

Prüfbericht-Nr.: Test Report No.:	50175259 001	Auftrags-Nr.: Order No.:	114080702	Seite 1 von 54 Page 1 of 54
Kunden-Referenz-Nr.: Client Reference No.:	N/A	Auftragsdatum: Order date:	07-Aug-2018	
Auftraggeber: Client:	Trans Electric Co., Ltd. 771, Sec. 2, Chungsan Road, Huatang, Changhua, Taiwan.			
Prüfgegenstand: Test item:	HD wireless Sender & Receiver			
Bezeichnung / Typ-Nr.: Identification / Type No.:	WTR-5000			
Auftrags-Inhalt: Order content:	FCC Part15E / RSS-247 Test report			
Prüfgrundlage: Test specification:	FCC 47CFR Part 15: Subpart E Section 15.407 RSS-247 Issue2 (2017)			
Wareneingangsdatum: Date of receipt:	06-Feb-2017			
Prüfmuster-Nr.: Test sample No.:	A000497838-008 A000497838-009			
Prüfzeitraum: Testing period:	09-Mar-2017 - 20-Apr-2017			
Ort der Prüfung: Place of testing:	EMC/RF Laboratory Taipei			
Prüflaboratorium: Testing laboratory:	TUV Rheinland Taiwan Ltd.			
Prüfergebnis*: Test result*:	Pass			
Report Date / tested by:		kontrolliert von / reviewed by:		
2018-08-19	Mars Y.J. Lin / Project Engineer	2018-08-19	Ryan W. T. Chen / Project Manager	
Datum	Name / Stellung	Datum	Name / Stellung	Unterschrift
Date	Name / Position	Date	Name / Position	Signature
Sonstiges / Other:				
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:		Prüfmuster vollständig und unbeschädigt Test item complete and undamaged		
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend N/A = nicht anwendbar	4 = ausreichend N/T = nicht getestet
Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory N/A = not applicable	4 = sufficient N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT

RESULT: Passed

5.1.2 26 dB BANDWIDTH AND 99% BANDWIDTH

RESULT: Passed

5.1.3 6 dB BANDWIDTH

RESULT: Passed

5.1.4 DUTY CYCLE

RESULT: Passed

5.1.5 TRANSMIT OUTPUT POWER

RESULT: Passed

5.1.6 POWER SPECTRAL DENSITY

RESULT: Passed

5.1.7 SPURIOUS EMISSION

RESULT: Passed

5.2.1 MAINS CONDUCTED EMISSIONS

RESULT: Passed

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1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix P: Photo Documentation internal view
(File Name: 50175259 001APPENDIX P)

Appendix D: Test Result of Radiated Emissions
(File Name: 50175259 001APPENDIX D)

Test Specifications

The following standards were applied:

Table 1: Applied Standard and Test Levels

Radio
FCC CFR47 Part 15 Subpart E RSS-247 Issue 2, May 2017 RSS-Gen, Issue 5, November 2018 ANSI C63.10:2013 FCC KDB-789033 FCC KDB-662911 D01 FCC KDB-644545

2. Test Sites

2.1 Test Facility

TUV Rheinland Taiwan Ltd.
Taipei Office

11F. No.758, Sec. 4, Bade Rd., Songshan Dist.
Taipei City 105
Taiwan (R.O.C.)

FCC Registration No.: 340738
IC Canada Registration No.: 9465A-1
TAF Accredited NCC Test Lab. No.:0759
TAF ISO17025 Certification effective periods: 2016-Jul-1st to 2019-Jun-30th



Testing Laboratory
0759

2.2 List of Test and Measurement Instruments

Table 2: List of Test and Measurement Equipment

Kind of Equipment	Manu-facturer	Type	S/N	Last Calibration	Next Calibration
Test Software	Farad	EZ_EMC	Ver. TUV3A1	N/A	N/A
EMI Test Receiver	R&S	ESR7	101062	2016/09/12	2017/09/12
Spectrum Analyzer	R&S	FSV 40	100921	2016/05/21	2017/05/21
Spectrum Analyzer	Agilent	N9010A	MY53470241	2016/05/25	2017/05/24
Preamplifier (30MHz -1GHz)	HP	8447F	2805A03335	2016/07/29	2017/07/29
Preamplifier (18 GHz -40 GHz)	COM-POWER	PAM-840	461257	2016/12/01	2017/12/01
Pre-Amplifier (1GHz~18GHz)	EM Electronics	EM01G18G	060558	2016/11/17	2017/11/17
Bilog Antenna	TESEQ	CBL6111D	29804	2016/06/23	2017/06/23
Horn Antenna	ETS-Lindgren	3117	138160	2016/05/25	2017/05/25
Horn Antenna (18GHz~40GHz)	COM-POWER	AH840	101029	2016/10/11	2017/10/11
Loop Antenna	Schwarzbeck	FMZB 1513	1513-076	2016/05/11	2017/05/11
EMI Test Receiver	R&S	ESCI7	100797	2016/12/30	2017/12/30
Spectrum Analyzer	R&S	FSL3	101943	2015/09/07	2017/09/07
Temp. & Humid. Chamber	Giant Force	GCT-099-40-S	MAF0103-007	2015/07/13	2017/07/12
LISN (1 phase)	R&S	ENV216	101243	2016/06/02	2017/06/02
LISN	R&S	ENV216	101262	2016/06/16	2017/06/16
Power sensor	Agilent	U2021XA	MY54020001	2017/03/08	2018/03/07

2.3 Traceability

All measurement equipment calibrations are traceable to NML(Taiwan)/NIST(USA) or where calibration is performed outside Taiwan, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically in a suitably accredited Calibration Lab. Additionally all equipment is verified for proper performance on a regular schedule using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements are:.

Table 3: Emission Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-7}$
RF power, conducted	± 1.5 dB
Adjacent channel power	± 3 dB
Radiated emission of transmitter, valid up to 40 GHz	± 6 dB
Radiated emission of receiver, valid up to 40 GHz	± 6 dB
Temperature	± 2 °C
Humidity	± 10 %

3. General Product Information

3.1 Product Function and Intended Use

The EUT is a HD wireless Sender & Receiver. It contains a WiFi compatible module enabling the user to communicate data through a Wireless interface.
For details refer to the User Guide, Data Sheet and Circuit Diagram.

3.2 Ratings and System Details

Table 4: Technical Specification of EUT

Technical Specification	Value
Kind of Equipment	HD wireless Sender & Receiver
FCC ID	BY4WTR5000
Brand Name	PX
Type Designation	WTR-5000
Operating Frequency	5180 ~ 5220MHz, 5745 MHz ~ 5825 MHz
Operation Voltage	5V
Modulation	802.11a: OFDM 6M 802.11n HT20 MHz Mode: MCS0 802.11n HT40 MHz Mode: MCS0
Antenna gain	Chain 0 : -7dBi Chain 1 : -7dBi
Antenna Type	PCB Antenna

Table 5: Test Channel Frequency information

	CH	Frequency
		(MHz)
802.11a Band I	36	5180
802.11a Band I	40	5200
802.11a Band I	44	5220
802.11n (HT20) Band I	36	5180
802.11n (HT20) Band I	40	5200
802.11n (HT20) Band I	44	5220
802.11n (HT40) Band I	38	5190
802.11a Band IV	149	5745
802.11a Band IV	157	5785
802.11a Band IV	165	5825
802.11n (HT20) Band IV	149	5745
802.11n (HT20) Band IV	157	5785
802.11n (HT20) Band IV	165	5825
802.11n (HT40) Band IV	151	5755
802.11n (HT40) Band IV	159	5795

3.3 Independent Operation Modes

The basic operation modes are:

- A. Transmitting
 - 1. Low channel
 - 2. Middle channel
 - 3. High channel
- B. Receiving
- C. Standby
- D. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Circuit Diagram
- Instruction Manual
- Rating Label
- Technical Description

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Setup for testing: Test samples are provided with a USB interface which makes it possible to control them through a test software installed on a notebook computer.

This software was running on the laptop computer connected to the EUT. It was used to enable the operation modes listed in section 2.3 as appropriate. The samples were used as follows:

Conducted: A000497838-008
Radiation: A000497838-009

Full test was applied on all test modes, but only worst case was shown.

Chain0 stands for Antenna port one.

Chain1 stands for Antenna port two.

U-NII-1:**IEEE 802.11a for 5180 ~ 5220MHz:**

Channel Low (5180MHz), Channel Mid (5200MHz) and Channel High (5220MHz) with 6Mbps data rate were chosen for full testing.

IEEE 802.11n HT 20 MHz for 5180 ~ 5220MHz:

Channel Low (5180MHz), Channel Mid (5200MHz) and Channel High (5220MHz) with 13Mbps data rate were chosen for full testing.

IEEE 802.11n HT 40 MHz Channel for 5190 MHz ~ 5230MHz:

Low (5190MHz) with 27Mbps data rate were chosen for full testing.

U-NII-3:**IEEE 802.11a mode for 5745 MHz ~ 5825 MHz:**

Channel Low (5745MHz), Channel Mid (5785MHz) and Channel High (5825MHz) with 6Mbps data rate were chosen for full testing.

IEEE 802.11n HT 20 mode for 5745 MHz ~ 5825 MHz:

Channel Low(5745MHz), Channel Mid(5785MHz) and Channel High(5825MHz) with 13Mbps data rate were chosen for full testing.

IEEE 802.11n HT 40 mode for 5755 MHz ~ 5795 MHz:

Channel Low(5755MHz) and Channel High(5795MHz) with 27Mbps data rate were chosen for full testing.

4.3 Special Accessories and Auxiliary Equipment

The product has been tested together with the following additional accessories:

Description	Manufacturer	Model No.	Serial No.
Notebook(EMC-06)	Lenovo	TP00048A	PB-0F8B2

4.4 Countermeasures to achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test

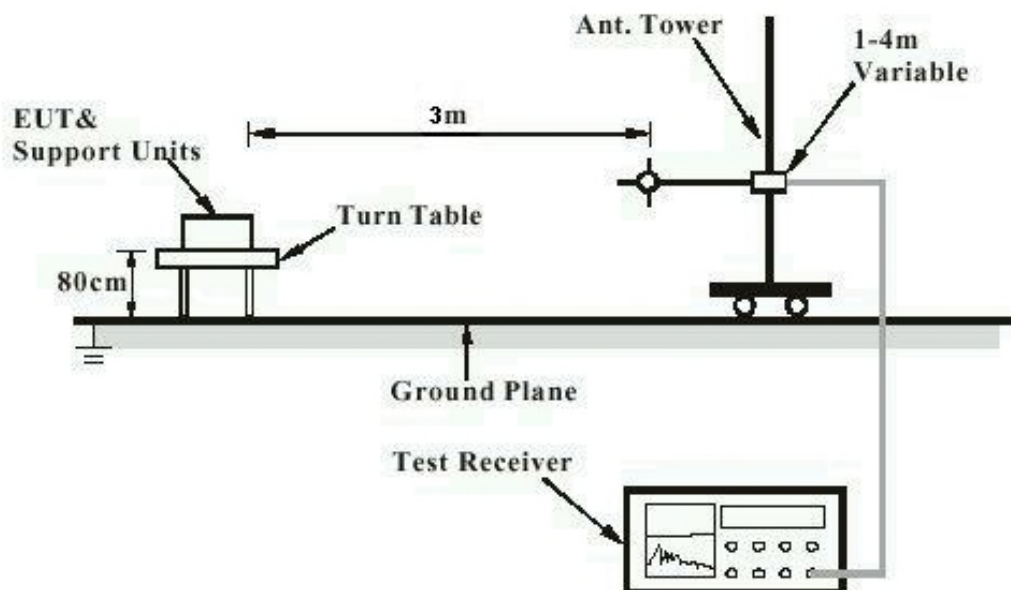


Diagram of Measurement Equipment Configuration for Mains Conduction Measurement

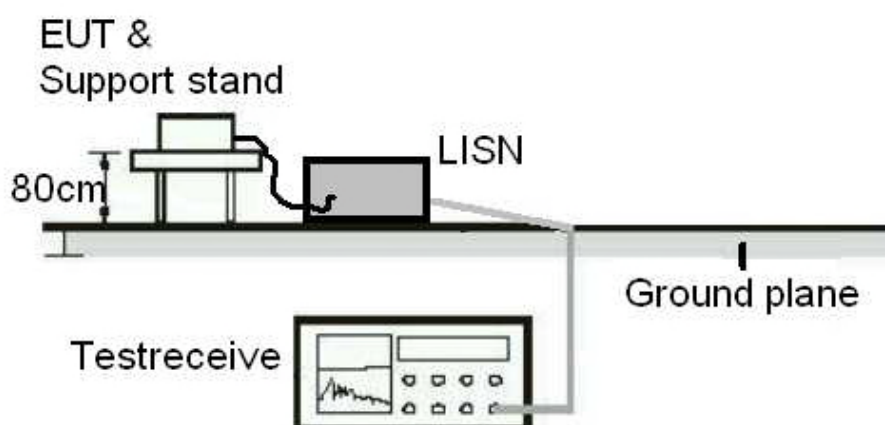
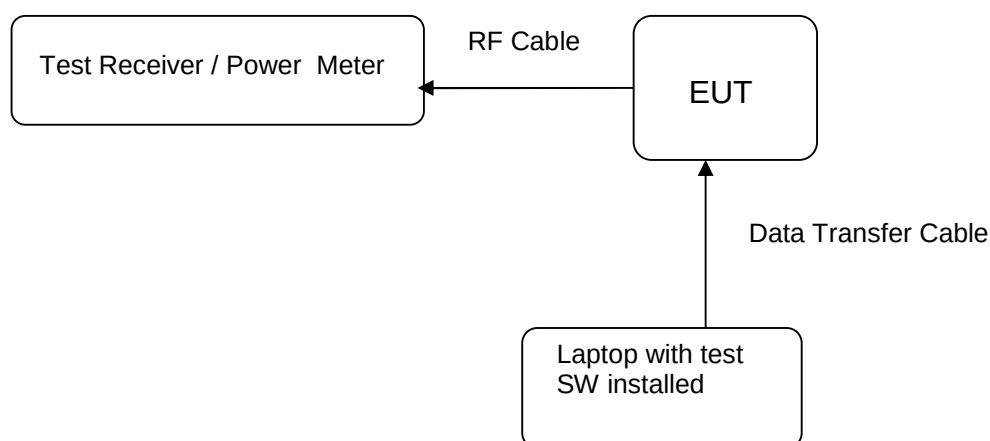


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement

Chain0 or Chain1 testing



5. Antenna Port Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Passed**

Test standard	:	FCC Part 15.407(a), Part 15.203 and RSS-Gen 6.8
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declaration, the EUT has an antenna with a directional gain of -7dBi. The antenna is PCB Antenna with no possibility of replacement with a non-approved antenna by the end-user. Therefore, the EUT is considered to comply with this provision.

Refer to EUT photo for details.

5.1.2 26 dB Bandwidth and 99% Bandwidth

RESULT:

Passed

Test standard : FCC Part 15.407(a), RSS-247 6.2.1 ;

Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High
 Operation Mode : A

Ambient temperature : 22-26 °C
 Relative humidity : 50-65 %
 Atmospheric pressure : 100-103 kPa

Table 6: Test result of 26dB/99% Bandwidth (11a)

Channel	Channel Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	5180	20.61	16.575
Mid Channel	5200	21.27	16.532
High Channel	5220	20.51	16.594

Table 7: Test result of 26dB/99% Bandwidth (HT20)

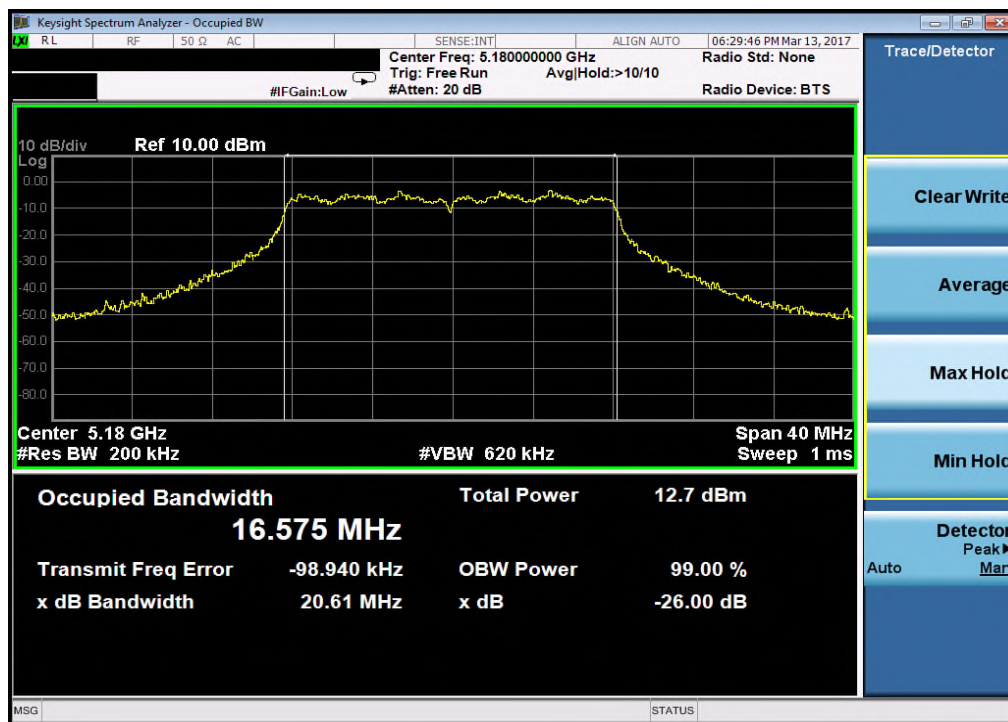
Channel	Channel Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	5180	20.68	17.626
Mid Channel	5200	20.74	17.614
High Channel	5220	20.88	17.638

Table 8: Test result of 26dB/99% Bandwidth (HT40)

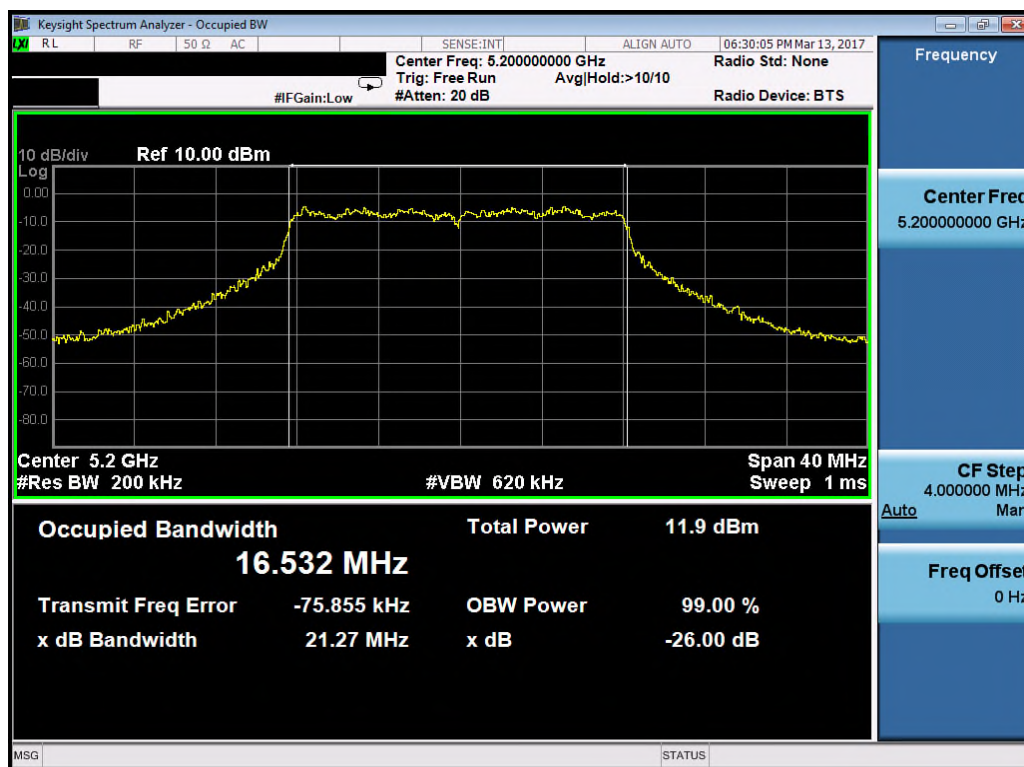
Channel	Channel Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	5190	43.55	36.252

Test Plot of 26dB Bandwidth (11a)

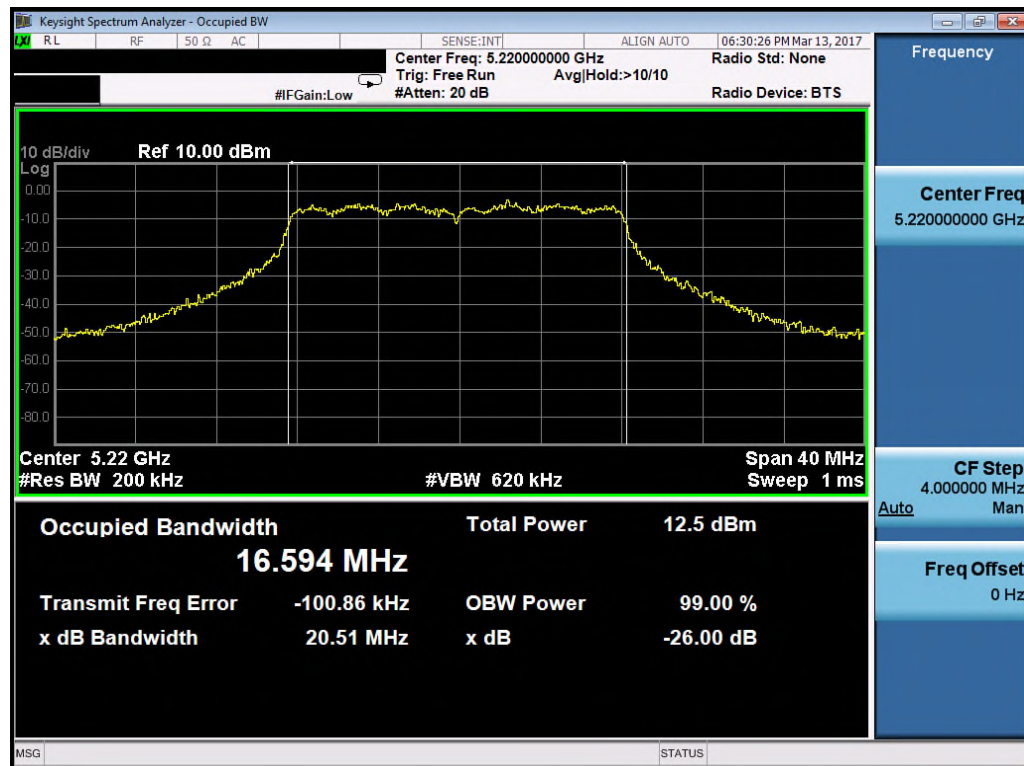
Low Channel



Mid Channel

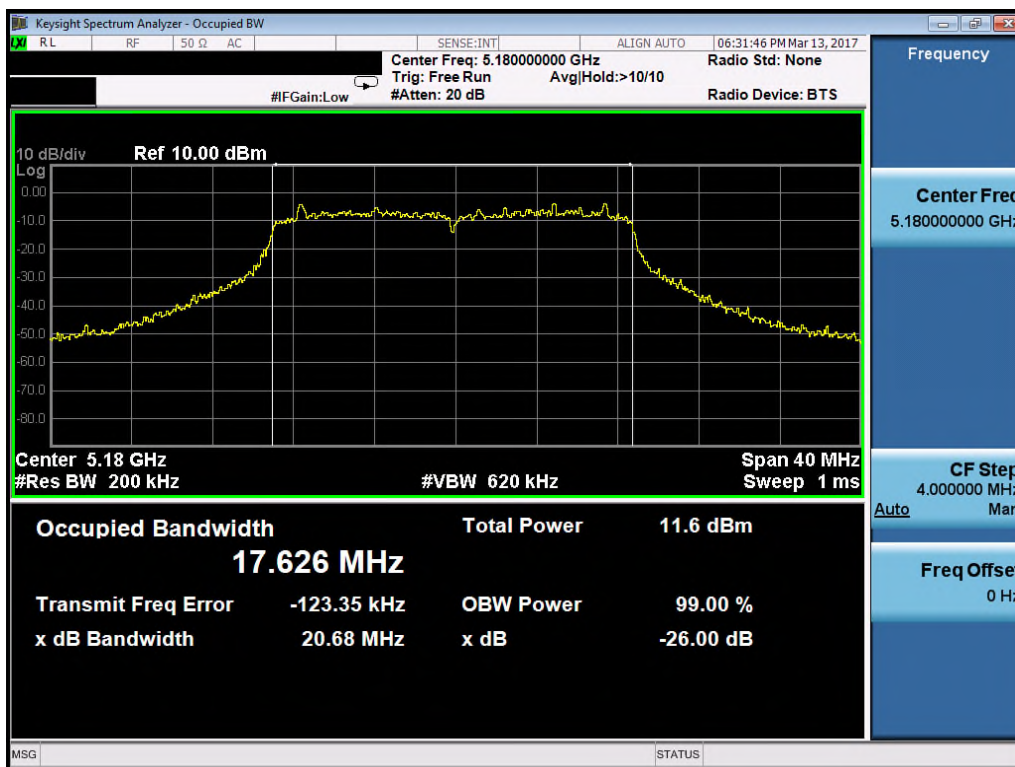


High Channel

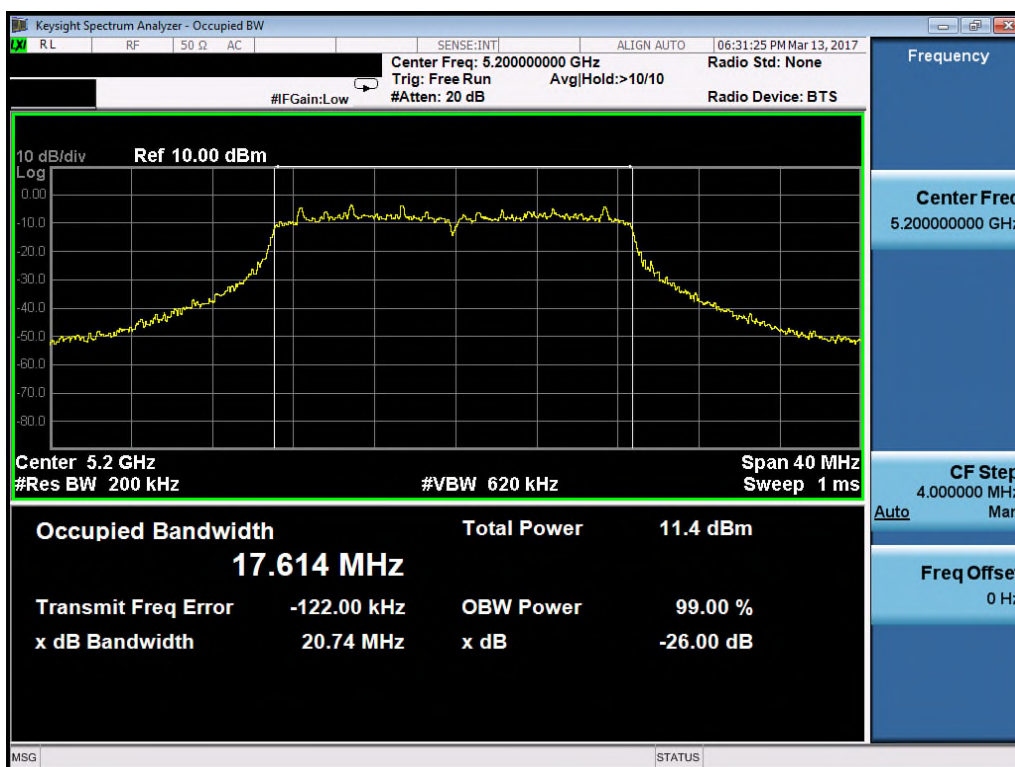


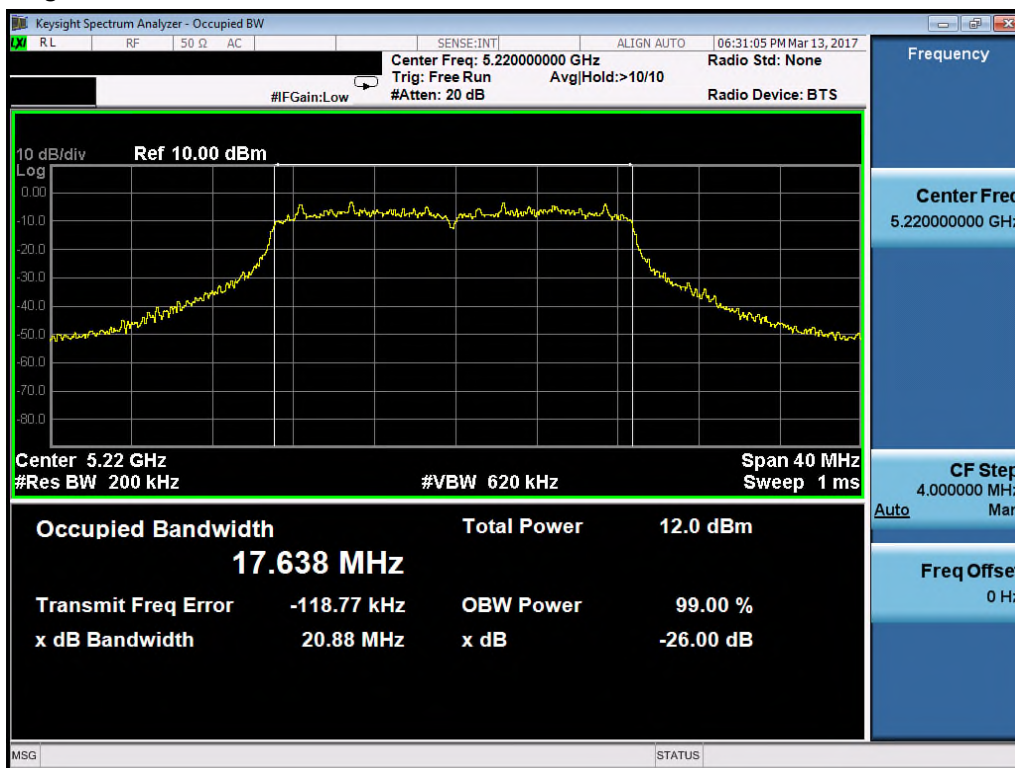
Test Plot of 26dB Bandwidth (HT20)

Low Channel



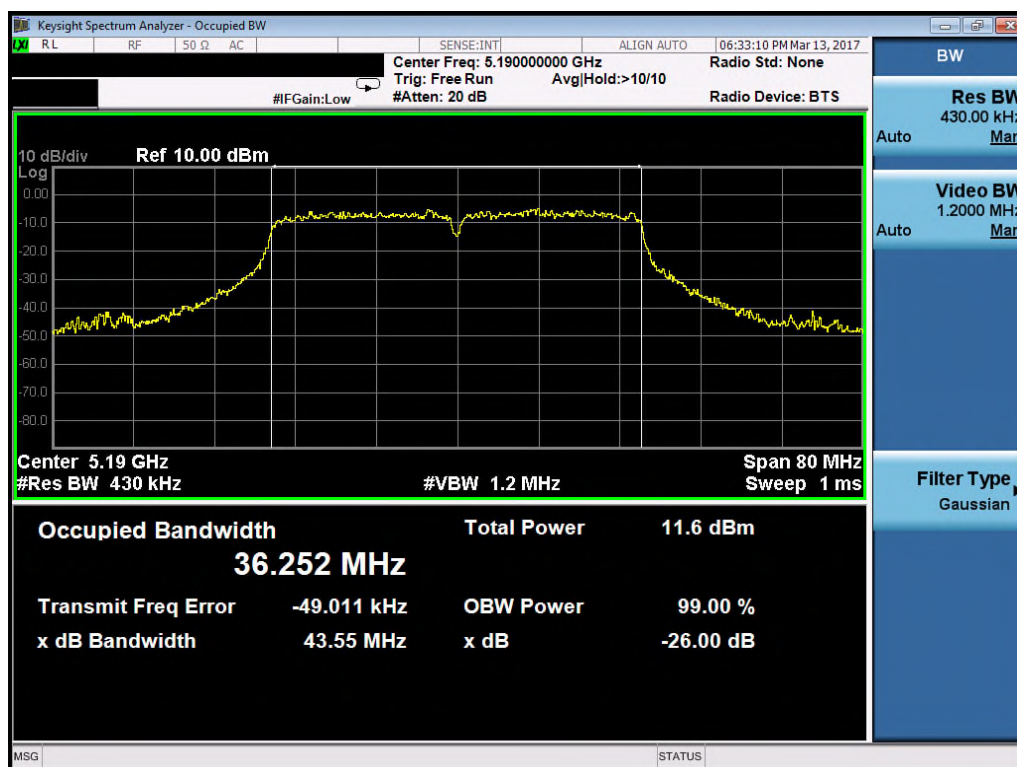
Mid Channel



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Test Plot of 26dB Bandwidth(HT40)

Low Channel



5.1.3 6 dB Bandwidth

RESULT:**Passed**

Test standard : FCC Part 15.407(a), RSS-247 6.2.4.1 ;

Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High

Operation Mode : A

Ambient temperature : 22-26 °C

Relative humidity : 50-65 %

Atmospheric pressure : 100-103 kPa

Table 9: Test result of 6dB Bandwidth (11a)

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low Channel	5745	16.37	> 0.5
Mid Channel	5785	16.33	> 0.5
High Channel	5825	16.33	> 0.5

Table 10: Test result of 6dB Bandwidth (HT20)

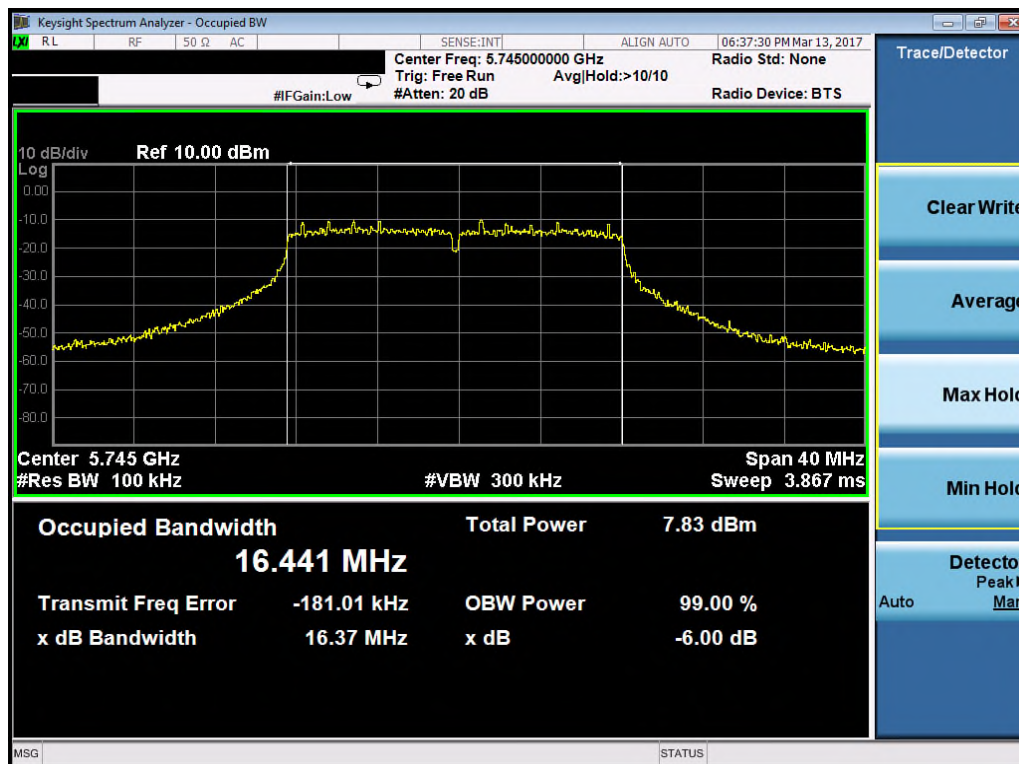
Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low Channel	5745	16.13	> 0.5
Mid Channel	5785	15.76	> 0.5
High Channel	5825	16.67	> 0.5

Table 11: Test result of 6dB Bandwidth (HT40)

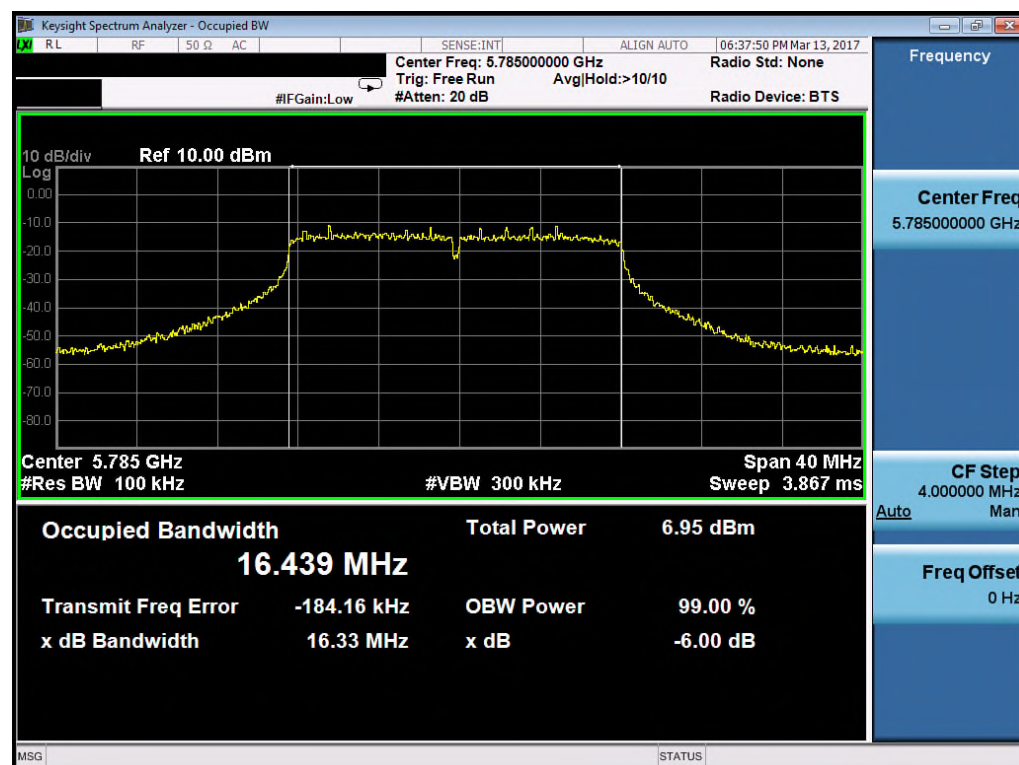
Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low Channel	5755	35.18	> 0.5
High Channel	5795	35.20	> 0.5

Test Plot of 6dB Bandwidth (11a)

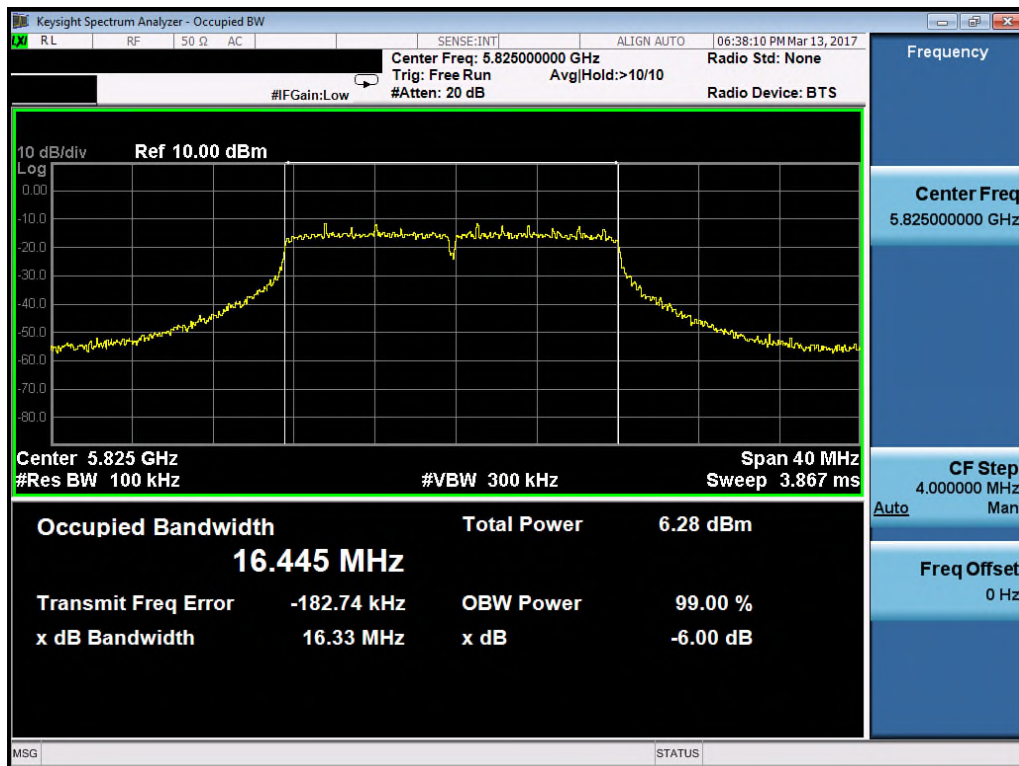
Low Channel



Mid Channel

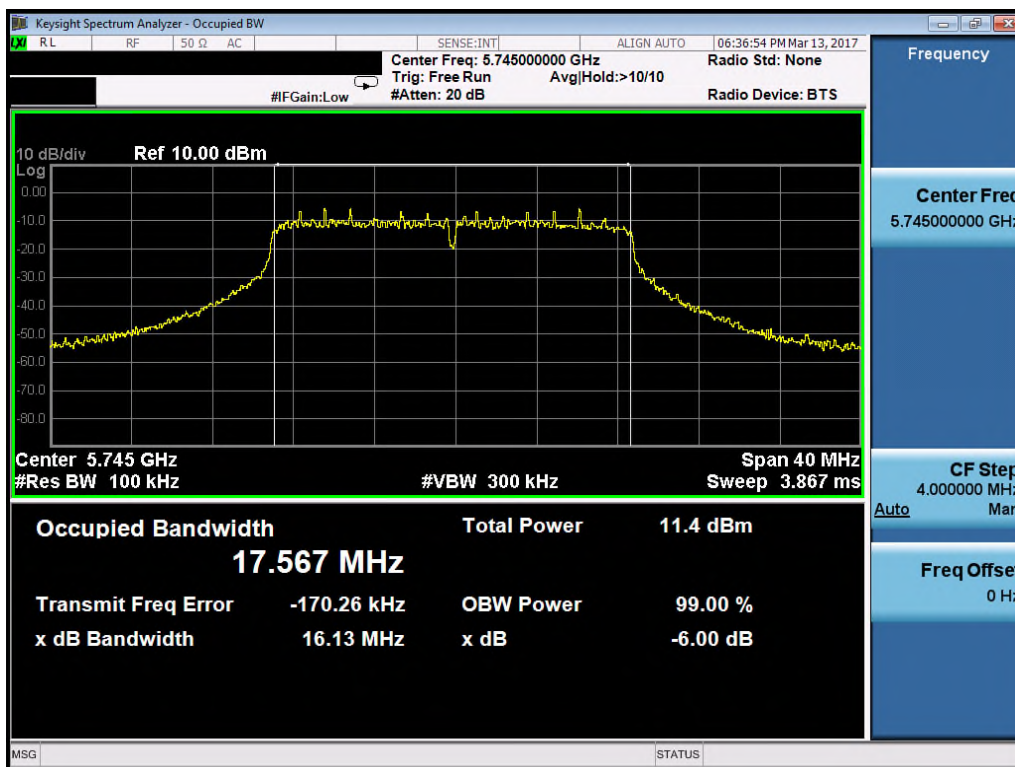


High Channel

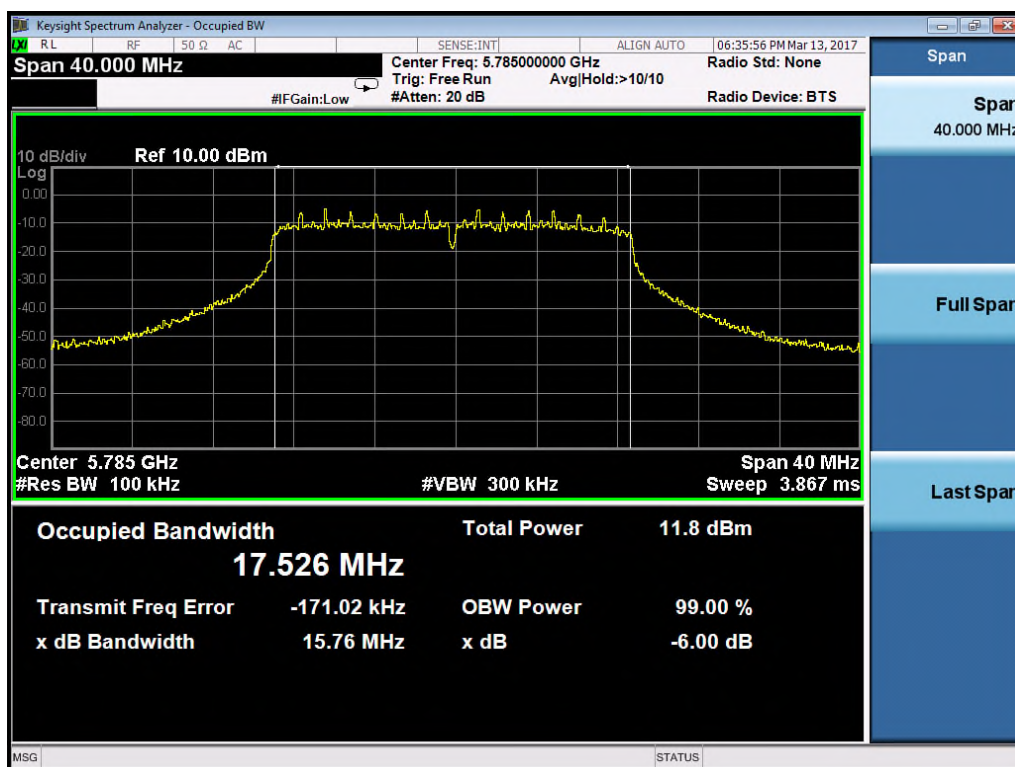


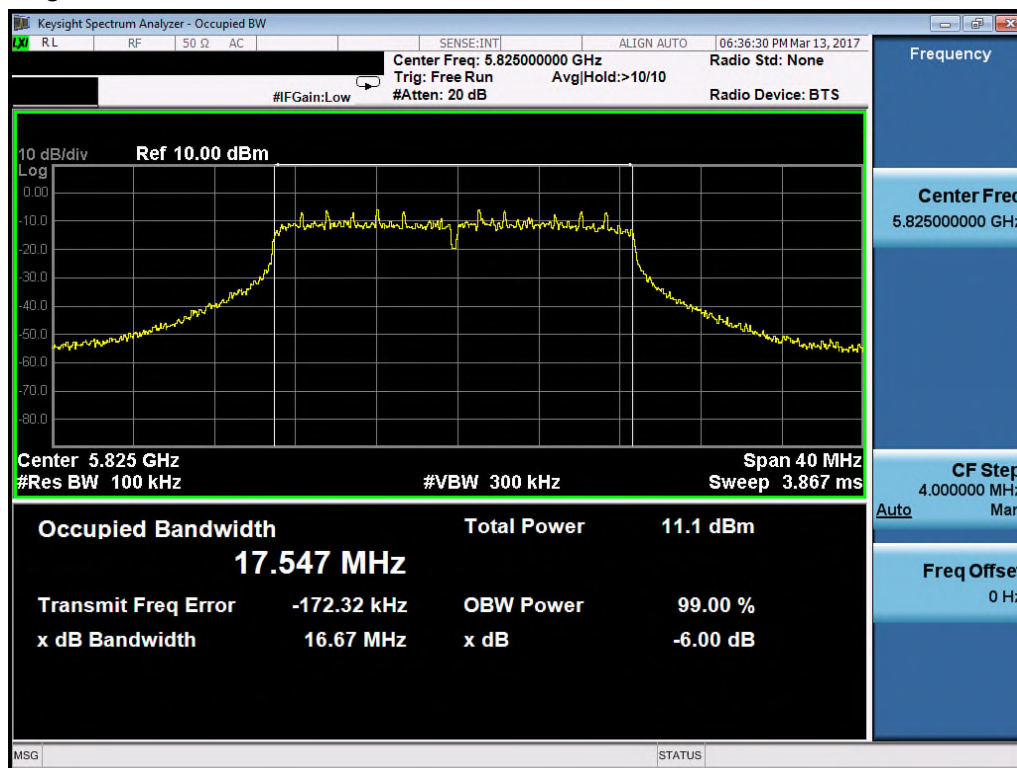
Test Plot of 6dB Bandwidth (HT20)

Low Channel



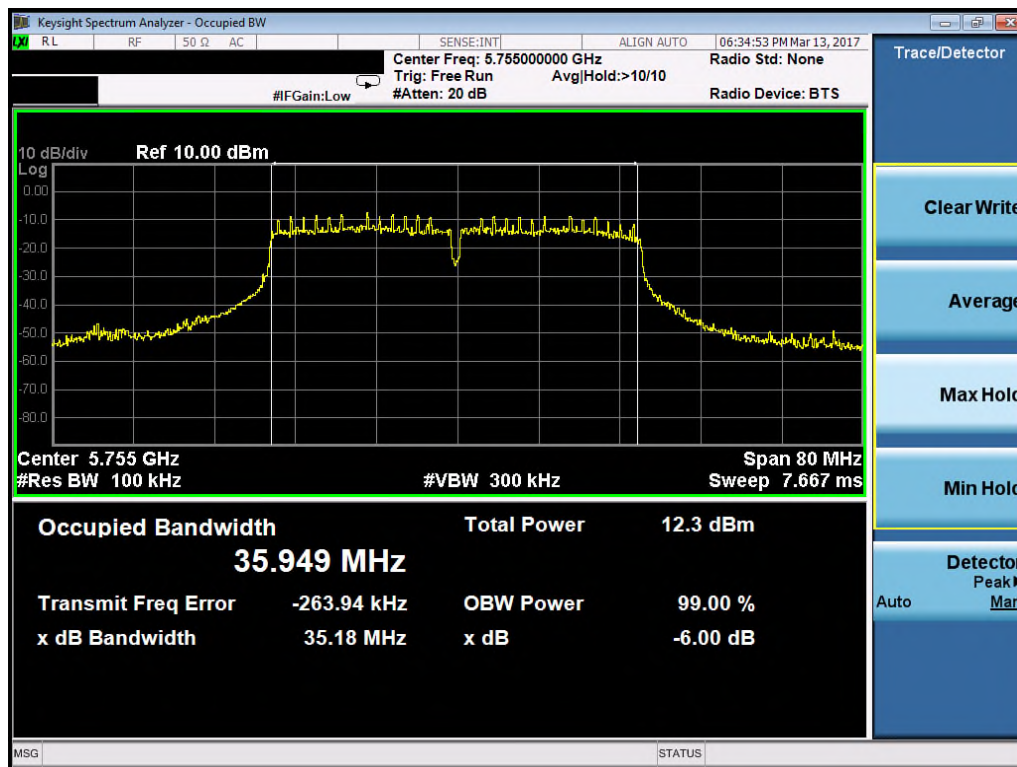
Mid Channel



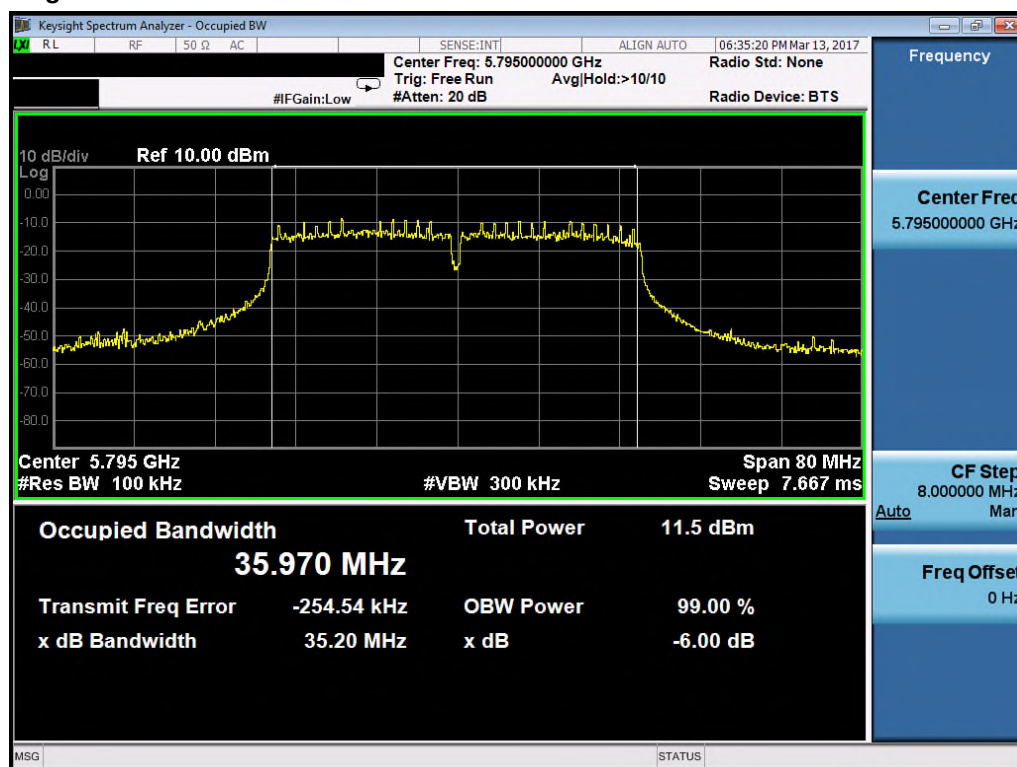
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Test Plot of 6dB Bandwidth(HT40)

Low Channel



High Channel



5.1.4 Duty Cycle

RESULT:**Passed**

Table 12: For CDD mode:

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11a	2.020	2.050	98.54	0.06
802.11an MCS0 HT20	0.975	1.005	97.01	0.13
802.11an MCS0 HT20	0.488	0.520	93.85	0.28

5.1.5 Transmit Output Power

RESULT:

Passed

Test standard : FCC Part 15.407(a), RSS-247 6.2.1, 6.2.4 ;

Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High

Operation Mode : A

Ambient temperature : 22-26 °C

Relative humidity : 50-65 %

Atmospheric pressure : 100-103 kPa

15.407 General technical requirements.

(a) Power limits:

For the band 5.15–5.25 GHz.:

(iv) For mobile and portable client devices in the 5.15–5.25 GHz. band, the maximum **conducted** output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.

In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3)For the band 5.725 - 5.85 GHz,

the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

In addition, the maximum power spectral density shall not exceed 30 dBm in any 500kHz band.

If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

=====

Table 13: Test result of Transmit Power (11a)
5150-5250MHz:

Channel	Channel Frequency (MHz)	Power (dBm)	Power (mW)	Limit (mW)	Result
Low Channel	5180	8.97	7.89	250	Pass
Mid Channel	5200	8.95	7.85	250	Pass
High Channel	5220	9.48	8.87	250	Pass

5725-5850MHz:

Channel	Channel Frequency (MHz)	Power(dBm)	Power (mW)	Limit (mW)	Result
Low Channel	5745	8.46	7.01	1000	Pass
Mid Channel	5785	8.06	6.40	1000	Pass
High Channel	5825	7.54	5.68	1000	Pass

Table 14: Test result of Transmit Power (HT20)
5150-5250MHz:

Channel	Channel Frequency (MHz)	Power (Chain0) (dBm)	Power (Chain1) (dBm)	Power (Chain0) + (Chain1) (mW)	Limit (mW)	Result
Low Channel	5180	8.86	6.27	11.93	250	Pass
Mid Channel	5200	8.84	5.68	11.35	250	Pass
High Channel	5220	9.58	5.50	12.63	250	Pass

5725-5850MHz:

Channel	Channel Frequency (MHz)	Power (Chain0) (dBm)	Power (Chain1) (dBm)	Power (Chain0) + (Chain1) (mW)	Limit (mW)	Result
Low Channel	5745	8.98	6.93	12.84	1000	Pass
Mid Channel	5785	8.64	7.19	12.55	1000	Pass
High Channel	5825	7.67	6.57	10.39	1000	Pass

Table 15: Test result of Transmit Power (HT40)**5150-5250MHz:**

Channel	Channel Frequency (MHz)	Power (Chain0) (dBm)	Power (Chain1) (dBm)	Power (Chain0) + (Chain1) (mW)	Limit (mW)	Result
Low Channel	5190	5.40	2.34	5.18	250	Pass

5725-5850MHz:

Channel	Channel Frequency (MHz)	Power (Chain0) (dBm)	Power (Chain1) (dBm)	Power (Chain0) + (Chain1) (mW)	Limit (mW)	Result
Low Channel	5755	8.52	3.91	9.57	1000	Pass
High Channel	5795	8.16	3.25	8.66	1000	Pass

5.1.6 Power Spectral Density

RESULT:**Passed**

Test standard : FCC Part 15.407(a)(1),(5)
RSS-247 6.2.1, 6.2.4

Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High
Operation Mode : A

Ambient temperature : 22-26 °C
Relative humidity : 50-65 %
Atmospheric pressure : 100-103 kPa

Table 16: Test result of Power Spectral Density (11a)**5150-5250MHz:**

Channel	Channel Frequency (MHz)	Peak Power Density (dBm)	Limit (dBm/MHz)	Result
Low Channel	5180	3.44	11	Pass
Mid Channel	5200	2.98	11	Pass
High Channel	5220	4.22	11	Pass

5725-5850MHz:

Channel	Channel Frequency (MHz)	Peak Power Density (dBm)	Limit (dBm/MHz)	Result
Low Channel	5745	1.55	30	Pass
Mid Channel	5785	2.57	30	Pass
High Channel	5825	2.23	30	Pass

Table 17: Test result of Power Spectral Density (HT20)
5150-5250MHz:

Channel	Channel Frequency (MHz)	Peak Power Density Chain0 (dBm)	Peak Power Density Chain1(dBm)	Total Peak Power Density (mW)	Total Peak Power Density (dBm)	Limit (dBm/MHz)	Result
Low Channel	5180	4.56	1.92	4.41	6.45	11	Pass
Mid Channel	5200	3.59	1.97	3.86	5.87	11	Pass
High Channel	5220	4.44	1.68	4.25	6.29	11	Pass

5725-5850MHz:

Channel	Channel Frequency (MHz)	Peak Power Density Chain0 (dBm)	Peak Power Density Chain1(dBm)	Total Peak Power Density (mW)	Total Peak Power Density (dBm)	Limit (dBm/MHz)	Result
Low Channel	5745	2.97	1.17	3.29	5.17	30	Pass
Mid Channel	5785	4.28	2.39	4.41	6.45	30	Pass
High Channel	5825	2.41	1.69	3.22	5.08	30	Pass

Table 18: Test result of Power Spectral Density (HT40)
5150-5250MHz:

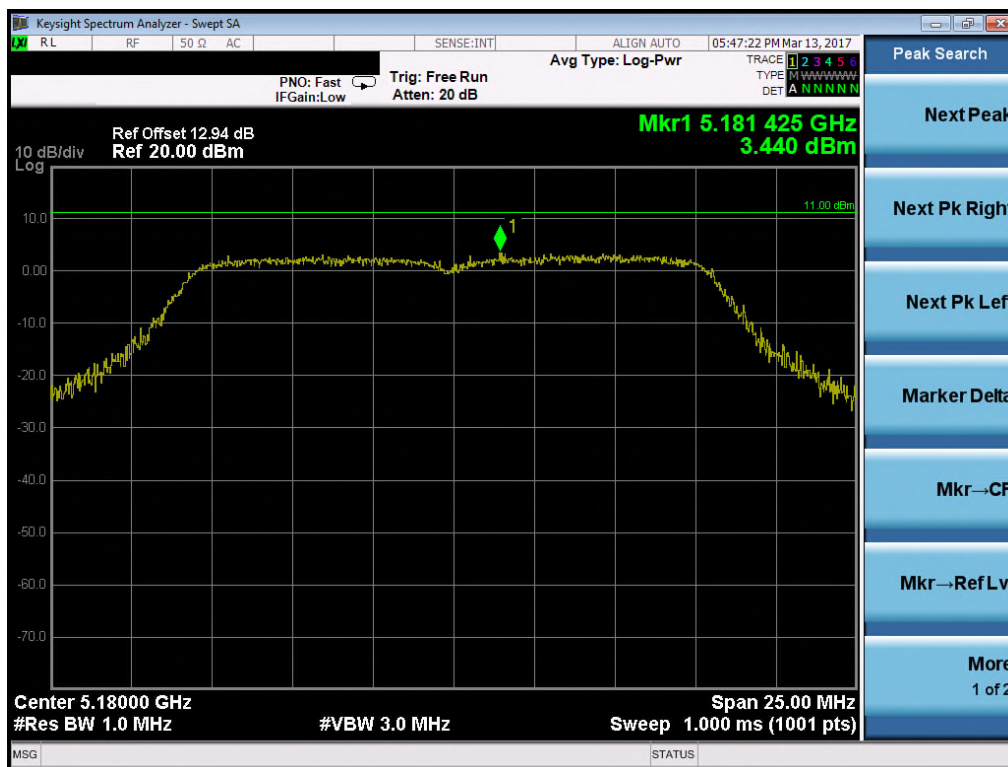
Channel	Channel Frequency (MHz)	Peak Power Density Chain0 (dBm)	Peak Power Density Chain1(dBm)	Total Peak Power Density (mW)	Total Peak Power Density (dBm)	Limit (dBm/MHz)	Result
Low Channel	5190	-1.24	-3.64	1.18	0.73	30	Pass

5725-5850MHz:

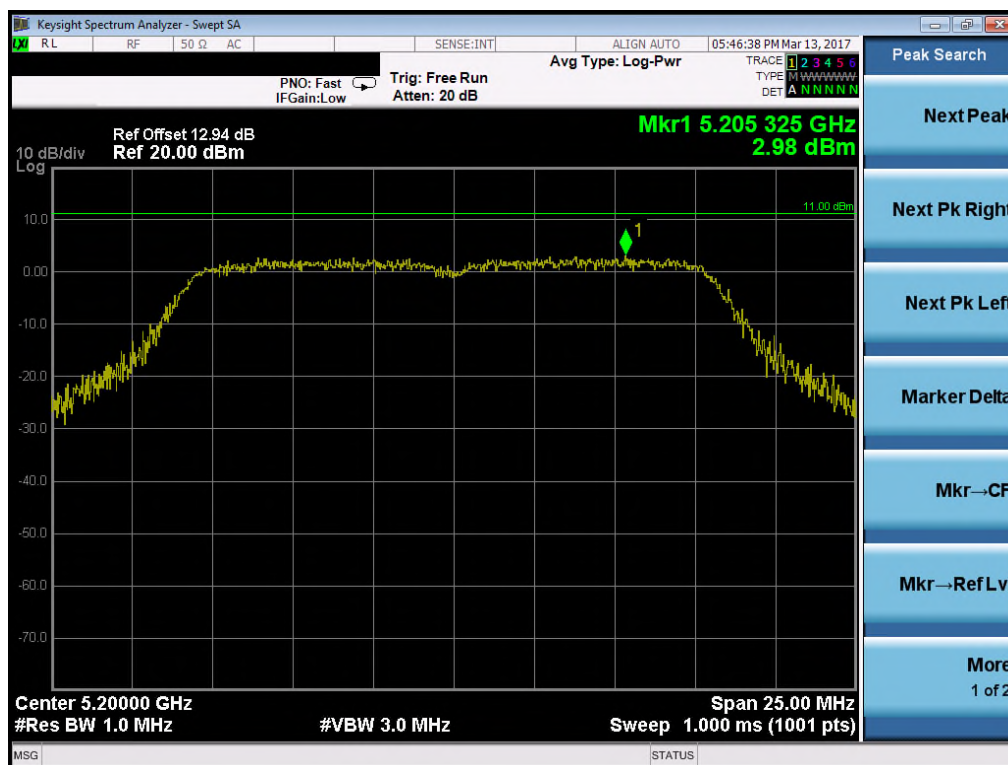
Channel	Channel Frequency (MHz)	Peak Power Density Chain0 (dBm)	Peak Power Density Chain1(dBm)	Total Peak Power Density (mW)	Total Peak Power Density (dBm)	Limit (dBm/MHz)	Result
Low Channel	5755	-1.06	-4.89	1.11	0.44	30	Pass
High Channel	5795	-0.49	-5.03	1.21	0.82	30	Pass

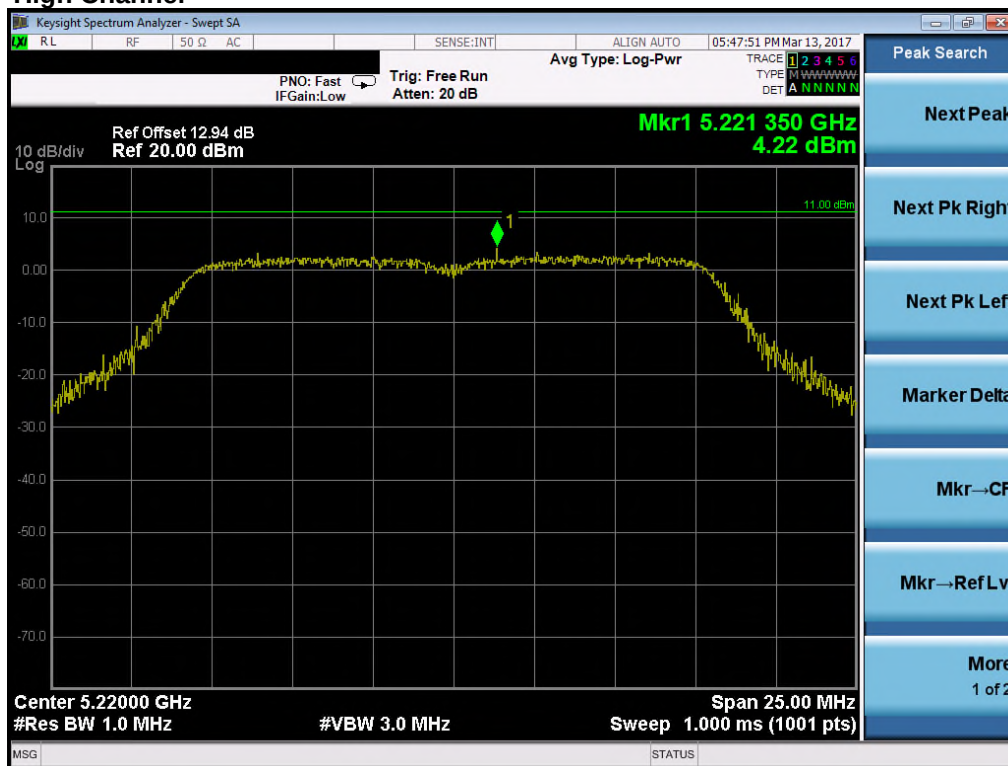
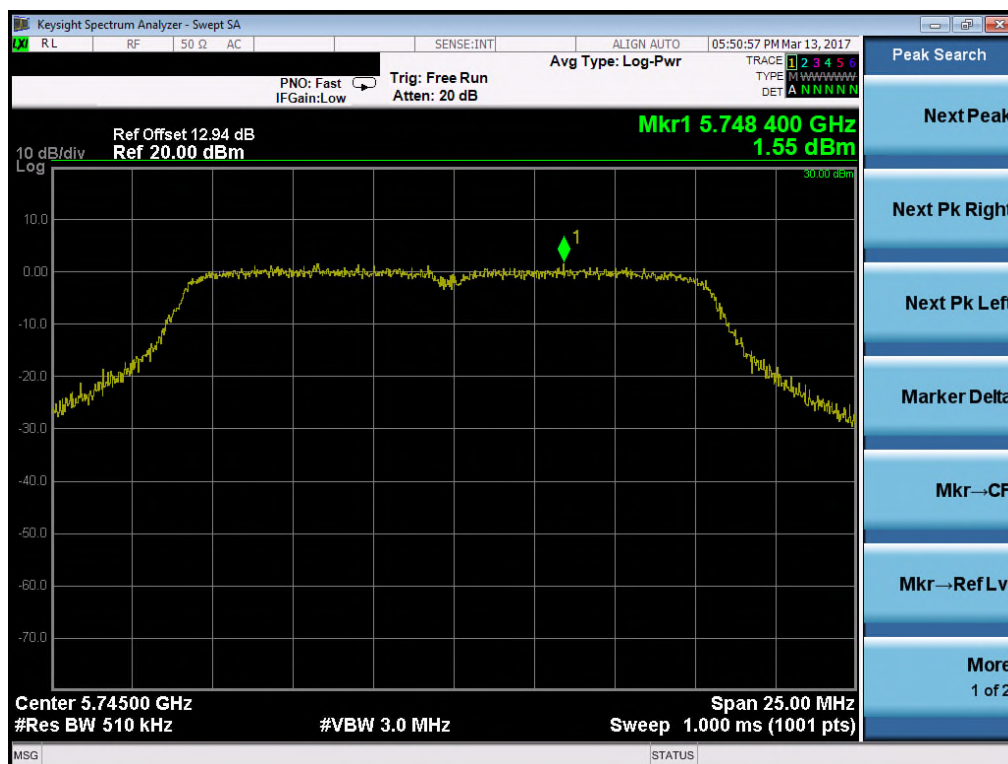
Test Plot of Power Density 11a (5150-5250MHz)

Low Channel

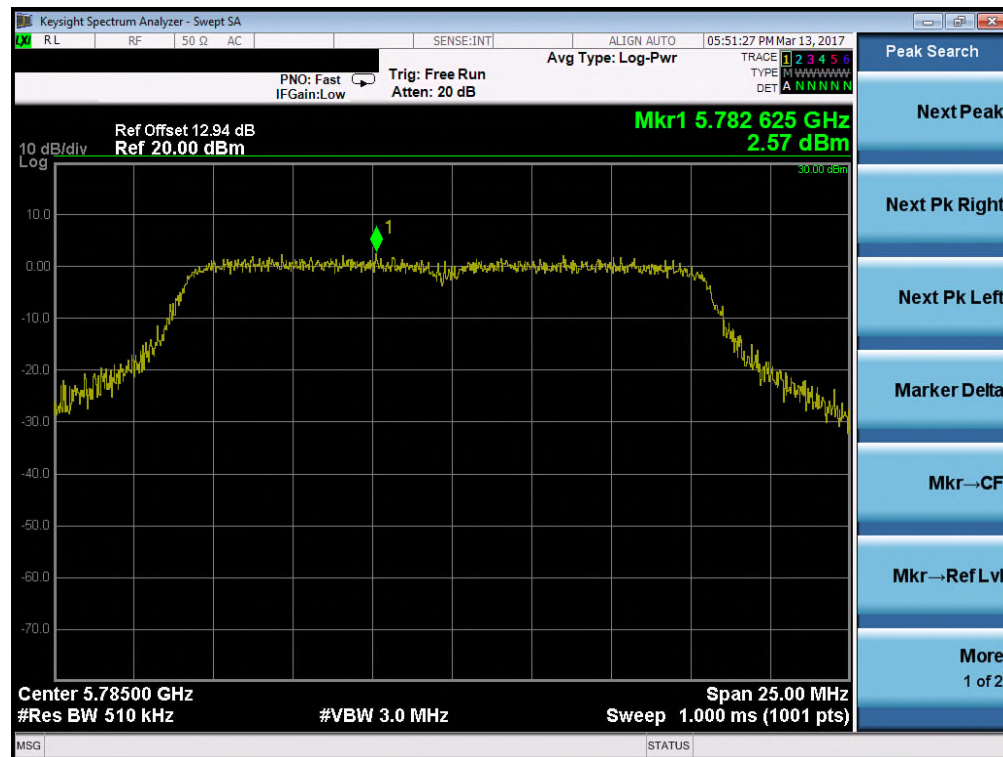


Middle Channel

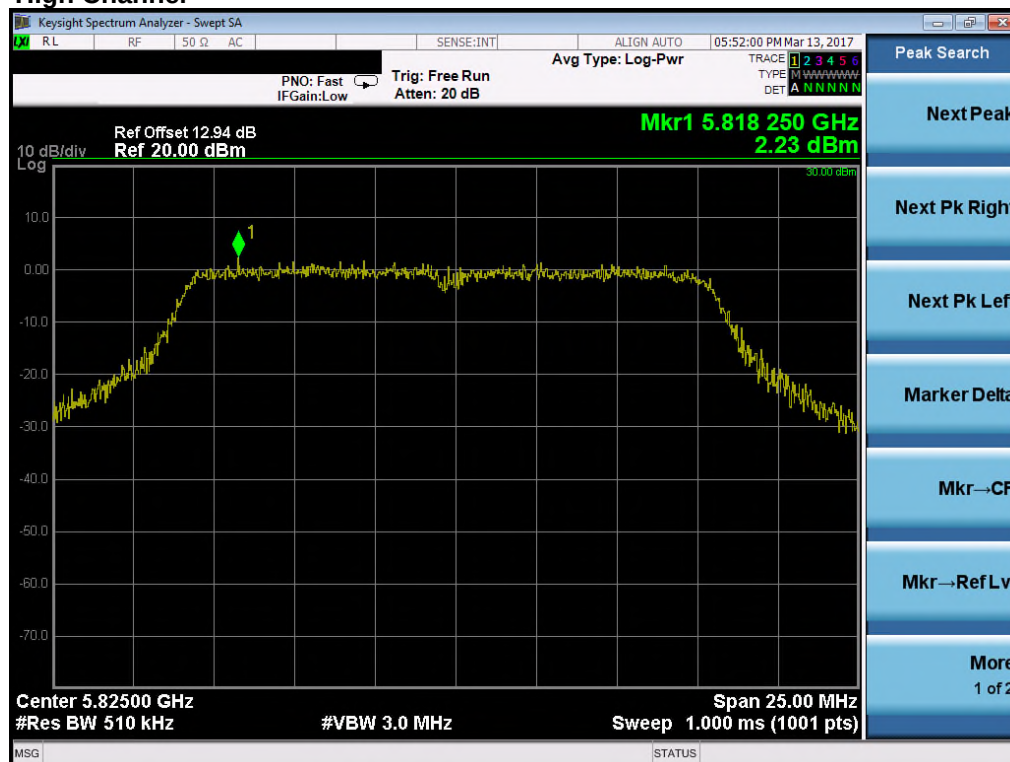


High Channel

Test Plot of Power Density 11a (5725-5850MHz)
Low Channel


Middle Channel



High Channel

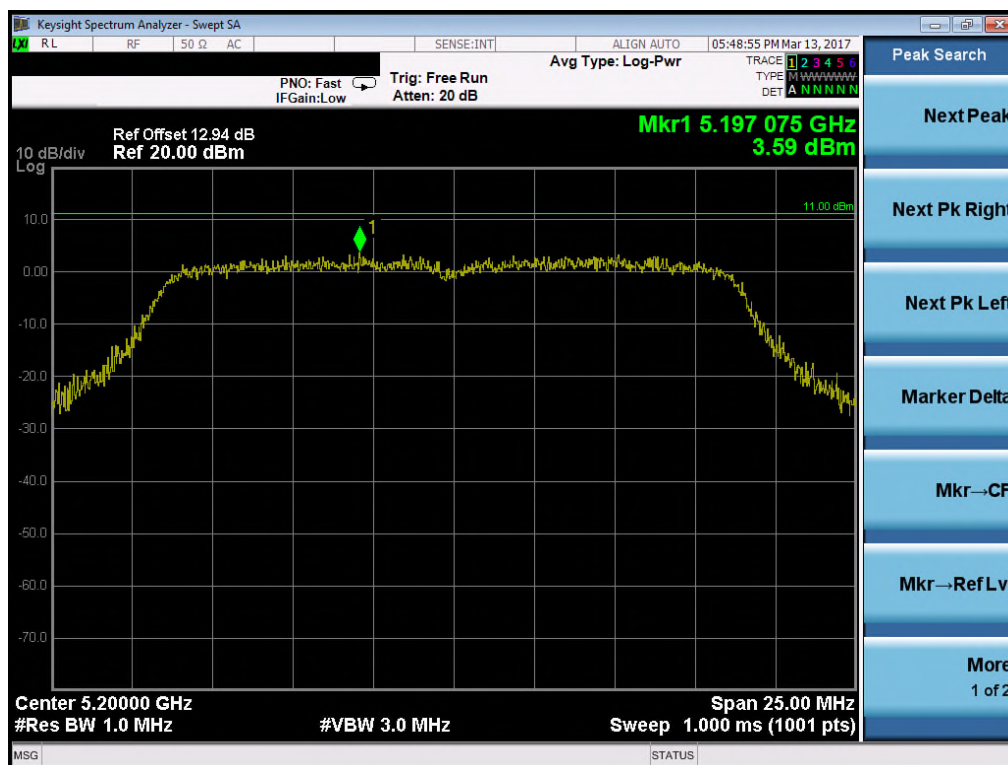


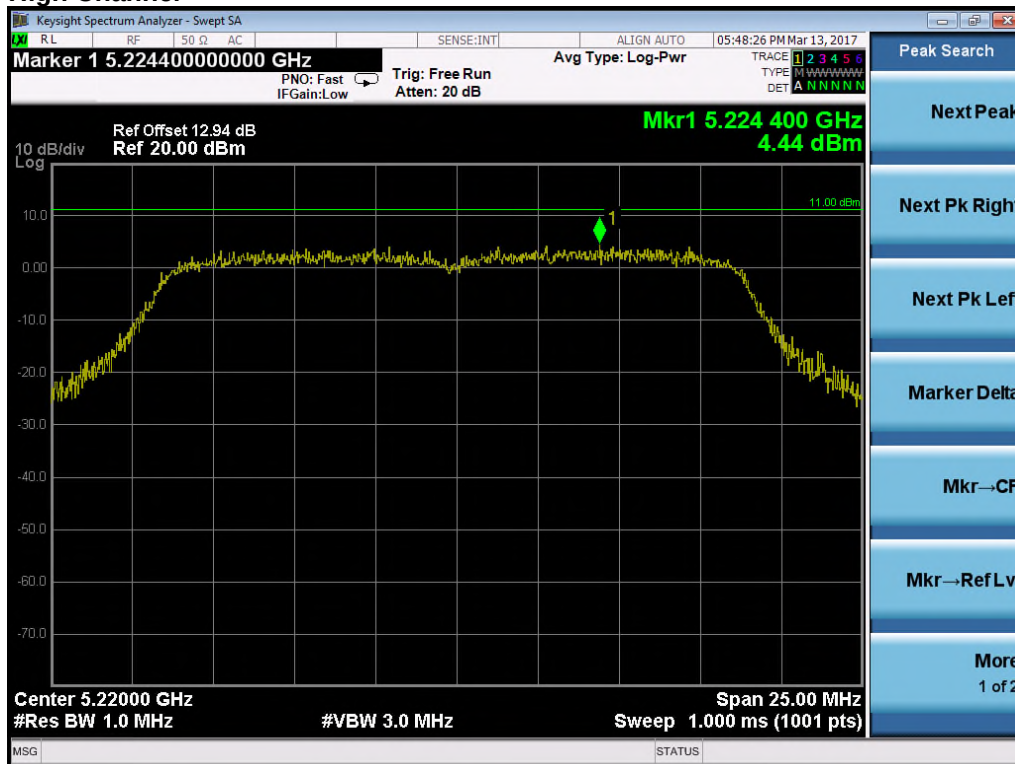
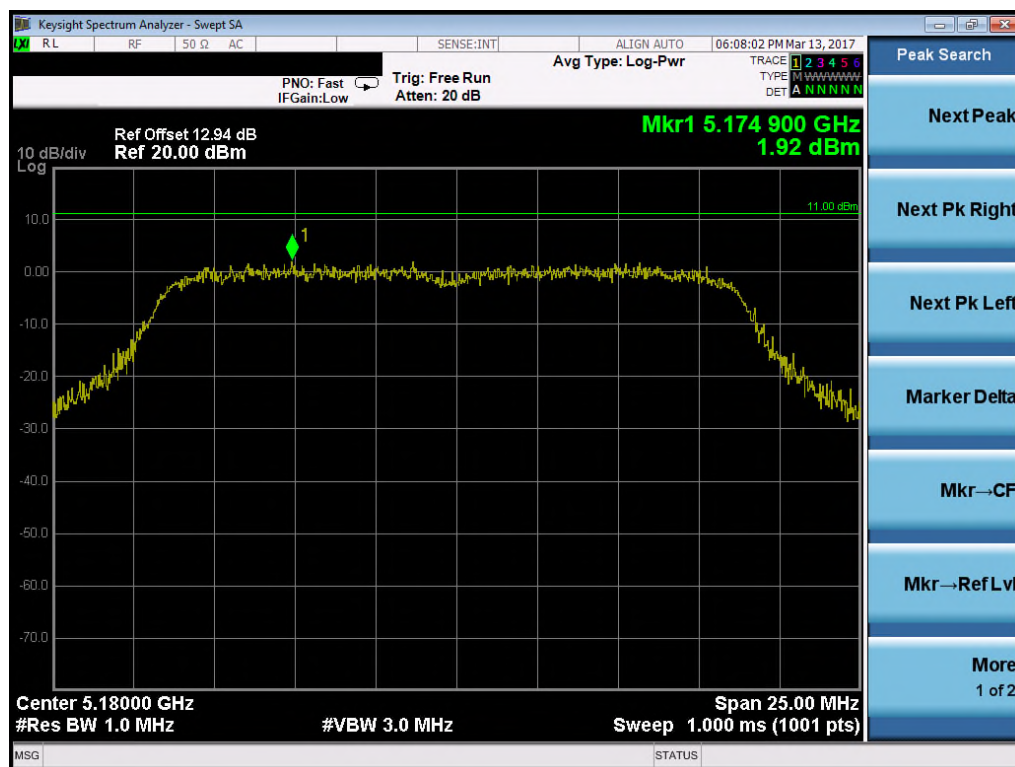
Test Plot of Power Density (HT20) (5150-5250MHz)

Chain0: Low channel

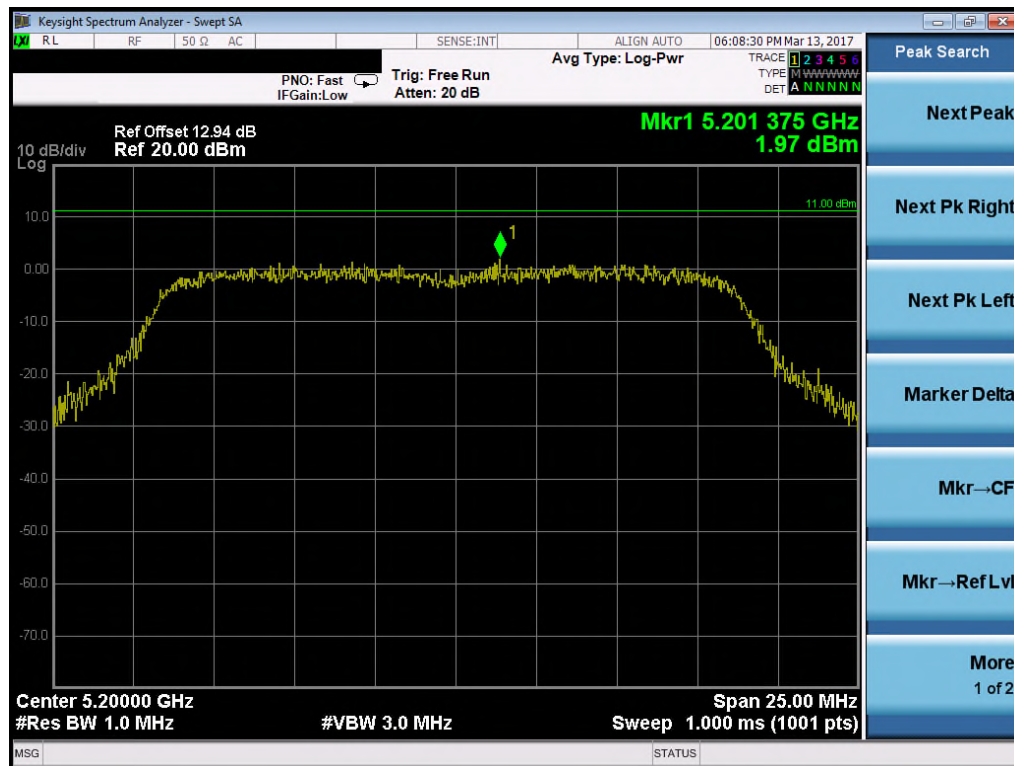


Middle Channel

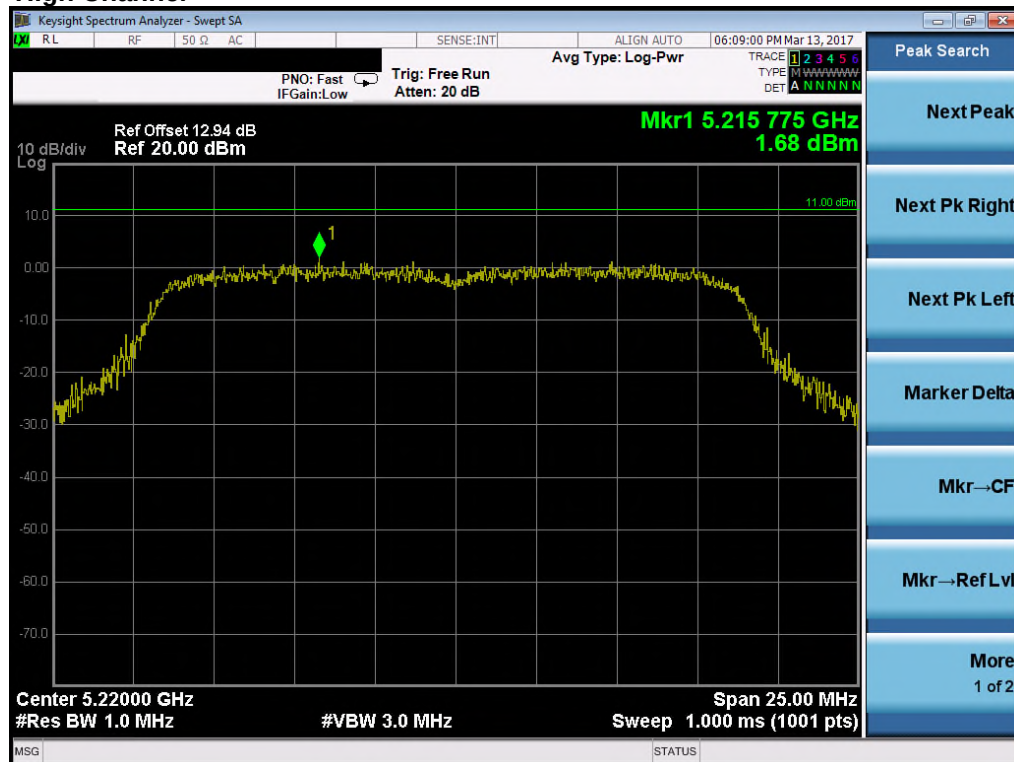


High Channel

Chain1: Low Channel


Middle Channel

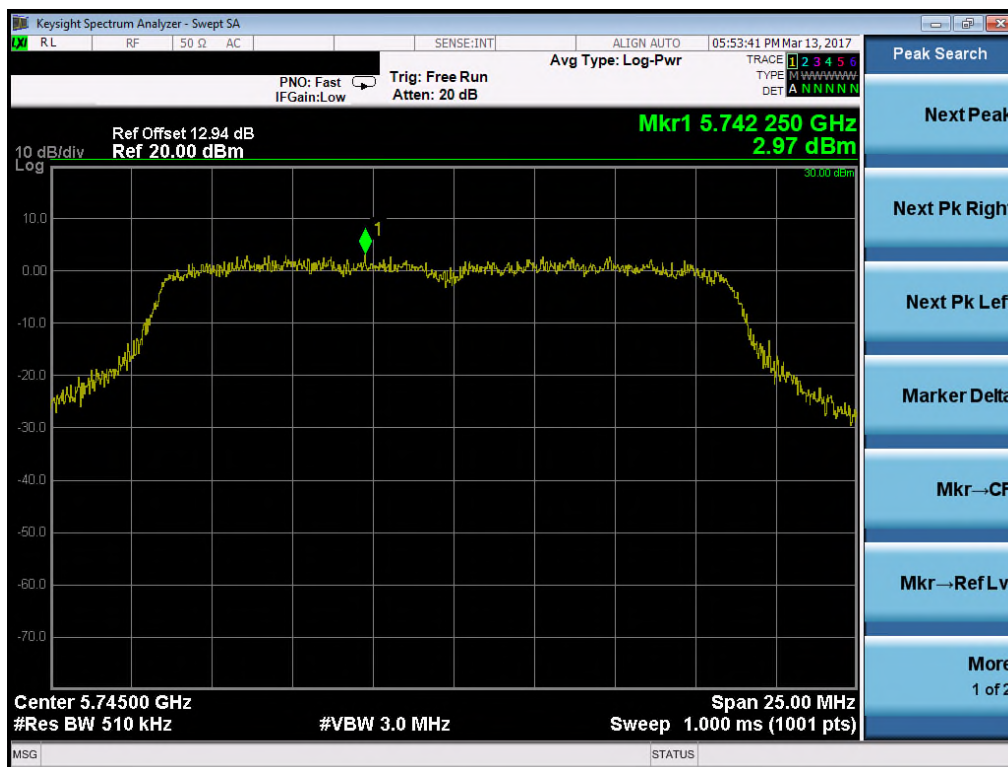


High Channel

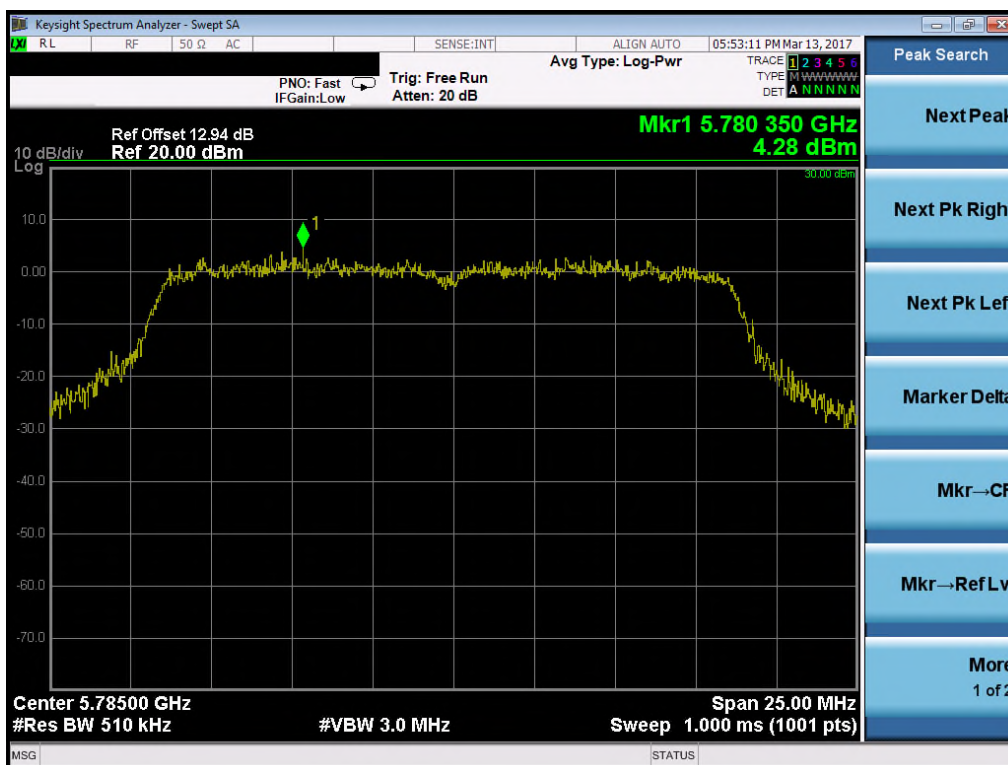


Test Plot of Power Density (HT20) (5725-5850MHz)

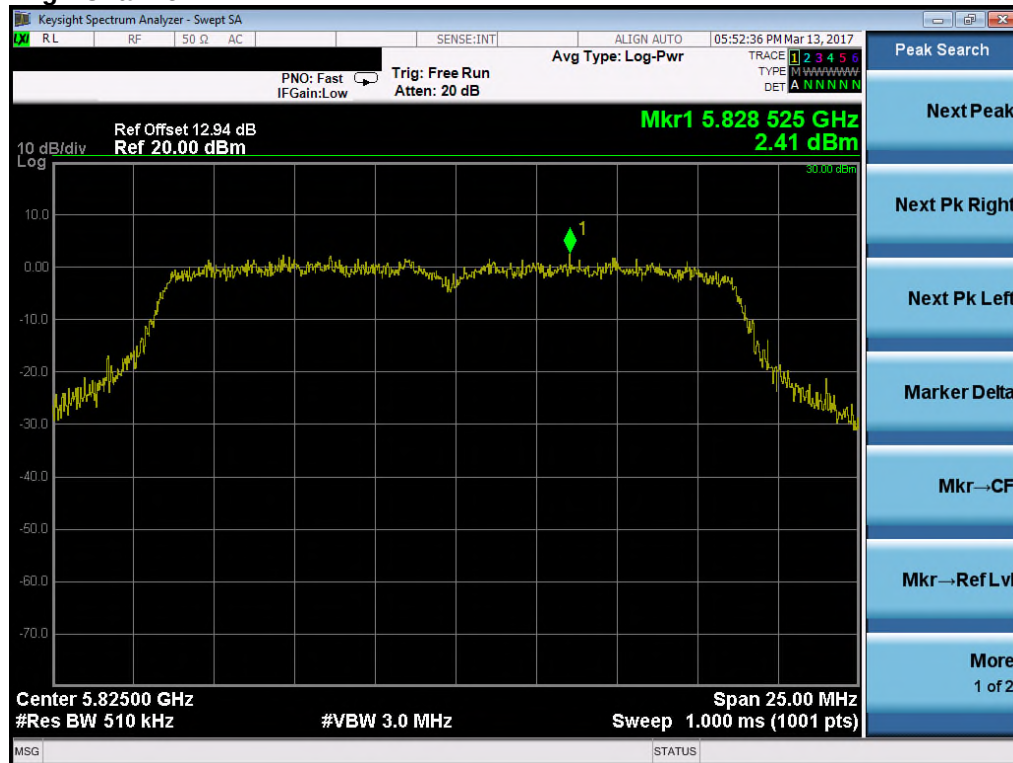
Chain0: Low Channel



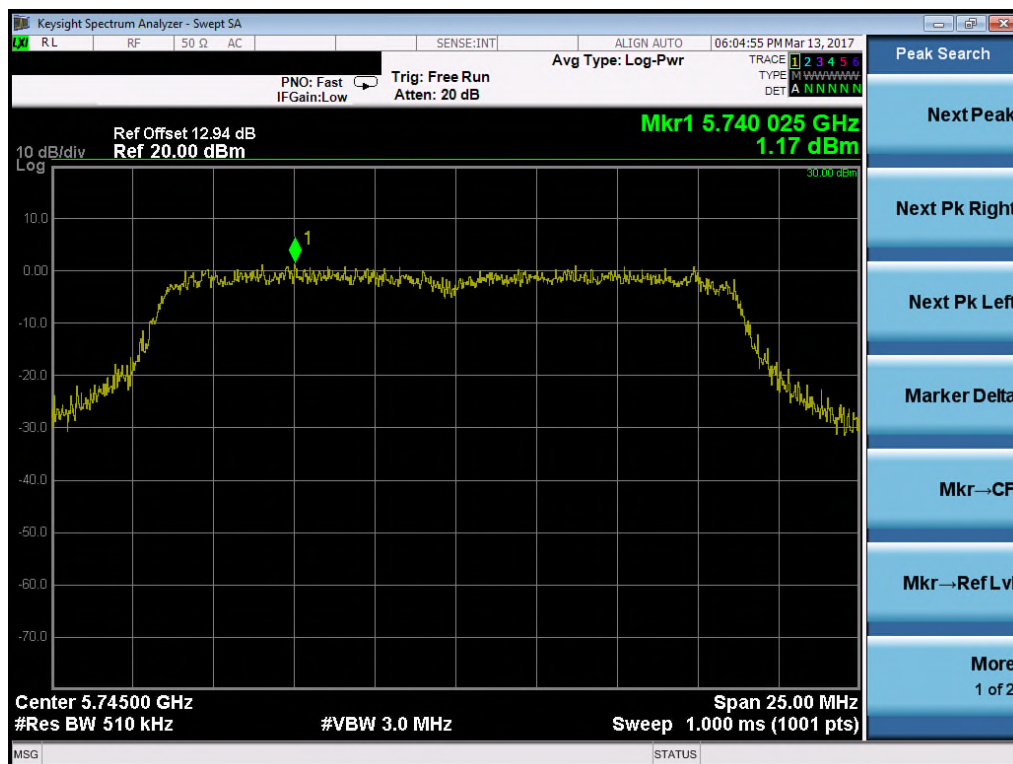
Middle Channel

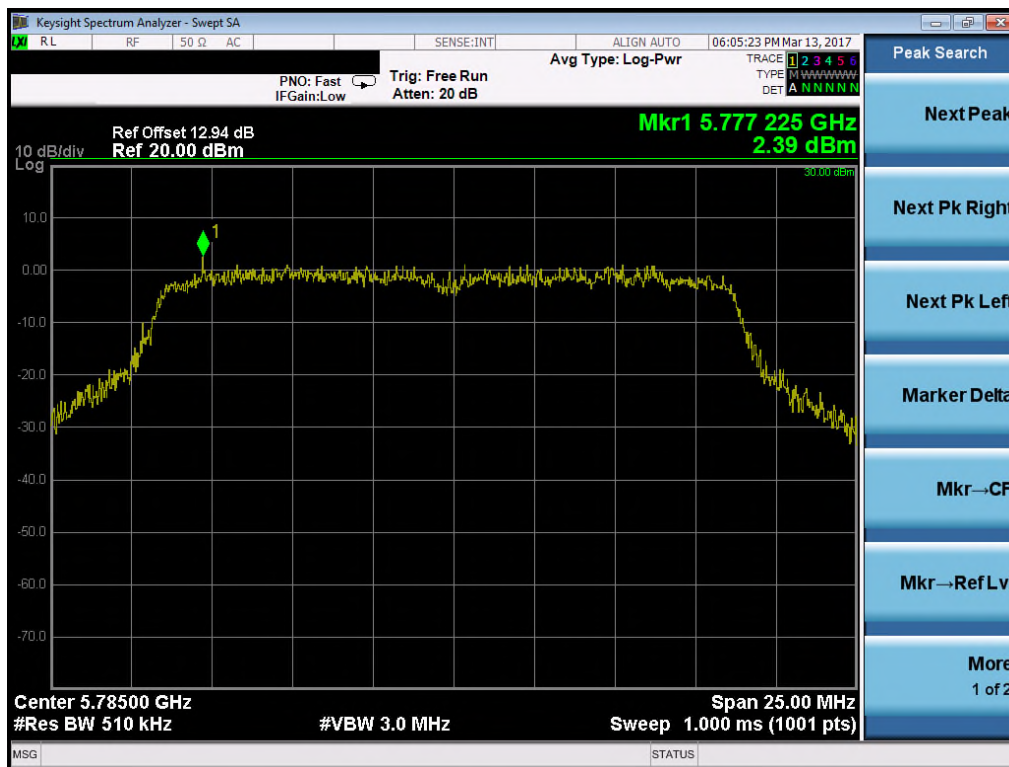
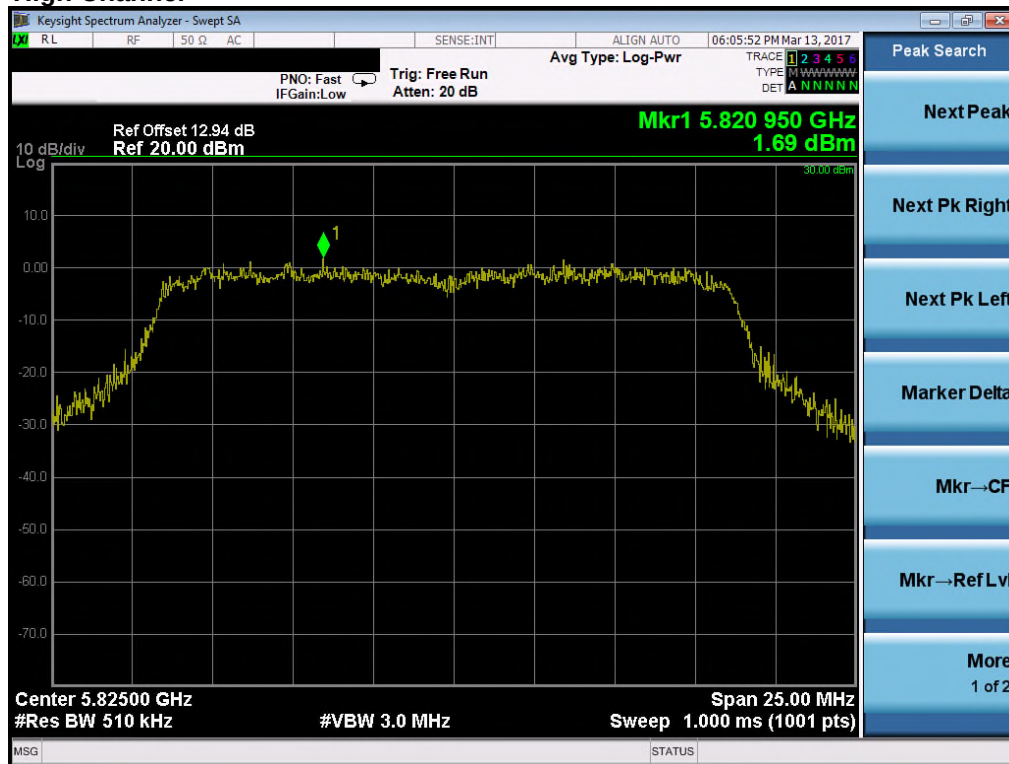


High Channel



Chain1: Low Channel



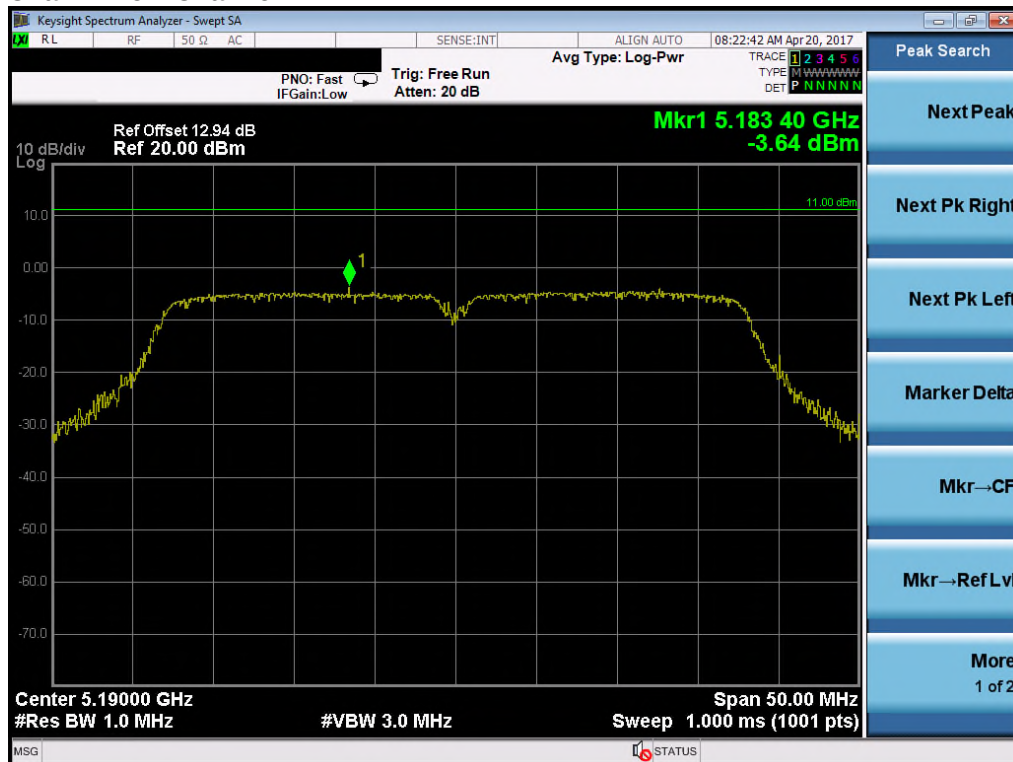
Middle Channel

High Channel


Test Plot of Power Density (HT40) (5150-5250MHz)

Chain0: Low Channel

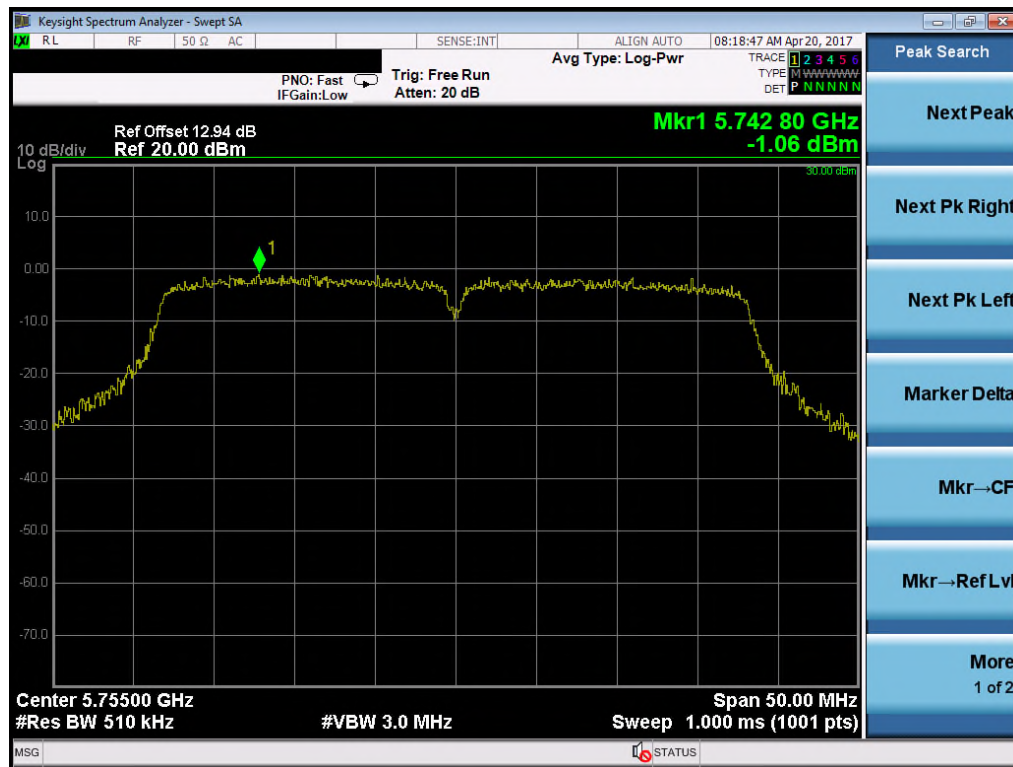


Chain1: Low Channel

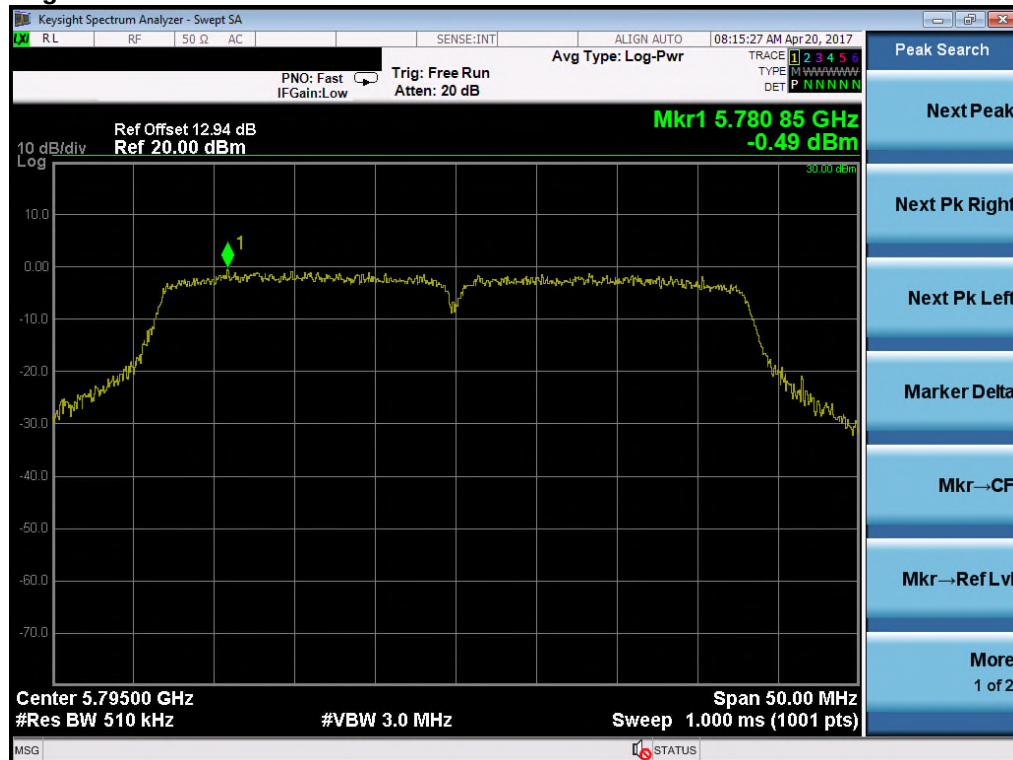


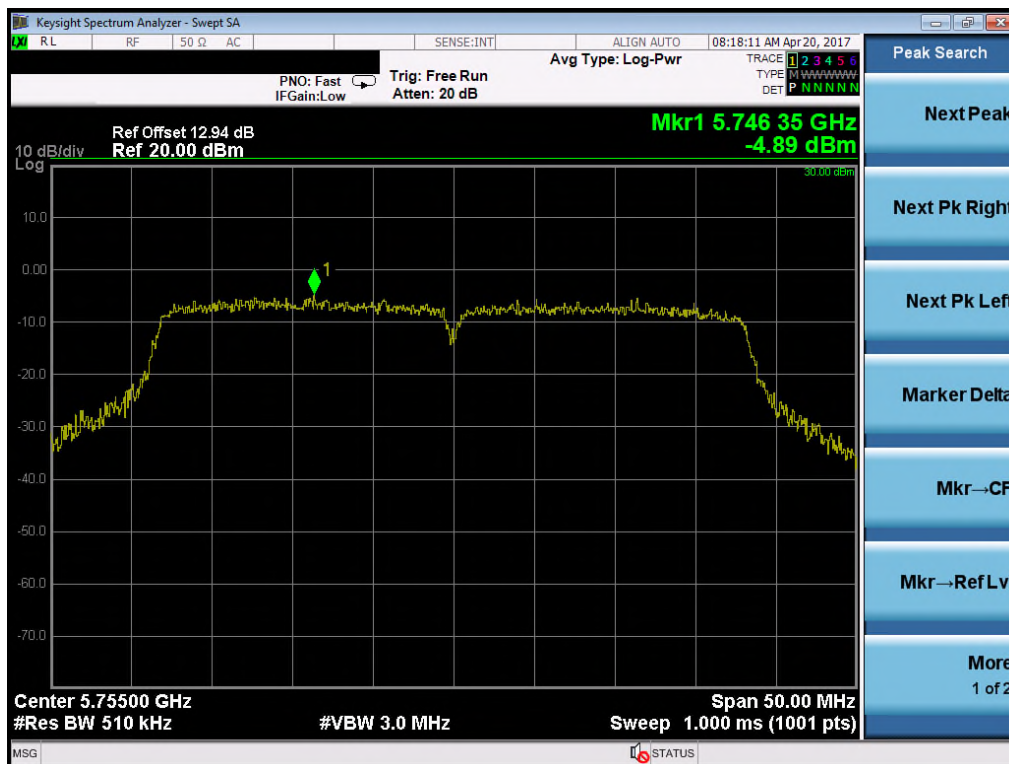
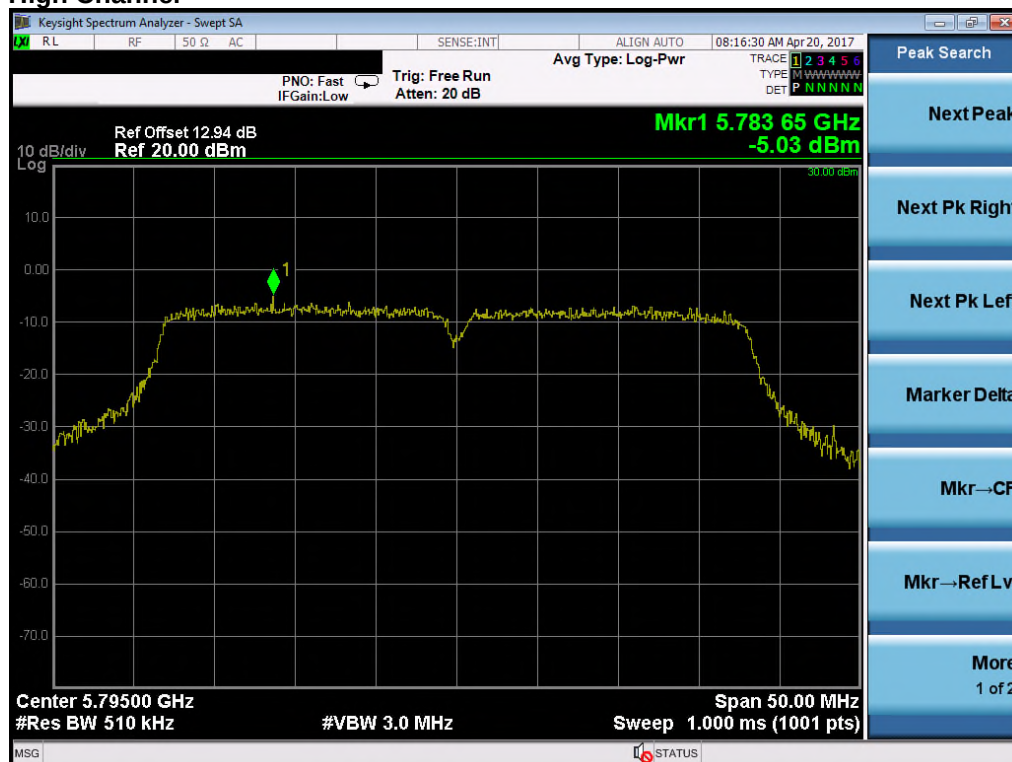
Test Plot of Power Density (HT40) (5725-5850MHz)

Chain0: Low Channel



High Channel



Chain1: Low Channel

High Channel


5.1.7 Spurious Emission

RESULT:**Passed**

Test standard	:	FCC 15.205, FCC 15.209, RSS-247 and RSS-Gen 8.9;
Basic standard	:	ANSI C63.10: 2009
Limits	:	Radiated emissions which fall in the restricted bands, as defined in FCC 15.205(a) and RSS-210 2.7 (Table 1), must comply with the radiated emission limits specified in FCC 15.209(a) and RSS-210 2.7 (Table 2 and 3). Emission radiated outside the specified frequency bands must comply with the radiated emission limits specified in FCC 15.209(a) and FCC 15.249(a), RSS-210 2.7 (Table 2 and 3) and RSS-210 A2.9(a).
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Test Channel	:	Low/ Middle/ High
Operation mode	:	A

Remark: Testing was carried out within frequency range 30MHz to the tenth harmonic. For details refer to Appendix D. The Radiated Emissions testing was performed in the X, Y and Z axis orientation. The Z Axis orientation is the worst-case and recorded in this test report. Due to the small size of the product and that there are no inductive components of significant size, 9kHz to 30MHz frequency range is not tested based on technical judgment.

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5.2 Mains Emissions

5.2.1 Mains Conducted Emissions

RESULT:**Passed**

Test standard : FCC Part 15.207
FCC Part 15.107
RSS-Gen 8.8

Limits : Mains Conducted emissions as defined in
above standards

Kind of test site : Shielded Room

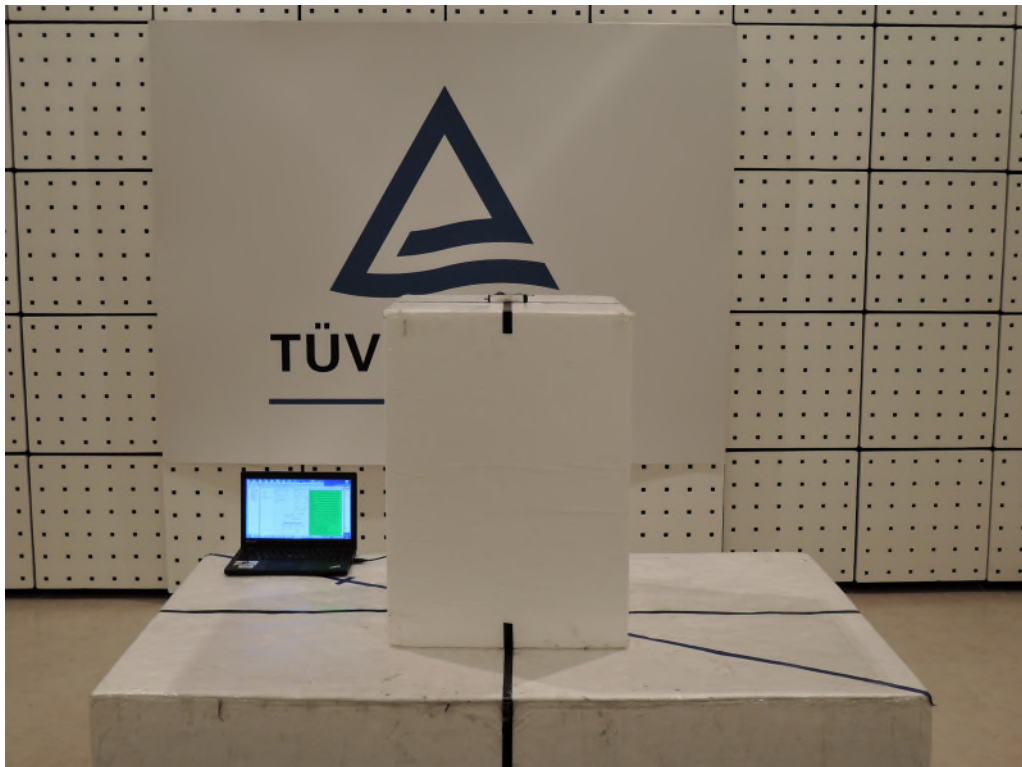
Test setup

Test Channel : Middle
Operation mode : A

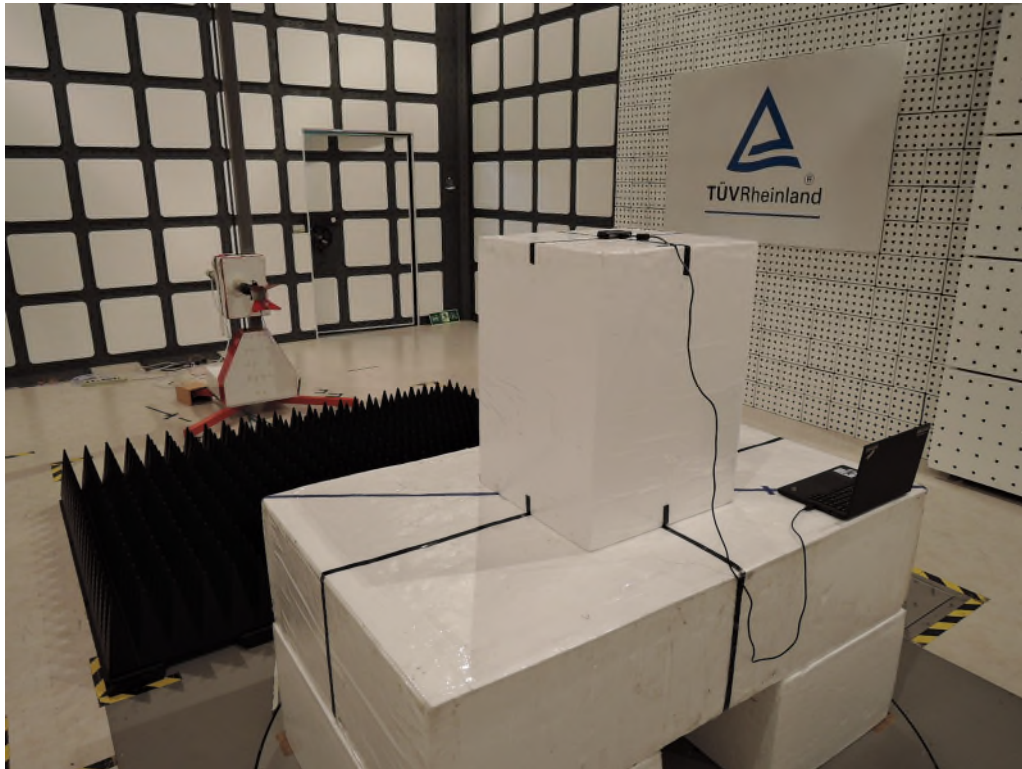
Remark: For details refer to Appendix D.

6. Photographs of the Test Set-Up

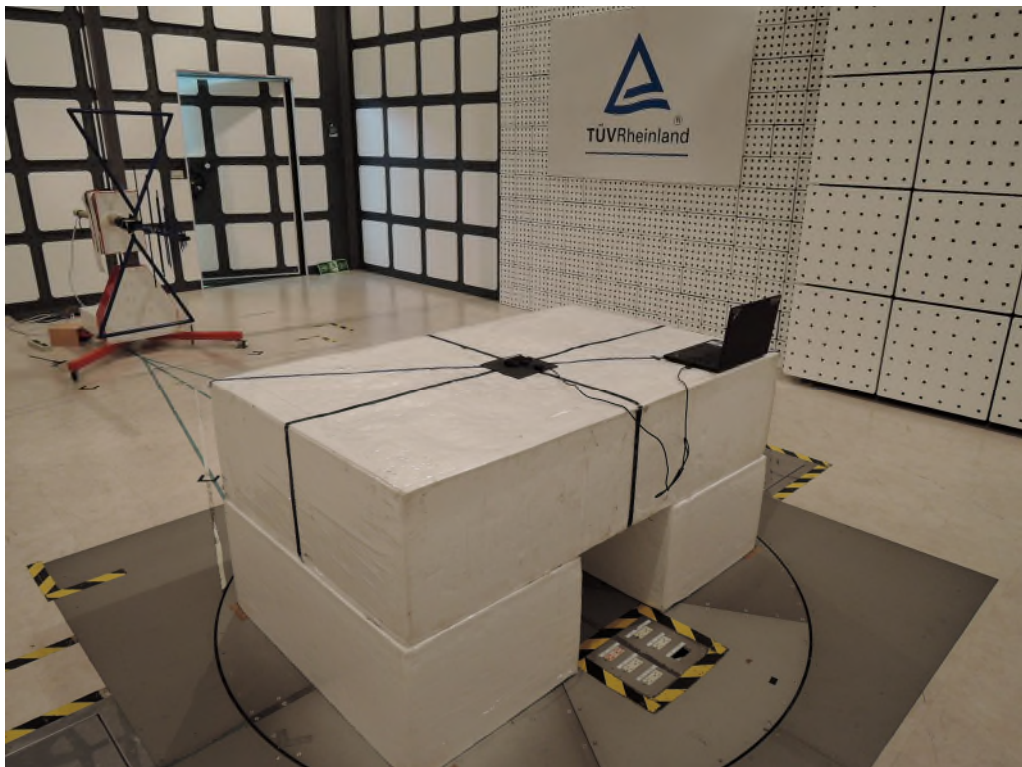
Photograph 1: Set-up for Spurious Emissions TX (Front View)



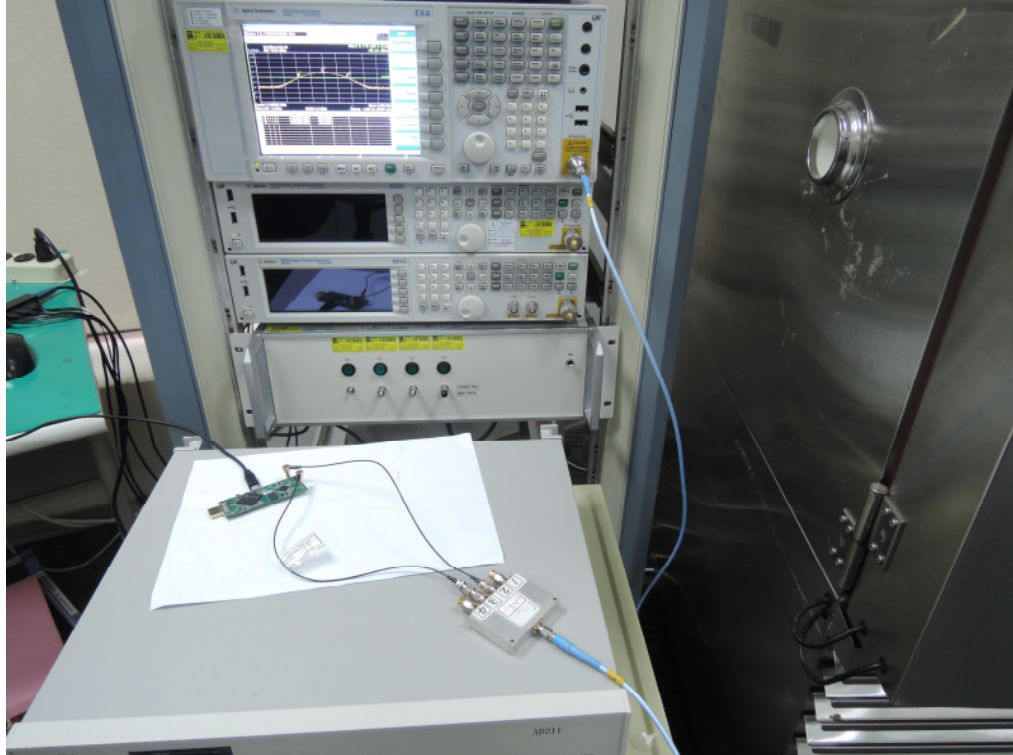
Photograph 2: Set-up for Spurious Emissions TX (Back View 1)



Photograph 3: Set-up for Spurious Emissions TX (Back View 2)



Photograph 4: Set-up for Conducted testing



Photograph 5: Set-up for for Mains Conducted testing Back



Photograph 6: Set-up for for Mains Conducted testing Front



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