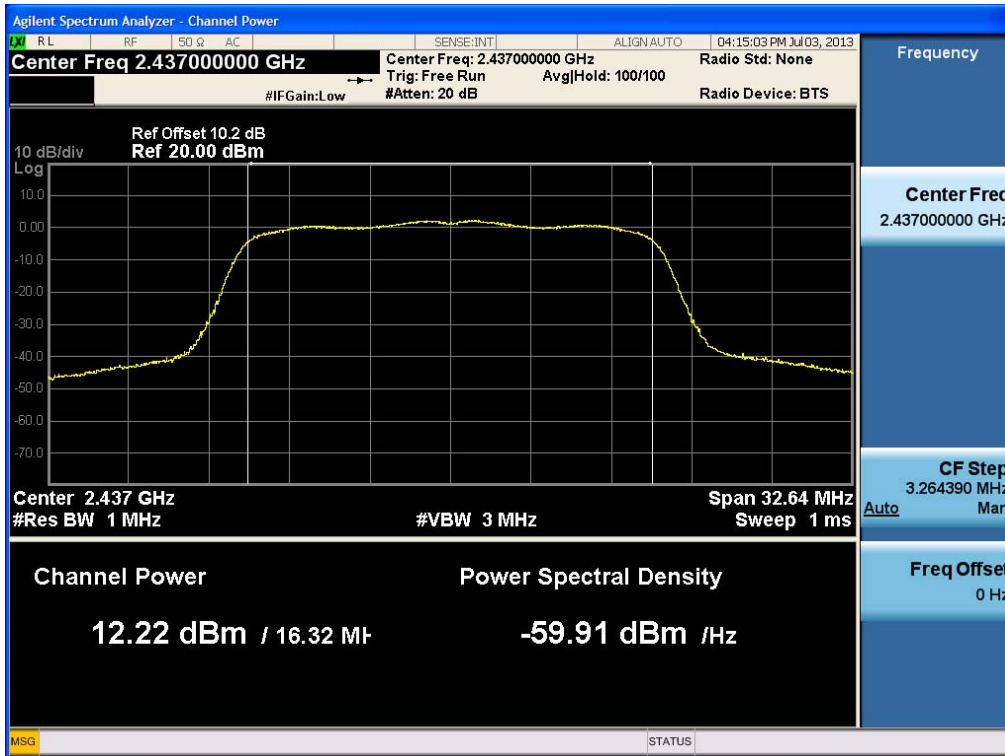
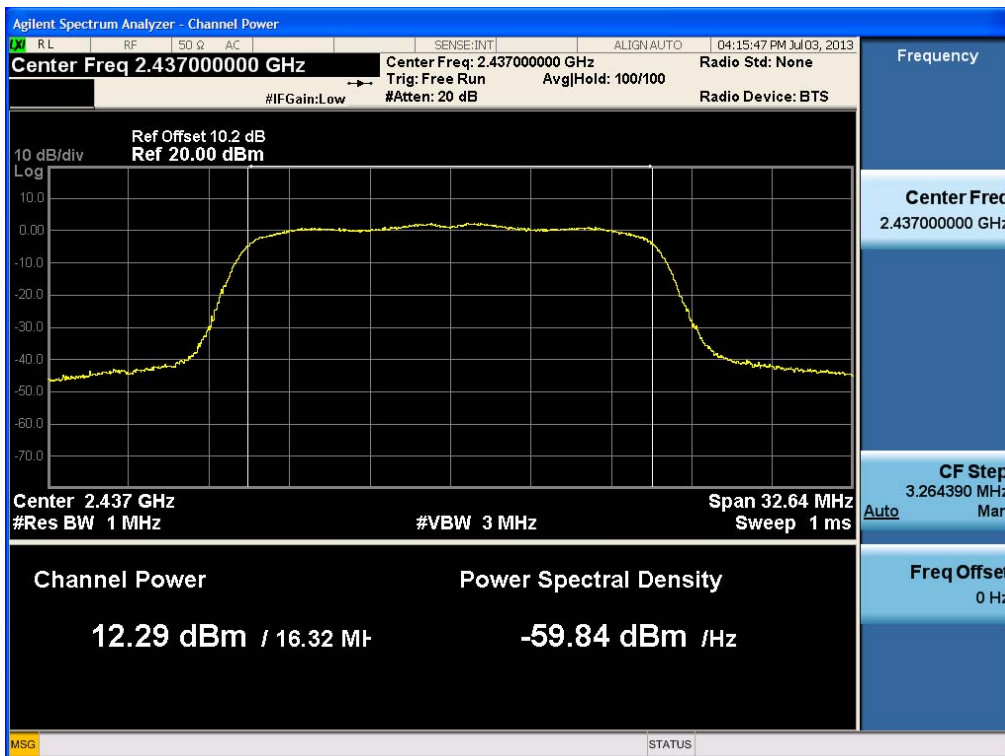


Conducted Output Power (802.11g-CH 6) 6Mbps

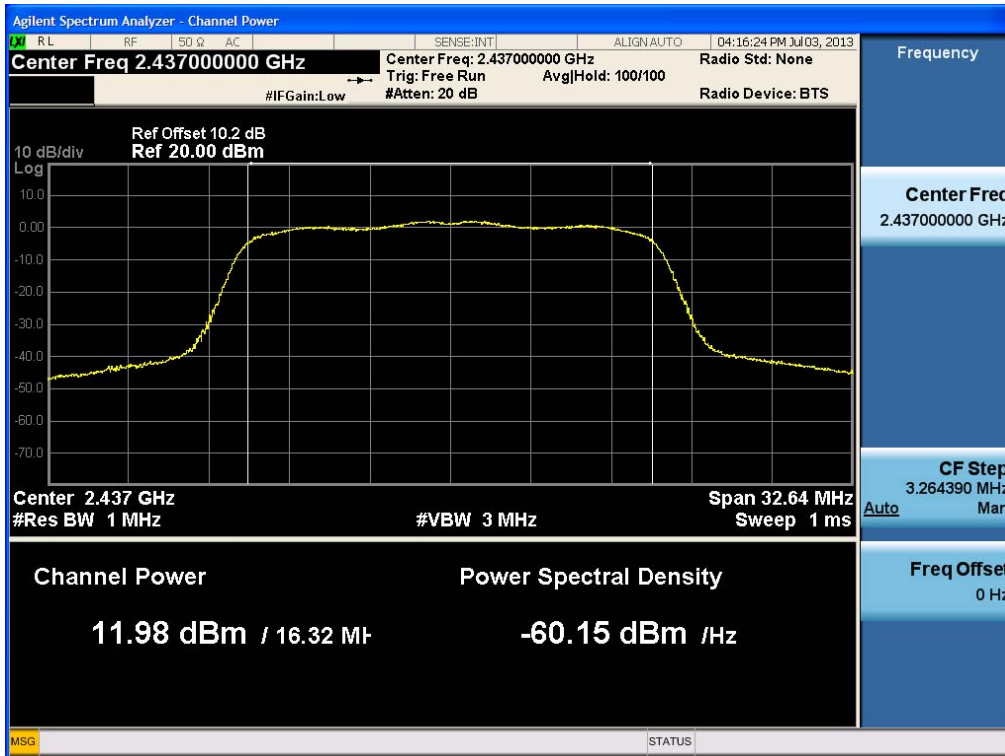


Conducted Output Power (802.11g-CH 6) 9Mbps

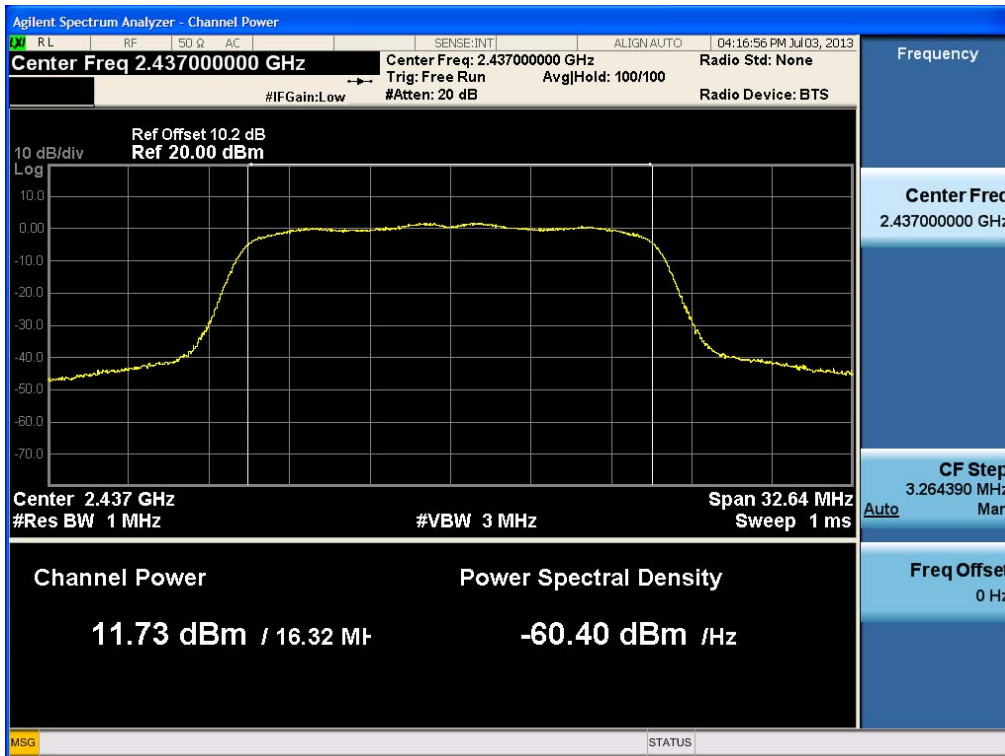


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

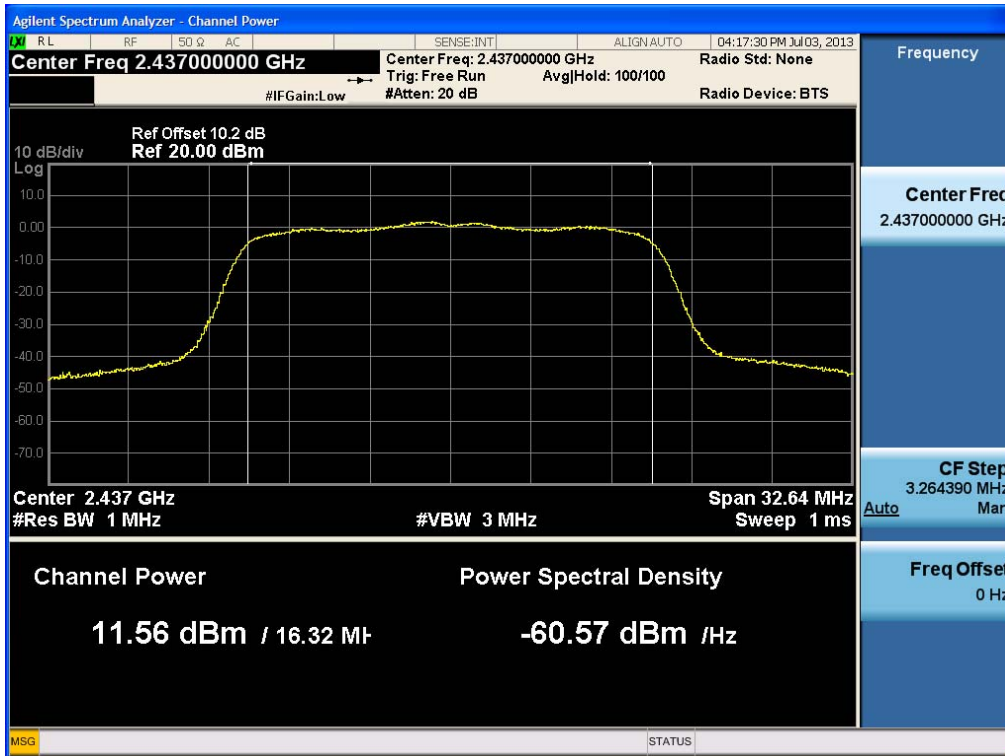


Conducted Output Power (802.11g-CH 6) 18Mbps

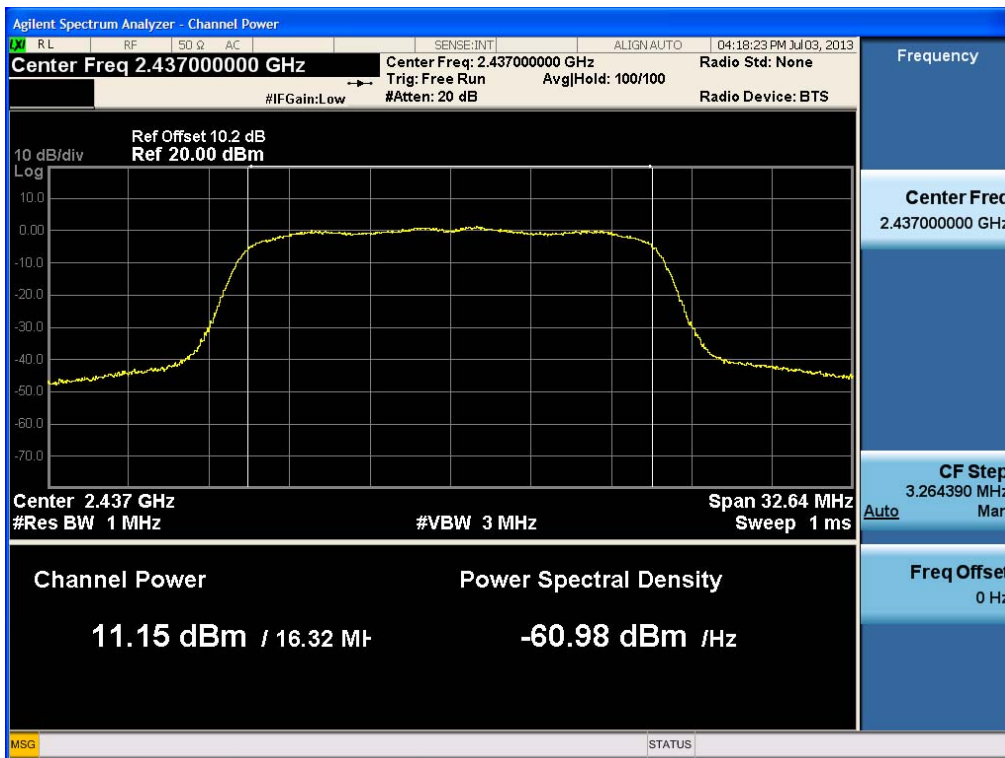


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

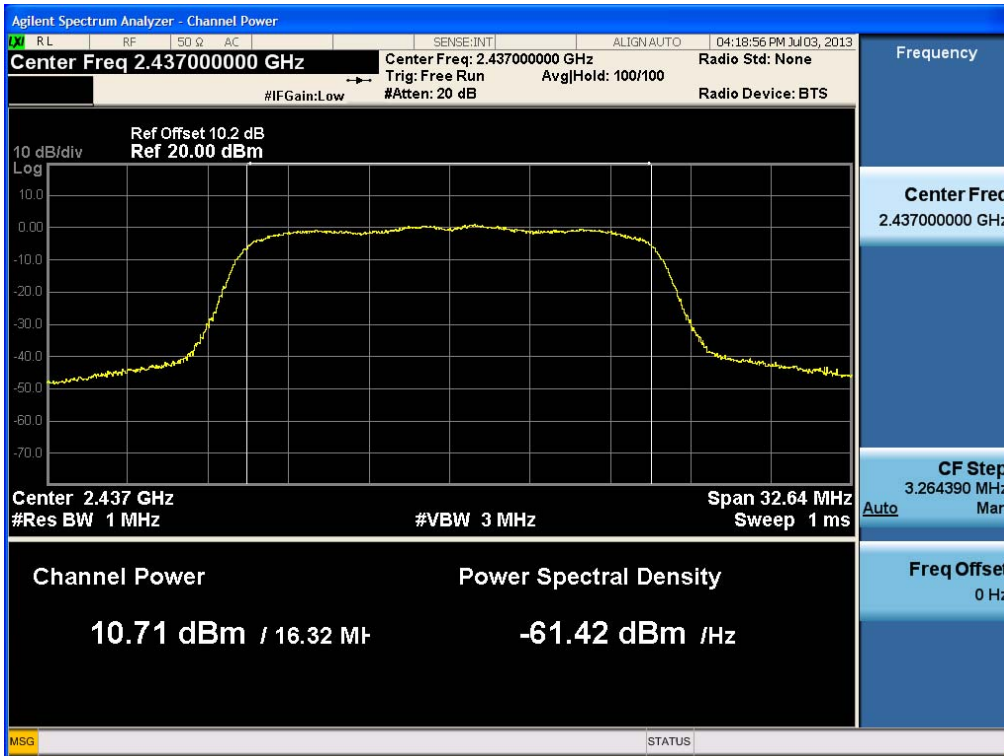


Conducted Output Power (802.11g-CH 6) 36Mbps

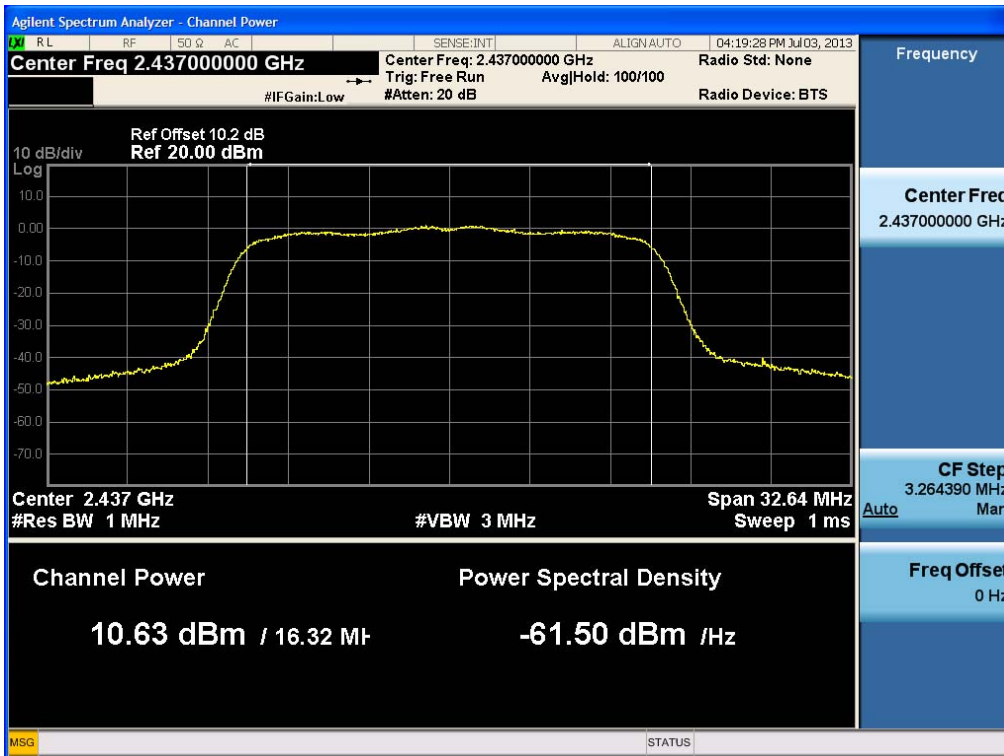


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
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Conducted Output Power (802.11g-CH 6) 48Mbps

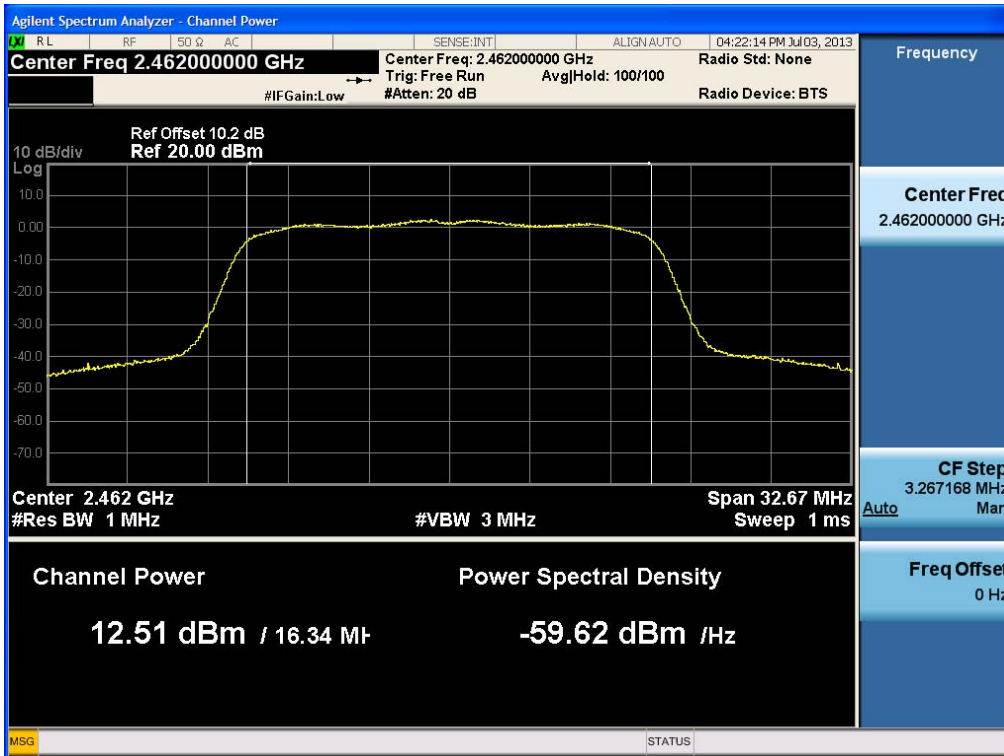


Conducted Output Power (802.11g-CH 6) 54Mbps

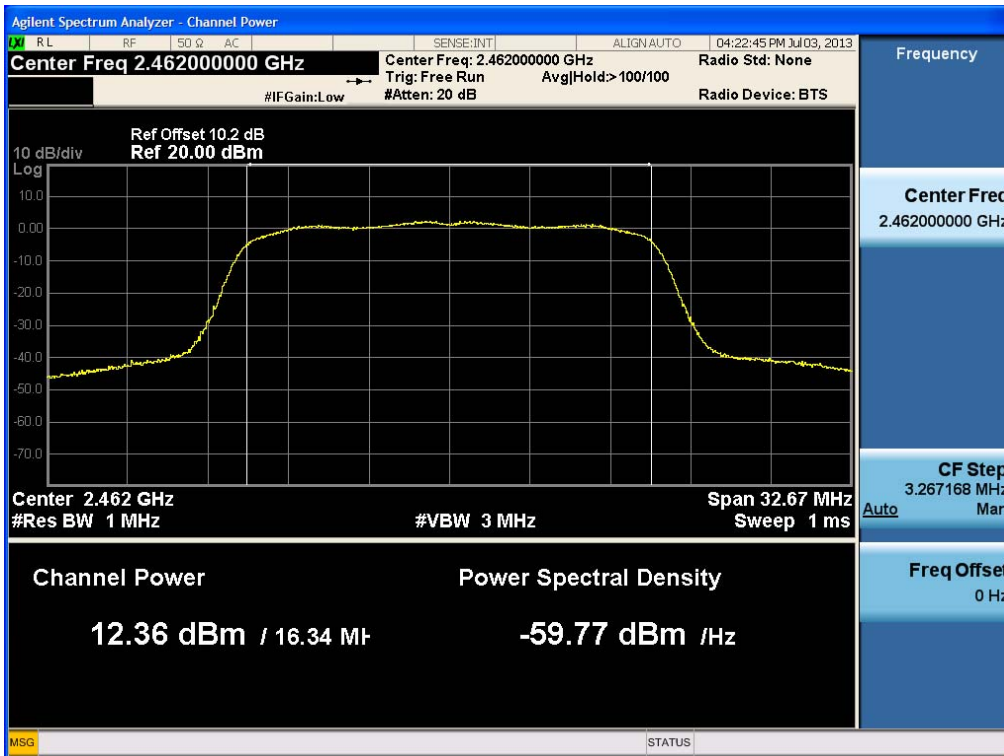


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

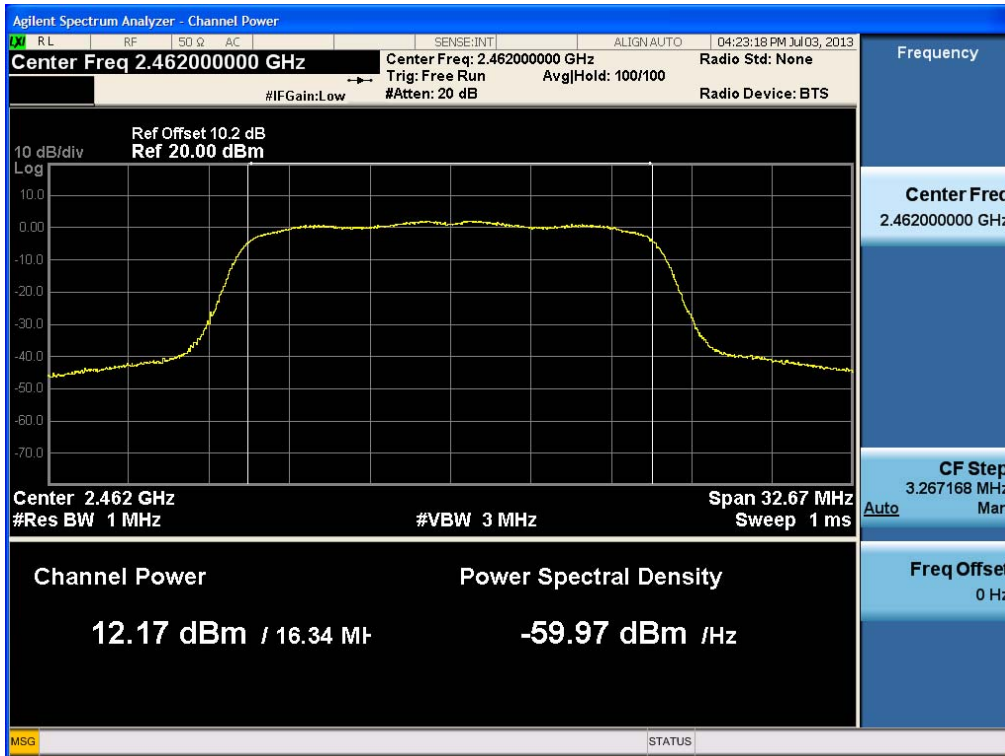


Conducted Output Power (802.11g-CH 11) 9Mbps

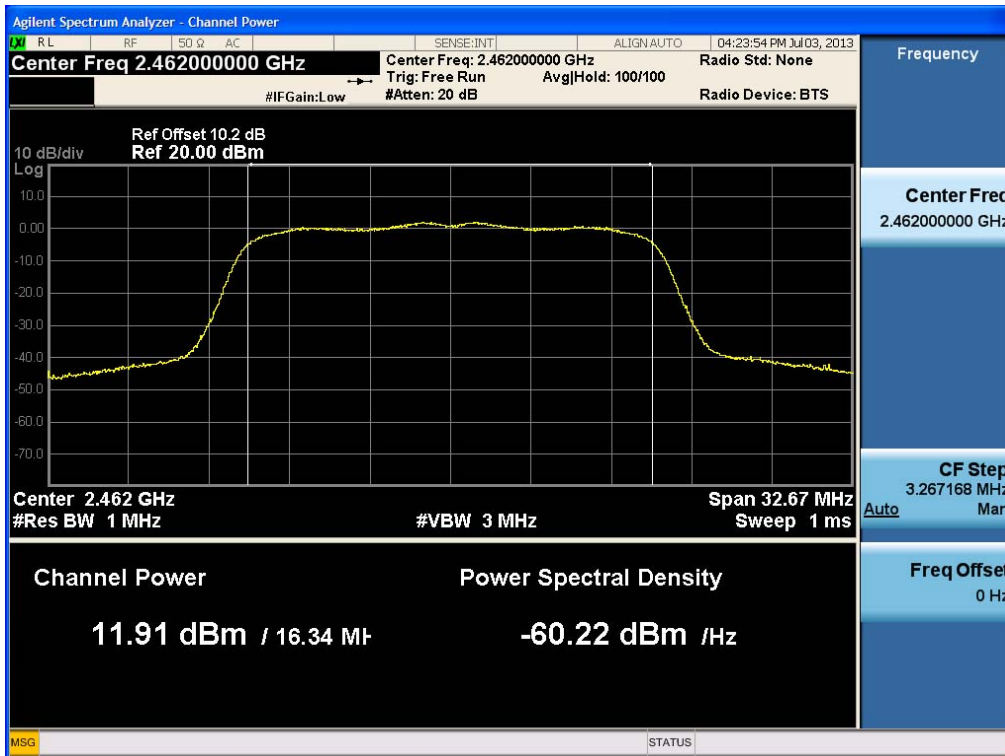


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

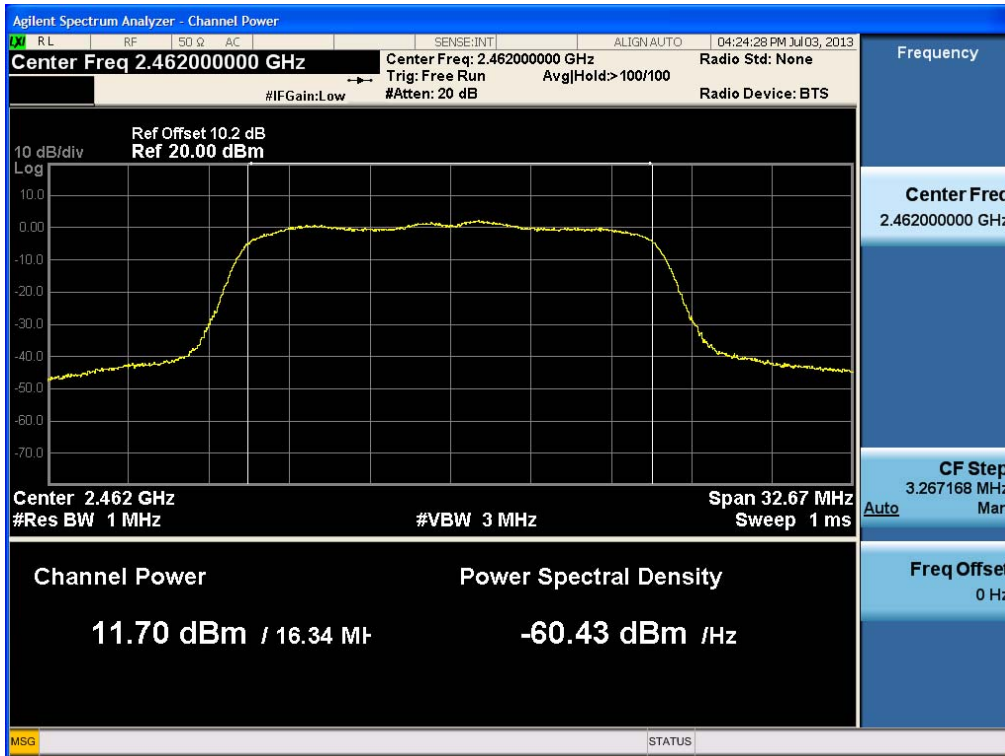


Conducted Output Power (802.11g-CH 11) 18Mbps

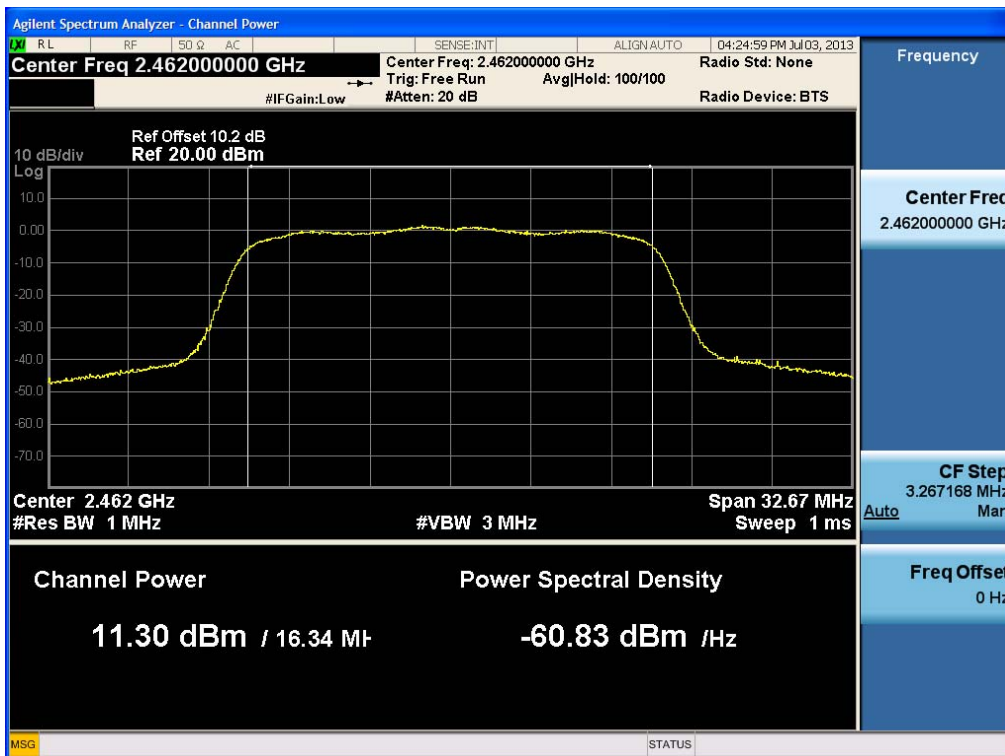


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

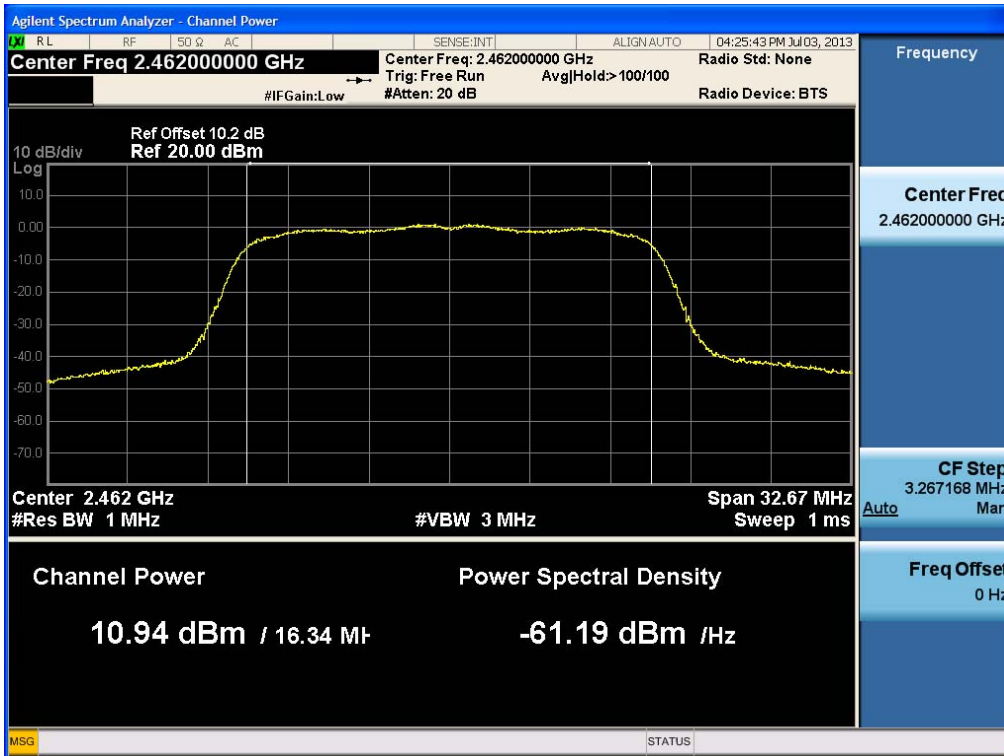


Conducted Output Power (802.11g-CH 11) 36Mbps

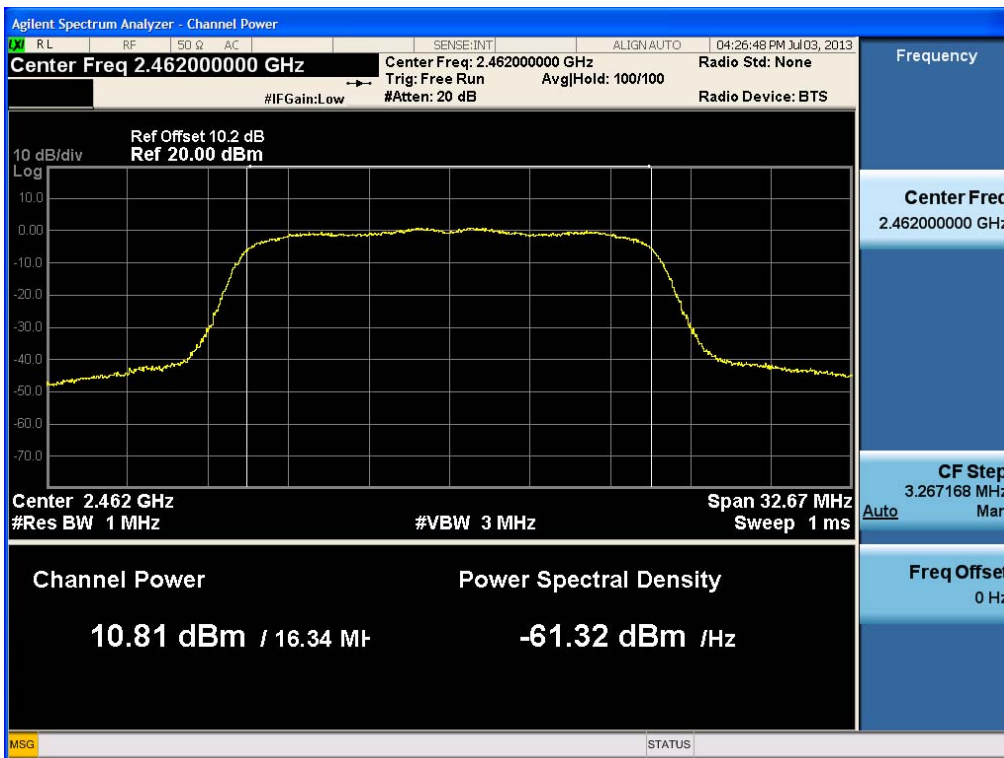


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

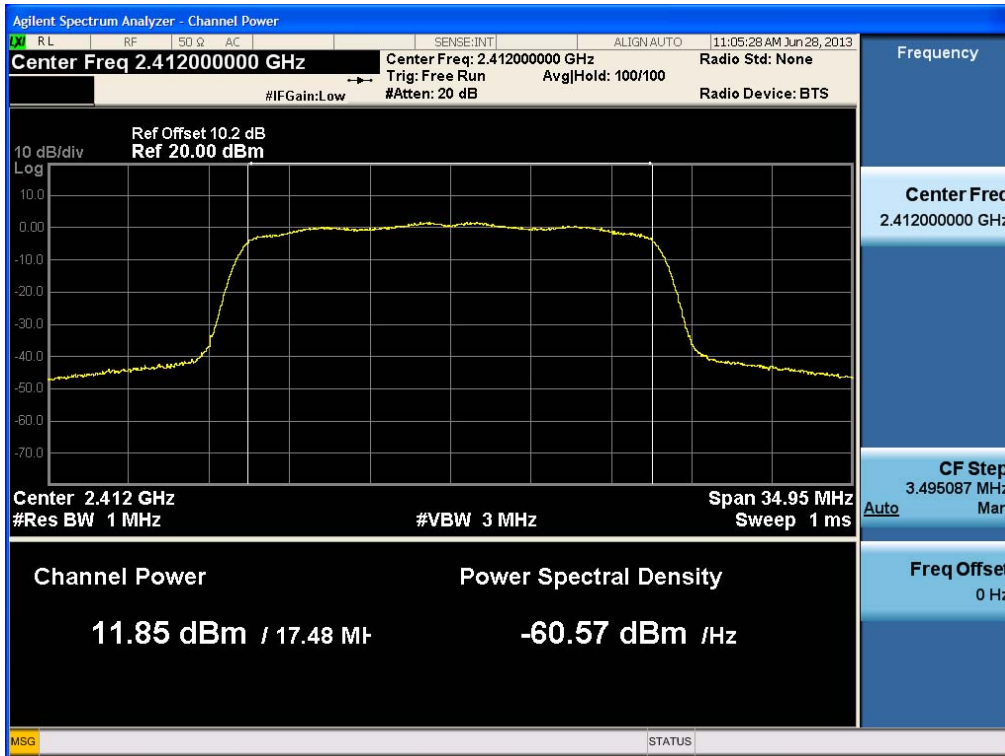


Conducted Output Power (802.11g-CH 11) 54Mbps

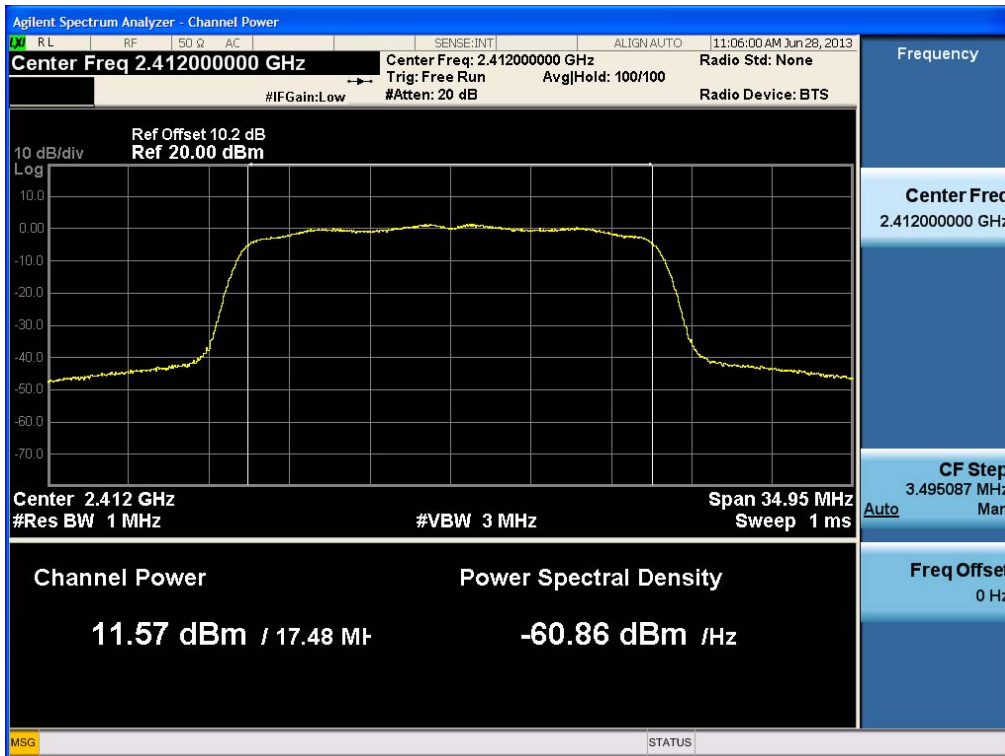


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

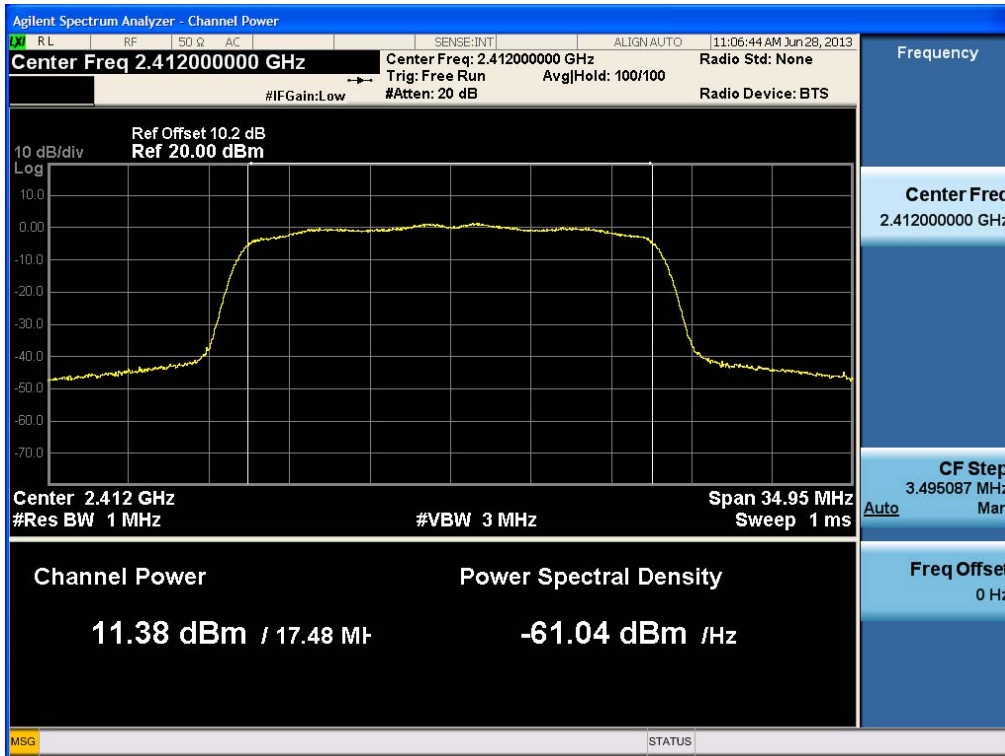


Conducted Output Power (802.11n-CH 1) 13Mbps

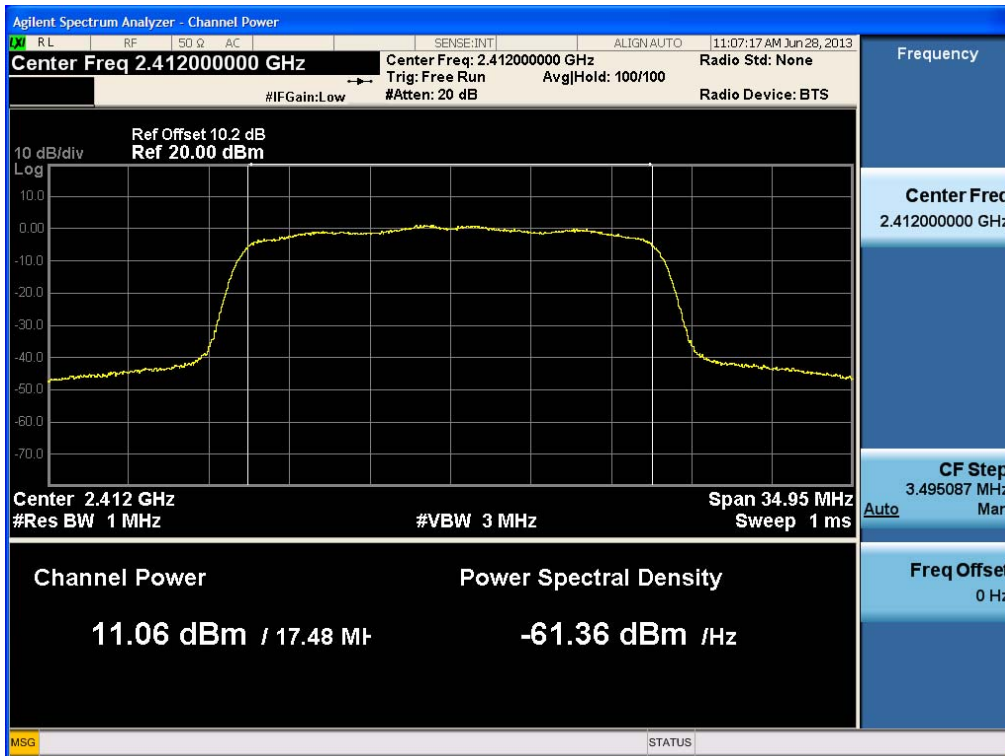


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

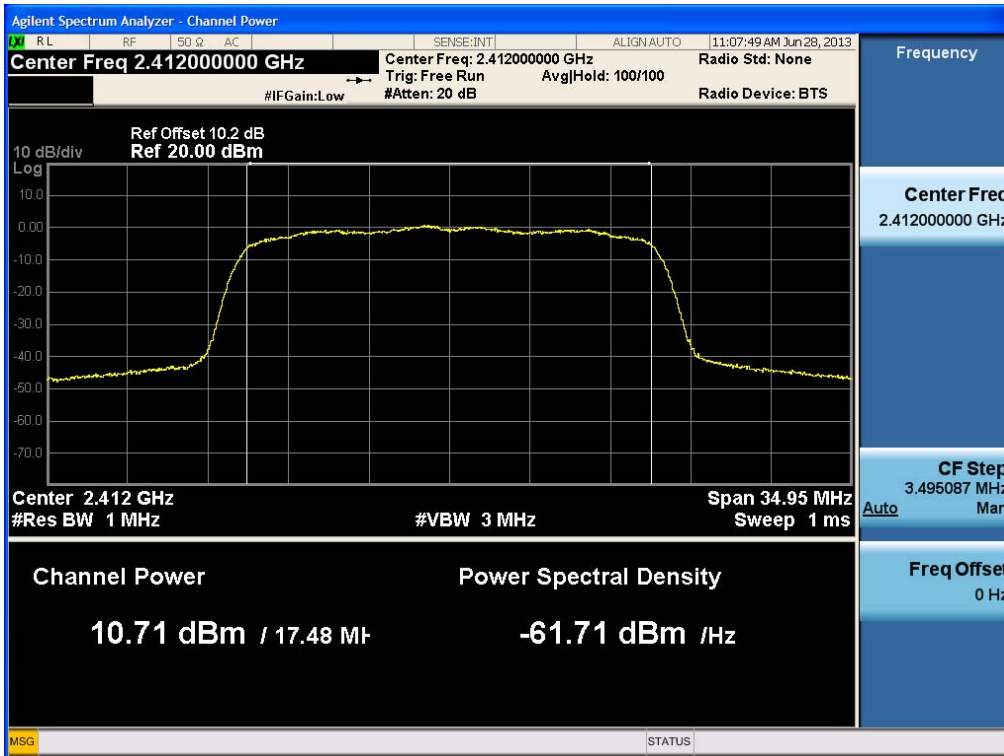


Conducted Output Power (802.11n-CH 1) 26Mbps

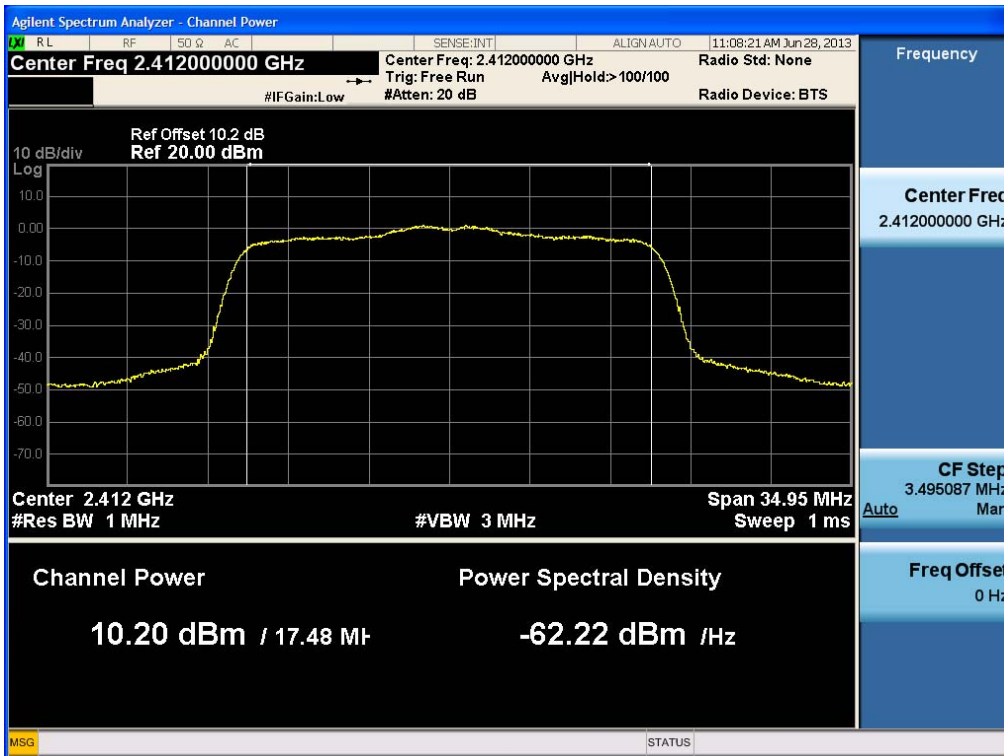


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

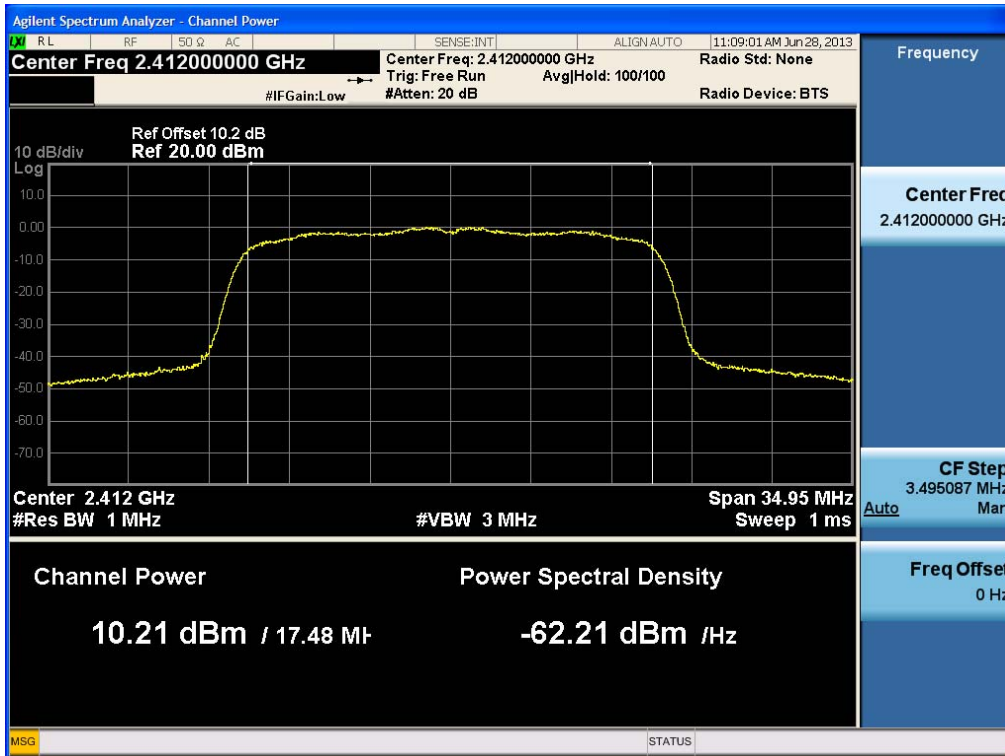


Conducted Output Power (802.11n-CH 1) 52Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

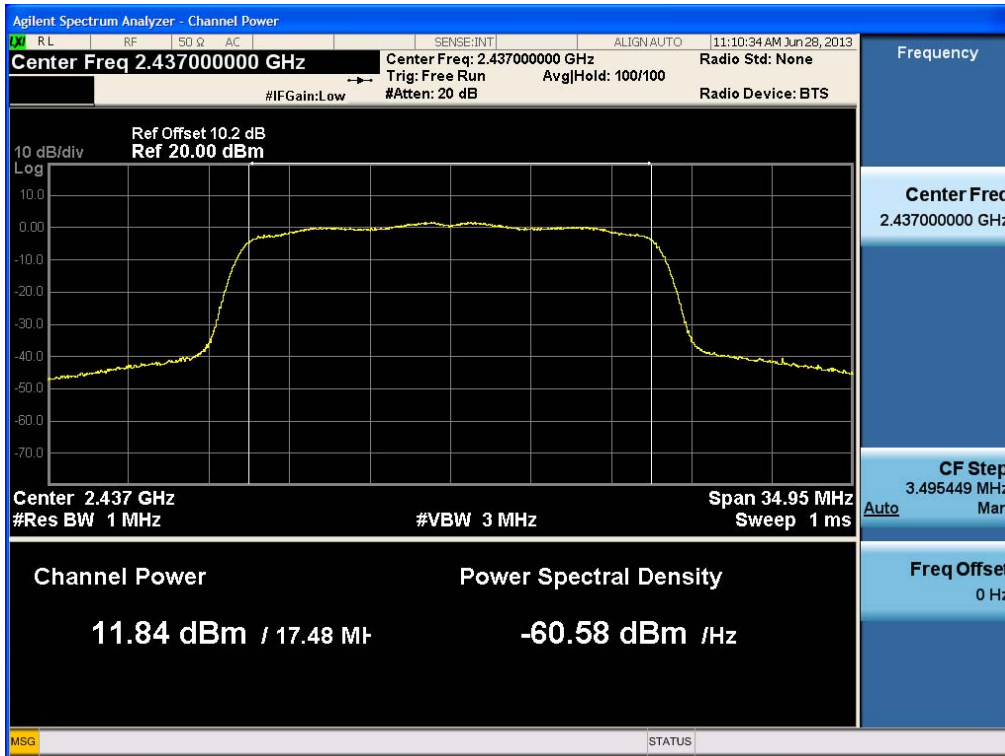


Conducted Output Power (802.11n-CH 1) 65Mbps

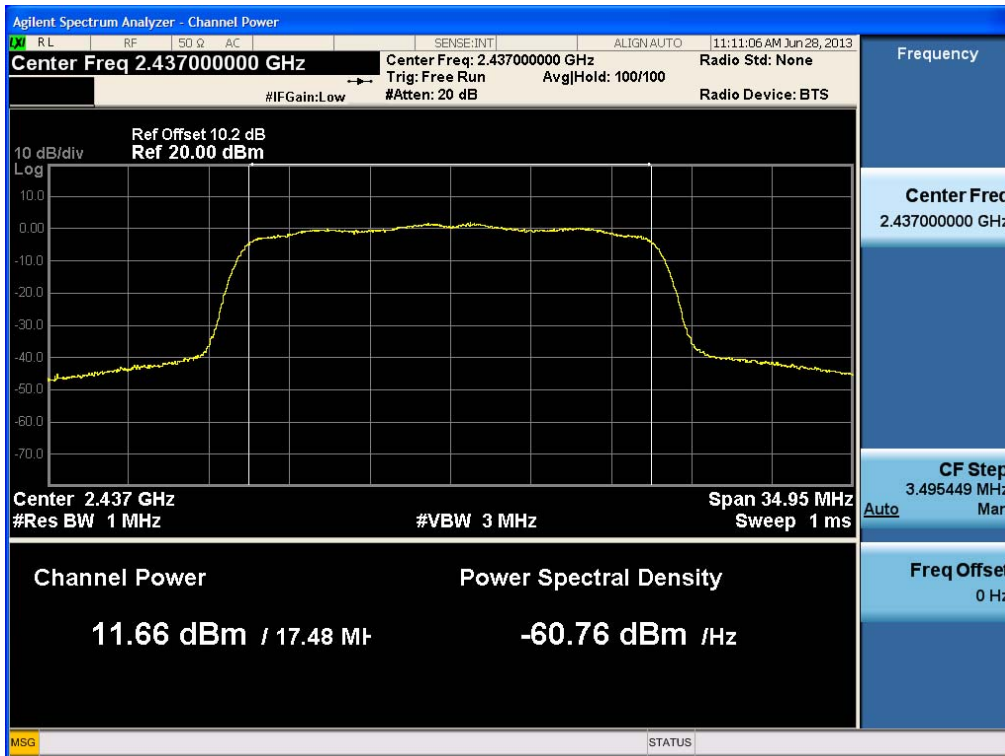


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

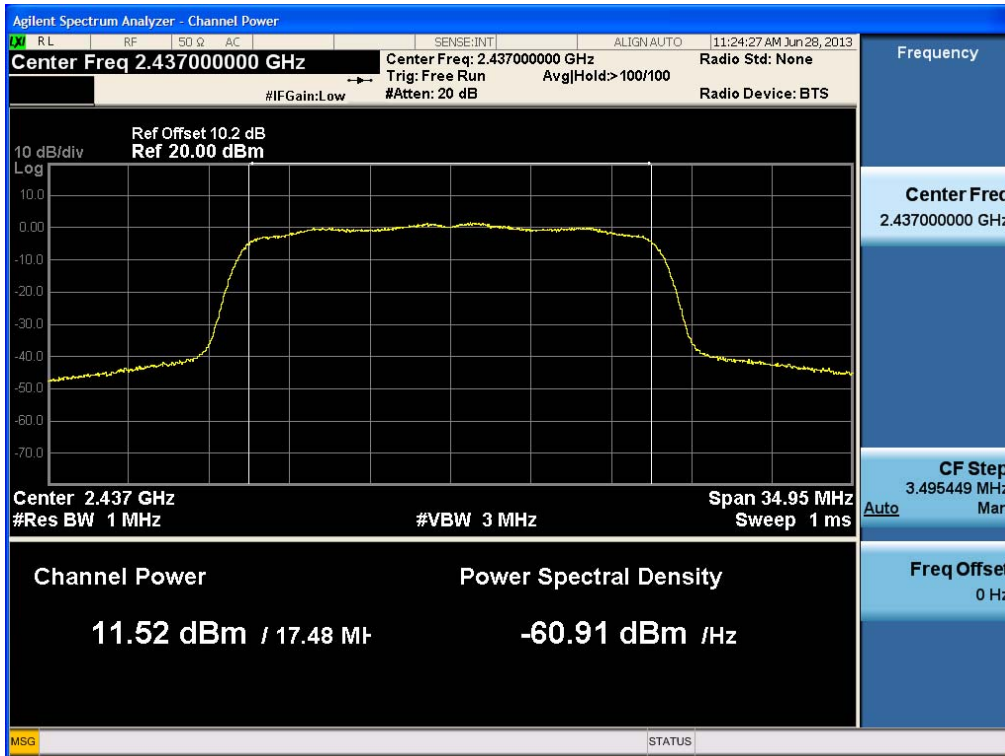


Conducted Output Power (802.11n-CH 6) 13Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

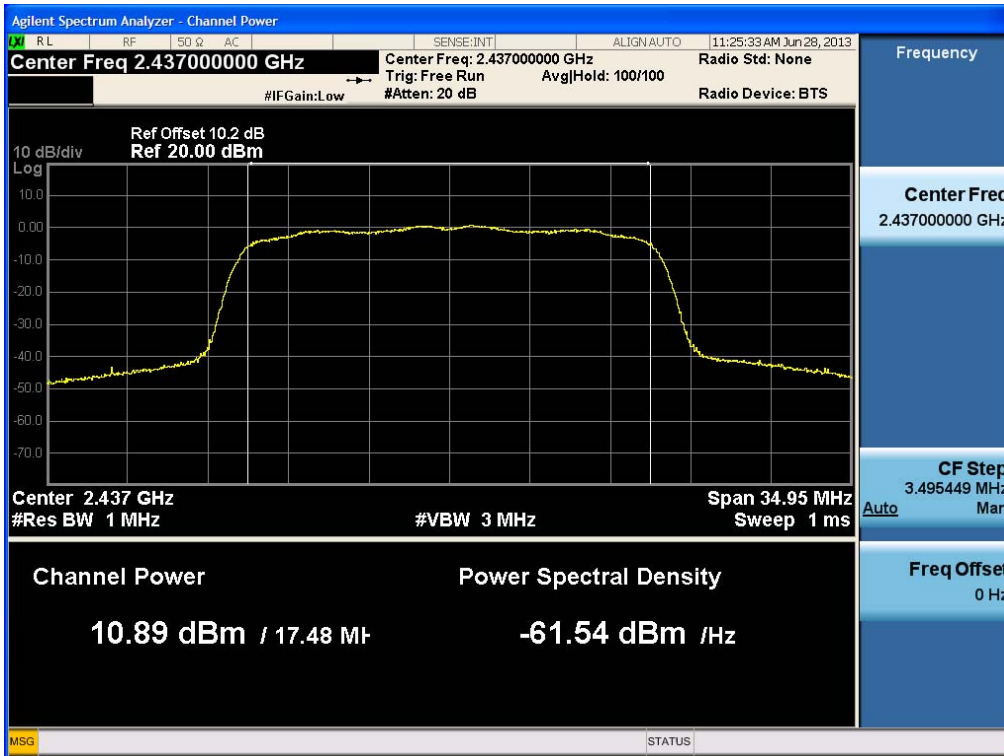


Conducted Output Power (802.11n-CH 6) 26Mbps

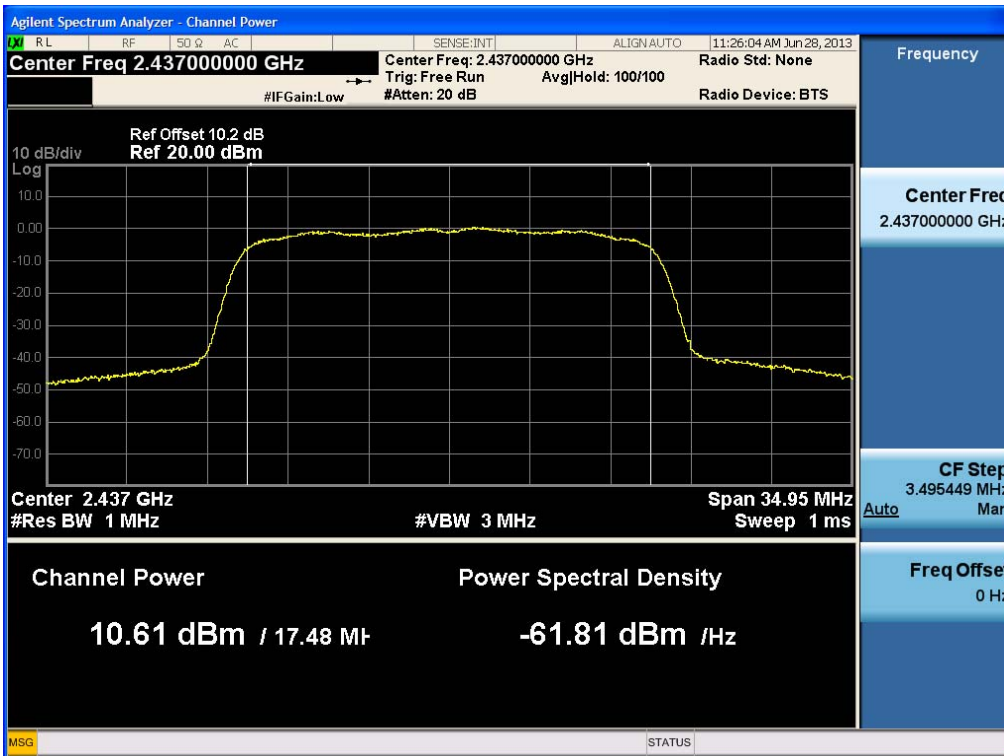


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

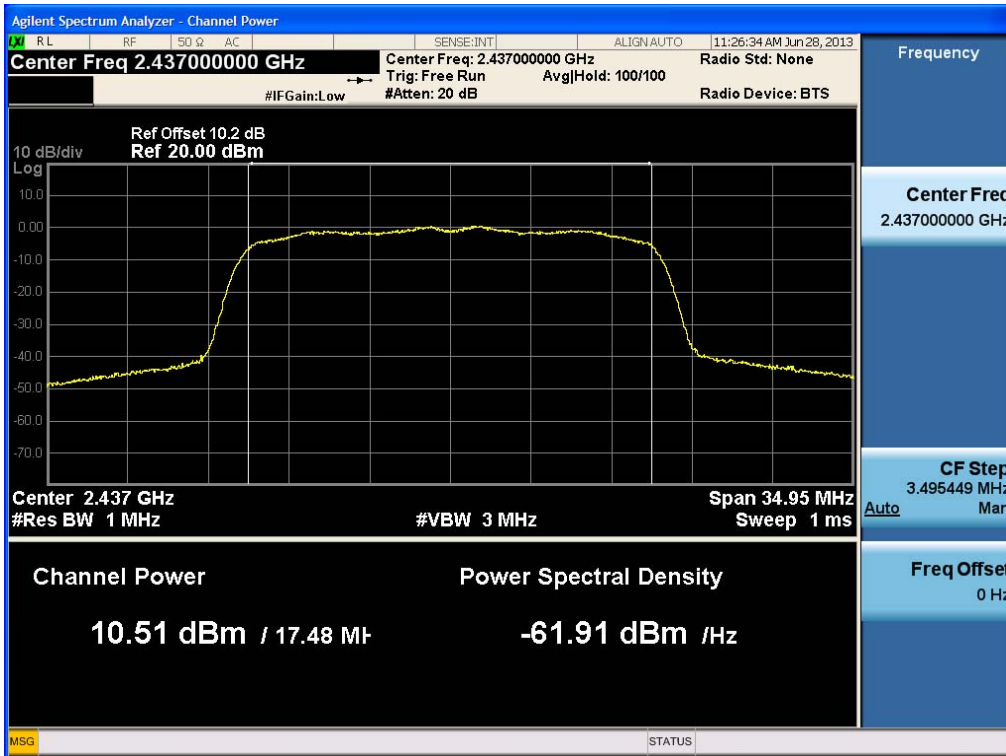


Conducted Output Power (802.11n-CH 6) 52Mbps

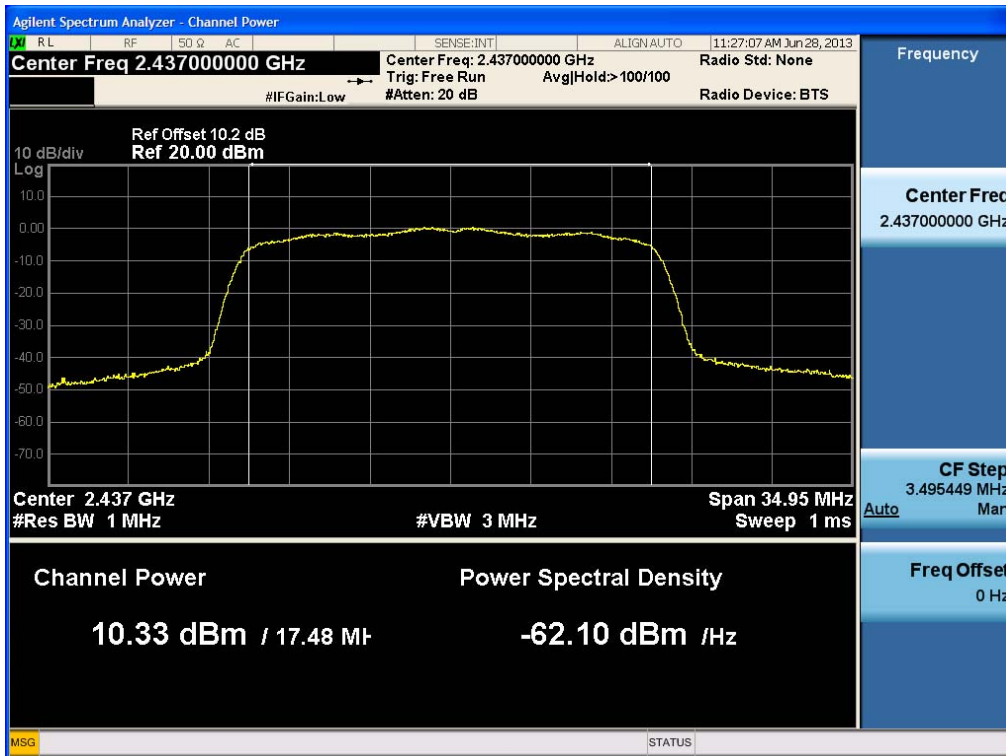


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

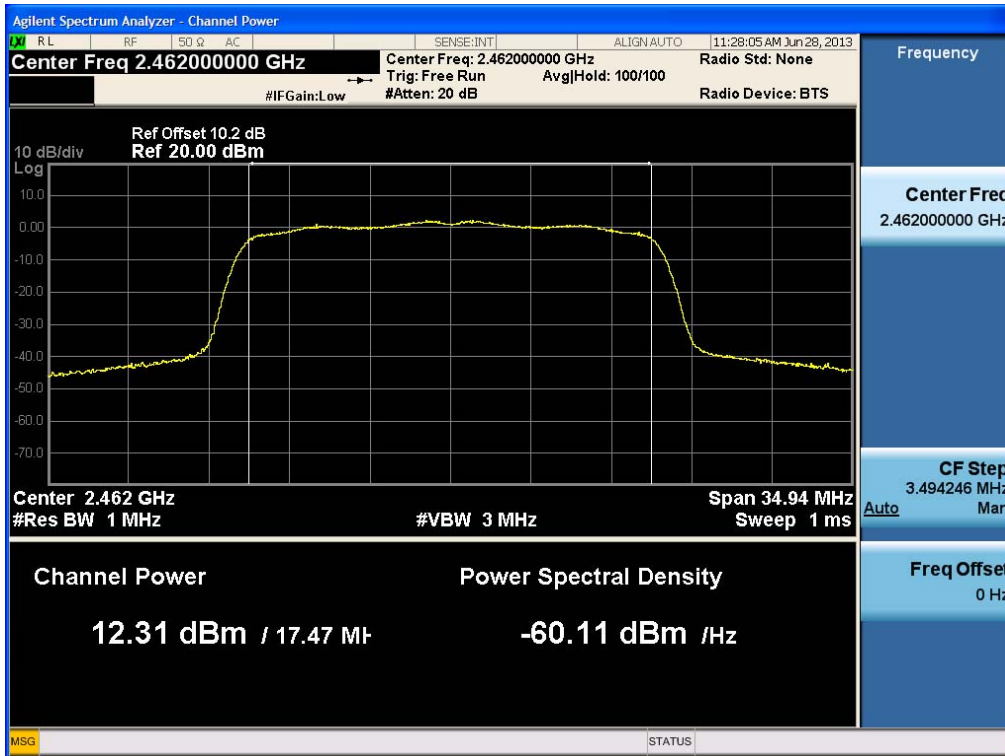


Conducted Output Power (802.11n-CH 6) 65Mbps

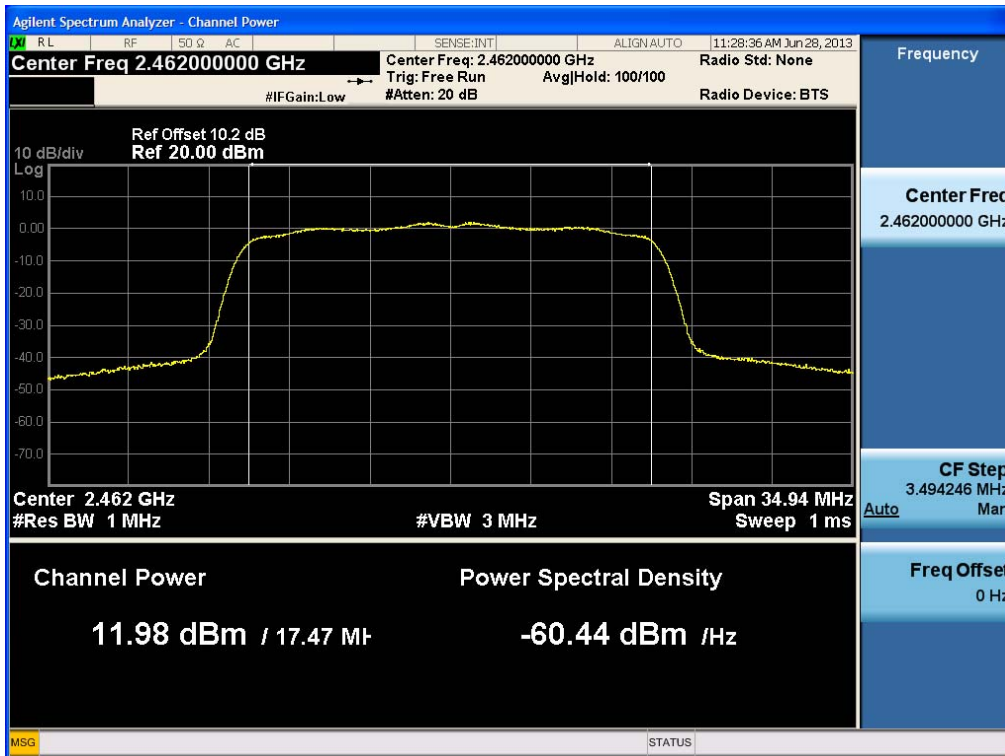


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

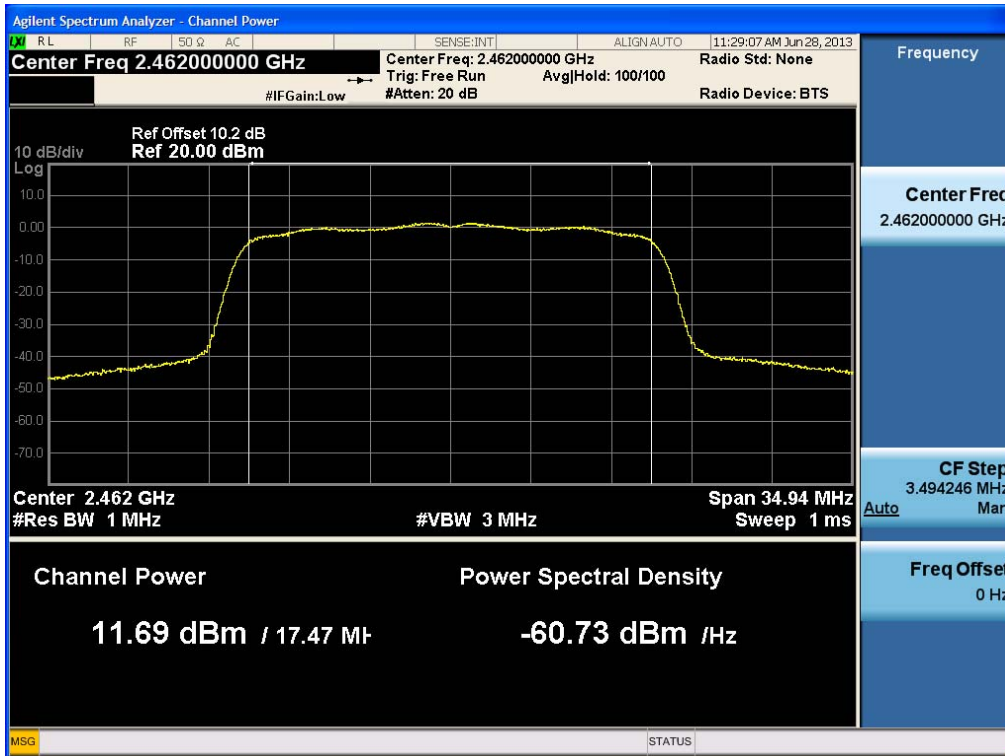


Conducted Output Power (802.11n-CH 11) 13Mbps

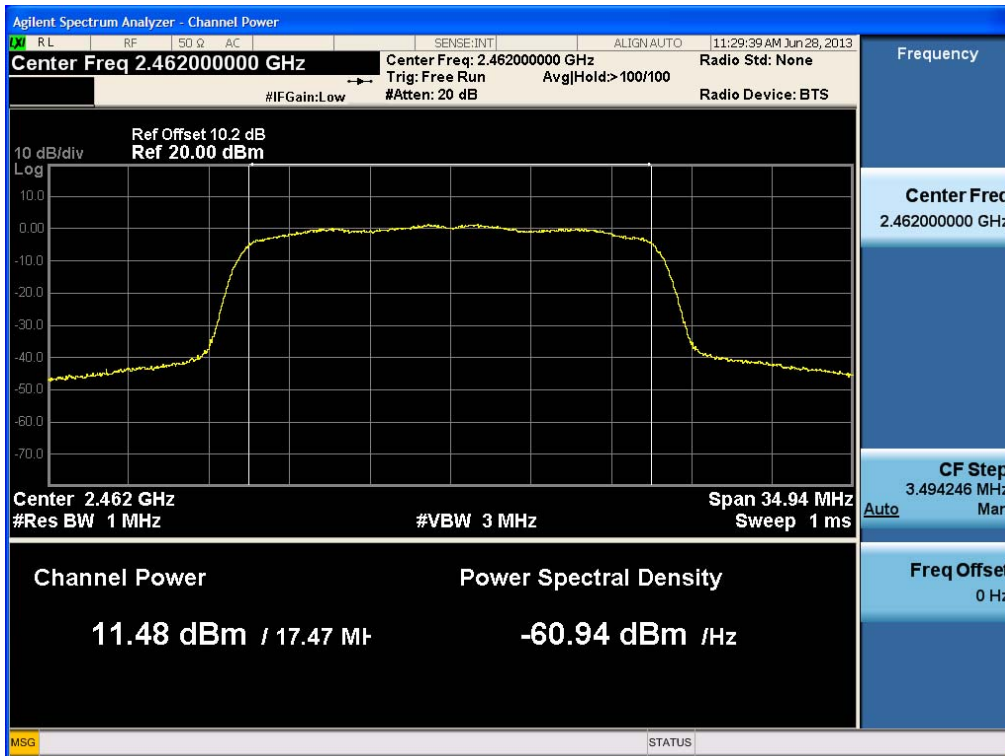


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

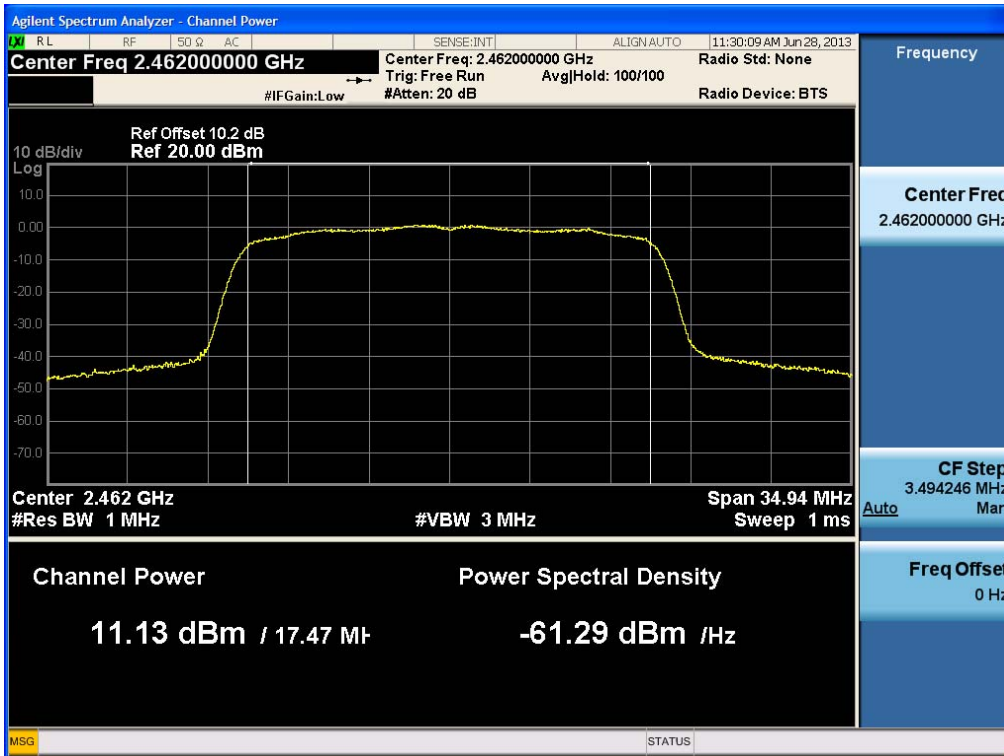


Conducted Output Power (802.11n-CH 11) 26Mbps

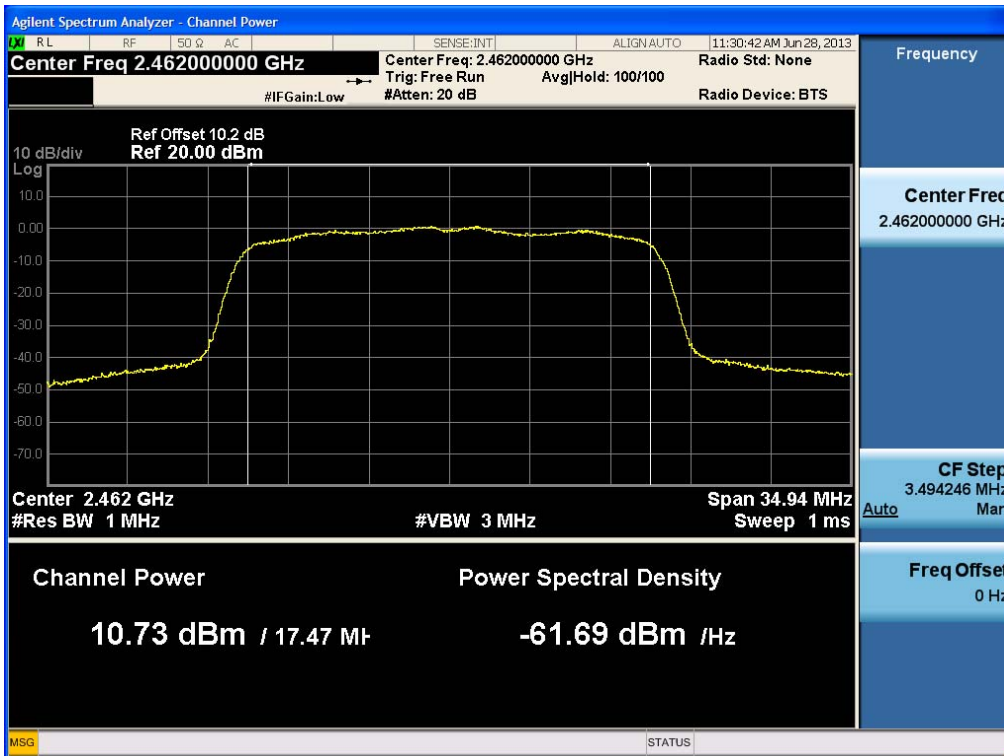


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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

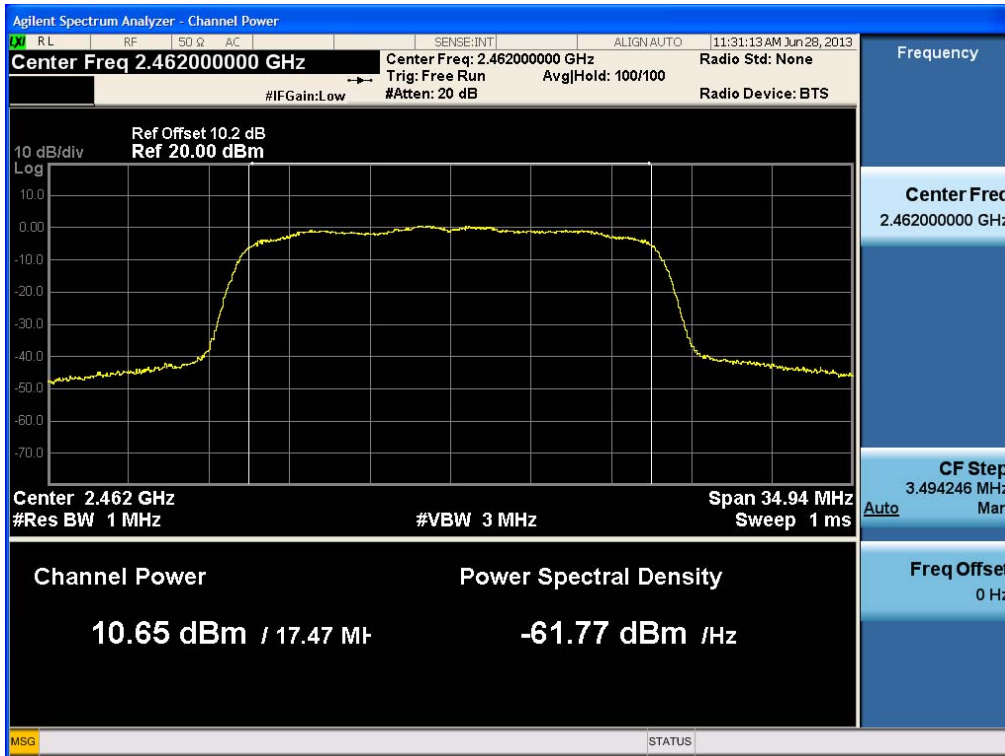


Conducted Output Power (802.11n-CH 11) 52Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

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



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



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
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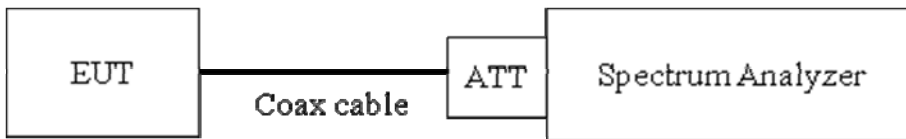
8.4 POWER SPECTRAL DENSITY (802.11b/g/n)

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 Procedure 10.2 in KDB 558074, issued 04/09/2013

The spectrum analyzer is set to :

Set analyzer center frequency to DTS channel center frequency.

Span = 1.5 times the DTS channel bandwidth.

RBW = 3 kHz ≤ RBW ≤ 100 kHz.

VBW ≥ 3 x RBW.

Sweep = auto couple

Detector = peak

Trace Mode = max hold

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

■ Sample Calculation

$$\begin{aligned} \text{PSD} &= \text{Reading Value} + \text{ATT loss} + \text{Cable loss}(1 \text{ ea}) \\ &= -5 \text{ dBm} + 10 \text{ dB} + 0.8 \text{ dB} = 5.8 \text{ dBm} \end{aligned}$$

Note :

1. Spectrum reading values are not plot data. The PSD results in plot is already including the actual values of loss for the attenuator and cable combination.
2. Spectrum offset = Attenuator loss + Cable loss
3. We apply to the offset in the 2.4 GHz range that was rounded off to the closest tenth dB. So, 10.2 dB is offset for 2.4 GHz Band.

Actual value of loss for the attenuator and cable combination is below table.

FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

Band	Frequency(MHz)	Loss(dB)
2.4 GHz	2412	10.21
	2437	10.24
	2462	10.24

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

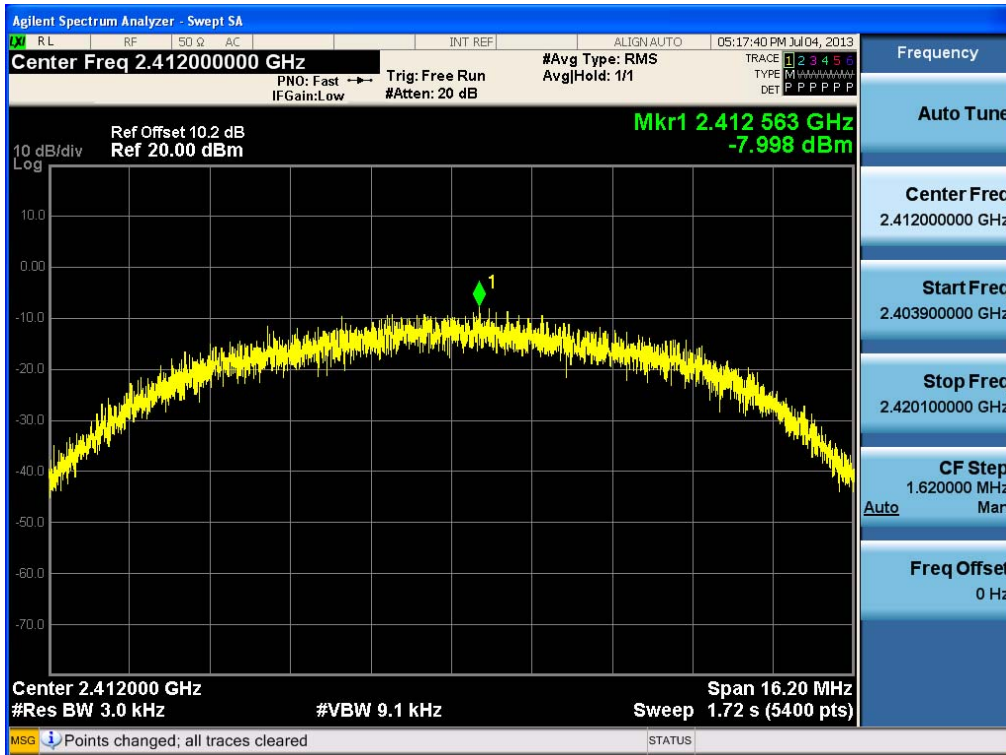
■ TEST RESULTS

Conducted Power Density Measurements

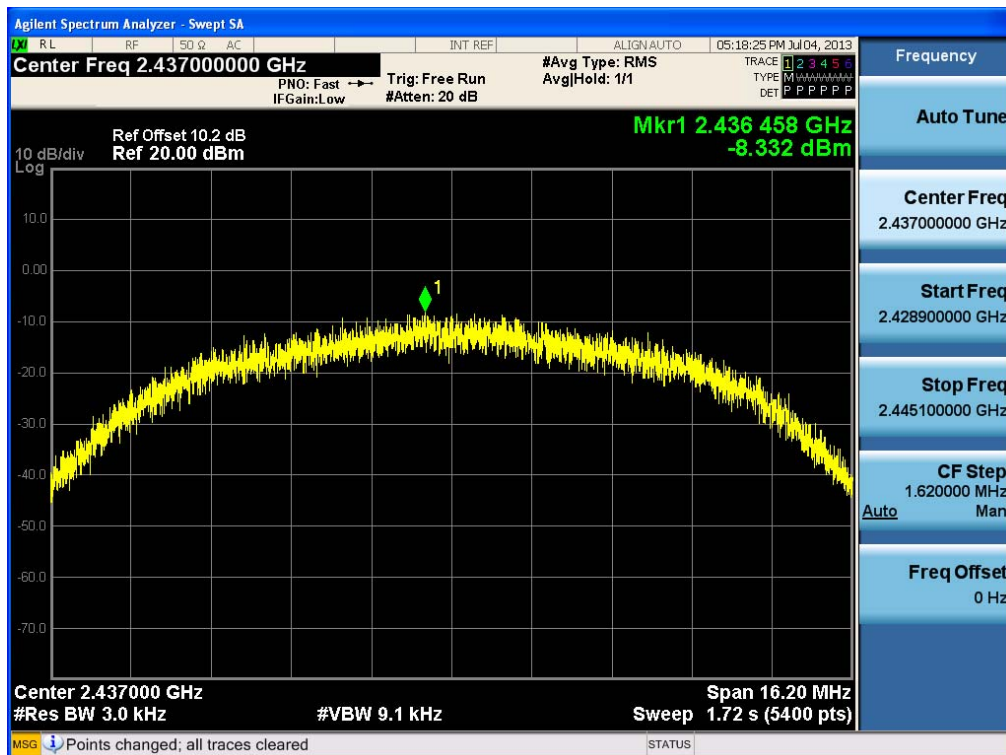
Frequency (MHz)	Channel No.	Mode	Test Result		
			PSD (dBm)	Limit (dBm)	Pass/Fail
2412	1	802.11b	-7.998	8	Pass
2437	6		-8.332	8	Pass
2462	11		-7.603	8	Pass
2412	1	802.11g	-12.519	8	Pass
2437	6		-12.663	8	Pass
2462	11		-13.548	8	Pass
2412	1	802.11n	-13.624	8	Pass
2437	6		-13.766	8	Pass
2462	11		-14.289	8	Pass

RESULT PLOTS

Power Spectral Density (802.11b-CH 1)

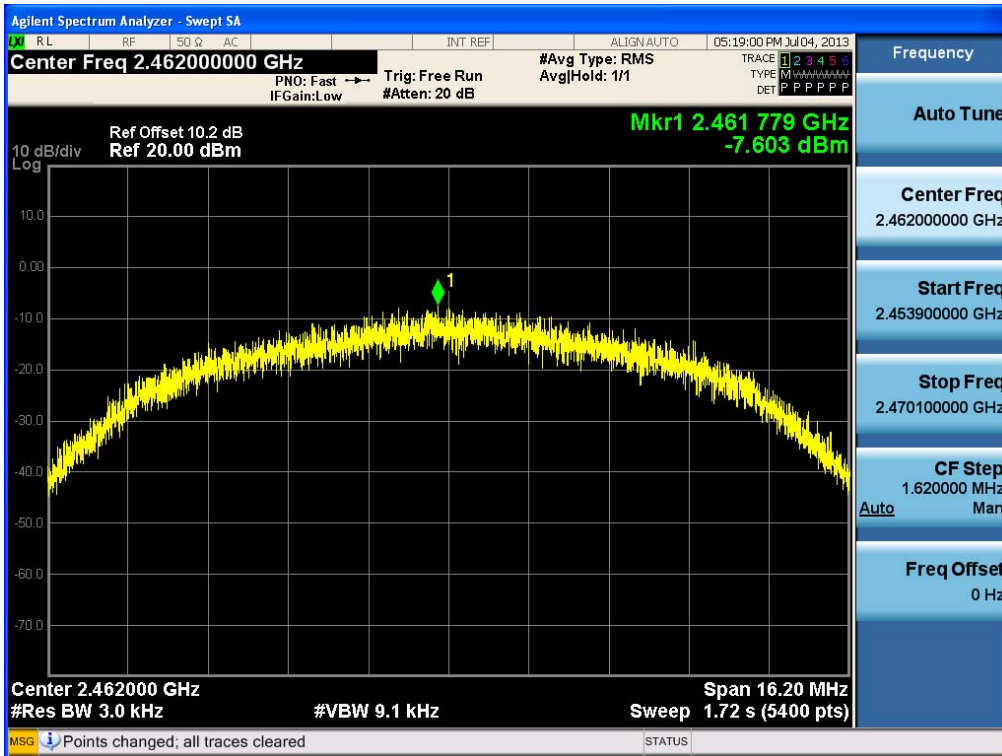


Power Spectral Density (802.11b-CH 6)

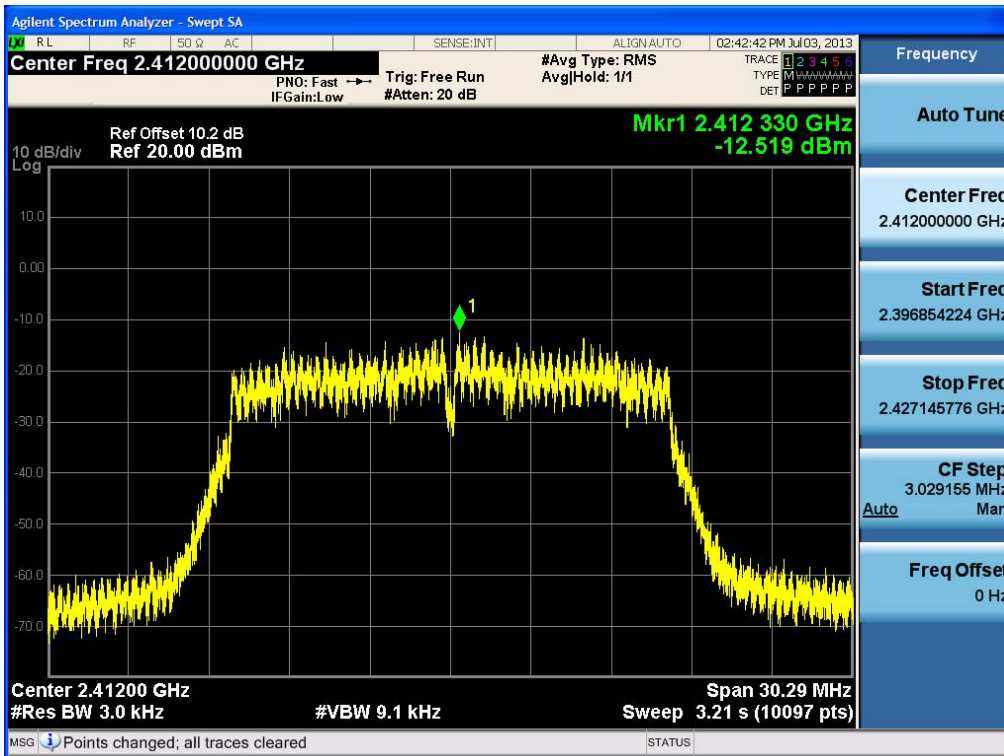


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

Power Spectral Density (802.11b-CH 11)

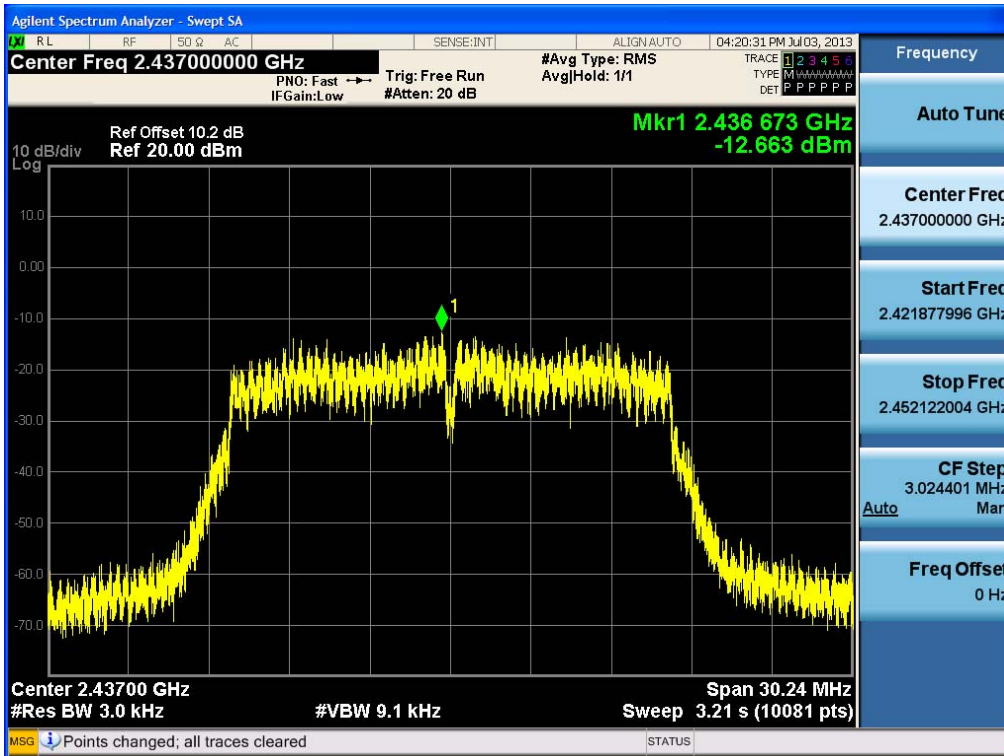


Power Spectral Density (802.11g-CH 1)

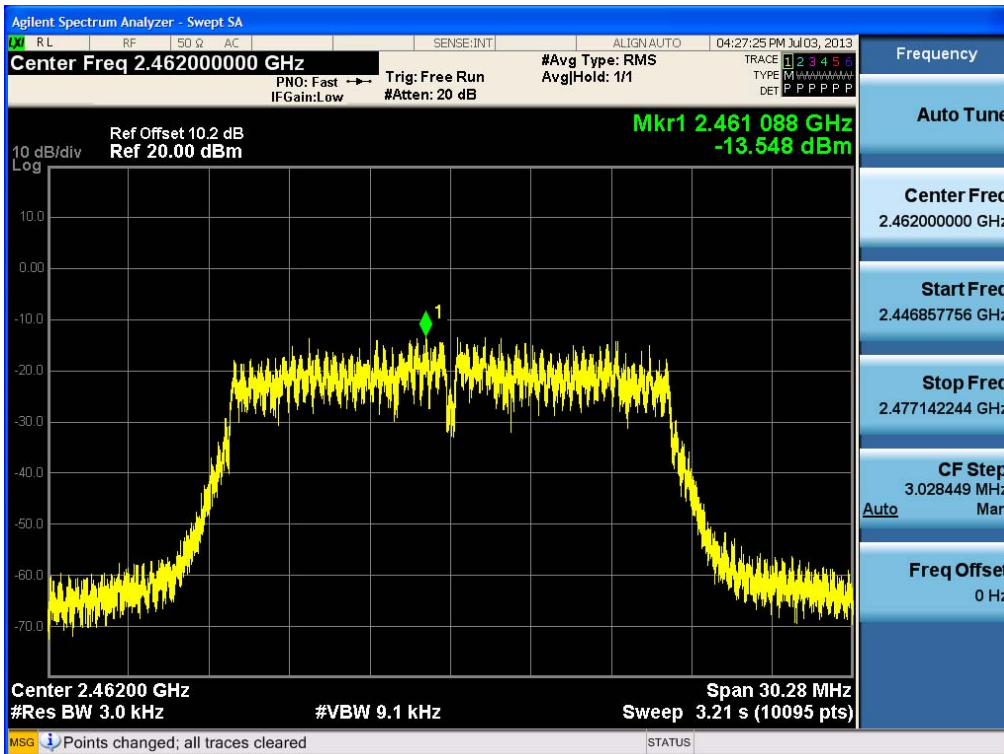


FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G

Power Spectral Density (802.11g-CH 6)



Power Spectral Density (802.11g-CH11)



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1307FR10	Date of Issue: July 08, 2013	EUT Type: 850/1900 GSM/GPRS Phone with Bluetooth v.4.0(LE), 802.11b/g/n, Hotspot and EDGE Rx Only	FCC ID: A3LGTS5310G