FCC RADIO TEST REPORT

FCC ID: 2ABWOCLP289

Product：	SLIMBOOK 10.1 INCH DISPLAY
Trade Name：	ICRAIG; EVEREX
Model Name：	CLP289
Serial Model：	EX 289
Report No.：	NTEK-2014NT0220419F1

Prepared for

Everex Electronics Ltd

Unit 03,16F .,Block A,Kailey Industrial Centre,12 Fung Yip Street,
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Prepared by

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TEST RESULT CERTIFICATION

Applicant's name ..... Everex Electronics Ltd

Address ..... Unit 03,16F .,Block A,Kailey Industrial Centre, 12 Fung Yip Street,Chai Wan ,HONGKONG

Manufacture's Name... Everex Electronics Ltd

Address ..... Unit 03,16F .,Block A,Kailey Industrial Centre, 12 Fung Yip Street,Chai Wan ,HONGKONG

Product description

Product name ..... SLIMBOOK 10.1 INCH DISPLAY

Model and/or type reference CLP289,EX 289

Serial Model ..... N/A

Standards ..... FCC Part15.247

Test procedure ..... ANSI C63.4-2003

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test .....

Date (s) of performance of tests ..... 20 Feb. 2014 ~27 Feb. 2014

Date of Issue..... 27 Feb. 2014

Test Result..... **Pass**

Testing Engineer : Polo Cha

(Polo Cha)

Technical Manager : Brown Lu

(Brown Lu)

Authorized Signatory : Bovey Yang

(Bovey Yang)

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247 (a)(2)	6dB Bandwidth	PASS	
15.247 (b)	Peak Output Power	PASS	
15.247 (c)	Radiated Spurious Emission	PASS	
15.247 (d)	Power Spectral Density	PASS	
15.205	Band Edge Emission	PASS	
15.203	Antenna Requirement	PASS	

NOTE:

(1)” N/A” denotes test is not applicable in this Test Report

1.1 TEST FACILITY

NTEK Testing Technology Co., Ltd
Add.:1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.
FCC Registration No.:238937; IC Registration No.:9270A-1
CNAS Registration No.:L5516

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ± U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td>SLIMBOOK 10.1 INCH DISPLAY</td></tr>
<tr><td>Trade Name</td><td>ICRAIG; EVEREX</td></tr>
<tr><td>Model Name</td><td>CLP289</td></tr>
<tr><td>Serial Model</td><td>EX 289</td></tr>
<tr><td>Model Difference</td><td>All the model are the same circuit and RF module,
except the model name.</td></tr>
<tr><td>Product Description</td><td>The EUT is a SLIMBOOK 10.1 INCH DISPLAY
<table>
<tr><td>Operation Frequency:</td><td>802.11b/g/n(20MHz): 2412~2462MHz
802.11n(40MHz):2422~2452MHz</td></tr>
<tr><td>Modulation Type:</td><td>CCK/OFDM/DBPSK/DAPSK</td></tr>
<tr><td>Bit Rate of Transmitter</td><td>802.11b:11/5.5/2/1 Mbps
802.11g:54/48/36/24/18/12/9/6Mbps
802.11n(20MHz):MSC7
802.11n(40MHz): MCS7</td></tr>
<tr><td>Number Of Channel</td><td>802.11b/g/n20MHz:11CH
802.11n40MHz:7CH</td></tr>
<tr><td>Antenna Designation:</td><td>Please see Note 3.</td></tr>
<tr><td>Output Power(Conducted):</td><td>802.11b: 12.67 dBm (Max.)
802.11g: 11.42dBm (Max.)
802.11n(20M): 10.83dBm (Max.)
802.11n(40M): 10.28 dBm (Max.)</td></tr>
<tr><td>Antenna Gain (dBi)</td><td>1.0dbi</td></tr>
</table>
Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.</td></tr>
<tr><td>Channel List</td><td>Please refer to the Note 2.</td></tr>
<tr><td>Ratings</td><td>DC 5V, 2A</td></tr>
<tr><td>Adapter</td><td>Mode: HB10-050200USPA
Input: 100-240V~, 50/60Hz, 0.4A
Output: 5V⎓, 2000mA</td></tr>
<tr><td>Battery</td><td>DC 3.7V, 3600mAh</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the User's Manual</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.

2.

Channel List for 802.11b/g/n(20 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

Channel List for 802.11n(40MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
03	2422	06	2437	09	2452		
04	2427	07	2442				
05	2432	08	2447				

3.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
A	N/A	N/A	FPBC Antenna	N/A	1.0	Wifi Antenna

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n/20MHz CH1/ CH6/ CH11
Mode 4	802.11n/40MHz CH3/ CH6/ CH9
Mode 5	Link Mode

For Conducted Emission	
Final Test Mode	Description
Mode 5	Link Mode

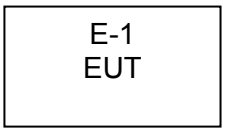
For Radiated Emission	
Final Test Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n/20MHz CH1/ CH6/ CH11
Mode 4	802.11n/40MHz CH3/ CH6/ CH9

Note:

(1) The measurements are performed at the highest, middle, lowest available channels.

(2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Brand	Model/Type No.	Series No.	Note
E-1	SLIMBOOK 10.1 INCH DISPLAY	ICRAIG; EVEREX	CLP289,EX 289	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4407B	MY45108040	2013.07.06	2014.07.05	1 year
2	Test Receiver	R&S	ESPI	101318	2013.06.07	2014.06.06	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2013.07.06	2014.07.05	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2013.06.07	2014.06.06	1 year
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	2013.06.07	2014.06.06	1 year
6	Horn Antenna	EM	EM-AH-10180	2011071402	2013.07.06	2014.07.05	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2013.07.06	2014.07.05	1 year
8	Amplifier	EM	EM-30180	060538	2013.12.22	2014.12.21	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2013.06.08	2014.06.07	1 year
10	Power Meter	R&S	NRVS	100696	2013.07.06	2014.07.05	1 year
11	Power Sensor	R&S	URV5-Z4	0395.1619.05	2013.07.06	2014.07.05	1 year

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2013.06.06	2014.06.05	1 year
2	LISN	R&S	ENV216	101313	2013.08.24	2014.08.23	1 year
3	LISN	EMCO	3816/2	00042990	2013.08.24	2014.08.23	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2013.06.07	2014.06.06	1 year
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	2013.06.07	2014.06.06	1 year
6	Absorbing clamp	R&S	MOS-21	100423	2013.06.08	2014.06.07	1 year

1	Attenuation	MCE	24-10-34	BN9258	2013.06.08	2014.06.07	1 year

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	73.00	60.00	56.00	46.00	CISPR
5.0 -30.0	73.00	60.00	60.00	50.00	CISPR

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

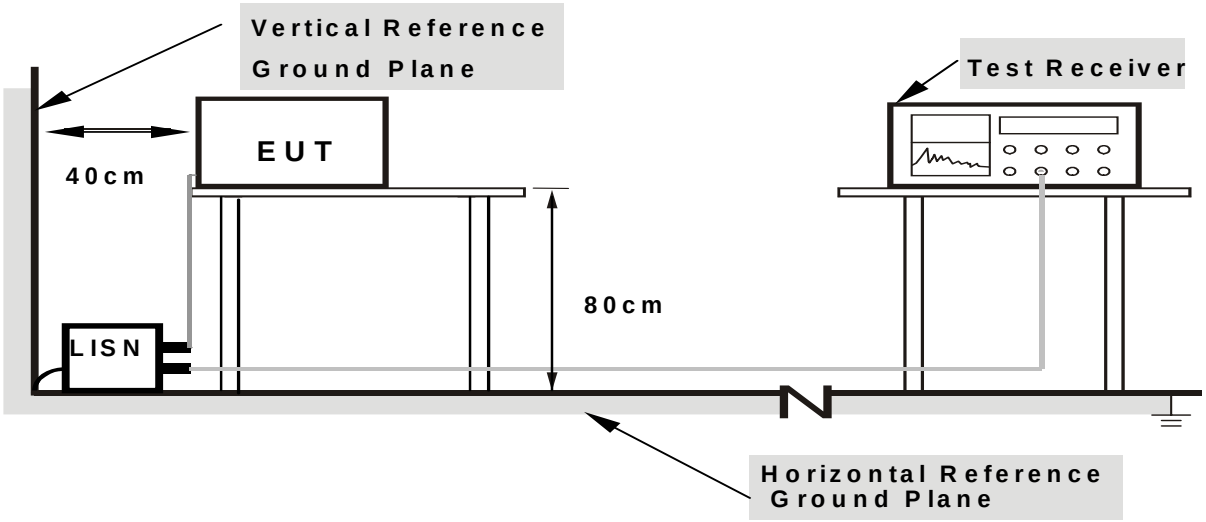
3.1.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.5 EUT OPERATING CONDITIONS

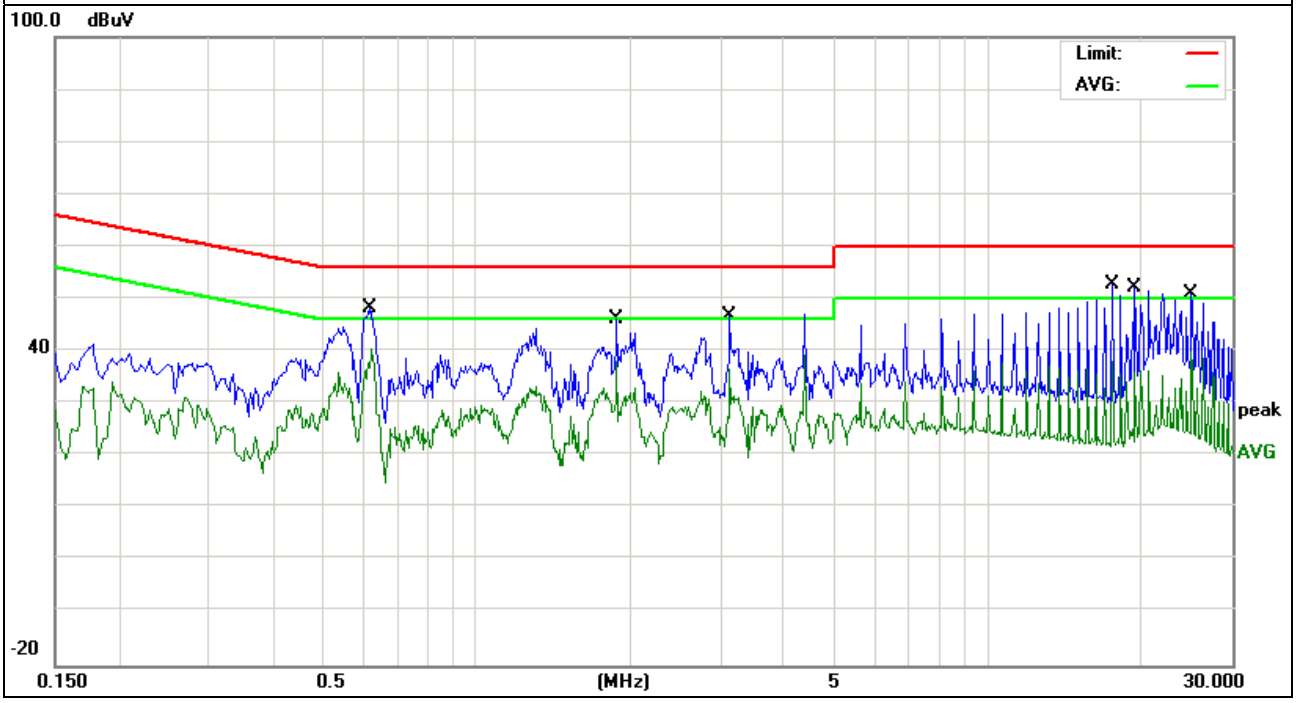
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.6 TEST RESULTS

EUT：	SLIMBOOK 10.1 INCH DISPLAY	Model Name. ：	CLP289
Temperature：	26 ℃	Relative Humidity：	56%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	AC120V/60Hz	Test Mode：	Mode 5

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Detector Type
0.6180	38.81	9.52	48.33	56.00	-7.67	QP
0.6180	31.07	9.52	40.59	46.00	-5.41	AVG
1.8820	36.64	9.55	46.19	56.00	-9.81	QP
1.8820	28.56	9.55	38.11	46.00	-7.89	AVG
3.1300	37.10	9.57	46.67	56.00	-9.33	QP
3.1300	27.08	9.57	36.65	46.00	-9.35	AVG
17.5339	42.63	10.07	52.70	60.00	-7.30	QP
17.5339	27.90	10.07	37.97	50.00	-12.03	AVG
19.4139	41.97	10.25	52.22	60.00	-7.78	QP
19.4139	26.01	10.25	36.26	50.00	-13.74	AVG
25.0540	40.62	10.18	50.80	60.00	-9.20	QP
25.0540	29.77	10.18	39.95	50.00	-10.05	AVG

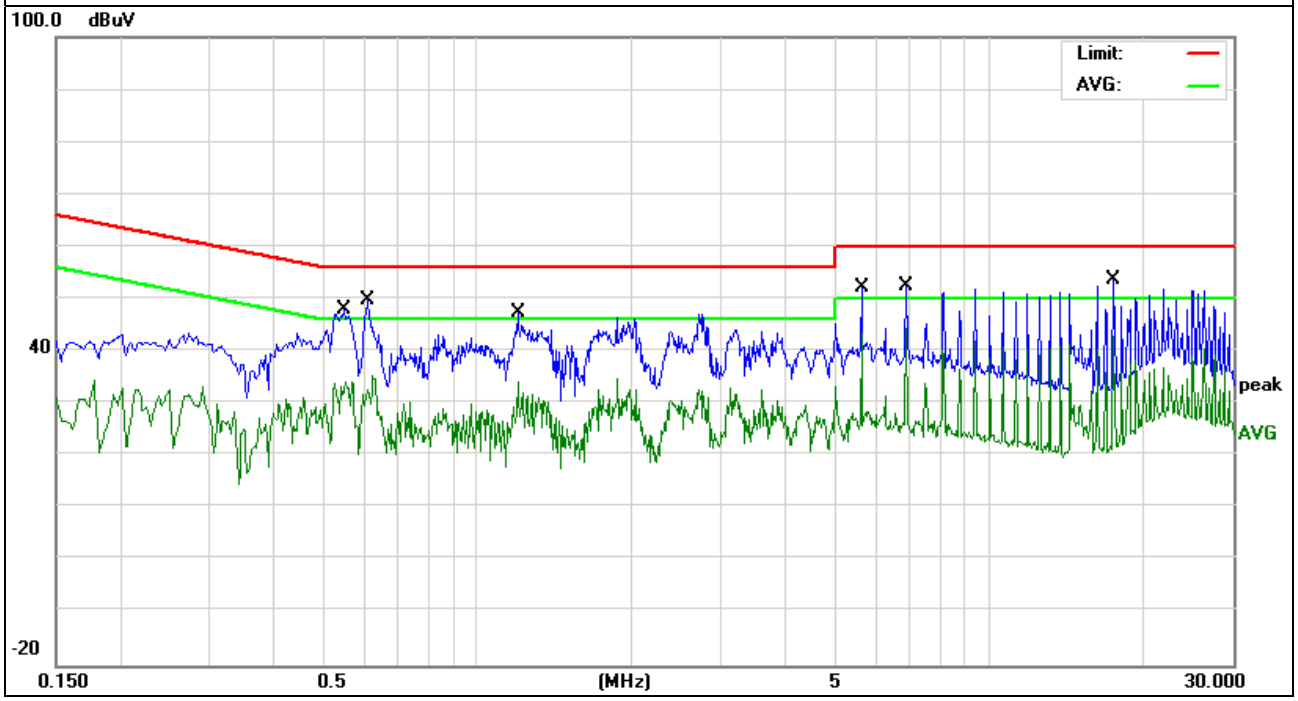
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



EUT：	SLIMBOOK 10.1 INCH DISPLAY	Model Name. ：	CLP289
Temperature：	26 ℃	Relative Humidity：	56%
Pressure：	1010hPa	Phase：	N
Test Voltage ：	AC120V/60Hz	Test Mode：	Mode 5

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.5500	38.48	9.53	48.01	56.00	-7.99	QP
0.5500	24.53	9.53	34.06	46.00	-11.94	AVG
0.6107	40.30	9.53	49.83	56.00	-6.17	QP
0.6107	25.84	9.53	35.37	46.00	-10.63	AVG
1.1980	37.88	9.55	47.43	56.00	-8.57	QP
1.1980	24.67	9.55	34.22	46.00	-11.78	AVG
5.6419	42.64	9.63	52.27	60.00	-7.73	QP
5.6419	33.85	9.63	43.48	50.00	-6.52	AVG
6.8939	42.82	9.67	52.49	60.00	-7.51	QP
6.8939	34.65	9.67	44.32	50.00	-5.68	AVG
17.5419	43.79	10.01	53.80	60.00	-6.20	QP
17.5419	32.93	10.01	42.94	50.00	-7.06	AVG

Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (dBuV/m) (at 3M)		Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / *10Hz* for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

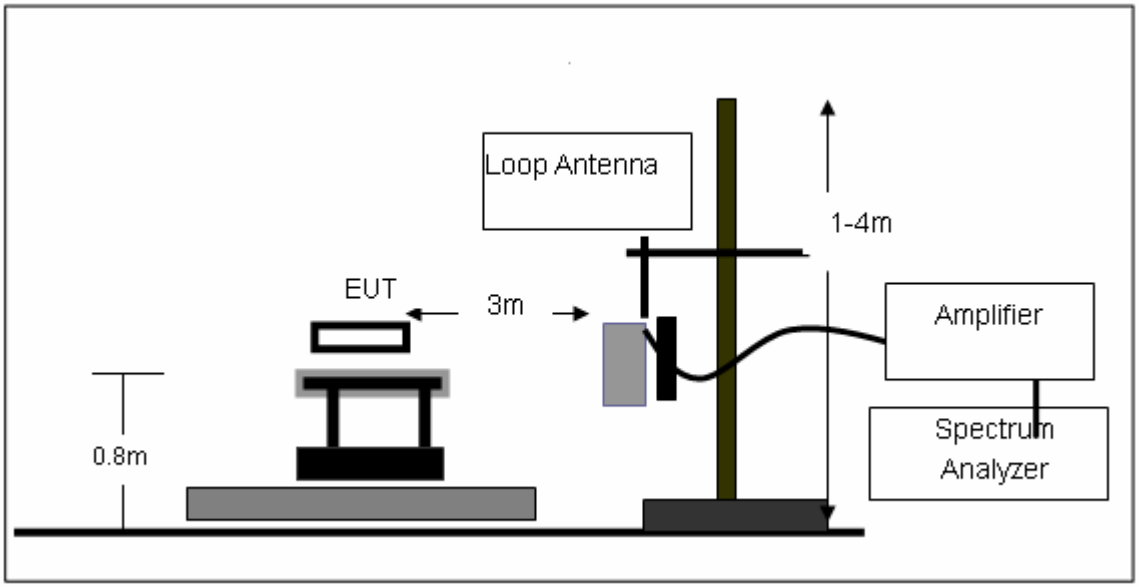
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

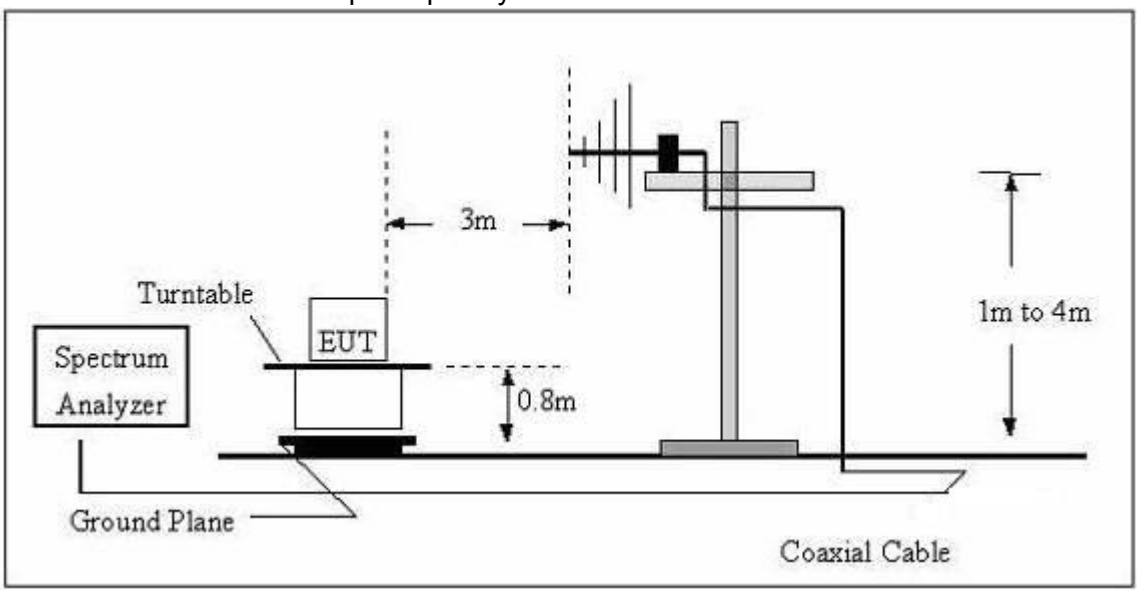
No deviation

3.2.4 TEST SETUP

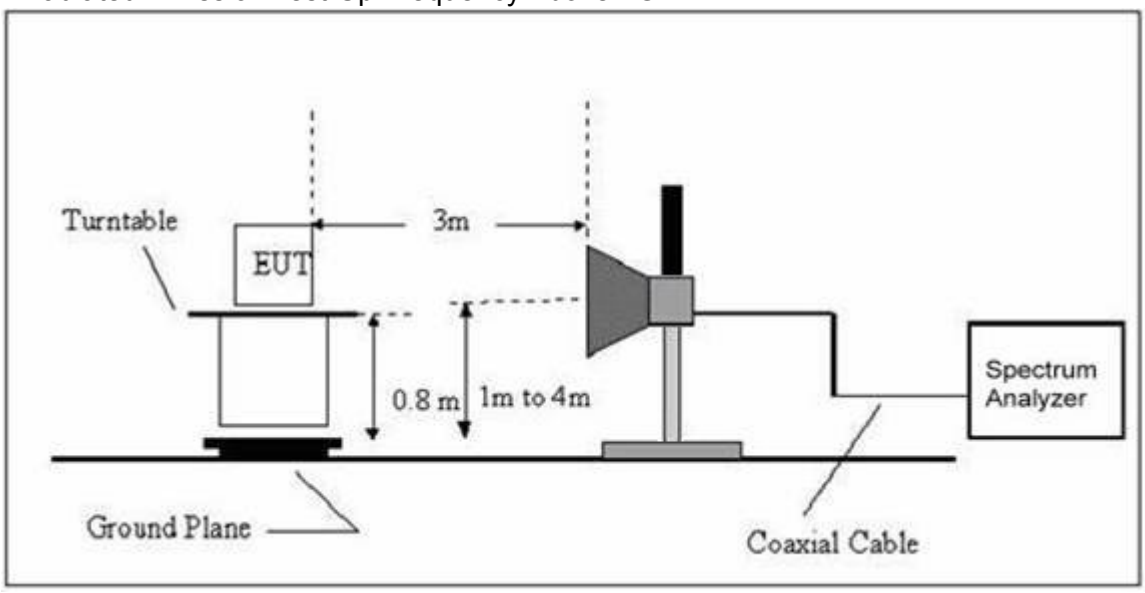
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.6 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)

EUT：	SLIMBOOK 10.1 INCH DISPLAY	Model Name. ：	CLP289
Temperature：	20 ℃	Relative Humidtity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	N/A
--	--	--	--	N/A

NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)

EUT：	SLIMBOOK 10.1 INCH DISPLAY	Model Name ：	CMP289
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
V	102.3597	23.12	10.87	33.99	43.50	-9.51	QP
V	153.7384	24.19	11.53	35.72	43.50	-7.78	QP
V	460.7271	16.09	19.45	35.54	46.00	-10.46	QP
V	511.8351	15.78	20.78	36.56	46.00	-9.44	QP
V	564.6389	12.21	22.82	35.03	46.00	-10.97	QP
V	614.2142	12.03	23.48	35.51	46.00	-10.49	QP
H	102.3597	24.85	10.87	35.72	43.50	-7.78	QP
H	153.7385	22.39	11.53	33.92	43.50	-9.58	QP
H	204.9551	23.92	9.24	33.16	43.50	-10.34	QP
H	256.5211	22.71	14.47	37.18	46.00	-8.82	QP
H	392.0951	20.47	17.84	38.31	46.00	-7.69	QP
H	614.2142	12.49	23.48	35.97	46.00	-10.03	QP

Remark:

Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit

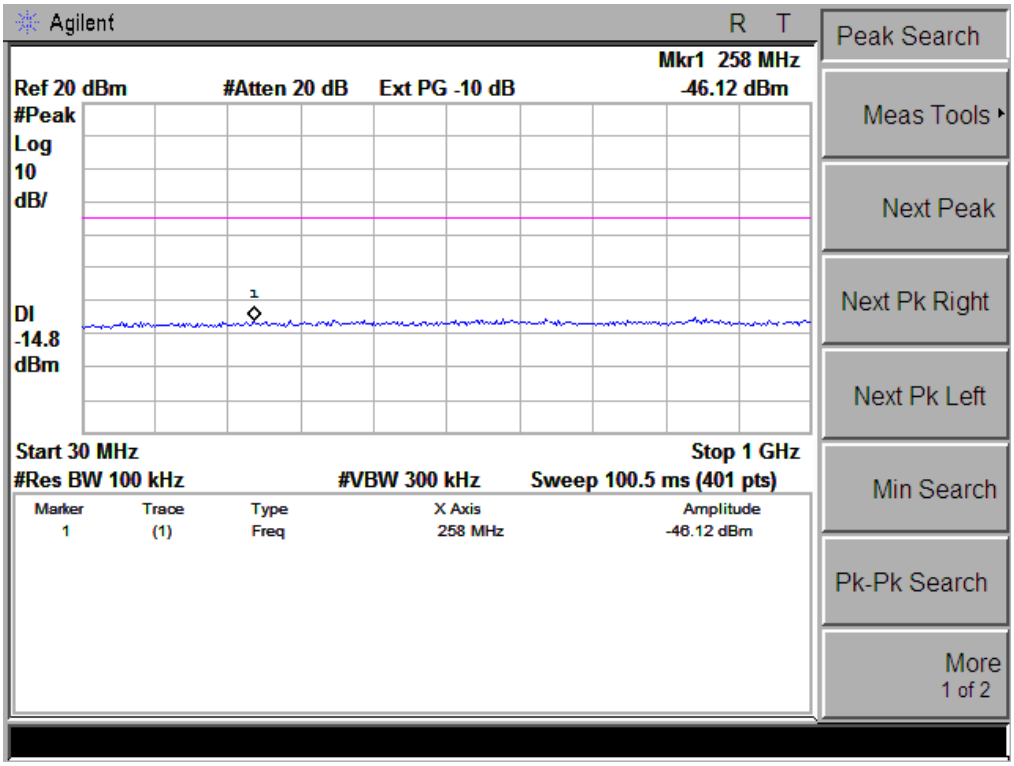
3.2.8 TEST RESULTS (ABOVE 1000 MHZ)

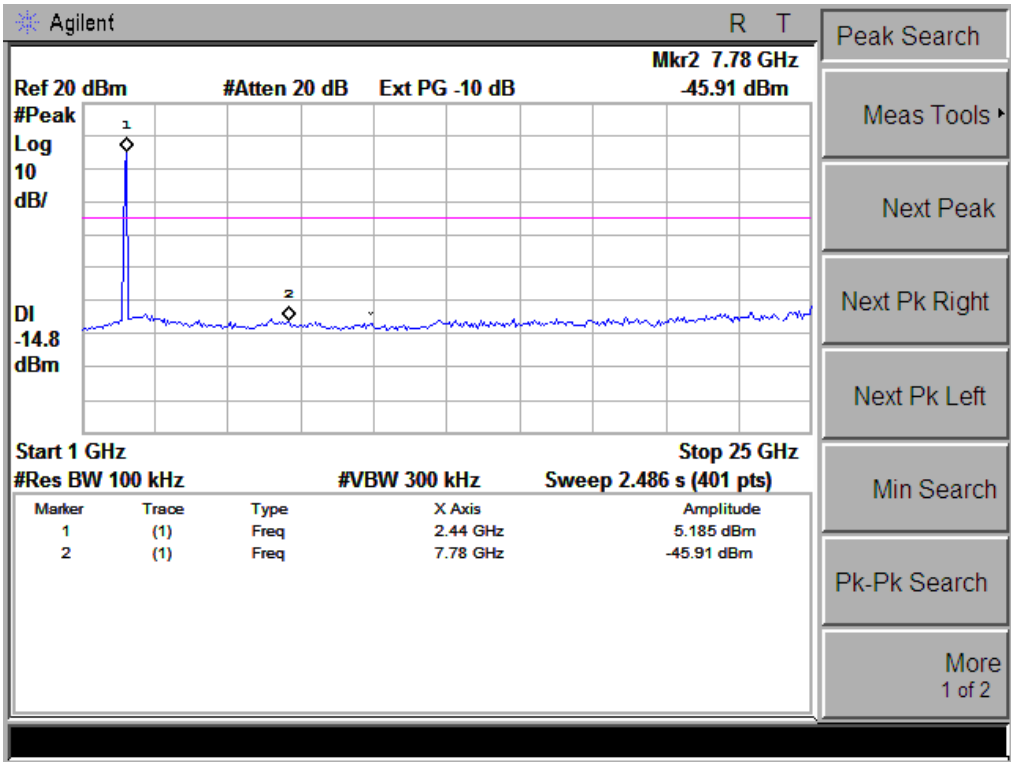
Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type	Comment
Low Channel (2422 MHz)-Above 1G							
4843.639	41.97	10.43	52.40	74.00	-21.60	peak	Vertical
7267.274	37.65	12.37	50.02	74.00	-23.98	peak	Vertical
4844.499	42.36	10.43	52.79	74.00	-21.21	peak	Horizontal
7266.346	37.23	12.37	49.60	74.00	-24.40	peak	Horizontal
Mid Channel (2437 MHz)-Above 1G							
4874.515	44.85	10.45	55.30	74.00	-18.70	peak	Vertical
4874.515	21.06	10.45	31.51	54.00	-22.49	AVG	Vertical
7312.667	40.37	12.41	52.78	74.00	-21.22	peak	Vertical
4875.086	44.91	10.45	55.36	74.00	-18.64	peak	Horizontal
4875.086	22.18	10.45	32.63	54.00	-21.37	AVG	Horizontal
7313.001	38.51	12.41	50.92	74.00	-23.08	peak	Horizontal
High Channel (2452 MHz)- Above 1G							
4905.597	46.10	10.39	56.49	74.00	-17.51	peak	Vertical
4905.597	20.97	10.39	31.36	54.00	-22.64	AVG	Vertical
7356.393	39.34	12.68	52.02	74.00	-21.98	peak	Vertical
4907.209	44.74	10.39	55.13	74.00	-18.87	peak	Horizontal
4907.209	22.48	10.39	32.87	54.00	-21.13	AVG	Horizontal
7355.996	40.67	12.68	53.35	74.00	-20.65	peak	Horizontal

Note:Pre test 802.11b,g,n-HT20,n-HT-40 mode, The 802.11b mode is the worst mode,only shown it.
When the result(PK) less than AV limite,No need shown AV result.

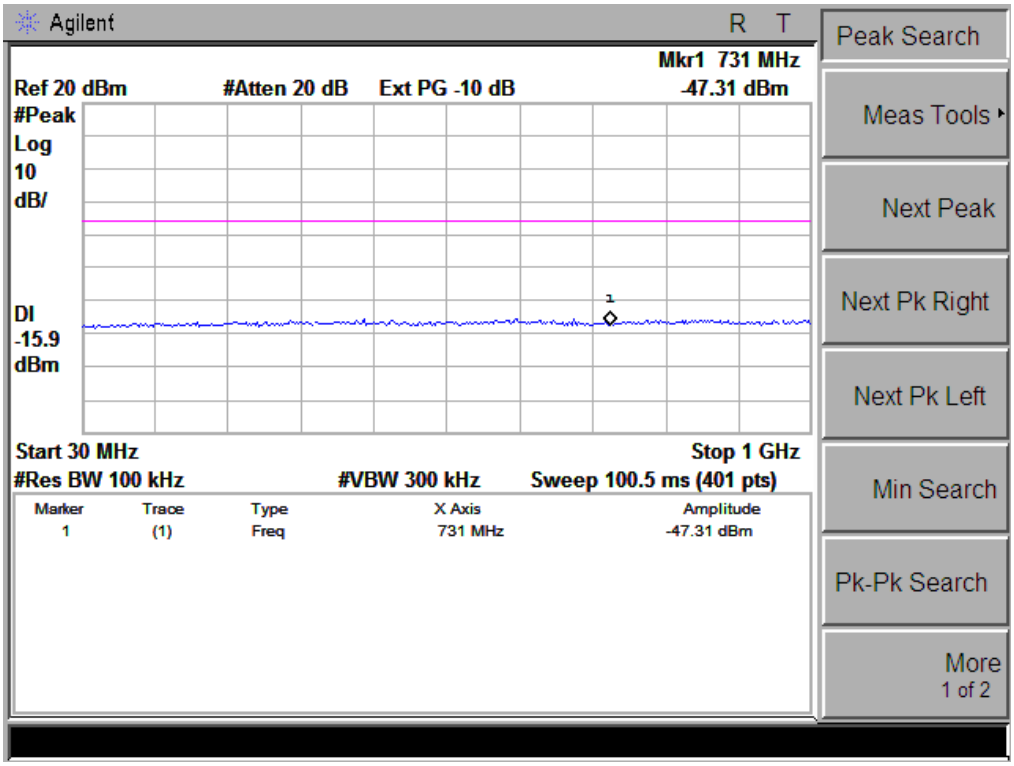
Conducted Spurious Emissions at Antenna Port:

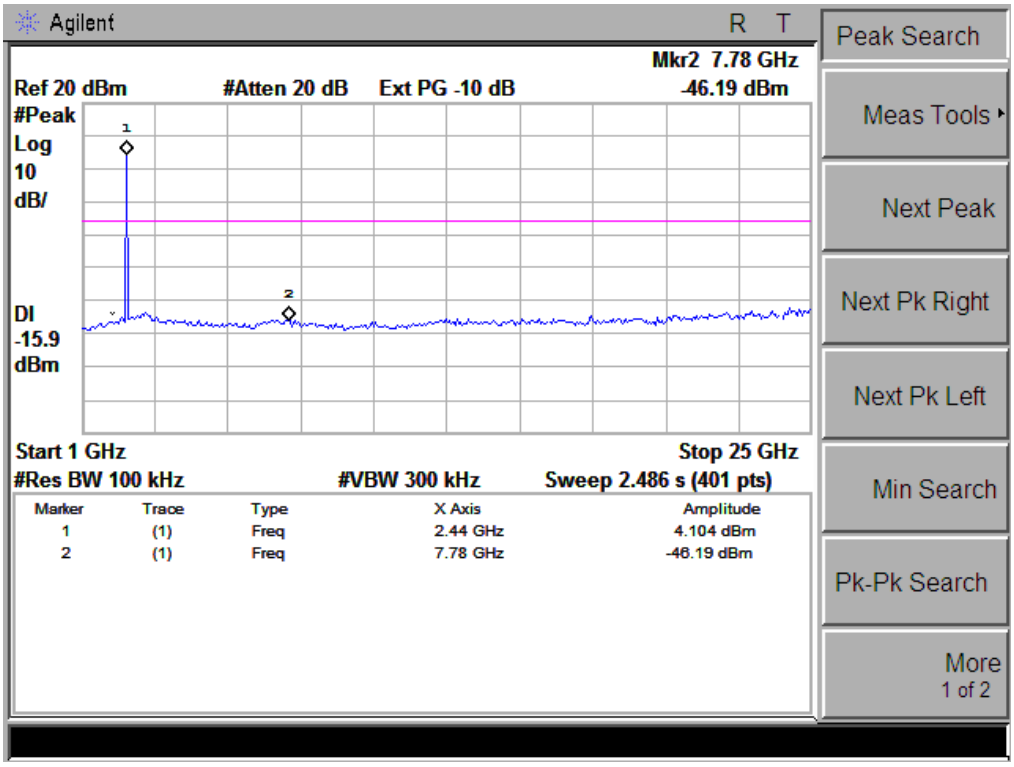
802.11b Low Channel



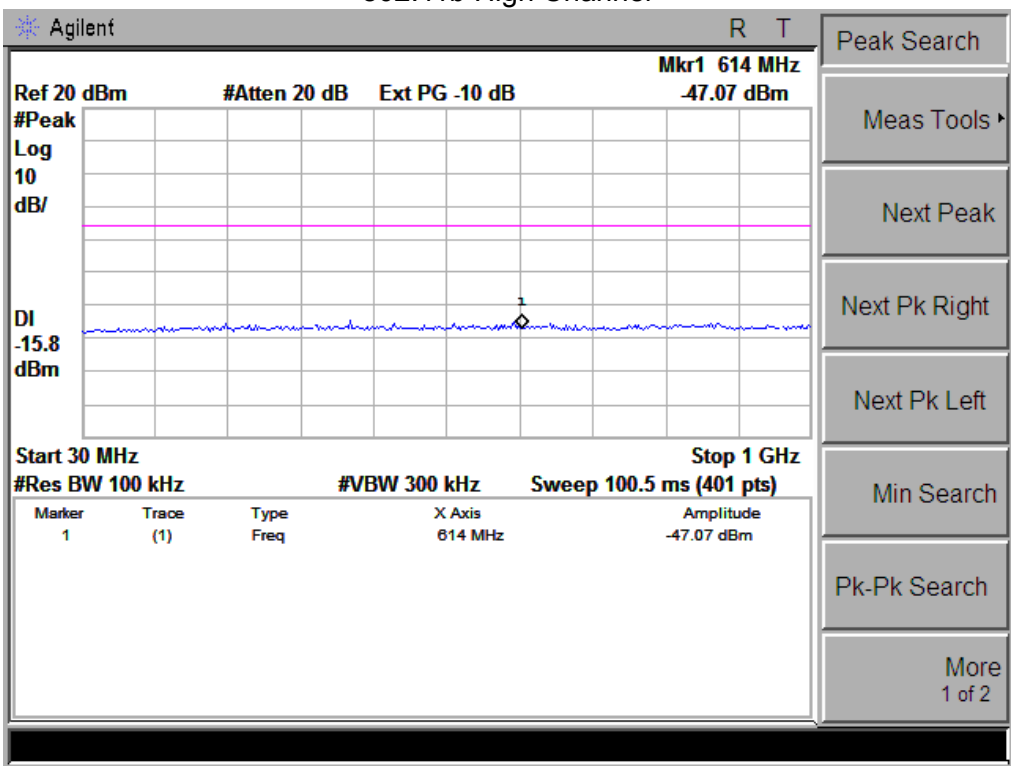


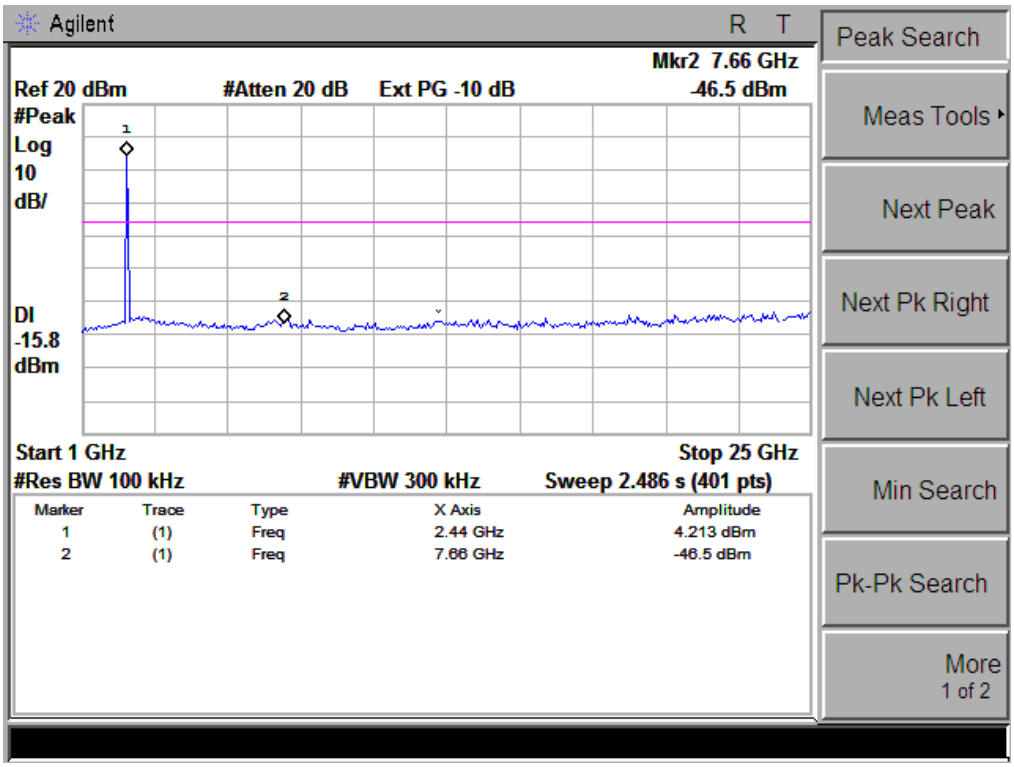
802.11b Middle Channel



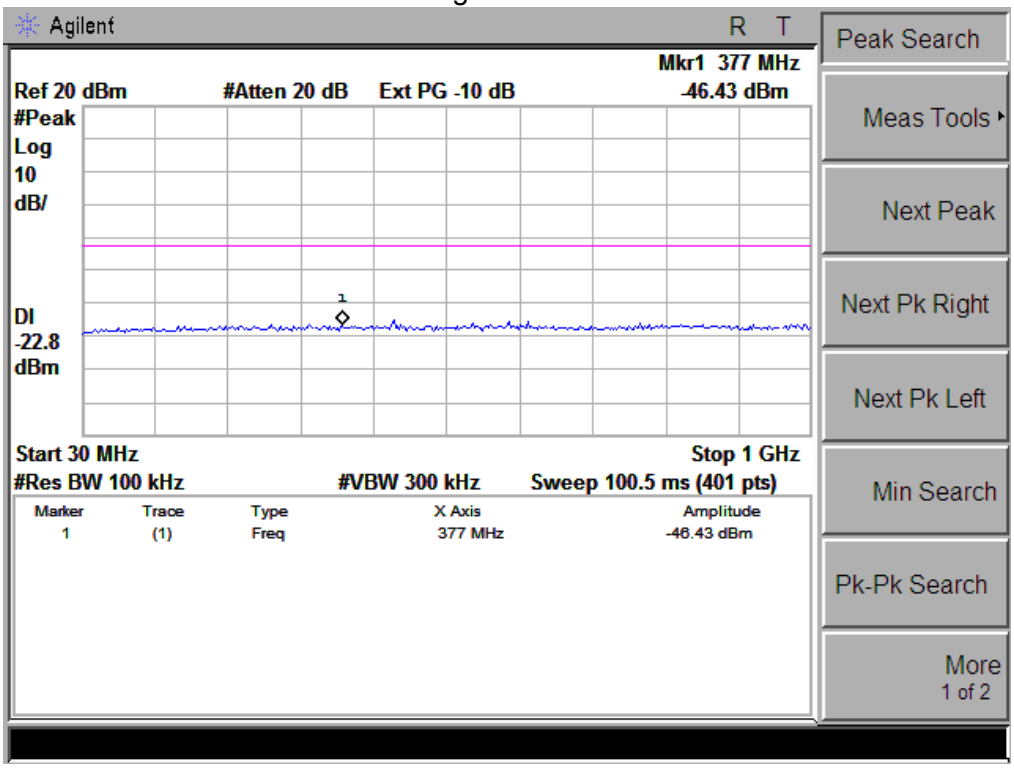


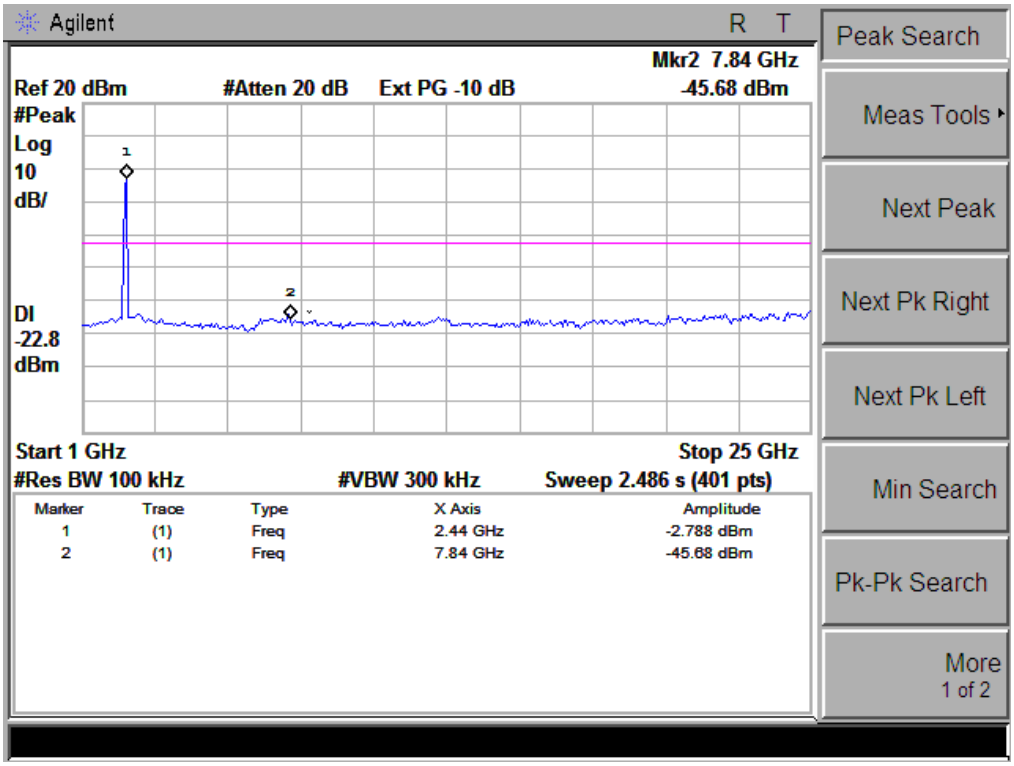
802.11b High Channel



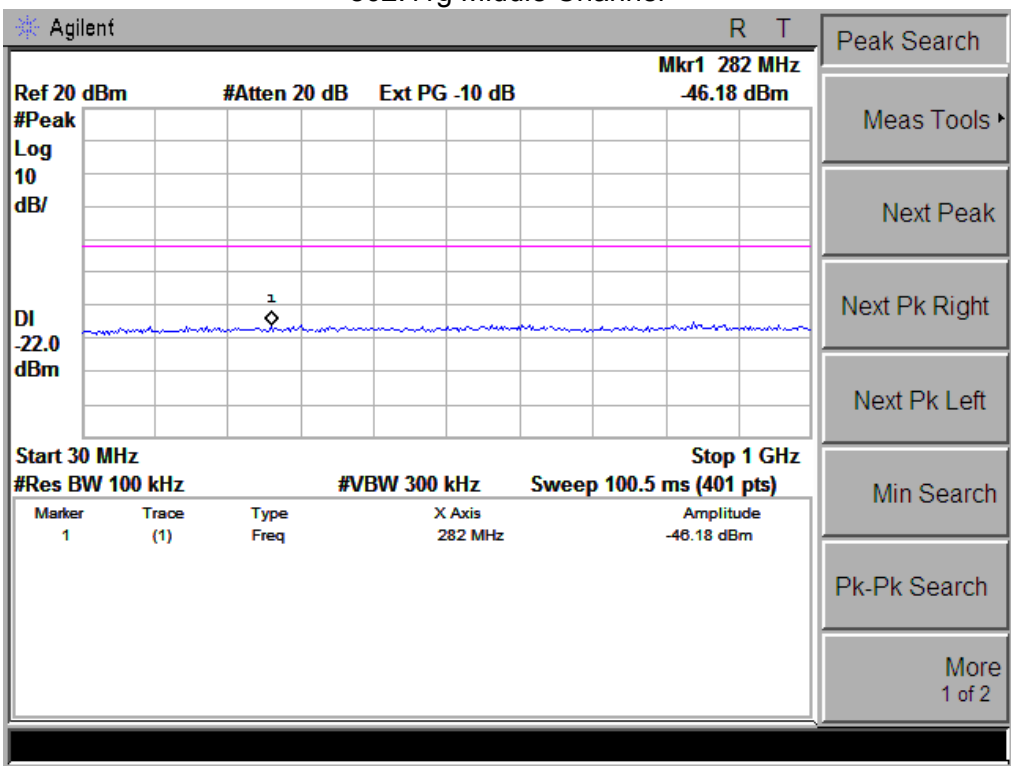


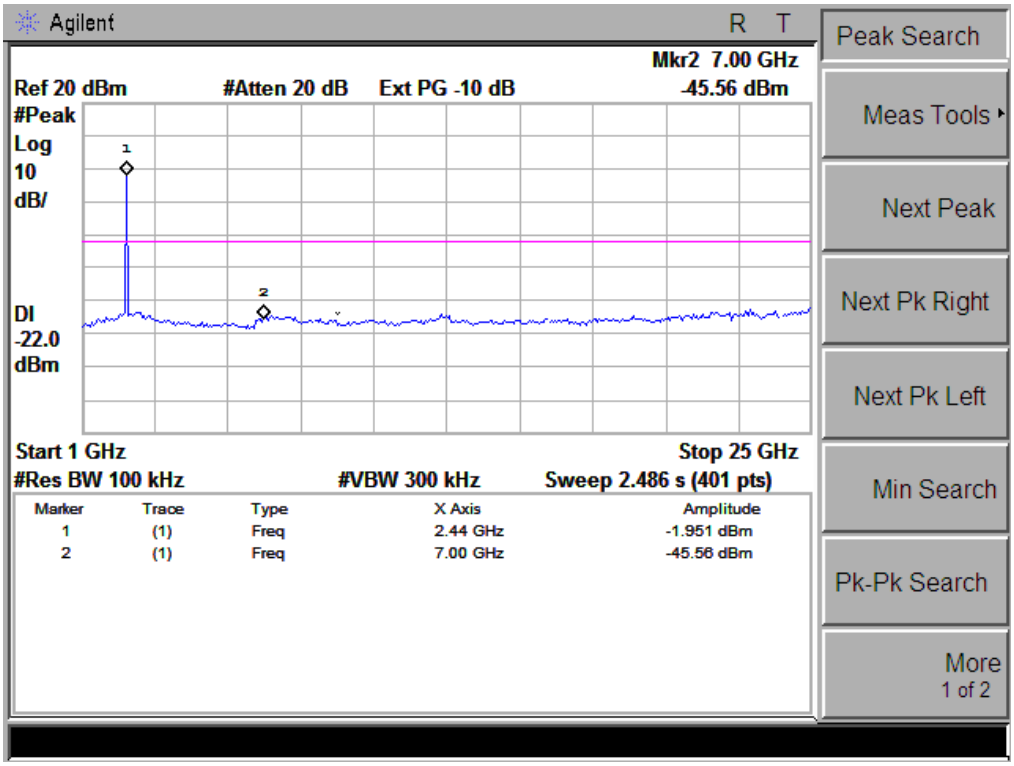
802.11g Low Channel



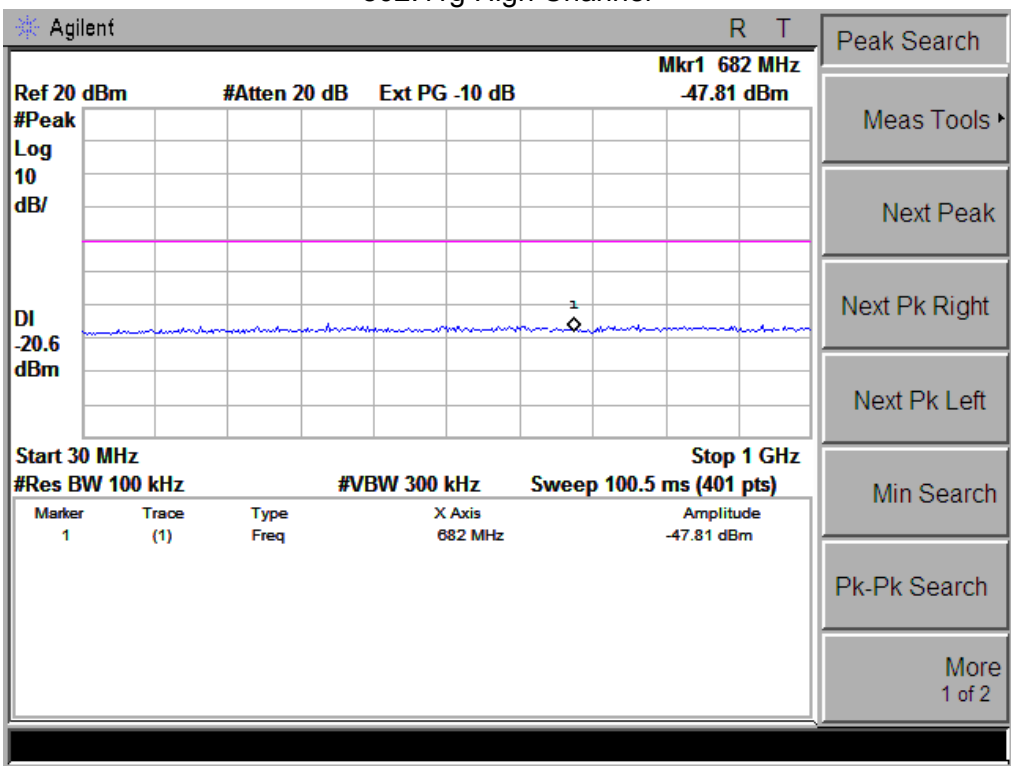


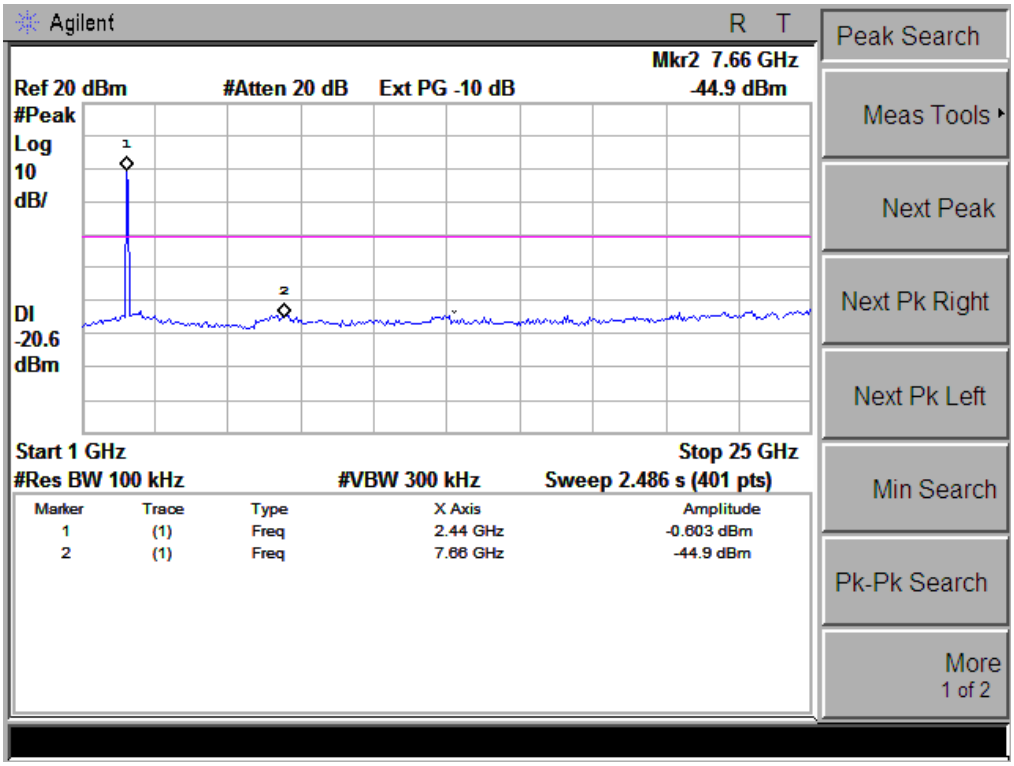
802.11g Middle Channel



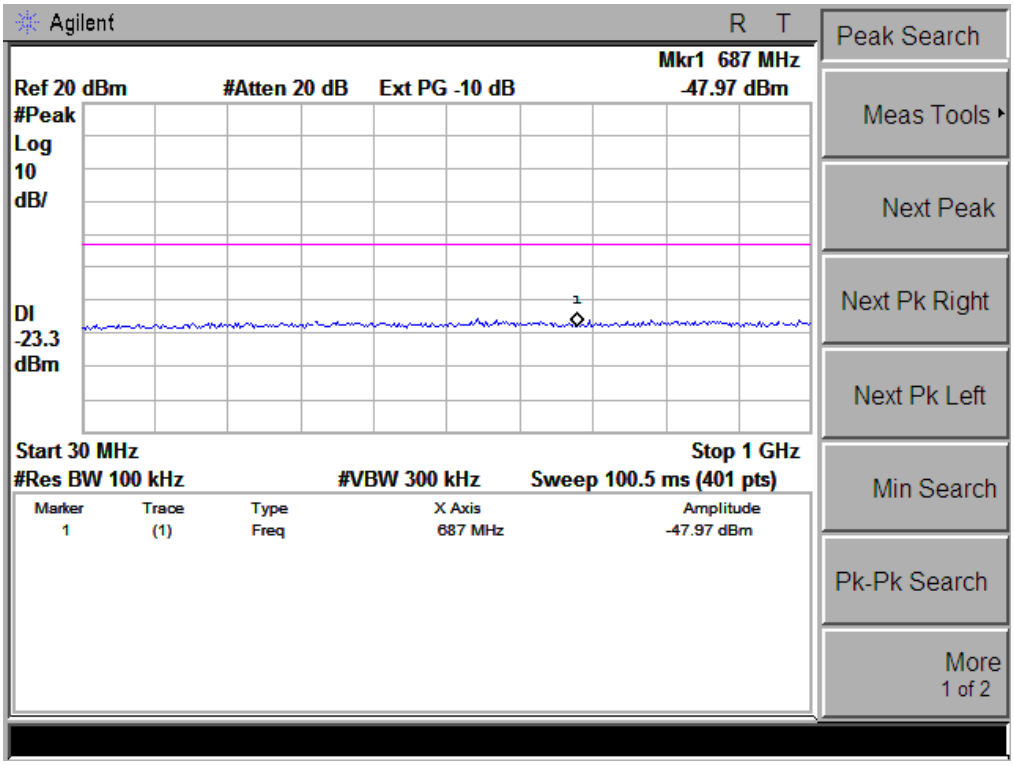


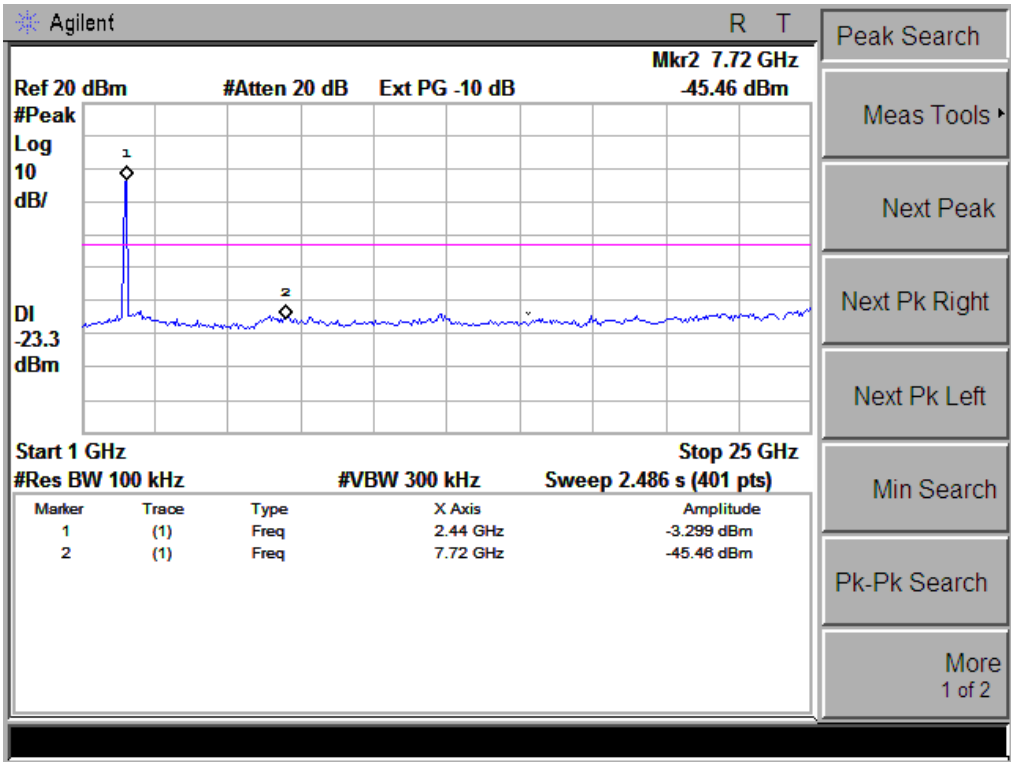
802.11g High Channel



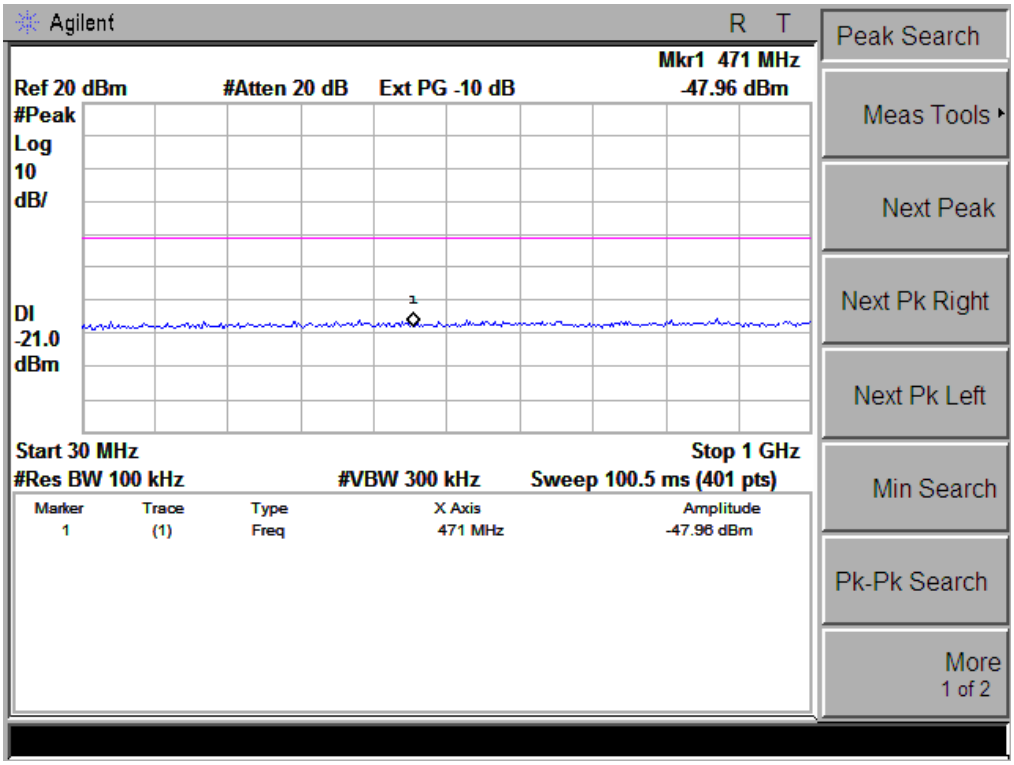


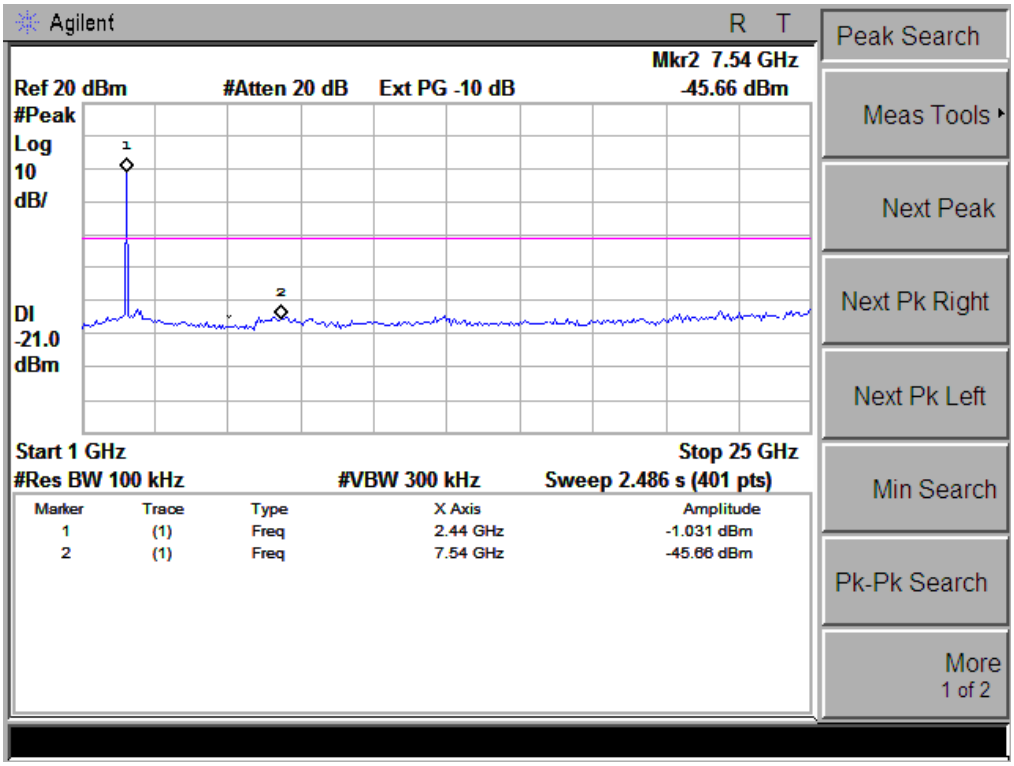
802.11n-HT20 Low Channel



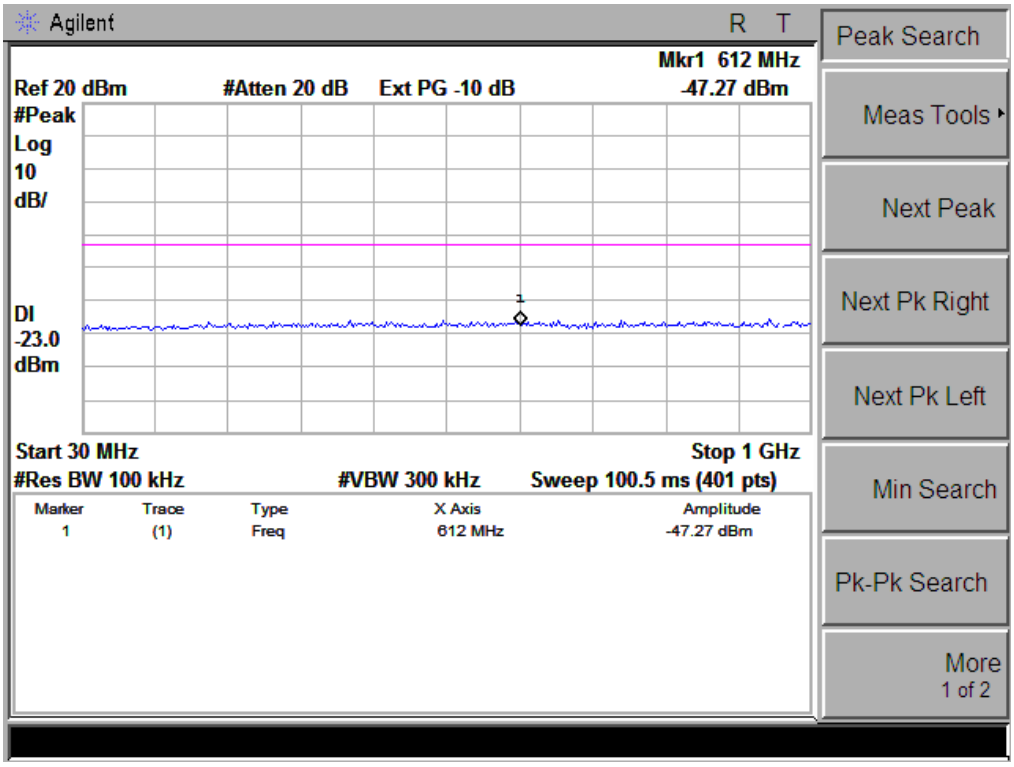


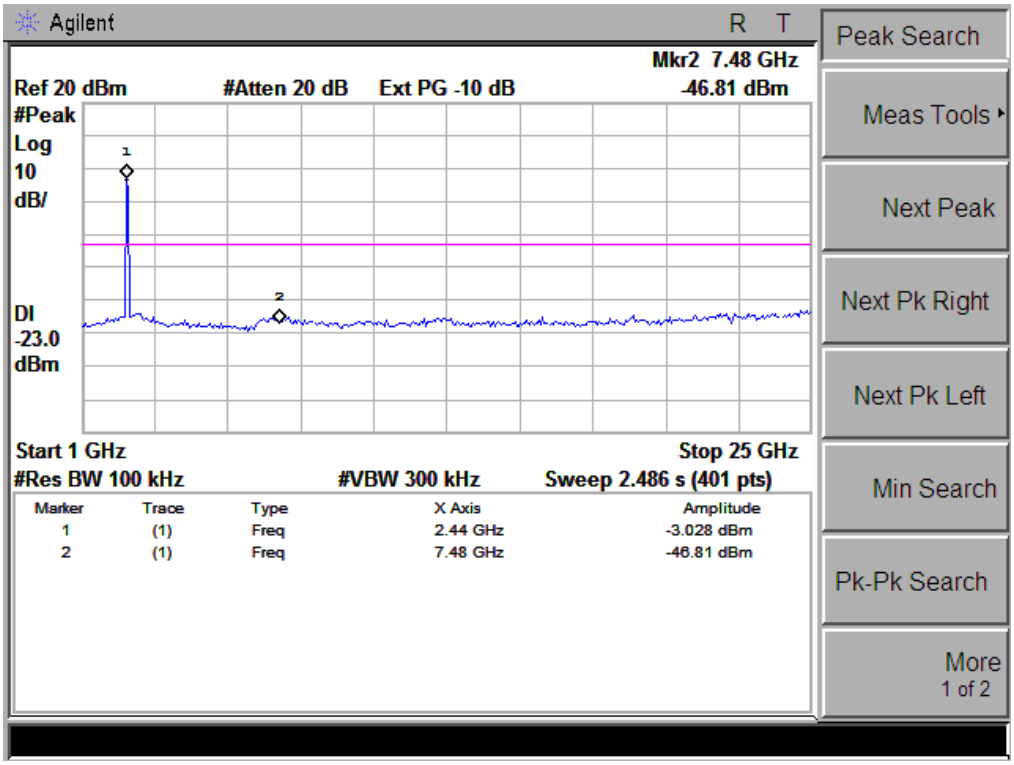
802.11n-HT20 Middle Channel



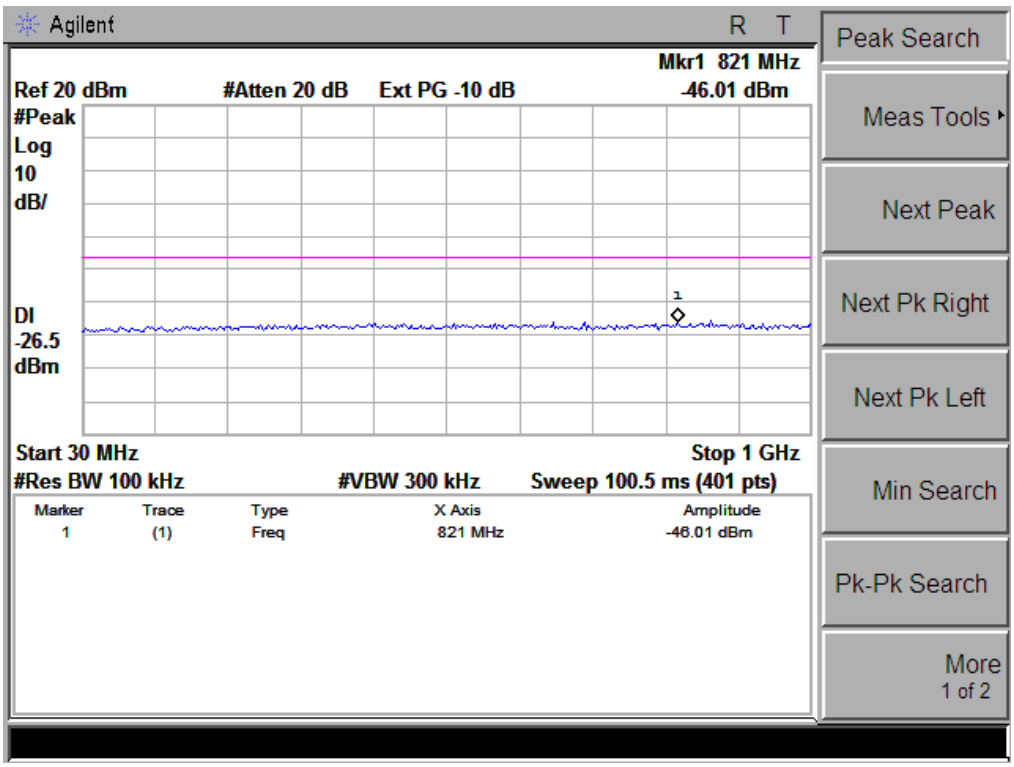


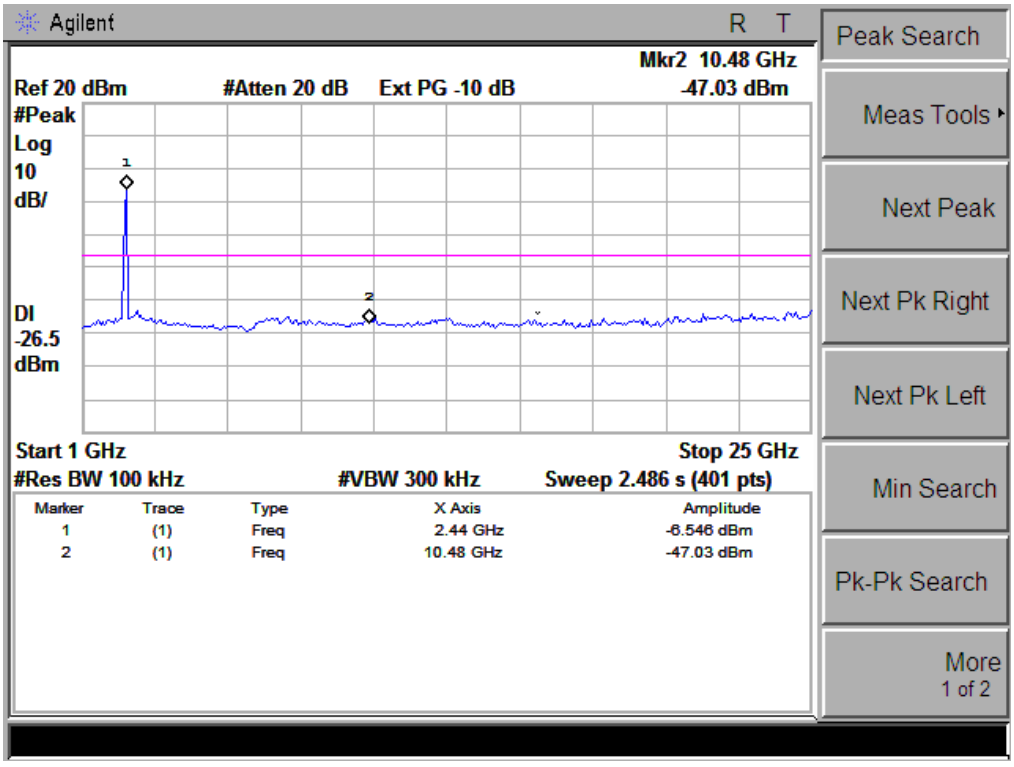
802.11n-HT20 High Channel



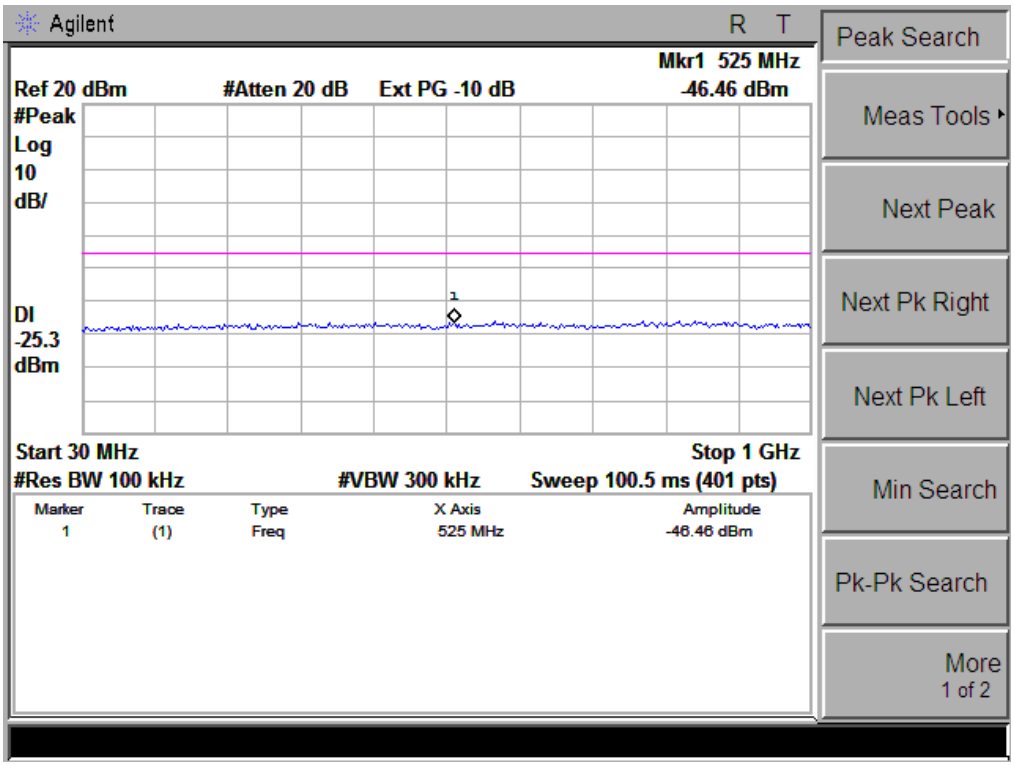


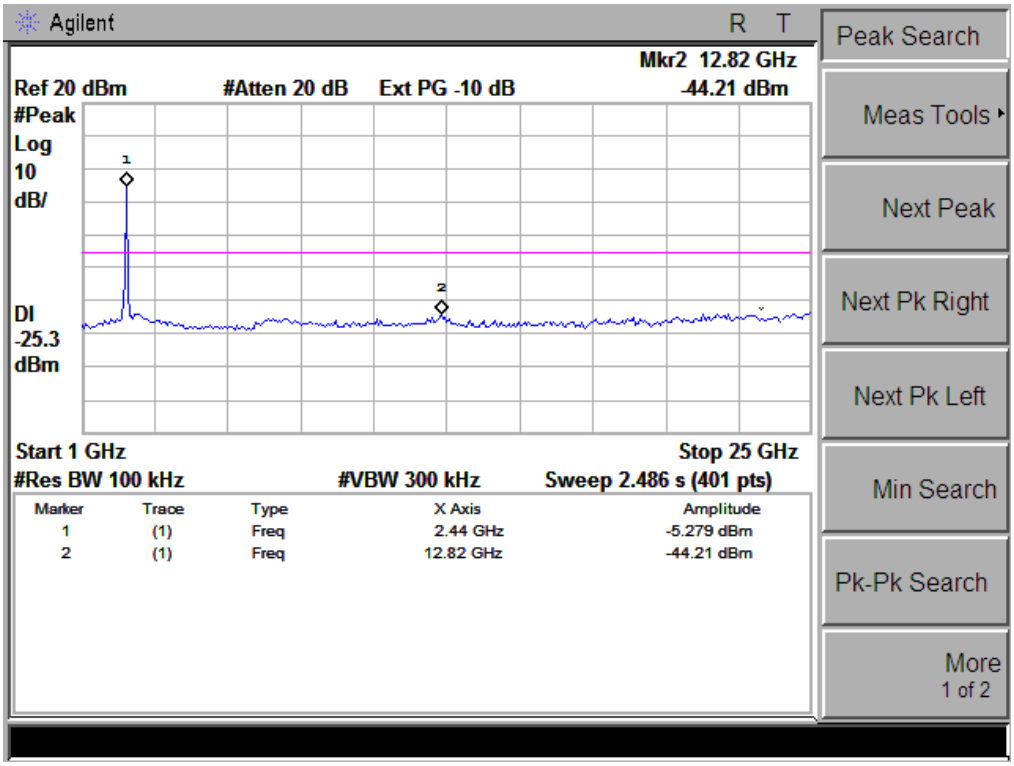
802.11n-HT40 Low Channel



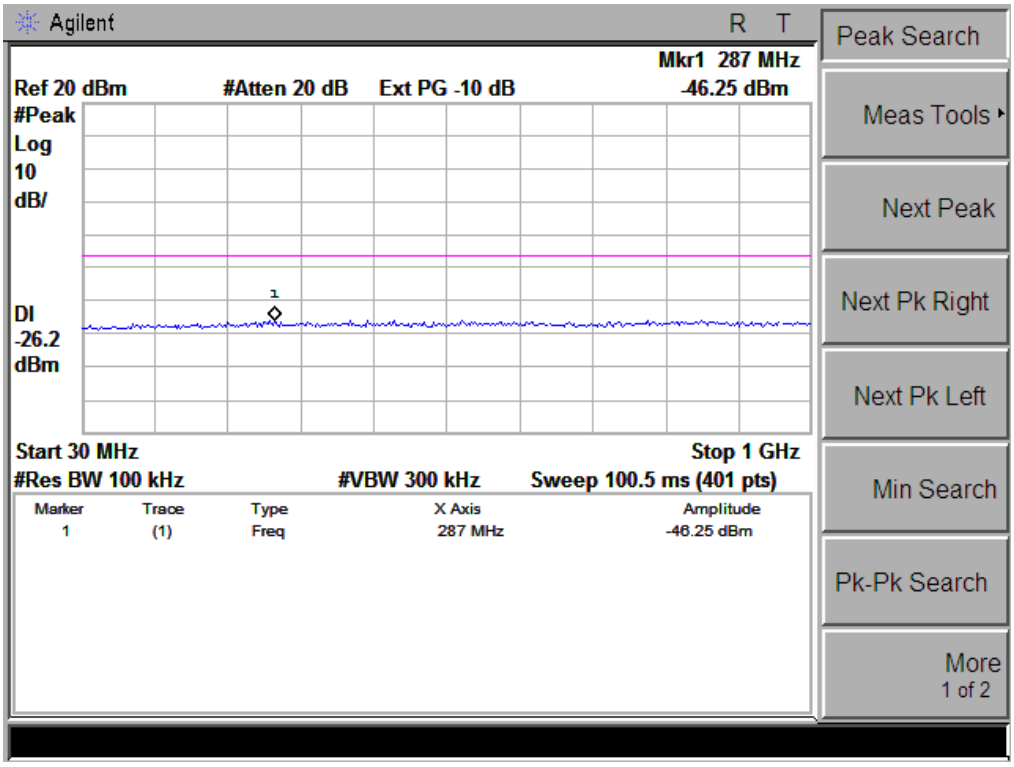


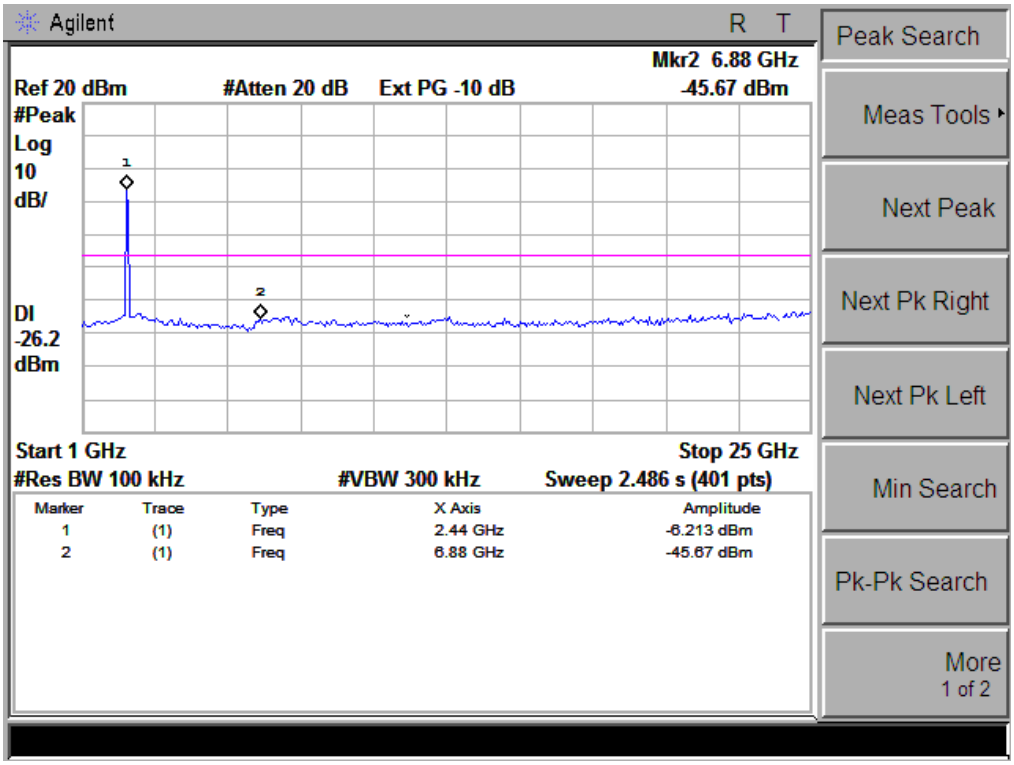
802.11n-HT40 Middle Channel





802.11n-HT40 High Channel





4. POWER SPECTRAL DENSITY TEST

4.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

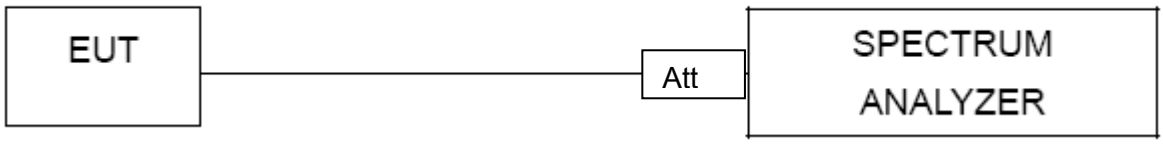
4.1.1 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW ≥ 3 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



4.1.4 EUT OPERATION CONDITIONS

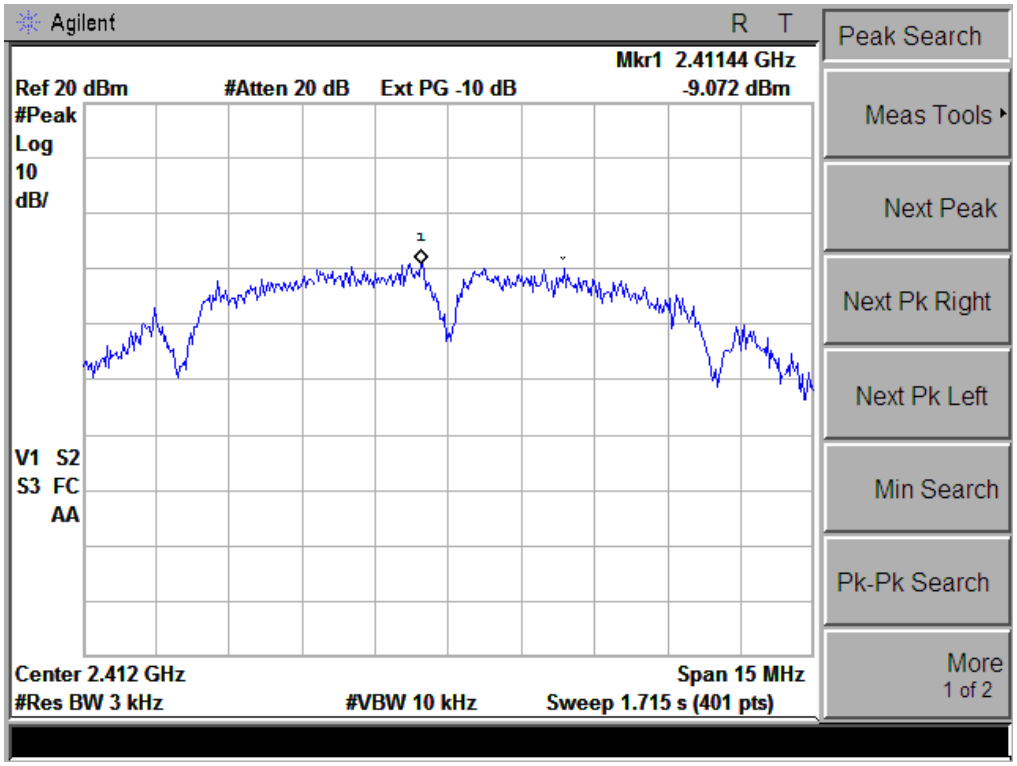
The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

4.1.5 TEST RESULTS

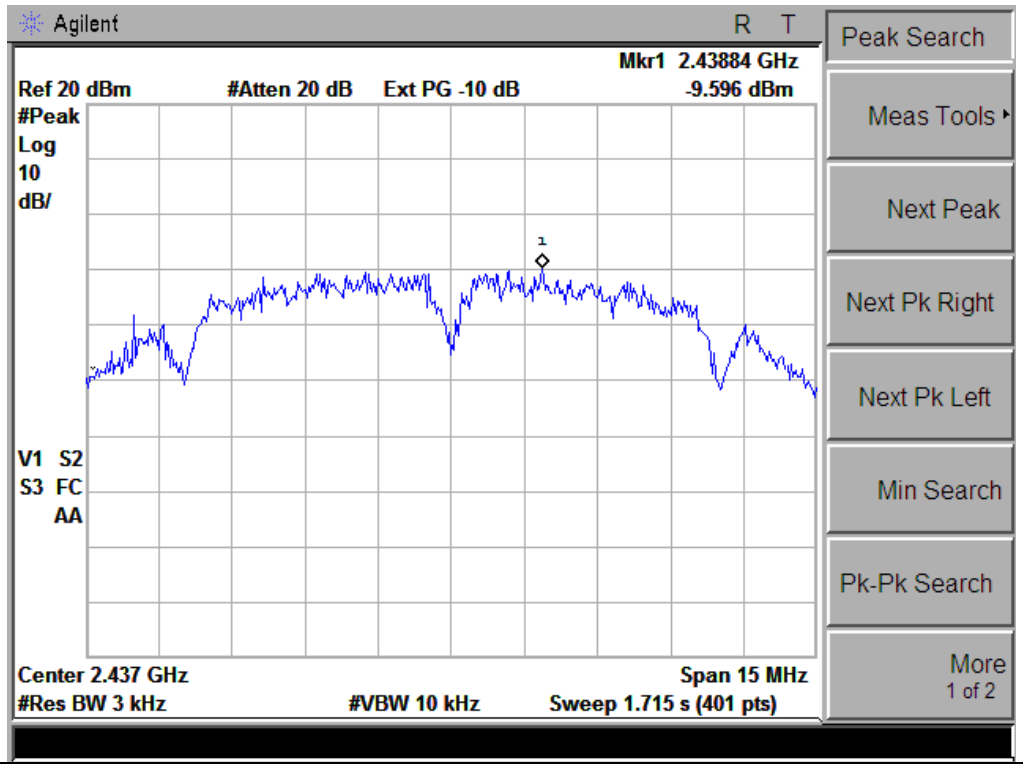
EUT：	SLIMBOOK 10.1 INCH DISPLAY	Model Name ：	CLP289
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1015 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX b Mode /CH01, CH06, CH11		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-9.072	8	PASS
2437 MHz	-9.596	8	PASS
2462 MHz	-8.832	8	PASS

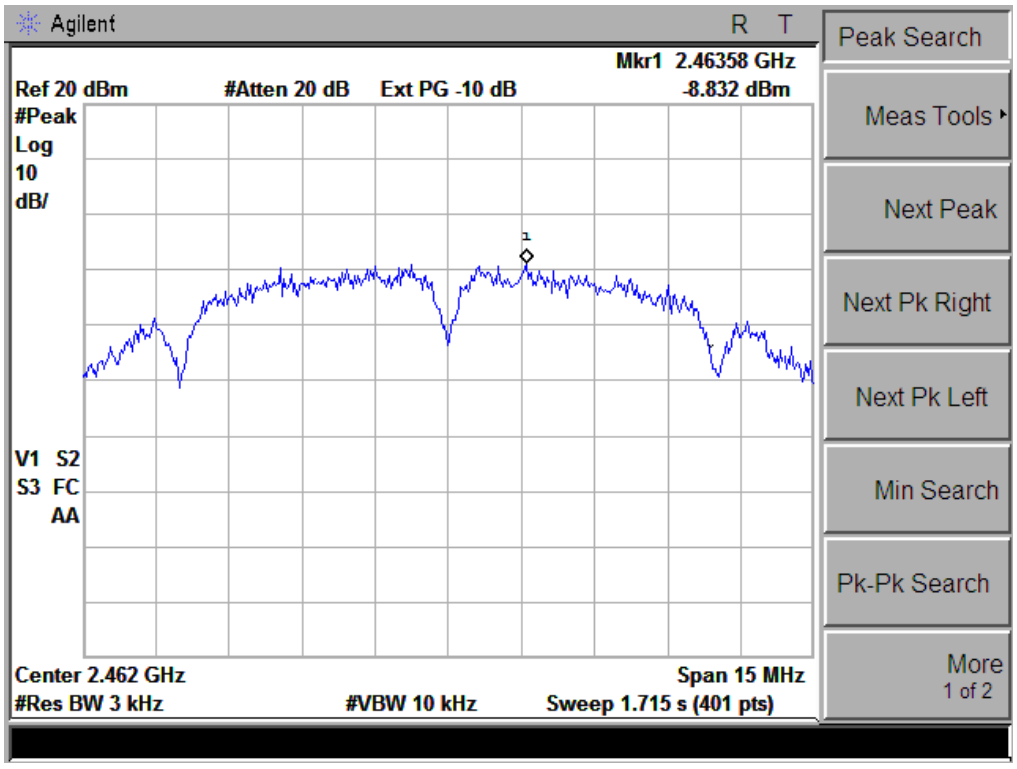
TX CH01



TX CH06



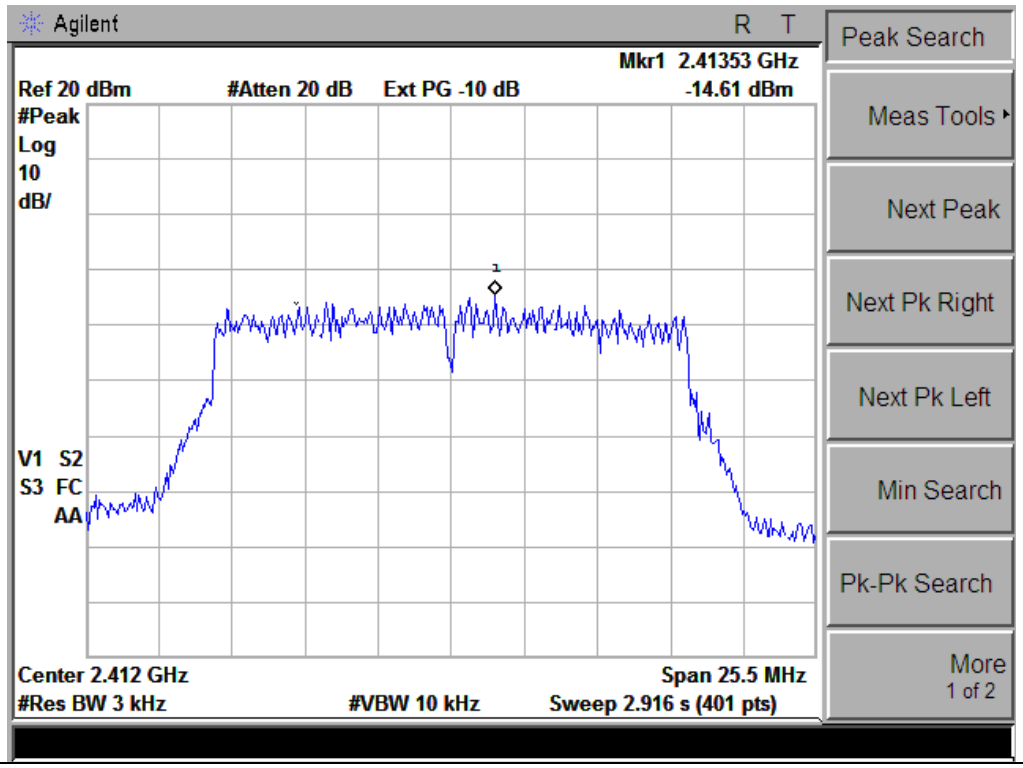
TX CH11



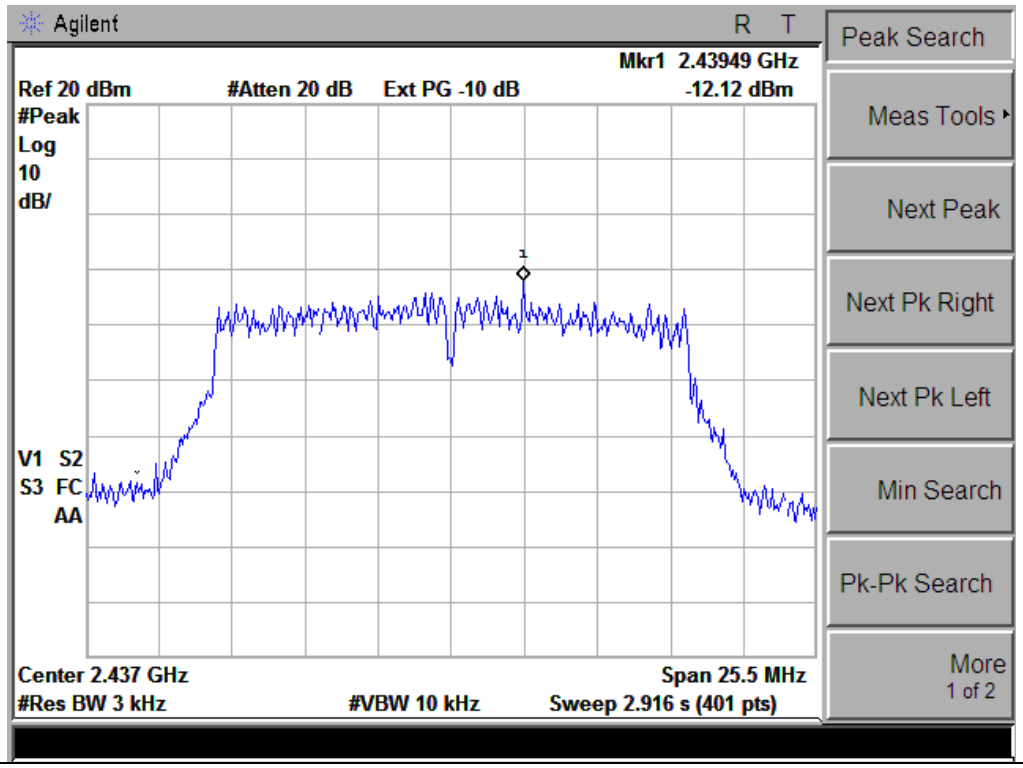
EUT：	SLIMBOOK 10.1 INCH DISPLAY	Model Name ：	CLP289
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1015 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX g Mode /CH01, CH06, CH11		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-14.61	8	PASS
2437 MHz	-12.12	8	PASS
2462 MHz	-13.98	8	PASS

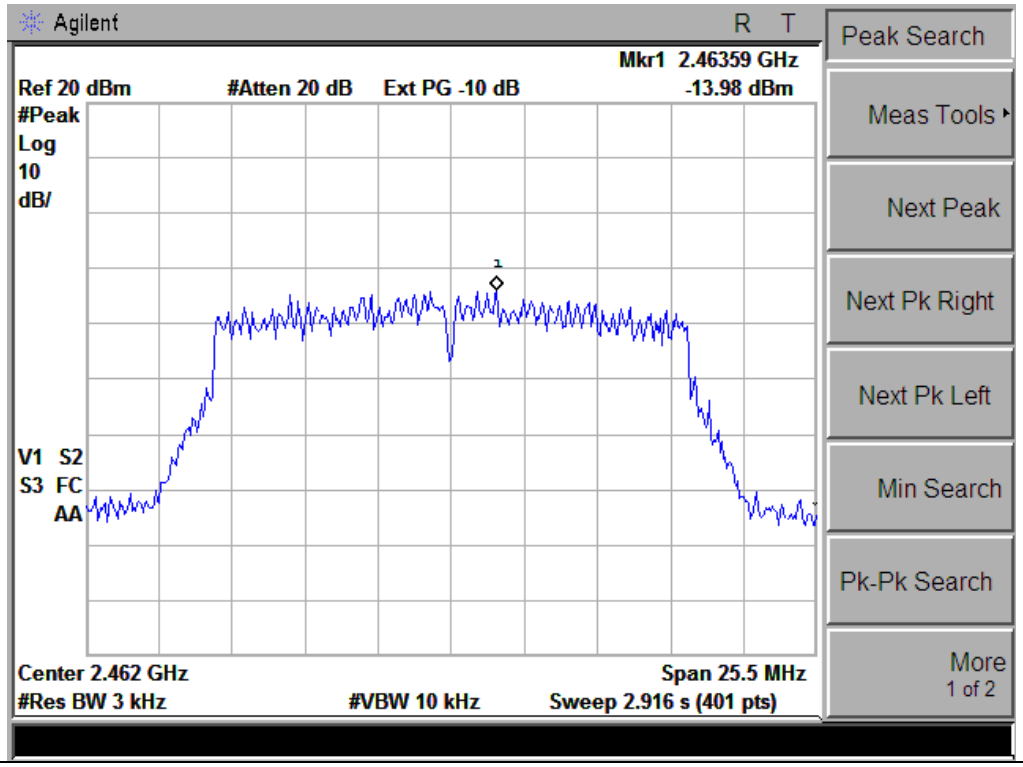
TX CH01



TX CH06



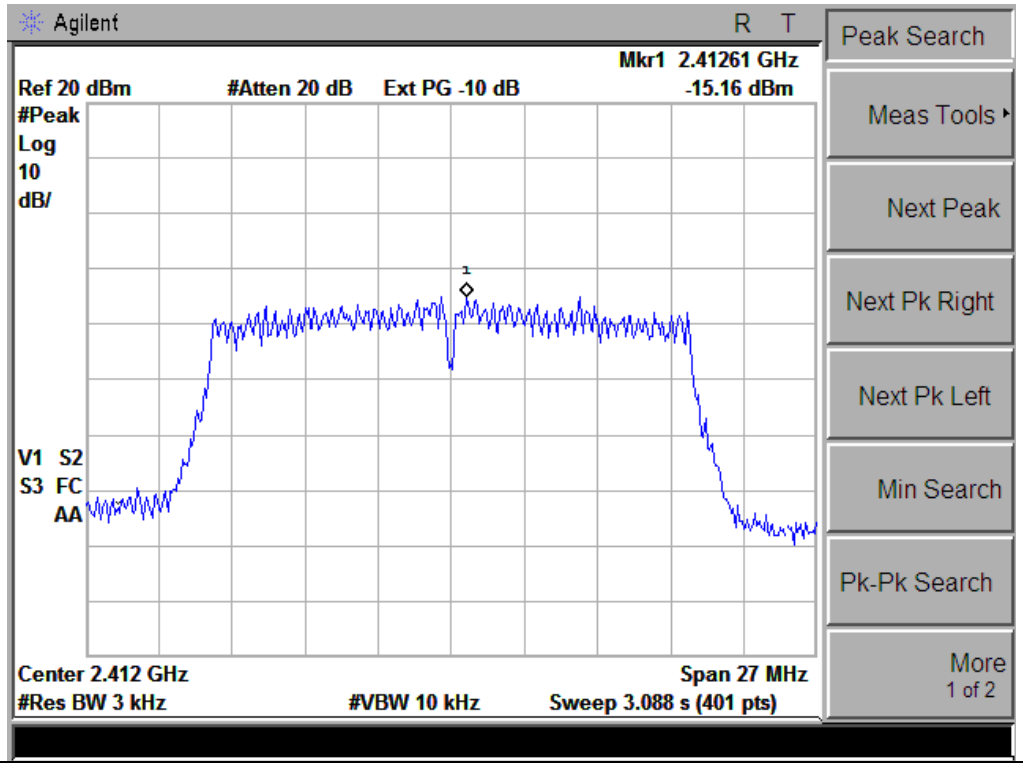
TX CH11



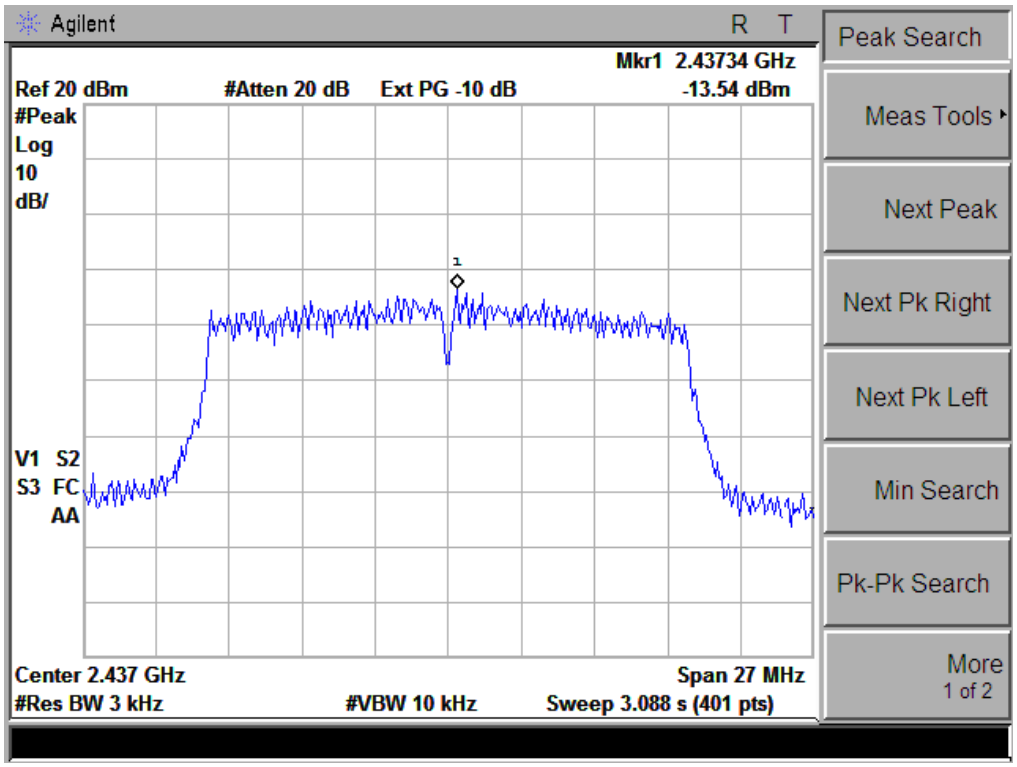
EUT：	SLIMBOOK 10.1 INCH DISPLAY	Model Name ：	CMP289
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1015 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX n Mode(20M) /CH01, CH06, CH11		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-15.16	8	PASS
2437 MHz	-13.54	8	PASS
2462 MHz	-14.22	8	PASS

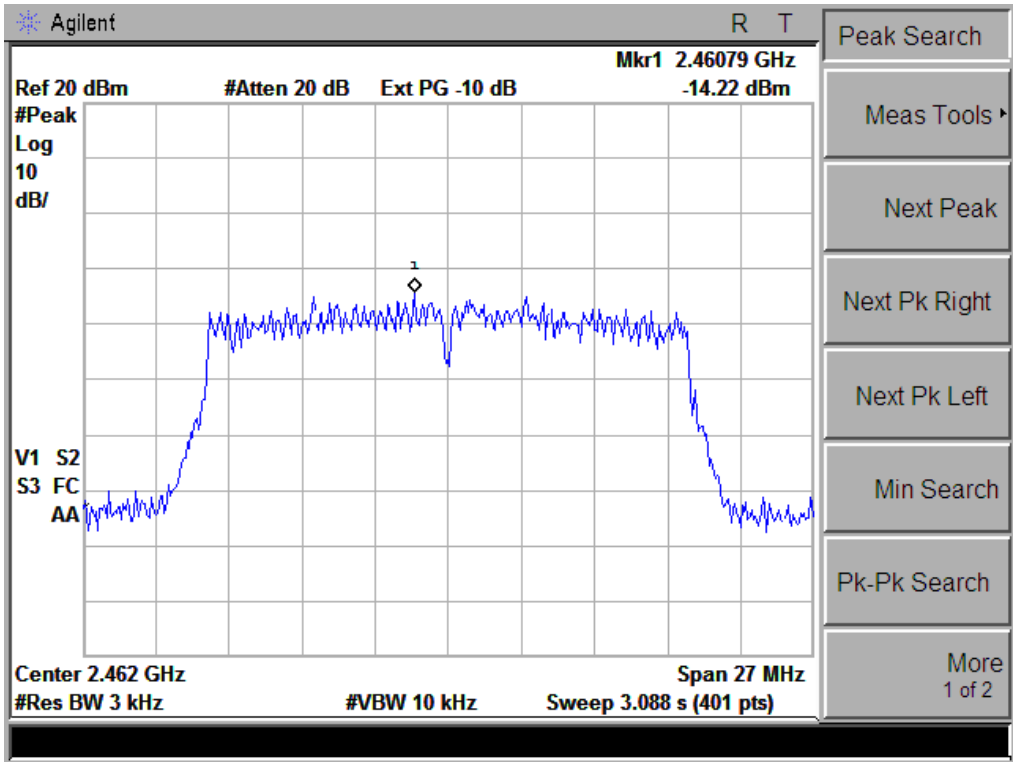
TX CH01



TX CH06



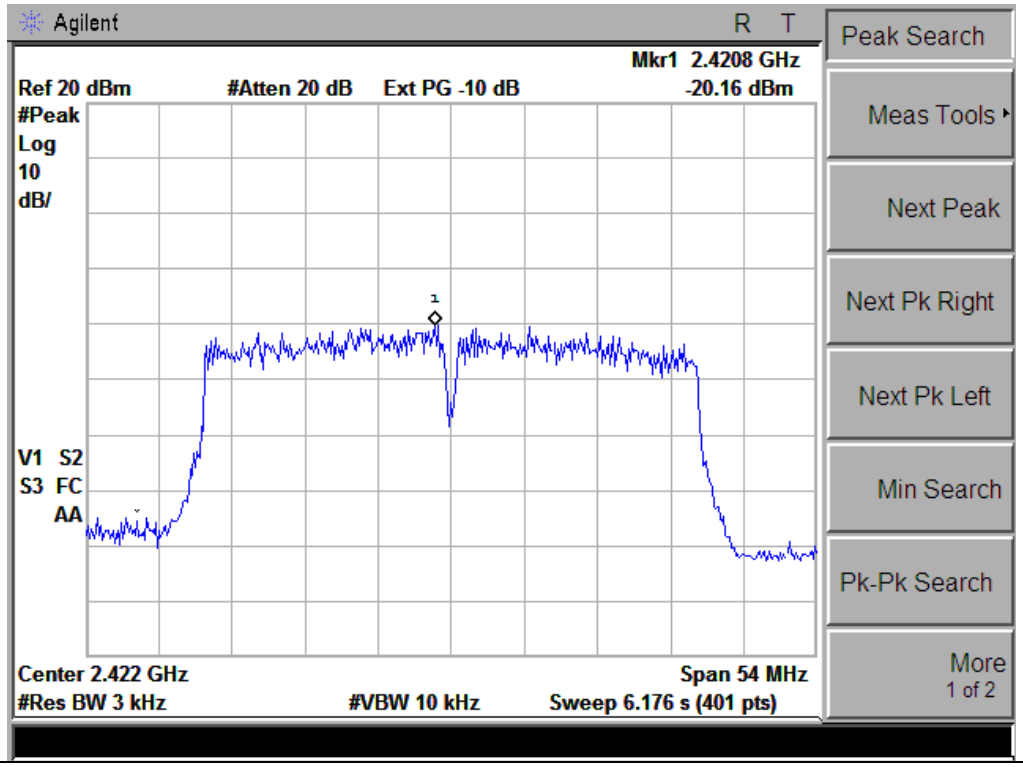
TX CH11



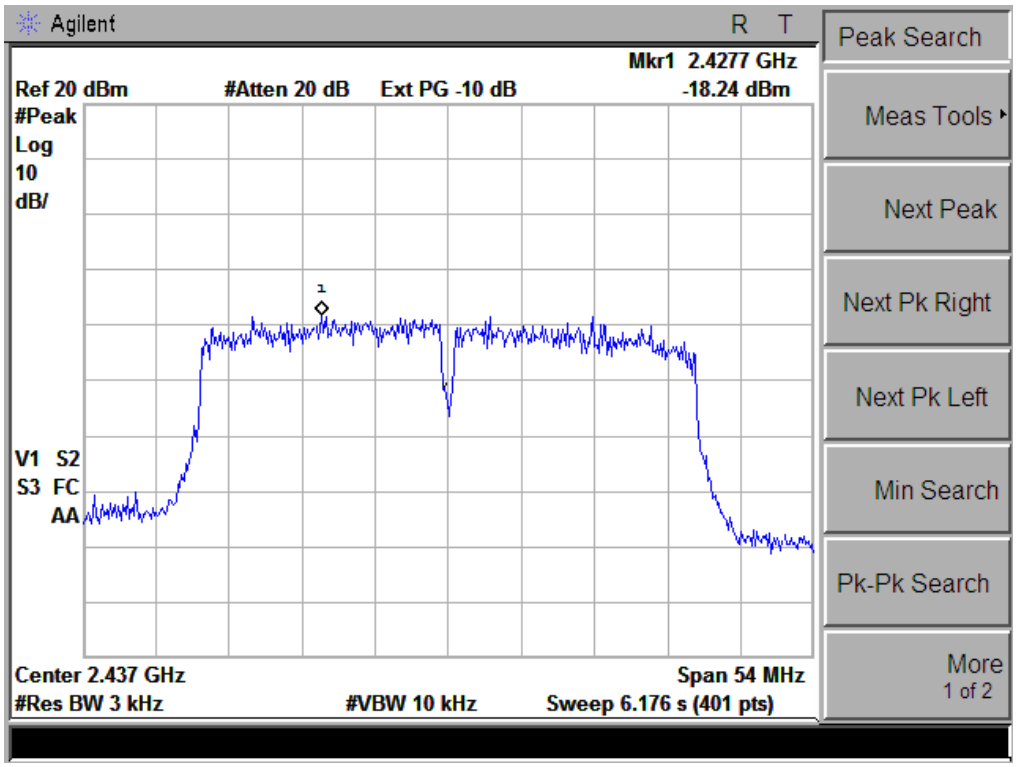
EUT：	SLIMBOOK 10.1 INCH DISPLAY	Model Name ：	CMP289
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1015 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX n Mode(40M) /CH03, CH06, CH09		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2422 MHz	-20.16	8	PASS
2437 MHz	-18.24	8	PASS
2452 MHz	-21.32	8	PASS

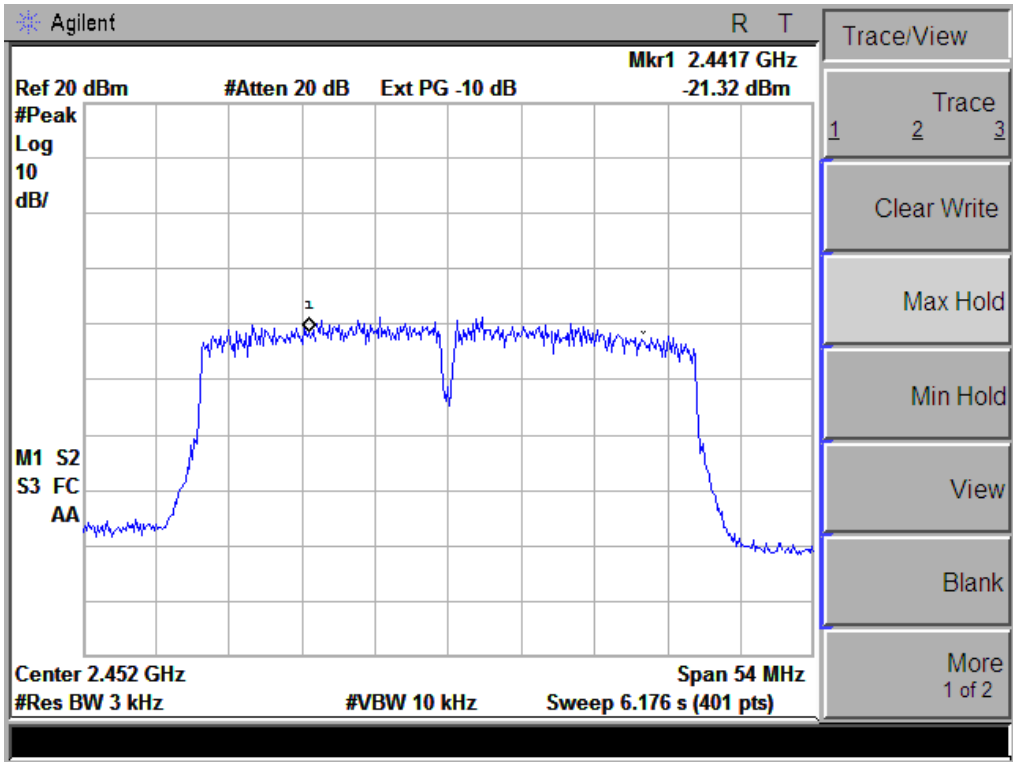
TX CH01



TX CH06



TX CH11



5. BANDWIDTH TEST

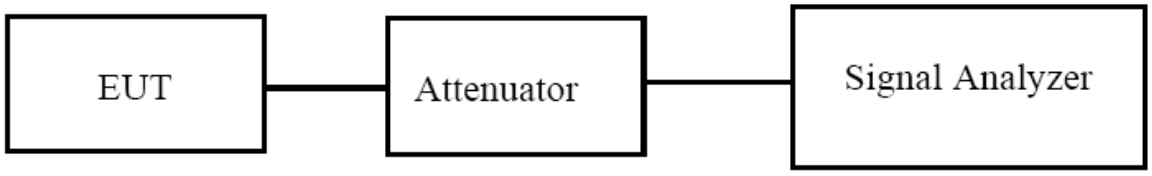
5.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

5.1.1 TEST PROCEDURE

According to KDB 558074 D01 DTS Meas Guidance v03r01

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 6 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.



5.1.2 EUT OPERATION CONDITIONS

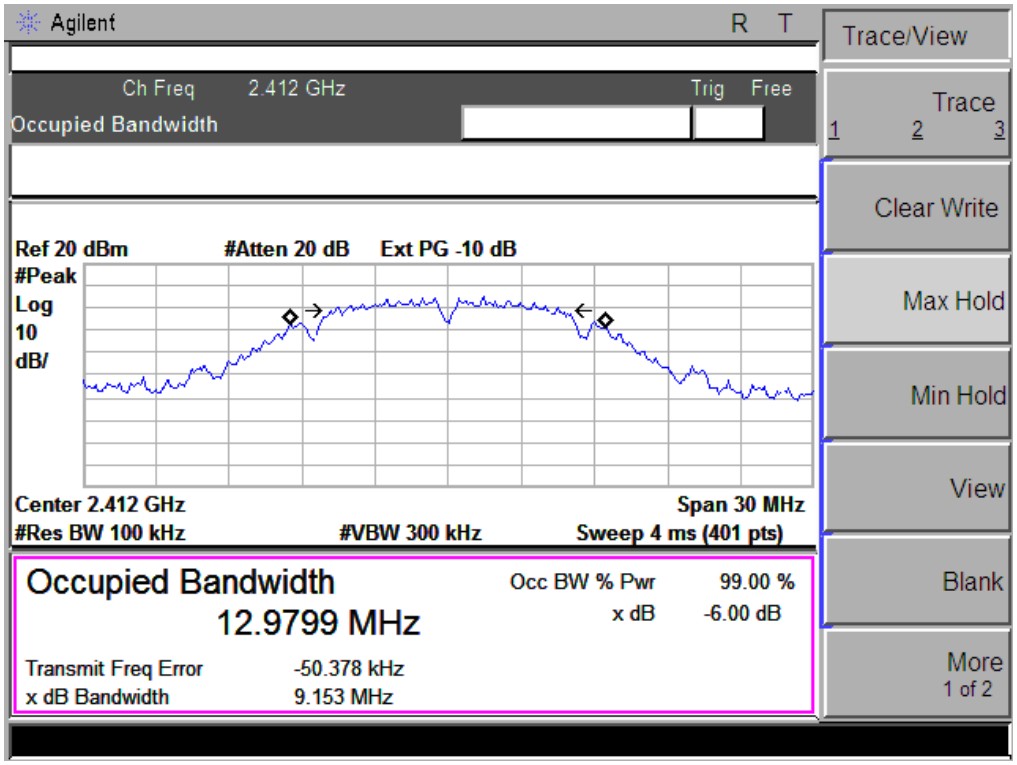
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.3 TEST RESULTS

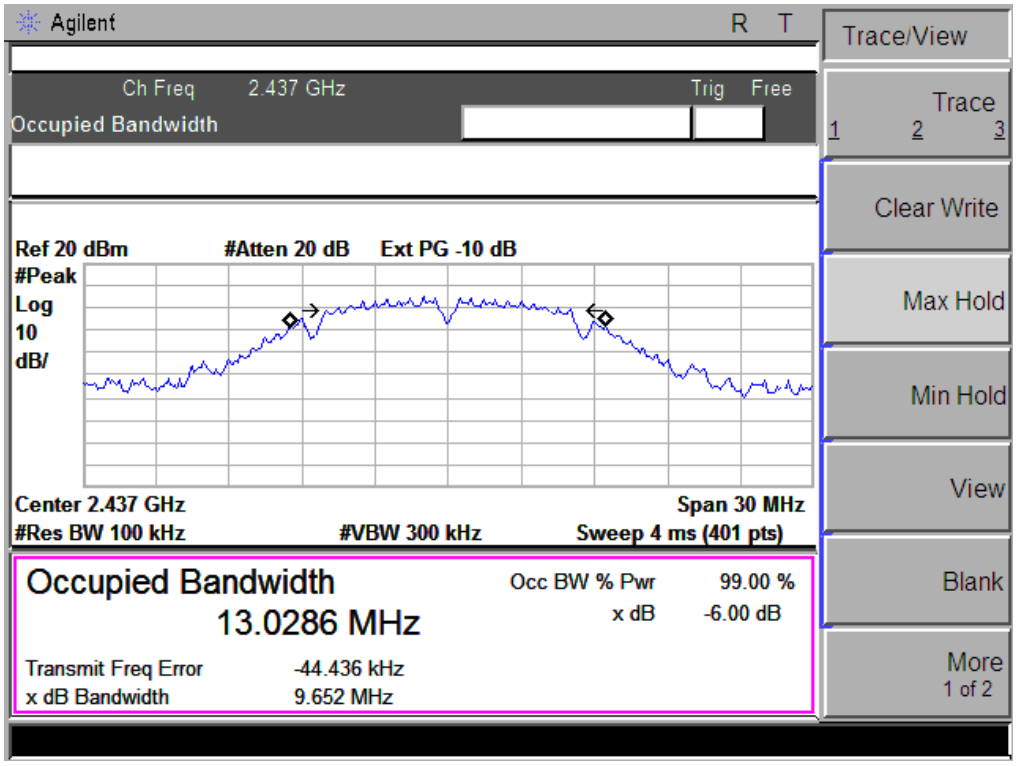
EUT：	SLIMBOOK 10.1 INCH DISPLAY	Model Name ：	CLP289
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1012 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX b Mode /CH01, CH06, CH11		

Channel	Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
Low	2412	9.153	500	Pass
Middle	2437	9.652	500	Pass
High	2462	9.558	500	Pass

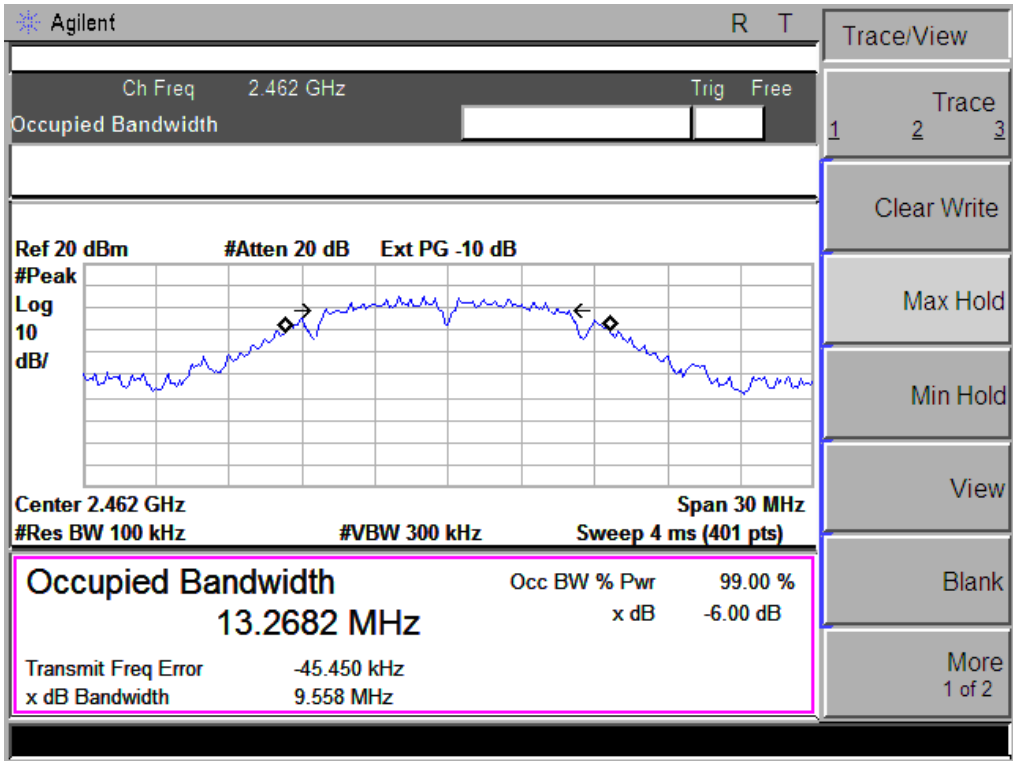
TX CH 01



TX CH 06



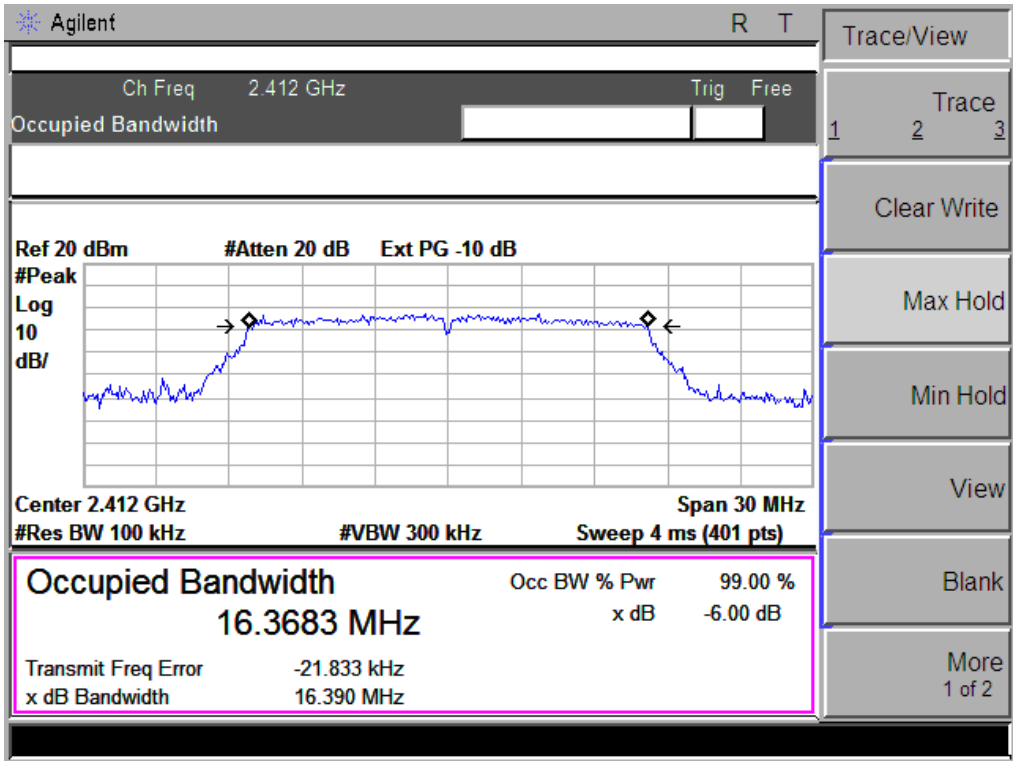
TX CH 11



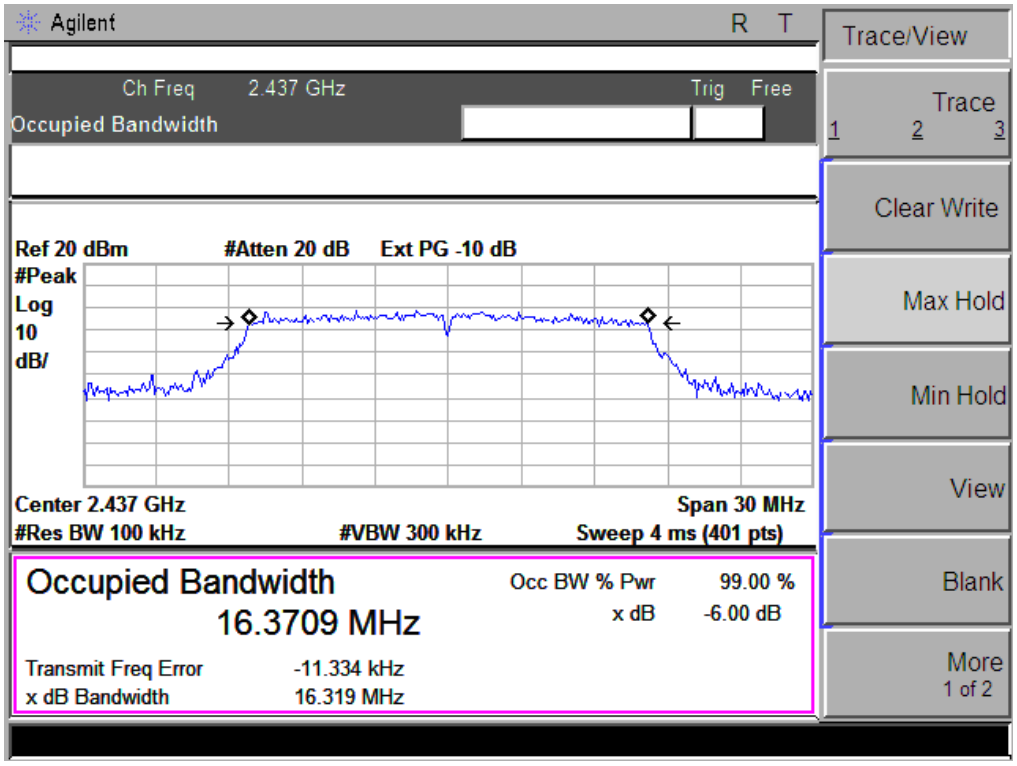
EUT：	SLIMBOOK 10.1 INCH DISPLAY	Model Name ：	CLP289
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX g Mode /CH01, CH06, CH11		

Channel	Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
Low	2412	16.390	500	Pass
Middle	2437	16.319	500	Pass
High	2462	15.410	500	Pass

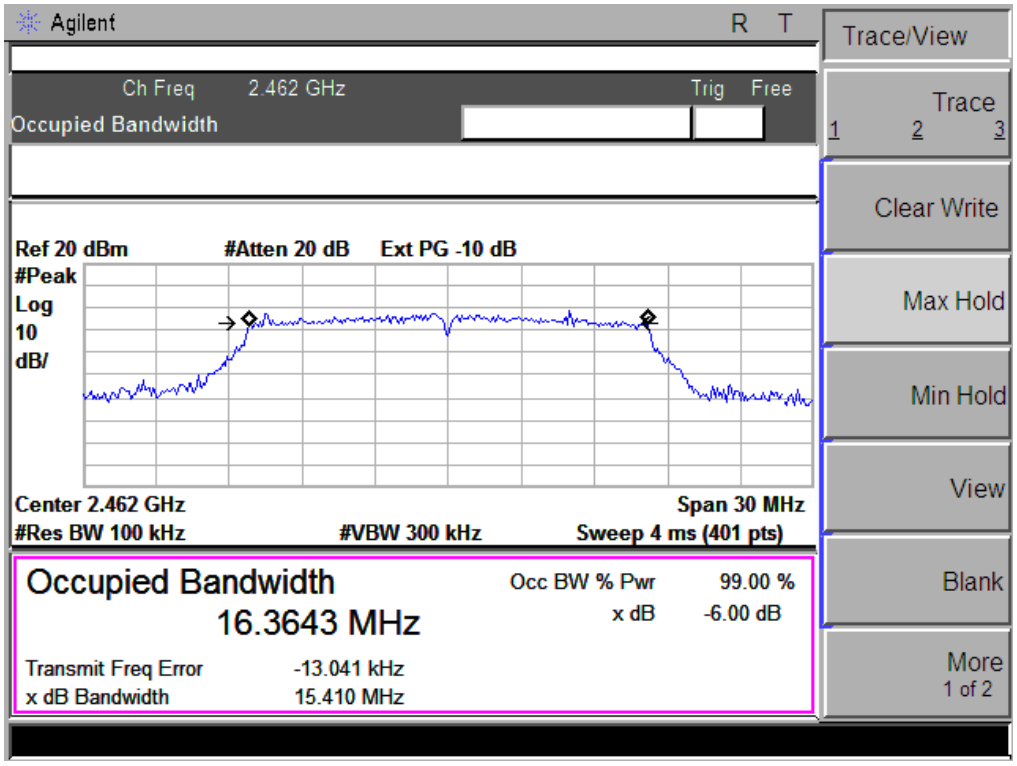
TX CH 01



TX CH 06



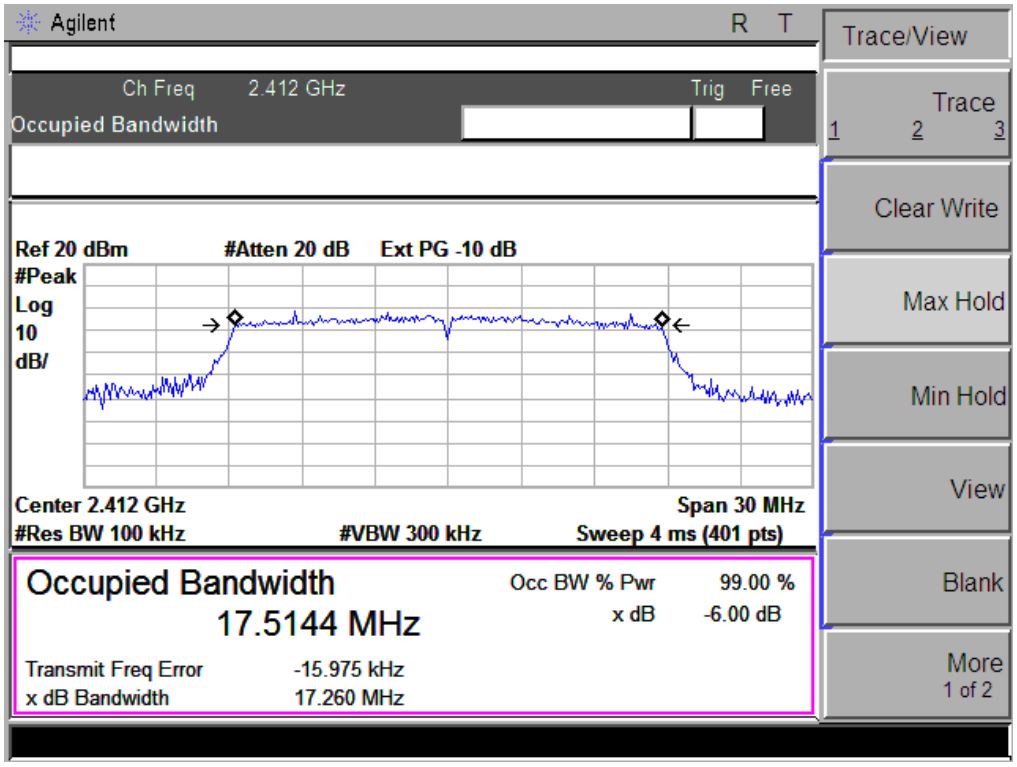
TX CH 11



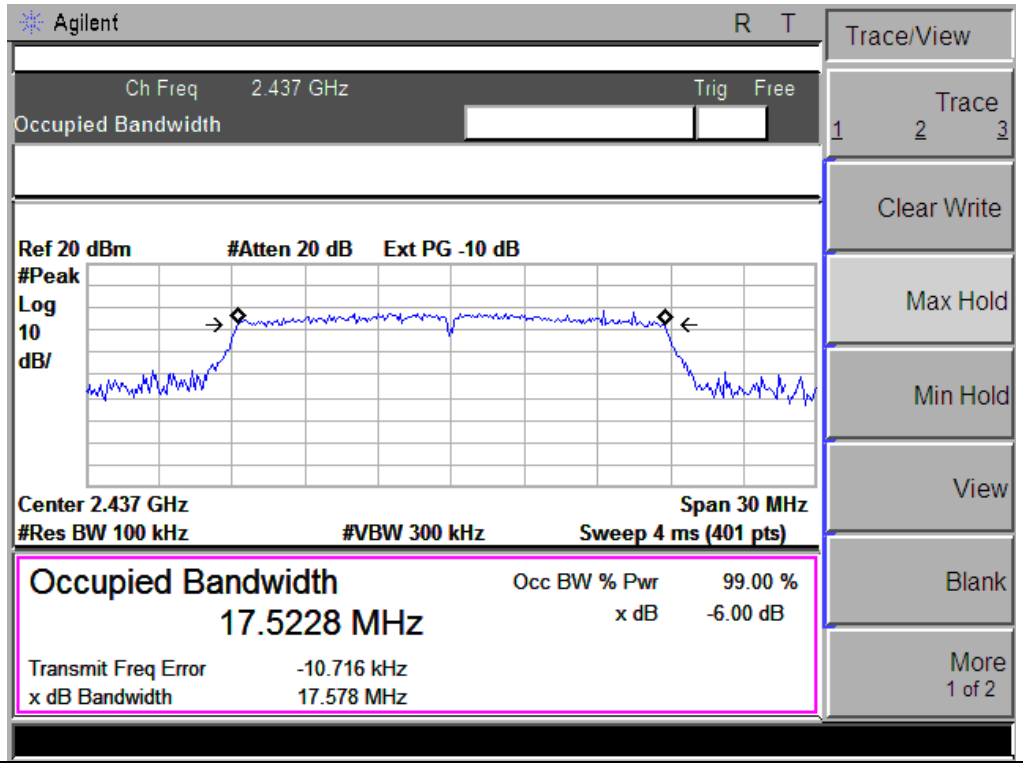
EUT：	SLIMBOOK 10.1 INCH DISPLAY	Model Name ：	CLP289
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1012 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX n Mode(20M) /CH01, CH06, CH11		

Channel	Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
Low	2412	17.260	500	Pass
Middle	2437	17.578	500	Pass
High	2462	16.970	500	Pass

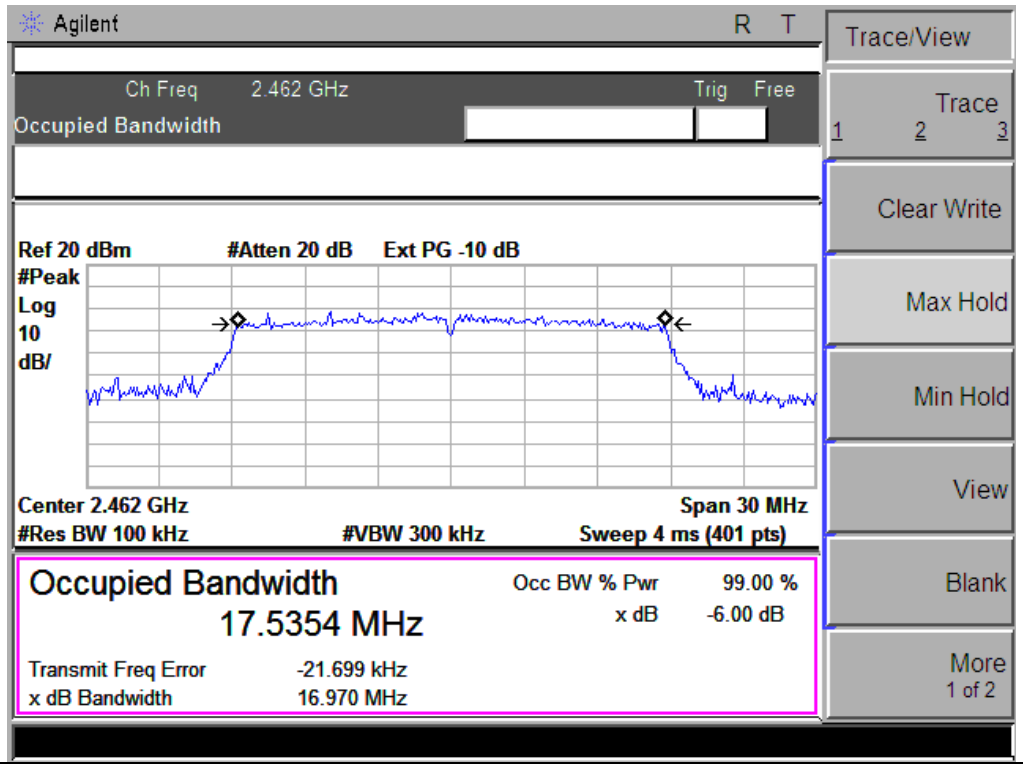
TX CH 01



TX CH 06



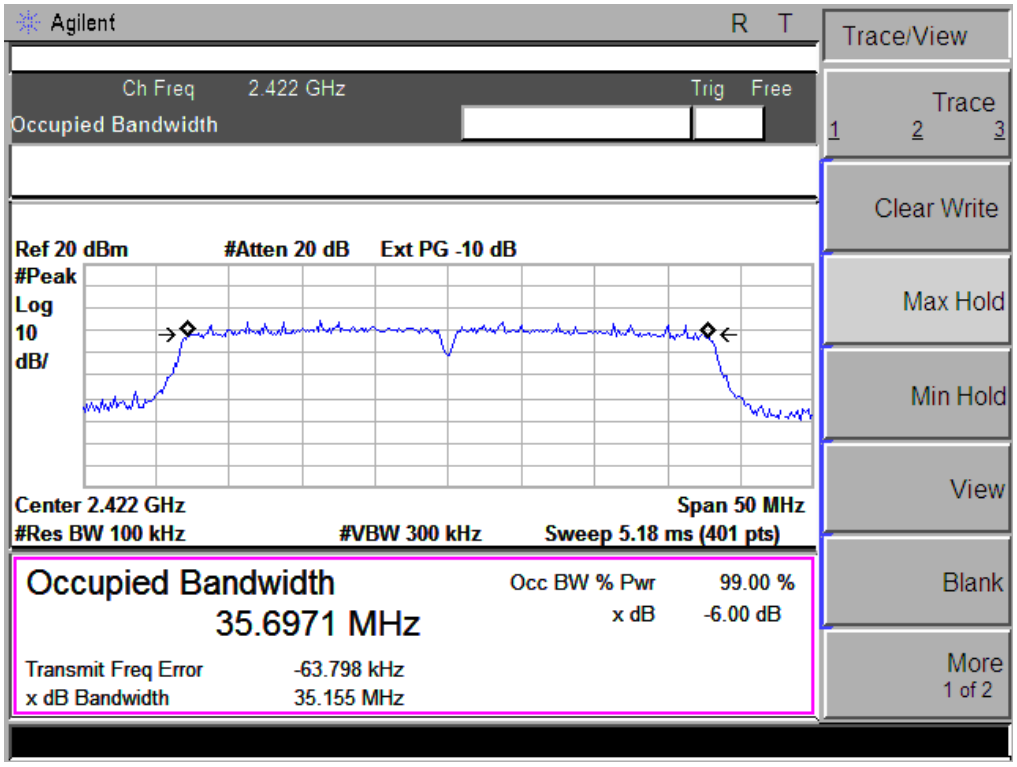
TX CH 11



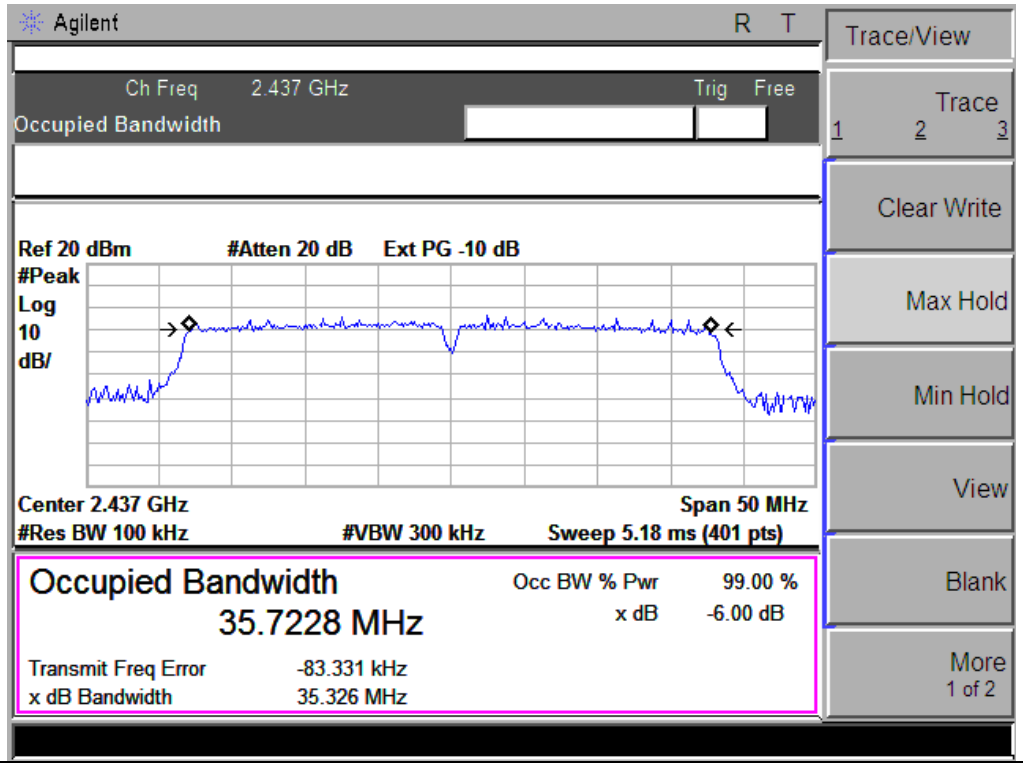
EUT：	SLIMBOOK 10.1 INCH DISPLAY	Model Name ：	CLP289
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1012 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX n Mode(40M) /CH03, CH06, CH 9		

Channel	Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
Low	2422	35.155	500	Pass
Middle	2437	35.326	500	Pass
High	2452	35.279	500	Pass

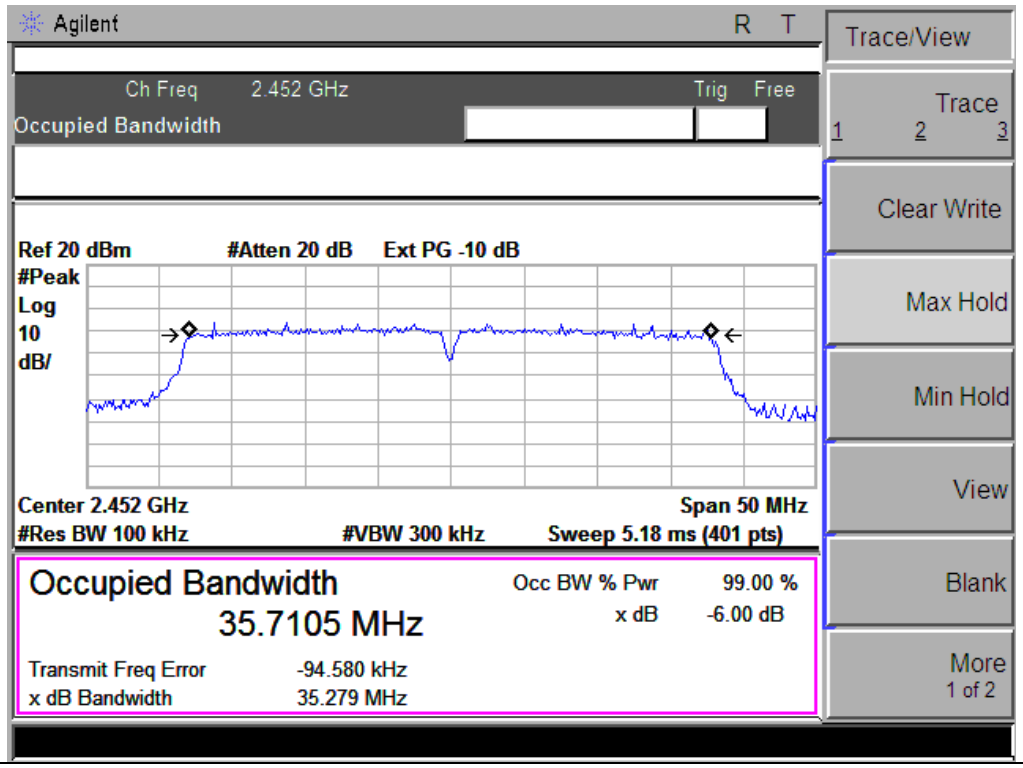
TX CH 01



TX CH 06



TX CH 11



6. PEAK OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

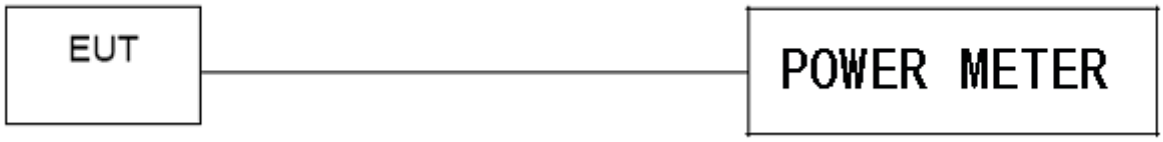
6.1.1 TEST PROCEDURE

a. The EUT was directly connected to the Power meter

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 TEST RESULTS

EUT：	SLIMBOOK 10.1 INCH DISPLAY	Model Name ：	CLP289
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX b/g/n Mode		

TX 802.11b Mode				
Test Channe	Frequency	Maximum Conducted Output Power(PK)	Maximum Conducted Output Power(AV)	LIMIT
	(MHz)	(dBm)	(dBm)	dBm
CH01	2412	12.67	9.46	30
CH06	2437	12.53	9.31	30
CH11	2462	12.49	9.28	30
TX 802.11g Mode				
CH01	2412	11.29	8.15	30
CH06	2437	11.42	8.36	30
CH11	2462	11.35	8.29	30
TX 802.11n20 Mode				
CH01	2412	10.56	7.86	30
CH06	2437	10.71	7.91	30
CH11	2462	10.83	7.85	30
TX 802.11n40 Mode				
CH03	2422	10.22	7.19	30
CH06	2437	10.16	7.08	30
CH09	2452	10.28	7.24	30

7. 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE

APPLICABLE STANDARD

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

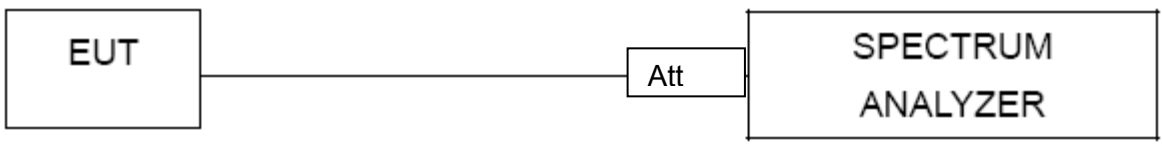
TEST PROCEDURE

a) Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
b) Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
c) Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
d) Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
e) Repeat above procedures until all measured frequencies were complete.

7.1 DEVIATION FROM STANDARD

No deviation.

7.2 TEST SETUP



7.3 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.4 TEST RESULTS

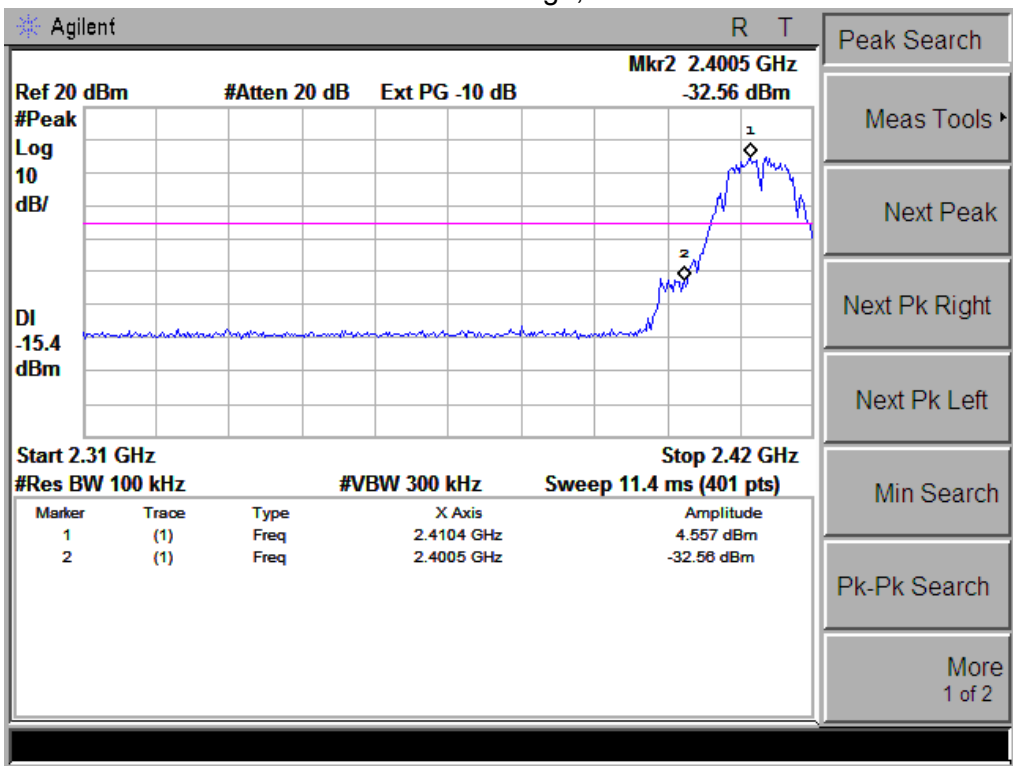
EUT：	SLIMBOOK 10.1 INCH DISPLAY	Model Name ：	CLP289
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1012 hPa	Test Voltage ：	DC 3.7V

Frequency Band	Delta Peak to band emission (dBc)	＞Limit (dBc)	Result
802.11b mode			
Left-band	37.12	20	Pass
Right-band	53.15	20	Pass
802.11g mode			
Left-band	31.99	20	Pass
Right-band	40.89	20	Pass
802.11n20 mode			
Left-band	33.88	20	Pass
Right-band	41.55	20	Pass
802.11n40 mode			
Left-band	34.91	20	Pass
Right-band	40.26	20	Pass

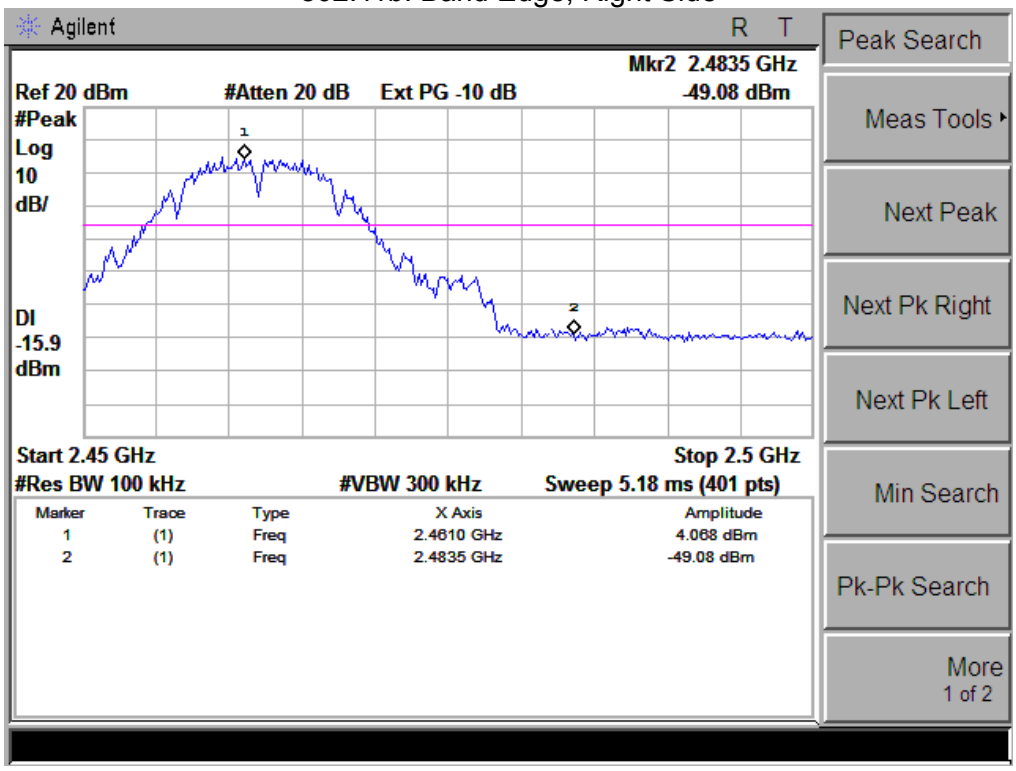
Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type	Comment
802.11b							
2390	70.69	-13.06	57.63	74.00	-16.37	peak	Vertical
2390	47.58	-13.06	34.52	54.00	-19.48	AVG	Vertical
2390	71.78	-13.06	58.72	74.00	-15.28	peak	Horizontal
2390	46.87	-13.06	33.81	54.00	-20.19	AVG	Horizontal
2483.5	52.86	-12.78	40.08	74.00	-33.92	peak	Vertical
2483.5	52.63	-12.78	39.85	74.00	-34.15	peak	Horizontal
802.11g							
2390	77.41	-13.06	64.35	74.00	-9.65	peak	Vertical
2390	52.20	-13.06	39.14	54.00	-14.86	AVG	Vertical
2390	78.75	-13.06	65.69	74.00	-8.31	peak	Horizontal
2390	51.72	-13.06	38.66	54.00	-15.34	AVG	Horizontal
2483.5	66.27	-12.78	53.49	74.00	-20.51	peak	Vertical
2483.5	65.01	-12.78	52.23	74.00	-21.77	peak	Horizontal
802.11n20							
2390	74.69	-13.06	61.63	74.00	-12.37	peak	Vertical
2390	47.58	-13.06	34.52	54.00	-19.48	AVG	Vertical
2390	75.78	-13.06	62.72	74.00	-11.28	peak	Horizontal
2390	49.87	-13.06	36.81	54.00	-17.19	AVG	Horizontal
2483.5	65.27	-12.78	52.49	74.00	-21.51	peak	Vertical
2483.5	66.11	-12.78	53.33	74.00	-20.67	peak	Horizontal
802.11n40							
2390	73.30	-13.06	60.24	74.00	-13.76	peak	Vertical
2390	48.57	-13.06	35.51	54.00	-18.49	AVG	Vertical
2390	74.55	-13.06	61.49	74.00	-12.51	peak	Horizontal
2390	50.34	-13.06	37.28	54.00	-16.72	AVG	Horizontal
2483.5	68.32	-12.78	55.54	74.00	-18.46	peak	Vertical
2483.5	45.40	-12.78	32.62	54.00	-21.38	AVG	Vertical
2483.5	66.34	-12.78	53.56	74.00	-20.44	peak	Horizontal

Note: Test method to see chapter 3.2 . When PK value is lower than the Average value limit, average not record.

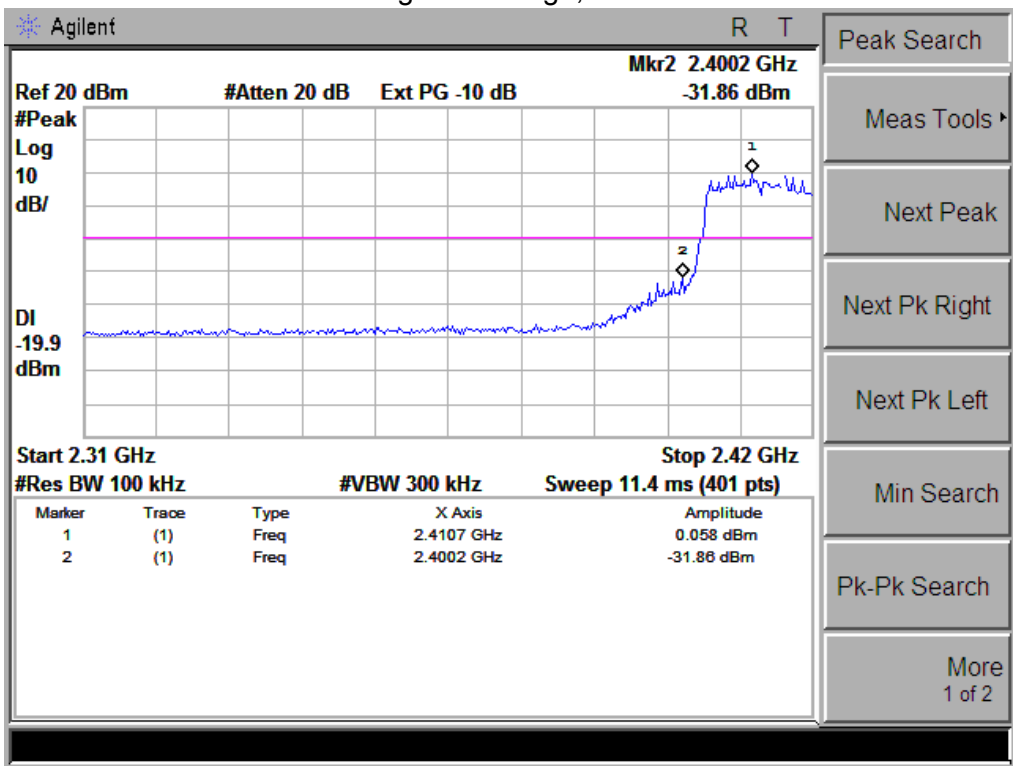
802.11b: Band Edge, Left Side



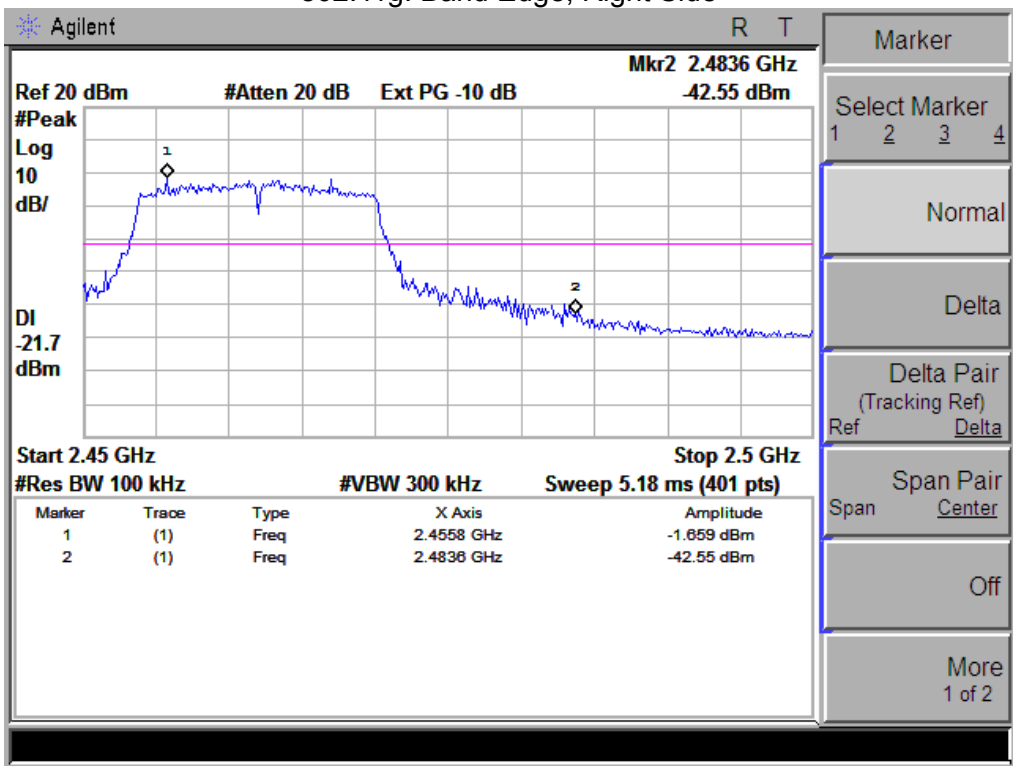
802.11b: Band Edge, Right Side



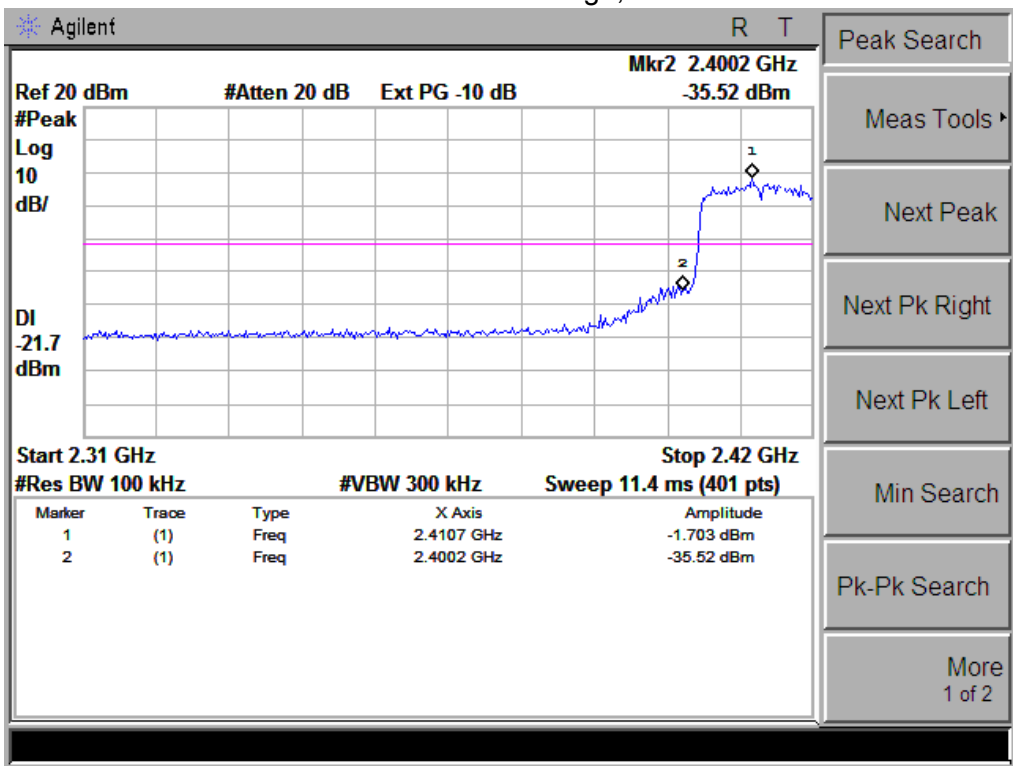
802.11g: Band Edge, Left Side



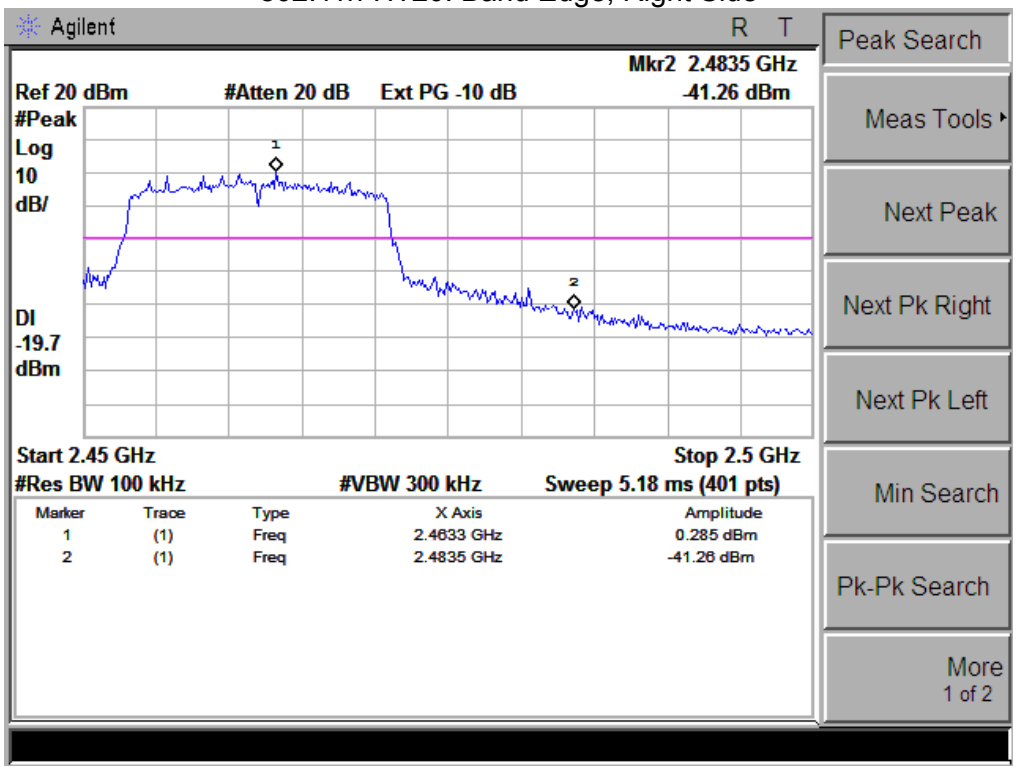
802.11g: Band Edge, Right Side



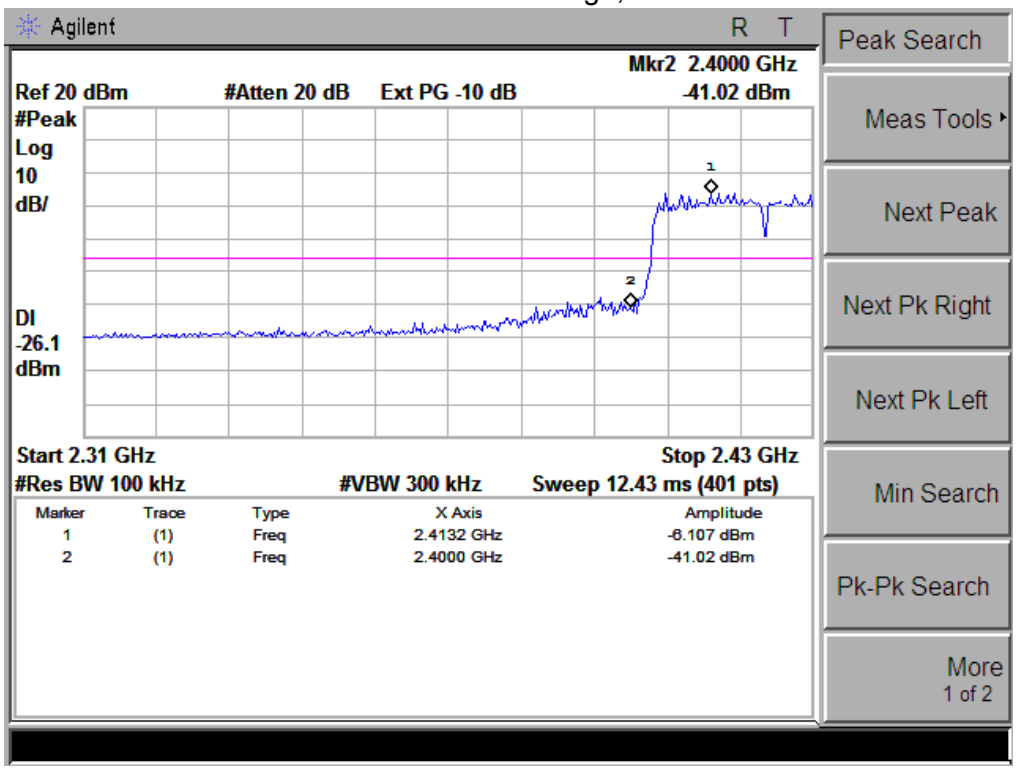
802.11n-HT20: Band Edge, Left Side



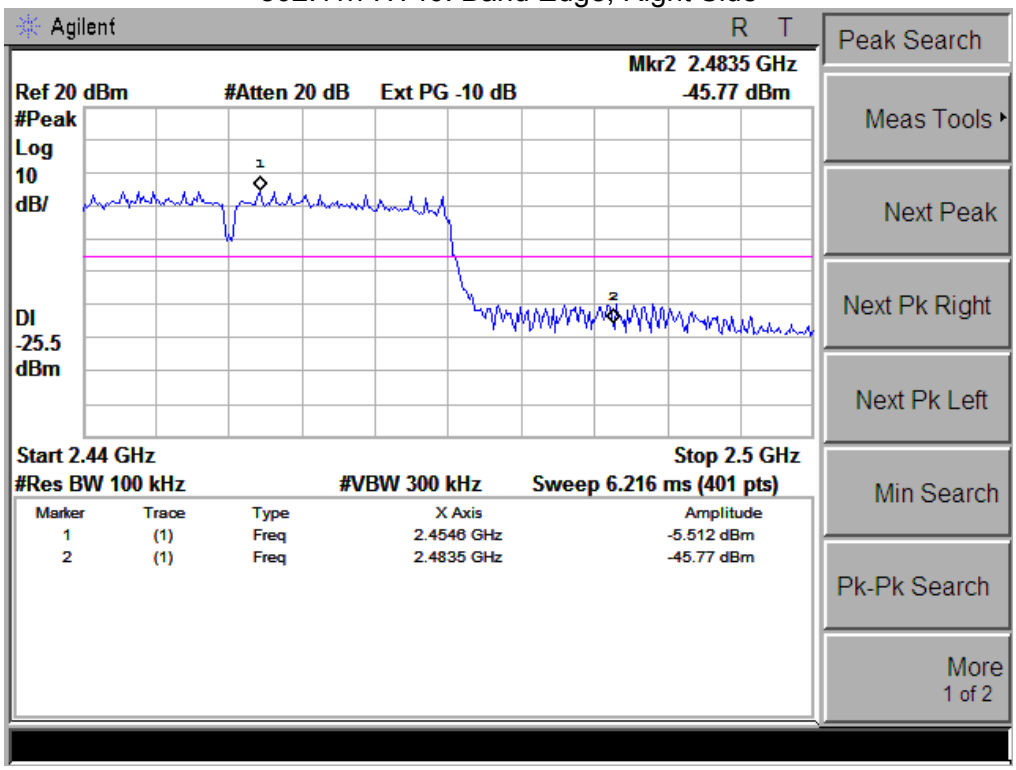
802.11n-HT20: Band Edge, Right Side



802.11n-HT40: Band Edge, Left Side



802.11n-HT40: Band Edge, Right Side



8. ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

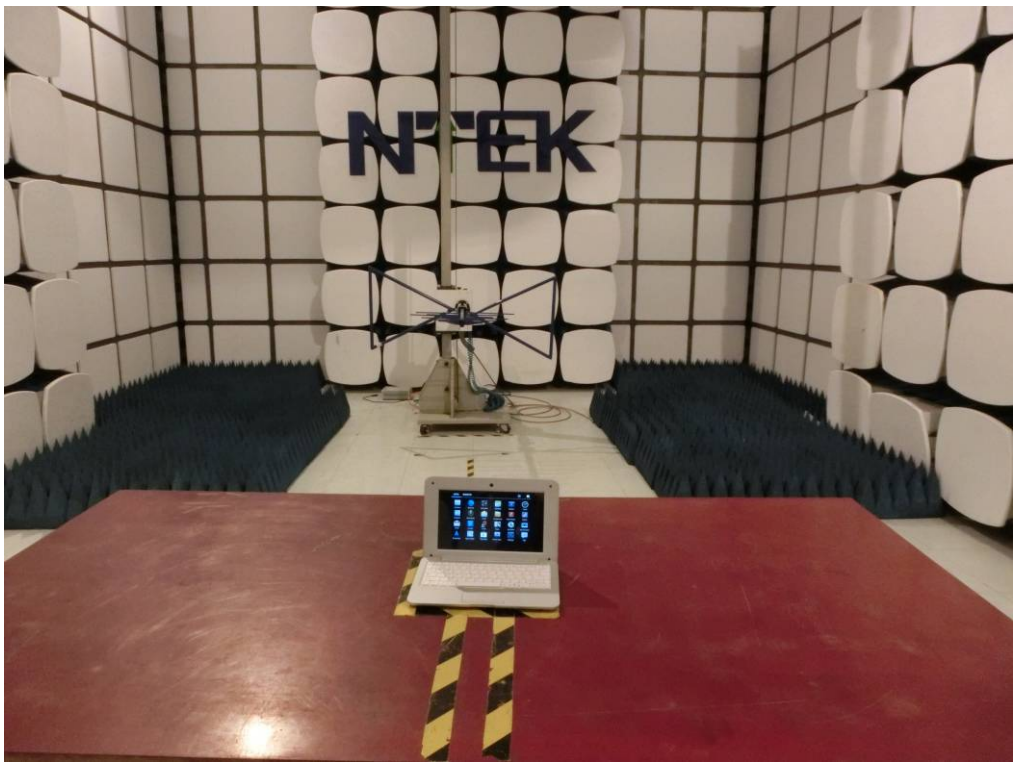
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

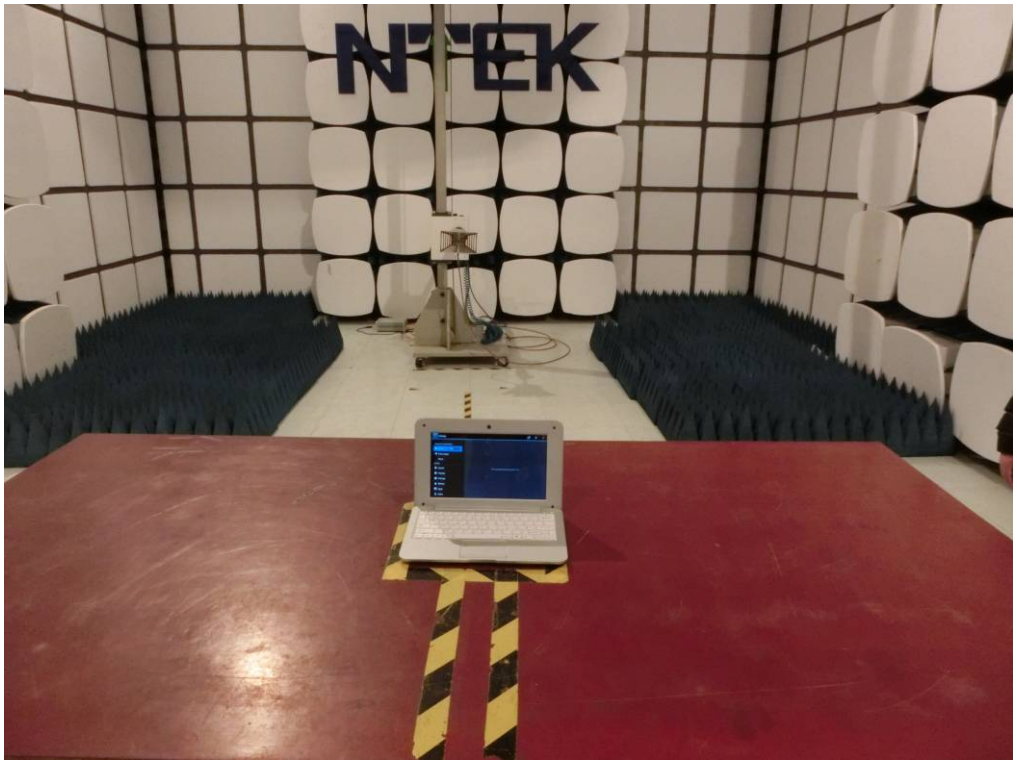
8.2 EUT ANTENNA

The EUT antenna is Built-in antenna. It comply with the standard requirement.

9. EUT TEST PHOTO

Radiated Measurement Photos





Conducted Measurement Photos