TEST REPORT



DT&C Co., Ltd.

42, Yurim-ro, 154Beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea, 17042 Tel: 031-321-2664, Fax: 031-321-1664

1. Report No: DRTFCC1710-0236

2. Customer

· Name : Bitfinder, Inc.

Address: 814 SARATOGA AVE #J205, SAN JOSE, California, United States, 95129

3. Use of Report: FCC Original Grant

4. Product Name / Model Name : Air Quality Monitor / AWAIROMNI1

FCC ID: 2AF65AWAIR

5. Test Method Used: KDB 558074 D01v04

Test Specification: FCC Part 15 Subpart C.247

6. Date of Test: 2017.09.25 ~ 2017.10.13

7. Testing Environment: See appended test report.

8. Test Result: Refer to the attached test result.

Affirmation Tested by Name : JaeHyeok Bang Technical Manager Name : GeunKi Son (Signature)

The test results presented in this test report are limited only to the sample supplied by applicant and the use of this test report is inhibited other than its purpose. This test report shall not be reproduced except in full, without the written approval of DT&C Co., Ltd.

2017.10.31.

DT&C Co., Ltd.

If this report is required to confirmation of authenticity, please contact to report@dtnc.net

Test Report Version

Test Report No.	Date	Description
DRTFCC1710-0236	Oct. 31, 2017	Initial issue



Table of Contents

1. EUT DESCRIPTION	4
2. INFORMATION ABOUT TESTING	5
2.1 Test mode	5
2.2 Auxiliary equipment	5
2.3 Test Environment	6
2.4 EMI suppression Device(s) / Modifications	6
2.5 Measurement Uncertainty	6
3. SUMMARY OF TESTS	7
4. TEST METHODOLOGY	8
4.1 EUT CONFIGURATION	8
4.2 EUT EXERCISE	8
4.3 GENERAL TEST PROCEDURES	8
4.4 DESCRIPTION OF TEST MODES	9
5. INSTRUMENT CALIBRATION	9
6. FACILITIES AND ACCREDITATIONS	9
6.1 Facilities	9
6.2 Equipment	9
7. ANTENNA REQUIREMENTS	9
8. TEST RESULT	10
8.1 6 dB Bandwidth	
8.2 Maximum Peak Conducted Output Power	23
8.3 Maximum Power Spectral Density	26
8.4 Out of Band Emissions at the Band Edge / Conducted Spurious Emissions	39
8.5 Radiated Spurious Emissions	88
8.6 Power-line conducted emissions	98
8.7 Occupied Bandwidth	101
7. LIST OF TEST EQUIPMENT	102
APPENDIX I	103
APPENDIX II	107



1. EUT DESCRIPTION

EUT	Air Quality Monitor
Model Name	AWAIROMNI1
Add Model Name	AWAIR OMNI2, AWAIR MINT1, AWAIR MINT2, STOKKE AWAIR V1, STOKKE AWAIR V2
Power Supply	DC 3.7 V
Hardware version	1.0
Software version	1.0
Frequency Range	2.4GHz Band • 802.11b/g/n(HT20) : 2412 MHz ~ 2462 MHz
Max. RF Output Power	2.4GHz Band • 802.11b : 12.51 dBm • 802.11g : 20.71 dBm • 802.11n (HT20) : 20.56 dBm
Modulation Type	802.11b : DSSS/CCK 802.11g/n : OFDM
Antenna Specification	Internal Antenna • 2.4GHz Band Max. peak gain : 1.198 dBi

Report No.: DRTFCC1710-0236

Transmitting configuration of EUT

	TX Diversity				
Mode	Ant 1	Ant 2			
	Data rate				
802.11b	1~11 Mbps	1~11 Mbps			
802.11g	6~54Mbps	6~54Mbps			
802.11n(HT20)	MCS 0 ~ 7	MCS 0 ~ 7			

2. INFORMATION ABOUT TESTING

2.1 Test mode

Test	TX Antenna	TX Antenna Worst case		Tested Frequency(MHz)			
mode	1 X Amemia	data rate	Lowest	Middle	Highest		
TM 1	Ant 1 or Ant 2	802.11b 1 Mbps	2412	2437	2462		
TM 2	Ant 1 or Ant 2	802.11g 6 Mbps	2412	2437	2462		
TM 3	Ant 1 or Ant 2	802.11n(HT20) MCS 0	2412	2437	2462		

Report No.: DRTFCC1710-0236

Note 1: The worst case data rate is determined as above test mode according to the power measurements.

Note 2: The power measurement results for all modes and data rate were reported.

2.2 Auxiliary equipment

Equipment	Model No.	Serial No.	Manufacturer	Note	
-	-	-	-	-	
-	-	-	-	-	



2.3 Test Environment

Ambient Condition	
Temperature	+23 ~ +24 °C
Relative Humidity	42 % ~ 48 %

Report No.: DRTFCC1710-0236

2.4 EMI suppression Device(s) / Modifications

EMI suppression device(s) added and/or modifications made during testing \rightarrow None

2.5 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with requirements of ANSI C 63.4-2014 and ANSI C 63.10-2013. All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95 % level of confidence.

Test items	Measurement uncertainty
Transmitter Output Power	0.70 dB (The confidence level is about 95 %, k = 2)
Conducted spurious emission	0.90 dB (The confidence level is about 95 %, k = 2)
AC conducted emission	2.4 dB (The confidence level is about 95 %, k = 2)
Radiated spurious emission (1 GHz Below)	5.1 dB (The confidence level is about 95 %, k = 2)
Radiated spurious emission (1 GHz ~ 18 GHz)	5.4 dB (The confidence level is about 95 %, k = 2)
Radiated spurious emission (18 GHz Above)	5.3 dB (The confidence level is about 95 %, k = 2)



3. SUMMARY OF TESTS

FCC Part	RSS Std.	Parameter	Limit	Test Condition	Status Note 1
15.247(a)	RSS-247 [5.2]	6 dB Bandwidth	> 500 kHz	z	
15.247(b)	RSS-247 [5.4]	Transmitter Output Power	< 1 Watt		С
15.247(d)	RSS-247 [5.5]	Out of Band Emissions / Band Edge	20 dBc in any 100 kHz BW	Conducted	С
15.247(e)	RSS-247 [5.2]	Transmitter Power Spectral Density < 8 dBm/3 kHz			С
-	RSS-Gen [6.6]	Occupied Bandwidth (99 %)	RSS-Gen(6.6)		NA
15.247(d) 15.205 15.209	RSS-247 [5.5] RSS-GEN [8.9] RSS-GEN [8.10]	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	FCC 15.209 limits	Radiated	C Note 2,3
15.207	RSS-Gen [8.8]	AC Line Conducted Emissions	FCC 15.207 limits	AC Line Conducted	С
15.203	-	Antenna Requirements	FCC 15.203	-	С

Note 1: C=Comply NC=Not Comply NT=Not Tested NA=Not Applicable

Note 2: For radiated emission tests below 30 MHz were performed on semi-anechoic chamber which is correlated with OATS.

Note 3: This test item was performed in each axis and the worst case data was reported.



4. TEST METHODOLOGY

Generally the tests were performed according to the KDB558074 D01 v04. And ANSI C63.10-2013 was used to reference appropriate EUT setup and maximizing procedures of radiated spurious emission and AC line conducted emission testing.

Report No.: DRTFCC1710-0236

4.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

4.2 EUT EXERCISE

The EUT was operated in the test mode to fix the TX frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

4.3 GENERAL TEST PROCEDURES

Conducted Emissions

The power-line conducted emission test procedure is not described on the KDB 558074. So this test was fulfilled with the requirements in Section 6.2 of ANSI C63.10.

The EUT is placed on the wooden table, which is 0.8 m above ground plane and the conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-peak and Average detector.

Radiated Emissions

Basically the radiated tests were performed with KDB 558074. But some requirements and procedures like test site requirements, EUT setup and maximizing procedure were fulfilled with the requirements in Section 5 and 6 of the ANSI C63.10 as stated on section 12.1 of the KDB 558074.

The EUT is placed on a non-conductive table. For emission measurements at or below 1 GHz, the table height is 80 cm. For emission measurements above 1 GHz, the table height is 1.5 m. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the highest emission, the relative positions of the EUT were rotated through three orthogonal axes.



Report No.: DRTFCC1710-0236

4.4 DESCRIPTION OF TEST MODES

The EUT has been tested with all modes of operating conditions to determine the worst case emission characteristics. A test program is used to control the EUT for staying in continuous transmitting mode.

5. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipments, which is traceable to recognized national standards.

6. FACILITIES AND ACCREDITATIONS

6.1 Facilities

DT&C Co., Ltd.

The 3 m test site and conducted measurement facility used to collect the radiated data are located at the 42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 17042. The site is constructed in conformance with the requirements.

- FCC MRA Accredited Test Firm No.: KR0034

www.dtnc.net		
Telephone	:	+ 82-31-321-2664
FAX	:	+ 82-31-321-1664

6.2 Equipment

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, loop, horn. Spectrum analyzers with pre-selectors and peak, quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

7. ANTENNA REQUIREMENTS

7.1 According to FCC 47 CFR §15. 203

An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

The antenna is permanently attached on PCB. (Refer to Internal photo file.)

Therefore this E.U.T Complies with the requirement of §15.203



8. TEST RESULT

8.1 6 dB Bandwidth

Test Requirements and limit, §15.247(a)

The bandwidth at 6 dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the receive antenna while the EUT is operating in transmission mode at the appropriate frequencies.

Report No.: DRTFCC1710-0236

The minimum permissible 6 dB bandwidth is 500 kHz.

TEST CONFIGURATION

Refer to the APPENDIX I.

TEST PROCEDURE

The transmitter output is connected to the Spectrum Analyzer and used following test procedure of KDB558074

- 1. Set resolution bandwidth (RBW) = 100 kHz.
- 2. Set the video bandwidth (VBW) \geq 3 x RBW.

(RBW: 100 kHz / VBW: 300 kHz)

- 3. Detector = **Peak**.
- 4. Trace mode = **Max hold**.
- 5. Sweep = Auto couple.
- 6. Allow the trace to stabilize.
- 7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

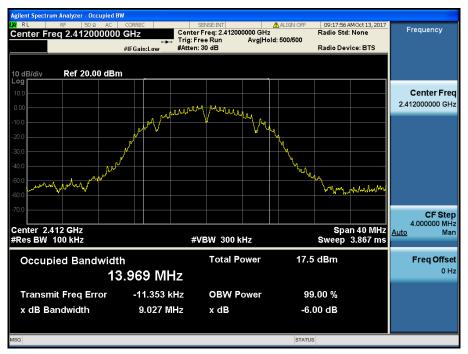
■ TEST RESULTS: Comply

T		Test Results [MHz]			
Test Mode	Frequency	ANT 1	ANT 2		
	Lowest	9.027	9.529		
TM 1	Middle	8.599	8.566		
	Highest	9.028	8.118		
	Lowest	15.150	15.500		
TM 2	Middle	15.130	15.090		
	Highest	15.130	15.130		
	Lowest	15.110	15.150		
TM 3	Middle	15.130	15.120		
	Highest	15.140	15.140		

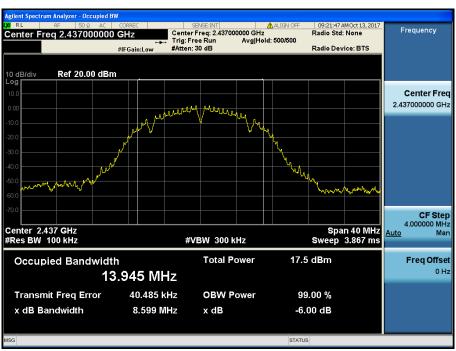
RESULT PLOTS

6 dB Bandwidth TM 1 & ANT1 & Lowest

Report No.: DRTFCC1710-0236

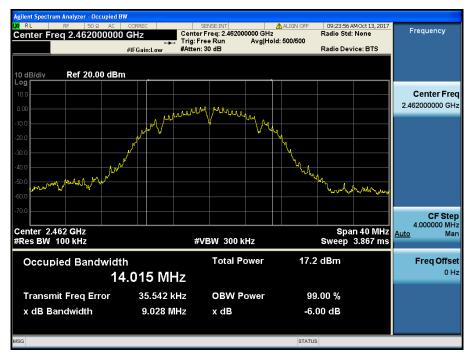


6 dB Bandwidth TM 1 & ANT1 & Middle



6 dB Bandwidth

TM 1 & ANT 1 & Highest

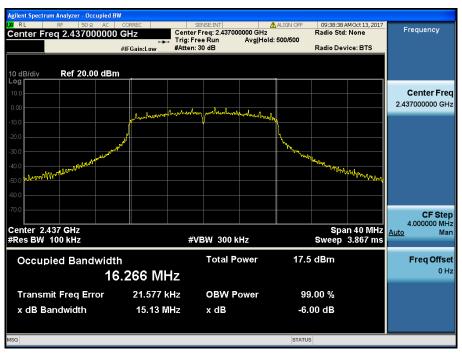


& Lowest



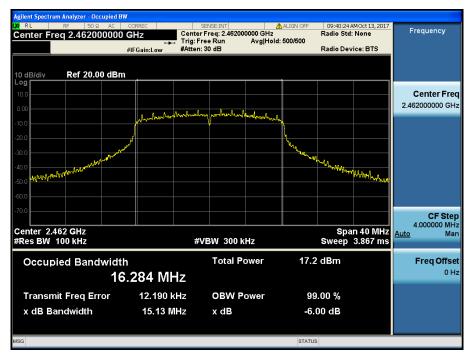
Report No.: DRTFCC1710-0236

6 dB Bandwidth TM 2 & ANT 1 & Middle



6 dB Bandwidth

TM 2 & ANT 1 & Highest

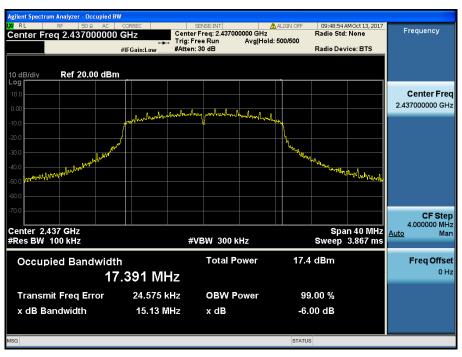


& Lowest

Report No.: DRTFCC1710-0236

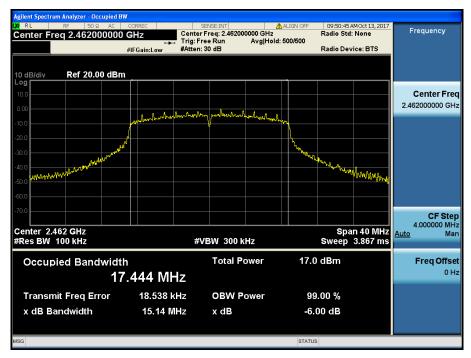


6 dB Bandwidth TM 3 & ANT 1 & Middle



6 dB Bandwidth

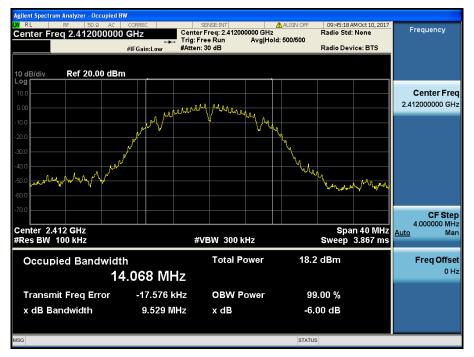
TM 3 & ANT 1 & Highest



Report No.: DRTFCC1710-0236

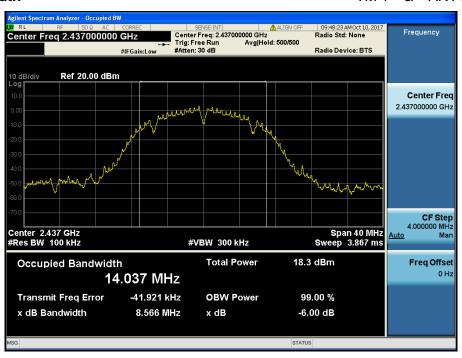
6 dB Bandwidth

TM 1 & ANT 2 & Lowest



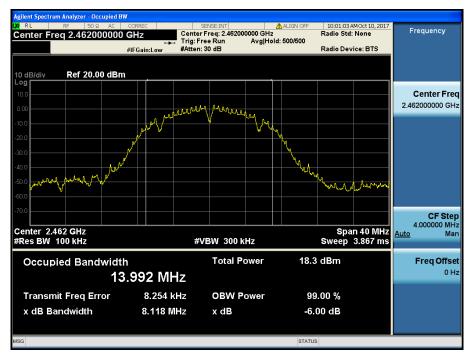
6 dB Bandwidth

TM 1 & ANT 2 & Middle



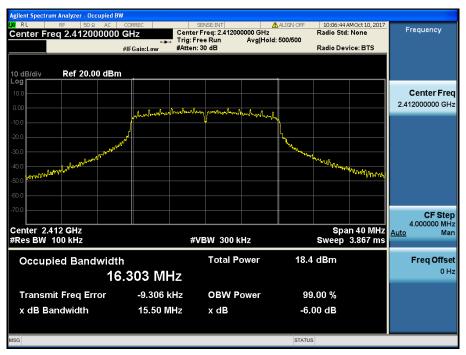
6 dB Bandwidth

TM 1 & ANT 2 & Highest



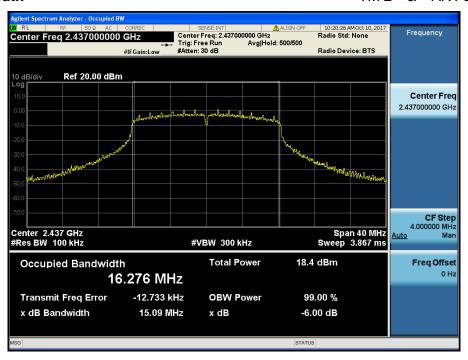
6 dB Bandwidth TM 2 & ANT 2 & Lowest

Report No.: DRTFCC1710-0236



6 dB Bandwidth

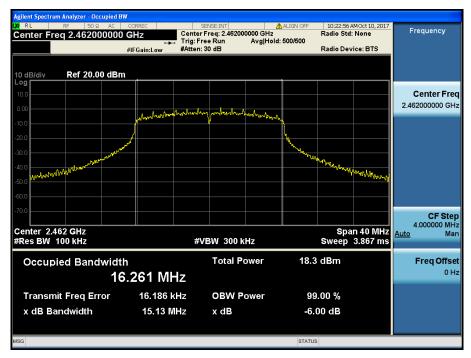
TM 2 & ANT 2 & Middle



Report No.: DRTFCC1710-0236

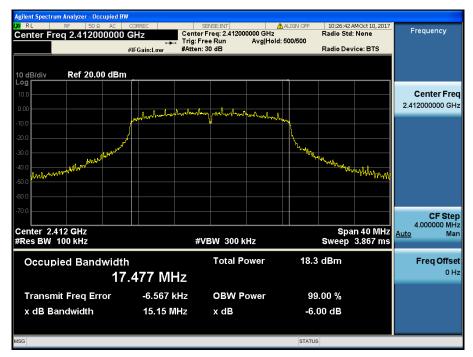
6 dB Bandwidth

TM 2 & ANT 2 & Highest



6 dB Bandwidth

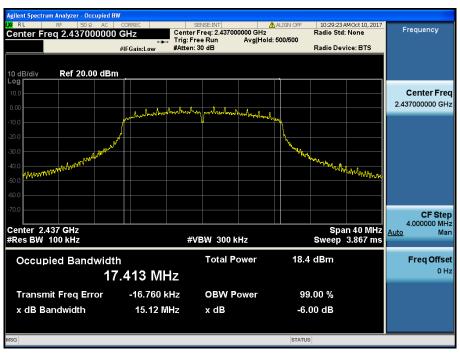
TM 3 & ANT 2 & Lowest



Report No.: DRTFCC1710-0236

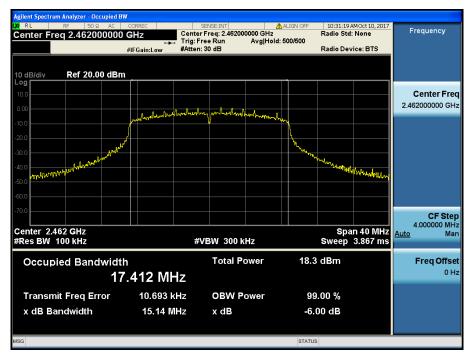
6 dB Bandwidth

TM 3 & ANT 2 & Middle



6 dB Bandwidth

TM 3 & ANT 2 & Highest

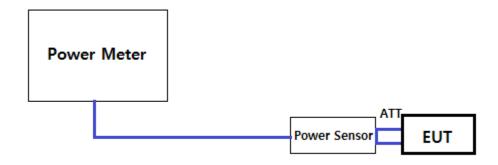


8.2 Maximum Peak Conducted Output Power

Test Requirements and limit, §15.247(b)

The maximum permissible conducted output power is 1 Watt.

TEST CONFIGURATION



Report No.: DRTFCC1710-0236

■ TEST PROCEDURE

1. PKPM1 Peak power meter method of KDB558074

The maximum conducted output powers were measured using a broadband peak RF power meter which has greater video bandwidth than DUT's DTS bandwidth and utilize a fast-responding diode detector.

2. Method AVGPM-G (Measurement using a gated RF average power meter) of KDB558074

The average conducted output powers were measured using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since this measurement is made only during the ON time of the transmitter, no duty cycle correction is required.

■ TEST RESULTS: Comply

- Measurement Data:

<ANT 1>

		Frequency [MHz]		Test Result [dBm]							
Mode	Channel		Detector	DATA RATE [Mbps]							
				1	2	5.5	11	NA	NA	NA	NA
	4	2412	PK	11.15	11.09	11.05	11.02	-	-	-	-
	1		AV	9.01	8.97	8.92	8.85	-	-	-	-
000 445	•	0.407	PK	11.24	11.20	11.14	11.09	-	-	-	-
802.11b	6	2437	AV	9.05	9.01	8.94	8.89	-	-	-	-
	44	0.400	PK	11.55	11.50	11.44	11.38	-	-	-	-
	11	2462	AV	9.38	9.32	9.26	9.19	-	-	-	-

Mode	Channel		Detector	Test Result [dBm]								
		Frequency [MHz]		DATA RATE [Mbps]								
		[6	9	12	18	24	36	48	54	
	1	2412	PK	17.89	17.82	17.75	17.69	17.62	17.58	17.51	17.46	
	'		AV	9.45	9.39	9.31	9.26	9.20	9.14	9.08	9.02	
902 44~	e	2437	PK	17.55	17.49	17.42	17.37	17.32	17.26	17.20	17.14	
802.11g	6		AV	9.39	9.34	9.30	9.25	9.21	9.16	9.11	9.06	
	11	2462	PK	18.58	18.51	18.48	18.41	18.36	18.32	18.24	18.20	
			AV	9.41	9.37	9.31	9.24	9.18	9.12	9.06	9.01	

			Detector	Test Result [dBm]								
Mode	Channel	Frequency [MHz]		DATA RATE [MCS]								
		[0	1	2	3	4	5	6	7	
	1	2412	PK	18.11	18.04	17.98	17.92	17.88	17.81	17.76	17.69	
	'		AV	9.25	9.17	9.13	9.08	9.02	8.95	8.91	8.84	
802.11n	6	2437	PK	17.70	17.64	17.59	17.51	17.47	17.42	17.36	17.31	
(HT20)			AV	9.37	9.32	9.28	9.22	9.16	9.09	9.02	8.98	
	11	2462	PK	17.94	17.91	17.88	17.82	17.78	17.71	17.64	17.60	
			AV	9.41	9.37	9.31	9.25	9.18	9.16	9.10	9.04	

Report No.: DRTFCC1710-0236

<ANT 2>

Mode	Channel		Detector	Test Result [dBm]								
		Frequency [MHz]		DATA RATE [Mbps]								
		[]		1	2	5.5	11	NA	NA	NA	NA	
	4	2412	PK	12.42	12.37	12.31	12.24		-	-	-	
	1		AV	10.21	10.17	10.11	10.06	-	-	-	-	
000 445	•	2437	PK	12.33	12.27	12.23	12.18	-	-	-	-	
802.11b	6		AV	10.11	10.05	10.01	9.95	-	-	-	-	
	11	2462	PK	12.51	12.46	12.41	12.34	-	-	-	-	
			AV	10.28	10.23	10.18	10.11	-	-	-	-	

Mode			Detector	Test Result [dBm]							
	Channel	Frequency [MHz]		DATA RATE [Mbps]							
		[6	9	12	18	24	36	48	54
	1	2412	PK	20.18	20.02	19.91	19.89	19.85	19.83	19.79	19.71
	•		ΑV	11.17	11.11	11.05	10.91	10.87	10.79	10.72	10.63
902 44~	6	2437	PK	20.46	20.34	20.29	20.21	20.13	20.06	20.01	19.94
802.11g	6		AV	11.25	11.19	11.05	10.97	10.89	10.82	10.79	10.75
	11	2462	PK	20.71	20.65	20.59	20.51	20.44	20.39	20.31	20.22
			AV	10.91	10.85	10.81	10.74	10.69	10.61	10.55	10.42

Mode			Detector	Test Result [dBm]							
	Channel	Frequency [MHz]		DATA RATE [MCS]							
		[0	1	2	3	4	5	6	7
	1	2412	PK	19.92	19.86	19.79	19.73	19.68	19.59	19.49	19.42
	'		AV	10.98	10.92	10.84	10.75	10.68	10.59	10.53	10.48
802.11n	6	2437	PK	20.56	20.49	20.43	20.38	20.31	20.25	20.19	20.15
(HT20)			ΑV	10.74	10.68	10.61	10.57	10.49	1.38	10.29	10.24
	11	2462	PK	20.35	20.29	20.21	20.15	20.07	19.98	19.91	19.84
			AV	10.85	10.78	10.71	10.65	10.57	10.49	10.42	10.35

Report No.: DRTFCC1710-0236

8.3 Maximum Power Spectral Density

Test requirements and limit, §15.247(e)

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

TEST CONFIGURATION

Refer to the APPENDIX I.

■ Test Procedure

Method PKPSD of KDB558074 is used.

- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. Set the span to **1.5 times** the DTS bandwidth.
- 3. Set the RBW to : $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$
- 4. Set the VBW ≥ 3 x RBW
- 5. Detector = **Peak**
- 6. Sweep time = Auto couple
- 7. Trace mode = Max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the **peak marker function** to determine the maximum amplitude level within the RBW.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

TEST RESULTS: Comply

Test Mode	Frequency	RBW	PKPSD [dBm]				
rest wode	[MHz]	KDW	ANT 1	ANT 2			
	Lowest	3 kHz	-11.31	-12.03			
TM 1	Middle	3 kHz	-11.54	-11.37			
	Highest	3 kHz	-11.80	-11.68			
	Lowest	3 kHz	-14.23	-12.71			
TM 2	Middle	3 kHz	-14.32	-12.47			
	Highest	3 kHz	-13.18	-13.15			
	Lowest	3 kHz	-14.91	-13.48			
TM 3	Middle	3 kHz	-14.51	-13.91			
	Highest	3 kHz	-14.59	-13.46			

RESULT PLOTS

Maximum PKPSD





Report No.: DRTFCC1710-0236

Maximum PKPSD

TM 1 & ANT1 & Middle



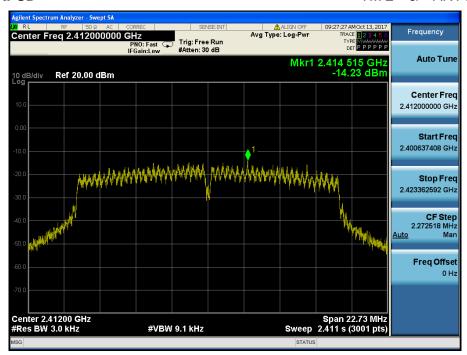
Maximum PKPSD

TM 1 & ANT1 & Highest



Maximum PKPSD TM 2 & ANT1 & Lowest

Report No.: DRTFCC1710-0236

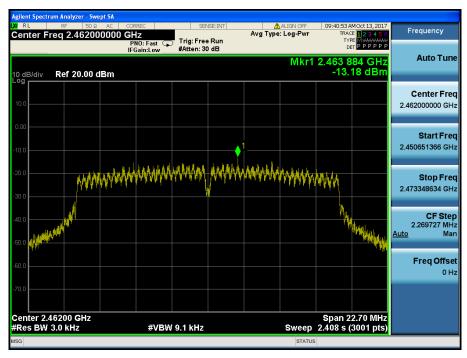


Maximum PKPSD TM 2 & ANT1 & Middle



Maximum PKPSD

TM 2 & ANT1 & Highest

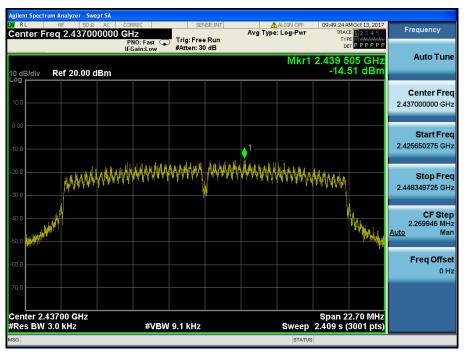


Maximum PKPSD TM 3 & ANT1 & Lowest

Report No.: DRTFCC1710-0236



Maximum PKPSD TM 3 & ANT1 & Middle



Maximum PKPSD

TM 3 & ANT1 & Highest



Report No.: DRTFCC1710-0236

Maximum PKPSD

TM 1 & ANT2 & Lowest



Maximum PKPSD

TM 1 & ANT2 & Middle



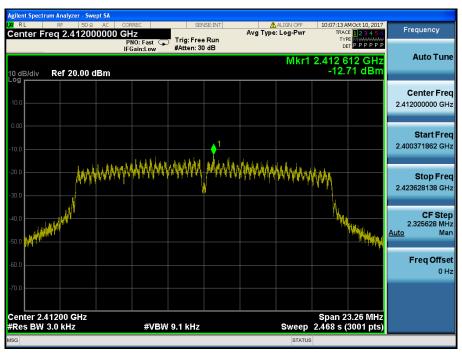
Maximum PKPSD

TM 1 & ANT2 & Highest



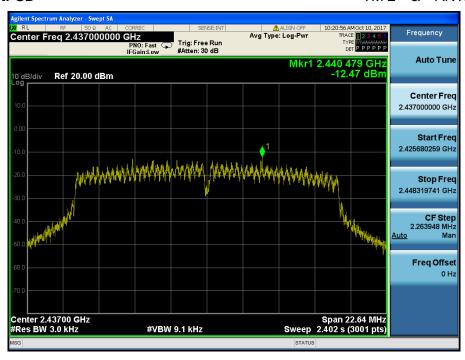
Maximum PKPSD TM 2 & ANT2 & Lowest

Report No.: DRTFCC1710-0236



Maximum PKPSD

TM 2 & ANT2 & Middle



Maximum PKPSD

TM 2 & ANT2 & Highest



Maximum PKPSD TM 3 & ANT2 & Lowest

Report No.: DRTFCC1710-0236



Maximum PKPSD

TM 3 & ANT2 & Middle



Maximum PKPSD

TM 3 & ANT2 & Highest



Report No.: DRTFCC1710-0236



Report No.: DRTFCC1710-0236

8.4 Out of Band Emissions at the Band Edge / Conducted Spurious Emissions

Test requirements and limit, §15.247(d)

§15.247(d) specifies that in any 100 kHz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions:

If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to **15.247(b)(3)** requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated **by at least 20 dB** relative to the maximum measured in-band peak PSD level.

If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to **15.247(b)(3)** requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured inband average PSD level.

In either case, attenuation to levels below the general emission limits specified in §15.209(a) is not required.

TEST CONFIGURATION

Refer to the APPENDIX I.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer.

- Measurement Procedure 1 - Reference Level

- 1. Set instrument center frequency to DTS channel center frequency.
- 2. Set the span to ≥ 1.5 times the DTS bandwidth.
- 3. Set the RBW = 100 kHz.
- 4. Set the VBW \geq 3 x RBW.
- 5. Detector = Peak.
- 6. Sweep time = **Auto couple.**
- 7. Trace mode = **Max hold.**
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum PSD level.

- Measurement Procedure 2 - Unwanted Emissions

- 1. Set the center frequency and span to encompass frequency range to be measured.
- 2. Set the RBW = 100 kHz. (Actual 1 MHz , See below note)
- 3. Set the VBW \geq 3 x RBW. (Actual 3 MHz, See below note)
- 4. Detector = **Peak**.
- 5. Ensure that the number of measurement points ≥ Span / RBW.
- 6. Sweep time = Auto couple.
- 7. Trace mode = **Max hold.**
- 8. Allow the trace to stabilize. (this may take some time, depending on the extent of the span)
- 9. Use the peak marker function to determine the maximum amplitude level.

Note: The conducted spurious emission was tested with below settings.

Frequency range: 9 kHz ~ 30 MHz

RBW = 100 kHz, VBW = 300 kHz, SWEEP TIME = AUTO, DETECTOR = PEAK, TRACE = MAX HOLD, SWEEP POINT : 40001

Frequency range: 30 MHz ~ 10 GHz, 10 GHz ~25 GHz

RBW = 1 MHz, VBW = 3 MHz, SWEEP TIME = AUTO, DETECTOR = PEAK, TRACE = MAX HOLD, SWEEP POINT : 40001

LIMIT LINE = 20 dB below of the reference level of above measurement procedure Step 2. (RBW = 100 kHz, VBW = 300 kHz)

If the emission level with above setting was close to the limit (ie, less than 3 dB margin) then zoom scan is required using RBW = 100 kHz, VBW = 300 kHz, SPAN = 100 MHz and BINS = 2001 to get accurate emission level within 100 kHz BW.

Also the path loss for conducted measurement setup was used as described on the Appendix I of this test report.

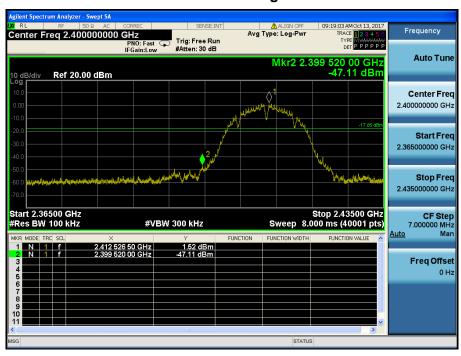
RESULT PLOTS

TM 1 & ANT1 & Lowest

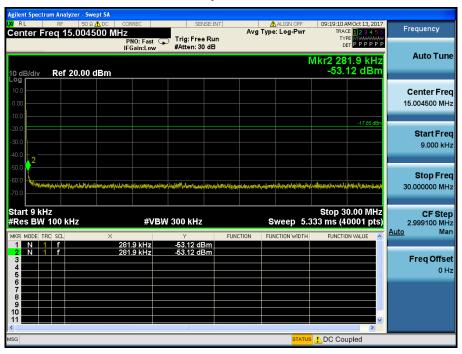
Reference

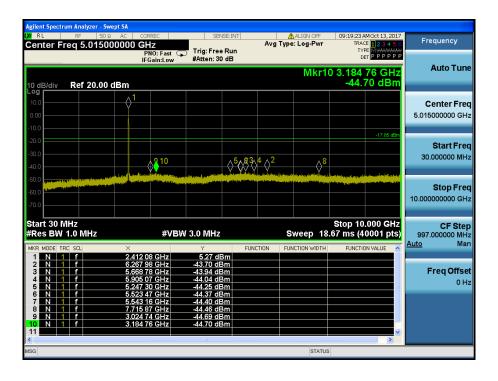


Low Band-edge

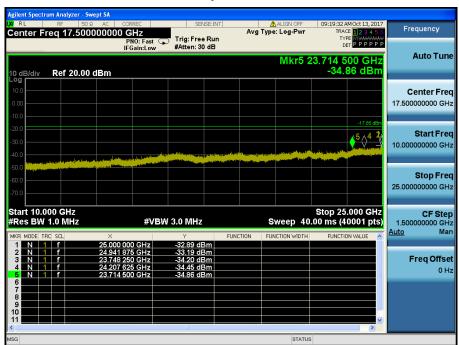










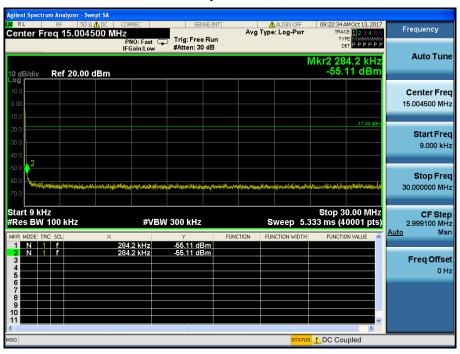




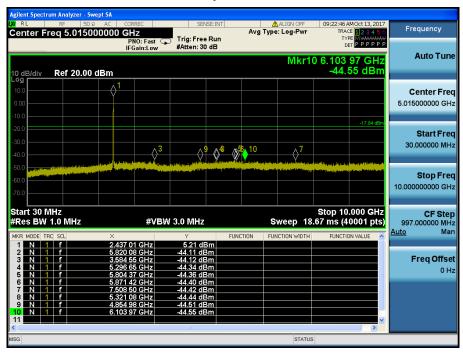
TM 1 & ANT1 & Middle

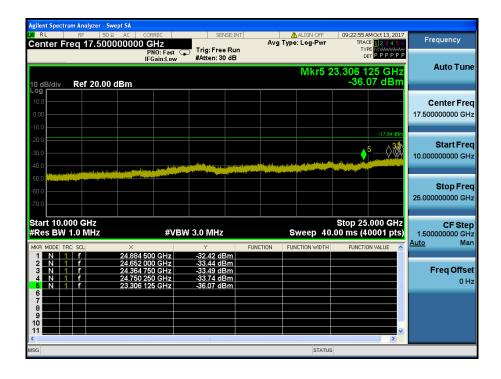
Reference











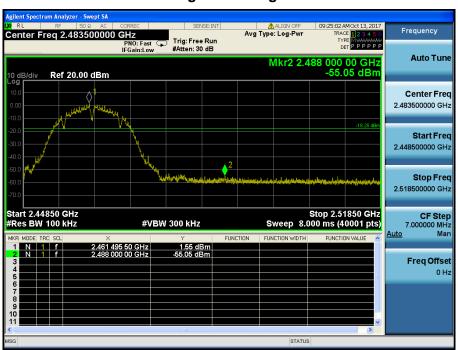


TM 1 & ANT1 & Highest

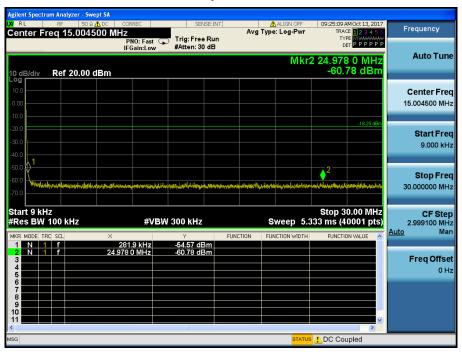
Reference

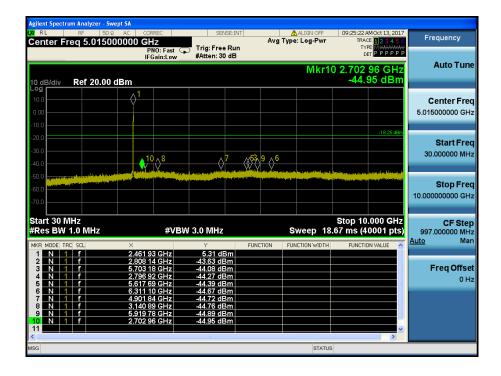


High Band-edge

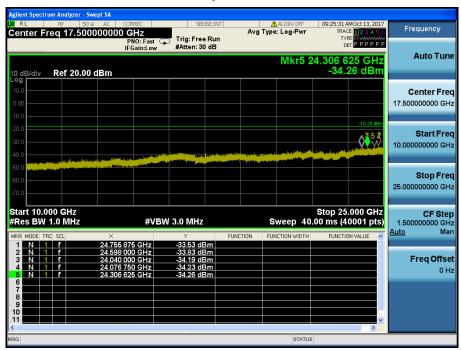














TM 2 & ANT1 & Lowest

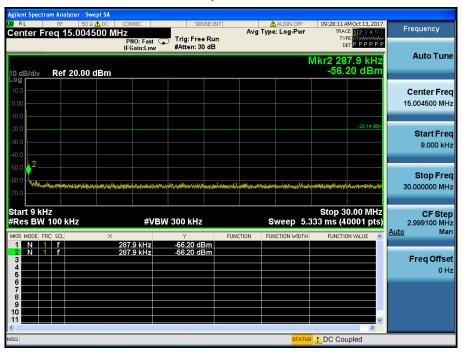
Reference

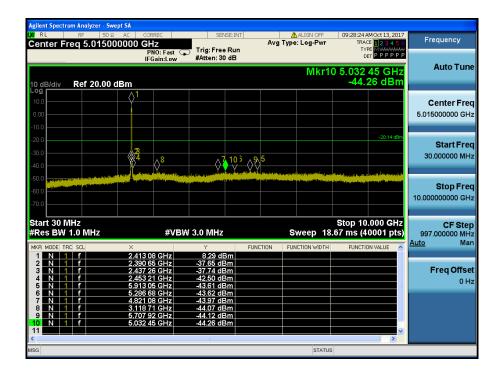


Low Band-edge

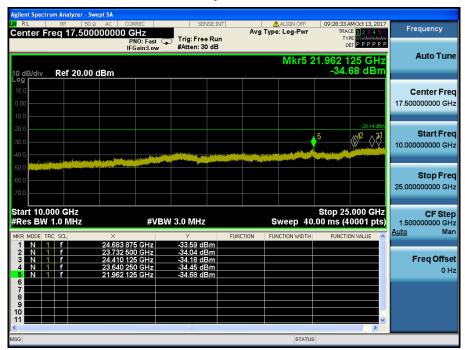








Report No.: DRTFCC1710-0236

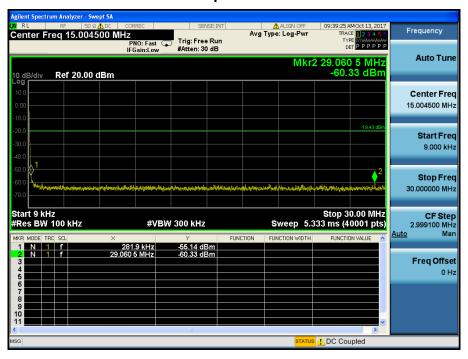




TM 2 & ANT1 & Middle

Reference











Report No.: DRTFCC1710-0236

TM 2 & ANT1 & Highest

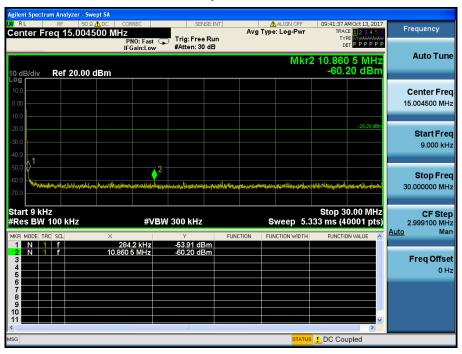
Reference

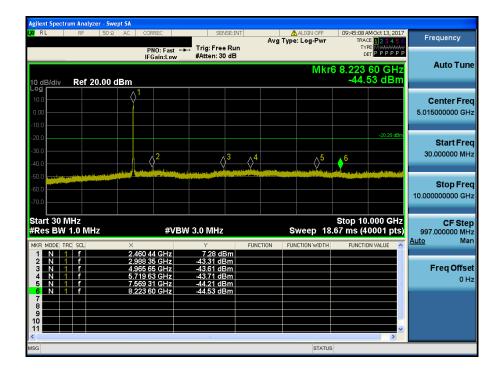


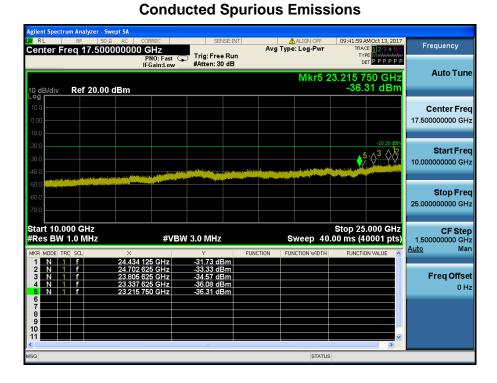
High Band-edge











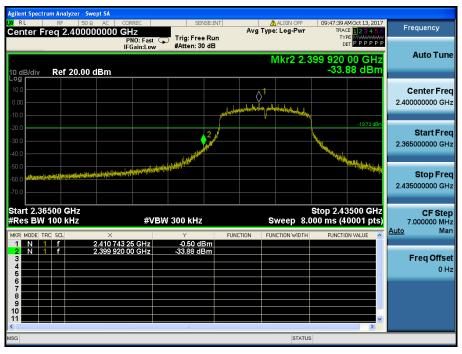


TM 3 & ANT1 & Lowest

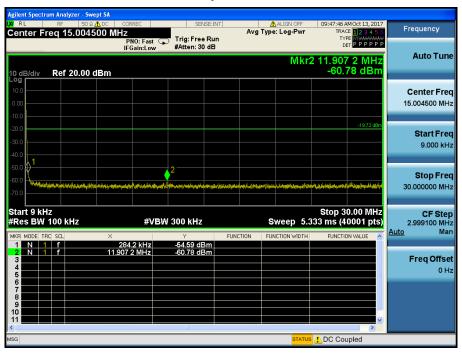
Reference

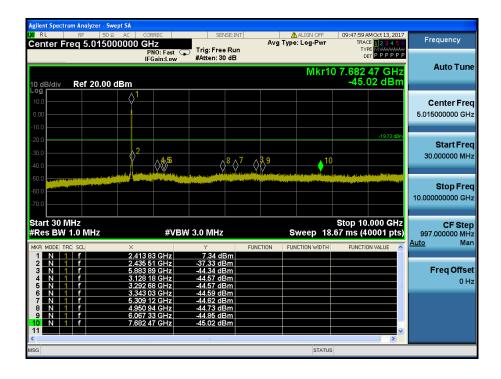


Low Band-edge

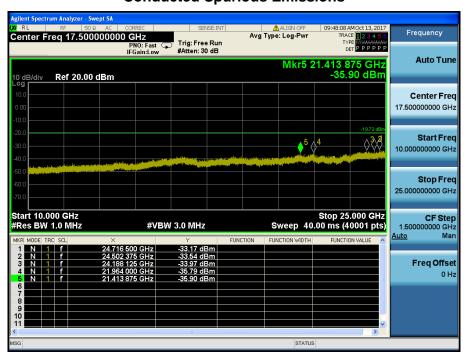








Report No.: DRTFCC1710-0236

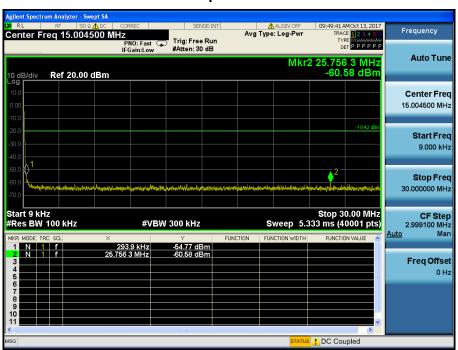




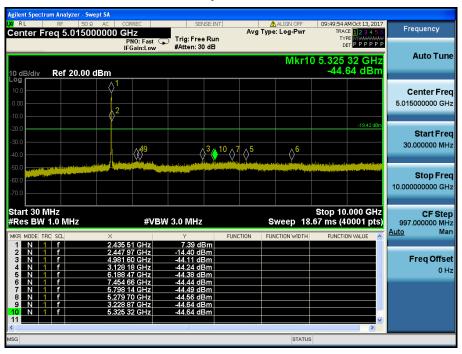
TM 3 & ANT1 & Middle

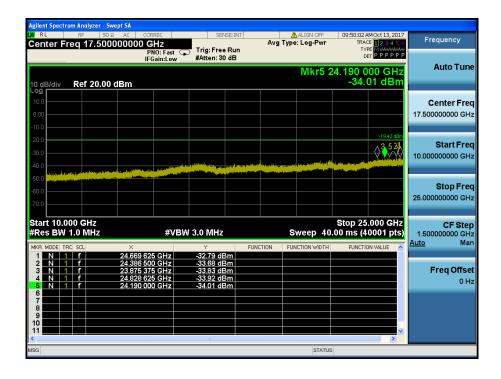
Reference











Report No.: DRTFCC1710-0236

TM 3 & ANT1 & Highest

Reference



High Band-edge

