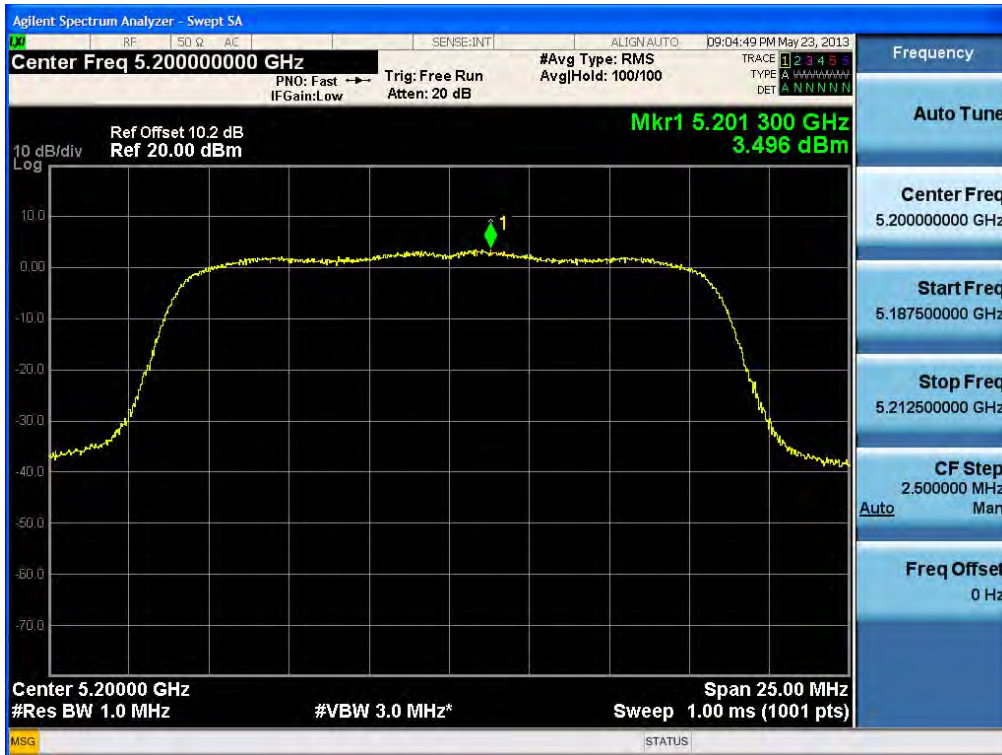


RESULT PLOTS

Power Spectral Density (802.11a-CH 36)

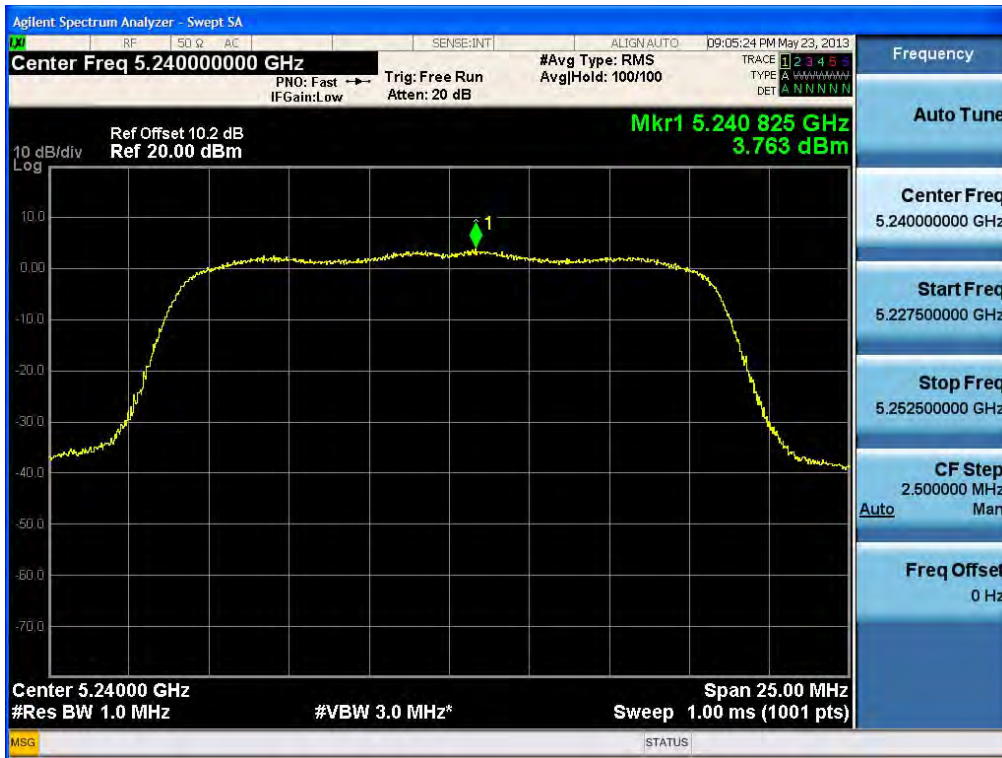


Power Spectral Density (802.11a-CH 40)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIF1802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

Power Spectral Density (802.11a-CH 48)

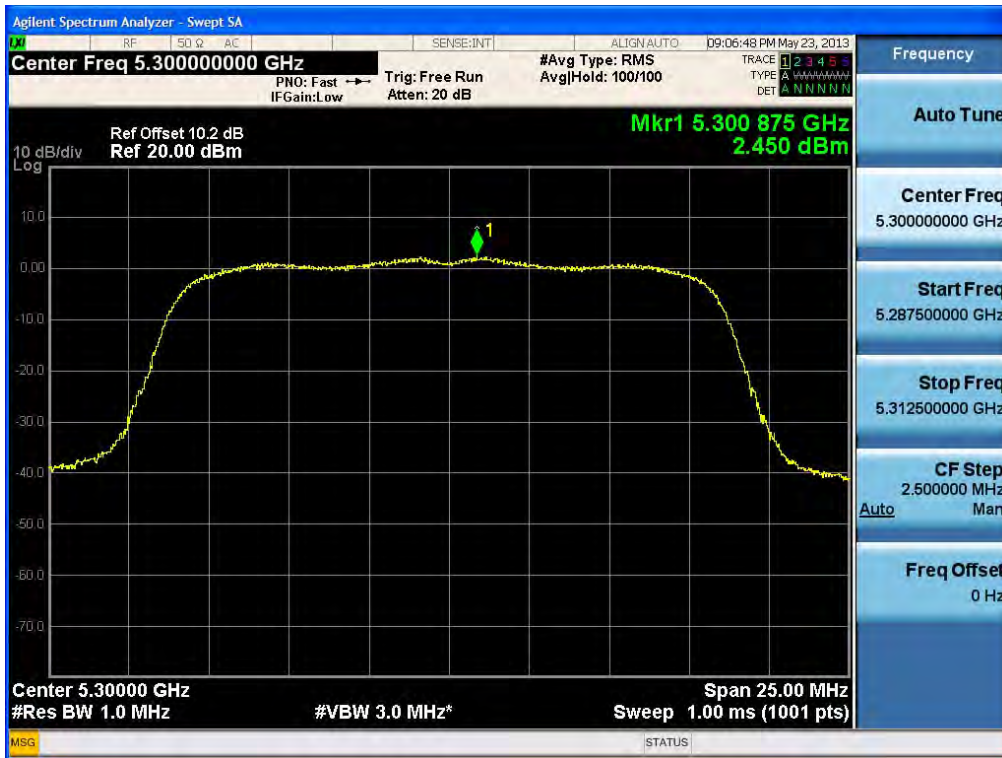


Power Spectral Density (802.11a-CH 52)

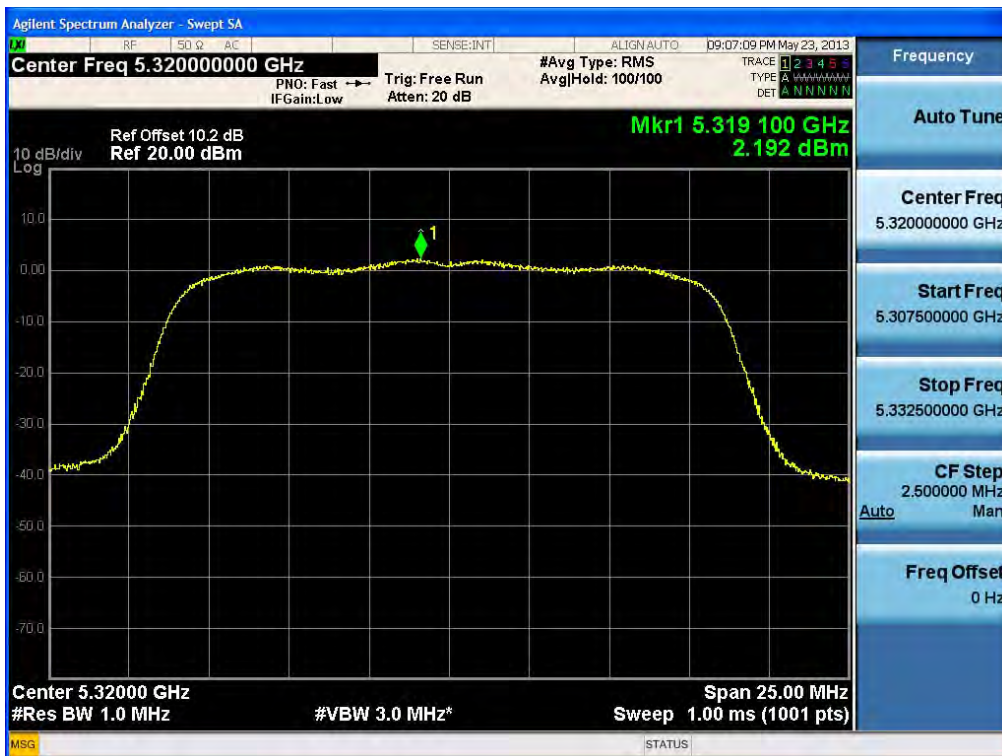


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

Power Spectral Density (802.11a-CH 60)



Power Spectral Density (802.11a-CH 64)

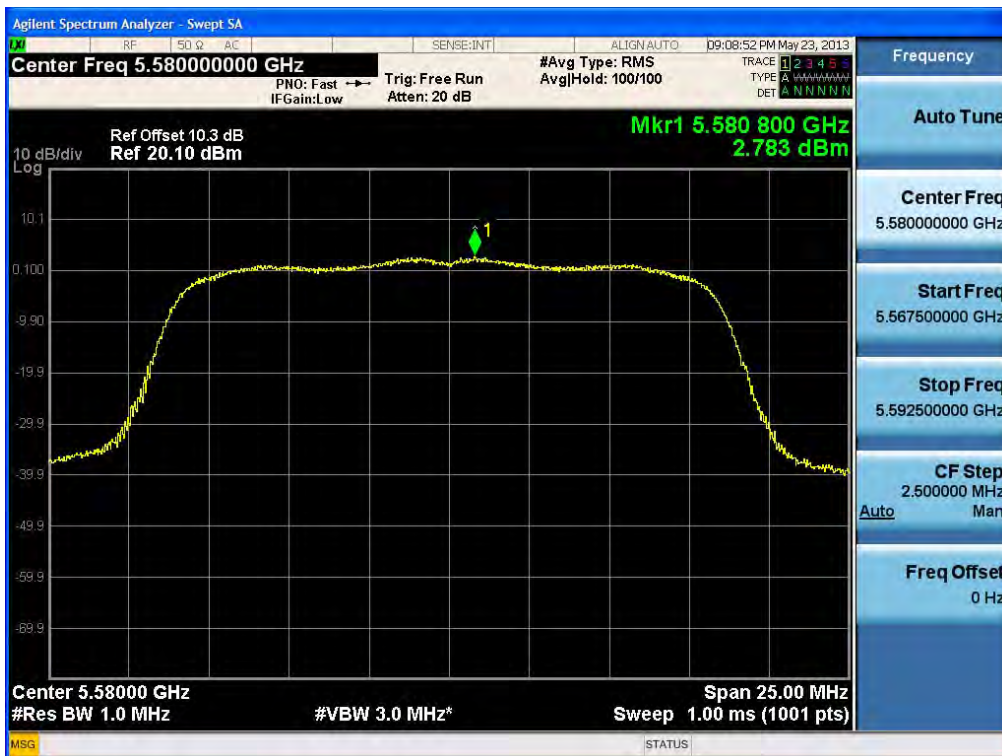


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

Power Spectral Density (802.11a-CH 100)



Power Spectral Density (802.11a-CH 116)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

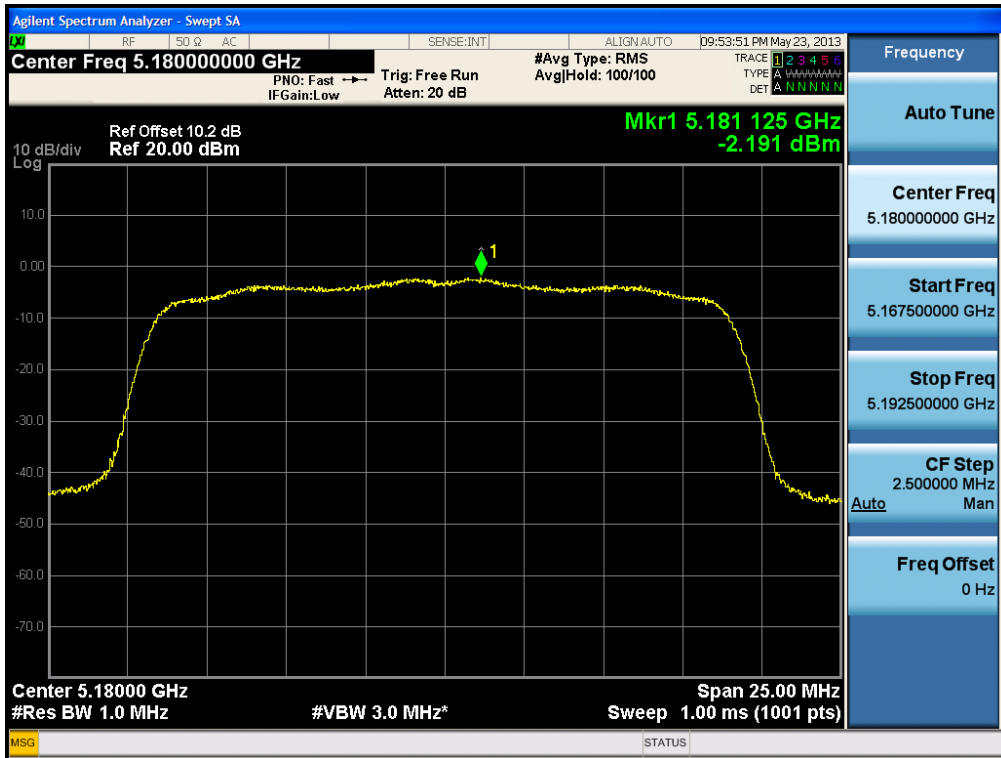
Power Spectral Density (802.11a-CH 140)



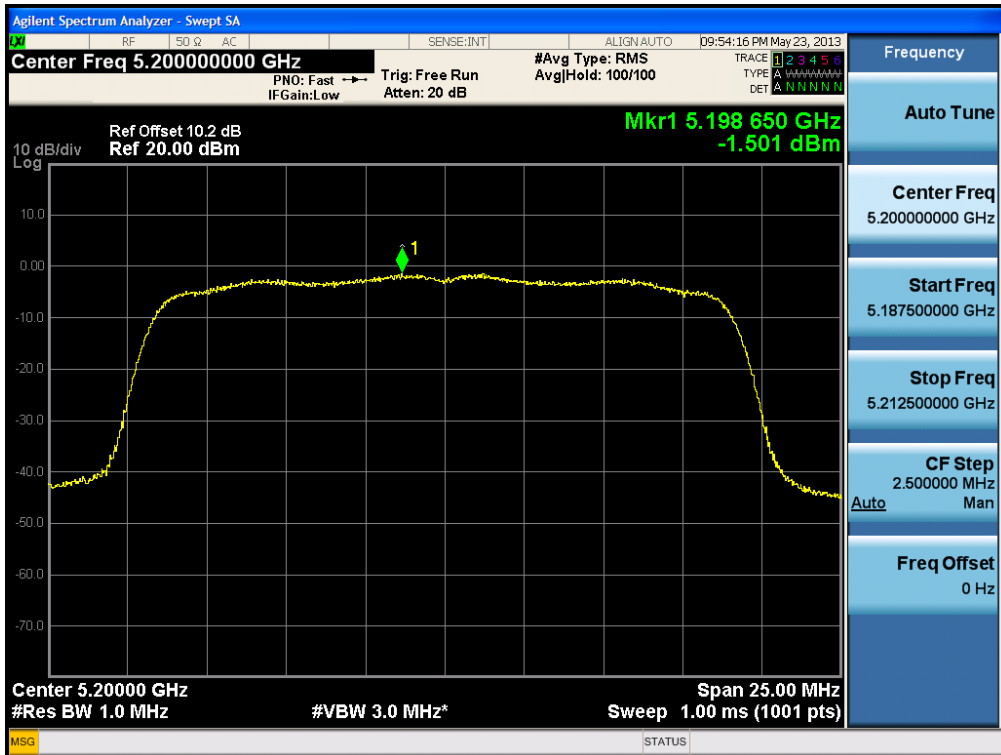
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIF1802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

20 MHz BW

Power Spectral Density (802.11n-CH 36)

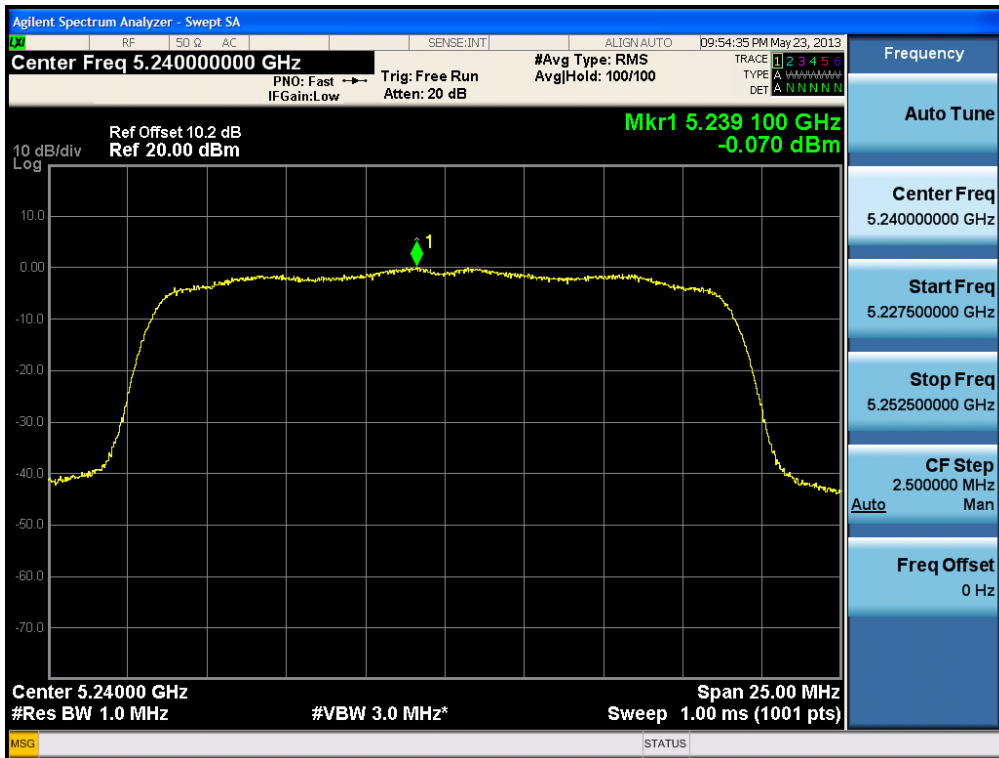


Power Spectral Density (802.11n-CH 40)

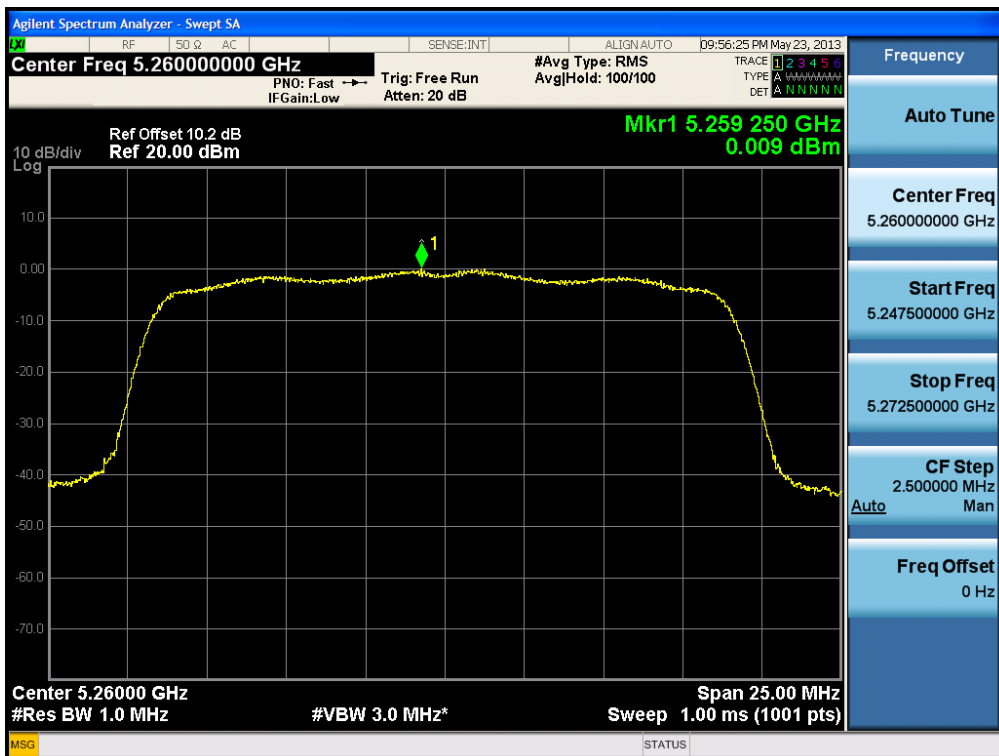


FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIF1802.11 a/b/g/n(2.4/5GHz)/NFC		FCC ID: ZNFE989

Power Spectral Density (802.11n-CH 48)

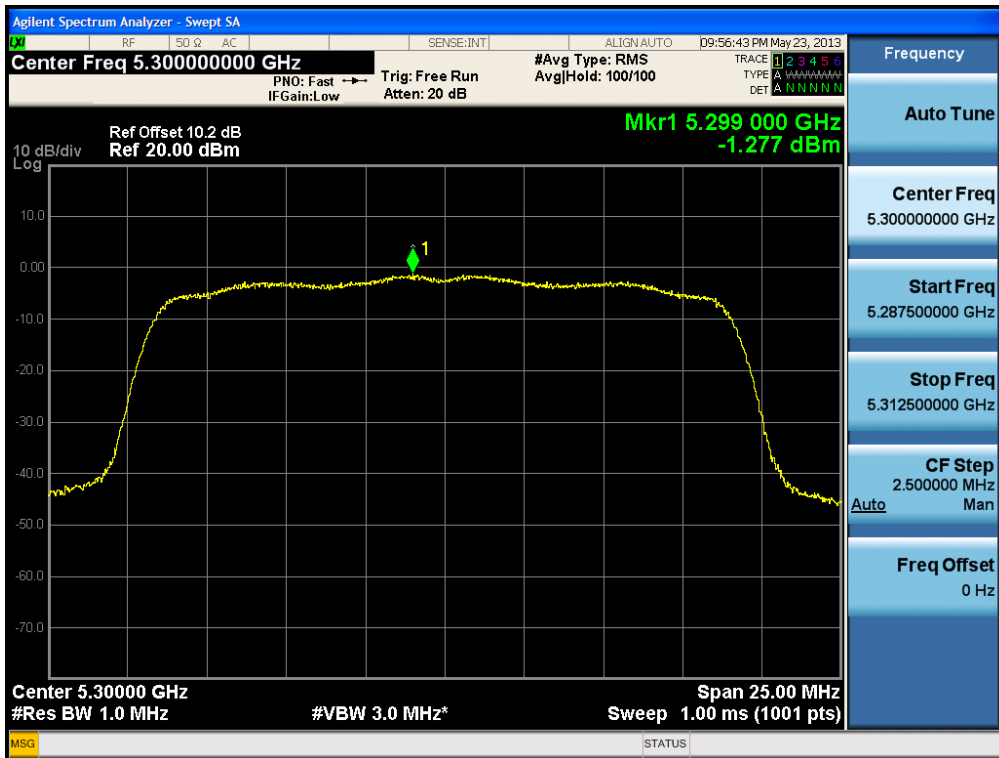


Power Spectral Density (802.11n-CH 52)

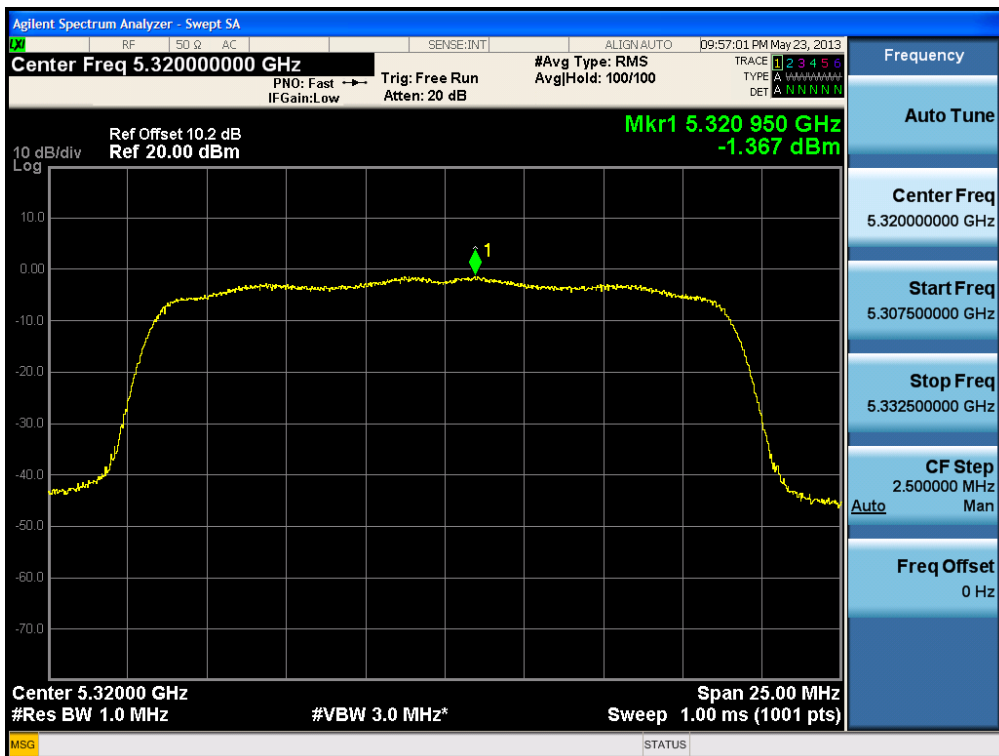


FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIF1802.11 a/b/g/n(2.4/5GHz)/NFC		FCC ID: ZNFE989

Power Spectral Density (802.11n-CH 60)

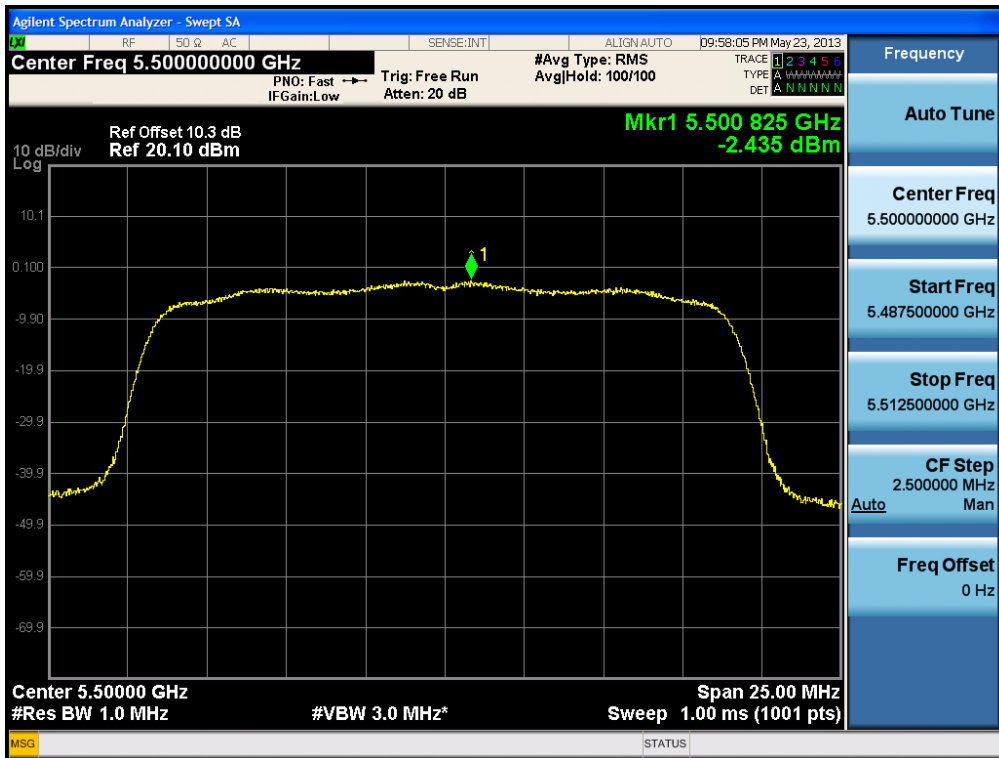


Power Spectral Density (802.11n-CH 64)

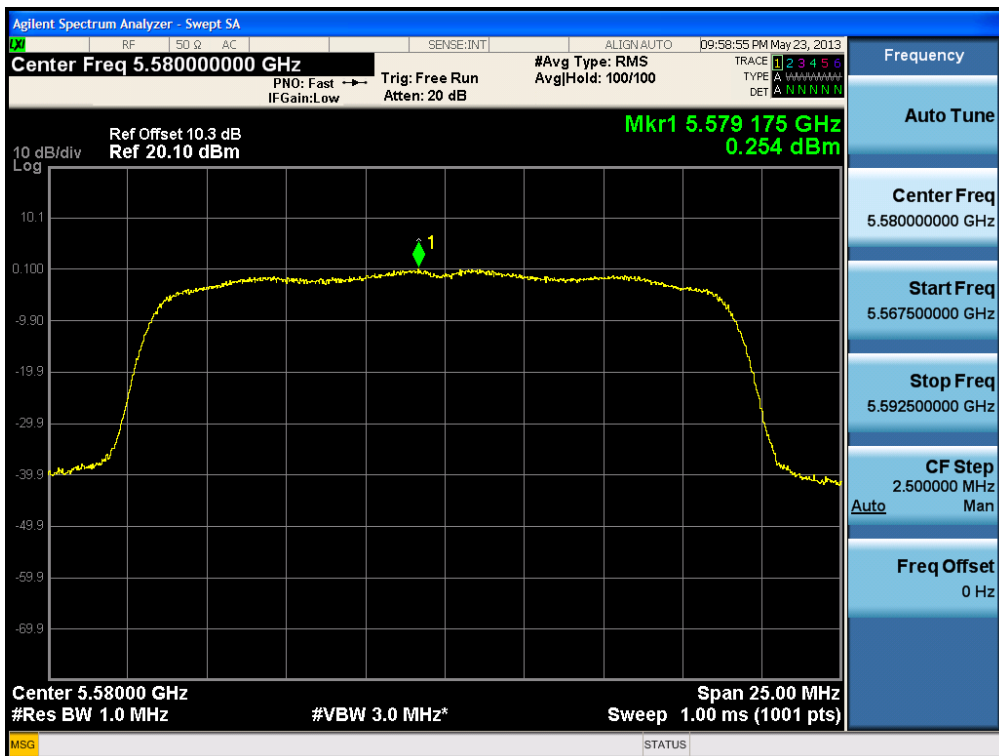


FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC		FCC ID: ZNFE989

Power Spectral Density (802.11n-CH 100)

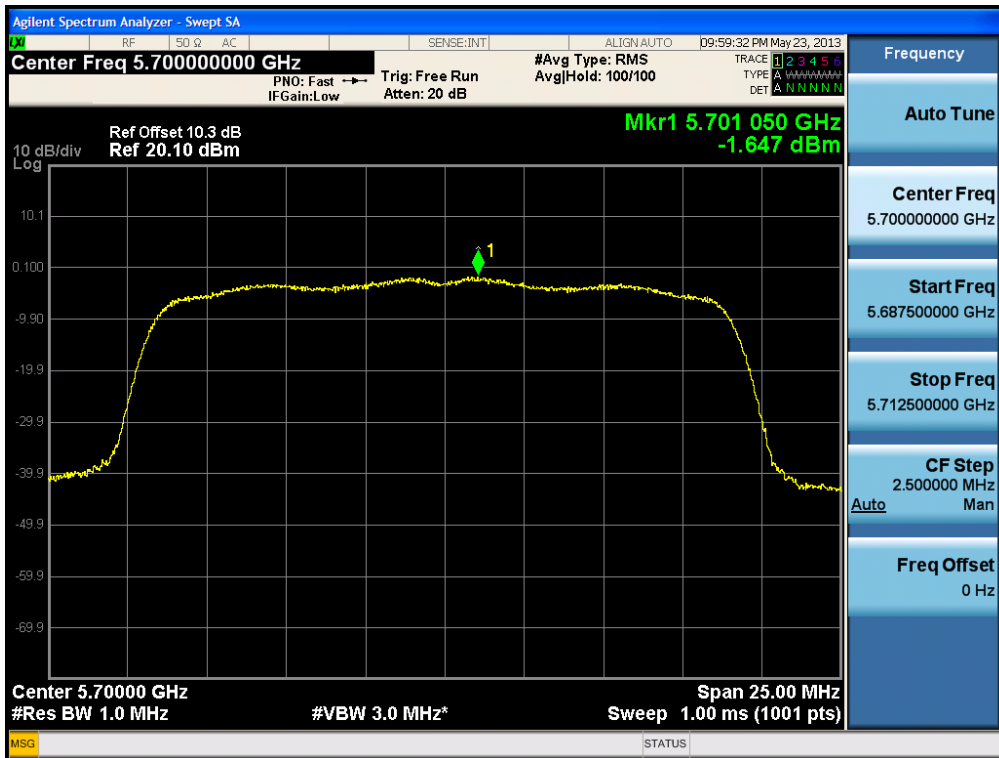


Power Spectral Density (802.11n-CH 116)



FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC		FCC ID: ZNFE989

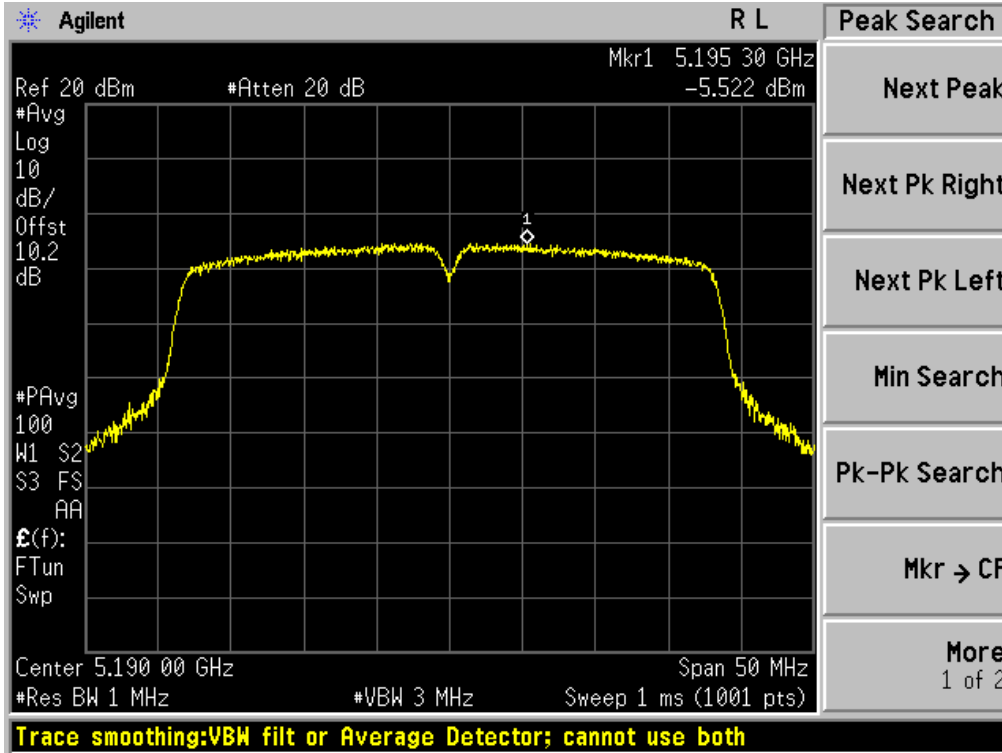
Power Spectral Density (802.11n-CH 140)



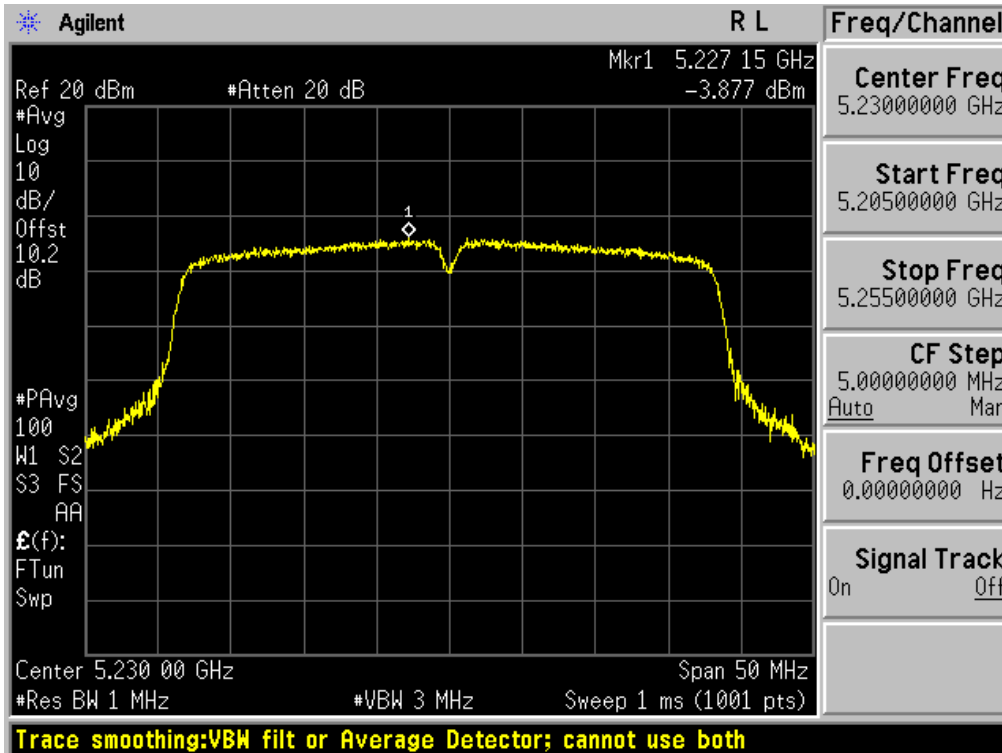
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIF1802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989	

40 MHz BW

Power Spectral Density (802.11n-CH 38)

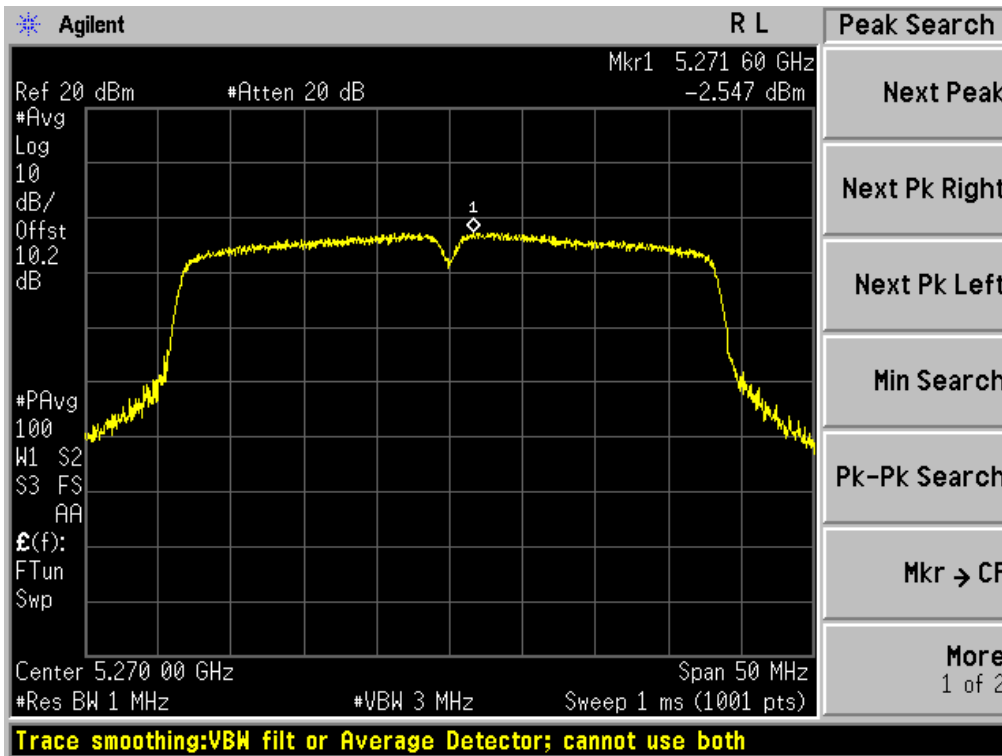


Power Spectral Density (802.11n-CH 46)

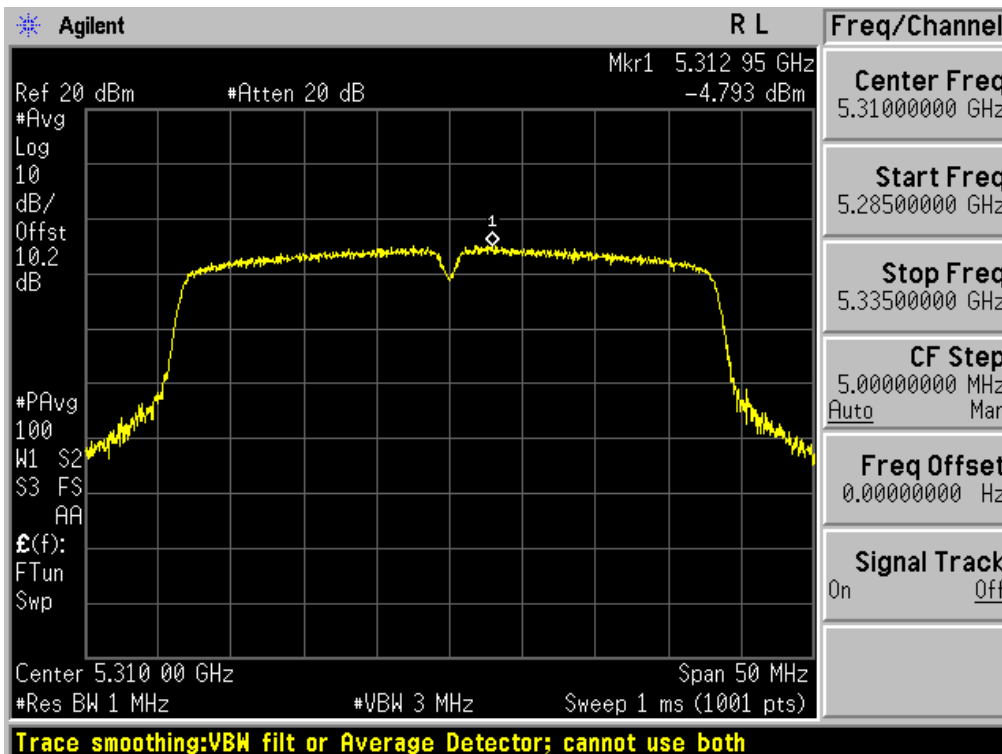


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIF1802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

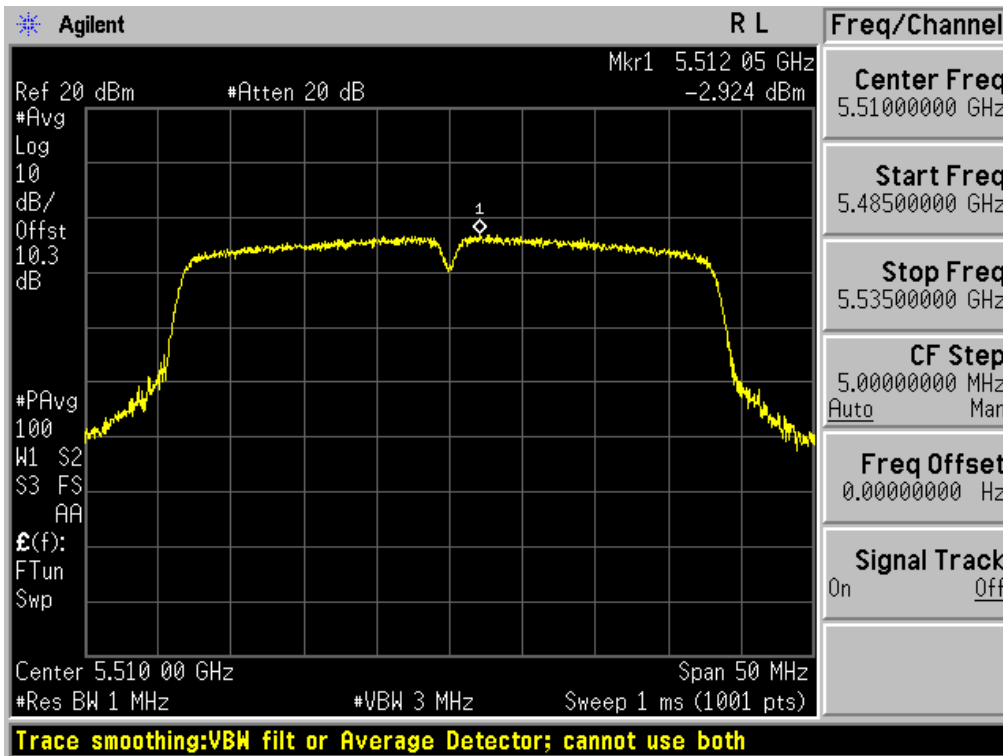
Power Spectral Density (802.11n-CH 54)



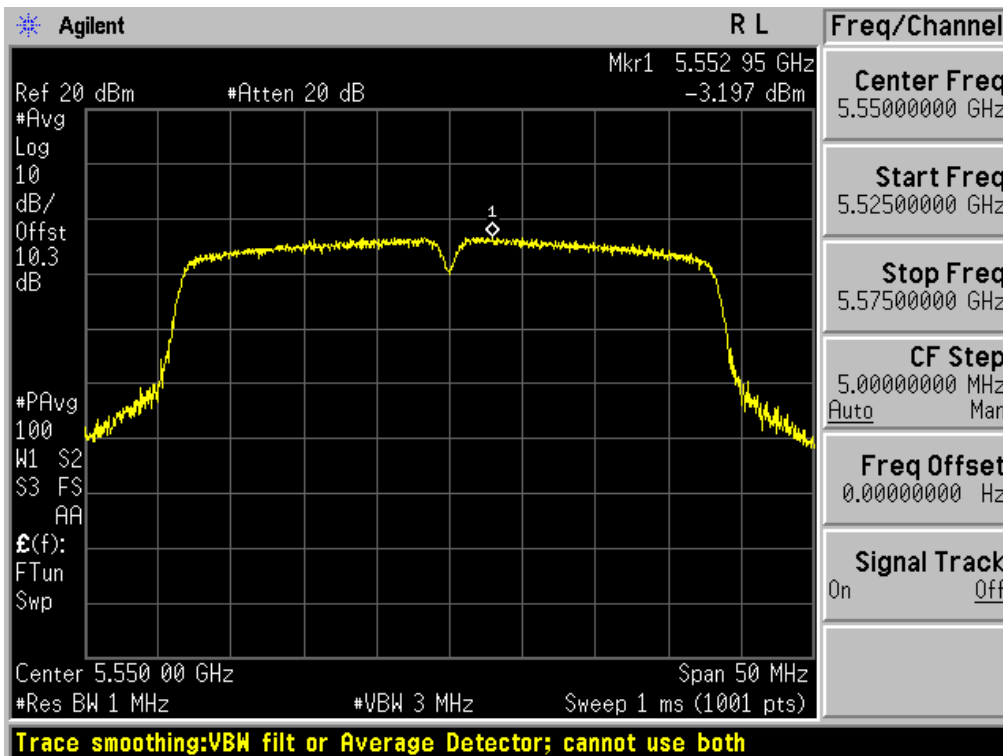
Power Spectral Density (802.11n-CH 62)



Power Spectral Density (802.11n-CH 102)

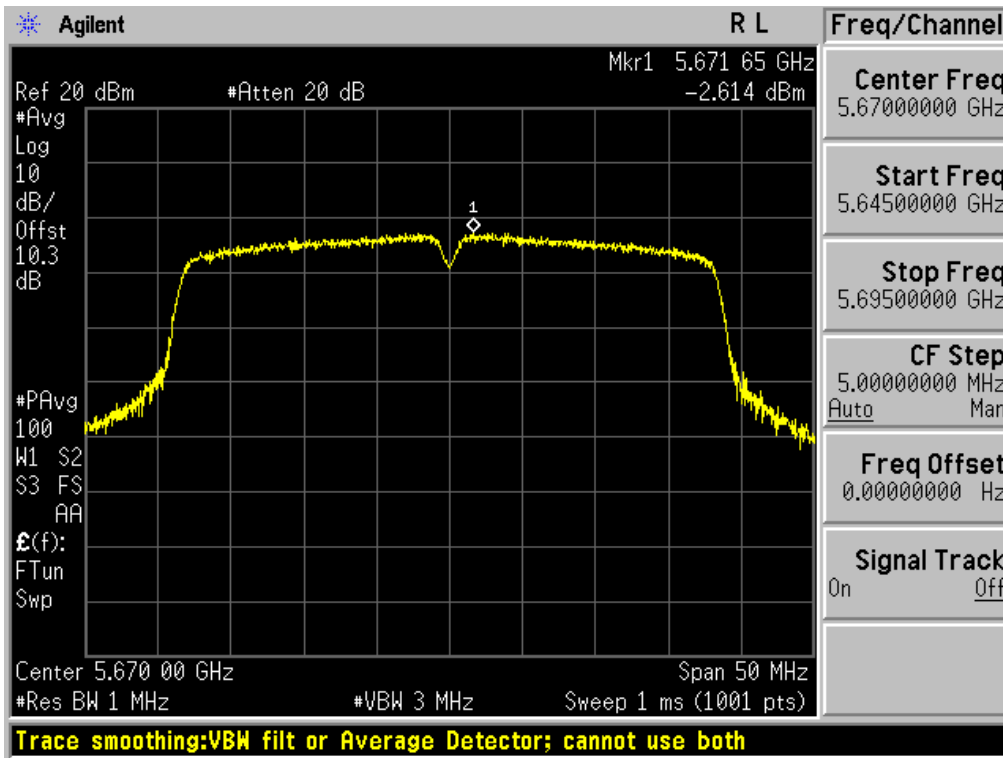


Power Spectral Density (802.11n-CH 110)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIF1802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

Power Spectral Density (802.11n-CH 134)

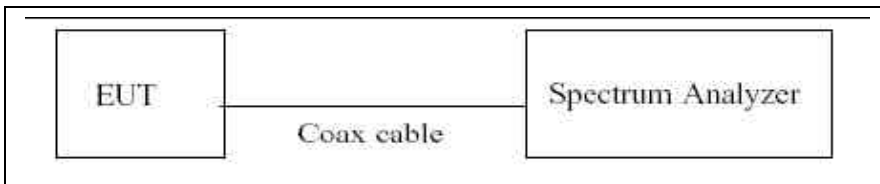


FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC		FCC ID: ZNFE989

8.5 PEAK EXCURSION RATIO

The spectrum analyzer was connected to the antenna terminal while the EUT was operating in the continuous transmission mode at the appropriate center frequencies. The largest permissible difference between the modulation envelope(measured using a peak hold function) and the maximum conducted output power 13 dB/MHz.

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

We tested according to KDB 789033(issued 04/08/2013).

The spectrum analyzer is set to :

1. Span = Set the span to view the entire emission bandwidth.
2. RBW = 1 MHz
3. VBW \geq 3 MHz
4. Detector Mode = Peak
5. Trace Mode = Max hold
6. Allow the sweeps to continue until the trace stabilizes.
7. Use the peak search function to find the peak of the spectrum.
8. Use the procedure to measure the PPSD
9. Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

Note :

1. The PSD results in plot is already including the actual values of loss for the attenuator and cable combination.
2. Spectrum offset = Attenuator loss + Cable loss
3. We apply to the offset in the 5.2 GHz, 5.3 GHz and 5.6 GHz range that was rounded off to the closest tenth dB. Actual value of loss for the attenuator and cable combination is below table.

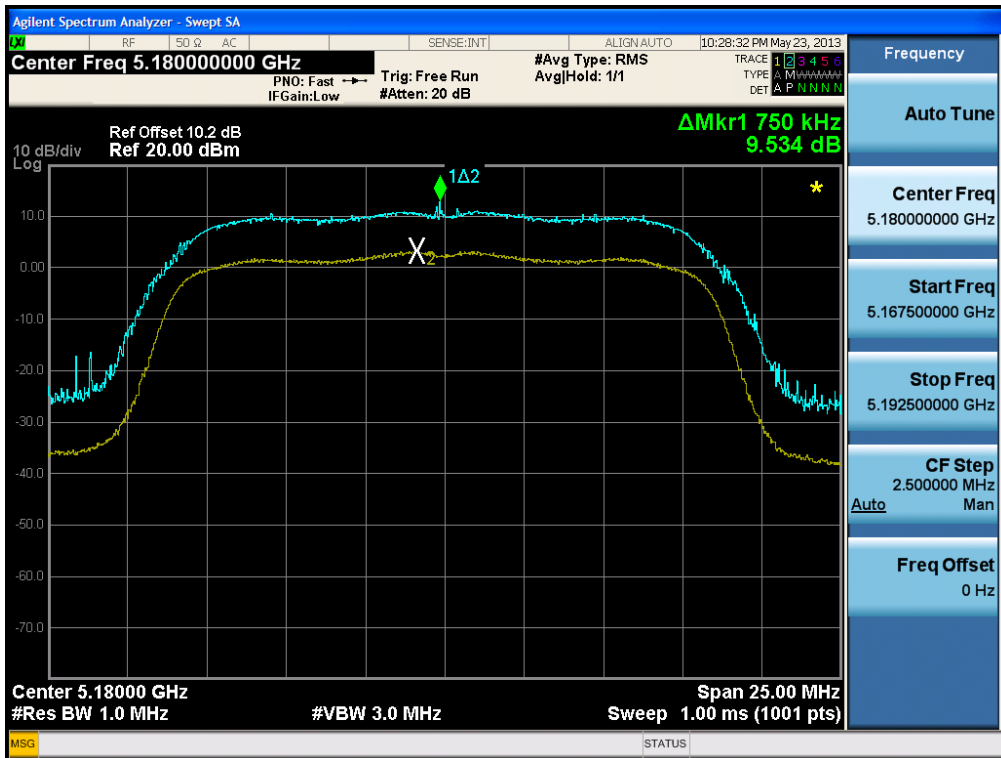
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC		FCC ID: ZNFE989

Band	Frequency(MHz)	Loss(dB)
UNII 1	5180	10.26
	5190	10.22
	5200	10.18
	5230	10.19
	5240	10.19
UNII 2	5260	10.18
	5270	10.17
	5300	10.14
	5310	10.11
	5320	10.09
UNII 3	5500	10.20
	5510	10.20
	5550	10.23
	5580	10.24
	5670	10.36
	5700	10.40

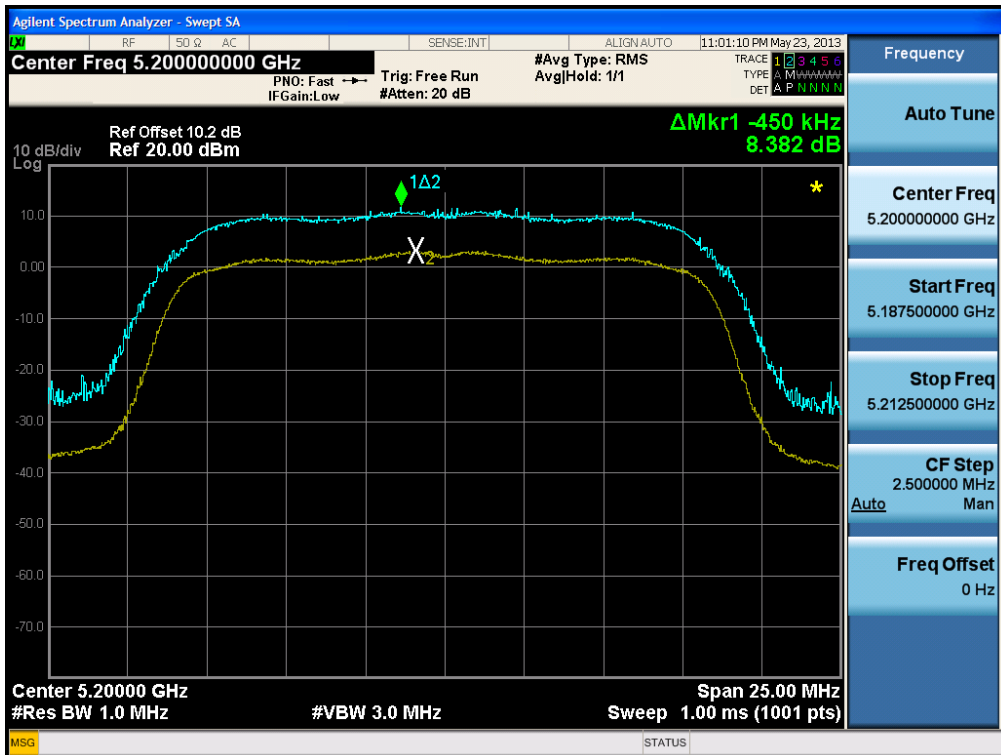
(Actual value of loss for the attenuator and cable combination)

RESULT PLOTS

Peak Excursion Ratio (802.11a-CH 36)

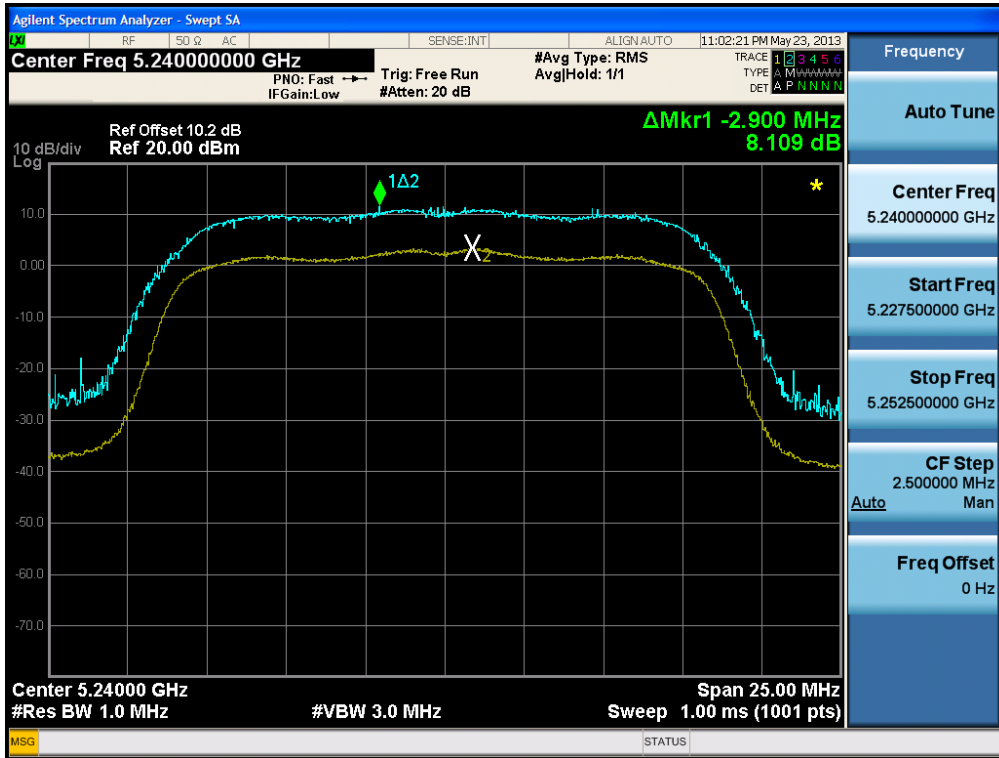


Peak Excursion Ratio (802.11a-CH 40)

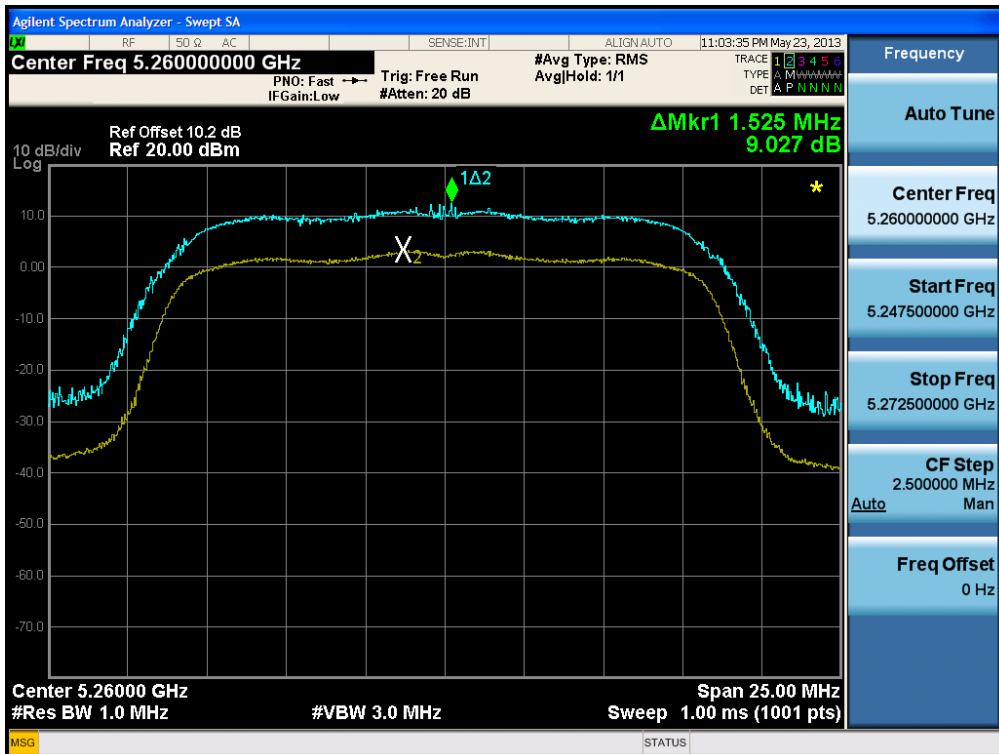


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIF1802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

Peak Excursion Ratio (802.11a-CH 48)

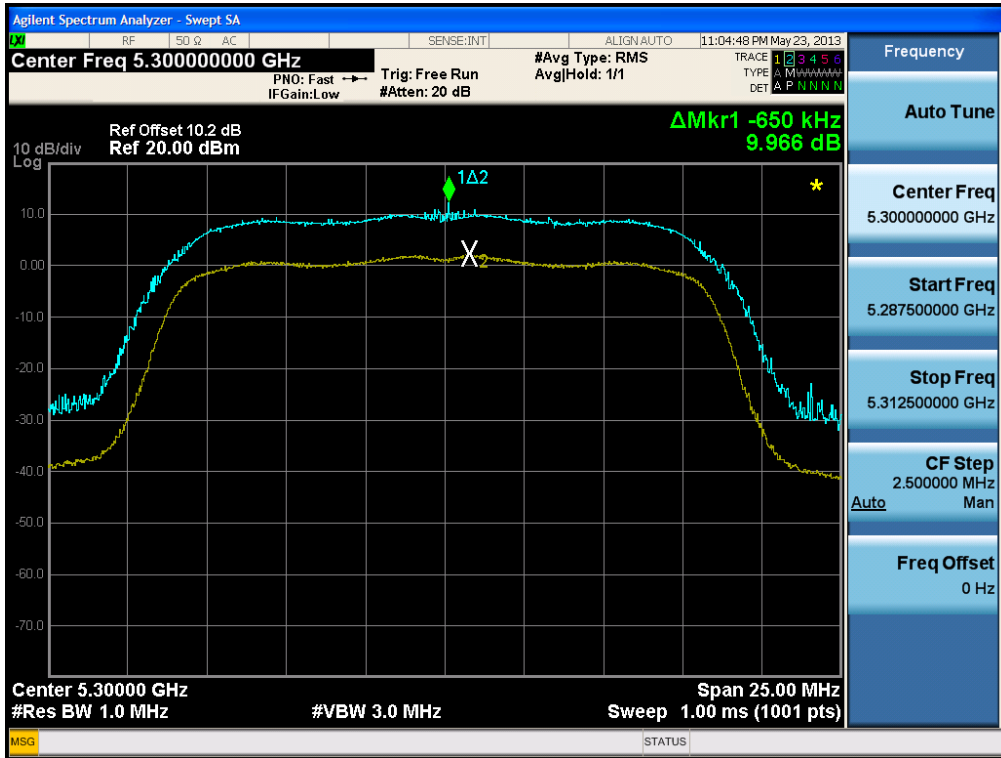


Peak Excursion Ratio (802.11a-CH 52)

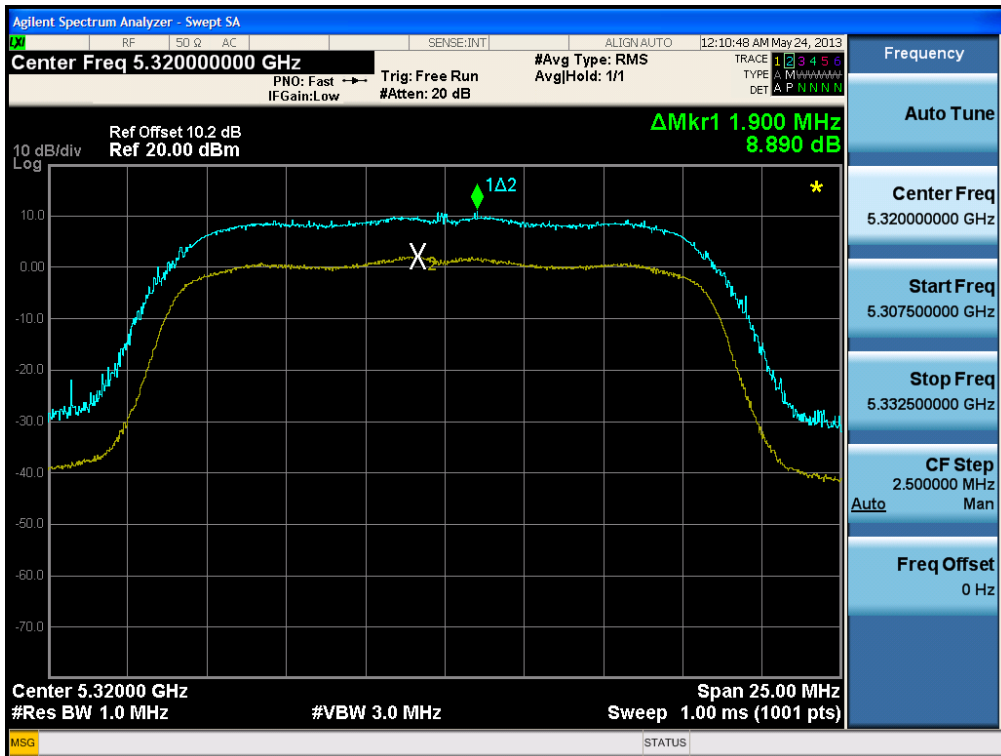


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

Peak Excursion Ratio (802.11a-CH 60)

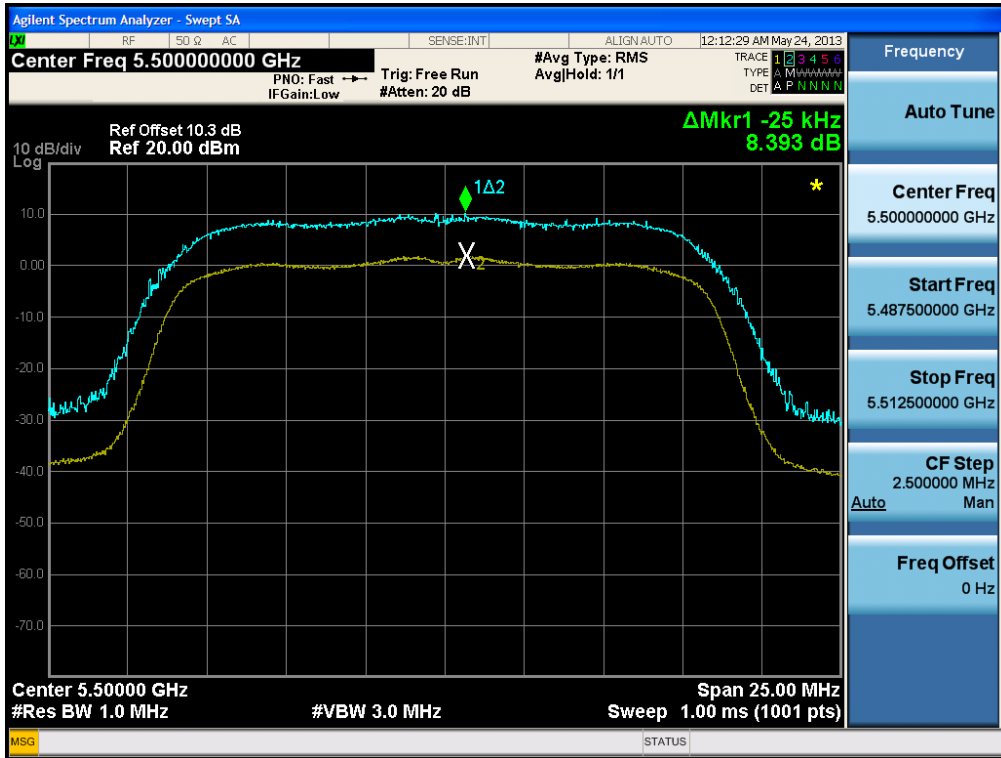


Peak Excursion Ratio (802.11a-CH 64)

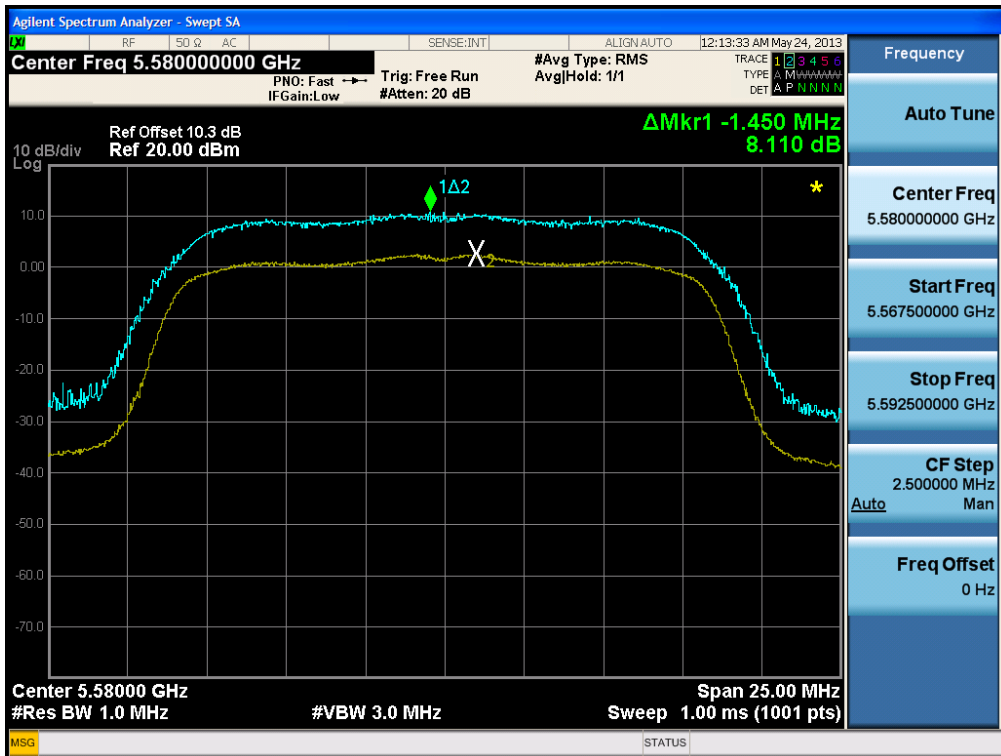


FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIF1802.11 a/b/g/n(2.4/5GHz)/NFC		FCC ID: ZNFE989

Peak Excursion Ratio (802.11a-CH 100)

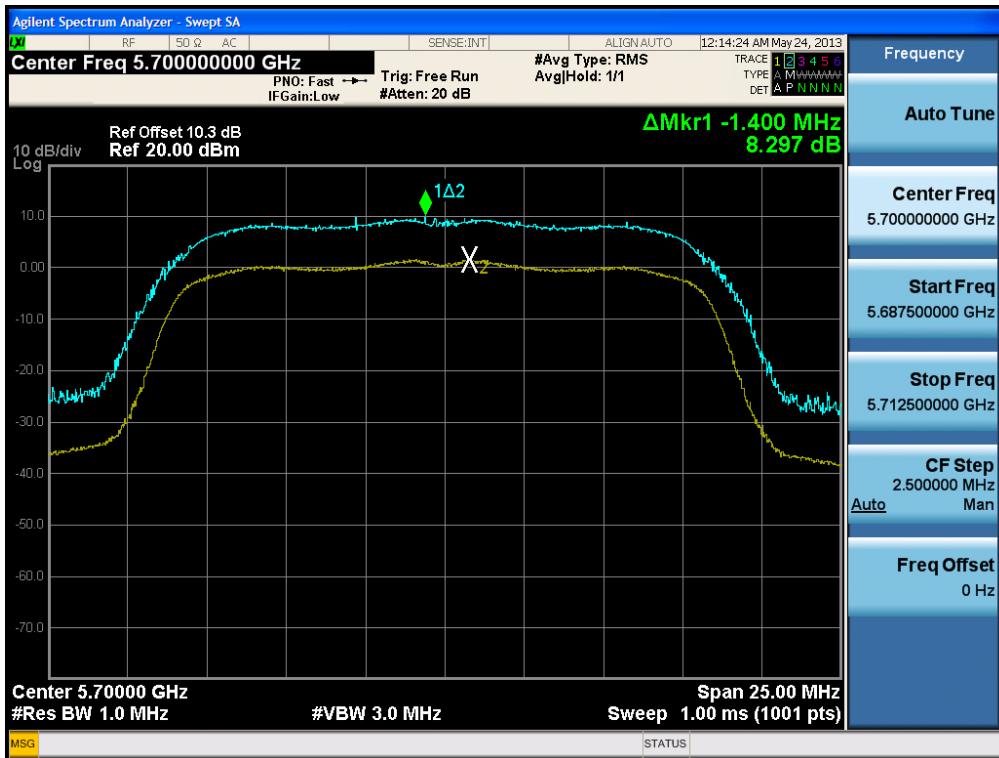


Peak Excursion Ratio (802.11a-CH 116)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

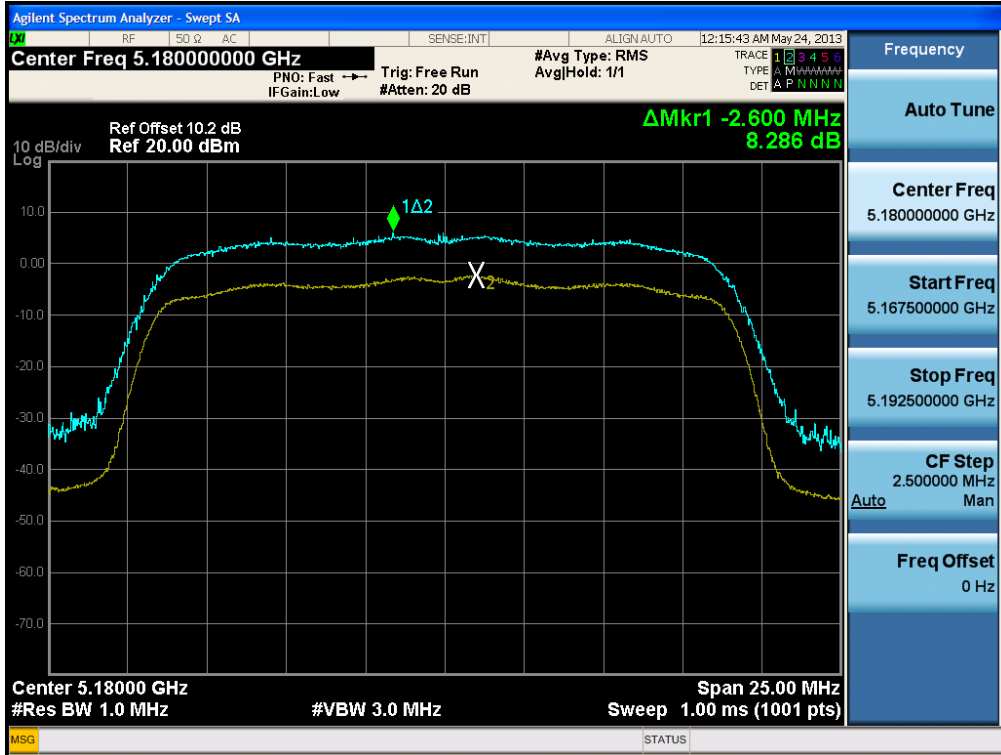
Peak Excursion Ratio (802.11a-CH 140)



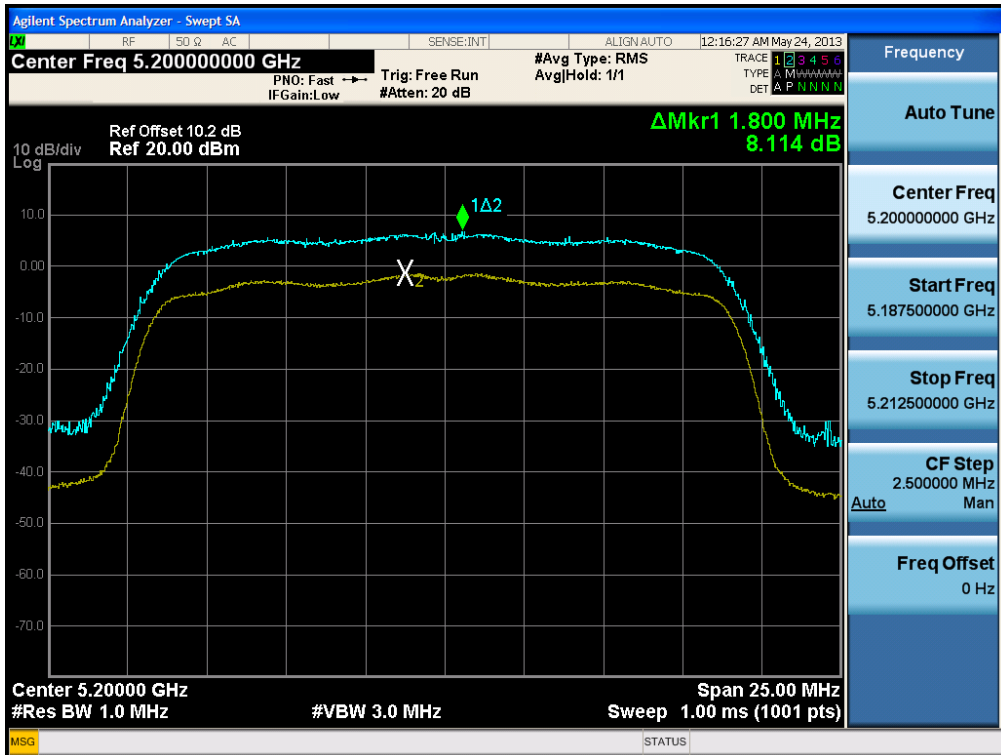
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIF1802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989	

20 MHz BW

Peak Excursion Ratio (802.11n-CH 36)

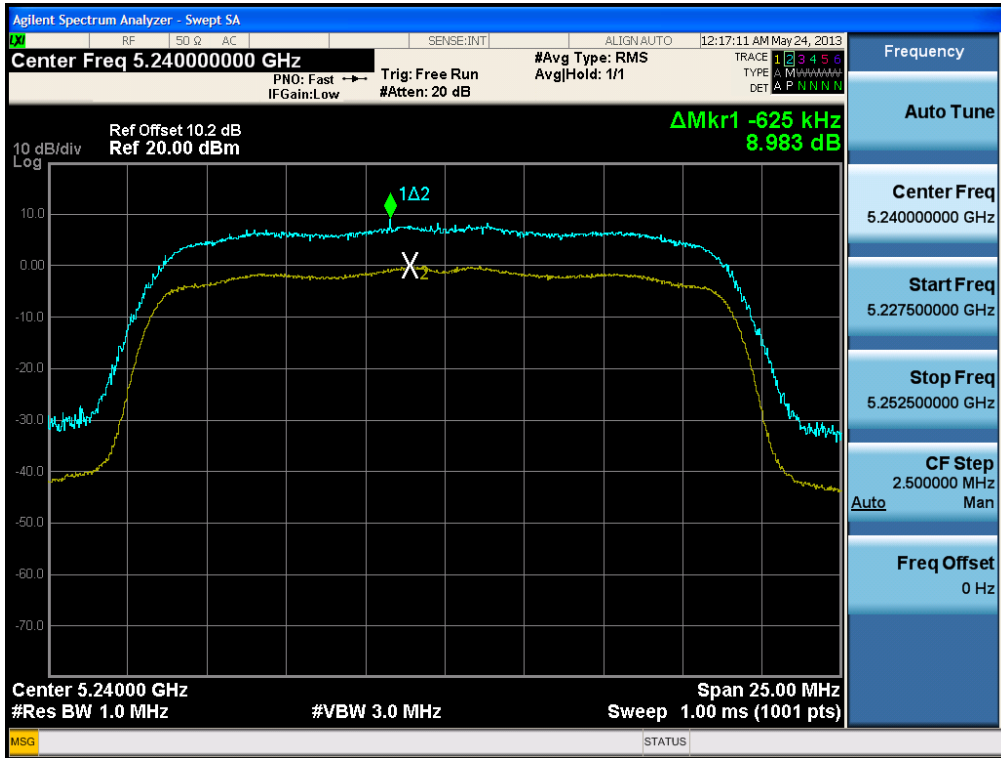


Peak Excursion Ratio (802.11n-CH 40)

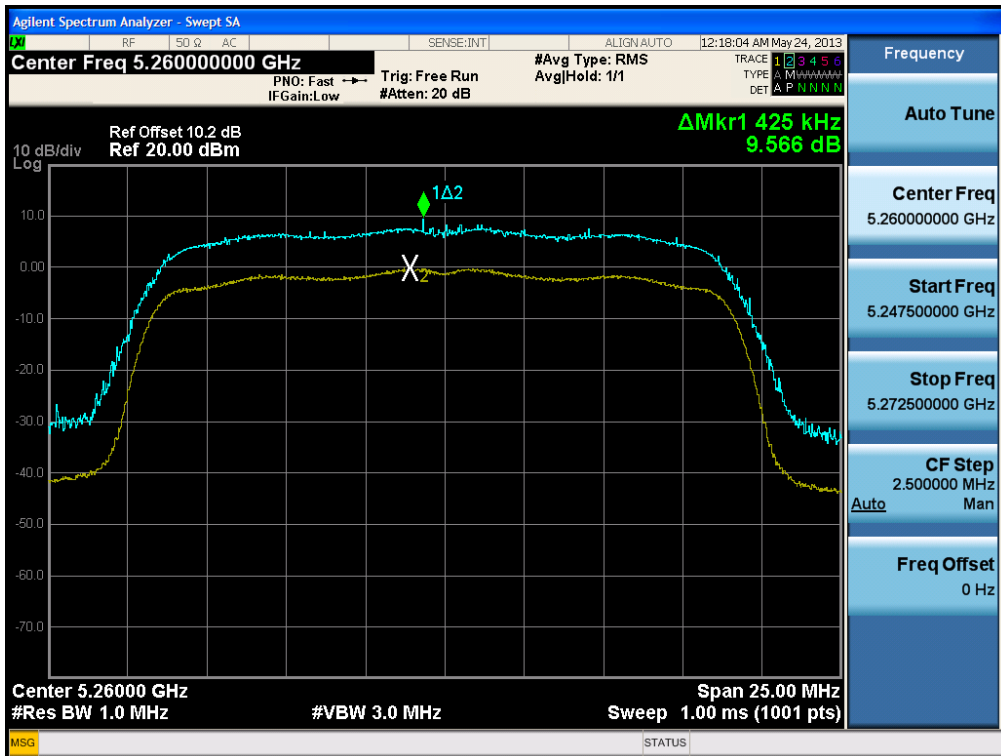


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIF1802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

Peak Excursion Ratio (802.11n-CH 48)

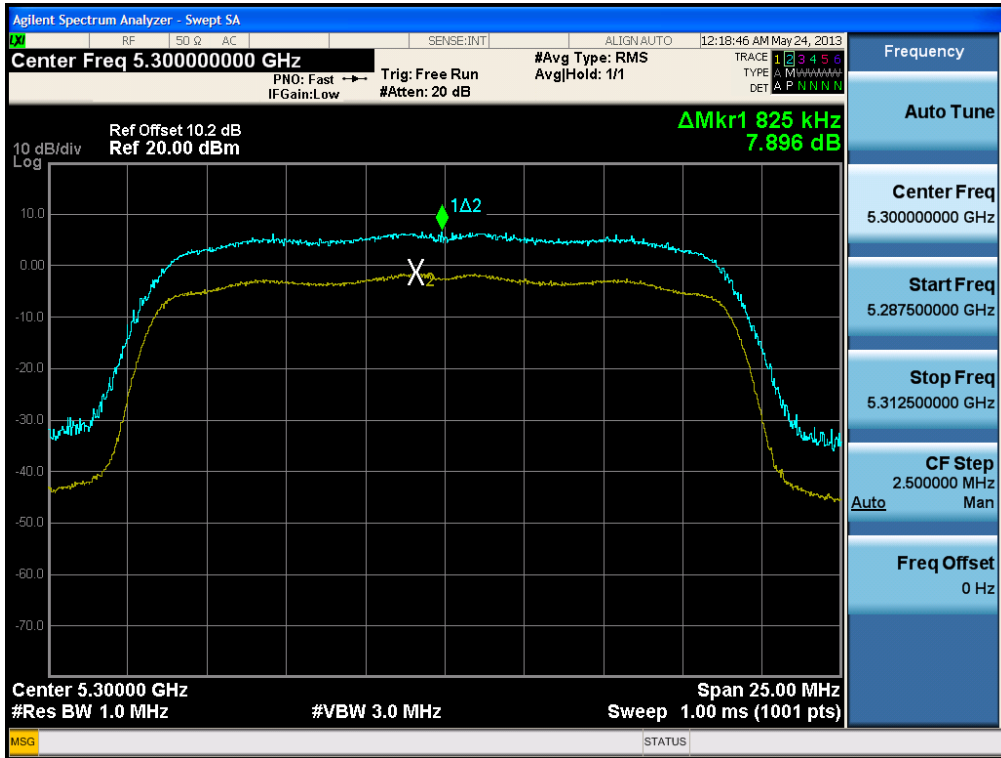


Peak Excursion Ratio (802.11n-CH 52)

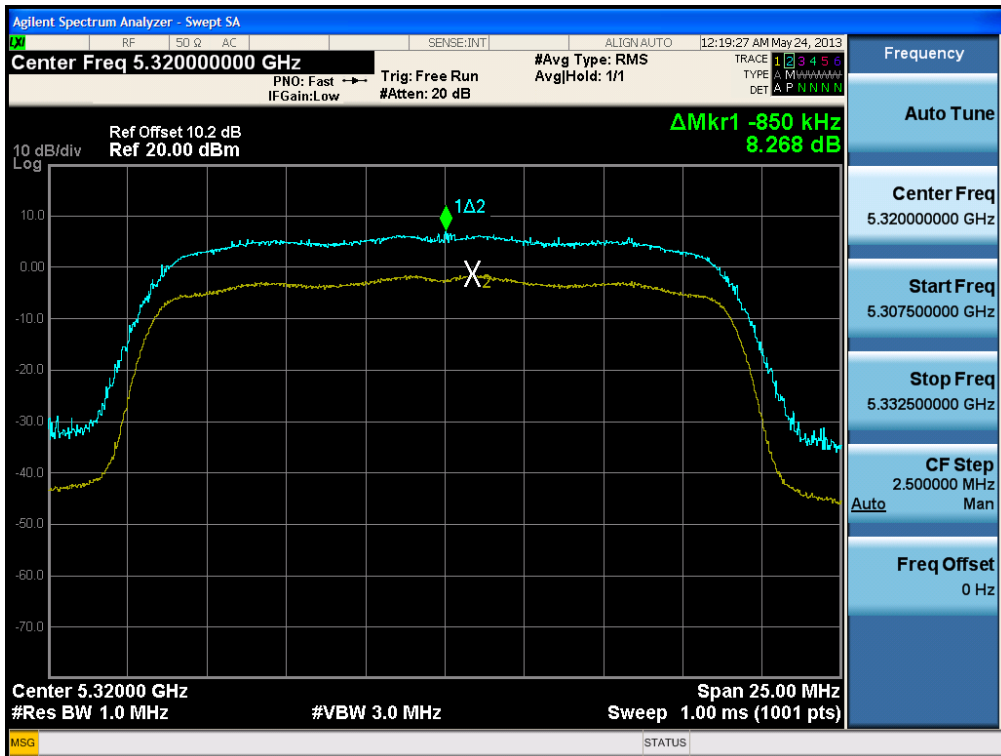


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

Peak Excursion Ratio (802.11n-CH 60)

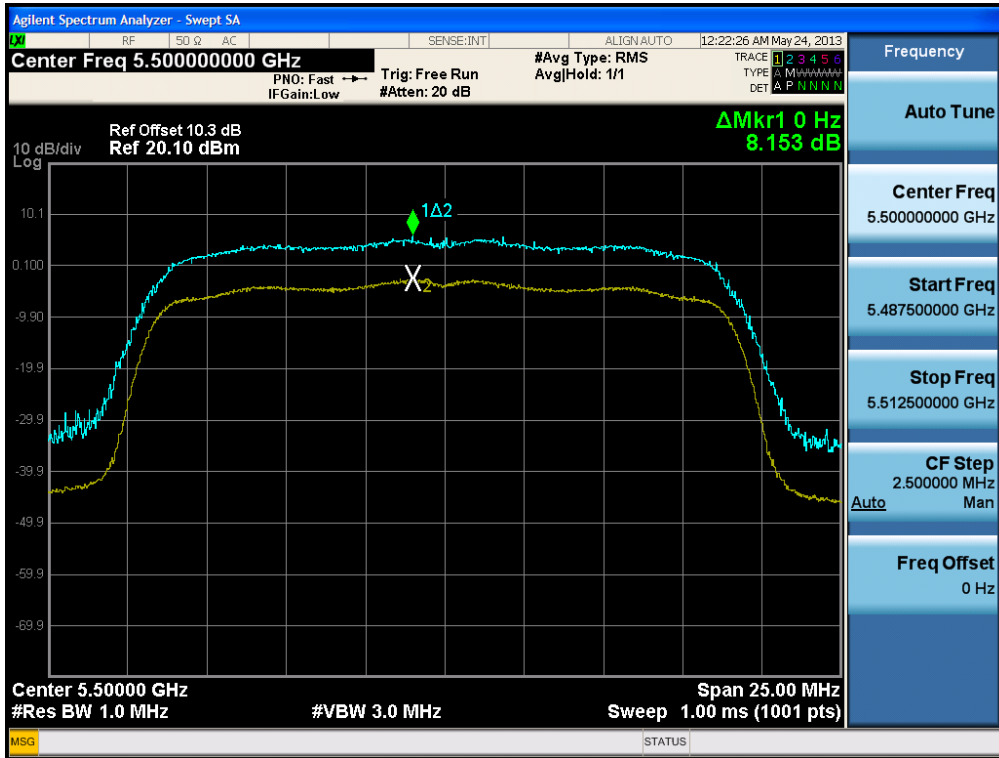


Peak Excursion Ratio (802.11n-CH 64)

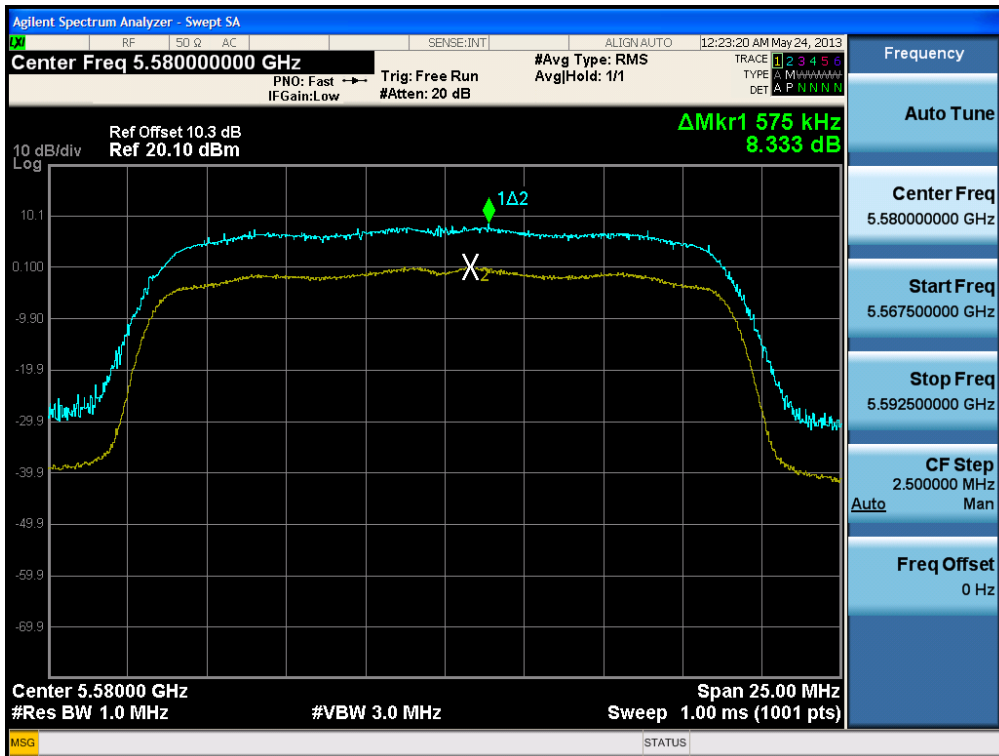


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

Peak Excursion Ratio (802.11n-CH 100)

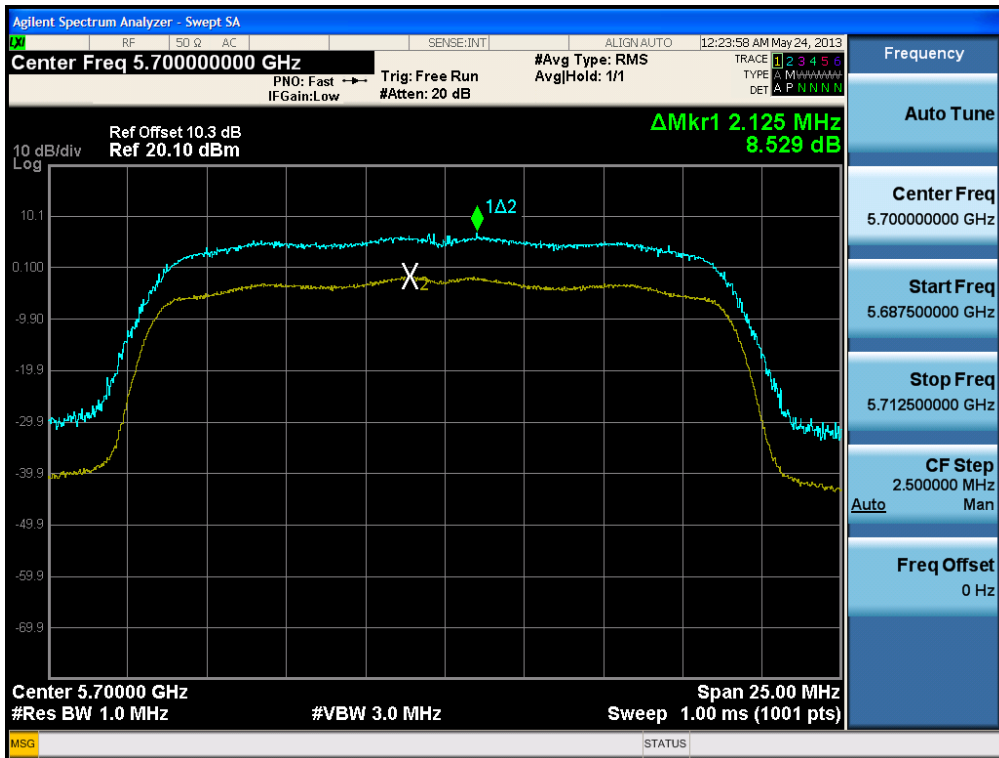


Peak Excursion Ratio (802.11n-CH 116)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

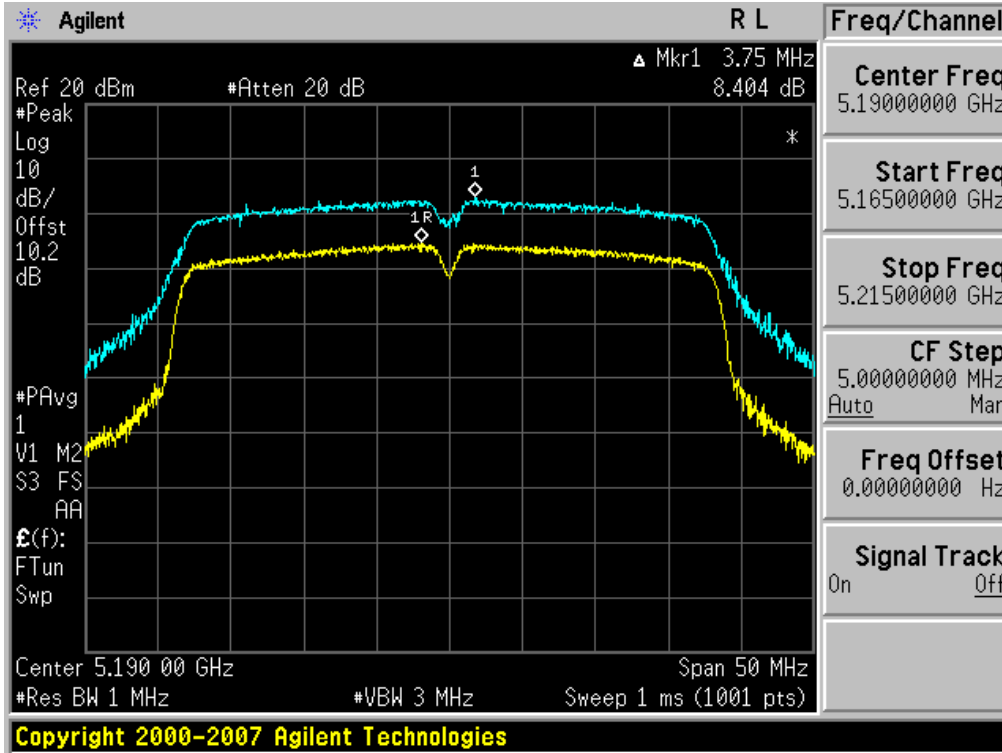
Peak Excursion Ratio (802.11n-CH 140)



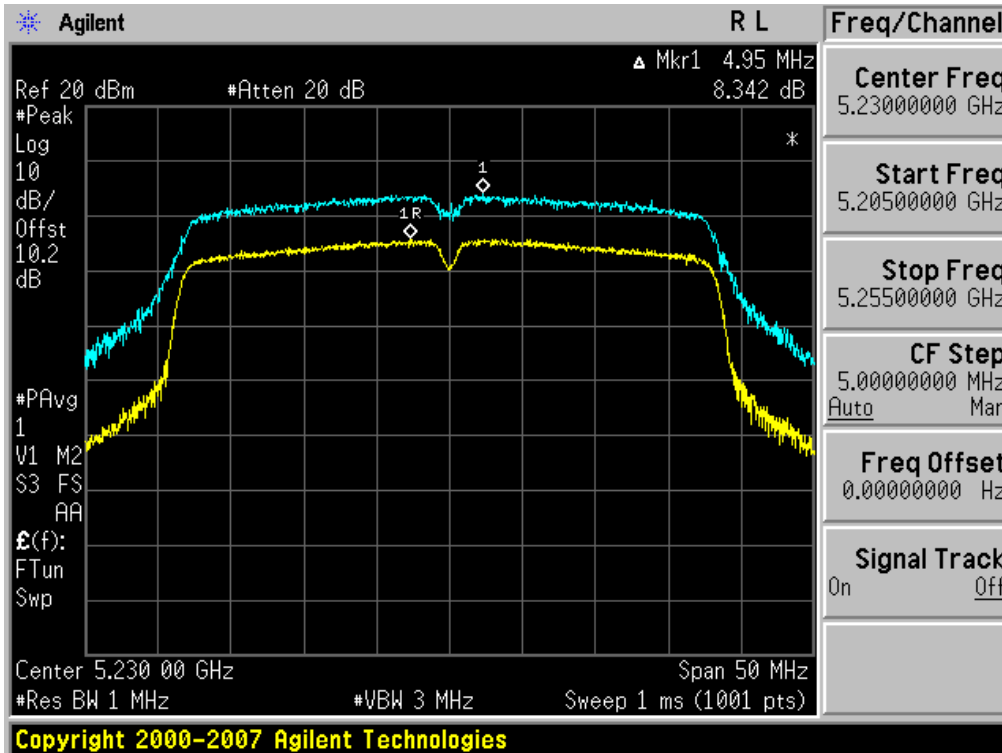
FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIF1802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989	

40 MHz BW

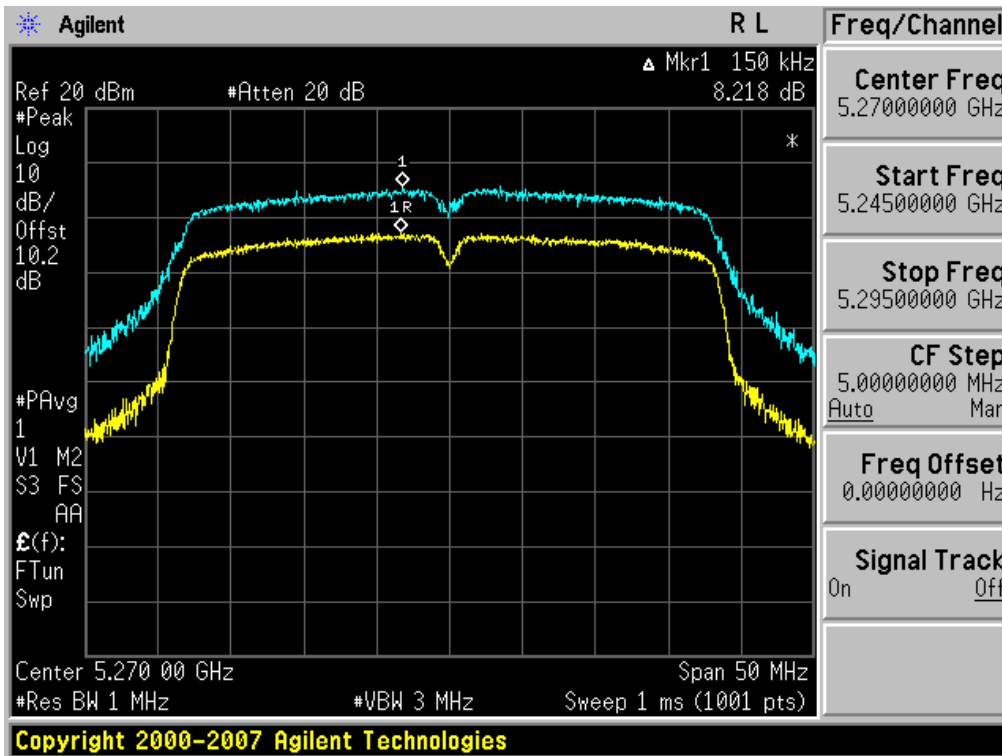
Peak Excursion Ratio (802.11n-CH 38)



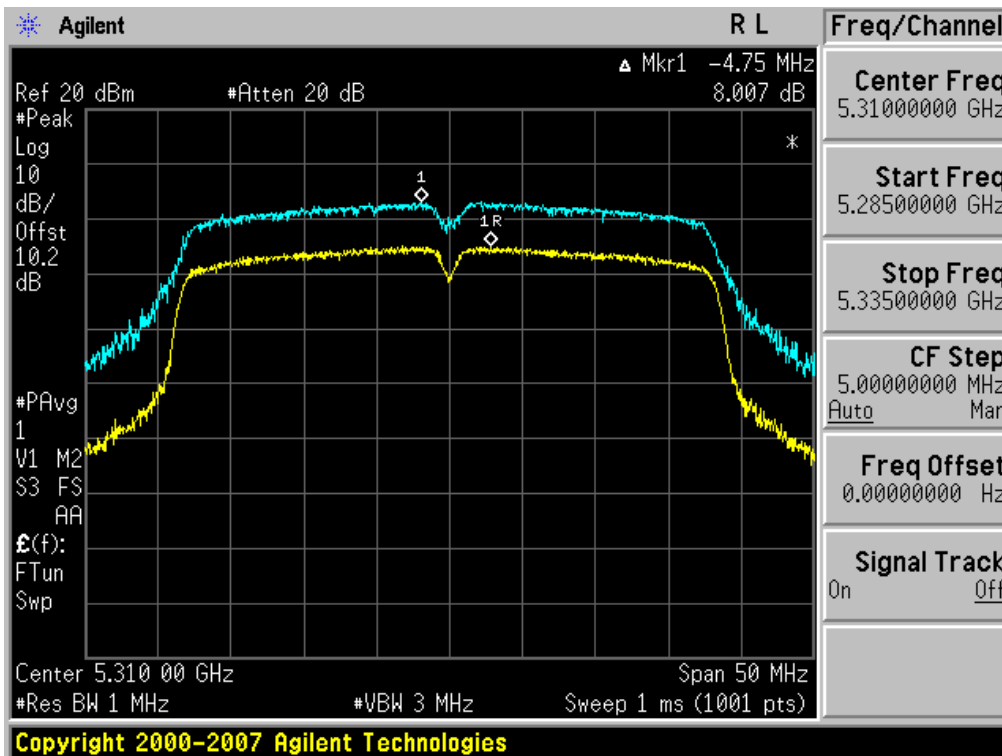
Peak Excursion Ratio (802.11n-CH 46)



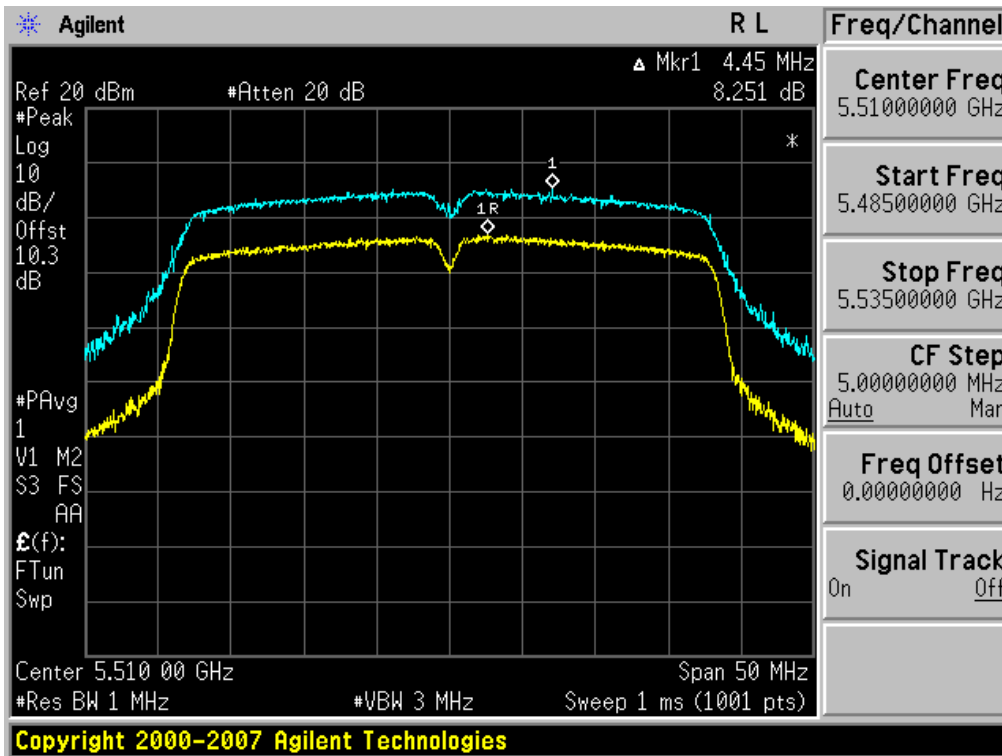
Peak Excursion Ratio (802.11n-CH 54)



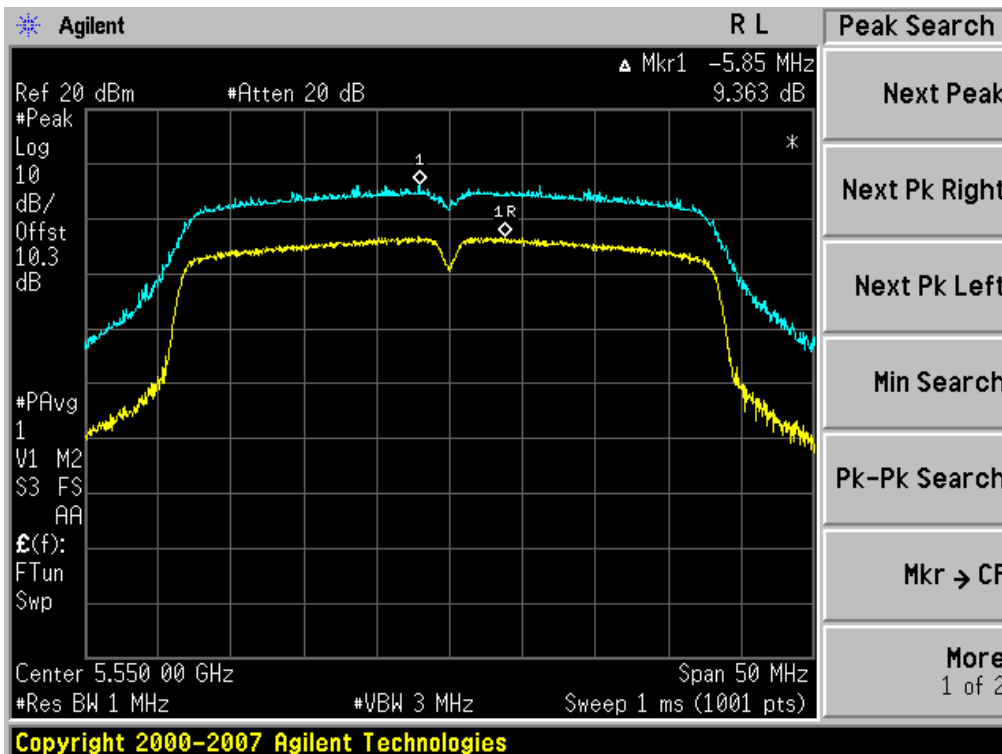
Peak Excursion Ratio (802.11n-CH 62)



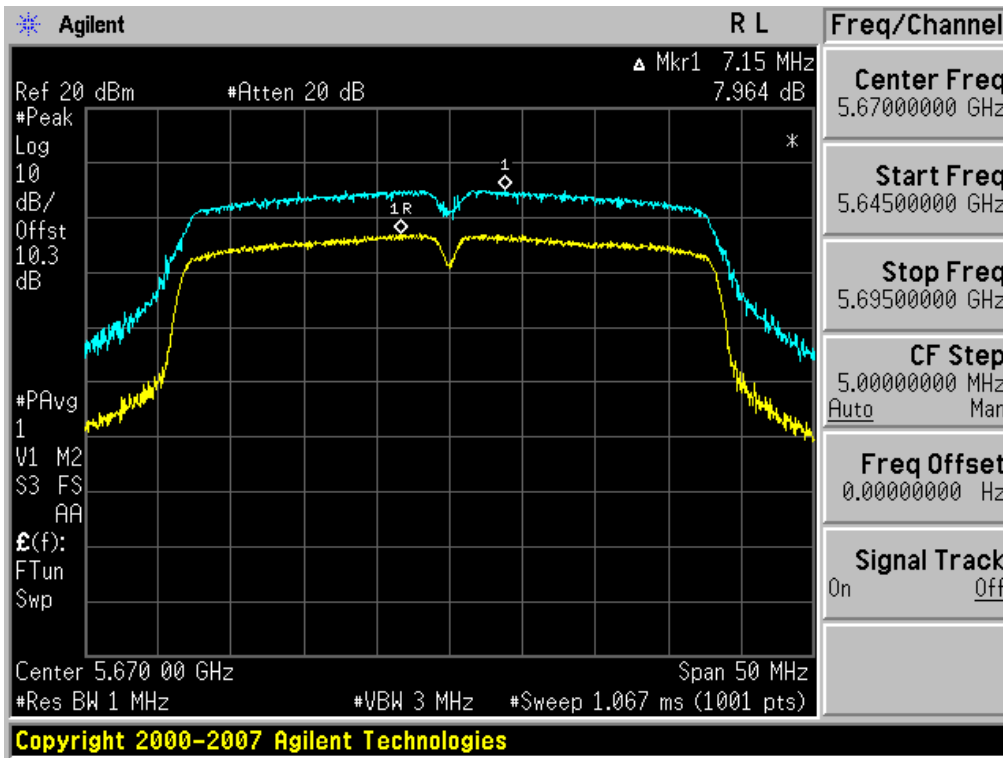
Peak Excursion Ratio (802.11n-CH 102)



Peak Excursion Ratio (802.11n-CH 110)



Peak Excursion Ratio (802.11n-CH 134)



FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC		FCC ID: ZNFE989

8.6 FREQUENCY STABILITY.

The EUT was placed inside an environmental chamber as the temperature in the chamber was varied between -30 °C and 50 °C. The temperature was incremented by 10 °C intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded.

20 MHz BW

OPERATING BAND: UNII Band 1
 OPERATING FREQUENCY: 5,180,000,000 Hz
 CHANNEL: 36
 REFERENCE VOLTAGE: 3.8 VDC

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (kHz)	Frequency Error (kHz)
100%	3.800	+20(Ref)	5 179 949	-51.42
100%		-30	5 180 006	6.38
100%		-20	5 179 994	-5.89
100%		-10	5 179 978	-21.57
100%		0	5 179 970	-30.22
100%		+10	5 179 956	-44.14
100%		+30	5 179 941	-58.70
100%		+40	5 179 937	-63.44
100%		+50	5 179 933	-67.25
115%		4.370	+20	5 179 948
Batt. Endpoint	3.500	+20	5 179 949	-51.36

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2
 OPERATING FREQUENCY: 5,260,000,000 Hz
 CHANNEL: 52
 REFERENCE VOLTAGE: 3.8 VDC

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (kHz)	Frequency Error (kHz)
100%	3.800	+20(Ref)	5 259 947	-53.50
100%		-30	5 260 006	5.94
100%		-20	5 259 995	-5.44
100%		-10	5 259 980	-20.48
100%		0	5 259 968	-31.74
100%		+10	5 259 954	-45.82
100%		+30	5 259 942	-58.49
100%		+40	5 259 936	-64.15
100%		+50	5 259 932	-67.84
115%	4.370	+20	5 259 946	-54.10
Batt. Endpoint	3.500	+20	5 259 947	-53.30

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 3
 OPERATING FREQUENCY: 5,500,000,000 Hz
 CHANNEL: 100
 REFERENCE VOLTAGE: 3.8 VDC

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (kHz)	Frequency Error (kHz)
100%	3.800	+20(Ref)	5 499 942	-58.40
100%		-30	5 500 006	5.94
100%		-20	5 499 995	-5.37
100%		-10	5 499 977	-22.84
100%		0	5 499 966	-33.57
100%		+10	5 499 951	-49.24
100%		+30	5 499 939	-61.49
100%		+40	5 499 934	-65.55
100%		+50	5 499 929	-71.45
115%	4.370	+20	5 499 941	-58.90
Batt. Endpoint	3.500	+20	5 499 942	-58.00

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

40 MHz BW

OPERATING BAND: UNII Band 1
 OPERATING FREQUENCY: 5,190,000,000 Hz
 CHANNEL: 38
 REFERENCE VOLTAGE: 3.8 VDC

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (kHz)	Frequency Error (kHz)
100%	3.800	+20(Ref)	5 189 946	-54.44
100%		-30	5 190 006	5.88
100%		-20	5 189 995	-4.78
100%		-10	5 189 980	-20.48
100%		0	5 189 967	-32.57
100%		+10	5 189 951	-48.67
100%		+30	5 189 939	-61.49
100%		+40	5 189 935	-64.87
100%		+50	5 189 934	-66.48
115%	4.370	+20	5 189 945	-55.27
Batt. Endpoint	3.500	+20	5 189 946	-54.05

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2
 OPERATING FREQUENCY: 5,310,000,000 Hz
 CHANNEL: 62
 REFERENCE VOLTAGE: 3.8 VDC

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (kHz)	Frequency Error (kHz)
100%	3.800	+20(Ref)	5 309 944	-55.87
100%		-30	5 310 006	5.77
100%		-20	5 309 995	-4.67
100%		-10	5 309 979	-21.48
100%		0	5 309 968	-31.57
100%		+10	5 309 952	-47.57
100%		+30	5 309 938	-62.18
100%		+40	5 309 935	-65.37
100%		+50	5 309 931	-68.87
115%	4.370	+20	5 309 944	-56.07
Batt. Endpoint	3.500	+20	5 309 946	-54.17

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 3
 OPERATING FREQUENCY: 5,510,000,000 Hz
 CHANNEL: 102
 REFERENCE VOLTAGE: 3.8 VDC

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (kHz)	Frequency Error (kHz)
100%	3.800	+20(Ref)	5 509 942	-58.47
100%		-30	5 510 005	5.37
100%		-20	5 509 995	-4.57
100%		-10	5 509 977	-23.48
100%		0	5 509 968	-31.87
100%		+10	5 509 951	-48.56
100%		+30	5 509 939	-61.48
100%		+40	5 509 934	-65.76
100%		+50	5 509 929	-71.48
115%	4.370	+20	5 509 941	-59.46
Batt. Endpoint	3.500	+20	5 509 942	-58.04

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

8.7 RADIATED MEASUREMENT.

8.7.1 RADIATED SPURIOUS EMISSIONS.

Test Requirements and limit, §15.205, §15.209, §15.407

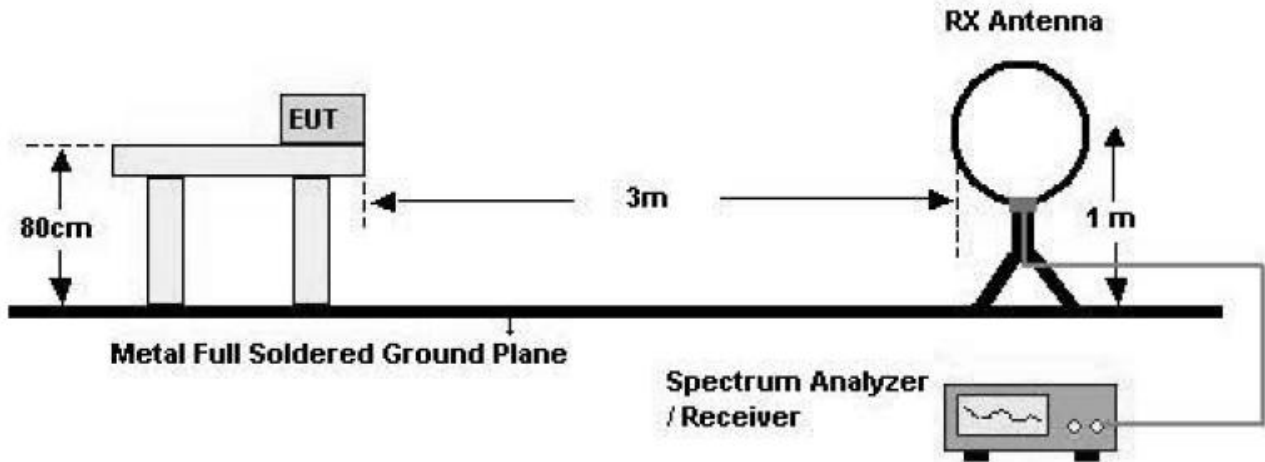
Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

▣ §15.407, KDB 789033

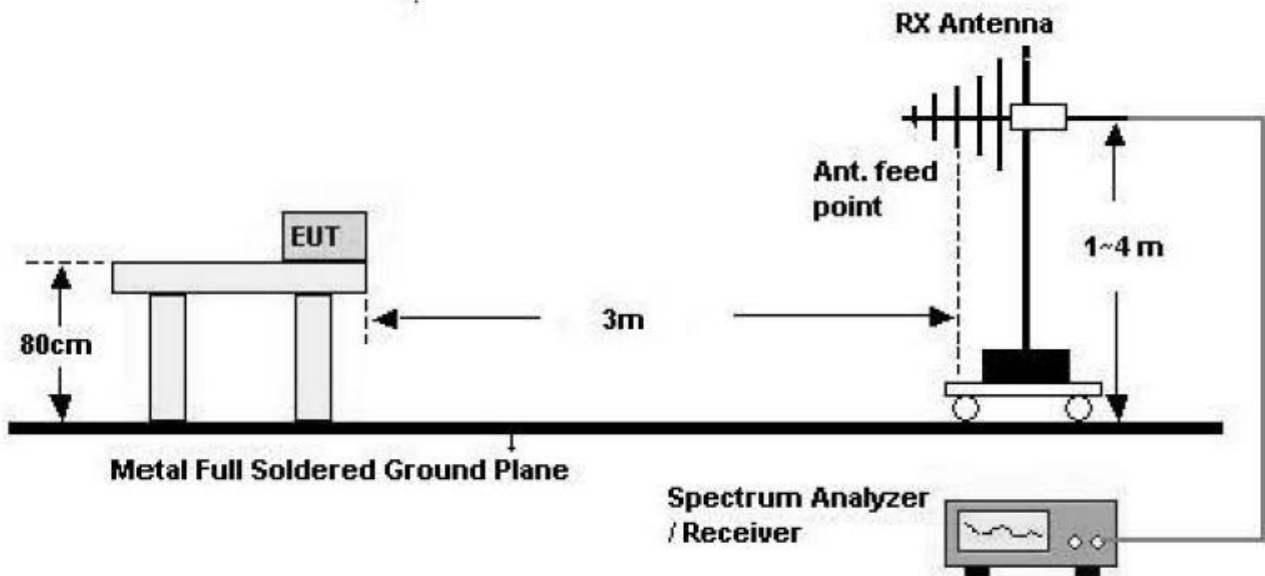
All harmonics that do not lie in a restricted band are subject to a peak limit of -27 dBm/MHz. At a distance of 3 meters the field strength limit in dBµV/m can be determined by adding a “conversion” factor of 95.2 dB to the EIRP limit of -27 dBm/MHz to obtain the limit for out of band spurious emissions of 68.2 dBµV/m.

Test Configuration

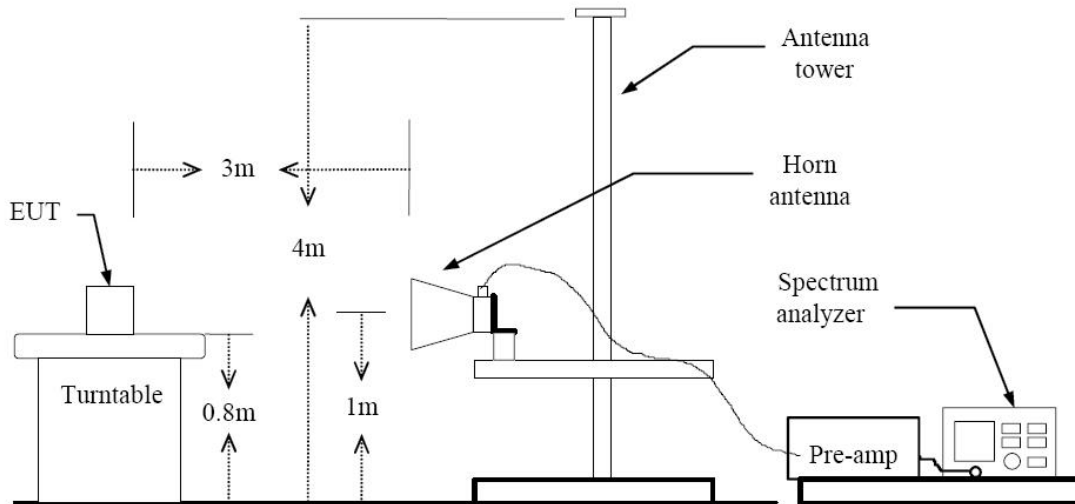
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



TEST PROCEDURE USED

ANSI C63.4(2003)

Method H)5) in KDB 789033, issued 04/08/2013 (Peak)

Method H)6)d) in KDB 789033, issued 04/08/2013 (Average)

. Spectrum setting:

- Peak.

1. RBW = 1 MHz

2. VBW \geq 3 MHz

3. Detector = Peak

4. Sweep Time = auto

5. Trace mode = max hold

6. Allow sweeps to continue until the trace stabilizes.

7. Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately $1/x$, where x is the duty cycle.

- Average (Method VB :Averaging using reduced video bandwidth)

1. RBW = 1 MHz

2. VBW

2.1. If the EUT is configured to transmit with duty cycle \geq 98 percent, set $VBW \leq RBW/100$ (i.e., 10 kHz) but not less than 10 Hz.

2.2. If the EUT duty cycle is $<$ 98 percent, set $VBW \geq 1/T$, where T is the minimum transmission duration.

3. The analyzer is set to linear detector mode.

4. Detector = Peak.

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC		FCC ID: ZNFE989



- 5. Sweep time = auto.
- 6. Trace mode = max hold.
- 7. Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98 percent duty cycle. For lower duty cycles, increase the minimum number of traces by a factor of $1/x$, where x is the duty cycle.

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIF1802.11 a/b/g/n(2.4/5GHz)/NFC	FCC ID: ZNFE989

TEST RESULTS

9 kHz – 30MHz

Operation Mode: Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dB μ V	dB /m	dB	(H/V)	dB μ V/m	dB μ V/m	dB
No Critical peaks found							

Notes:

1. Measuring frequencies from 9 kHz to the 30MHz.
2. The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
3. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
4. Limit line = specific Limits (dBuV) + Distance extrapolation factor
5. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

TEST RESULTS

Below 1 GHz

Operation Mode: Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dB μ V	dB /m	dB	(H/V)	dB μ V/m	dB μ V/m	dB
No Critical peaks found							

Notes:

1. Measuring frequencies from 30 MHz to the 1 GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Above 1 GHz

Stand alone

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10360	44.66	9.33	V	53.99	68.2	14.21	PK
15540	45.54	14.61	V	60.15	74.0	13.85	PK
15540	31.54	14.61	V	46.15	54.0	7.85	AV
10360	47.65	9.33	H	56.98	68.2	11.22	PK
15540	45.61	14.61	H	60.22	74.0	13.78	PK
15540	31.61	14.61	H	46.22	54.0	7.78	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10400	45.06	10.13	V	55.19	68.2	13.01	PK
15600	45.59	14.60	V	60.19	74.0	13.81	PK
15600	33.51	14.60	V	48.11	54.0	5.89	AV
10400	47.56	10.13	H	57.69	68.2	10.51	PK
15600	46.38	14.60	H	60.98	74.0	13.02	PK
15600	33.61	14.60	H	48.21	54.0	5.79	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 1
 Operation Mode: 802.11 a
 Transfer Rate: 6 Mbps
 Operating Frequency 5240 MHz
 Channel No. 48 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10480	44.77	10.20	V	54.97	68.2	13.23	PK
15720	46.04	13.47	V	59.51	74.0	14.49	PK
15720	34.89	13.47	V	48.36	54.0	5.64	AV
10480	48.08	10.20	H	58.28	68.2	9.92	PK
15720	46.18	13.47	H	59.65	74.0	14.35	PK
15720	35.10	13.47	H	48.57	54.0	5.43	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10360	41.24	9.33	V	50.57	68.2	17.63	PK
15540	45.62	14.61	V	60.23	74.0	13.77	PK
15540	31.48	14.61	V	46.09	54.0	7.91	AV
10360	42.42	9.33	H	51.75	68.2	16.45	PK
15540	45.66	14.61	H	60.27	74.0	13.73	PK
15540	31.44	14.61	H	46.05	54.0	7.95	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10400	41.87	10.13	V	52.00	68.2	16.20	PK
15600	45.63	14.60	V	60.23	74.0	13.77	PK
15600	33.47	14.60	V	48.07	54.0	5.93	AV
10400	43.42	10.13	H	53.55	68.2	14.65	PK
15600	46.31	14.60	H	60.91	74.0	13.09	PK
15600	33.60	14.60	H	48.20	54.0	5.80	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5240 MHz
Channel No.	48 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10480	43.80	10.20	V	54.00	68.2	14.20	PK
15720	46.08	13.47	V	59.55	74.0	14.45	PK
15720	35.04	13.47	V	48.51	54.0	5.49	AV
10480	45.02	10.20	H	55.22	68.2	12.98	PK
15720	46.20	13.47	H	59.67	74.0	14.33	PK
15720	35.04	13.47	H	48.51	54.0	5.49	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10380	40.89	9.33	V	50.22	68.2	17.98	PK
15570	45.60	14.61	V	60.21	74.0	13.79	PK
15570	31.44	14.61	V	46.05	54.0	7.95	AV
10380	41.82	9.33	H	51.15	68.2	17.05	PK
15570	45.54	14.61	H	60.15	74.0	13.85	PK
15570	31.50	14.61	H	46.11	54.0	7.89	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5230 MHz
Channel No.	46 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10460	42.05	10.13	V	52.18	68.2	16.02	PK
15690	45.68	14.60	V	60.28	74.0	13.72	PK
15690	33.60	14.60	V	48.20	54.0	5.80	AV
10460	42.86	10.13	H	52.99	68.2	15.21	PK
15690	45.77	14.60	H	60.37	74.0	13.63	PK
15690	33.55	14.60	H	48.15	54.0	5.85	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10520	45.54	10.38	V	55.92	68.2	12.28	PK
15780	45.23	14.38	V	59.61	74.0	14.39	PK
15780	34.01	14.38	V	48.39	54.0	5.61	AV
10520	47.97	10.38	H	58.35	68.2	9.85	PK
15780	45.36	14.38	H	59.74	74.0	14.26	PK
15780	34.48	14.38	H	48.86	54.0	5.14	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 2
 Operation Mode: 802.11 a
 Transfer Rate: 6 Mbps
 Operating Frequency 5300 MHz
 Channel No. 60 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10600	43.21	10.39	V	53.60	74.0	20.40	PK
10600	31.17	10.39	V	41.56	54.0	12.44	AV
15900	45.20	14.00	V	59.20	74.0	14.80	PK
15900	33.00	14.00	V	47.00	54.0	7.00	AV
10600	46.52	10.39	H	56.91	74.0	17.09	PK
10600	34.08	10.39	H	44.47	54.0	9.53	AV
15900	45.12	14.00	H	59.12	74.0	14.88	PK
15900	33.04	14.00	H	47.04	54.0	6.96	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 2
 Operation Mode: 802.11 a
 Transfer Rate: 6 Mbps
 Operating Frequency 5320 MHz
 Channel No. 64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10640	43.67	10.50	V	54.17	74	19.83	PK
10640	31.13	10.50	V	41.63	54	12.37	AV
15960	44.41	14.27	V	58.68	74	15.32	PK
15960	32.98	14.27	V	47.25	54	6.75	AV
10640	47.93	10.50	H	58.43	74	15.57	PK
10640	34.85	10.50	H	45.35	54	8.65	AV
15960	44.45	14.27	H	58.72	74	15.28	PK
15960	32.94	14.27	H	47.21	54	6.79	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10520	43.20	10.38	V	53.58	68.2	14.62	PK
15780	45.20	14.38	V	59.58	74.0	14.42	PK
15780	34.44	14.38	V	48.82	54.0	5.18	AV
10520	45.44	10.38	H	55.82	68.2	12.38	PK
15780	45.41	14.38	H	59.79	74.0	14.21	PK
15780	34.40	14.38	H	48.78	54.0	5.22	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5300 MHz
Channel No.	60 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10600	41.63	10.39	V	52.02	74.0	21.98	PK
10600	29.59	10.39	V	39.98	54.0	14.02	AV
15900	45.08	14.00	V	59.08	74.0	14.92	PK
15900	33.08	14.00	V	47.08	54.0	6.92	AV
10600	43.69	10.39	H	54.08	74.0	19.92	PK
10600	31.25	10.39	H	41.64	54.0	12.36	AV
15900	45.11	14.00	H	59.11	74.0	14.89	PK
15900	33.05	14.00	H	47.05	54.0	6.95	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10640	41.43	10.50	V	51.93	74	22.07	PK
10640	29.59	10.50	V	40.09	54	13.91	AV
15960	44.46	14.27	V	58.73	74	15.27	PK
15960	32.95	14.27	V	47.22	54	6.78	AV
10640	44.59	10.50	H	55.09	74	18.91	PK
10640	31.75	10.50	H	42.25	54	11.75	AV
15960	44.40	14.27	H	58.67	74	15.33	PK
15960	32.91	14.27	H	47.18	54	6.82	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5270 MHz
Channel No.	54 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10540	43.03	10.55	V	53.58	68.2	14.62	PK
15810	45.30	14.26	V	59.56	74.0	14.44	PK
15810	34.48	14.26	V	48.74	54.0	5.26	AV
10540	44.05	10.55	H	54.60	68.2	13.60	PK
15810	45.43	14.26	H	59.69	74.0	14.31	PK
15810	34.51	14.26	H	48.77	54.0	5.23	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10620	41.72	10.25	V	51.97	74	22.03	PK
10620	28.88	10.25	V	39.13	54	14.87	AV
15930	45.14	13.62	V	58.76	74	15.24	PK
15930	33.11	13.62	V	46.73	54	7.27	AV
10620	42.19	10.25	H	52.44	74	21.56	PK
10620	29.90	10.25	H	40.15	54	13.85	AV
15930	45.08	13.62	H	58.70	74	15.30	PK
15930	33.08	13.62	H	46.70	54	7.30	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 3
 Operation Mode: 802.11 a
 Transfer Rate: 6 Mbps
 Operating Frequency 5500 MHz
 Channel No. 100 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11000	41.53	11.28	V	52.81	74.0	21.19	PK
11000	29.50	11.28	V	40.78	54.0	13.22	AV
16500	45.56	14.19	V	59.75	68.2	8.45	PK
11000	46.48	11.28	H	57.76	74.0	16.24	PK
11000	33.63	11.28	H	44.91	54.0	9.09	AV
16500	45.63	14.19	H	59.82	68.2	8.38	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5580 MHz
Channel No.	116 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11160	43.94	11.10	V	55.04	74.0	18.96	PK
11160	31.12	11.10	V	42.22	54.0	11.78	AV
16740	45.77	15.70	V	61.47	68.2	6.73	PK
11160	46.98	11.10	H	58.08	74.0	15.92	PK
11160	34.27	11.10	H	45.37	54.0	8.63	AV
16740	45.84	15.70	H	61.54	68.2	6.66	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5700 MHz
Channel No.	140 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11400	43.79	10.97	V	54.76	74.0	19.24	PK
11400	31.11	10.97	V	42.08	54.0	11.92	AV
17100	46.11	17.82	V	63.93	68.2	4.27	PK
11400	48.22	10.97	H	59.19	74.0	14.81	PK
11400	34.50	10.97	H	45.47	54.0	8.53	AV
17100	46.08	17.82	H	63.90	68.2	4.30	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11000	40.57	11.28	V	51.85	74.0	22.15	PK
11000	28.50	11.28	V	39.78	54.0	14.22	AV
16500	45.74	14.19	V	59.93	68.2	8.27	PK
11000	43.00	11.28	H	54.28	74.0	19.72	PK
11000	30.25	11.28	H	41.53	54.0	12.47	AV
16500	45.61	14.19	H	59.80	68.2	8.40	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5580 MHz
Channel No.	116 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11160	42.13	11.10	V	53.23	74.0	20.77	PK
11160	29.67	11.10	V	40.77	54.0	13.23	AV
16740	45.75	15.70	V	61.45	68.2	6.75	PK
11160	44.48	11.10	H	55.58	74.0	18.42	PK
11160	31.90	11.10	H	43.00	54.0	11.00	AV
16740	45.81	15.70	H	61.51	68.2	6.69	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5700 MHz
Channel No.	140 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11400	41.03	10.97	V	52.00	74.0	22.00	PK
11400	29.00	10.97	V	39.97	54.0	14.03	AV
17100	46.20	17.82	V	64.02	68.2	4.18	PK
11400	44.20	10.97	H	55.17	74.0	18.83	PK
11400	31.28	10.97	H	42.25	54.0	11.75	AV
17100	46.04	17.82	H	63.86	68.2	4.34	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11020	40.47	11.28	V	51.75	74.0	22.25	PK
11020	28.54	11.28	V	39.82	54.0	14.18	AV
16530	45.60	8.83	V	54.43	68.2	13.77	PK
11020	42.58	11.28	H	53.86	74.0	20.14	PK
11020	30.14	11.28	H	41.42	54.0	12.58	AV
16530	45.55	8.83	H	54.38	68.2	13.82	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 3
 Operation Mode: 802.11n_40 MHz BW
 Transfer Rate: 13.5 Mbps
 Operating Frequency 5580 MHz
 Channel No. 110 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11100	40.60	11.56	V	52.16	74.0	21.84	PK
11100	28.51	11.56	V	40.07	54.0	13.93	AV
16650	45.84	14.98	V	60.82	68.2	7.39	PK
11100	42.09	11.56	H	53.65	74.0	20.35	PK
11100	29.88	11.56	H	41.44	54.0	12.56	AV
16650	45.74	14.98	H	60.72	68.2	7.48	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5670 MHz
Channel No.	134 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11340	41.44	10.86	V	52.30	74.0	21.70	PK
11340	29.37	10.86	V	40.23	54.0	13.77	AV
17010	46.20	18.15	V	64.35	68.2	3.85	PK
11340	42.96	10.86	H	53.82	74.0	20.18	PK
11340	30.73	10.86	H	41.59	54.0	12.41	AV
17010	46.11	18.15	H	64.26	68.2	3.94	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

With Wireless Charger

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10360	44.38	9.33	V	53.71	68.2	14.49	PK
15540	45.10	14.61	V	59.71	74.0	14.29	PK
15540	31.14	14.61	V	45.75	54.0	8.25	AV
10360	47.54	9.33	H	56.87	68.2	11.33	PK
15540	45.50	14.61	H	60.11	74.0	13.89	PK
15540	31.54	14.61	H	46.15	54.0	7.85	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10400	44.65	10.13	V	54.78	68.2	13.42	PK
15600	45.12	14.60	V	59.72	74.0	14.28	PK
15600	32.95	14.60	V	47.55	54.0	6.45	AV
10400	46.95	10.13	H	57.08	68.2	11.12	PK
15600	46.50	14.60	H	61.10	74.0	12.90	PK
15600	33.48	14.60	H	48.08	54.0	5.92	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 1
 Operation Mode: 802.11 a
 Transfer Rate: 6 Mbps
 Operating Frequency 5240 MHz
 Channel No. 48 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10480	43.69	10.20	V	53.89	68.2	14.31	PK
15720	45.91	13.47	V	59.38	74.0	14.62	PK
15720	34.65	13.47	V	48.12	54.0	5.88	AV
10480	47.59	10.20	H	57.79	68.2	10.41	PK
15720	45.84	13.47	H	59.31	74.0	14.69	PK
15720	34.16	13.47	H	47.63	54.0	6.37	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10360	41.10	9.33	V	50.43	68.2	17.77	PK
15540	45.11	14.61	V	59.72	74.0	14.28	PK
15540	31.30	14.61	V	45.91	54.0	8.09	AV
10360	42.38	9.33	H	51.71	68.2	16.49	PK
15540	44.98	14.61	H	59.59	74.0	14.41	PK
15540	31.29	14.61	H	45.90	54.0	8.10	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 1

Operation Mode: 802.11 n_20 MHz BW

Transfer Rate: 6.5 Mbps

Operating Frequency 5200 MHz

Channel No. 40 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10400	41.55	10.13	V	51.68	68.2	16.52	PK
15600	44.65	14.60	V	59.25	74.0	14.75	PK
15600	33.41	14.60	V	48.01	54.0	5.99	AV
10400	43.10	10.13	H	53.23	68.2	14.97	PK
15600	46.30	14.60	H	60.90	74.0	13.10	PK
15600	32.84	14.60	H	47.44	54.0	6.56	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 1

Operation Mode: 802.11 n_20 MHz BW

Transfer Rate: 6.5 Mbps

Operating Frequency 5240 MHz

Channel No. 48 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10480	43.12	10.20	V	53.32	68.2	14.88	PK
15720	45.00	13.47	V	58.47	74.0	15.53	PK
15720	34.65	13.47	V	48.12	54.0	5.88	AV
10480	44.65	10.20	H	54.85	68.2	13.35	PK
15720	45.94	13.47	H	59.41	74.0	14.59	PK
15720	34.84	13.47	H	48.31	54.0	5.69	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10380	40.65	9.33	V	49.98	68.2	18.22	PK
15570	45.42	14.61	V	60.03	74.0	13.97	PK
15570	31.26	14.61	V	45.87	54.0	8.13	AV
10380	41.63	9.33	H	50.96	68.2	17.24	PK
15570	44.68	14.61	H	59.29	74.0	14.71	PK
15570	31.20	14.61	H	45.81	54.0	8.19	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5230 MHz
Channel No.	46 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10460	42.00	10.13	V	52.13	68.2	16.07	PK
15690	45.61	14.60	V	60.21	74.0	13.79	PK
15690	33.54	14.60	V	48.14	54.0	5.86	AV
10460	41.95	10.13	H	52.08	68.2	16.12	PK
15690	44.65	14.60	H	59.25	74.0	14.75	PK
15690	33.42	14.60	H	48.02	54.0	5.98	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10520	45.16	10.38	V	55.54	68.2	12.66	PK
15780	44.81	14.38	V	59.19	74.0	14.81	PK
15780	34.99	14.38	V	49.37	54.0	4.63	AV
10520	47.65	10.38	H	58.03	68.2	10.17	PK
15780	45.29	14.38	H	59.67	74.0	14.33	PK
15780	34.15	14.38	H	48.53	54.0	5.47	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 2
 Operation Mode: 802.11 a
 Transfer Rate: 6 Mbps
 Operating Frequency 5300 MHz
 Channel No. 60 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10600	43.04	10.39	V	53.43	74.0	20.57	PK
10600	31.05	10.39	V	41.44	54.0	12.56	AV
15900	45.01	14.00	V	59.01	74.0	14.99	PK
15900	32.58	14.00	V	46.58	54.0	7.42	AV
10600	45.96	10.39	H	56.35	74.0	17.65	PK
10600	33.56	10.39	H	43.95	54.0	10.05	AV
15900	44.75	14.00	H	58.75	74.0	15.25	PK
15900	32.68	14.00	H	46.68	54.0	7.32	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10640	43.51	10.50	V	54.01	74	19.99	PK
10640	31.04	10.50	V	41.54	54	12.46	AV
15960	44.25	14.27	V	58.52	74	15.48	PK
15960	32.85	14.27	V	47.12	54	6.88	AV
10640	47.58	10.50	H	58.08	74	15.92	PK
10640	34.54	10.50	H	45.04	54	8.96	AV
15960	44.10	14.27	H	58.37	74	15.63	PK
15960	32.15	14.27	H	46.42	54	7.58	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10520	43.16	10.38	V	53.54	68.2	14.66	PK
15780	44.84	14.38	V	59.22	74.0	14.78	PK
15780	34.06	14.38	V	48.44	54.0	5.56	AV
10520	45.21	10.38	H	55.59	68.2	12.61	PK
15780	45.28	14.38	H	59.66	74.0	14.34	PK
15780	34.02	14.38	H	48.40	54.0	5.60	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5300 MHz
Channel No.	60 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10600	41.41	10.39	V	51.80	74.0	22.20	PK
10600	29.15	10.39	V	39.54	54.0	14.46	AV
15900	44.76	14.00	V	58.76	74.0	15.24	PK
15900	32.89	14.00	V	46.89	54.0	7.11	AV
10600	43.51	10.39	H	53.90	74.0	20.10	PK
10600	31.12	10.39	H	41.51	54.0	12.49	AV
15900	44.78	14.00	H	58.78	74.0	15.22	PK
15900	32.87	14.00	H	46.87	54.0	7.13	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10640	40.54	10.50	V	51.04	74	22.96	PK
10640	29.41	10.50	V	39.91	54	14.09	AV
15960	44.15	14.27	V	58.42	74	15.58	PK
15960	32.80	14.27	V	47.07	54	6.93	AV
10640	44.12	10.50	H	54.62	74	19.38	PK
10640	31.54	10.50	H	42.04	54	11.96	AV
15960	44.31	14.27	H	58.58	74	15.42	PK
15960	32.84	14.27	H	47.11	54	6.89	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5270 MHz
Channel No.	54 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10540	43.00	10.55	V	53.55	68.2	14.65	PK
15810	44.81	14.26	V	59.07	74.0	14.93	PK
15810	34.14	14.26	V	48.40	54.0	5.60	AV
10540	43.86	10.55	H	54.41	68.2	13.79	PK
15810	45.38	14.26	H	59.64	74.0	14.36	PK
15810	34.46	14.26	H	48.72	54.0	5.28	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10620	41.01	10.25	V	51.26	74	22.74	PK
10620	28.61	10.25	V	38.86	54	15.14	AV
15930	44.78	13.62	V	58.40	74	15.60	PK
15930	32.89	13.62	V	46.51	54	7.49	AV
10620	42.10	10.25	H	52.35	74	21.65	PK
10620	29.41	10.25	H	39.66	54	14.34	AV
15930	44.74	13.62	H	58.36	74	15.64	PK
15930	32.89	13.62	H	46.51	54	7.49	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 3
 Operation Mode: 802.11 a
 Transfer Rate: 6 Mbps
 Operating Frequency 5500 MHz
 Channel No. 100 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11000	41.30	11.28	V	52.58	74.0	21.42	PK
11000	29.14	11.28	V	40.42	54.0	13.58	AV
16500	45.18	14.19	V	59.37	68.2	8.83	PK
11000	45.64	11.28	H	56.92	74.0	17.08	PK
11000	33.51	11.28	H	44.79	54.0	9.21	AV
16500	45.25	14.19	H	59.44	68.2	8.76	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 3
 Operation Mode: 802.11 a
 Transfer Rate: 6 Mbps
 Operating Frequency 5580 MHz
 Channel No. 116 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11160	43.76	11.10	V	54.86	74.0	19.14	PK
11160	31.02	11.10	V	42.12	54.0	11.88	AV
16740	45.19	15.70	V	60.89	68.2	7.31	PK
11160	46.50	11.10	H	57.60	74.0	16.40	PK
11160	33.56	11.10	H	44.66	54.0	9.34	AV
16740	45.51	15.70	H	61.21	68.2	6.99	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5700 MHz
Channel No.	140 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11400	43.64	10.97	V	54.61	74.0	19.39	PK
11400	31.06	10.97	V	42.03	54.0	11.97	AV
17100	46.00	17.82	V	63.82	68.2	4.38	PK
11400	47.56	10.97	H	58.53	74.0	15.47	PK
11400	34.38	10.97	H	45.35	54.0	8.65	AV
17100	45.88	17.82	H	63.70	68.2	4.50	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11000	39.96	11.28	V	51.24	74.0	22.76	PK
11000	28.25	11.28	V	39.53	54.0	14.47	AV
16500	45.54	14.19	V	59.73	68.2	8.47	PK
11000	42.65	11.28	H	53.93	74.0	20.07	PK
11000	29.94	11.28	H	41.22	54.0	12.78	AV
16500	45.08	14.19	H	59.27	68.2	8.93	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 3
 Operation Mode: 802.11 n_20 MHz BW
 Transfer Rate: 6.5 Mbps
 Operating Frequency 5580 MHz
 Channel No. 116 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11160	41.90	11.10	V	53.00	74.0	21.00	PK
11160	29.33	11.10	V	40.43	54.0	13.57	AV
16740	45.46	15.70	V	61.16	68.2	7.04	PK
11160	44.27	11.10	H	55.37	74.0	18.63	PK
11160	31.45	11.10	H	42.55	54.0	11.45	AV
16740	44.18	15.70	H	59.88	68.2	8.32	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5700 MHz
Channel No.	140 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11400	40.64	10.97	V	51.61	74.0	22.39	PK
11400	28.56	10.97	V	39.53	54.0	14.47	AV
17100	45.64	17.82	V	63.46	68.2	4.74	PK
11400	43.88	10.97	H	54.85	74.0	19.15	PK
11400	31.14	10.97	H	42.11	54.0	11.89	AV
17100	45.74	17.82	H	63.56	68.2	4.64	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11020	40.10	11.28	V	51.38	74.0	22.62	PK
11020	28.23	11.28	V	39.51	54.0	14.49	AV
16530	45.09	8.83	V	53.92	68.2	14.28	PK
11020	42.15	11.28	H	53.43	74.0	20.57	PK
11020	29.65	11.28	H	40.93	54.0	13.07	AV
16530	45.38	8.83	H	54.21	68.2	13.99	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 3
 Operation Mode: 802.11n_40 MHz BW
 Transfer Rate: 13.5 Mbps
 Operating Frequency 5580 MHz
 Channel No. 110 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11100	40.07	11.56	V	51.63	74.0	22.37	PK
11100	28.49	11.56	V	40.05	54.0	13.95	AV
16650	45.60	14.98	V	60.58	68.2	7.62	PK
11100	41.97	11.56	H	53.53	74.0	20.47	PK
11100	29.65	11.56	H	41.21	54.0	12.79	AV
16650	45.41	14.98	H	60.39	68.2	7.81	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5670 MHz
Channel No.	134 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11340	41.07	10.86	V	51.93	74.0	22.07	PK
11340	29.04	10.86	V	39.90	54.0	14.10	AV
17010	45.74	18.15	V	63.89	68.2	4.31	PK
11340	42.56	10.86	H	53.42	74.0	20.58	PK
11340	29.84	10.86	H	40.70	54.0	13.30	AV
17010	45.51	18.15	H	63.66	68.2	4.54	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11a, 802.11n test. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

8.7.2 RADIATED RESTRICTED BAND EDGE MEASUREMENTS

Test Requirements and limit, §15.247(d) §15.205, §15.209

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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 Section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a) (See section 15.205(c)).

Stand alone

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5150	63.08	3.63	H	66.71	74	7.29	PK
5150	44.75	3.63	H	48.38	54	5.62	AV
5150	59.40	3.63	V	63.03	74	10.97	PK
5150	42.08	3.63	V	45.71	54	8.29	AV

Band : UNII 2
 Operation Mode: 802.11 a
 Transfer Rate: 6 Mbps
 Operating Frequency 5320 MHz
 Channel No. 64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5350	56.08	4.45	H	60.53	74	13.47	PK
5350	41.10	4.45	H	45.55	54	8.45	AV
5350	52.83	4.45	V	57.28	74	16.72	PK
5350	39.62	4.45	V	44.07	54	9.93	AV

Band : UNII 3
 Operation Mode: 802.11 a
 Transfer Rate: 6 Mbps
 Operating Frequency 5500 MHz
 Channel No. 100 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5460	52.19	5.54	H	57.73	68.2	10.47	PK
5460	39.00	5.54	H	44.54	54.0	9.46	AV
5470	52.47	5.54	H	58.01	68.2	10.19	PK
5460	51.50	5.54	V	57.04	68.2	11.16	PK
5460	38.50	5.54	V	44.04	54.0	9.96	AV
5470	55.52	5.54	V	61.06	68.2	7.14	PK

Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5700 MHz
Channel No.	140 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5725	52.91	6.80	H	59.71	68.2	8.49	PK
5725	55.67	6.80	V	62.47	68.2	5.73	PK

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done 802.11a/n mode test. . Worst case of EUT is 6 Mbps in 802.11a.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 1
 Operation Mode: 802.11 n_20 MHz BW
 Transfer Rate: 6 Mbps
 Operating Frequency 5180 MHz
 Channel No. 36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5150	53.63	3.63	H	57.26	74	16.74	PK
5150	41.30	3.63	H	44.93	54	9.07	AV
5150	53.17	3.63	V	56.80	74	17.20	PK
5150	40.45	3.63	V	44.08	54	9.92	AV

Band : UNII 2
 Operation Mode: 802.11 n_20 MHz BW
 Transfer Rate: 6 Mbps
 Operating Frequency 5320 MHz
 Channel No. 64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5350	52.01	4.45	H	56.46	74	17.54	PK
5350	39.43	4.45	H	43.88	54	10.12	AV
5350	50.95	4.45	V	55.40	74	18.60	PK
5350	38.87	4.45	V	43.32	54	10.68	AV

Band : UNII 3
 Operation Mode: 802.11 n_20 MHz BW
 Transfer Rate: 6 Mbps
 Operating Frequency 5500 MHz
 Channel No. 100 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5460	49.92	5.54	H	55.46	74.0	18.54	PK
5460	38.08	5.54	H	43.62	54.0	10.38	AV
5470	50.81	5.54	H	56.35	68.2	11.85	PK
5460	50.92	5.54	V	56.46	74.0	17.54	PK
5460	37.92	5.54	V	43.46	54.0	10.54	AV
5470	51.33	5.54	V	56.87	68.2	11.33	PK

Band : UNII 3
 Operation Mode: 802.11 n_20 MHz BW
 Transfer Rate: 6.5 Mbps
 Operating Frequency 5700 MHz
 Channel No. 140 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5725	50.22	6.80	H	57.02	68.2	11.18	PK
5725	51.05	6.80	V	57.85	68.2	10.35	PK

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done 802.11a/n mode test. . Worst case of EUT is 6 Mbps in 802.11a.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 1

Operation Mode: 802.11n_40 MHz BW

Transfer Rate: 13.5 Mbps

Operating Frequency 5190 MHz

Channel No. 38 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5150	63.20	3.63	H	66.83	74	7.17	PK
5150	45.96	3.63	H	49.59	54	4.41	AV
5150	57.21	3.63	V	60.84	74	13.16	PK
5150	42.81	3.63	V	46.44	54	7.56	AV

Band : UNII 2

Operation Mode: 802.11n_40 MHz BW

Transfer Rate: 13.5 Mbps

Operating Frequency 5310 MHz

Channel No. 62 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5350	54.26	4.45	H	58.71	74	15.29	PK
5350	41.20	4.45	H	45.65	54	8.35	AV
5350	52.80	4.45	V	57.25	74	16.75	PK
5350	39.69	4.45	V	44.14	54	9.86	AV

Band : UNII 3
 Operation Mode: 802.11n_40 MHz BW
 Transfer Rate: 13.5 Mbps
 Operating Frequency 5510 MHz
 Channel No. 102 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5460	52.26	5.54	H	57.80	74.0	16.20	PK
5460	39.05	5.54	H	44.59	54.0	9.41	AV
5470	57.15	5.54	H	62.69	68.2	5.51	PK
5460	50.76	5.54	V	56.30	74.0	17.70	PK
5460	38.60	5.54	V	44.14	54.0	9.86	AV
5470	56.97	5.54	V	62.51	68.2	5.69	PK

Band : UNII 3
 Operation Mode: 802.11 n_40 MHz BW
 Transfer Rate: 13.5 Mbps
 Operating Frequency 5670 MHz
 Channel No. 134 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5725	50.74	6.80	H	57.54	68.2	10.66	PK
5725	50.78	6.80	V	57.58	68.2	10.62	PK

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done 802.11a/n mode test. . Worst case of EUT is 6 Mbps in 802.11a.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

With Wireless Charger

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5150	62.68	3.63	H	66.31	74	7.69	PK
5150	44.04	3.63	H	47.67	54	6.33	AV
5150	58.84	3.63	V	62.47	74	11.53	PK
5150	41.76	3.63	V	45.39	54	8.61	AV

Band :	UNII 2
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5350	55.45	4.45	H	59.90	74	14.10	PK
5350	40.65	4.45	H	45.10	54	8.90	AV
5350	52.59	4.45	V	57.04	74	16.96	PK
5350	39.45	4.45	V	43.90	54	10.10	AV

Band : UNII 3
 Operation Mode: 802.11 a
 Transfer Rate: 6 Mbps
 Operating Frequency 5500 MHz
 Channel No. 100 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5460	51.49	5.54	H	57.03	74.0	16.97	PK
5460	38.87	5.54	H	44.41	54.0	9.59	AV
5470	57.38	5.54	H	62.92	68.2	5.28	PK
5460	51.42	5.54	V	56.96	74.0	17.04	PK
5460	38.41	5.54	V	43.95	54.0	10.05	AV
5470	55.43	5.54	V	60.97	68.2	7.23	PK

Band : UNII 3
 Operation Mode: 802.11 a
 Transfer Rate: 6 Mbps
 Operating Frequency 5700 MHz
 Channel No. 140 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5725	52.64	6.80	H	59.44	68.2	8.76	PK
5725	54.91	6.80	V	61.71	68.2	6.49	PK

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done 802.11a/n mode test. . Worst case of EUT is 6 Mbps in 802.11a.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 1
 Operation Mode: 802.11 n_20 MHz BW
 Transfer Rate: 6 Mbps
 Operating Frequency 5180 MHz
 Channel No. 36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5150	53.50	3.63	H	57.13	74	16.87	PK
5150	41.16	3.63	H	44.79	54	9.21	AV
5150	52.88	3.63	V	56.51	74	17.49	PK
5150	39.89	3.63	V	43.52	54	10.48	AV

Band : UNII 2
 Operation Mode: 802.11 n_20 MHz BW
 Transfer Rate: 6 Mbps
 Operating Frequency 5320 MHz
 Channel No. 64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5350	51.84	4.45	H	56.29	74	17.71	PK
5350	39.15	4.45	H	43.60	54	10.40	AV
5350	50.46	4.45	V	54.91	74	19.09	PK
5350	38.55	4.45	V	43.00	54	11.00	AV

Band : UNII 3
 Operation Mode: 802.11 n_20 MHz BW
 Transfer Rate: 6 Mbps
 Operating Frequency 5500 MHz
 Channel No. 100 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5460	49.80	5.54	H	55.34	74.0	18.66	PK
5460	37.95	5.54	H	43.49	54.0	10.51	AV
5470	50.65	5.54	H	56.19	68.2	12.01	PK
5460	50.74	5.54	V	56.28	74.0	17.72	PK
5460	36.68	5.54	V	42.22	54.0	11.78	AV
5470	51.24	5.54	V	56.78	68.2	11.42	PK

Band : UNII 3
 Operation Mode: 802.11 n_20 MHz BW
 Transfer Rate: 6.5 Mbps
 Operating Frequency 5700 MHz
 Channel No. 140 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5725	49.89	6.80	H	56.69	68.2	11.51	PK
5725	50.65	6.80	V	57.45	68.2	10.75	PK

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done 802.11a/n mode test. . Worst case of EUT is 6 Mbps in 802.11a.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 1
 Operation Mode: 802.11n_40 MHz BW
 Transfer Rate: 13.5 Mbps
 Operating Frequency 5190 MHz
 Channel No. 38 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5150	62.91	3.63	H	66.54	74	7.46	PK
5150	45.63	3.63	H	49.26	54	4.74	AV
5150	56.8	3.63	V	60.43	74	13.57	PK
5150	42.45	3.63	V	46.08	54	7.92	AV

Band : UNII 2
 Operation Mode: 802.11n_40 MHz BW
 Transfer Rate: 13.5 Mbps
 Operating Frequency 5310 MHz
 Channel No. 62 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5350	53.91	4.45	H	58.36	74	15.64	PK
5350	40.31	4.45	H	44.76	54	9.24	AV
5350	52.41	4.45	V	56.86	74	17.14	PK
5350	39.42	4.45	V	43.87	54	10.13	AV

Band : UNII 3
 Operation Mode: 802.11n_40 MHz BW
 Transfer Rate: 13.5 Mbps
 Operating Frequency 5510 MHz
 Channel No. 102 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5460	52.01	5.54	H	57.55	74.0	16.45	PK
5460	38.86	5.54	H	44.4	54.0	9.6	AV
5470	56.86	5.54	H	62.40	68.2	5.80	PK
5460	50.65	5.54	V	56.19	74.0	17.81	PK
5460	38.48	5.54	V	44.02	54.0	9.98	AV
5470	56.48	5.54	V	62.02	68.2	6.18	PK

Band : UNII 3
 Operation Mode: 802.11 n_40 MHz BW
 Transfer Rate: 13.5 Mbps
 Operating Frequency 5670 MHz
 Channel No. 134 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5725	50.51	6.80	H	57.31	68.2	10.89	PK
5725	50.61	6.80	V	57.41	68.2	10.79	PK

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done 802.11a/n mode test. . Worst case of EUT is 6 Mbps in 802.11a.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

8.8 POWERLINE CONDUCTED EMISSIONS

Test Requirements and limit, §15.207

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

Frequency Range (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

TEST PROCEDURE

1. The EUT is placed on a wooden table 80 cm above the reference groundplane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors – Quasi Peak and Average Detector.
5. We are performed the AC Power Line Conducted Emission test for 58.5 Mbps, Ch.140 and 802.11n mode in UNII 3. Because 802.11n mode in UNII 3 is worst case.

RESULT PLOTS

Conducted Emissions (Line 1)

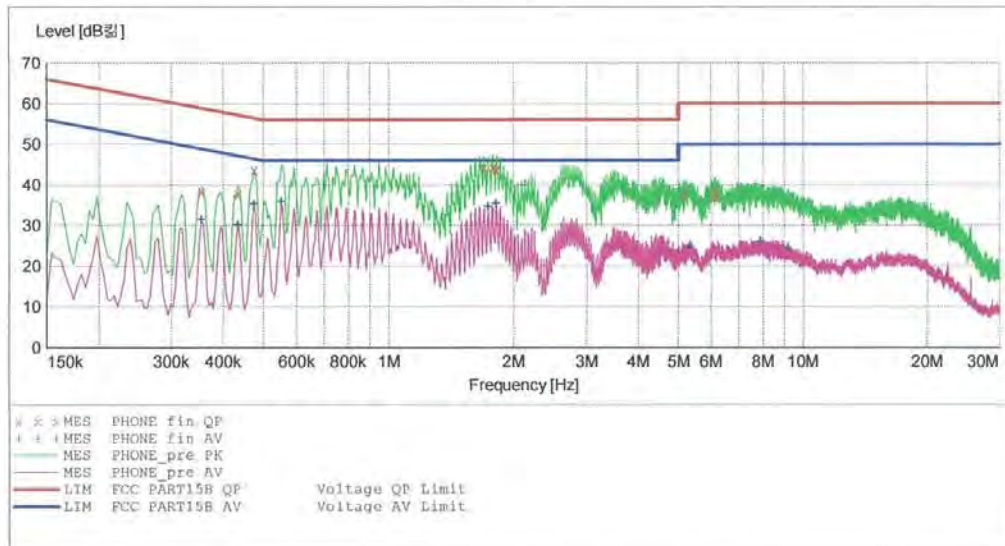
HCT

EMC

EUT: LG-E989
 Manufacturer: LG
 Operating Condition: WLAN UNIT
 Test Site: SHIELD ROOM
 Operator: JS LEE
 Test Specification: FCC PART15 B
 Comment: H

SCAN TABLE: "FCC CLASS B(H)"

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
500.0 kHz	5.0 MHz	4.0 kHz	Average	10.0 ms	9 kHz	None
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			



MEASUREMENT RESULT: "PHONE_fin QP"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.354001	38.40	9.8	59	20.5	---	---
0.434001	37.90	9.8	57	19.3	---	---
0.474001	43.70	9.8	56	12.7	---	---
1.700000	44.40	9.9	56	11.6	---	---
1.780000	44.40	9.9	56	11.6	---	---
1.820000	43.70	9.9	56	12.3	---	---
5.176000	37.40	10.2	60	22.6	---	---
6.120000	38.20	10.2	60	21.8	---	---
6.156000	37.10	10.2	60	22.9	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

2013-05-25 2:49 오후

Frequency MHz	Level dB _{μV}	Transd dB	Limit dB _{μV}	Margin dB	Line	PE
0.354001	31.40	9.8	49	17.4	---	---
0.434001	30.20	9.8	47	17.0	---	---
0.474001	35.20	9.8	46	11.2	---	---
0.552000	35.90	9.8	46	10.1	---	---
1.736000	34.70	9.9	46	11.3	---	---
1.816000	35.40	9.9	46	10.6	---	---
5.328000	24.60	10.2	50	25.4	---	---
7.900000	26.10	10.3	50	23.9	---	---
9.200000	24.30	10.4	50	25.7	---	---

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIF1802.11 a/b/g/n(2.4/5GHz)/NFC		FCC ID: ZNFE989

Conducted Emissions (Line 2)

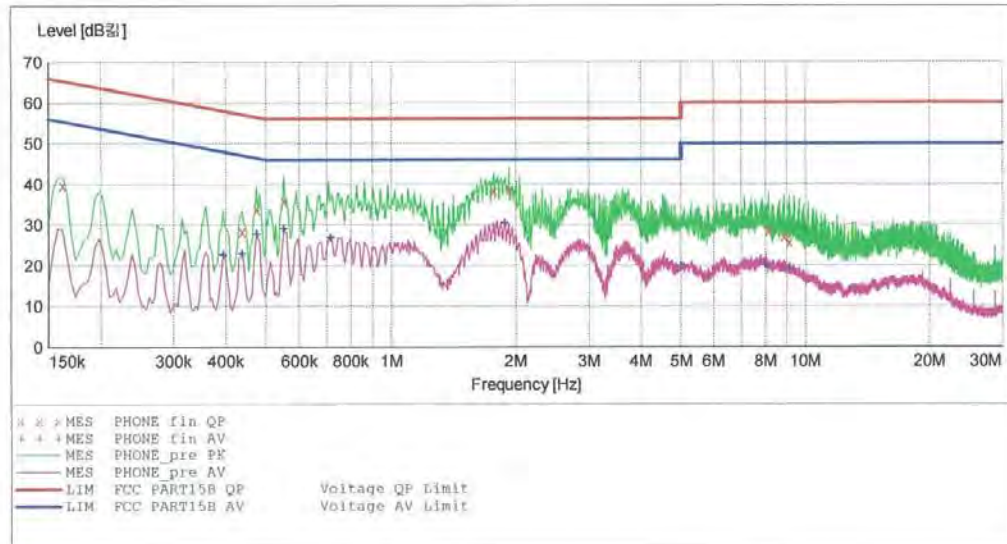
HCT

EMC

EUT: LG-E989
 Manufacturer: LG
 Operating Condition: WLAN UNII
 Test Site: SHIELD ROOM
 Operator: JS LEE
 Test Specification: FCC PART15 B
 Comment: N

SCAN TABLE: "FCC CLASS B(N)"

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			



MEASUREMENT RESULT: "PHONE_fin QP"

2013-05-25 2:02오후

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.162001	39.70	10.0	65	25.7	---	---
0.438001	28.40	10.0	57	28.7	---	---
0.474001	33.90	10.0	56	22.6	---	---
0.552000	36.00	10.0	56	20.0	---	---
1.772000	38.30	10.1	56	17.7	---	---
1.928000	38.50	10.1	56	17.5	---	---
8.156000	28.50	10.6	60	31.5	---	---
8.908000	27.10	10.6	60	32.9	---	---
9.152000	25.70	10.7	60	34.3	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

2013-05-25 2:02오후

Frequency MHz	Level dB _{μV}	Transd dB	Limit dB _{μV}	Margin dB	Line	PE
0.394001	22.70	10.0	48	25.3	---	---
0.438001	22.90	10.0	47	24.2	---	---
0.474001	27.70	10.0	46	18.8	---	---
0.552000	29.00	10.0	46	17.0	---	---
0.716000	26.90	10.0	46	19.1	---	---
1.884000	30.40	10.1	46	15.6	---	---
5.000000	19.90	10.4	46	26.1	---	---
8.056000	20.00	10.6	50	30.0	---	---
9.160000	19.10	10.7	50	30.9	---	---

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1306FR05-3	Date of Issue: July 01, 2013	EUT Type: GSM/WCDMA Phone with Bluetooth4.0, WIFI802.11 a/b/g/n(2.4/5GHz)/NFC		FCC ID: ZNFE989

9. LIST OF TEST EQUIPMENT

Manufacturer	Model / Equipment	Calibration Interval	Calibration Due	Serial No.
Rohde & Schwarz	ENV216/ LISN	Annual	02/06/2014	100073
Schwarzbeck	VULB 9160/ TRILOG Antenna	Biennial	12/17/2014	3150
Rohde & Schwarz	ESI 40 / EMI TEST RECEIVER	Annual	04/16/2014	831564103
Agilent	E4440A/ Spectrum Analyzer	Annual	04/25/2014	US45303008
Agilent	N9020A/ SIGNAL ANALYZER	Annual	05/14/2014	MY51110063
HD	MA240/ Antenna Position Tower	N/A	N/A	556
EMCO	1050/ Turn Table	N/A	N/A	114
HD GmbH	HD 100/ Controller	N/A	N/A	13
HD GmbH	KMS 560/ SlideBar	N/A	N/A	12
Rohde & Schwarz	SCU-18/ Signal Conditioning Unit	Annual	09/11/2013	10094
MITEQ	AMF-6B-180265-35-10P / POWER AMP	Annual	04/16/2014	667624
CERNEX	CBL26405040 / POWER AMP	Annual	04/16/2014	19660
Schwarzbeck	BBHA 9120D/ Horn Antenna	Biennial	10/17/2013	937
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	Biennial	10/30/2014	BBHA9170124
Rohde & Schwarz	FSP / Spectrum Analyzer	Annual	02/08/2014	839117/011
Agilent	E4416A /Power Meter	Annual	11/07/2013	GB41291412
Agilent	E9327A /POWER SENSOR	Annual	04/16/2014	MY4442009
Wainwright Instrument	WHF3.0/18G-10EF / High Pass Filter	Annual	02/08/2014	F6
Wainwright Instrument	WHNX6.0/26.5G-6SS / High Pass Filter	Annual	04/16/2014	1
Wainwright Instrument	WHNX7.0/18G-8SS / High Pass Filter	Annual	04/16/2014	29
Wainwright Instrument	WRCJ2400/2483.5-2370/2520-60/14SS / Band Reject Filter	Annual	03/19/2014	1
Hewlett Packard	11636B/Power Divider	Annual	11/07/2013	11377
Agilent	87300B/Directional Coupler	Annual	12/24/2013	3116A03621
Hewlett Packard	11667B / Power Splitter	Annual	05/29/2014	05001
DIGITAL	EP-3010 /DC POWER SUPPLY	Annual	11/07/2013	3110117
ITECH	IT6720 / DC POWER SUPPLY	Annual	11/07/2013	010002156287001199
TESCOM	TC-3000C / BLUETOOTH TESTER	Annual	04/24/2014	3000C000276
Rohde & Schwarz	CBT / BLUETOOTH TESTER	Annual	04/25/2014	100422
EMCO	6502.LOOP ANTENNA	Biennial	01/11/2014	9009-2536
CERNEX	CBLU1183540 / POWER AMP	Annual	07/27/2013	21691
Agilent	8493C / Attenuator(10 dB)	Annual	07/30/2013	76649
WEINSCHTEL	2-3 / Attenuator(3 dB)	Annual	11/07/2013	BR0617
LG Electronics	WCP-300/ Wireless Charger (FCC ID: BEJWCP300)	-	-	304HYPB000072