99％ Occupied Bandwidth:

For 802.11b Mode:

Channel Frequency (MHz)	*99％ Occupied Bandwidth: (MHz)*	*Minimum Limit (MHz)*	*Pass/Fail*
2412	*16.33*	*0.5*	*Pass*
2437	*16.36*	*0.5*	*Pass*
2462	*16.38*	*0.5*	*Pass*

For 802.11g Mode:

Channel Frequency (MHz)	*99％ Occupied Bandwidth: (MHz)*	*Minimum Limit (MHz)*	*Pass/Fail*
2412	*18.92*	*0.5*	*Pass*
2437	*18.83*	*0.5*	*Pass*
2462	*18.91*	*0.5*	*Pass*

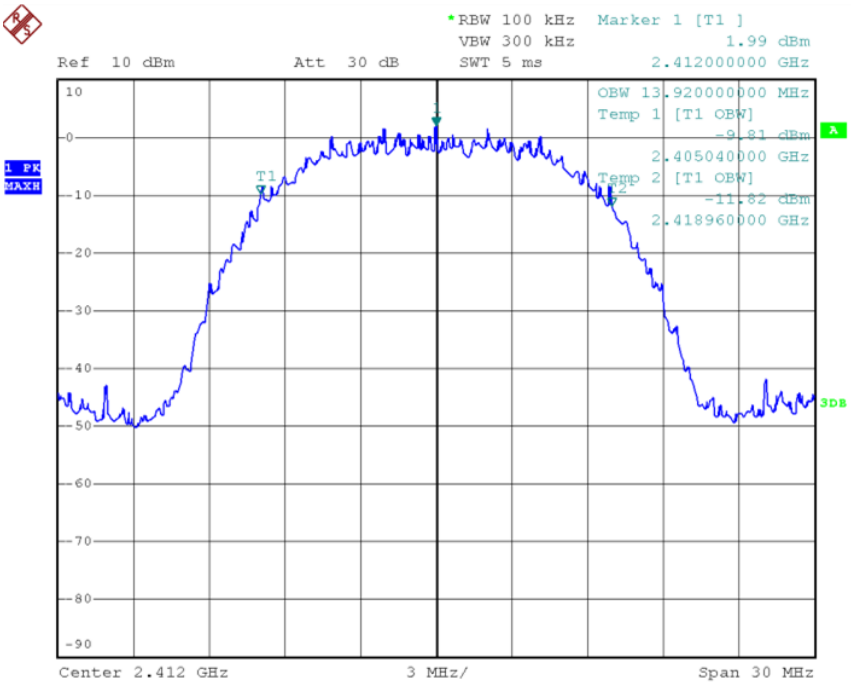
For 802.11n HT20 Mode:

Channel Frequency (MHz)	*99％ Occupied Bandwidth: (MHz)*	*Minimum Limit (MHz)*	*Pass/Fail*
2412	*20.00*	*0.5*	*Pass*
2437	*20.02*	*0.5*	*Pass*
2462	*20.05*	*0.5*	*Pass*

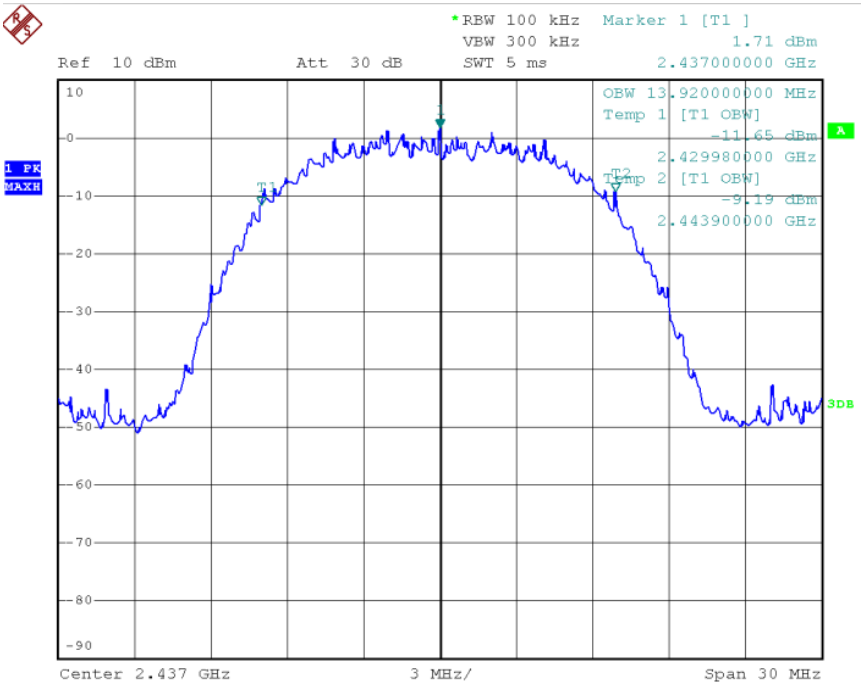
For 802.11n HT40 Mode:

Channel Frequency (MHz)	*99％ Occupied Bandwidth: (MHz)*	*Minimum Limit (MHz)*	*Pass/Fail*
2422	*38.31*	*0.5*	*Pass*
2437	*38.33*	*0.5*	*Pass*
2452	*38.47*	*0.5*	*Pass*

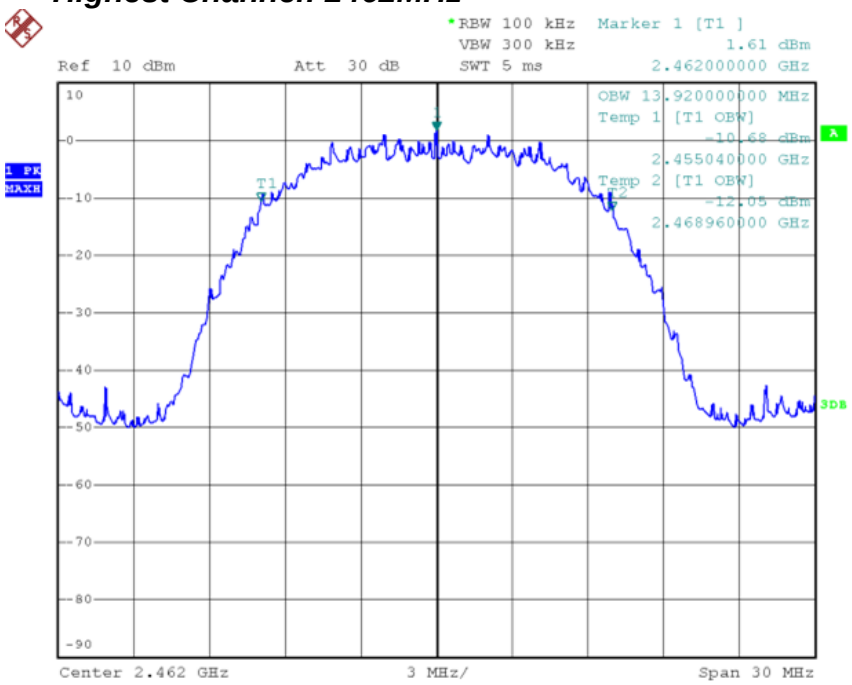
For 802.11b Mode:
Lowest Channel: 2412MHz



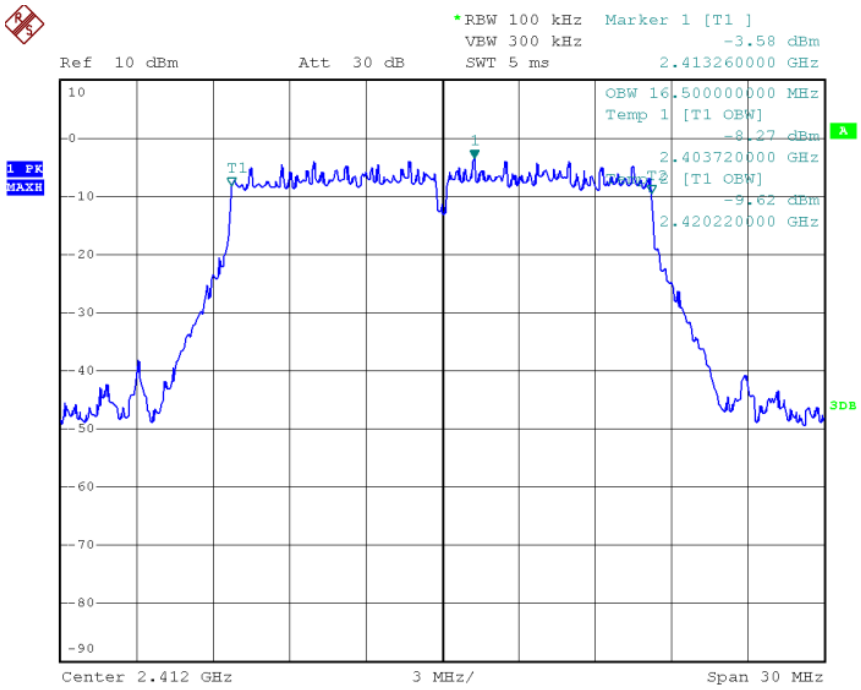
Mid Channel: 2437MHz



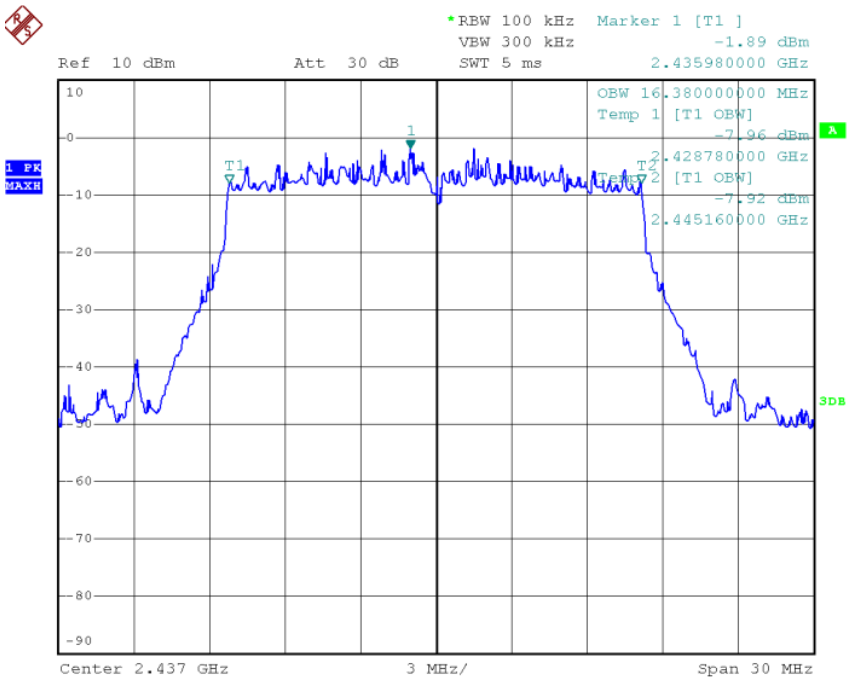
Highest Channel: 2462MHz



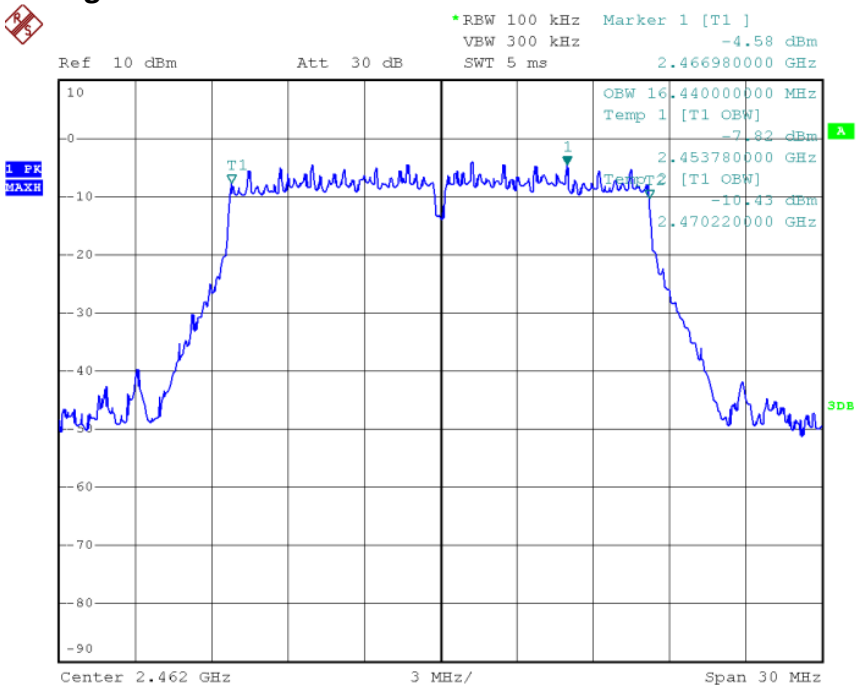
For 802.11g Mode:
Lowest Channel: 2412MHz



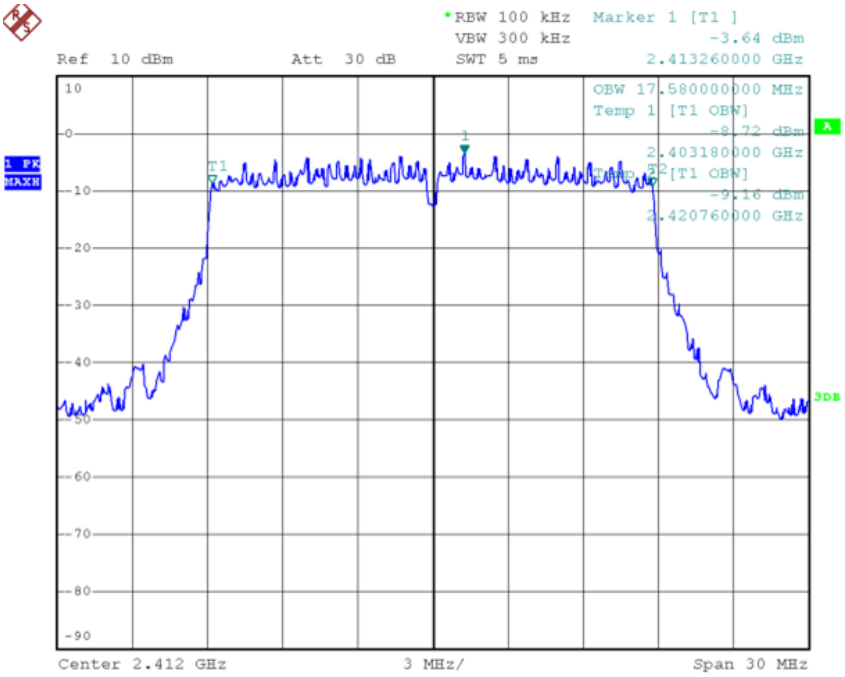
Mid Channel: 2437MHz



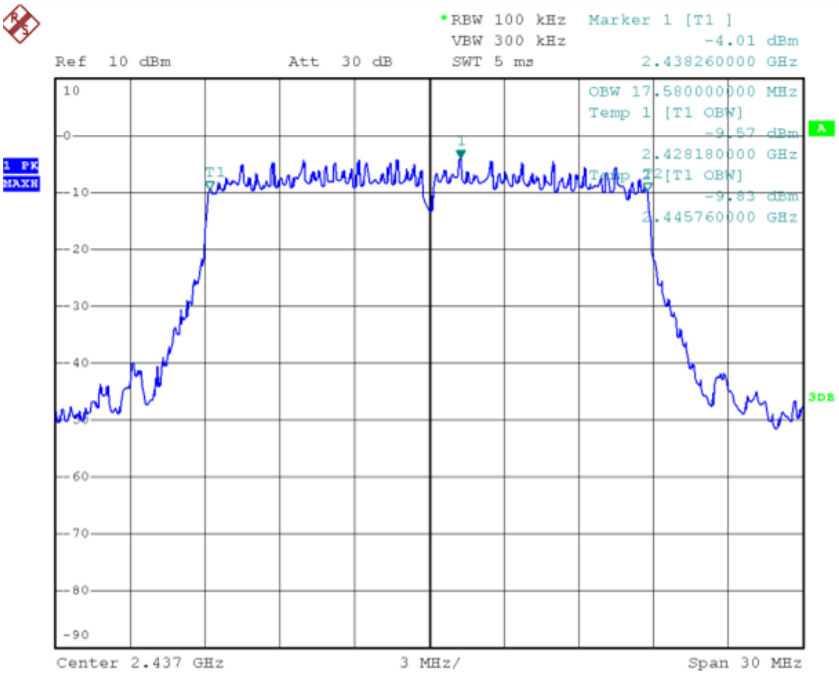
Highest Channel: 2462MHz



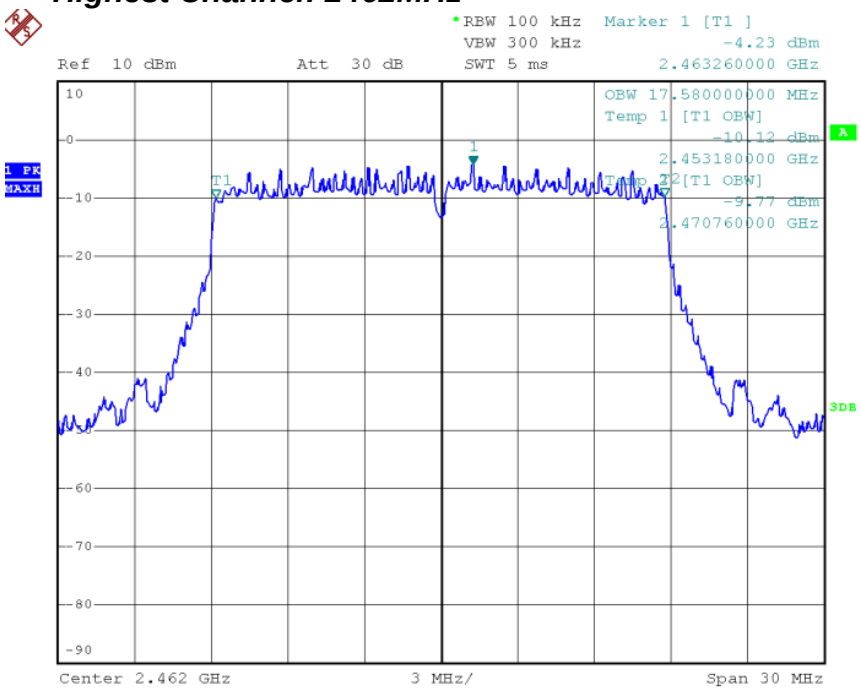
For 802.11n HT20 Mode:
Lowest Channel: 2412MHz



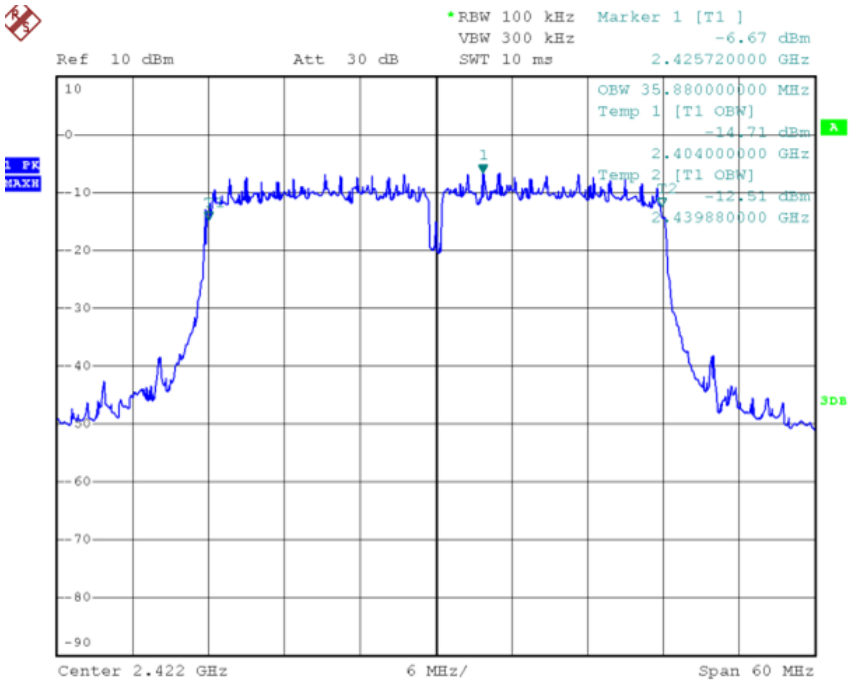
Mid Channel: 2437MHz



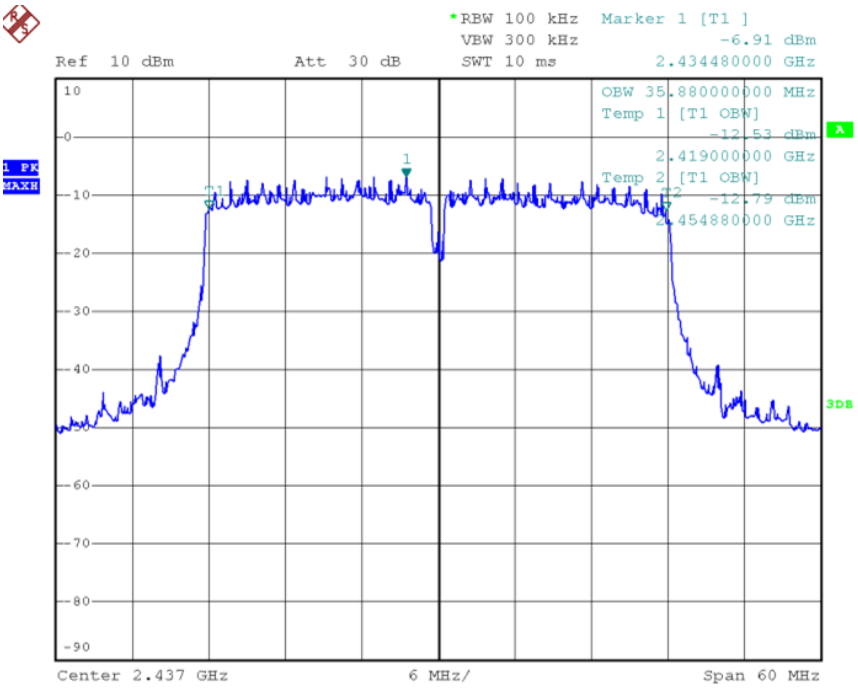
Highest Channel: 2462MHz



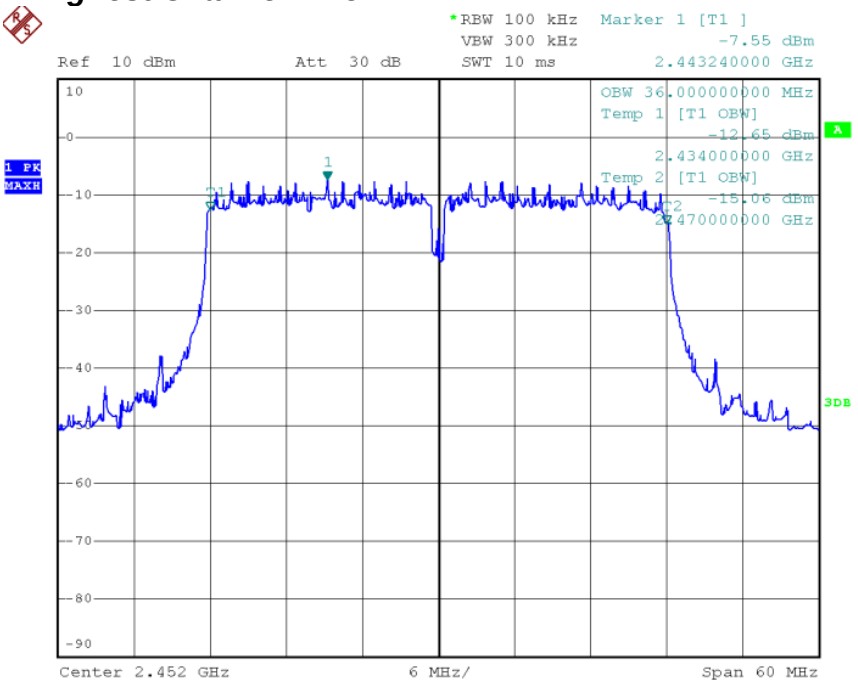
For 802.11n HT40 Mode:
Lowest Channel: 2422MHz



Mid Channel: 2437MHz

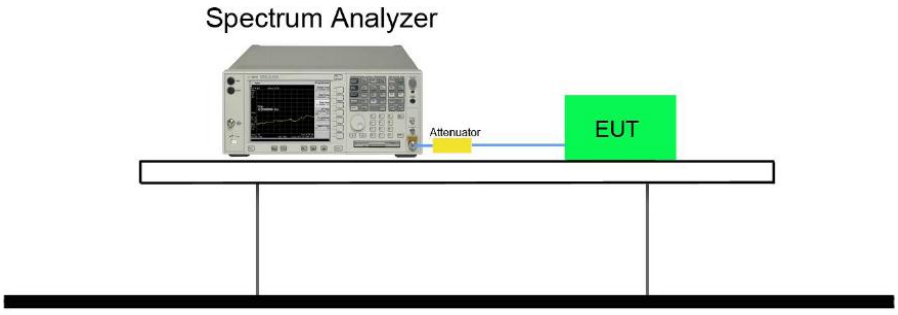


Highest Channel: 2452MHz



ATTACHMENT 5– MAXIMUM PEAK OUTPUT POWER

<table>
<tr><td>CLIENT:</td><td>Grandstream Networks, Inc.</td><td>TEST STANDERD:</td><td>FCC §15.247(b)(3)& RSS-210,A8.4</td></tr>
<tr><td>MODEL NUMBERS:</td><td>GXV3615WPI_HD</td><td>PRODUCT:</td><td>IP Camera</td></tr>
<tr><td>EUT MODEL:</td><td>GXV3615WPI_HD</td><td>EUT DESIGNATION:</td><td>Digital Transmission Device</td></tr>
<tr><td>TEMPERATURE:</td><td>23°C</td><td>HUMIDITY:</td><td>47%RH</td></tr>
<tr><td>ATM PRESSURE:</td><td>101.0kPa</td><td>GROUNDING:</td><td>None</td></tr>
<tr><td>TESTED BY:</td><td>Daomen</td><td>DATE OF TEST:</td><td>April 17, 2014</td></tr>
<tr><td>TEST REFERENCE:</td><td colspan="3">ANSI C63.4:2009 and KDB 558074 with version D01 v03r01</td></tr>
<tr><td>TEST PROCEDURE:</td><td colspan="3">The EUT was set-up as ANSI C63.4:2009, tested to DTS test procedure of KDB 558074 with version D01 v03r01 for compliance to FCC 47CFR 15.247 requirements.</td></tr>
<tr><td>DESCRIPTIONS OF TEST MODE:</td><td colspan="3">Pre-Scan has been conducted to determine the worst-case mode from all possible Combinations between available modulations,data rates and antenna ports (if EUT with antenna diversity architecture). Following channels were selected for the final test as listed beLow:

802.11b mode with data rate of 1Mbps, 802.11g mode with data rate of 6Mbps, 802.11n HT20 mode with data rate of MCS0and 802.11n HT40 mode with data rate of MCS6.</td></tr>
<tr><td>MEASUREMENT EQUIPMENT SET</td><td colspan="3">Spectrum analyzer was set as beLow:
<table>
<tr><td>Equipment Mode</td><td>Spectrum Analyzer</td></tr>
<tr><td>Detector Function</td><td>Peak</td></tr>
<tr><td>RBW</td><td>1MHz</td></tr>
<tr><td>VBW</td><td>1MHz</td></tr>
</table></td></tr>
<tr><td>TESTED RANGE:</td><td colspan="3">N/A</td></tr>
<tr><td>TEST SET UP:</td><td colspan="3">,
 
</td></tr>
</table>

Continue on to next page…

TEST VOLTAGE:	120VAC/60Hz
RESULTS:	The EUT meet the requirements of test reference for maximum peak output power.The test results relate only to the equipment under test provided by client.
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen) test personnel.
M. UNCERTAINTY:	Freq. $\pm$ 2x10^{-7} x Center Freq., Amp $\pm$ 2.6 dB.

Test Data:

For 802.11b Mode:

Channel Frequency (MHz)	Peak Output Power(dBm)	Cable Loss (dB)	Power Level (dBm)	Limit	Margin
2412	16.99	2.00	***18.99***	30.00	-11.01
2437	16.61	2.00	18.61	30.00	-11.39
2462	16.17	2.00	18.17	30.00	-11.83

For 802.11g Mode:

Channel Frequency (MHz)	Peak Output Power(dBm)	Cable Loss (dB)	Power Level (dBm)	Limit	Margin
2412	16.13	2.00	***18.13***	30.00	-11.87
2437	15.83	2.00	17.83	30.00	-12.17
2462	15.54	2.00	17.54	30.00	-12.46

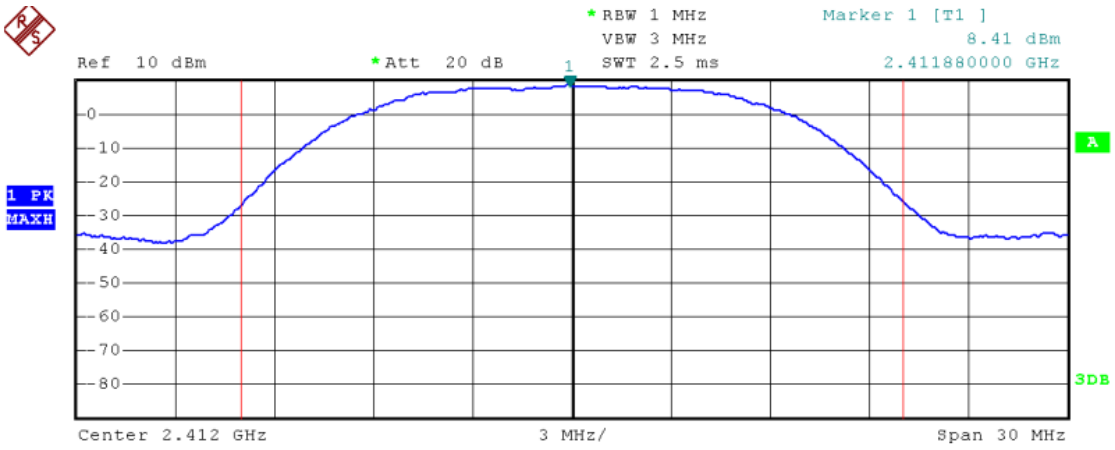
For 802.11n HT20 Mode:

Channel Frequency (MHz)	Peak Output Power(dBm)	Cable Loss (dB)	Power Level (dBm)	Limit	Margin
2412	15.85	2.00	***17.85***	30.00	-12.15
2437	15.67	2.00	17.67	30.00	-12.33
2462	15.50	2.00	17.50	30.00	-12.50

For 802.11n HT40 Mode:

Channel Frequency (MHz)	Peak Output Power(dBm)	Cable Loss (dB)	Power Level (dBm)	Limit	Margin
2422	15.96	2.00	***17.96***	30.00	-12.04
2437	15.56	2.00	17.56	30.00	-12.44
2452	15.23	2.00	17.23	30.00	-12.77

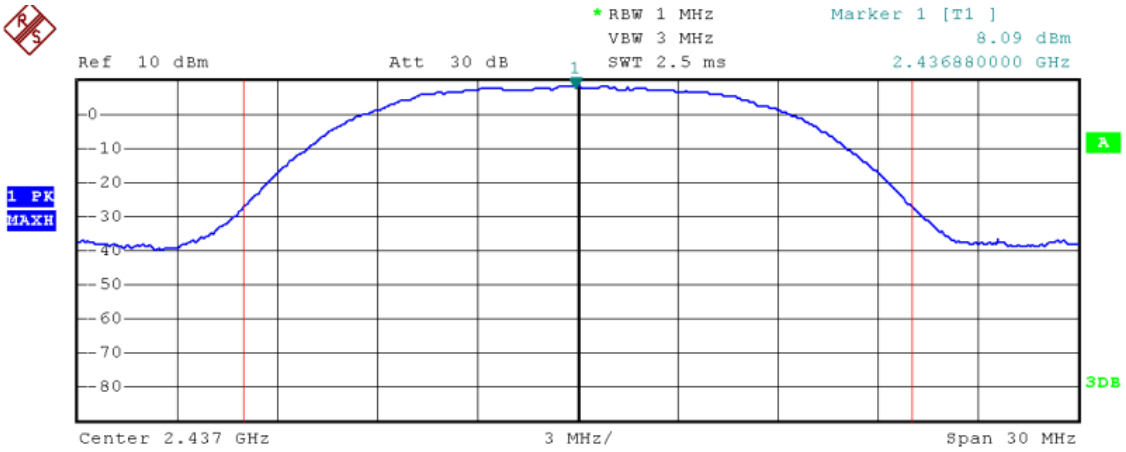
For 802.11b Mode:
Lowest Channel: 2412MHz



Tx Channel

Bandwidth	20 MHz	Power	16.99 dBm

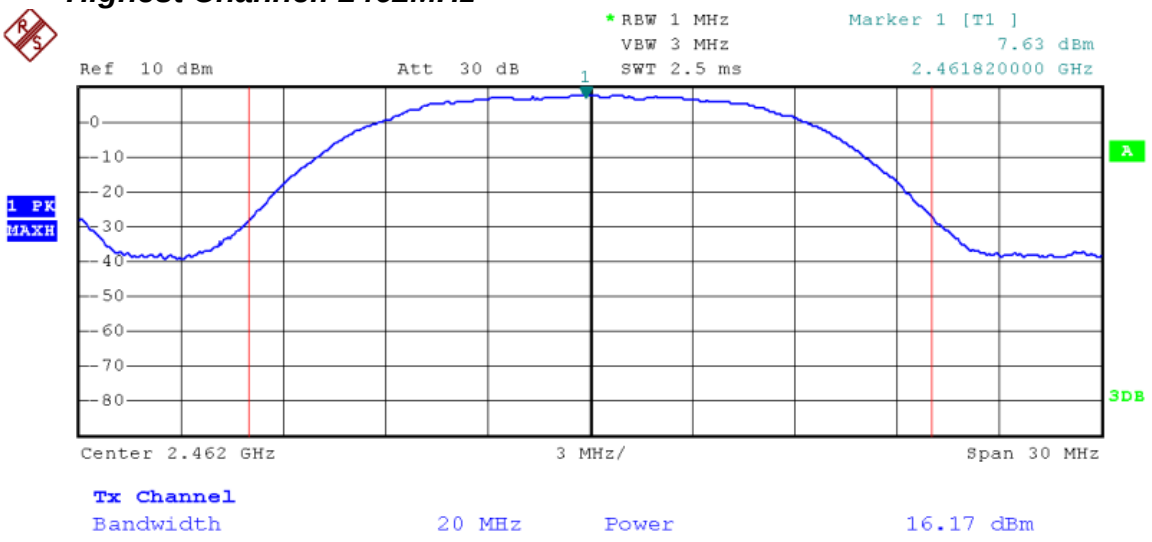
Mid Channel: 2437MHz



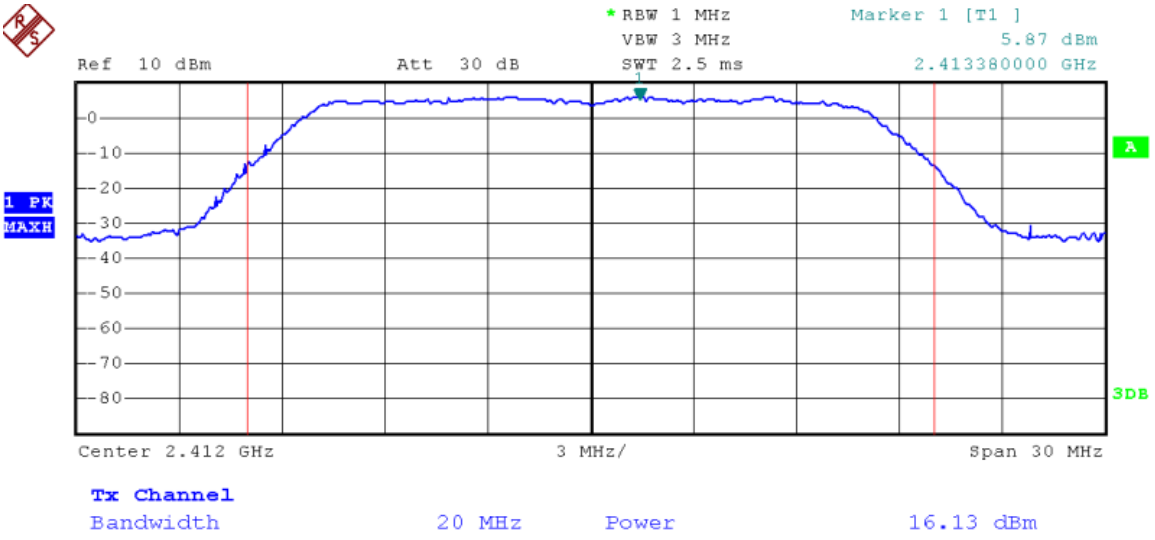
Tx Channel

Bandwidth	20 MHz	Power	16.61 dBm

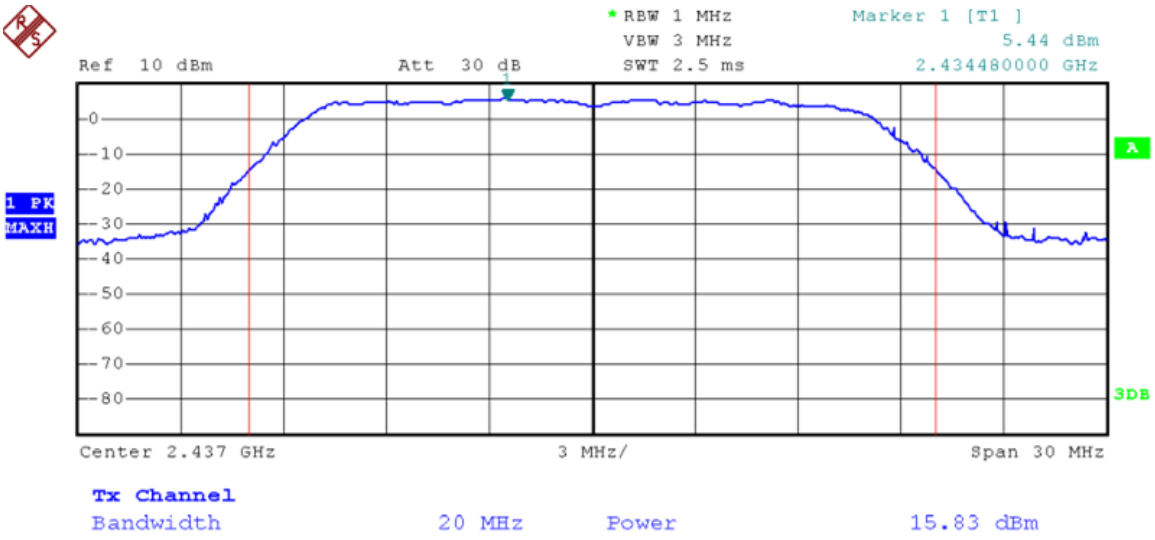
Highest Channel: 2462MHz



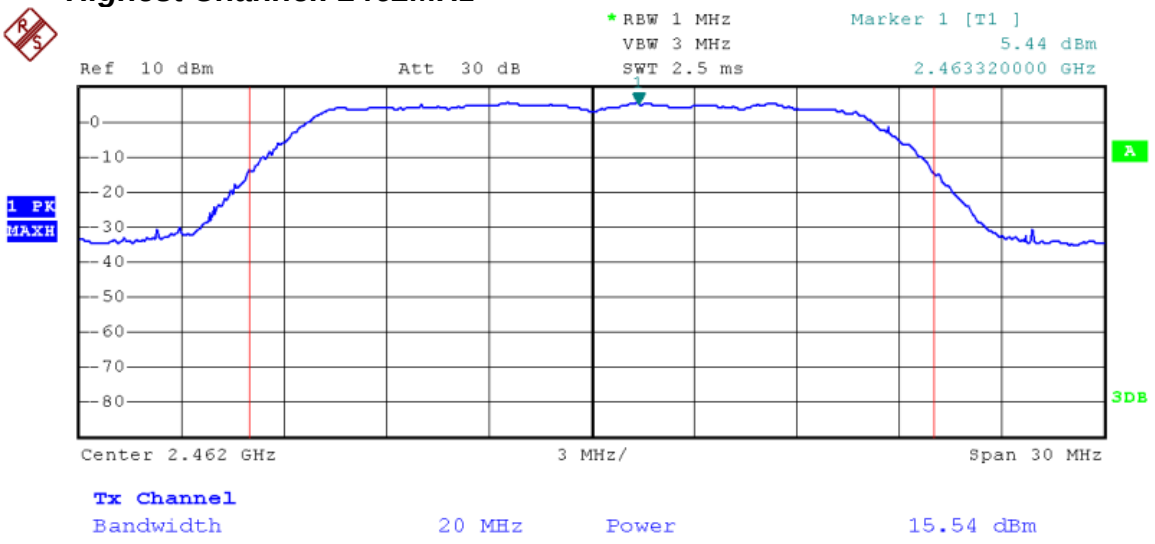
For 802.11g Mode:
Lowest Channel: 2412MHz



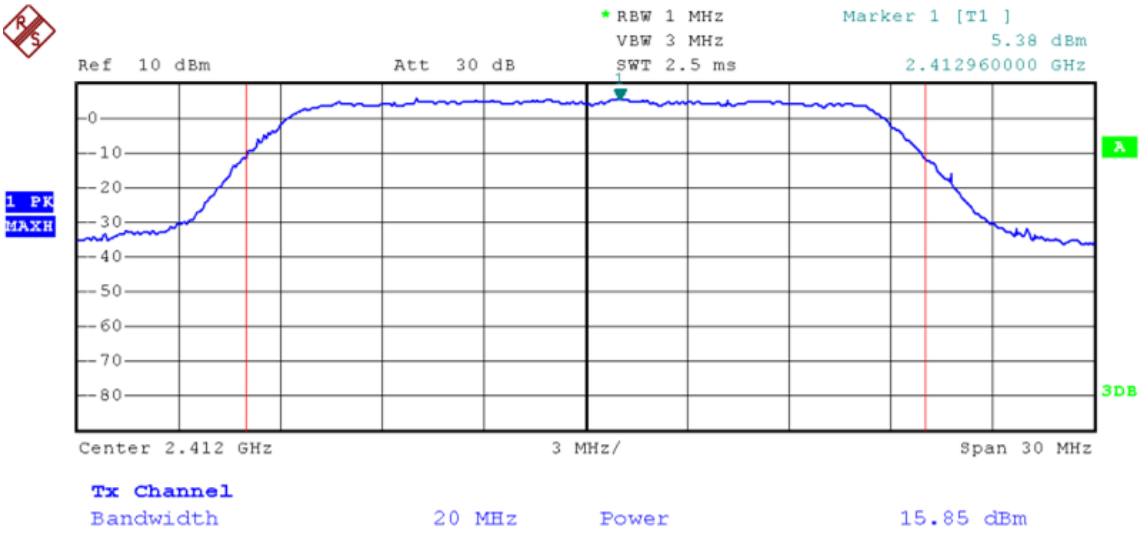
Mid Channel: 2437MHz



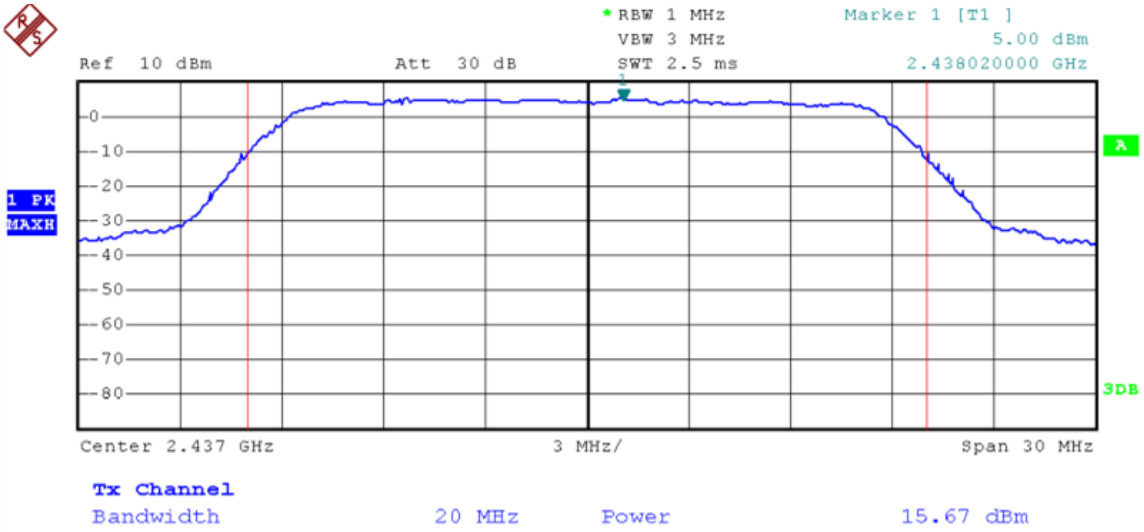
Highest Channel: 2462MHz



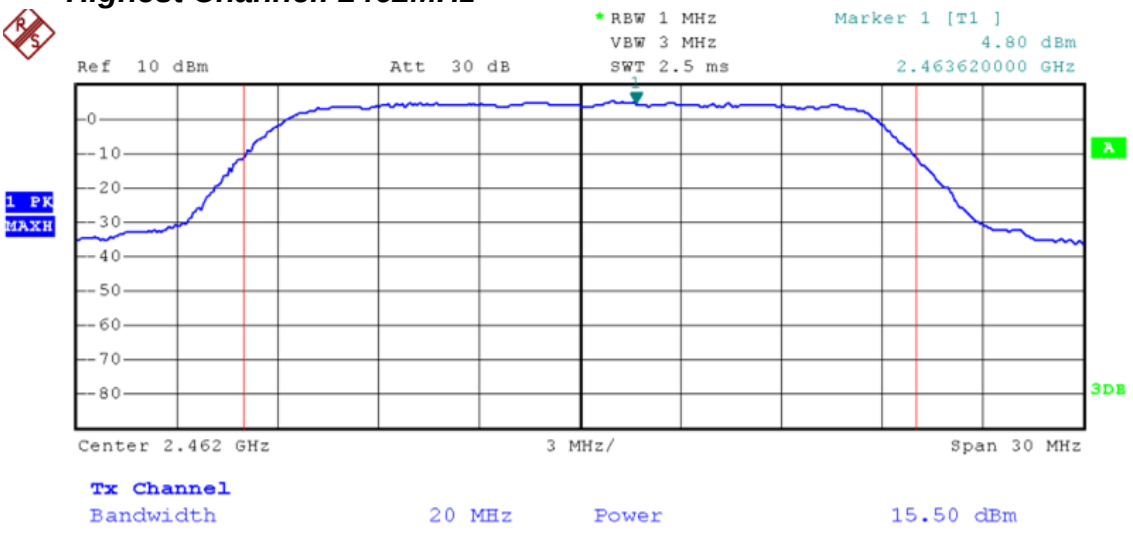
For 802.11n HT20 Mode:
Lowest Channel: 2412MHz



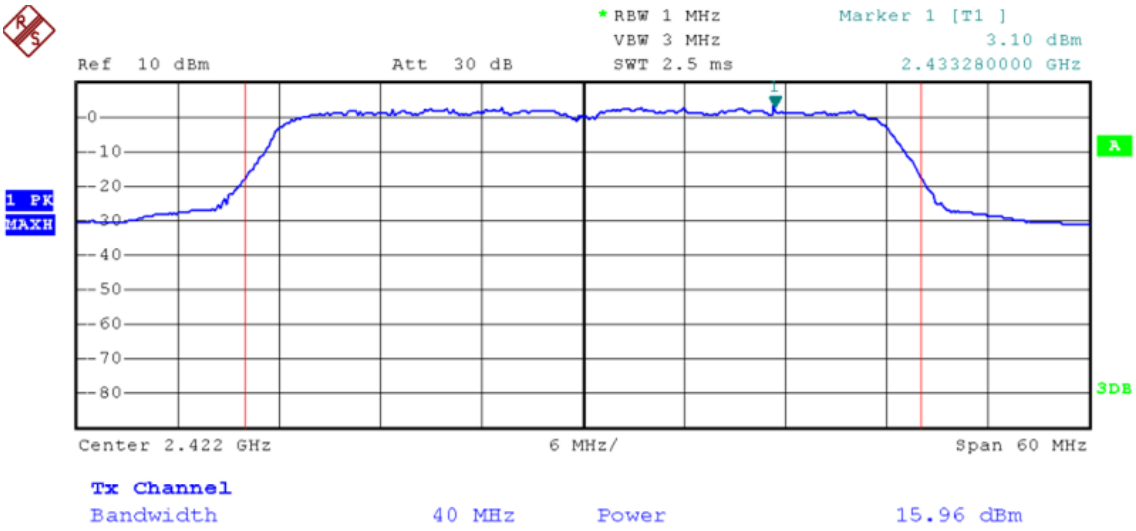
Mid Channel: 2437MHz



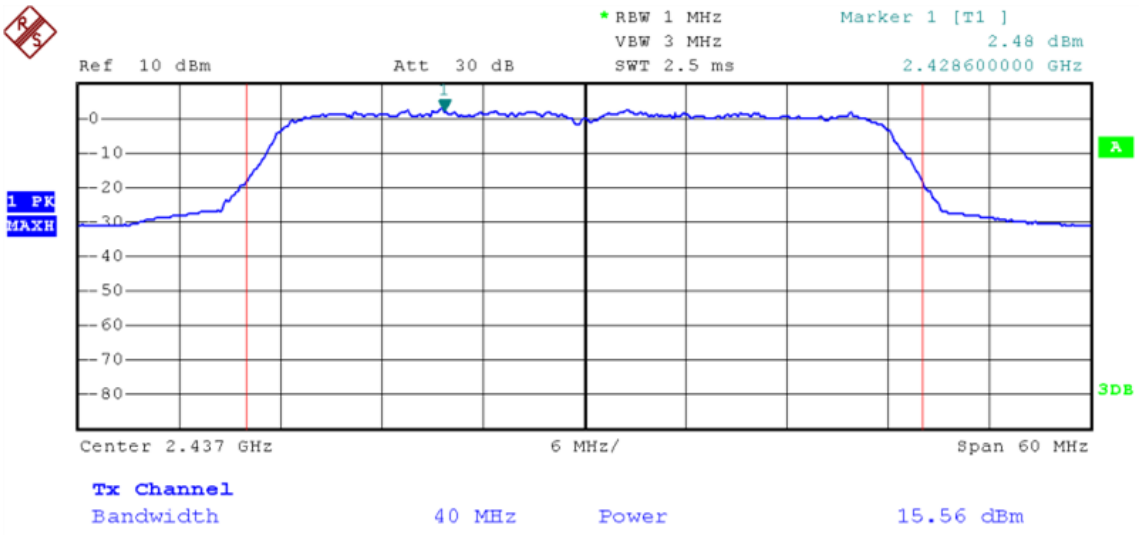
Highest Channel: 2462MHz



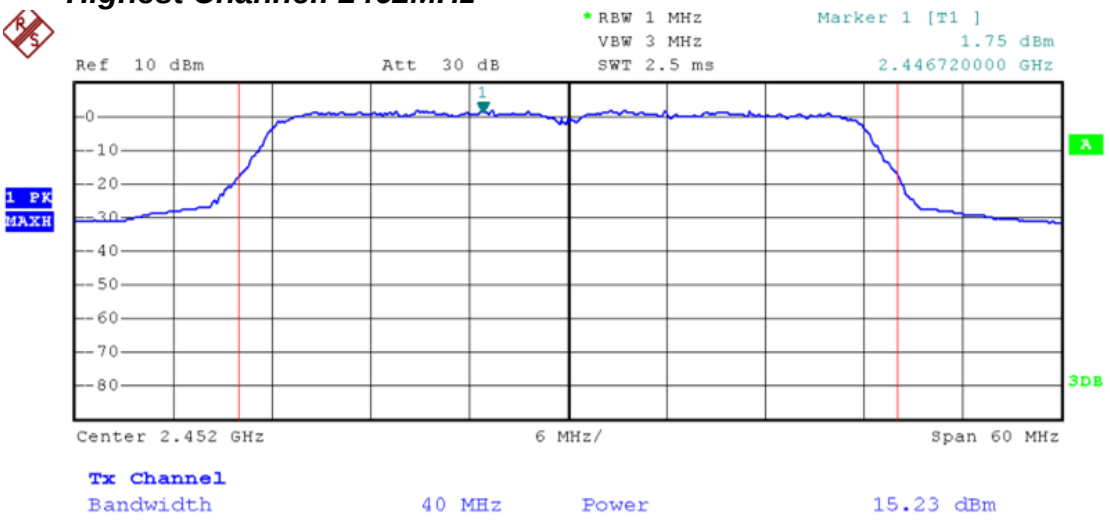
For 802.11n HT40 Mode:
Lowest Channel: 2412MHz



Mid Channel: 2437MHz



Highest Channel: 2462MHz



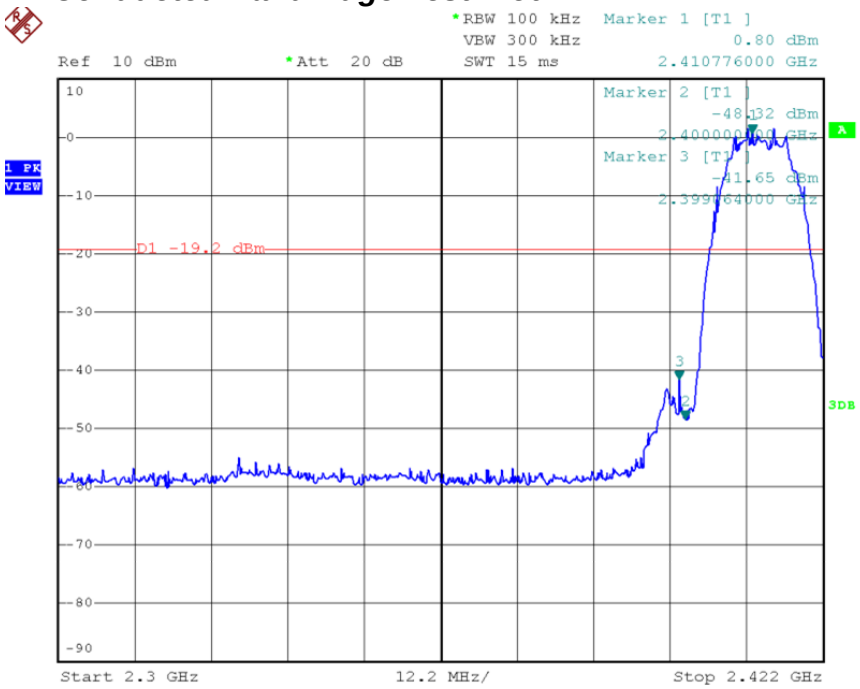
ATTACHMENT 6 – BAND EDGES TEST

<table>
<tr><td>CLIENT:</td><td>Grandstream Networks, Inc.</td><td>TEST STANDERD:</td><td>FCC §15.247(d)& RSS-210,A8.5</td></tr>
<tr><td>MODEL NUMBERS:</td><td>GXV3615WPI_HD</td><td>PRODUCT:</td><td>IP Camera</td></tr>
<tr><td>EUT MODEL:</td><td>GXV3615WPI_HD</td><td>EUT DESIGNATION:</td><td>Digital Transmission Device</td></tr>
<tr><td>TEMPERATURE:</td><td>23°C</td><td>HUMIDITY:</td><td>47%RH</td></tr>
<tr><td>ATM PRESSURE:</td><td>101.0kPa</td><td>GROUNDING:</td><td>None</td></tr>
<tr><td>TESTED BY:</td><td>Daomen</td><td>DATE OF TEST:</td><td>April 17 ,2014</td></tr>
<tr><td>TEST REFERENCE:</td><td colspan="3">ANSI C63.4:2009 and KDB 558074 with version D01 v03r01</td></tr>
<tr><td>TEST PROCEDURE:</td><td colspan="3">Requirement: 15.247 (d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequen cy power that is produced by the intentional radiator shall be at least 20 dB belo w that in the 100 kHz bandwidth within the band that contains the Highestest level of the desired power, based on either an RF conducted or a radiated measurem ent.

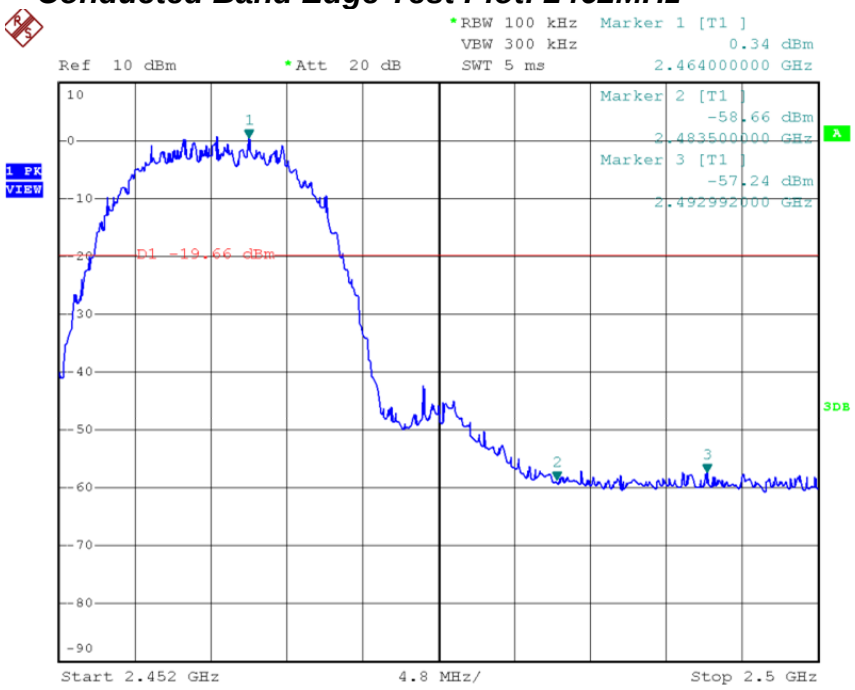
Test Procedures: The EUT was set -up as ANSI C63.4-2009, tested to DTS test procedure of KDB 558074 with version D01 v03r01 for compliance to FCC 47CFR 15.247 requirements.</td></tr>
<tr><td>DESCRIPTIONS OF TEST MODE:</td><td colspan="3">Pre-Scan has been conducted to determine the worst-case mode from all possible Combinations between available modulations,data rates and antenna ports (if EUT with antenna diversity architecture). Following channels were chosen for the final test as listed beLow: 802.11b mode with data rate of 1Mbps, 802.11g mode with data rate of 6Mbps,802.11n HT20 mode with data rate of MCS0 and 802.11n HT40 mode with data rate of MCS6.</td></tr>
<tr><td>EQUIPMENT SETUP</td><td colspan="3">Spectrum analyzer shall be set as beLow:
<table>
<tr><th>Equipment mode</th><th>Spectrum Analyzer</th></tr>
<tr><td>Detector function</td><td>Peak mode</td></tr>
<tr><td>RBW</td><td>100KHz</td></tr>
<tr><td>VBW</td><td>300KHz</td></tr>
</table></td></tr>
<tr><td>TEST VOLTAGE:</td><td colspan="3">120VAC/60Hz</td></tr>
<tr><td>RESULTS:</td><td colspan="3">The EUT meet the requirements of test reference for band edges.The test results relate only to the equipment under test provided by client.</td></tr>
<tr><td>CHANGES OR MODIFICATIONS:</td><td colspan="3">There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen) test personnel.</td></tr>
<tr><td>M. UNCERTAINTY:</td><td colspan="3">Freq. ± $2x10^{-7}$ x Center Freq., Amp ± 2.6 dB.</td></tr>
</table>

For 802.11b Mode:

Conducted Band Edge Test Plot: 2412MHz

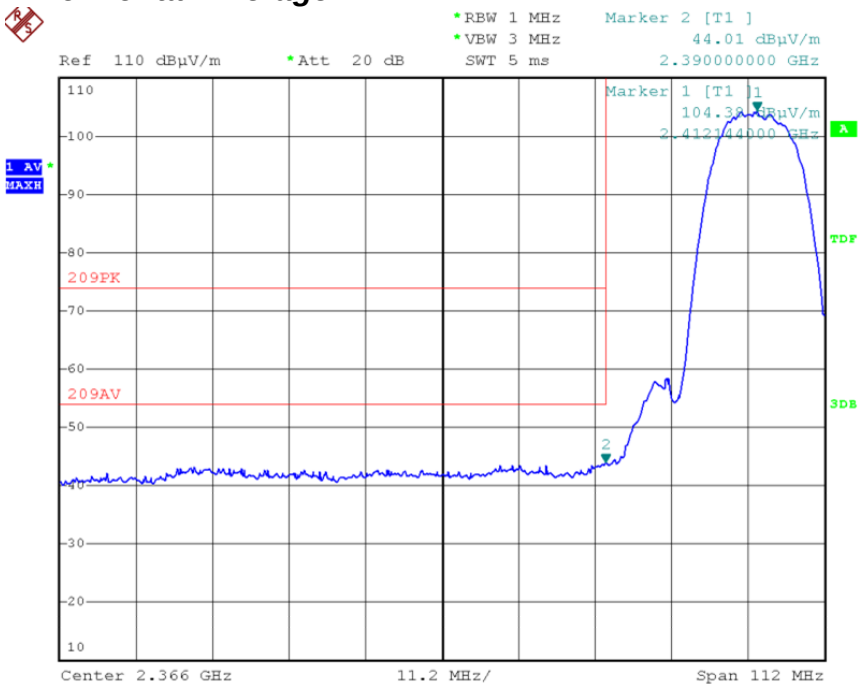


Conducted Band Edge Test Plot: 2462MHz

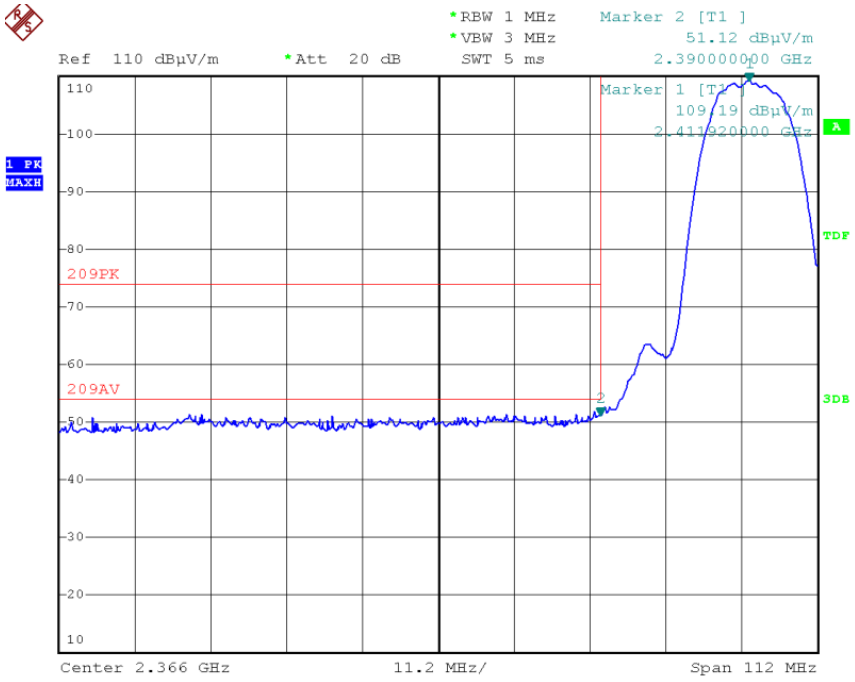


Radiated Band Edge Test Plot: 2412MHz

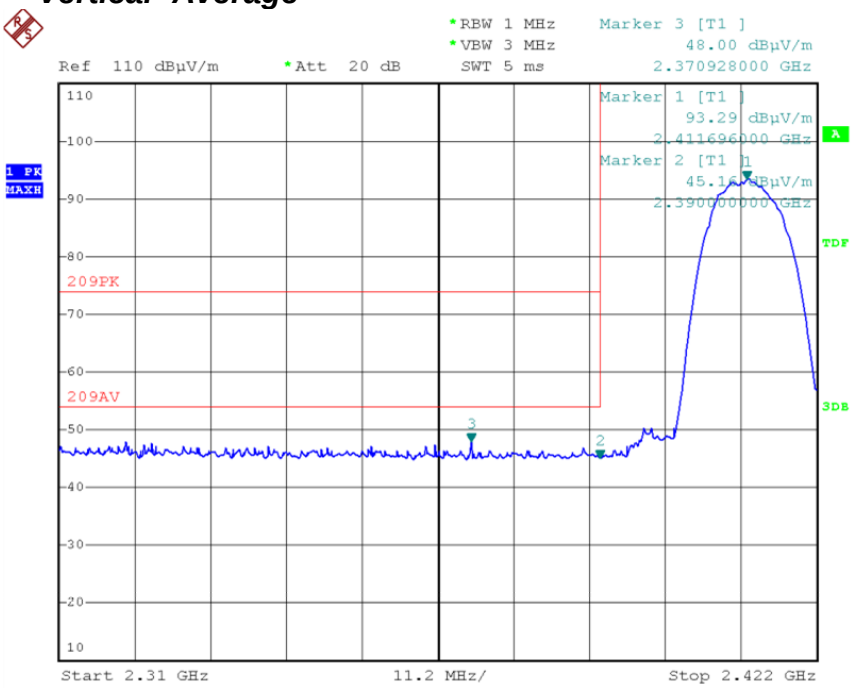
Horizontal-Average



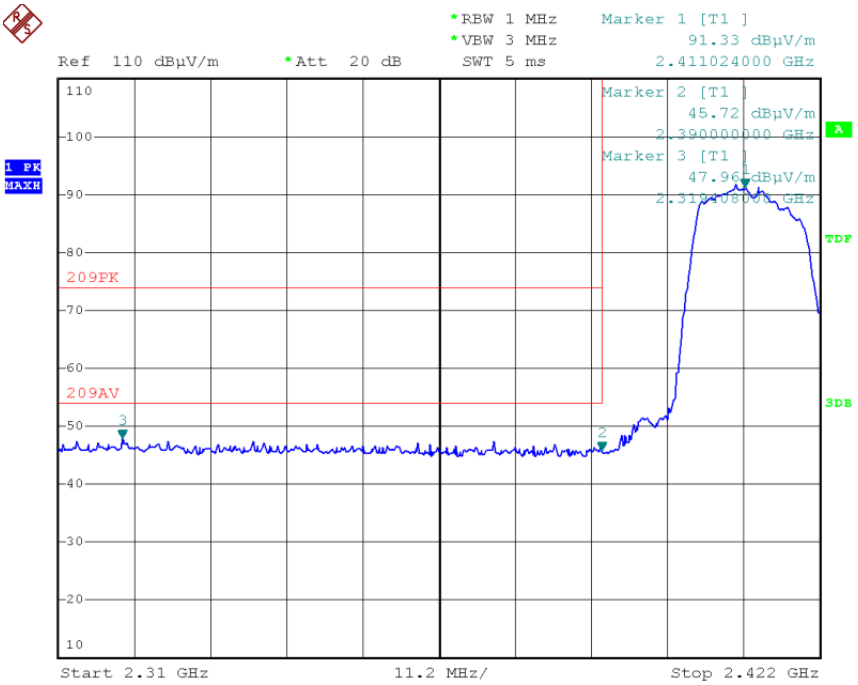
Horizontal-Peak



Vertical- Average

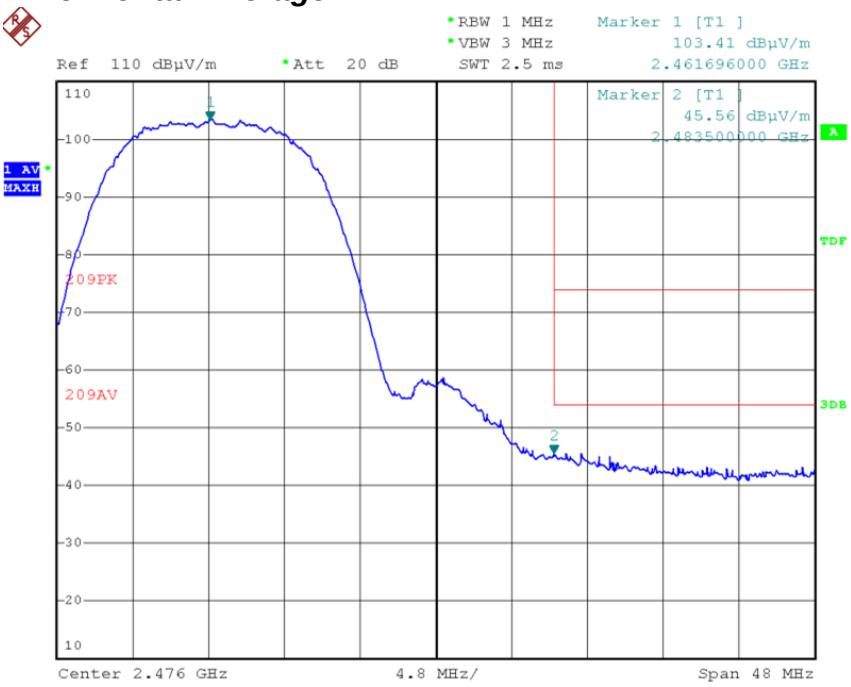


Vertical-Peak

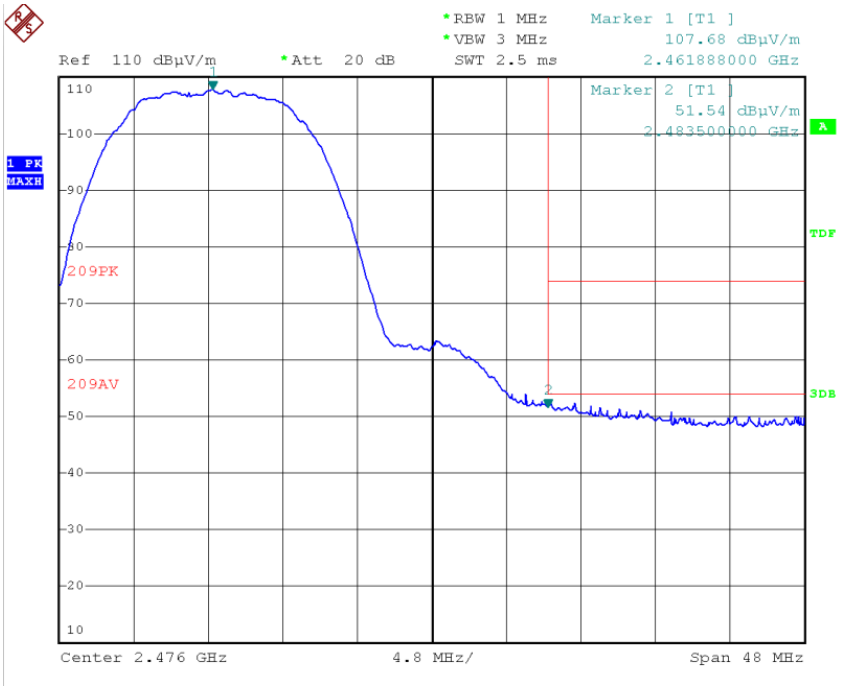


Radiated Band Edge Test Plot: 2462MHz

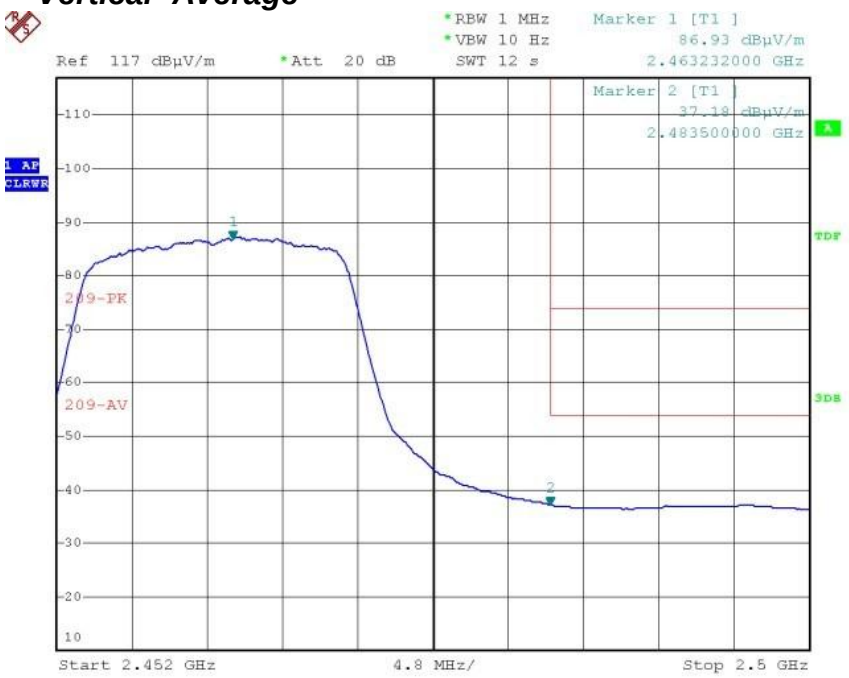
Horizontal-Average



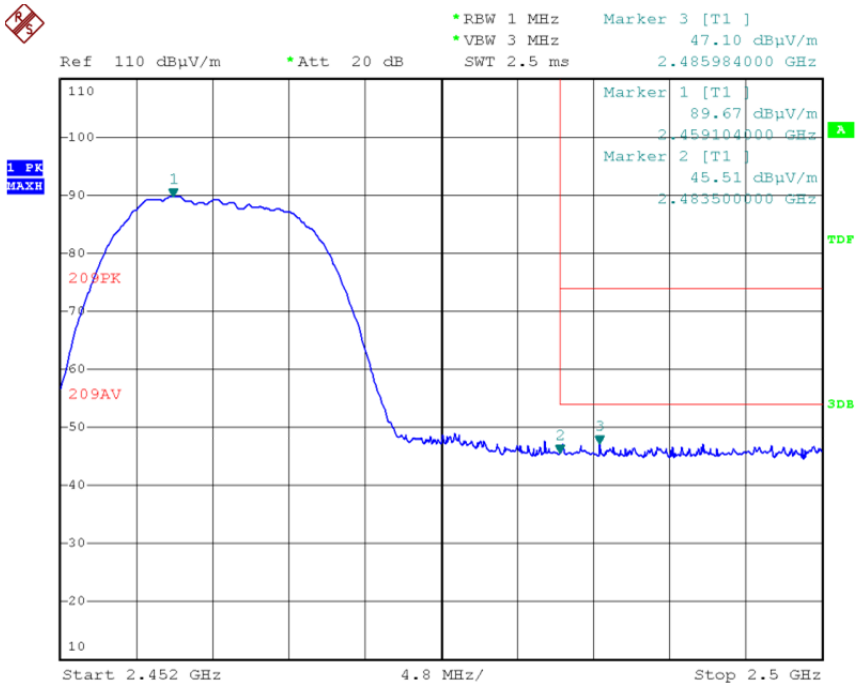
Horizontal-Peak



Vertical- Average

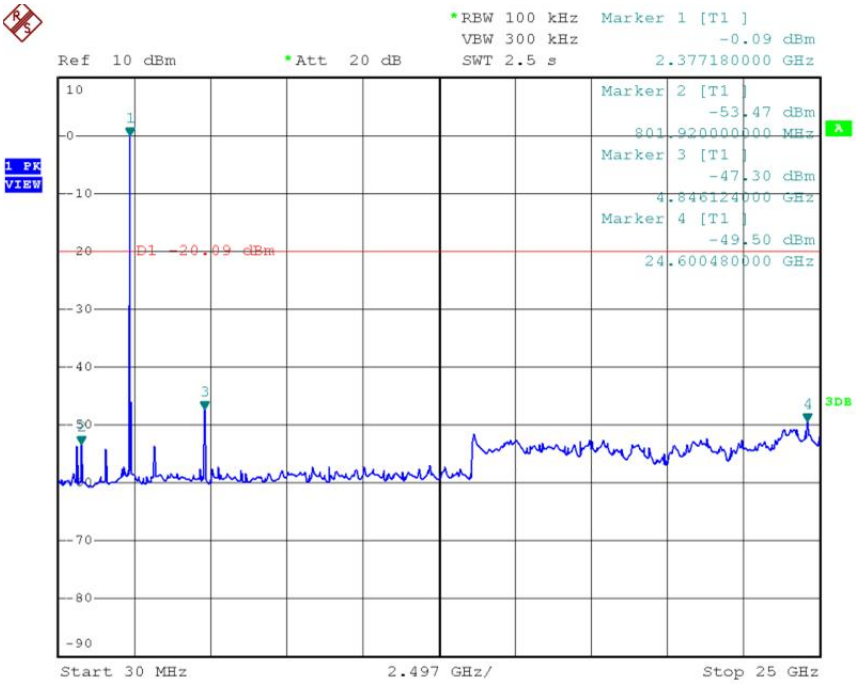


Vertical- Peak

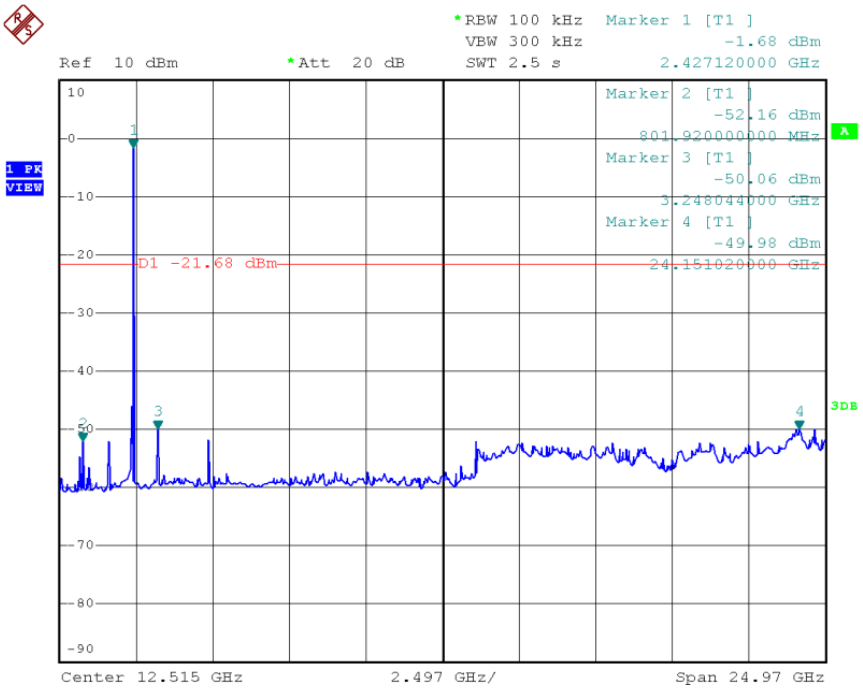


Conducted Spurious Emission Test Plot

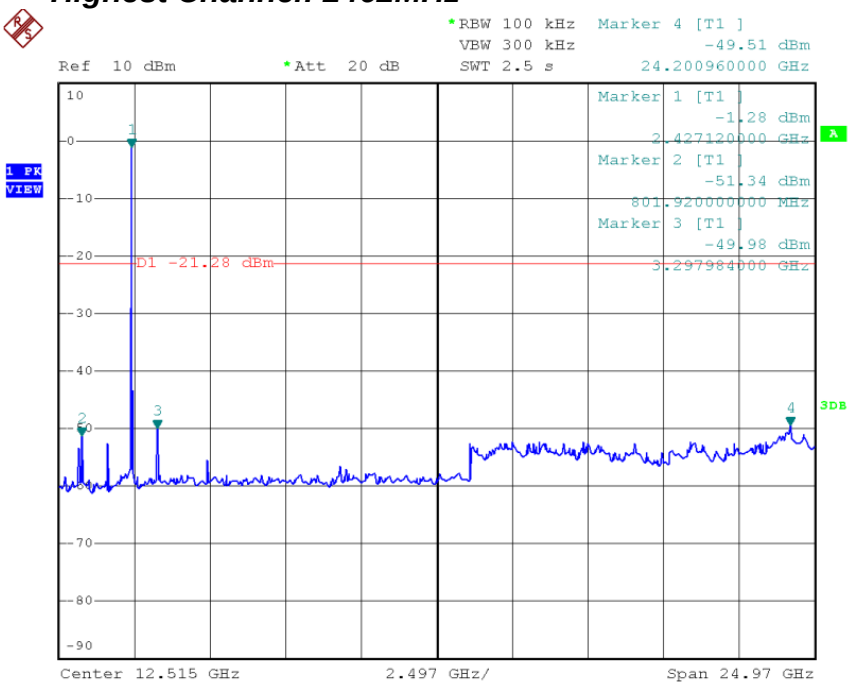
Lowest Channel: 2412MHz



Mid Channel: 2437MHz

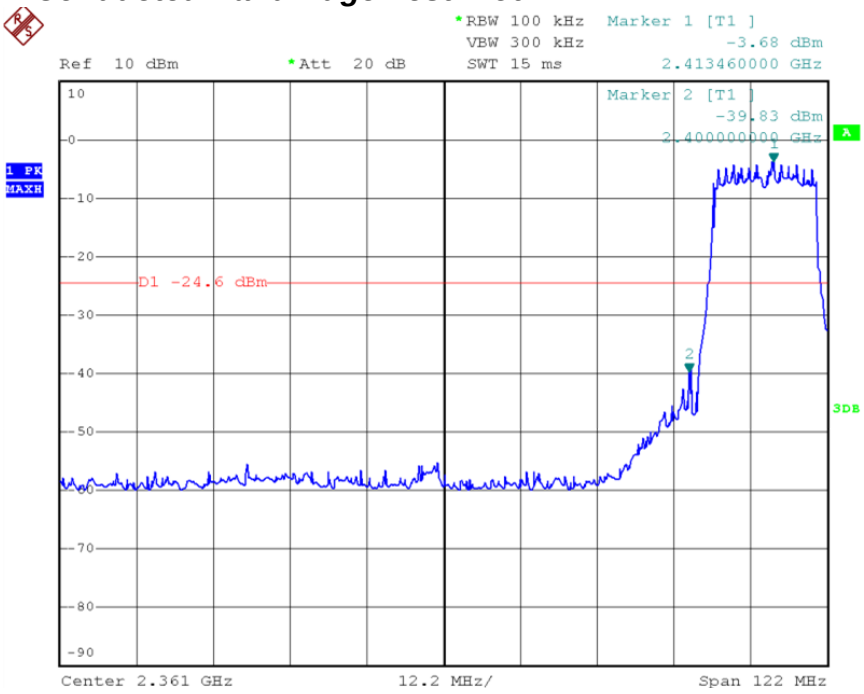


Highest Channel: 2462MHz

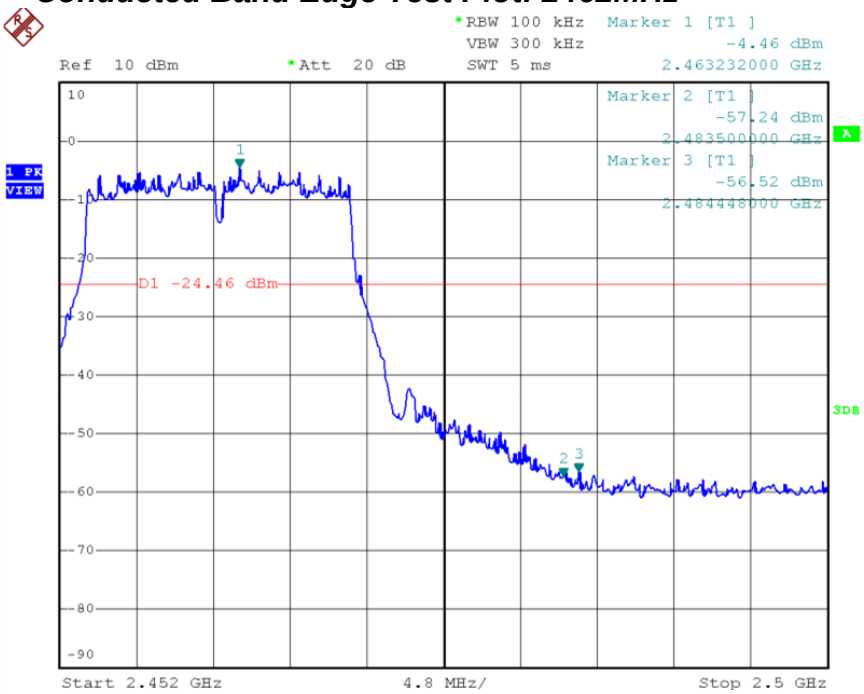


For 802.11g Mode:

Conducted Band Edge Test Plot: 2412MHz

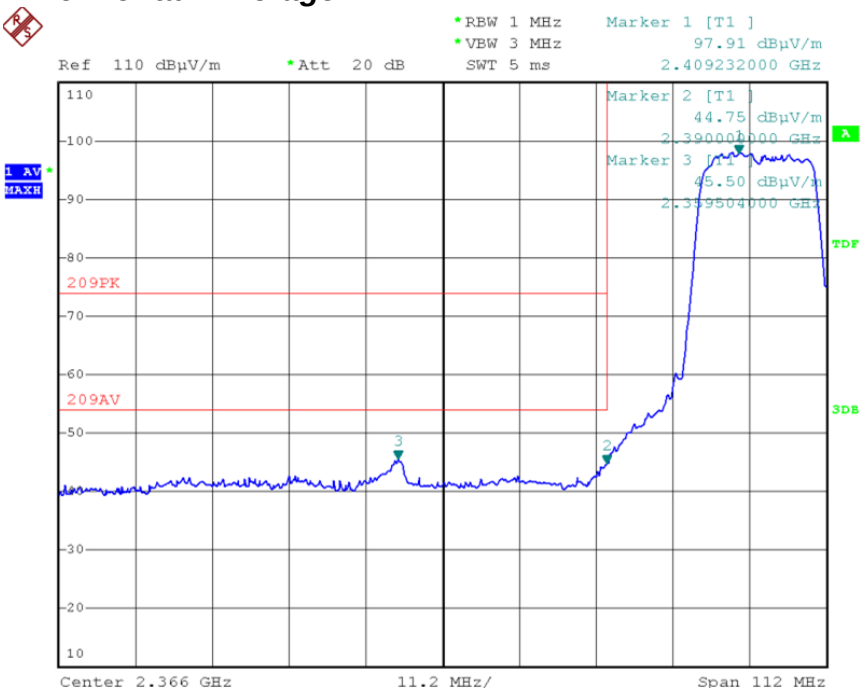


Conducted Band Edge Test Plot: 2462MHz

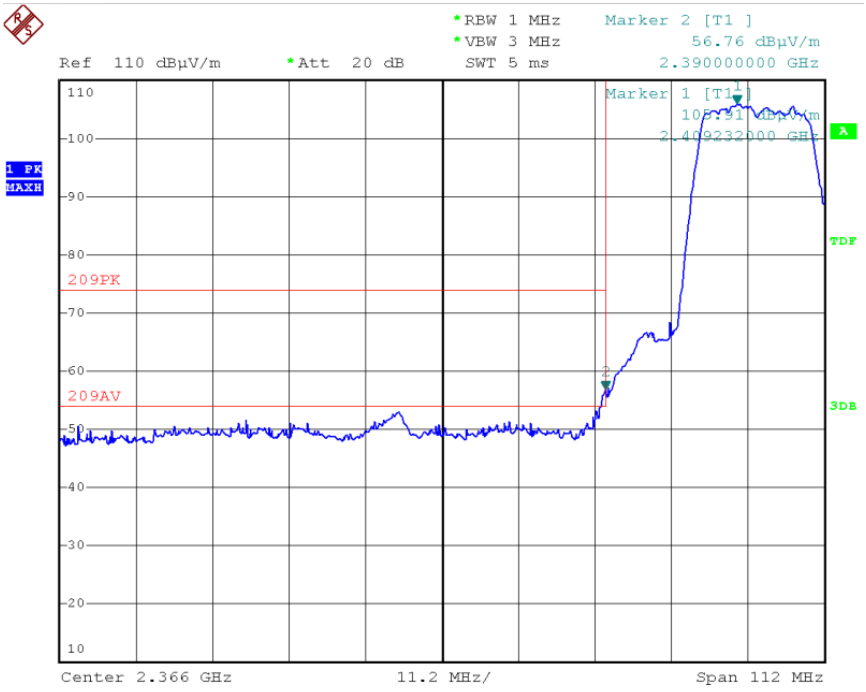


Radiated Band Edge Test Plot: 2412MHz

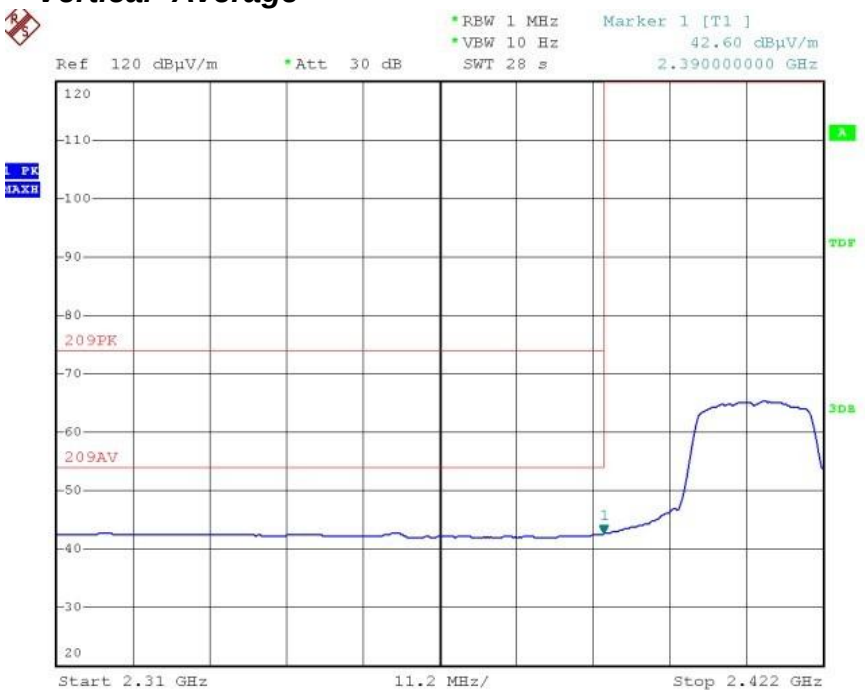
Horizontal- Average



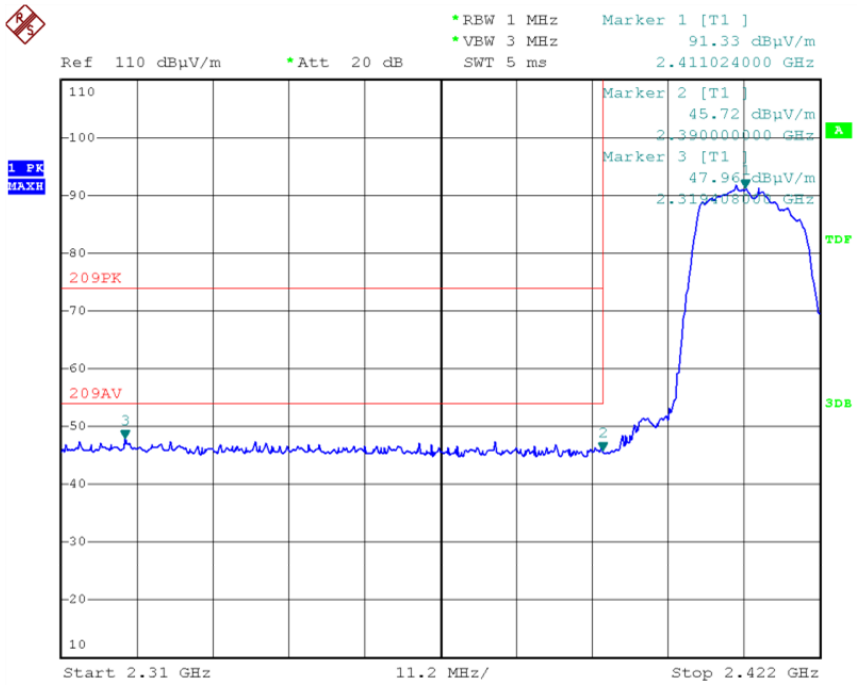
Horizontal-Peak



Vertical- Average

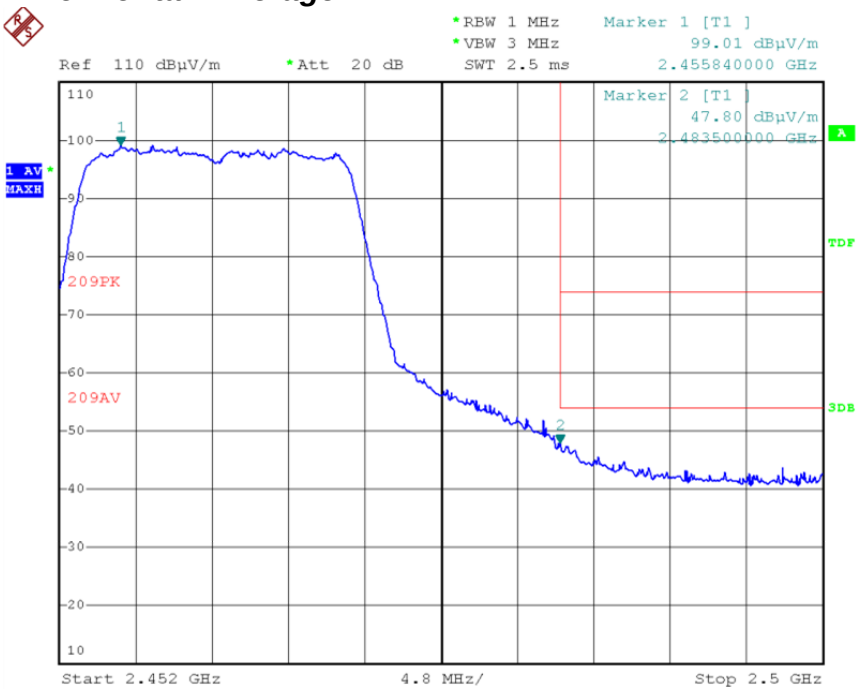


Vertical-Peak

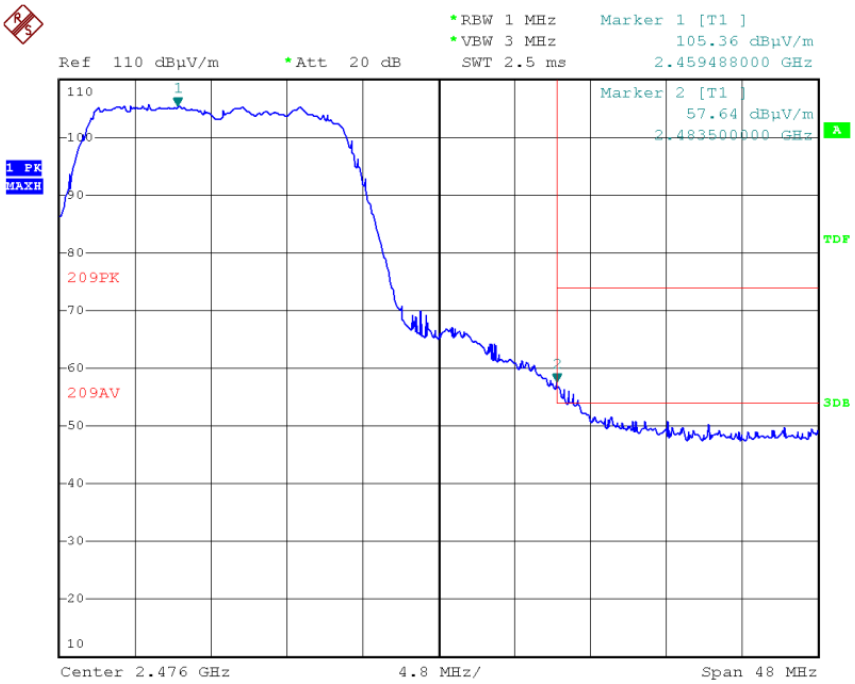


Radiated Band Edge Test Plot: 2462MHz

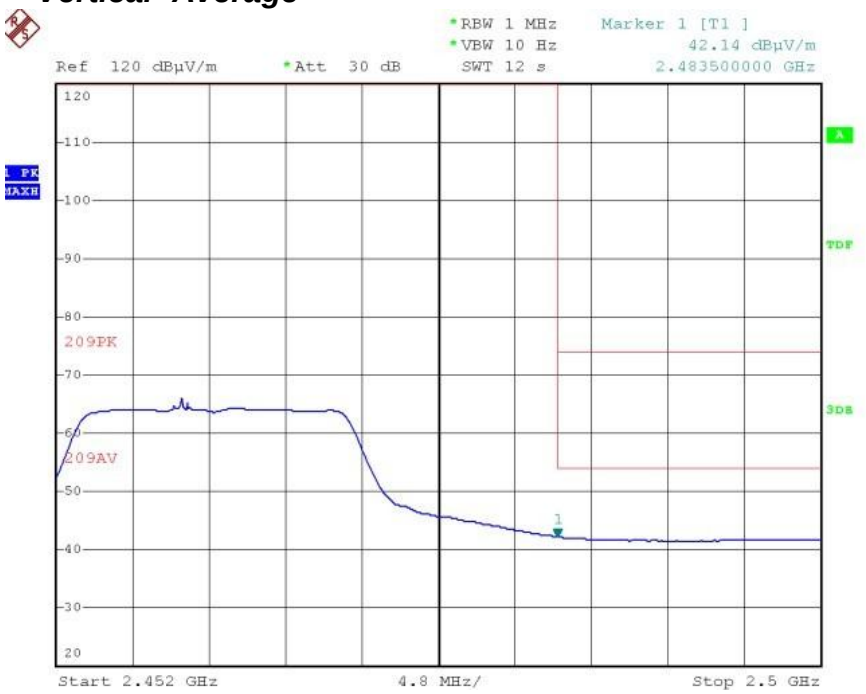
Horizontal- Average



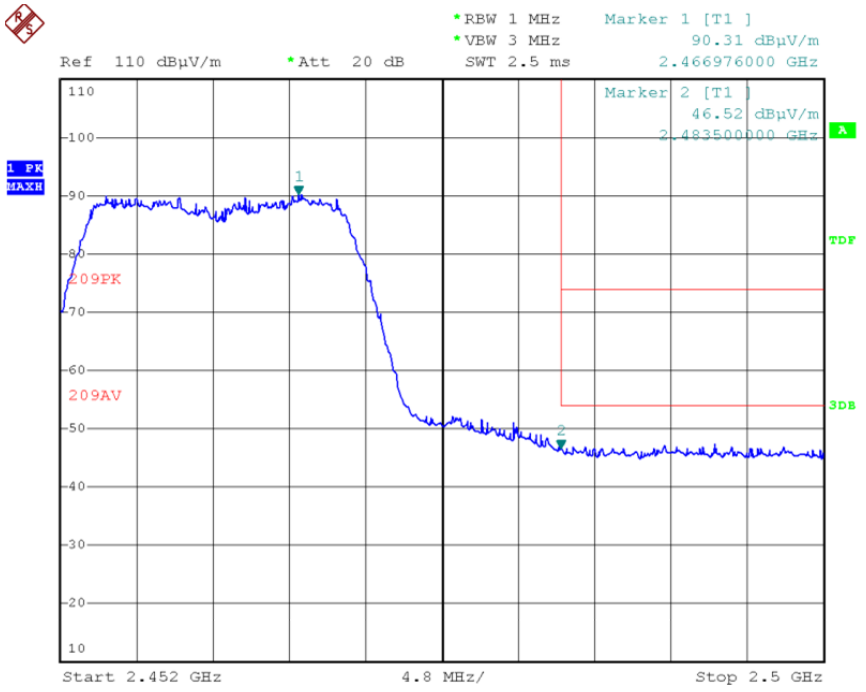
Horizontal-Peak



Vertical- Average

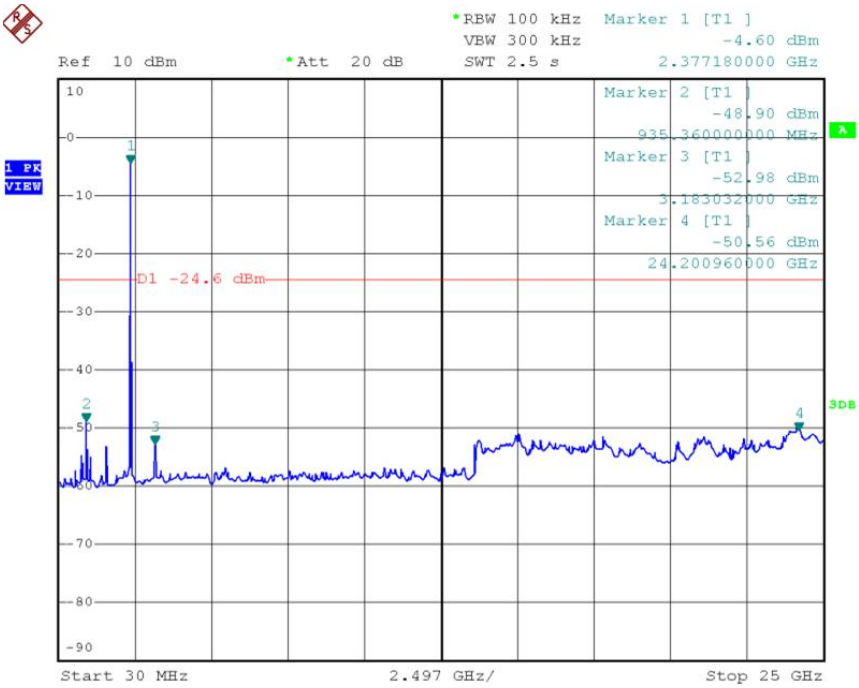


Vertical-Peak

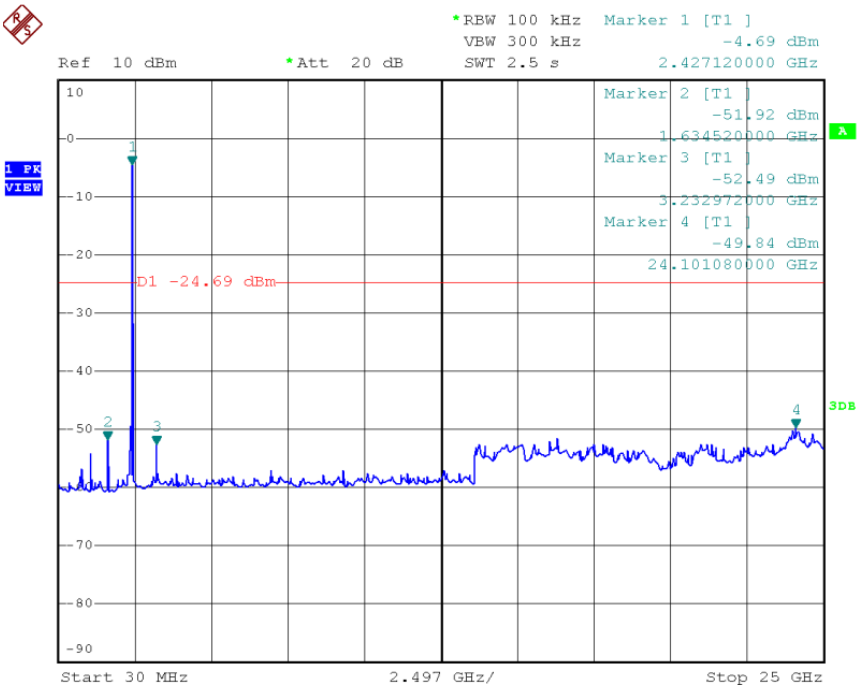


Conducted Spurious Emission Test Plot

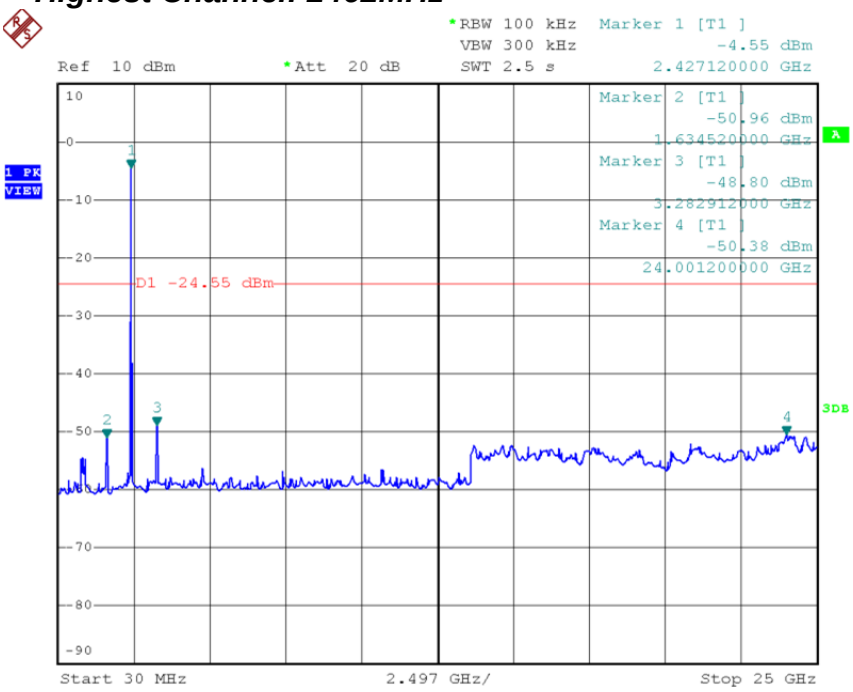
Lowest Channel: 2412MHz



Mid Channel: 2437MHz

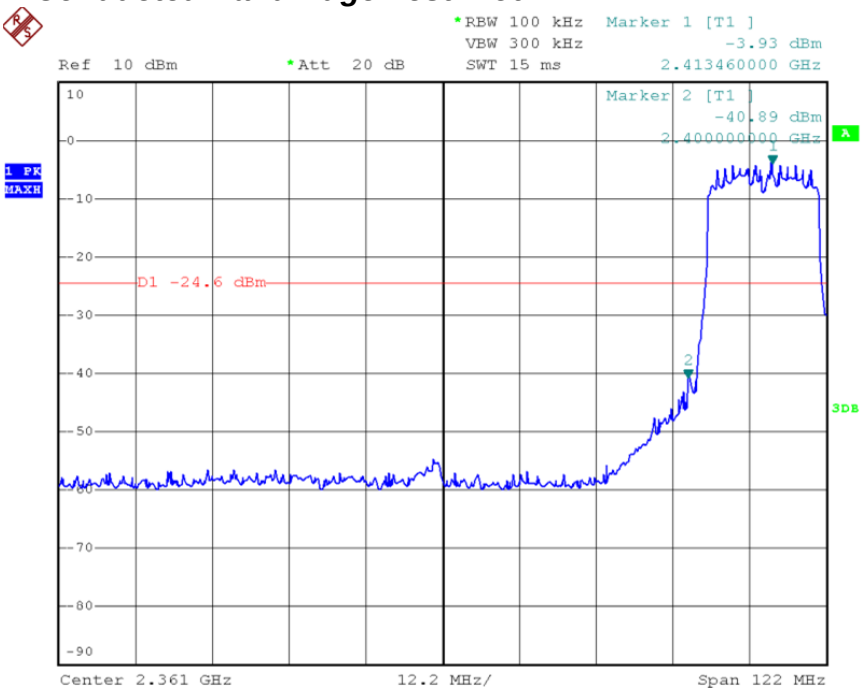


Highest Channel: 2462MHz

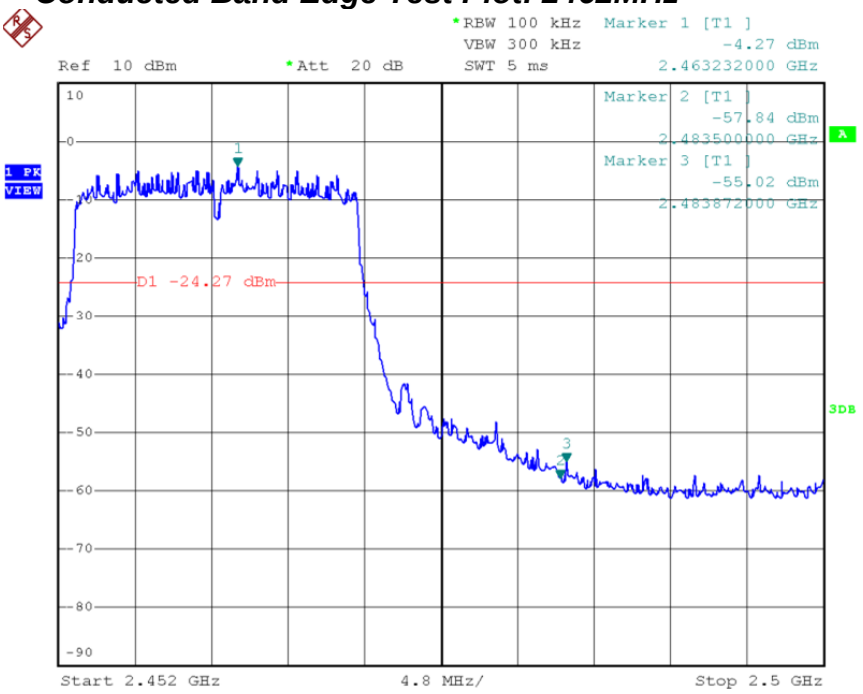


For 802.11n HT20 Mode:

Conducted Band Edge Test Plot: 2412MHz

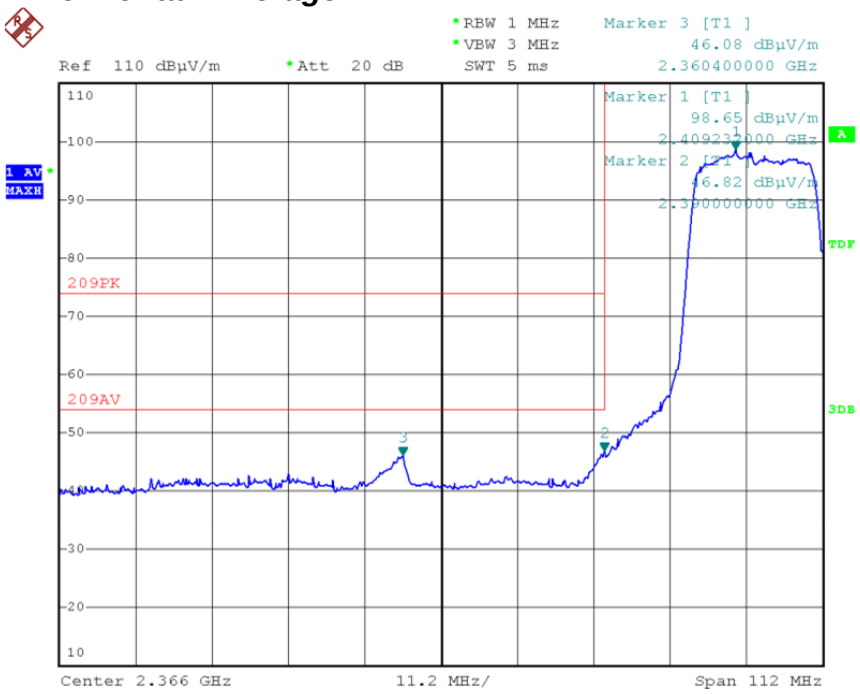


Conducted Band Edge Test Plot: 2462MHz

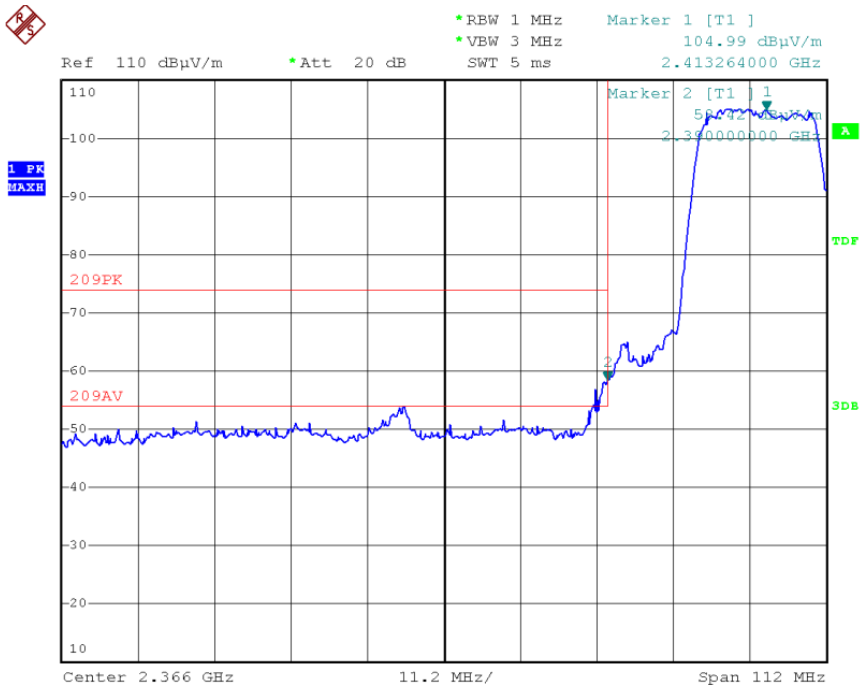


Radiated Band Edge Test Plot: 2412MHz

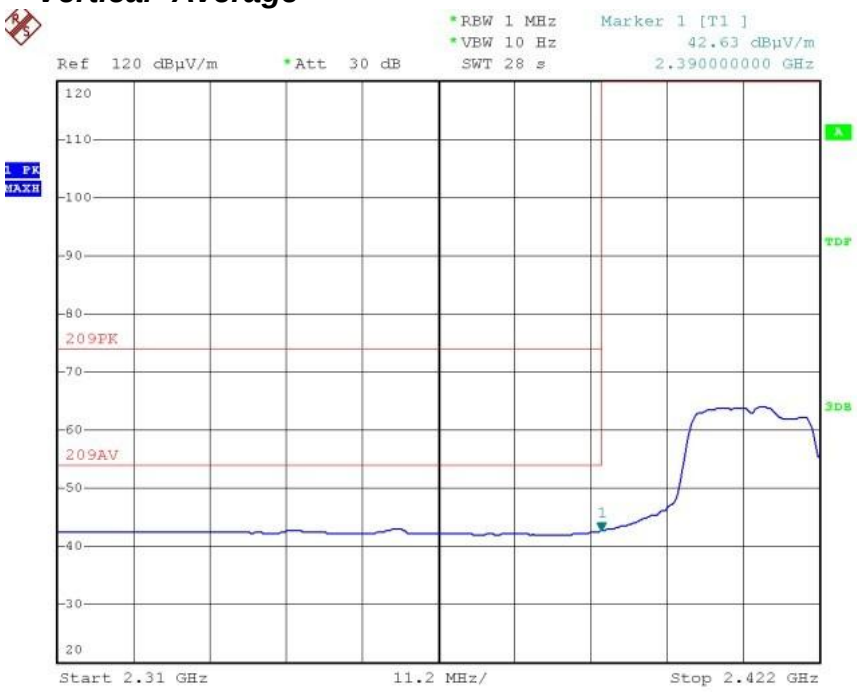
Horizontal- Average



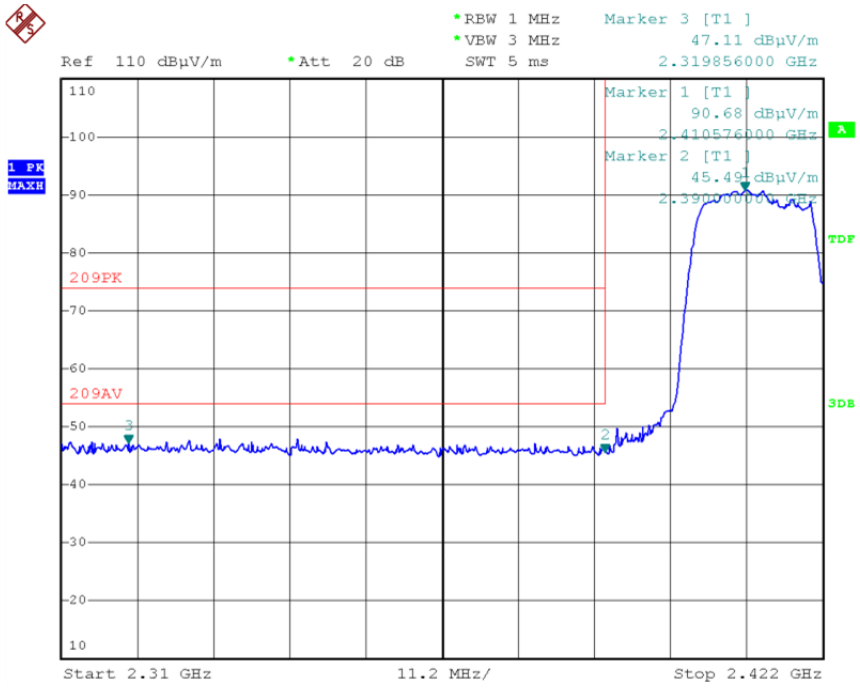
Horizontal-Peak



Vertical- Average

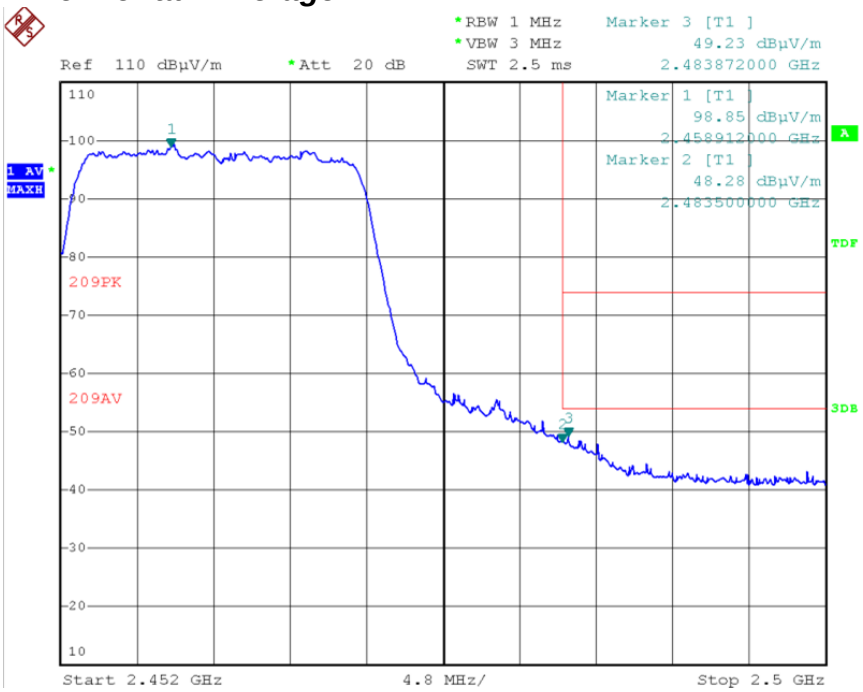


Vertical-Peak

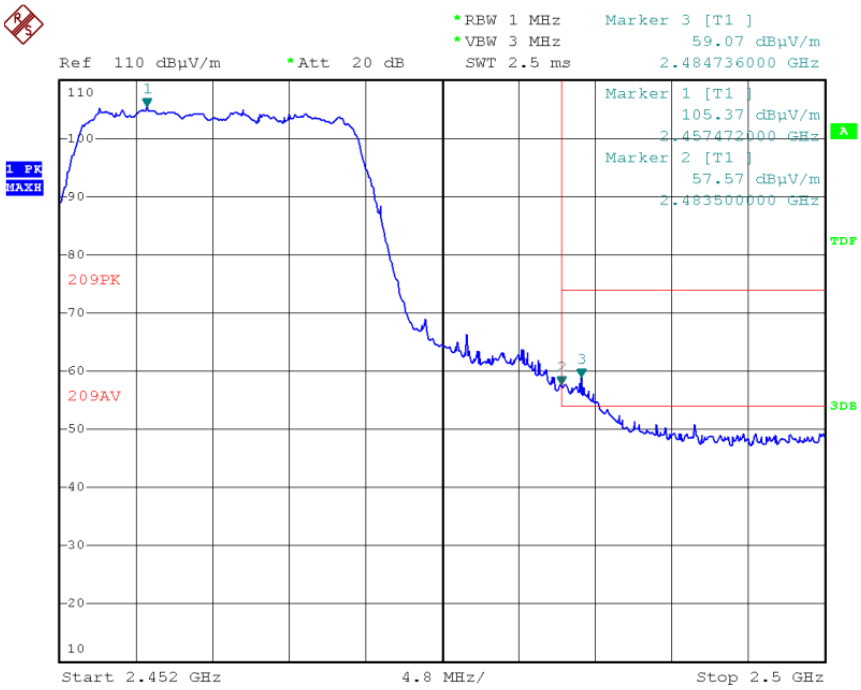


Radiated Band Edge Test Plot: 2462MHz

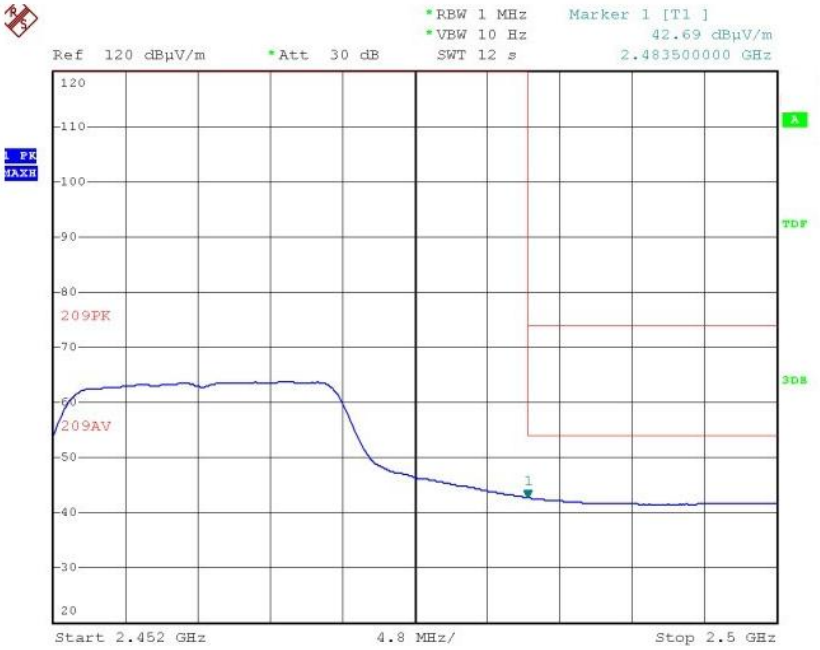
Horizontal- Average



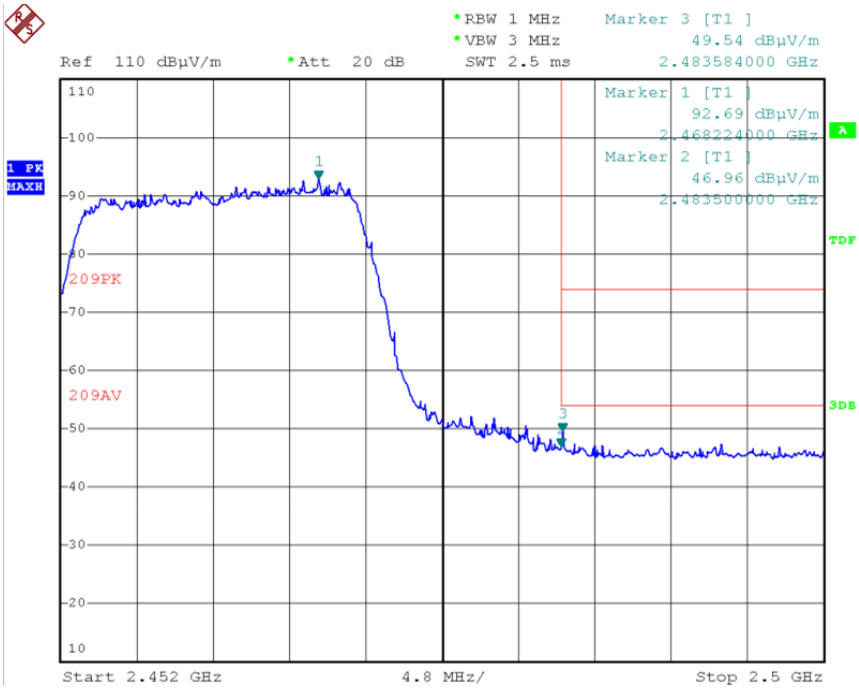
Horizontal-Peak



Vertical- Average

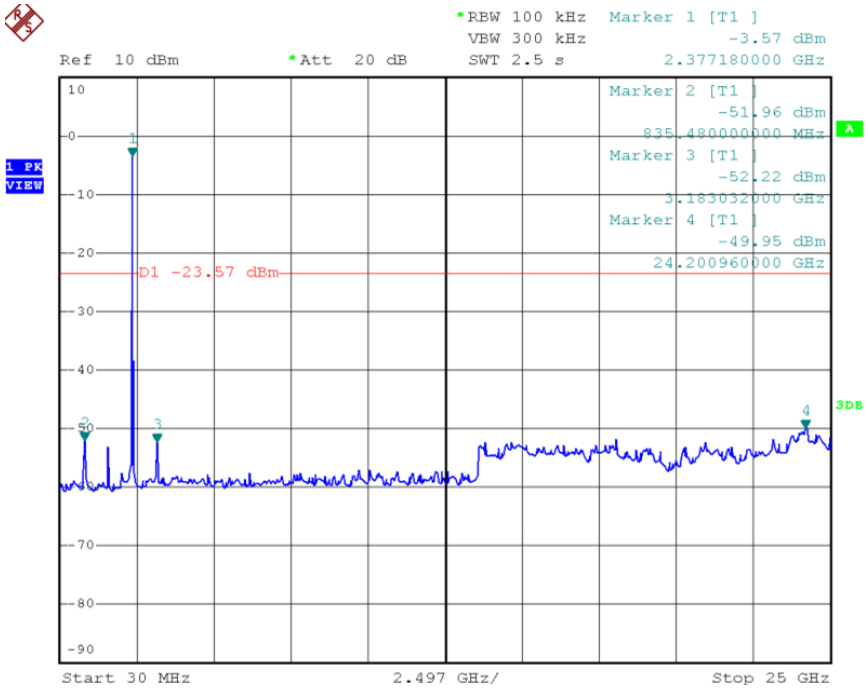


Vertical-Peak

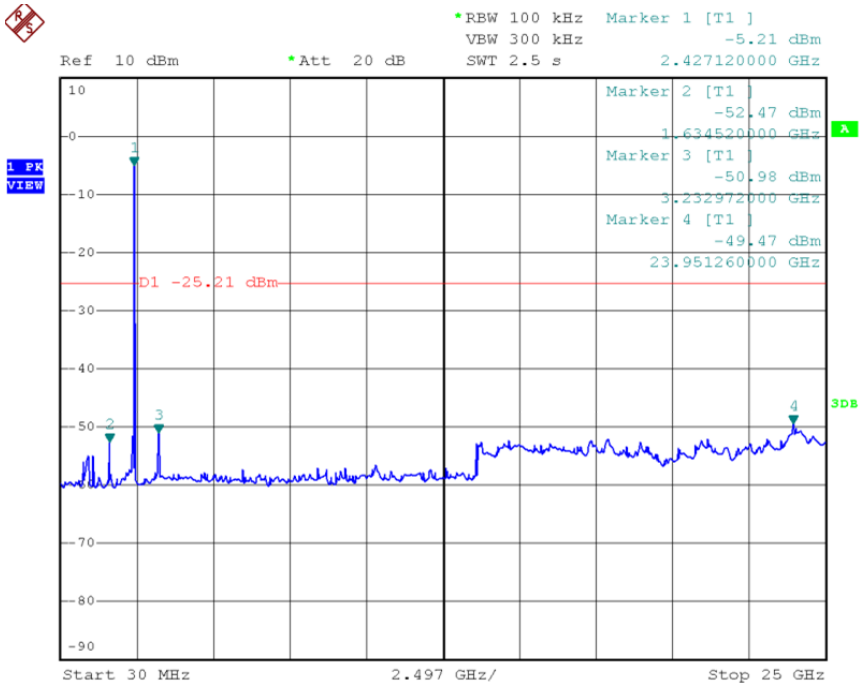


Conducted Spurious Emission Test Plot

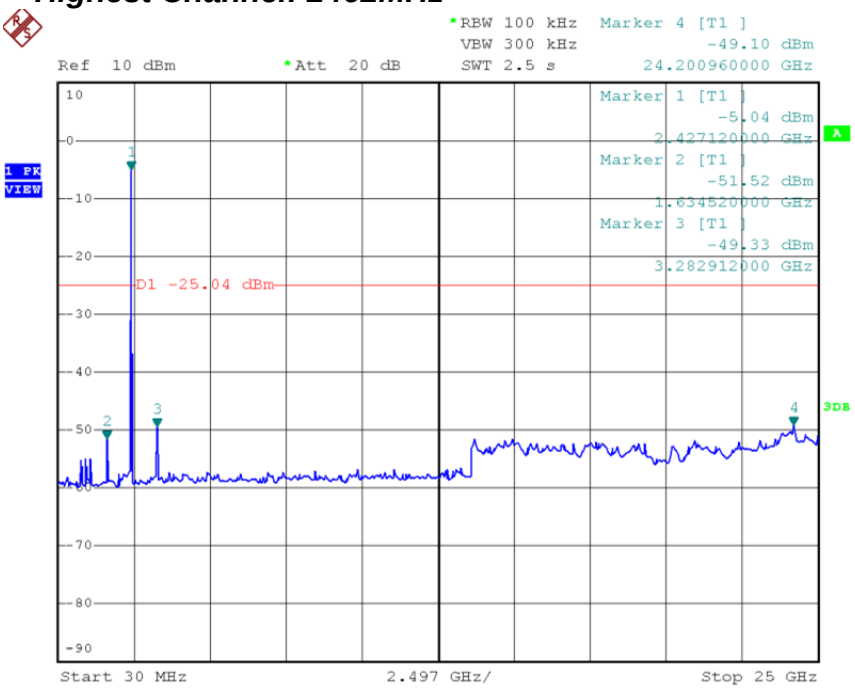
Lowest Channel: 2412MHz



Mid Channel: 2437MHz

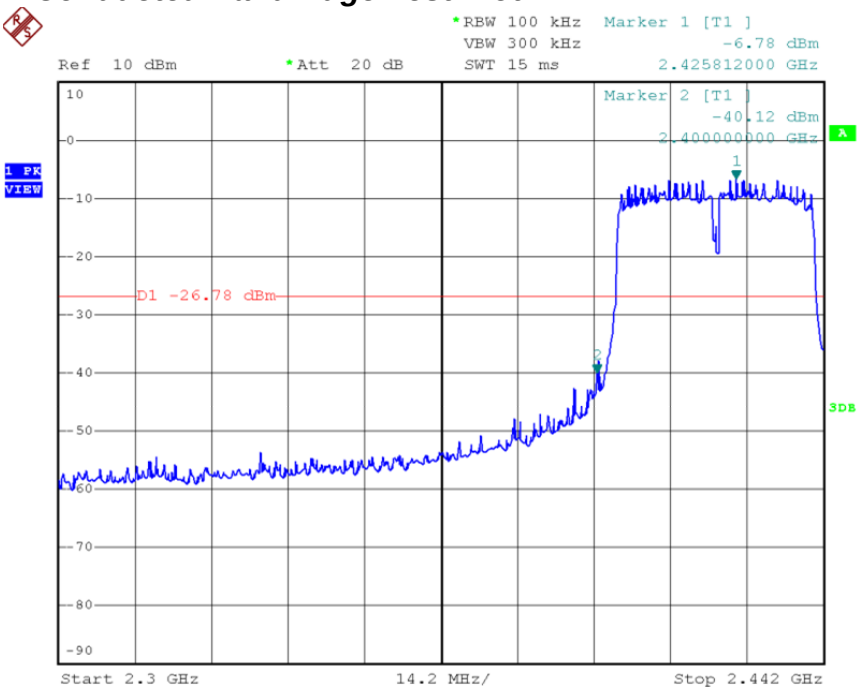


Highest Channel: 2462MHz

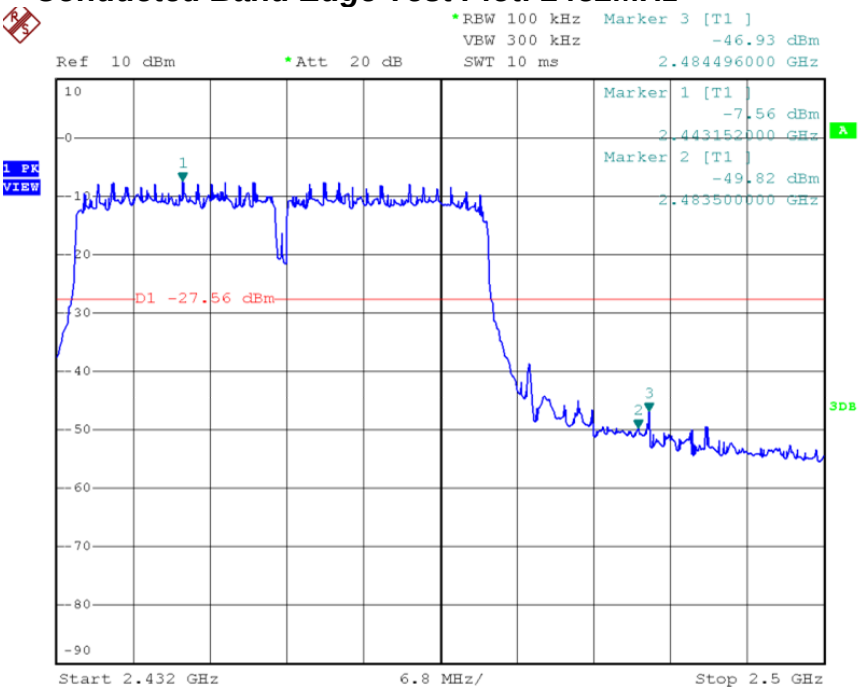


For 802.11n HT40 Mode:

Conducted Band Edge Test Plot: 2422MHz

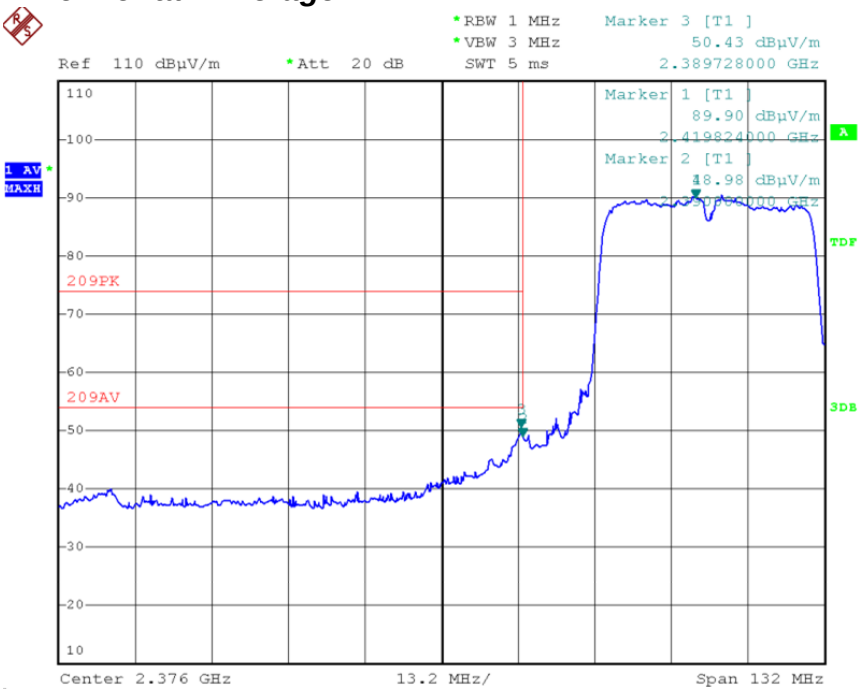


Conducted Band Edge Test Plot: 2452MHz

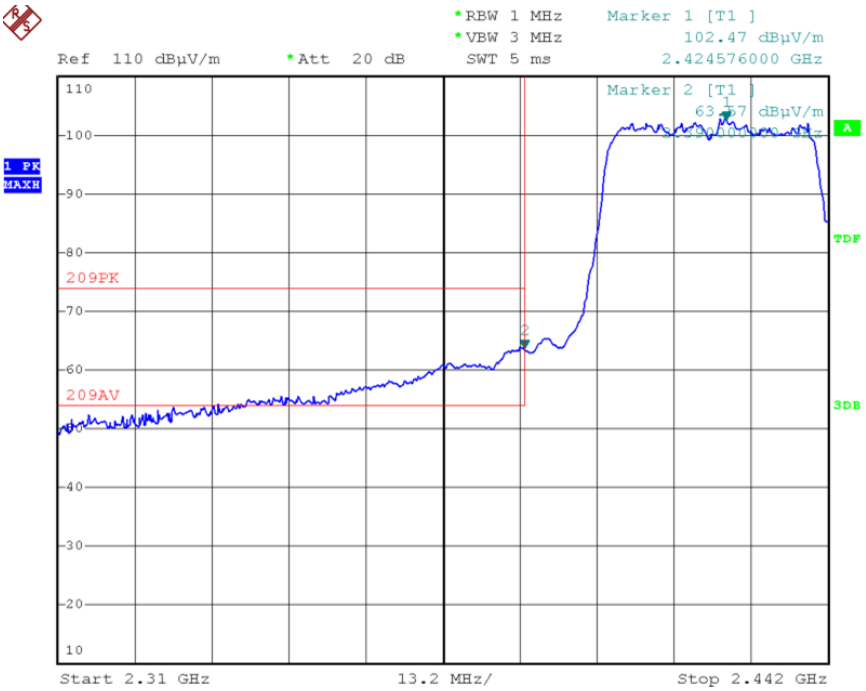


Radiated Band Edge Test Plot: 2422MHz

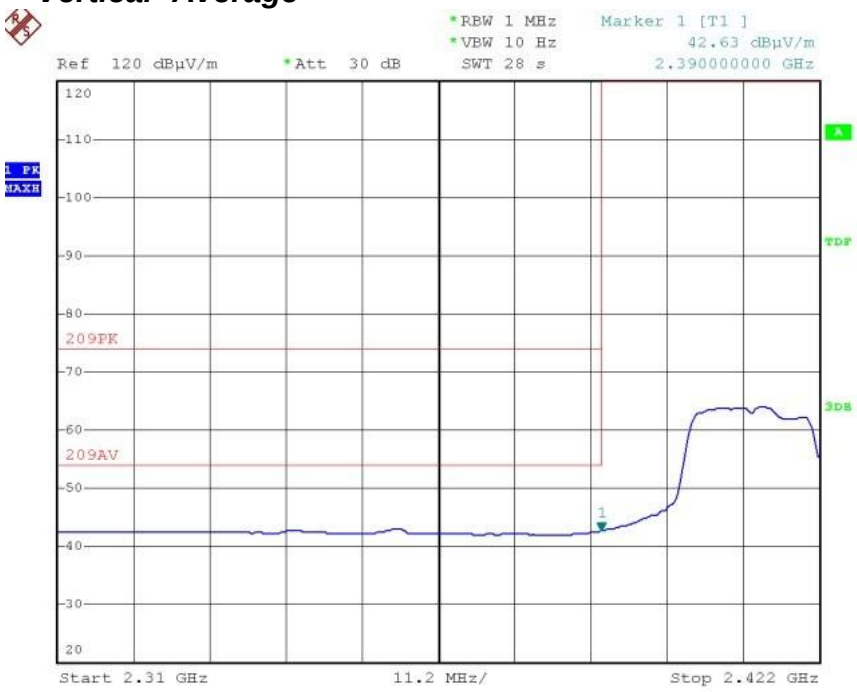
Horizontal- Average



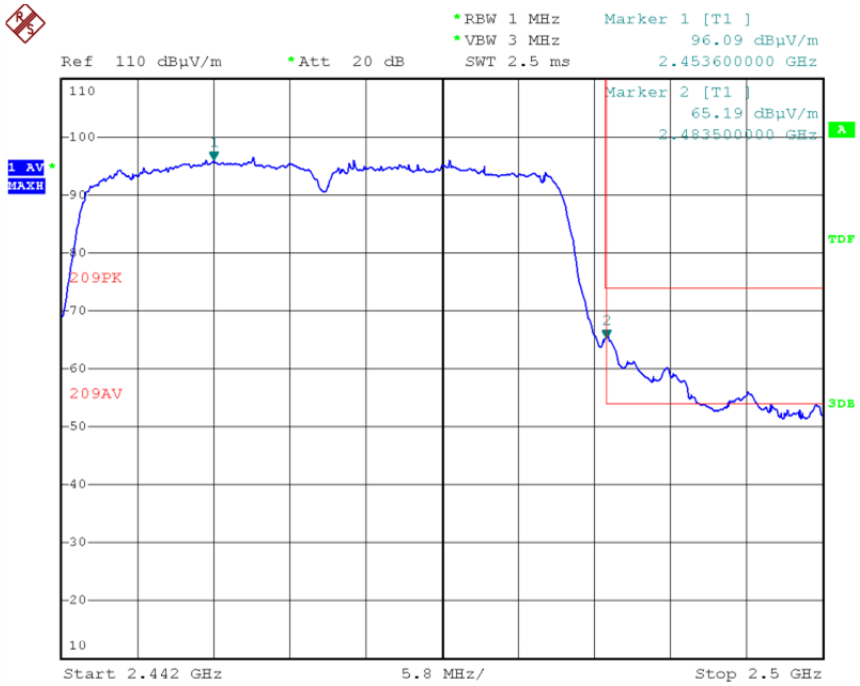
Horizontal-Peak



Vertical- Average

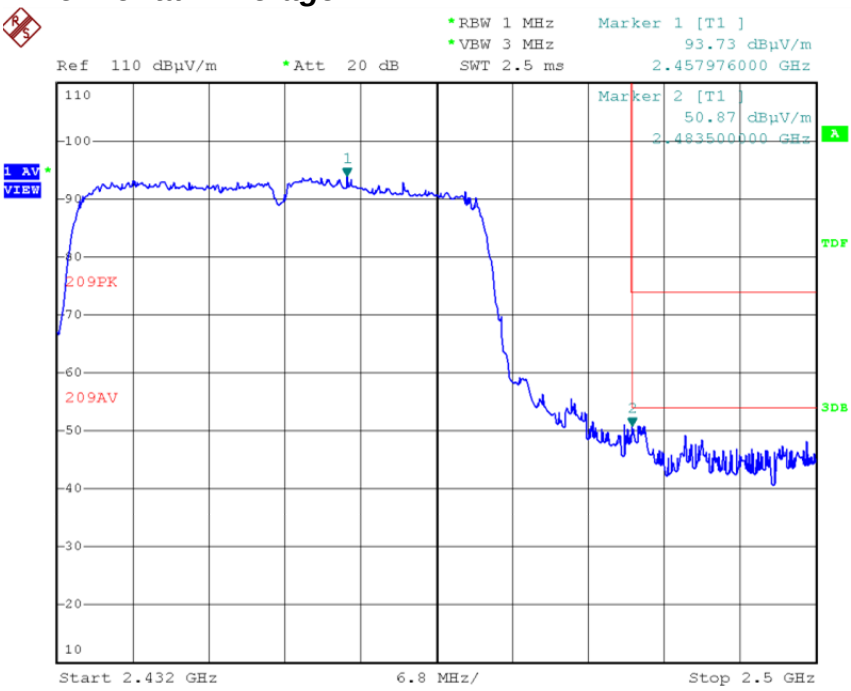


Vertical-Peak

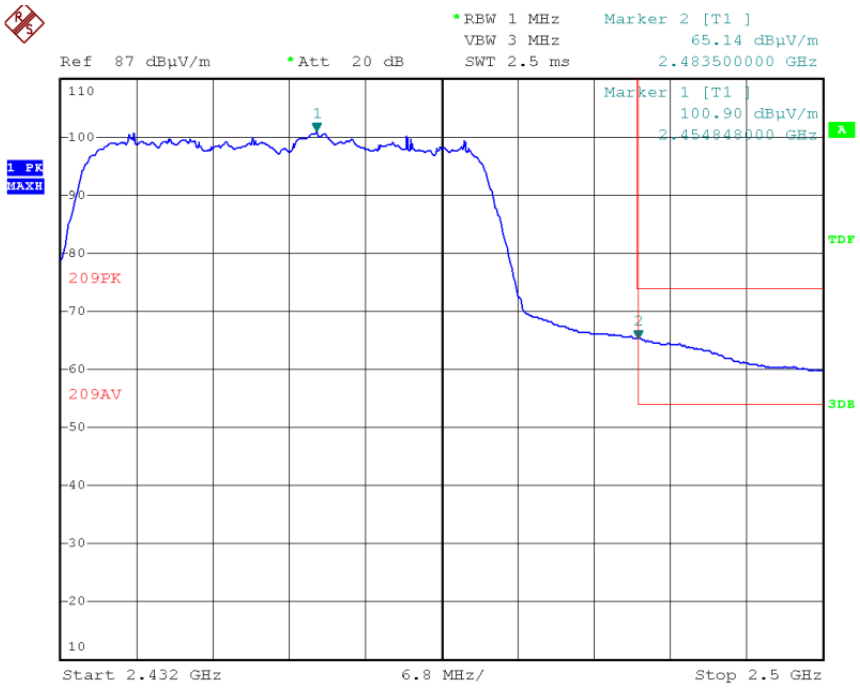


Radiated Band Edge Test Plot: 2452MHz

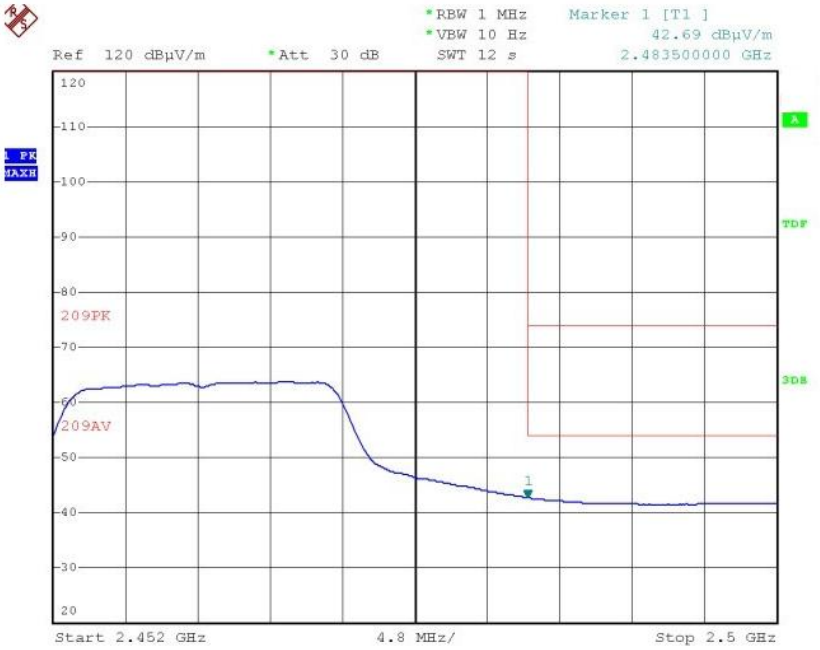
Horizontal- Average



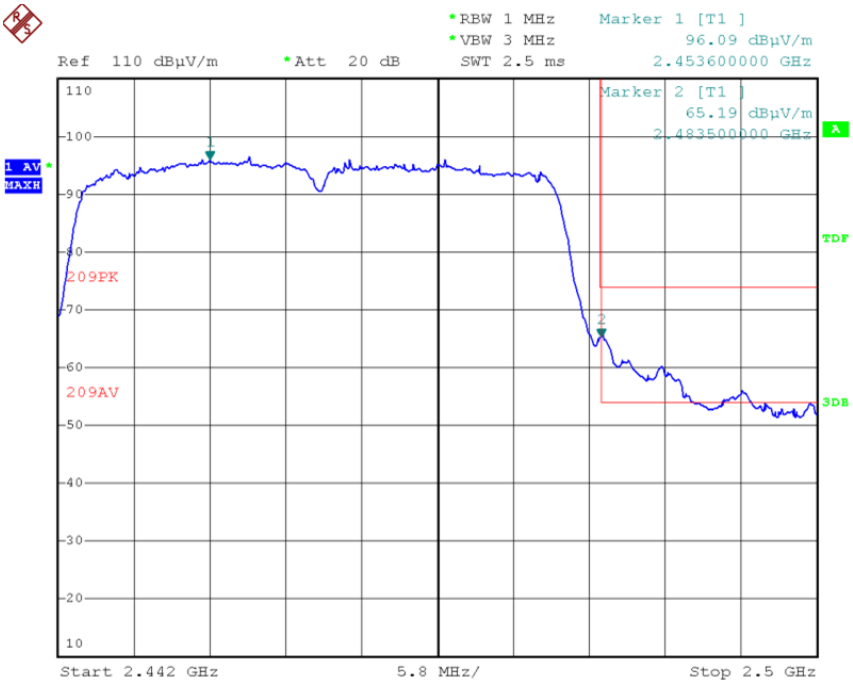
Horizontal-Peak



Vertical- Average

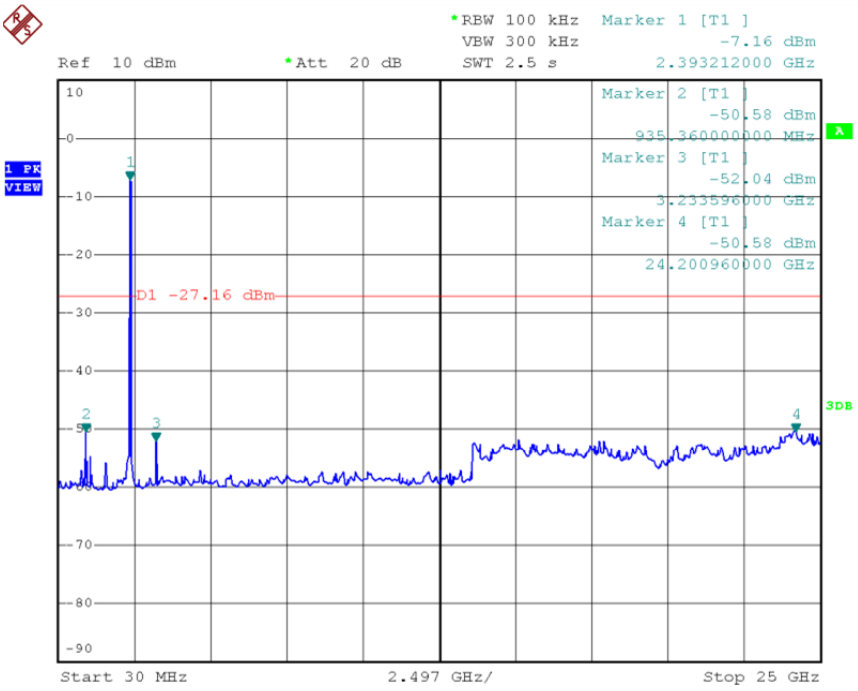


Vertical-Peak

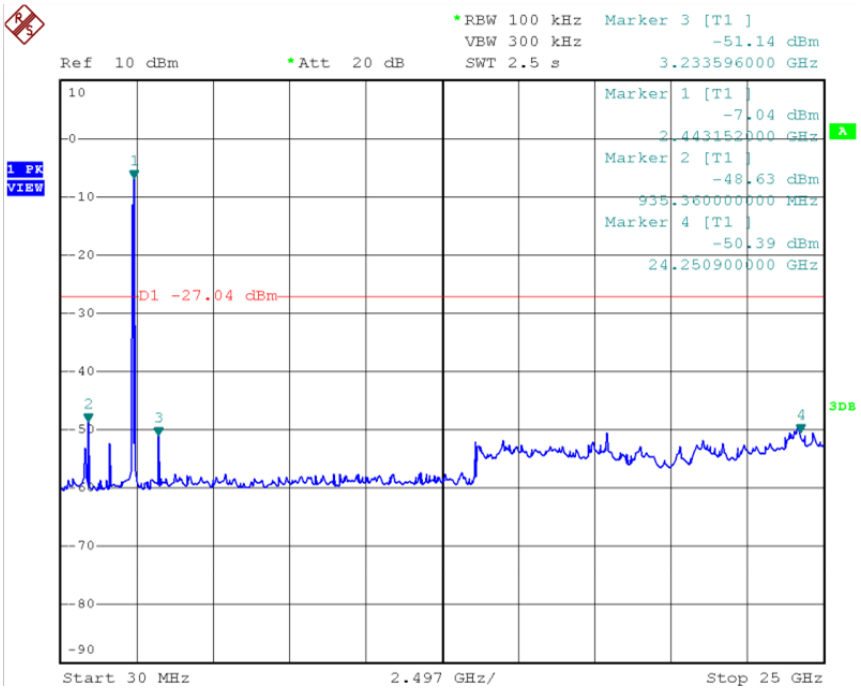


Conducted Spurious Emission Test Plot

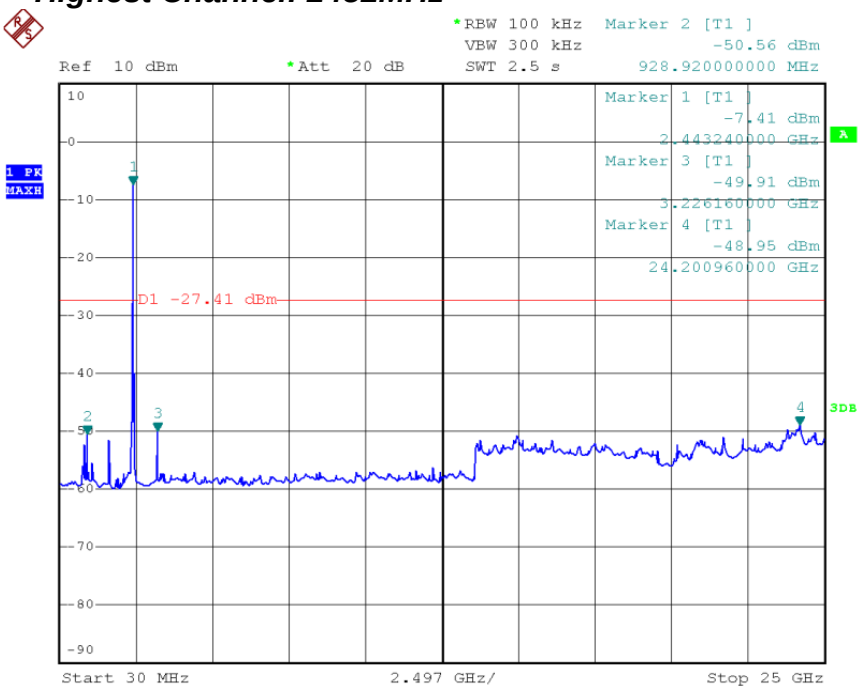
Lowest Channel: 2422MHz



Mid Channel: 2437MHz



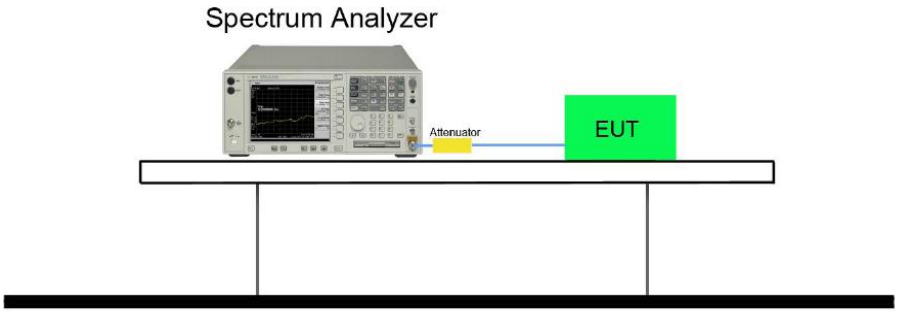
Highest Channel: 2452MHz



ATTACHMENT 7 – PEAK POWER SPECTRAL DENSITY TEST

CLIENT:	Grandstream Networks, Inc.	**TEST STANDERD:**	FCC§ 15.247(e)& RSS-210,A8.2
MODEL NUMBERS:	GXV3615WPI_HD	**PRODUCT:**	IP Camera
EUT MODEL:	GXV3615WPI_HD	**EUT DESIGNATION:**	Digital Transmission Device
TEMPERATURE:	23°C	**HUMIDITY:**	47%RH
ATM PRESSURE:	101.0kPa	**GROUNDING:**	None
TESTED BY:	Daomen	**DATE OF TEST:**	April 16th, 2014
TEST REFERENCE:	ANSI C63.4:2009 and KDB Publication No. 558074 D01 v03r01 &RSS-210,A8.2		
TEST PROCEDURE:	Regulation 15.247(e) for direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.The EUT was set transmitting continuously and force selection of output power level and channel number. We'd observed that the peak levels aren't greater than +8dBm limit. The EUT was set up as ANSI C63.4: 2009, tested to DTS test procedure of KDB 558074 with version D01 v03r01 for compliance to FCC 47CFR 15.247 requirements.		
DESCRIPTIONS OF TEST MODE:	Pre-Scan has been conducted to determine the worst-case mode from all possible Combinations between available modulations,data rates and antenna ports (if EUT with antenna diversity architecture). FolLowing channels were selected for the final test as listed beLow: 802.11b mode with data rate of 1mbps, 802.11g mode with data rate of 6mbps,802.11n HT20 mode with data rate of MCS0 and 802.11n HT40 mode with data rate of MCS6		
EQUIPMENT SET:	Spectrum analyzer shall be set as beLow: a) Set analyzer center frequency to DTS channel center frequency. b) Set the span to 1.5 times the DTS bandwidth. c) Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz. d) Set the VBW ≥ 3 RBW. e) Detector = peak. f) Sweep time = auto couple. g) Trace mode = max hold. h) Allow trace to fully stabilize. i) Use the peak marker function to determine the maximum amplitude level within the RBW. k) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.		

Continue on to next page…

TEST VOLTAGE:	120VAC/60Hz
TEST SET UP:	, 
RESULTS:	The EUT meet the requirements of test reference for power spectral density.The test results relate only to the equipment under test provided by client.
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen) test personnel.

Test Data:

For 802.11b Mode:

Channel Frequency (MHz)	Power Spectral Density (dBm)	Cable Loss (dB)	Power Spectral Density Level (dBm)	Maximum Limit (dBm)	Pass/Fail
2412	-13.16	2.0	-11.16	8.00	Pass
2437	-13.44	2.0	-11.44	8.00	Pass
2462	-13.74	2.0	-11.74	8.00	Pass

.

For 802.11g Mode:

Channel Frequency (MHz)	Power Spectral Density (dBm)	Cable Loss (dB)	Power Spectral Density Level (dBm)	Maximum Limit (dBm)	Pass/Fail
2412	-19.96	2.0	-17.96	8.00	Pass
2437	-20.31	2.0	-18.31	8.00	Pass
2462	-21.14	2.0	-19.14	8.00	Pass

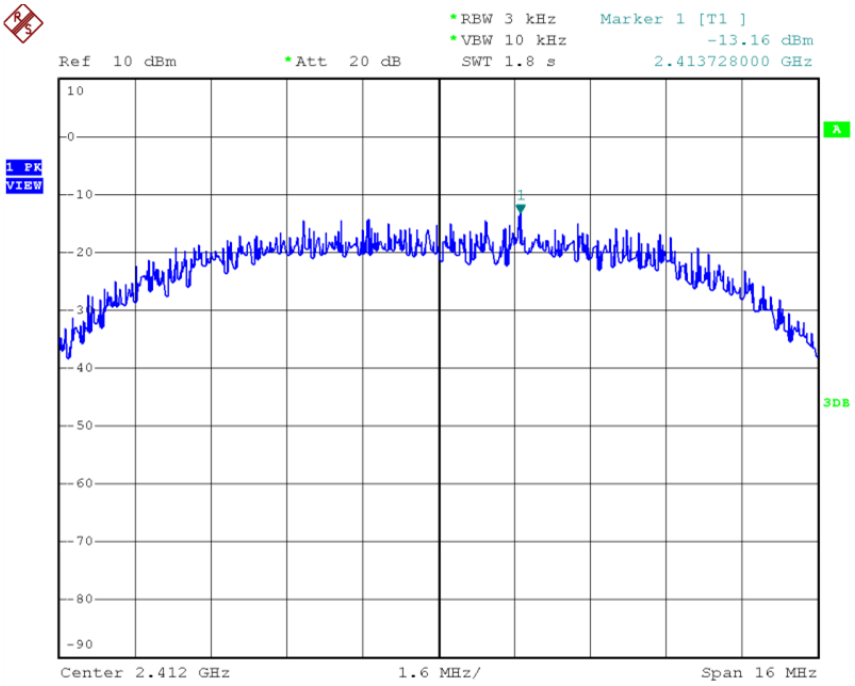
For 802.11n HT20 Mode:

Channel Frequency (MHz)	Power Spectral Density (dBm)	Cable Loss (dB)	Power Spectral Density Level (dBm)	Maximum Limit (dBm)	Pass/Fail
2412	-19.80	2.0	-17.80	8.00	Pass
2437	-19.58	2.0	-17.58	8.00	Pass
2462	-20.96	2.0	-18.96	8.00	Pass

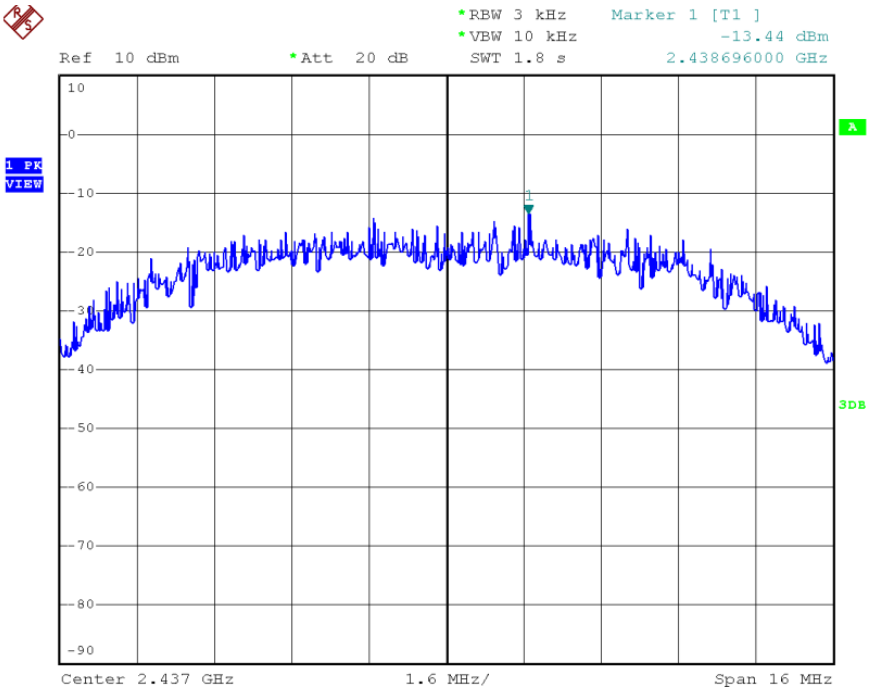
For 802.11n HT40 Mode:

Channel Frequency (MHz)	Power Spectral Density (dBm)	Cable Loss (dB)	Power Spectral Density Level (dBm)	Maximum Limit (dBm)	Pass/Fail
2422	-25.43	2.0	-23.43	8.00	Pass
2437	-25.37	2.0	-23.37	8.00	Pass
2452	-25.99	2.0	-23.99	8.00	Pass

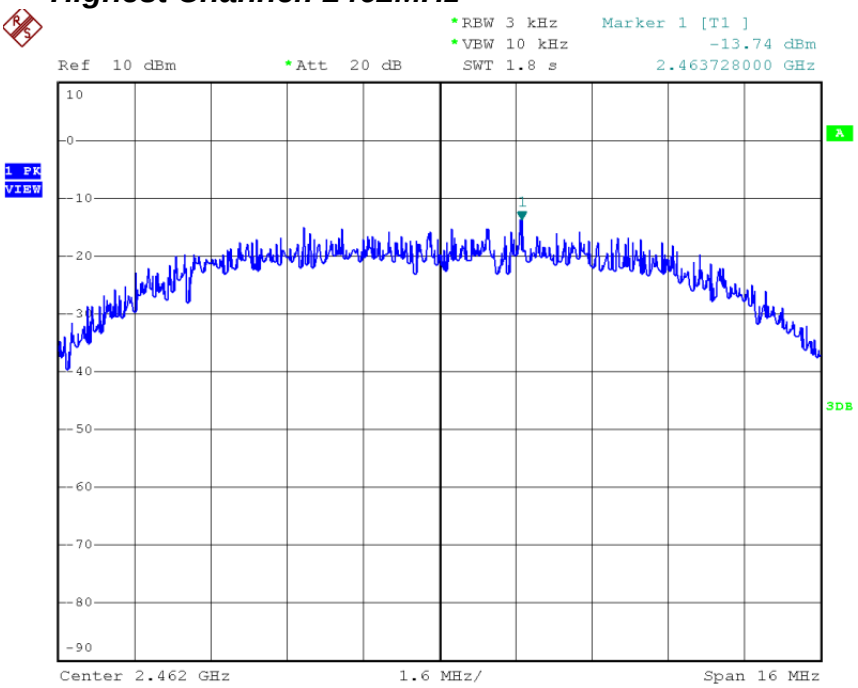
For 802.11b Mode:
Lowest Channel: 2412MHz



Mid Channel: 2437MHz

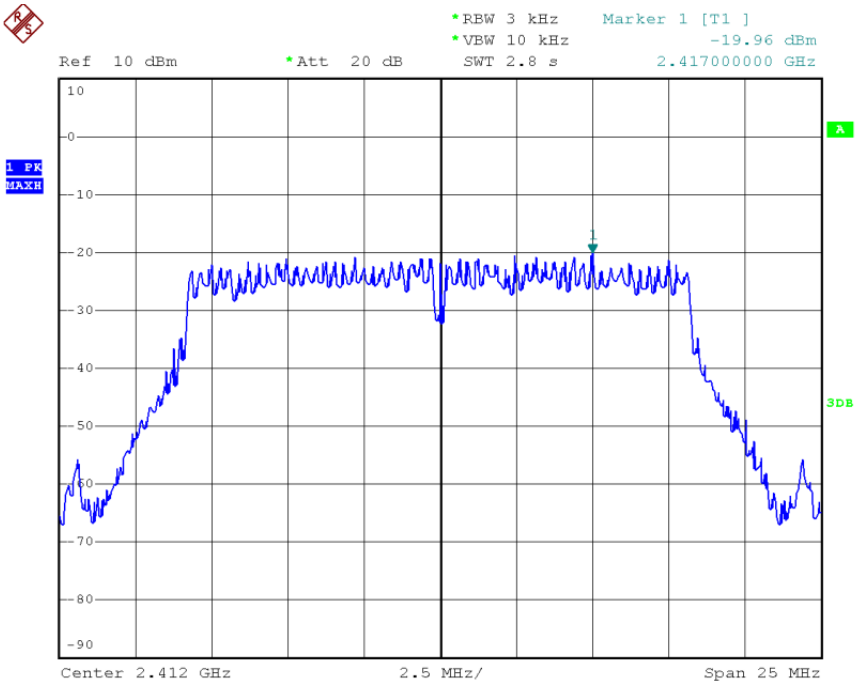


Highest Channel: 2462MHz

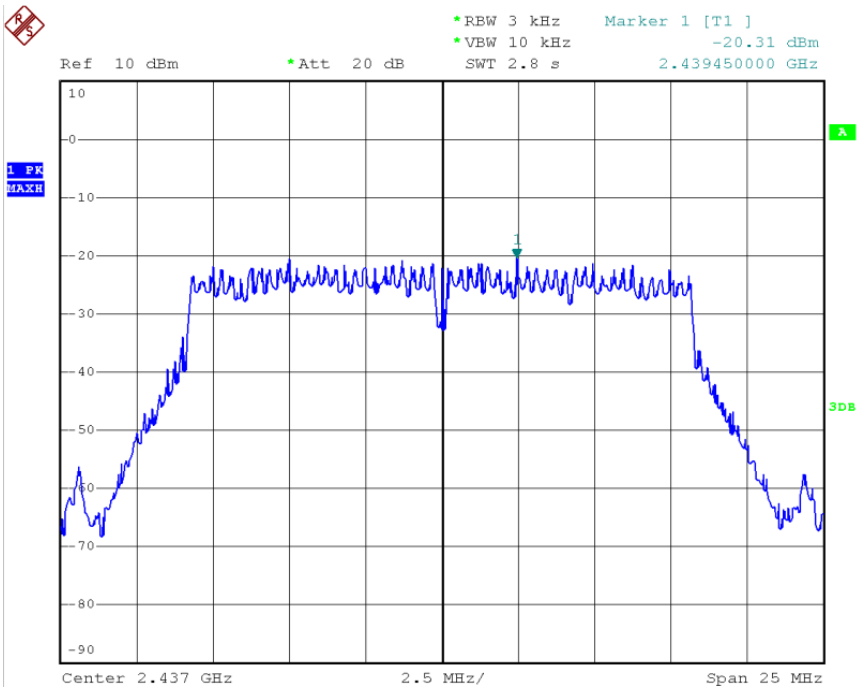


For 802.11g Mode:

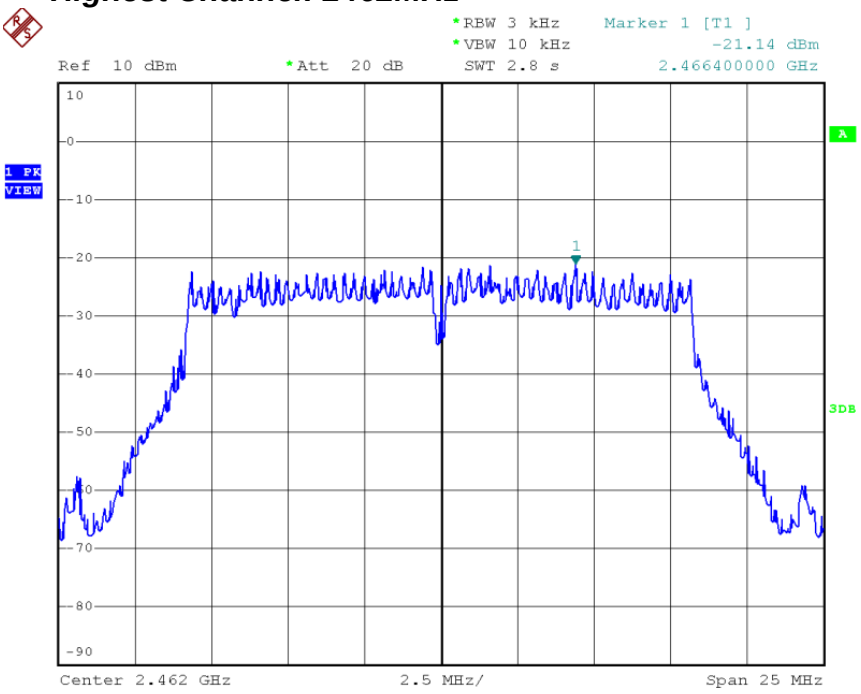
Lowest Channel: 2412MHz



Mid Channel: 2437MHz

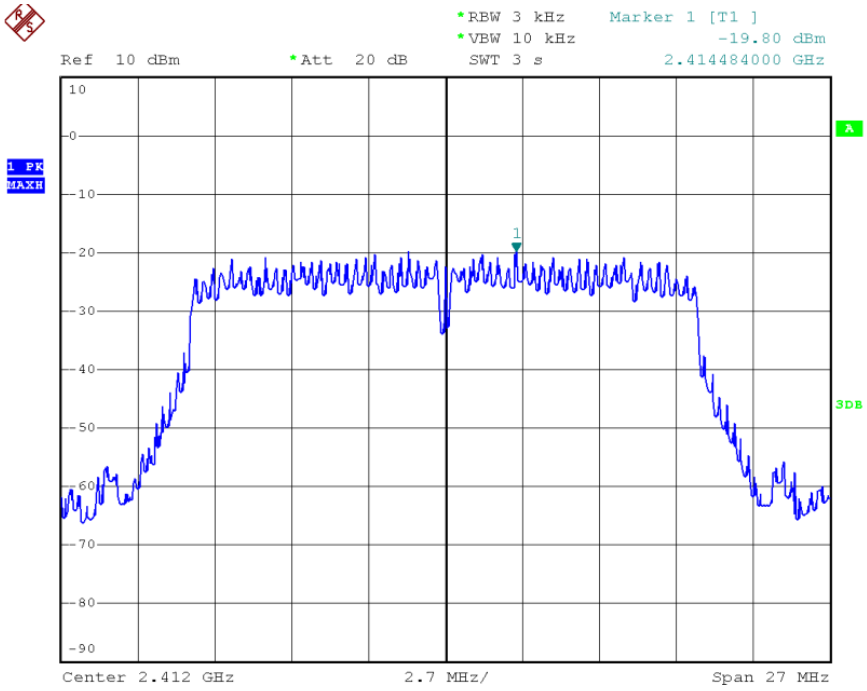


Highest Channel: 2462MHz

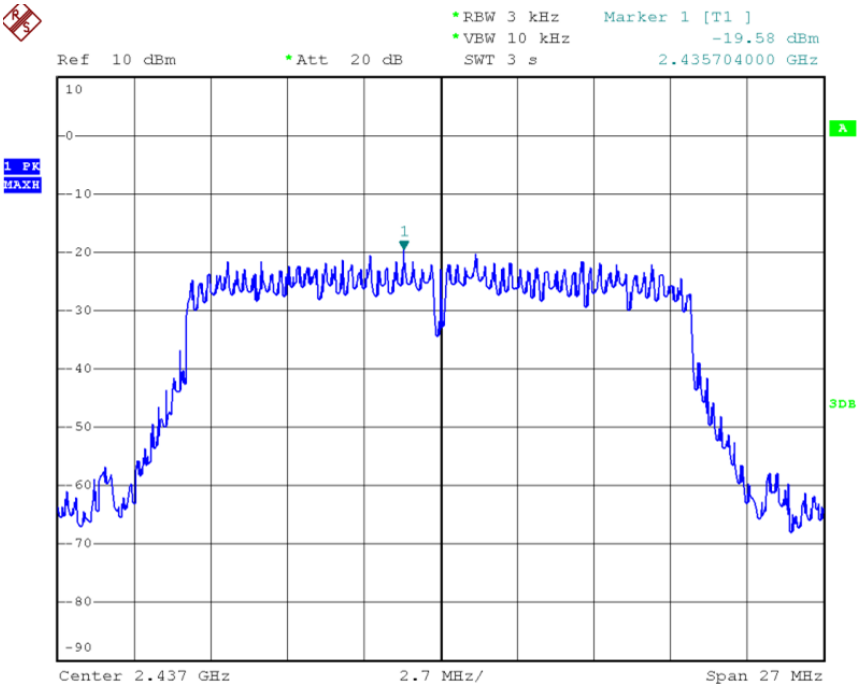


For 802.11n HT20 Mode:

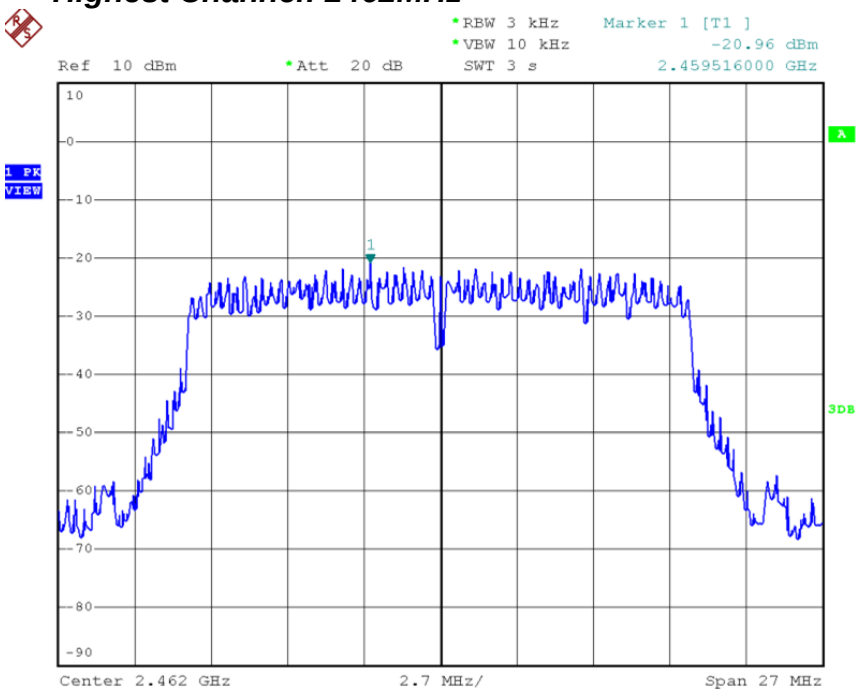
Lowest Channel: 2412MHz



Mid Channel: 2437MHz

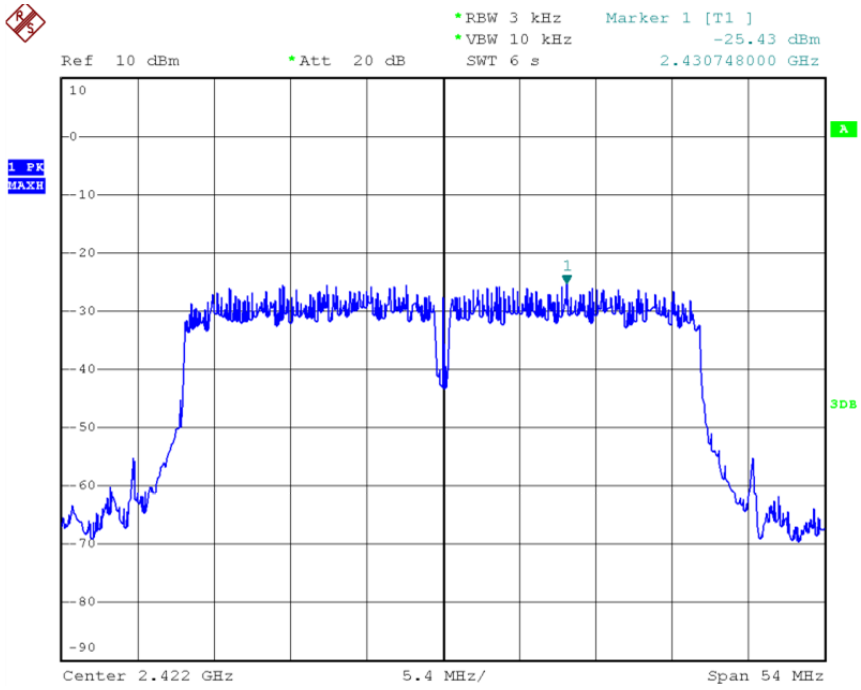


Highest Channel: 2462MHz

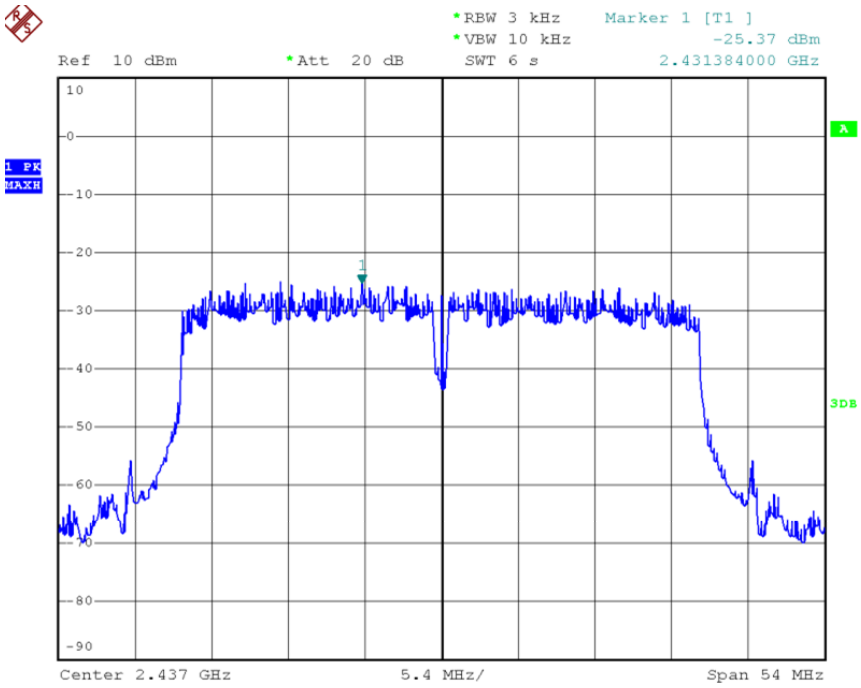


For 802.11n HT40 Mode:

Lowest Channel: 2422MHz



Mid Channel: 2437MHz



Highest Channel: 2452MHz