EMC TEST REPORT	
TEST REPORT NUMBER	DBN 1528TEL187-A2
TEST REPORT DATE	07th Sep 2015
TEST REPORT VERSION	1.10
MANUFACTURER	Cambium Networks
PRODUCT NAME	ePMP 2.4GHz Transceiver (Force 200)
PRODUCT MODEL NO.	C024900P161A
PART NO.	C024900C161A
REV	0B
CONDITION OF EUT WHEN RECEIVED	GOOD and in working condition
ISSUED TO	**ACCTON TECHNOLOGY CORP** 1 creation 3rd RD science-based industrial park hsinchu 300 TAIWAN
ISSUED BY	**TARANG Lab** Wipro Technologies, SJP2, Survey#70,77,78/8A, Dodda Kanelli, Sarjapur road, Bangalore. Karnataka. India - 560 035 Tel: +91-80-30292929Fax: +91-80-30298200 Email: tarang.planet@wipro.com Web: www.wipro.com

AMENDMENT HISTORY

Amendment Number	Amendment Date	Author of Amendment	Previous Report Version	Previous Report Date
1.10	07th Sep 2015	Subhendu Jana	1.0	17th Aug 2015
Amendment Details	• Measurement of "Emission in Restricted Frequency band" (Conducted) shown as Section 7.5.7			

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LIST OF FIGURES

1 TEST REPORT SUMMARY

Applicant	Cambium Networks			
Manufacturer	Cambium Networks			
Equipment Under Test	ePMP 2.4GHz Transceiver (Force 200)			
Model	C024900P161A			
Serial number	**Type of test**	**Serial no.**	**Wi-Fi MAC**	**Ethernet MAC**
	Conducted	AF02016113	000456F80374	000456F80974
Date of Submission	06th Aug 2015			
Date of Test	12th Aug 2015 to 13th Aug 2015			
Venue of Test	Tarang Lab			

Applicable Standard	**FCC Section**	**Description**	**Results**
47 CFR Ch. I (10–1–14 Ed), Part 15, Subpart C; RSS-Gen, Issue 4, Nov 2014 RSS-247 Issue 1, May 2015	§15.247 (a) (2)	6 dB Bandwidth measurement	PASS
	§15.247 (b) (3)	Maximum Peak conducted Output Power	PASS
	§15.247 (e)	Power Spectral Density	PASS
	§15.247 (d)	Radio frequency power in any 100 kHz bandwidth outside the Intentional band	PASS
	§15.205	Emissions in Restricted frequency bands	PASS
	§15.247 (d)	Operating Band edge measurements	PASS

ePMP 2.4GHz Transceiver (Force 200) was tested by Tarang Lab as per the standards that are listed in the table above. Based on the observations during the test and interpretations by Tarang lab, results have been indicated. The test results produced in this report shall apply only to the above sample that have been tested under the specific conditions and modes of testing as described in the report. Other similar equipment may not necessarily reproduce same result due to production tolerances and measurement uncertainties. Any measurement uncertainties listed in this report are for information purpose only.

The results shall stand invalid, in case there are any modifications / additions / removals to the hardware or software or end use atmosphere to the product tested. This report shall not be modified or in any way revised unless it is expressly permitted and endorsed by Tarang lab, through a duly authorized representative. Particulars on Manufacturer / Supplier / Product configuration / performance criteria, given in this report, are based on the information given by the customer, along with test request. Tarang does not assume any responsibility for the correctness of such information for the above mentioned equipment under test.

Customer acknowledges that this is a test report and not a certificate to gain market access for the product. To gain market access, Customer needs appropriate clearance from the Government or authorized agency for the target market. For markets that allow self-declaration, customer needs to follow the procedure defined by the target market.

Prepared by	Reviewed by	Approved by
		
Subhendu J	Albin A	Rajneesh R
Test Engineer	Principal EMC Test Engineer	Functional Head

2 GENERAL INFORMATION

2.1 TEST DETAILS

The tests documented in this report are performed according to the following standards:

- ANSI C63.10-2013
- 47 CFR Ch. I (10–1–14 Ed), Part 15, Subpart C

2.2 TEST FACILITY DETAILS

All the tests were carried out at Tarang –Product Qualification and Compliance Planet located at Wipro Limited, SJP2, Dodda Kanelli, Sarjapur road, Bangalore, Karnataka, India. 560035.

Following are the accreditation and listing details for Tarang.

Accreditation / Listing body	**Registration / Company / Certificate Number**
FCC (Federal Communications Commission)	Registration Number: 799247 http://www.fcc.gov/
IC (Industry Canada)	Company Number: 9023A http://www.ic.gc.ca
TEC Approval	Certificate Number: TEC/MRA/CAB/IND-D/3 CAB Identification: IND003
DGAQA Approval	1415/F-15/DGAQA/Aircraft
CEMILAC approval	Certificate Number: F-07-22 Reference Number: CEMILAC/6042/TH-13/TC & S

3 INSTRUMENTATION AND CALIBRATION

3.1 TEST AND MEASURING EQUIPMENT

The list of following measuring equipment used for this testing conforms to the applicable standards. Performance of all test and measuring equipment including any accessories are checked periodically to ensure accuracy.

3.2 EQUIPMENTS USED

3.2.1 CONDUCTED RF TESTING

Name of Equipment	Manufacturer	Model No	Serial No	Calibration Due
X series USB Peak and Average Power sensor	Keysight Technologies	U2021XA	MY55050001	08th Feb 2016
X series USB Peak and Average Power sensor	Keysight Technologies	U2021XA	MY54390014	07th Feb 2016
4ch simultaneous sampling 14bits 2 MS/s	Keysight Technologies	U2531A	TW54493524	02nd Feb 2015
Spectrum Analyzer	Keysight Technologies	N9020A	MY54420183	10th Feb 2016
Spectrum Analyzer	Agilent Technologies	E4407B	MY45112948	02nd Apr 2016

4 PRODUCT INFORMATION

4.1 DESCRIPTION OF THE PRODUCT

EUT is a Point to point & Point to Multipoint Fixed outdoor Transceiver.

Product Category / Type of Equipment	TEL (Telecom)
EUT Operating AC Voltage	120V AC
Max EUT AC Operating Current	0.5A
Max EUT AC Power Rating	60W
EUT Operating DC Voltage	30V DC
Max EUT DC Operating Current	0.5A
Max EUT DC Power Rating	12W

4.2 SOFTWARE AND FIRMWARE DETAILS

The ePMP 2.4GHz Transceiver (Force 200) Radio was configured with test software and configured to have the following settings during the course of testing:

- 40MHz modulation bandwidth for low & mid channels
  - Rate - HT40,
  - 54Mbps OFDM, MCS15/270Mbps
  - Interframe spacing is tx100
  - Tx Power is 31.5 for 2.15dBi antenna configuration
  - Tx Power is 27 for 17dBi antenna configuration

- 40MHz modulation bandwidth for high channels
  - Rate - HT40,
  - 54Mbps OFDM, MCS15/270Mbps
  - Interframe spacing is tx100
  - Tx Power is 31.5 for 2.15dBi antenna configuration
  - Tx Power is 28 for 17dBi antenna configuration

- 5MHz modulation bandwidth for low & mid channels
  - Rate – HT20,
  - 54Mbps OFDM, MCS15/ 130Mbps
  - Interframe spacing is tx100
  - Tx Power is 31.5 for 2.15dBi antenna configuration
  - Tx Power is 27 for 17dBi antenna configuration

- 5MHz modulation bandwidth for high channels
  - Rate – HT20,
  - 54Mbps OFDM, MCS15/ 130Mbps
  - Interframe spacing is tx100
  - Tx Power is 31.5 for 2.15dBi antenna configuration
  - Tx Power is 31.5 for 17dBi antenna configuration

The unit was monitored for transmission using an auxiliary antenna before and after the radiated tests.

4.3 PRODUCT CONFIGURATION

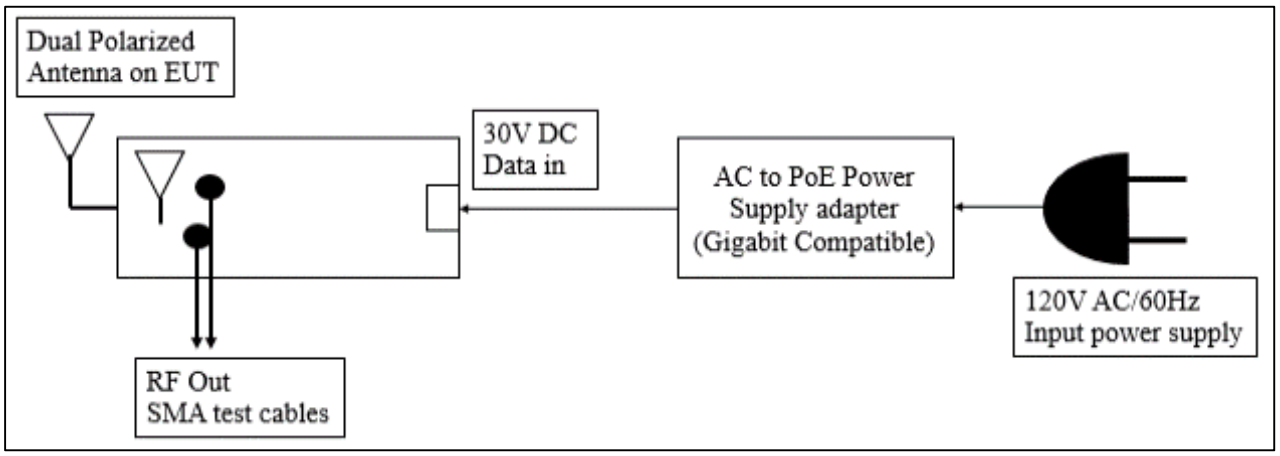

Figure 1: EUT Configuration

Figure 1 shows the product configuration during the tests. The EUT was powered through AC power supply (120VAC / 60Hz). The EUT was connected to Ethernet switch by using RJ45 cable. Following power supply module was used during the test to power ON the EUT.

Name of the Equipment	Manufacturer	Model Number	Serial Number
Switching Power Supply Gigabit Compatible	PHIHONG	PSA15M-300 (AP)	N000900L001A

During all test, RF ports of EUT were terminated using 50Ω terminations and EUT was configured to radiate at mentioned operating power, laptop was kept near to the EUT and connection was established in conducted measurements.

The operating frequency range of EUT is from 2400MHz to 2483.5MHz, the channels with their frequency is as follows:

5MHz Modulation Bandwidth	40MHz Modulation Bandwidth
• **Low Channel:** 2412MHz • **Mid Channel:** 2442MHz • **High Channel:** 2477MHz	• **Low Channel:** 2427 MHz • **Mid Channel:** 2442 MHz • **High Channel:** 2462 MHz

5 TEST SETUP DETAILS

5.1 SUPPORTING EQUIPMENT

Name of the Equipment	Manufacturer	Model Number	Serial Number
Laptop	Wipro Technologies Ltd	WLG7E1100	1221

5.2 I/O CABLE

Cable No.	Cable Name	Cable Length	Power / Interconnection cable	Shielded / Unshielded
Cable - 1	Cat. 5E_Ethernet cable	0.5 meter	Interconnection	Unshielded
Cable - 2	Cat. 5E_Ethernet cable	2 meter	Interconnection	Unshielded
Cable - 3	RF cable (50 Ω)	0.125 meter	Interconnection	Shielded
Cable - 4	Power Cord	1 meter	Power	Unshielded

6 APPLICABLE TESTS

Applicable Standard	Description	Test level / Test Voltage	Applicability
47 CFR Ch. I (10–1–14 Ed), Part 15, Subpart C RSS-Gen, Issue 4, Nov 2014 RSS-247 Issue 1, May 2015	6 dB Bandwidth measurement	≥ 500 kHz	Antenna port
	Maximum Conducted Output Power	≤ 1 Watts	Antenna port
	Power Spectral Density	Power spectral density should be ≤ 8 dBm in 3 kHz bandwidth	Antenna port
	Radio frequency power in any 100 kHz bandwidth outside the Intentional band	30 dB below intentional frequency power measured in any 100 kHz bandwidth	Antenna port
	Emissions in Restricted frequency bands	9kHz to 26.5GHz	Antenna port
	Operating Band edge measurements	2400 MHz to 2483.5 MHz	Antenna port

7 TEST RESULT

7.1 6dB BANDWIDTH

7.1.1 TEST SPECIFICATION

Test Standard	47 CFR Ch. I (10–1–14 Ed), Part 15, Subpart C RSS-247 Issue 1, May 2015
Test Procedure	ANSI C63.10-2013
Resolution Bandwidth	100kHz
Video Bandwidth	300kHz
Sweep Time	10ms
Attenuation	20dB
Test Mode	Conducted
Detector	Peak
Input Voltage	120V AC
Input Frequency	60 Hz
Temperature	22.0°C
Humidity	52.8%
Tested By	Subhendu
Test Date	13th Aug 2015

7.1.2 LIMITS

Standard	Reference section	Frequency range	Limit (min. 6 dB Bandwidth)
47 CFR Ch. I (10–1–14 Ed), Part 15, Subpart C RSS-247 Issue 1, May 2015	§15.247 (a) (2) 5.2 (1)	2400 MHz to 2483.5 MHz	≥ 500 kHz

7.1.3 TEST SETUP

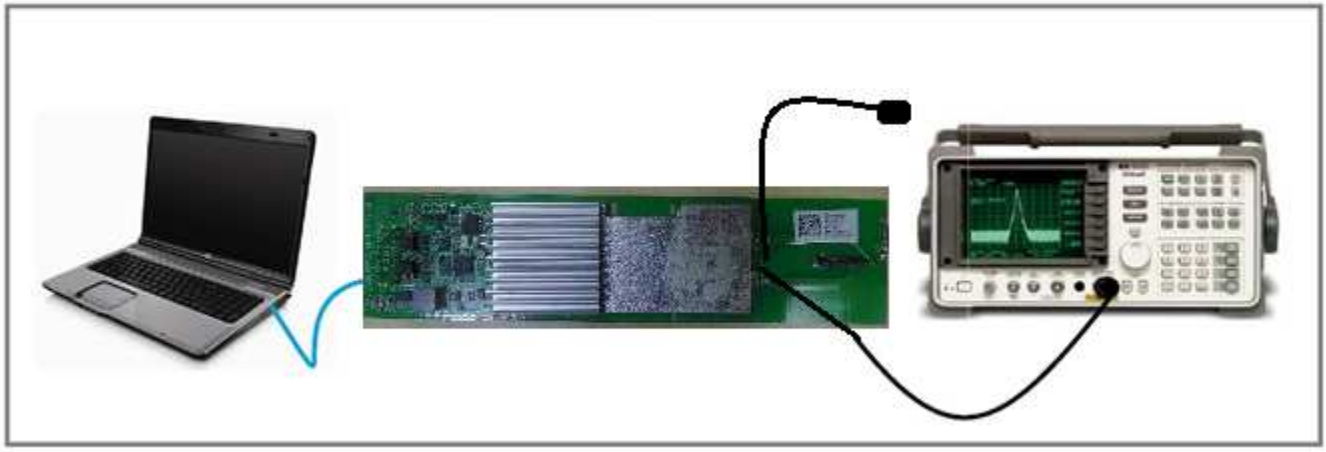

Figure 2: Typical test setup for Conducted RF Test setup

7.1.4 TEST PROCEDURE

The Conducted test was performed using the Spectrum analyzer. Measurements were done as per the **"558074 D01 DTS measurement Guidance v03r03".**The RF output of the EUT was connected to the input port of Spectrum analyzer using an attenuator. Captured the data from spectrum analyzer and compared with the limits specified in the standard.

7.1.5 RESULT (SUPPORTING GRAPHS / DATA) FOR 40 MHZ MODULATION BANDWIDTH FOR BASIC CONFIGURATION

7.1.5.1 LOW CHANNEL_2427 MHZ

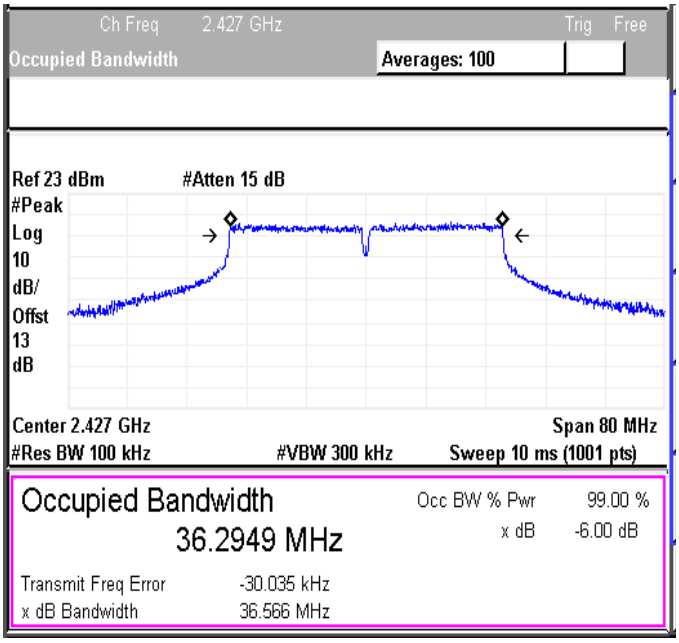

Figure 3: 6dB Bandwidth measured at Ch.0

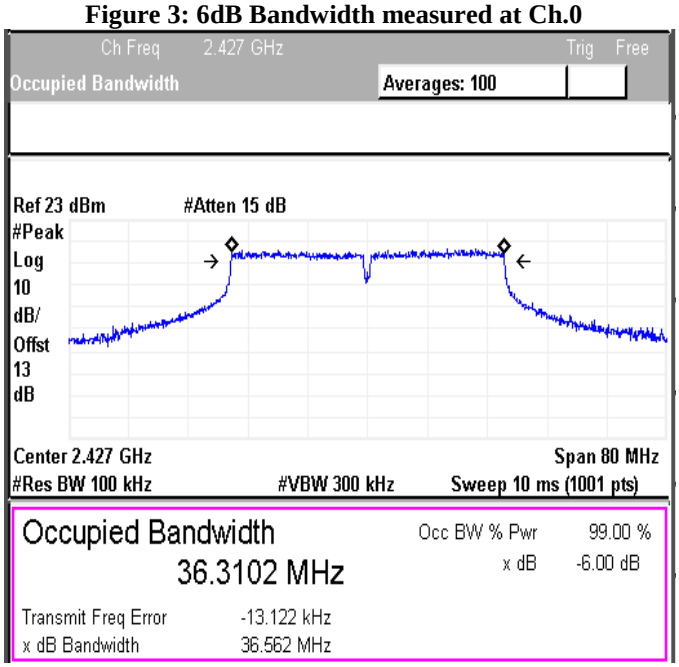

Figure 4: 6dB Bandwidth measured at Ch.1

7.1.5.2 MID CHANNEL_2442 MHZ

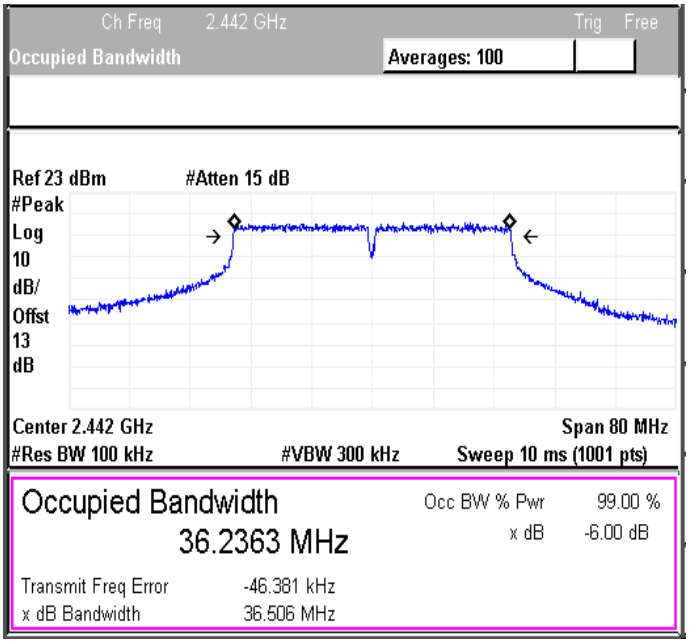

Figure 5: 6dB Bandwidth measured at Ch.0

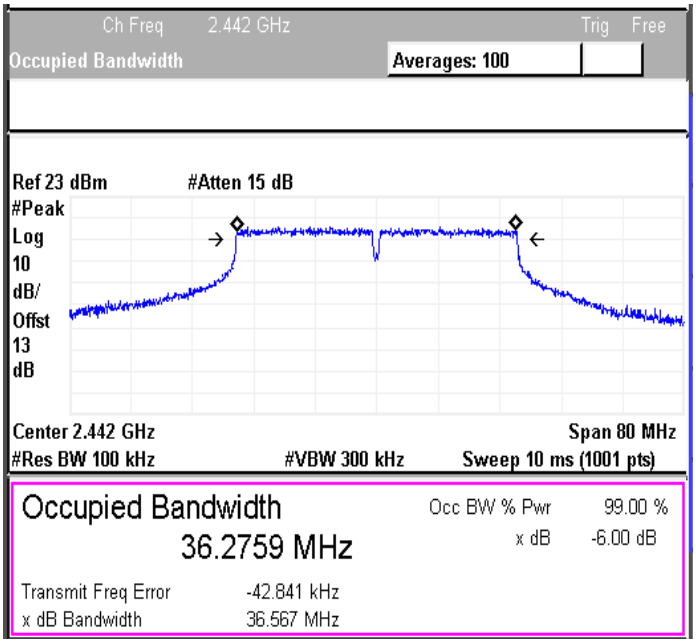

Figure 6: 6dB Bandwidth measured at Ch.1

7.1.5.3 HIGH CHANNEL_2462 MHZ

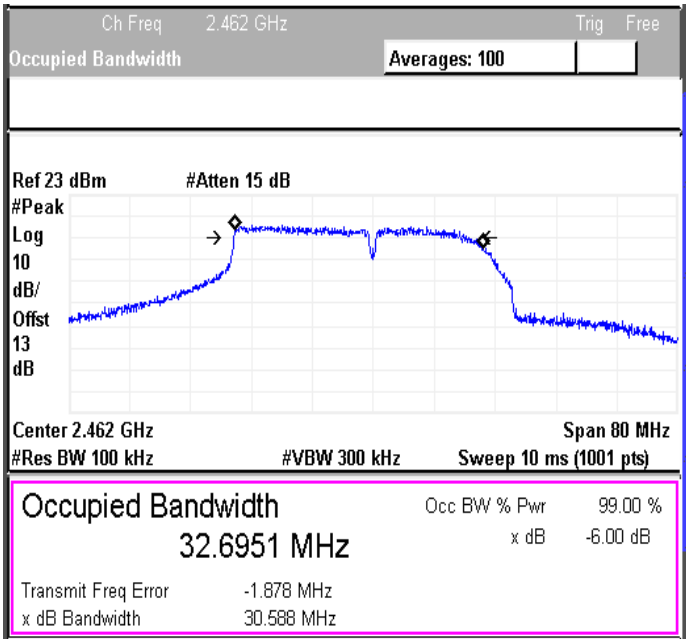

Figure 7: 6dB Bandwidth measured at Ch.0

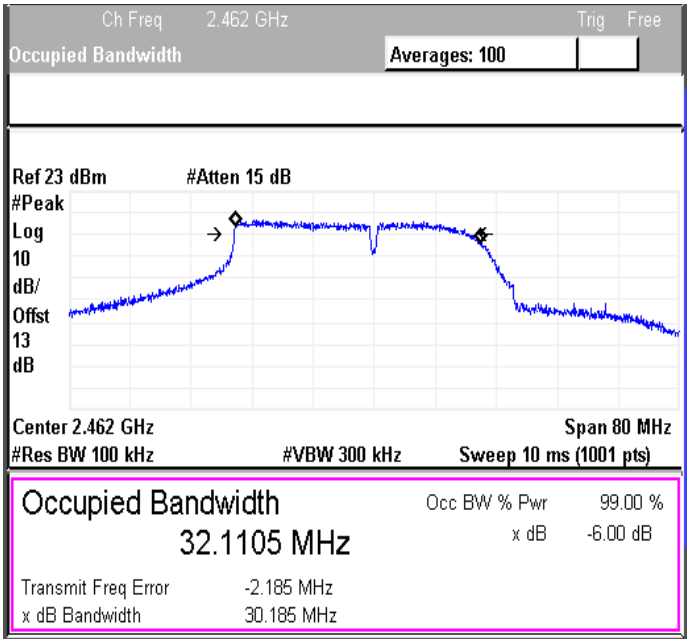

Figure 8: 6dB Bandwidth measured at Ch.1

7.1.6 RESULT (SUPPORTING GRAPHS / DATA) FOR 5 MHZ MODULATION BANDWIDTH FOR BASIC CONFIGURATION

7.1.6.1 LOW CHANNEL_2412 MHZ

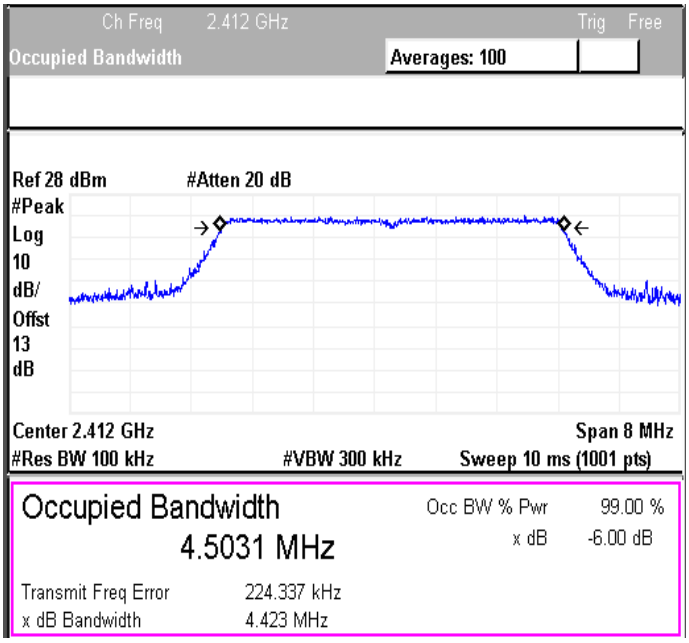

Figure 9: 6dB Bandwidth measured at Ch.0

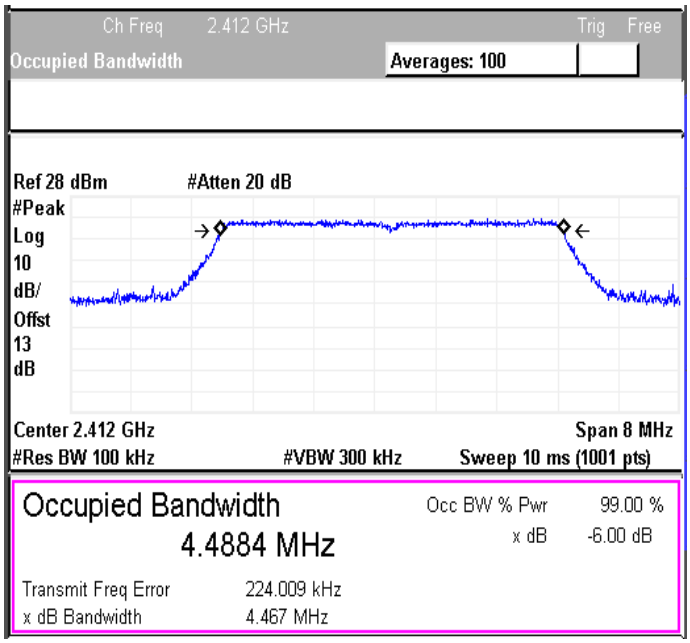

Figure 10: 6dB Bandwidth measured at Ch.1

7.1.6.2 MID CHANNEL_2442 MHZ

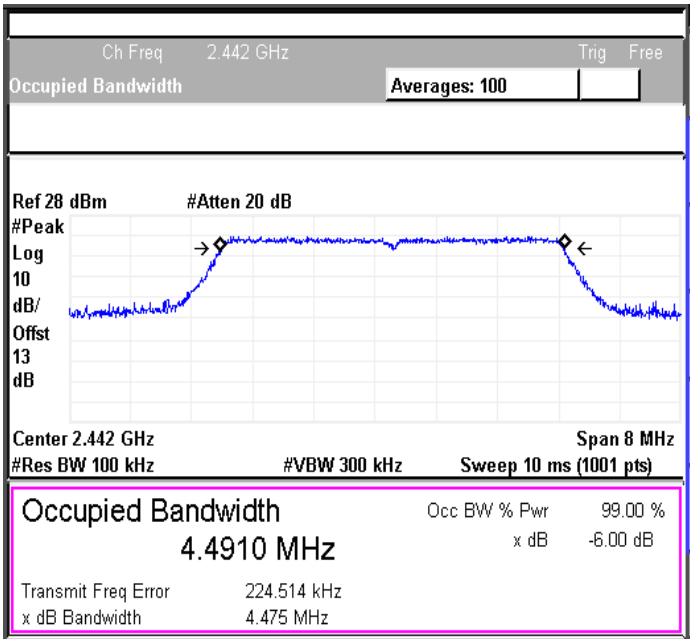

Figure 11: 6dB Bandwidth measured at Ch.0

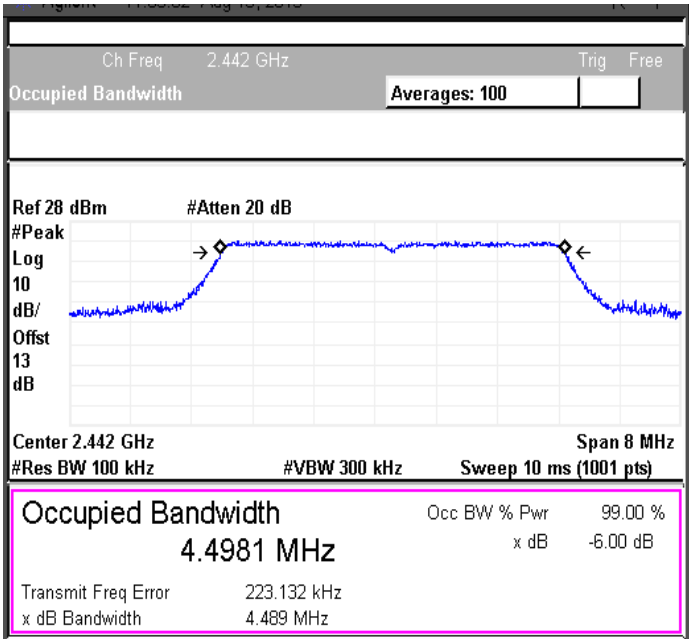

Figure 12: 6dB Bandwidth measured at Ch.1

7.1.6.3 HIGH CHANNEL_2477 MHZ

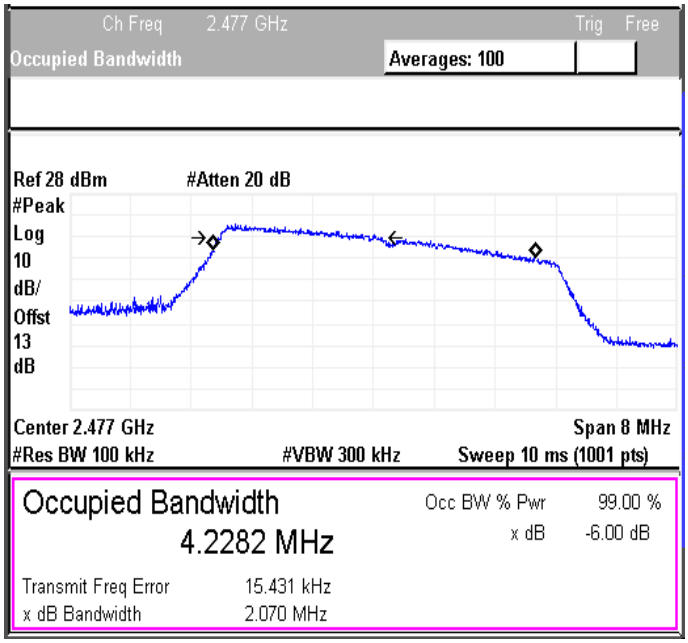

Figure 13: 6dB Bandwidth measured at Ch.0

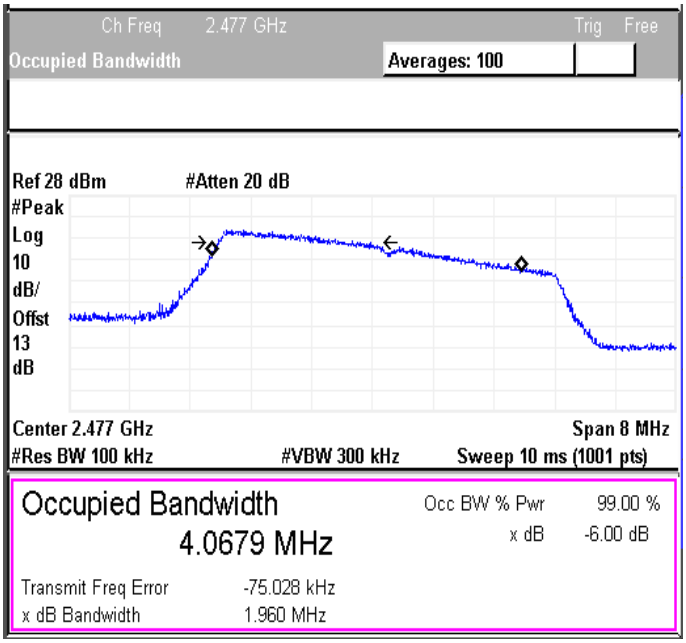

Figure 14: 6dB Bandwidth measured at Ch.1

7.1.7 RESULT (SUPPORTING GRAPHS / DATA) FOR 40 MHZ MODULATION BANDWIDTH FOR 17DBI DISH CONFIGURATION

7.1.7.1 LOW CHANNEL_2427 MHZ

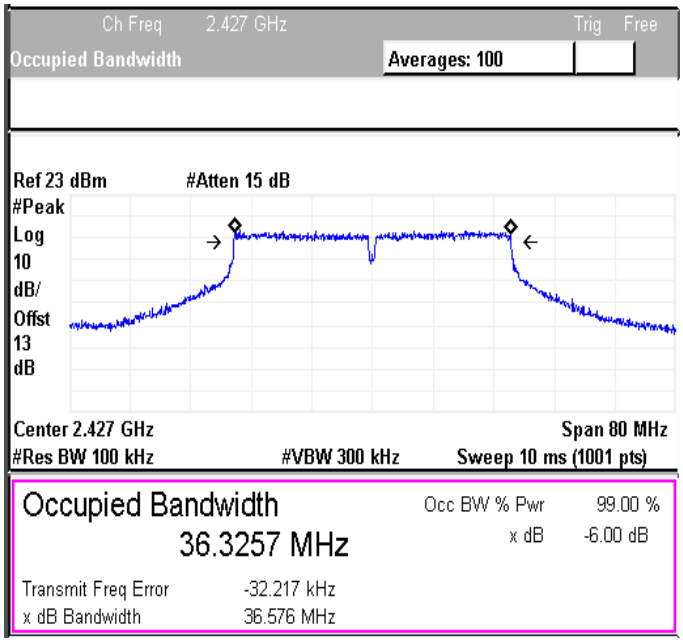

Figure 15: 6dB Bandwidth measured at Ch.0

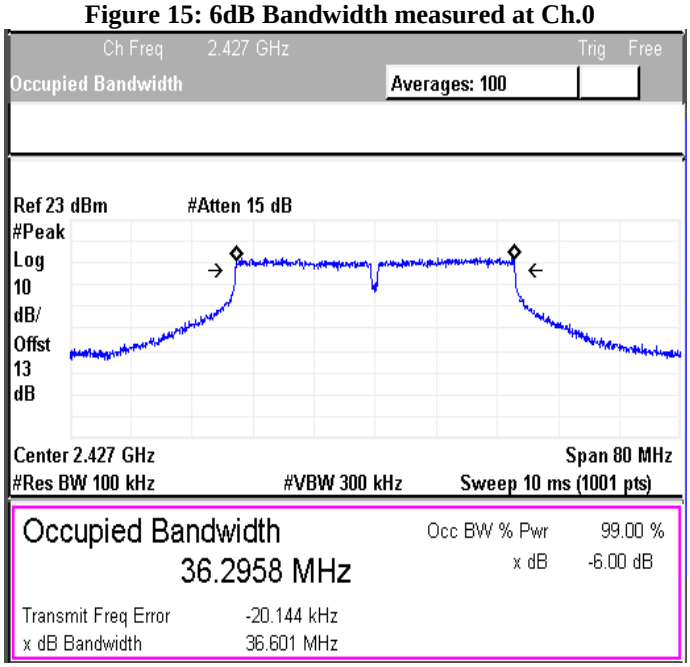

Figure 16: 6dB Bandwidth measured at Ch.1

7.1.7.2 MID CHANNEL_2442 MHZ

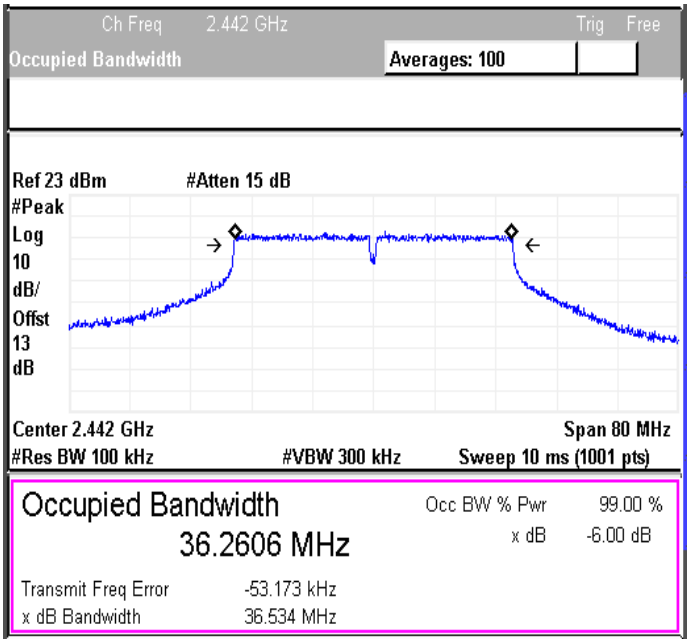

Figure 17: 6dB Bandwidth measured at Ch.0

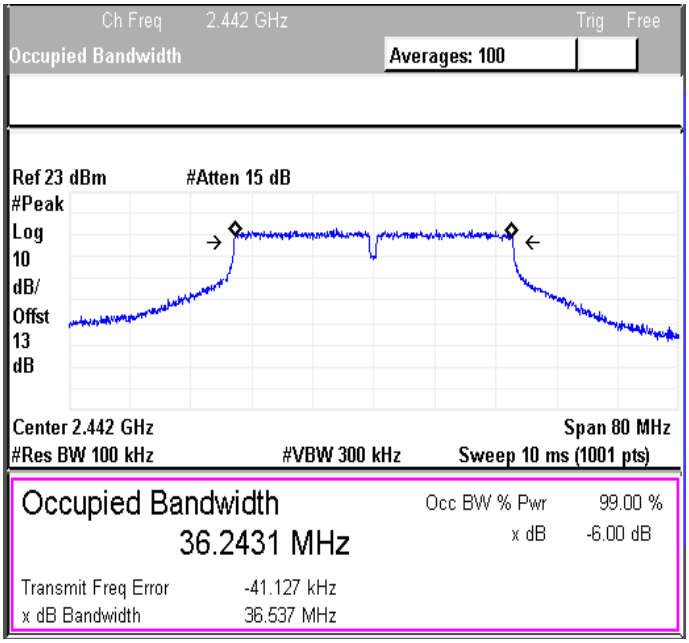

Figure 18: 6dB Bandwidth measured at Ch.1

7.1.7.3 HIGH CHANNEL_2462 MHZ

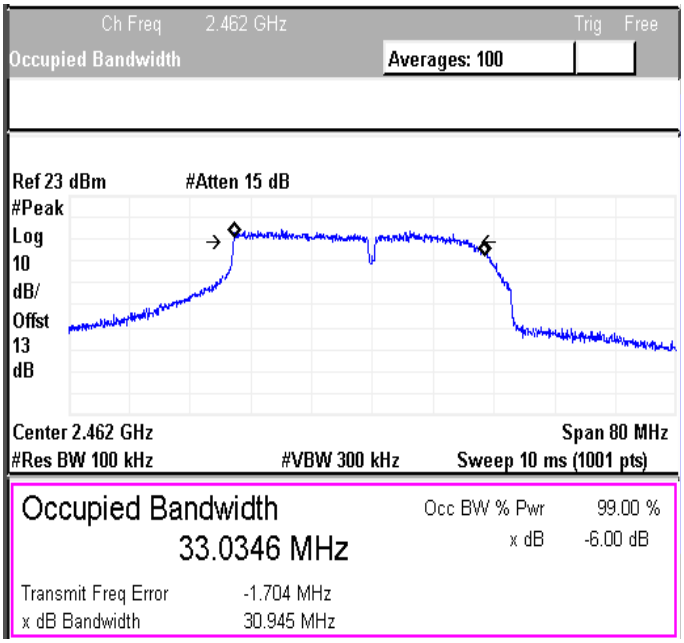

Figure 19: 6dB Bandwidth measured at Ch.0

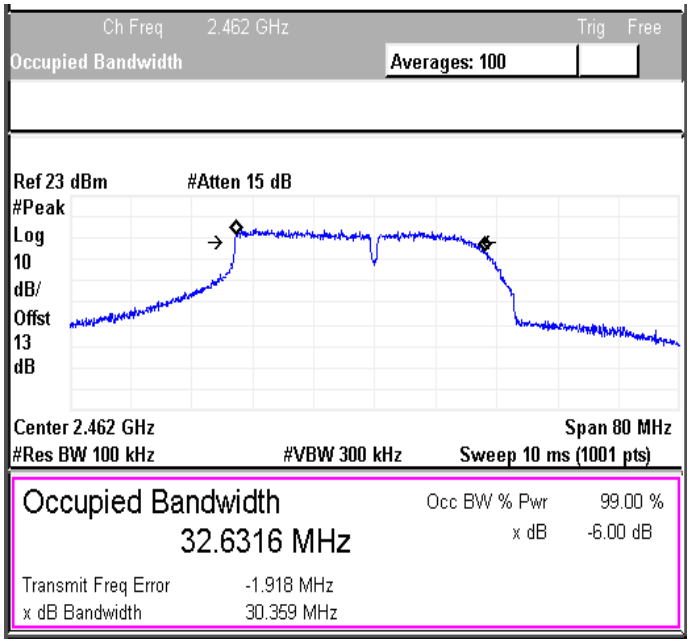

Figure 20: 6dB Bandwidth measured at Ch.1

7.1.8 RESULT (SUPPORTING GRAPHS / DATA) FOR 5 MHZ MODULATION BANDWIDTH FOR 17DBI DISH CONFIGURATION

7.1.8.1 LOW CHANNEL_2412 MHZ

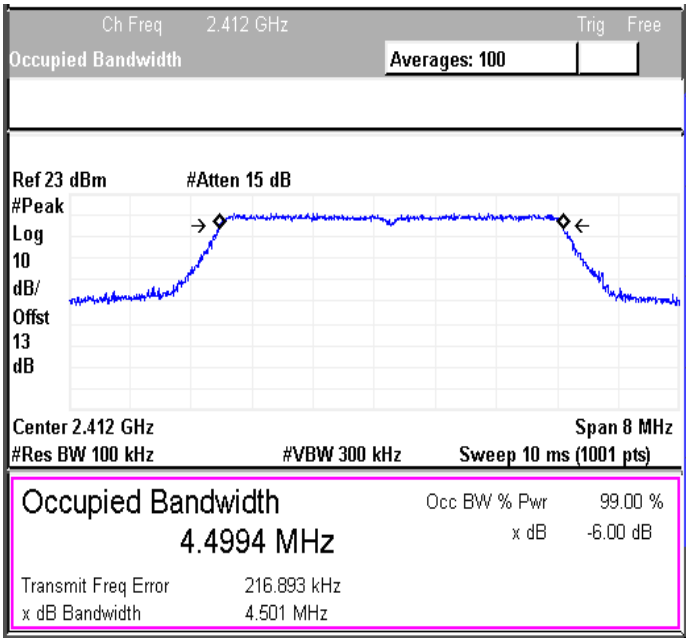

Figure 21: 6dB Bandwidth measured at Ch.0

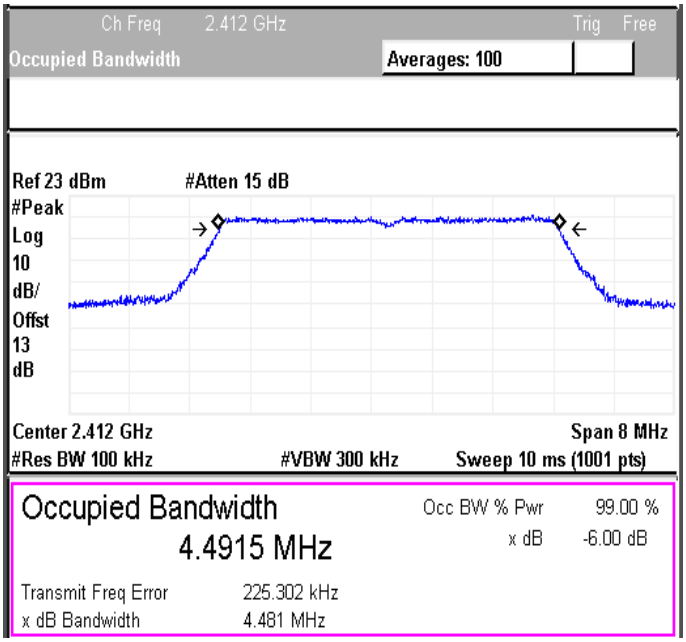

Figure 22: 6dB Bandwidth measured at Ch.1

7.1.8.2 MID CHANNEL_2442 MHZ

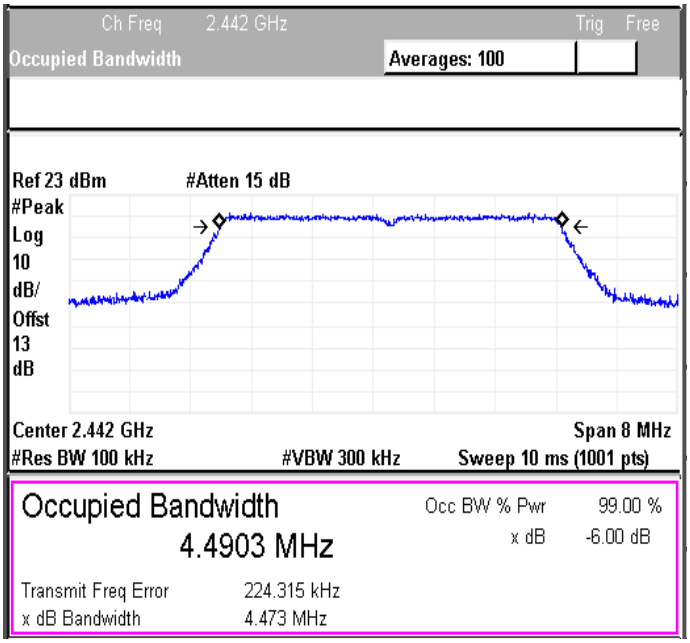

Figure 23: 6dB Bandwidth measured at Ch.0

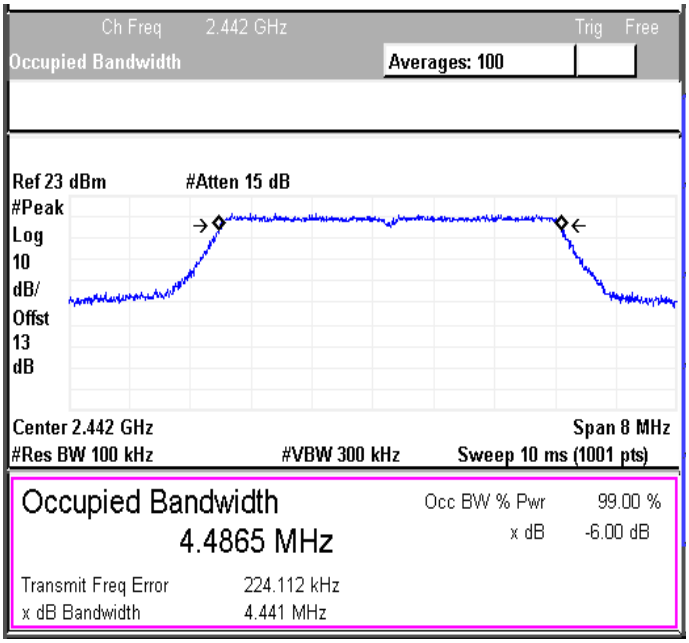

Figure 24: 6dB Bandwidth measured at Ch.1

7.1.8.3 HIGH CHANNEL_2477 MHZ

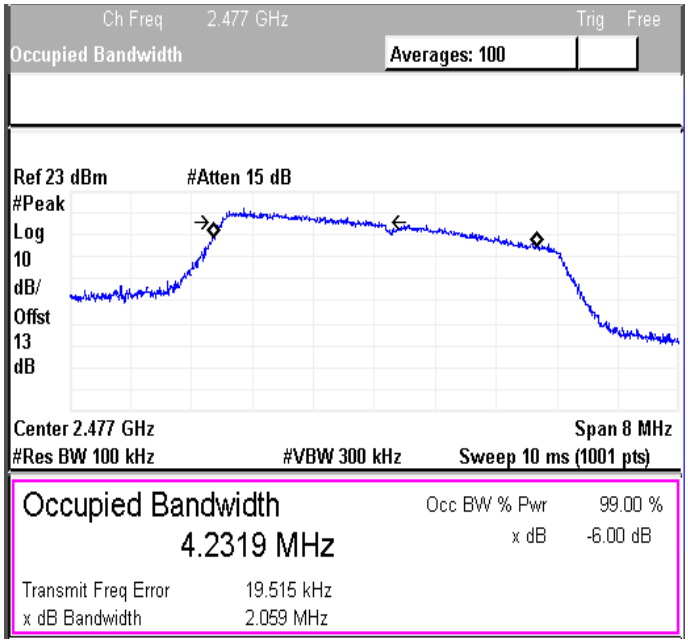

Figure 25: 6dB Bandwidth measured at Ch.0

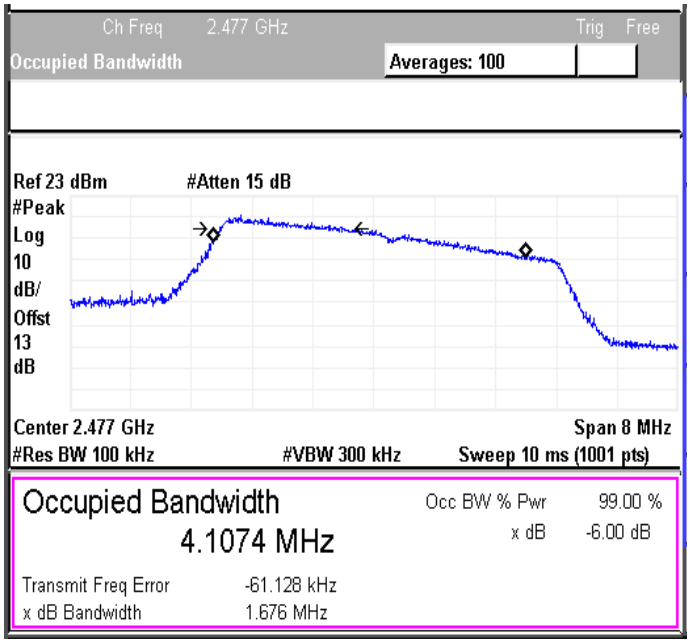

Figure 26: 6dB Bandwidth measured at Ch.1

7.1.9 RESULT

6dB Bandwidth for all channels in both 40MHz & 5MHz Modulation Bandwidths exceed 500 kHz. Refer below table for consolidated data.

Modulation Bandwidth (MHz)	Antenna path	Channel Frequency (MHz)	Recorded value (MHz)	Limit (kHz)	Result
40	Ch. 0	2427	36.566	≥500	Pass
40	Ch. 1	2427	36.562	≥500	Pass
40	Ch. 0	2442	36.506	≥500	Pass
40	Ch. 1	2442	36.567	≥500	Pass
40	Ch. 0	2462	30.588	≥500	Pass
40	Ch. 1	2462	30.185	≥500	Pass
5	Ch. 0	2412	4.423	≥500	Pass
5	Ch. 1	2412	4.467	≥500	Pass
5	Ch. 0	2442	4.475	≥500	Pass
5	Ch. 1	2442	4.489	≥500	Pass
5	Ch. 0	2477	2.070	≥500	Pass
5	Ch. 1	2477	1.960	≥500	Pass

Table 1: Consolidated data for Basic configuration

Modulation Bandwidth (MHz)	Antenna path	Channel Frequency (MHz)	Recorded value (MHz)	Limit (kHz)	Result
40	Ch. 0	2427	36.576	≥500	Pass
40	Ch. 1	2427	36.601	≥500	Pass
40	Ch. 0	2442	36.534	≥500	Pass
40	Ch. 1	2442	36.537	≥500	Pass
40	Ch. 0	2462	30.945	≥500	Pass
40	Ch. 1	2462	30.359	≥500	Pass
5	Ch. 0	2412	4.501	≥500	Pass
5	Ch. 1	2412	4.481	≥500	Pass
5	Ch. 0	2442	4.473	≥500	Pass
5	Ch. 1	2442	4.441	≥500	Pass
5	Ch. 0	2477	2.059	≥500	Pass
5	Ch. 1	2477	1.676	≥500	Pass

Table 2: Consolidated data for 17dBi Dish configuration

7.2 MAXIMUM CONDUCTED OUTPUT POWER

7.2.1 TEST SPECIFICATION

Test Standard	47 CFR Ch. I (10–1–14 Ed), Part 15, Subpart C RSS-247 Issue 1, May 2015
Test Procedure	ANSI C63.10-2013
Frequency Range	2400MHz to 2483.5MHz
Detector	Average
Input Voltage	120V AC
Input Frequency	60 Hz
Temperature	23.0°C
Humidity	53.0%
Tested By	Subhendu
Test Date	12th Aug 2015

7.2.2 LIMITS

Frequency range	**Limit**
2400 MHz to 2483.5 MHz	Point to Point: ≤ 30dBm (1W) Point to Multi point (With 17dBi Dish Gain): ≤ 26.33dBm

7.2.3 TEST SETUP

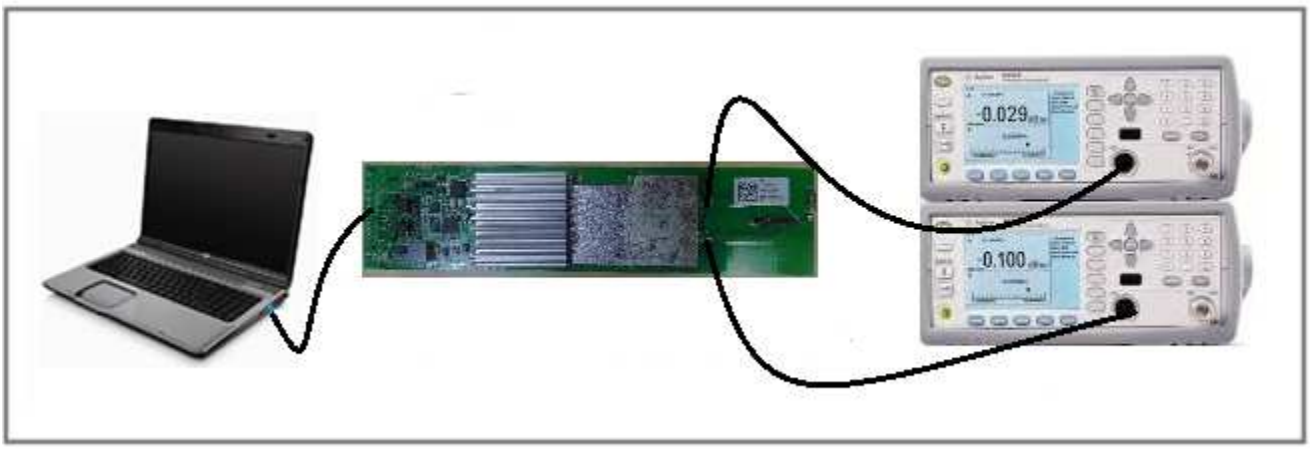

Figure 27: Typical test setup for Conducted RF Test setup

7.2.4 TEST PROCEDURE

The Conducted test was performed using the Power meter. Measurements were done as per Section 9.2.3 (Method AVGPM) of KDB **"558074 D01 DTS measurement Guidance v03r03".** The RF output of the EUT was connected to the input port of power meter using an attenuator (10dB). Captured the data from power meter and compared with the limits specified in the standard.

7.2.5 RESULT (SUPPORTING GRAPHS / DATA) FOR BASIC CONDITION

Note: *Top box indicates power read from Ch.0& Bottom box indicates the power read from Ch.1*

7.2.5.1 40MHZ MODULATION BW-LOW CHANNEL_2427 MHZ

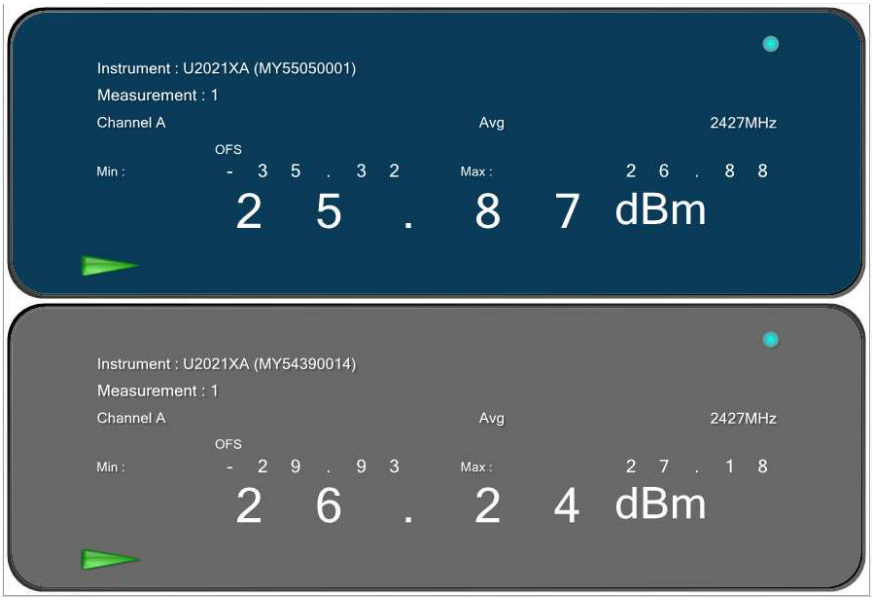

Figure 28: Maximum Conducted Output power measured at Ch.0 & Ch.1

7.2.5.2 40MHZ MODULATION BW-MID CHANNEL_2442 MHZ

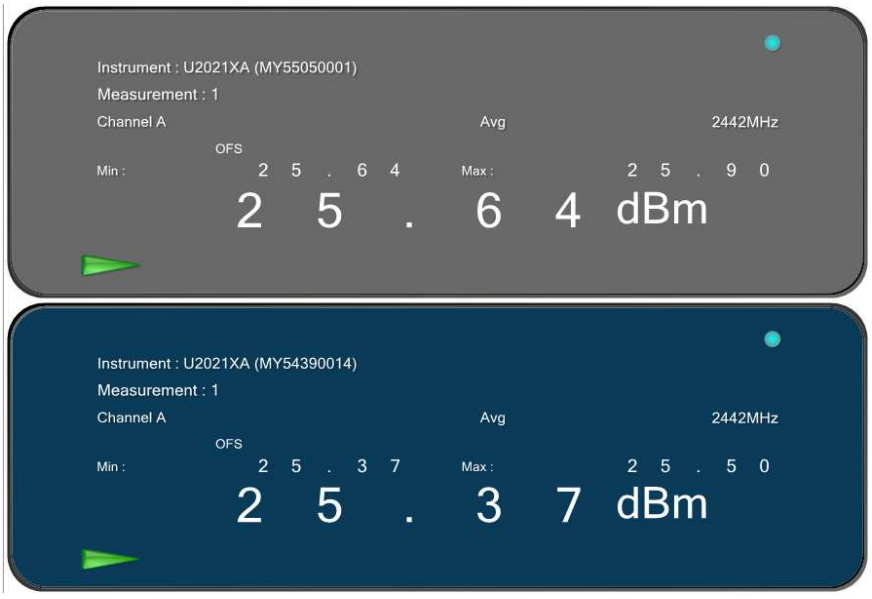

Figure 29: Maximum Conducted Output power measured at Ch.0 & Ch.1

7.2.5.3 40MHZ MODULATION BW-HIGH CHANNEL_2462 MHZ

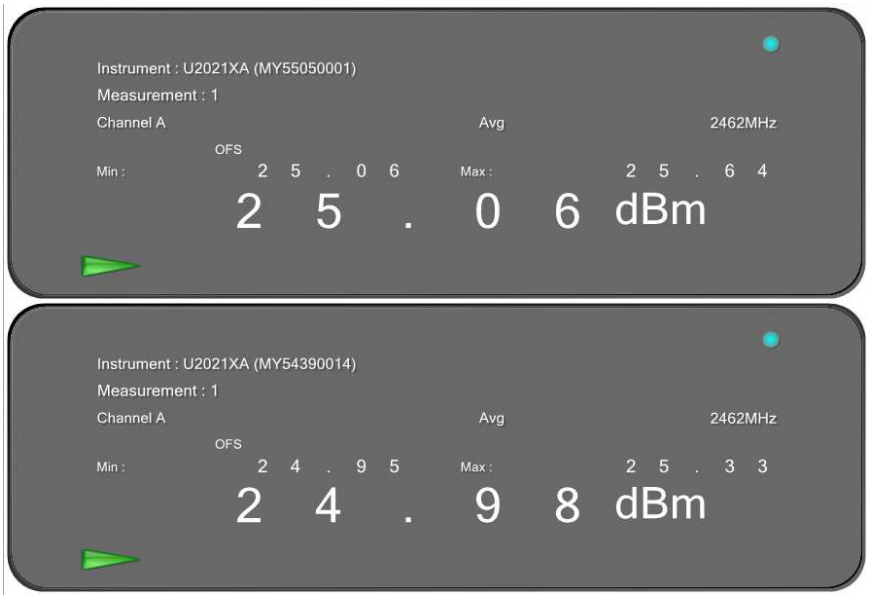

Figure 30: Maximum Conducted Output power measured at Ch.0 & Ch.1

7.2.5.4 5MHZ MODULATION BW-LOW CHANNEL_2412 MHZ

Figure 31: Maximum Conducted Output power measured at Ch.0 & Ch.1

7.2.5.5 5MHZ MODULATION BW-MID CHANNEL_2442 MHZ

Figure 32: Maximum Conducted Output power measured at Ch.0 & Ch.1

7.2.5.6 5MHZ MODULATION BW-HIGH CHANNEL_2477 MHZ

Figure 33: Maximum Conducted Output power measured at Ch.0 & Ch.1

7.2.6 RESULT (SUPPORTING GRAPHS / DATA) FOR 17DBI DISH CONDITION

7.2.6.1 40MHZ MODULATION BW-LOW CHANNEL_2427 MHZ

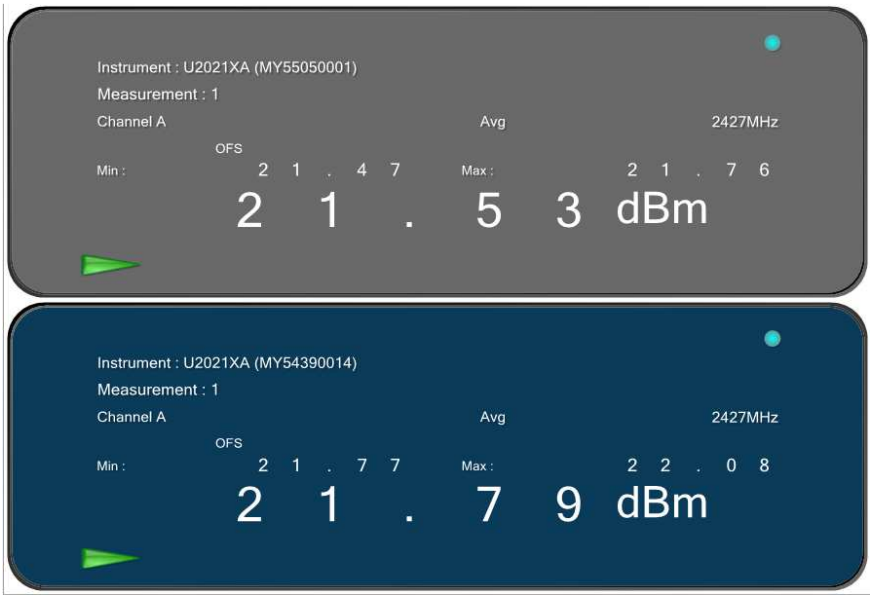

Figure 34: Maximum Conducted Output power measured at Ch.0 & Ch.1

7.2.6.2 40MHZ MODULATION BW-MID CHANNEL_2442 MHZ

Figure 35: Maximum Conducted Output power measured at Ch.0 & Ch.1

7.2.6.3 40MHZ MODULATION BW-HIGH CHANNEL_2462 MHZ

Figure 36: Maximum Conducted Output power measured at Ch.0 & Ch.1

7.2.6.4 5MHZ MODULATION BW-LOW CHANNEL_2412 MHZ

Figure 37: Maximum Conducted Output power measured at Ch.0 & Ch.1

7.2.6.5 5MHZ MODULATION BW-MID CHANNEL_2442 MHZ

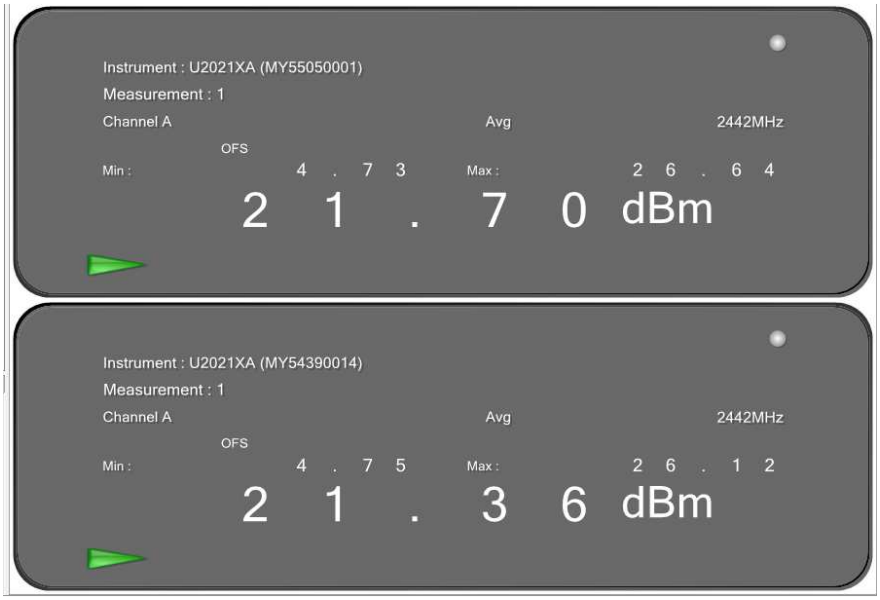

Figure 38: Maximum Conducted Output power measured at Ch.0 & Ch.1

7.2.6.6 5MHZ MODULATION BW-HIGH CHANNEL_2477 MHZ

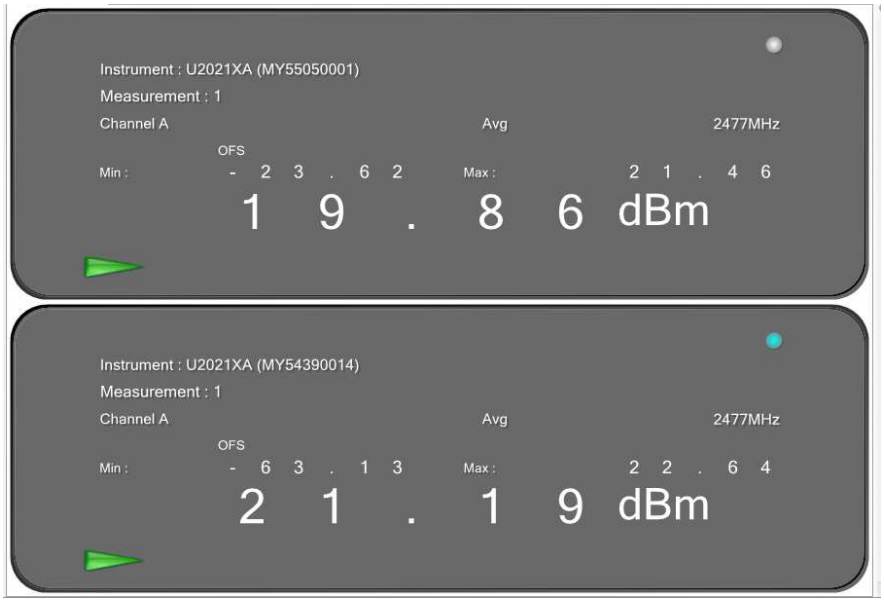

Figure 39: Maximum Conducted Output power measured at Ch.0 & Ch.1

7.2.7 RESULT

Maximum Conducted Output Power for all channels in both 40MHz & 5MHz Modulation Bandwidths is within the specified limits. Refer below table for consolidated data.

7.2.7.1 BASIC CONDITION

Modulation Bandwidth (MHz)	Antenna path	Channel Frequency (MHz)	Recorded value (dBm)
40	Ch. 0	2427	25.87
40	Ch. 1	2427	26.24
40	Ch. 0	2442	25.64
40	Ch. 1	2442	25.37
40	Ch. 0	2462	25.06
40	Ch. 1	2462	24.98
5	Ch. 0	2412	25.62
5	Ch. 1	2412	25.99
5	Ch. 0	2442	26.26
5	Ch. 1	2442	25.79
5	Ch. 0	2477	19.49
5	Ch. 1	2477	20.88

Table 3: Maximum conducted output power for 17 Basic configuration

Consolidated values across channels and Final Power

Modulation Bandwidth (MHz)	Antenna path	Channel Frequency (MHz)	Consolidated Power (dBm)	Limit (dBm)	Result
40	Ch. 0& Ch. 1	2427	29.069	30	PASS
40	Ch. 0 & Ch. 1	2442	28.517	30	PASS
40	Ch. 0 & Ch. 1	2462	28.031	30	PASS
5	Ch. 0 & Ch. 1	2412	28.819	30	PASS
5	Ch. 0 & Ch. 1	2442	29.042	30	PASS
5	Ch. 0 & Ch. 1	2477	23.251	30	PASS

Table 4: Consolidated data for Basic configuration

7.2.7.2 17DBI DISH CONDITION

Modulation Bandwidth (MHz)	Antenna path	Channel Frequency (MHz)	Recorded value (dBm)
40	Ch. 0	2427	21.53
40	Ch. 1	2427	21.79
40	Ch. 0	2442	21.62
40	Ch. 1	2442	21.43
40	Ch. 0	2462	21.46
40	Ch. 1	2462	21.40
5	Ch. 0	2412	21.14
5	Ch. 1	2412	21.54
5	Ch. 0	2442	21.70
5	Ch. 1	2442	21.36
5	Ch. 0	2477	19.86
5	Ch. 1	2477	21.19

Table 5: Maximum conducted output power for 17 dBi configuration

Consolidated values across channels and Final Power

Modulation Bandwidth (MHz)	Antenna path	Channel Frequency (MHz)	Consolidated Power (dBm)	Limit (dBm)	Result
40	Ch. 0 & Ch. 1	2427	24.672	26.33	PASS
40	Ch. 0 & Ch. 1	2442	24.536	26.33	PASS
40	Ch. 0 & Ch. 1	2462	24.440	26.33	PASS
5	Ch. 0 & Ch. 1	2412	24.355	26.33	PASS
5	Ch. 0 & Ch. 1	2442	24.544	26.33	PASS
5	Ch. 0 & Ch. 1	2477	23.586	26.33	PASS

Table 6: Consolidated data for 17 dBi Dish configuration

7.3 POWER SPECTRAL DENSITY

7.3.1 TEST SPECIFICATION

Test Standard	47 CFR Ch. I (10–1–14 Ed), Part 15, Subpart C RSS-247 Issue 1, May 2015
Test Procedure	ANSI C63.10-2013
Frequency Range	2400 MHz to 2483.5 MHz
Resolution Bandwidth	40MHz: 100 kHz; 5MHz: 10 kHz
Video Bandwidth	40MHz: 300 kHz; 5MHz: 30 kHz
Sweep Time	40MHz: 100ms; 5MHz: 150ms
Attenuation	Auto
Test Mode	Conducted
Detector	Average
Input Voltage	120V AC
Input Frequency	60 Hz
Temperature	22.0°C
Humidity	52.8%
Tested By	Subhendu
Test Date	13th Aug 2015

7.3.2 LIMITS

Standard	Reference section	Frequency range	Limit
47 CFR Ch. I (10–1–14 Ed), Part 15, Subpart C RSS-247 Issue 1, May 2015	§15.247 (e) 5.2 (2)	2400 MHz to 2483.5 MHz	≤ 8dBm in any 3 kHz band

7.3.3 TEST SETUP

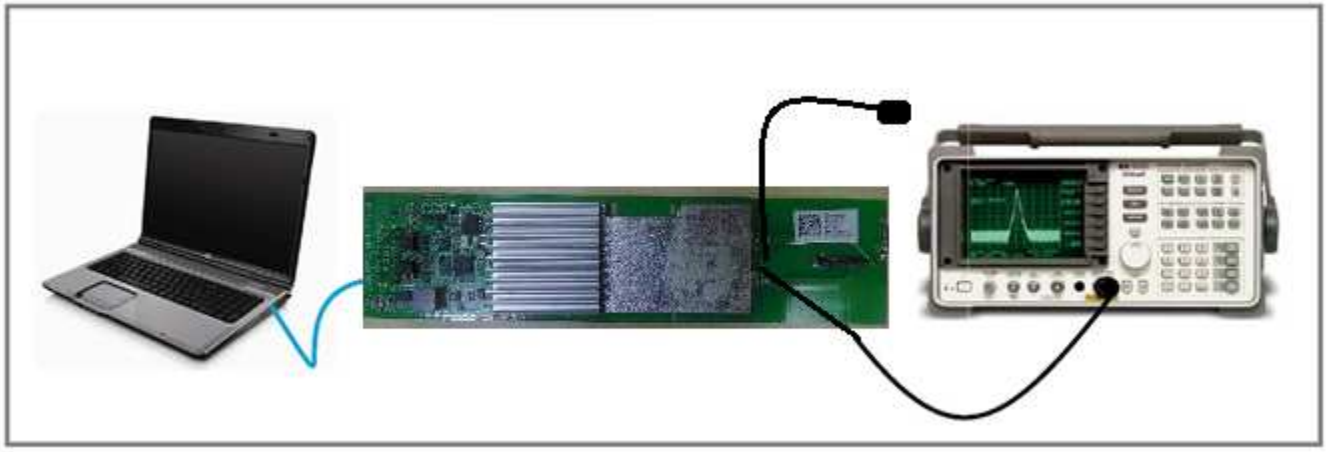

Figure 40: Typical test setup for Conducted Test setup

7.3.4 TEST PROCEDURE

The Conducted test was performed using the Spectrum analyzer. Measurements were done as per Section 10.3 (Method AVGPSD-1) of KDB **"558074 D01 DTS measurement Guidance v03r03".** The RF output of the EUT was connected to the input port of Spectrum analyzer using an attenuator. Captured the data from spectrum analyzer and compared with the limits specified in the standard.

7.3.5 RESULT (SUPPORTING GRAPHS / DATA) FOR 40 MHZ MODULATION BANDWIDTH BASIC CONFIGURATION

7.3.5.1 LOW CHANNEL_2427 MHZ

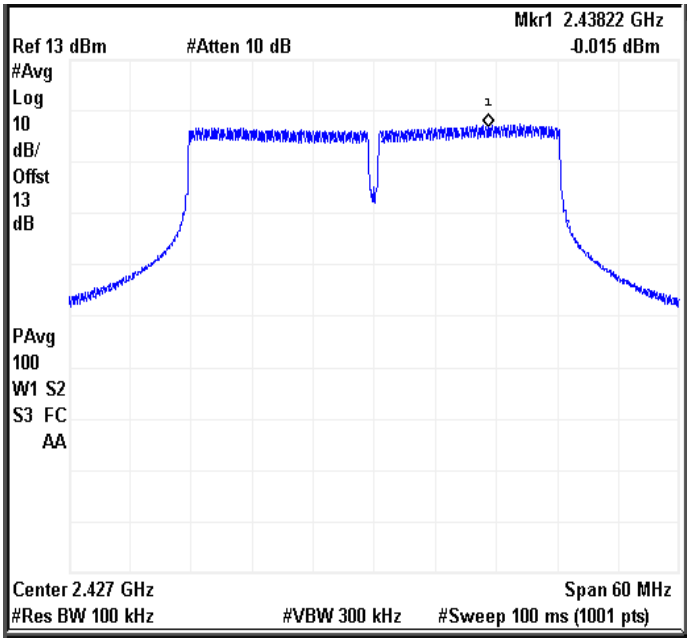

Figure 41: Power Spectral density measured at Ch. 0

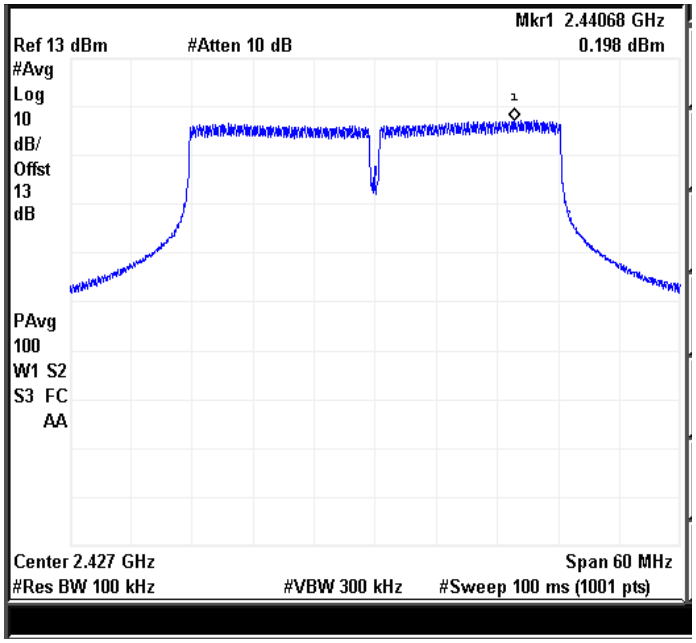

Figure 42: Power Spectral density measured at Ch. 1

7.3.5.2 MID CHANNEL_2442 MHZ

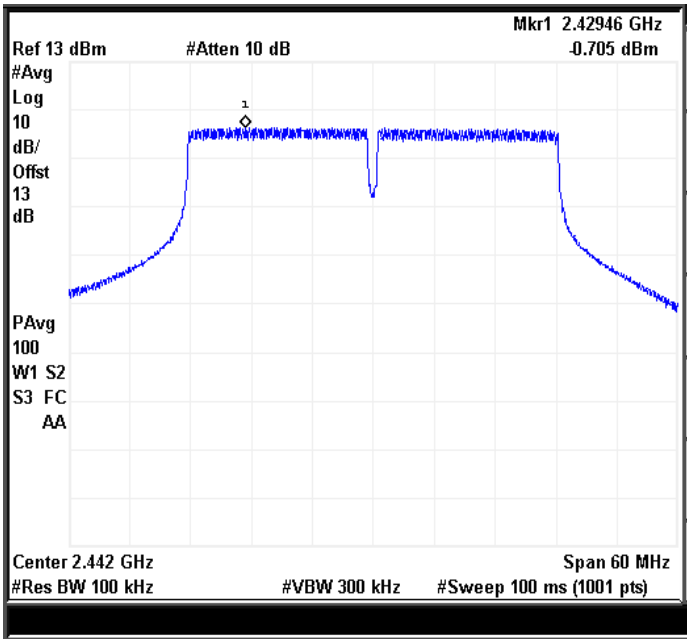

Figure 43: Power Spectral density measured at Ch. 0

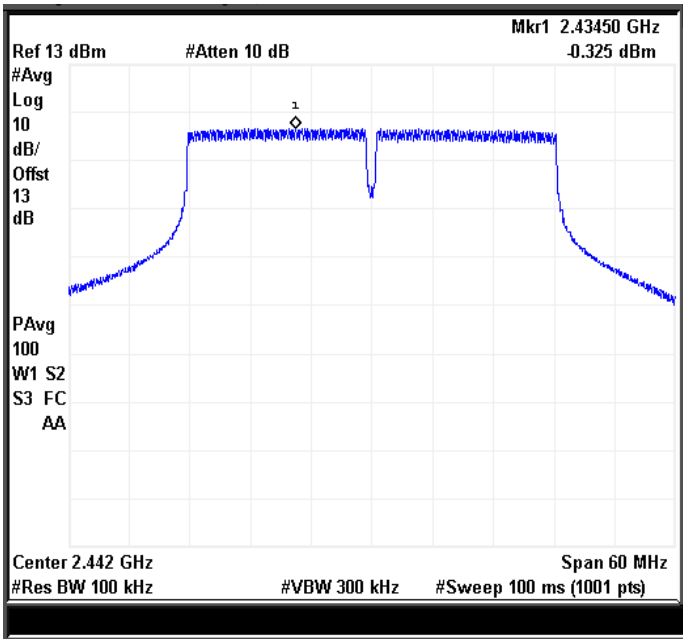

Figure 44: Power Spectral density measured at Ch. 1

7.3.5.3 HIGH CHANNEL_2462 MHZ

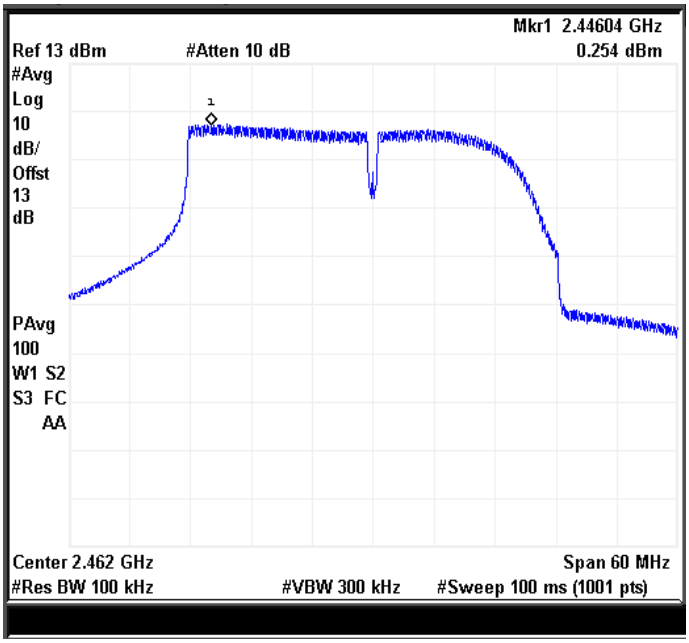

Figure 45: Power Spectral density measured at Ch. 0

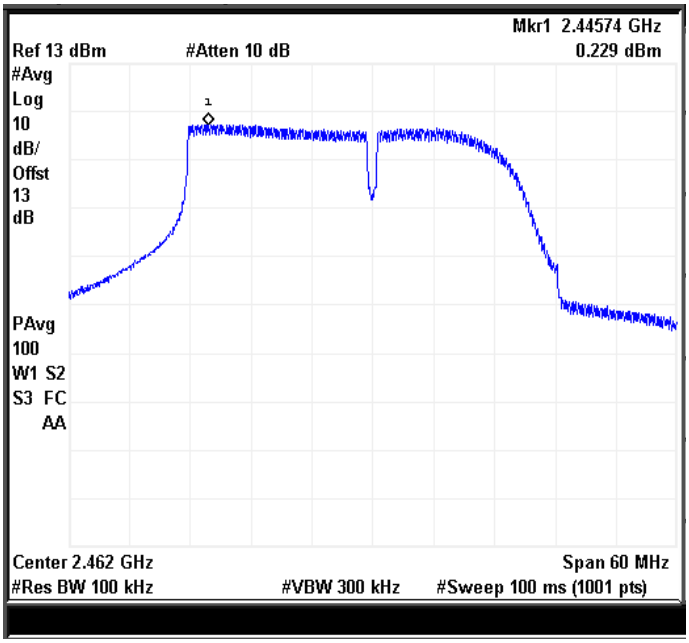

Figure 46: Power Spectral density measured at Ch. 1

7.3.6 RESULT (SUPPORTING GRAPHS / DATA) FOR 5 MHZ MODULATION BANDWIDTH BASIC CONFIGURATION

7.3.6.1 LOW CHANNEL_2412 MHZ

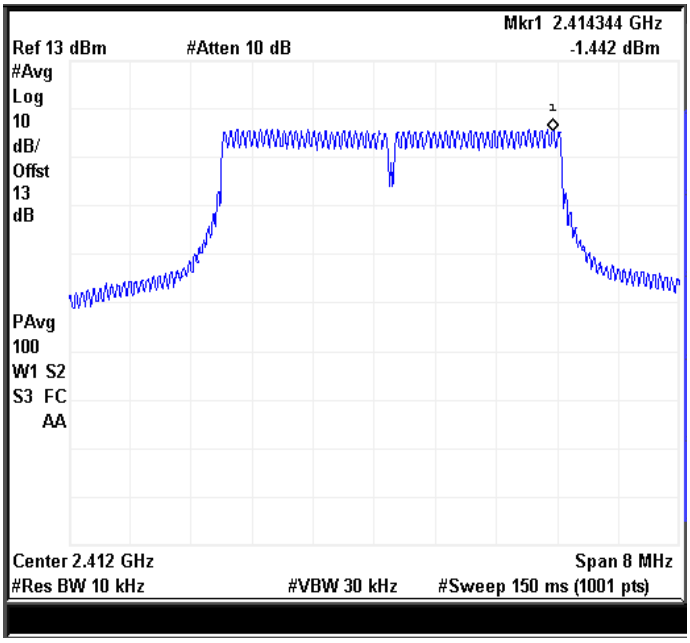

Figure 47: Power Spectral density measured at Ch. 0

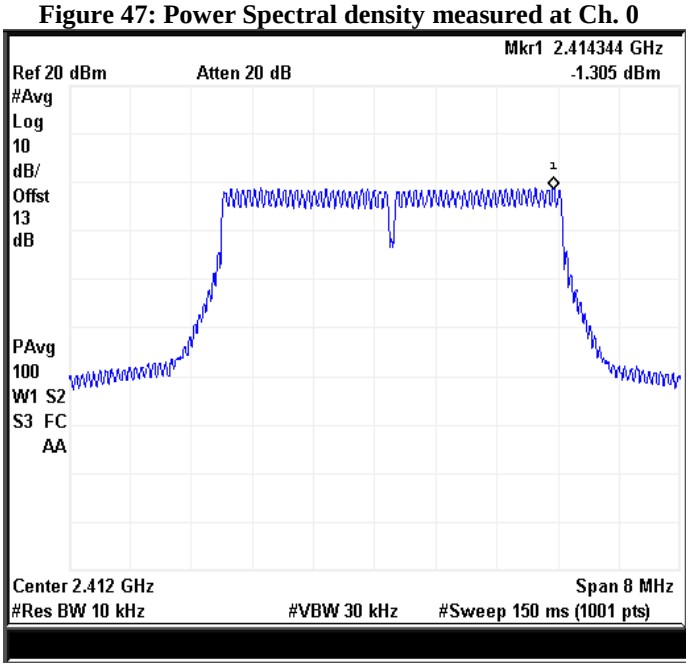

Figure 48: Power Spectral density measured at Ch. 1

7.3.6.2 MID CHANNEL_2442 MHZ

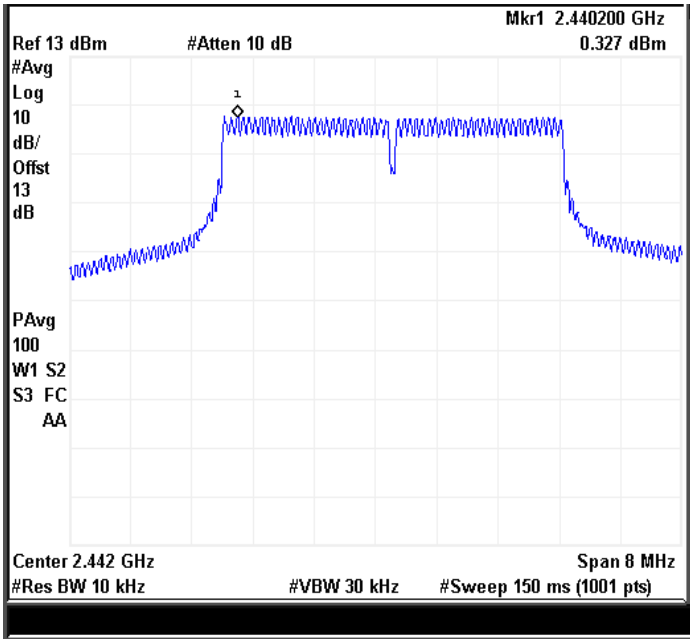

Figure 49: Power Spectral density measured at Ch. 0

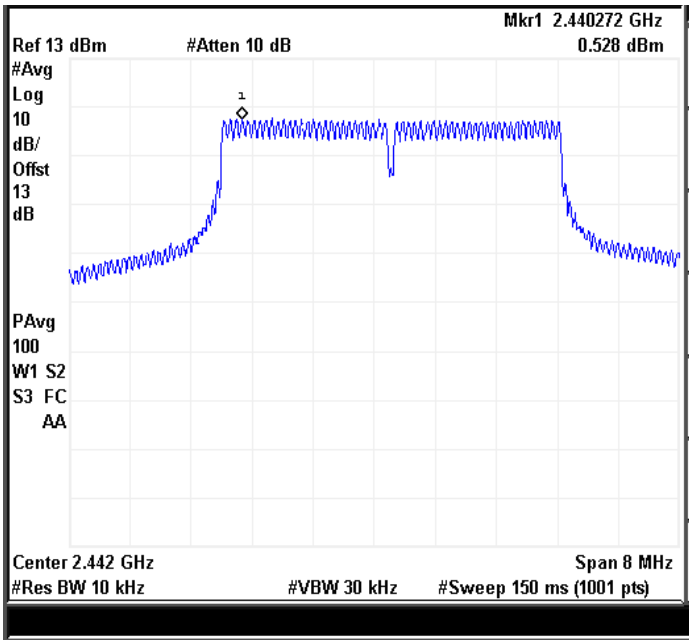

Figure 50: Power Spectral density measured at Ch. 1

7.3.6.3 HIGH CHANNEL_2477 MHZ

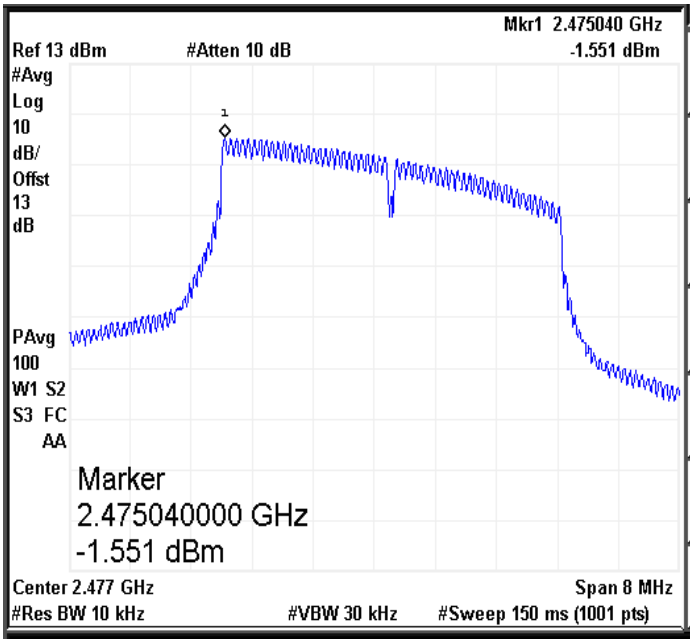

Figure 51: Power Spectral density measured at Ch. 0

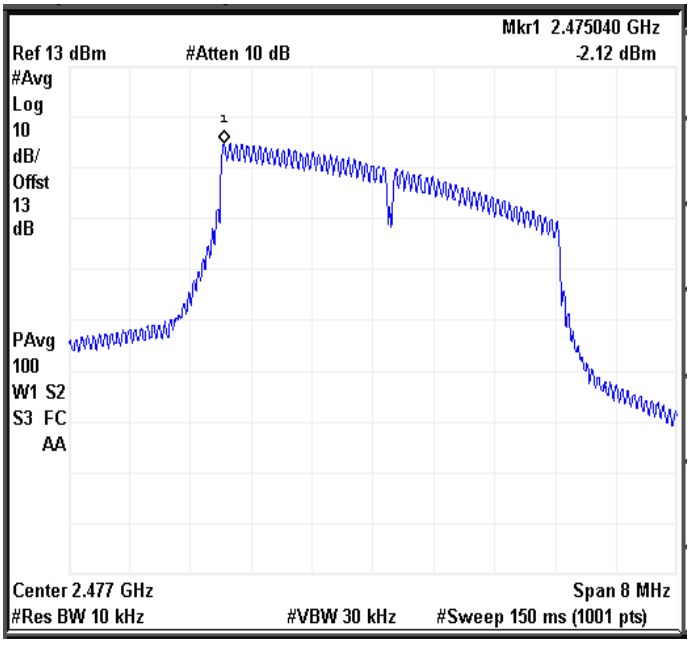

Figure 52: Power Spectral density measured at Ch. 1

7.3.7 RESULT (SUPPORTING GRAPHS / DATA) FOR 40 MHZ MODULATION BANDWIDTH 17 DBI DISH CONFIGURATION

7.3.7.1 LOW CHANNEL_2427 MHZ

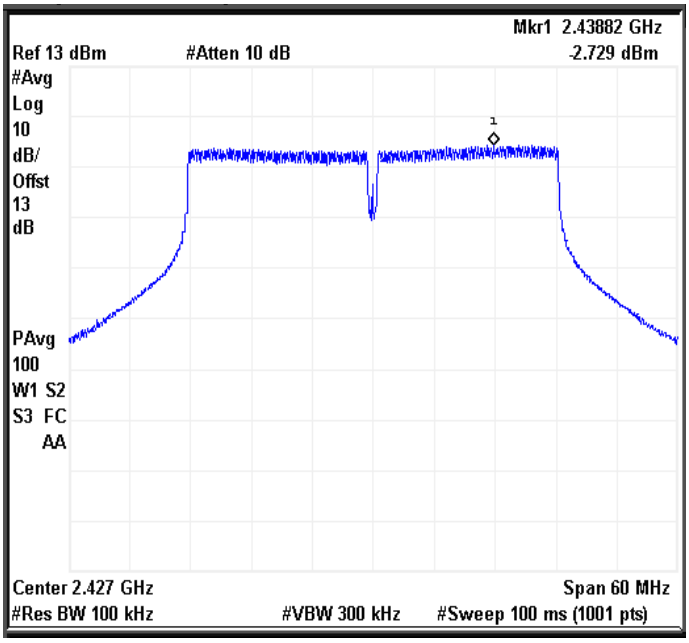

Figure 53: Power Spectral density measured at Ch. 0

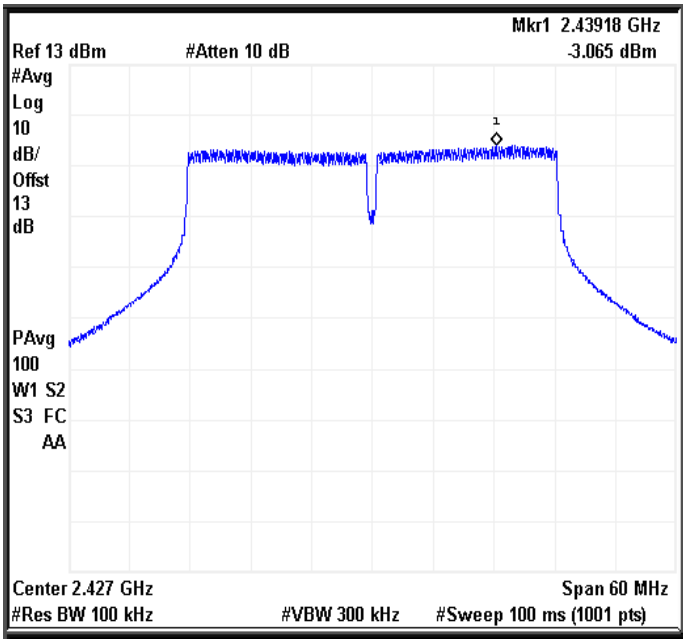

Figure 54: Power Spectral density measured at Ch. 1

7.3.7.2 MID CHANNEL_2442 MHZ

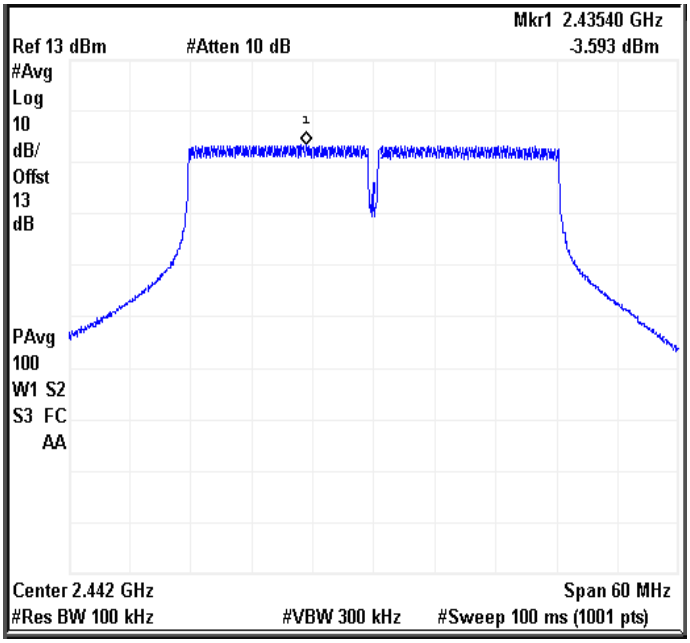

Figure 55: Power Spectral density measured at Ch. 0

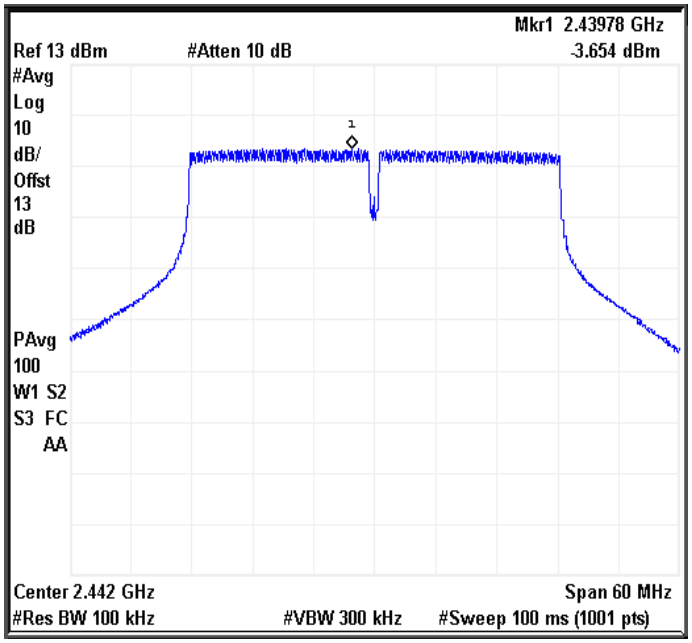

Figure 56: Power Spectral density measured at Ch. 1

7.3.7.3 HIGH CHANNEL_2462 MHZ

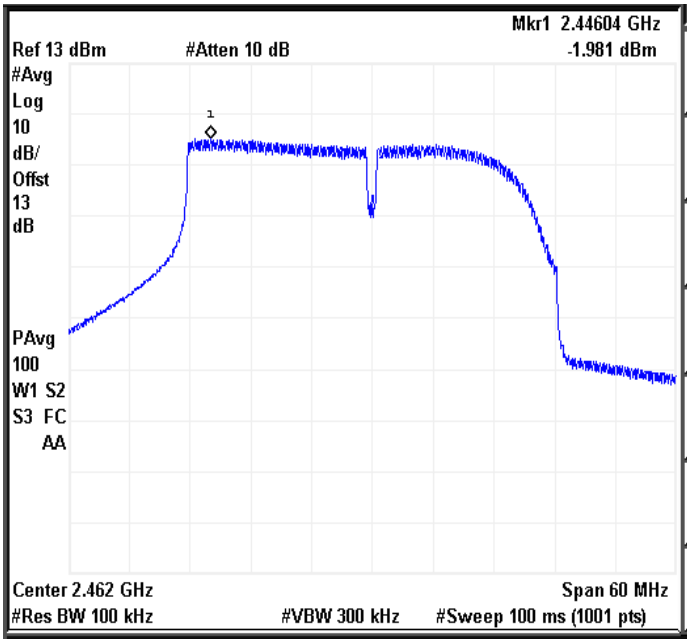

Figure 57: Power Spectral density measured at Ch. 0

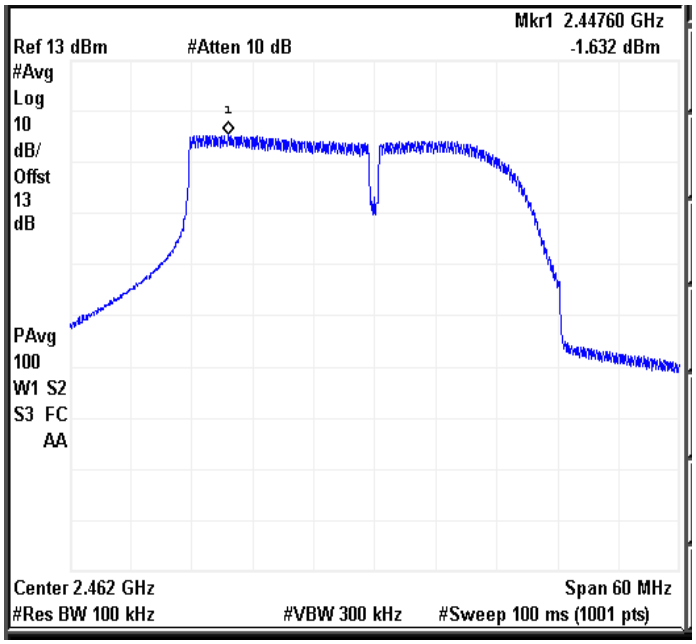

Figure 58: Power Spectral density measured at Ch. 1

7.3.8 RESULT (SUPPORTING GRAPHS / DATA) FOR 5 MHZ MODULATION BANDWIDTH 17 DBI DISH CONFIGURATION

7.3.8.1 LOW CHANNEL_2412 MHZ

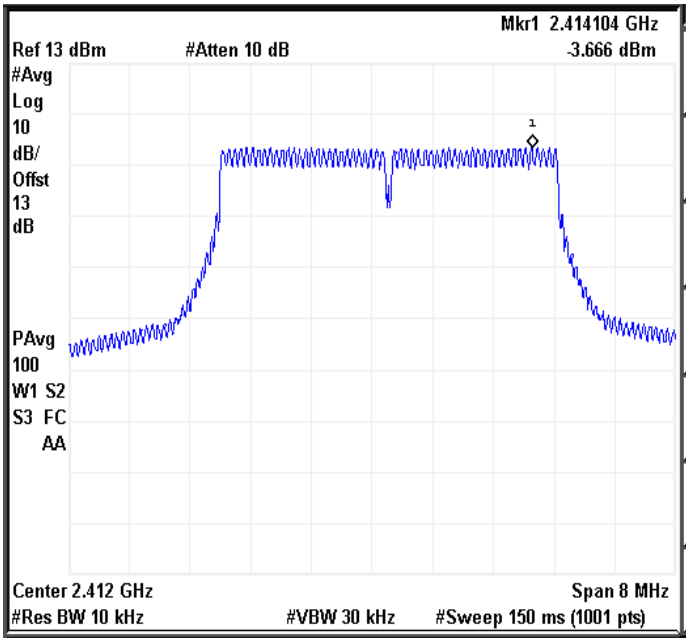

Figure 59: Power Spectral density measured at Ch. 0

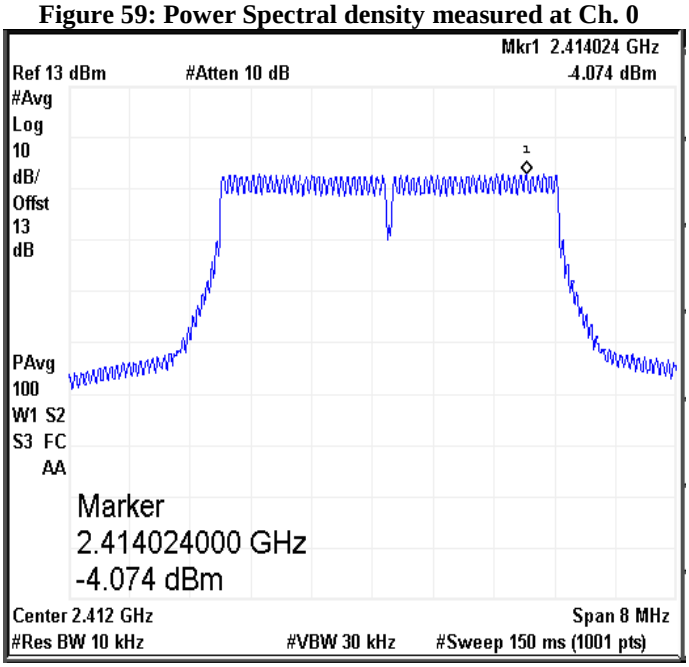

Figure 60: Power Spectral density measured at Ch. 1

7.3.8.2 MID CHANNEL_2442 MHZ

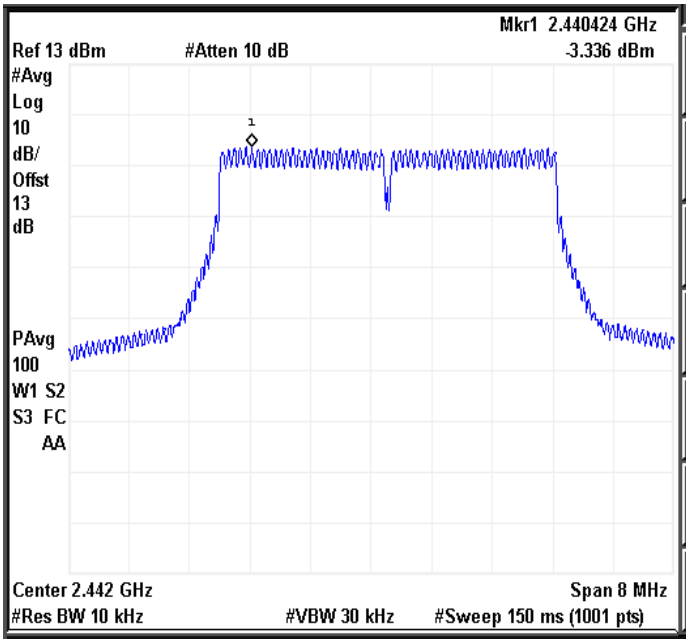

Figure 61: Power Spectral density measured at Ch. 0

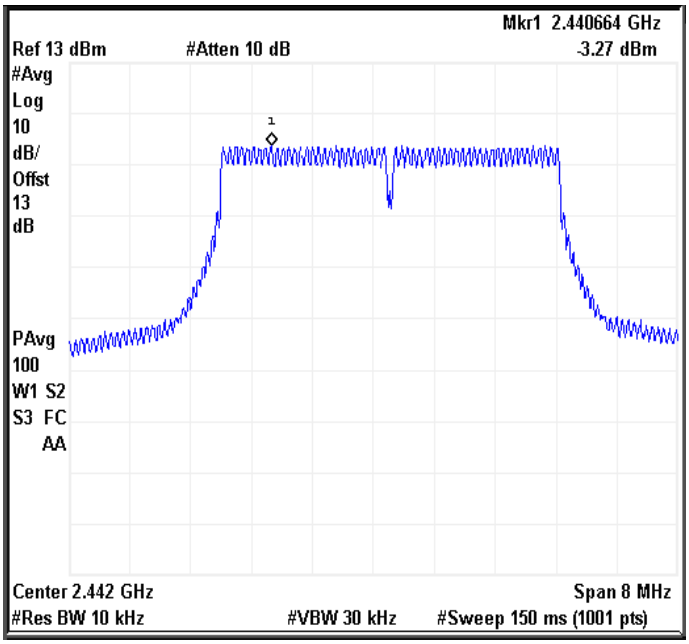

Figure 62: Power Spectral density measured at Ch. 1

7.3.8.3 HIGH CHANNEL_2472 MHZ

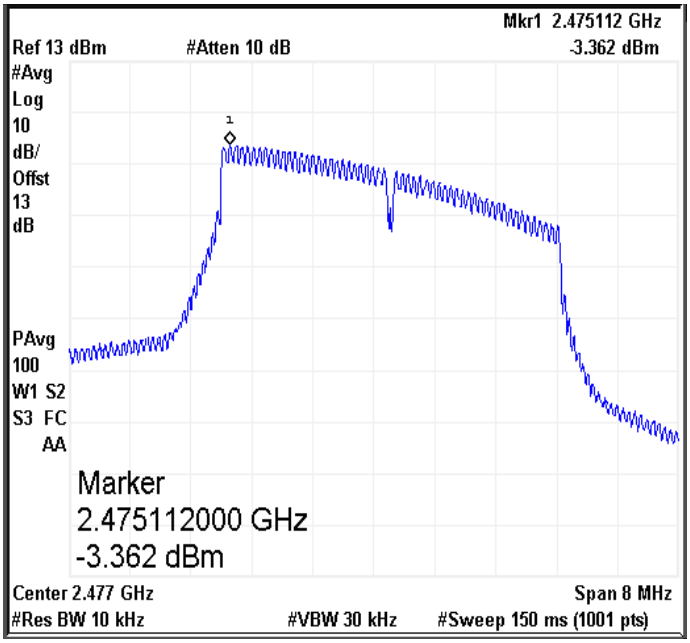

Figure 63: Power Spectral density measured at Ch. 0

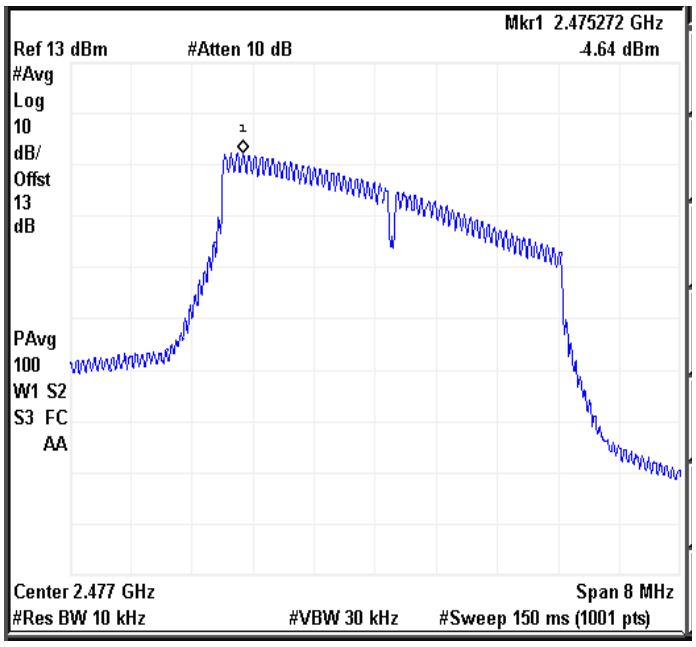

Figure 64: Power Spectral density measured at Ch. 1

7.3.9 RESULT

Power Spectral Density for all channels in both 40MHz & 5MHz Modulation Bandwidths is within the Specified limit. Refer below table for consolidated result.

7.3.9.1 BASIC CONDITION

Modulation Bandwidth (MHz)	Antenna path	Channel Frequency (MHz)	Recorded value (dBm/100kHz)	Limit (dBm/3kHz)	Result
40	Ch. 0	2427	-0.015	8	Pass
40	Ch. 1	2427	0.198	8	Pass
40	Ch. 0	2442	-0.705	8	Pass
40	Ch. 1	2442	-0.325	8	Pass
40	Ch. 0	2462	0.254	8	Pass
40	Ch. 1	2462	0.229	8	Pass
5	Ch. 0	2412	-1.442	8	Pass
5	Ch. 1	2412	-1.305	8	Pass
5	Ch. 0	2442	0.327	8	Pass
5	Ch. 1	2442	0.528	8	Pass
5	Ch. 0	2477	-1.551	8	Pass
5	Ch. 1	2477	-2.12	8	Pass

Table 7: Consolidated PSD Data for basic configuration

7.3.9.2 17DBI CONDITION

Modulation Bandwidth (MHz)	Antenna path	Channel Frequency (MHz)	Recorded value (dBm/100kHz)	Limit (dBm/3kHz)	Result
40	Ch. 0	2427	-2.729	8	Pass
40	Ch. 1	2427	-3.065	8	Pass
40	Ch. 0	2442	-3.593	8	Pass
40	Ch. 1	2442	-3.654	8	Pass
40	Ch. 0	2462	-1.981	8	Pass
40	Ch. 1	2462	-1.632	8	Pass
5	Ch. 0	2412	-3.666	8	Pass
5	Ch. 1	2412	-4.874	8	Pass
5	Ch. 0	2442	-3.336	8	Pass
5	Ch. 1	2442	-3.27	8	Pass
5	Ch. 0	2477	-3.362	8	Pass
5	Ch. 1	2477	-4.64	8	Pass

Table 8: Consolidated PSD data for 17dBi Dish configuration

7.4 RADIO FREQUENCY POWER IN ANY 100 kHZ BANDWIDTH OUTSIDE THE INTENTIONAL BAND

7.4.1 TEST SPECIFICATION

Test Standard	47 CFR Ch. I (10–1–14 Ed), Part 15, Subpart C RSS-247 Issue 1, May 2015
Test Procedure	ANSI C63.10-2013
Frequency Range	30MHz to 26.5GHz
Resolution Bandwidth	100 kHz
Video Bandwidth	300 kHz
Sweep Time	Auto
Attenuation	Auto
Test Mode	Conducted
Detector	Peak
Input Voltage	120V AC
Input Frequency	60 Hz
Temperature	21.0°C
Humidity	54.0%
Tested By	Subhendu
Test Date	13th Aug 2015

7.4.2 LIMITS

Standard	Reference section	Frequency range	Limit
47 CFR Ch. I (10–1–14 Ed), Part 15, Subpart C RSS-247 Issue 1, May 2015	§15.247 (d) 5.5	2400 MHz to 2483.5 MHz	-30dBc in any 100 kHz band outside the Intentional band

7.4.3 TEST SETUP

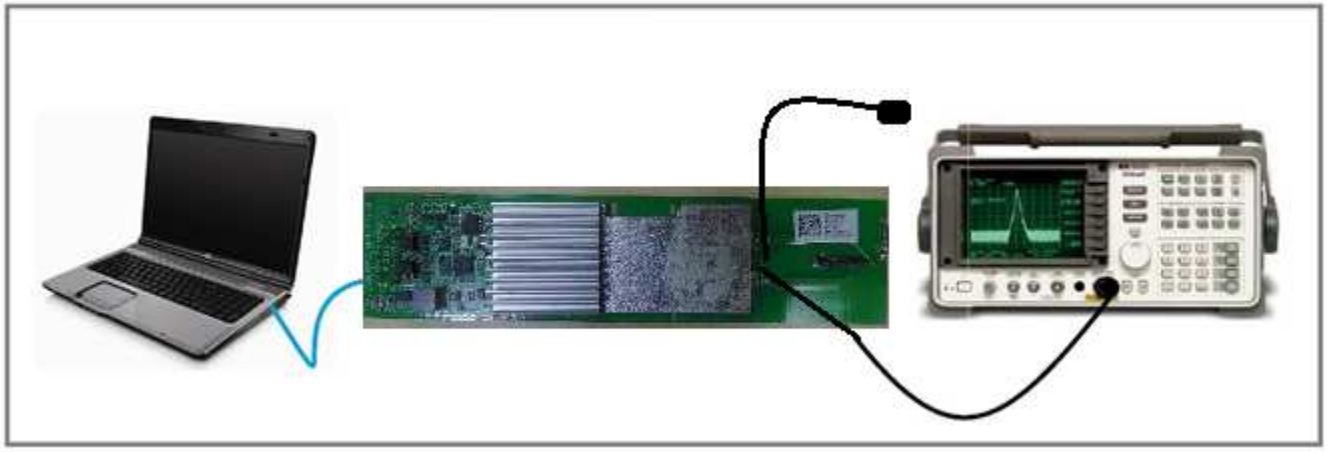

Figure 65: Typical test setup for Conducted Test setup

7.4.4 TEST PROCEDURE

The Conducted test was performed using the Spectrum analyzer. Measurements were done as per Section 11.3 of KDB **"558074 D01 DTS measurement Guidance v03r03".** The RF output of the EUT was connected to the input port of Spectrum analyzer using an attenuator. Captured the data from spectrum analyzer and compared with the limits specified in the standard

7.4.5 RESULT (SUPPORTING GRAPHS / DATA) FOR BASIC CONDITION

7.4.5.1 40MHZ MODULATION BW-LOWCHANNEL_2427 MHZ

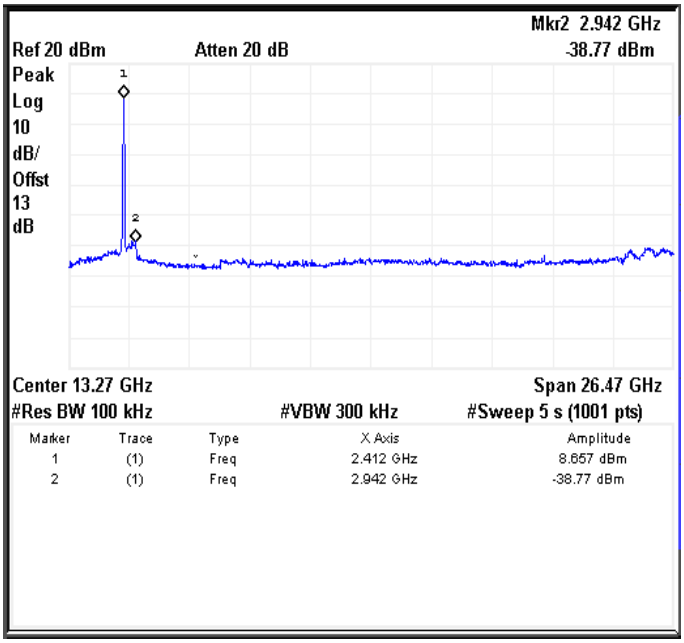

Figure 66: Spurious emission measured at Ch. 0

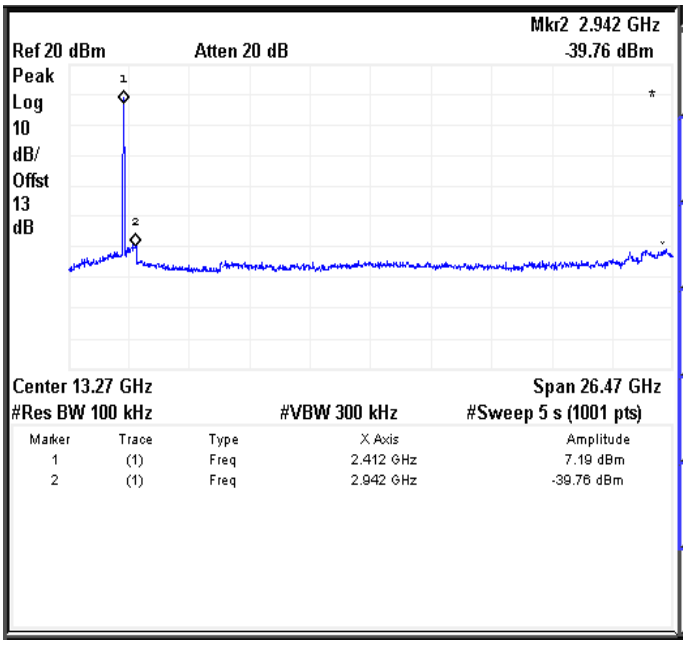

Figure 67: Spurious emission measured at Ch. 1

7.4.5.2 40MHZ MODULATION BW-MID CHANNEL_2442 MHZ

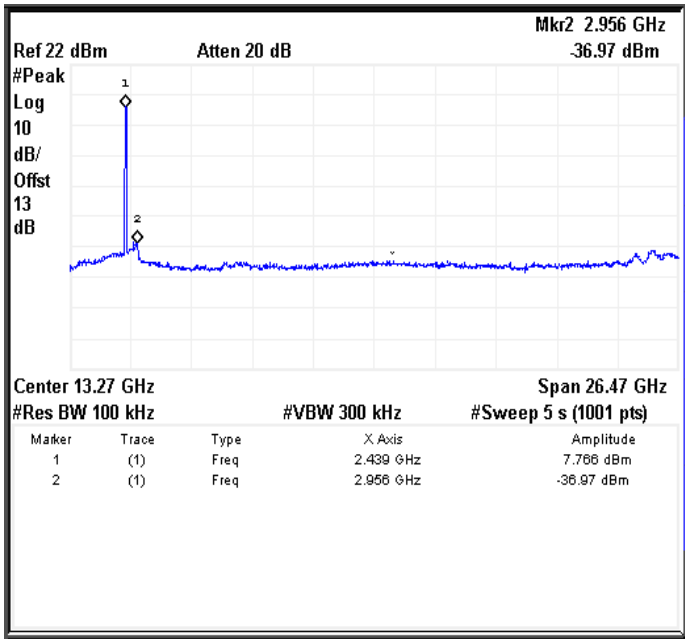

Figure 68: Spurious emission measured at Ch. 0

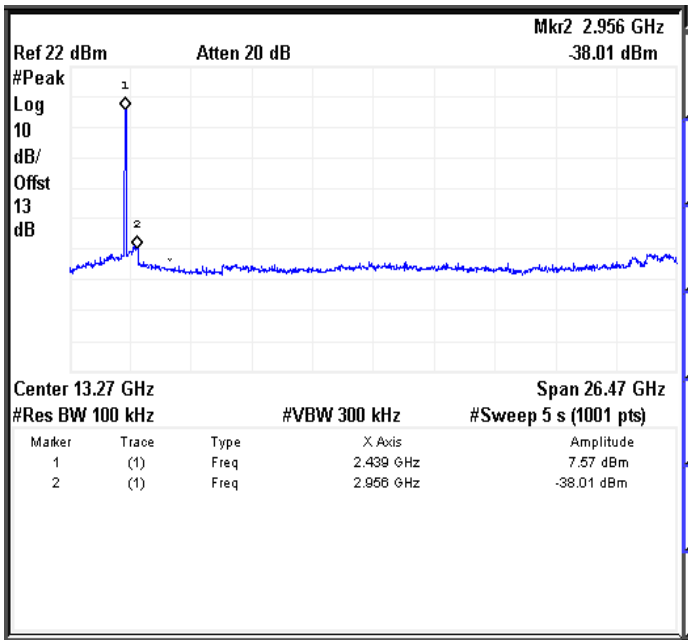

Figure 69: Spurious emission measured at Ch. 1

7.4.5.3 40MHZ MODULATION BW-HIGH CHANNEL_2462 MHZ

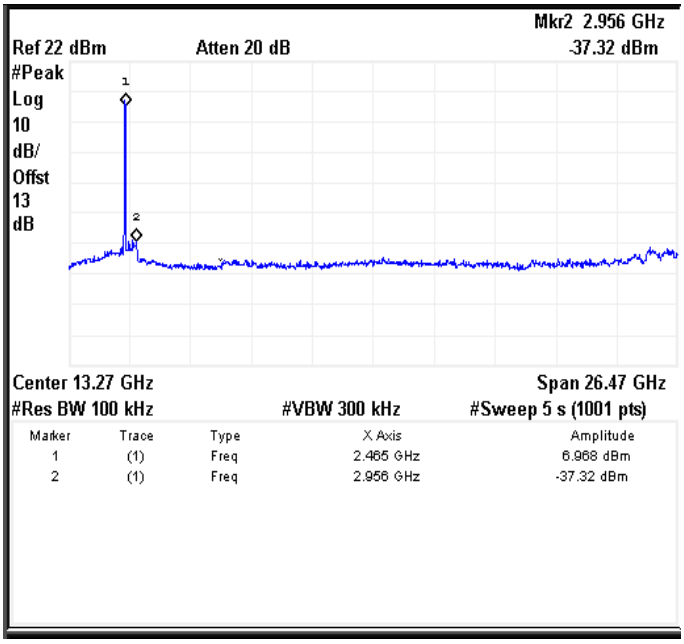

Figure 70: Spurious emission measured at Ch. 0

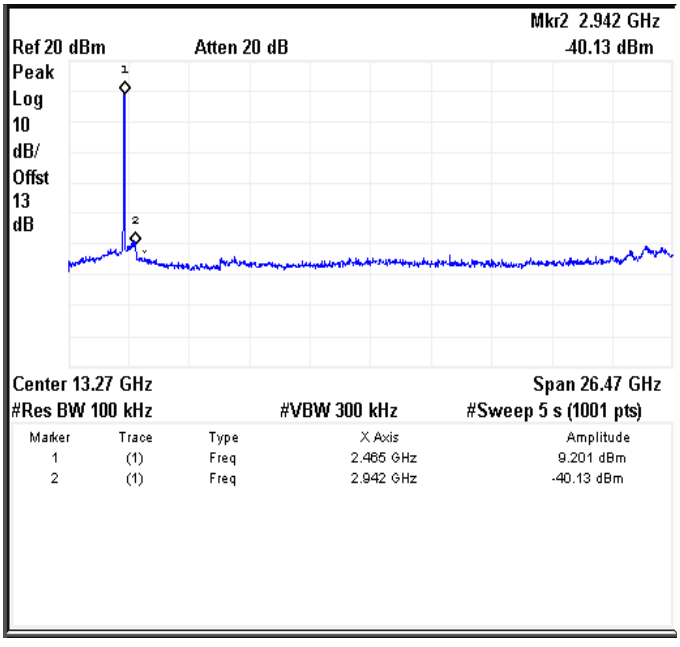

Figure 71: Spurious emission measured at Ch. 1

7.4.5.4 5MHZ MODULATION BW-LOW CHANNEL_2412 MHZ

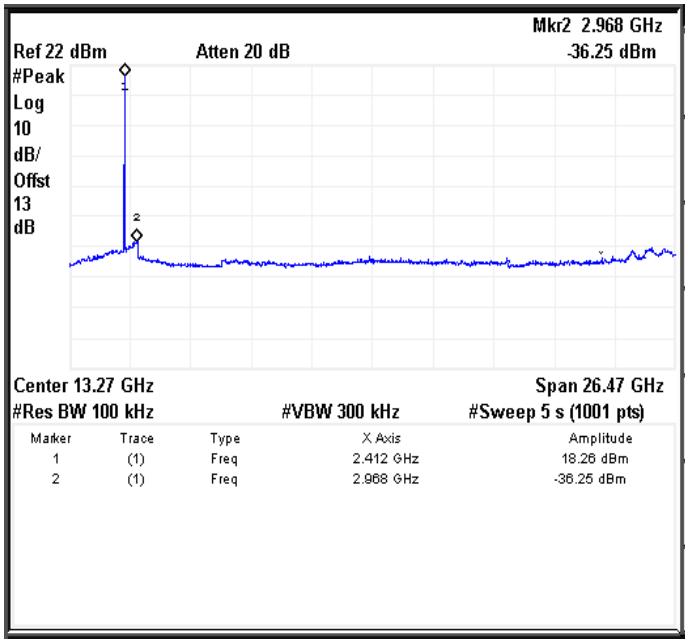

Figure 72: Spurious emission measured at Ch. 0

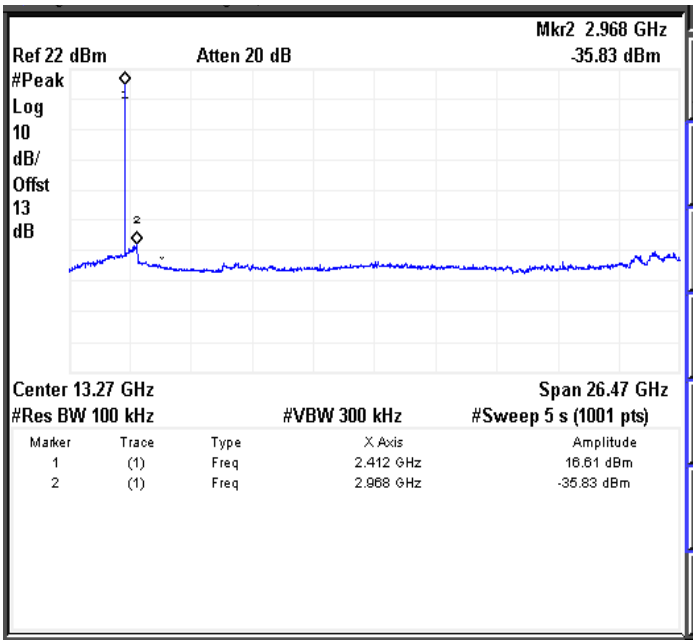

Figure 73: Spurious emission measured at Ch. 1

7.4.5.5 5MHZ MODULATION BW-MID CHANNEL_2442 MHZ

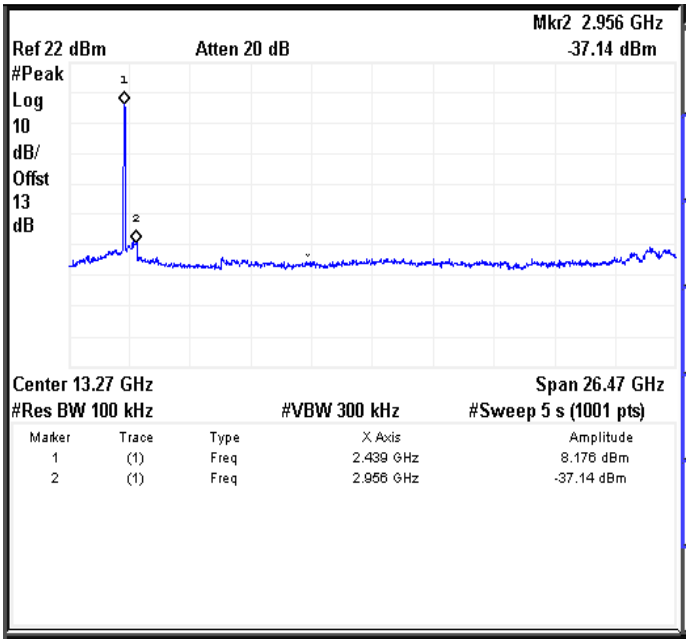

Figure 74: Spurious emission measured at Ch. 0

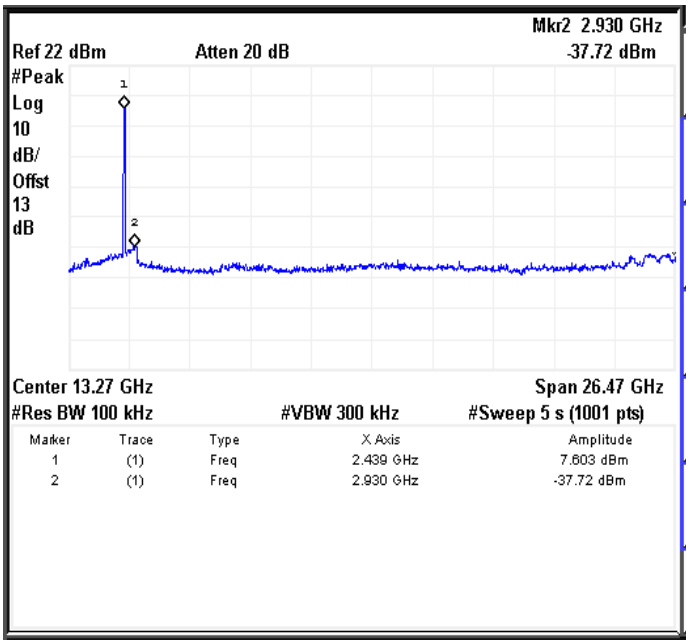

Figure 75: Spurious emission measured at Ch. 1

7.4.5.6 5MHZ MODULATION BW-HIGH CHANNEL_2477 MHZ

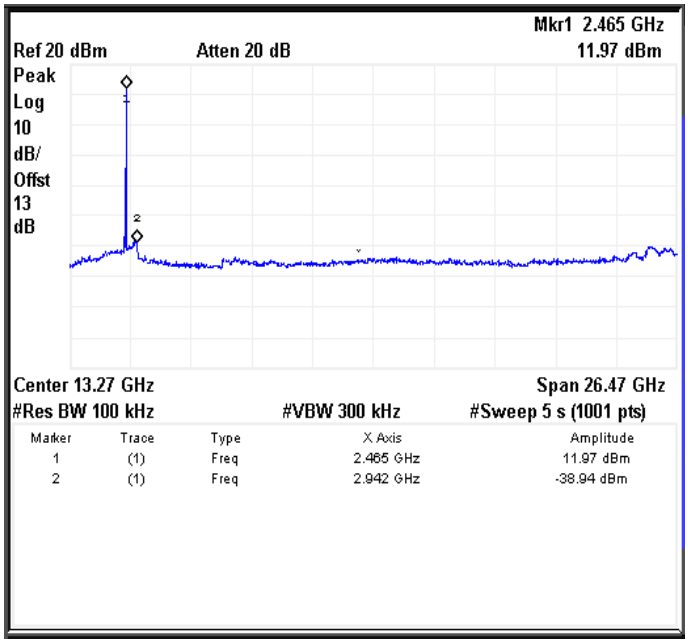

Figure 76: Spurious emission measured at Ch. 0

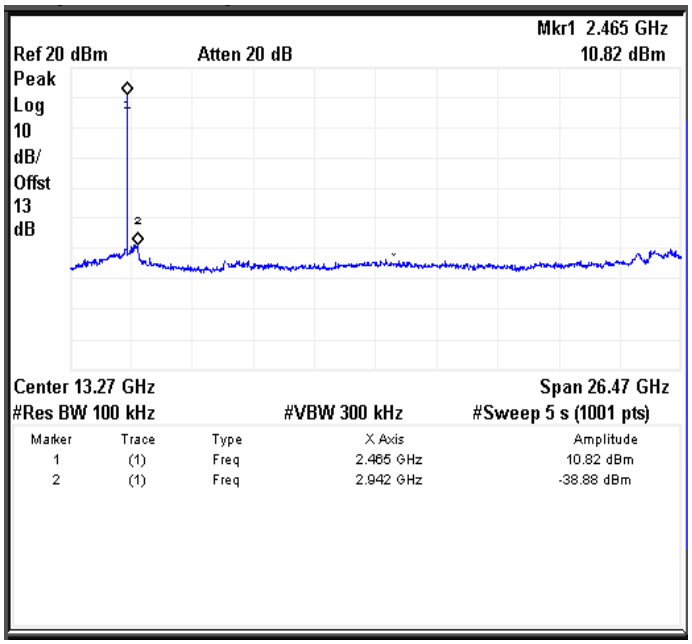

Figure 77: Spurious emission measured at Ch. 1

7.4.6 RESULT (SUPPORTING GRAPHS / DATA) FOR 17DBI DISH CONDITION

7.4.6.1 40MHZ MODULATION BW-LOW CHANNEL_2427 MHZ

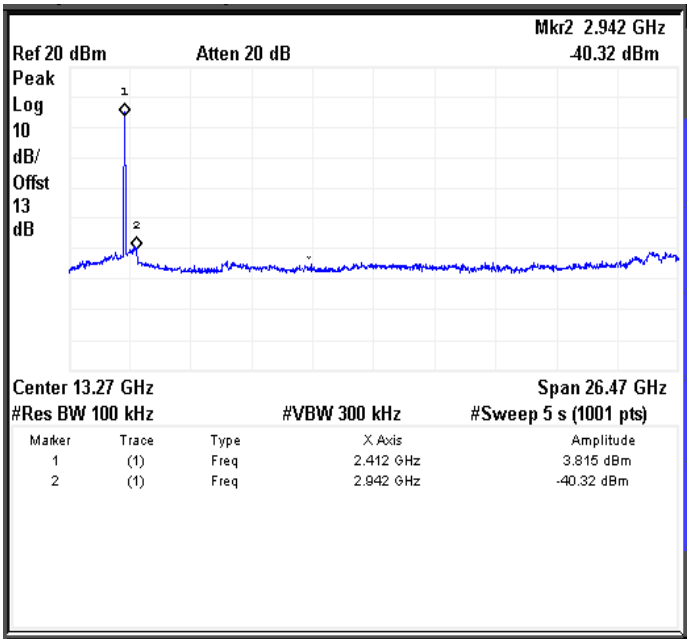

Figure 78: Spurious emission measured at Ch. 0

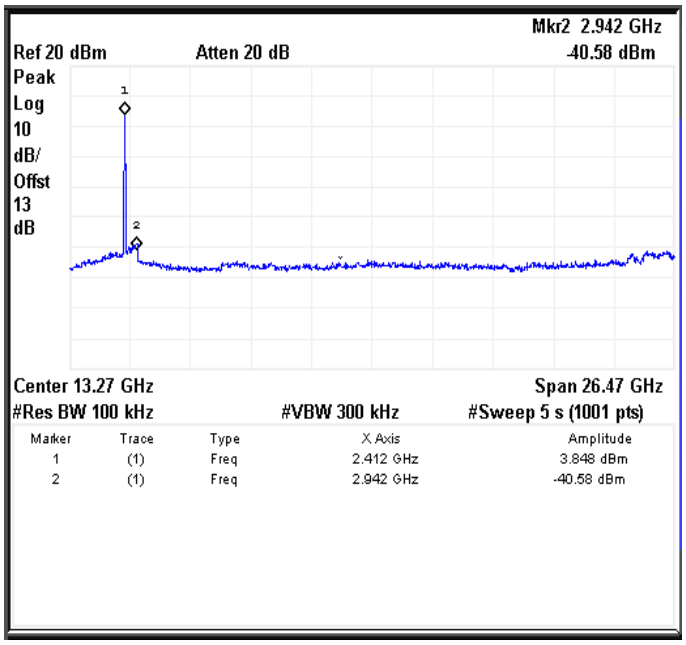

Figure 79: Spurious emission measured at Ch. 1

7.4.6.2 40MHZ MODULATION BW-MID CHANNEL_2442 MHZ

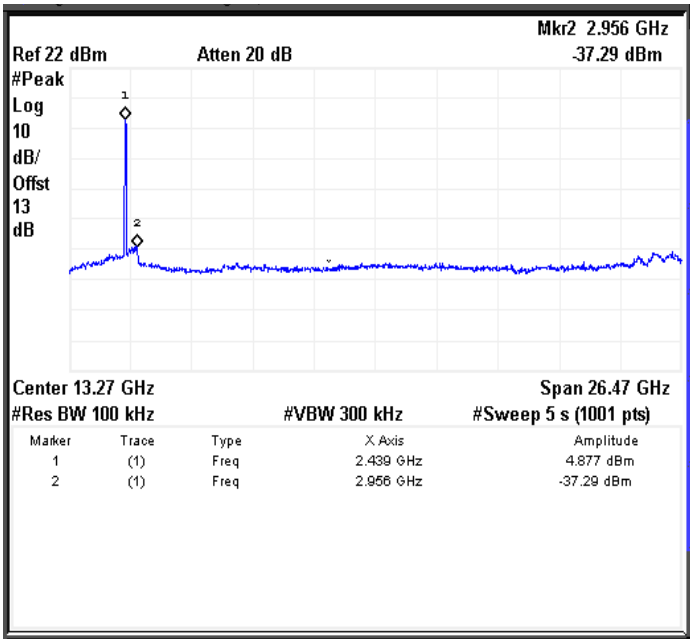

Figure 80: Spurious emission measured at Ch. 0

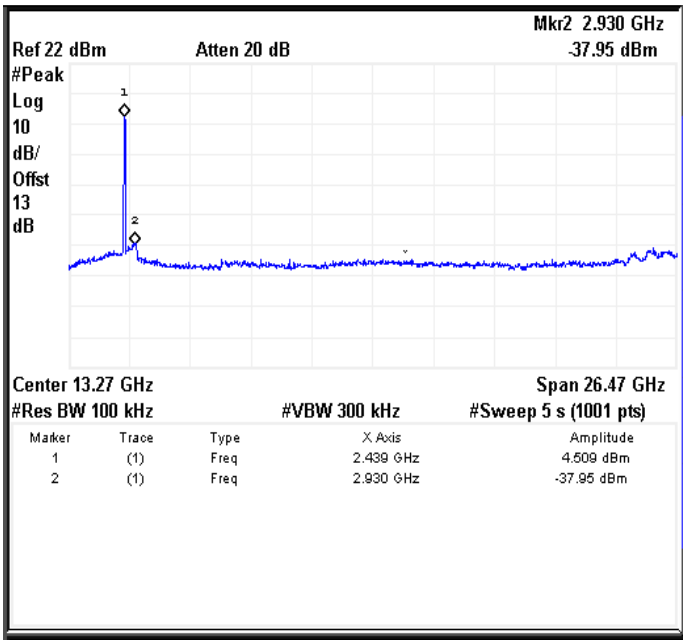

Figure 81: Spurious emission measured at Ch. 1

7.4.6.3 40MHZ MODULATION BW-HIGH CHANNEL_2462 MHZ

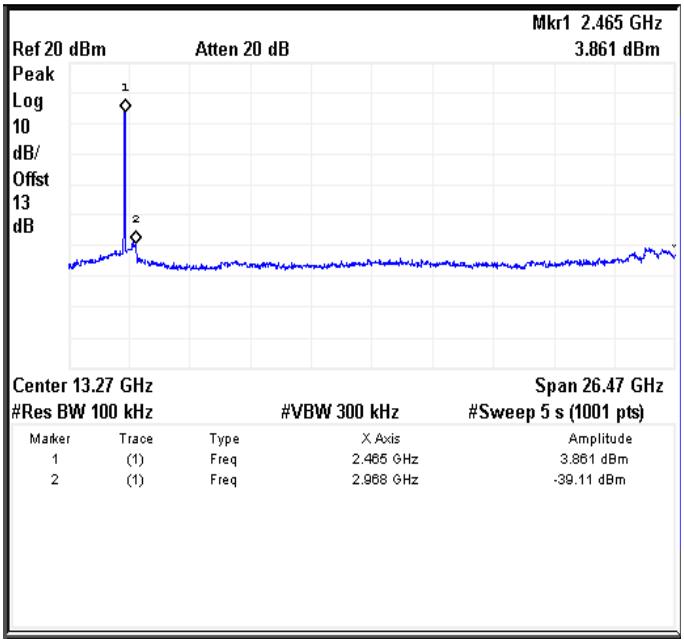

Figure 82: Spurious emission measured at Ch. 0

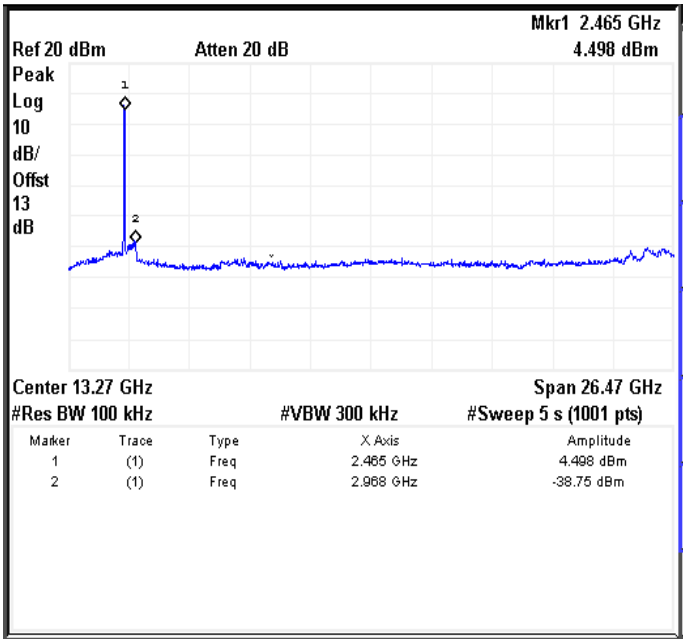

Figure 83: Spurious emission measured at Ch. 1

7.4.6.4 5MHZ MODULATION BW-LOW CHANNEL_2412 MHZ

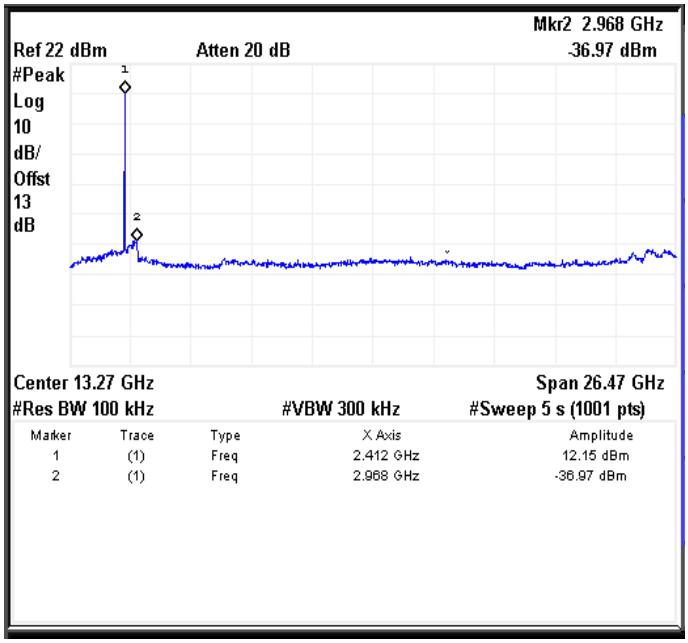

Figure 84: Spurious emission measured at Ch. 0

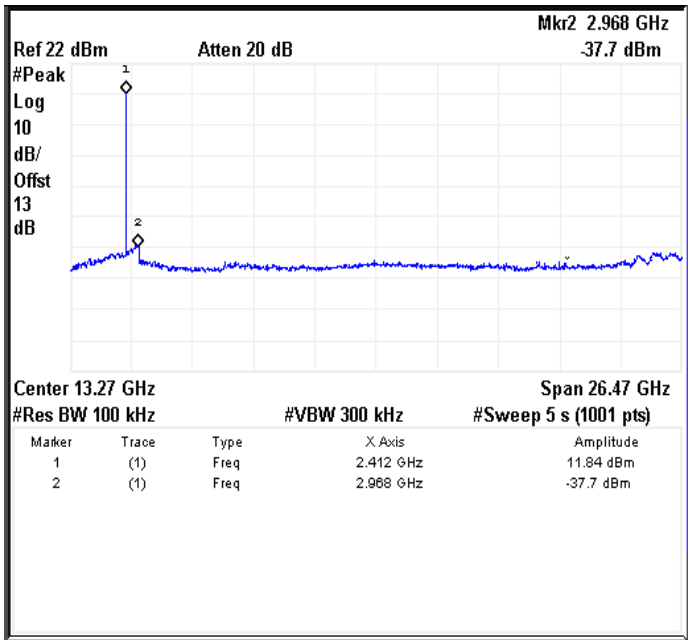

Figure 85: Spurious emission measured at Ch. 1

7.4.6.5 5MHZ MODULATION BW-MID CHANNEL_2442 MHZ

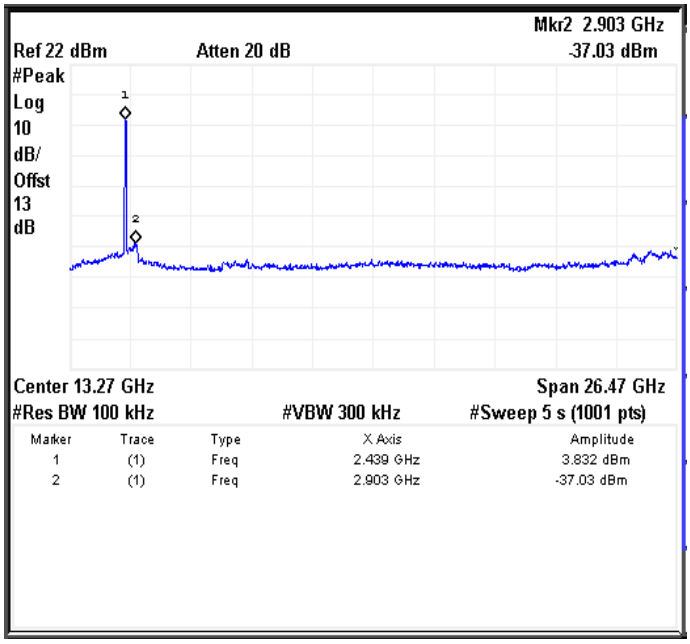

Figure 86: Spurious emission measured at Ch. 0

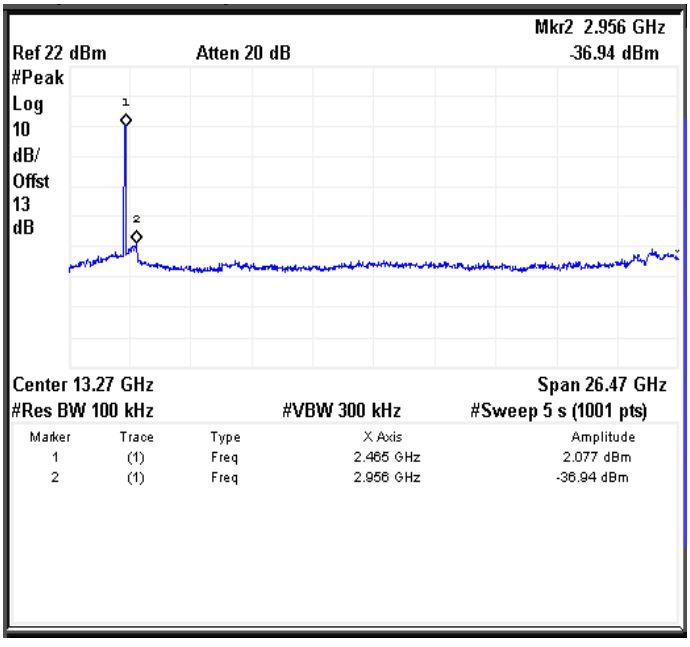

Figure 87: Spurious emission measured at Ch. 1

7.4.6.6 5MHZ MODULATION BW-HIGH CHANNEL_2477 MHZ

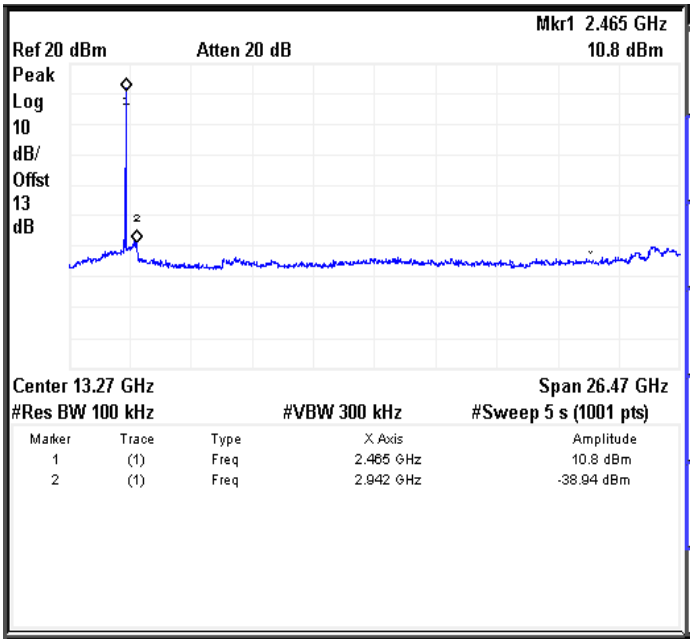

Figure 88: Spurious emission measured at Ch. 0

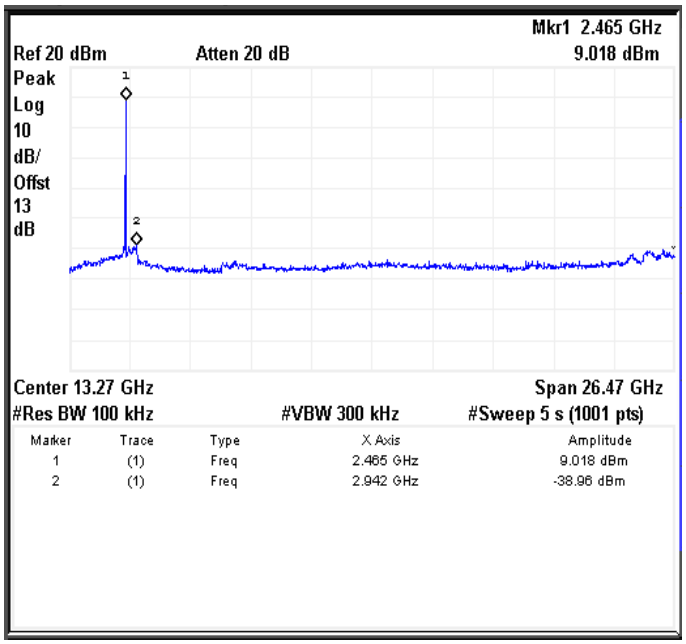

Figure 89: Spurious emission measured at Ch. 1

7.4.7 RESULT

Emission is below -30dBc from the carrier in all channels for both 40MHz & 5MHz Modulation Bandwidths.

7.5 EMISSIONS IN RESTRICTED FREQUENCY BANDS

7.5.1 TEST SPECIFICATION

Test Standard	47 CFR Ch. I (10–1–14 Ed), Part 15, Subpart C RSS-Gen, Issue 4, Nov 2014			
Test Procedure	ANSI C63.10-2013			
Frequency Range	9 kHz-150 kHz	150 kHz-30MHz	30MHz-1GHz	1GHz-26.5GHz
Resolution Bandwidth	200Hz	9 kHz	120 kHz	1MHz
Video Bandwidth	1 kHz	30 kHz	300 kHz	3MHz
Sweep Time	Auto	Auto	Auto	Auto
Detector	Peak	Peak	Peak	Peak and Average
Attenuation	Auto			
Test Mode	Conducted			
Input Voltage	120V AC			
Input Frequency	60 Hz			
Temperature	22.0°C			
Humidity	56.0%			
Tested By	Subhendu			
Test Date	13th Aug 2015			

7.5.2 LIMITS

Frequency range	**Limit (dBµV/m) as per Section 15.209**
9 kHz to 490 kHz	128.5194 to 93.8003*
490 kHz to 1.705 MHz	73.8003 to 62.9697*
1.705 MHz to 30 MHz	69.5429

*Note: * Decreases with the logarithm of the frequency*

Frequency range	**Limit (dBµV/m) as per Section 15.209**
30 MHz to 88 MHz	39.54
88 MHz to 216 MHz	43.52
216 MHz to 960 MHz	46.02
960 MHz to 40 GHz	53.98

Above table specifies limit with Average detector above 1GHz. 73.98dBµV/m is considered as the limit when Peak detector is employed for the measurements above 1GHz.

7.5.3 TEST SETUP

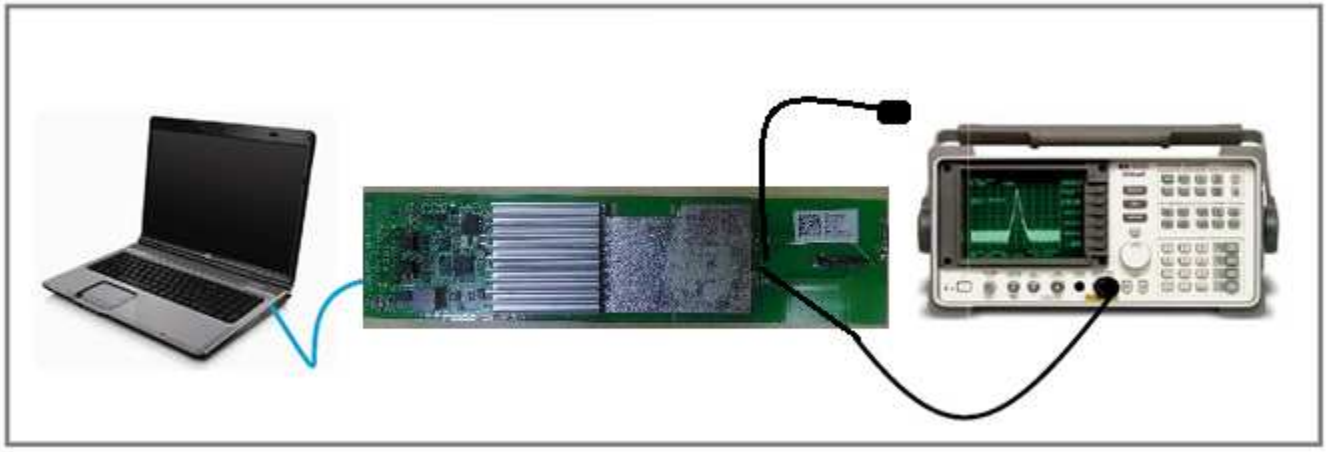

Figure 90: Typical test setup for Conducted Test setup

7.5.4 TEST PROCEDURE

The Conducted test was performed using the Spectrum analyzer. Measurements were done as per Section 12.2 of KDB **"558074 D01 DTS measurement Guidance v03r03".** The RF output of the EUT was connected to the input port of Spectrum analyzer using an attenuator. Captured the data from spectrum analyzer and performed required calculations to attain the Electric Field value and compared with the limits specified in the standard.

From 9 kHz to 1GHz, measurements have been performed with Peak detector. From 1GHz to 26.5GHz, measurements have been performed employing both Peak & Average detectors as specified in the standard. Detectors were selected based on FCC KDB document.

A Band reject filter (2400MHz to 2483.5MHz) offering an attenuation of approximately 40dB was used to attenuate the intentional band during the testing.

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7.5.5 RESULT (SUPPORTING GRAPHS / DATA) FOR BASIC CONDITION

7.5.5.1 40MHZ MODULATION BW-LOW CHANNEL_2427 MHZ

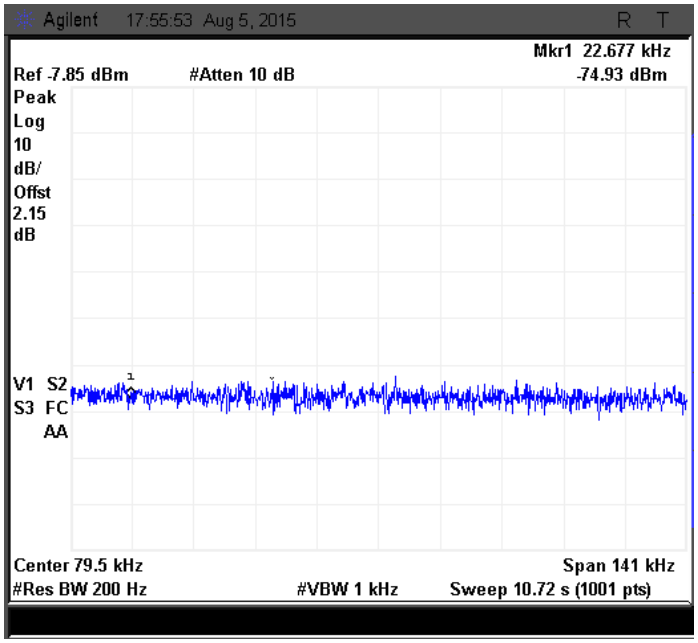

Figure 91: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 0

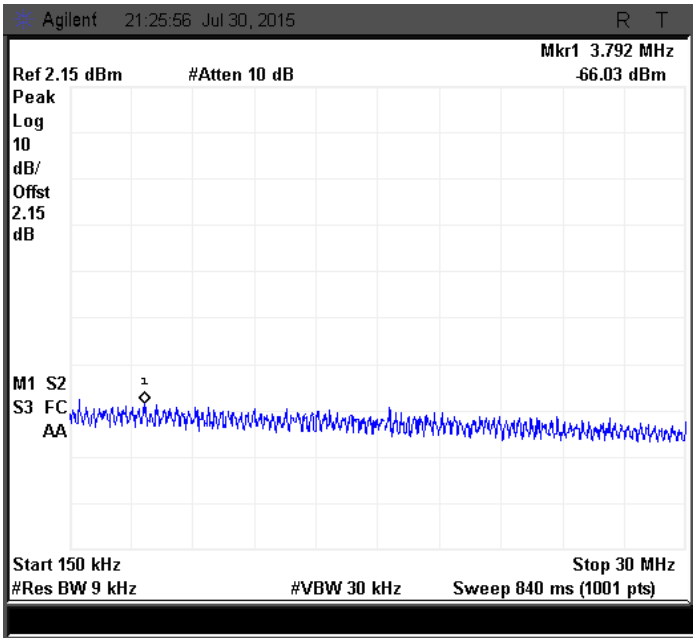

Figure 92: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 0

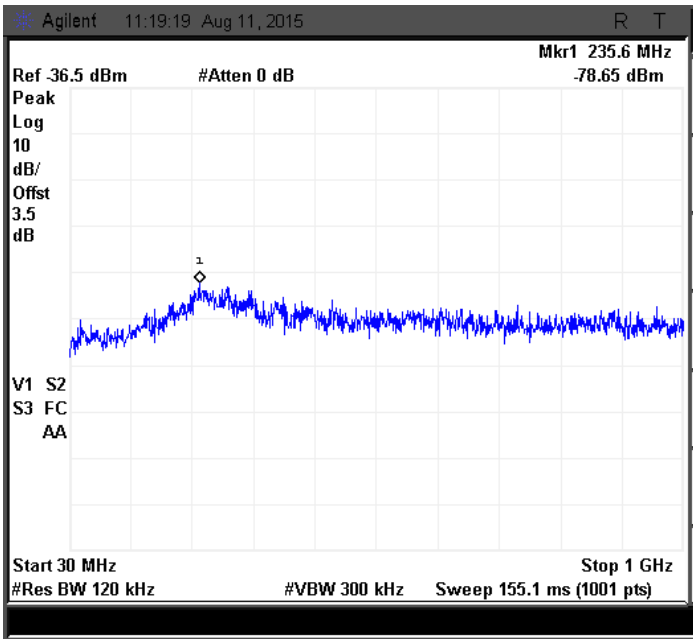

Figure 93: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 0

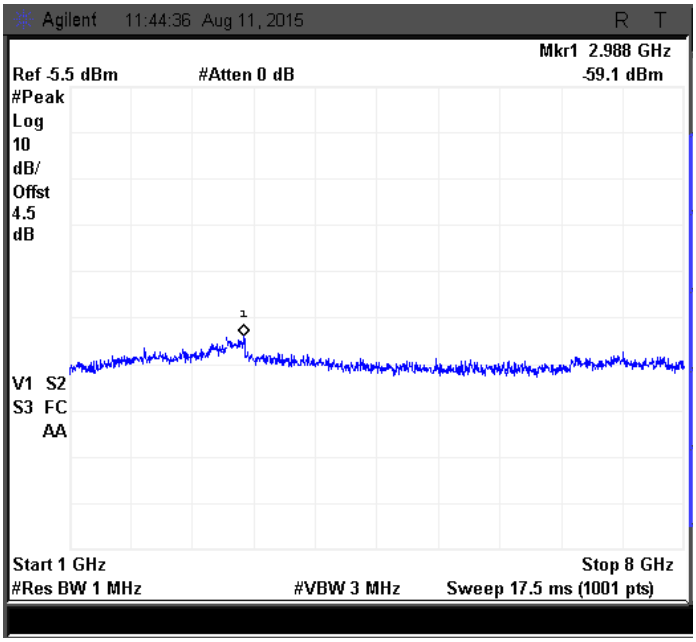

Figure 94: Emission measured with Peak Detector from 1GHz to 8 GHz at Ch. 0

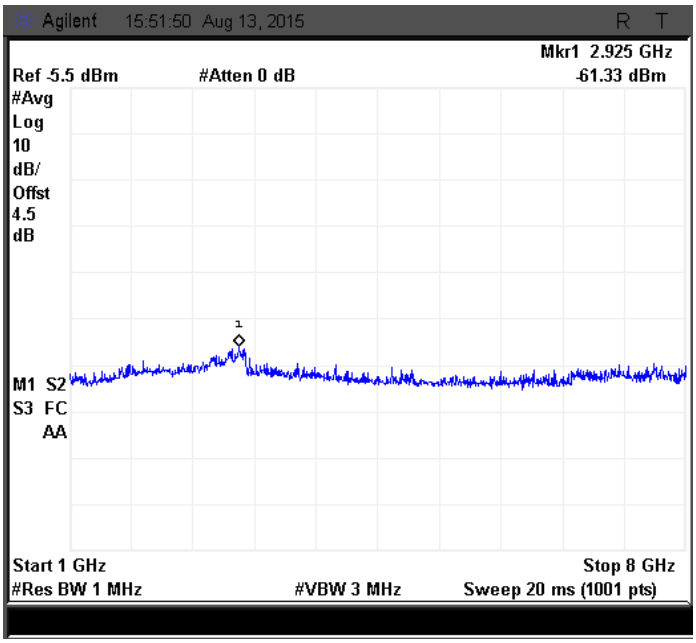

Figure 95: Emission measured with Average Detector from 1GHz to 8 GHz at Ch. 0

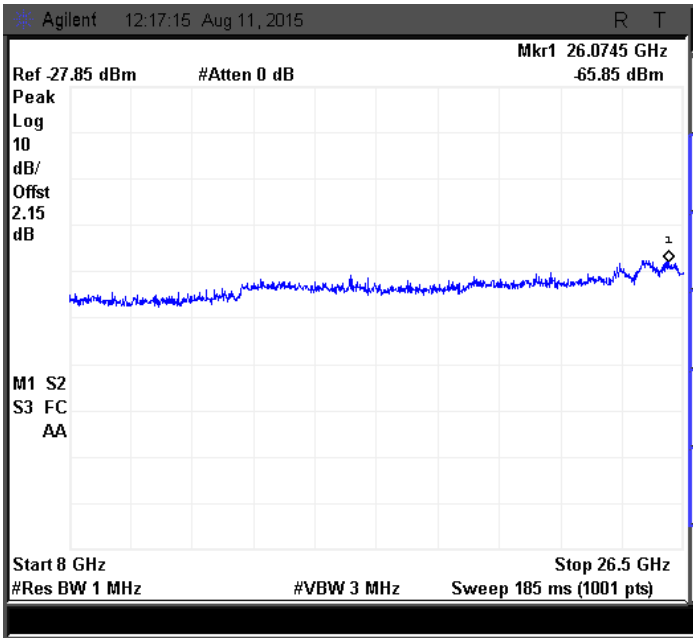

Figure 96: Emission measured with Peak Detector from 8GHz to 26.5 GHz at Ch. 0

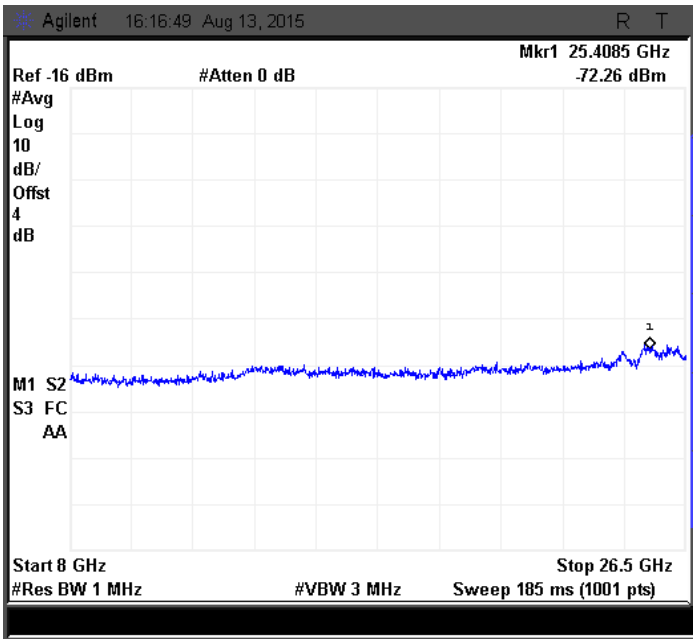

Figure 97: Emission measured with Average Detector from 8GHz to 26.5 GHz at Ch. 0

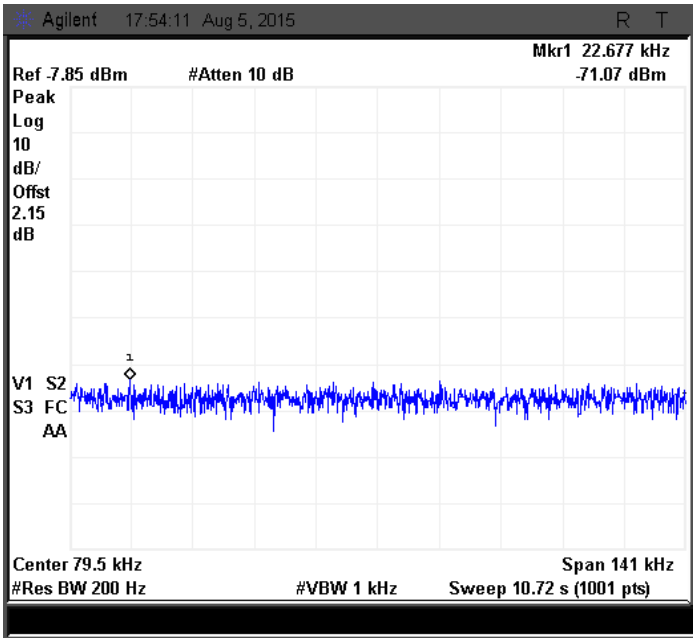

Figure 98: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 1

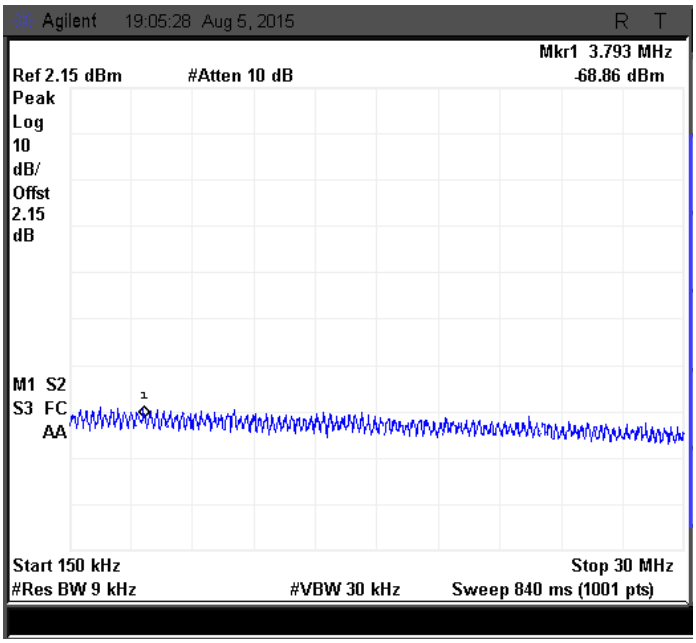

Figure 99: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 1

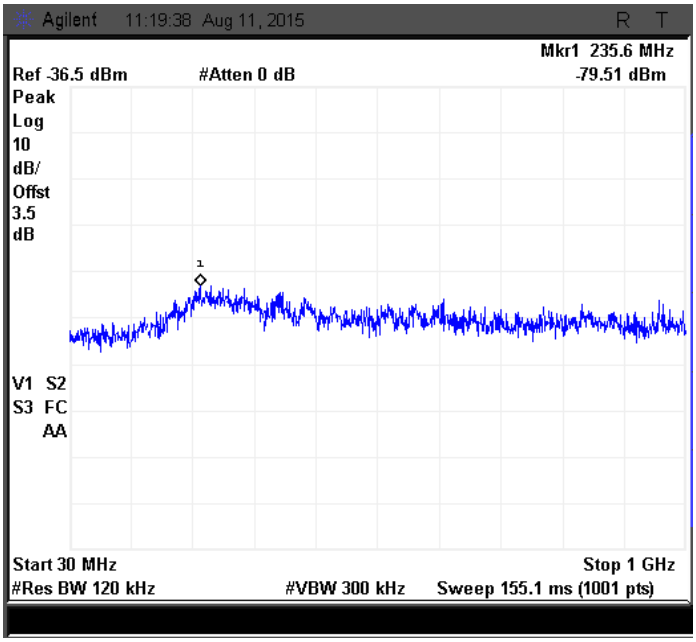

Figure 100: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 1

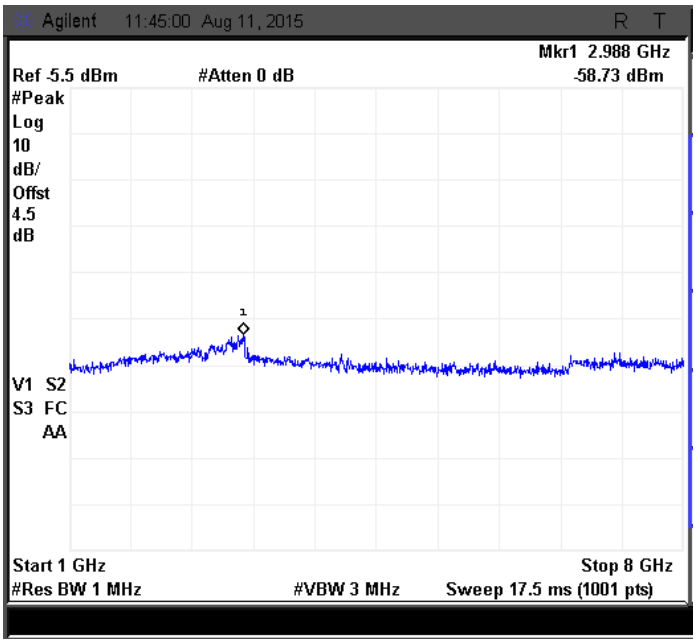

Figure 101: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 1

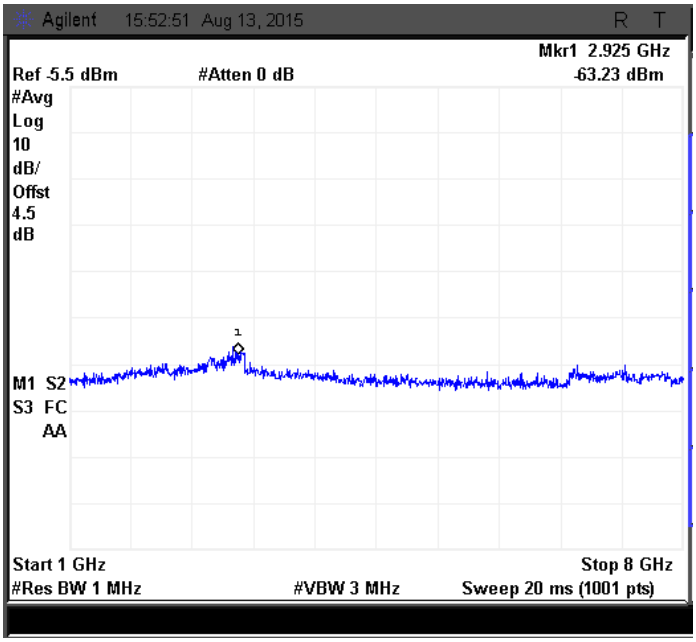

Figure 102: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 1

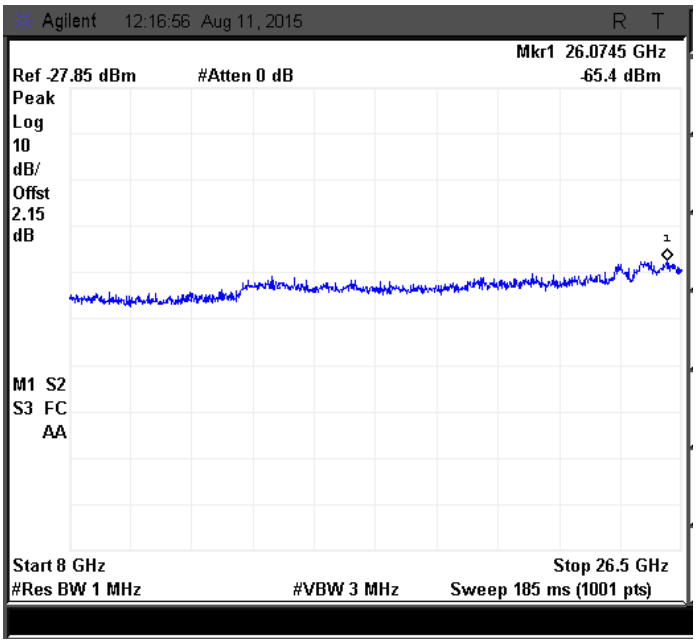

Figure 103: Emission measured with Peak Detector from 8GHz to 26.5 GHz at Ch. 1

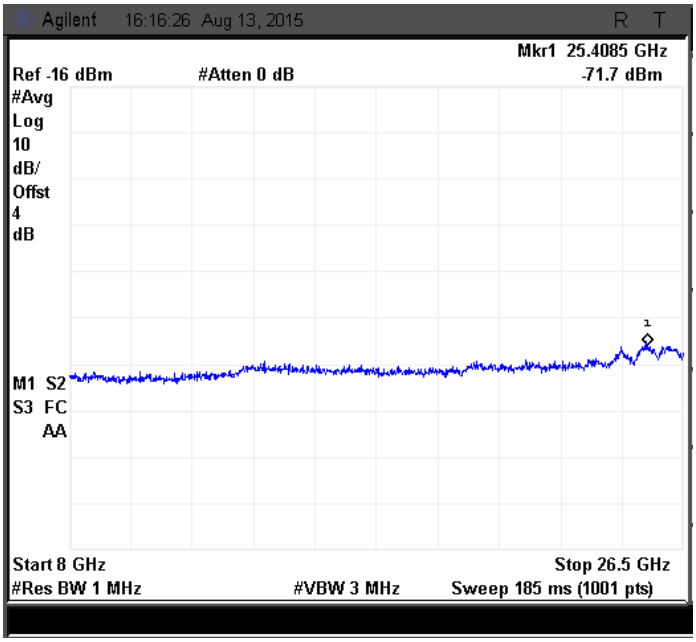

Figure 104: Emission measured with Average Detector from 8GHz to 26.5 GHz at Ch. 1

7.5.5.2 40MHZ MODULATION BW-MID CHANNEL_2442 MHZ

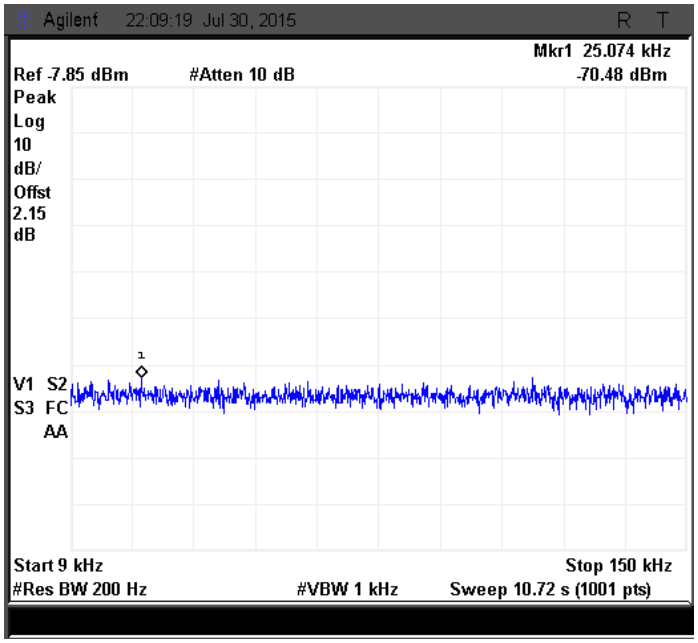

Figure 105: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 0

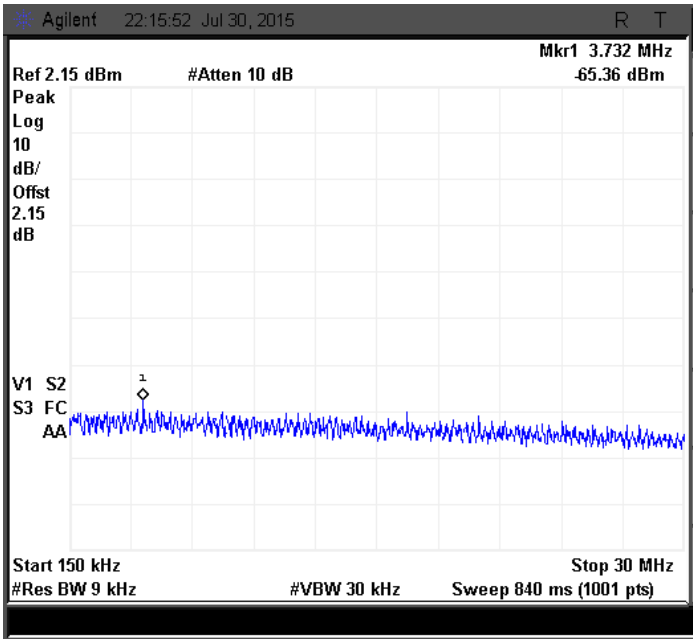

Figure 106: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 0

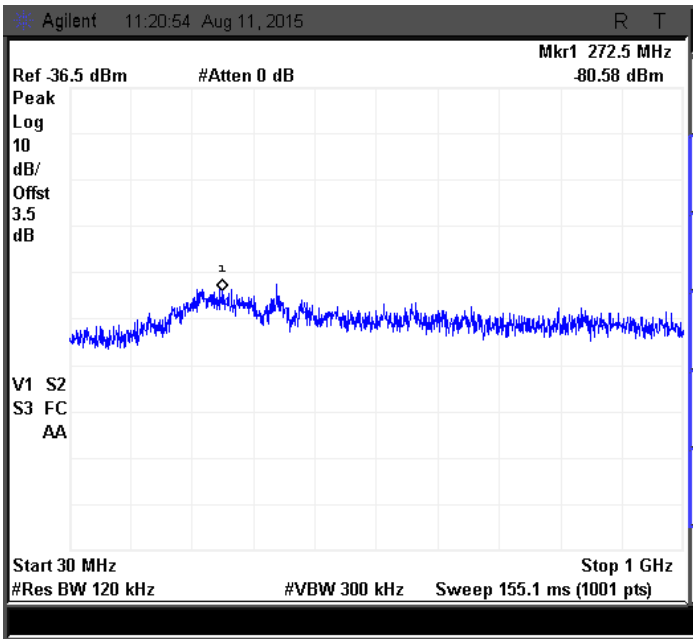

Figure 107: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 0

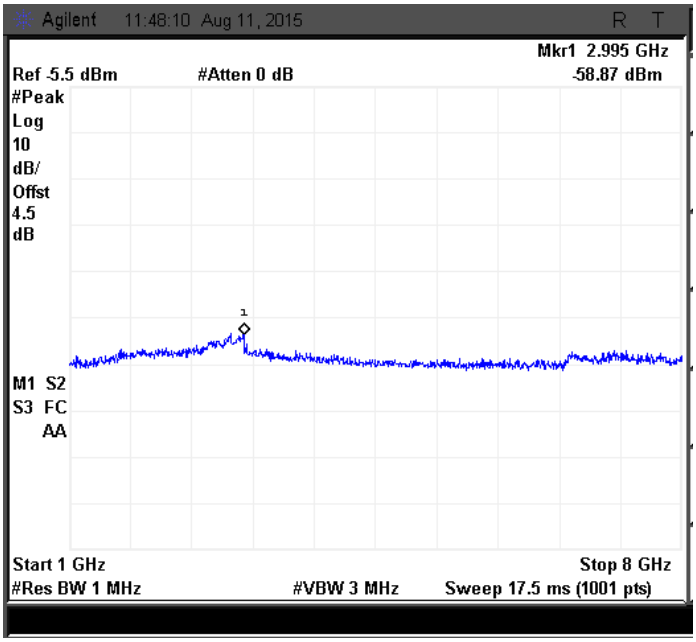

Figure 108: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 0

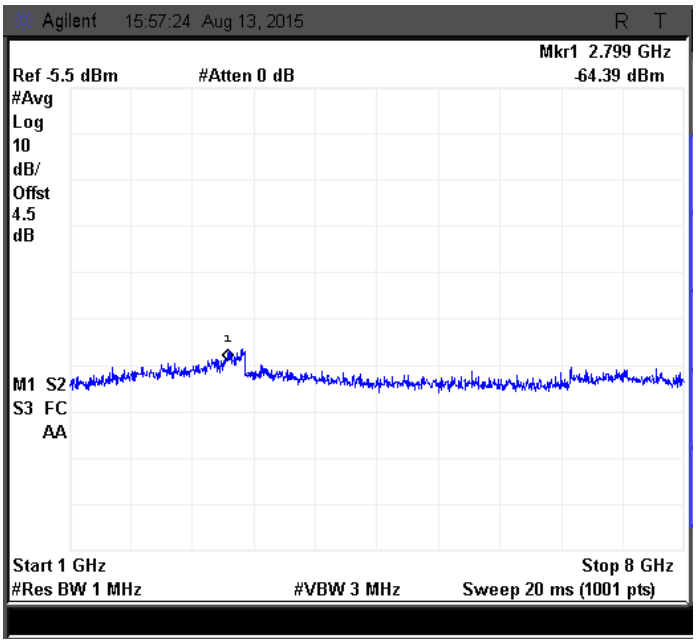

Figure 109: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 0

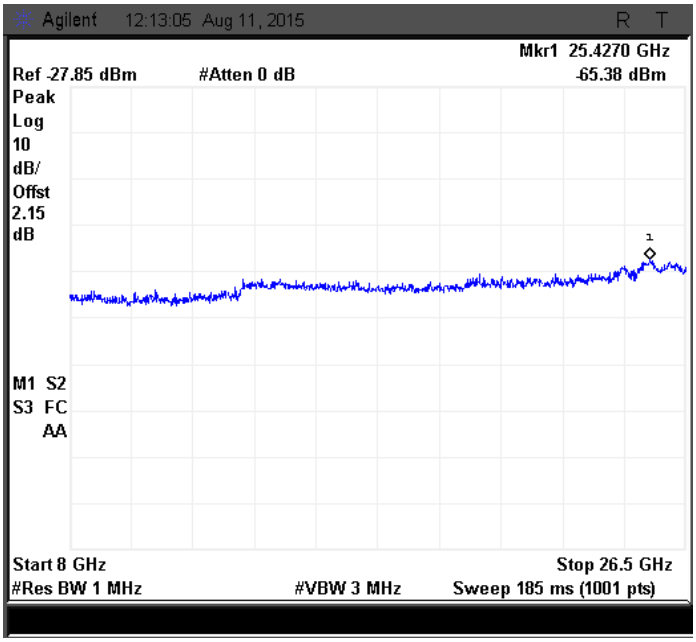

Figure 110: Emission measured with Peak Detector from 8GHz to 26.5 GHz at Ch. 0

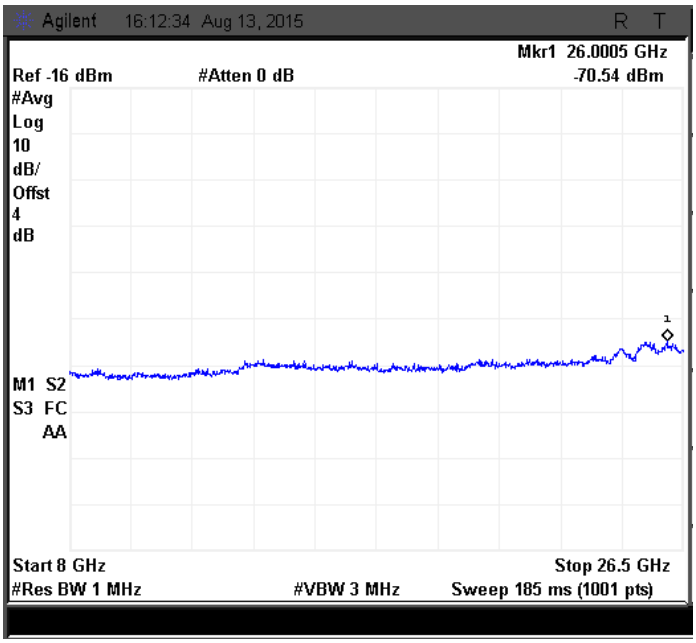

Figure 111: Emission measured with Average Detector from 8GHz to 26.5 GHz at Ch. 0

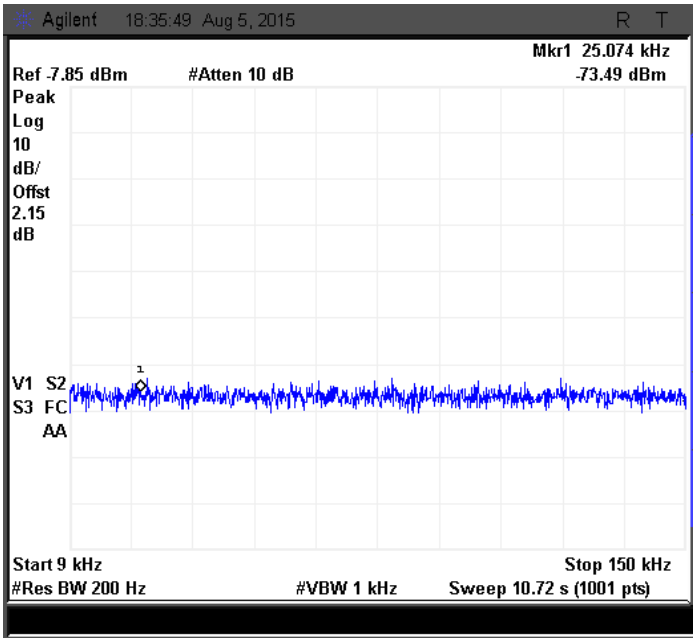

Figure 112: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 1

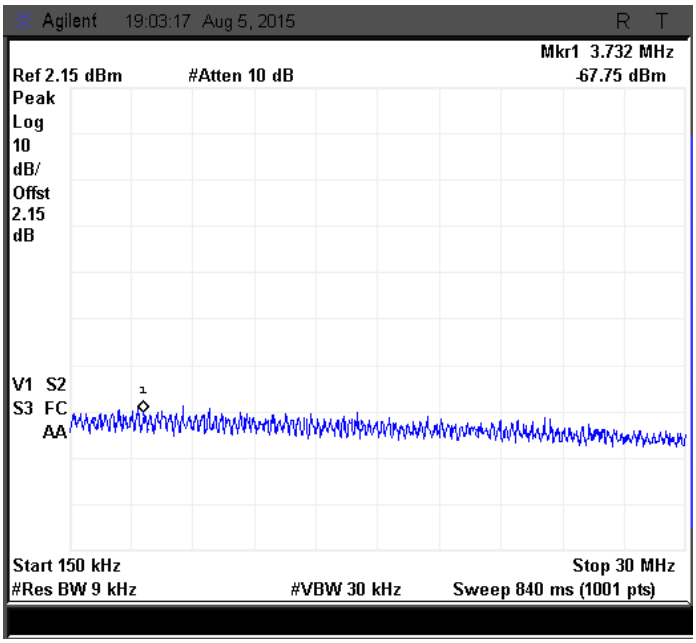

Figure 113: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 1

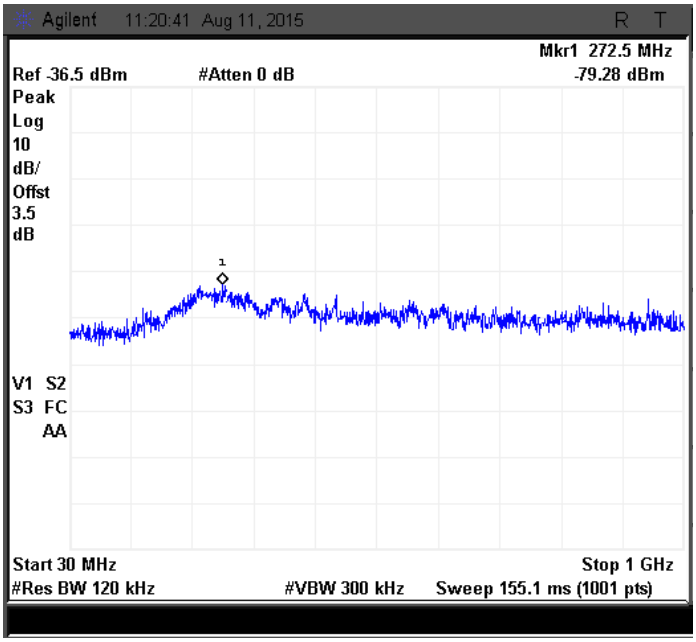

Figure 114: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 1

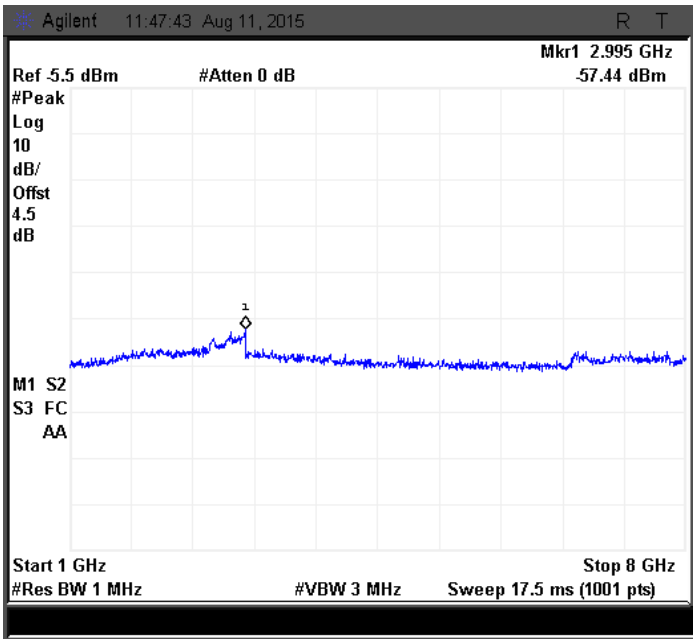

Figure 115: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 1

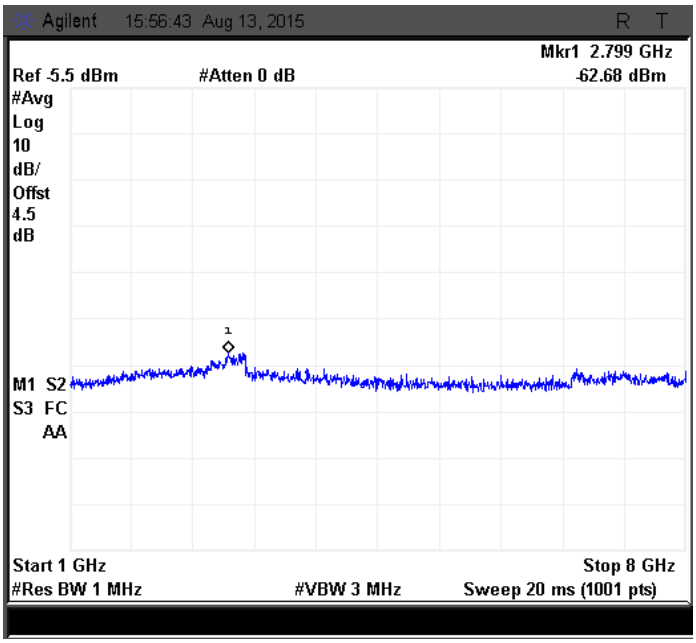

Figure 116: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 1

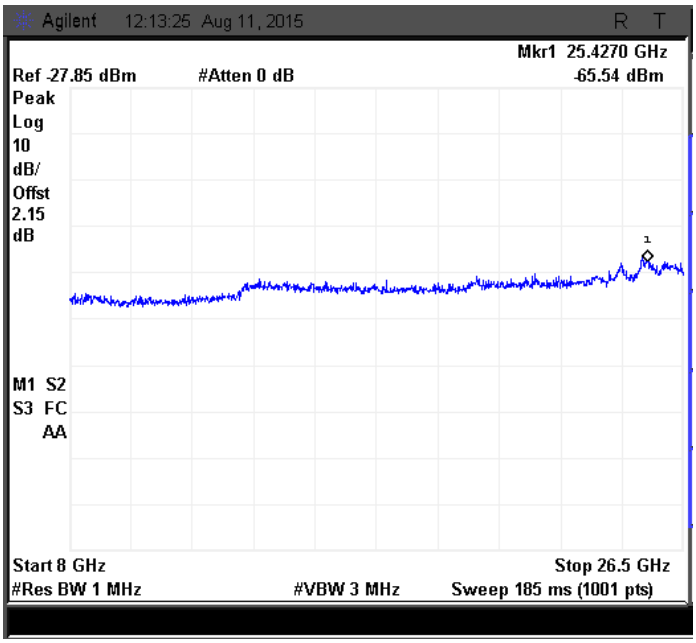

Figure 117: Emission measured with Peak Detector from 8GHz to 26.5 GHz at Ch. 1

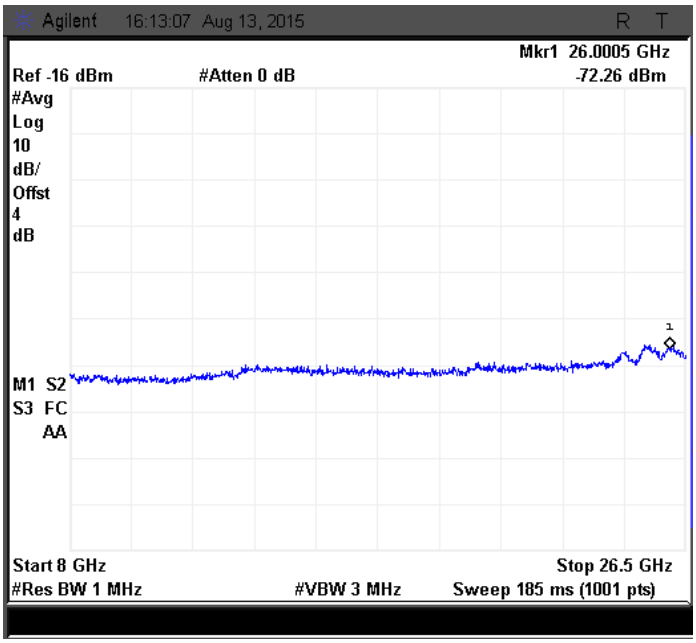

Figure 118: Emission measured with Average Detector from 8GHz to 26.5 GHz at Ch. 1

7.5.5.3 40MHZ MODULATION BW-HIGH CHANNEL_2462 MHZ

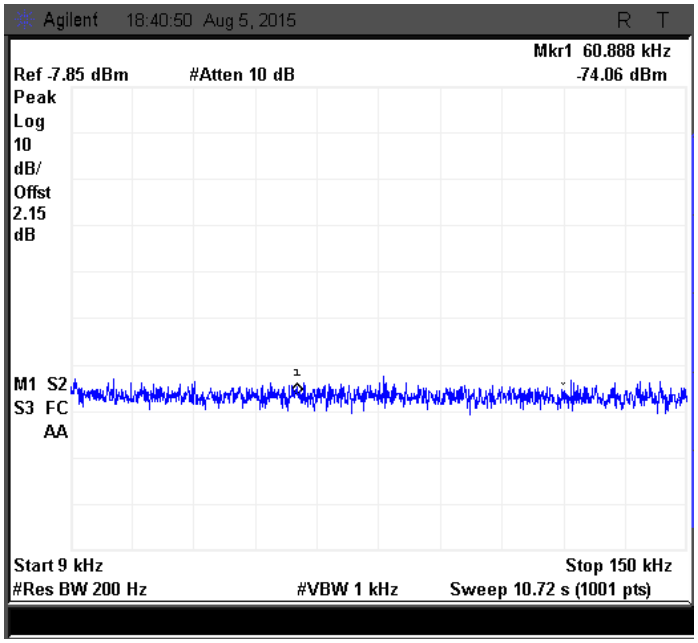

Figure 119: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 0

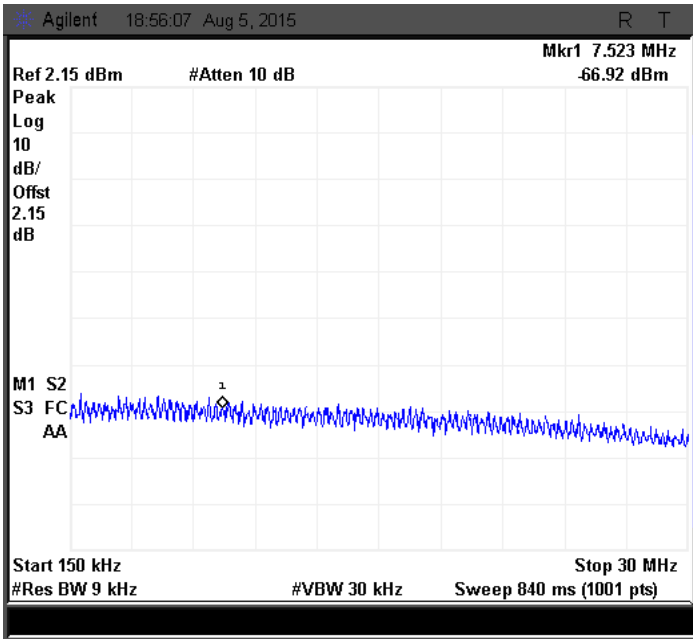

Figure 120: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 0

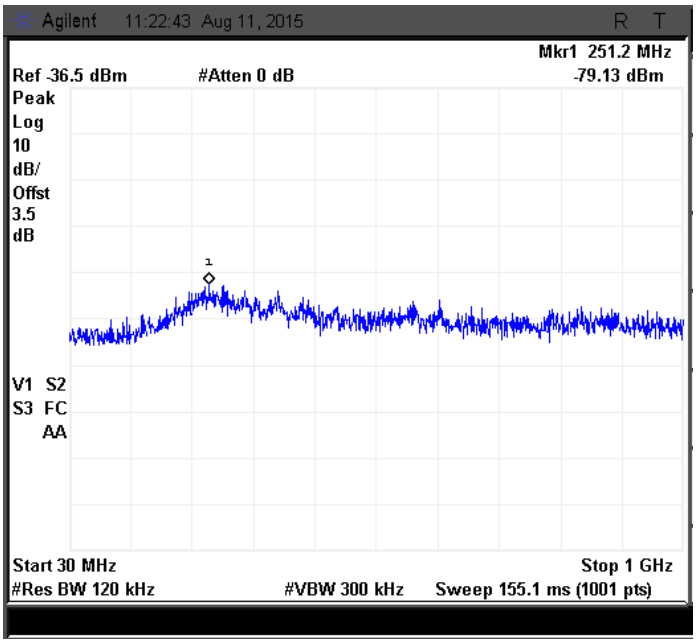

Figure 121: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 0

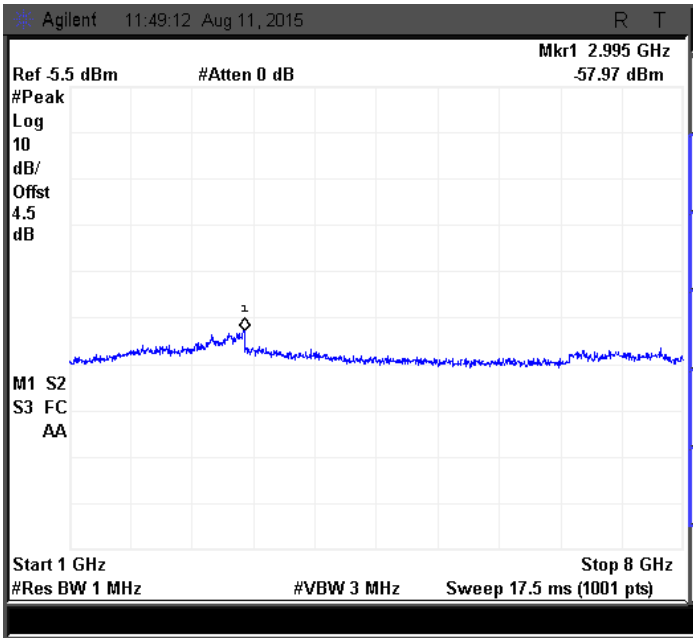

Figure 122: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 0

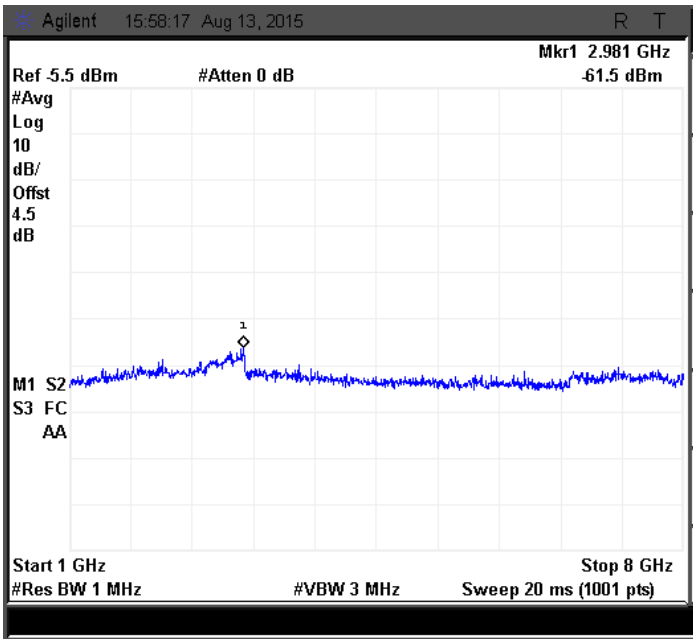

Figure 123: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 0

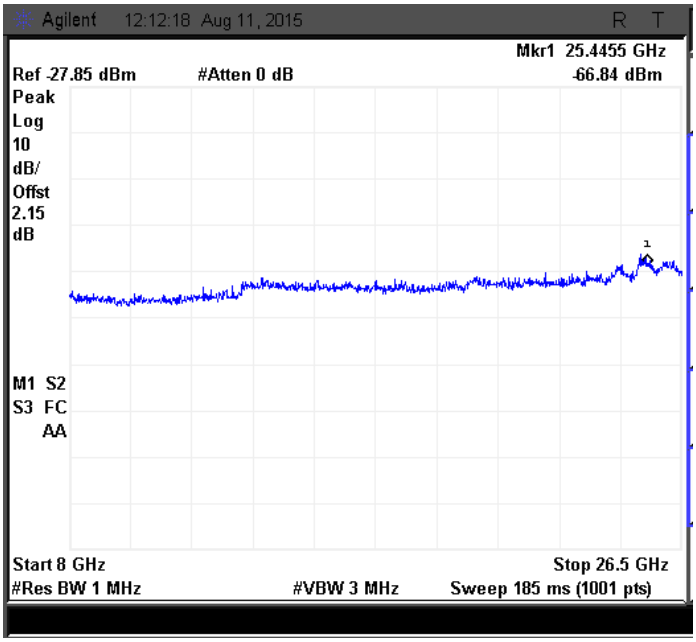

Figure 124: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 0

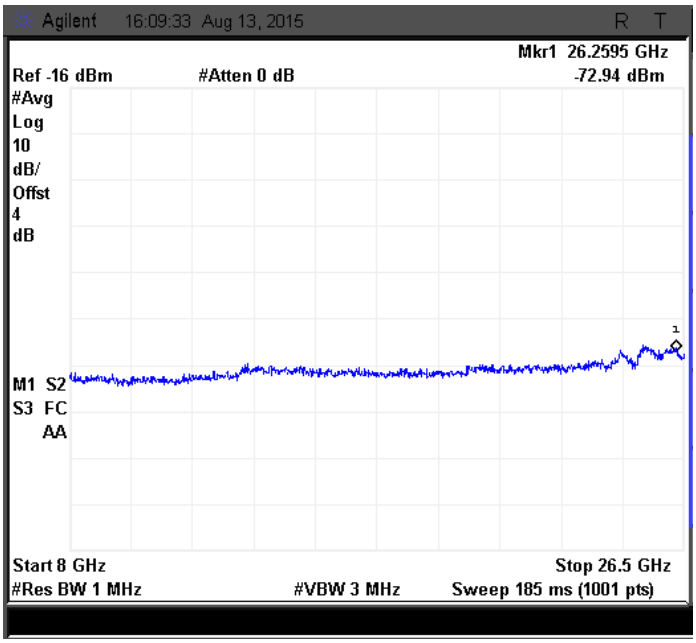

Figure 125: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 0

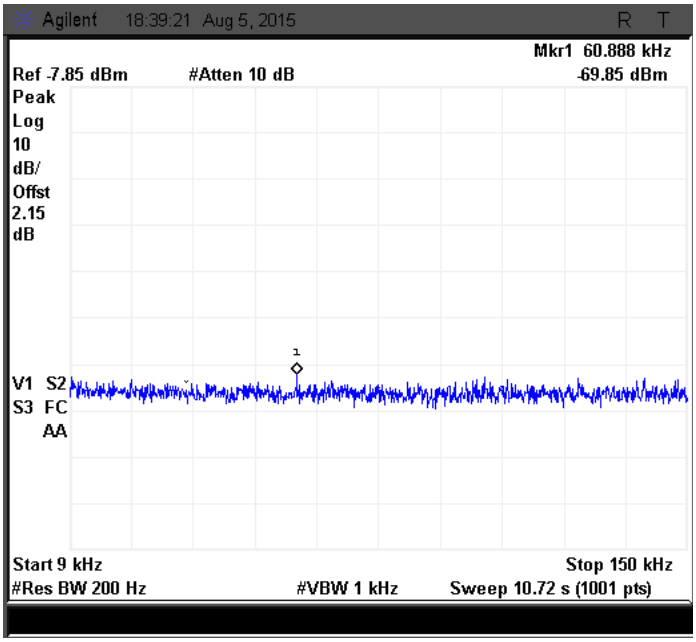

Figure 126: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 1

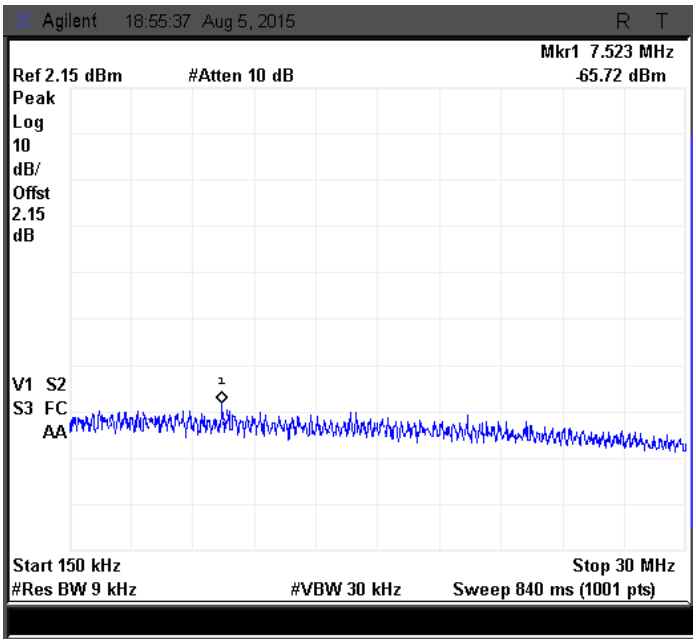

Figure 127: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 1

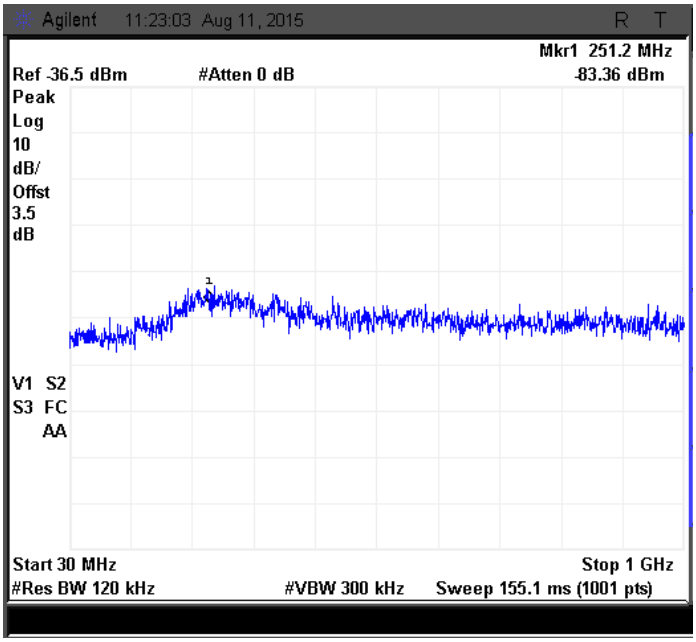

Figure 128: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 1

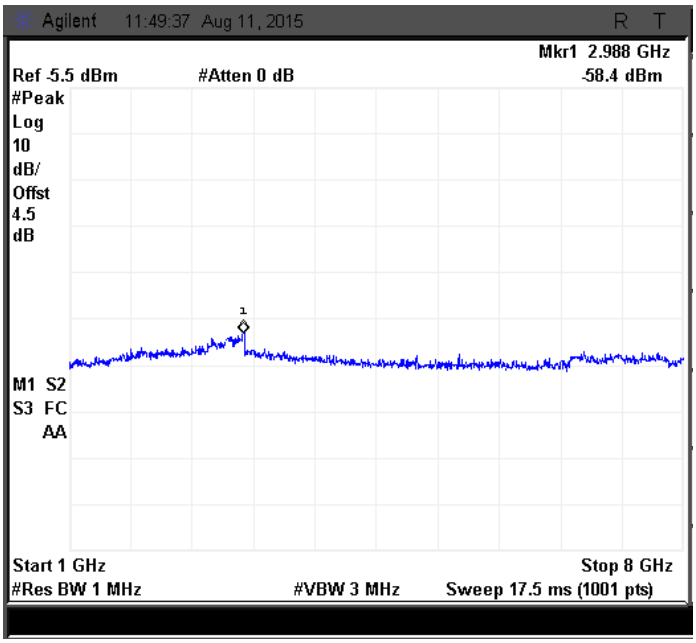

Figure 129: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 1

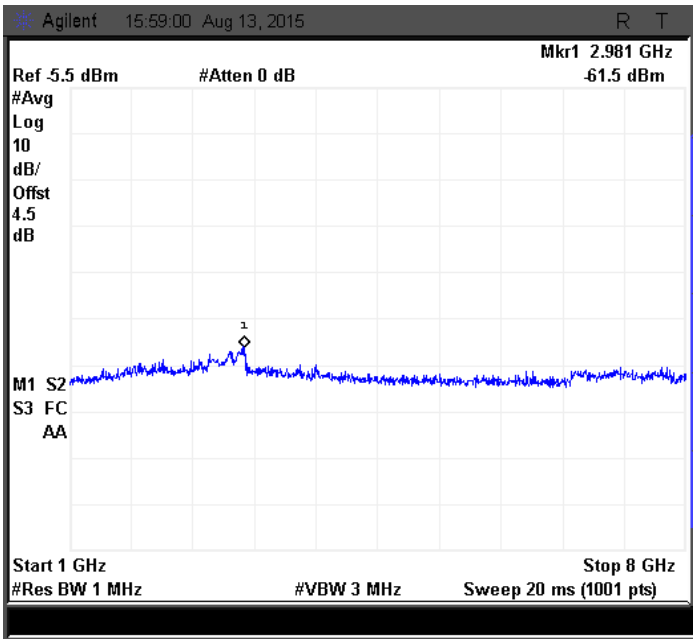

Figure 130: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 1

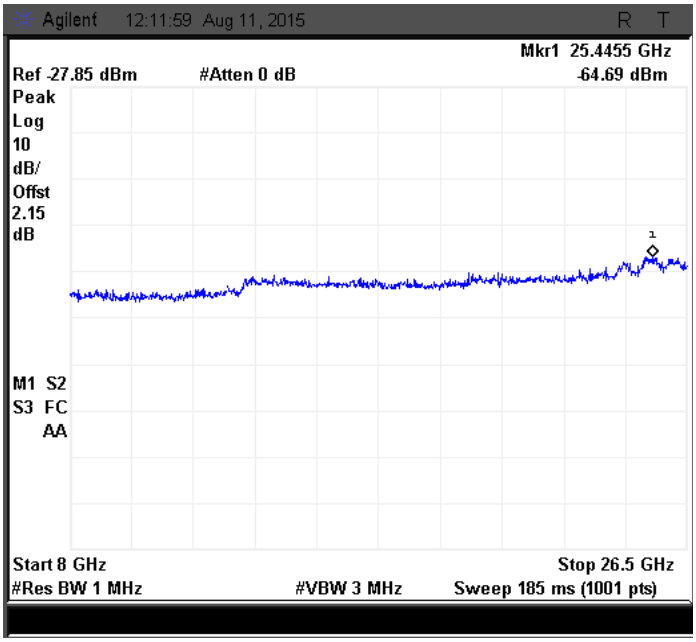

Figure 131: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 1

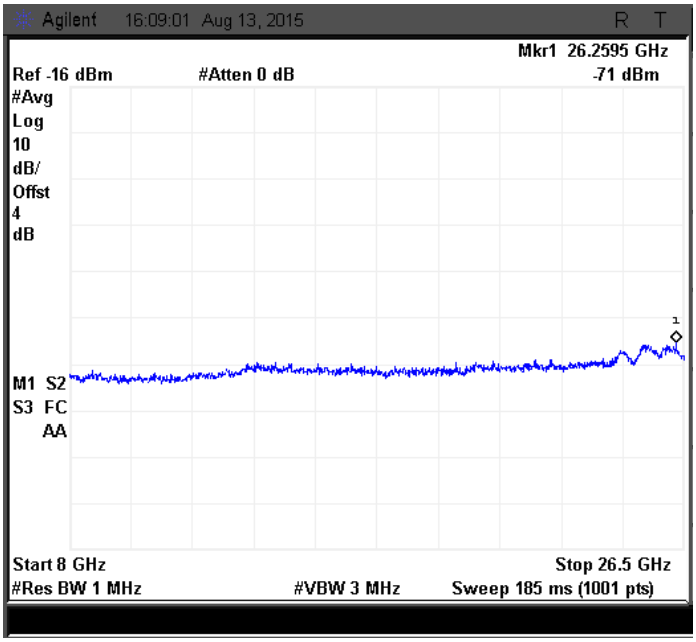

Figure 132: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 1

7.5.5.4 5MHZ MODULATION BW-LOW CHANNEL_2412 MHZ

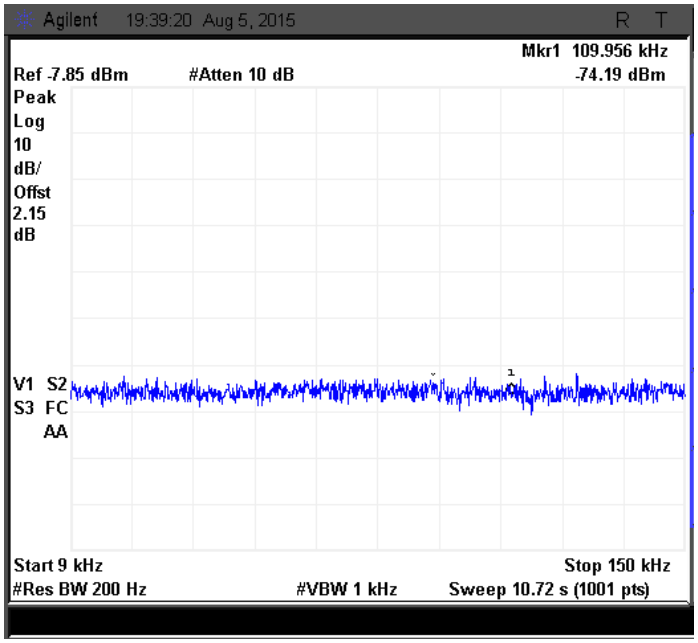

Figure 133: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 0

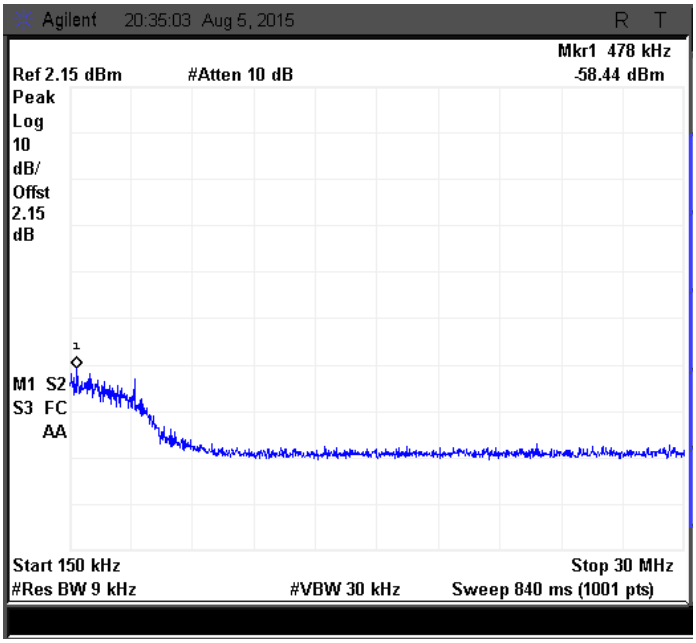

Figure 134: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 0

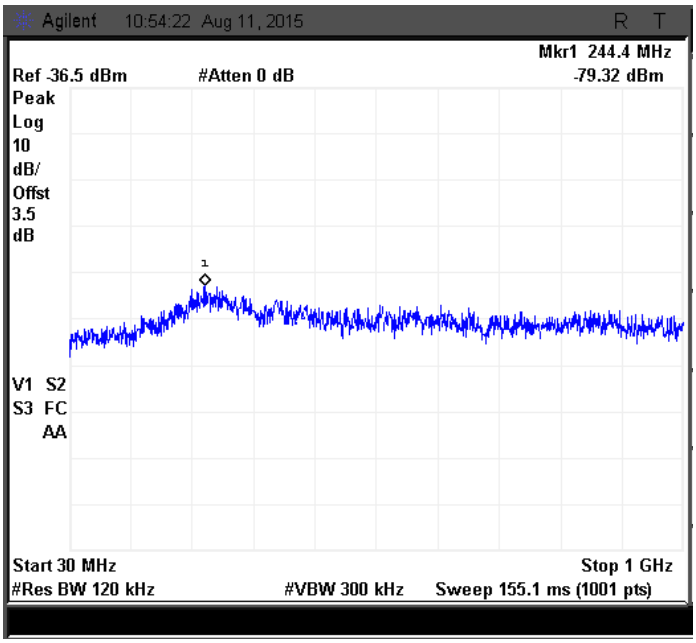

Figure 135: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 0

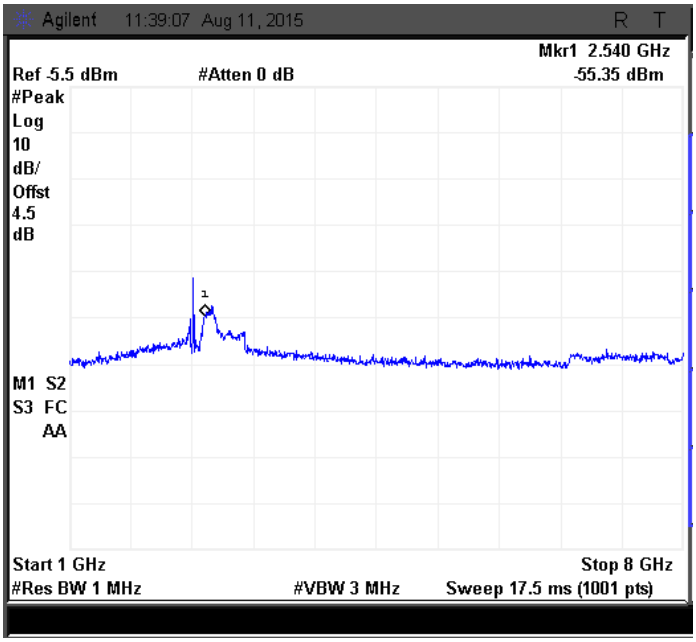

Figure 136: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 0

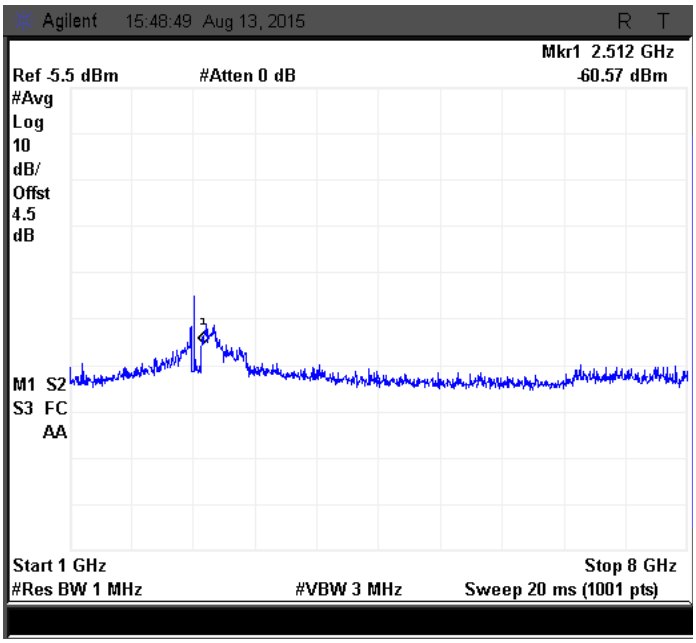

Figure 137: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 0

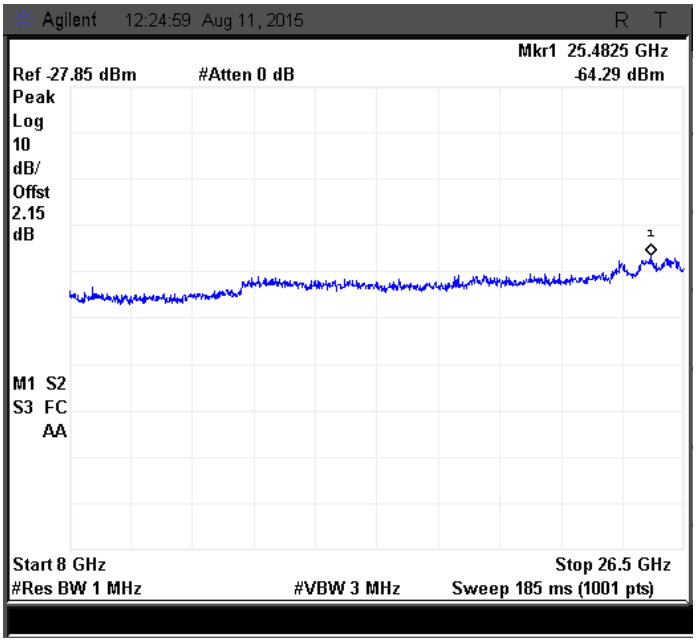

Figure 138: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 0

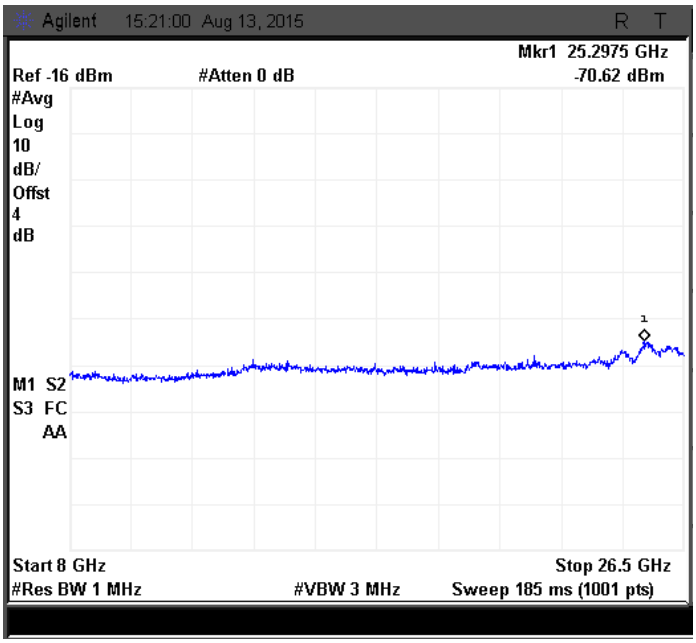

Figure 139: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 0

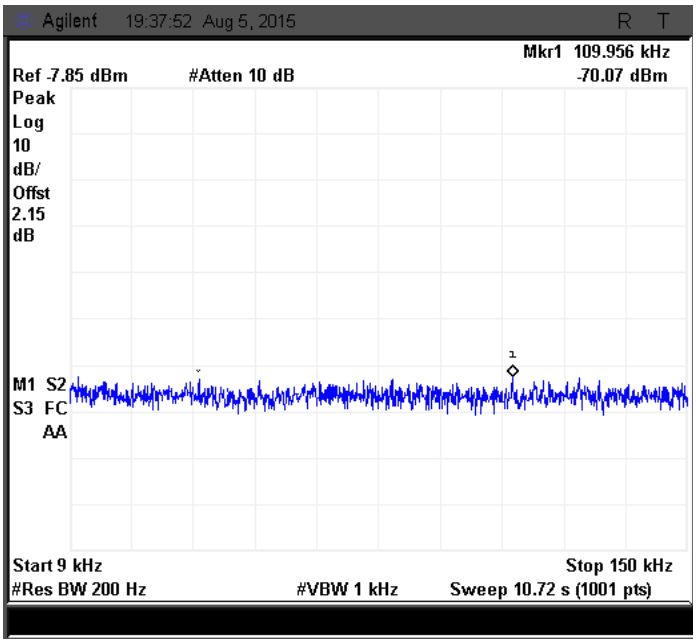

Figure 140: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 1

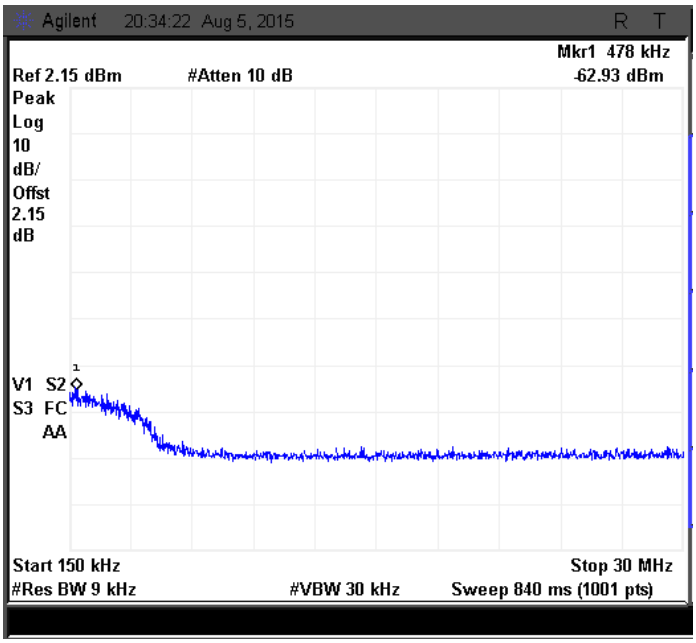

Figure 141: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 1

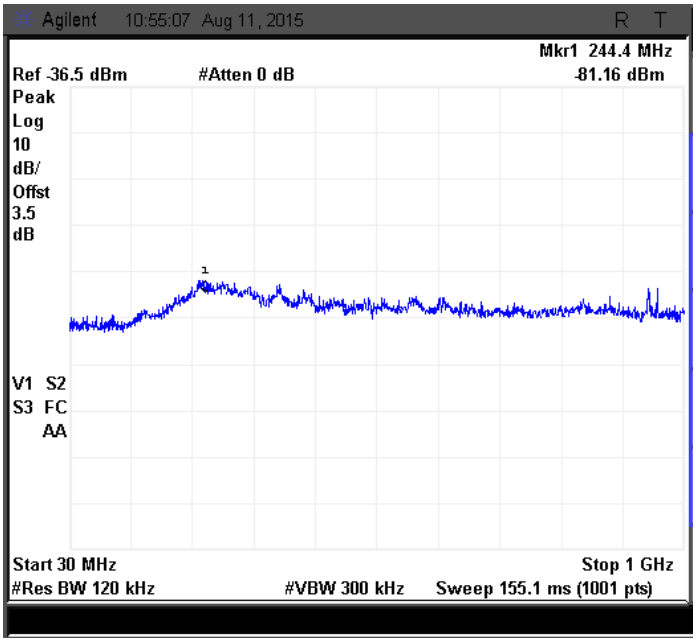

Figure 142: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 1

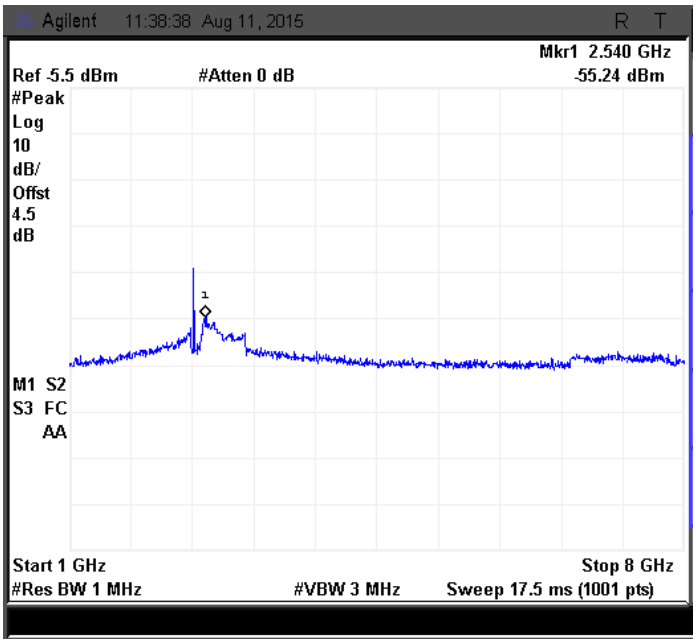

Figure 143: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 1

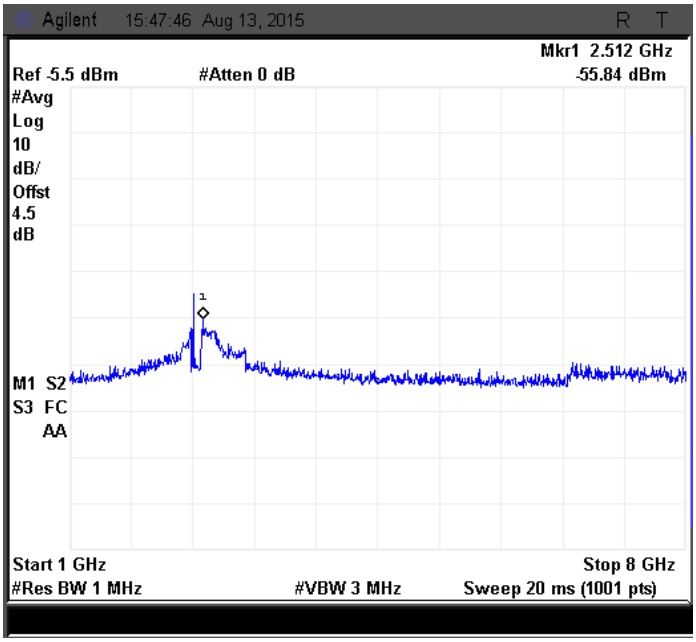

Figure 144: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 1

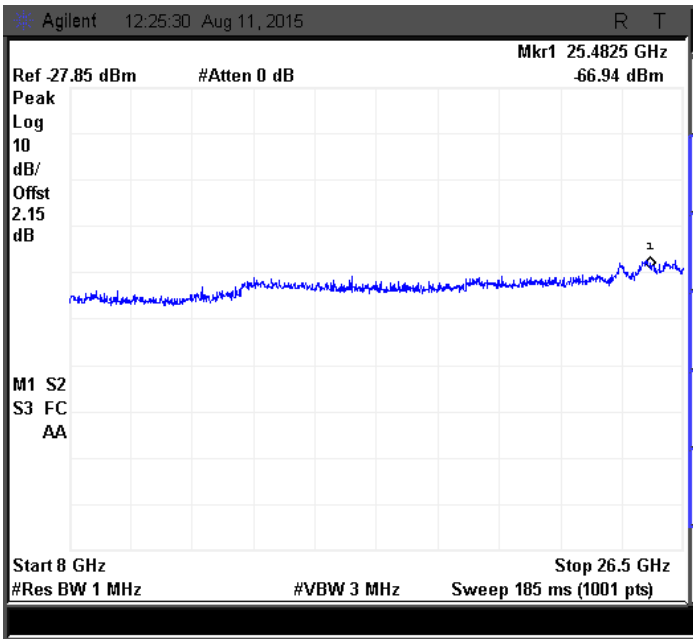

Figure 145: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 1

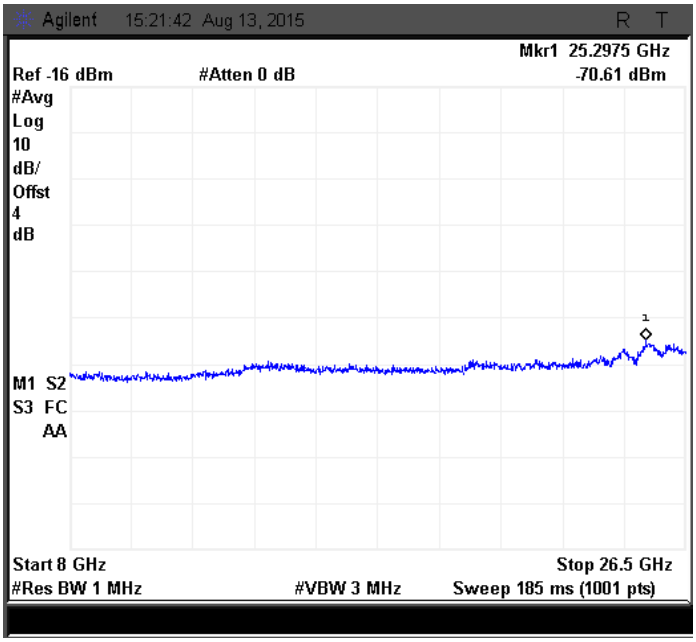

Figure 146: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 1

7.5.5.5 5MHZ MODULATION BW-MID CHANNEL_2442 MHZ

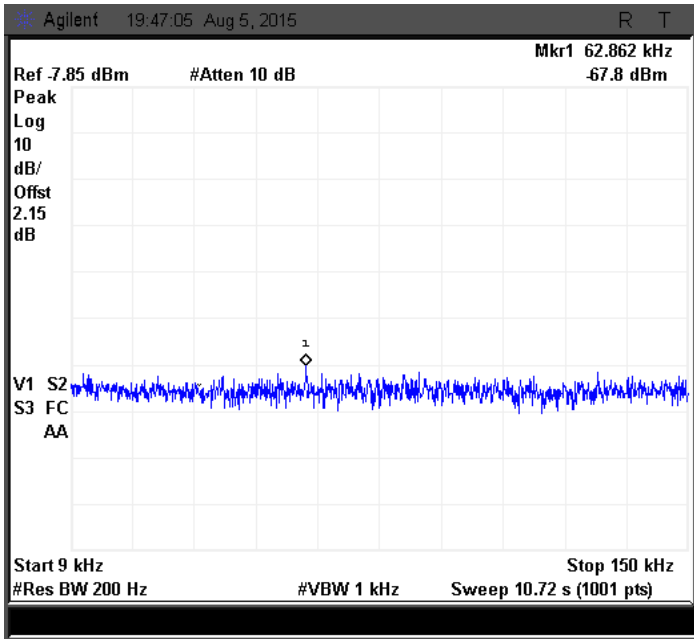

Figure 147: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 0

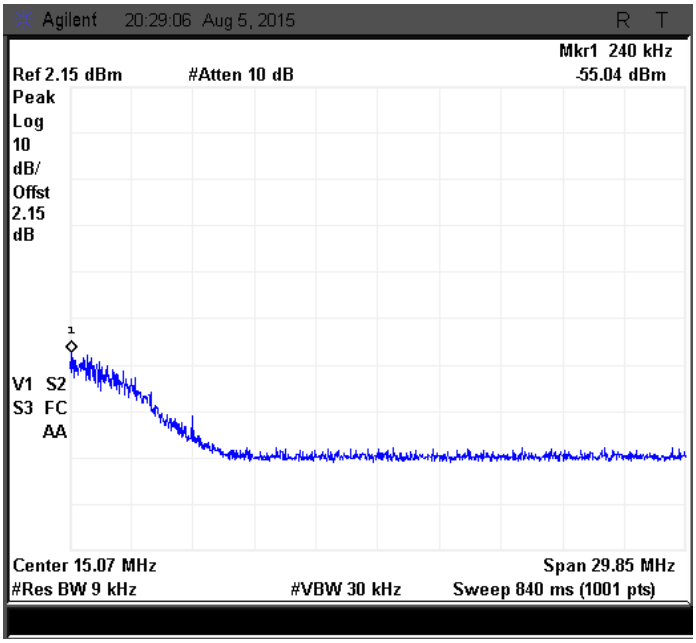

Figure 148: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 0

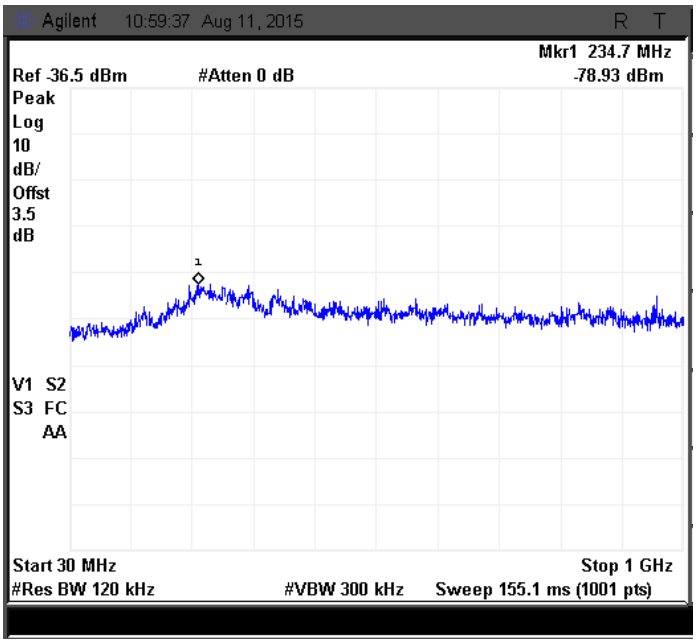

Figure 149: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 0

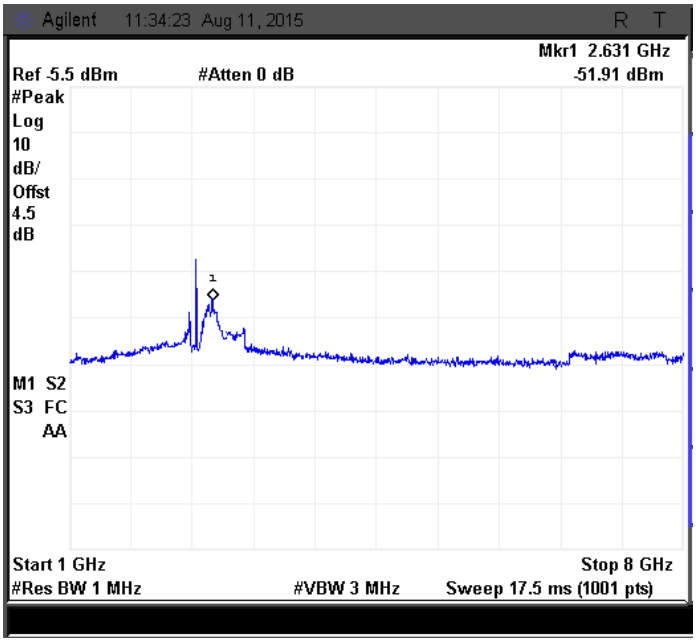

Figure 150: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 0

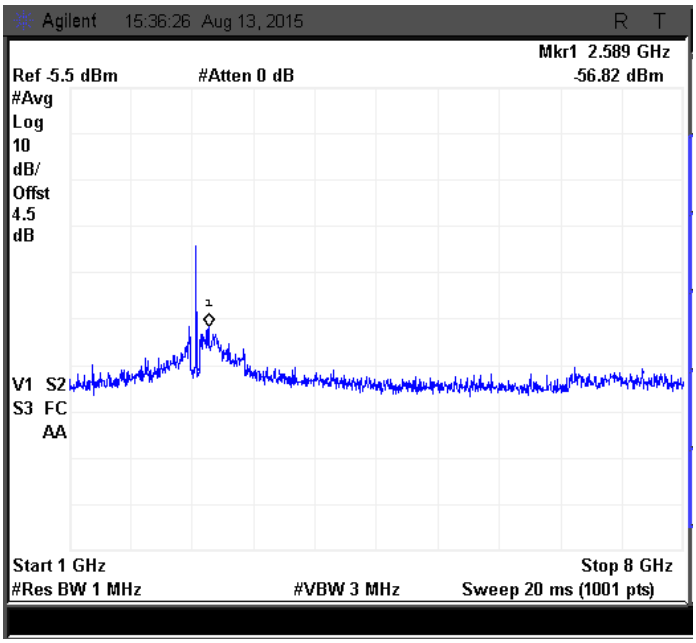

Figure 151: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 0

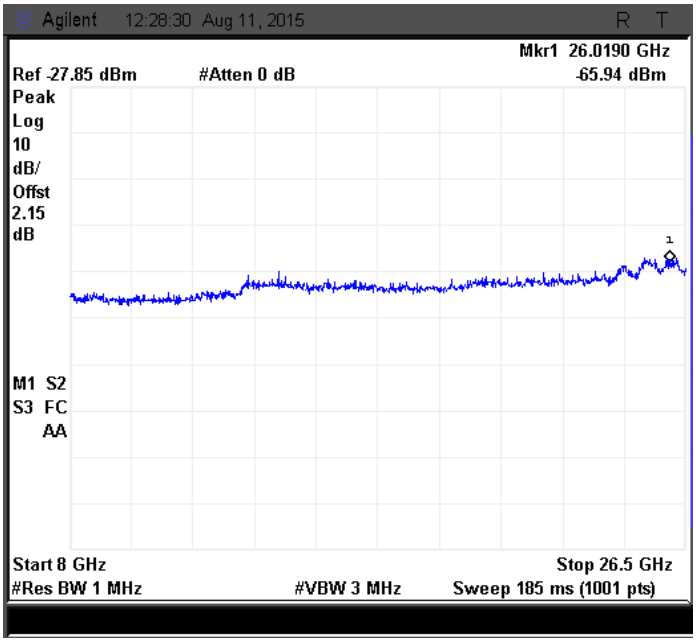

Figure 152: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 0

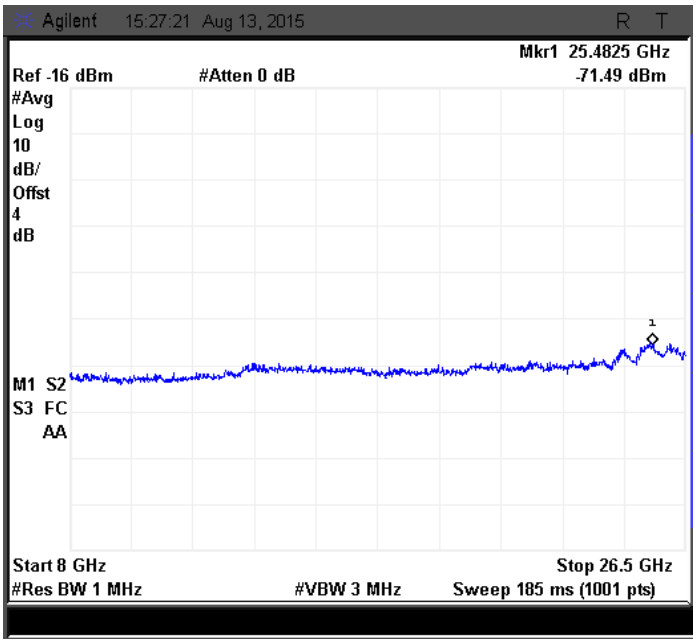

Figure 153: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 0

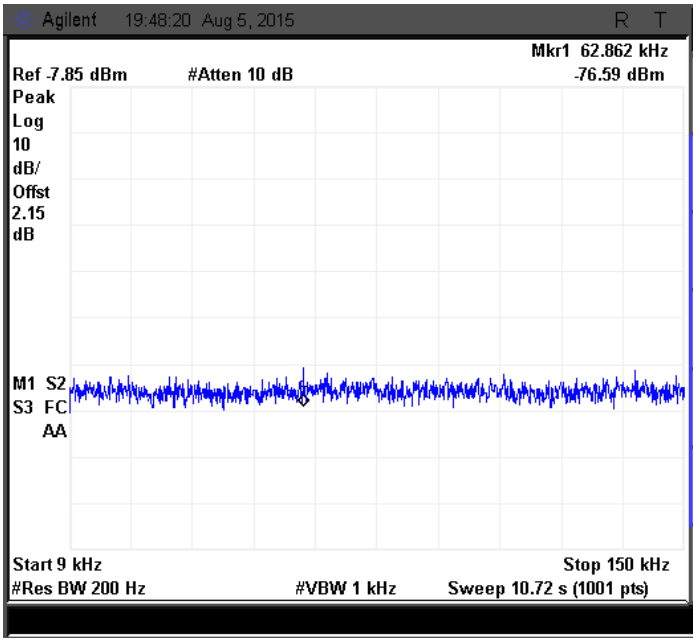

Figure 154: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 1

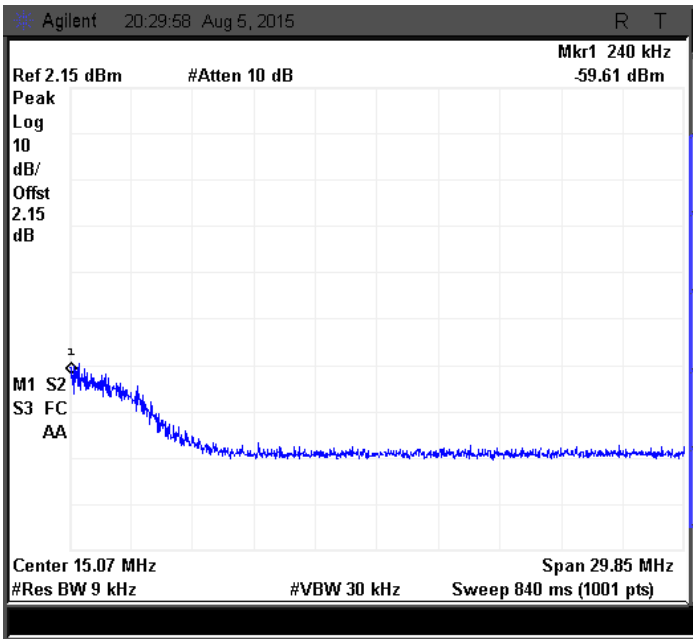

Figure 155: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 1

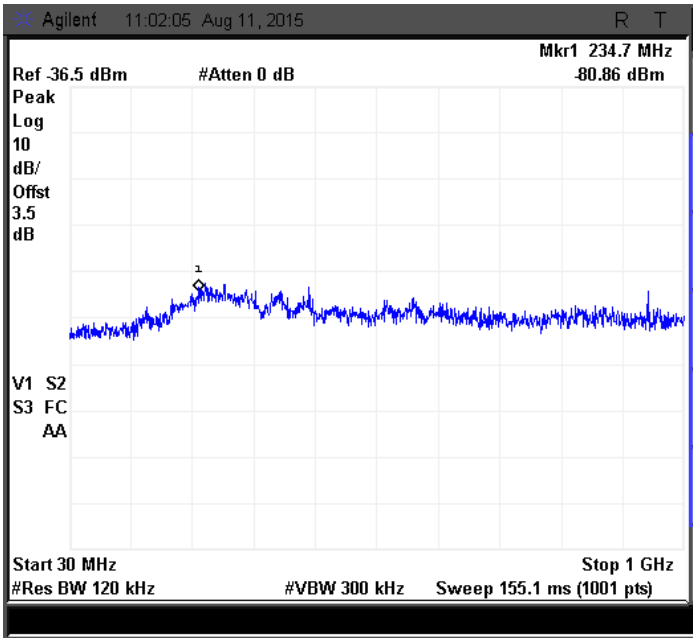

Figure 156: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 1

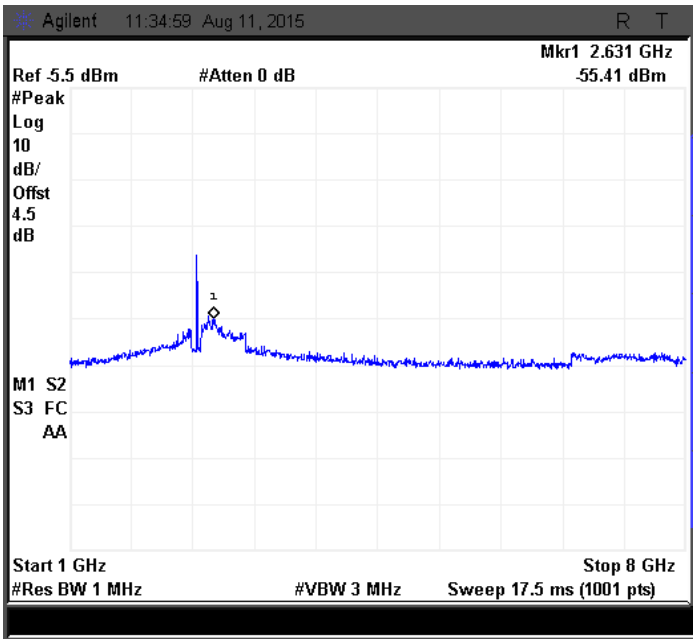

Figure 157: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 1

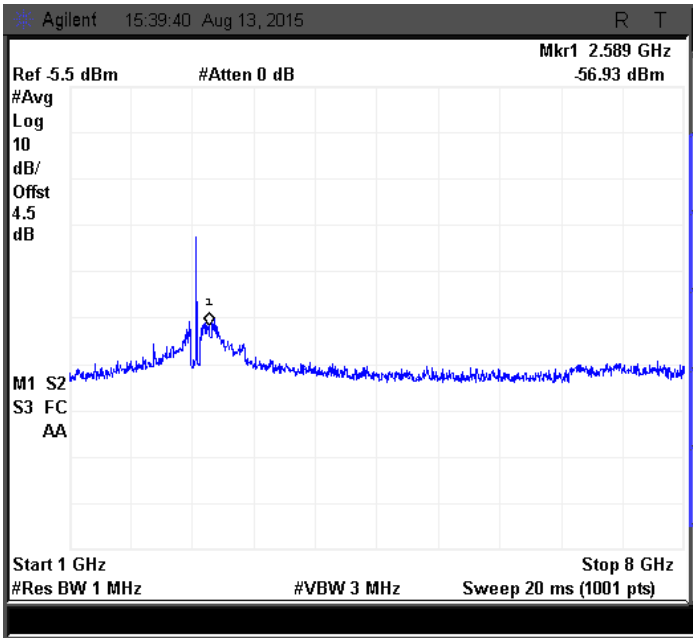

Figure 158: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 1

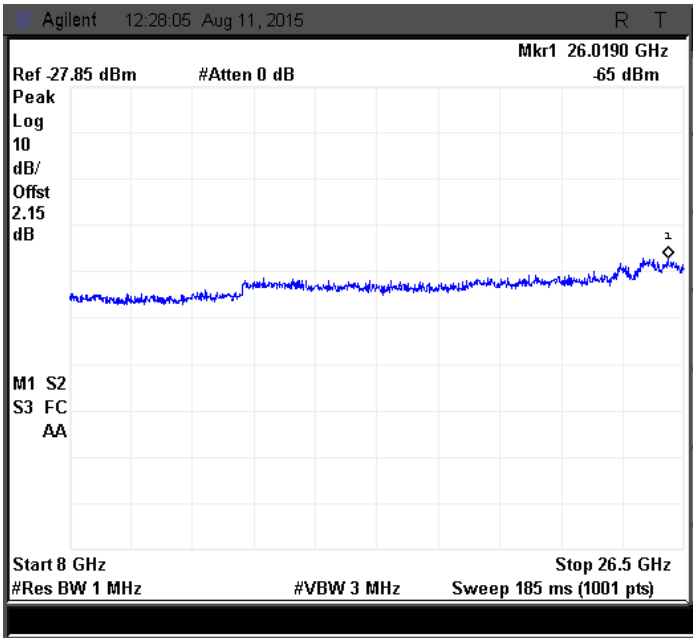

Figure 159: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 1

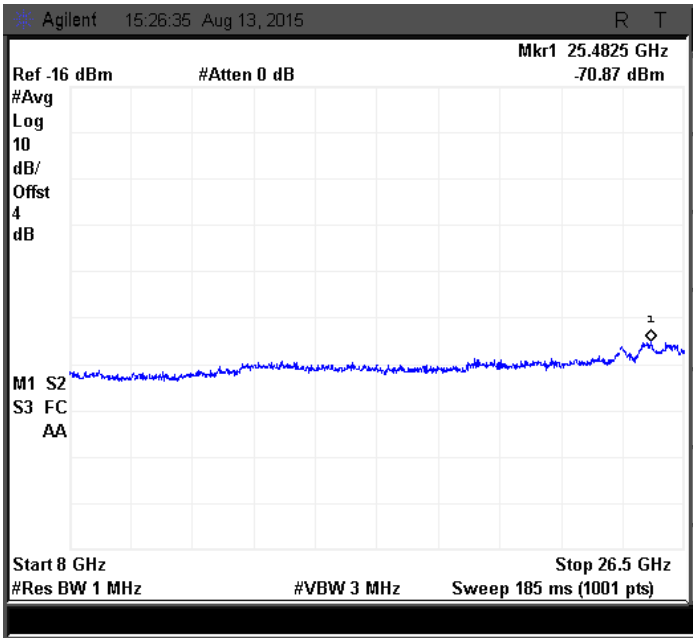

Figure 160: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 1

7.5.5.6 5MHZ MODULATION BW-HIGH CHANNEL_2477 MHZ

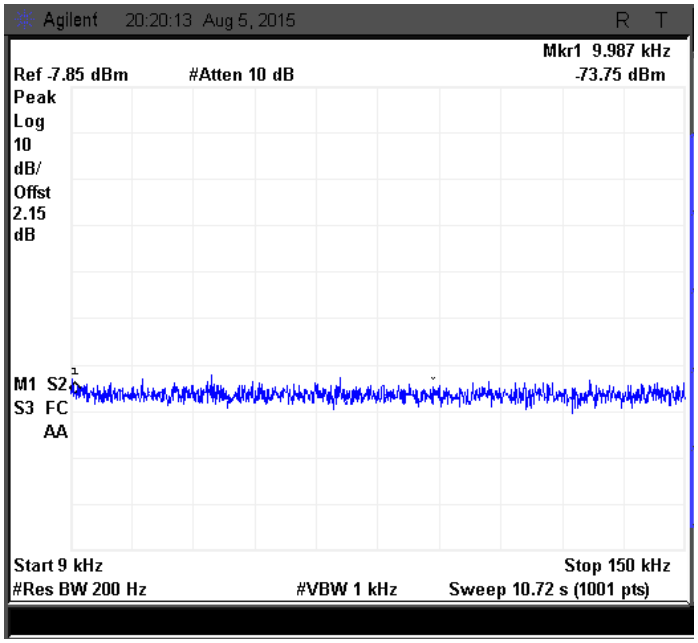

Figure 161: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 0

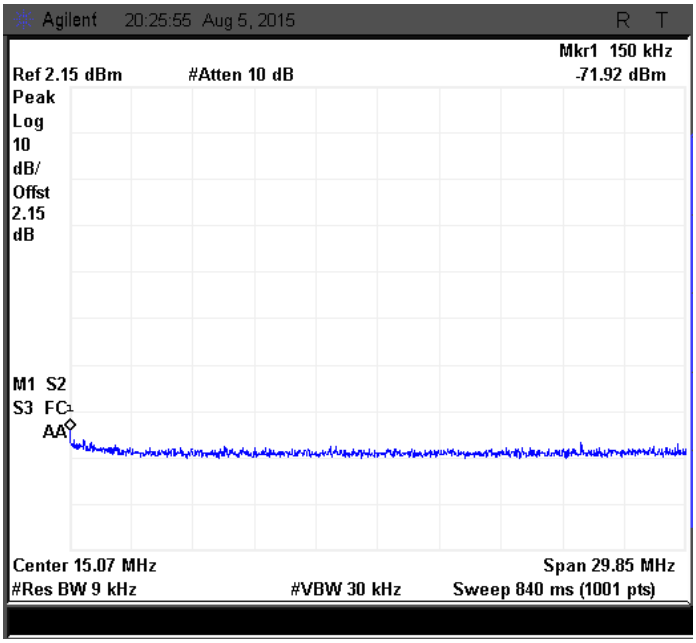

Figure 162: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 0

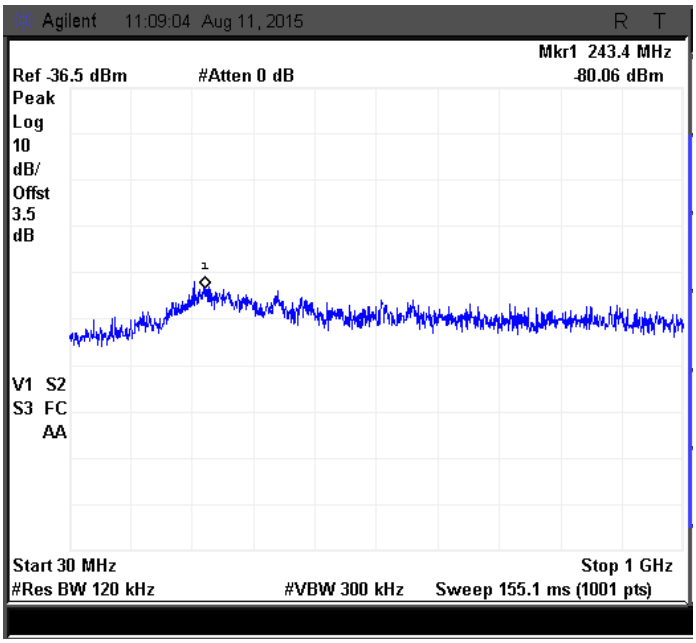

Figure 163: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 0

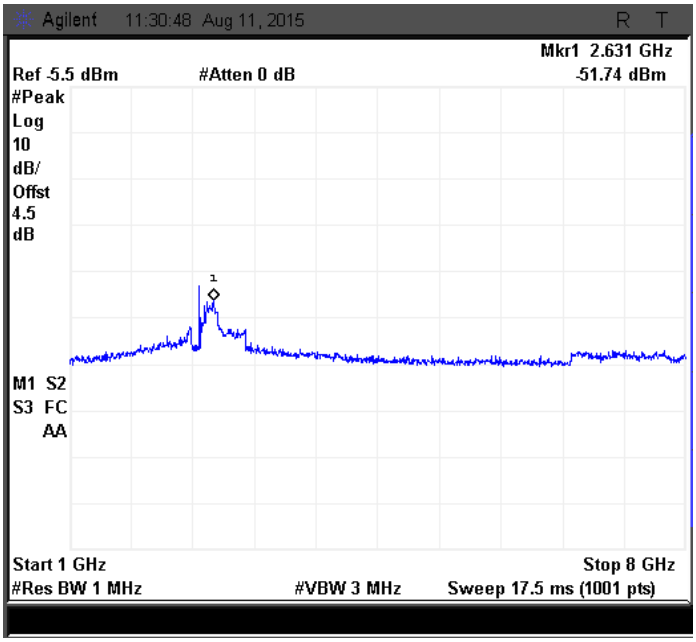

Figure 164: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 0

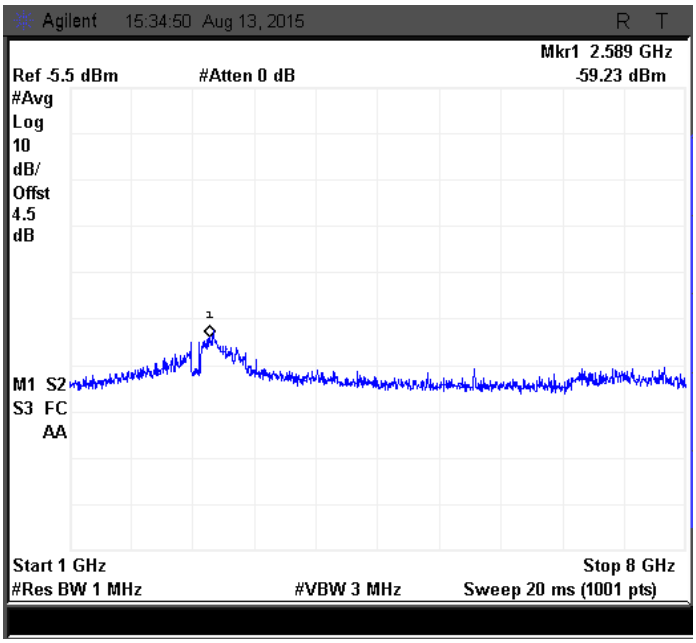

Figure 165: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 0

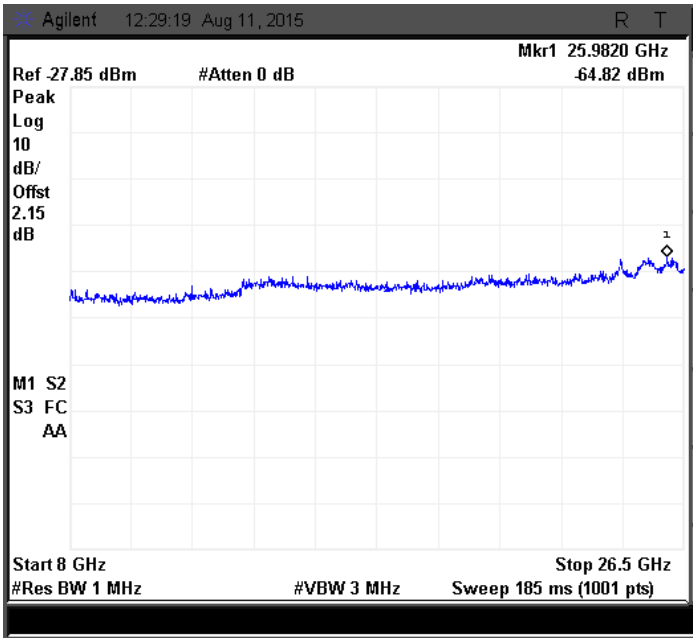

Figure 166: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 0

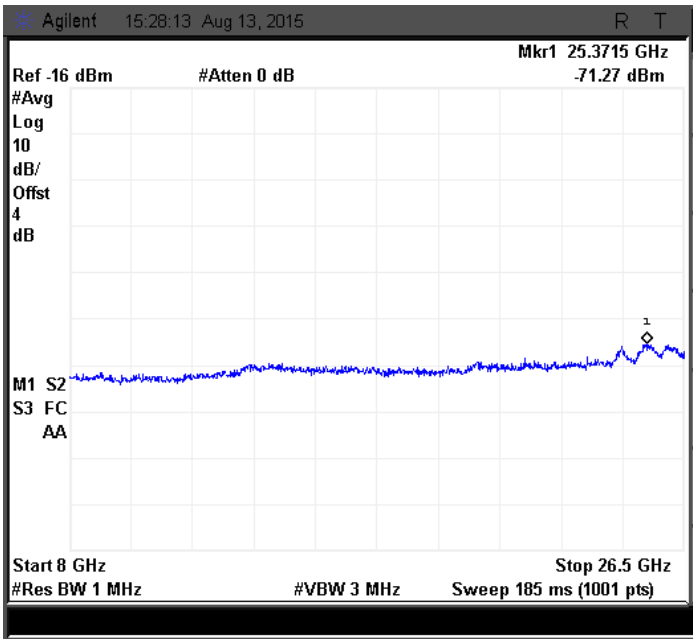

Figure 167: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 0

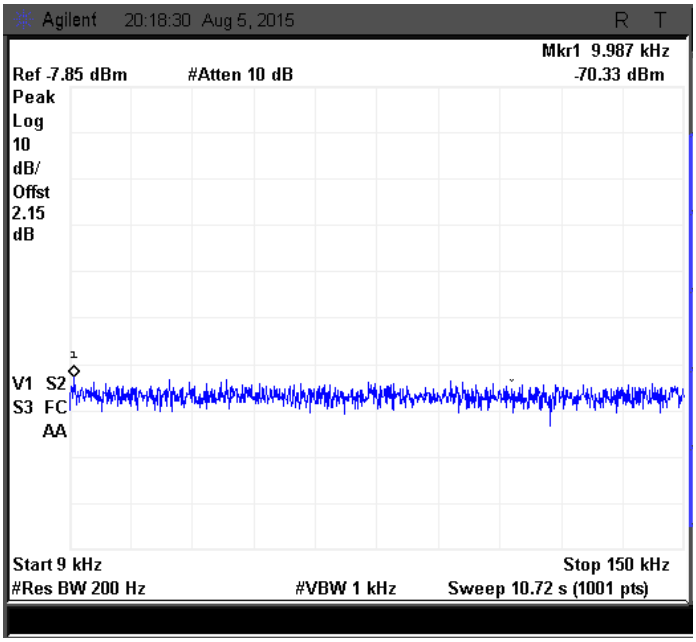

Figure 168: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 1

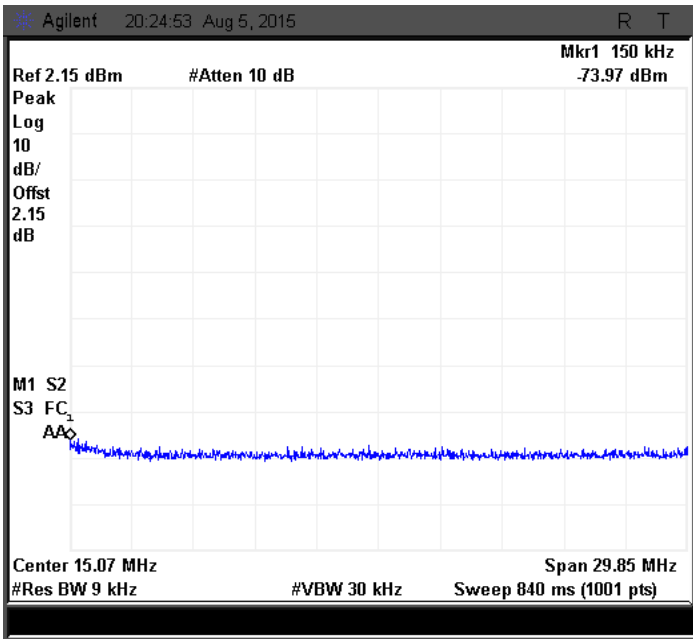

Figure 169: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 1

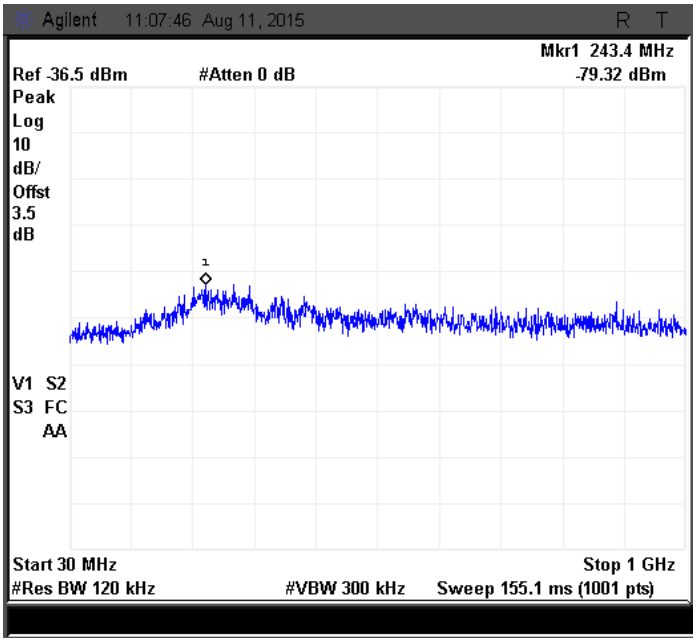

Figure 170: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 1

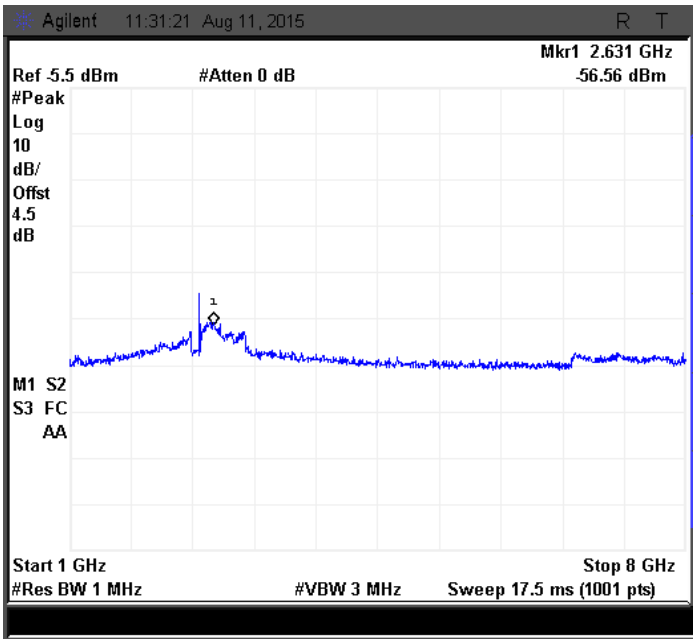

Figure 171: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 1

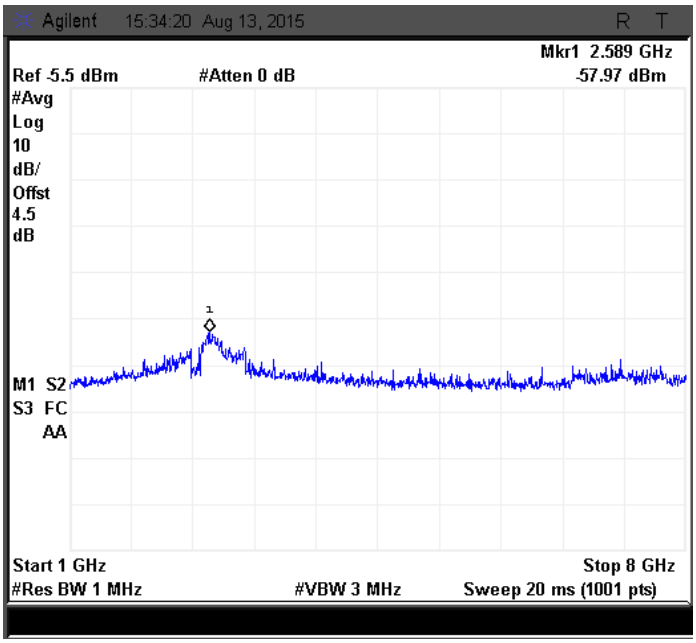

Figure 172: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 1

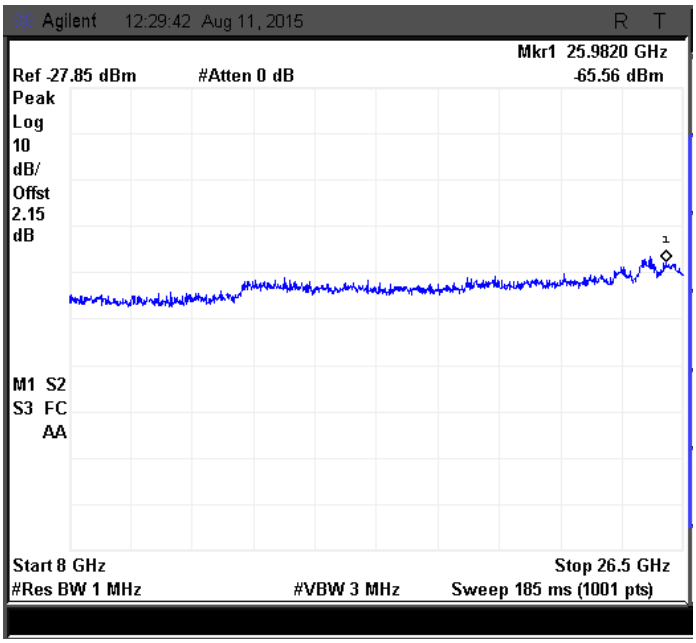

Figure 173: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 1

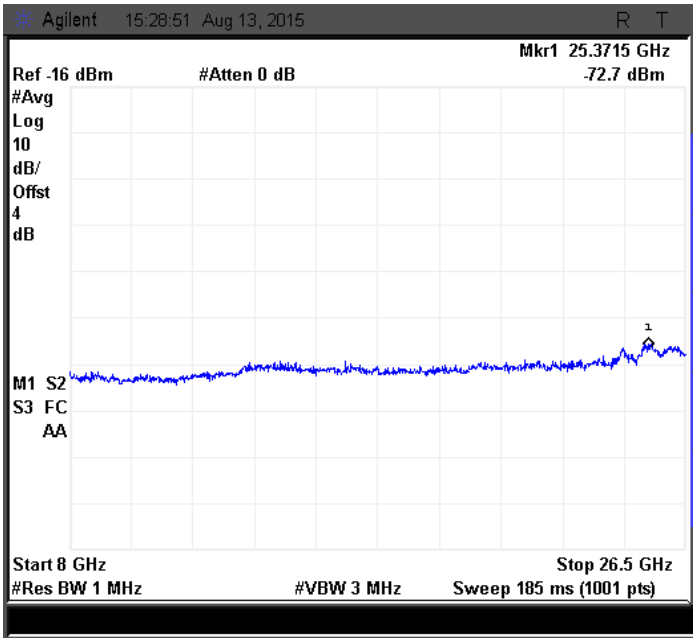

Figure 174: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 1

7.5.6 RESULT (SUPPORTING GRAPHS / DATA) FOR 17DBI DISH CONDITION

7.5.6.1 40MHZ MODULATION BW-LOW CHANNEL_2427 MHZ

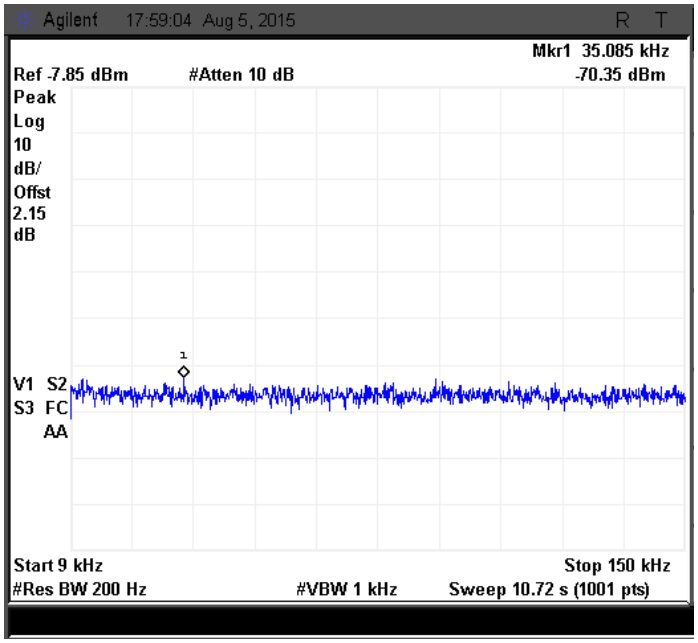

Figure 175: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 0

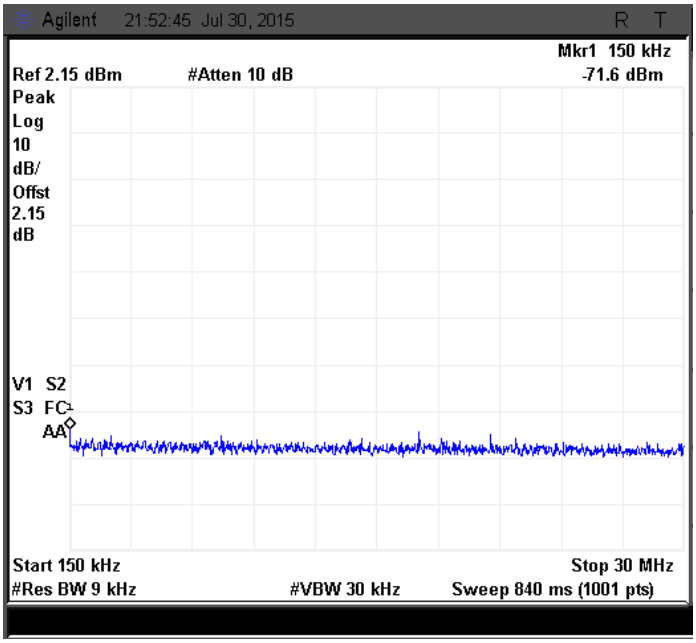

Figure 176: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 0

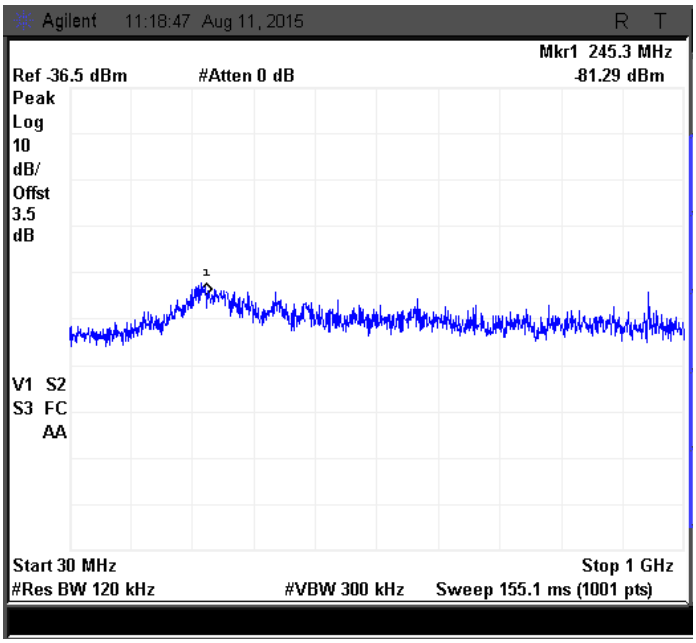

Figure 177: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 0

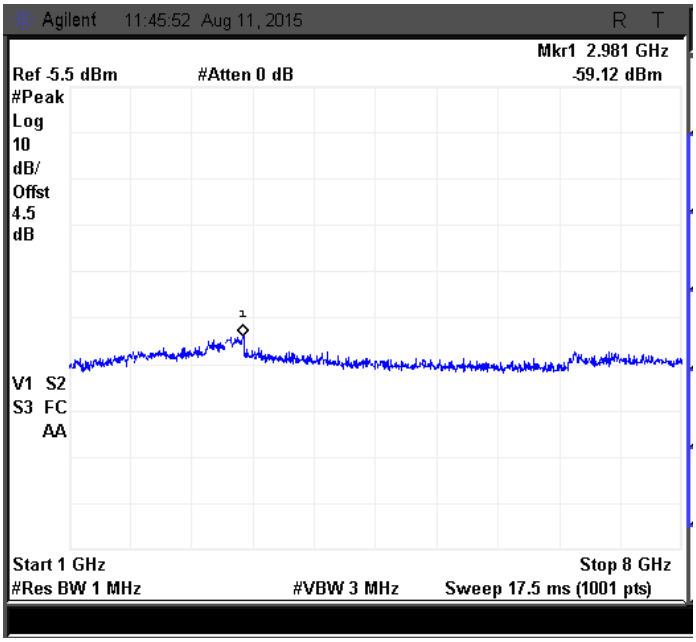

Figure 178: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 0

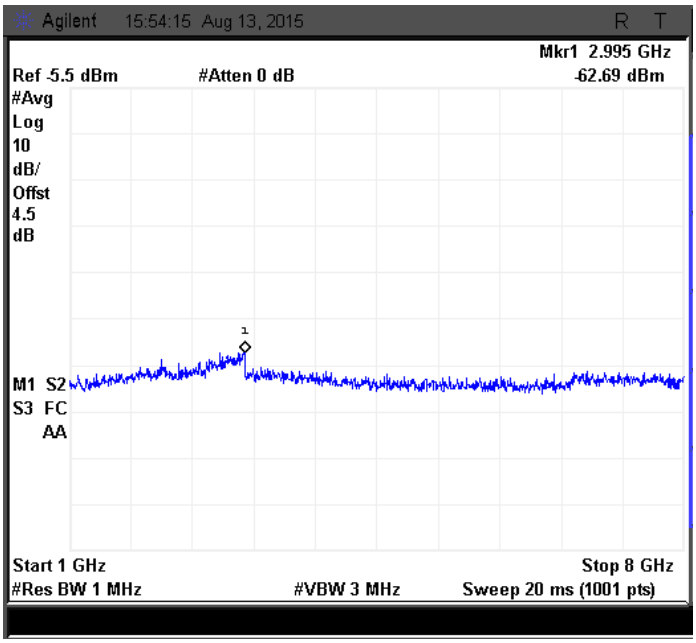

Figure 179: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 0

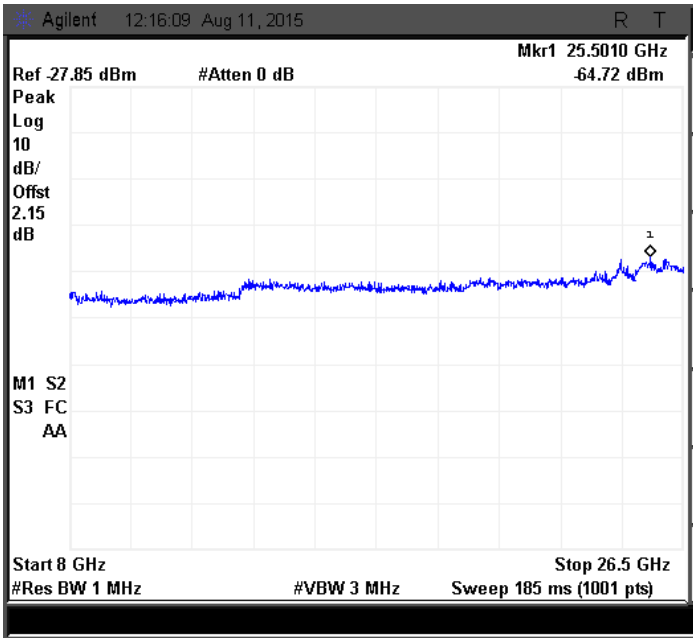

Figure 180: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 0

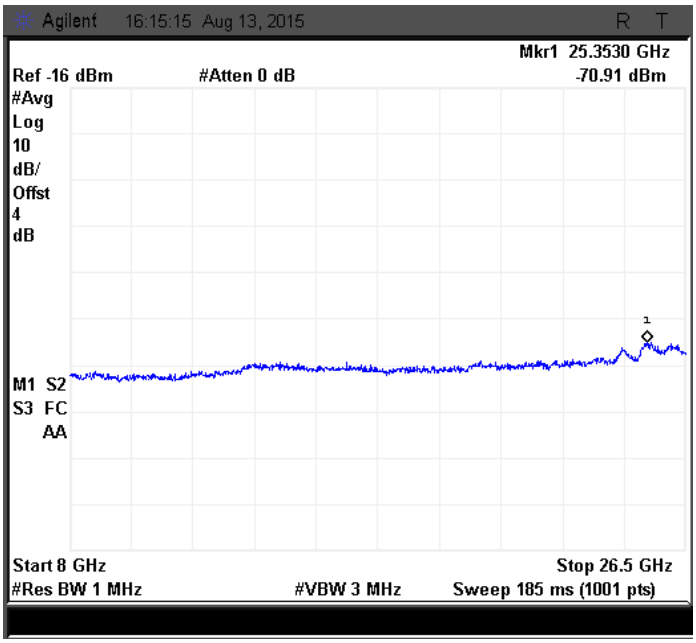

Figure 181: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 0

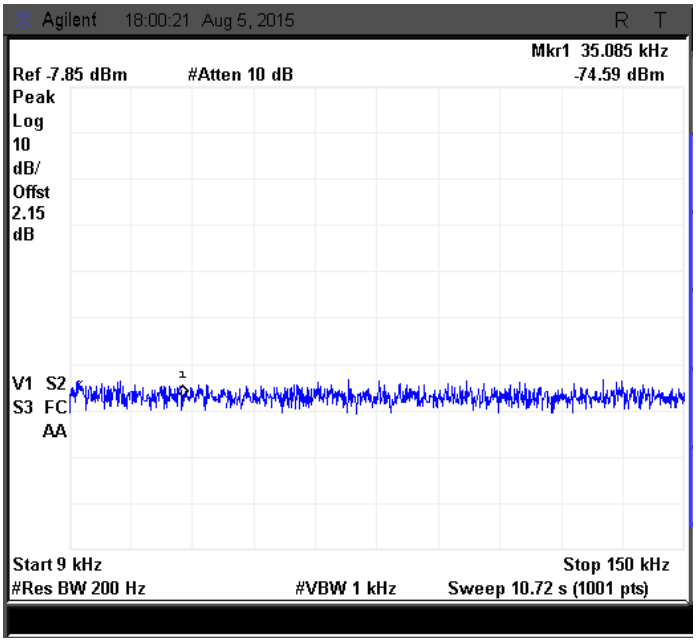

Figure 182: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 1

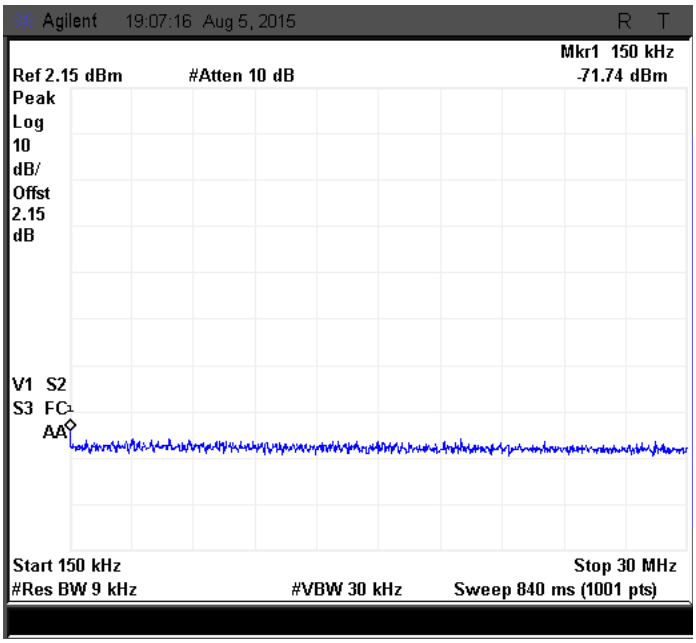

Figure 183: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 1

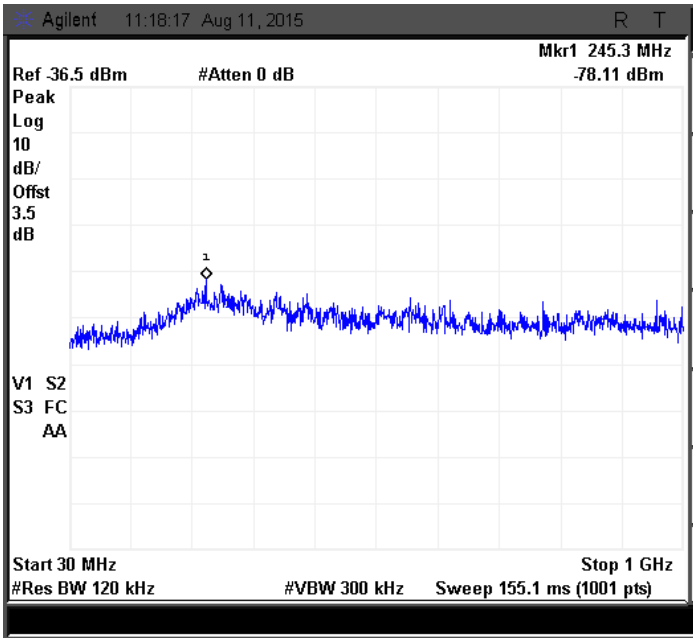

Figure 184: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 1

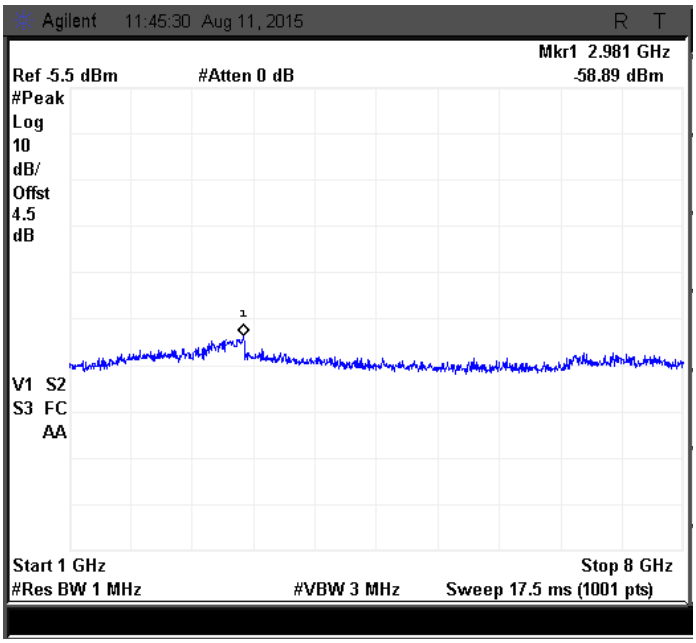

Figure 185: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 1

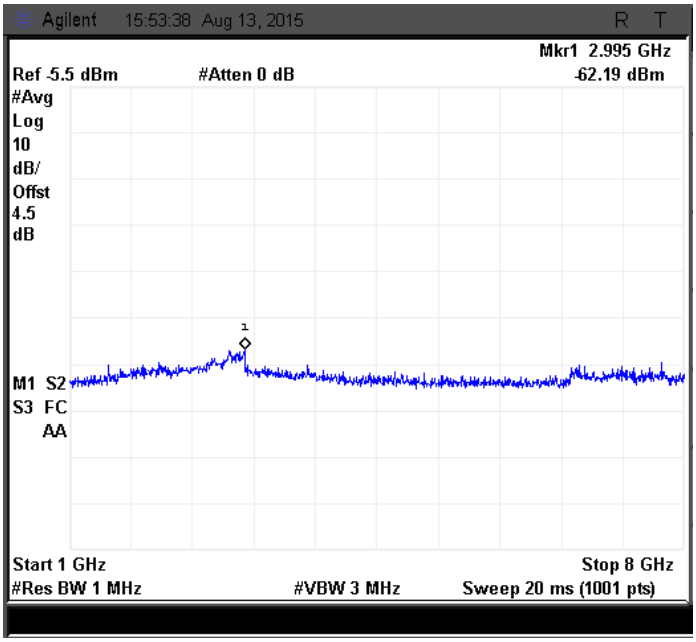

Figure 186: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 1

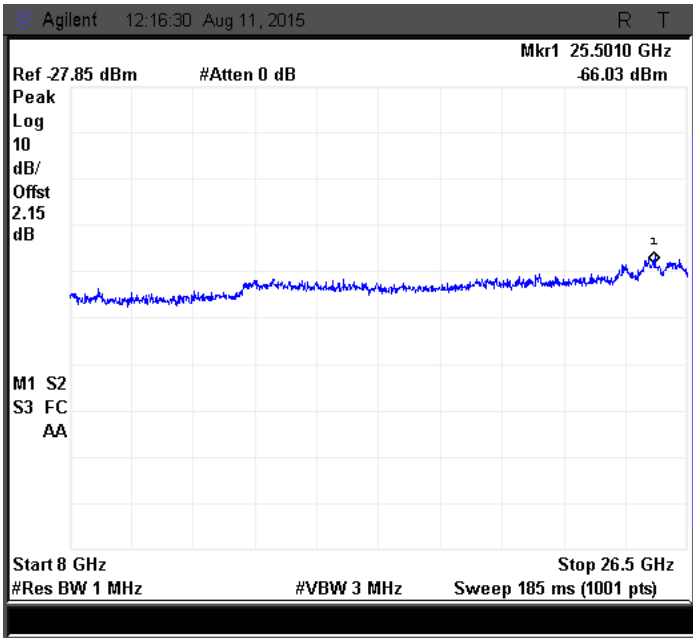

Figure 187: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 1

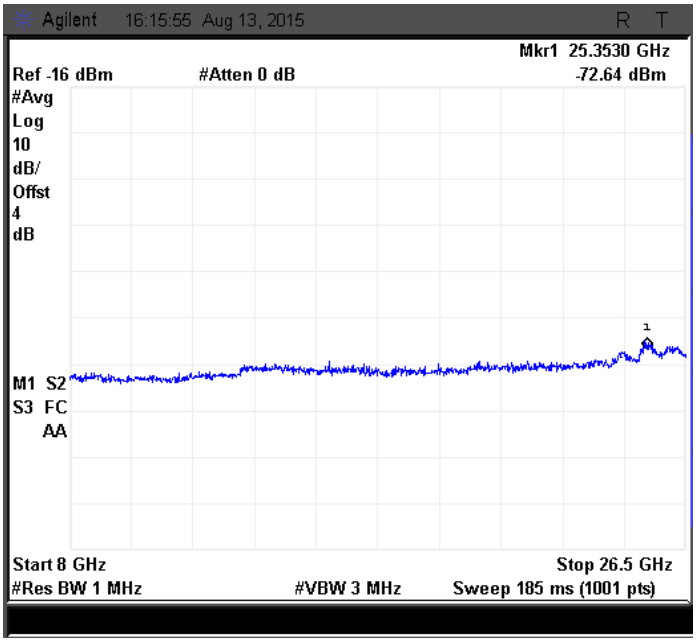

Figure 188: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 1

7.5.6.2 40MHZ MODULATION BW-MID CHANNEL_2442 MHZ

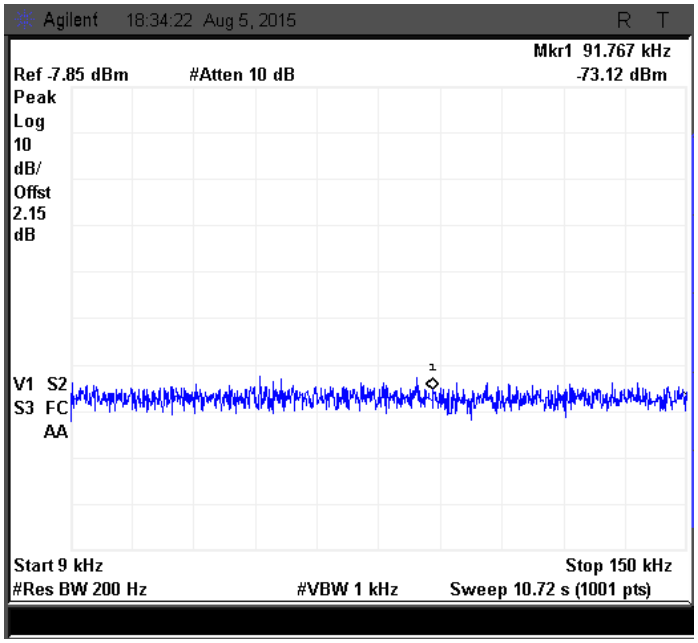

Figure 189: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 0

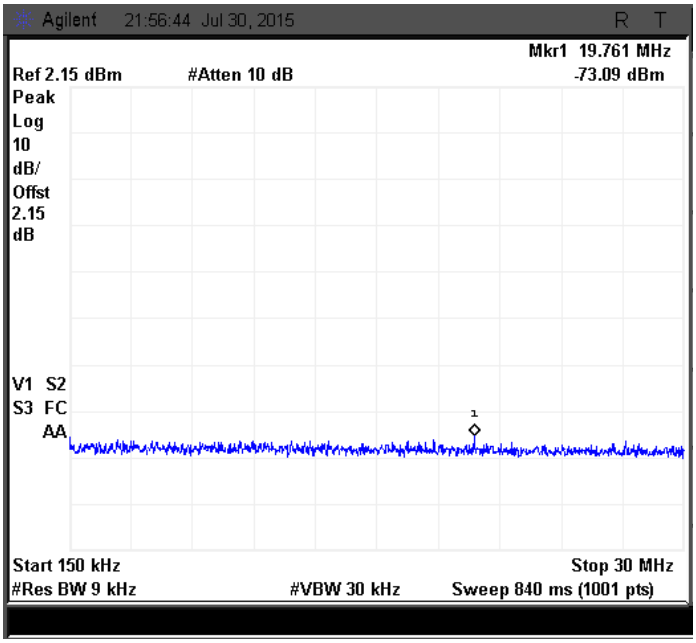

Figure 190: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 0

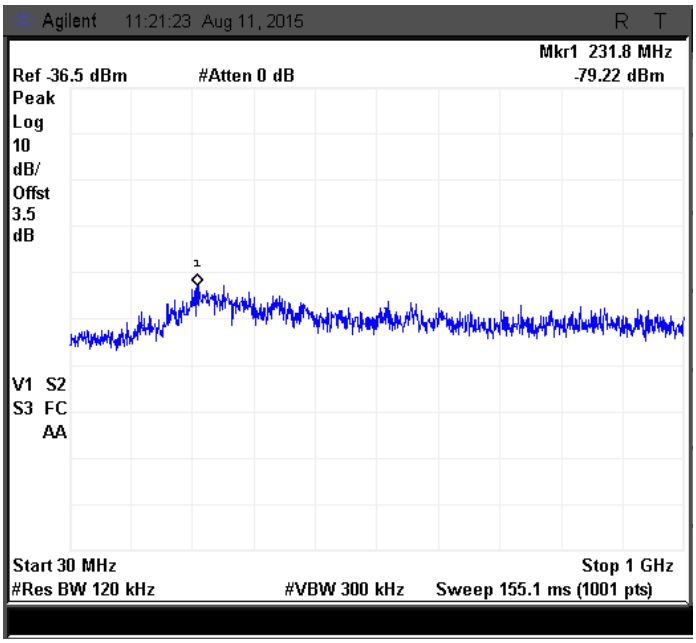

Figure 191: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 0

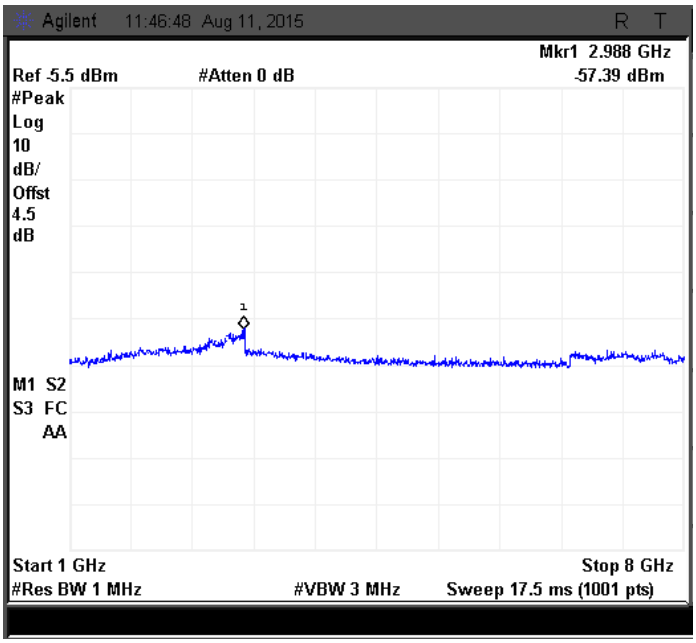

Figure 192: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 0

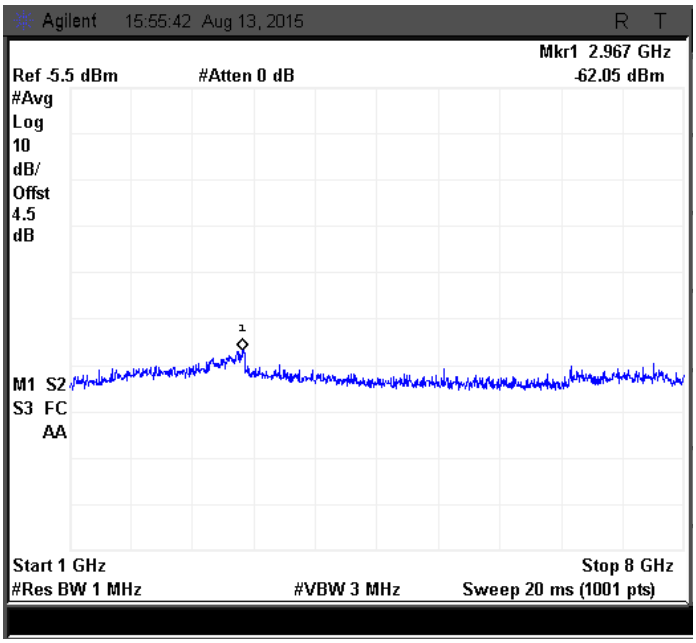

Figure 193: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 0

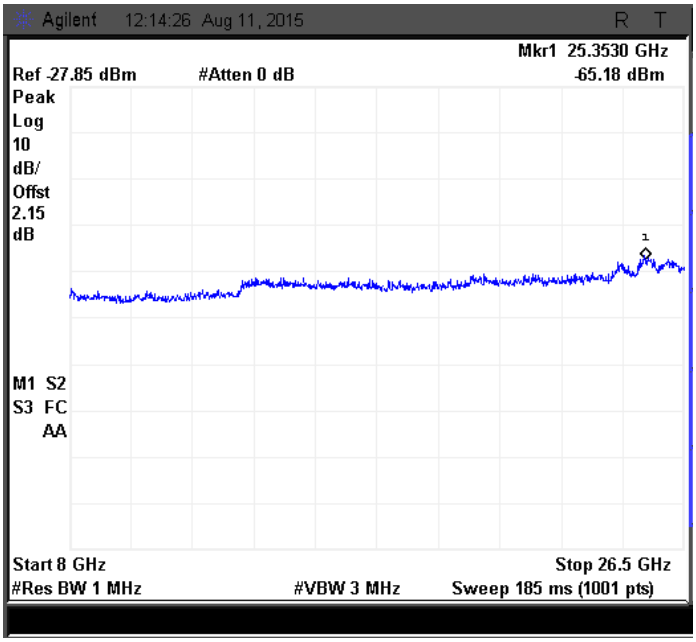

Figure 194: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 0

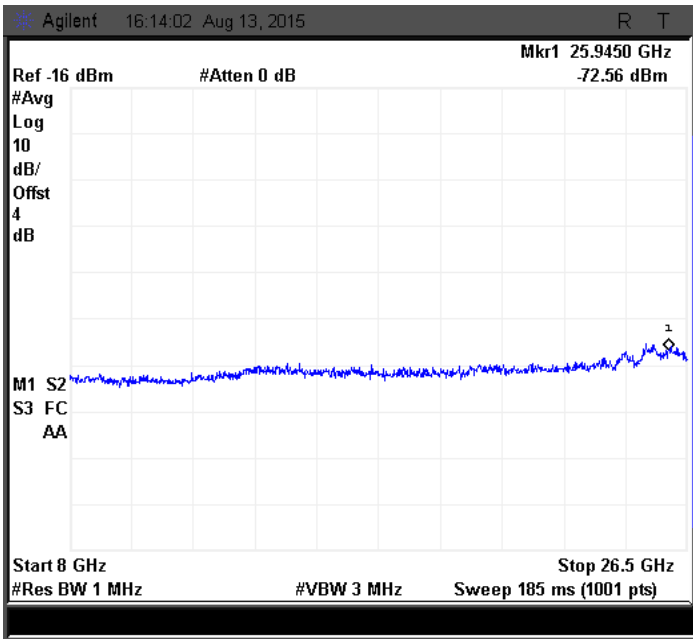

Figure 195: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 0

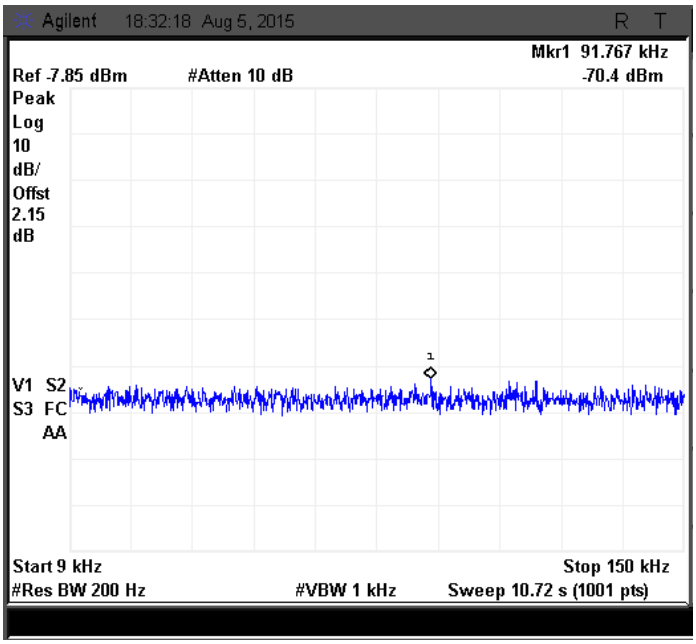

Figure 196: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 1

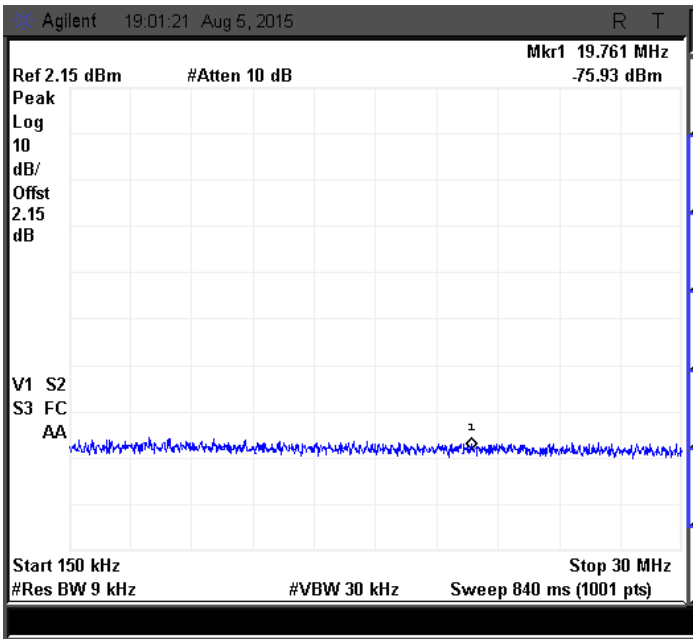

Figure 197: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 1

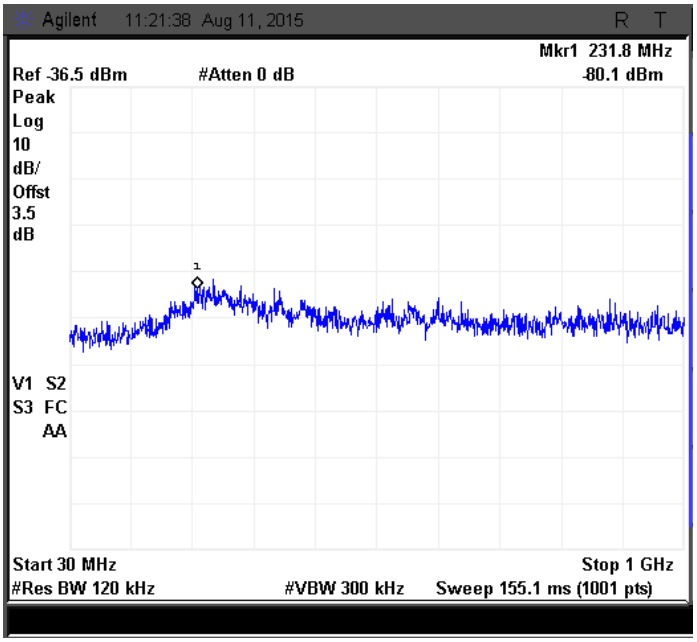

Figure 198: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 1

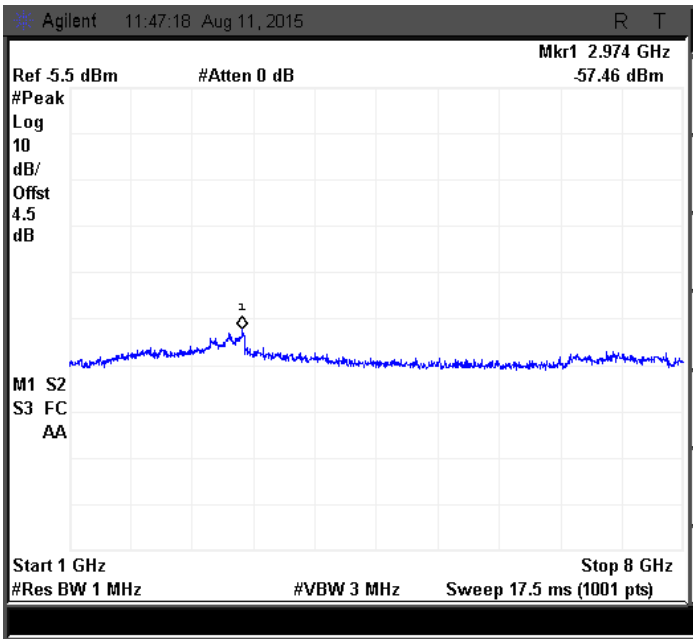

Figure 199: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 1

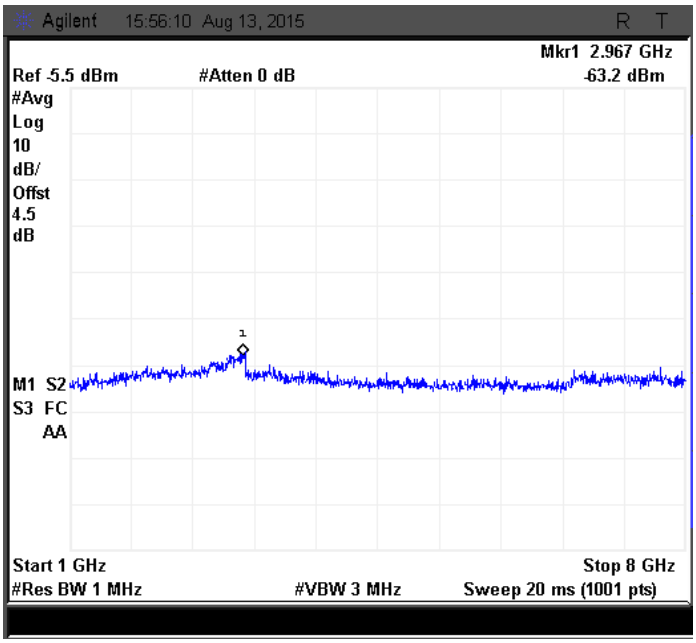

Figure 200: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 1

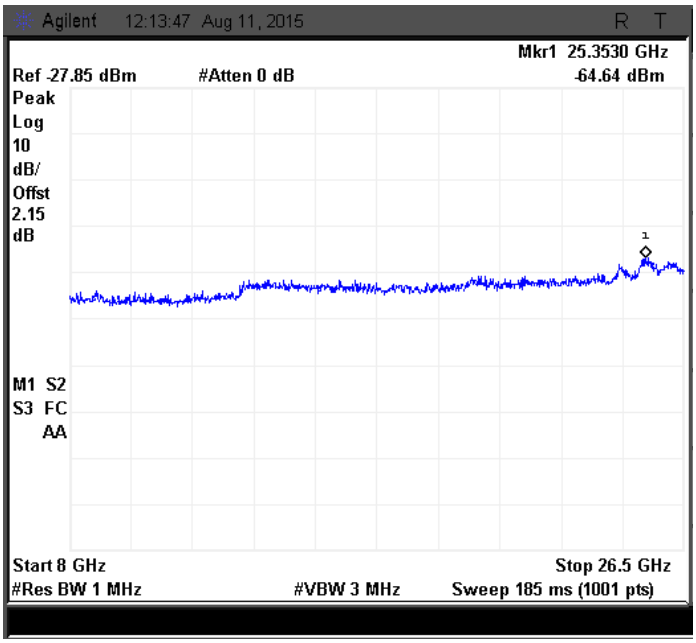

Figure 201: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 1

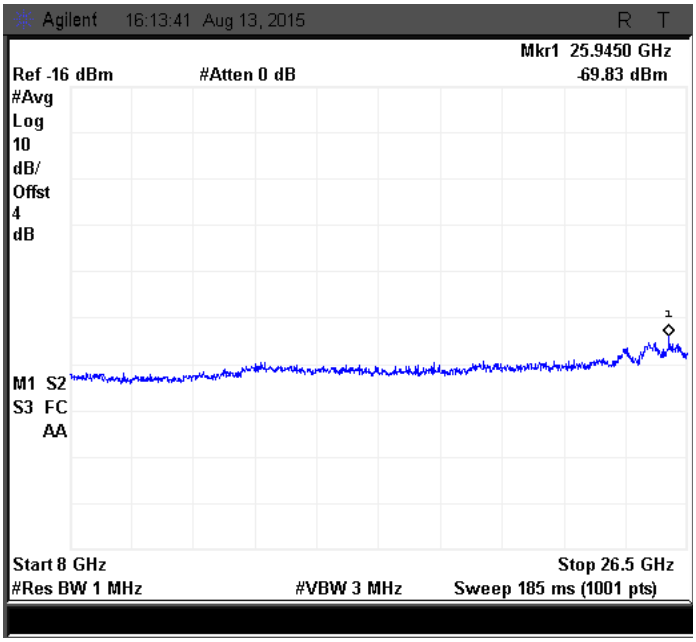

Figure 202: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 1

7.5.6.3 40MHZ MODULATION BW-HIGH CHANNEL_2462 MHZ

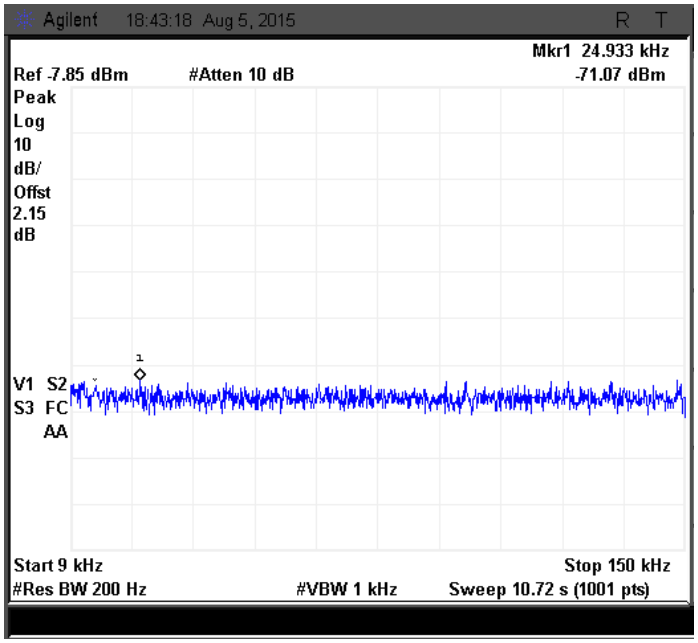

Figure 203: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 0

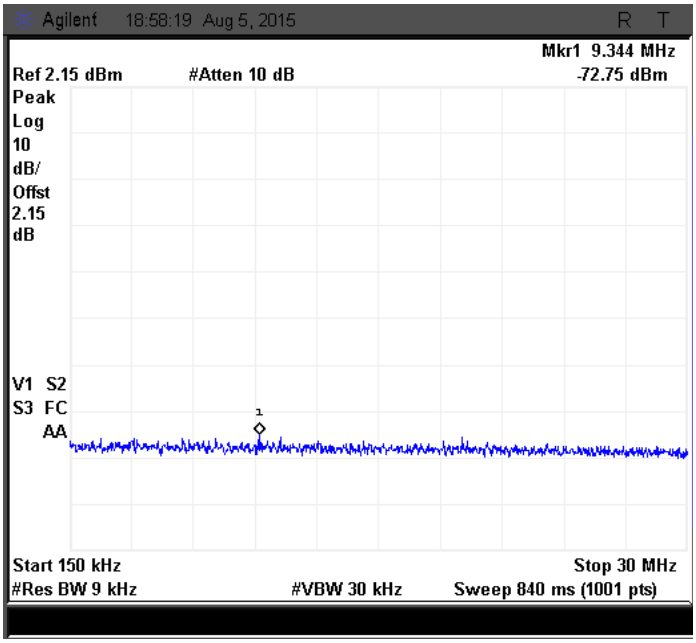

Figure 204: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 0

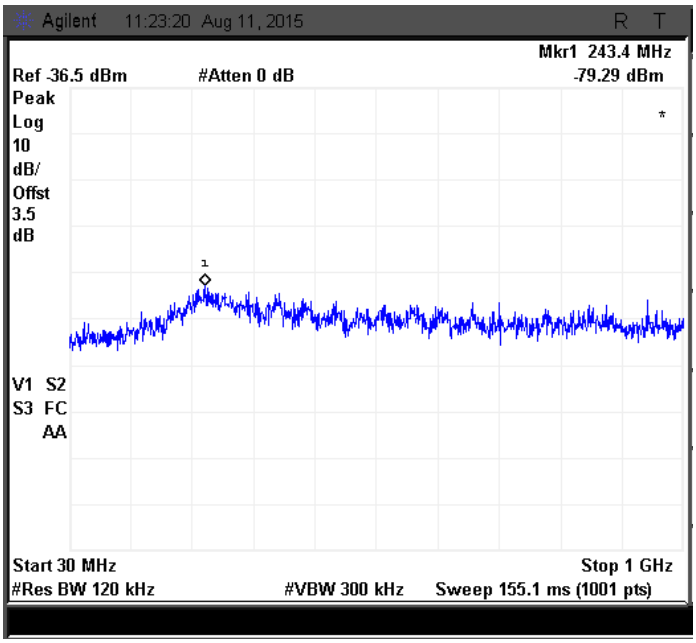

Figure 205: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 0

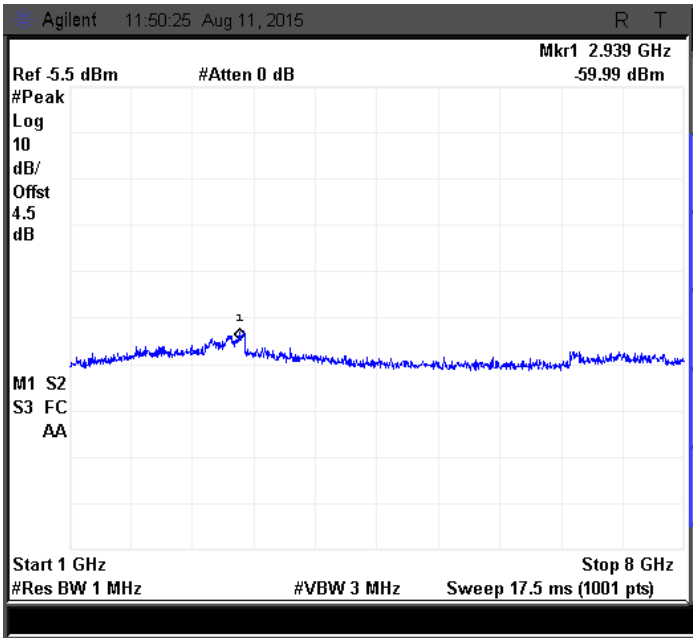

Figure 206: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 0

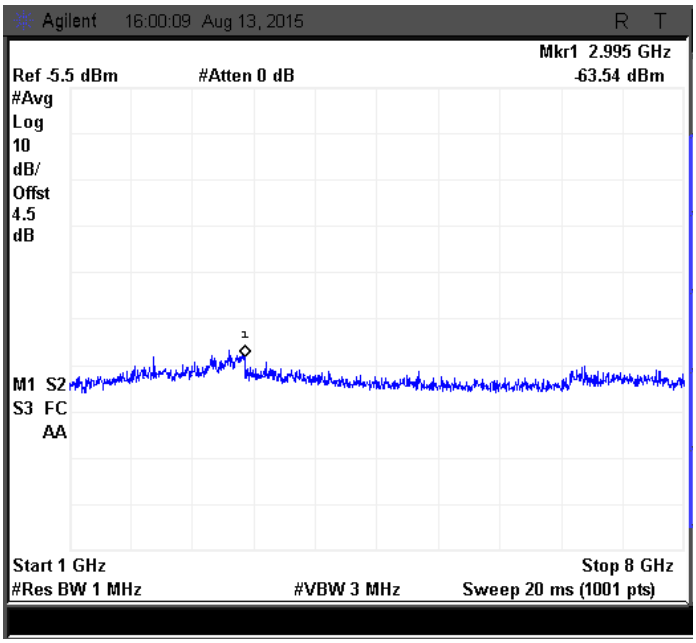

Figure 207: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 0

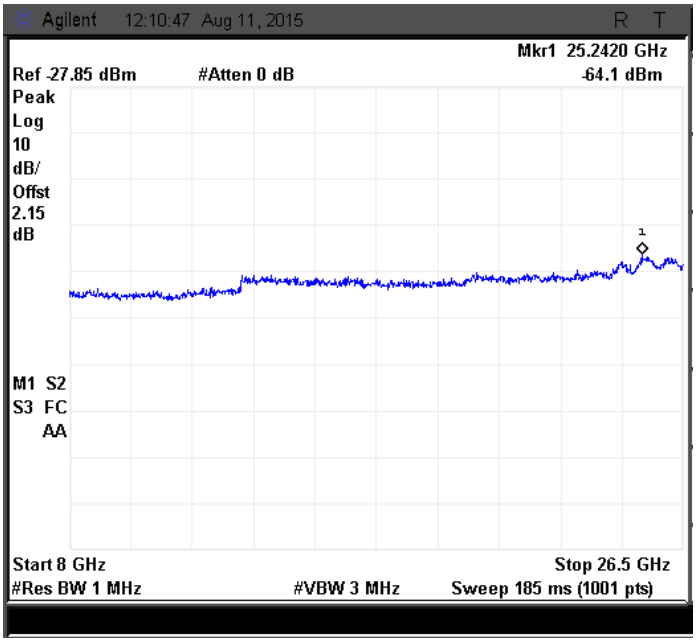

Figure 208: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 0

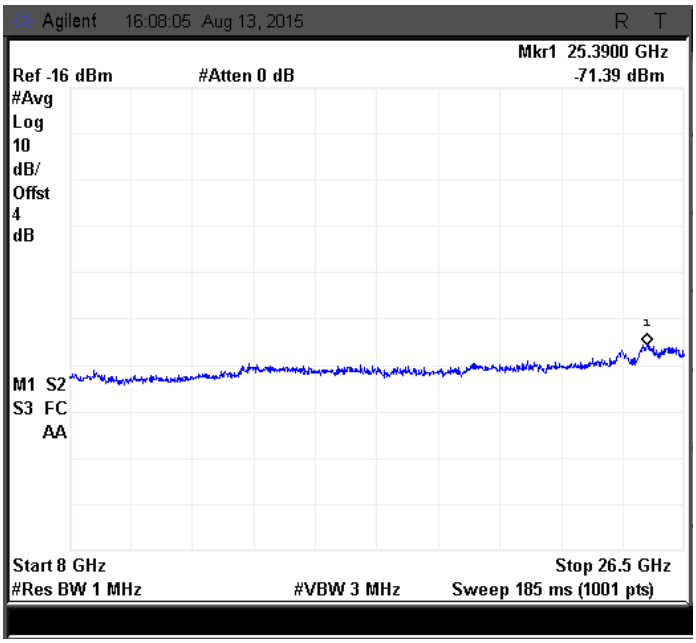

Figure 209: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 0

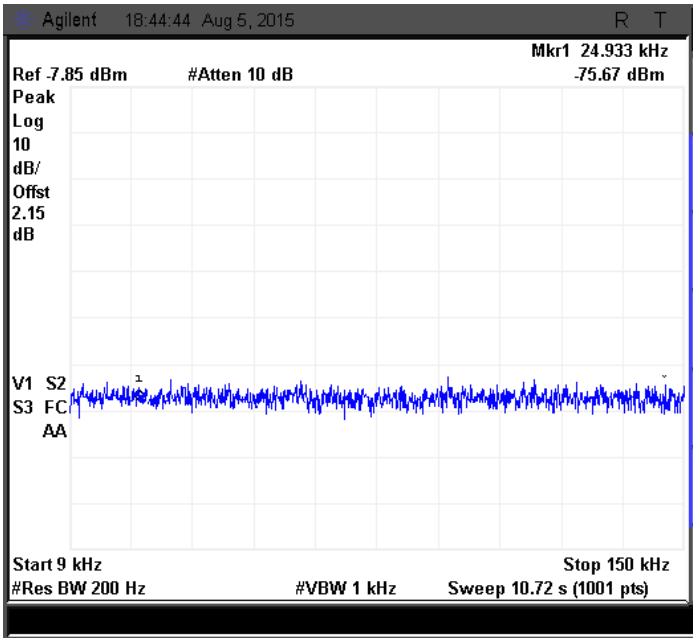

Figure 210: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 1

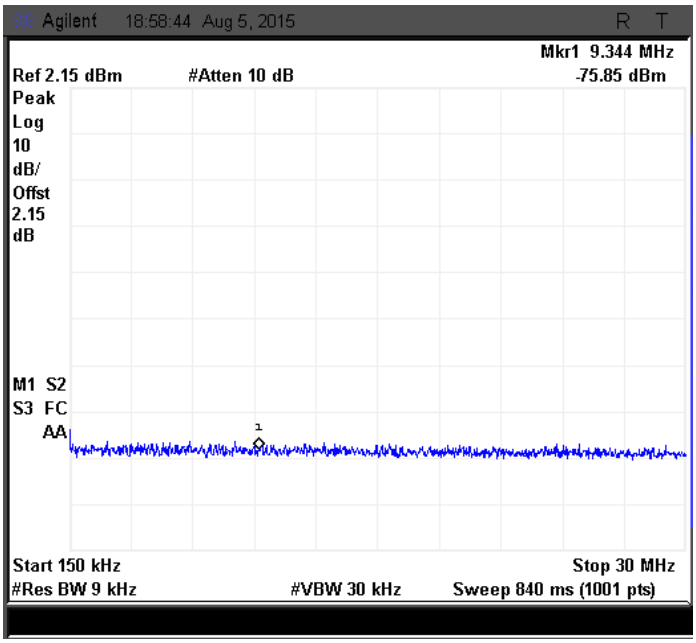

Figure 211: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 1

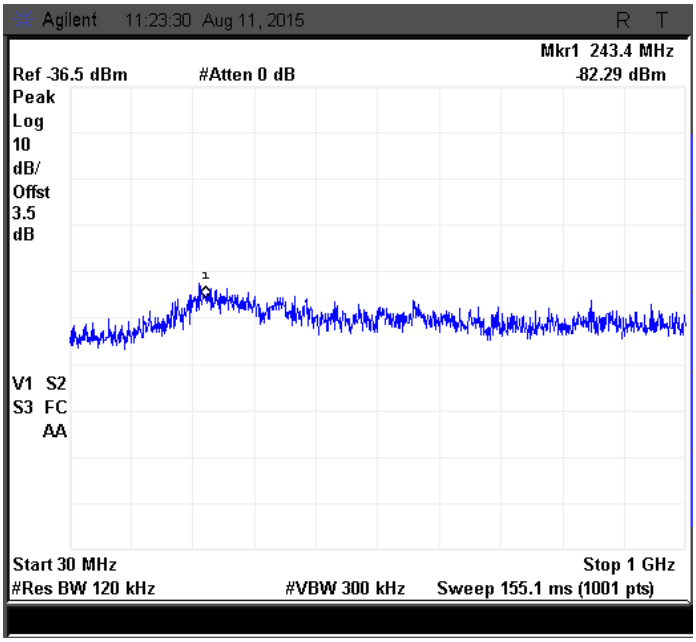

Figure 212: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 1

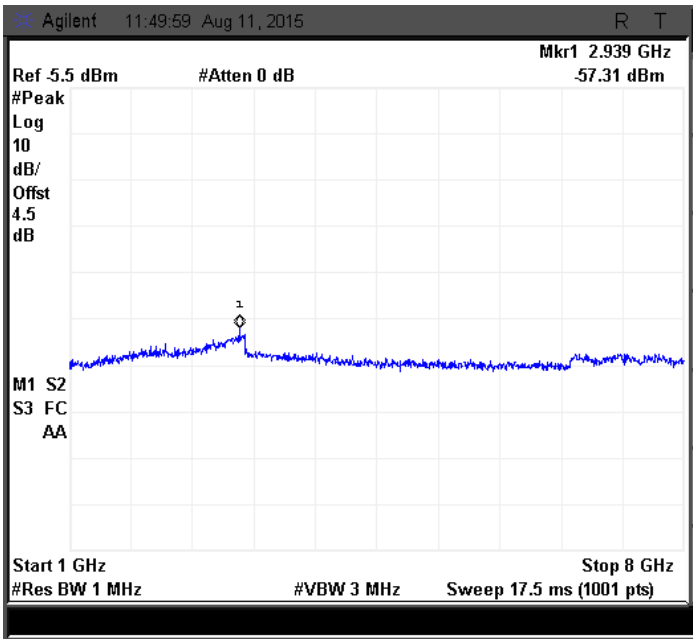

Figure 213: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 1

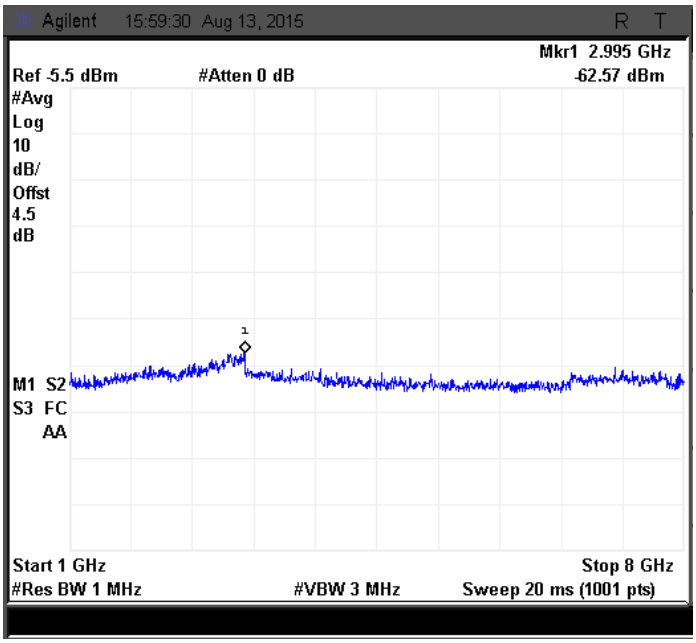

Figure 214: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 1

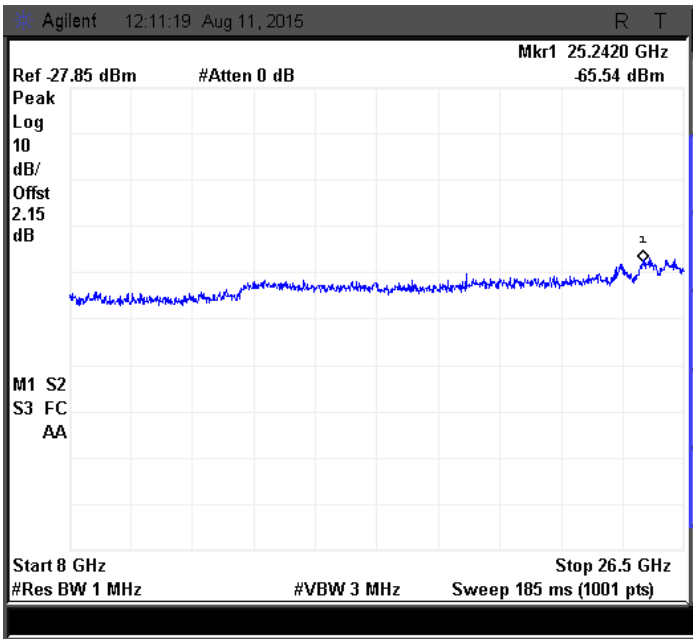

Figure 215: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 1

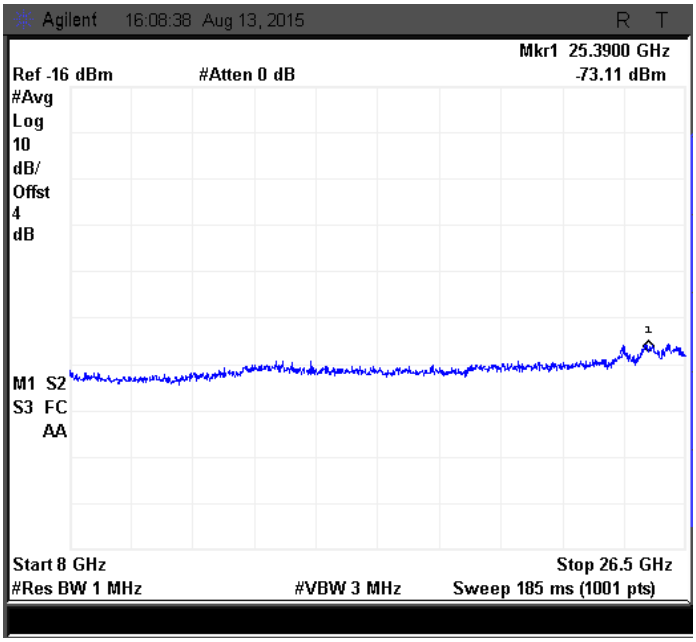

Figure 216: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 1

7.5.6.4 5MHZ MODULATION BW-LOW CHANNEL_2412 MHZ

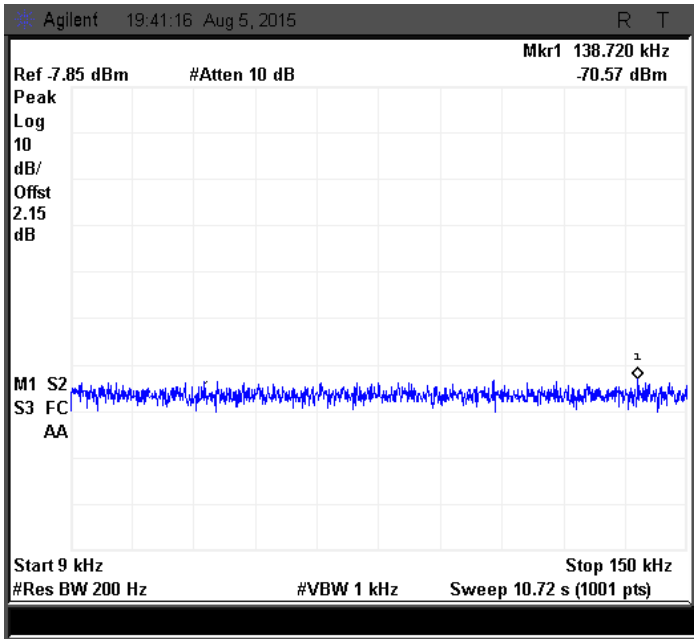

Figure 217: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 0

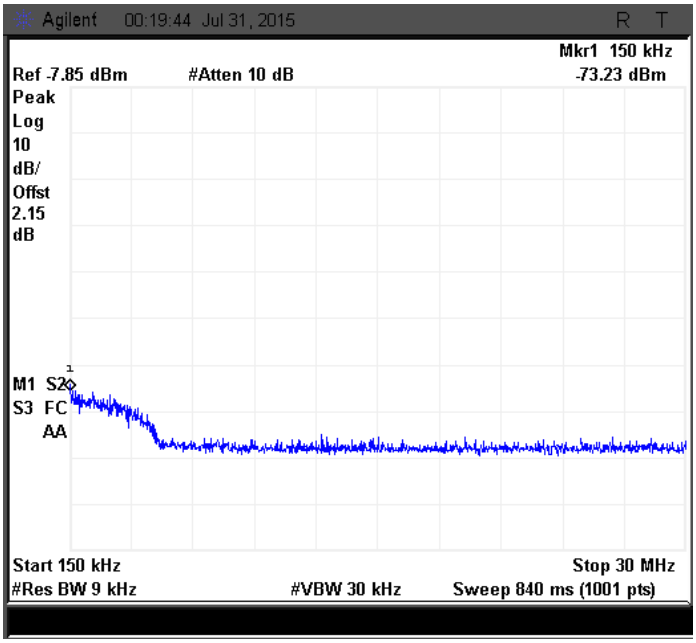

Figure 218: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 0

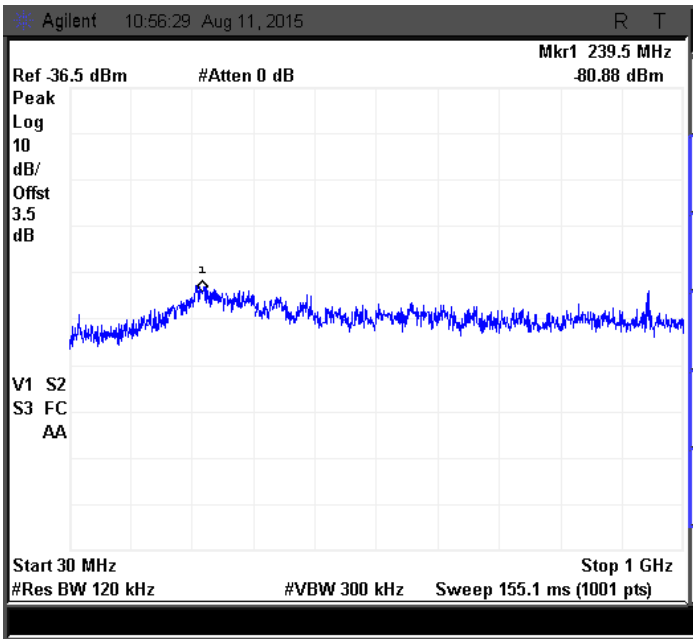

Figure 219: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 0

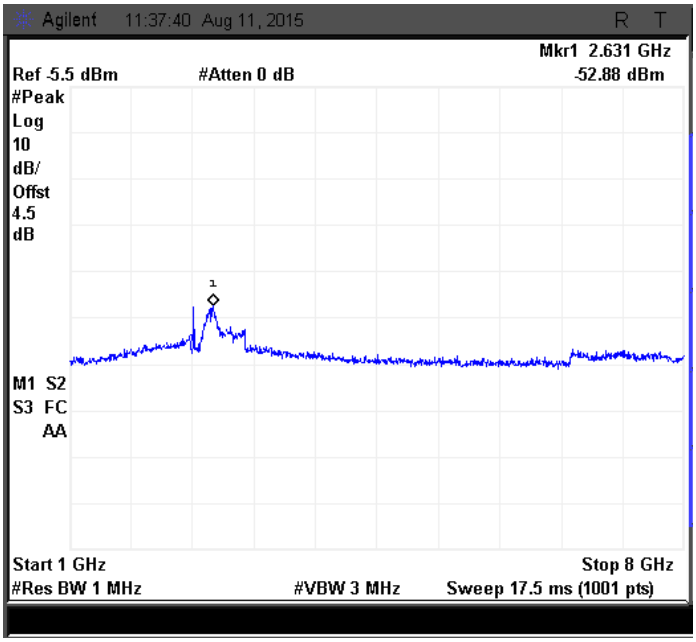

Figure 220: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 0

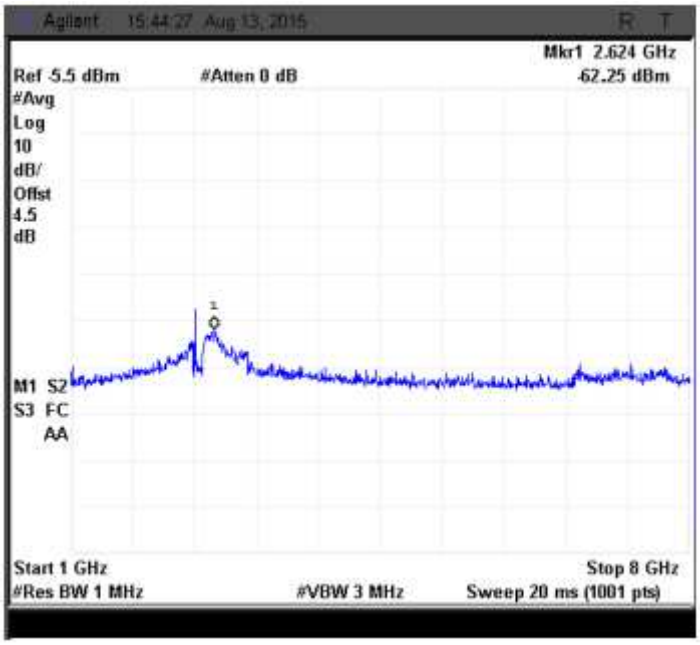

Figure 221: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 0

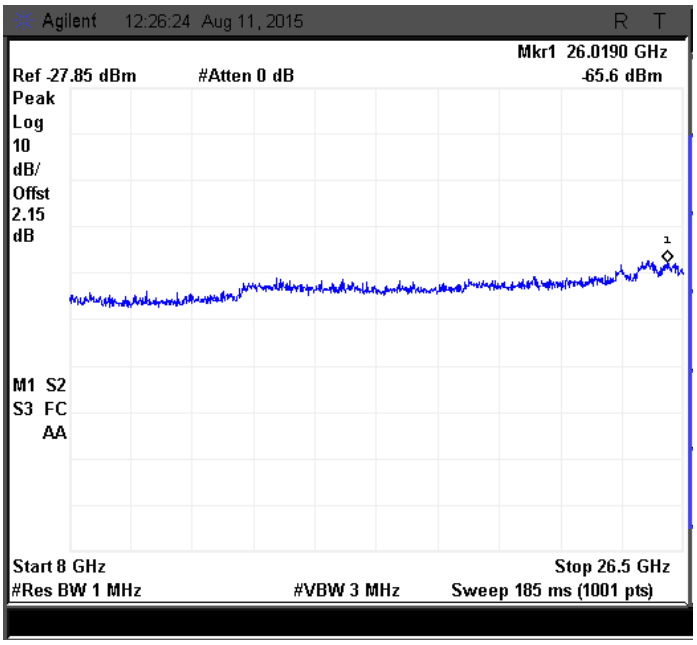

Figure 222: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 0

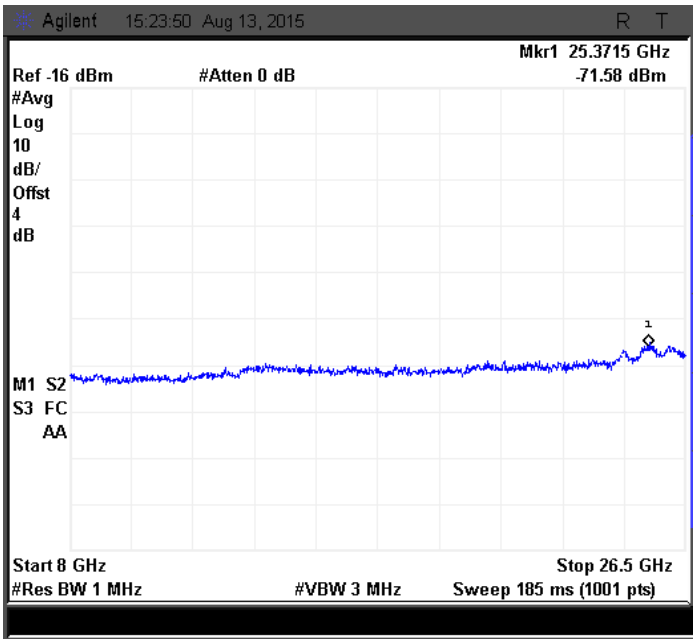

Figure 223: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 0

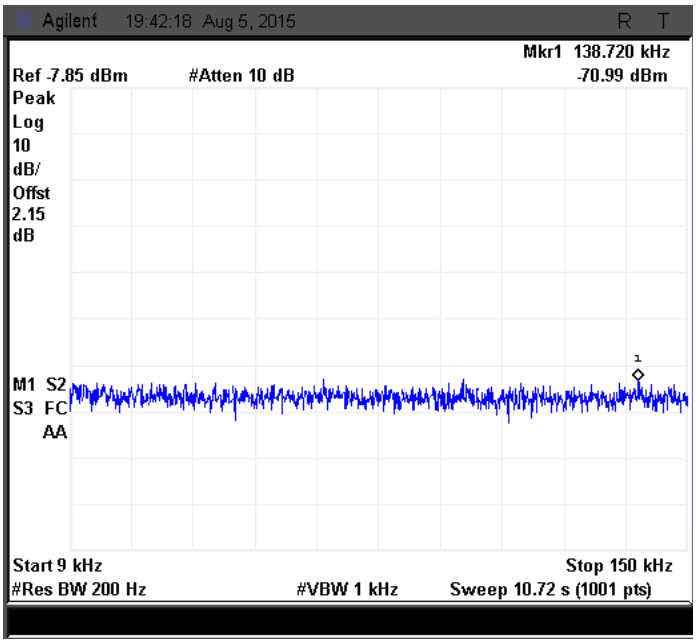

Figure 224: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 1

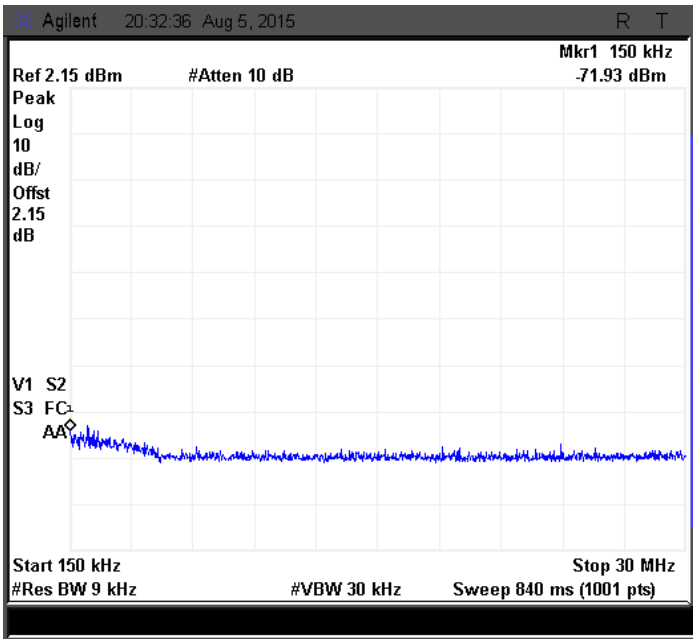

Figure 225: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 1

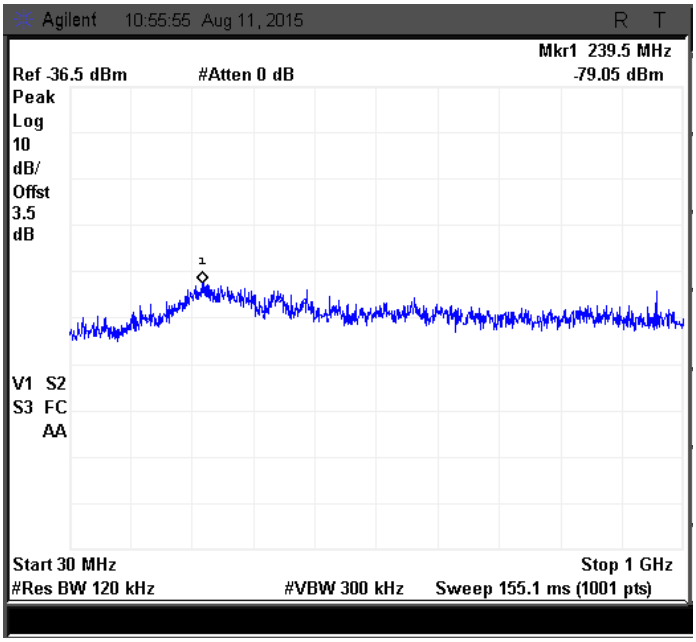

Figure 226: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 1

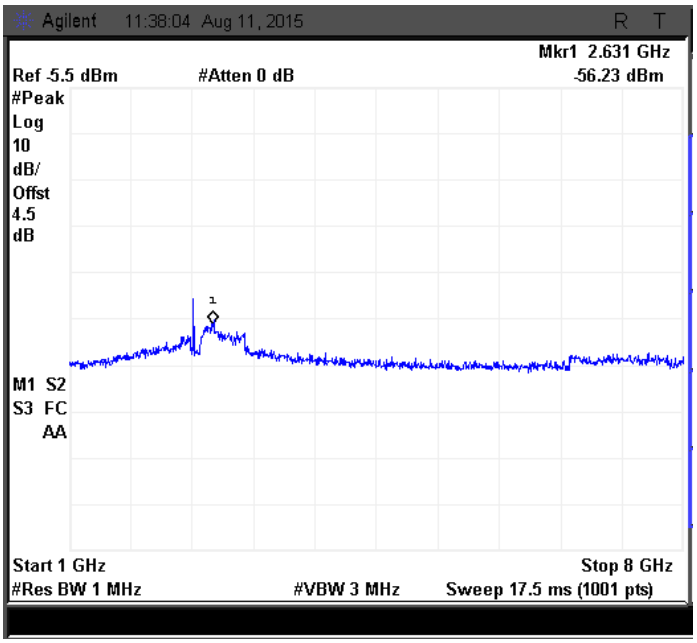

Figure 227: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 1

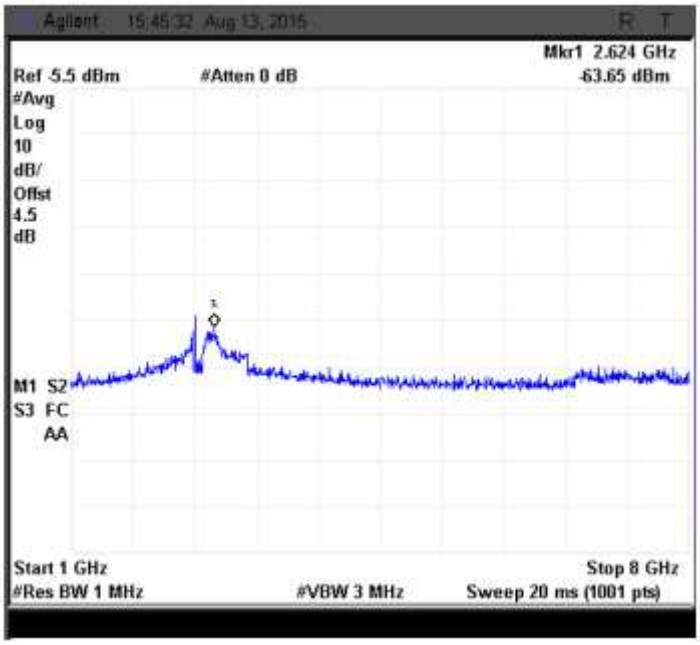

Figure 228: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 1

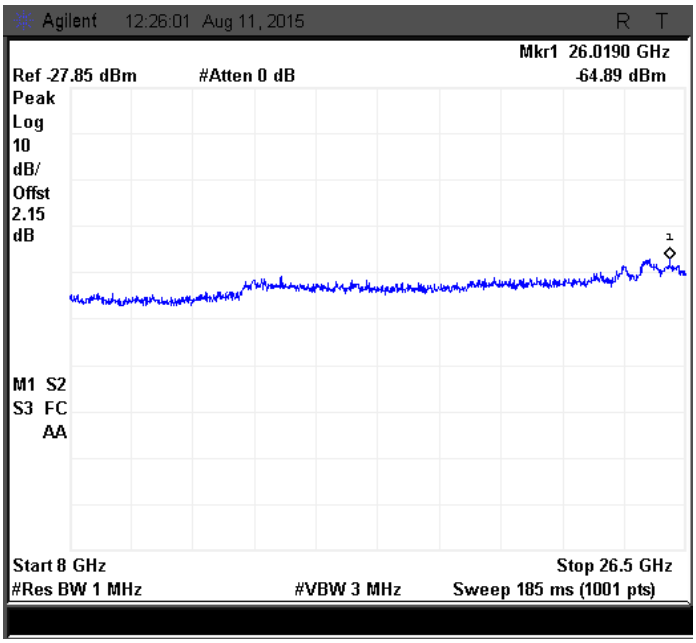

Figure 229: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 1

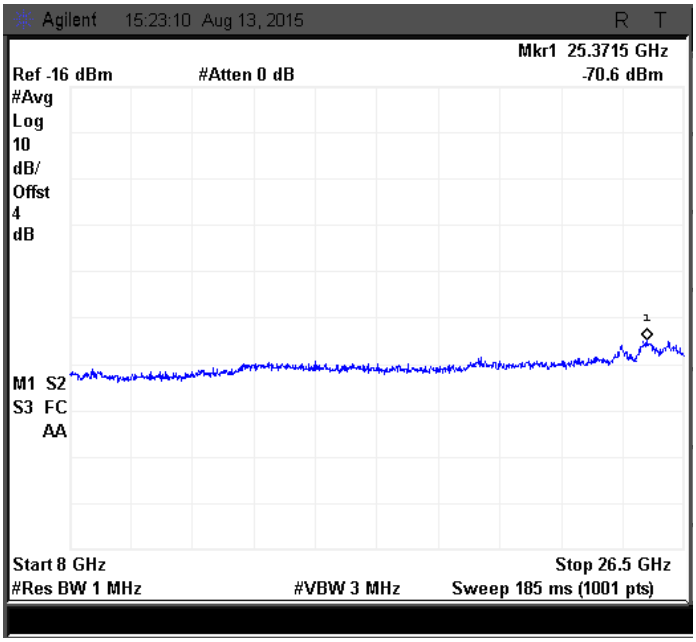

Figure 230: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 1

7.5.6.5 5MHZ MODULATION BW-MID CHANNEL_2442 MHZ

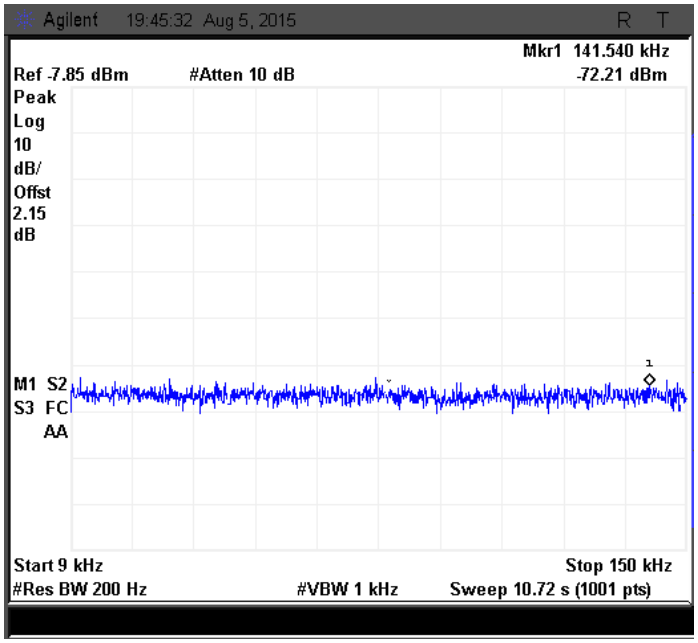

Figure 231: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 0

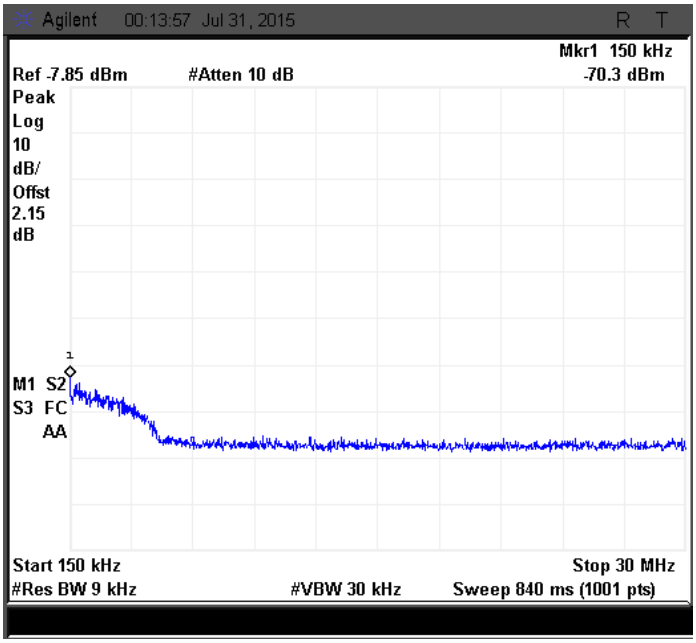

Figure 232: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 0

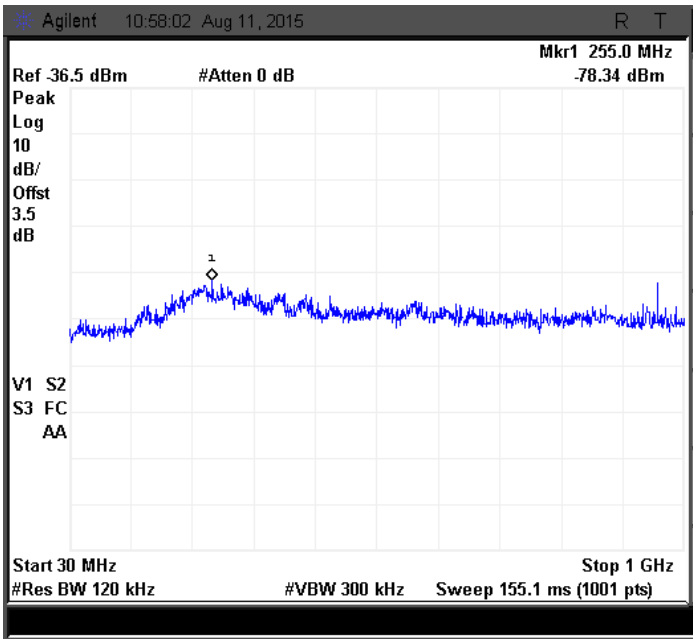

Figure 233: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 0

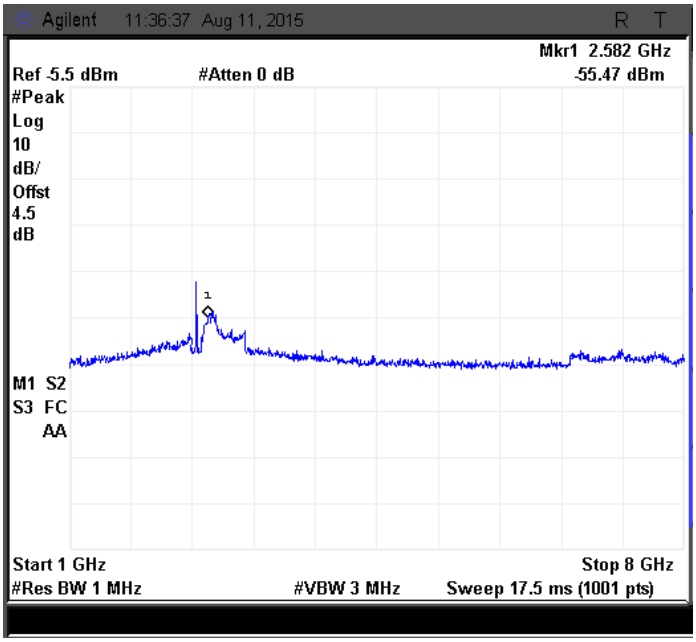

Figure 234: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 0

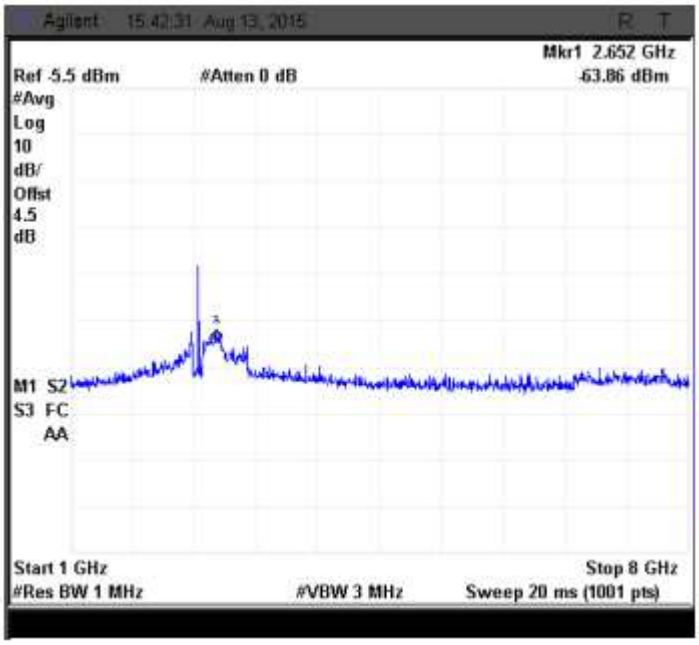

Figure 235: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 0

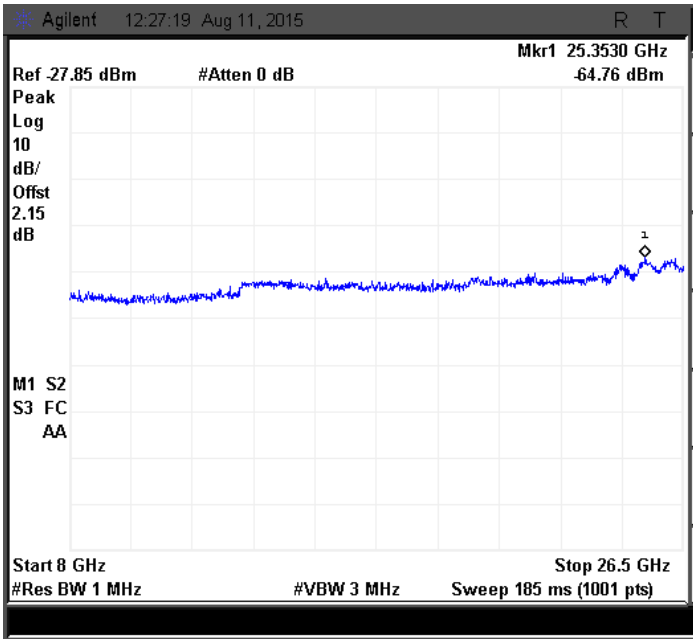

Figure 236: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 0

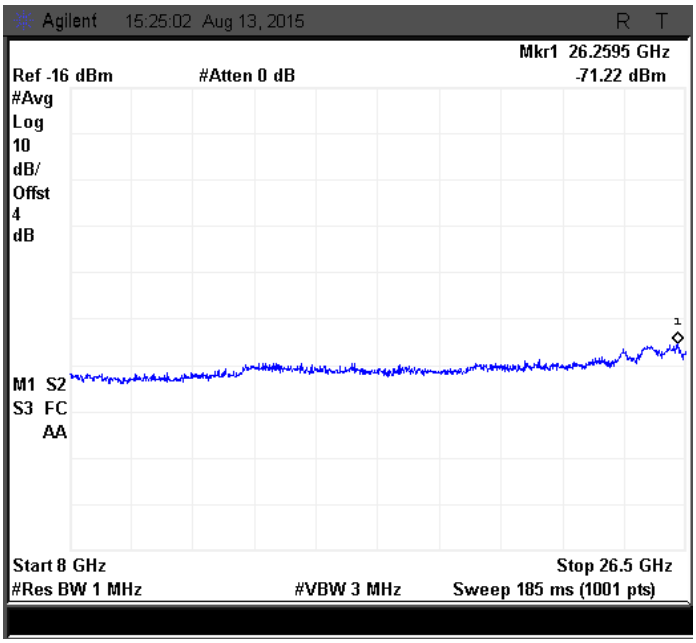

Figure 237: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 0

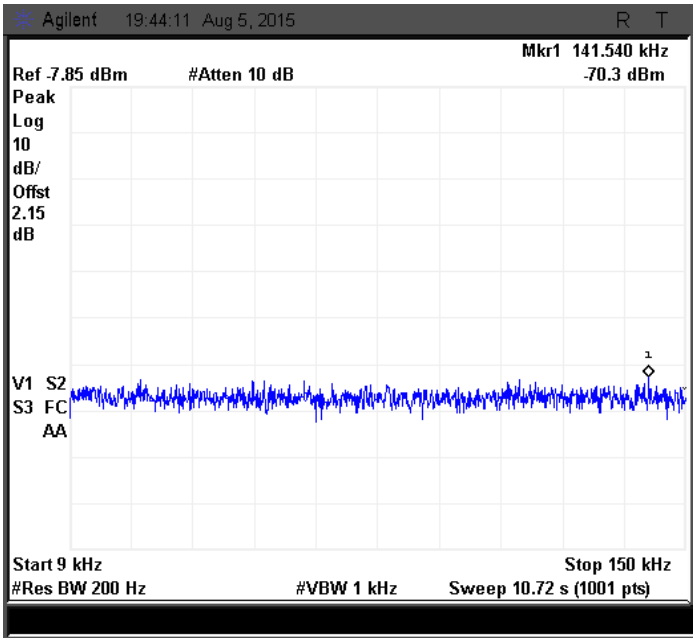

Figure 238: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 1

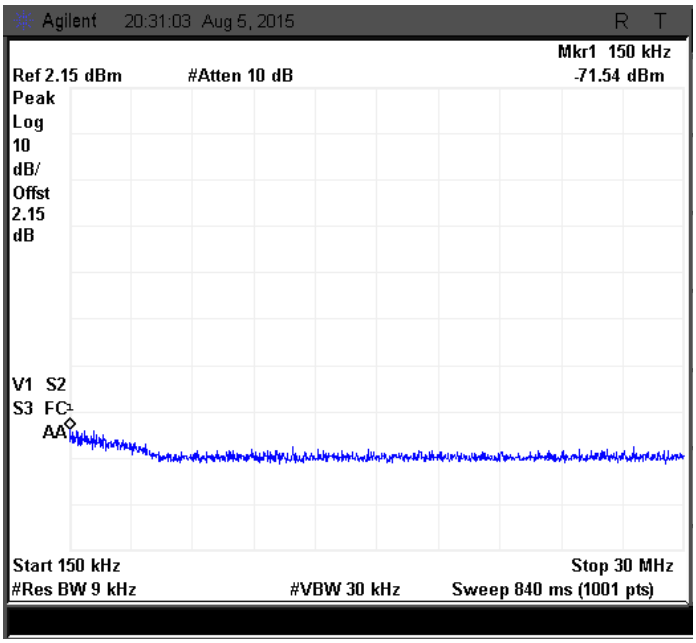

Figure 239: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 1

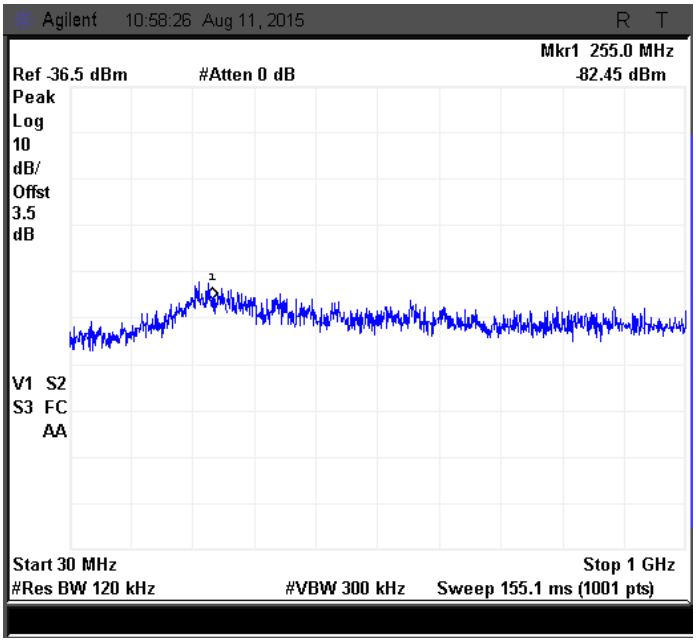

Figure 240: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 1

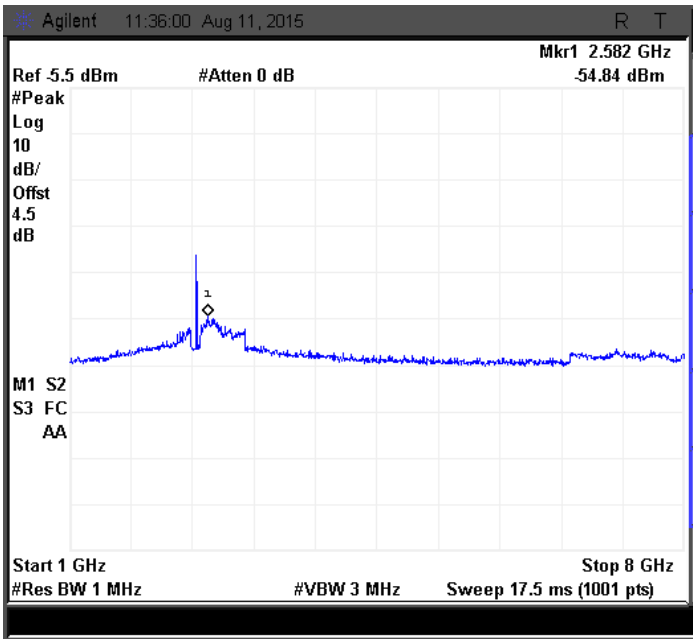

Figure 241: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 1

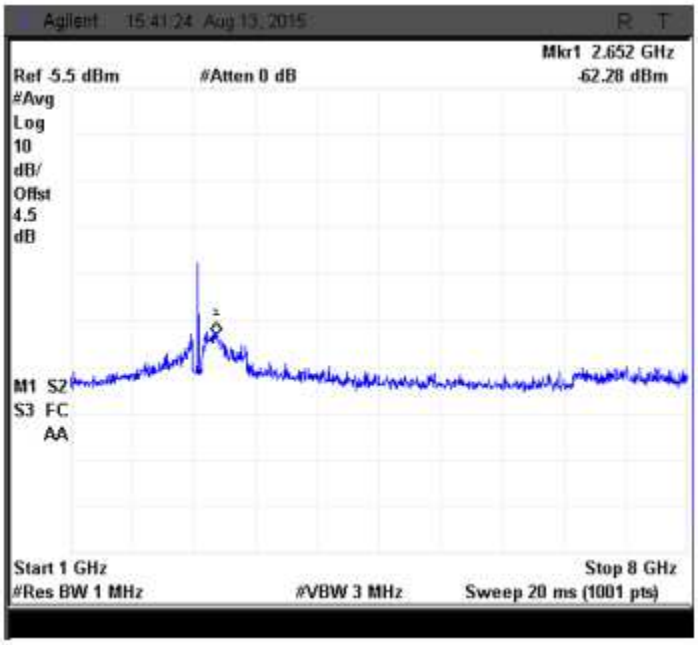

Figure 242: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 1

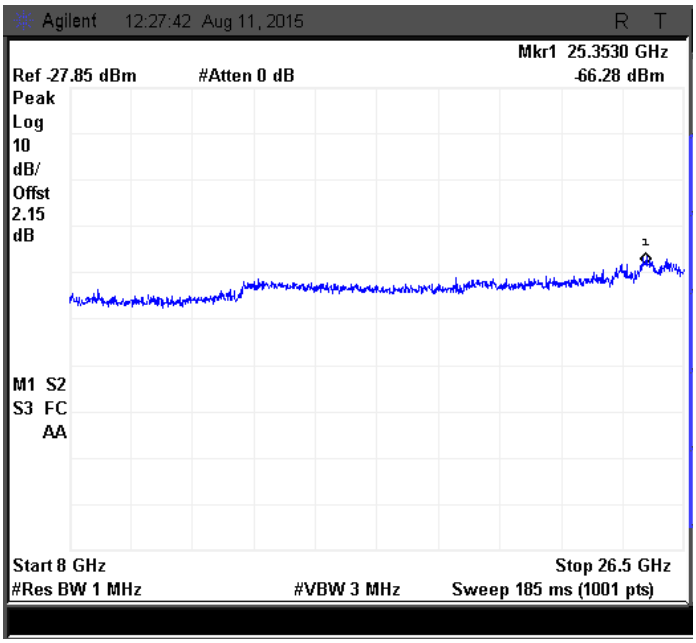

Figure 243: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 1

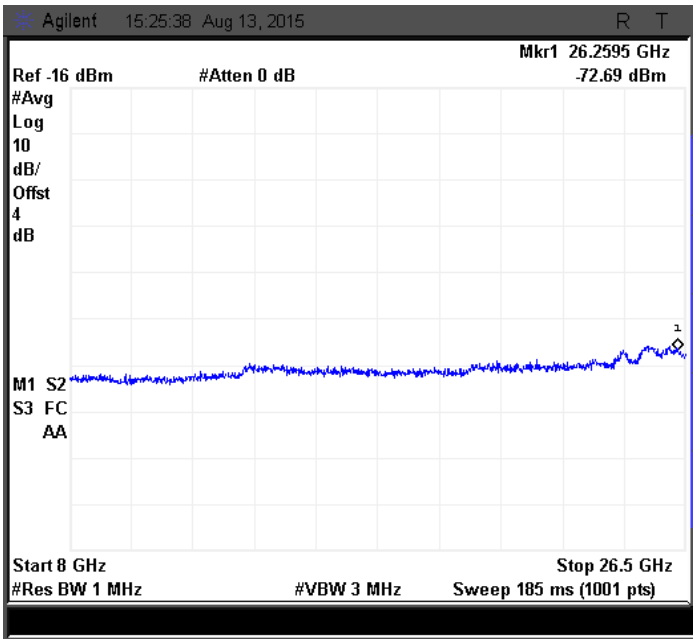

Figure 244: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 1

7.5.6.6 5MHZ MODULATION BW-HIGH CHANNEL_2477 MHZ

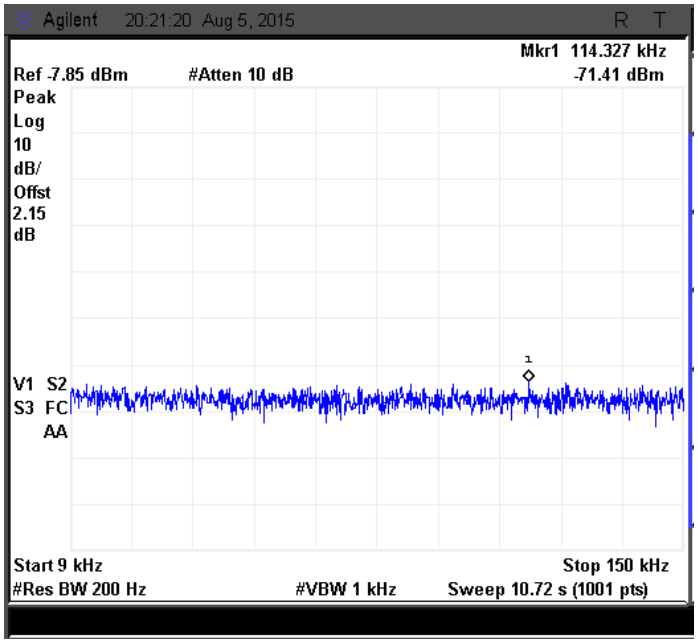

Figure 245: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 0

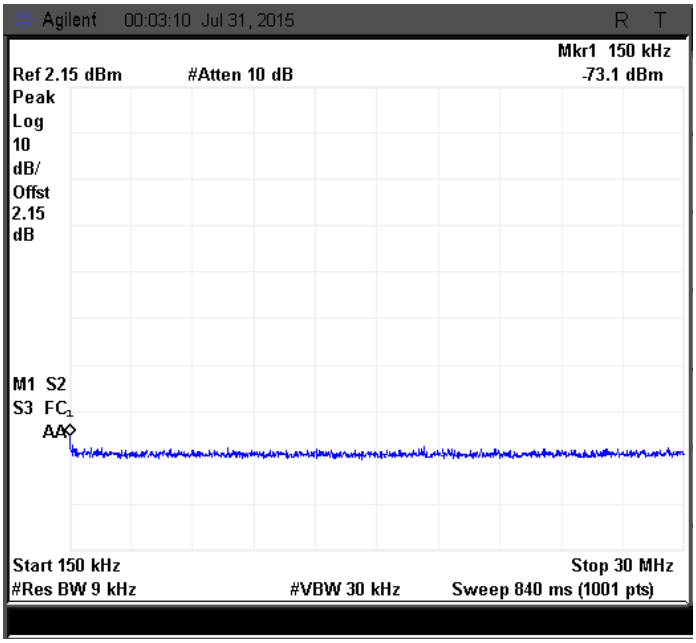

Figure 246: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 0

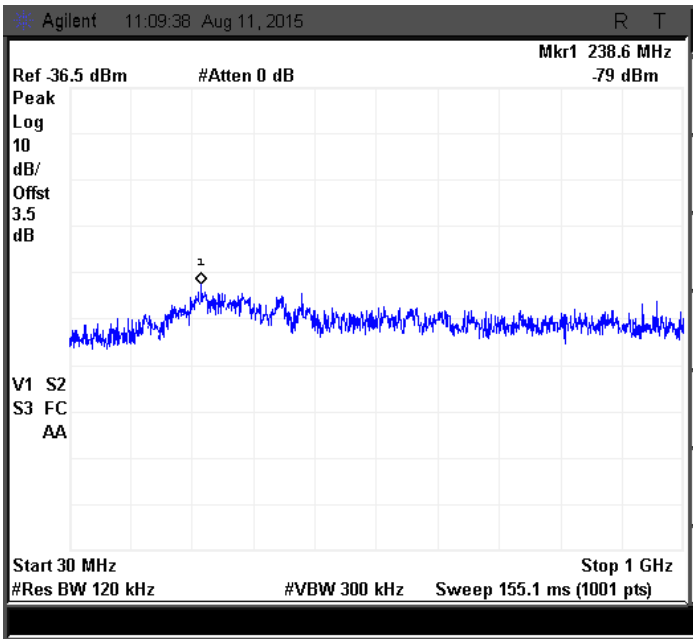

Figure 247: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 0

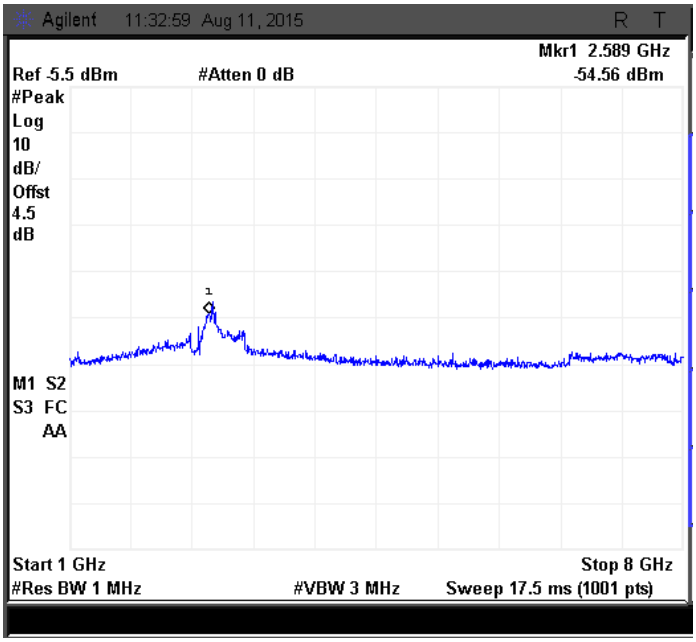

Figure 248: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 0

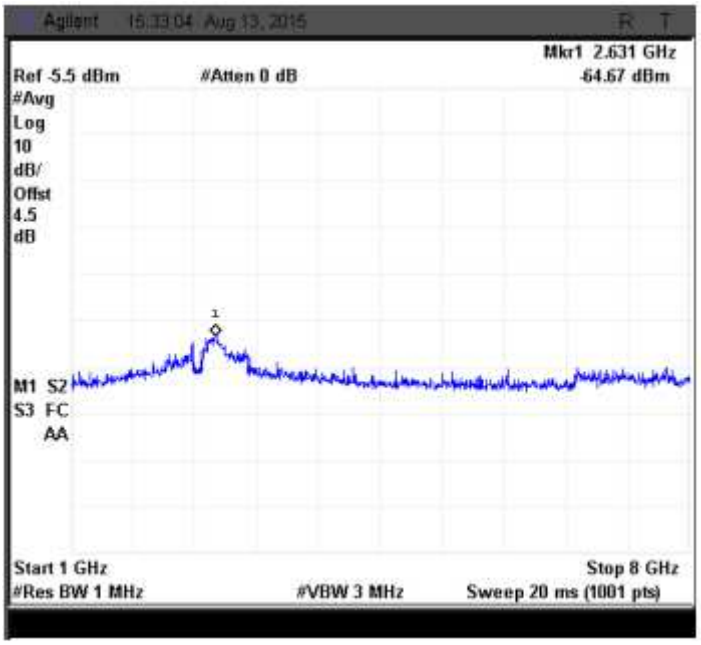

Figure 249: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 0

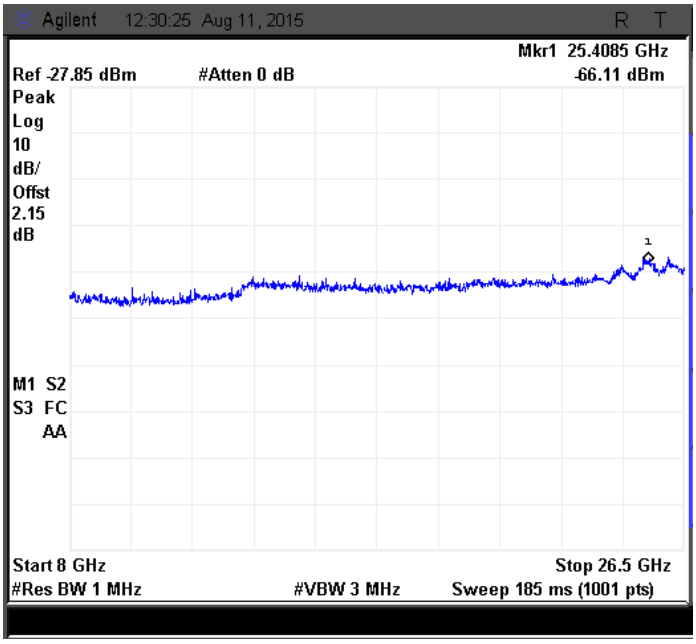

Figure 250: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 0

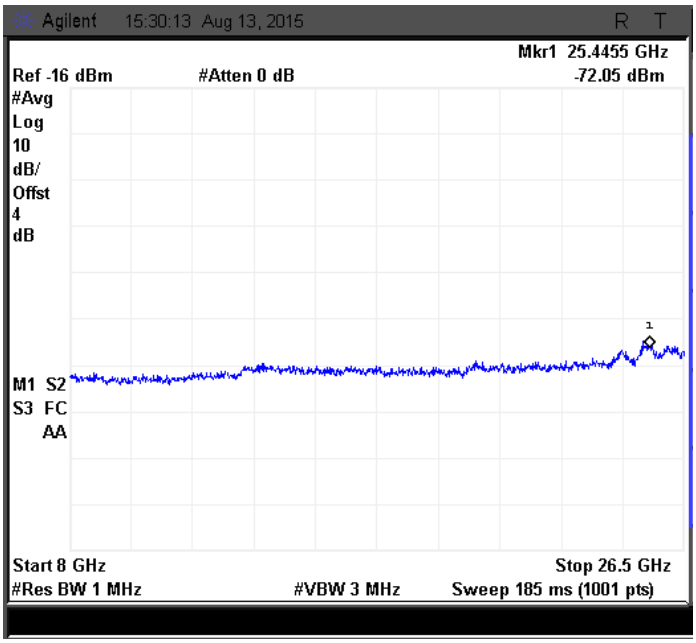

Figure 251: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 0

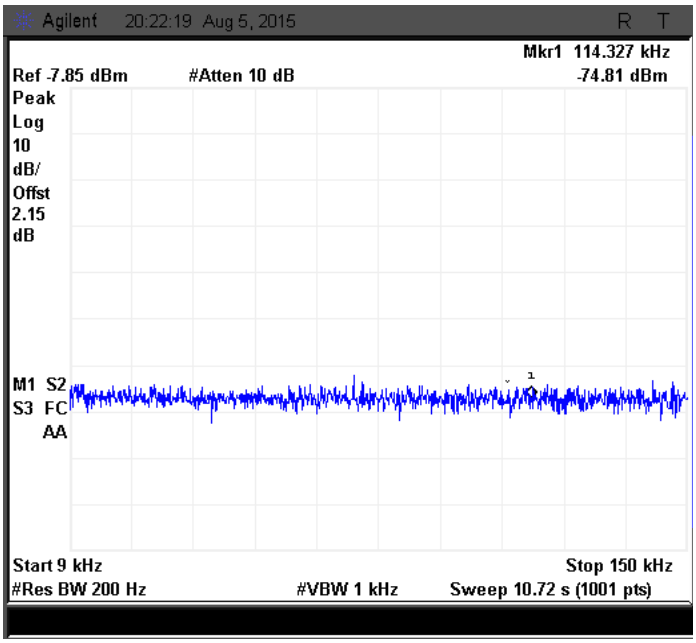

Figure 252: Emission measured with Peak Detector from 9 kHz to 150 kHz at Ch. 1

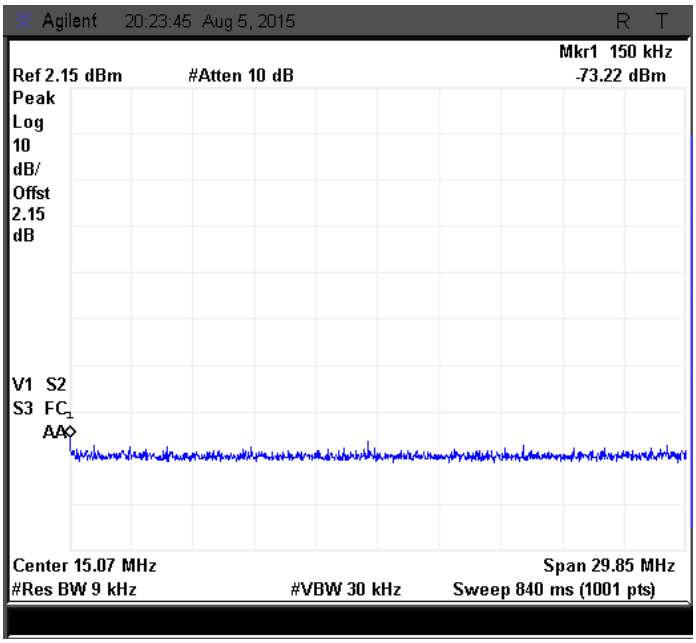

Figure 253: Emission measured with Peak Detector from 150 kHz to 30MHz at Ch. 1

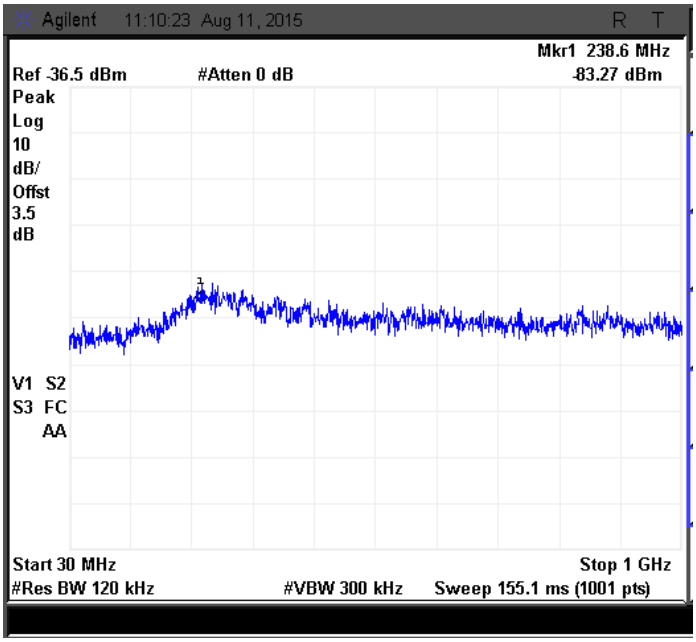

Figure 254: Emission measured with Peak Detector from 30MHz to 1GHz at Ch. 1

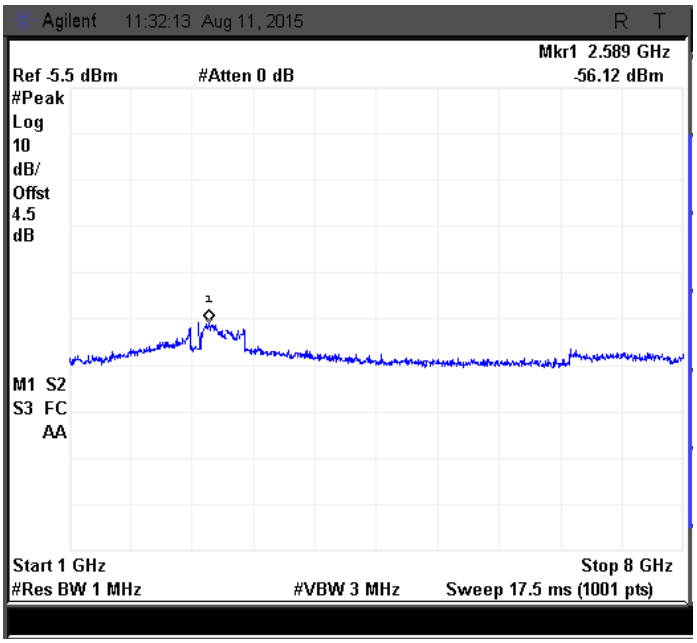

Figure 255: Emission measured with Peak Detector from 1GHz to 8GHz at Ch. 1

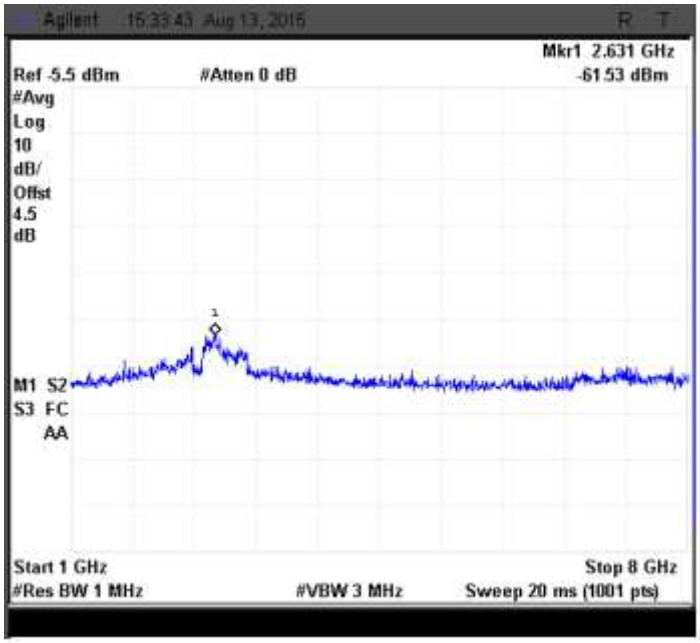

Figure 256: Emission measured with Average Detector from 1GHz to 8GHz at Ch. 1

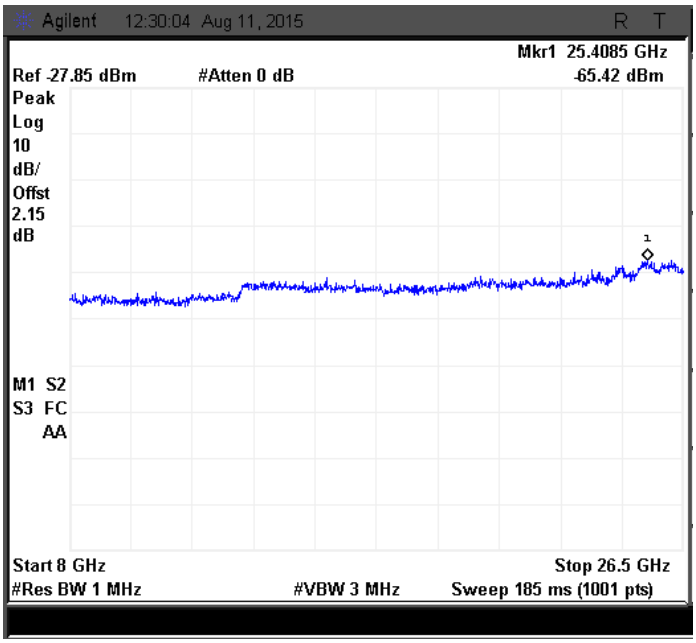

Figure 257: Emission measured with Peak Detector from 8GHz to 26.5GHz at Ch. 1

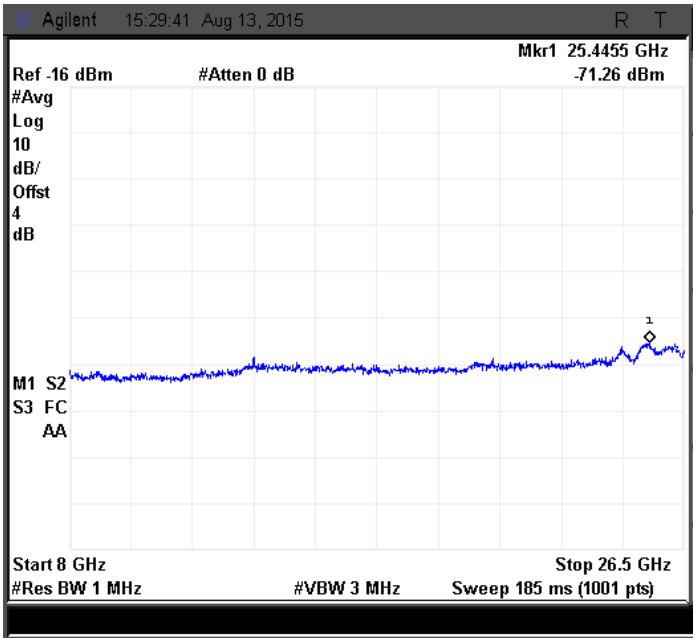

Figure 258: Emission measured with Average Detector from 8GHz to 26.5GHz at Ch. 1

7.5.7 RESULT

Conducted RF Emission is within the restricted bands of operation limits specified.

7.5.7.1 BASIC CONDITION

40MHz Modulation Bandwidth

Channel	Detector (PK/ AVG)	Freq. (Hz)	Ch. 0 (dBm)	Ch. 1 (dBm)	Ant Gain (dBi)	EIRP+GRF Ch. 0 (dBm)	EIRP+GRF Ch. 1 (dBm)	Ch. 0 + Ch. 1 (dBm)	E (dBµV/m)	Limit	Margin (dB)
Low	PK	22.677k	-74.93	-71.07	2.15	-66.78	-62.92	-61.42	33.83	127.54	-93.71
	PK	3.792M	-66.03	-68.86	2.15	-57.88	-60.71	-56.06	39.19	69.54	-30.35
	PK	235.6M	-78.65	-79.51	2.15	-71.8	-72.66	-69.20	26.05	46.02	-19.97
	PK	2.988G	-59.1	-58.73	2.15	-56.95	-56.58	-53.75	41.5	73.98	-32.48
	AVG	2.925G	-61.33	-63.23	2.15	-59.18	-61.08	-57.02	38.23	53.98	-15.75
	PK	26.0745G	-65.85	-65.4	2.15	-63.7	-63.25	-60.46	34.79	73.98	-39.19
	AVG	25.4085G	-72.26	-71.7	2.15	-70.11	-69.55	-66.81	28.44	53.98	-25.54
Mid	PK	25.074k	-70.48	-73.49	2.15	-62.33	-65.34	-60.57	34.68	127.36	-92.68
	PK	3.732M	-65.36	-67.75	2.15	-57.21	-59.6	-55.23	40.02	69.54	-29.52
	PK	272.5M	-80.58	-79.28	2.15	-73.73	-72.43	-70.02	25.23	46.02	-20.79
	PK	2.995G	-58.87	-57.44	2.15	-56.72	-55.29	-52.94	42.31	73.98	-31.67
	AVG	2.799G	-64.39	-62.68	2.15	-62.24	-60.53	-58.29	36.96	53.98	-17.02
	PK	25.427G	-65.38	-65.54	2.15	-63.23	-63.39	-60.30	34.95	73.98	-39.03
	AVG	26.005G	-70.54	-72.26	2.15	-68.39	-70.11	-66.16	29.09	53.98	-24.89
High	PK	60.888k	-74.06	-69.85	2.15	-65.91	-61.7	-60.30	34.95	124.78	-89.83
	PK	7.523M	-66.92	-65.72	2.15	-58.77	-57.57	-55.12	40.13	69.54	-29.41
	PK	251.2M	-79.13	-83.36	2.15	-72.28	-76.51	-70.89	24.36	46.02	-21.66
	PK	2.995G	-57.97	-58.4	2.15	-55.82	-56.25	-53.02	42.23	73.98	-31.75
	AVG	2.981G	-61.5	-61.5	2.15	-59.35	-59.35	-56.34	38.91	53.98	-15.07
	PK	25.4455G	-66.84	-64.69	2.15	-64.69	-62.54	-60.47	34.78	73.98	-39.2
	AVG	26.2595G	-72.94	-71	2.15	-70.79	-68.85	-66.70	28.55	53.98	-25.43

5MHz Modulation Bandwidth

Channel	Detector (PK/ AVG)	Freq. (Hz)	Ch. 0 (dBm)	Ch. 1 (dBm)	Ant Gain (dBi)	EIRP+GRF Ch. 0 (dBm)	EIRP+GRF Ch. 1 (dBm)	Ch. 0 + Ch. 1 (dBm)	E (dBµV/m)	Limit	Margin (dB)
Low	PK	109.956k	-74.19	-70.07	2.15	-66.04	-61.92	-60.50	34.75	121.24	-86.49
	PK	478k	-58.44	-62.93	2.15	-50.29	-54.78	-48.97	46.28	94.67	-48.39
	PK	244.4M	-79.32	-81.16	2.15	-72.47	-74.31	-70.28	24.97	46.02	-21.05
	PK	2.540G	-55.35	-55.24	2.15	-53.2	-53.09	-50.13	45.12	73.98	-28.86
	AVG	2.512G	-60.57	-55.84	2.15	-58.42	-53.69	-52.43	42.82	53.98	-11.16
	PK	25.4825G	-64.29	-66.94	2.15	-62.14	-64.79	-60.26	34.99	73.98	-38.99
	AVG	25.2975G	-70.62	-70.61	2.15	-68.47	-68.46	-65.45	29.8	53.98	-24.18
Mid	PK	62.862k	-67.8	-76.59	2.15	-59.65	-68.44	-59.11	36.14	124.64	-88.5
	PK	240k	-55.04	-59.61	2.15	-46.89	-51.46	-45.59	49.66	111.85	-62.19
	PK	234.7M	-78.93	-80.86	2.15	-72.08	-74.01	-69.93	25.32	46.02	-20.7
	PK	2.631G	-51.91	-55.41	2.15	-49.76	-53.26	-48.16	47.09	73.98	-29.89
	AVG	2.589G	-56.82	-56.93	2.15	-54.67	-54.78	-51.71	43.54	53.98	-10.44
	PK	26.019G	-65.94	-65	2.15	-63.79	-62.85	-60.28	34.97	73.98	-39.01
	AVG	25.4825G	-71.49	-70.87	2.15	-69.34	-68.72	-66.01	29.24	53.98	-24.74
High	PK	9.987k	-73.75	-70.33	2.15	-65.6	-62.18	-60.55	34.7	128.45	-93.75
	PK	150k	-71.92	-73.97	2.15	-63.77	-65.82	-61.66	33.59	118.34	-84.75
	PK	243.4M	-80.06	-79.32	2.15	-73.21	-72.47	-69.81	25.44	46.02	-20.58
	PK	2.631G	-51.74	-56.56	2.15	-49.59	-54.41	-48.35	46.9	73.98	-27.08
	AVG	2.589G	-59.23	-57.97	2.15	-57.08	-55.82	-53.40	41.85	53.98	-12.13
	PK	25.982G	-64.82	-65.56	2.15	-62.67	-63.41	-60.01	35.24	73.98	-38.74
	AVG	25.3715G	-71.27	-72.7	2.15	-69.12	-70.55	-66.77	28.48	53.98	-25.5

7.5.7.2 17DBI ANTENNA CONDITION

40MHz Modulation Bandwidth

Channel	Detector (PK/ AVG)	Freq. (Hz)	Ch. 0 (dBm)	Ch. 1 (dBm)	Ant Gain (dBi)	EIRP+GRF Ch. 0 (dBm)	EIRP+GRF Ch. 1 (dBm)	Ch. 0 + Ch. 1 (dBm)	E (dBµV/m)	Limit	Margin (dB)
Low	PK	35.085k	-70.35	-74.59	17	-47.35	-51.59	-45.96	49.29	126.4	-77.11
	PK	150k	-71.6	-71.74	17	-48.6	-48.74	-45.66	49.59	118.34	-68.75
	PK	245.3M	-81.29	-78.11	17	-59.59	-56.41	-54.70	40.55	46.02	-5.47
	PK	2.981G	-59.12	-58.89	17	-42.12	-41.89	-38.99	56.26	73.98	-17.72
	AVG	2.995G	-62.69	-62.19	17	-45.69	-45.19	-42.42	52.83	53.98	-1.15
	PK	25.5010G	-64.72	-66.03	17	-47.72	-49.03	-45.32	49.93	73.98	-24.05
	AVG	25.3530G	-70.91	-72.64	17	-53.91	-55.64	-51.68	43.57	53.98	-10.41
Mid	PK	91.767k	-73.12	-70.4	17	-50.12	-47.4	-45.54	49.71	122.55	-72.84
	PK	19.761M	-73.09	-75.93	17	-50.09	-52.93	-48.27	46.98	69.54	-22.56
	PK	231.8M	-79.22	-80.1	17	-57.52	-58.4	-54.93	40.32	46.02	-5.7
	PK	2.988G	-57.39	-57.46	17	-40.39	-40.46	-37.41	57.84	73.98	-16.14
	AVG	2.967G	-62.05	-63.2	17	-45.05	-46.2	-42.58	52.67	53.98	-1.31
	PK	25.3530G	-65.18	-64.64	17	-48.18	-47.64	-44.9	50.35	73.98	-23.63
	AVG	25.9450G	-72.56	-69.83	17	-55.56	-52.83	-50.97	44.28	53.98	-9.7
High	PK	24.933k	-71.07	-75.67	17	-48.07	-52.67	-46.78	48.47	127.37	-78.9
	PK	9.344M	-72.75	-75.85	17	-49.75	-52.85	-48.02	47.23	69.54	-22.31
	PK	243.4M	-79.28	-82.29	17	-57.58	-60.59	-55.82	39.43	46.02	-6.59
	PK	2.939G	-59.99	-57.31	17	-42.99	-40.31	-38.43	56.82	73.98	-17.16
	AVG	2.995G	-63.54	-62.57	17	-46.54	-45.57	-43.02	52.23	53.98	-1.75
	PK	25.242G	-64.1	-65.54	17	-47.1	-48.54	-44.75	50.5	73.98	-23.48
	AVG	25.390G	-71.39	-73.11	17	-54.39	-56.11	-52.16	43.09	53.98	-10.89

5MHz Modulation Bandwidth

Channel	Detector (PK/ AVG)	Freq. (Hz)	Ch. 0 (dBm)	Ch. 1 (dBm)	Ant Gain (dBi)	EIRP+GRF Ch. 0 (dBm)	EIRP+GRF Ch. 1 (dBm)	Ch. 0 + Ch. 1 (dBm)	E (dBµV/m)	Limit	Margin (dB)
Low	PK	138.720k	-70.57	-70.99	17	-47.57	-47.99	-44.76	50.49	119.16	-68.67
	PK	150k	-73.23	-71.93	17	-50.23	-48.93	-46.52	48.73	118.34	-69.61
	PK	239.5M	-80.88	-79.05	17	-59.18	-57.35	-55.16	40.09	46.02	-5.93
	PK	2.631G	-52.88	-56.23	17	-35.88	-39.23	-34.23	61.02	73.98	-12.96
	AVG	2.624G	-62.25	-63.65	17	-45.25	-46.65	-42.88	52.37	53.98	-1.61
	PK	26.019G	-65.6	-64.89	17	-48.6	-47.89	-45.22	50.03	73.98	-23.95
	AVG	25.3715G	-71.58	-70.6	17	-54.58	-53.6	-51.05	44.02	53.98	-9.96
Mid	PK	141.54k	-72.21	-70.3	17	-49.21	-47.3	-45.14	50.11	118.96	-68.85
	PK	150k	-70.3	-71.54	17	-47.3	-48.54	-44.87	50.38	118.34	-67.96
	PK	255M	-78.34	-82.45	17	-56.64	-60.75	-55.22	40.03	46.02	-5.99
	PK	2.582G	-55.47	-54.84	17	-38.47	-37.84	-35.13	60.12	73.98	-13.86
	AVG	2.652G	-63.86	-62.28	17	-46.86	-45.28	-42.99	52.26	53.98	-1.72
	PK	25.353G	-64.76	-66.28	17	-47.76	-49.28	-45.44	49.81	73.98	-24.17
	AVG	26.2595G	-71.22	-72.69	17	-54.22	-55.69	-51.88	43.37	53.98	-10.61
High	PK	114.327k	-71.41	-74.81	17	-48.41	-51.81	-46.78	48.47	120.92	-72.45
	PK	150k	-73.1	-73.22	17	-50.1	-50.22	-47.15	48.1	118.34	-70.24
	PK	238.6M	-79	-83.27	17	-57.3	-61.57	-55.92	39.33	46.02	-6.69
	PK	2.589G	-54.56	-56.12	17	-37.56	-39.12	-35.26	59.99	73.98	-13.99
	AVG	2.631G	-64.67	-61.53	17	-47.67	-44.53	-42.81	52.44	53.98	-1.54
	PK	25.4085G	-66.11	-65.42	17	-49.11	-48.42	-45.74	49.51	73.98	-24.47
	AVG	25.4455G	-72.05	-71.26	17	-55.05	-54.26	-51.63	43.62	53.98	-10.36

7.6 OPERATING BAND EDGE MEASUREMENTS

7.6.1 TEST SPECIFICATION

Test Standard	47 CFR Ch. I (10–1–14 Ed), Part 15, Subpart C
Test Procedure	ANSI C63.10-2013
Frequency Range	As applicable
Resolution Bandwidth	100 kHz
Video Bandwidth	300 kHz
Sweep Time	Auto
Attenuation	Auto
Test Mode	Conducted
Detector	Average
Input Voltage	120V AC
Input Frequency	60 Hz
Temperature	21.0°C
Humidity	54.0%
Tested By	Subhendu
Test Date	13th Aug 2015

7.6.2 LIMITS

Standard	Reference section	Frequency range	Limit
47 CFR Ch. I (10–1–14 Ed), Part 15, Subpart C	§15.247 (d)	2400 MHz to 2483.5 MHz	30dB below the maximum in- band average PSD level

7.6.3 TEST SETUP

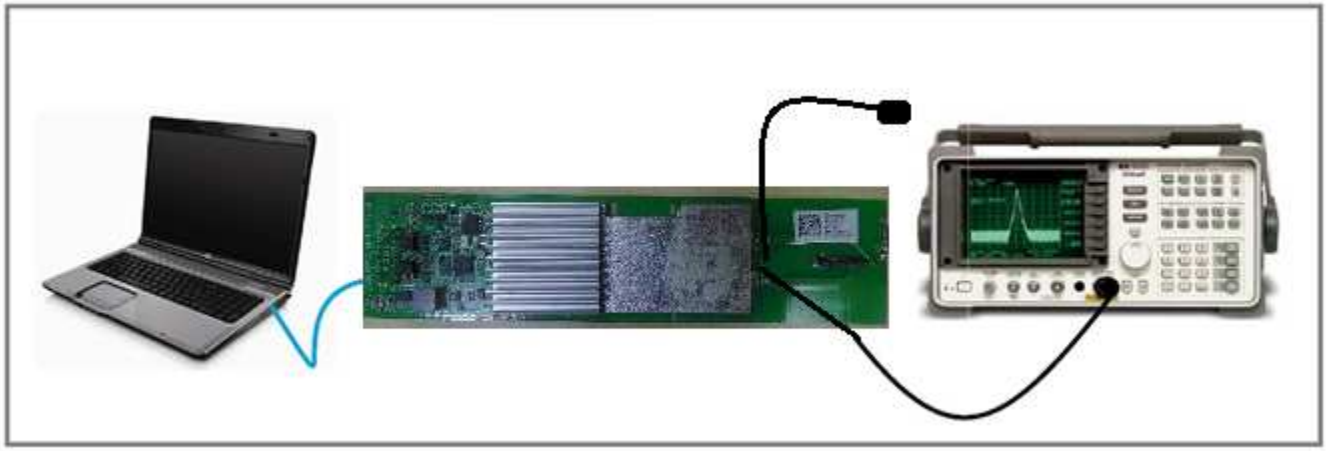

Figure 259: Typical test setup for Conducted Test setup

7.6.4 TEST PROCEDURE

The Conducted test was performed using the Spectrum analyzer. Measurements were done as per Section 13 of KDB **"558074 D01 DTS measurement Guidance v03r02".** The RF output of the EUT was connected to the input port of Spectrum analyzer using an attenuator. Captured the data from spectrum analyzer and compared with the limits specified in the standard.

7.6.5 RESULT (SUPPORTING GRAPHS / DATA) FOR BASIC CONDITION

7.6.5.1 40MHZ MODULATION BW-LOW CHANNEL_2427 MHZ

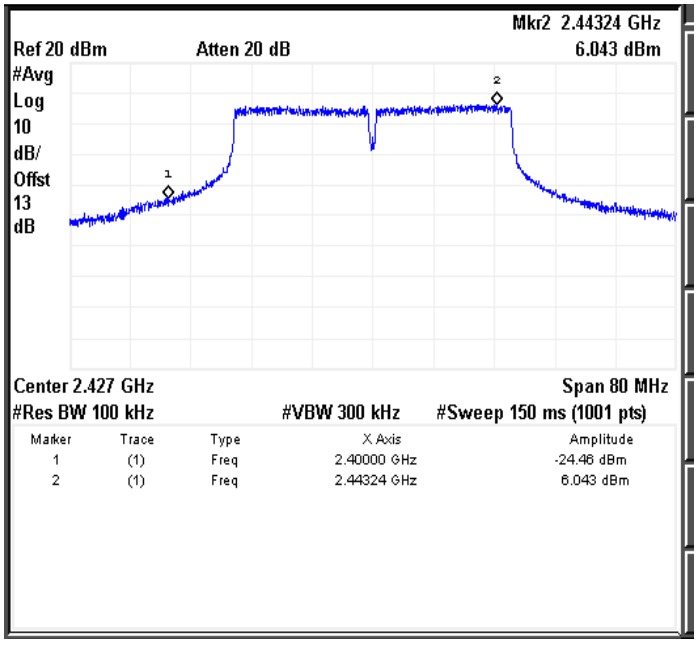

Figure 260: Band edge measured at Ch. 0-Average detector

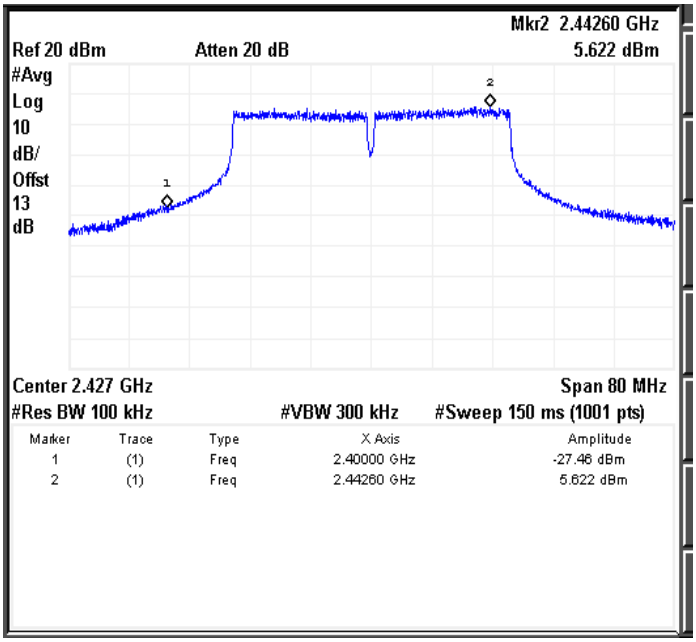

Figure 261: Band edge measured at Ch. 1-Average detector

7.6.5.2 40MHZ MODULATION BW-MIDCHANNEL_2442 MHZ

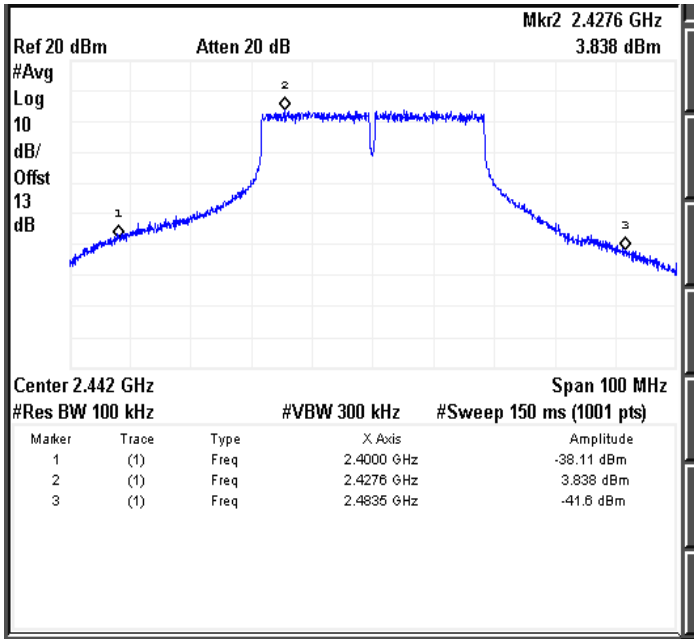

Figure 262: Band edge measured at Ch. 0-Average detector

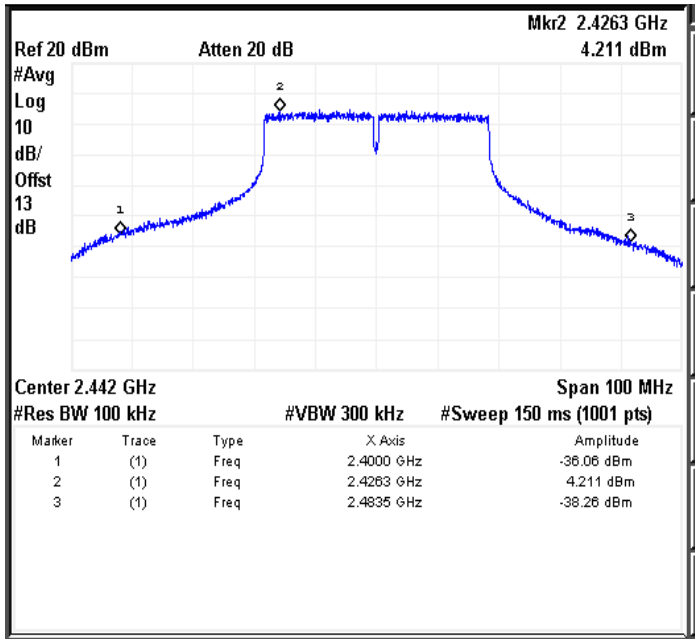

Figure 263: Band edge measured at Ch. 1-Average detector

7.6.5.3 40MHZ MODULATION BW-HIGHCHANNEL_2462 MHZ

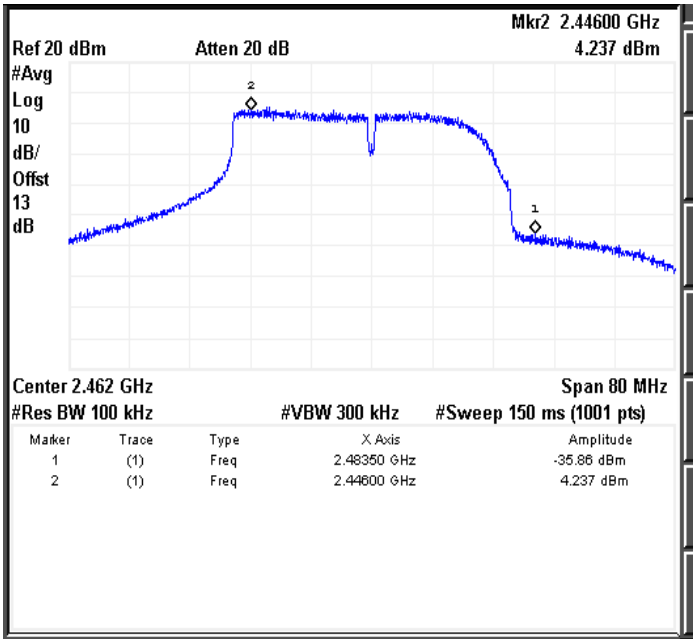

Figure 264: Band edge measured at Ch. 0-Average detector

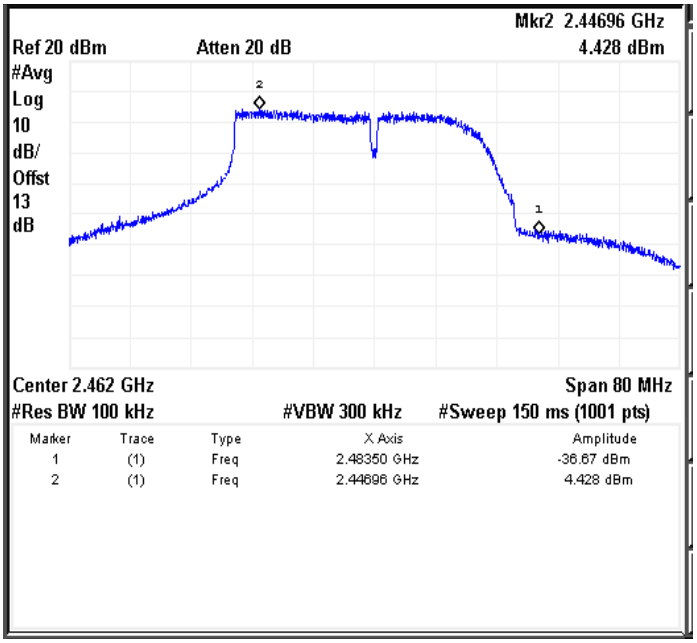

Figure 265: Band edge measured at Ch. 1-Average detector

7.6.5.4 5MHZ MODULATION BW-LOWCHANNEL_2412MHZ

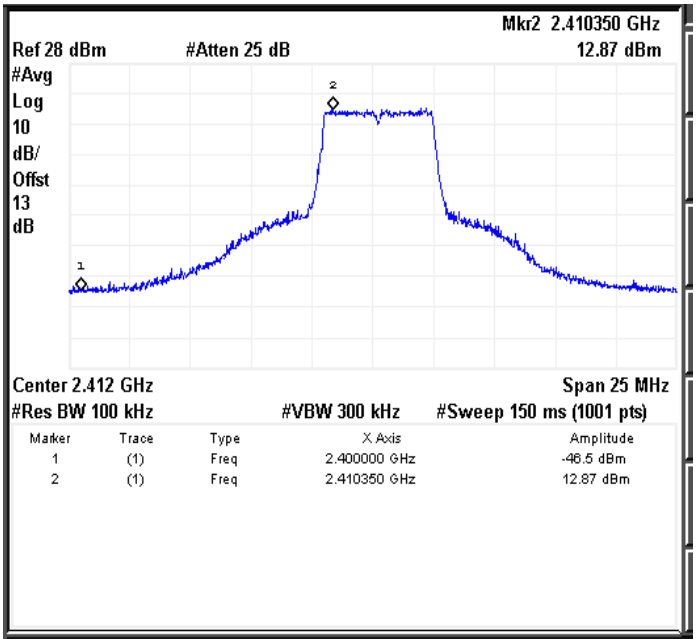

Figure 266: Band edge measured at Ch. 0-Average detector

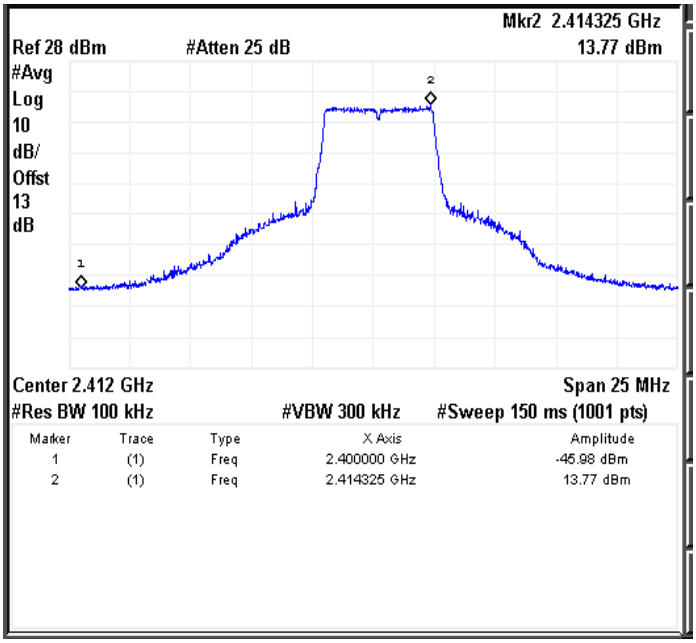

Figure 267: Band edge measured at Ch. 1-Average detector

7.6.5.5 5MHZ MODULATION BW-MID CHANNEL_2442 MHZ

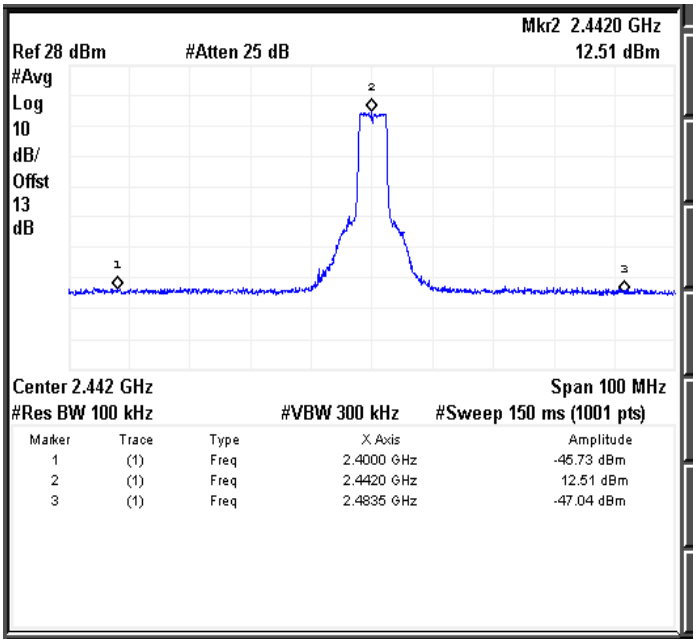

Figure 268: Band edge measured at Ch. 0-Average detector

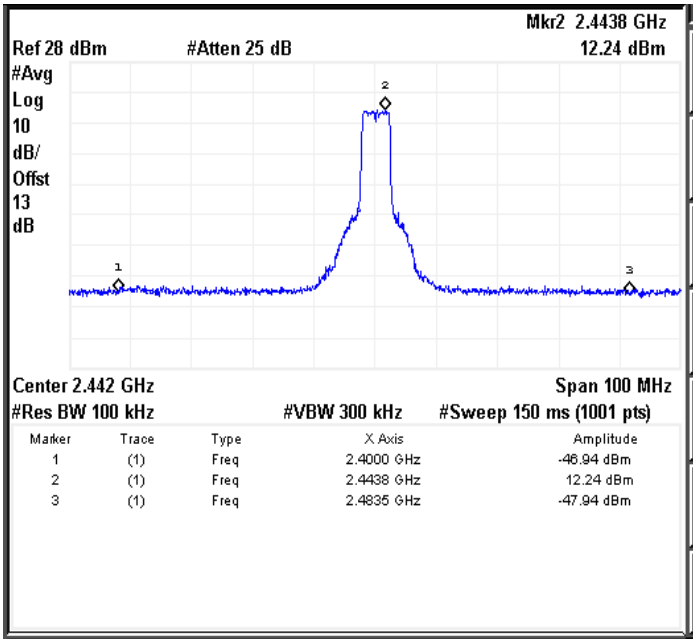

Figure 269: Band edge measured at Ch. 1-Average detector

7.6.5.6 5MHZ MODULATION BW-HIGH CHANNEL_2477 MHZ

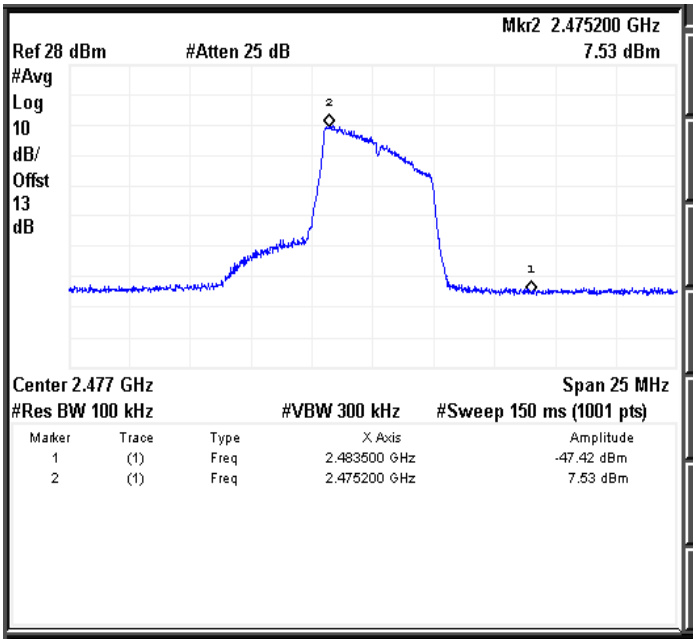

Figure 270: Band edge measured at Ch. 0-Average detector

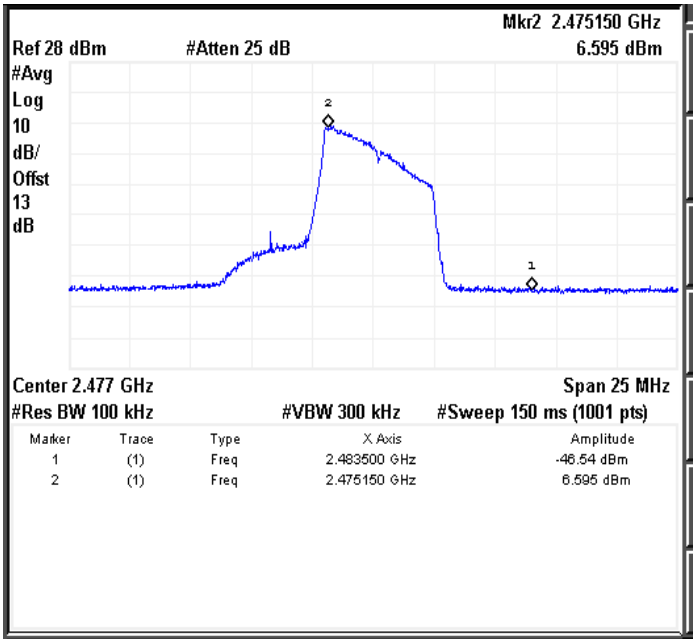

Figure 271: Band edge measured at Ch. 1-Average detector

7.6.6 RESULT (SUPPORTING GRAPHS / DATA) FOR 17DBI DISH CONDITION

7.6.6.1 40MHZ MODULATION BW-LOW CHANNEL_2427 MHZ

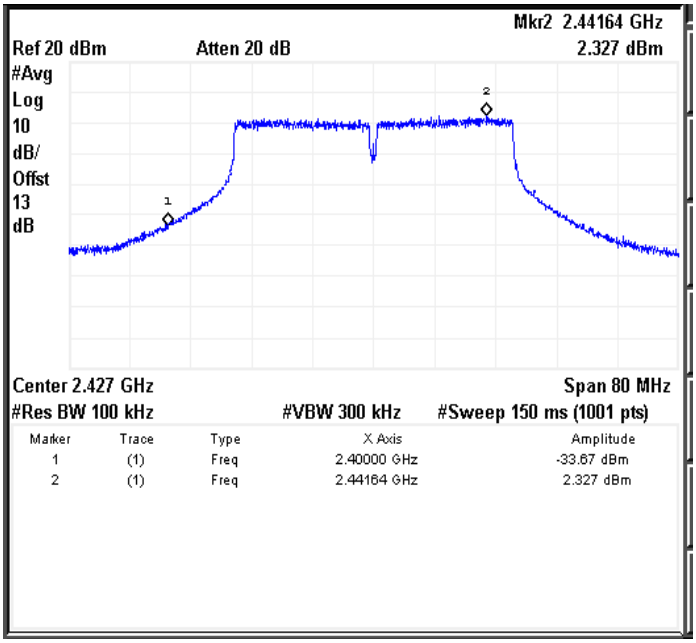

Figure 272: Band edge measured at Ch. 0-Average detector

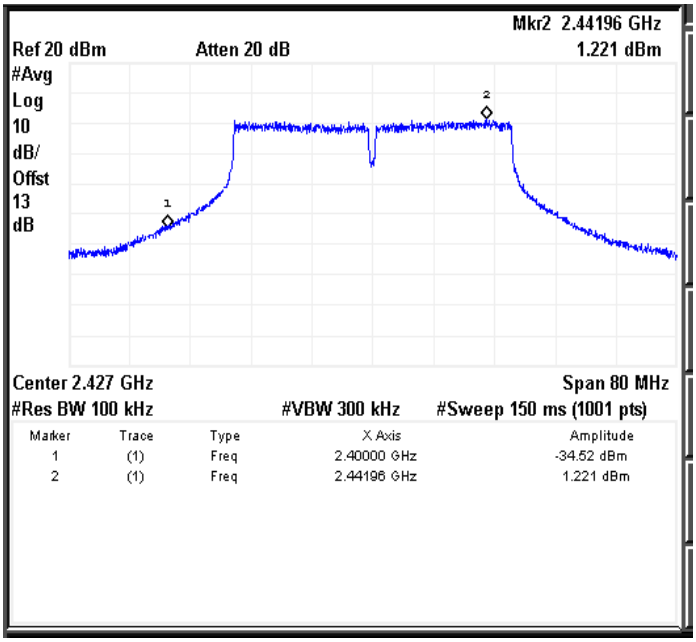

Figure 273: Band edge measured at Ch. 1-Average detector

7.6.6.2 40MHZ MODULATION BW-MIDCHANNEL_2442 MHZ

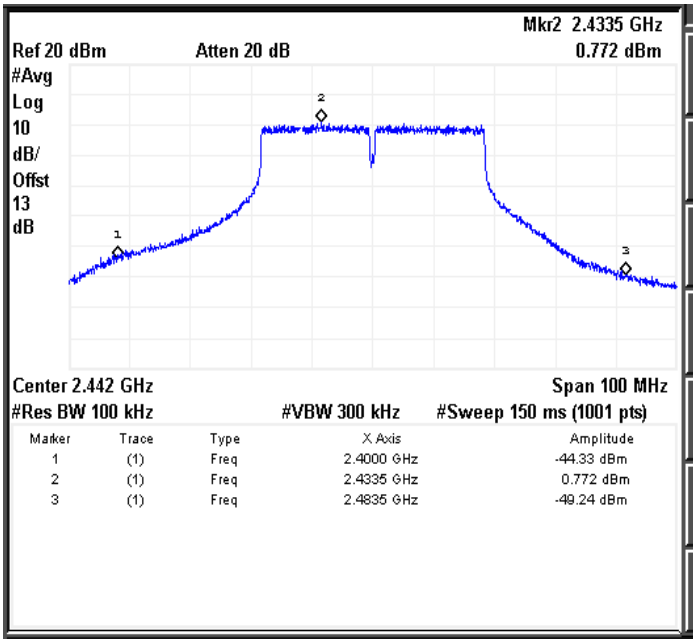

Figure 274: Band edge measured at Ch. 0-Average detector

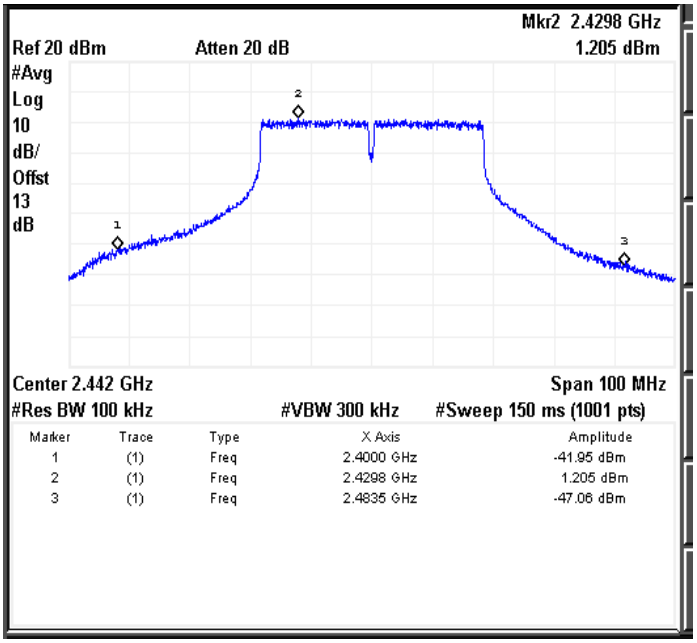

Figure 275: Band edge measured at Ch. 1-Average detector

7.6.6.3 40MHZ MODULATION BW-HIGH CHANNEL_2462 MHZ

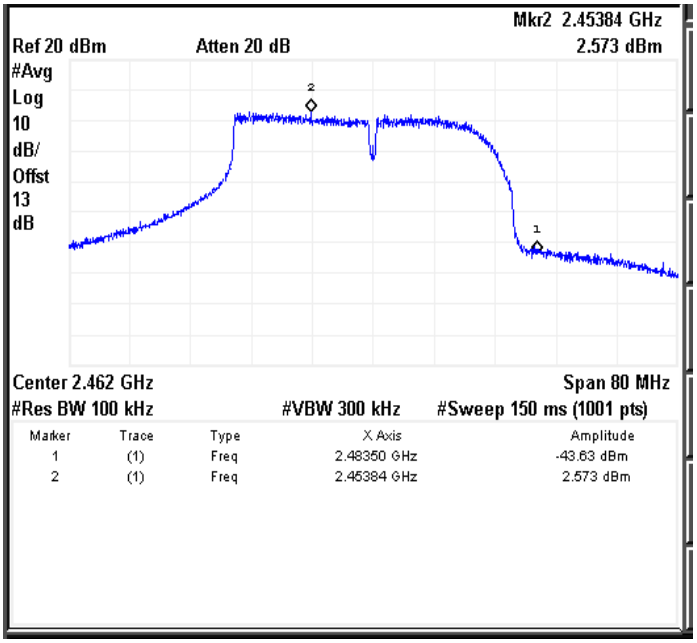

Figure 276: Band edge measured at Ch. 0-Average detector

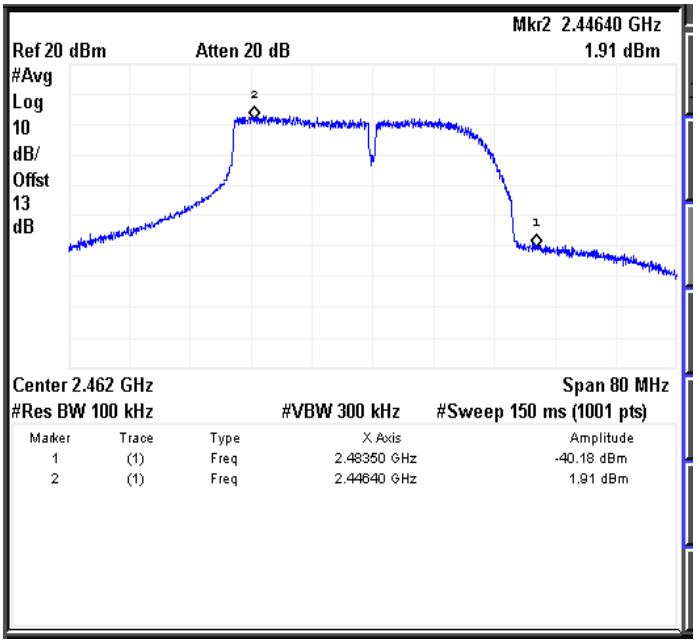

Figure 277: Band edge measured at Ch. 1-Average detector

7.6.6.4 5MHZ MODULATION BW-LOW CHANNEL_2412 MHZ

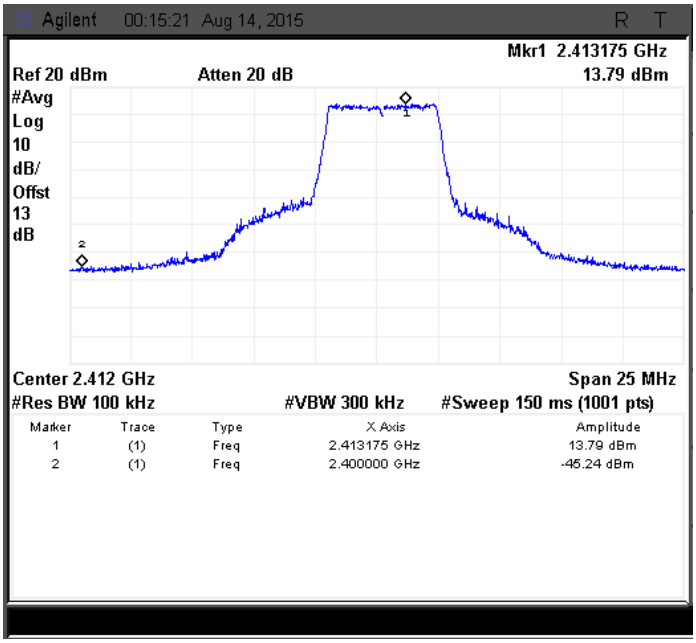

Figure 278: Band edge measured at Ch. 0-Average detector

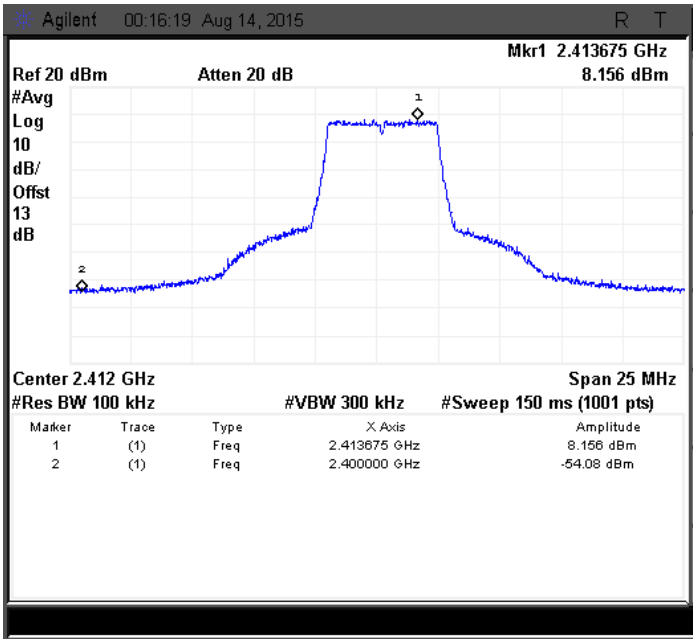

Figure 279: Band edge measured at Ch. 1-Average detector

7.6.6.5 5MHZ MODULATION BW-MIDCHANNEL_2442 MHZ

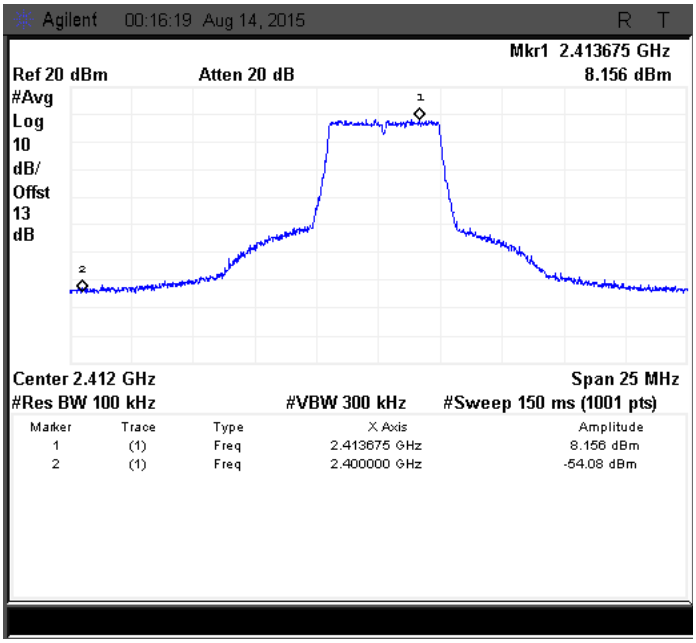

Figure 280: Band edge measured at Ch. 0-Average detector

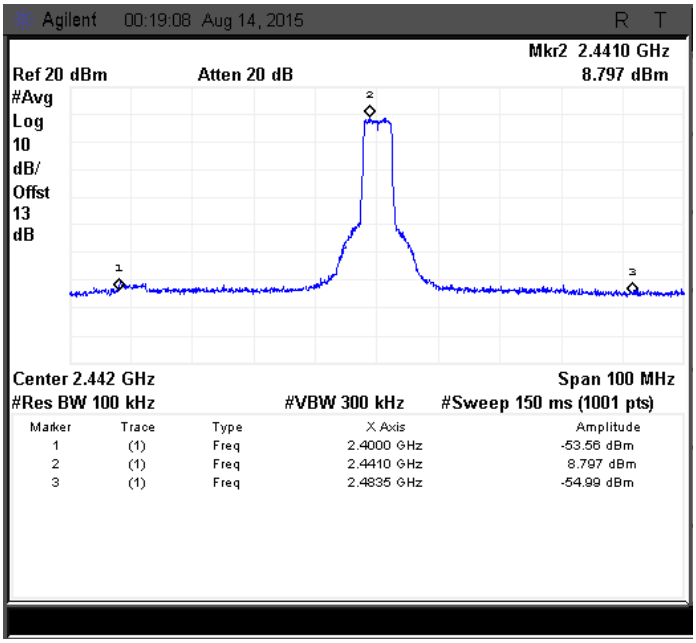

Figure 281: Band edge measured at Ch. 1-Average detector

7.6.6.6 5MHZ MODULATION BW-HIGH CHANNEL_2477 MHZ

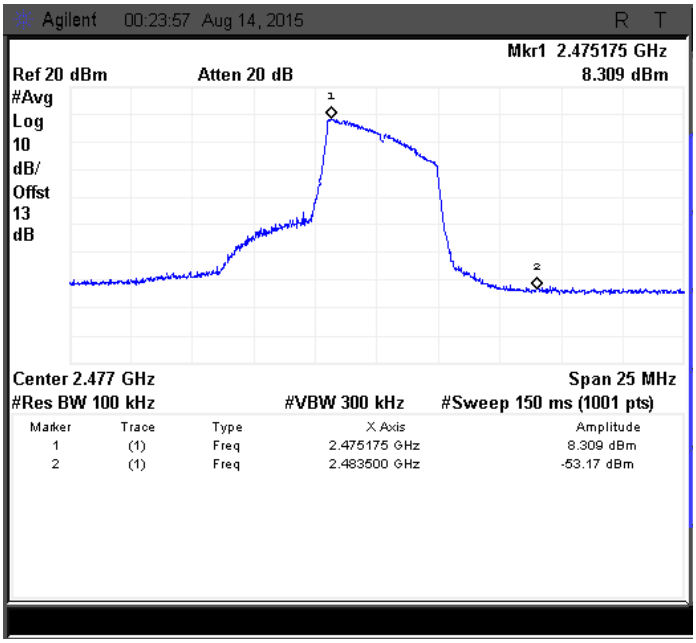

Figure 282: Band edge measured at Ch. 0-Average detector

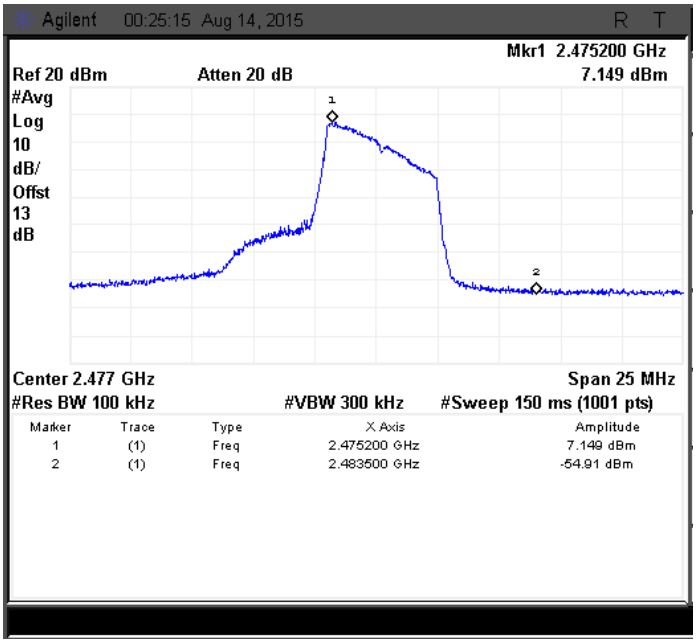

Figure 283: Band edge measured at Ch. 1-Average detector

7.6.7 RESULT

Emission is below -30dBc from the carrier in all channels for both 40MHz & 5MHz Modulation Bandwidths.

APPENDIX I – ACRONYMS

dBµV	Decibel micro Volts
EUT	Equipment Under Test
FCC	Federal Communications Commission
GHz	Giga Hertz
kHz	Kilo Hertz
LISN	Line Impedance Stabilization Network
MHz	Mega Hertz
QP	Quasi Peak

END OF REPORT