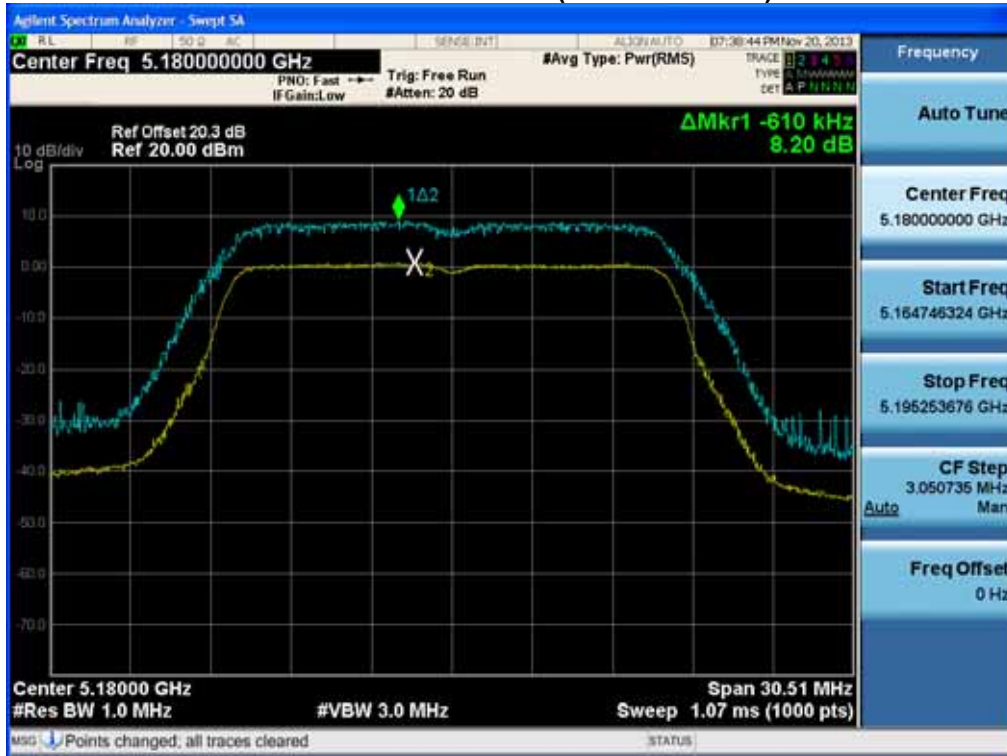


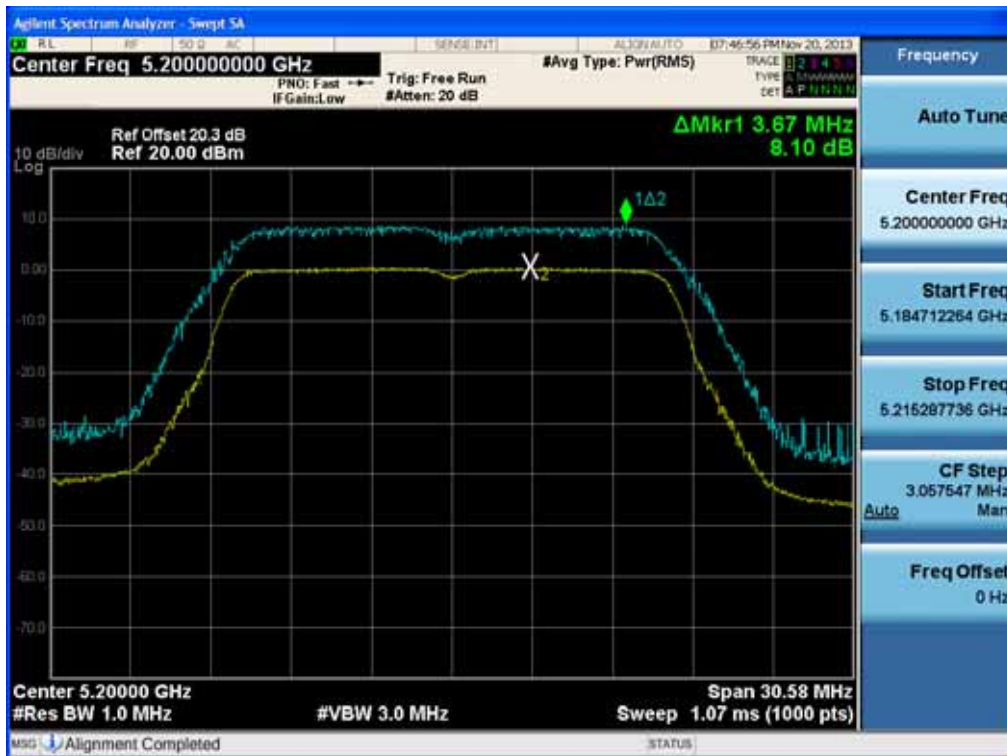
RESULT PLOTS

20 MHz BW

Peak Excursion Ratio (802.11a-CH 36)

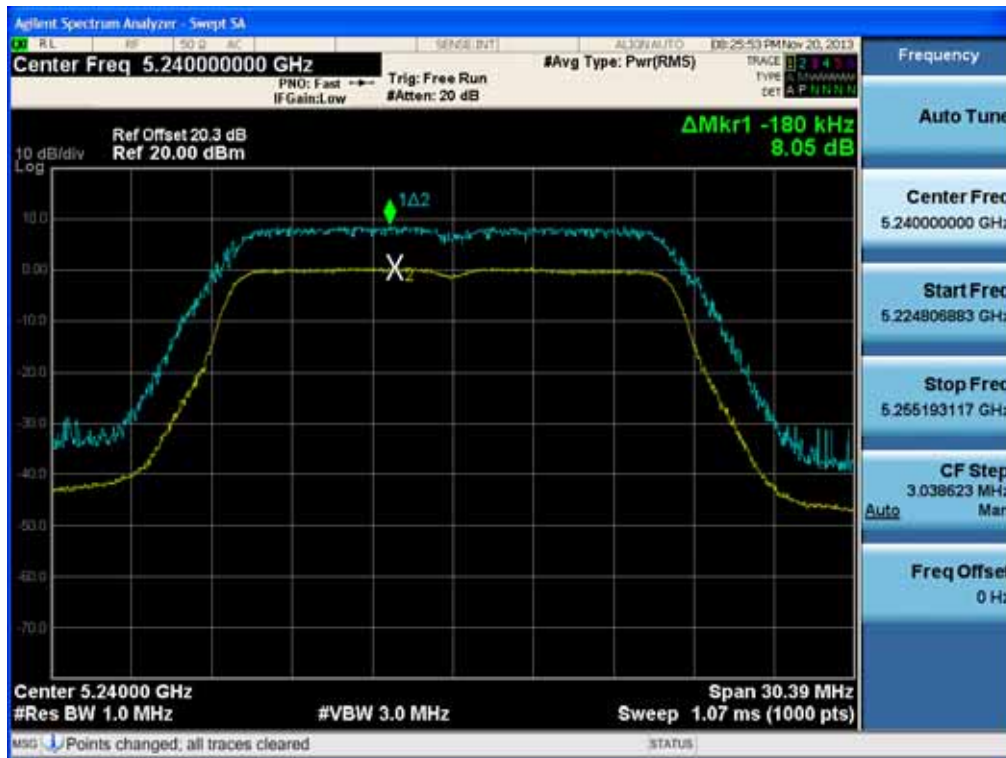


Peak Excursion Ratio (802.11a-CH 40)

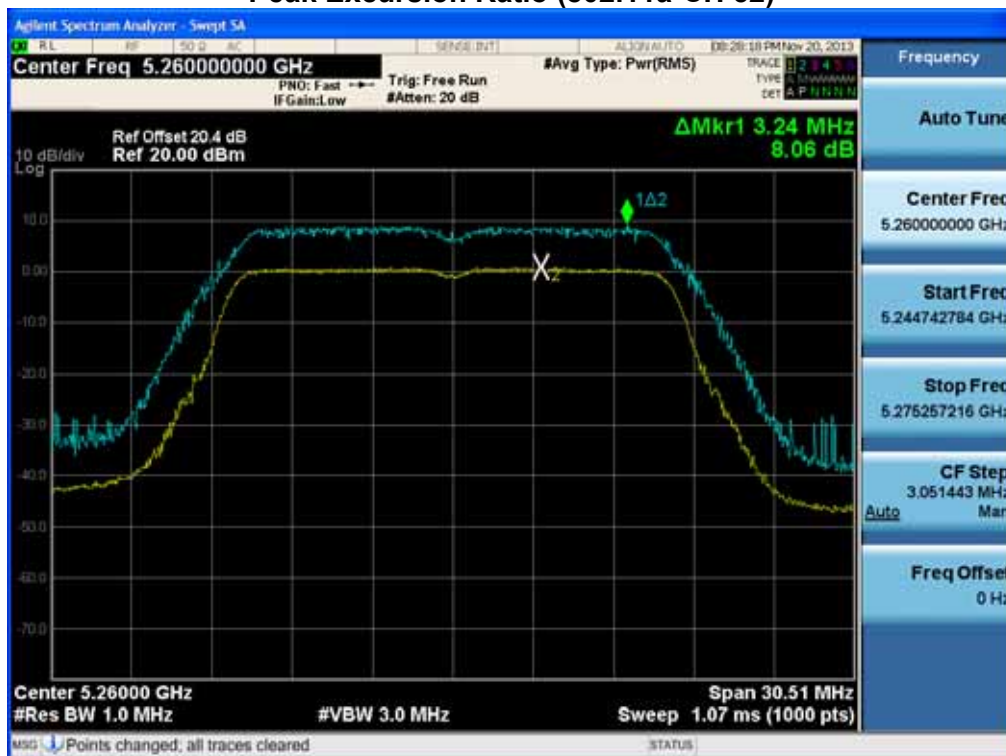


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

Peak Excursion Ratio (802.11a-CH 48)



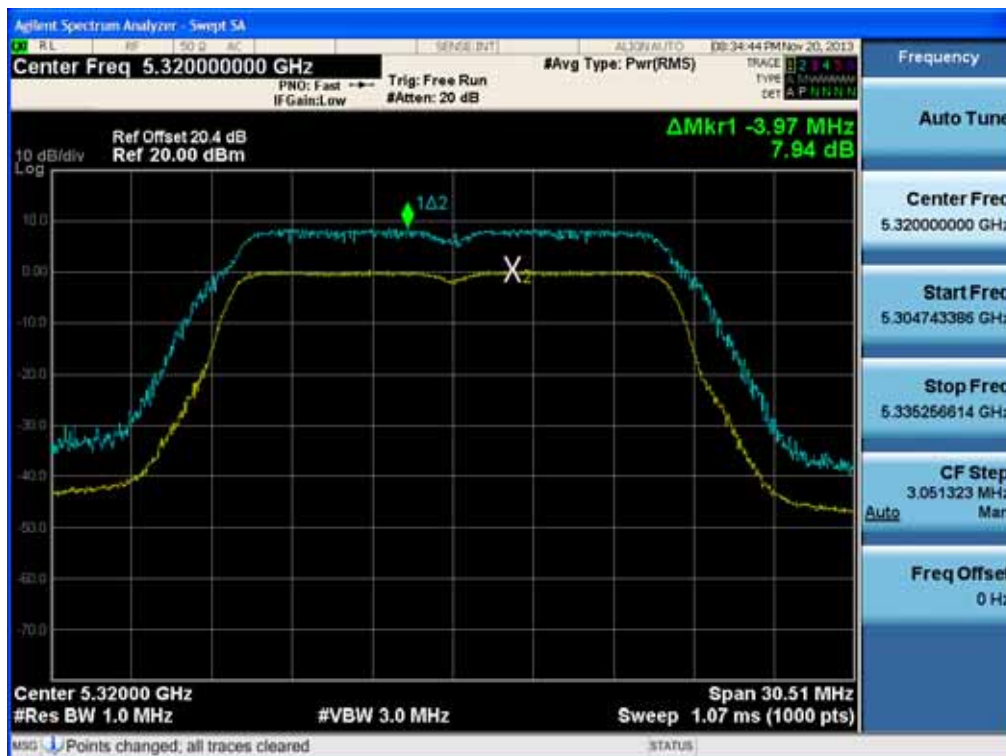
Peak Excursion Ratio (802.11a-CH 52)



Peak Excursion Ratio (802.11a-CH 60)

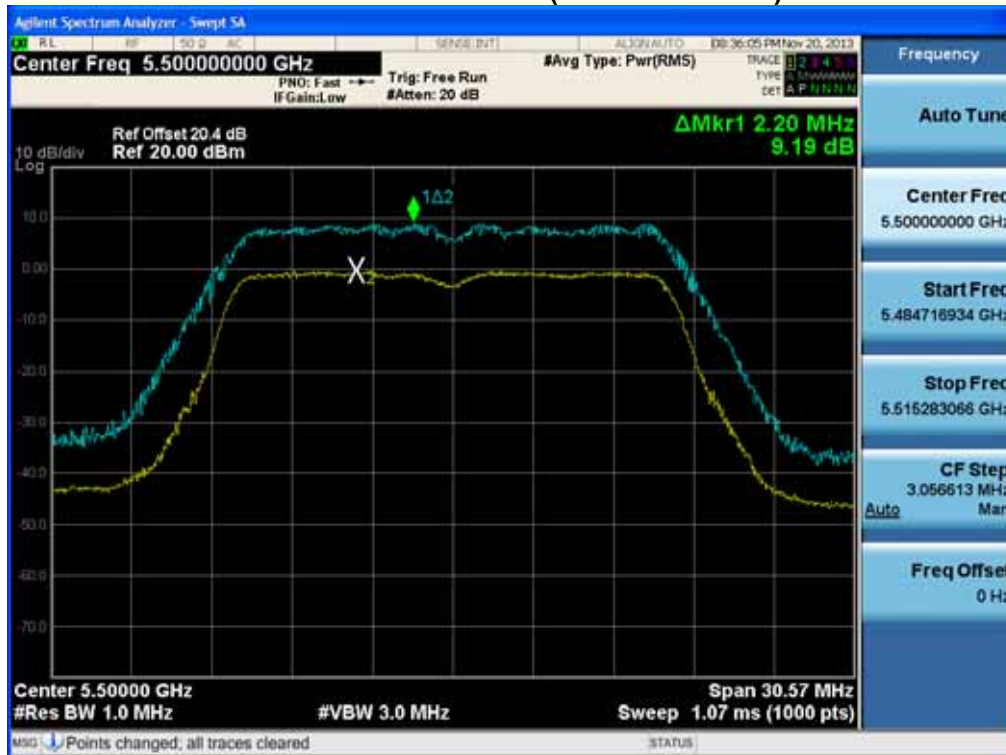


Peak Excursion Ratio (802.11a-CH 64)

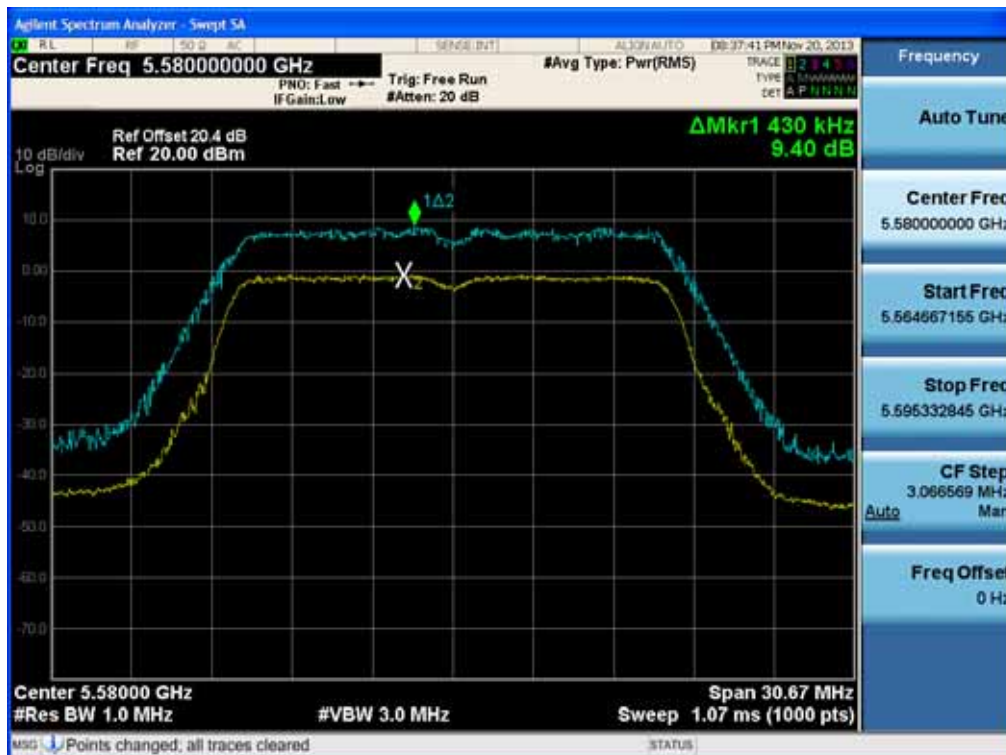


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

Peak Excursion Ratio (802.11a-CH 100)

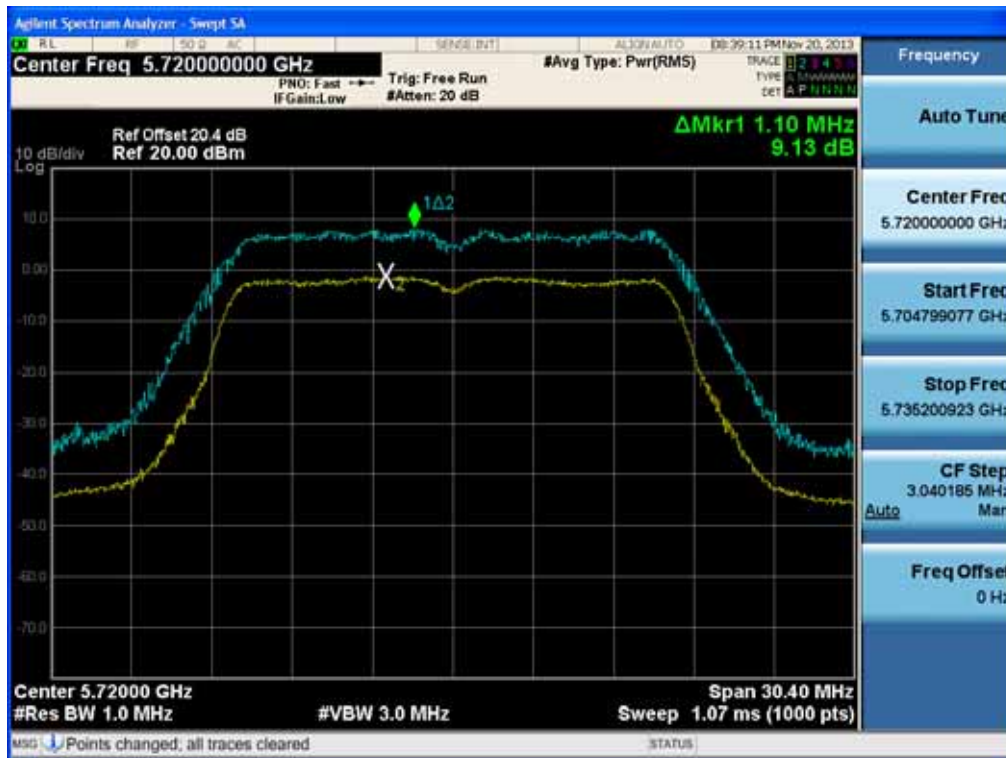


Peak Excursion Ratio (802.11a-CH 116)



FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

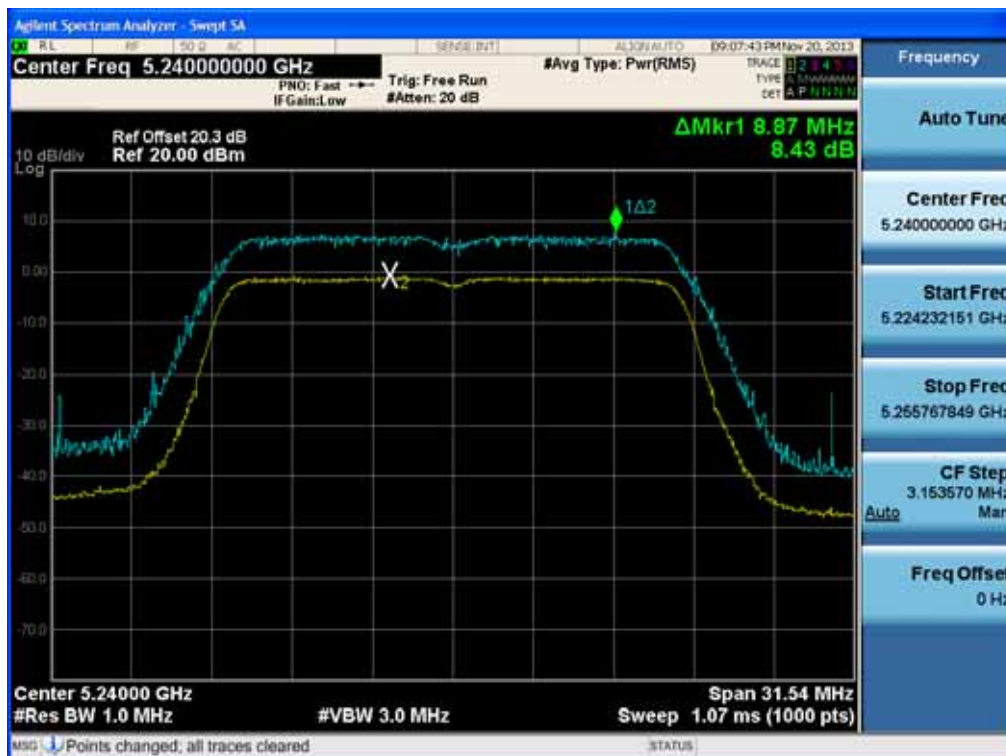
Peak Excursion Ratio (802.11a-CH 144)



Peak Excursion Ratio (802.11n-CH 40)

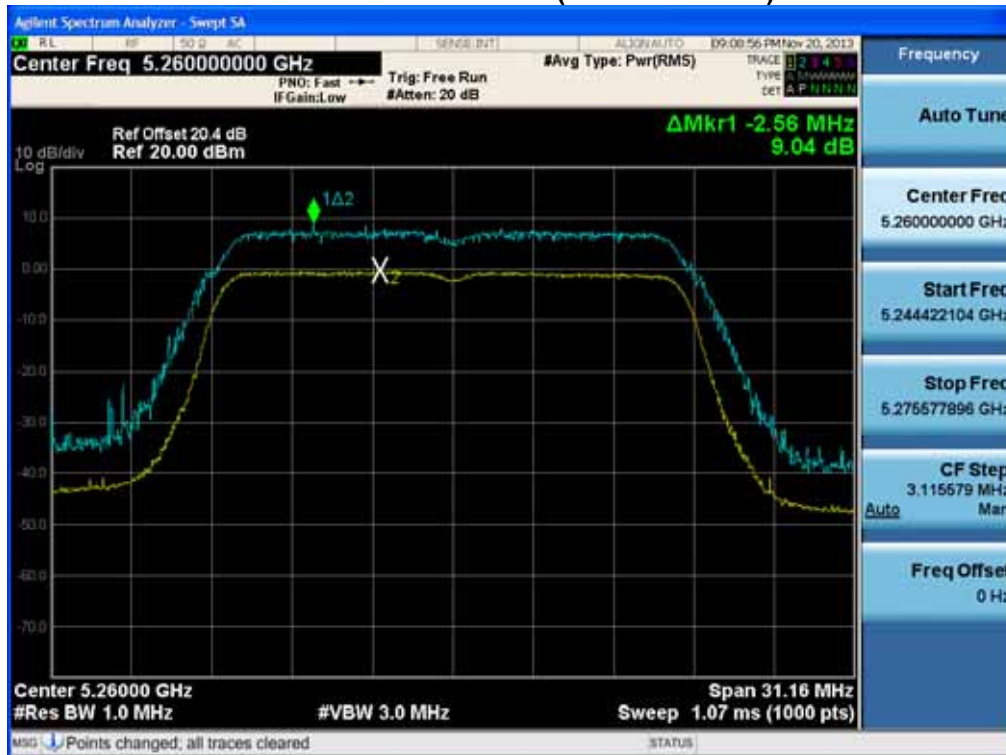


Peak Excursion Ratio (802.11n-CH 48)

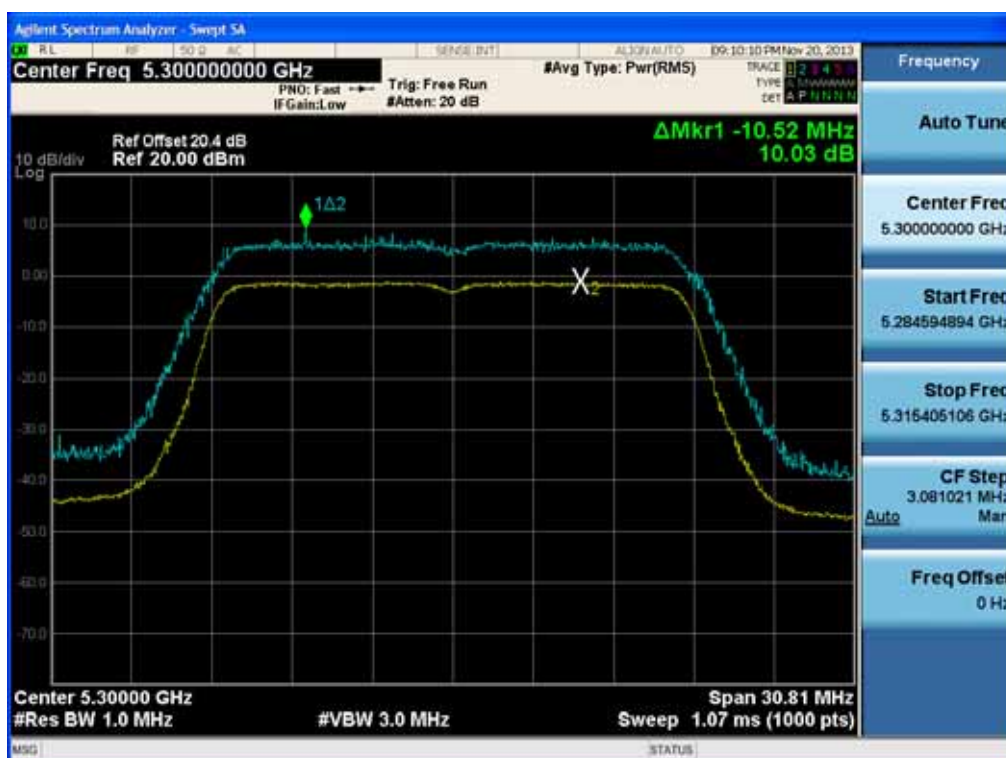


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

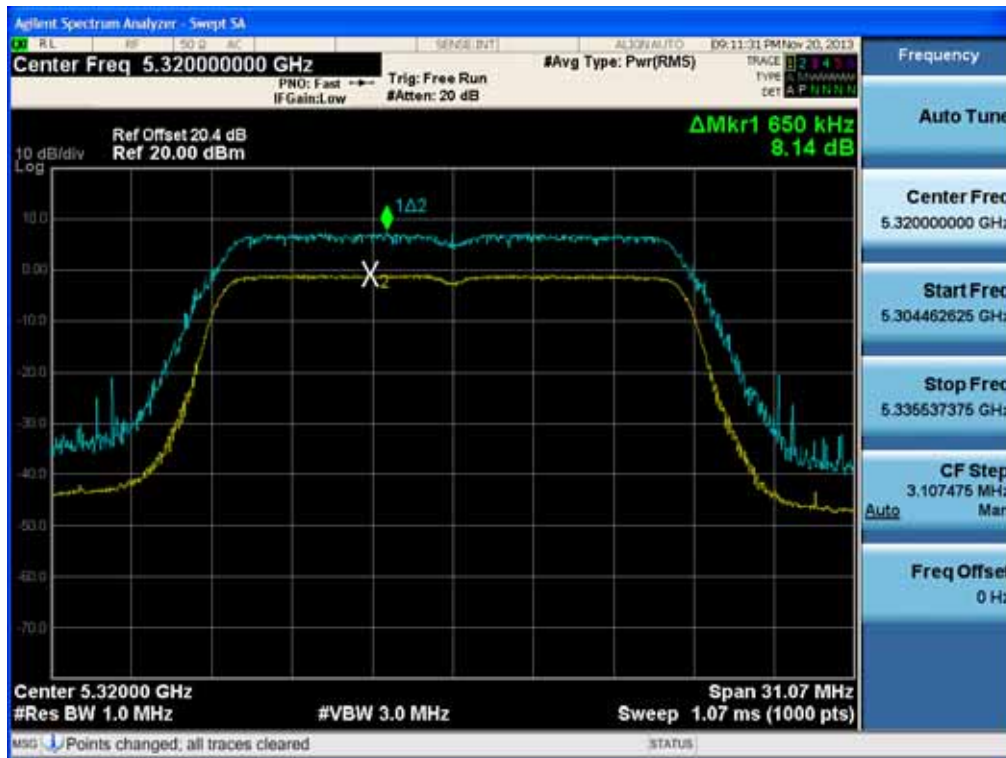
Peak Excursion Ratio (802.11n-CH 52)



Peak Excursion Ratio (802.11n-CH 60)



Peak Excursion Ratio (802.11n-CH 64)



Peak Excursion Ratio (802.11n-CH 100)

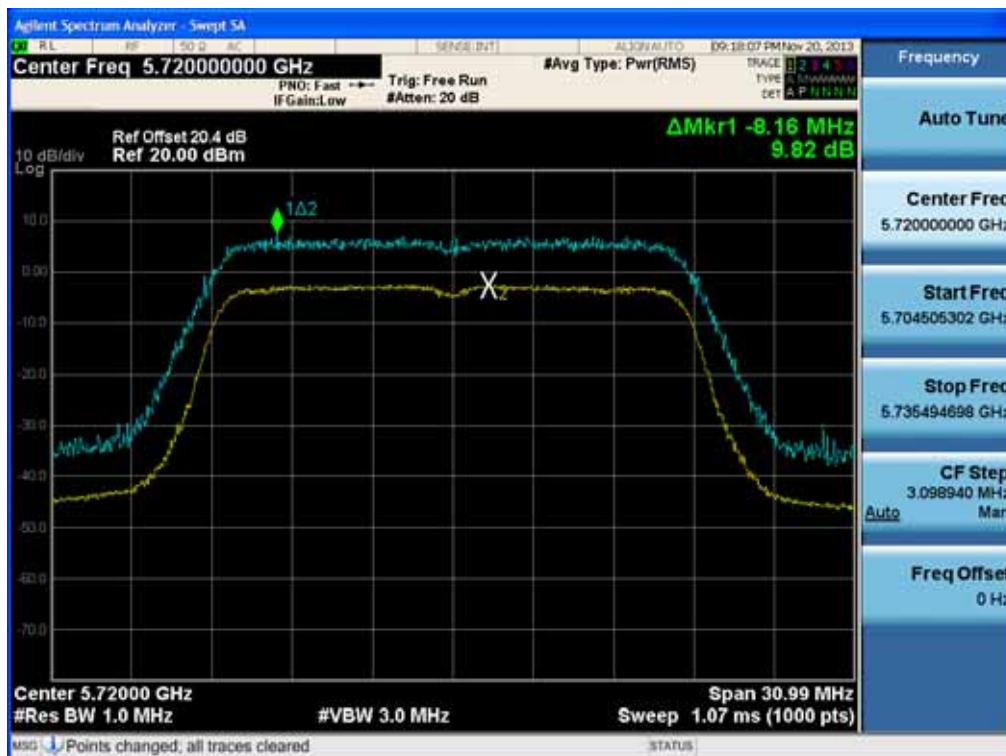


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

Peak Excursion Ratio (802.11n-CH 116)

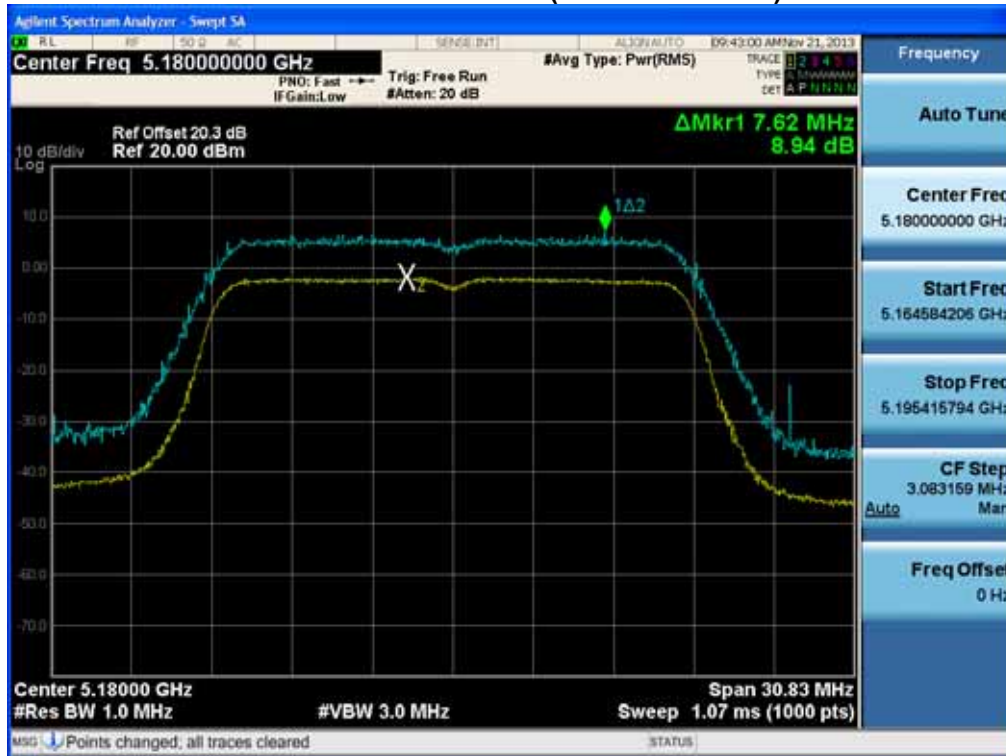


Peak Excursion Ratio (802.11n-CH 144)

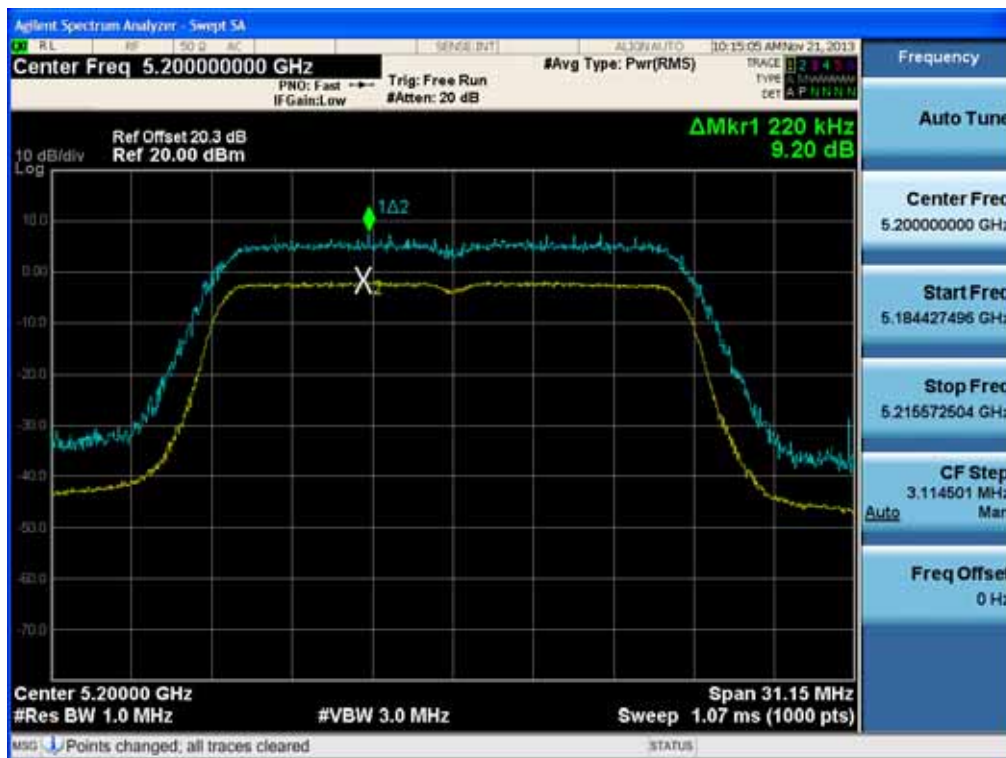


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

Peak Excursion Ratio (802.11ac-CH 36)

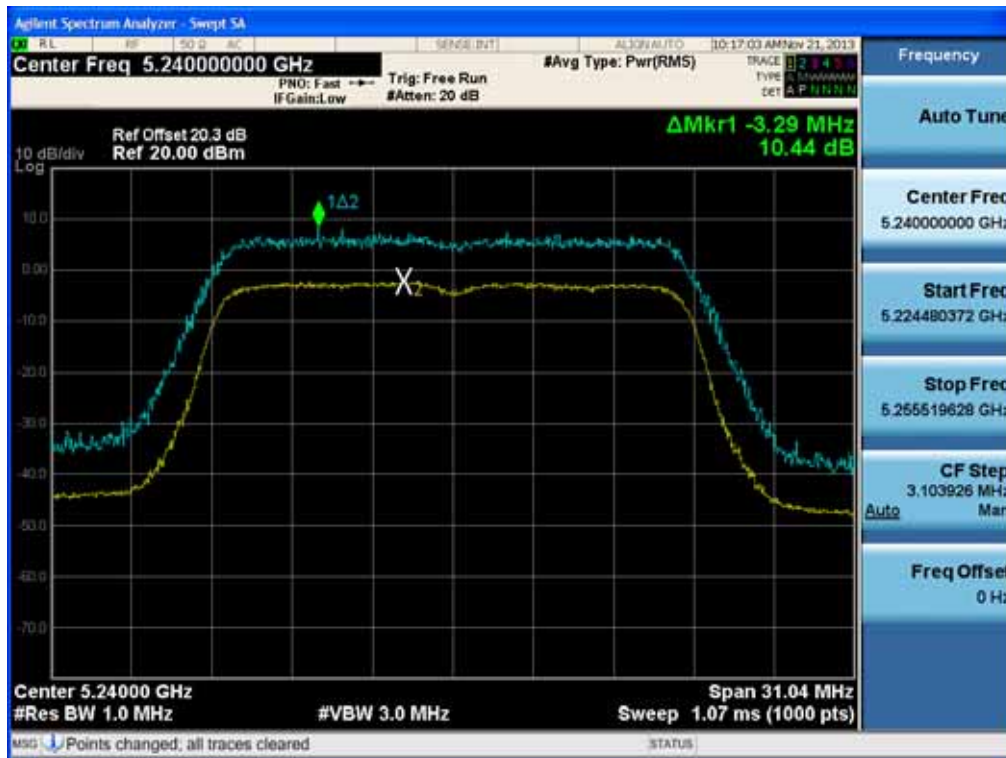


Peak Excursion Ratio (802.11ac-CH 40)

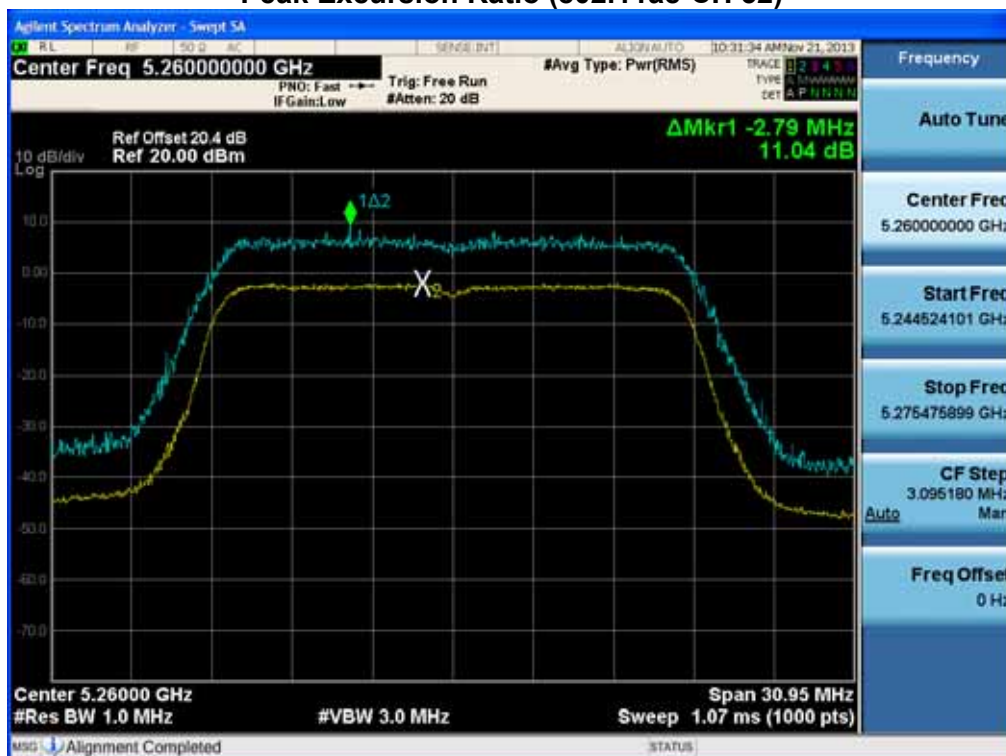


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

Peak Excursion Ratio (802.11ac-CH 48)

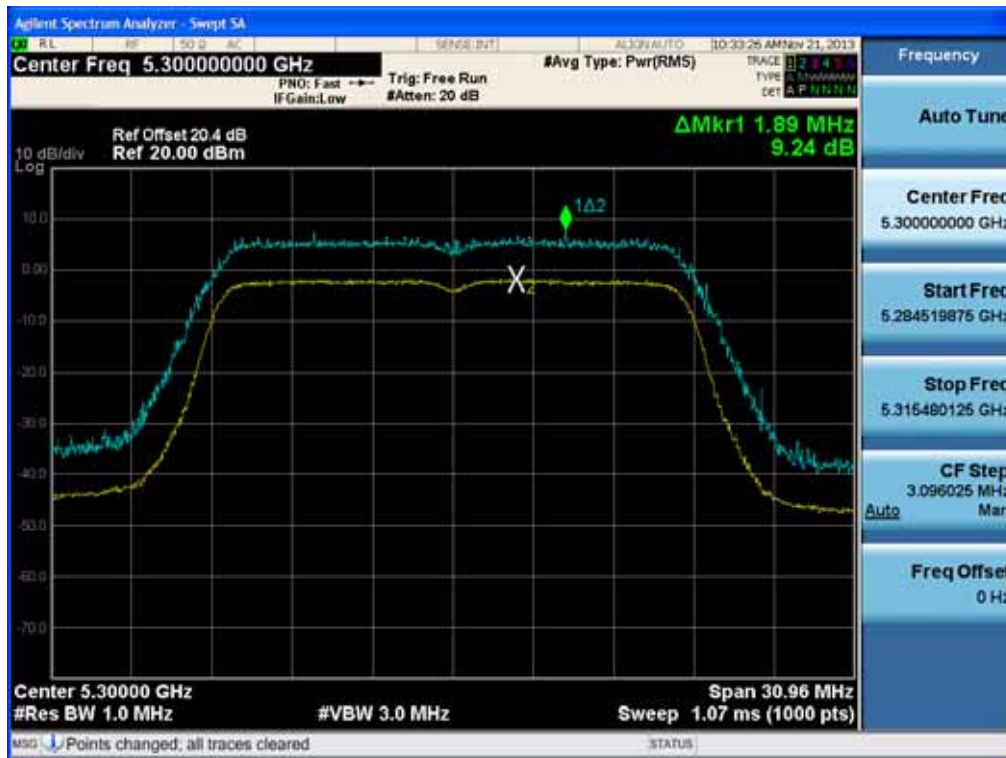


Peak Excursion Ratio (802.11ac-CH 52)

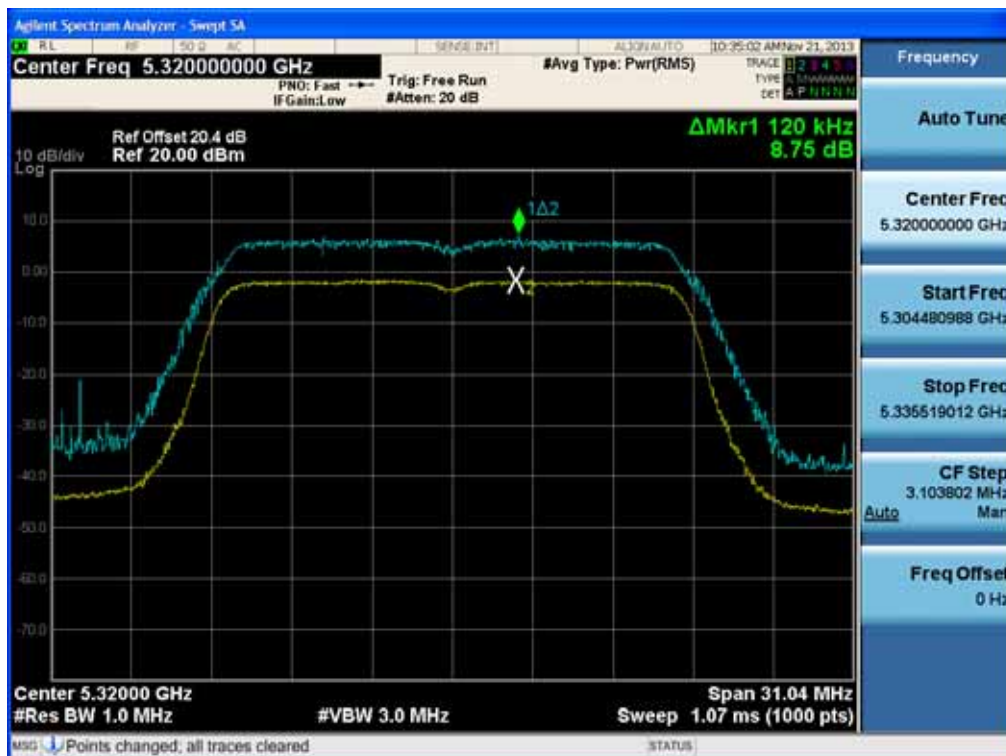


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

Peak Excursion Ratio (802.11ac-CH 60)

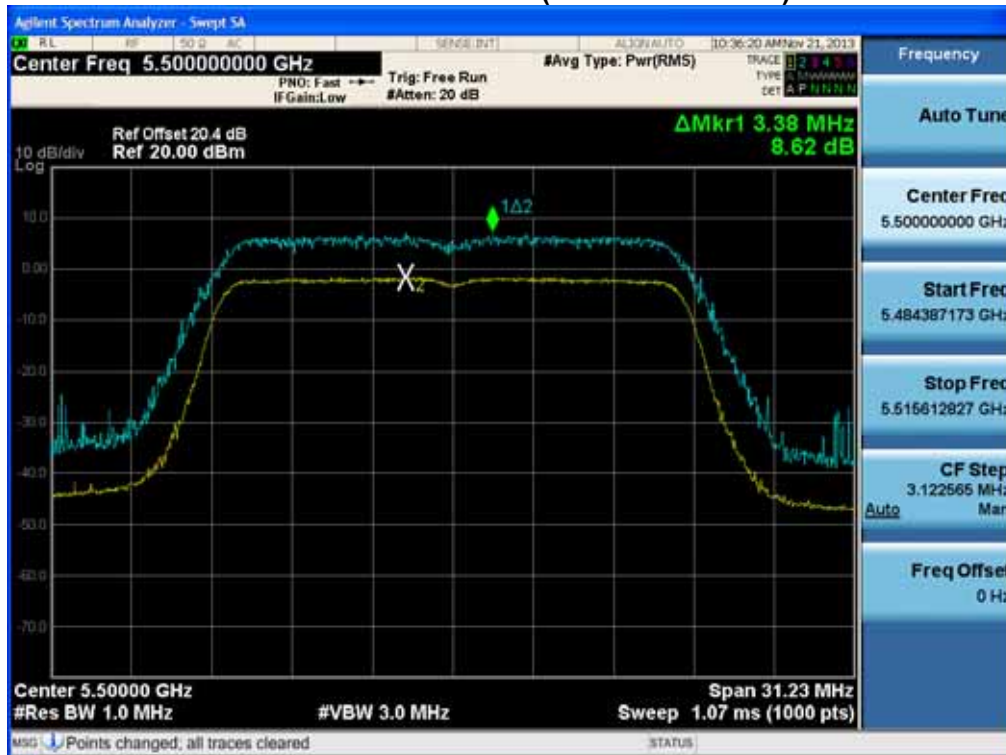


Peak Excursion Ratio (802.11ac-CH 64)

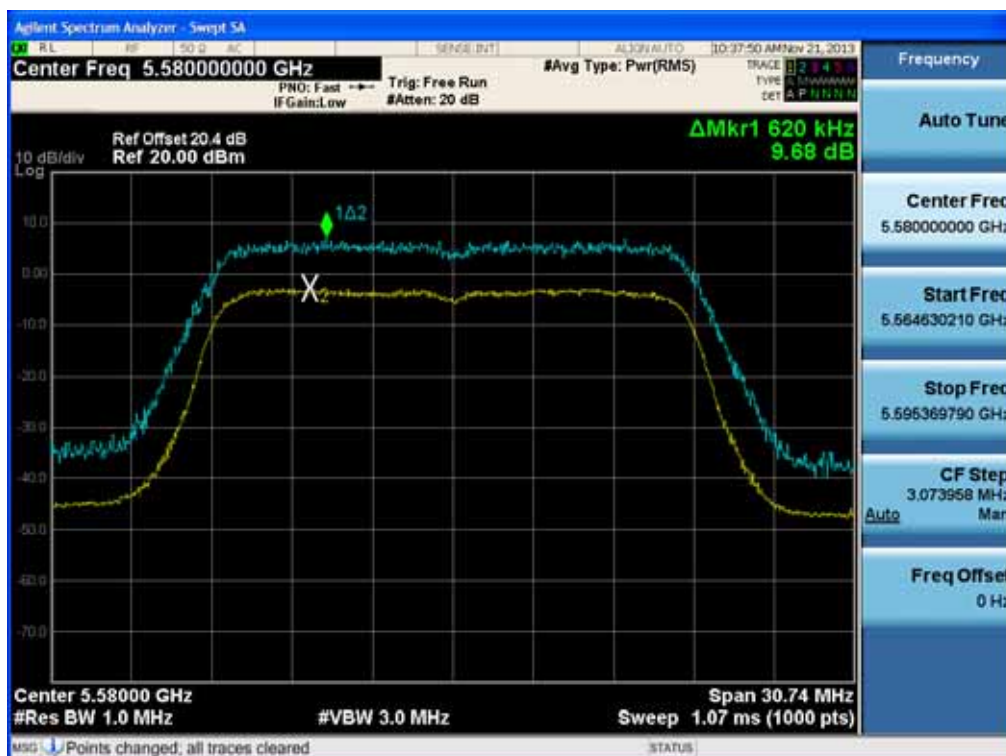


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

Peak Excursion Ratio (802.11ac-CH 100)

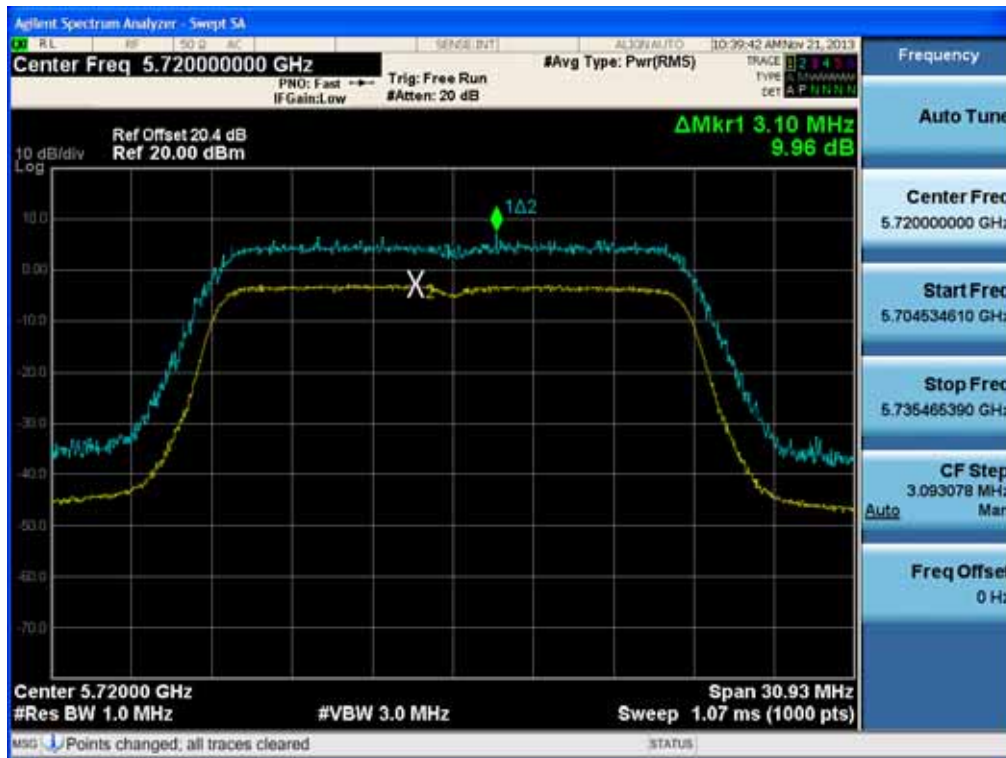


Peak Excursion Ratio (802.11ac-CH 116)



FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

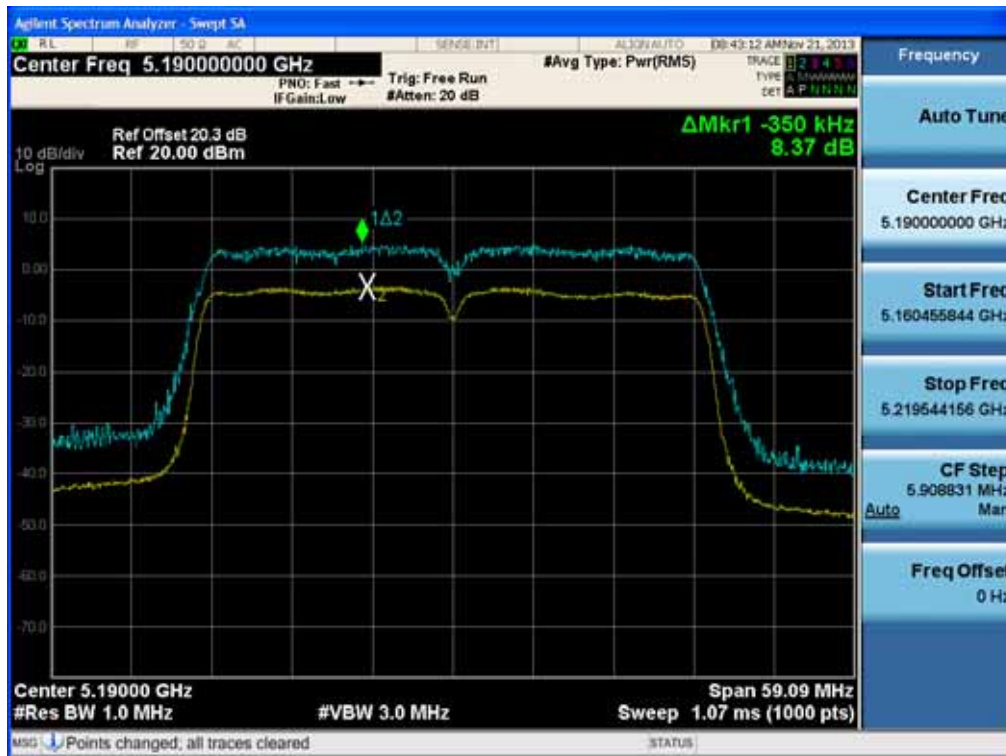
Peak Excursion Ratio (802.11ac-CH 144)



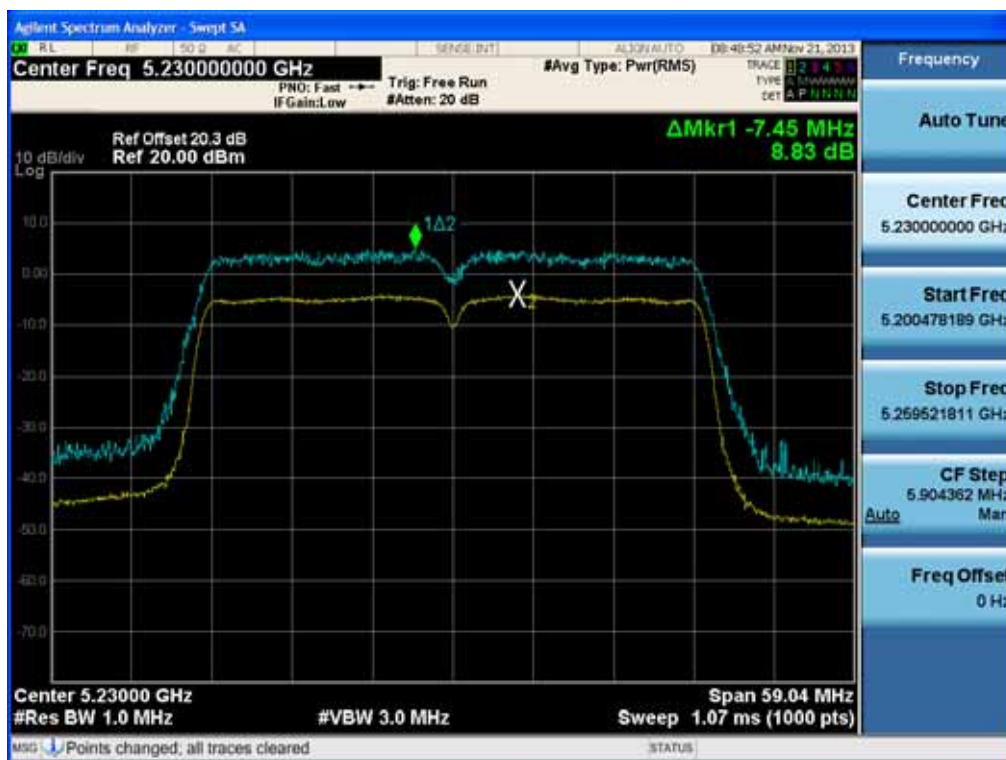
FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

40 MHz BW

Peak Excursion Ratio (802.11n-CH 38)

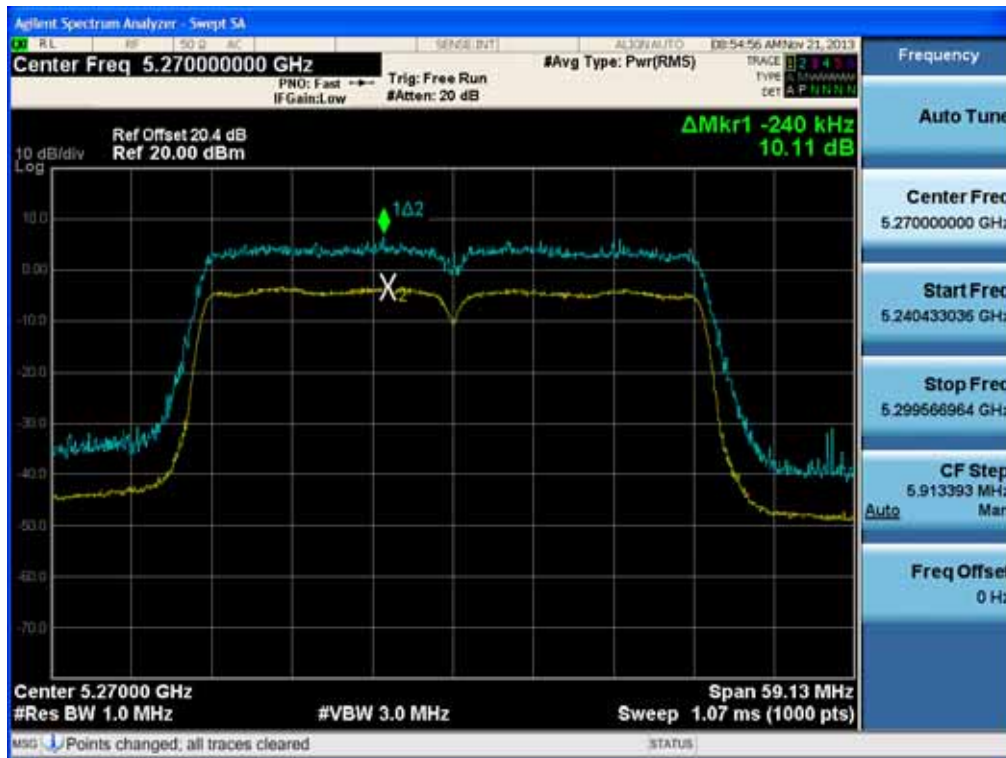


Peak Excursion Ratio (802.11n-CH 46)

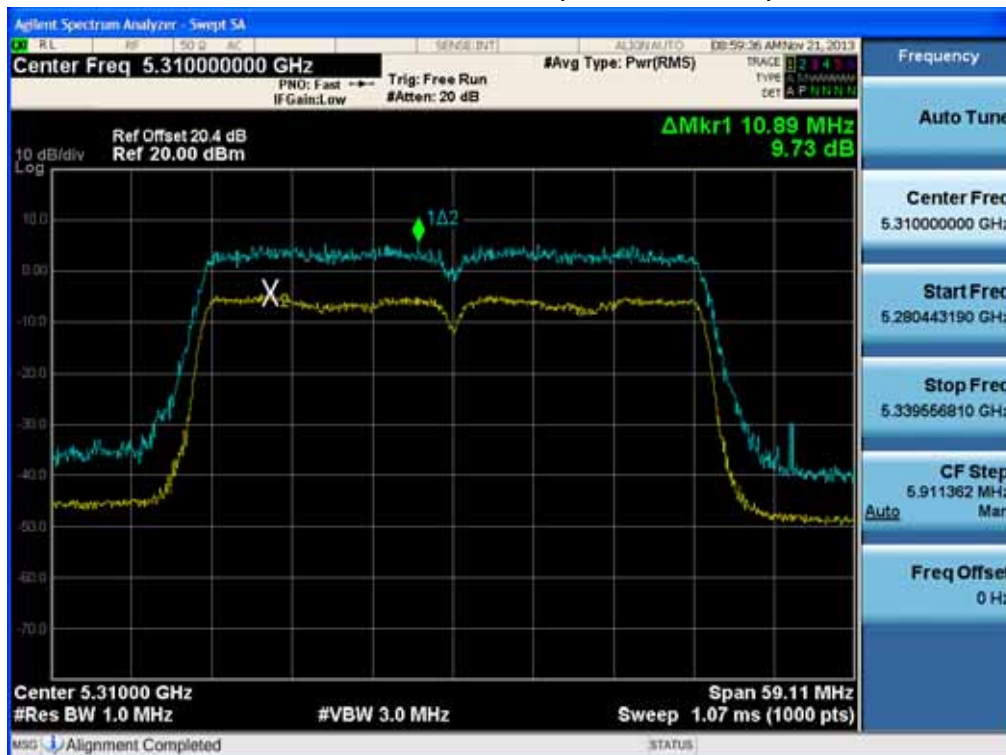


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

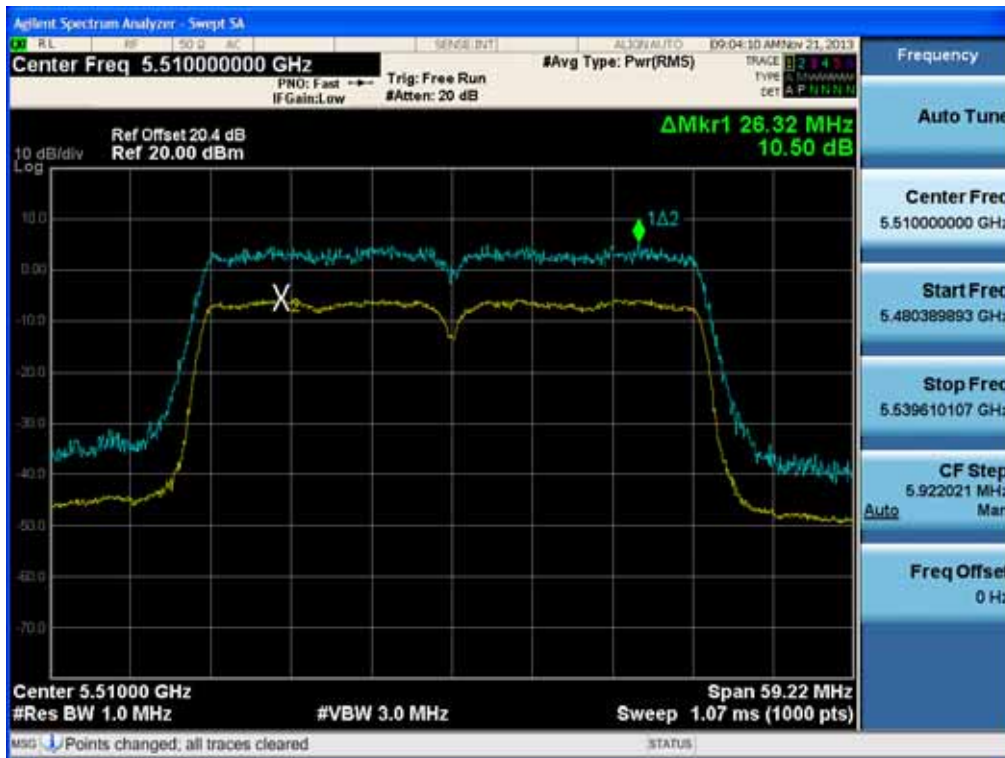
Peak Excursion Ratio (802.11n-CH 54)



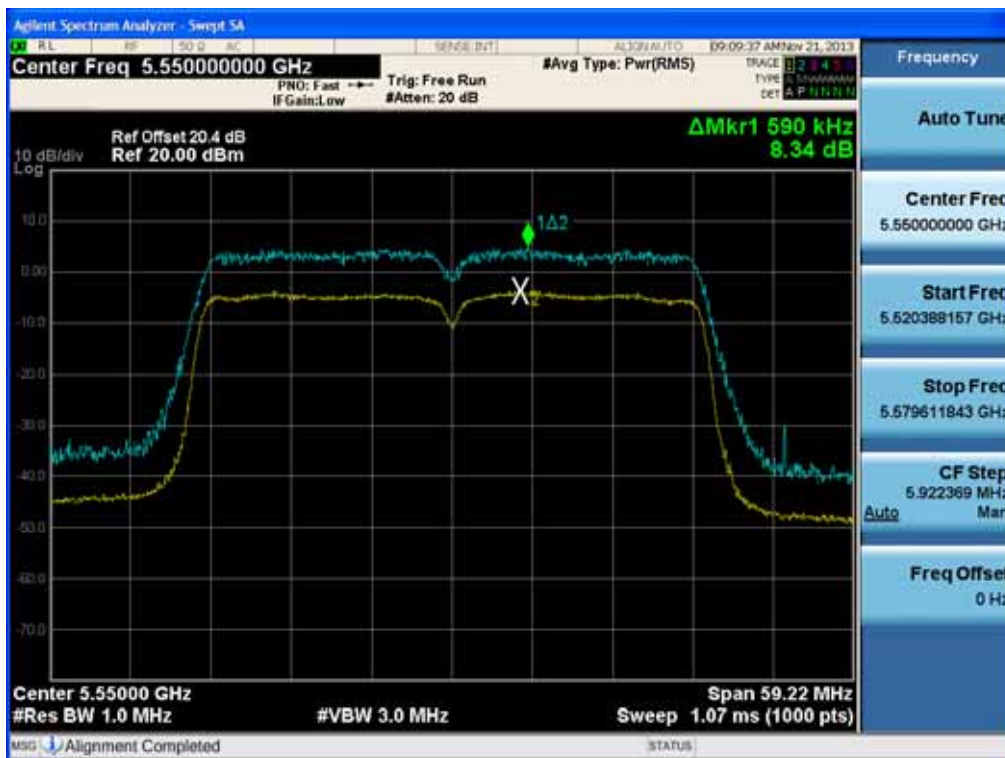
Peak Excursion Ratio (802.11n-CH 62)



Peak Excursion Ratio (802.11n-CH 102)

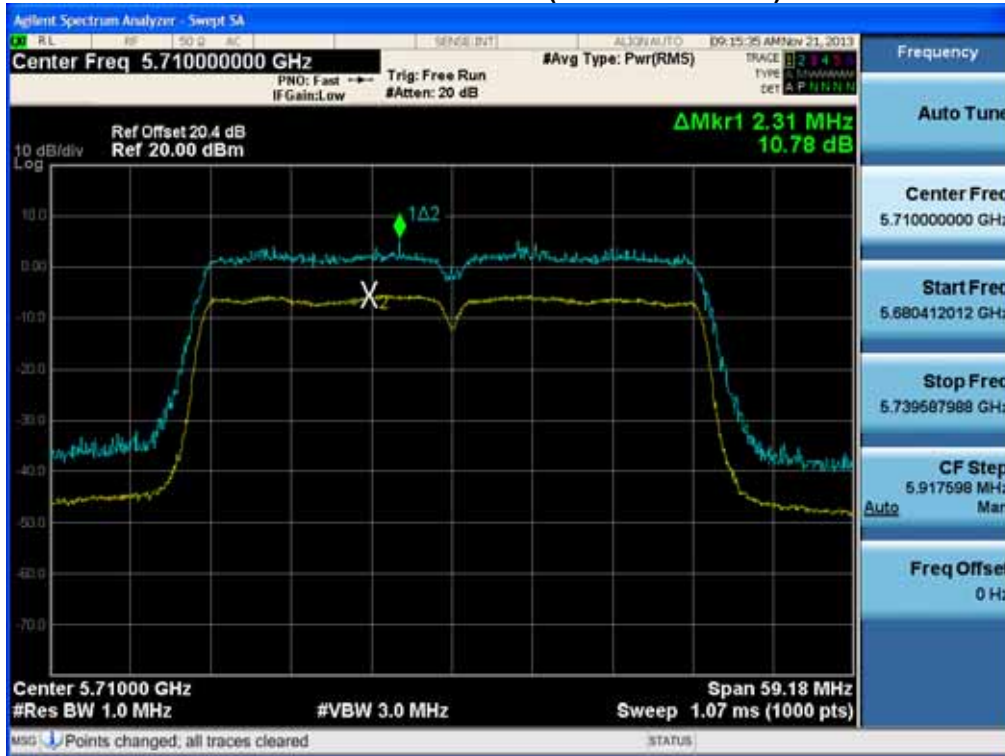


Peak Excursion Ratio (802.11n-CH 110)

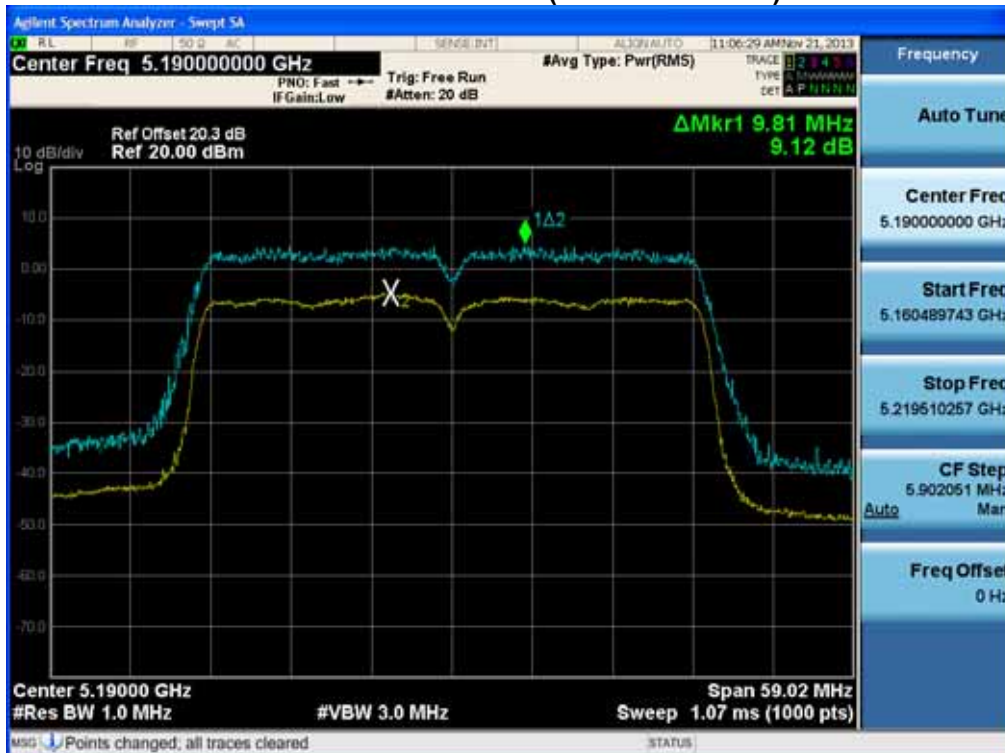


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

Peak Excursion Ratio (802.11n-CH 142)



Peak Excursion Ratio (802.11ac-CH 38)

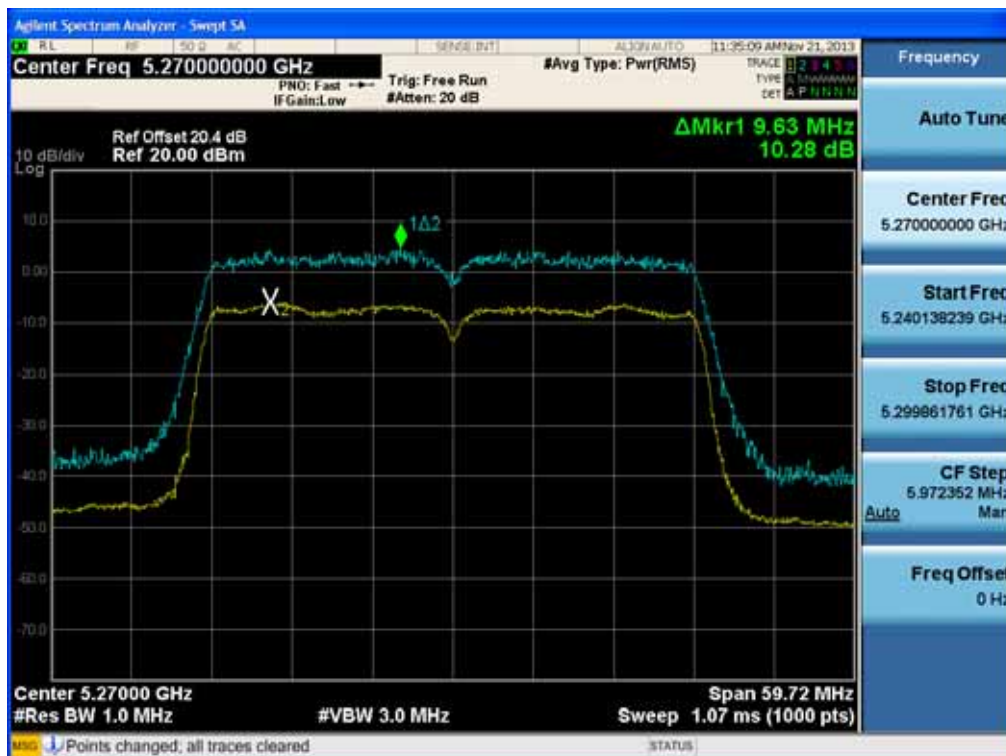


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

Peak Excursion Ratio (802.11ac-CH 46)

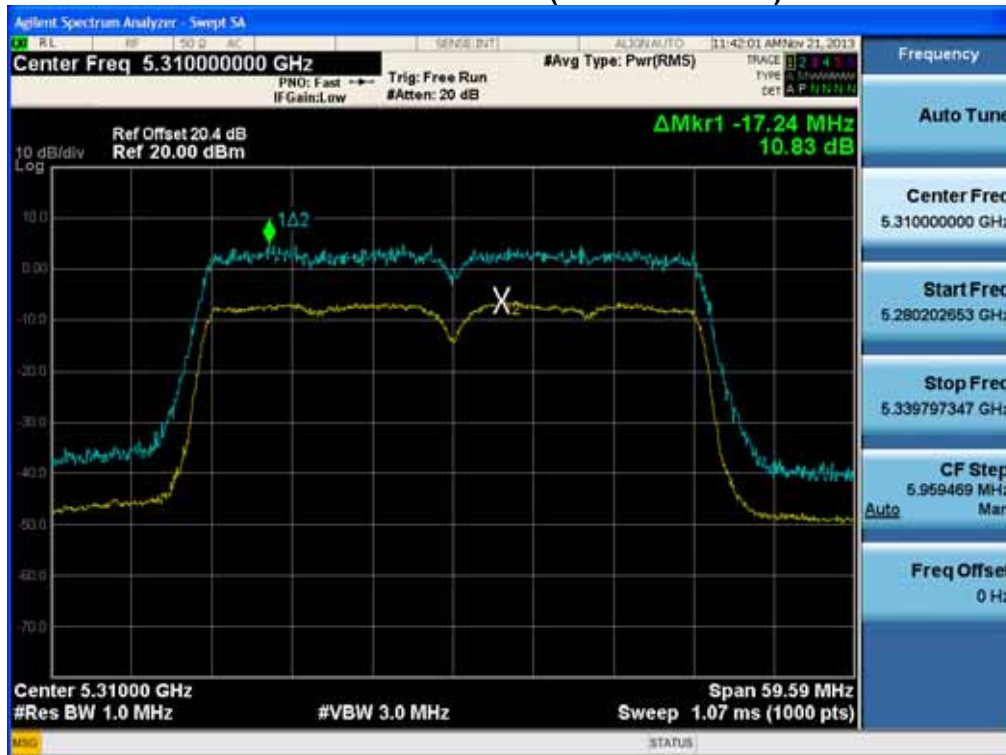


Peak Excursion Ratio (802.11ac-CH 54)

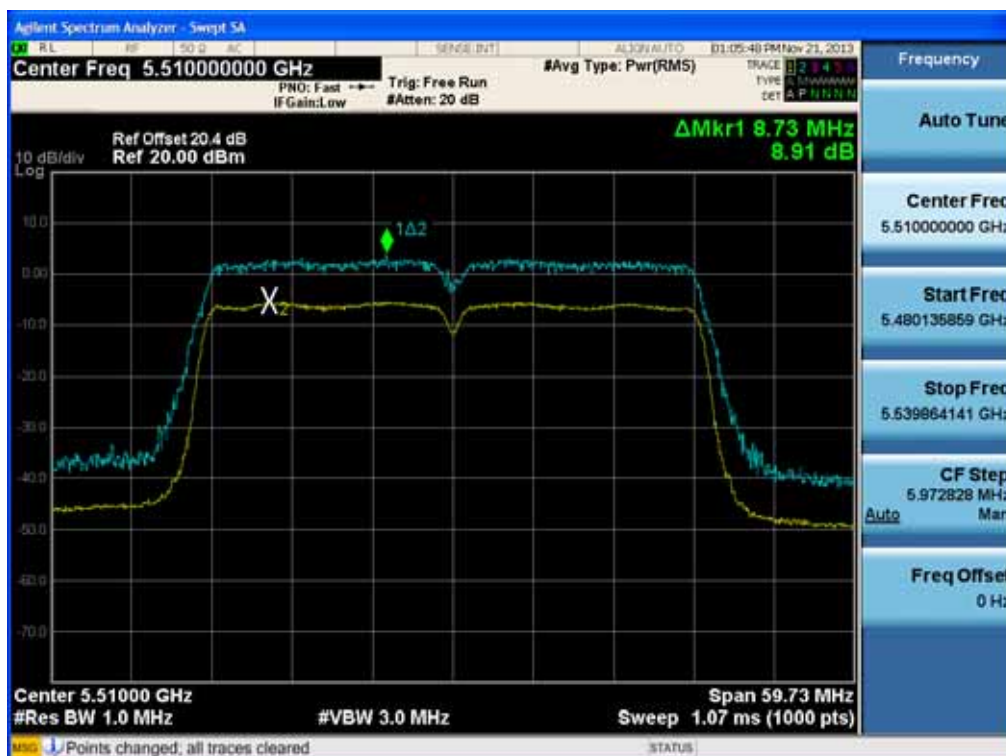


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

Peak Excursion Ratio (802.11ac-CH 62)



Peak Excursion Ratio (802.11ac-CH 102)

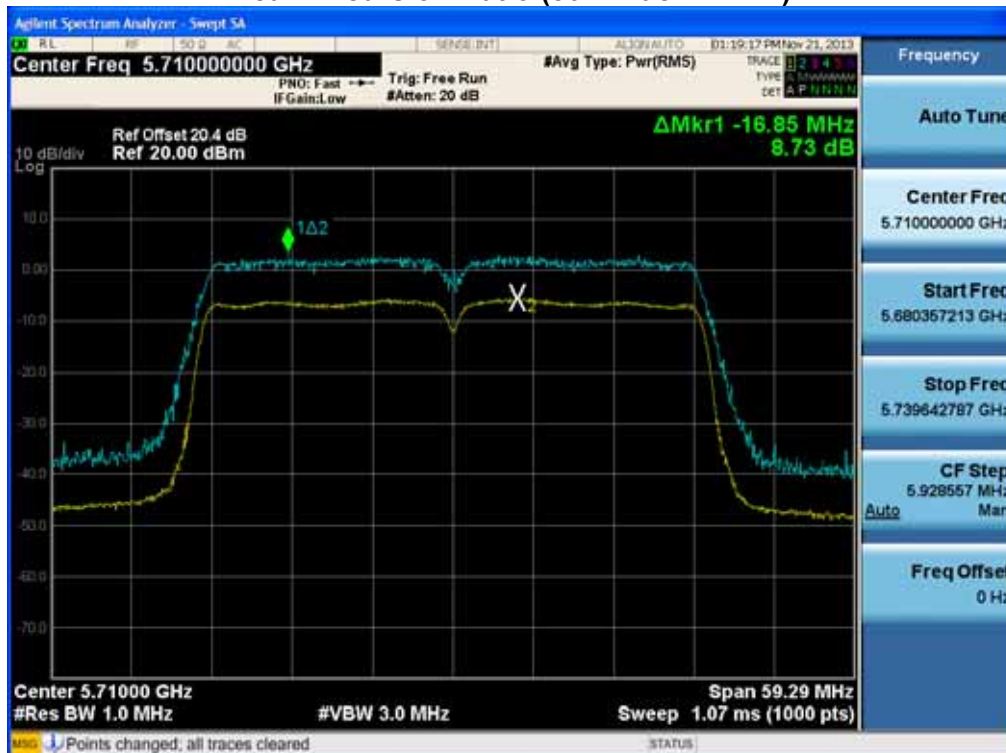


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

Peak Excursion Ratio (802.11ac-CH 110)



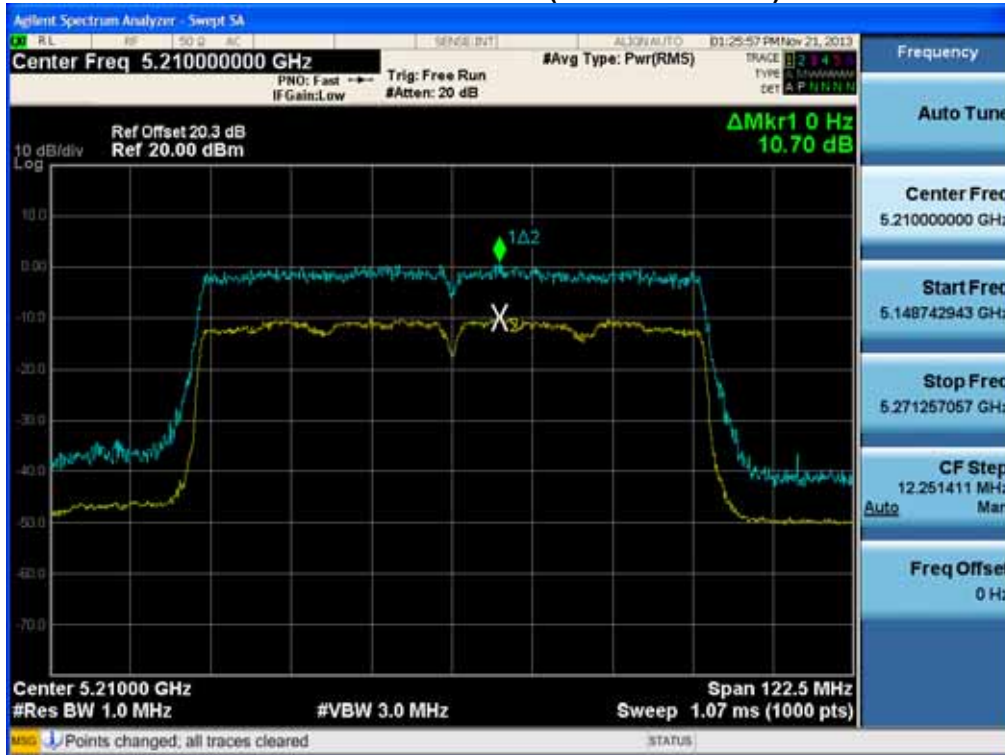
Peak Excursion Ratio (802.11ac-CH 142)



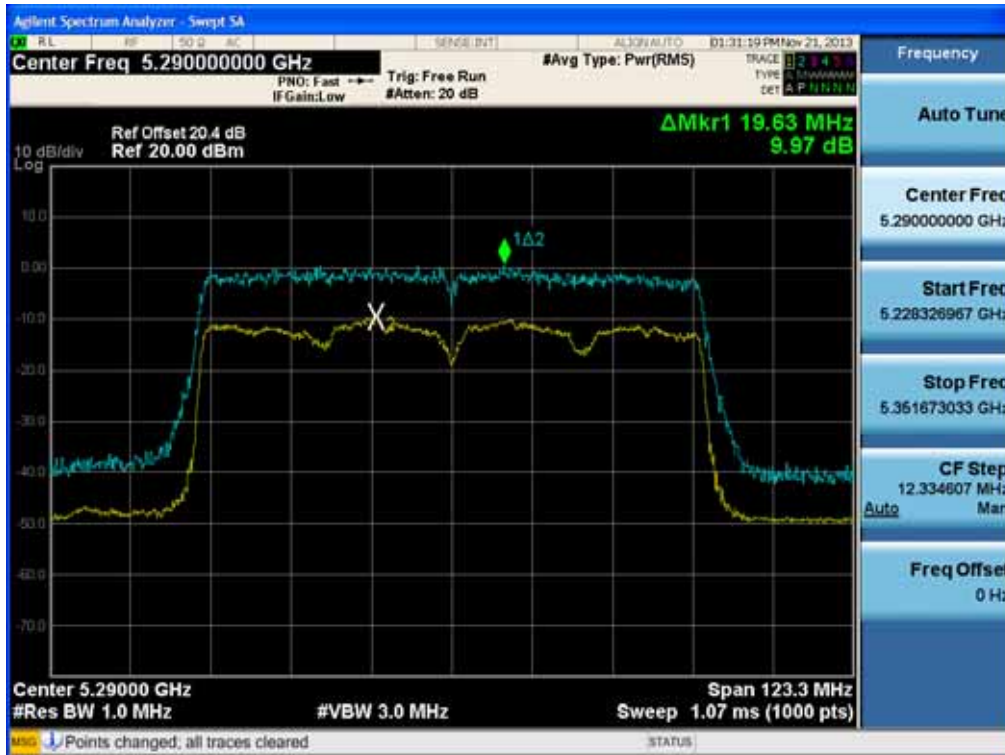
FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

80 MHz BW

Peak Excursion Ratio (802.11ac-CH 42)



Peak Excursion Ratio (802.11ac-CH 58)

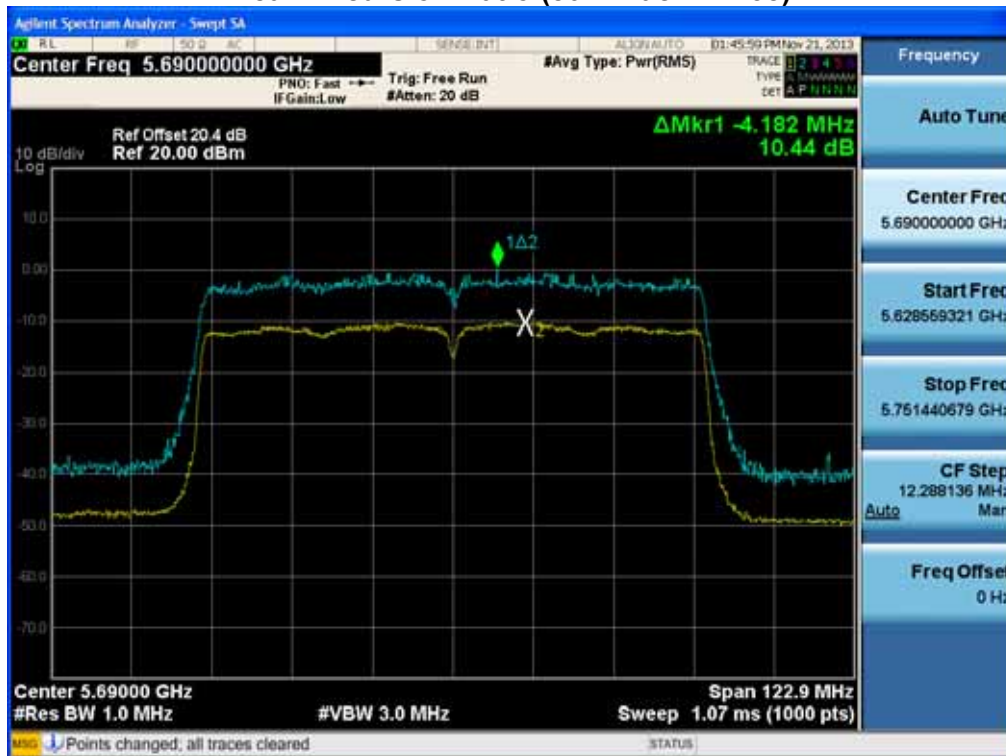


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

Peak Excursion Ratio (802.11ac-CH 106)



Peak Excursion Ratio (802.11ac-CH 138)



8.6 FREQUENCY STABILITY.

The EUT was placed inside an environmental chamber as the temperature in the chamber was varied between -30 and 50 . The temperature was incremented by 10 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. ()	Frequency (kHz)	Frequency Error (kHz)
100%	3.80	+20(Ref)	5 180 003.78	3.78
100%		-30	5 179 994.08	-5.92
100%		-20	5 179 995.88	-4.12
100%		-10	5 179 993.57	-6.43
100%		0	5 179 998.36	-1.64
100%		+10	5 180 000.45	0.45
100%		+30	5 180 002.15	2.15
100%		+40	5 179 998.54	-1.46
100%		+50	5 179 994.12	-5.88
115%	4.37	+20	5 180 008.55	8.55
Batt. Endpoint	3.50	+20	5 180 006.12	6.12

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. ()	Frequency (kHz)	Frequency Error (kHz)
100%	3.80	+20(Ref)	5 260 003.64	3.64
100%		-30	5 259 994.67	-5.33
100%		-20	5 259 995.69	-4.31
100%		-10	5 259 994.06	-5.94
100%		0	5 259 997.97	-2.03
100%		+10	5 260 000.86	0.86
100%		+30	5 260 001.89	1.89
100%		+40	5 259 997.36	-2.64
100%		+50	5 259 995.85	-4.15
115%	4.37	+20	5 260 005.64	5.64
Batt. Endpoint	3.50	+20	5 260 006.66	6.66

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: 5,550,000,000 Hz
 CHANNEL: 100
 REFERENCE VOLTAGE: 3.8 VDC

Voltage (%)	Power (VDC)	Temp. ()	Frequency (kHz)	Frequency Error (kHz)
100%	3.80	+20(Ref)	5 500 001.96	1.96
100%		-30	5 499 996.36	-3.64
100%		-20	5 499 997.29	-2.71
100%		-10	5 499 995.36	-4.64
100%		0	5 499 998.05	-1.95
100%		+10	5 500 000.94	0.94
100%		+30	5 500 001.54	1.54
100%		+40	5 499 997.78	-2.22
100%		+50	5 499 995.36	-4.64
115%	4.37	+20	5 500 002.38	2.38
Batt. Endpoint	3.50	+20	5 500 004.12	4.12

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. ()	Frequency (kHz)	Frequency Error (kHz)
100%	3.80	+20(Ref)	5 190 000.90	0.90
100%		-30	5 189 997.87	-2.13
100%		-20	5 189 996.95	-3.05
100%		-10	5 189 997.85	-2.15
100%		0	5 189 998.24	-1.76
100%		+10	5 190 001.89	1.89
100%		+30	5 190 002.65	2.65
100%		+40	5 189 998.71	-1.29
100%		+50	5 189 997.05	-2.95
115%	4.37	+20	5 190 005.31	5.31
Batt. Endpoint	3.50	+20	5 190 002.10	2.10

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: 5,270,000,000 Hz
 CHANNEL: 54
 REFERENCE VOLTAGE: 3.8 VDC

Voltage (%)	Power (VDC)	Temp. ()	Frequency (kHz)	Frequency Error (kHz)
100%	3.80	+20(Ref)	5 270 001.24	1.24
100%		-30	5 269 996.88	-3.12
100%		-20	5 269 996.39	-3.61
100%		-10	5 269 994.39	-5.61
100%		0	5 269 997.69	-2.31
100%		+10	5 270 002.36	2.36
100%		+30	5 270 003.46	3.46
100%		+40	5 269 998.69	-1.31
100%		+50	5 269 996.55	-3.45
115%	4.37	+20	5 270 006.12	6.12
Batt. Endpoint	3.50	+20	5 270 001.43	1.43

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. ()	Frequency (kHz)	Frequency Error (kHz)
100%	3.80	+20(Ref)	5 510 000.64	0.64
100%		-30	5 509 998.66	-1.34
100%		-20	5 509 997.54	-2.46
100%		-10	5 509 996.88	-3.12
100%		0	5 509 998.67	-1.33
100%		+10	5 510 004.34	4.34
100%		+30	5 510 006.28	6.28
100%		+40	5 510 002.34	2.34
100%		+50	5 510 001.31	1.31
115%	4.37	+20	5 510 004.12	4.12
Batt. Endpoint	3.50	+20	5 510 005.16	5.16

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.

80 MHz BW

OPERATING BAND:	UNII Band 1
OPERATING FREQUENCY:	5,210,000,000 Hz
CHANNEL:	42
REFERENCE VOLTAGE:	3.8 VDC

Voltage (%)	Power (VDC)	Temp. ()	Frequency (kHz)	Frequency Error (kHz)
100%	3.80	+20(Ref)	5 210 000.38	0.38
100%		-30	5 209 997.66	-2.34
100%		-20	5 209 998.70	-1.3
100%		-10	5 209 997.49	-2.51
100%		0	5 209 999.06	-0.94
100%		+10	5 210 002.36	2.36
100%		+30	5 210 004.56	4.56
100%		+40	5 210 001.32	1.32
100%		+50	5 210 004.32	4.32
115%	4.37	+20	5 210 002.89	2.89
Batt. Endpoint	3.50	+20	5 210 003.28	3.28

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: 5,290,000,000 Hz
 CHANNEL: 58
 REFERENCE VOLTAGE: 3.8 VDC

Voltage (%)	Power (VDC)	Temp. ()	Frequency (kHz)	Frequency Error (kHz)
100%	3.80	+20(Ref)	5 290 001.10	1.10
100%		-30	5 289 995.36	-4.64
100%		-20	5 289 994.89	-5.11
100%		-10	5 289 997.85	-2.15
100%		0	5 289 999.33	-0.67
100%		+10	5 290 001.67	1.67
100%		+30	5 290 002.95	2.95
100%		+40	5 290 001.05	1.05
100%		+50	5 290 003.19	3.19
115%	4.37	+20	5 290 001.84	1.84
Batt. Endpoint	3.50	+20	5 290 002.64	2.64

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: 5,530,000,000 Hz
 CHANNEL: 106
 REFERENCE VOLTAGE: 3.8 VDC

Voltage (%)	Power (VDC)	Temp. ()	Frequency (kHz)	Frequency Error (kHz)
100%	3.80	+20(Ref)	5 530 000.72	0.72
100%		-30	5 529 996.79	-3.21
100%		-20	5 529 995.88	-4.12
100%		-10	5 529 998.79	-1.21
100%		0	5 529 999.13	-0.87
100%		+10	5 530 002.31	2.31
100%		+30	5 530 001.52	1.52
100%		+40	5 530 001.64	1.64
100%		+50	5 530 002.94	2.94
115%	4.37	+20	5 530 003.95	3.95
Batt. Endpoint	3.50	+20	5 530 004.12	4.12

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

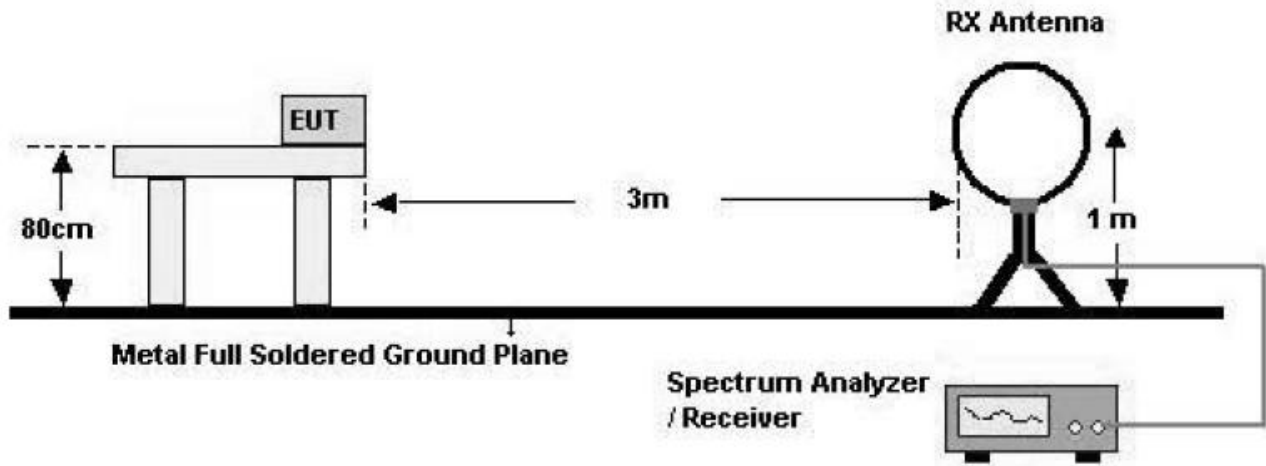
Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

§15.407, KDB 789033

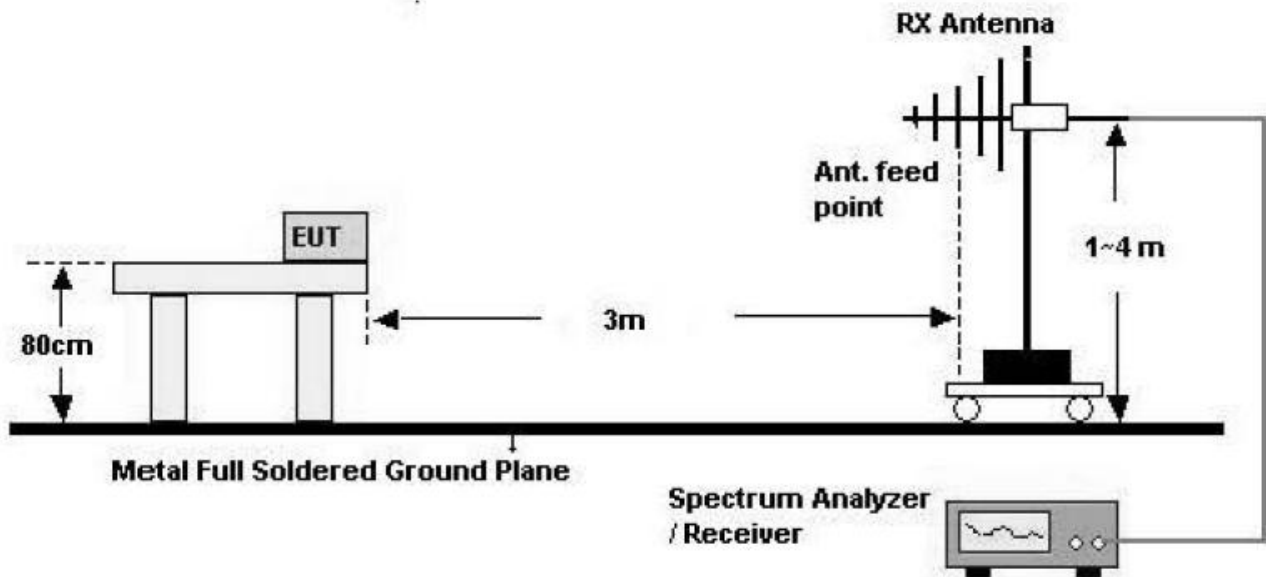
All harmonics that do not lie in a restricted band are subject to a peak limit of -27 dBm/MHz. At a distance of 3 meters the field strength limit in dBµV/m can be determined by adding a “conversion” factor of 95.2 dB to the EIRP limit of -27 dBm/MHz to obtain the limit for out of band spurious emissions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

Test Configuration

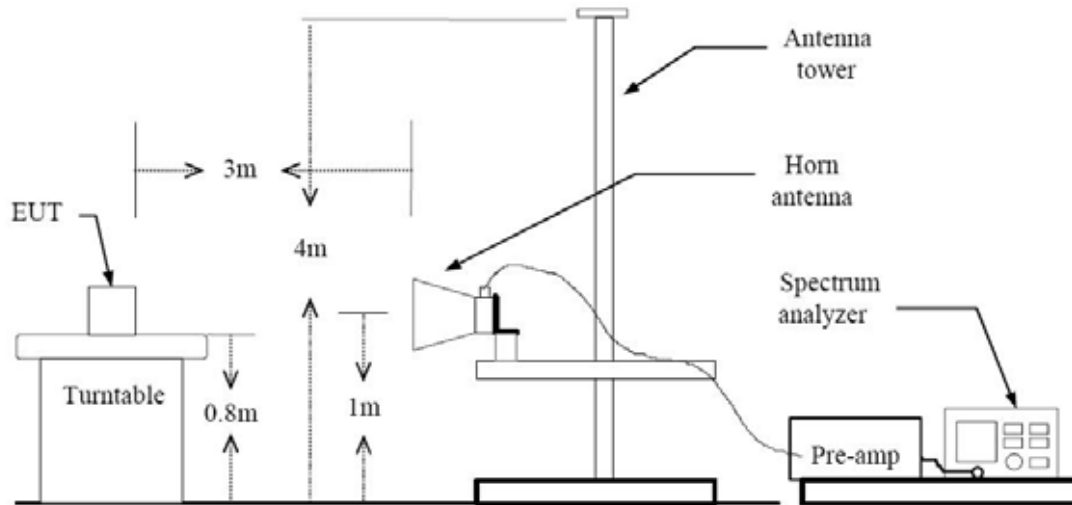
Below 30 MHz



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.

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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.

Note :

1. We used the case 2 for 802.11a/n_20/n_40/ac_20/ac_40/ac_80 to perform the average field strength measurements for RSE and radiated band edge test.
2. The actual setting value of VBW for 802.11a/n_20/n_40/ac_20/ac_40/ac_80.
3. We applied the 15.407 for Ch.144, 142 and 138 in 802.11ac according to KDB 644545 D01 v01r01.

Mode	Worst Data rate (Mbps)	T _{on} (ms)	T _{total} (ms)	Duty Cycle (%)	VBW(1/T) (Hz)	The actual setting value of VBW (Hz)
a	6	2.060	2.165	95.15	485	1000
n_20	6.5	1.925	2.030	94.83	519	1000
n_40	13.5	0.942	1.044	90.23	1062	3000
ac_20	6.5	1.925	2.030	94.83	519	1000
ac_40	13.5	0.950	1.052	90.30	1053	3000
ac_80	29.3	0.458	0.560	81.79	2183	3000

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 (dB μ V) + 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

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	44.35	9.33	V	53.68	68.20	14.52	PK
15540	45.00	14.61	V	59.61	73.98	14.37	PK
15540	31.47	14.61	V	46.08	53.98	7.90	AV
10360	44.51	9.33	H	53.84	68.20	14.36	PK
15540	45.01	14.61	H	59.62	73.98	14.36	PK
15540	31.49	14.61	H	46.10	53.98	7.88	AV

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	43.65	10.13	V	53.78	68.20	14.42	PK
15600	44.97	14.60	V	59.57	73.98	14.41	PK
15600	31.66	14.60	V	46.26	53.98	7.72	AV
10400	43.89	10.13	H	54.02	68.20	14.18	PK
15600	44.99	14.60	H	59.59	73.98	14.39	PK
15600	31.67	14.60	H	46.27	53.98	7.71	AV

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	43.21	10.20	V	53.41	68.20	14.79	PK
15720	46.76	13.47	V	60.23	73.98	13.75	PK
15720	31.81	13.47	V	45.28	53.98	8.70	AV
10480	43.48	10.20	H	53.68	68.20	14.52	PK
15720	46.81	13.47	H	60.28	73.98	13.70	PK
15720	32.82	13.47	H	46.29	53.98	7.69	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 all data rate in 802.11a. 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	43.05	9.33	V	52.38	68.20	15.82	PK
15540	45.21	14.61	V	59.82	73.98	14.16	PK
15540	31.50	14.61	V	46.11	53.98	7.87	AV
10360	43.07	9.33	H	52.40	68.20	15.80	PK
15540	45.23	14.61	H	59.84	73.98	14.14	PK
15540	31.51	14.61	H	46.12	53.98	7.86	AV

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	42.43	10.13	V	52.56	68.20	15.64	PK
15600	45.81	14.60	V	60.41	73.98	13.57	PK
15600	31.73	14.60	V	46.33	53.98	7.65	AV
10400	42.45	10.13	H	52.58	68.20	15.62	PK
15600	45.35	14.60	H	59.95	73.98	14.03	PK
15600	31.74	14.60	H	46.34	53.98	7.64	AV

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	42.61	10.20	V	52.81	68.20	15.39	PK
15720	46.45	13.47	V	59.92	73.98	14.06	PK
15720	32.86	13.47	V	46.33	53.98	7.65	AV
10480	42.64	10.20	H	52.84	68.20	15.36	PK
15720	46.48	13.47	H	59.95	73.98	14.03	PK
15720	32.87	13.47	H	46.34	53.98	7.64	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 all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
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 ac_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	43.35	9.33	V	52.68	68.20	15.52	PK
15540	44.79	14.61	V	59.40	73.98	14.58	PK
15540	31.44	14.61	V	46.05	53.98	7.93	AV
10360	43.36	9.33	H	52.69	68.20	15.51	PK
15540	44.81	14.61	H	59.42	73.98	14.56	PK
15540	31.46	14.61	H	46.07	53.98	7.91	AV

Band :	UNII 1
Operation Mode:	802.11 ac_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	41.75	10.13	V	51.88	68.20	16.32	PK
15600	46.23	14.60	V	60.83	73.98	13.15	PK
15600	31.74	14.60	V	46.34	53.98	7.64	AV
10400	41.78	10.13	H	51.91	68.20	16.29	PK
15600	46.25	14.60	H	60.85	73.98	13.13	PK
15600	31.75	14.60	H	46.35	53.98	7.63	AV

Band :	UNII 1
Operation Mode:	802.11 ac_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	42.45	10.20	V	52.65	68.20	15.55	PK
15720	46.59	13.47	V	60.06	73.98	13.92	PK
15720	32.73	13.47	V	46.20	53.98	7.78	AV
10480	42.48	10.20	H	52.68	68.20	15.52	PK
15720	46.63	13.47	H	60.10	73.98	13.88	PK
15720	32.74	13.47	H	46.21	53.98	7.77	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 all data rate in 802.11ac_20 MHz BW. Worst case is 6.5 Mbps in 802.11ac_20 MHz BW.
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	41.81	9.70	V	51.51	68.20	16.69	PK
15570	45.21	14.62	V	59.83	73.98	14.15	PK
15570	31.61	14.62	V	46.23	53.98	7.75	AV
10380	41.83	9.70	H	51.53	68.20	16.67	PK
15570	45.23	14.62	H	59.85	73.98	14.13	PK
15570	31.62	14.62	H	46.24	53.98	7.74	AV

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	41.25	10.26	V	51.51	68.20	16.69	PK
15690	46.26	14.33	V	60.59	73.98	13.39	PK
15690	32.73	14.33	V	47.06	53.98	6.92	AV
10460	41.28	10.26	H	51.54	68.20	16.66	PK
15690	46.29	14.33	H	60.62	73.98	13.36	PK
15690	32.74	14.33	H	47.07	53.98	6.91	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.

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4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

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Band :	UNII 1
Operation Mode:	802.11ac_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	40.82	9.70	V	50.52	68.20	17.68	PK
15570	45.00	14.62	V	59.62	73.98	14.36	PK
15570	31.49	14.62	V	46.11	53.98	7.87	AV
10380	40.85	9.70	H	50.55	68.20	17.65	PK
15570	45.01	14.62	H	59.63	73.98	14.35	PK
15570	31.51	14.62	H	46.13	53.98	7.85	AV

Band :	UNII 1
Operation Mode:	802.11ac_40 MHz BW
Transfer Rate:	6.5 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	41.21	10.26	V	51.47	68.20	16.73	PK
15690	46.37	14.33	V	60.70	73.98	13.28	PK
15690	32.85	14.33	V	47.18	53.98	6.80	AV
10460	41.23	10.26	H	51.49	68.20	16.71	PK
15690	46.38	14.33	H	60.71	73.98	13.27	PK
15690	32.86	14.33	H	47.19	53.98	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.

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4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac_40 MHz BW. Worst case is 13.5 Mbps in 802.11ac_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna

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Band :	UNII 1
Operation Mode:	802.11ac_80 MHz BW
Transfer Rate:	29.3 Mbps
Operating Frequency	5210 MHz
Channel No.	42 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10420	40.32	10.43	V	50.75	68.20	17.45	PK
15630	45.57	14.15	V	59.72	73.98	14.26	PK
15630	32.65	14.15	V	46.80	53.98	7.18	AV
10420	40.35	10.43	H	50.78	68.20	17.42	PK
15630	45.58	14.15	H	59.73	73.98	14.25	PK
15630	32.65	14.15	H	46.80	53.98	7.18	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 all data rate in 802.11ac_80 MHz BW. Worst case is 29.3 Mbps in 802.11ac_80 MHz BW.
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	42.74	10.38	V	53.12	68.20	15.08	PK
15780	46.41	14.38	V	60.79	73.98	13.19	PK
15780	32.64	14.38	V	47.02	53.98	6.96	AV
10520	42.83	10.38	H	53.21	68.20	14.99	PK
15780	46.43	14.38	H	60.81	73.98	13.17	PK
15780	32.69	14.38	H	47.07	53.98	6.91	AV

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	42.02	10.39	V	52.41	73.98	21.57	PK
10600	28.41	10.39	V	38.80	53.98	15.18	AV
15900	44.91	14.00	V	58.91	73.98	15.07	PK
15900	31.17	14.00	V	45.17	53.98	8.81	AV
10600	42.08	10.39	H	52.47	73.98	21.51	PK
10600	28.43	10.39	H	38.82	53.98	15.16	AV
15900	44.93	14.00	H	58.93	73.98	15.05	PK
15900	31.19	14.00	H	45.19	53.98	8.79	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 G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10640	41.79	10.50	V	52.29	73.98	21.69	PK
10640	28.35	10.50	V	38.85	53.98	15.13	AV
15960	44.52	14.27	V	58.79	73.98	15.19	PK
15960	30.81	14.27	V	45.08	53.98	8.90	AV
10640	41.82	10.50	H	52.32	73.98	21.66	PK
10640	28.39	10.50	H	38.89	53.98	15.09	AV
15960	44.54	14.27	H	58.81	73.98	15.17	PK
15960	30.85	14.27	H	45.12	53.98	8.86	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 all data rate in 802.11a. 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	41.92	10.38	V	52.30	68.20	15.90	PK
15780	46.48	14.38	V	60.86	73.98	13.12	PK
15780	32.53	14.38	V	46.91	53.98	7.07	AV
10520	41.95	10.38	H	52.33	68.20	15.87	PK
15780	46.49	14.38	H	60.87	73.98	13.11	PK
15780	32.54	14.38	H	46.92	53.98	7.06	AV

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	42.07	10.39	V	52.46	73.98	21.52	PK
10600	28.22	10.39	V	38.61	53.98	15.37	AV
15900	45.27	14.00	V	59.27	73.98	14.71	PK
15900	31.22	14.00	V	45.22	53.98	8.76	AV
10600	42.11	10.39	H	52.50	73.98	21.48	PK
10600	28.24	10.39	H	38.63	53.98	15.35	AV
15900	45.29	14.00	H	59.29	73.98	14.69	PK
15900	31.23	14.00	H	45.23	53.98	8.75	AV

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	41.49	10.50	V	51.99	73.98	21.99	PK
10640	28.00	10.50	V	38.50	53.98	15.48	AV
15960	44.45	14.27	V	58.72	73.98	15.26	PK
15960	30.76	14.27	V	45.03	53.98	8.95	AV
10640	41.52	10.50	H	52.02	73.98	21.96	PK
10640	28.01	10.50	H	38.51	53.98	15.47	AV
15960	44.46	14.27	H	58.73	73.98	15.25	PK
15960	30.79	14.27	H	45.06	53.98	8.92	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 all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
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 ac_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	42.35	10.38	V	52.73	68.20	15.47	PK
15780	46.26	14.38	V	60.64	73.98	13.34	PK
15780	32.70	14.38	V	47.08	53.98	6.90	AV
10520	42.39	10.38	H	52.77	68.20	15.43	PK
15780	46.28	14.38	H	60.66	73.98	13.32	PK
15780	32.71	14.38	H	47.09	53.98	6.89	AV

Band : UNII 2

Operation Mode: 802.11 ac_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	41.14	10.39	V	51.53	73.98	22.45	PK
10600	27.61	10.39	V	38.00	53.98	15.98	AV
15900	45.00	14.00	V	59.00	73.98	14.98	PK
15900	31.09	14.00	V	45.09	53.98	8.89	AV
10600	41.16	10.39	H	51.55	73.98	22.43	PK
10600	27.62	10.39	H	38.01	53.98	15.97	AV
15900	45.01	14.00	H	59.01	73.98	14.97	PK
15900	31.11	14.00	H	45.11	53.98	8.87	AV

Band :	UNII 2
Operation Mode:	802.11 ac_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	40.70	10.50	V	51.20	73.98	22.78	PK
10640	27.60	10.50	V	38.10	53.98	15.88	AV
15960	44.41	14.27	V	58.68	73.98	15.30	PK
15960	30.83	14.27	V	45.10	53.98	8.88	AV
10640	40.72	10.50	H	51.22	73.98	22.76	PK
10640	27.61	10.50	H	38.11	53.98	15.87	AV
15960	44.43	14.27	H	58.70	73.98	15.28	PK
15960	30.85	14.27	H	45.12	53.98	8.86	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 all data rate in 802.11ac_20 MHz BW. Worst case is 6.5 Mbps in 802.11ac_20 MHz BW.
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	41.33	10.55	V	51.88	68.20	16.32	PK
15810	46.14	14.26	V	60.40	73.98	13.58	PK
15810	32.25	14.26	V	46.51	53.98	7.47	AV
10540	41.36	10.55	H	51.91	68.20	16.29	PK
15810	46.16	14.26	H	60.42	73.98	13.56	PK
15810	32.26	14.26	H	46.52	53.98	7.46	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 G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10620	41.04	10.25	V	51.29	73.98	22.69	PK
10620	27.30	10.25	V	37.55	53.98	16.43	AV
15930	44.71	13.62	V	58.33	73.98	15.65	PK
15930	30.93	13.62	V	44.55	53.98	9.43	AV
10620	41.06	10.25	H	51.31	73.98	22.67	PK
10620	27.31	10.25	H	37.56	53.98	16.42	AV
15930	44.84	13.62	H	58.46	73.98	15.52	PK
15930	30.95	13.62	H	44.57	53.98	9.41	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

FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955



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 all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955



Band :	UNII 2
Operation Mode:	802.11ac_40 MHz BW
Transfer Rate:	6.5 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	41.61	10.55	V	52.16	68.20	16.04	PK
15810	45.68	14.26	V	59.94	73.98	14.04	PK
15810	32.31	14.26	V	46.57	53.98	7.41	AV
10540	41.63	10.55	H	52.18	68.20	16.02	PK
15810	45.71	14.26	H	59.97	73.98	14.01	PK
15810	32.32	14.26	H	46.58	53.98	7.40	AV

Band :	UNII 2
Operation Mode:	802.11ac_40 MHz BW
Transfer Rate:	6.5 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	40.71	10.25	V	50.96	73.98	23.02	PK
10620	27.01	10.25	V	37.26	53.98	16.72	AV
15930	44.82	13.62	V	58.44	73.98	15.54	PK
15930	30.91	13.62	V	44.53	53.98	9.45	AV
10620	40.73	10.25	H	50.98	73.98	23.00	PK
10620	27.04	10.25	H	37.29	53.98	16.69	AV
15930	44.84	13.62	H	58.46	73.98	15.52	PK
15930	30.92	13.62	H	44.54	53.98	9.44	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

FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
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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 all data rate in 802.11ac_40 MHz BW. Worst case is 13.5 Mbps in 802.11ac_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

Band :	UNII 2
Operation Mode:	802.11ac_80 MHz BW
Transfer Rate:	29.3 Mbps
Operating Frequency	5290 MHz
Channel No.	58 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10580	40.89	10.42	V	51.31	68.20	16.89	PK
15870	45.12	13.96	V	59.08	73.98	14.90	PK
15870	32.28	13.96	V	46.24	53.98	7.74	AV
10580	40.91	10.42	H	51.33	68.20	16.87	PK
15870	45.14	13.96	H	59.10	73.98	14.88	PK
15870	32.29	13.96	H	46.25	53.98	7.73	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 all data rate in 802.11ac_80 MHz BW. Worst case is 13.5 Mbps in 802.11ac_80 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
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	39.59	11.28	V	50.87	73.98	23.11	PK
11000	25.85	11.28	V	37.13	53.98	16.85	AV
16500	45.81	14.19	V	60.00	68.20	8.20	PK
11000	39.61	11.28	H	50.89	73.98	23.09	PK
11000	25.88	11.28	H	37.16	53.98	16.82	AV
16500	45.83	14.19	H	60.02	68.20	8.18	PK

Band :	UNII 2e
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	39.00	11.10	V	50.10	73.98	23.88	PK
11160	25.45	11.10	V	36.55	53.98	17.43	AV
16740	45.88	15.70	V	61.58	68.20	6.62	PK
11160	39.02	11.10	H	50.12	73.98	23.86	PK
11160	25.47	11.10	H	36.57	53.98	17.41	AV
16740	45.91	15.70	H	61.61	68.20	6.59	PK

Band :	UNII 2e
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5720 MHz
Channel No.	144 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11400	39.81	10.97	V	50.78	73.98	23.20	PK
11400	25.92	10.97	V	36.89	53.98	17.09	AV
17100	45.71	17.82	V	63.53	68.20	4.67	PK
11400	39.83	10.97	H	50.80	73.98	23.18	PK
11400	25.95	10.97	H	36.92	53.98	17.06	AV
17100	45.75	17.82	H	63.57	68.20	4.63	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 all data rate in 802.11a. 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 2e
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	39.48	11.28	V	50.76	73.98	23.22	PK
11000	25.94	11.28	V	37.22	53.98	16.76	AV
16500	46.01	14.19	V	60.20	68.20	8.00	PK
11000	39.51	11.28	H	50.79	73.98	23.19	PK
11000	25.95	11.28	H	37.23	53.98	16.75	AV
16500	46.06	14.19	H	60.25	68.20	7.95	PK

Band :	UNII 2e
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	38.82	11.10	V	49.92	73.98	24.06	PK
11160	25.40	11.10	V	36.50	53.98	17.48	AV
16740	45.56	15.70	V	61.26	68.20	6.94	PK
11160	38.84	11.10	H	49.94	73.98	24.04	PK
11160	25.41	11.10	H	36.51	53.98	17.47	AV
16740	45.58	15.70	H	61.28	68.20	6.92	PK

Band :	UNII 2e
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5720 MHz
Channel No.	144 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11400	39.08	10.97	V	50.05	73.98	23.93	PK
11400	25.42	10.97	V	36.39	53.98	17.59	AV
17100	45.92	17.82	V	63.74	68.20	4.46	PK
11400	39.11	10.97	H	50.08	73.98	23.90	PK
11400	25.43	10.97	H	36.40	53.98	17.58	AV
17100	45.94	17.82	H	63.76	68.20	4.44	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 all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 2e

Operation Mode: 802.11 ac_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	40.41	11.28	V	51.69	73.98	22.29	PK
11000	26.28	11.28	V	37.56	53.98	16.42	AV
16500	45.62	14.19	V	59.81	68.20	8.39	PK
11000	40.43	11.28	H	51.71	73.98	22.27	PK
11000	26.31	11.28	H	37.59	53.98	16.39	AV
16500	45.64	14.19	H	59.83	68.20	8.37	PK

Band : UNII 2e

Operation Mode: 802.11 ac_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	39.36	11.10	V	50.46	73.98	23.52	PK
11160	26.00	11.10	V	37.10	53.98	16.88	AV
16740	45.75	15.70	V	61.45	68.20	6.75	PK
11160	39.39	11.10	H	50.49	73.98	23.49	PK
11160	26.01	11.10	H	37.11	53.98	16.87	AV
16740	45.78	15.70	H	61.48	68.20	6.72	PK

Band :	UNII 2e
Operation Mode:	802.11 ac_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5720 MHz
Channel No.	144 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11400	39.00	10.97	V	49.97	73.98	24.01	PK
11400	25.76	10.97	V	36.73	53.98	17.25	AV
17100	45.61	17.82	V	63.43	68.20	4.77	PK
11400	39.01	10.97	H	49.98	73.98	24.00	PK
11400	25.79	10.97	H	36.76	53.98	17.22	AV
17100	45.62	17.82	H	63.44	68.20	4.76	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 all data rate in 802.11ac_20 MHz BW. Worst case is 6.5 Mbps in 802.11ac_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. We applied the 15.407 for Ch.144 in 802.11ac according to KDB 644545 D01 v01r01.

Band :	UNII 2e
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	40.28	11.28	V	51.56	73.98	22.42	PK
11020	26.31	11.28	V	37.59	53.98	16.39	AV
16530	46.71	14.83	V	61.54	68.20	6.66	PK
11020	40.31	11.28	H	51.59	73.98	22.39	PK
11020	26.32	11.28	H	37.60	53.98	16.38	AV
16530	46.72	14.83	H	61.55	68.20	6.65	PK

Band :	UNII 2e
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5590 MHz
Channel No.	118 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11180	39.64	11.12	V	50.76	73.98	23.22	PK
11180	25.96	11.12	V	37.08	53.98	16.90	AV
16770	46.65	16.52	V	63.17	68.20	5.03	PK
11180	39.66	11.12	H	50.78	73.98	23.20	PK
11180	25.98	11.12	H	37.10	53.98	16.88	AV
16770	46.67	16.52	H	63.19	68.20	5.01	PK

Band :	UNII 2e
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5710 MHz
Channel No.	142 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11340	39.48	10.86	V	50.34	73.98	23.64	PK
11340	25.77	10.86	V	36.63	53.98	17.35	AV
17010	44.97	18.15	V	63.12	68.20	5.08	PK
11340	39.51	10.86	H	50.37	73.98	23.61	PK
11340	25.78	10.86	H	36.64	53.98	17.34	AV
17010	44.99	18.15	H	63.14	68.20	5.06	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 all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11ac_40 MHz BW
Transfer Rate:	6.5 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	39.94	11.28	V	51.22	73.98	22.76	PK
11020	26.51	11.28	V	37.79	53.98	16.19	AV
16530	45.79	14.83	V	60.62	68.20	7.58	PK
11020	39.98	11.28	H	51.26	73.98	22.72	PK
11020	26.52	11.28	H	37.80	53.98	16.18	AV
16530	45.82	14.83	H	60.65	68.20	7.55	PK

Band :	UNII 2e
Operation Mode:	802.11ac_40 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5590 MHz
Channel No.	118 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11180	39.64	11.12	V	50.76	73.98	23.22	PK
11180	25.90	11.12	V	37.02	53.98	16.96	AV
16770	46.07	16.52	V	62.59	68.20	5.61	PK
11180	39.69	11.12	H	50.81	73.98	23.17	PK
11180	25.91	11.12	H	37.03	53.98	16.95	AV
16770	46.11	16.52	H	62.63	68.20	5.57	PK

Band :	UNII 2e
Operation Mode:	802.11ac_40 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5710 MHz
Channel No.	142 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11420	39.19	10.73	V	49.92	73.98	24.06	PK
11420	25.64	10.73	V	36.37	53.98	17.61	AV
17130	45.91	18.11	V	64.02	68.20	4.18	PK
11420	39.21	10.73	H	49.94	73.98	24.04	PK
11420	25.65	10.73	H	36.38	53.98	17.60	AV
17130	45.94	18.11	H	64.05	68.20	4.15	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 all data rate in 802.11ac_40 MHz BW. Worst case is 13.5 Mbps in 802.11ac_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. We applied the 15.407 for Ch.142 in 802.11ac according to KDB 644545 D01 v01r01.

Band :	UNII 2e
Operation Mode:	802.11ac_80 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5530 MHz
Channel No.	106 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11060	40.50	11.48	V	51.98	73.98	22.00	PK
11060	26.94	11.48	V	38.42	53.98	15.56	AV
16590	45.31	14.42	V	59.73	68.20	8.47	PK
11060	40.53	11.48	H	52.01	73.98	21.97	PK
11060	26.95	11.48	H	38.43	53.98	15.55	AV
16590	45.34	14.42	H	59.76	68.20	8.44	PK

Band :	UNII 2e
Operation Mode:	802.11ac_80 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5690 MHz
Channel No.	138 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11380	39.50	11.05	V	50.55	73.98	23.43	PK
11380	25.96	11.05	V	37.01	53.98	16.97	AV
17070	45.46	18.08	V	63.54	68.20	4.66	PK
11380	39.52	11.05	H	50.57	73.98	23.41	PK
11380	25.97	11.05	H	37.02	53.98	16.96	AV
17070	45.48	18.08	H	63.56	68.20	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.

FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955



4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac_80 MHz BW. Worst case is 13.5 Mbps in 802.11ac_80 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna
7. We applied the 15.407 for Ch.138 in 802.11ac according to KDB 644545 D01 v01r01.

FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR18-1	Date of Issue: December 06, 2013	EUT Type: Cellular/PCS GSM/GPRS/EDGE Phone with Bluetooth, WLAN and RFID	FCC ID: ZNFD955

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)).

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	60.07	-0.51	H	59.56	73.98	14.42	PK
5150	44.85	-0.51	H	44.34	53.98	9.64	AV
5150	60.56	-0.51	V	60.05	73.98	13.93	PK
5150	45.78	-0.51	V	45.27	53.98	8.71	AV

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+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5150	67.02	-0.51	H	66.51	73.98	7.47	PK
5150	44.36	-0.51	H	43.85	53.98	10.13	AV
5150	67.45	-0.51	V	66.94	73.98	7.04	PK
5150	45.28	-0.51	V	44.77	53.98	9.21	AV

Band : UNII 1

Operation Mode: 802.11 ac_20 MHz BW

Transfer Rate: 6.5 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	65.23	-0.51	H	64.72	73.98	9.26	PK
5150	43.51	-0.51	H	43.00	53.98	10.98	AV
5150	65.65	-0.51	V	65.14	73.98	8.84	PK
5150	44.22	-0.51	V	43.71	53.98	10.27	AV

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	67.01	-0.51	H	66.50	73.98	7.48	PK
5150	50.23	-0.51	H	49.72	53.98	4.26	AV
5150	67.38	-0.51	V	66.87	73.98	7.11	PK
5150	51.18	-0.51	V	50.67	53.98	3.31	AV

Band :	UNII 1
Operation Mode:	802.11 ac_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	65.48	-0.51	H	64.97	73.98	9.01	PK
5150	48.56	-0.51	H	48.05	53.98	5.93	AV
5150	66.05	-0.51	V	65.54	73.98	8.44	PK
5150	49.42	-0.51	V	48.91	53.98	5.07	AV

Band :	UNII 1
Operation Mode:	802.11 ac_80 MHz BW
Transfer Rate:	29.3 Mbps
Operating Frequency	5210 MHz
Channel No.	42 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5150	65.21	-0.51	H	64.70	73.98	9.28	PK
5150	50.98	-0.51	H	50.47	53.98	3.51	AV
5150	65.65	-0.51	V	65.14	73.98	8.84	PK
5150	51.47	-0.51	V	50.96	53.98	3.02	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done all data rate in 802.11a/n/ac mode test. . Worst case of EUT is lowest data rate in 802.11a/n/ac
3. 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+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5350	53.41	-0.19	H	53.22	73.98	20.76	PK
5350	37.91	-0.19	H	37.72	53.98	16.26	AV
5350	53.84	-0.19	V	53.65	73.98	20.33	PK
5350	38.89	-0.19	V	38.70	53.98	15.28	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	55.36	-0.19	H	55.17	73.98	18.81	PK
5350	37.94	-0.19	H	37.75	53.98	16.23	AV
5350	55.81	-0.19	V	55.62	73.98	18.36	PK
5350	38.73	-0.19	V	38.54	53.98	15.44	AV

Band : UNII 2

Operation Mode: 802.11 ac_20 MHz BW

Transfer Rate: 6.5 Mbps

Operating Frequency 5320 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	54.62	-0.19	H	54.43	73.98	19.55	PK
5350	37.61	-0.19	H	37.42	53.98	16.56	AV
5350	55.08	-0.19	V	54.89	73.98	19.09	PK
5350	38.48	-0.19	V	38.29	53.98	15.69	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	56.03	-0.19	H	55.84	73.98	18.14	PK
5350	38.59	-0.19	H	38.40	53.98	15.58	AV
5350	56.41	-0.19	V	56.22	73.98	17.76	PK
5350	39.48	-0.19	V	39.29	53.98	14.69	AV

Band :	UNII 2
Operation Mode:	802.11 ac_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	54.89	-0.19	H	54.70	73.98	19.28	PK
5350	38.56	-0.19	H	38.37	53.98	15.61	AV
5350	55.23	-0.19	V	55.04	73.98	18.94	PK
5350	39.31	-0.19	V	39.12	53.98	14.86	AV

Band :	UNII 2
Operation Mode:	802.11 ac_80 MHz BW
Transfer Rate:	29.3 Mbps
Operating Frequency	5290 MHz
Channel No.	58 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5350	57.73	-0.19	H	57.54	73.98	16.44	PK
5350	38.79	-0.19	H	38.60	53.98	15.38	AV
5350	58.16	-0.19	V	57.97	73.98	16.01	PK
5350	39.66	-0.19	V	39.47	53.98	14.51	AV

Notes:

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

Band : UNII 2e

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	51.14	0.38	H	51.52	73.98	22.46	PK
5460	36.88	0.38	H	37.26	53.98	16.72	AV
*5470	53.79	0.24	H	54.03	68.20	14.17	PK
5460	51.56	0.38	V	51.94	73.98	22.04	PK
5460	37.83	0.38	V	38.21	53.98	15.77	AV
*5470	54.29	0.24	V	54.53	68.20	13.67	PK

Band : UNII 2e

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	50.97	0.38	H	51.35	73.98	22.63	PK
5460	36.99	0.38	H	37.37	53.98	16.61	AV
*5470	56.88	0.24	H	57.12	68.20	11.08	PK
5460	51.31	0.38	V	51.69	73.98	22.29	PK
5460	37.83	0.38	V	38.21	53.98	15.77	AV
*5470	57.23	0.24	V	57.47	68.20	10.73	PK

Band :	UNII 2e
Operation Mode:	802.11 ac_20 MHz BW
Transfer Rate:	6.5 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	50.76	0.38	H	51.14	73.98	22.84	PK
5460	36.85	0.38	H	37.23	53.98	16.75	AV
*5470	55.78	0.24	H	56.02	68.20	12.18	PK
5460	51.12	0.38	V	51.50	73.98	22.48	PK
5460	37.81	0.38	V	38.19	53.98	15.79	AV
*5470	56.16	0.24	V	56.40	68.20	11.80	PK

Band :	UNII 2e
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	54.32	0.38	H	54.70	73.98	19.28	PK
5460	37.26	0.38	H	37.64	53.98	16.34	AV
*5470	57.63	0.24	H	57.87	68.20	10.33	PK
5460	54.71	0.38	V	55.09	73.98	18.89	PK
5460	38.12	0.38	V	38.50	53.98	15.48	AV
*5470	58.02	0.24	V	58.26	68.20	9.94	PK

Band :	UNII 2e
Operation Mode:	802.11 ac_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	52.64	0.38	H	53.02	73.98	20.96	PK
5460	36.95	0.38	H	37.33	53.98	16.65	AV
*5470	54.66	0.24	H	54.90	68.20	13.30	PK
5460	53.06	0.38	V	53.44	73.98	20.54	PK
5460	37.83	0.38	V	38.21	53.98	15.77	AV
*5470	54.97	0.24	V	55.21	68.20	12.99	PK

Band :	UNII 2e
Operation Mode:	802.11 ac_80 MHz BW
Transfer Rate:	29.3 Mbps
Operating Frequency	5530 MHz
Channel No.	106 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5460	55.76	0.38	H	56.14	73.98	17.84	PK
5460	37.55	0.38	H	37.93	53.98	16.05	AV
*5470	59.42	0.24	H	59.66	68.20	8.54	PK
5460	56.14	0.38	V	56.52	73.98	17.46	PK
5460	38.41	0.38	V	38.79	53.98	15.19	AV
*5470	59.99	0.24	V	60.23	68.20	7.97	PK

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done all data rate in 802.11a/n/ac mode test. . Worst case of EUT is lowest data rate in 802.11a/n/ac
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
4. “*” is radiated band edge test frequency(not restricted band emissions).

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 (dBμV)	
	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 6 Mbps, Ch.52 and 802.11a mode in UNII 2. Because 802.11a mode in UNII 2 is worst case.

RESULT PLOTS

Conducted Emissions (Line 1)

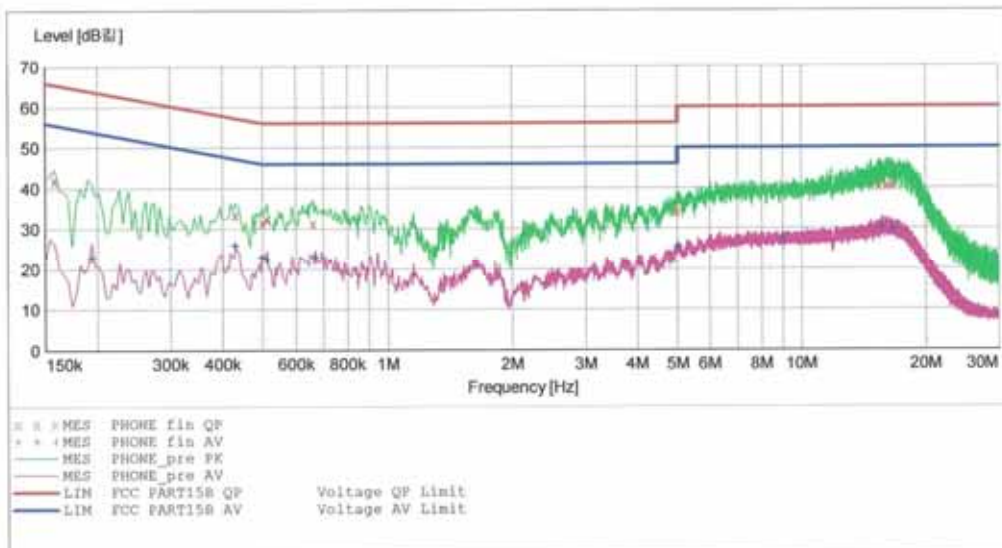
HCT

EMC

EUT: LG-D955
 Manufacturer: LG
 Operating Condition: WLAN MODE(UNII)
 Test Site: SHIELD ROOM
 Operator: JS LEE
 Test Specification: FCC PART15B
 Comment: H
 Start of Test: 2013-11-16 / 10:53:24오전

SCAN TABLE: "FCC CLASS B(H)"

Short Description:			FCC CLASS B(H)			
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
			Average			
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			



MEASUREMENT RESULT: "PHONE_fin QP"

2013-11-16 10:56오전

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.158001	42.00	9.8	66	23.6	---	---
0.430001	33.50	9.8	57	23.8	---	---
0.498001	31.60	9.8	56	24.5	---	---
0.512000	32.50	9.8	56	23.5	---	---
0.660000	31.30	9.8	56	24.7	---	---
4.988000	34.20	10.2	56	21.8	---	---
15.432000	40.30	10.8	60	19.7	---	---
16.148000	40.40	10.8	60	19.6	---	---
16.628000	40.50	10.8	60	19.5	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

2013-11-16 10:56오전

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.194001	22.50	9.8	54	31.4	---	---
0.430001	25.80	9.8	47	21.4	---	---
0.498001	22.80	9.8	46	23.2	---	---
0.512000	22.30	9.8	46	23.7	---	---
0.668000	22.80	9.8	46	23.2	---	---
5.000000	25.40	10.2	46	20.6	---	---
9.000000	27.40	10.4	50	22.6	---	---
15.648000	30.00	10.8	50	20.0	---	---
16.652000	29.80	10.8	50	20.2	---	---

Conducted Emissions (Line 2)

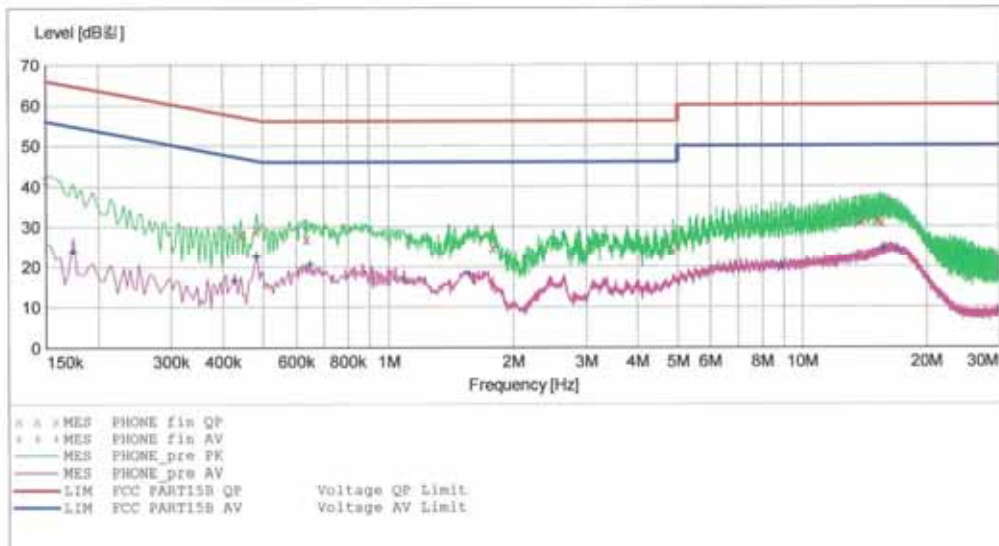
HCT

EMC

EUT: LG-D955
 Manufacturer: LG
 Operating Condition: WLAN MODE(UNII)
 Test Site: SHIELD ROOM
 Operator: JS LEE
 Test Specification: FCC PART15B
 Comment: N
 Start of Test: 2013-11-16 / 10:49:12오전

SCAN TABLE: "FCC CLASS B(N)"

Short Description:			FCC CLASS B(N)				Transducer
Start	Stop	Step	Detector	Meas. Time	IF Bandw.		
Frequency	Frequency	Width					
150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None	
			Average				
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None	
			Average				
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None	
			Average				



MEASUREMENT RESULT: "PHONE_fin QP"

2013-11-16 10:51오전						
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.150001	41.80	10.0	66	24.2	---	---
0.442001	28.20	10.0	57	28.8	---	---
0.482001	29.20	10.0	56	27.1	---	---
0.636000	27.00	10.0	56	29.0	---	---
1.780000	24.80	10.1	56	31.2	---	---
4.876000	24.00	10.4	56	32.0	---	---
13.944000	31.30	11.0	60	28.7	---	---
15.204000	31.40	11.0	60	28.6	---	---
15.528000	31.00	11.1	60	29.0	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

2013-11-16 10:51오전

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.174001	23.80	10.0	55	31.0	---	---
0.426001	16.50	10.0	47	30.9	---	---
0.482001	22.50	10.0	46	23.8	---	---
0.648000	20.40	10.0	46	25.6	---	---
1.092000	16.90	10.1	46	29.1	---	---
1.568000	18.10	10.1	46	27.9	---	---
8.884000	20.20	10.6	50	29.8	---	---
15.692000	24.30	11.1	50	25.7	---	---
16.984000	24.20	11.1	50	25.8	---	---

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	09/10/2014	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	07/05/2015	1151
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	N1911A /Power Meter	Annual	01/22/2014	MY45100523
Agilent	N1921A /POWER SENSOR	Annual	07/11/2014	MY45241059
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	10/22/2014	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	10/29/2014	3110117
ITECH	IT6720 / DC POWER SUPPLY	Annual	11/05/2014	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	07/24/2014	21691
Agilent	8493C / Attenuator(10 dB)	Annual	07/24/2014	76649
WEINSCHL	2-3 / Attenuator(3 dB)	Annual	10/28/2014	BR0617