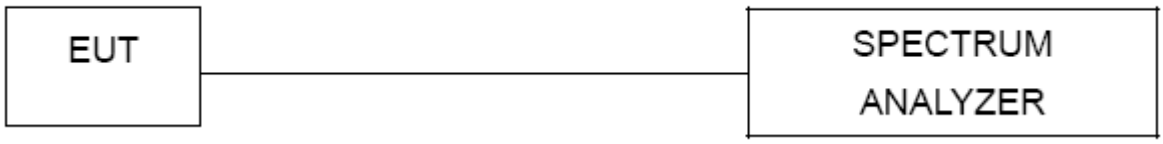
6.1.1 TEST PROCEDURE

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 ´ 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 d B 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

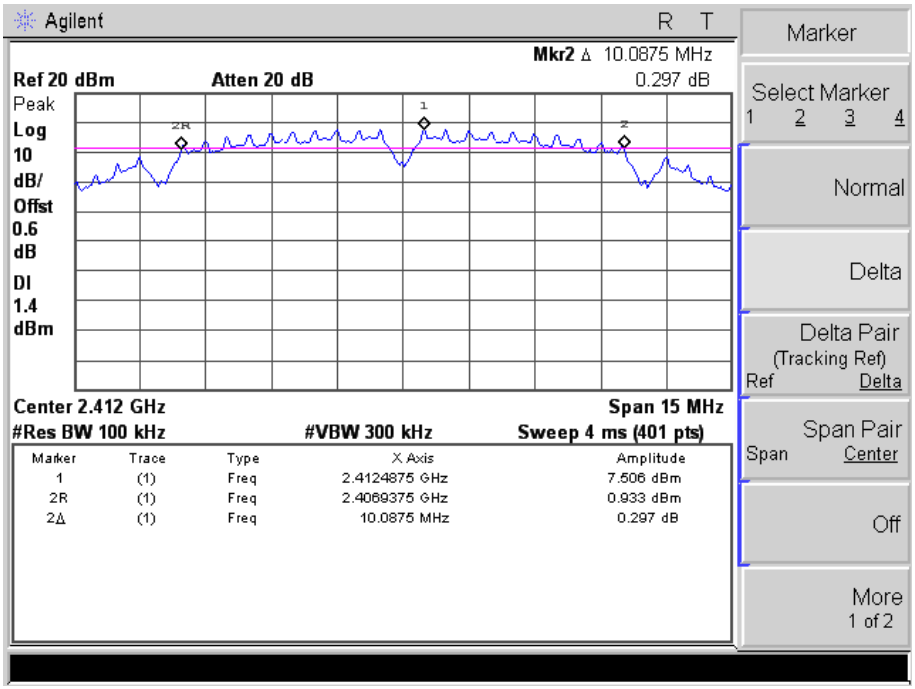
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 TEST RESULTS

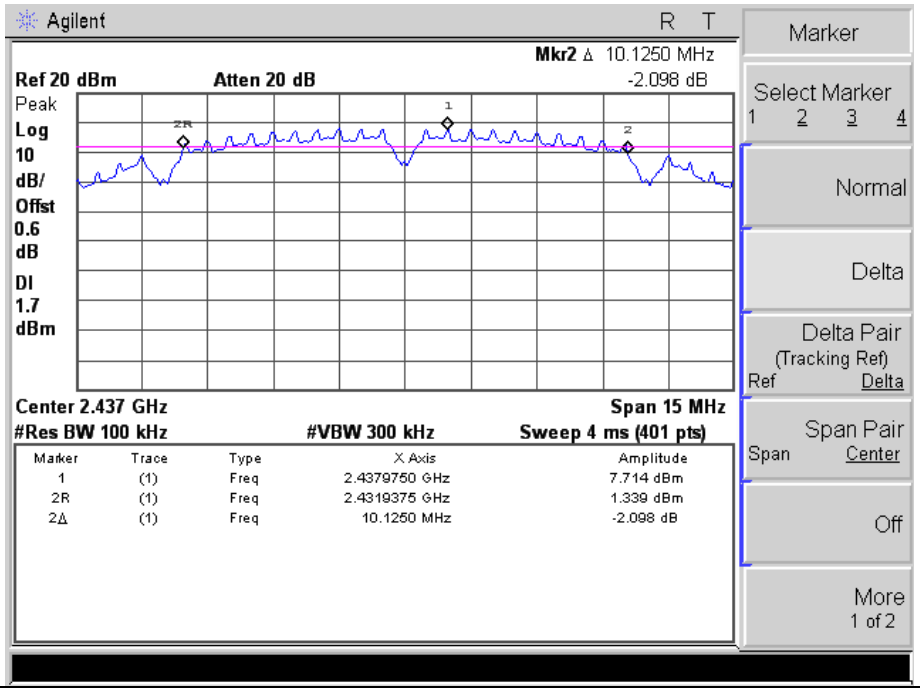
EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V from Adapter with AC 120V/60Hz
Test Mode ：	TX b Mode /CH01, CH06, CH11		

Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	10.0875	>=500KHz	**PASS**
2437 MHz	10.1250	>=500KHz	**PASS**
2462 MHz	10.0875	>=500KHz	**PASS**

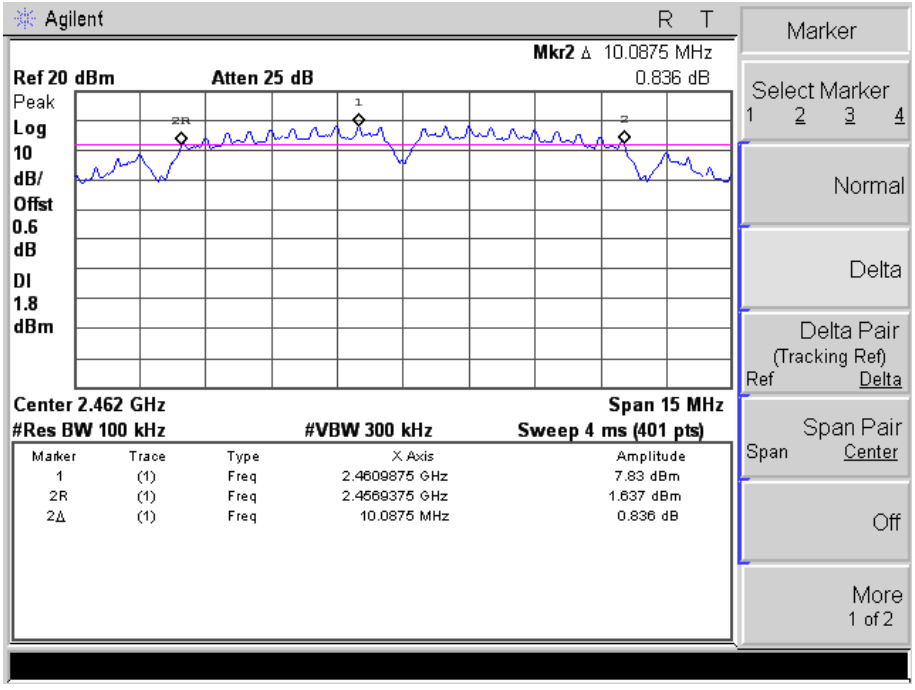
TX CH 01



TX CH 06



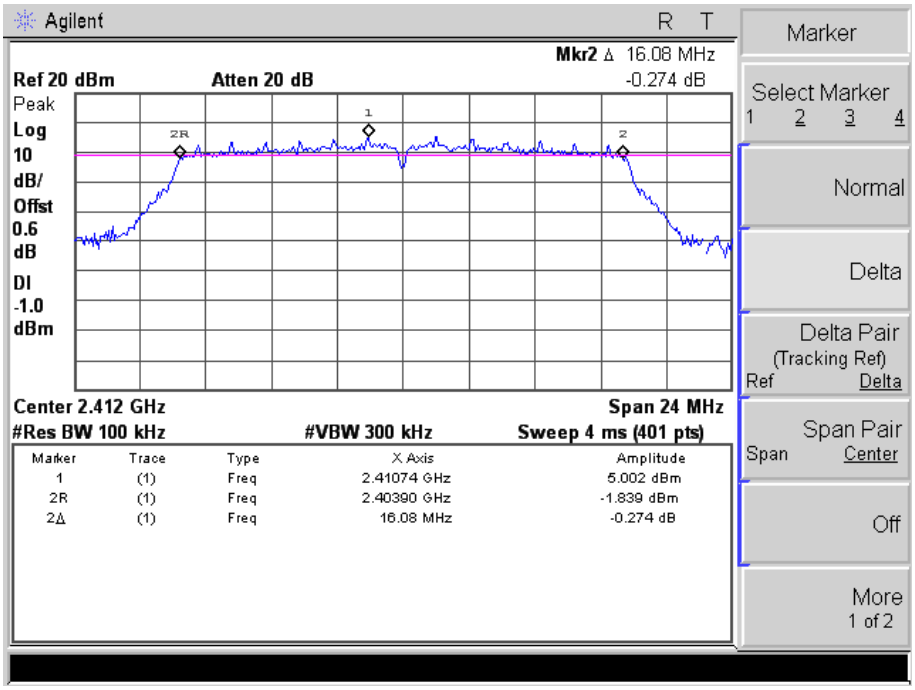
TX CH 11



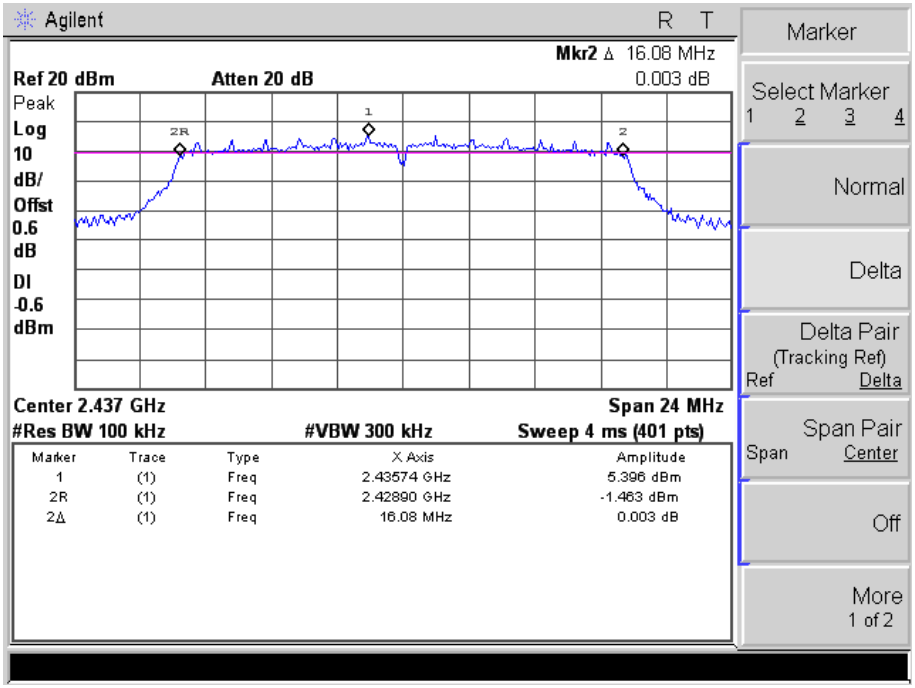
EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V from Adapter with AC 120V/60Hz
Test Mode ：	TX g Mode /CH01, CH06, CH11		

Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	16.08	>=500KHz	**PASS**
2437 MHz	16.08	>=500KHz	**PASS**
2462 MHz	16.08	>=500KHz	**PASS**

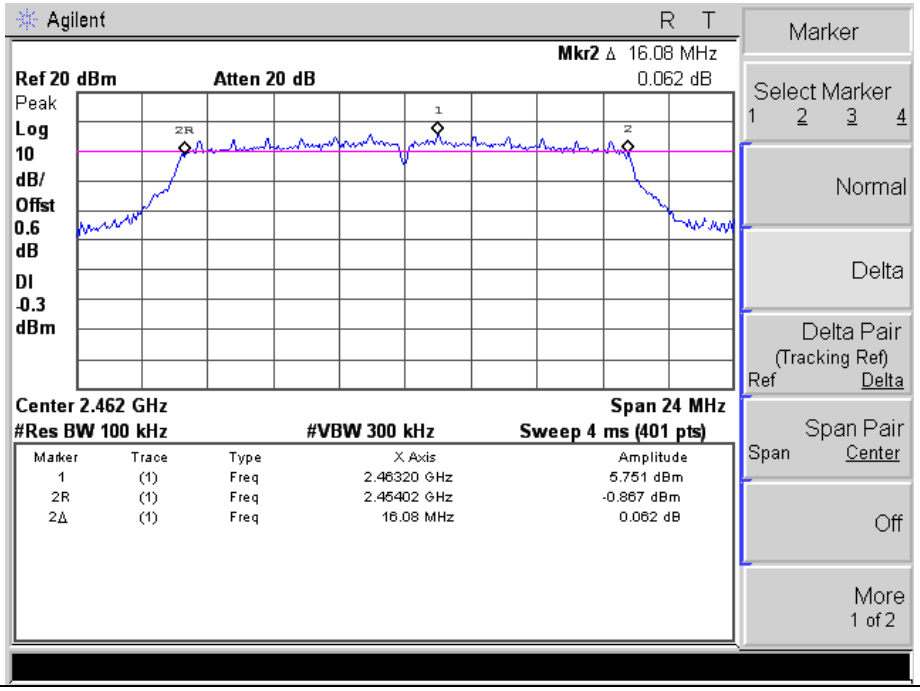
TX CH 01



TX CH 06



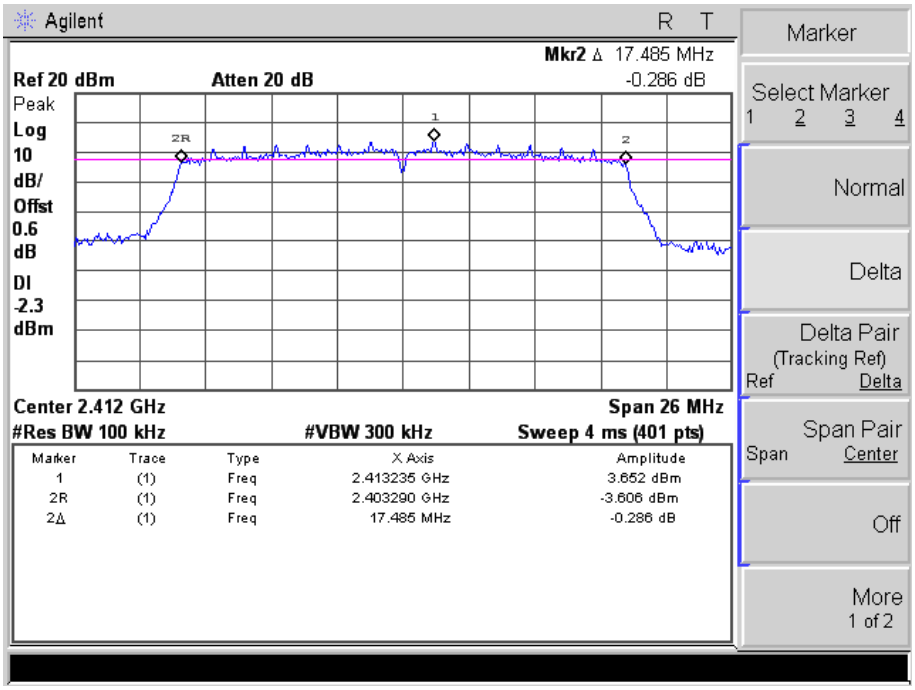
TX CH 11



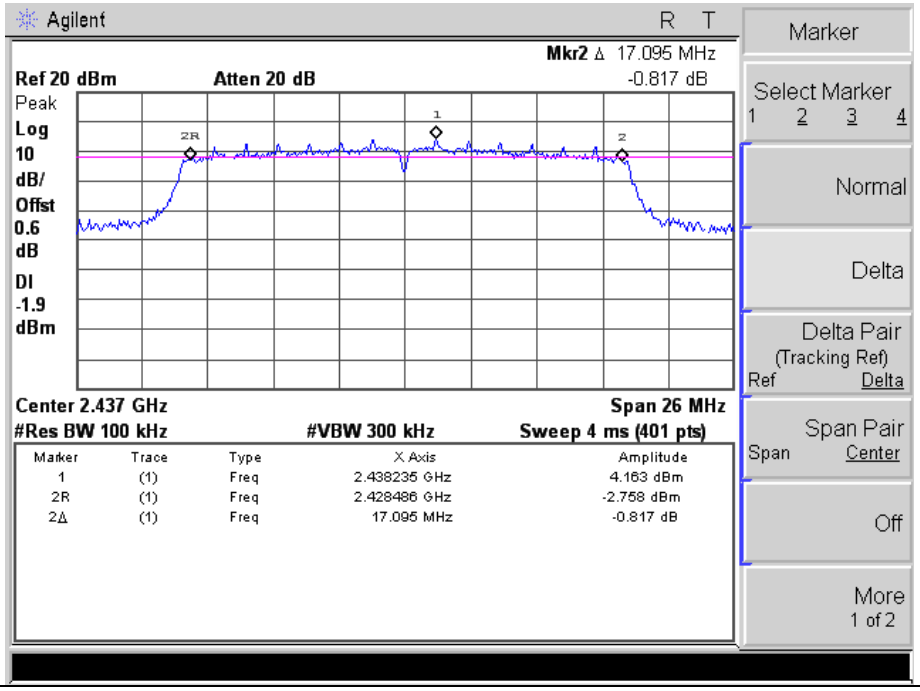
EUT：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V from Adapter with AC 120V/60Hz
Test Mode ：	TX n Mode(20M) /CH01, CH06, CH11		

Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	17.485	>=500KHz	**PASS**
2437 MHz	17.095	>=500KHz	**PASS**
2462 MHz	17.290	>=500KHz	**PASS**

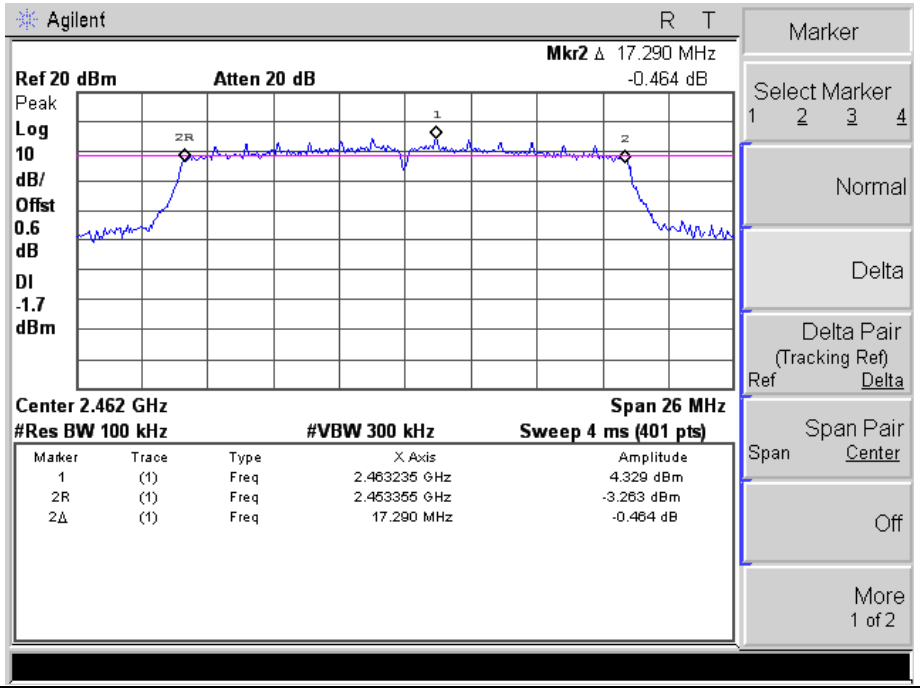
TX CH 01



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

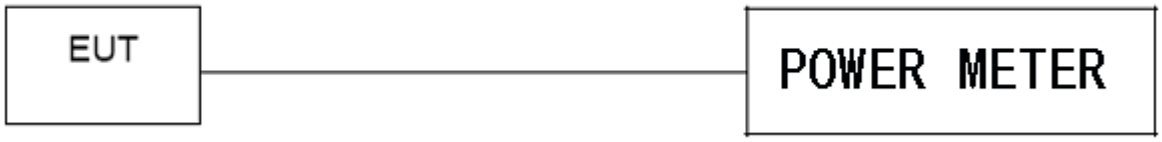
7.1.1 TEST PROCEDURE

a. The EUT was directly connected to the Power meter

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：	WCDMA Smart Phone	Model Name ：	T702c
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V from Adapter with AC 120V/60Hz
Test Mode ：	TX b/g/n(20M,40M) Mode /CH01, CH06, CH11		

TX 802.11b Mode			
Test Channe	Frequency (MHz)	Peak Conducted Output Power (dBm)	LIMIT dBm
CH01	2412	14.21	30
CH06	2437	14.63	30
CH11	2462	14.79	30
TX 802.11g Mode			
CH01	2412	12.19	30
CH06	2437	12.6	30
CH11	2462	12.68	30
TX 802.11n20 Mode			
CH01	2412	10.01	30
CH06	2437	10.53	30
CH11	2462	10.95	30

8. ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

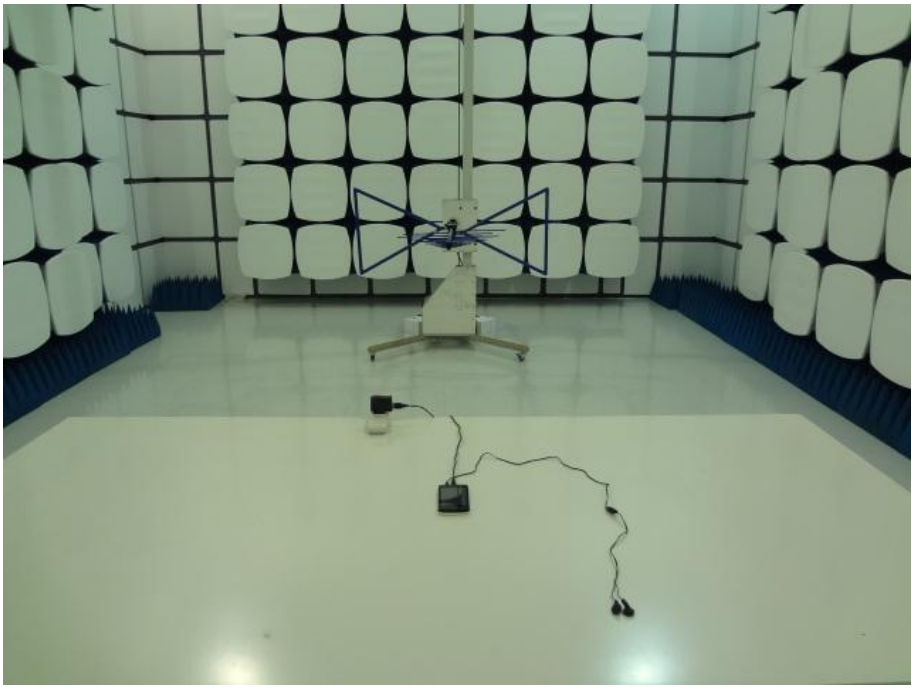
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

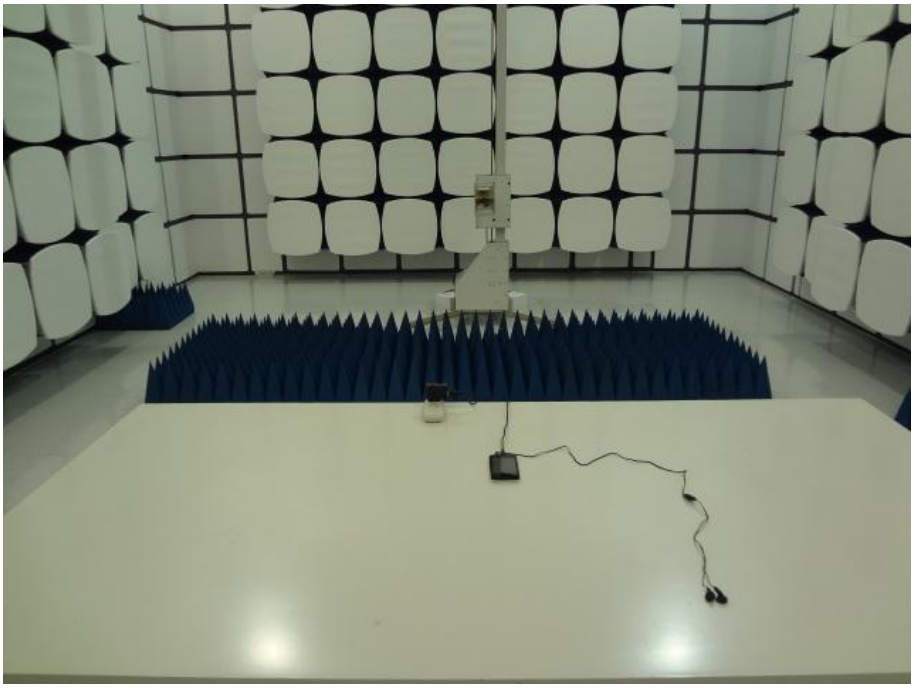
8.2 EUT ANTENNA

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

EUT TEST PHOTO

Radiated Measurement Photos





Conducted Measurement Photos