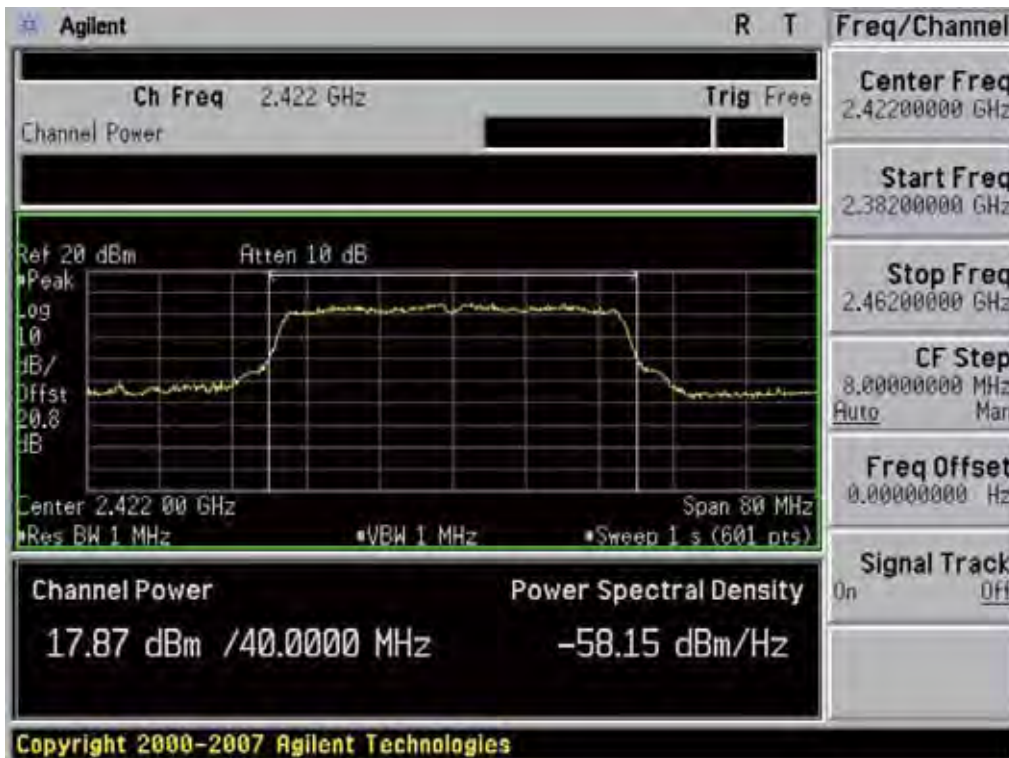


Conducted Output Power (802.11n-CH 3) 40.5 Mbps

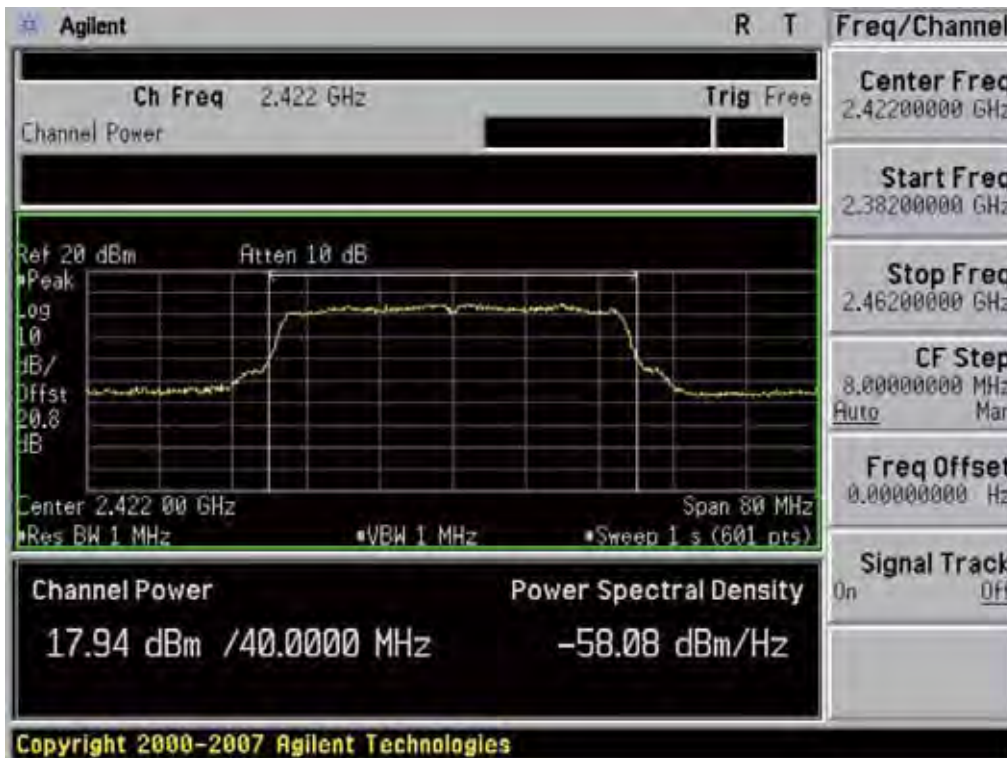


Conducted Output Power (802.11n-CH 3) 54 Mbps



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 3) 81 Mbps

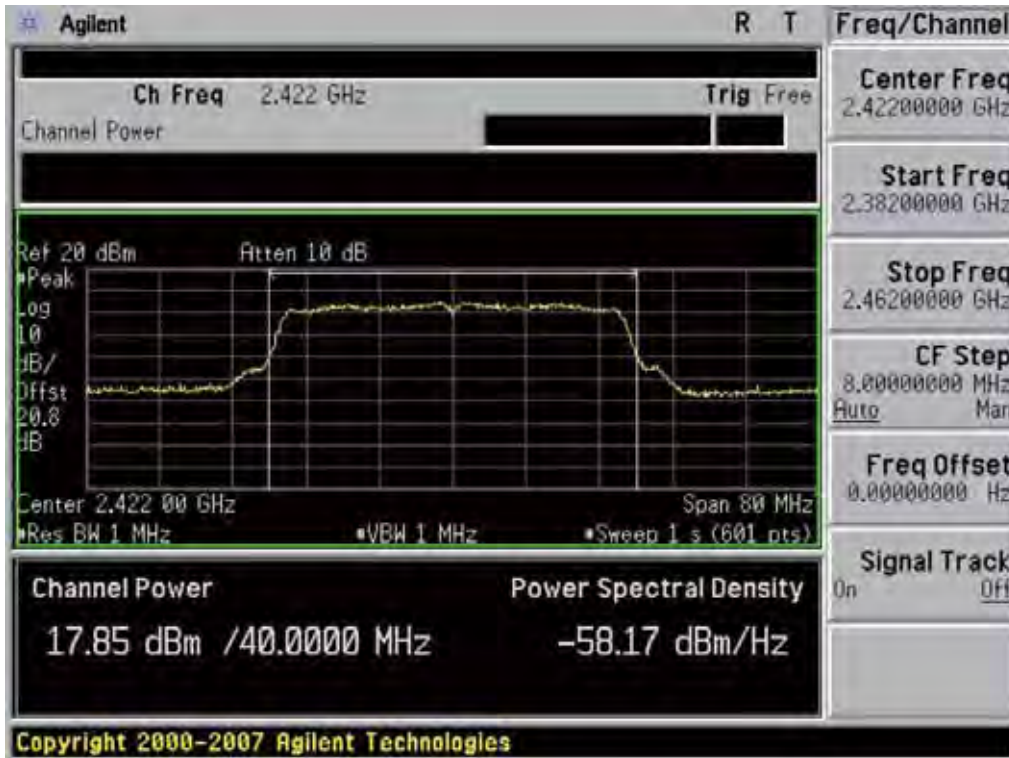


Conducted Output Power (802.11n-CH 3) 108 Mbps

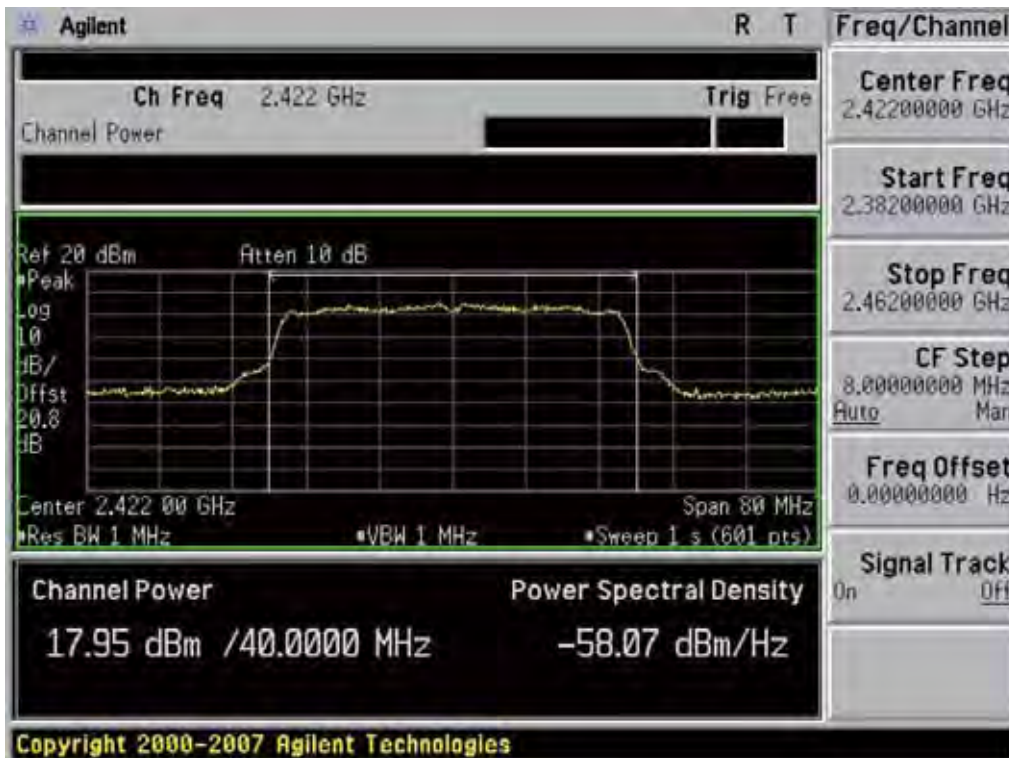


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 3) 121.5 Mbps

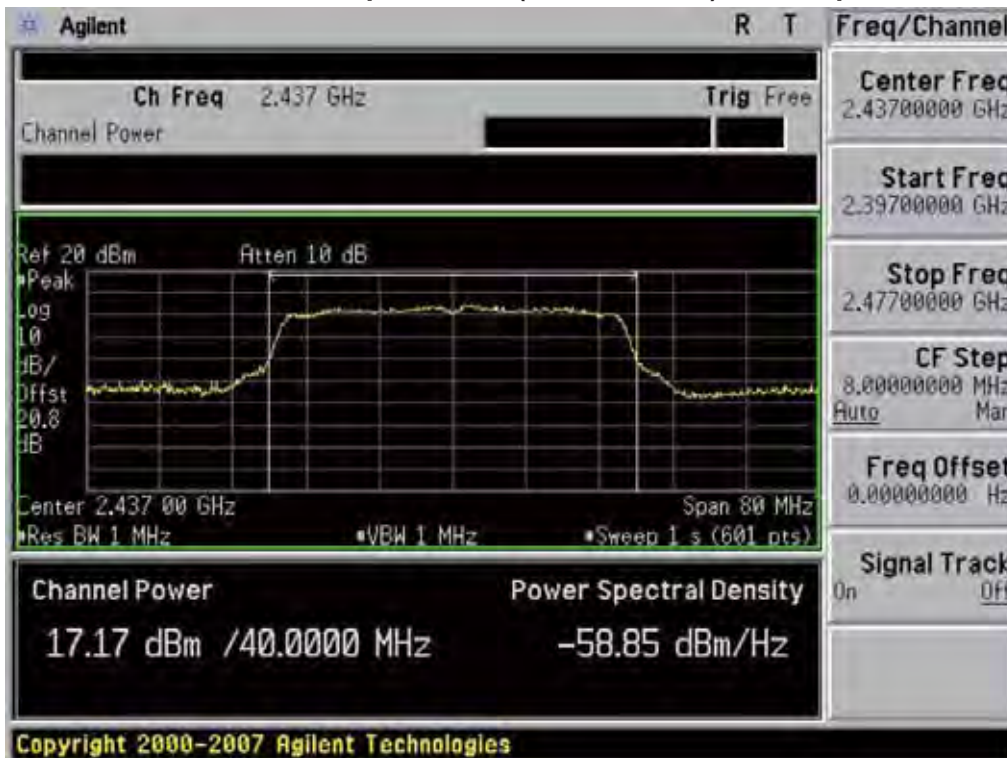


Conducted Output Power (802.11n-CH 3) 135 Mbps

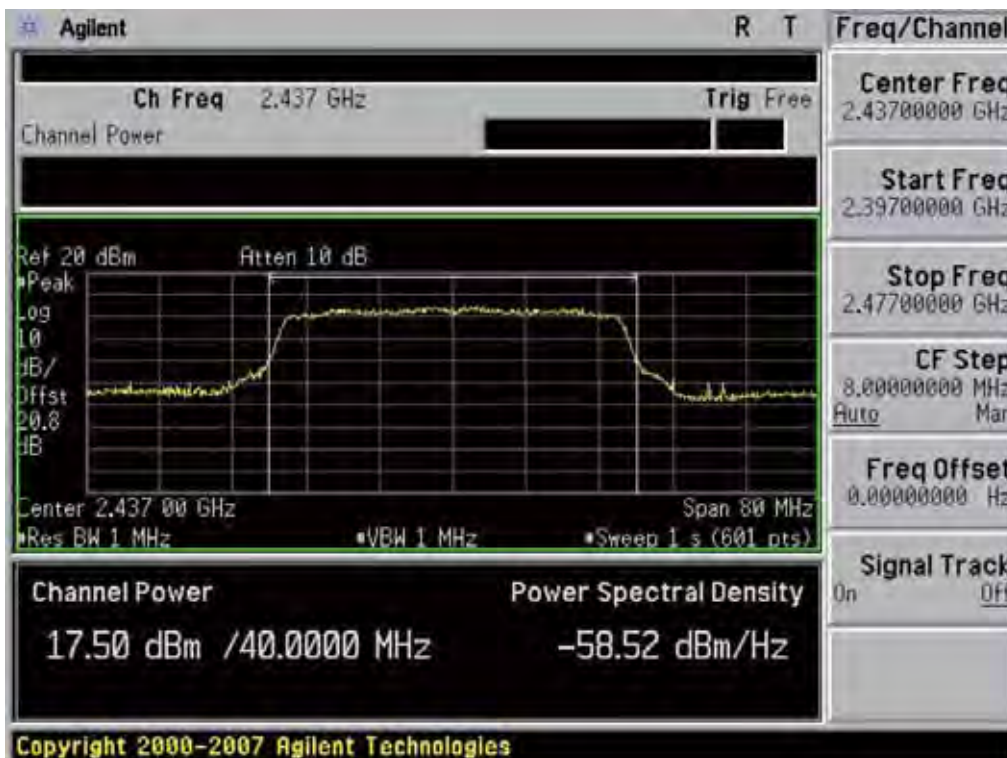


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 6) 13.5 Mbps

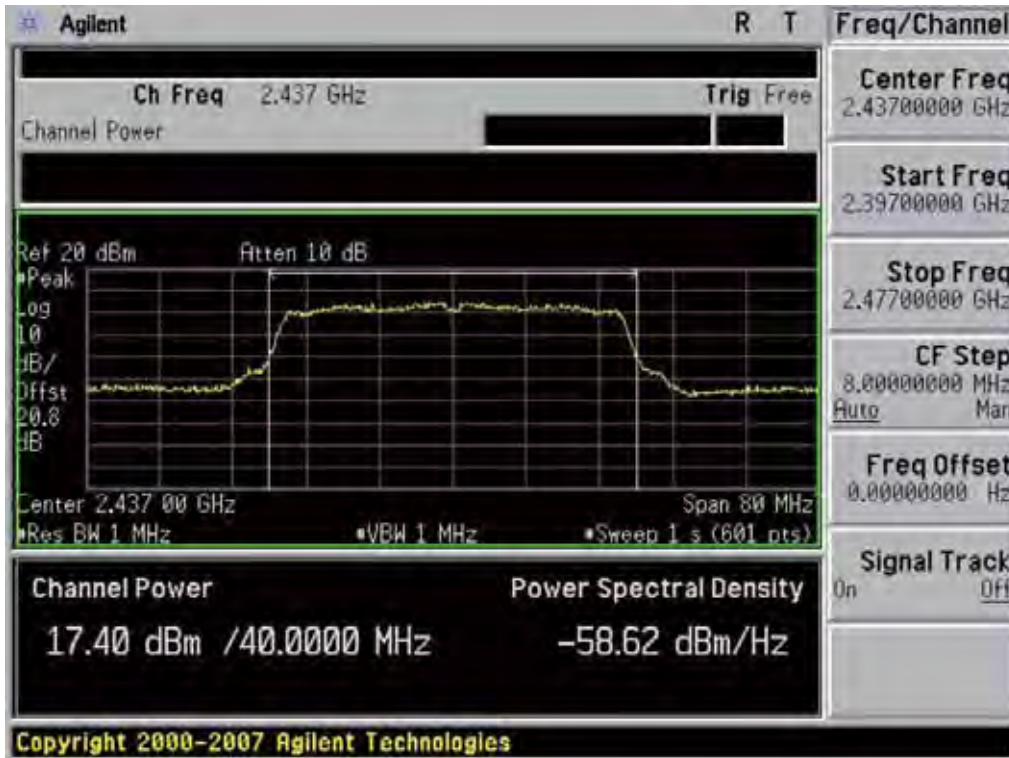


Conducted Output Power (802.11n-CH 6) 27 Mbps

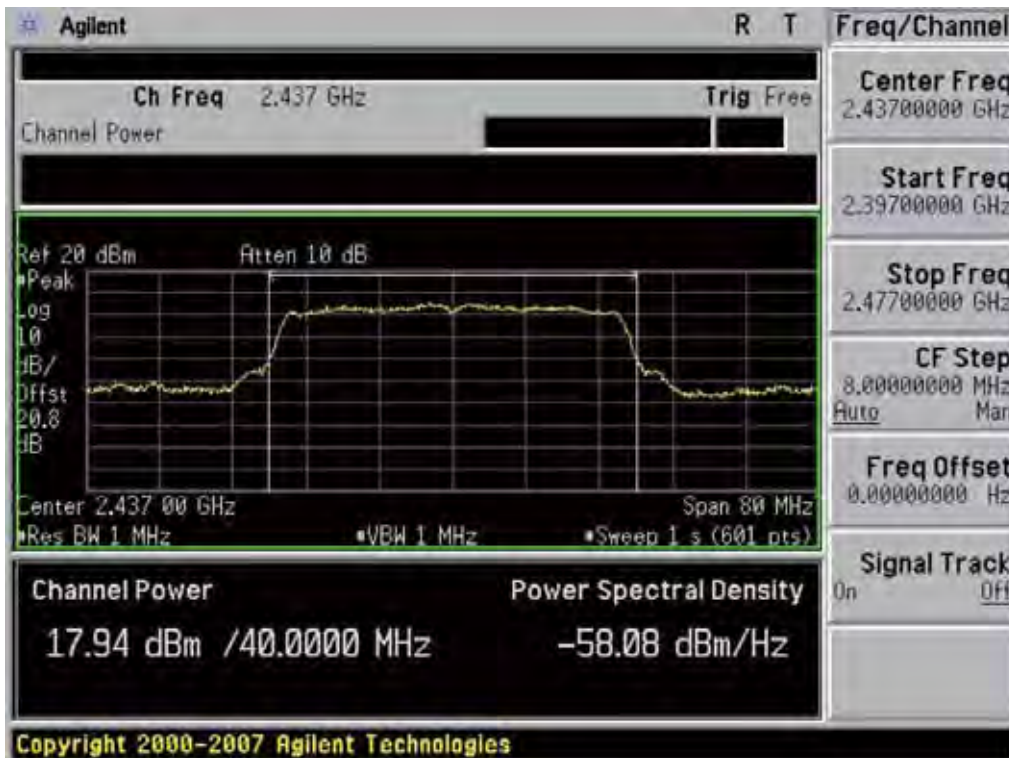


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 6) 40.5 Mbps



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



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 6) 81 Mbps



Conducted Output Power (802.11n-CH 6) 108 Mbps

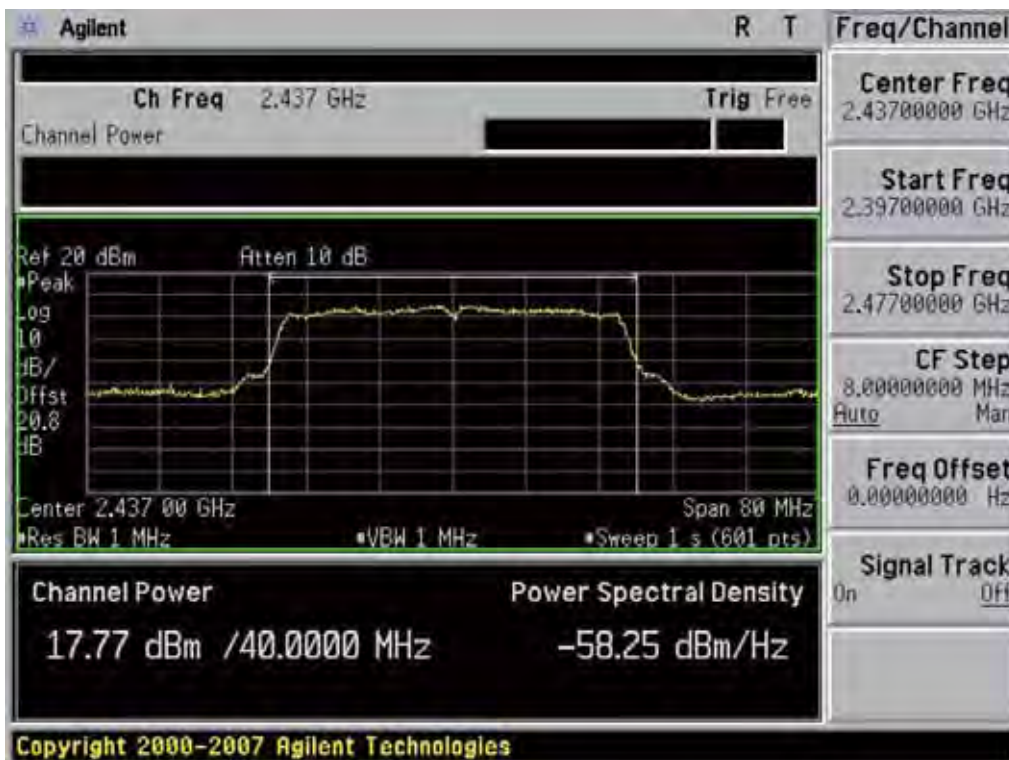


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 6) 121.5 Mbps

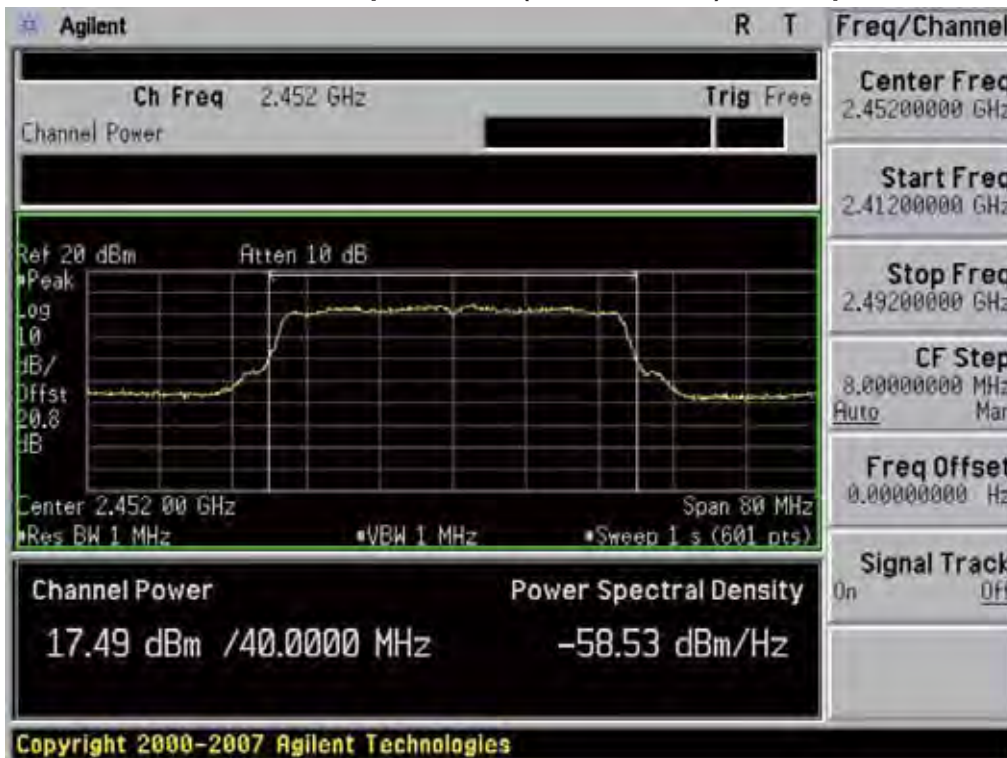


Conducted Output Power (802.11n-CH 6) 135 Mbps

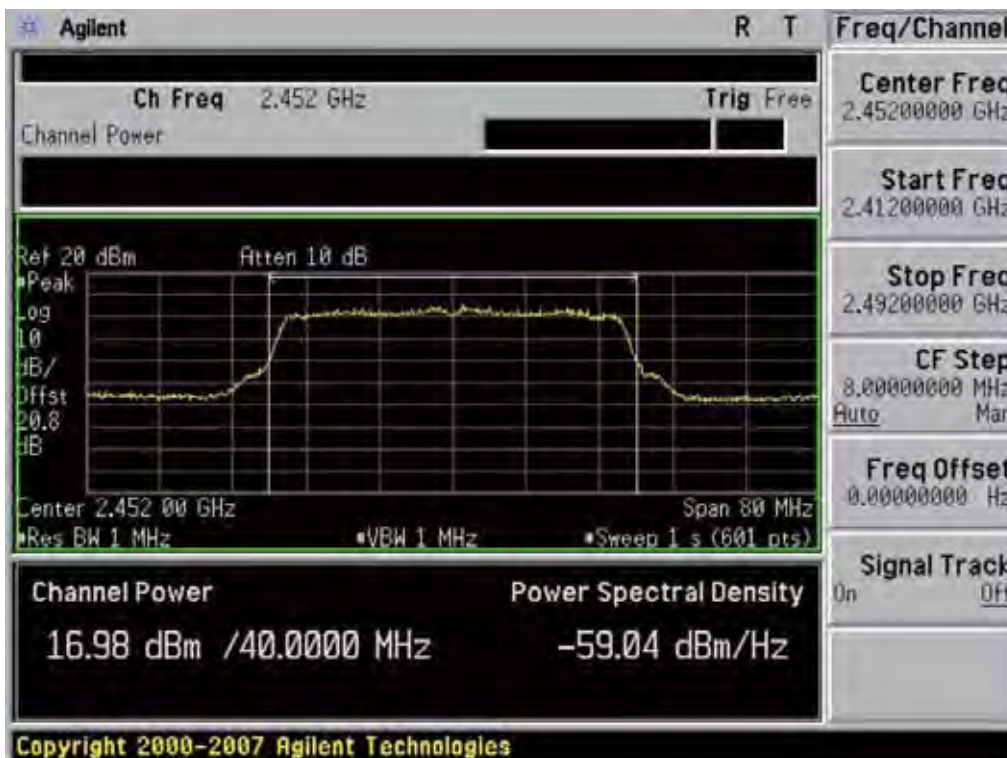


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 9) 13.5Mbps



Conducted Output Power (802.11n-CH 9) 27 Mbps

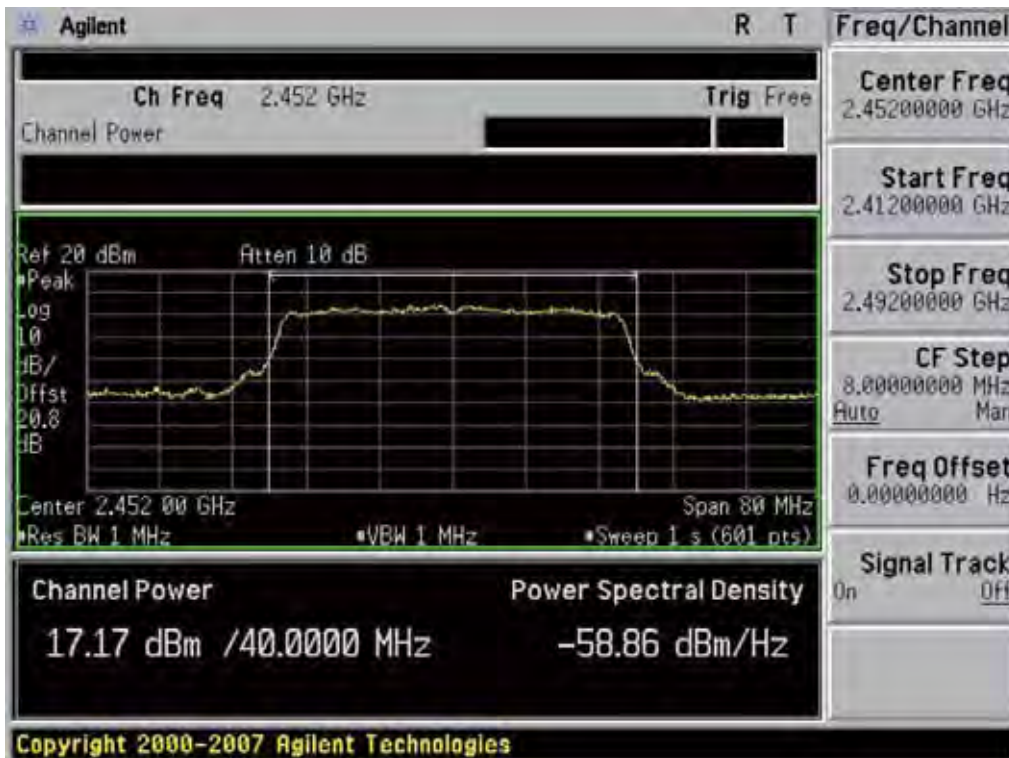


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 9) 40.5 Mbps

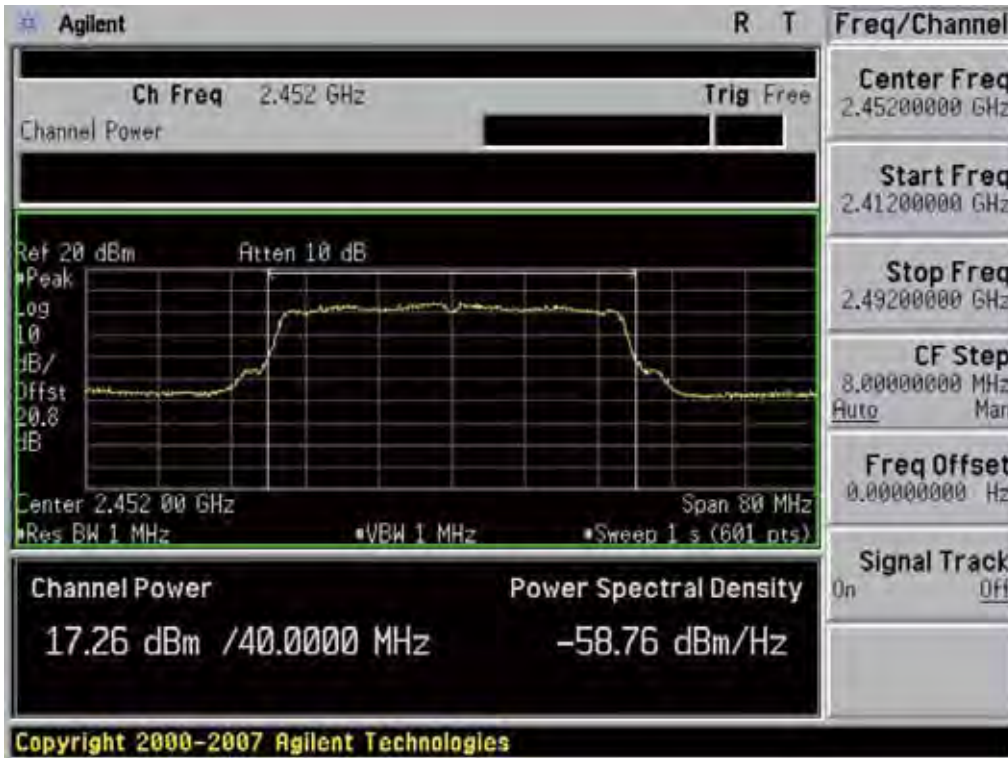


Conducted Output Power (802.11n-CH 9) 54 Mbps

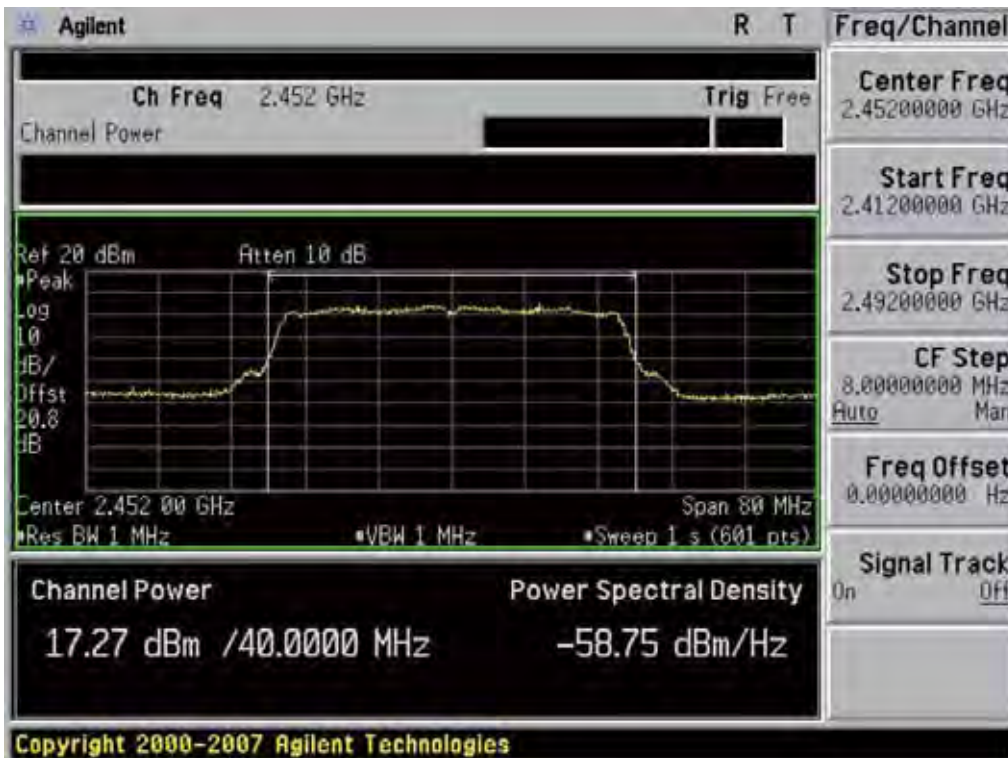


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 9) 81 Mbps

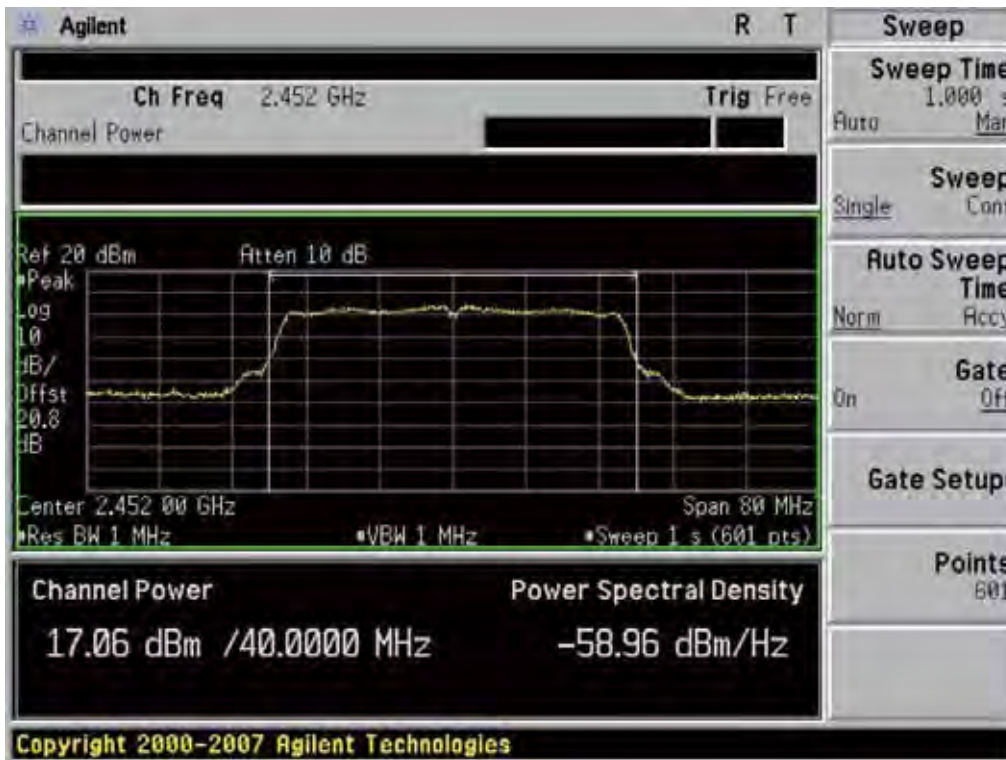


Conducted Output Power (802.11n-CH 9) 108 Mbps

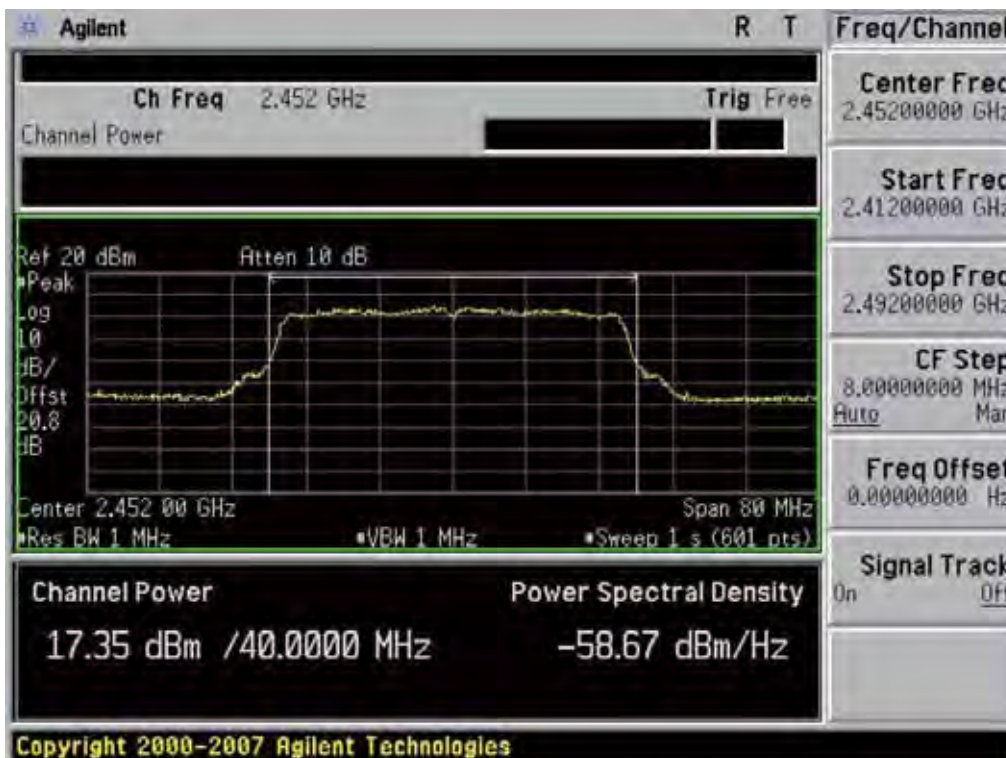


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 9) 121.5 Mbps



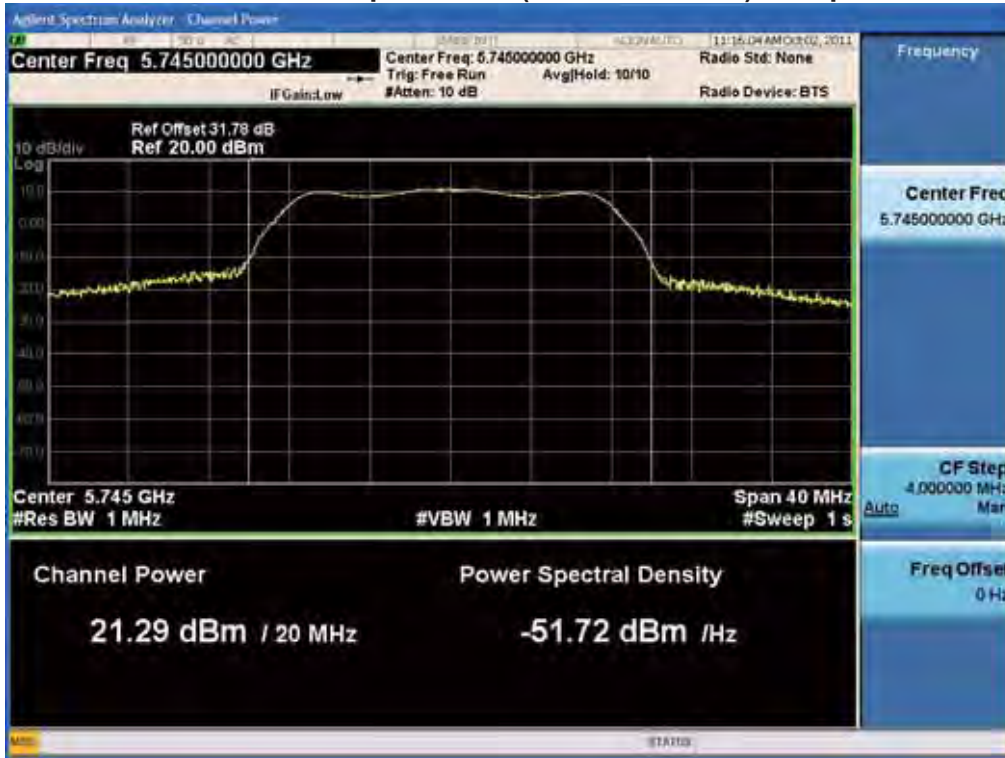
Conducted Output Power (802.11n-CH 9) 135 Mbps



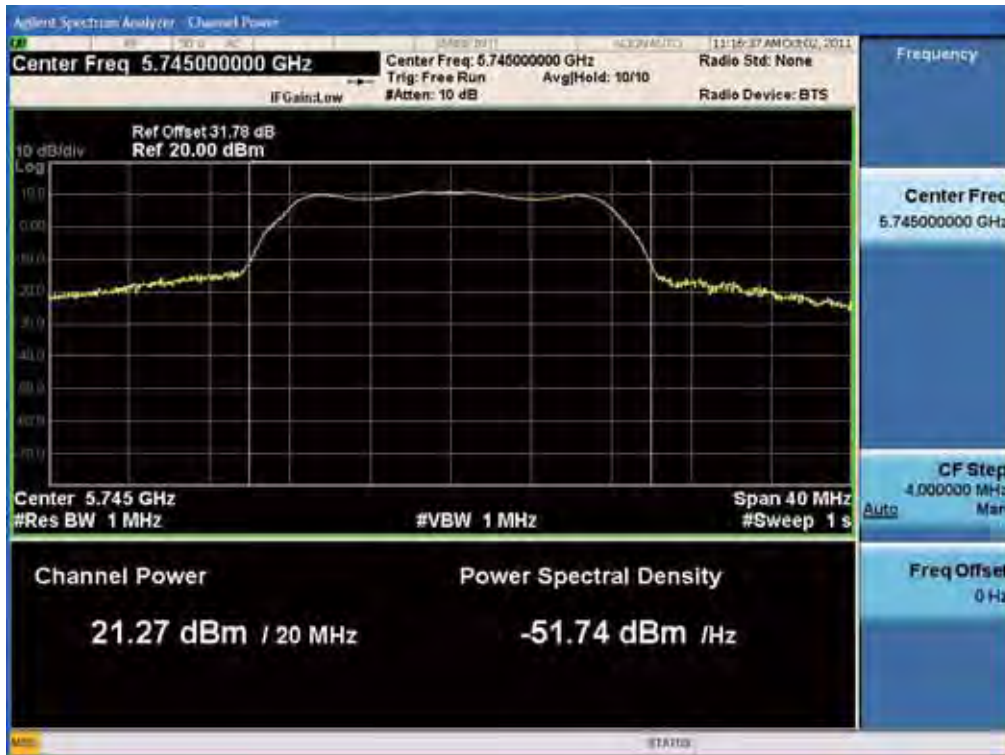
FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

RESULT PLOTS_Ant.0 (5745 MHz -5825 MHz)

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



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

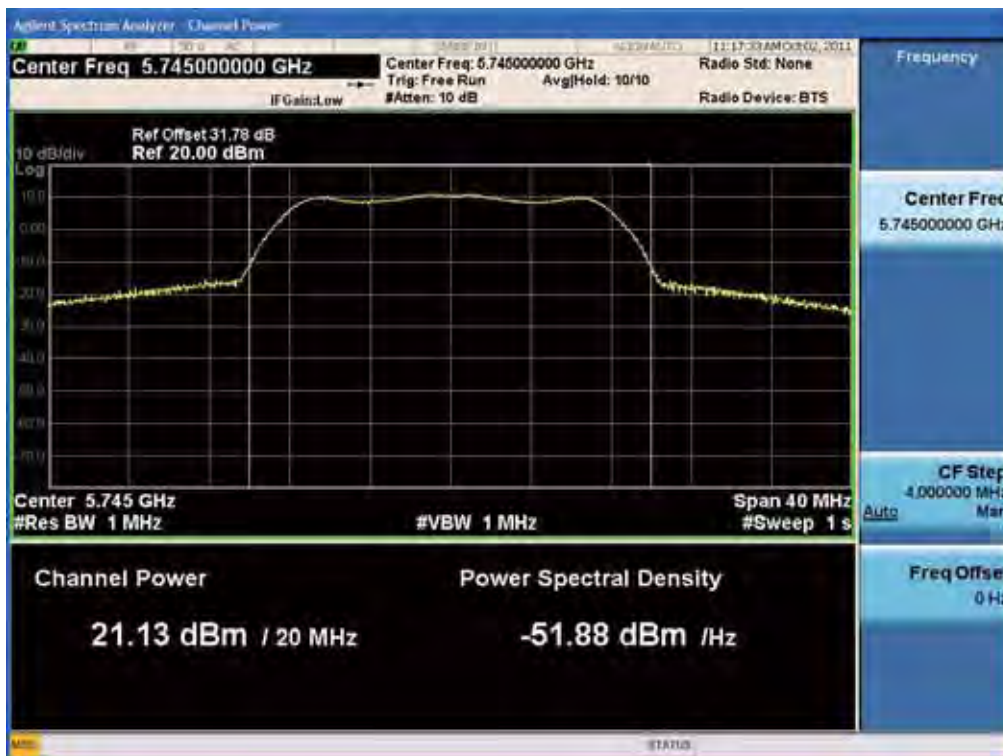


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

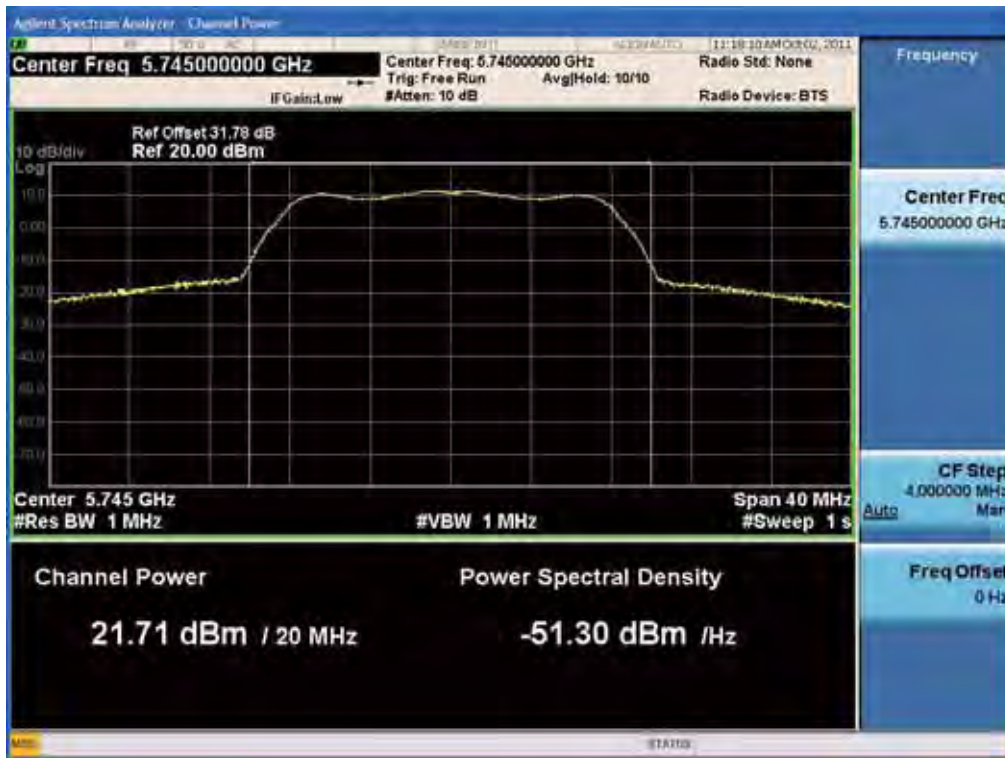


Conducted Output Power (802.11a-CH 149) 18 Mbps

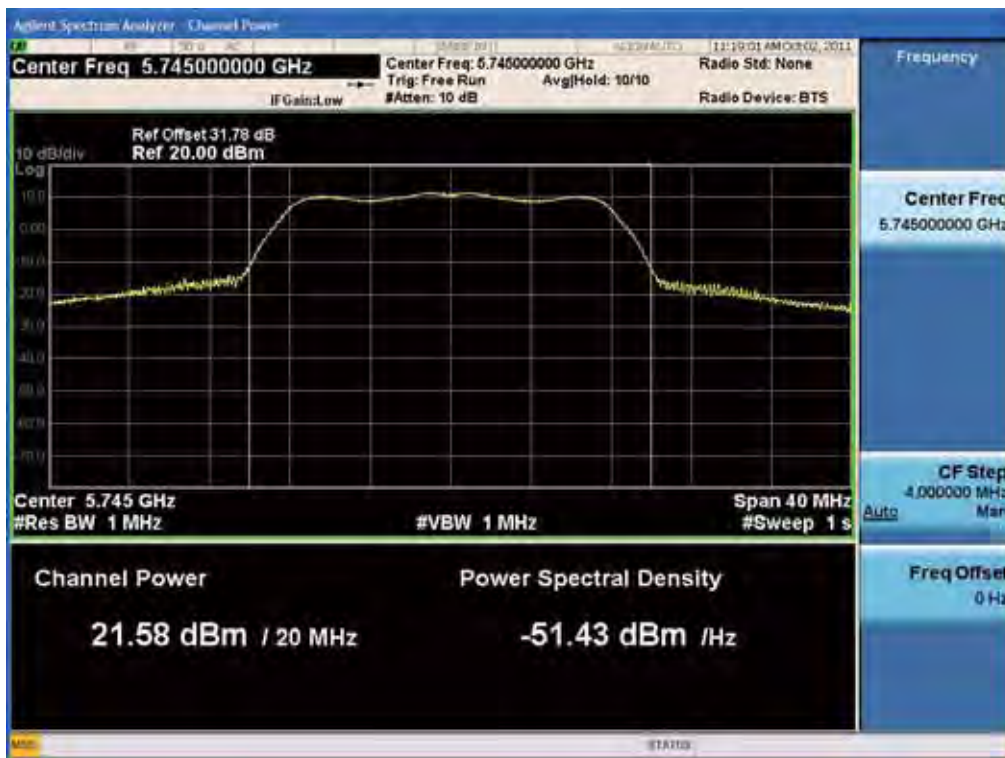


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



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

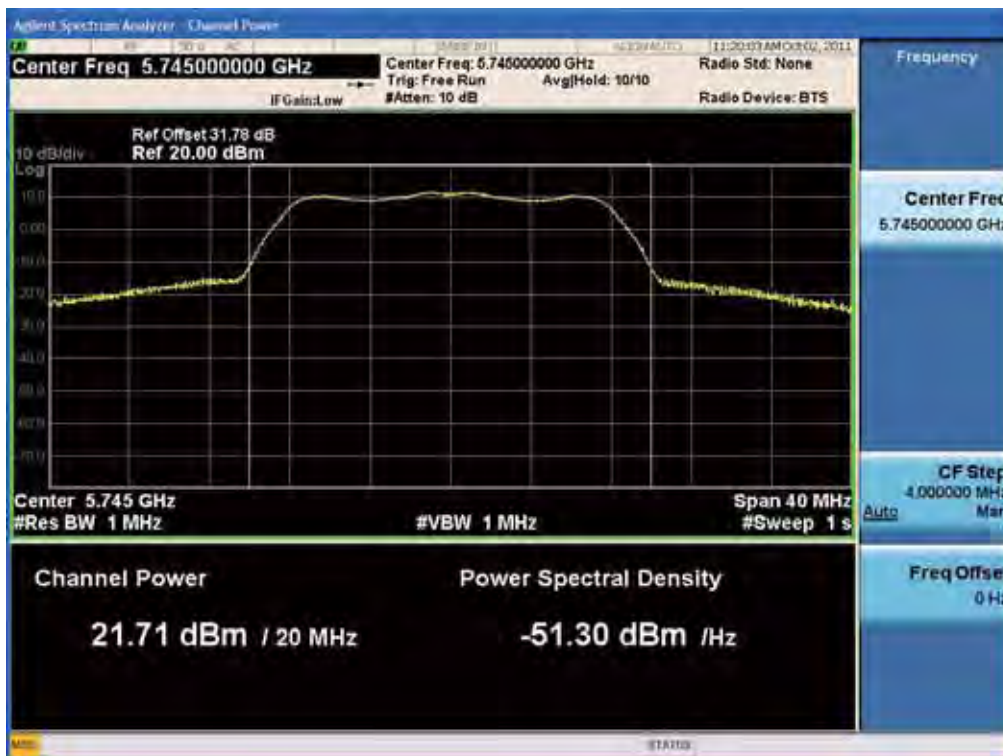


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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 & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

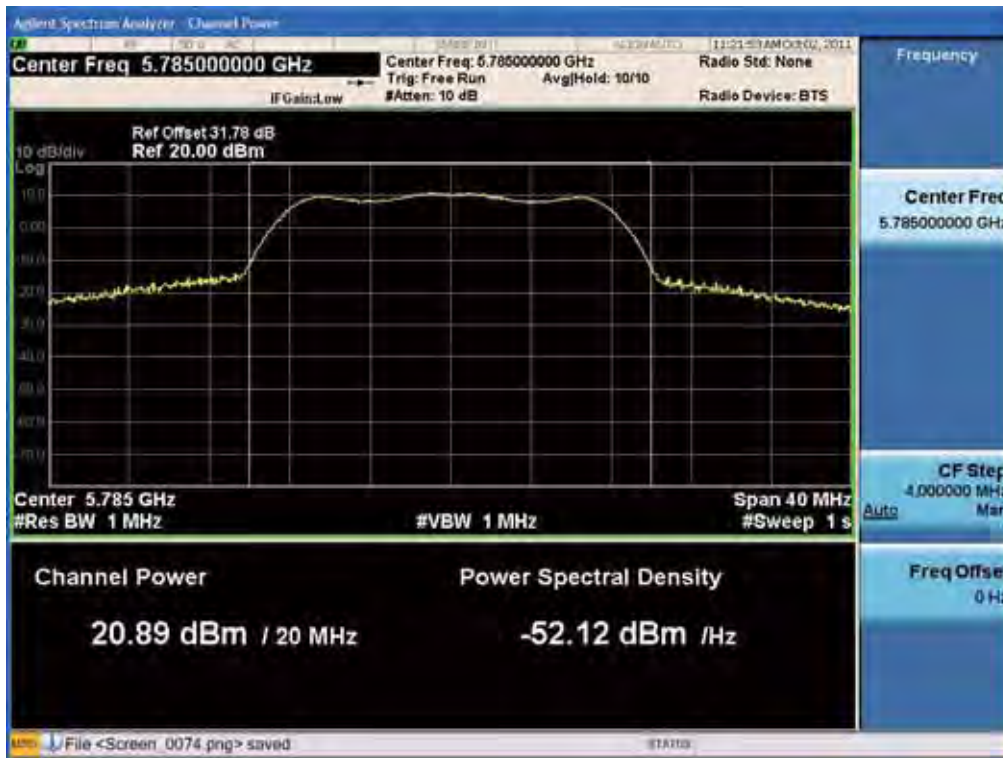


Conducted Output Power (802.11a-CH 157) 9 Mbps

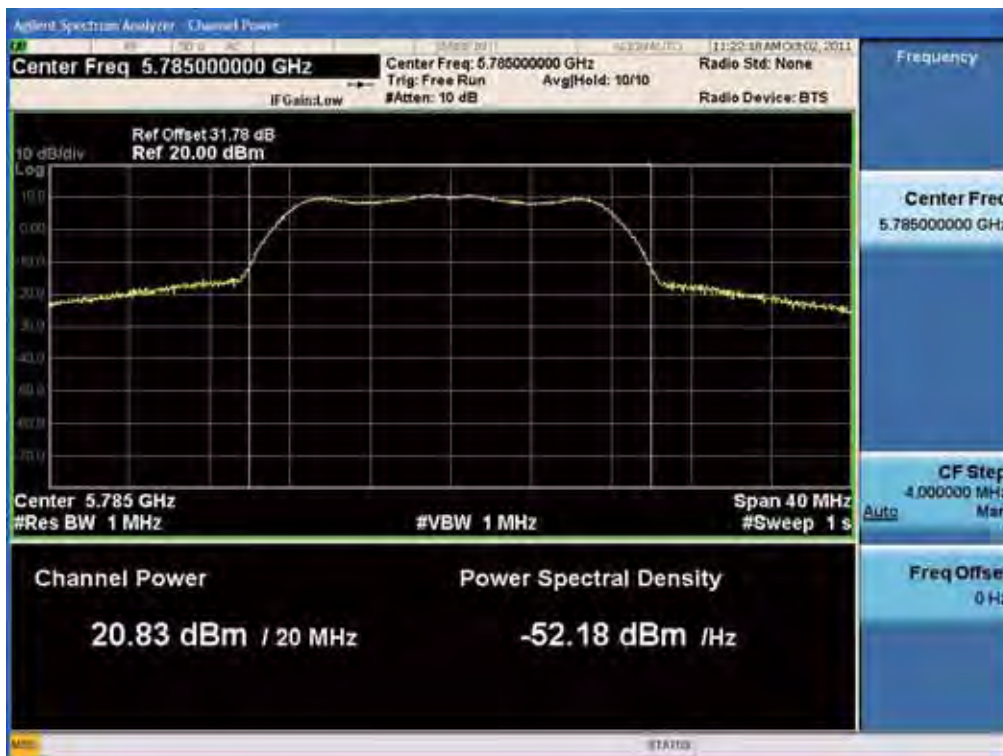


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

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



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



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



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

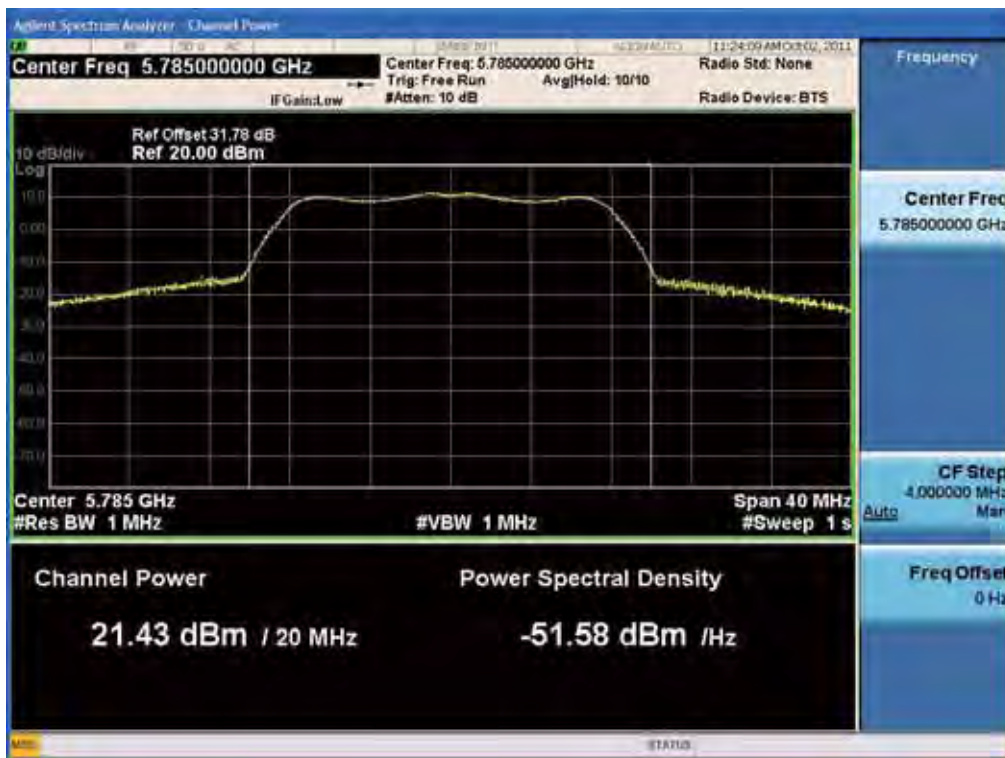


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



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



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



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

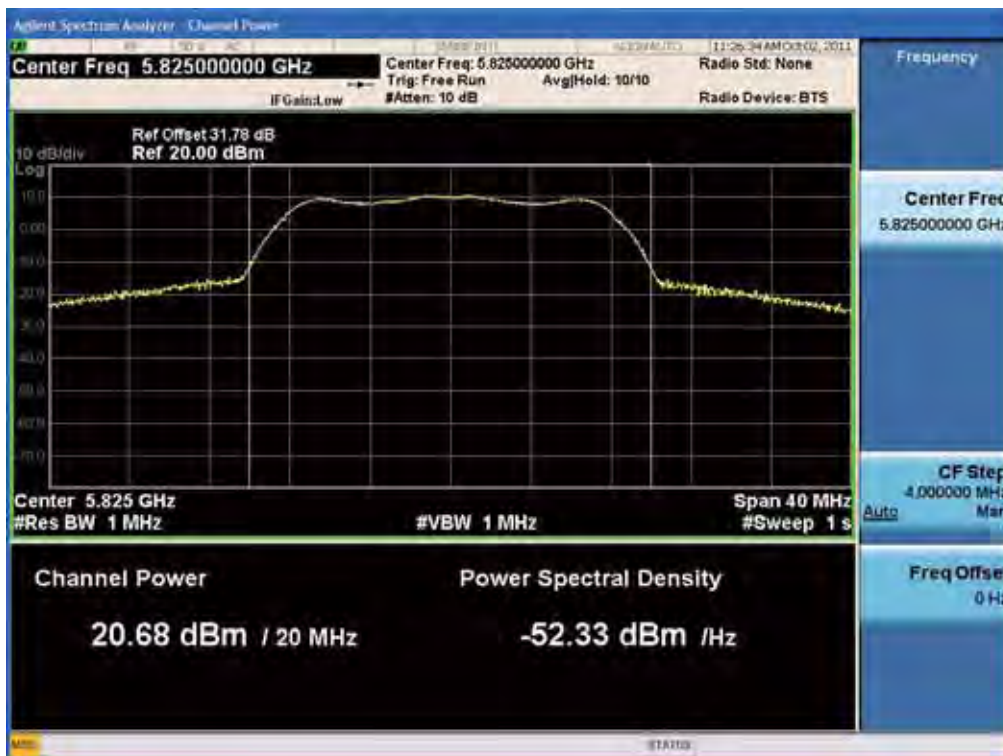


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

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

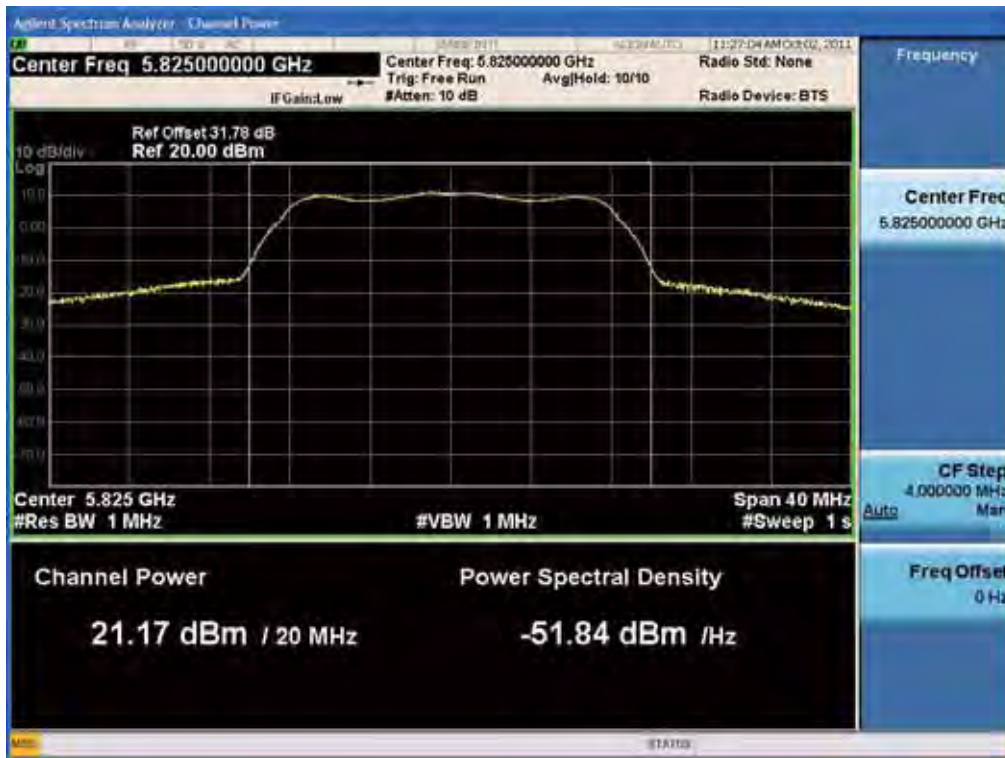


Conducted Output Power (802.11a-CH 165) 18 Mbps

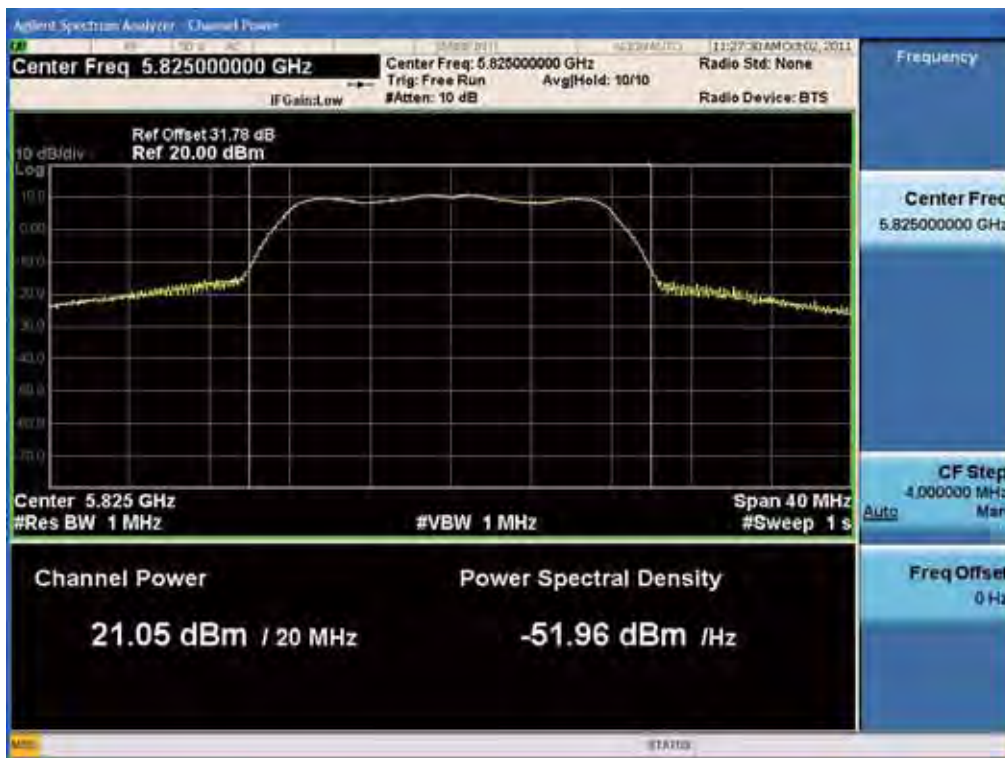


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



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

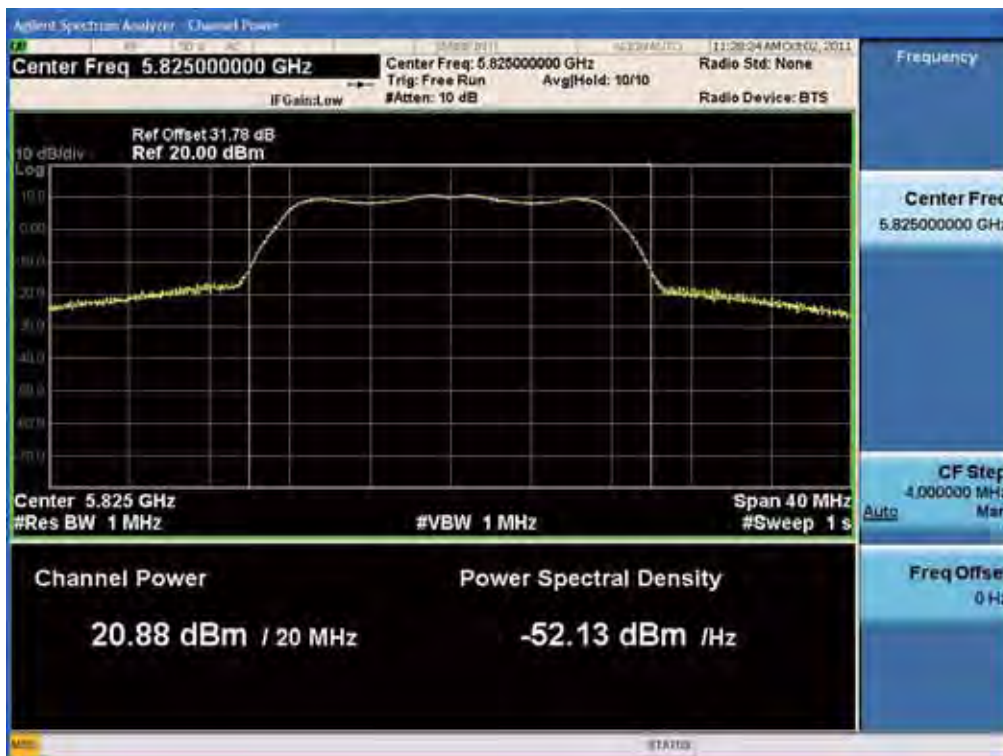


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



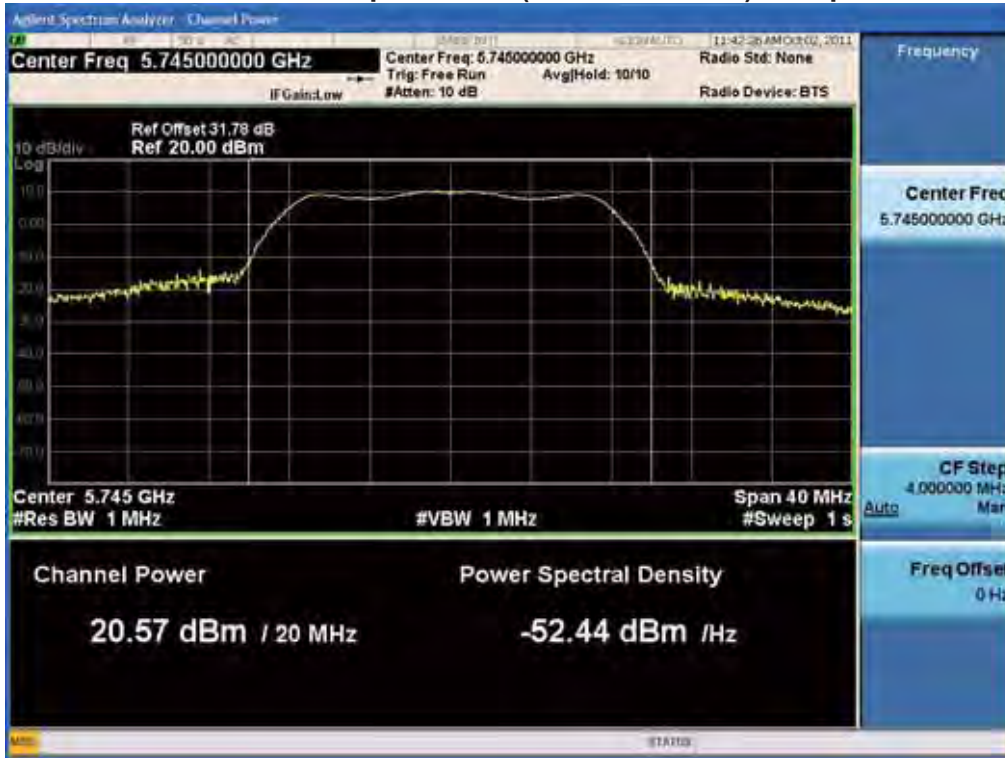
Conducted Output Power (802.11a-CH 165) 54 Mbps



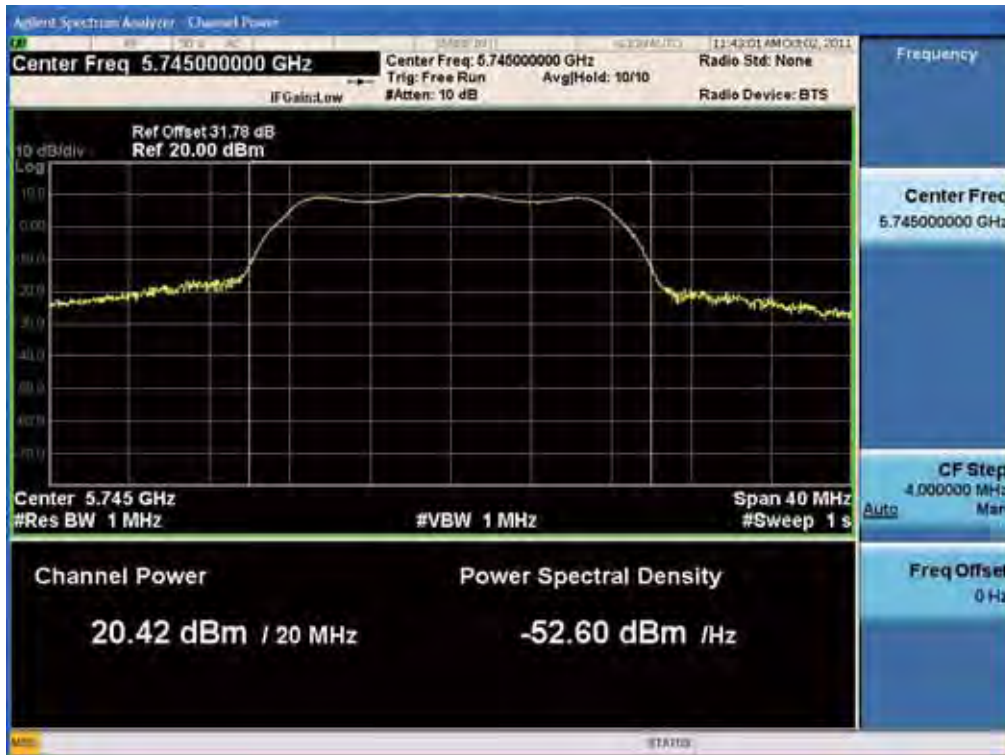
FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

RESULT PLOTS_Ant.1 (5745 MHz - 5825 MHz)

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



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

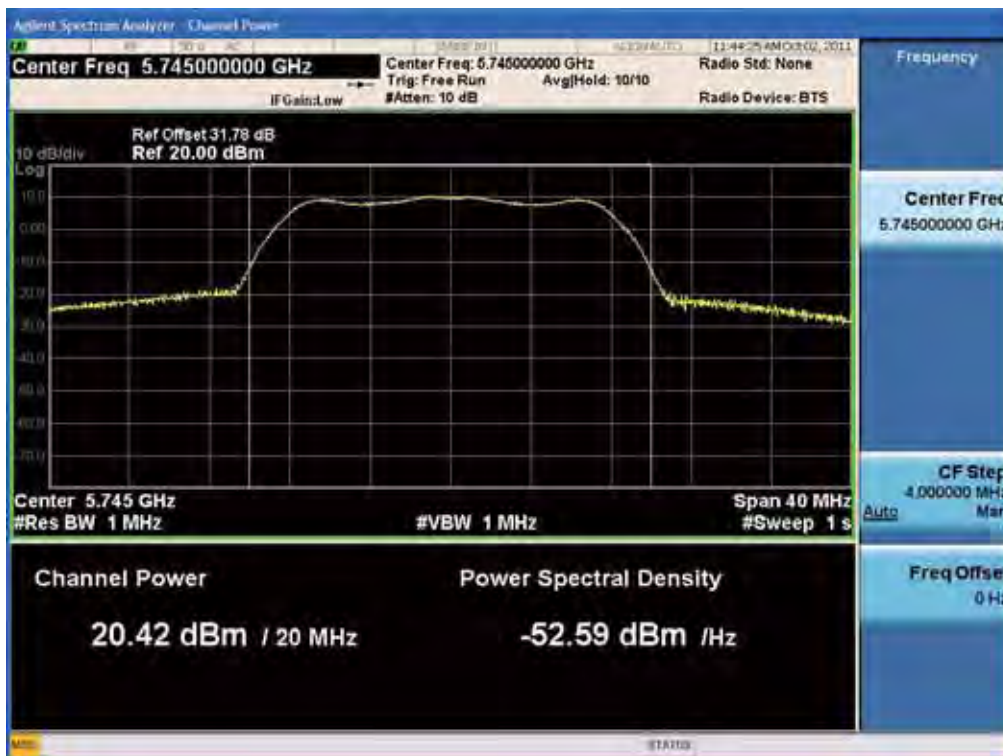


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



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

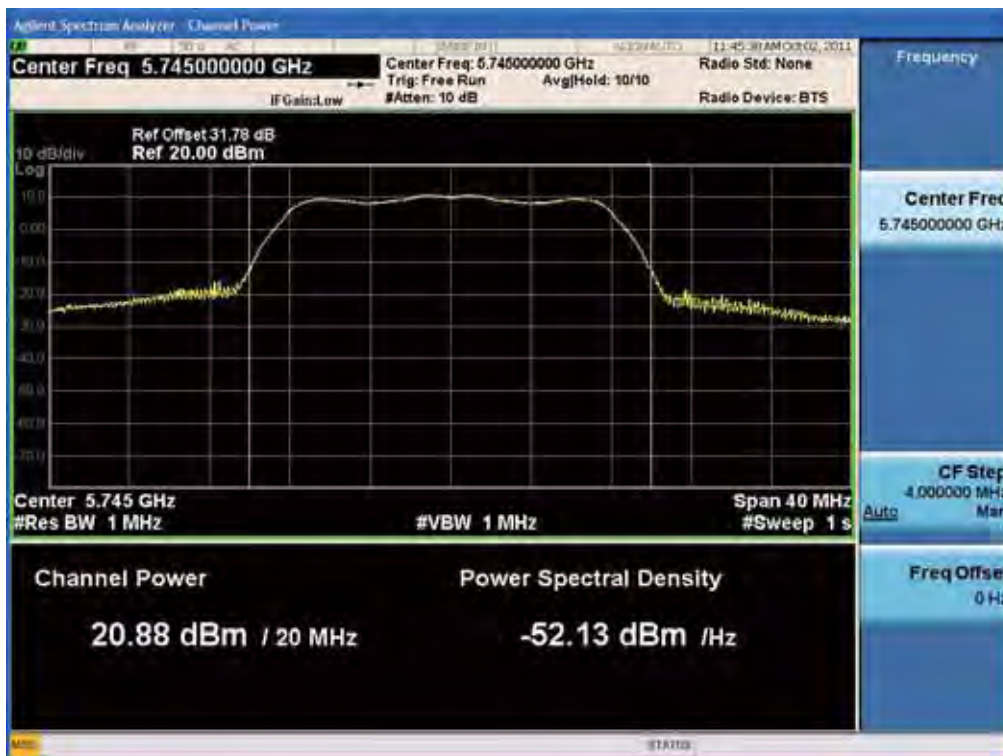


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

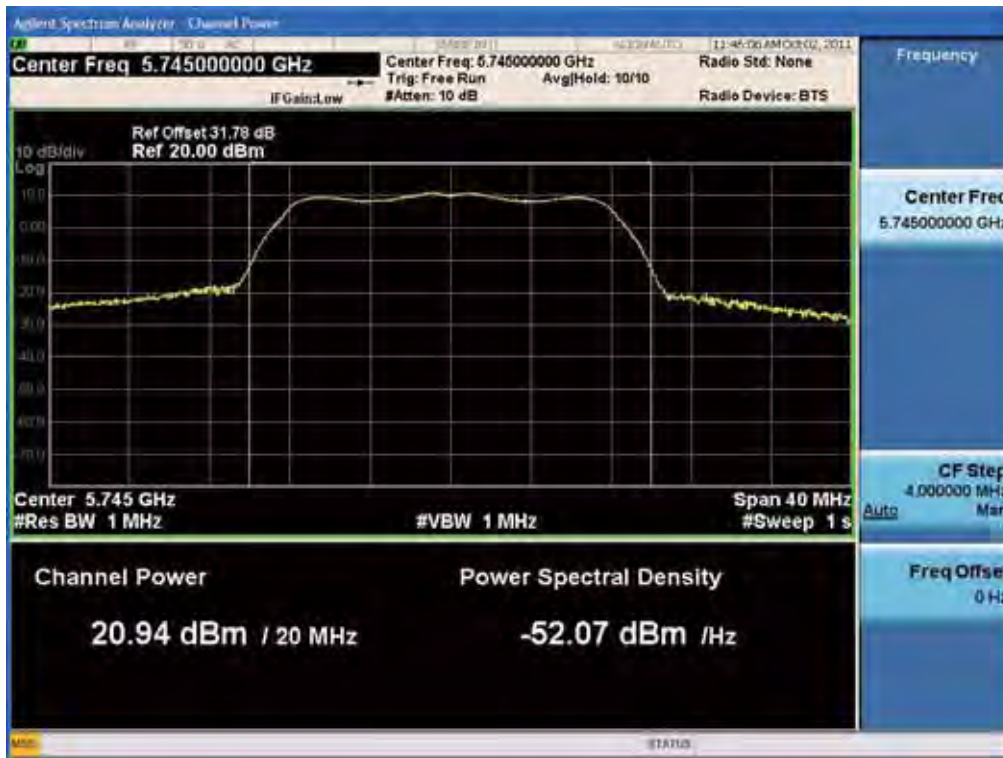


Conducted Output Power (802.11a-CH 149) 36 Mbps

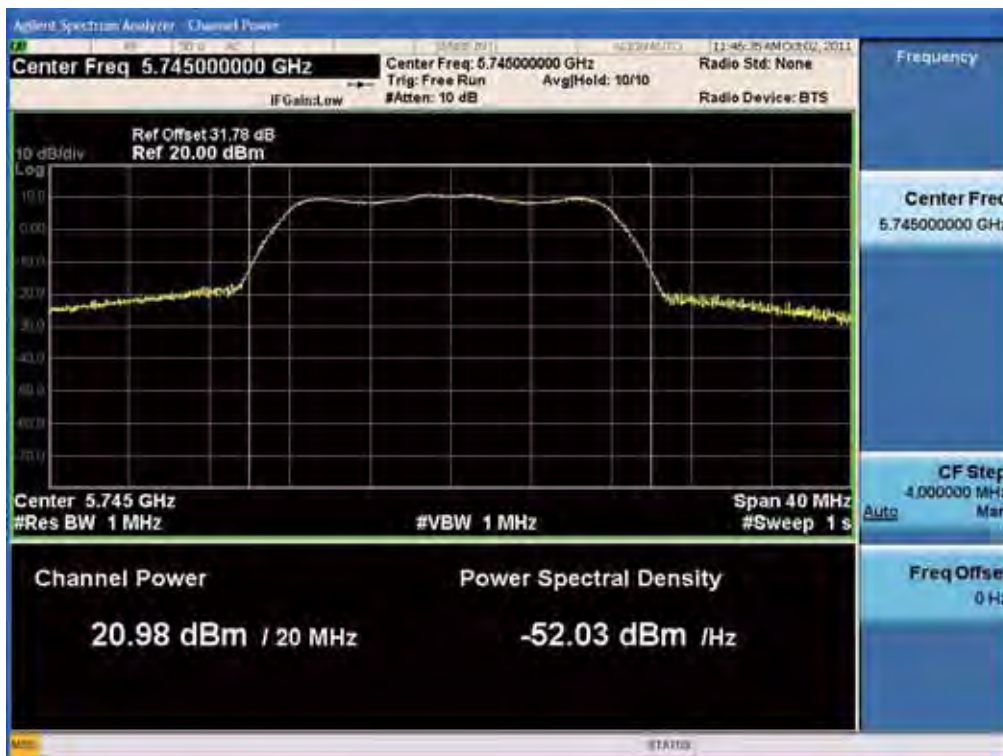


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

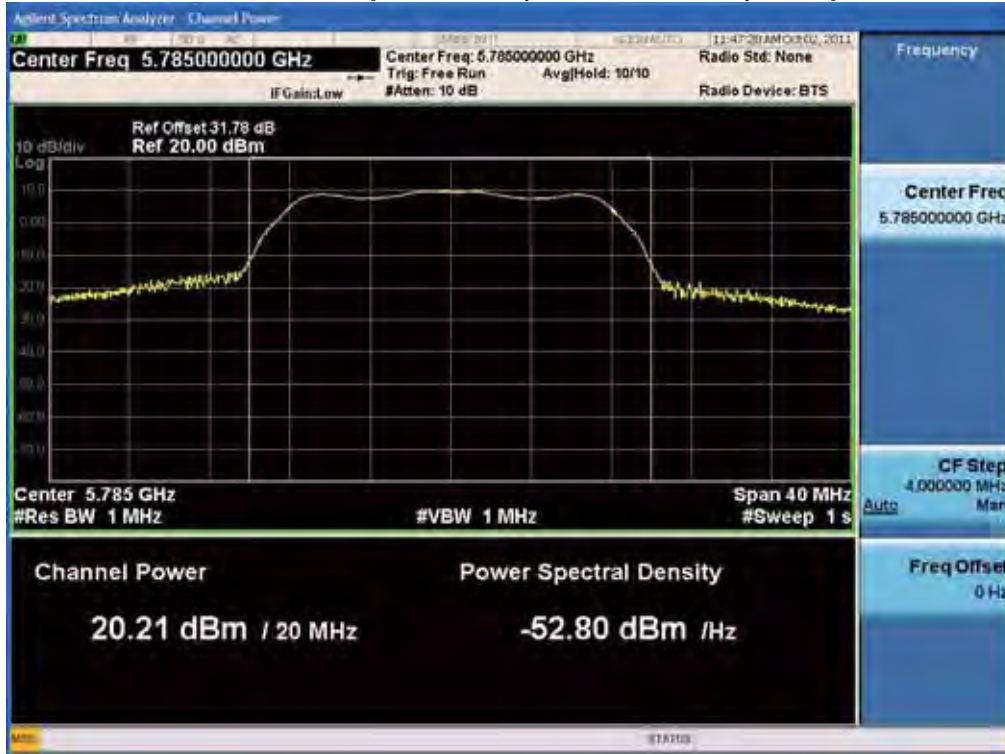


Conducted Output Power (802.11a-CH 149) 54 Mbps

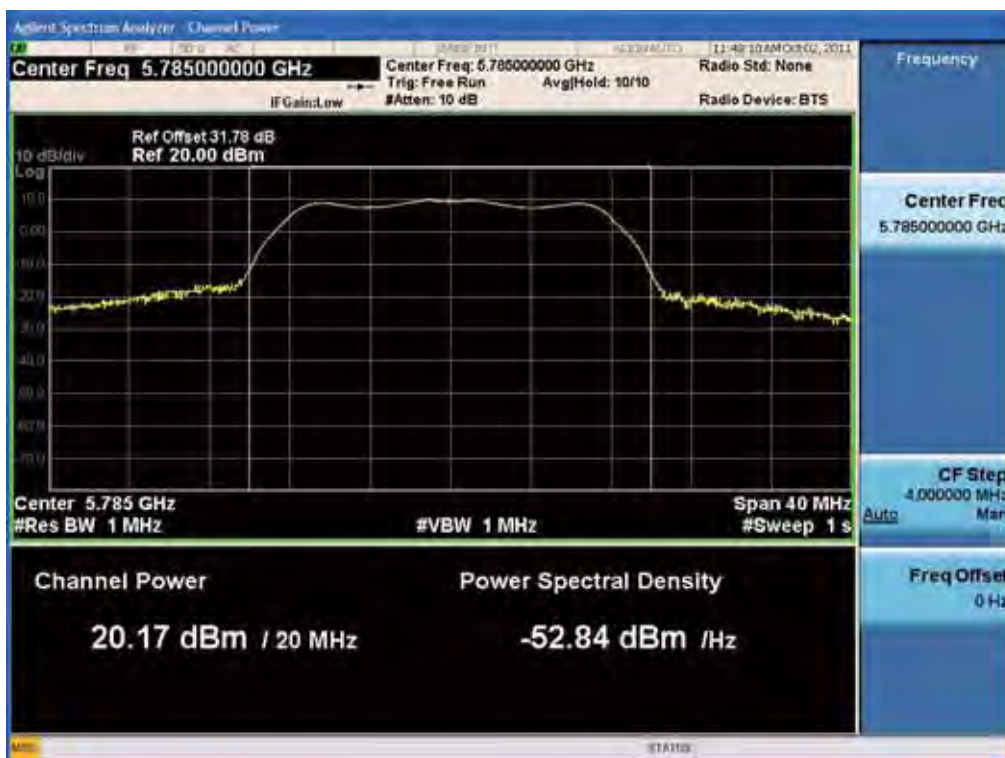


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



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

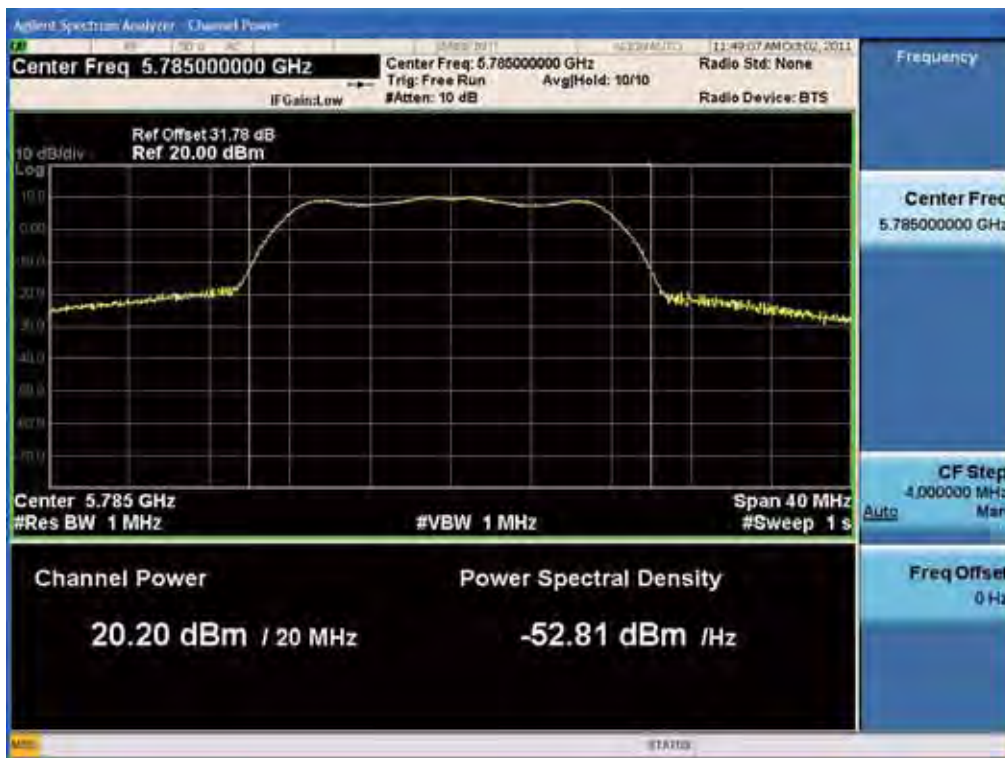


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

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



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

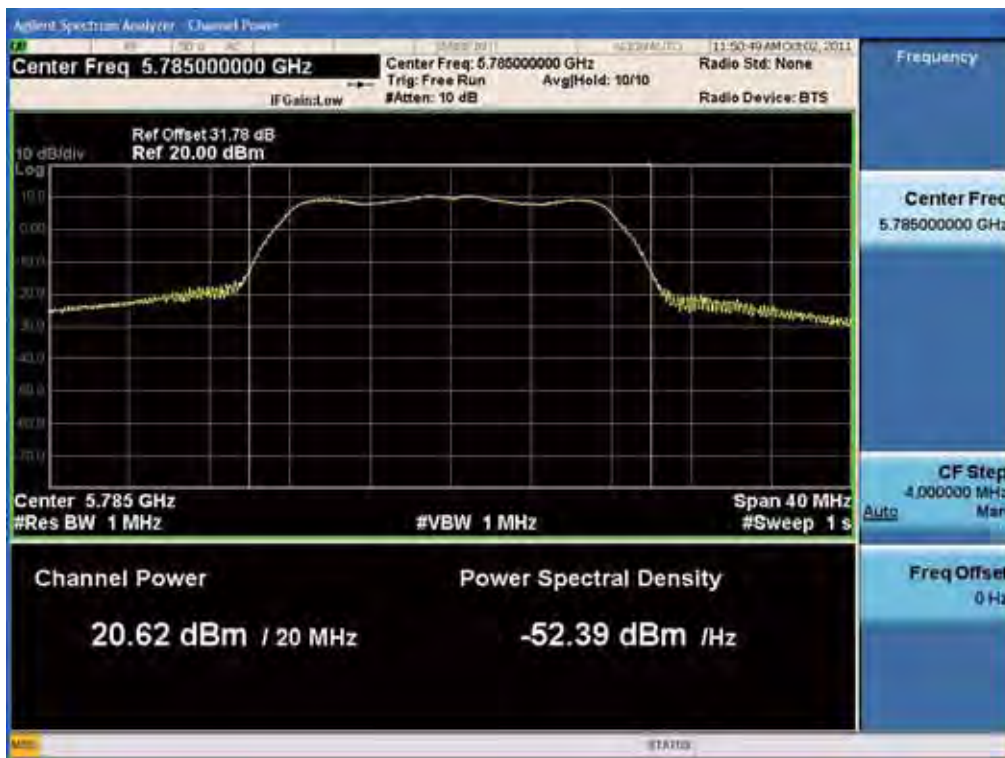


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

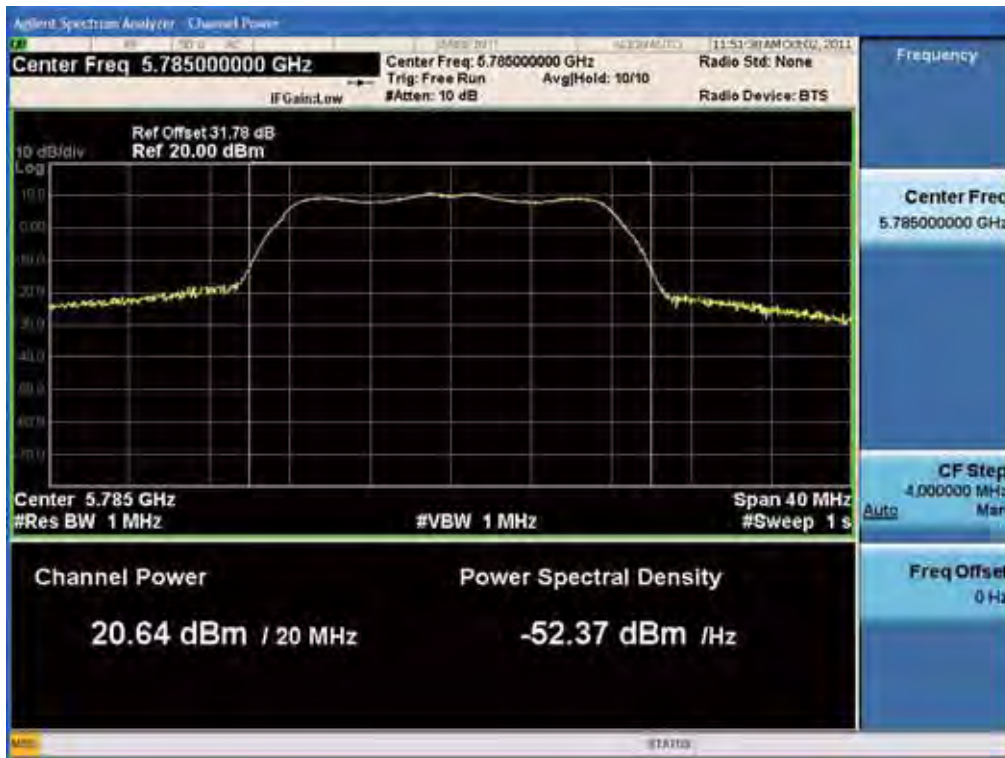


Conducted Output Power (802.11a-CH 157) 36 Mbps



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

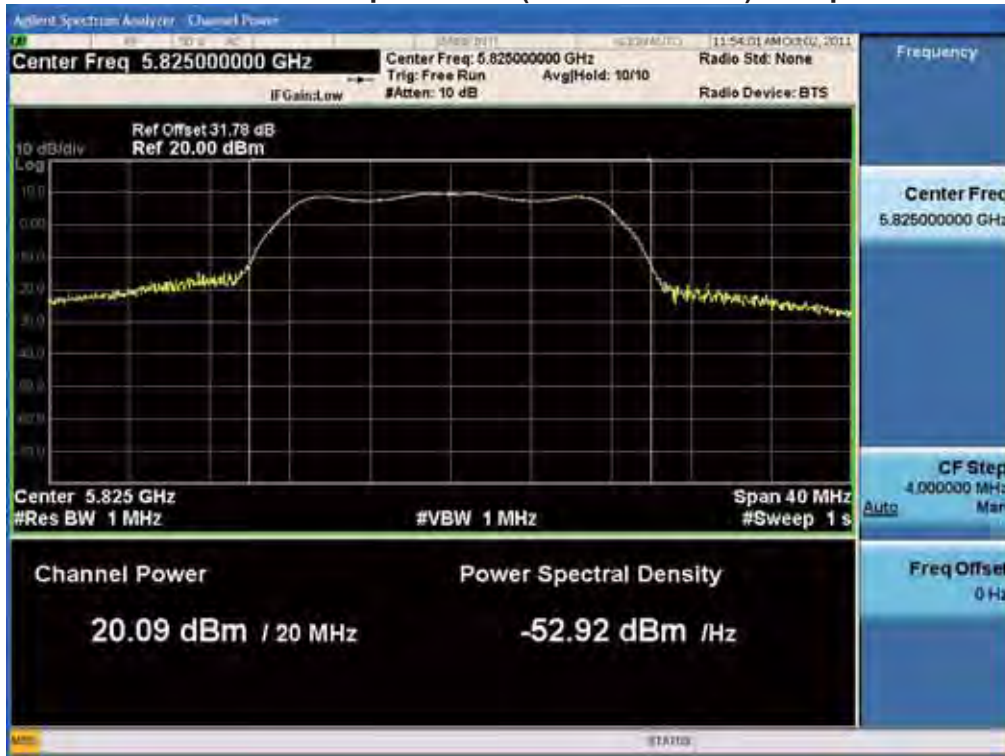


Conducted Output Power (802.11a-CH 157) 54 Mbps



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



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

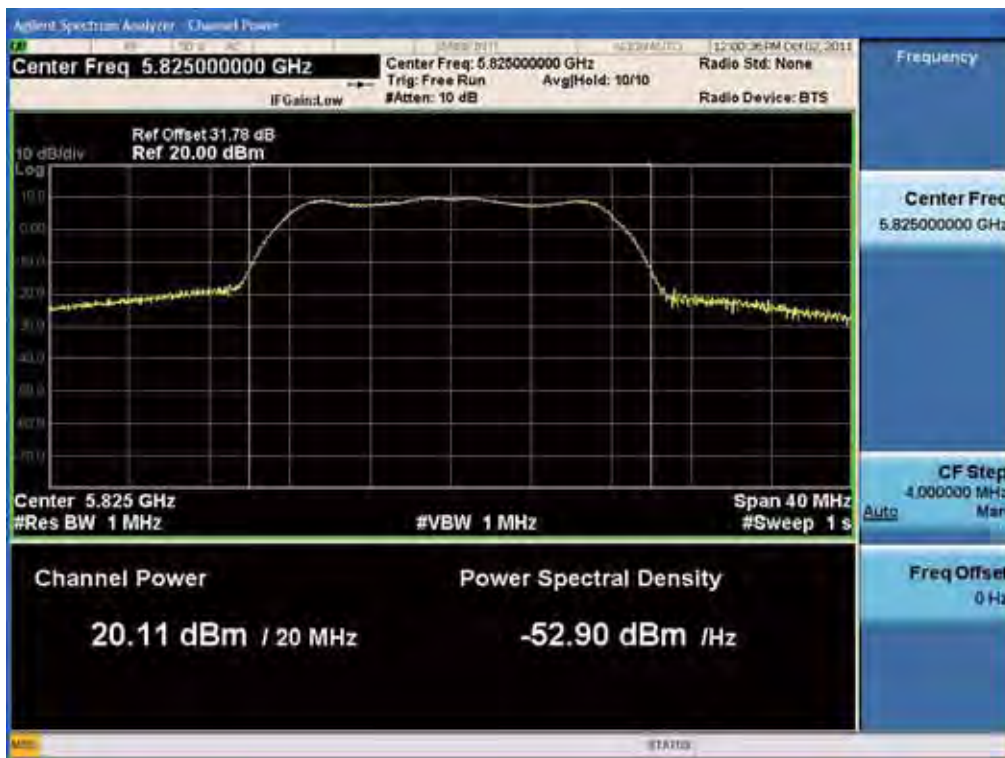


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

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



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

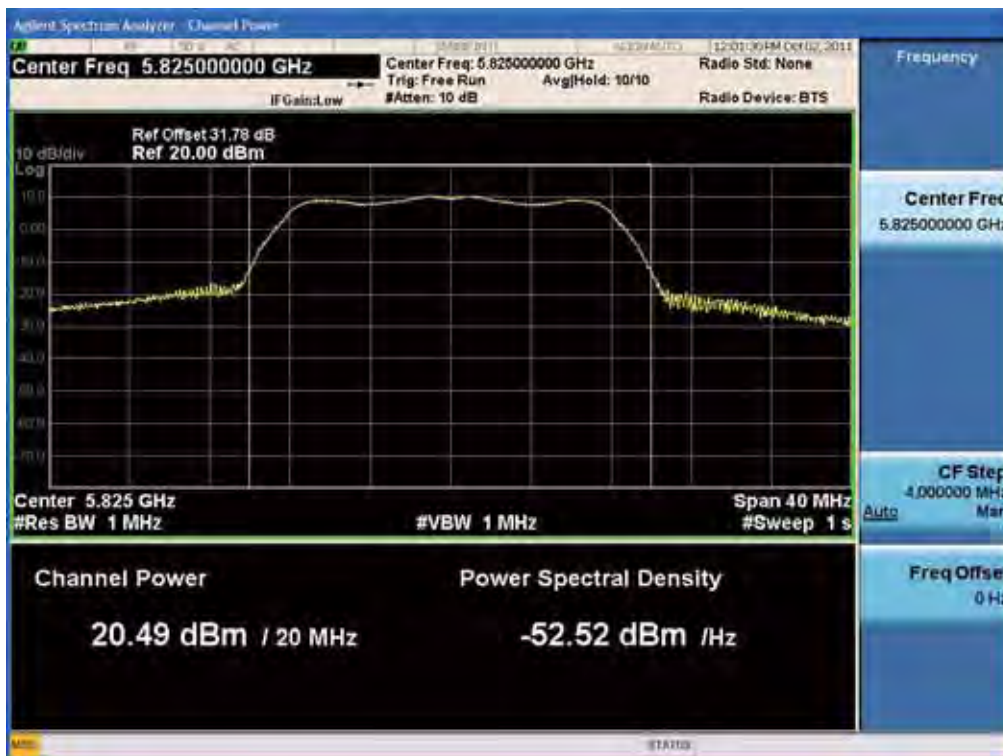


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

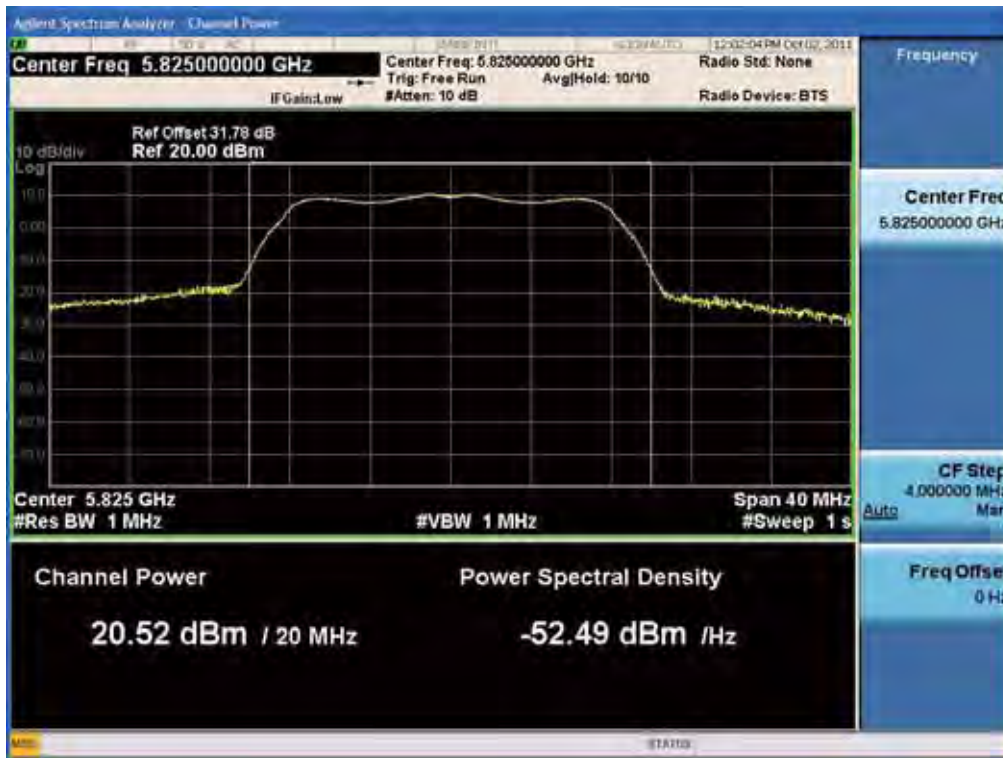


Conducted Output Power (802.11a-CH 165) 36 Mbps

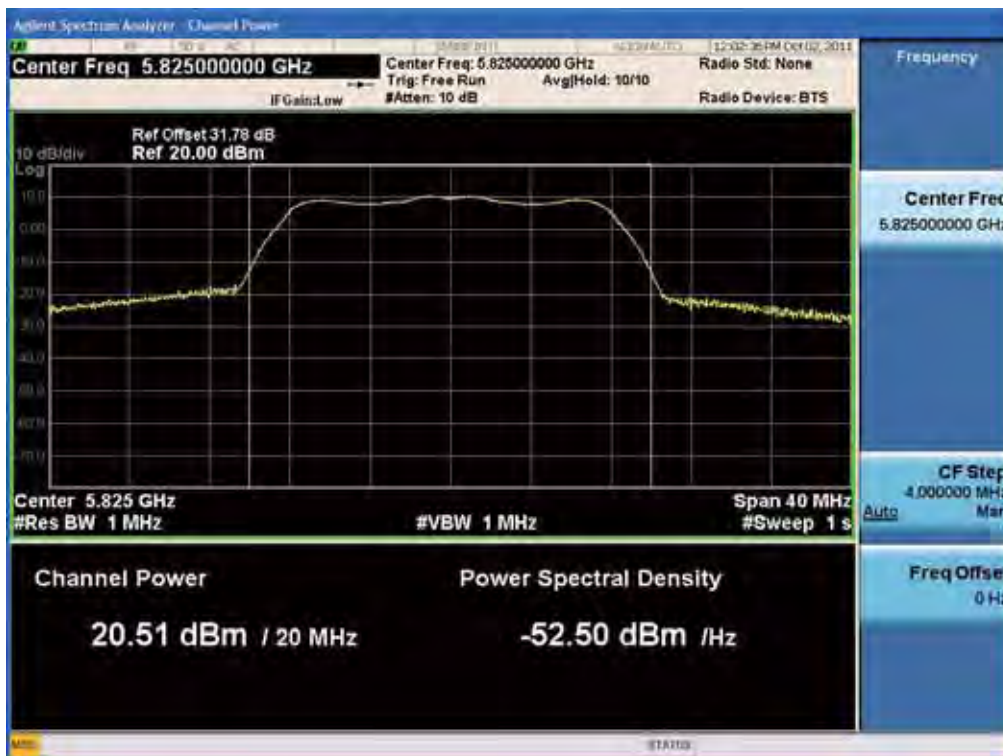


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

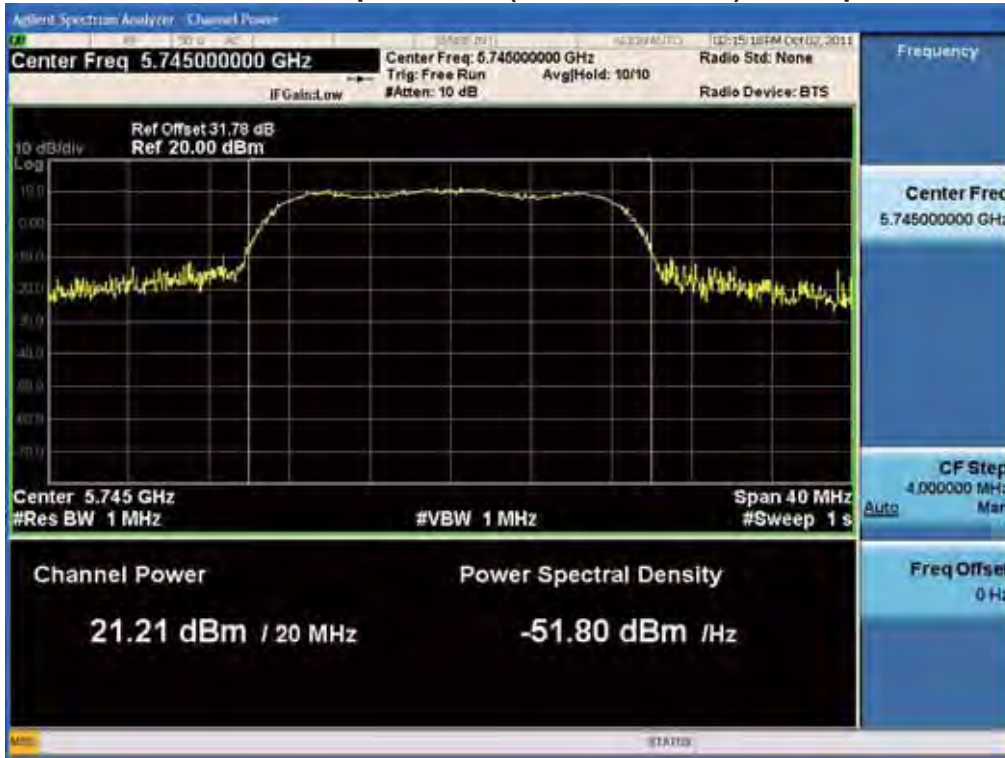


Conducted Output Power (802.11a-CH 165) 54 Mbps



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

RESULT PLOTS_Ant.0 (5745 MHz – 5825 MHz)_ 20 MHz BW
 Conducted Output Power (802.11n-CH 149) 6.5 Mbps

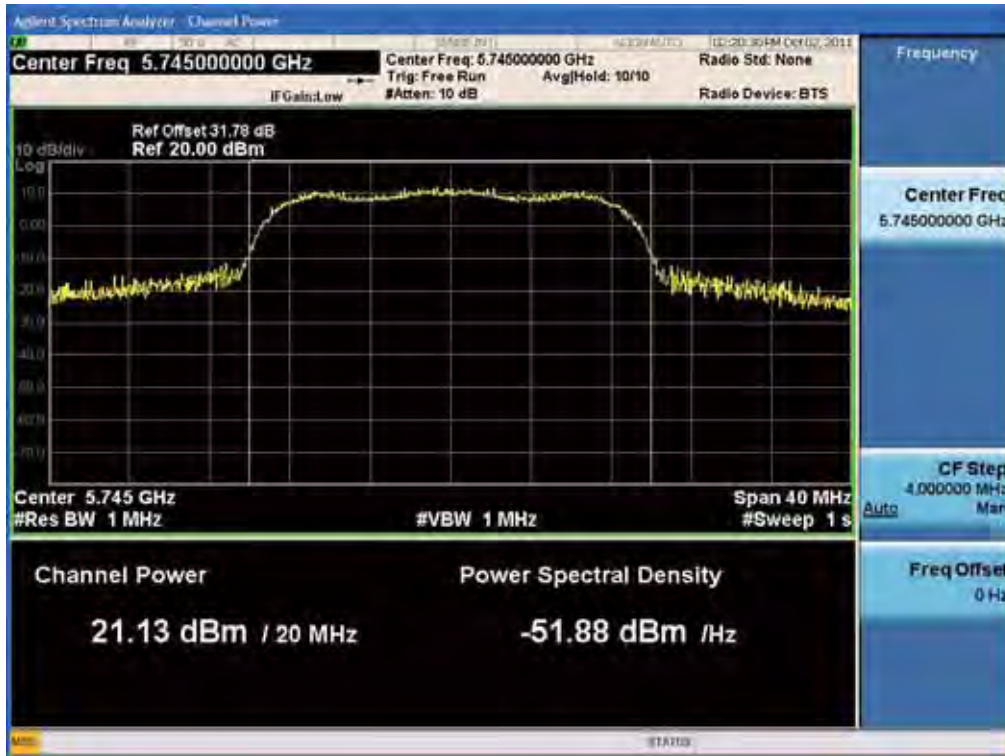


Conducted Output Power (802.11n-CH 149) 13 Mbps



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



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

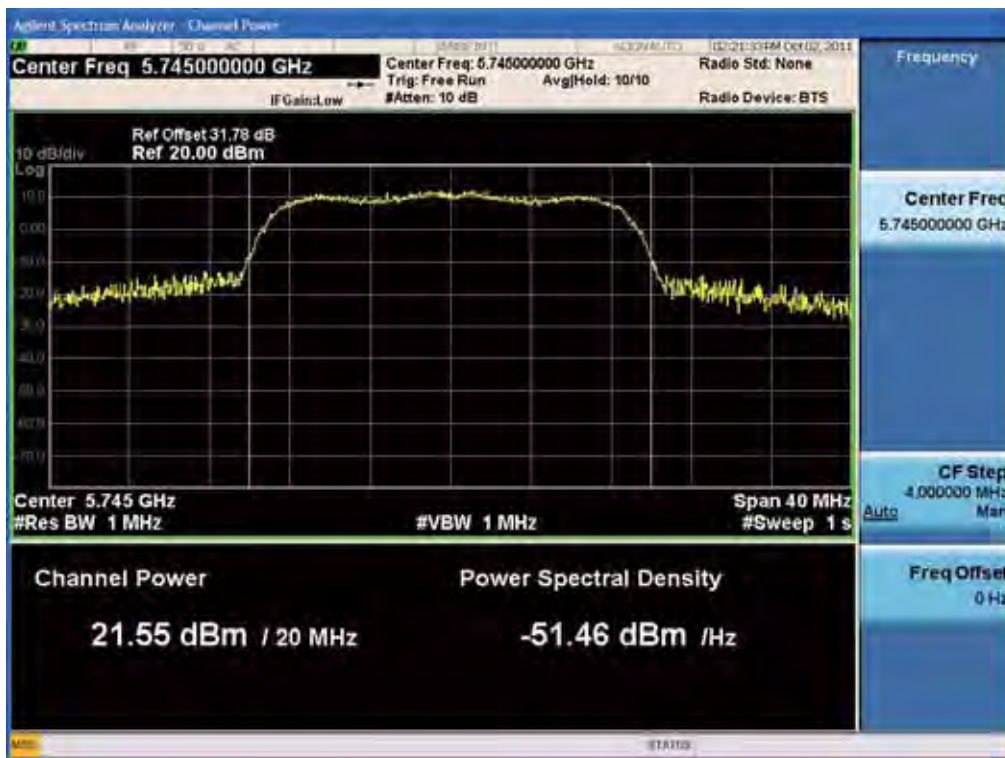


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

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

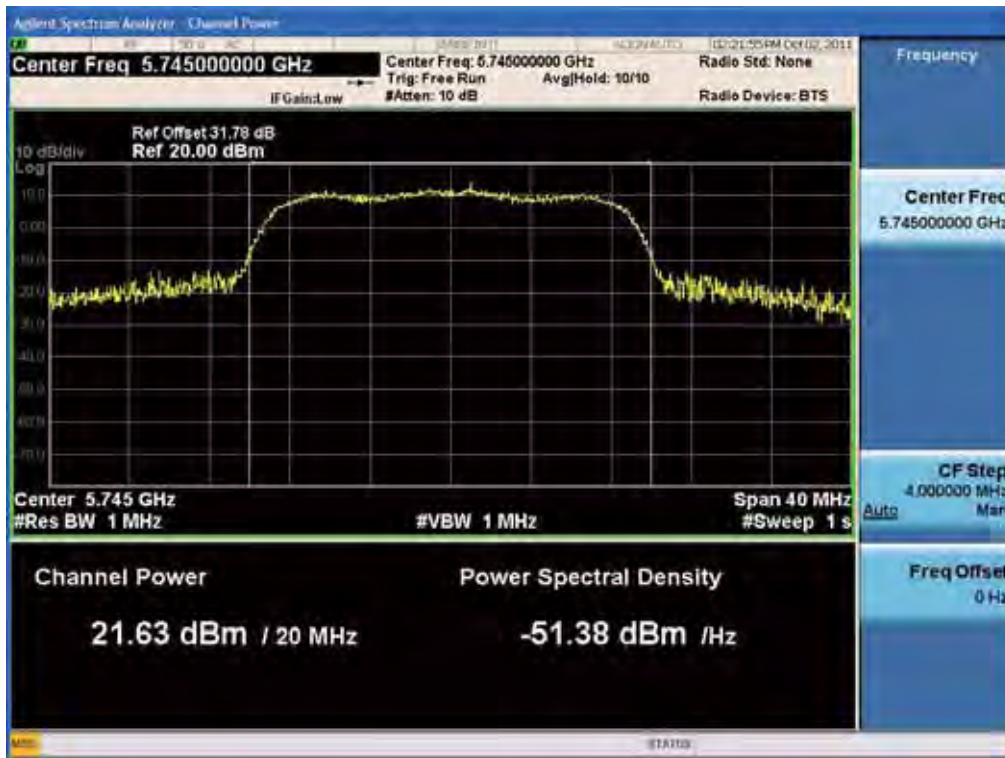


Conducted Output Power (802.11n-CH 149) 52 Mbps

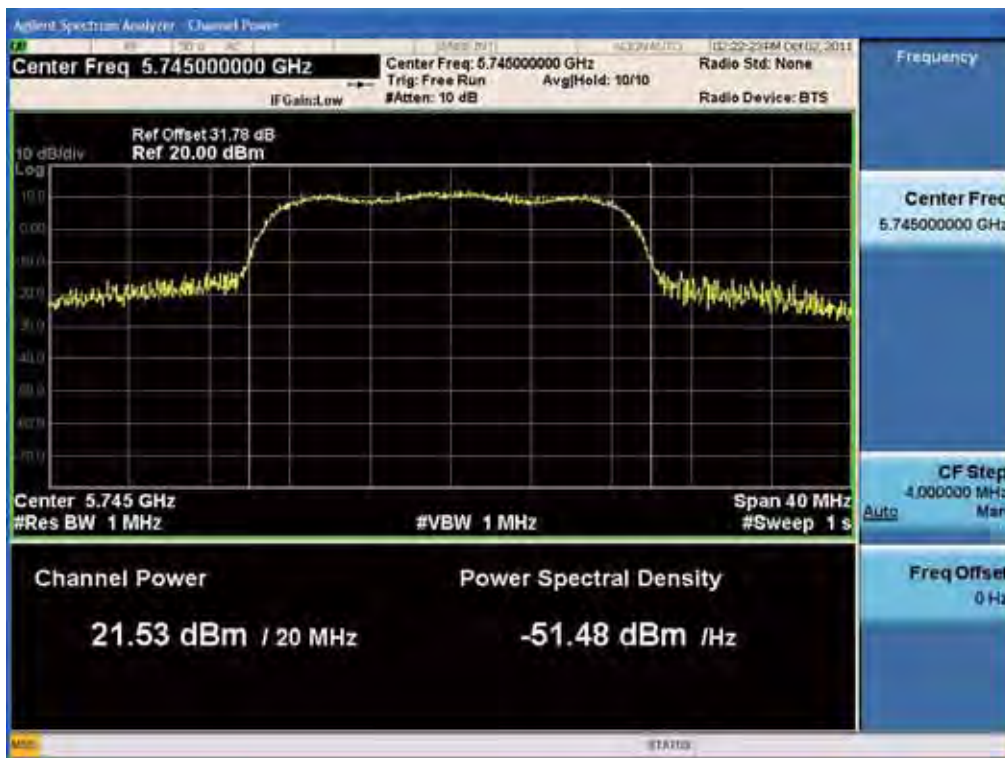


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

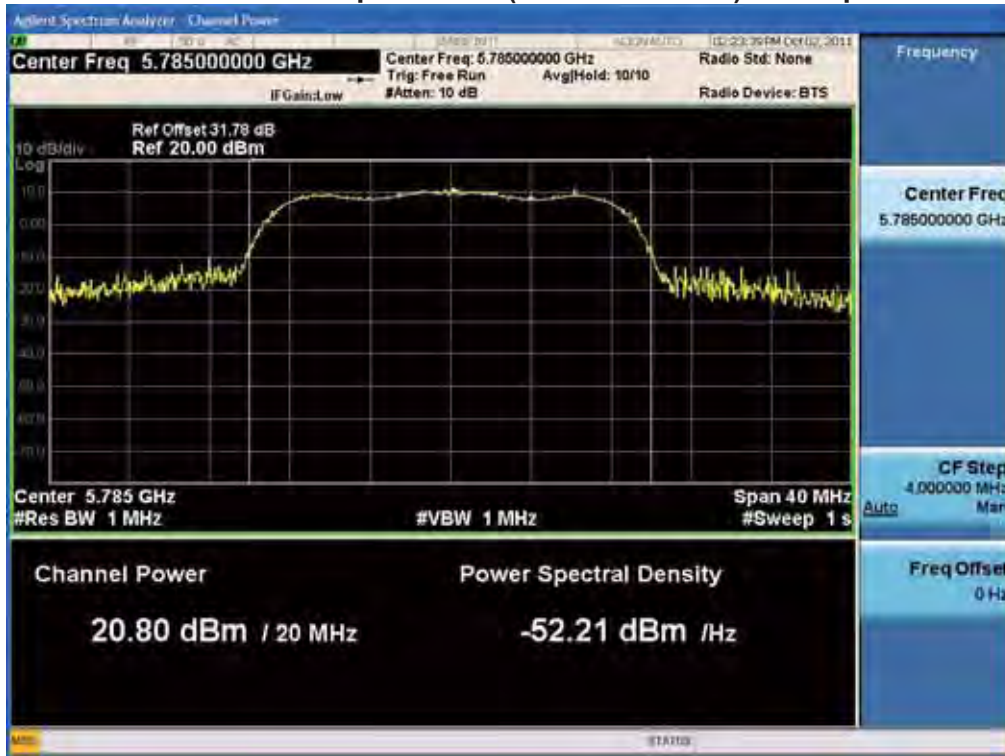


Conducted Output Power (802.11n-CH 149) 65 Mbps



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

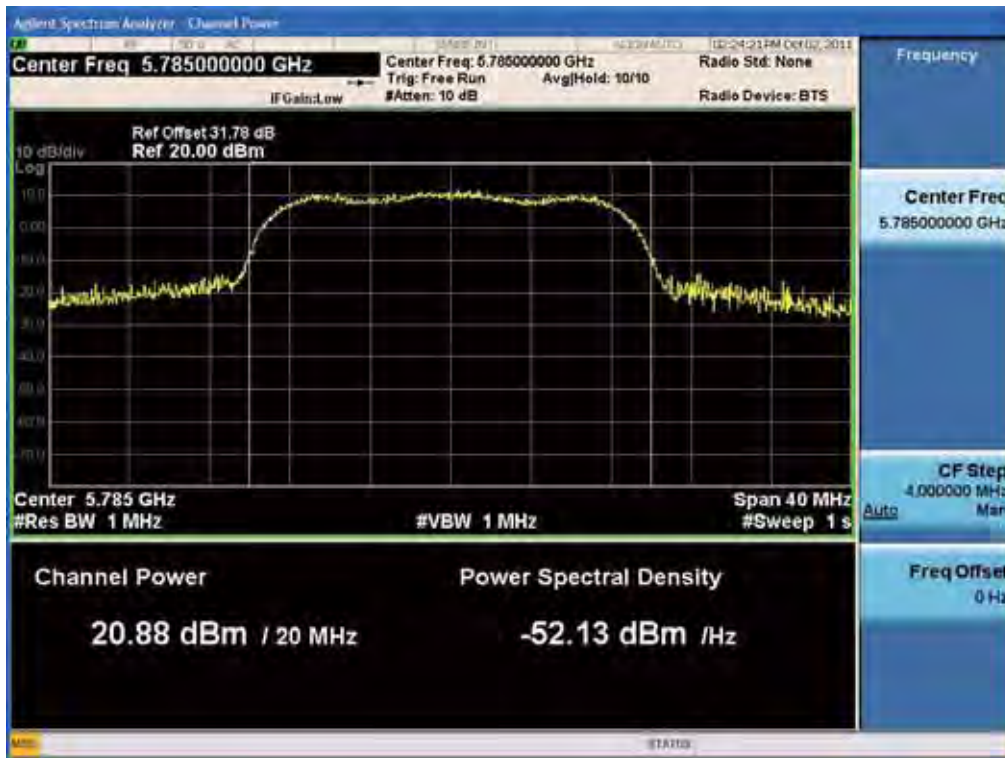


Conducted Output Power (802.11n-CH 157) 13 Mbps

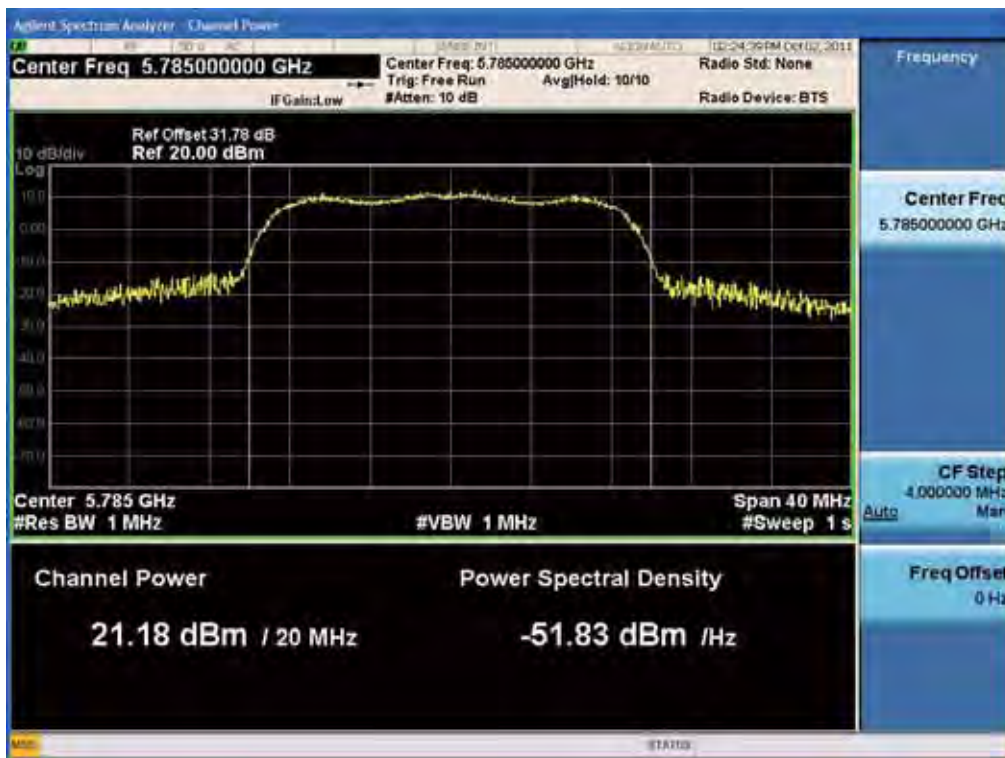


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



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

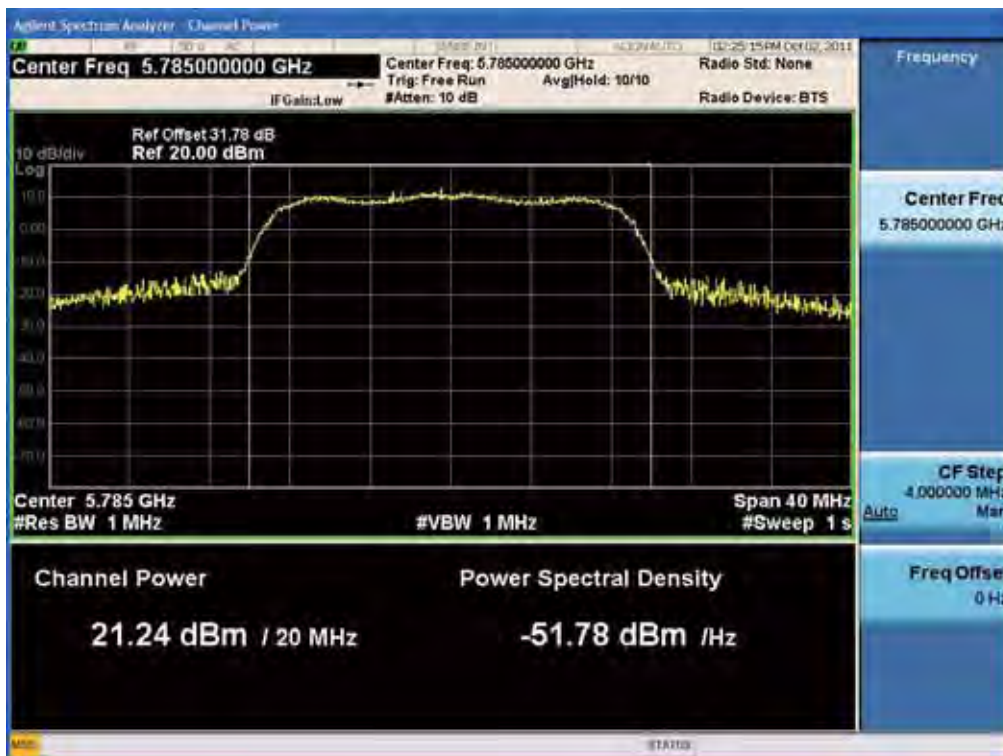


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

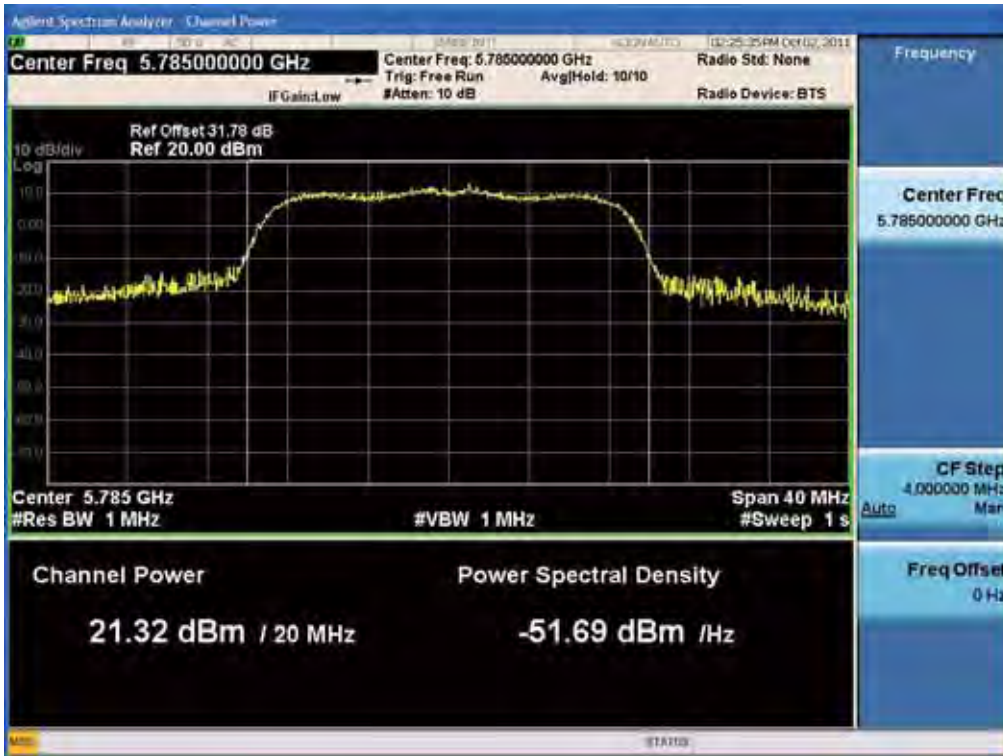


Conducted Output Power (802.11n-CH 157) 52 Mbps



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

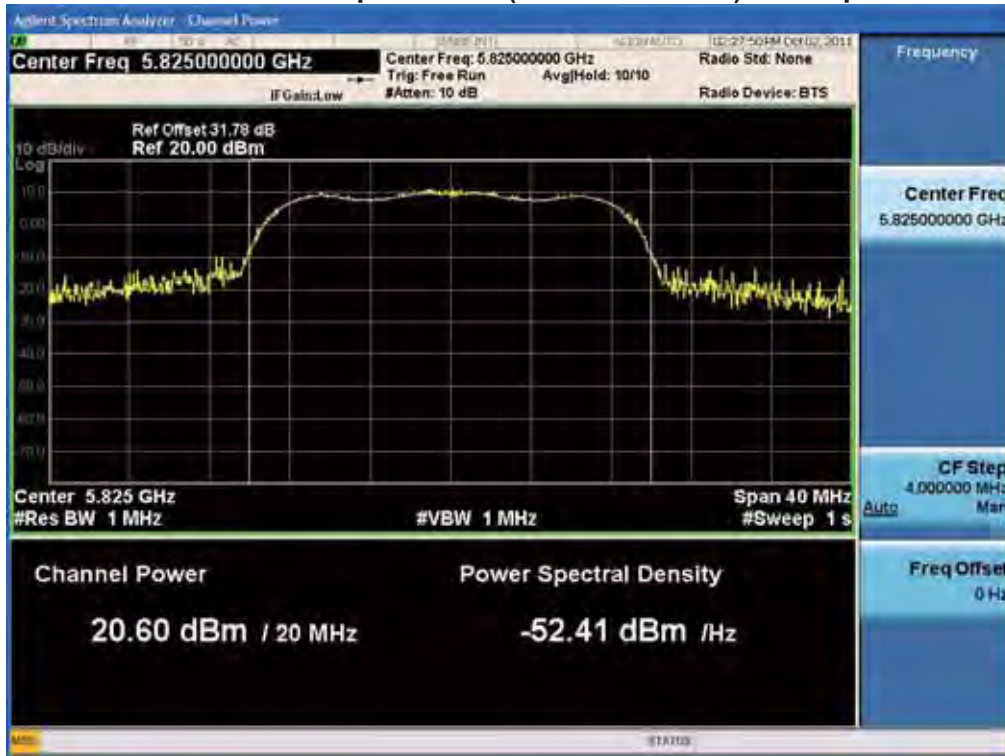


Conducted Output Power (802.11n-CH 157) 65 Mbps



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



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

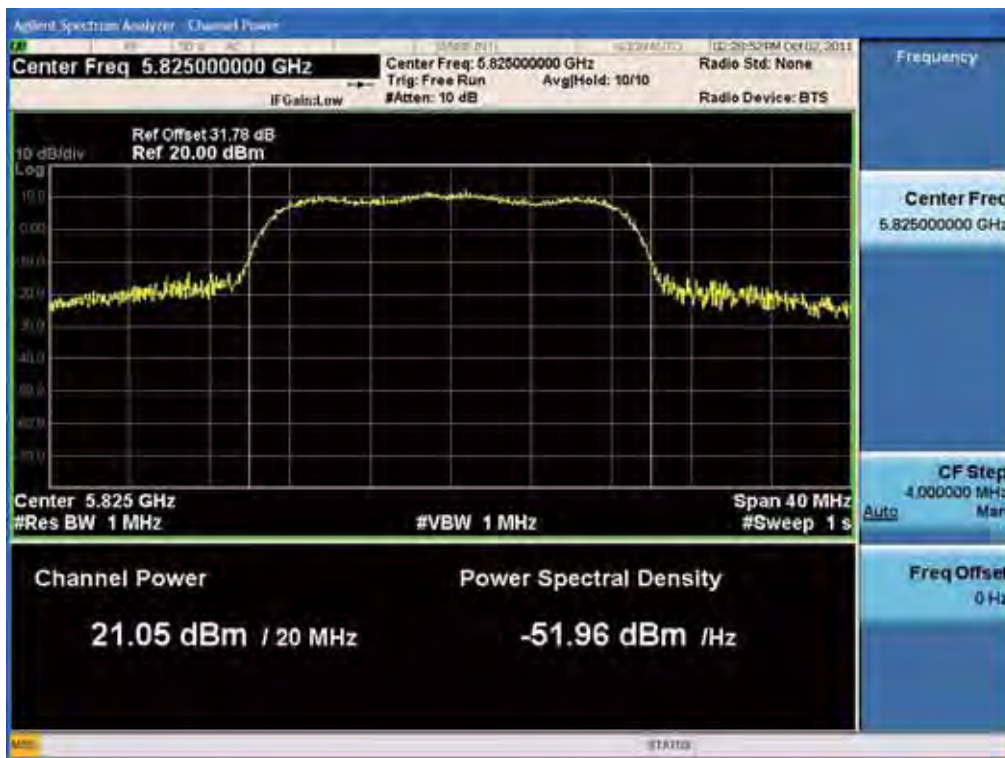


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



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



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

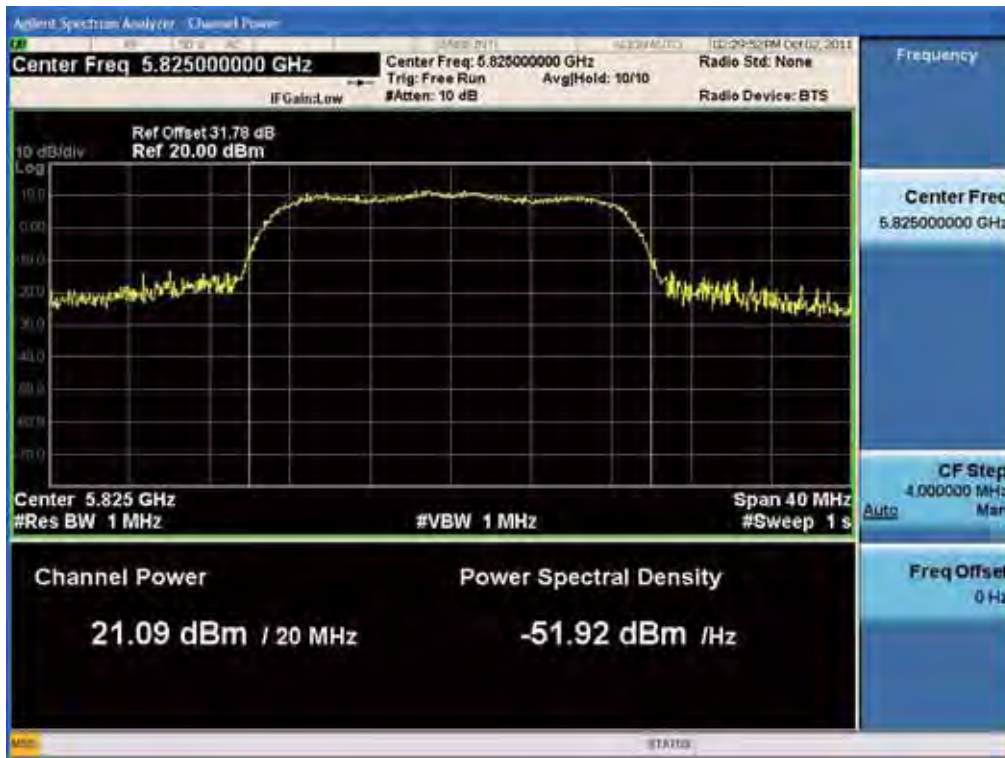


Conducted Output Power (802.11n-CH 165) 52 Mbps



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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 & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

■ RESULT PLOTS_Ant.1 (5745 MHz – 5825 MHz) _ 20 MHz BW
 Conducted Output Power (802.11n-CH 149) 6.5 Mbps

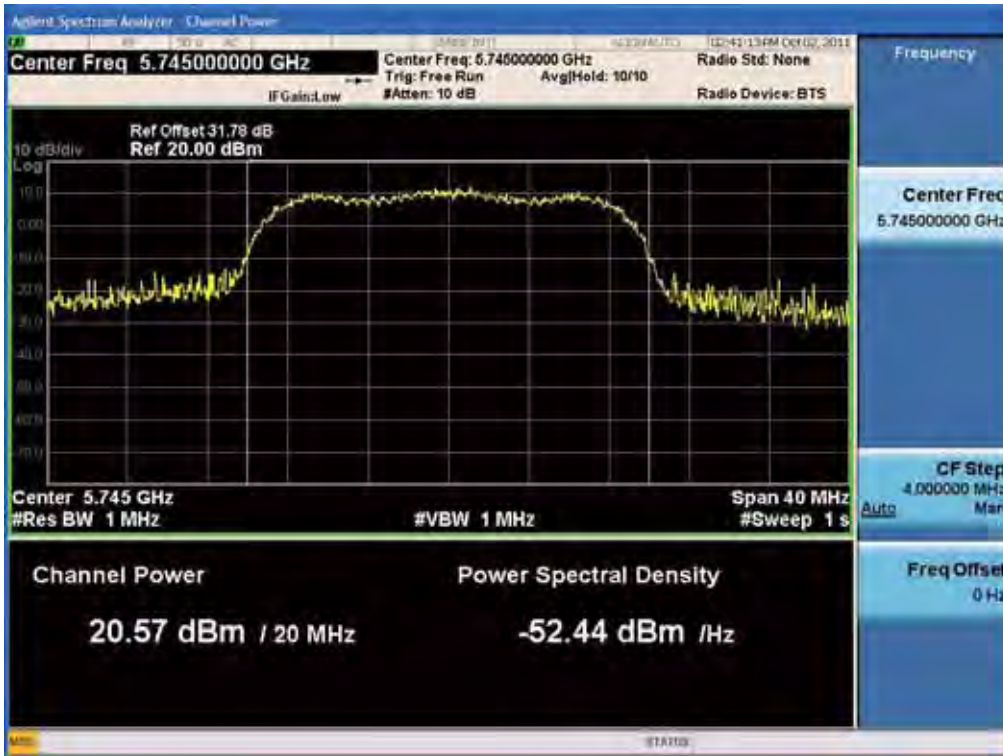


Conducted Output Power (802.11n-CH 149) 13 Mbps

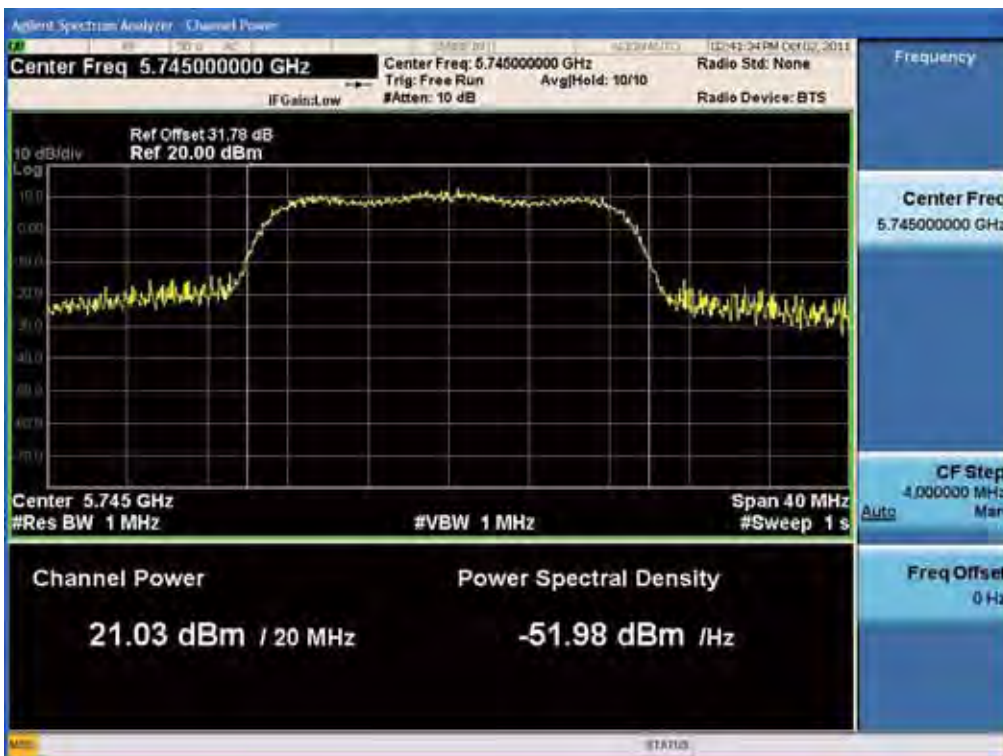


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

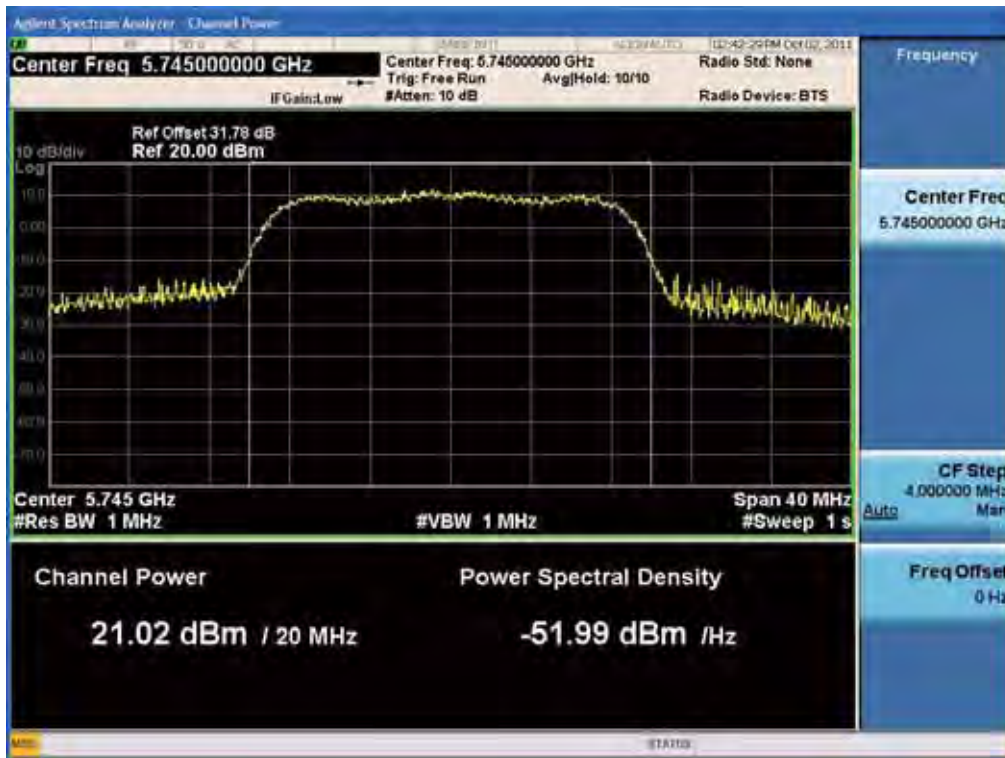


Conducted Output Power (802.11n-CH 149) 26 Mbps

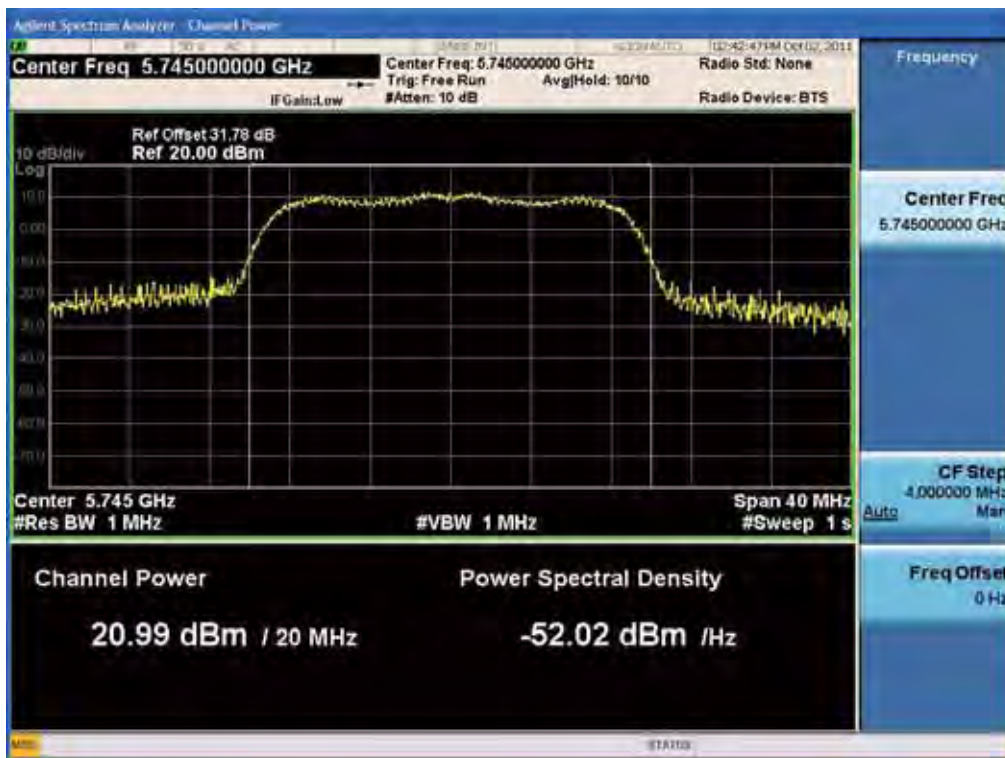


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

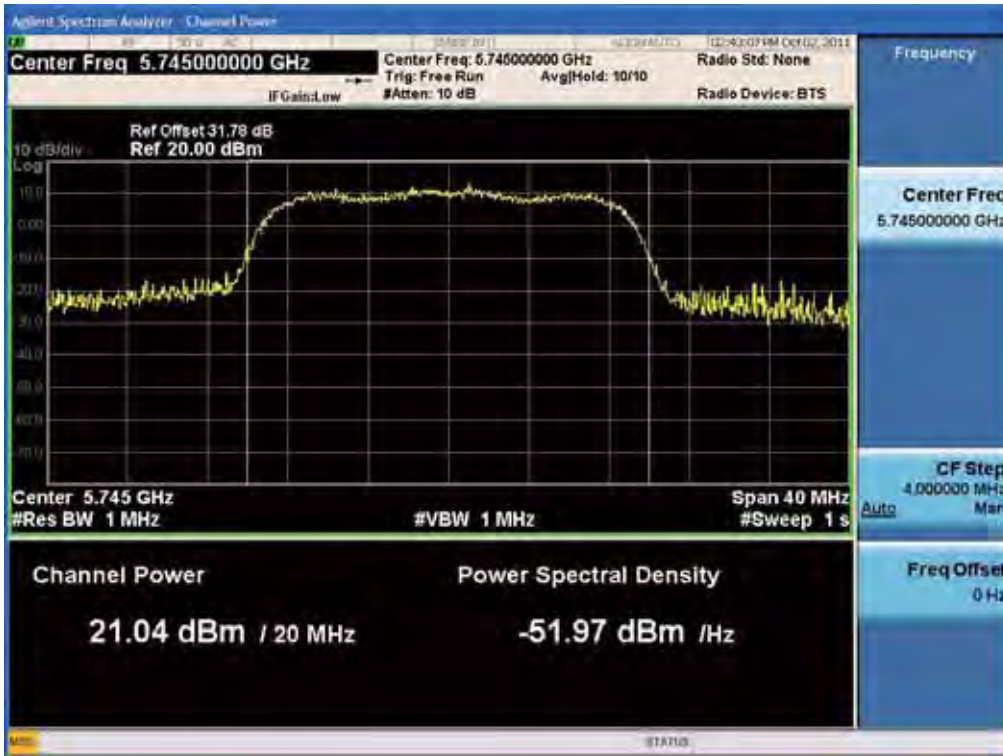
Conducted Output Power (802.11n-CH 149) 39 Mbps



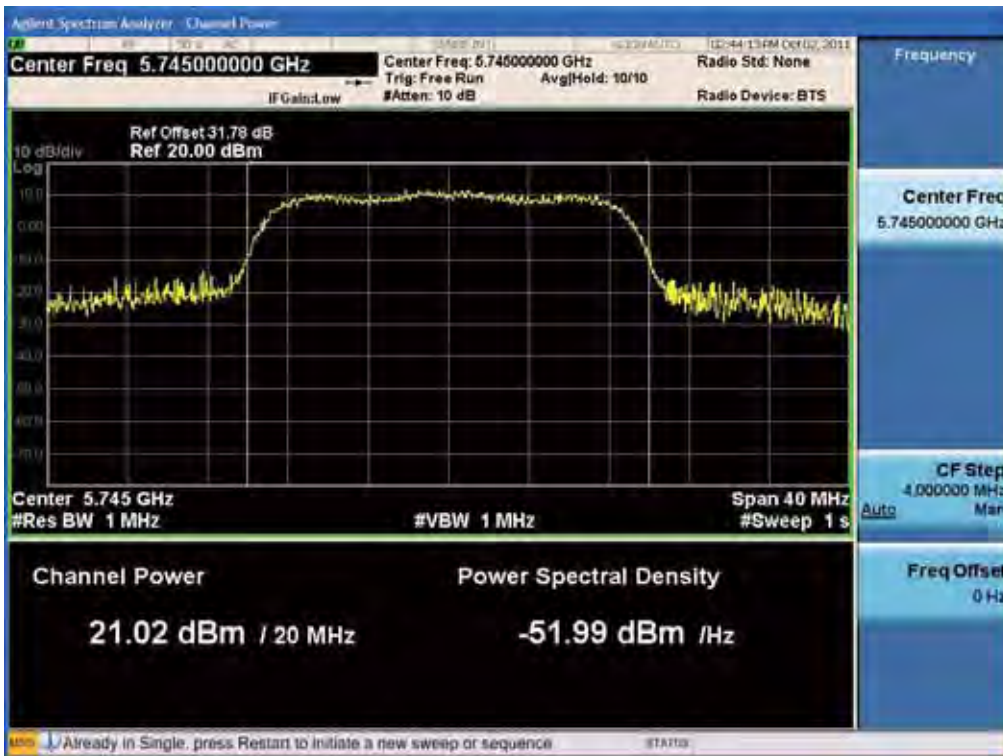
Conducted Output Power (802.11n-CH 149) 52 Mbps



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

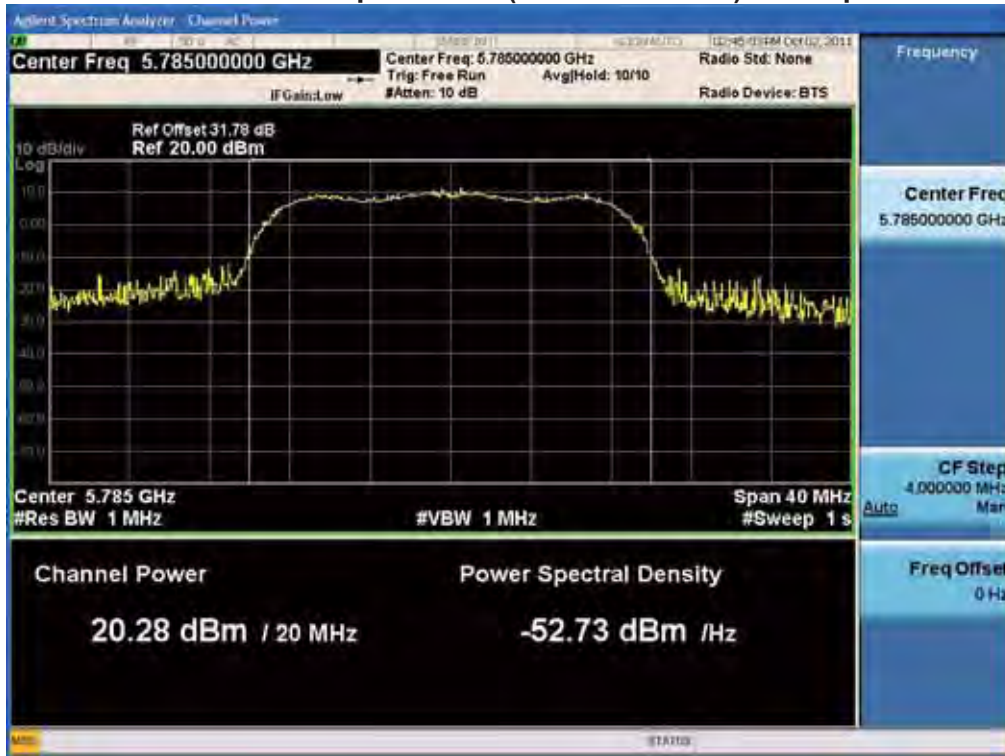


Conducted Output Power (802.11n-CH 149) 65 Mbps



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

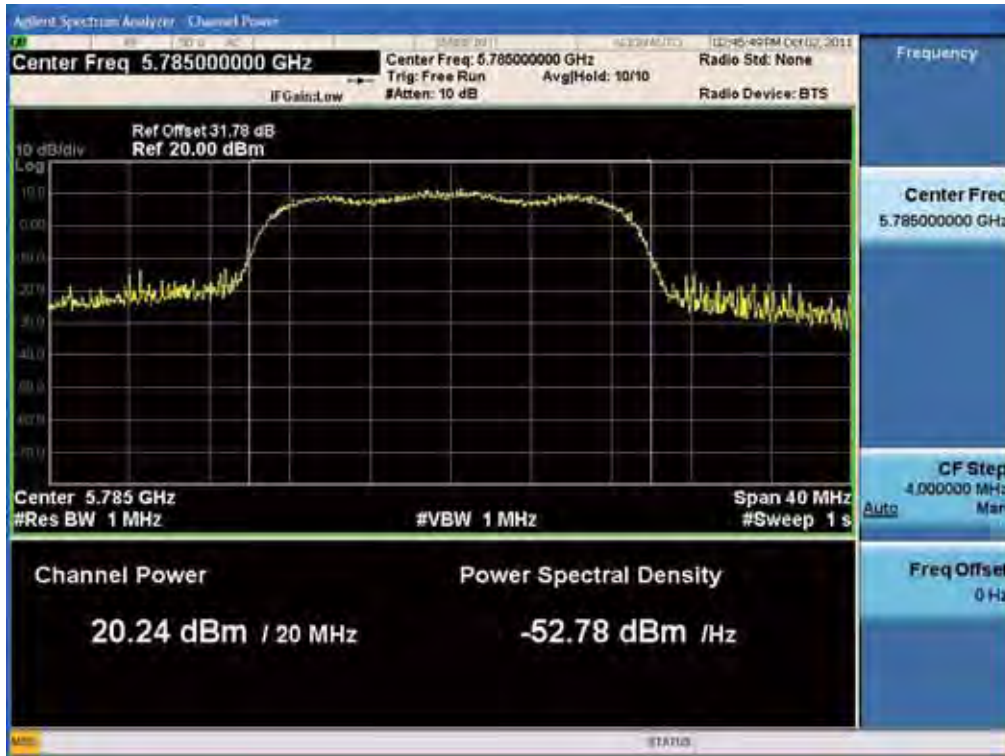


Conducted Output Power (802.11n-CH 157) 13 Mbps

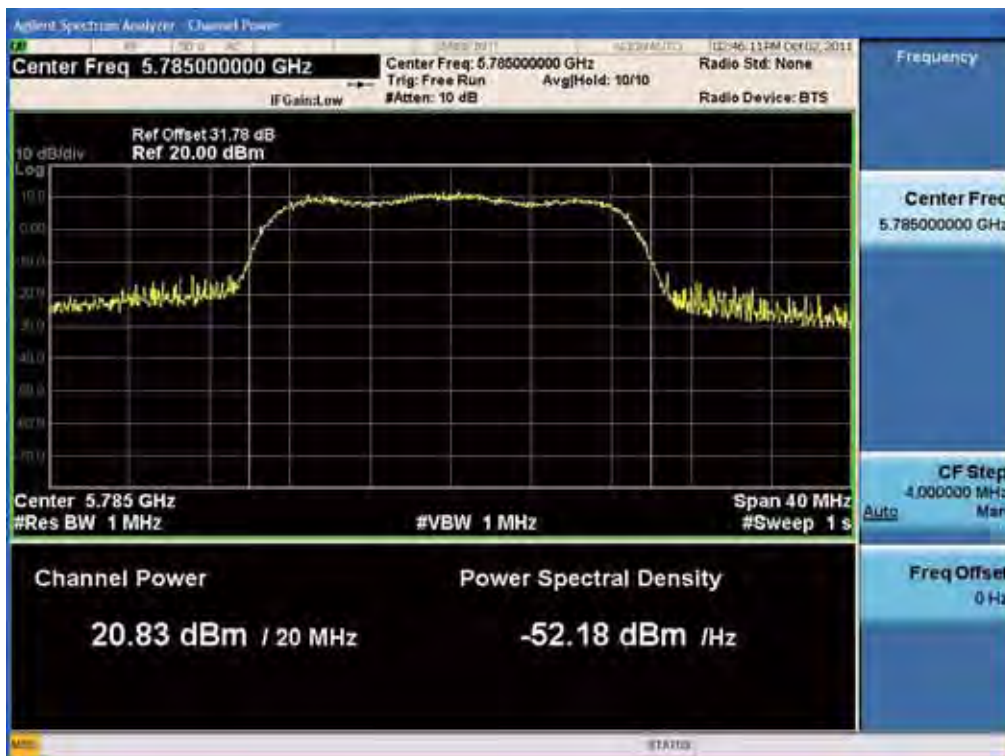


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



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

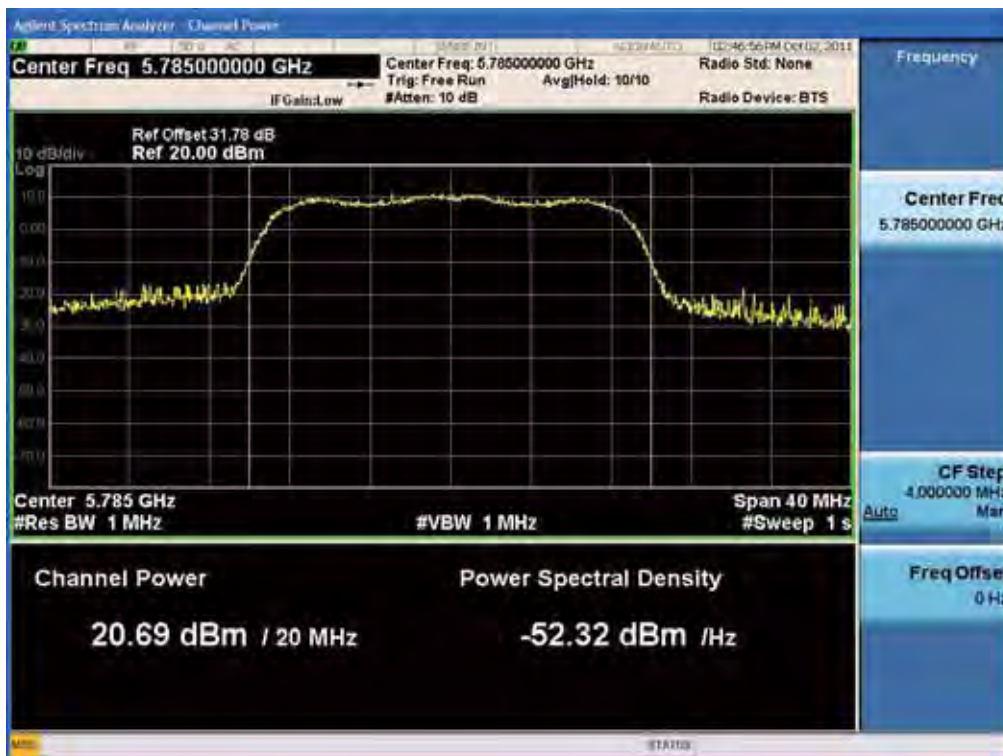


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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



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



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

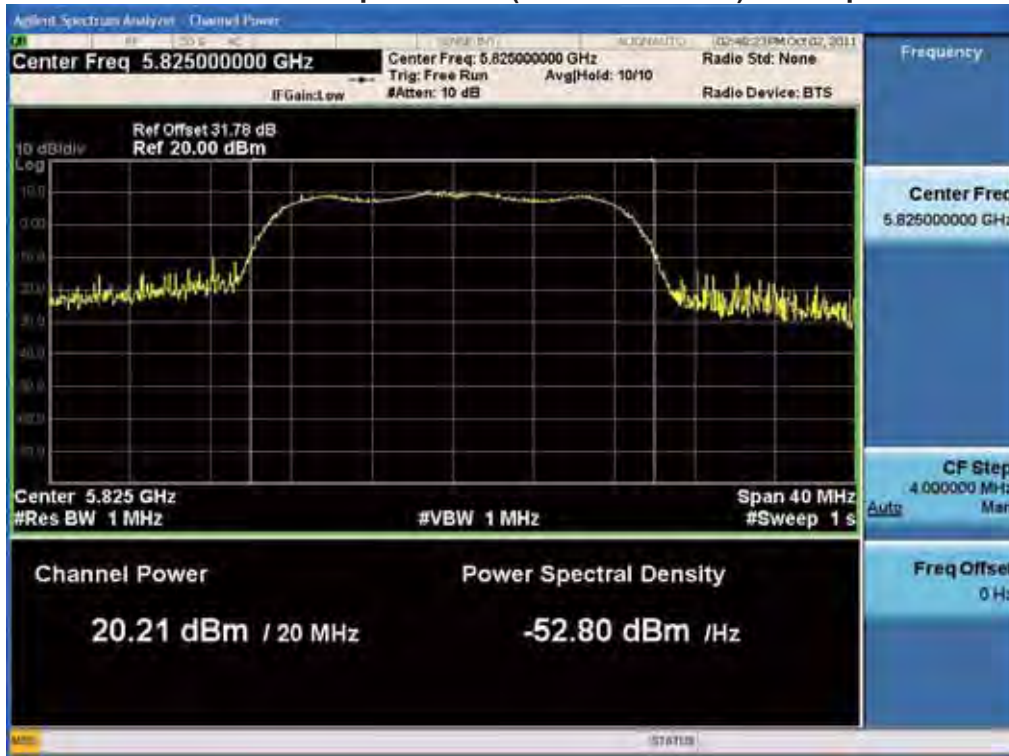


Conducted Output Power (802.11n-CH 157) 65 Mbps

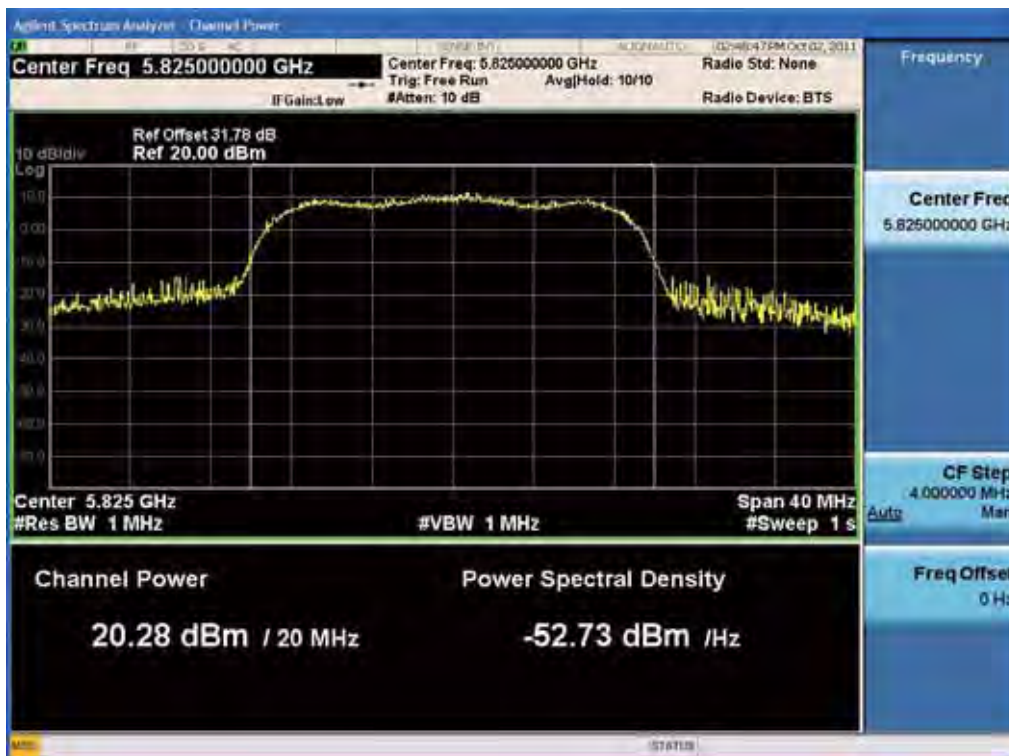


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

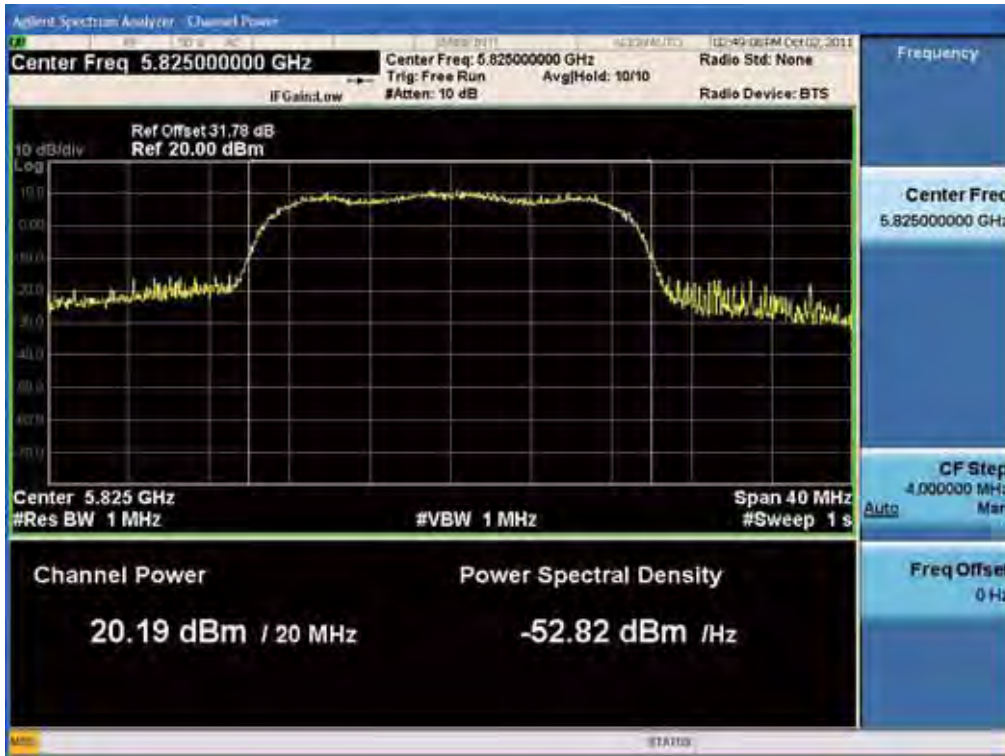


Conducted Output Power (802.11n-CH 165) 13 Mbps

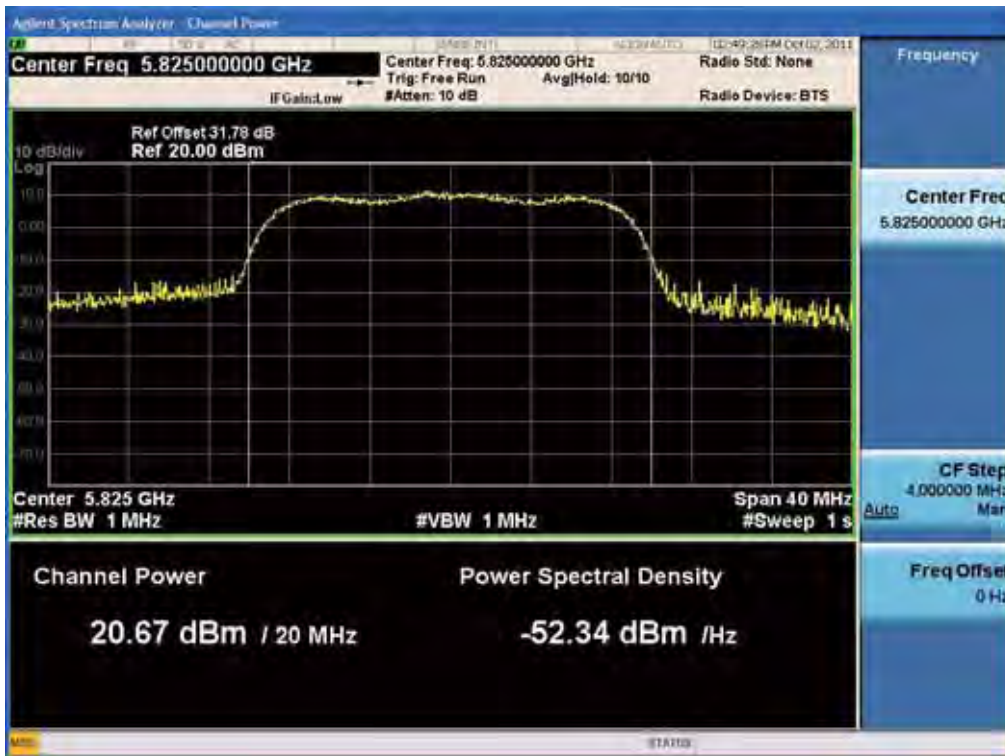


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

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



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

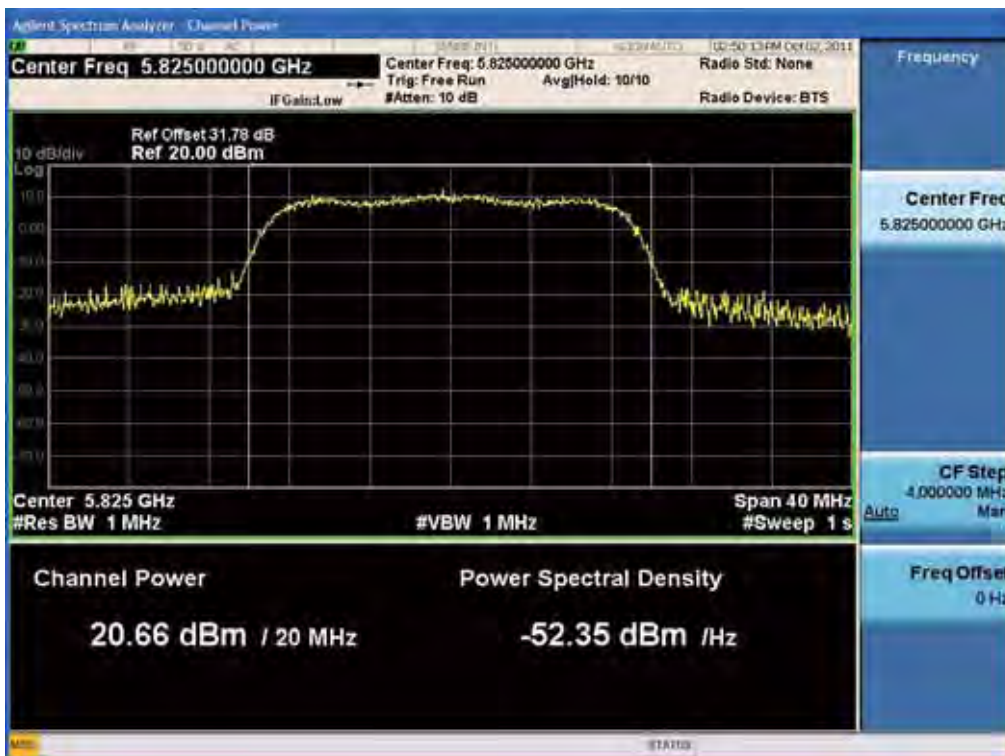


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

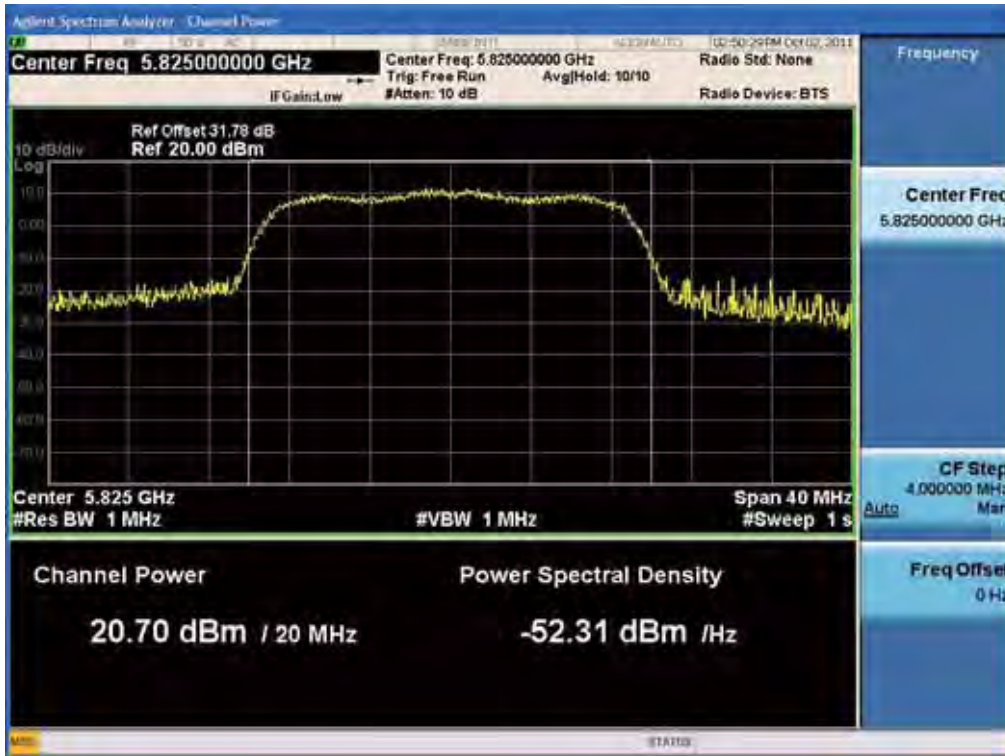


Conducted Output Power (802.11n-CH 165) 52 Mbps

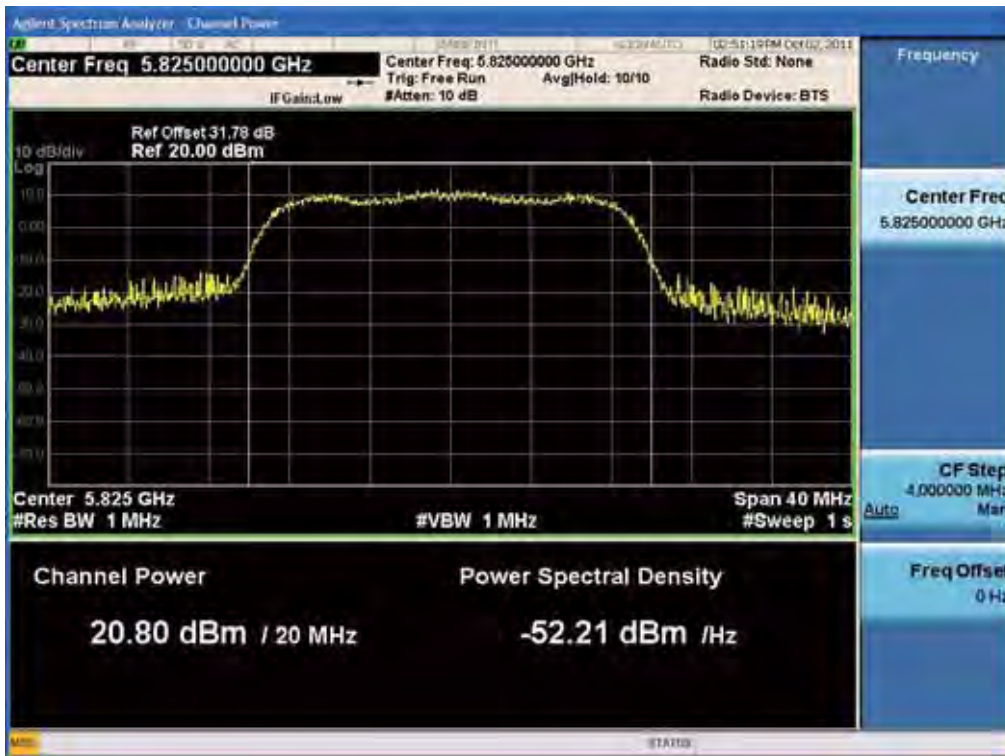


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

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

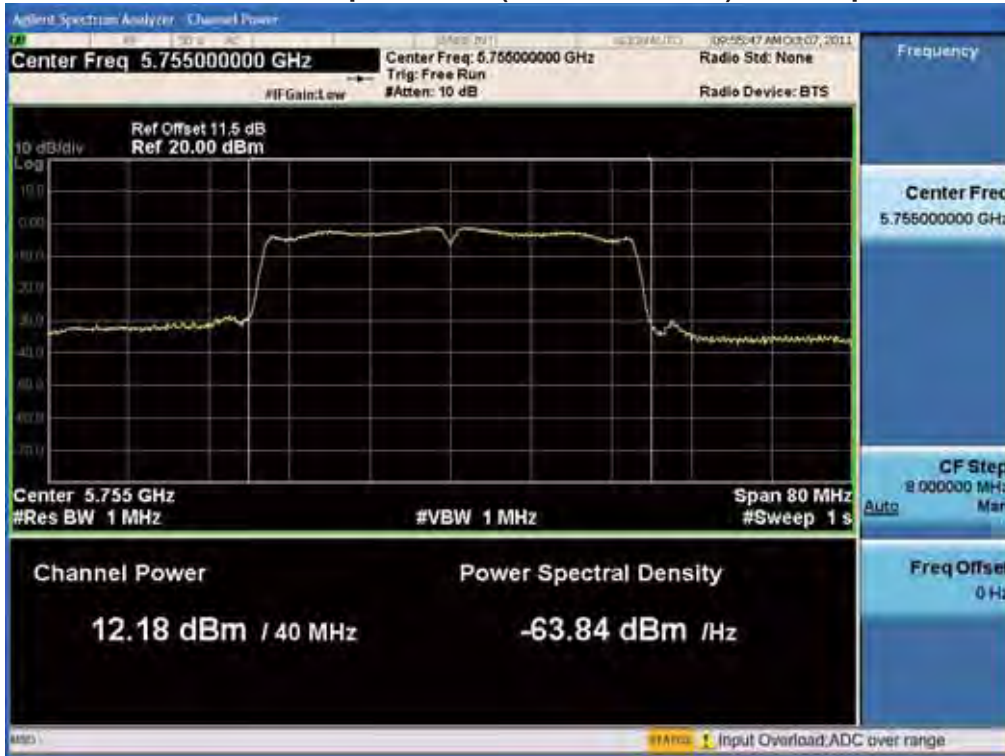


Conducted Output Power (802.11n-CH 165) 65 Mbps

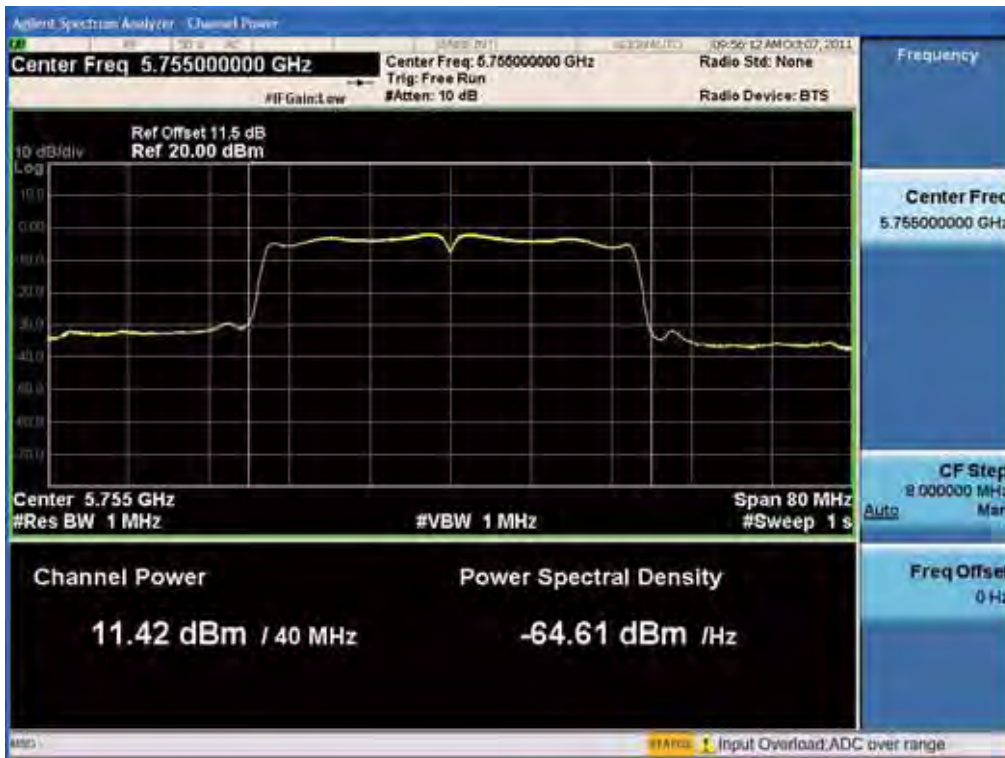


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

RESULT PLOTS_Ant.0 (5755 MHz~5795 MHz) _ 40 MHz BW
 Conducted Output Power (802.11n-CH 151) 13.5 Mbps

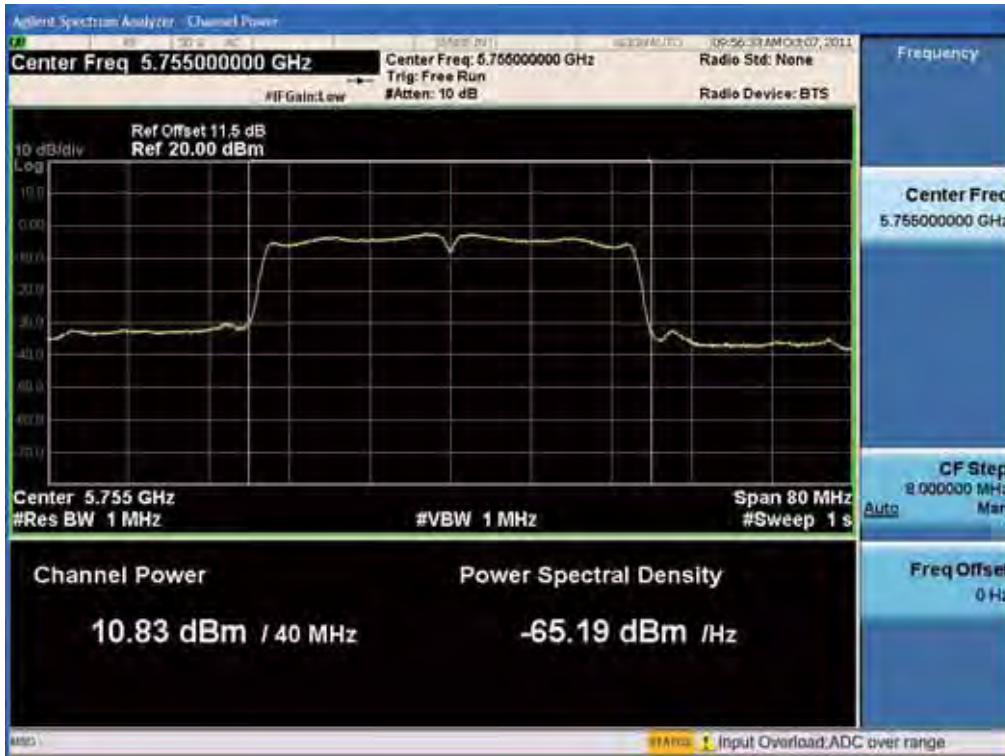


Conducted Output Power (802.11n-CH 151) 27 Mbps

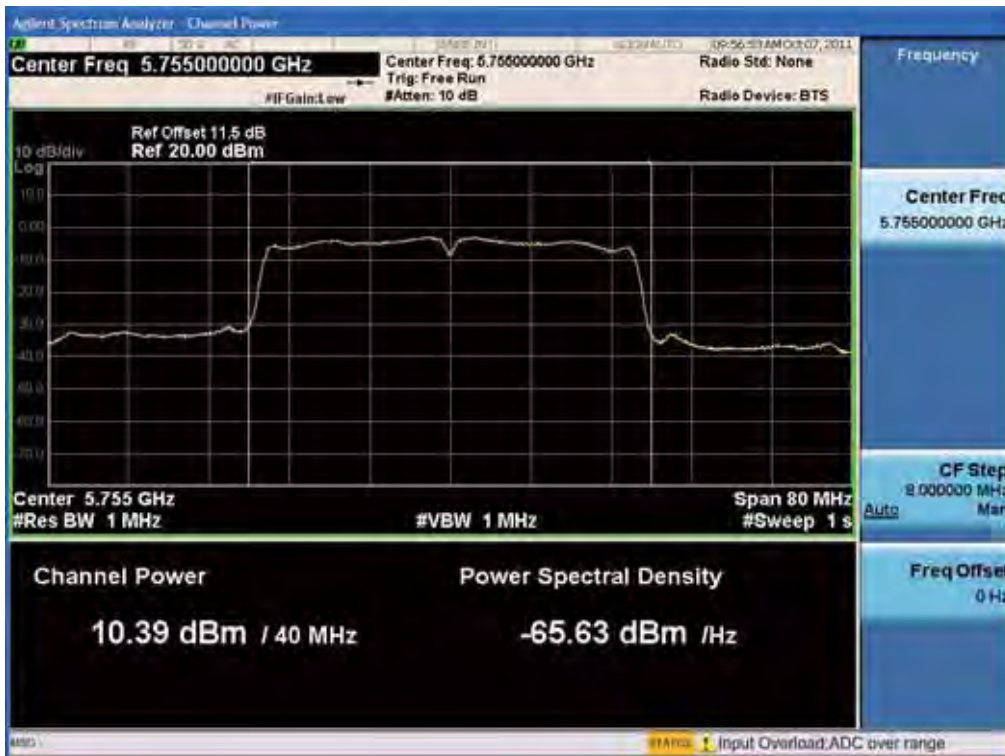


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 151) 40.5 Mbps

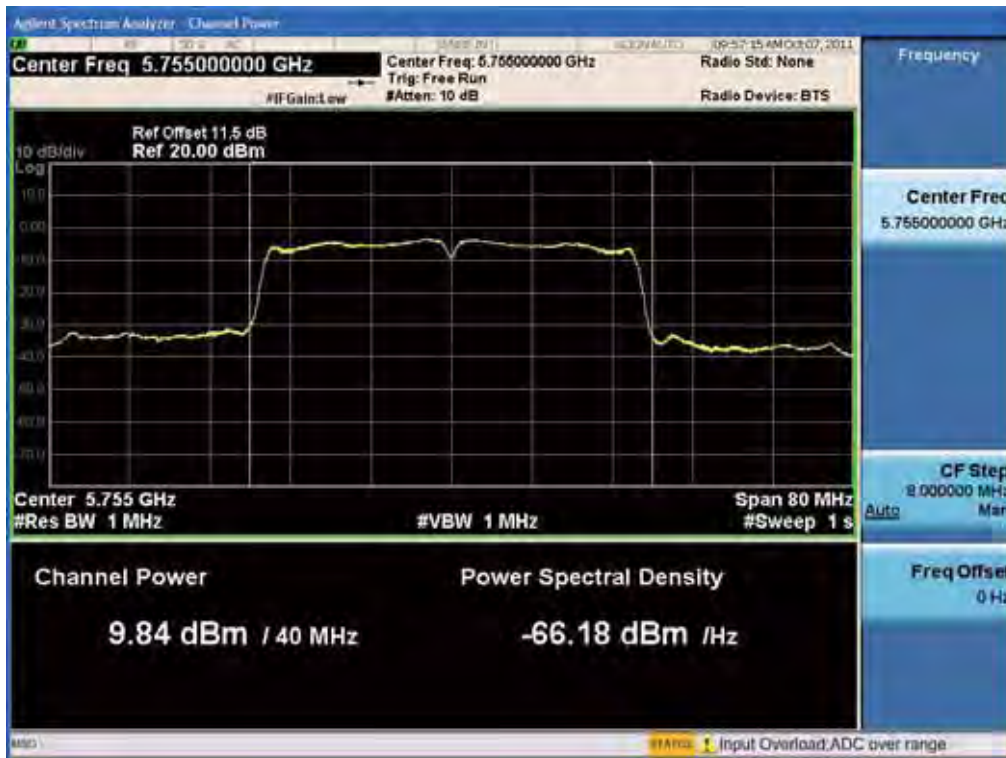


Conducted Output Power (802.11n-CH 151) 54 Mbps

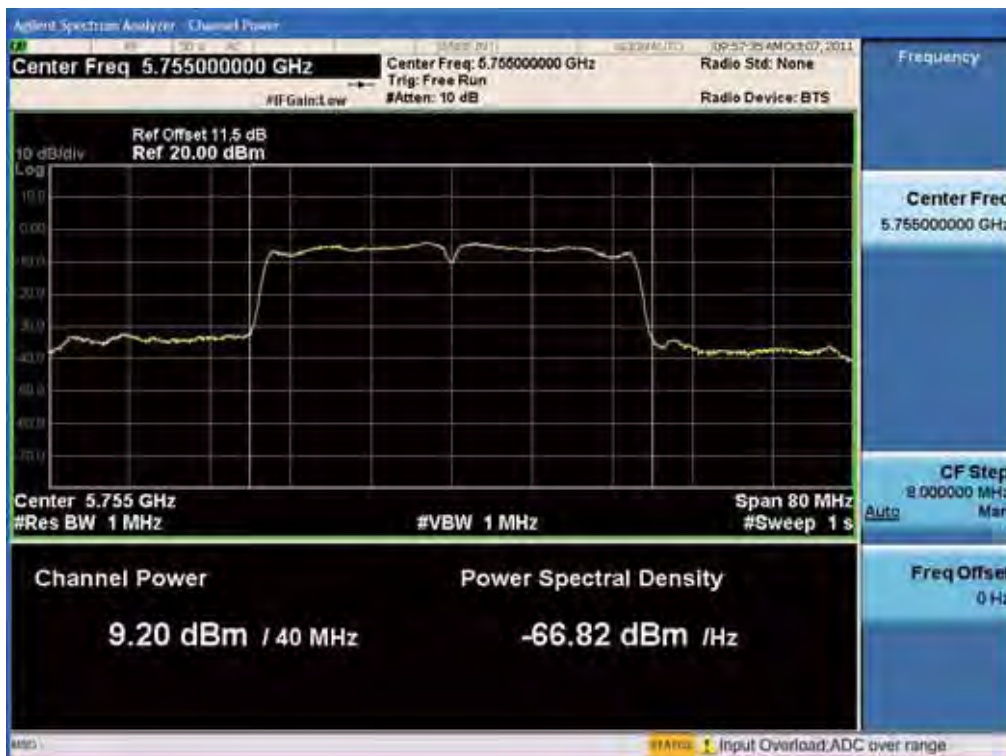


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 151) 81 Mbps

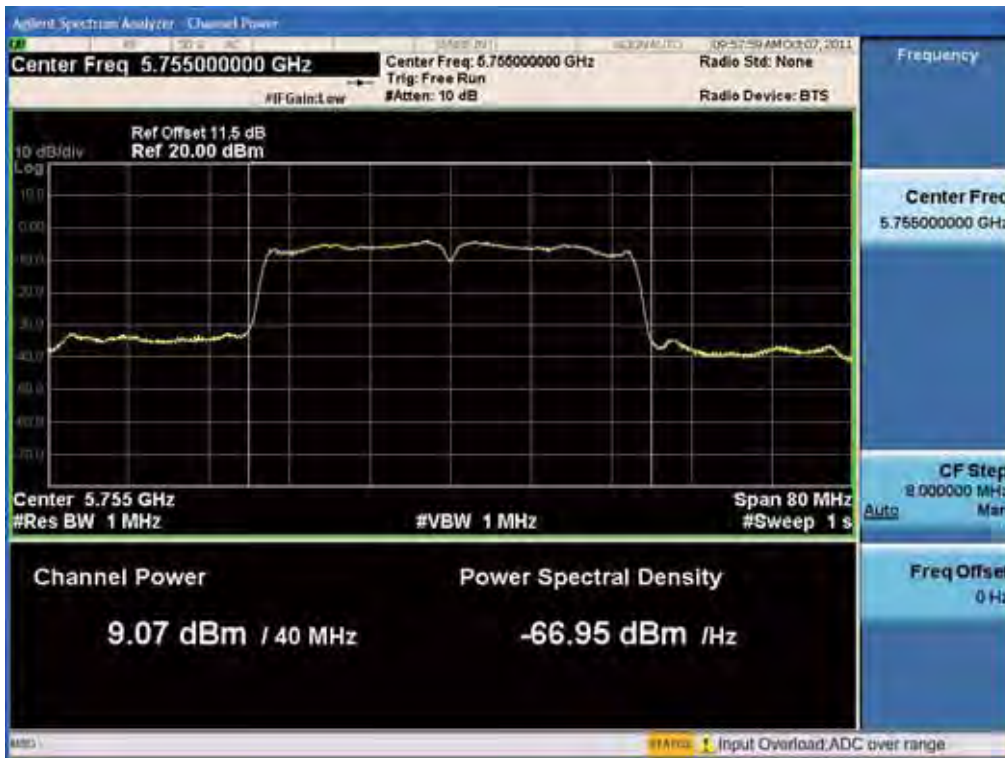


Conducted Output Power (802.11n-CH 151) 108 Mbps

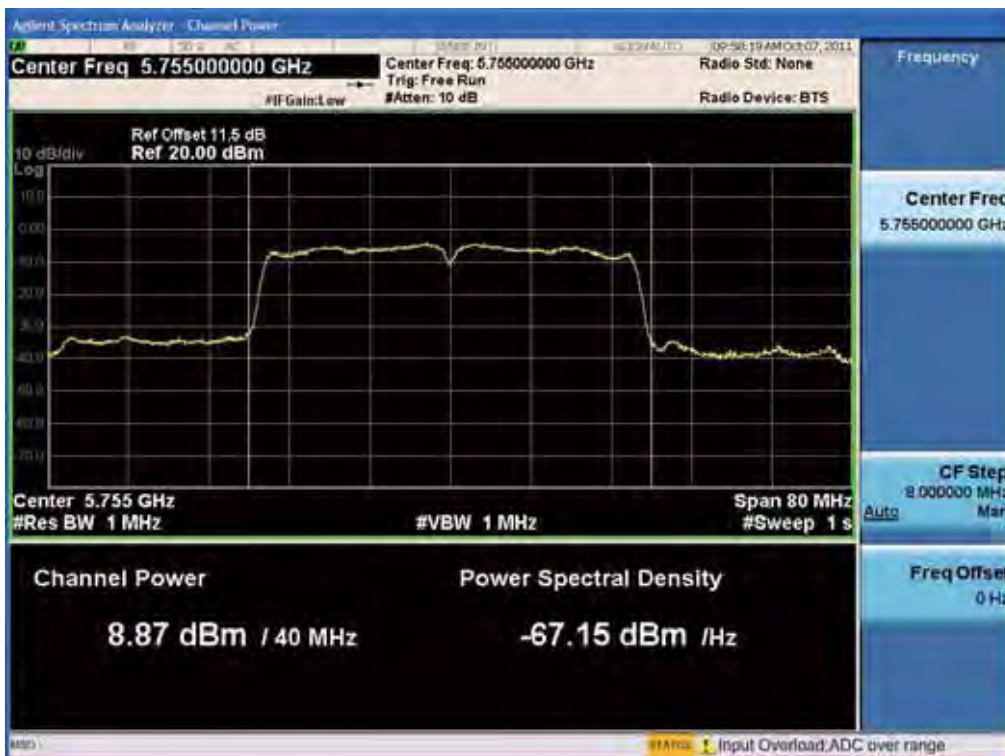


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 151) 121.5 Mbps

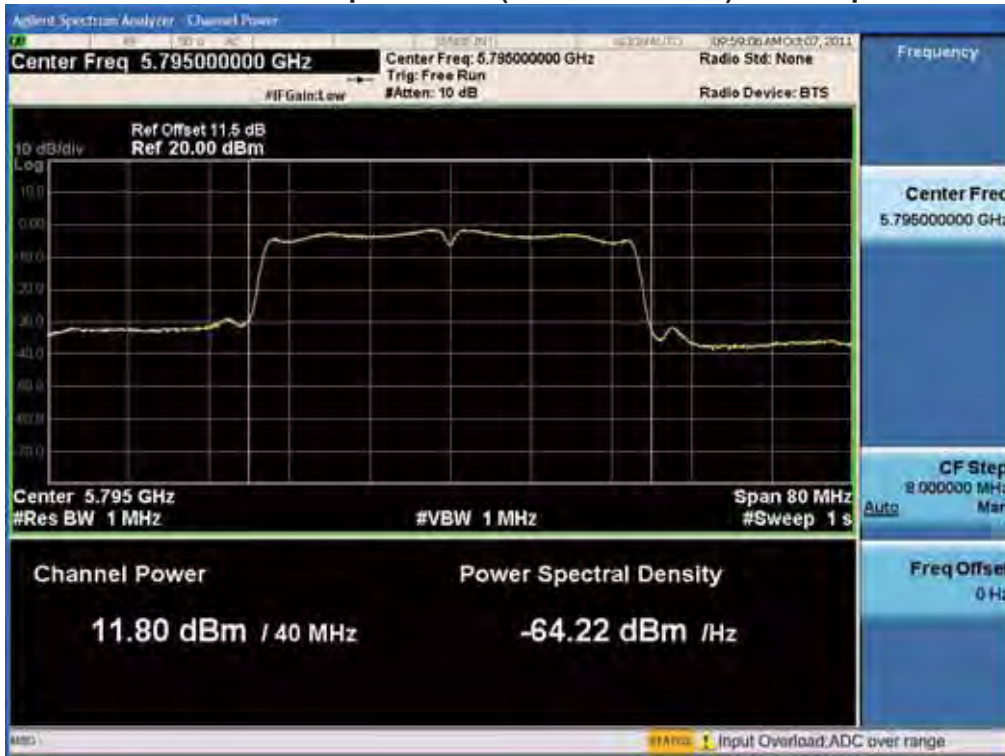


Conducted Output Power (802.11n-CH 151) 135 Mbps



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

Conducted Output Power (802.11n-CH 159) 13.5 Mbps

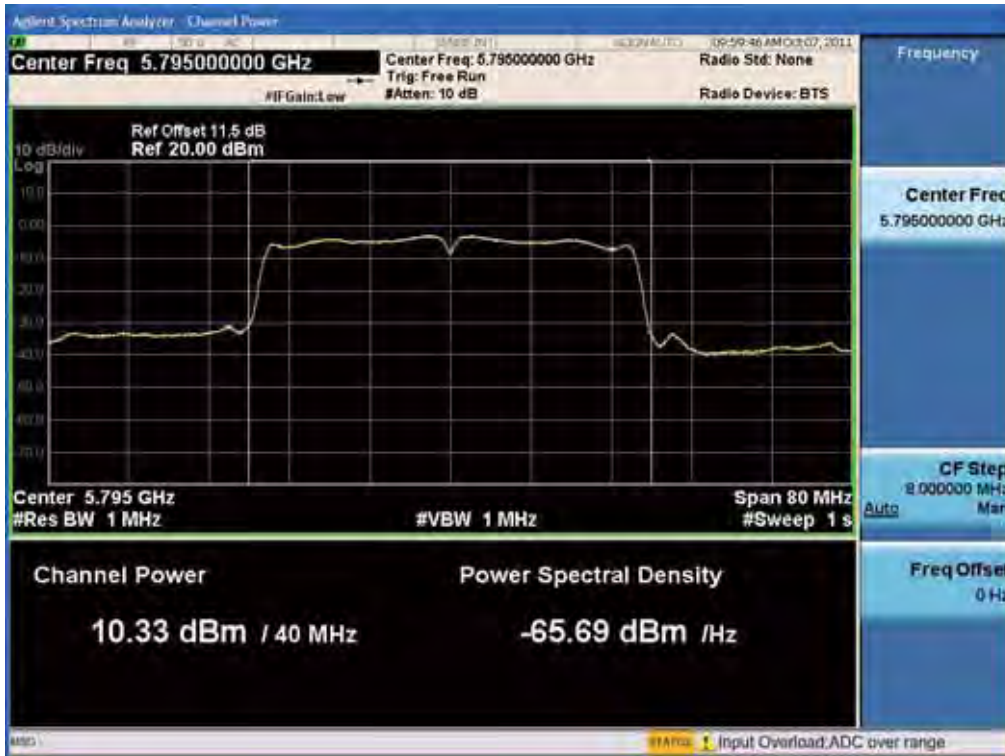


Conducted Output Power (802.11n-CH 159) 27 Mbps

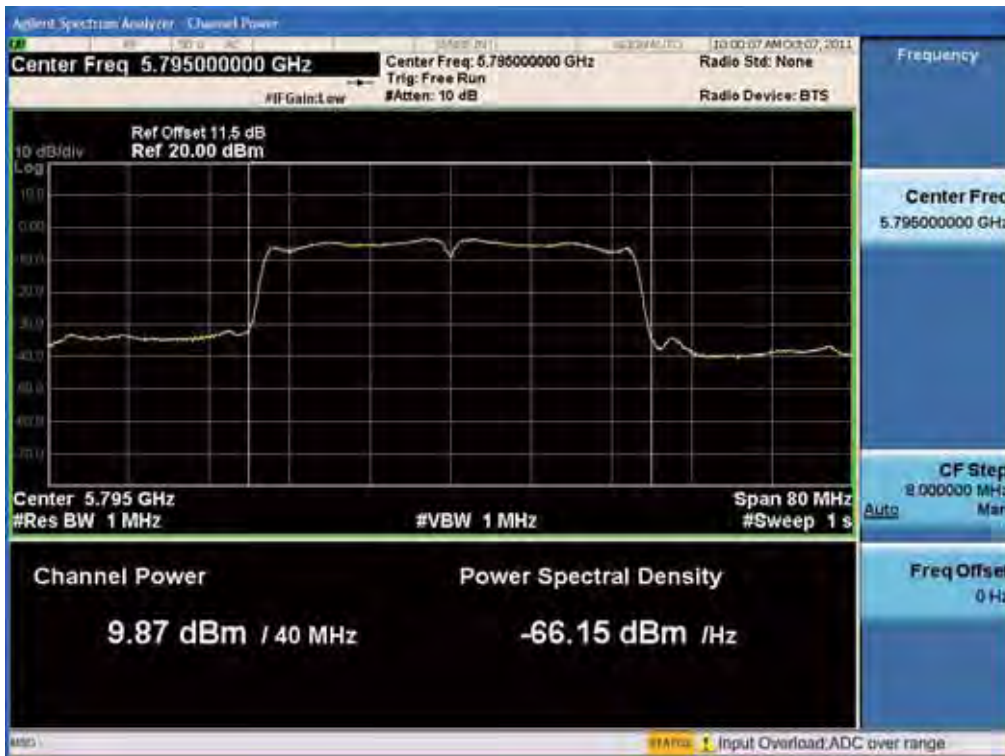


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

Conducted Output Power (802.11n-CH 159) 40.5 Mbps

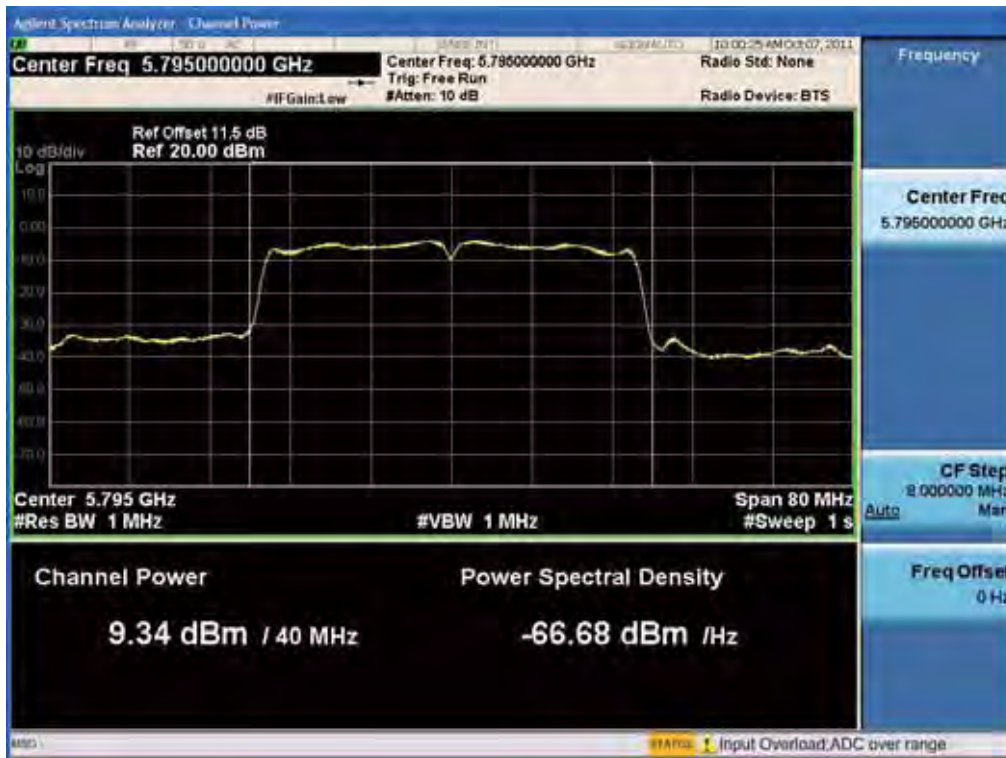


Conducted Output Power (802.11n-CH 159) 54 Mbps

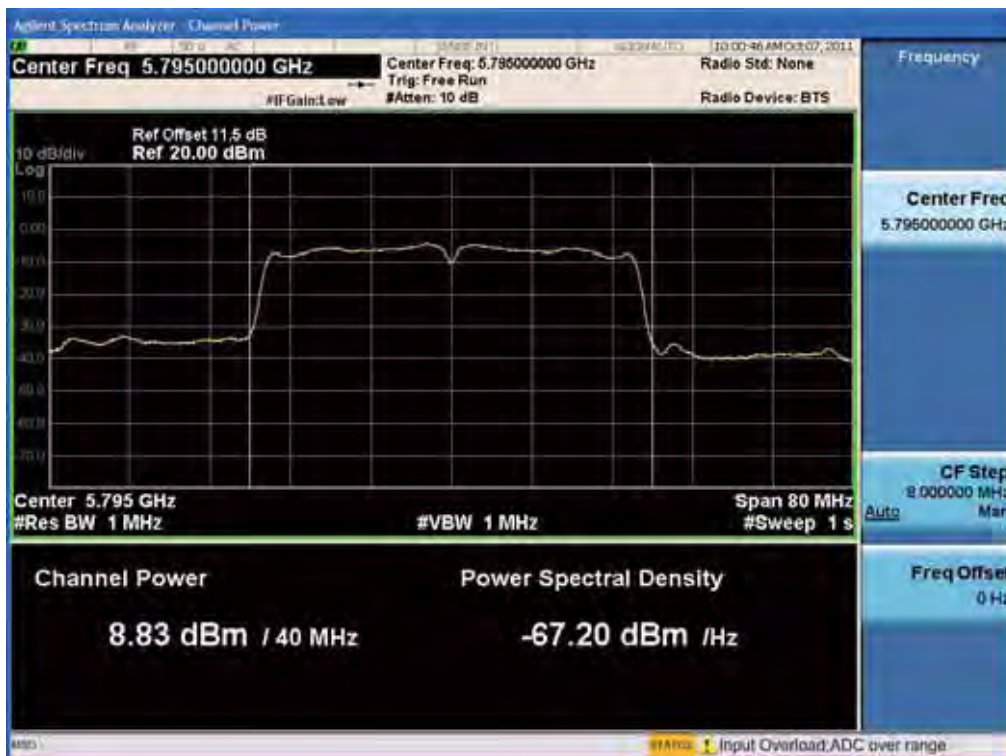


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 159) 81 Mbps

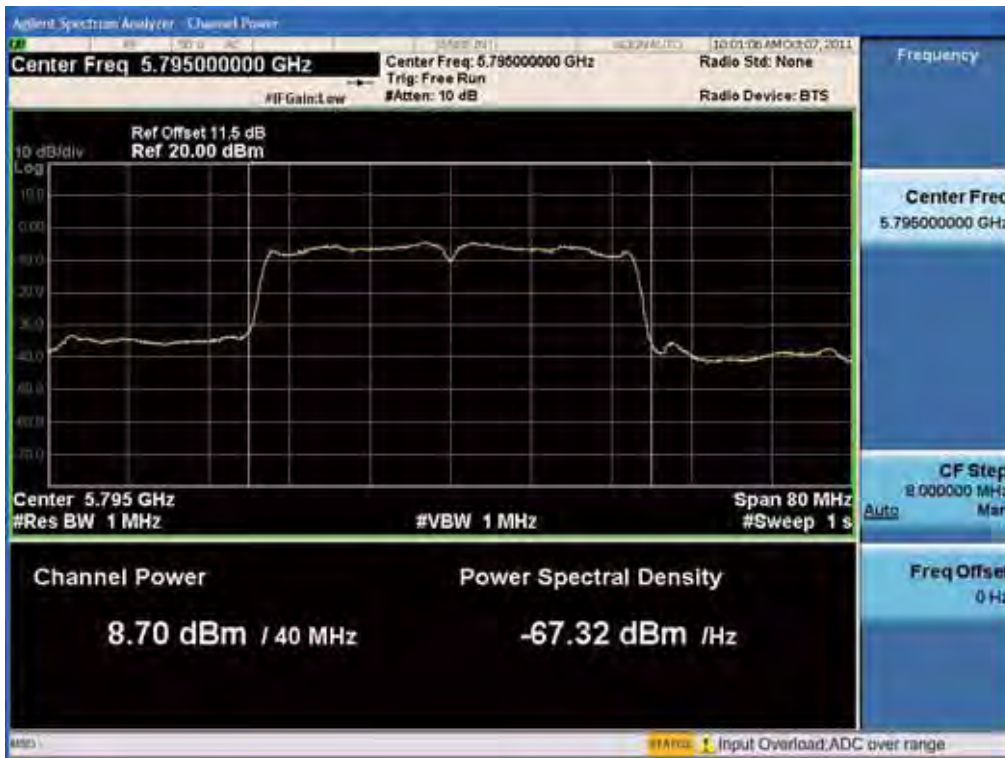


Conducted Output Power (802.11n-CH 159) 108 Mbps

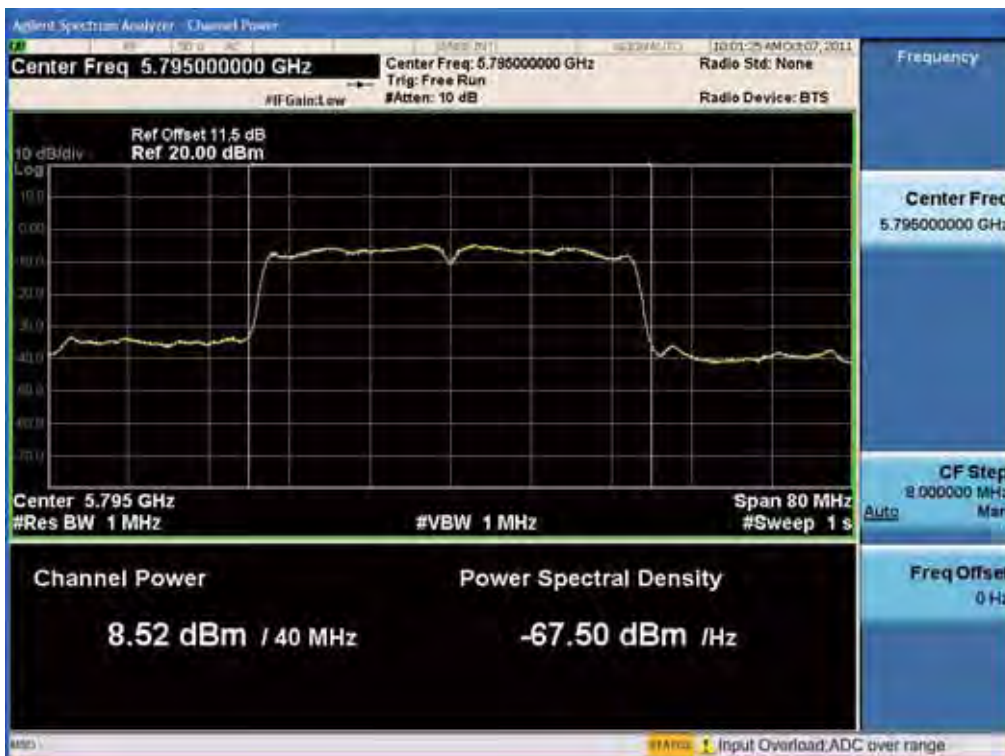


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 159) 121.5 Mbps



Conducted Output Power (802.11n-CH 159) 135 Mbps

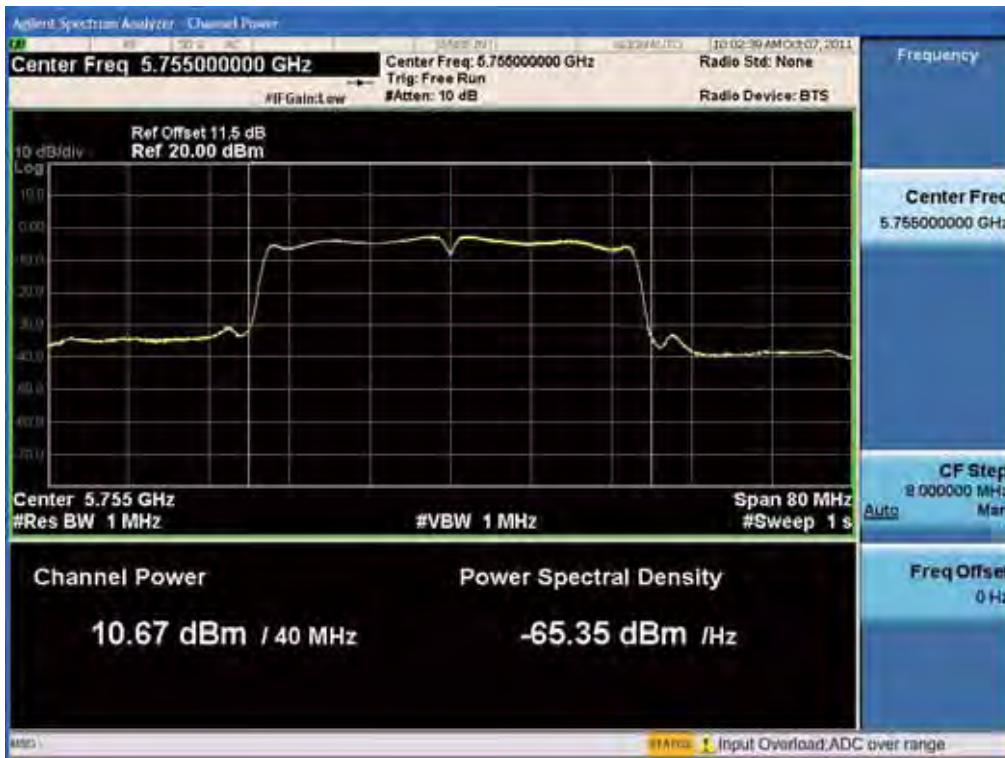


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

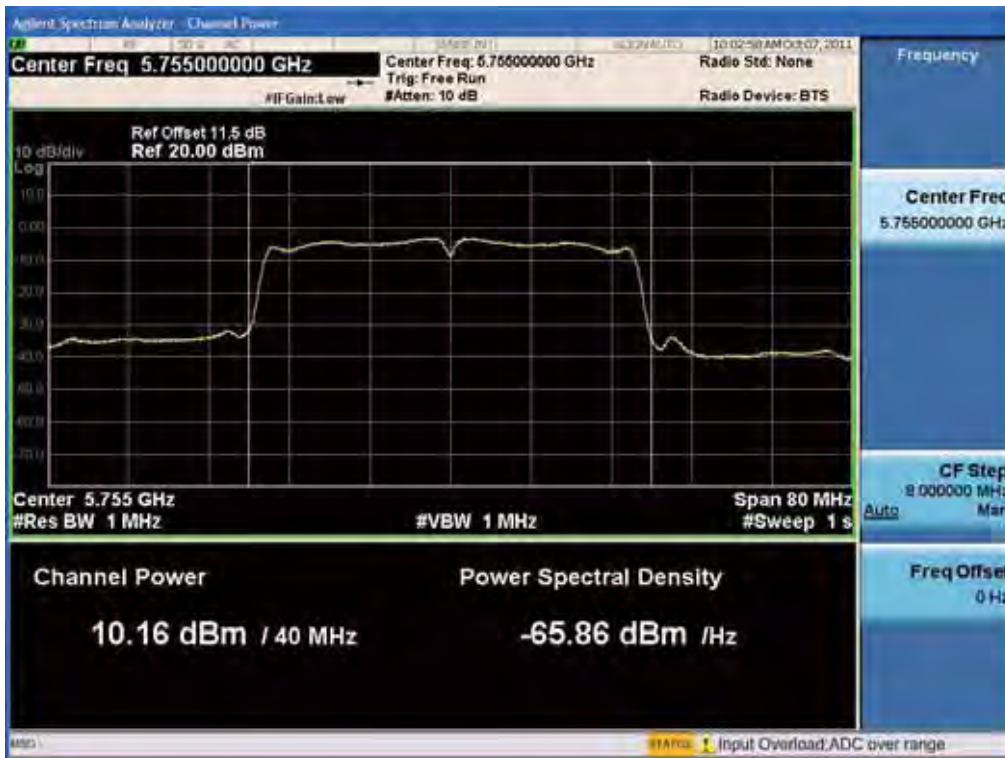
RESULT PLOTS_Ant.1 (5755 MHz~5795 MHz) _ 40 MHz BW
 Conducted Output Power (802.11n-CH 151) 13.5 Mbps



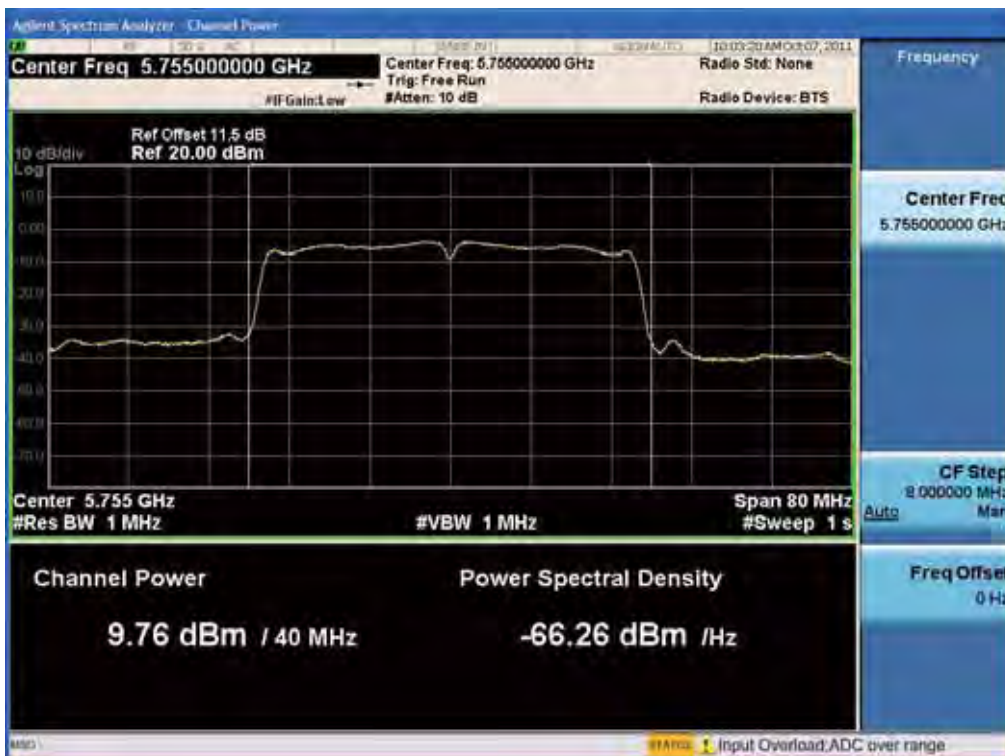
Conducted Output Power (802.11n-CH 151) 27 Mbps



Conducted Output Power (802.11n-CH 151) 40.5 Mbps

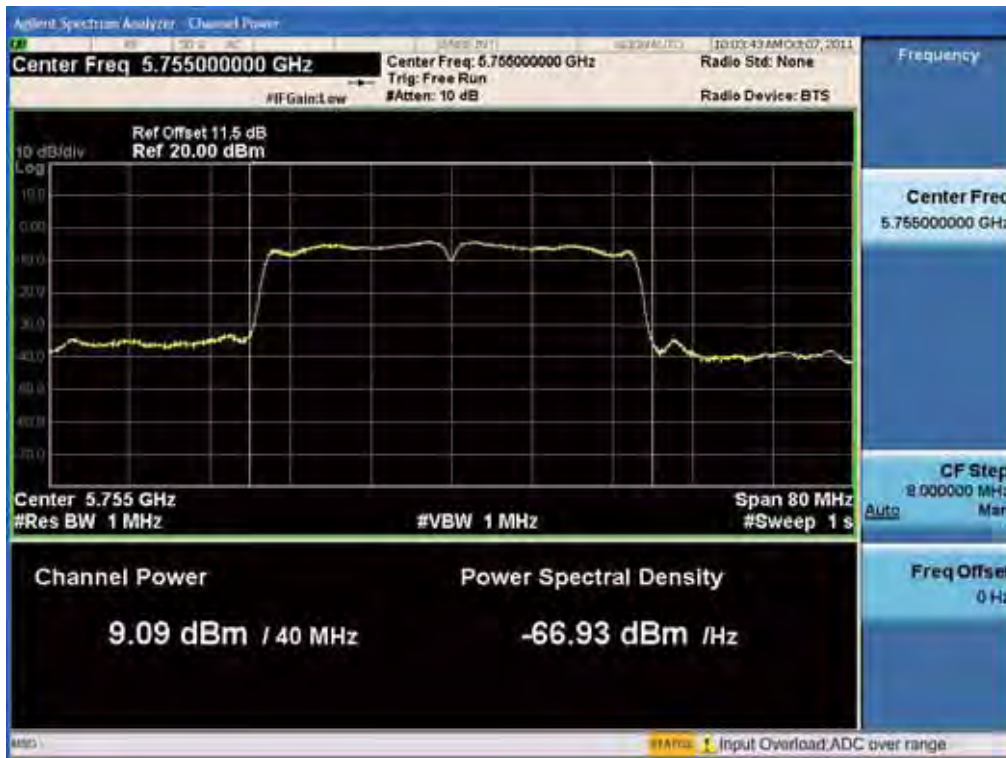


Conducted Output Power (802.11n-CH 151) 54 Mbps

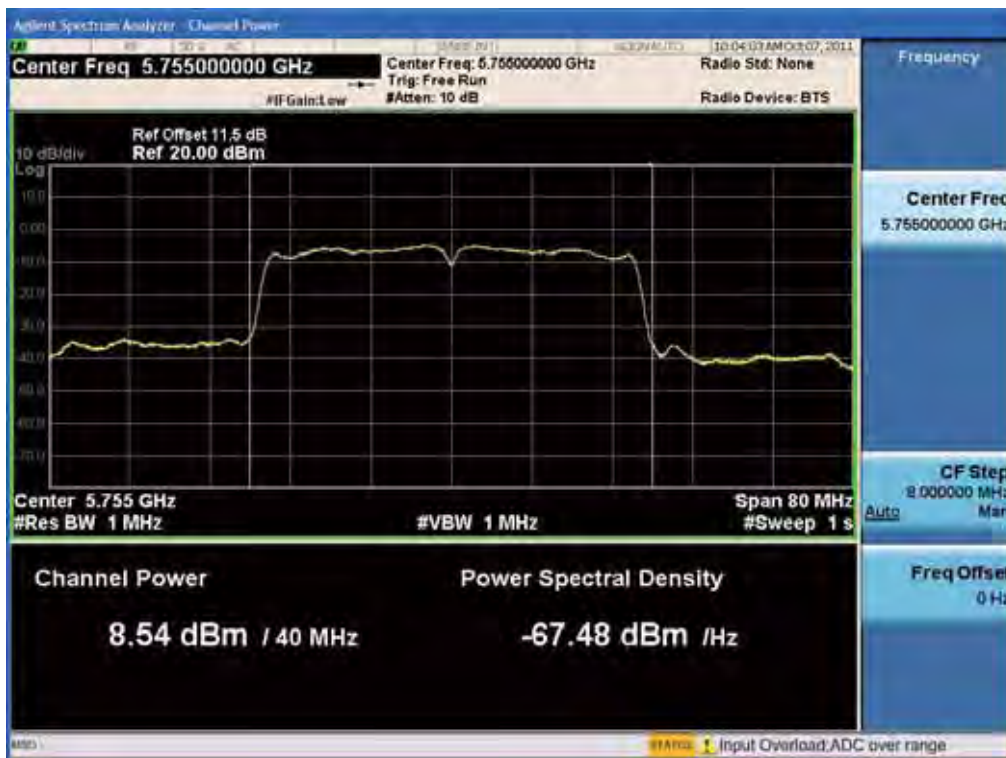


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 151) 81 Mbps



Conducted Output Power (802.11n-CH 151) 108 Mbps



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

Conducted Output Power (802.11n-CH 151) 121.5 Mbps

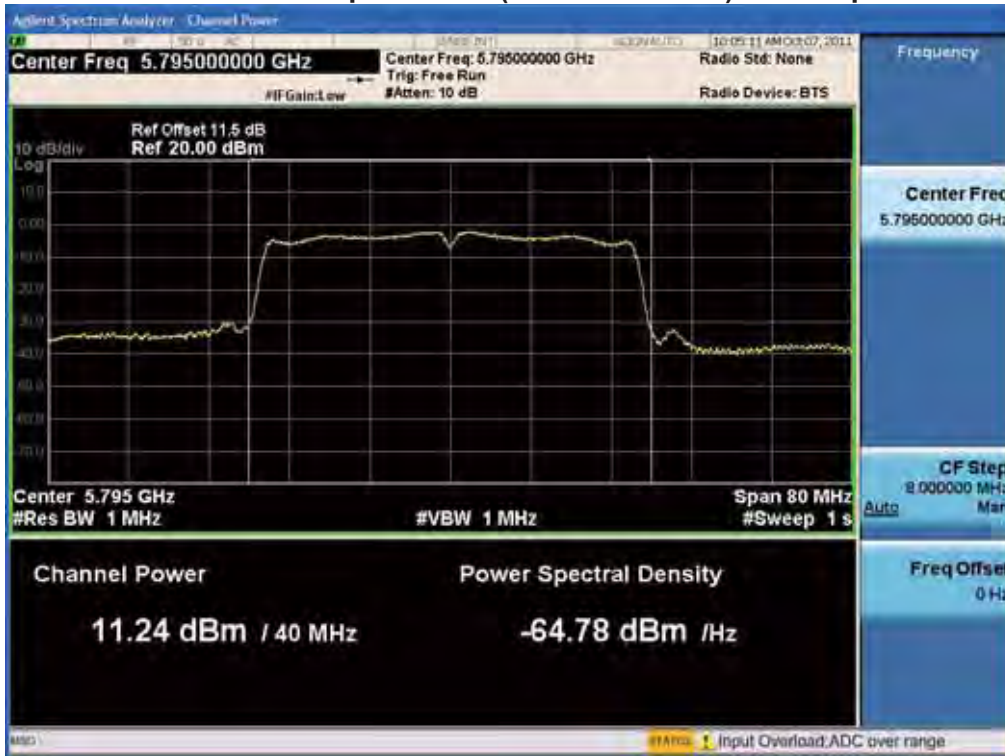


Conducted Output Power (802.11n-CH 151) 135 Mbps



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 159) 13.5 Mbps

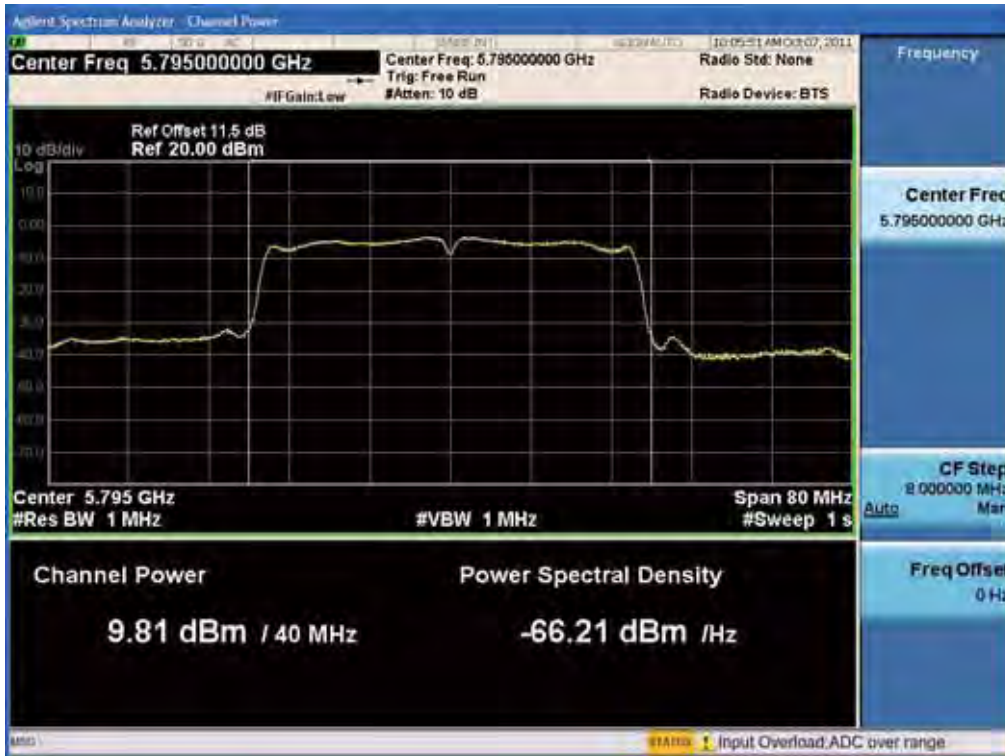


Conducted Output Power (802.11n-CH 159) 27 Mbps

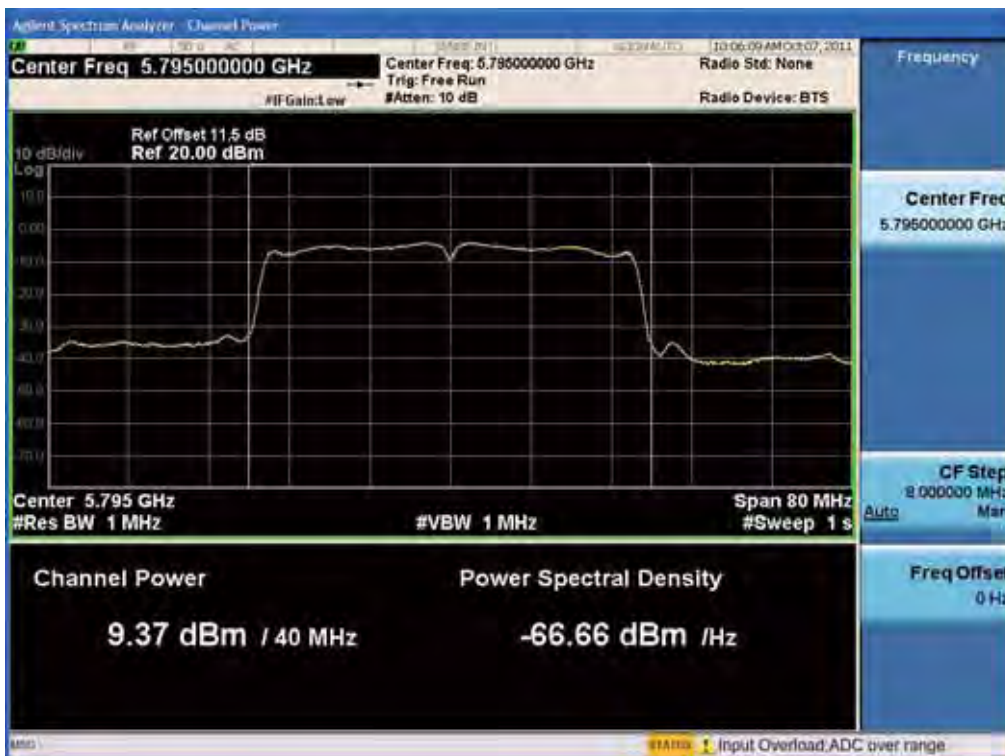


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 159) 40.5 Mbps

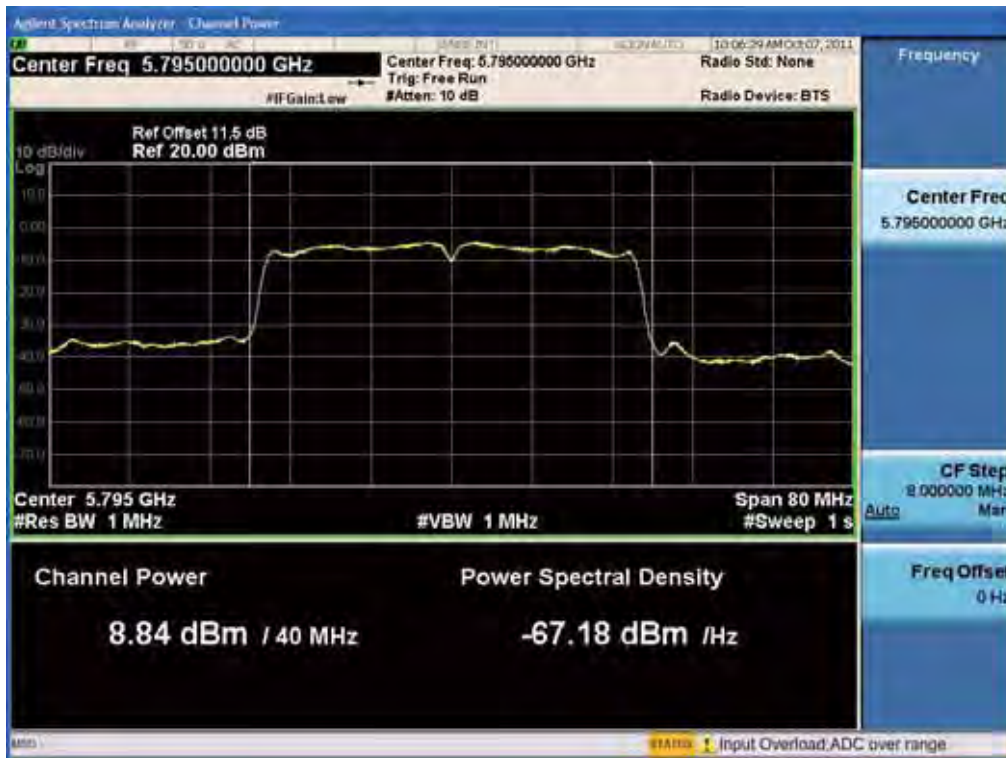


Conducted Output Power (802.11n-CH 159) 54 Mbps

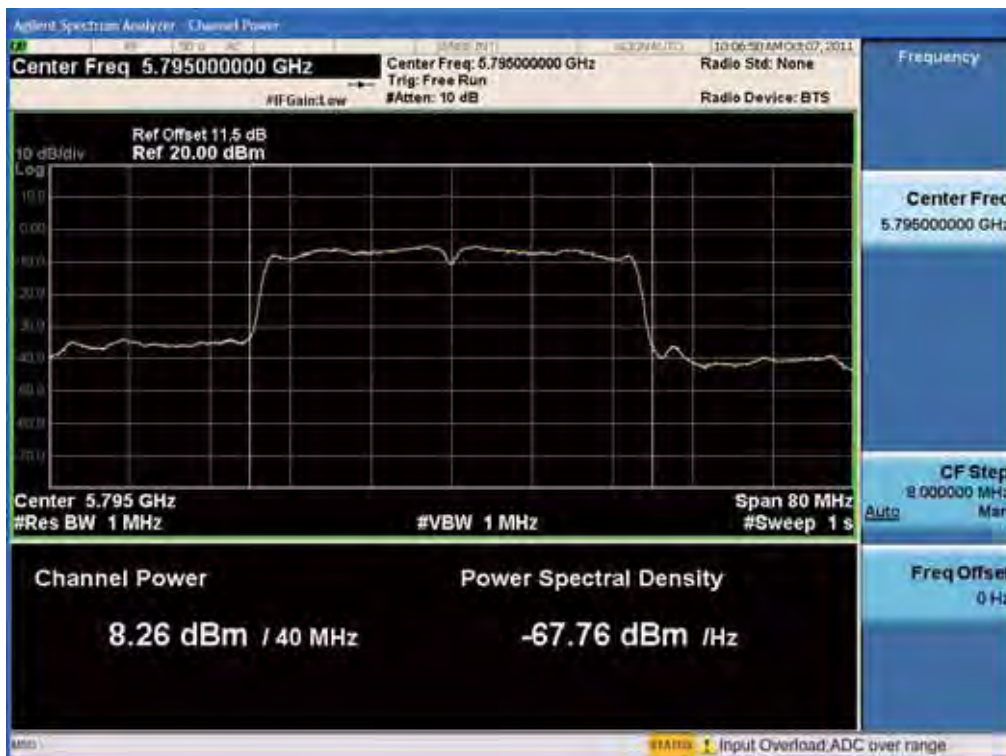


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 159) 81 Mbps

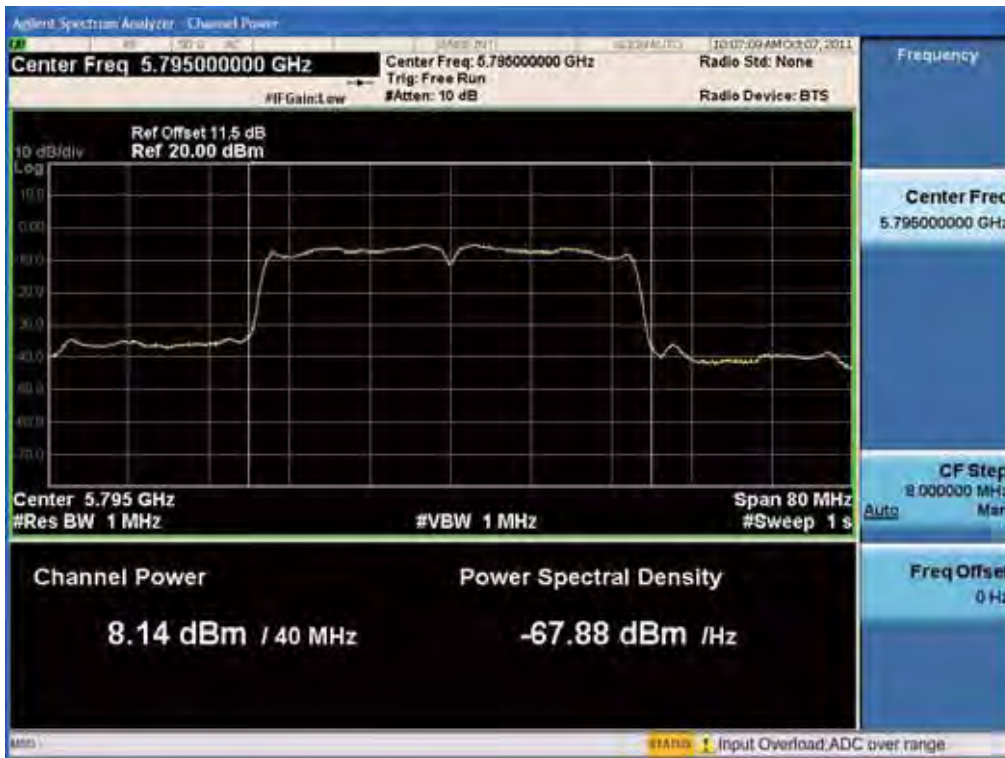


Conducted Output Power (802.11n-CH 159) 108 Mbps

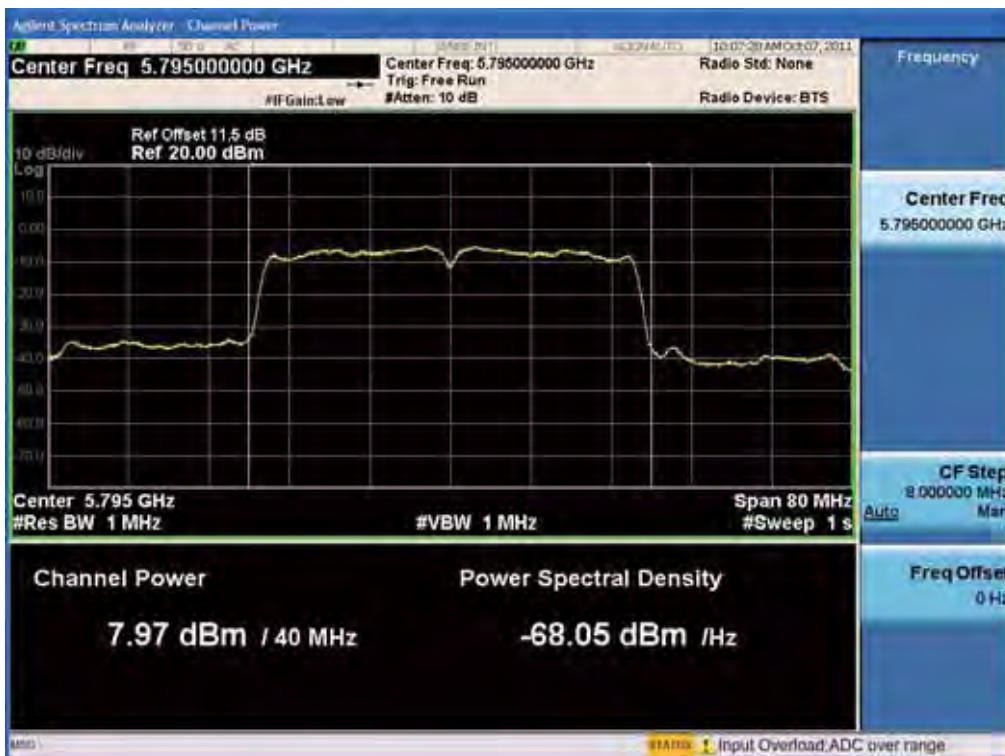


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Output Power (802.11n-CH 159) 121.5 Mbps



Conducted Output Power (802.11n-CH 159) 135 Mbps



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

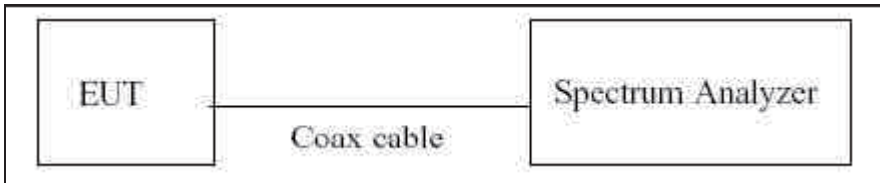
7.4 POWER SPECTRAL DENSITY

Test Requirements and limit, §15.247(e)

The peak power 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 transmitter power density average over 1-second interval shall not be greater than 8dBm in any 3kHz BW.

■ TEST CONFIGURATION



■ TEST PROCEDURE

The spectrum analyzer is set to :

1. Span = 300 kHz
2. RBW = 3 kHz
3. VBW = 3 kHz
4. Sweep = 100 sec
5. Detector Mode = Peak

FCC PT.15.247 TEST REPORT		FCC & IC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

■ TEST RESULTS_Ant.0

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result	
			Power Density (dBm)	Pass/Fail
2412	1	802.11b	-10.606	Pass
2437	6		-9.856	Pass
2462	11		-8.760	Pass
2412	1	802.11g	-18.450	Pass
2437	6		-8.940	Pass
2462	11		-12.550	Pass
2412	1	802.11n (20 MHz BW)	-15.900	Pass
2437	6		-9.105	Pass
2462	11		-14.620	Pass
2422	3	802.11n (40 MHz BW)	-20.870	Pass
2437	6		-20.410	Pass
2452	9		-21.660	Pass
5745	149	802.11a	-11.597	Pass
5785	157		-12.788	Pass
5825	165		-11.325	Pass
5745	149	802.11n (20 MHz BW)	-12.282	Pass
5785	157		-12.530	Pass
5825	165		-12.482	Pass
5755	151	802.11n (40 MHz BW)	-14.754	Pass
5795	159		-18.033	Pass

■ TEST RESULTS_Ant.1

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result	
			Power Density (dBm)	Pass/Fail
2412	1	802.11b	-12.231	Pass
2437	6		-11.389	Pass
2462	11		-9.120	Pass
2412	1	802.11g	-18.127	Pass
2437	6		-10.420	Pass
2462	11		-13.860	Pass
2412	1	802.11n (20 MHz BW)	-19.063	Pass
2437	6		-9.869	Pass
2462	11		-14.060	Pass
2422	3	802.11n (40 MHz BW)	-23.180	Pass
2437	6		-22.900	Pass
2452	9		-21.540	Pass
5745	149	802.11a	-11.948	Pass
5785	157		-10.306	Pass
5825	165		-12.448	Pass
5745	149	802.11n (20 MHz BW)	-11.727	Pass
5785	157		-13.284	Pass
5825	165		-13.563	Pass
5755	151	802.11n (40 MHz BW)	-15.522	Pass
5795	159		-15.734	Pass

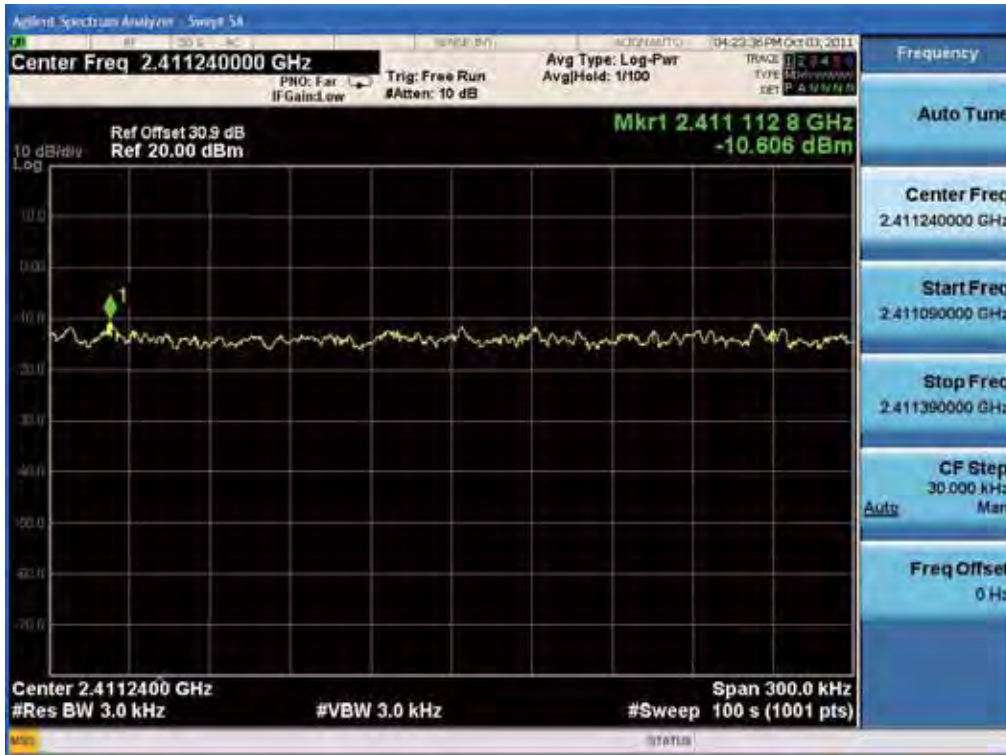
■ Measure and sum data

Conducted Power Density Measurements

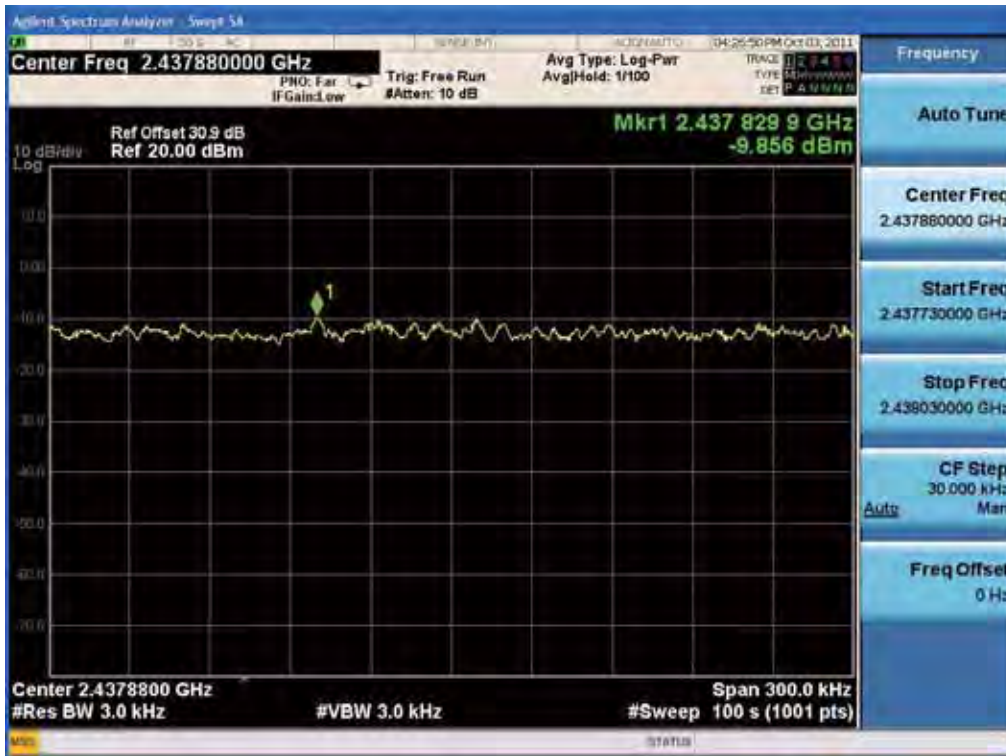
Frequency (MHz)	Channel No.	Mode	Test Result	
			Power Density (dBm)	Pass/Fail
2412	1	802.11b	-8.33	Pass
2437	6		-7.54	Pass
2462	11		-5.93	Pass
2412	1	802.11g	-15.28	Pass
2437	6		-6.61	Pass
2462	11		-10.15	Pass
2412	1	802.11n (20 MHz BW)	-14.19	Pass
2437	6		-6.46	Pass
2462	11		-11.32	Pass
2422	3	802.11n (40 MHz BW)	-18.86	Pass
2437	6		-18.47	Pass
2452	9		-18.59	Pass
5745	149	802.11a	-8.76	Pass
5785	157		-8.36	Pass
5825	165		-8.84	Pass
5745	149	802.11n (20 MHz BW)	-8.99	Pass
5785	157		-9.88	Pass
5825	165		-9.98	Pass
5755	151	802.11n (40 MHz BW)	-12.11	Pass
5795	159		-13.72	Pass

RESULT PLOTS_Ant.0

Power Spectral Density (802.11b-CH 1)

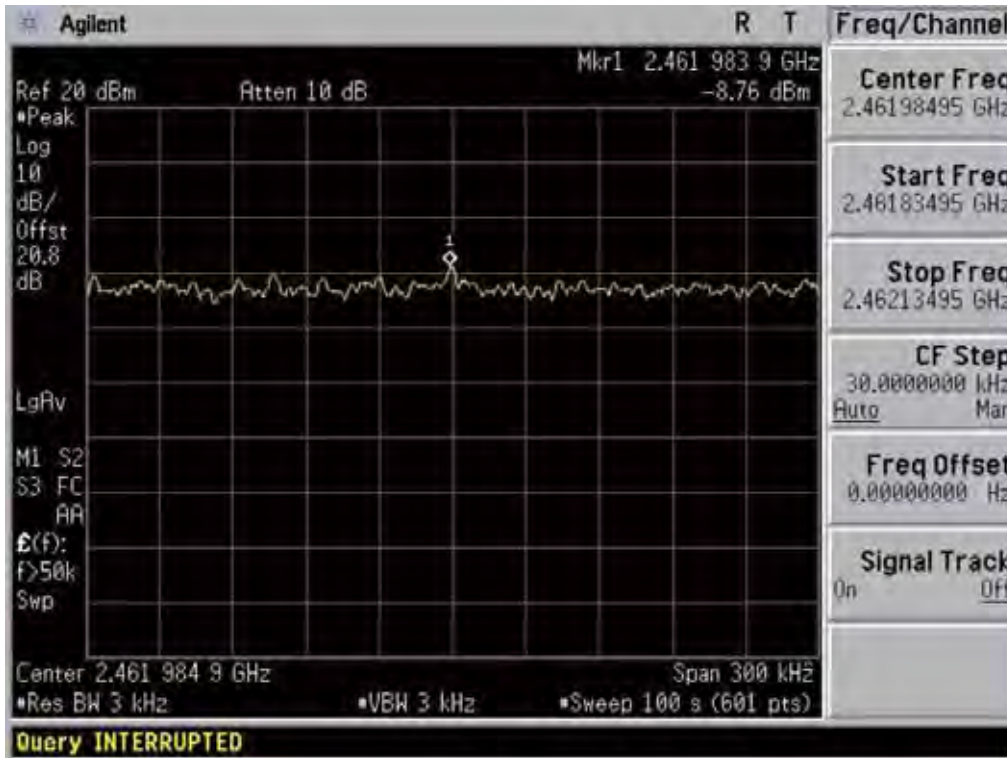


Power Spectral Density (802.11b-CH 6)

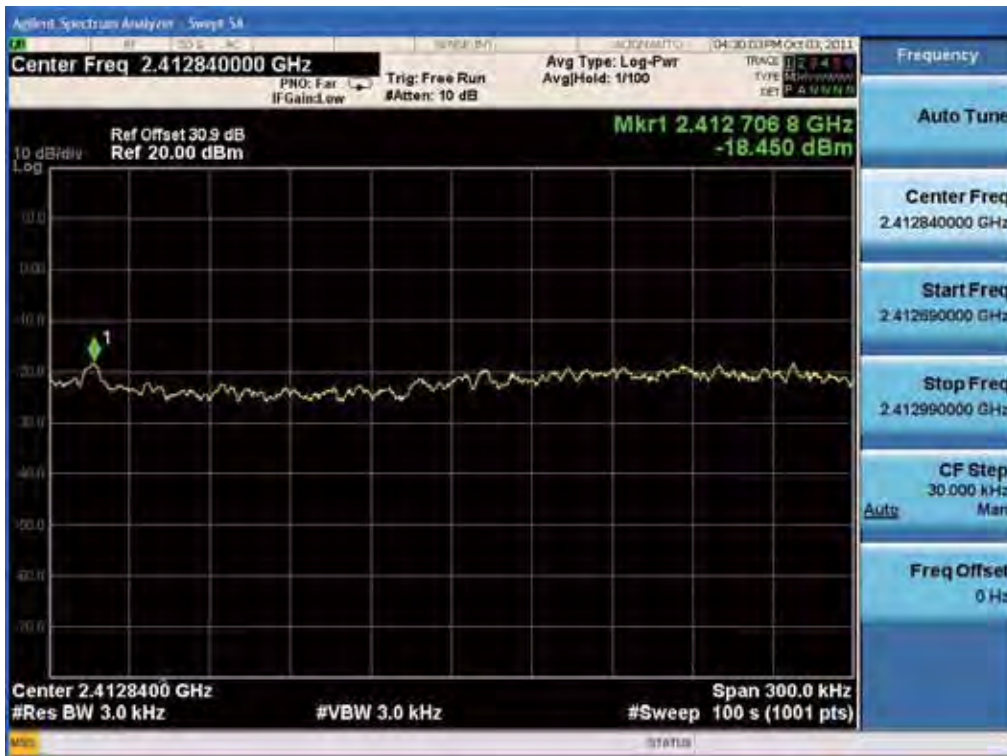


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Power Spectral Density (802.11b-CH 11)

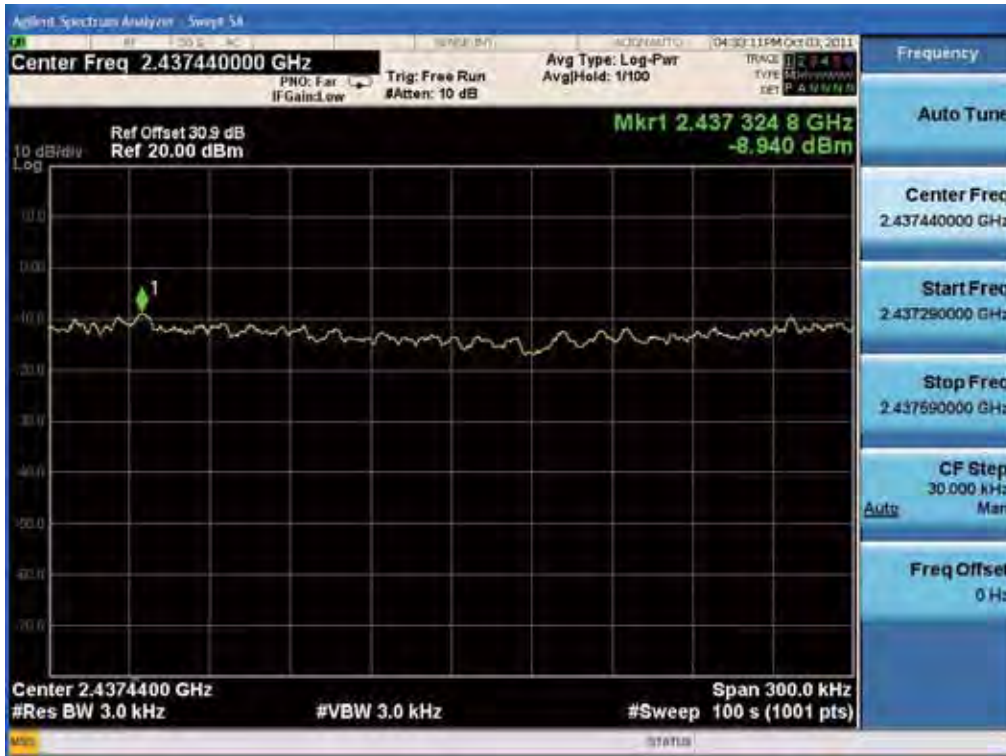


Power Spectral Density (802.11g-CH 1)

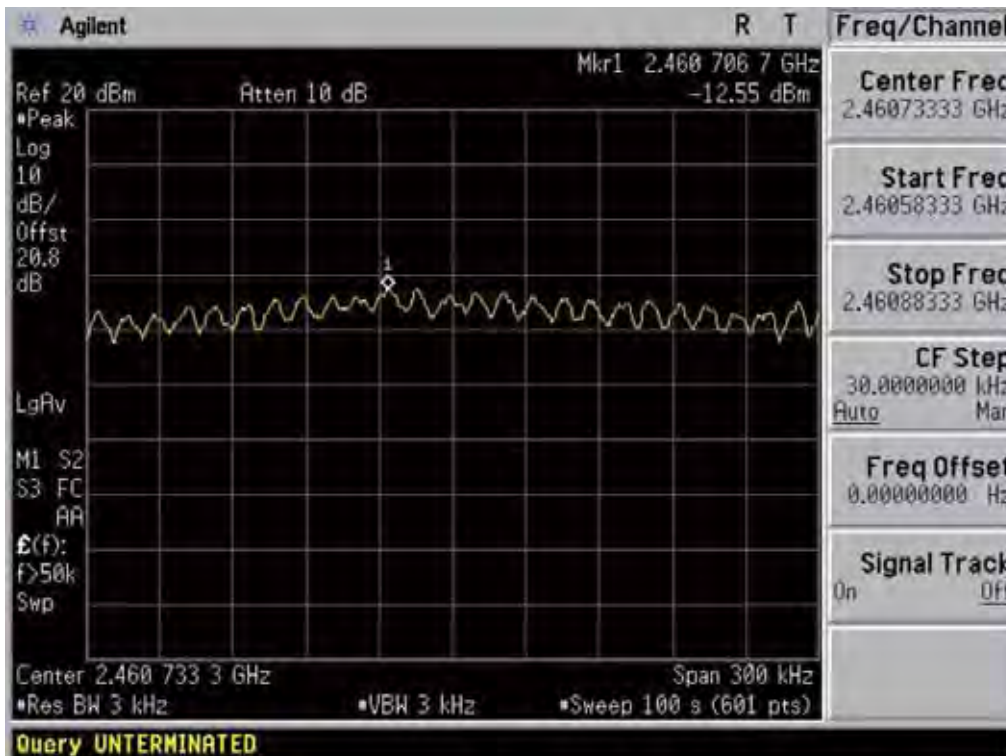


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

Power Spectral Density (802.11g-CH 6)

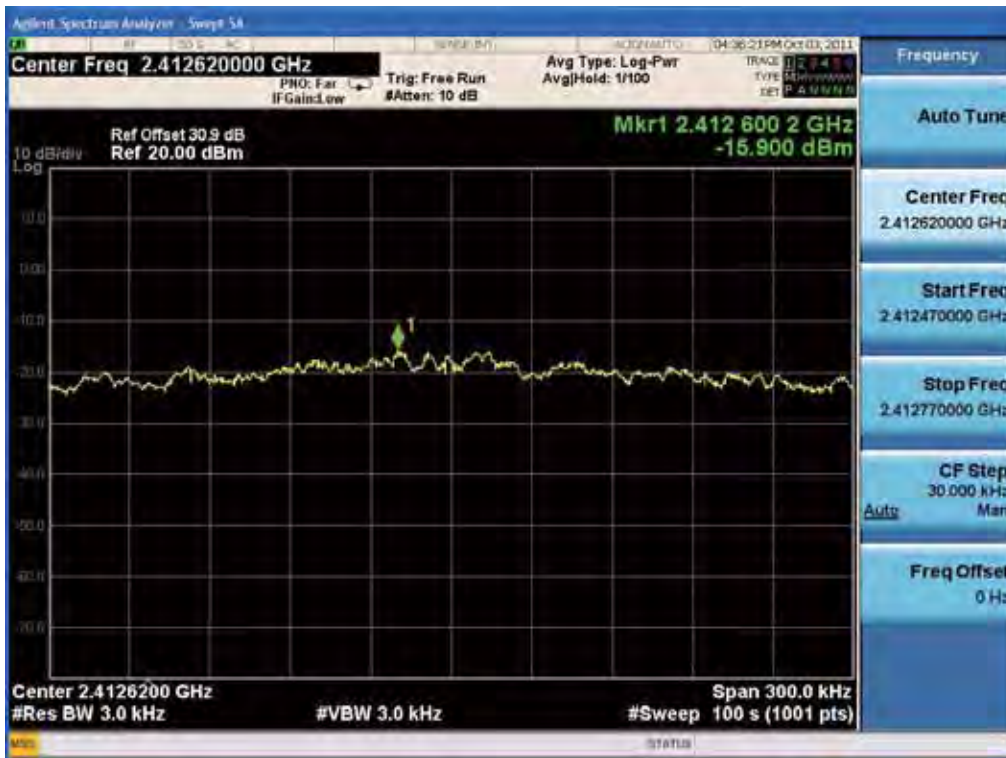


Power Spectral Density (802.11g-CH11)

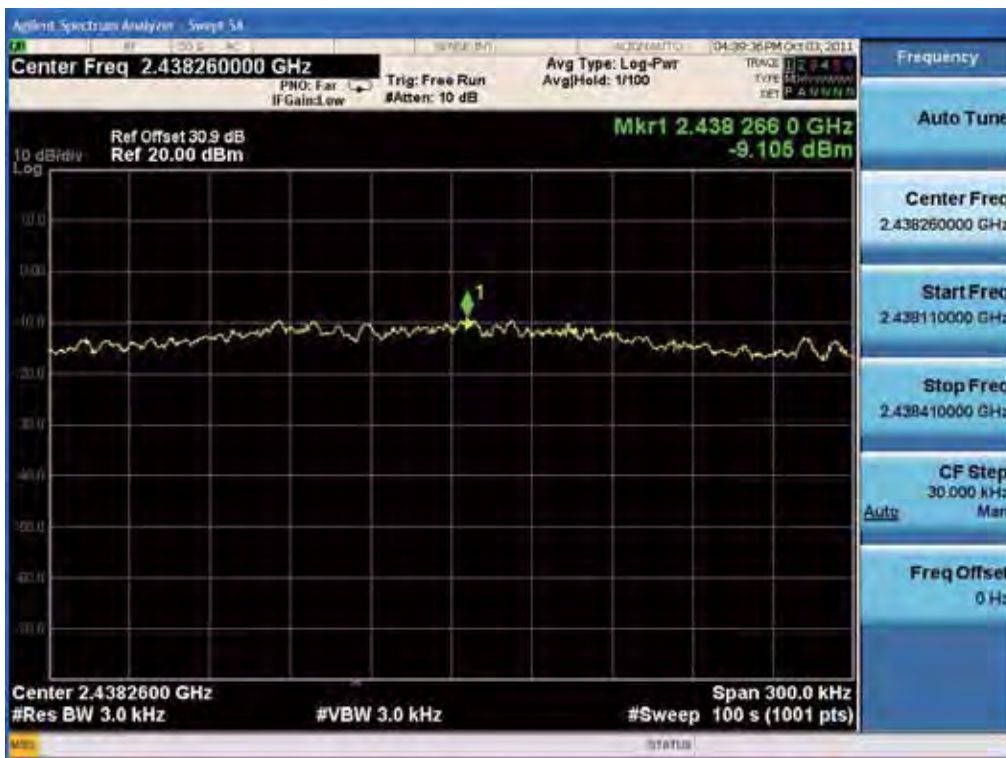


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

Power Spectral Density (802.11n-CH 1) _ 20 MHz BW

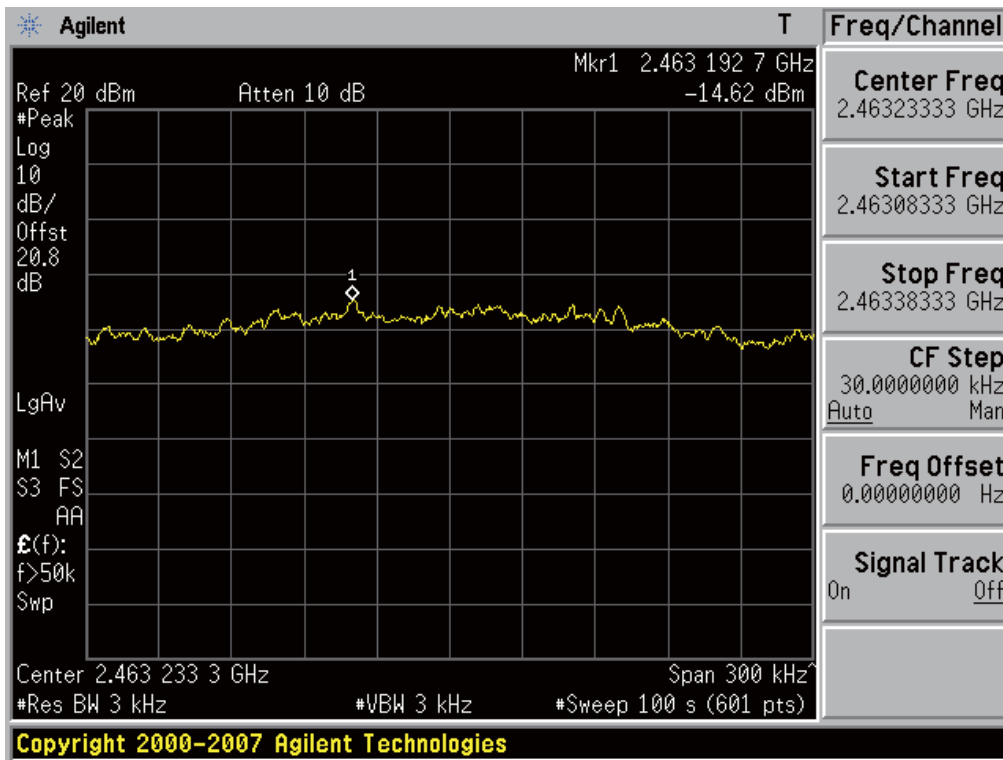


Power Spectral Density (802.11n-CH 6) _ 20 MHz BW

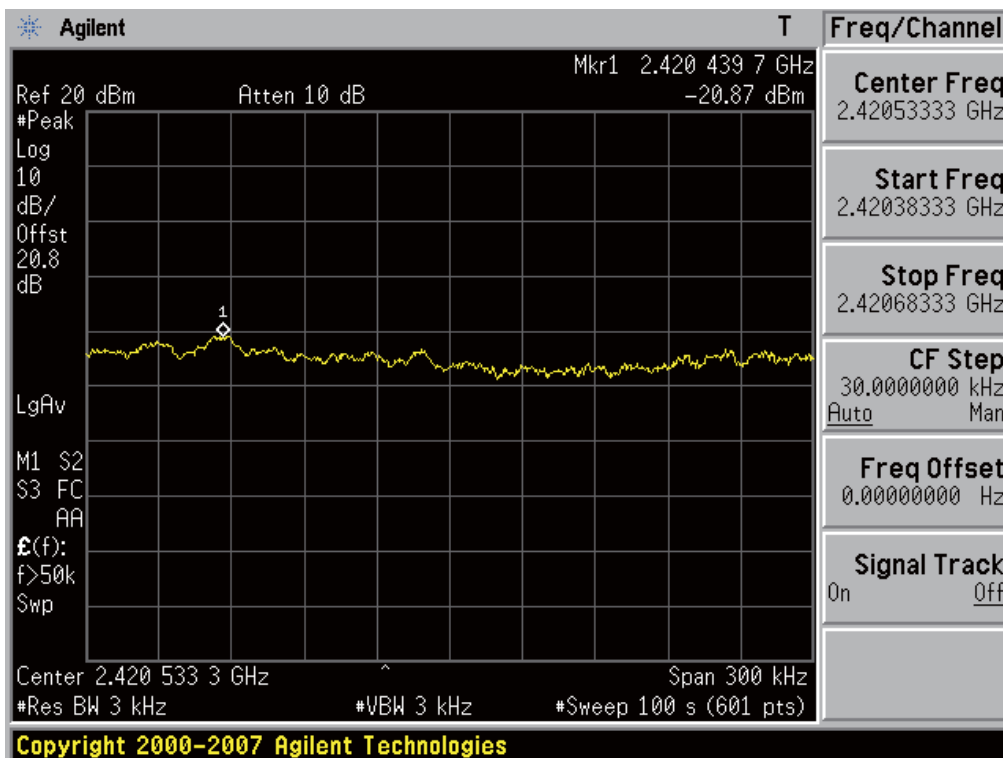


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

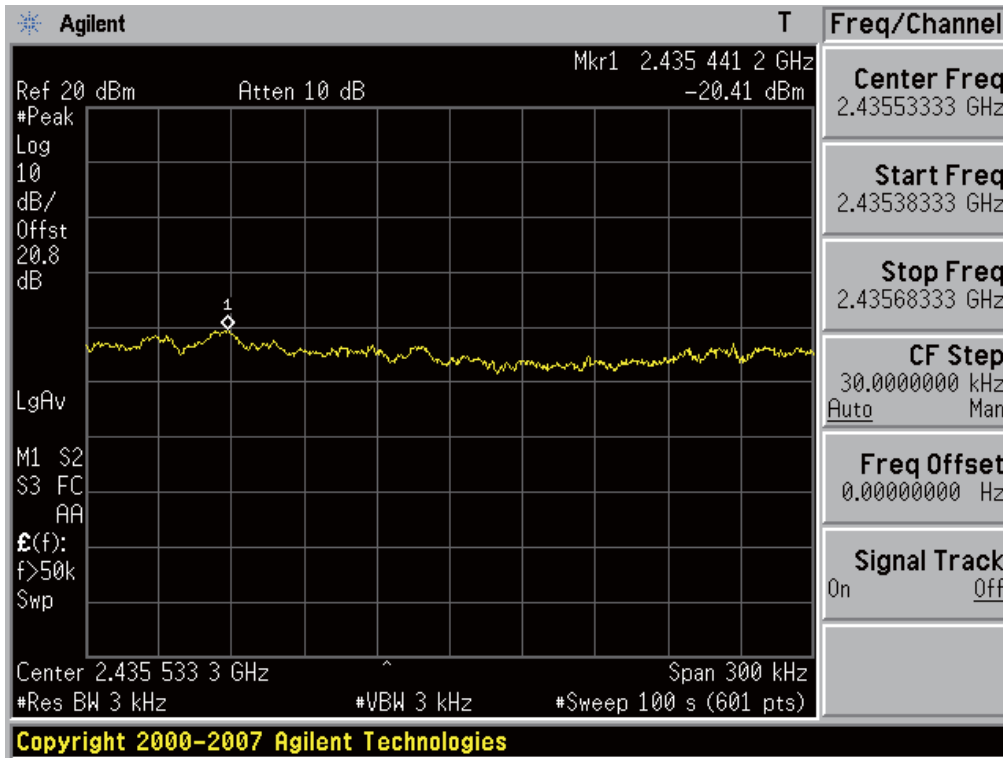
Power Spectral Density (802.11n-CH11) _ 20 MHz BW



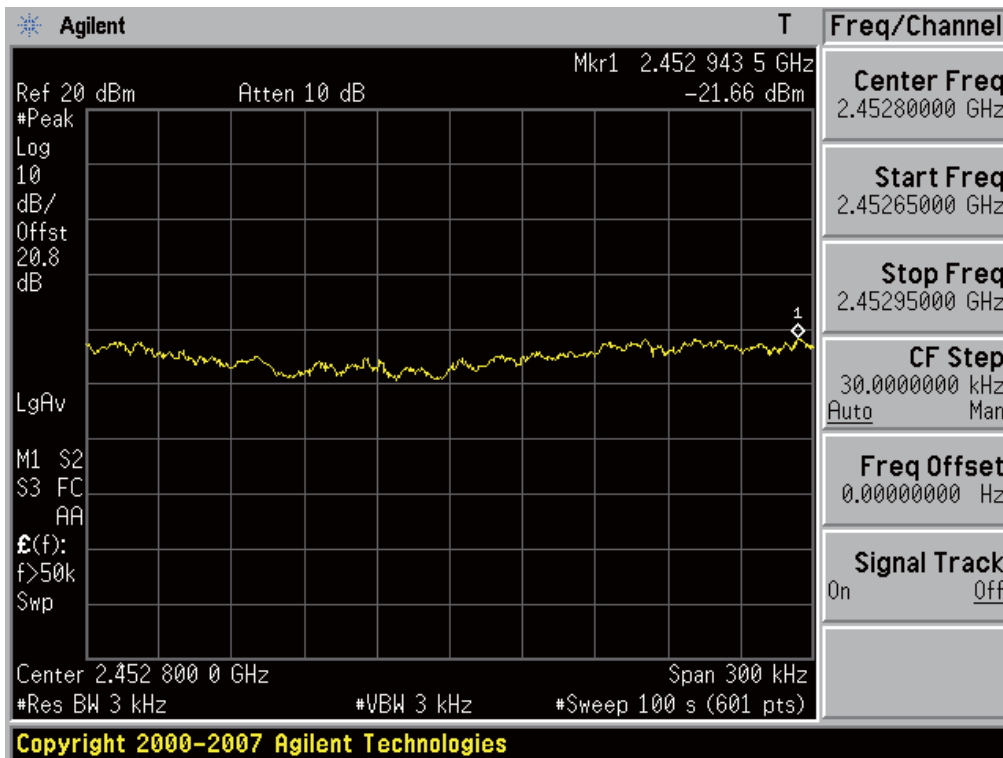
Power Spectral Density (802.11n-CH 3)_ 40 MHz BW



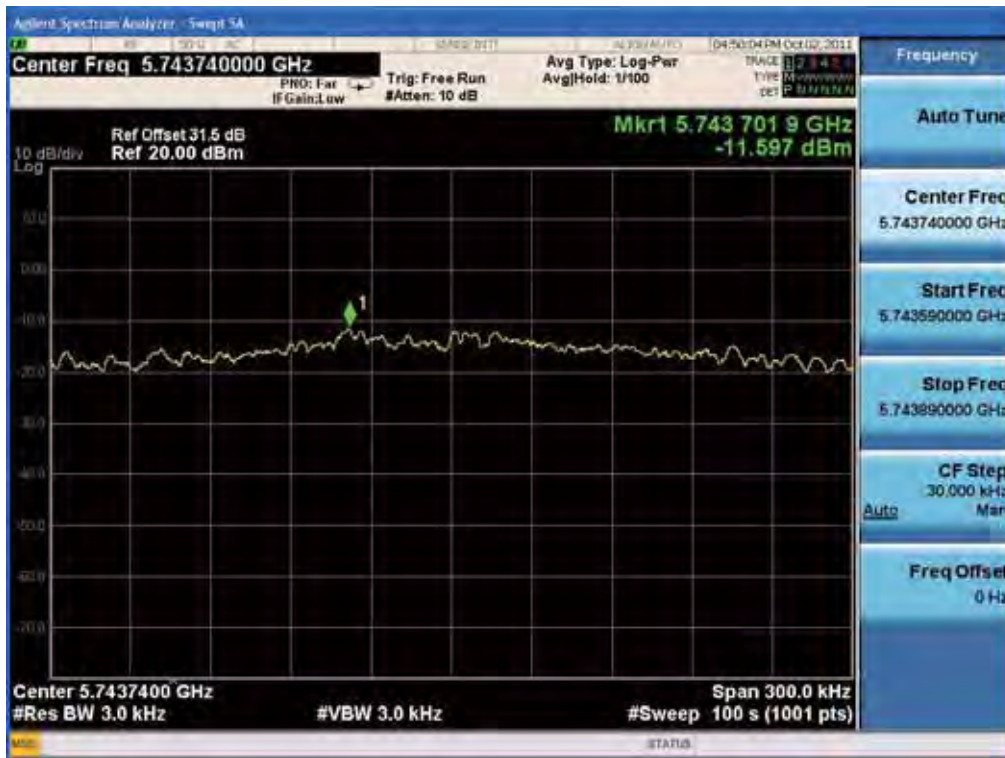
Power Spectral Density (802.11n-CH 6) _ 40 MHz BW



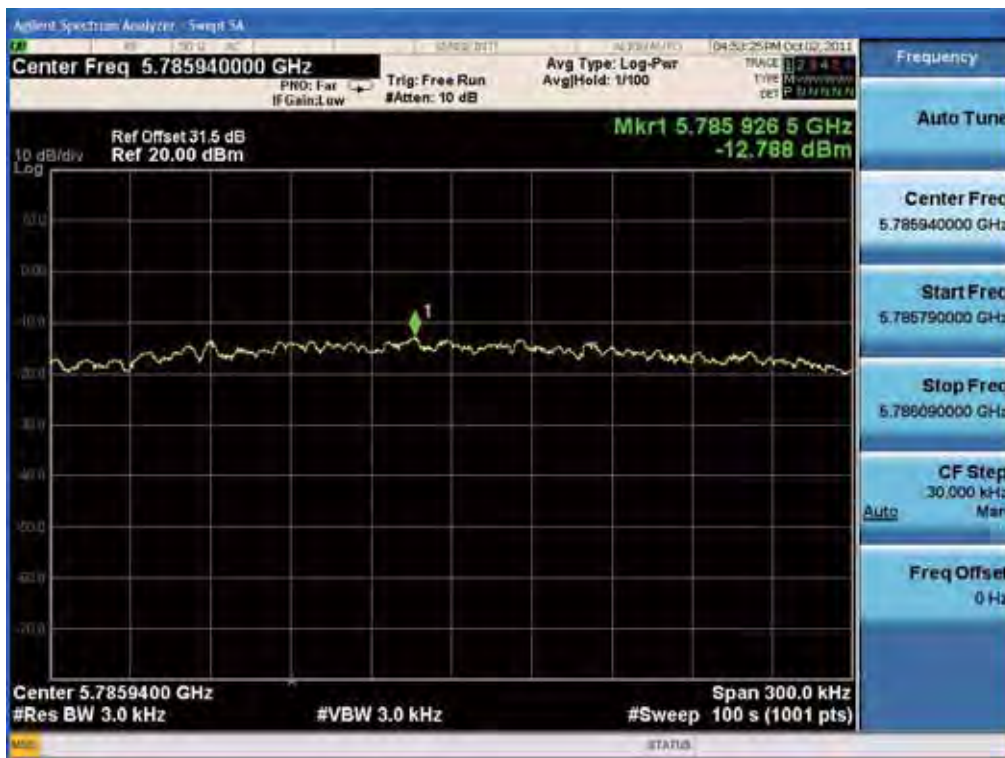
Power Spectral Density (802.11n-CH9) _ 40 MHz BW



Power Spectral Density (802.11a-CH 149)

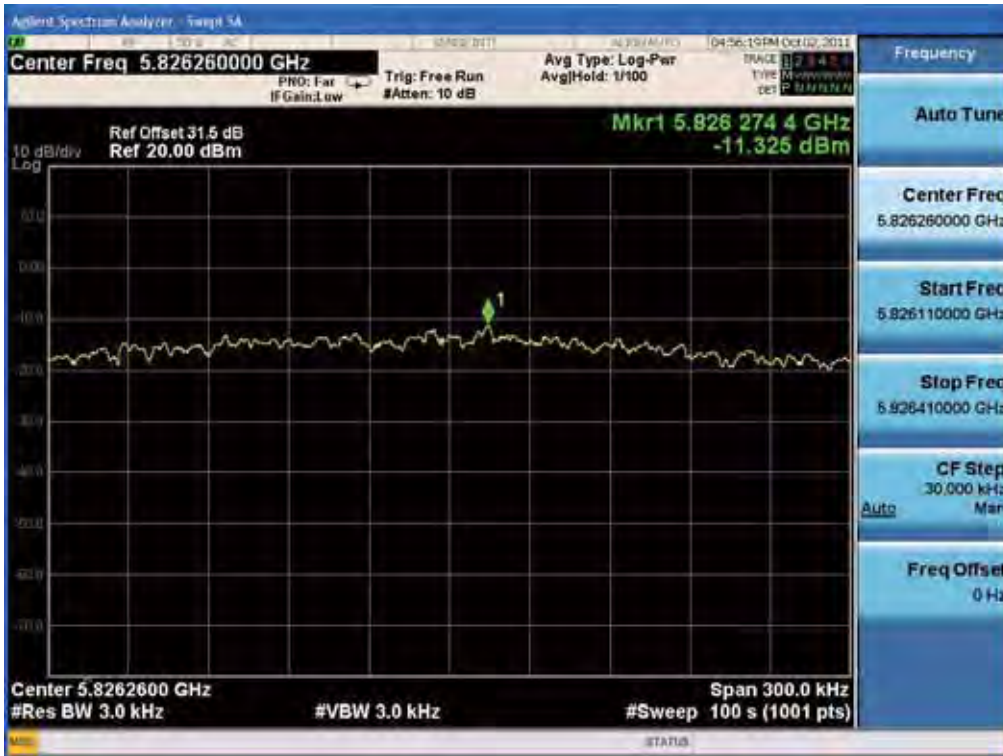


Power Spectral Density (802.11a-CH 157)

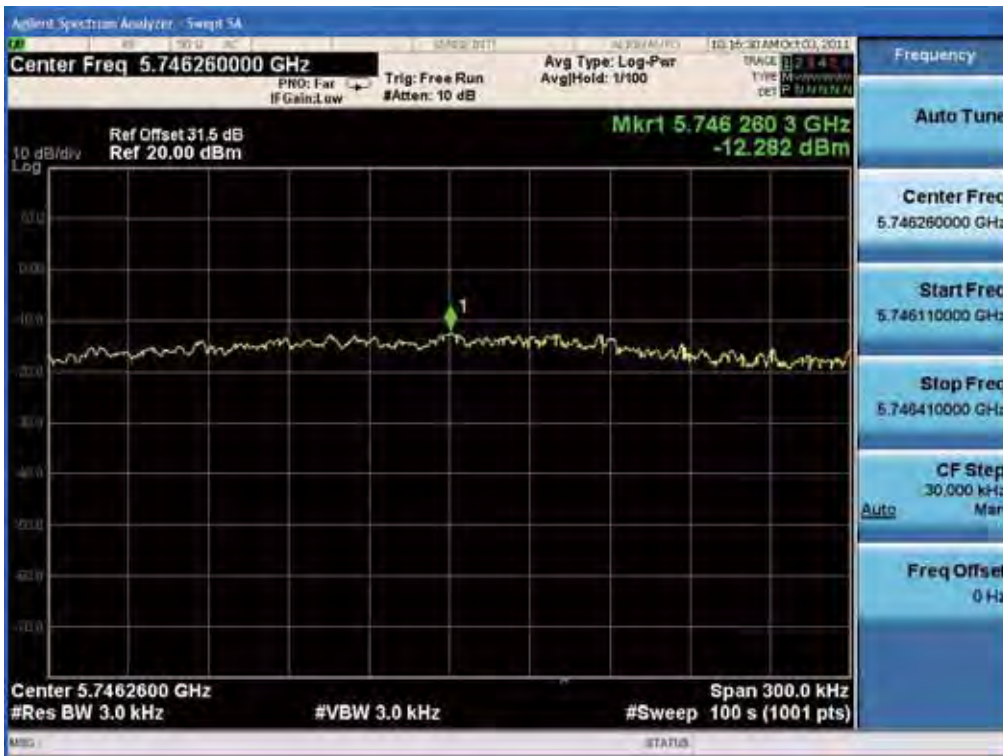


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Power Spectral Density (802.11a-CH1165)

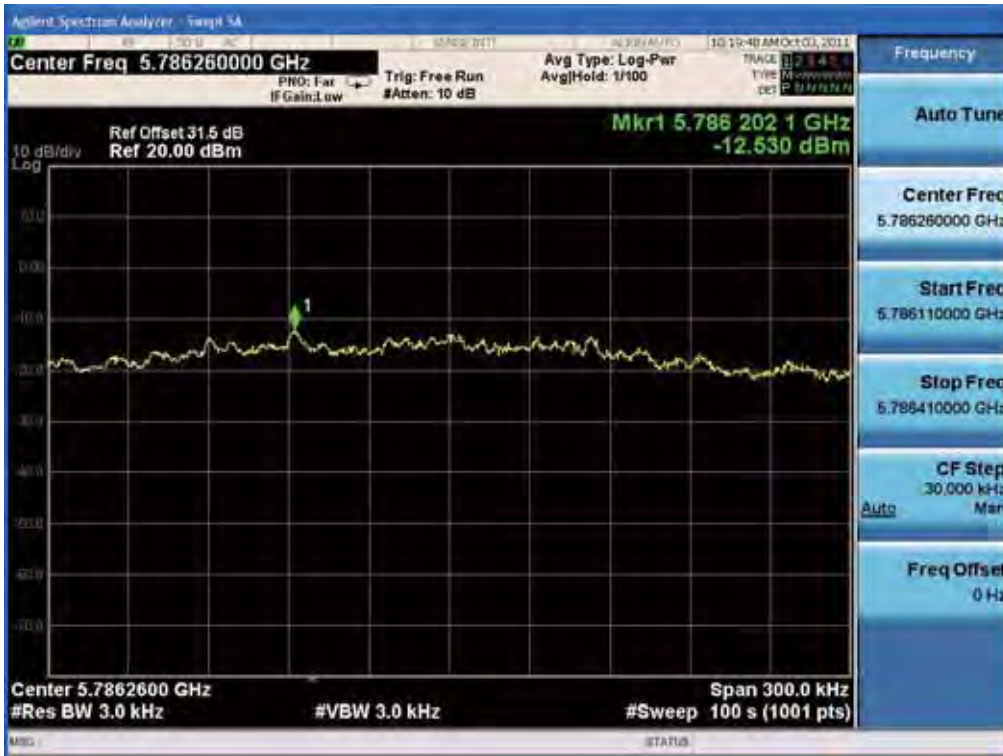


Power Spectral Density (802.11n-CH 149) _20 MHz BW



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Power Spectral Density (802.11n-CH 157) _20 MHz BW

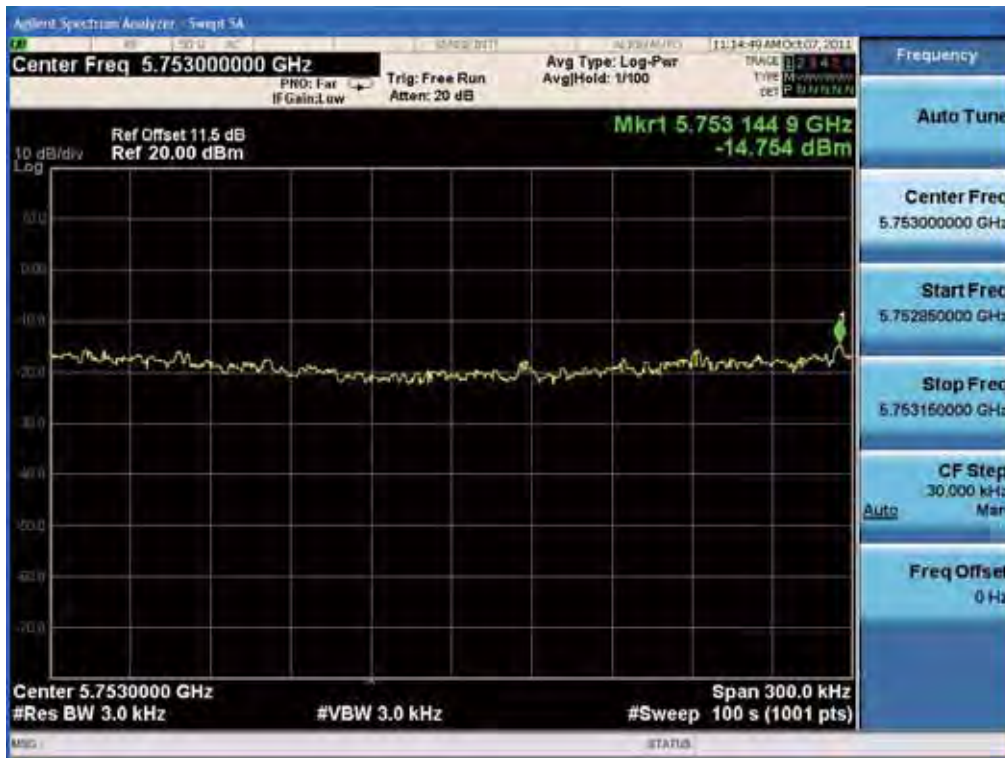


Power Spectral Density (802.11n-CH165) _20 MHz BW

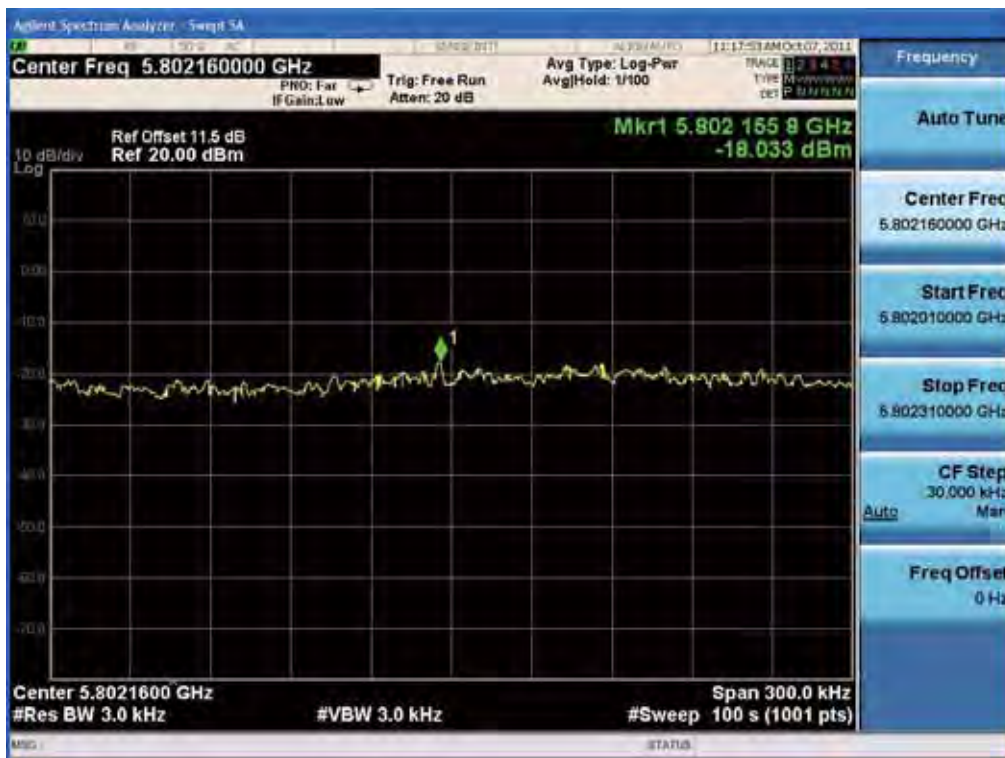


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Power Spectral Density (802.11n-CH 151)_40 MHz BW



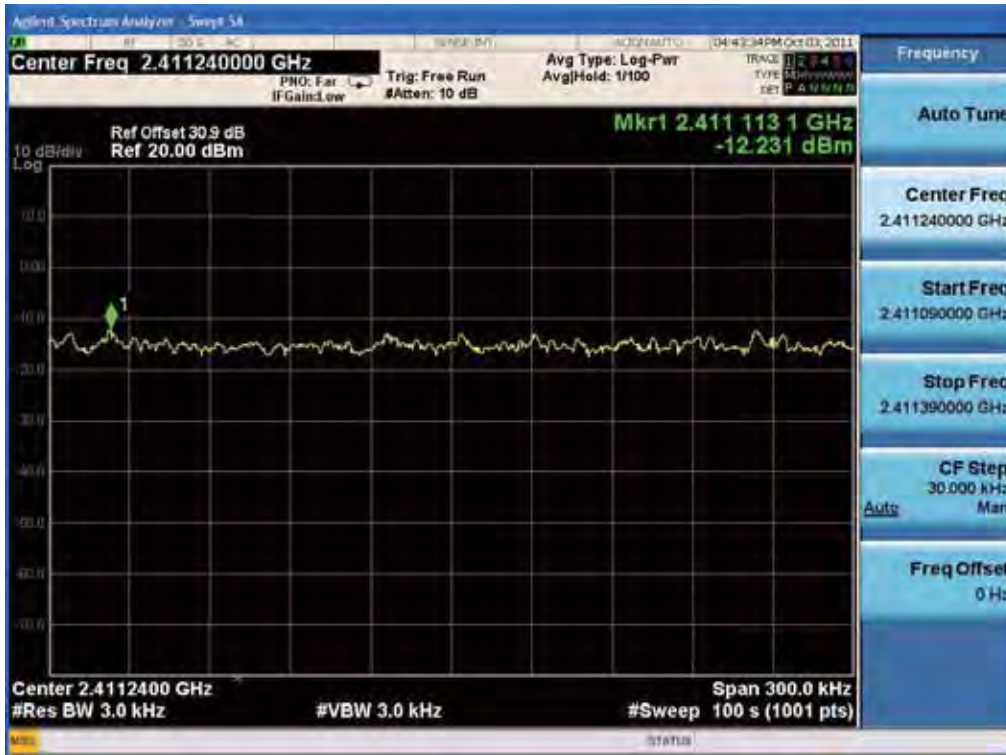
Power Spectral Density (802.11n-CH 159)_40 MHz BW



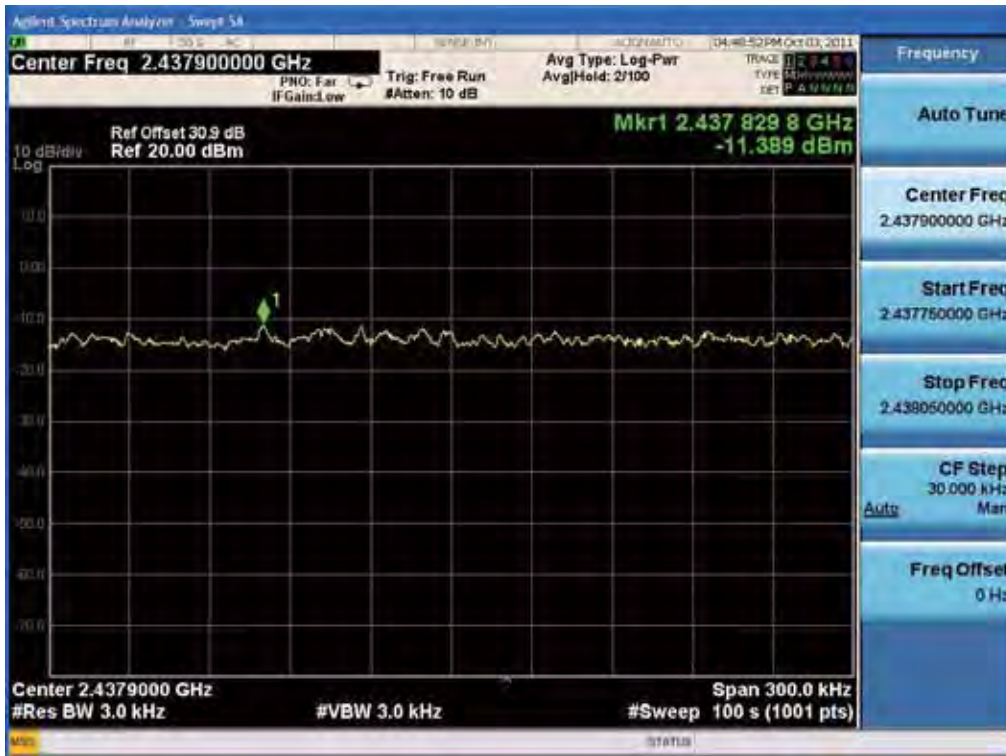
FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

RESULT PLOTS_Ant.1

Power Spectral Density (802.11b-CH 1)

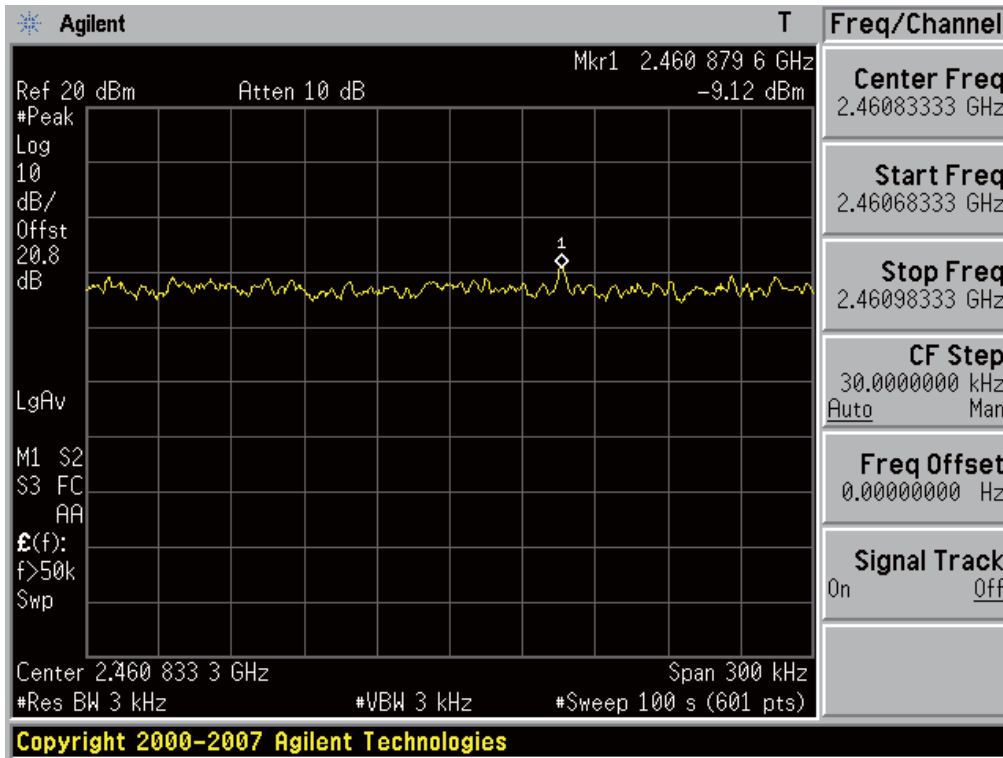


Power Spectral Density (802.11b-CH 6)

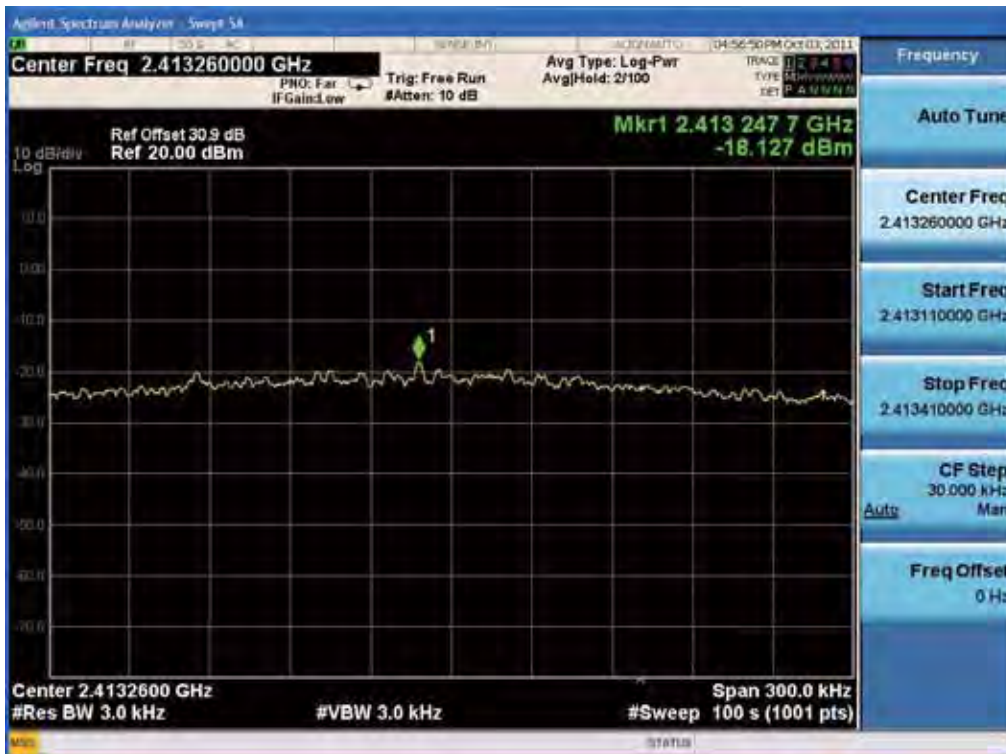


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Power Spectral Density (802.11b-CH 11)

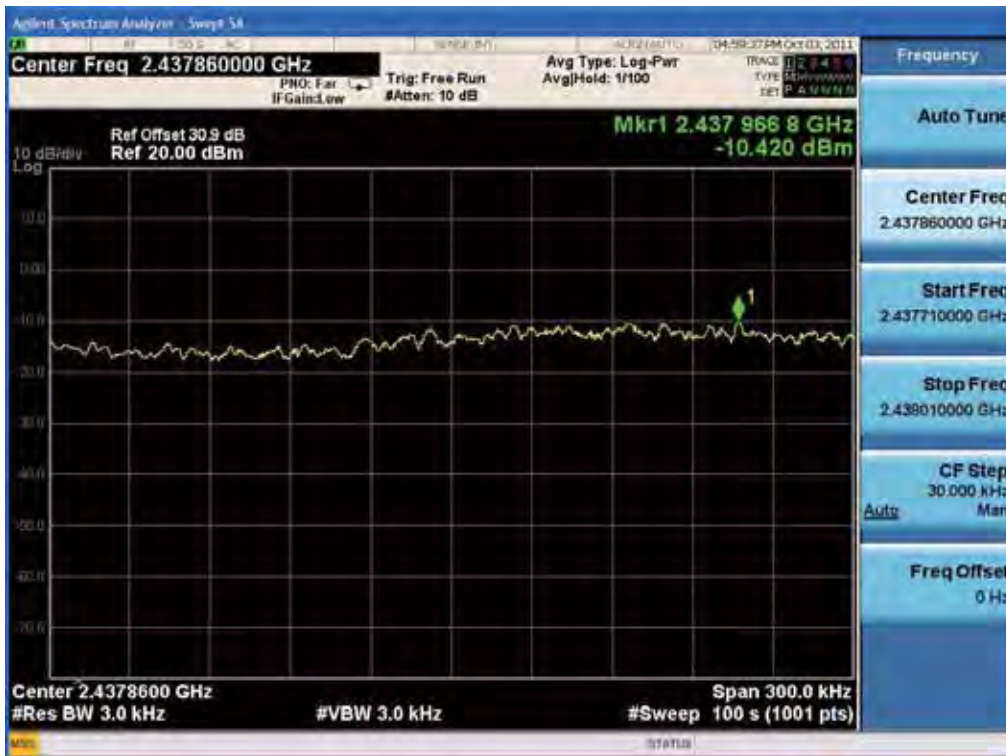


Power Spectral Density (802.11g-CH 1)

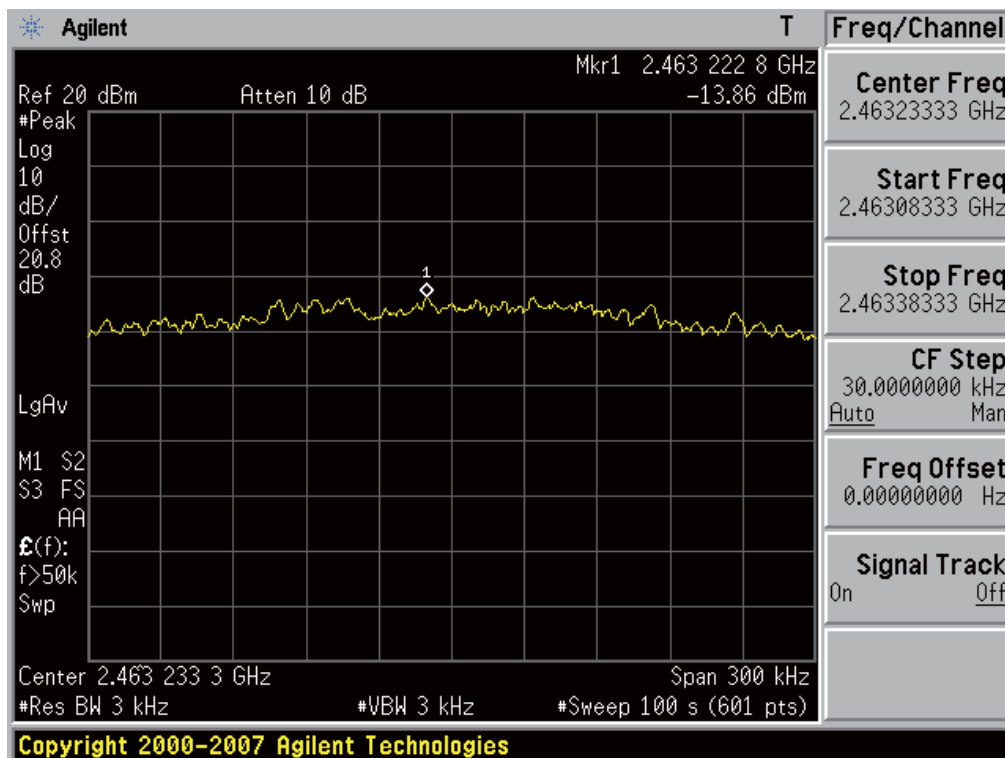


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Power Spectral Density (802.11g-CH 6)

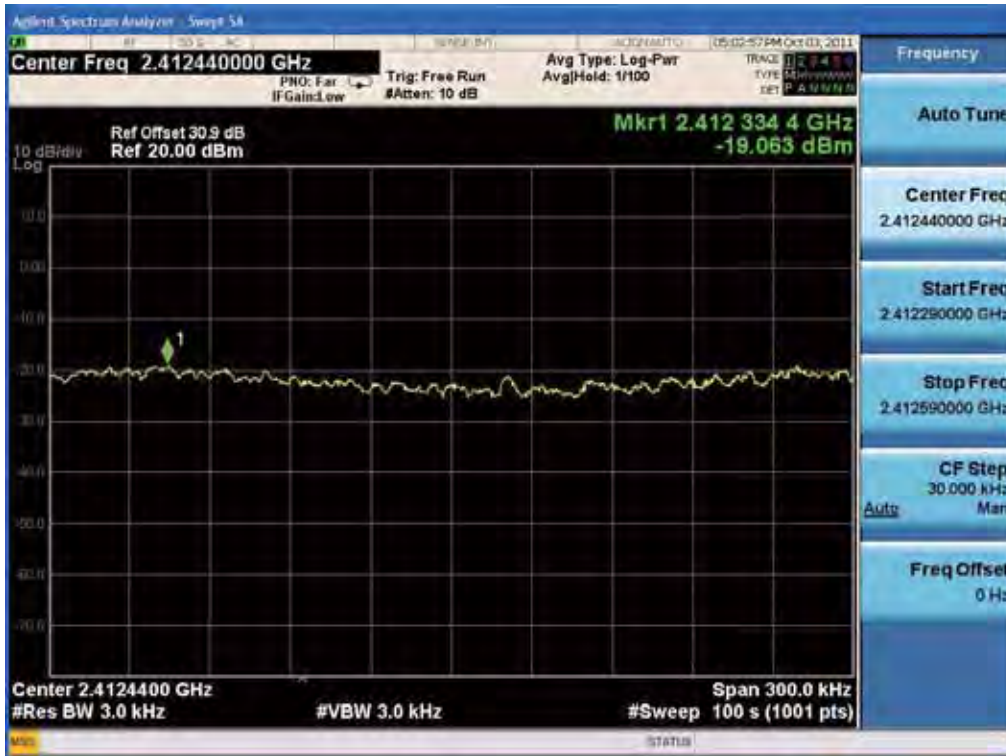


Power Spectral Density (802.11g-CH11)

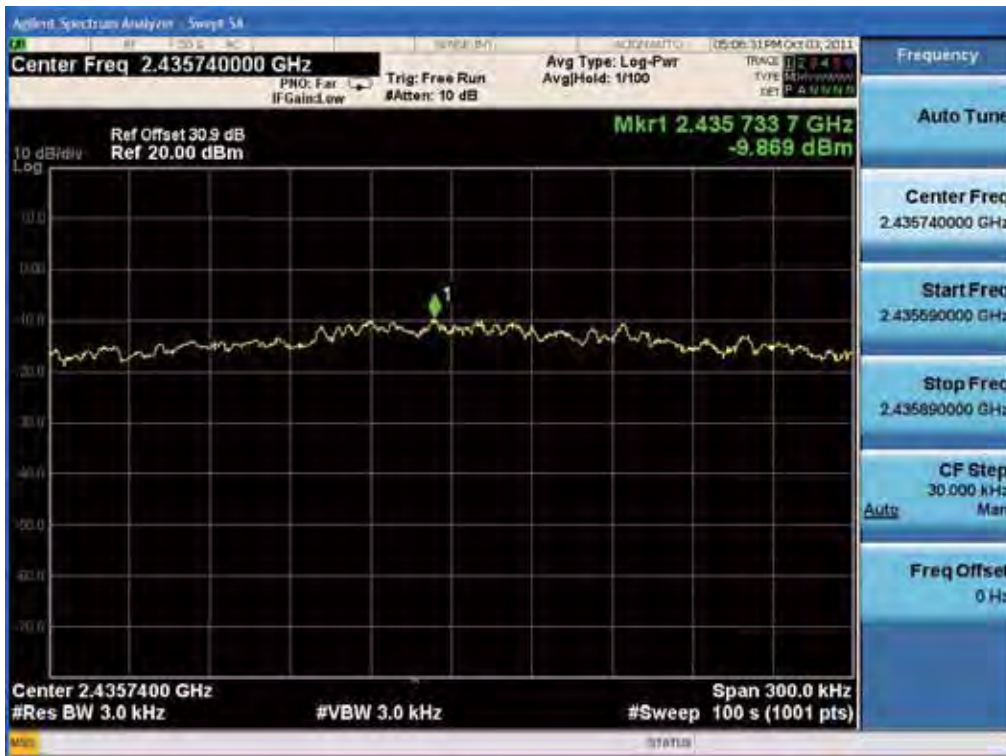


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Power Spectral Density (802.11n-CH 1)_ 20 MHz BW

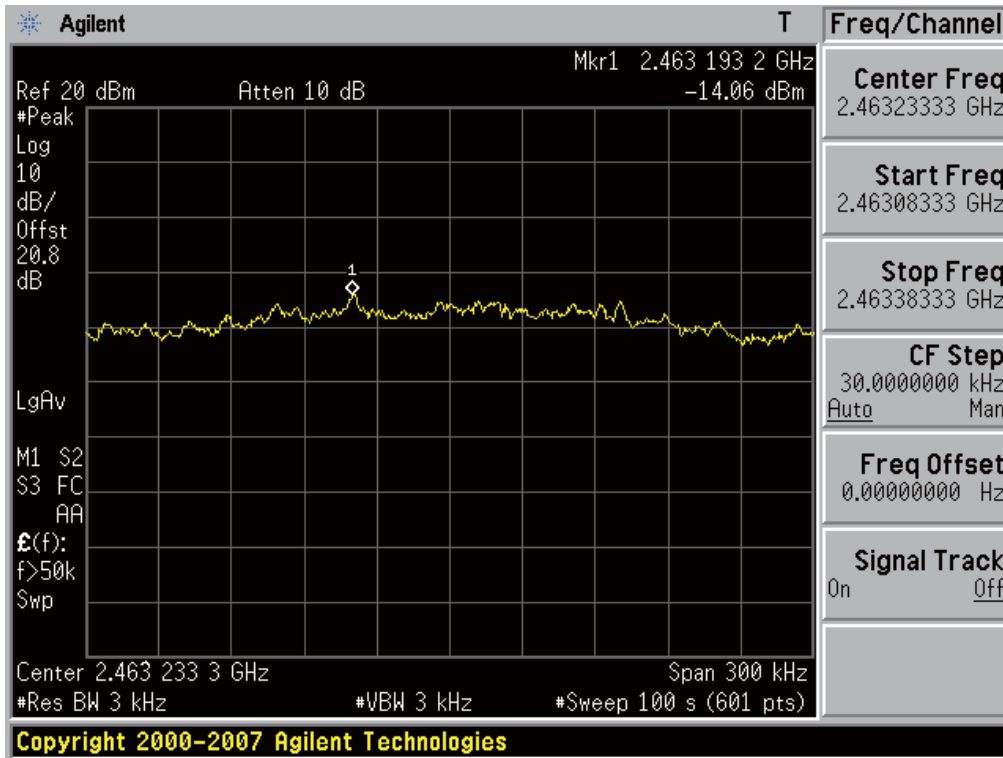


Power Spectral Density (802.11n-CH 6)_ 20 MHz BW

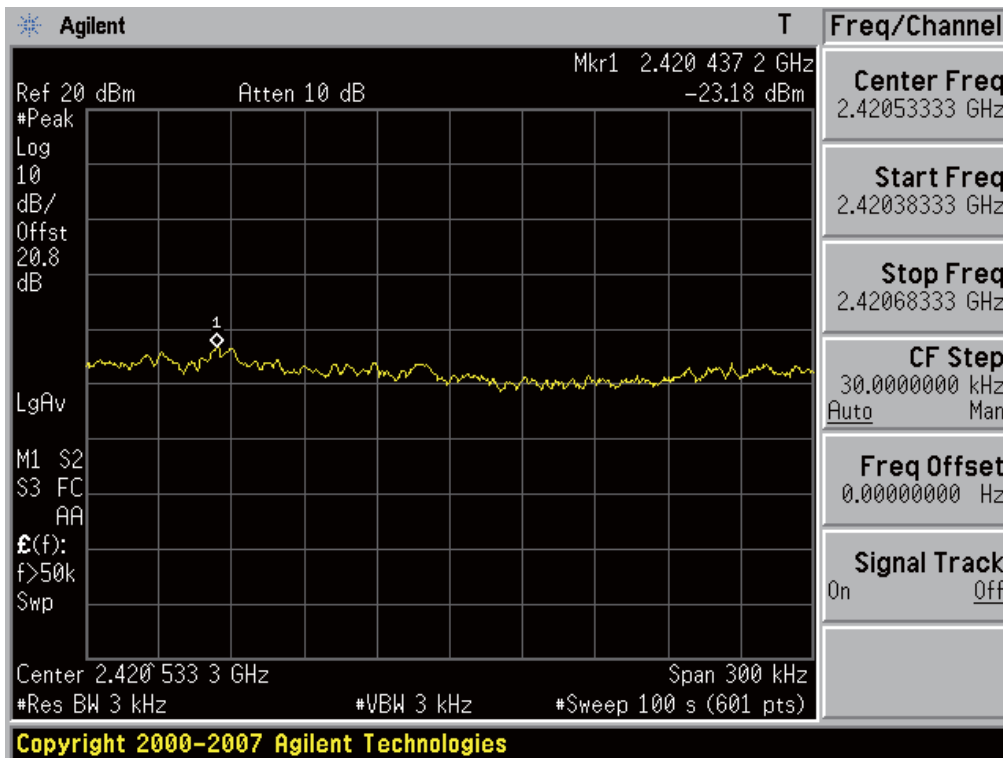


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

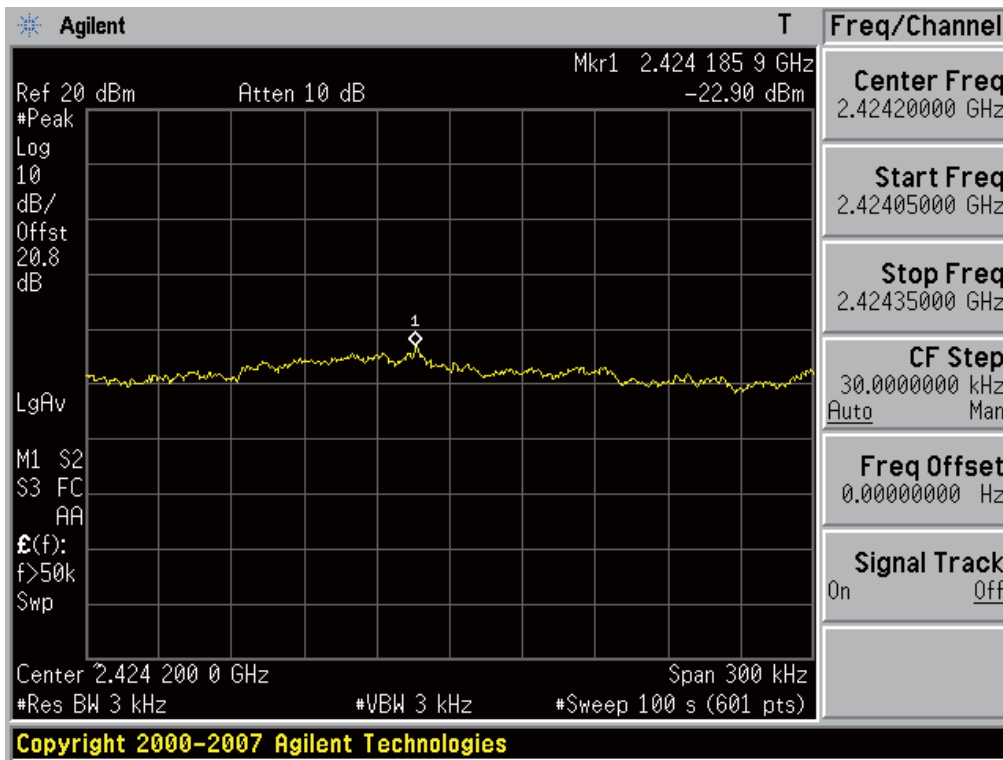
Power Spectral Density (802.11n-CH11) _ 20 MHz BW



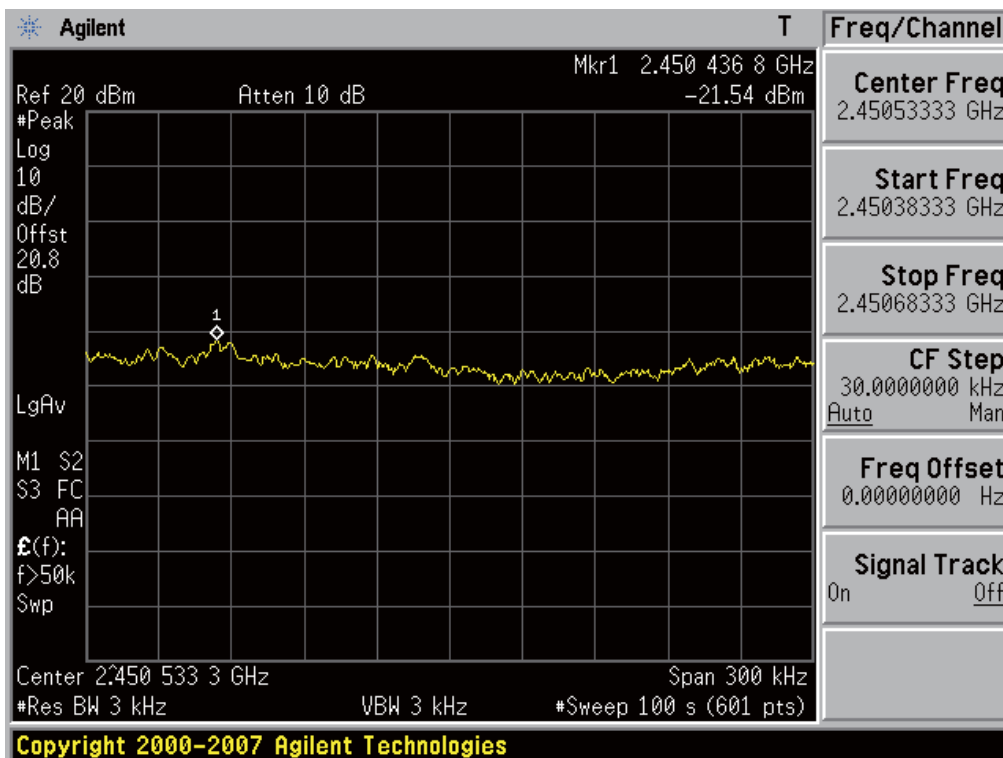
Power Spectral Density (802.11n-CH 3)_ 40 MHz BW



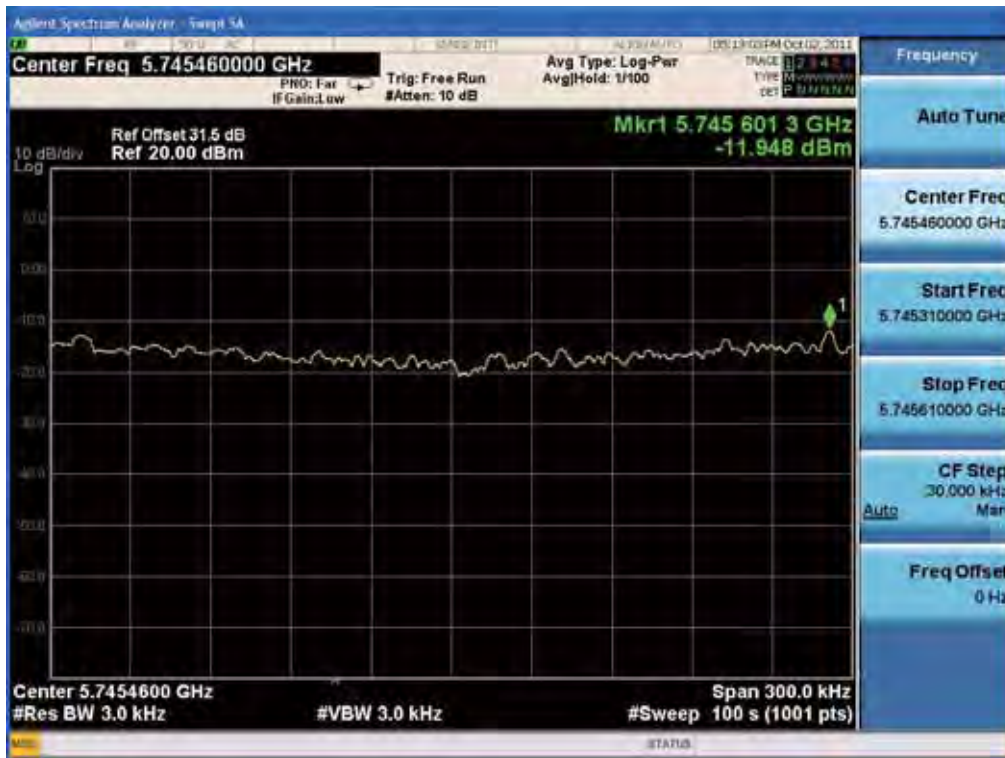
Power Spectral Density (802.11n-CH 6) _ 40 MHz BW



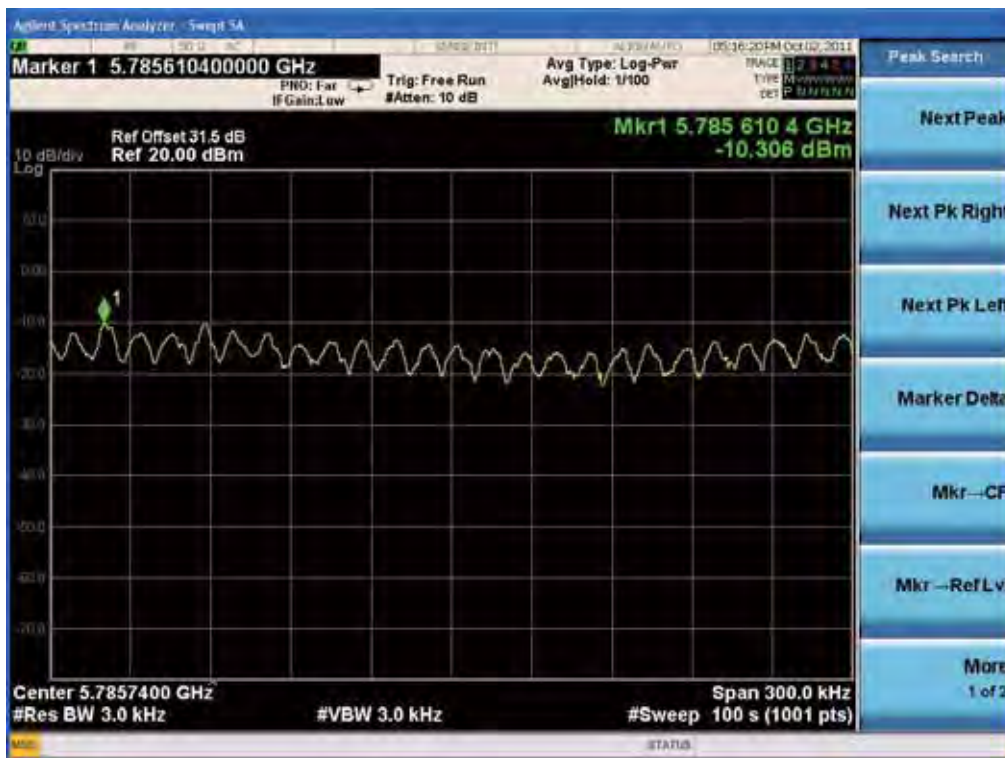
Power Spectral Density (802.11n-CH9) _ 40 MHz BW



Power Spectral Density (802.11a-CH 149)

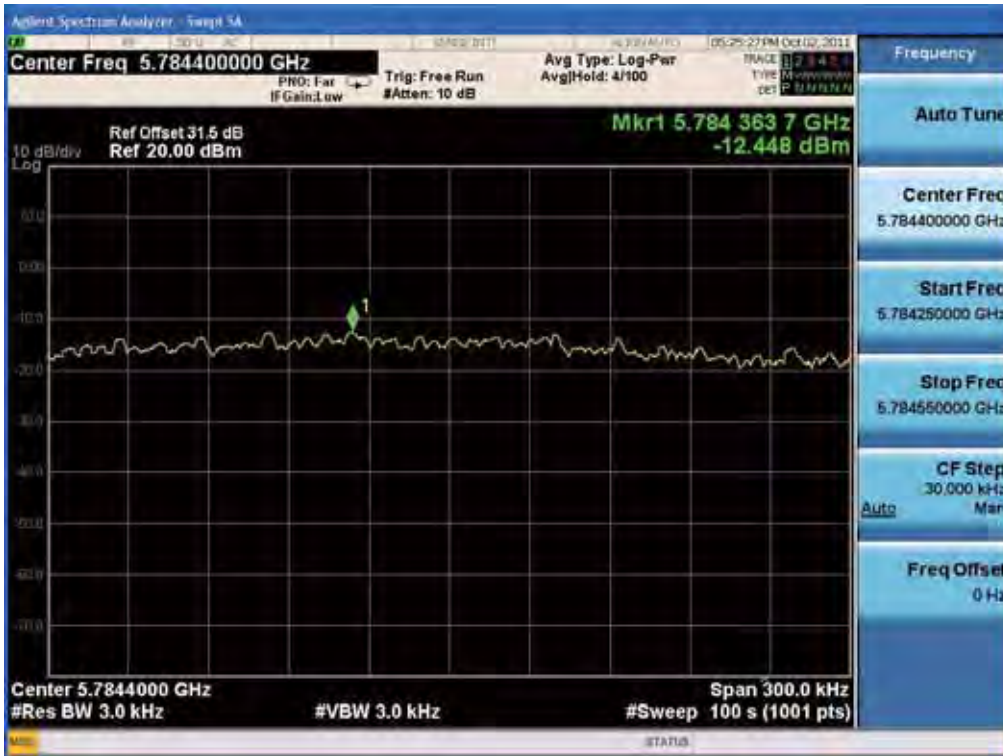


Power Spectral Density (802.11a-CH 157)



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Power Spectral Density (802.11a-CH1165)

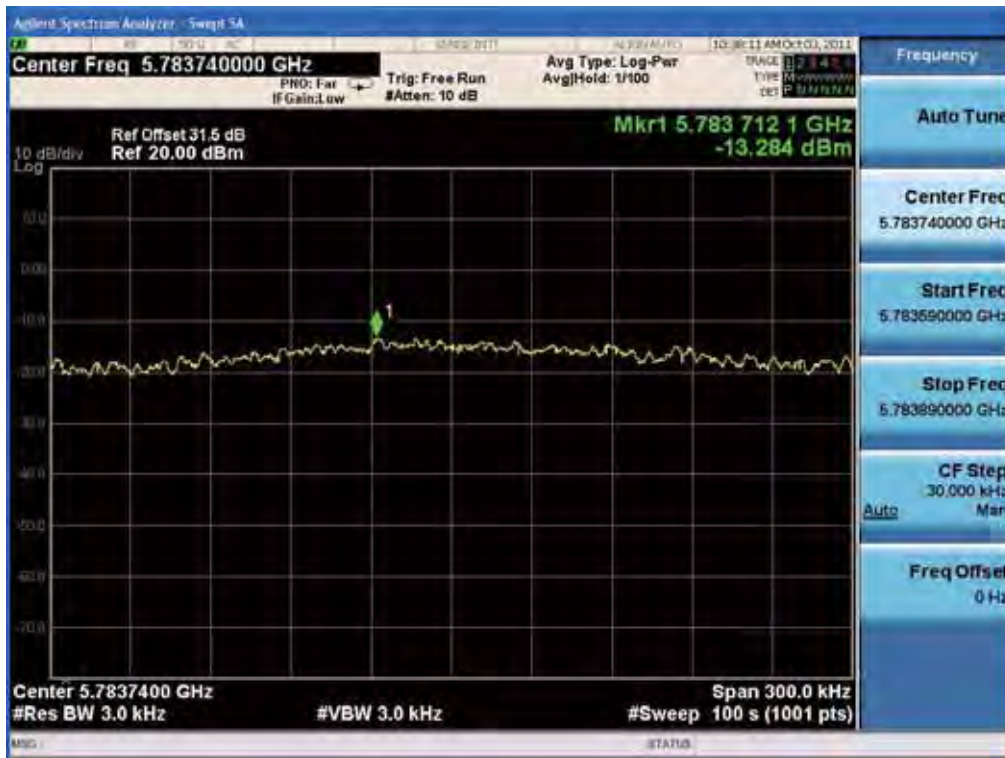


Power Spectral Density (802.11n-CH 149) _20 MHz BW



FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Power Spectral Density (802.11n-CH 157) _20 MHz BW

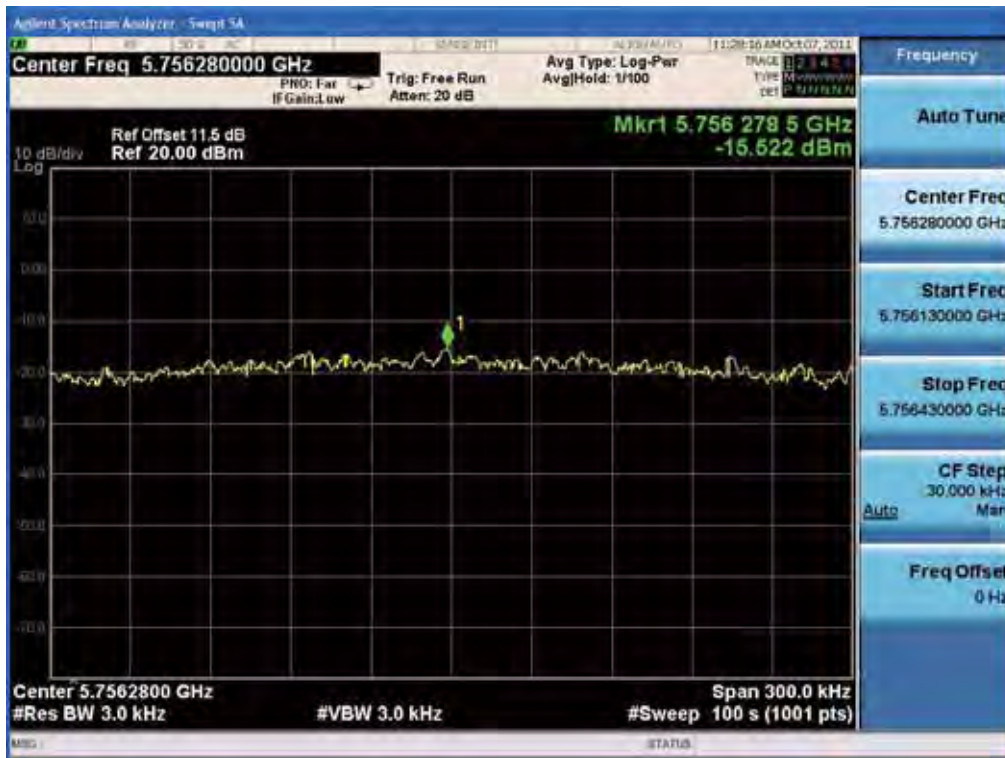


Power Spectral Density (802.11n-CH165) _20 MHz BW

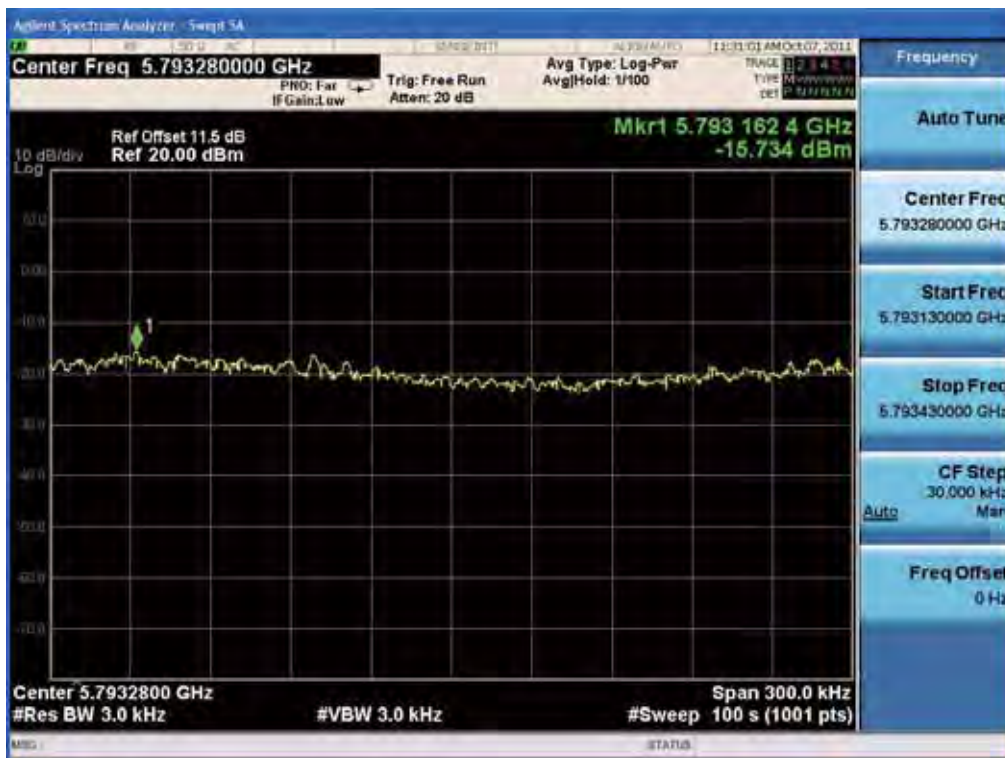


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Power Spectral Density (802.11n-CH 151)_40 MHz BW



Power Spectral Density (802.11n-CH 159)_40 MHz BW



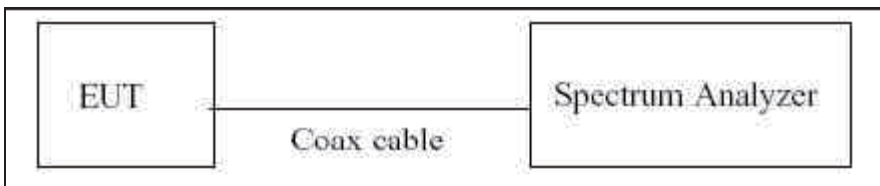
FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

7.5 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 intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB 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 §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)).

■ TEST CONFIGURATION



■ TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

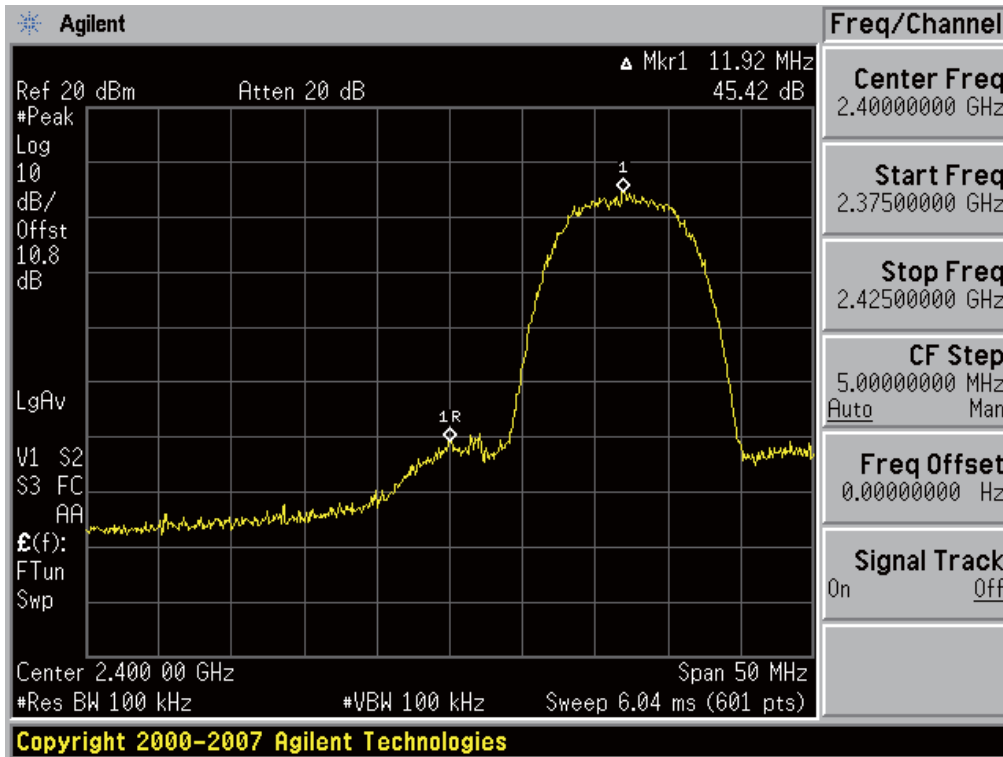
Detector Mode is set to a peak detector Mode.

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

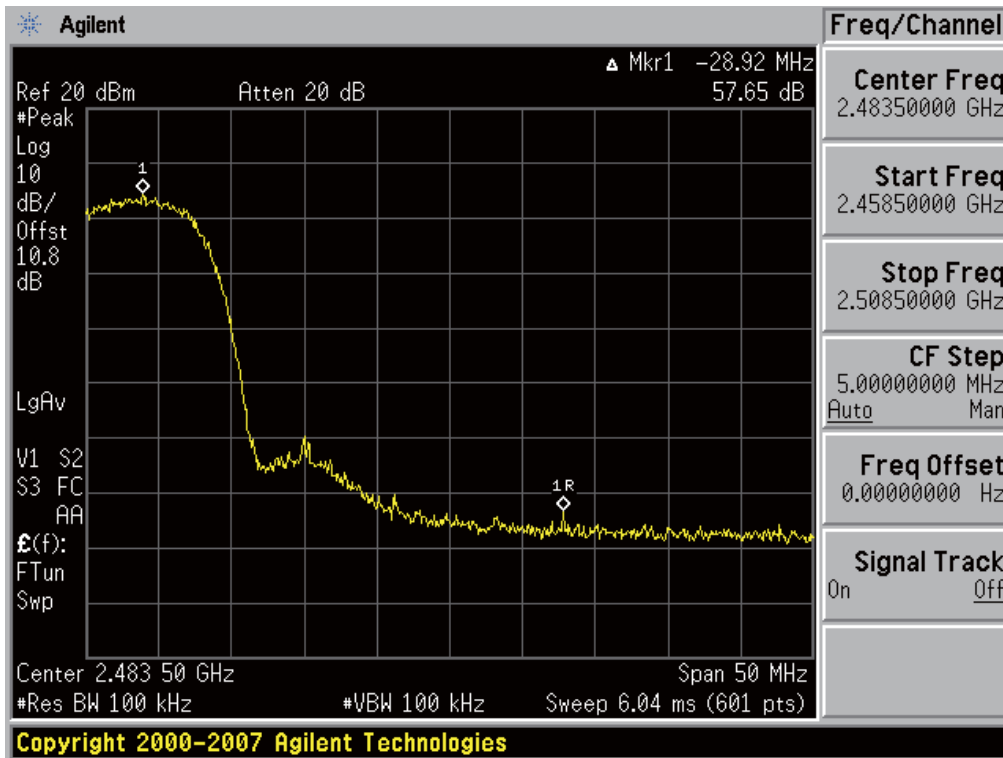
FCC PT.15.247 TEST REPORT		FCC & IC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

RESULT PLOTS_Ant.0

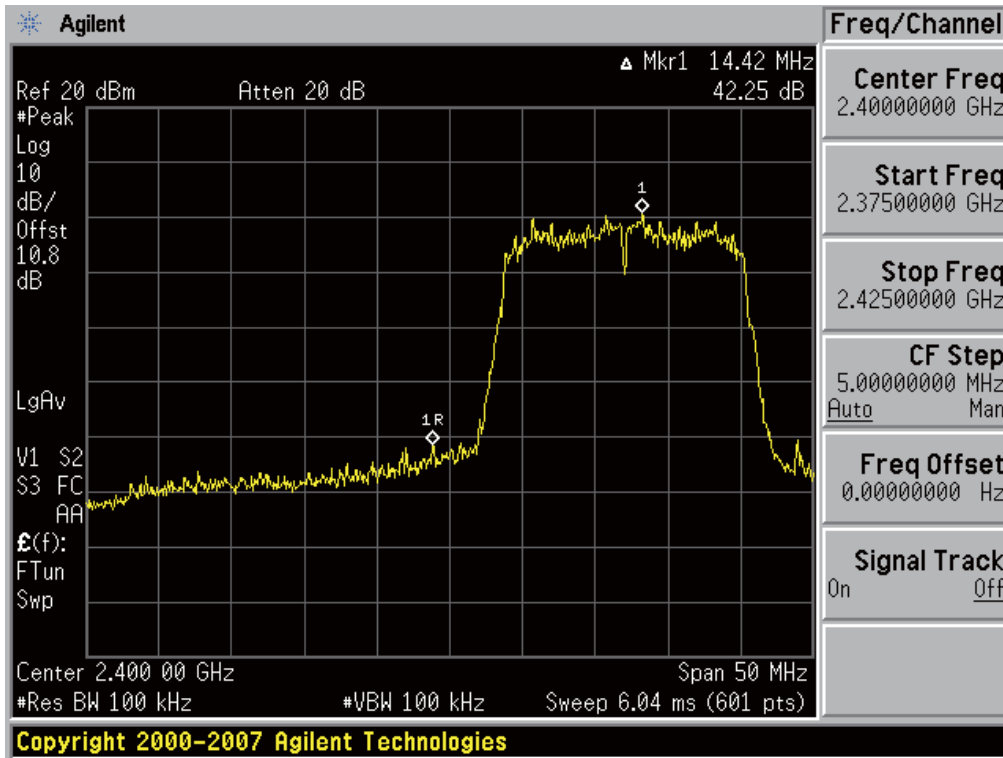
Band Edge (802.11b-CH1)



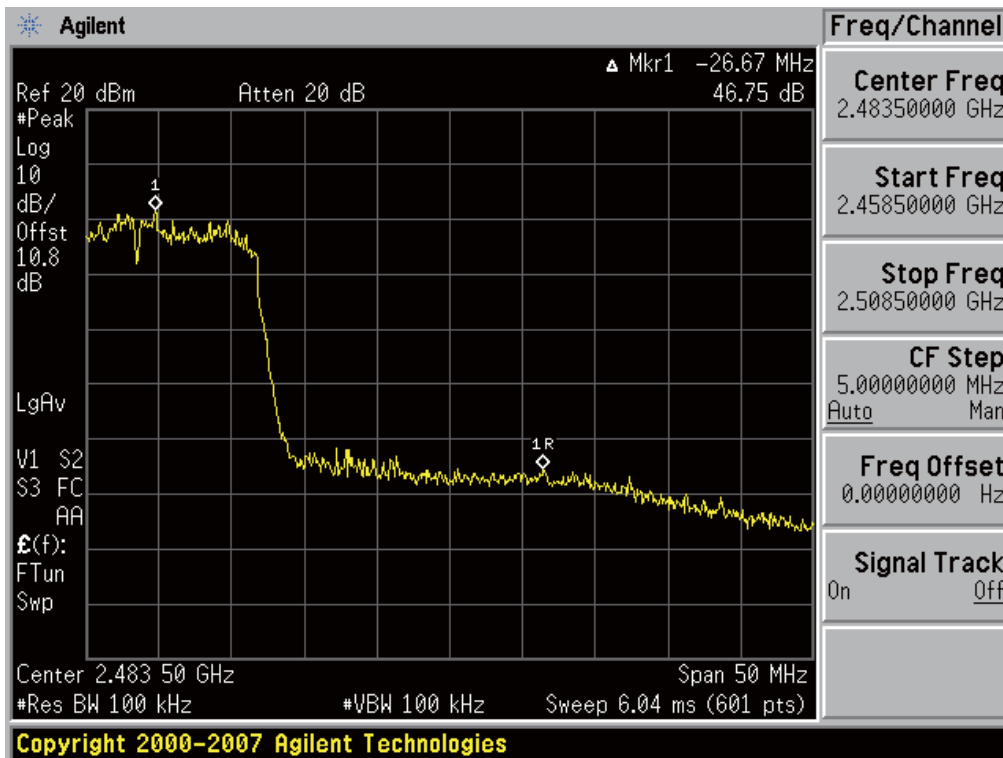
Band Edge (802.11b-CH11)



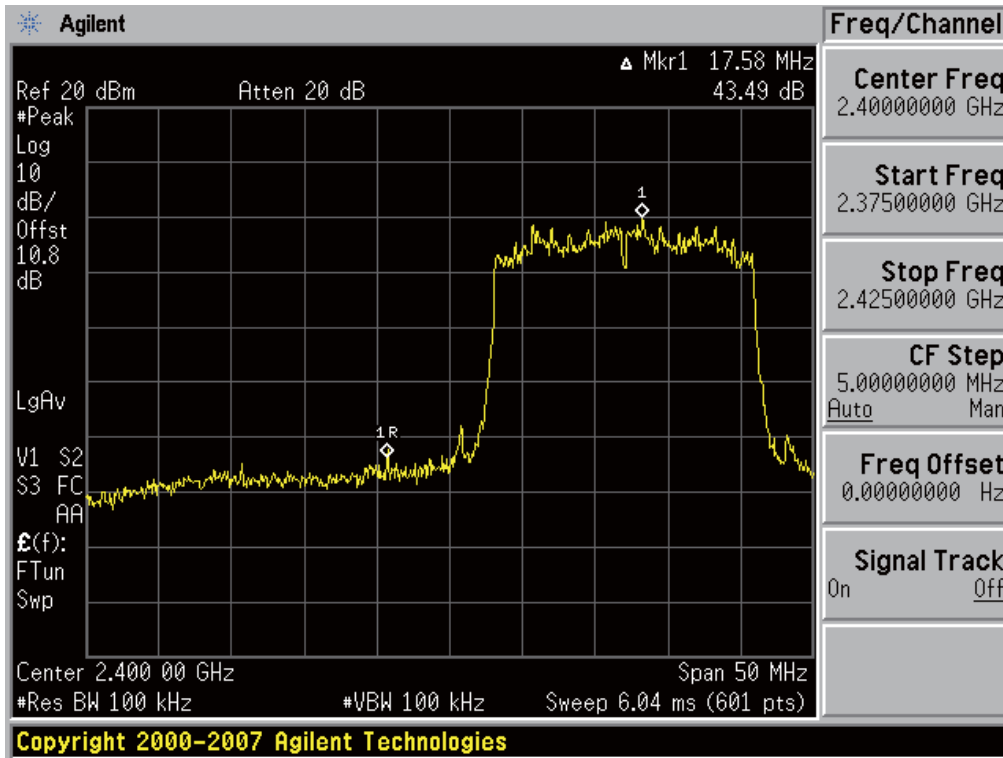
Band Edge (802.11g-CH1)



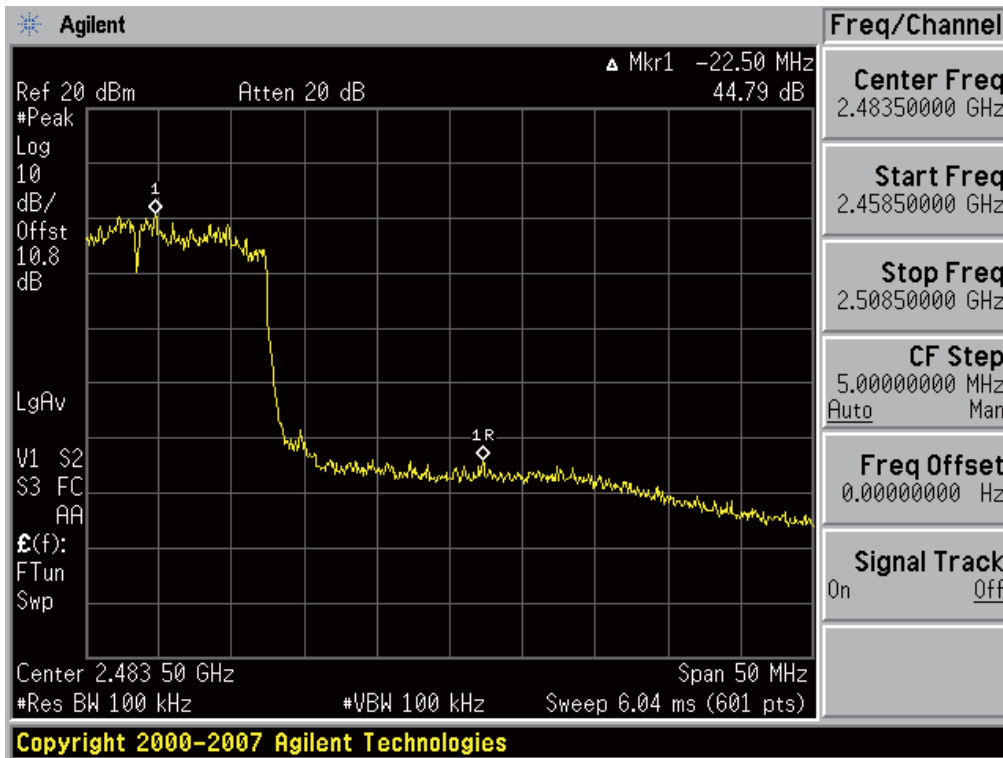
Band Edge (802.11g-CH11)



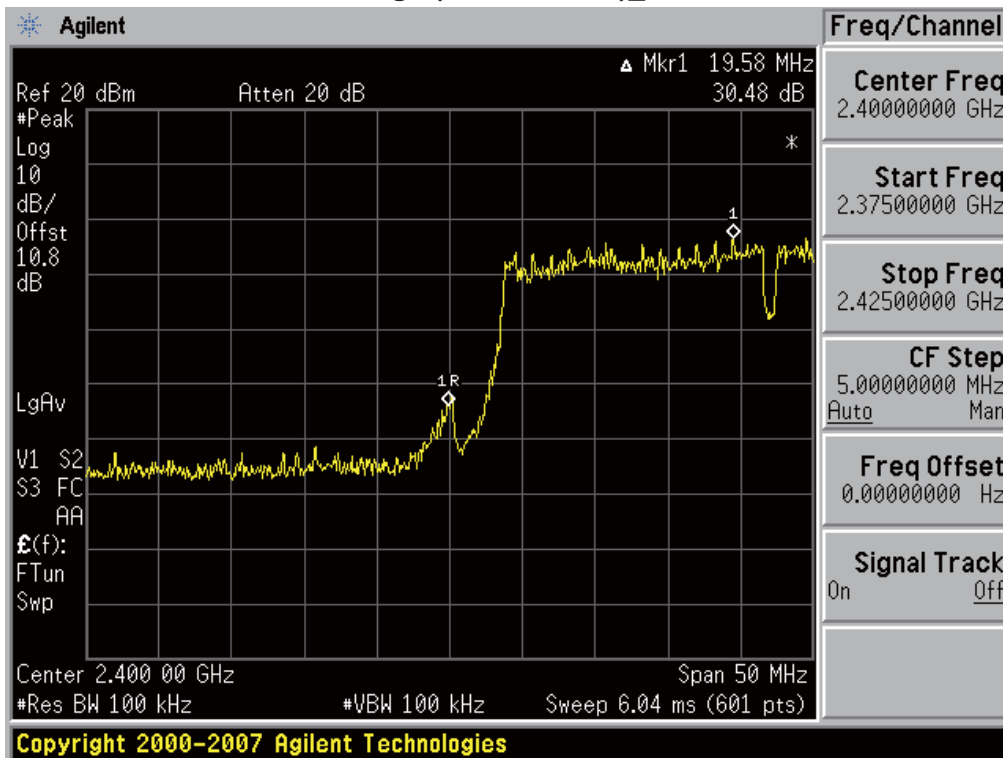
Band Edge (802.11n-CH1) _ 20 MHz BW



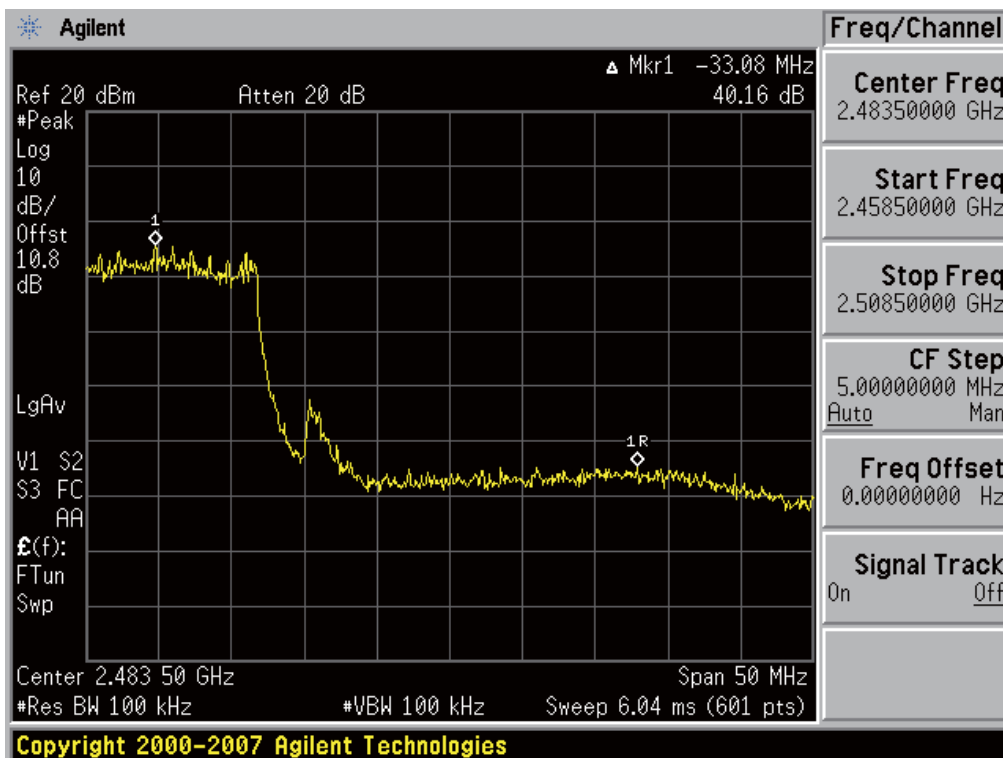
Band Edge (802.11n-CH11) _ 20 MHz BW



Band Edge (802.11n-CH3)_40 MHz

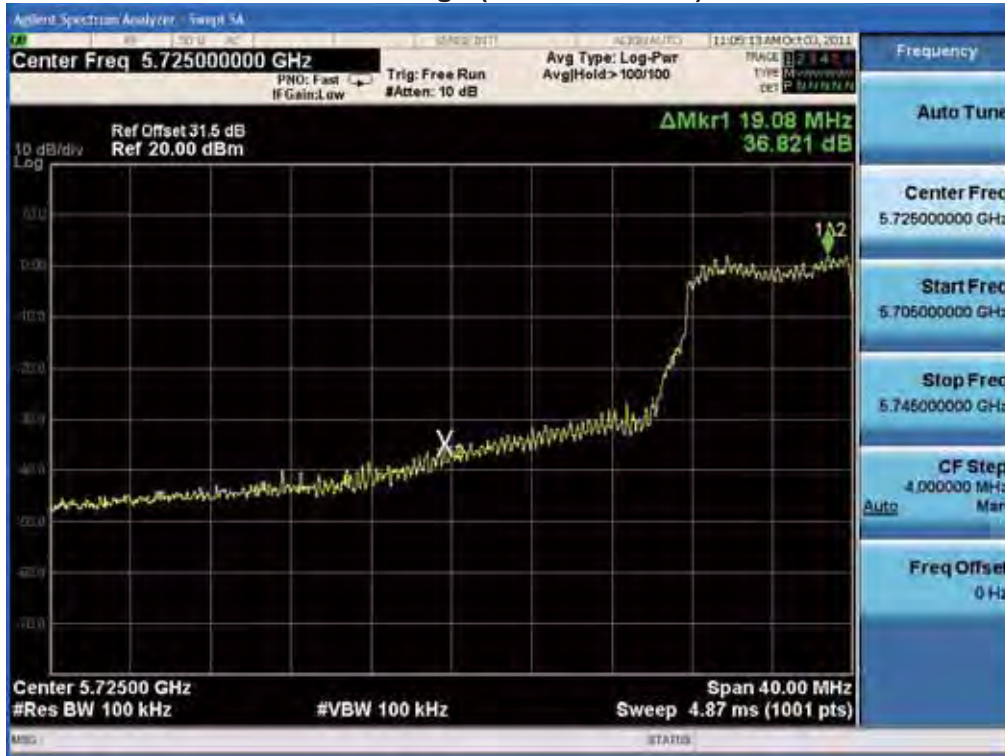


Band Edge (802.11n-CH9)_40 MHz

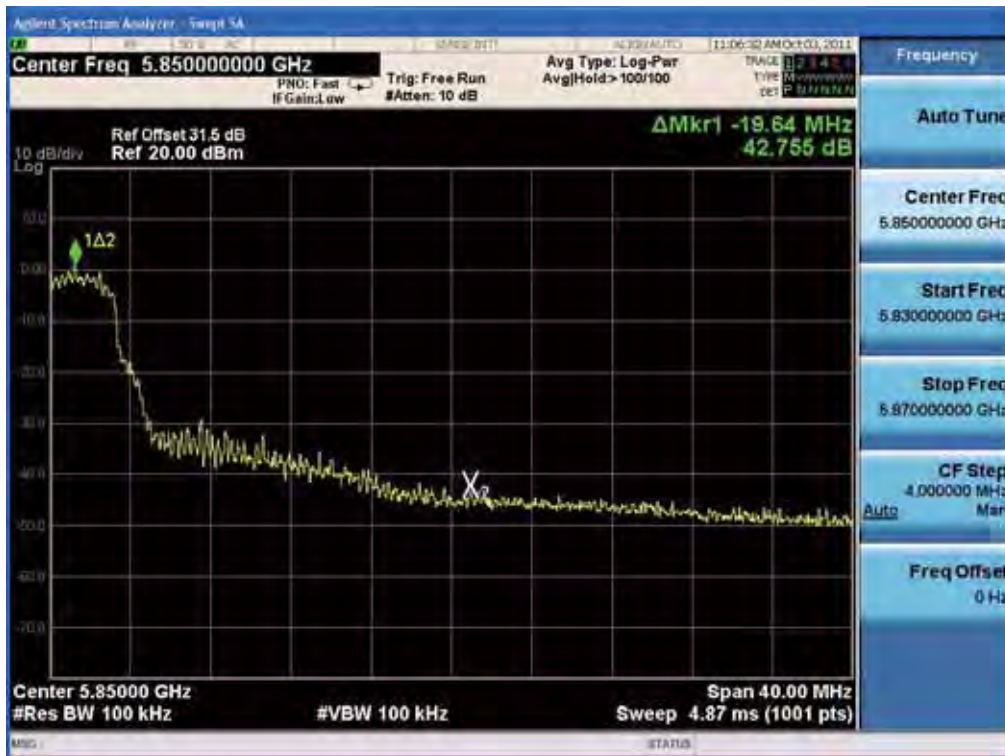


RESULT PLOTS_Ant.0

Band Edge (802.11a-CH149)



Band Edge (802.11a-CH165)

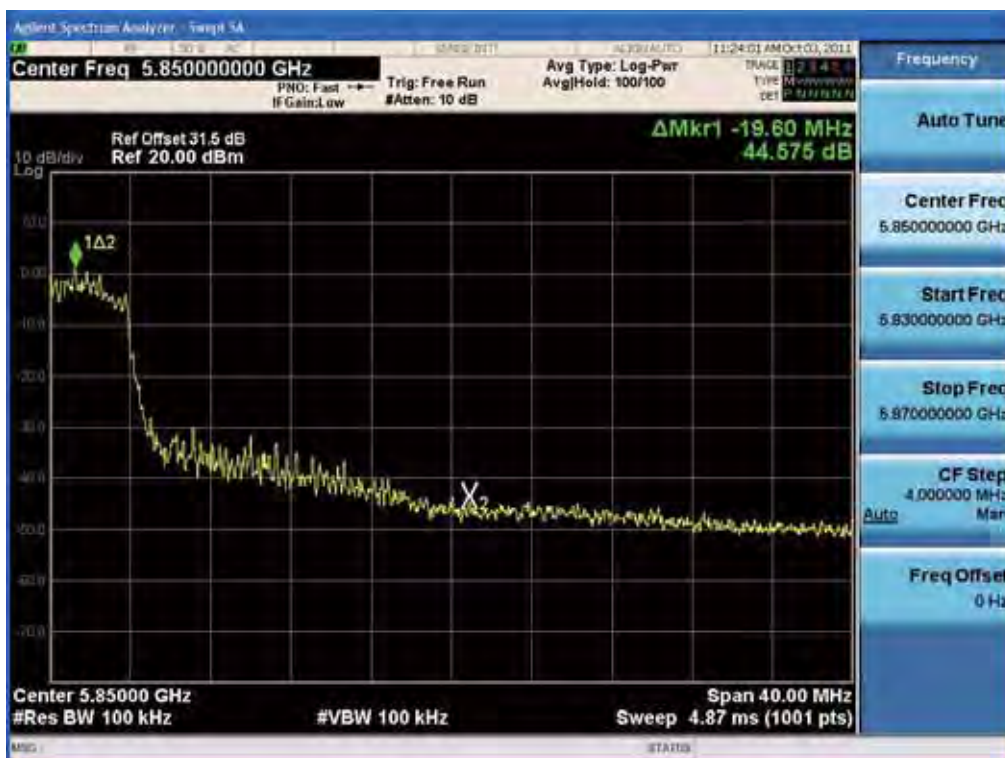


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Band Edge (802.11n-CH149) _ 20 MHz BW

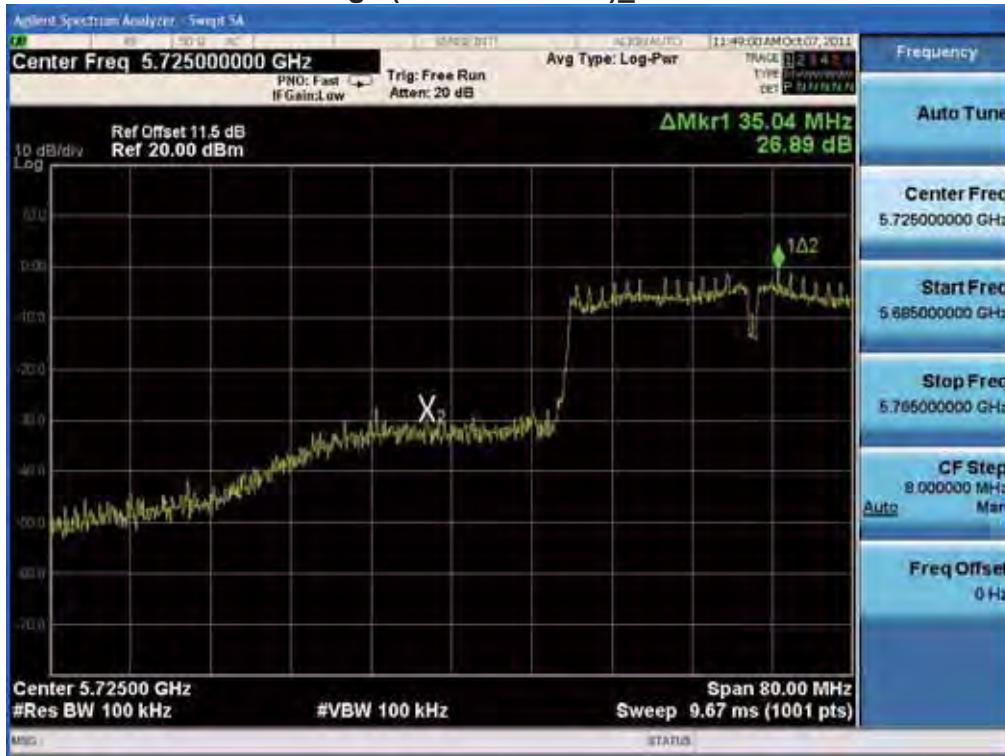


Band Edge (802.11n-CH165) _ 20 MHz BW

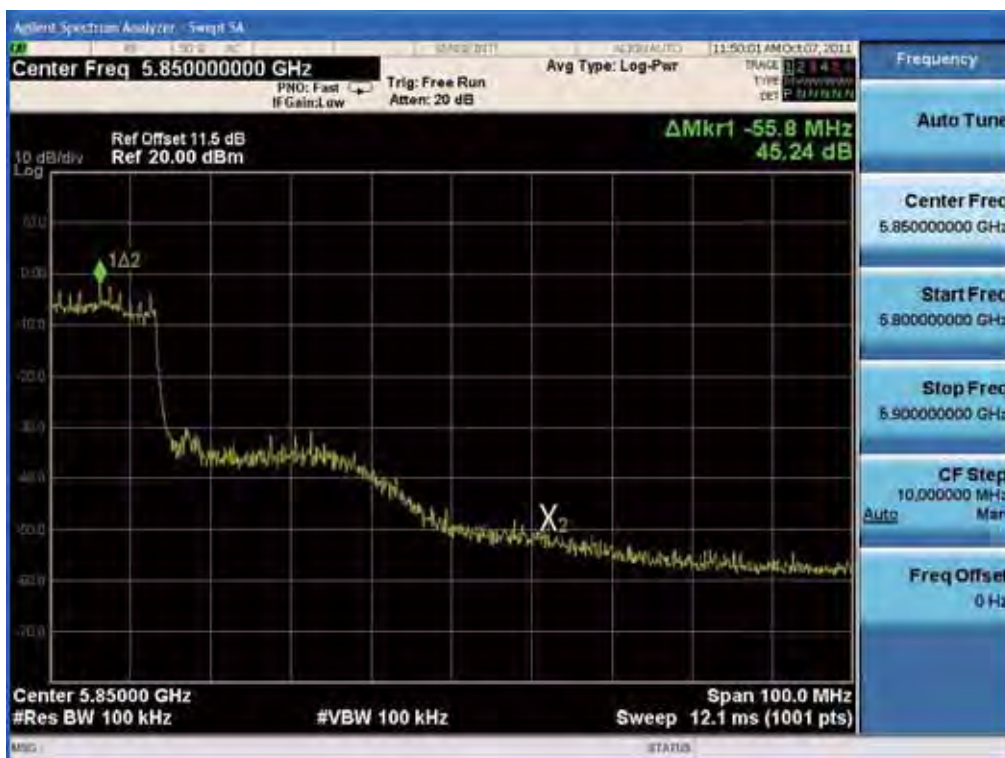


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Band Edge (802.11n-CH151)_40 MHz BW



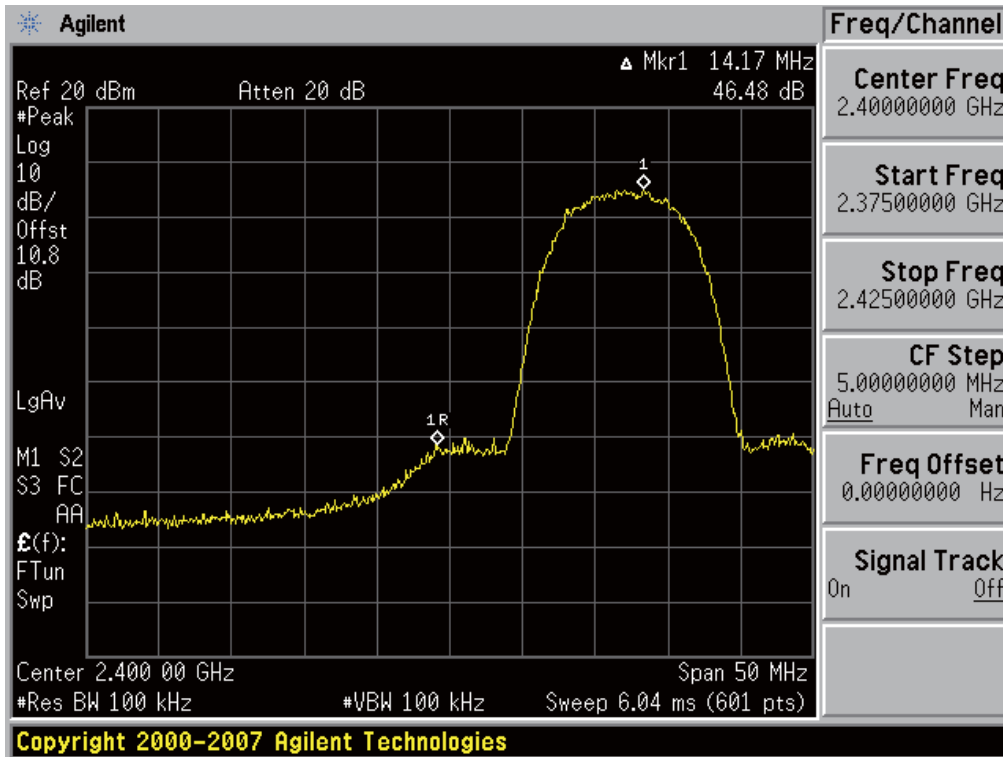
Band Edge (802.11n-CH159)_40 MHz BW



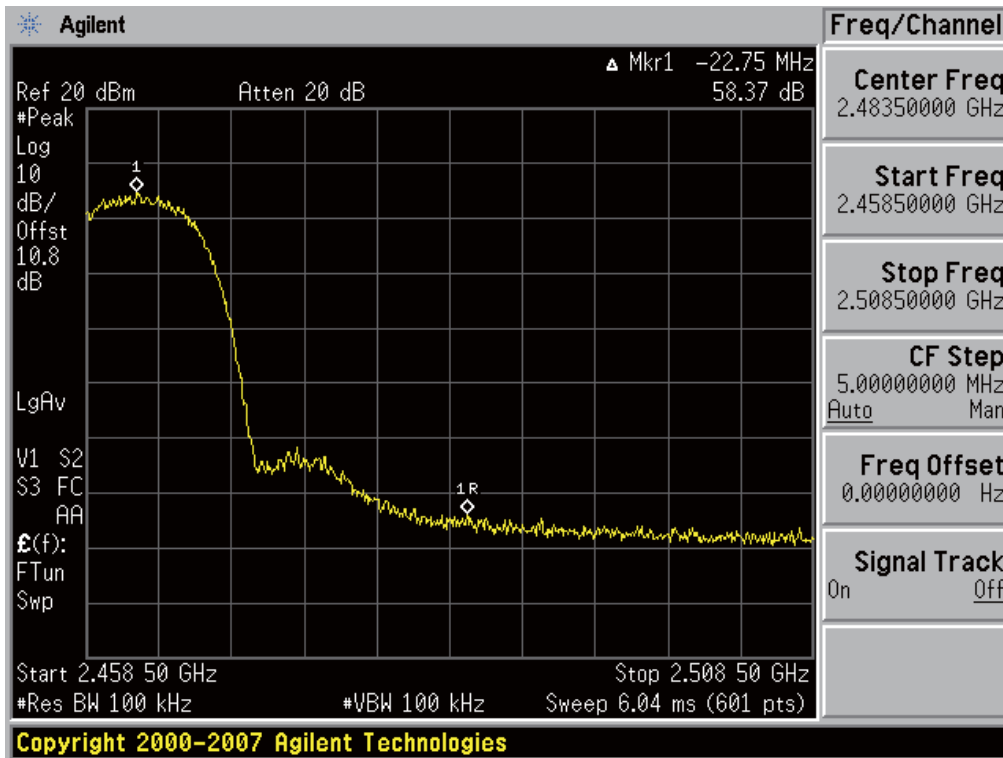
FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

RESULT PLOTS_Ant.1

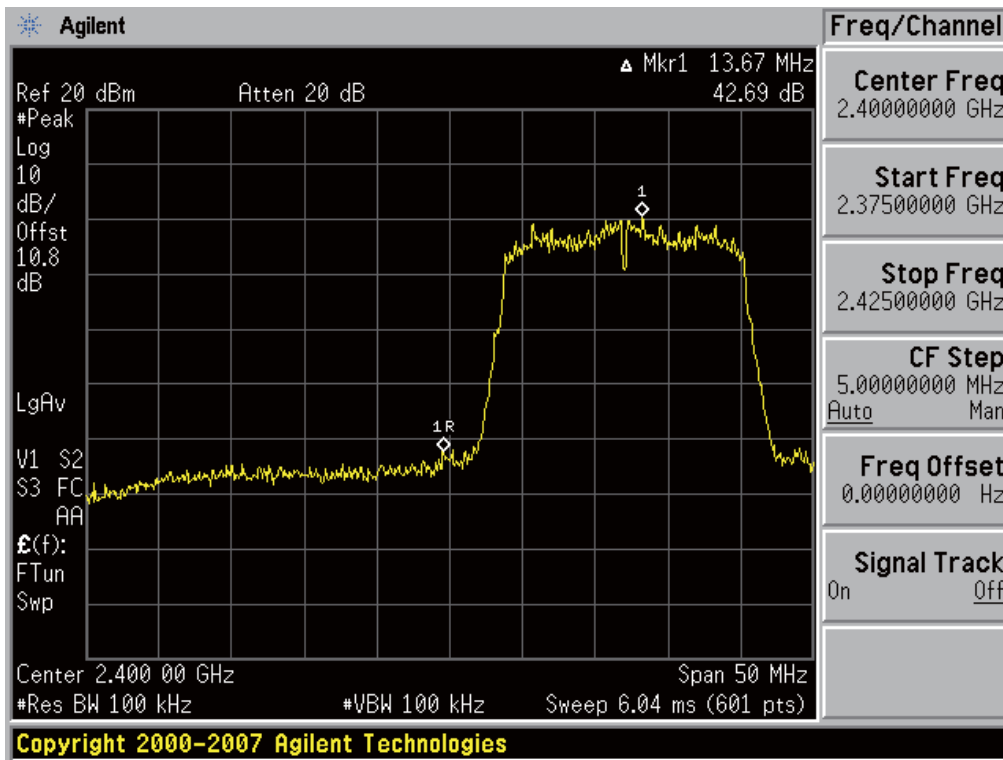
Band Edge (802.11b-CH1)



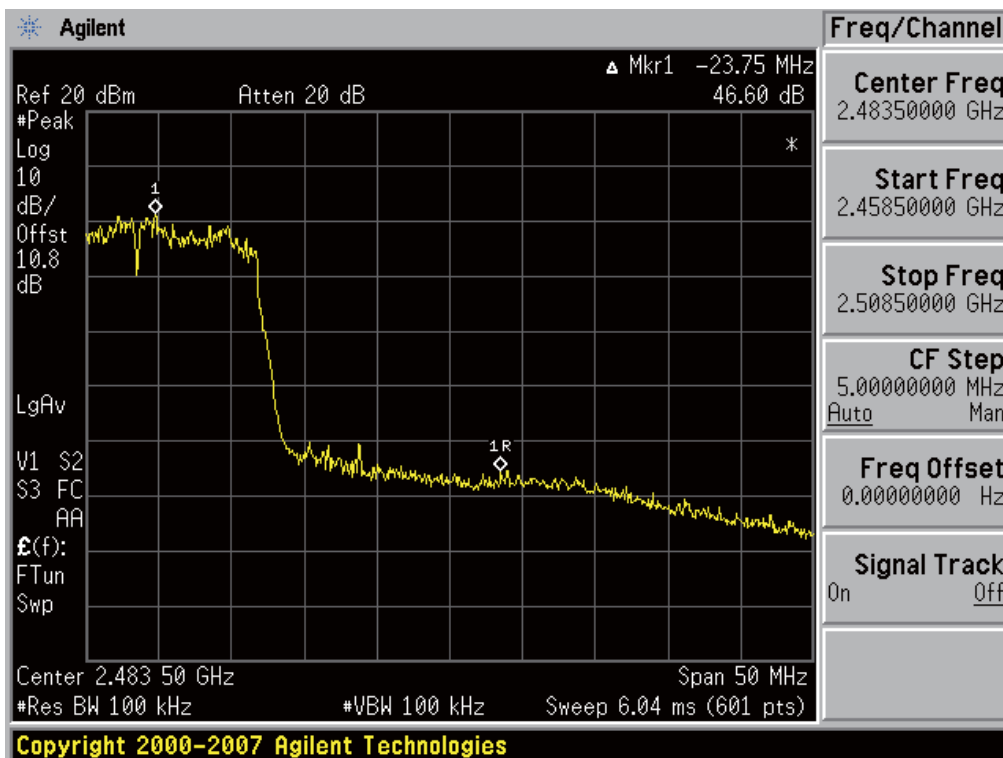
Band Edge (802.11b-CH11)



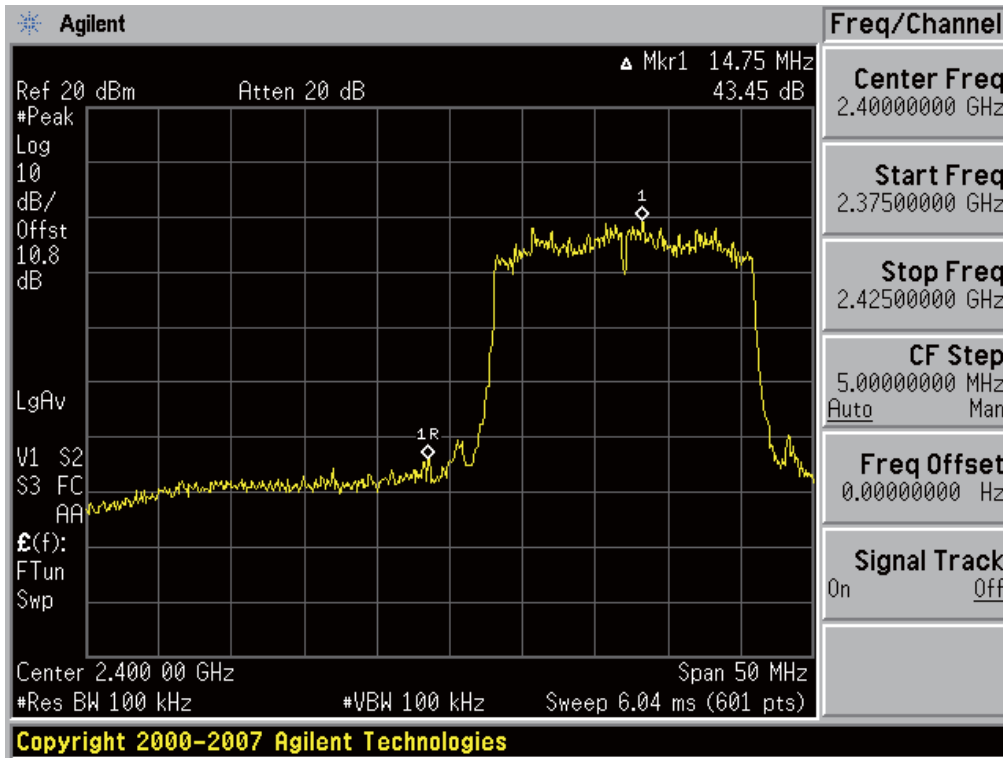
Band Edge (802.11g-CH1)



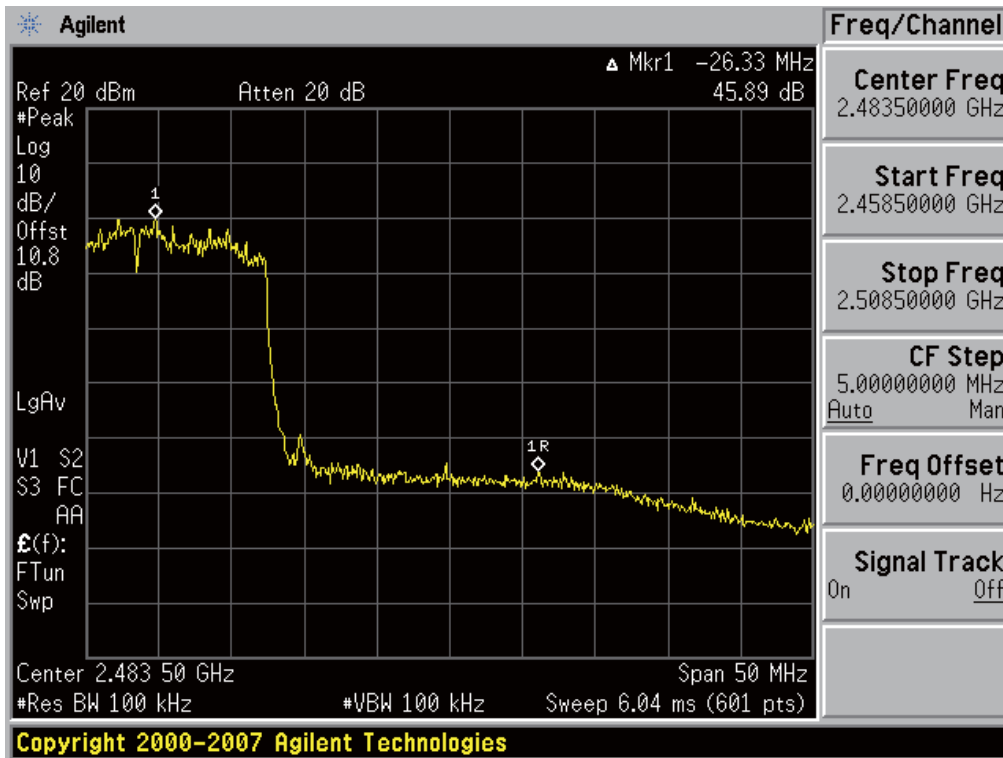
Band Edge (802.11g-CH11)



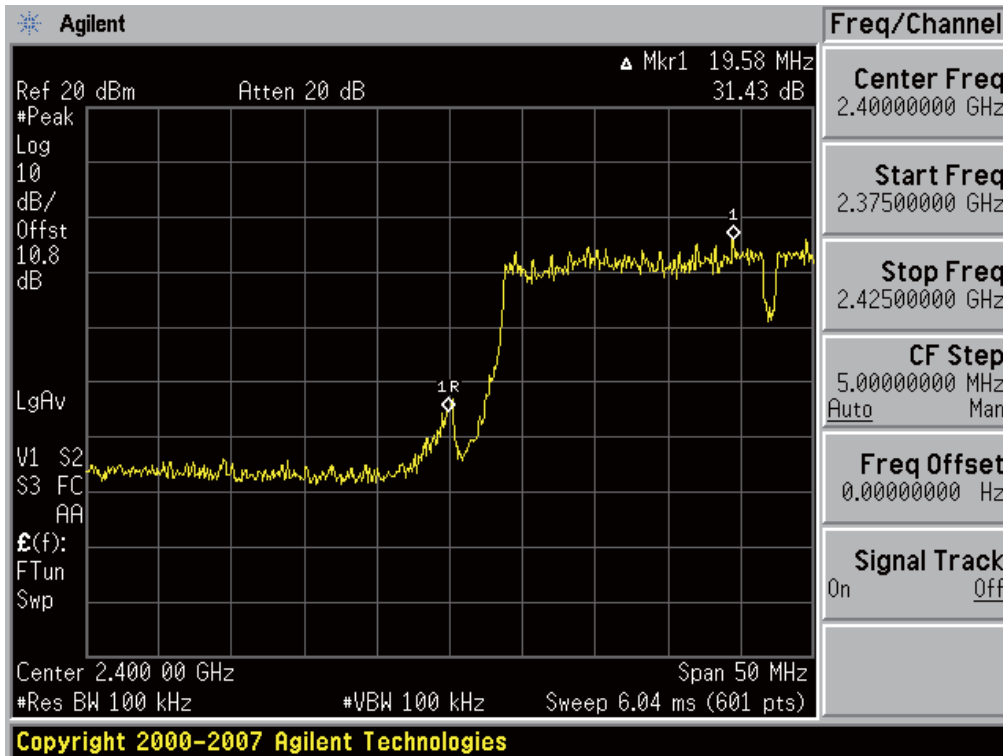
Band Edge (802.11n-CH1) _20 MHz BW



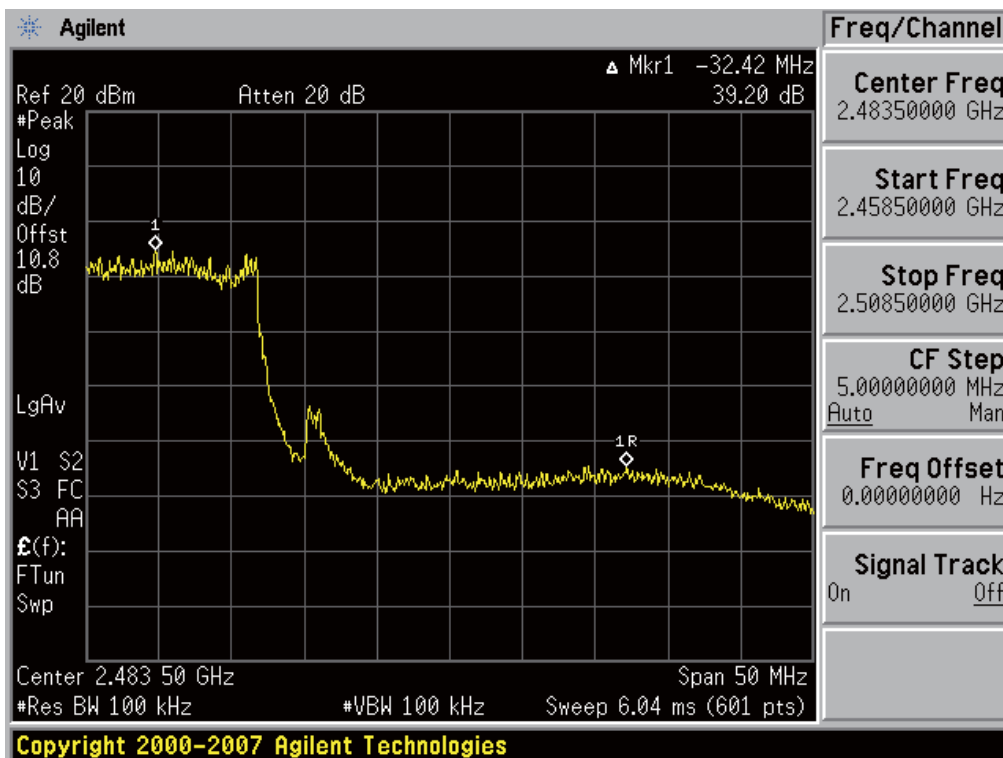
Band Edge (802.11n-CH11) _20 MHz BW



Band Edge (802.11n-CH3)_40 MHz BW



Band Edge (802.11n-CH9)_40 MHz BW



RESULT PLOTS_Ant.1

Band Edge (802.11a-CH149)



Band Edge (802.11a-CH165)

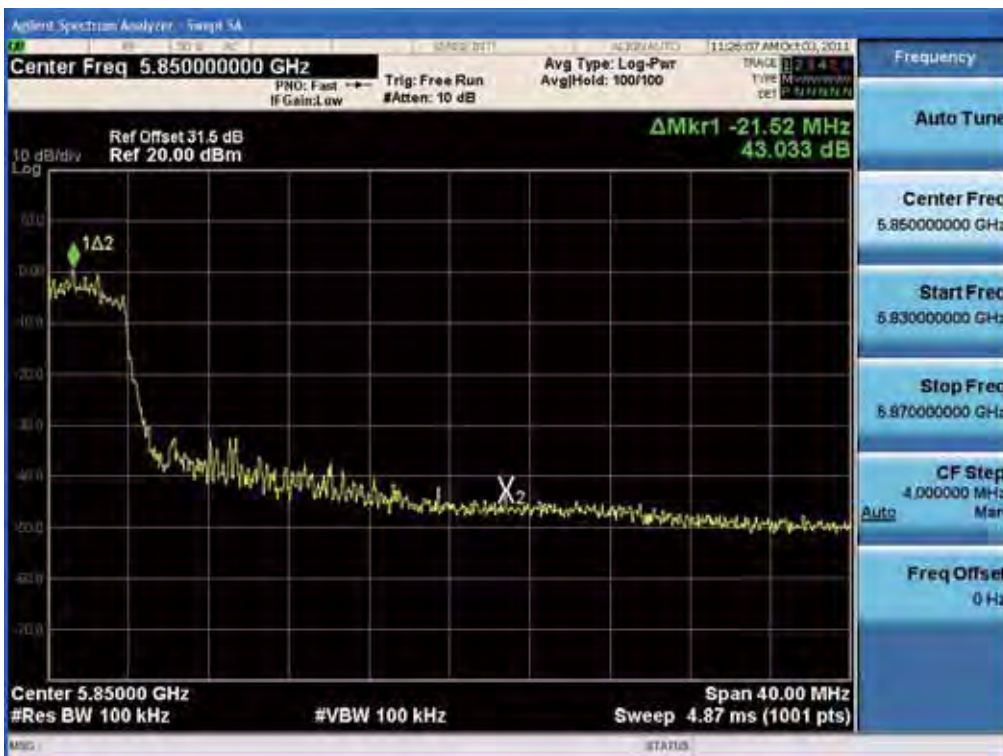


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Band Edge (802.11n-CH149) _20 MHz

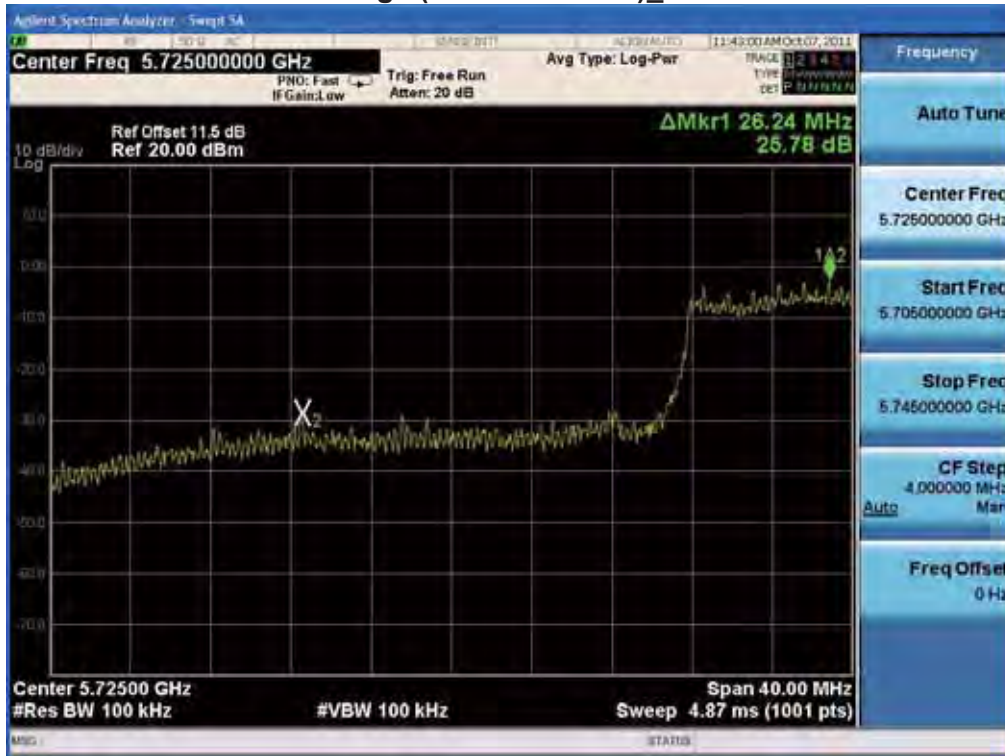


Band Edge (802.11n-CH165) _20 MHz

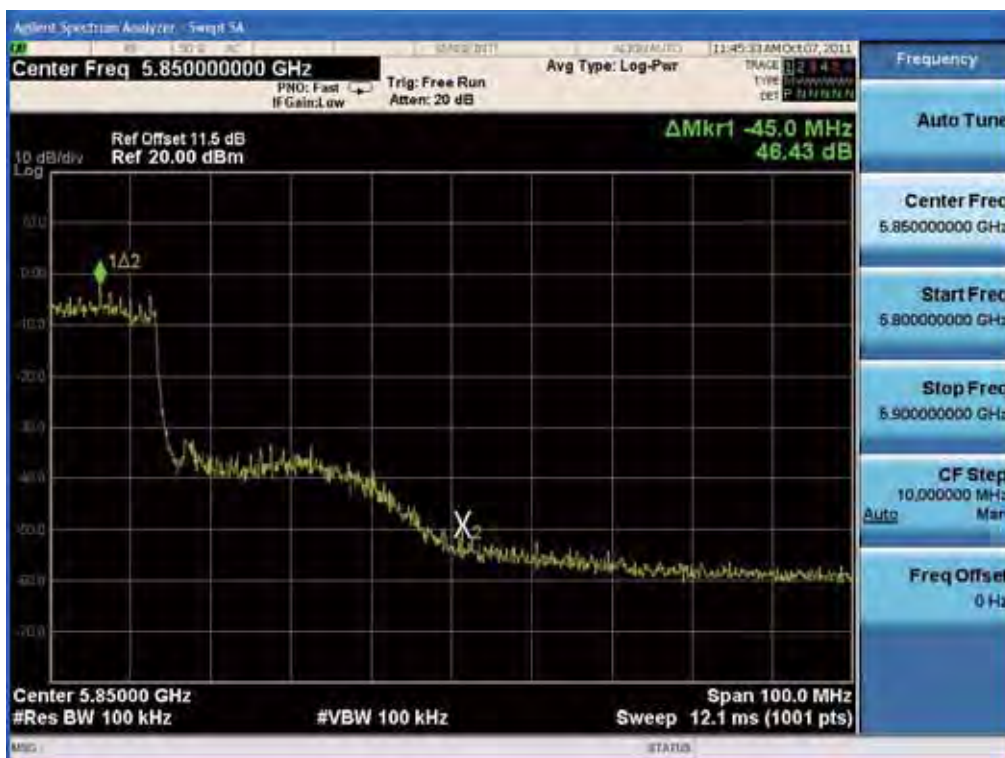


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Band Edge (802.11n-CH151)_40 MHz



Band Edge (802.11n-CH159)_40 MHz

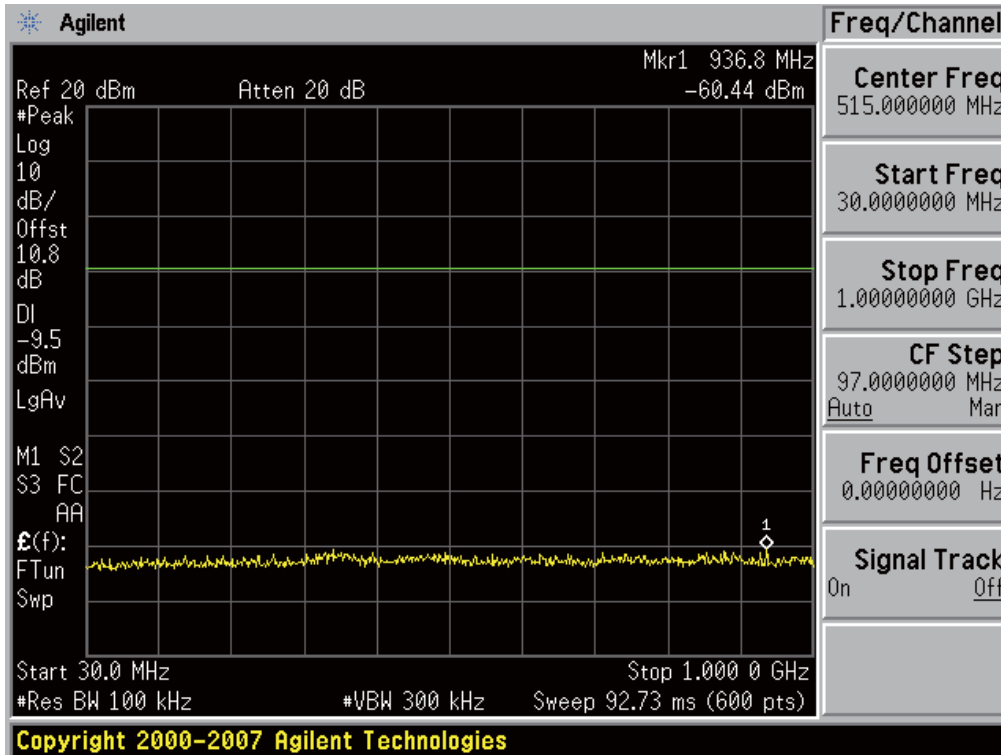


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

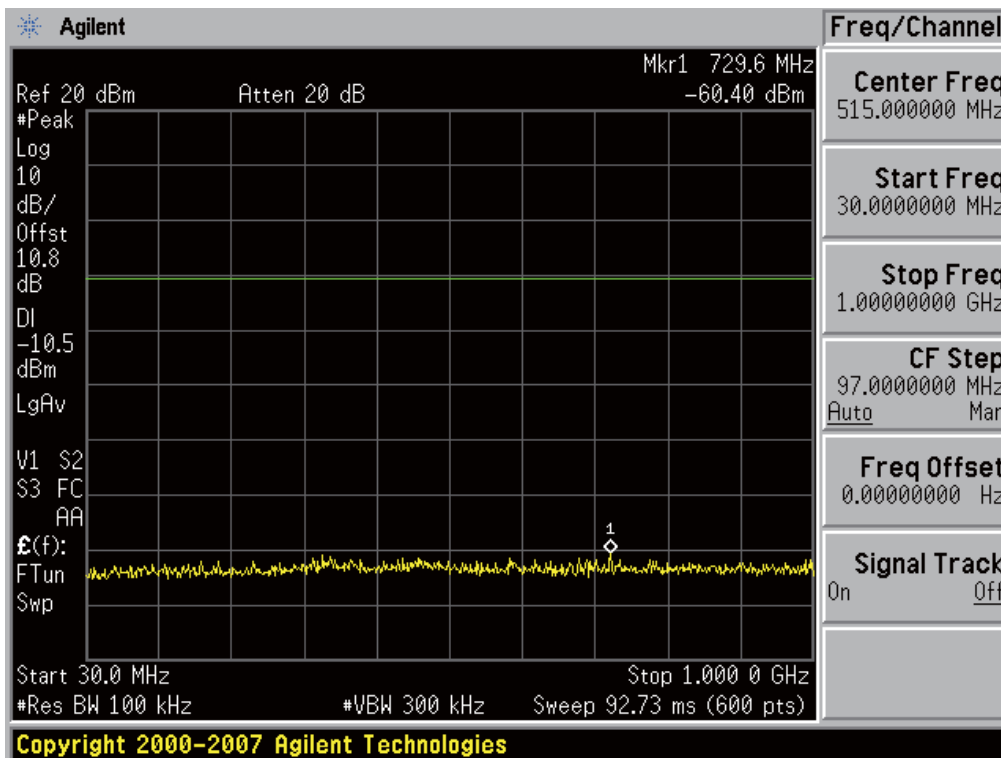
RESULT PLOTS_(2.4 GHz Band)

30 MHz ~ 1 GHz (Ant.0)

Conducted Spurious Emission (802.11b-CH1)

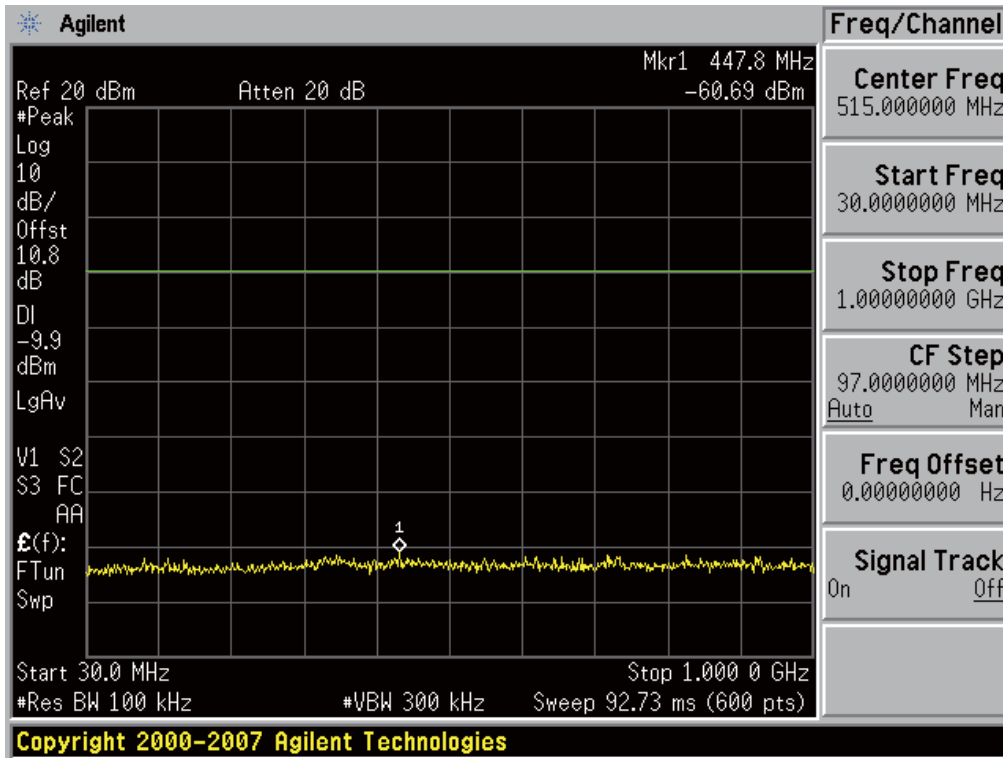


Conducted Spurious Emission (802.11b-CH6)

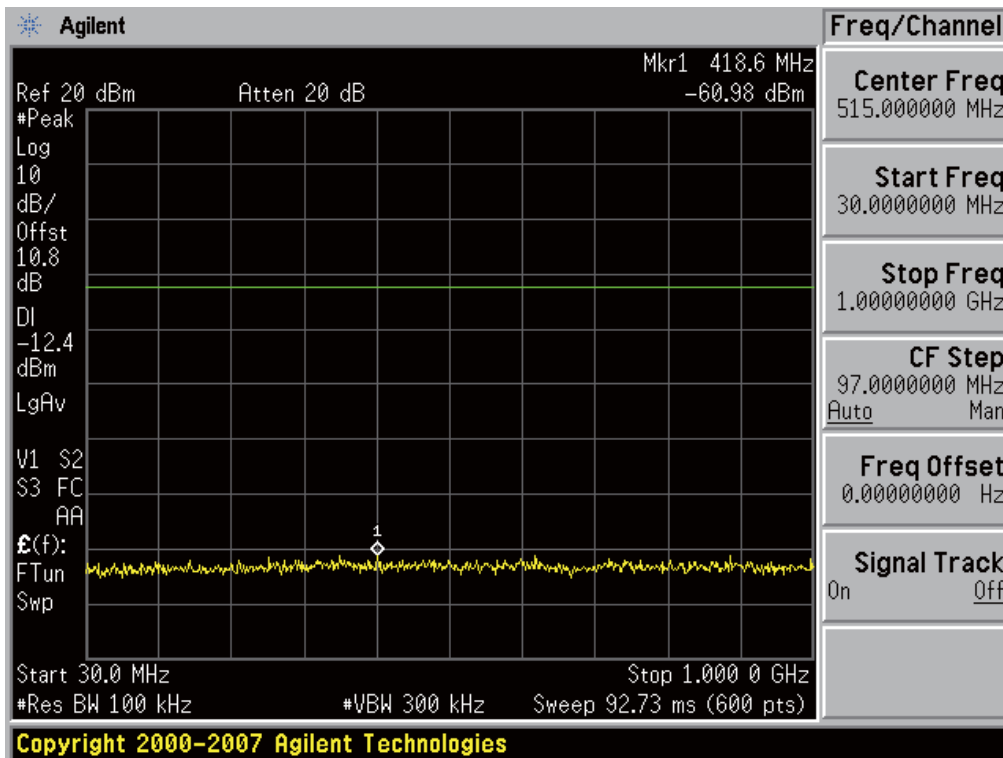


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

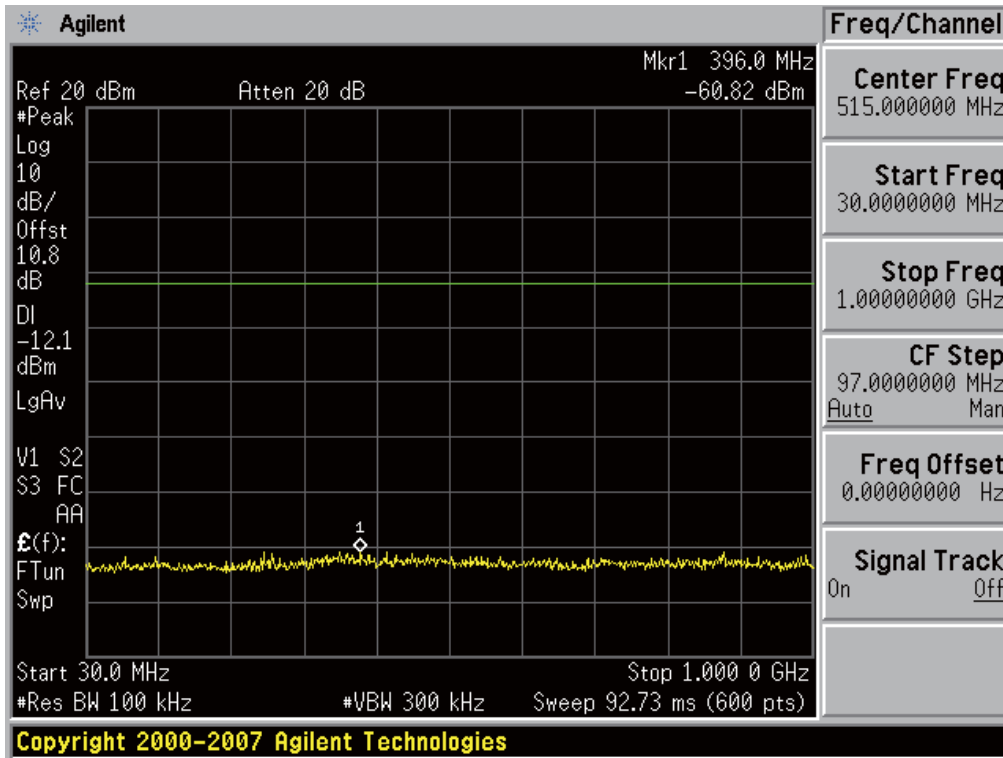
Conducted Spurious Emission (802.11b-CH11)



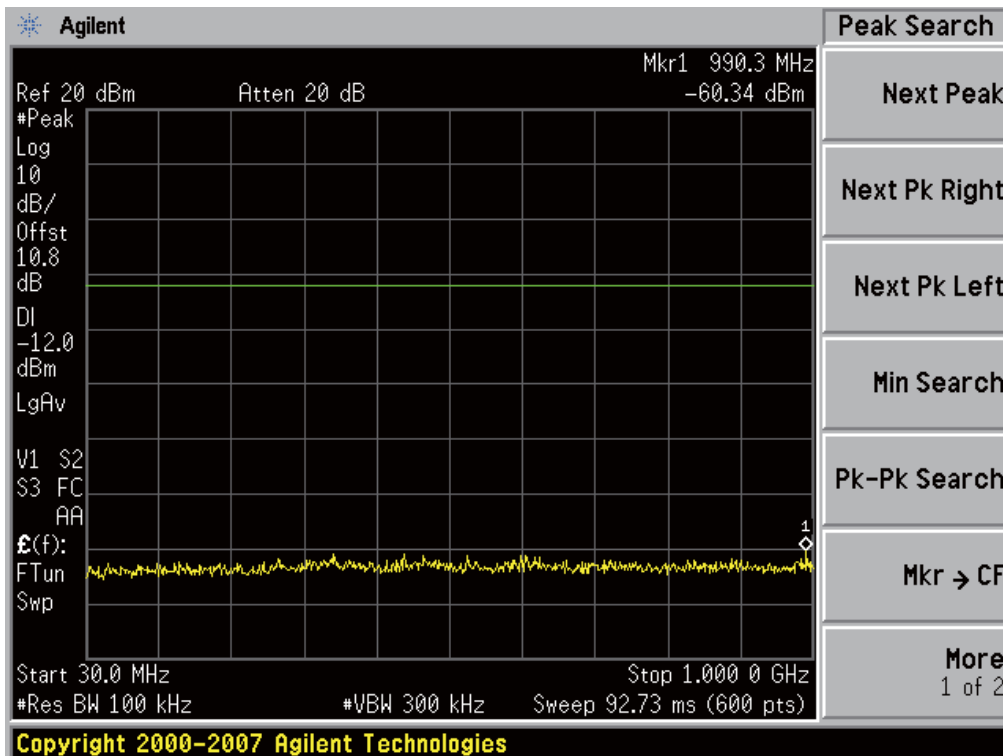
Conducted Spurious Emission (802.11g-CH1)



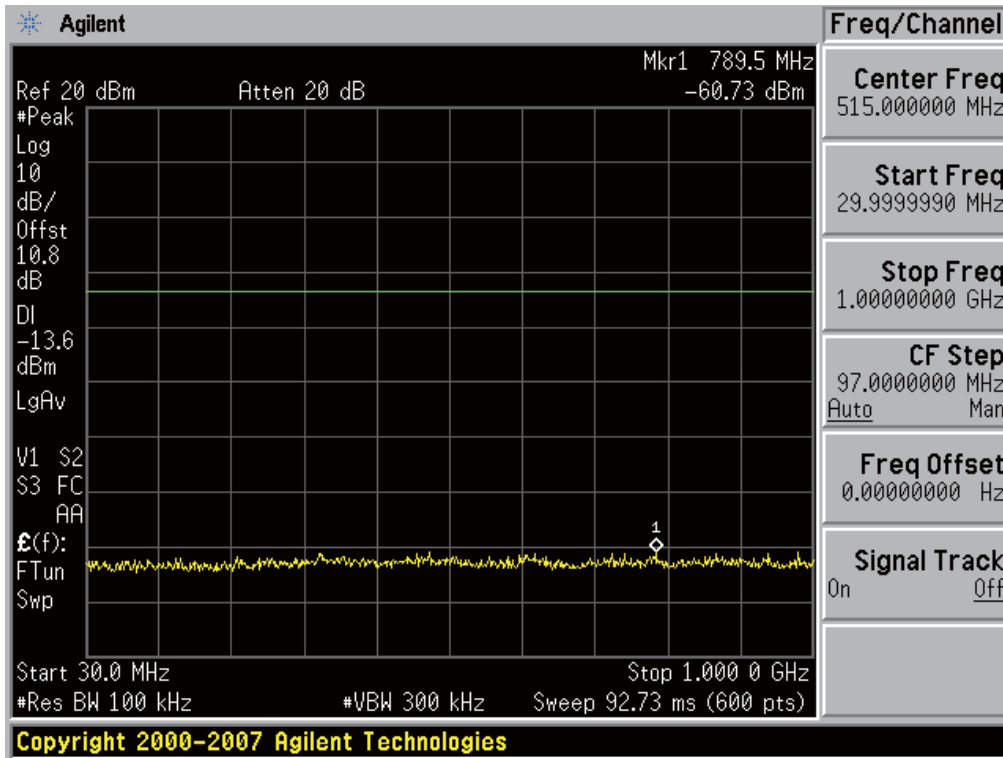
Conducted Spurious Emission (802.11g-CH6)



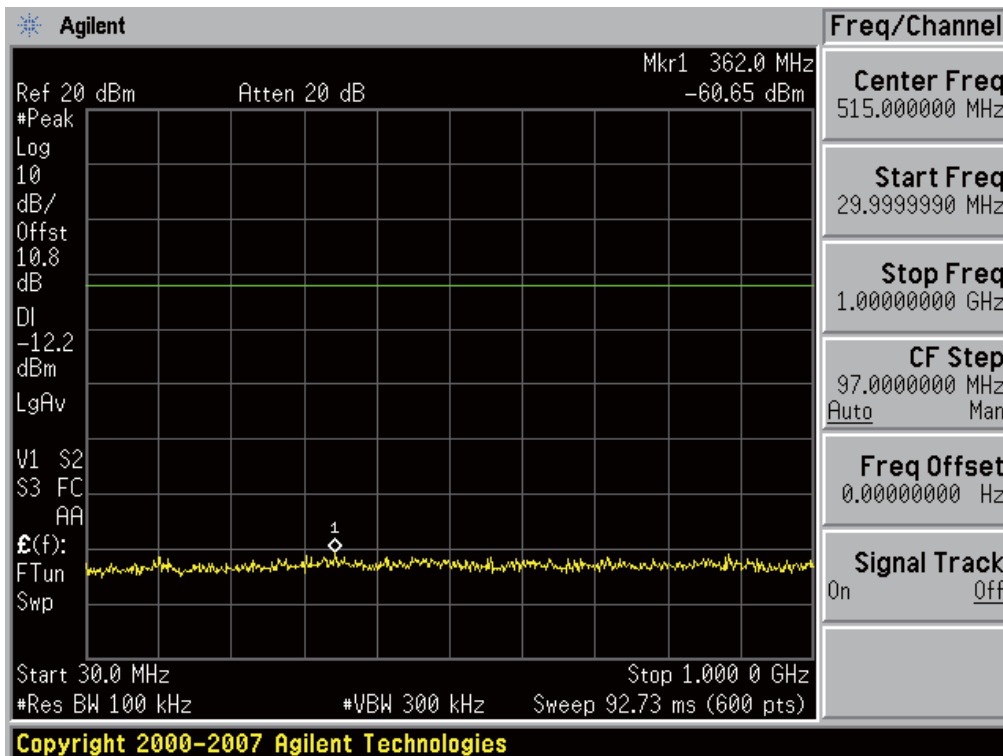
Conducted Spurious Emission (802.11g-CH11)



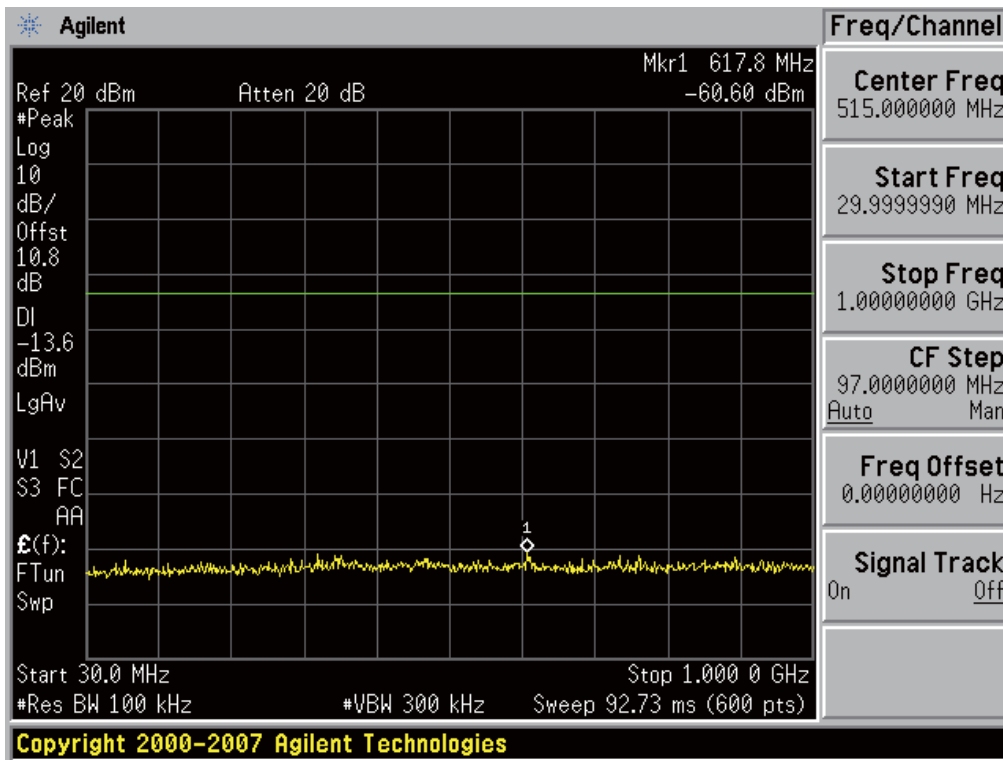
Conducted Spurious Emission (802.11n-CH1)_20 MHz BW



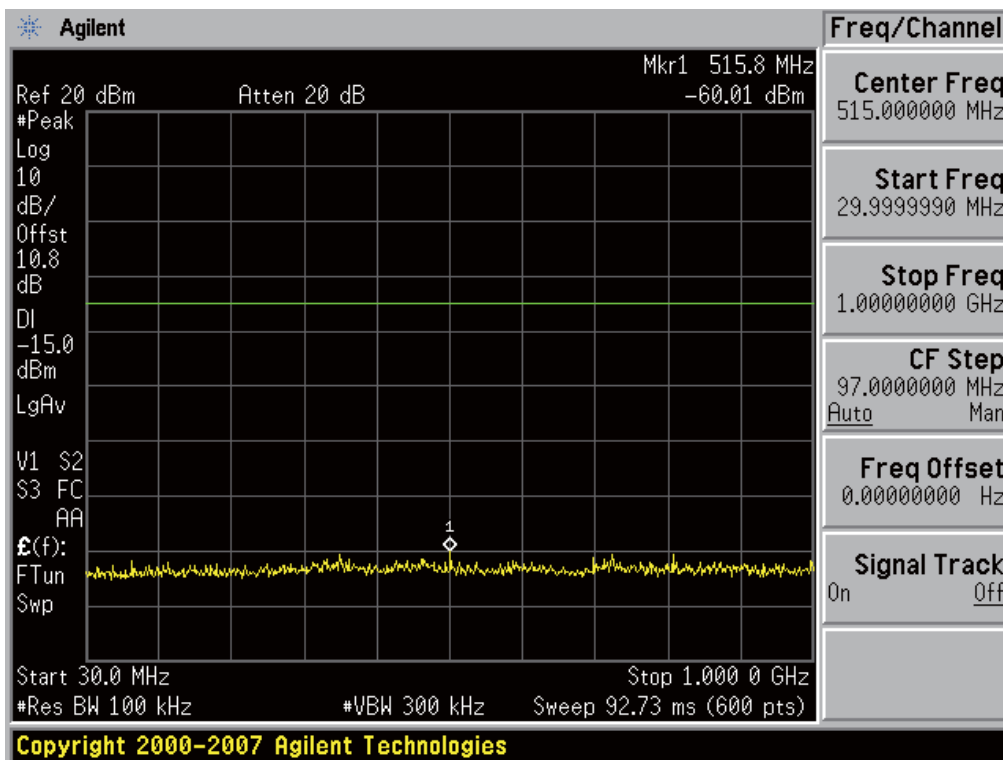
Conducted Spurious Emission (802.11n-CH6)_20 MHz BW



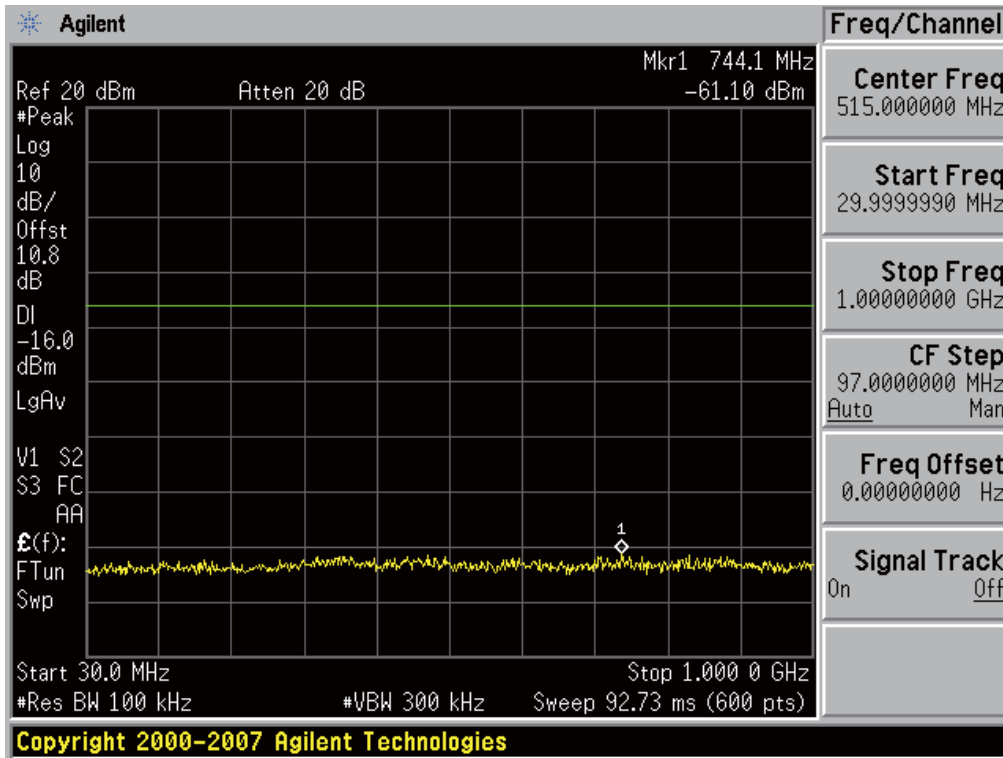
Conducted Spurious Emission (802.11n-CH11) _20 MHz BW



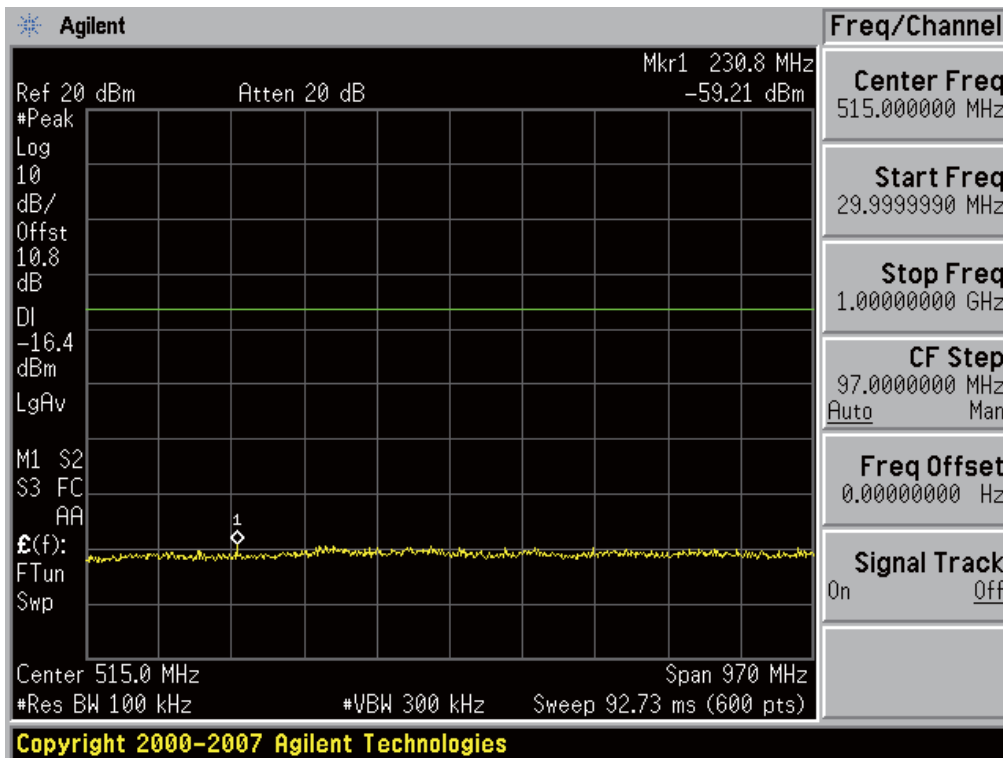
Conducted Spurious Emission (802.11n-CH3)_40 MHz BW



Conducted Spurious Emission (802.11n-CH6)_40 MHz BW



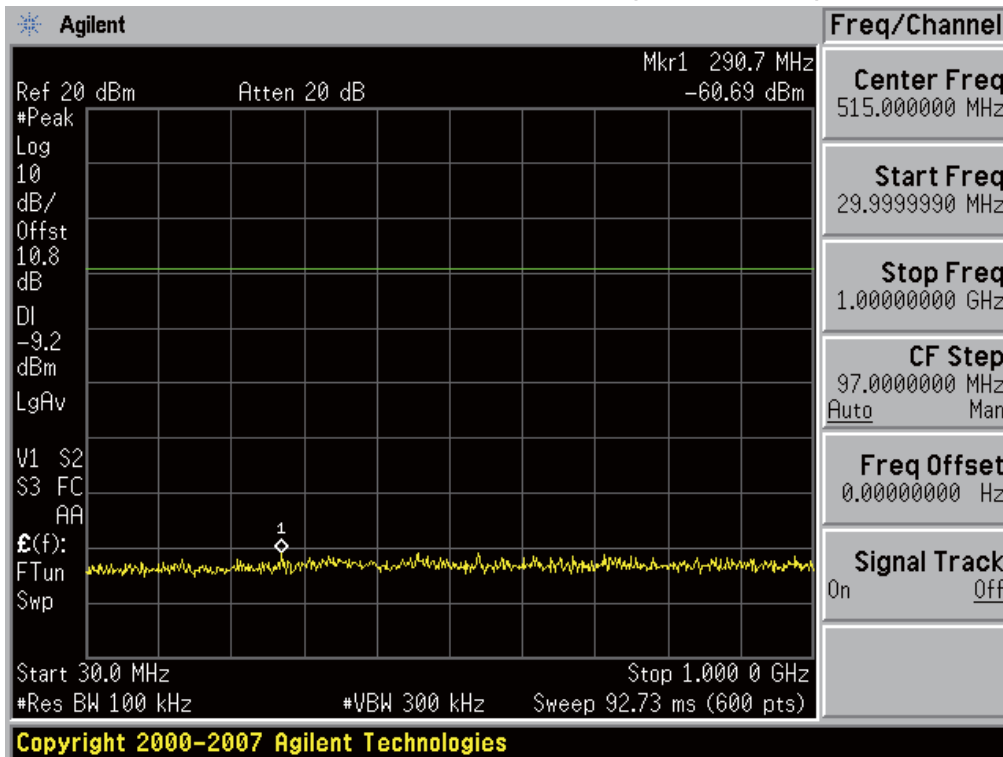
Conducted Spurious Emission (802.11n-CH9)_40 MHz BW



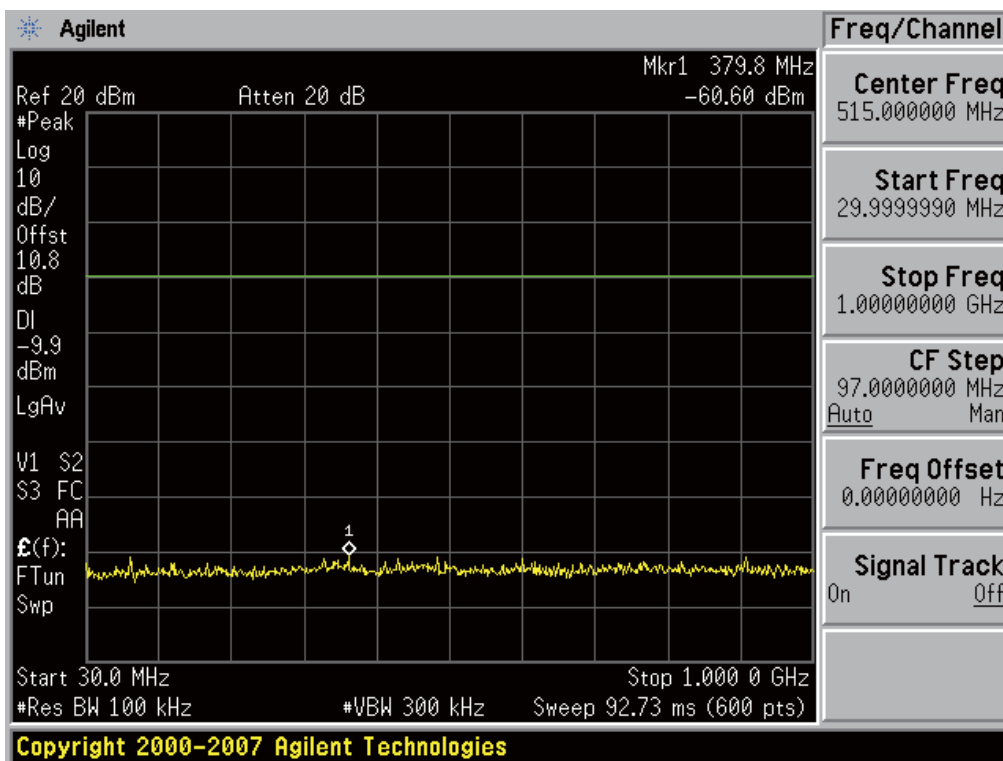
RESULT PLOTS_(2.4 GHz Band)

30 MHz ~ 1 GHz (Ant.1)

Conducted Spurious Emission (802.11b-CH1)

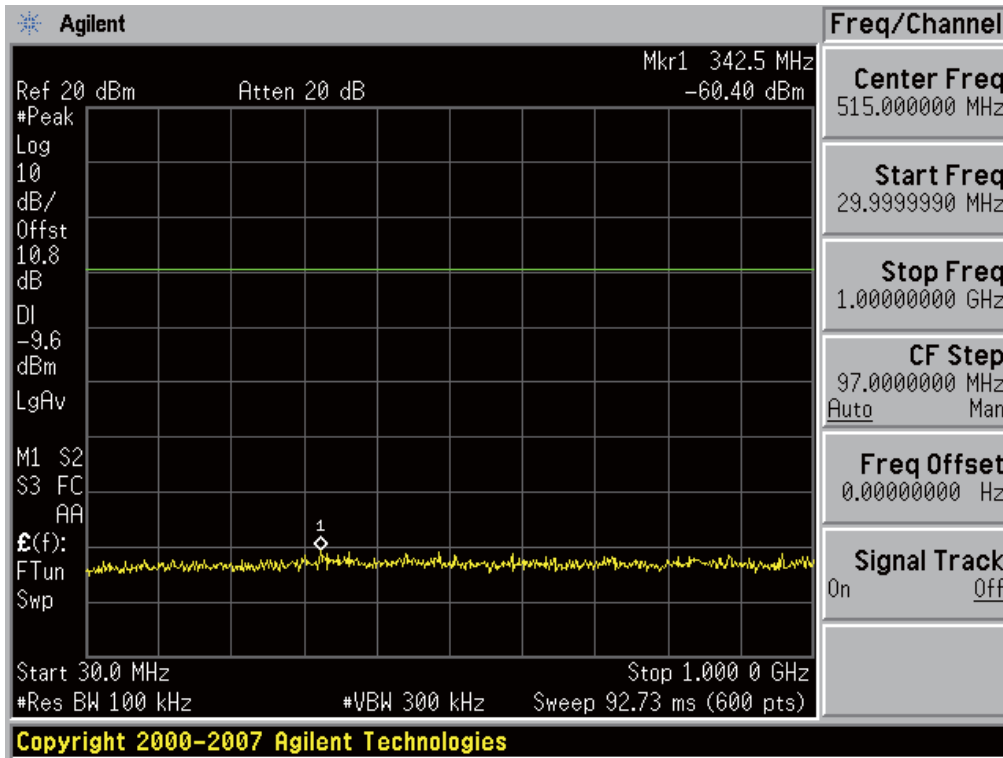


Conducted Spurious Emission (802.11b-CH6)

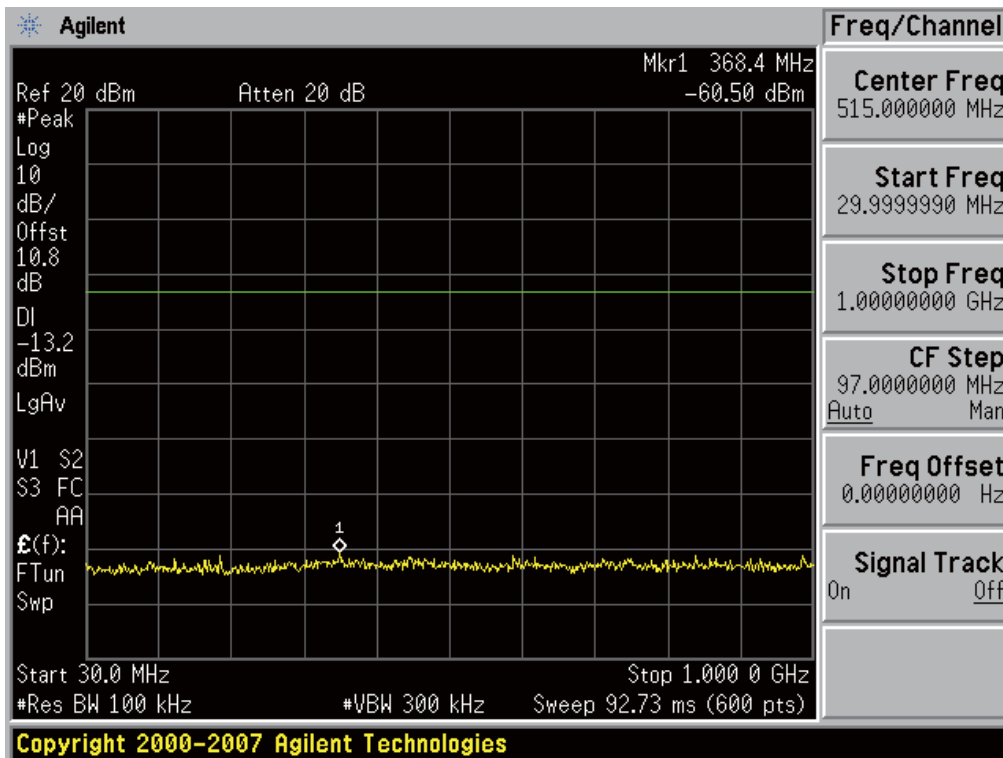


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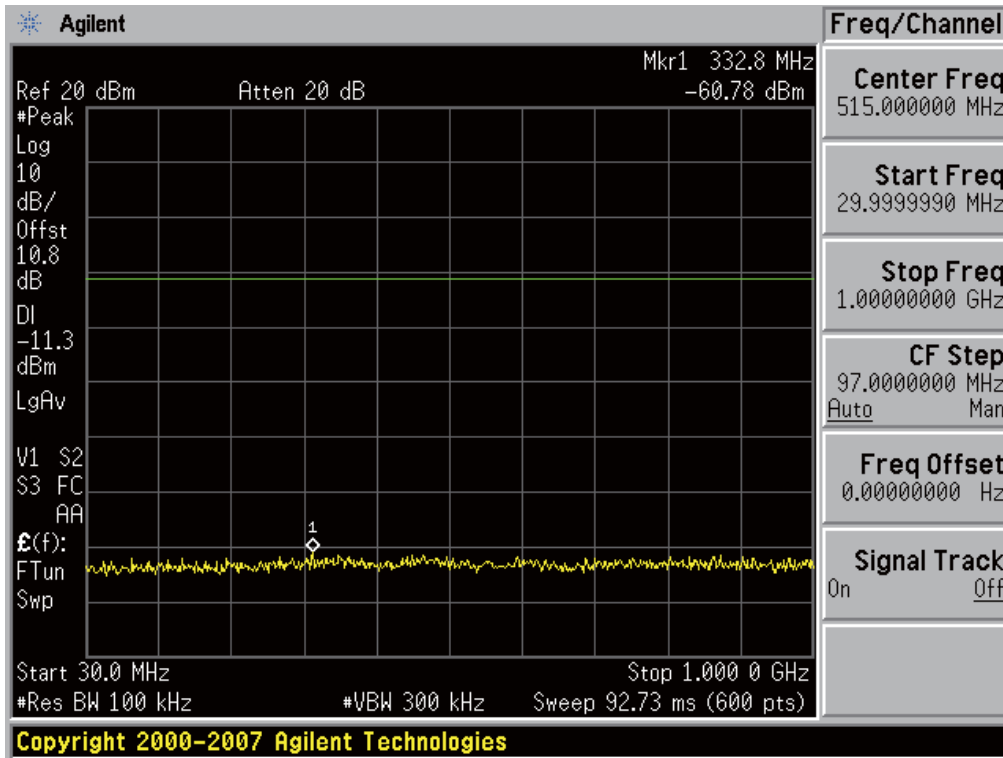
Conducted Spurious Emission (802.11b-CH11)



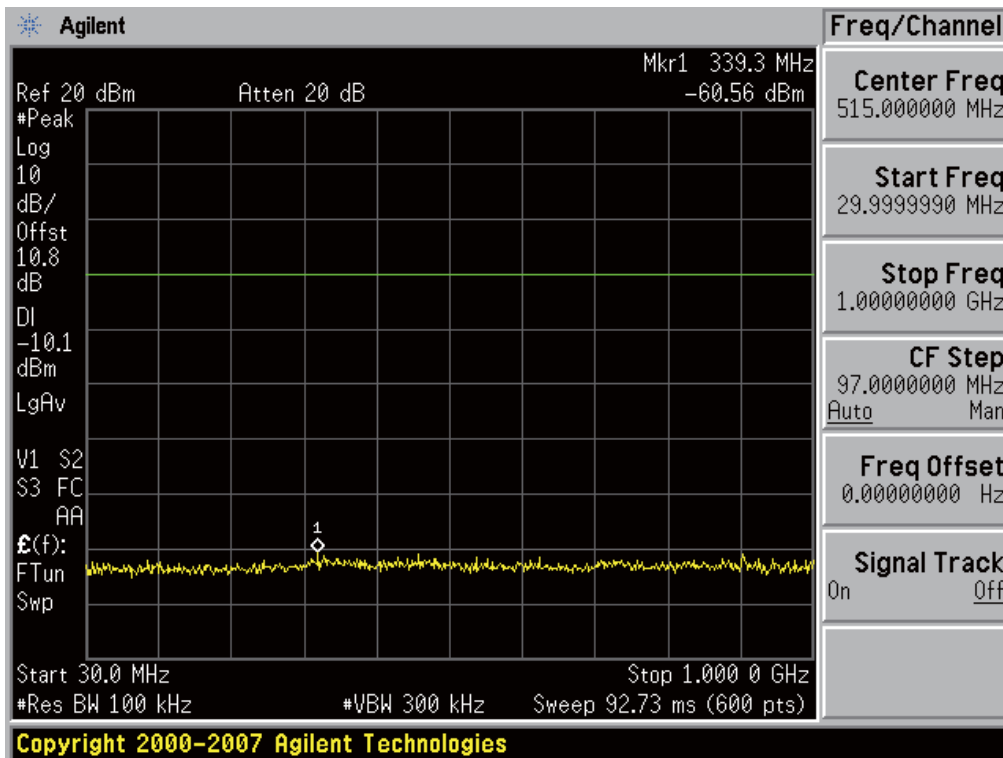
Conducted Spurious Emission (802.11g-CH1)



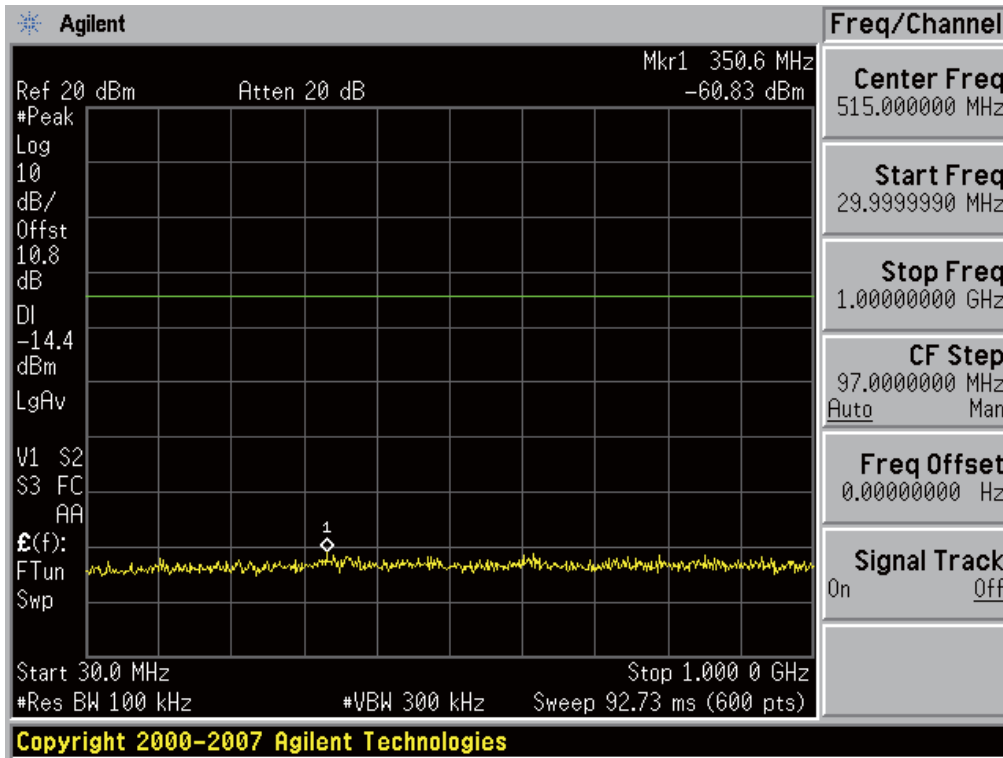
Conducted Spurious Emission (802.11g-CH6)



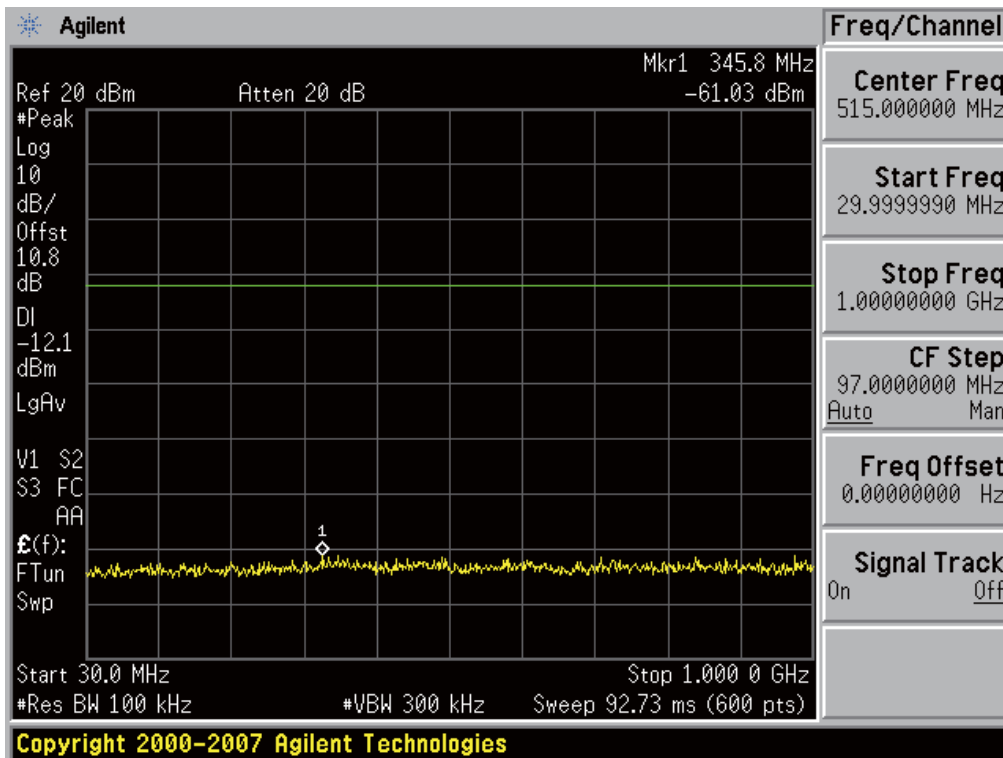
Conducted Spurious Emission (802.11g-CH11)



Conducted Spurious Emission (802.11n-CH1)_20 MHz BW

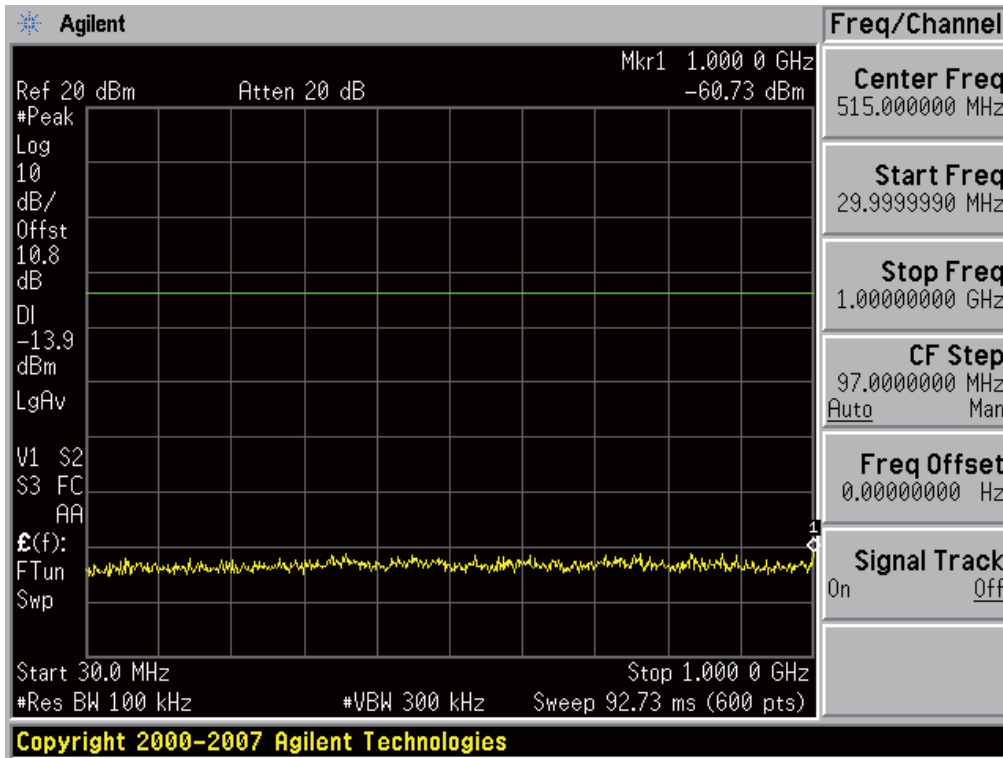


Conducted Spurious Emission (802.11n-CH6)_20 MHz BW

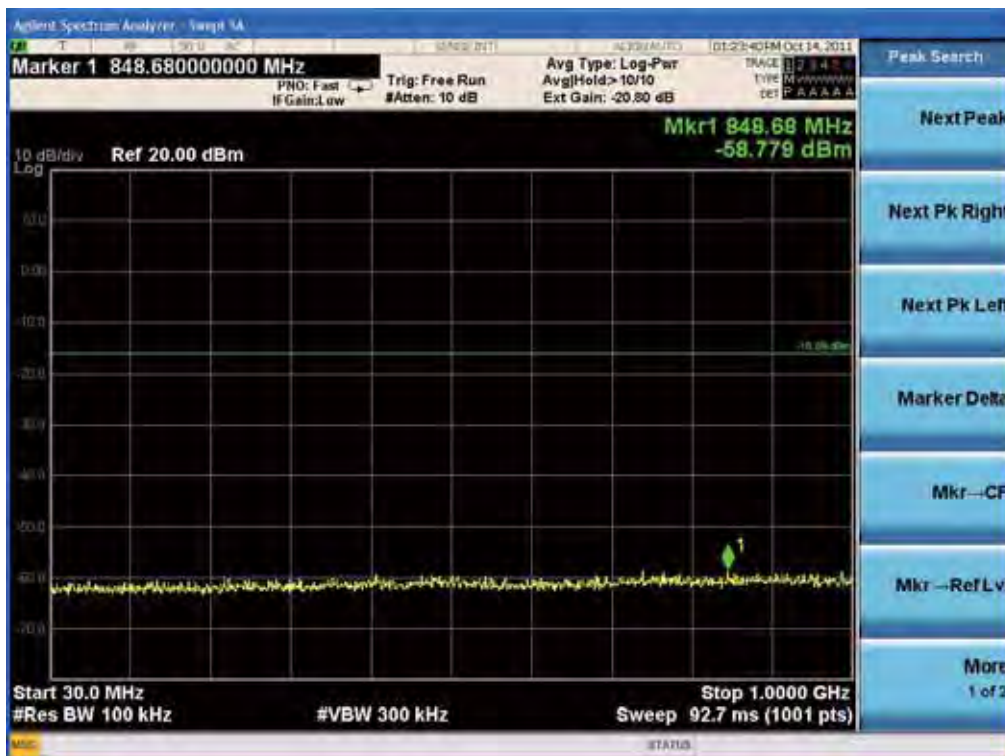


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Conducted Spurious Emission (802.11n-CH11) _20 MHz BW

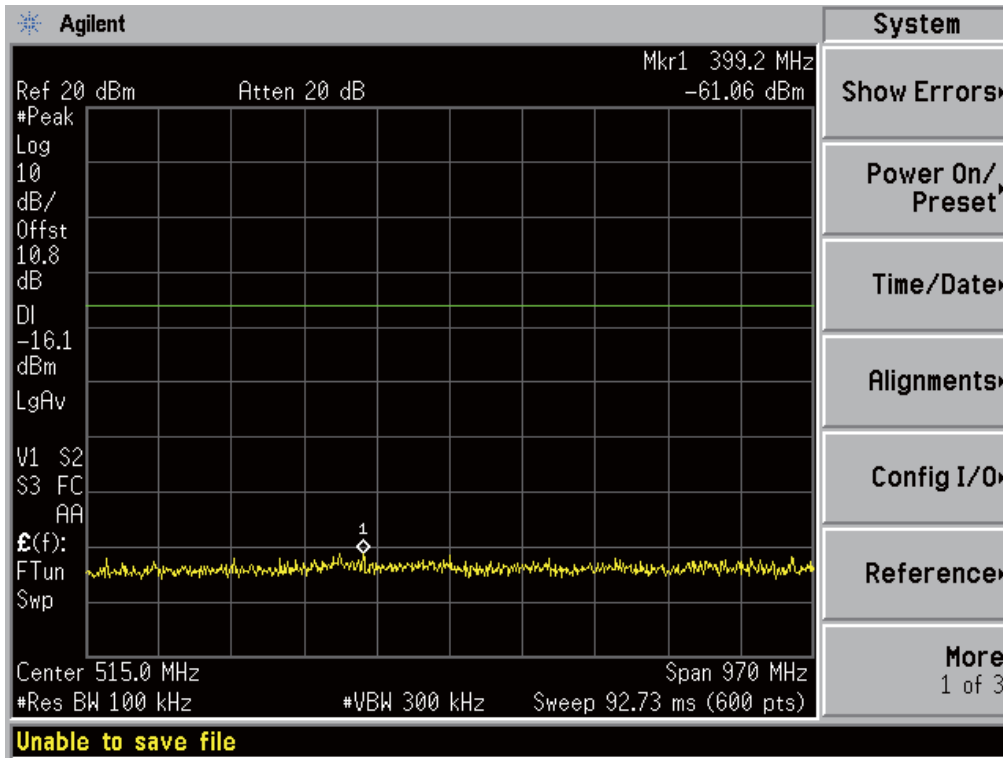


Conducted Spurious Emission (802.11n-CH3)_40 MHz BW

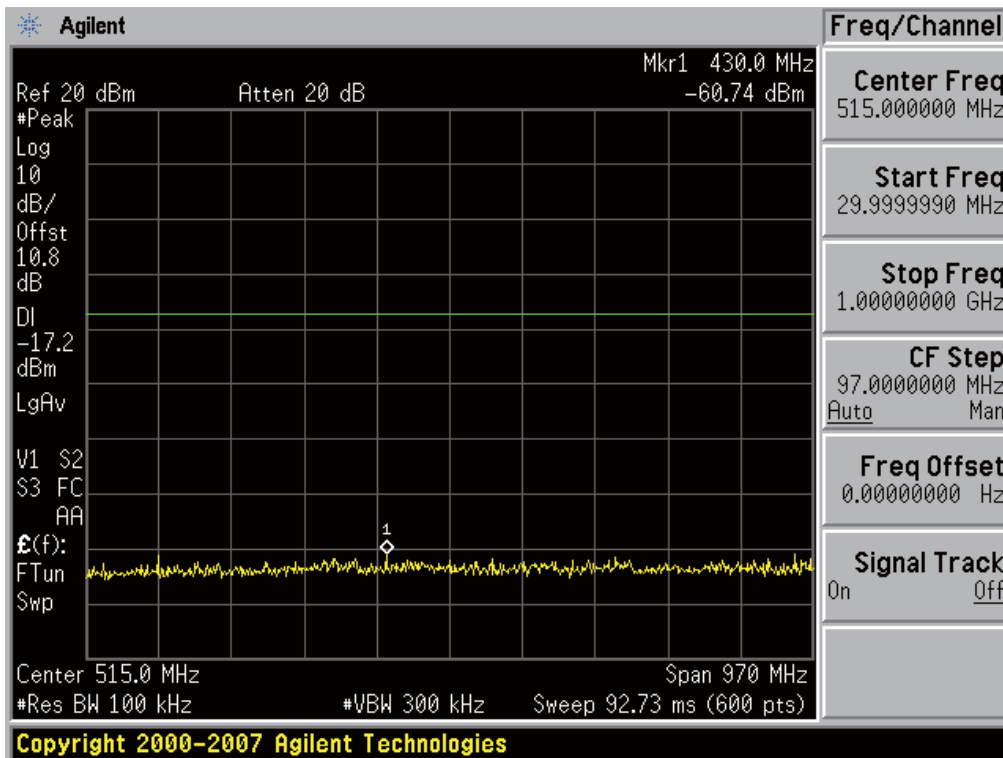


FCC PT.15.247 TEST REPORT		FCC & IC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D	

Conducted Spurious Emission (802.11n-CH6)_40 MHz BW



Conducted Spurious Emission (802.11n-CH9)_40 MHz BW

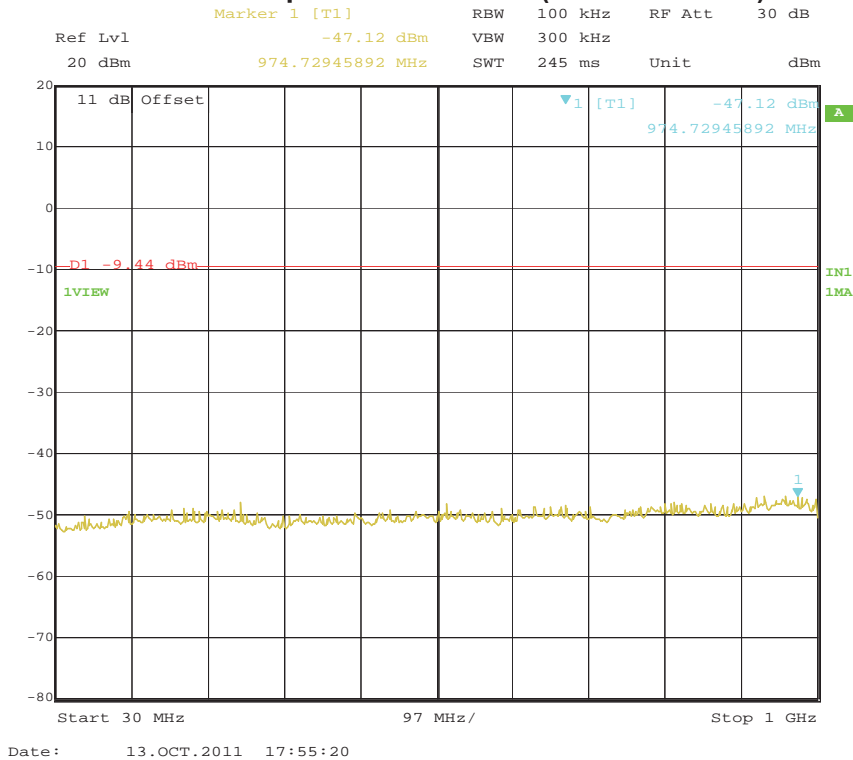


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

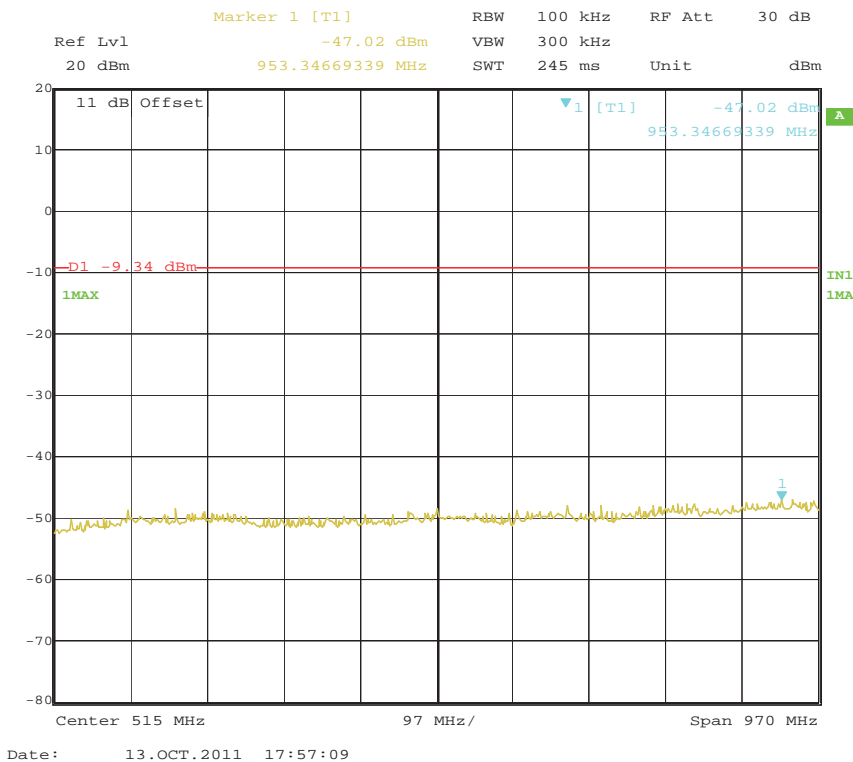
RESULT PLOTS_(5.8 GHz Band)

30 MHz ~ 1 GHz (Ant.0)

Conducted Spurious Emission (802.11a-CH149)

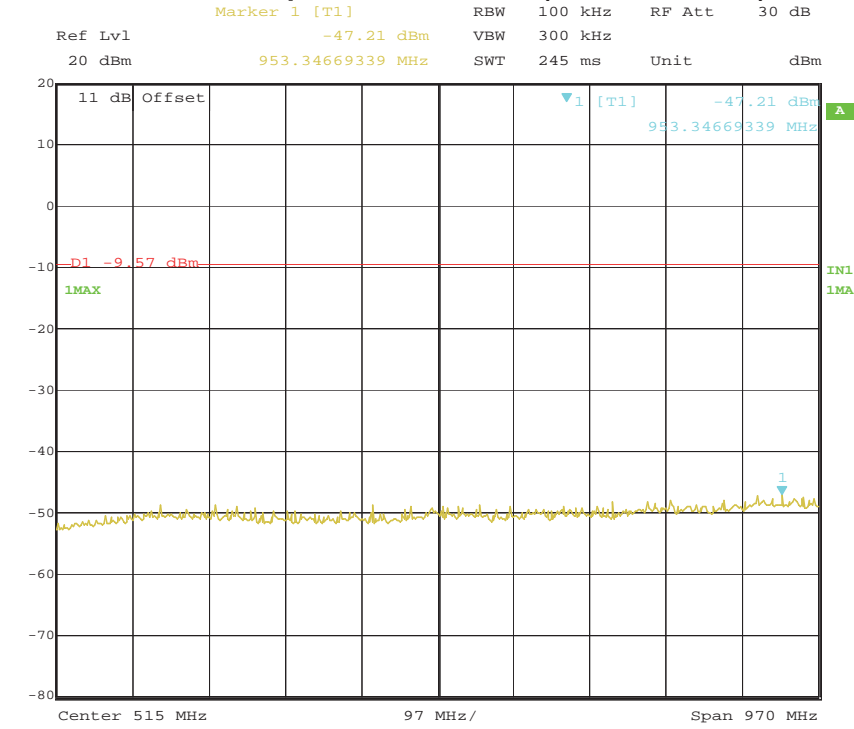


Conducted Spurious Emission (802.11a-CH157)



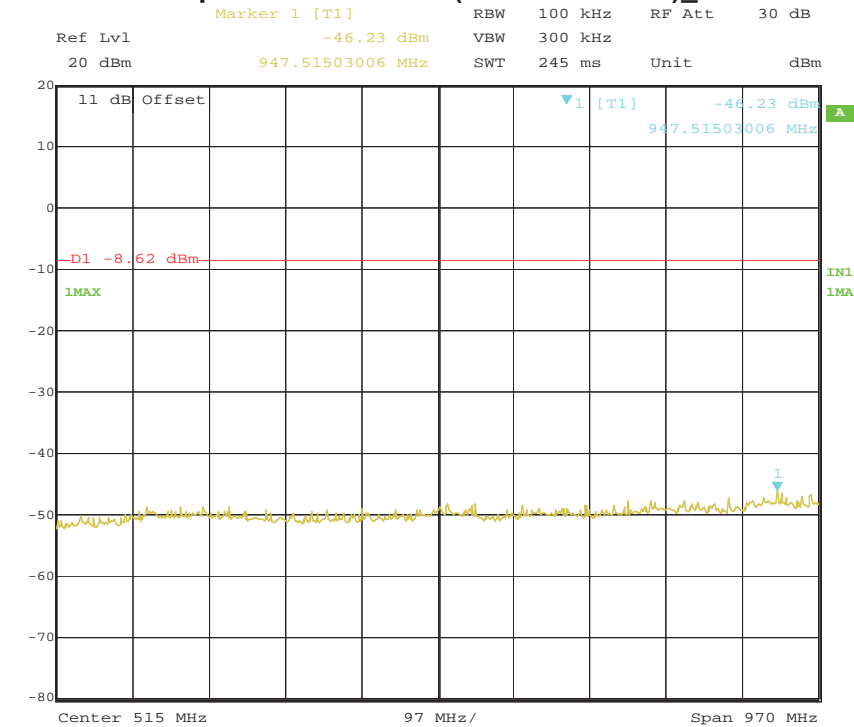
FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Spurious Emission (802.11a-CH165)



Date: 13.OCT.2011 17:58:14

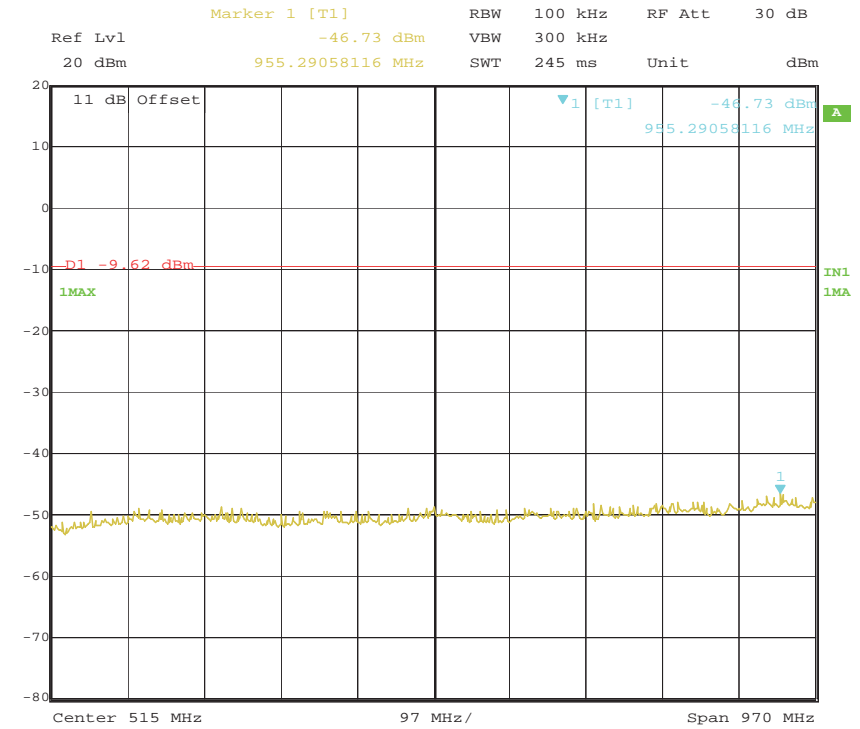
Conducted Spurious Emission (802.11n-CH149)_20 MHz BW



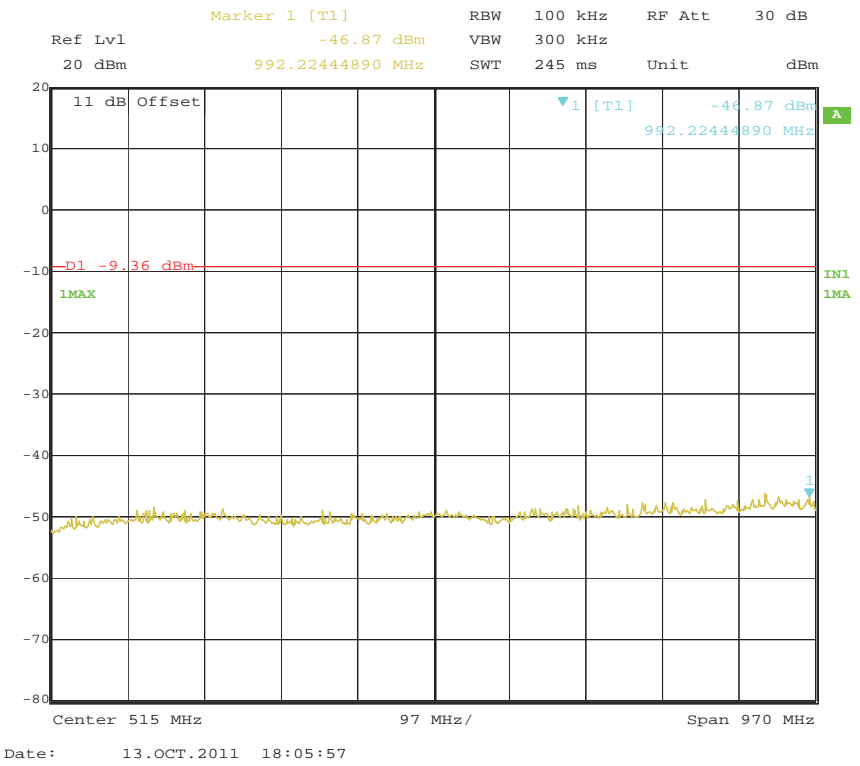
Date: 13.OCT.2011 17:59:45

FCC PT.15.247 TEST REPORT		FCC & IC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module		FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Spurious Emission (802.11n-CH157) _20 MHz BW

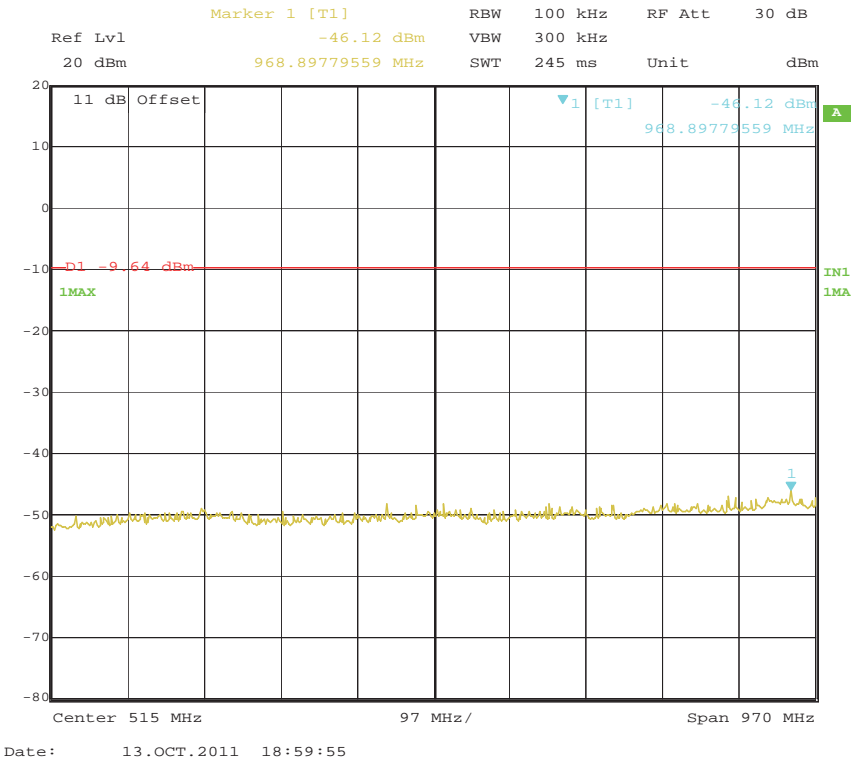


Conducted Spurious Emission (802.11n-CH165) _20 MHz BW

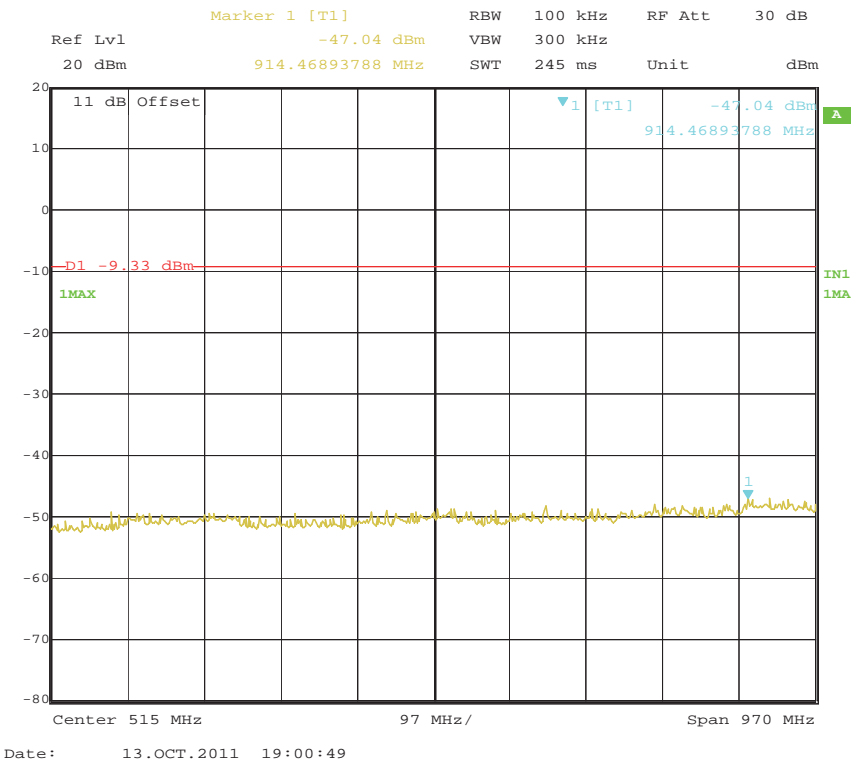


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Spurious Emission (802.11n-CH149) _40 MHz BW



Conducted Spurious Emission (802.11n-CH159) _40 MHz BW

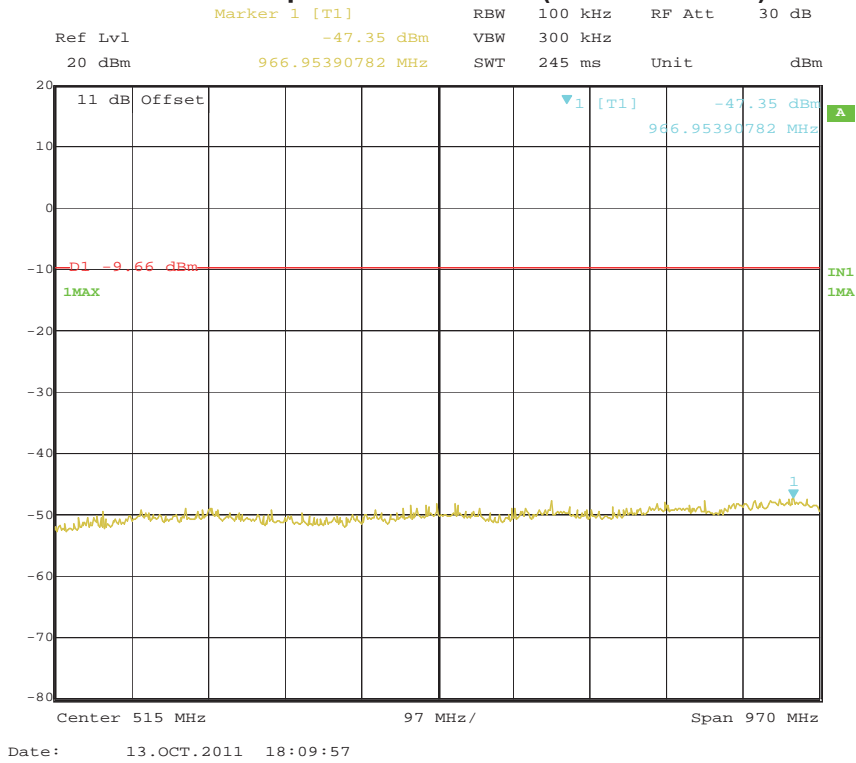


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

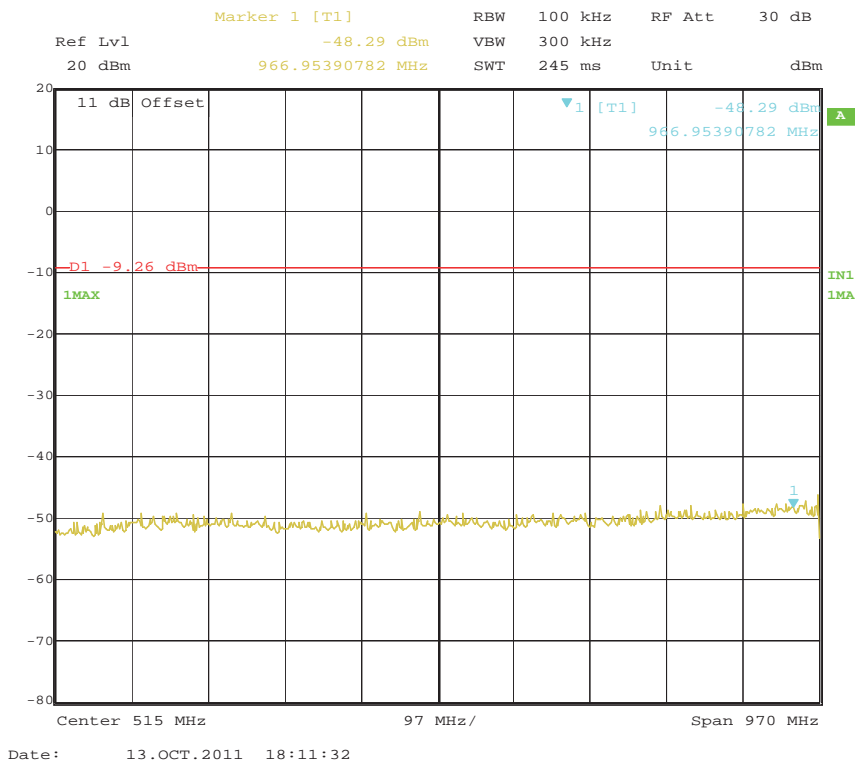
RESULT PLOTS_(5.8 GHz Band)

30 MHz ~ 1 GHz (Ant.1)

Conducted Spurious Emission (802.11a-CH149)

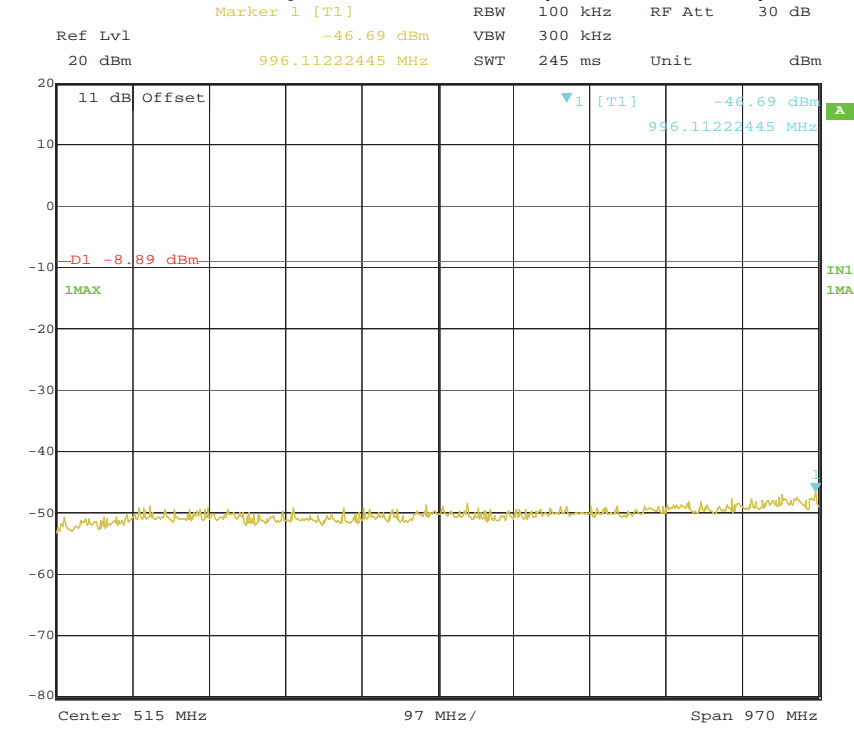


Conducted Spurious Emission (802.11a-CH157)



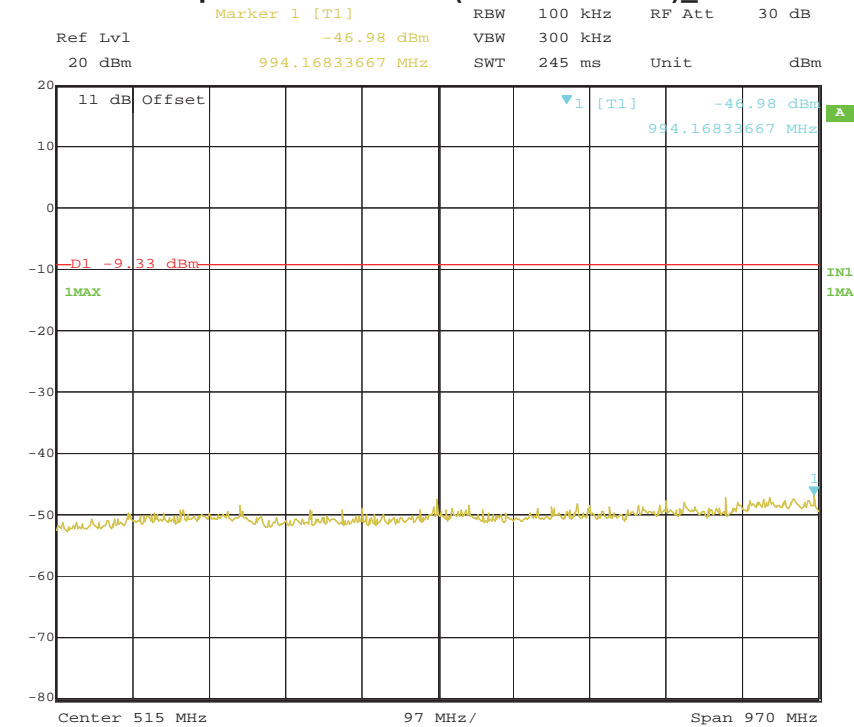
FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Spurious Emission (802.11a-CH165)



Date: 13.OCT.2011 18:55:21

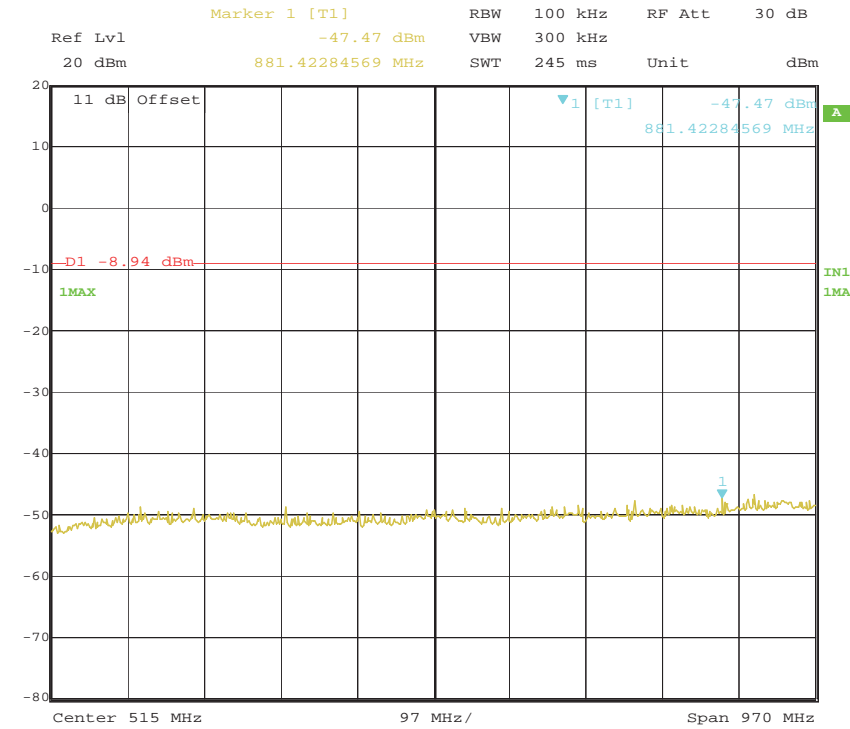
Conducted Spurious Emission (802.11n-CH149)_20 MHz BW



Date: 13.OCT.2011 18:56:06

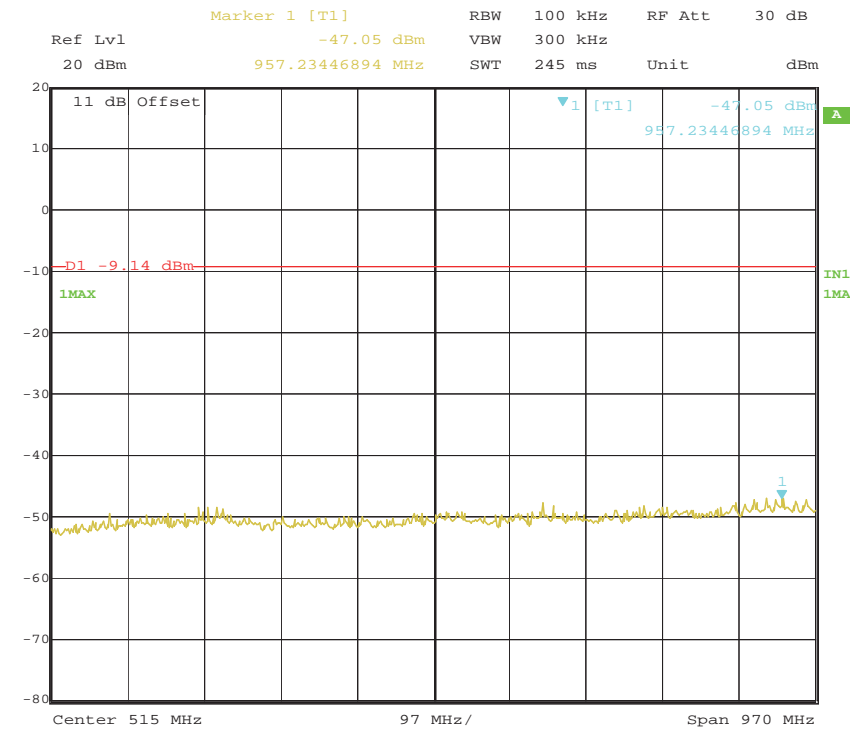
FCC PT.15.247 TEST REPORT		FCC & IC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module		FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Spurious Emission (802.11n-CH157) _20 MHz BW



Date: 13.OCT.2011 18:56:40

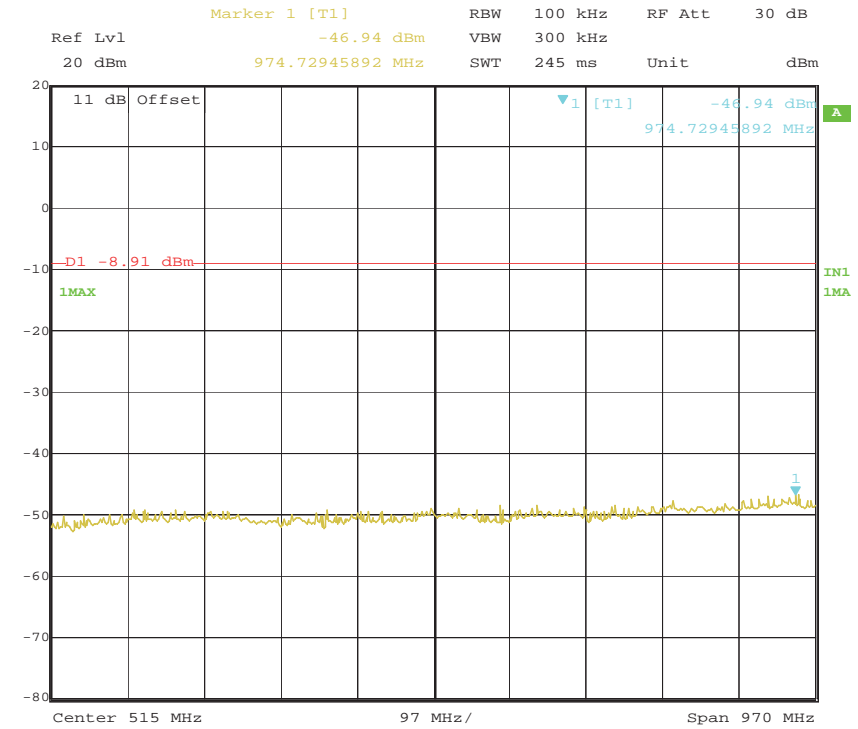
Conducted Spurious Emission (802.11n-CH165) _20 MHz BW



Date: 13.OCT.2011 18:57:17

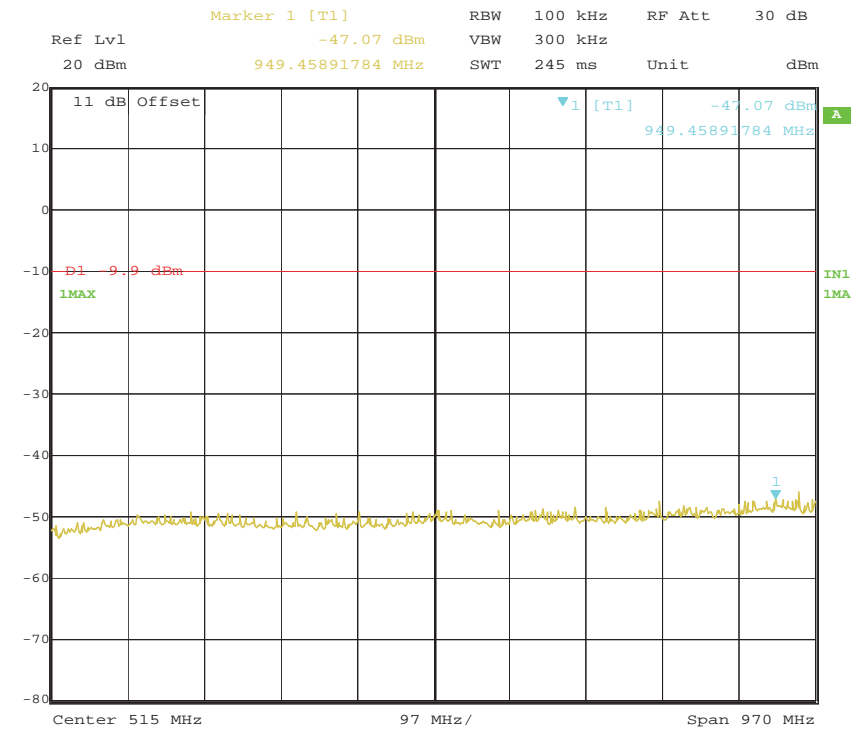
FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

Conducted Spurious Emission (802.11n-CH149) _40 MHz BW



Date: 13.OCT.2011 18:58:17

Conducted Spurious Emission (802.11n-CH159) _40 MHz BW



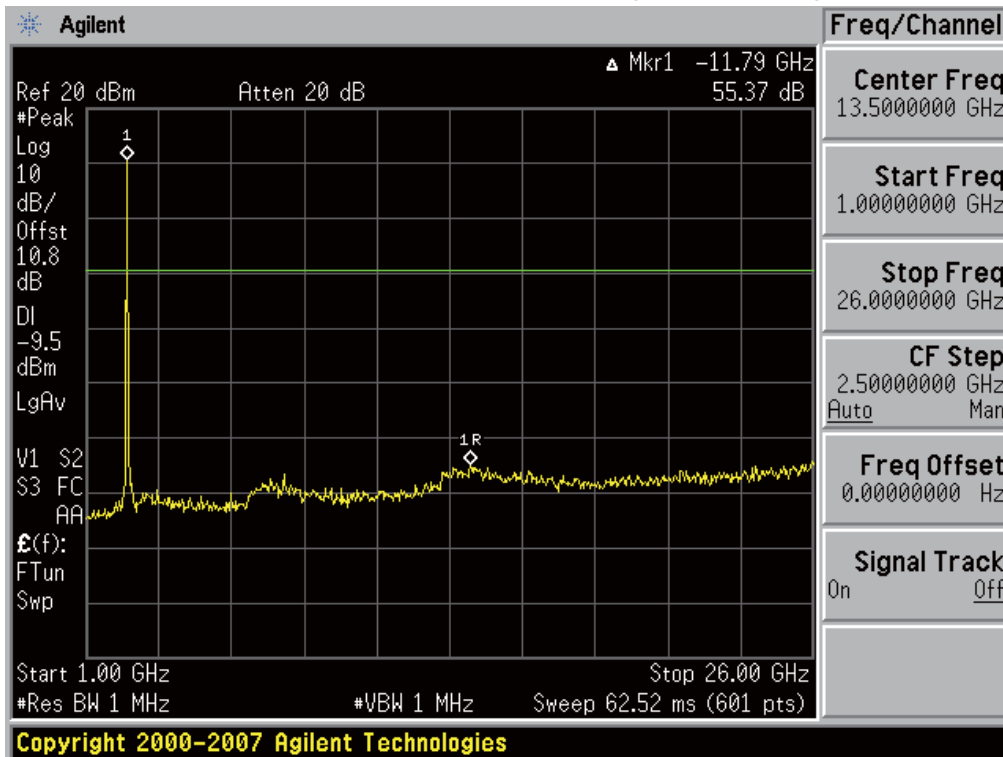
Date: 13.OCT.2011 18:58:53

FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

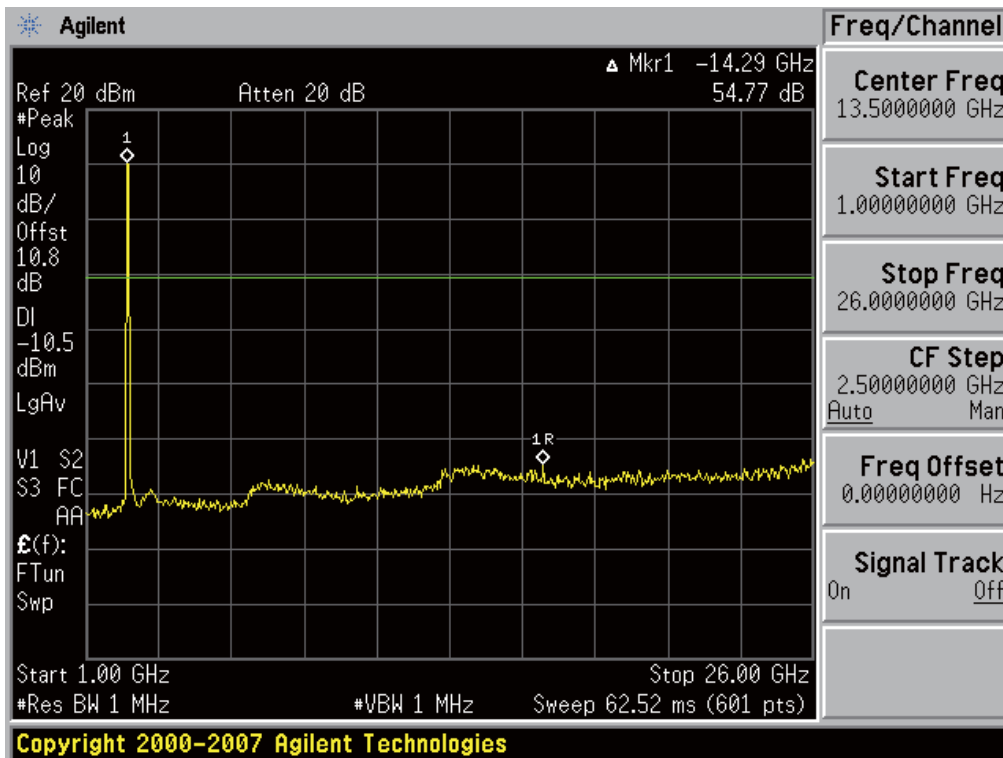
RESULT PLOTS_(2.4 GHz Band)

1 GHz ~ 26 GHz(Ant.0)

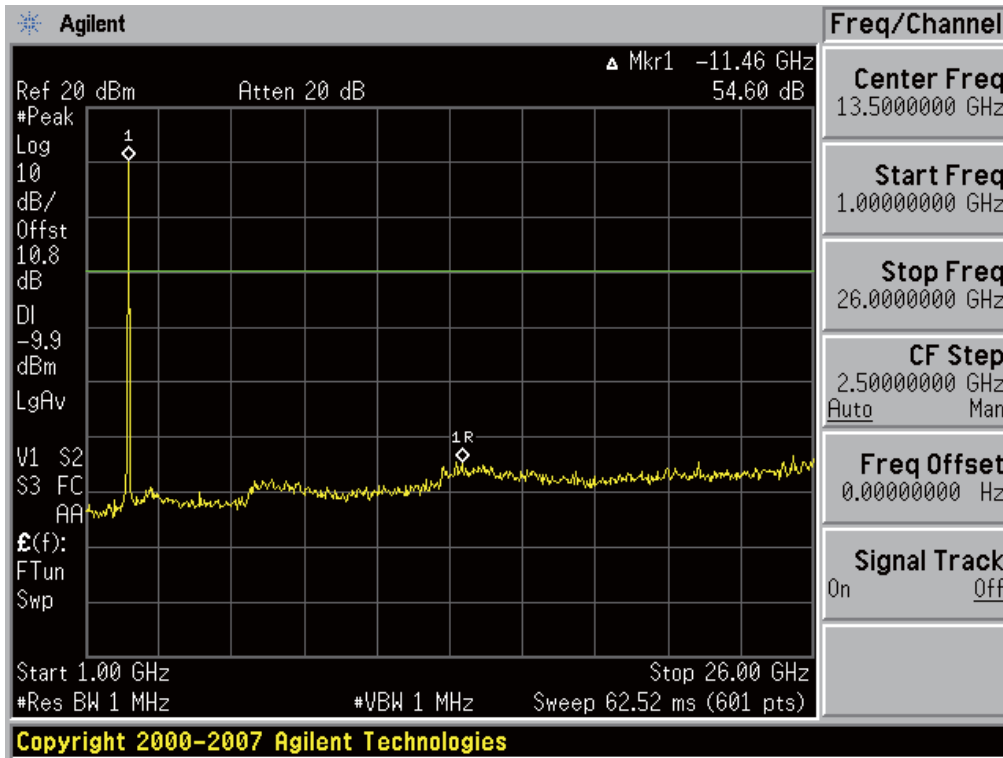
Conducted Spurious Emission (802.11b-CH1)



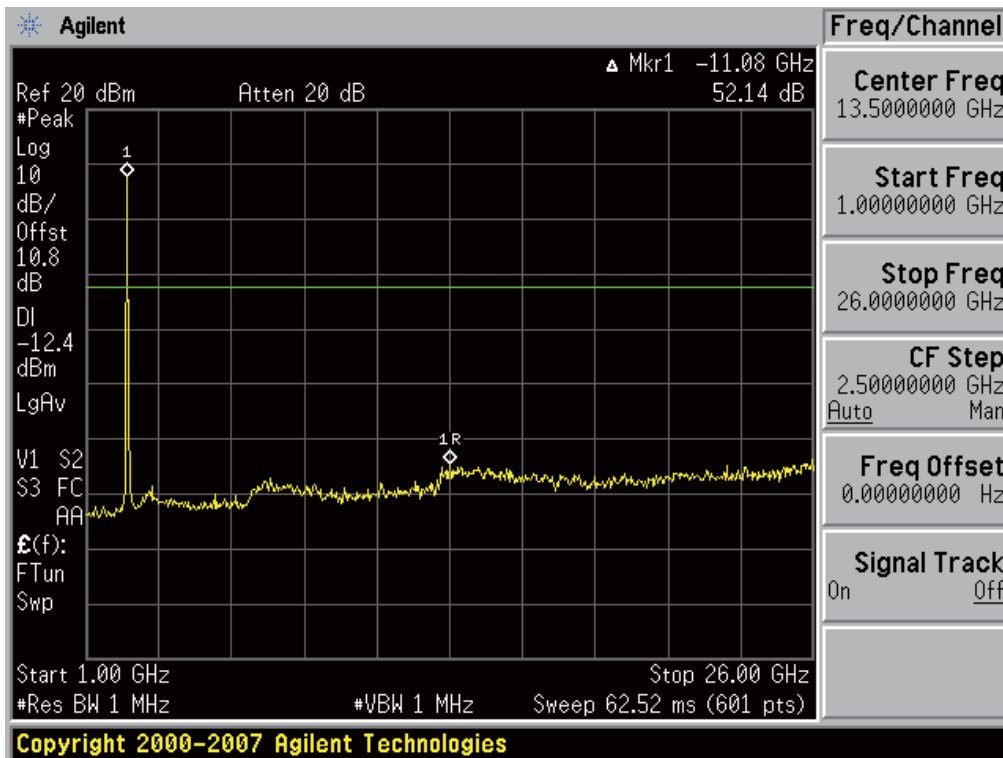
Conducted Spurious Emission (802.11b-CH6)



Conducted Spurious Emission (802.11b-CH11)

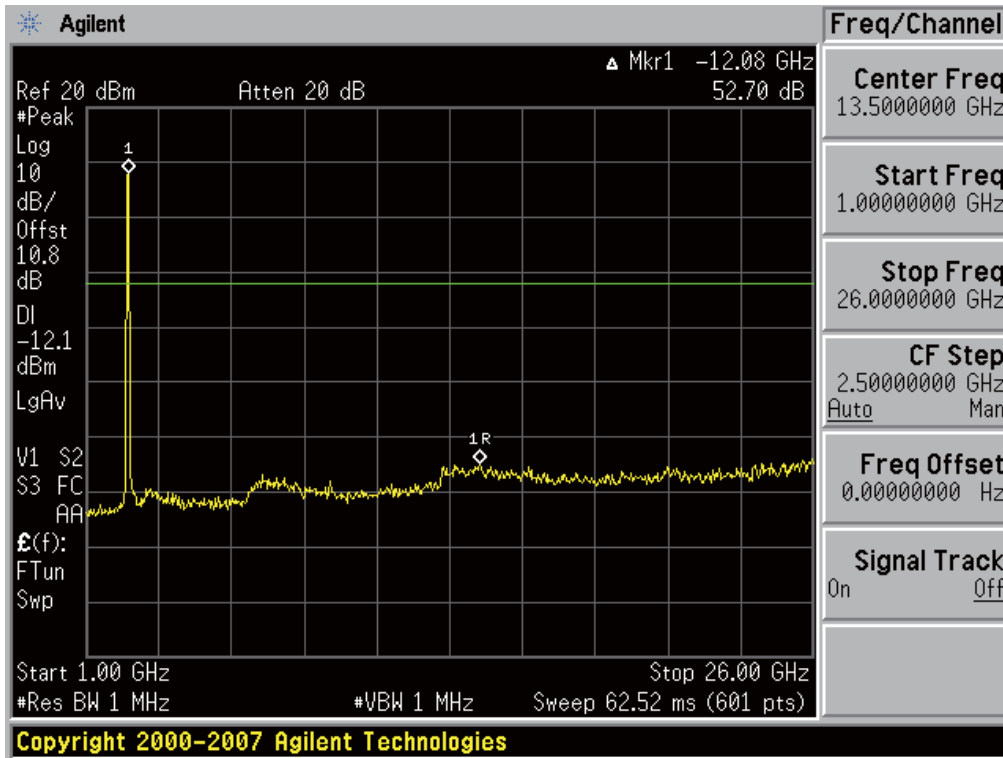


Conducted Spurious Emission (802.11g-CH1)

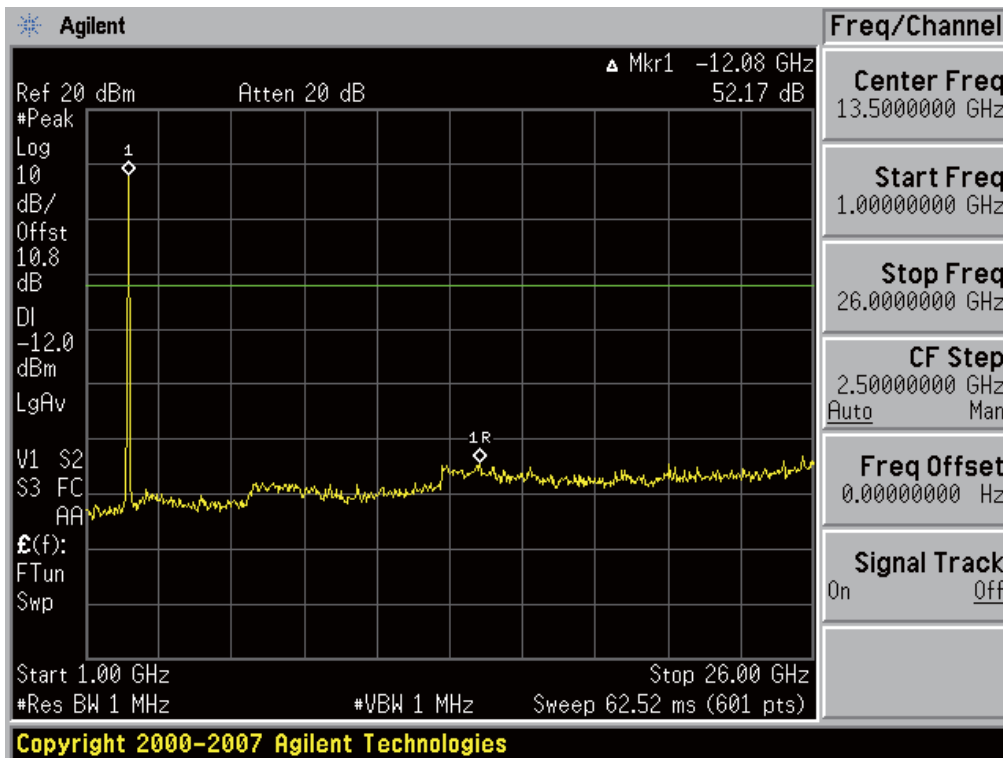


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Spurious Emission (802.11g-CH6)

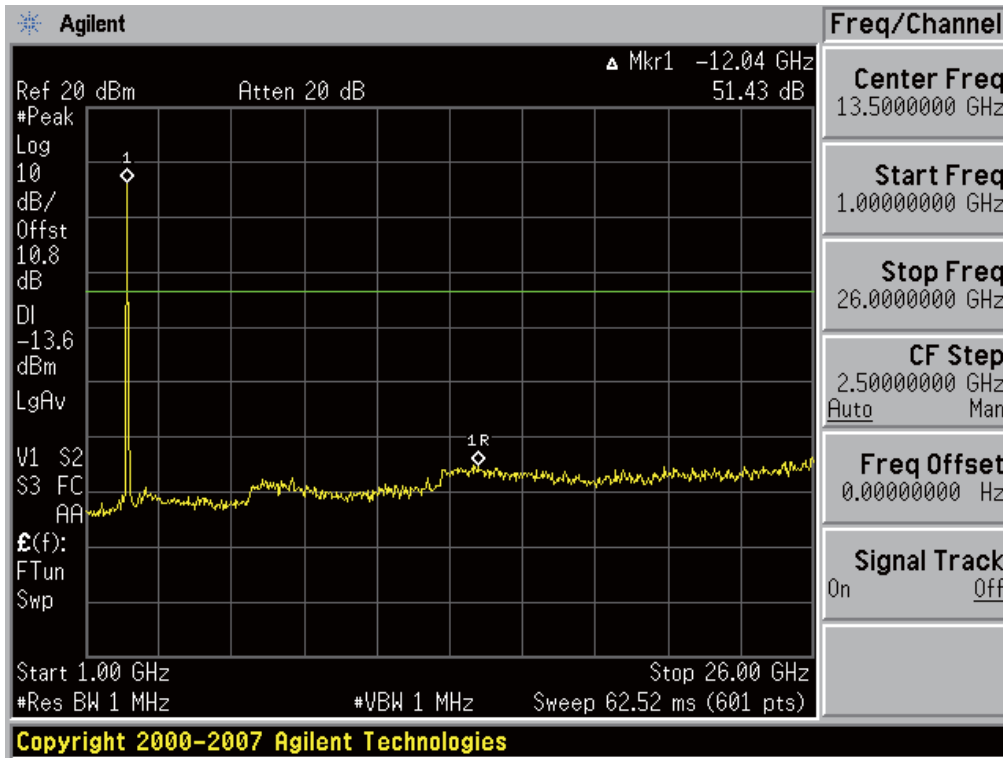


Conducted Spurious Emission (802.11g-CH11)

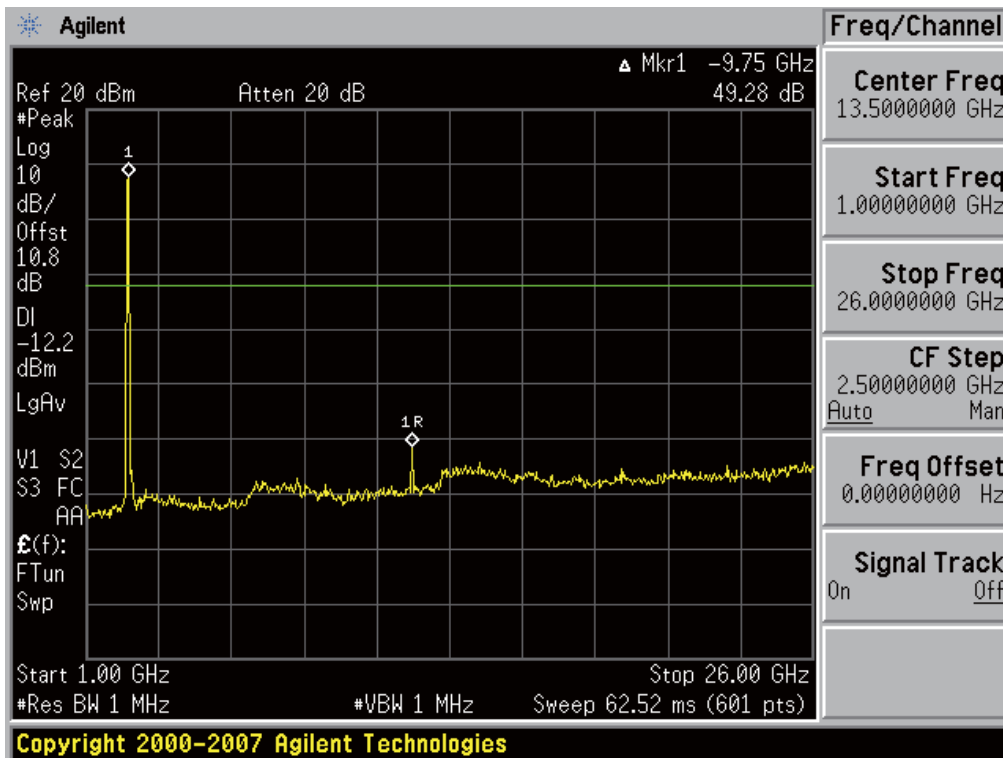


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

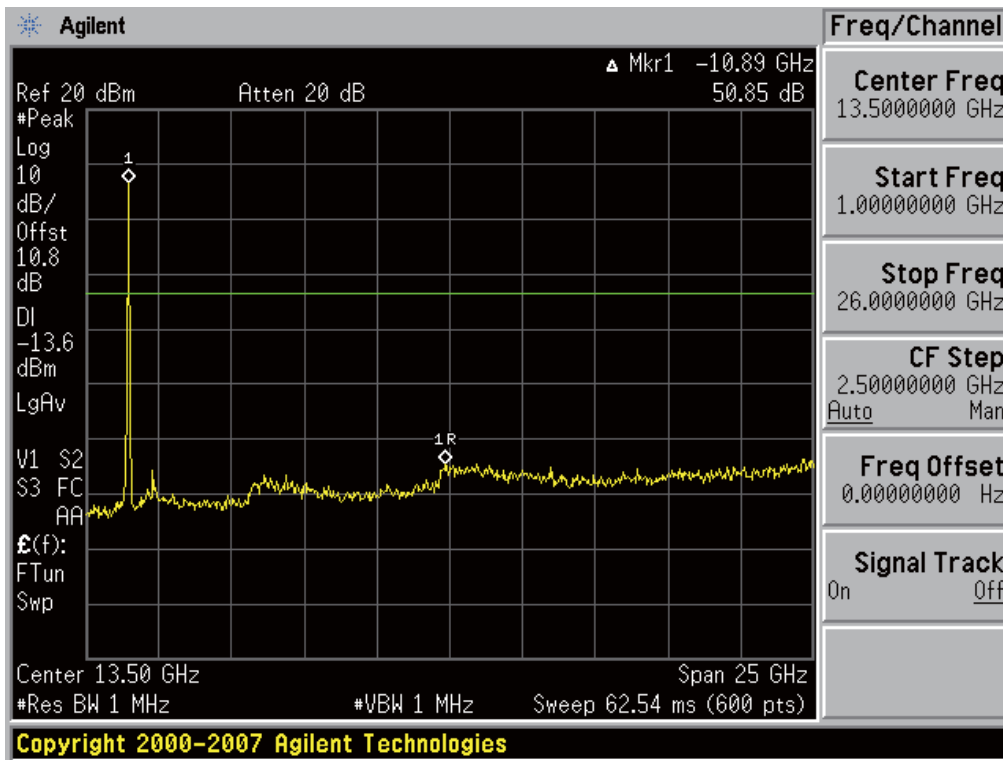
Conducted Spurious Emission (802.11n-CH1)_20 MHz BW



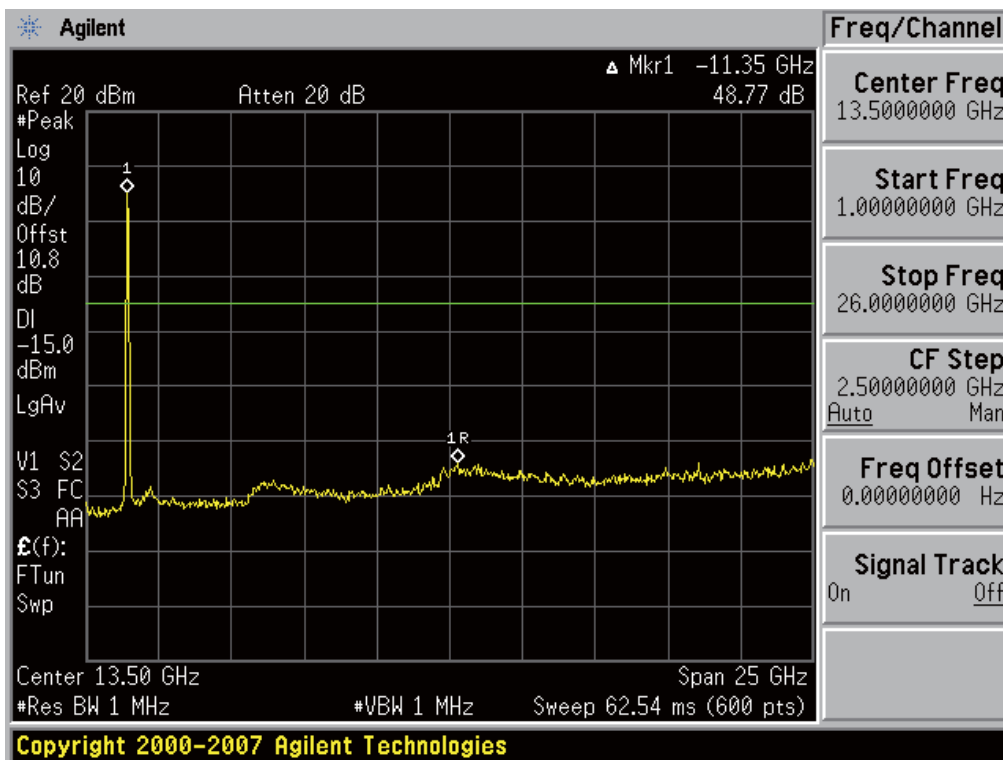
Conducted Spurious Emission (802.11n-CH6)_20 MHz BW



Conducted Spurious Emission (802.11n-CH11) _20 MHz BW

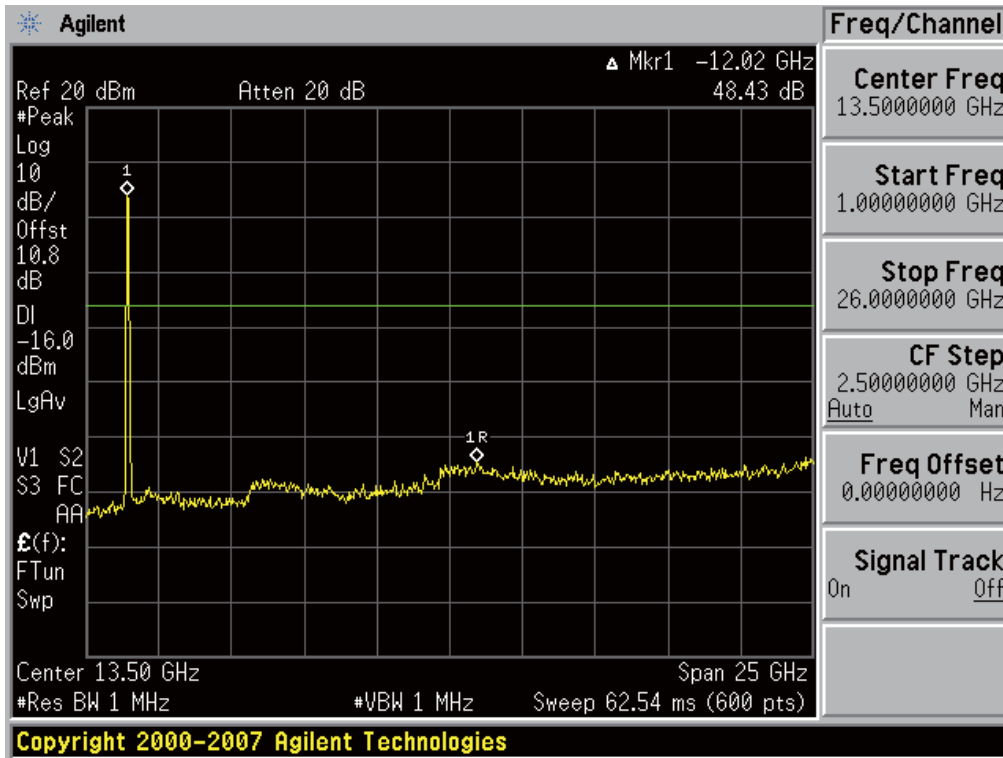


Conducted Spurious Emission (802.11n-CH3)_40 MHz BW

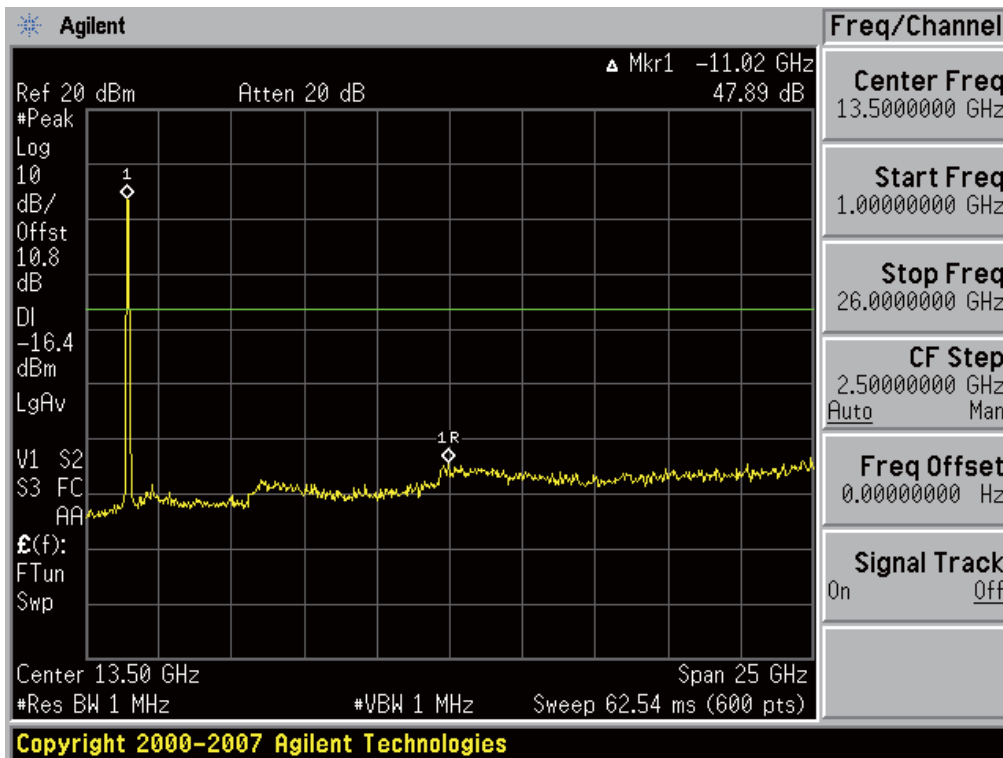


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Spurious Emission (802.11n-CH6)_40 MHz BW



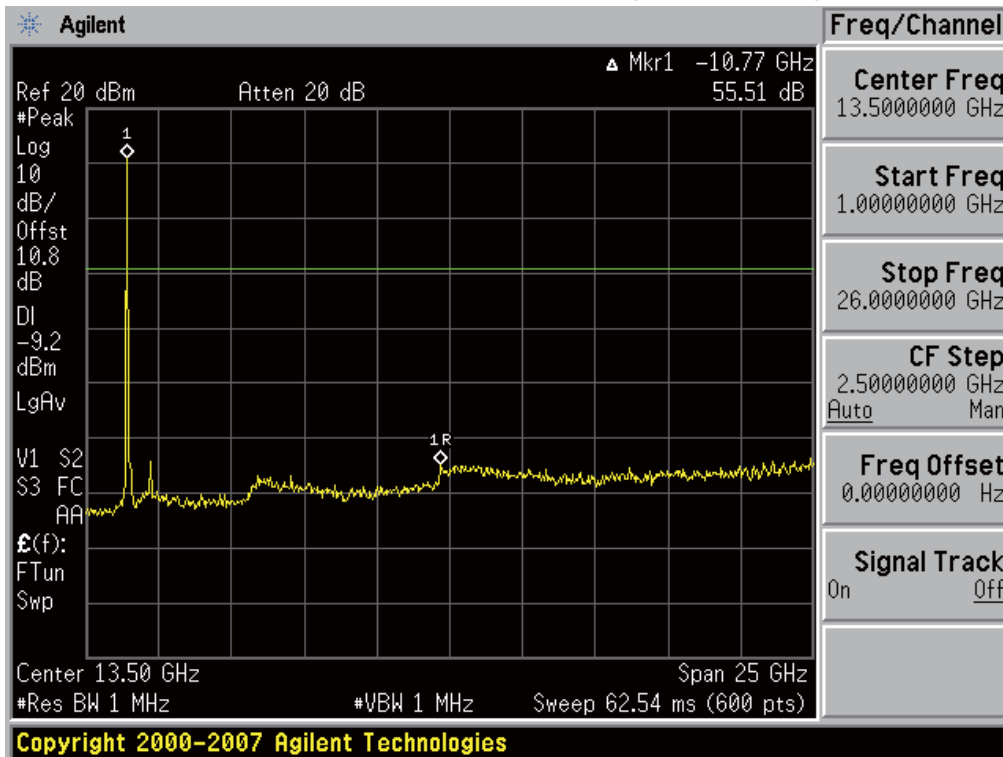
Conducted Spurious Emission (802.11n-CH9)_40 MHz BW



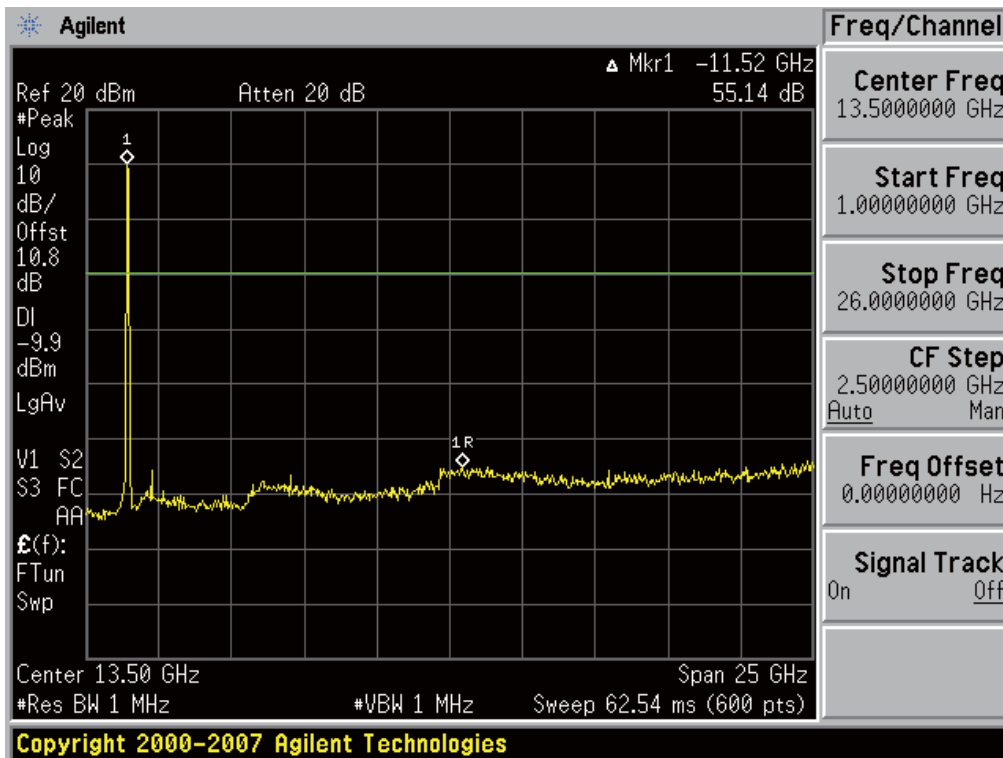
RESULT PLOTS_ (2.4 GHz Band)

1 GHz ~ 26 GHz (Ant.1)

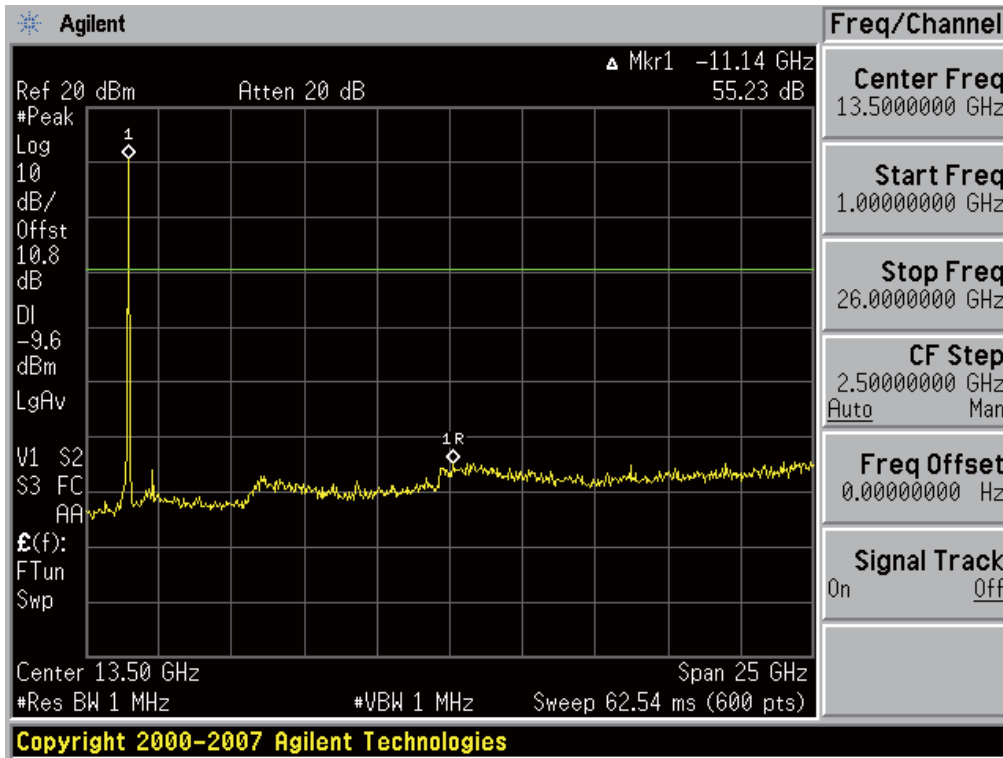
Conducted Spurious Emission (802.11b-CH1)



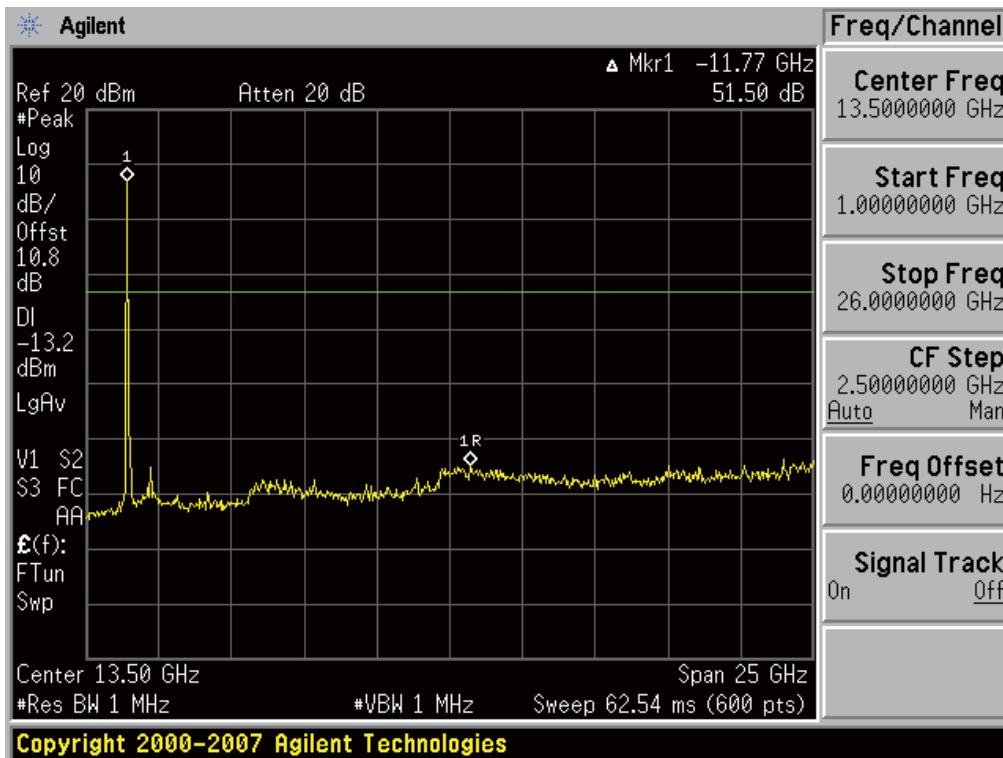
Conducted Spurious Emission (802.11b-CH6)



Conducted Spurious Emission (802.11b-CH11)

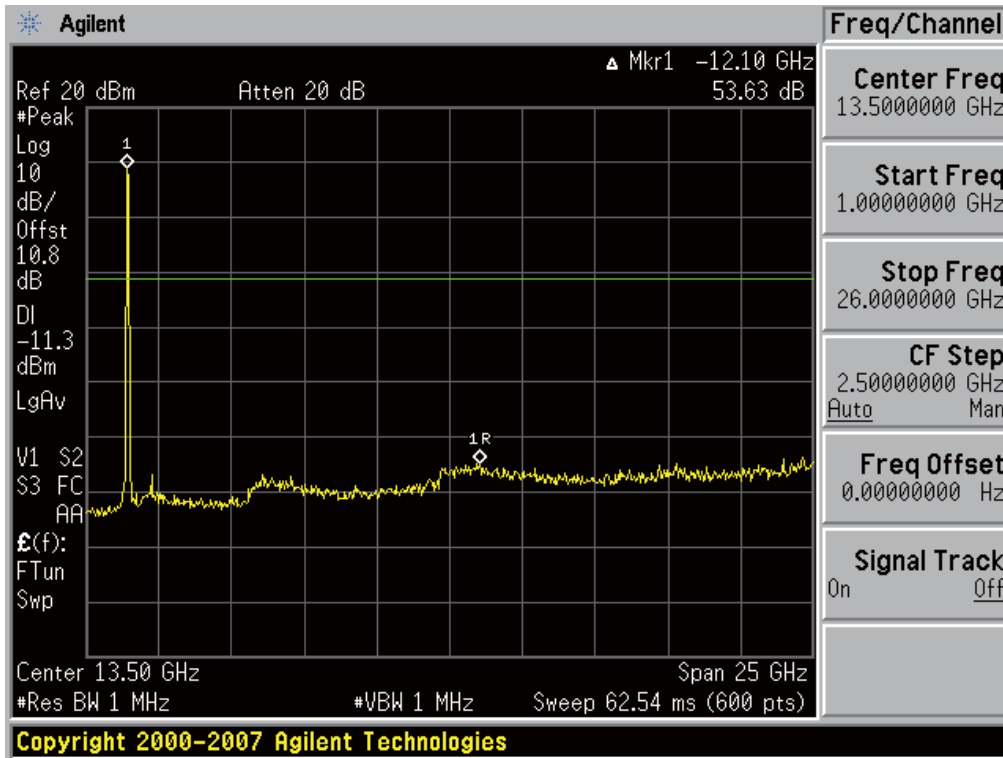


Conducted Spurious Emission (802.11g-CH1)

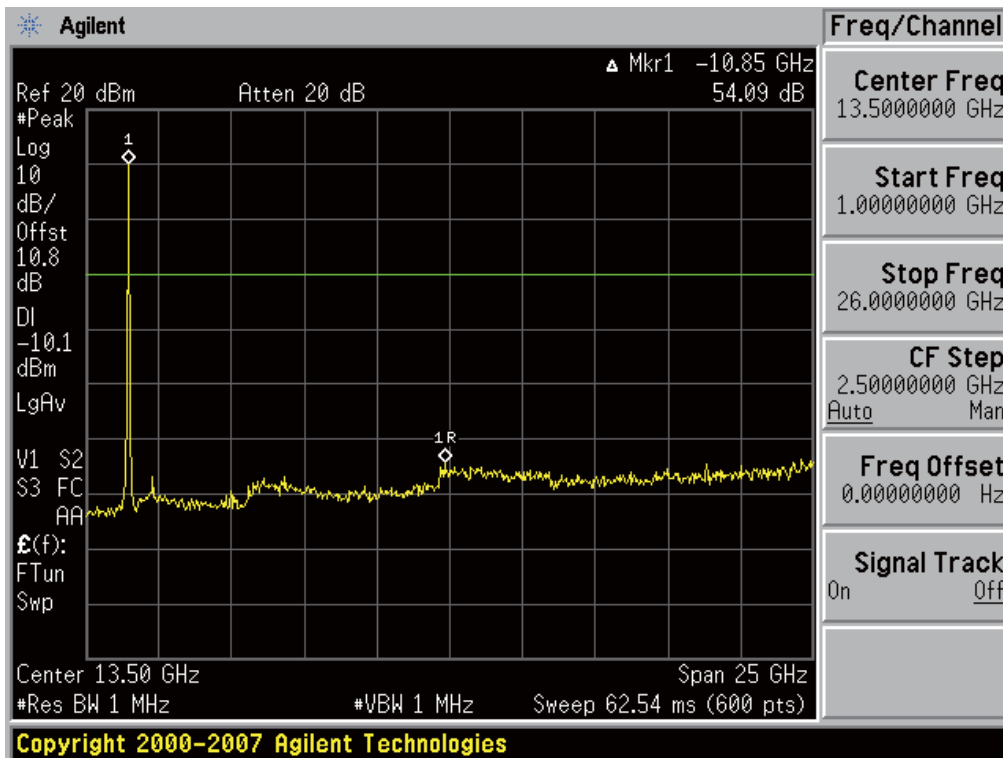


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

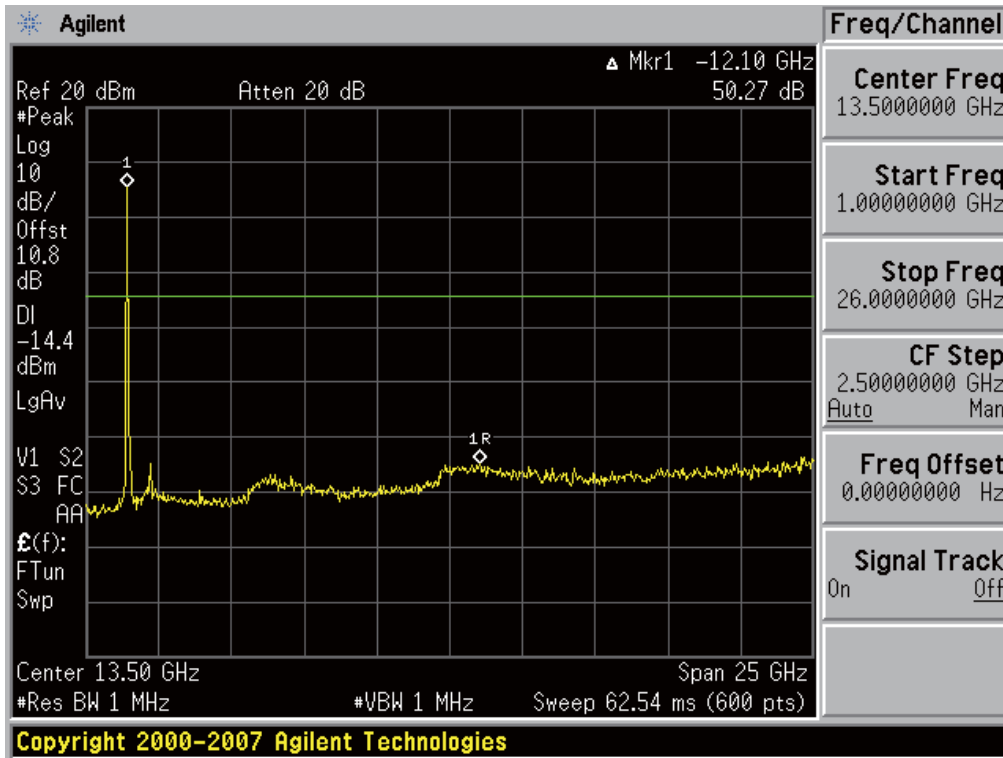
Conducted Spurious Emission (802.11g-CH6)



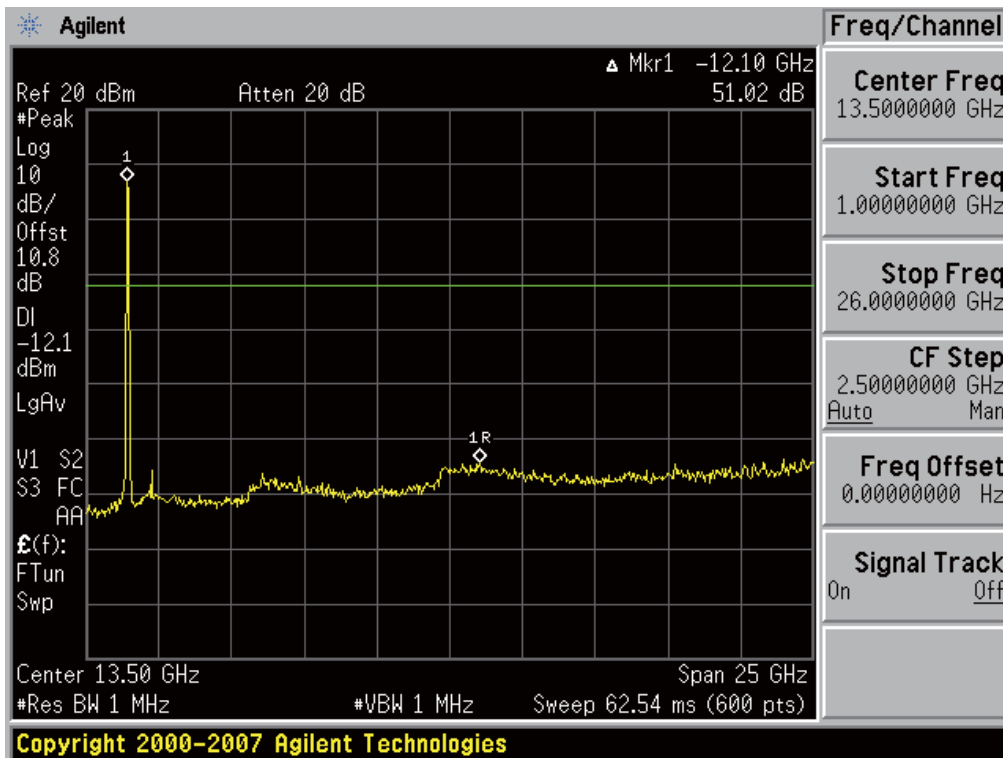
Conducted Spurious Emission (802.11g-CH11)



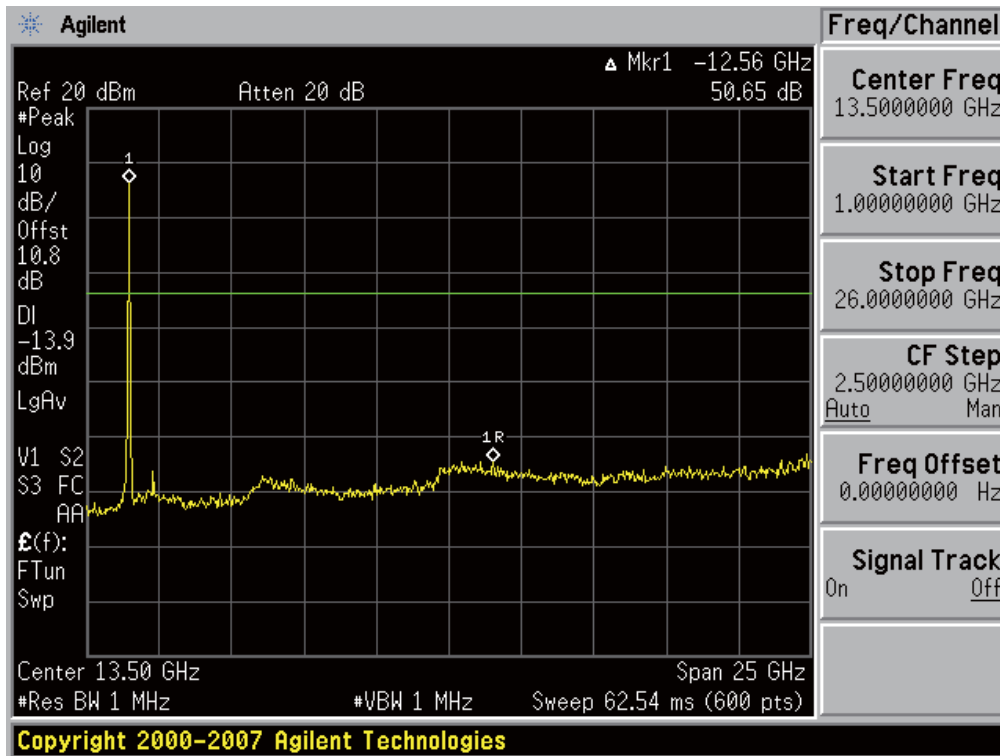
Conducted Spurious Emission (802.11n-CH1)_20 MHz



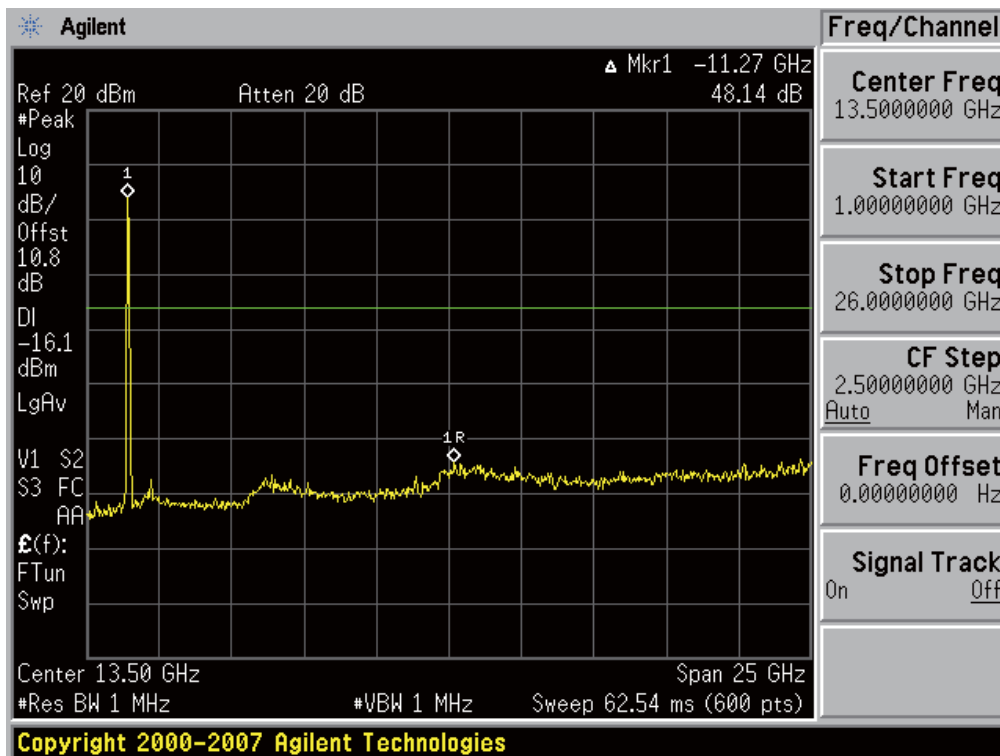
Conducted Spurious Emission (802.11n-CH6)_20 MHz



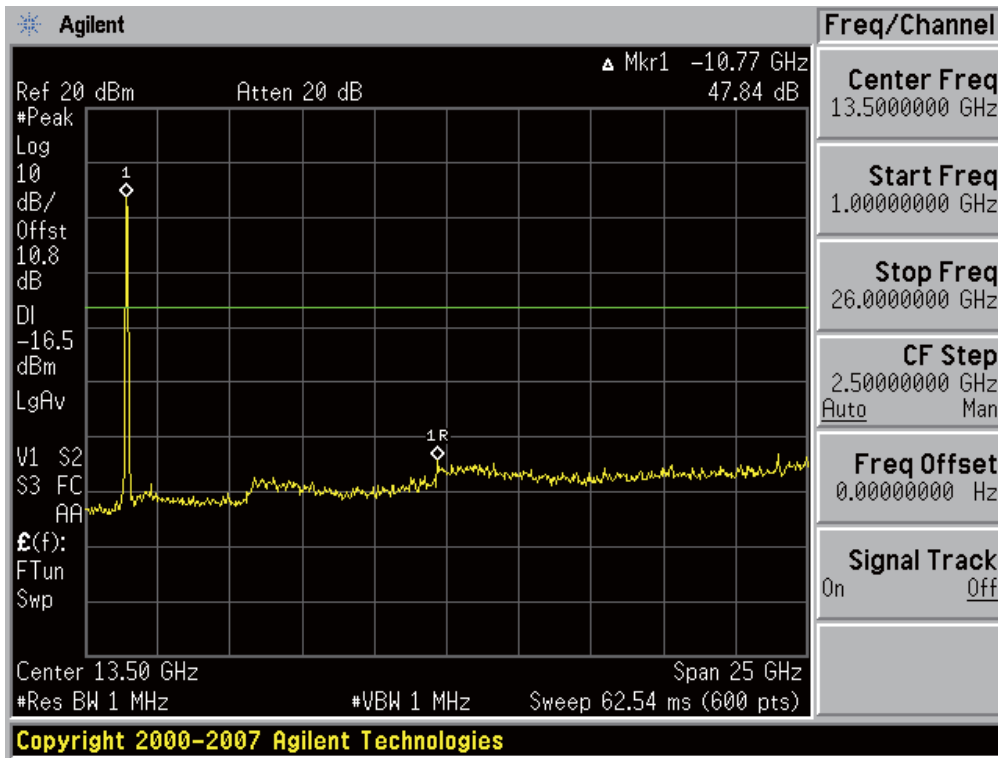
Conducted Spurious Emission (802.11n-CH11) _20 MHz



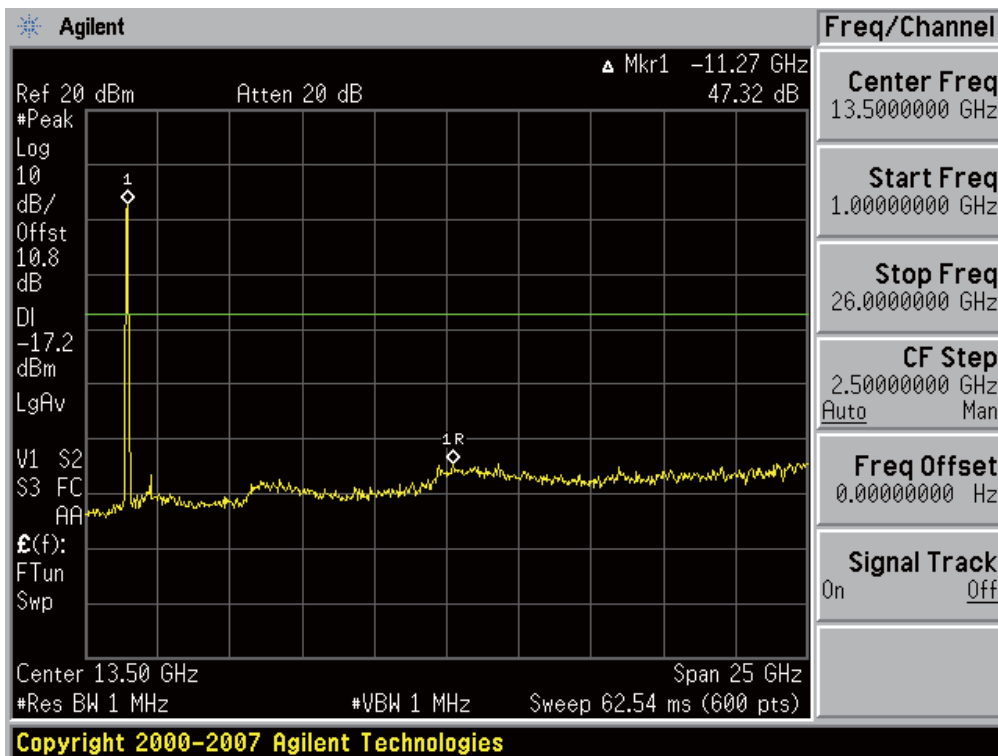
Conducted Spurious Emission (802.11n-CH3)_40 MHz BW



Conducted Spurious Emission (802.11n-CH6)_40 MHz BW



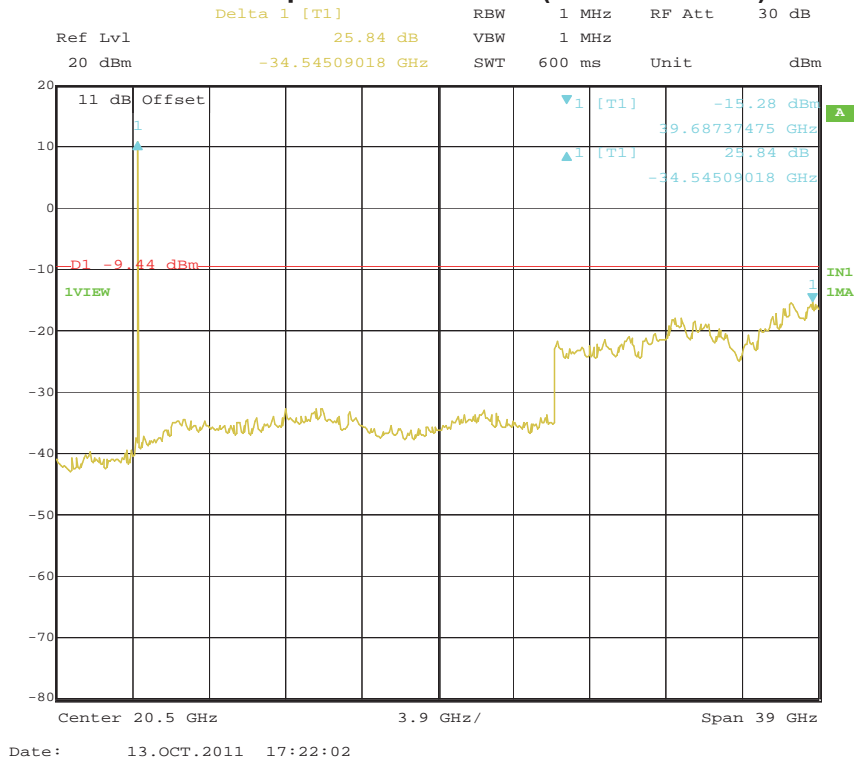
Conducted Spurious Emission (802.11n-CH9)_40 MHz BW



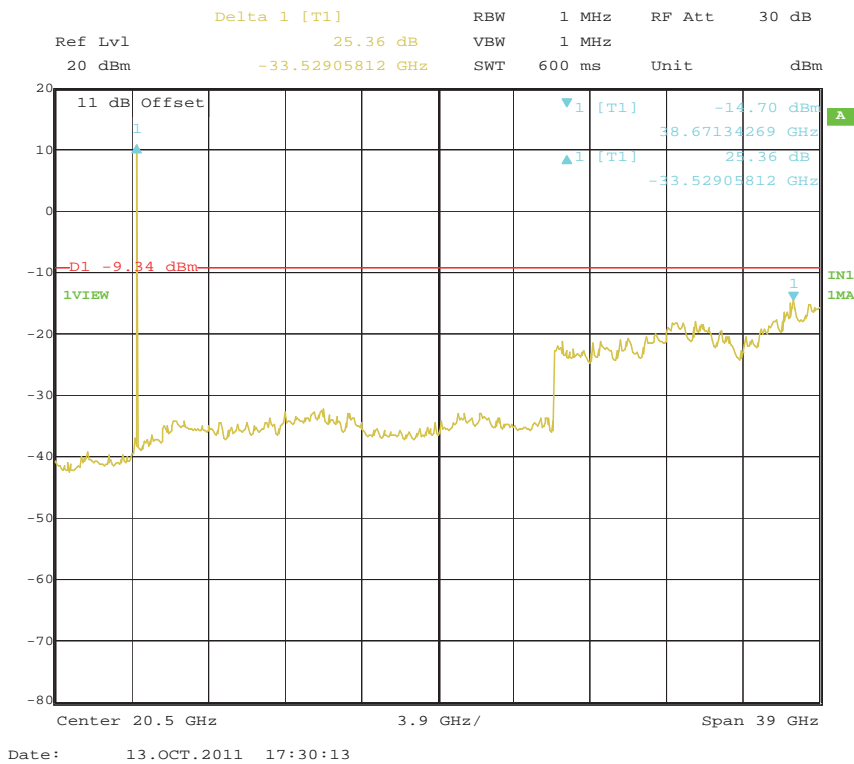
RESULT PLOTS_(5.8 GHz Band)

1 GHz ~ 40 GHz (Ant.0)

Conducted Spurious Emission (802.11a-CH149)

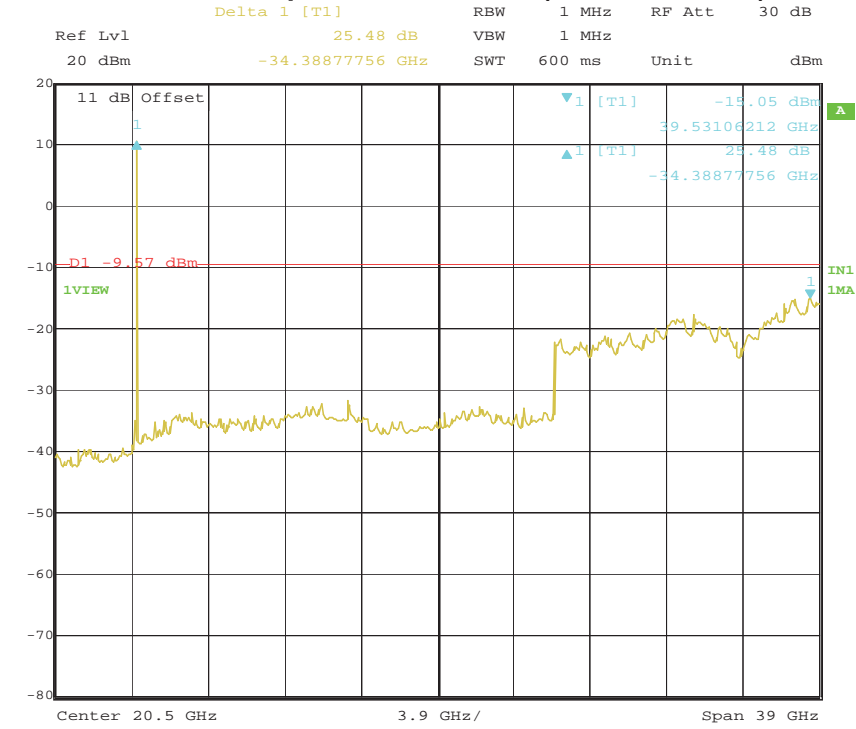


Conducted Spurious Emission (802.11a-CH157)



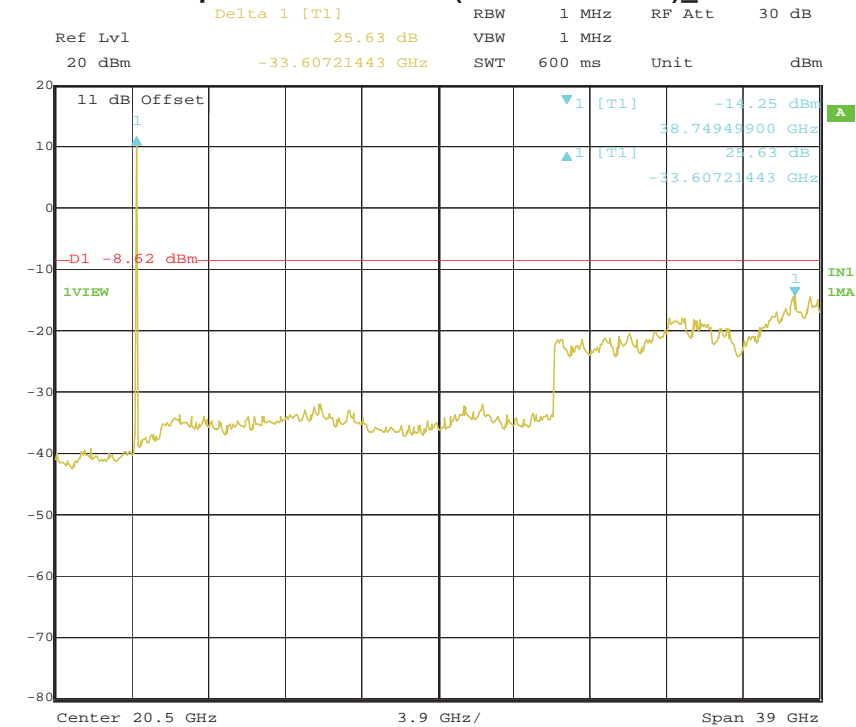
FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

Conducted Spurious Emission (802.11a-CH165)



Date: 13.OCT.2011 17:33:16

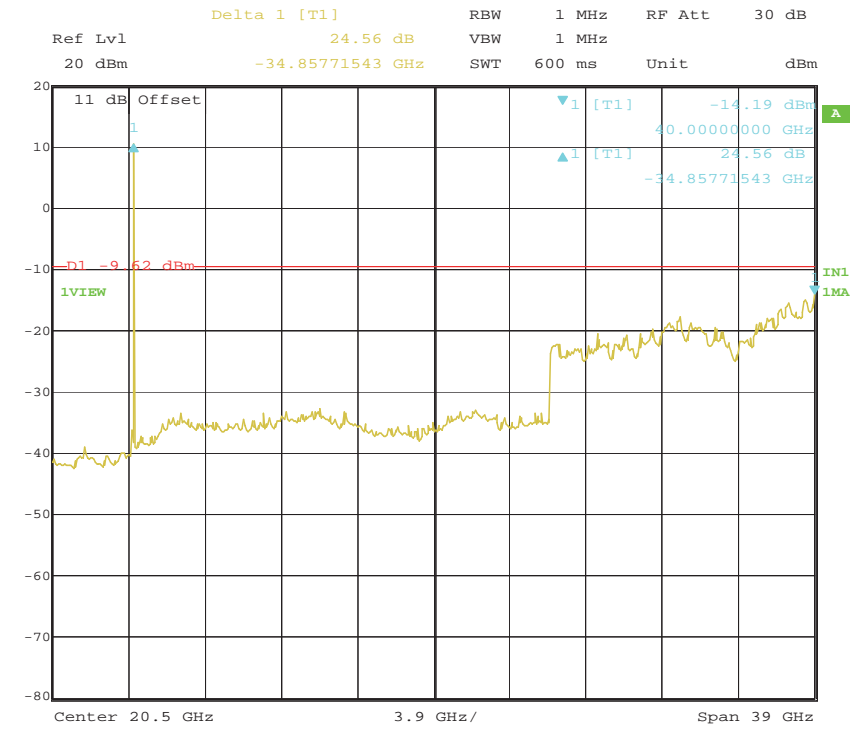
Conducted Spurious Emission (802.11n-CH149)_20 MHz BW



Date: 13.OCT.2011 17:35:10

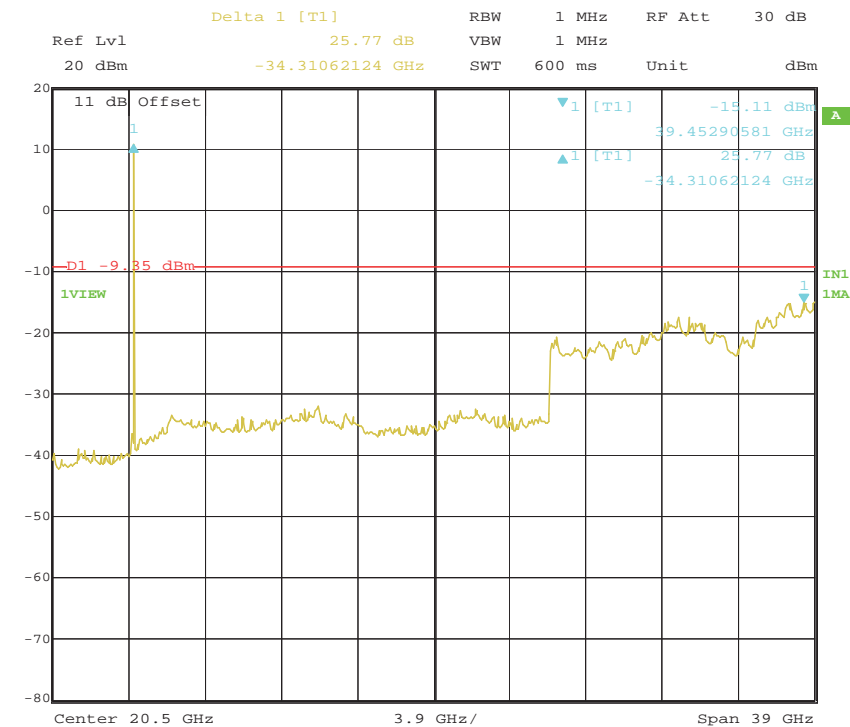
FCC PT.15.247 TEST REPORT		FCC & IC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module		FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Spurious Emission (802.11n-CH157) _20 MHz BW



Date: 13.OCT.2011 17:36:14

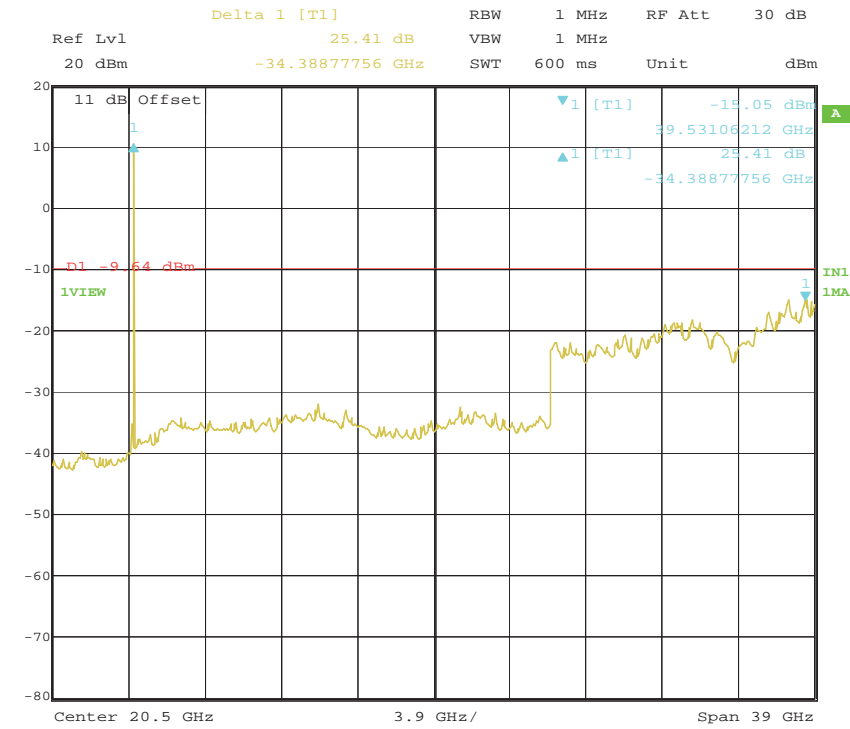
Conducted Spurious Emission (802.11n-CH165) _20 MHz BW



Date: 13.OCT.2011 17:37:35

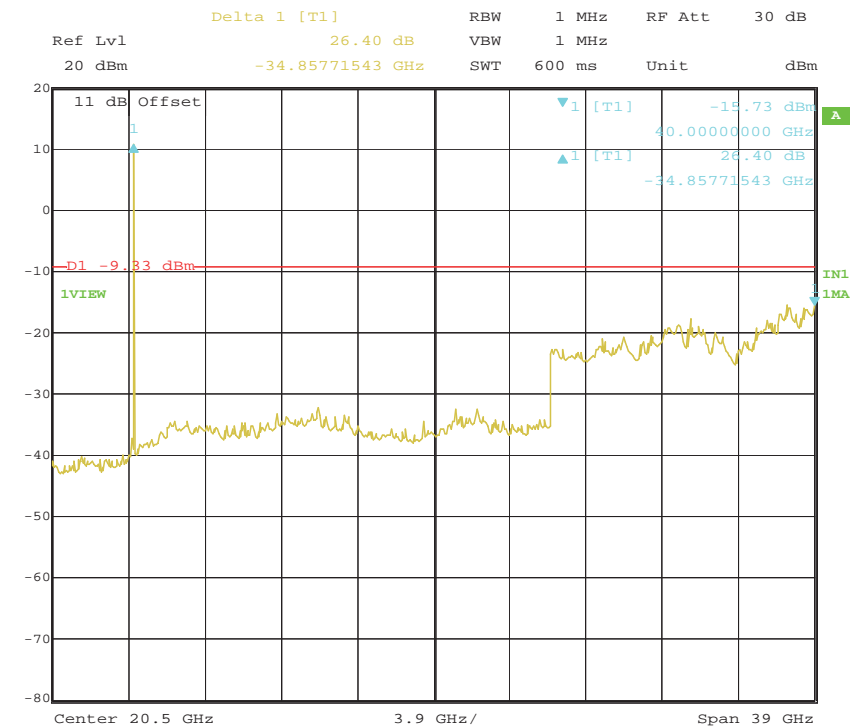
FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Spurious Emission (802.11n-CH149) _40 MHz BW



Date: 13.OCT.2011 17:52:32

Conducted Spurious Emission (802.11n-CH159) _40 MHz BW



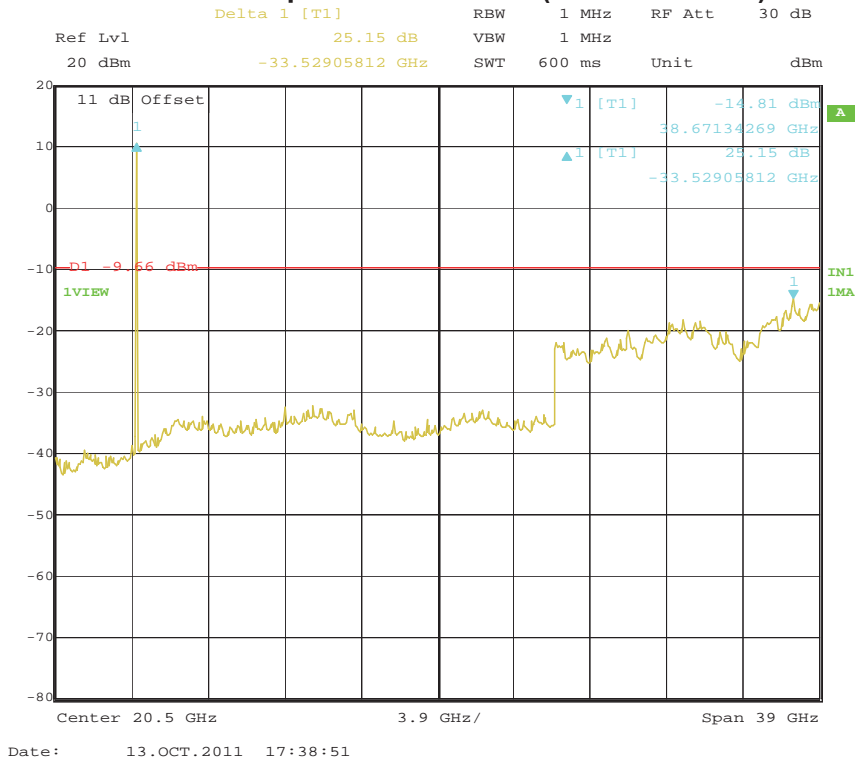
Date: 13.OCT.2011 17:53:21

FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
	Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFB003D

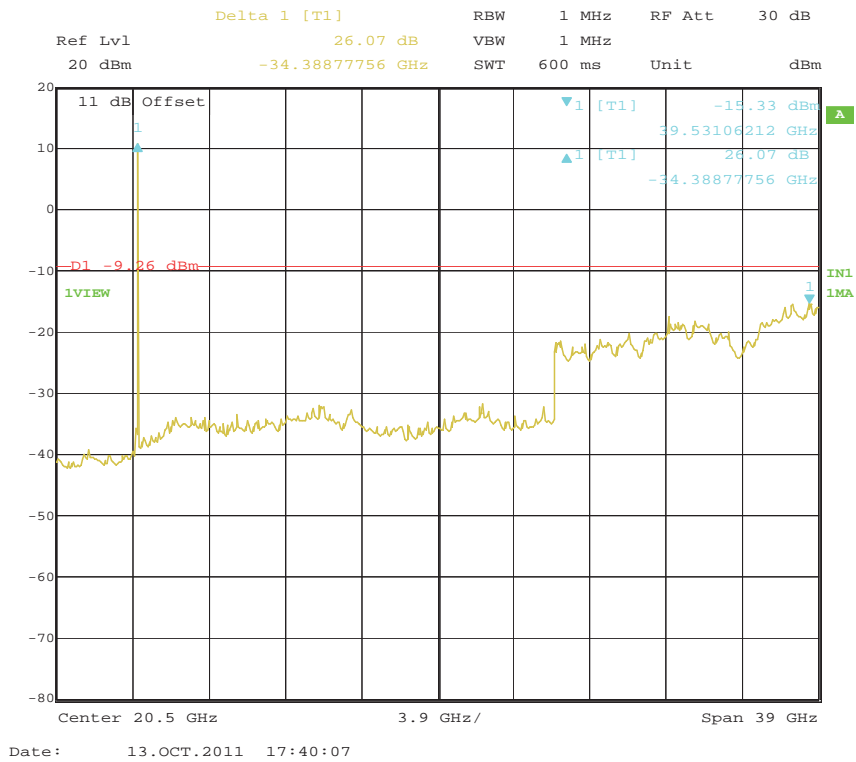
RESULT PLOTS_ (5.8 GHz Band)

1 GHz ~ 40 GHz (Ant.1)

Conducted Spurious Emission (802.11a-CH149)

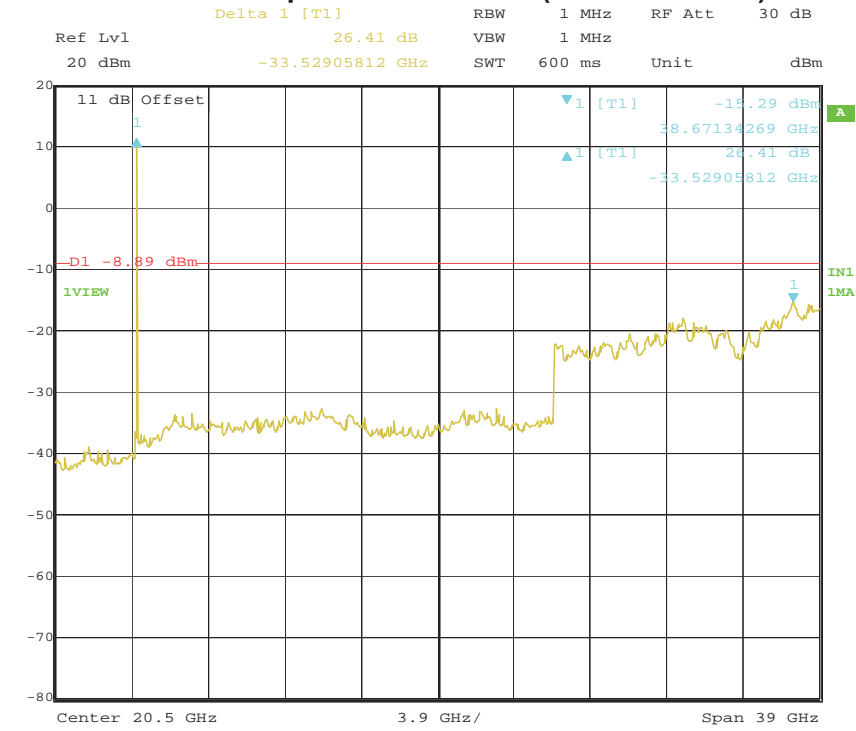


Conducted Spurious Emission (802.11a-CH157)

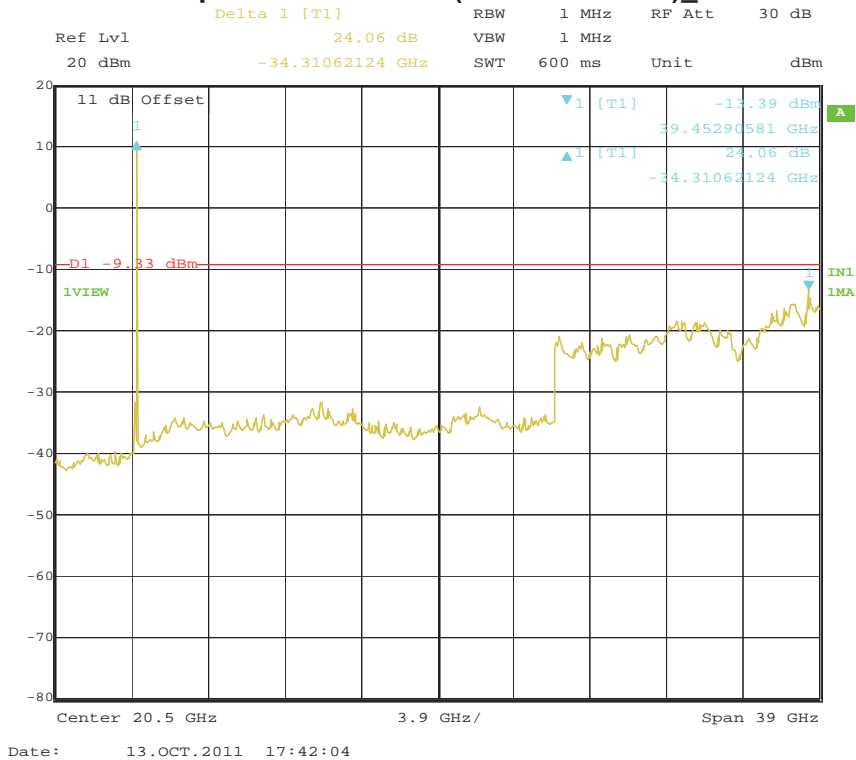


FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Spurious Emission (802.11a-CH165)

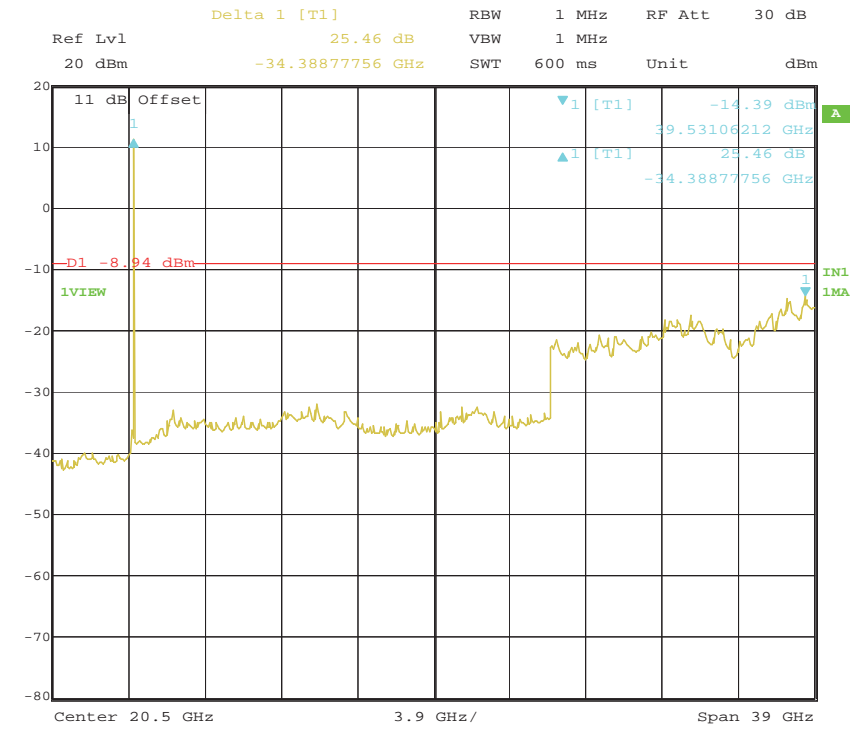


Conducted Spurious Emission (802.11n-CH149)_20 MHz BW



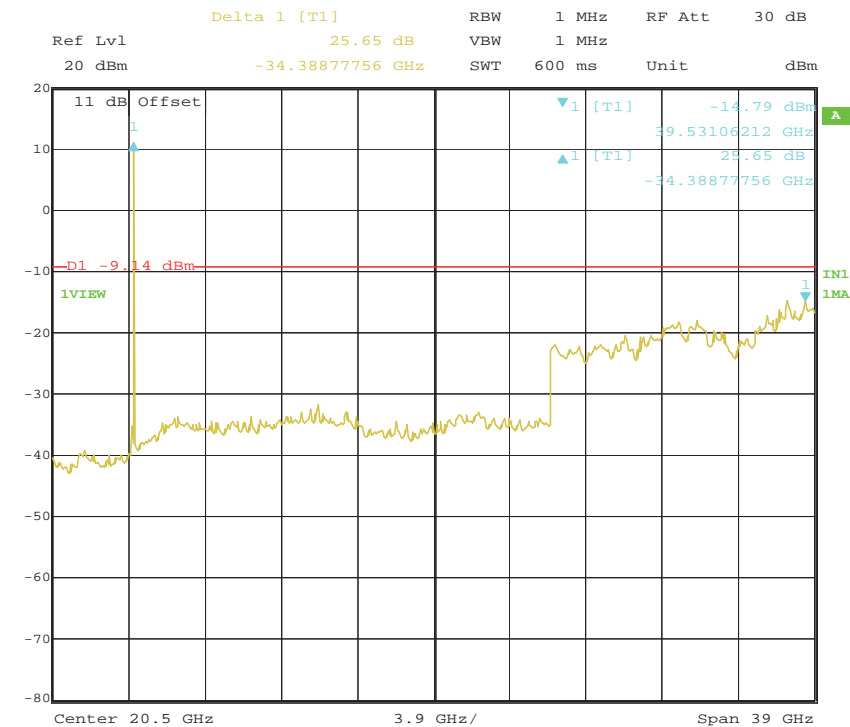
FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Spurious Emission (802.11n-CH157) _20 MHz BW



Date: 13.OCT.2011 17:44:07

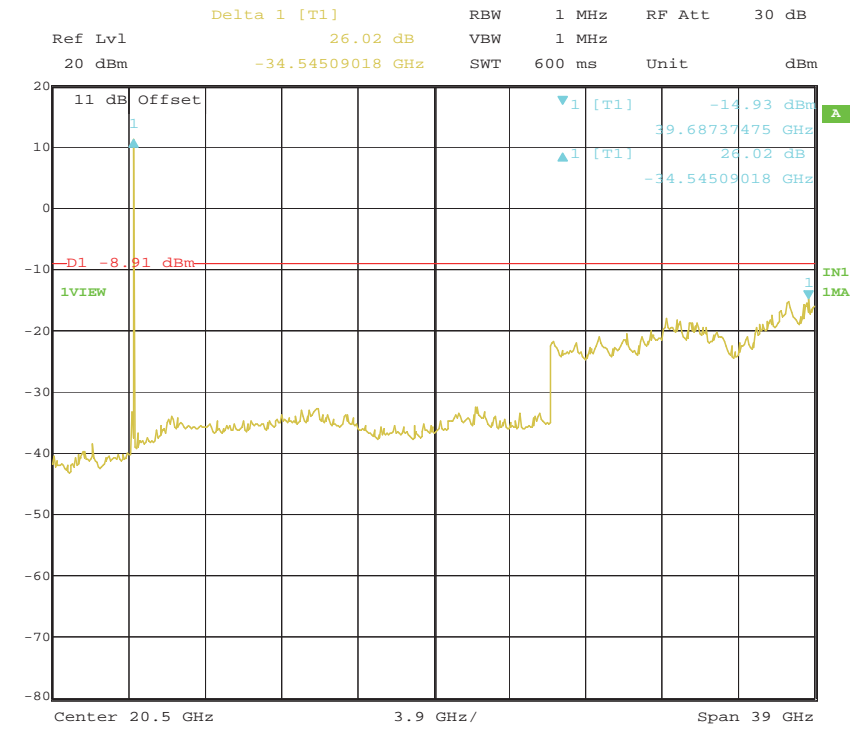
Conducted Spurious Emission (802.11n-CH165) _20 MHz BW



Date: 13.OCT.2011 17:45:39

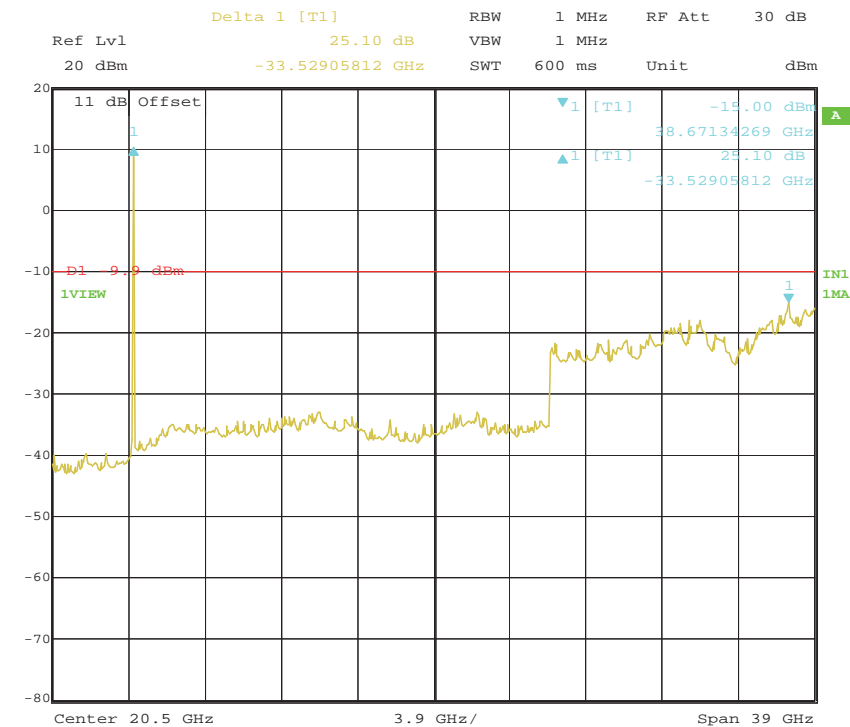
FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

Conducted Spurious Emission (802.11n-CH149) _40 MHz BW



Date: 13.OCT.2011 17:49:26

Conducted Spurious Emission (802.11n-CH159) _40 MHz BW



Date: 13.OCT.2011 17:50:55

FCC PT.15.247 TEST REPORT		FCC & IC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module		FCC ID: BEJTWFB003D	IC: 2703H-TWFB003D

7.6 RADIATED MEASUREMENT.

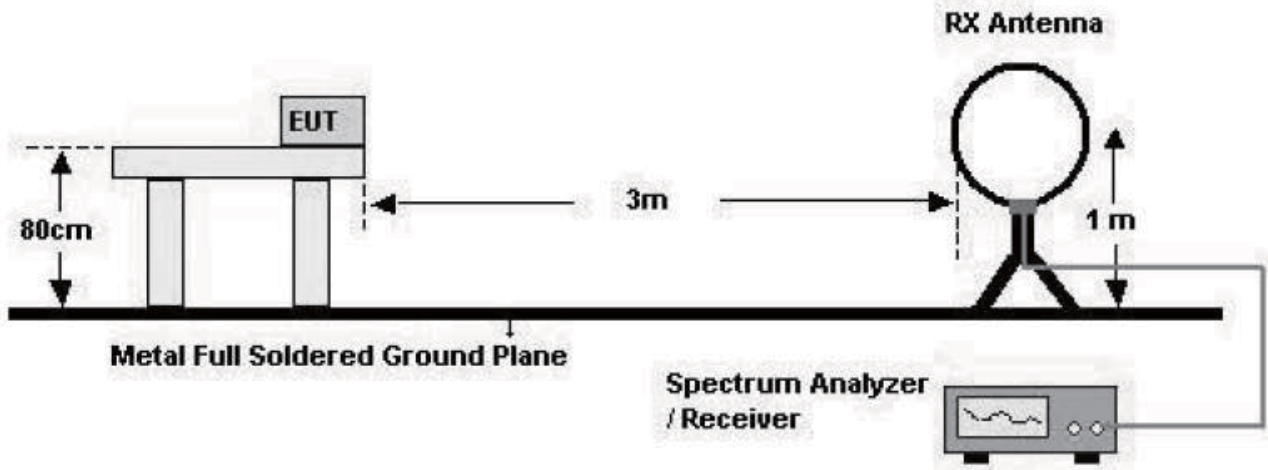
7.6.1 RADIATED SPURIOUS EMISSIONS.

Test Requirements and limit, §15.205, §15.209

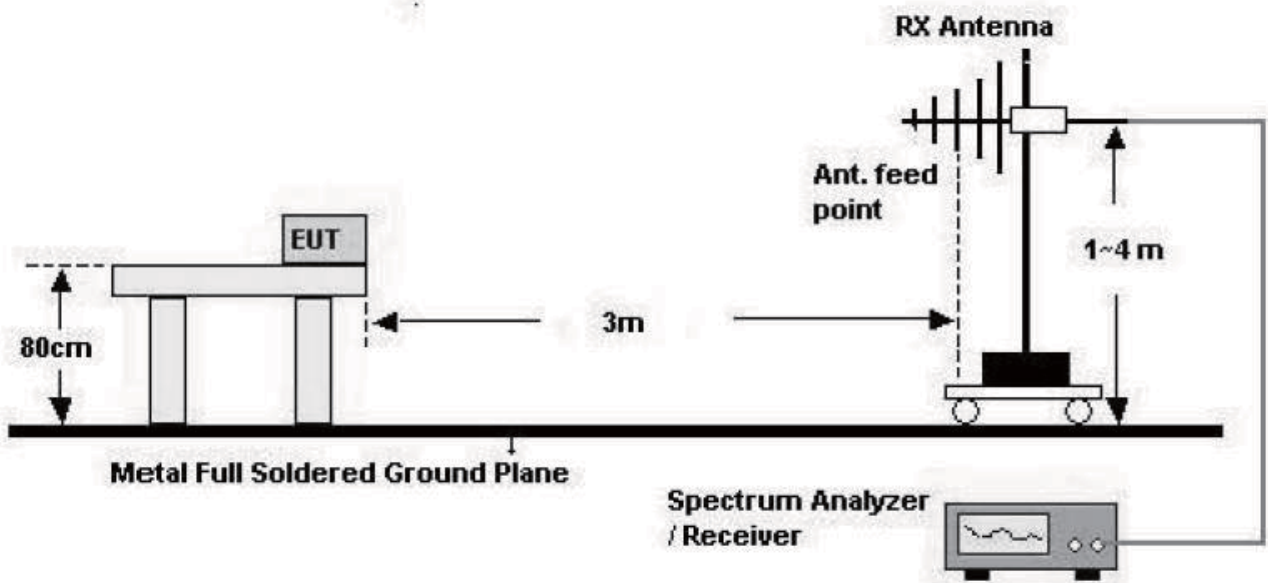
Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Test Configuration

Below 30 MHz

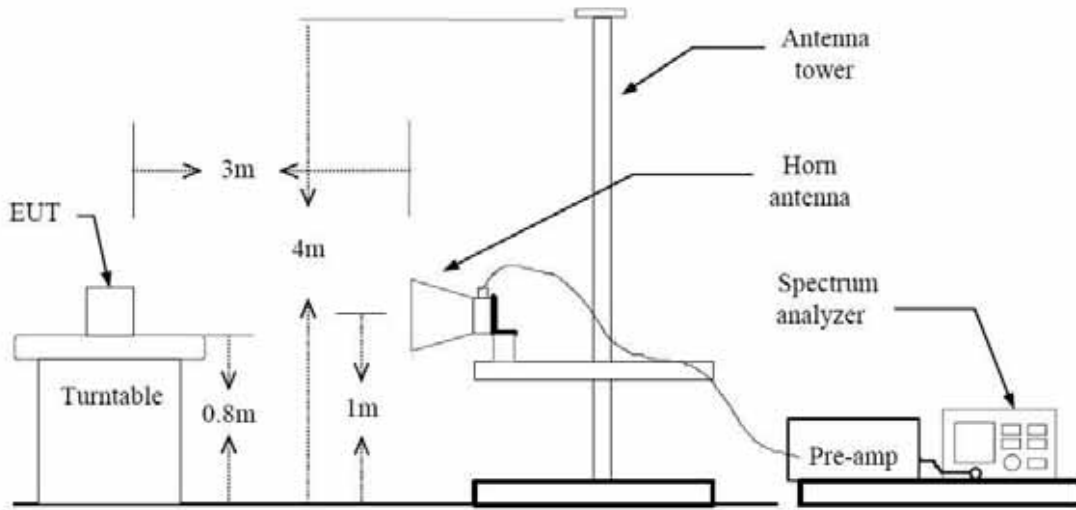


30 MHz - 1 GHz



FCC PT.15.247 TEST REPORT		FCC & IC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D	

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 & IC CERTIFICATION REPORT		www.hct.co.kr	
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D	

TEST RESULTS

9 kHz – 30MHz

Operation Mode: Normal Mode

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

Notes:

1. Measuring frequencies from 9 kHz to the 30MHz.
2. The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
3. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
4. Limit line = specific Limits (dBuV) + Distance extrapolation factor

TEST RESULTS

Below 1 GHz

Operation Mode: 802.11n Mode(2.4 GHz) (Channel : 6 , Data rate : 18 Mbps)

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dB μ V	dB /m	dB	(H/V)	dB μ V/m	dB μ V/m	dB
81.05	21.31	9.33	0.86	H	31.49	40.0	8.51
98.72	24.97	8.52	0.99	V	34.48	43.5	9.02
131.65	20.24	11.90	1.17	V	33.31	43.5	10.19
165.88	20.19	13.00	1.33	V	34.52	43.5	8.98
347.20	17.79	14.40	2.03	H	34.22	46.0	11.78

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 802.11b, 802.11g, 802.11n_20 MHz BW, 802.11n_40 MHz BW (2.4 GHz) and 802.11a, 802.11n_20 MHz BW, 802.11n_40 MHz BW (5.8 GHz) test. Worst case of EUT is 18 Mbps in 802.11n_20 MHz BW.

Above 1 GHz

Operation Mode: 802.11 b_Ant.0
 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	57.92	-0.61	V	57.31	74	16.69	PK
4824	52.22	-0.61	V	51.61	54	2.39	AV
4824	59.11	-0.61	H	58.50	74	15.50	PK
4824	52.60	-0.61	H	51.99	54	2.01	AV

Operation Mode: 802.11 b_Ant.1
 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	54.30	-0.61	V	53.69	74	20.31	PK
4824	47.19	-0.61	V	46.58	54	7.42	AV
4824	54.61	-0.61	H	54.00	74	20.00	PK
4824	46.51	-0.61	H	45.90	54	8.10	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. 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.
5. We have done 802.11b, 802.11g, 802.11n_20 MHz BW, 802.11n_40 MHz BW (2.4 GHz) and 802.11a, 802.11n_20 MHz BW, 802.11n_40 MHz BW (5.8 GHz) test. Worst case of EUT is 1 Mbps in 802.11b.

FCC PT.15.247 TEST REPORT		FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D	

Operation Mode: 802.11 b_Ant.0
 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	57.54	-0.42	V	57.12	74	16.88	PK
4874	52.32	-0.42	V	51.90	54	2.10	AV
4874	58.19	-0.42	H	57.77	74	16.23	PK
4874	52.45	-0.42	H	52.03	54	1.97	AV

Operation Mode: 802.11 b_Ant.1
 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	52.78	-0.42	V	52.36	74	21.64	PK
4874	43.11	-0.42	V	42.69	54	11.31	AV
4874	52.39	-0.42	H	51.97	74	22.03	PK
4874	44.05	-0.42	H	43.63	54	10.37	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. 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.
5. We have done 802.11b, 802.11g, 802.11n_20 MHz BW, 802.11n_40 MHz BW (2.4 GHz) and 802.11a, 802.11n_20 MHz BW, 802.11n_40 MHz BW (5.8 GHz) test. Worst case of EUT is 1 Mbps in 802.11b.

FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: WI-FI Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D



Operation Mode: 802.11 b_Ant.0
 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	55.65	-0.39	V	55.26	74	18.74	PK
4924	50.54	-0.39	V	50.15	54	3.85	AV
4924	55.74	-0.39	H	55.35	74	18.65	PK
4924	50.07	-0.39	H	49.68	54	4.32	AV

Operation Mode: 802.11 b_Ant.1
 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	52.53	-0.39	V	52.14	74	21.86	PK
4924	42.60	-0.39	V	42.21	54	11.79	AV
4924	52.67	-0.39	H	52.28	74	21.72	PK
4924	43.74	-0.39	H	43.35	54	10.65	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 > 20dB 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. Spectrum setting:
 - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MH.
 - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.
5. We have done 802.11b, 802.11g, 802.11n_20 MHz BW, 802.11n_40 MHz BW (2.4 GHz) and 802.11a, 802.11n_20 MHz BW, 802.11n_40 MHz BW (5.8 GHz) test. Worst case of EUT is 1 Mbps in 802.11b.

FCC PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

7.6.2 RECEIVER SPURIOUS EMISSIONS

FCC Rule(s)	§15.109 (see Table Below)
Test Requirements:	Emission Level shall not exceed §15.109 limits
Operating conditions:	Under normal test conditions
Method of testing:	Radiated

S/A. Settings:	F < 1 GHz: RBW: 120 kHz, VBW: 300 kHz (Quasi Peak)
	F > 1 GHz: RBW: 1 MHz, VBW: 1 MHz (Peak)
Mode of operation:	Receive

Frequency (MHz)	Field Strength (mV/m)	Measurement Distance (m)
30 – 88	100 (40 dBuV)	3
88 - 216	150 (43.5 dBuV)	3
216 – 960	200 (46 dBuV)	3
Above 960	500 (54 dBuV)	3

Operation Mode: Receive:

30 MHz ~ 1 GHz

Frequency MHz	Reading dBuV	Ant. Factor dB/m	Cable Loss dB	ANT POL (H/V)	Total dBuV/m	Limit dBuV/m	Margin dB
82.11	20.60	9.16	0.86	H	30.62	40.0	9.38
99.02	24.37	8.61	1.00	V	33.98	43.5	9.52
132.72	20.42	11.94	1.17	V	33.53	43.5	9.97
164.20	19.67	13.08	1.33	V	34.08	43.5	9.42
347.15	18.50	14.40	2.03	H	34.93	46.0	11.07

Above 1 GHz

Frequency MHz	Reading dBuV	Ant. Factor dB/m	Cable Loss dB	ANT POL (H/V)	Total dBuV/m	Limit dBuV/m	Margin dB
No Critical peaks found							

7.6.3 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)).

Operation Mode:	802.11 g (Ant.0 and 1_2 TX)
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	30.47	33.25	H	63.72	74	10.28	PK
2390.0	16.69	33.25	H	49.94	54	4.06	AV
2390.0	28.89	33.25	V	62.14	74	11.86	PK
2390.0	15.46	33.25	V	48.71	54	5.29	AV
2483.5	36.18	33.73	H	69.91	74	4.09	PK
2483.5	17.46	33.73	H	51.19	54	2.81	AV
2483.5	34.25	33.73	V	67.98	74	6.02	PK
2483.5	16.50	33.73	V	50.23	54	3.77	AV

Operation Mode: 802.11 n (Ant.0 and 1_2 TX)_ 20 MHz BW
 Transfer Rate: 6.5 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	33.18	33.25	H	66.43	74	7.57	PK
2390.0	16.30	33.25	H	49.55	54	4.45	AV
2390.0	30.27	33.25	V	63.52	74	10.48	PK
2390.0	15.85	33.25	V	49.10	54	4.90	AV
2483.5	38.46	33.73	H	72.19	74	1.81	PK
2483.5	18.17	33.73	H	51.90	54	2.10	AV
2483.5	33.70	33.73	V	67.43	74	6.57	PK
2483.5	16.18	33.73	V	49.91	54	4.09	AV

Operation Mode: 802.11 n (Ant.0 and 1_2 TX)_40 MHz
 Transfer Rate: 13.5 Mbps
 Operating Frequency: 2422 MHz, 2452 MHz
 Channel No. 03 Ch, 09 Ch

Frequency [MHz]	Reading dBuV	AN.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
2390.0	33.09	33.25	H	66.34	74	7.66	PK
2390.0	15.85	33.25	H	49.10	54	4.90	AV
2390.0	31.67	33.25	V	64.92	74	9.08	PK
2390.0	15.53	33.25	V	48.78	54	5.22	AV
2483.5	37.02	33.73	H	70.75	74	3.25	PK
2483.5	17.11	33.73	H	50.84	54	3.16	AV
2483.5	32.61	33.73	V	66.34	74	7.66	PK
2483.5	15.95	33.73	V	49.68	54	4.32	AV

Notes:

1. 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.
2. We have done 802.11b, 802.11g, 802.11n and 802.11n (40 MHz) test. Also we have done SISO and MIMO. Worst case is MIMO mode.

7.7 POWERLINE CONDUCTED EMISSIONS

Test Requirements and limit, §15.207

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

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

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

Test Configuration

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

TEST PROCEDURE

1. The EUT is placed on a wooden table 80 cm above the reference groundplane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors – Quasi Peak and Average Detector.

■ RESULT PLOTS

Conducted Emissions (Line 1)

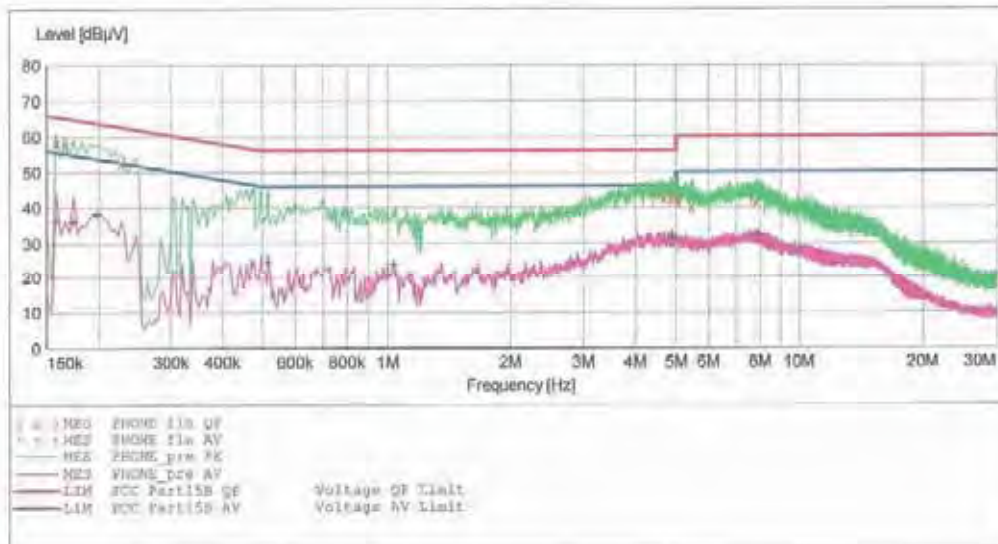
HCT

EMC

EUT: TWFM-B003D
 Manufacturer: LGINNOTEK
 Operating Condition: WLAN MODE
 Test Site: SHIELD ROOM
 Operator: JS LEE
 Test Specification: FCC PART15 CLASS C
 Comment: N

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

Short Description:		FCC PART 15 CLASS B					Transducer
Start	Stop	Step	Detector	Meas. Time	IF Bandw.		
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"

10/25/2011 10:31AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Line	PE
0.158010	58.40	10.3	66	7.2	---	---
0.166010	57.60	10.3	65	7.6	---	---
0.226010	52.50	10.3	63	10.1	---	---
4.672000	42.50	10.7	56	13.5	---	---
4.868000	42.30	10.7	56	13.5	---	---
5.000000	42.40	10.7	56	13.6	---	---
5.064000	41.00	10.7	60	19.0	---	---
5.468000	40.10	10.8	60	19.9	---	---
7.828000	41.30	11.0	60	18.7	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

10/25/2011 10:31AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.158010	36.30	10.3	56	19.2	---	---
0.174010	35.90	10.3	55	18.8	---	---
0.198010	38.10	10.3	54	15.6	---	---
0.516000	24.50	10.3	46	21.5	---	---
1.036000	24.00	10.4	46	22.0	---	---
4.892000	31.50	10.7	46	14.5	---	---
5.000000	31.40	10.7	46	14.6	---	---
7.912000	32.10	11.0	50	17.9	---	---
9.792000	28.30	11.0	50	21.7	---	---

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Conducted Emissions (Line 2)

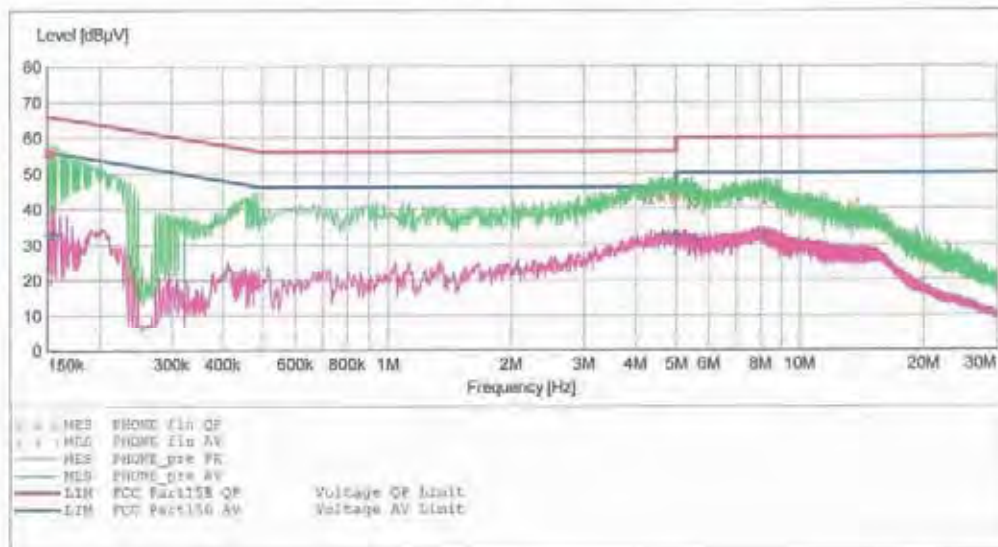
HCT

EMC

EUT: TWFM-0003D
 Manufacturer: LGINNOTEK
 Operating Condition: WLAN MODE
 Test Site: SHIELD ROOM
 Operator: JS LEE
 Test Specification: FCC PART15 CLASS B
 Comment: R

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"

10/25/2011 10:27AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.150010	56.20	10.1	66	9.8	---	---
0.152010	56.00	10.1	66	9.9	---	---
0.154010	55.60	10.1	66	10.2	---	---
4.360000	42.70	10.4	56	13.3	---	---
4.652000	43.20	10.5	56	12.8	---	---
4.956000	42.80	10.5	56	13.2	---	---
5.000000	43.60	10.5	56	12.4	---	---
5.460000	41.80	10.6	60	18.2	---	---
6.200000	42.20	10.8	60	17.9	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

10/25/2011 10:27AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Line	PE
0.150010	32.50	10.1	56	23.5	---	---
0.154010	32.60	10.1	56	23.2	---	---
0.156010	32.90	10.1	56	22.7	---	---
2.076000	23.20	10.2	46	22.8	---	---
4.668000	32.90	10.5	46	13.1	---	---
4.984000	32.90	10.5	46	13.1	---	---
5.000000	32.10	10.5	46	13.9	---	---
5.592000	31.10	10.8	50	18.9	---	---
6.212000	32.50	10.8	50	17.5	---	---

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Test Report No. HCTR1110FR01-3	Date of Issue: October 26, 2011	EUT Type: Wi-Fi Module	FCC ID: BEJTWFBM003D	IC: 2703H-TWFBM003D

8. LIST OF TEST EQUIPMENT

Manufacturer	Model / Equipment	Calibration Interval	Calibration Due	Serial No.
Rohde & Schwarz	ESH2-Z5/ LISN	Annual	02/01/2012	861741/013
Schwarzbeck	VULB 9168/ TRILOG Antenna	Biennial	02/09/2013	200
Rohde & Schwarz	ESI 40 / EMI TEST RECEIVER	Annual	05/26/2012	831564103
Agilent	E4440A/ Spectrum Analyzer	Annual	05/02/2012	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	ESH3-Z2/ PULSE LIMITER	Annual	10/25/2011	375.8810.352
Rohde & Schwarz	SCU-18/ Signal Conditioning Unit	Annual	09/19/2012	10094
MITEQ	AFS44-00102650-42-10P-44-PS/ POWER AMP	Annual	09/23/2012	1532439
Schwarzbeck	BBHA 9120D/ Horn Antenna	Biennial	04/13/2012	147
Rohde & Schwarz	FSP / Spectrum Analyzer	Annual	03/23/2012	839117/011
Agilent	E4440A / Spectrum Analyzer	Annual	05/02/2012	US45303008
Agilent	E4416A /Power Meter	Annual	01/04/2012	GB41291412
Agilent	E9327A /POWER SENSOR	Annual	05/02/2012	MY4442009
Wainwright Instrument	WHF3.3/18G-10EF / High Pass Filter	Annual	05/02/2012	1
Wainwright Instrument	WRCJ2400/2483.5-2370/2520-60/14SS / Band Reject Filter	Annual	05/02/2012	1
Hewlett Packard	11636B/Power Divider	Annual	12/29/2011	11377
Hewlett Packard	11667B / Power Splitter	Annual	11/08/2011	10126
DIGITAL	EP-3010 /DC POWER SUPPLY	Annual	01/04/2012	3110117
ITECH	IT6720 / DC POWER SUPPLY	Annual	12/01/2011	010002156287001199
TESCOM	TC-3000C / BLUETOOTH TESTER	Annual	04/01/2012	3000C000276
Rohde & Schwarz	CBT / BLUETOOTH TESTER	Annual	05/02/2012	100422
EMCO	6502.LOOP ANTENNA	Biennial	01/13/2012	9009-2536