FCC REPORT

Applicant	:	enjoy smile Co.
Address of Applicant	:	5-13-37 Midorigaoka Atsugi Kanagawa Japan
Manufacturer	:	DMS Solutions Ltd
Address of Manufacturer	:	3F, Jinjie Industrial Park, No.13 Longjiang Road, Wanji Industrial Zone, Longhu District, Shantou
Equipment under Test	:	MRD RTD Chassis 01
Model No.	:	MD-01
FCC ID	:	2BXMZ-ES-RES001GB
Test Standard(s)	:	FCC Rules and Regulations Part 15 Subpart C Section 15.247, ANSI C63.10-2020
Report No.	:	A2607213-C08-R01
Issue Date	:	2026/10/09
Issued By	:	Shenzhen Alpha Product Testing Co., Ltd. Building i, No.2, Lixin Road, Fuyong Street, Bao'an District,518103, Shenzhen City, Guangdong Province, P.R. China.

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Test Report Declare

Applicant	:	enjoy smile Co.
Address of Applicant	:	5-13-37 Midorigaoka Atsugi Kanagawa Japan
Manufacturer	:	DMS Solutions Ltd
Address of Manufacturer	:	3F, Jinjie Industrial Park, No.13 Longjiang Road, Wanji Industrial Zone, Longhu District, Shantou
Equipment under Test	:	MRD RTD Chassis 01
Model No.	:	MD-01
Trademark	:	enjoy smile Co.

Test Standard Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247, ANSI C63.10-2020

We Declare:

The equipment described above is tested by Shenzhen Alpha Product Testing Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Shenzhen Alpha Product Testing Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

Report No.:	A2607213-C08-R01		
Date of Receipt:	2026/09/08	**Date of Test:**	2026/09/08 - 2026/09/17

Prepared By:	**Approved By:**
Yannis Wen	Alan Fan
Yannis Wen/Engineer	**Alan Fan/EMC Manager**

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Alpha Product Testing Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
V0	Initial issue	2026/10/09	Yannis Wen

1. Summary of Test Results

No.	Test Parameter	Clause No.	Result	Memo
1	Spurious Emission	FCC Part 15: 15.209, FCC Part 15: 15.247(d), ANSI C63.10-2020	Pass	/
2	RF Conducted Spurious Emissions	FCC Part 15: 15.247(d), ANSI C63.10-2020	Pass	/
3	Power Line Conducted Emissions	FCC Part 15: 15.207, ANSI C63.10-2020	N/A	EUT power supply by battery, so the test not applicable.
4	Duty Cycle	ANSI C63.10-2020	Pass	/
5	Maximum Conducted Output Power	FCC Part 15: 15.247(b)(3), ANSI C63.10-2020	Pass	/
6	Maximum Power Spectral Density Level	FCC PART 15:15.247(e), ANSI C63.10-2020	Pass	/
7	-6 dB Bandwidth and 99% Bandwidth	FCC PART 15:15.247(a)(2), ANSI C63.10-2020	Pass	/
8	Band Edge(Conducted)	FCC Part 15: 15.247(d), ANSI C63.10-2020	Pass	/
9	Band Edge(Radiated)	FCC Part 15: 15.247(d), ANSI C63.10-2020	Pass	/
10	Antenna Requirement	FCC Part 15: 15.203	Pass	The EUT antenna is Wire Antenna. It complies with the standard requirement.

Note: 1.N/A is an abbreviation for Not Applicable, and means this item is not applicable for this device or no need to test according to standard.

2. Decision rules for the conclusion of this test report: decision by actual test data without considering measurement uncertainty.

2. General Test Information

2.1. Description of EUT

EUT Name	:	MRD RTD Chassis 01
Model Number	:	MD-01
Difference of model number	:	/
Power Supply	:	DC 6V From Battery
Hardware Version	:	V1.0
Software Version	:	V1.0

Radio Specification	:	Bluetooth LE
Operation Frequency	:	2402 MHz to 2480 MHz
Modulation	:	GFSK
Data Rate	:	1Mbps, 2Mbps
Antenna Type	:	Wire Antenna
Max Antenna Gain(dBi)	:	0.22dBi(Antenna information is provided by applicant.) (Testing lab is not responsible for the accuracy of the information.)

Channel information					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	14	2430	28	2458
1	2404	15	2432	29	2460
2	2406	16	2434	30	2462
3	2408	17	2436	31	2464
4	2410	18	2438	32	2466
5	2412	19	2440	33	2468
6	2414	20	2442	34	2470
7	2416	21	2444	35	2472
8	2418	22	2446	36	2474
9	2420	23	2448	37	2476
10	2422	24	2450	38	2478
11	2424	25	2452	39	2480
12	2426	26	2454		
13	2428	27	2456		

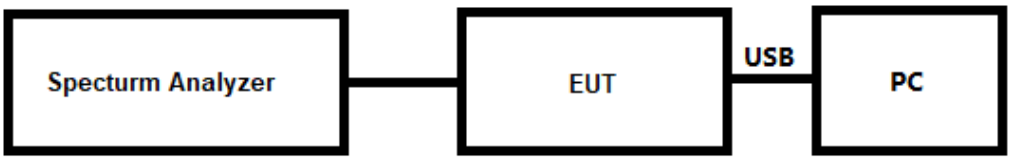
Note: The above EUT information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications or User's Manual. The above Antenna information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

“☒” means to be chosen or applicable; “□” means don’t to be chosen or not applicable; This note applies to entire report.

2.2. Accessories of EUT

Accessories	Manufacturer	Model number	Description
/	/	/	/

2.3. Block diagram of EUT configuration for test



2.4. Test mode description

The test software “BK32xx RF Test_V2.1.0.exe” was used to control EUT work in Continuous Bluetooth TX mode, and select test channel, default power level, wireless mode.

Mode	Channel	Frequency (MHz)
GFSK(1Mbps/2Mbps) Mode	Low : CH0	2402
	Middle: CH19	2440
	High: CH39	2480

2.5. Deviations of test standard

No deviation.

2.6. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Items	Required
Temperature range:	15-35℃
Humidity range:	25-75%
Pressure range:	86-106kPa

Note: The specific temperature and humidity information of each test item refers to the temperature and humidity record in the corresponding test data.

2.7. Test laboratory

Shenzhen Alpha Product Testing Co., Ltd.
Add.: Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103, Shenzhen City, Guangdong Province, P.R. China.
Tel.: 4008-3008-95, Website: http://www.a-lab.cn, Email: service@a-lab.cn

2.8. Measurement uncertainty

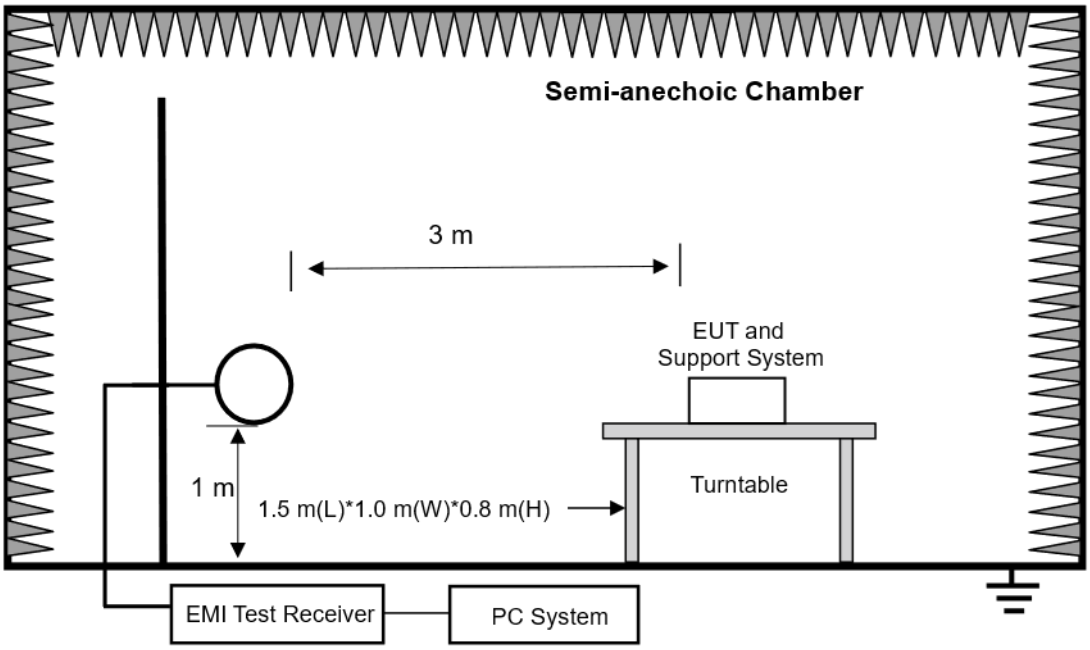
Item	Uncertainty
Uncertainty for Power point Conducted Emissions Test	1.63dB
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	3.5dB
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	4.17dB(Polarize: V)
	4.08dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 25GHz)	4.29dB(Polarize: V)
	4.82dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (18GHz to 40GHz)	4.31dB(Polarize: V)
	4.30dB(Polarize: H)
Uncertainty for radio frequency	5.06×10^{-8}GHz
Uncertainty for conducted RF Power	0.40dB
Uncertainty for temperature	0.3℃
Uncertainty for humidity	1%
Uncertainty for DC and low frequency voltages	0.06%
Uncertainty for Power Spectral Density	0.69dB
Uncertainty for Occupied-Bandwidth	4.22%

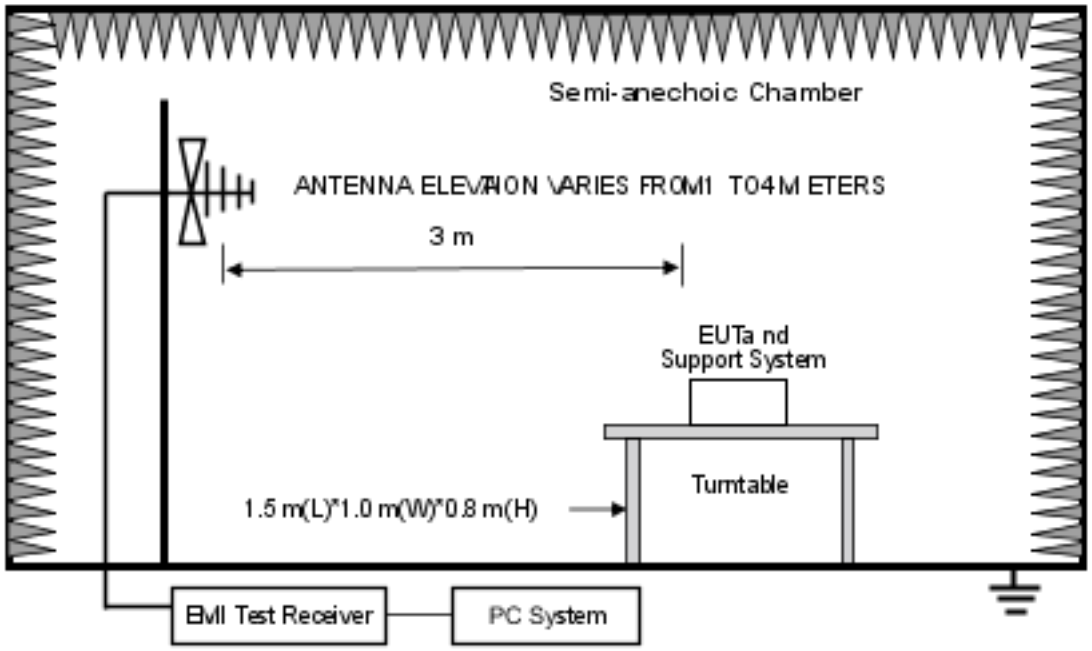
3. Spurious Emission

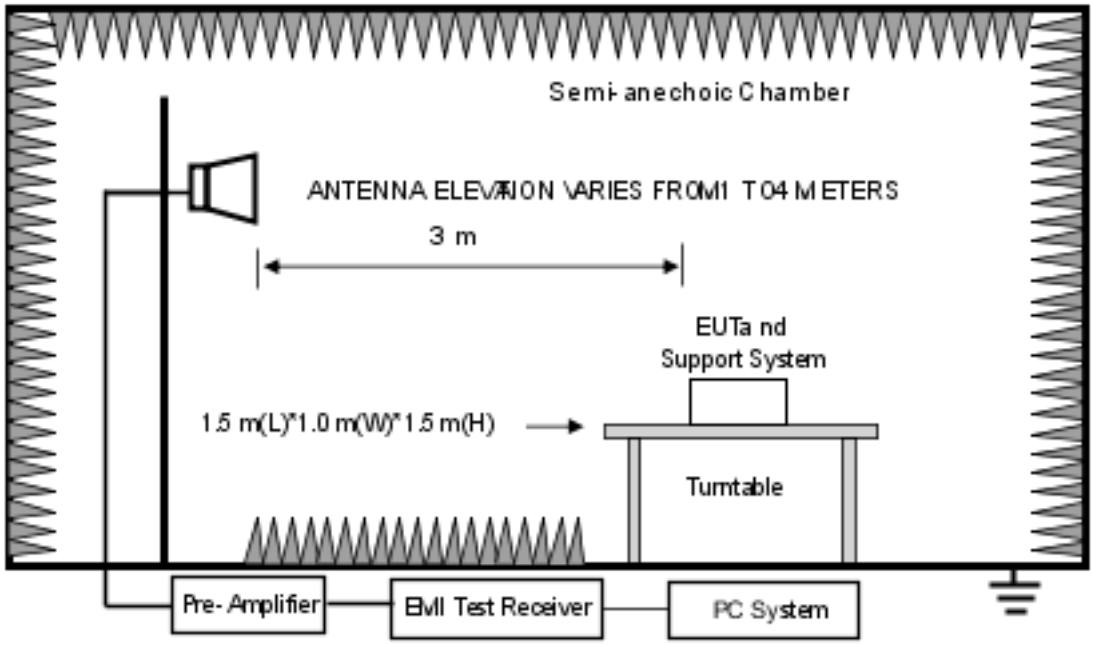
3.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal Due To
Spectrum analyzer	ROHDE&SCHWARZ	FSU	Aa-EE075	2026/07/28	2027/07/27
Horn Antenna	SCHWARZBECK	BBHA 9120 D	Aa-EE076	2025/08/11	2027/08/10
Test Receiver	ROHDE&SCHWARZ	ESR	Aa-EE048	2026/07/27	2027/07/26
Bilog Antenna	SCHWARZBECK	VULB 9168	Aa-EE001	2025/08/11	2027/08/10
Amplifier	SKET	LNPA_0118G-45	Aa-EE087	2026/07/27	2027/07/26
Horn Antenna	SCHWARZBECK	BBHA 9170	Aa-EE077	2025/08/11	2027/08/10
Loop Antenna	SCHWARZBECK	FMZB 1519B	Aa-EE074	2025/08/11	2027/08/10
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	Aa-EE081	2026/07/28	2027/07/27
Preamplifier	SKET	LNPA_1840-50	Aa-EE079	2026/07/27	2027/07/26

3.2. Block diagram of test setup







3.3. Limits

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

(1) FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5

4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

1Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz
2Above 38.6
(2) FCC 15.209 Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		uV/m	dBuV/m
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30~88	3	100	40.0
88~216	3	150	43.5
216~960	3	200	46.0
960~1000	3	500	54.0
Above 1000	3	74.0 dBuV/m (Peak) 54.0 dBuV/m (Average)	

Note:Harmonic emissions limits comply with below 54 dBuV'm at 3m. Other emissions radiated outsideof the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dBbelow the level of the fundamental or comply with the radiated emissions limits specified in section15.209(a) limit in the table below has to be followed.

3.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

3.5. Test procedure

The measuring distance of 3m shall be used for measurements at frequency up to 1GH and above 1GHz, The EUT was placed on a rotating 0.8 m high above ground for below 1GHz and 1.5m high for above1GHz testing, The table was rotated 360 degrees to determine the position of the highest radiation

The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set of make measurement.

The initial step in collecting conducted emission data is a spectrum analyzer Peak detector mode pre-scanning the measurement frequency range. Significant Peaks are then marked. and then Qusia Peak Detector mode premeasured

If Peak value comply with QP limit Below 1GHz.The EUT deemed to comply with QP limit. But the Peak value and average value both need to comply with applicable limit above 1GHz.

For the actual test configuration, please see the test setup photo.

3.6. Test result

Test Site: Chamber 1#(RSE)	Test Date: 2026/09/15--2026/09/15
Condition: 23.0°C,54%RH,101kPa	Test Engineer: Yannis Wen
Memo: Only show the test data of the worst case.	

EUT Name: MRD RTD Chassis 01	EUT Model: MD-01
Sample No.: A2607213-S0010	Test Mode: GFSK(1Mbps/2Mbps) Mode
Power supply: DC 6V From Battery	Memo: /

Test Condition

Continual Transmitting in maximum power.

9KHz~150KHz	RBW200Hz	VBW1KHz
150KHz~30MHz	RBW9KHz	VBW 30KHz
30MHZ~1GHz	RBW120KHz	VBW 300KHz
Above1GHz	RBW1MHz	VBW 3MHz

We have scanned the 10th harmonic from 9 kHz to the EUT.

Detailed information please see the following page.

From 9KHz to 30MHz: Conclusion: PASS

Note: 1.The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

2. Only show the test data of the worst Channel in this report.

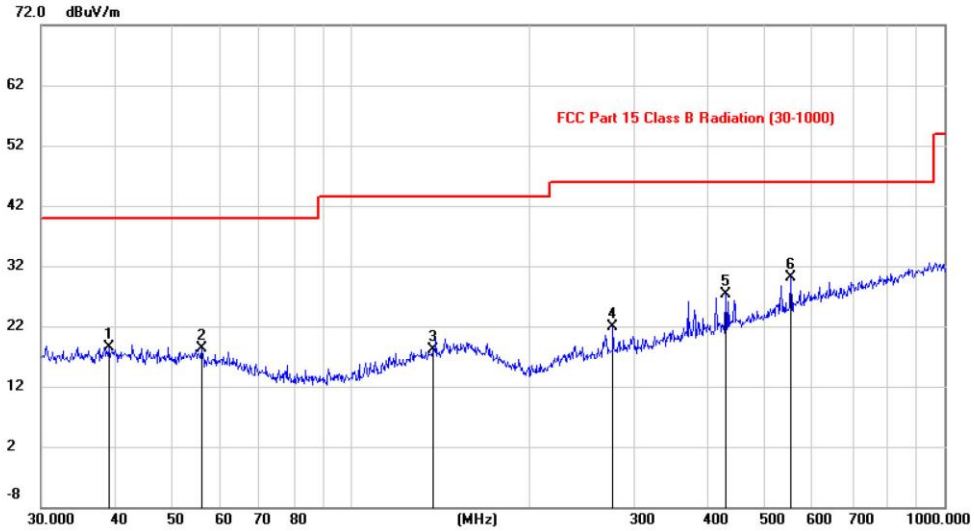
3.7. Test data

深圳阿尔法商品检验有限公司 SHENZHEN ALPHA PRODUCT TESTING CO.,LTD.
深圳阿尔法商品检验有限公司
Shenzhen Alpha Product Testing Co.,Ltd.
地址: ALPHA 广东省深圳市宝安区福永街道立新路 2 号 i 栋
TEL: 4008-3008-95

Site	LAB 966 Chamber 1	Polarization:	***Vertical***	Temperature:	23.0
Limit:	FCC Part 15 Class B Radiation (30-1000)	Power:	DC 6V From Battery	Humidity:	54 %
EUT/Task No :	A2607213-C08	Distance:	3m		
M/N/Sample No:	A2607213-S0010				
Mode :	Mode 1				
Note:					
Engineer Signature:	Yanni3 wen				

Radiated Emission Measurement

File :A2607213-C08 Data :#1 Date: 2026/9/15 Time: 17:19:18



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		39.1341	-1.24	19.79	18.55	40.00	-21.45	peak			
2		56.0531	-0.80	19.01	18.21	40.00	-21.79	peak			
3		137.8868	-1.50	19.64	18.14	43.50	-25.36	peak			
4		276.6727	2.44	19.51	21.95	46.00	-24.05	peak			
5		428.2695	3.74	23.54	27.28	46.00	-18.72	peak			
6	*	552.2374	4.41	25.78	30.19	46.00	-15.81	peak			

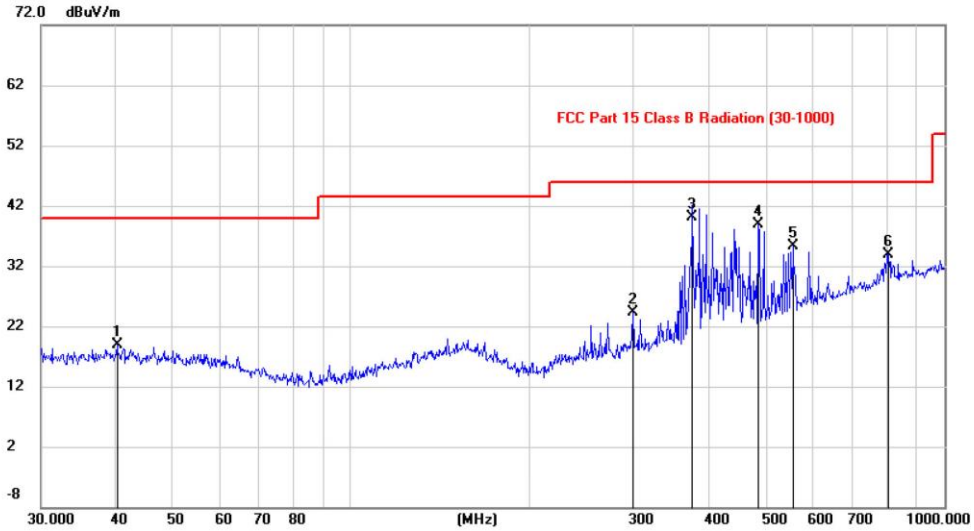
Note:1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

深圳阿尔法商品检验有限公司 SHENZHEN ALPHA PRODUCT TESTING CO.,LTD.
深圳阿尔法商品检验有限公司
Shenzhen Alpha Product Testing Co.,Ltd.
地址: ALPHA 广东省深圳市宝安区福永街道立新路 2 号 i 栋
TEL: 4008-3008-95

Site	LAB 966 Chamber 1	Polarization:	***Horizontal***	Temperature:	23.0
Limit:	FCC Part 15 Class B Radiation (30-1000)	Power:	DC 6V From Battery	Humidity:	54 %
EUT/Task No :	A2607213-C08	Distance:	3m		
M/N/Sample No:	A2607213-S0010				
Mode :	Mode 1				
Note:					
Engineer Signature:	Yanni3 Wen				

Radiated Emission Measurement

File :A2607213-C08 Data :#2 Date: 2026/9/15 Time: 17:21:07



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		40.2897	-0.87	19.80	18.93	40.00	-21.07	peak			
2		298.4076	4.06	20.16	24.22	46.00	-21.78	peak			
3	*	376.4221	18.08	22.11	40.19	46.00	-5.81	QP			
4		486.3477	14.47	24.52	38.99	46.00	-7.01	peak			
5		555.5392	9.47	25.89	35.36	46.00	-10.64	peak			
6		806.7687	4.09	29.82	33.91	46.00	-12.09	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

From 1G-25GHz

Test Mode: GFSK 1Mbps TX Low									
Freq (MHz)	Read Level (dBuV/m)	Polar (H/V)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4804	42.20	V	33.95	10.18	34.26	52.07	74	-21.93	PK
4804	33.96	V	33.95	10.18	34.26	43.83	54	-10.17	AV
7206	/	/	/	/	/	/	/	/	/
9608	/	/	/	/	/	/	/	/	/
4804	43.67	H	33.95	10.18	34.26	53.54	74	-20.46	PK
4804	33.24	H	33.95	10.18	34.26	43.11	54	-10.89	AV
7206	/	/	/	/	/	/	/	/	/
9608	/	/	/	/	/	/	/	/	/
Test Mode: GFSK 1Mbps TX Mid									
4880	44.27	V	33.93	10.2	34.29	54.11	74	-19.89	PK
4880	33.85	V	33.93	10.2	34.29	43.69	54	-10.31	AV
7320	/	/	/	/	/	/	/	/	/
9760	/	/	/	/	/	/	/	/	/
4880	46.12	H	33.93	10.2	34.29	55.96	74	-18.04	PK
4880	34.09	H	33.93	10.2	34.29	43.93	54	-10.07	AV
7320	/	/	/	/	/	/	/	/	/
9760	/	/	/	/	/	/	/	/	/
Test Mode: GFSK 1Mbps TX High									
4960	43.32	V	33.98	10.22	34.25	53.27	74	-20.73	PK
4960	33.61	V	33.98	10.22	34.25	43.56	54	-10.44	AV
7440	/	/	/	/	/	/	/	/	/
9920	/	/	/	/	/	/	/	/	/
4960	44.15	H	33.98	10.22	34.25	54.10	74	-19.90	PK
4960	33.80	H	33.98	10.22	34.25	43.75	54	-10.25	AV
7440	/	/	/	/	/	/	/	/	/
9920	/	/	/	/	/	/	/	/	/

Note:
1, Result = Read level + Antenna factor + cable loss-Amp factor
2, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Test Mode: GFSK 2Mbps TX Low									
Freq (MHz)	Read Level (dBuV/m)	Polar (H/V)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4804	41.96	V	33.95	10.18	34.26	51.83	74	-22.17	PK
4804	35.35	V	33.95	10.18	34.26	45.22	54	-8.78	AV
7206	/	/	/	/	/	/	/	/	/
9608	/	/	/	/	/	/	/	/	/
4804	46.38	H	33.95	10.18	34.26	56.25	74	-17.75	PK
4804	34.41	H	33.95	10.18	34.26	44.28	54	-9.72	AV
7206	/	/	/	/	/	/	/	/	/
9608	/	/	/	/	/	/	/	/	/
Test Mode: GFSK 2Mbps TX Mid									
4880	44.86	V	33.93	10.2	34.29	54.70	74	-19.30	PK
4880	33.81	V	33.93	10.2	34.29	43.65	54	-10.35	AV
7320	/	/	/	/	/	/	/	/	/
9760	/	/	/	/	/	/	/	/	/
4880	45.32	H	33.93	10.2	34.29	55.16	74	-18.84	PK
4880	35.01	H	33.93	10.2	34.29	44.85	54	-9.15	AV
7320	/	/	/	/	/	/	/	/	/
9760	/	/	/	/	/	/	/	/	/
Test Mode: GFSK 2Mbps TX High									
4960	44.50	V	33.98	10.22	34.25	54.45	74	-19.55	PK
4960	34.69	V	33.98	10.22	34.25	44.64	54	-9.36	AV
7440	/	/	/	/	/	/	/	/	/
9920	/	/	/	/	/	/	/	/	/
4960	44.43	H	33.98	10.22	34.25	54.38	74	-19.62	PK
4960	33.86	H	33.98	10.22	34.25	43.81	54	-10.19	AV
7440	/	/	/	/	/	/	/	/	/
9920	/	/	/	/	/	/	/	/	/

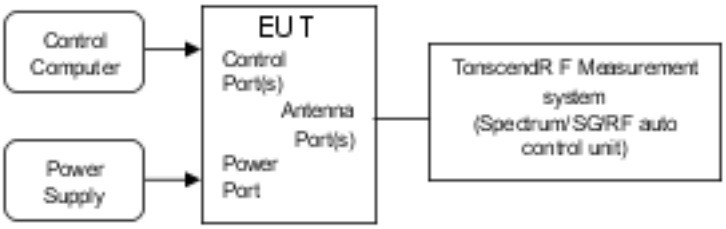
Note:
1, Result = Read level + Antenna factor + cable loss-Amp factor
2, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

4. RF Conducted Spurious Emissions

4.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal Due To
CMW500	ROHDE&SCHWARZ	CMW500	Aa-EE073	2026/07/27	2027/07/26
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	Aa-EE081	2026/07/28	2027/07/27
Vector Signal Generator	Agilent	N5182A	Aa-EE040	2026/07/28	2027/07/27
Power Sensor	DARE	RPR3006W	Aa-EE071	2026/07/28	2027/07/27
Power Sensor	DARE	RPR3006W	Aa-EE070	2026/07/28	2027/07/27
Power meter	Agilent	E4419B	Aa-EE045	2026/07/27	2027/07/26

4.2. Block diagram of test setup



4.3. 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, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20dB.
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)).

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.
(1) FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5

4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

1Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz
2Above 38.6

4.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

4.5. Test procedure

The test receiver set RBW = 100kHz, VBW≥3*RBW =300kHz, sweep time set auto, detail see the test plot

4.6. Test result

Test Site: RF Laboratory	Test Date: 2026/09/08--2026/09/17
Condition: 24.2°C,56%RH,101kPa	Test Engineer: Yannis Wen
Memo: /	

EUT Name: MRD RTD Chassis 01	EUT Model: MD-01
Sample No.: A2607213-S0009	Test Mode: GFSK(1Mbps/2Mbps) Mode
Power supply: DC 6V From Battery	Memo: Please refer to the Conducted RF Spurious Emission of Appendix of BLE data

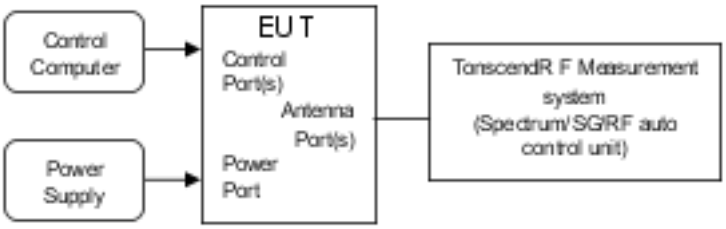
/

5. Duty Cycle

5.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal Due To
CMW500	ROHDE&SCHWARZ	CMW500	Aa-EE073	2026/07/27	2027/07/26
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	Aa-EE081	2026/07/28	2027/07/27
Vector Signal Generator	Agilent	N5182A	Aa-EE040	2026/07/28	2027/07/27
Power Sensor	DARE	RPR3006W	Aa-EE071	2026/07/28	2027/07/27
Power Sensor	DARE	RPR3006W	Aa-EE070	2026/07/28	2027/07/27
Power meter	Agilent	E4419B	Aa-EE045	2026/07/27	2027/07/26

5.2. Block diagram of test setup



5.3. Limits

Please refer KDB 558074 D01 Meas Guidance v05r02.
The duty cycle refers to the fraction of time over which the transmitter is ON and is transmitting at its maximum power control level. The duty cycle is considered to be constant if variations are less than ±2%; otherwise, the duty cycle is considered to be nonconstant

5.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

5.5. Test procedure

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on- and off-times of the transmitted signal.

1) Set the center frequency of the instrument to the center frequency of the transmission.

2) Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value.

3) Set detector = average.

4) The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100.

5.6. Test result

Test Site: RF Laboratory	Test Date: 2026/09/08--2026/09/17
Condition: 24.2°C,56%RH,101kPa	Test Engineer: Yannis Wen
Memo: /	

EUT Name: MRD RTD Chassis 01	EUT Model: MD-01
Sample No.: A2607213-S0009	Test Mode: GFSK(1Mbps/2Mbps) Mode
Power supply: DC 6V From Battery	Memo: Please refer to Duty Cycle of Appendix of BLE data

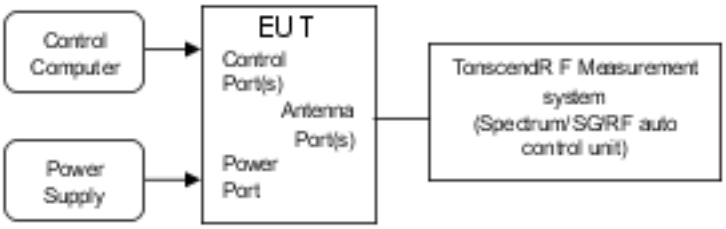
/

6. Maximum Conducted Output Power

6.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal Due To
CMW500	ROHDE&SCHWARZ	CMW500	Aa-EE073	2026/07/27	2027/07/26
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	Aa-EE081	2026/07/28	2027/07/27
Vector Signal Generator	Agilent	N5182A	Aa-EE040	2026/07/28	2027/07/27
Power Sensor	DARE	RPR3006W	Aa-EE071	2026/07/28	2027/07/27
Power Sensor	DARE	RPR3006W	Aa-EE070	2026/07/28	2027/07/27
Power meter	Agilent	E4419B	Aa-EE045	2026/07/27	2027/07/26

6.2. Block diagram of test setup



6.3. Limits

Please refer section 15.247.
The limit of Maximum Peak conducted output power Measurement is 1W(30dBm).

6.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

6.5. Test procedure

Details see the KDB 558074 D01 15.247 Meas Guidance v05r02

Place the EUT on the table and set it in transmitting mode.

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

Set the spectrum analyzer as RBW = 3kHz(Set the RBW to: 3 kHz≤RBW≤100 kHz.), VBW = 10kHz(Set the VBW≥3×RBW), span=1.5×DTS bandwidth, detail see the test plot.

Record the max reading.

Repeat the above procedure until the measurements for all frequencies are completed.

Note: The cable loss were offset into measure device as amplitude offset.

6.6. Test result

Test Site: RF Laboratory	Test Date: 2026/09/08--2026/09/17
Condition: 24.2°C,56%RH,101kPa	Test Engineer: Yannis Wen
Memo: /	

EUT Name: MRD RTD Chassis 01	EUT Model: MD-01
Sample No.: A2607213-S0009	Test Mode: GFSK(1Mbps/2Mbps) Mode
Power supply: DC 6V From Battery	Memo: Please refer to Maximum Conducted Output Power&Duty Cycle of Appendix of BLE data

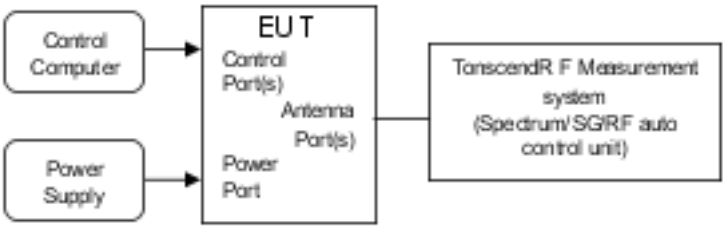
/

7. Maximum Power Spectral Density Level

7.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal Due To
CMW500	ROHDE&SCHWARZ	CMW500	Aa-EE073	2026/07/27	2027/07/26
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	Aa-EE081	2026/07/28	2027/07/27
Vector Signal Generator	Agilent	N5182A	Aa-EE040	2026/07/28	2027/07/27
Power Sensor	DARE	RPR3006W	Aa-EE071	2026/07/28	2027/07/27
Power Sensor	DARE	RPR3006W	Aa-EE070	2026/07/28	2027/07/27
Power meter	Agilent	E4419B	Aa-EE045	2026/07/27	2027/07/26

7.2. Block diagram of test setup



7.3. Limits

Please refer section 15.247.

For direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

The direct sequence operating of the hybrid system, with the frequency hopping operation turned off, shall comply with the power density requirements of paragraph (d) of this section.

7.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

7.5. Test procedure

Details see the KDB 558074 D01 15.247 Meas Guidance v05r02

Place the EUT on the table and set it in transmitting mode.

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

Set the spectrum analyzer as RBW = 3kHz(Set the RBW to: 3 kHz≤RBW≤100 kHz.), VBW = 10kHz(Set the VBW≥3×RBW), span=1.5×DTS bandwidth., detail see the test plot.

Record the max reading.

Repeat the above procedure until the measurements for all frequencies are completed.

7.6. Test result

Test Site: RF Laboratory	Test Date: 2026/09/08--2026/09/17
Condition: 24.2°C,56%RH,101kPa	Test Engineer: Yannis Wen
Memo: /	

EUT Name: MRD RTD Chassis 01	EUT Model: MD-01
Sample No.: A2607213-S0009	Test Mode: GFSK(1Mbps/2Mbps) Mode
Power supply: DC 6V From Battery	Memo: Please refer to Maximum Power Spectral Density Level of Appendix of BLE data

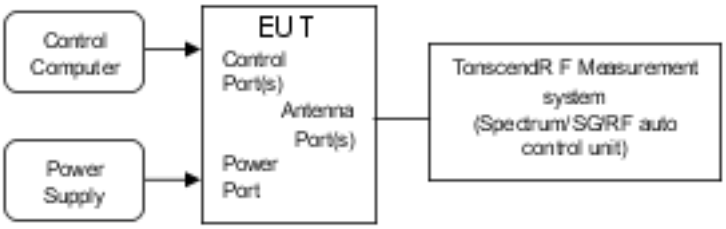
/

8. -6 dB Bandwidth and 99% Bandwidth

8.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal Due To
CMW500	ROHDE&SCHWARZ	CMW500	Aa-EE073	2026/07/27	2027/07/26
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	Aa-EE081	2026/07/28	2027/07/27
Vector Signal Generator	Agilent	N5182A	Aa-EE040	2026/07/28	2027/07/27
Power Sensor	DARE	RPR3006W	Aa-EE071	2026/07/28	2027/07/27
Power Sensor	DARE	RPR3006W	Aa-EE070	2026/07/28	2027/07/27
Power meter	Agilent	E4419B	Aa-EE045	2026/07/27	2027/07/26

8.2. Block diagram of test setup



8.3. Limits

Please refer section 15.247

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500 kHz.

8.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

8.5. Test procedure

Details see the KDB 558074 D01 15.247 Meas Guidance v05r02

a) The bandwidth is measured at an amplitude level reduced 20dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

b) The test receiver set RBW = 100kHz, VBW≥3*RBW =300kHz, sweep time set auto, detail see the test plot.

8.6. Test result

Test Site: RF Laboratory	Test Date: 2026/09/08--2026/09/17
Condition: 24.2°C,56%RH,101kPa	Test Engineer: Yannis Wen
Memo: /	

EUT Name: MRD RTD Chassis 01	EUT Model: MD-01
Sample No.: A2607213-S0009	Test Mode: GFSK(1Mbps/2Mbps) Mode
Power supply: DC 6V From Battery	Memo: Please refer to -6dB Bandwidth&Occupied Channel Bandwidth of Appendix of BLE data

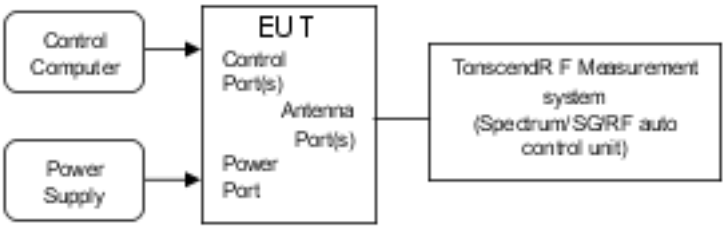
/

9. Band Edge(Conducted)

9.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal Due To
CMW500	ROHDE&SCHWARZ	CMW500	Aa-EE073	2026/07/27	2027/07/26
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	Aa-EE081	2026/07/28	2027/07/27
Vector Signal Generator	Agilent	N5182A	Aa-EE040	2026/07/28	2027/07/27
Power Sensor	DARE	RPR3006W	Aa-EE071	2026/07/28	2027/07/27
Power Sensor	DARE	RPR3006W	Aa-EE070	2026/07/28	2027/07/27
Power meter	Agilent	E4419B	Aa-EE045	2026/07/27	2027/07/26

9.2. Block diagram of test setup



9.3. Limits

Please refer section 15.247.

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20dB.

9.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

9.5. Test procedure

1) Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products that fall outside of the authorized band

of operation.

2) Reference level: As required to keep the signal from exceeding the maximum instrument input mixer level for linear operation.

3) Attenuation: Auto (at least 10 dB preferred).

4) Sweep time: Coupled.

5) Resolution bandwidth: 100 kHz.

6) Video bandwidth: 300 kHz.

7) Detector: Peak.

8) Trace: Max hold.

9.6. Test result

Test Site: RF Laboratory	Test Date: 2026/09/08--2026/09/17
Condition: 24.2°C,56%RH,101kPa	Test Engineer: Yannis Wen
Memo: /	

EUT Name: MRD RTD Chassis 01	EUT Model: MD-01
Sample No.: A2607213-S0009	Test Mode: GFSK(1Mbps/2Mbps) Mode-L/H
Power supply: DC 6V From Battery	Memo: Please refer to Band Edge of Appendix of BLE data

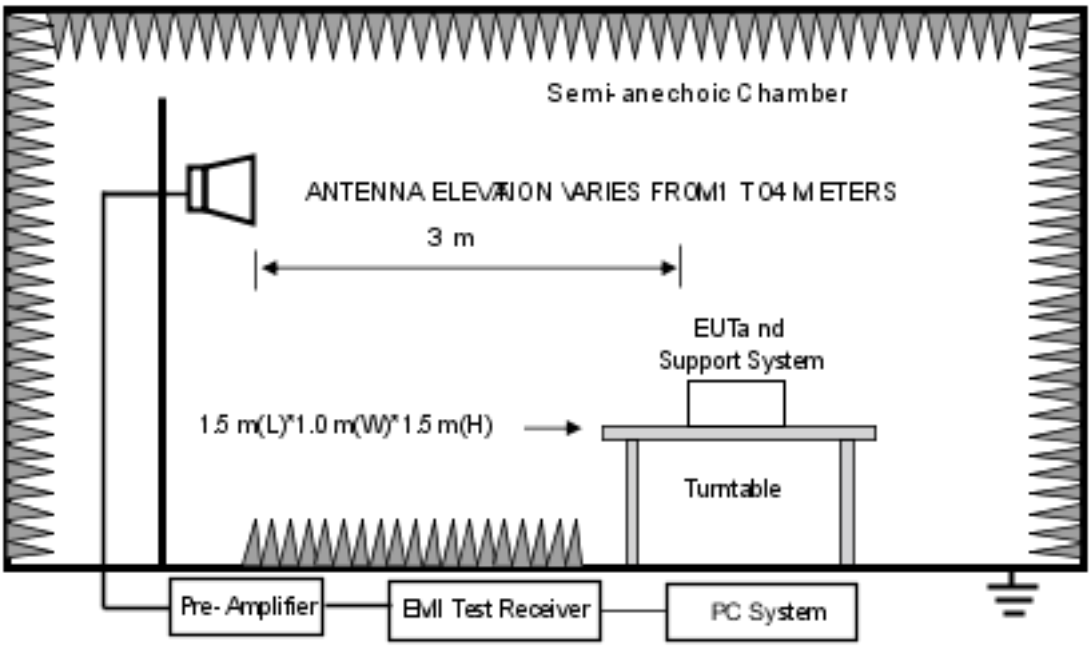
/

10.Band Edge(Radiated)

10.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal Due To
Spectrum analyzer	ROHDE&SCHWARZ	FSU	Aa-EE075	2026/07/28	2027/07/27
Horn Antenna	SCHWARZBECK	BBHA 9120 D	Aa-EE076	2025/08/11	2027/08/10
Test Receiver	ROHDE&SCHWARZ	ESR	Aa-EE048	2026/07/27	2027/07/26
Bilog Antenna	SCHWARZBECK	VULB 9168	Aa-EE001	2025/08/11	2027/08/10
Amplifier	SKET	LNPA_0118G-45	Aa-EE087	2026/07/27	2027/07/26
Horn Antenna	SCHWARZBECK	BBHA 9170	Aa-EE077	2025/08/11	2027/08/10
Loop Antenna	SCHWARZBECK	FMZB 1519B	Aa-EE074	2025/08/11	2027/08/10
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	Aa-EE081	2026/07/28	2027/07/27
Preamplifier	SKET	LNPA_1840-50	Aa-EE079	2026/07/27	2027/07/26

10.2. Block diagram of test setup



10.3. Limits

Please refer section 15.247.

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all

the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits

10.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

10.5. Test procedure

Details see the KDB 558074 D01 15.247 Meas Guidance v05r02

- Put the EUT on a 1.5m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission
- Check the spurious emissions out of band.
- RBW 1MHz, VBW 3MHz, peak detector for peak value, RBW 1MHz, VBW 3MHz, RMS detector for AV value.

10.6. Test result

Test Site: Chamber 1#(RSE)	Test Date: 2026/09/15--2026/09/15
Condition: 23.0°C,54%RH,101kPa	Test Engineer: Yannis Wen
Memo: /	

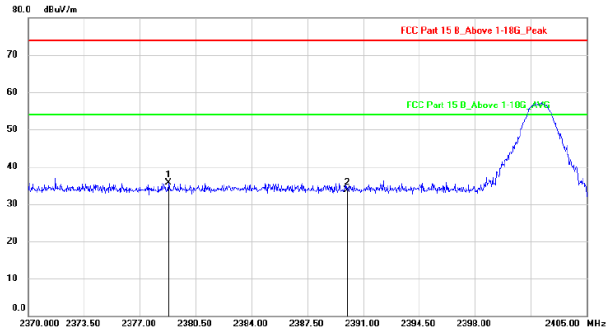
EUT Name: MRD RTD Chassis 01	EUT Model: MD-01
Sample No.: A2607213-S0010	Test Mode: GFSK(1Mbps/2Mbps) Mode-L/H
Power supply: DC 6V From Battery	Memo: /

/

10.7. Test data

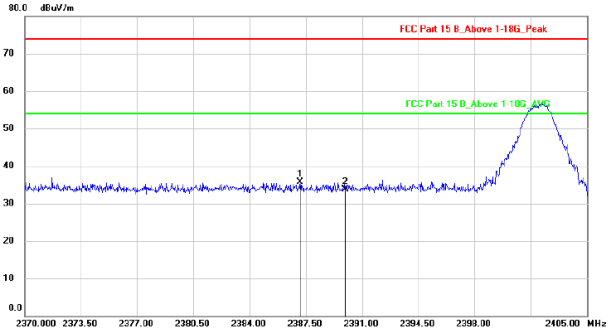
Test Mode: GFSK(1Mbps)-Low

Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2378.814	54.36	-18.65	35.71	74.00	-38.29	peak			
2		2390.000	52.33	-18.66	33.67	74.00	-40.33	peak			

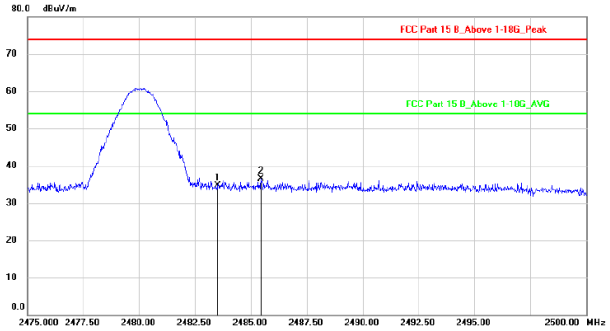
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2387.175	54.27	-18.65	35.62	74.00	-38.38	peak			
2		2390.000	52.33	-18.66	33.67	74.00	-40.33	peak			

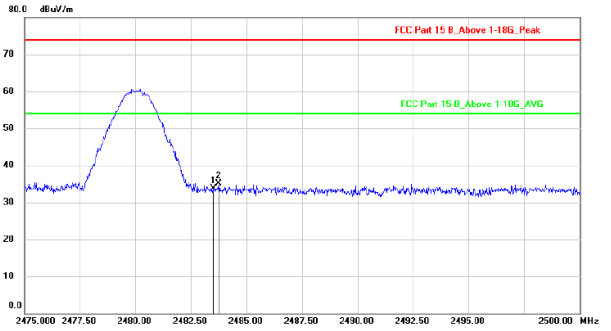
Test Mode: GFSK(1Mbps)-High

Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	53.52	-18.76	34.76	74.00	-39.24	peak			
2	*	2485.463	55.23	-18.76	36.47	74.00	-37.53	peak			

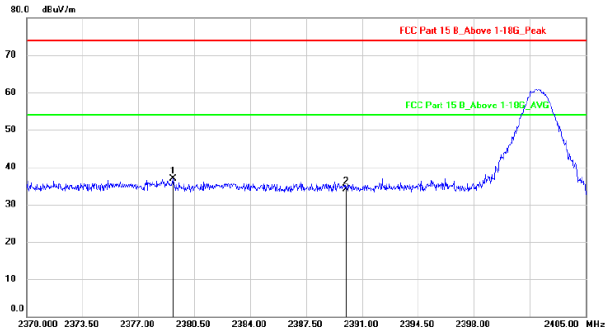
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	52.52	-18.76	33.76	74.00	-40.24	peak			
2	*	2483.766	53.96	-18.76	35.20	74.00	-38.80	peak			

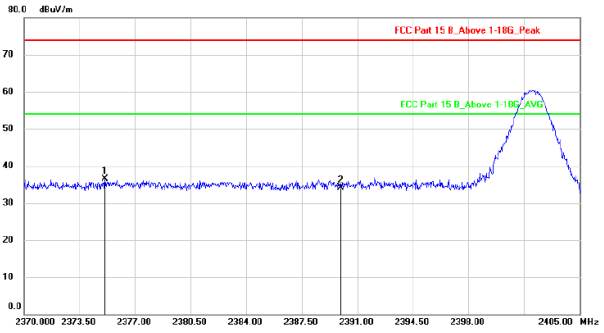
Test Mode: GFSK(2Mbps)-Low

Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2379.192	55.51	-18.65	36.86	74.00	-37.14	peak			
2		2390.000	52.83	-18.66	34.17	74.00	-39.83	peak			

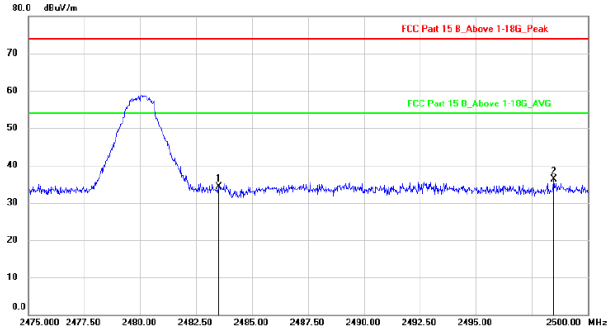
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2375.110	55.15	-18.64	36.51	74.00	-37.49	peak			
2		2390.000	52.83	-18.66	34.17	74.00	-39.83	peak			

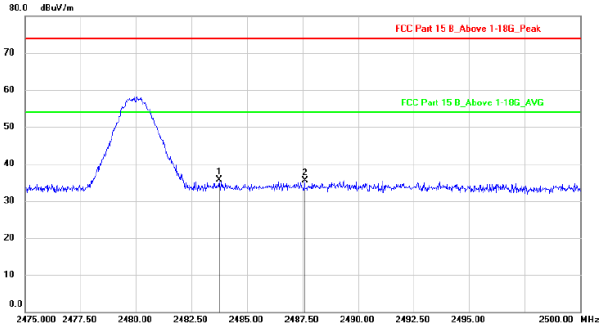
Test Mode: GFSK(2Mbps)-High

Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	53.02	-18.76	34.26	74.00	-39.74	peak			
2	*	2498.493	55.04	-18.75	36.29	74.00	-37.71	peak			

Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2483.766	54.46	-18.76	35.70	74.00	-38.30	peak			
2		2487.608	54.28	-18.76	35.52	74.00	-38.48	peak			

11. Test Setup Photograph

Please refer to Appendix of Test photos_RF.

12. Photos of the EUT

Please refer to Appendix of EUT photos.

----------End Report----------