



FCC TEST REPORT

Test report

On Behalf of

Modern Marketing Concepts, Inc.

For

Eclipse Entertainment Center

CR7014A-BK, CR7014X-XXXX("X-XXXX" can be replaced Model No.: by letter from "A" to "Z", number from "0" to "9" or blank)

FCC ID: AUSCR7014A

Prepared for: Modern Marketing Concepts, Inc.

1220 E Oak, St. Louisville, Kentucky, United States 40204

Prepared By: Shenzhen HUAK Testing Technology Co., Ltd.

1F, B2 Building, Junfeng Zhongcheng Zhizao Innovation Park, Fuhai

Street, Bao'an District, Shenzhen City, China

Date of Test: Sep. 18, 2019 ~ Sep. 26, 2019

Date of Report: Sep. 26, 2019

Report Number: HK1909272441-E



Page 2 of 29 Report No.: HK1909272441-E

TEST RESULT CERTIFICATION

Applicant's name:	Modern Marketing Concepts, Inc.
Address:	1220 E Oak, St. Louisville, Kentucky, United States 40204
Manufacture's Name:	Timsen Development Limited
Address:	5F, 447# Tianhebei Road, Guangzhou, China
Product description	
Trade Mark:	CROSLEY
Product name:	Eclipse Entertainment Center
Model and/or type reference .:	CR7014A-BK, CR7014X-XXXX("X-XXXX" can be replaced by letter from "A" to "Z", number from "0" to "9" or blank)
Standards:	FCC Rules and Regulations Part 15 Subpart C Section 15.249 ANSI C63.10: 2013
the Shenzhen HUAK Testing source of the material. Shenzh	
Date (s) of performance of tests	: Sep. 18, 2019 ~ Sep. 26, 2019
Date of Issue	: Sep. 26, 2019
Test Result	Pass
Testing Engin	eer : Goyl Di an (Gary Qian)
Technical Mai	nager: Edon Hu

(Eden Hu)

Jason Zhou Authorized Signatory

(Jason Zhou)



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8.2 Conducted Emission

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1.1 TEST PROCEDURES AND RESULTS

DESCRIPTION C	OF TEST	RESULT
15.207	Conducted Emission	COMPLIANT
15.249&15.209	Fundamental &Radiated Spurious Emission Measuremen	COMPLIANT
15.215	Bandwidth	COMPLIANT
15.205	Band Edge Emission	COMPLIANT
15.203	Antenna Requirement	COMPLIANT

1.2 TEST FACILITY

Test Firm : Shenzhen HUAK Testing Technology Co., Ltd.

Address 1F, B2 Building, Junfeng Zhongcheng Zhizao Innovation Park, Fuhai

Street, Bao'an District, Shenzhen City, China

1.3 MEASUREMENT UNCERTAINTY

Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2 Radiated emission expanded uncertainty(9kHz-30MHz) = 3.08dB, k=2 Radiated emission expanded uncertainty(30MHz-1000MHz) = 4.42dB, k=2 Radiated emission expanded uncertainty(Above 1GHz) = 4.06dB, k=2



2.1 GENERAL DESCRIPTION OF EUT

Equipment	Eclipse Entertainment Center					
Model Name	CR7014A-BK, CR7014X-XXXX					
Serial No	N/A					
Model Difference	All model's the function, software and electric circuit are the same, X-XXXX represents the color, they be replaced by letter from "A" to "Z", number from "0" to "9" or blank Test sample model: CR7014A-BK					
FCC ID	AUSCR7014A					
Antenna Type	Internal Antenna					
Antenna Gain	0.8dBi					
BT Operation frequency	2402-2480MHz					
Number of Channels	79CH					
Modulation Type	GFSK, π/4DQPSK, 8DPSK					
Battery	N/A					
Power Source	AC 9V, 2.3A from transformer					
Transformer	Input: AC 120V/60Hz Output: AC 9V 2.3A					



2. 52	Channel List										
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)						
00	2402	27	2429	54	2456						
01	2403	28	2430	55	2457						
02	2404	29	2431	56	2458						
03	2405	30	2432	57	2459						
04	2406	31	2433	58	2460						
05	2407	32	2434	59	2461						
06	2408	33	2435	60	2462						
07	2409	34	2436	610	2463						
08	2410	35	2437	62	2464						
09	2411	36	2438	63	2465						
10	2412	37	2439	64	2466						
11	2413	38	2440	65	2467						
12	2414	39	2441	66	2468						
13	2415	40	2442	67	2469						
. 14	2416	41	2443	68	2470						
15	2417	42	2444	69	2471						
16	2418	43	2445	70	2472						
17	2419	44	2446	71	2473						
18	2420	45	2447	72	2474						
19	2421	46	2448	73	2475						
20	2422	47	2449	74	2476						
21	2423	48	2450	75	2477						
22	2424	49	2451	76	2478						
23	2425	50	2452	77	2479						
24	2426	51	2453	78	2480						
25	2427	52	2454								
26	2428	53	2455	A							

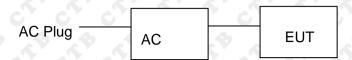
2.2 Operation of EUT during testing

Operating Mode
The mode is used: **Transmitting mode**Low Channel: 2402MHz Middle Channel: 2441MHz High Channel: 2480MHz



2.3 DESCRIPTION OF TEST SETUP

Operation of EUT during conducted testing:



Operation of EUT during Radiation testing and Above1GHz Radiation testing:





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Hf antenna

2.4 MEASUREMENT INSTRUMENTS LIST

Cal. Model No. Item Equipment Manufacturer Serial No. Last Cal. Interval L.I.S.N. **Artificial Mains** R&S **ENV216** HKE-002 Dec. 28, 2018 1 Year 1. Network R&S ESCI 7 HKE-010 Dec. 28, 2018 1 Year 2. Receiver RF automatic Tonscend JS0806-2 HKE-060 Dec. 28, 2018 1 Year 3. control unit 4. Spectrum analyzer R&S FSP40 HKE-025 Dec. 28, 2018 1 Year 1 Year 5. Spectrum analyzer N9020A HKE-048 Dec. 28, 2018 Agilent **BBV 9743** 6. Preamplifier Schwarzbeck HKE-006 Dec. 28, 2018 1 Year 7. **EMI Test Receiver** Rohde & Schwarz ESCI 7 HKE-010 Dec. 28, 2018 1 Year Bilog Broadband 8. Schwarzbeck VULB9163 HKE-012 Dec. 28, 2018 1 Year Antenna **FMZB 1519** 9. Loop Antenna Schwarzbeck HKE-014 Dec. 28, 2018 1 Year В Horn Antenna Schewarzbeck 9120D HKE-013 Dec. 28, 2018 1 Year 10. EMC051845 11. Pre-amplifier **EMCI** HKE-015 Dec. 28, 2018 1 Year SE 12. 83051A HKE-016 Dec. 28, 2018 Pre-amplifier Agilent 1 Year **JZOZtheBO EMI Test Software** 13. HKE-083 N/A Tonscend T120-B N/A EZ-EMC Version 14. Power Sensor Agilent E9300A HKE-086 Dec. 28, 2018 1 Year 15. Spectrum analyzer Agilent N9020A HKE-048 Dec. 28, 2018 1 Year 16. HKE-029 Dec. 28, 2018 Signal generator Agilent N5182A 1 Year 17. Signal Generator Agilent 83630A HKE-028 Dec. 28, 2018 1 Year Shiel Hong Shielded room 4*3*3 HKE-039 Dec. 28, 2017 18. 3 Year

LB-180400-

KF

HKE-031

Dec. 28, 2018

1 Year

Schwarzbeck





3. CONDUCTED EMISSIONS TEST

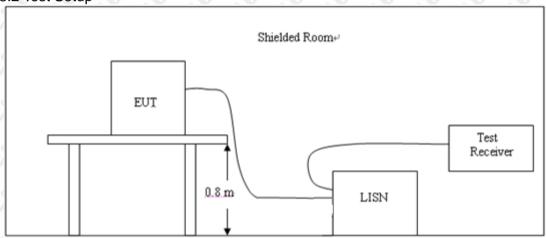
3.1 Conducted Power Line Emission Limit

For unintentional device, according to § 15.207(a) Line Conducted Emission Limits is as following

Eroguanav	Maximum RF Line Voltage (dBμV)					
Frequency (MHz)	CLAS	SS A	CLASS B			
(11112)	Q.P.	Ave.	Q.P.	Ave.		
0.15 - 0.50	79	66	66-56*	56-46*		
0.50 - 5.00	73	60	56	46		
5.00 - 30.0	73	60	60	50		

^{*} Decreasing linearly with the logarithm of the frequency
For intentional device, according to §15.207(a) Line Conducted Emission Limit is same as above table.

3.2 Test Setup



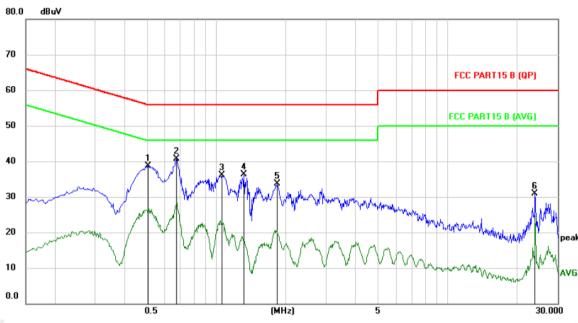
3.3 Test Procedure

- 1, The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10.
- 2, Support equipment, if needed, was placed as per ANSI C63.10.
- 3, All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4, If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5, All support equipments received AC power from a second LISN, if any.
- 6, The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7, Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.

3.4 Test Result

PASS

- 1. All modes were tested at AC 120V and 240V, only the worst result of AC 120V 60Hz was reported.
- 2. All the test modes completed for test. only the worst result of GFSK Low Channel was reported as below:



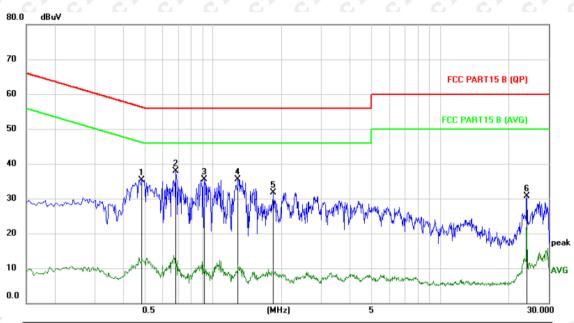
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.5100	28.69	9.98	38.67	56.00	-17.33	peak
2	*	0.6740	30.75	10.04	40.79	56.00	-15.21	peak
3		1.0620	26.03	9.99	36.02	56.00	-19.98	peak
4		1.3180	26.21	10.03	36.24	56.00	-19.76	peak
5		1.8300	23.62	10.03	33.65	56.00	-22.35	peak
6		24.0060	19.99	10.86	30.85	60.00	-29.15	peak

Remark:

Factor = Cable loss + LISN factor, Over = Measurement - Limit



Test Specification: Neutral



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1	0.4860	25.54	9.80	35.34	56.24	-20.90	peak
2 *	0.6860	28.11	9.89	38.00	56.00	-18.00	peak
3	0.9140	25.60	10.00	35.60	56.00	-20.40	peak
4	1.2860	25.47	10.08	35.55	56.00	-20.45	peak
5	1.8420	21.62	10.12	31.74	56.00	-24.26	peak
6	24.0220	19.88	10.84	30.72	60.00	-29.28	peak

Remark:

Factor = Cable loss + LISN factor, Over = Measurement – Limit



4 RADIATED EMISSION TEST

4.1 Radiation Limit

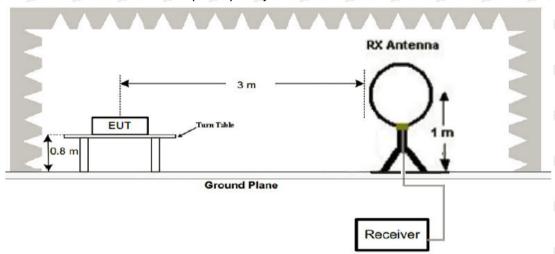
For unintentional device, according to § 15.209(a), except for Class B digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Ī	Frequency (MHz)	Distance (Meters)	Radiated (dBµV/m)	Radiated (µV/m)
I	0.009-0.49	3	20log(2400/F(KHz))+40log(300/3)	2400/F(KHz)
Ī	0.49-1.705	3	20log(24000/F(KHz))+ 40log(30/3)	24000/F(KHz)
I	1.705-30	3	20log(30)+ 40log(30/3)	30
Ī	30-88	3	40.0	100
Ī	88-216	3	43.5	150
Ī	216-960	3	46.0	200
Ī	Above 960	3	54.0	500

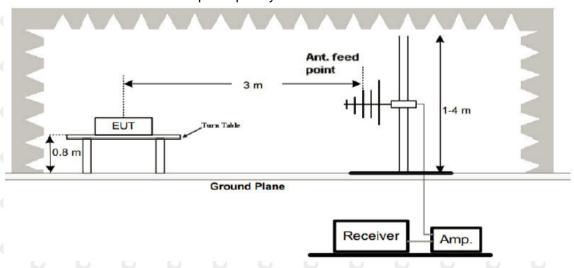
For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

4.2 Test Setup

(1) Radiated Emission Test-Up Frequency Below 30MHz



(2) Radiated Emission Test-Up Frequency 30MHz~1GHz

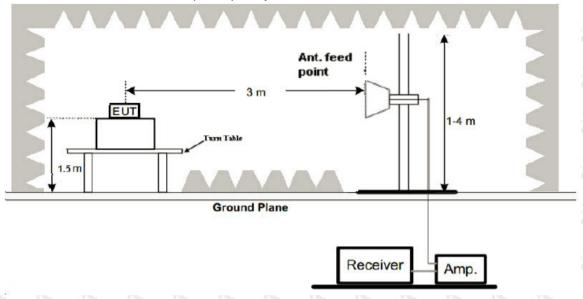




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Radiated Emission Test-Up Frequency Above 1GHz



4.3 Test Procedure

- 1. Below 1GHz measurement the EUT is placed on turntable which is 0.8m above ground plane. And above 1GHz measurement EUT was placed on low permittivity and low tangent turn table which is 1.5m above ground plane.
- 2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- 4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 6. Repeat above procedures until the measurements for all frequencies are complete.
- 7. The test frequency range from 9KHz to 25GHz per FCC PART 15.33(a).

Note

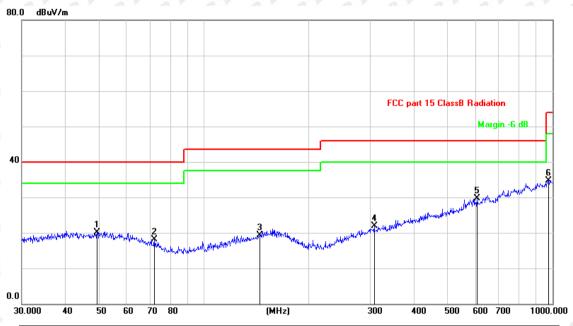
For battery operated equipment, the equipment tests shall be performed using a new battery.

4.4 Test Result

PASS

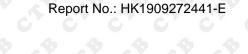
Remark:

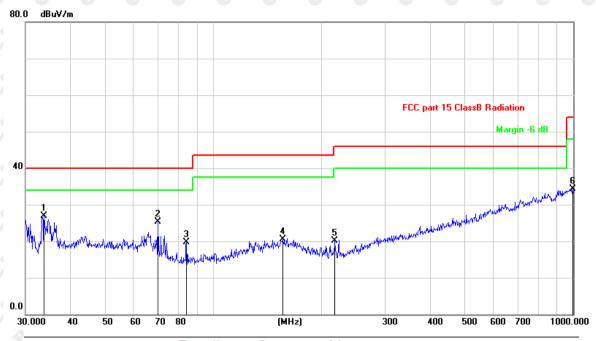
- 1. All modes of GFSK, $\pi/4$ DQPSK, 8DPSK were test at Low, Middle, and High channel, only the worst result of GFSK Low Channel was reported for below 1GHz test.
- 2. For BT above 1GHz test all modes of GFSK, $\pi/4$ DQPSK, and 8DPSK were test at Low, Middle, and High channel, only the worst result of GFSK was reported.
- 3. By preliminary testing and verifying three axis (X, Y and Z) position of EUT transmitted status, it was found that "Z axis" position was the worst, and test data recorded in this report.
- 4. Radiated emission test from 9KHz to 10th harmonic of fundamental was verified, and no emission found except system noise floor in 9KHz to 30MHz and not recorded in this report.



	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
_			MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
_	1		49.3594	26.70	-6.55	20.15	40.00	-19.85	peak
,	2		72.0843	27.35	-9.30	18.05	40.00	-21.95	peak
	3		144.8418	25.78	-6.53	19.25	43.50	-24.25	peak
•	4		307.8313	26.99	-5.16	21.83	46.00	-24.17	peak
_	5	*	607.7867	26.64	3.05	29.69	46.00	-16.31	peak
-	6		975.7529	26.60	8.19	34.79	54.00	-19.21	peak

Remark: Factor = Cable lose + Antenna factor - Pre-amplifier; Over = Measurement - Limit





	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
Y			MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
Q	1	×	33.7986	34.20	-7.33	26.87	40.00	-13.13	peak
,	2		70.0903	34.14	-8.89	25.25	40.00	-14.75	peak
8	3		84.1100	30.59	-10.92	19.67	40.00	-20.33	peak
	4		155.9101	26.51	-6.02	20.49	43.50	-23.01	peak
8	5		217.5443	29.86	-9.71	20.15	46.00	-25.85	peak
Q	6		996.4996	26.20	8.18	34.38	54.00	-19.62	peak

Remark: Factor = Cable lose + Antenna factor - Pre-amplifier; Over = Measurement - Limit

Remark:

- (1) Measuring frequencies from 9 KHz to the 1 GHz, Radiated emission test from 9KHz to 30MHz was verified, and no any emission was found except system noise floor.
- (2) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (3) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.



CH Low (2402MHz)

Horizontal:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Datastar
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
2402	110.75	-5.81	104.94	114.00	-9.06	peak
2402	88.84	-5.81	83.03	94.00	-10.97	AVG
4804	56.45	-3.65	52.80	74.00	-21.20	peak
4804	50.51	-3.65	46.86	54.00	-7.14	AVG
7206	58.82	-0.95	57.87	74.00	-16.13	peak
7206	40.02	-0.95	39.07	54.00	-14.93	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	C C
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
2402	109.84	-5.81	104.03	114.00	-9.97	peak
2402	86.55	-5.81	80.74	94.00	-13.26	AVG
4804	58.59	-3.65	54.94	74.00	-19.06	peak
4804	45.99	-3.65	42.34	54.00	-11.66	AVG
7206	59.68	-0.95	58.73	74.00	-15.27	peak
7206	44.32	-0.95	43.37	54.00	-10.63	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits



Horizontal:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	D. C.
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
2441.00	108.71	-5.73	102.98	114.00	-11.02	peak
2441.00	84.35	-5.73	78.62	94.00	-15.38	AVG
4882.00	57.66	-3.54	54.12	74.00	-19.88	peak
4882.00	46.80	-3.54	43.26	54.00	-10.74	AVG
7323.00	55.28	-0.81	54.47	74.00	-19.53	peak
7323.00	41.61	-0.81	40.80	54.00	-13.20	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	4
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
2441.00	106.18	-5.73	100.45	114.00	-13.55	peak
2441.00	86.72	-5.73	80.99	94.00	-13.01	AVG
4882.00	56.52	-3.54	52.98	74.00	-21.02	peak
4882.00	48.12	-3.54	44.58	54.00	-9.42	AVG
7323.00	56.12	-0.81	55.31	74.00	-18.69	peak
7323.00	41.16 r = Antenna Fa	-0.81	40.35	54.00	-13.65 = Reading Re	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor Margin = Emission level - Limits



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Horizontal:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
2480	109.07	-5.63	103.44	114.00	-10.56	peak
2480	85.82	-5.63	80.19	94.00	-13.81	AVG
4960	56.62	-3.43	53.19	74.00	-20.81	peak
4960	47.28	-3.44	43.84	54.00	-10.16	AVG
7440	58.56	-0.77	57.79	74.00	-16.21	peak
7440	39.66	-0.77	38.89	54.00	-15.11	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Type
2480	109.02	-5.63	103.39	114.00	-10.61	peak
2480	85.72	-5.63	80.09	94.00	-13.91	AVG
4960	56.66	-3.43	53.23	74.00	-20.77	peak
4960	47.30	-3.44	43.86	54.00	-10.14	AVG
7440	58.63	-0.77	57.86	74.00	-16.14	peak
7440	39.80	-0.77	39.03	54.00	-14.97	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Remark:

- (1) Measuring frequencies from 1 GHz to the 25 GHz.
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (4) Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz. 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. 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.
- (6) For fundamental frequency ,RBW >20dB BW, VBW>=3XRBW ,PK detector is for PK value ,RMS detector is for AV value.
- (7) All modes of operation were investigated and the worst-case emissions are reported.





K K

5.1 Limits

FCC PART 15.249(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

5.2 Test Procedure

The band edge compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. RBW 1MHz VBW 3MHz PK detector is for PK value, RBW 1MHz VBW 10Hz PK detector is for AV value. The conducted RF band edge was measured by using a spectrum analyzer. Set span wide enough to capture the highest in-band emission and the emission at the band edge. Set RBW to 100 KHz and VBW to 300 KHz, to measure the conducted peak band edge.

5.3 Test Result

PASS

All the test modes completed for test. The worst case of Band Edge is GFSK; the test data of this mode was reported.

Radiated Band Edge Test:

Operation Mode: TX CH Low (2402MHz)

Horizontal (Worst case):

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
2310.00	58.58	-5.81	52.77	74.00	-21.23	peak
2310.00	1 1 1 B	-5.81	9 691 69	54.00	\$ 13°	AVG
2390.00	56.15	-5.84	50.31	74.00	-23.69	peak
2390.00	67/67	-5.84	c 10° c	54.00		AVG
2400.00	55.95	-5.84	50.11	74.00	-23.89	peak
2400.00		-5.84	9 4/4	54.00	0/0	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits



Vertical:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
2310.00	58.60	-5.81	52.79	74.00	-21.21	peak
2310.00	A 187	-5.81	9 29129	54.00	\$ P	AVG
2390.00	56.33	-5.84	50.49	74.00	-23.51	peak
2390.00	0 10	-5.84	C 10 1	54.00		AVG
2400.00	55.98	-5.84	50.14	74.00	-23.86	peak
2400.00		-5.84	0 0 0	54.00		AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Operation Mode: TX CH High (2480MHz)

Horizontal (Worst case)

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
2483.50	57.54	-5.81	51.73	74.00	-22.27	peak
2483.50	0 0	-5.81	0 0	54.00	9	AVG
2500.00	53.81	-6.06	47.75	74.00	-26.25	peak
2500.00	K 91 K 9	-6.06	1 CB1 CB	54.00	P 129	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
2483.50	54.66	-5.81	48.85	74.00	-25.15	peak
2483.50	1 5	-5.81	1	54.00		AVG
2500.00	53.03	-6.06	46.97	74.00	-27.03	peak
2500.00	6,10,	-6.06	67 /67	54.00		AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.



6 OCCUPIED BANDWIDTH MEASUREMENT

6.1 Test Setup

Same as Radiated Emission Measurement

6.2 Test Procedure

- 1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 2. Set EUT as normal operation.
- 3. Based on ANSI C63.10 section 6.9.2: RBW= 30KHz. VBW= 100 KHz, Span=2MHz.
- 4. The useful radiated emission from the EUT was detected by the spectrum analyser with peak detector.

6.3 Measurement Equipment Used

Same as Radiated Emission Measurement

6.4 Test Result

PASS

Test Mode	Frequency	20dB Bandwidth (MHz)	Result
C C C C	2402 MHz	0.7262	PASS
GFSK	2441 MHz	0.8153	PASS
	2480 MHz	0.8225	PASS
AB AB AB	2402 MHz	1.099	PASS
π/4DQPSK	2441 MHz	9.1111	PASS
74 74 74	2480 MHz	1.1115	PASS
	2402 MHz	1.1149	PASS
8DPSK	2441 MHz	1.0884	PASS
	2480 MHz	1.0871	PASS

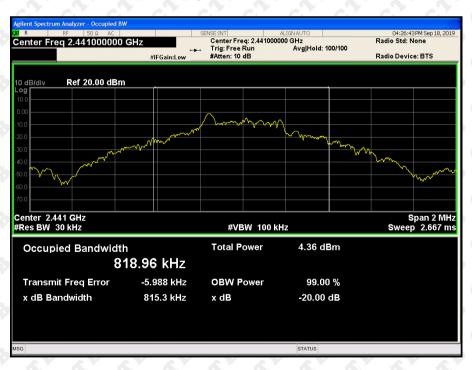


Test Mode: GFSK

CH: 2402MHz



CH: 2441MHz





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CH: 2480MHz



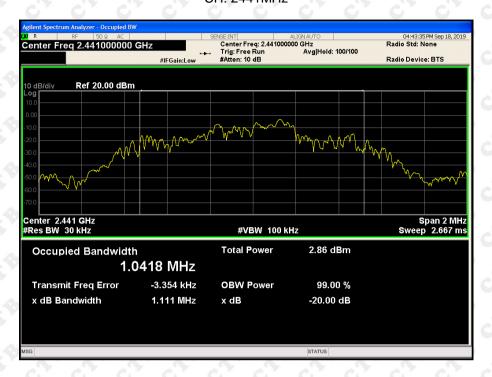
Test Mode: π/4DQPSK

CH: 2402MHz





CH: 2441MHz



CH: 2480MHz



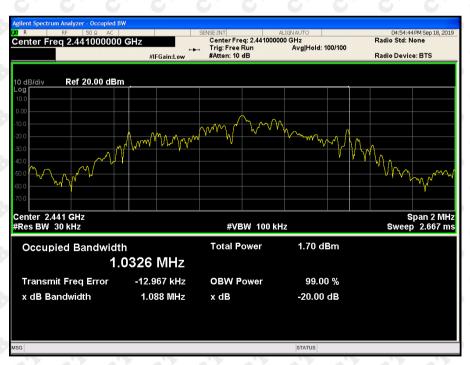


Test Mode: 8DPSK

CH: 2402MHz



CH: 2441MHz



CH: 2480MHz

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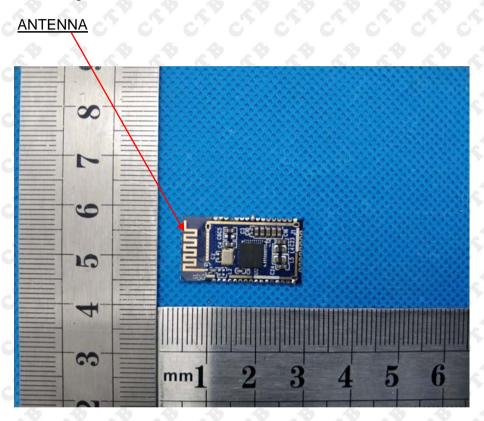


Standard Applicable

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 15.249, 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.

Antenna Connected Construction

The antenna used in this product is Internal Antenna, The directional gains of antenna used for transmitting is 0.8dBi.





8.1 Radiated Emission







8.2 Conducted Emission



End of Report