

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth Test Mode : GFSK TX 2480MHz

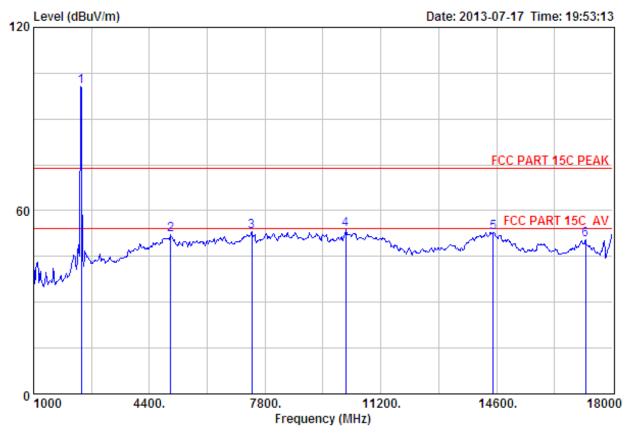
		Ant.	Cable	Amp		Emission			
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2480.00	27.58	6.71	34.03	98.30	98.56	74.00	-24.56	Peak
2	4961.00	31.49	12.44	31.97	39.61	51.57	74.00	22.43	Peak
3	8038.00	36.95	11.40	31.28	35.22	52.29	74.00	21.71	Peak
4	9959.00	38.13	11.60	31.77	34.14	52.10	74.00	21.90	Peak
5	14294.00	41.71	10.92	33.08	33.38	52.93	74.00	21.07	Peak
6	17133.00	40.26	10.94	33.03	32.05	50.22	74.00	23.78	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth Test Mode : 8-DPSK TX 2402MHz

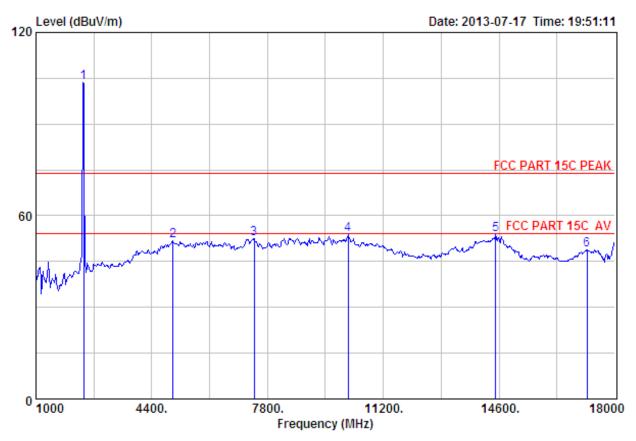
	-	Factor	Loss	Factor	Reading	Emission g Level (dBuV/m)	Limits	_	Remark
1	2402.00	27 61	6 62	34 18	100 56	100 61	74 00	-26 61	Peak
	5029.00								
3	7409.00	36.58	11.60	31.97	36.81	53.02	74.00	20.98	Peak
4	10163.00	38.39	11.50	32.08	35.86	53.67	74.00	20.33	Peak
5	14498.00	41.88	10.93	33.08	33.09	52.82	74.00	21.18	Peak
6	17218.00	40.58	10.91	33.55	32.38	50.32	74.00	23.68	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth Test Mode : 8-DPSK TX 2402MHz

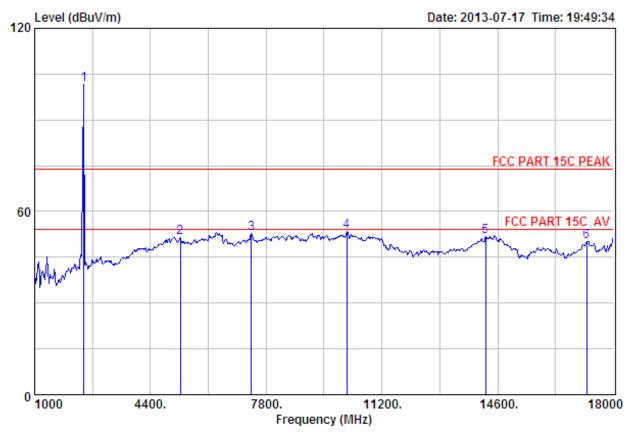
	-	Factor	Loss	Factor	Reading	Emission g Level (dBuV/m)	Limits	_	Remark
1	2402.00	27.61	6.62	34.18	103.64	103.69	74.00	-29.69	Peak
2	5029.00	31.56	12.55	32.06	39.70	51.75	74.00	22.25	Peak
3	7409.00	36.58	11.60	31.97	36.27	52.48	74.00	21.52	Peak
4	10163.00	38.39	11.50	32.08	35.95	53.76	74.00	20.24	Peak
5	14498.00	41.88	10.93	33.08	33.97	53.70	74.00	20.30	Peak
6	17184.00	40.45	10.92	33.34	30.85	48.88	74.00	25.12	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth Test Mode : 8-DPSK TX 2441MHz

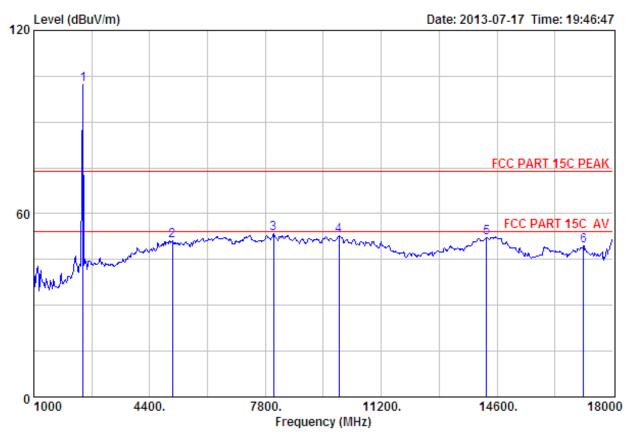
		Ant.	Cable	Amp		Emission			
	Freq. (MHz)				-	(dBuV/m)		_	Remark
1	2441.00	27.60	6.67	34.12	101.56	101.71	74.00	-27.71	Peak
2	5284.00	31.70	12.25	32.22	39.87	51.60	74.00	22.40	Peak
3	7358.00	36.56	11.58	31.99	36.66	52.81	74.00	21.19	Peak
4	10163.00	38.39	11.50	32.08	35.62	53.43	74.00	20.57	Peak
5	14243.00	41.67	10.91	33.24	32.55	51.89	74.00	22.11	Peak
6	17218.00	40.58	10.91	33.55	32.17	50.11	74.00	23.89	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth Test Mode : 8-DPSK TX 2441MHz

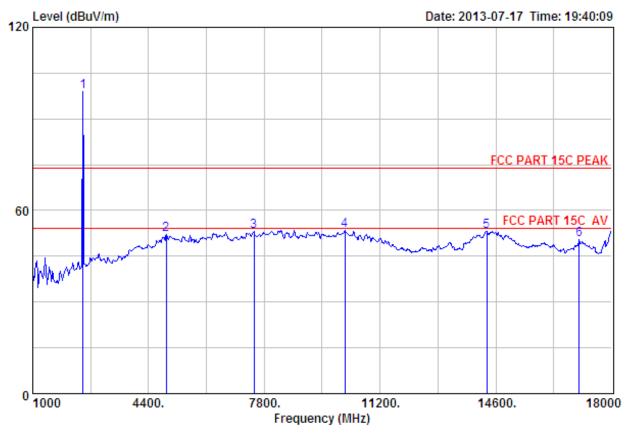
	_	Factor	Loss	Factor	Reading	Emission g Level (dBuV/m)	Limits	_	Remark
1	2441.00	27.60	6.67	34.12	101.97	102.12	74.00	-28.12	Peak
2	5063.00	31.58	12.51	32.11	39.05	51.03	74.00	22.97	Peak
3	8038.00	36.95	11.40	31.28	36.26	53.33	74.00	20.67	Peak
4	9959.00	38.13	11.60	31.77	34.85	52.81	74.00	21.19	Peak
5	14294.00	41.71	10.92	33.08	32.51	52.06	74.00	21.94	Peak
6	17133.00	40.26	10.94	33.03	31.38	49.55	74.00	24.45	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth Test Mode : 8-DPSK TX 2480MHz

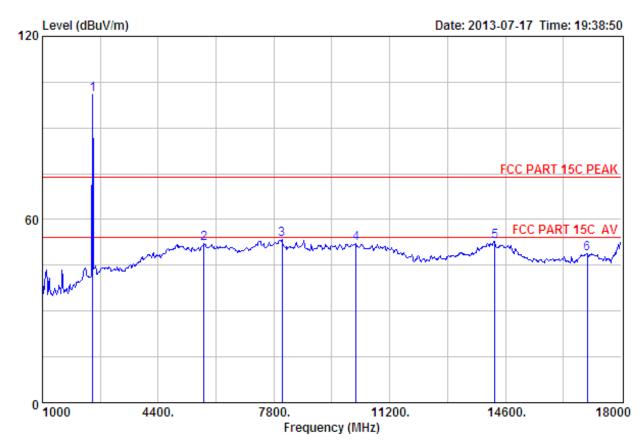
	Freq.	Factor	Loss	Factor	Reading	Emission Level (dBuV/m)	Limits	_	Remark
1	2480.00	27.58	6.71	34.03	98.66	98.92	74.00	-24.92	Peak
2	4927.00	31.45	12.29	31.95	40.33	52.12	74.00	21.88	Peak
3	7494.00	36.48	11.62	31.87	36.98	53.21	74.00	20.79	Peak
4	10163.00	38.39	11.50	32.08	35.75	53.56	74.00	20.44	Peak
5	14328.00	41.74	10.92	32.98	33.52	53.20	74.00	20.80	Peak
6	17048.00	39.93	10.97	33.09	32.53	50.34	74.00	23.66	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth Test Mode : 8-DPSK TX 2480MHz

	Freq.	Factor	Loss	Factor	Reading	Emission Level (dBuV/m)	Limits	_	Remark
1	2480.00	27.58	6.71	34.03	100.68	100.94	74.00	-26.94	Peak
2	5743.00	32.27	12.05	32.54	40.26	52.04	74.00	21.96	Peak
3	8038.00	36.95	11.40	31.28	36.36	53.43	74.00	20.57	Peak
4	10214.00	38.48	11.47	32.17	34.39	52.17	74.00	21.83	Peak
5	14294.00	41.71	10.92	33.08	33.17	52.72	74.00	21.28	Peak
6	16997.00	39.74	10.99	33.21	31.27	48.79	74.00	25.21	Peak

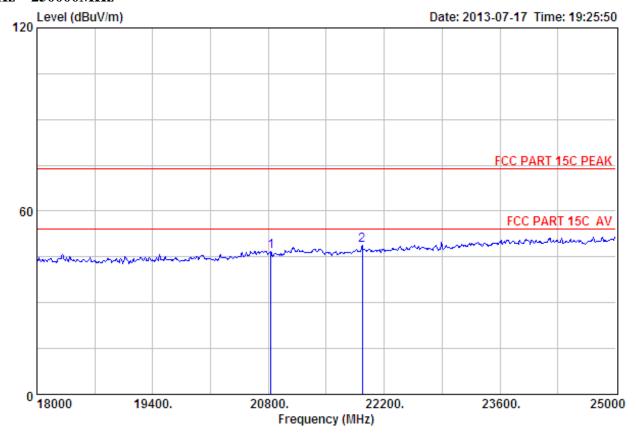
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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18000MHz - 250000MHz



Site no. : 3m Chamber Data no. : 140

Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

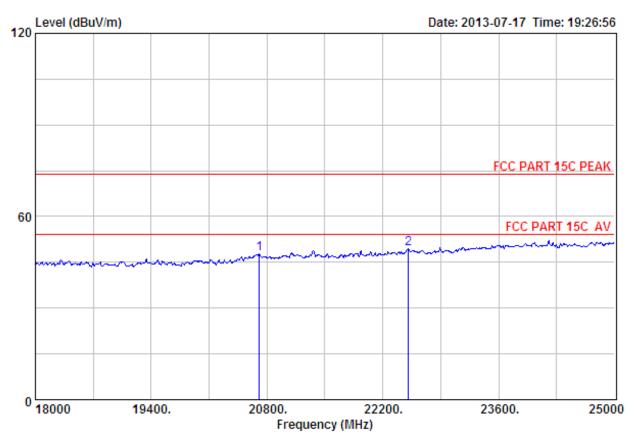
M/N : Jukebox Bluetooth Test Mode : GFSK TX 2402MHz

	Ant. Cable Amp Emission								
	-				_	Level (dBuV/m)		_	Remark
1	20828.00	46.20	20.05	35.96	16.61	46.90	74.00	27.10	Peak
2	21934.00	45.74	20.53	34.97	17.43	48.73	74.00	25.27	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth Test Mode : GFSK TX 2402MHz

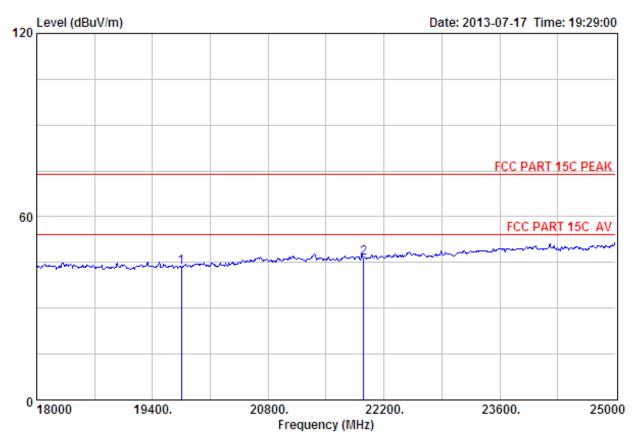
Ant. Cable Amp Emission								
-				_		Limits (dBuV/m)	_	Remark
20709.00 22508.00								Peak Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth Test Mode : GFSK TX 2441MHz

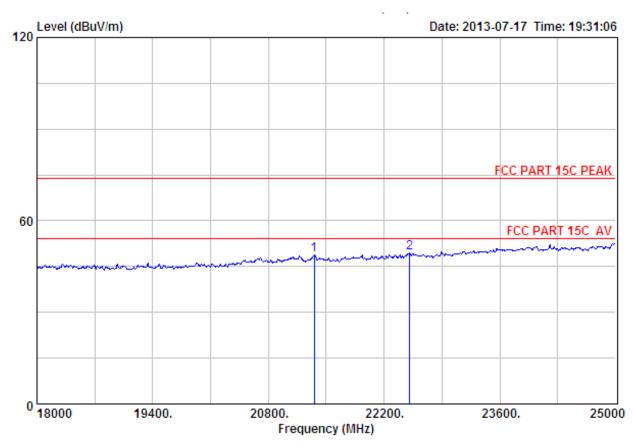
	Ant. Cable Amp Emission								
	-				_		Limits (dBuV/m)	_	Remark
_	19750.00 21955.00								Peak Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth Test Mode : GFSK TX 2441MHz

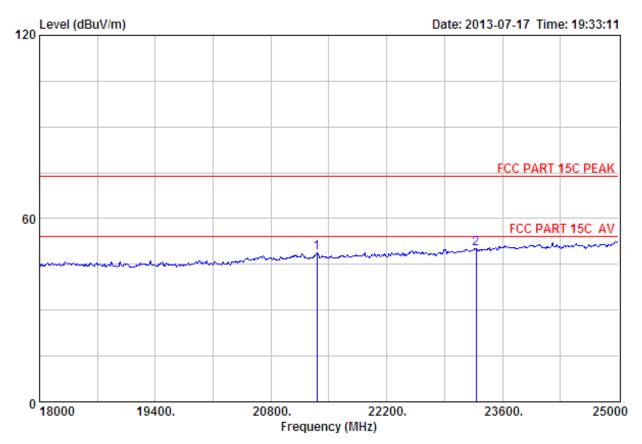
	Ant. Cable Amp Emission							
	-				_	Level (dBuV/m)	_	Remark
_	21353.00 22508.00						 	Peak Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

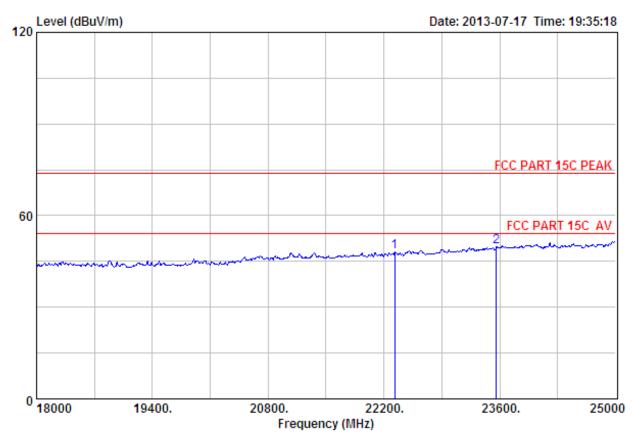
M/N : Jukebox Bluetooth Test Mode : GFSK TX 2480MHz

	Ant.	Cable	Amp]			
 -				_	Limits (dBuV/m)	_	Remark
21353.00 23278.00							Peak Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

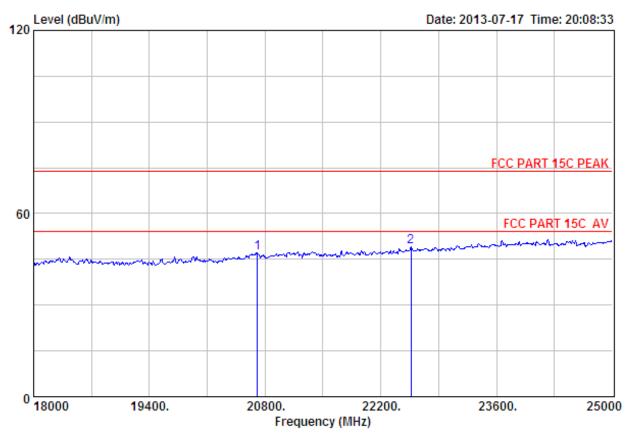
M/N : Jukebox Bluetooth Test Mode : GFSK TX 2480MHz

-	Factor	Loss	Factor	Reading	Limits (dBuV/m)	_	Remark
22333.00 23558.00							

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

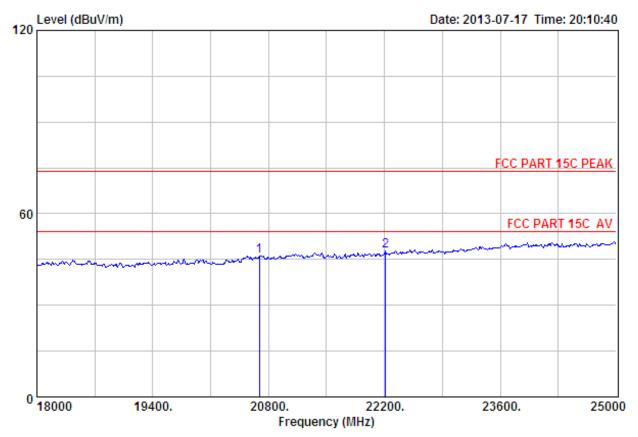
M/N : Jukebox Bluetooth Test Mode : 8-DPSK TX 2402MHz

	Ant.	Cable	Amp		Emission		
 -				_	Level (dBuV/m)	_	Remark
20709.00 22564.00							Peak Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

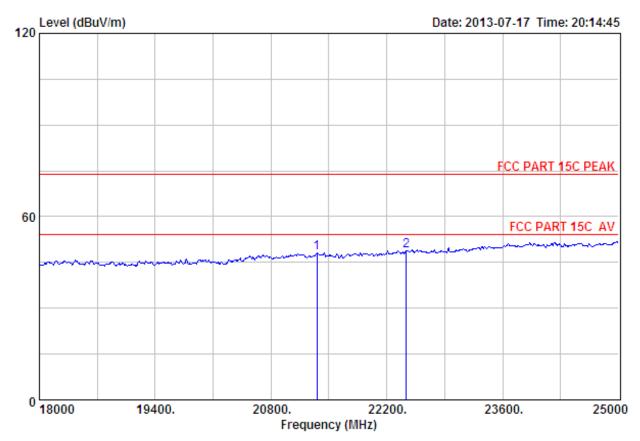
M/N : Jukebox Bluetooth Test Mode : 8-DPSK TX 2402MHz

	Ant.	Cable	Amp	1	Emission			
-				_		Limits (dBuV/m)	Margin (dB)	Remark
20688.00 22214.00								Peak Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth Test Mode : 8-DPSK TX 2441MHz

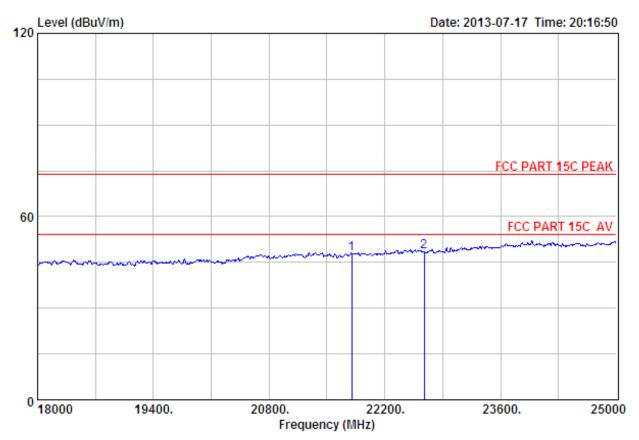
	-	Factor	Loss	Factor	Reading	Emission Level	Limits	_	Remark	
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	21353.00	46.09	20.28	35.49	17.32	48.20	74.00	25.80	Peak	
2	22438.00	45.79	20.82	34.43	16.76	48.94	74.00	25.06	Peak	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth Test Mode : 8-DPSK TX 2441MHz

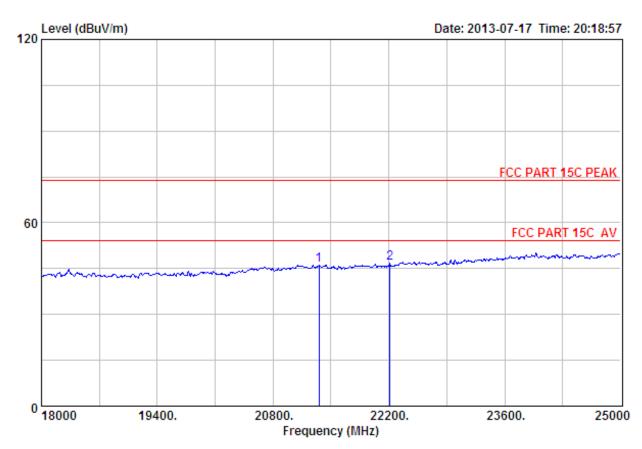
		Ant.	Cable	Amp		Emission			
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	21801.00	45.82	20.47	35.08	16.67	47.88	74.00	26.12	Peak
2	22676.00	45.73	20.96	34.19	15.85	48.35	74.00	25.65	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth Test Mode : 8-DPSK TX 2480MHz

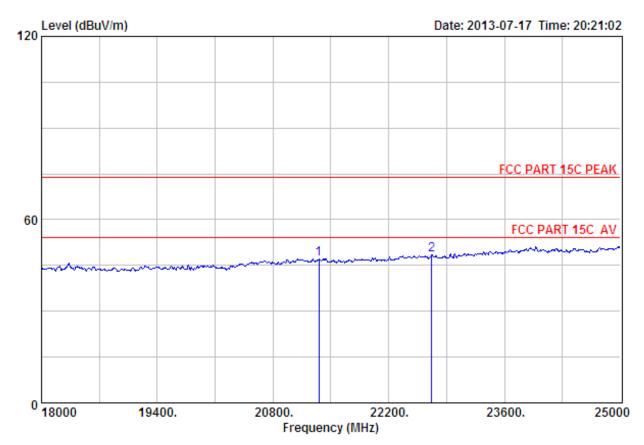
		Ant.	Cable	Amp		Emission		
	-				_	Level (dBuV/m)	_	Remark
_	21353.00 22214.00						 	Peak Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth Test Mode : 8-DPSK TX 2480MHz

		Ant.	Cable	Amp]	Emission		
	-				_	Level (dBuV/m)	_	Remark
_	21353.00 22718.00						 	Peak Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

 The emission levels that are 20dB below the official limit are not reported.

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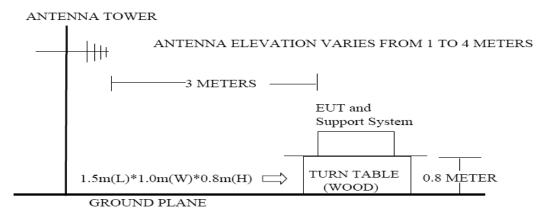


9. BAND EDGE COMPLIANCE

9.1. Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

9.2. Block Diagram of Test setup



9.3. Test Procedure

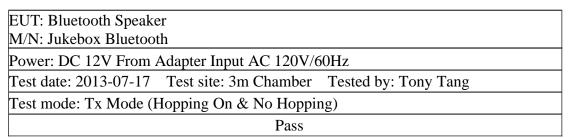
EUT was placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on test.

Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of emissions

(a) PEAK: RBW=VBW=1MHz / Sweep=AUTO

(b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO

9.4. Test Result



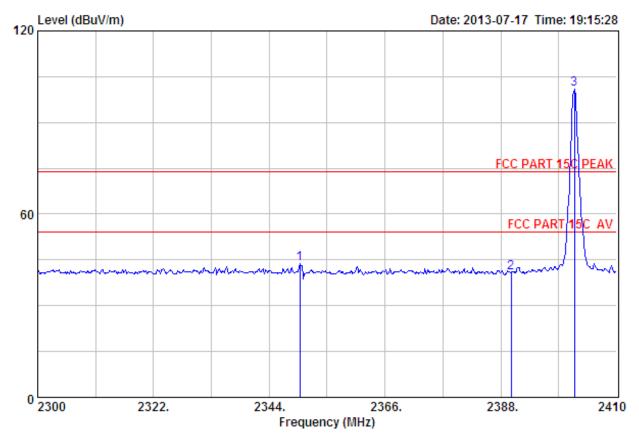
Note: 1. For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.

2. The frequency 2402MHz . 2441MHz and 2480MHz is fundamental frequency which no limit, the limit on plots is automatically generated by the software, it's not fundamental limit, we can't remove it.

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9.5. Test Data



Site no. : 3m Chamber Data no. : 132

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

Test Mode : GFSK TX 2402MHz(No Hopping)

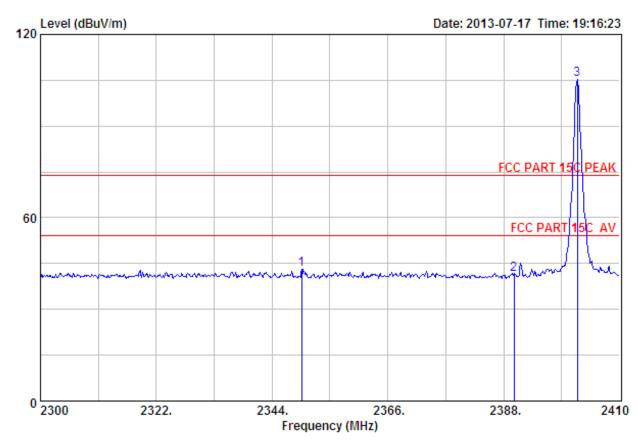
		Ant.	Cable	Amp		Emission	L		
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2349.83	27.70	6.56	34.22	43.61	43.65	74.00	30.35	Peak
2	2390.00	27.64	6.62	34.19	40.74	40.81	74.00	33.19	Peak
3	2401.97	27.61	6.62	34.18	100.94	100.99	74.00	-26.99	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

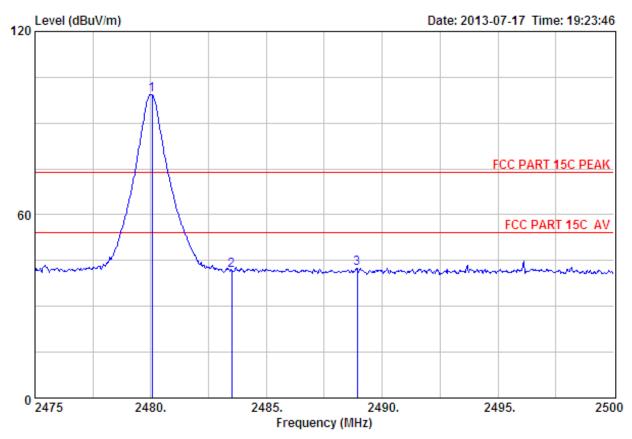
Test Mode : GFSK TX 2402MHz(No Hopping)

		Ant.	Cable	Amp		Emission			
	_				_	Level (dBuV/m)		_	Remark
1	2349.61	27.70	6.56	34.22	43.17	43.21	74.00	30.79	Peak
2	2390.00	27.64	6.62	34.19	41.41	41.48	74.00	32.52	Peak
3	2401.97	27.61	6.62	34.18	105.22	105.27	74.00	-31.27	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.





Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

imit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

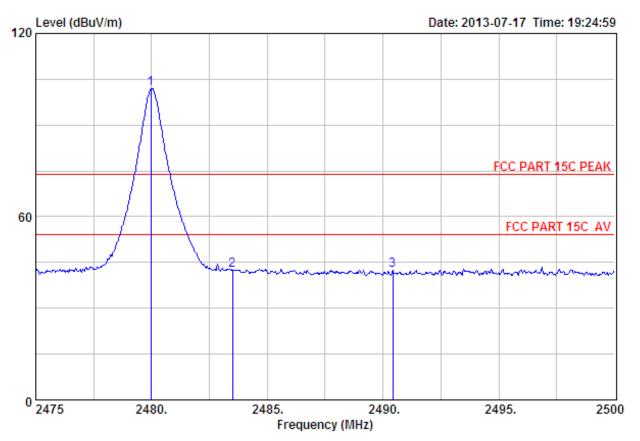
Test Mode : GFSK TX 2480MHz(No Hopping)

		Ant.	Cable	Amp		Emission			
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2480.05	27.58	6.71	34.03	99.12	99.38	74.00	-25.38	Peak
2	2483.50	27.58	6.71	34.03	41.58	41.84	74.00	32.16	Peak
3	2488.93	27.58	6.73	34.03	42.20	42.48	74.00	31.52	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.





Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

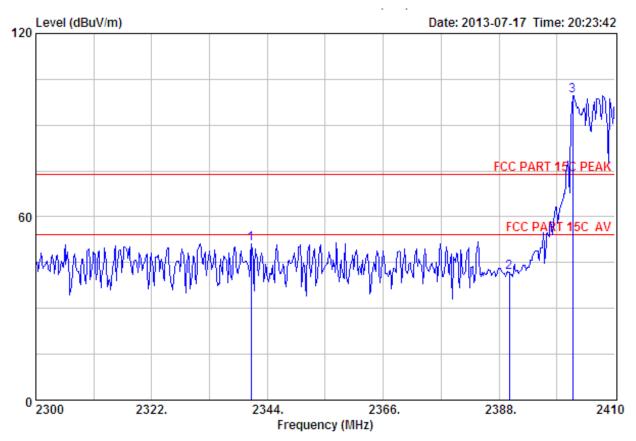
Test Mode : GFSK TX 2480MHz(No Hopping)

	-	Factor	Loss	Factor	Reading	Emission Level (dBuV/m)	Limits	_	Remark
1	2479.98	27.58	6.71	34.03	101.63	101.89	74.00	-27.89	Peak
2	2483.50	27.58	6.71	34.03	42.28	42.54	74.00	31.46	Peak
3	2490.43	27.58	6.73	34.03	42.33	42.61	74.00	31.39	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

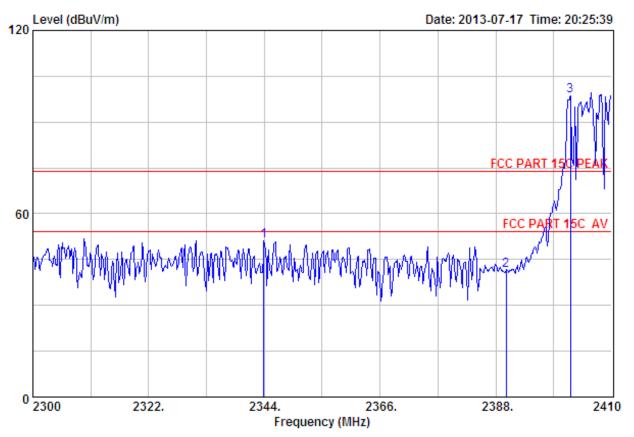
Test Mode : GFSK TX 2402MHz(Hopping On)

		Ant.	Cable	Amp		Emission			
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2340.92	27.70	6.56	34.22	51.22	51.26	74.00	22.74	Peak
2	2390.00	27.64	6.62	34.19	41.57	41.64	74.00	32.36	Peak
3	2401.97	27.61	6.62	34.18	99.53	99.58	74.00	-25.58	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

Test Mode : GFSK TX 2402MHz (Hopping On)

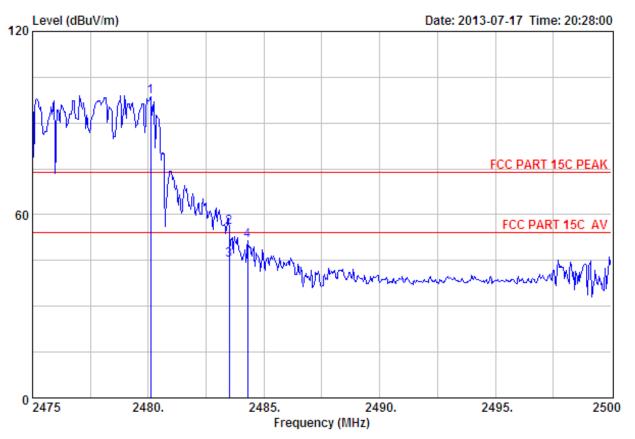
		Ant.	Cable	Amp		Emission			
	-				_	Level (dBuV/m)		Margin (dB)	Remark
1	2343.89	27.70	6.56	34.22	51.22	51.26	74.00	22.74	Peak
2	2390.00	27.64	6.62	34.19	41.22	41.29	74.00	32.71	Peak
3	2402.19	27.61	6.62	34.18	98.55	98.60	74.00	-24.60	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

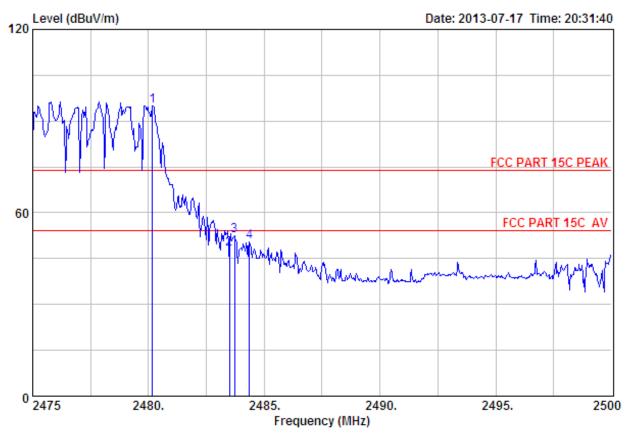
Test Mode : GFSK TX 2480MHz (Hopping On)

		Ant.	Cable	Amp		Emission			
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2480.10	27.58	6.71	34.03	98.27	98.53	74.00	-24.53	Peak
2	2483.50	27.58	6.71	34.03	55.56	55.82	74.00	18.18	Peak
3	2483.50	27.58	6.71	34.03	44.86	45.12	54.00	8.88	Average
4	2484.30	27.58	6.71	34.03	51.17	51.43	74.00	22.57	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

Test Mode : GFSK TX 2480MHz(Hopping On)

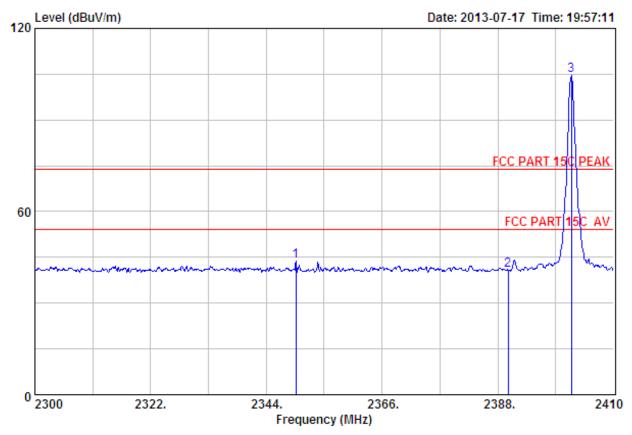
	-	Factor	Loss	Factor	Reading	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark
1	2480.18	27.58	6.71	34.03	94.79	95.05	74.00	-21.05	Peak
2	2483.50	27.58	6.71	34.03	47.88	48.14	74.00	25.86	Peak
3	2483.73	27.58	6.71	34.03	52.06	52.32	74.00	21.68	Peak
4	2484.35	27.58	6.71	34.03	50.21	50.47	74.00	23.53	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

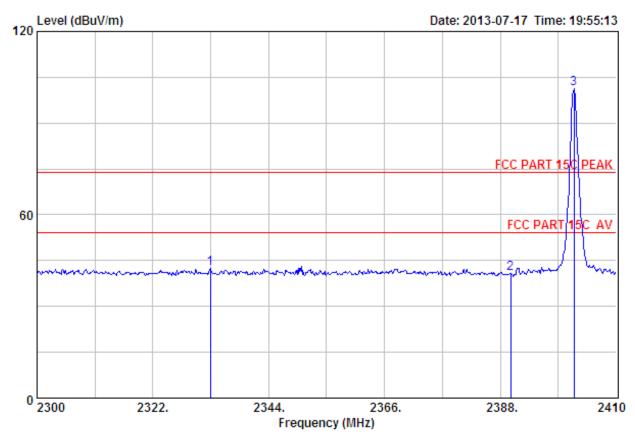
Test Mode : 8-DPSK TX 2402MHz(No Hopping)

		Ant.	Cable	Amp		Emission				
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark	
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	2349.61	27.70	6.56	34.22	43.80	43.84	74.00	30.16	Peak	-
2	2390.00	27.64	6.62	34.19	40.85	40.92	74.00	33.08	Peak	
3	2401.97	27.61	6.62	34.18	104.48	104.53	74.00	-30.53	Peak	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

Test Mode : 8-DPSK TX 2402MHz(No Hopping)

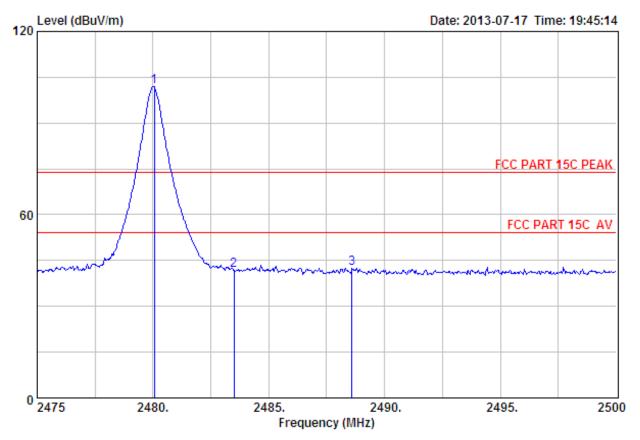
	-	Factor	Loss	Factor	Reading	Emission Level (dBuV/m)	Limits	_	Remark
1	2332.89	27.73	6.54	34.23	42.30	42.34	74.00	31.66	Peak
2	2390.00	27.64	6.62	34.19	40.80	40.87	74.00	33.13	Peak
3	2401.97	27.61	6.62	34.18	101.26	101.31	74.00	-27.31	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

Test Mode : 8-DPSK TX 2480MHz(No Hopping)

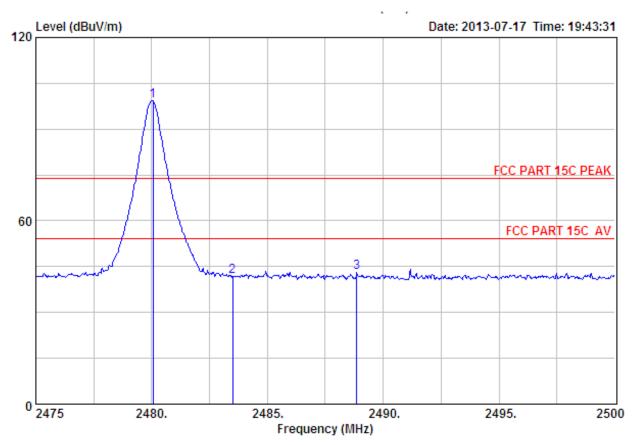
-	Factor	Loss	Factor	Reading	Emission Level (dBuV/m)	Limits	_	Remark
2480.05								
2483.50 2488.60								Peak Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

Test Mode : 8-DPSK TX 2480MHz(No Hopping)

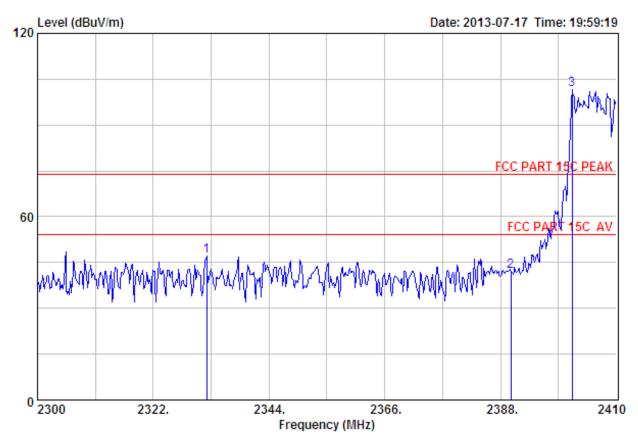
		Ant.	Cable	Amp		Emission				
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark	
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	2480.05	27 58	6 71	34 03	08 00	00 25	74 00	-25 25	Peak	
	2483.50								Peak	
3	2488.85	27.58	6.73	34.03	42.81	43.09	74.00	30.91	Peak	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

Test Mode : 8-DPSK TX 2402MHz (Hopping On)

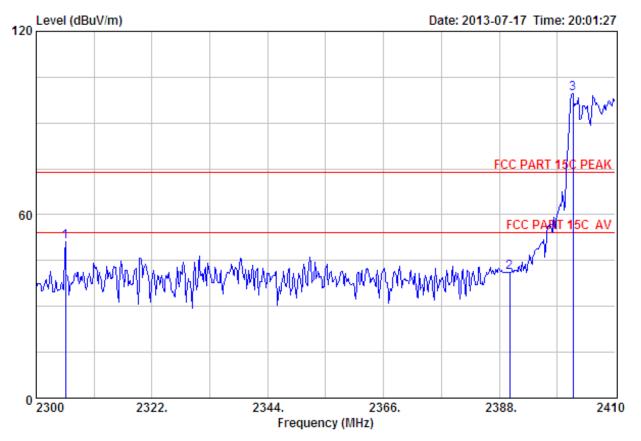
		Ant.	Cable	Amp		Emission			
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2332.12	27.73	6.54	34.23	47.00	47.04	74.00	26.96	Peak
2	2390.00	27.64	6.62	34.19	42.19	42.26	74.00	31.74	Peak
3	2401.64	27.61	6.62	34.18	101.43	101.48	74.00	-27.48	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

Test Mode : 8-DPSK TX 2402MHz (Hopping On)

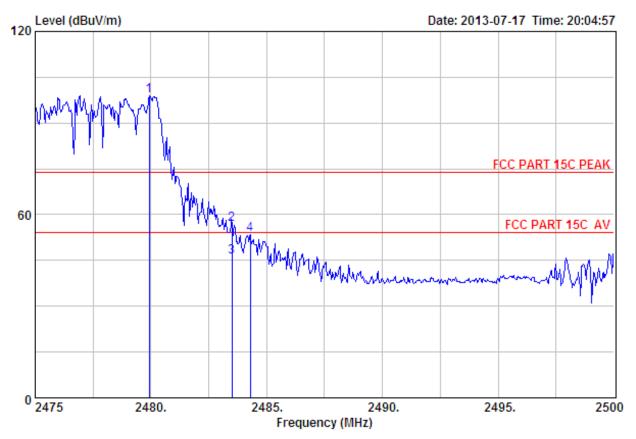
		Ant.	Cable	Amp		Emission			
	-	Factor (dB/m)			_			Margin (dB)	Remark
1	2305.61	27.76	6.53	34.24	51.08	51.13	74.00	22.87	Peak
2	2390.00	27.64	6.62	34.19	40.91	40.98	74.00	33.02	Peak
3	2401.97	27.61	6.62	34.18	99.65	99.70	74.00	-25.70	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

Test Mode : 8-DPSK TX 2480MHz(Hopping On)

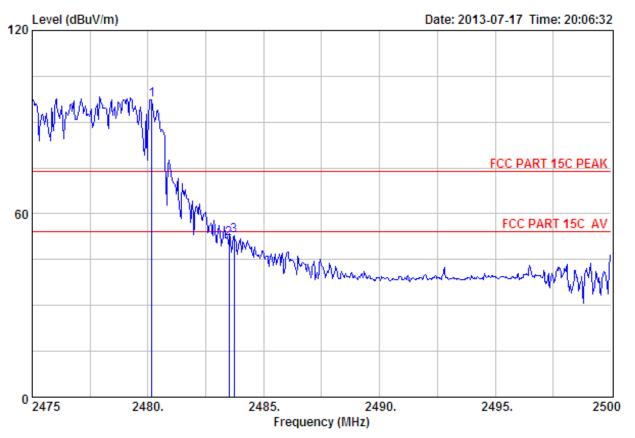
	-	Factor	Loss	Factor	Reading	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark
2	2479.93 2483.50 2483.50 2484.30	27.58 27.58	6.71 6.71	34.03 34.03	56.54 45.73	56.80 45.99	74.00 54.00	17.20 8.01	Peak Peak Average Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

Test Mode : 8-DPSK TX 2480MHz (Hopping On)

		Ant.	Cable	Amp		Emission			
	-	Factor (dB/m)			_			Margin (dB)	Remark
1	2480.18	27.58	6.71	34.03	97.12	97.38	74.00	-23.38	Peak
2	2483.50	27.58	6.71	34.03	51.51	51.77	74.00	22.23	Peak
3	2483.73	27.58	6.71	34.03	52.44	52.70	74.00	21.30	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.

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10. POWER LINE CONDUCTED EMISSIONS

10.1.Limit

	Maximum RF Line Voltage				
Frequency	Quasi-Peak Level	Average Level			
	$dB(\mu V)$	dB(μV)			
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*			
500kHz ~ 5MHz	56	46			
5MHz ~ 30MHz	60	50			

Notes: 1. * Decreasing linearly with logarithm of frequency.

10.2.Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT was charged form PC's USB port which connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#).. Both sides of AC line 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: 2003 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESHS30) is set at 10kHz.

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

10.3.Test Result

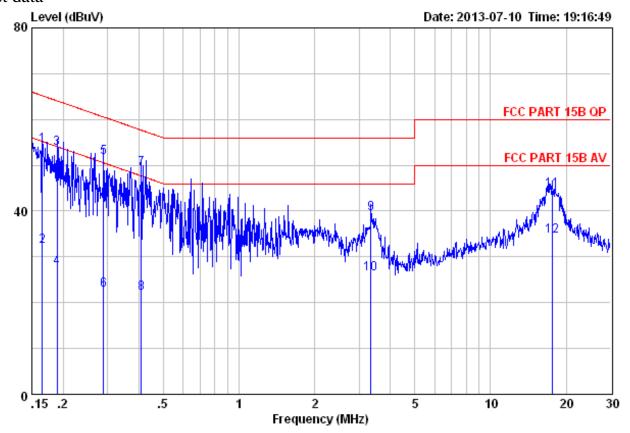
0.15MHz—30MHz Conducted emissison Test result						
EUT: Bluetooth Speaker						
M/N: Jukebox Bluetooth						
Power: DC 12V From Adapter Input AC 120V/60Hz						
Test date: 2013-07-10 Test site: 3m Chamber Tested by: Tony.Tang						
Test mode: Tx Mode						
Pass						

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^{2.} The lower limit shall apply at the transition frequencies.

10.4.Test data



Site no. : EST Conduction Shielded RoomData no. : 51 Limit : FCC PART 15B QP LINE Phase : LINE

Env. / Ins. : Temp:25.3'C Humi:58% Press:101.50kPa

Engineer : Tony

EUT : Bluetooth Speaker

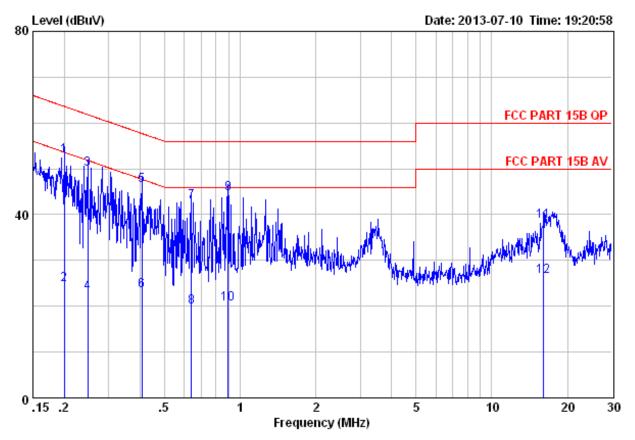
Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

Test Mode : TX Mode

		LISN	Cable		Emission			
	Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dBuV)	(dBuv/m)	(dBuv/m)	(dB)	
1	0.17	9.61	9.81	34.96	54.38	65.21	10.83	QP
2	0.17	9.61	9.81	12.96	32.38	55.21	22.83	Average
3	0.19	9.61	9.80	34.21	53.62	64.06	10.44	QP
4	0.19	9.61	9.80	8.21	27.62	54.06	26.44	Average
5	0.29	9.61	9.83	32.19	51.63	60.54	8.91	QP
6	0.29	9.61	9.83	3.19	22.63	50.54	27.91	Average
7	0.41	9.61	9.82	29.73	49.16	57.68	8.52	QP
8	0.41	9.61	9.82	2.73	22.16	47.68	25.52	Average
9	3.35	9.63	9.84	19.87	39.34	56.00	16.66	QP
10	3.35	9.63	9.84	6.87	26.34	46.00	19.66	Average
11	17.57	9.69	9.93	24.90	44.52	60.00	15.48	QP
12	17.57	9.69	9.93	14.90	34.52	50.00	15.48	Average

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Site no. : EST Conduction Shielded RoomData no. : 53 Limit : FCC PART 15B QP LINE Phase : NEUTRAL

Env. / Ins. : Temp:25.3'C Humi:58% Press:101.50kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 12V From Adapter Input AC 120V/60Hz

M/N : Jukebox Bluetooth

Test Mode : TX Mode

		LISN	Cable		Emission			
	Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dBuV)	(dBuv/m)	(dBuv/m)	(dB)	
1	0.20	9.60	9.80	33.42	52.82	63.62	10.80	QP
2	0.20	9.60	9.80	5.42	24.82	53.62	28.80	Average
3	0.25	9.60	9.82	30.47	49.89	61.82	11.93	QP
4	0.25	9.60	9.82	3.47	22.89	51.82	28.93	Average
5	0.41	9.59	9.82	27.05	46.46	57.73	11.27	QP
6	0.41	9.59	9.82	4.05	23.46	47.73	24.27	Average
7	0.64	9.62	9.81	23.37	42.80	56.00	13.20	QP
8	0.64	9.62	9.81	0.37	19.80	46.00	26.20	Average
9	0.89	9.62	9.82	25.09	44.53	56.00	11.47	QP
10	0.89	9.62	9.82	1.09	20.53	46.00	25.47	Average
11	16.05	9.75	9.94	18.85	38.54	60.00	21.46	QP
12	16.05	9.75	9.94	6.85	26.54	50.00	23.46	Average

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11. ANTENNA REQUIREMENTS

11.1.Limit

For intentional device, according to FCC 47 CFR 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2.Result

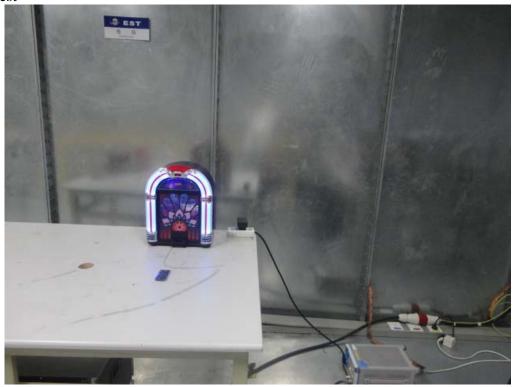
The antennas used for this product are integral Patch Antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 0dBi.





12. TEST SETUP PHOTO

Conducted Test

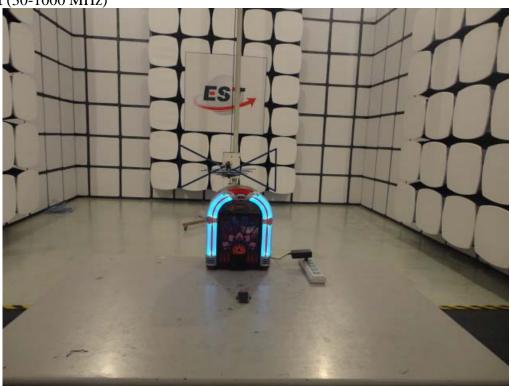


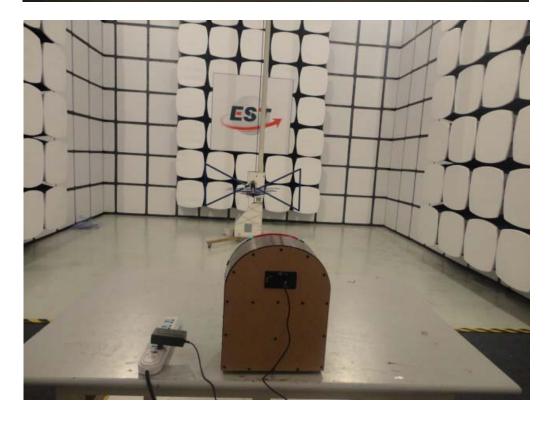




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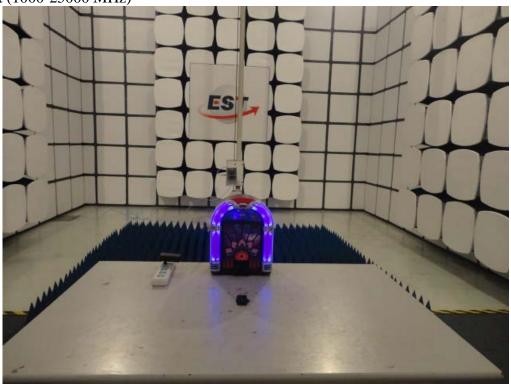
Radiated Test (30-1000 MHz)

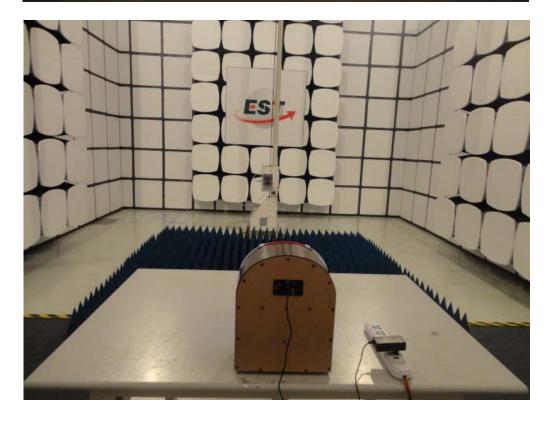






Radiated Test (1000-25000 MHz)

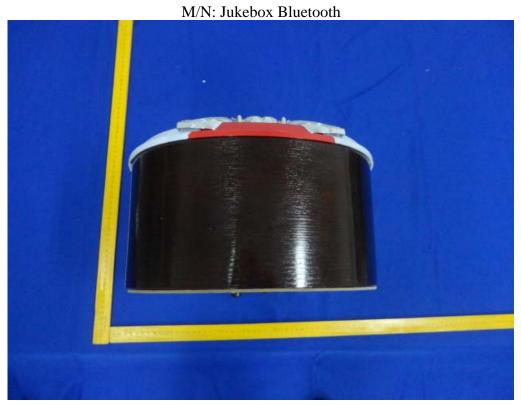






13.PHOTOS OF EUT

External Photos







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External Photos M/N: Jukebox Bluetooth







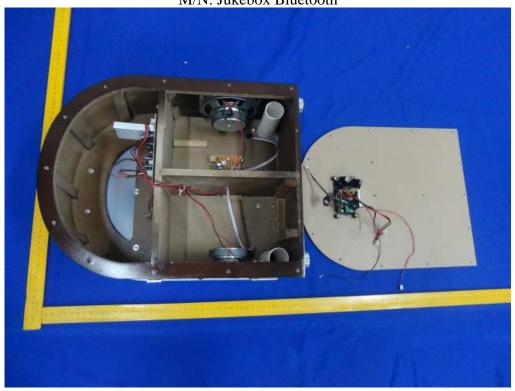
External Photos M/N: Jukebox Bluetooth

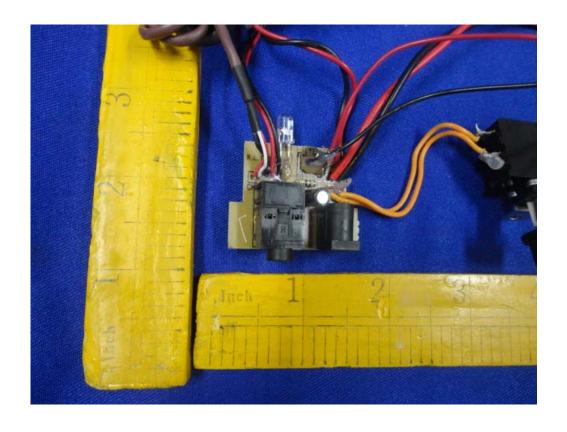




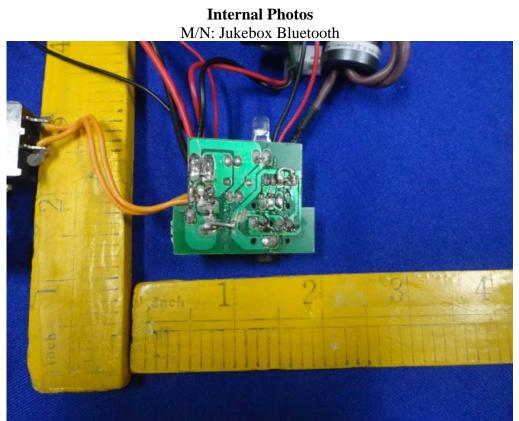
Internal Photos

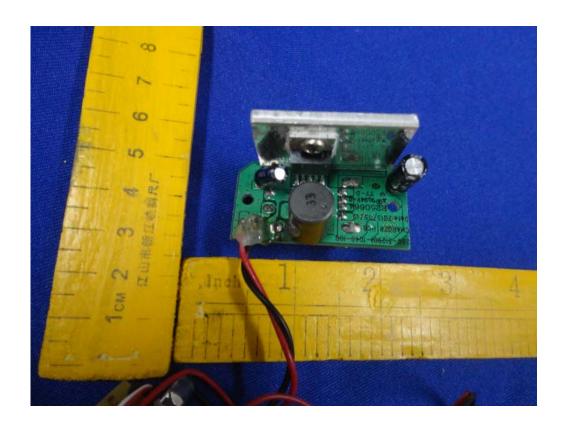
M/N: Jukebox Bluetooth





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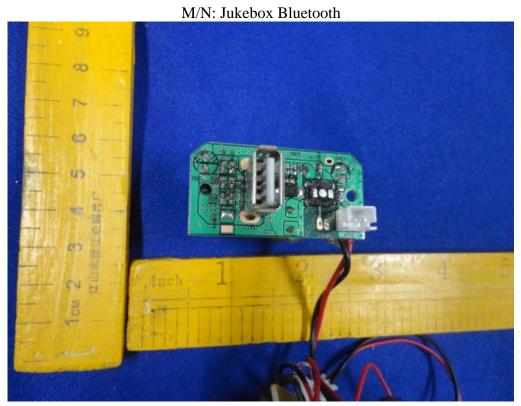


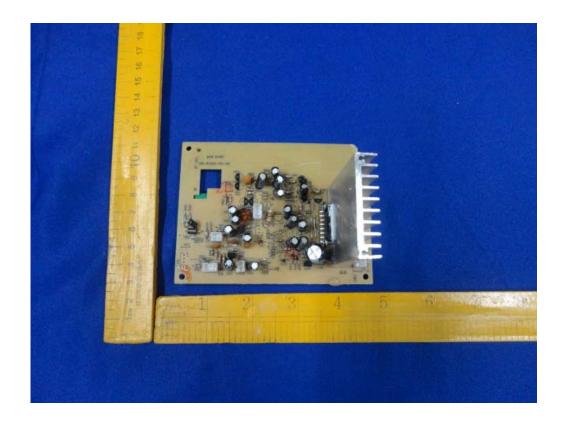




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Internal Photos







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Internal Photos



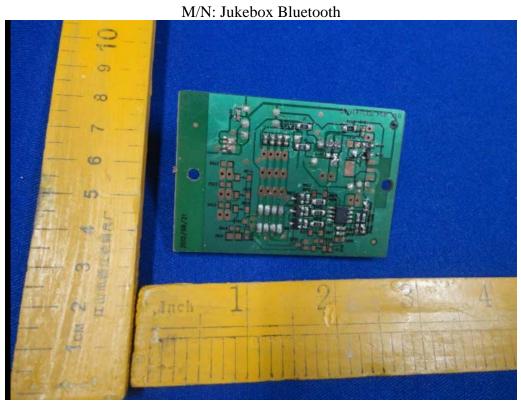
Antenna

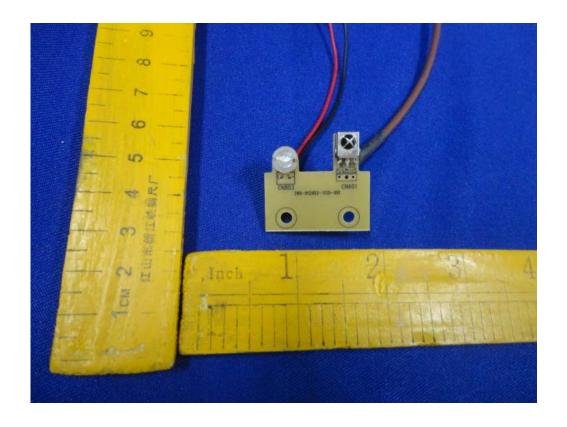




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Internal Photos

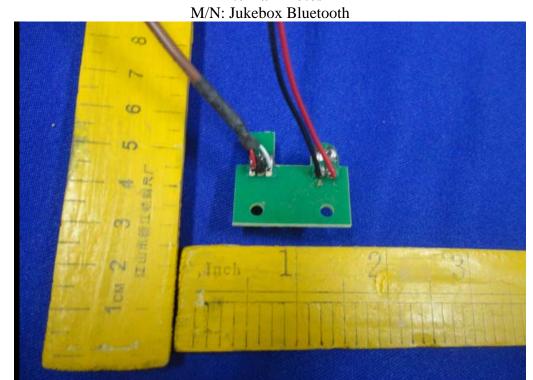






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Internal Photos



Adapter Photos M/N: Jukebox Bluetooth





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Remote Control Photos









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