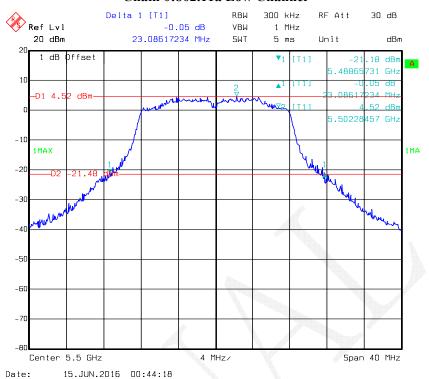
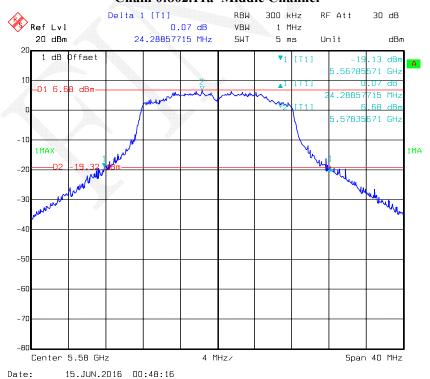
# 5470-5725MHz:

### Chain 0:802.11a Low Channel

Report No.: RDG160608001-00D



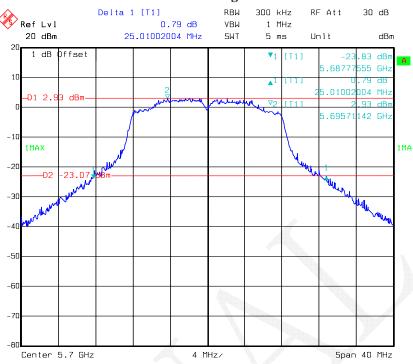
# Chain 0:802.11a Middle Channel



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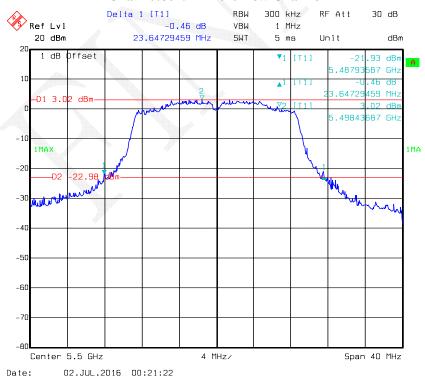
# Chain 0:802.11a High Channel

Report No.: RDG160608001-00D



### Date: 15.JUN.2016 00:50:15

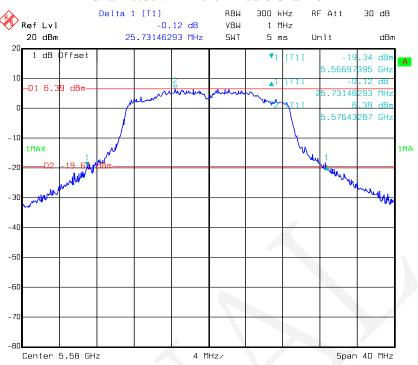
### Chain 0:802.11n ht20 Low Channel



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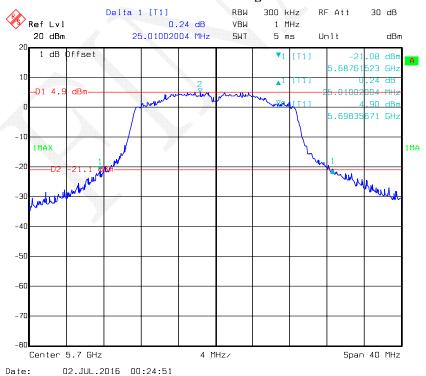
### Chain 0:802.11n ht20 Middle Channel

Report No.: RDG160608001-00D



#### Date: 15.JUN.2016 00:55:54

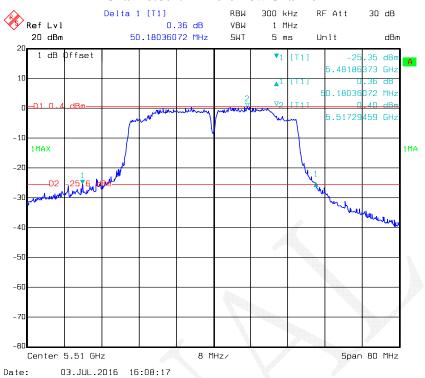
# Chain 0:802.11n ht20 High Channel



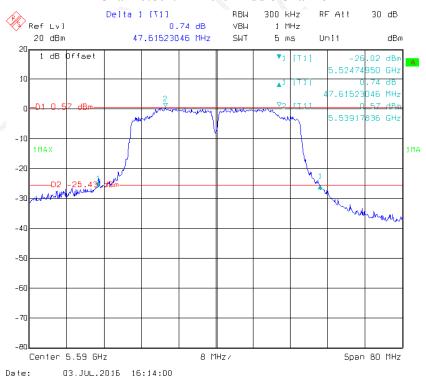
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### Chain 0:802.11n ht40 Low Channel

Report No.: RDG160608001-00D



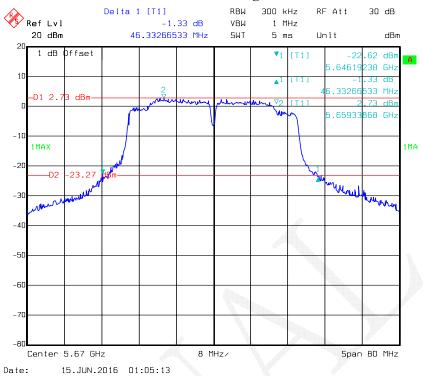
### Chain 0:802.11n ht40 Middle Channel



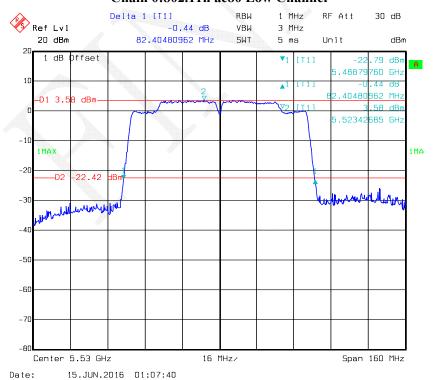
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# Chain 0:802.11n ht40 High Channel

Report No.: RDG160608001-00D



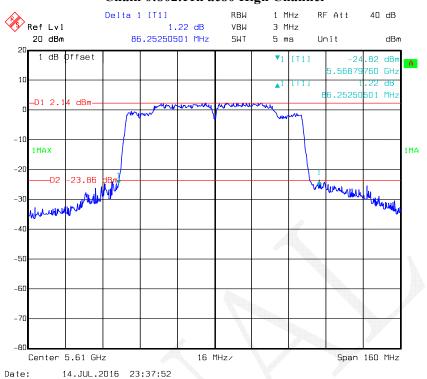
# Chain 0:802.11n ac80 Low Channel



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# Chain 0:802.11n ac80 High Channel

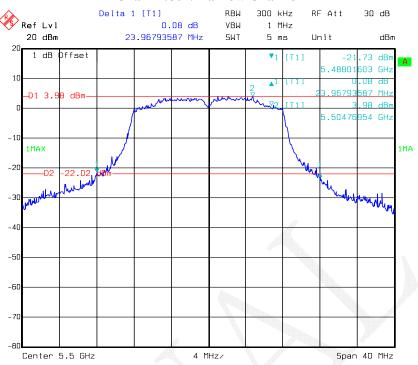
Report No.: RDG160608001-00D



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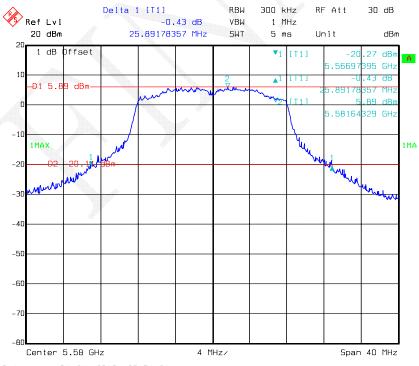
### Chain 1:802.11a Low Channel

Report No.: RDG160608001-00D



Date: 02.JUL.2016 00:08:22

### Chain 1:802.11a Middle Channel

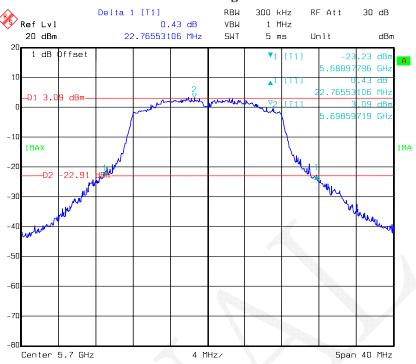


Date: 01.JUL.2016 23:51:21

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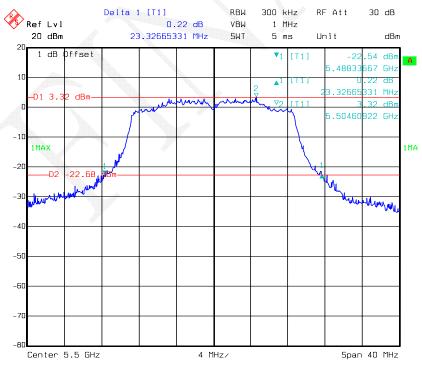
# Chain 1:802.11a High Channel

Report No.: RDG160608001-00D



#### Date: 01.JUL.2016 23:55:50

# Chain 1:802.11n ht20 Low Channel

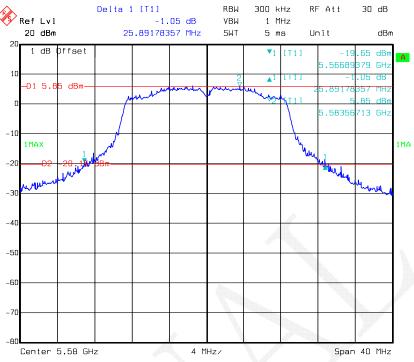


Date: 02.JUL.2016 00:19:17

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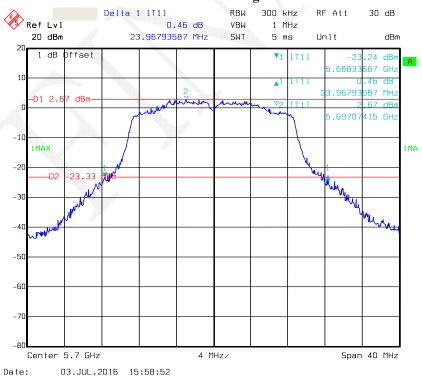
# Chain 1:802.11n ht20 Middle Channel

Report No.: RDG160608001-00D



#### Date: 02.JUL.2016 00:14:41

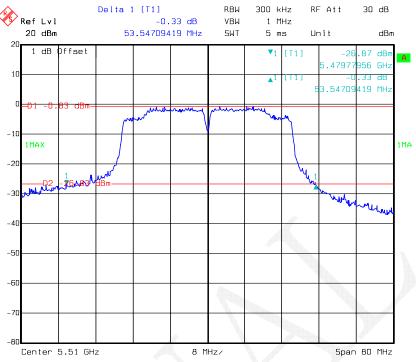
# Chain 1:802.11n ht20 High Channel



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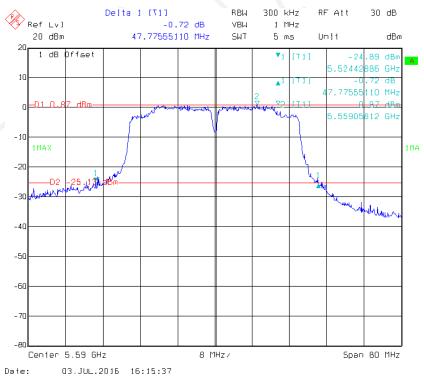
### Chain 1:802.11n ht40 Low Channel

Report No.: RDG160608001-00D



#### Date: 07.JUL.2016 22:48:13

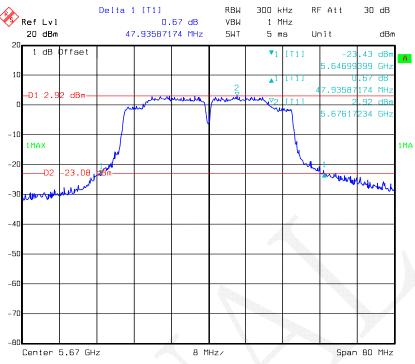
### Chain 1:802.11n ht40 Middle Channel



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# Chain 1:802.11n ht40 High Channel

Report No.: RDG160608001-00D



# Date: 03.JUL.2016 16:19:41

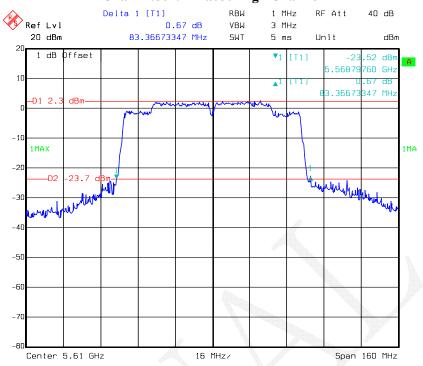
# Chain 1:802.11n ac80 Low Channel



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# Chain 1:802.11n ac80 High Channel

Report No.: RDG160608001-00D



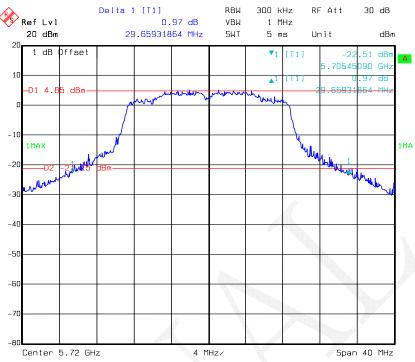
Date: 14.JUL.2016 23:36:41

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# Accoss Band:

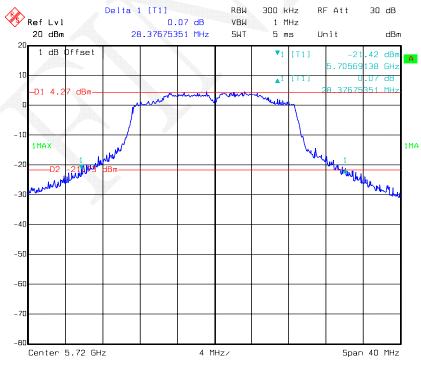
#### Chain 0:802.11ac20 5720MHz

Report No.: RDG160608001-00D



Date: 08.JUL.2016 01:49:08

### Chain 1:802.11ac20 5720MHz

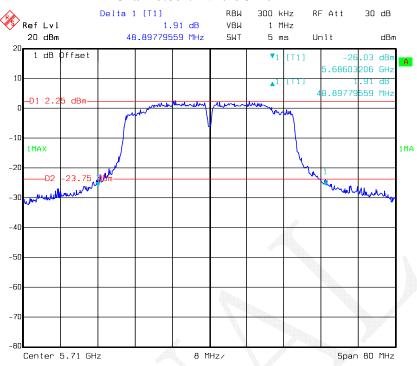


Date: 08.JUL.2016 01:48:17

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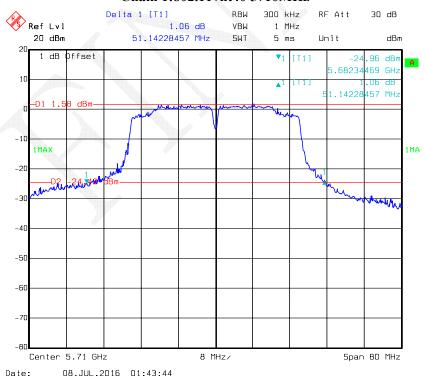
### Chain 0:802.11vht40 5710MHz

Report No.: RDG160608001-00D



#### Date: 08.JUL.2016 01:42:19

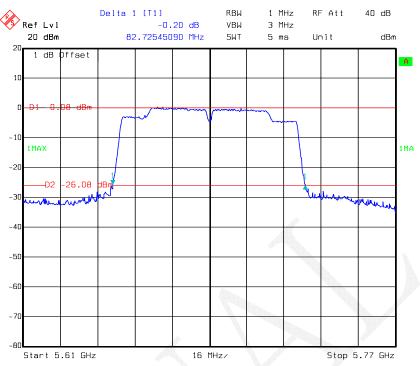
# Chain 1:802.11vht40 5710MHz



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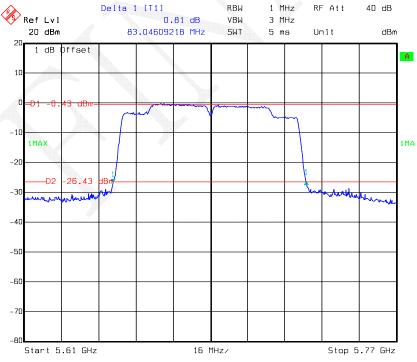
# Chain 0:802.11 vht40 5690MHz

Report No.: RDG160608001-00D



Date: 15.JUL.2016 18:13:20

# Chain 1:802.11 vht40 5690MHz



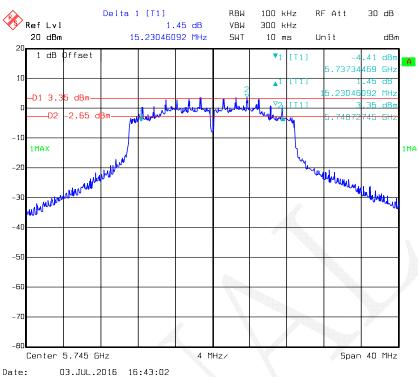
Date: 15.JUL.2016 18:12:15

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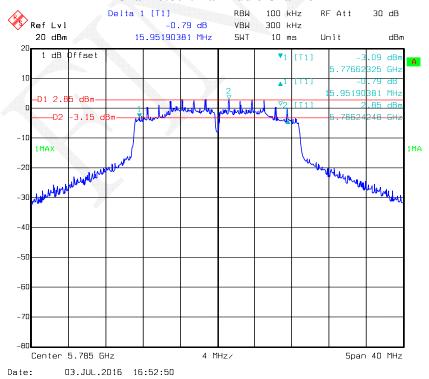
# 5725-5850MHz, 6dB Minimum Emission Bandwidth:

### Chain 0:802.11a Low Channel

Report No.: RDG160608001-00D



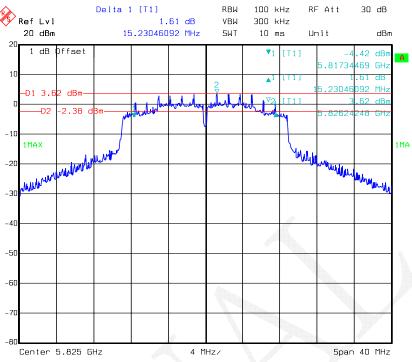
### Chain 0:802.11a Middle Channel



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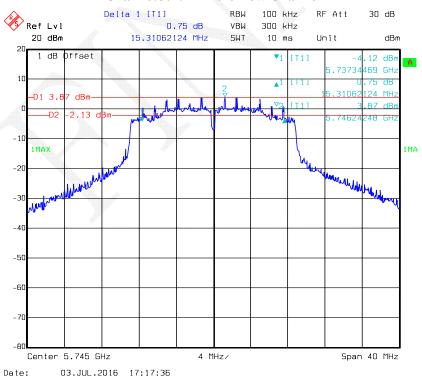
# Chain 0:802.11a High Channel

Report No.: RDG160608001-00D



#### Date: 03.JUL.2016 16:58:59

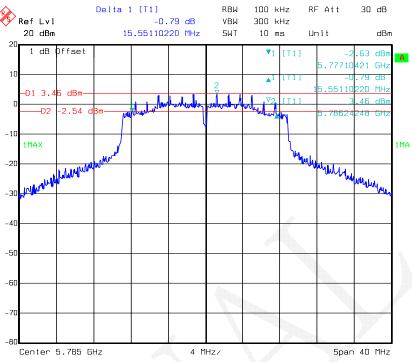
### Chain 0:802.11n ht20 Low Channel



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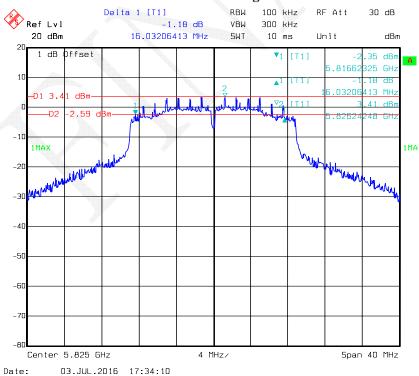
### Chain 0:802.11n ht20 Middle Channel

Report No.: RDG160608001-00D



#### Date: 03.JUL.2016 17:25:58

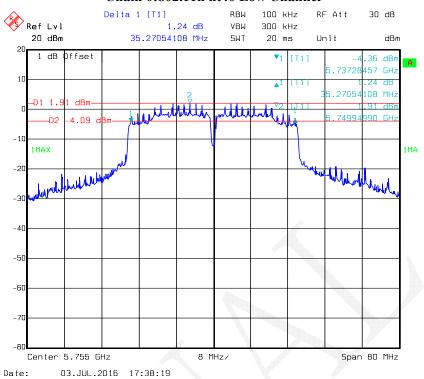
# Chain 0:802.11n ht20 High Channel



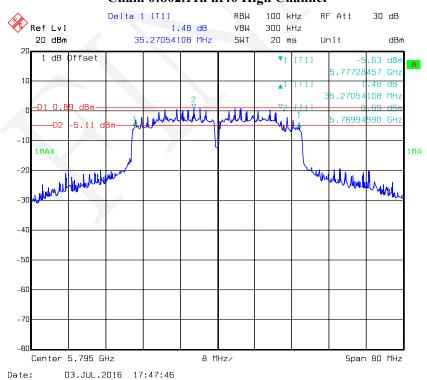
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# Chain 0:802.11n ht40 Low Channel

Report No.: RDG160608001-00D



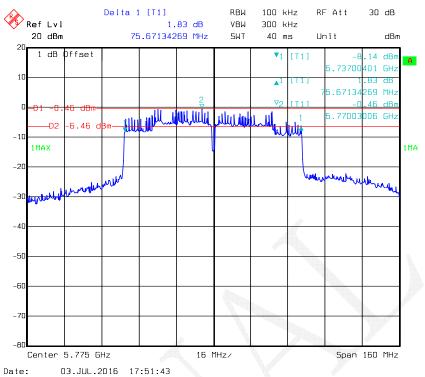
# Chain 0:802.11n ht40 High Channel



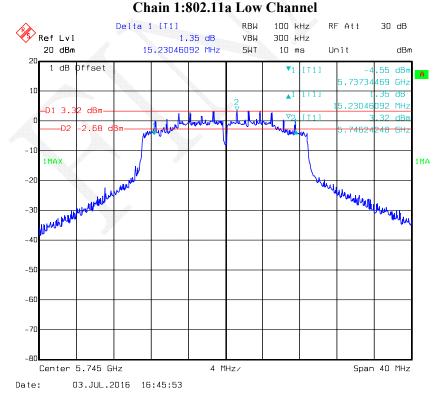
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### Chain 0:802.11n ac80 Middle Channel

Report No.: RDG160608001-00D



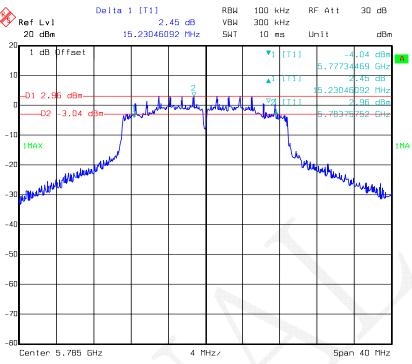
# 03.JUL.2016 17:51:43



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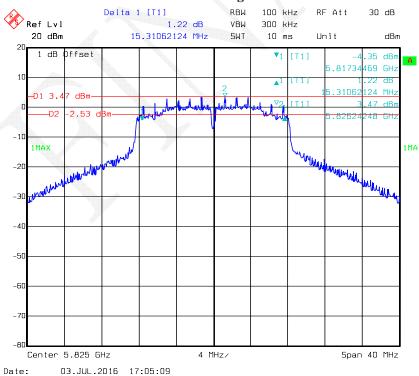
### Chain 1:802.11a Middle Channel

Report No.: RDG160608001-00D



Date: 03.JUL.2016 16:50:31

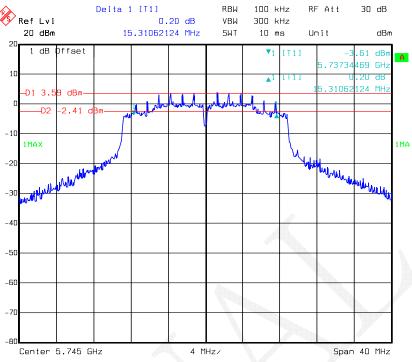
# Chain 1:802.11a High Channel



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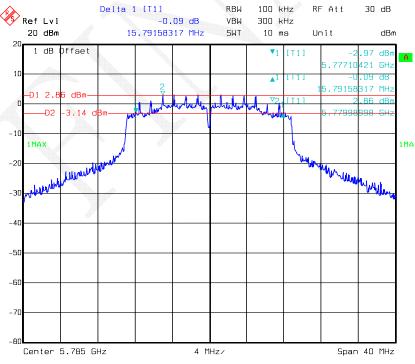
# Chain 1:802.11n ht20 Low Channel

Report No.: RDG160608001-00D



### Date: 07.JUL.2016 22:54:15

### Chain 1:802.11n ht20 Middle Channel

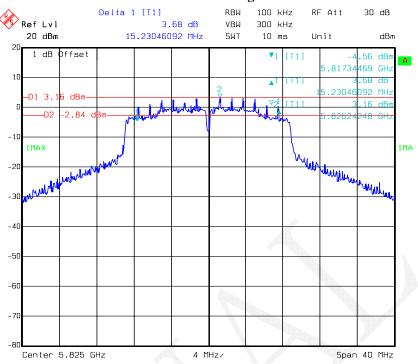


Date: 03.JUL.2016 17:23:05

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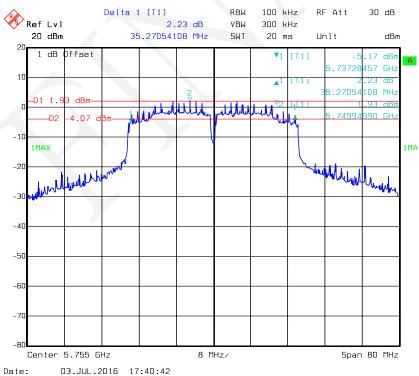
# Chain 1:802.11n ht20 High Channel

Report No.: RDG160608001-00D



#### Date: 03.JUL.2016 17:31:36

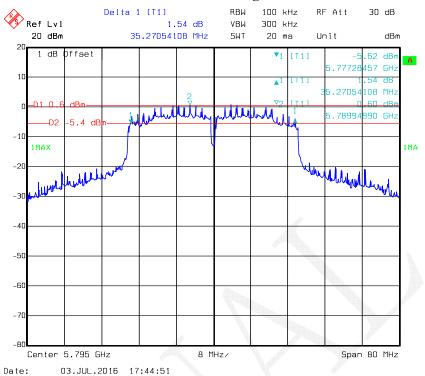
### Chain 1:802.11n ht40 Low Channel



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# Chain 1:802.11n ht40 High Channel

Report No.: RDG160608001-00D



# 03.JUL.2016 17:44:51

03.JUL.2016 17:53:58

Date:

#### Chain 1:802.11n ac80 Middle Channel 100 kHz Delta 1 [T1] RBW RF Att 30 dB Ref Lvl 1.96 dB VBW 300 kHz 20 dBm 75.67134269 MHz SWT 40 ms 1 dB Offset 401 GH 69 MH 006 GH 1MAX 1MA -20 -50 -60 -80 Center 5.775 GHz 16 MHz/ Span 160 MHz

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# FCC §15.407(a) (1) (ii) (4) –MAXIMUM CONDUCTED OUTPUT POWER

Report No.: RDG160608001-00D

# **Applicable Standard**

- (a) Power limits:
- (1) For the band 5.15-5.25 GHz.
- (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
- (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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.
- (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
- (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.
- (2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm+10 log B, where B is the 26 dB emission bandwidth in megahertz. 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.

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(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 500-kHz 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

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(4) The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

# **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date	
Agilent	Wideband Power Sensor	N1921A	MY54210016	2015-11-03	2016-11-03	
Agilent	Wideband Power Sensor	N1921A	MY54170013	2015-11-03	2016-11-03	
Agilent	P-Series Power Meter	N1912A	MY5000448	2015-11-03	2016-11-03	

<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

#### **Test Procedure**

According to KDB789033 D02 General U-NII Test Procedures New Rules v01r02

### **Test Data**

### **Environmental Conditions**

Temperature:	26.8 °C		
Relative Humidity:	50 %		
ATM Pressure:	100.3 kPa		

The testing was performed by Costa Dong on 2016-07-03.

Test Mode: Transmitting

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# SISO Mode

SISO Mode: UNII Band	Mode	Channel	Frequency (MHz)	Maximum Cond Output (dBi	Limit (dBm)		
				Chain 0	Chain 1		
		Low	5180	12.06	13.17	24	
	802.11 a	Middle	5200	12.45	13.5	24	
		High	5240	12.99	13.16	24	
		Low	5180	11.97	12.35	24	
5150- 5250MHz	5G 802.11 n20	Middle	5200	12.74	13.19	24	
3230MHZ		High	5240	12.87	12.98	24	
		Low	5190	10.48	12.13	24	
	5G 802.11 n40	High	5230	13.07	13.92	24	
	802.11 ac80	Middle	5210	12.18	11.1	24	
	002.11 4000	Low	5260	14.09	13.63	24	
	802.11 a	Middle	5280	13.96	13.17	24	
		High	5320	12.19	10.47	24	
		Low	5260	14.13	13.61	24	
5250-	5G 802.11 n20	Middle	5280	13.86	13.04	24	
5350MHz		High	5320	12.95	12.98	24	
	5G 802.11 n40	Low	5270	14.36	14.32	24	
		High	5310	12.11	12.28	24	
	802.11 ac80	Middle	5290	11.89	11.25	24	
	802.11 a	Low	5500	12.66	12.93	24	
		Middle	5580	14.56	14.38	24	
		High	5700	11.41	11.37	24	
		Low	5500	11.74	11.35	24	
5.470	5G 802.11 n20	Middle	5580	14.83	14.59	24	
5470- 5725MHz		High	5700	11.35	11.09	24	
3/23WIIIZ		Low	5510	12.21	11.77	24	
	5G 802.11 n40	Middle	5590	12.43	12.75	24	
		High	5670	14.33	14.8	24	
	802.11 ac80	Low	5530	12.57	12.18	24	
	002.11 acoo	High	5610	12.33	12.09	24	
	802.11ac20	High	5720	14.41	14.3	24	
Cross Band	802.11ac40	High	5710	14.51	14.33	24	
	802.11ac80	High	5690	14.62	14.58	24	
		Low	5745	14.54	14.22	30	
	802.11 a	Middle	5785	14	13.89	30	
		High	5825	14.37	14.53	30	
5725-		Low	5745	14.78	14.23	30	
5850MHz	5G 802.11 n20	Middle	5785	14.21	13.92	30	
		High	5825	14.42	14.2	30	
	5G 802.11 n40	Low	5755	15.69	15.69	30	
		High	5795	14.75	14.82	30	
	802.11 ac80	Middle	5775	15.02	15.00	30	

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### MIMO Mode:

UNII Band	Mode	Channel	Frequency (MHz)	Maximu	Limit (dBm)		
				Chain 0	Chain 1	Total	` ′
	50.000.11	Low	5180	10.25	10.24	13.26	24
	5G 802.11 n20	Middle	5200	9.49	9.81	12.66	24
5150-	1120	High	5240	9.8	9.79	12.81	24
5250MHz	5G 802.11	Low	5190	8.29	8.52	11.42	24
	n40	High	5230	10.48	10.28	13.39	24
	802.11 ac80	Middle	5210	9.58	9.88	12.74	24
	5 G 00 <b>2</b> 11	Low	5260	9.95	10.03	13	24
	5G 802.11 n20	Middle	5280	10.24	10.25	13.26	24
5250-	1120	High	5320	9.51	10.22	12.89	24
5350MHz	5G 802.11	Low	5270	10.27	10.3	13.3	24
	n40	High	5310	10.13	10.14	13.15	24
	802.11 ac80	Middle	5290	8.48	9.1	11.81	24
	5G 802.11 n20	Low	5500	9.11	8.52	11.84	24
		Middle	5580	10.08	9.62	12.87	24
		High	5700	9.42	9.84	12.65	24
5470-	7.G.002.11	Low	5510	9.52	9.48	12.51	24
5725MHz	5G 802.11 n40	Middle	5590	9.89	9.16	12.55	24
	1140	High	5670	10.63	11.37	14.03	24
	902 11 2290	Low	5530	10.44	10.22	13.34	24
	802.11 ac80	High	5610	11.15	11.61	14.49	24
	802.11ac20	High	5720	11.47	11.69	14.59	24
Cross Band	802.11ac40	High	5710	12.34	12.11	15.24	24
	802.11ac80	High	5690	12.25	12.17	15.22	24
	50,000,11	Low	5745	11.22	11.26	14.25	30
	5G 802.11 n20	Middle	5785	10.58	10.56	13.58	30
5725-	1120	High	5825	10.73	10.76	13.76	30
5850MHz	5G 802.11	Low	5755	10.37	10.65	13.52	30
	n40	High	5795	10.31	10.32	13.33	30
	802.11 ac80	Middle	5775	12.19	12.45	15.33	30

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Note 1: For 5250-5350MHz & 5470-5725MHz Band, Emission bandwidth is greater than 20 MHz,  $11 + 10 \log 10B = 24.01 > 24$ , so the PSD Limit is 24dBm.

Note 2: the device is a mobile and potable client device. the 2 antenna maximum atenna gains are 6.0dBi, and employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:

Array Gain = 0 dB (i.e., no array gain) for NANT  $\leq$  4;

So:

Directional gain = GANT + Array Gain = 6.0dBi = 6dBi

The power limit need reduce 0dB.

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# FCC §15.407(a) - POWER SPECTRAL DENSITY

# **Applicable Standard**

- (a) Power limits:
- (1) For the band 5.15-5.25 GHz.
- (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

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- (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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.
- (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
- (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.
- (2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. 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.

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(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 500-kHz 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

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#### **Test Procedure**

According to KDB 789033 D02 General U-NII Test Procedures New Rules v01r02

# **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2015-05-09	2016-05-09

<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

### **Test Data**

### **Environmental Conditions**

Temperature:	26.2 – 28.6 °C
Relative Humidity:	39 - 58%
ATM Pressure:	99.3-100.4 kPa

The testing was performed by Costa Dong from 2016-06-14 to 2016-07-15.

#### Test Result: Compliance.

Test Mode: Transmitting

Note: per output power test, the SISO mode was the worst, so only SISO mode was test for this item, and used to evaluate MIMO mode compliance.

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UNII Band	Mode	Channel	Frequency	Power	Limit		
			(MHz)	Chain 0	Chain 1	Total	(dBm/MHz)
		Low	5180	0.06	1.4	3.79	7.98
	802.11 a	Middle	5200	1.03	1.83	4.46	7.98
		High	5240	1.69	1.62	4.67	7.98
<b>7.1.7</b> 0		Low	5180	0.05	1.09	3.61	7.98
5150- 5250MHz	802.11 n20	Middle	5200	1.33	1.48	4.42	7.98
3230WIIIZ		High	5240	1.16	1.42	4.30	7.98
	002 1140	Low	5190	-4.69	-3.18	-0.86	7.98
	802.11 n40	High	5230	-2.07	-1.39	1.29	7.98
	802.11 ac80	Middle	5210	-6.23	-6.89	-3.54	7.98
		Low	5260	2.23	2.12	5.19	7.98
	802.11 a	Middle	5280	2	1.31	4.68	7.98
		High	5320	0.31	-1.25	2.61	7.98
	802.11 n20	Low	5260	2.01	1.71	4.87	7.98
5250- 5350MHz		Middle	5280	1.84	1.42	4.65	7.98
SSOMITZ		High	5320	1.05	1.01	4.04	7.98
	802.11 n40	Low	5270	-0.67	-0.67	2.34	7.98
		High	5310	-2.72	-3.1	0.10	7.98
	802.11 ac80	Middle	5290	-6.47	-6.6	-3.52	7.98
	802.11 a	Low	5500	2.56	2.6	5.59	7.98
		Middle	5580	4.24	4.08	7.17	7.98
		High	5700	1.29	1.4	4.36	7.98
	4	Low	5500	1.35	1.49	4.43	7.98
	802.11 n20	Middle	5580	4.36	4.11	7.25	7.98
5470- 5725MHz		High	5700	1.44	1.35	4.41	7.98
3/23MHZ		Low	5510	-1.15	-1.41	1.73	7.98
	802.11 n40	Middle	5590	-1.12	-0.72	2.09	7.98
		High	5670	1.22	1.21	4.23	7.98
	002.11 00	Low	5530	-4.06	-4.29	-1.16	7.98
	802.11 ac80	High	5610	-4.33	-4.77	-1.53	7.98
a	802.11ac20	High	5720	3.63	3.58	6.62	7.98
Cross Band Low edge	802.11ac40	High	5710	0.72	0.58	3.66	7.98
Low eage	802.11ac80	High	5690	-1.75	-1.98	1.15	7.98

Note: the device is a client device. the 2 antenna maximum atenna gain are 6.01dBi, and employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:

Array Gain = 10 log(NANT/NSS) dB.

So:

Directional gain = GANT + Array Gain = 6.01+10\*log(2) = 9.02 dBi

The Power density Limits was reduce 3.02dB

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UNII	Mode	Channel	Frequen cy		Reading (dBm/300kHz)			Spectral Density		Limit (dBm/5
Band			(MHz)	Chain 0	Chain 1	value	(dBm/500kHz)			00kHz)
	000 11	Low	5745	2.94	2.01	2.22	5.16	4.23	7.73	26.98
	802.11 a	Middle	5785	2.71	1.3	2.22	4.93	3.52	7.29	26.98
	a	High	5825	3.14	3.58	2.22	5.36	5.80	8.59	26.98
5725	002.11	Low	5745	2.89	2.63	2.22	5.11	4.85	7.99	26.98
5725- 5850	802.11 n20	Middle	5785	2.07	2.15	2.22	4.29	4.37	7.34	26.98
MHz	1120	High	5825	1.94	2.13	2.22	4.16	4.35	7.26	26.98
	802.11	Low	5755	0.68	0.6	2.22	2.90	2.82	5.87	26.98
	n40	High	5795	0.00	0.04	2.22	2.22	2.26	5.25	26.98
	802.11 ac80	Middle	5775	-2.37	-2.35	2.22	-0.15	-0.13	2.87	26.98
Cross	802.11 ac20	High	5720	-0.57	-1.13	2.22	1.65	1.09	4.39	26.98
Up edge ac 802	802.11 ac40	High	5710	-4.05	-4.13	2.22	-1.83	-1.91	1.14	26.98
	802.11 ac80	High	5690	-6.16	-6.45	2.22	-3.94	-4.23	-1.07	26.98

Note 1: According to KDB789033 D02 General U-NII Test Procedures New Rules v01r02, the test value for 5725-5850 MHz should add 10\*log(500kHz/RBW) to the measured result.

Note 2: the device is a client device. the 2 antenna maximum atenna gain are 6.01dBi, and employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:

Array  $Gain = 10 \log(NANT/NSS) dB$ .

So:

Directional gain = GANT + Array Gain = 6.01+10\*log(2) =9.02 dBi

The Power density Limits was reduce 3.02dB

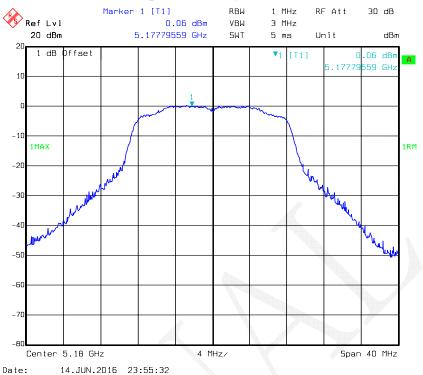
Please refer to the following plots

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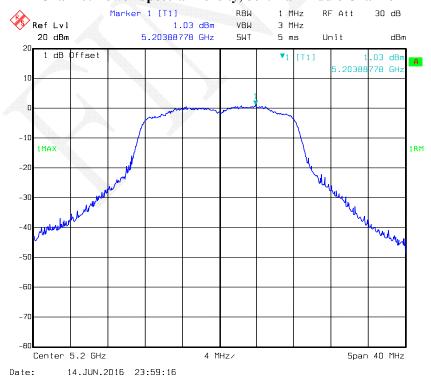
5150-5250MHz:

Chain 0: Power Spectral Density, 802.11a Low Channel

Report No.: RDG160608001-00D

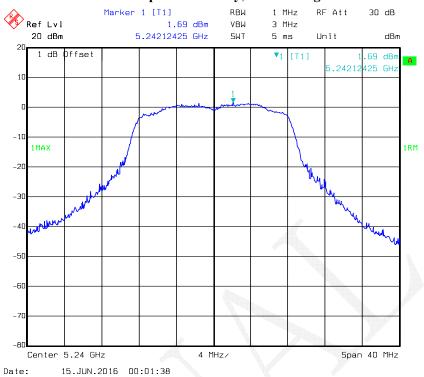


Chain 0: Power Spectral Density, 802.11a Middle Channel

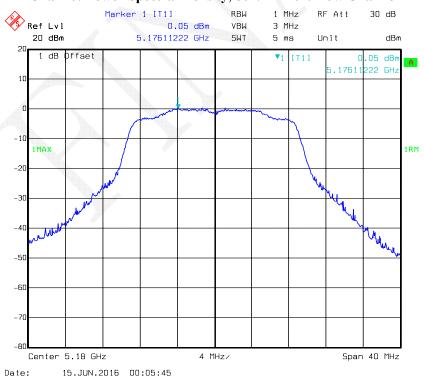


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Chain 0: Power Spectral Density, 802.11a High Channel

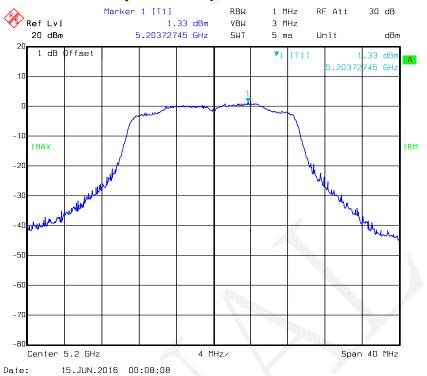


Chain 0: Power Spectral Density, 802.11n ht20 Low Channel

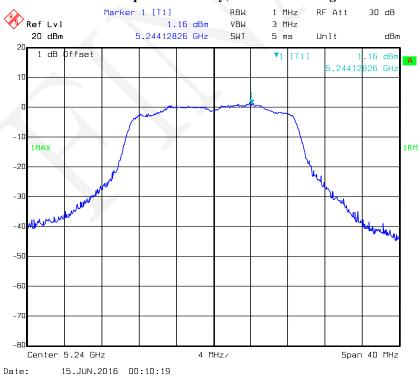


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Chain 0: Power Spectral Density, 802.11n ht20 Middle Channel

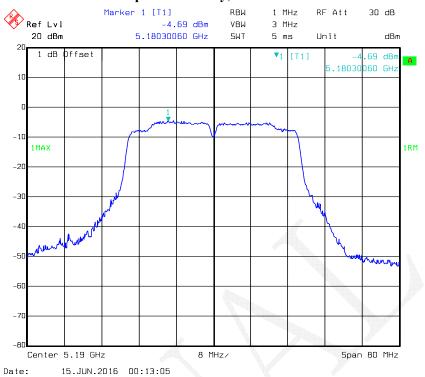


Chain 0: Power Spectral Density, 802.11n ht20 High Channel

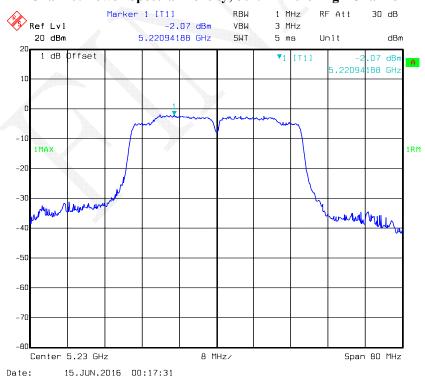


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Chain 0: Power Spectral Density, 802.11n ht40 Low Channel

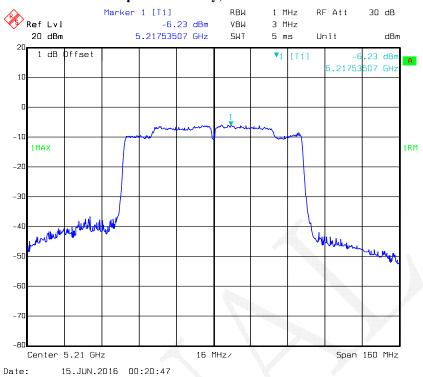


Chain 0: Power Spectral Density, 802.11n ht40 High Channel

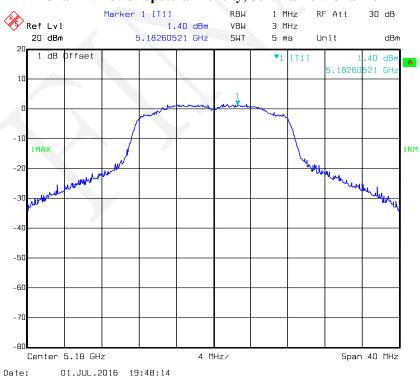


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Chain 0: Power Spectral Density, 802.11n ac80 Middle Channel

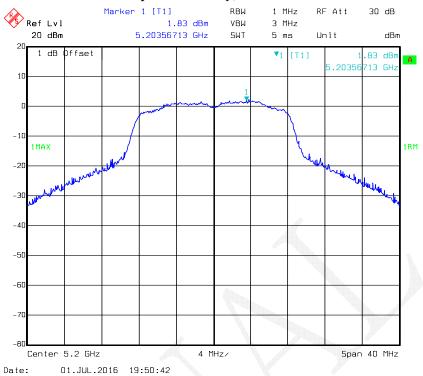


Chain 1: Power Spectral Density, 802.11a Low Channel

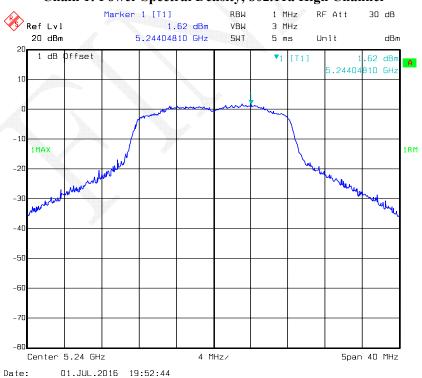


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Chain 1: Power Spectral Density, 802.11a Middle Channel

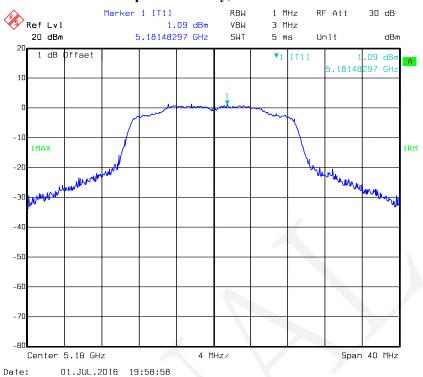


Chain 1: Power Spectral Density, 802.11a High Channel

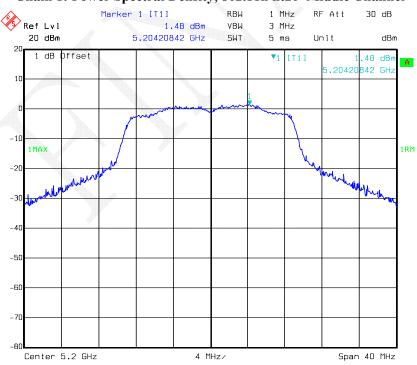


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Chain 1: Power Spectral Density, 802.11n ht20 Low Channel



Chain 1: Power Spectral Density, 802.11n ht20 Middle Channel

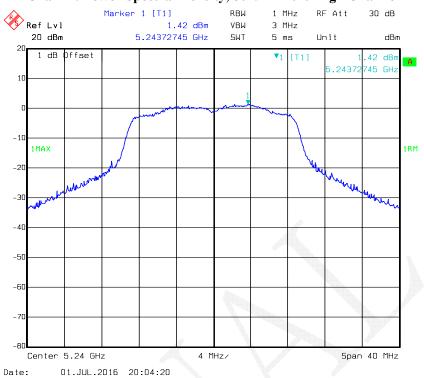


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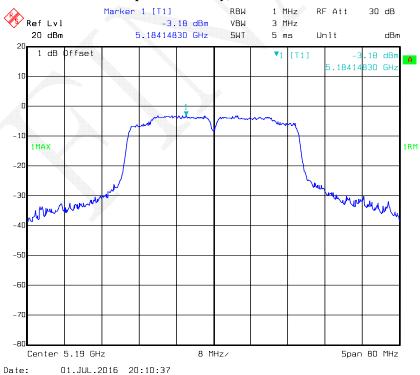
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Date:

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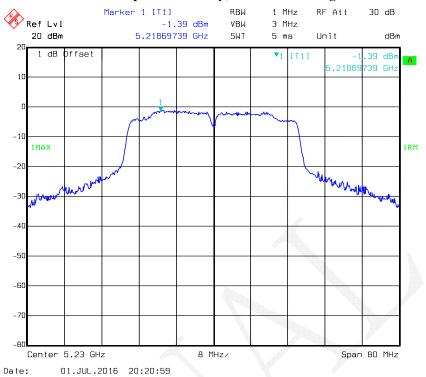


Chain 1: Power Spectral Density, 802.11n ht40 Low Channel



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Chain 1: Power Spectral Density, 802.11n ht40 High Channel



Chain 1: Power Spectral Density, 802.11n ac80 Middle Channel

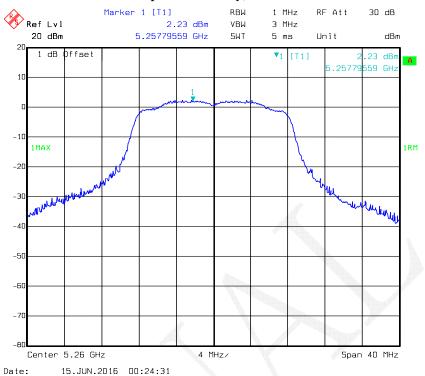


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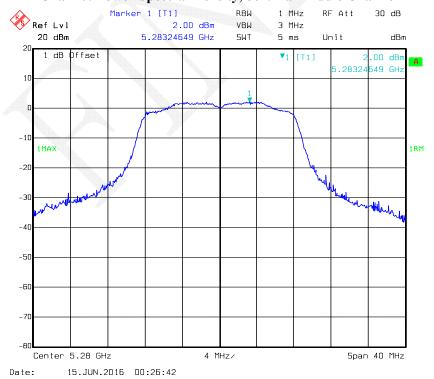
## 5250-5350MHz:

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Report No.: RDG160608001-00D

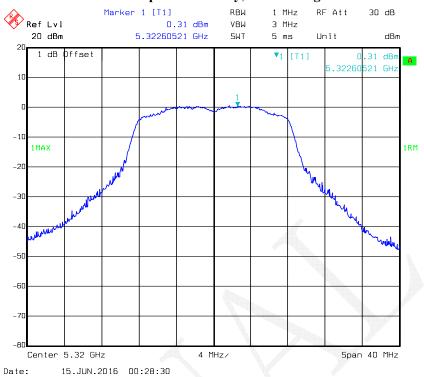


Chain 0: Power Spectral Density, 802.11a Middle Channel

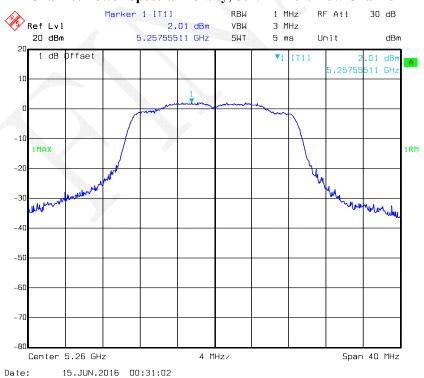


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Chain 0: Power Spectral Density, 802.11a High Channel

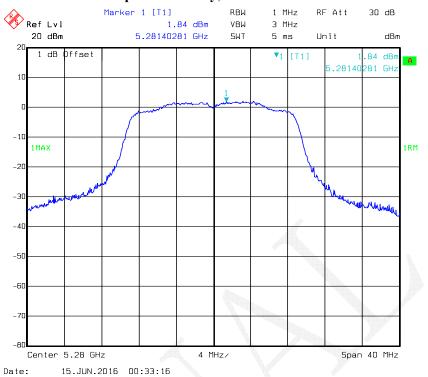


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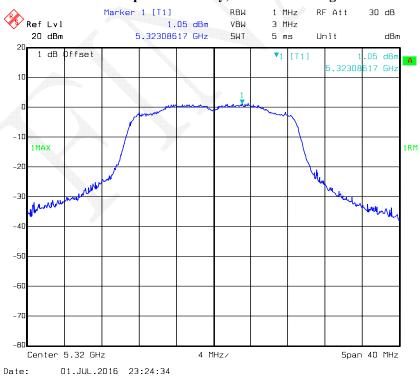


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Chain 0: Power Spectral Density, 802.11n ht20 Middle Channel

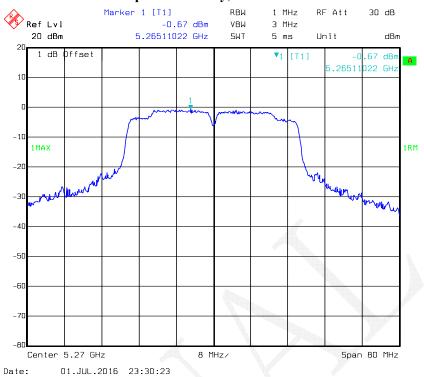


Chain 0: Power Spectral Density, 802.11n ht20 High Channel

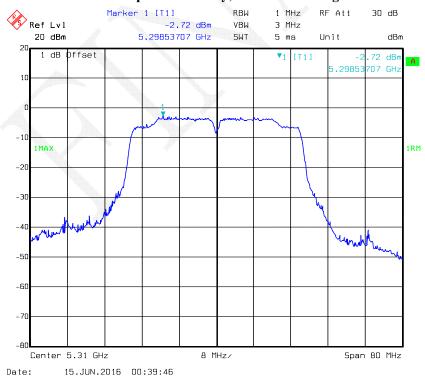


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Chain 0: Power Spectral Density, 802.11n ht40 Low Channel

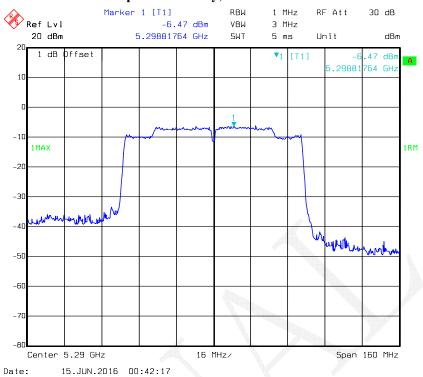


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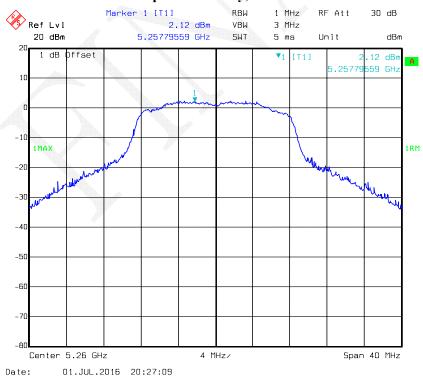


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Chain 0: Power Spectral Density, 802.11n ac80 Middle Channel

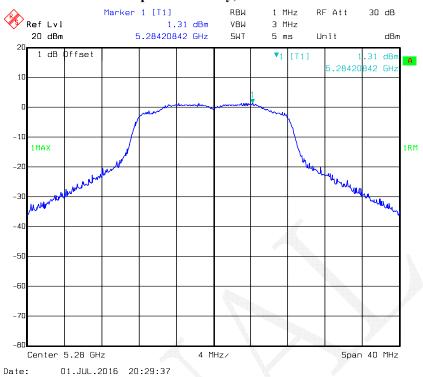


Chain 1: Power Spectral Density, 802.11a Low Channel

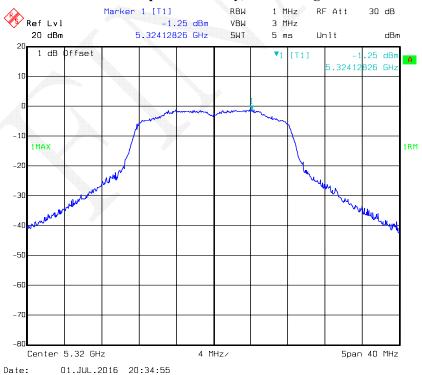


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Chain 1: Power Spectral Density, 802.11a Middle Channel

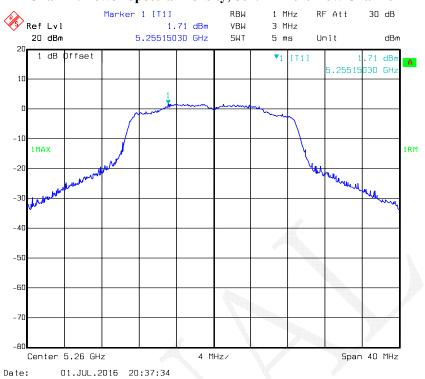


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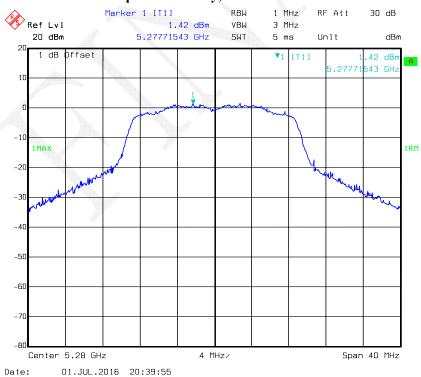


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Chain 1: Power Spectral Density, 802.11n ht20 Low Channel

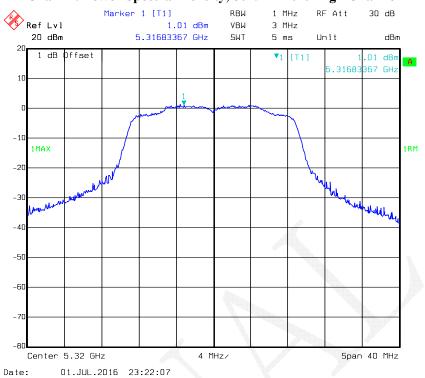


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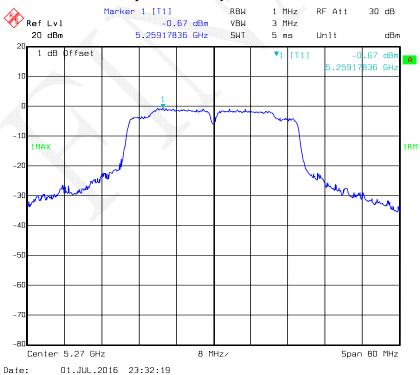


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Chain 1: Power Spectral Density, 802.11n ht20 High Channel

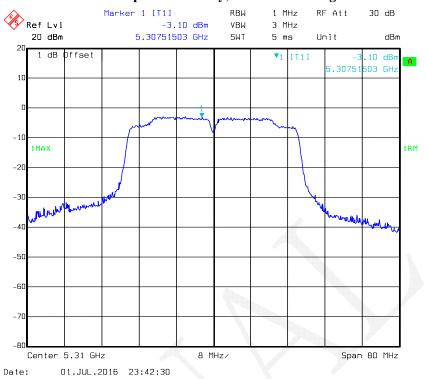


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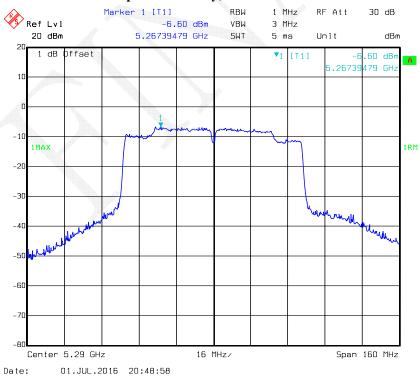


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Chain 1: Power Spectral Density, 802.11n ht40 High Channel



Chain 1: Power Spectral Density, 802.11n ac80 Middle Channel

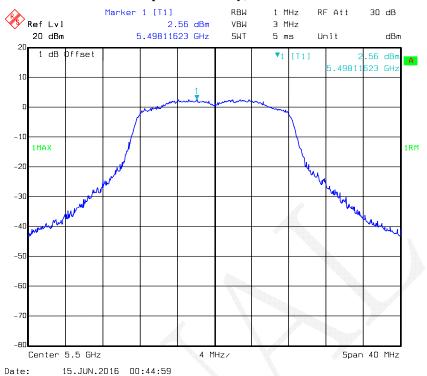


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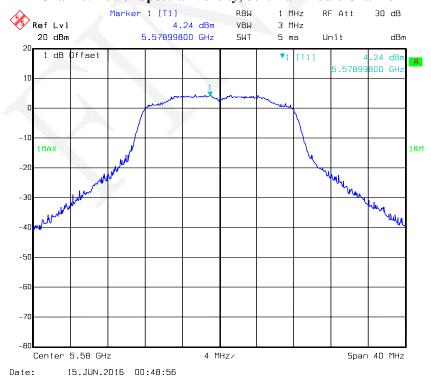
5470-5725MHz:

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Report No.: RDG160608001-00D

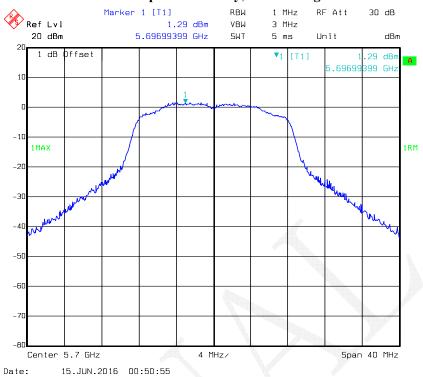


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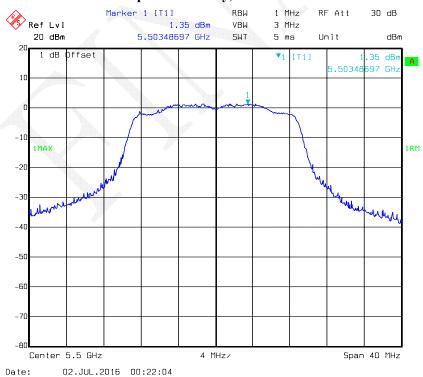


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Chain 0: Power Spectral Density, 802.11a High Channel

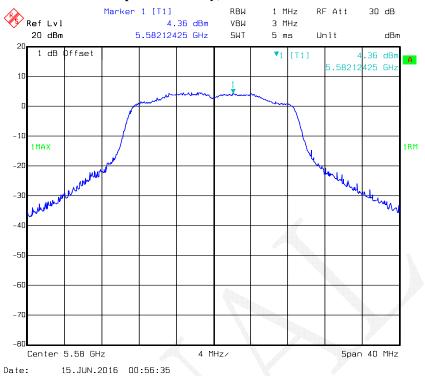


Chain 0: Power Spectral Density, 802.11n ht20 Low Channel

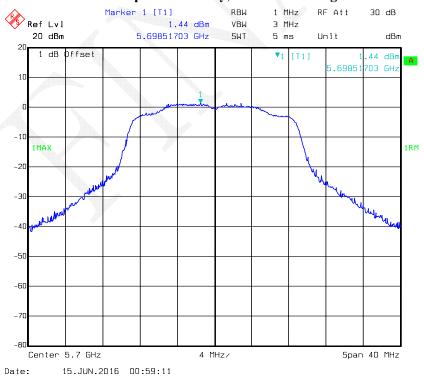


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Chain 0: Power Spectral Density, 802.11n ht20 Middle Channel

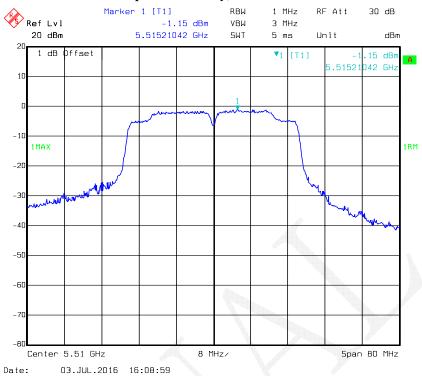


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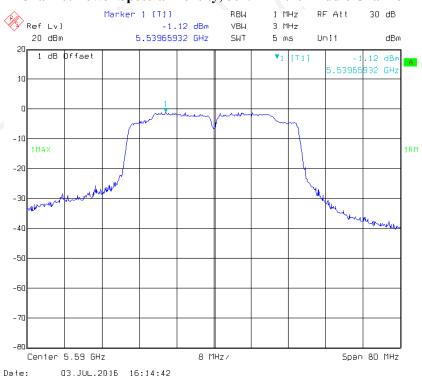


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Chain 0: Power Spectral Density, 802.11n ht40 Low Channel

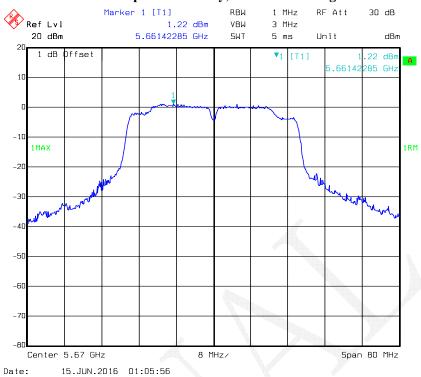


Chain 0: Power Spectral Density, 802.11n ht40 Middle Channel

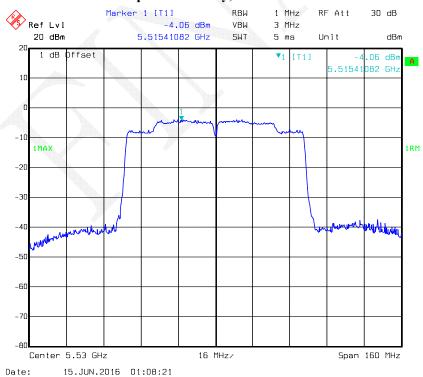


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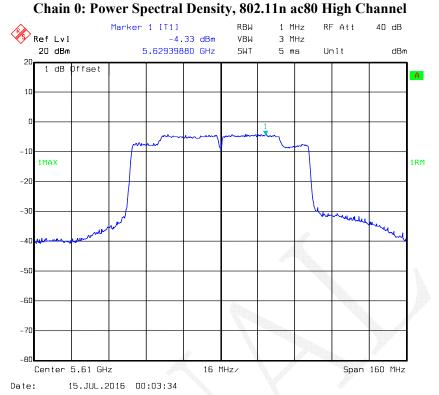
Chain 0: Power Spectral Density, 802.11n ht40 High Channel



Chain 0: Power Spectral Density, 802.11n ac80 Low Channel

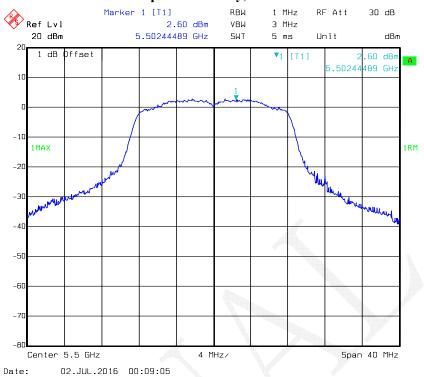


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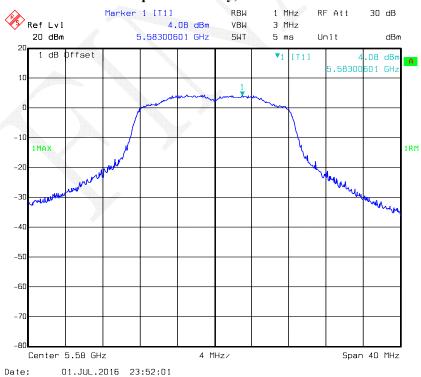


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Chain 1: Power Spectral Density, 802.11a Low Channel

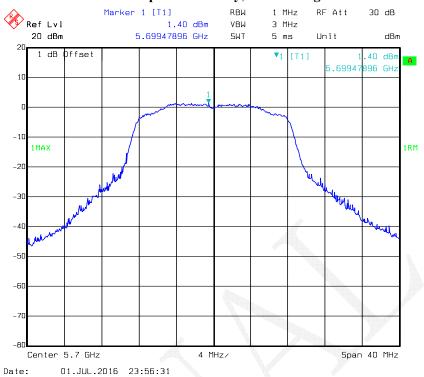


Chain 1: Power Spectral Density, 802.11a Middle Channel

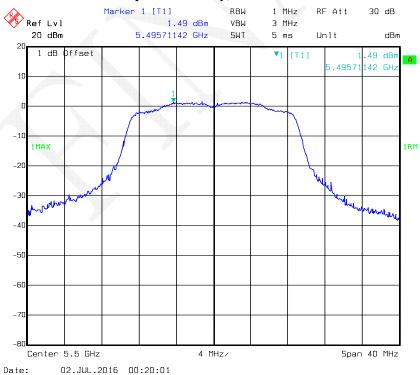


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Chain 1: Power Spectral Density, 802.11a High Channel

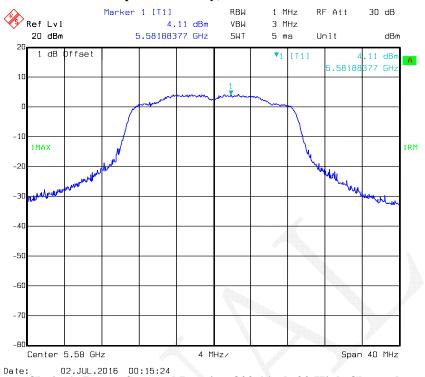


Chain 1: Power Spectral Density, 802.11n ht20 Low Channel

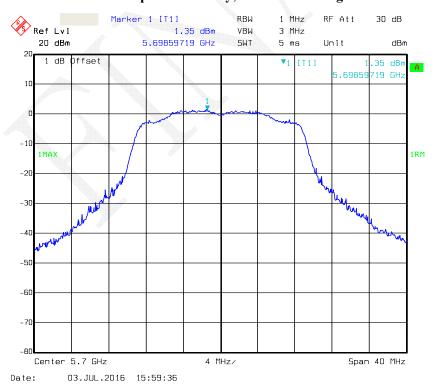


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Chain 1: Power Spectral Density, 802.11n ht20 Middle Channel

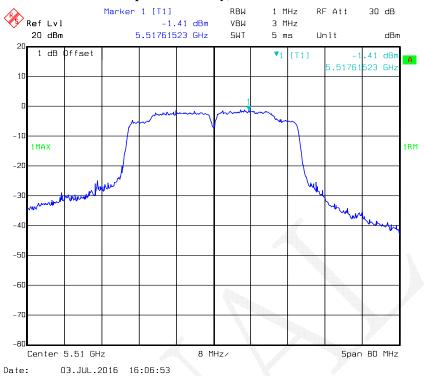


Chain 1: Power Spectral Density, 802.11n ht20 High Channel

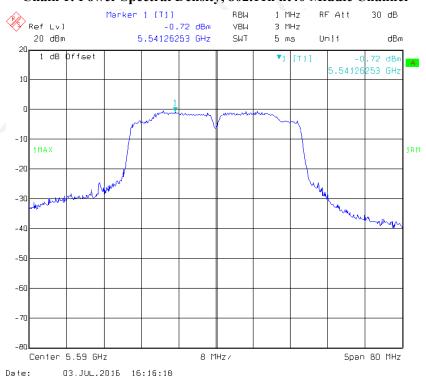


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Chain 1: Power Spectral Density, 802.11n ht40 Low Channel

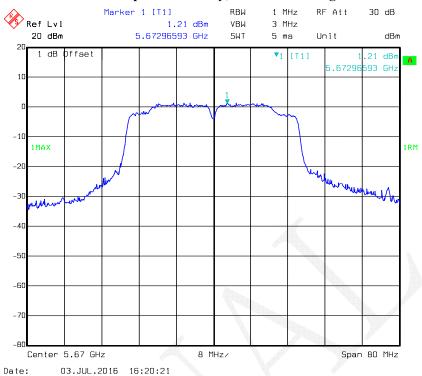


Chain 1: Power Spectral Density, 802.11n ht40 Middle Channel



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Chain 1: Power Spectral Density, 802.11n ht40 High Channel



Chain 1: Power Spectral Density, 802.11n ac80 Low Channel



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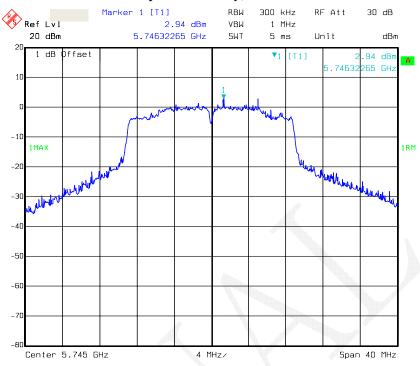
Chain 1: Power Spectral Density, 802.11n ac80 High Channel



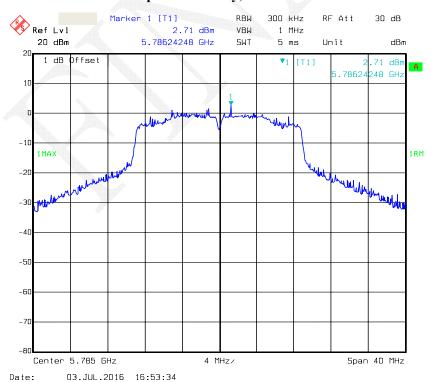
Date: 15.JUL.2016 00:03:39

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Chain 0: Power Spectral Density, 802.11a Low Channel

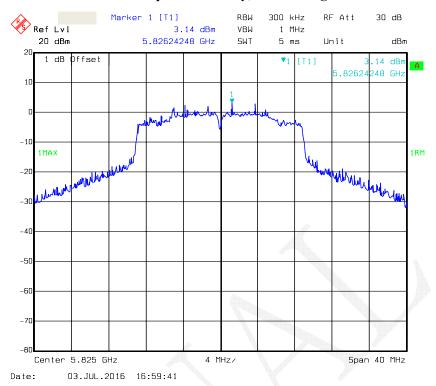


Chain 0: Power Spectral Density, 802.11a Middle Channel

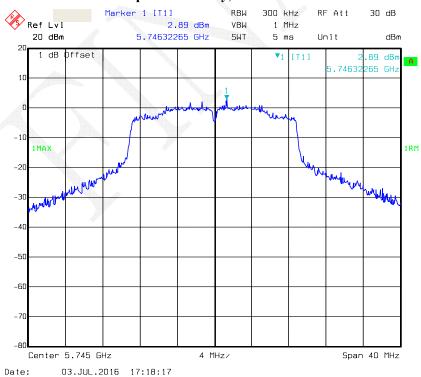


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Chain 0: Power Spectral Density, 802.11a High Channel



Chain 0: Power Spectral Density, 802.11n ht20 Low Channel

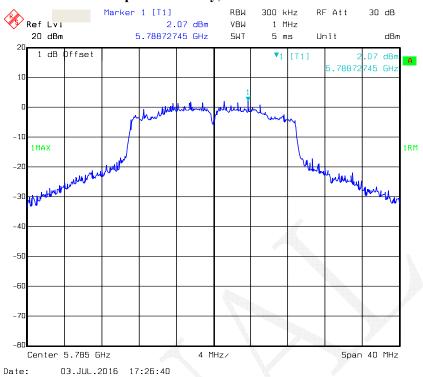


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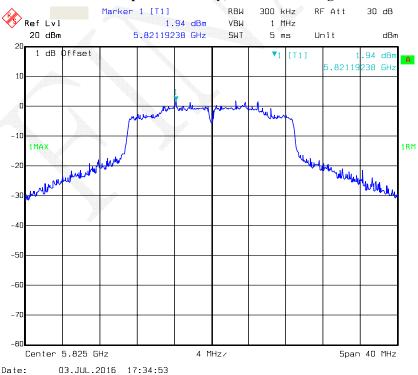
Date:

Chain 0: Power Spectral Density, 802.11n ht20 Middle Channel

Report No.: RDG160608001-00D

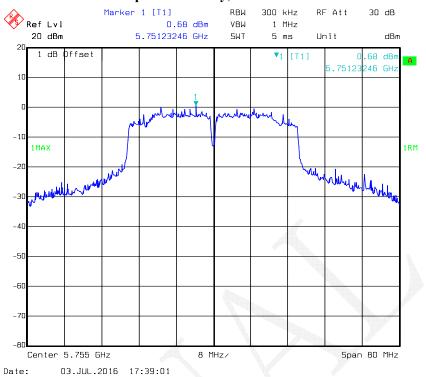


Chain 0: Power Spectral Density, 802.11n ht20 High Channel

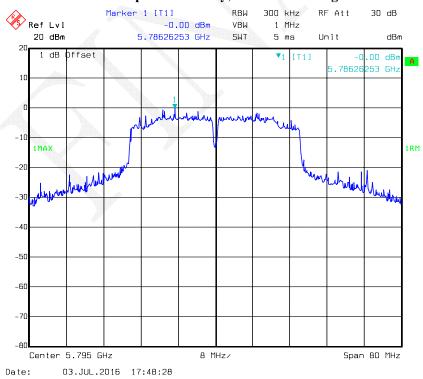


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Chain 0: Power Spectral Density, 802.11n ht40 Low Channel

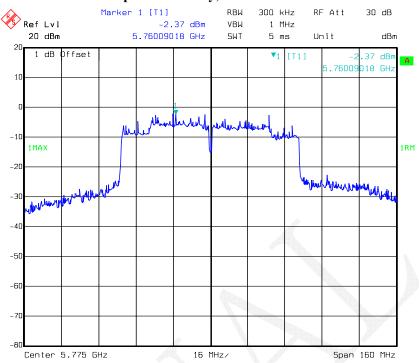


Chain 0: Power Spectral Density, 802.11n ht40 High Channel

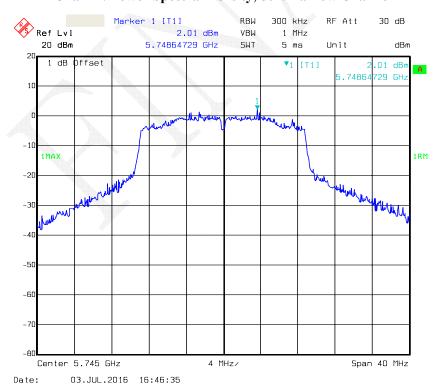


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Chain 0: Power Spectral Density, 802.11n ac80 Middle Channel

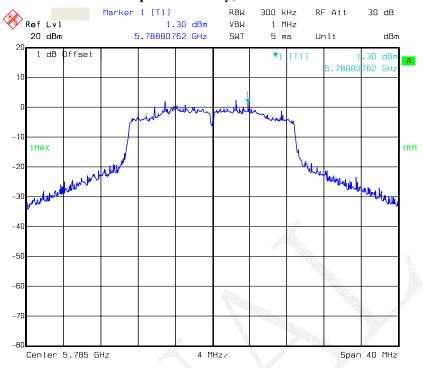


e: 03.JUL.2016 17:52:26 Chain 1: Power Spectral Density, 802.11a Low Channel

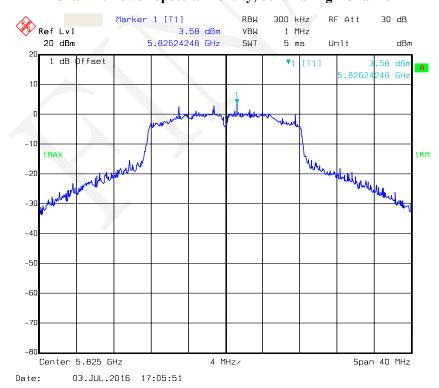


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Chain 1: Power Spectral Density, 802.11a Middle Channel

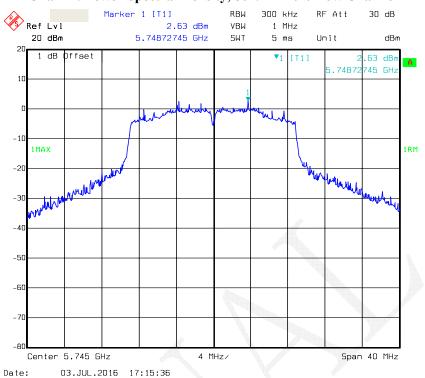


e: 03.JUL.2016 16:51:13 Chain 1: Power Spectral Density, 802.11a High Channel

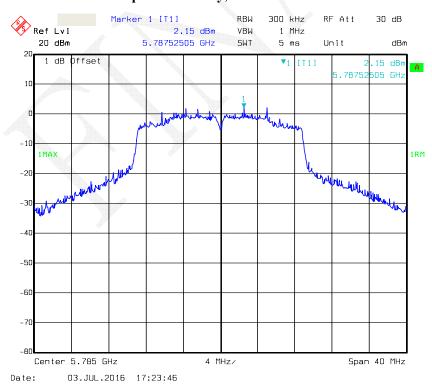


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Chain 1: Power Spectral Density, 802.11n ht20 Low Channel

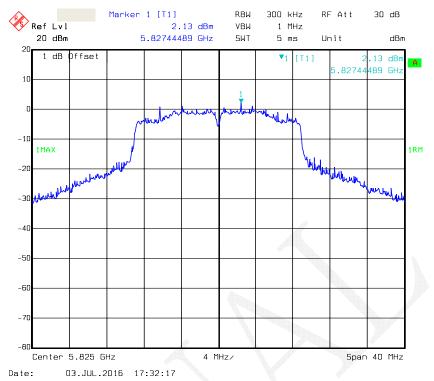


Chain 1: Power Spectral Density, 802.11n ht20 Middle Channel

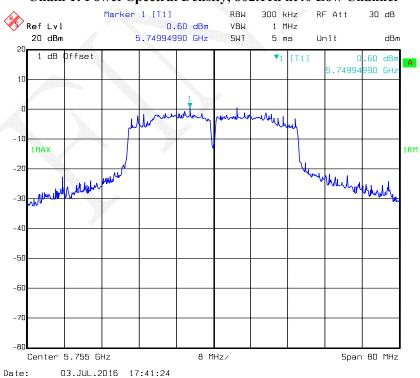


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Chain 1: Power Spectral Density, 802.11n ht20 High Channel

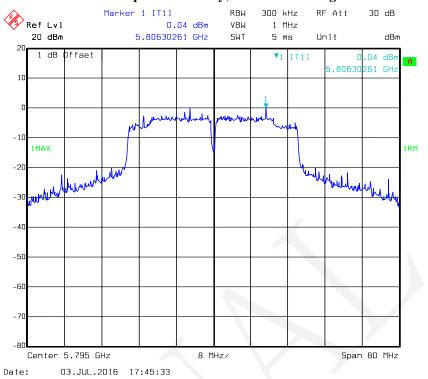


Chain 1: Power Spectral Density, 802.11n ht40 Low Channel

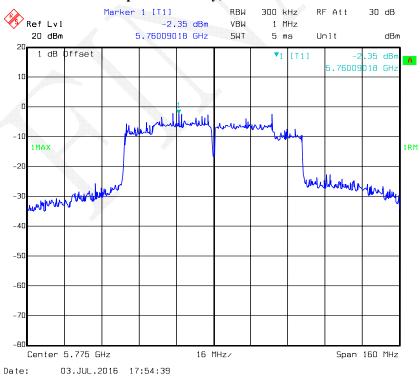


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Chain 1: Power Spectral Density, 802.11n ht40 High Channel



Chain 1: Power Spectral Density, 802.11n ac80 Middle Channel

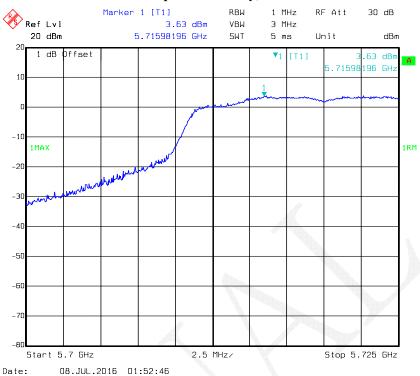


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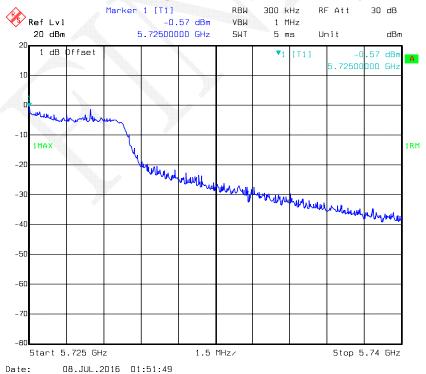
## Cross Band:

Chain 0: Power Spectral Density, 802.11vht20 Low

Report No.: RDG160608001-00D

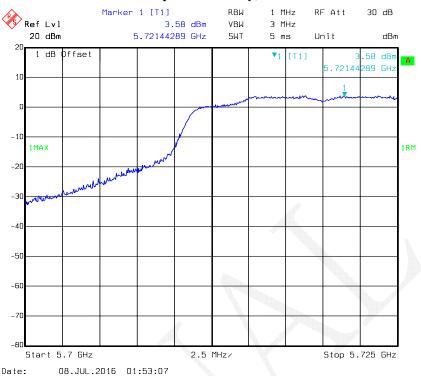


Chain 0: Power Spectral Density, 802.11vht20 High

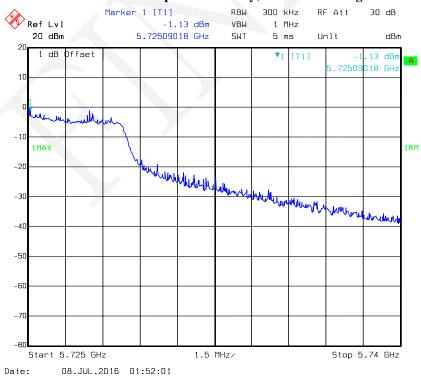


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Chain 1: Power Spectral Density, 802.11vht20 Low

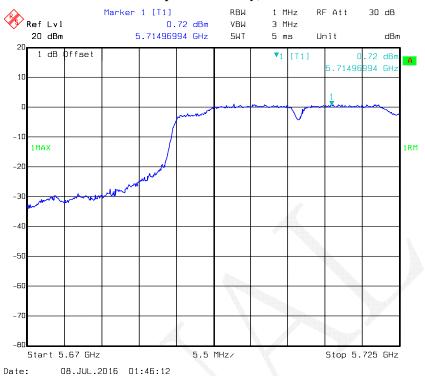


Chain 1: Power Spectral Density, 802.11vht20 High

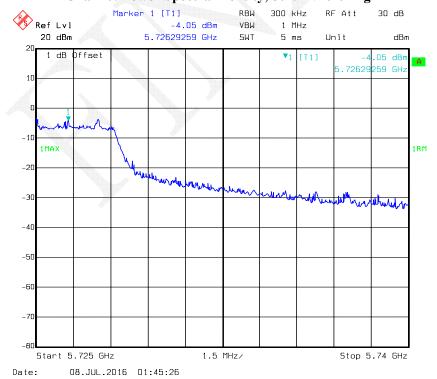


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Chain 0: Power Spectral Density, 802.11vht40 Low

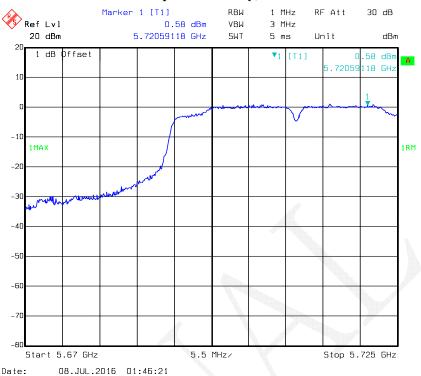


## Chain 0: Power Spectral Density, 802.11vht40 High

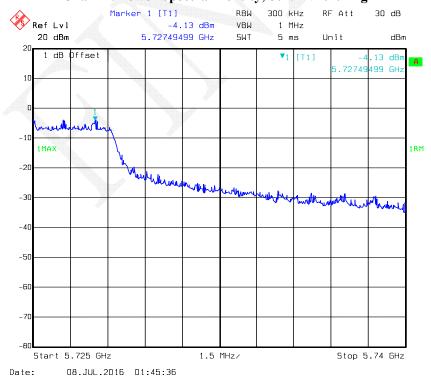


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Chain 1: Power Spectral Density, 802.11vht40 Low

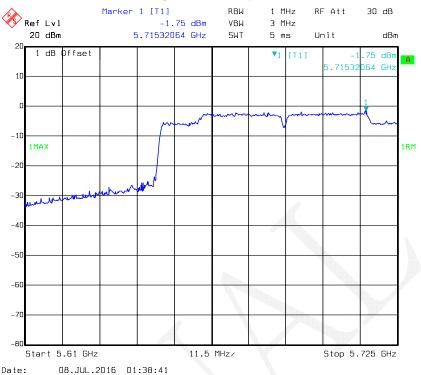


Chain 1: Power Spectral Density, 802.11vht40 High

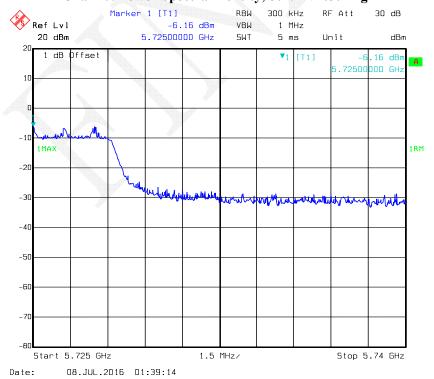


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Chain 0: Power Spectral Density, 802.11vht80 Low

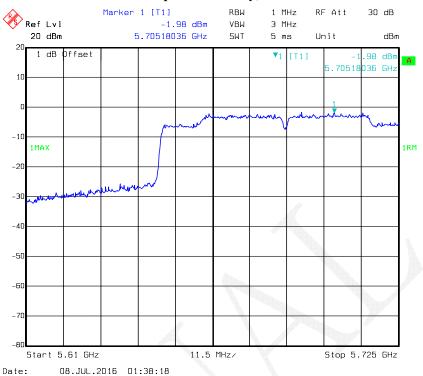


## Chain 0: Power Spectral Density, 802.11vht80 High

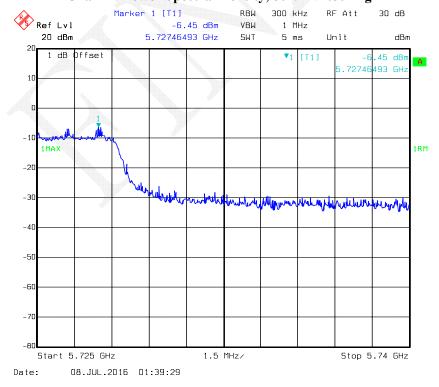


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Chain 1: Power Spectral Density, 802.11vht80 Low



Chain 1: Power Spectral Density, 802.11vht80 High



\*\*\*\*\* END OF REPORT \*\*\*\*\*

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