

## 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



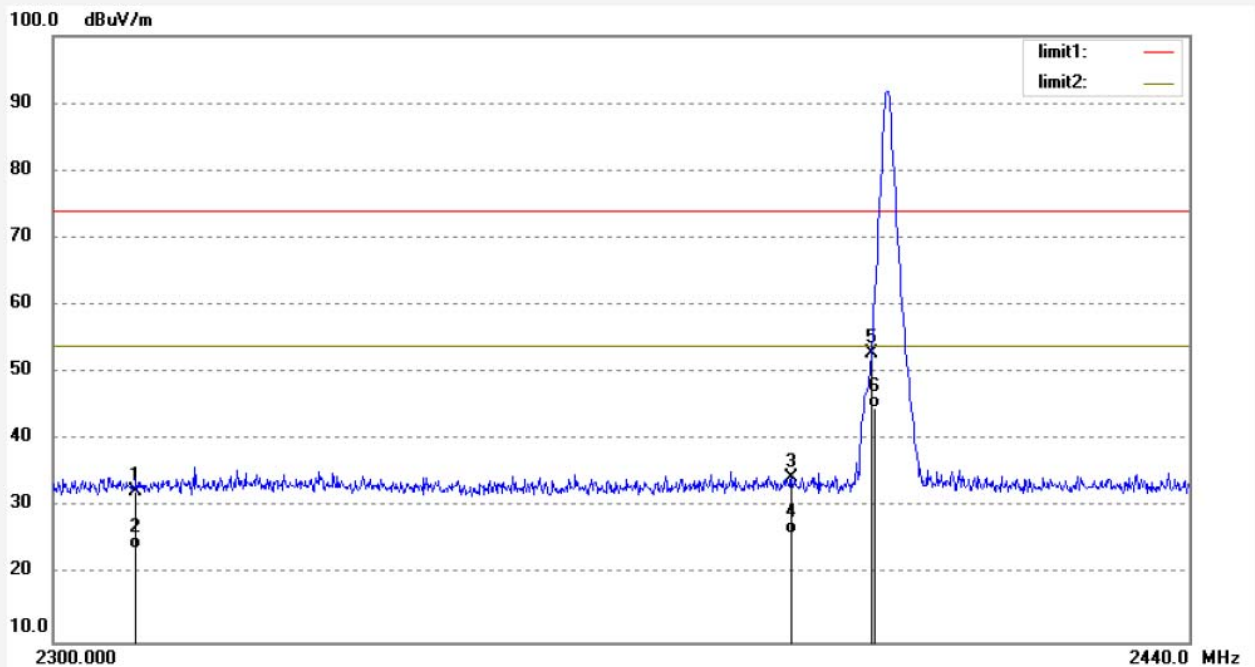
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F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: STAR2016 #235	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/01/00
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: TX 2402MHz(GFSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	40.60	-8.21	32.39	74.00	-41.61	peak			
2	2310.000	32.14	-8.21	23.93	54.00	-30.07	peak			
3	2390.000	42.45	-8.00	34.45	74.00	-39.55	peak			
4	2390.000	34.14	-8.00	26.14	54.00	-27.86	peak			
5	2400.000	60.75	-7.97	52.78	74.00	-21.22	peak			
6	2400.000	52.77	-7.97	44.80	54.00	-9.20	peak			

Note: Average measurement with peak detection at No.2&4&6



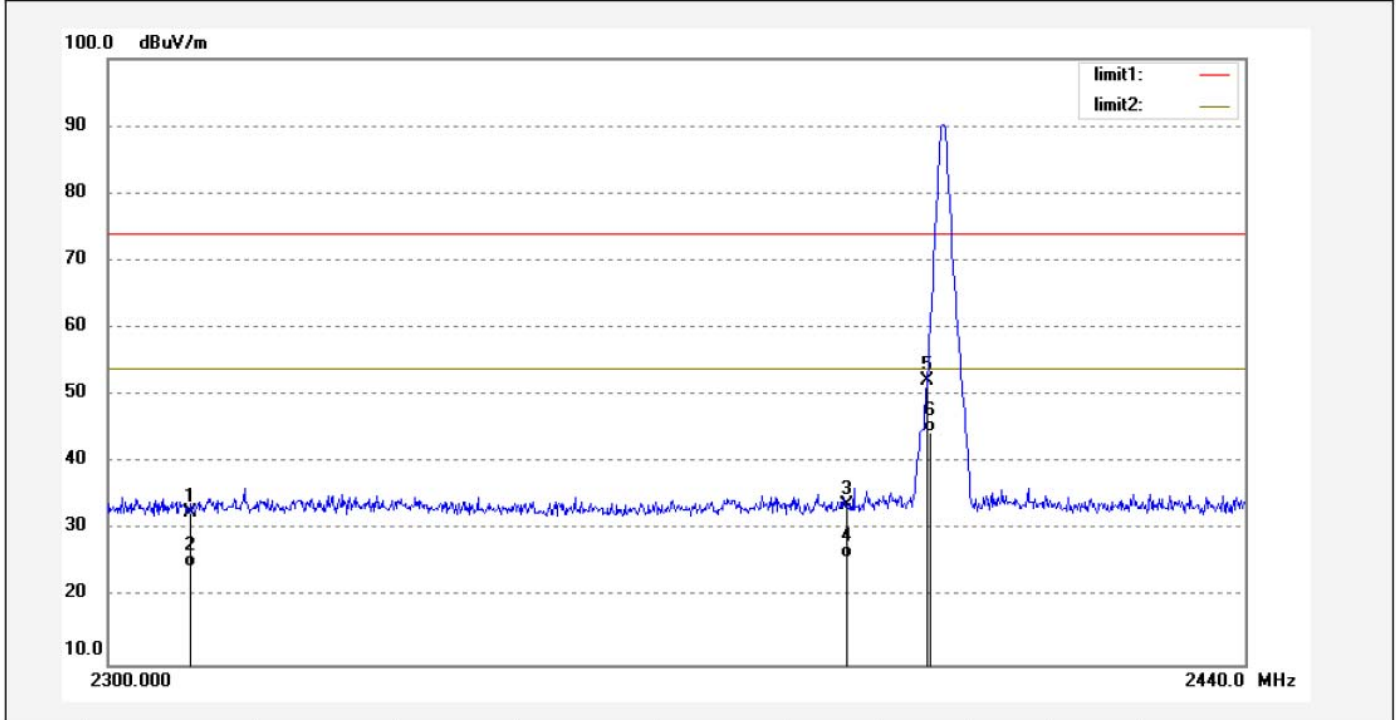
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Site: 1# Chamber  
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Job No.: STAR2016 #234	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 10/59/54
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: TX 2402MHz(GFSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	40.74	-8.21	32.53	74.00	-41.47	peak			
2	2310.000	32.67	-8.21	24.46	54.00	-29.54	peak			
3	2390.000	41.67	-8.00	33.67	74.00	-40.33	peak			
4	2390.000	33.78	-8.00	25.78	54.00	-28.22	peak			
5	2400.000	60.15	-7.97	52.18	74.00	-21.82	peak			
6	2400.000	52.60	-7.97	44.63	54.00	-9.37	peak			

Note: Average measurement with peak detection at No.2&4&6



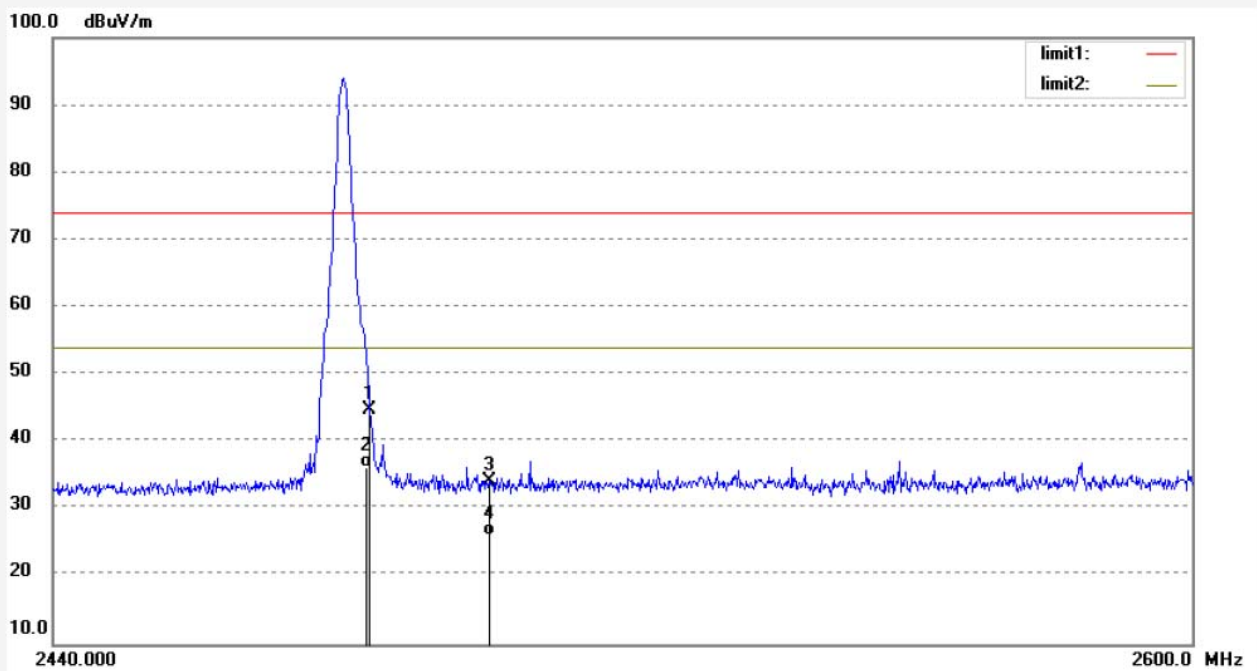
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Job No.: STAR2016 #236	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/03/07
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: TX 2480MHz(GFSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	52.53	-7.76	44.77	74.00	-29.23	peak			
2	2483.500	44.06	-7.76	36.30	54.00	-17.70	peak			
3	2500.000	41.97	-7.71	34.26	74.00	-39.74	peak			
4	2500.000	33.69	-7.71	25.98	54.00	-28.02	peak			

Note: Average measurement with peak detection at No.2&4&6





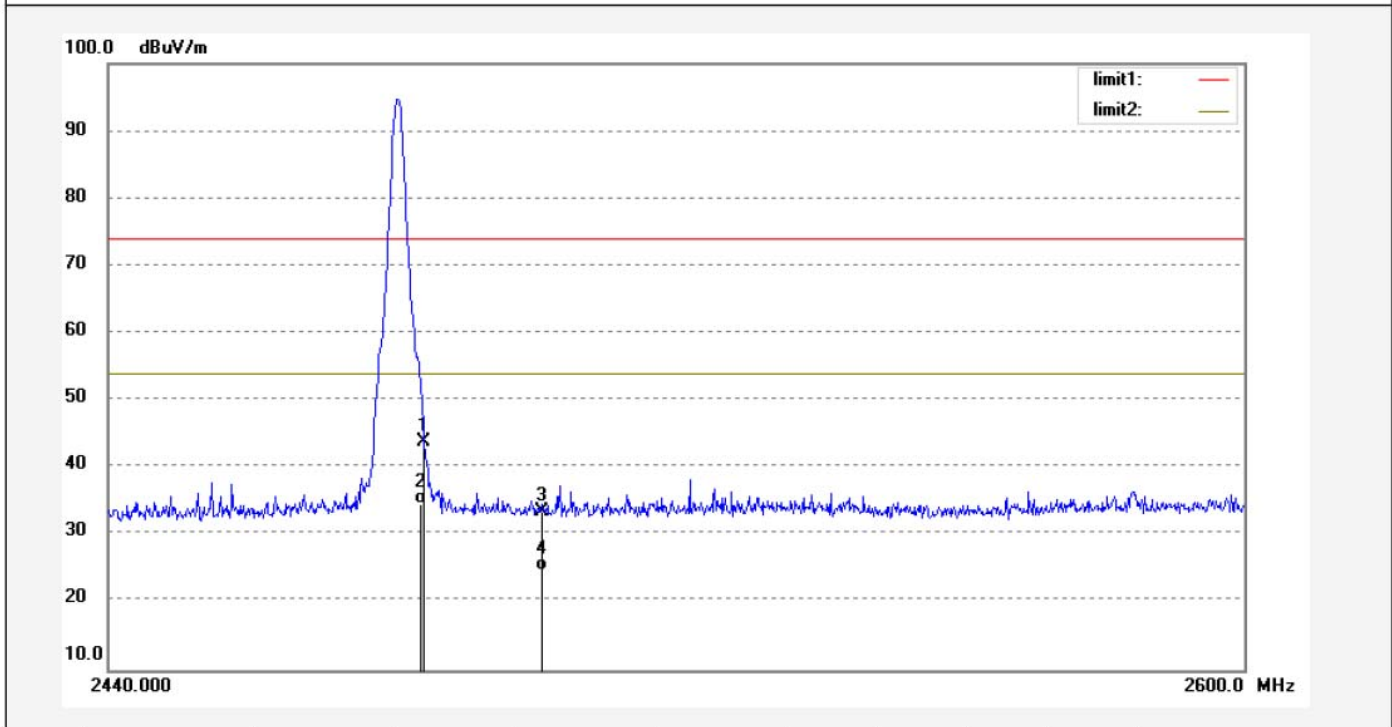
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Job No.: STAR2016 #237	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/04/14
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: TX 2480MHz(GFSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	51.63	-7.76	43.87	74.00	-30.13	peak			
2	2483.500	42.45	-7.76	34.69	54.00	-19.31	peak			
3	2500.000	41.29	-7.71	33.58	74.00	-40.42	peak			
4	2500.000	32.55	-7.71	24.84	54.00	-29.16	peak			

Note: Average measurement with peak detection at No.2&4&6



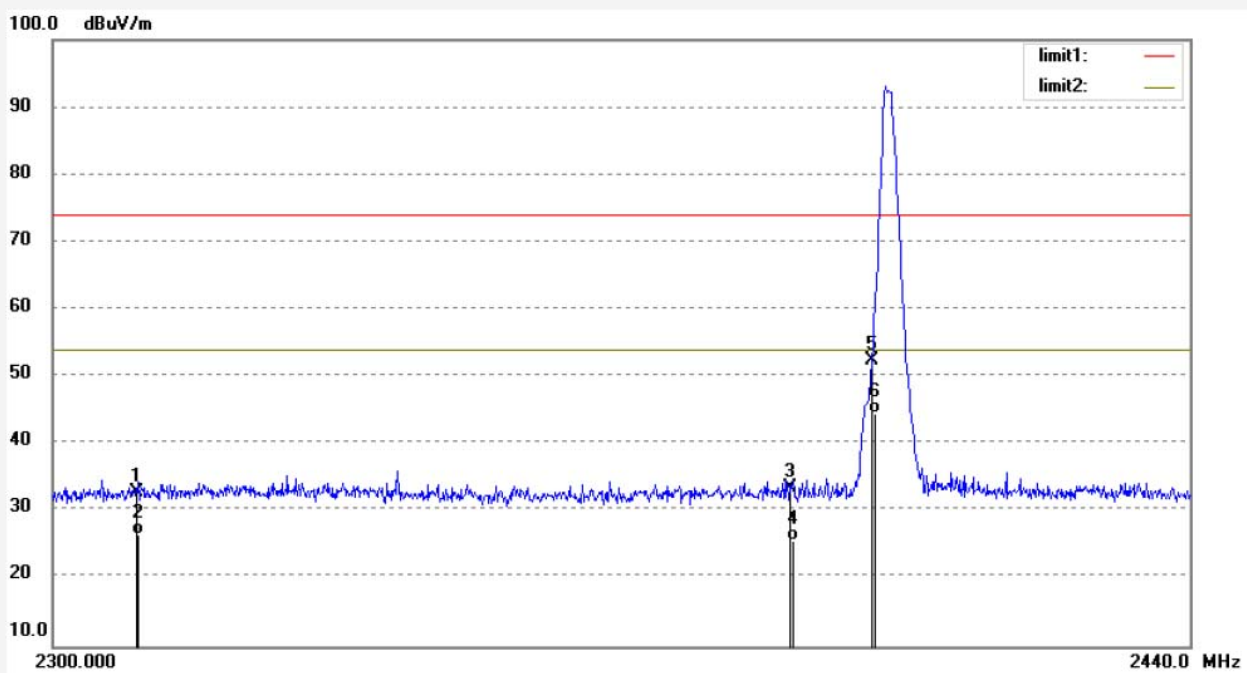
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Job No.: STAR2016 #240	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/10/09
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: TX 2402MHz(pi/4DQPSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700

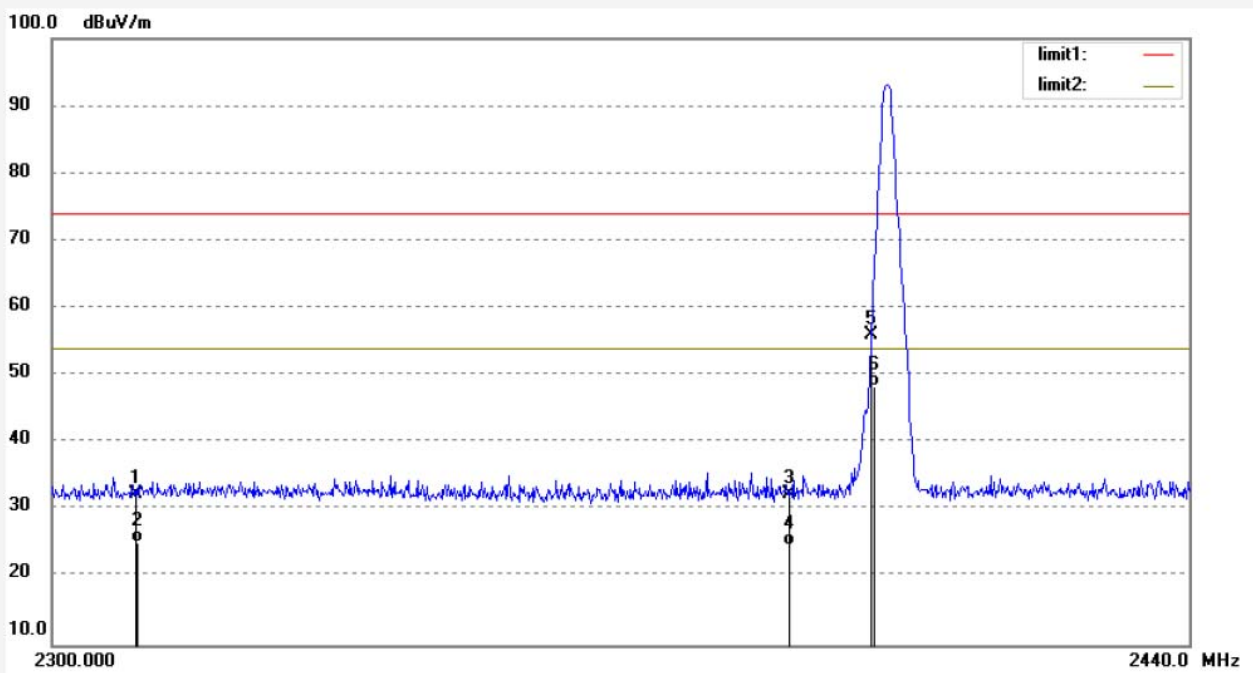


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	41.00	-8.21	32.79	74.00	-41.21	peak			
2	2310.000	34.80	-8.21	26.59	54.00	-27.41	peak			
3	2390.000	41.59	-8.00	33.59	74.00	-40.41	peak			
4	2390.000	33.62	-8.00	25.62	54.00	-28.38	peak			
5	2400.000	60.34	-7.97	52.37	74.00	-21.63	peak			
6	2400.000	52.45	-7.97	44.48	54.00	-9.52	peak			

Note: Average measurement with peak detection at No.2&4&6

Job No.: STAR2016 #241	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/11/55
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: TX 2402MHz(pi/4DQPSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	40.56	-8.21	32.35	74.00	-41.65	peak			
2	2310.000	33.33	-8.21	25.12	54.00	-28.88	peak			
3	2390.000	40.32	-8.00	32.32	74.00	-41.68	peak			
4	2390.000	32.78	-8.00	24.78	54.00	-29.22	peak			
5	2400.000	64.04	-7.97	56.07	74.00	-17.93	peak			
6	2400.000	56.41	-7.97	48.44	54.00	-5.56	peak			

Note: Average measurement with peak detection at No.2&4&6



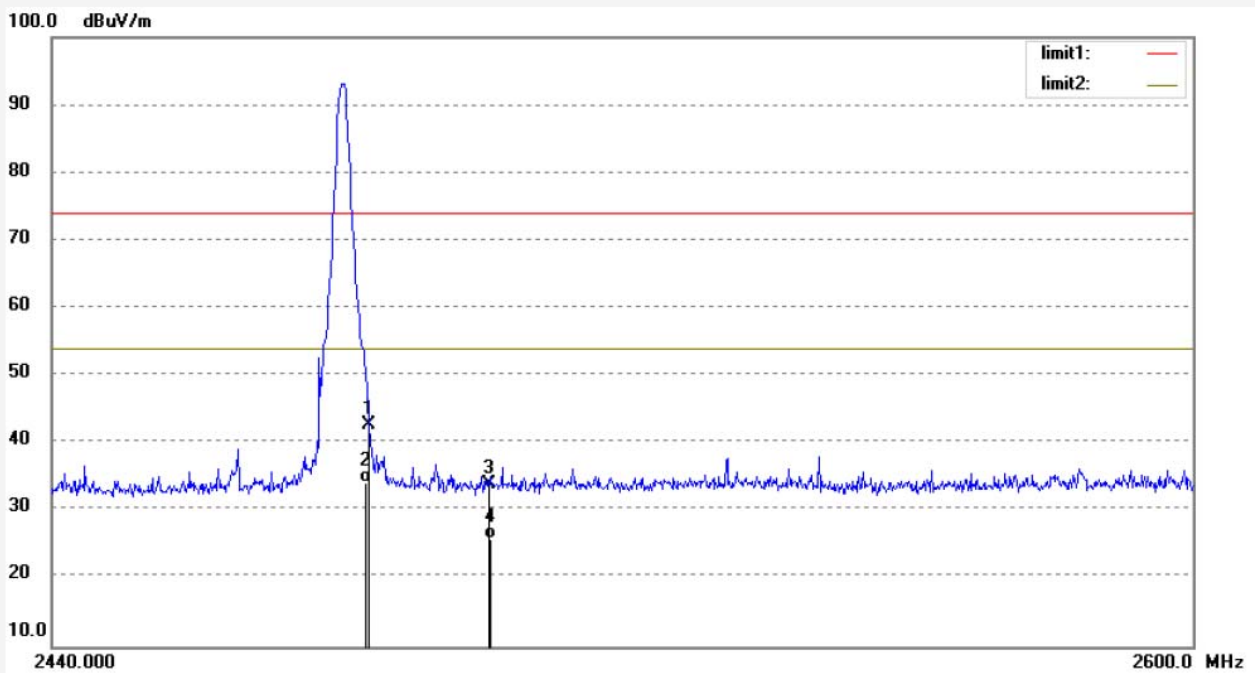
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Job No.: STAR2016 #239	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/07/49
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: TX 2480MHz(pi/4DQPSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	50.53	-7.76	42.77	74.00	-31.23	peak			
2	2483.500	42.04	-7.76	34.28	54.00	-19.72	peak			
3	2500.000	41.75	-7.71	34.04	74.00	-39.96	peak			
4	2500.000	33.64	-7.71	25.93	54.00	-28.07	peak			

Note: Average measurement with peak detection at No.2&4





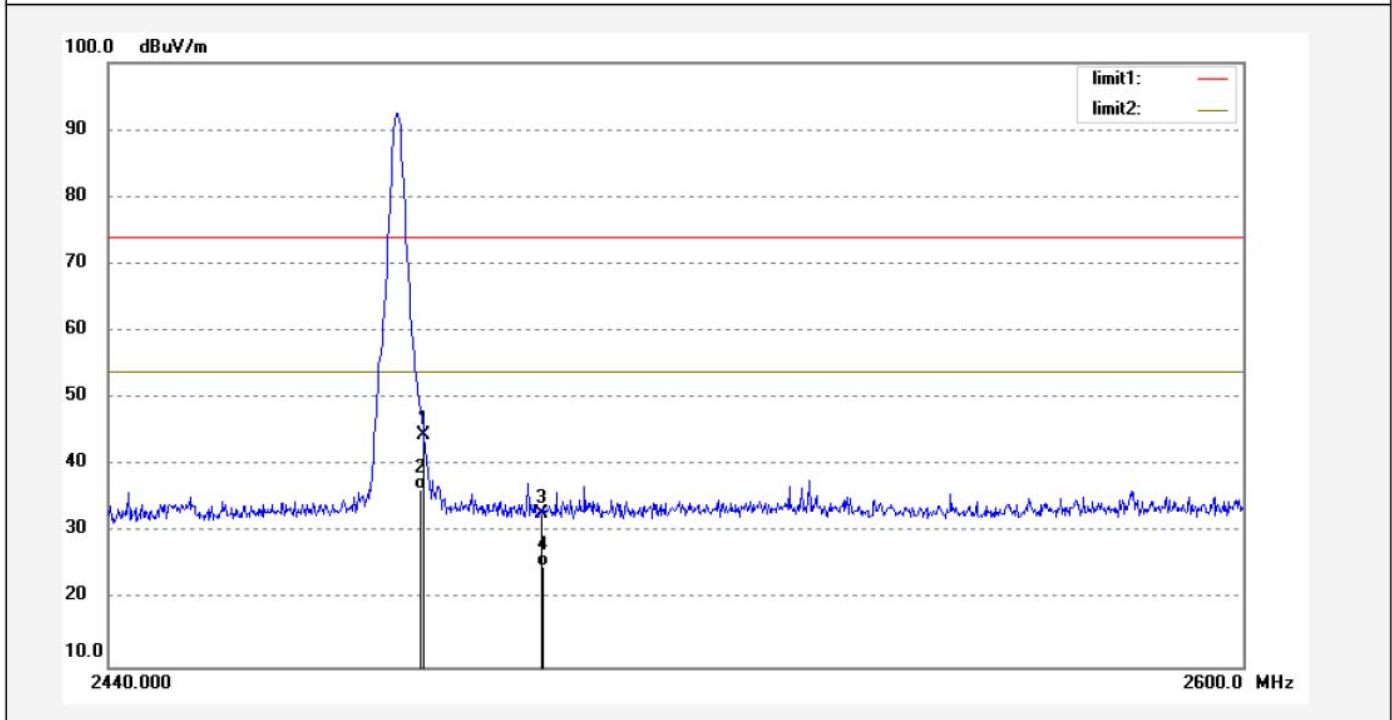
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Job No.: STAR2016 #238	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/06/39
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: TX 2480MHz(pi/4DQPSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	52.34	-7.76	44.58	74.00	-29.42	peak			
2	2483.500	44.27	-7.76	36.51	54.00	-17.49	peak			
3	2500.000	40.44	-7.71	32.73	74.00	-41.27	peak			
4	2500.000	32.70	-7.71	24.99	54.00	-29.01	peak			

Note: Average measurement with peak detection at No.2&4



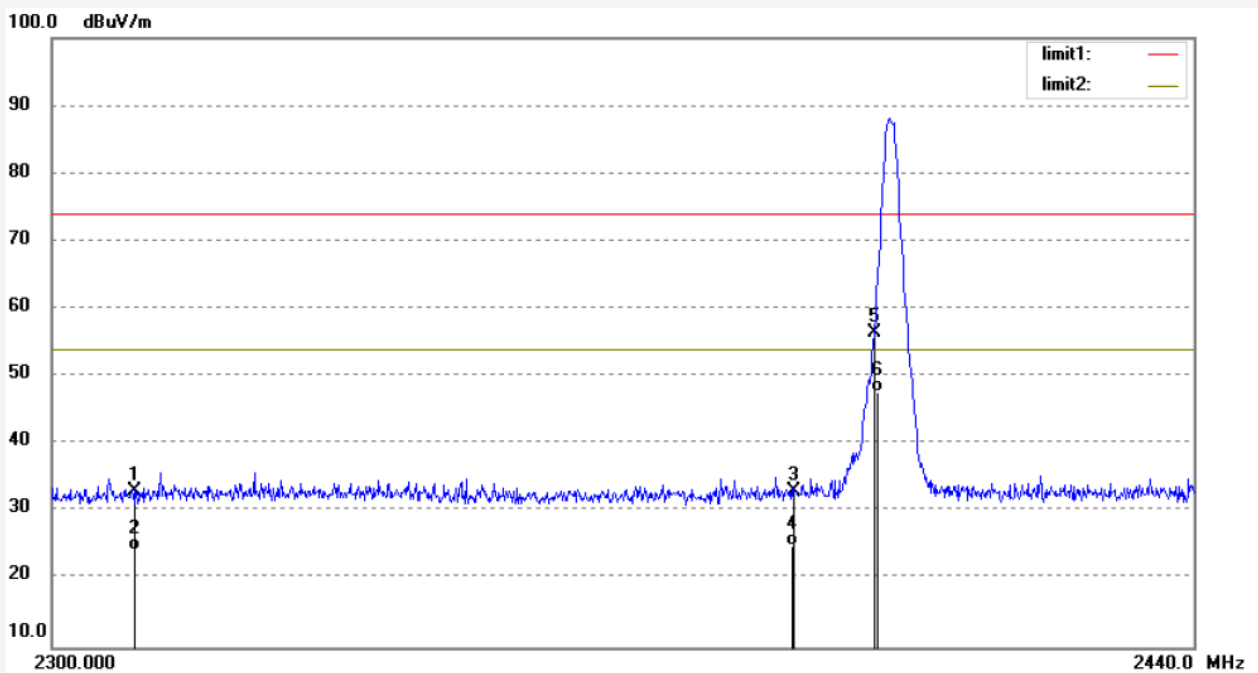
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Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: STAR2016 #243	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/16/07
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: TX 2402MHz(8DPSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	41.31	-8.21	33.10	74.00	-40.90	peak			
2	2310.000	32.40	-8.21	24.19	54.00	-29.81	peak			
3	2390.000	41.16	-8.00	33.16	74.00	-40.84	peak			
4	2390.000	33.00	-8.00	25.00	54.00	-29.00	peak			
5	2400.000	64.49	-7.97	56.52	74.00	-17.48	peak			
6	2400.000	55.67	-7.97	47.70	54.00	-6.30	peak			

Note: Average measurement with peak detection at No.2&4&6



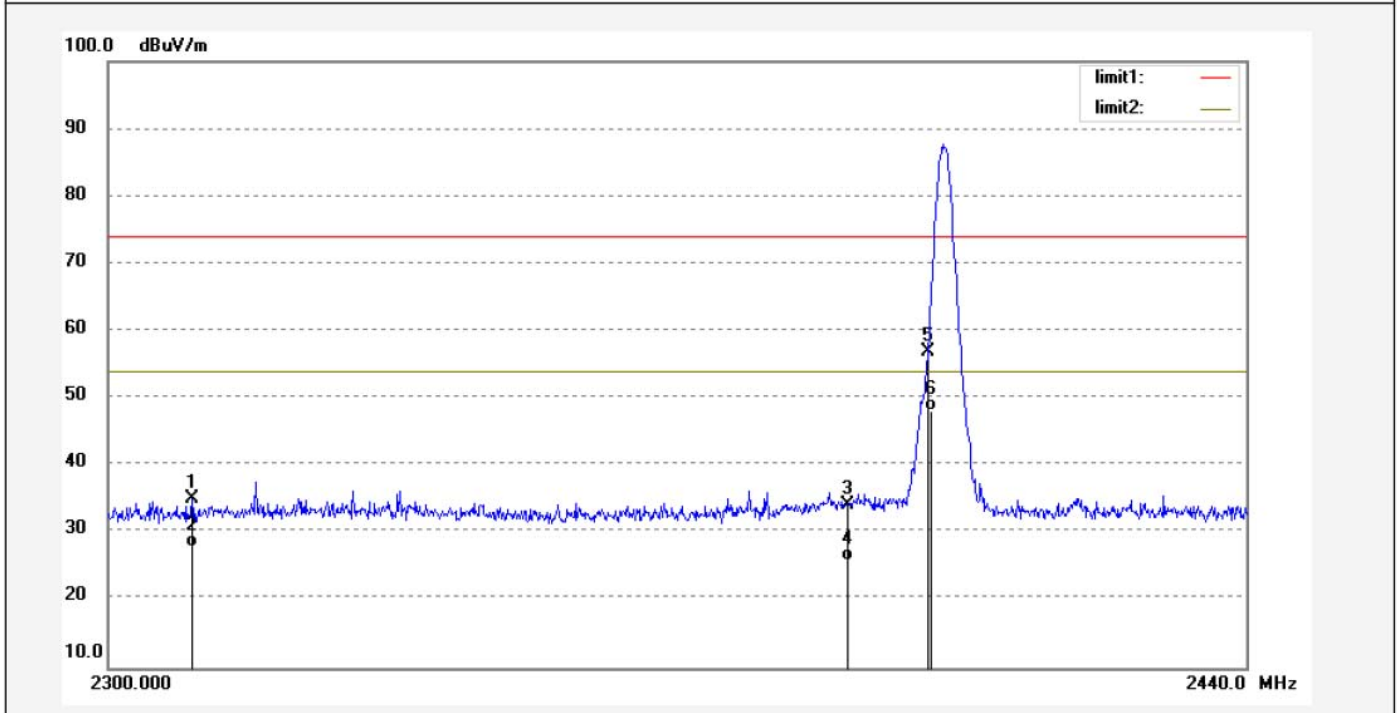
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Site: 1# Chamber  
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Job No.: STAR2016 #242	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/14/55
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: TX 2402MHz(8DPSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	43.32	-8.21	35.11	74.00	-38.89	peak			
2	2310.000	36.00	-8.21	27.79	54.00	-26.21	peak			
3	2390.000	42.30	-8.00	34.30	74.00	-39.70	peak			
4	2390.000	33.90	-8.00	25.90	54.00	-28.10	peak			
5	2400.000	64.89	-7.97	56.92	74.00	-17.08	peak			
6	2400.000	56.14	-7.97	48.17	54.00	-5.83	peak			

Note: Average measurement with peak detection at No.2&4&6



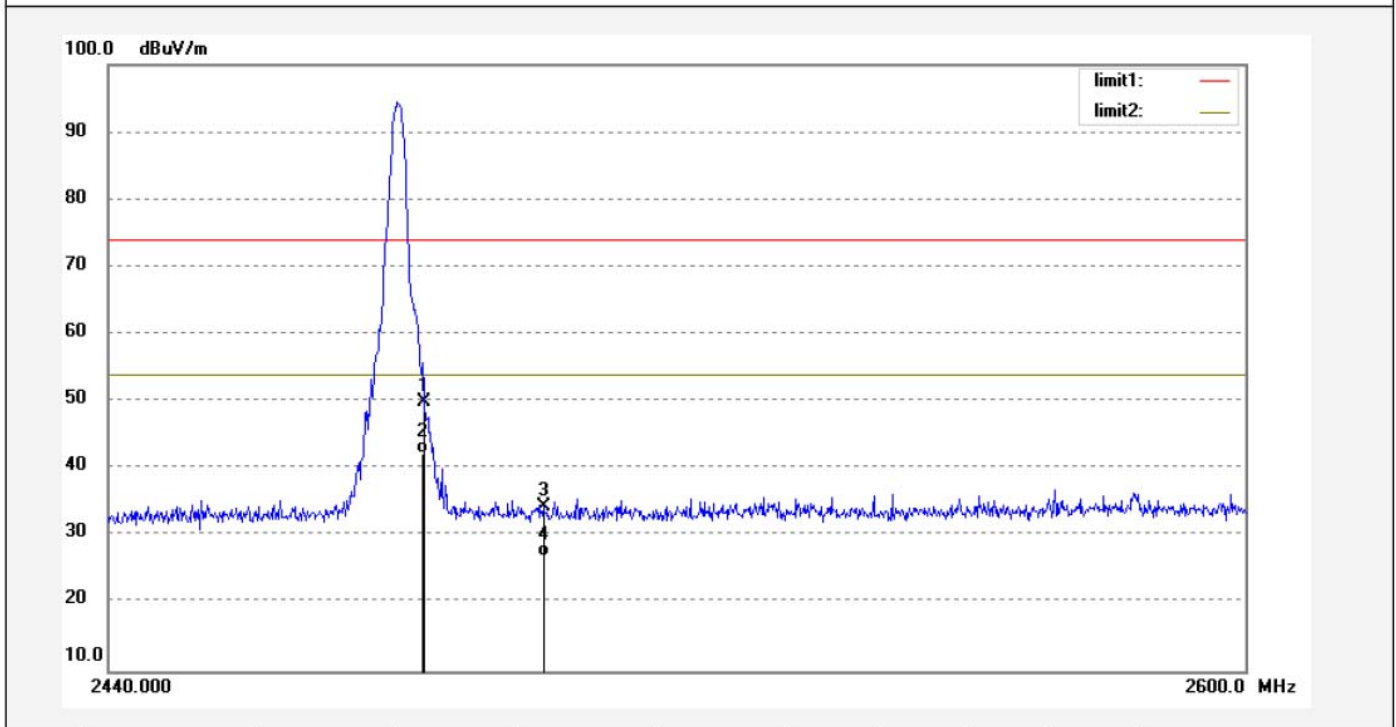
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Job No.: STAR2016 #244	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/18/27
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: TX 2480MHz(8DPSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



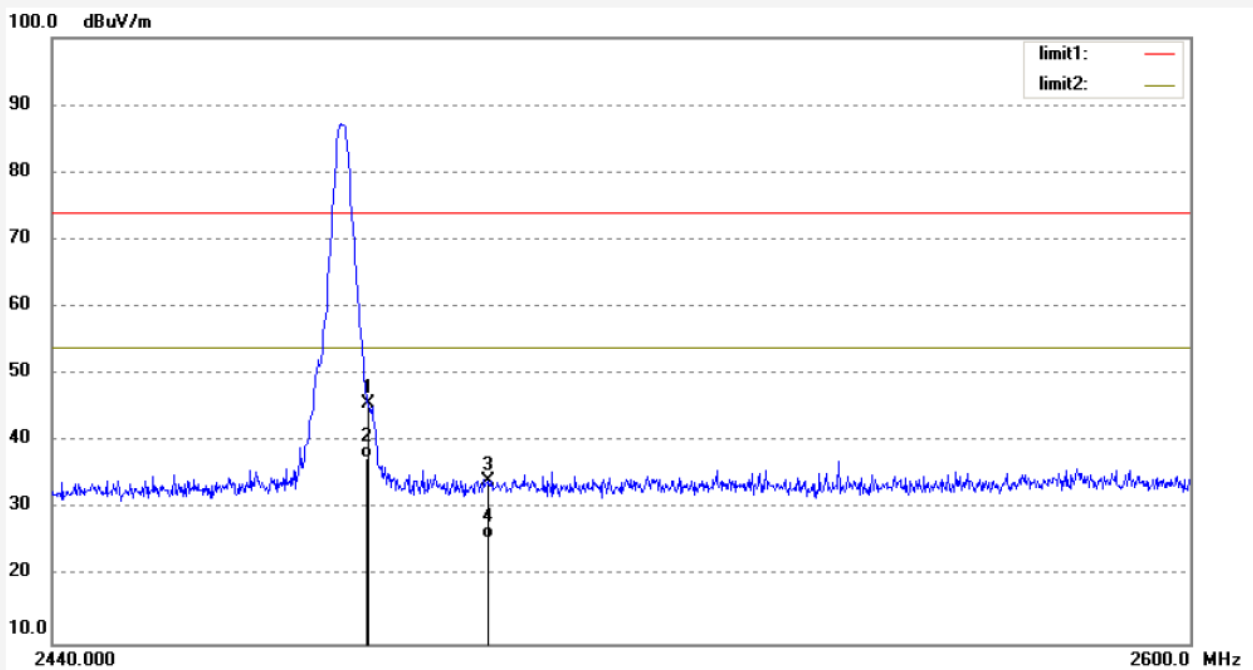
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	57.60	-7.76	49.84	74.00	-24.16	peak			
2	2483.500	50.14	-7.76	42.38	54.00	-11.62	peak			
3	2500.000	42.19	-7.71	34.48	74.00	-39.52	peak			
4	2500.000	34.63	-7.71	26.92	54.00	-27.08	peak			

Note: Average measurement with peak detection at No.2&4



Job No.: STAR2016 #245	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/20/04
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: TX 2480MHz(8DPSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	53.46	-7.76	45.70	74.00	-28.30	peak			
2	2483.500	45.36	-7.76	37.60	54.00	-16.40	peak			
3	2500.000	41.98	-7.71	34.27	74.00	-39.73	peak			
4	2500.000	33.27	-7.71	25.56	54.00	-28.44	peak			

Note: Average measurement with peak detection at No.2&4

Hopping mode



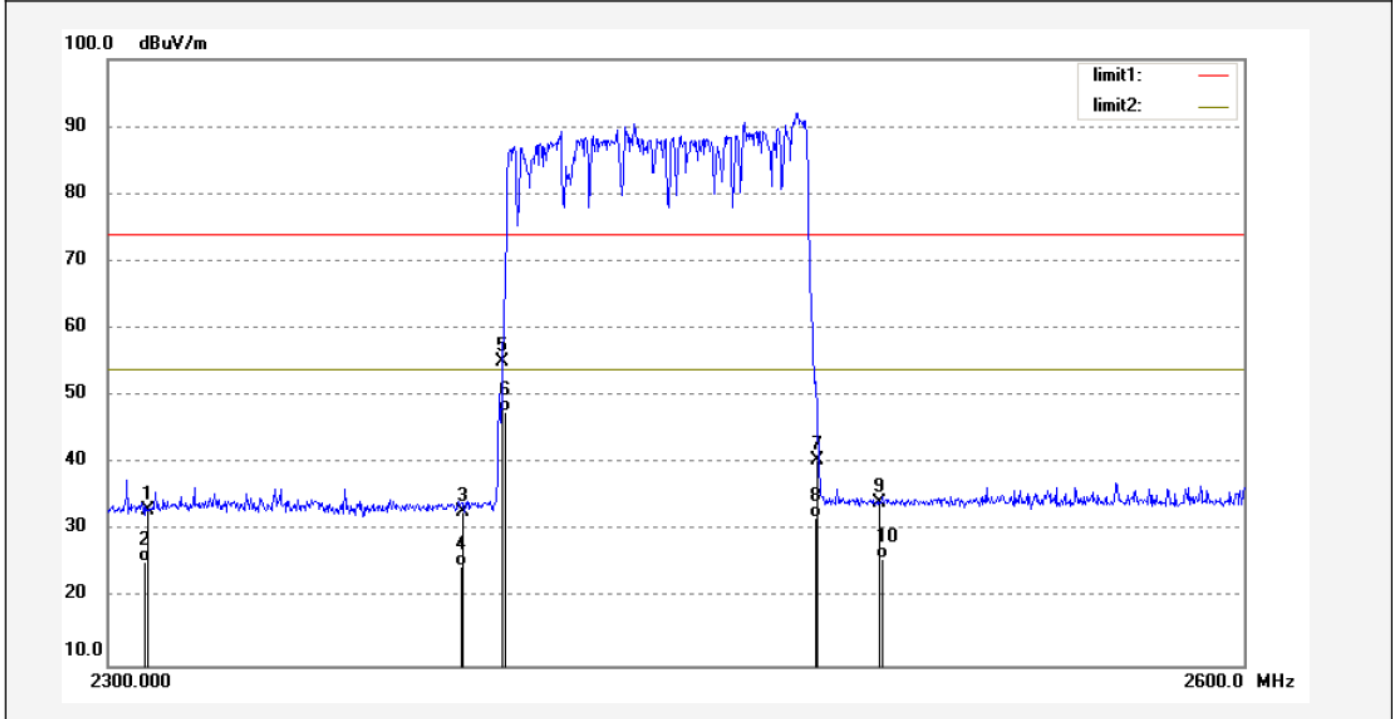
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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
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Job No.: STAR2016 #247	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/27/58
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: HOPPING (GFSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	41.24	-8.21	33.03	74.00	-40.97	peak			
2	2310.000	33.69	-8.21	25.48	54.00	-28.52	peak			
3	2390.000	40.75	-8.00	32.75	74.00	-41.25	peak			
4	2390.000	32.77	-8.00	24.77	54.00	-29.23	peak			
5	2400.000	63.17	-7.97	55.20	74.00	-18.80	peak			
6	2400.000	55.69	-7.97	47.72	54.00	-6.28	peak			
7	2483.500	48.14	-7.76	40.38	74.00	-33.62	peak			
8	2483.500	39.64	-7.76	31.88	54.00	-22.12	peak			
9	2500.000	41.88	-7.71	34.17	74.00	-39.83	peak			
10	2500.000	33.62	-7.71	25.91	54.00	-28.09	peak			

Note: Average measurement with peak detection at No.2&4&6&8&10



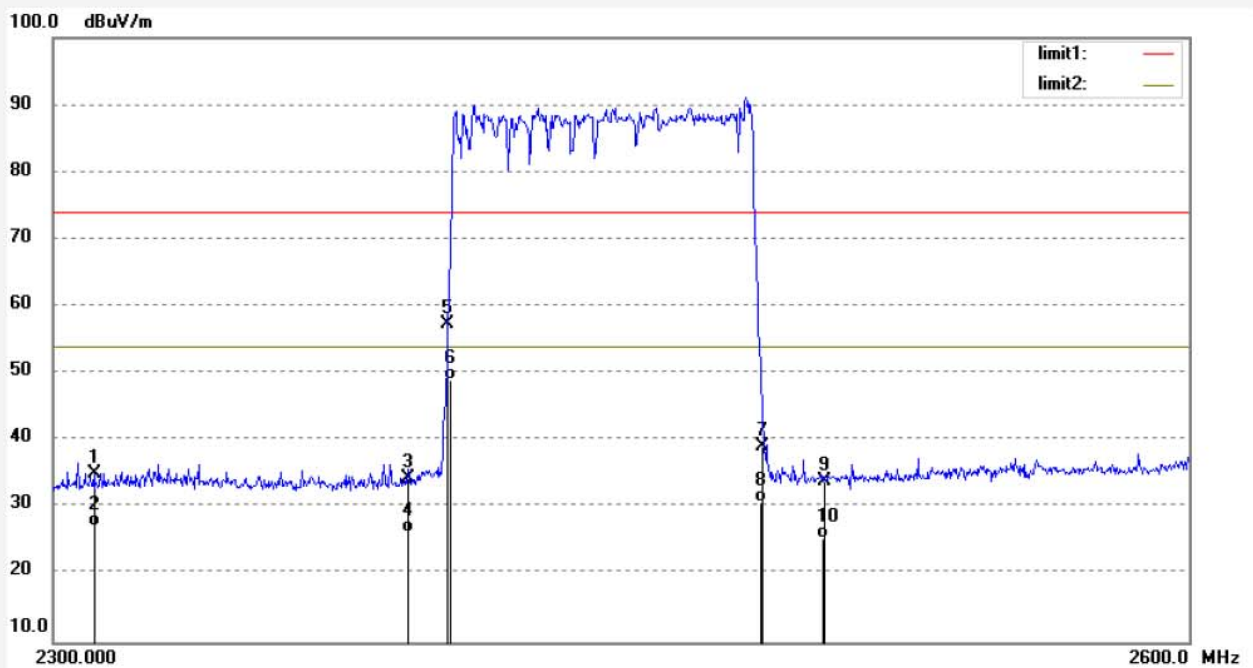
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Job No.: STAR2016 #246	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/25/35
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: HOPPING (GFSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	43.34	-8.21	35.13	74.00	-38.87	peak			
2	2310.000	35.37	-8.21	27.16	54.00	-26.84	peak			
3	2390.000	42.32	-8.00	34.32	74.00	-39.68	peak			
4	2390.000	34.32	-8.00	26.32	54.00	-27.68	peak			
5	2400.000	65.23	-7.97	57.26	74.00	-16.74	peak			
6	2400.000	56.92	-7.97	48.95	54.00	-5.05	peak			
7	2483.500	46.94	-7.76	39.18	74.00	-34.82	peak			
8	2483.500	38.65	-7.76	30.89	54.00	-23.11	peak			
9	2500.000	41.74	-7.71	34.03	74.00	-39.97	peak			
10	2500.000	33.22	-7.71	25.51	54.00	-28.49	peak			

Note: Average measurement with peak detection at No.2&4&6&8&10



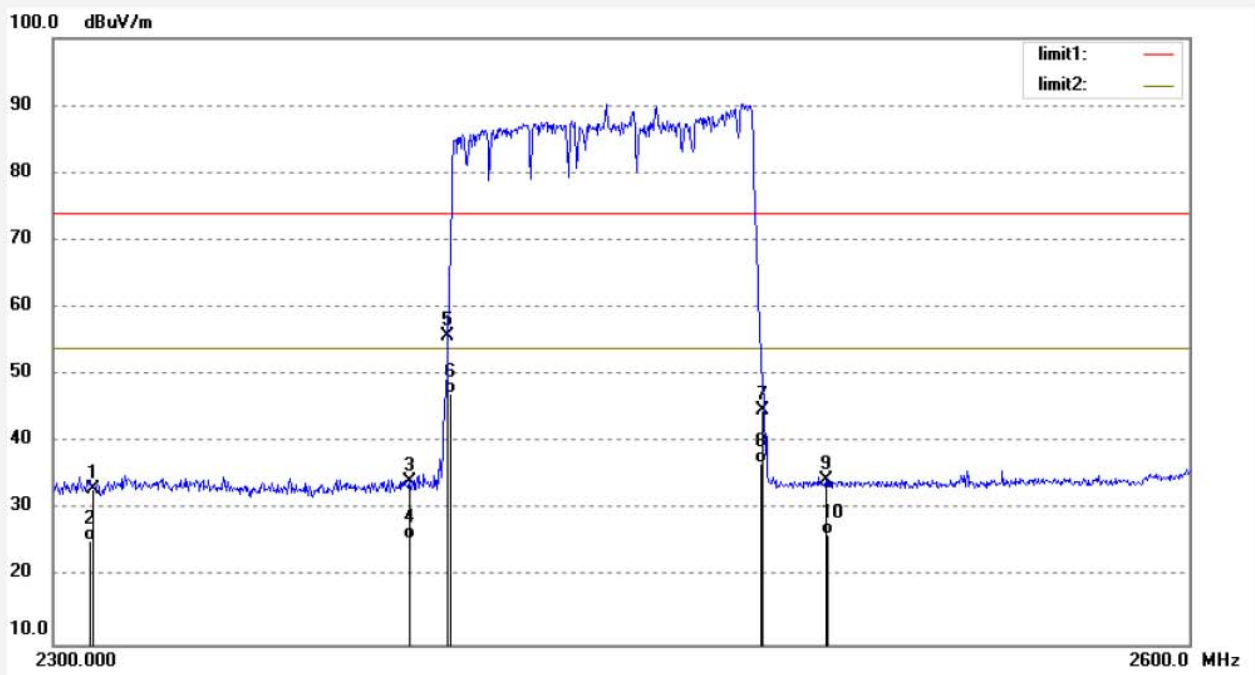
**ACCURATE TECHNOLOGY CO., LTD.**

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

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: STAR2016 #248	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/30/14
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: HOPPING (pi/4DQPSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



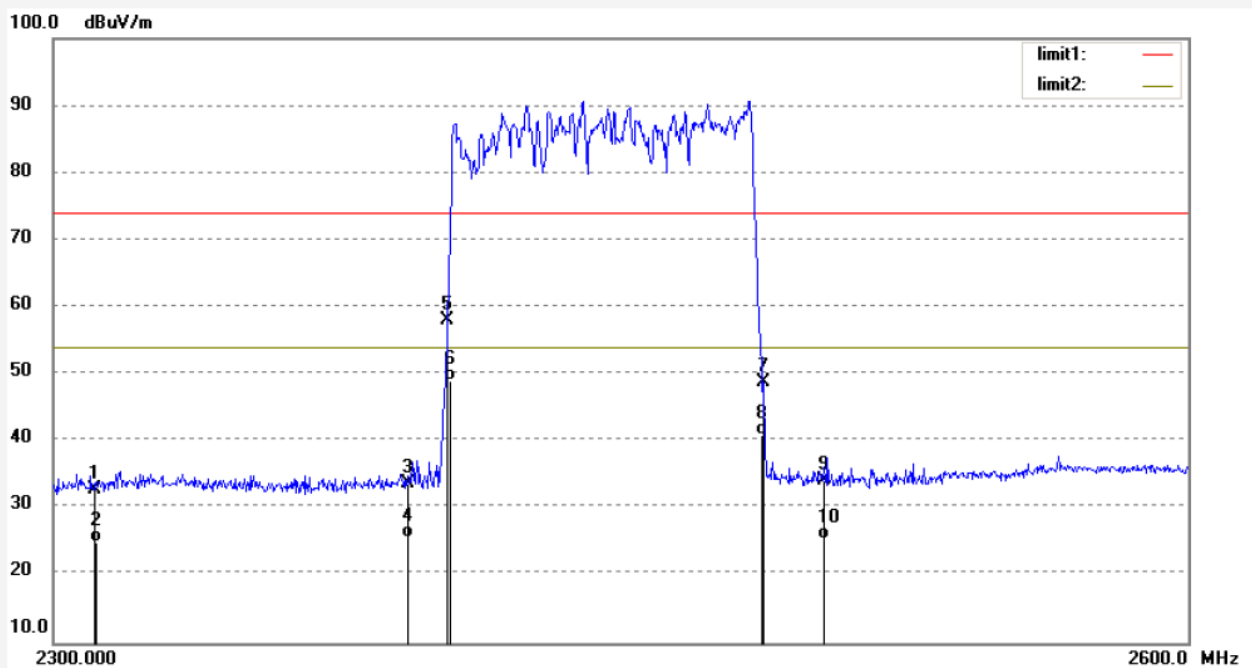
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	41.26	-8.21	33.05	74.00	-40.95	peak			
2	2310.000	33.66	-8.21	25.45	54.00	-28.55	peak			
3	2390.000	42.11	-8.00	34.11	74.00	-39.89	peak			
4	2390.000	33.68	-8.00	25.68	54.00	-28.32	peak			
5	2400.000	63.80	-7.97	55.83	74.00	-18.17	peak			
6	2400.000	55.10	-7.97	47.13	54.00	-6.87	peak			
7	2483.500	52.46	-7.76	44.70	74.00	-29.30	peak			
8	2483.500	44.62	-7.76	36.86	54.00	-17.14	peak			
9	2500.000	42.02	-7.71	34.31	74.00	-39.69	peak			
10	2500.000	34.06	-7.71	26.35	54.00	-27.65	peak			

Note: Average measurement with peak detection at No.2&4&6&8&10



Job No.: STAR2016 #249	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/32/05
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: HOPPING (pi/4DQPSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	41.15	-8.21	32.94	74.00	-41.06	peak			
2	2310.000	33.20	-8.21	24.99	54.00	-29.01	peak			
3	2390.000	41.79	-8.00	33.79	74.00	-40.21	peak			
4	2390.000	33.71	-8.00	25.71	54.00	-28.29	peak			
5	2400.000	65.98	-7.97	58.01	74.00	-15.99	peak			
6	2400.000	57.00	-7.97	49.03	54.00	-4.97	peak			
7	2483.500	56.54	-7.76	48.78	74.00	-25.22	peak			
8	2483.500	48.65	-7.76	40.89	54.00	-13.11	peak			
9	2500.000	41.85	-7.71	34.14	74.00	-39.86	peak			
10	2500.000	33.14	-7.71	25.43	54.00	-28.57	peak			

Note: Average measurement with peak detection at No.2&4&6&8&10



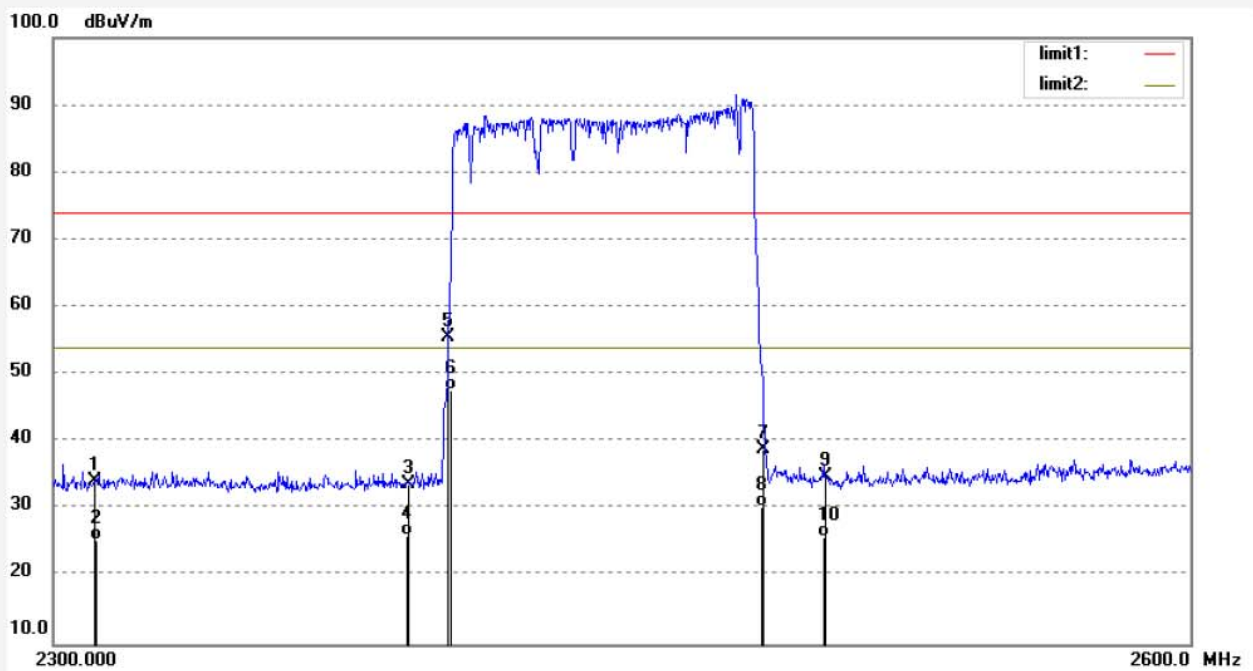
**ACCURATE TECHNOLOGY CO., LTD.**

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

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: STAR2016 #251	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/38/04
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: HOPPING (8DPSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700

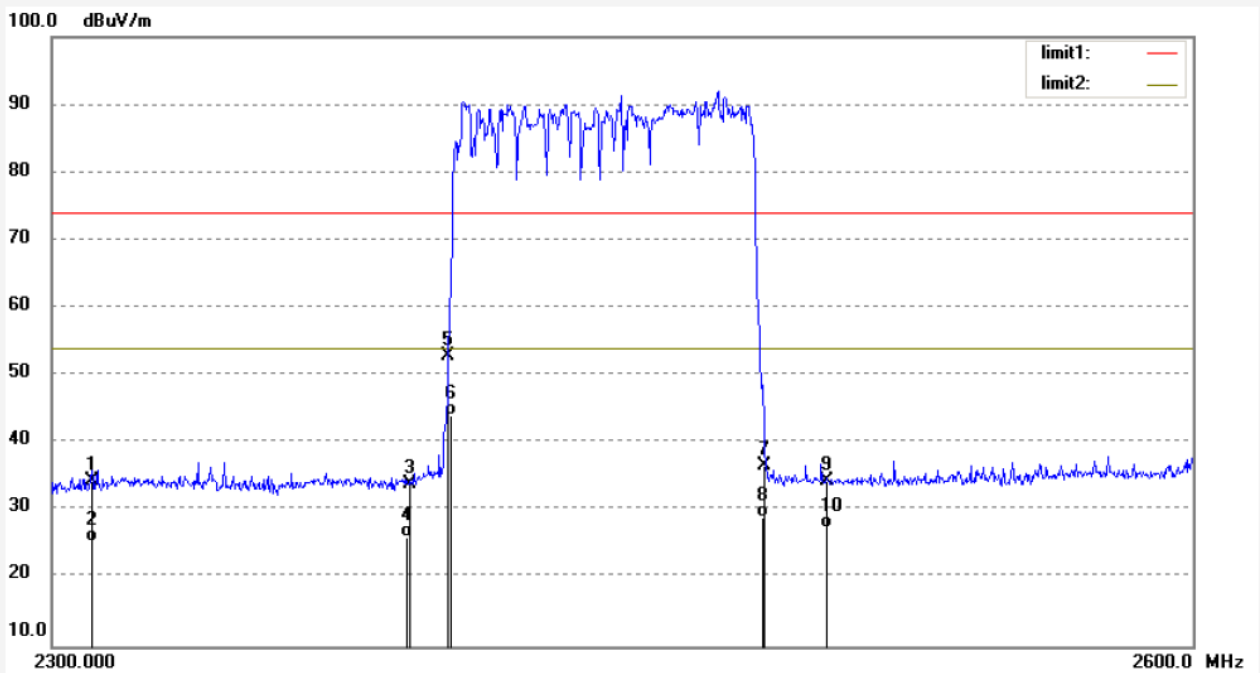


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	42.47	-8.21	34.26	74.00	-39.74	peak			
2	2310.000	33.69	-8.21	25.48	54.00	-28.52	peak			
3	2390.000	41.70	-8.00	33.70	74.00	-40.30	peak			
4	2390.000	34.00	-8.00	26.00	54.00	-28.00	peak			
5	2400.000	63.43	-7.97	55.46	74.00	-18.54	peak			
6	2400.000	55.67	-7.97	47.70	54.00	-6.30	peak			
7	2483.500	46.59	-7.76	38.83	74.00	-35.17	peak			
8	2483.500	38.14	-7.76	30.38	54.00	-23.62	peak			
9	2500.000	42.61	-7.71	34.90	74.00	-39.10	peak			
10	2500.000	33.54	-7.71	25.83	54.00	-28.17	peak			

Note: Average measurement with peak detection at No.2&4&6&8&10

Job No.: STAR2016 #250	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/01/30/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/35/15
EUT: Braven 2300 Portable Bluetooth Speaker	Engineer Signature: star
Mode: HOPPING (8DPSK)	Distance: 3m
Model: 2300	
Manufacturer: Braven LC	

Note: Report No.:ATE20151700



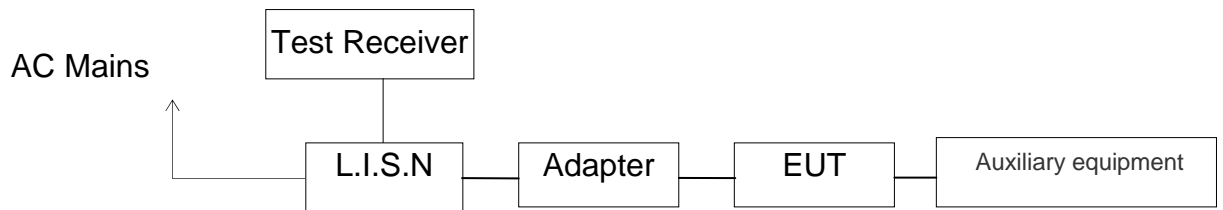
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	42.54	-8.21	34.33	74.00	-39.67	peak			
2	2310.000	33.57	-8.21	25.36	54.00	-28.64	peak			
3	2390.000	42.00	-8.00	34.00	74.00	-40.00	peak			
4	2390.000	34.04	-8.00	26.04	54.00	-27.96	peak			
5	2400.000	60.85	-7.97	52.88	74.00	-21.12	peak			
6	2400.000	52.00	-7.97	44.03	54.00	-9.97	peak			
7	2483.500	44.45	-7.76	36.69	74.00	-37.31	peak			
8	2483.500	36.77	-7.76	29.01	54.00	-24.99	peak			
9	2500.000	42.23	-7.71	34.52	74.00	-39.48	peak			
10	2500.000	35.14	-7.71	27.43	54.00	-26.57	peak			

Note: Average measurement with peak detection at No.2&4&6&8&10

## 12.AC POWER LINE CONDUCTED EMISSION FOR FCC PART

### 15 SECTION 15.207(A)

#### 12.1.Block Diagram of Test Setup



(EUT: Braven 2300 Portable Bluetooth Speaker)

#### 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 5.1.

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 communicating(AC 120V/60Hz)								
<b>MEASUREMENT RESULT: "YAQ012_fin"</b>								
1/29/2016 9:47AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBµV	dB	dBµV	dB				
0.155000	37.70	10.5	66	28.0	QP	L1	GND	
0.350000	32.60	10.6	59	26.4	QP	L1	GND	
0.880000	19.20	10.8	56	36.8	QP	L1	GND	
<b>MEASUREMENT RESULT: "YAQ012_fin2"</b>								
1/29/2016 9:47AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBµV	dB	dBµV	dB				
0.345000	23.00	10.6	49	26.1	AV	L1	GND	
0.695000	22.80	10.8	46	23.2	AV	L1	GND	
1.040000	20.50	10.9	46	25.5	AV	L1	GND	
<b>MEASUREMENT RESULT: "YAQ011_fin"</b>								
1/29/2016 9:43AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBµV	dB	dBµV	dB				
0.170000	40.00	10.5	65	25.0	QP	N	GND	
0.345000	32.90	10.6	59	26.2	QP	N	GND	
0.875000	25.10	10.8	56	30.9	QP	N	GND	
<b>MEASUREMENT RESULT: "YAQ011_fin2"</b>								
1/29/2016 9:43AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBµV	dB	dBµV	dB				
0.345000	23.40	10.6	49	25.7	AV	N	GND	
0.695000	22.40	10.8	46	23.6	AV	N	GND	
1.040000	20.00	10.9	46	26.0	AV	N	GND	

Test mode : BT communicating(AC 240V/60Hz)								
<b>MEASUREMENT RESULT: "YAQ007_fin"</b>								
1/29/2016 9:26AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBµV	dB	dBµV	dB				
0.370000	37.10	10.7	59	21.4	QP	L1	GND	
0.820000	32.50	10.8	56	23.5	QP	L1	GND	
0.895000	28.80	10.8	56	27.2	QP	L1	GND	
<b>MEASUREMENT RESULT: "YAQ007_fin2"</b>								
1/29/2016 9:26AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBµV	dB	dBµV	dB				
0.375000	28.40	10.7	48	20.0	AV	L1	GND	
0.780000	22.60	10.8	46	23.4	AV	L1	GND	
1.040000	21.00	10.9	46	25.0	AV	L1	GND	
<b>MEASUREMENT RESULT: "YAQ008_fin"</b>								
1/29/2016 9:30AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBµV	dB	dBµV	dB				
0.370000	37.60	10.7	59	20.9	QP	N	GND	
0.780000	34.00	10.8	56	22.0	QP	N	GND	
0.895000	28.60	10.8	56	27.4	QP	N	GND	
<b>MEASUREMENT RESULT: "YAQ008_fin2"</b>								
1/29/2016 9:30AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBµV	dB	dBµV	dB				
0.375000	28.80	10.7	48	19.6	AV	N	GND	
0.780000	23.20	10.8	46	22.8	AV	N	GND	
1.040000	21.10	10.9	46	24.9	AV	N	GND	

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

The spectral diagrams are attached as below.

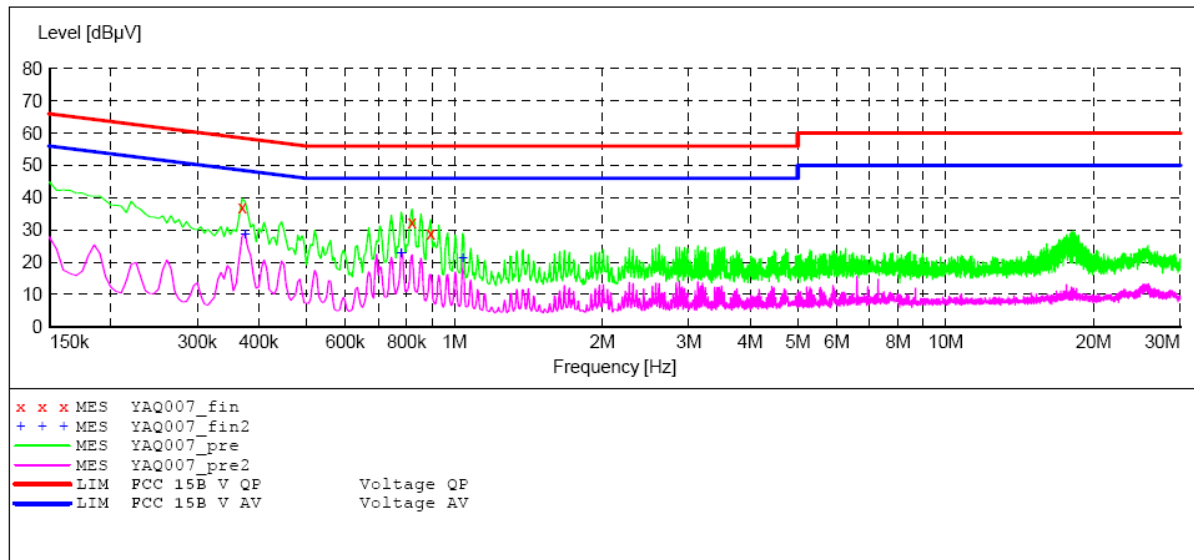
**ACCURATE TECHNOLOGY CO., LTD**

**CONDUCTED EMISSION STANDARD FCC PART 15B**

EUT: Braven 2300 Portable Bluetooth Speaker M/N:2300  
 Manufacturer: Braven LC  
 Operating Condition: BT Operation  
 Test Site: 1#Shielding Room  
 Operator: star  
 Test Specification: L 240V/60Hz  
 Comment: Report No.:ATE20151700  
 Start of Test: 1/29/2016 / 9:23:24AM

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

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



**MEASUREMENT RESULT: "YAQ007\_fin"**

1/29/2016 9:26AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.370000	37.10	10.7	59	21.4	QP	L1	GND
0.820000	32.50	10.8	56	23.5	QP	L1	GND
0.895000	28.80	10.8	56	27.2	QP	L1	GND

**MEASUREMENT RESULT: "YAQ007\_fin2"**

1/29/2016 9:26AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.375000	28.40	10.7	48	20.0	AV	L1	GND
0.780000	22.60	10.8	46	23.4	AV	L1	GND
1.040000	21.00	10.9	46	25.0	AV	L1	GND

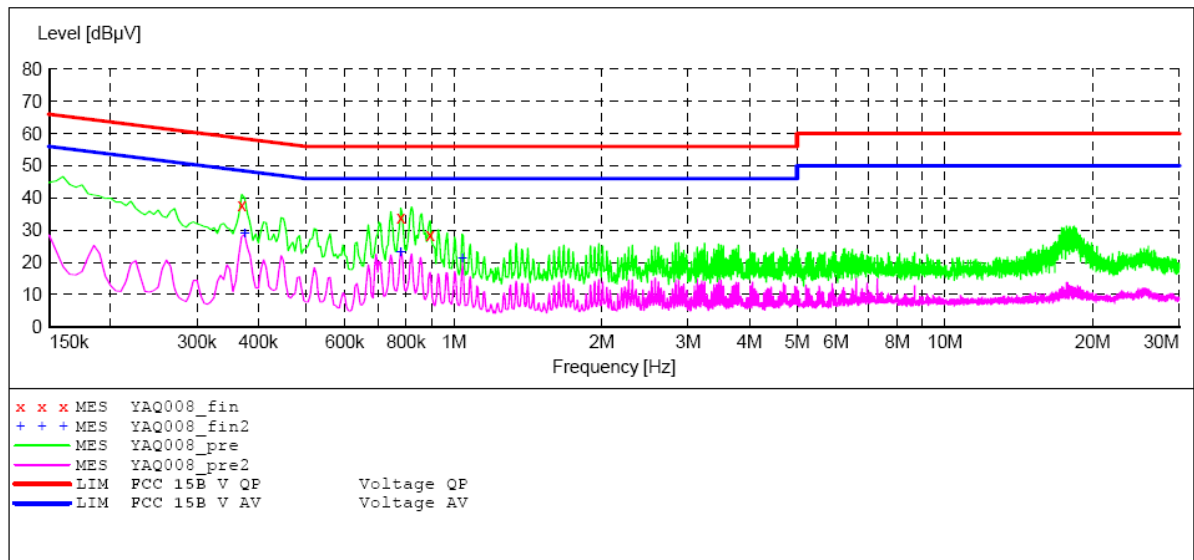
**ACCURATE TECHNOLOGY CO., LTD**

**CONDUCTED EMISSION STANDARD FCC PART 15B**

EUT: Braven 2300 Portable Bluetooth Speaker M/N:2300  
 Manufacturer: Braven LC  
 Operating Condition: BT Operation  
 Test Site: 1#Shielding Room  
 Operator: star  
 Test Specification: N 240V/60Hz  
 Comment: Report No.:ATE20151700  
 Start of Test: 1/29/2016 / 9:26:58AM

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

Start	Stop	Step	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	Average			
			QuasiPeak	1.0 s	9 kHz	NSLK8126 2008
			Average			



**MEASUREMENT RESULT: "YAQ008\_fin"**

1/29/2016 9:30AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.370000	37.60	10.7	59	20.9	QP	N	GND
0.780000	34.00	10.8	56	22.0	QP	N	GND
0.895000	28.60	10.8	56	27.4	QP	N	GND

**MEASUREMENT RESULT: "YAQ008\_fin2"**

1/29/2016 9:30AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.375000	28.80	10.7	48	19.6	AV	N	GND
0.780000	23.20	10.8	46	22.8	AV	N	GND
1.040000	21.10	10.9	46	24.9	AV	N	GND



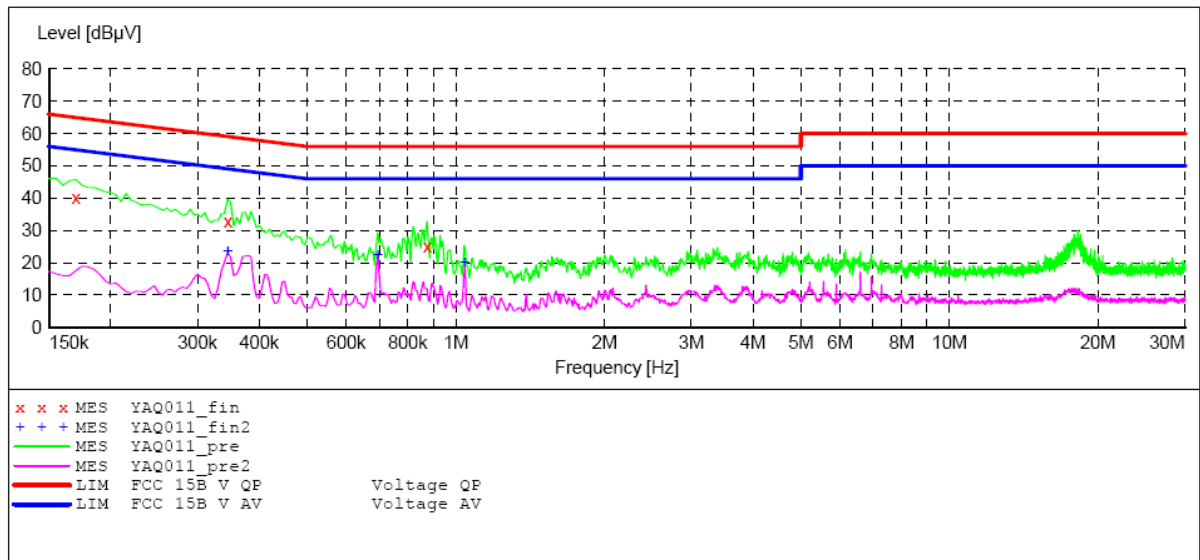
**ACCURATE TECHNOLOGY CO., LTD**

**CONDUCTED EMISSION STANDARD FCC PART 15B**

EUT: Braven 2300 Portable Bluetooth Speaker M/N:2300  
 Manufacturer: Braven LC  
 Operating Condition: BT Operation  
 Test Site: 1#Shielding Room  
 Operator: star  
 Test Specification: N 120V/60Hz  
 Comment: Report No.:ATE20151700  
 Start of Test: 1/29/2016 / 9:40:04AM

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

Start	Stop	Step	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	Average	1.0 s	9 kHz	NSLK8126 2008



**MEASUREMENT RESULT: "YAQ011\_fin"**

1/29/2016 9:43AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.170000	40.00	10.5	65	25.0	QP	N	GND
0.345000	32.90	10.6	59	26.2	QP	N	GND
0.875000	25.10	10.8	56	30.9	QP	N	GND

**MEASUREMENT RESULT: "YAQ011\_fin2"**

1/29/2016 9:43AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.345000	23.40	10.6	49	25.7	AV	N	GND
0.695000	22.40	10.8	46	23.6	AV	N	GND
1.040000	20.00	10.9	46	26.0	AV	N	GND

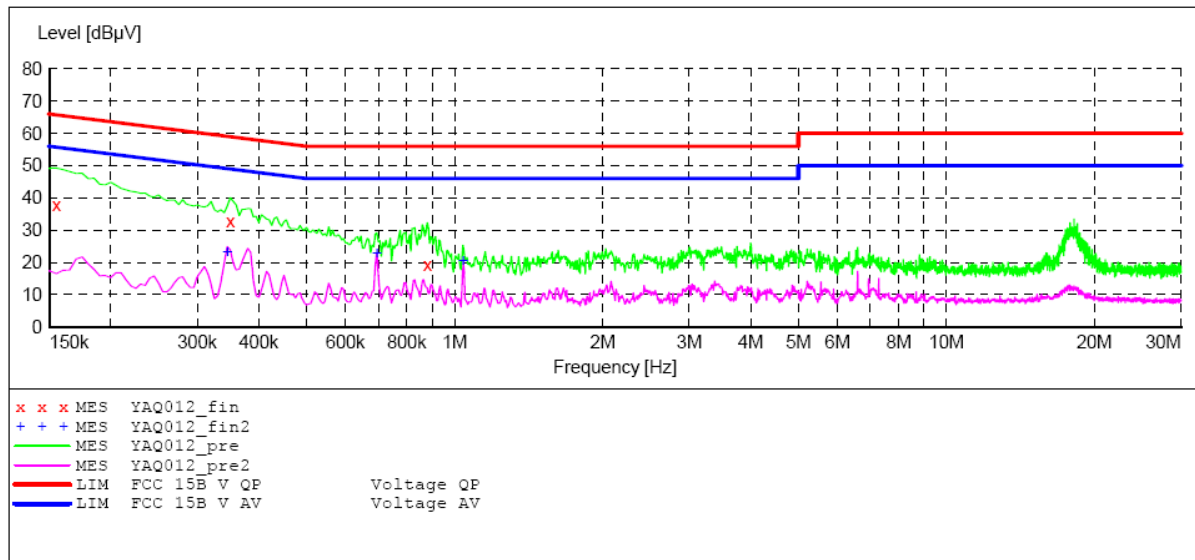
**ACCURATE TECHNOLOGY CO., LTD**

**CONDUCTED EMISSION STANDARD FCC PART 15B**

EUT: Braven 2300 Portable Bluetooth Speaker M/N:2300  
 Manufacturer: Braven LC  
 Operating Condition: BT Operation  
 Test Site: 1#Shielding Room  
 Operator: star  
 Test Specification: L 120V/60Hz  
 Comment: Report No.:ATE20151700  
 Start of Test: 1/29/2016 / 9:44:12AM

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

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



**MEASUREMENT RESULT: "YAQ012\_fin"**

1/29/2016 9:47AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.155000	37.70	10.5	66	28.0	QP	L1	GND
0.350000	32.60	10.6	59	26.4	QP	L1	GND
0.880000	19.20	10.8	56	36.8	QP	L1	GND

**MEASUREMENT RESULT: "YAQ012\_fin2"**

1/29/2016 9:47AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.345000	23.00	10.6	49	26.1	AV	L1	GND
0.695000	22.80	10.8	46	23.2	AV	L1	GND
1.040000	20.50	10.9	46	25.5	AV	L1	GND

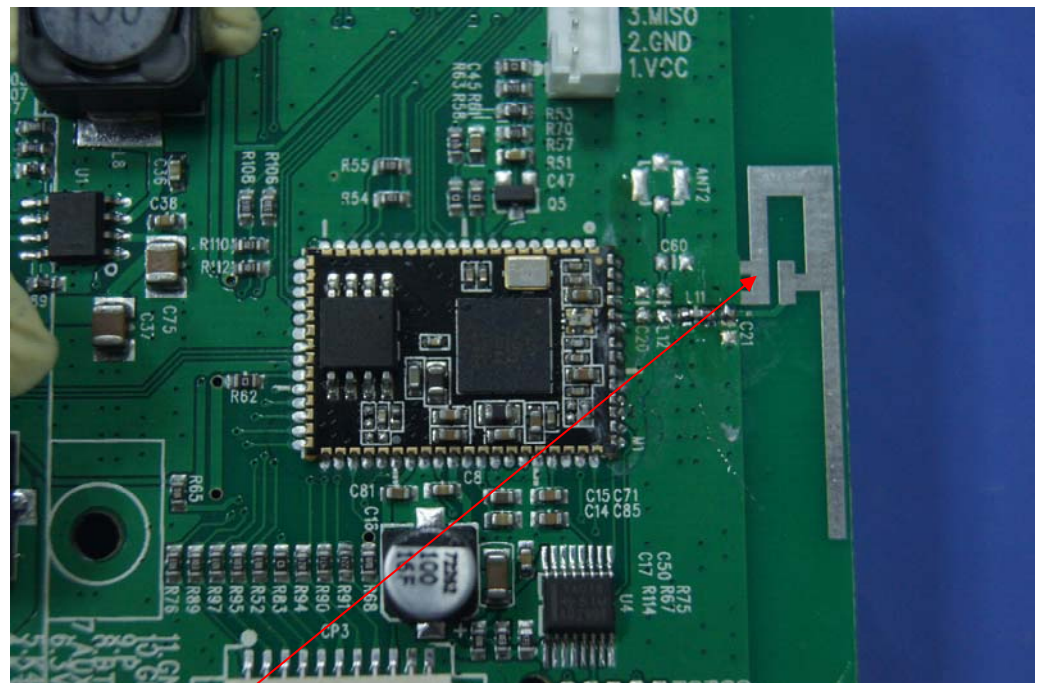
## 13.ANTENNA REQUIREMENT

### 13.1.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.

### 13.2.Antenna Construction

Device is equipped with permanent attached antenna, which isn't displaced by other antenna. The Antenna gain of EUT is 0dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna