FCC Test Report

Product Name	:	Bluetooth Low Energy 5.2 Controller Module
Trade Name	:	HOLTEK
Model No.	:	BM67C741-1
Applicant	:	HOLTEK SEMICONDUCTOR INCORPORATION
Address	:	NO.3, CREATION RD. II, HSINCHU SCIENCE PARK, HSINCHU, TAIWAN, R.O.C..
Date of Receipt	:	Jul. 22, 2021
Issued Date	:	Sep. 02, 2021
Report No.	:	2170981R-RFUSBLEV01
Report Version	:	V1.0

Test Report Certification

Product Name	:	Bluetooth Low Energy 5.2 Controller Module
Applicant	:	HOLTEK SEMICONDUCTOR INCORPORATION
Address	:	NO.3, CREATION RD. II, HSINCHU SCIENCE PARK, HSINCHU, TAIWAN, R.O.C..
Manufacturer	:	HOLTEK SEMICONDUCTOR INCORPORATION
Address	:	NO.3, CREATION RD. II, HSINCHU SCIENCE PARK, HSINCHU, TAIWAN, R.O.C..
Trade Name	:	HOLTEK
Model No.	:	BM67C741-1
EUT Voltage	:	DC 3.3V
Testing Voltage	:	DC 3V (Power by fixture)
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C Section 15.247 ANSI C63.10: 2013
Laboratory Name	:	Hsin Chu Laboratory
Address	:	No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan, R.O.C. TEL: +886-3-582-8001 / FAX: +886-3-582-8958
Test Result	:	Complied

Documented By :

(Carol Tsai / Senior Engineering Adm. Specialist)

Approved By :

(Louis Hsu / Deputy Manager)

The test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of DEKRA Testing and Certification Co., Ltd.

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Sep. 02, 2021

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1. General Information

1.1 EUT Description

Product Name	Bluetooth Low Energy 5.2 Controller Module
Trade Name	HOLTEK
Model No.	BM67C741-1
Frequency Range	1Mbps: 2402~2480MHz 2Mbps: 2402~2480MHz
Channel Number	1Mbps: 40 Channels 2Mbps: 40 Channels
Type of Modulation	GFSK

Antenna Information			
Brand	Model No.	Type	Gain (dBi)
HOLTEK	N/A	PCB	0

GFSK (BLE 1Mbps / 2Mbps)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	10	2422 MHz	20	2442 MHz	30	2462 MHz
01	2404 MHz	11	2424 MHz	21	2444 MHz	31	2464 MHz
02	2406 MHz	12	2426 MHz	22	2446 MHz	32	2466 MHz
03	2408 MHz	13	2428 MHz	23	2448 MHz	33	2468 MHz
04	2410 MHz	14	2430 MHz	24	2450 MHz	34	2470 MHz
05	2412 MHz	15	2432 MHz	25	2452 MHz	35	2472 MHz
06	2414 MHz	16	2434 MHz	26	2454 MHz	36	2474 MHz
07	2416MHz	17	2436 MHz	27	2456 MHz	37	2476 MHz
08	2418 MHz	18	2438 MHz	28	2458 MHz	38	2478 MHz
09	2420 MHz	19	2440 MHz	29	2460 MHz	39	2480 MHz

Note:

1. Regards to the frequency band operation; the lowest、middle and highest frequency of channel were selected to perform the test, and then shown on this report.
2. The above EUT information is declared by the manufacturer.

1.2 Test Mode

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Test Mode	Mode 1: Transmit

Test Items	Test Mode	Modulation	Channel	Result
AC Power Line Conducted Emission	It was supplied power by DC-Powered for EUT. It's not necessary to apply to AC Power Line Conducted Emission test.			
Maximum Peak Conducted Output Power	Mode 1	GFSK (1Mbps)	00/19/39	Pass
		GFSK (2Mbps)	00/19/39	Pass
Radiated Emission Below 1GHz	Mode 1	GFSK (1Mbps)	19	Pass
Radiated Emission Above 1GHz	Mode 1	GFSK (1Mbps)	00/19/39	Pass
		GFSK (2Mbps)	00/19/39	Pass
Antenna Port Conducted Emission	Mode 1	GFSK (1Mbps)	00/19/39	Pass
		GFSK (2Mbps)	00/19/39	Pass
Radiated Emission Band Edge	Mode 1	GFSK (1Mbps)	00/19/39	Pass
		GFSK (2Mbps)	00/19/39	Pass
Occupied Bandwidth & DTS Bandwidth	Mode 1	GFSK (1Mbps)	00/19/39	Pass
		GFSK (2Mbps)	00/19/39	Pass
Power Spectral Density	Mode 1	GFSK (1Mbps)	00/19/39	Pass
		GFSK (2Mbps)	00/19/39	Pass

Note:

1. Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. For below 1 GHz radiated emission have performed all modes of operation were investigated and the worst-case emissions are reported.
3. EUT was performed at X axis, Y axis and Z axis position for radiated emission test. The worst case was found at Z axis, so the measurement will follow this same test configuration.

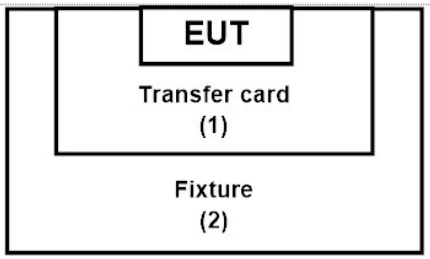
1.3 Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Transfer card	HOLTEK	BCT-67C741-001	N/A	DoC	--
2	Fixture	HOLTEK	BCE-GENTRX-001	N/A	DoC	--

1.4 Configuration of tested System

Connection Diagram



1.5 Operation Descriptions

1	Set the EUT as shown.
2	Configure test mode, test channel.
3	Let the EUT start sending transmit continuously.
4	Verify that device is working properly.

1.6 Comments and Remarks

The product specification and testing instructions for the EUT declared in the report are provided by the manufacturer who will take all responsibilities for the accuracy.

1.7 Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Actually	Tested by	Test Date	Test Site
Temperature (°C)	Maximum Peak Conducted Output Power	26.0	Scott Chang	2021/8/4	SR12-H
Humidity (%RH)		68.0			
Temperature (°C)	Radiated Emission	24.5	Scott Chang	2021/8/2 ~ 2021/8/3	CB2-H
Humidity (%RH)		59.0			
Temperature (°C)	Antenna Port Conducted Emission	26.0	Scott Chang	2021/8/4	SR12-H
Humidity (%RH)		68.0			
Temperature (°C)	Radiated Emission Band Edge	25.1	Scott Chang	2021/7/30 ~ 2021/8/2	CB4-H
Humidity (%RH)		57.0			
Temperature (°C)	Occupied Bandwidth & DTS Bandwidth	26.0	Scott Chang	2021/8/4	SR12-H
Humidity (%RH)		68.0			
Temperature (°C)	Power Spectral Density	26.0	Scott Chang	2021/8/4	SR12-H
Humidity (%RH)		68.0			

Note: Test site information refers to Laboratory Information.

Laboratory Information

USA	**:**	**FCC Registration Number: TW3024**
Canada	**:**	**CAB identifier : TW3024**

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: http://www.dekra.com.tw

If you have any comments, please don't hesitate to contact us. Our test sites as below:

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
Address	1. No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. 2. No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.
Phone number	1. +886-3-582-8001 2. +886-3-582-8001
Fax number	1. +886-3-582-8958 2. +886-3-582-8958
Email address	info.tw@dekra.com
Website	http://www.dekra.com.tw
Note: Test site number for address 1 includes SR2-H. Test site number for address 2 includes CB2-H, CB3-H, CB4-H, SR10-H and SR12-H.	

1.8 List of Test Equipment

CB2-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2020/10/12	2021/10/11
Signal & Spectrum Analyzer	R&S	FSV40	101049	2021/03/31	2022/03/30
Signal Analyzer	R&S	FSVA40	101435	2021/06/04	2022/06/03
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2021/01/25	2022/01/24
Bilog Antenna	Teseq	CBL6112D	23191	2021/02/26	2022/02/25
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2021/05/17	2022/05/16
Horn Antenna	Schwarzbeck	BBHA 9170	202	2020/12/16	2021/12/15
Pre-Amplifier	EMCI	EMC01820I	980365	2021/05/28	2022/05/27
Pre-Amplifier	EMEC	EM01G18GA	060741	2021/07/02	2022/07/01
Pre-Amplifier	DEKRA	AP-400C	201801231	2020/11/16	2021/11/15
Wideband Radio Communication Tester	R&S	CMW500	106071	2021/01/27	2022/01/26
Wireless Conn. Tseter	R&S	CMW500	157118	2021/07/06	2022/07/05
Coaxial Cable(13m)	Huber+Suhner	SF104	CB2-H	2021/07/25	2022/07/24
DEKRA Testing System	DEKRA	Version 2.0	CB2-H	NA	NA

CB4-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2020/10/12	2021/10/11
Signal & Spectrum Analyzer	R&S	FSV40	101049	2021/03/31	2022/03/30
Signal Analyzer	R&S	FSVA40	101435	2021/06/04	2022/06/03
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2021/01/25	2022/01/24
Trilog Broadband Antenna	Schwarzbeck	VULB 9168	1209	2021/05/28	2022/05/27
Horn Antenna	Schwarzbeck	BBHA 9120D	01640	2020/09/17	2021/09/16
Horn Antenna	Schwarzbeck	BBHA 9170	203	2021/03/11	2022/03/10
Pre-Amplifier	EMCI	EMC01820I	980364	2020/09/14	2021/09/13
Pre-Amplifier	EMCI	EMC0031835	980233	2020/12/07	2021/12/06
Pre-Amplifier	DEKRA	AP-400C	201801231	2020/11/16	2021/11/15
Wideband Radio Communication Tester	R&S	CMW500	106071	2021/01/27	2022/01/26
Wireless Conn. Tseter	R&S	CMW500	157118	2021/07/06	2022/07/05
Coaxial Cable(10m)	Suhner	SF102_SF104	CB4-H	2021/04/25	2022/04/24
DEKRA Testing System	DEKRA	Version 2.0	CB4-H	NA	NA

SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	2020/11/30	2021/11/29
Pulse Power Sensor	Anritsu	MA2411B	1531043	2020/11/30	2021/11/29
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2021/01/25	2022/01/24
Pulse Power Sensor	Anritsu	MA2411B	1531044	2020/11/30	2021/11/29
Power Meter	Keysight	8990B	MY51000248	2021/05/21	2022/05/20
Power Sensor	Keysight	N1923A	MY57240005	2021/05/21	2022/05/20
Spectrum Analyzer	Keysight	N9030B	MY57140404	2021/05/14	2022/05/13
Spectrum Analyzer	Keysight	N9010B	MY57110159	2021/03/29	2022/03/28
Wideband Radio Communication Tester	R&S	CMW500	106071	2021/01/27	2022/01/26
Wireless Conn. Tseter	R&S	CMW500	157118	2021/07/06	2022/07/05
Spectrum Analyzer	Agilent	N9010A	US47140172	2021/05/28	2022/05/27
Signal & Spectrum Analyzer	R&S	FSV40	101049	2021/03/31	2022/03/30

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

1.9 Uncertainty

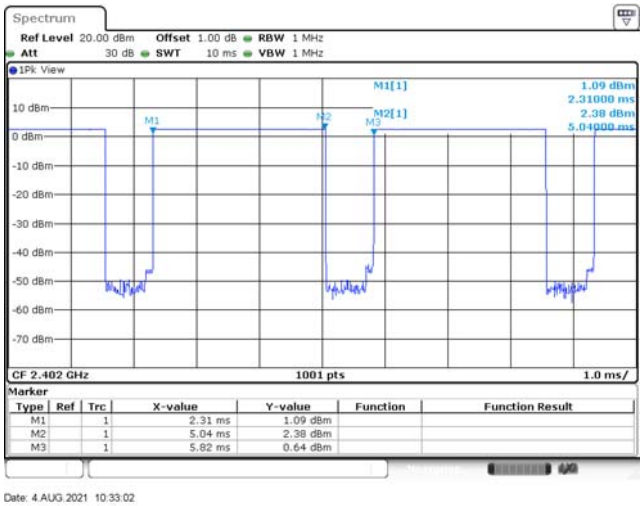
Uncertainties have been calculated according to the DEKRA internal document with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2).

Test item	Uncertainty
Maximum Peak Conducted Output Power	± 1.27 dB
Radiated Emission	30MHz~1GHz as ± 3.43 dB 1GHz~26.5GHz as ± 3.65 dB
Antenna Port Conducted Emission	± 1.27 dB
Radiated Emission Band Edge	± 1.27 dB
Occupied Bandwidth & DTS Bandwidth	± 50 Hz
Power Spectral Density	± 1.27 dB

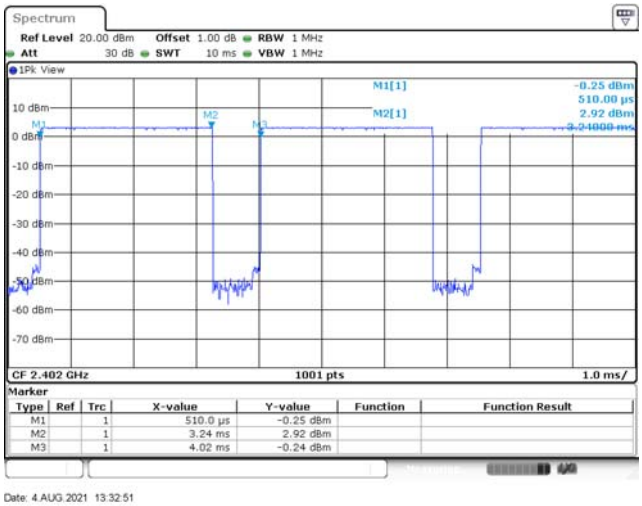
1.10 Duty Cycle

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
GFSK (1Mbps)	5.040	5.820	86.60%	0.62	0.198
GFSK (2Mbps)	3.240	4.020	80.60%	0.94	0.309

GFSK (1Mbps)

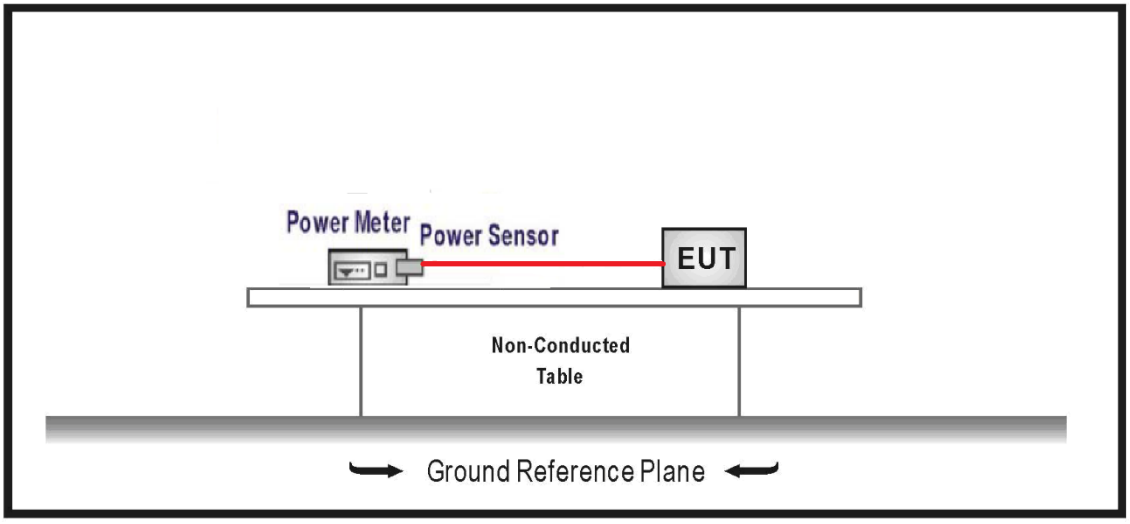


GFSK (2Mbps)



3. Maximum Peak Conducted Output Power

3.1 Test Setup



3.2 Limits

The Maximum Peak Conducted Output Power shall be less 1 Watt.

3.3 Test procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure of KDB 558074 D01 v05r02 for compliance to FCC 47CFR 15.247 requirements.

3.4 Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247.

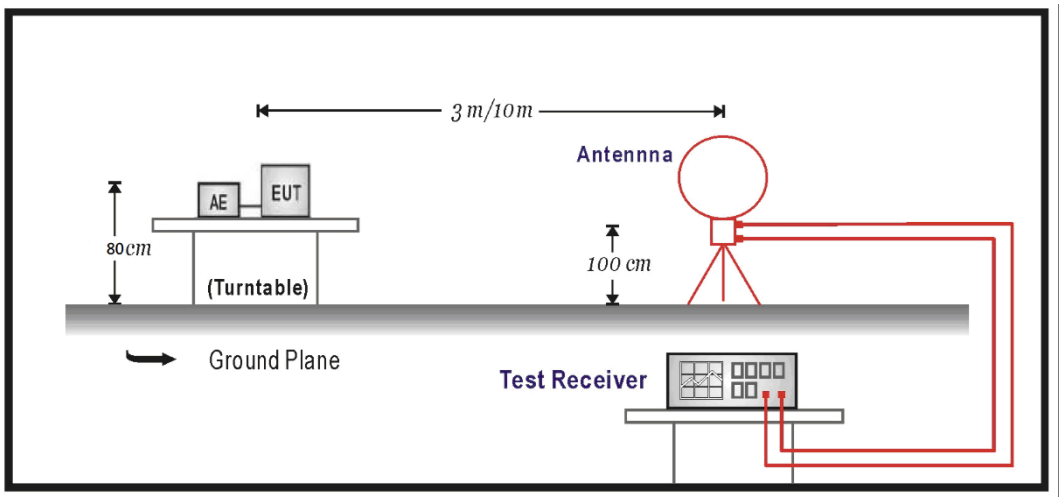
3.5 Test Result of Maximum Peak Conducted Output Power

Modulation	Channel	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
GFSK (1Mbps)	00	2402	4.620	≦30.00	Pass
	19	2440	4.590	≦30.00	Pass
	39	2480	4.580	≦30.00	Pass
GFSK (2Mbps)	00	2402	4.590	≦30.00	Pass
	19	2440	4.550	≦30.00	Pass
	39	2480	4.580	≦30.00	Pass

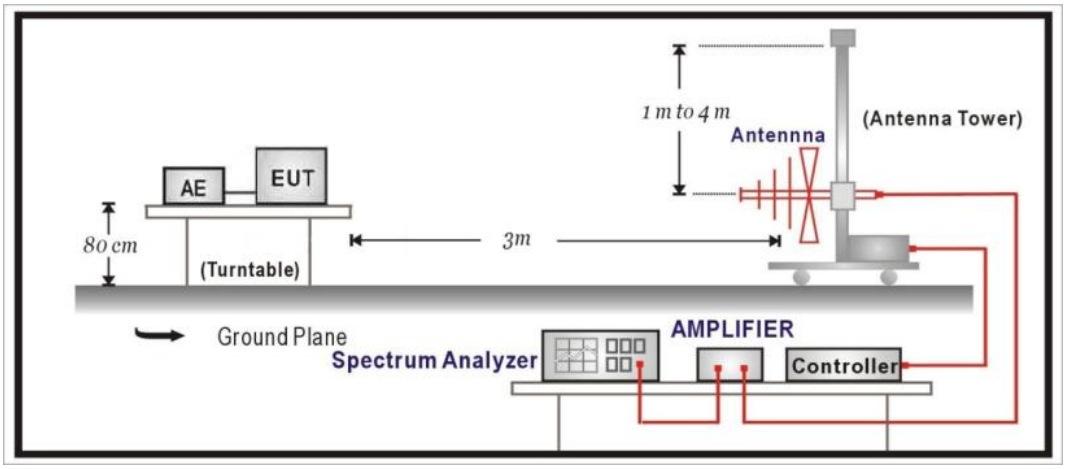
4. Radiated Emission

4.1 Test Setup

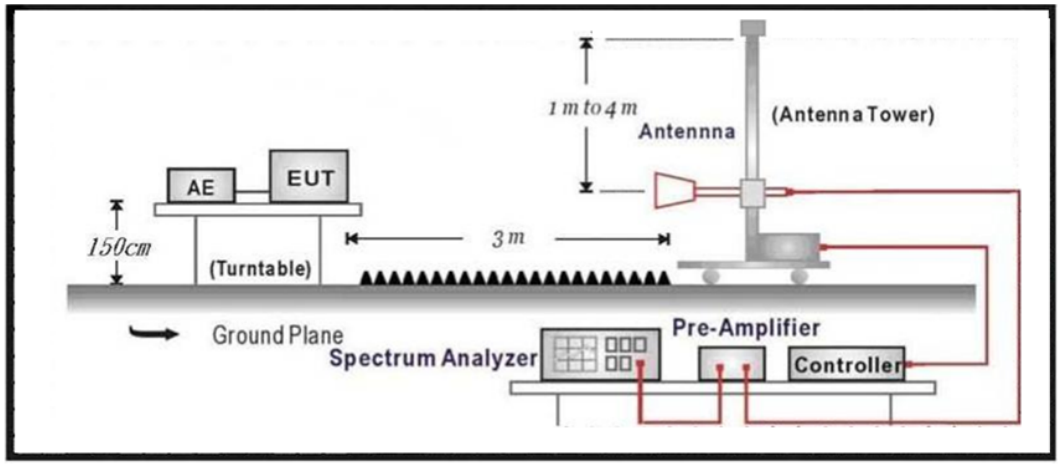
9 kHz~30 MHz



30 MHz~1 GHz



Above 1 GHz



4.2 Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

Limits		
Frequency (MHz)	uV/m	dBuV/m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks: 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
2. In the Above Table, the tighter limit applies at the Bandedges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.3 Test Procedure

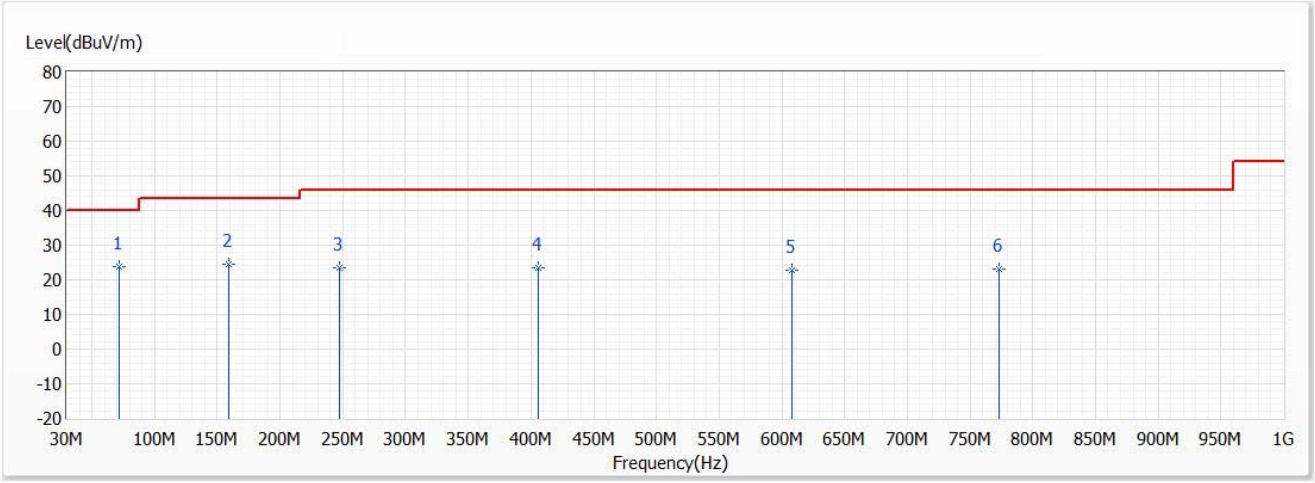
The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB 558074 D01V05r02 for compliance to FCC 47CFR 15.247 requirements.
The EUT and its simulators are placed on a turn table which is 0.8 or 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.
The antenna can move 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 measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.
On any frequency or frequencies form 9kHz(inculde The the lowest oscillator frequency generated within the device up to the 10th harmonic) to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

4.4 Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247.

4.5 Test Result of Radiated Emissions (30MHz~1GHz)

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/3
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	24.5
Test Condition	Ch 19,2.44G,BW1M	Humidity (%RH)	59.0

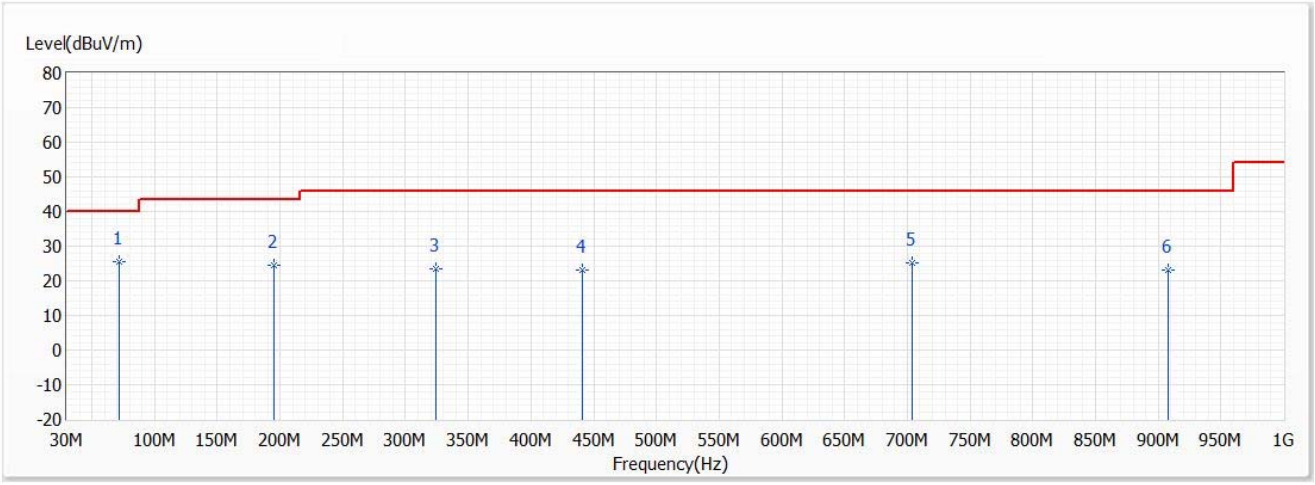


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	71.710	23.65	40.00	-16.35	16.87	6.78	QP
2	159.495	24.33	43.50	-19.17	17.43	6.90	QP
3	247.280	23.32	46.00	-22.68	16.19	7.13	QP
4	405.390	23.46	46.00	-22.54	15.81	7.65	QP
5	608.120	22.83	46.00	-23.17	14.48	8.35	QP
6	773.505	23.02	46.00	-22.98	14.15	8.87	QP

Note:

1. All reading levels is Quasi-Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor
4. The emission under 30MHz were not included is because their levels are lower than 20dB from limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/3
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	24.5
Test Condition	Ch 19,2.44G,BW1M	Humidity (%RH)	59.0



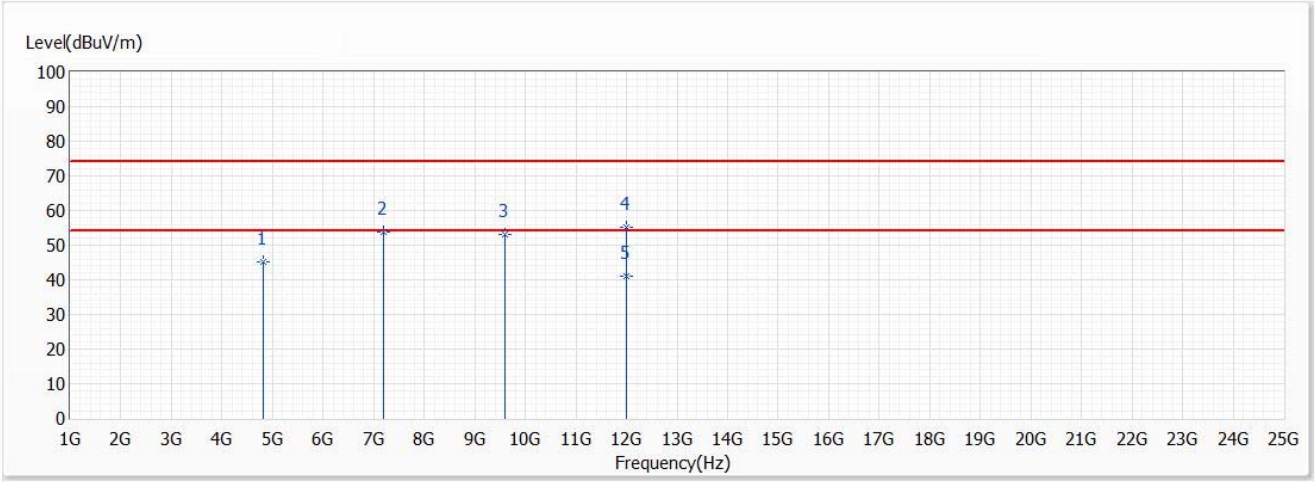
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	71.710	25.50	40.00	-14.50	18.72	6.78	QP
2	195.385	24.35	43.50	-19.15	17.41	6.94	QP
3	324.395	23.37	46.00	-22.63	15.98	7.39	QP
4	441.280	23.20	46.00	-22.80	15.43	7.77	QP
5	704.150	25.33	46.00	-20.67	16.70	8.63	QP
6	908.335	22.96	46.00	-23.04	13.64	9.32	QP

Note:

1. All reading levels is Quasi-Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor
4. The emission under 30MHz were not included is because their levels are lower than 20dB from limit.

4.6 Test Result of Radiated Emissions (1GHz~10th Harmonic)

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/3
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	24.5
Test Condition	Ch 0,2.402G,BW1M	Humidity (%RH)	59.0

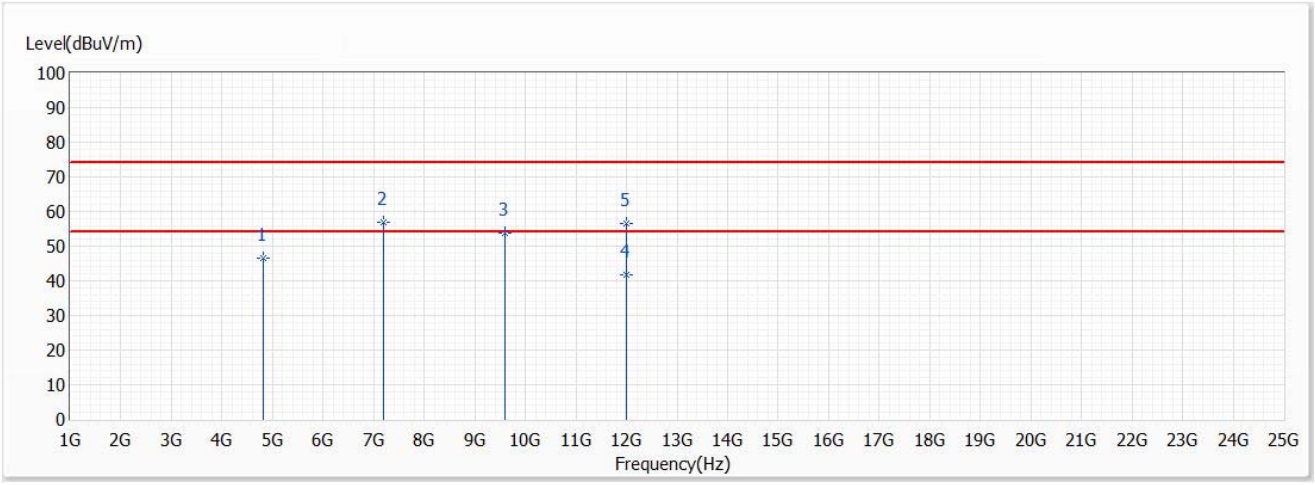


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4804.000	45.15	74.00	-28.85	46.63	-1.48	PK
2	7206.000	53.67	74.00	-20.33	47.45	6.22	PK
3	9608.000	53.22	74.00	-20.78	41.84	11.38	PK
4	12010.000	55.07	74.00	-18.93	41.65	13.42	PK
* 5	12010.000	41.11	54.00	-12.89	27.69	13.42	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/3
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	24.5
Test Condition	Ch 0,2.402G,BW1M	Humidity (%RH)	59.0

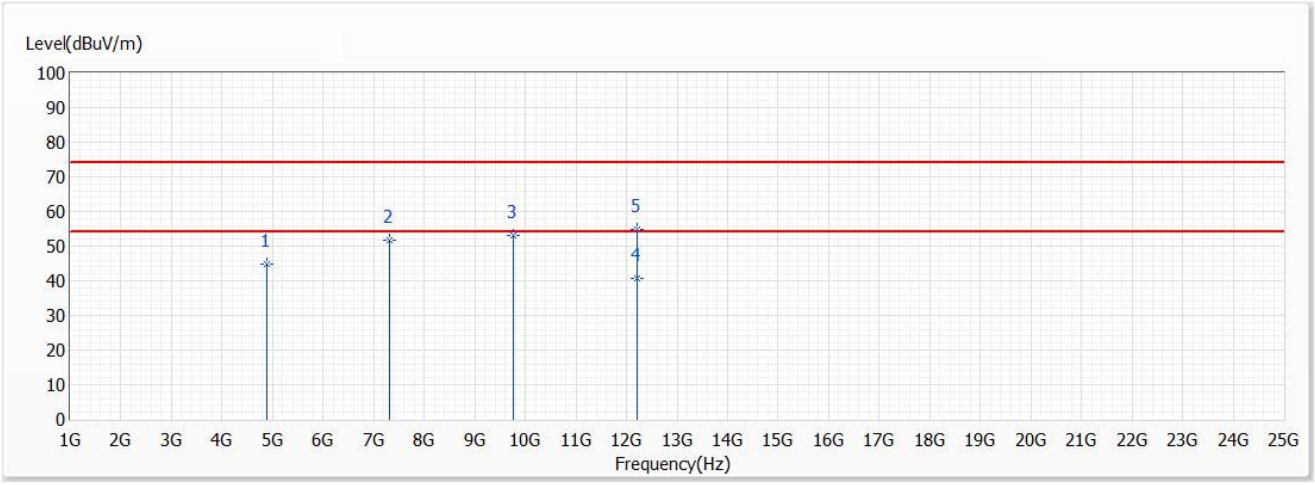


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4804.000	46.43	74.00	-27.57	47.91	-1.48	PK
2	7206.000	56.77	74.00	-17.23	50.55	6.22	PK
3	9608.000	53.83	74.00	-20.17	42.45	11.38	PK
* 4	12010.000	41.59	54.00	-12.41	28.17	13.42	AV
5	12010.000	56.60	74.00	-17.40	43.18	13.42	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/3
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	24.5
Test Condition	Ch 19,2.44G,BW1M	Humidity (%RH)	59.0

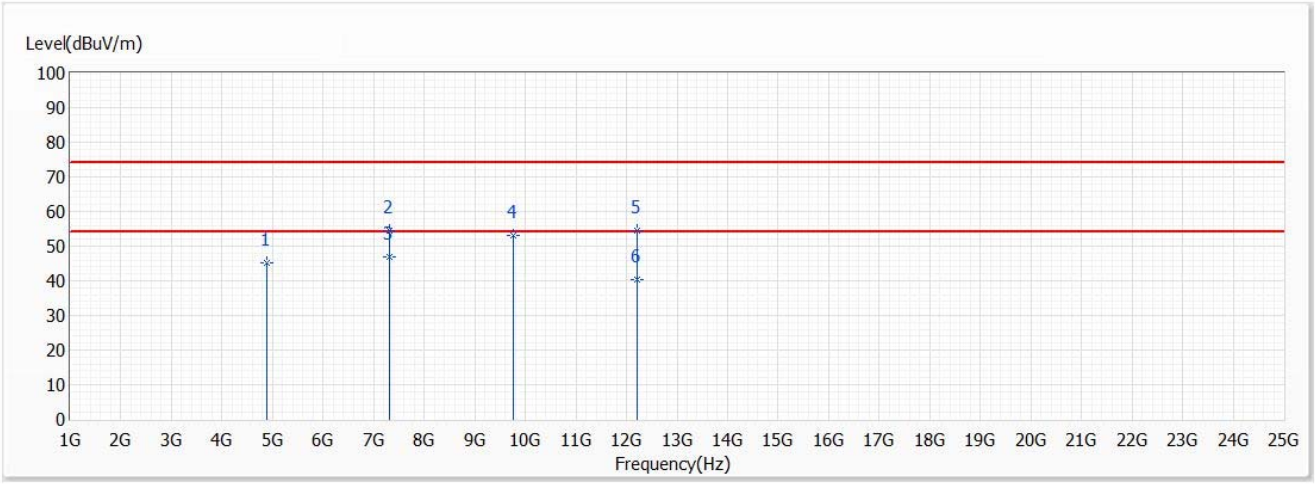


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4880.000	44.68	74.00	-29.32	46.07	-1.39	PK
2	7320.000	51.69	74.00	-22.31	45.46	6.23	PK
3	9760.000	53.18	74.00	-20.82	41.50	11.68	PK
* 4	12200.000	40.69	54.00	-13.31	27.14	13.55	AV
5	12200.000	54.90	74.00	-19.10	41.35	13.55	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/3
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	24.5
Test Condition	Ch 19,2.44G,BW1M	Humidity (%RH)	59.0

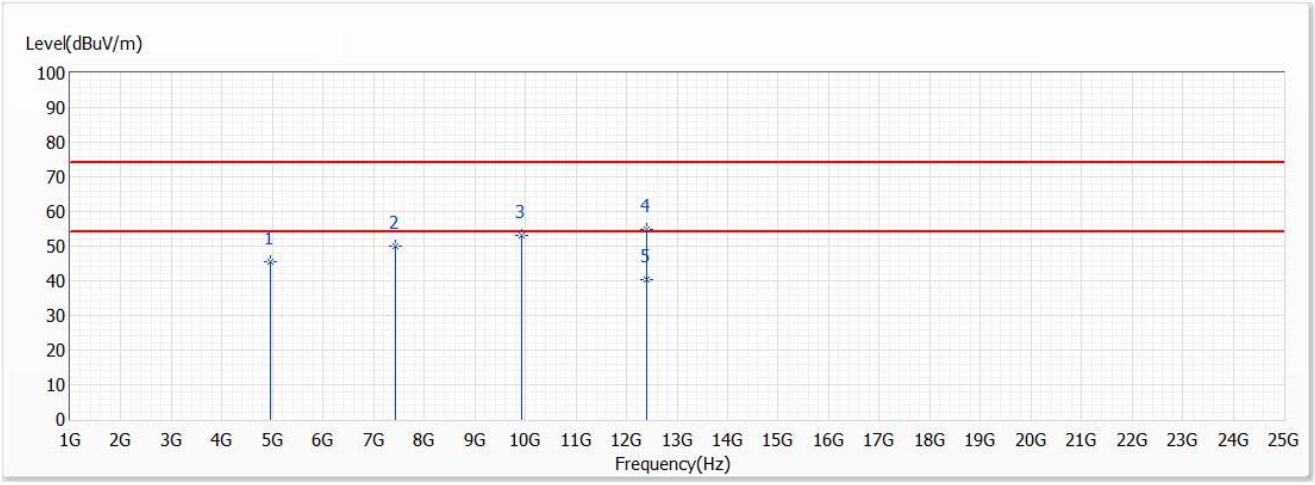


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4880.000	45.22	74.00	-28.78	46.61	-1.39	PK
2	7320.000	54.36	74.00	-19.64	48.13	6.23	PK
* 3	7320.000	46.78	54.00	-7.22	40.55	6.23	AV
4	9760.000	53.17	74.00	-20.83	41.49	11.68	PK
5	12200.000	54.45	74.00	-19.55	40.90	13.55	PK
6	12200.000	40.36	54.00	-13.64	26.81	13.55	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/3
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	24.5
Test Condition	Ch 39,2.48G,BW1M	Humidity (%RH)	59.0

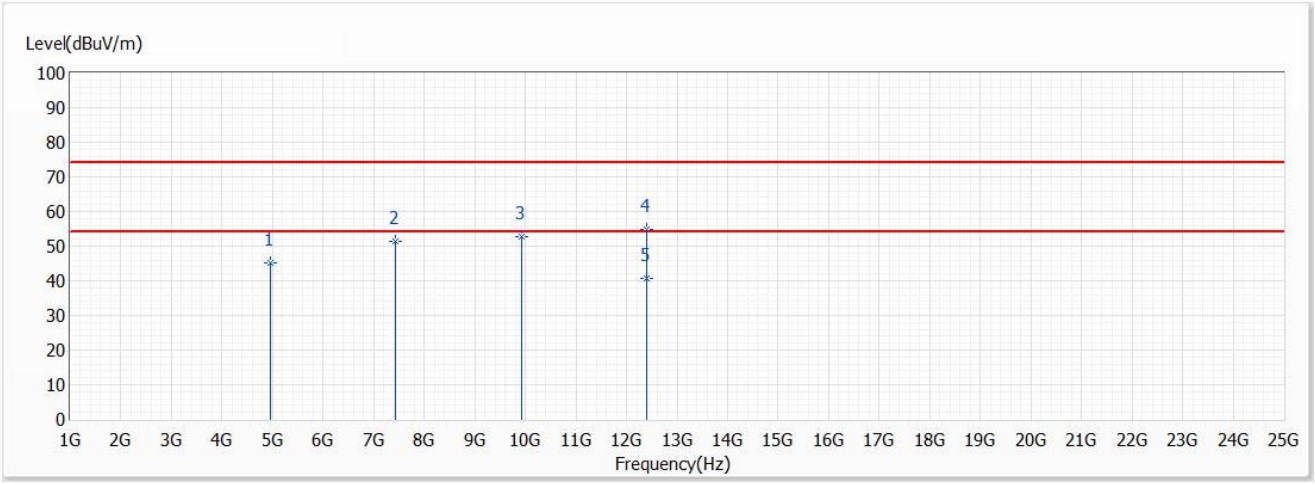


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4960.000	45.42	74.00	-28.58	46.57	-1.15	PK
2	7440.000	50.16	74.00	-23.84	43.35	6.81	PK
3	9920.000	53.18	74.00	-20.82	41.21	11.97	PK
4	12400.000	54.66	74.00	-19.34	41.61	13.05	PK
* 5	12400.000	40.48	54.00	-13.52	27.43	13.05	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/3
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	24.5
Test Condition	Ch 39,2.48G,BW1M	Humidity (%RH)	59.0

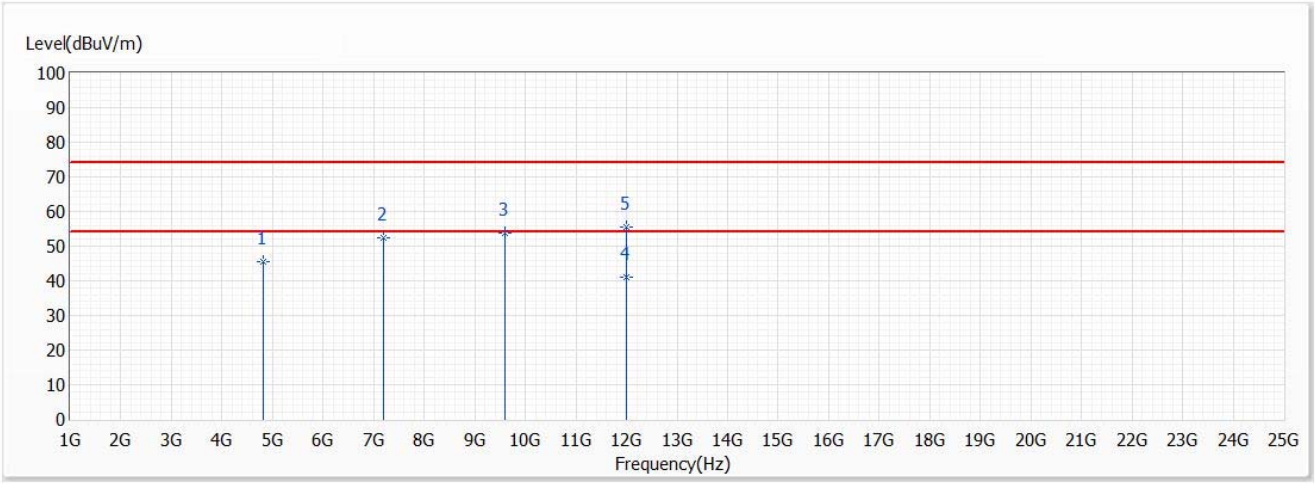


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4960.000	45.19	74.00	-28.81	46.34	-1.15	PK
2	7440.000	51.49	74.00	-22.51	44.68	6.81	PK
3	9920.000	52.69	74.00	-21.31	40.72	11.97	PK
4	12400.000	54.75	74.00	-19.25	41.70	13.05	PK
* 5	12400.000	40.66	54.00	-13.34	27.61	13.05	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/3
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	24.5
Test Condition	Ch 0,2.402G,BW2M	Humidity (%RH)	59.0

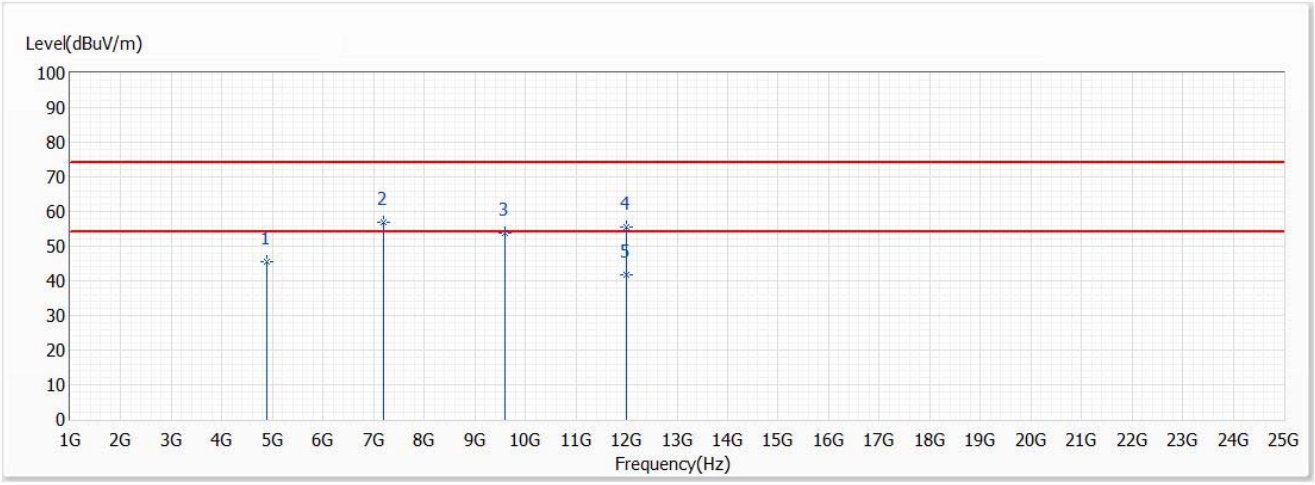


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4804.000	45.51	74.00	-28.49	46.99	-1.48	PK
2	7206.000	52.30	74.00	-21.70	46.08	6.22	PK
3	9608.000	53.83	74.00	-20.17	42.45	11.38	PK
* 4	12010.000	40.88	54.00	-13.12	27.46	13.42	AV
5	12010.000	55.64	74.00	-18.36	42.22	13.42	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/3
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	24.5
Test Condition	Ch 0,2.402G,BW2M	Humidity (%RH)	59.0

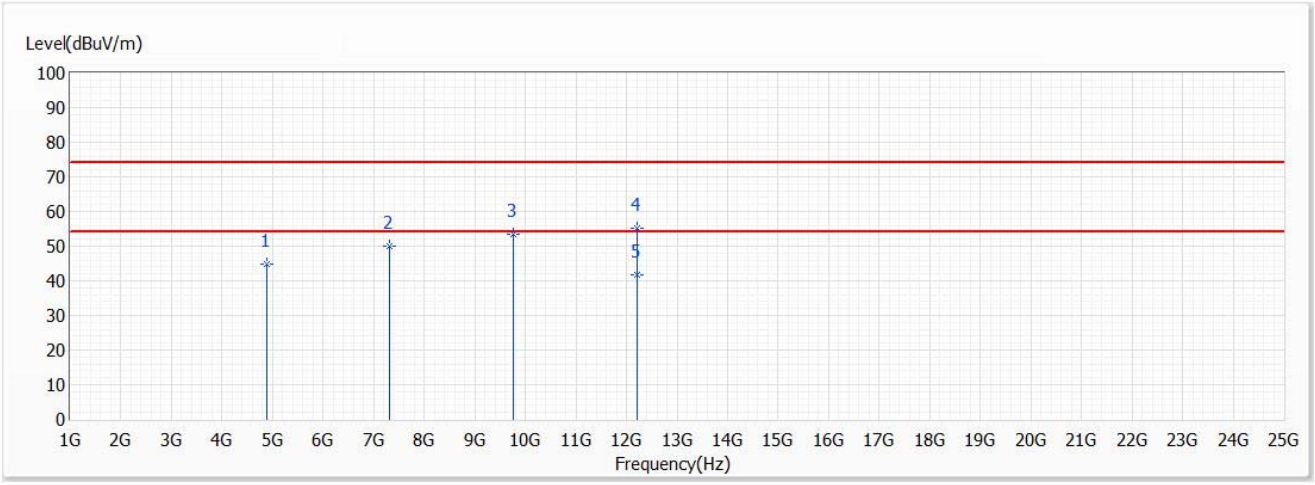


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4880.000	45.48	74.00	-28.52	46.87	-1.39	PK
2	7206.000	56.77	74.00	-17.23	50.55	6.22	PK
3	9608.000	53.88	74.00	-20.12	42.50	11.38	PK
4	12010.000	55.68	74.00	-18.32	42.26	13.42	PK
* 5	12010.000	41.88	54.00	-12.12	28.46	13.42	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/3
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	24.5
Test Condition	Ch 19,2.44G,BW2M	Humidity (%RH)	59.0

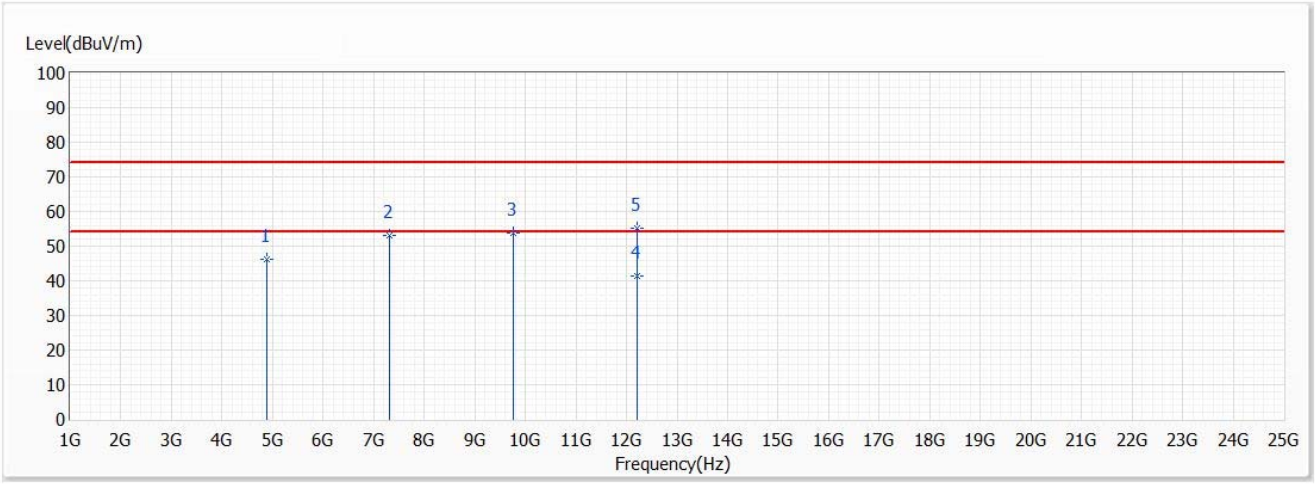


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4880.000	44.79	74.00	-29.21	46.18	-1.39	PK
2	7320.000	50.15	74.00	-23.85	43.92	6.23	PK
3	9760.000	53.55	74.00	-20.45	41.87	11.68	PK
4	12200.000	55.09	74.00	-18.91	41.54	13.55	PK
* 5	12200.000	41.63	54.00	-12.37	28.08	13.55	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/3
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	24.5
Test Condition	Ch 19,2.44G,BW2M	Humidity (%RH)	59.0

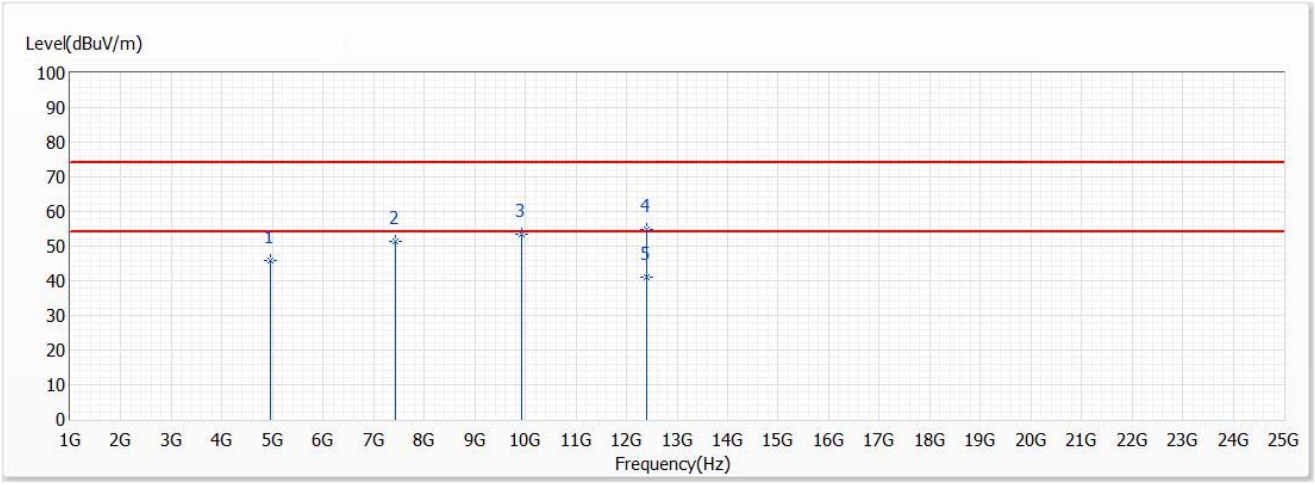


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4880.000	46.10	74.00	-27.90	47.49	-1.39	PK
2	7320.000	53.14	74.00	-20.86	46.91	6.23	PK
3	9760.000	53.77	74.00	-20.23	42.09	11.68	PK
* 4	12200.000	41.31	54.00	-12.69	27.76	13.55	AV
5	12200.000	55.02	74.00	-18.98	41.47	13.55	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	24.5
Test Condition	Ch 39,2.48G,BW2M	Humidity (%RH)	59.0

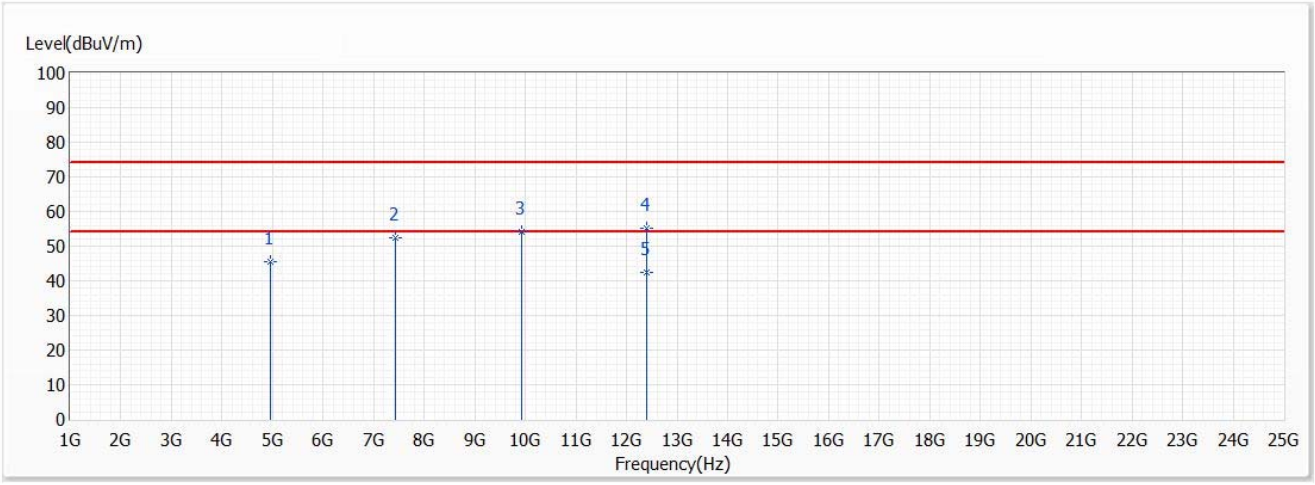


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4960.000	45.88	74.00	-28.12	47.03	-1.15	PK
2	7440.000	51.25	74.00	-22.75	44.44	6.81	PK
3	9920.000	53.61	74.00	-20.39	41.64	11.97	PK
4	12400.000	54.68	74.00	-19.32	41.63	13.05	PK
* 5	12400.000	41.11	54.00	-12.89	28.06	13.05	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	24.5
Test Condition	Ch 39,2.48G,BW2M	Humidity (%RH)	59.0



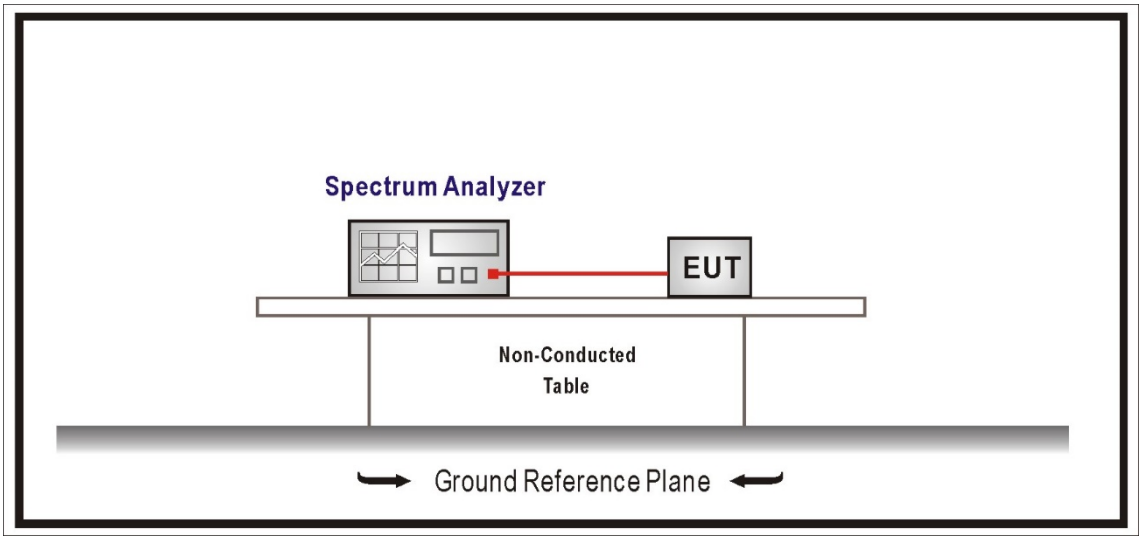
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	4960.000	45.49	74.00	-28.51	46.64	-1.15	PK
2	7440.000	52.43	74.00	-21.57	45.62	6.81	PK
3	9920.000	54.15	74.00	-19.85	42.18	11.97	PK
4	12400.000	55.16	74.00	-18.84	42.11	13.05	PK
* 5	12400.000	42.36	54.00	-11.64	29.31	13.05	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

5. Antenna Port Conducted Emission

5.1 Test Setup



5.2 Limits

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

5.3 Test Procedure

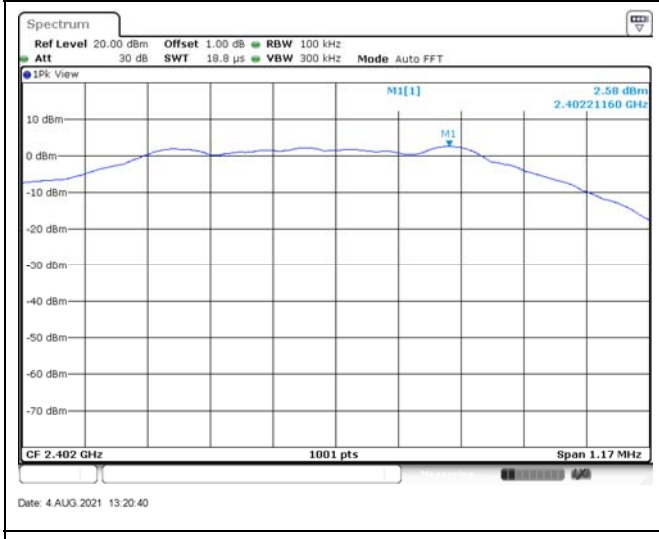
The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB 558074 D01 V05r02 for compliance to FCC 47CFR 15.247 requirements.
Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

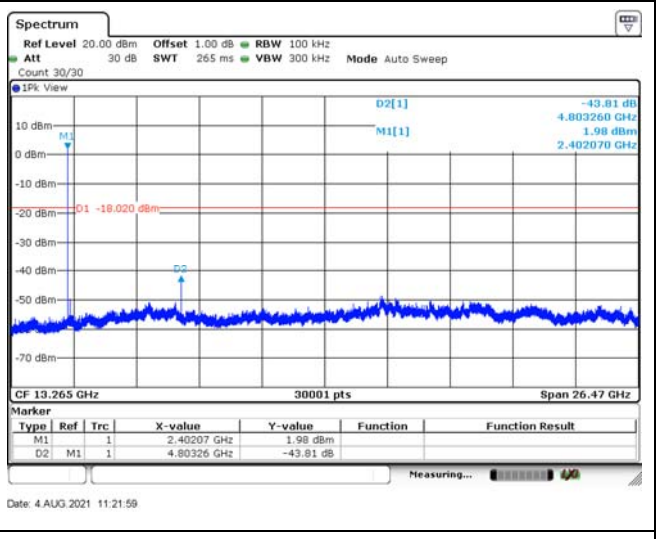
5.4 Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247.

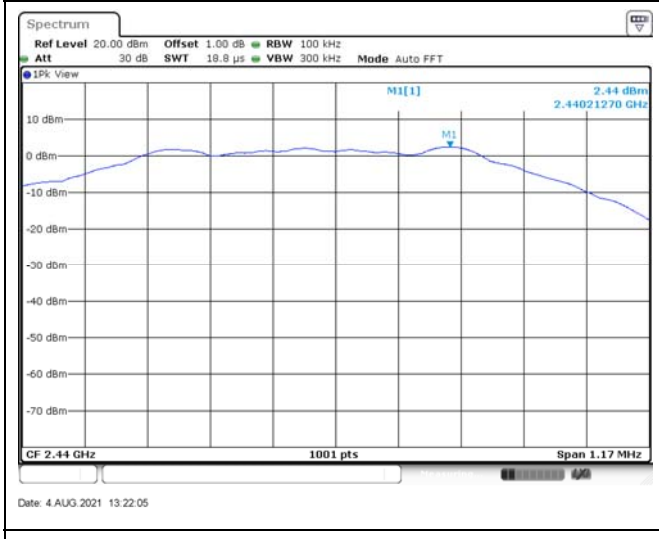
5.5 Test Result of Antenna Port Conducted Emission

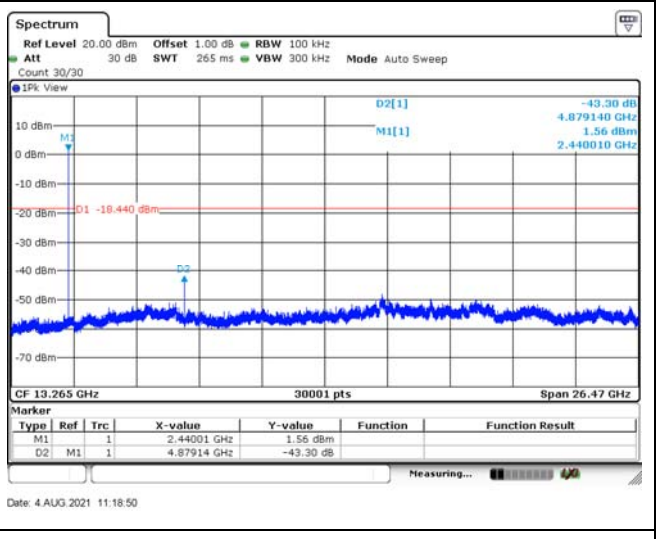
GFSK (1Mbps) / 2402 MHz



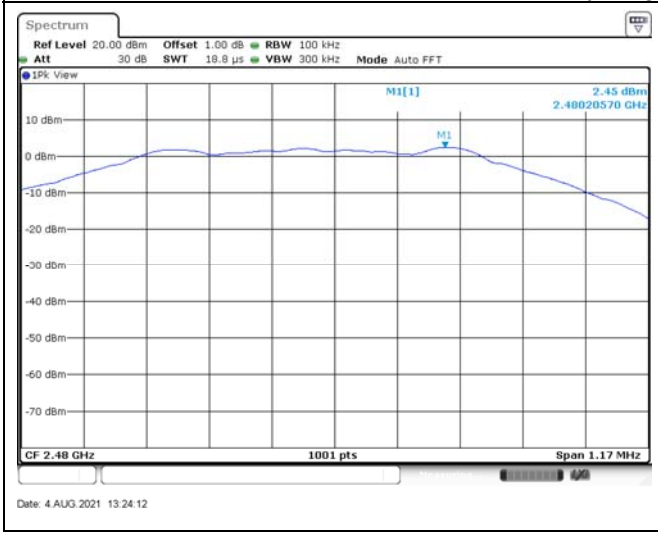


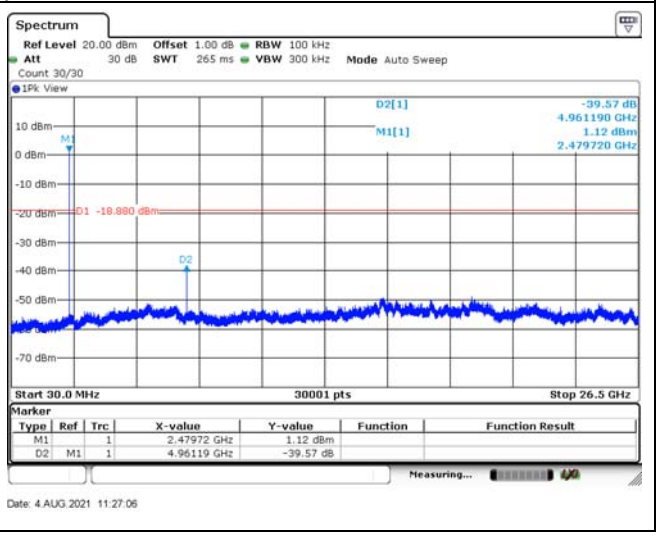
GFSK (1Mbps) / 2440 MHz



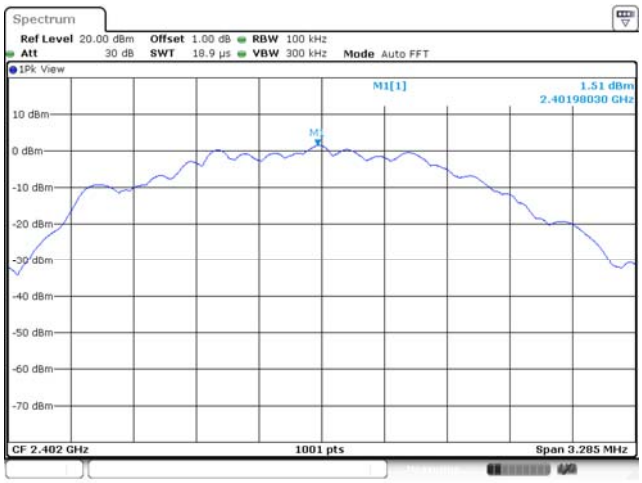


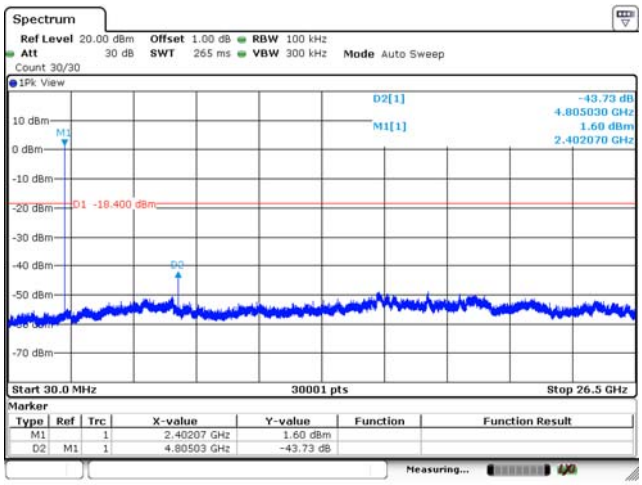
GFSK (1Mbps) / 2480 MHz



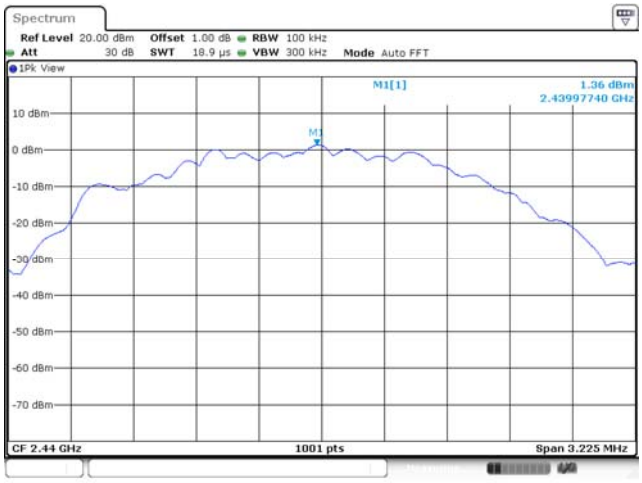


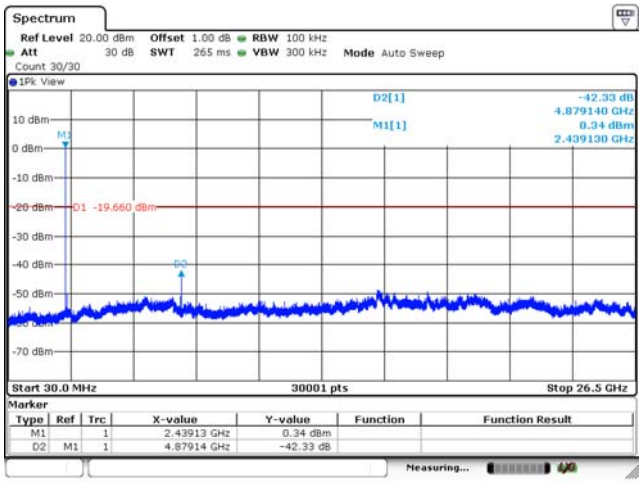
GFSK (2Mbps) / 2402 MHz



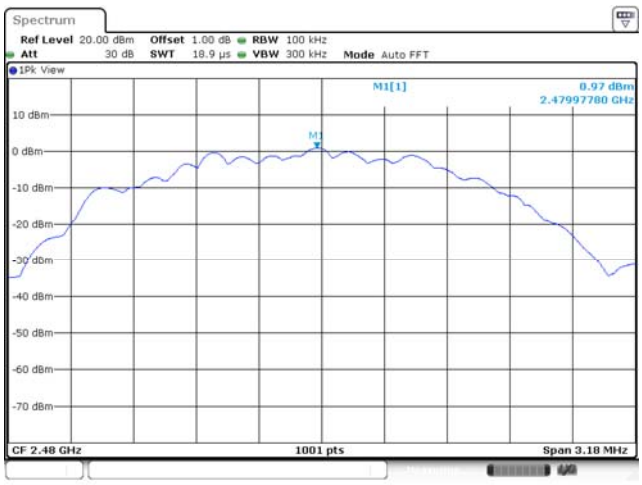


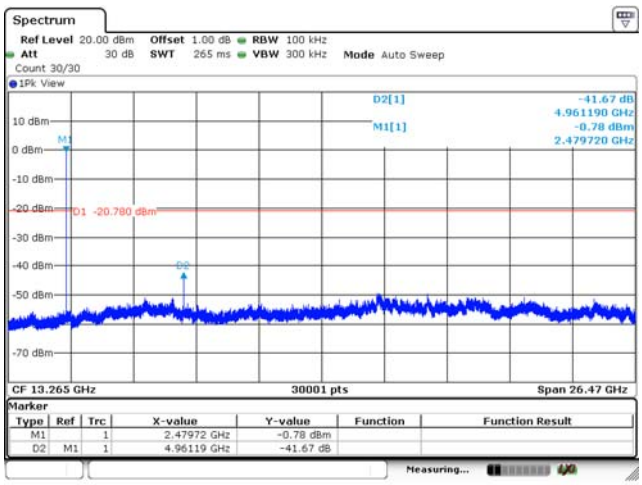
GFSK (2Mbps) / 2440 MHz

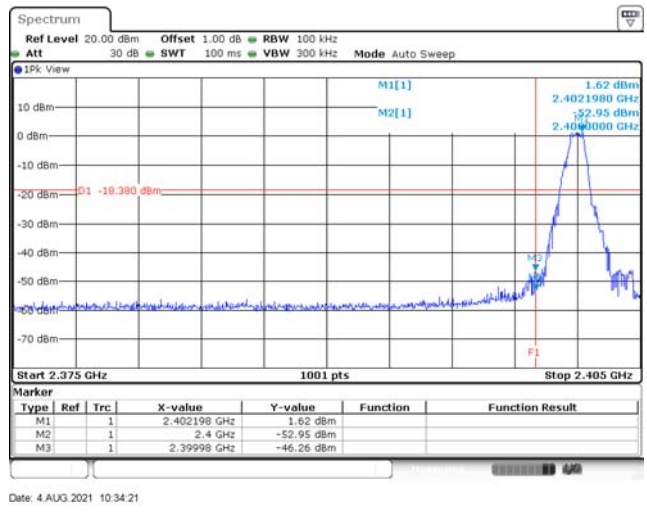
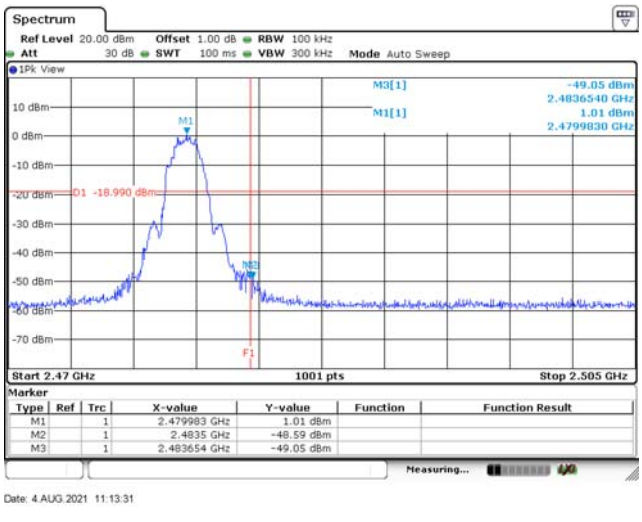
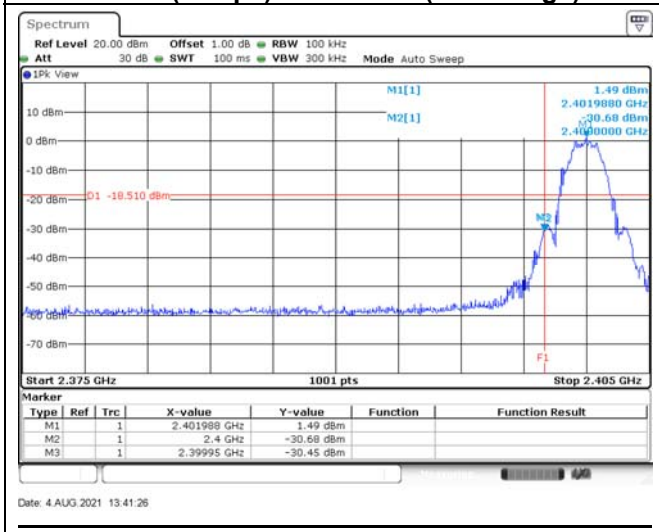
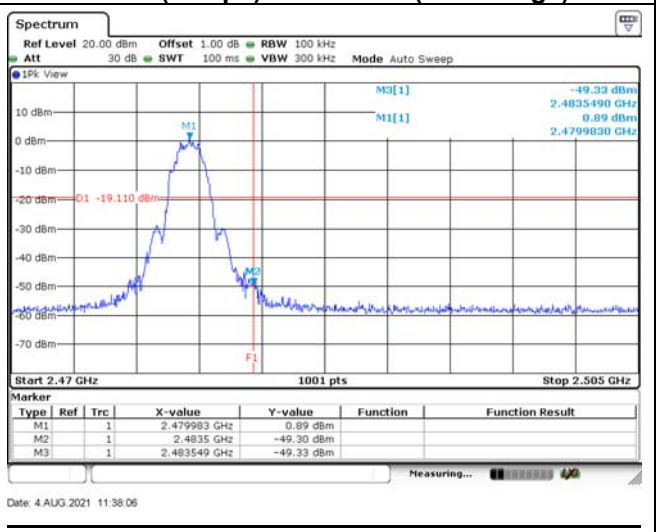




GFSK (2Mbps) / 2480 MHz

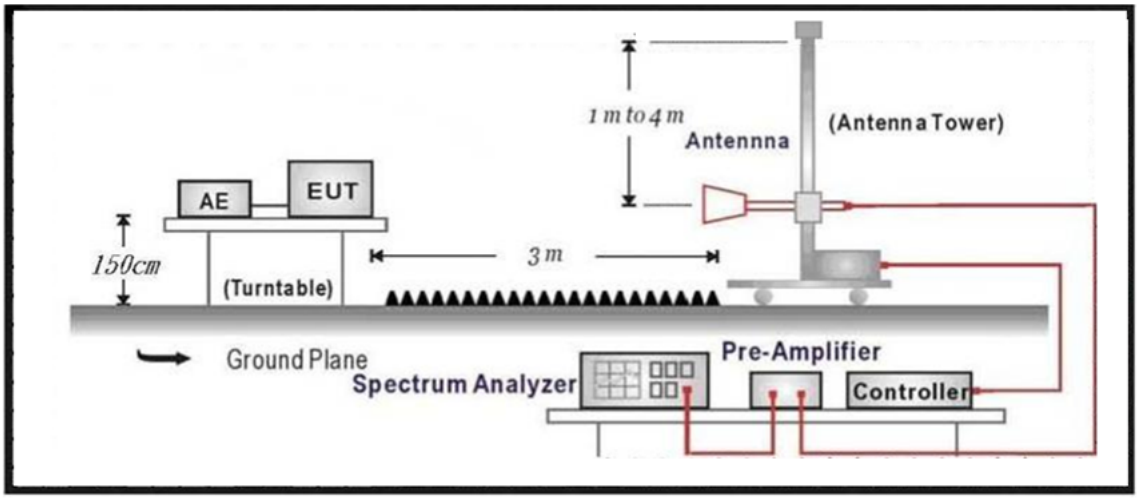




GFSK (1Mbps) / 2402 MHz (Band Edge)	GFSK (1Mbps) / 2480 MHz (Band Edge)
	
GFSK (2Mbps) / 2402 MHz (Band Edge)	GFSK (2Mbps) / 2480 MHz (Band Edge)
	

6. Radiated Emission Band Edge

6.1 Test Setup



6.2 Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.3 Test Procedure

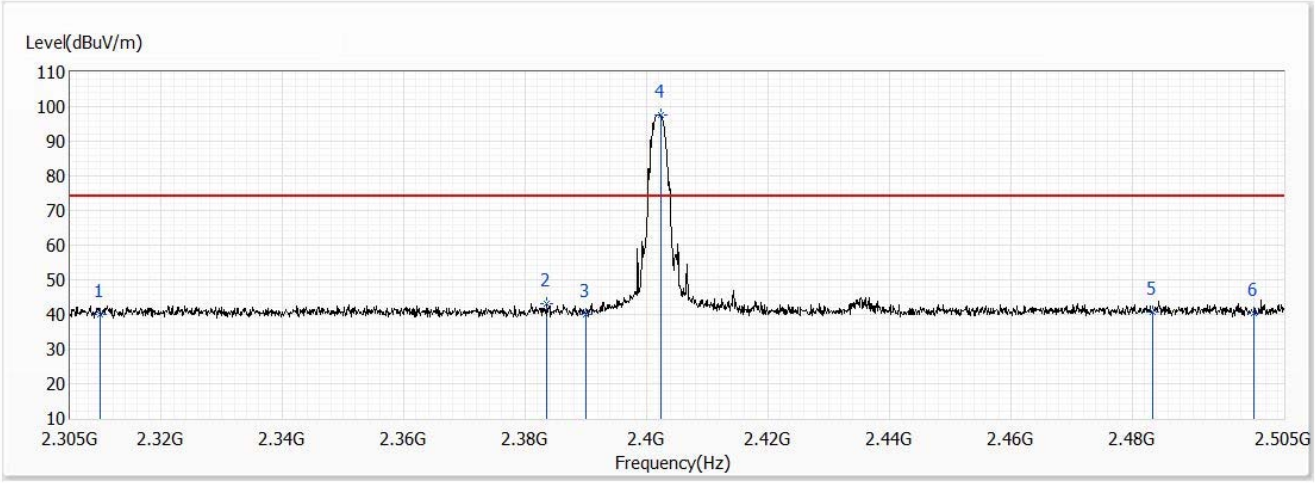
The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of FCC KDB 558074 D01 v05r02 for compliance to FCC 47CFR 15.247 requirements.
The EUT and its simulators are placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The antenna can move 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 measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

6.4 Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247.

6.5 Test Result of Radiated Emission Band Edge

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/7/30
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	25.1
Test Condition	Ch 0,2.402G,BW1M	Humidity (%RH)	57.0

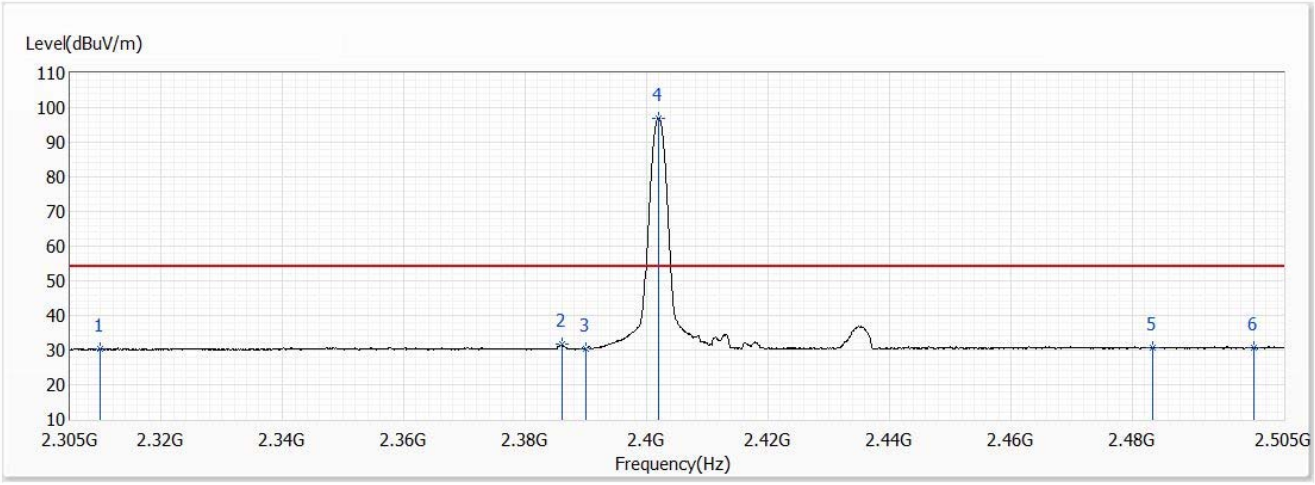


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	40.11	74.00	-33.89	27.50	12.61	PK
2	2383.600	43.01	74.00	-30.99	30.38	12.63	PK
3	2390.000	40.01	74.00	-33.99	27.40	12.61	PK
! 4	2402.300	97.50	74.00	23.50	84.90	12.60	PK
5	2483.500	40.55	74.00	-33.45	27.78	12.77	PK
6	2500.000	40.48	74.00	-33.52	27.69	12.79	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it's not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/7/30
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	25.1
Test Condition	Ch 0,2.402G,BW1M	Humidity (%RH)	57.0

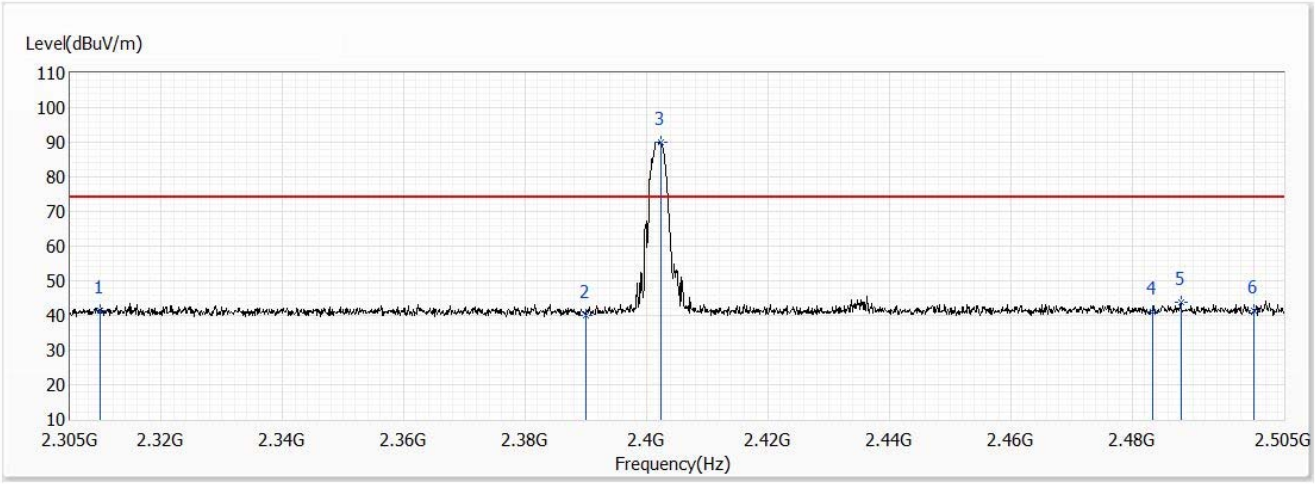


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	30.45	54.00	-23.55	17.84	12.61	AV
2	2386.000	31.62	54.00	-22.38	18.99	12.63	AV
3	2390.000	30.29	54.00	-23.71	17.68	12.61	AV
! 4	2402.000	97.01	54.00	43.01	84.41	12.60	AV
5	2483.500	30.82	54.00	-23.18	18.05	12.77	AV
6	2500.000	30.69	54.00	-23.31	17.90	12.79	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/7/30
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	25.1
Test Condition	Ch 0,2.402G,BW1M	Humidity (%RH)	57.0

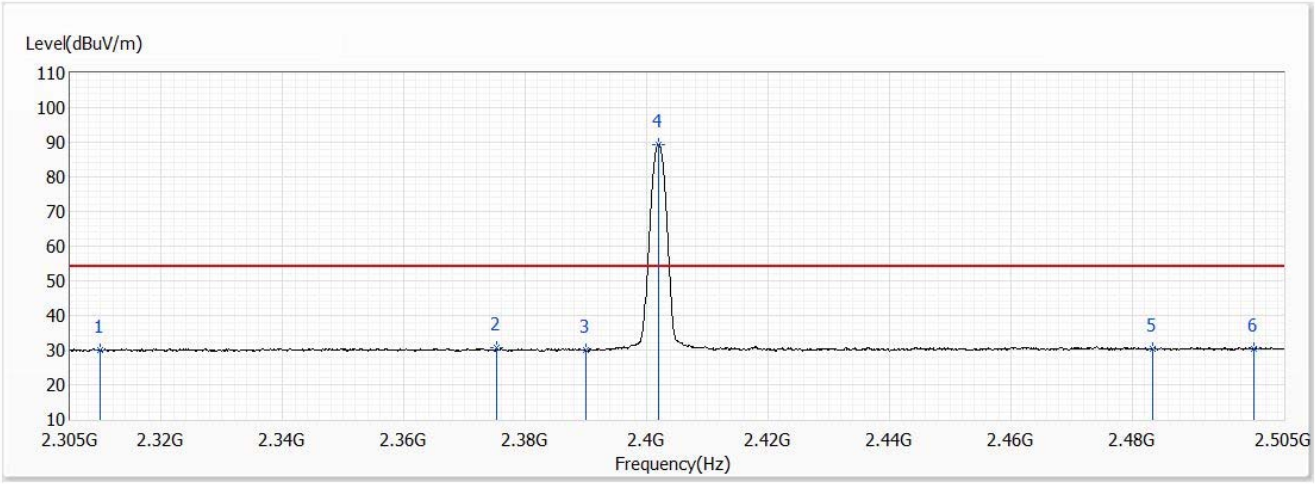


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	41.40	74.00	-32.60	28.79	12.61	PK
2	2390.000	40.10	74.00	-33.90	27.49	12.61	PK
! 3	2402.300	89.92	74.00	15.92	77.32	12.60	PK
4	2483.500	40.97	74.00	-33.03	28.20	12.77	PK
5	2488.100	43.75	74.00	-30.25	30.97	12.78	PK
6	2500.000	41.40	74.00	-32.60	28.61	12.79	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/7/30
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	25.1
Test Condition	Ch 0,2.402G,BW1M	Humidity (%RH)	57.0

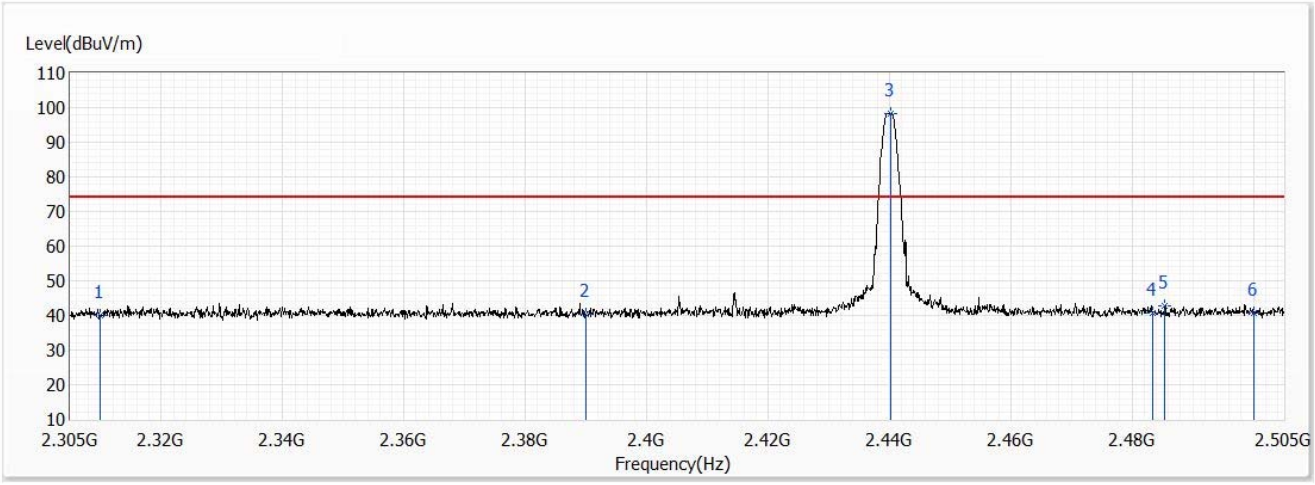


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	30.04	54.00	-23.96	17.43	12.61	AV
2	2375.200	30.53	54.00	-23.47	17.86	12.67	AV
3	2390.000	29.83	54.00	-24.17	17.22	12.61	AV
! 4	2402.000	89.37	54.00	35.37	76.77	12.60	AV
5	2483.500	30.33	54.00	-23.67	17.56	12.77	AV
6	2500.000	30.30	54.00	-23.70	17.51	12.79	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/7/30
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	25.1
Test Condition	Ch 19,2.44G,BW1M	Humidity (%RH)	57.0

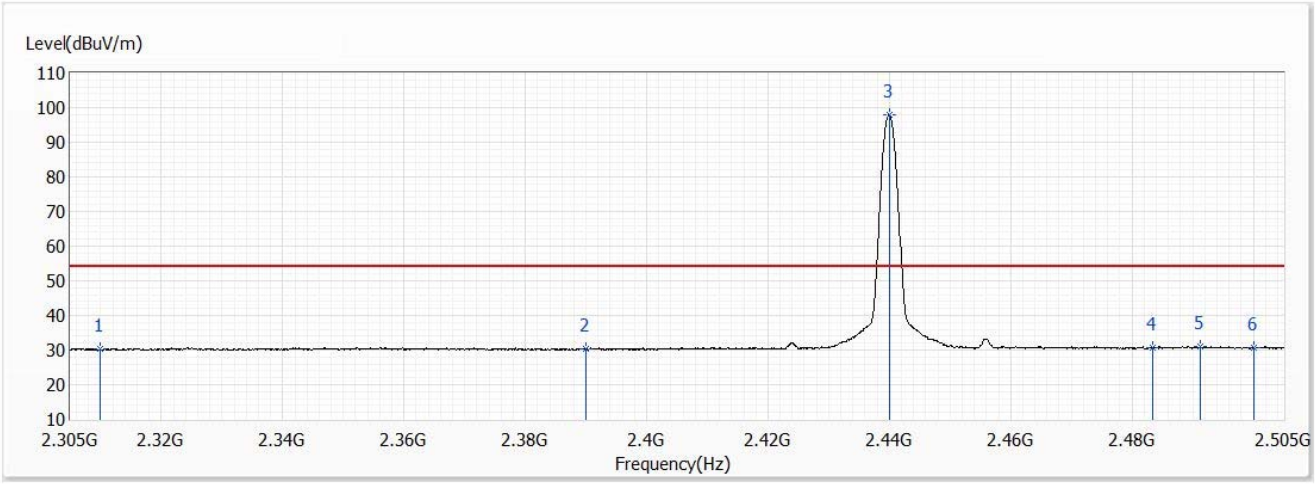


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	40.12	74.00	-33.88	27.51	12.61	PK
2	2390.000	40.23	74.00	-33.77	27.62	12.61	PK
! 3	2440.300	98.37	74.00	24.37	85.66	12.71	PK
4	2483.500	40.74	74.00	-33.26	27.97	12.77	PK
5	2485.400	42.72	74.00	-31.28	29.95	12.77	PK
6	2500.000	40.62	74.00	-33.38	27.83	12.79	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/7/30
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	25.1
Test Condition	Ch 19,2.44G,BW1M	Humidity (%RH)	57.0

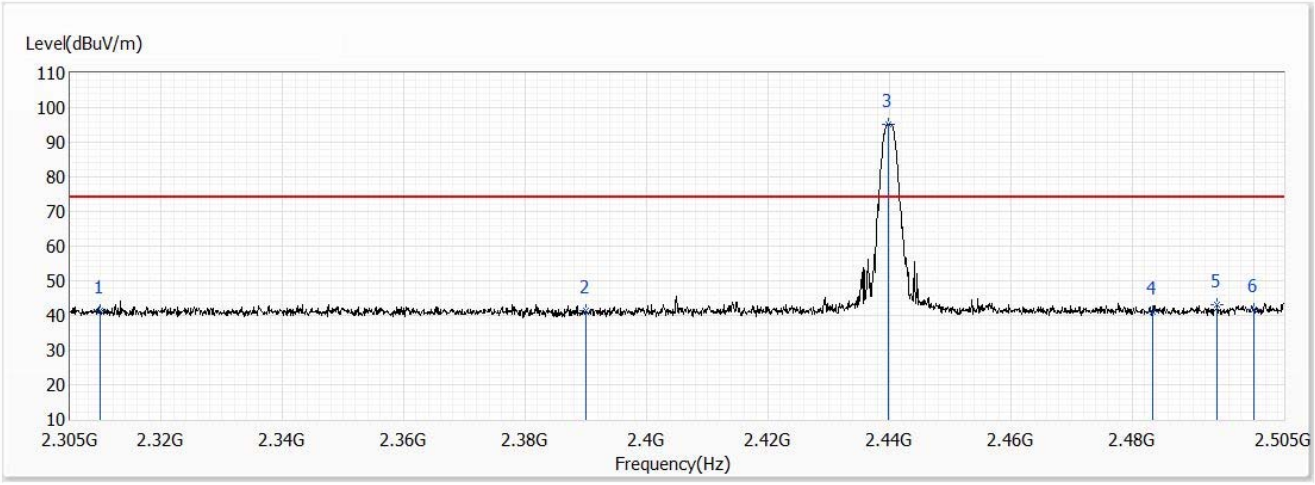


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	30.24	54.00	-23.76	17.63	12.61	AV
2	2390.000	30.31	54.00	-23.69	17.70	12.61	AV
! 3	2440.000	97.89	54.00	43.89	85.18	12.71	AV
4	2483.500	30.68	54.00	-23.32	17.91	12.77	AV
5	2491.300	31.06	54.00	-22.94	18.28	12.78	AV
6	2500.000	30.72	54.00	-23.28	17.93	12.79	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/7/30
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	25.1
Test Condition	Ch 19,2.44G,BW1M	Humidity (%RH)	57.0

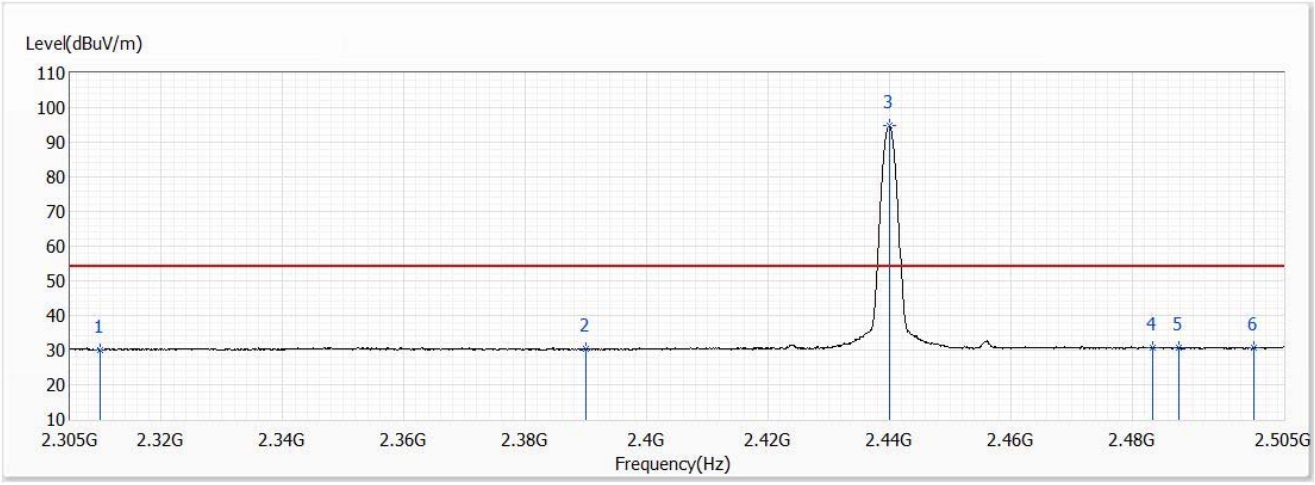


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	41.26	74.00	-32.74	28.65	12.61	PK
2	2390.000	41.37	74.00	-32.63	28.76	12.61	PK
! 3	2439.800	95.14	74.00	21.14	82.43	12.71	PK
4	2483.500	40.95	74.00	-33.05	28.18	12.77	PK
5	2494.100	42.95	74.00	-31.05	30.17	12.78	PK
6	2500.000	41.56	74.00	-32.44	28.77	12.79	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/7/30
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	25.1
Test Condition	Ch 19,2.44G,BW1M	Humidity (%RH)	57.0

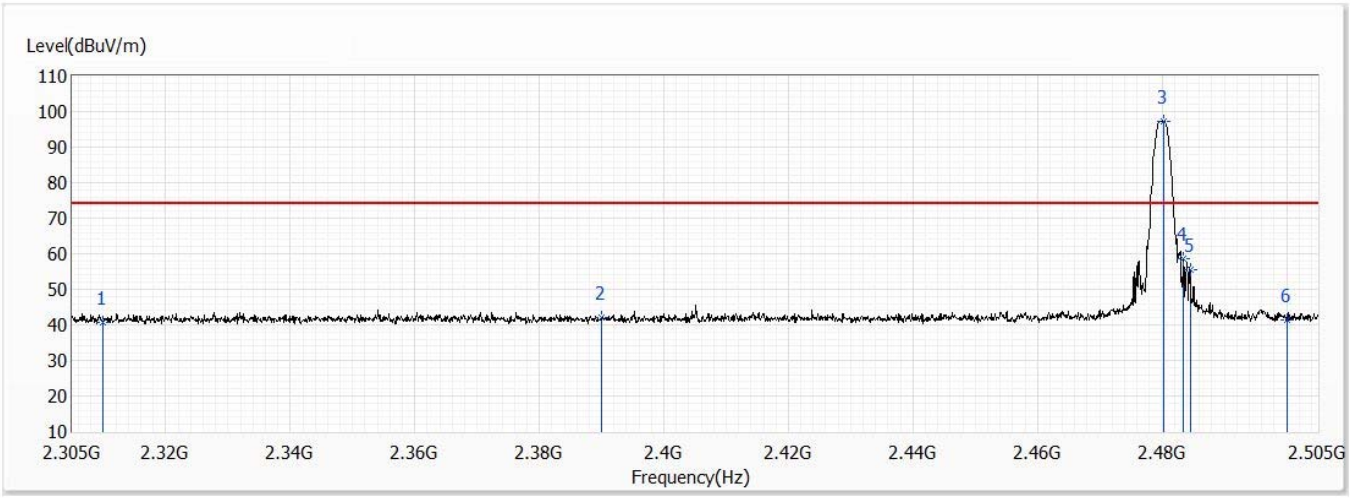


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	30.09	54.00	-23.91	17.48	12.61	AV
2	2390.000	30.32	54.00	-23.68	17.71	12.61	AV
! 3	2440.000	94.66	54.00	40.66	81.95	12.71	AV
4	2483.500	30.59	54.00	-23.41	17.82	12.77	AV
5	2487.800	30.80	54.00	-23.20	18.02	12.78	AV
6	2500.000	30.60	54.00	-23.40	17.81	12.79	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/7/30
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	25.1
Test Condition	Ch 39,2.48G,BW1M	Humidity (%RH)	57.0

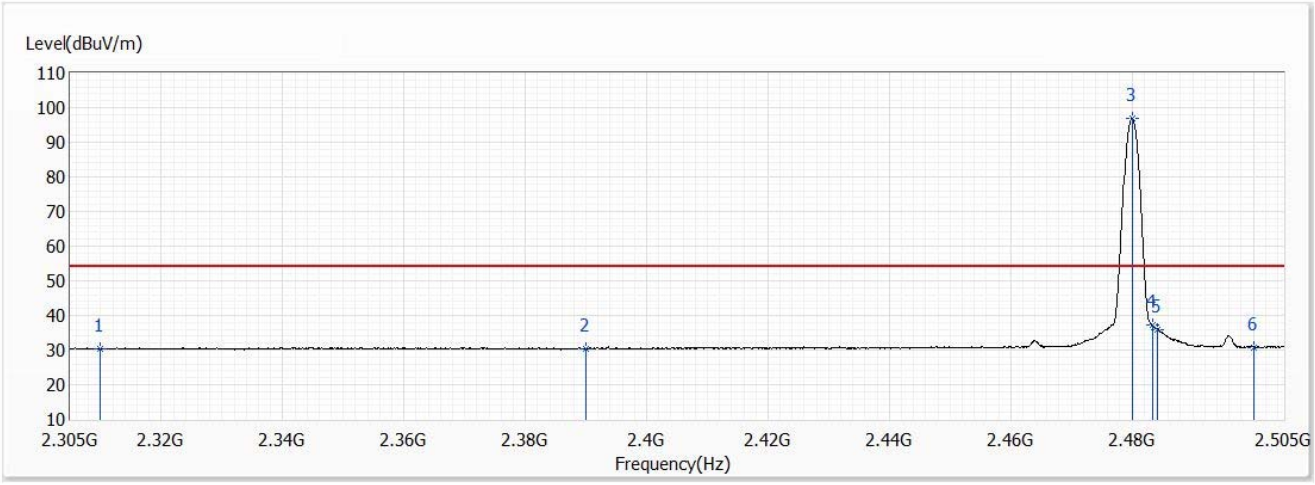


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	40.78	74.00	-33.22	28.17	12.61	PK
2	2390.000	42.00	74.00	-32.00	29.39	12.61	PK
! 3	2480.300	97.31	74.00	23.31	84.54	12.77	PK
4	2483.500	58.57	74.00	-15.43	45.80	12.77	PK
5	2484.500	55.35	74.00	-18.65	42.58	12.77	PK
6	2500.000	41.41	74.00	-32.59	28.62	12.79	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/7/30
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	25.1
Test Condition	Ch 39,2.48G,BW1M	Humidity (%RH)	57.0

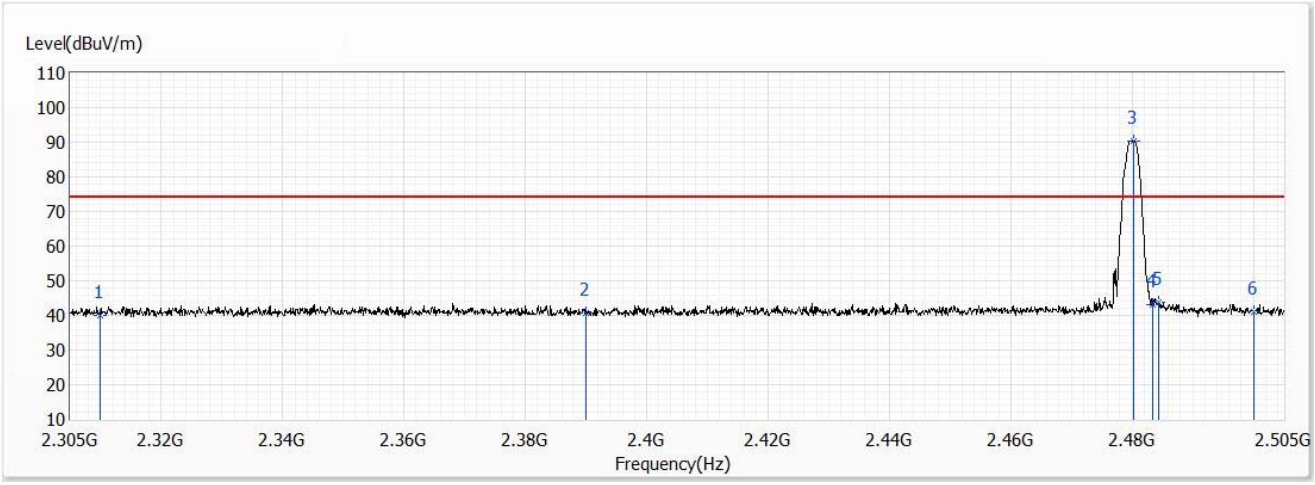


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	30.33	54.00	-23.67	17.72	12.61	AV
2	2390.000	30.51	54.00	-23.49	17.90	12.61	AV
! 3	2480.000	96.81	54.00	42.81	84.04	12.77	AV
4	2483.500	37.11	54.00	-16.89	24.34	12.77	AV
5	2484.200	35.87	54.00	-18.13	23.10	12.77	AV
6	2500.000	30.85	54.00	-23.15	18.06	12.79	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/7/30
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	25.1
Test Condition	Ch 39,2.48G,BW1M	Humidity (%RH)	57.0

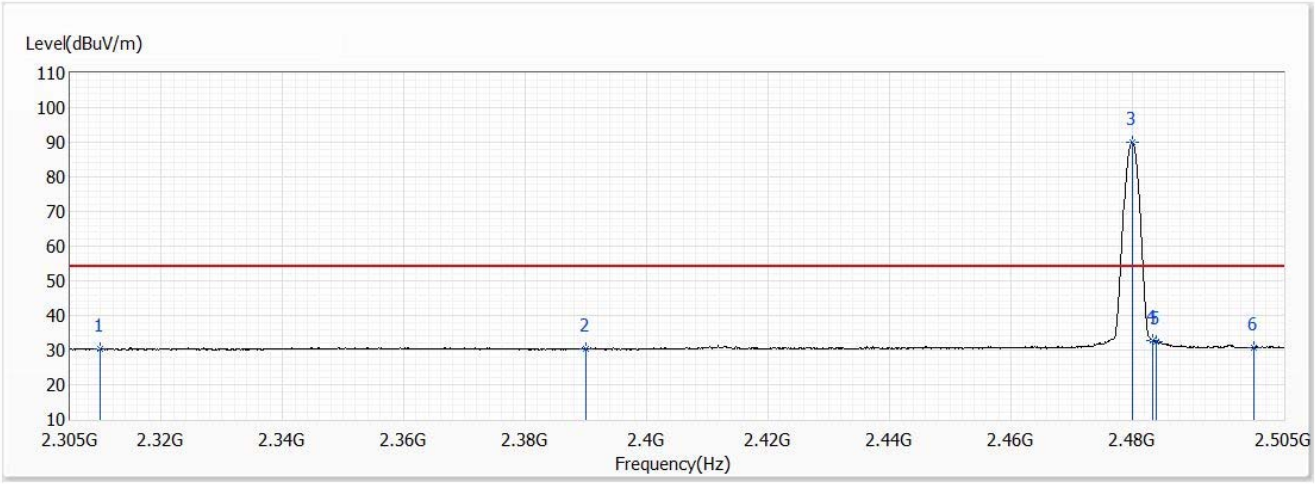


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	39.86	74.00	-34.14	27.25	12.61	PK
2	2390.000	40.62	74.00	-33.38	28.01	12.61	PK
! 3	2480.200	90.44	74.00	16.44	77.67	12.77	PK
4	2483.500	43.00	74.00	-31.00	30.23	12.77	PK
5	2484.400	43.93	74.00	-30.07	31.16	12.77	PK
6	2500.000	41.08	74.00	-32.92	28.29	12.79	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	25.1
Test Condition	Ch 39,2.48G,BW1M	Humidity (%RH)	57.0

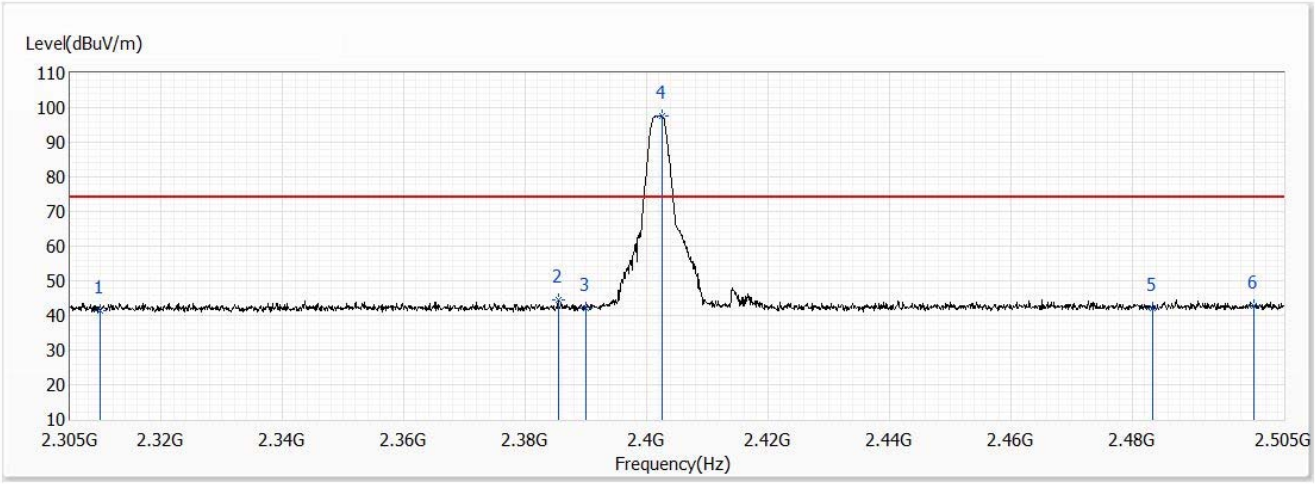


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	30.19	54.00	-23.81	17.58	12.61	AV
2	2390.000	30.23	54.00	-23.77	17.62	12.61	AV
! 3	2480.000	89.94	54.00	35.94	77.17	12.77	AV
4	2483.500	32.68	54.00	-21.32	19.91	12.77	AV
5	2484.000	32.40	54.00	-21.60	19.63	12.77	AV
6	2500.000	30.54	54.00	-23.46	17.75	12.79	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	25.1
Test Condition	Ch 0,2.402G,BW2M	Humidity (%RH)	57.0

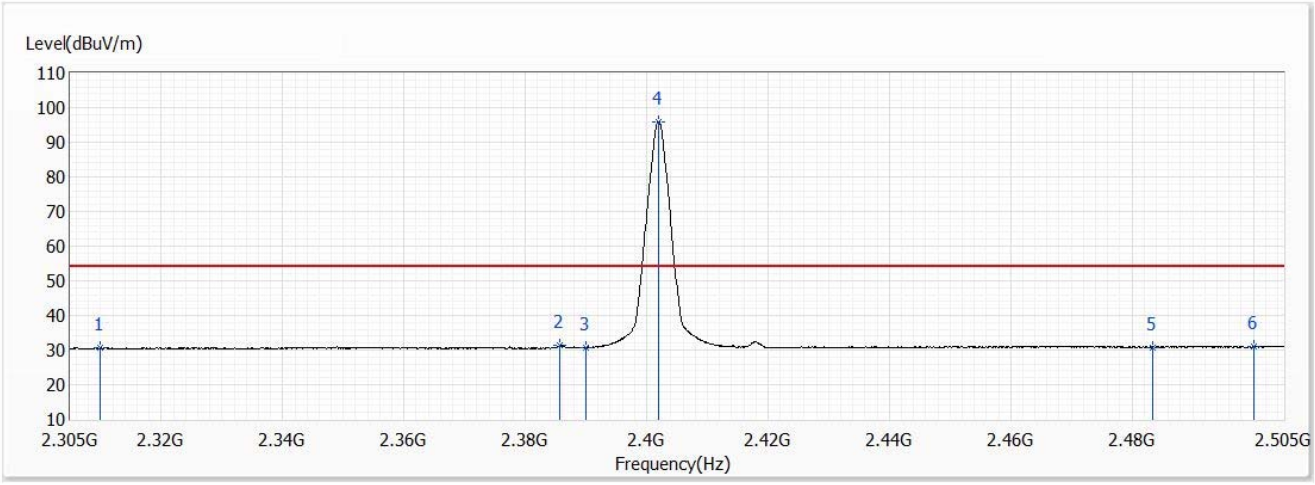


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	41.52	74.00	-32.48	28.91	12.61	PK
2	2385.400	44.34	74.00	-29.66	31.71	12.63	PK
3	2390.000	42.22	74.00	-31.78	29.61	12.61	PK
! 4	2402.500	97.61	74.00	23.61	85.01	12.60	PK
5	2483.500	42.19	74.00	-31.81	29.42	12.77	PK
6	2500.000	42.86	74.00	-31.14	30.07	12.79	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	25.1
Test Condition	Ch 0,2.402G,BW2M	Humidity (%RH)	57.0

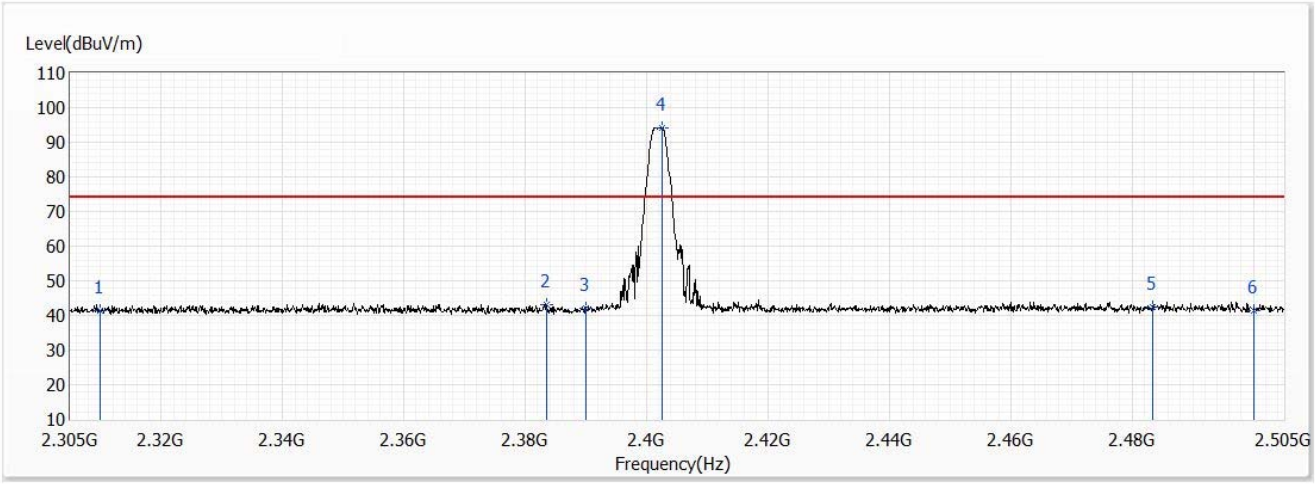


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	30.60	54.00	-23.40	17.99	12.61	AV
2	2385.700	31.31	54.00	-22.69	18.67	12.64	AV
3	2390.000	30.64	54.00	-23.36	18.03	12.61	AV
! 4	2401.900	95.94	54.00	41.94	83.34	12.60	AV
5	2483.500	30.86	54.00	-23.14	18.09	12.77	AV
6	2500.000	30.95	54.00	-23.05	18.16	12.79	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	25.1
Test Condition	Ch 0,2.402G,BW2M	Humidity (%RH)	57.0

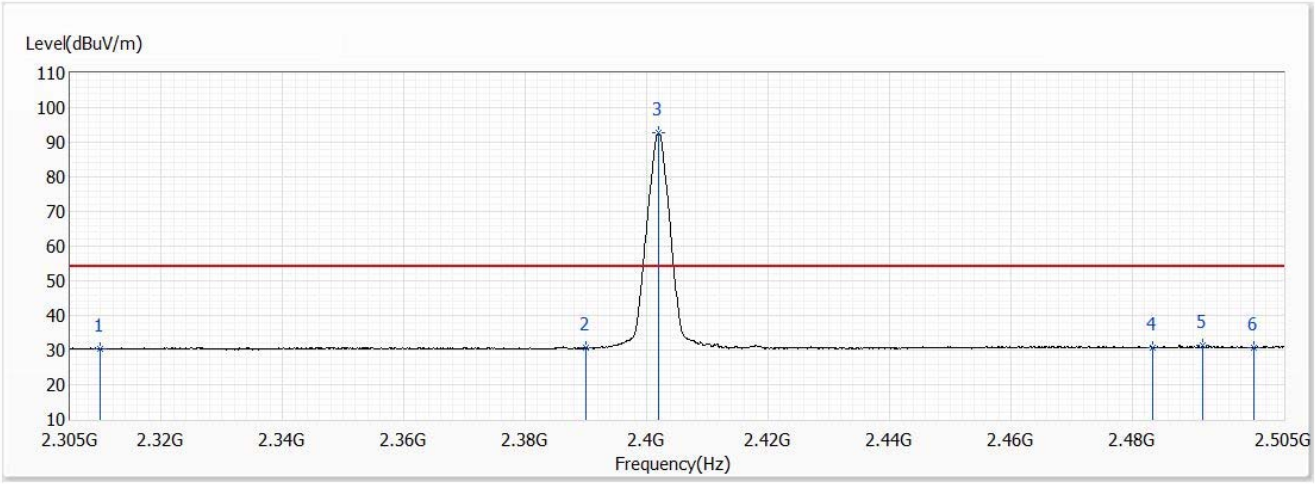


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	41.33	74.00	-32.67	28.72	12.61	PK
2	2383.600	43.26	74.00	-30.74	30.63	12.63	PK
3	2390.000	41.91	74.00	-32.09	29.30	12.61	PK
! 4	2402.500	94.29	74.00	20.29	81.69	12.60	PK
5	2483.500	42.56	74.00	-31.44	29.79	12.77	PK
6	2500.000	41.44	74.00	-32.56	28.65	12.79	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it's not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	25.1
Test Condition	Ch 0,2.402G,BW2M	Humidity (%RH)	57.0

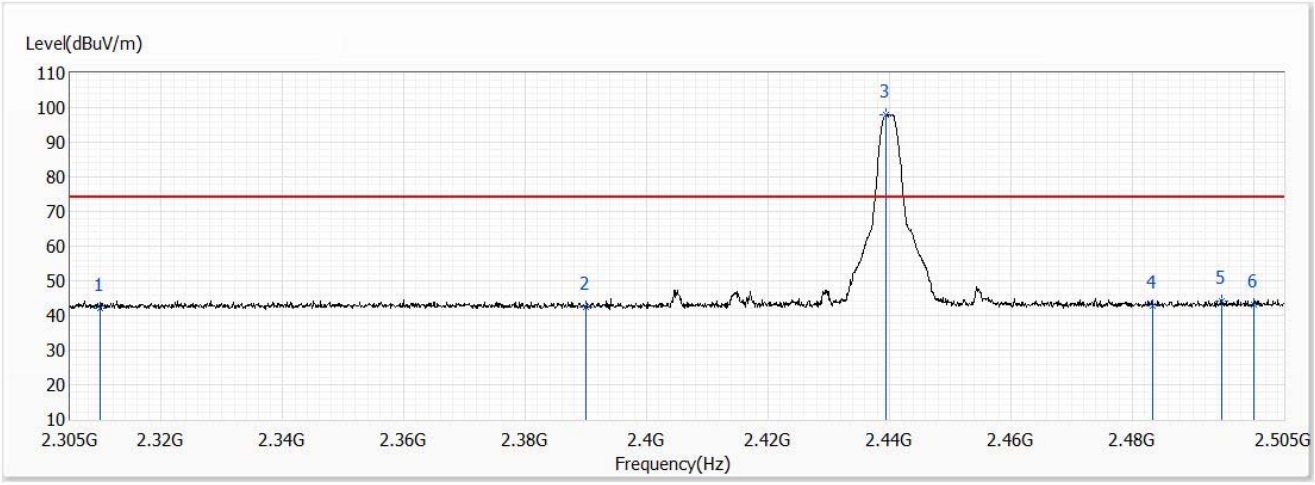


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	30.38	54.00	-23.62	17.77	12.61	AV
2	2390.000	30.53	54.00	-23.47	17.92	12.61	AV
! 3	2401.900	92.63	54.00	38.63	80.03	12.60	AV
4	2483.500	30.73	54.00	-23.27	17.96	12.77	AV
5	2491.700	31.28	54.00	-22.72	18.50	12.78	AV
6	2500.000	30.75	54.00	-23.25	17.96	12.79	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	25.1
Test Condition	Ch 19,2.44G,BW2M	Humidity (%RH)	57.0

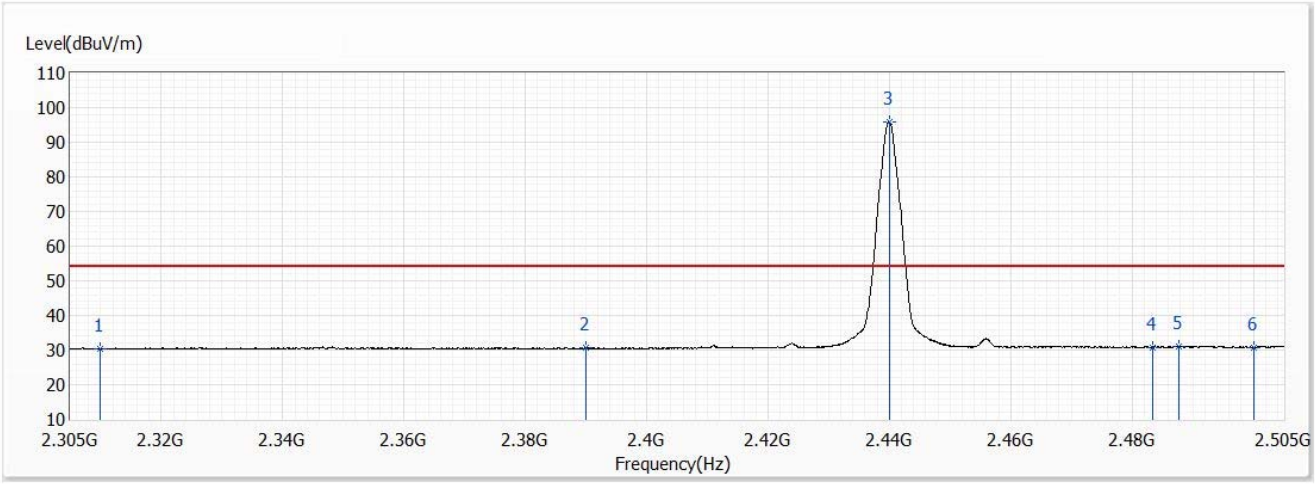


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	42.14	74.00	-31.86	29.53	12.61	PK
2	2390.000	42.32	74.00	-31.68	29.71	12.61	PK
! 3	2439.500	97.86	74.00	23.86	85.15	12.71	PK
4	2483.500	42.68	74.00	-31.32	29.91	12.77	PK
5	2494.700	44.31	74.00	-29.69	31.53	12.78	PK
6	2500.000	43.22	74.00	-30.78	30.43	12.79	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	25.1
Test Condition	Ch 19,2.44G,BW2M	Humidity (%RH)	57.0

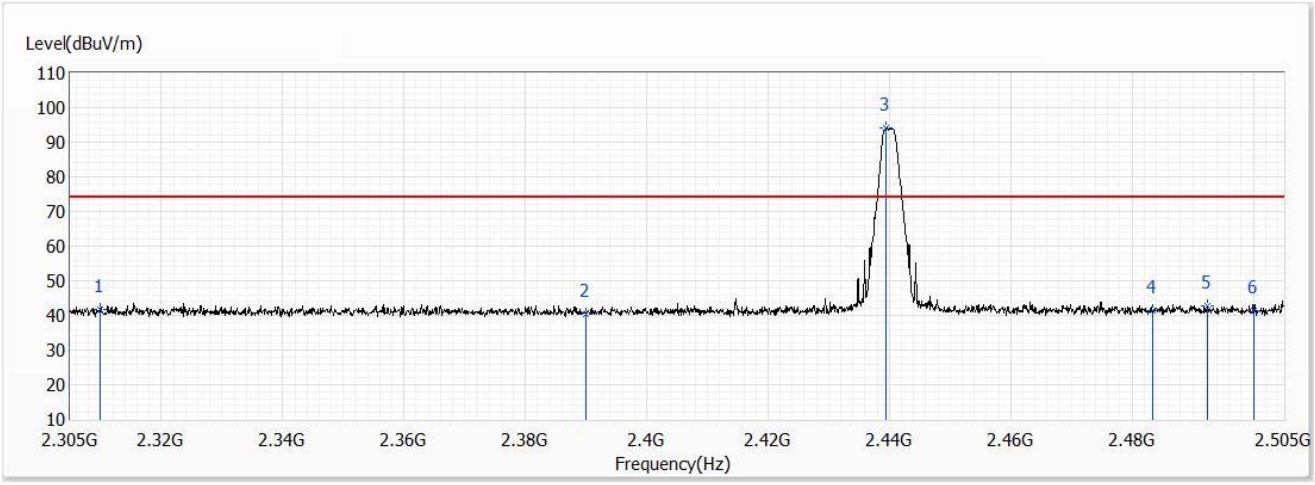


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	30.41	54.00	-23.59	17.80	12.61	AV
2	2390.000	30.59	54.00	-23.41	17.98	12.61	AV
! 3	2440.000	96.00	54.00	42.00	83.29	12.71	AV
4	2483.500	30.82	54.00	-23.18	18.05	12.77	AV
5	2487.700	31.09	54.00	-22.91	18.31	12.78	AV
6	2500.000	30.82	54.00	-23.18	18.03	12.79	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	25.1
Test Condition	Ch 19,2.44G,BW2M	Humidity (%RH)	57.0

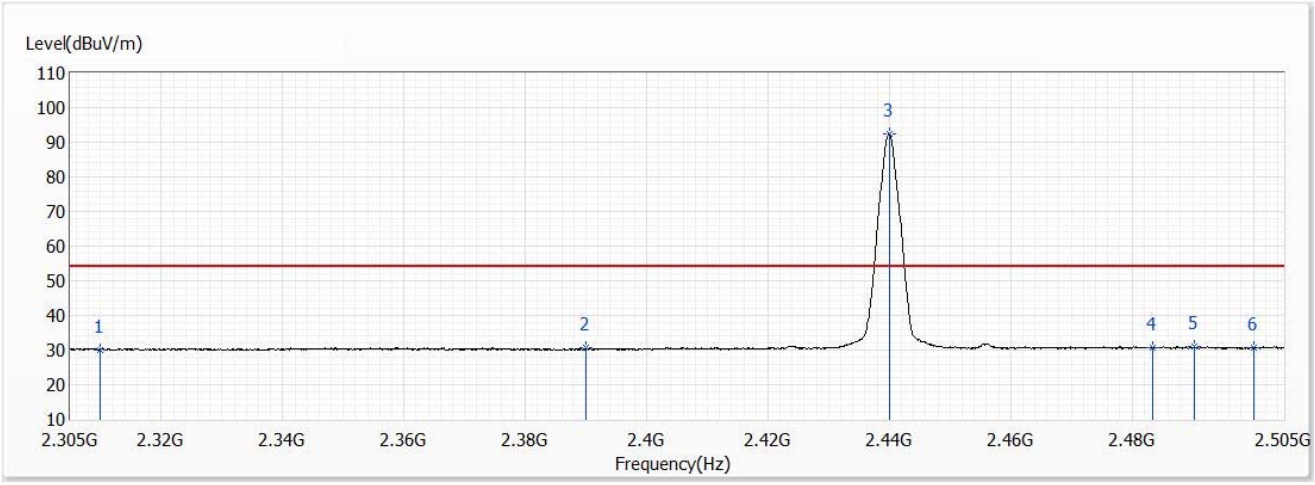


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	41.79	74.00	-32.21	29.18	12.61	PK
2	2390.000	40.50	74.00	-33.50	27.89	12.61	PK
! 3	2439.500	93.99	74.00	19.99	81.28	12.71	PK
4	2483.500	41.22	74.00	-32.78	28.45	12.77	PK
5	2492.500	42.83	74.00	-31.17	30.04	12.79	PK
6	2500.000	41.54	74.00	-32.46	28.75	12.79	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	25.1
Test Condition	Ch 19,2.44G,BW2M	Humidity (%RH)	57.0

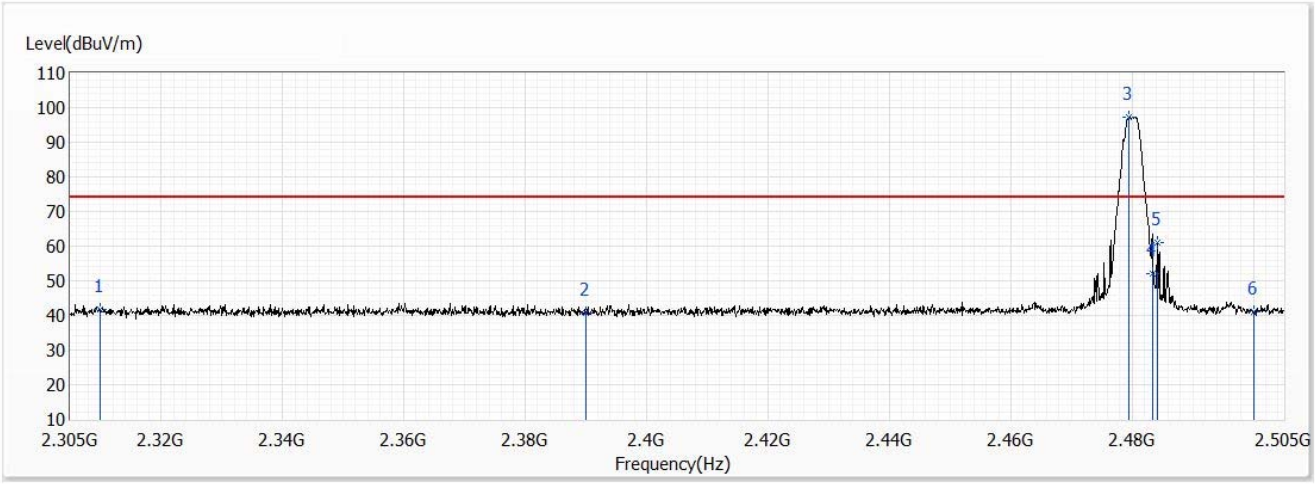


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	30.06	54.00	-23.94	17.45	12.61	AV
2	2390.000	30.57	54.00	-23.43	17.96	12.61	AV
! 3	2440.000	92.29	54.00	38.29	79.58	12.71	AV
4	2483.500	30.55	54.00	-23.45	17.78	12.77	AV
5	2490.300	30.87	54.00	-23.13	18.09	12.78	AV
6	2500.000	30.53	54.00	-23.47	17.74	12.79	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	25.1
Test Condition	Ch 39,2.48G,BW2M	Humidity (%RH)	57.0

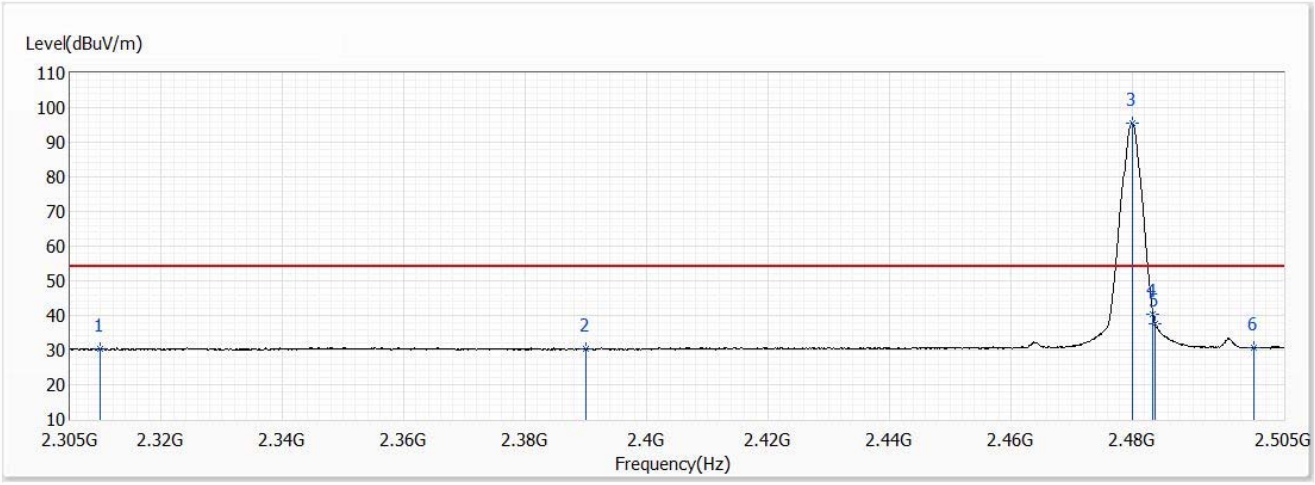


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	41.79	74.00	-32.21	29.18	12.61	PK
2	2390.000	40.72	74.00	-33.28	28.11	12.61	PK
! 3	2479.500	97.23	74.00	23.23	84.46	12.77	PK
4	2483.500	52.01	74.00	-21.99	39.24	12.77	PK
5	2484.100	61.07	74.00	-12.93	48.30	12.77	PK
6	2500.000	40.97	74.00	-33.03	28.18	12.79	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it's not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Horizontal	Temperature (℃)	25.1
Test Condition	Ch 39,2.48G,BW2M	Humidity (%RH)	57.0

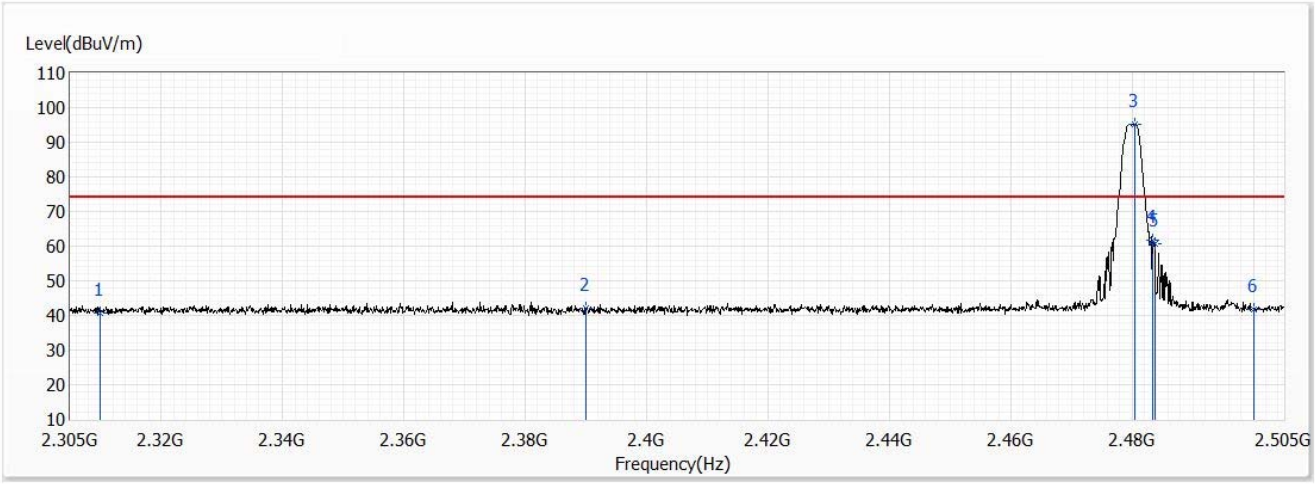


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	30.28	54.00	-23.72	17.67	12.61	AV
2	2390.000	30.32	54.00	-23.68	17.71	12.61	AV
! 3	2480.000	95.54	54.00	41.54	82.77	12.77	AV
4	2483.500	40.32	54.00	-13.68	27.55	12.77	AV
5	2483.800	37.72	54.00	-16.28	24.95	12.77	AV
6	2500.000	30.77	54.00	-23.23	17.98	12.79	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	25.1
Test Condition	Ch 39,2.48G,BW2M	Humidity (%RH)	57.0

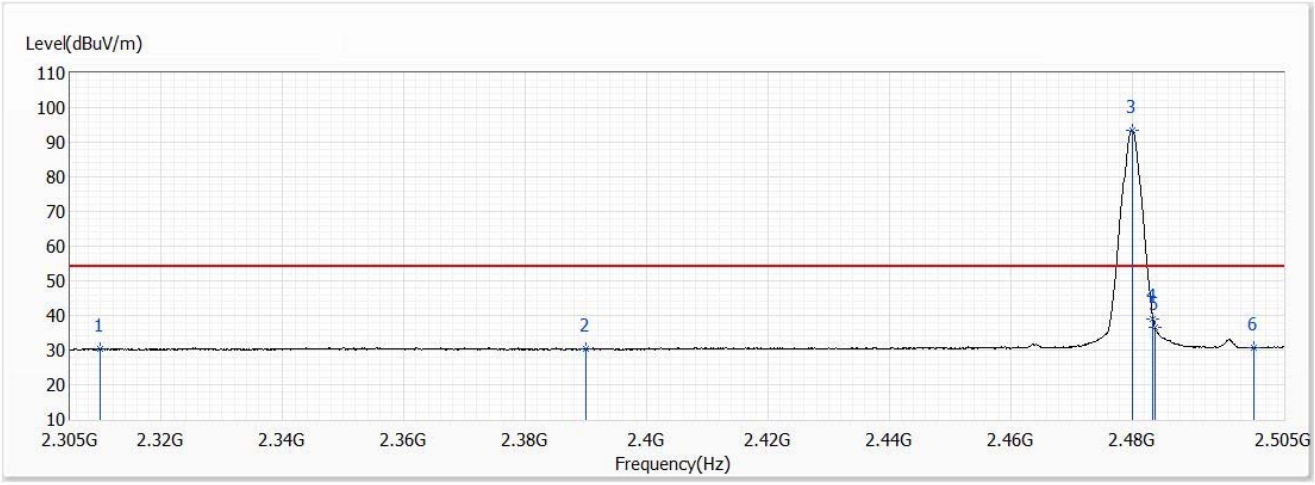


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	40.76	74.00	-33.24	28.15	12.61	PK
2	2390.000	42.10	74.00	-31.90	29.49	12.61	PK
! 3	2480.500	95.22	74.00	21.22	82.45	12.77	PK
4	2483.500	61.77	74.00	-12.23	49.00	12.77	PK
5	2483.800	60.52	74.00	-13.48	47.75	12.77	PK
6	2500.000	41.56	74.00	-32.44	28.77	12.79	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Model No	BM67C741-1	Site	CB4-H
Test Voltage	DC 3V	Test Date	2021/8/2
Test Mode	Mode 1: Transmit	Engineer	Scott Chang
Polarity	Vertical	Temperature (℃)	25.1
Test Condition	Ch 39,2.48G,BW2M	Humidity (%RH)	57.0



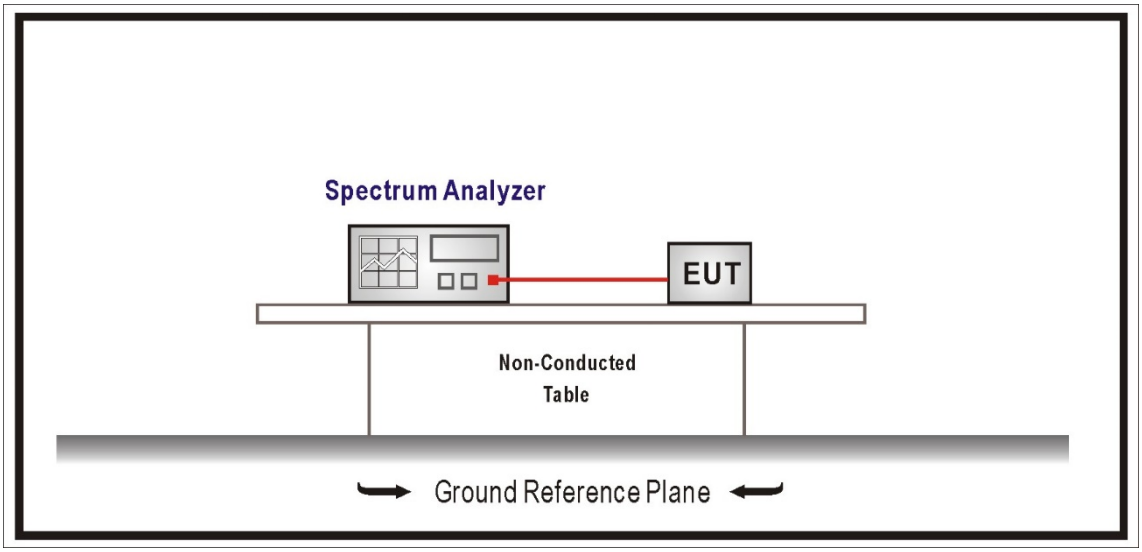
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310.000	30.21	54.00	-23.79	17.60	12.61	AV
2	2390.000	30.25	54.00	-23.75	17.64	12.61	AV
! 3	2480.000	93.54	54.00	39.54	80.77	12.77	AV
4	2483.500	38.95	54.00	-15.05	26.18	12.77	AV
5	2483.800	36.44	54.00	-17.56	23.67	12.77	AV
6	2500.000	30.61	54.00	-23.39	17.82	12.79	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it’s not restricted by unwanted emission limit.

7. Occupied Bandwidth & DTS Bandwidth

7.1 Test Setup



7.2 Limits

The 6 dB bandwidth: ≧ 500 kHz.

Occupied Bandwidth: NA

7.3 Test Procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure of KDB 558074 D01 V05r02 for compliance to FCC 47CFR 15.247 requirements.

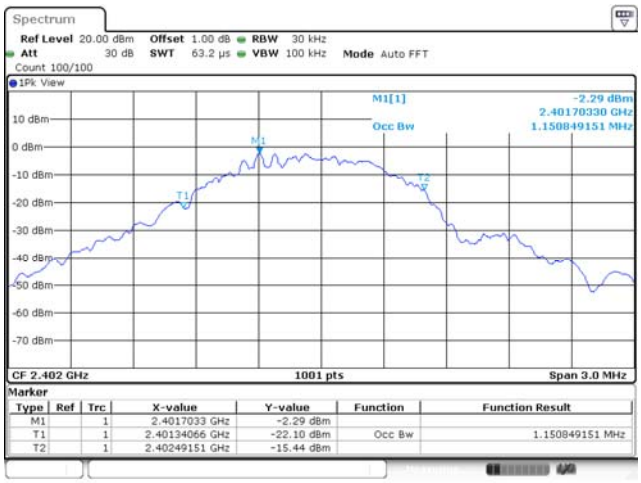
7.4 Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247.

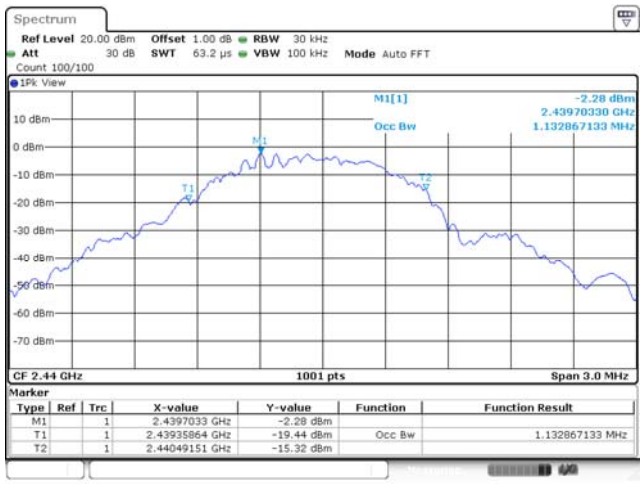
7.5 Test Result of Occupied Bandwidth

Modulation	Channel	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
GFSK (1Mbps)	00	2402	1.151	-	Pass
	19	2440	1.133	-	Pass
	39	2480	1.106	-	Pass
GFSK (2Mbps)	00	2402	2.191	-	Pass
	19	2440	2.152	-	Pass
	39	2480	2.122	-	Pass

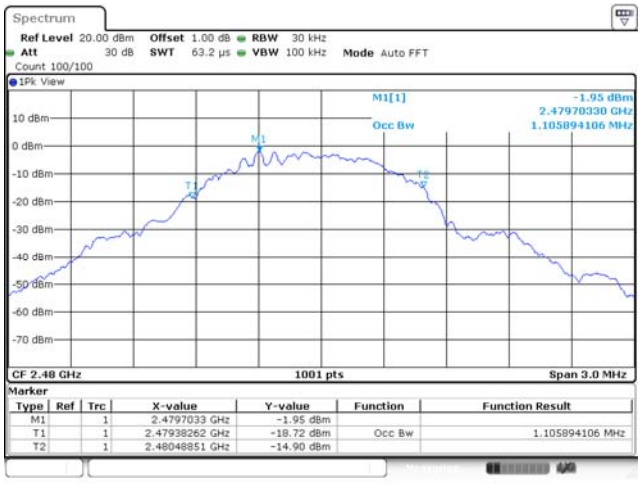
GFSK (1Mbps) / 2402 MHz



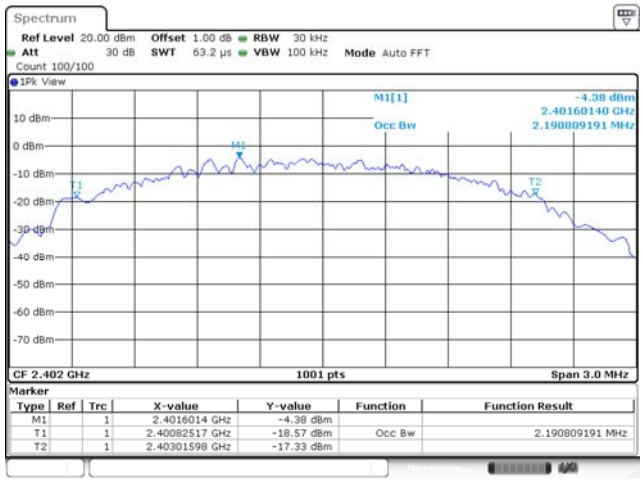
GFSK (1Mbps) / 2440 MHz



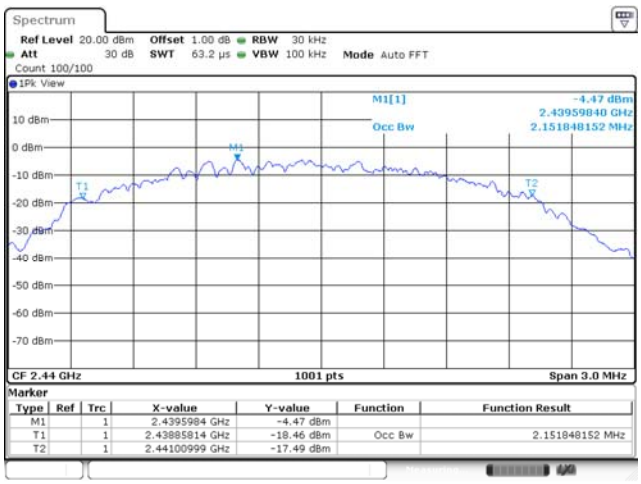
GFSK (1Mbps) / 2480 MHz



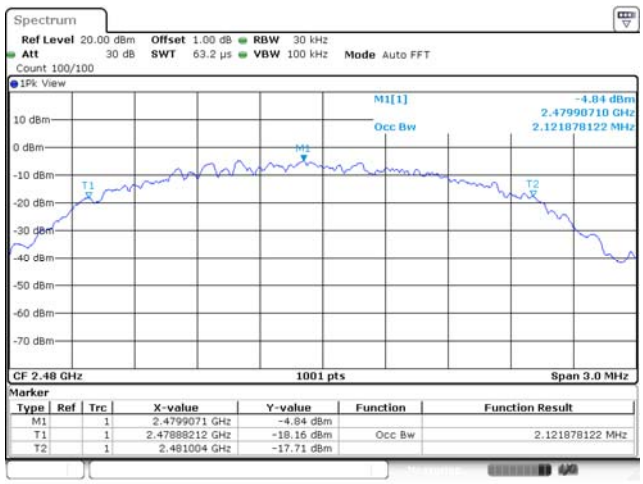
GFSK (2Mbps) / 2402 MHz



GFSK (2Mbps) / 2440 MHz



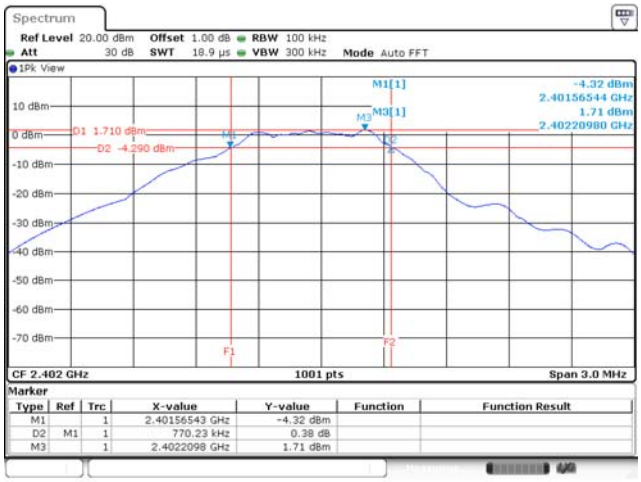
GFSK (2Mbps) / 2480 MHz



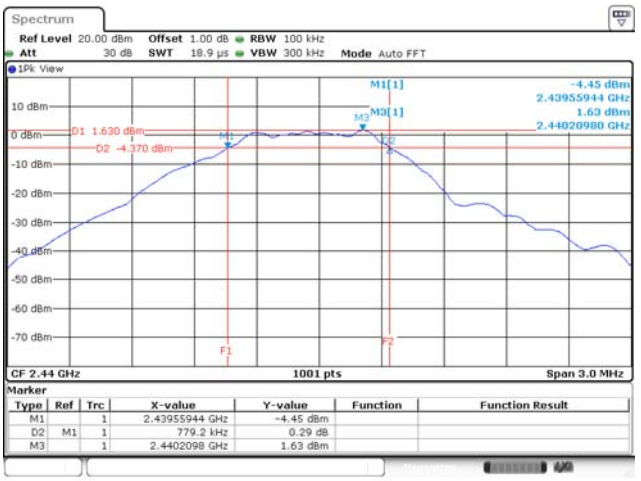
7.6 Test Result of DTS Bandwidth

Modulation	Channel	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
GFSK (1Mbps)	00	2402	0.770	≧0.500	Pass
	19	2440	0.779	≧0.500	Pass
	39	2480	0.779	≧0.500	Pass
GFSK (2Mbps)	00	2402	1.346	≧0.500	Pass
	19	2440	1.352	≧0.500	Pass
	39	2480	1.361	≧0.500	Pass

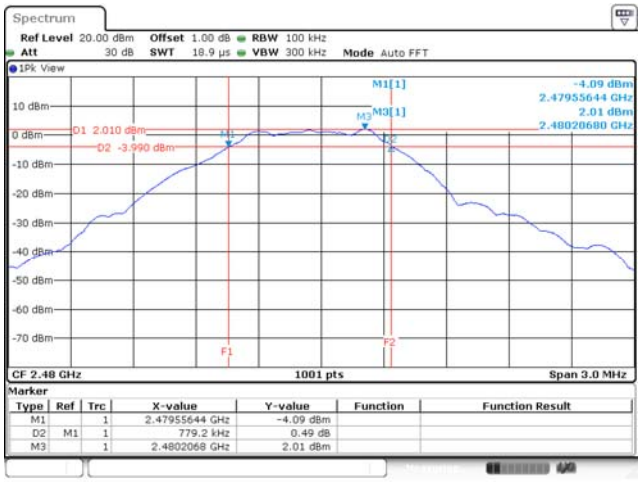
GFSK (1Mbps) / 2402 MHz



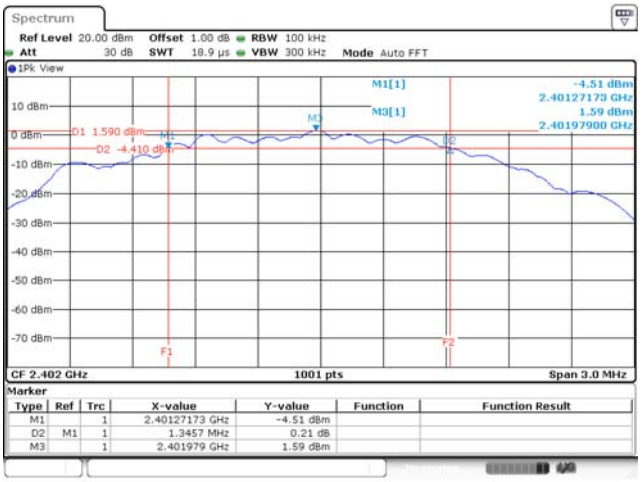
GFSK (1Mbps) / 2440 MHz



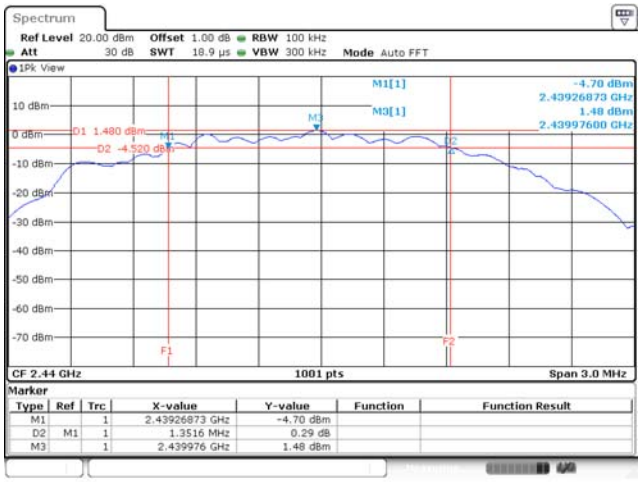
GFSK (1Mbps) / 2480 MHz



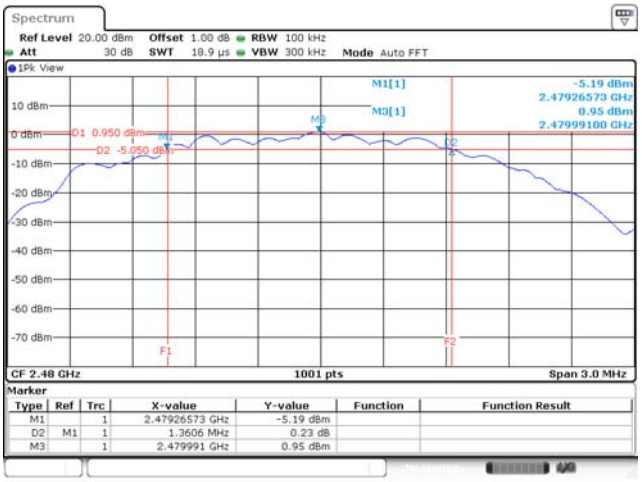
GFSK (2Mbps) / 2402 MHz



GFSK (2Mbps) / 2440 MHz

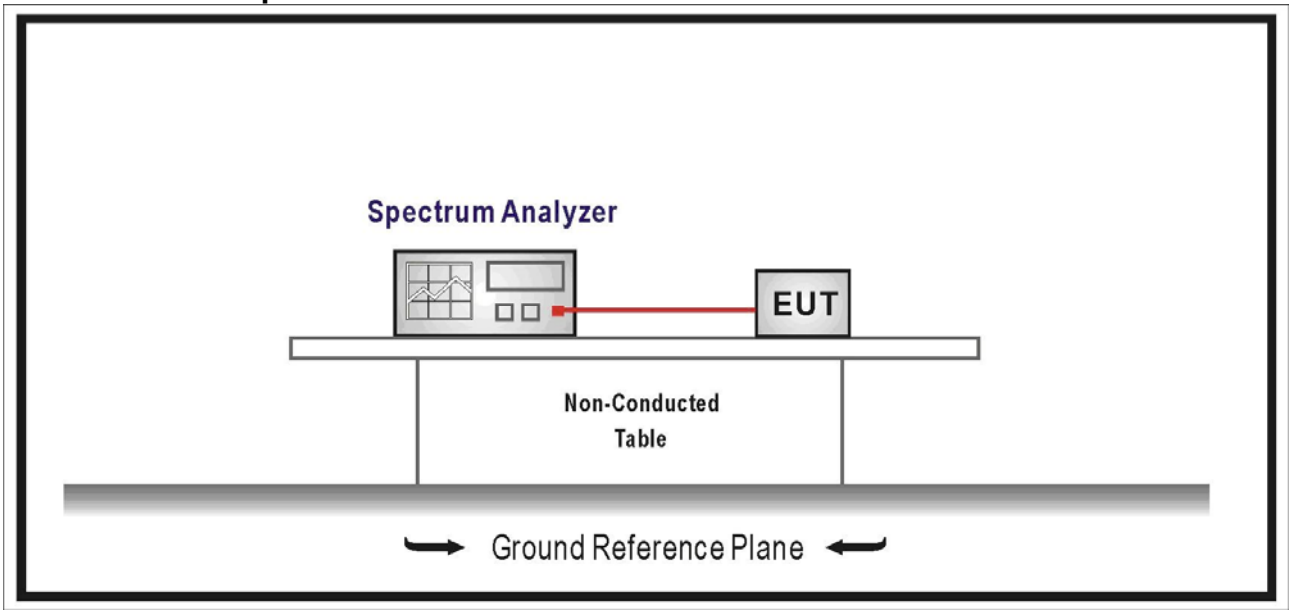


GFSK (2Mbps) / 2480 MHz



8. Power Spectral Density

8.1 Test Setup



8.2 Limits

The peak power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8dBm in any 3kHz band during any time interval of continuous transmission.

8.3 Test Procedures

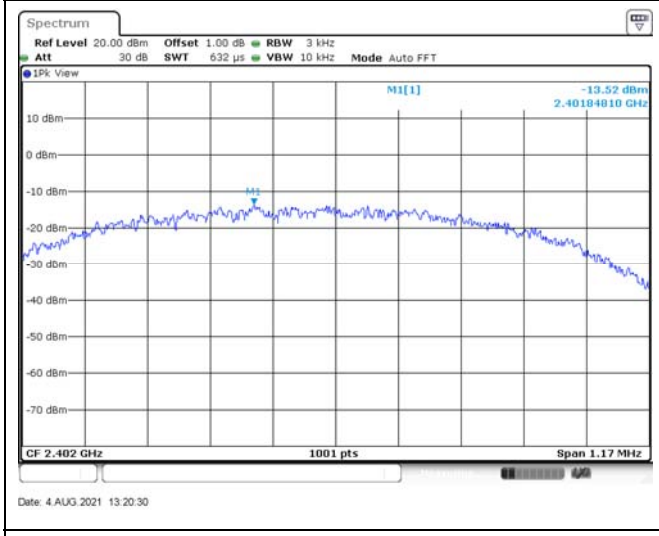
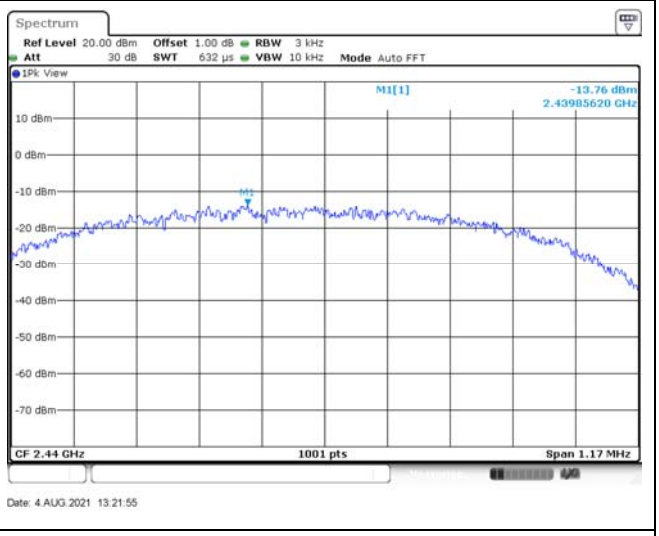
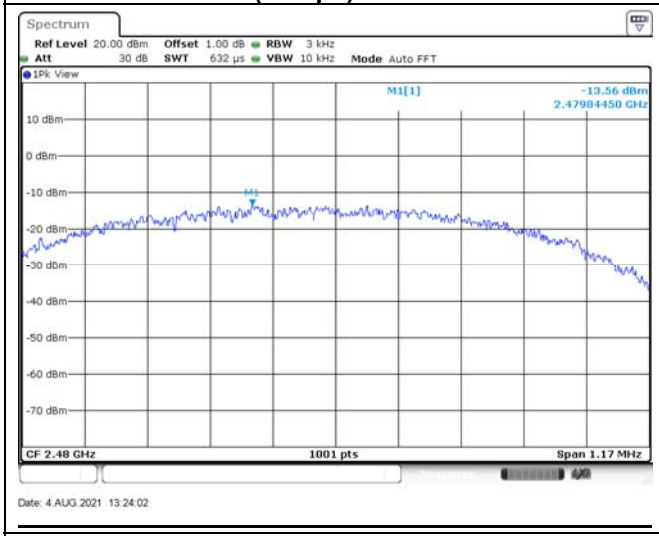
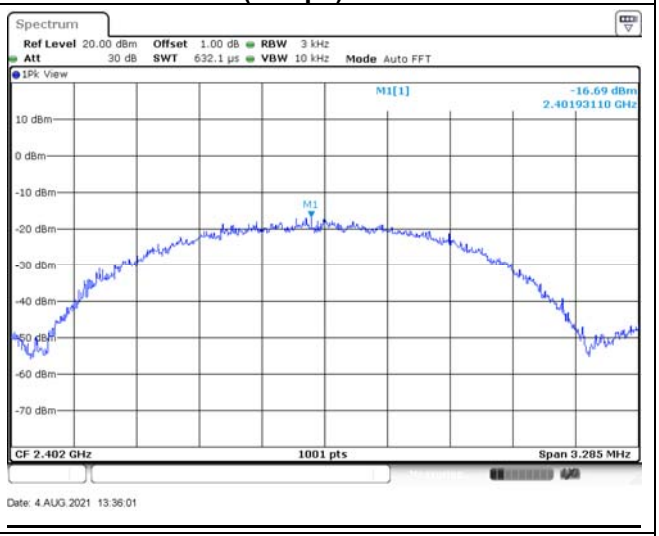
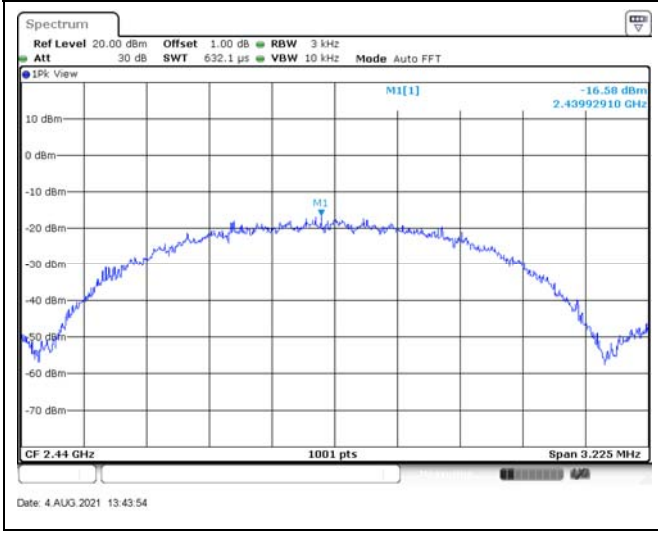
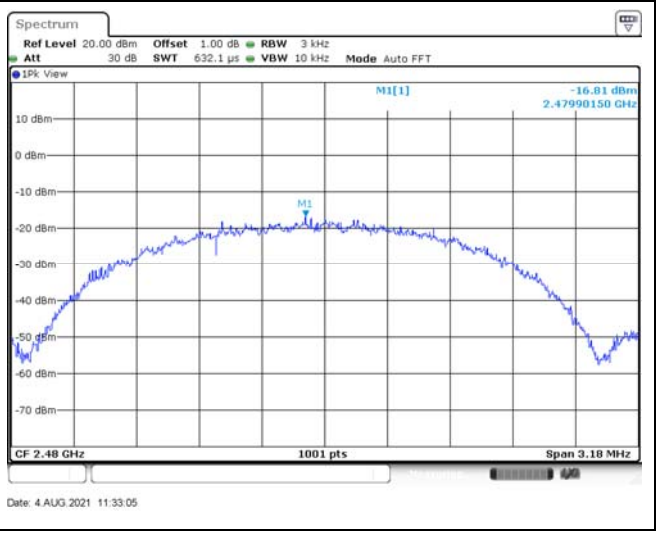
The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure of KDB 558074 D01 V05r02 for compliance to FCC 47CFR 15.247 requirements.

8.4 Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247

8.5 Test Result of Power Spectral Density

Modulation	Channel	Frequency (MHz)	Measure Value (dBm/3kHz)	Limit (dBm/3kHz)	Result
GFSK (1Mbps)	00	2402	-13.520	≦8.000	Pass
	19	2440	-13.760	≦8.000	Pass
	39	2480	-13.560	≦8.000	Pass
GFSK (2Mbps)	00	2402	-16.690	≦8.000	Pass
	19	2440	-16.580	≦8.000	Pass
	39	2480	-16.810	≦8.000	Pass

GFSK (1Mbps) / 2402 MHz	GFSK (1Mbps) / 2440 MHz
	
GFSK (1Mbps) / 2480 MHz	**GFSK (2Mbps) / 2402 MHz**
	
GFSK (2Mbps) / 2440 MHz	**GFSK (2Mbps) / 2480 MHz**
	

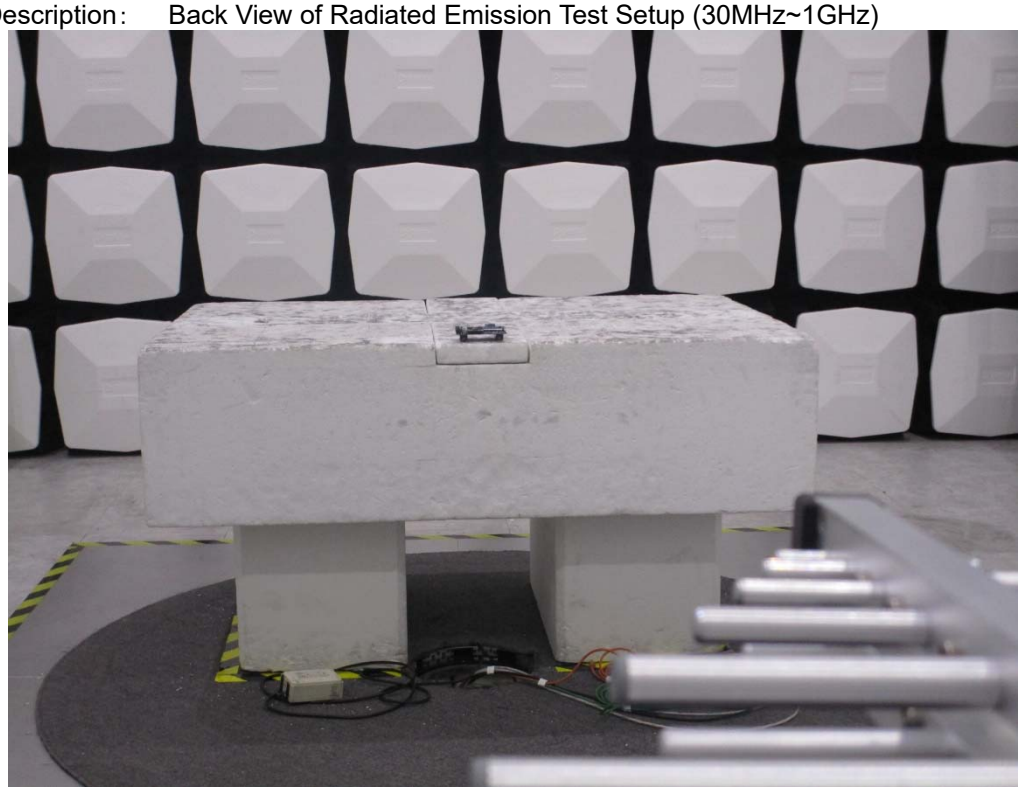
Appendix A

➢ Test Setup Photograph

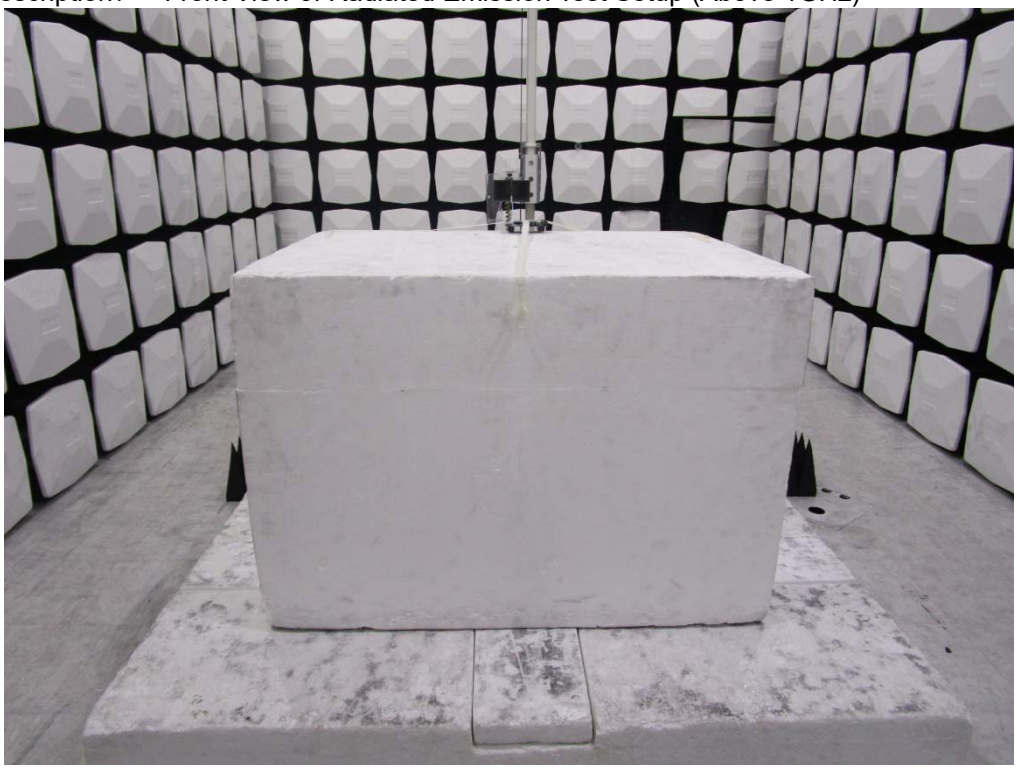
<Radiated Emission>

Description： Front View of Radiated Emission Test Setup (30MHz~1GHz)

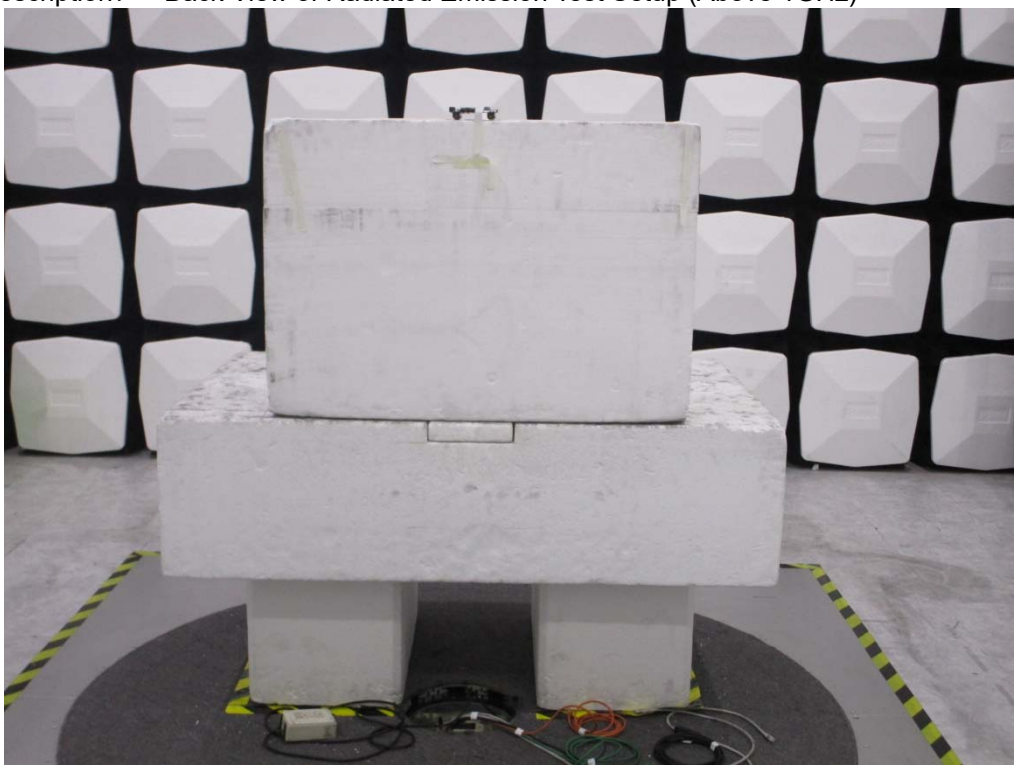
Description： Back View of Radiated Emission Test Setup (30MHz~1GHz)



Description： Front View of Radiated Emission Test Setup (Above 1GHz)



Description： Back View of Radiated Emission Test Setup (Above 1GHz)



CE Test Report

Product Name	：	Bluetooth Low Energy 5.2 Controller Module
Trade Name	：	HOLTEK
Model No.	：	BM67C741-1
Applicant	：	HOLTEK SEMICONDUCTOR INCORPORATION
Address	：	NO.3, CREATION RD. II, HSINCHU SCIENCE PARK, HSINCHU, TAIWAN, R.O.C..
Date of Receipt	：	Jul. 22, 2021
Issued Date	：	Sep. 02, 2021
Report No.	：	2170981R-RFCEBLEV01
Report Version	：	V1.0

The test results relate only to the samples tested.
The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.
This report must not be used to claim product endorsement by TAF or any agency of the government.
Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test Report Certification

Product Name	:	Bluetooth Low Energy 5.2 Controller Module
Applicant	:	HOLTEK SEMICONDUCTOR INCORPORATION
Address	:	NO.3, CREATION RD. II, HSINCHU SCIENCE PARK, HSINCHU, TAIWAN, R.O.C..
Manufacturer	:	HOLTEK SEMICONDUCTOR INCORPORATION
Address	:	NO.3, CREATION RD. II, HSINCHU SCIENCE PARK, HSINCHU, TAIWAN, R.O.C..
Trade Name	:	HOLTEK
Model No.	:	BM67C741-1
EUT Voltage	:	DC 3.3V
Testing Voltage	:	DC 3V (Power by fixture)
Applicable Standard	:	ETSI EN 300 328 V2.2.2 (2019-07)
Laboratory Name	:	Hsin Chu Laboratory
Address	:	No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan, R.O.C. TEL: +886-3-582-8001 / FAX: +886-3-582-8958
Test Result	:	Complied

Documented By : Carol Tsai

(Carol Tsai / Senior Engineering Adm. Specialist)

Approved By : Louis Hsu

(Louis Hsu / Deputy Manager)

The test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of DEKRA Testing and Certification Co., Ltd.

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Sep. 02, 2021

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1. General Information

1.1. EUT Description

Product Name	Bluetooth Low Energy 5.2 Controller Module		
Trade Name	HOLTEK		
Model No.	BM67C741-1		
Frequency Range	1Mbps: 2402~2480MHz 2Mbps: 2402~2480MHz		
Channel Number	1Mbps: 40 Channels 2Mbps: 40 Channels		
Type of Modulation	GFSK		
Adaptive Equipment	☐	Non-Adaptive Equipment	
	☒	Adaptive Equipment	
		☒	The equipment has implemented an LBT based DAA mechanism.
		☐	The equipment has implemented an non-LBT based DAA mechanism.
		☐	The equipment can operate in more than one adaptive mode

Antenna Information			
Brand	Model No.	Type	Gain (dBi)
HOLTEK	N/A	PCB	0

EUT Operational Condition			
Power Supply Type	Vnom (3V)		
Operational Climatic	Tnom (25℃)	Tmax (85℃)	Tmin (-45℃)

Geo-location capability supported by the equipment		
☐	Yes	
	☐	The geographical location determined by the equipment as defined in EN 300 328, clause 4.3.2.12.3 is not accessible to the user.
☒	No	

GFSK (1Mbps / 2Mbps)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	10	2422 MHz	20	2442 MHz	30	2462 MHz
01	2404 MHz	11	2424 MHz	21	2444 MHz	31	2464 MHz
02	2406 MHz	12	2426 MHz	22	2446 MHz	32	2466 MHz
03	2408 MHz	13	2428 MHz	23	2448 MHz	33	2468 MHz
04	2410 MHz	14	2430 MHz	24	2450 MHz	34	2470 MHz
05	2412 MHz	15	2432 MHz	25	2452 MHz	35	2472 MHz
06	2414 MHz	16	2434 MHz	26	2454 MHz	36	2474 MHz
07	2416MHz	17	2436 MHz	27	2456 MHz	37	2476 MHz
08	2418 MHz	18	2438 MHz	28	2458 MHz	38	2478 MHz
09	2420 MHz	19	2440 MHz	29	2460 MHz	39	2480 MHz

Note: The above EUT information is declared by the manufacturer.

1.2. Test Mode

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode	Mode 1: Transmit Mode 2: Receiver Mode 3: Normal

Test Items	Test Mode	Modulation	Channel	Result
RF Output Power	Mode 1	GFSK (1Mbps) GFSK (2Mbps)	00/19/39	Pass
Power Spectral Density	Mode 1	GFSK (1Mbps) GFSK (2Mbps)	00/19/39	Pass
Transmitter Unwanted Emissions in the Out-of-band Domain	Mode 1	GFSK (1Mbps) GFSK (2Mbps)	00/39	Pass
Occupied Channel Bandwidth	Mode 1	GFSK (1Mbps) GFSK (2Mbps)	00/39	Pass
Transmitter Spurious Emission 30MHz-1GHz	Mode 1	GFSK (2Mbps)	00/39	Pass
Transmitter Spurious Emission Above 1GHz	Mode 1	GFSK (1Mbps) GFSK (2Mbps)	00/39	Pass
Receiver Spurious Emission 30MHz-1GHz	Mode 2	GFSK (2Mbps)	00/39	Pass
Receiver Spurious Emission Above 1GHz	Mode 2	GFSK (2Mbps)	00/39	Pass
Adaptivity	The RF Output Power Level of adaptive equipment is less than +10 dBm EIRP, so this item does not need to be tested. Not applicable.			
Receiver Blocking	Mode 3	GFSK (1Mbps)	00/39	Pass
Medium Utilization (MU) Factor	Adaptive equipment does not need to be tested. Not applicable.			

Note:

1. Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
3. The EUT was performed at X axis, Y axis and Z axis position for transmitter spurious emission and receiver spurious emission test. The worst case was found at Z axis, so the measurement will follow this same test configuration.

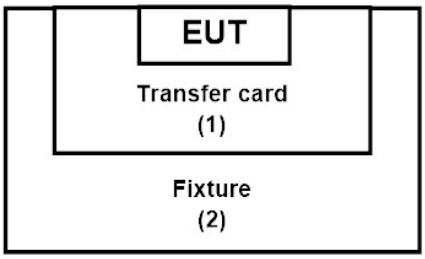
1.3. Tested System Details

The types for all equipment's, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Transfer card	HOLTEK	BCT-67C741-001	N/A	--
2	Fixture	HOLTEK	BCE-GENTRX-001	N/A	--

1.4. Configuration of tested System

Connection Diagram



1.5. Operation Descriptions

1	Set the EUT as shown.
2	Configure test mode, test channel.
3	Let the EUT start sending transmit and receive continuously.
4	Verify that device is working properly.

1.6. Comments and Remarks

The product specification and testing instructions for the EUT declared in the report are provided by the manufacturer who will take all responsibilities for the accuracy.

1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Actually	Tested by	Test Date	Test Site
Temperature (°C)	RF Output Power	24.0	Clemens Fang	2021/7/28	SR12-H
Humidity (%RH)		68.0			
Temperature (°C)	Power Spectral Density	24.0	Clemens Fang	2021/7/28	SR12-H
Humidity (%RH)		68.0			
Temperature (°C)	Transmitter Unwanted Emission in the Out-of-band Domain	24.0	Clemens Fang	2021/7/28	SR12-H
Humidity (%RH)		68.0			
Temperature (°C)	Occupied Channel Bandwidth	24.0	Clemens Fang	2021/7/28	SR12-H
Humidity (%RH)		68.0			
Temperature (°C)	Transmitter Spurious Emissions	26.1	Lion Wang	2021/7/27 ~ 2021/7/28	CB3-H
Humidity (%RH)		57.2			
Temperature (°C)	Receiver Spurious Emissions	26.1 ~ 26.5	Lion Wang	2021/7/27 ~ 2021/7/28	CB3-H
Humidity (%RH)		57.2 ~ 57.8			
Temperature (°C)	Receiver Blocking	24.4	Lion Wang	2021/8/06	SR10-H
Humidity (%RH)		66			

Note: Test Site information refers to Laboratory Information.

Laboratory Information

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: http://www.dekra.com.tw

If you have any comments, please don't hesitate to contact us. Our test sites as below:

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
Address	1. No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. 2. No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.
Phone number	1. +886-3-582-8001 2. +886-3-582-8001
Fax number	1. +886-3-582-8958 2. +886-3-582-8958
Email address	info.tw@dekra.com
Website	http://www.dekra.com.tw
Note: Test site number for address 1 includes SR2-H. Test site number for address 2 includes CB2-H, CB3-H, CB4-H, SR10-H and SR12-H.	

1.8. List of Test Equipment

SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Temperature & Humidity Test Chamber	KSON	THS-B4T-150	A0401	2020/12/30	2021/12/29
USB Power Sensor	Keysight	U2021XA	MY57160027	2021/04/16	2022/04/15
USB Power Sensor	Keysight	U2021XA	MY57160028	2021/04/16	2022/04/15
USB Power Sensor	Keysight	U2021XA	MY57160029	2021/04/16	2022/04/15
USB Power Sensor	Keysight	U2021XA	MY57240002	2021/04/16	2022/04/15
MIMO Power Switch Box	Pallas	4PS6A-1	TW5451093	N/A	N/A
Spectrum Analyzer	Agilent	N9010A	US47140172	2021/05/28	2022/05/27
MXG Vector Signal Generator	Keysight	N5182B	MY53052548	2021/02/22	2022/02/21
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2021/01/25	2022/01/24
Signal & Spectrum Analyzer	R&S	FSV40	101049	2021/03/31	2022/03/30
Signal Analyzer	R&S	FSV7	101650	2021/03/23	2022/03/22
Signal Analyzer	R&S	FSVA40	101455	2020/10/12	2021/10/11
Spectrum Analyzer	Keysight	N9030B	MY57140404	2021/05/14	2022/05/13
EXG Analog Signal Generator	Keysight	N5171B	MY56200665	2021/06/07	2022/06/06
Multi-Function GNSS Simulator	Spectracom	GSG-5	188093	2021/05/16	2022/05/15
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	2020/11/30	2021/11/29
Pulse Power Sensor	Anritsu	MA2411B	1531043	2020/11/30	2021/11/29
Pulse Power Sensor	Anritsu	MA2411B	1531044	2020/11/30	2021/11/29

CB3-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2020/10/12	2021/10/11
Signal & Spectrum Analyzer	R&S	FSV40	101049	2021/03/31	2022/03/30
Signal Analyzer	R&S	FSVA40	101435	2021/06/04	2022/06/03
MXG Vector Signal Generator	Keysight	N5182B	MY53052548	2021/02/22	2022/02/21
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2021/01/25	2022/01/24
Horn Antenna	Schwarzbeck	BBHA 9120D	01656	2020/10/14	2021/10/13
Bilog Antenna	Teseq	CBL6112D	23191	2021/02/26	2022/02/25
Magnetic Loop Antenna	Teseq	HLA 6121	44287	2020/09/23	2021/09/22
Pre-Amplifier	DEKRA	AP-025C	12183122	2020/09/03	2021/09/02
Pre-Amplifier	EMCI	EMC11830I	980366	2020/11/30	2021/11/29
Coaxial Cable(19m)	Suhner	SF104	CB3-H_1	2021/07/25	2022/07/24
DEKRA Testing System	DEKRA	Version 2.0	CB3-H	NA	NA

SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
ESG Vector Signal Generator	Agilent	E4438C	MY45095759	2021/04/23	2022/04/22
MXG Vector Signal Generator	Keysight	N5182B	MY53052548	2021/02/22	2022/02/21
Spectrum Analyzer	Agilent	N9010A	US47140172	2021/05/28	2022/05/27
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2021/01/25	2022/01/24
Signal & Spectrum Analyzer	R&S	FSV40	101049	2021/03/31	2022/03/30
Signal Analyzer	R&S	FSV7	101650	2021/03/23	2022/03/22
EXG Analog Signal Generator	Keysight	N5171B	MY56200665	2021/06/07	2022/06/06
Wideband Radio Communication Tester	R&S	CMW500	150246	2021/03/09	2022/03/08
Spectrum Analyzer	Keysight	N9030B	MY57140404	2021/05/14	2022/05/13

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

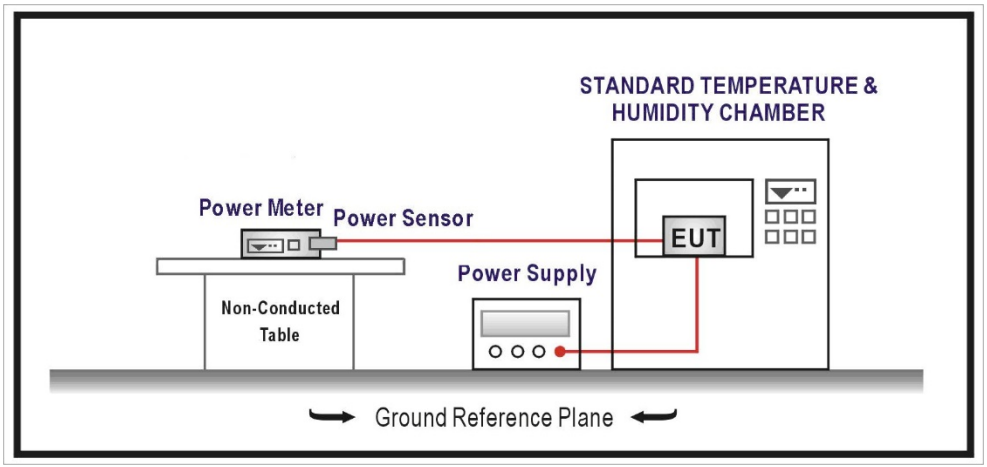
1.9. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2).

Test item	Uncertainty
RF Output Power	± 1.16 dB
Power Spectral Density	± 2.11 dB (± 3dB)
Transmitter Unwanted Emissions in the Out-of-band Domain	± 2.11 dB (± 3dB)
Occupied Channel Bandwidth	± 282 Hz
Transmitter Unwanted Emissions in the Spurious Domain	± 3.50 dB below 1GHz ± 3.41 dB above 1GHz
Receiver Spurious Emission	± 3.50 dB below 1GHz ± 3.41 dB above 1GHz
Receiver Blocking	N/A

2. RF Output Power

2.1. Test Setup



2.2. Test Condition

Normal and Extreme test conditions.

2.3. Limits

For non-adaptive frequency systems

The maximum RF Output Power for non-adaptive equipment shall be declared by the supplier and shall not exceed 20 dBm.

For non-adaptive equipment using wide band modulations other than FHSS, the maximum RF Output Power shall be equal to or less than the value declared by the supplier.

This limit shall apply for any combination of power level and intended antenna assembly.

For adaptive frequency systems

For adaptive equipment using wide band modulations other than FHSS, the maximum RF Output Power shall be 20 dBm.

2.4. Test Procedure

Refer to ETSI EN 300 328 V2.2.2 (2019-07) Clause 5.4.2

Measurement Method	
☒Conducted measurement	☐Radiated measurement

2.5. Test Specification

According to ETSI EN 300 328 V2.2.2 (2019-07)

2.6. Test Result of RF Output Power

GFSK 1Mbps

Detector: Average				
Test Conditions	Frequency (MHz)	Reading Value (dBm)	Measure Value (dBm)	Limit (dBm)
NTNV	2402	4.030	4.030	≦20
	2440	4.070	4.070	≦20
	2480	4.120	4.120	≦20
HTNV	2402	3.740	3.740	≦20
	2440	3.780	3.780	≦20
	2480	3.830	3.830	≦20
LTNV	2402	4.500	4.500	≦20
	2440	4.530	4.530	≦20
	2480	4.580	4.580	≦20

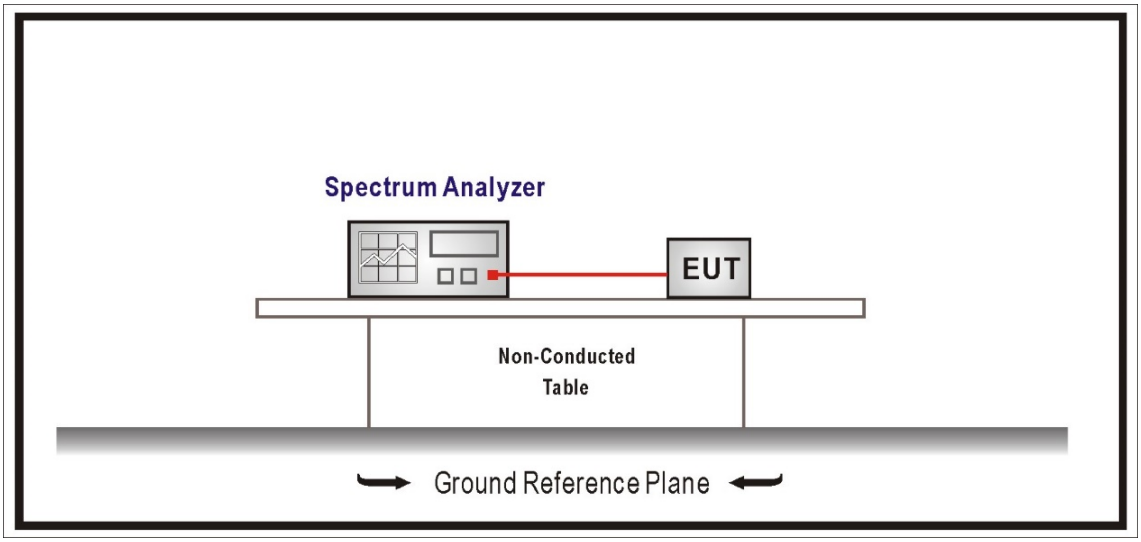
GFSK 2Mbps

Detector: Average				
Condition	Frequency (MHz)	Reading Value (dBm)	Measure Value (dBm)	Limit (dBm)
NTNV	2402	4.010	4.010	≦20
	2440	4.050	4.050	≦20
	2480	4.110	4.110	≦20
HTNV	2402	3.720	3.720	≦20
	2440	3.760	3.760	≦20
	2480	3.810	3.810	≦20
LTNV	2402	4.480	4.480	≦20
	2440	4.500	4.500	≦20
	2480	4.560	4.560	≦20

Note: Measure Value = Reading Value + Antenna Gain

3. Power Spectral Density

3.1. Test Setup



3.2. Test Condition

Normal test conditions

3.3. Limits

The maximum Power Spectral Density for non-FHSS equipment is 10 dBm per MHz.

3.4. Test Procedure

Refer to ETSI EN 300 328 V2.2.2 (2019-07) Clause 5.4.3

Measurement Method	
☒Conducted measurement	☐Radiated measurement

3.5. Test Specification

According to ETSI EN 300 328 V2.2.2 (2019-07)

3.6. Test Result of Power Spectral Density

GFSK 1Mbps

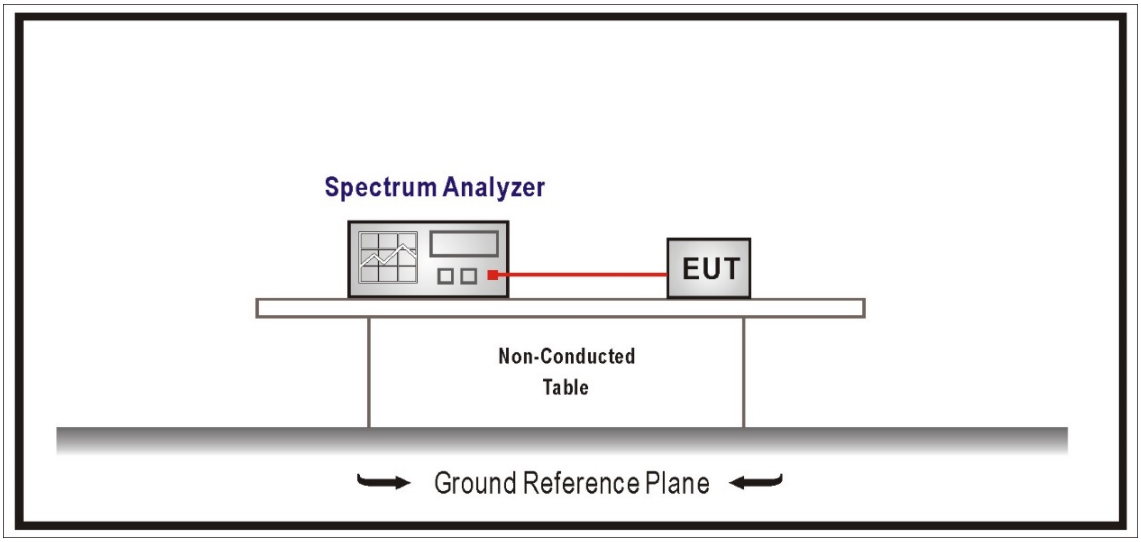
Channel No.	Frequency (MHz)	Measure Value (dBm/MHz)	Limit (dBm/MHz)
0	2402	3.950	≦ 10
19	2440	3.990	≦ 10
39	2480	4.040	≦ 10

GFSK 2Mbps

Channel No.	Frequency (MHz)	Measure Value (dBm/MHz)	Limit (dBm/MHz)
0	2402	2.590	≦ 10
19	2440	2.620	≦ 10
39	2480	2.720	≦ 10

4. Transmitter Unwanted Emissions in the Out-of-band Domain

4.1. Test Setup



4.2. Test Condition

Normal test conditions.

4.3. Limits

The transmitter unwanted emissions in the out-of-band domain but outside the allocated band, shall not exceed the values provided by the mask in figure 3.

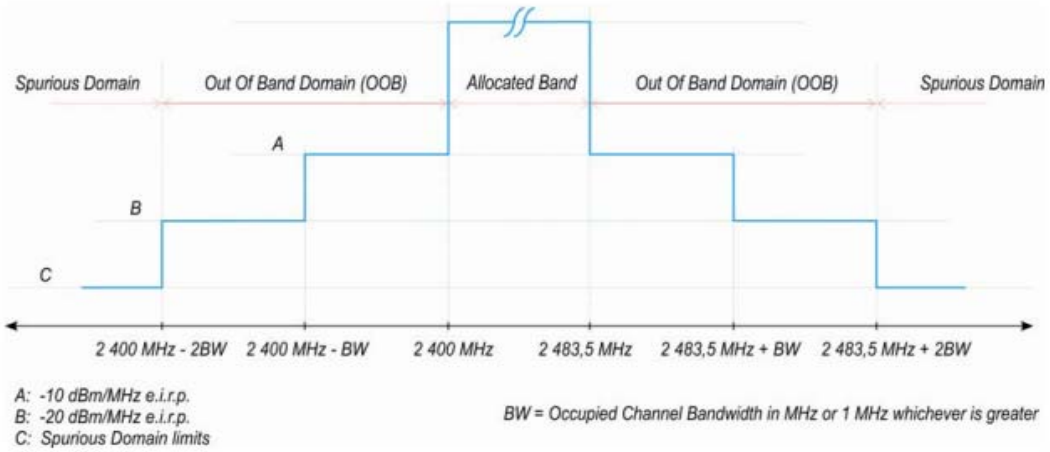


Figure 3: Transmit mask

4.4. Test Procedure

Refer to ETSI EN 300 328 V2.2.2 (2019-07) Clause 5.4.8

Measurement Method	
☒Conducted measurement	☐Radiated measurement

4.5. Test Specification

According to ETSI EN 300 328 V2.2.2 (2019-07)

4.6. Test Result of Transmitter Unwanted Emissions in the Out-of-band Domain

GFSK 1Mbps

Test Conditions	Frequency (MHz)	Occupied Bandwidth (MHz)	Frequency (MHz)	Reading Value (dBm)	Measure Value (dBm)	Limit (dBm/MHz)
NTNV	2402	1.266	2397.468	-33.241	-33.241	-20
			2398.734	-19.524	-19.524	-10
			2484.766	-46.844	-46.844	-10
			2486.032	-46.687	-46.687	-20
	2480	1.179	2397.642	-47.257	-47.257	-20
			2398.821	-47.036	-47.036	-10
			2484.679	-33.068	-33.068	-10
			2485.858	-38.651	-38.651	-20

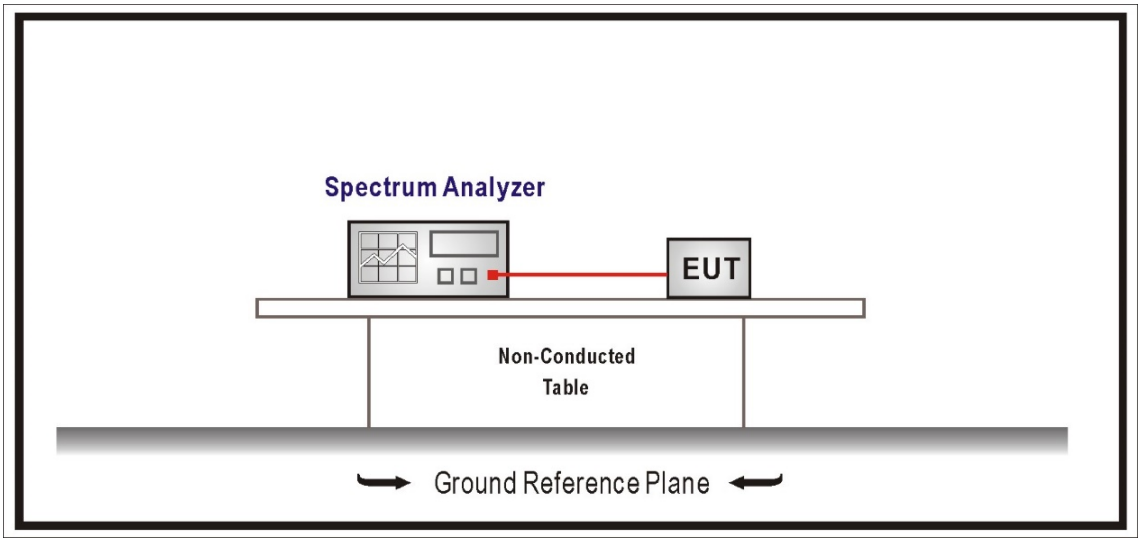
GFSK 2Mbps

Test Conditions	Frequency (MHz)	Occupied Bandwidth (MHz)	Frequency (MHz)	Reading Value (dBm)	Measure Value (dBm)	Limit (dBm/MHz)
NTNV	2402	2.226	2395.548	-33.777	-33.777	-20
			2397.774	-10.745	-10.745	-10
			2485.726	-47.201	-47.201	-10
			2487.952	-47.163	-47.163	-20
	2480	2.155	2395.690	-47.299	-47.299	-20
			2397.845	-46.729	-46.729	-10
			2485.655	-28.927	-28.927	-10
			2487.810	-38.144	-38.144	-20

Note: Measure Value = Reading Value + Antenna Gain

5. Occupied Channel Bandwidth

5.1. Test Setup



5.2. Test Condition

Normal test conditions

5.3. Limits

The Occupied Channel Bandwidth shall fall completely within the band 2,4 GHz to 2,4835 GHz. In addition, for non-adaptive equipment using wide band modulations other than FHSS and with e.i.r.p greater than 10 dBm, the occupied channel bandwidth shall be less than 20 MHz.

5.4. Test Procedures

Refer to ETSI EN 300 328 V2.2.2 (2019-07) Clause 5.4.7

Measurement Method	
☒Conducted measurement	☐Radiated measurement

5.5. Test Specification

According to ETSI EN 300 328 V2.2.2 (2019-07)

5.6. Test Result of Occupied Channel Bandwidth

GFSK 1Mbps

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
00	2402	2401.238	≧2400.000
39	2480	2480.503	≦2483.500

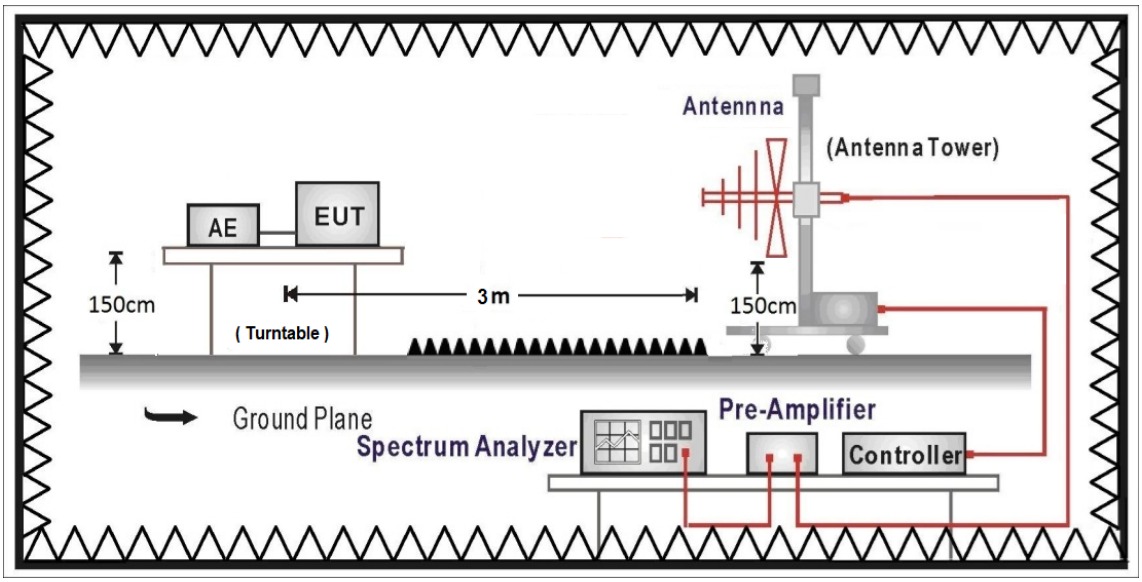
GFSK 2Mbps

Channel No.	Frequency (MHz)	Measure Value (MHz)	Limit (MHz)
00	2402	2400.769	≧2400.000
39	2480	2480.999	≦2483.500

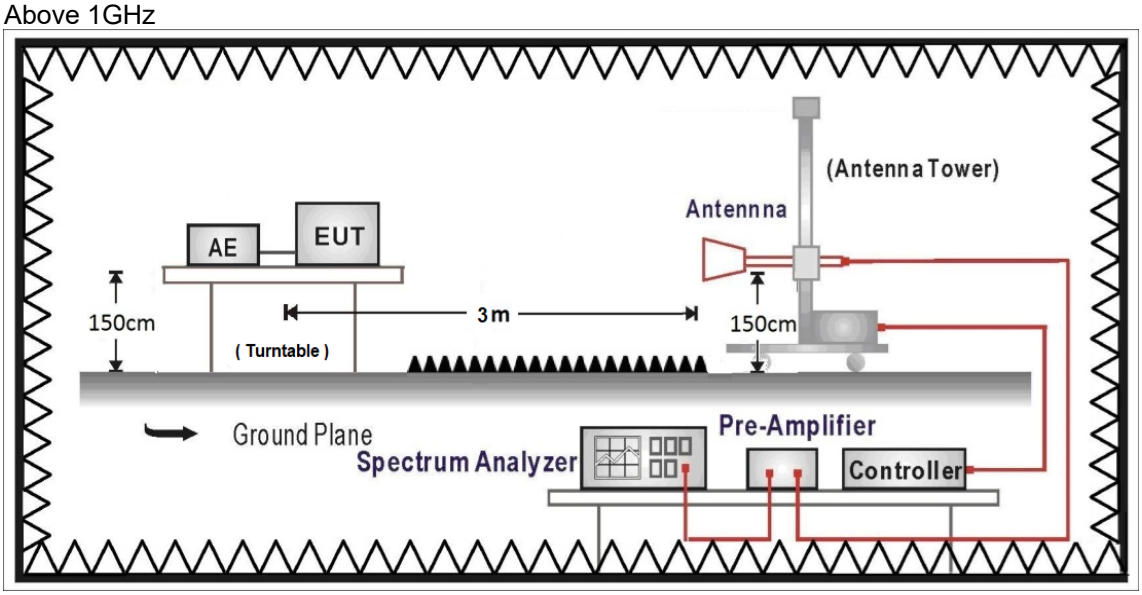
6. Transmitter Unwanted Emissions in the Spurious Domain

6.1. Test Setup

30MHz-1GHz



Above 1GHz



6.2. Test Condition

Normal test conditions

6.3. Limits

Frequency Range	Maximum Power e.r.p. (≤1 GHz) ; e.i.r.p. (>1 GHz)	Bandwidth
30 MHz to 47 MHz	-36 dBm	100 kHz
47 MHz to 74 MHz	-54 dBm	100 kHz
74 MHz to 87,5 MHz	-36 dBm	100 kHz
87,5 MHz to 118 MHz	-54 dBm	100 kHz
118 MHz to 174 MHz	-36 dBm	100 kHz
174 MHz to 230 MHz	-54 dBm	100 kHz
230 MHz to 470 MHz	-36 dBm	100 kHz
470 MHz to 694 MHz	-54 dBm	100 kHz
694 MHz to 1 GHz	-36 dBm	100 kHz
1 GHz to 12,75 GHz	-30 dBm	1 MHz
Note: spurious domain ≤ (2400 MHz – 2N) and spurious domain ≥ (2483.5 MHz + 2N); N = MAX (1, Occupied Channel Bandwidth) MHz		

6.4. Test Procedure

Refer to ETSI EN 300 328 V2.2.2 (2019-07) Clause 5.4.9

Measurement Method	
☐ Conducted measurement	☒ Radiated measurement
For Conducted measurement: The level of unwanted emissions shall be measured as their power in a specified load (conducted spurious emissions) and their effective radiated power when radiated by the cabinet or structure of the equipment with the antenna connector(s) terminated by a specified load (cabinet radiation).	
For Radiated measurement: The UUT and the measurement antenna shall be oriented such as to obtain the maximum emitted power level. The measurement antenna shall be oriented initially for vertical antenna polarization unless otherwise stated and the UUT shall be placed on the support in its normal position and switched on. The UUT shall be rotated through 360° around its azimuth until the maximum signal level is received. The measurement antenna shall be raised or lowered over the specified height range until the maximum signal level is received. This level shall be recorded. This measurement shall be repeated for horizontal measurement antenna polarization.	

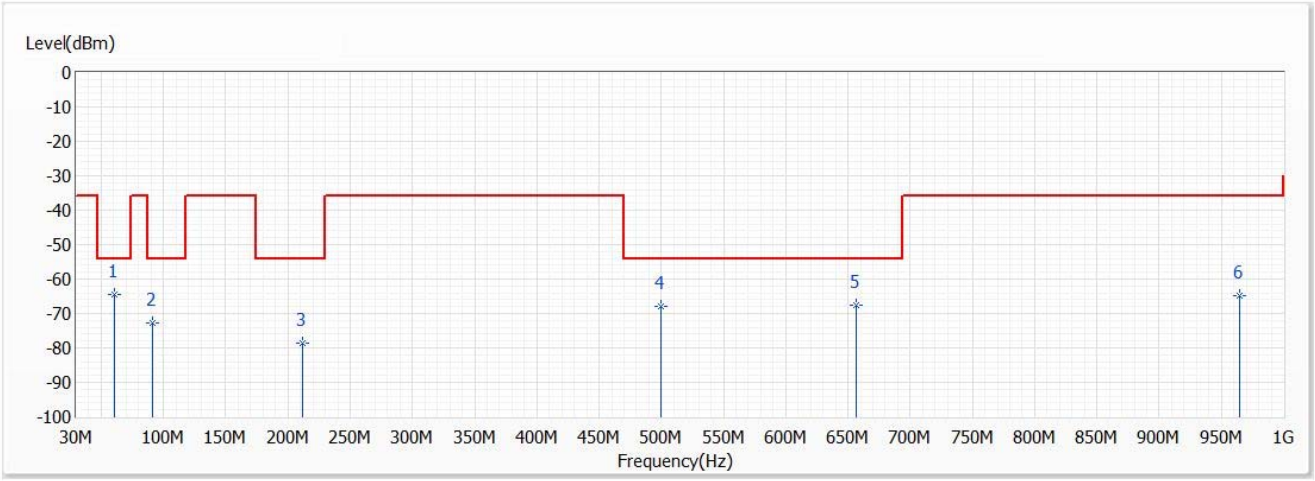
6.5. Test Specification

According to ETSI EN 300 328 V2.2.2 (2019-07)

6.6. Test Result of Transmitter Unwanted Emissions in the Spurious Domain

30 MHz-1GHz Spurious:

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/28
Test Mode	Mode 1: Transmit	Engineer	Lion Wang
Polarity	Horizontal	Temperature (℃)	26.1
Test Condition	2M,Ant0,Ch 0,2.402 G	Humidity (%RH)	57.2

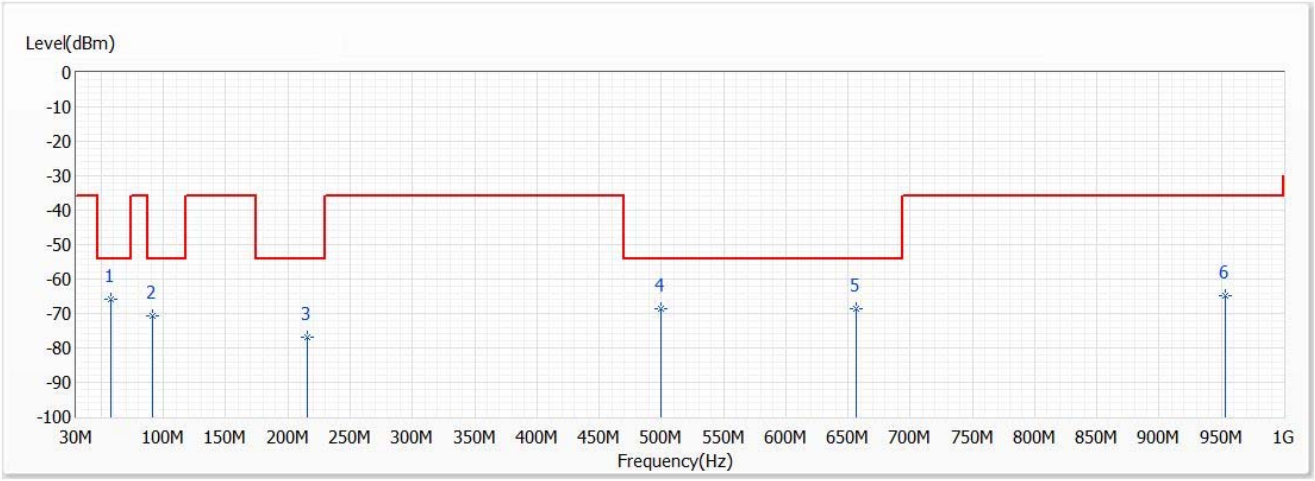


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
* 1	60.555	-64.46	-54.00	-10.46	-51.55	-12.91	PK
2	91.110	-72.75	-54.00	-18.75	-62.59	-10.16	PK
3	211.875	-78.46	-54.00	-24.46	-67.24	-11.22	PK
4	499.965	-67.93	-54.00	-13.93	-66.29	-1.64	PK
5	656.620	-67.66	-54.00	-13.66	-67.37	-0.29	PK
6	964.595	-64.75	-36.00	-28.75	-66.40	1.65	PK

Note:

1. All Reading Levels is Peak value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Correct Factor.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/28
Test Mode	Mode 1: Transmit	Engineer	Lion Wang
Polarity	Vertical	Temperature (℃)	26.1
Test Condition	2M,Ant0,Ch 0,2.402G	Humidity (%RH)	57.2

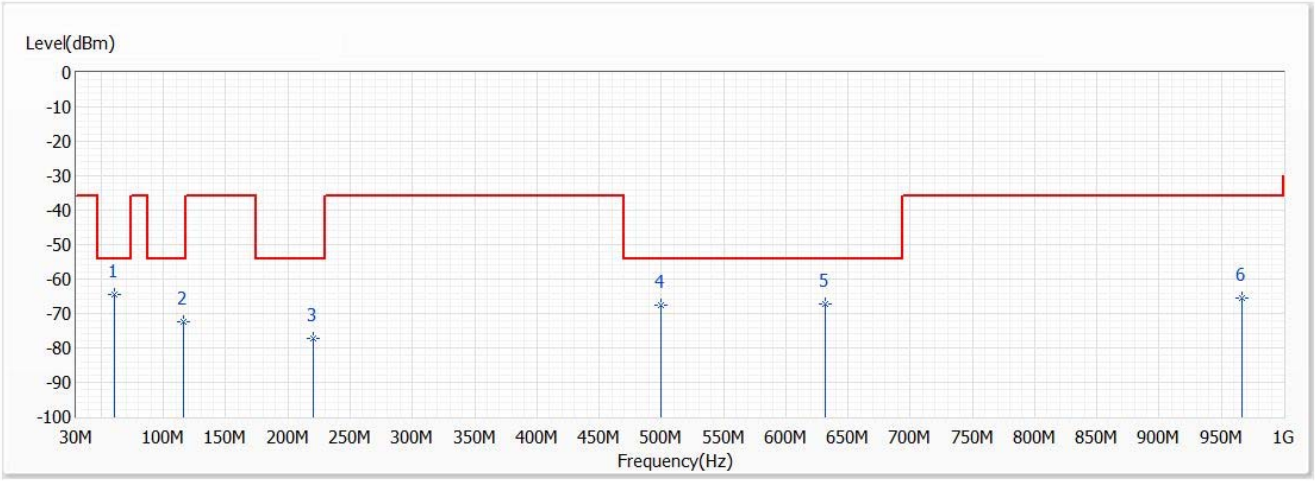


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
* 1	58.130	-65.84	-54.00	-11.84	-53.40	-12.44	PK
2	91.110	-70.85	-54.00	-16.85	-61.94	-8.91	PK
3	215.755	-76.78	-54.00	-22.78	-66.87	-9.91	PK
4	499.965	-68.68	-54.00	-14.68	-66.26	-2.42	PK
5	656.620	-68.57	-54.00	-14.57	-67.74	-0.83	PK
6	953.440	-64.71	-36.00	-28.71	-65.91	1.20	PK

Note:

1. All Reading Levels is Peak value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Correct Factor.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/28
Test Mode	Mode 1: Transmit	Engineer	Lion Wang
Polarity	Horizontal	Temperature (℃)	26.1
Test Condition	2M,Ant0,Ch 39,2.48G	Humidity (%RH)	57.2

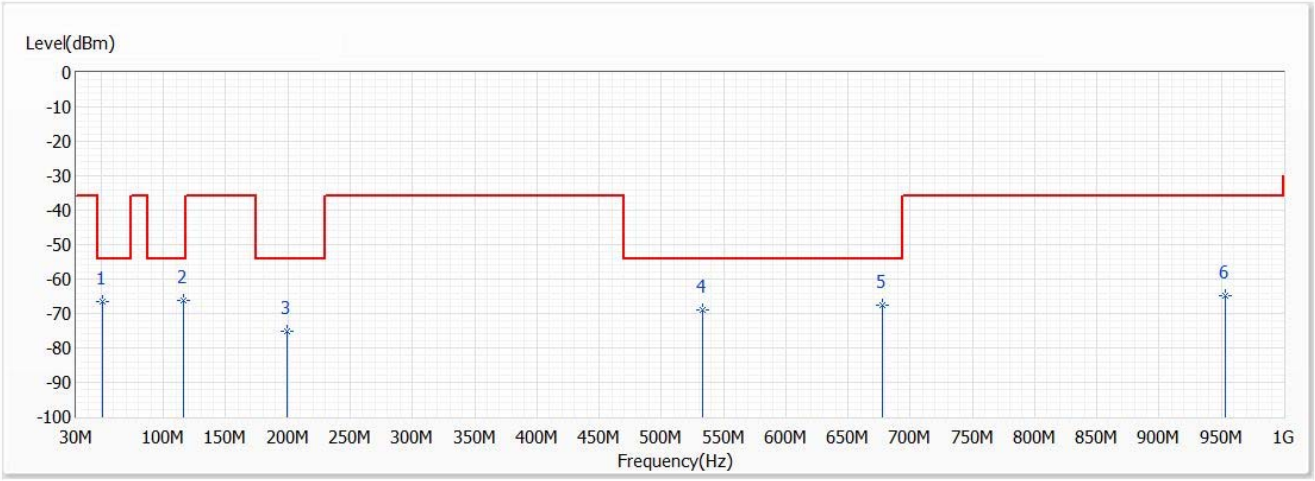


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
* 1	61.040	-64.60	-54.00	-10.60	-51.66	-12.94	PK
2	115.845	-72.26	-54.00	-18.26	-64.21	-8.05	PK
3	220.605	-77.32	-54.00	-23.32	-66.82	-10.50	PK
4	499.965	-67.68	-54.00	-13.68	-66.04	-1.64	PK
5	631.885	-67.14	-54.00	-13.14	-66.31	-0.83	PK
6	966.535	-65.58	-36.00	-29.58	-67.25	1.67	PK

Note:

1. All Reading Levels is Peak value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Correct Factor.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/28
Test Mode	Mode 1: Transmit	Engineer	Lion Wang
Polarity	Vertical	Temperature (℃)	26.1
Test Condition	2M,Ant0,Ch 39,2.48G	Humidity (%RH)	57.2



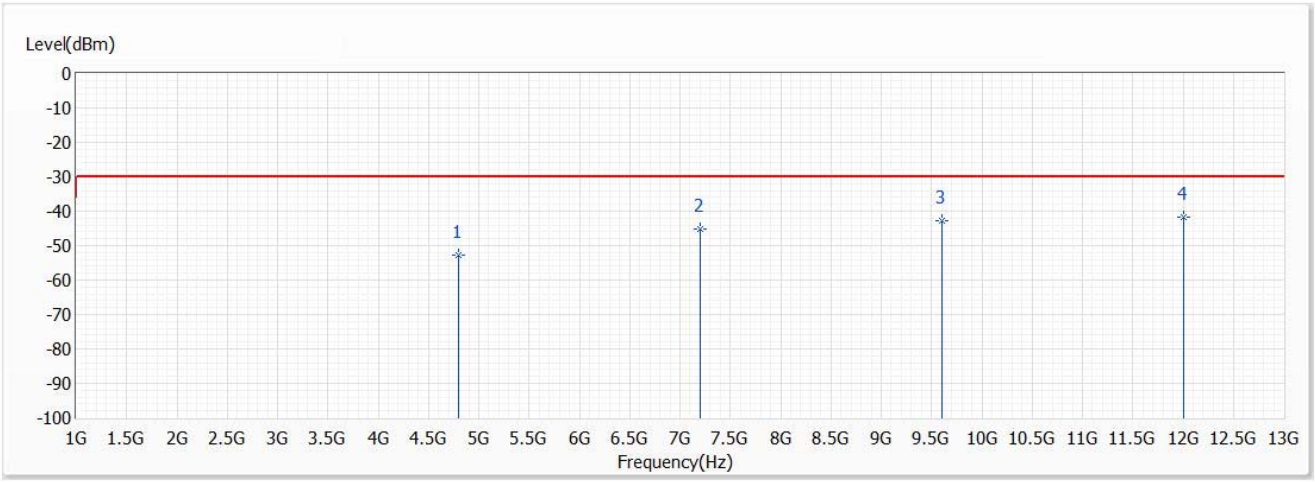
No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	50.855	-66.46	-54.00	-12.46	-56.41	-10.05	PK
* 2	115.845	-66.29	-54.00	-12.29	-60.32	-5.97	PK
3	199.750	-75.01	-54.00	-21.01	-64.70	-10.31	PK
4	532.945	-68.82	-54.00	-14.82	-67.20	-1.62	PK
5	677.960	-67.64	-54.00	-13.64	-66.90	-0.74	PK
6	953.440	-64.78	-36.00	-28.78	-65.98	1.20	PK

Note:

1. All Reading Levels is Peak value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Correct Factor.

Above 1GHz Spurious:

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/27
Test Mode	Mode 1: Transmit	Engineer	Lion Wang
Polarity	Horizontal	Temperature (℃)	26.1
Test Condition	1M,Ant0,Ch 0,2.402G	Humidity (%RH)	57.2

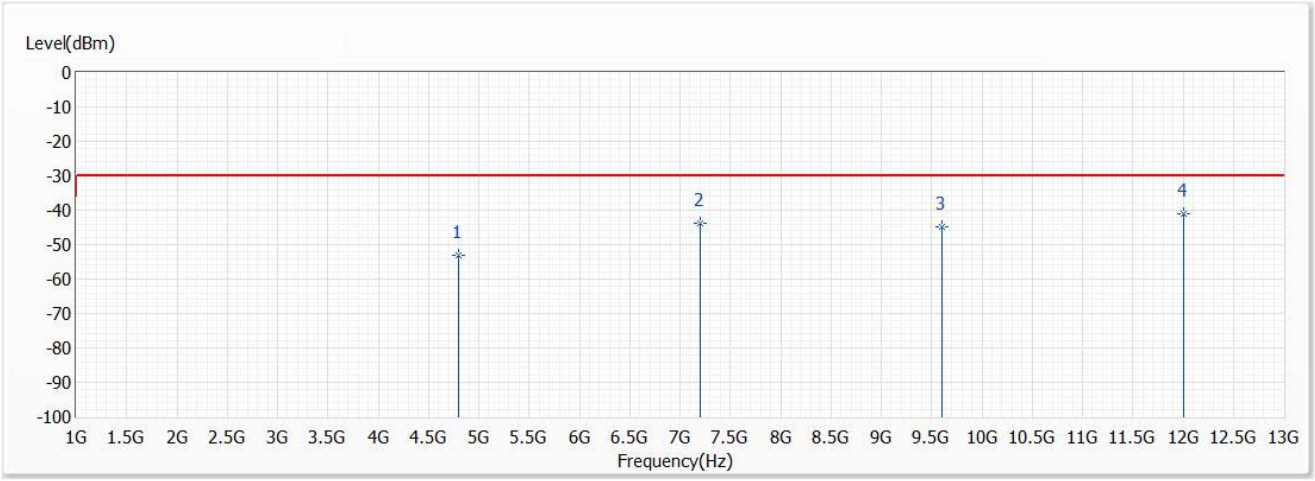


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	4804.000	-52.75	-30.00	-22.75	-66.19	13.44	PK
2	7206.000	-45.10	-30.00	-15.10	-66.34	21.24	PK
3	9608.000	-42.66	-30.00	-12.66	-69.45	26.79	PK
* 4	12010.000	-41.81	-30.00	-11.81	-71.48	29.67	PK

Note:

1. All reading levels is Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The emission above 13GHz were not included is because their levels are too low.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/27
Test Mode	Mode 1: Transmit	Engineer	Lion Wang
Polarity	Vertical	Temperature (℃)	26.1
Test Condition	1M,Ant0,Ch 0,2.402G	Humidity (%RH)	57.2

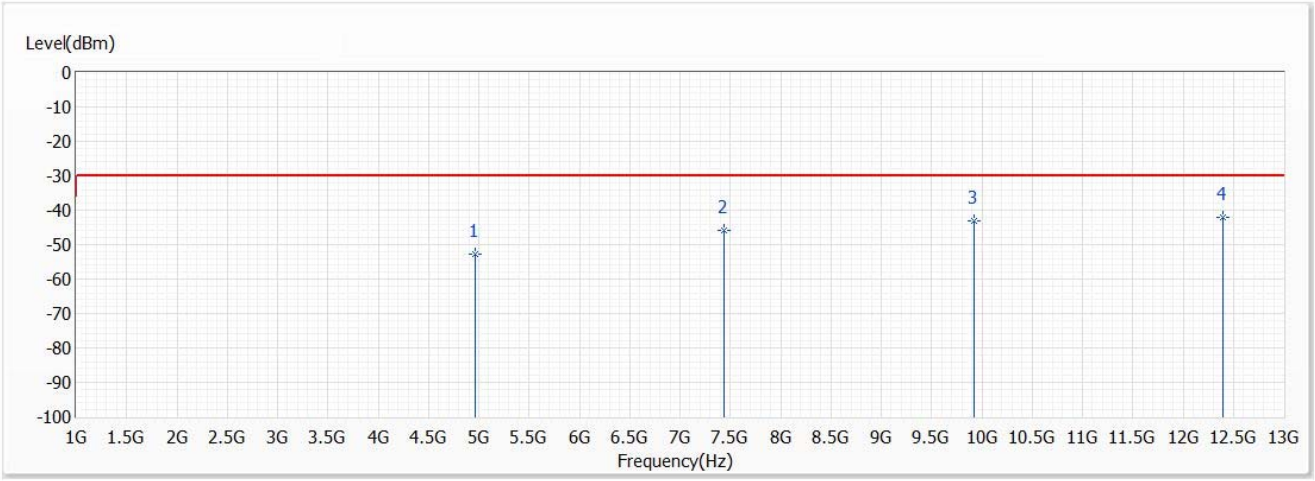


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	4804.000	-52.98	-30.00	-22.98	-66.05	13.07	PK
2	7206.000	-43.92	-30.00	-13.92	-63.78	19.86	PK
3	9608.000	-44.67	-30.00	-14.67	-70.48	25.81	PK
* 4	12010.000	-40.97	-30.00	-10.97	-70.45	29.48	PK

Note:

1. All reading levels is Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The emission above 13GHz were not included is because their levels are too low.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/27
Test Mode	Mode 1: Transmit	Engineer	Lion Wang
Polarity	Horizontal	Temperature (℃)	26.1
Test Condition	1M,Ant0,Ch 39,2.48G	Humidity (%RH)	57.2

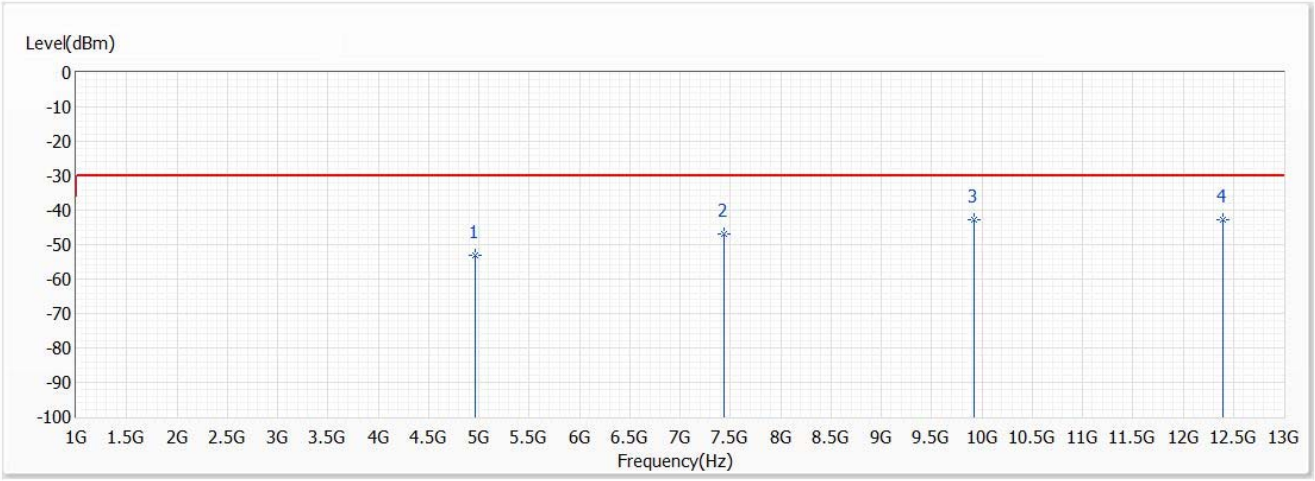


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	4960.000	-52.80	-30.00	-22.80	-66.55	13.75	PK
2	7440.000	-46.00	-30.00	-16.00	-67.93	21.93	PK
3	9920.000	-42.99	-30.00	-12.99	-70.52	27.53	PK
* 4	12400.000	-42.24	-30.00	-12.24	-71.29	29.05	PK

Note:

1. All reading levels is Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The emission above 13GHz were not included is because their levels are too low.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/27
Test Mode	Mode 1: Transmit	Engineer	Lion Wang
Polarity	Vertical	Temperature (℃)	26.1
Test Condition	1M,Ant0,Ch 39,2.48G	Humidity (%RH)	57.2

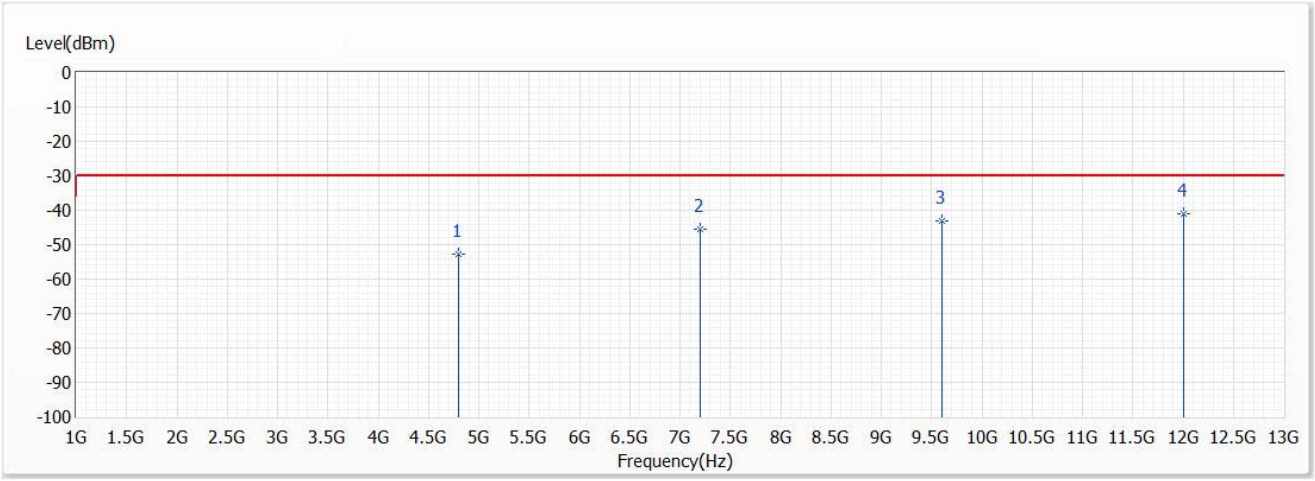


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	4960.000	-53.14	-30.00	-23.14	-66.43	13.29	PK
2	7440.000	-46.98	-30.00	-16.98	-67.60	20.62	PK
3	9920.000	-42.91	-30.00	-12.91	-70.05	27.14	PK
* 4	12400.000	-42.65	-30.00	-12.65	-71.23	28.58	PK

Note:

1. All reading levels is Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The emission above 13GHz were not included is because their levels are too low.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/27
Test Mode	Mode 1: Transmit	Engineer	Lion Wang
Polarity	Horizontal	Temperature (℃)	26.1
Test Condition	2M,Ant0,Ch 0,2.402G	Humidity (%RH)	57.2

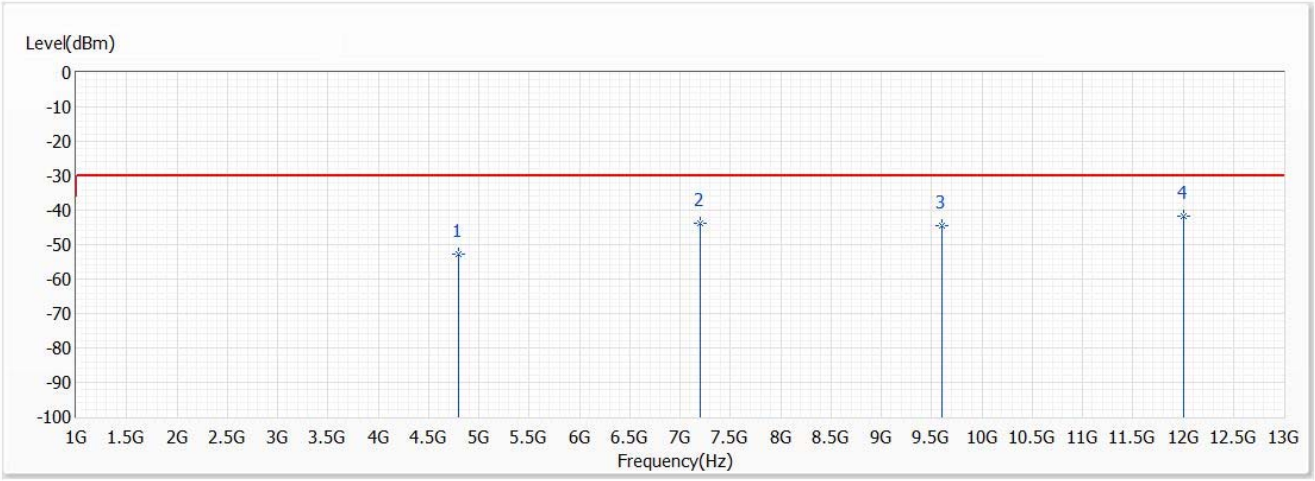


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	4804.000	-52.80	-30.00	-22.80	-66.24	13.44	PK
2	7206.000	-45.55	-30.00	-15.55	-66.79	21.24	PK
3	9608.000	-43.01	-30.00	-13.01	-69.80	26.79	PK
* 4	12010.000	-40.96	-30.00	-10.96	-70.63	29.67	PK

Note:

1. All reading levels is Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The emission above 13GHz were not included is because their levels are too low.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/27
Test Mode	Mode 1: Transmit	Engineer	Lion Wang
Polarity	Vertical	Temperature (℃)	26.1
Test Condition	2M,Ant0,Ch 0,2.402G	Humidity (%RH)	57.2

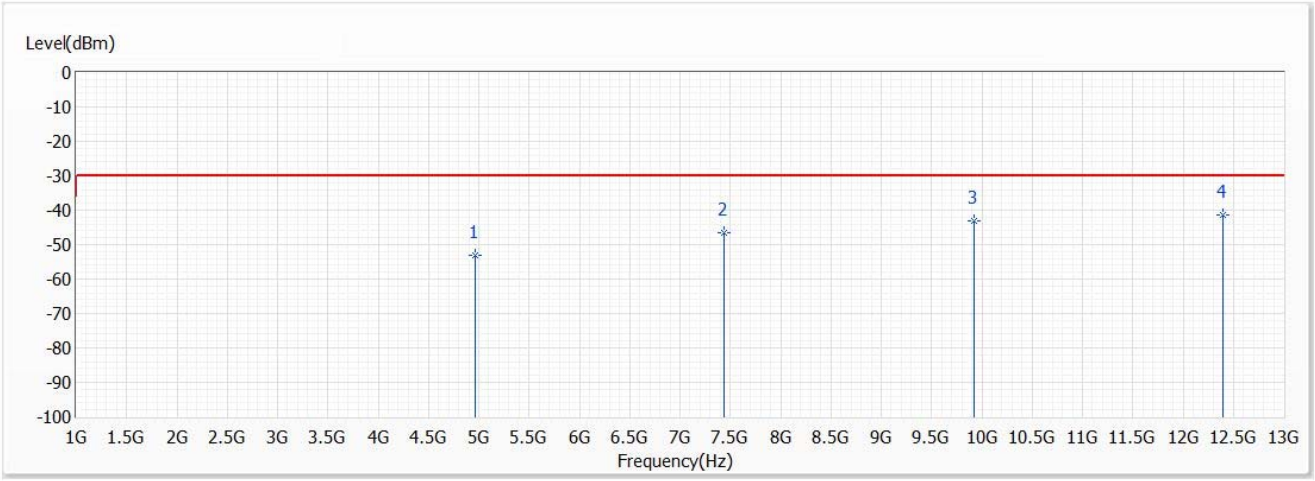


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	4804.000	-52.76	-30.00	-22.76	-65.83	13.07	PK
2	7206.000	-43.90	-30.00	-13.90	-63.76	19.86	PK
3	9608.000	-44.44	-30.00	-14.44	-70.25	25.81	PK
* 4	12010.000	-41.83	-30.00	-11.83	-71.31	29.48	PK

Note:

1. All reading levels is Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The emission above 13GHz were not included is because their levels are too low.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/27
Test Mode	Mode 1: Transmit	Engineer	Lion Wang
Polarity	Horizontal	Temperature (℃)	26.1
Test Condition	2M,Ant0,Ch 39,2.48G	Humidity (%RH)	57.2

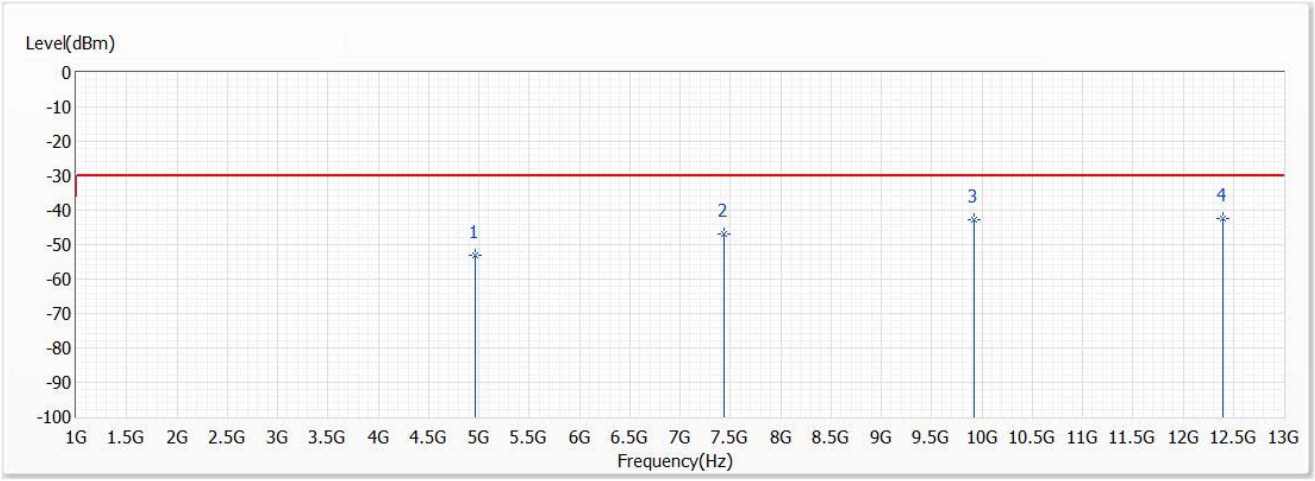


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	4960.000	-53.04	-30.00	-23.04	-66.79	13.75	PK
2	7440.000	-46.45	-30.00	-16.45	-68.38	21.93	PK
3	9920.000	-43.02	-30.00	-13.02	-70.55	27.53	PK
* 4	12400.000	-41.55	-30.00	-11.55	-70.60	29.05	PK

Note:

1. All reading levels is Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The emission above 13GHz were not included is because their levels are too low.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/27
Test Mode	Mode 1: Transmit	Engineer	Lion Wang
Polarity	Vertical	Temperature (℃)	26.1
Test Condition	2M,Ant0,Ch 39,2.48G	Humidity (%RH)	57.2



No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	4960.000	-53.07	-30.00	-23.07	-66.36	13.29	PK
2	7440.000	-47.03	-30.00	-17.03	-67.65	20.62	PK
3	9920.000	-42.61	-30.00	-12.61	-69.75	27.14	PK
* 4	12400.000	-42.49	-30.00	-12.49	-71.07	28.58	PK

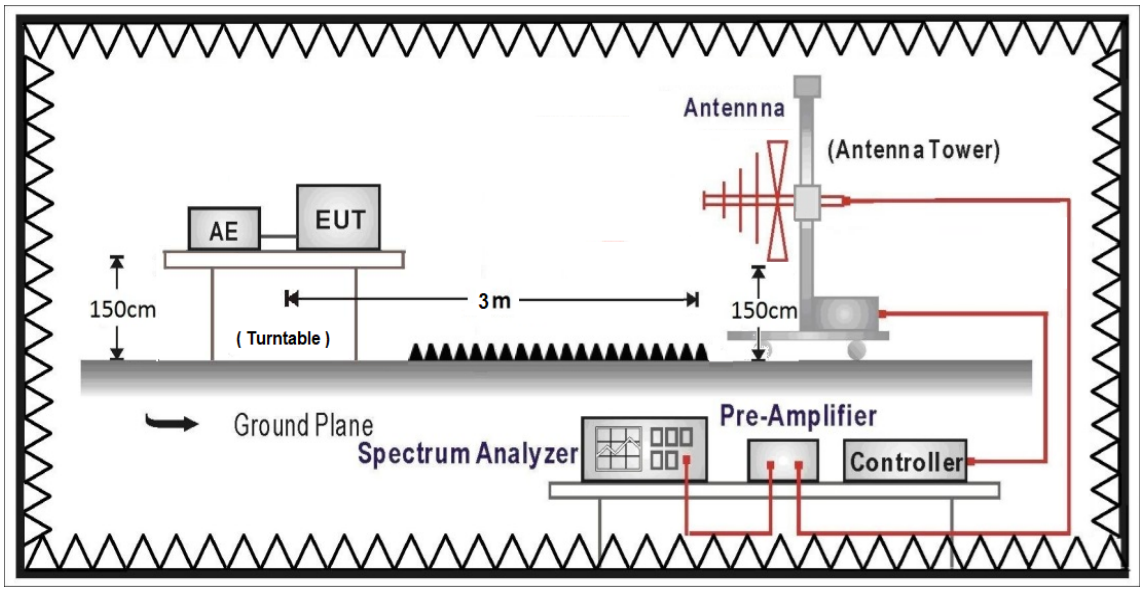
Note:

1. All reading levels is Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The emission above 13GHz were not included is because their levels are too low.

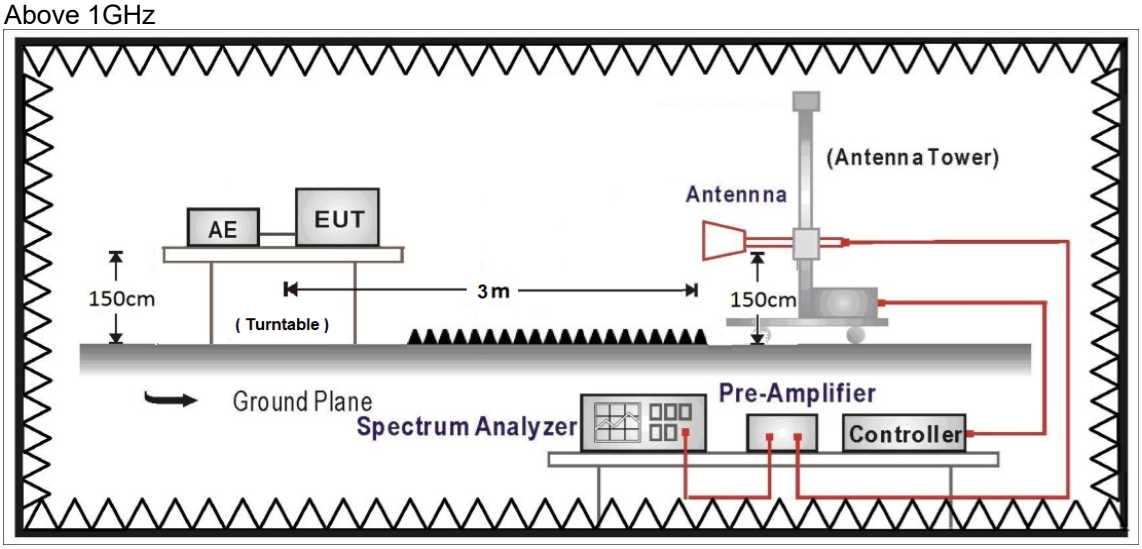
7. Receiver Spurious Emission

7.1. Test Setup

30MHz-1GHz



Above 1GHz



7.2. Test Condition

Normal test conditions

7.3. Limits

Frequency Range	Maximum Power e.r.p. (≤1 GHz) ; e.i.r.p. (>1 GHz)	Bandwidth
30 MHz to 1 GHz	-57 dBm	100 kHz
1 GHz to 12,75 GHz	-47 dBm	1 MHz

7.4. Test Procedure

Refer to ETSI EN 300 328 V2.2.2 (2019-07) Clause 5.4.10

Measurement Method	
☐ Conducted measurement	☒ Radiated measurement
For Conducted measurement: The level of unwanted emissions shall be measured as their power in a specified load (conducted spurious emissions) and their effective radiated power when radiated by the cabinet or structure of the equipment with the antenna connector(s) terminated by a specified load (cabinet radiation).	
For Radiated measurement: The UUT and the measurement antenna shall be oriented such as to obtain the maximum emitted power level. The measurement antenna shall be oriented initially for vertical antenna polarization unless otherwise stated and the UUT shall be placed on the support in its normal position and switched on. The UUT shall be rotated through 360° around its azimuth until the maximum signal level is received. The measurement antenna shall be raised or lowered over the specified height range until the maximum signal level is received. This level shall be recorded. This measurement shall be repeated for horizontal measurement antenna polarization.	

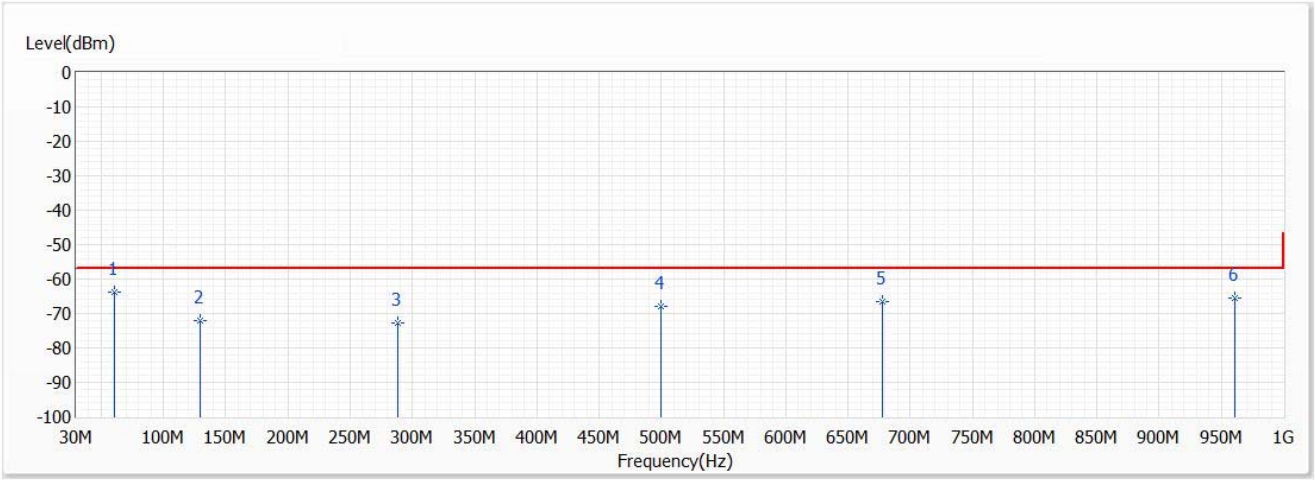
7.5. Test Specification

According to ETSI EN 300 328 V2.2.2 (2019-07)

7.6. Test Result of Receiver Spurious Emission

30MHz-1GHz Spurious:

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/28
Test Mode	Mode 2: Receiver	Engineer	Lion Wang
Polarity	Horizontal	Temperature (℃)	26.1
Test Condition	2M,Ant0,Ch 0,2.402G	Humidity (%RH)	57.2



No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
* 1	60.555	-63.89	-57.00	-6.89	-50.98	-12.91	PK
2	129.425	-72.01	-57.00	-15.01	-64.36	-7.65	PK
3	288.020	-72.70	-57.00	-15.70	-65.88	-6.82	PK
4	499.965	-67.94	-57.00	-10.94	-66.30	-1.64	PK
5	677.960	-66.52	-57.00	-9.52	-66.29	-0.23	PK
6	961.200	-65.36	-57.00	-8.36	-66.96	1.60	PK

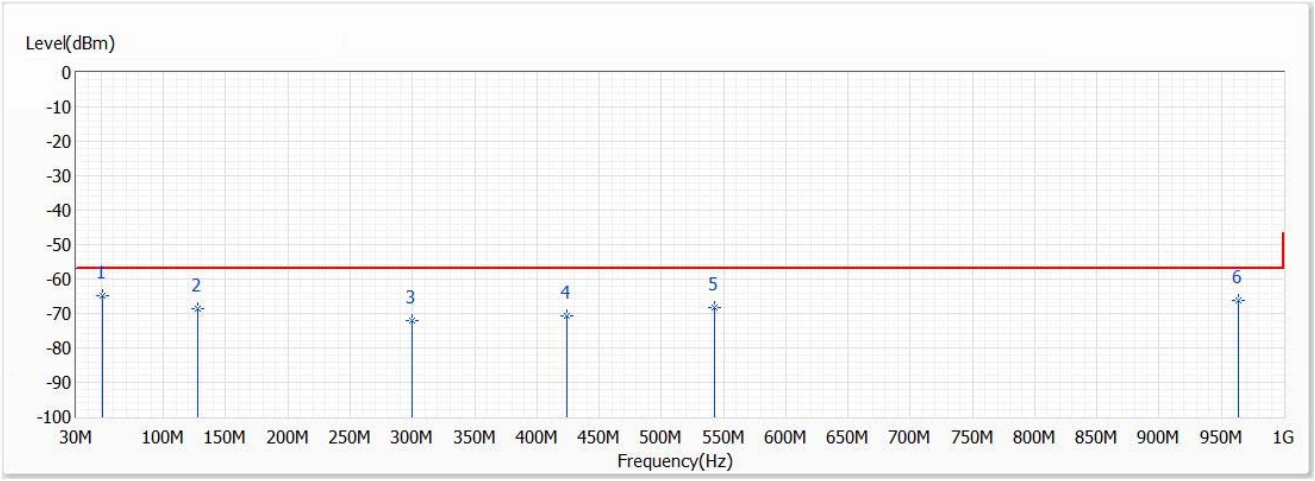
Note:

1. All Reading Levels is Peak value.

2. " * ", means this data is the worst emission level.

3. Emission Level = Reading Level + Correct Factor.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/28
Test Mode	Mode 2: Receiver	Engineer	Lion Wang
Polarity	Vertical	Temperature (℃)	26.1
Test Condition	2M,Ant0,Ch 0,2.402G	Humidity (%RH)	57.2

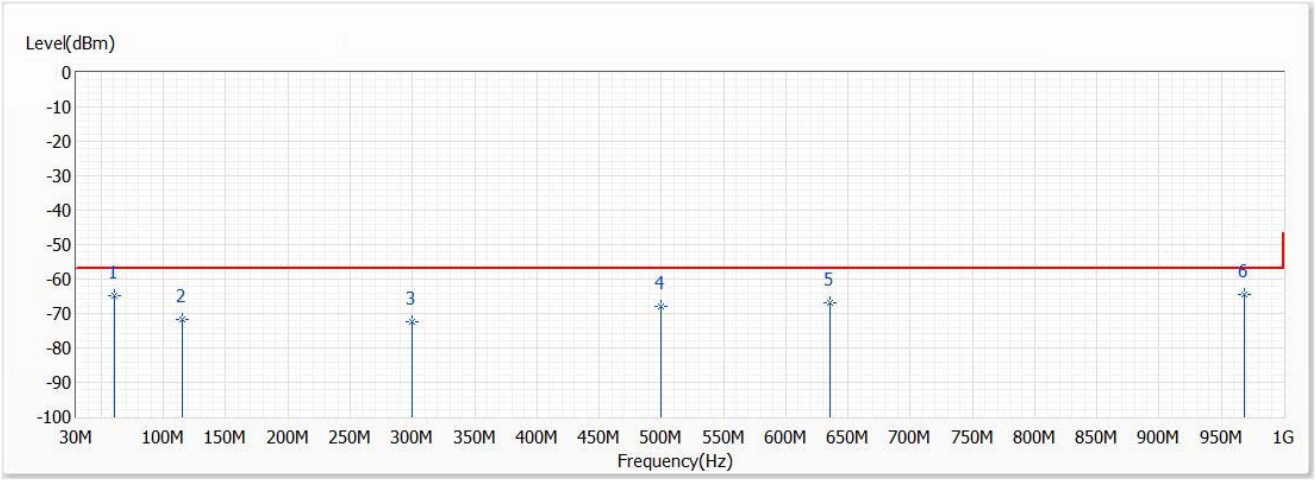


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
* 1	51.340	-64.75	-57.00	-7.75	-54.45	-10.30	PK
2	127.970	-68.60	-57.00	-11.60	-62.59	-6.01	PK
3	300.145	-72.16	-57.00	-15.16	-64.55	-7.61	PK
4	424.305	-70.61	-57.00	-13.61	-66.62	-3.99	PK
5	543.130	-68.26	-57.00	-11.26	-66.89	-1.37	PK
6	963.625	-66.18	-57.00	-9.18	-67.41	1.23	PK

Note:

1. All Reading Levels is Peak value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Correct Factor.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/28
Test Mode	Mode 2: Receiver	Engineer	Lion Wang
Polarity	Horizontal	Temperature (℃)	26.1
Test Condition	2M,Ant0,Ch 39,2.48G	Humidity (%RH)	57.2

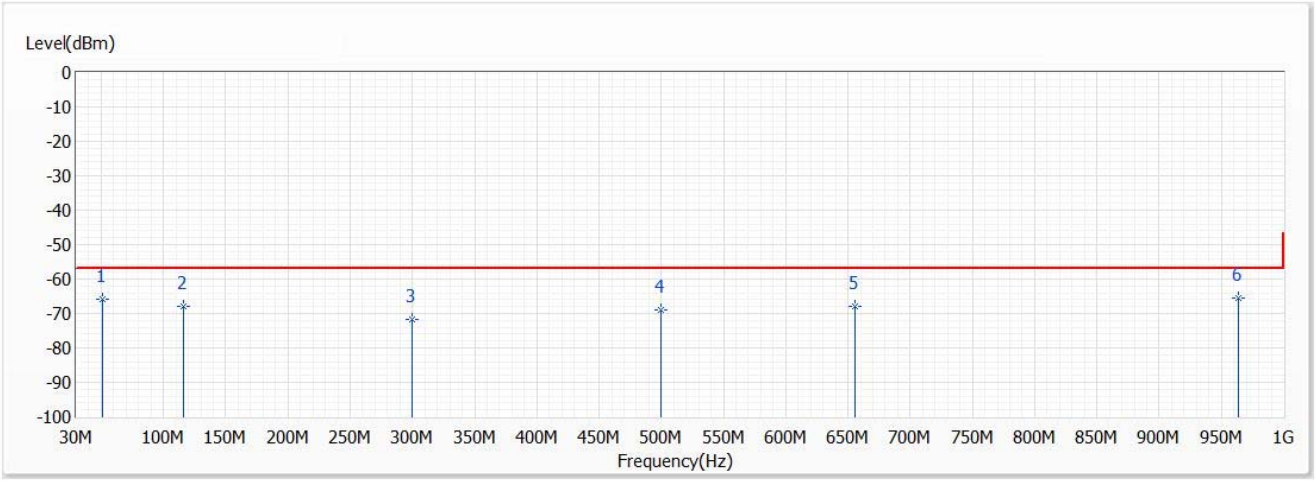


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	60.555	-64.74	-57.00	-7.74	-51.83	-12.91	PK
2	114.875	-71.77	-57.00	-14.77	-63.67	-8.10	PK
3	300.145	-72.36	-57.00	-15.36	-65.95	-6.41	PK
4	499.965	-67.83	-57.00	-10.83	-66.19	-1.64	PK
5	635.765	-66.79	-57.00	-9.79	-66.08	-0.71	PK
* 6	968.475	-64.56	-57.00	-7.56	-66.24	1.68	PK

Note:

1. All Reading Levels is Peak value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Correct Factor.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/28
Test Mode	Mode 2: Receiver	Engineer	Lion Wang
Polarity	Vertical	Temperature (℃)	26.1
Test Condition	2M,Ant0,Ch 39,2.48G	Humidity (%RH)	57.2



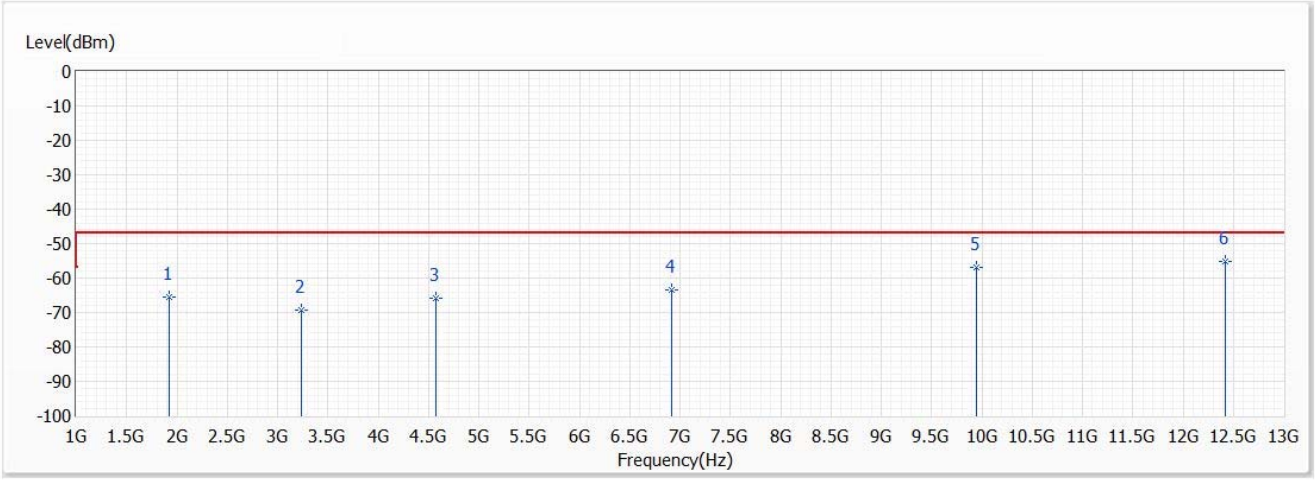
No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	50.855	-65.75	-57.00	-8.75	-55.70	-10.05	PK
2	115.845	-67.98	-57.00	-10.98	-62.01	-5.97	PK
3	300.145	-71.87	-57.00	-14.87	-64.26	-7.61	PK
4	499.965	-68.86	-57.00	-11.86	-66.44	-2.42	PK
5	655.650	-67.89	-57.00	-10.89	-67.05	-0.84	PK
* 6	964.110	-65.49	-57.00	-8.49	-66.73	1.24	PK

Note:

1. All Reading Levels is Peak value.
2. " * ", means this data is the worst emission level.
3. Emission Level = Reading Level + Correct Factor.

Above 1GHz Spurious:

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/27
Test Mode	Mode 2: Receiver	Engineer	Lion Wang
Polarity	Horizontal	Temperature (℃)	26.1
Test Condition	2M,Ant0,Ch 0,2.402G	Humidity (%RH)	57.2

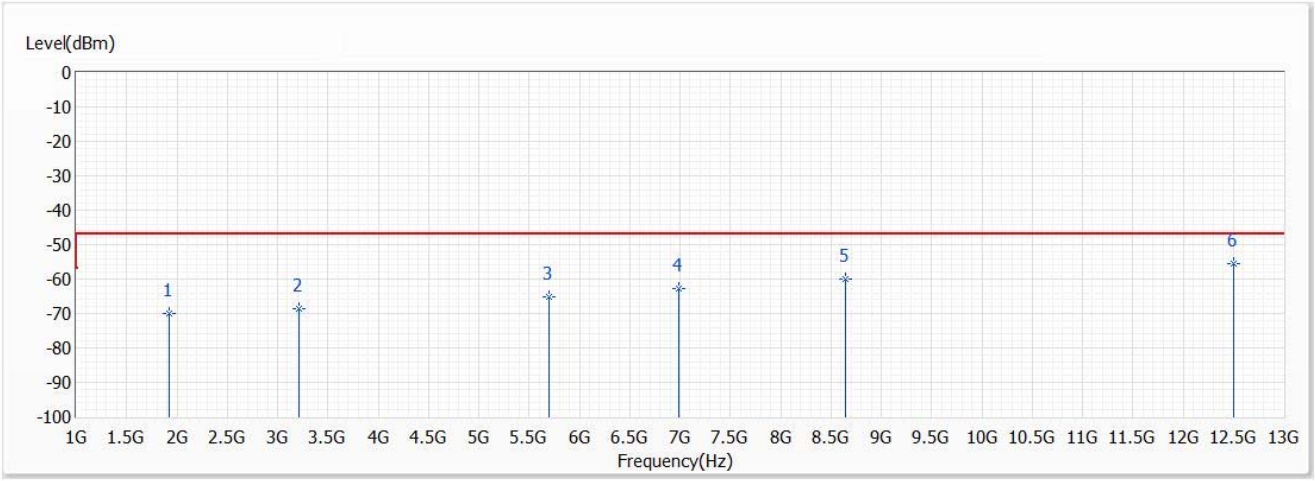


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	1921.000	-65.67	-47.00	-18.67	-59.81	-5.86	PK
2	3239.500	-69.14	-47.00	-22.14	-67.42	-1.72	PK
3	4574.500	-65.76	-47.00	-18.76	-67.44	1.68	PK
4	6920.500	-63.34	-47.00	-16.34	-67.72	4.38	PK
5	9944.500	-56.79	-47.00	-9.79	-70.04	13.25	PK
* 6	12415.000	-55.31	-47.00	-8.31	-71.33	16.02	PK

Note:

1. All reading levels is Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The emission above 13GHz were not included is because their levels are too low.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/27
Test Mode	Mode 2: Receiver	Engineer	Lion Wang
Polarity	Vertical	Temperature (℃)	26.1
Test Condition	2M,Ant0,Ch 0,2.402G	Humidity (%RH)	57.2

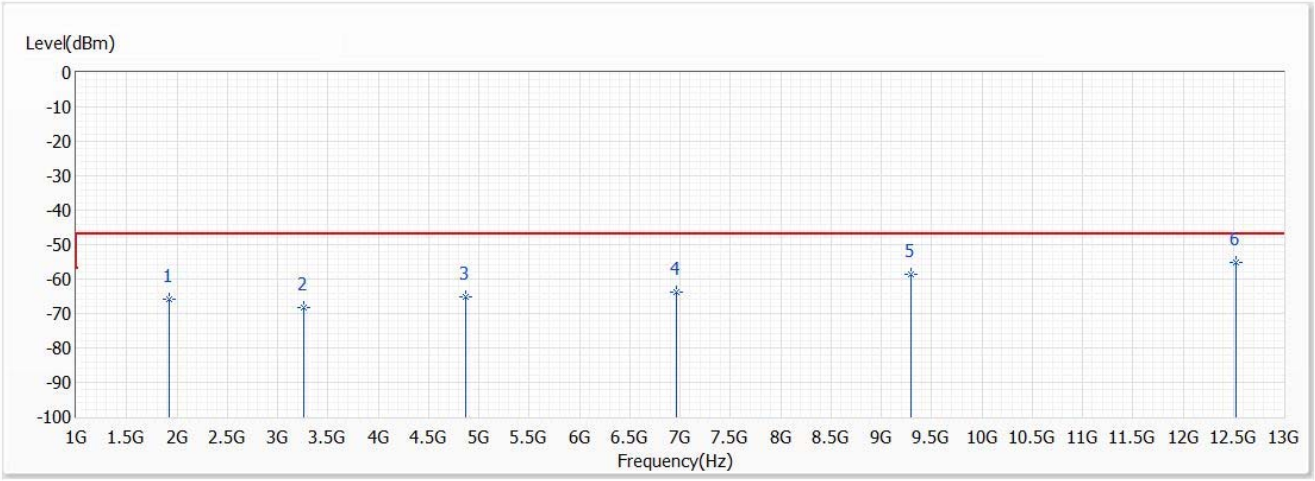


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	1921.000	-69.88	-47.00	-22.88	-64.21	-5.67	PK
2	3208.000	-68.64	-47.00	-21.64	-66.98	-1.66	PK
3	5699.500	-65.17	-47.00	-18.17	-67.22	2.05	PK
4	6983.500	-62.85	-47.00	-15.85	-67.87	5.02	PK
5	8639.500	-59.85	-47.00	-12.85	-70.05	10.20	PK
* 6	12503.500	-55.45	-47.00	-8.45	-71.69	16.24	PK

Note:

1. All reading levels is Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The emission above 13GHz were not included is because their levels are too low.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/28
Test Mode	Mode 2: Receiver	Engineer	Lion Wang
Polarity	Horizontal	Temperature (℃)	26.5
Test Condition	2M,Ant0,Ch 39,2.48G	Humidity (%RH)	57.8

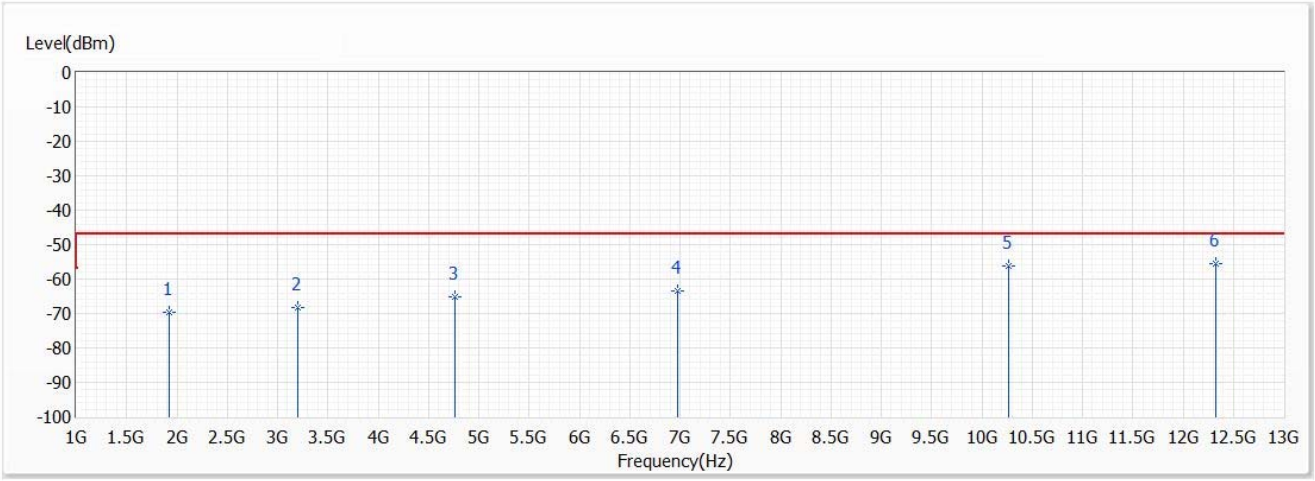


No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	1921.000	-65.90	-47.00	-18.90	-60.04	-5.86	PK
2	3259.000	-68.37	-47.00	-21.37	-66.74	-1.63	PK
3	4867.000	-65.17	-47.00	-18.17	-67.33	2.16	PK
4	6970.000	-63.83	-47.00	-16.83	-68.33	4.50	PK
5	9299.500	-58.79	-47.00	-11.79	-70.59	11.80	PK
* 6	12526.000	-55.32	-47.00	-8.32	-71.41	16.09	PK

Note:

1. All reading levels is Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The emission above 13GHz were not included is because their levels are too low.

Model No	BM67C741-1	Site	CB3-H
Test Voltage	DC 3V	Test Date	2021/7/28
Test Mode	Mode 2: Receiver	Engineer	Lion Wang
Polarity	Vertical	Temperature (℃)	26.5
Test Condition	2M,Ant0,Ch 39,2.48G	Humidity (%RH)	57.8



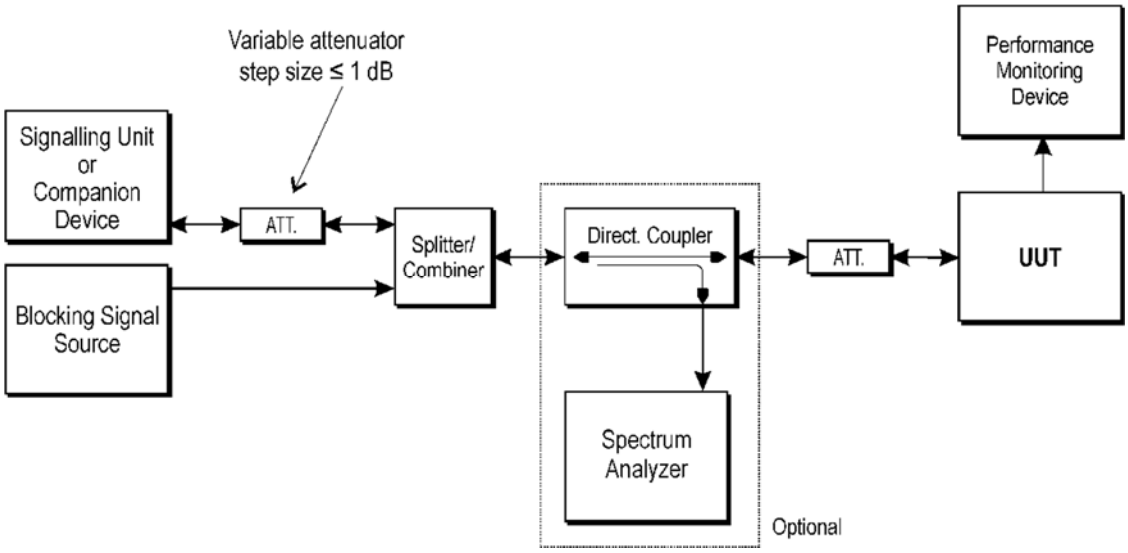
No	Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Reading Level (dBm)	Correct Factor (dB)	Detector Type
1	1921.000	-69.67	-47.00	-22.67	-64.00	-5.67	PK
2	3205.000	-68.11	-47.00	-21.11	-66.43	-1.68	PK
3	4763.500	-65.16	-47.00	-18.16	-66.63	1.47	PK
4	6976.000	-63.41	-47.00	-16.41	-68.39	4.98	PK
5	10265.500	-56.04	-47.00	-9.04	-70.62	14.58	PK
* 6	12329.500	-55.41	-47.00	-8.41	-71.35	15.94	PK

Note:

1. All reading levels is Peak value.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The emission above 13GHz were not included is because their levels are too low.

8. Receiver Blocking

8.1. Test Setup



8.2. Test Condition

Normal test conditions

8.3. Limit

This requirement applies to all receiver categories.

Receiver Category		
☐Category 1	☒Category 2	☐Category 3
Minimum performance criterion	☒PER ≦10%	
	☐FER ≦10%	
	☐Alternative performance criteria (See note)	
Note: For equipment that does not support a PER or a FER test to be performed, the minimum performance criterion shall be no loss of the wireless transmission function needed for the intended use of the equipment.		

Receiver Category 1 Equipment			
Wanted signal mean power from companion device (dBm) (see notes 1 and 4)	**Blocking Signal Frequency (MHz)**	**Blocking Signal Power (dBm) (See note 4)**	**Type of blocking signal**
(-133 dBm + 10 × log10(OCBW)) or -68 dBm whichever is less (see note 2)	2 380 2 504	-34	CW
(-139 dBm + 10 × log10(OCBW)) or -74 dBm whichever is less (see note 3)	2 300 2 330 2 360 2 524 2 584 2 674		

NOTE 1: OCBW is in Hz.

NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to Pmin + 26 dB where Pmin is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.

NOTE 3: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to Pmin + 20 dB where Pmin is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.

NOTE 4: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna with the UUT being configured/positioned as recorded in clause 5.4.3.2.2.

Receiver Category 2 Equipment			
Wanted signal mean power from companion device (dBm) (see notes 1 and 3)	**Blocking Signal Frequency (MHz)**	**Blocking Signal Power (dBm) (See note 3)**	**Type of blocking signal**
(-139 dBm + 10 × log10(OCBW) + 10 dB) or (-74 dBm + 10 dBm) whichever is less (see note 2)	2 380 2 504 2 300 2 584	-34	CW
NOTE 1: OCBW is in Hz. NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to Pmin + 26 dB where Pmin is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal. NOTE 3: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna with the UUT being configured/positioned as recorded in clause 5.4.3.2.2.			

Receiver Category 3 Equipment			
Wanted signal mean power from companion device (dBm) (see notes 1 and 3)	**Blocking Signal Frequency (MHz)**	**Blocking Signal Power (dBm) (See note 3)**	**Type of blocking signal**
(-139 dBm + 10 × log10(OCBW) + 20 dB) or (-74 dBm + 20 dBm) whichever is less (see note 2)	2 380 2 504 2 300 2 584	-34	CW
NOTE 1: OCBW is in Hz. NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to Pmin + 30 dB where Pmin is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal. NOTE 3: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna with the UUT being configured/positioned as recorded in clause 5.4.3.2.2.			

8.4. Test Procedure

Refer to ETSI EN 300 328 V2.2.2 (2019-07) Clause 5.4.11

Measurement Method	
☒Conducted measurement	☐Radiated measurement

8.5. Test Result of Receiver Blocking

GFSK 1Mbps

2402MHz				
Blocking signal frequency [MHz]	Wanted signal mean power from companion device (dBm)	Blocking signal power (dBm)	Max PER (%)	Limit (%)
2380	-69	-34	3.50	<10
2300			3.10	
2480MHz				
Blocking signal frequency [MHz]	Wanted signal mean power from companion device (dBm)	Blocking signal power (dBm)	Max PER (%)	Limit (%)
2504	-69	-34	0.50	<10
2584			0.90	
The actual wanted signal mean power from companion device (Note1)			☒ at the antenna connector ☐ in front of the antenna	
The actual blocking signal power (Note2)			☒ at the antenna connector ☐ in front of the antenna	

Note1: For the conducted measurements , the level shall be corrected as follows:
The actual wanted signal mean power from companion device =
wanted signal mean power from companion device + G

Note2: For the conducted measurements , the level shall be corrected as follows:
the actual blocking signal power = blocking signal power + G

Appendix A

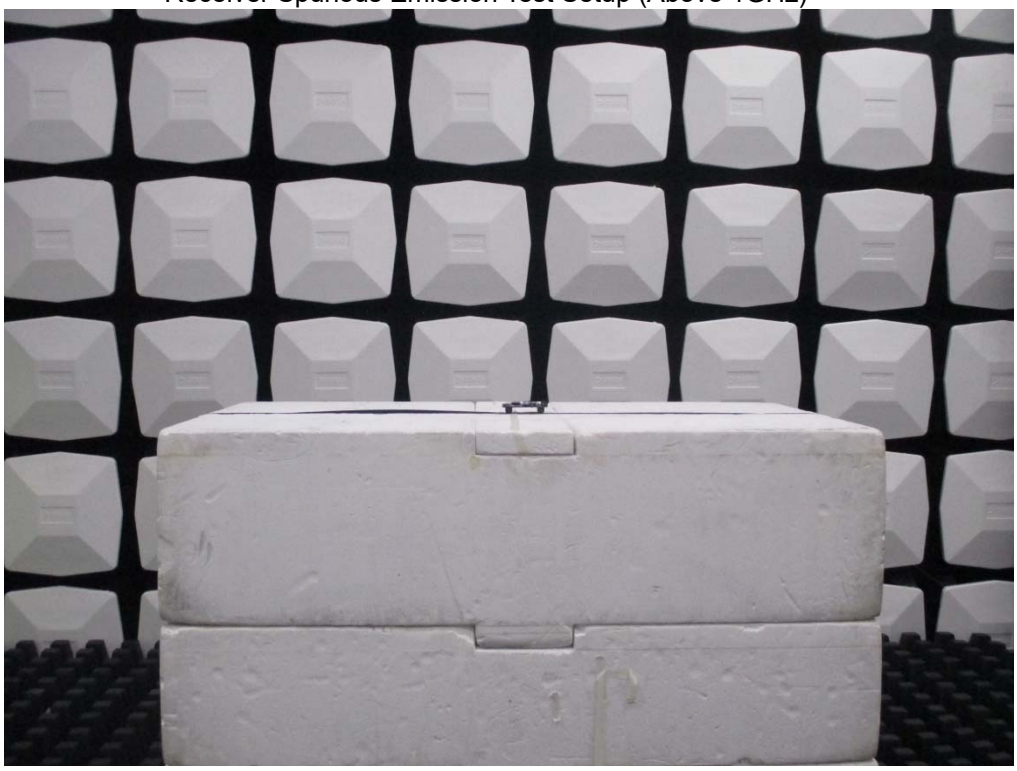
➢ Test Setup Photograph

Description： Front View of Transmitter Unwanted Emissions in the Spurious Domain and Receiver Spurious Emission Test Setup (30MHz-1GHz)

Description： Back View of Transmitter Unwanted Emissions in the Spurious Domain and Receiver Spurious Emission Test Setup (30MHz-1GHz)

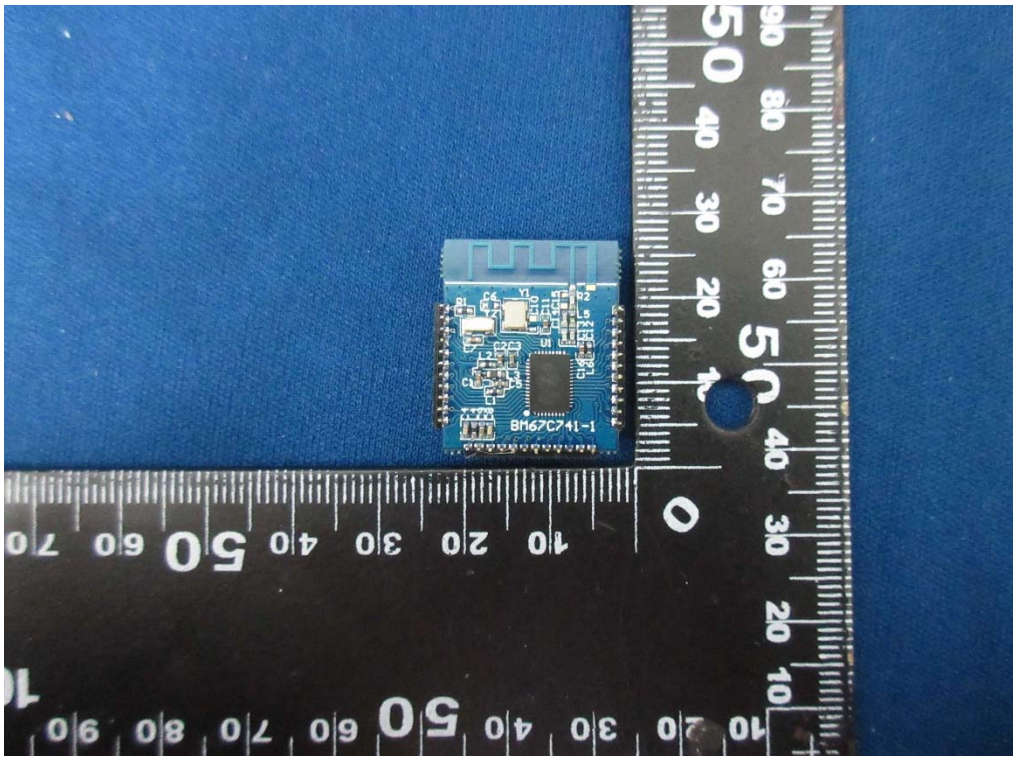
Description： Front View of Transmitter Unwanted Emissions in the Spurious Domain and Receiver Spurious Emission Test Setup (Above 1GHz)

Description： Back View of Transmitter Unwanted Emissions in the Spurious Domain and Receiver Spurious Emission Test Setup (Above 1GHz)

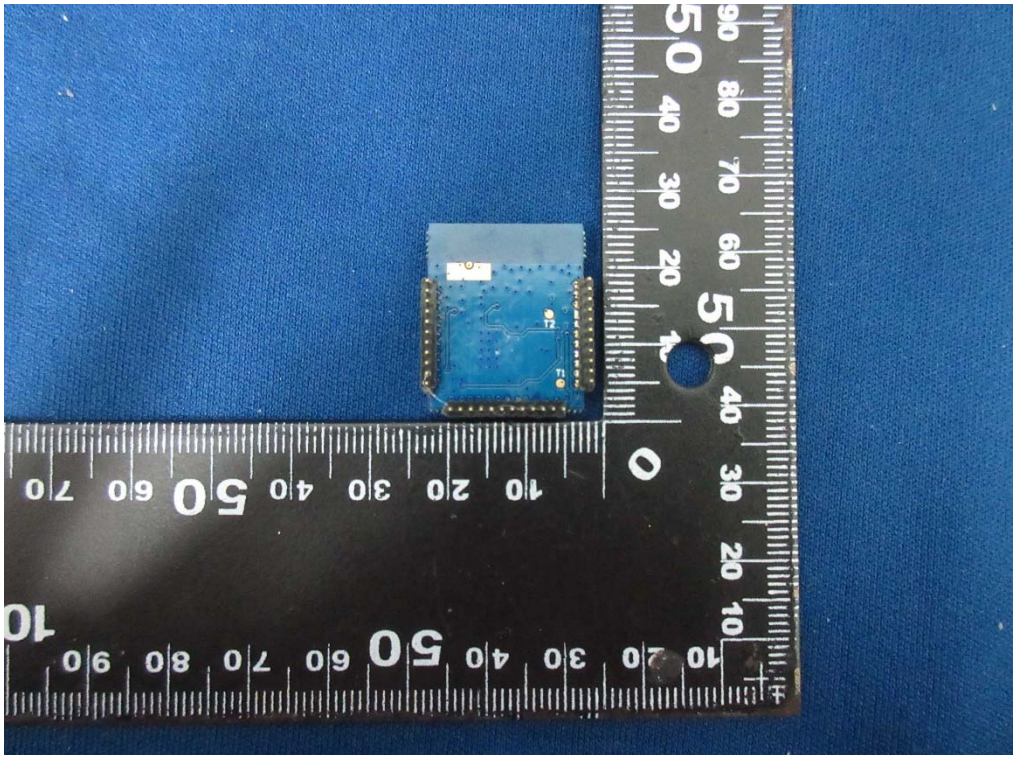


➢ EUT Photograph

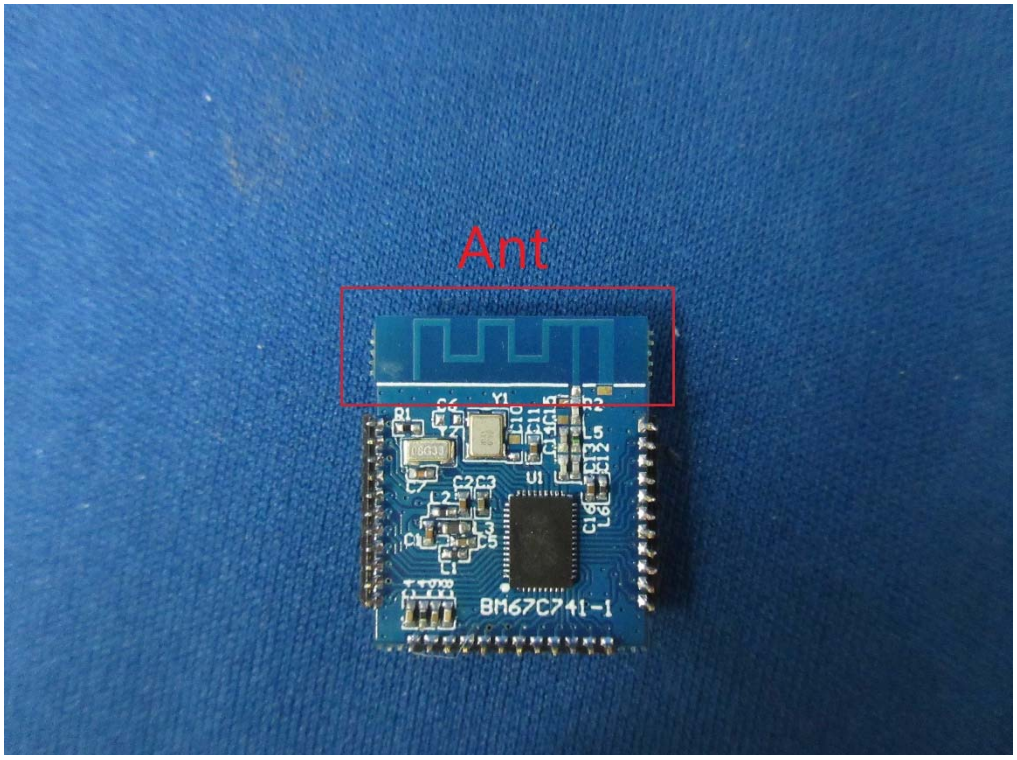
(1) EUT Photo



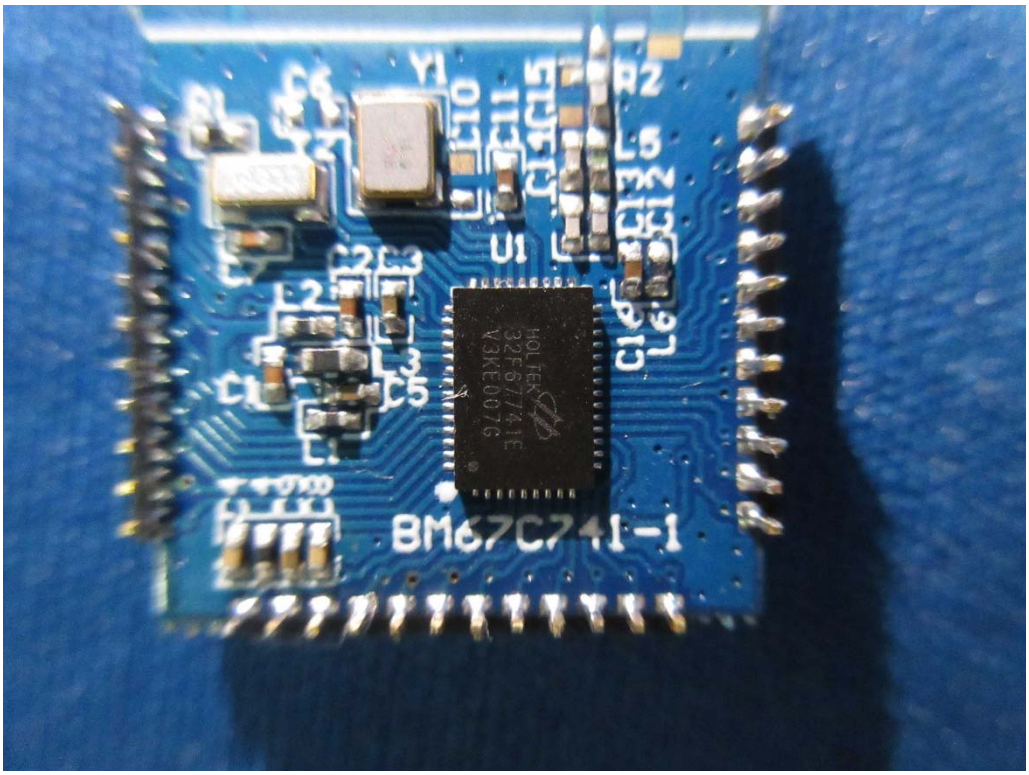
(2) EUT Photo



(3) EUT Photo (Antenna)



(4) EUT Photo



(5) EUT Photo