



Test Mode:	802.11g	Test Site:	AC2						
Test Channel:	1	Test Engineer:	Lewis Huang						
Remark:	Average measurement was not performed if peak level lower than average								
	limit.	limit.							
	2. Other frequency was 20dB bel	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show							
	in the report.								

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
	4000.5	43.1	-0.8	42.3	74.0	-31.7	Peak	Horizontal
	4825.0	49.7	2.0	51.7	74.0	-22.3	Peak	Horizontal
*	6431.5	41.5	5.7	47.2	75.9	-28.7	Peak	Horizontal
*	8811.5	35.1	10.5	45.6	75.9	-30.3	Peak	Horizontal
	4000.5	48.7	-0.8	47.9	74.0	-26.1	Peak	Vertical
	4825.0	46.3	2.0	48.3	74.0	-25.7	Peak	Vertical
*	6431.5	43.9	5.7	49.6	75.9	-26.3	Peak	Vertical
*	8590.5	34.5	9.9	44.4	75.9	-31.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (95.9dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

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Report No.: 1601RSU02001

Test Mode:	802.11g	Test Site:	AC2						
Test Channel:	6	Test Engineer:	Lewis Huang						
Remark:	1. Average measurement was no	Average measurement was not performed if peak level lower than average							
	limit.								
	2. Other frequency was 20dB bel	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show							
	in the report.								

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
	3864.5	39.0	-0.9	38.1	74.0	-35.9	Peak	Horizontal
	4867.5	48.4	1.9	50.3	74.0	-23.7	Peak	Horizontal
*	6499.5	40.1	6.2	46.3	78.4	-32.1	Peak	Horizontal
*	8743.5	34.3	10.5	44.8	78.4	-33.6	Peak	Horizontal
	4000.5	46.4	-0.8	45.6	74.0	-28.4	Peak	Vertical
	4876.0	43.3	1.9	45.2	74.0	-28.8	Peak	Vertical
*	6499.5	42.1	6.2	48.3	78.4	-30.1	Peak	Vertical
*	8599.0	34.0	9.9	43.9	78.4	-34.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (98.4dB μ V/m) or 15.209 which is higher.

Note 2: Measure Level $(dB\mu V/m) = Reading Level (dB\mu V) + Factor (dB)$

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

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Report No.: 1601RSU02001

Test Mode:	802.11g	Test Site:	AC2						
Test Channel:	11	Test Engineer:	Lewis Huang						
Remark:	1. Average measurement was no	Average measurement was not performed if peak level lower than average							
	limit.								
	2. Other frequency was 20dB bel	. Other frequency was 20dB below limit line within 1-18GHz, there is not show							
	in the report.								

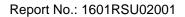
Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
	4000.5	43.0	-0.8	42.2	74.0	-31.8	Peak	Horizontal
	4927.0	46.4	1.9	48.3	74.0	-25.7	Peak	Horizontal
*	6567.5	40.0	6.6	46.6	77.3	-30.7	Peak	Horizontal
*	8582.0	34.5	9.9	44.4	77.3	-32.9	Peak	Horizontal
	4000.5	47.2	-0.8	46.4	74.0	-27.6	Peak	Vertical
	4927.0	44.7	1.9	46.6	74.0	-27.4	Peak	Vertical
*	6567.5	40.7	6.6	47.3	77.3	-30.0	Peak	Vertical
*	8624.5	35.0	10.1	45.1	77.3	-32.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (97.3dBµV/m) or 15.209 which is higher.

Note 2: Measure Level $(dB\mu V/m) = Reading Level (dB\mu V) + Factor (dB)$

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

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Test Mode:	802.11n-HT20	Test Site:	AC2						
Test Channel:	1	Test Engineer:	Lewis Huang						
Remark:	Average measurement was not performed if peak level lower than average								
	limit.	limit.							
	2. Other frequency was 20dB bel	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show							
	in the report.								

Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	4000.5	39.3	-0.8	38.5	74.0	-35.5	Peak	Horizontal
	4825.0	49.8	2.0	51.8	74.0	-22.2	Peak	Horizontal
*	6431.5	41.8	5.7	47.5	75.7	-28.2	Peak	Horizontal
*	8565.0	34.4	9.7	44.1	75.7	-31.6	Peak	Horizontal
	4000.5	44.5	-0.8	43.7	74.0	-30.3	Peak	Vertical
	4816.5	47.1	2.0	49.1	74.0	-24.9	Peak	Vertical
*	6431.5	43.7	5.7	49.4	75.7	-26.3	Peak	Vertical
*	8624.5	35.0	10.1	45.1	75.7	-30.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (95.7dBµV/m) or 15.209 which is higher.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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Report No.: 1601RSU02001

Test Mode:	802.11n-HT20	Test Site:	AC2					
Test Channel:	6	Test Engineer:	Lewis Huang					
Remark:	1. Average measurement was no	Average measurement was not performed if peak level lower than average						
	limit.							
	2. Other frequency was 20dB bel	ow limit line within 1	-18GHz, there is not show					
	in the report.							

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
	4000.5	39.9	-0.8	39.1	74.0	-34.9	Peak	Horizontal
	4876.0	50.1	1.9	52.0	74.0	-22.0	Peak	Horizontal
*	6499.5	41.2	6.2	47.4	77.2	-29.8	Peak	Horizontal
*	8573.5	35.1	9.8	44.9	77.2	-32.3	Peak	Horizontal
	4000.5	46.8	-0.8	46.0	74.0	-28.0	Peak	Vertical
	4876.0	45.8	1.9	47.7	74.0	-26.3	Peak	Vertical
*	6499.5	42.6	6.2	48.8	77.2	-28.4	Peak	Vertical
*	8607.5	33.8	9.9	43.7	77.2	-33.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (97.2dB μ V/m) or 15.209 which is higher.

Note 2: Measure Level $(dB\mu V/m) = Reading Level (dB\mu V) + Factor (dB)$

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

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Report No.: 1601RSU02001

Test Mode:	802.11n-HT20	Test Site:	AC2						
Test Channel:	11	Test Engineer:	Lewis Huang						
Remark:	1. Average measurement was no	Average measurement was not performed if peak level lower than average							
	limit.								
	2. Other frequency was 20dB bel	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show							
	in the report.								

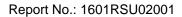
Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
	4000.5	40.3	-0.8	39.5	74.0	-34.5	Peak	Horizontal
	4927.0	49.1	1.9	51.0	74.0	-23.0	Peak	Horizontal
*	6567.5	39.7	6.6	46.3	76.6	-30.3	Peak	Horizontal
*	8709.5	34.0	10.2	44.2	76.6	-32.4	Peak	Horizontal
	4000.5	45.7	-0.8	44.9	74.0	-29.1	Peak	Vertical
	4927.0	46.5	1.9	48.4	74.0	-25.6	Peak	Vertical
*	6567.5	40.7	6.6	47.3	76.6	-29.3	Peak	Vertical
*	8539.5	34.0	9.7	43.7	76.6	-32.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (96.6dBµV/m) or 15.209 which is higher.

Note 2: Measure Level $(dB\mu V/m) = Reading Level (dB\mu V) + Factor (dB)$

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

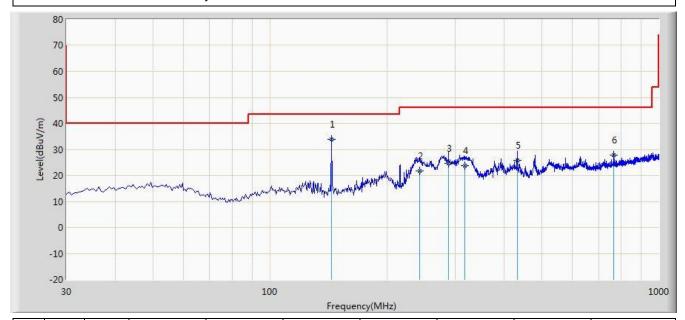
FCC ID: 2ACS5-ST16 Page Number: 48 of 82





The worst case of Radiated Emission below 1GHz:

Worse Case Mode: Transmit by 802.11b at Channel 2412MHz					
EUT: Radio Controller	Power: By Battery				
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal				
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang				
Site: AC2	Time: 2016/01/27 - 14:31				



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	143.975	33.832	24.385	-9.668	43.500	9.446	QP
2			242.915	21.828	8.320	-24.172	46.000	13.508	QP
3			288.020	24.744	10.410	-21.256	46.000	14.334	QP
4			317.120	23.645	8.640	-22.355	46.000	15.004	QP
5			432.065	25.856	8.670	-20.144	46.000	17.187	QP
6			766.715	27.803	5.340	-18.197	46.000	22.463	QP

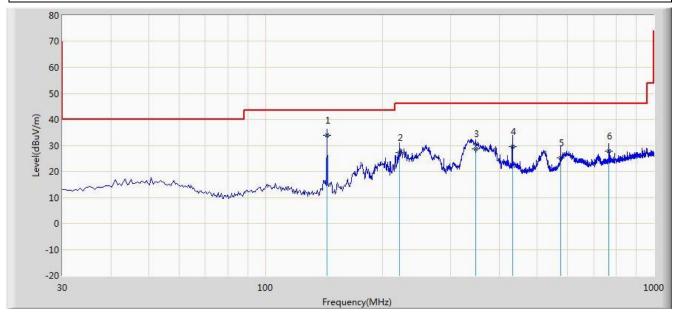
Note: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

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eer. Lewis Huarig		
Engineer: Lewis Huang Polarity: Vertical		
r: By Battery		



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	143.975	33.817	24.370	-9.683	43.500	9.446	QP
2			221.575	27.123	14.410	-18.877	46.000	12.713	QP
3			347.190	28.664	12.850	-17.336	46.000	15.814	QP
4			432.065	29.596	12.410	-16.404	46.000	17.187	QP
5			576.110	25.090	5.390	-20.910	46.000	19.700	QP
6			766.715	27.823	5.360	-18.177	46.000	22.463	QP

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

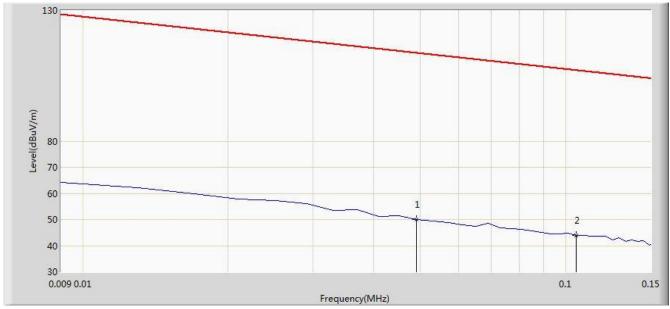
FCC ID: 2ACS5-ST16 IC: 11554B-ST16





Note: There is the ambient noise within frequency range 9kHz-30MHz						
EUT: Radio Controller	Power: By Battery					
Probe: FMZB1519_0.009-30MHz	Polarity: Face on					
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang					
Site: AC2	Time: 2016/1/27 - 16:18					

Note: There is the ambient noise within frequency range 9kHz~30MHz.



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			0.049	50.112	29.552	-63.688	113.800	20.560	AV
2		*	0.105	44.043	23.845	-63.137	107.180	20.198	QP

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

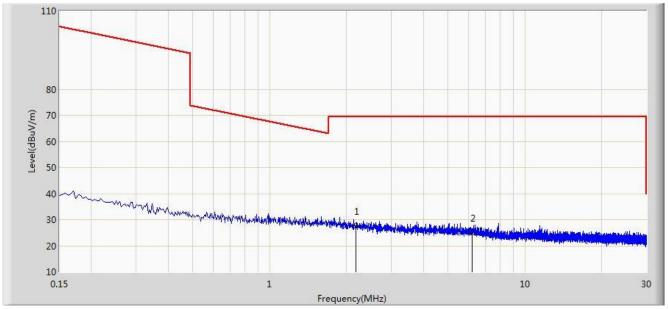
 $Limit@3m = 20*Log((2400/49)uV/m) + 40*Log(300m/3m) = 113.800dB\mu\nu/m$ (Average detector)

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Note: There is the ambient noise within frequency range 9kHz~30MHz.						
EUT: Radio Controller	Power: By Battery					
Probe: FMZB1519_0.009-30MHz	Polarity: Face on					
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang					
Site: AC2	Time: 2016/1/27 - 16:19					



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	2.175	27.371	6.960	-42.129	69.500	20.412	QP
2			6.216	24.786	4.701	-44.714	69.500	20.085	QP

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

 $\label{eq:limit} Limit@3m = 20*Log(30uV/m) + 20*Log(30m/3m) = 49.5dB\mu\nu/m \ (Average \ detector), \ and \ 69.5dB\mu\nu/m \ (Quasi-Peak \ detector).$

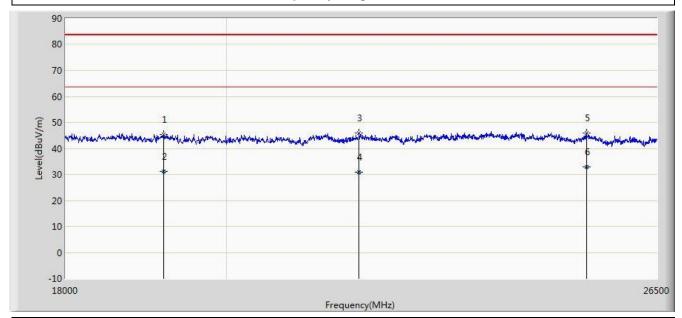
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Note: There is the embient noise within frequency range 1904z 2504z						
EUT: Radio Controller	Power: By Battery					
Probe: BBHA9170_18-40GHz	Polarity: Horizontal					
Limit: FCC_Part15.209_RE(1m)	Engineer: Lewis Huang					
Site: AC2	Time: 2016/1/27 - 16:25					

Note: There is the ambient noise within frequency range 18GHz~25GHz.



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			19194.250	45.350	44.174	-38.150	83.500	1.176	PK
2			19194.250	31.296	30.120	-32.204	63.500	1.176	AV
3			21812.250	45.806	45.995	-37.694	83.500	-0.189	PK
4			21812.250	31.001	31.190	-32.499	63.500	-0.189	AV
5			25310.000	45.892	43.365	-37.608	83.500	2.527	PK
6		*	25310.000	32.957	30.430	-30.543	63.500	2.527	AV

Note: Measure Level $(dB\mu V/m)$ = Reading Level $(dB\mu V)$ + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

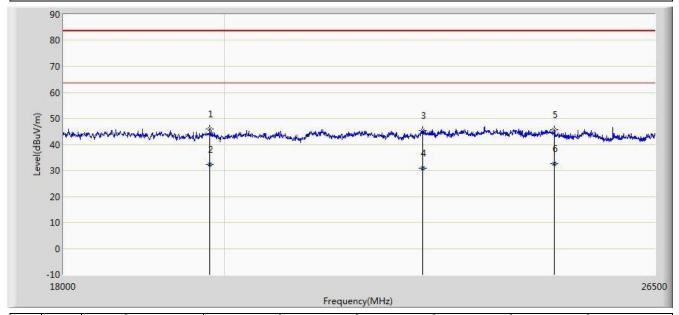
 $\label{limit} Limit@1m = 20*Log(500uV/m) + 20*Log(3m/1m) = 63.5dB\mu\nu/m \ (Average \ detector), \ and \ 83.5dB\mu\nu/m \ (Peak \ detector).$

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Note: There is the ambient noise within frequency range 18GHz~25GHz						
EUT: Radio Controller	Power: By Battery					
Probe: BBHA9170_18-40GHz	Polarity: Vertical					
Limit: FCC_Part15.209_RE(1m)	Engineer: Lewis Huang					
Site: AC2	Time: 2016/1/27 - 16:31					



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			19810.500	46.028	45.623	-37.472	83.500	0.405	PK
2			19810.500	32.225	31.820	-31.275	63.500	0.405	AV
3			22764.250	45.366	44.798	-38.134	83.500	0.568	PK
4			22764.250	30.798	30.230	-32.702	63.500	0.568	AV
5			24812.750	45.794	43.064	-37.706	83.500	2.730	PK
6		*	24812.750	32.620	29.890	-30.880	63.500	2.730	AV

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

 $Limit@1m = 20*Log(500uV/m) + 20*Log(3m/1m) = 63.5dB\mu\nu/m \ (Average \ detector), \ and \ 83.5dB\mu\nu/m \ (Peak \ detector) = 10.5dB\mu\nu/m \ (Average \ detector) = 10.5dB\mu\nu/m \ (A$ detector).

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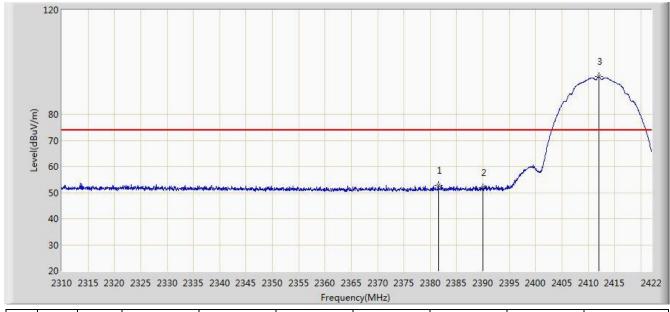




7.7. Radiated Restricted Band Edge Measurement

7.7.1. Test Result

Site: AC2	Time: 2016/01/27 - 14:38
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Radio Controller	Power: By Battery
Test Mode: Transmit by 802.11b at Channel 2412MHz	



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			2381.568	52.774	55.316	-21.226	74.000	-2.542	PK
2			2390.000	51.778	54.378	-22.222	74.000	-2.600	PK
3		*	2411.976	94.383	97.043	N/A	N/A	-2.660	PK

Note: Measure Level $(dB\mu V/m)$ = Reading Level $(dB\mu V)$ + Factor (dB)

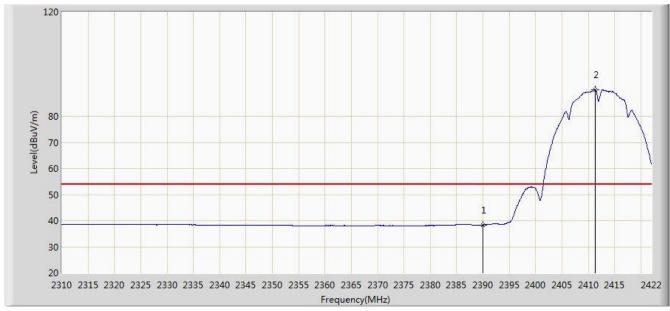
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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Site: AC2	Time: 2016/01/27 - 15:47
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Radio Controller	Power: By Battery
Test Mode: Transmit by 802.11b at Channel 2412MHz	



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			2390.000	38.308	40.908	-15.692	54.000	-2.600	AV
2		*	2411.304	90.269	92.924	N/A	N/A	-2.655	AV

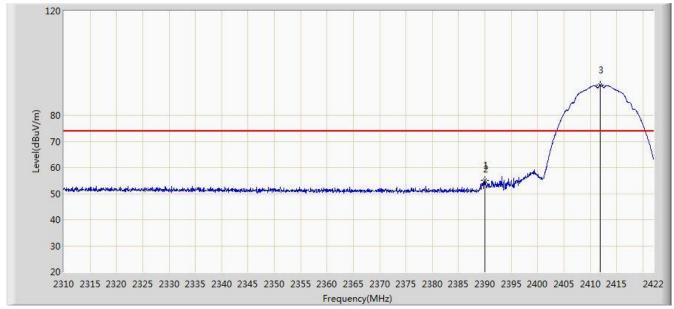
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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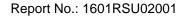
Site: AC2	Time: 2016/01/27 - 15:48
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Radio Controller	Power: By Battery
Test Mode: Transmit by 802.11b at Channel 2412MHz	



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			2389.968	55.200	57.800	-18.800	74.000	-2.600	PK
2			2390.000	53.734	56.334	-20.266	74.000	-2.600	PK
3		*	2411.864	91.596	94.255	N/A	N/A	-2.659	PK

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

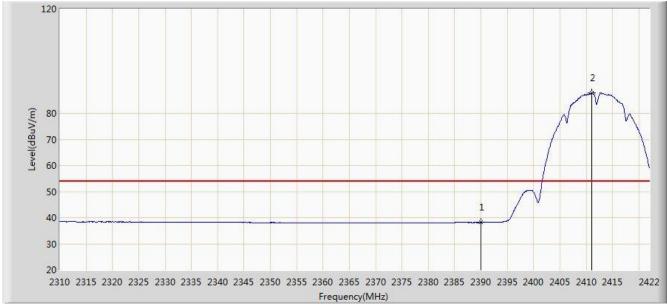
FCC ID: 2ACS5-ST16 Page Number: 57 of 82





Site: AC2	Time: 2016/01/27 - 15:50
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Radio Controller	Power: By Battery
Test Mode: Transmit by 802.11b at Channel 2412MHz	

Test Mode: Transmit by 802.11b at Channel 2412MHz

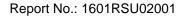


No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			2390.000	38.178	40.778	-15.822	54.000	-2.600	AV
2		*	2411.080	87.924	90.578	N/A	N/A	-2.654	AV

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

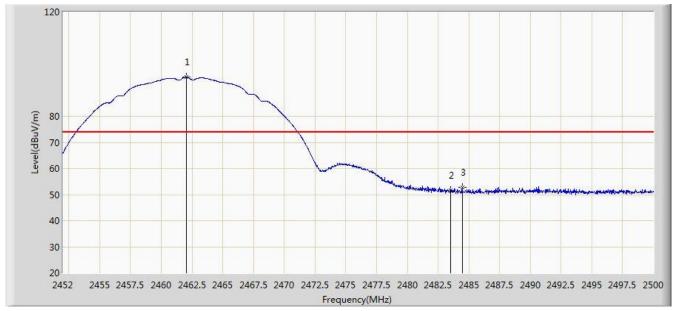
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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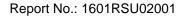
Site: AC2	Time: 2016/01/27 - 15:51
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Radio Controller	Power: By Battery
Test Mode: Transmit by 802.11b at Channel 2462MHz	



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	2462.056	95.048	98.013	N/A	N/A	-2.965	PK
2			2483.500	51.716	54.687	-22.284	74.000	-2.971	PK
3			2484.472	52.724	55.697	-21.276	74.000	-2.974	PK

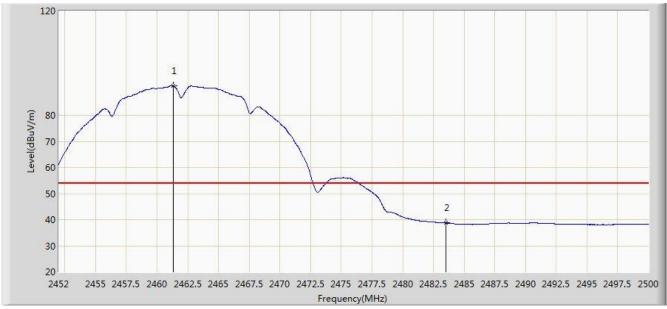
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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Site: AC2	Time: 2016/01/27 - 16:00
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Radio Controller	Power: By Battery
Test Mode: Transmit by 802.11b at Channel 2462MHz	



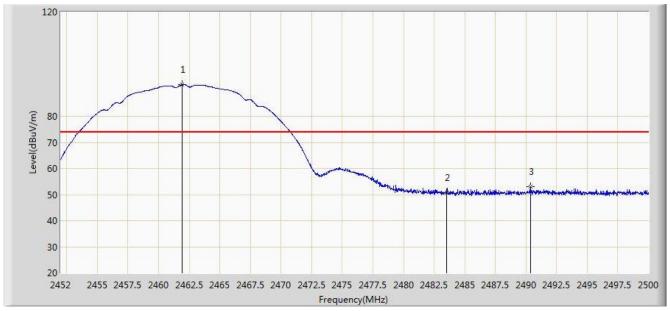
No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	2461.312	91.299	94.262	N/A	N/A	-2.962	AV
2			2483.500	38.761	41.732	-15.239	54.000	-2.971	AV

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)





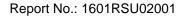
Site: AC2	Time: 2016/01/27 - 16:05				
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang				
Probe: BBHA9120D_1-18GHz	Polarity: Vertical				
EUT: Radio Controller	Power: By Battery				
Test Mode: Transmit by 802.11b at Channel 2462MHz					



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	2461.936	92.217	95.182	N/A	N/A	-2.965	PK
2			2483.500	50.798	53.769	-23.202	74.000	-2.971	PK
3			2490.352	53.015	55.998	-20.985	74.000	-2.983	PK

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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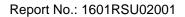
Site: AC2	Time: 2016/01/27 - 16:06				
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang				
Probe: BBHA9120D_1-18GHz	Polarity: Vertical				
EUT: Radio Controller	Power: By Battery				
Test Mode: Transmit by 802.11b at Channel 2462MHz					



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	2461.312	88.278	91.241	N/A	N/A	-2.962	AV
2			2483.500	38.339	41.310	-15.661	54.000	-2.971	AV

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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Site: AC2	Time: 2016/01/27 - 16:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Radio Controller	Power: By Battery
Test Mode: Transmit by 802.11g at Channel 2412MHz	

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Level(dBuV/m)	70														-	A Prof	1			
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Ì	40																			
	30																			
	20																			
		2215	2220	2225	2220	2225	240 2	245 2	250 22	55 226	2265	2370 23	75 22	00 220	5 2200	2205	2400	140E 2	410 2415	5

No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			2390.000	61.629	64.229	-12.371	74.000	-2.600	PK
2		*	2414.776	95.936	98.615	N/A	N/A	-2.679	PK

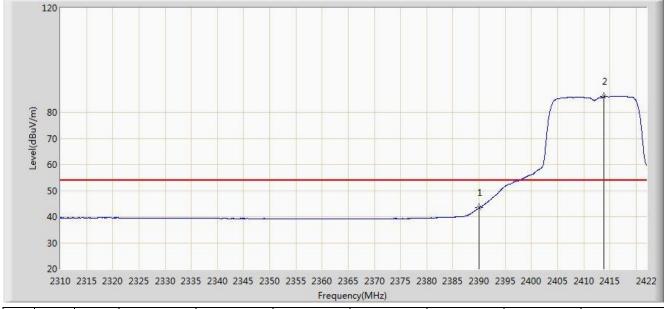
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

FCC ID: 2ACS5-ST16 Page Number: 63 of 82





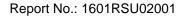
Site: AC2	Time: 2016/01/27 - 16:08					
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang					
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal					
EUT: Radio Controller	Power: By Battery					
Test Mode: Transmit by 802.11g at Channel 2412MHz						



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			2390.000	43.349	45.949	-10.651	54.000	-2.600	AV
2		*	2413.880	85.996	88.669	N/A	N/A	-2.673	AV

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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Site: AC2	Time: 2016/01/27 - 16:08
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Radio Controller	Power: By Battery
Test Mode: Transmit by 802.11g at Channel 2412MHz	

120 2 70 40 30 20 2310 2315 2320 2325 2330 2335 2340 2345 2350 2355 2360 2365 2370 2375 2380 2385 2390 2395 2400 2405 2410 2415 2422 Frequency(MHz)

No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			2390.000	58.845	61.445	-15.155	74.000	-2.600	PK
2		*	2414.832	93.460	96.139	N/A	N/A	-2.679	PK

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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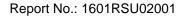
Site: AC2	Time: 2016/01/27 - 16:09					
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang					
Probe: BBHA9120D_1-18GHz	Polarity: Vertical					
EUT: Radio Controller	Power: By Battery					
Test Mode: Transmit by 802.11g at Channel 2412MHz						



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			2390.000	41.799	44.399	-12.201	54.000	-2.600	AV
2		*	2415.000	83.512	86.192	N/A	N/A	-2.680	AV

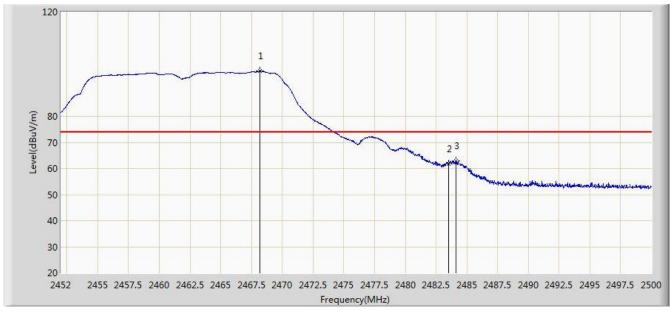
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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Site: AC2	Time: 2016/01/27 - 16:10				
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang				
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal				
EUT: Radio Controller	Power: By Battery				
Test Mode: Transmit by 802.11g at Channel 2462MHz					



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	2468.176	97.290	100.256	N/A	N/A	-2.965	PK
2			2483.500	61.717	64.688	-12.283	74.000	-2.971	PK
3			2484.112	62.813	65.785	-11.187	74.000	-2.972	PK

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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Site: AC2	Time: 2016/01/27 - 16:18					
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang					
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal					
EUT: Radio Controller	Power: By Battery					
Test Mode: Transmit by 802.11g at Channel 2462MHz						

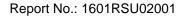
No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	2466.448	87.254	90.220	N/A	N/A	-2.966	AV
2			2483.500	45.435	48.406	-8.565	54.000	-2.971	AV

Frequency(MHz)

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

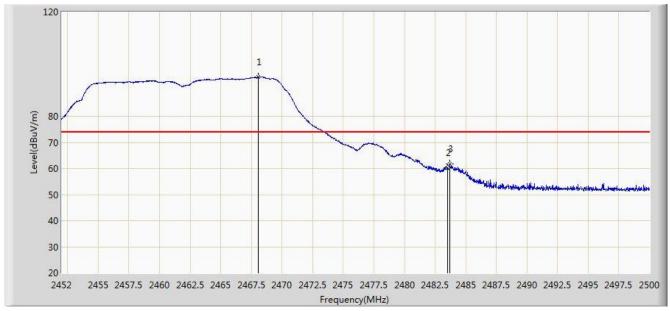
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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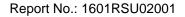
Site: AC2	Time: 2016/01/27 - 16:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Radio Controller	Power: By Battery
Test Mode: Transmit by 802.11g at Channel 2462MHz	



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	2468.032	95.019	97.985	N/A	N/A	-2.966	PK
2			2483.500	60.191	63.162	-13.809	74.000	-2.971	PK
3			2483.704	61.796	64.768	-12.204	74.000	-2.972	PK

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

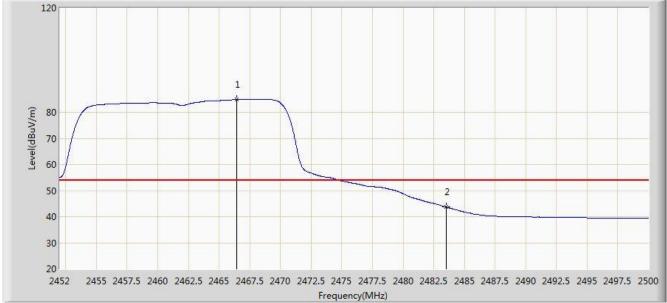
FCC ID: 2ACS5-ST16 Page Number: 69 of 82





Site: AC2	Time: 2016/01/27 - 16:20				
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang				
Probe: BBHA9120D_1-18GHz	Polarity: Vertical				
EUT: Radio Controller	Power: By Battery				
Test Mode: Transmit by 802.11g at Channel 2462MHz					

Test Mode: Transmit by 802.11g at Channel 2462MHz



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	2466.448	84.854	87.820	N/A	N/A	-2.966	AV
2			2483.500	43.690	46.661	-10.310	54.000	-2.971	AV

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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Site: AC2	Time: 2016/01/27 - 16:21				
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang				
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal				
EUT: Radio Controller	Power: By Battery				
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz					

120 80 Level(dBuV/m) 70 60 50 40 30 2310 2315 2320 2325 2330 2335 2340 2345 2350 2355 2360 2365 2370 2375 2380 2385 2390 2395 2400 2405 2410 2415 Frequency(MHz)

No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			2390.000	66.859	69.459	-7.141	74.000	-2.600	PK
2		*	2416.176	95.689	98.377	N/A	N/A	-2.688	PK

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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Site: AC2	Time: 2016/01/27 - 16:22				
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang				
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal				
EUT: Radio Controller	Power: By Battery				
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz					

120 80 70 40 30 20 2310 2315 2320 2325 2330 2335 2340 2345 2350 2355 2360 2365 2370 2375 2380 2385 2390 2395 2400 2405 2410 2415 2422

No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			2390.000	45.115	47.715	-8.885	54.000	-2.600	AV
2		*	2415.336	85.841	88.523	N/A	N/A	-2.682	AV

Frequency(MHz)

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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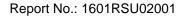
Site: AC2	Time: 2016/01/27 - 16:23			
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang			
Probe: BBHA9120D_1-18GHz	Polarity: Vertical			
EUT: Radio Controller	Power: By Battery			
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz				

No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			2390.000	63.020	65.620	-10.980	74.000	-2.600	PK
2		*	2414.832	93.145	95.824	N/A	N/A	-2.679	PK

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

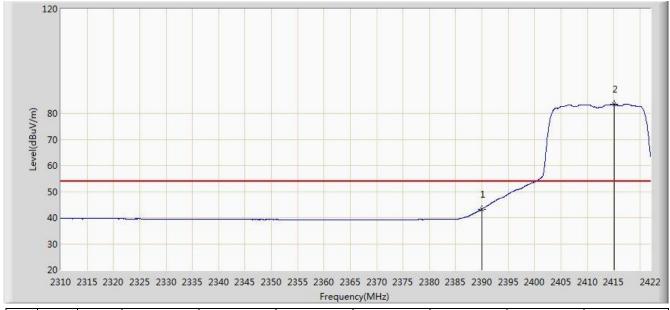
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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Site: AC2	Time: 2016/01/27 - 16:23			
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang			
Probe: BBHA9120D_1-18GHz	Polarity: Vertical			
EUT: Radio Controller	Power: By Battery			
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz				



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			2390.000	43.304	45.904	-10.696	54.000	-2.600	AV
2		*	2415.168	83.564	86.245	N/A	N/A	-2.682	AV

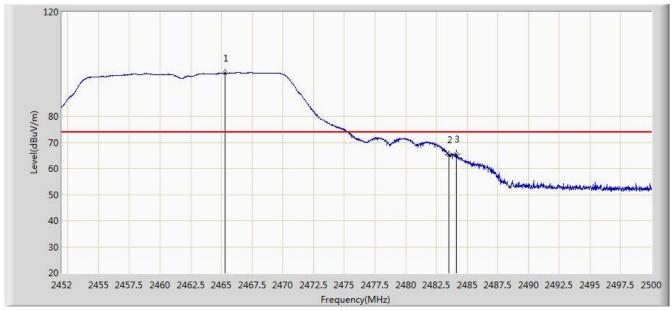
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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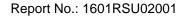
Site: AC2	Time: 2016/01/27 - 16:24			
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang			
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal			
EUT: Radio Controller	Power: By Battery			
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz				



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	2465.296	96.564	99.530	N/A	N/A	-2.965	PK
2			2483.500	65.285	68.256	-8.715	74.000	-2.971	PK
3			2484.112	65.557	68.529	-8.443	74.000	-2.972	PK

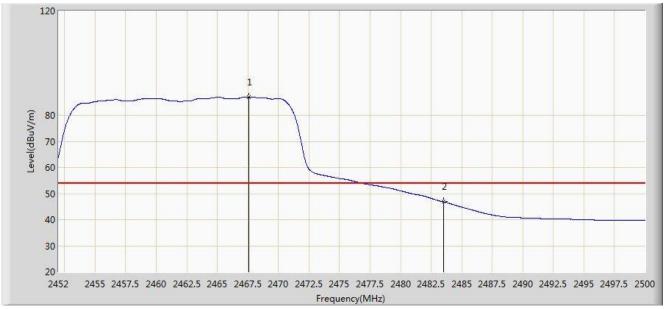
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

FCC ID: 2ACS5-ST16 Page Number: 75 of 82





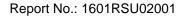
Site: AC2	Time: 2016/01/27 - 16:25			
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang			
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal			
EUT: Radio Controller	Power: By Battery			
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz				



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	2467.576	86.970	89.936	N/A	N/A	-2.966	AV
2			2483.500	46.814	49.785	-7.186	54.000	-2.971	AV

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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Site: AC2	Time: 2016/01/27 - 16:25			
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang			
Probe: BBHA9120D_1-18GHz	Polarity: Vertical			
EUT: Radio Controller	Power: By Battery			
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz				

120 70 50 40 30 2452 2455 2457.5 2460 2462.5 2465 2467.5 2470 2472.5 2475 2477.5 2480 2482.5 2485 2487.5 2490 2492.5 2497.5 2500

No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	2467.288	94.400	97.366	N/A	N/A	-2.967	PK
2			2483.500	62.767	65.738	-11.233	74.000	-2.971	PK
3			2483.656	63.555	66.527	-10.445	74.000	-2.972	PK

Frequency(MHz)

Note: Measure Level $(dB\mu V/m) = Reading Level (dB\mu V) + Factor (dB)$

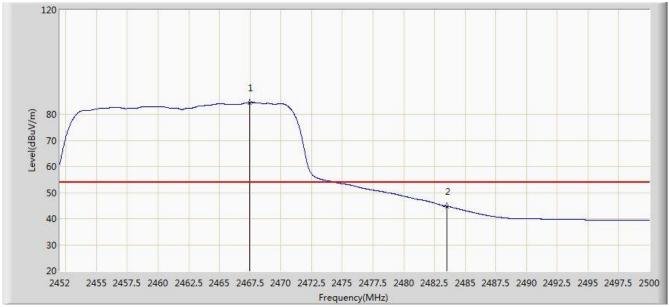
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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Site: AC2	Time: 2016/01/27 - 16:26			
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang			
Probe: BBHA9120D_1-18GHz	Polarity: Vertical			
EUT: Radio Controller	Power: By Battery			
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz				



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1		*	2467.432	84.486	87.452	N/A	N/A	-2.965	AV
2			2483.500	44.763	47.734	-9.237	54.000	-2.971	AV

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

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7.8. AC Conducted Emissions Measurement

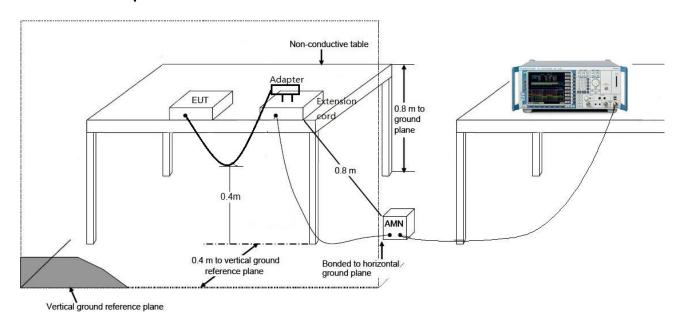
7.8.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits						
Frequency (MHz)	QP (dBuV)	AV (dBuV)				
0.15 - 0.50	66 - 56	56 – 46				
0.50 - 5.0	56	46				
5.0 - 30	60	50				

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.8.2. Test Setup



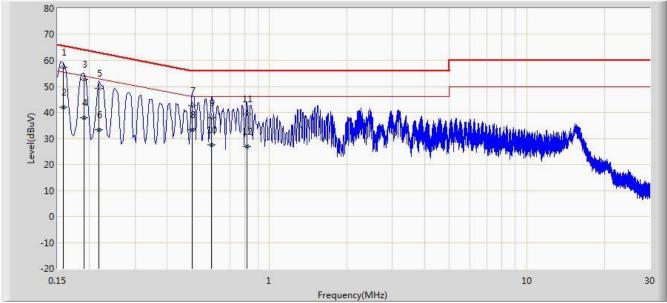
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7.8.3. Test Result

Site: SR2	Time: 2016/02/17 - 14:22		
Limit: FCC_Part15.207_CE_AC Power_ClassB	Engineer: Zero Cao		
Probe: ENV216_101683_Filter On	Polarity: Line		
EUT: Radio Controller	Power: AC 120V/60Hz		
Note: Mode 1			

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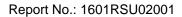


No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV)	(dB)	
				(dBuV)	(dBuV)				
1		*	0.158	57.285	46.974	-8.283	65.568	10.311	QP
2			0.158	42.017	31.706	-13.552	55.568	10.311	AV
3			0.190	52.826	42.797	-11.211	64.037	10.029	QP
4			0.190	37.842	27.813	-16.195	54.037	10.029	AV
5			0.218	49.198	39.253	-13.697	62.895	9.945	QP
6			0.218	33.252	23.307	-19.643	52.895	9.945	AV
7			0.502	42.737	32.580	-13.263	56.000	10.157	QP
8			0.502	33.359	23.202	-12.641	46.000	10.157	AV
9			0.594	38.093	27.975	-17.907	56.000	10.118	QP
10			0.594	27.669	17.551	-18.331	46.000	10.118	AV
11			0.818	39.439	29.438	-16.561	56.000	10.002	QP
12			0.818	26.920	16.919	-19.080	46.000	10.002	AV

Note: Measure Level (dB μ V) = Reading Level (dB μ V) + Factor (dB)

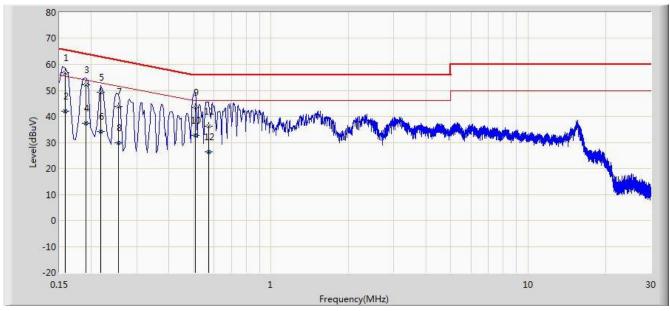
Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

FCC ID: 2ACS5-ST16 IC: 11554B-ST16





Site: SR2	Time: 2016/02/17 - 14:42		
Limit: FCC_Part15.207_CE_AC Power_ClassB	Engineer: Zero Cao		
Probe: ENV216_101683_Filter On	Polarity: Neutral		
EUT: Radio Controller	Power: AC 120V/60Hz		
Note: Mode 1			



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV)	(dB)	
				(dBuV)	(dBuV)				
1		*	0.158	56.820	46.531	-8.748	65.568	10.290	QP
2			0.158	42.090	31.800	-13.479	55.568	10.290	AV
3			0.190	52.113	42.086	-11.923	64.037	10.028	QP
4			0.190	37.521	27.493	-16.516	54.037	10.028	AV
5			0.218	49.409	39.428	-13.486	62.895	9.981	QP
6			0.218	34.277	24.295	-18.618	52.895	9.981	AV
7			0.254	43.863	33.859	-17.763	61.625	10.004	QP
8			0.254	29.962	19.958	-21.664	51.625	10.004	AV
9			0.506	43.577	33.401	-12.423	56.000	10.177	QP
10			0.506	32.859	22.682	-13.141	46.000	10.177	AV
11			0.570	36.220	26.072	-19.780	56.000	10.148	QP
12			0.570	26.255	16.107	-19.745	46.000	10.148	AV

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

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8. CONCLUSION

The data collected relate only the item(s) tested and show that the Radio Controller FCC ID:

2ACS5-ST16 Mode Number: ST16 is in compliance with Part 15C of the FCC Rules.

———— The End