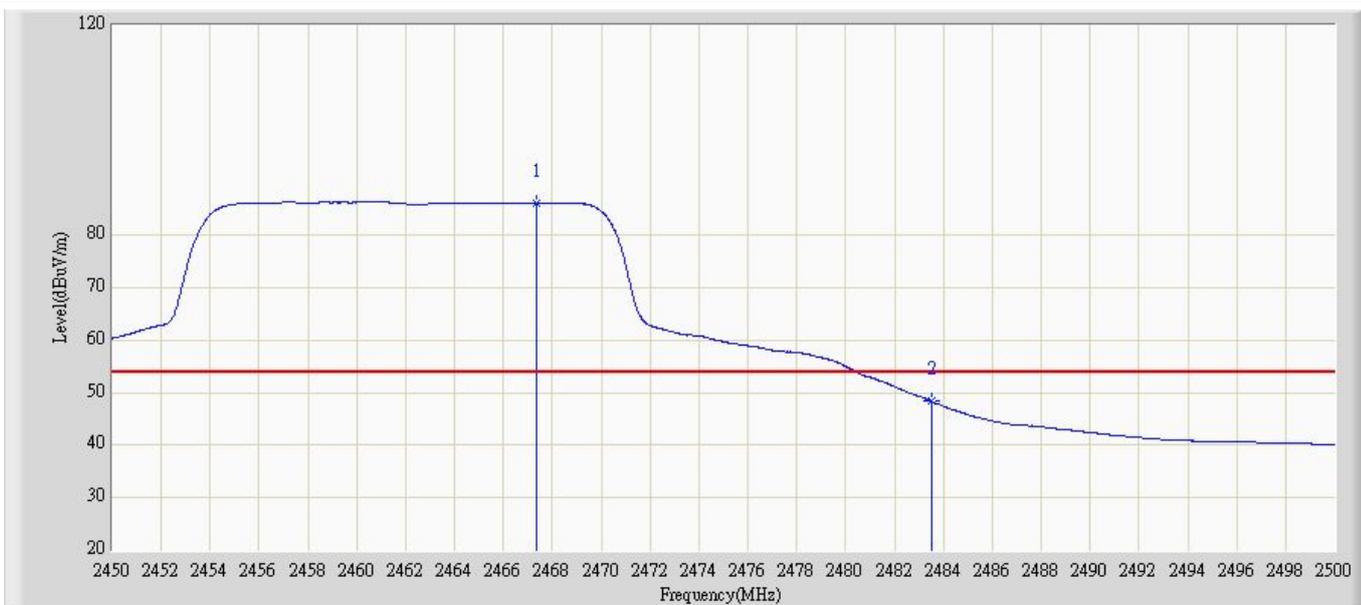


Engineer: Brgant	
Site: AC5	Time: 2013/03/26 - 19:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-737(1-18GHz)	Polarity: Vertical
EUT: WCDMA Digital Mobile Phone	Power: By Battery
Note: Mode 2: Transmit at Channel 2462MHz by 802.11g	



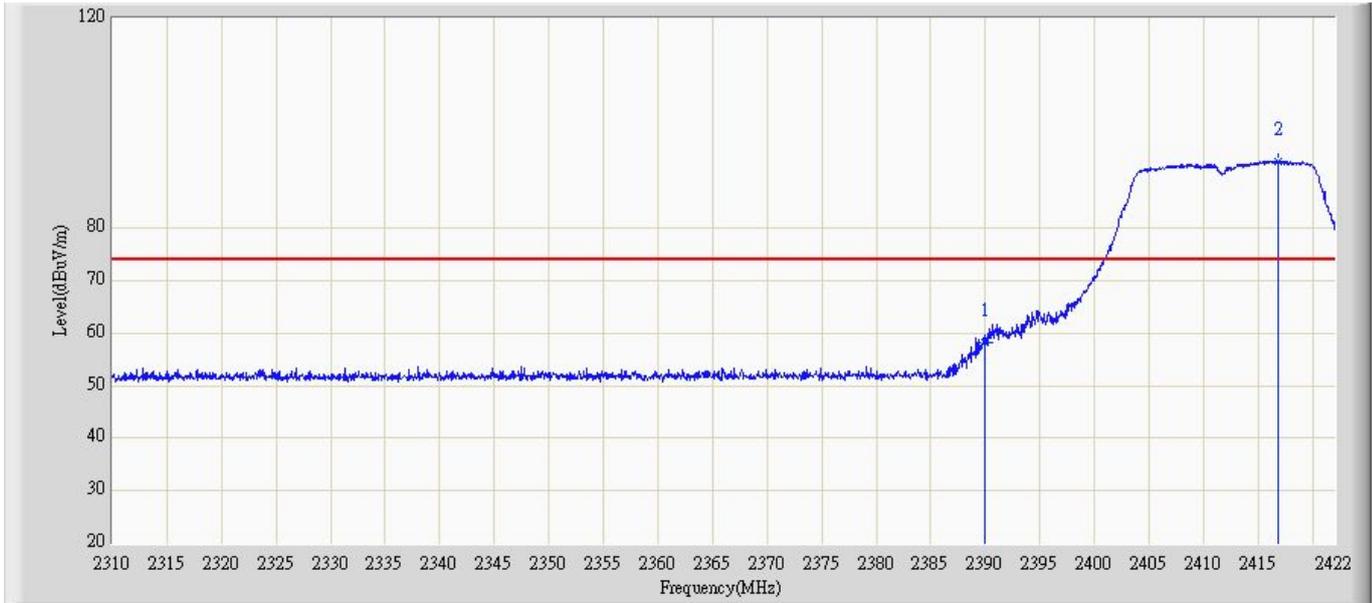
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2468.359	96.943	68.490	N/A	N/A	28.453	PK
2		2483.500	65.874	37.360	-8.126	74.000	28.514	PK

Engineer: Brgant	
Site: AC5	Time: 2013/03/26 - 19:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-737(1-18GHz)	Polarity: Vertical
EUT: WCDMA Digital Mobile Phone	Power: By Battery
Note: Mode 2: Transmit at Channel 2462MHz by 802.11g	



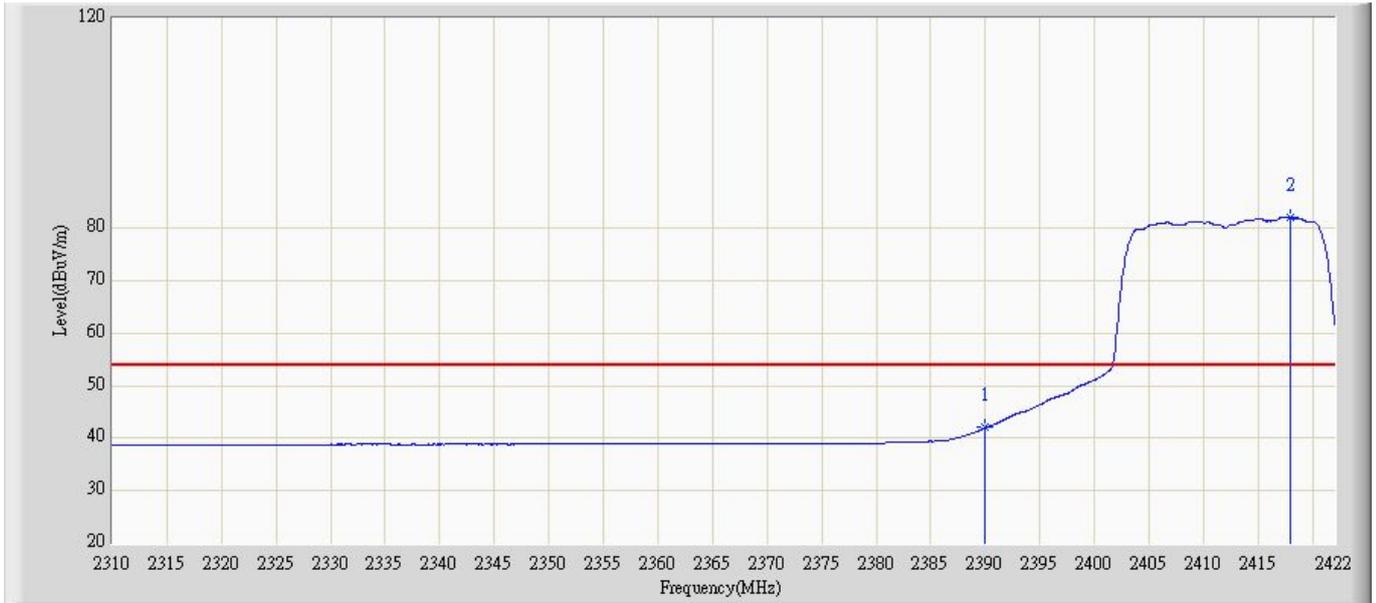
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2467.334	86.172	57.723	N/A	N/A	28.449	AV
2		2483.500	48.436	19.922	-5.564	54.000	28.514	AV

Engineer: Brgant	
Site: AC5	Time: 2013/03/26 - 19:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-737(1-18GHz)	Polarity: Horizontal
EUT: WCDMA Digital Mobile Phone	Power: By Battery
Note: Mode 3: Transmit at Channel 2412MHz by 802.11n20	



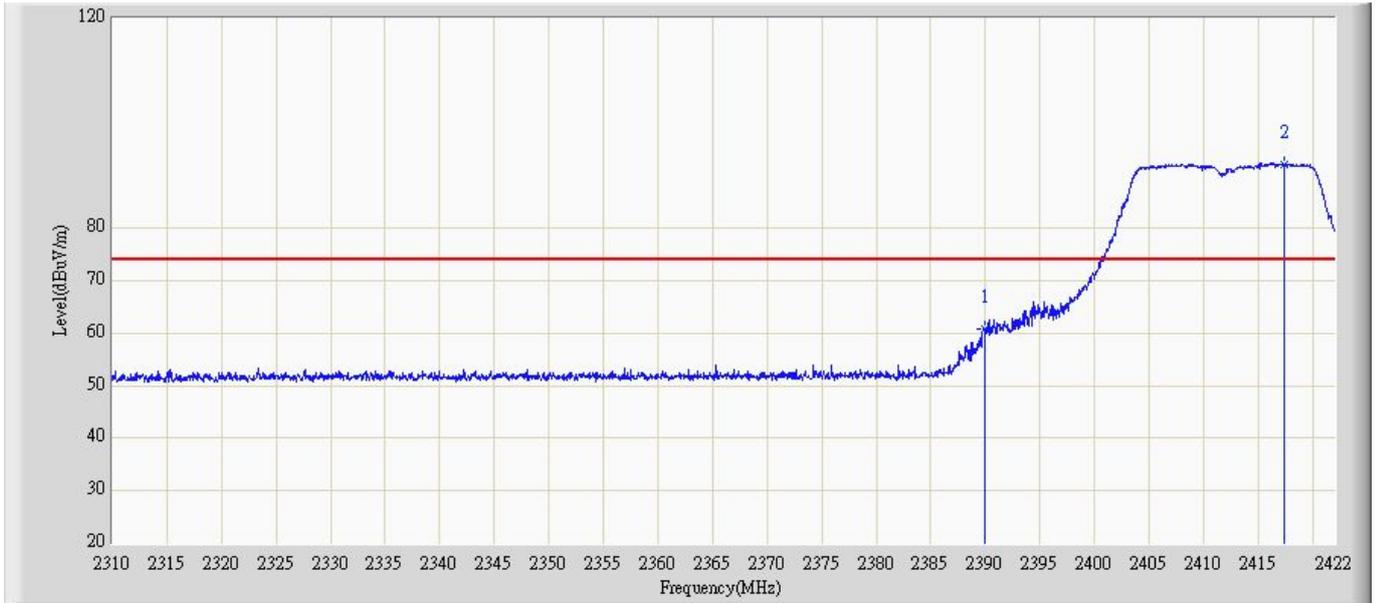
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	58.151	30.029	-15.849	74.000	28.122	PK
2	*	2416.845	92.697	64.463	N/A	N/A	28.234	PK

Engineer: Brgant	
Site: AC5	Time: 2013/03/26 - 19:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-737(1-18GHz)	Polarity: Horizontal
EUT: WCDMA Digital Mobile Phone	Power: By Battery
Note: Mode 3: Transmit at Channel 2412MHz by 802.11n20	



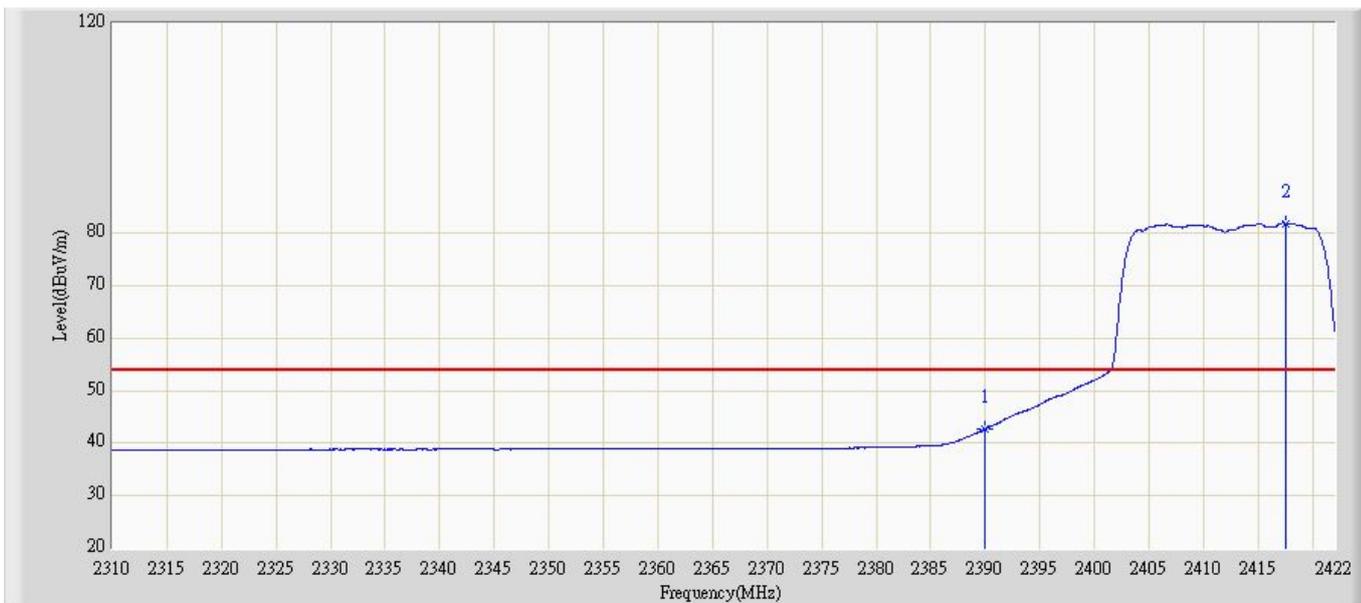
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	41.994	13.872	-12.006	54.000	28.122	AV
2	*	2417.910	82.044	53.805	N/A	N/A	28.239	AV

Engineer: Brgant	
Site: AC5	Time: 2013/03/26 - 19:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-737(1-18GHz)	Polarity: Vertical
EUT: WCDMA Digital Mobile Phone	Power: By Battery
Note: Mode 3: Transmit at Channel 2412MHz by 802.11n20	



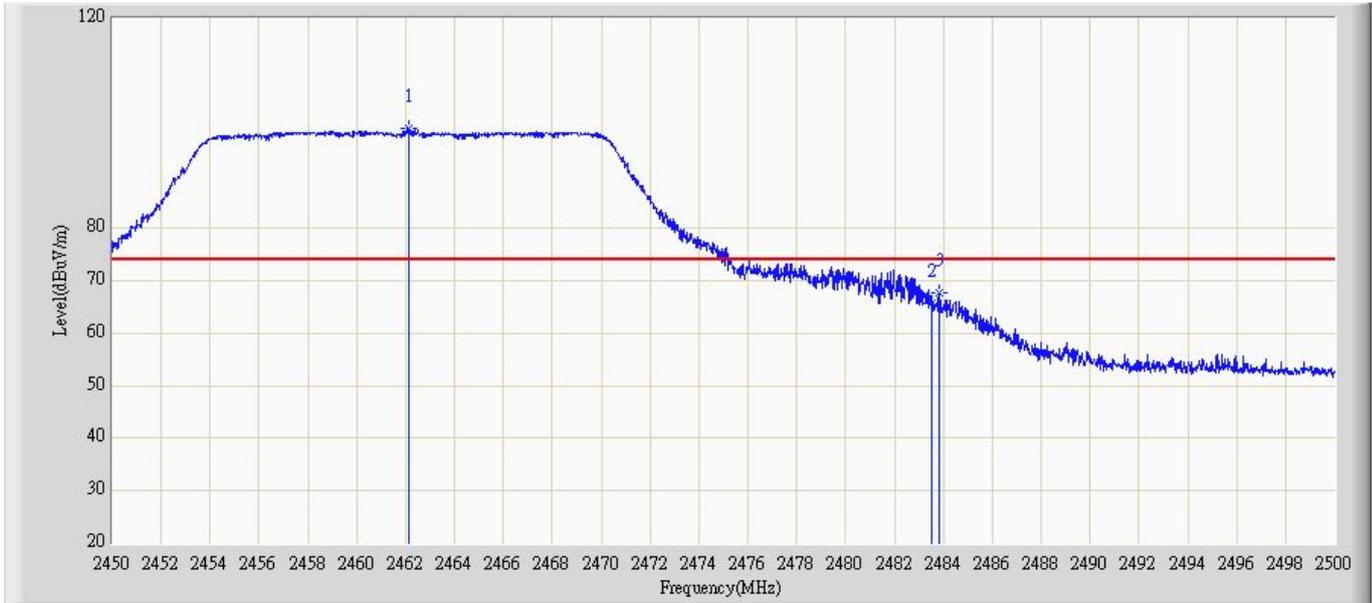
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	60.809	32.687	-13.191	74.000	28.122	PK
2	*	2417.406	92.238	64.001	N/A	N/A	28.237	PK

Engineer: Brgant	
Site: AC5	Time: 2013/03/26 - 19:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-737(1-18GHz)	Polarity: Vertical
EUT: WCDMA Digital Mobile Phone	Power: By Battery
Note: Mode 3: Transmit at Channel 2412MHz by 802.11n20	



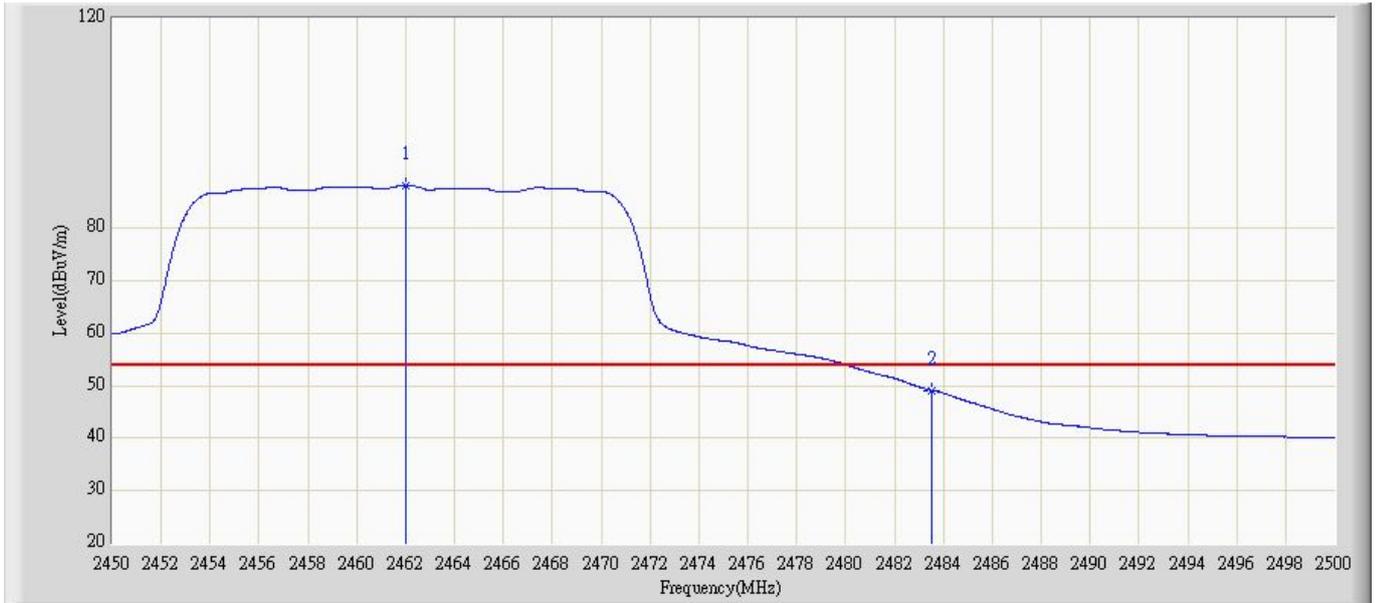
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	42.765	14.643	-11.235	54.000	28.122	AV
2	*	2417.574	81.898	53.660	N/A	N/A	28.238	AV

Engineer: Brgant	
Site: AC5	Time: 2013/03/26 - 19:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-737(1-18GHz)	Polarity: Horizontal
EUT: WCDMA Digital Mobile Phone	Power: By Battery
Note: Mode 3: Transmit at Channel 2462MHz by 802.11n20	



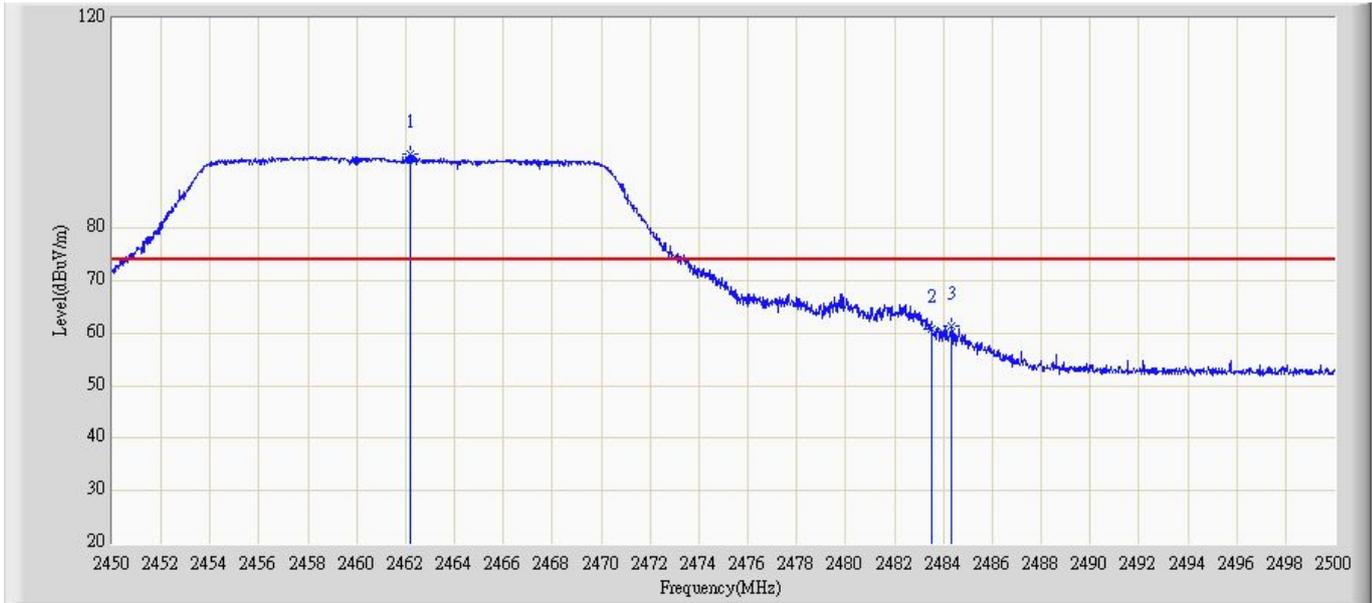
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.156	98.885	70.456	N/A	N/A	28.429	PK
2		2483.500	65.625	37.111	-8.375	74.000	28.514	PK
3		2483.817	67.640	39.125	-6.360	74.000	28.515	PK

Engineer: Brgant	
Site: AC5	Time: 2013/03/26 - 19:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-737(1-18GHz)	Polarity: Horizontal
EUT: WCDMA Digital Mobile Phone	Power: By Battery
Note: Mode 3: Transmit at Channel 2462MHz by 802.11n20	



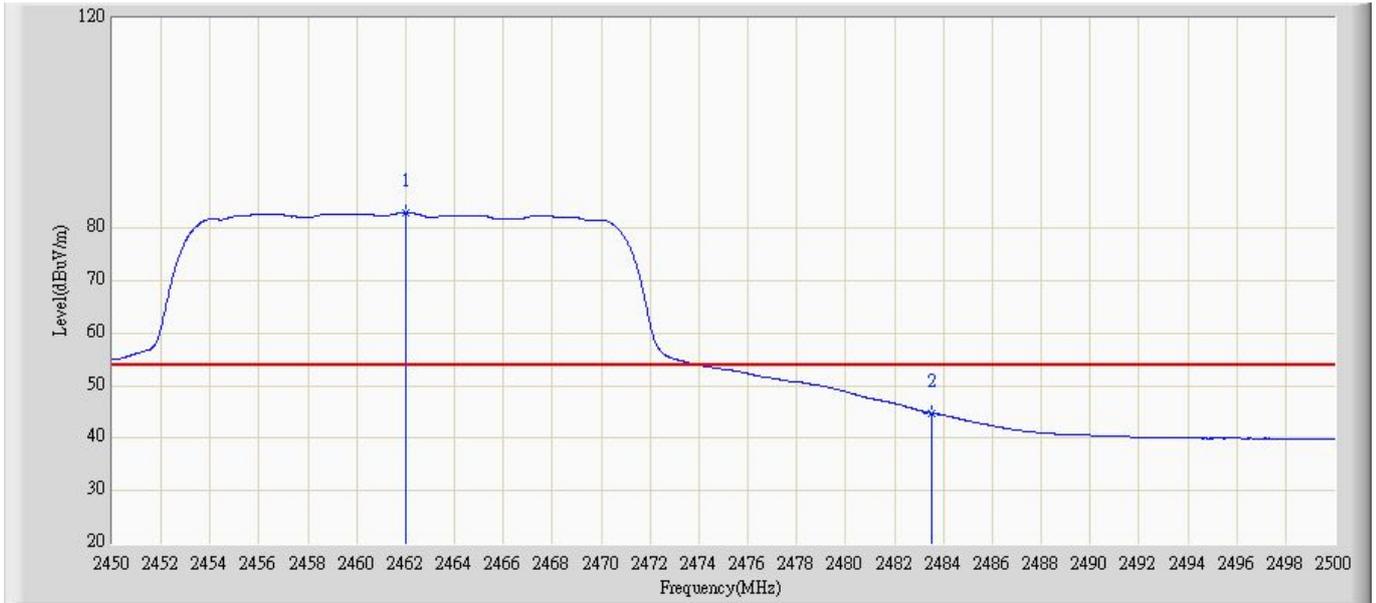
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.031	88.077	59.649	N/A	N/A	28.428	AV
2		2483.500	49.120	20.606	-4.880	54.000	28.514	AV

Engineer: Brgant	
Site: AC5	Time: 2013/03/26 - 20:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-737(1-18GHz)	Polarity: Vertical
EUT: WCDMA Digital Mobile Phone	Power: By Battery
Note: Mode 3: Transmit at Channel 2462MHz by 802.11n20	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.181	94.108	65.679	N/A	N/A	28.429	PK
2		2483.500	60.788	32.274	-13.212	74.000	28.514	PK
3		2484.342	61.248	32.731	-12.752	74.000	28.517	PK

Engineer: Brgant	
Site: AC5	Time: 2013/03/26 - 20:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-737(1-18GHz)	Polarity: Vertical
EUT: WCDMA Digital Mobile Phone	Power: By Battery
Note: Mode 3: Transmit at Channel 2462MHz by 802.11n20	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.031	82.904	54.476	N/A	N/A	28.428	AV
2		2483.500	44.826	16.312	-9.174	54.000	28.514	AV

7. Operation Frequency Range of 20dB Bandwidth

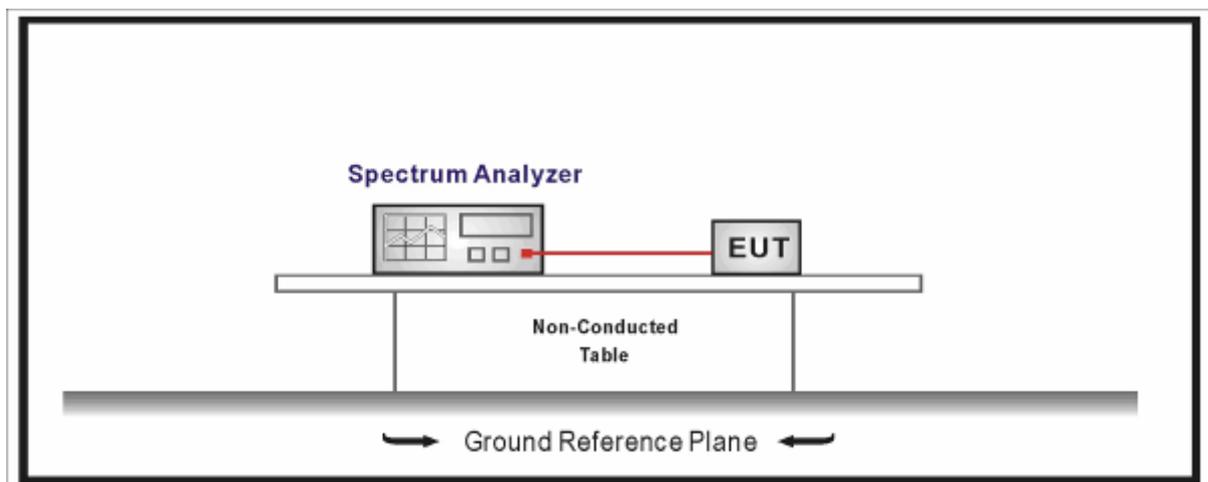
7.1. Test Equipment

Operation Frequency Range of 20dB Bandwidth / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2014.01.21
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2013.05.07

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

7.2. Test Setup



7.3. Limit

20 dB bandwidth of the emission is contained within the operation frequency band.

7.4. Test Procedure

The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Span greater than RBW.

7.5. Uncertainty

The measurement uncertainty is defined as ± 1 kHz

7.6. Test Result

Product	:	WCDMA Digital Mobile Phone
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11b

Channel 01 (2412MHz)



Channel 11 (2462MHz)



Product	:	WCDMA Digital Mobile Phone
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11g

Channel 01 (2412MHz)



Channel 11 (2462MHz)



Product	:	WCDMA Digital Mobile Phone
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n (20MHz)

Channel 01 (2412MHz)



Channel 11 (2462MHz)



8. Occupied Bandwidth

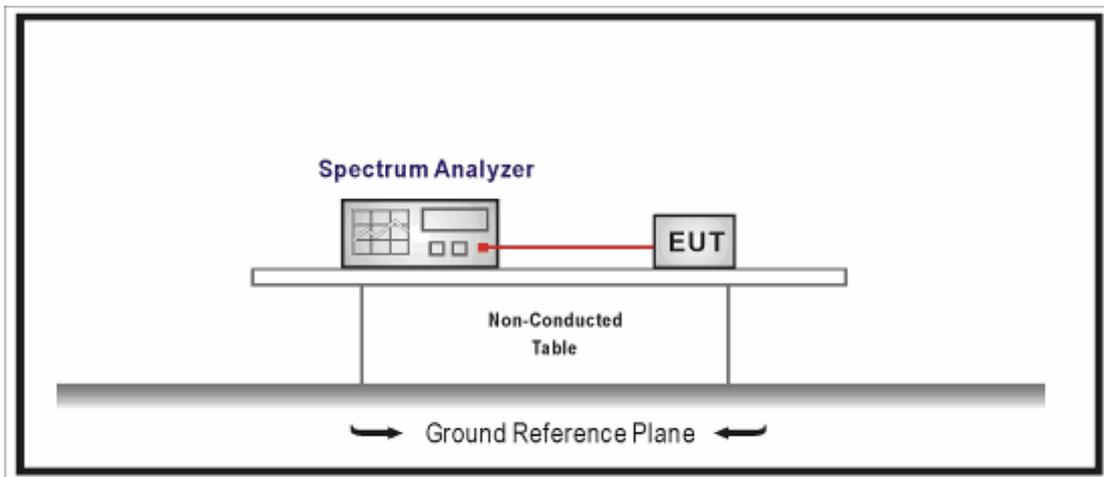
8.1. Test Equipment

Occupied Bandwidth / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2014.01.21
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2013.05.07

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

8.2. Test Setup



8.3. Limit

The minimum 6 dB bandwidth shall be at least 500 kHz.

8.4. Test Procedure

The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Span greater than RBW.

8.5. Uncertainty

The measurement uncertainty is defined as ± 1 kHz

8.6. Test Result

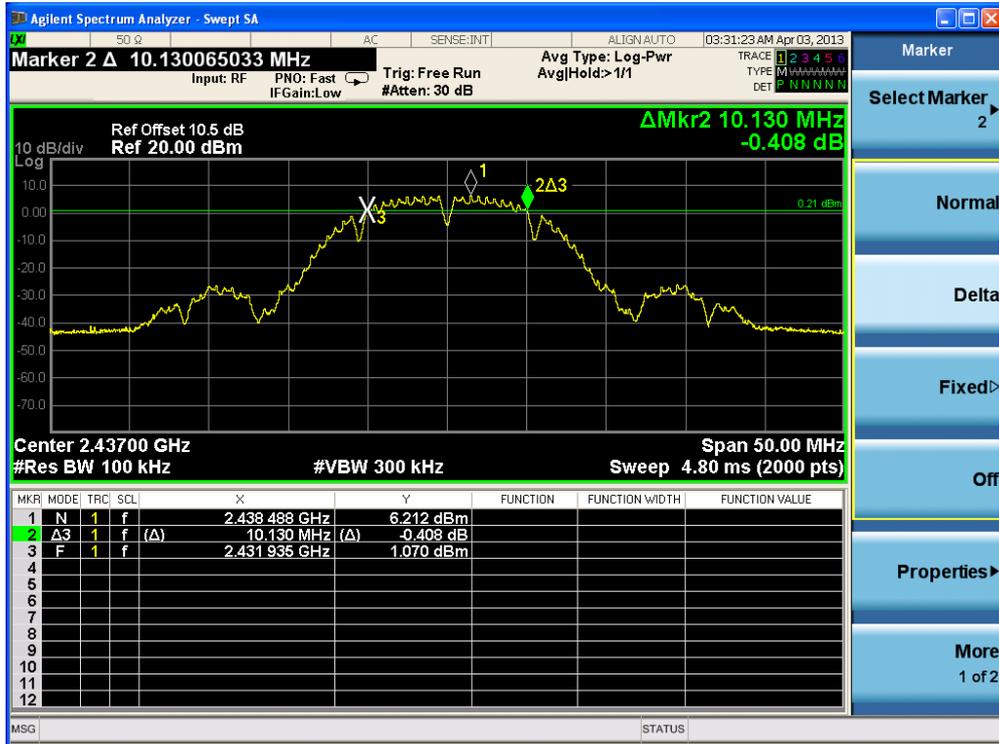
Product	:	WCDMA Digital Mobile Phone
Test Item	:	6dB Occupied Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11b

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	10155	500	Pass
06	2437	10130	500	Pass
11	2462	10105	500	Pass

Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



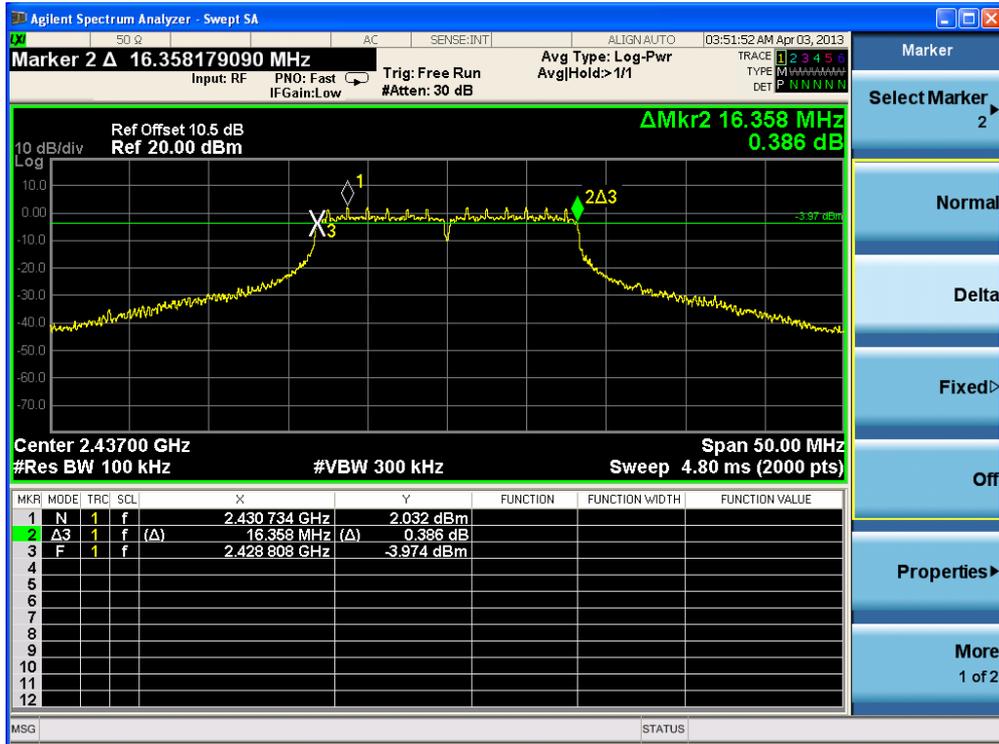
Product	: WCDMA Digital Mobile Phone
Test Item	: 6dB Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 2: Transmit by 802.11g

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	16358	500	Pass
06	2437	16358	500	Pass
11	2462	16358	500	Pass

Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



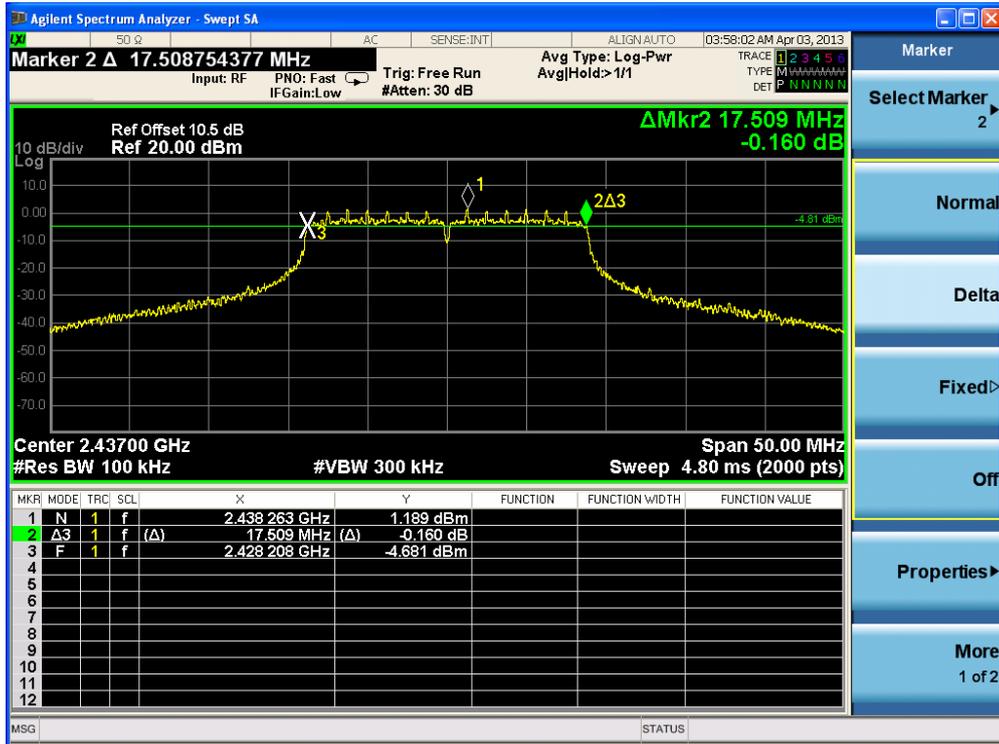
Product	: WCDMA Digital Mobile Phone
Test Item	: 6dB Occupied Bandwidth
Test Site	: TR-8
Test Mode	: Mode 3: Transmit by 802.11n(20MHz)

Channel No.	Frequency (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Result
01	2412	17534	500	Pass
06	2437	17509	500	Pass
11	2462	17534	500	Pass

Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



Product	:	WCDMA Digital Mobile Phone
Test Item	:	99% Occupied Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11b

Channel No.	Frequency (MHz)	99% Bandwidth (MHz)
01	2412	14.25
06	2437	14.27
11	2462	14.37

Channel 01 (2412MHz)



Channel 06 (2437MHz)



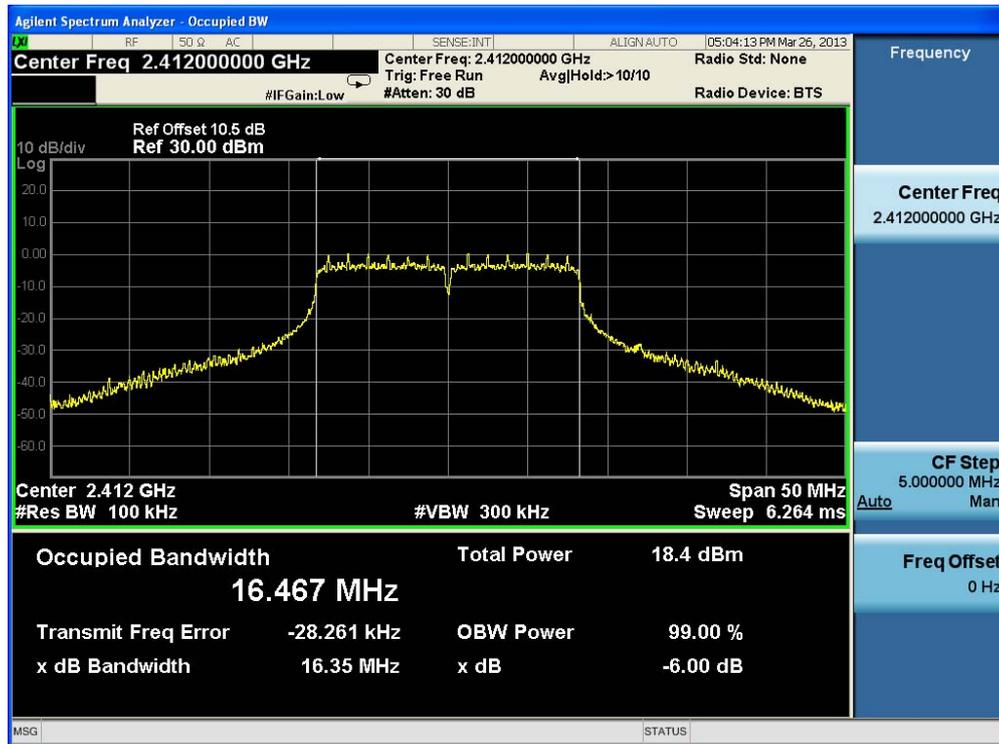
Channel 11 (2462MHz)



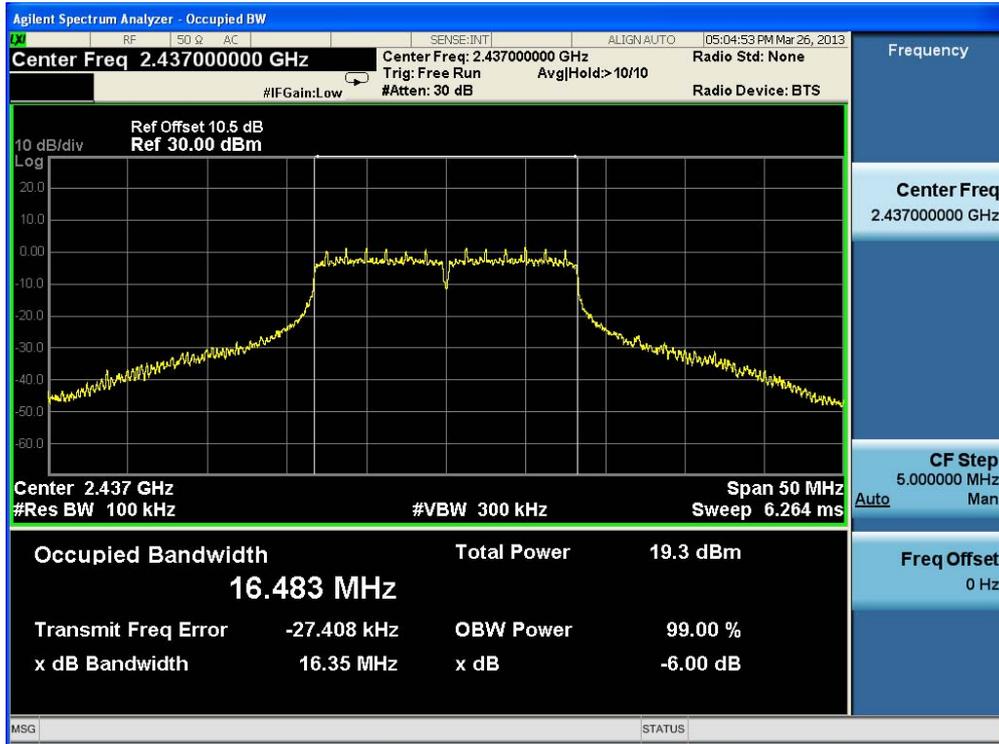
Product	:	WCDMA Digital Mobile Phone
Test Item	:	99% Occupied Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11g

Channel No.	Frequency (MHz)	99% Bandwidth (MHz)
01	2412	16.47
06	2437	16.48
11	2462	16.50

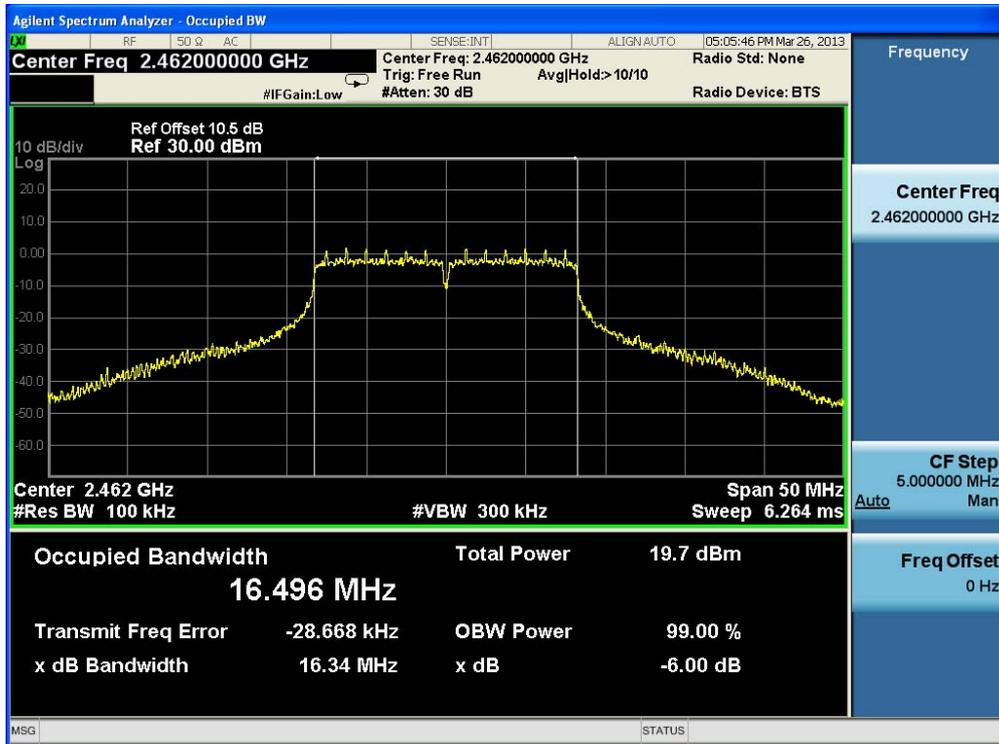
Channel 01 (2412MHz)



Channel 06 (2437MHz)



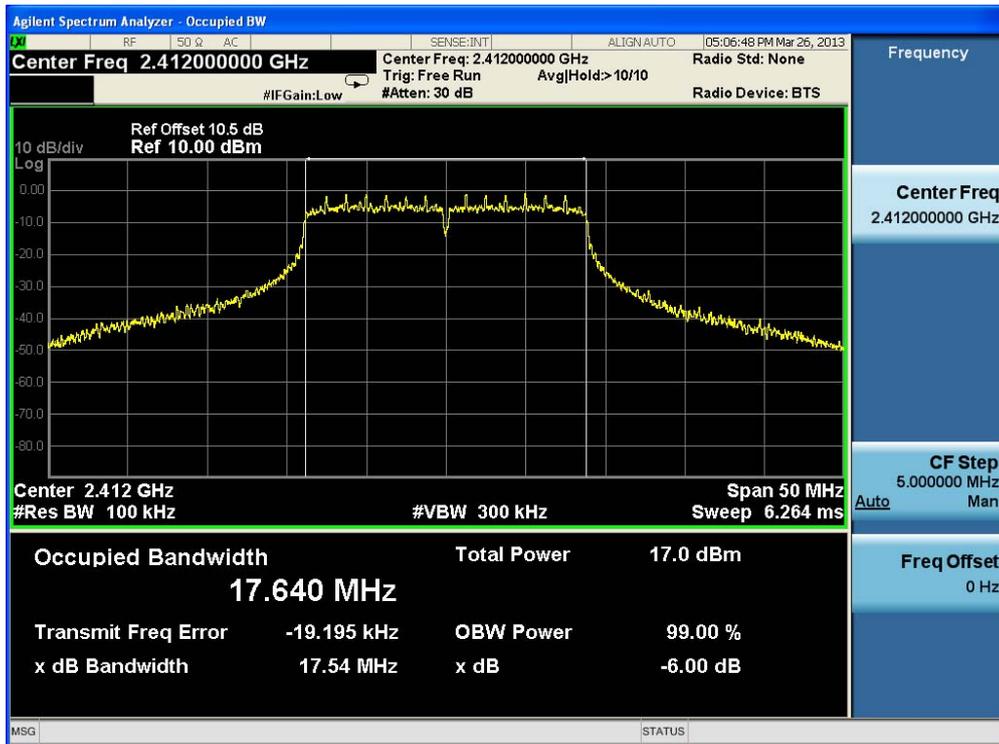
Channel 11 (2462MHz)



Product	:	WCDMA Digital Mobile Phone
Test Item	:	99% Occupied Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n(20MHz)

Channel No.	Frequency (MHz)	99% Bandwidth (kHz)
01	2412	17.64
06	2437	17.67
11	2462	17.67

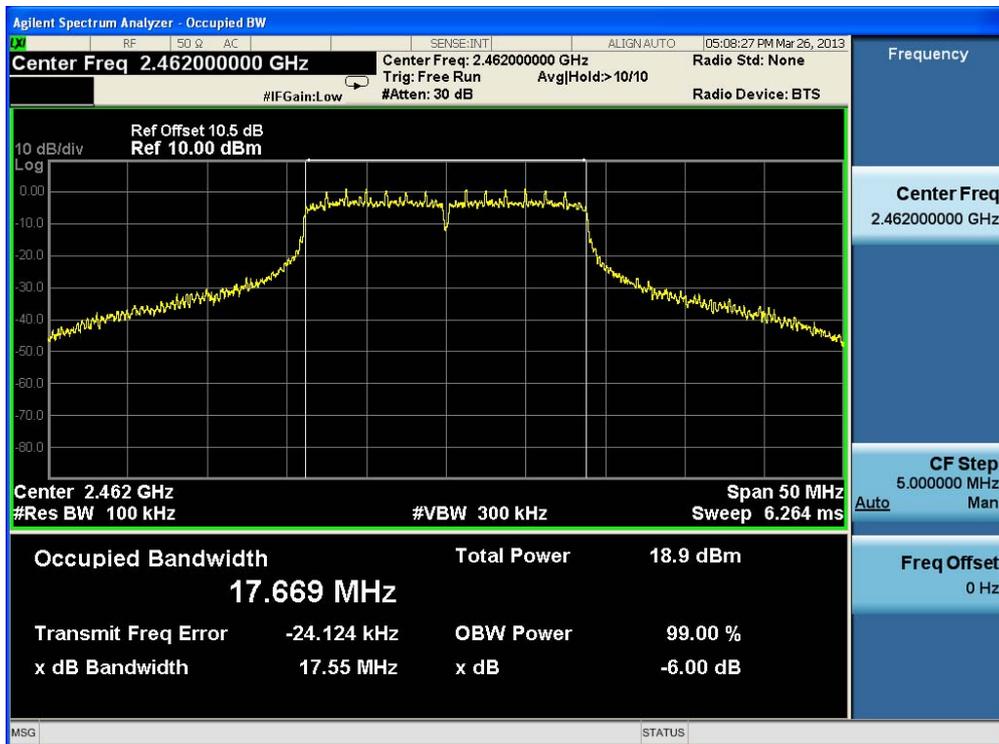
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 06 (2462MHz)



9. Power Output

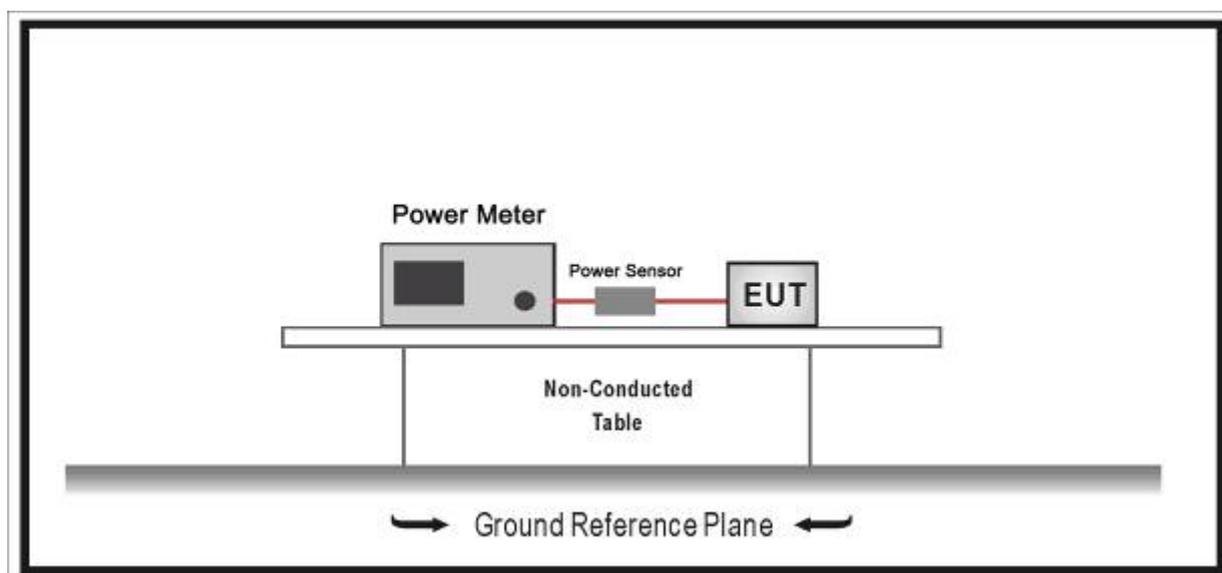
9.1. Test Equipment

Power Output / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2013.11.10
Power Sensor	Anritsu	MA2411B	0846014	2013.11.10
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2013.05.07

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

9.2. Test Setup



9.3. Limit

The maximum peak power shall be less 1 Watt (30dBm).

Note: the conducted output power limit specified above is based on the use the antennas with directional gains that do not exceed 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values above, as appropriate, by the amount in dB that the directional gain of antenna exceeds 6 dBi.

9.4. Test Procedure

The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

Use the wideband power meter to test peak power and record the result.

9.5. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

9.6. Test Result

Power output test was verified over all data rates of each mode shown as below, and then choose the maximum power output (blue marker) for final test of each channel.

MCS Index for 802.11n	Spatial Streams	Data Rate (Mbps)		
		802.11b	802.11g	20MHz Bandwidth
				800ns GI
0	1	1	6	6.5
1	1	2	9	13.0
0	1	5.5	12	19.5
1	1	11	18	26.0
4	1	---	24	39.0
5	1	---	36	52.0
6	1	---	48	58.5
7	1	---	54	65.0

Power output at various data rates:

Test Mode	Bandwidth	Frequency (MHz)	Channel	Data Rate	Peak Power (dBm)
802.11b	20	2437	6	1	18.73
				5.5	18.85
				11	18.96
802.11g	20	2437	6	6	21.79
				24	21.98
				54	22.05
802.11n	20	2437	6	MCS0	21.05
				MCS4	21.13
				MCS7	21.21

Product	:	WCDMA Digital Mobile Phone
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 1: Transmit by 802.11b

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result	Max.EIRP (dBm)
1	2412	18.30	30.00	Pass	16.78
6	2437	18.96	30.00	Pass	17.21
11	2462	19.07	30.00	Pass	17.55

Max.EIRP=Measurement Power + Antenna Gain

Product	:	WCDMA Digital Mobile Phone
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 2: Transmit by 802.11g

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result	Max.EIRP (dBm)
1	2412	21.15	30.00	Pass	19.63
6	2437	22.05	30.00	Pass	20.27
11	2462	22.02	30.00	Pass	20.50

Max.EIRP=Measurement Power + Antenna Gain

Product	:	WCDMA Digital Mobile Phone
Test Item	:	Power Output
Test Site	:	TR8
Test Mode	:	Mode 3: Transmit by 802.11n(20MHz)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result	Max.EIRP (dBm)
1	2412	21.56	30.00	Pass	20.04
6	2437	21.21	30.00	Pass	19.53
11	2462	21.68	30.00	Pass	20.16

Max.EIRP=Measurement Power + Antenna Gain

10. Power Spectral Density

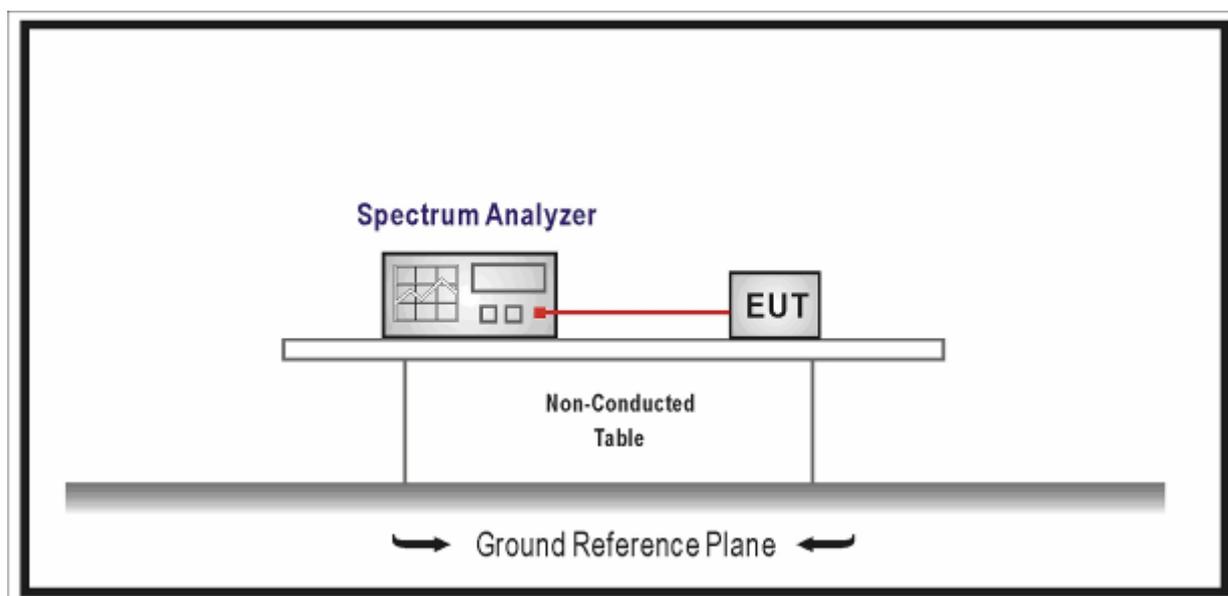
10.1. Test Equipment

Power Spectral Density / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2014.01.21
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2013.05.07

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

10.2. Test Setup



10.3. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiated to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

10.4. Test Procedure

The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

Set the Span to 1.5 times the DTS channel bandwidth, $RBW \cong 3 \text{ kHz}$, $VBW \cong 3*RBW$, Sweep time = auto couple, detector = Peak, trace mode = max hold, allow trace to fully stabilize, use the peak marker function to determine the maximum amplitude level.

10.5. Uncertainty

The measurement uncertainty is defined as $\pm 1.27 \text{ dB}$

10.6. Test Result

Product	:	WCDMA Digital Mobile Phone
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11b

Channel No.	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Result
01	2412	-10.37	8	Pass
06	2437	-9.52	8	Pass
11	2462	-9.50	8	Pass

Channel 01 (2412MHz)



Channel 06 (2437MHz)



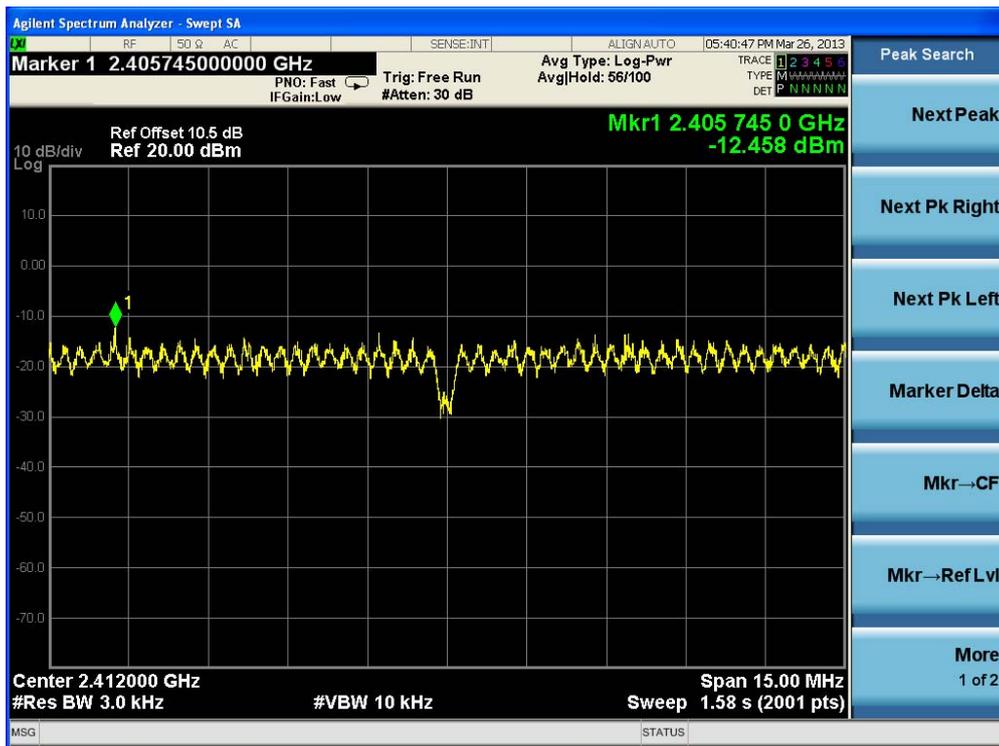
Channel 11 (2462MHz)



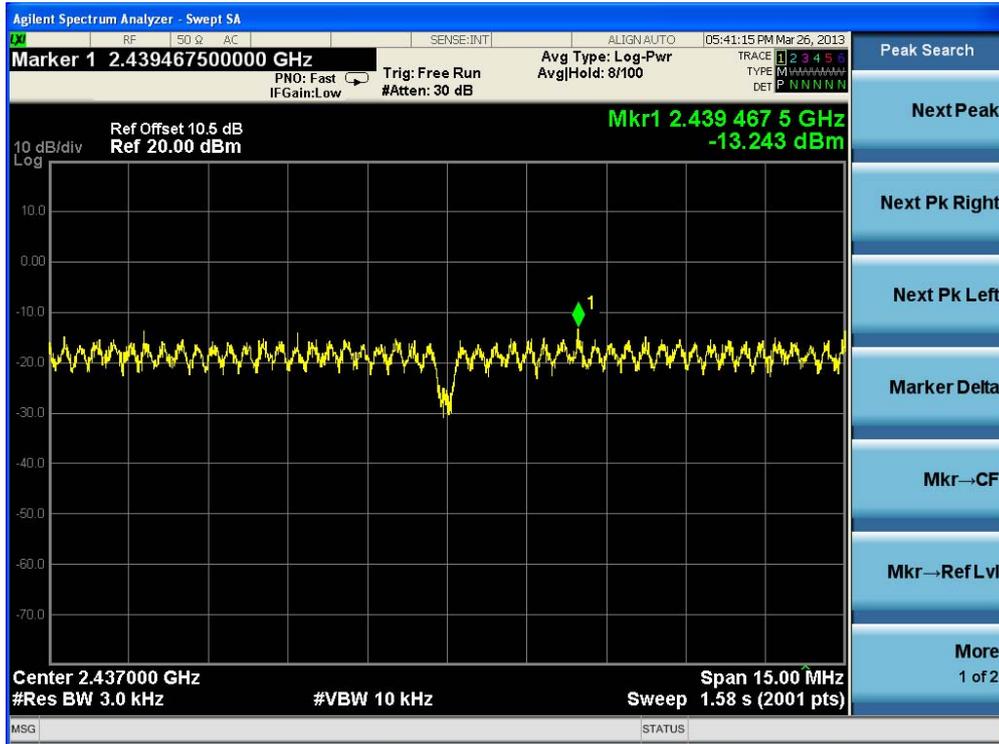
Product	:	WCDMA Digital Mobile Phone
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11g

Channel No.	Frequency (MHz)	Reading Value (dBm)	Limit (dBm)	Result
01	2412	-12.46	8	Pass
06	2437	-13.24	8	Pass
11	2462	-13.07	8	Pass

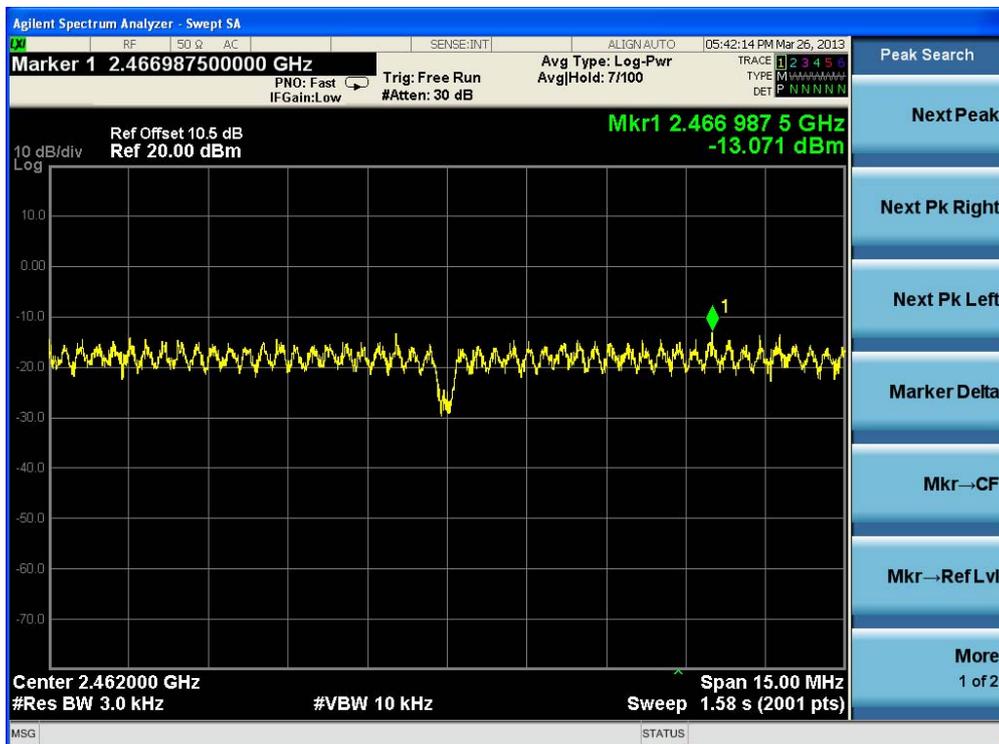
Channel 01 (2412MHz)



Channel 06 (2437MHz)



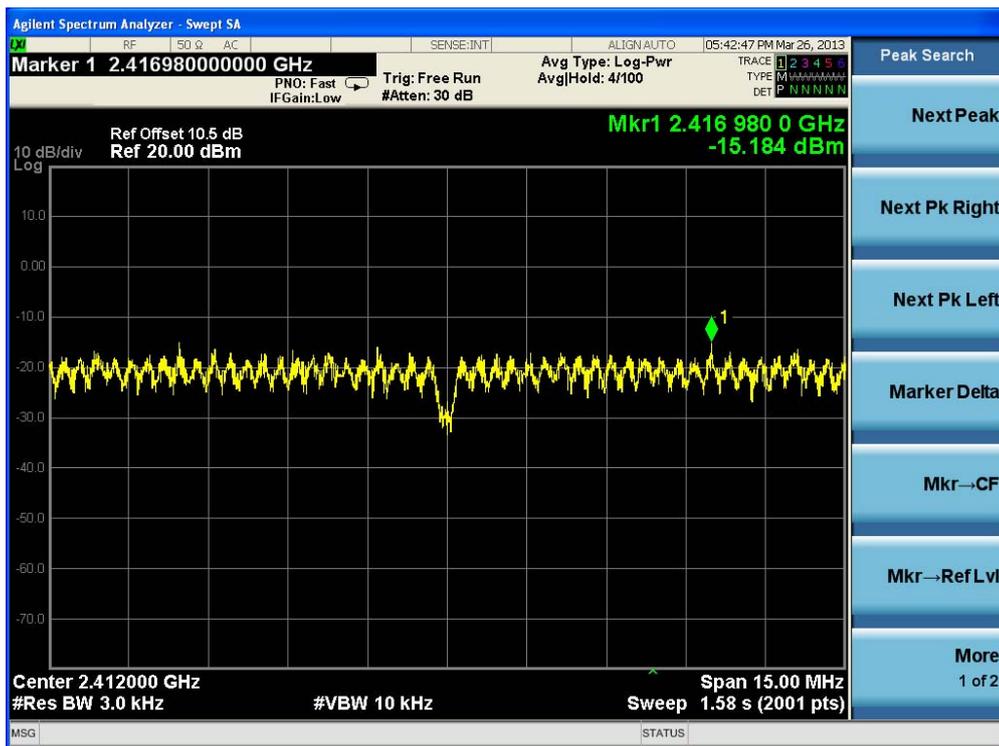
Channel 11 (2462MHz)



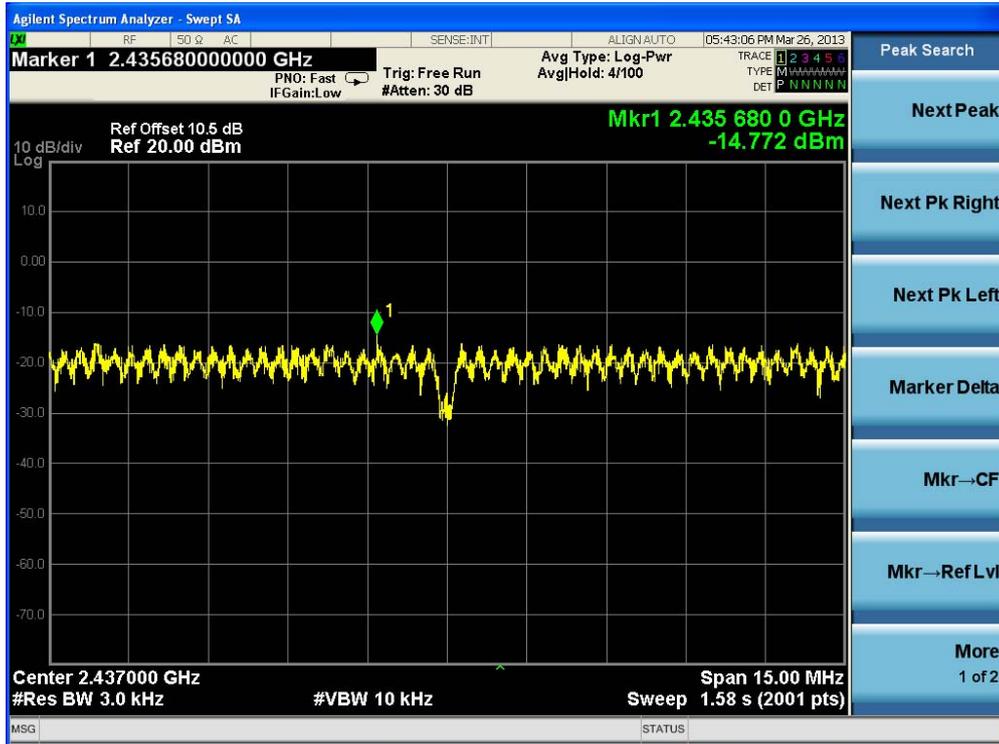
Product	:	WCDMA Digital Mobile Phone
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n (20MHz)

Channel No.	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Result
01	2412	-15.18	8	Pass
06	2437	-14.77	8	Pass
11	2462	-13.62	8	Pass

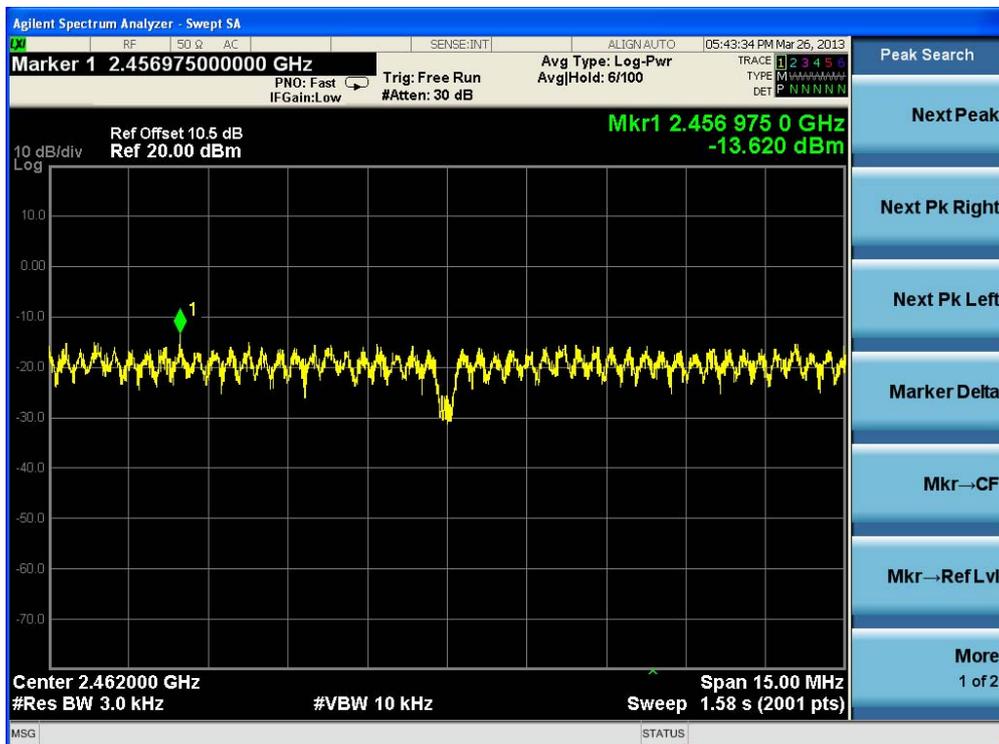
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



The End