FCC Test Report

Report No.: AGC08918170303FE06

FCC ID	:	2AF6AD600
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	mini projector
BRAND NAME	:	N/A
MODEL NAME	:	D600,AN400, I400, A350, PA05, M200, S8000, E8
CLIENT	:	Guangxi Jiaway Technology Corporation Limited
DATE OF ISSUE	:	Jul 12, 2017
STANDARD(S) **TEST PROCEDURE(S)**	:	FCC Part 15.407 KDB 789033 D02
REPORT VERSION	:	V1.0

***A**ttestation of **G**lobal **C**ompliance (Shenzhen) Co., Ltd*

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jul 12, 2017	Valid	Original Report

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1. VERIFICATION OF CONFORMITY

Applicant	Guangxi Jiaway Technology Corporation Limited
Address	Building 5, China-Asean Enterprise headquarters base(Phase 2), No.3 of Headquarters road,Nanning,China
Manufacturer	Guangxi Jiaway Technology Corporation Limited
Address	Building 5, China-Asean Enterprise headquarters base(Phase 2), No.3 of Headquarters road,Nanning,China
Product Designation	mini projector
Brand Name	N/A
Test Model	D600
Series Model	AN400, I400, A350, PA05, M200, S8000, E8
Model Difference	All the same except the model name.
Date of test	Jul 06, 2017 to Jul 12, 2017
Deviation	None
Condition of Test Sample	Normal
Test Result	Pass
Report Template	AGCRT-US-BGN/RF

We hereby certify that:
The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with requirement of FCC Part 15 Rules requirement.

Tested by SNOW. Feng

Snow. Feng(Feng. Nianwei) Jul 12, 2017

Reviewed by Bart Xie

Bart Xie(Xie Xiaobin)) Jul 12, 2017

Approved by Solger Zhang

Solger Zhang(Zhang Hongyi) Jul 12, 2017

Authorized Officer

2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

The EUT is designed as “client”. It is designed by way of utilizing the OFDM technology to achieve the system operation.

A major technical description of EUT is described as following

Operation Frequency	5.150 GHz～5.250GHz;5.725 GHz～5.825GHz
Output Power	5.150 GHz～5.250GHz: IEEE 802.11a20:**9.25**dBm IEEE 802.11n20:**11.97**dBm IEEE 802.11n(40):**9.70**dBm 5.725 GHz～5.825GHz: IEEE 802.11a20:**10.33**dBm IEEE 802.11n20:**13**dBm IEEE 802.11n(40):**9.97**dBm
Modulation	BPSK, QPSK, 16QAM, 64QAM, 128QAM, 256QAM,OFDM
Number of channels	13
Hardware Version	V1.4
Software Version	JW-2017-04-19D600
Antenna Designation	Internal Antenna
Number of transmit chain	2（802.11a one Antenna port is used with the better performance automatically, 802.11n20/40 support MIMO）
Antenna Gain	2dBi
Power Supply	DC 11.4V by battery or DC 19V by Micro-USB

2.2. TABLE OF CARRIER FREQUENCYS

Frequency Band	Channel Number	Frequency	Frequency Band	Channel Number	Frequency
5.150 GHz～5.250GHz	36	5180 MHz	5.725 GHz～5.850GHz	149	5745 MHz
	38	5190 MHz		151	5755 MHz
	40	5200 MHz		153	5765 MHz
	44	5220 MHz		157	5785 MHz
	46	5230 MHz		159	5795 MHz
	48	5240 MHz		161	5805 MHz
				165	5825MHz

Note: For 20MHZ bandwidth system use Channel 36,40,44,48,149,153,157,161,165; For 40MHZ bandwidth system use Channel 38,46,151,159;

2.3. RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID:2AF6AD600** filing to comply with the FCC Part 15 requirements.

2.4. TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013).
Radiated testing was performed at an antenna to EUT distance 3 meters.
Others testing (listed at item 5.3) was performed according to the procedures in FCC Part 15.407 rules KDB 789033

2.5. SPECIAL ACCESSORIES

Refer to section 5.2.

2.6. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

3. MEASUREMENT UNCERTAINTY

Conducted measurement: +/- 3.18dB
Radiated measurement: +/- 3.91dB

4. DESCRIPTION OF TEST MODES

Mode	Available channel	Tested channel	Modulation	Date rate(Mbps)
802.11a/n20	36,40,44,48,149,153,157,161,165	36,48, 149, 165	OFDM	6/6.5
802.11n40	38,46,151,159	38,46, 151,159	OFDM	13.5

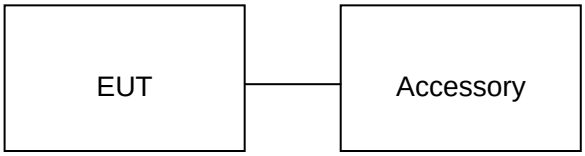
Note:

1. The EUT has been set to operate continuously on tested channel individually, and the EUT is operating at its maximum duty cycle>or equal 98%
2. All modes under which configure applicable have been tested and the worst mode test data recording in the test report, if no other mode data.

5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF EUT SYSTEM

Configure:



5.2. EQUIPMENT USED IN EUT SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	mini projecto	D600	2AF6AD600	EUT
2	PC	SONY	E1412AYCW	Support
3	PC adapter	SONY	A13-040A3A	Support

5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.407	6dB Bandwidth	Compliant
§15.407	Emission Bandwidth	Compliant
§15.407	Maximum conducted output power	Compliant
§15.407	Conducted Spurious Emission	Compliant
§15.407	Maximum Conducted Output Power Density	Compliant
§15.209	Radiated Emission	Compliant
§15.407	Band Edges	Compliant
§15.407	Frequency Stability	Compliant
§15.207	Line Conduction Emission	Compliant

6. TEST FACILITY

Site	Dongguan Precise Testing Service Co., Ltd.
Location	Building D, Baoding Technology Park,Guangming Road2, Dongcheng District, Dongguan, Guangdong, China.
FCC Registration No.	371540
Description	The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2014.

ALL TEST EQUIPMENT LIST

Radiated Emission Test Site					
Name of Equipment	**Manufacturer**	**Model Number**	**Serial Number**	**Last Calibration**	**Due Calibration**
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	July 2, 2017	July 1, 2018
Trilog Broadband Antenna (25M-1GHz)	SCHWARZBECK	VULB9160	9160-3355	July 2, 2017	July 1, 2018
Signal Amplifier	SCHWARZBECK	BBV 9475	9745-0013	July 2, 2017	July 1, 2018
RF Cable	SCHWARZBECK	AK9515E	96221	July 2, 2017	July 1, 2018
3m Anechoic Chamber	CHENGYU	966	PTS-001	July 2, 2017	July 1, 2018
MULTI-DEVICE Positioning Controller	Max-Full	MF-7802	MF780208339	N/A	N/A
Active loop antenna (9K-30MHz)	Schwarzbeck	FMZB1519	1519-038	June 5, 2016	June 4, 2018
Spectrum analyzer	Agilent	E4407B	MY46185649	June 2, 2017	June 1, 2018
Power Probe	R&S	NRP-Z23	100323	July 24,2016	July 23,2017
RF attenuator	N/A	RFA20db	68	N/A	N/A
Horn Antenna (1G-18GHz)	SCHWARZBECK	BBHA9120D	9120D-1246	June 2, 2017	June 1, 2018
Horn Ant (18G-40GHz)	Schwarzbeck	BBHA 9170	9170-181	June 2, 2017	June 1, 2018

Conducted Emission Test Site					
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	July 2, 2017	July 1, 2018
Artificial Mains Network	Narda	L2-16B	000WX31025	July 2, 2017	July 1, 2018
Artificial Mains Network (AUX)	Narda	L2-16B	000WX31026	July 2, 2017	July 1, 2018
RF Cable	SCHWARZBECK	AK9515E	96222	July 2, 2017	July 1, 2018
Shielded Room	CHENGYU	843	PTS-002	June 2, 2017	June 1, 2018

7. MAXIMUM CONDUCTED OUTPUT POWER

7.1. MEASUREMENT PROCEDURE

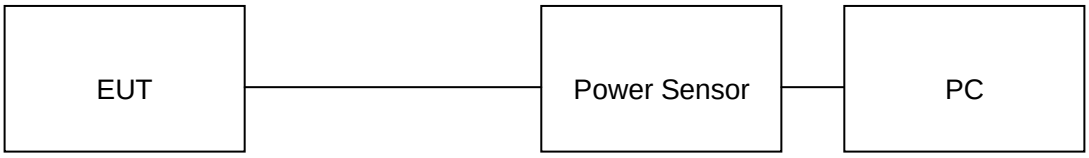
For average power test:

1. Connect EUT RF output port to power sensor through an RF attenuator.
2. Connect the power sensor to the PC.
3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
4. Record the maximum power from the software.

Note：The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

7.2. TEST SET-UP

AVERAGE POWER SETUP



7.3. LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION				
Port	**Frequency (MHz)**	**Average Power (dBm)**	**Applicable Limits (dBm)**	**Pass or Fail**
Ant0	5180	9.13	24	Pass
	5200	9.25	24	Pass
	5240	9.08	24	Pass
	5745	10.31	30	Pass
	5785	10.33	30	Pass
	5825	10.29	30	Pass
Ant1	5180	8.38	24	Pass
	5200	8.42	24	Pass
	5240	8.33	24	Pass
	5745	9.56	30	Pass
	5785	9.63	30	Pass
	5825	9.54	30	Pass

LIMITS AND MEASUREMENT RESULT FOR 802.11N20 MODULATION				
Port	**Frequency (MHz)**	**Average Power (dBm)**	**Applicable Limits (dBm)**	**Pass or Fail**
Ant0	5180	9.24	24	Pass
	5200	9.28	24	Pass
	5240	9.32	24	Pass
	5745	10.25	30	Pass
	5785	10.33	30	Pass
	5825	10.28	30	Pass
Ant1	5180	8.49	24	Pass
	5200	8.55	24	Pass

	5240	8.57	24	Pass
	5745	9.5	30	Pass
	5785	9.62	30	Pass
	5825	9.53	30	Pass
SUM	5180	11.89	24	Pass
	5200	11.94	24	Pass
	5240	11.97	24	Pass
	5745	12.90	30	Pass
	2785	13.00	30	Pass
	5825	12.93	30	Pass

LIMITS AND MEASUREMENT RESULT FOR 802.11N40 MODULATION				
Port	**Frequency (MHz)**	**Average Power (dBm)**	**Applicable Limits (dBm)**	**Pass or Fail**
Ant0	5190	6.74	24	Pass
	5230	6.86	24	Pass
	5755	7.08	30	Pass
	5795	7.13	30	Pass
Ant1	5190	6.39	24	Pass
	5230	6.51	24	Pass
	5755	6.73	30	Pass
	5795	6.78	30	Pass
SUM	5190	9.58	24	Pass
	5230	9.70	24	Pass
	5755	9.92	30	Pass
	5795	9.97	30	Pass

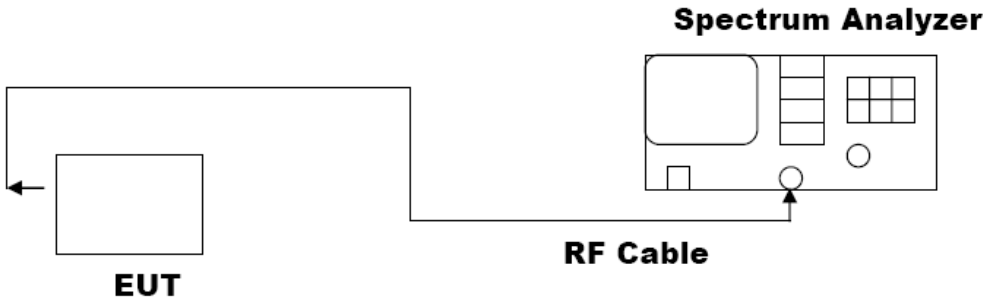
8. 6dB BANDWIDTH

8.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 100kHz.
4. Set the VBW ⩾3*RBW. Detector = Peak. Trace mode = max hold.
5. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.

Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



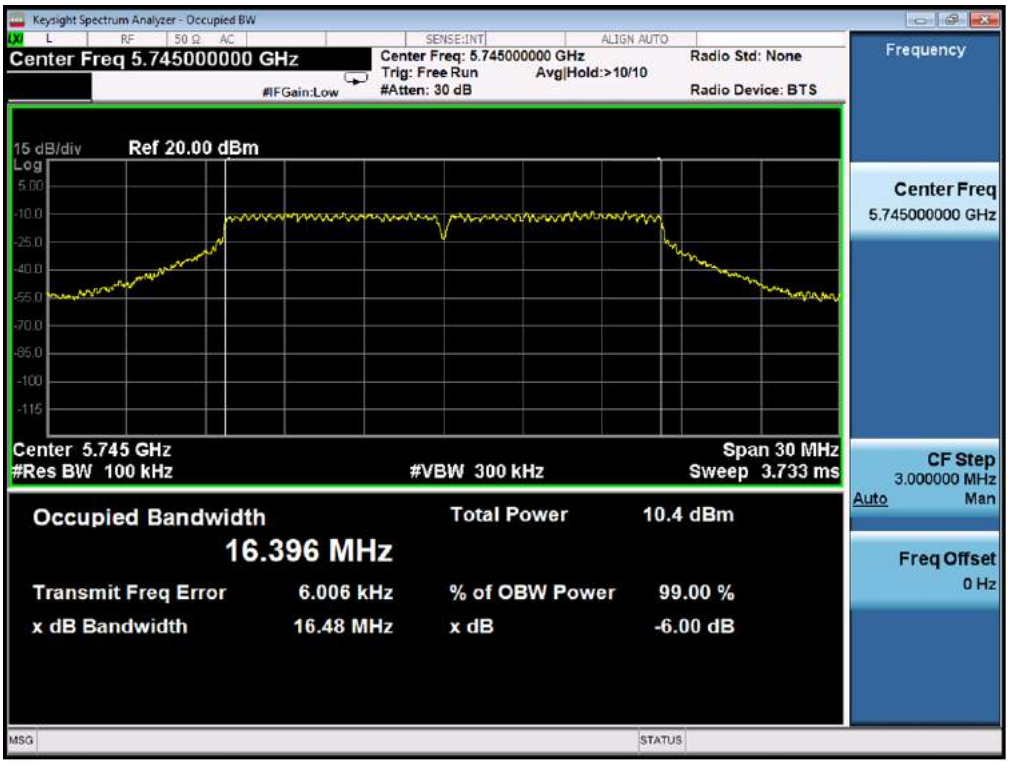
8.3. LIMITS AND MEASUREMENT RESULTS

LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION				
Port	**Applicable Limits**	**Applicable Limits**		
		Test Data (MHz)		**Criteria**
Ant0	>500KHZ	5745MHz	16.48	PASS
		5785 MHz	16.35	PASS
		5825MHz	16.48	PASS
Ant1	>500KHZ	5745MHz	16.36	PASS
		5785 MHz	16.35	PASS
		5825MHz	16.36	PASS

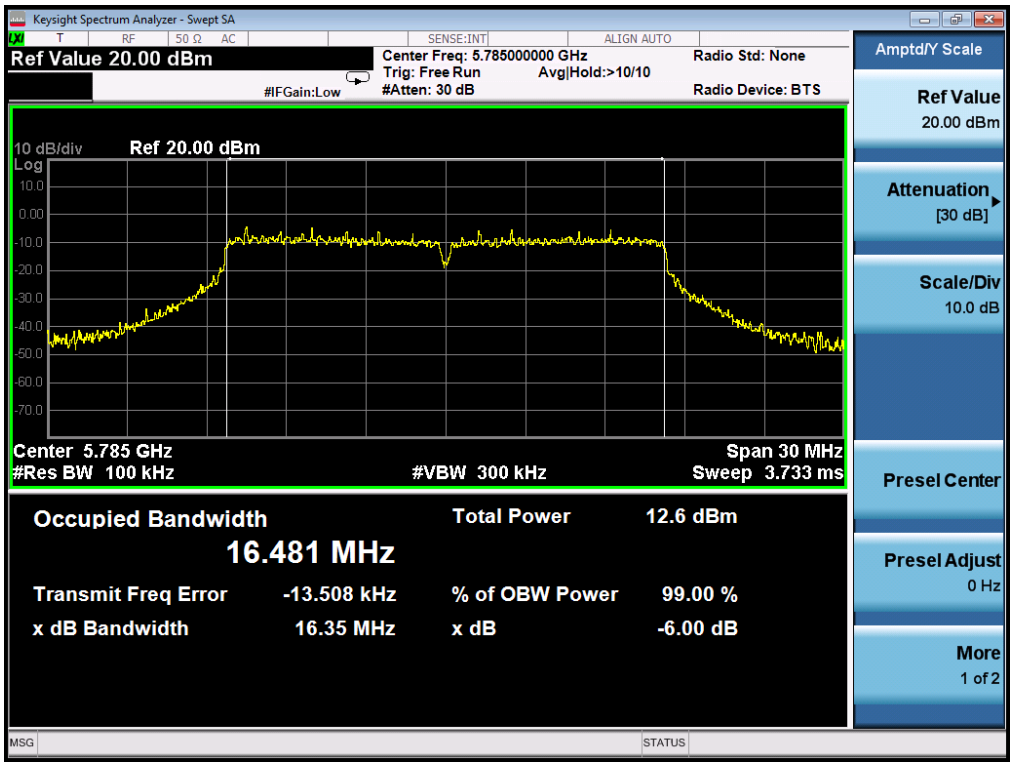
LIMITS AND MEASUREMENT RESULT FOR 802.11N20/40 MODULATION				
Port	**Applicable Limits**	**Applicable Limits**		
		Test Data (MHz)		**Criteria**
Ant0	>500KHZ	5745MHz	17.73	PASS
		5785 MHz	17.25	PASS
		5825MHz	17.72	PASS
		5755MHz	36.45	PASS
		5795MHz	36.52	PASS
Ant1	>500KHZ	5745MHz	17.61	PASS
		5785 MHz	17.28	PASS
		5825MHz	17.61	PASS
		5755MHz	36.37	PASS
		5795MHz	36.32	PASS

802.11a20 TEST RESULT-ant0:

TEST PLOT OF BANDWIDTH FOR 5745MHz



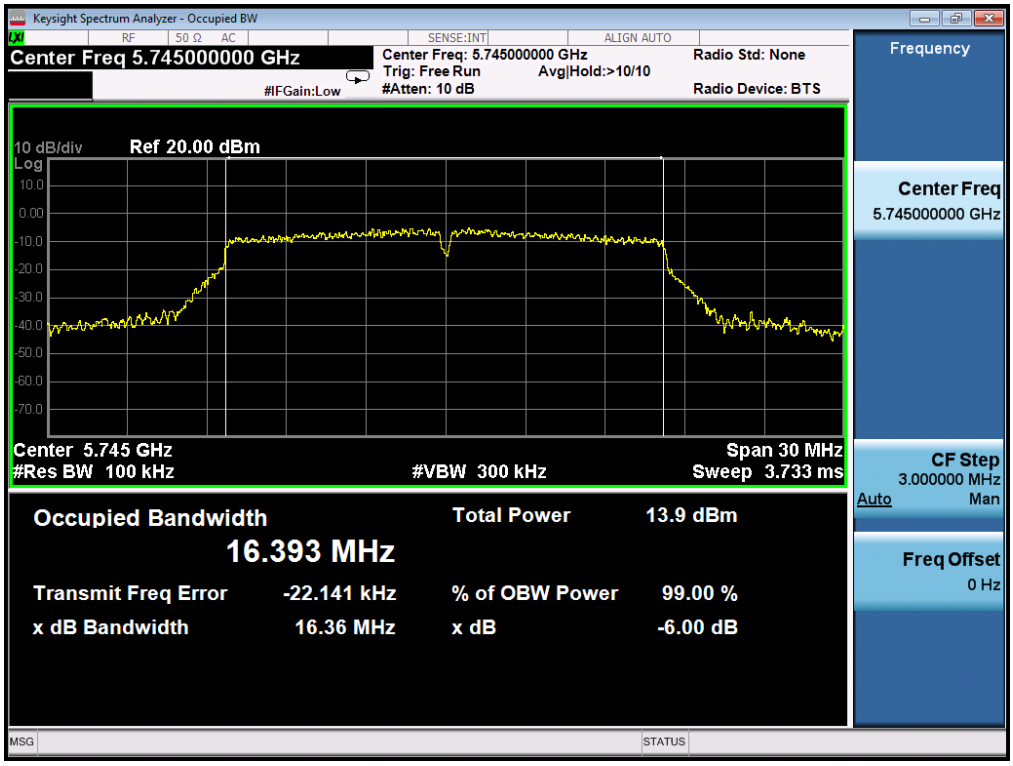
TEST PLOT OF BANDWIDTH FOR 5785MHz



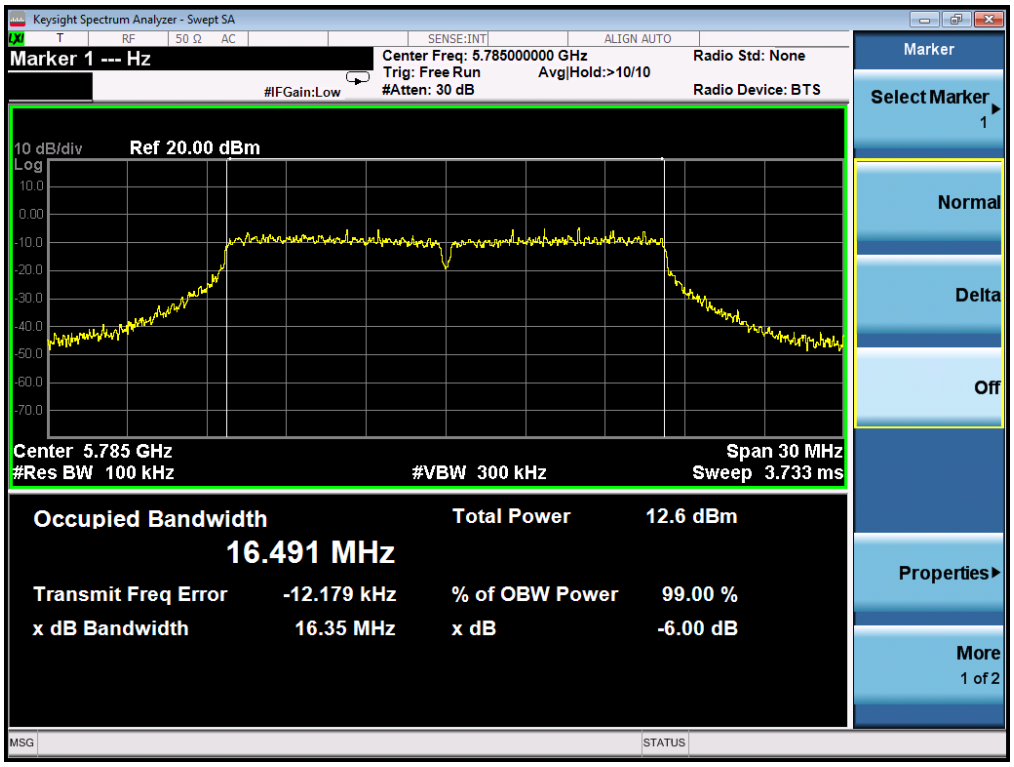
TEST PLOT OF BANDWIDTH FOR 5825MHz

802.11a20 TEST RESULT-ant1:

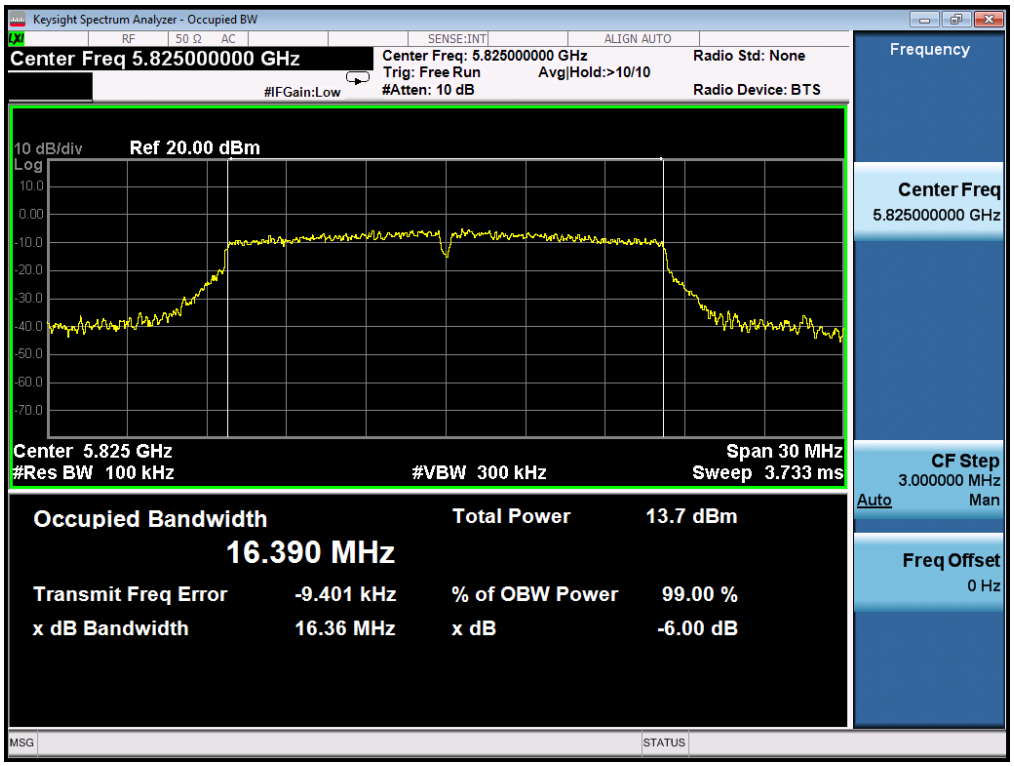
TEST PLOT OF BANDWIDTH FOR 5745MHz



TEST PLOT OF BANDWIDTH FOR 5785MHz

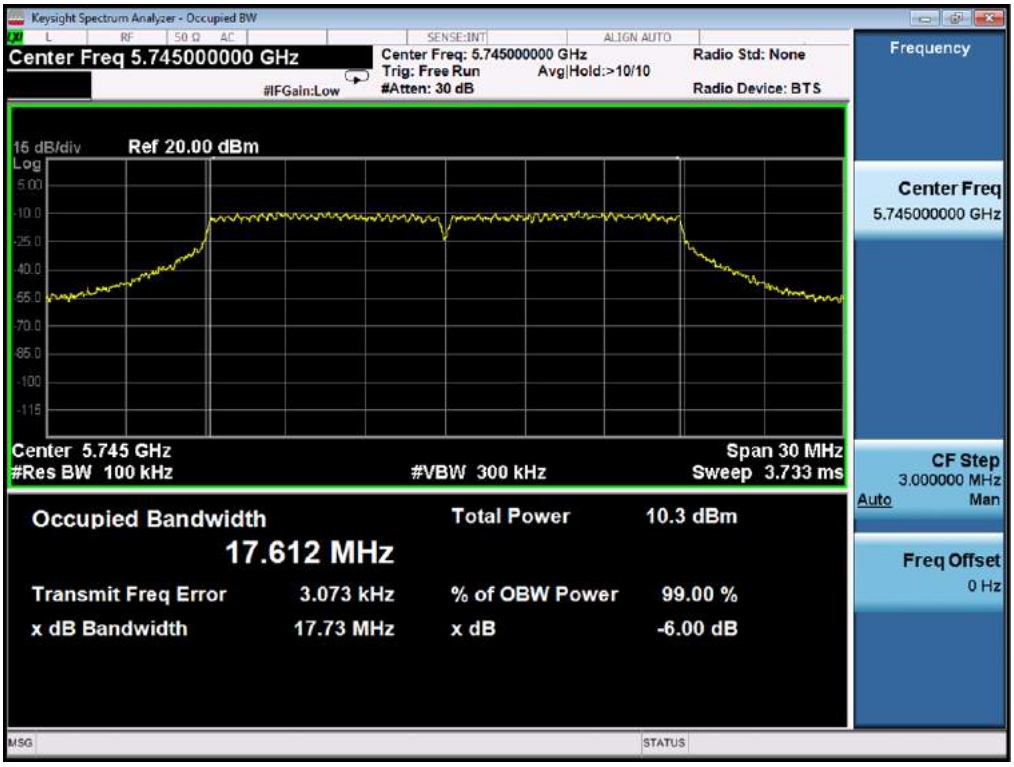


TEST PLOT OF BANDWIDTH FOR 5825MHz

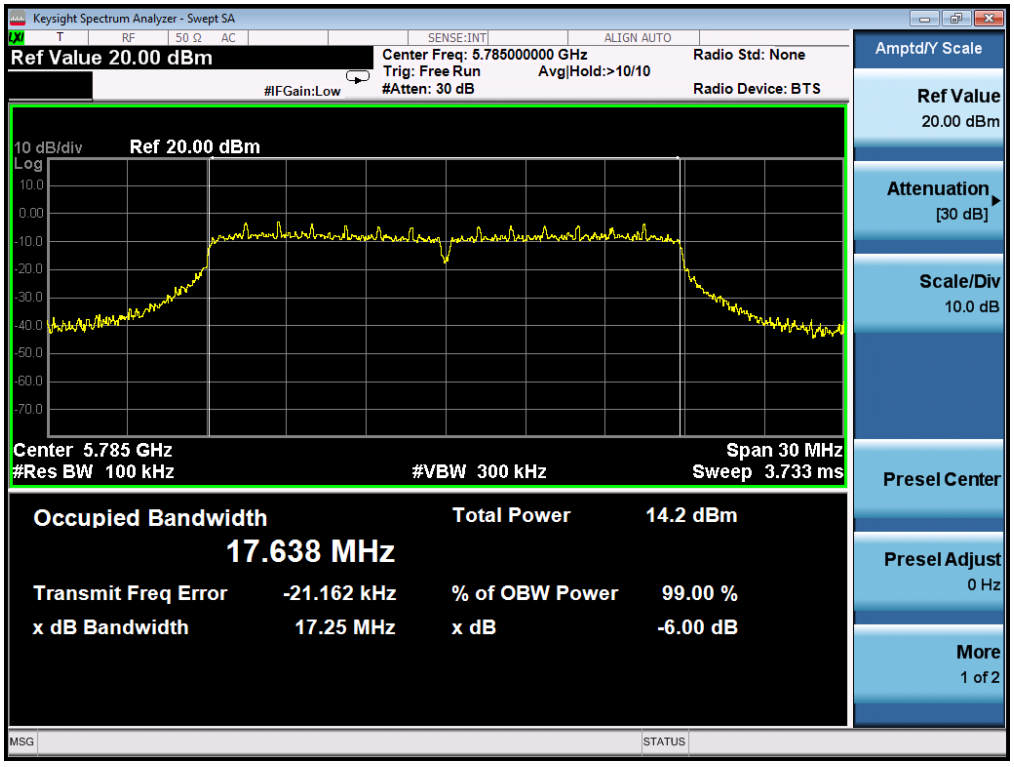


802.11n20 TEST RESULT-ant0:

TEST PLOT OF BANDWIDTH FOR 5745MHz



TEST PLOT OF BANDWIDTH FOR 5785MHz

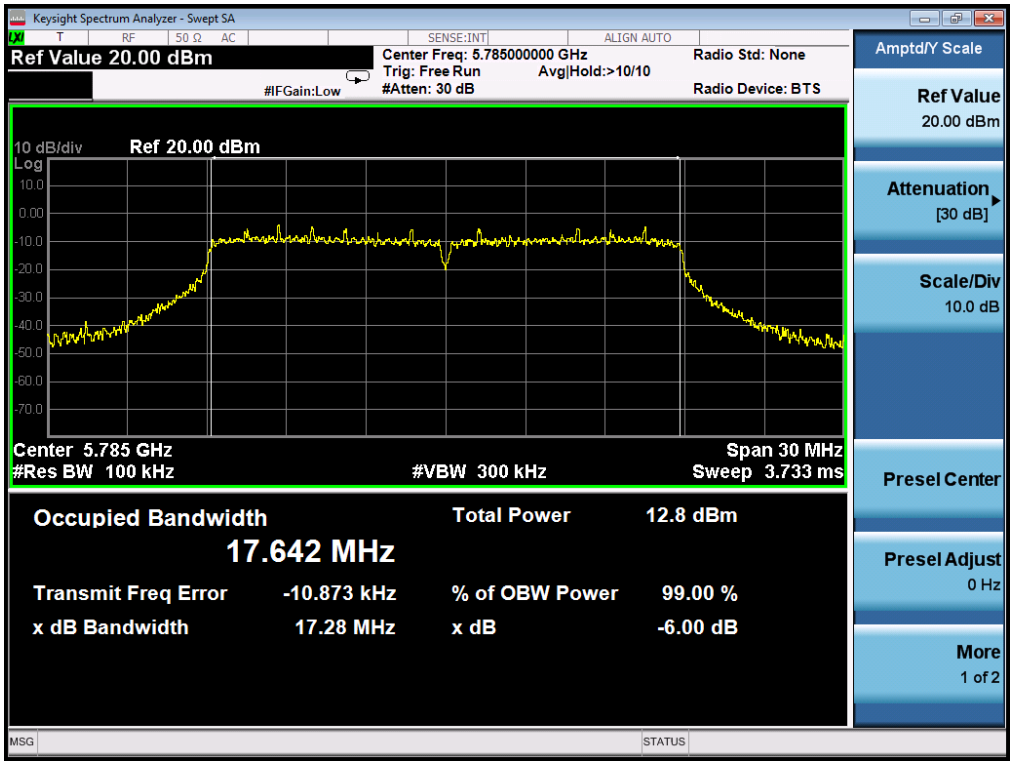


TEST PLOT OF BANDWIDTH FOR 5825MHz

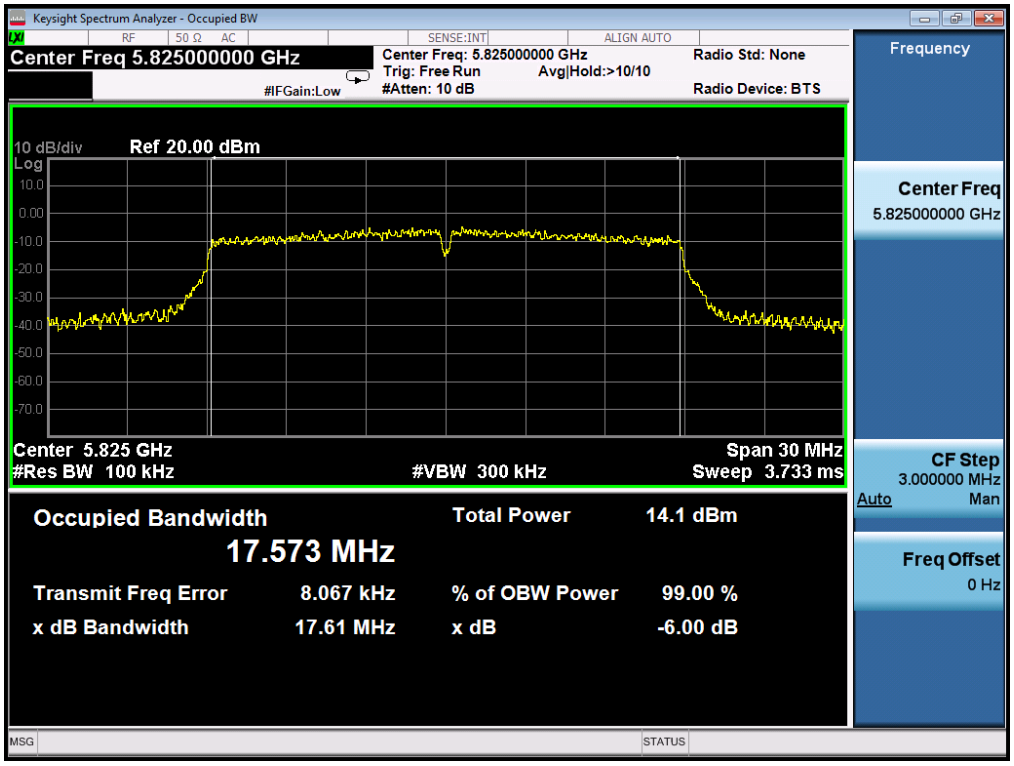
802.11n20 TEST RESULT-ant1:

TEST PLOT OF BANDWIDTH FOR 5745MHz

TEST PLOT OF BANDWIDTH FOR 5785MHz



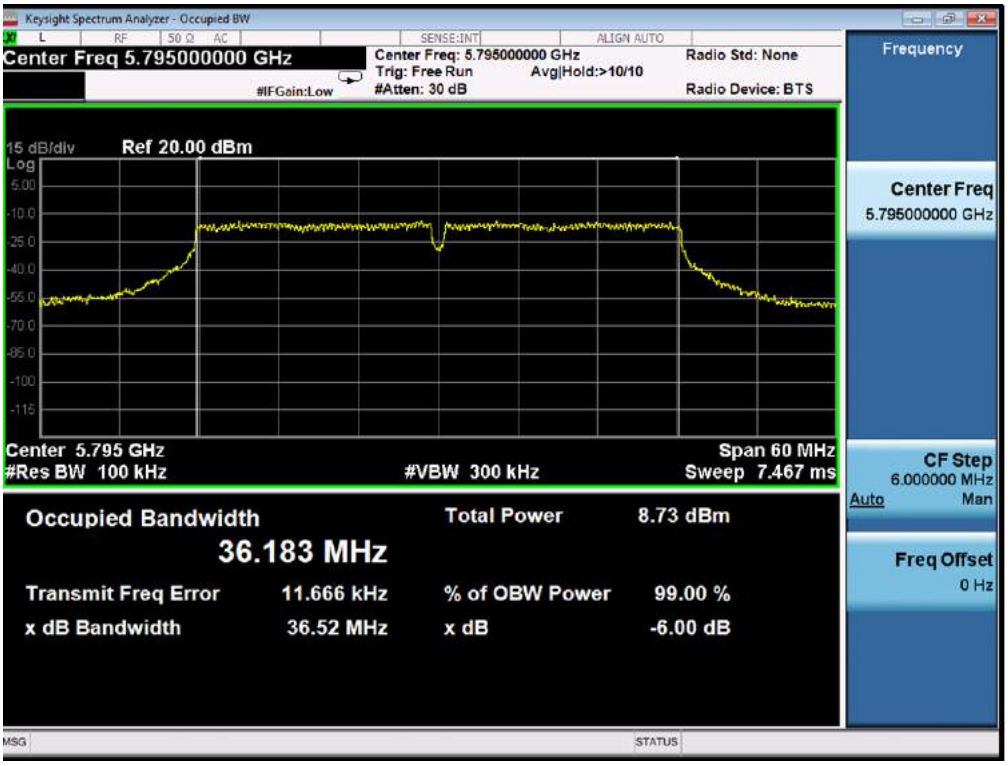
TEST PLOT OF BANDWIDTH FOR 5825MHz



802.11n40 TEST RESULT-ant0:

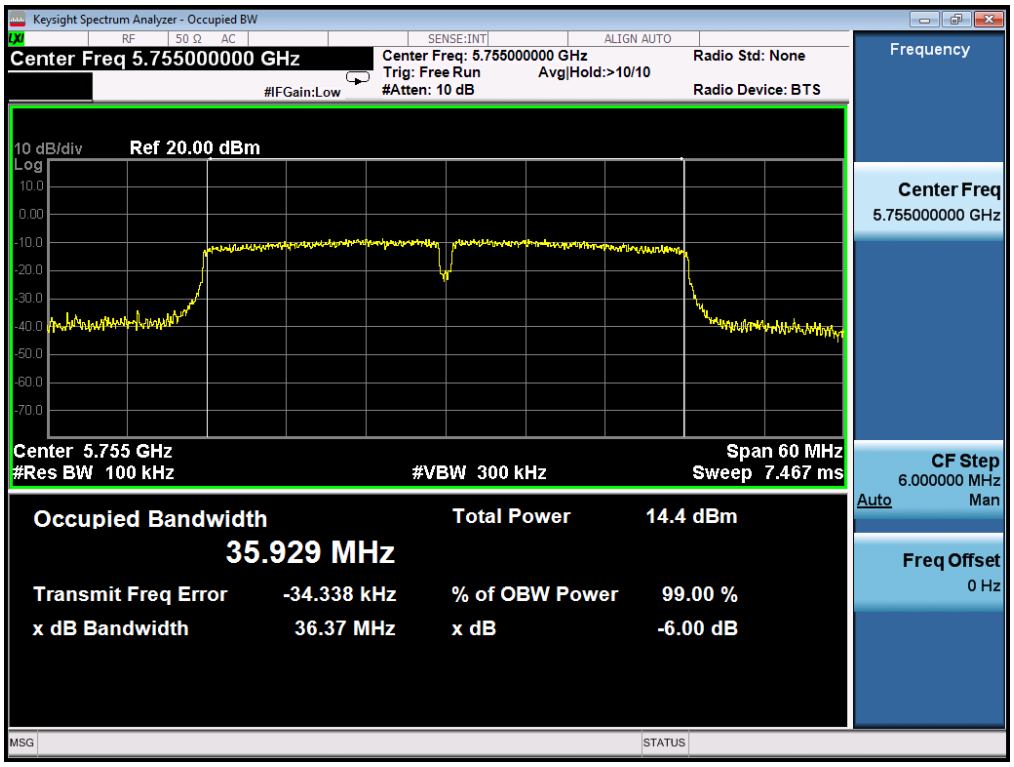
TEST PLOT OF BANDWIDTH FOR 5755MHz

TEST PLOT OF BANDWIDTH FOR 5795MHz

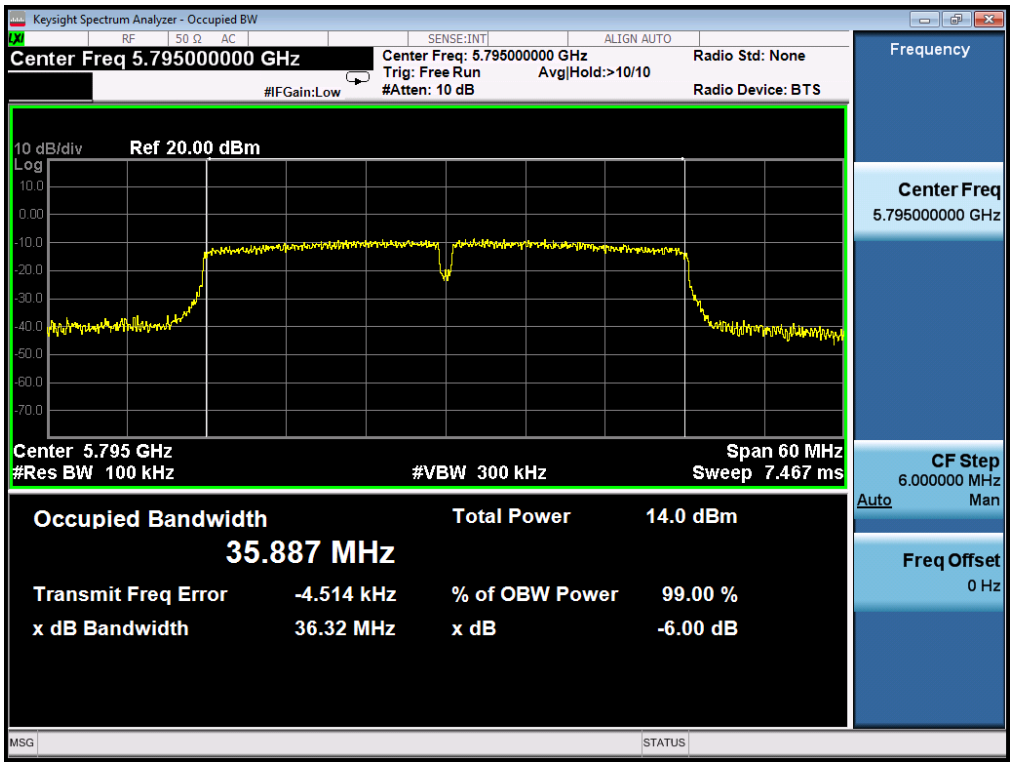


802.11n40 TEST RESULT-ant1:

TEST PLOT OF BANDWIDTH FOR 5755MHz



TEST PLOT OF BANDWIDTH FOR 5795MHz



9. EMISSION BANDWIDTH

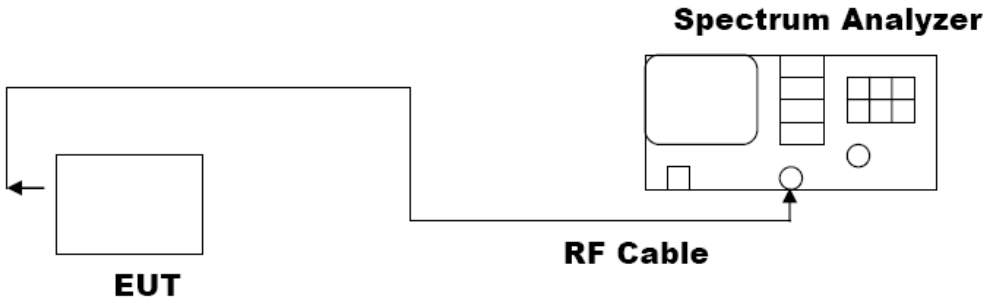
9.1. MEASUREMENT PROCEDURE

a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

The following procedure shall be used for measuring (99 %) power bandwidth:
1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ≥ 3 · RBW
5. Peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument

Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



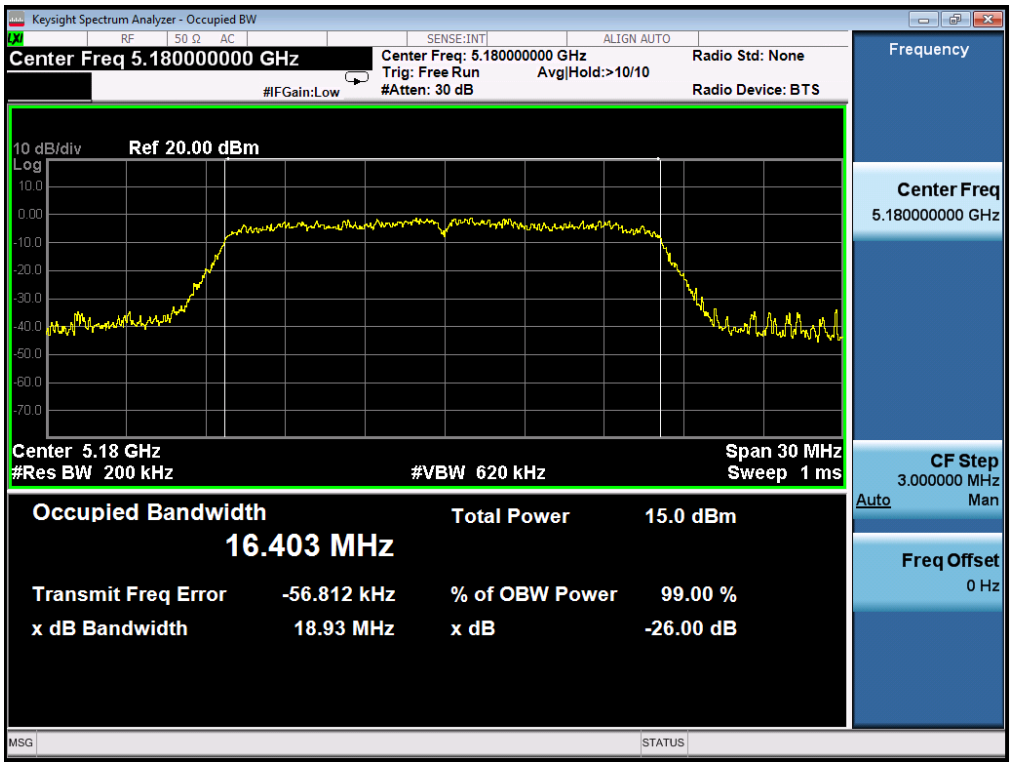
9.3. LIMITS AND MEASUREMENT RESULTS

LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION				
Port	**Test Channel**	**-26dBc EBW (MHz)**	**99% OBW (MHz)**	**Criteria**
Ant0	5180MHz	18.93	16.403	PASS
	5200 MHz	19.48	16.415	PASS
	5240MHz	18.55	16.416	PASS
Ant1	5180MHz	18.93	16.353	PASS
	5200 MHz	19.46	16.414	PASS
	5240MHz	18.55	16.350	PASS

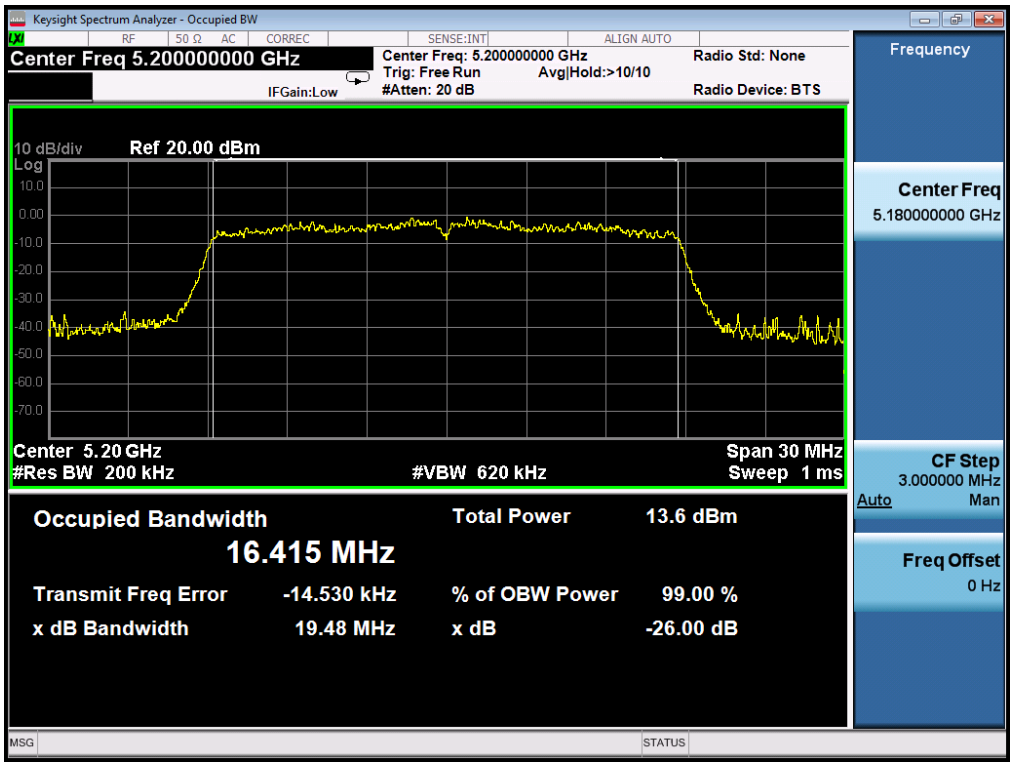
LIMITS AND MEASUREMENT RESULT FOR 802.11N20/40 MODULATION				
Port	**Test Channel**	**-26dBc EBW (MHz)**	**99% OBW (MHz)**	**Criteria**
Ant0	5180MHz	19.03	17.592	PASS
	5200 MHz	19.84	17.604	PASS
	5240MHz	19.08	17.626	PASS
	5190MHz	38.82	36.052	PASS
	5230MHz	38.78	36.164	PASS
Ant1	5180MHz	19.03	17.466	PASS
	5200 MHz	19.88	17.605	PASS
	5240MHz	19.08	17.481	PASS
	5190MHz	38.82	36.052	PASS
	5230MHz	38.78	36.022	PASS

802.11a20 TEST RESULT-ant0:

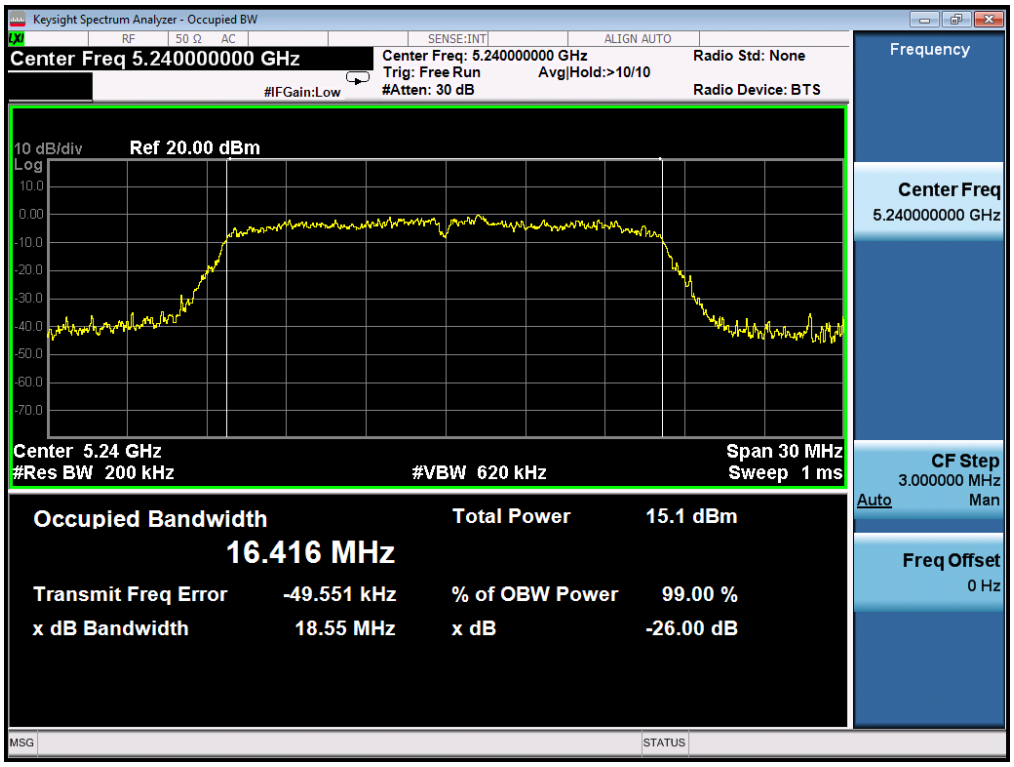
TEST PLOT OF BANDWIDTH FOR 5180MHz



TEST PLOT OF BANDWIDTH FOR 5200MHz

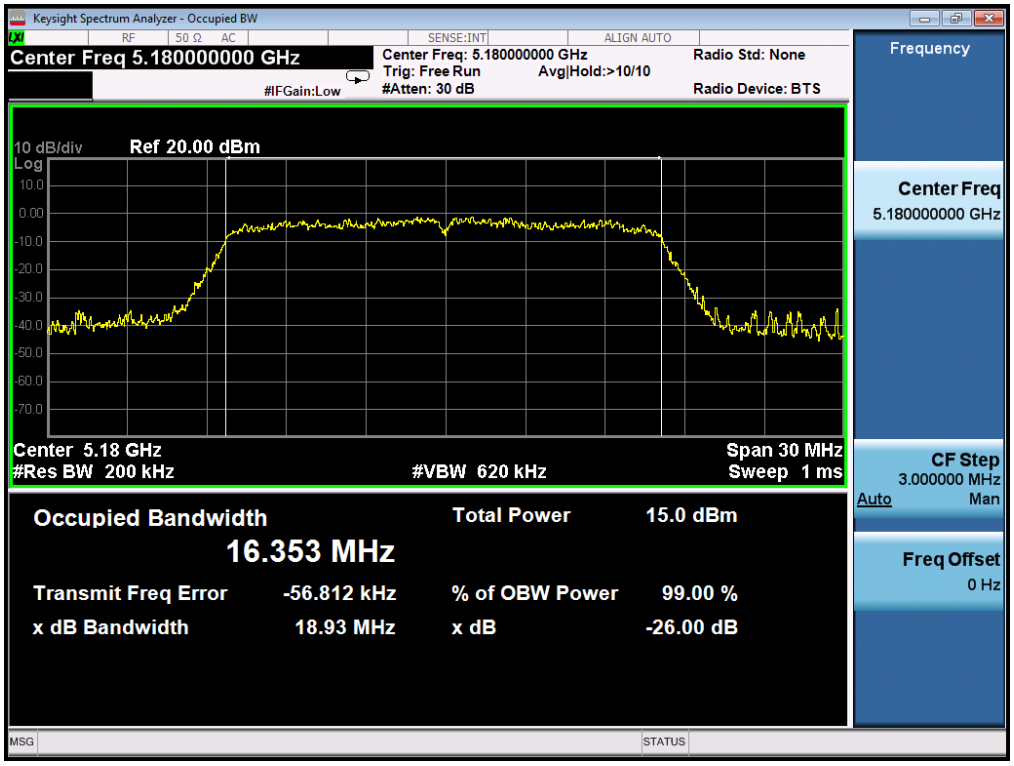


TEST PLOT OF BANDWIDTH FOR 5240MHz

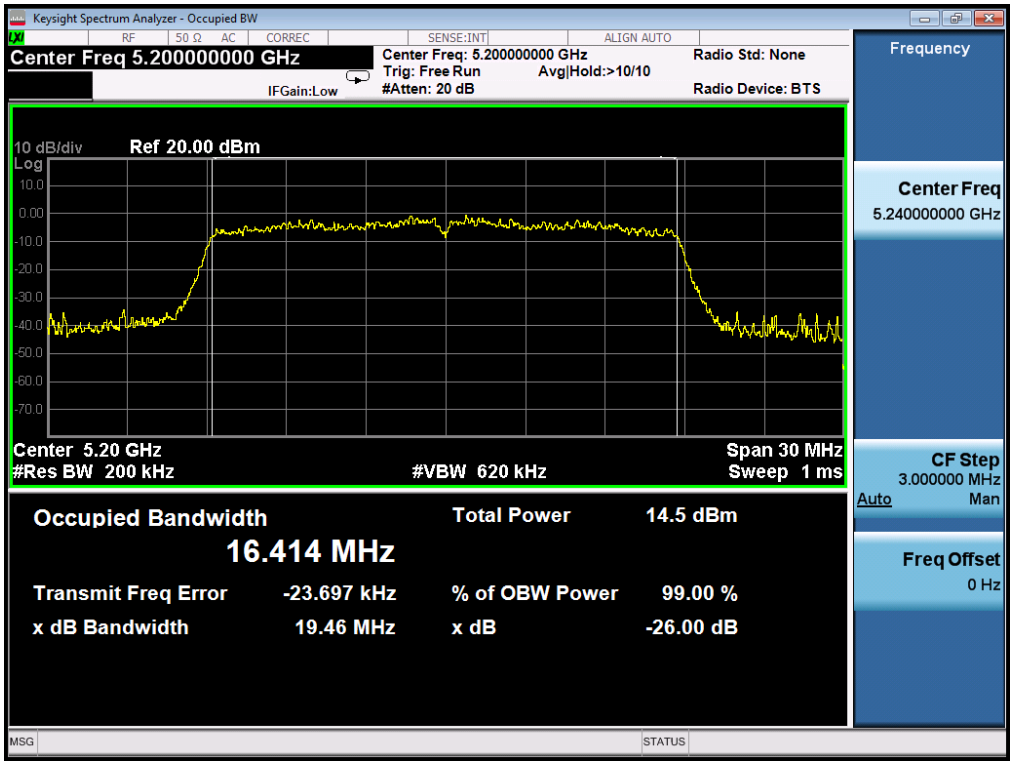


802.11a20 TEST RESULT-ant1:

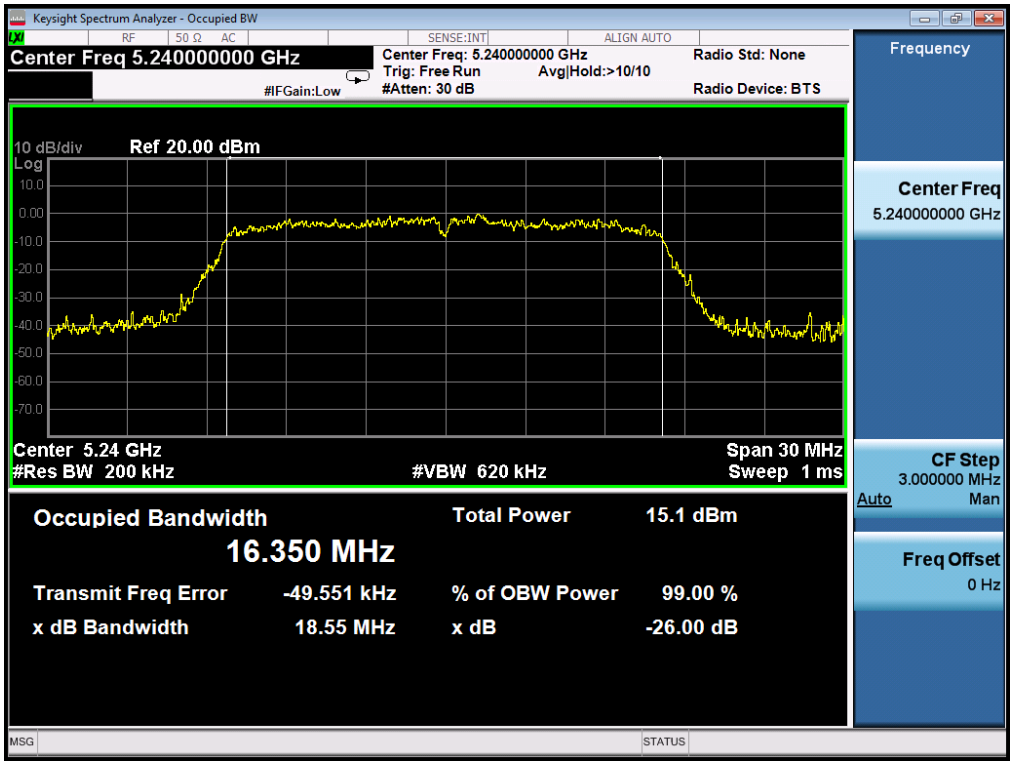
TEST PLOT OF BANDWIDTH FOR 5180MHz



TEST PLOT OF BANDWIDTH FOR 5200MHz

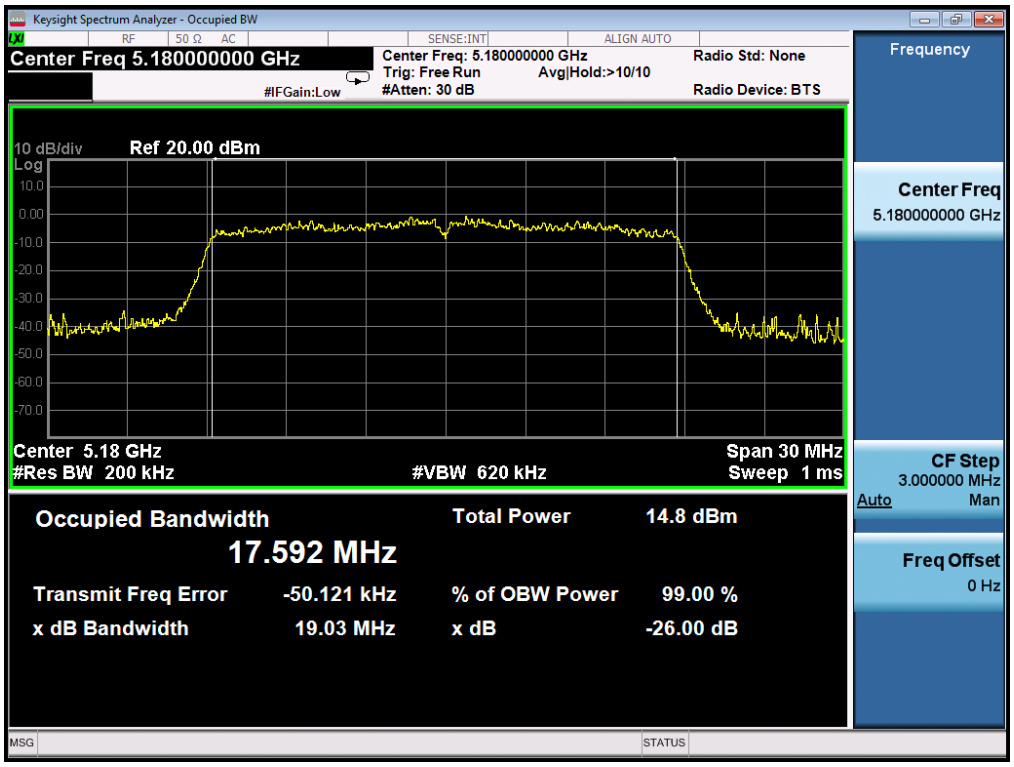


TEST PLOT OF BANDWIDTH FOR 5240MHz

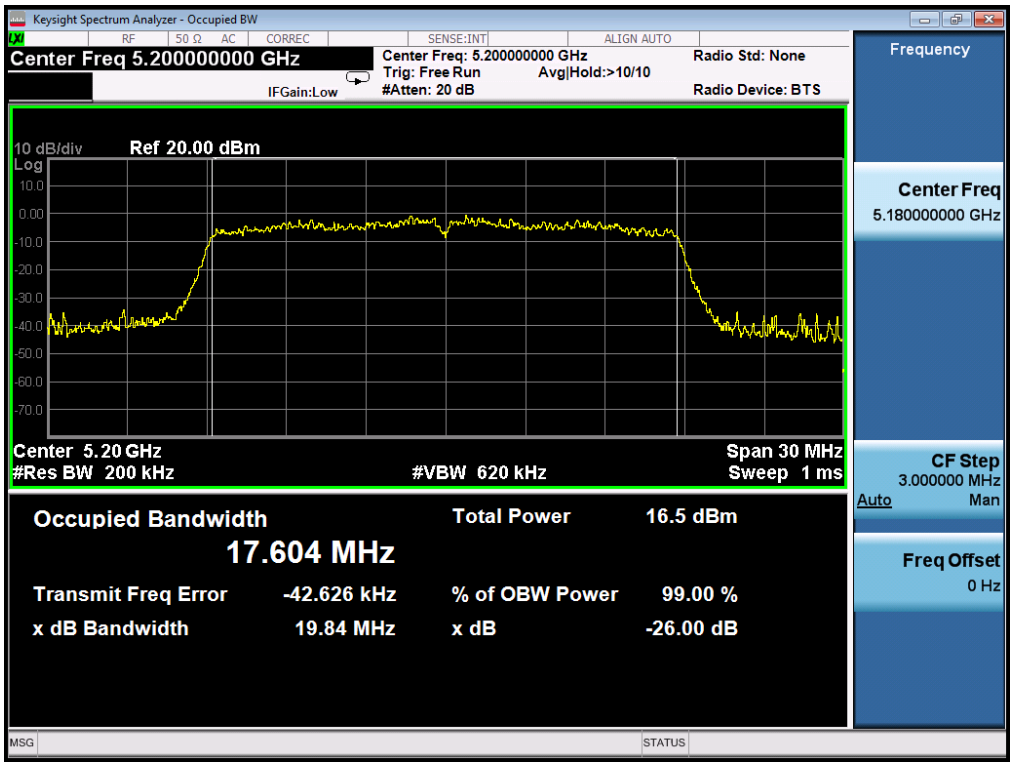


802.11n20 TEST RESULT-ant0：

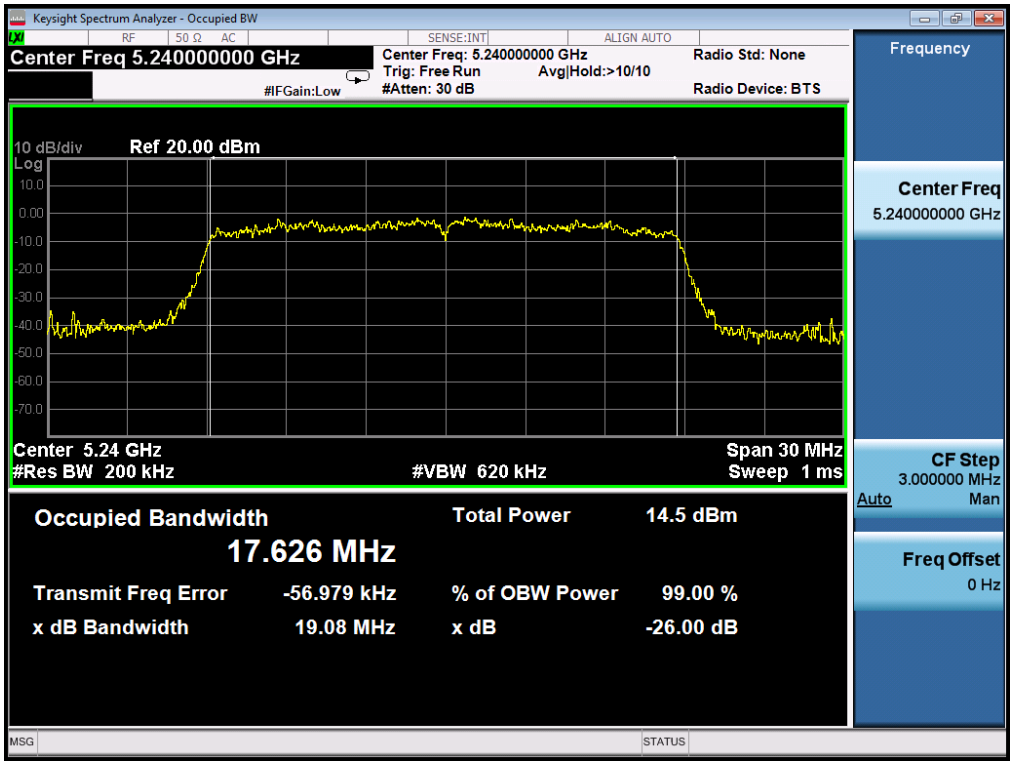
TEST PLOT OF BANDWIDTH FOR 5180MHz



TEST PLOT OF BANDWIDTH FOR 5200MHz

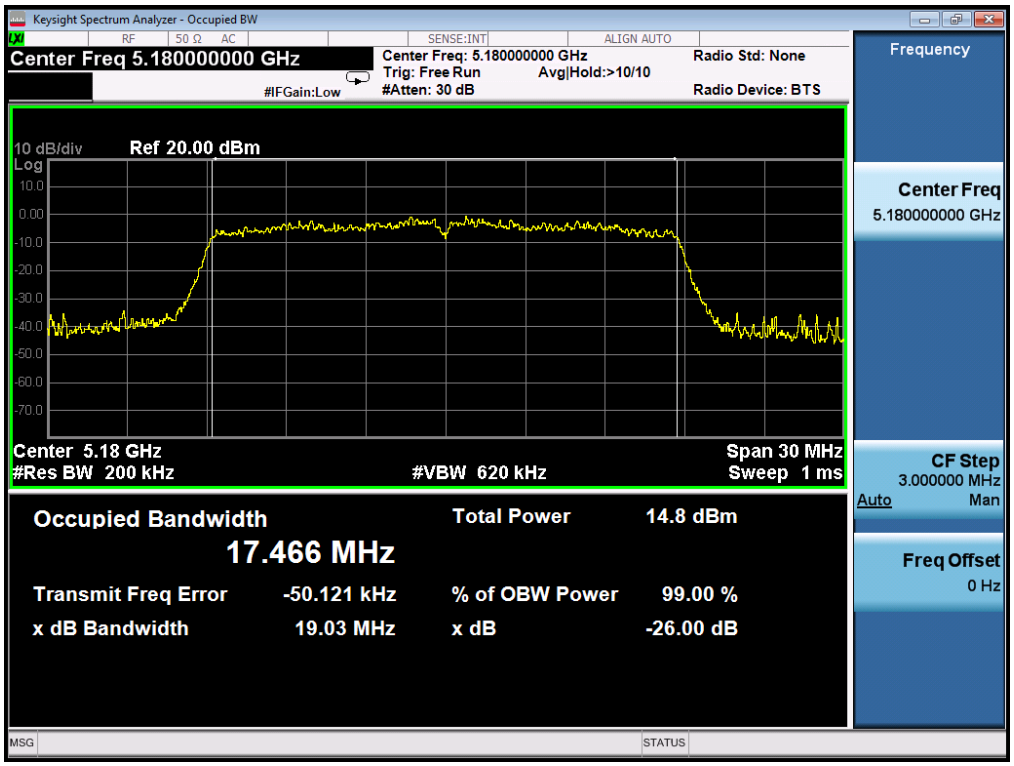


TEST PLOT OF BANDWIDTH FOR 5240MHz

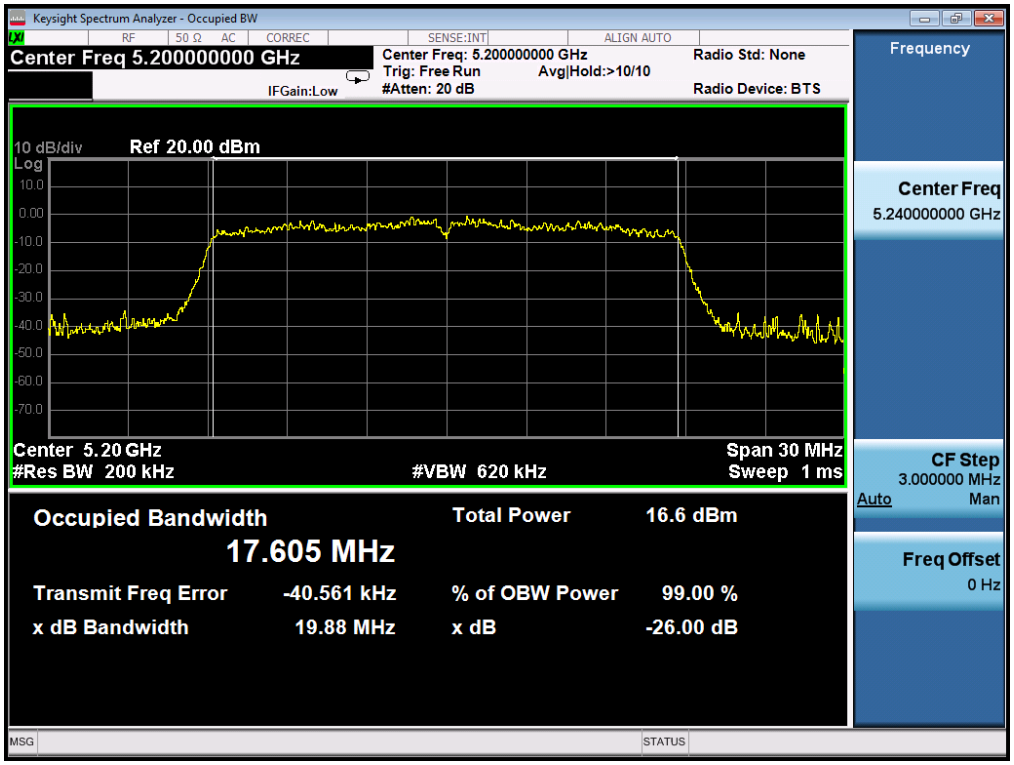


802.11n20 TEST RESULT-ant1:

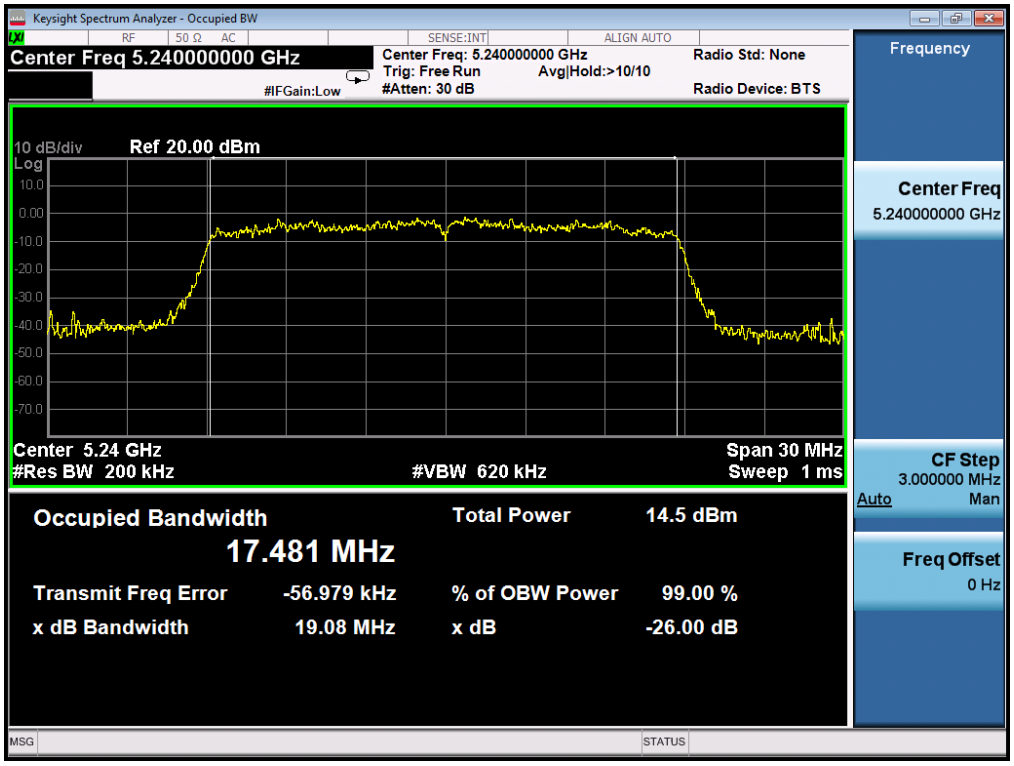
TEST PLOT OF BANDWIDTH FOR 5180MHz



TEST PLOT OF BANDWIDTH FOR 5200MHz

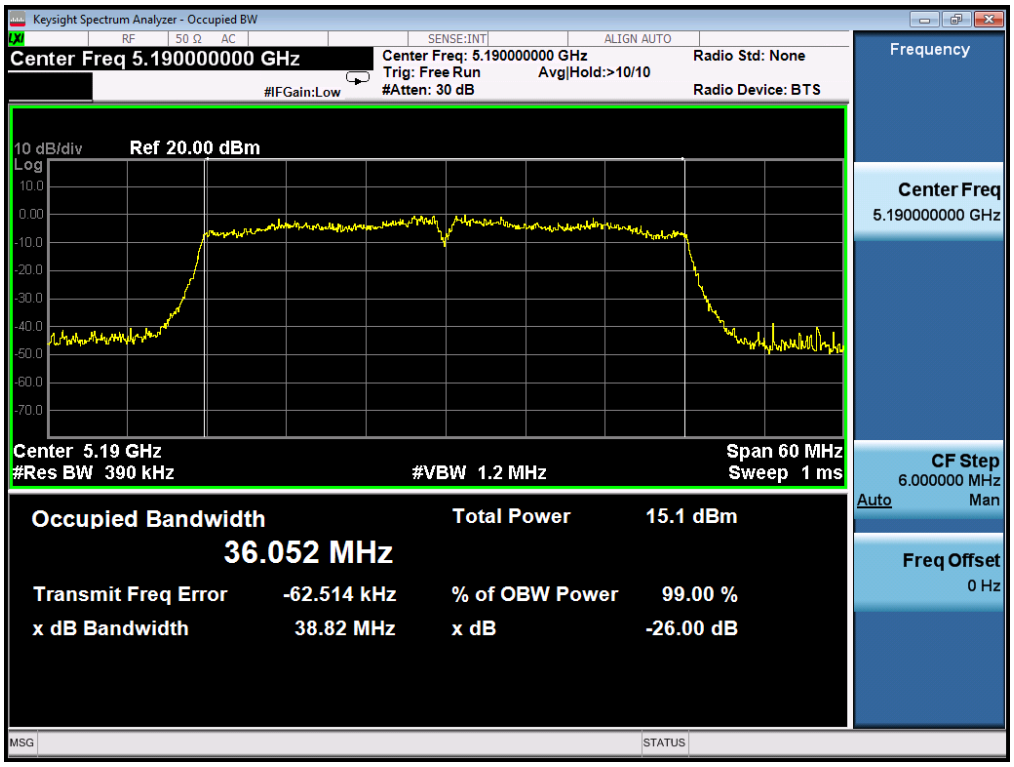


TEST PLOT OF BANDWIDTH FOR 5240MHz

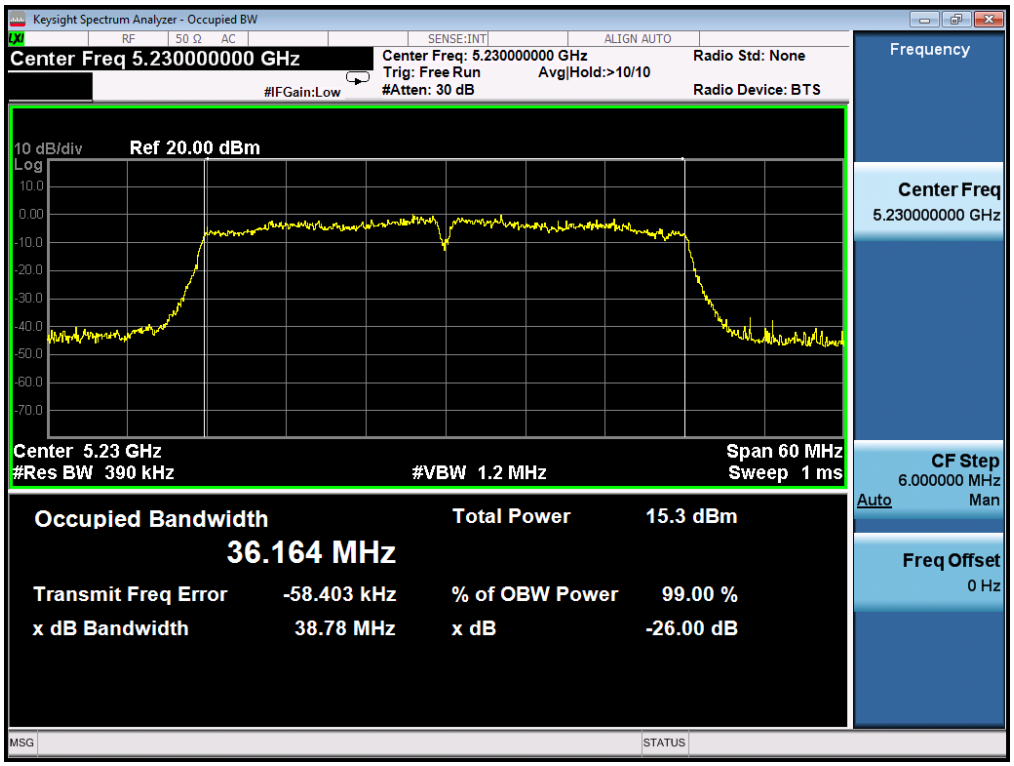


802.11n40 TEST RESULT-ant0:

TEST PLOT OF BANDWIDTH FOR 5190MHz

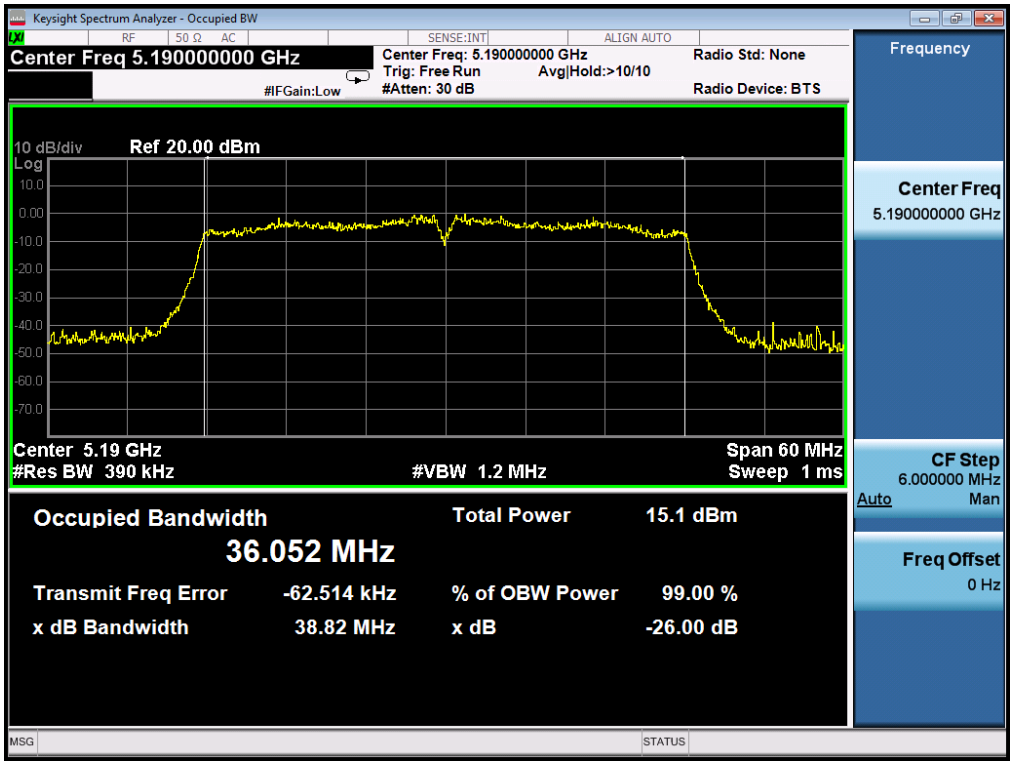


TEST PLOT OF BANDWIDTH FOR 5230MHz

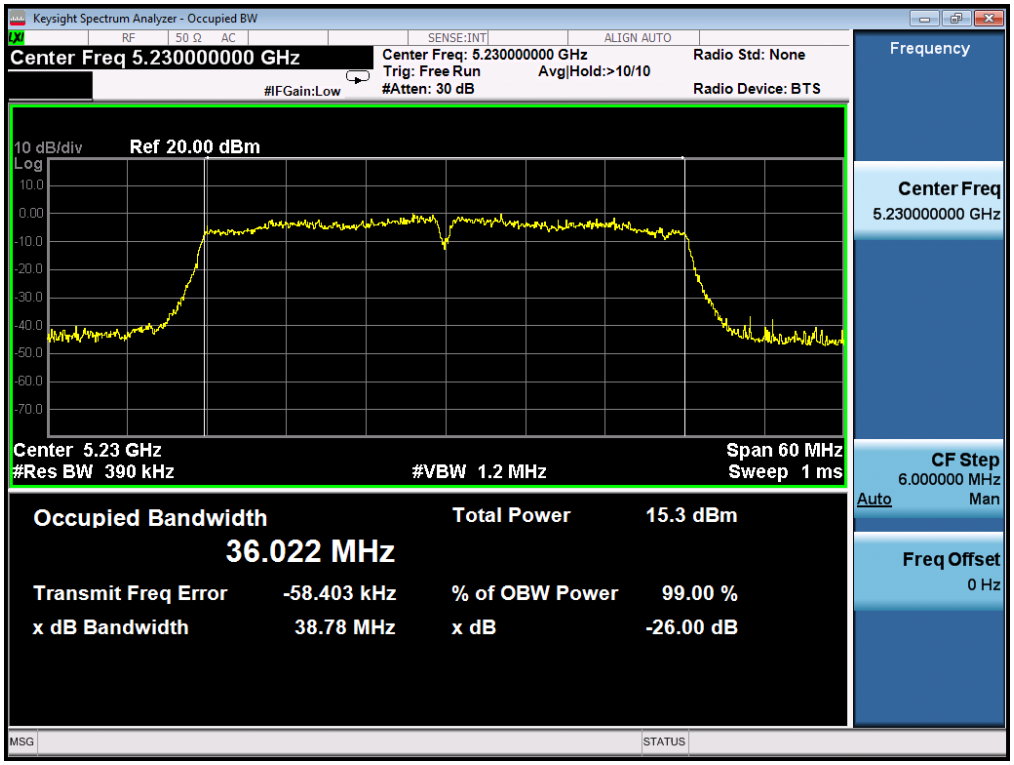


802.11n40 TEST RESULT-ant1：

TEST PLOT OF BANDWIDTH FOR 5190MHz



TEST PLOT OF BANDWIDTH FOR 5230MHz



10. MAXIMUM CONDUCTED OUTPUT PEAK POWER SPECTRAL DENSITY

10.1 MEASUREMENT PROCEDURE

Refer to KDB 789033 section F

10.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer To Section 8.2.

10.3 MEASUREMENT EQUIPMENT USED

Refer To Section 6.

10.4 LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION				
Port	**Frequency (MHz)**	**Power density (dBm/MHz)**	**Applicable Limits (dBm)**	**Pass or Fail**
Ant0	5180	6.821	11	Pass
	5200	6.426	11	Pass
	5240	6.493	11	Pass
Ant1	5180	6.300	11	Pass
	5200	5.190	11	Pass
	5240	5.895	11	Pass
	Frequency (MHz)	**Power density (dBm/500kHz)**	**Applicable Limits (dBm)**	**Pass or Fail**
Ant0	5745	7.455	30	Pass
	5785	7.473	30	Pass
	5825	6.768	30	Pass
Ant1	5745	6.088	30	Pass
	5785	7.190	30	Pass
	5825	6.182	30	Pass

LIMITS AND MEASUREMENT RESULT FOR 802.11N20/40 MODULATION				
Port	**Frequency (MHz)**	**Power density (dBm/MHz)**	**Applicable Limits (dBm)**	**Pass or Fail**
Ant0	5180	6.691	11	Pass
	5200	5.746	11	Pass

	5240	6.017	11	Pass
	5190	3.525	11	Pass
	5230	2.820	11	Pass
Ant1	5180	6.126	11	Pass
	5200	6.007	11	Pass
	5240	6.722	11	Pass
	5190	3.838	11	Pass
	5230	4.837	11	Pass
Sum	5180	9.43	11	Pass
	5200	8.89	11	Pass
	5240	9.39	11	Pass
	5190	6.69	11	Pass
	5230	6.95	11	Pass
	Frequency (MHz)	**Power density (dBm/500kHz)**	**Applicable Limits (dBm)**	**Pass or Fail**
Ant0	5745	7.650	30	Pass
	5785	6.304	30	Pass
	5825	6.642	30	Pass
	5755	4.495	30	Pass
	5795	3.701	30	Pass
Ant1	5745	7.223	30	Pass
	5785	5.718	30	Pass
	5825	5.028	30	Pass
	5755	4.095	30	Pass
	5795	2.958	30	Pass
Sum	5745	10.45	30	Pass
	5785	9.03	30	Pass
	5825	8.92	30	Pass
	5755	7.31	30	Pass

	5795	6.36	30	Pass

802.11a20 TEST RESULT-ant0:

TEST PLOT FOR 5180MHz

TEST PLOT FOR 5200MHz

TEST PLOT FOR 5240MHz

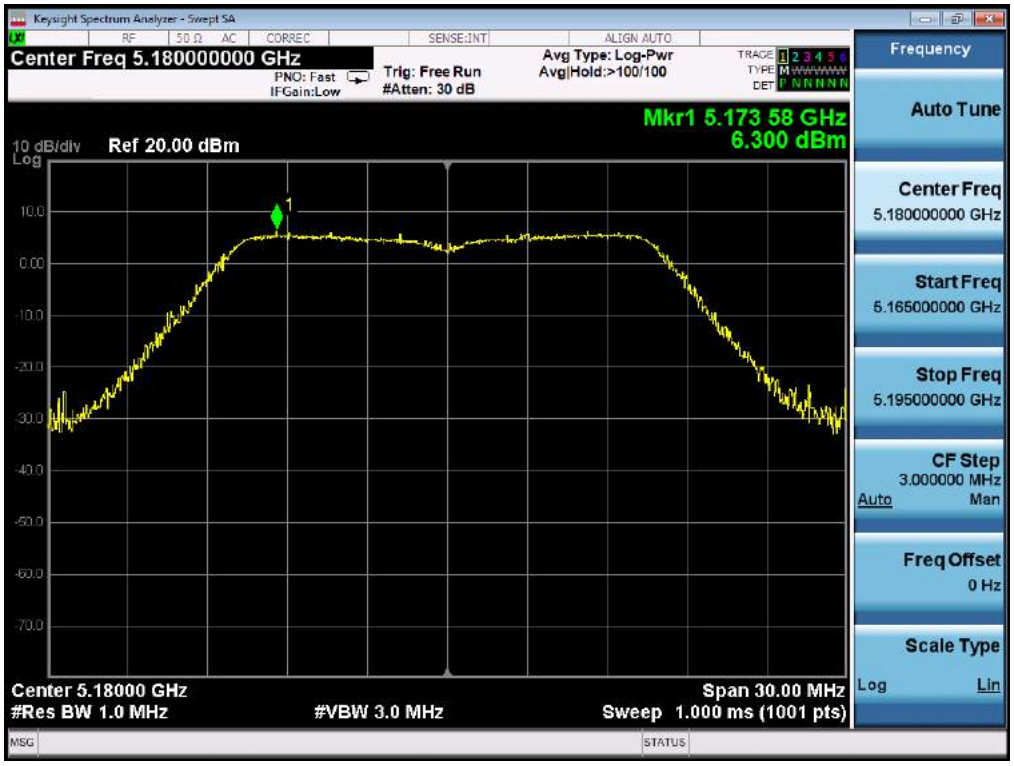
TEST PLOT FOR 5745MHz

TEST PLOT FOR 5785MHz

TEST PLOT FOR 5825MHz

802.11a20 TEST RESULT-ant1:

TEST PLOT OF SPECTRAL DENSITY FOR 5180MHz



TEST PLOT OF SPECTRAL DENSITY FOR 5200MHz

TEST PLOT OF SPECTRAL DENSITY FOR 5240MHz

TEST PLOT OF SPECTRAL DENSITY FOR 5785MHz

TEST PLOT OF SPECTRAL DENSITY FOR 5745MHz

TEST PLOT OF SPECTRAL DENSITY FOR 5825MHz

802.11n20 TEST RESULT-ant0

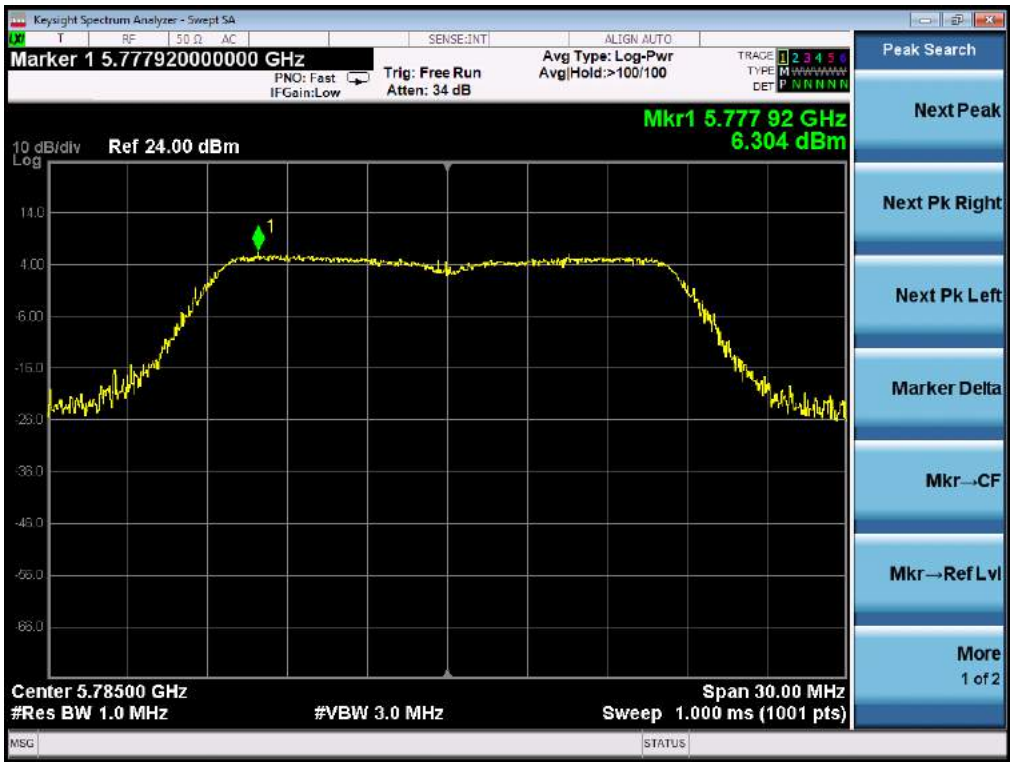
TEST PLOT FOR 5180MHz

TEST PLOT FOR 5200MHz

TEST PLOT FOR 5240MHz

TEST PLOT FOR 5745MHz

TEST PLOT FOR 5745MHz



TEST PLOT FOR 5825MHz

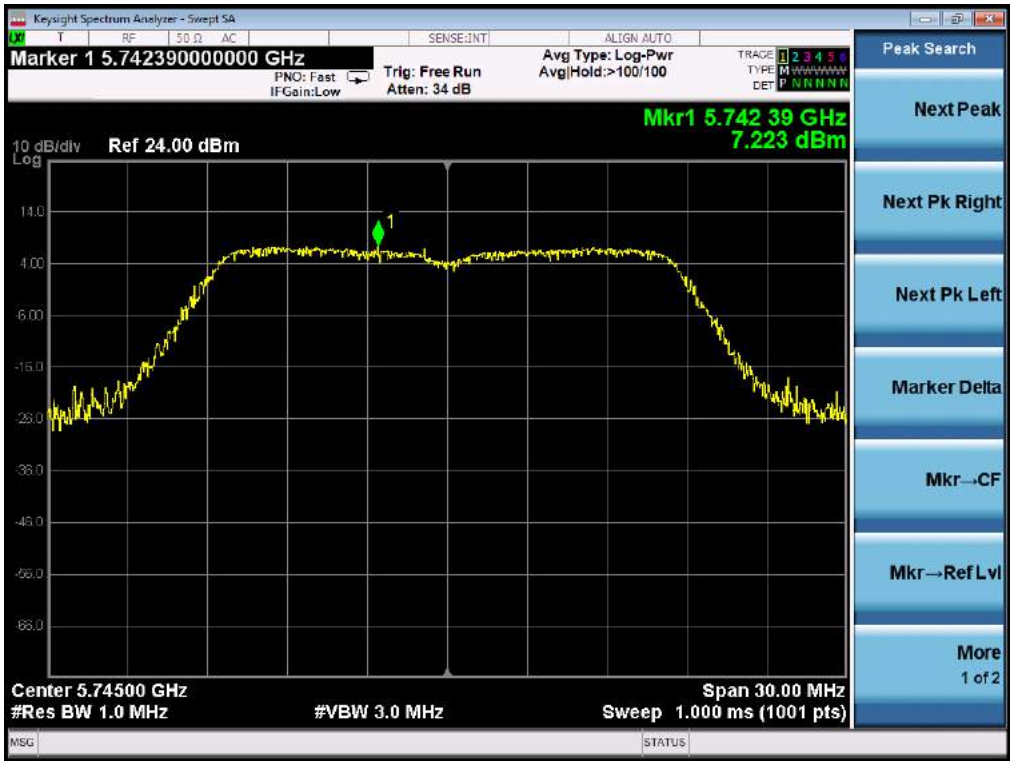
802.11n20 TEST RESULT-ant1:

TEST PLOT FOR 5180MHz

TEST PLOT FOR 5200MHz

TEST PLOT FOR 5240MHz

TEST PLOT FOR 5745MHz



TEST PLOT FOR 5785MHz

TEST PLOT FOR 5825MHz

802.11n40 TEST RESULT-ant0:

TEST PLOT FOR 5190MHz

TEST PLOT FOR 5230MHz

TEST PLOT FOR 5755MHz

TEST PLOT FOR 5795MHz

802.11n40 TEST RESULT-ant1:

TEST PLOT FOR 5190MHz

TEST PLOT FOR 5230MHz

TEST PLOT FOR 5755MHz

TEST PLOT FOR 5795MHz

11. CONDUCTED SPURIOUS EMISSION

11.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2, Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

11.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 8.2.

11.3. MEASUREMENT EQUIPMENT USED

The same as described in section 6.

11.4. LIMITS AND MEASUREMENT RESULT

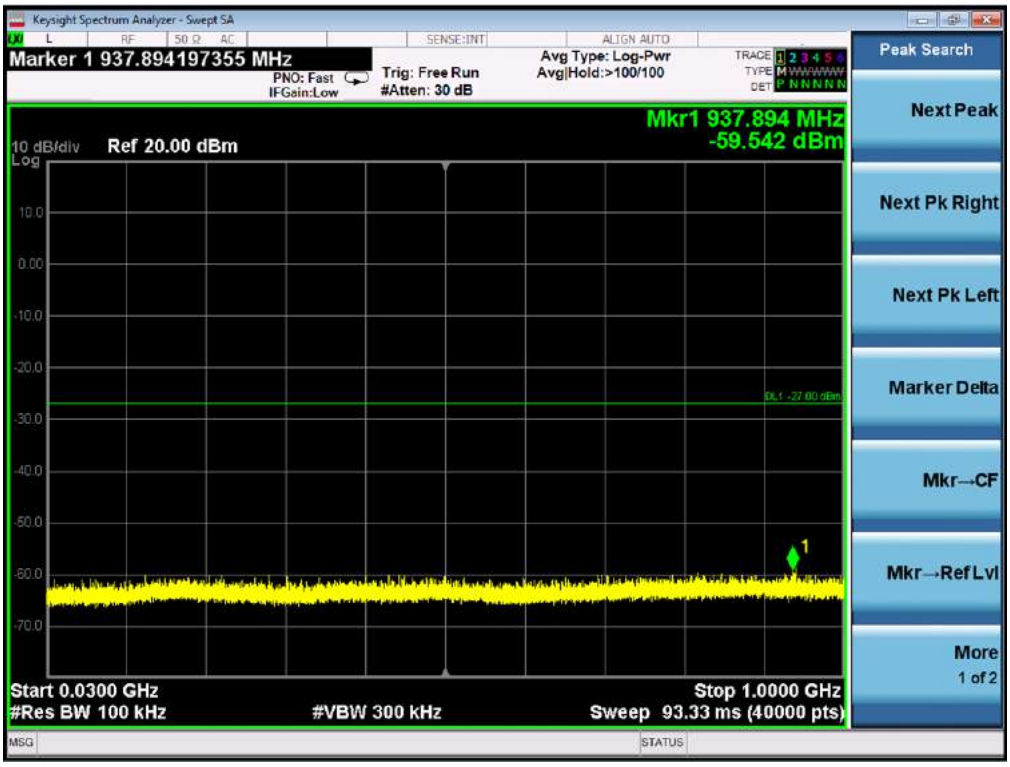
LIMITS AND MEASUREMENT RESULT		
Applicable Limits	Measurement Result	
	Test channel	Criteria
27dBm	5150MHz-5250MHz	PASS
17dBm within 5715-5725MHz and 5850-5860MHz 27dBm outside 5715-5860MHz	5725MHz-5825MHz	PASS

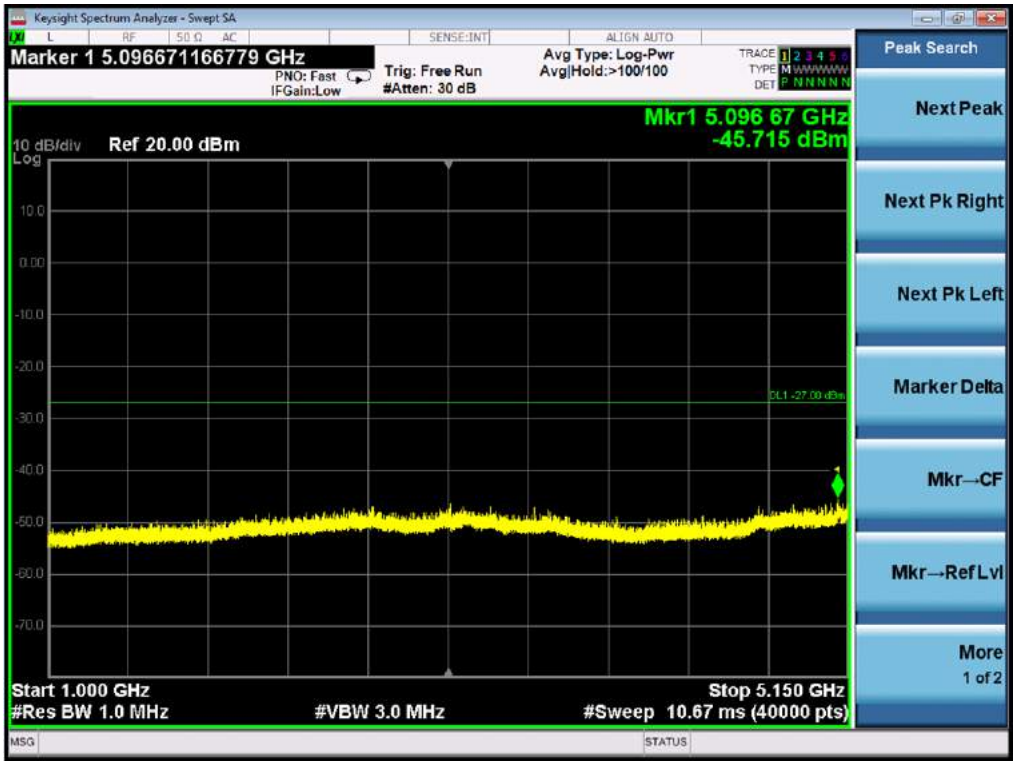
Note：

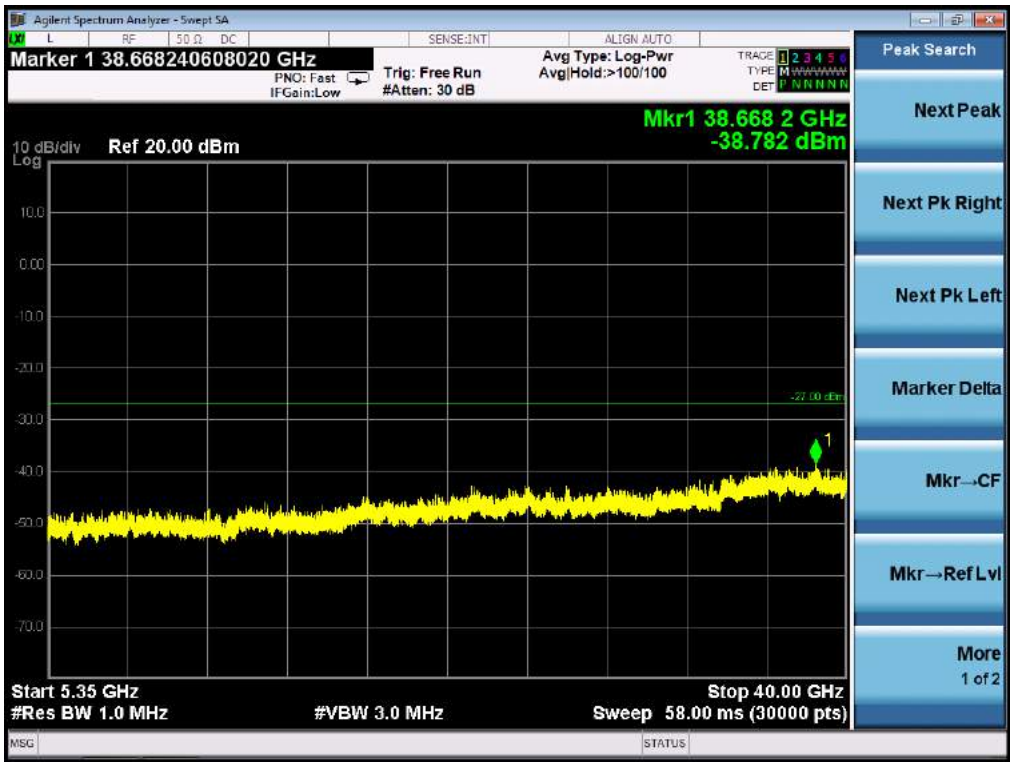
Two transmit chains had been tested, the chain 0 was the worst case and record in the test report.The spurious emission at chain 0 is more than 3dB below the limits, so the MIMO results for the spurious emissions are comply with the requirement.

FOR 802.11A20 MODULATION,ant0

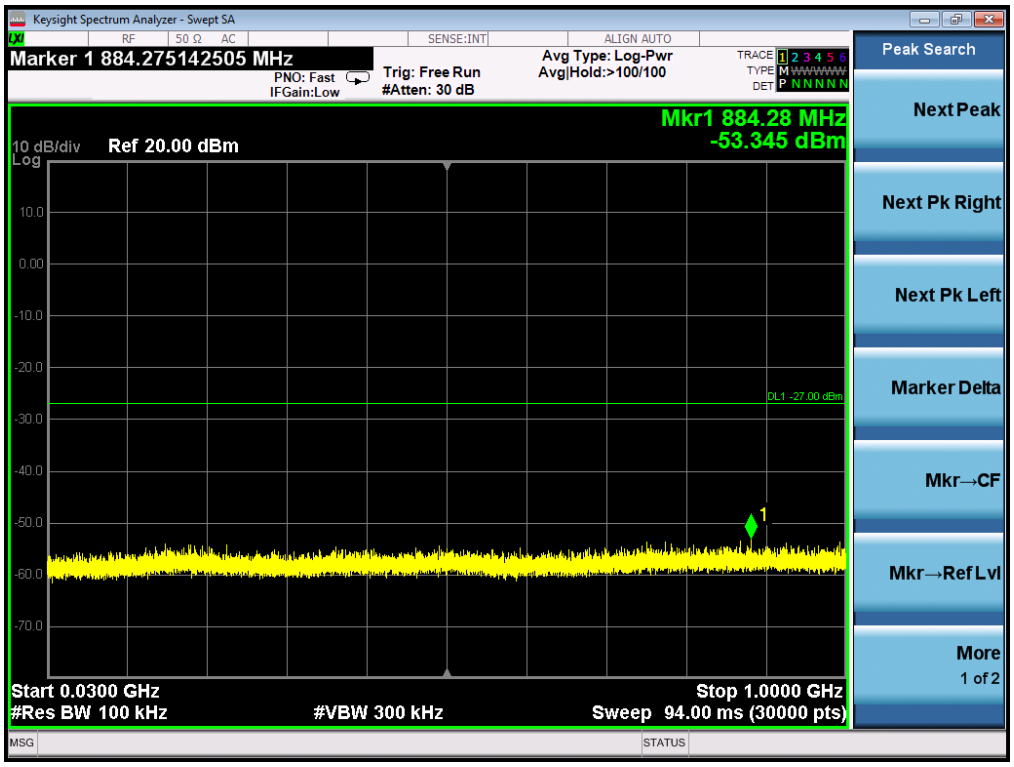
TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5180MHz

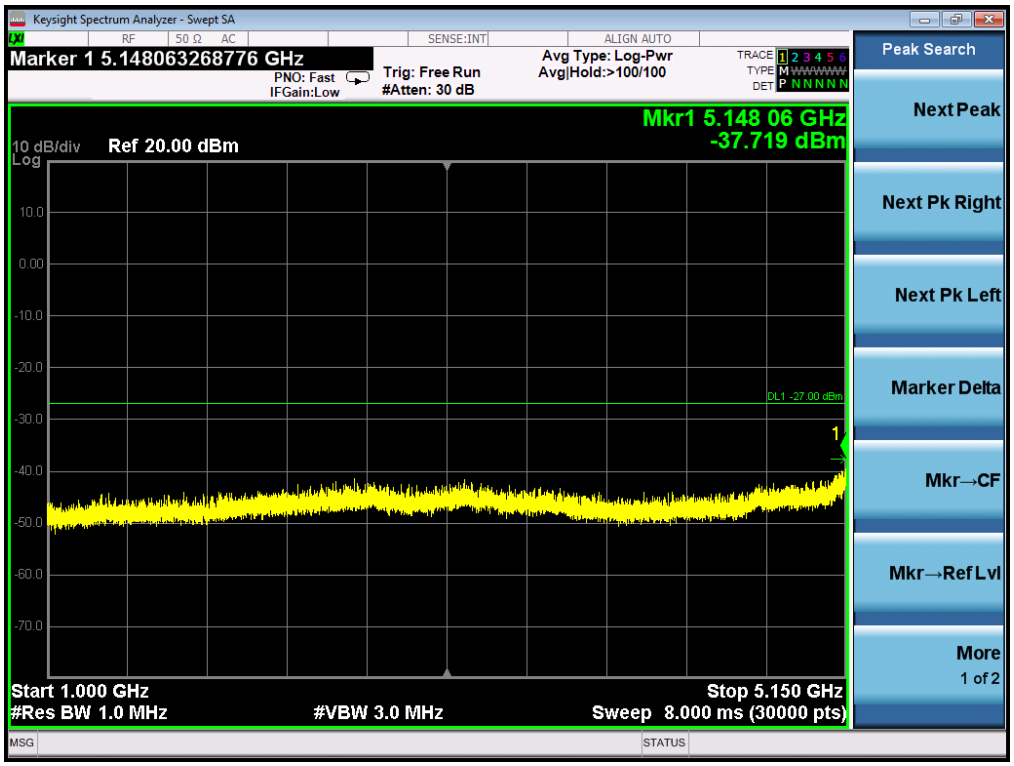


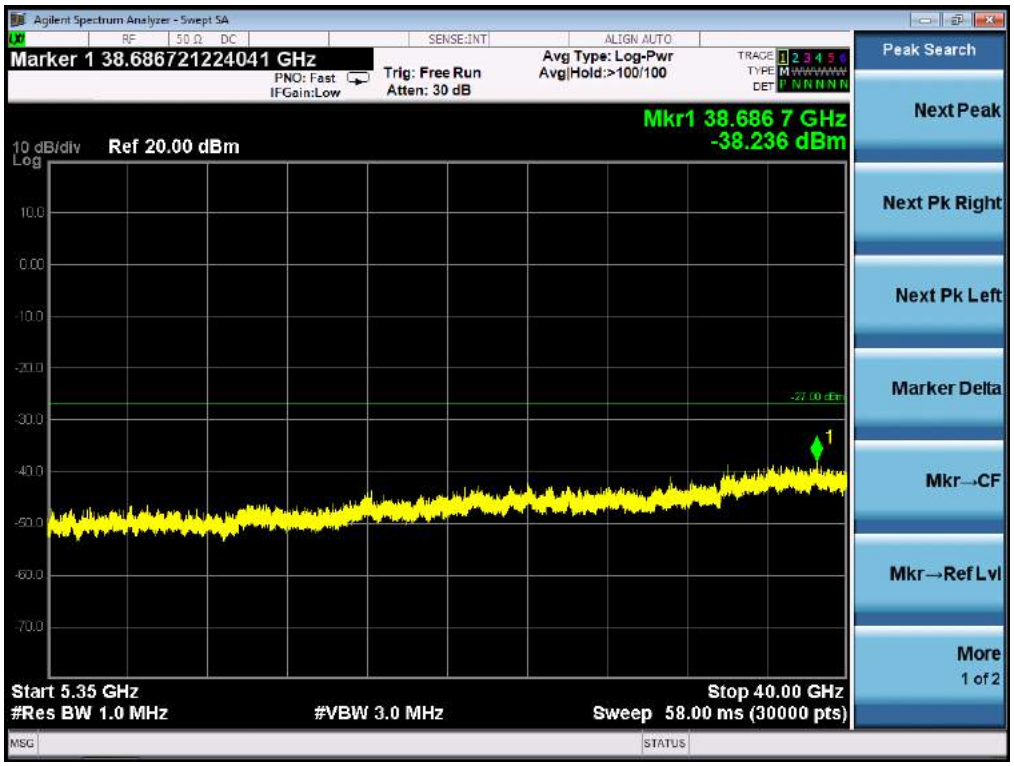




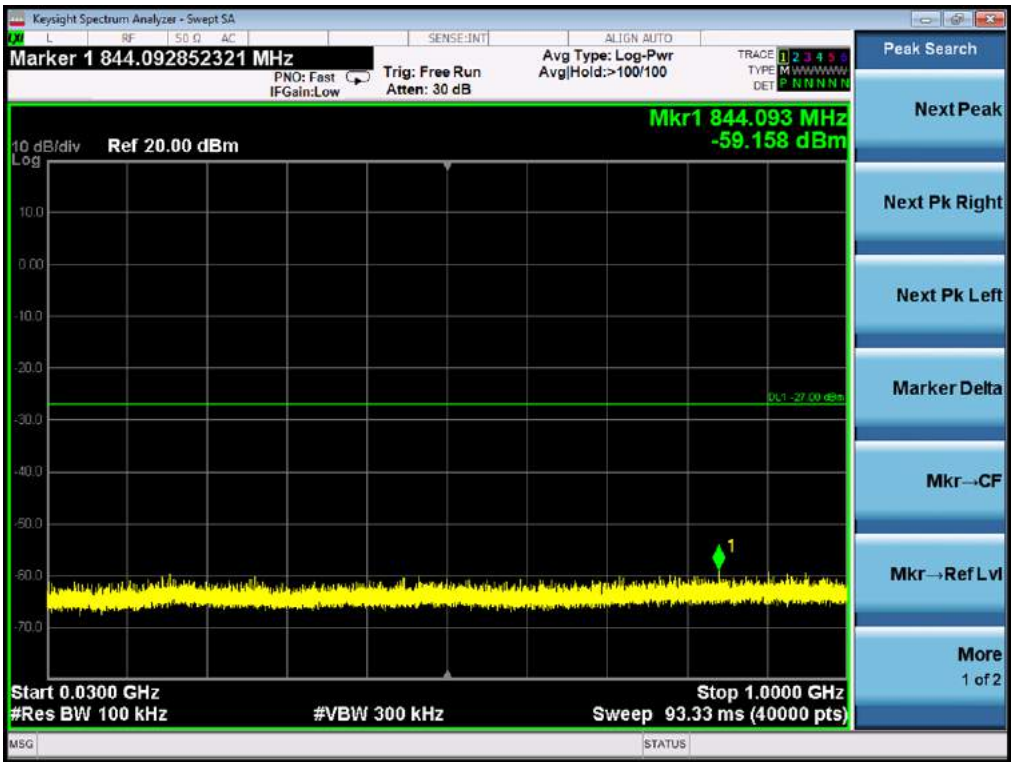
TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5200MHz

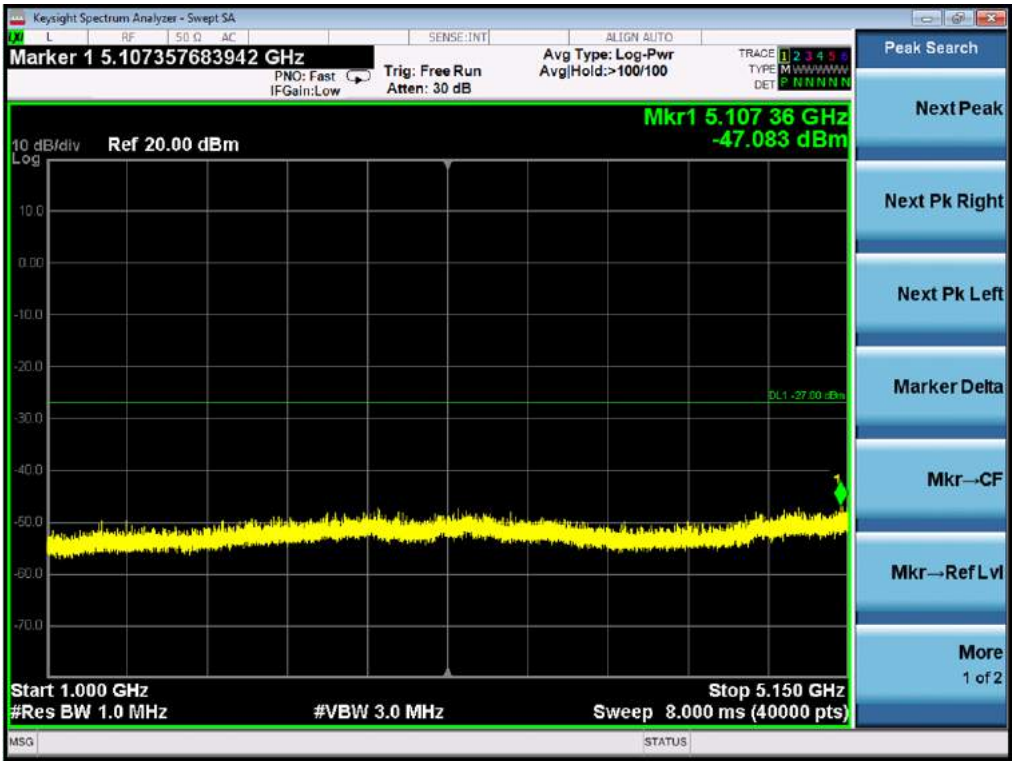


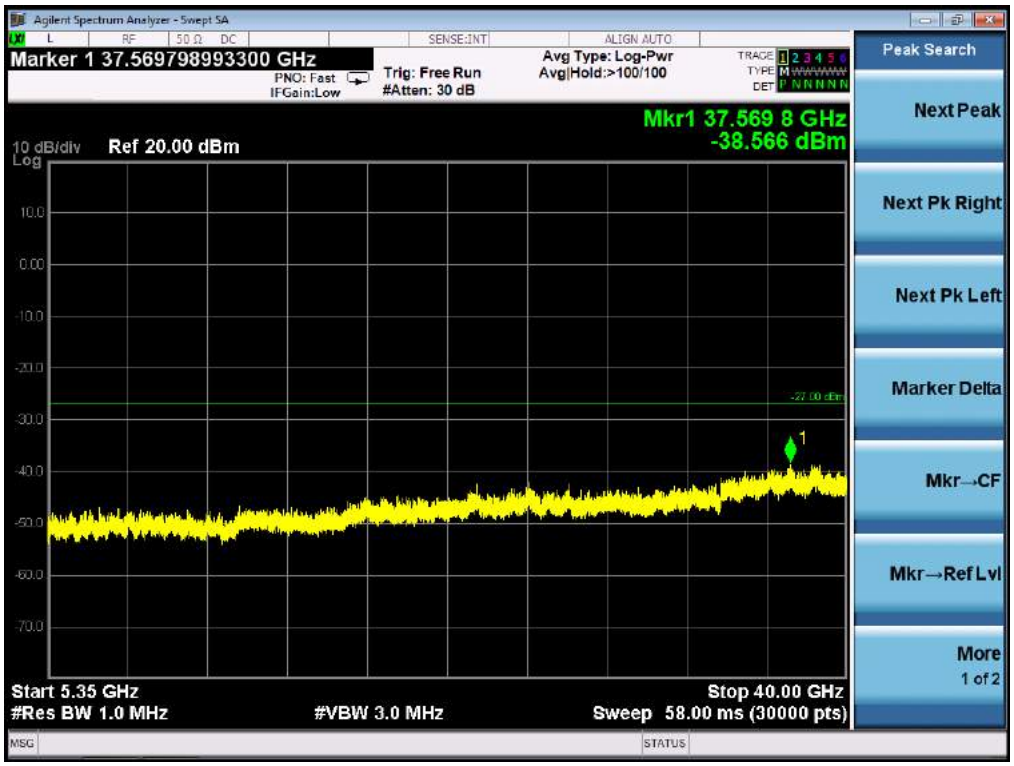

Keysight Spectrum Analyzer - Swept SA
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
Marker 1 5.148063268776 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Mkr1 5.148 06 GHz
-37.719 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
DL1 -27.00 dBm
1
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.150 GHz
Sweep 8.000 ms (30000 pts)
MSG
STATUS
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Agilent Spectrum Analyzer - Swept SA
RF 50 Ω DC
SENSE:INT
ALIGN AUTO
Marker 1 38.686721224041 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Mkr1 38.686 7 GHz
-38.236 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.00 dBm
1
Start 5.35 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 40.00 GHz
Sweep 58.00 ms (30000 pts)
MSG
STATUS
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

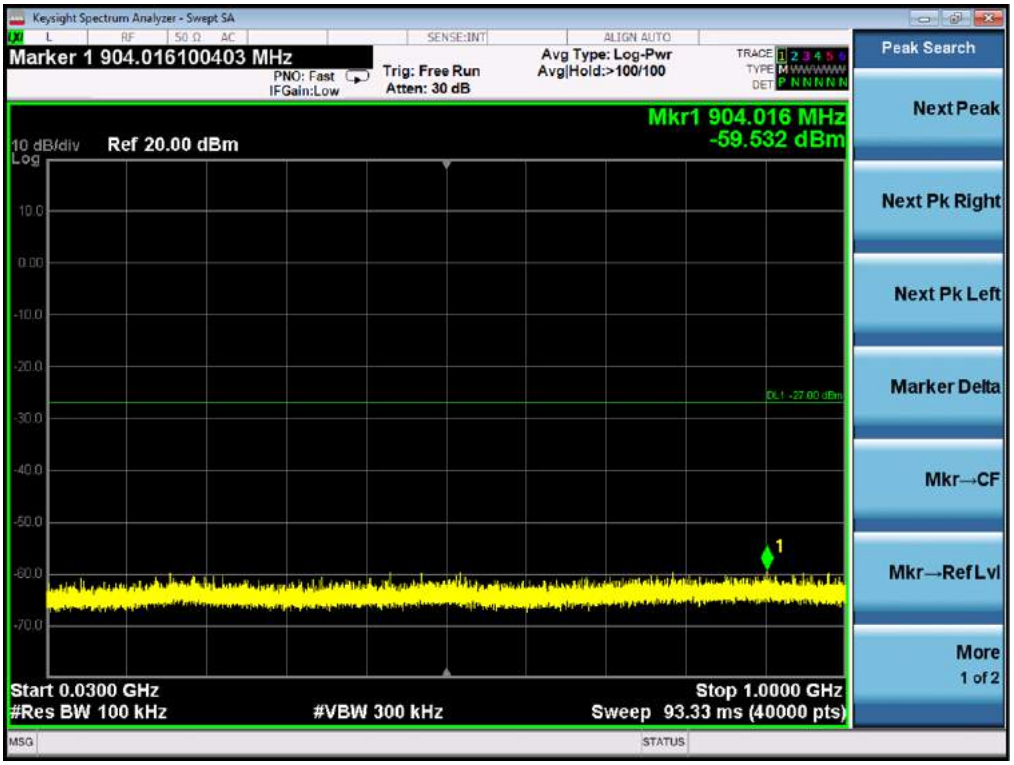
TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5240MHz

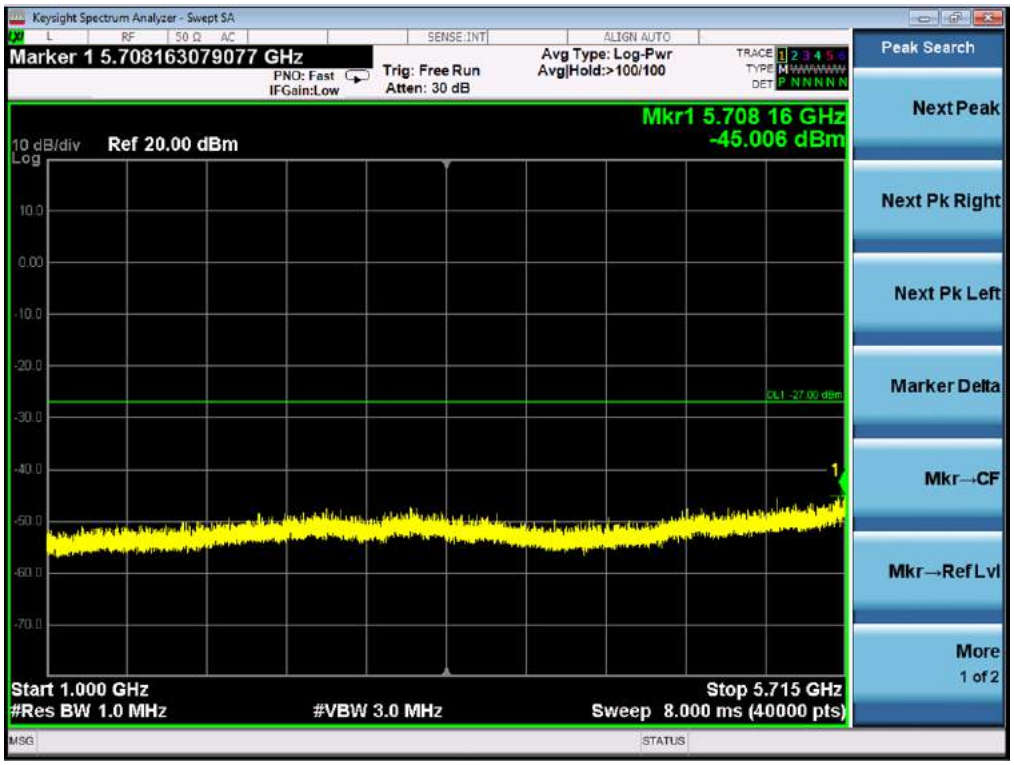


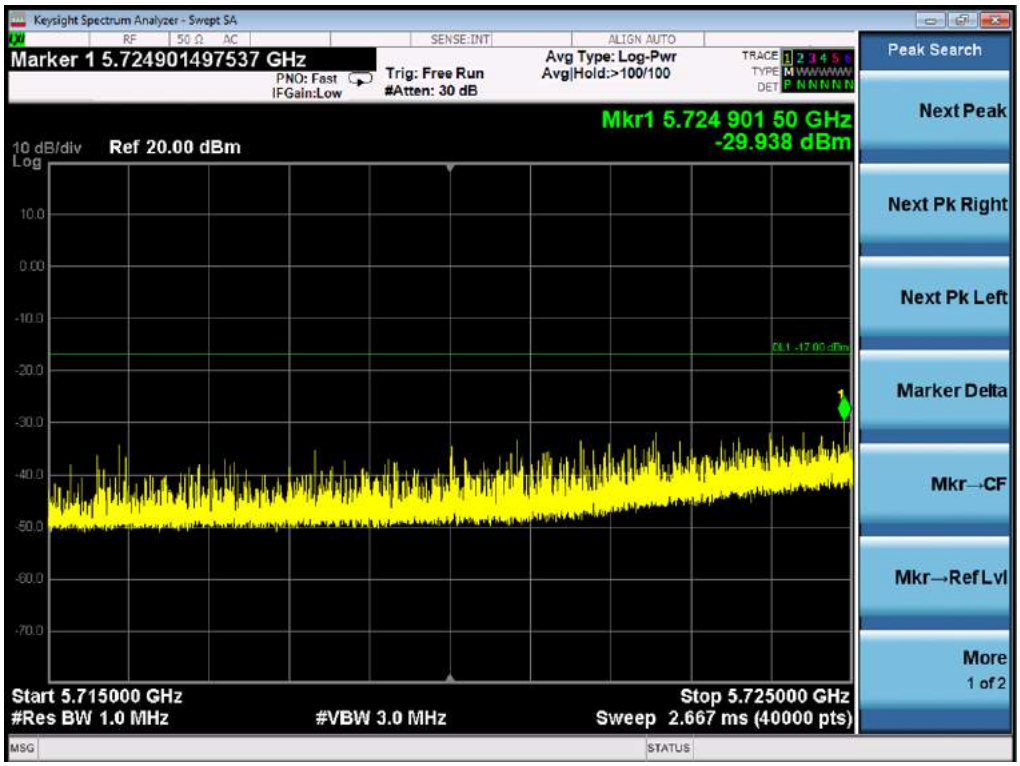


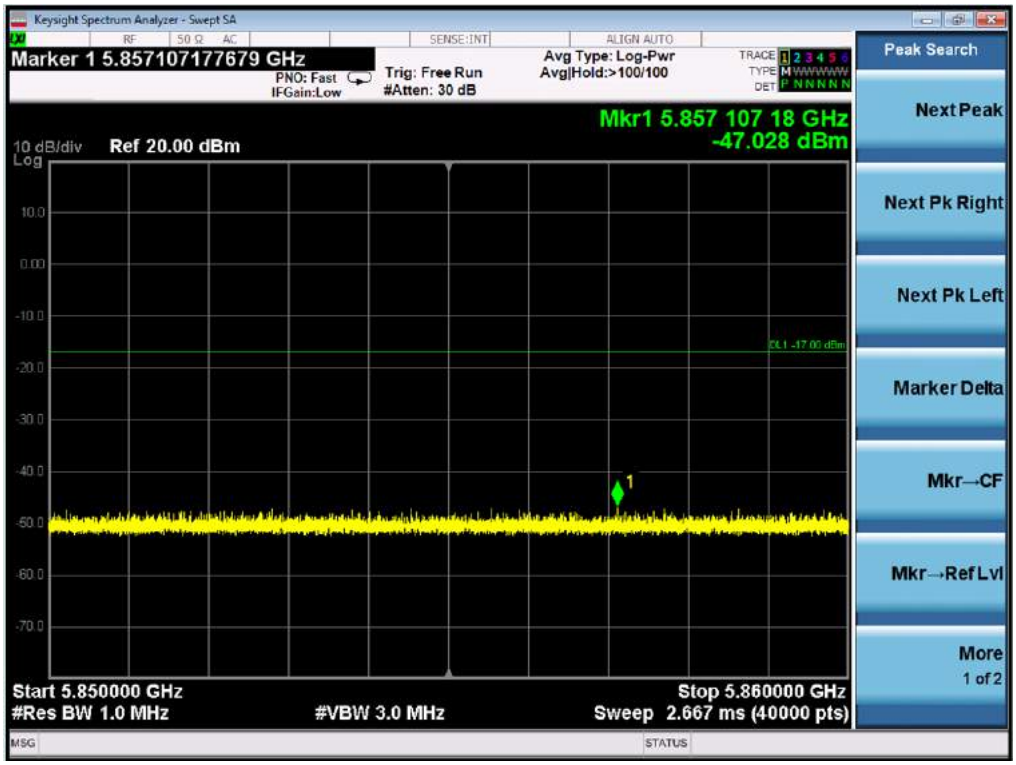


TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5745MHz



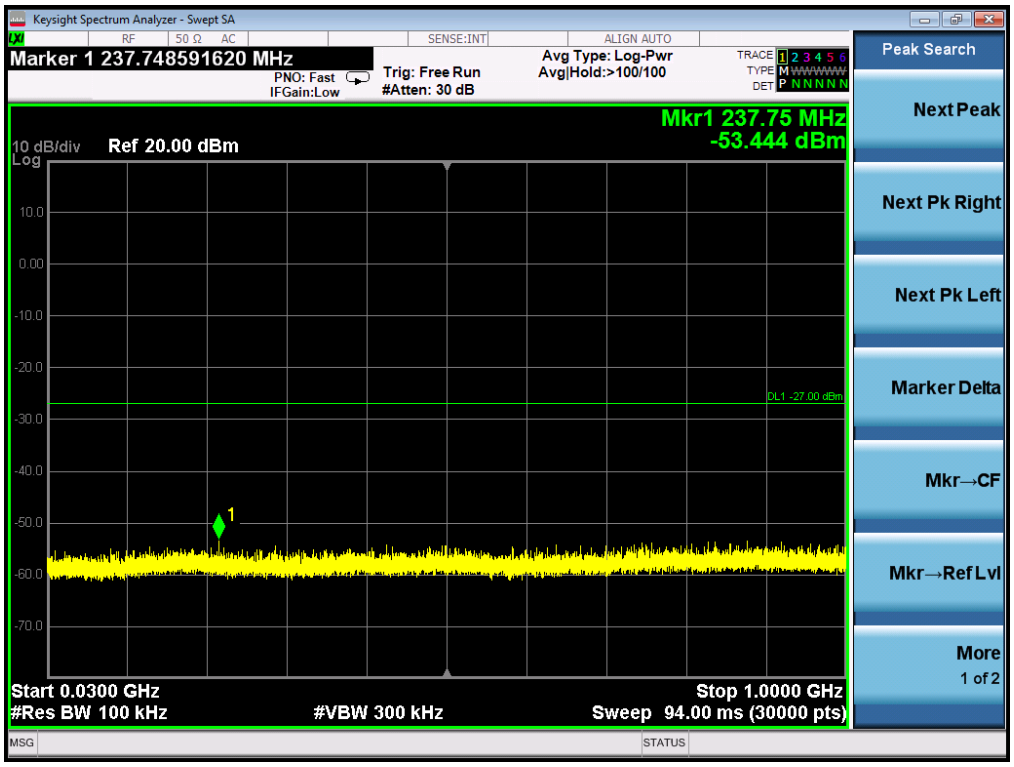

Keysight Spectrum Analyzer - Swept SA
Marker 1 5.708163079077 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Mkr1 5.708 16 GHz
-45.006 dBm
10 dB/div
Log
Ref 20.00 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.715 GHz
Sweep 8.000 ms (40000 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

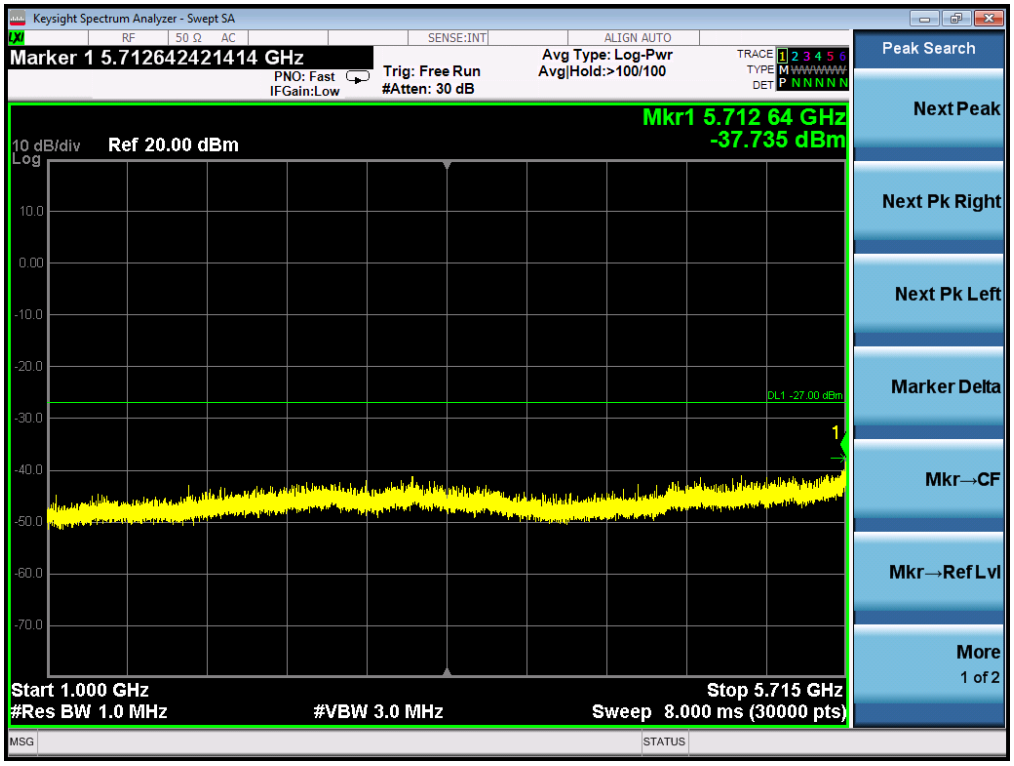

Keysight Spectrum Analyzer - Swept SA
Marker 1 5.724901497537 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Mkr1 5.724 901 50 GHz
-29.938 dBm
10 dB/div
Log
Ref 20.00 dBm
Start 5.715000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.725000 GHz
Sweep 2.667 ms (40000 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

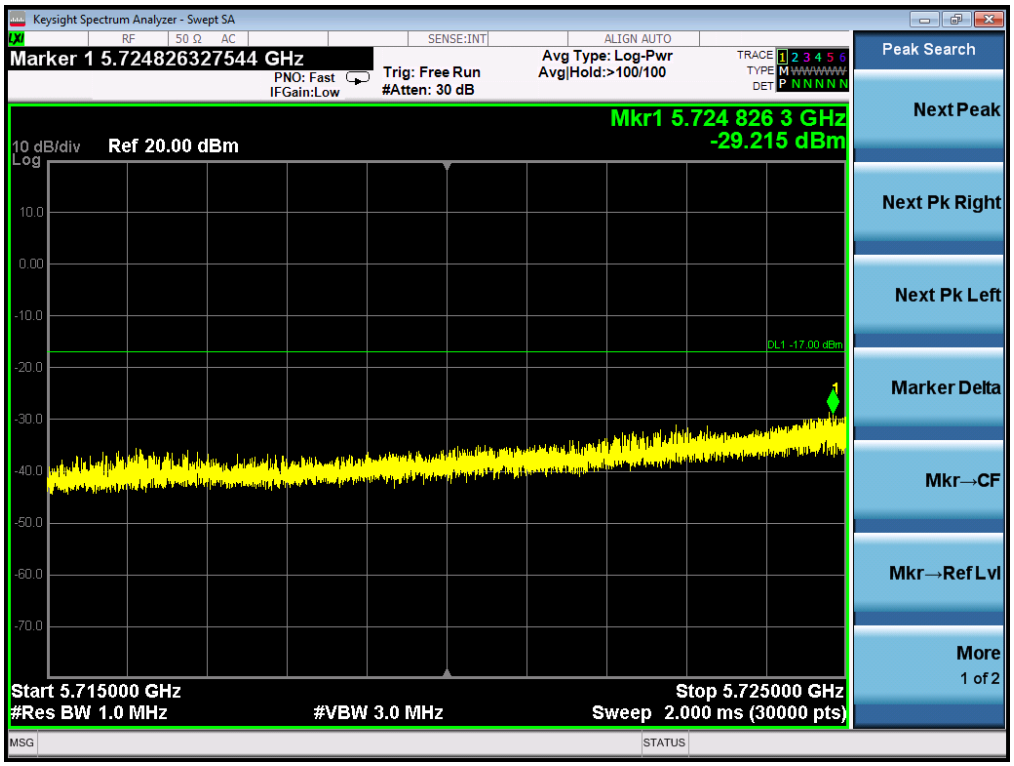

Keysight Spectrum Analyzer - Swept SA
Marker 1 5.857107177679 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Mkr1 5.857 107 18 GHz
-47.028 dBm
10 dB/div
Log
Ref 20.00 dBm
Start 5.850000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.860000 GHz
Sweep 2.667 ms (40000 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

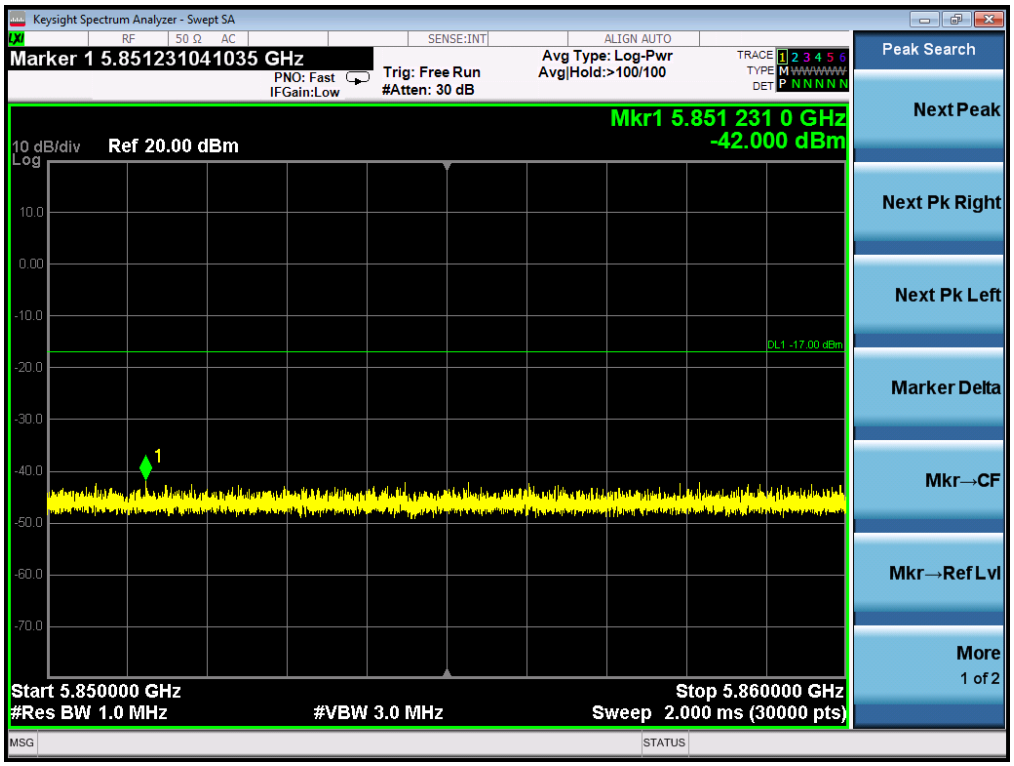

Agilent Spectrum Analyzer - Swept SA
Marker 1 37.448518950632 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Mkr1 37.448 5 GHz
-38.562 dBm
10 dB/div
Log
Ref 20.00 dBm
Start 5.86 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 40.00 GHz
Sweep 58.00 ms (30000 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5785MHz

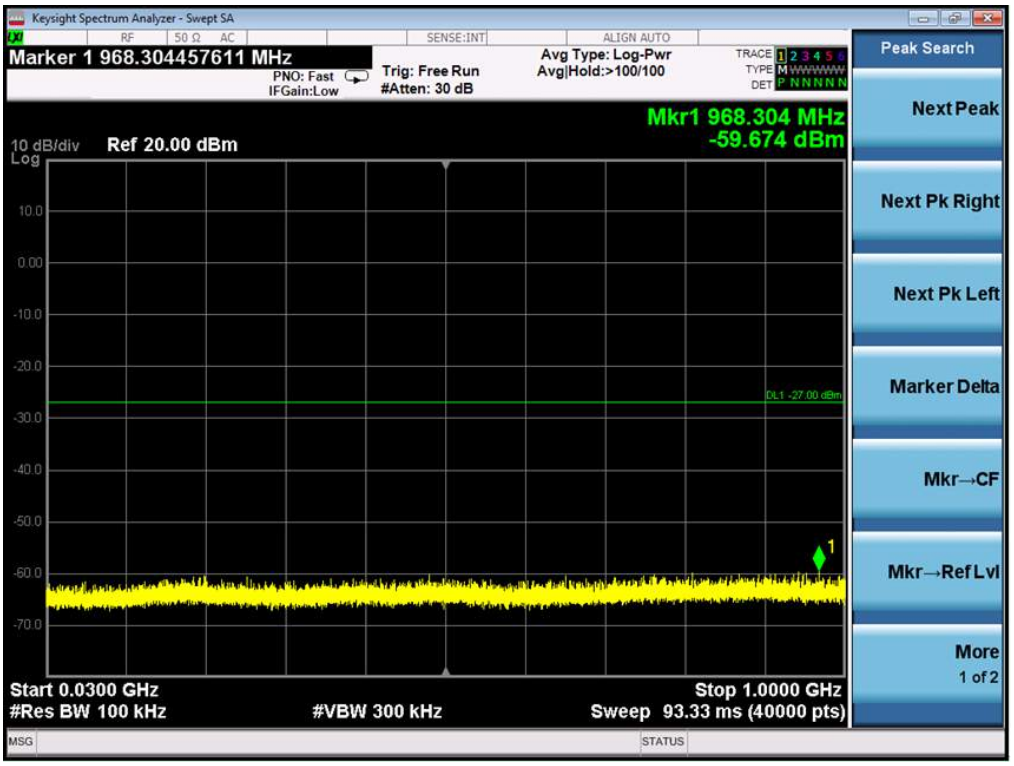


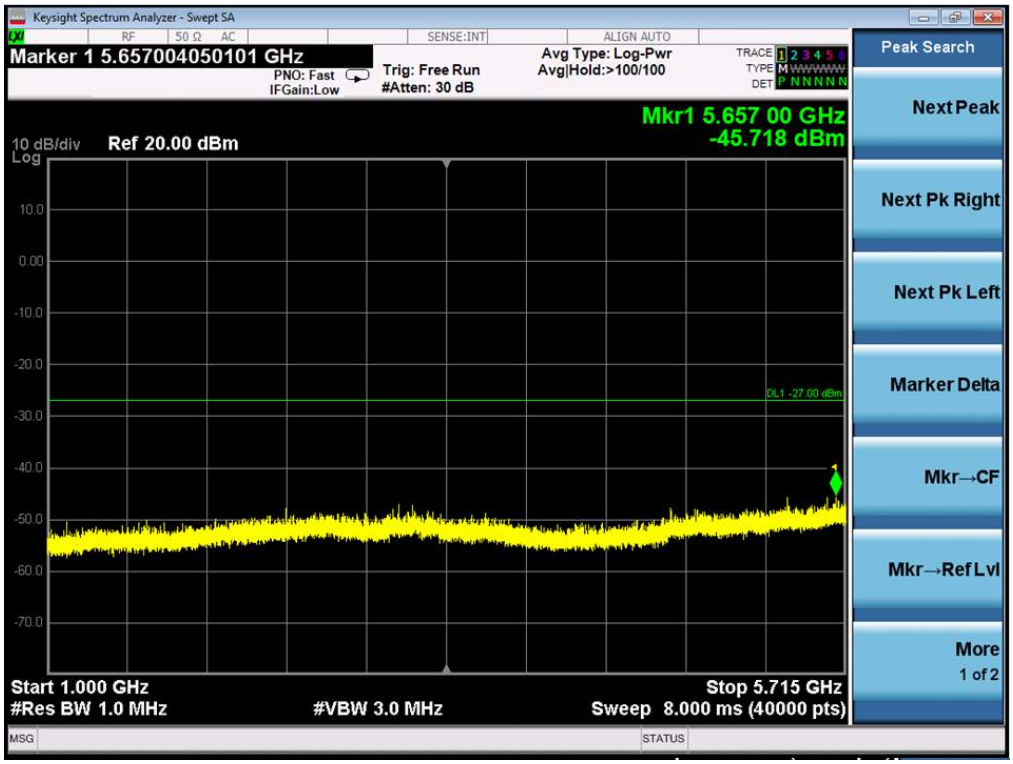


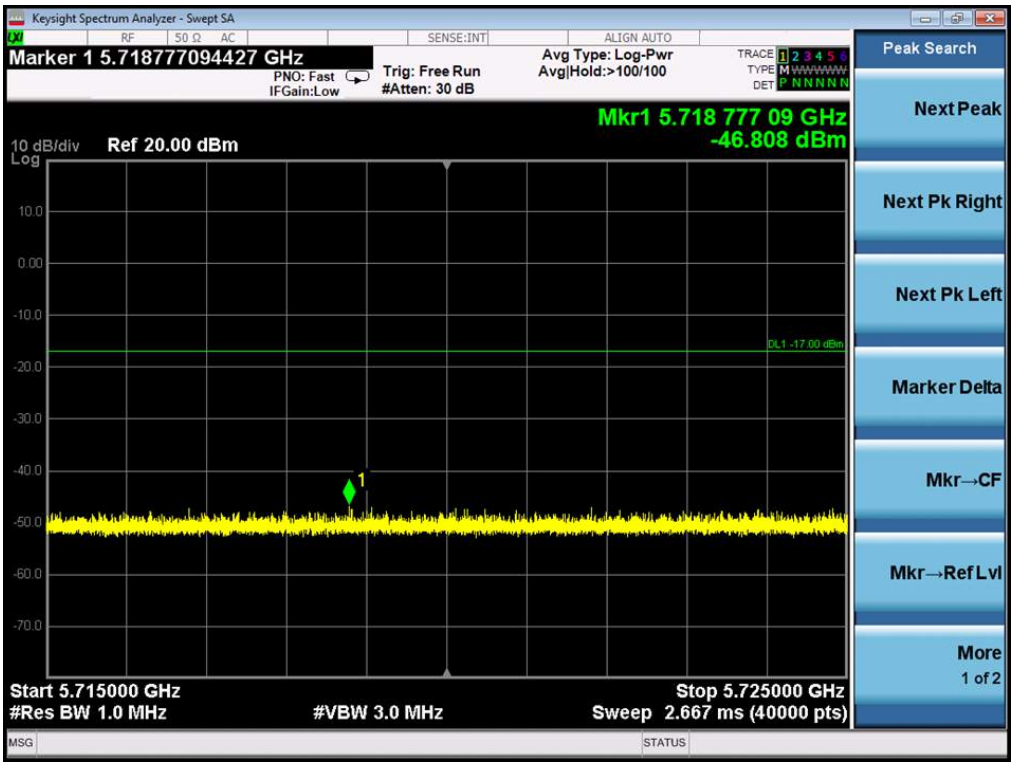

Keysight Spectrum Analyzer - Swept SA
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
Marker 1 5.724826327544 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2
Mkr1 5.724 826 3 GHz
-29.215 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
DL1 -17.00 dBm
1
Start 5.715000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.725000 GHz
Sweep 2.000 ms (30000 pts)
MSG
STATUS

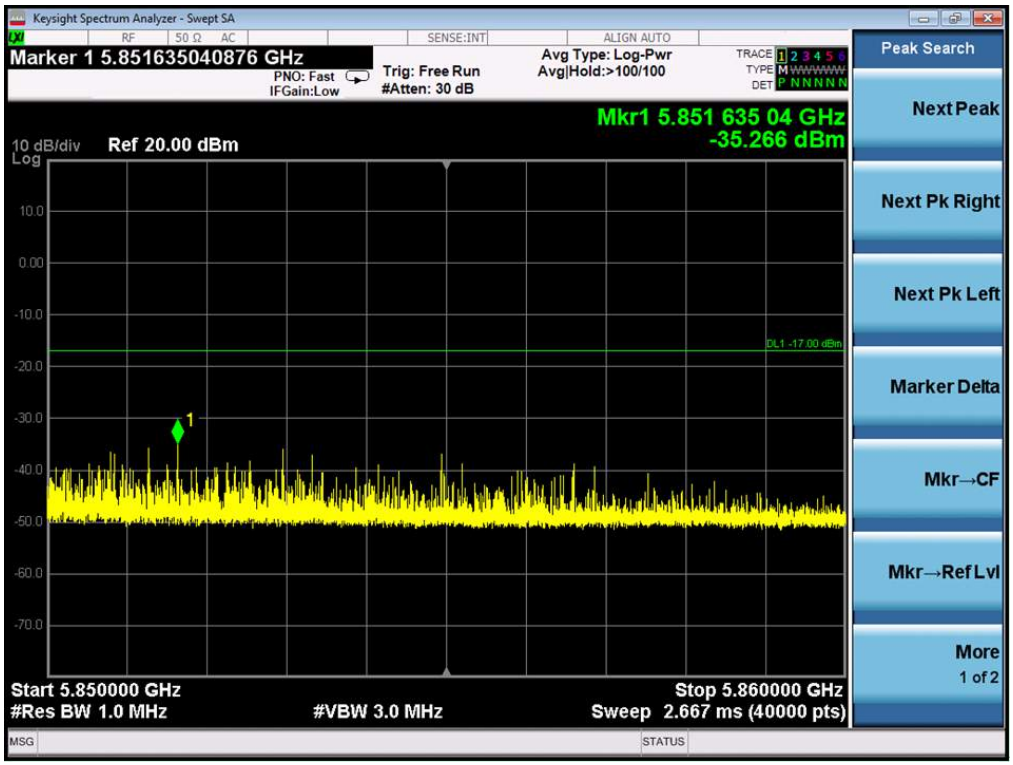

Keysight Spectrum Analyzer - Swept SA
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
Marker 1 5.851231041035 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2
Mkr1 5.851 231 0 GHz
-42.000 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
DL1 -17.00 dBm
1
Start 5.850000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.860000 GHz
Sweep 2.000 ms (30000 pts)
MSG
STATUS

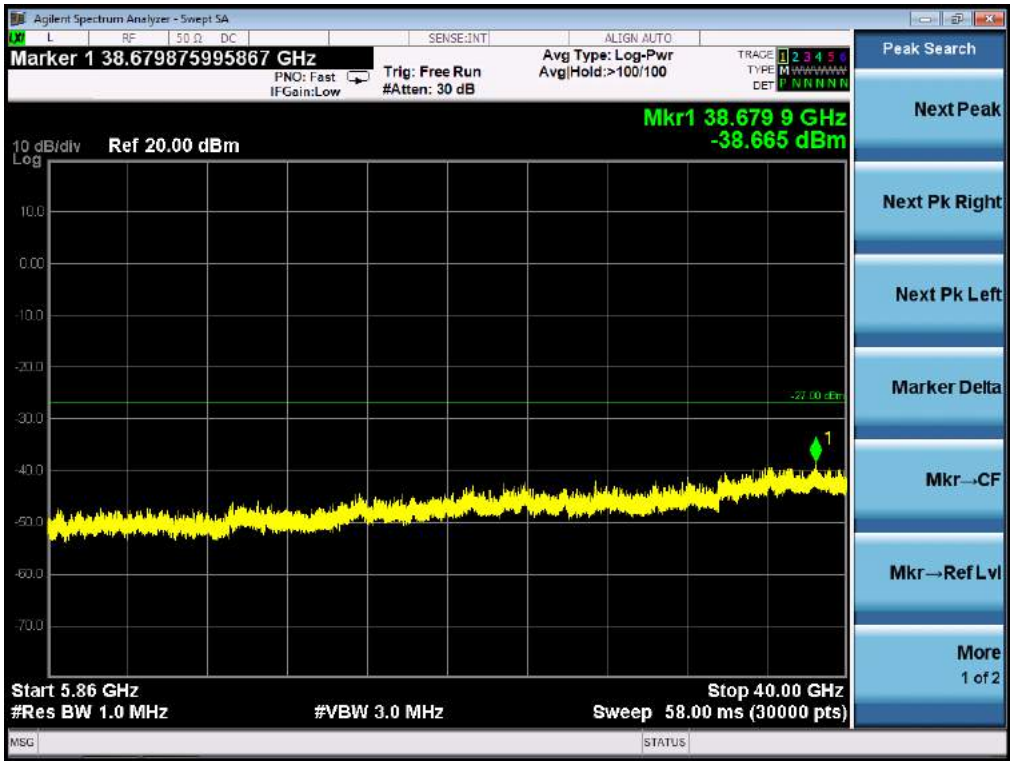
TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5825MHz




Keysight Spectrum Analyzer - Swept SA
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
Marker 1 5.657004050101 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Mkr1 5.657 00 GHz
-45.718 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
DL1 -27.00 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.715 GHz
Sweep 8.000 ms (40000 pts)
MSG
STATUS
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

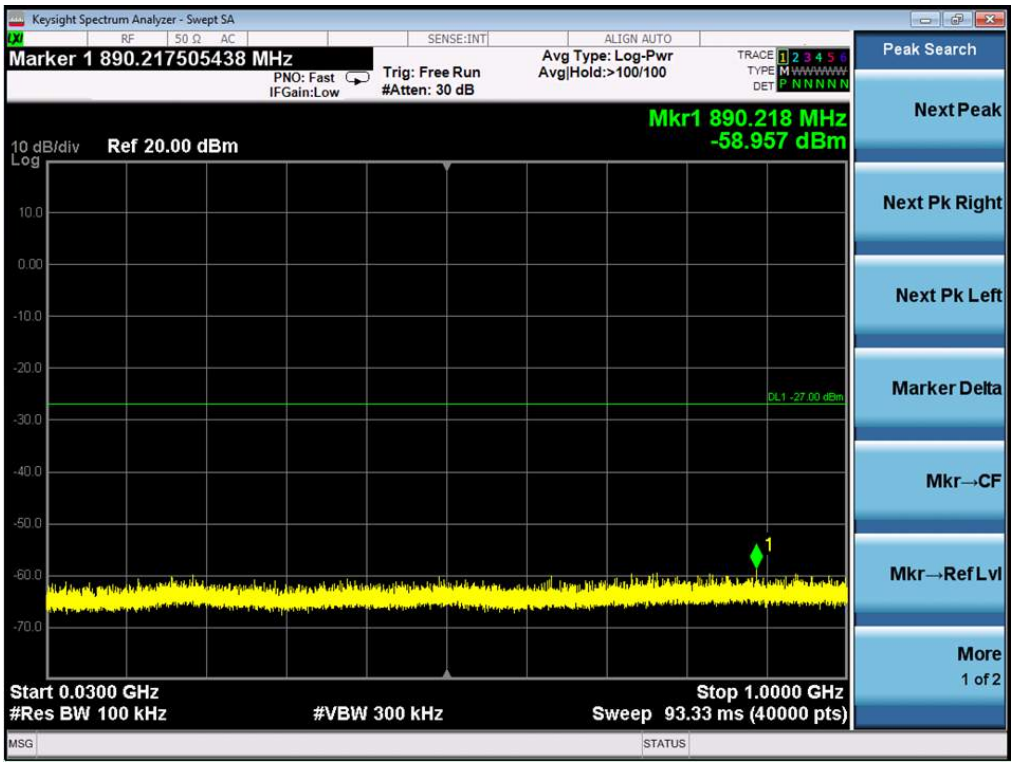

Keysight Spectrum Analyzer - Swept SA
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
Marker 1 5.718777094427 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Mkr1 5.718 777 09 GHz
-46.808 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
DL1 -17.00 dBm
Start 5.715000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.725000 GHz
Sweep 2.667 ms (40000 pts)
MSG
STATUS
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

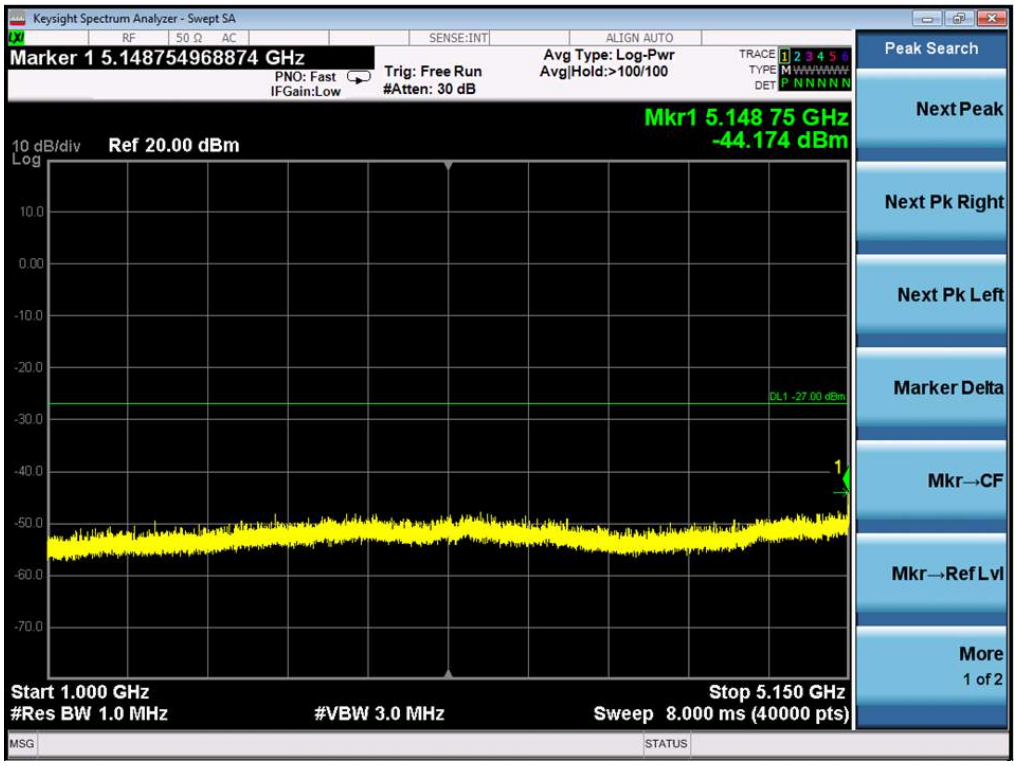

Keysight Spectrum Analyzer - Swept SA
Marker 1 5.851635040876 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Mkr1 5.851 635 04 GHz
-35.266 dBm
10 dB/div
Log
Ref 20.00 dBm
Start 5.850000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.860000 GHz
Sweep 2.667 ms (40000 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

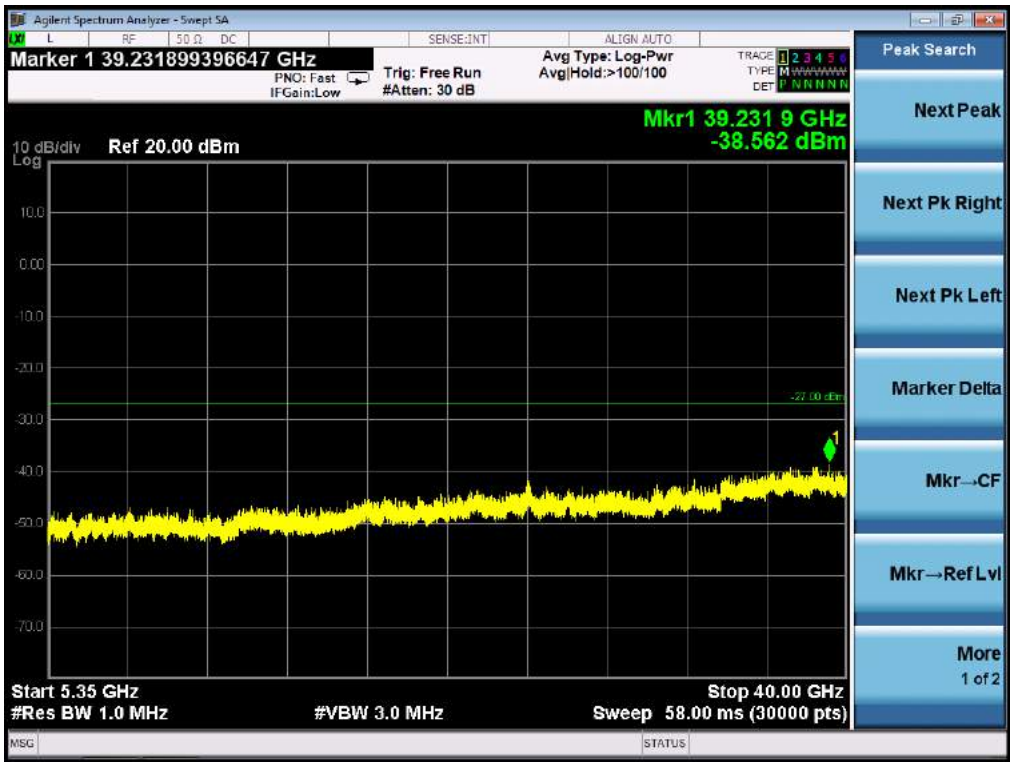

Agilent Spectrum Analyzer - Swept SA
Marker 1 38.679875995867 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Mkr1 38.679 9 GHz
-38.665 dBm
10 dB/div
Log
Ref 20.00 dBm
Start 5.86 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 40.00 GHz
Sweep 58.00 ms (30000 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

FOR 802.11N40 MODULATION, ant0

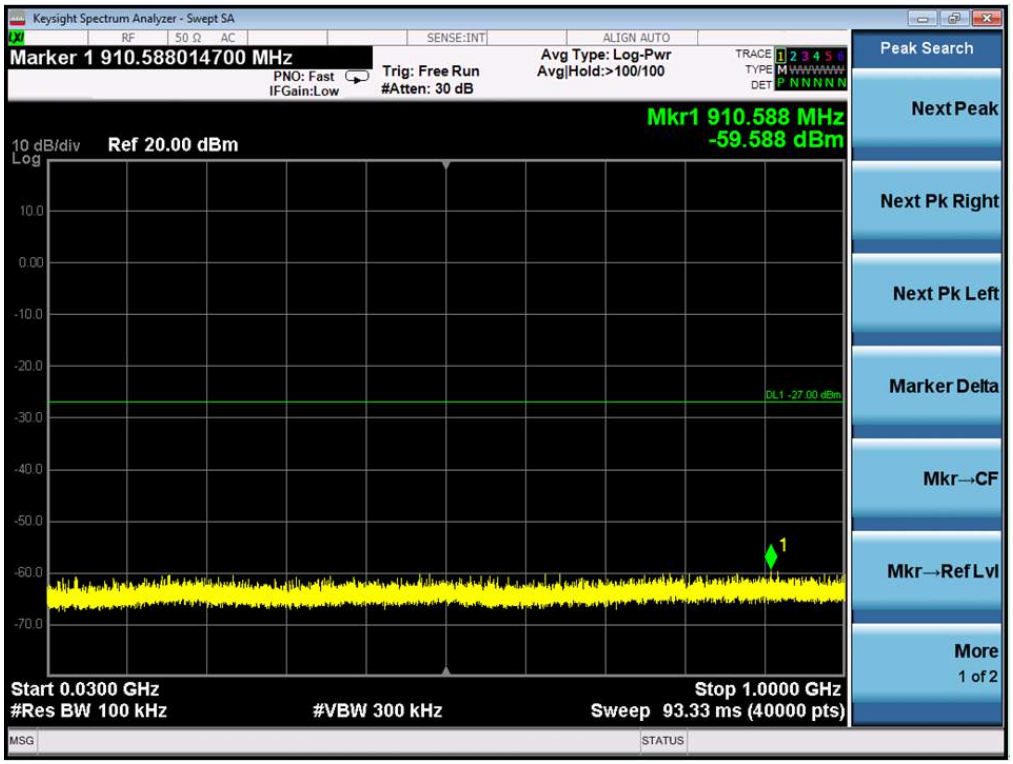
TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5190MHz

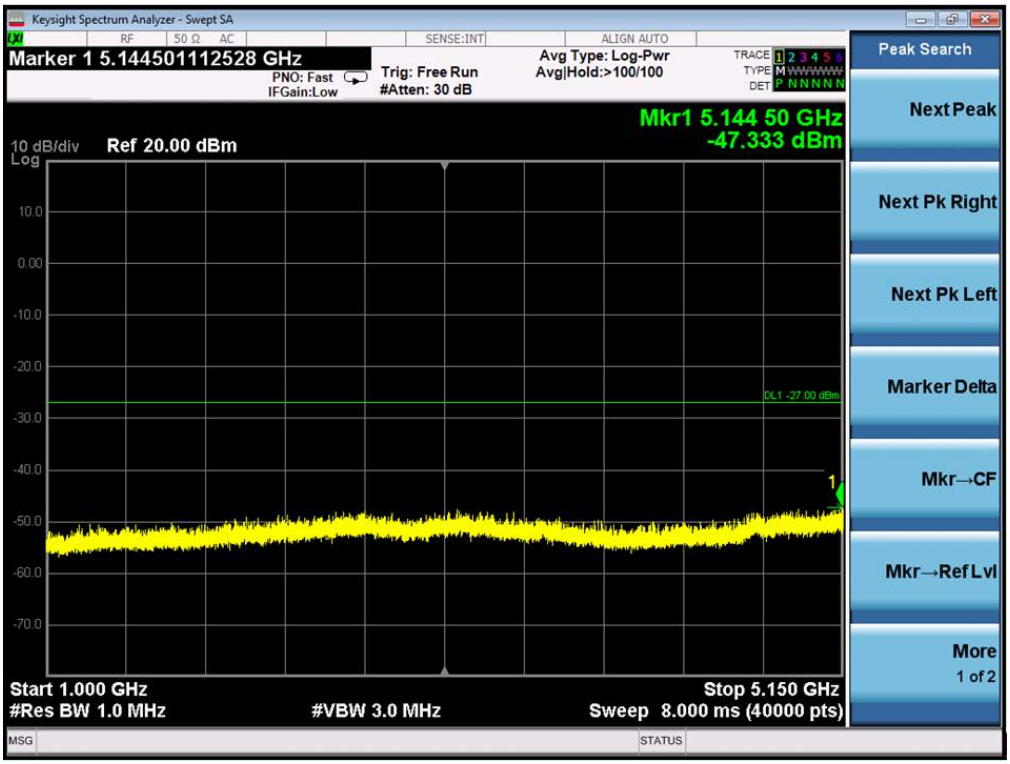






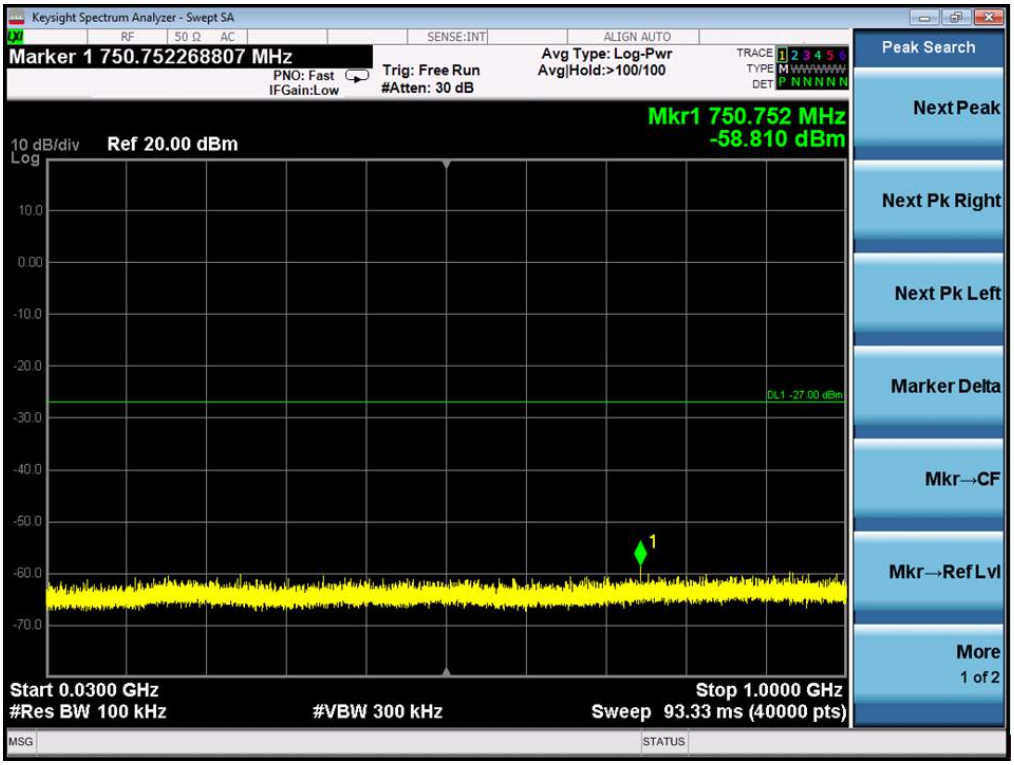
TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5230MHz

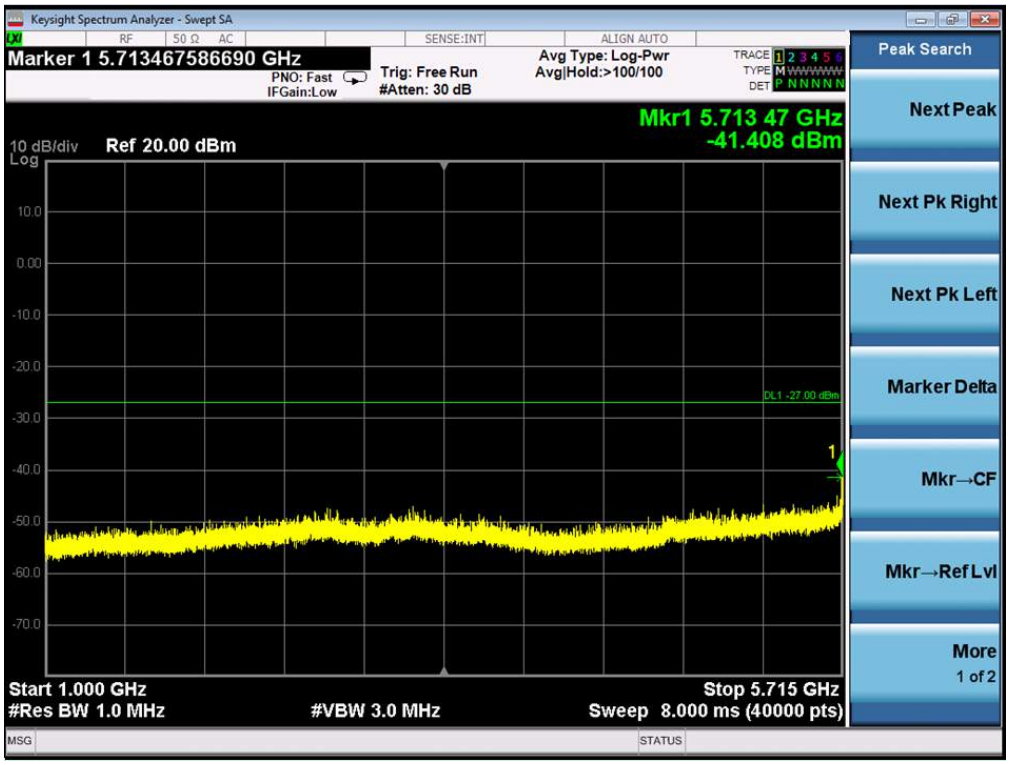


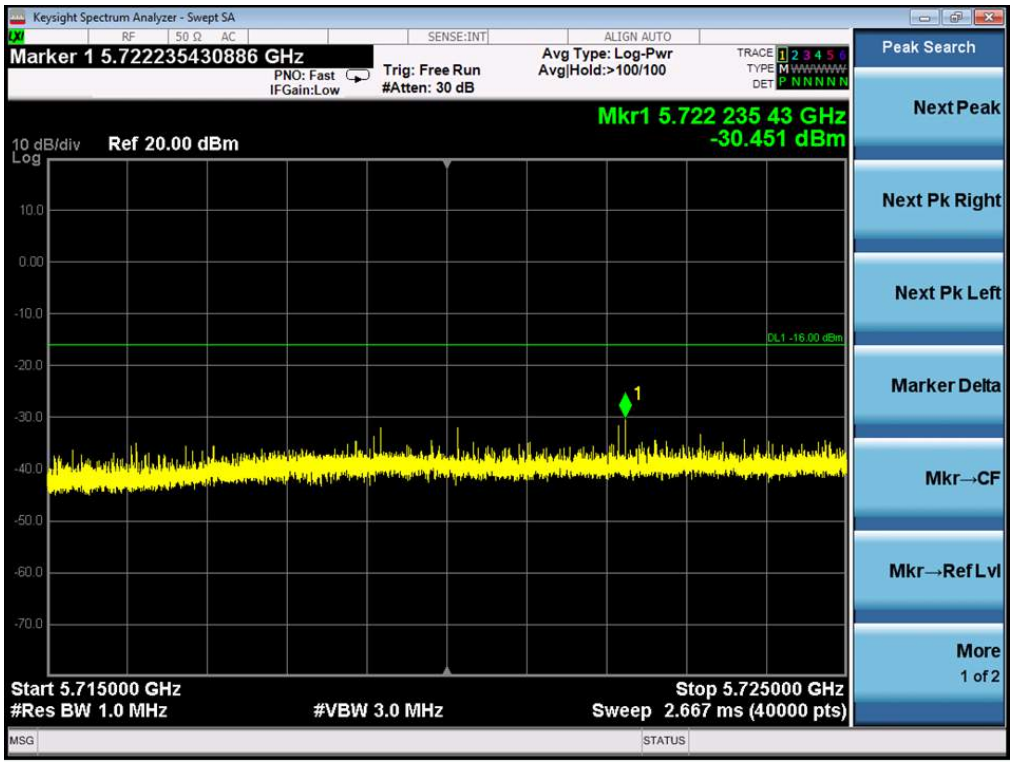

Keysight Spectrum Analyzer - Swept SA
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
Marker 1 5.144501112528 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N
Mkr1 5.144 50 GHz
-47.333 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
DL1 -27.00 dBm
1
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.150 GHz
Sweep 8.000 ms (40000 pts)
MSG
STATUS
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

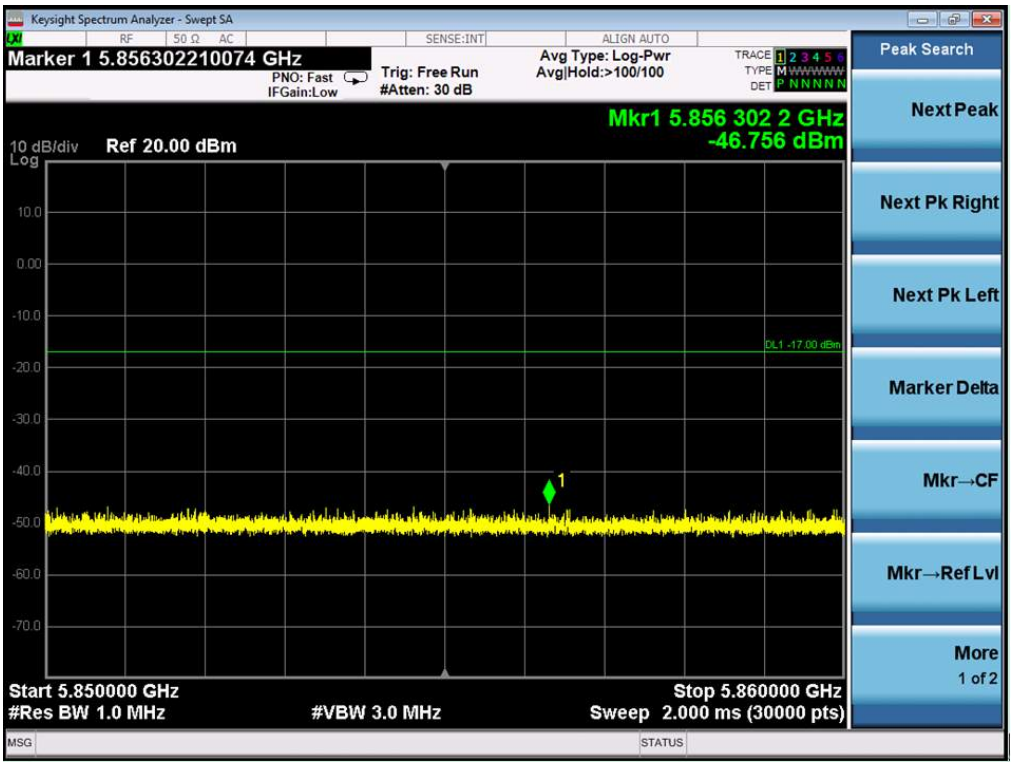

Agilent Spectrum Analyzer - Swept SA
L
RF
50 Ω DC
SENSE:INT
ALIGN AUTO
Marker 1 38.630124337478 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N
Mkr1 38.630 1 GHz
-38.453 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.00 dBm
1
Start 5.35 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 40.00 GHz
Sweep 58.00 ms (30000 pts)
MSG
STATUS
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

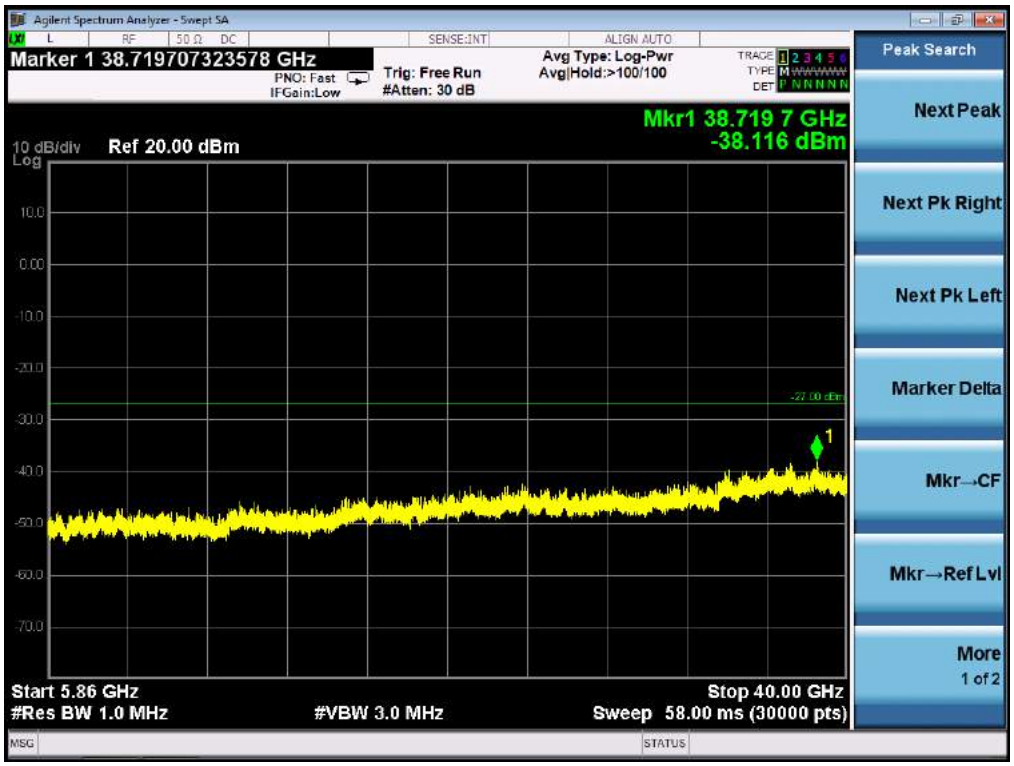
TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5755MHz



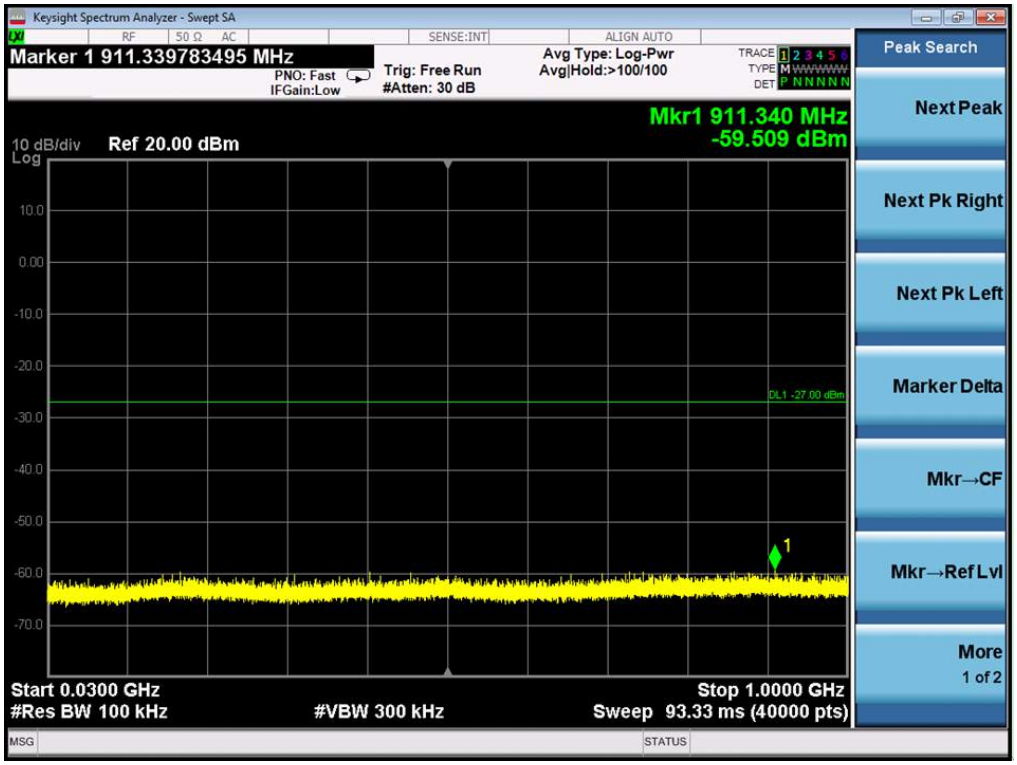


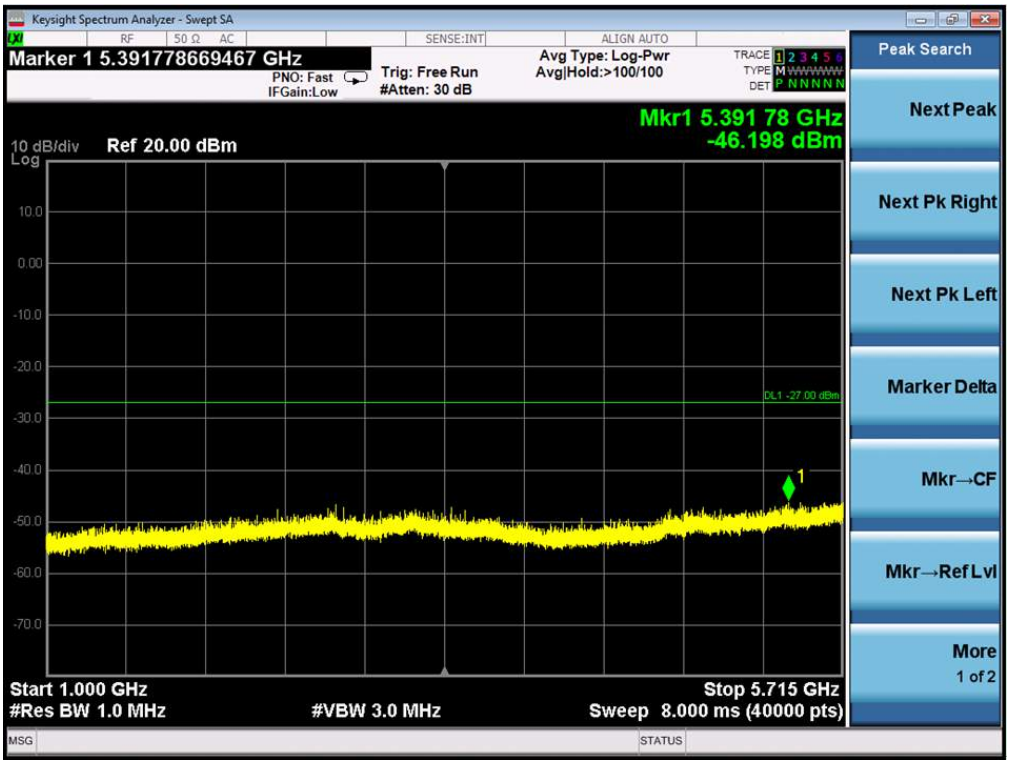

Keysight Spectrum Analyzer - Swept SA
Marker 1 5.722235430886 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Mkr1 5.722 235 43 GHz
-30.451 dBm
10 dB/div
Log
Ref 20.00 dBm
DL1 -16.00 dBm
Start 5.715000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.725000 GHz
Sweep 2.667 ms (40000 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

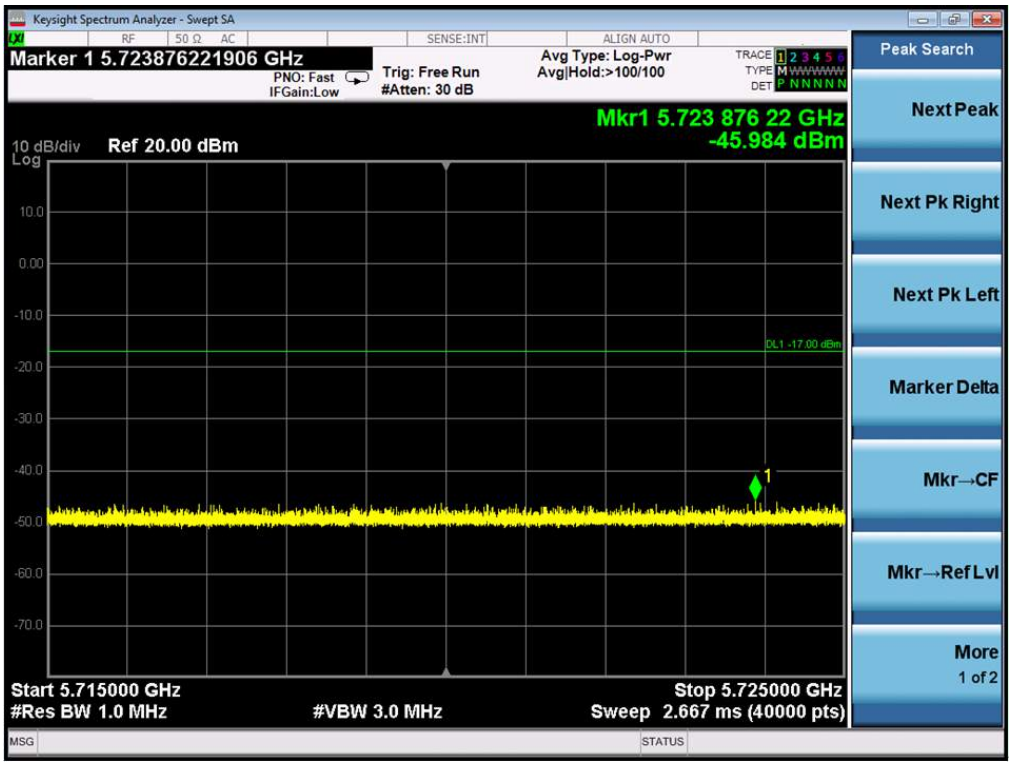

Keysight Spectrum Analyzer - Swept SA
Marker 1 5.856302210074 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Mkr1 5.856 302 2 GHz
-46.756 dBm
10 dB/div
Log
Ref 20.00 dBm
DL1 -17.00 dBm
Start 5.850000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.860000 GHz
Sweep 2.000 ms (30000 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

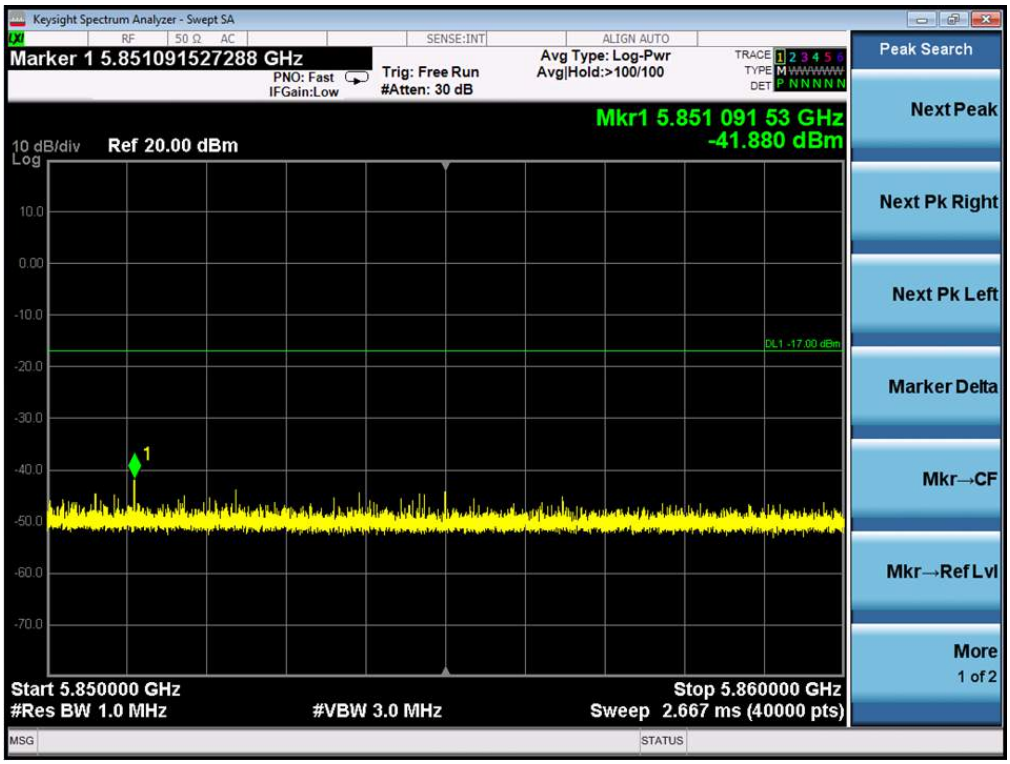


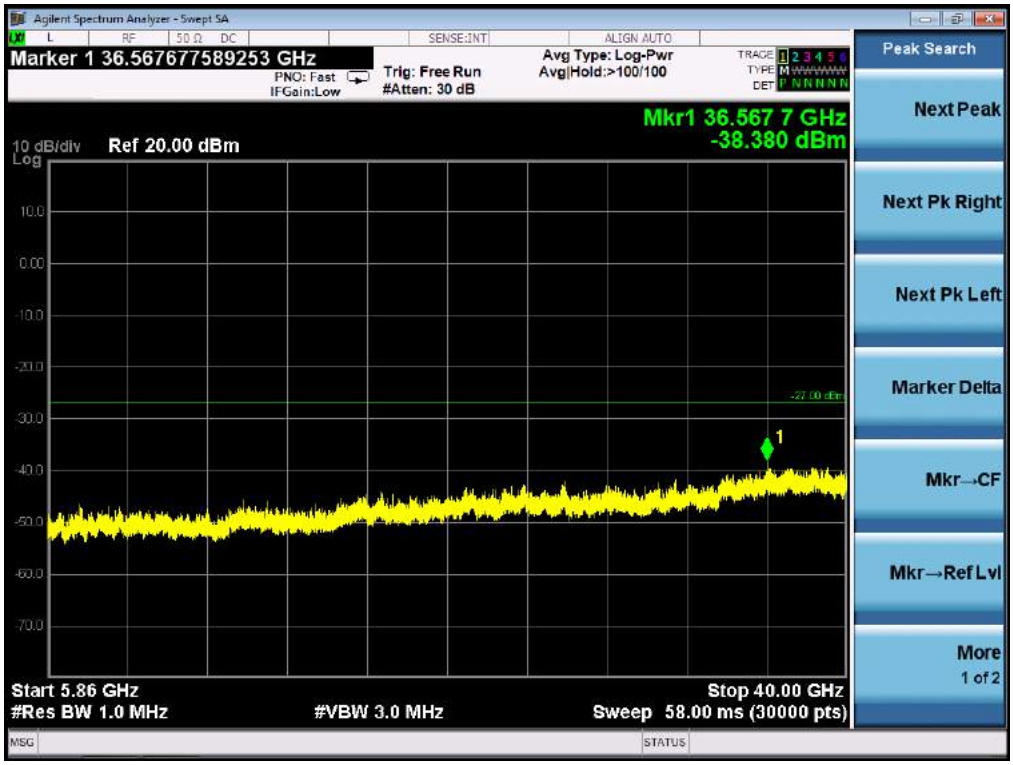
TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5795MHz




Keysight Spectrum Analyzer - Swept SA
Marker 1 5.391778669467 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Mkr1 5.391 78 GHz
-46.198 dBm
10 dB/div
Log
Ref 20.00 dBm
DL1 -27.00 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.715 GHz
Sweep 8.000 ms (40000 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2


Keysight Spectrum Analyzer - Swept SA
Marker 1 5.723876221906 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Mkr1 5.723 876 22 GHz
-45.984 dBm
10 dB/div
Log
Ref 20.00 dBm
DL1 -17.00 dBm
Start 5.715000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.725000 GHz
Sweep 2.667 ms (40000 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2





Note: All the 20MHz and 40MHz bandwidth modulation had been tested, the 802.11a20 and 11n40 ant0 was the worst case and record in his test report.

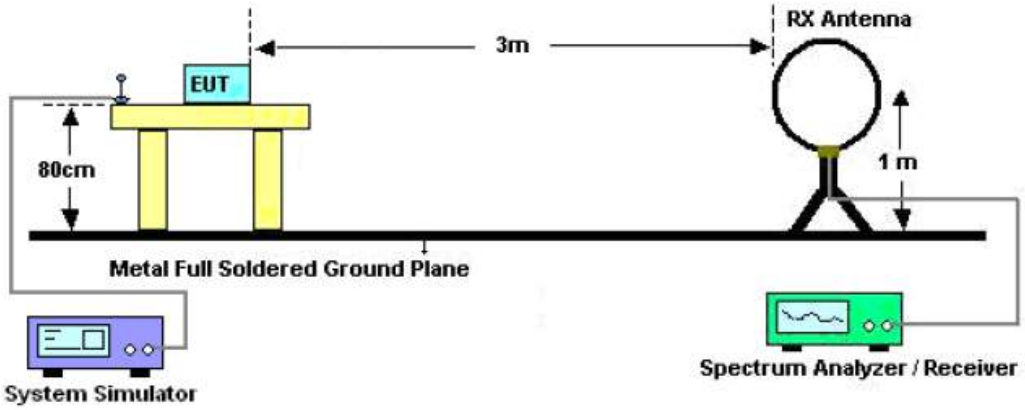
12. RADIATED EMISSION

12.1. MEASUREMENT PROCEDURE

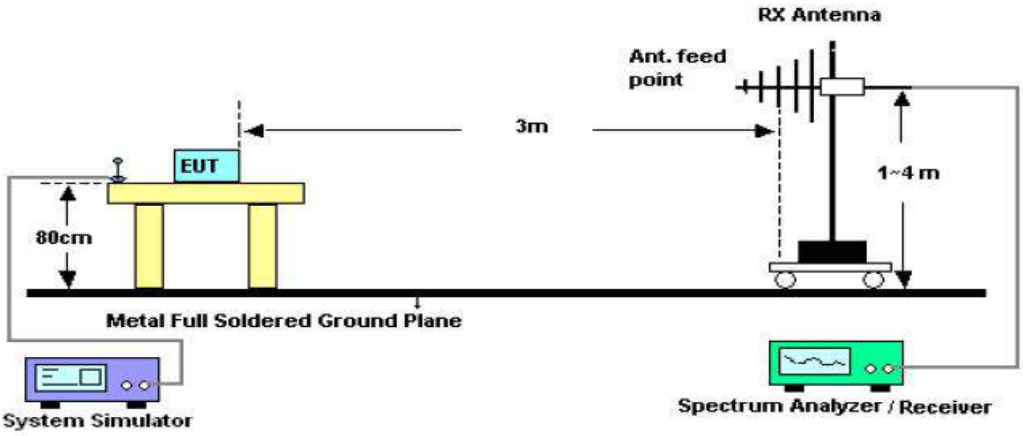
1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz RBW and 3M VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

12.2. TEST SETUP

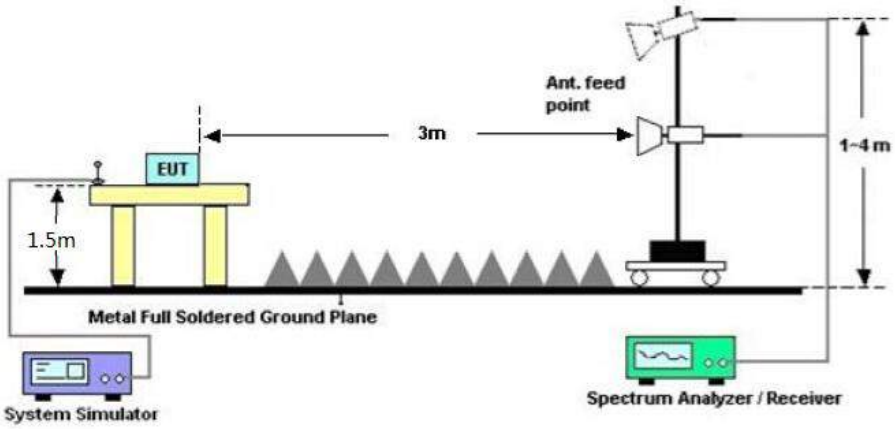
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



12.3. LIMITS AND MEASUREMENT RESULT

15.209(a) Limit in the below table 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

Note: All modes were tested For restricted band radiated emission,
the test records reported below are the worst result compared to other modes.

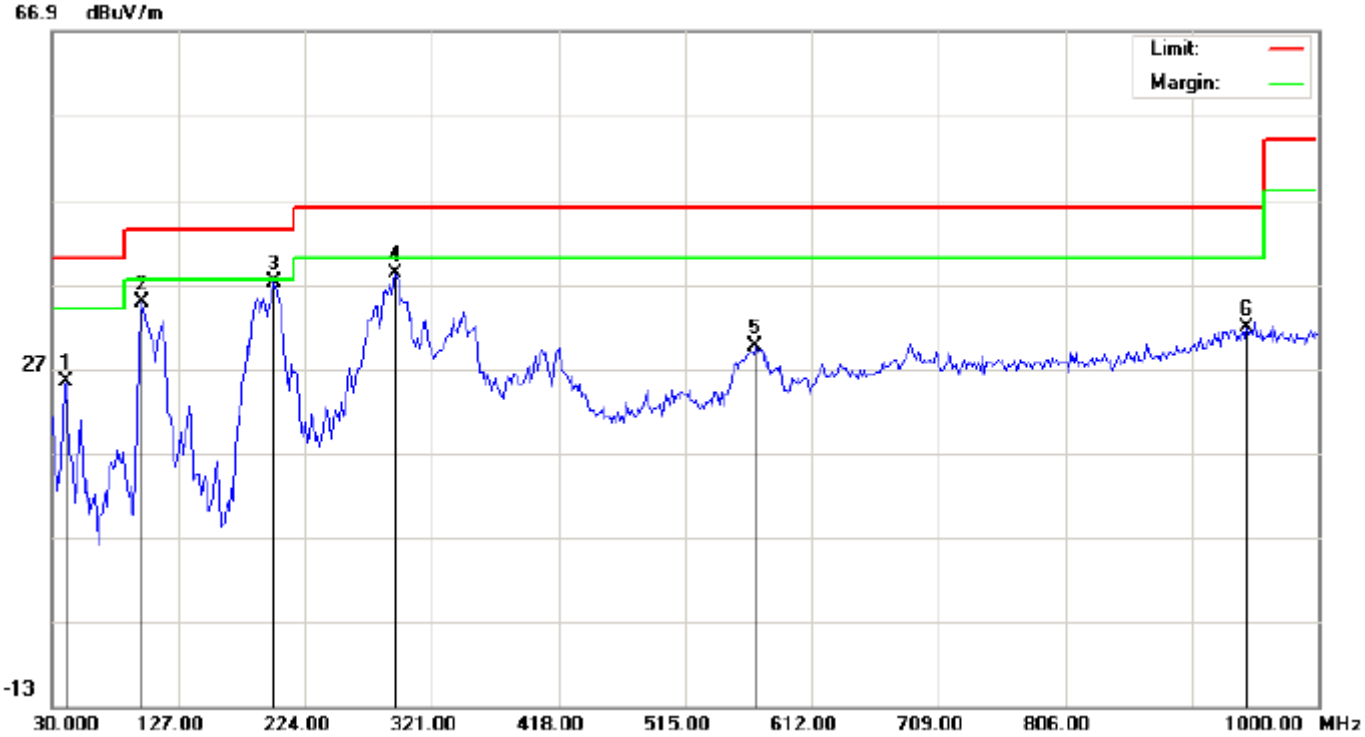
12.4. TEST RESULT

RADIATED EMISSION BELOW 30MHZ

No emission found between lowest internal used/generated frequencies to 30MHz.

RADIATED EMISSION BELOW 1GHZ

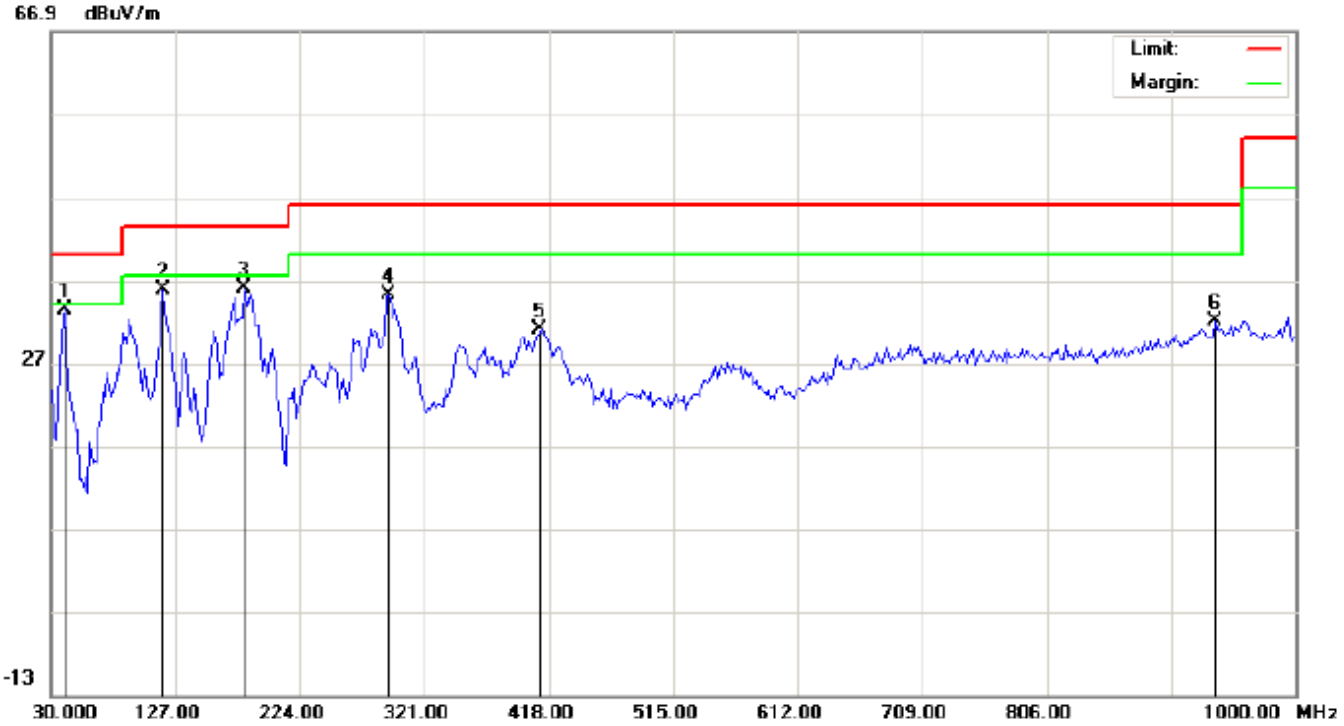
EUT	mini projector	**Model Name**	D600
Temperature	25℃	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	802.11a20 5180MHz,ant0	**Antenna**	Horizontal



No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		41.3166	13.62	11.81	25.43	40.00	-14.57	peak			
2		99.5167	24.81	10.00	34.81	43.50	-8.69	peak			
3	*	199.7500	25.30	11.99	37.29	43.50	-6.21	peak			
4		293.5167	23.91	14.31	38.22	46.00	-7.78	peak			
5		568.3500	6.65	22.94	29.59	46.00	-16.41	peak			
6		945.0333	1.87	29.86	31.73	46.00	-14.27	peak			

RESULT: PASS

EUT	mini projector	Model Name	D600
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5180MHz,ant0	Antenna	Vertical



No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	41.3166	24.69	8.81	33.50	40.00	-6.50	peak			
2		117.2999	30.19	5.52	35.71	43.50	-7.79	peak			
3		180.3499	22.09	13.98	36.07	43.50	-7.43	peak			
4		293.5167	20.00	15.21	35.21	46.00	-10.79	peak			
5		411.5332	11.51	19.42	30.93	46.00	-15.07	peak			
6		936.9500	2.27	29.64	31.91	46.00	-14.09	peak			

RESULT: PASS

Note: All test channels had been tested. The 802.11a20 at 5180MHz is the worst case and recorded in the test report.

Factor = Antenna Factor + Cable loss - Amplifier gain, Margin= Limit-Level.

The “Factor” value can be calculated automatically by software of measurement system.

RADIATED EMISSION ABOVE 1GHZ

EUT	mini projector	**Model Name**	D600
Temperature	25°C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	802.11a20 5180MHz,ant0	**Antenna**	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10360.120	43.15	9.14	52.29	74	-21.71	peak
10360.120	37.24	9.14	46.38	54	-7.62	AVG
15540.180	40.57	10.22	50.79	74	-23.21	peak
15540.180	34.56	10.22	44.78	54	-9.22	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10360.120	42.46	9.14	51.6	74	-22.4	peak
10360.120	36.15	9.14	45.29	54	-8.71	AVG
15540.180	39.78	10.22	50	74	-24	peak
15540.180	34.19	10.22	44.41	54	-9.59	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	mini projector	Model Name	D600
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5200MHz,ant0	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10400.120	42.69	9.27	51.96	74	-22.04	peak
10400.120	37.83	9.27	47.1	54	-6.9	AVG
15600.180	41.09	10.38	51.47	74	-22.53	peak
15600.180	34.5	10.38	44.88	54	-9.12	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10400.120	40.6	9.27	49.87	74	-24.13	peak
10400.120	35.72	9.27	44.99	54	-9.01	AVG
15600.180	40.11	10.38	50.49	74	-23.51	peak
15600.180	34.31	10.38	44.69	54	-9.31	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	mini projector	Model Name	D600
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5240MHz,ant0	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10480.120	42.33	9.27	51.6	74	-22.4	peak
10480.120	37.47	9.27	46.74	54	-7.26	AVG
15720.180	40.73	10.38	51.11	74	-22.89	peak
15720.180	34.14	10.38	44.52	54	-9.48	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10480.120	40.24	9.27	49.51	74	-24.49	peak
10480.120	35.36	9.27	44.63	54	-9.37	AVG
15720.180	39.75	10.38	50.13	74	-23.87	peak
15720.180	33.95	10.38	44.33	54	-9.67	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	mini projector	**Model Name**	D600
Temperature	25°C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	802.11a20 5745MHz,ant0	**Antenna**	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
11490.120	42.33	9.42	51.75	74	-22.25	peak
11490.120	36.61	9.42	46.03	54	-7.97	AVG
17235.180	38.77	10.51	49.28	74	-24.72	peak
17235.180	34.06	10.51	44.57	54	-9.43	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
11490.120	41.63	9.42	51.05	74	-22.95	peak
11490.120	35.42	9.42	44.84	54	-9.16	AVG
17235.180	38.49	10.51	49	74	-25	peak
17235.180	33.78	10.51	44.29	54	-9.71	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	mini projector	**Model Name**	D600
Temperature	25°C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	802.11a20 5785MHz,ant0	**Antenna**	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
17570.120	42.69	9.42	52.11	74	-21.89	peak
17570.120	36.97	9.42	46.39	54	-7.61	AVG
26355.180	39.13	10.51	49.64	74	-24.36	peak
26355.180	34.42	10.51	44.93	54	-9.07	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
17570.120	41.99	9.42	51.41	74	-22.59	peak
17570.120	35.78	9.42	45.2	54	-8.8	AVG
26355.180	38.85	10.51	49.36	74	-24.64	peak
26355.180	34.14	10.51	44.65	54	-9.35	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	mini projector	**Model Name**	D600
Temperature	25°C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	802.11a20 5825MHz,ant0	**Antenna**	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
11650.120	40.21	9.62	49.83	74	-24.17	peak
11650.120	34.87	9.62	44.49	54	-9.51	AVG
17475.180	38.75	10.75	49.5	74	-24.5	peak
17475.180	33.98	10.75	44.73	54	-9.27	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
11650.120	40.13	9.62	49.75	74	-24.25	peak
11650.120	34.61	9.62	44.23	54	-9.77	AVG
17475.180	37.87	10.75	48.62	74	-25.38	peak
17475.180	33.4	10.75	44.15	54	-9.85	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	mini projector	**Model Name**	D600
Temperature	25°C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	802.11n20mimo 5180MHz,ant0+ant1	**Antenna**	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
10360.120	45.61	9.14	54.75	74	-19.25	peak
10360.120	38.55	9.14	47.69	54	-6.31	AVG
15540.180	43.28	10.22	53.5	74	-20.5	peak
15540.180	37.21	10.22	47.43	54	-6.57	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
10360.120	44.44	9.14	53.58	74	-20.42	peak
10360.120	37.8	9.14	46.94	54	-7.06	AVG
15540.180	42.21	10.22	52.43	74	-21.57	peak
15540.180	35.88	10.22	46.1	54	-7.9	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	mini projector	Model Name	D600
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n20mimo 5200MHz,ant0+ant1	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10400.120	42.93	9.27	52.2	74	-21.8	peak
10400.120	38.07	9.27	47.34	54	-6.66	AVG
15600.180	41.33	10.38	51.71	74	-22.29	peak
15600.180	34.74	10.38	45.12	54	-8.88	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10400.120	40.84	9.27	50.11	74	-23.89	peak
10400.120	35.96	9.27	45.23	54	-8.77	AVG
15600.180	40.35	10.38	50.73	74	-23.27	peak
15600.180	34.55	10.38	44.93	54	-9.07	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	mini projector	Model Name	D600
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n20mimo 5240MHz,ant0+ant1	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10480.120	44.41	9.27	53.68	74	-20.32	peak
10480.120	39.5	9.27	48.77	54	-5.23	AVG
15720.180	42.87	10.38	53.25	74	-20.75	peak
15720.180	37.68	10.38	48.06	54	-5.94	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
10480.120	43.78	9.27	53.05	74	-20.95	peak
10480.120	38.41	9.27	47.68	54	-6.32	AVG
15720.180	41.62	10.38	52	74	-22	peak
15720.180	36.44	10.38	46.82	54	-7.18	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	mini projector	Model Name	D600
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n20mimo 5745MHz,ant0+ant1	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
11490.120	45.24	9.42	54.66	74	-19.34	peak
11490.120	38.38	9.42	47.8	54	-6.2	AVG
17235.180	41.8	10.51	52.31	74	-21.69	peak
17235.180	37.62	10.51	48.13	54	-5.87	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
11490.120	44.25	9.42	53.67	74	-20.33	peak
11490.120	38.07	9.42	47.49	54	-6.51	AVG
17235.180	41.18	10.51	51.69	74	-22.31	peak
17235.180	35.99	10.51	46.5	54	-7.5	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	mini projector	**Model Name**	D600
Temperature	25°C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	802.11n20mimo 5785MHz,ant0+ant1	**Antenna**	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
17570.120	44.93	9.42	54.35	74	-19.65	peak
17570.120	38.21	9.42	47.63	54	-6.37	AVG
26355.180	41.37	10.51	51.88	74	-22.12	peak
26355.180	35.66	10.51	46.17	54	-7.83	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
17570.120	44.23	9.42	53.65	74	-20.35	peak
17570.120	37.02	9.42	46.44	54	-7.56	AVG
26355.180	41.09	10.51	51.6	74	-22.4	peak
26355.180	36.38	10.51	46.89	54	-7.11	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	mini projector	**Model Name**	D600
Temperature	25°C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	802.11n20mimo 5825MHz,ant0+ant1	**Antenna**	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ–Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
11650.120	43.57	9.62	53.19	74	-20.81	peak
11650.120	38.36	9.62	47.98	54	-6.02	AVG
17475.180	40.67	10.75	51.42	74	-22.58	peak
17475.180	38.39	10.75	49.14	54	-4.86	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
11650.120	42.77	9.62	52.39	74	-21.61	peak
11650.120	37.89	9.62	47.51	54	-6.49	AVG
17475.180	40.18	10.75	50.93	74	-23.07	peak
17475.180	37.89	10.75	48.64	54	-5.36	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Note: All the case had been tested. The 802.11a and 11n20mimo modulation are the worst case and recorded in the test report.

Other frequencies radiation emission from 1GHz to 40GHz at least have 20dB margin and not recorded in the test report.

Factor = Antenna Factor + Cable loss - Amplifier gain, Margin= Limit-Level.

The “Factor” value can be calculated automatically by software of measurement system.

13. BAND EDGE EMISSION

13.1. MEASUREMENT PROCEDURE

1. The EUT operates at transmitting mode. The operate channel is tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.

2. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission: (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO

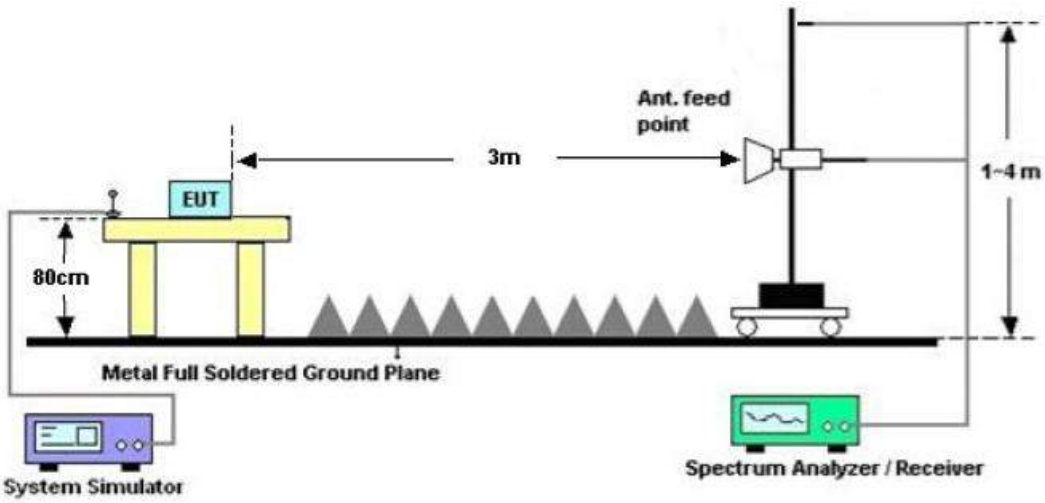
(b) AVERAGE: RBW=1MHz ; VBW=1/on time(1KHz) / Sweep=AUTO

3. Other procedures refer to clause 11.2.

Note:

1. Factor=Antenna Factor + Cable loss - Amplifier gain. Field Strength=Factor + Reading level
2. The factor had been edited in the “Input Correction” of the Spectrum Analyzer. So the Amplitude of test plots is equal to Reading level plus the Factor in dB. Use the A dB(μV) to represent the Amplitude. Use the F dB(μV/m) to represent the Field Strength. So A=F.
3. Only the data of band edge emission at the restricted band 4.5GHz-5.15GHz record in the report. Other restricted band 5.35GHz-5.46GHz and 7.25GHz-7.77GHz were considered as ambient noise. No recording in the test report.

13.2. TEST SET-UP

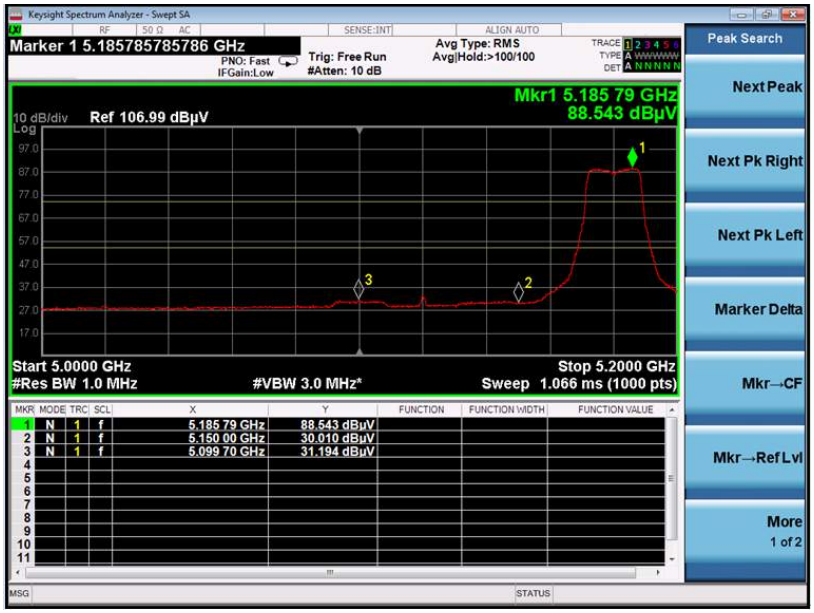


13.3. TEST RESULT

EUT	mini projector	Model Name	D600
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5180MHz,ant0	Antenna	Horizontal

PK Value

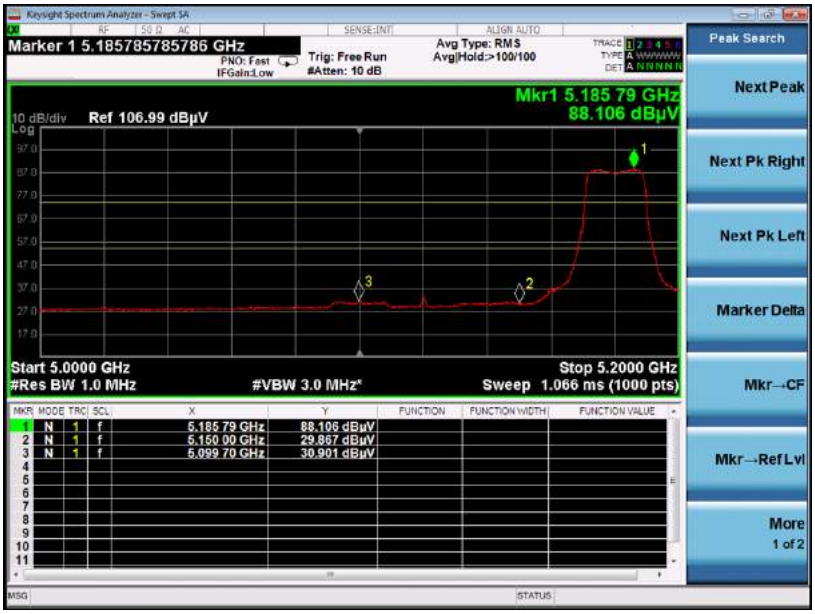
AV Value



EUT	mini projector	Model Name	D600
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n20 5180MHz,ant0	Antenna	Vertical

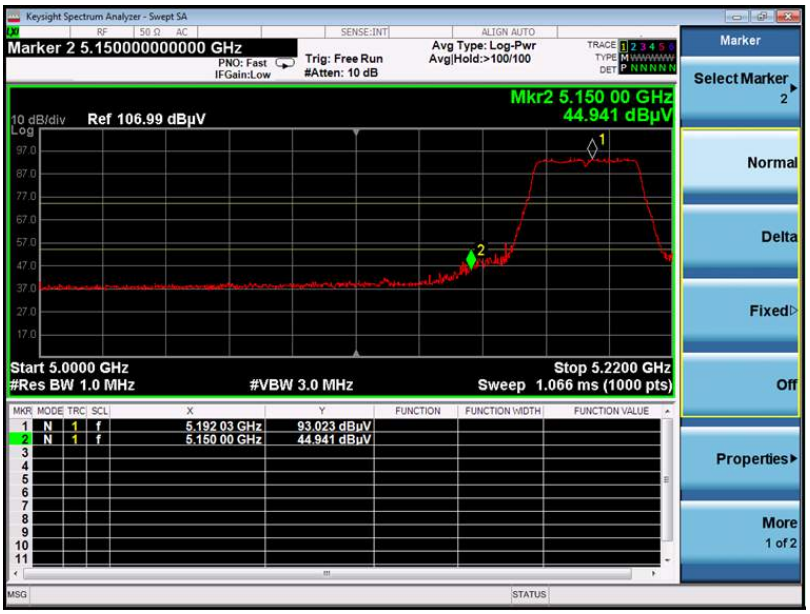
PK Value

AV Value



EUT	mini projector	Model Name	D600
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n40 5190MHz,ant0	Antenna	Horizontal

PK Value



AV Value

RESULT: PASS

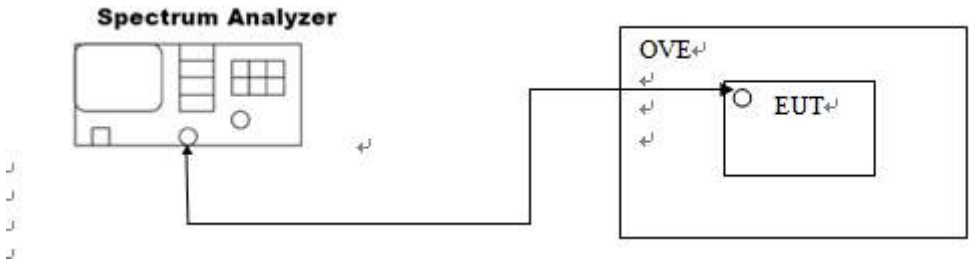
Note: All the 20MHz bandwidth modulation had been tested, the 802.11a20 was the worst case and record in his test report.

14. FREQUENCY STABILITY

14.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the operation frequency.
3. Set SPA Centre Frequency = Operation Frequency. SPAN=enough to measure the emission is maintained within the band
4. Set SPA Trace 1 Max hold, then View.
5. Extreme temperature rule is -20°C~60°C.

14.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



14.3. MEASUREMENT RESULTS

Test Mode	Voltage	Temperature	Measurement Frequency (MHz)	Result	Conclusion
802.11a	NV	- 10℃	5180	within the band	PASS
		0℃	5180	within the band	PASS
		10℃	5180	within the band	PASS
		20℃	5180	within the band	PASS
		30℃	5180	within the band	PASS
		40℃	5180	within the band	PASS
		50℃	5180	within the band	PASS
		- 10℃	5200	within the band	PASS
		0℃	5200	within the band	PASS
		10℃	5200	within the band	PASS
		20℃	5200	within the band	PASS
		30℃	5200	within the band	PASS
		40℃	5200	within the band	PASS
		50℃	5200	within the band	PASS
		- 10℃	5240	within the band	PASS
		0℃	5240	within the band	PASS
		10℃	5240	within the band	PASS
		20℃	5240	within the band	PASS
		30℃	5240	within the band	PASS
		40℃	5240	within the band	PASS
		50℃	5240	within the band	PASS
		- 10℃	5745	within the band	PASS
		0℃	5745	within the band	PASS

		10℃	5745	within the band	PASS
		20℃	5745	within the band	PASS
		30℃	5745	within the band	PASS
		40℃	5745	within the band	PASS
		50℃	5745	within the band	PASS
		- 10℃	5785	within the band	PASS
		0℃	5785	within the band	PASS
		10℃	5785	within the band	PASS
		20℃	5785	within the band	PASS
		30℃	5785	within the band	PASS
		40℃	5785	within the band	PASS
		50℃	5785	within the band	PASS
		- 10℃	5825	within the band	PASS
		0℃	5825	within the band	PASS
		10℃	5825	within the band	PASS
		20℃	5825	within the band	PASS
		30℃	5825	within the band	PASS
		40℃	5825	within the band	PASS
		50℃	5825	within the band	PASS
	LT	- 10℃	5180	within the band	PASS
		0℃	5180	within the band	PASS
		10℃	5180	within the band	PASS
		20℃	5180	within the band	PASS
		30℃	5180	within the band	PASS
		40℃	5180	within the band	PASS
		50℃	5180	within the band	PASS

		- 10℃	5200	within the band	PASS
		0℃	5200	within the band	PASS
		10℃	5200	within the band	PASS
		20℃	5200	within the band	PASS
		30℃	5200	within the band	PASS
		40℃	5200	within the band	PASS
		50℃	5200	within the band	PASS
		- 10℃	5240	within the band	PASS
		0℃	5240	within the band	PASS
		10℃	5240	within the band	PASS
		20℃	5240	within the band	PASS
		30℃	5240	within the band	PASS
		40℃	5240	within the band	PASS
		50℃	5240	within the band	PASS
		- 10℃	5745	within the band	PASS
		0℃	5745	within the band	PASS
		10℃	5745	within the band	PASS
		20℃	5745	within the band	PASS
		30℃	5745	within the band	PASS
		40℃	5745	within the band	PASS
		50℃	5745	within the band	PASS
		- 10℃	5785	within the band	PASS
		0℃	5785	within the band	PASS
		10℃	5785	within the band	PASS
		20℃	5785	within the band	PASS
		30℃	5785	within the band	PASS

		40℃	5785	within the band	PASS
		50℃	5785	within the band	PASS
		- 10℃	5825	within the band	PASS
		0℃	5825	within the band	PASS
		10℃	5825	within the band	PASS
		20℃	5825	within the band	PASS
		30℃	5825	within the band	PASS
		40℃	5825	within the band	PASS
		50℃	5825	within the band	PASS
	HV	- 10℃	5180	within the band	PASS
		0℃	5180	within the band	PASS
		10℃	5180	within the band	PASS
		20℃	5180	within the band	PASS
		30℃	5180	within the band	PASS
		40℃	5180	within the band	PASS
		50℃	5180	within the band	PASS
		- 10℃	5200	within the band	PASS
		0℃	5200	within the band	PASS
		10℃	5200	within the band	PASS
		20℃	5200	within the band	PASS
		30℃	5200	within the band	PASS
		40℃	5200	within the band	PASS
		50℃	5200	within the band	PASS
		- 10℃	5240	within the band	PASS
		0℃	5240	within the band	PASS
		10℃	5240	within the band	PASS

		20℃	5240	within the band	PASS
		30℃	5240	within the band	PASS
		40℃	5240	within the band	PASS
		50℃	5240	within the band	PASS
		- 10℃	5745	within the band	PASS
		0℃	5745	within the band	PASS
		10℃	5745	within the band	PASS
		20℃	5745	within the band	PASS
		30℃	5745	within the band	PASS
		40℃	5745	within the band	PASS
		50℃	5745	within the band	PASS
		- 10℃	5785	within the band	PASS
		0℃	5785	within the band	PASS
		10℃	5785	within the band	PASS
		20℃	5785	within the band	PASS
		30℃	5785	within the band	PASS
		40℃	5785	within the band	PASS
		50℃	5785	within the band	PASS
		- 10℃	5825	within the band	PASS
		0℃	5825	within the band	PASS
		10℃	5825	within the band	PASS
		20℃	5825	within the band	PASS
		30℃	5825	within the band	PASS
		40℃	5825	within the band	PASS
		50℃	5825	within the band	PASS

Test Mode	Voltage	Temperature	Measurement Frequency (MHz)	Result	Conclusion
802.11n20	NV	- 10℃	5180	within the band	PASS
		0℃	5180	within the band	PASS
		10℃	5180	within the band	PASS
		20℃	5180	within the band	PASS
		30℃	5180	within the band	PASS
		40℃	5180	within the band	PASS
		50℃	5180	within the band	PASS
		- 10℃	5200	within the band	PASS
		0℃	5200	within the band	PASS
		10℃	5200	within the band	PASS
		20℃	5200	within the band	PASS
		30℃	5200	within the band	PASS
		40℃	5200	within the band	PASS
		50℃	5200	within the band	PASS
		- 10℃	5240	within the band	PASS
		0℃	5240	within the band	PASS
		10℃	5240	within the band	PASS
		20℃	5240	within the band	PASS
		30℃	5240	within the band	PASS
		40℃	5240	within the band	PASS
		50℃	5240	within the band	PASS
		- 10℃	5745	within the band	PASS
		0℃	5745	within the band	PASS
		10℃	5745	within the	PASS

				band	
		20℃	5745	within the band	PASS
		30℃	5745	within the band	PASS
		40℃	5745	within the band	PASS
		50℃	5745	within the band	PASS
		- 10℃	5785	within the band	PASS
		0℃	5785	within the band	PASS
		10℃	5785	within the band	PASS
		20℃	5785	within the band	PASS
		30℃	5785	within the band	PASS
		40℃	5785	within the band	PASS
		50℃	5785	within the band	PASS
		- 10℃	5825	within the band	PASS
		0℃	5825	within the band	PASS
		10℃	5825	within the band	PASS
		20℃	5825	within the band	PASS
		30℃	5825	within the band	PASS
		40℃	5825	within the band	PASS
		50℃	5825	within the band	PASS
	LT	- 10℃	5180	within the band	PASS
		0℃	5180	within the band	PASS
		10℃	5180	within the band	PASS
		20℃	5180	within the band	PASS
		30℃	5180	within the band	PASS
		40℃	5180	within the band	PASS
		50℃	5180	within the band	PASS
		- 10℃	5200	within the	PASS

				band	
		0℃	5200	within the band	PASS
		10℃	5200	within the band	PASS
		20℃	5200	within the band	PASS
		30℃	5200	within the band	PASS
		40℃	5200	within the band	PASS
		50℃	5200	within the band	PASS
		- 10℃	5240	within the band	PASS
		0℃	5240	within the band	PASS
		10℃	5240	within the band	PASS
		20℃	5240	within the band	PASS
		30℃	5240	within the band	PASS
		40℃	5240	within the band	PASS
		50℃	5240	within the band	PASS
		- 10℃	5745	within the band	PASS
		0℃	5745	within the band	PASS
		10℃	5745	within the band	PASS
		20℃	5745	within the band	PASS
		30℃	5745	within the band	PASS
		40℃	5745	within the band	PASS
		50℃	5745	within the band	PASS
		- 10℃	5785	within the band	PASS
		0℃	5785	within the band	PASS
		10℃	5785	within the band	PASS
		20℃	5785	within the band	PASS
		30℃	5785	within the band	PASS
		40℃	5785	within the	PASS

				band	
		50℃	5785	within the band	PASS
		- 10℃	5825	within the band	PASS
		0℃	5825	within the band	PASS
		10℃	5825	within the band	PASS
		20℃	5825	within the band	PASS
		30℃	5825	within the band	PASS
		40℃	5825	within the band	PASS
		50℃	5825	within the band	PASS
	HV	- 10℃	5180	within the band	PASS
		0℃	5180	within the band	PASS
		10℃	5180	within the band	PASS
		20℃	5180	within the band	PASS
		30℃	5180	within the band	PASS
		40℃	5180	within the band	PASS
		50℃	5180	within the band	PASS
		- 10℃	5200	within the band	PASS
		0℃	5200	within the band	PASS
		10℃	5200	within the band	PASS
		20℃	5200	within the band	PASS
		30℃	5200	within the band	PASS
		40℃	5200	within the band	PASS
		50℃	5200	within the band	PASS
		- 10℃	5240	within the band	PASS
		0℃	5240	within the band	PASS
		10℃	5240	within the band	PASS
		20℃	5240	within the	PASS

				band	
		30℃	5240	within the band	PASS
		40℃	5240	within the band	PASS
		50℃	5240	within the band	PASS
		- 10℃	5745	within the band	PASS
		0℃	5745	within the band	PASS
		10℃	5745	within the band	PASS
		20℃	5745	within the band	PASS
		30℃	5745	within the band	PASS
		40℃	5745	within the band	PASS
		50℃	5745	within the band	PASS
		- 10℃	5785	within the band	PASS
		0℃	5785	within the band	PASS
		10℃	5785	within the band	PASS
		20℃	5785	within the band	PASS
		30℃	5785	within the band	PASS
		40℃	5785	within the band	PASS
		50℃	5785	within the band	PASS
		- 10℃	5825	within the band	PASS
		0℃	5825	within the band	PASS
		10℃	5825	within the band	PASS
		20℃	5825	within the band	PASS
		30℃	5825	within the band	PASS
		40℃	5825	within the band	PASS
		50℃	5825	within the band	PASS

Test Mode	Voltage	Temperature	Measurement Frequency (MHz)	Result	Conclusion
802.11n40	NV	- 10℃	5190	within the band	PASS
		0℃	5190	within the band	PASS
		10℃	5190	within the band	PASS
		20℃	5190	within the band	PASS
		30℃	5190	within the band	PASS
		40℃	5190	within the band	PASS
		50℃	5190	within the band	PASS
		- 10℃	5230	within the band	PASS
		0℃	5230	within the band	PASS
		10℃	5230	within the band	PASS
		20℃	5230	within the band	PASS
		30℃	5230	within the band	PASS
		40℃	5230	within the band	PASS
		50℃	5230	within the band	PASS
		- 10℃	5755	within the band	PASS
		0℃	5755	within the band	PASS
		10℃	5755	within the band	PASS
		20℃	5755	within the band	PASS
		30℃	5755	within the band	PASS
		40℃	5755	within the band	PASS
		50℃	5755	within the band	PASS
		- 10℃	5795	within the band	PASS
		0℃	5795	within the band	PASS
		10℃	5795	within the	PASS

				band	
		20℃	5795	within the band	PASS
		30℃	5795	within the band	PASS
		40℃	5795	within the band	PASS
		50℃	5795	within the band	PASS
	LT	- 10℃	5190	within the band	PASS
		0℃	5190	within the band	PASS
		10℃	5190	within the band	PASS
		20℃	5190	within the band	PASS
		30℃	5190	within the band	PASS
		40℃	5190	within the band	PASS
		50℃	5190	within the band	PASS
		- 10℃	5230	within the band	PASS
		0℃	5230	within the band	PASS
		10℃	5230	within the band	PASS
		20℃	5230	within the band	PASS
		30℃	5230	within the band	PASS
		40℃	5230	within the band	PASS
		50℃	5230	within the band	PASS
		- 10℃	5755	within the band	PASS
		0℃	5755	within the band	PASS
		10℃	5755	within the band	PASS
		20℃	5755	within the band	PASS
		30℃	5755	within the band	PASS
		40℃	5755	within the band	PASS
		50℃	5755	within the band	PASS
		- 10℃	5795	within the	PASS

				band	
		0℃	5795	within the band	PASS
		10℃	5795	within the band	PASS
		20℃	5795	within the band	PASS
		30℃	5795	within the band	PASS
		40℃	5795	within the band	PASS
		50℃	5795	within the band	PASS
	HV	- 10℃	5190	within the band	PASS
		0℃	5190	within the band	PASS
		10℃	5190	within the band	PASS
		20℃	5190	within the band	PASS
		30℃	5190	within the band	PASS
		40℃	5190	within the band	PASS
		50℃	5190	within the band	PASS
		- 10℃	5230	within the band	PASS
		0℃	5230	within the band	PASS
		10℃	5230	within the band	PASS
		20℃	5230	within the band	PASS
		30℃	5230	within the band	PASS
		40℃	5230	within the band	PASS
		50℃	5230	within the band	PASS
		- 10℃	5755	within the band	PASS
		0℃	5755	within the band	PASS
		10℃	5755	within the band	PASS
		20℃	5755	within the band	PASS
		30℃	5755	within the band	PASS
		40℃	5755	within the	PASS

				band	
		50℃	5755	within the band	PASS
		- 10℃	5795	within the band	PASS
		0℃	5795	within the band	PASS
		10℃	5795	within the band	PASS
		20℃	5795	within the band	PASS
		30℃	5795	within the band	PASS
		40℃	5795	within the band	PASS
		50℃	5795	within the band	PASS

15. FCC LINE CONDUCTED EMISSION TEST

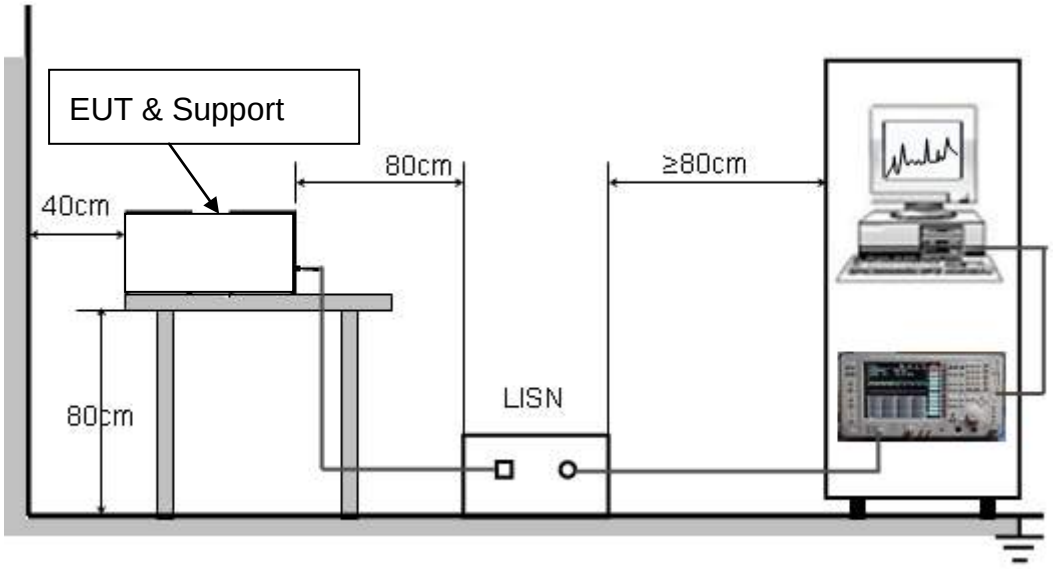
15.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Note:

1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50MHz.

15.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



15.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2. Support equipment, if needed, was placed as per ANSI C63.10.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
4. All support equipments received AC120V/60Hz power from a LISN, if any.
5. The EUT received charging voltage by adapter which received 120V/60Hzpower by a LISN.
6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.
9. The test mode(s) were scanned during the preliminary test.

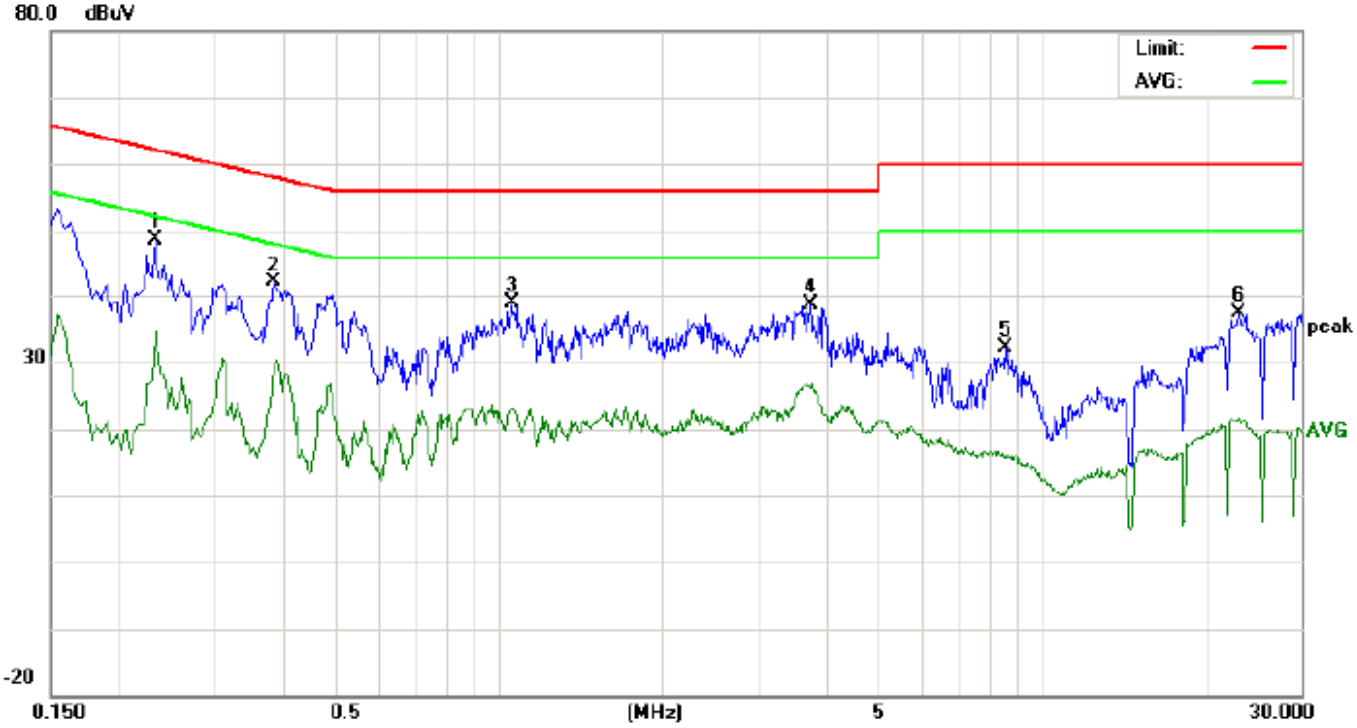
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

15.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
3. The test data of the worst case condition(s) was reported on the Summary Data page.

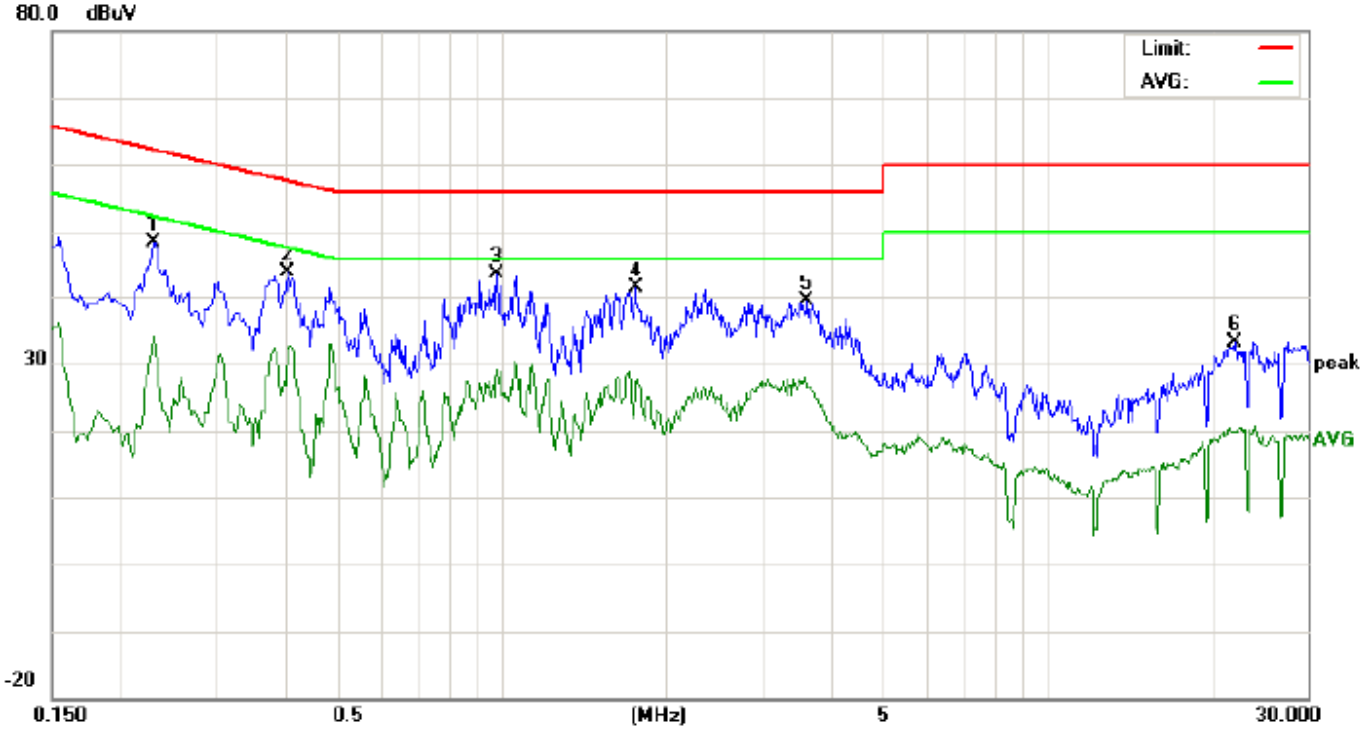
15.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

LINE CONDUCTED EMISSION TEST-L



No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.2340	38.33		24.46	10.25	48.58		34.71	62.30	52.30	-13.72	-17.59	P	
2	0.3860	31.92		18.50	10.32	42.24		28.82	58.15	48.15	-15.91	-19.33	P	
3	1.0580	28.39		12.73	10.37	38.76		23.10	56.00	46.00	-17.24	-22.90	P	
4	3.7540	28.25		15.73	10.47	38.72		26.20	56.00	46.00	-17.28	-19.80	P	
5	8.5499	21.88		5.34	10.33	32.21		15.67	60.00	50.00	-27.79	-34.33	P	
6	23.0340	27.19		11.59	10.11	37.30		21.70	60.00	50.00	-22.70	-28.30	P	

LINE CONDUCTED EMISSION TEST-N

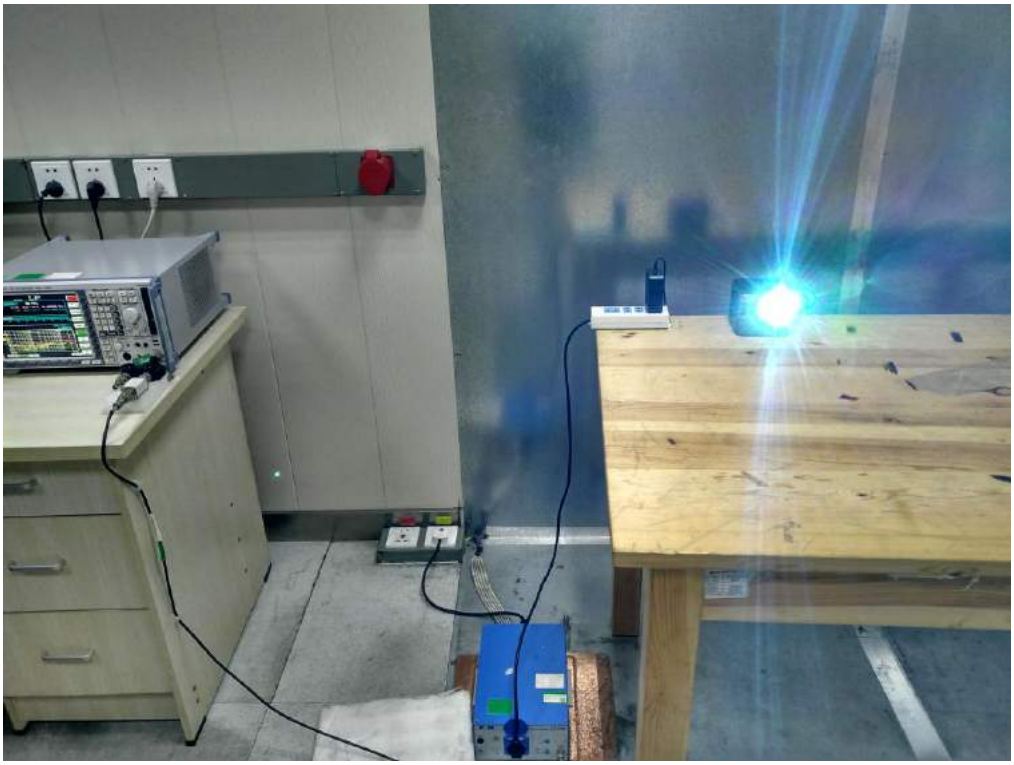


No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.2300	38.21		23.77	10.25	48.46		34.02	62.45	52.45	-13.99	-18.43	P	
2	0.4060	33.51		22.16	10.33	43.84		32.49	57.73	47.73	-13.89	-15.24	P	
3	0.9819	33.14		18.70	10.38	43.52		29.08	56.00	46.00	-12.48	-16.92	P	
4	1.7620	31.08		15.43	10.30	41.38		25.73	56.00	46.00	-14.62	-20.27	P	
5	3.6339	28.93		16.00	10.49	39.42		26.49	56.00	46.00	-16.58	-19.51	P	
6	22.1700	23.10		9.69	10.12	33.22		19.81	60.00	50.00	-26.78	-30.19	P	

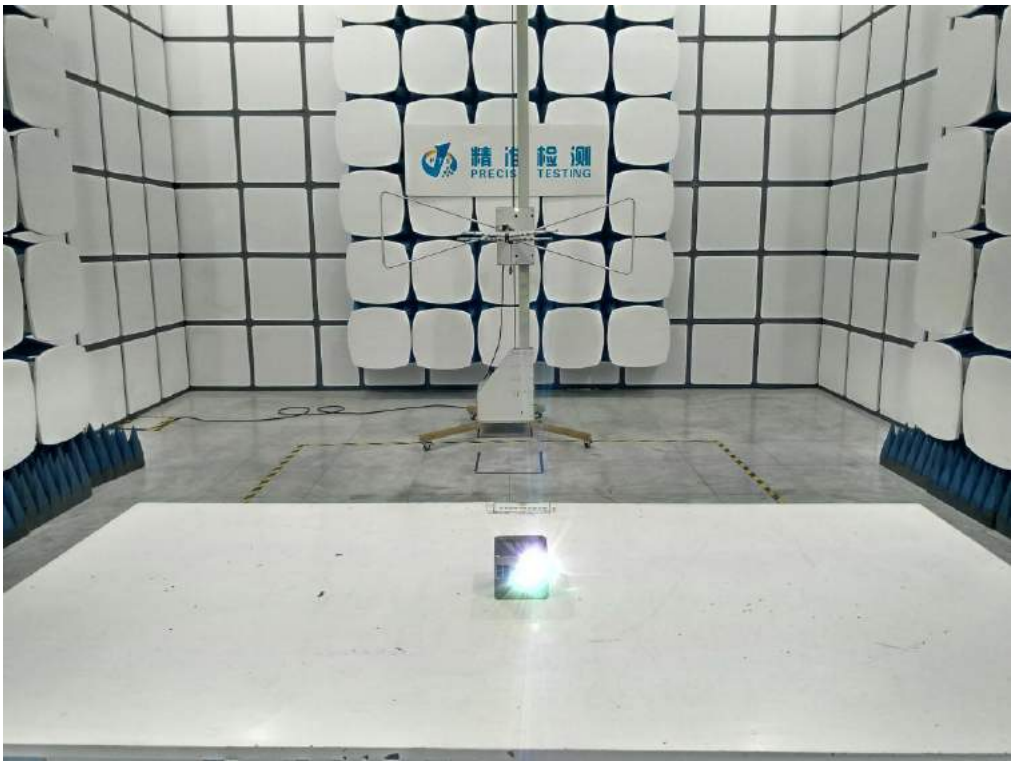
RESULT: PASS

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

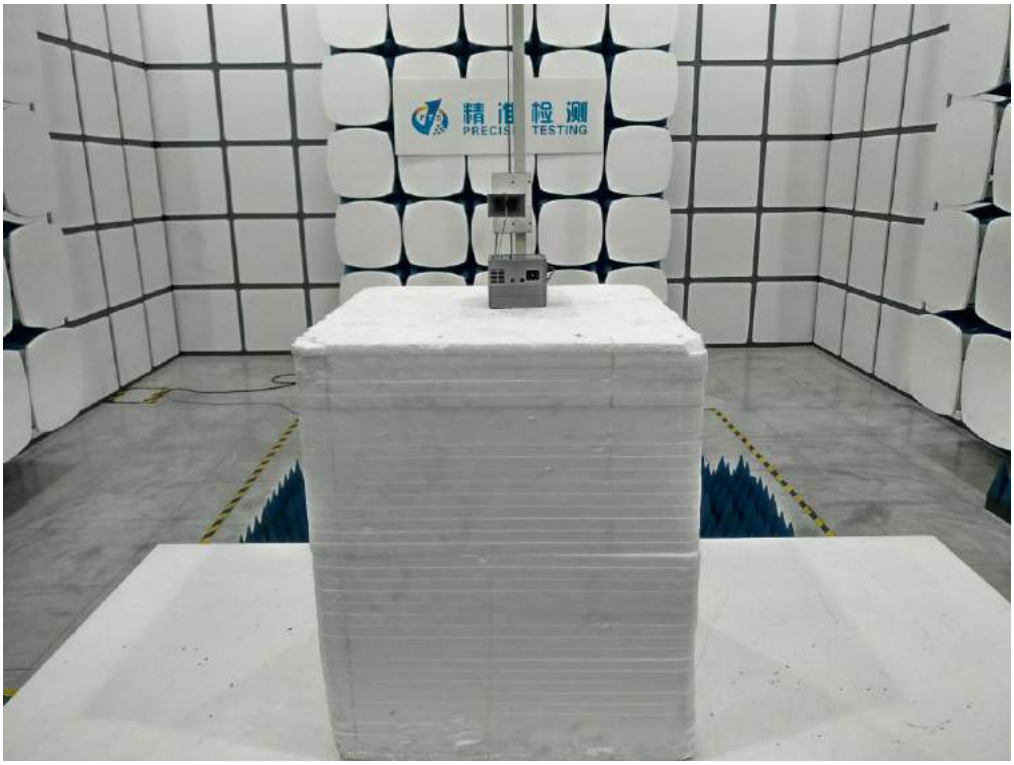
FCC LINE CONDUCTED EMISSION TEST SETUP



FCC RADIATED EMISSION TEST SETUP BELOW 1GHZ



FCC RADIATED EMISSION TEST SETUP ABOVE 1GHZ



----END OF REPORT----