



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Igw2018 #1107

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2441MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Vertical

Power Source: AC 120V/60Hz

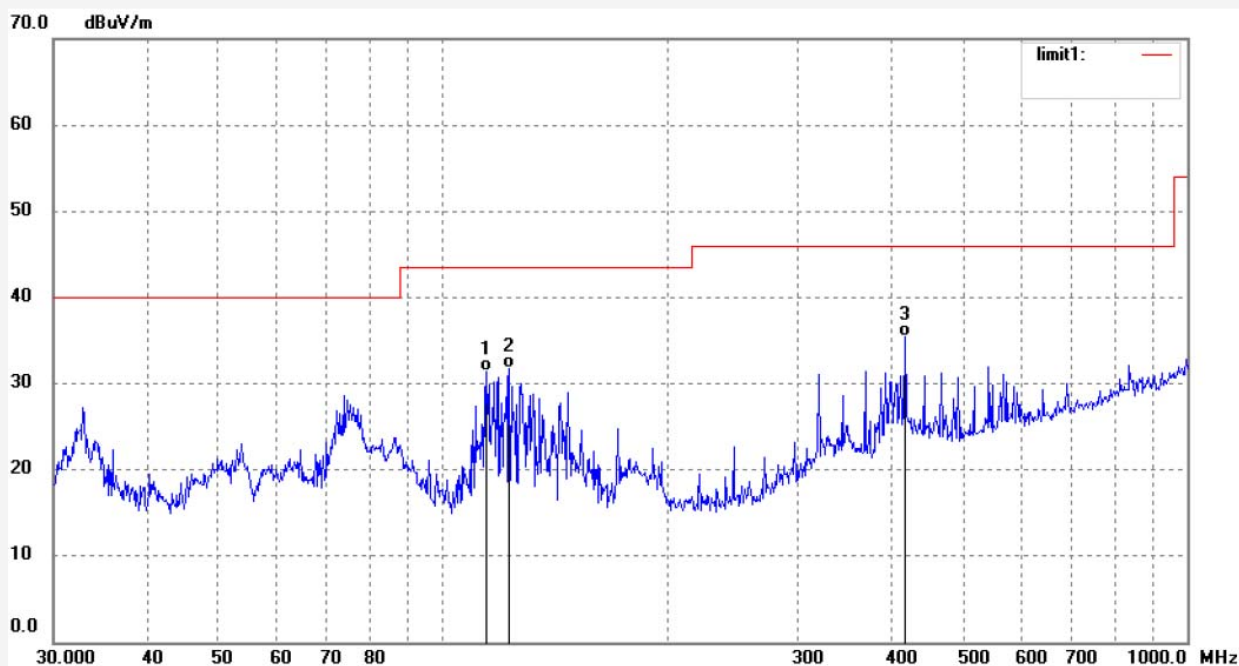
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	114.5146	44.50	-13.14	31.36	43.50	-12.14	QP			
2	122.8340	45.05	-13.37	31.68	43.50	-11.82	QP			
3	417.6409	41.27	-5.87	35.40	46.00	-10.60	QP			

shenzhen Accurate Technology Co., Ltd.

Address: 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

Tel: +86-755-26503290

Fax: +86-755-26503396

E-mail: webmaster@atc-lab.com

Http://www.atc-lab.com



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Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Igw2018 #1109

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2480MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Horizontal

Power Source: AC 120V/60Hz

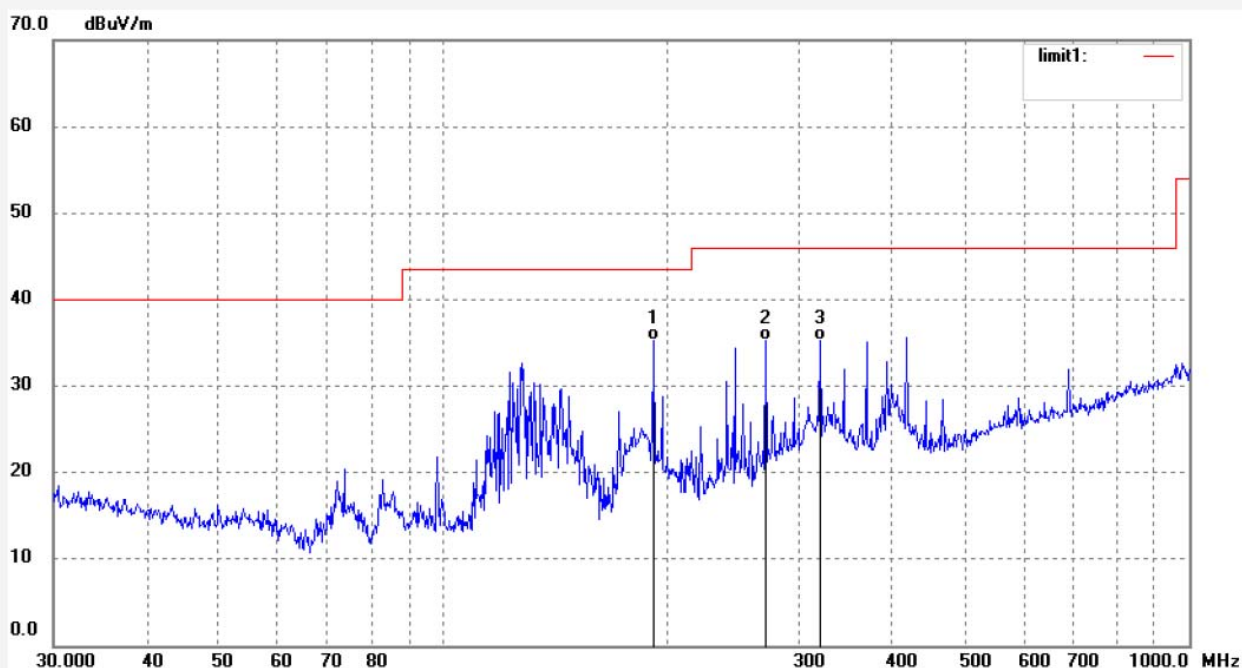
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	191.7450	47.75	-12.42	35.33	43.50	-8.17	QP			
2	270.3747	45.21	-9.92	35.29	46.00	-10.71	QP			
3	319.9370	43.71	-8.45	35.26	46.00	-10.74	QP			

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E-mail: webmaster@atc-lab.com

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Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Igw2018 #1110

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2480MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Vertical

Power Source: AC 120V/60Hz

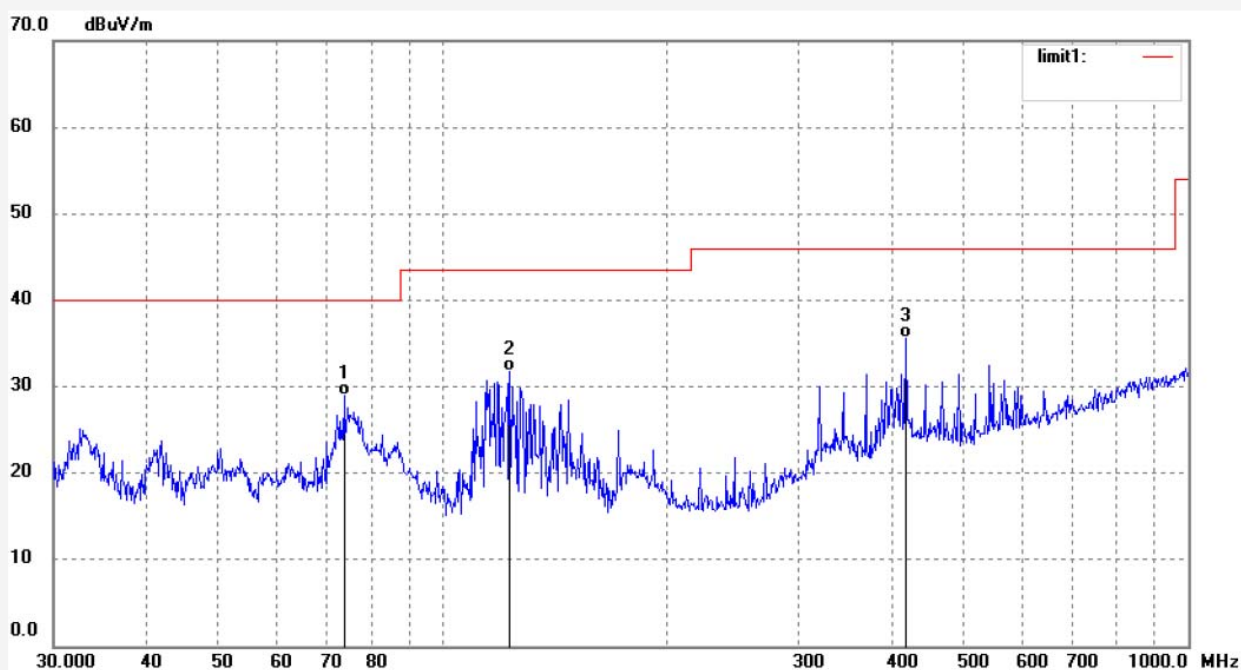
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	73.6170	45.43	-16.53	28.90	40.00	-11.10	QP			
2	122.8340	45.17	-13.37	31.80	43.50	-11.70	QP			
3	417.6409	41.42	-5.87	35.55	46.00	-10.45	QP			

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E-mail: webmaster@atc-lab.com

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1GHz-18GHz test data



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Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: lgw2018 #1073

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2402MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Horizontal

Power Source: AC 120V/60Hz

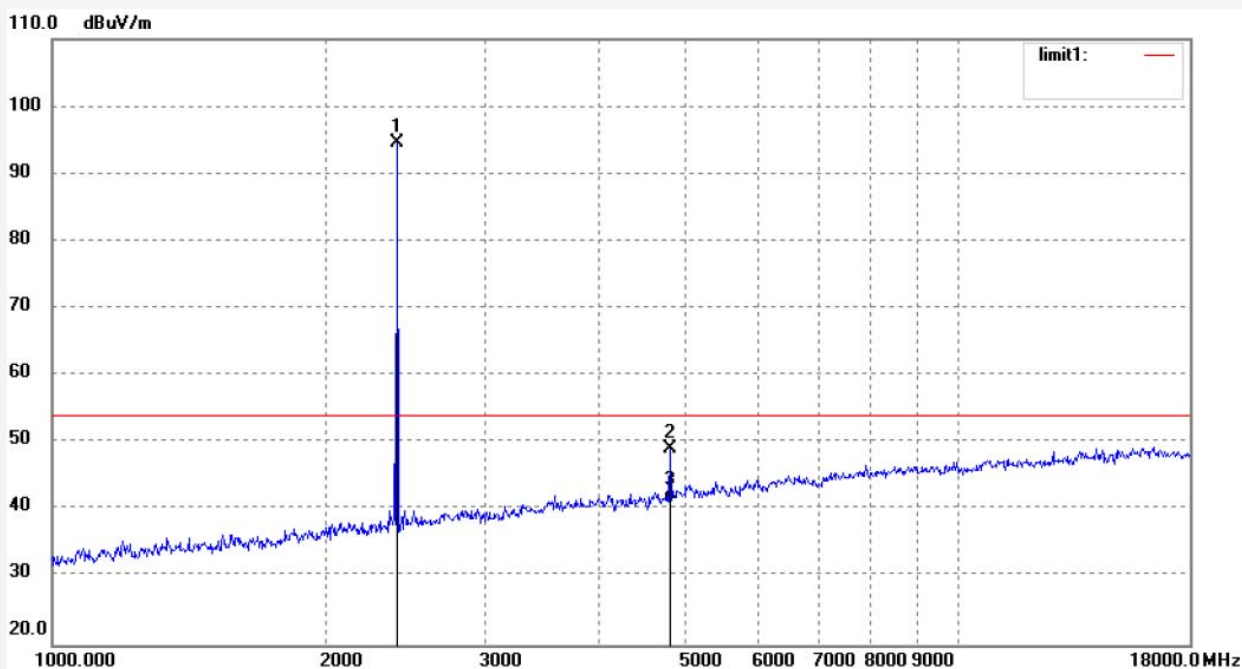
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.000	93.60	0.89	94.49	/	/	peak			
2	4804.025	41.68	7.40	49.08	74.00	-24.92	peak			
3	4804.025	33.82	7.40	41.22	54.00	-12.78	AVG			

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E-mail: webmaster@atc-lab.com

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Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Igw2018 #1074

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2402MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Vertical

Power Source: AC 120V/60Hz

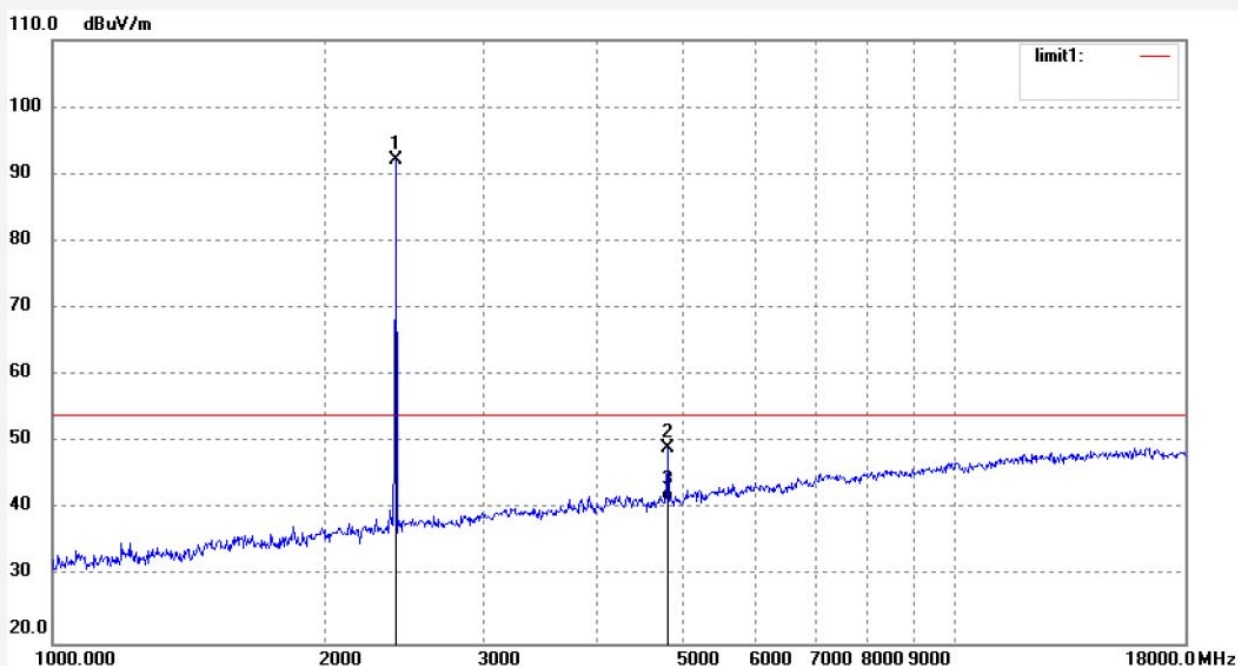
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.000	91.31	0.88	92.19	/	/	peak			
2	4804.026	41.65	7.40	49.05	74.00	-24.95	peak			
3	4804.026	33.95	7.40	41.35	54.00	-12.65	AVG			

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Fax: +86-755-26503396

E-mail: webmaster@atc-lab.com

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Job No.: Igw2018 #1077

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2441MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Horizontal

Power Source: AC 120V/60Hz

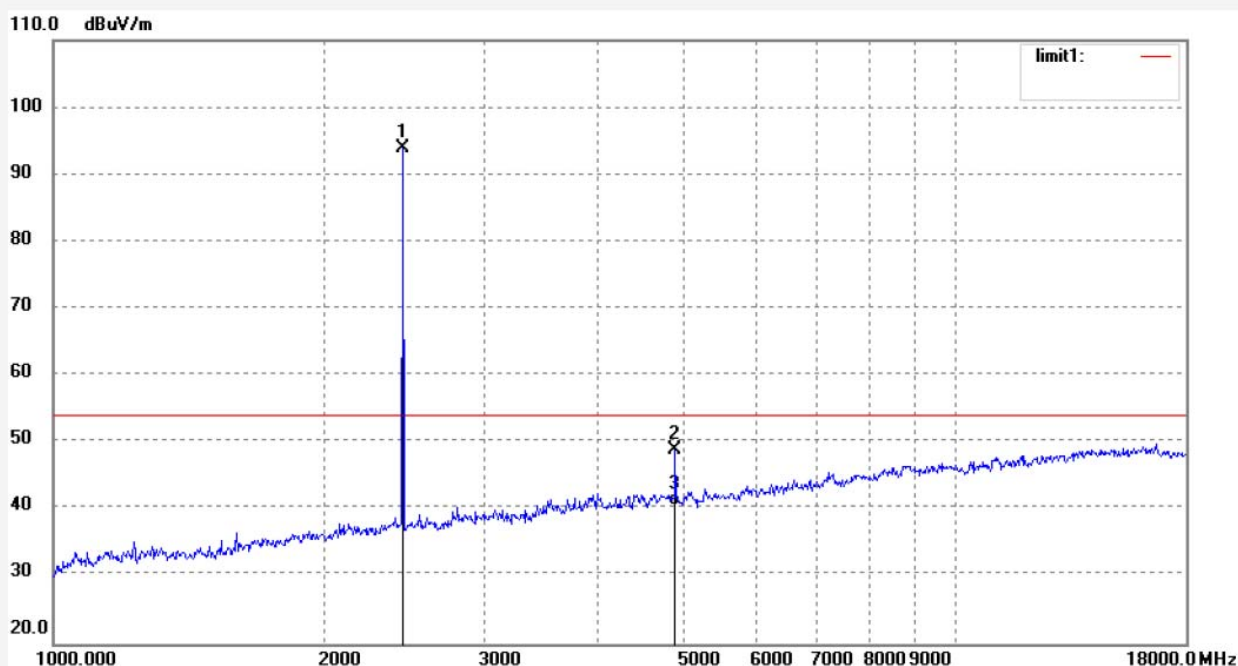
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.000	92.90	1.06	93.96	/	/	peak			
2	4882.027	40.81	8.11	48.92	74.00	-25.08	peak			
3	4882.027	32.46	8.11	40.57	54.00	-13.43	AVG			

Job No.: Igw2018 #1078

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2441MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Vertical

Power Source: AC 120V/60Hz

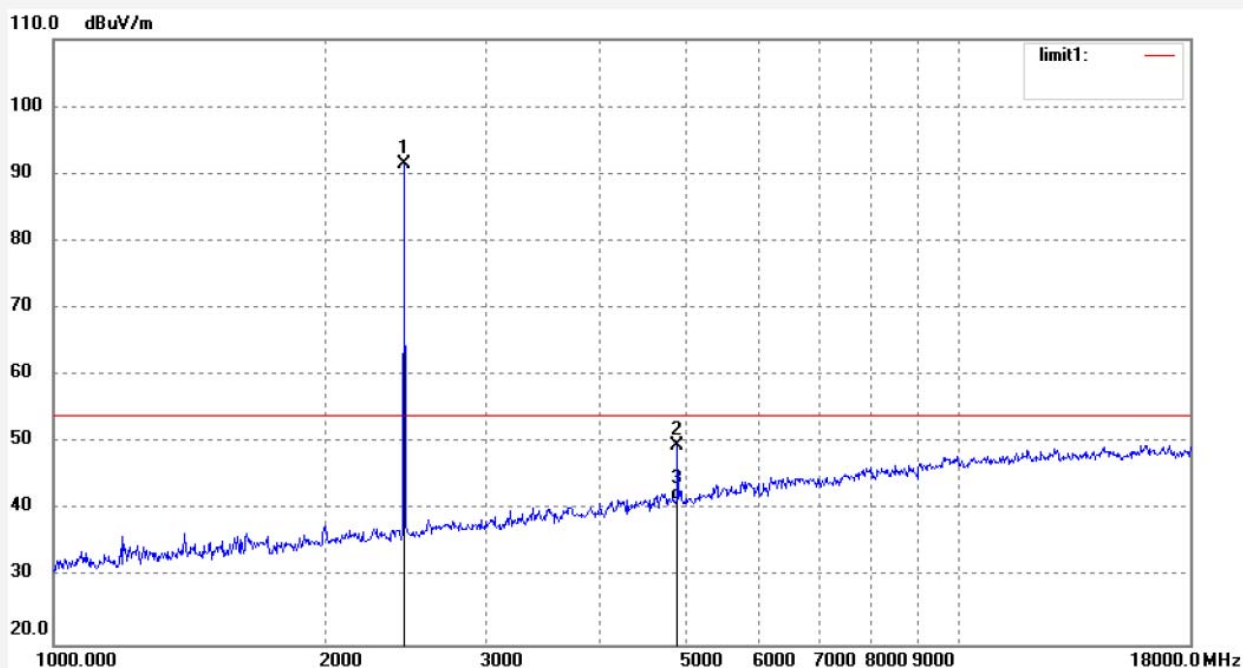
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.000	90.40	1.06	91.46	/	/	peak			
2	4882.028	41.47	8.11	49.58	74.00	-24.42	peak			
3	4882.028	33.43	8.11	41.54	54.00	-12.46	AVG			

Job No.: Igw2018 #1080

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2480MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Horizontal

Power Source: AC 120V/60Hz

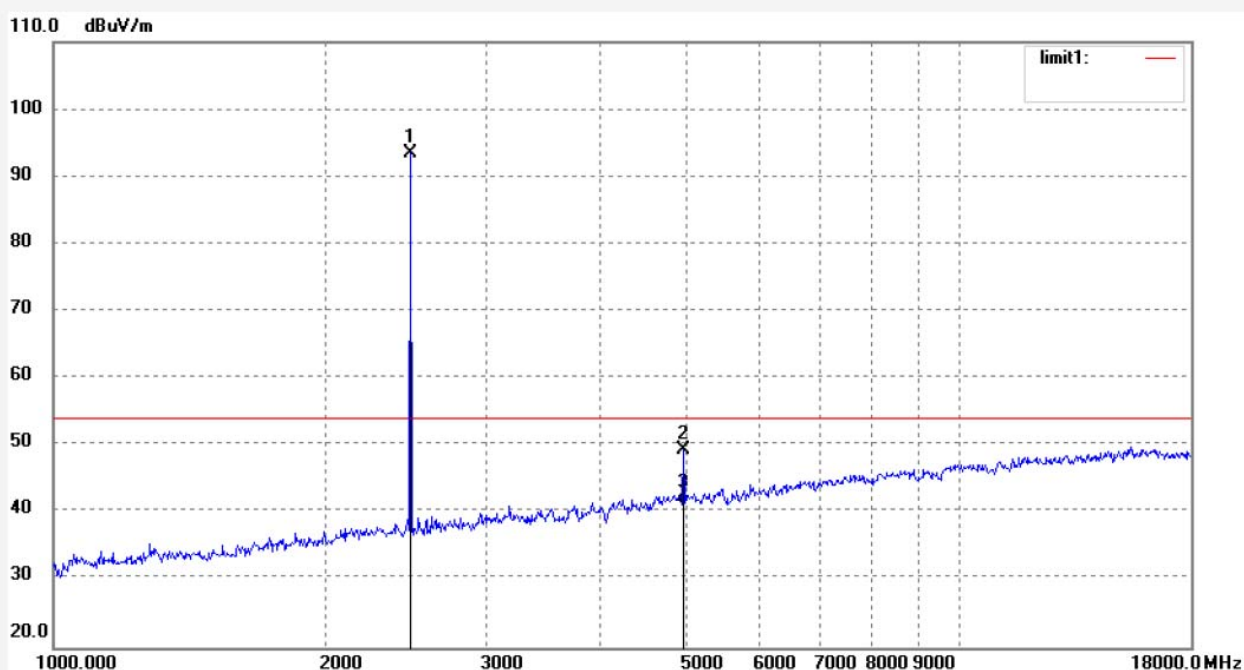
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.000	92.42	1.10	93.52	/	/	peak			
2	4960.028	40.85	8.60	49.45	74.00	-24.55	peak			
3	4960.028	32.67	8.60	41.27	54.00	-12.73	AVG			



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Fax:+86-0755-26503396

Job No.: Igw2018 #1079

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2480MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Vertical

Power Source: AC 120V/60Hz

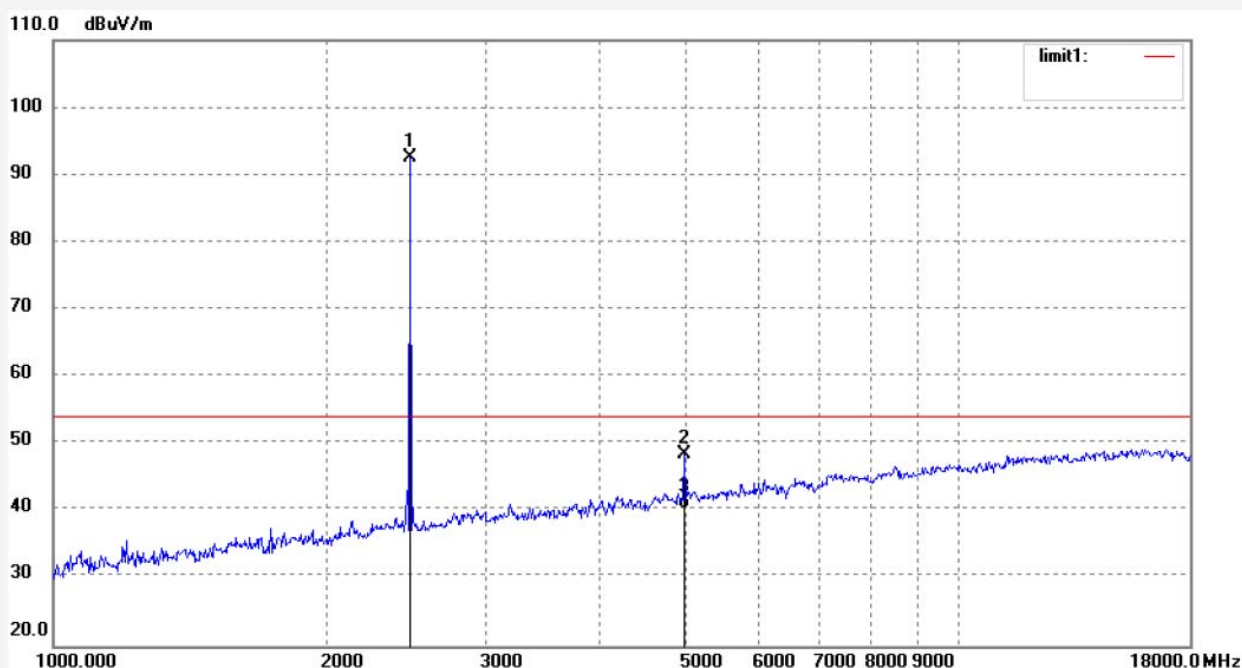
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.000	91.37	1.10	92.47	/	/	peak			
2	4960.029	39.89	8.60	48.49	74.00	-25.51	peak			
3	4960.029	31.73	8.60	40.33	54.00	-13.67	AVG			

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18GHz-26.5GHz test data



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Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: lgw2018 #1084

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2402MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Horizontal

Power Source: AC 120V/60Hz

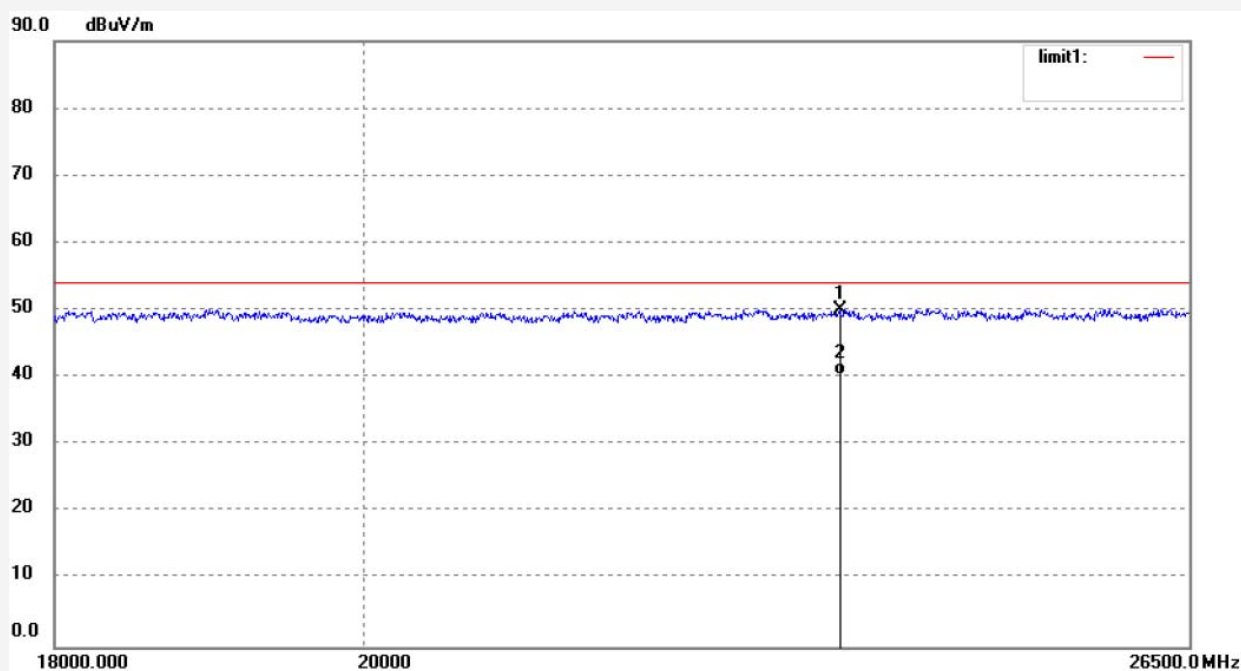
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	23523.941	9.96	40.06	50.02	74.00	-23.98	peak			
2	23523.941	0.29	40.06	40.35	54.00	-13.65	AVG			

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Fax:+86-0755-26503396

Job No.: Igw2018 #1083

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2402MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Vertical

Power Source: AC 120V/60Hz

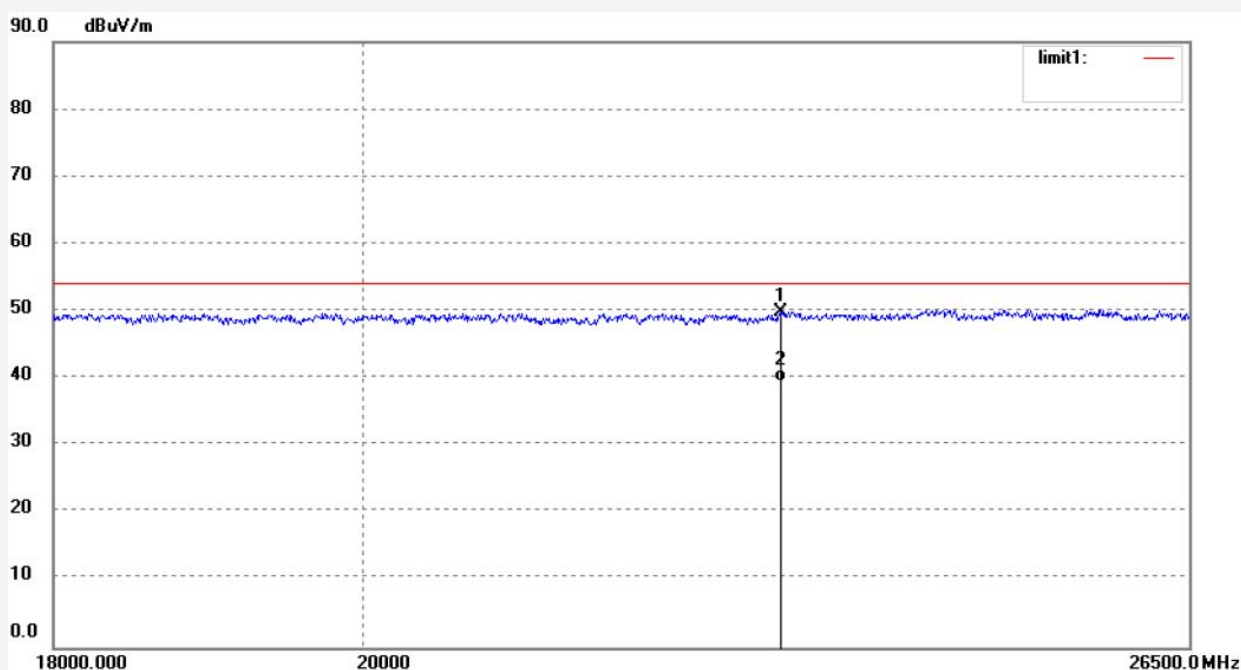
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	23055.549	10.12	39.81	49.93	74.00	-24.07	peak			
2	23055.549	-0.40	39.81	39.41	54.00	-14.59	AVG			

Job No.: Igw2018 #1085

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2441MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Horizontal

Power Source: AC 120V/60Hz

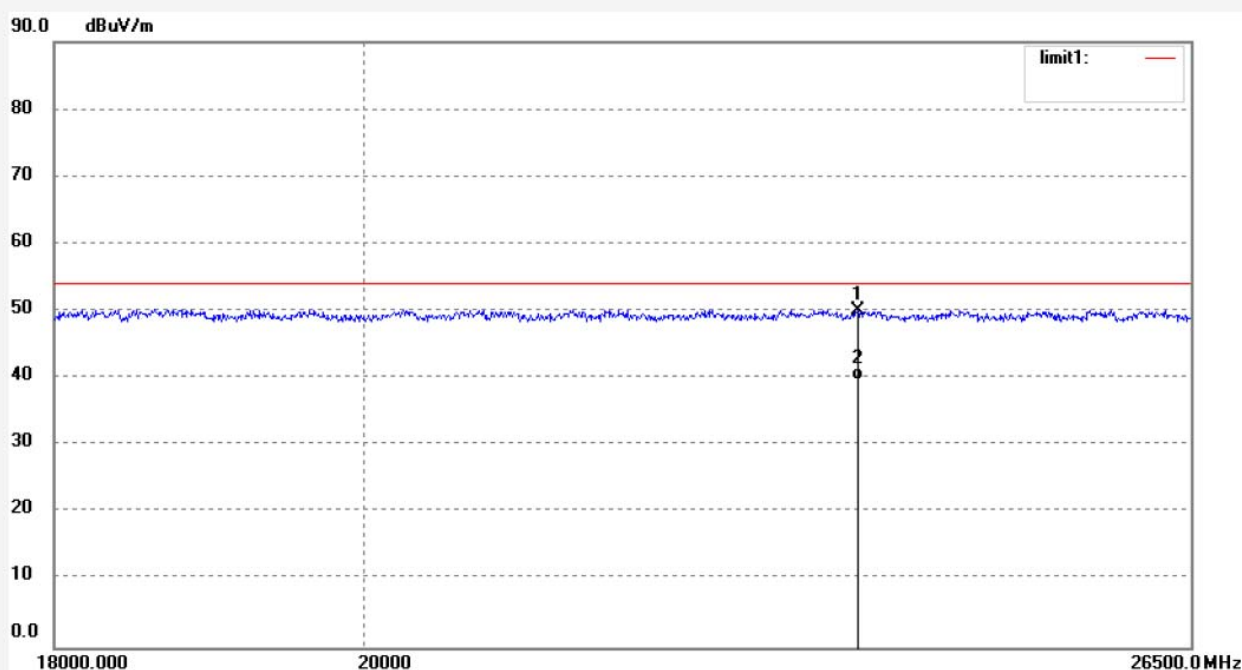
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	23660.814	9.81	40.16	49.97	74.00	-24.03	peak			
2	23660.814	-0.51	40.16	39.65	54.00	-14.35	AVG			

Job No.: Igw2018 #1086

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2441MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Vertical

Power Source: AC 120V/60Hz

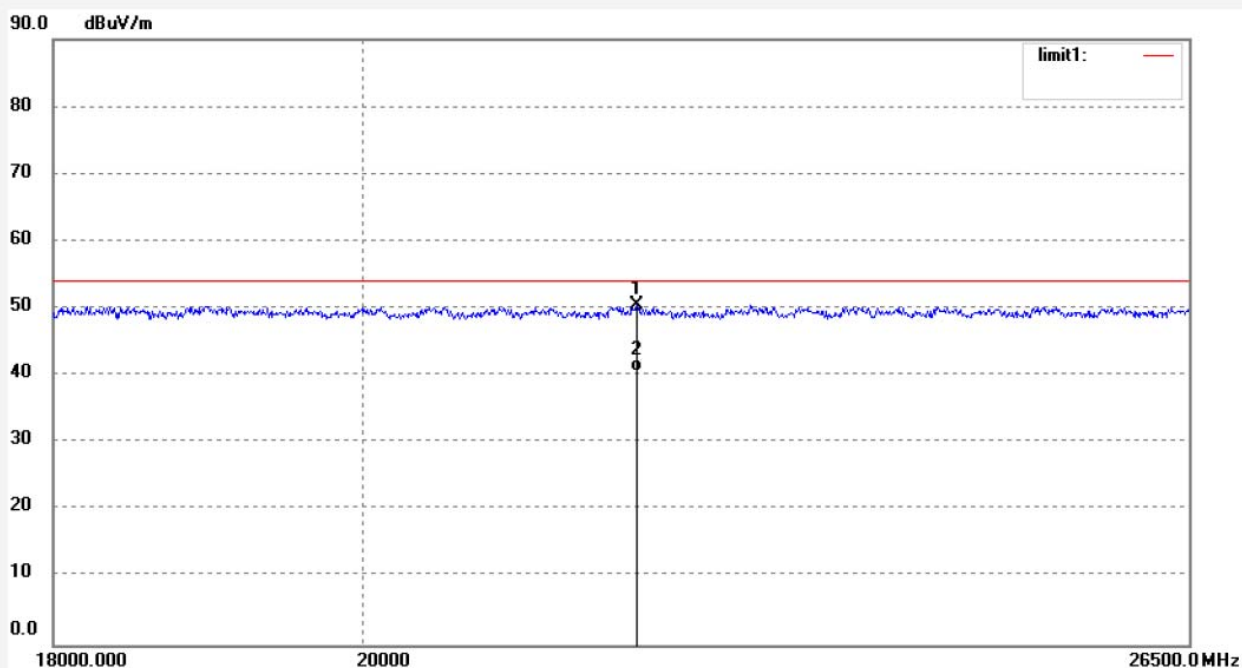
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	21958.912	11.33	39.22	50.55	74.00	-23.45	peak			
2	21958.912	1.32	39.22	40.54	54.00	-13.46	AVG			

Job No.: Igw2018 #1088

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2480MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Horizontal

Power Source: AC 120V/60Hz

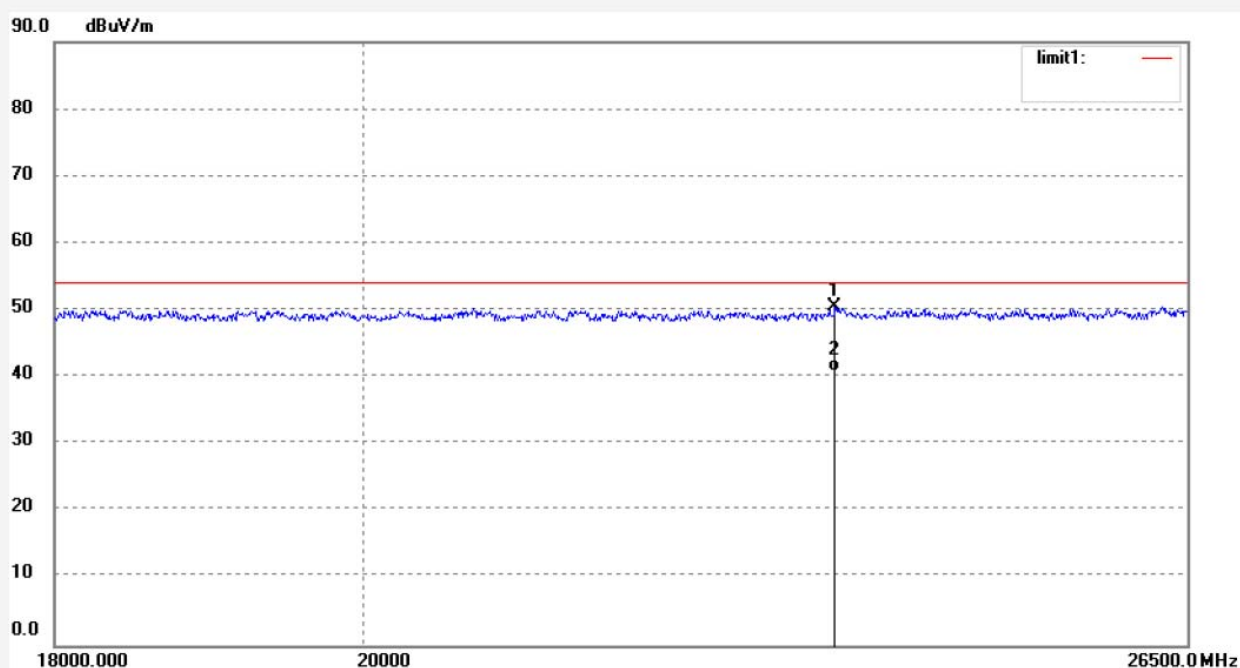
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Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	23496.661	10.44	40.04	50.48	74.00	-23.52	peak			
2	23496.661	0.75	40.04	40.79	54.00	-13.21	AVG			

Job No.: Igw2018 #1087

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2480MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Vertical

Power Source: AC 120V/60Hz

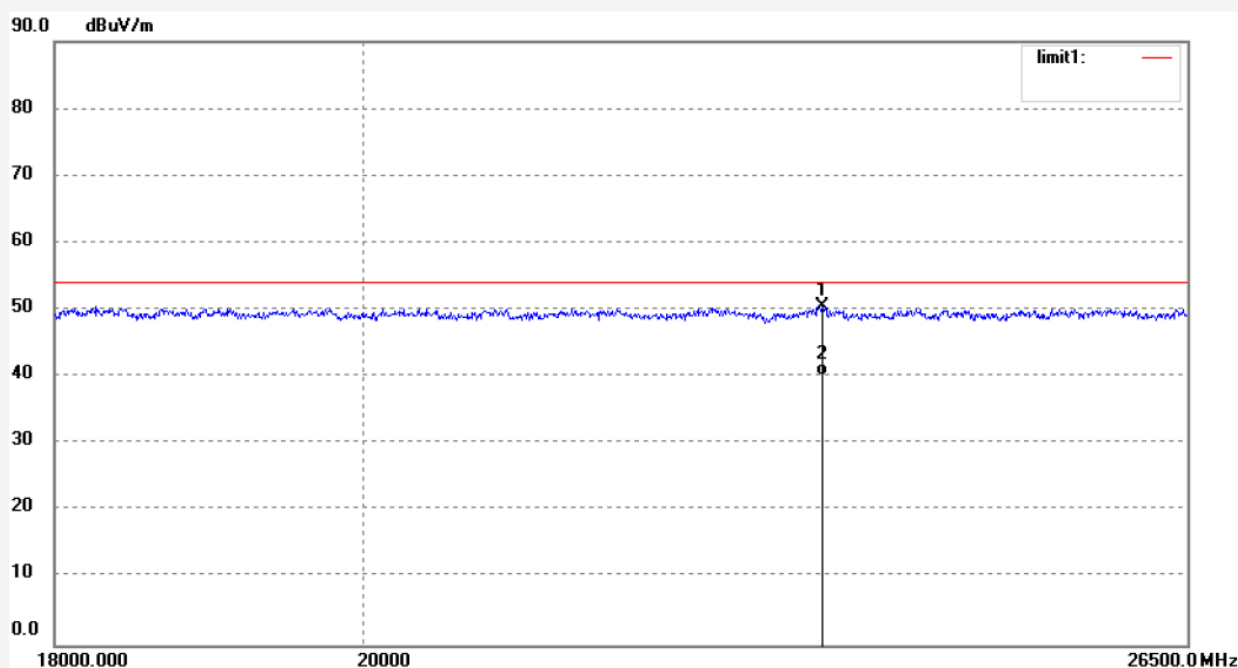
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

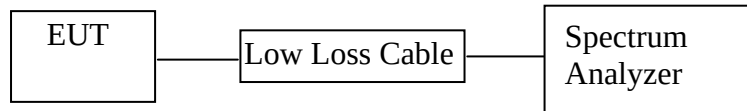
Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	23396.907	10.74	39.71	50.45	74.00	-23.55	peak			
2	23396.907	0.54	39.71	40.25	54.00	-13.75	AVG			

11.BAND EDGE COMPLIANCE TEST

11.1.Block Diagram of Test Setup



(EUT: ACTIVE SPEAKER SYSTEM)

11.2.The Requirement For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

11.3.EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

11.4.Operating Condition of EUT

11.4.1.Setup the EUT and simulator as shown as Section 11.1.

11.4.2.Turn on the power of all equipment.

11.4.3.Let the EUT work in TX (Hopping off, Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2480MHz TX frequency to transmit.

11.5. Test Procedure

11.5.1. The transmitter output was connected to the spectrum analyzer via a low loss cable.

11.5.2. Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz with convenient frequency span including 100 kHz bandwidth from band edge.

11.5.3. The band edges were measured and recorded.

11.6. Test Result

Non-hopping mode

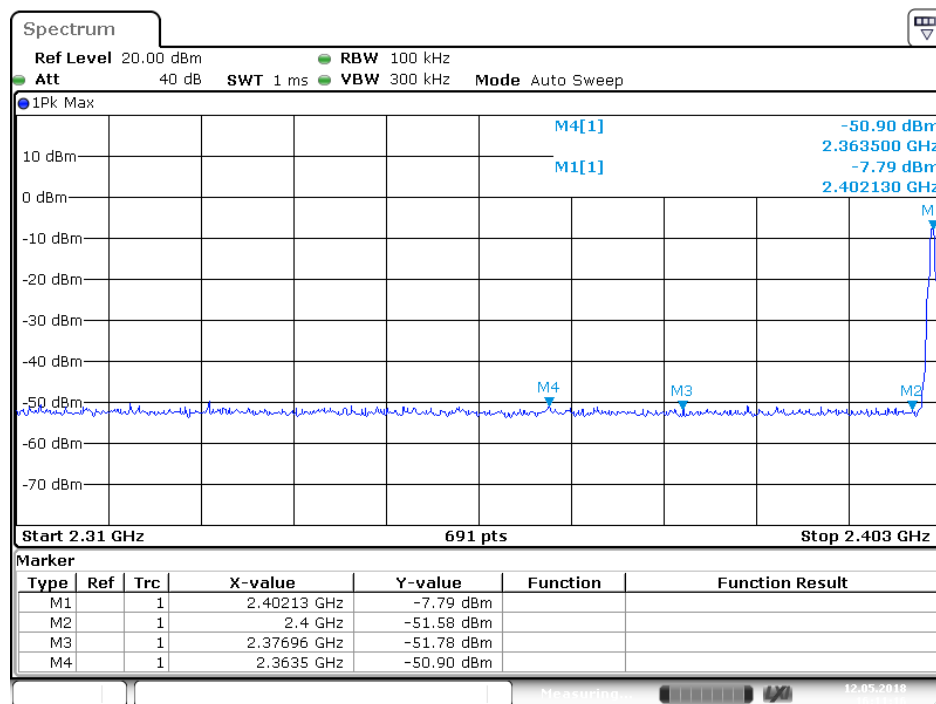
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
BDR mode		
2363.50	43.11	> 20dBc
2490.242	50.45	> 20dBc
EDR mode		
2386.92	38.94	> 20dBc
2489.86	47.16	> 20dBc

Hopping mode

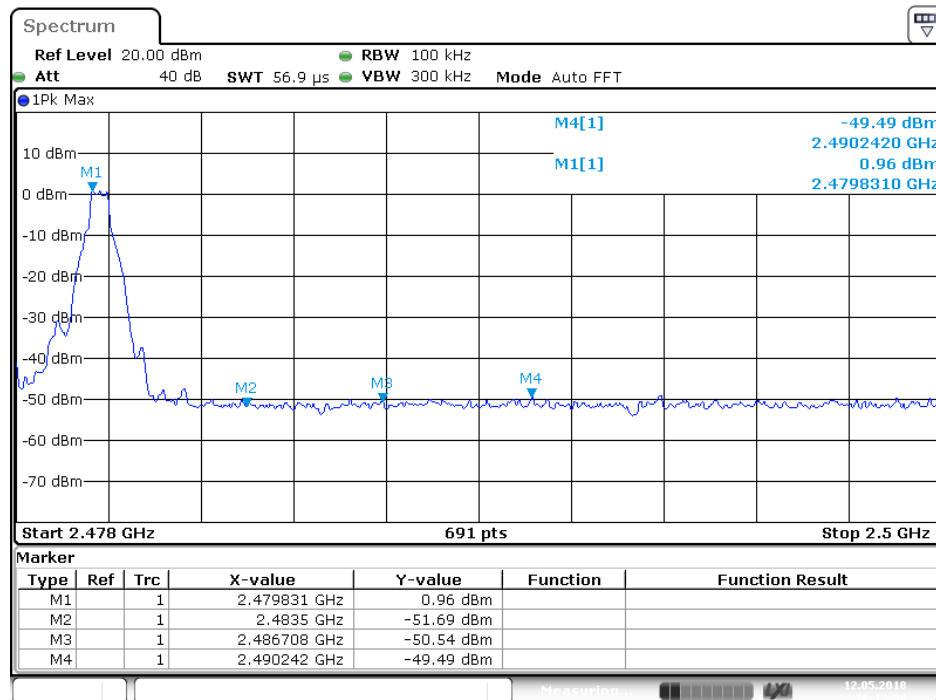
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
BDR mode		
2341.55	42.79	> 20dBc
2485.005	50.83	> 20dBc
EDR mode		
2388.30	39.43	> 20dBc
2486.503	46.23	> 20dBc

Non-hopping mode

BDR mode

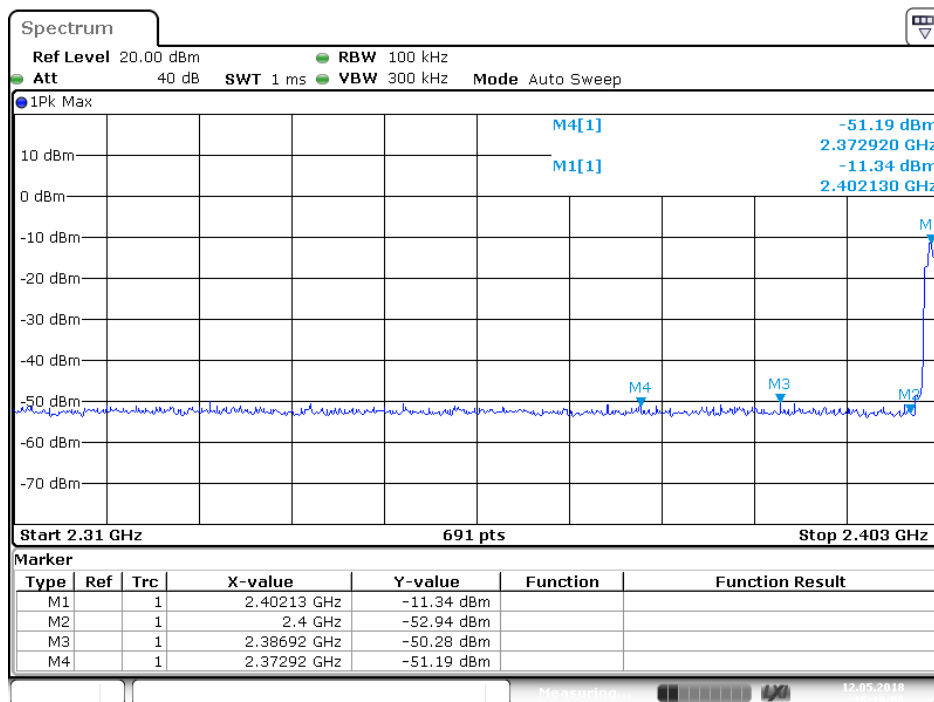


Date: 12.MAY.2018 16:11:16

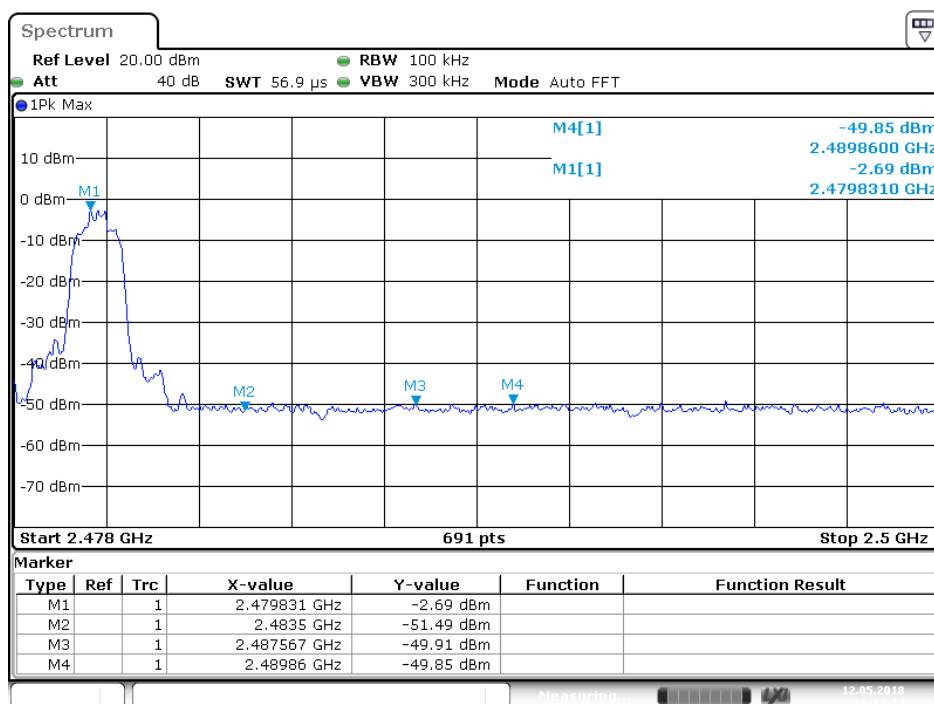


Date: 12.MAY.2018 16:12:54

EDR mode



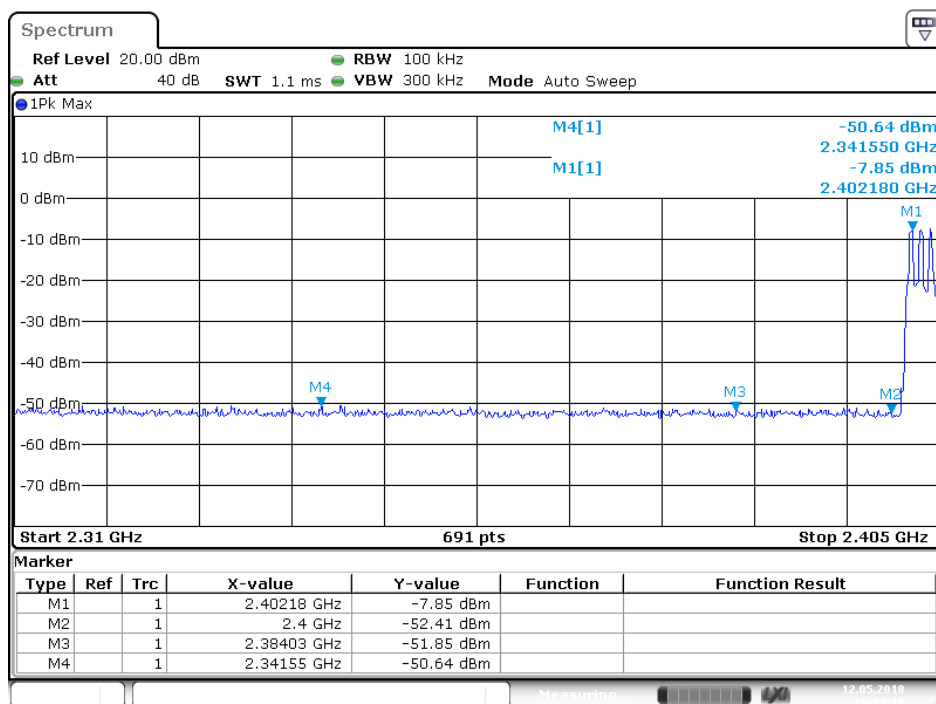
Date: 12.MAY.2018 16:16:07



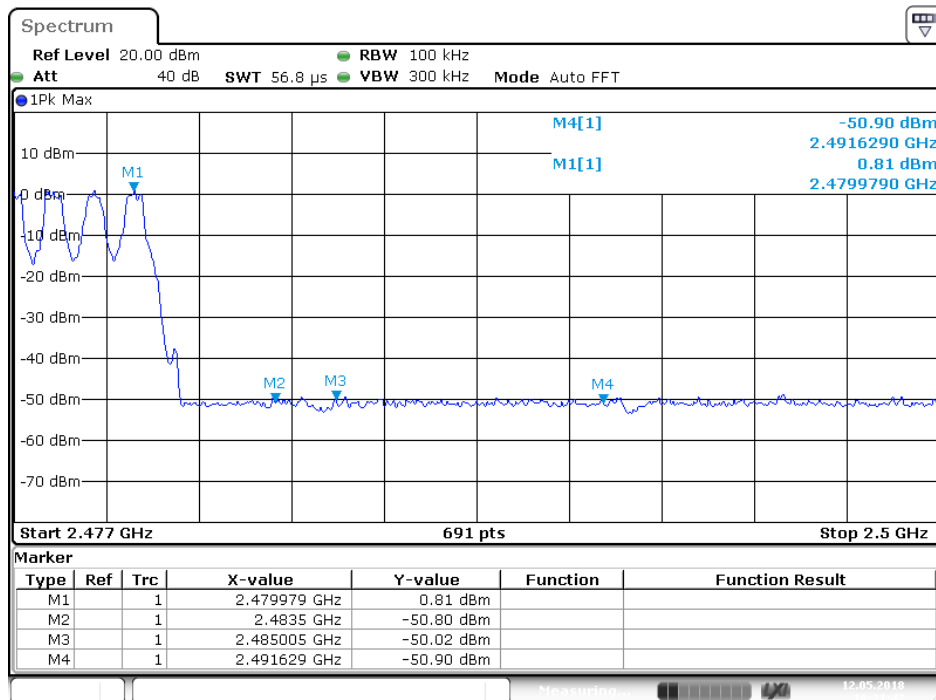
Date: 12.MAY.2018 16:14:45

hopping mode

BDR mode

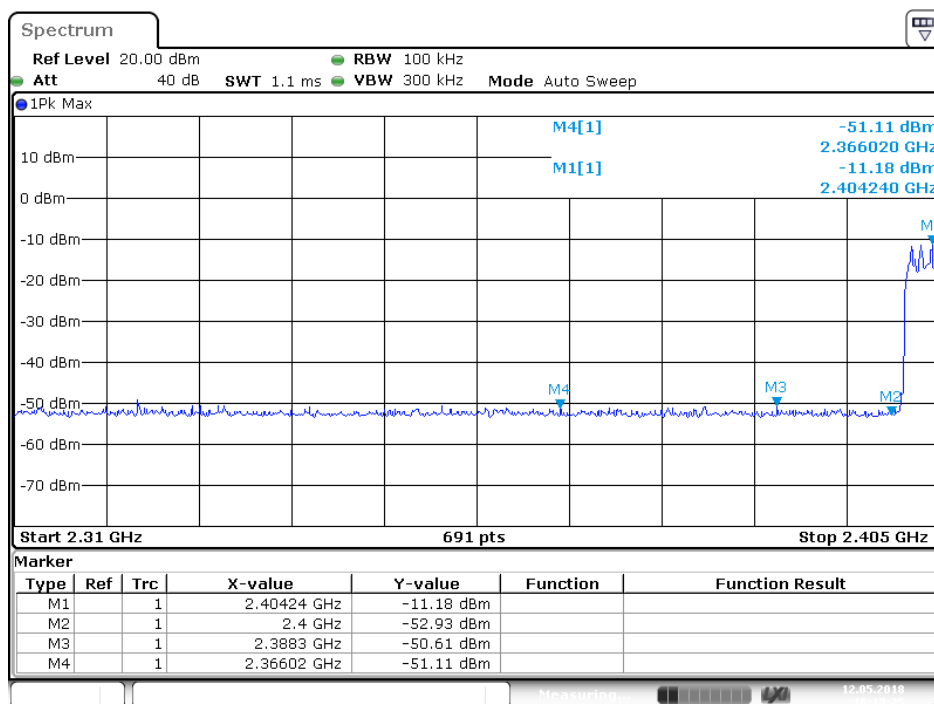


Date: 12.MAY.2018 16:23:18

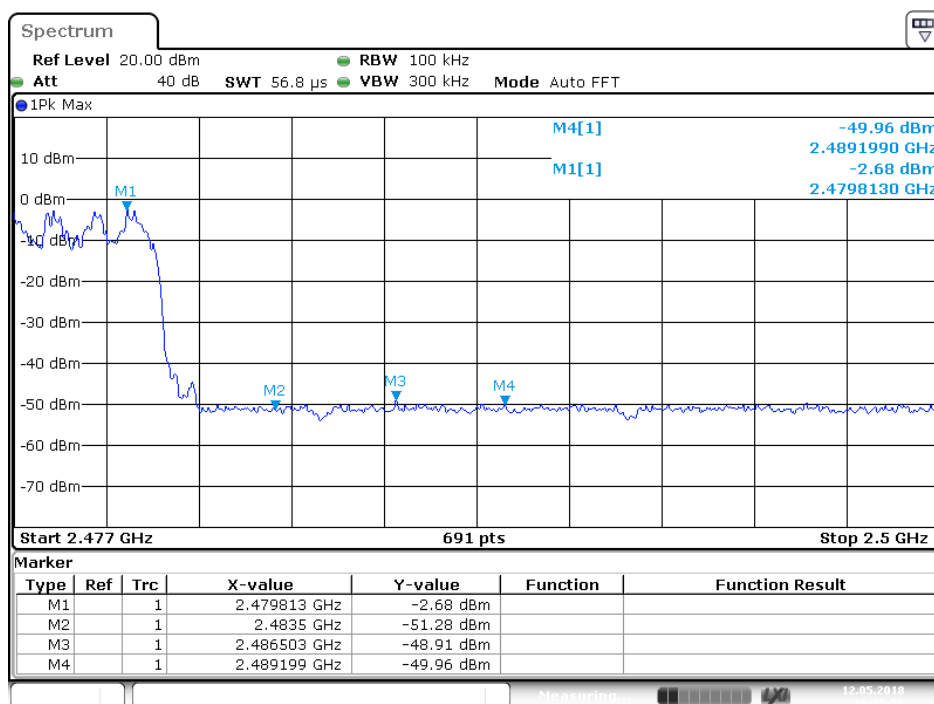


Date: 12.MAY.2018 16:21:48

EDR mode



Date: 12.MAY.2018 16:18:25



Date: 12.MAY.2018 16:19:57

Radiated Band Edge Result

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

3. Display the measurement of peak values.

Test Procedure:

The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground(Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

Let the EUT work in TX (Hopping off, Hopping on) modes measure it.

We select 2402MHz, 2480MHz TX frequency to transmit(Hopping off mode).

We select 2402-2480MHz TX frequency to transmit(Hopping on mode).

During the radiated emission test, the spectrum analyzer was set with the following configurations:

- 1.The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz.
- 2.The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
- 3.All modes of operation were investigated and the worst-case emissions are reported.

Non-hopping mode



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Site: 2# Chamber

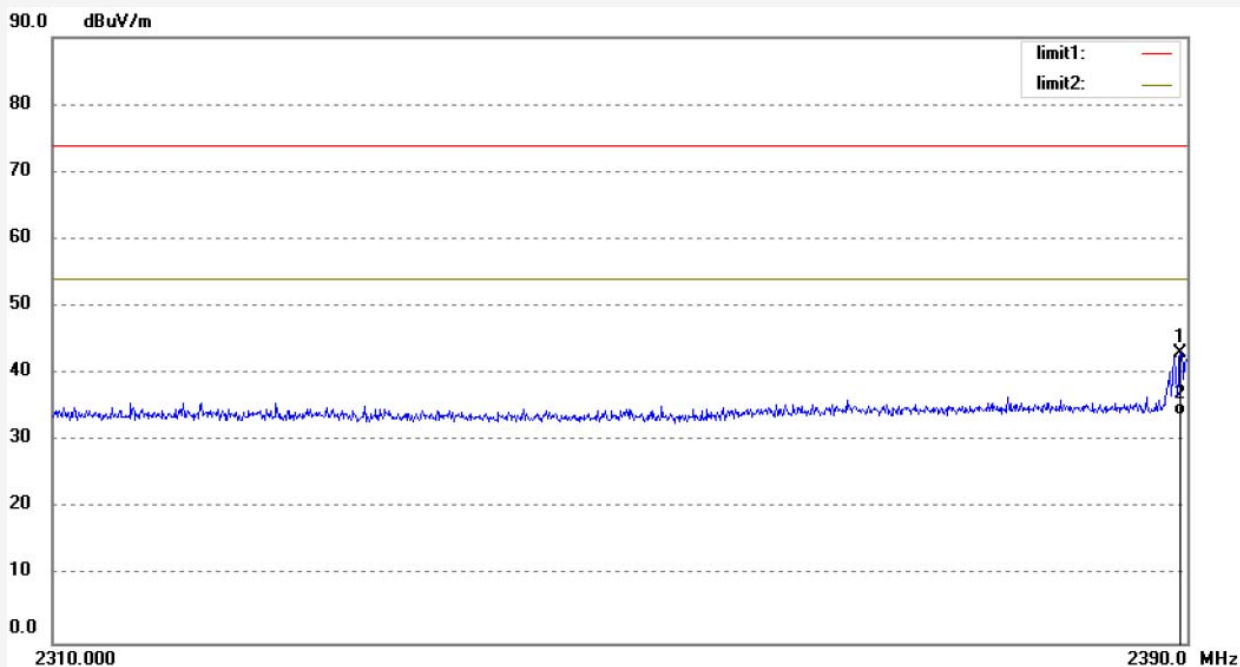
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Igw2018 #1076
Standard: FCC (Band Edge)
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: ACTIVE SPEAKER SYSTEM
Mode: TX 2402MHz
Model: A300
Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 18/05/12/
Time:
Engineer Signature: WADE
Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2389.520	42.34	0.79	43.13	74.00	-30.87	peak			
2	2389.520	32.98	0.79	33.77	54.00	-20.23	AVG			

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Address: 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

Tel: +86-755-26503290

Fax: +86-755-26503396

E-mail: webmaster@atc-lab.com

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F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
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Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: lgw2018 #1075

Standard: FCC (Band Edge)

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2402MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Vertical

Power Source: AC 120V/60Hz

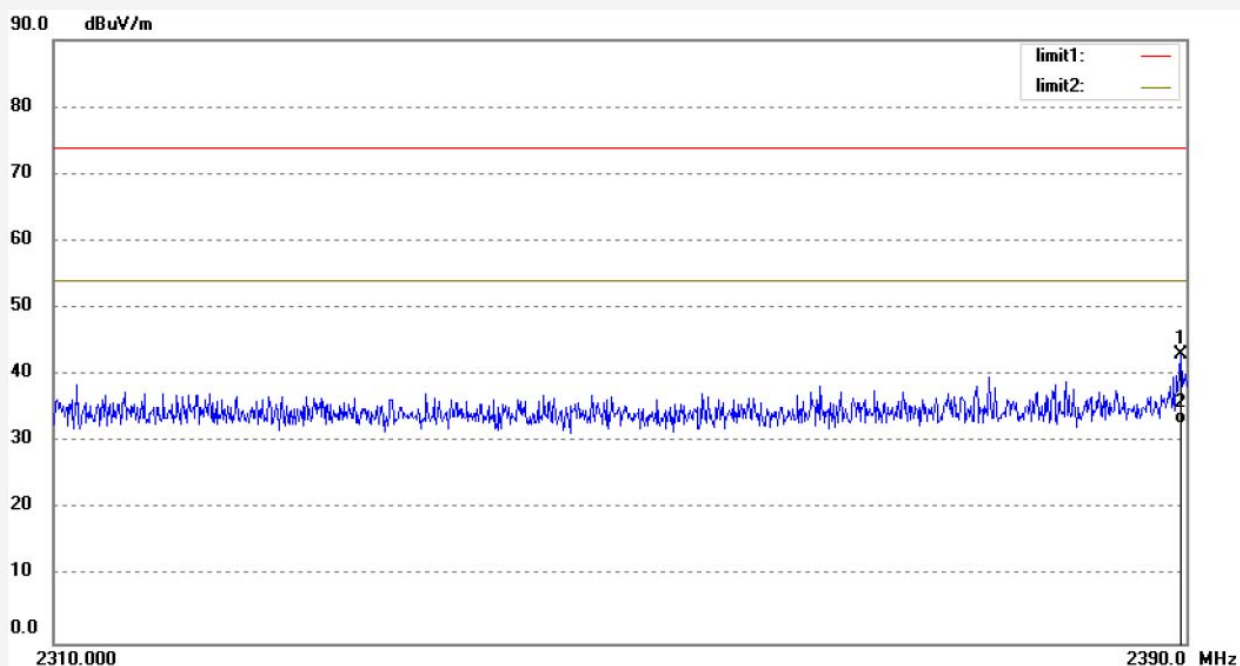
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2389.600	42.20	0.79	42.99	74.00	-31.01	peak			
2	2389.600	31.89	0.79	32.68	54.00	-21.32	AVG			

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Job No.: Igw2018 #1081

Standard: FCC (Band Edge)

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2480MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Horizontal

Power Source: AC 120V/60Hz

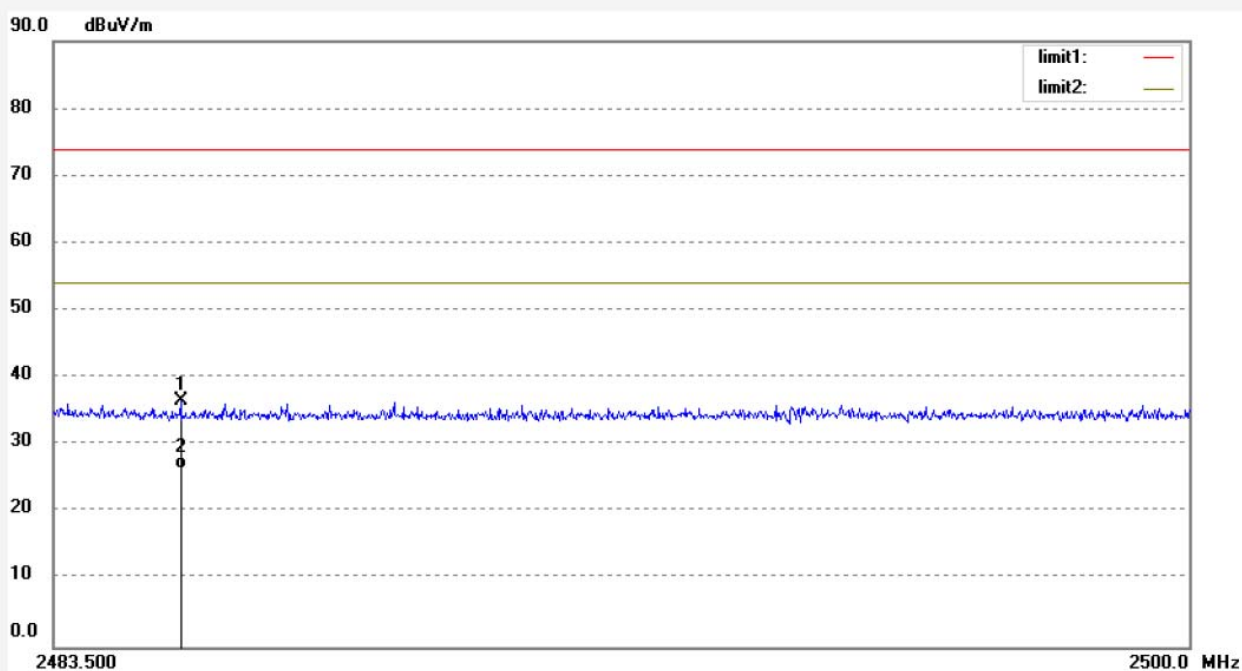
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2485.348	35.36	1.10	36.46	74.00	-37.54	peak			
2	2485.348	25.24	1.10	26.34	54.00	-27.66	AVG			



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Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Igw2018 #1082

Standard: FCC (Band Edge)

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: ACTIVE SPEAKER SYSTEM

Mode: TX 2480MHz

Model: A300

Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.

Polarization: Vertical

Power Source: AC 120V/60Hz

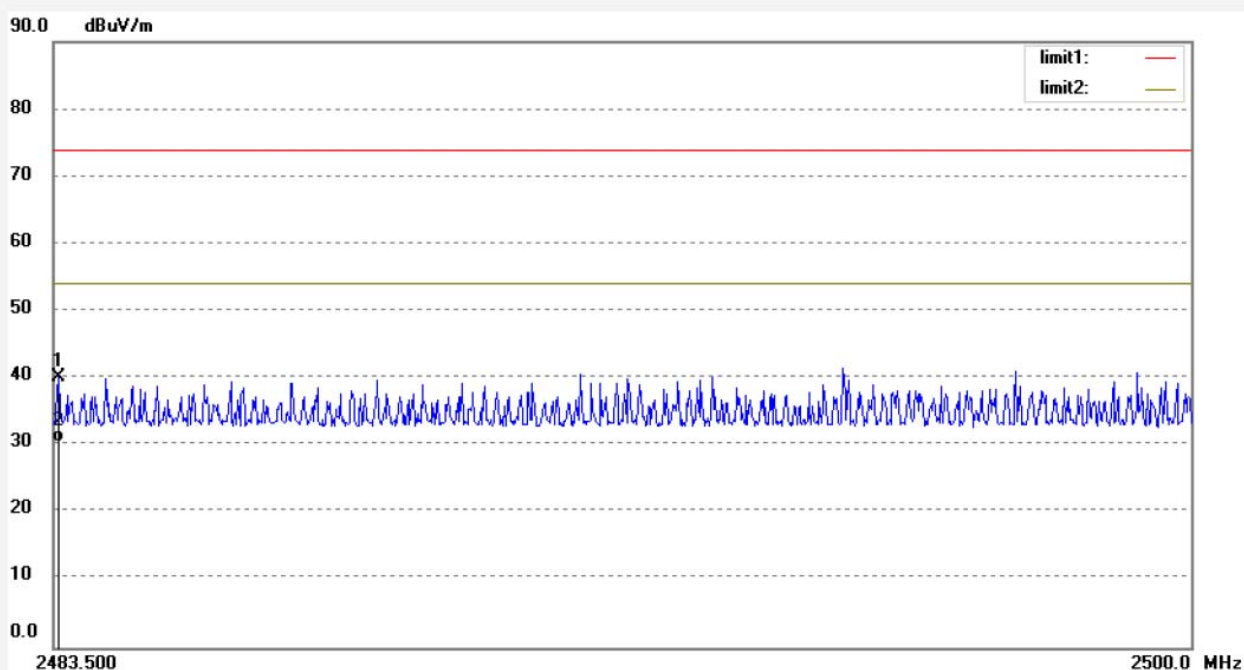
Date: 18/05/12/

Time:

Engineer Signature: WADE

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.582	39.09	1.10	40.19	74.00	-33.81	peak			
2	2483.582	29.37	1.10	30.47	54.00	-23.53	AVG			

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Address: 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

Tel: +86-755-26503290

Fax: +86-755-26503396

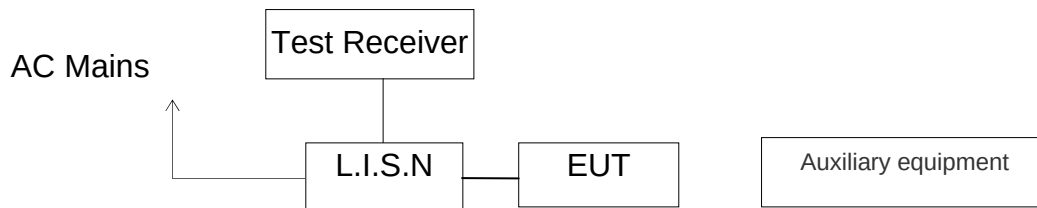
E-mail: webmaster@atc-lab.com

Http://www.atc-lab.com

12.AC POWER LINE CONDUCTED EMISSION FOR FCC PART

15 SECTION 15.207(A)

12.1.Block Diagram of Test Setup



(EUT: ACTIVE SPEAKER SYSTEM)

12.2.Power Line Conducted Emission Measurement Limits

Frequency (MHz)	Limit dB(μV)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

NOTE1: The lower limit shall apply at the transition frequencies.
 NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

12.3.Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

12.4.Operating Condition of EUT

12.4.1.Setup the EUT and simulator as shown as Section 12.1.

12.4.2.Turn on the power of all equipment.

12.4.3.Let the EUT work in test mode and measure it.

12.5.Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2014 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

12.6.Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

Test mode : BT Playing(AC 120V/60Hz)

MEASUREMENT RESULT: "TUV-0518-1_fin"

5/18/2018	Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
	0.190000	38.10	10.5	64	25.9	QP	L1	GND
	0.445000	32.50	10.7	57	24.5	QP	L1	GND
	1.960000	38.90	11.0	56	17.1	QP	L1	GND
	13.825000	38.90	11.4	60	21.1	QP	L1	GND

MEASUREMENT RESULT: "TUV-0518-1_fin2"

5/18/2018	Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
	0.190000	24.70	10.5	54	29.3	AV	L1	GND
	0.445000	28.00	10.7	47	19.0	AV	L1	GND
	1.960000	33.00	11.0	46	13.0	AV	L1	GND
	13.825000	34.80	11.4	50	15.2	AV	L1	GND

MEASUREMENT RESULT: "TUV-0518-2_fin"

5/18/2018	Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
	0.150000	33.60	10.5	66	32.4	QP	N	GND
	0.445000	32.30	10.7	57	24.7	QP	N	GND
	1.960000	39.20	11.0	56	16.8	QP	N	GND
	13.825000	36.50	11.4	60	23.5	QP	N	GND

MEASUREMENT RESULT: "TUV-0518-2_fin2"

5/18/2018	Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
	0.190000	24.10	10.5	54	29.9	AV	N	GND
	0.765000	27.60	10.8	46	18.4	AV	N	GND
	1.960000	33.40	11.0	46	12.6	AV	N	GND
	13.825000	35.00	11.4	50	15.0	AV	N	GND

Emissions attenuated more than 20 dB below the permissible value are not reported.

The spectral diagrams are attached as below.

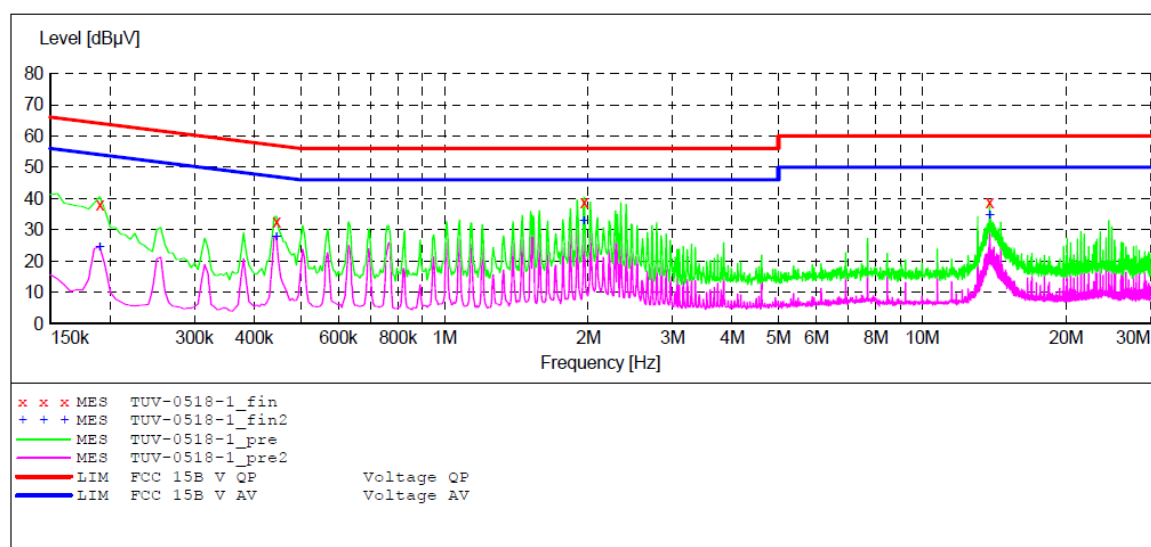
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CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: ACTIVE SPEAKER SYSTEM M/N:A300
 Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.
 Operating Condition: Bluetooth playing
 Test Site: 1#Shielding Room
 Operator: WADE
 Test Specification: L 120V/60Hz
 Comment: Mains port
 Start of Test: 5/18/2018 /

SCAN TABLE: "V 9K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz NSLK8126 2008
 Average
 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "TUV-0518-1_fin"

5/18/2018

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.190000	38.10	10.5	64	25.9	QP	L1	GND
0.445000	32.50	10.7	57	24.5	QP	L1	GND
1.960000	38.90	11.0	56	17.1	QP	L1	GND
13.825000	38.90	11.4	60	21.1	QP	L1	GND

MEASUREMENT RESULT: "TUV-0518-1_fin2"

5/18/2018

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.190000	24.70	10.5	54	29.3	AV	L1	GND
0.445000	28.00	10.7	47	19.0	AV	L1	GND
1.960000	33.00	11.0	46	13.0	AV	L1	GND
13.825000	34.80	11.4	50	15.2	AV	L1	GND

shenzhen Accurate Technology Co., Ltd.

Address: 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

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Fax: +86-755-26503396

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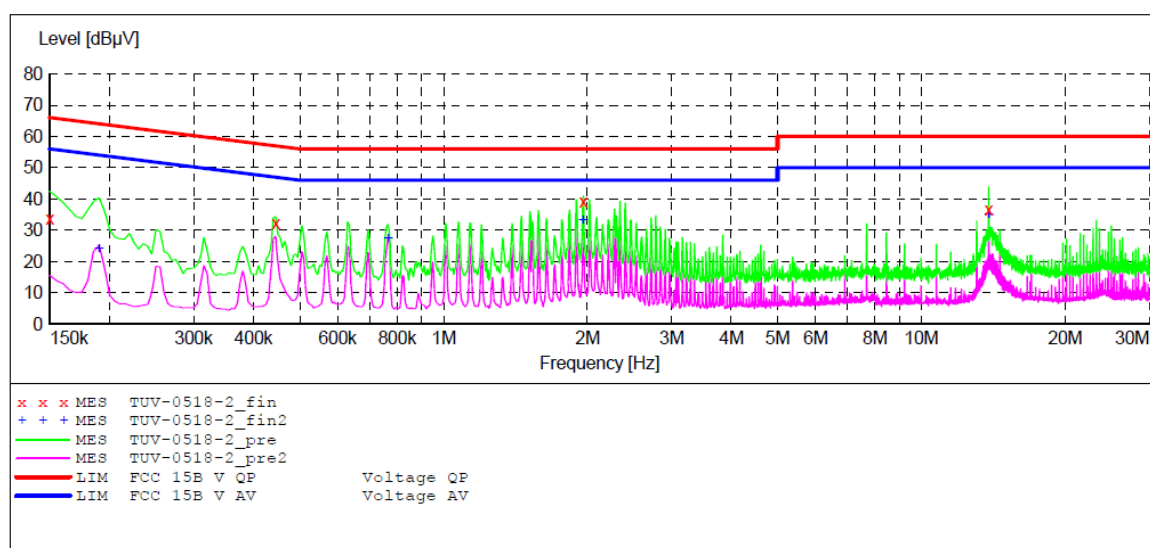
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: ACTIVE SPEAKER SYSTEM M/N:A300
 Manufacturer: Dongguan Platinum Audio Systems Co., Ltd.
 Operating Condition: Bluetooth playing
 Test Site: 1#Shielding Room
 Operator: WADE
 Test Specification: N 120V/60Hz
 Comment: Mains port
 Start of Test: 5/18/2018 /

SCAN TABLE: "V 9K-30MHz fin"

Short Description: SUB STD VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	NSLK8126 2008
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	NSLK8126 2008
Average						



MEASUREMENT RESULT: "TUV-0518-2_fin"

5/18/2018

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.150000	33.60	10.5	66	32.4	QP	N	GND
0.445000	32.30	10.7	57	24.7	QP	N	GND
1.960000	39.20	11.0	56	16.8	QP	N	GND
13.825000	36.50	11.4	60	23.5	QP	N	GND

MEASUREMENT RESULT: "TUV-0518-2_fin2"

5/18/2018

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.190000	24.10	10.5	54	29.9	AV	N	GND
0.765000	27.60	10.8	46	18.4	AV	N	GND
1.960000	33.40	11.0	46	12.6	AV	N	GND
13.825000	35.00	11.4	50	15.0	AV	N	GND

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Address: 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

Tel: +86-755-26503290

Fax: +86-755-26503396

E-mail: webmaster@atc-lab.com

Http://www.atc-lab.com

13.99% OCCUPIED BANDWIDTH

13.1.The Requirement for RSS-Gen Clause 6.6

The emission bandwidth (x dB) is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated x dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth. When the occupied bandwidth limit is not stated in the applicable RSS or reference measurement method, the transmitted signal bandwidth shall be reported as the 99% emission bandwidth

13.2.EUT Configuration on Measurement

The following equipment is installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

13.3.Operating Condition of EUT

13.3.1.Setup the EUT and simulator as shown as Section 5.1.

13.3.2.Turn on the power of all equipment.

13.3.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

13.4.Test Procedure

13.4.1.The transmitter shall be operated at its maximum carrier power measured under normal test conditions. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The transmitter output was connected to the spectrum analyzer through a low loss cable.

13.4.2.The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) shall be approximately 3x RBW. Set RBW of spectrum analyzer to 30kHz and VBW to 100kHz.

13.4.3.Set SPA “Meas” function, Select “Occupied Bandwidth” function, Select “99% Power Bandwidth”. The frequency of the upper and lower markers indicating the edges of the transmitters “99% Power” emission bandwidth shall be recorded to automate by SPA.

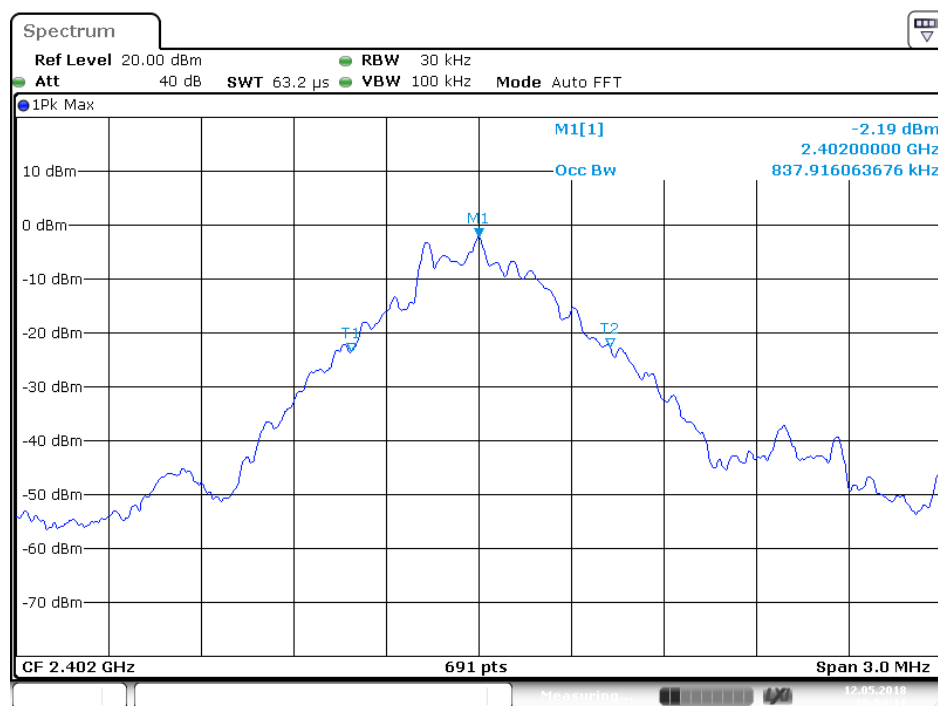
13.5.Measurement Result

Channel	Frequency (MHz)	BDR mode 99% Bandwidth (MHz)	EDR mode 99% Bandwidth (MHz)	Result
Low	2402	0.838	1.151	Pass
Middle	2441	0.838	1.137	Pass
High	2480	0.842	1.142	Pass

The spectrum analyzer plots are attached as below.

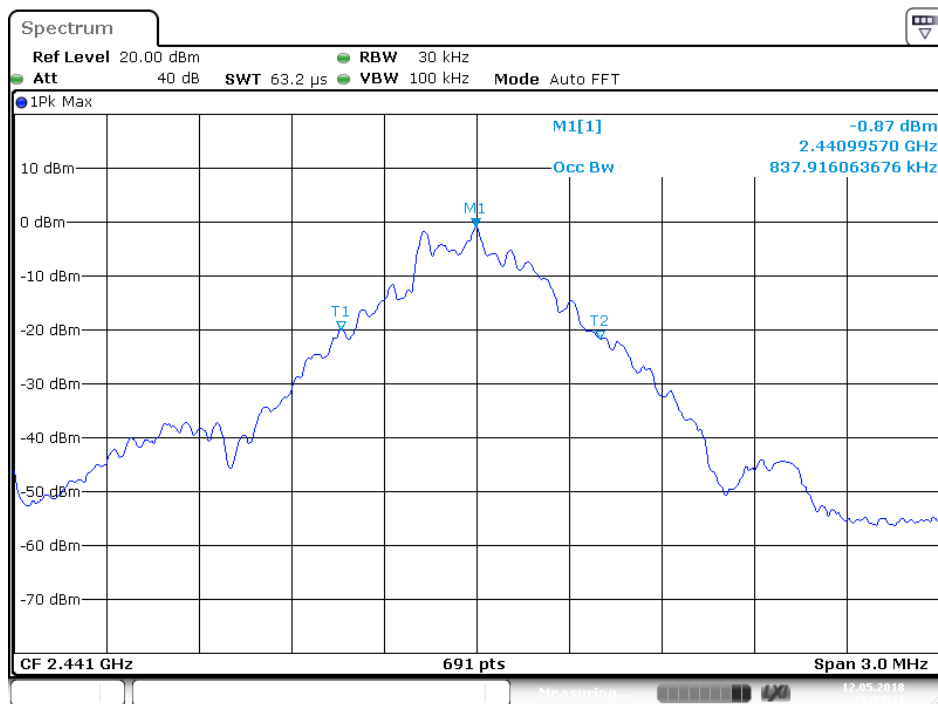
BDR mode

Low channel



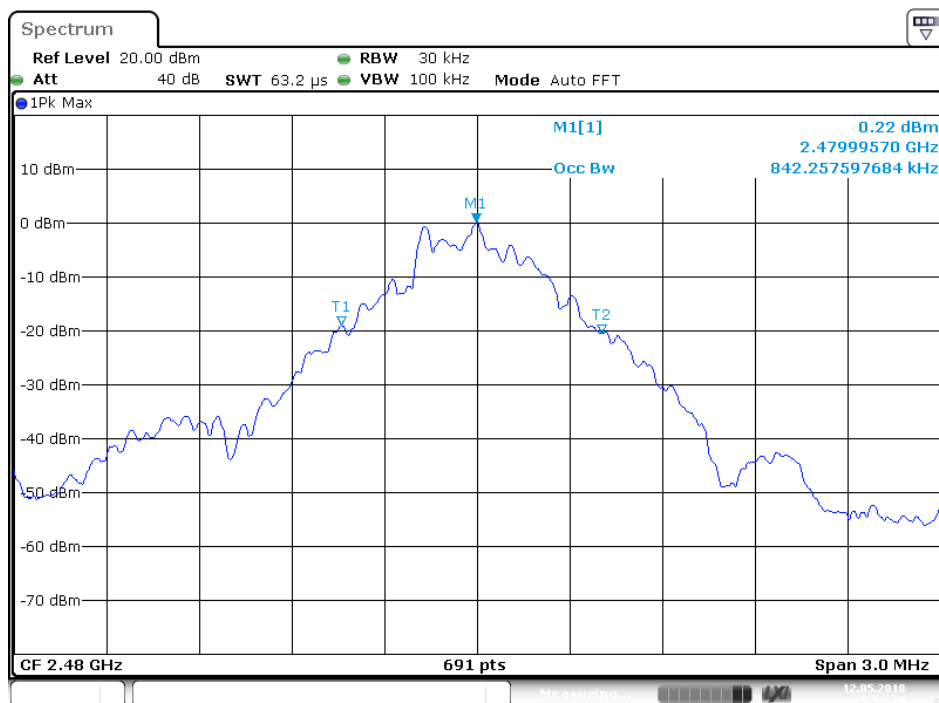
Date: 12.MAY.2018 15:54:12

Middle channel



Date: 12.MAY.2018 15:53:31

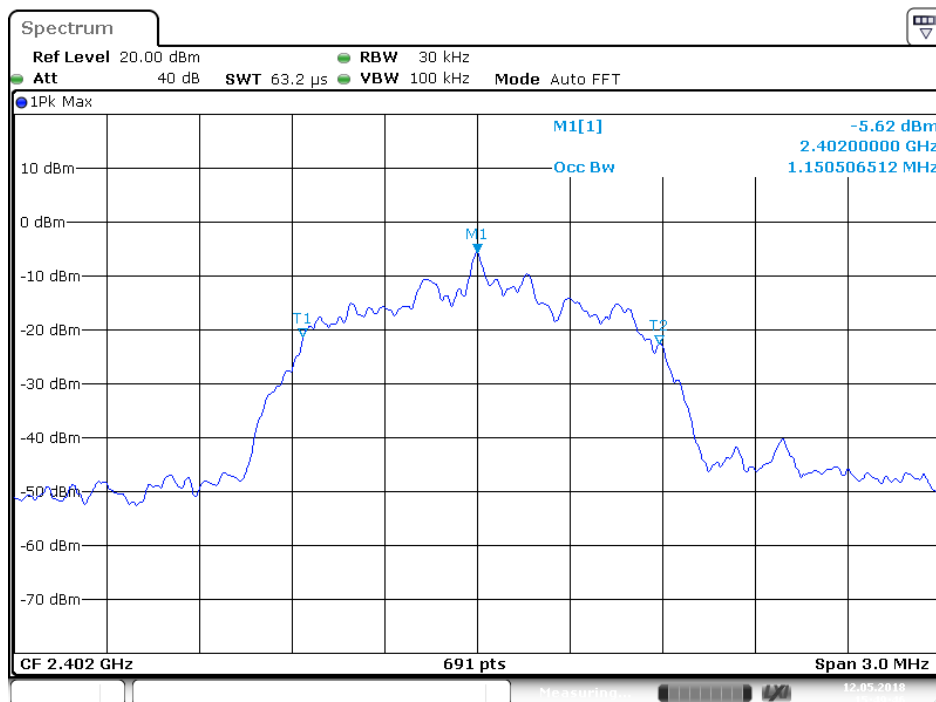
High channel



Date: 12.MAY.2018 15:52:40

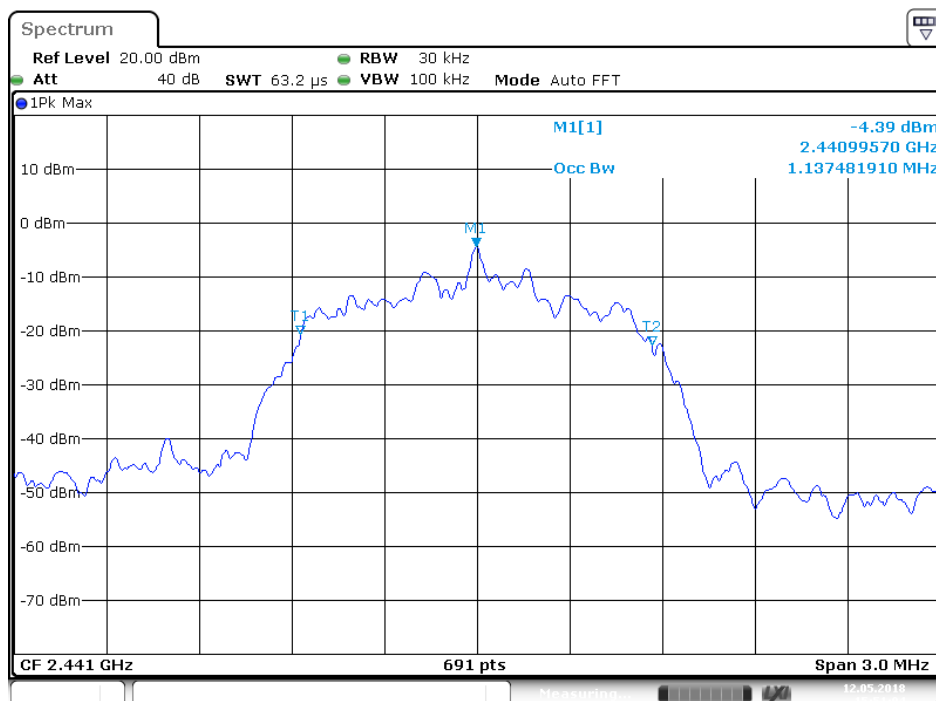
EDR mode

Low channel



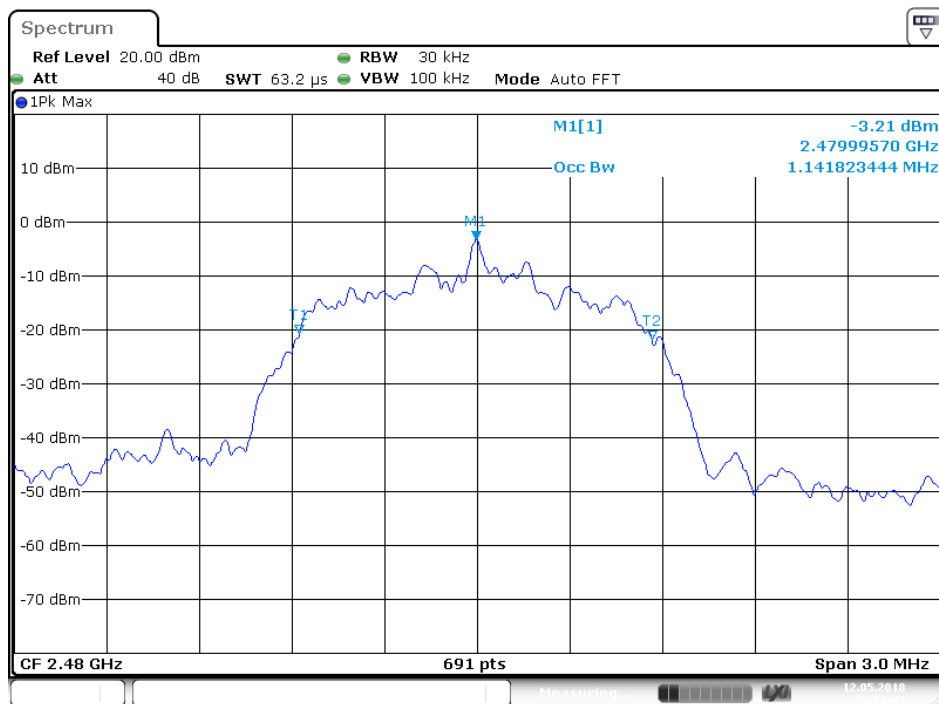
Date: 12.MAY.2018 15:49:47

Middle channel



Date: 12.MAY.2018 15:51:04

High channel



Date: 12.MAY.2018 15:51:44

14.CONDUCTED SPURIOUS EMISSION COMPLIANCE TEST

14.1.Block Diagram of Test Setup



(EUT: ACTIVE SPEAKER SYSTEM)

14.2.The Requirement For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

14.3.EUT Configuration on Measurement

The equipment is installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

14.4.Operating Condition of EUT

14.4.1.Setup the EUT and simulator as shown as Section 14.1.

14.4.2.Turn on the power of all equipment.

14.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480 MHz. We select 2402MHz, 2441MHz, and 2480MHz TX frequency to transmit.

14.5. Test Procedure

14.5.1. The transmitter output was connected to the spectrum analyzer via a low loss cable.

14.5.2. Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz

14.5.3. The Conducted Spurious Emission was measured and recorded.

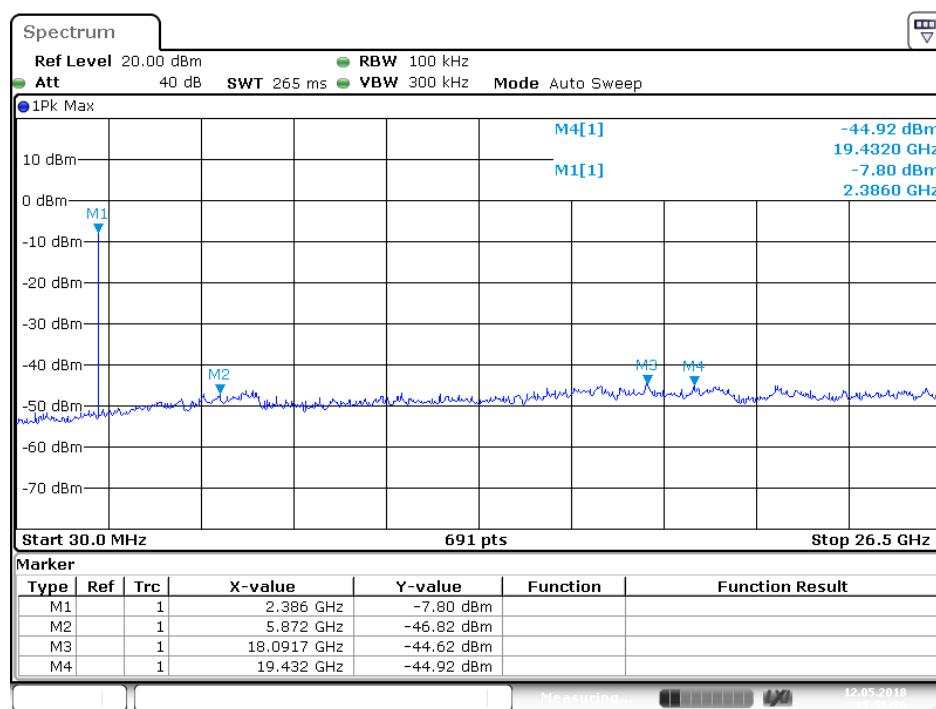
14.6. Test Result

Pass.

The spectrum analyzer plots are attached as below.

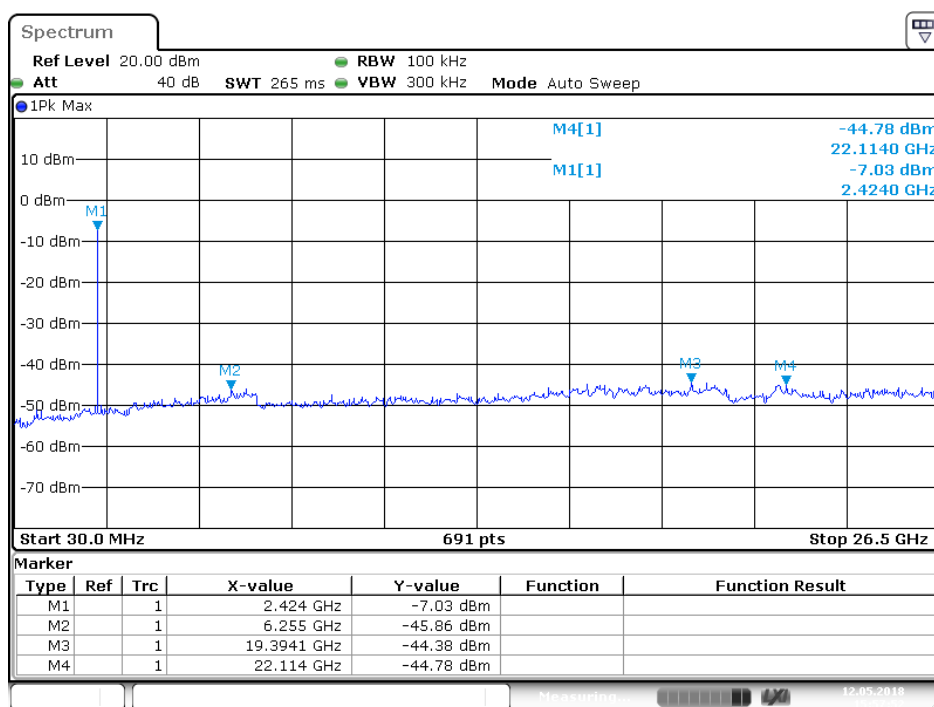
BDR mode

Low Channel 2402MHz



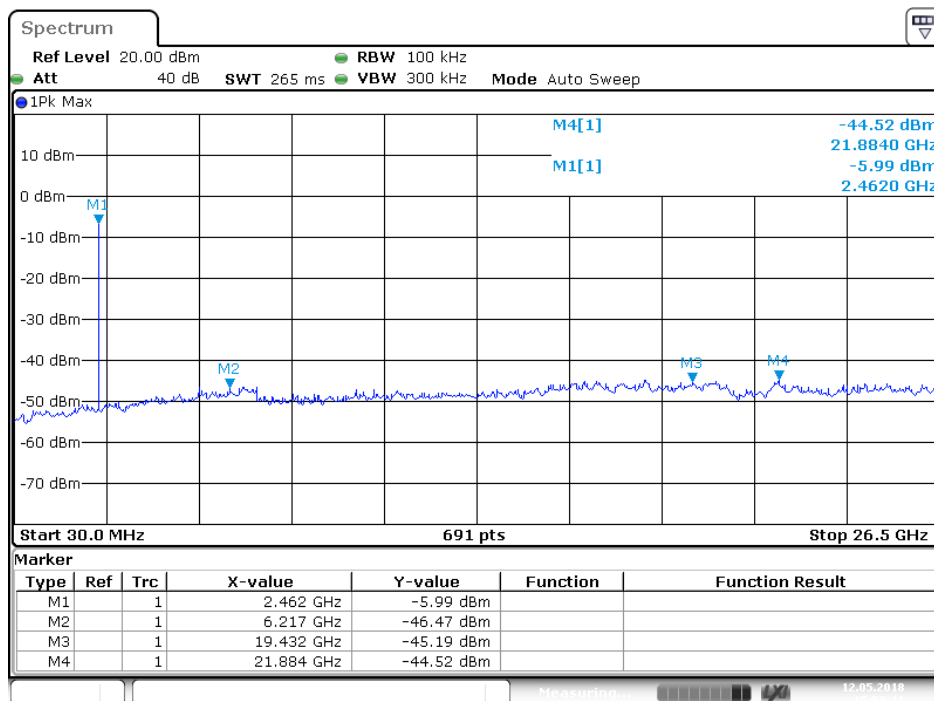
Date: 12.MAY.2018 15:56:26

Middle Channel 2441MHz



Date: 12.MAY.2018 15:57:53

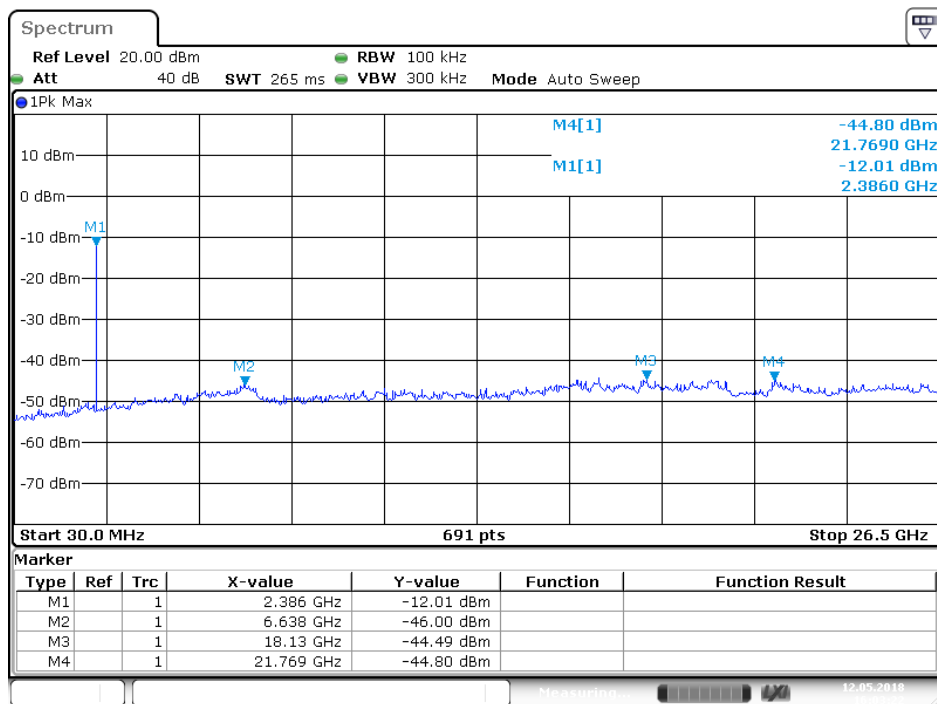
High Channel 2480MHz



Date: 12.MAY.2018 15:59:11

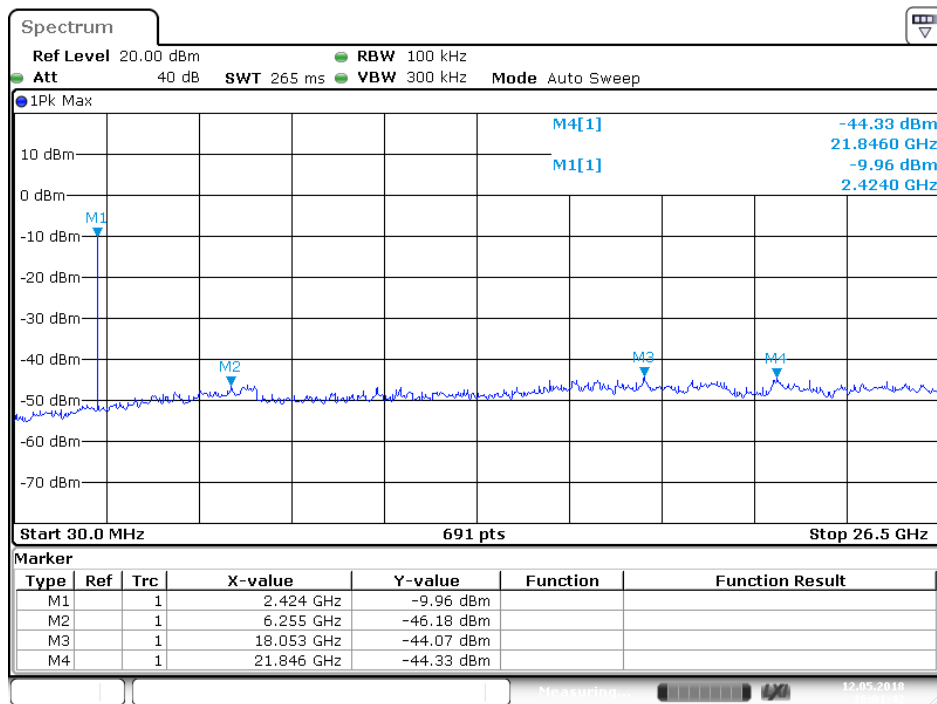
EDR mode

Low Channel 2402MHz



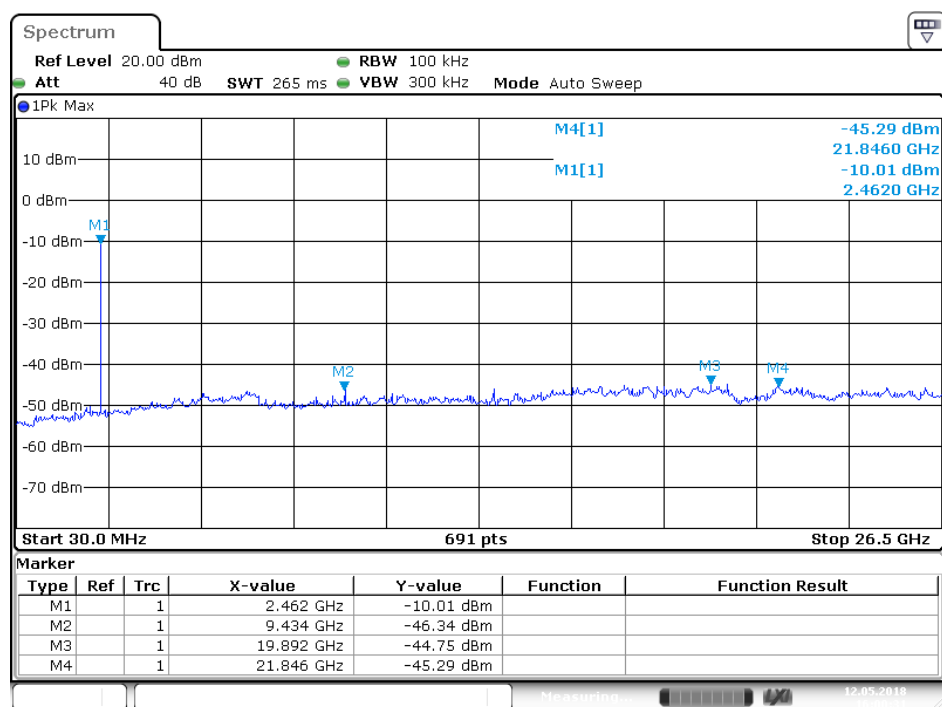
Date: 12.MAY.2018 16:03:22

Middle Channel 2441MHz



Date: 12.MAY.2018 16:01:43

High Channel 2480MHz



Date: 12.MAY.2018 16:00:32

15.ANTENNA REQUIREMENT

15.1.The Requirement

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

15.2.Antenna Construction

Device is equipped with permanent attached antenna, which isn't displaced by other antenna. The Max Antenna gain of EUT is 3.25dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.