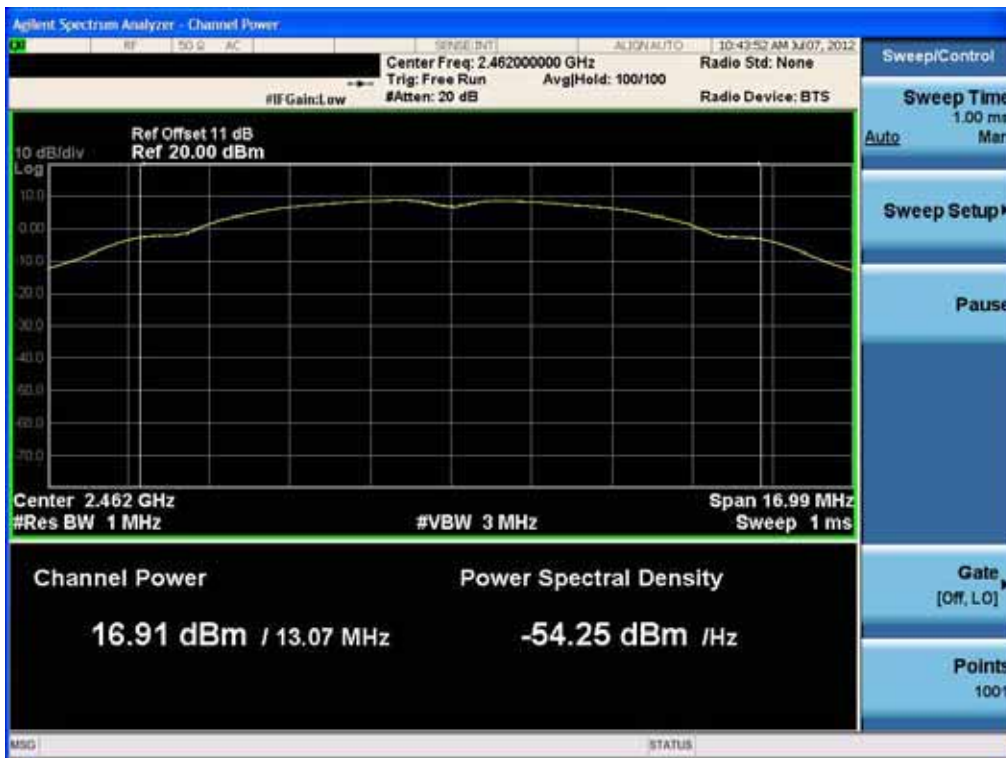


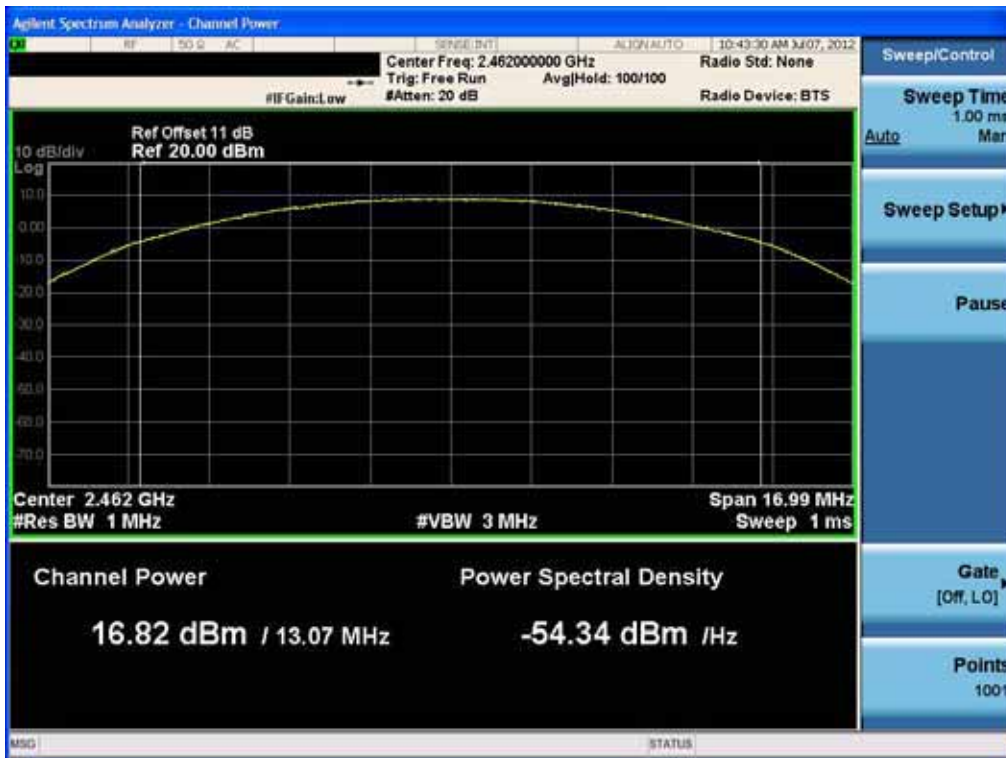
### Conducted Output Power (802.11b-CH 11) 1Mbps



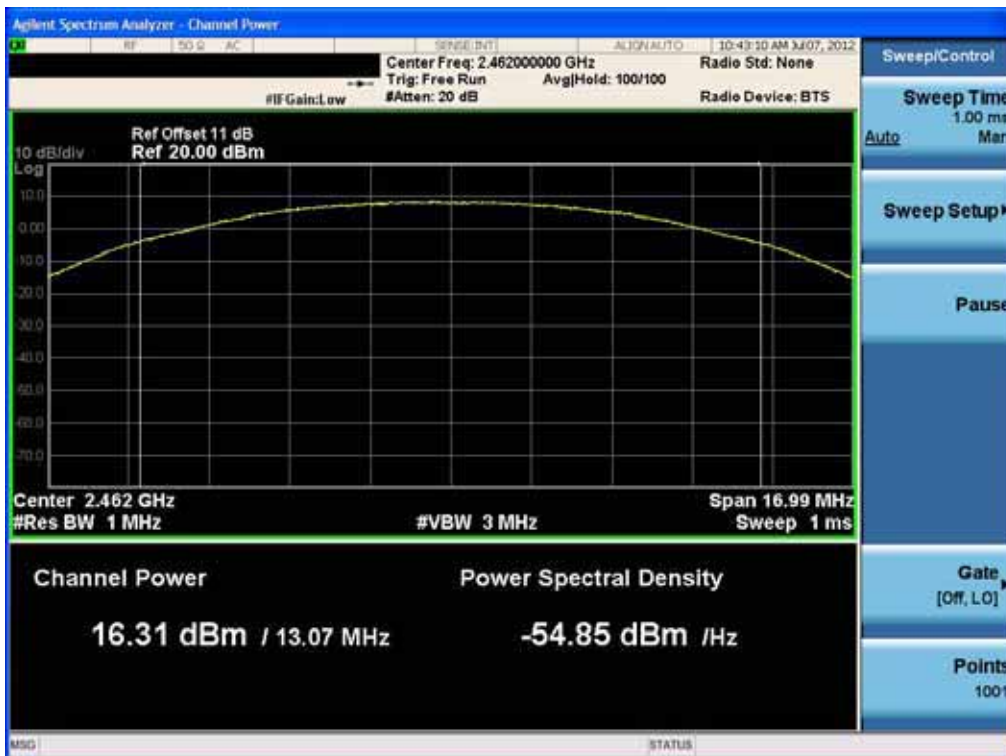
### Conducted Output Power (802.11b-CH 11) 2Mbps



### Conducted Output Power (802.11b-CH 11) 5.5Mbps

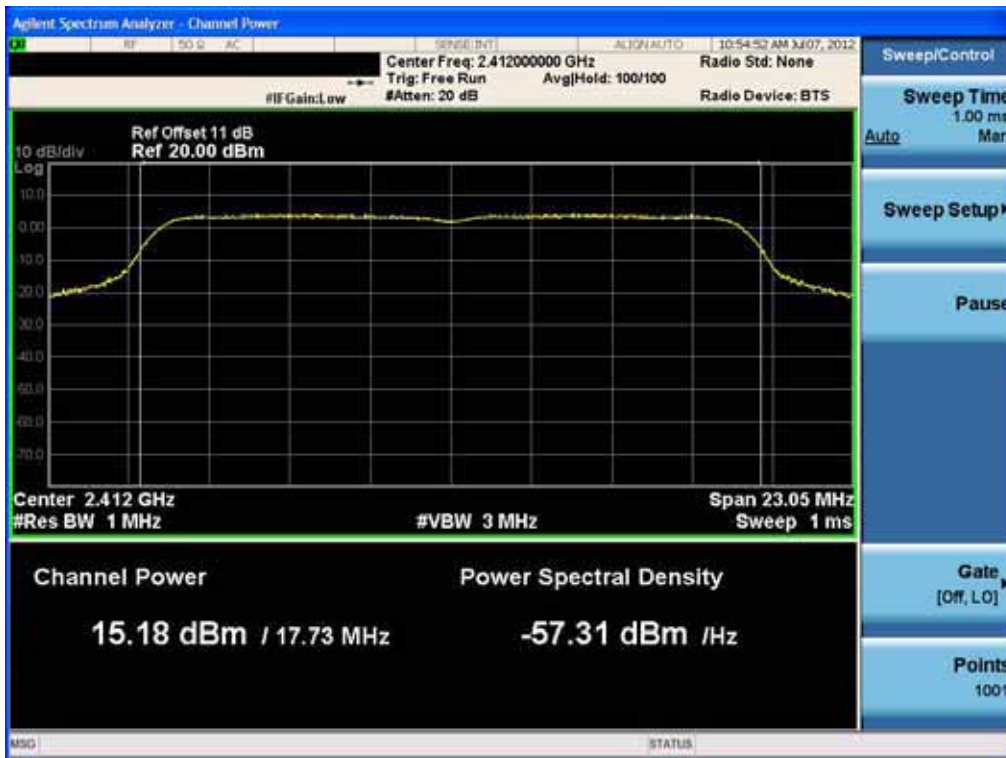


### Conducted Output Power (802.11b-CH 11) 11Mbps

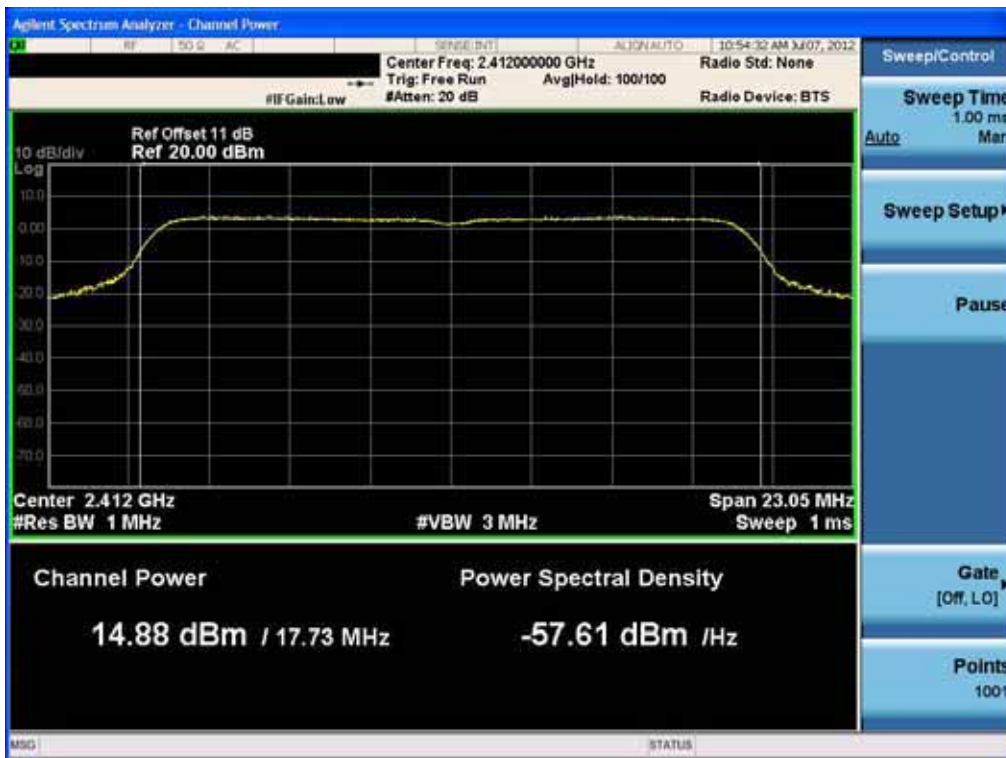


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Output Power (802.11g-CH 1) 6Mbps



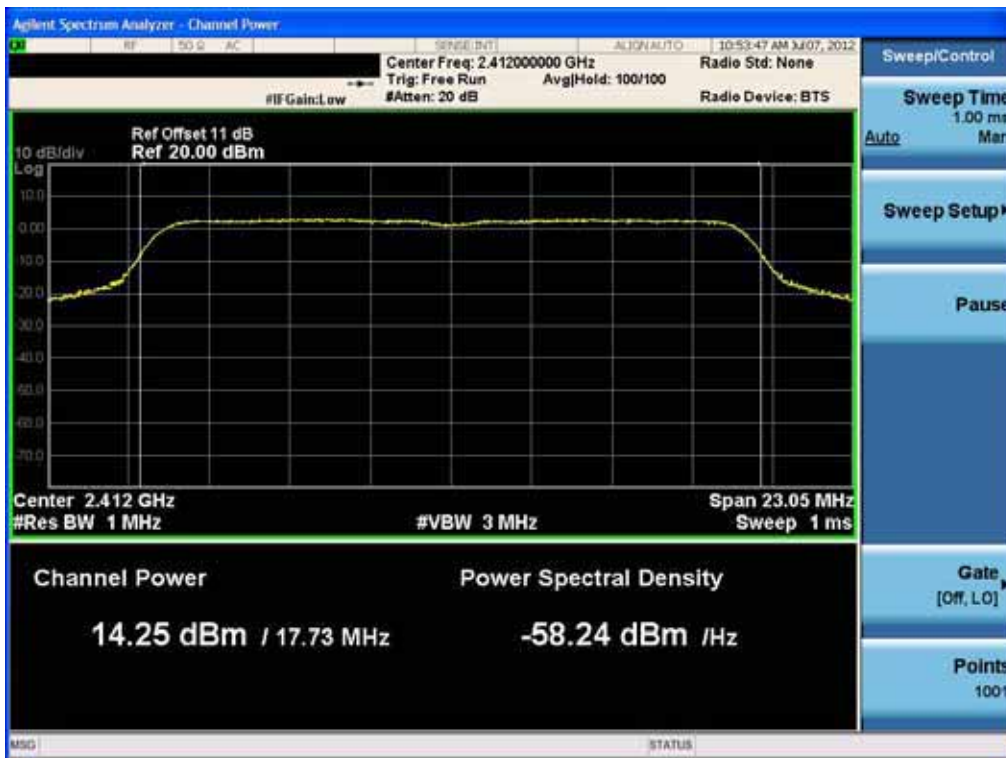
### Conducted Output Power (802.11g-CH 1) 9Mbps



### Conducted Output Power (802.11g-CH 1) 12Mbps



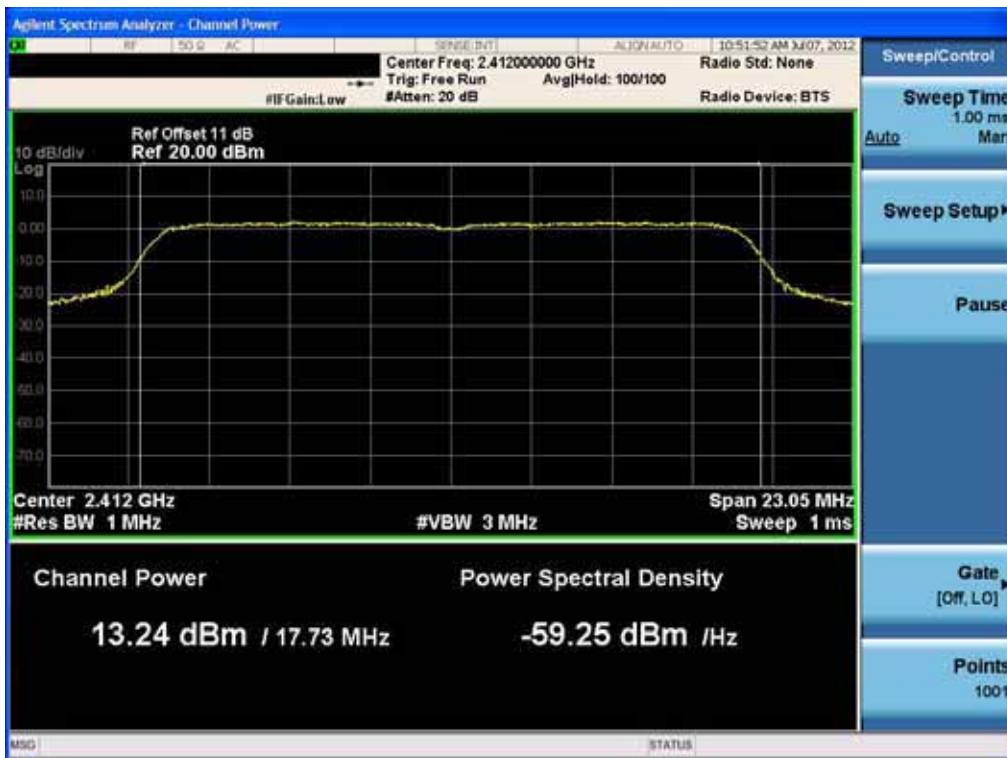
### Conducted Output Power (802.11g-CH 1) 18Mbps



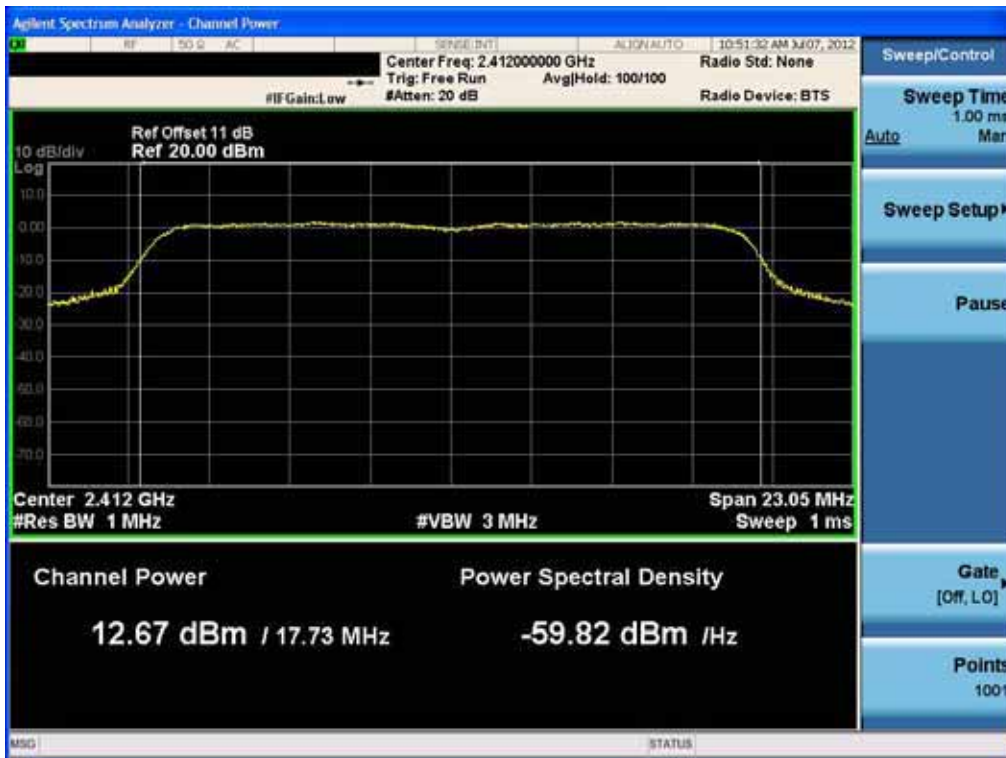
### Conducted Output Power (802.11g-CH 1) 24Mbps



### Conducted Output Power (802.11g-CH 1) 36Mbps



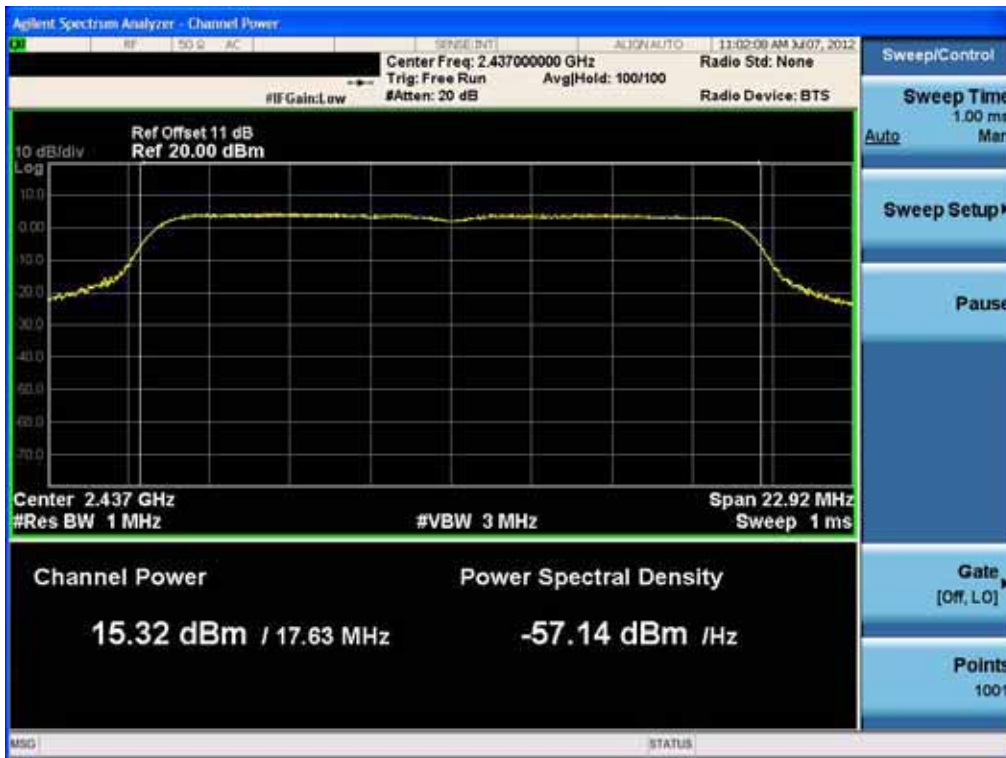
### Conducted Output Power (802.11g-CH 1) 48Mbps



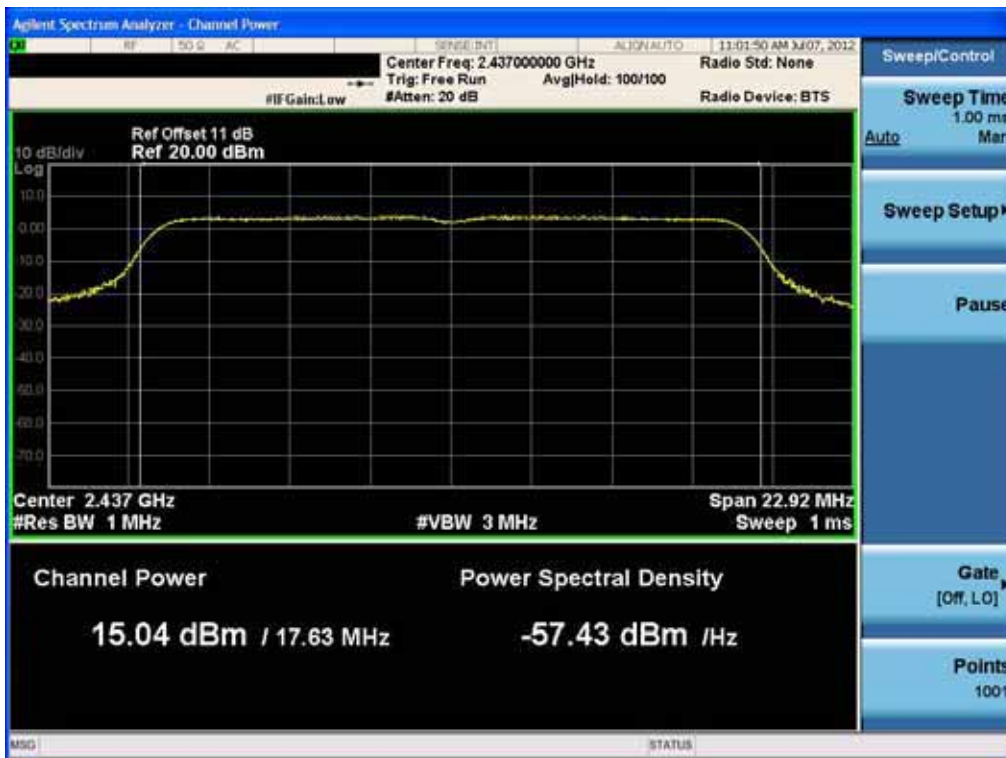
### Conducted Output Power (802.11g-CH 1) 54Mbps



### Conducted Output Power (802.11g-CH 6) 6Mbps



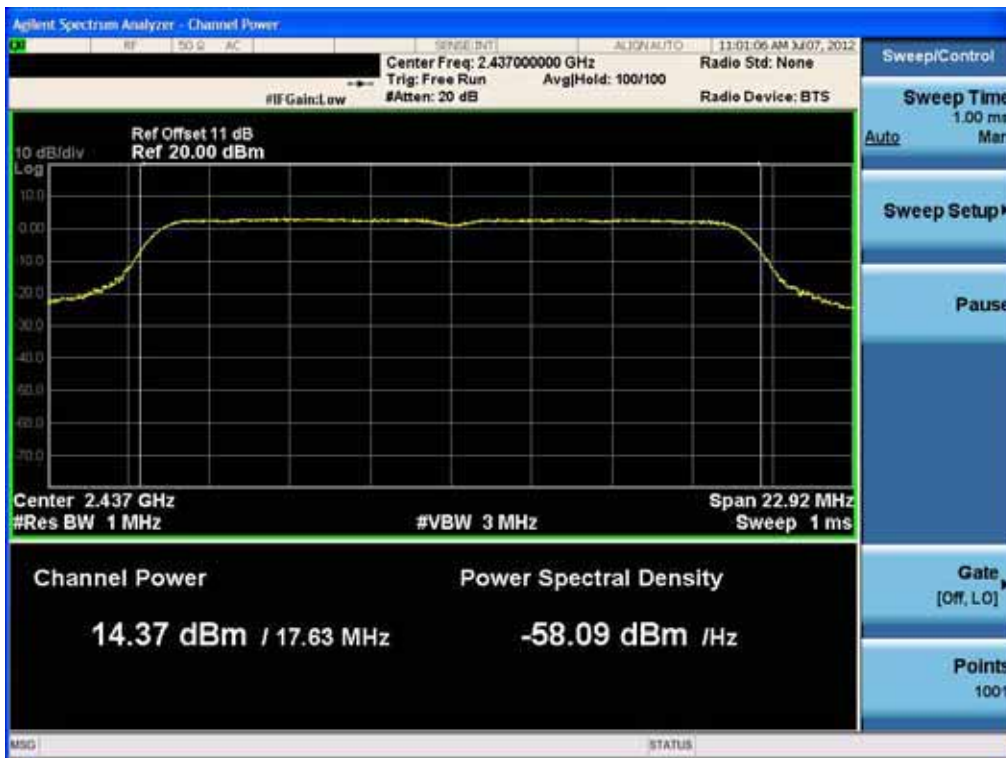
### Conducted Output Power (802.11g-CH 6) 9Mbps



### Conducted Output Power (802.11g-CH 6) 12Mbps



### Conducted Output Power (802.11g-CH 6) 18Mbps





### Conducted Output Power (802.11g-CH 6) 24Mbps



### Conducted Output Power (802.11g-CH 6) 36Mbps



### Conducted Output Power (802.11g-CH 6) 48Mbps

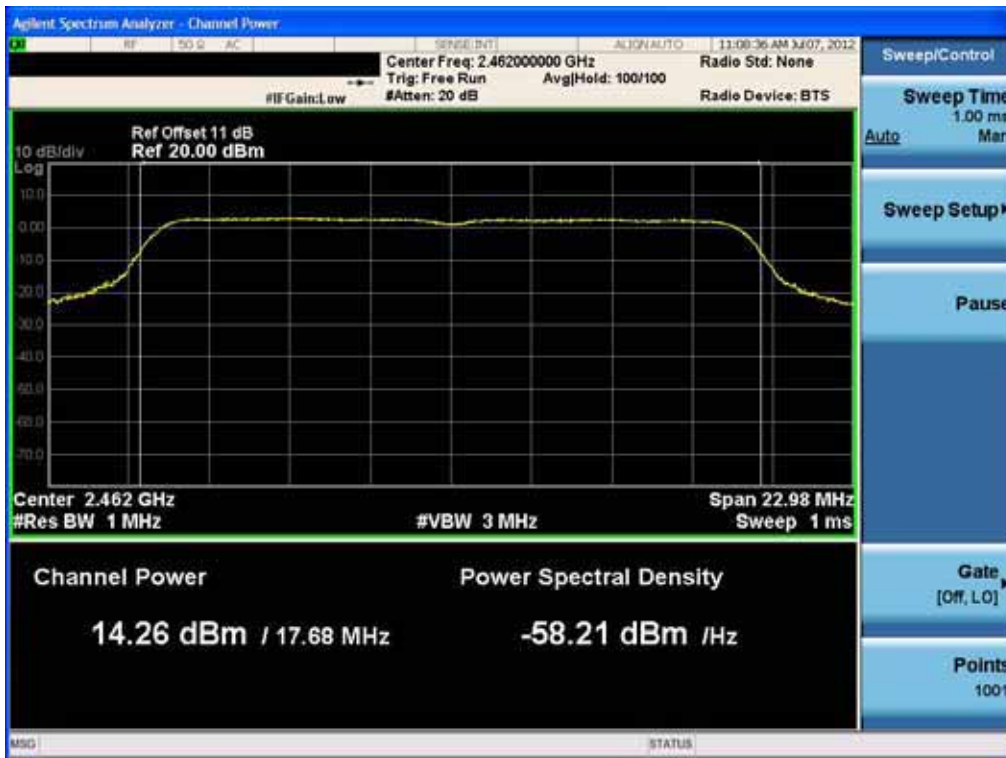


### Conducted Output Power (802.11g-CH 6) 54Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V

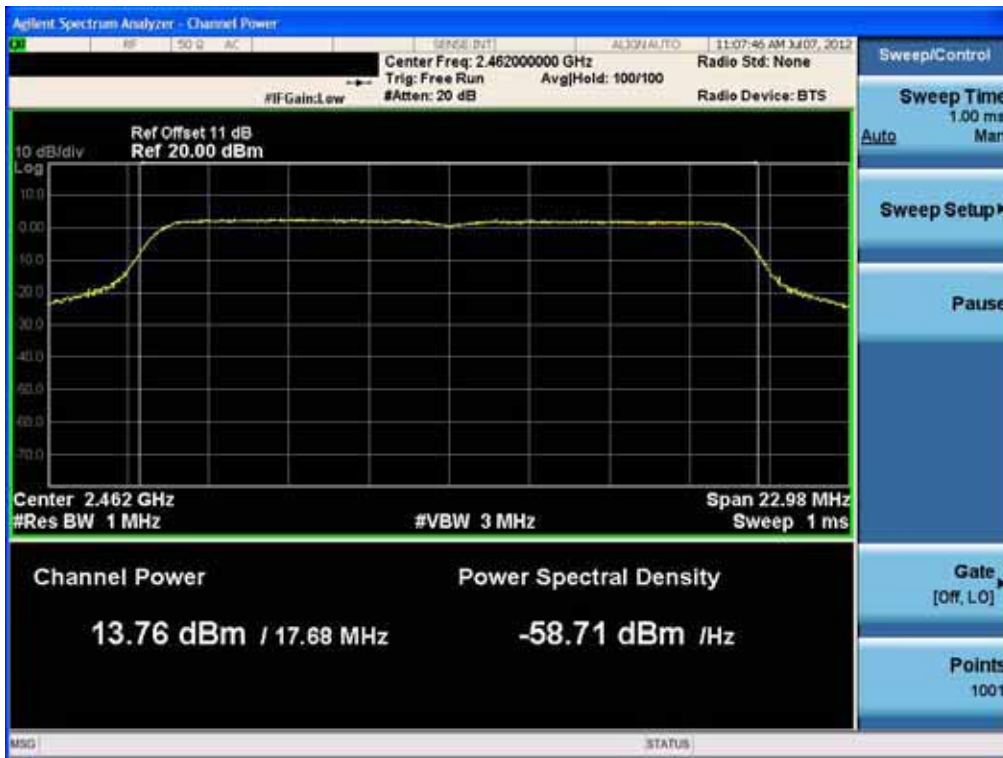
### Conducted Output Power (802.11g-CH 11) 6Mbps



### Conducted Output Power (802.11g-CH 11) 9Mbps



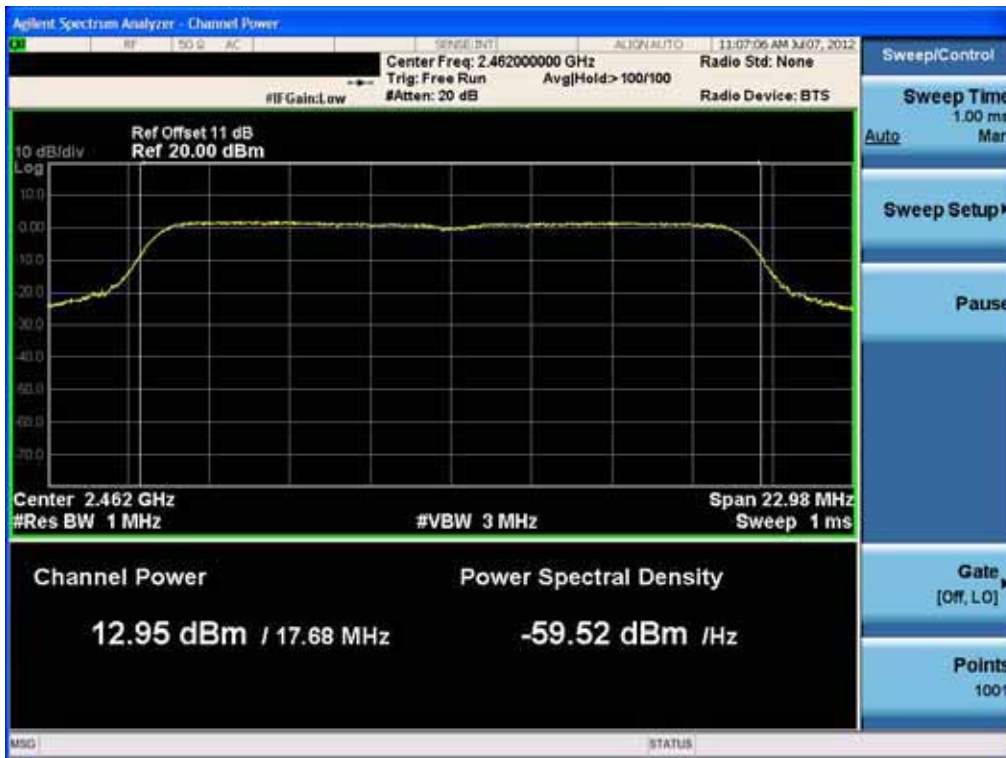
### Conducted Output Power (802.11g-CH 11) 12Mbps



### Conducted Output Power (802.11g-CH 11) 18Mbps



### Conducted Output Power (802.11g-CH 11) 24Mbps



### Conducted Output Power (802.11g-CH 11) 36Mbps



### Conducted Output Power (802.11g-CH 11) 48Mbps



### Conducted Output Power (802.11g-CH 11) 54Mbps



### Conducted Output Power (802.11n-CH 1) 6.5Mbps



### Conducted Output Power (802.11n-CH 1) 13Mbps



### Conducted Output Power (802.11n-CH 1) 19.5Mbps



### Conducted Output Power (802.11n-CH 1) 26Mbps





### Conducted Output Power (802.11n-CH 1) 39Mbps



### Conducted Output Power (802.11n-CH 1) 52Mbps



### Conducted Output Power (802.11n-CH 1) 58.5Mbps



### Conducted Output Power (802.11n-CH 1) 65Mbps



### Conducted Output Power (802.11n-CH 6) 6.5Mbps



### Conducted Output Power (802.11n-CH 6) 13Mbps



### Conducted Output Power (802.11n-CH 6) 19.5Mbps



### Conducted Output Power (802.11n-CH 6) 26Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Output Power (802.11n-CH 6) 39Mbps



### Conducted Output Power (802.11n-CH 6) 52Mbps



### Conducted Output Power (802.11n-CH 6) 58.5Mbps



### Conducted Output Power (802.11n-CH 6) 65Mbps



### Conducted Output Power (802.11n-CH 11) 6.5Mbps



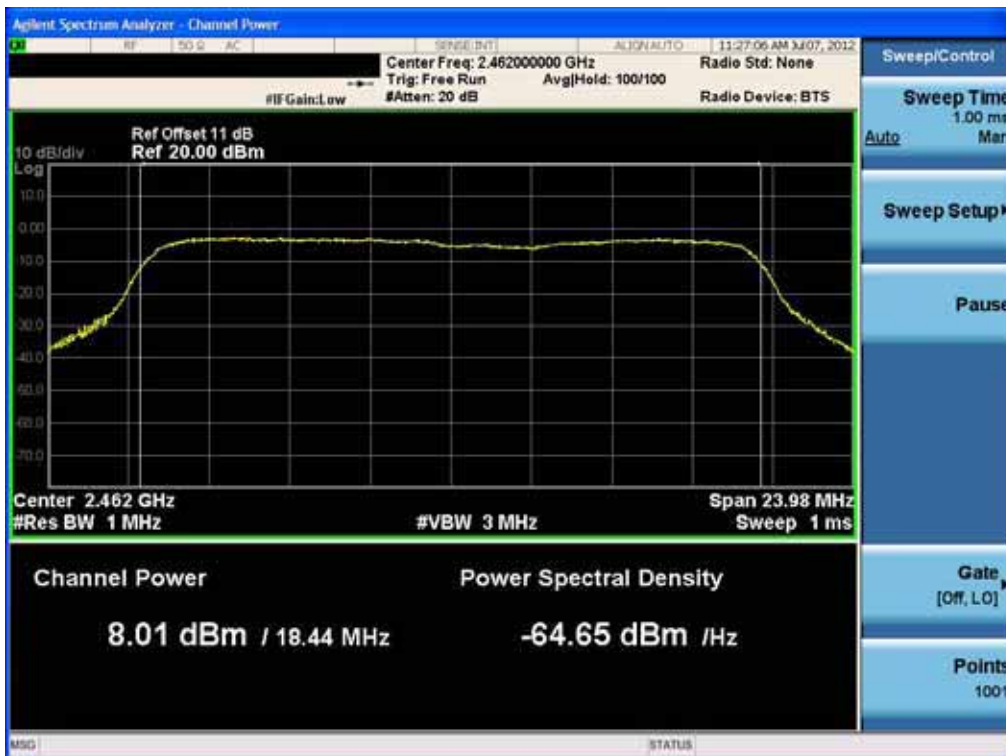
### Conducted Output Power (802.11n-CH 11) 13Mbps



### Conducted Output Power (802.11n-CH 11) 19.5Mbps

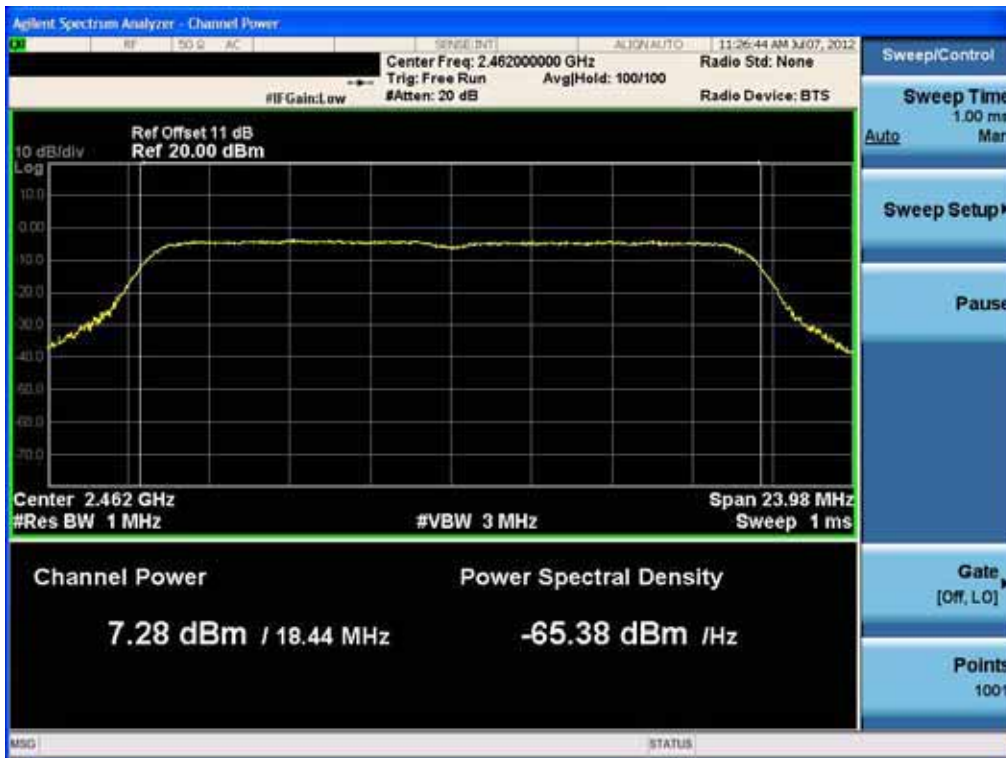


### Conducted Output Power (802.11n-CH 11) 26Mbps





### Conducted Output Power (802.11n-CH 11) 39Mbps



### Conducted Output Power (802.11n-CH 11) 52Mbps



### Conducted Output Power (802.11n-CH 11) 58.5Mbps



### Conducted Output Power (802.11n-CH 11) 65Mbps



(5745 MHz ~5825 MHz)

**Conducted Output Power (802.11a-CH 149) 6 Mbps**



**Conducted Output Power (802.11a-CH 149) 9 Mbps**



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V

### Conducted Output Power (802.11a-CH 149) 12 Mbps



### Conducted Output Power (802.11a-CH 149) 18 Mbps



### Conducted Output Power (802.11a-CH 149) 24 Mbps



### Conducted Output Power (802.11a-CH 149) 36 Mbps



### Conducted Output Power (802.11a-CH 149) 48 Mbps



### Conducted Output Power (802.11a-CH 149) 54 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Output Power (802.11a-CH 157) 6 Mbps



### Conducted Output Power (802.11a-CH 157) 9 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Output Power (802.11a-CH 157) 12 Mbps



### Conducted Output Power (802.11a-CH 157) 18 Mbps





### Conducted Output Power (802.11a-CH 157) 24 Mbps



### Conducted Output Power (802.11a-CH 157) 36 Mbps



### Conducted Output Power (802.11a-CH 157) 48 Mbps



### Conducted Output Power (802.11a-CH 157) 54 Mbps



### Conducted Output Power (802.11a-CH 165) 6 Mbps



### Conducted Output Power (802.11a-CH 165) 9 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Output Power (802.11a-CH 165) 12 Mbps



### Conducted Output Power (802.11a-CH 165) 18 Mbps



### Conducted Output Power (802.11a-CH 165) 24 Mbps



### Conducted Output Power (802.11a-CH 165) 36 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Output Power (802.11a-CH 165) 48 Mbps



### Conducted Output Power (802.11a-CH 165) 54 Mbps



20 MHz BW  
(5745 MHz ~5825 MHz)

Conducted Output Power (802.11n-CH 149) 6.5 Mbps



Conducted Output Power (802.11n-CH 149) 13 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Output Power (802.11n-CH 149) 19.5 Mbps



### Conducted Output Power (802.11n-CH 149) 26 Mbps





### Conducted Output Power (802.11n-CH 149) 39 Mbps



### Conducted Output Power (802.11n-CH 149) 52 Mbps



### Conducted Output Power (802.11n-CH 149) 58.5 Mbps



### Conducted Output Power (802.11n-CH 149) 65 Mbps



### Conducted Output Power (802.11n-CH 157) 6.5 Mbps



### Conducted Output Power (802.11n-CH 157) 13 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Output Power (802.11n-CH 157) 19.5 Mbps



### Conducted Output Power (802.11n-CH 157) 26 Mbps



### Conducted Output Power (802.11n-CH 157) 39 Mbps



### Conducted Output Power (802.11n-CH 157) 52 Mbps



### Conducted Output Power (802.11n-CH 157) 58.5 Mbps



### Conducted Output Power (802.11n-CH 157) 65 Mbps



### Conducted Output Power (802.11n-CH 165) 6.5 Mbps



### Conducted Output Power (802.11n-CH 165) 13 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Output Power (802.11n-CH 165) 19.5 Mbps



### Conducted Output Power (802.11n-CH 165) 26 Mbps





### Conducted Output Power (802.11n-CH 165) 39 Mbps



### Conducted Output Power (802.11n-CH 165) 52 Mbps



### Conducted Output Power (802.11n-CH 165) 58.5 Mbps



### Conducted Output Power (802.11n-CH 165) 65 Mbps

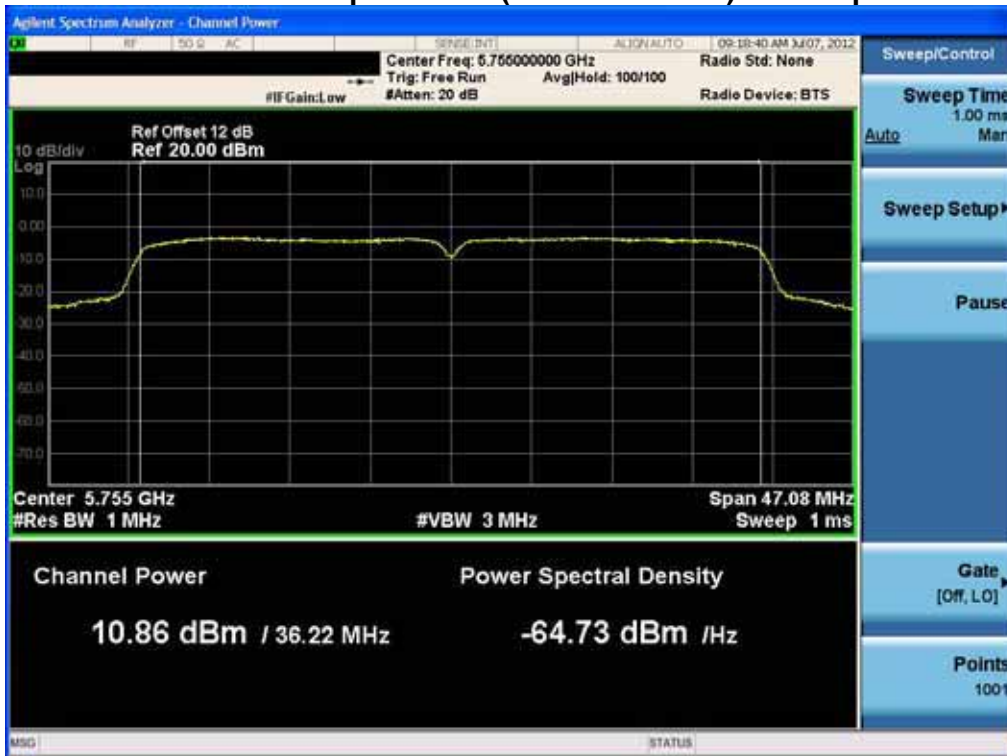


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V

40 MHz BW

(5755 MHz ~5795 MHz)

**Conducted Output Power (802.11n-CH 149) 13.5 Mbps**



**Conducted Output Power (802.11n-CH 149) 27 Mbps**



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Output Power (802.11n-CH 149) 40.5 Mbps



### Conducted Output Power (802.11n-CH 149) 54 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Output Power (802.11n-CH 149) 81 Mbps



### Conducted Output Power (802.11n-CH 149) 108 Mbps



### Conducted Output Power (802.11n-CH 149) 121.5 Mbps

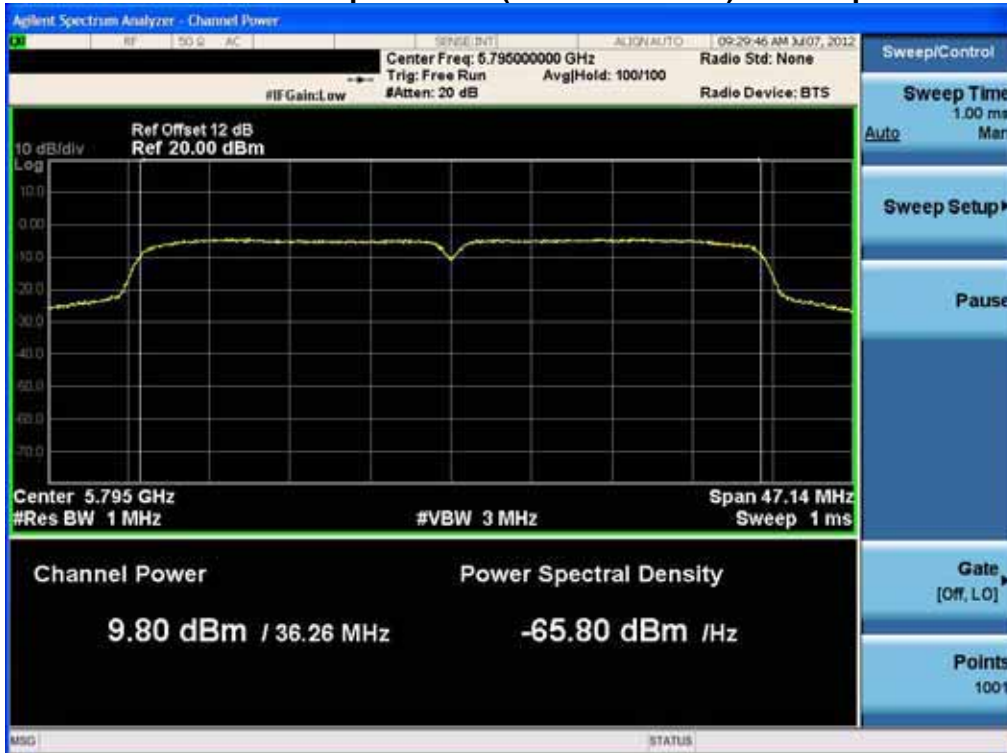


### Conducted Output Power (802.11n-CH 149) 135 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Output Power (802.11n-CH 149) 13.5 Mbps



### Conducted Output Power (802.11n-CH 149) 27 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Output Power (802.11n-CH 149) 40.5 Mbps



### Conducted Output Power (802.11n-CH 149) 54 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V



### Conducted Output Power (802.11n-CH 149) 81 Mbps



### Conducted Output Power (802.11n-CH 149) 108 Mbps



### Conducted Output Power (802.11n-CH 149) 121.5 Mbps



### Conducted Output Power (802.11n-CH 149) 135 Mbps



### 8.3 POWER SPECTRAL DENSITY (802.11a/b/g/n)

#### Test Requirements and limit, §15.247(e)

The peak power spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

**Minimum Standard – the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.**

#### ■ TEST CONFIGURATION

#### ■ TEST PROCEDURE

We tested according to KDB 558074(issued 1/18/2012).

The spectrum analyzer is set to :

1. Span = 5 – 30 % greater than the EBW
2. RBW = 100 kHz
3. VBW = 300 kHz
4. Sweep = Auto couple
5. Detector Mode = Peak
6. Trace Mode = Max hold
7. Search peak

<b>FCC PT.15.247 TEST REPORT</b>	<b>FCC CERTIFICATION REPORT</b>		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
<b>Test Report No.</b> HCTR1207FR13	<b>Date of Issue:</b> July 19, 2012	<b>EUT Type:</b> CDMA/GSM/LTE Phone with BT/WLAN/NFC	<b>FCC ID:</b> JYCPREMI4V



■ **Sample Calculation**

PSD = Reading Value + ATT loss + Cable loss(1 ea) + BWCF

Output Power = -5 dBm + 10 dB + 0.8 dB -15.2 dB= 0.6 dBm

Where: BWCF(Bandwidth Correction Factor) =  $10\log(3 \text{ kHz}/100 \text{ kHz}) = -15.2 \text{ dB}$

Note :

1. Spectrum reading values are not plot data. The power 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 2.4 GHz and 5.8 GHz range that was rounded off to the closest tenth dB.  
Actual value of loss for the attenuator and cable combination is 11 dB at 2.4 GHz and 12 dB at 5 GHz. We used the particular cable type that is supported by manufacture.

<b>FCC PT.15.247 TEST REPORT</b>	<b>FCC CERTIFICATION REPORT</b>		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
<b>Test Report No.</b> HCTR1207FR13	<b>Date of Issue:</b> July 19, 2012	<b>EUT Type:</b> CDMA/GSM/LTE Phone with BT/WLAN/NFC	<b>FCC ID:</b> JYCPREMIIV

■ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Spectrum Value(dBm)	BWCF (dB)	PSD (dBm)	Limit (dBm)	Pass/Fail
2412	1	802.11b	8.844	-15.2	-6.356	8	Pass
2437	6		9.857	-15.2	-5.343	8	Pass
2462	11		8.67	-15.2	-6.53	8	Pass
2412	1	802.11g	5.272	-15.2	-9.928	8	Pass
2437	6		5.174	-15.2	-10.026	8	Pass
2462	11		4.315	-15.2	-10.885	8	Pass
2412	1	802.11n 2.4 GHz Band	-0.059	-15.2	-15.259	8	Pass
2437	6		-0.414	-15.2	-15.614	8	Pass
2462	11		-1.282	-15.2	-16.482	8	Pass
5745	149	802.11a	0.697	-15.2	-14.503	8	Pass
5785	157		1.057	-15.2	-14.143	8	Pass
5825	165		0.635	-15.2	-14.565	8	Pass
5745	149	802.11n_ 20 MHz BW 5.8 GHz Band	-0.021	-15.2	-15.221	8	Pass
5785	157		0.002	-15.2	-15.198	8	Pass
5825	165		-0.491	-15.2	-15.691	8	Pass
5755	151	802.11n_ 40 MHz BW 5.8 GHz Band	-1.589	-15.2	-16.789	8	Pass
5795	159		-2.535	-15.2	-17.735	8	Pass

Note : PSD = Spectrum Value + BWCF

RESULT PLOTS

Power Spectral Density (802.11b-CH 1)



Power Spectral Density (802.11b-CH 6)



### Power Spectral Density (802.11b-CH 11)

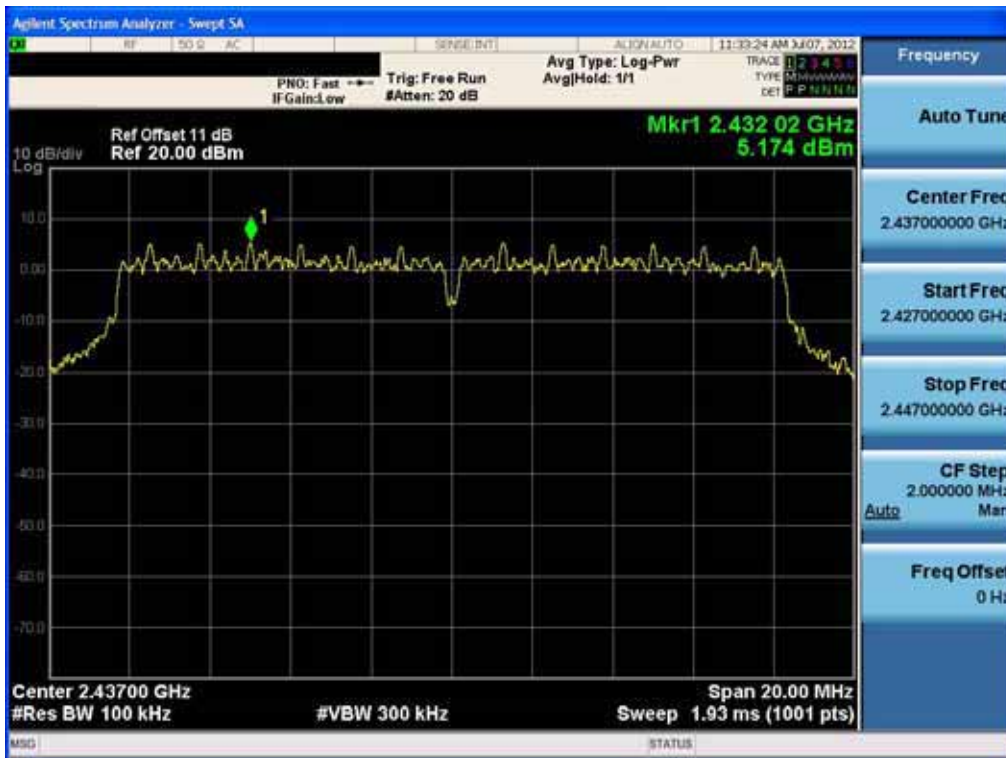


### Power Spectral Density (802.11g-CH 1)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Power Spectral Density (802.11g-CH 6)



### Power Spectral Density (802.11g-CH11)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV



### Power Spectral Density (802.11n-CH 1)



### Power Spectral Density (802.11n-CH 6)

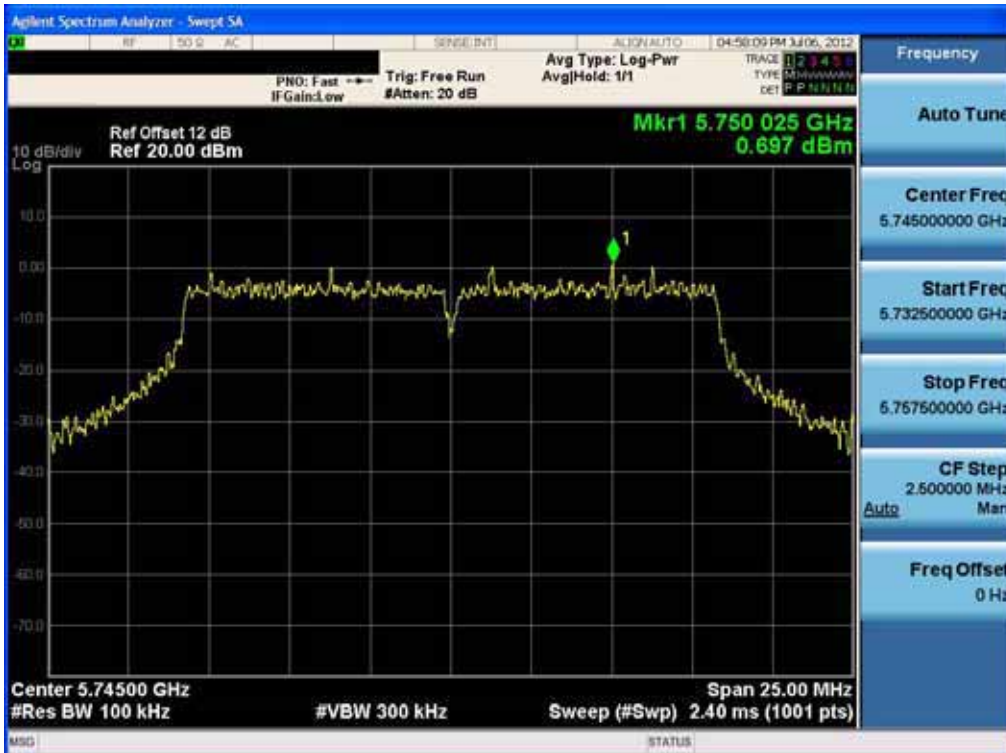


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Power Spectral Density (802.11n-CH11)



### Power Spectral Density (802.11a-CH 149)

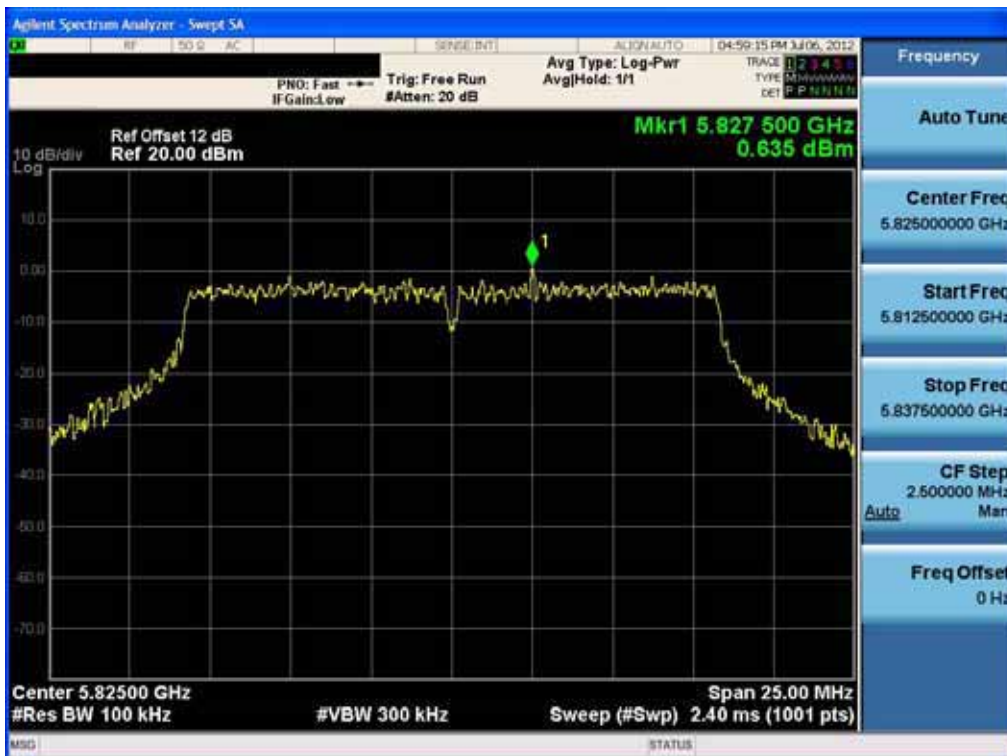


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Power Spectral Density (802.11a-CH 157)



### Power Spectral Density (802.11a-CH 165)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

Power Spectral Density (802.11n-CH 149)



Power Spectral Density (802.11n-CH 157)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Power Spectral Density (802.11n-CH 165)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V

Power Spectral Density (802.11n-CH 151)



Power Spectral Density (802.11n-CH 159)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIAV

## 8.4 OUT OF BAND EMISSIONS AT THE BAND EDGE/ CONDUCTED SPURIOUS EMISSIONS

### Test Requirements and limit, §15.247(d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

**Limit : 20 dBc**

### ■ TEST CONFIGURATION

### ■ TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer.

RBW = 100 kHz(Upon 1 GHz = 1 MHz)

VBW = 300 kHz(Upon 1 GHz = 1 MHz)

Set span to encompass the spectrum to be examined

Detector = Peak

Trace Mode = max hold

Sweep = auto couple

Measurements are made over the 30 MHz to 26 GHz range with the transmitter set to the lowest, middle, and highest channels.

Note :

1. The band edge 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 2.4 GHz and 5.8 GHz range that was rounded off to the closest tenth dB.

Actual value of loss for the attenuator and cable combination is 11 dB at 2.4 GHz and 12 dB at 5 GHz. We used the particular cable type that is supported by manufacture.

<b>FCC PT.15.247 TEST REPORT</b>	<b>FCC CERTIFICATION REPORT</b>		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
<b>Test Report No.</b> HCTR1207FR13	<b>Date of Issue:</b> July 19, 2012	<b>EUT Type:</b> CDMA/GSM/LTE Phone with BT/WLAN/NFC	<b>FCC ID:</b> JYCPREMI4V



4. In case of conducted spurious emissions test, we applied the offset values at 2.4 GHz and 5 GHz. Because we used the particular cable type that is supported by manufacture. So, we don't know exactly cable loss from 30 MHz to 40 GHz.

<b>FCC PT.15.247 TEST REPORT</b>	<b>FCC CERTIFICATION REPORT</b>		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
<b>Test Report No.</b> HCTR1207FR13	<b>Date of Issue:</b> July 19, 2012	<b>EUT Type:</b> CDMA/GSM/LTE Phone with BT/WLAN/NFC	<b>FCC ID:</b> JYCPREMIIV



RESULT PLOTS

BandEdge (802.11b-CH1)



BandEdge (802.11b-CH11)

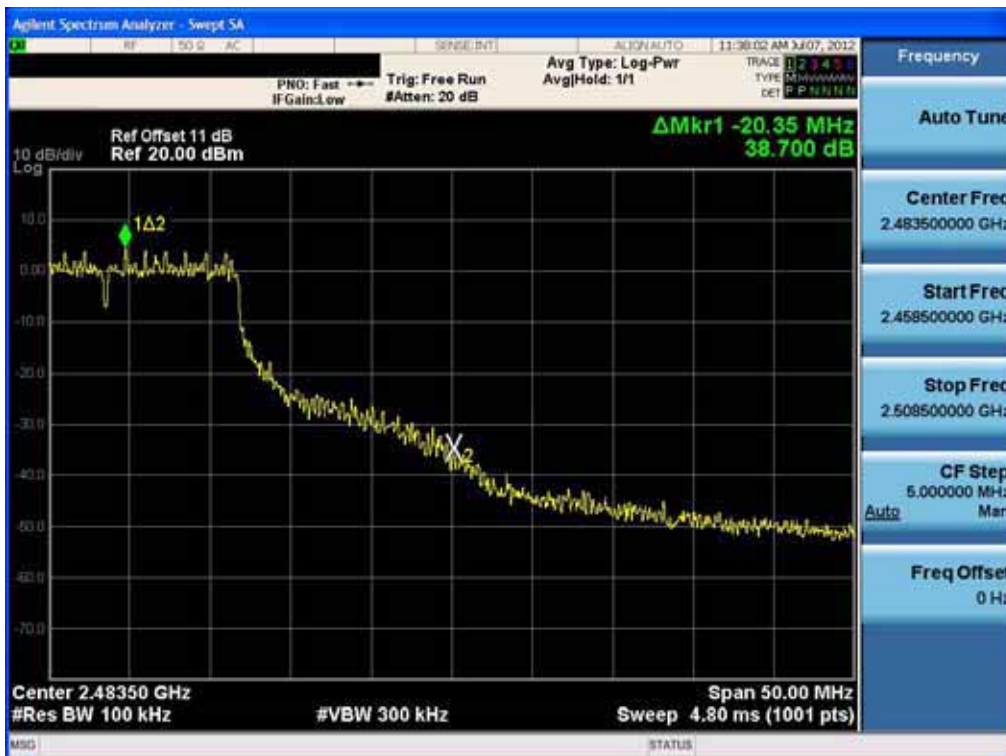


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### BandEdge (802.11g-CH1)



### BandEdge (802.11g-CH11)

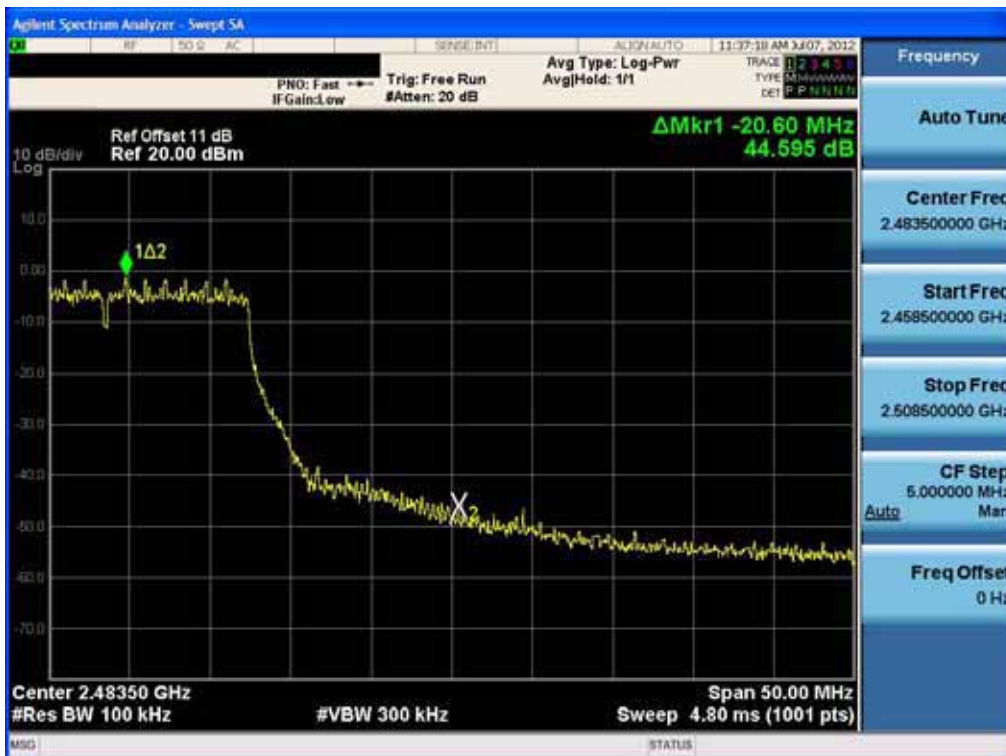


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### BandEdge (802.11n-CH1)



### BandEdge (802.11n-CH11)

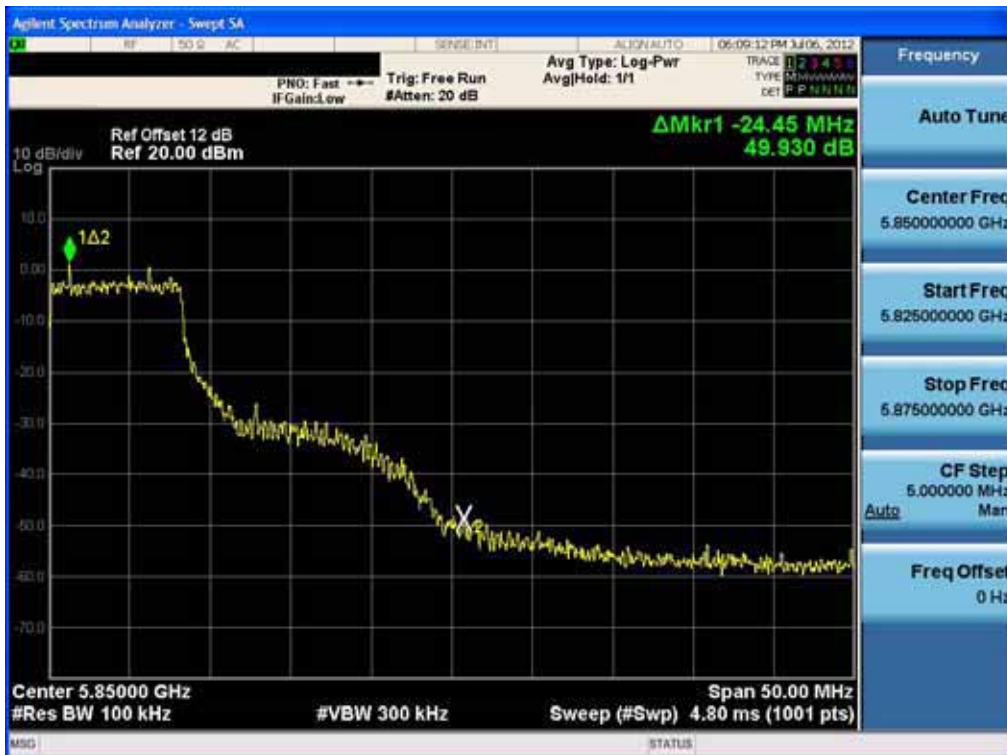


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### BandEdge (802.11a-CH 149)



### BandEdge (802.11a-CH 165)

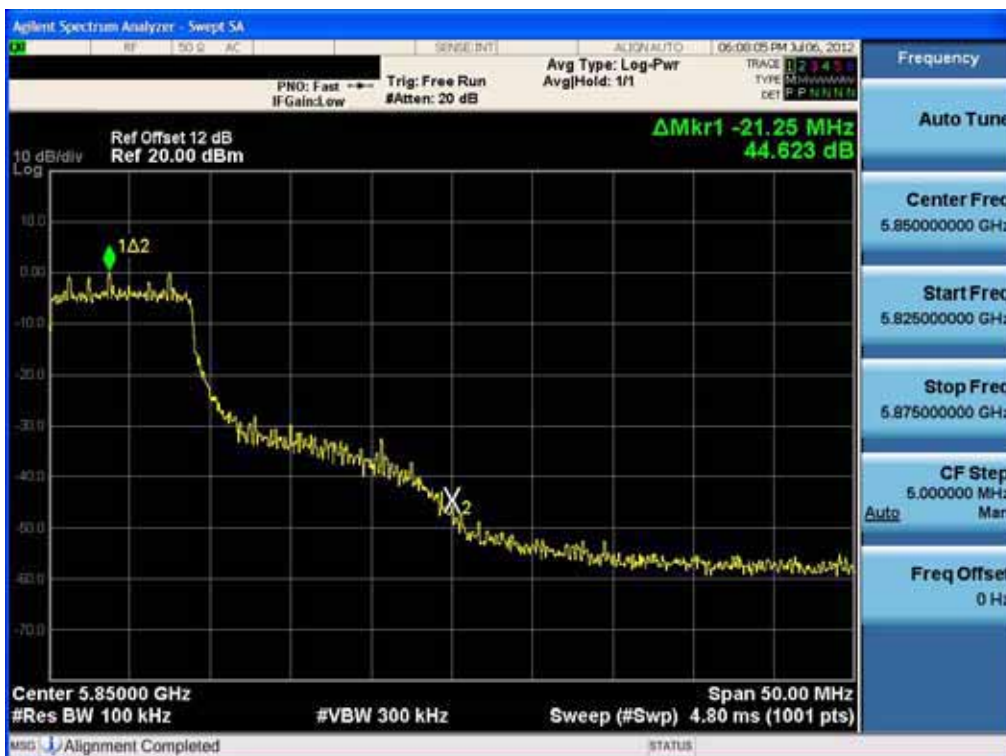


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

BandEdge (802.11n-CH 149)



BandEdge (802.11n-CH 165)

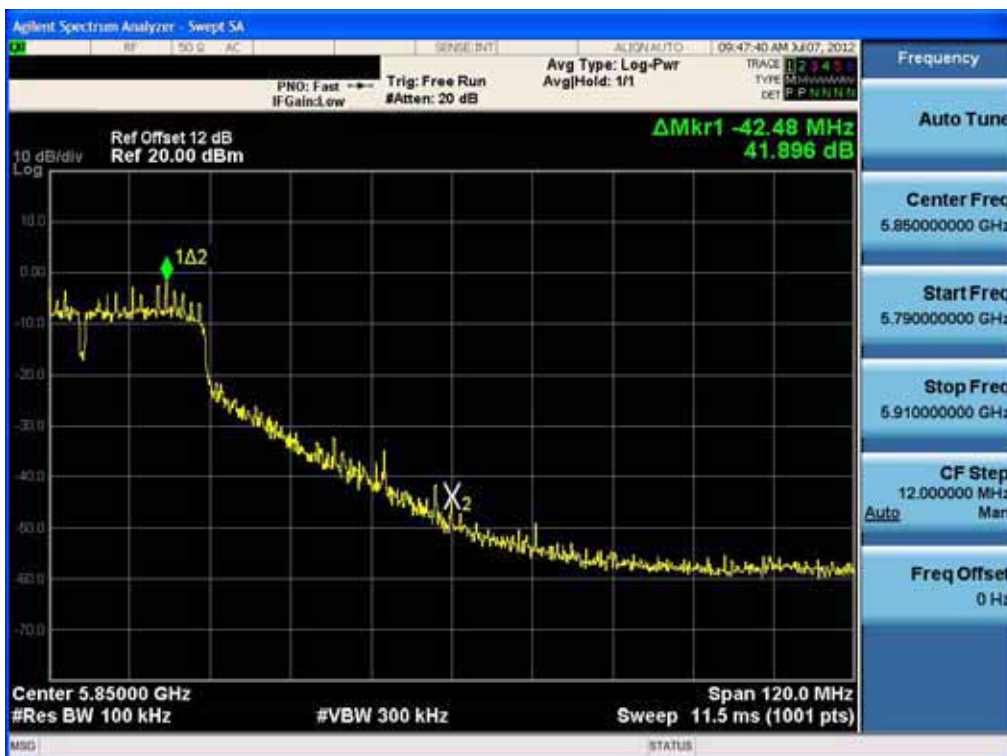


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

BandEdge (802.11n-CH 151)

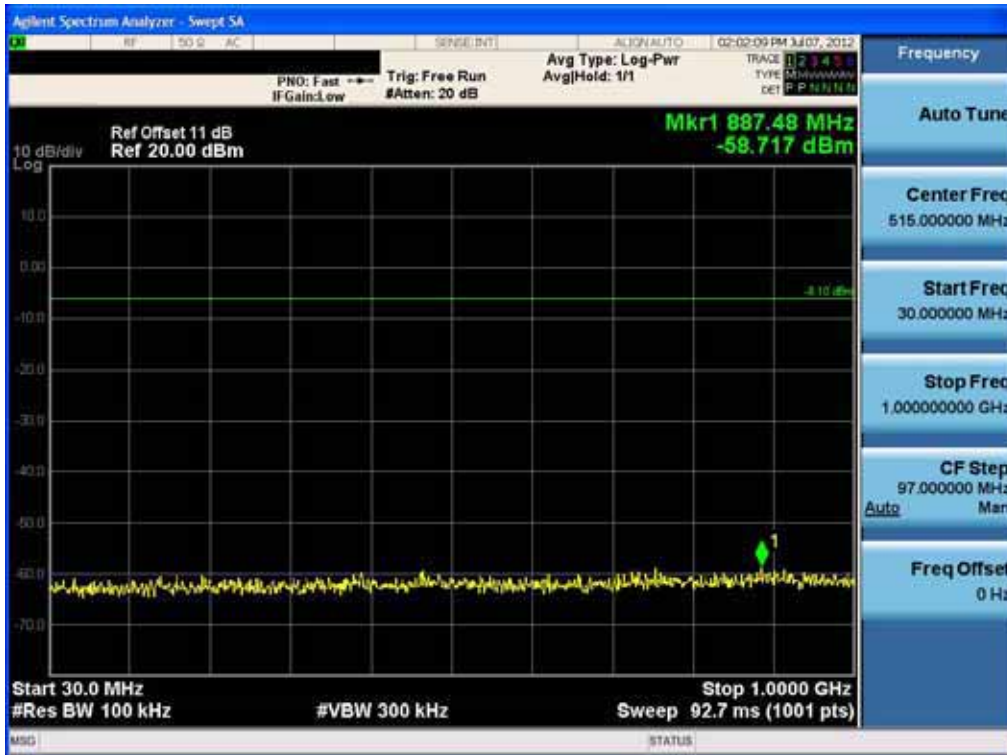


BandEdge (802.11n-CH 159)

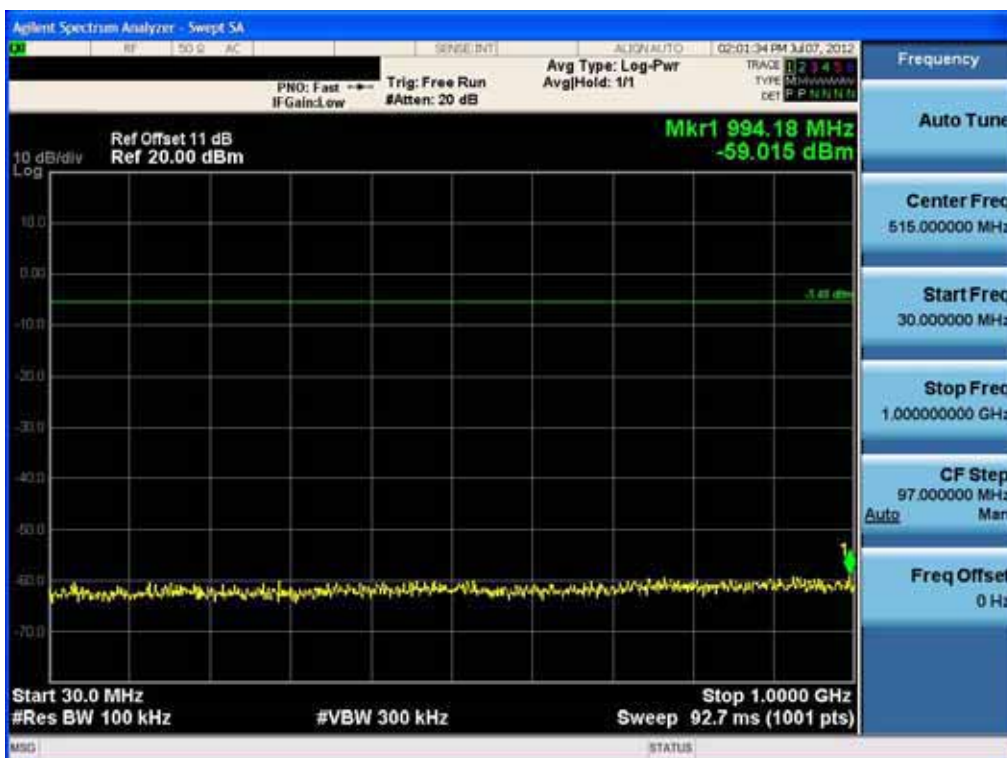


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

Conducted Spurious Emission (802.11b-CH1)

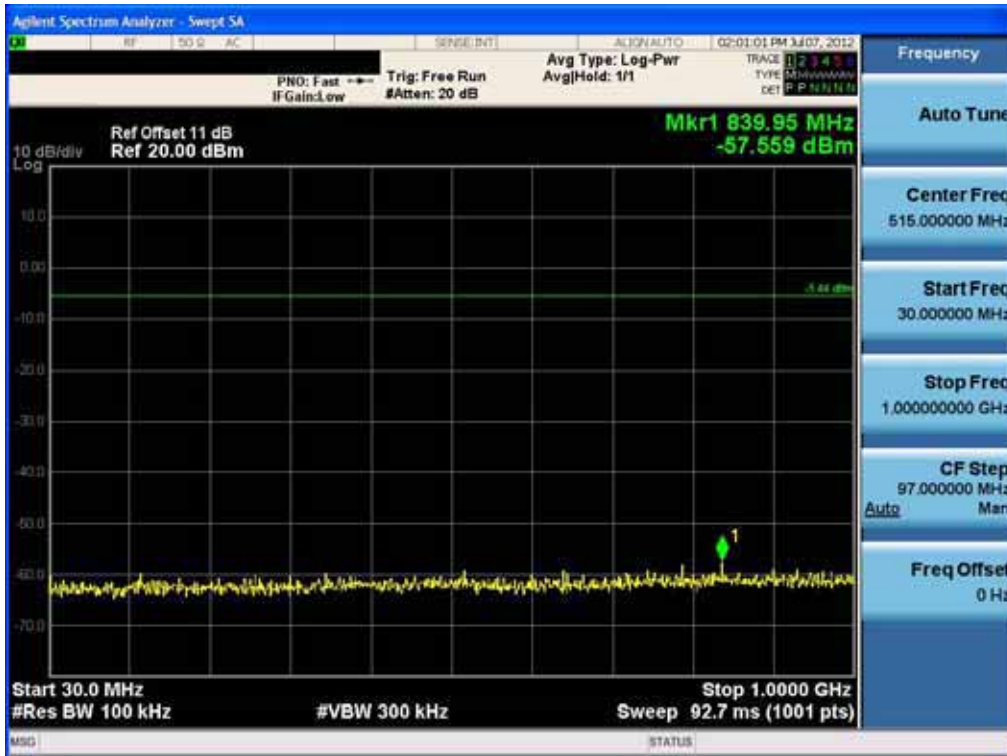


Conducted Spurious Emission (802.11b-CH6)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Spurious Emission (802.11b-CH11)



### Conducted Spurious Emission (802.11g-CH1)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV



### Conducted Spurious Emission (802.11g-CH6)

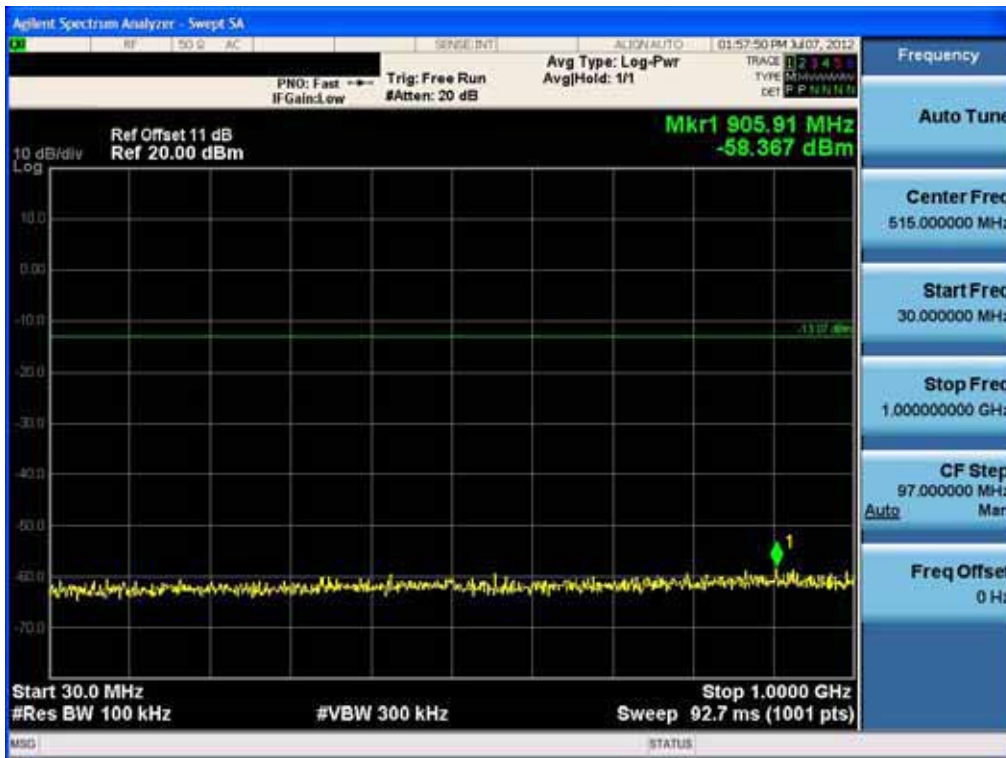


### Conducted Spurious Emission (802.11g-CH11)

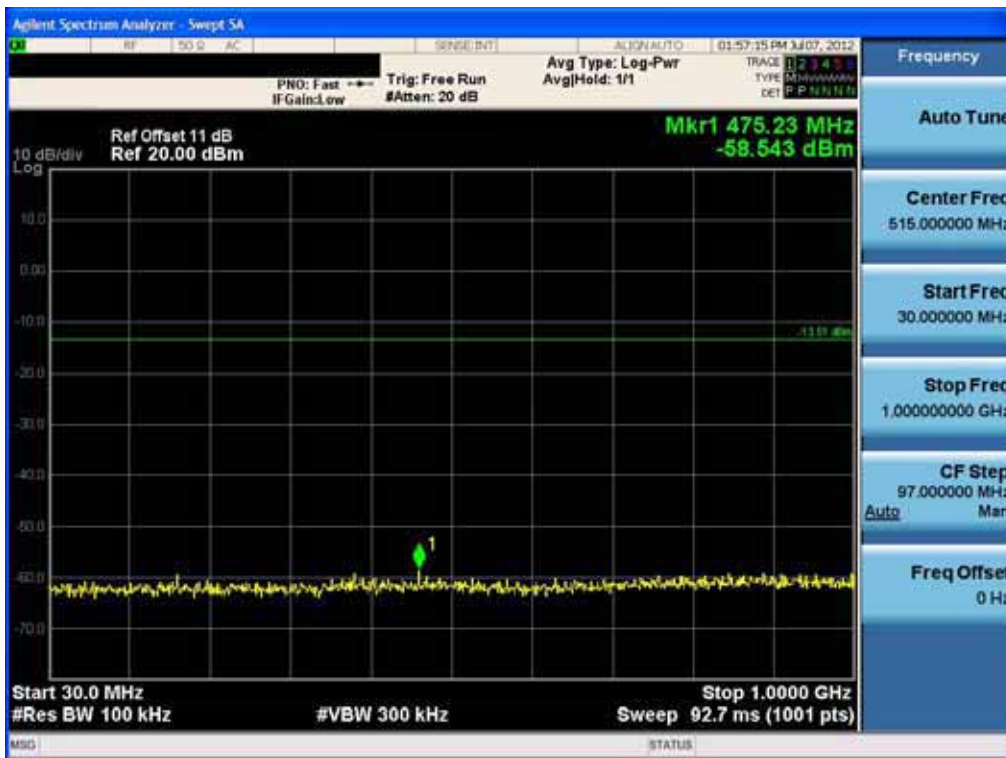


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Spurious Emission (802.11n-CH1)

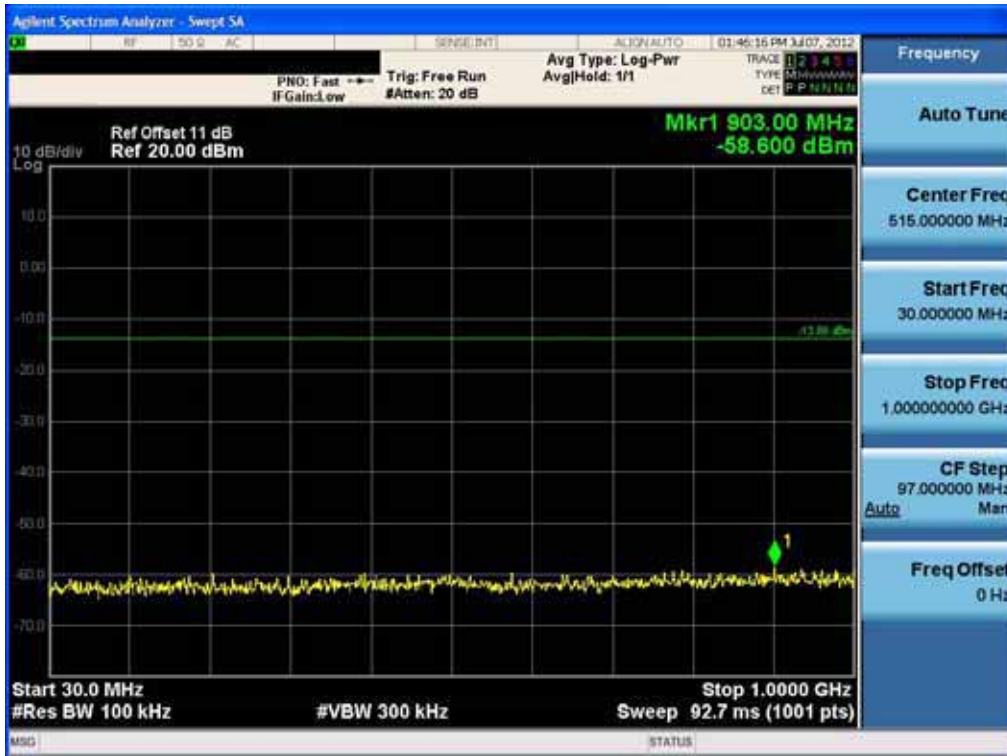


### Conducted Spurious Emission (802.11n-CH6)



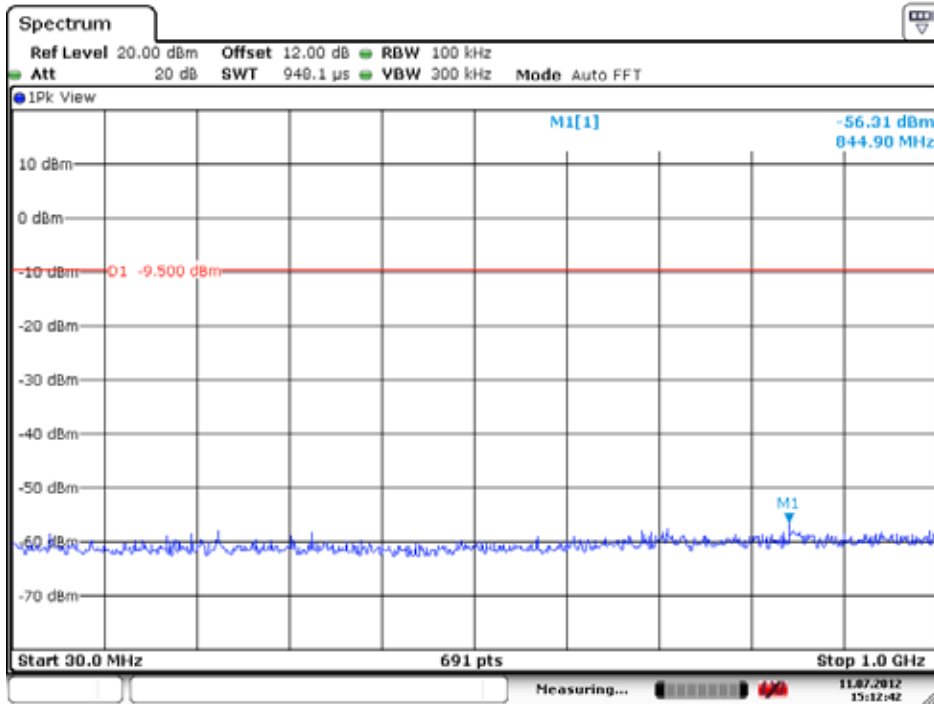
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Spurious Emission (802.11n-CH11)



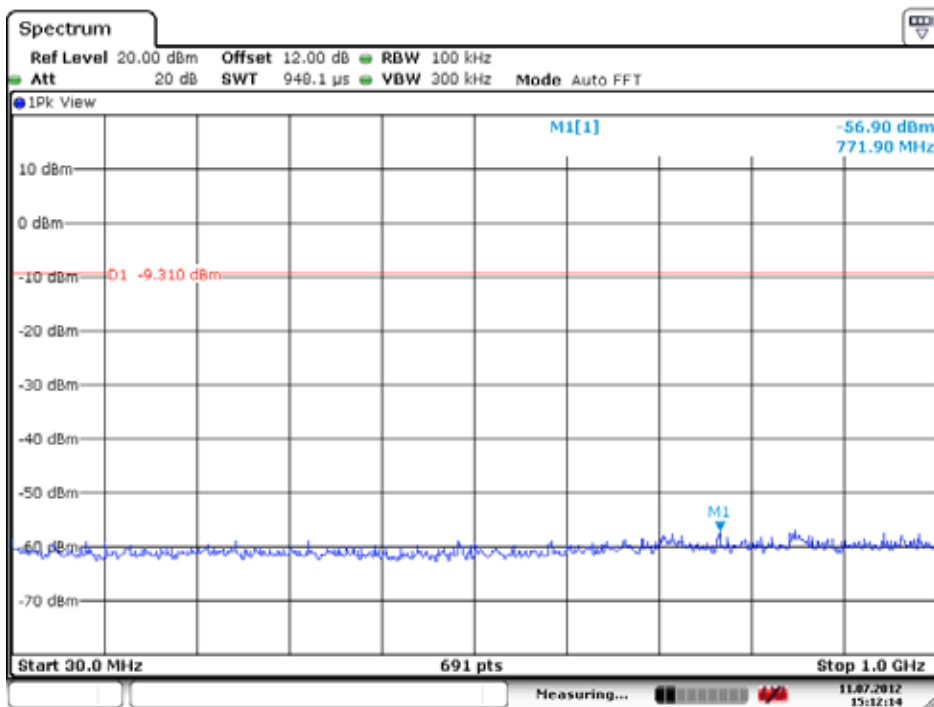
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V

**Conducted Spurious Emission (802.11a-CH149)**



Date: 11.JUL.2012 15:12:41

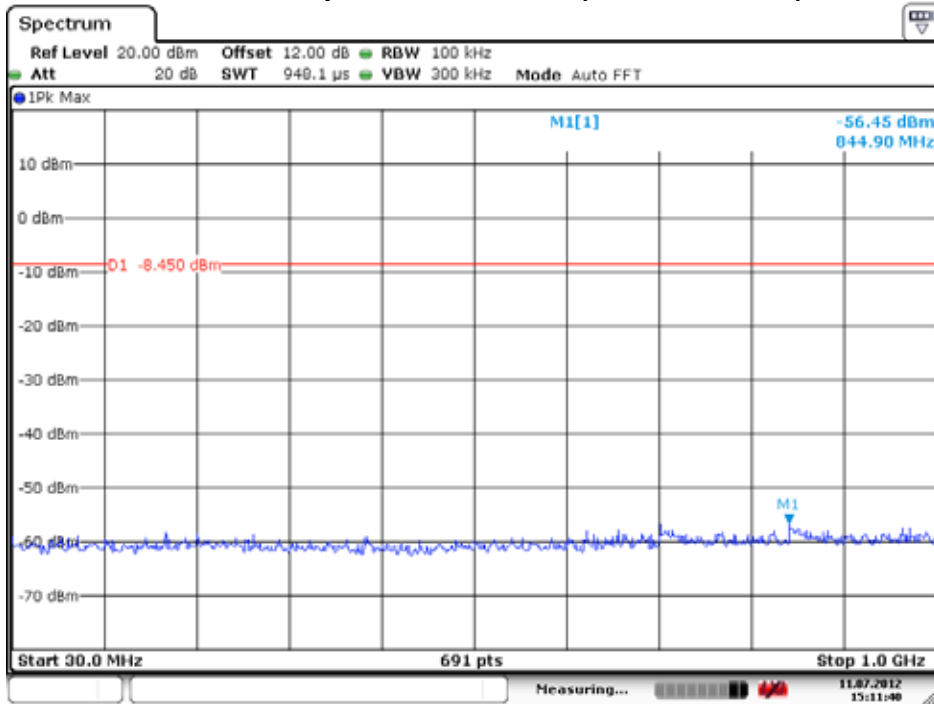
**Conducted Spurious Emission (802.11a-CH157)**



Date: 11.JUL.2012 15:12:14

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V

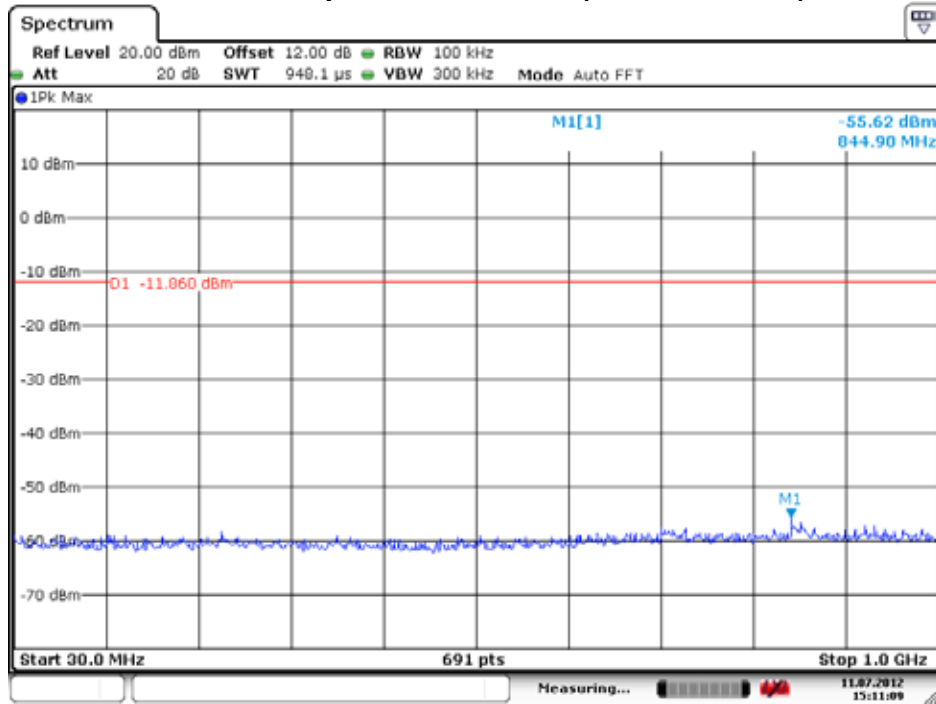
**Conducted Spurious Emission (802.11a-CH165)**



Date: 11.JUL.2012 15:11:39

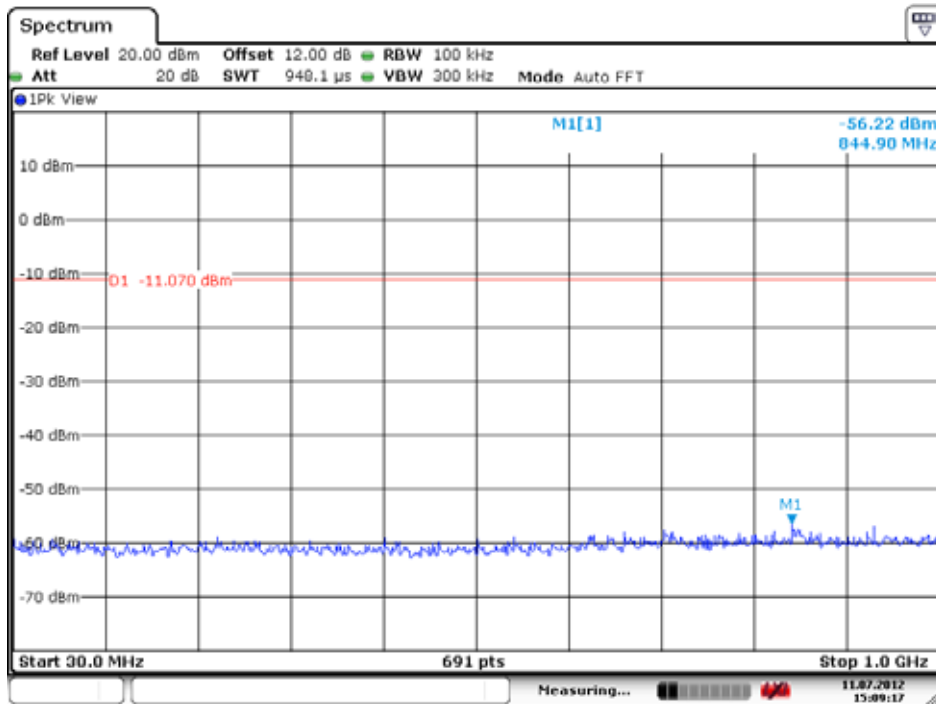
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V

**Conducted Spurious Emission (802.11n-CH149)**



Date: 11.JUL.2012 15:11:09

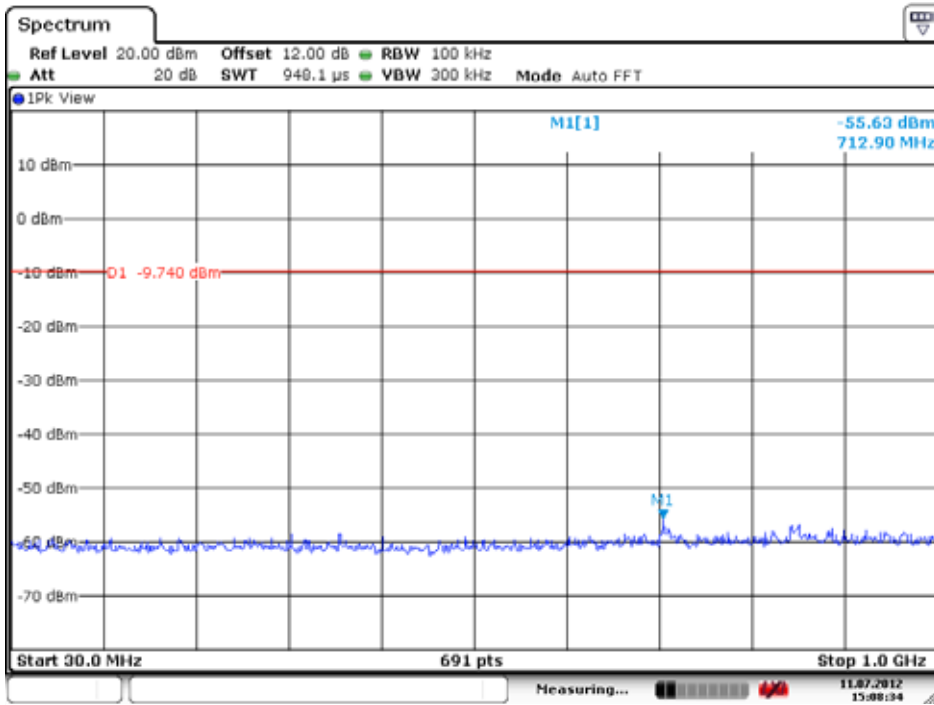
**Conducted Spurious Emission (802.11n-CH157)**



Date: 11.JUL.2012 15:09:17

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

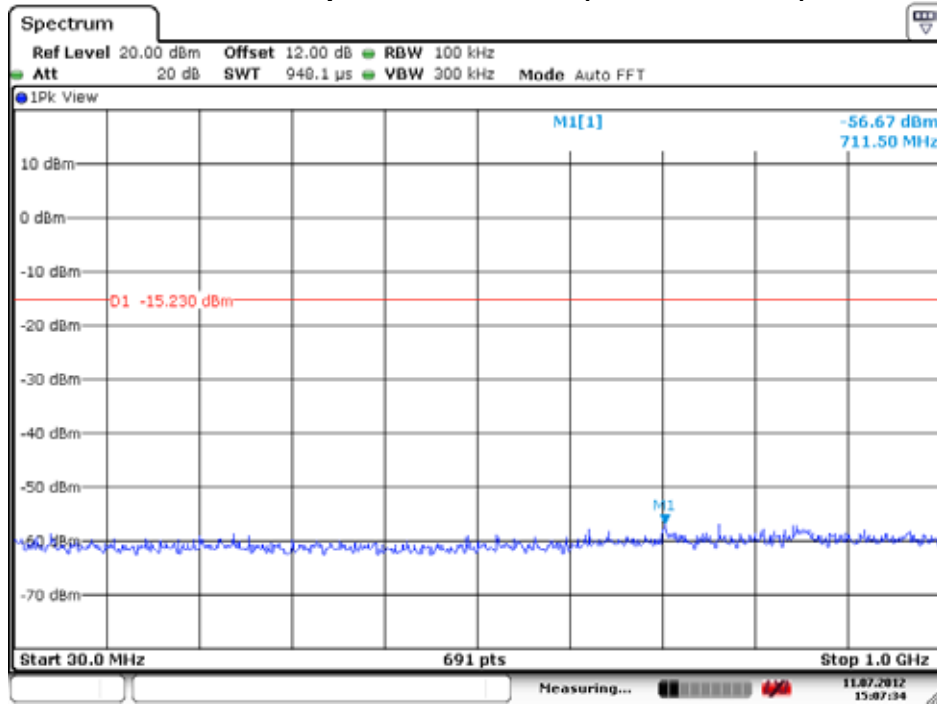
**Conducted Spurious Emission (802.11n-CH165)**



Date: 11.JUL.2012 15:08:33

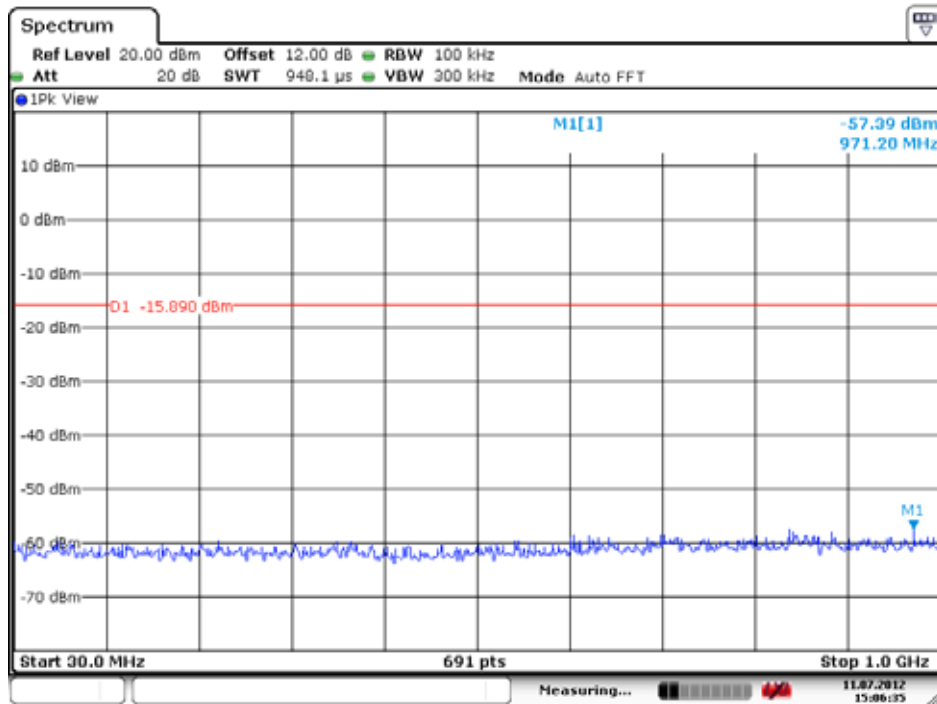
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V

**Conducted Spurious Emission (802.11n-CH151)**



Date: 11.JUL.2012 15:07:34

**Conducted Spurious Emission (802.11n-CH159)**



Date: 11.JUL.2012 15:06:34

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V



1 GHz ~ 26 GHz

### Conducted Spurious Emission (802.11b-CH1)



### Conducted Spurious Emission (802.11b-CH6)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Spurious Emission (802.11b-CH11)



### Conducted Spurious Emission (802.11g-CH1)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Spurious Emission (802.11g-CH6)



### Conducted Spurious Emission (802.11g-CH11)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

### Conducted Spurious Emission (802.11n-CH1)



### Conducted Spurious Emission (802.11n-CH6)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

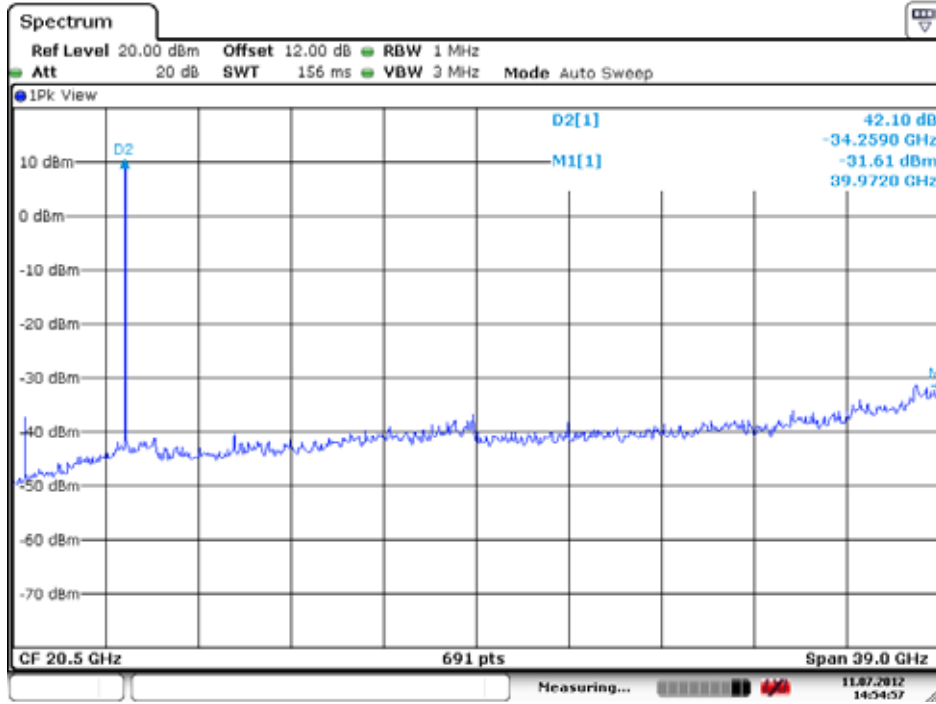
**Conducted Spurious Emission (802.11n-CH11)**



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V

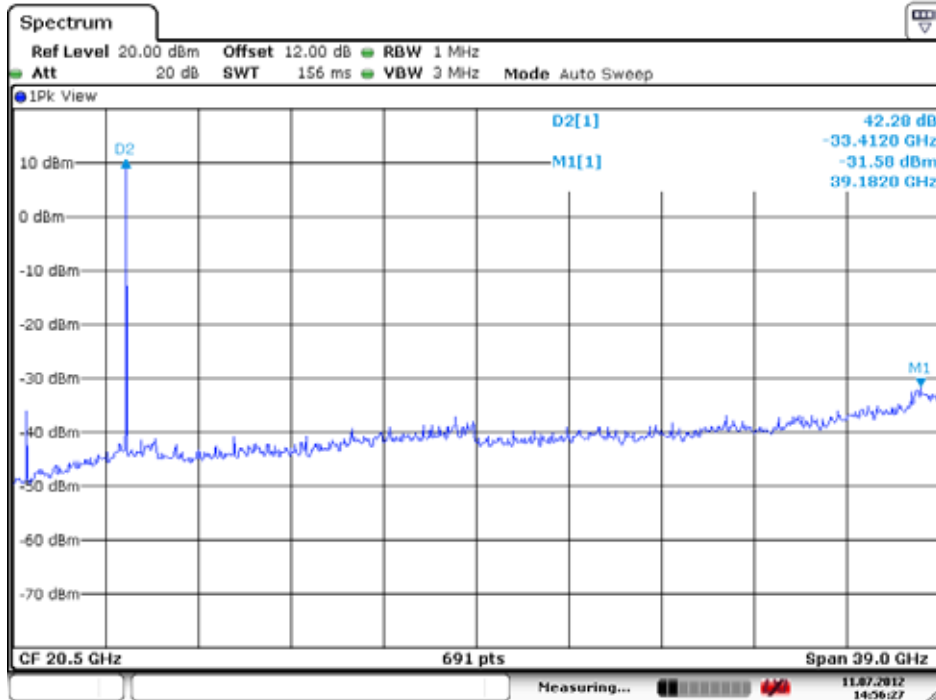
1 GHz ~ 40 GHz

**Conducted Spurious Emission (802.11a-CH149)**



Date: 11.JUL.2012 14:54:57

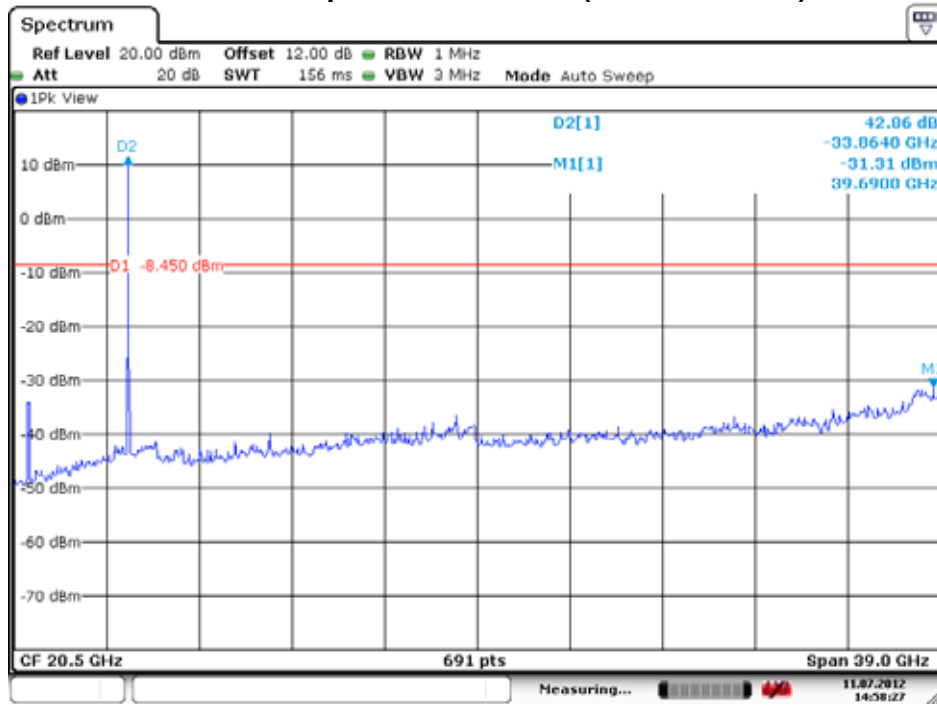
**Conducted Spurious Emission (802.11a-CH157)**



Date: 11.JUL.2012 14:56:27

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V

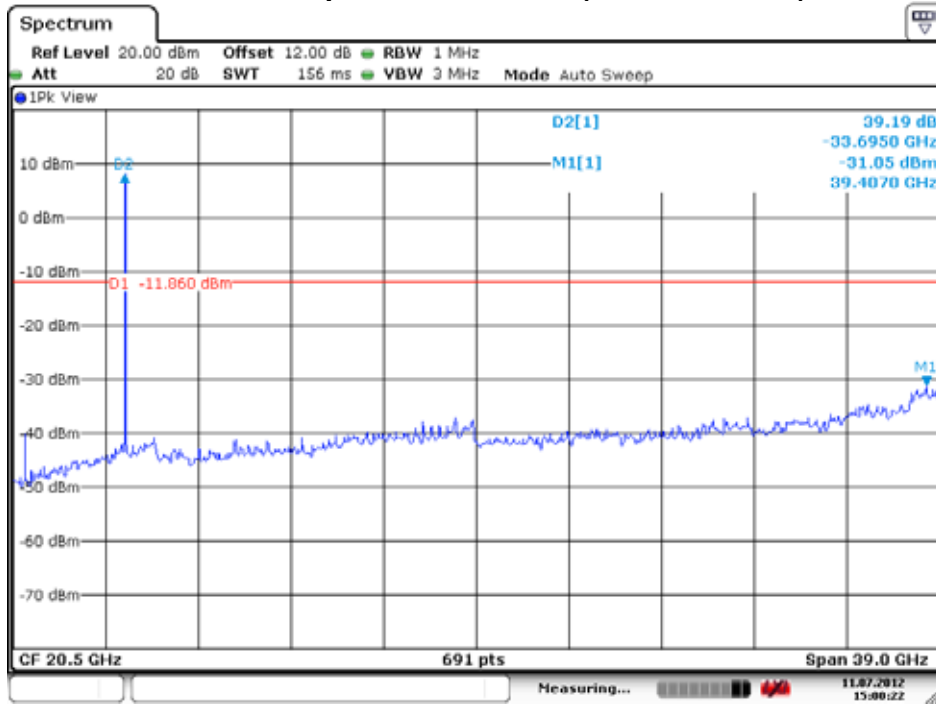
**Conducted Spurious Emission (802.11a-CH165)**



Date: 11.JUL.2012 14:58:26

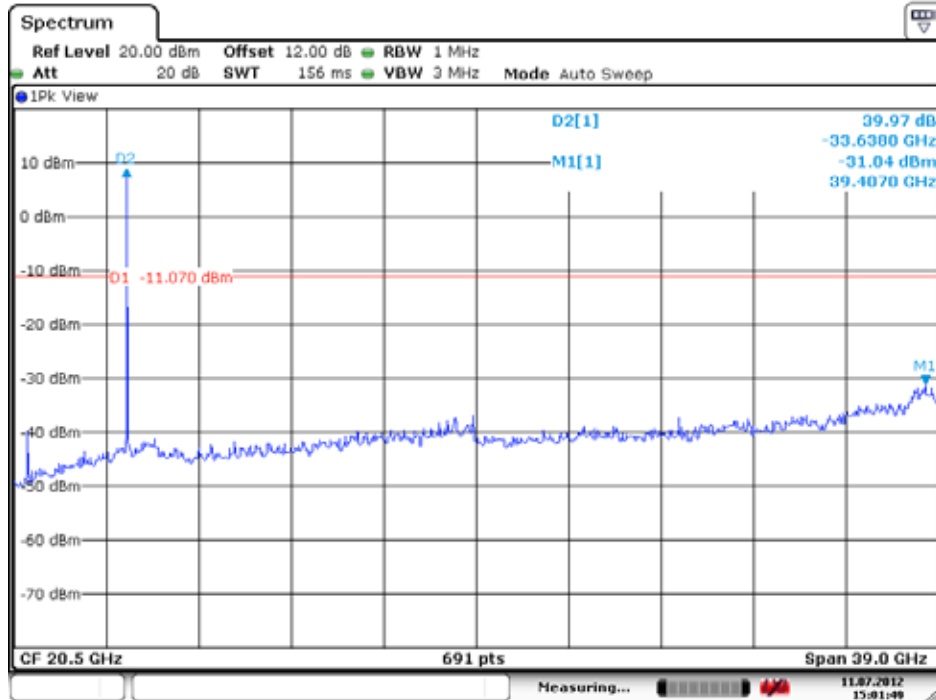
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V

**Conducted Spurious Emission (802.11n-CH149)**



Date: 11.JUL.2012 15:00:22

**Conducted Spurious Emission (802.11n-CH157)**

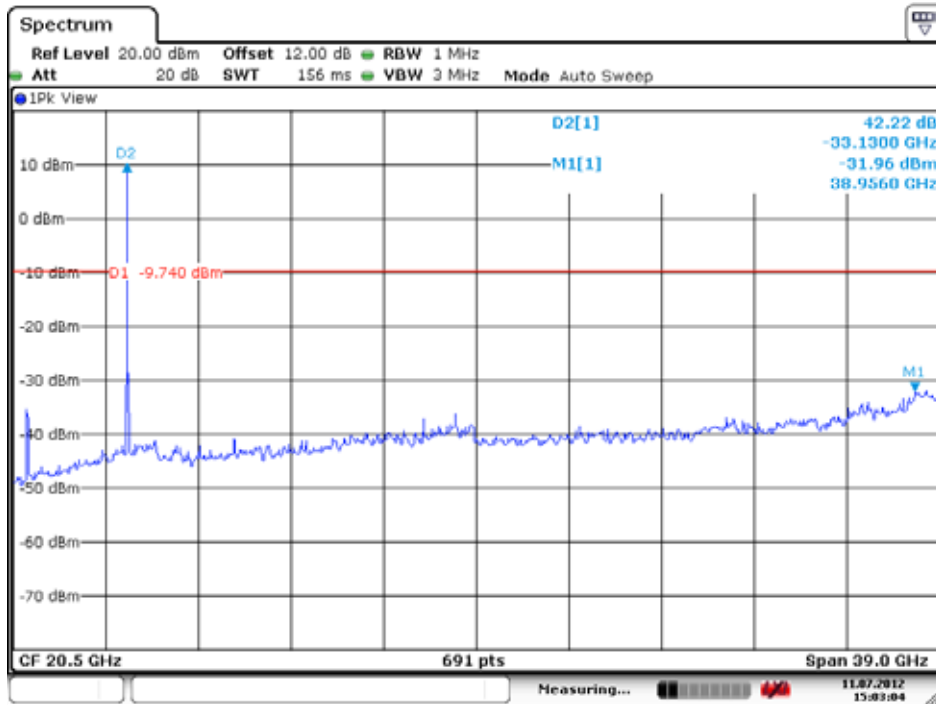


Date: 11.JUL.2012 15:01:49

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V



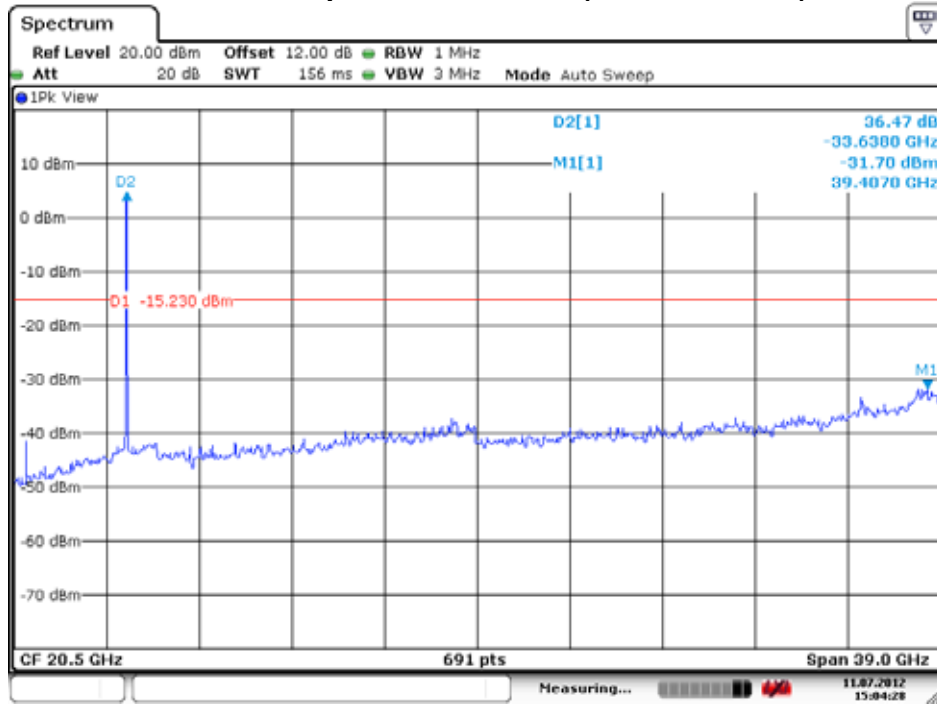
**Conducted Spurious Emission (802.11n-CH165)**



Date: 11.JUL.2012 15:03:04

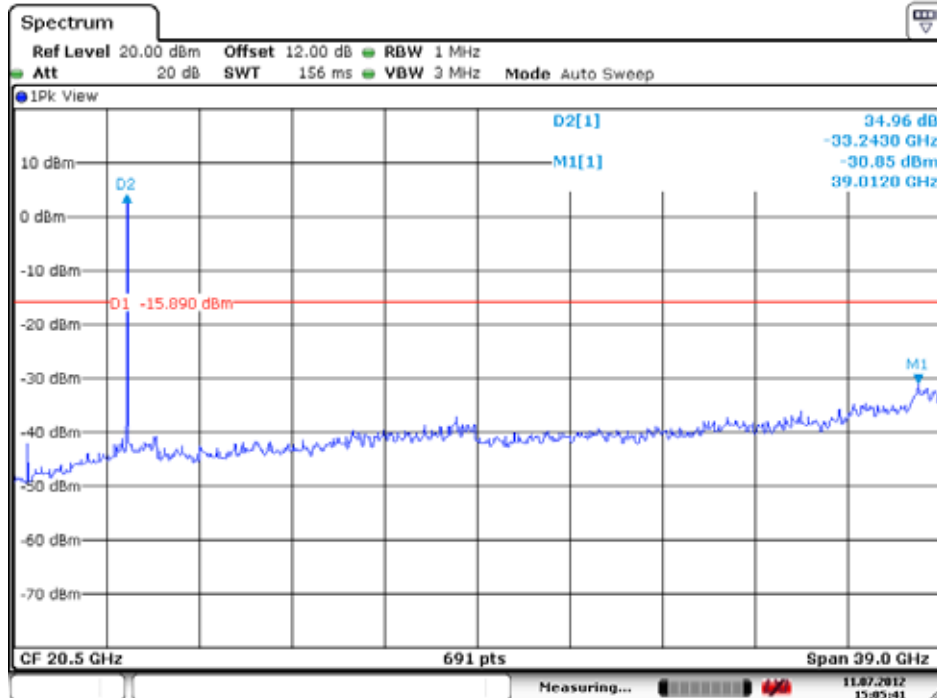
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V

**Conducted Spurious Emission (802.11n-CH151)**



Date: 11.JUL.2012 15:04:27

**Conducted Spurious Emission (802.11n-CH159)**



Date: 11.JUL.2012 15:05:41

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMI4V

**8.5 RADIATED MEASUREMENT.**

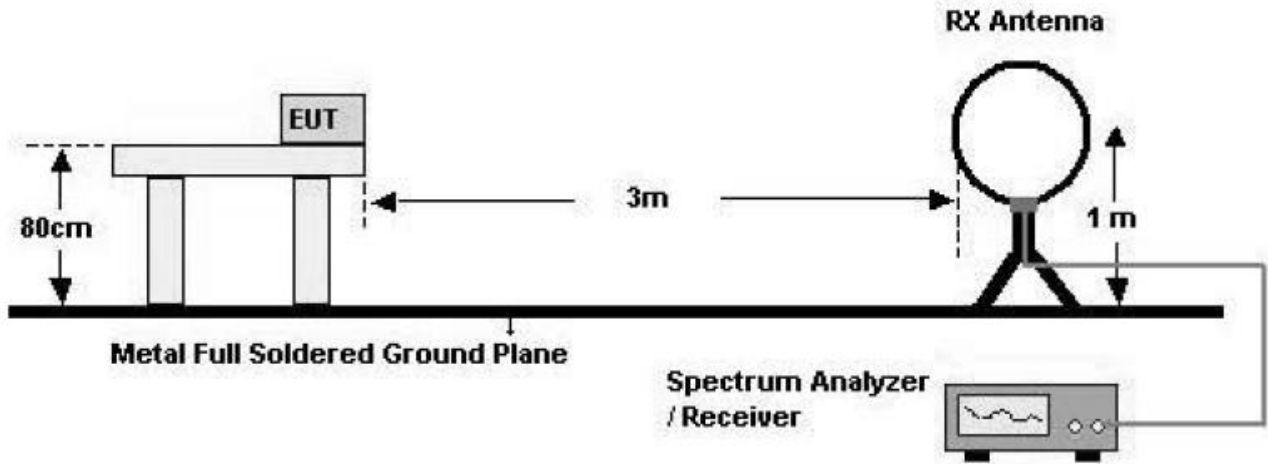
**8.5.1 RADIATED SPURIOUS EMISSIONS.**

Test Requirements and limit, §15.205, §15.209

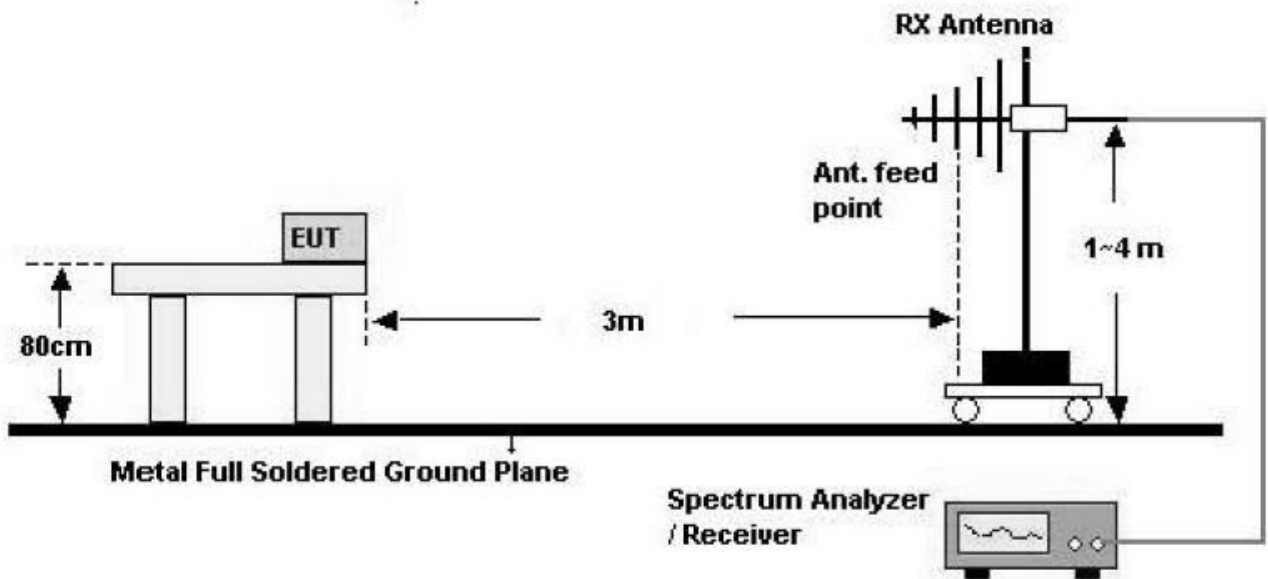
Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

**Test Configuration**

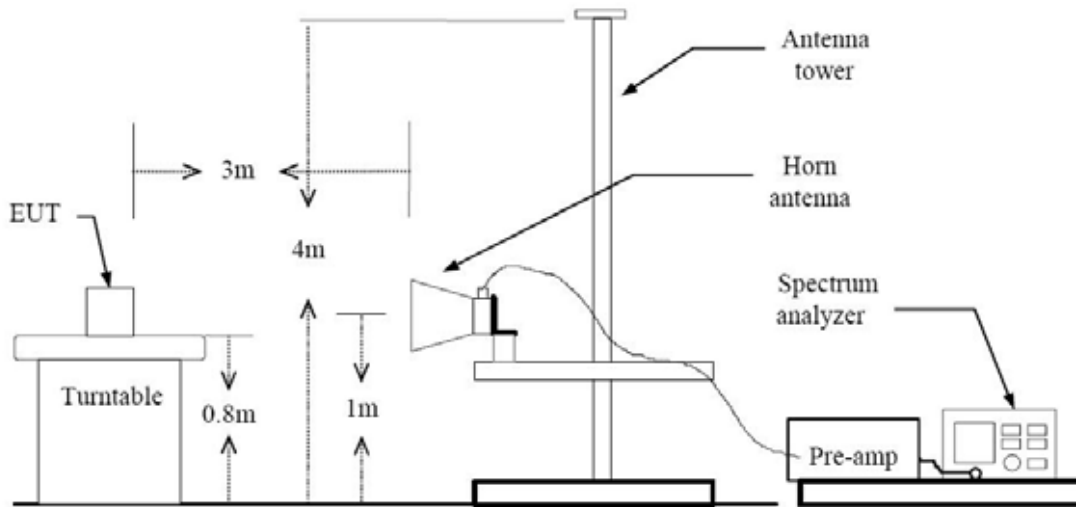
**Below 30 MHz**



**30 MHz - 1 GHz**



## Above 1 GHz



### TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8 m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3 m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC		FCC ID: JYCPREMIIV

**TEST RESULTS**

**9 kHz – 30MHz**

**Operation Mode:** Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dB $\mu$ V	dB /m	dB	(H/V)	dB $\mu$ V/m	dB $\mu$ 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 $\mu$ V	dB /m	dB	(H/V)	dB $\mu$ V/m	dB $\mu$ 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**

**Normal Battery Cover**

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4824	49.63	-0.10	V	49.53	74	24.47	PK
4824	37.12	-0.10	V	37.02	54	16.98	AV
7236	47.78	10.13	V	57.91	74	16.09	PK
7236	34.86	10.13	V	44.99	54	9.01	AV
4824	49.81	-0.10	H	49.71	74	24.29	PK
4824	36.03	-0.10	H	35.93	54	18.07	AV
7236	48.51	10.13	H	58.64	74	15.36	PK
7236	34.49	10.13	H	44.62	54	9.38	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11b/g/n(2.4 GHz) mode test. Worst case of EUT is 1 Mbps in 802.11b.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.





Operation Mode: 802.11 b  
 Transfer Rate: 1 Mbps  
 Operating Frequency: 2437  
 Channel No. 06 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4874	49.30	0.13	V	49.43	74	24.57	PK
4874	36.71	0.13	V	36.84	54	17.16	AV
7311	48.22	10.01	V	58.23	74	15.77	PK
7311	34.82	10.01	V	44.83	54	9.17	AV
4874	49.60	0.13	H	49.73	74	24.27	PK
4874	36.11	0.13	H	36.24	54	17.76	AV
7311	47.97	10.01	H	57.98	74	16.02	PK
7311	34.79	10.01	H	44.80	54	9.20	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11b/g/n(2.4 GHz) mode test. Worst case of EUT is 1 Mbps in 802.11b.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC		FCC ID: JYCPREMIIV



Operation Mode: 802.11 b  
 Transfer Rate: 1 Mbps  
 Operating Frequency: 2462  
 Channel No. 11 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4924	48.52	0.45	V	48.97	74	25.03	PK
4924	35.32	0.45	V	35.77	54	18.23	AV
7386	47.32	10.17	V	57.49	74	16.51	PK
7386	34.09	10.17	V	44.26	54	9.74	AV
4924	48.40	0.45	H	48.85	74	25.15	PK
4924	35.05	0.45	H	35.50	54	18.50	AV
7386	49.21	10.17	H	59.38	74	14.62	PK
7386	34.07	10.17	H	44.24	54	9.76	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11b/g/n(2.4 GHz) mode test. Worst case of EUT is 1 Mbps in 802.11b.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC		FCC ID: JYCPREMIIV

### Extended Battery Cover

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4824	50.11	-0.10	V	50.01	74	23.99	PK
4824	36.29	-0.10	V	36.19	54	17.81	AV
7236	47.50	10.13	V	57.63	74	16.37	PK
7236	34.60	10.13	V	44.73	54	9.27	AV
4824	49.77	-0.10	H	49.67	74	24.33	PK
4824	36.57	-0.10	H	36.47	54	17.53	AV
7236	48.18	10.13	H	58.31	74	15.69	PK
7236	34.37	10.13	H	44.50	54	9.50	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11b/g/n(2.4 GHz) mode test. Worst case of EUT is 1 Mbps in 802.11b.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.



Operation Mode: 802.11 b  
 Transfer Rate: 1 Mbps  
 Operating Frequency: 2437  
 Channel No. 06 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4874	49.32	0.13	V	49.45	74	24.55	PK
4874	36.23	0.13	V	36.36	54	17.64	AV
7311	47.69	10.01	V	57.70	74	16.30	PK
7311	35.23	10.01	V	45.24	54	8.76	AV
4874	48.65	0.13	H	48.78	74	25.22	PK
4874	35.53	0.13	H	35.66	54	18.34	AV
7311	48.06	10.01	H	58.07	74	15.93	PK
7311	34.45	10.01	H	44.46	54	9.54	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11b/g/n(2.4 GHz) mode test. Worst case of EUT is 1 Mbps in 802.11b.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.



Operation Mode: 802.11 b  
 Transfer Rate: 1 Mbps  
 Operating Frequency: 2462  
 Channel No. 11 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4924	48.43	0.45	V	48.88	74	25.12	PK
4924	34.84	0.45	V	35.29	54	18.71	AV
7386	47.4	10.17	V	57.57	74	16.43	PK
7386	33.74	10.17	V	43.91	54	10.09	AV
4924	48.54	0.45	H	48.99	74	25.01	PK
4924	35.1	0.45	H	35.55	54	18.45	AV
7386	47.95	10.17	H	58.12	74	15.88	PK
7386	33.74	10.17	H	43.91	54	10.09	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11b/g/n(2.4 GHz) mode test. Worst case of EUT is 1 Mbps in 802.11b.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

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**Wireless Battery Cover**

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4824	49.24	-0.10	V	49.14	74	24.86	PK
4824	37.00	-0.10	V	36.90	54	17.10	AV
7236	48.20	10.13	V	58.33	74	15.67	PK
7236	34.50	10.13	V	44.63	54	9.37	AV
4824	49.46	-0.10	H	49.36	74	24.64	PK
4824	36.08	-0.10	H	35.98	54	18.02	AV
7236	48.21	10.13	H	58.34	74	15.66	PK
7236	34.45	10.13	H	44.58	54	9.42	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11b/g/n(2.4 GHz) mode test. Worst case of EUT is 1 Mbps in 802.11b.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

<b>FCC PT.15.247 TEST REPORT</b>	<b>FCC CERTIFICATION REPORT</b>		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
<b>Test Report No.</b> HCTR1207FR13	<b>Date of Issue:</b> July 19, 2012	<b>EUT Type:</b> CDMA/GSM/LTE Phone with BT/WLAN/NFC	<b>FCC ID:</b> JYCPREMIIV



Operation Mode: 802.11 b  
 Transfer Rate: 1 Mbps  
 Operating Frequency: 2437  
 Channel No. 06 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4874	51.05	0.13	V	51.18	74	22.82	PK
4874	39.31	0.13	V	39.44	54	14.56	AV
7311	48.43	10.01	V	58.44	74	15.56	PK
7311	35.33	10.01	V	45.34	54	8.66	AV
4874	50.38	0.13	H	50.51	74	23.49	PK
4874	36.09	0.13	H	36.22	54	17.78	AV
7311	48.18	10.01	H	58.19	74	15.81	PK
7311	34.75	10.01	H	44.76	54	9.24	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11b/g/n(2.4 GHz) mode test. Worst case of EUT is 1 Mbps in 802.11b.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
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Operation Mode: 802.11 b  
 Transfer Rate: 1 Mbps  
 Operating Frequency: 2462  
 Channel No. 11 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4924	48.15	0.45	V	48.60	74	25.40	PK
4924	35.41	0.45	V	35.86	54	18.14	AV
7386	47.58	10.17	V	57.75	74	16.25	PK
7386	34.04	10.17	V	44.21	54	9.79	AV
4924	48.22	0.45	H	48.67	74	25.33	PK
4924	35.12	0.45	H	35.57	54	18.43	AV
7386	47.42	10.17	H	57.59	74	16.41	PK
7386	33.94	10.17	H	44.11	54	9.89	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11b/g/n(2.4 GHz) mode test. Worst case of EUT is 1 Mbps in 802.11b.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

FCC PT.15.247 TEST REPORT		FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC		FCC ID: JYCPREMIIV



**Normal Battery Cover:**

Band :	5.8 GHz
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5745 MHz
Channel No.	149 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11490	43.23	10.64	V	53.87	74	20.13	PK
11490	37.40	10.64	V	48.04	54	5.96	AV
17235	44.65	19.85	V	64.50	74	9.50	PK
17235	30.27	19.85	V	50.12	54	3.88	AV
11490	42.23	10.64	H	52.87	74	21.13	PK
11490	35.49	10.64	H	46.13	54	7.87	AV
17235	44.96	19.85	H	64.81	74	9.19	PK
17235	30.57	19.85	H	50.42	54	3.58	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a/n(5.8 GHz) mode test. Worst case of EUT is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	5.8 GHz
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5785 MHz
Channel No.	157 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11570	42.93	10.41	V	53.34	74	20.66	PK
11570	36.58	10.41	V	46.99	54	7.01	AV
17355	45.55	19.23	V	64.78	74	9.22	PK
17355	30.54	19.23	V	49.77	54	4.23	AV
11570	41.09	10.41	H	51.50	74	22.50	PK
11570	33.21	10.41	H	43.62	54	10.38	AV
17355	44.01	19.23	H	63.24	74	10.76	PK
17355	30.57	19.23	H	49.80	54	4.20	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a/n(5.8 GHz) mode test. Worst case of EUT is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	5.8 GHz
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5825 MHz
Channel No.	165 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11650	41.76	10.24	V	52.00	74	22.00	PK
11650	35.50	10.24	V	45.74	54	8.26	AV
17475	44.72	20.73	V	65.45	74	8.55	PK
17475	29.31	20.73	V	50.04	54	3.96	AV
11650	40.87	10.24	H	51.11	74	22.89	PK
11650	32.74	10.24	H	42.98	54	11.02	AV
17475	44.66	20.73	H	65.39	74	8.61	PK
17475	29.26	20.73	H	49.99	54	4.01	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a/n(5.8 GHz) mode test. Worst case of EUT is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

**Extended Battery Cover:**

Band :	5.8 GHz
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5745 MHz
Channel No.	149 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11490	44.12	10.64	V	54.76	74	19.24	PK
11490	38.61	10.64	V	49.25	54	4.75	AV
17235	44.86	19.85	V	64.71	74	9.29	PK
17235	30.31	19.85	V	50.16	54	3.84	AV
11490	42.43	10.64	H	53.07	74	20.93	PK
11490	35.47	10.64	H	46.11	54	7.89	AV
17235	44.70	19.85	H	64.55	74	9.45	PK
17235	30.33	19.85	H	50.18	54	3.82	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a/n(5.8 GHz) mode test. Worst case of EUT is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	5.8 GHz
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5785 MHz
Channel No.	157 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11570	43.11	10.41	V	53.52	74	20.48	PK
11570	37.58	10.41	V	47.99	54	6.01	AV
17355	44.37	19.23	V	63.60	74	10.40	PK
17355	30.68	19.23	V	49.91	54	4.09	AV
11570	41.90	10.41	H	52.31	74	21.69	PK
11570	34.40	10.41	H	44.81	54	9.19	AV
17355	44.41	19.23	H	63.64	74	10.36	PK
17355	30.69	19.23	H	49.92	54	4.08	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a/n(5.8 GHz) mode test. Worst case of EUT is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	5.8 GHz
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5825 MHz
Channel No.	165 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11650	42.83	10.24	V	53.07	74	20.93	PK
11650	36.58	10.24	V	46.82	54	7.18	AV
17475	44.58	20.73	V	65.31	74	8.69	PK
17475	29.37	20.73	V	50.10	54	3.90	AV
11650	42.09	10.24	H	52.33	74	21.67	PK
11650	33.69	10.24	H	43.93	54	10.07	AV
17475	44.64	20.73	H	65.37	74	8.63	PK
17475	29.39	20.73	H	50.12	54	3.88	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a/n(5.8 GHz) mode test. Worst case of EUT is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

**Wireless Battery Cover:**

Band :	5.8 GHz
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5745 MHz
Channel No.	149 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11490	43.73	10.64	V	54.37	74	19.63	PK
11490	38.48	10.64	V	49.12	54	4.88	AV
17235	44.66	19.85	V	64.51	74	9.49	PK
17235	30.35	19.85	V	50.20	54	3.80	AV
11490	42.54	10.64	H	53.18	74	20.82	PK
11490	35.53	10.64	H	46.17	54	7.83	AV
17235	44.81	19.85	H	64.66	74	9.34	PK
17235	30.34	19.85	H	50.19	54	3.81	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a/n(5.8 GHz) mode test. Worst case of EUT is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	5.8 GHz
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5785 MHz
Channel No.	157 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11570	42.42	10.41	V	52.83	74	21.17	PK
11570	36.07	10.41	V	46.48	54	7.52	AV
17355	43.82	19.23	V	63.05	74	10.95	PK
17355	30.69	19.23	V	49.92	54	4.08	AV
11570	41.67	10.41	H	52.08	74	21.92	PK
11570	33.81	10.41	H	44.22	54	9.78	AV
17355	43.86	19.23	H	63.09	74	10.91	PK
17355	30.67	19.23	H	49.90	54	4.10	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a/n(5.8 GHz) mode test. Worst case of EUT is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.



Band :	5.8 GHz
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5825 MHz
Channel No.	165 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11650	42.14	10.24	V	52.38	74	21.62	PK
11650	35.49	10.24	V	45.73	54	8.27	AV
17475	44.70	20.73	V	65.43	74	8.57	PK
17475	29.37	20.73	V	52.10	54	3.90	AV
11650	41.30	10.24	H	51.54	74	22.46	PK
11650	33.87	10.24	H	44.11	54	9.89	AV
17475	45.34	20.73	H	66.07	74	7.93	PK
17475	29.40	20.73	H	52.13	54	3.87	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a/n(5.8 GHz) mode test. Worst case of EUT is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

**Normal Battery Cover:**

Band :	5.8 GHz
Operation Mode:	802.11 n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5755 MHz
Channel No.	151 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11510	44.49	10.58	V	55.07	74	18.93	PK
11510	38.96	10.58	V	49.54	54	4.46	AV
17265	44.40	19.96	V	64.36	74	9.64	PK
17265	30.88	19.96	V	50.84	54	3.16	AV
11510	42.23	10.58	H	52.81	74	21.19	PK
11510	35.06	10.58	H	45.64	54	8.36	AV
17265	43.89	19.96	H	63.85	74	10.15	PK
17265	30.85	19.96	H	50.81	54	3.19	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done all data rate in 802.11n\_40 MHz BW(5.8 GHz) mode. Worst case of EUT is 13.5 Mbps in 802.11n.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
8. We have done normal battery cover, extended battery cover and wireless charging cover. In case of 802.11n\_40 MHz BW\_5 GHz band, worst case is normal battery cover.

Band :	5.8 GHz
Operation Mode:	802.11 n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5795 MHz
Channel No.	159 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11590	43.16	10.41	V	53.57	74	20.43	PK
11590	37.63	10.41	V	48.04	54	5.96	AV
17385	43.71	19.69	V	63.40	74	10.60	PK
17385	30.41	19.69	V	50.10	54	3.90	AV
11590	42.25	10.41	H	52.66	74	21.34	PK
11590	33.28	10.41	H	43.69	54	10.31	AV
17385	43.25	19.69	H	62.94	74	11.06	PK
17385	30.17	19.69	H	49.86	54	4.14	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. Spectrum setting:
  - a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done all data rate in 802.11n\_40 MHz BW(5.8 GHz) mode. Worst case of EUT is 13.5 Mbps in 802.11n.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
8. We have done normal battery cover, extended battery cover and wireless charging cover. In case of 802.11n\_40 MHz BW\_5 GHz band, worst case is normal battery cover.

## 8.5.2 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)).

### Normal Battery Cover

Operation Mode:	802.11g
Transfer Rate:	6 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	AN.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
2390.0	35.32	33.86	H	69.18	74	4.82	PK
2390.0	16.87	33.86	H	50.73	54	3.27	AV
2390.0	36.36	33.86	V	70.22	74	3.78	PK
2390.0	15.60	33.86	V	49.46	54	4.54	AV
2483.5	37.98	34.02	H	72.00	74	2.00	PK
2483.5	16.44	34.02	H	50.46	54	3.54	AV
2483.5	33.61	34.02	V	67.63	74	6.37	PK
2483.5	14.92	34.02	V	48.94	54	5.06	AV

### Notes:

- Total = Reading Value + Antenna Factor + Cable Loss
- Spectrum setting:
  - Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
- We have done 802.11b/g/n(2.4 GHz) mode test. Worst case of EUT is 6 Mbps in 802.11g

### Extended Battery Cover

Operation Mode:	802.11g
Transfer Rate:	6 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	AN.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
2390.0	34.36	33.86	H	68.22	74	5.78	PK
2390.0	15.69	33.86	H	49.55	54	4.45	AV
2390.0	35.16	33.86	V	69.02	74	4.98	PK
2390.0	15.40	33.86	V	49.26	54	4.74	AV
2483.5	36.36	34.02	H	70.38	74	3.62	PK
2483.5	17.14	34.02	H	51.16	54	2.84	AV
2483.5	36.52	34.02	V	70.54	74	3.46	PK
2483.5	16.76	34.02	V	50.78	54	3.22	AV

**Notes:**

1. Total = Reading Value + Antenna Factor + Cable Loss
2. Spectrum setting:
  - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
3. We have done 802.11b/g/n(2.4 GHz) mode test. Worst case of EUT is 6 Mbps in 802.11g



**Wireless Battery Cover**

Operation Mode:	802.11g
Transfer Rate:	6 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	AN.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
2390.0	35.97	33.86	H	69.83	74	4.17	PK
2390.0	15.23	33.86	H	49.09	54	4.91	AV
2390.0	34.17	33.86	V	68.03	74	5.97	PK
2390.0	15.22	33.86	V	49.08	54	4.92	AV
2483.5	36.45	34.02	H	70.47	74	3.53	PK
2483.5	16.79	34.02	H	50.81	54	3.19	AV
2483.5	36.13	34.02	V	70.15	74	3.85	PK
2483.5	16.18	34.02	V	50.20	54	3.80	AV

**Notes:**

1. Total = Reading Value + Antenna Factor + Cable Loss
2. Spectrum setting:
  - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
  - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
3. We have done 802.11b/g/n(2.4 GHz) mode test. Worst case of EUT is 6 Mbps in 802.11g

## 8.6 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 $\mu$ 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 ground plane.
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 11 Mbps, Ch.6 and 802.11b. Because 802.11b mode is worst case.

■ RESULT PLOTS

Conducted Emissions (Line 1)

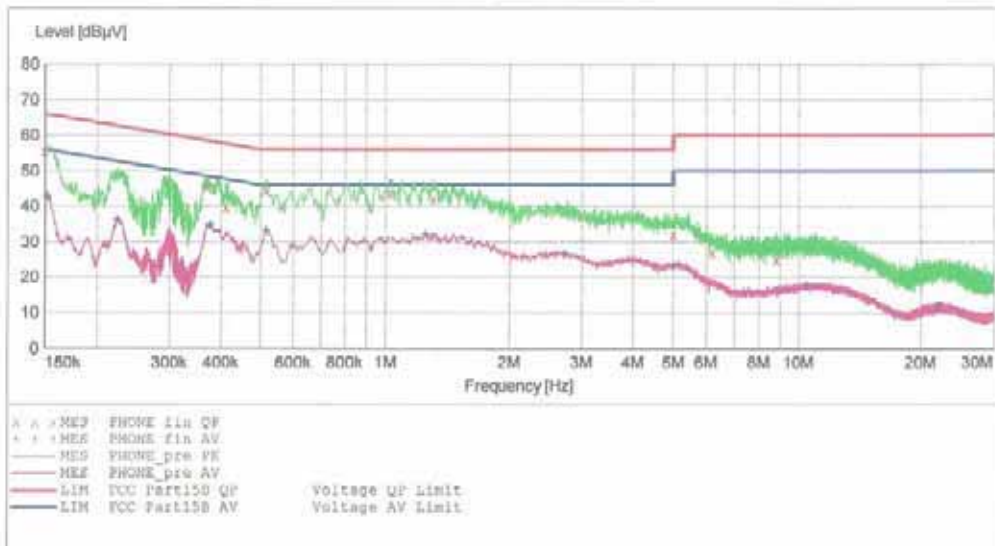
HCT

EMC

EUT: ADR930LVW  
 Manufacturer: PANTECH  
 Operating Condition: WLAN MODE  
 Test Site: SHIELD ROOM  
 Operator: JS LEE  
 Test Specification: FCC PART 15 B  
 Comment: H

SCAN TABLE: "FCC PART 15 B(H)"

Short Description:			FCC PART 15 CLASS B			
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	500.0 kHz	1.0 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"

7/10/2012 10:02AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.150010	55.50	9.8	66	10.5	---	---
0.369010	45.50	9.8	59	13.0	---	---
0.411010	39.70	9.8	58	18.0	---	---
0.516000	44.60	9.8	56	11.4	---	---
1.028000	43.60	9.8	56	12.4	---	---
1.308000	42.00	9.8	56	14.0	---	---
5.000000	32.20	10.2	56	23.8	---	---
6.200000	27.10	10.2	60	32.9	---	---
8.808000	24.90	10.4	60	35.1	---	---



MEASUREMENT RESULT: "PHONE\_fin AV"

7/18/2012 10:02AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.152010	42.80	9.8	56	13.1	---	---
0.224010	36.20	9.7	53	16.5	---	---
0.376010	34.70	9.8	48	13.7	---	---
0.516000	33.20	9.8	46	12.8	---	---
1.252000	32.10	9.8	46	13.9	---	---
2.732000	26.70	10.0	46	19.3	---	---
5.000000	23.10	10.2	46	22.9	---	---
10.484000	17.40	10.5	50	32.6	---	---
22.024000	11.70	11.9	50	38.3	---	---

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIAV

## Conducted Emissions (Line 2)

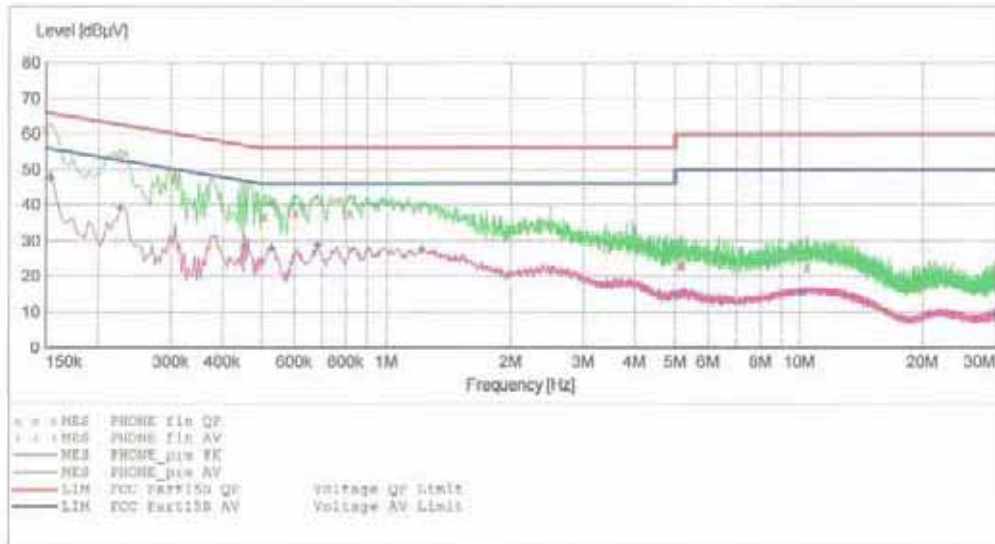
HCT

EMC

EUT: ADR930LVW  
 Manufacturer: PANTECH  
 Operating Condition: WLAN MODE  
 Test Site: SHIELD ROOM  
 Operator: JS LEE  
 Test Specification: FCC PART 15 CLASS B  
 Comment: N

### SCAN TABLE: "FCC PART 15 B(N)"

Short Description:			FCC PART 15 CLASS B				
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	
			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"

7/18/2012 9:57AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Line	PK
0.150010	61.30	10.0	66	4.7	---	---
0.226010	53.10	10.0	63	9.5	---	---
0.306010	47.70	9.9	60	12.4	---	---
0.508000	36.90	10.0	56	19.1	---	---
0.604000	38.00	10.0	56	18.0	---	---
0.816000	37.90	10.0	56	18.1	---	---
5.148000	23.20	10.4	60	36.8	---	---
5.220000	23.40	10.4	60	36.6	---	---
10.456000	22.70	10.7	60	37.3	---	---

MEASUREMENT RESULT: "PHONE\_fin AV"

7/18/2012 9:57AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.154010	47.50	10.0	56	8.3	---	---
0.226010	39.10	10.0	53	13.5	---	---
0.454010	28.60	10.0	47	18.2	---	---
0.528000	29.10	10.0	46	17.9	---	---
0.684000	28.90	10.0	46	17.1	---	---
1.216000	27.70	10.0	46	18.3	---	---
5.000000	15.00	10.4	46	31.0	---	---
10.132000	15.80	10.7	50	34.2	---	---
29.756000	9.40	12.7	50	40.6	---	---

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		<a href="http://www.hct.co.kr">www.hct.co.kr</a>
Test Report No. HCTR1207FR13	Date of Issue: July 19, 2012	EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC	FCC ID: JYCPREMIIV

## 9. LIST OF TEST EQUIPMENT

Manufacturer	Model / Equipment	Calibration Interval	Calibration Due	Serial No.
Rohde & Schwarz	ENV216/ LISN	Annual	02/09/2013	100073
Schwarzbeck	VULB 9168/ TRILOG Antenna	Biennial	02/09/2013	200
Rohde & Schwarz	ESI 40 / EMI TEST RECEIVER	Annual	05/03/2013	831564103
Agilent	E4440A/ Spectrum Analyzer	Annual	05/02/2013	US45303008
Agilent	N9020A/ SIGNAL ANALYZER	Annual	09/23/2012	MY51110020
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	09/19/2012	10094
MITEQ	AMF-6B-180265-35-10P / POWER AMP	Annual	04/16/2013	667624
CERNEX	CBL26405040 / POWER AMP	Annual	04/16/2013	19660
Schwarzbeck	BBHA 9120D/ Horn Antenna	Biennial	10/17/2013	937
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	Biennial	10/26/2012	BBHA9170342
Rohde & Schwarz	FSP / Spectrum Analyzer	Annual	02/09/2013	839117/011
Agilent	E4416A /Power Meter	Annual	11/07/2012	GB41291412
Agilent	E9327A /POWER SENSOR	Annual	05/02/2013	MY4442009
Wainwright Instrument	WHF3.3/18G-10EF / High Pass Filter	Annual	05/02/2013	1
Wainwright Instrument	WHNX6.0/26.5G-6SS / High Pass Filter	Annual	05/02/2013	1
Wainwright Instrument	WHNX7.0/18G-8SS / High Pass Filter	Annual	05/02/2013	29
Wainwright Instrument	WRCJ2400/2483.5-2370/2520-60/14SS / Band Reject Filter	Annual	05/02/2013	1
Hewlett Packard	11636B/Power Divider	Annual	11/07/2012	11377
Hewlett Packard	11667B / Power Splitter	Annual	06/05/2013	05001
DIGITAL	EP-3010 /DC POWER SUPPLY	Annual	11/07/2012	3110117
ITECH	IT6720 / DC POWER SUPPLY	Annual	11/07/2012	010002156287001199
TESCOM	TC-3000C / BLUETOOTH TESTER	Annual	11/14/2012	3000C000276
Rohde & Schwarz	CBT / BLUETOOTH TESTER	Annual	05/02/2013	100422
EMCO	6502.LOOP ANTENNA	Biennial	01/11/2014	9009-2536
MITEQ	AMF-6D-001180-35-20P/ POWER AMP	Annual	09/26/2012	990893
Agilent	8493C / Attenuator(10 dB)	Annual	09/23/2012	76649
WEINSCHL	2-3 / Attenuator(3 dB)	Annual	11/07/2013	BR0617