TEST REPORT

Report No.....	KS2210S4491E01
FCC ID.....	2A54U-DT8ULTRA
Applicant.....	Shenzhen Xinkeying Technology Co.,Ltd
Address.....	8/F,Block C,Han's Innovation Building,Xili Road, Nanshan District,Shenzhen,China
Manufacturer.....	Shenzhen Xinkeying Technology Co.,Ltd
Address.....	8/F,Block C,Han's Innovation Building,Xili Road, Nanshan District,Shenzhen,China
Product Name.....	Sports smart watch
Trademark.....	DTNO.1
Model/Type reference.....	DT8 Ultra, C118, DT8 Ultra+
Standard.....	47 CFR Part 15.247
Date of Receipt.....	October 18, 2022
Date of Test Date.....	October 18, 2022 to October 27, 2022
Date of issue.....	October 29, 2022
Test result.....	**Pass**

Prepared by: (Printed name + Signature)	Pai Zheng	Pai Zheng
Approved by: (Printed name + Signature)	Sky Dong	Sky dong

Testing Laboratory Name.....	**KSIGN(Guangdong) Testing Co., Ltd.**
Address.....	West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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1. TEST SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

47 CFR Part 15.247: Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

1.2. Report Version

Revised No.	Date of issue	Description
01	October 29, 2022	Original

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1.3. Test Description

Test Item	Standard	Requirement	Result
Antenna requirement	47 CFR Part 15.247	Part 15.203	Pass
Conducted Emission at AC power line	47 CFR Part 15.247	47 CFR 15.207(a)	Pass
Occupied Bandwidth	47 CFR Part 15.247	47 CFR 15.247(a)(2)	Pass
Maximum Conducted Output Power	47 CFR Part 15.247	47 CFR 15.247(b)(3)	Pass
Power Spectral Density	47 CFR Part 15.247	47 CFR 15.247(e)	Pass
Emissions in non-restricted frequency bands	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Emissions around the fundamental	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Emissions in restricted frequency bands (below 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Emissions in restricted frequency bands (above 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d)	Pass

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1.4. Test Facility

KSIGN(Guangdong) Testing Co., Ltd.
West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu,Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

The test facility is recognized, certified, or accredited by the following organizations:
CNAS-Lab Code: L13261
KSIGN(Guangdong) Testing Co., Ltd. has been assessed and proved to be in Compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.
A2LA-Lab Cert. No.: 5457.01
KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirementsfor the Competence of Testing and Calibration Laboratories and any additional program requirements in the
identified field of testing
ISED#: 25693 CAB identifier.: CN0096
KSIGN(Guangdong) Testing Co., Ltd. has been listed by Innovation, Science and Economic Development Canada to perform electromagnetic emission measurement.
FCC-Registration No.: 294912 Designation Number: CN1328
KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

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1.5. Measurement Uncertainty

Test Items	Measurement Uncertainty
Conducted Emission (150k-30MHz)	± 3.34dB
Output Power, Conducted	± 1.4dB
PSD, Conducted	± 1.0dB
Spurious Emissions, Conducted	± 3.3dB
RSE (1-18GHz)	± 4.68dB
RSE (30-1000MHz)	± 5.7dB
RSE (18-40GHz)	± 5.18dB

The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

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2. GENERAL INFORMATION

2.1. General Description Of EUT

Product Name:	Sports smart watch
Trademark:	DTNO.1
Model / Type reference:	DT8 Ultra, C118, DT8 Ultra+
Model Difference:	The difference between the product model is only the color and appearance is not the same, the different model name is for the market demand. Other power supply mode, internal structure, circuit and key components are the same, does not affect the safety and electromagnetic compatibility performance.
Power Supply:	The battery supplies 3.7V DC, and the adapter supplies 5V DC
Operation Frequency:	2402MHz to 2480MHz
Number of Channels:	40
Modulation Type:	GFSK
Antenna Type:	Internal Antenna
Antenna Gain:	-2.09dB

2.2. Accessory Equipment Information

The EUT was tested as an independent device.

2.3. Description of Test Modes

No.	Title	Description of Mode
TM1	TX mode	Keep the EUT connect to AC power line and works in continuously transmitting mode with GFSK modulation.

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2.4. Measurement Instruments List

Conducted Emission at AC power line				
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
LISN	R&S	ENV432	1326.6105.02	2023-03-04
EMI Test Receiver	R&S	ESR	102524	2023-03-04
Manual RF Switch	JS TOYO	/	MSW-01/002	2023-03-04
ISN CAT6	Schwarzbeck	CAT5 8158	227	2023-03-04
Color Signal Generator	Philips	PM5418	672926	2023-03-04
Power Absorbing Clamp	R&S	MDS-21	100925	2023-03-26

Occupied Bandwidth				
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
Wideband Radio Communication Tester	R&S	CMU200	115297	2023-03-04
Audio Analyzer	R&S	UPL16	100001	2023-03-04
Shielding box	Gxiong	GX-5915A	2201113	2023-04-23
High Pass Filter	COM-MW Technology Co., Ltd	ZHPF-M1.2-9G-187	09203403	2023-03-04
Band Stop Filter	COM-MW Technology Co., Ltd	ZBSF6-C820-920-188	09203401	2023-03-04
Splitter	COM-MW Technology Co., Ltd	ZPD-M1-8-2103	09203407	2023-03-04
Coaxial Cable	BEBES	A40-2.92M2.92F-4.5M	1907021	2023-03-04
Hygrothermograph	Anymetre	JB913	/	2023-03-07
Climate Chamber	Angul	AGNH80L	1903042120	2023-03-04
Spectrum Analyzer	HP	8593E	3831U02087	2023-03-04
Dual Output DC Power Supply	Agilent	E3646A	MY40009992	2023-03-04
RF Control Unit	Tonscend	JS0806-2	/	2023-03-04
Analog Signal Generator	HP	83752A	3344A00337	2023-03-04
Vector Signal Generator	Agilent	N5182A	MY50142520	2023-03-04
Wideband Radio Communication Tester	R&S	CMW500	157282	2023-03-04
Spectrum Analyzer	R&S	FSV40-N	101798	2023-03-04

Maximum Conducted Output Power				
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
Wideband Radio Communication Tester	R&S	CMU200	115297	2023-03-04
Audio Analyzer	R&S	UPL16	100001	2023-03-04
Shielding box	Gxiong	GX-5915A	2201113	2023-04-23
High Pass Filter	COM-MW	ZHPF-M1.2-9G-	09203403	2023-03-04

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	Technology Co., Ltd	187		
Band Stop Filter	COM-MW Technology Co., Ltd	ZBSF6-C820-920-188	09203401	2023-03-04
Splitter	COM-MW Technology Co., Ltd	ZPD-M1-8-2103	09203407	2023-03-04
Coaxial Cable	BEBES	A40-2.92M2.92F-4.5M	1907021	2023-03-04
Hygrothermograph	Anymetre	JB913	/	2023-03-07
Climate Chamber	Angul	AGNH80L	1903042120	2023-03-04
Spectrum Analyzer	HP	8593E	3831U02087	2023-03-04
Dual Output DC Power Supply	Agilent	E3646A	MY40009992	2023-03-04
RF Control Unit	Tonscend	JS0806-2	/	2023-03-04
Analog Signal Generator	HP	83752A	3344A00337	2023-03-04
Vector Signal Generator	Agilent	N5182A	MY50142520	2023-03-04
Wideband Radio Communication Tester	R&S	CMW500	157282	2023-03-04
Spectrum Analyzer	R&S	FSV40-N	101798	2023-03-04

Power Spectral Density				
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
Wideband Radio Communication Tester	R&S	CMU200	115297	2023-03-04
Audio Analyzer	R&S	UPL16	100001	2023-03-04
Shielding box	Gxiong	GX-5915A	2201113	2023-04-23
High Pass Filter	COM-MW Technology Co., Ltd	ZHPF-M1.2-9G-187	09203403	2023-03-04
Band Stop Filter	COM-MW Technology Co., Ltd	ZBSF6-C820-920-188	09203401	2023-03-04
Splitter	COM-MW Technology Co., Ltd	ZPD-M1-8-2103	09203407	2023-03-04
Coaxial Cable	BEBES	A40-2.92M2.92F-4.5M	1907021	2023-03-04
Hygrothermograph	Anymetre	JB913	/	2023-03-07
Climate Chamber	Angul	AGNH80L	1903042120	2023-03-04
Spectrum Analyzer	HP	8593E	3831U02087	2023-03-04
Dual Output DC Power Supply	Agilent	E3646A	MY40009992	2023-03-04
RF Control Unit	Tonscend	JS0806-2	/	2023-03-04
Analog Signal Generator	HP	83752A	3344A00337	2023-03-04
Vector Signal Generator	Agilent	N5182A	MY50142520	2023-03-04

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Wideband Radio Communication Tester	R&S	CMW500	157282	2023-03-04
Spectrum Analyzer	R&S	FSV40-N	101798	2023-03-04

Emissions in non-restricted frequency bands				
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
Wideband Radio Communication Tester	R&S	CMU200	115297	2023-03-04
Audio Analyzer	R&S	UPL16	100001	2023-03-04
Shielding box	Gxiong	GX-5915A	2201113	2023-04-23
High Pass Filter	COM-MW Technology Co., Ltd	ZHPF-M1.2-9G-187	09203403	2023-03-04
Band Stop Filter	COM-MW Technology Co., Ltd	ZBSF6-C820-920-188	09203401	2023-03-04
Splitter	COM-MW Technology Co., Ltd	ZPD-M1-8-2103	09203407	2023-03-04
Coaxial Cable	BEBES	A40-2.92M2.92F-4.5M	1907021	2023-03-04
Hygrothermograph	Anymetre	JB913	/	2023-03-07
Climate Chamber	Angul	AGNH80L	1903042120	2023-03-04
Spectrum Analyzer	HP	8593E	3831U02087	2023-03-04
Dual Output DC Power Supply	Agilent	E3646A	MY40009992	2023-03-04
RF Control Unit	Tonscend	JS0806-2	/	2023-03-04
Analog Signal Generator	HP	83752A	3344A00337	2023-03-04
Vector Signal Generator	Agilent	N5182A	MY50142520	2023-03-04
Wideband Radio Communication Tester	R&S	CMW500	157282	2023-03-04
Spectrum Analyzer	R&S	FSV40-N	101798	2023-03-04

Emissions around the fundamental				
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
Ultra-Broadband logarithmic period Antenna	Schwarzbeck	VULB 9163	1230	2023-04-12
Pre-Amplifier	Schwarzbeck	BBV 9745	9745#129	2023-03-04
Color Signal Generator	Philips	PM5418	672926	2023-03-04
Broadcast Television Signal Generator	R&S	SFE100	141038	2023-03-04
Analog Signal Generator	Agilent	8648A	3847M00445	2023-03-04
EMI Test Receiver	R&S	ESR	102525	2023-03-04
Horn Antenna	Schwarzbeck	BBHA 9120 D	2023	2023-03-29
Pre-Amplifier	EMCI	EMC051835SE	980662	2023-03-04
Spectrum Analyzer	Keysight	N9020A	MY46471971	2023-03-04

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Loop Antenna	Beijin ZHINAN	ZN30900C	18050	2023-03-05

Emissions in restricted frequency bands (below 1GHz)				
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
Ultra-Broadband logarithmic period Antenna	Schwarzbeck	VULB 9163	1230	2023-04-12
Pre-Amplifier	Schwarzbeck	BBV 9745	9745#129	2023-03-04
Color Signal Generator	Philips	PM5418	672926	2023-03-04
Broadcast Television Signal Generator	R&S	SFE100	141038	2023-03-04
Analog Signal Generator	Agilent	8648A	3847M00445	2023-03-04
EMI Test Receiver	R&S	ESR	102525	2023-03-04
Horn Antenna	Schwarzbeck	BBHA 9120 D	2023	2023-03-29
Pre-Amplifier	EMCI	EMC051835SE	980662	2023-03-04
Spectrum Analyzer	Keysight	N9020A	MY46471971	2023-03-04
Loop Antenna	Beijin ZHINAN	ZN30900C	18050	2023-03-05

Emissions in restricted frequency bands (above 1GHz)				
Test Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
Ultra-Broadband logarithmic period Antenna	Schwarzbeck	VULB 9163	1230	2023-04-12
Pre-Amplifier	Schwarzbeck	BBV 9745	9745#129	2023-03-04
Color Signal Generator	Philips	PM5418	672926	2023-03-04
Broadcast Television Signal Generator	R&S	SFE100	141038	2023-03-04
Analog Signal Generator	Agilent	8648A	3847M00445	2023-03-04
EMI Test Receiver	R&S	ESR	102525	2023-03-04
Horn Antenna	Schwarzbeck	BBHA 9120 D	2023	2023-03-29
Pre-Amplifier	EMCI	EMC051835SE	980662	2023-03-04
Spectrum Analyzer	Keysight	N9020A	MY46471971	2023-03-04
Loop Antenna	Beijin ZHINAN	ZN30900C	18050	2023-03-05

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3. Evaluation Results (Evaluation)

3.1. Antenna requirement

Test Requirement:	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

3.1.1. E.U.T. Operation:

Operating Environment:	
Temperature:	25.7 °C
Humidity:	44.4 %
Atmospheric Pressure:	101 kPa
Final test mode:	TM1

3.1.2. Test Data:

The antenna gain is -2.09dB, the directional gain of the antenna less than 6dBi. It comply with the standard requirement. In case of replacement of broken antenna the same antenna type must be used.
Antenna structure please refer to the EUT internal photographs antenna photo.

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4. Radio Spectrum Matter Test Results (RF)

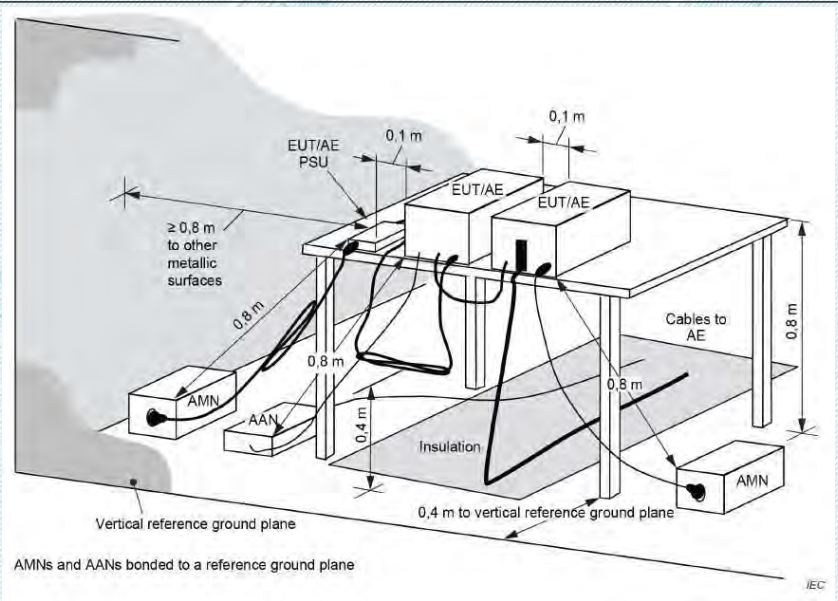
4.1. Conducted Emission at AC power line

Test Requirement:	Except as shown in paragraphs (b)and (c)of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN).
Test Limit:	Frequency of emission (MHz) / Conducted limit (dBμV): Quasi-peak / Average 0.15-0.5: 66 to 56* / 56 to 46* 0.5-5: 56 / 46 5-30: 60 / 50 *Decreases with the logarithm of the frequency.
Test Method:	Refer to ANSI C63.10-2013 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices

4.1.1. E.U.T. Operation:

Operating Environment:	
Temperature:	25.9 °C
Humidity:	43.9 %
Atmospheric Pressure:	102 kPa
Final test mode:	TM1

4.1.2. Test Setup Diagram:



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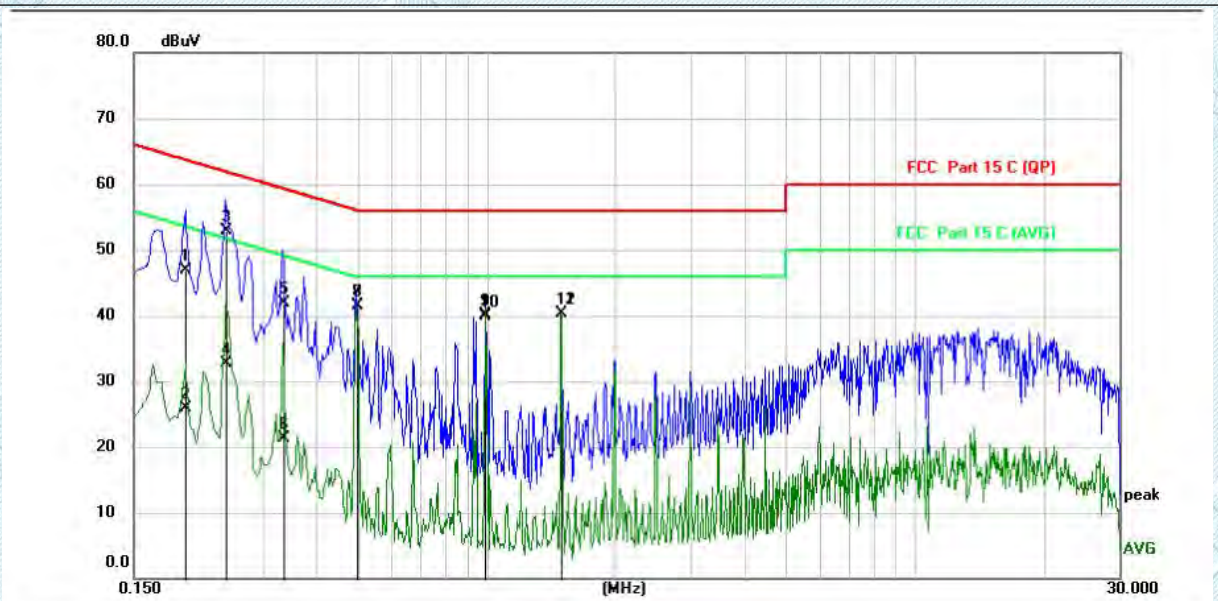
4.1.3. Test Data:

TM1 / Line: Line / Band: 2.4G / BW: 1 / CH: L



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1980	36.24	10.75	46.99	63.69	-16.70	QP	
2		0.1980	15.07	10.75	25.82	53.69	-27.87	AVG	
3		0.2460	42.29	10.71	53.00	61.89	-8.89	QP	
4		0.2460	22.09	10.71	32.80	51.89	-19.09	AVG	
5		0.3339	31.31	10.52	41.83	59.35	-17.52	QP	
6		0.3339	10.74	10.52	21.26	49.35	-28.09	AVG	
7		0.4980	31.06	10.52	41.58	56.03	-14.45	QP	
8	*	0.4980	31.02	10.52	41.54	46.03	-4.49	AVG	
9		0.9940	29.55	10.50	40.05	56.00	-15.95	QP	
10		0.9940	29.44	10.50	39.94	46.00	-6.06	AVG	
11		1.4940	29.86	10.50	40.36	56.00	-15.64	QP	
12		1.4940	29.75	10.50	40.25	46.00	-5.75	AVG	

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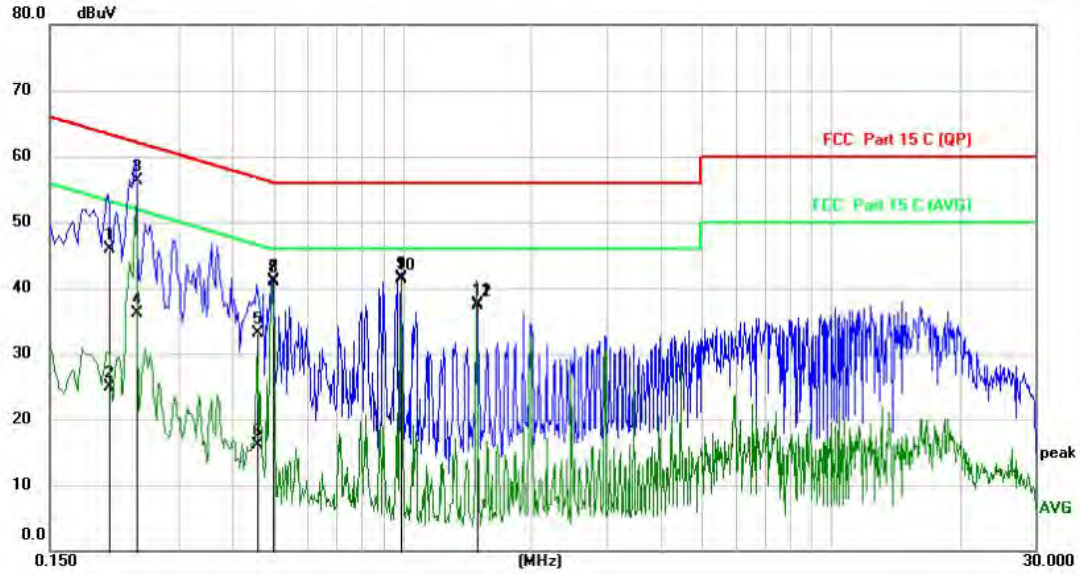
TM1 / Line: Neutral / Band: 2.4G / BW: 1 / CH: L



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2060	35.21	10.76	45.97	63.37	-17.40	QP	
2		0.2060	14.16	10.76	24.92	53.37	-28.45	AVG	
3		0.2380	45.57	10.74	56.31	62.17	-5.86	QP	
4		0.2380	25.46	10.74	36.20	52.17	-15.97	AVG	
5		0.4580	22.57	10.45	33.02	56.73	-23.71	QP	
6		0.4580	5.59	10.45	16.04	46.73	-30.69	AVG	
7		0.4980	30.68	10.38	41.06	56.03	-14.97	QP	
8		0.4980	30.59	10.38	40.97	46.03	-5.06	AVG	
9		0.9940	31.06	10.51	41.57	56.00	-14.43	QP	
10	*	0.9940	30.87	10.51	41.38	46.00	-4.62	AVG	
11		1.4900	27.02	10.42	37.44	56.00	-18.56	QP	
12		1.4900	26.93	10.42	37.35	46.00	-8.65	AVG	

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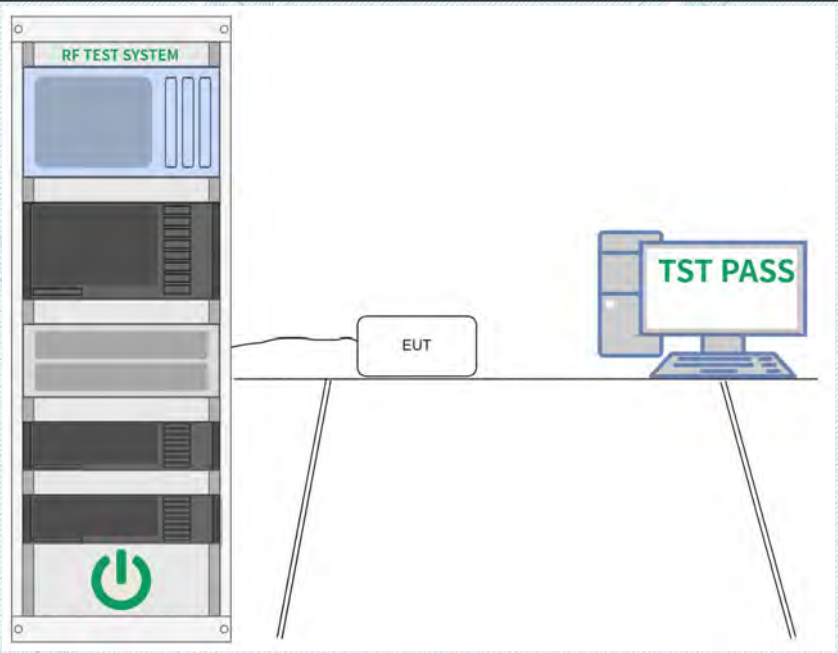
4.2. Occupied Bandwidth

Test Requirement:	Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.
Test Limit:	Section (a)(2), Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.
Test Method:	DTS bandwidth
Procedure:	a) Set RBW = 100 kHz. b) Set the VBW >= [3 × RBW]. c) Detector = peak. d) Trace mode = max hold. e) Sweep = auto couple. f) Allow the trace to stabilize. g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

4.2.1. E.U.T. Operation:

Operating Environment:	
Temperature:	23.5 °C
Humidity:	44 %
Atmospheric Pressure:	101 kPa
Final test mode:	TM1

4.2.2. Test Setup Diagram:



4.2.3. Test Data:

Please Refer to Appendix for Details.

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4.3. Maximum Conducted Output Power

Test Requirement:	For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.
Test Limit:	For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.
Test Method:	Maximum peak conducted output power
Procedure:	ANSI C63.10-2013, section 11.9.1 Maximum peak conducted output power

4.3.1. E.U.T. Operation:

Operating Environment:	
Temperature:	23.5 °C
Humidity:	44 %
Atmospheric Pressure:	101 kPa
Final test mode:	TM1

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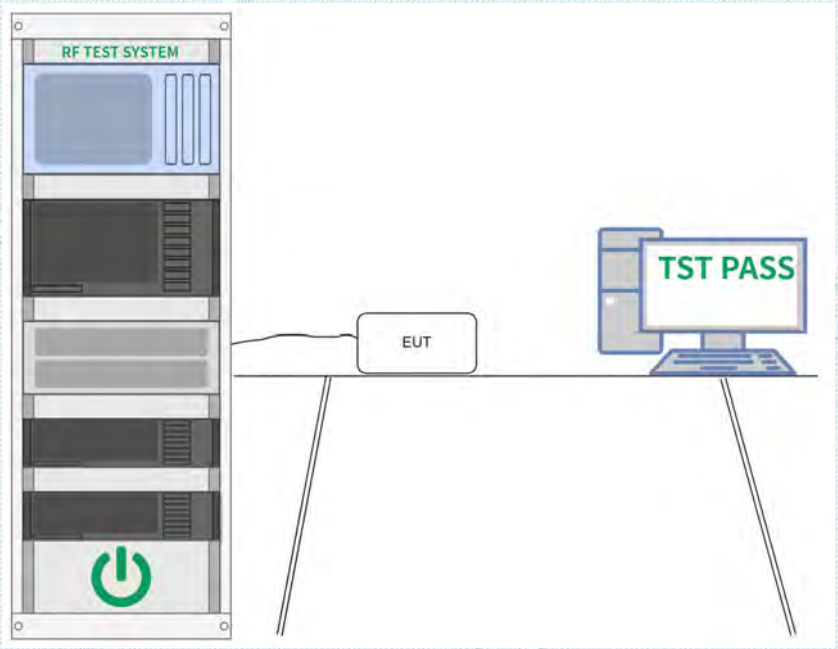
4.3.2. Test Setup Diagram:



4.3.3. Test Data:

Please Refer to Appendix for Details.

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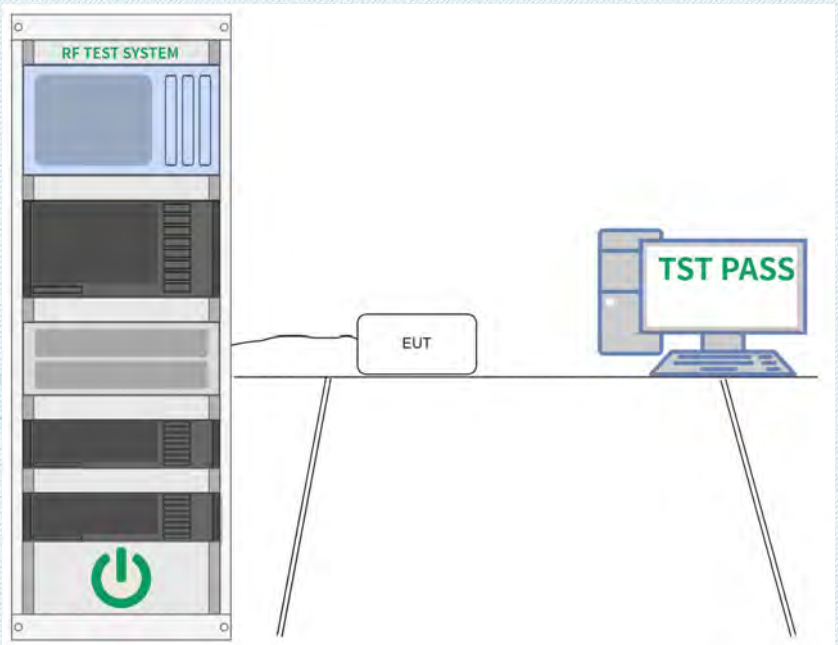
4.4. Power Spectral Density

Test Requirement:	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.
Test Limit:	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.
Test Method:	Maximum power spectral density level in the fundamental emission

4.4.1. E.U.T. Operation:

Operating Environment:	
Temperature:	23.5 °C
Humidity:	44 %
Atmospheric Pressure:	101 kPa
Final test mode:	TM1

4.4.2. Test Setup Diagram:



4.4.3. Test Data:

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4.5. Emissions in non-restricted frequency bands

Test Requirement:	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 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required.
Test Limit:	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 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required.
Test Method:	Emissions in nonrestricted frequency bands
Procedure:	ANSI C63.10-2013 Section 11.11.1, Section 11.11.2, Section 11.11.3

4.5.1. E.U.T. Operation:

Operating Environment:	
Temperature:	23.5 °C
Humidity:	44 %
Atmospheric Pressure:	101 kPa
Final test mode:	TM1

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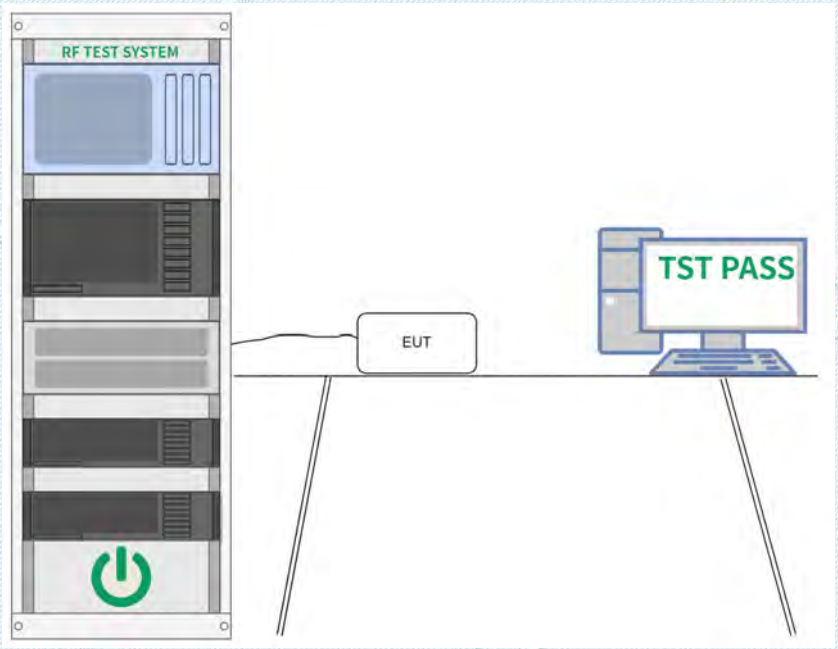
4.5.2. Test Setup Diagram:



4.5.3. Test Data:

Please Refer to Appendix for Details.

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4.6. Emissions around the fundamental

Test Requirement:	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)).`
Test Limit:	Frequency (MHz) / Field strength (microvolts/meter) / Measurement distance (meters) 0.009-0.490 / 2400/F(kHz) / 300 0.490-1.705 / 24000/F(kHz) / 30 1.705-30.0 / 30 / 30 30-88 / 100 ** / 3 88-216 / 150 ** / 3 216-960 / 200 ** / 3 Above 960 / 500 / 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.
Test Method:	Radiated emissions tests
Procedure:	ANSI C63.10-2013 section 6.6.4

4.6.1. E.U.T. Operation:

Operating Environment:	
Temperature:	23.2 °C
Humidity:	47 %
Atmospheric Pressure:	101 kPa
Final test mode:	TM1

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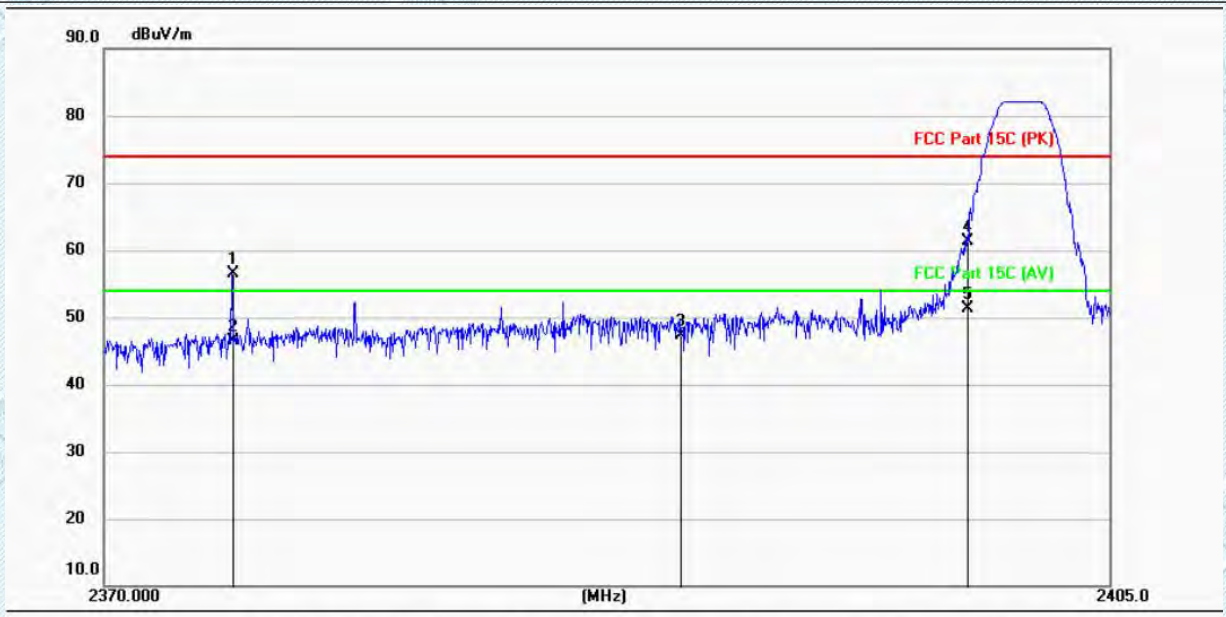
4.6.2. Test Data:

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: L



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2374.434	67.36	-10.93	56.43	74.00	-17.57	peak
2		2374.434	57.36	-10.93	46.43	54.00	-7.57	AVG
3		2390.000	58.21	-10.92	47.29	74.00	-26.71	peak
4		2400.000	72.27	-10.92	61.35	74.00	-12.65	peak
5	*	2400.000	62.27	-10.92	51.35	54.00	-2.65	AVG

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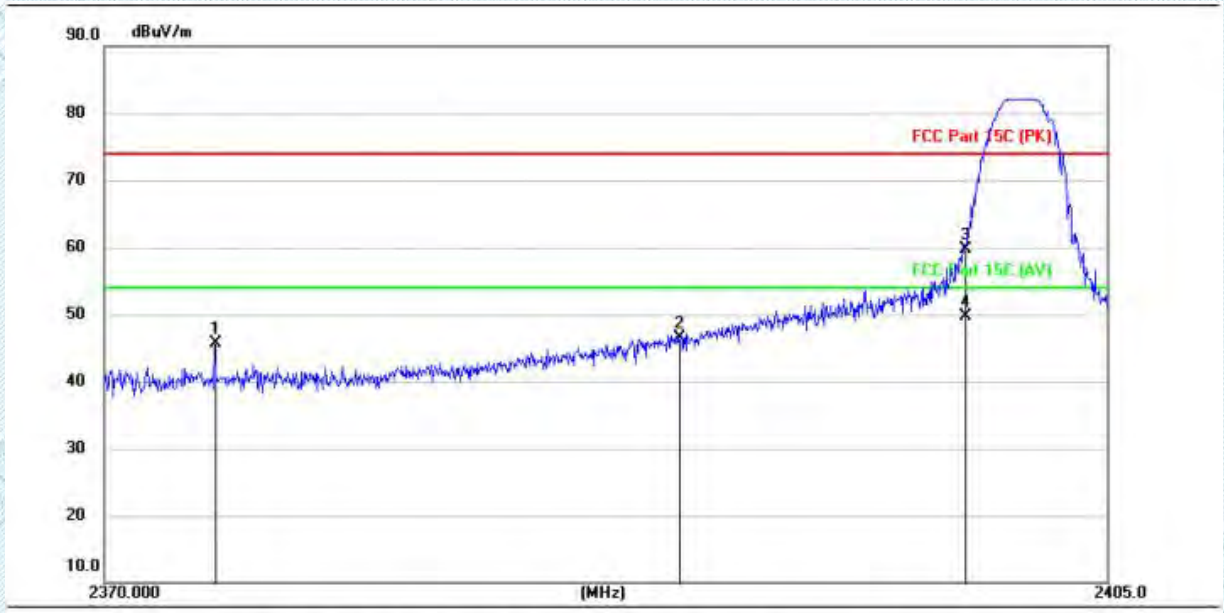
TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: L



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2373.857	56.61	-10.93	45.68	74.00	-28.32	peak
2		2390.000	57.34	-10.92	46.42	74.00	-27.58	peak
3		2400.000	70.63	-10.92	59.71	74.00	-14.29	peak
4	*	2400.000	60.63	-10.92	49.71	54.00	-4.29	AVG

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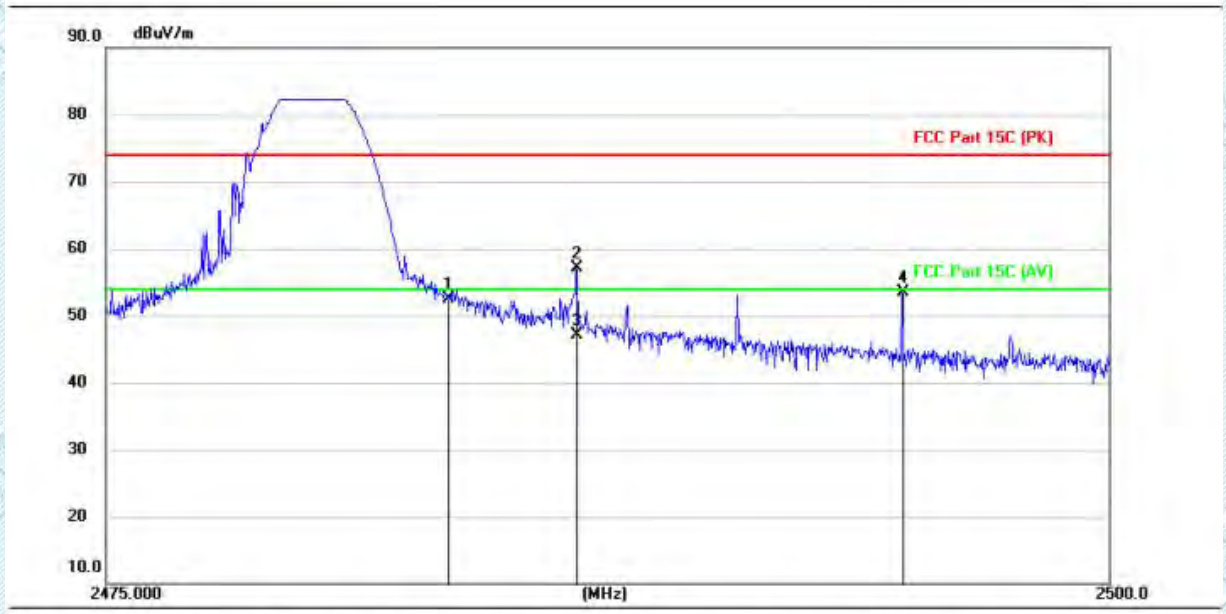
TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: H



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2483.500	63.36	-10.88	52.48	74.00	-21.52	peak
2		2486.713	67.97	-10.88	57.09	74.00	-16.91	peak
3	*	2486.713	57.97	-10.88	47.09	54.00	-6.91	AVG
4		2494.852	64.44	-10.87	53.57	74.00	-20.43	peak

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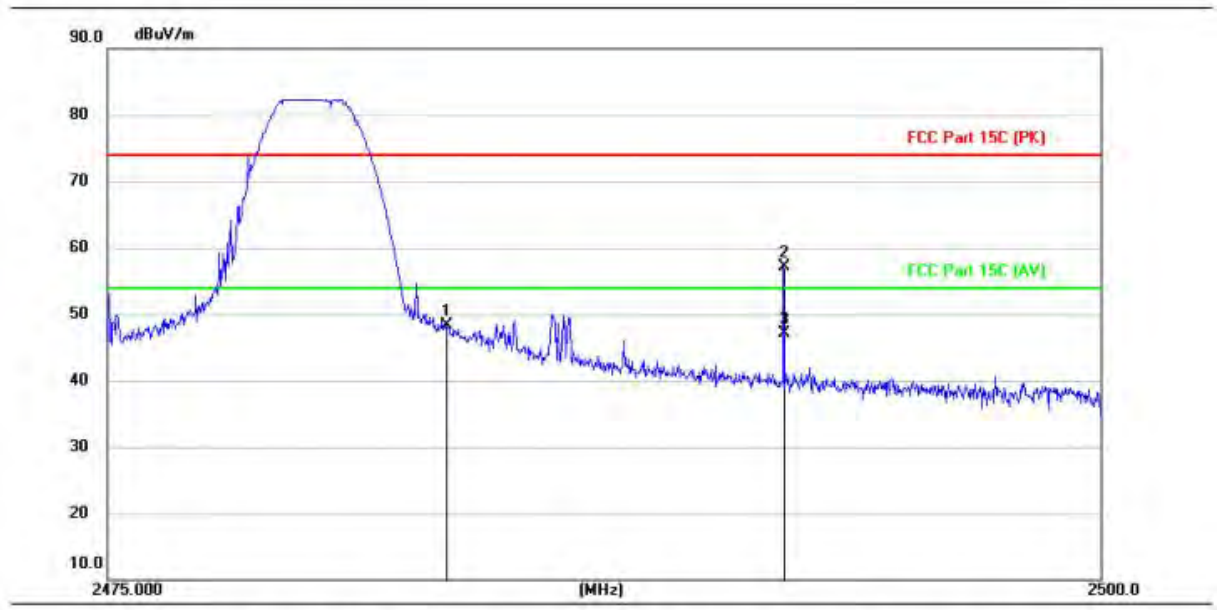
TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: H



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2483.500	59.20	-10.88	48.32	74.00	-25.68	peak
2		2492.005	67.94	-10.89	57.05	74.00	-16.95	peak
3	*	2492.005	57.94	-10.89	47.05	54.00	-6.95	AVG

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4.7. Emissions in restricted frequency bands (below 1GHz)

Test Requirement:	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)).`
Test Limit:	Frequency (MHz) / Field strength (microvolts/meter) / Measurement distance (meters) 0.009-0.490 / 2400/F(kHz) / 300 0.490-1.705 / 24000/F(kHz) / 30 1.705-30.0 / 30 / 30 30-88 / 100 ** / 3 88-216 / 150 ** / 3 216-960 / 200 ** / 3 Above 960 / 500 / 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.
Test Method:	Radiated emissions tests
Procedure:	ANSI C63.10-2013 section 6.6.4

4.7.1. E.U.T. Operation:

Operating Environment:	
Temperature:	23.2 °C
Humidity:	47 %
Atmospheric Pressure:	101 kPa
Final test mode:	TM1

4.7.2. Test Data:

Please Refer to Appendix for Details.

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4.8. Emissions in restricted frequency bands (above 1GHz)

Test Requirement:	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)).`
Test Limit:	Frequency (MHz) / Field strength (microvolts/meter) / Measurement distance (meters) 0.009-0.490 / 2400/F(kHz) / 300 0.490-1.705 / 24000/F(kHz) / 30 1.705-30.0 / 30 / 30 30-88 / 100 ** / 3 88-216 / 150 ** / 3 216-960 / 200 ** / 3 Above 960 / 500 / 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.
Test Method:	Radiated emissions tests
Procedure:	ANSI C63.10-2013 section 6.6.4

4.8.1. E.U.T. Operation:

Operating Environment:	
Temperature:	23.2 °C
Humidity:	47 %
Atmospheric Pressure:	101 kPa
Final test mode:	TM1

4.8.2. Test Data:

Please Refer to Appendix for Details.

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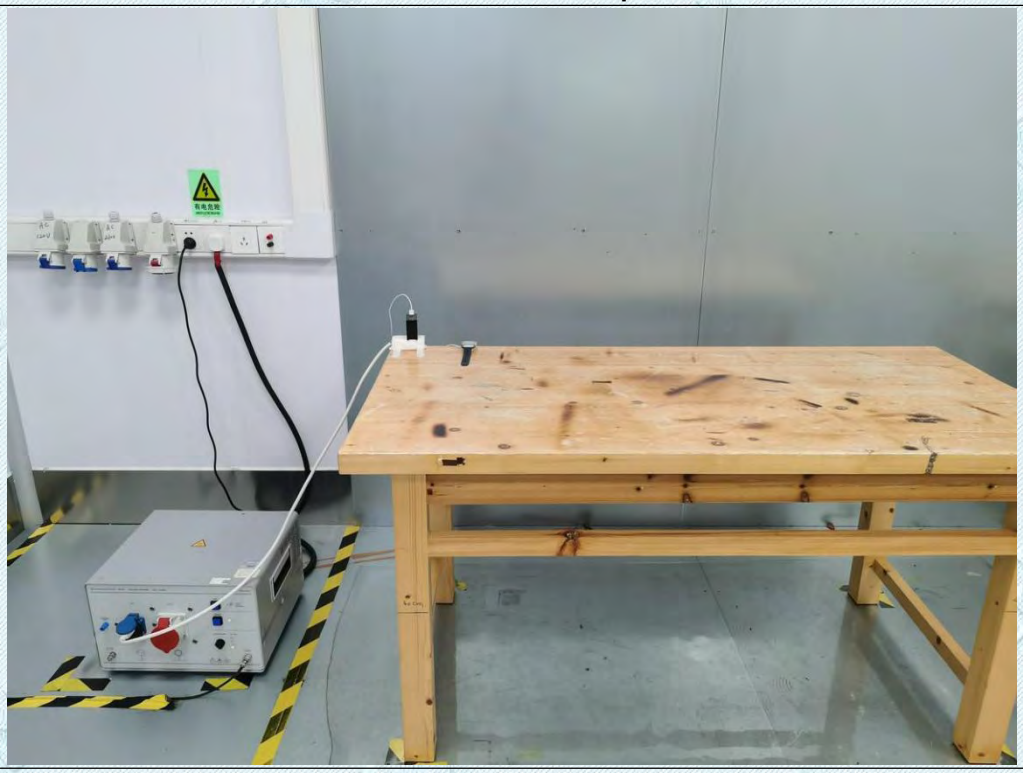
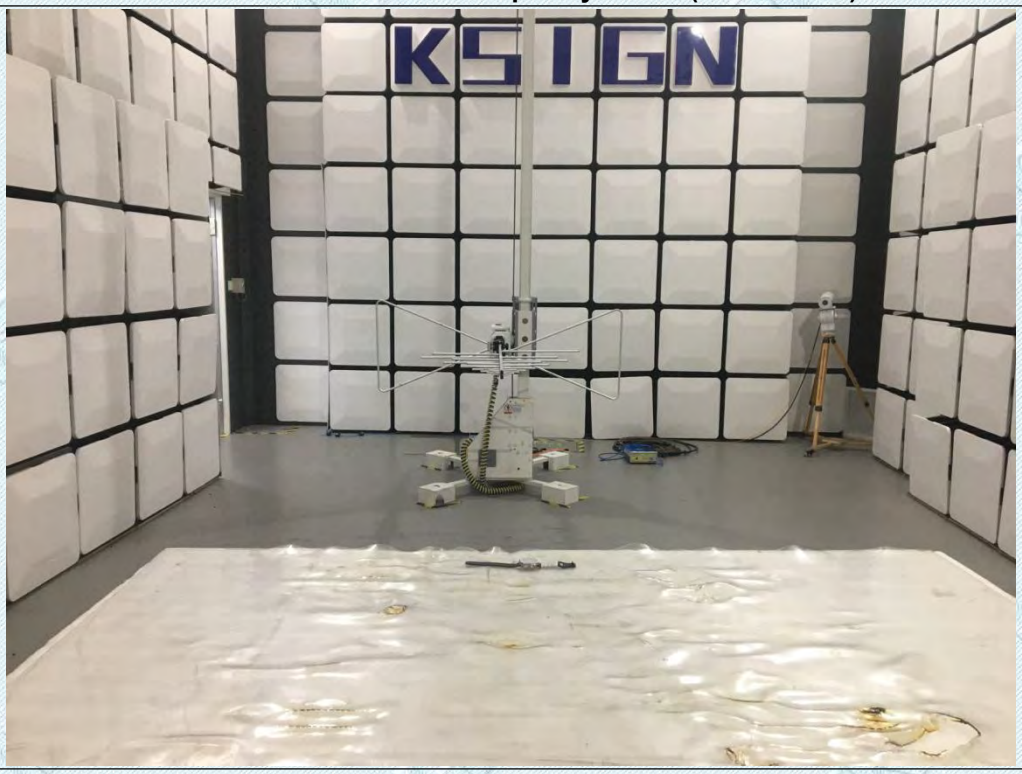
5. EUT TEST PHOTOS

Conducted Emission at AC power line



Emissions in restricted frequency bands (below 1GHz)



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Emissions in restricted frequency bands (above 1GHz)


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6. PHOTOGRAPHS OF EUT CONSTRUCTIONAL

External

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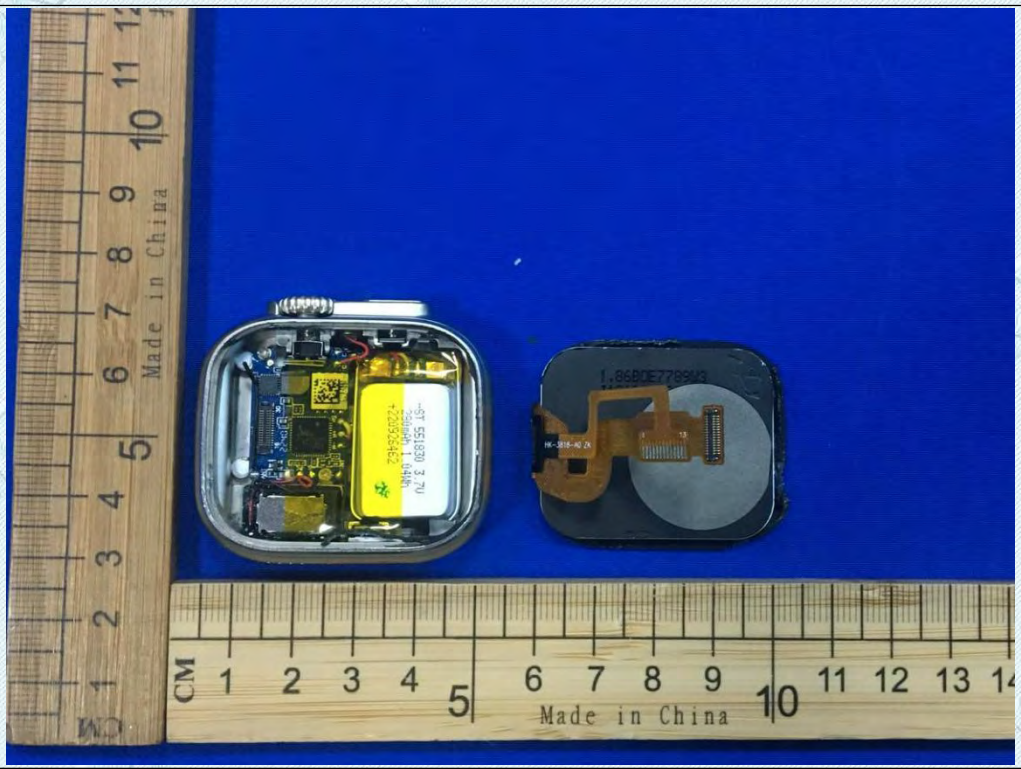
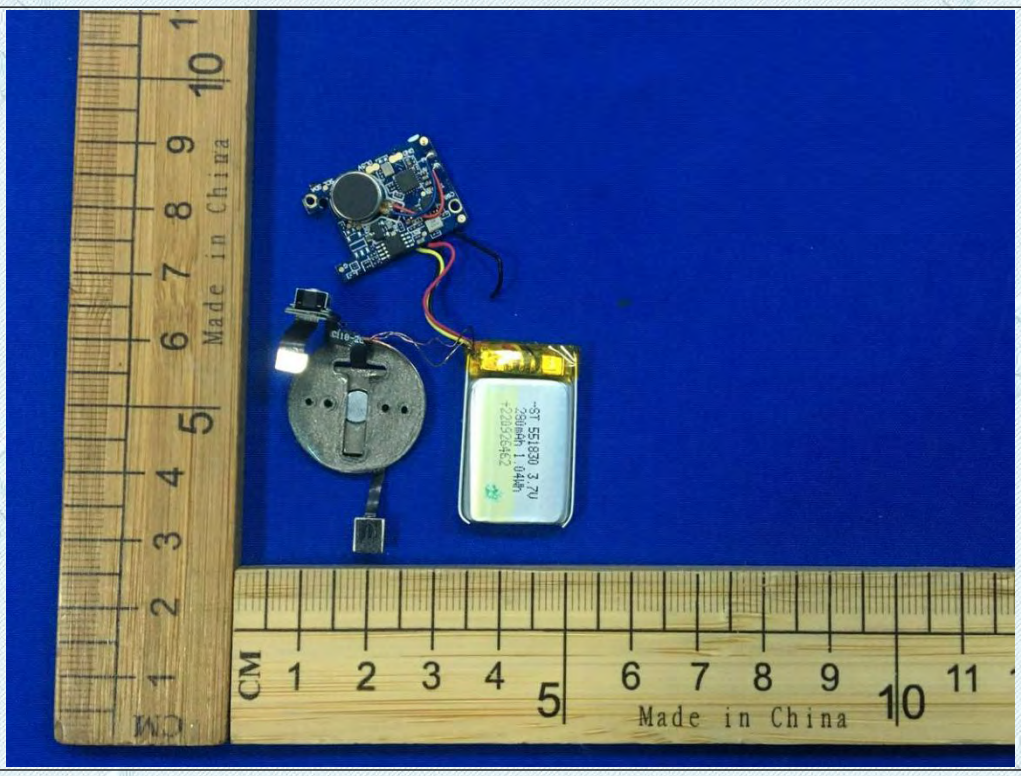
Internal


Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



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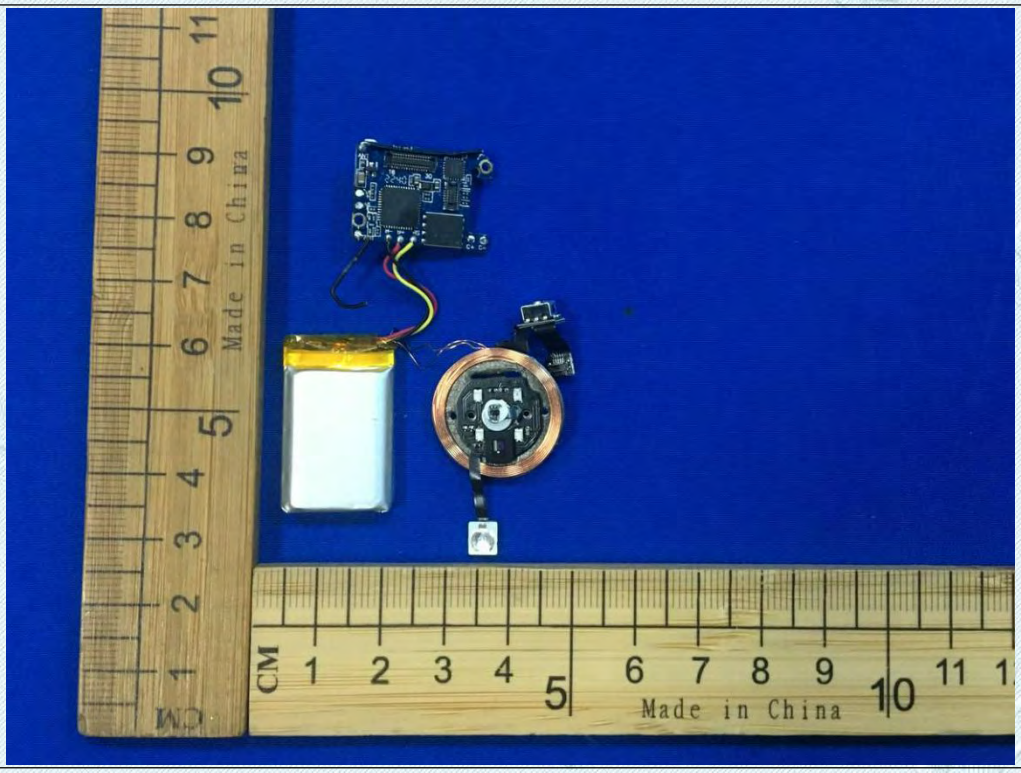
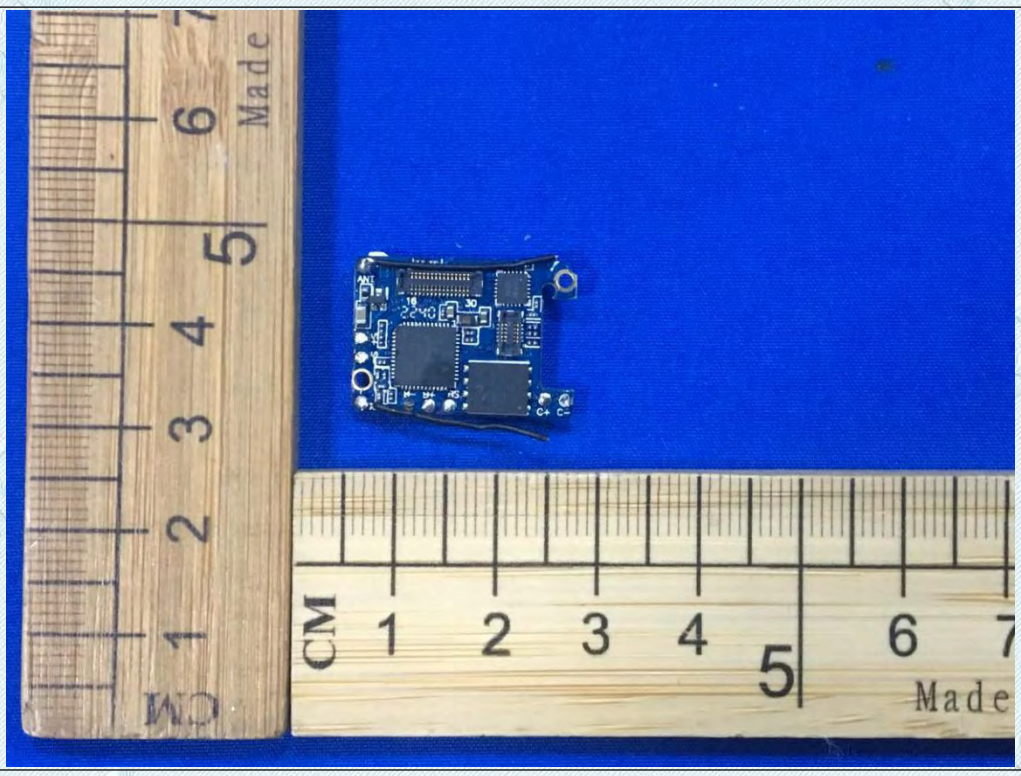
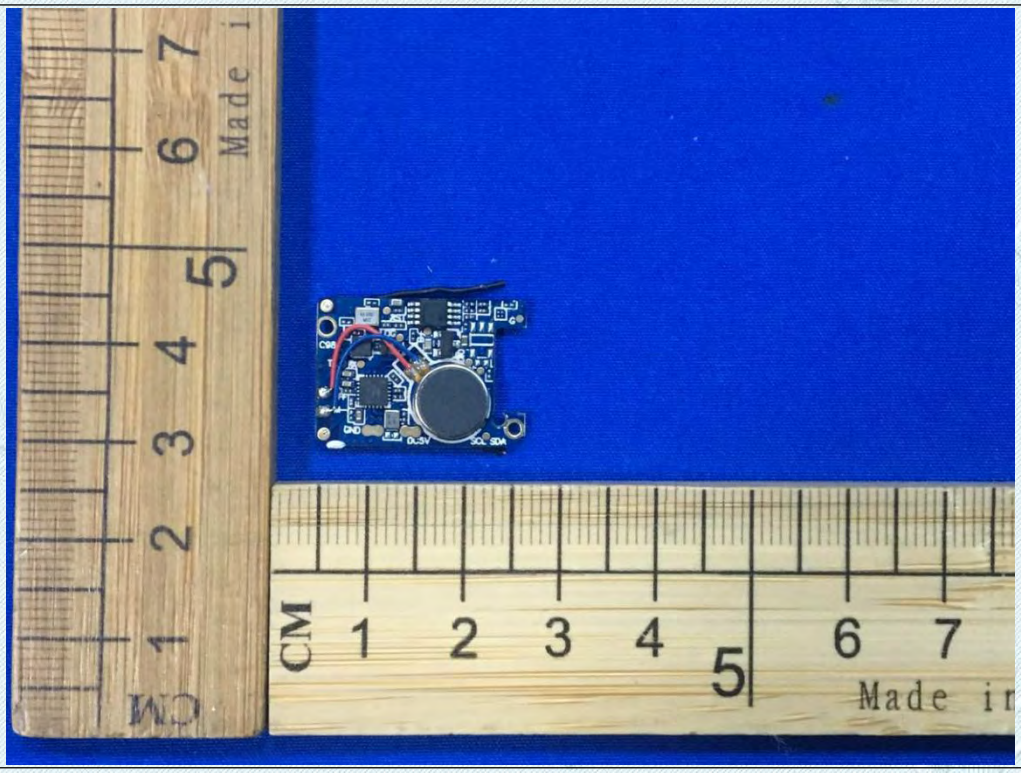
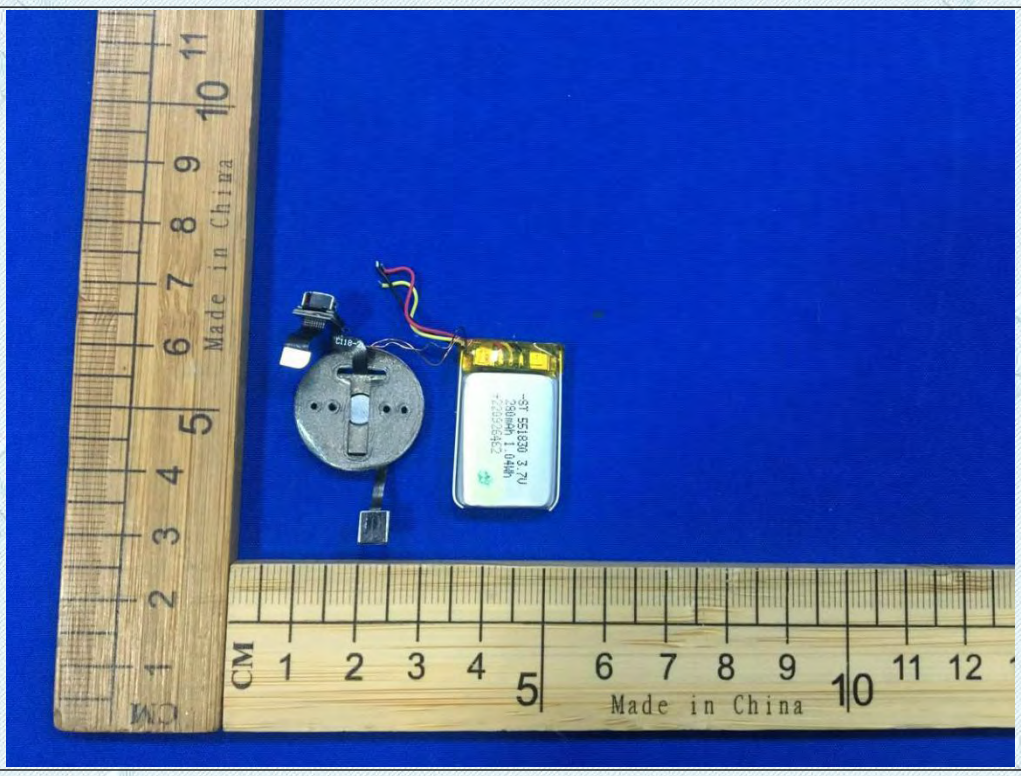


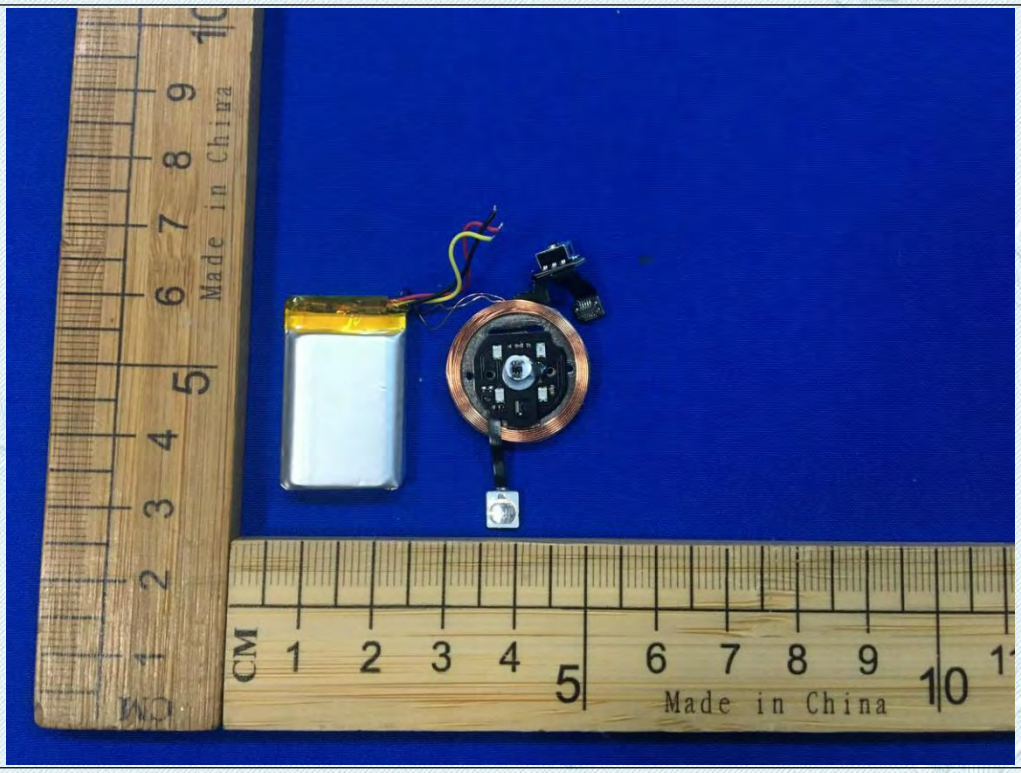


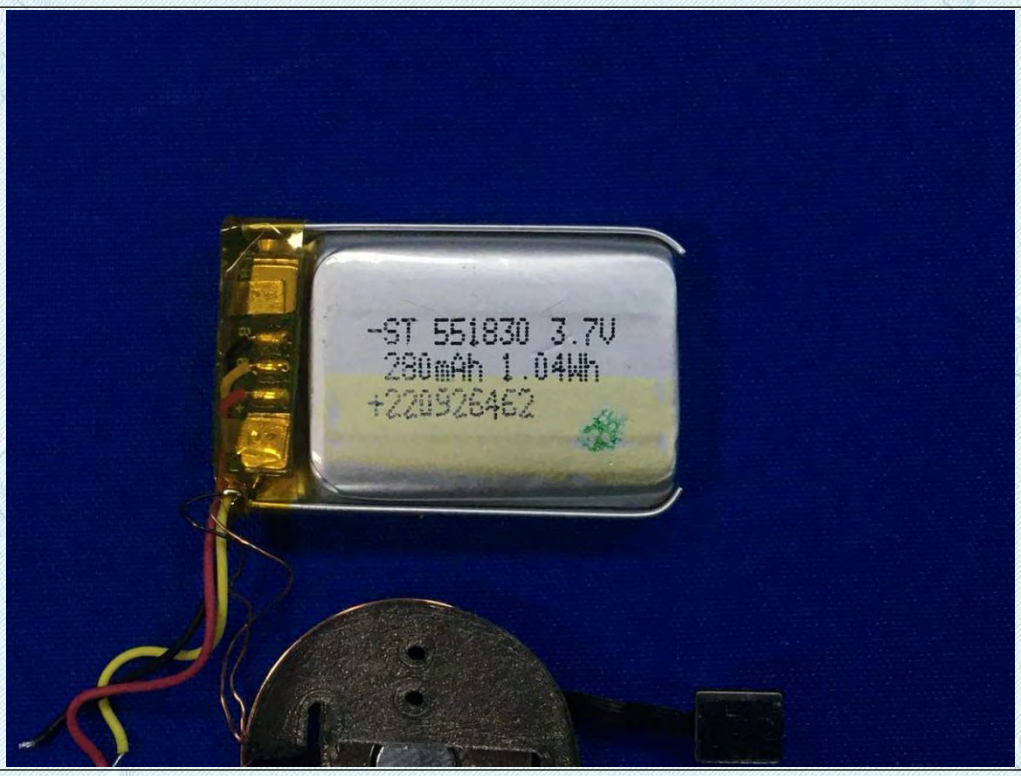
Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



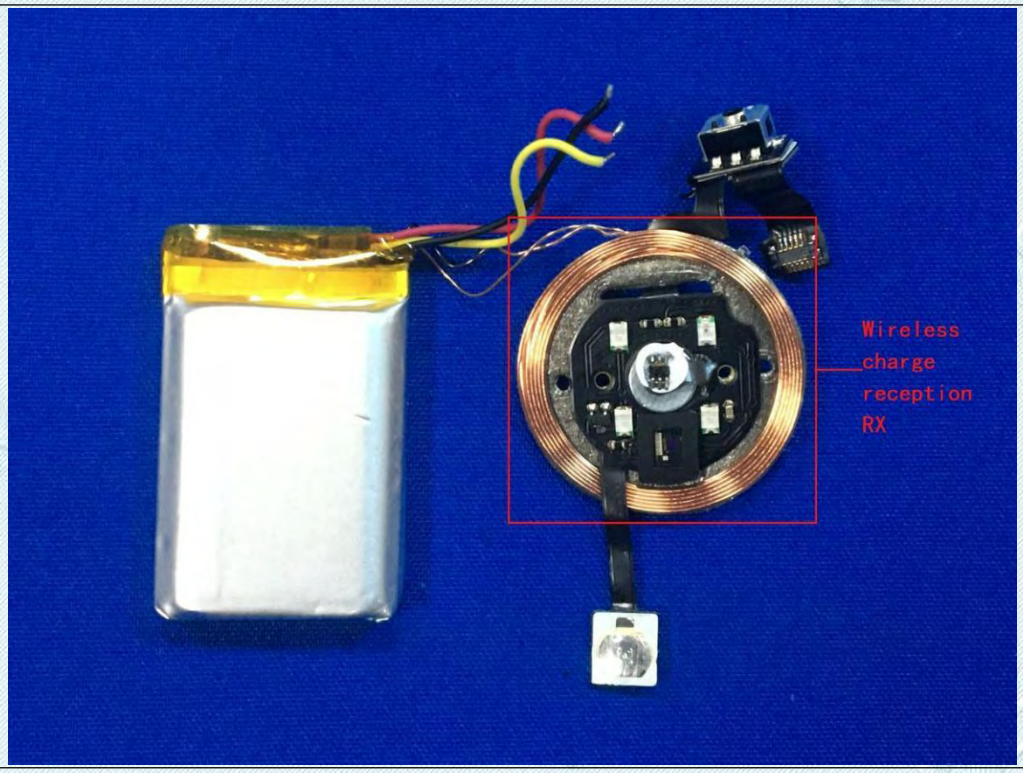


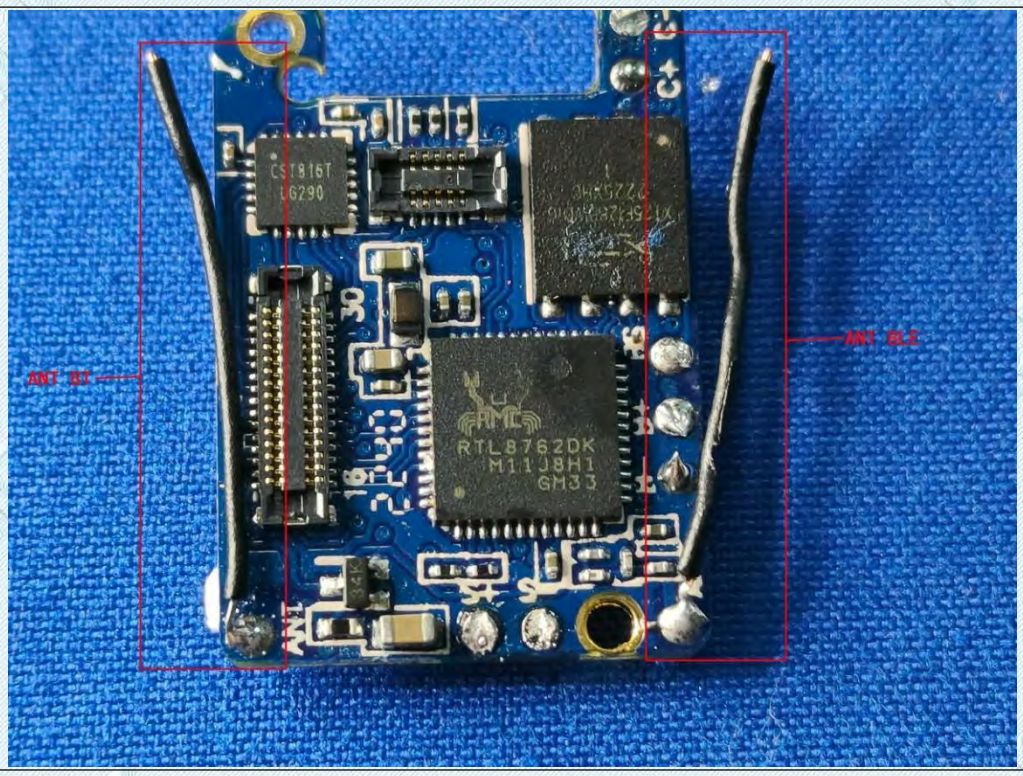
Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



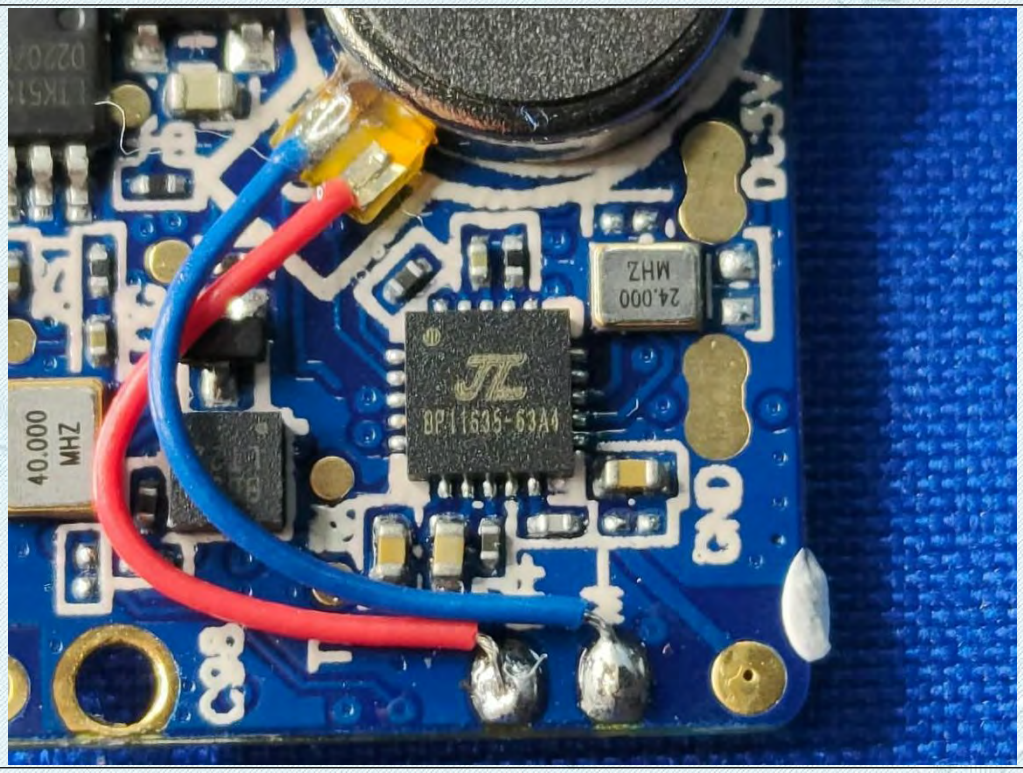


Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com





Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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6.1. Appendix A: DTS Bandwidth

6.1.1. Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.66	2401.66	2402.33	0.5	PASS
		2440	0.73	2439.60	2440.33	0.5	PASS
		2480	0.84	2479.50	2480.33	0.5	PASS
BLE_2M	Ant1	2402	1.14	2401.44	2402.57	0.5	PASS
		2440	1.14	2439.43	2440.57	0.5	PASS
		2480	1.15	2479.43	2480.58	0.5	PASS

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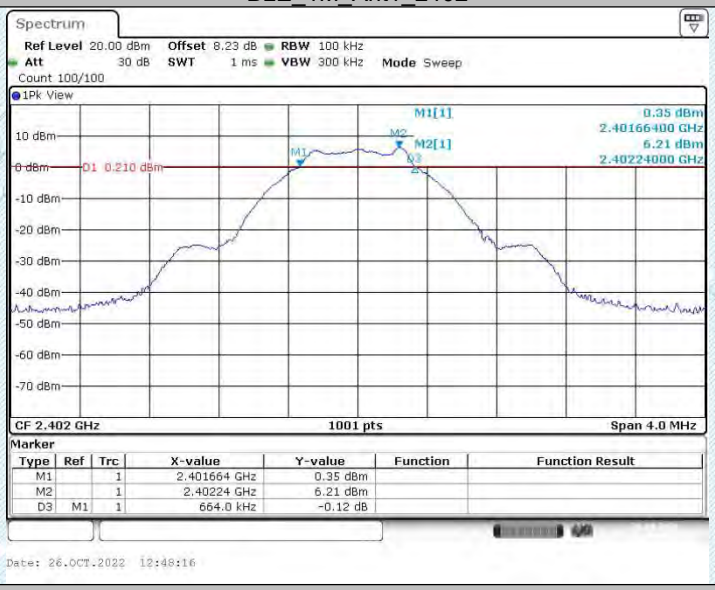
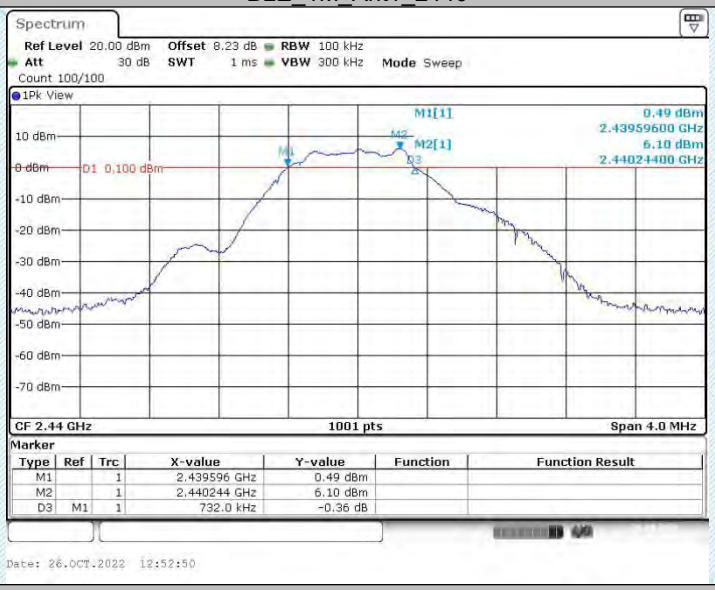
6.1.2. Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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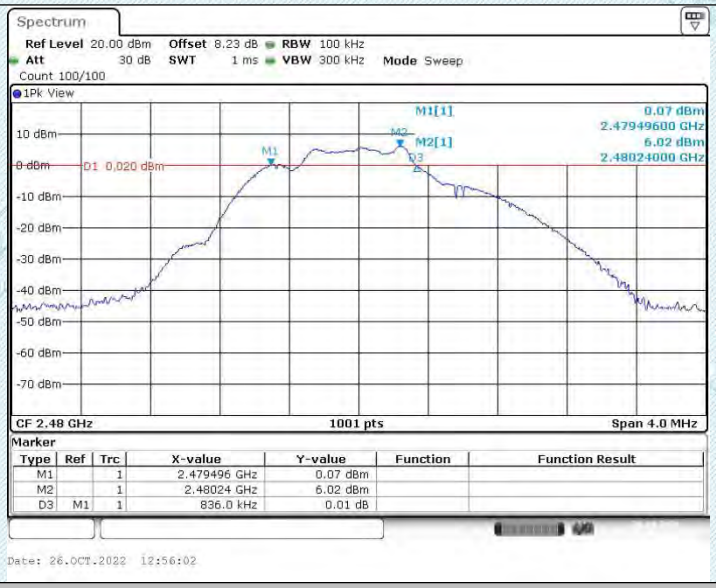
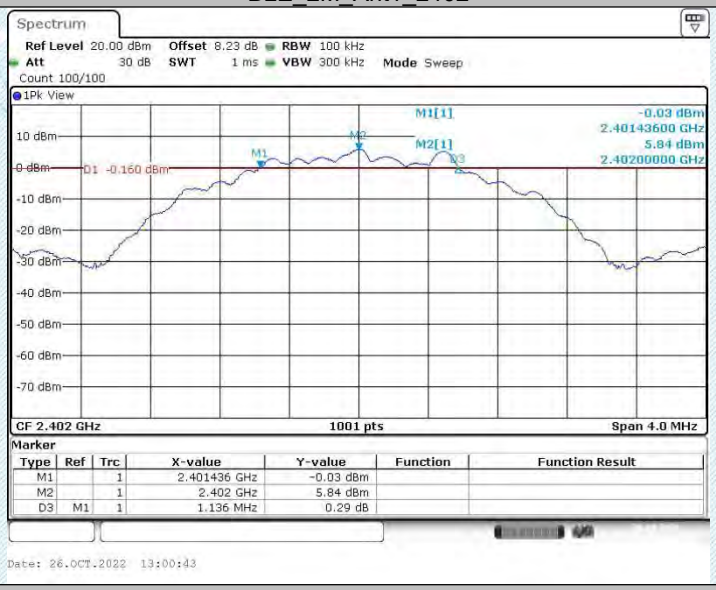
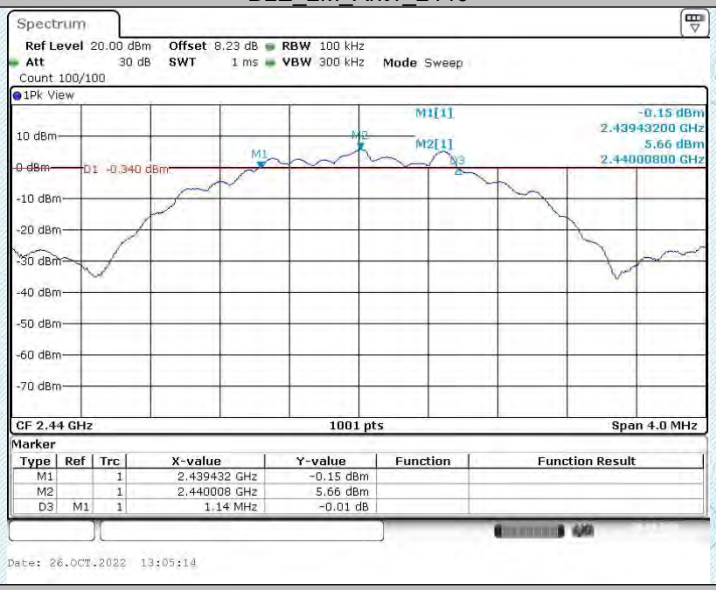


BLE_2M_Ant1_2402

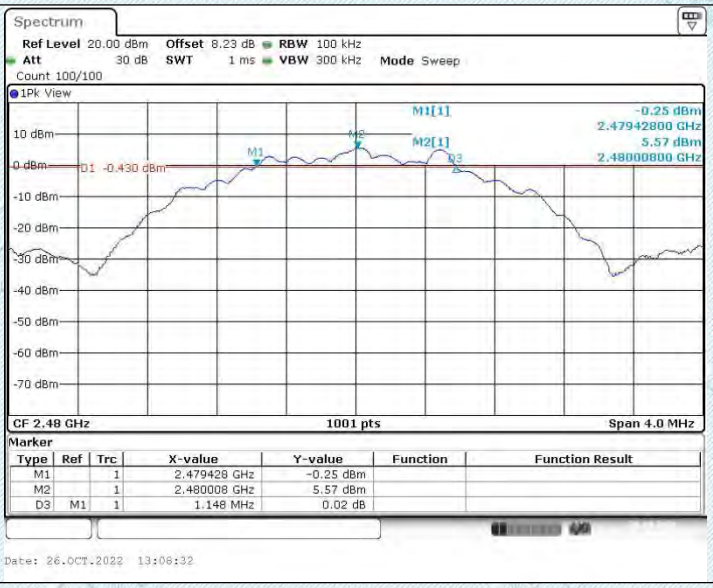


BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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6.2. Appendix B: Occupied Channel Bandwidth

6.2.1. Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.027	2401.485	2402.511	---	PASS
		2440	1.051	2439.485	2440.535	---	PASS
		2480	1.327	2479.377	2480.703	---	PASS
BLE_2M	Ant1	2402	2.046	2400.989	2403.035	---	PASS
		2440	2.046	2438.989	2441.035	---	PASS
		2480	2.03	2478.997	2481.027	---	PASS

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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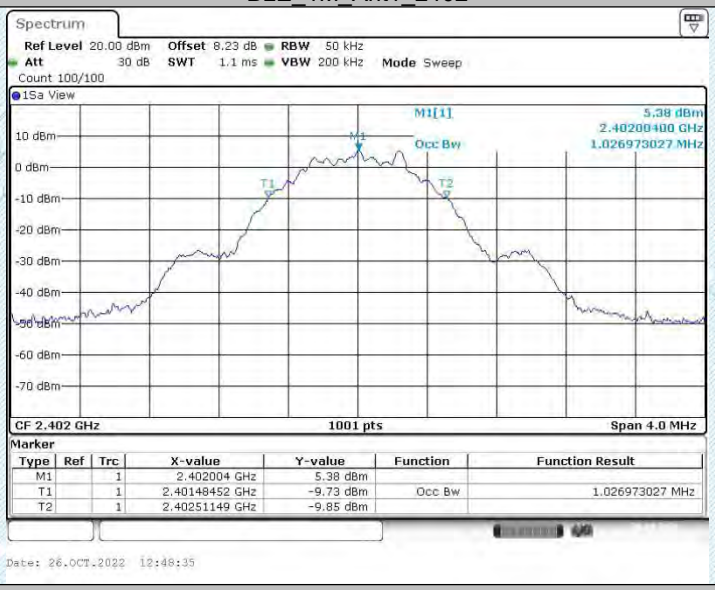
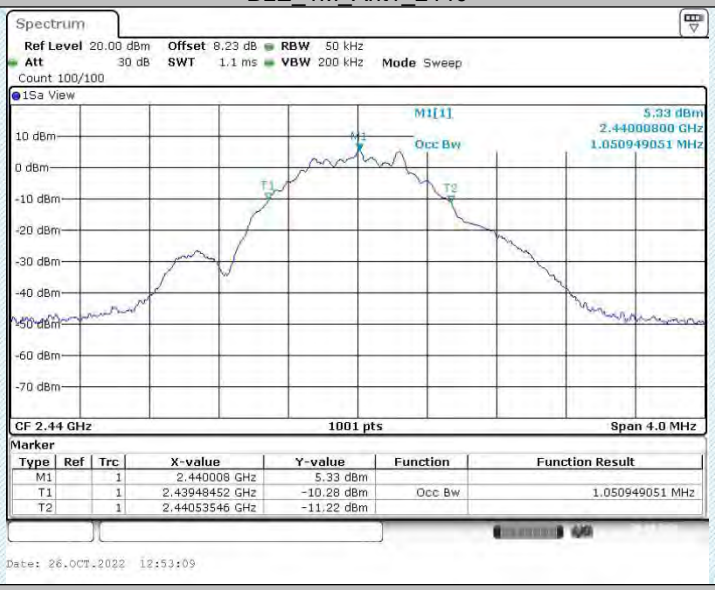
6.2.2. Test Graphs

BLE_1M_Ant1_2402

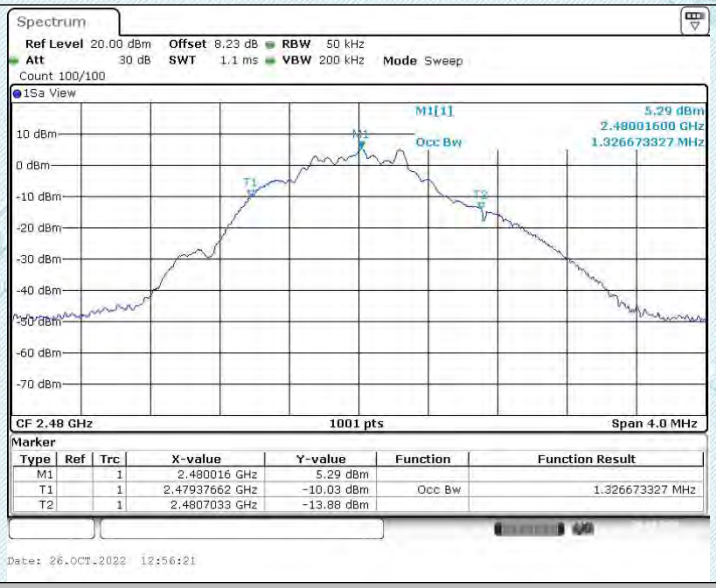


BLE_1M_Ant1_2440

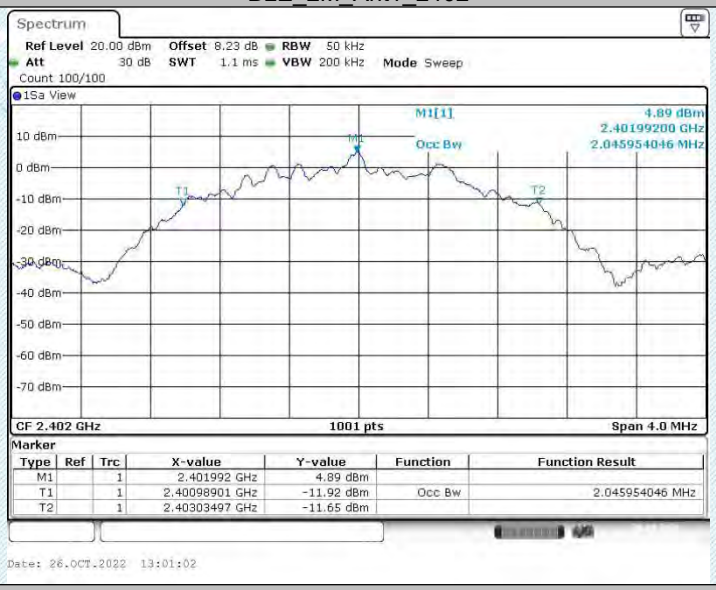


BLE_1M_Ant1_2480

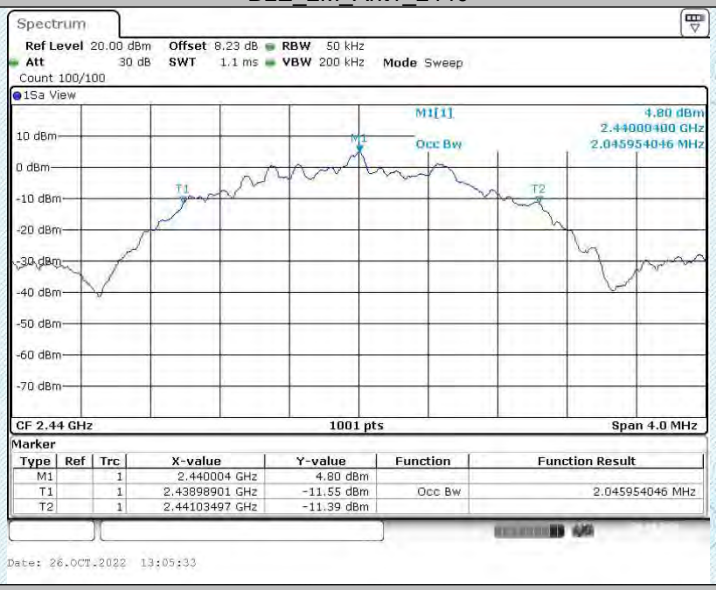
Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



BLE_2M_Ant1_2402

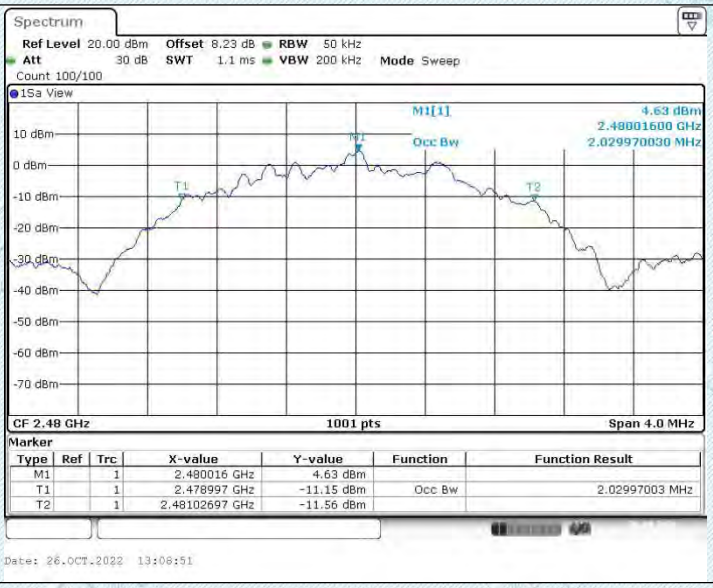


BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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6.3. Appendix C: Maximum conducted output power

6.3.1. Test Result Peak

TestMode	Antenna	Freq(MHz)	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_1M	Ant1	2402	4.67	≤30	2.58	≤36	PASS
		2440	4.71	≤30	2.08	≤36	PASS
		2480	4.55	≤30	2.46	≤36	PASS
BLE_2M	Ant1	2402	4.67	≤30	2.58	≤36	PASS
		2440	4.70	≤30	2.61	≤36	PASS
		2480	4.51	≤30	2.42	≤36	PASS

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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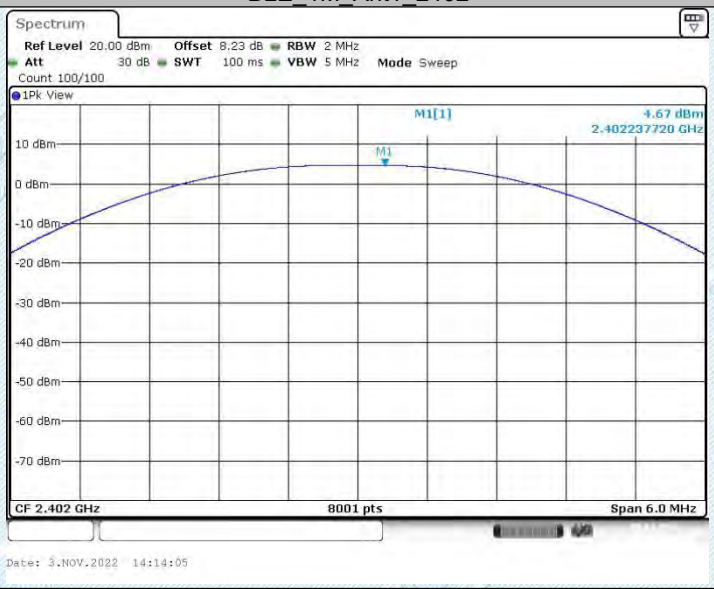
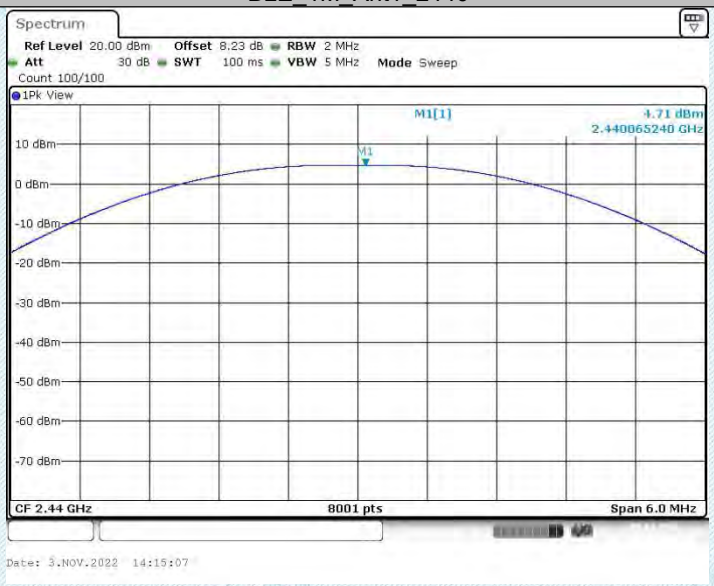
6.3.2. Test Graphs Peak

BLE_1M_Ant1_2402

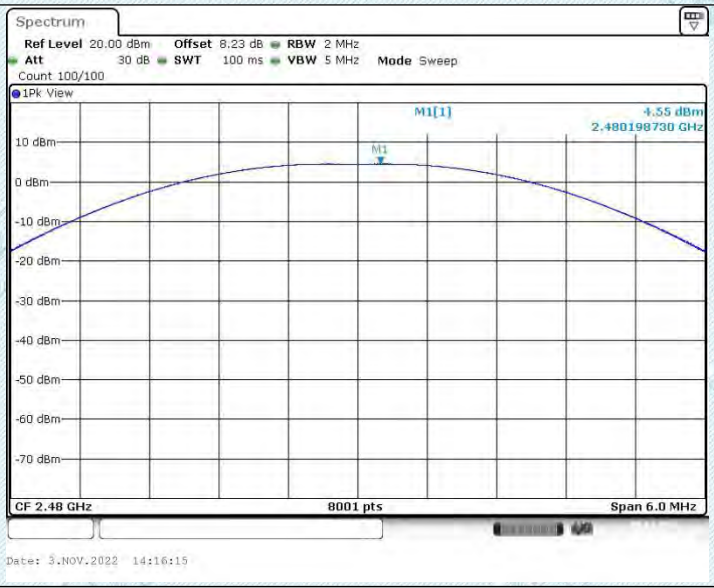


BLE_1M_Ant1_2440

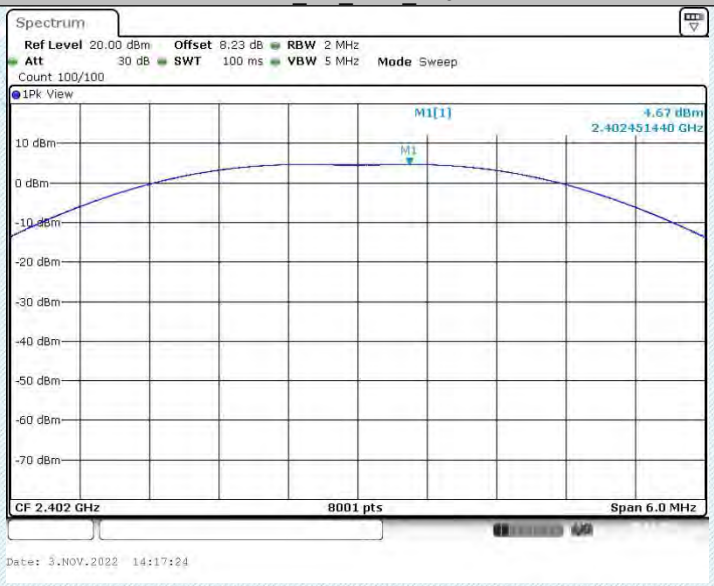


BLE_1M_Ant1_2480

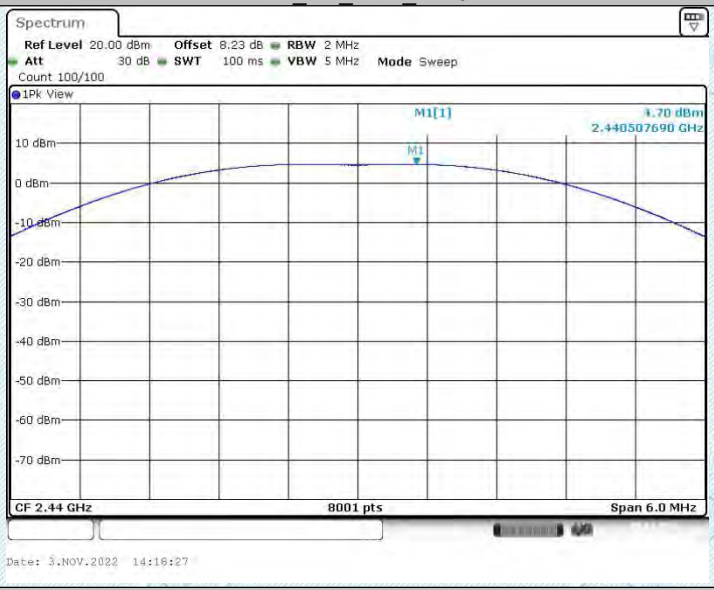
Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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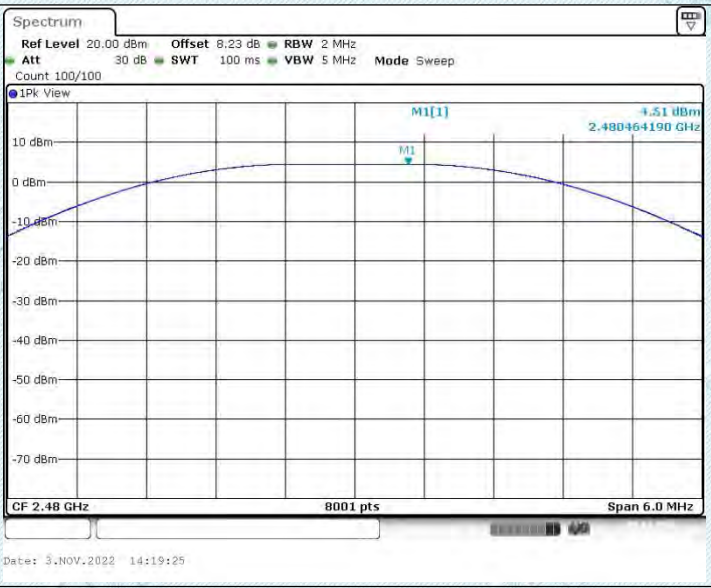

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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6.4. Appendix D: Maximum power spectral density

6.4.1. Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-9.73	≤8.00	PASS
		2440	-9.68	≤8.00	PASS
		2480	-9.85	≤8.00	PASS
BLE_2M	Ant1	2402	-10.77	≤8.00	PASS
		2440	-10.96	≤8.00	PASS
		2480	-11.84	≤8.00	PASS

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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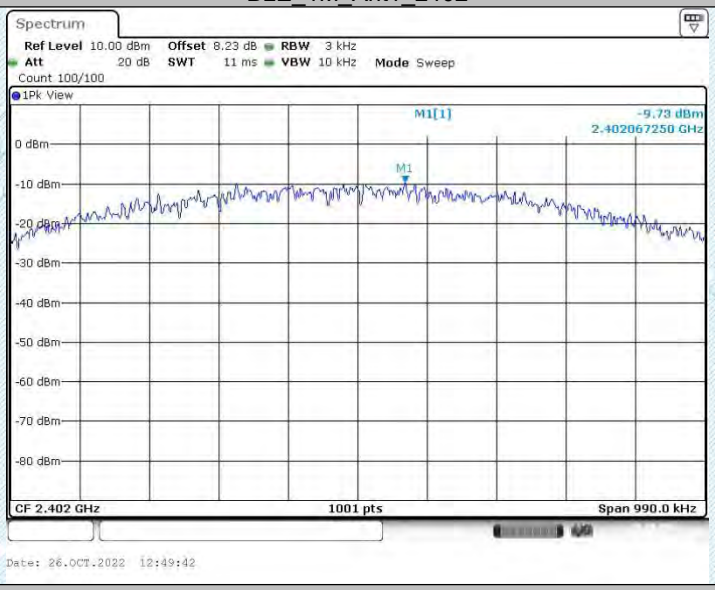
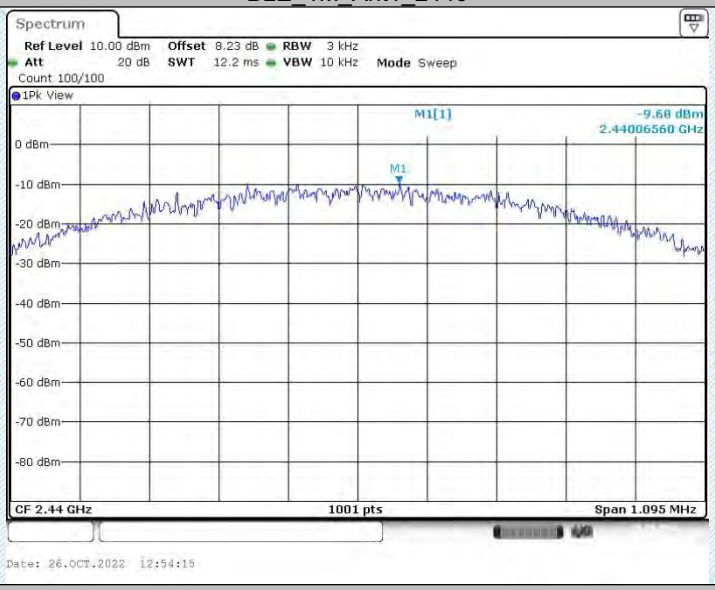
6.4.2. Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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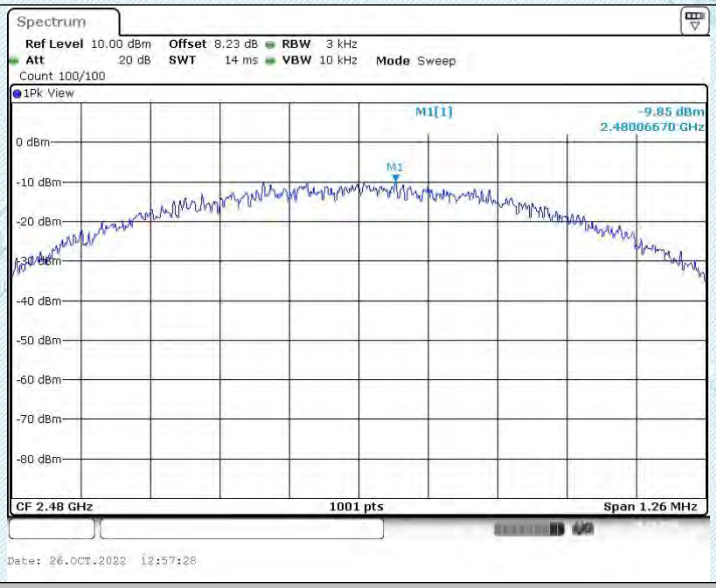

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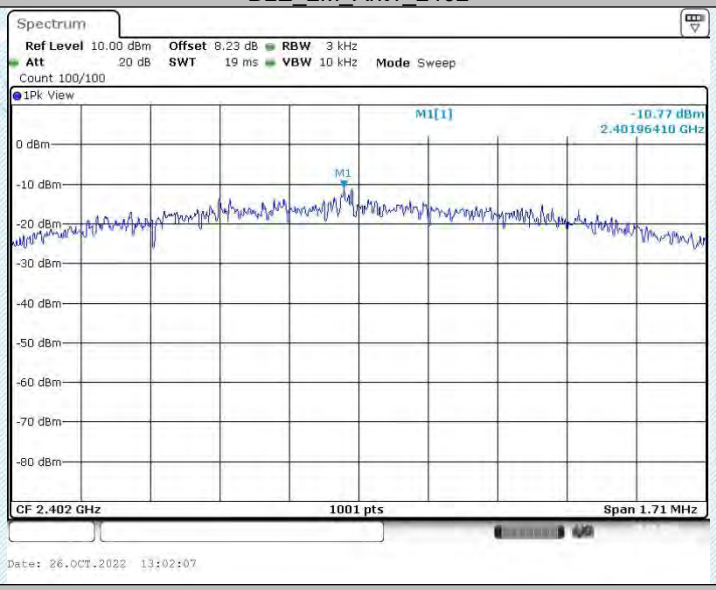
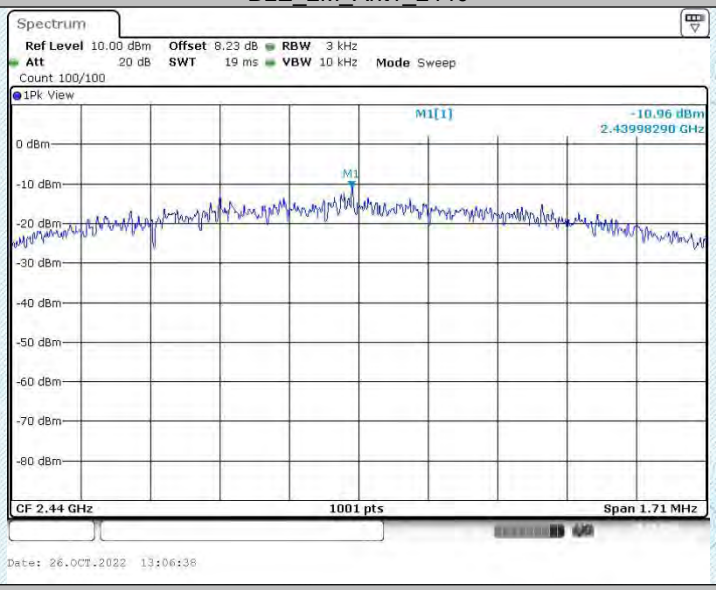


BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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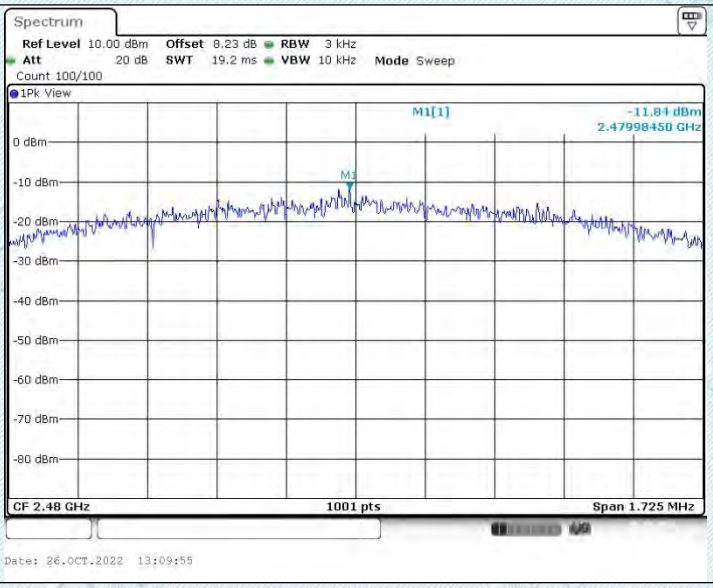

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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6.5. ppendix E: Reference level measurement

6.5.1. Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE_1M	Ant1	2402	2402.24	6.23
		2440	2440.24	6.09
		2480	2480.24	6.04
BLE_2M	Ant1	2402	2402.00	5.81
		2440	2440.01	5.70
		2480	2480.02	5.64

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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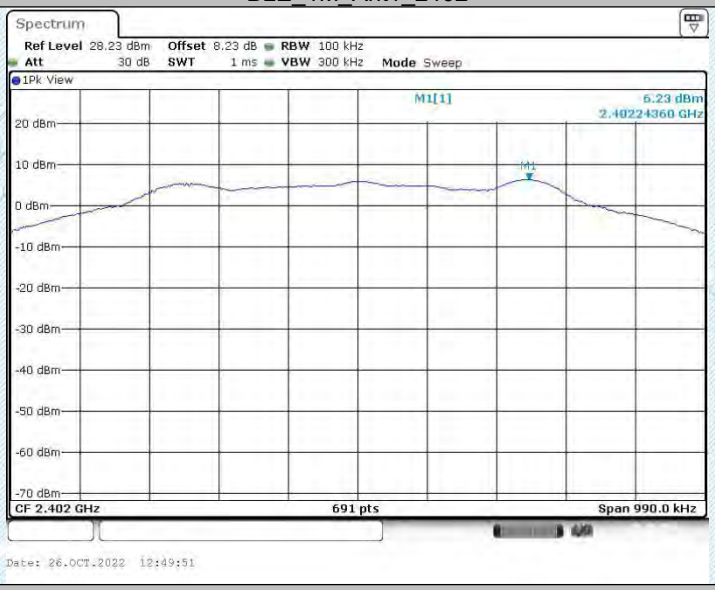
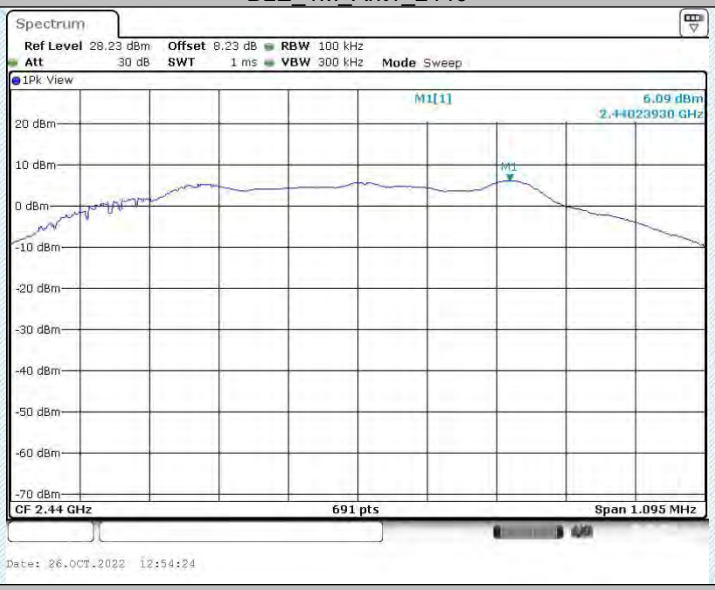
6.5.2. Test Graphs

BLE_1M_Ant1_2402

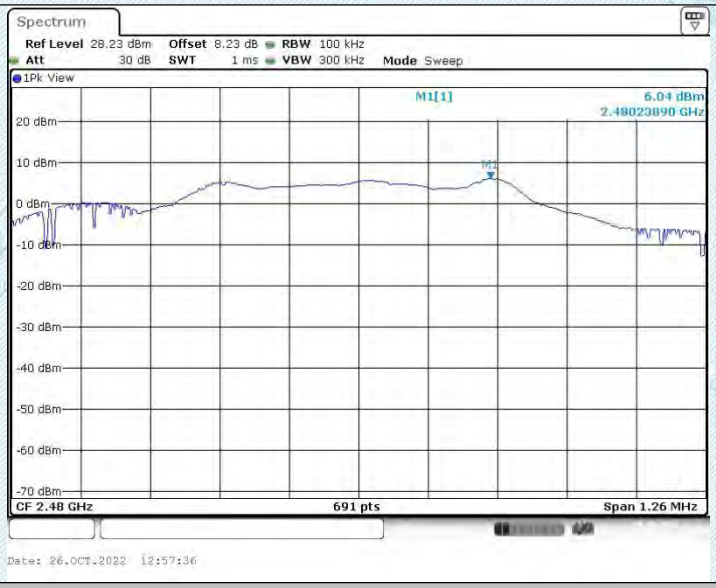


BLE_1M_Ant1_2440

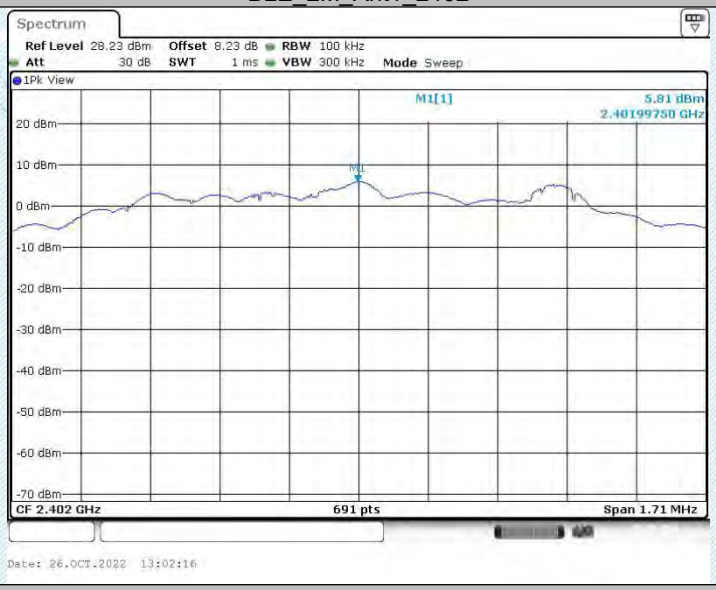


BLE_1M_Ant1_2480

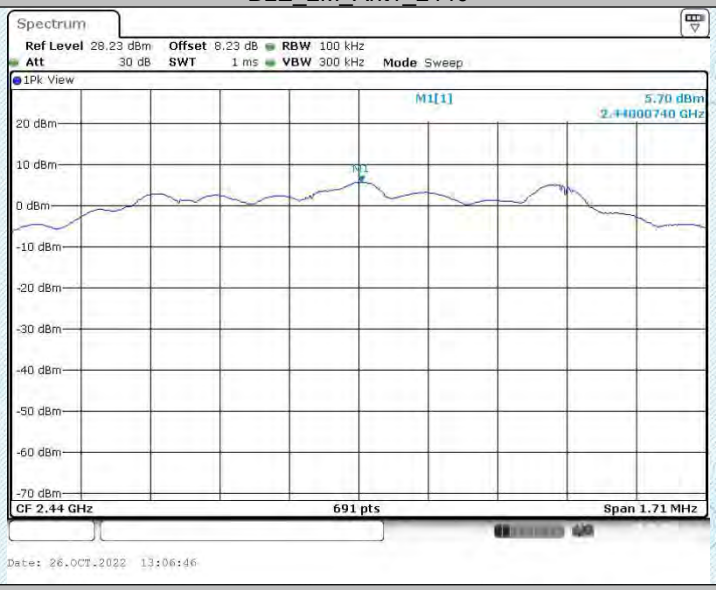
Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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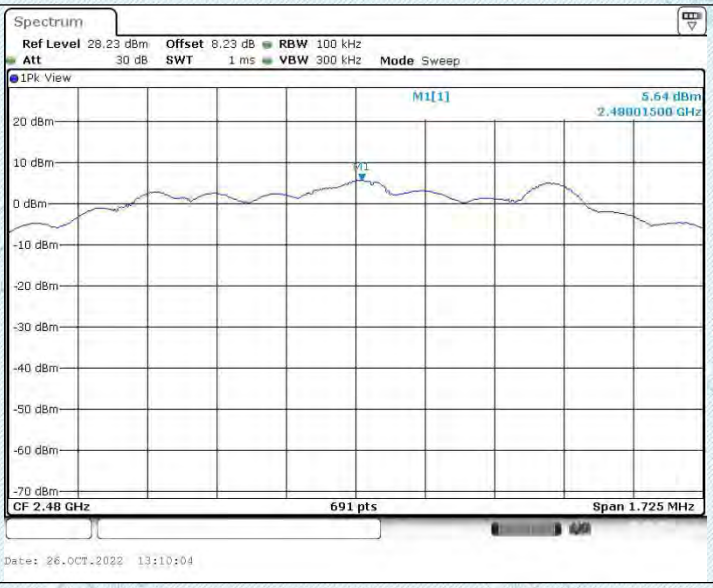

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com

6.6. Appendix F: Band edge measurements

6.6.1. Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	6.23	-41.64	≤-13.77	PASS
		High	2480	6.04	-41.58	≤-13.96	PASS
BLE_2M	Ant1	Low	2402	5.81	-26.55	≤-14.19	PASS
		High	2480	5.64	-41.51	≤-14.36	PASS

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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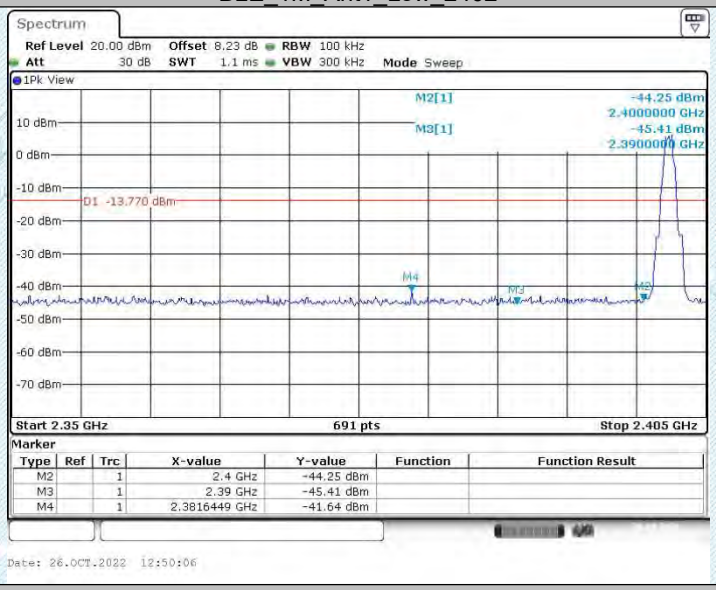
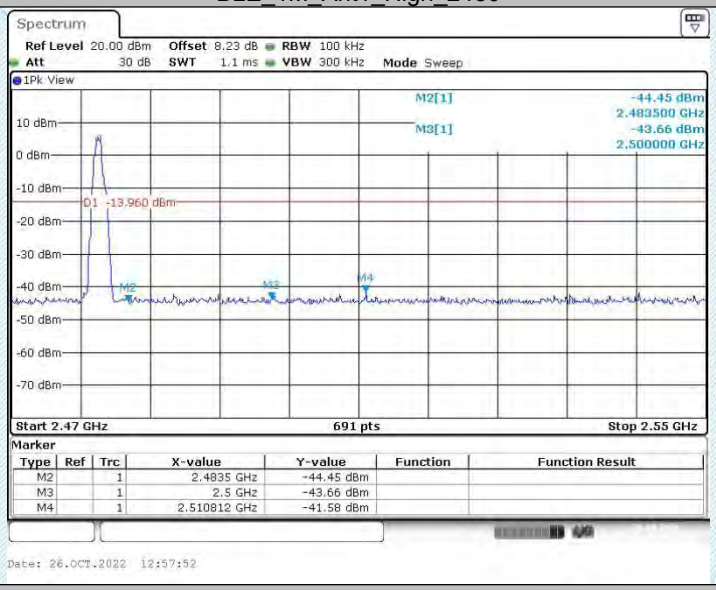
6.6.2. Test Graphs

BLE_1M_Ant1_Low_2402

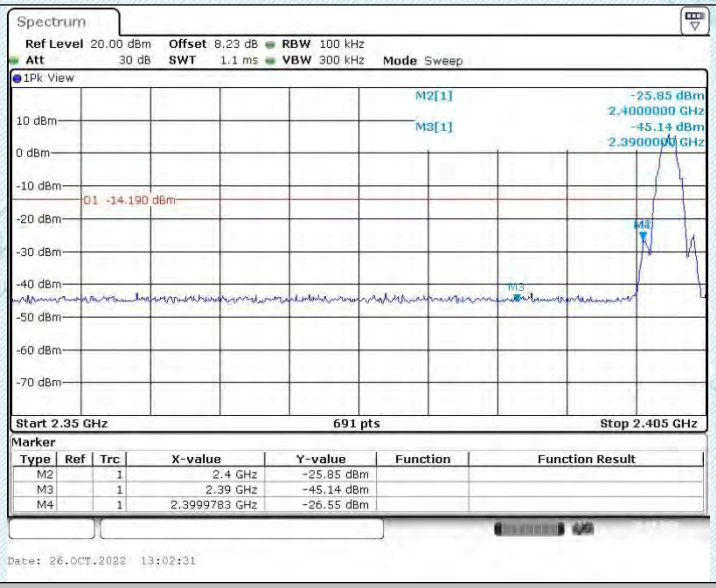


BLE_1M_Ant1_High_2480

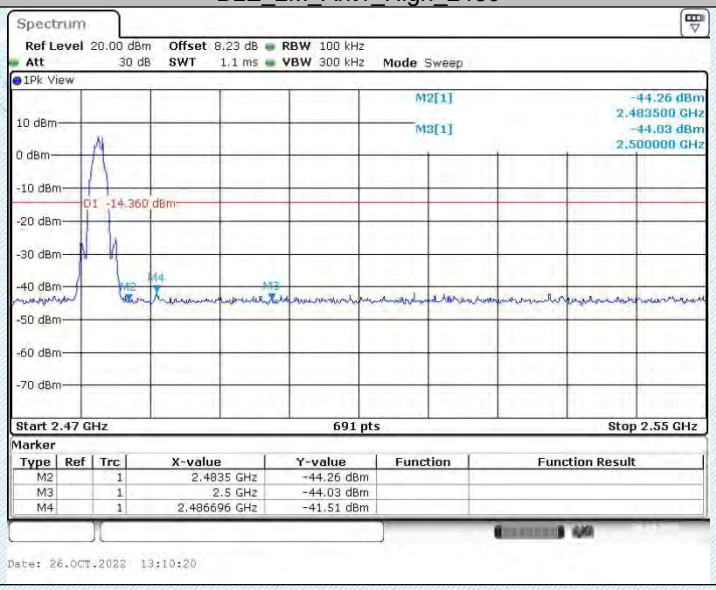


BLE_2M_Ant1_Low_2402

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



BLE_2M_Ant1_High_2480



Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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6.7. Appendix G: Conducted Spurious Emission

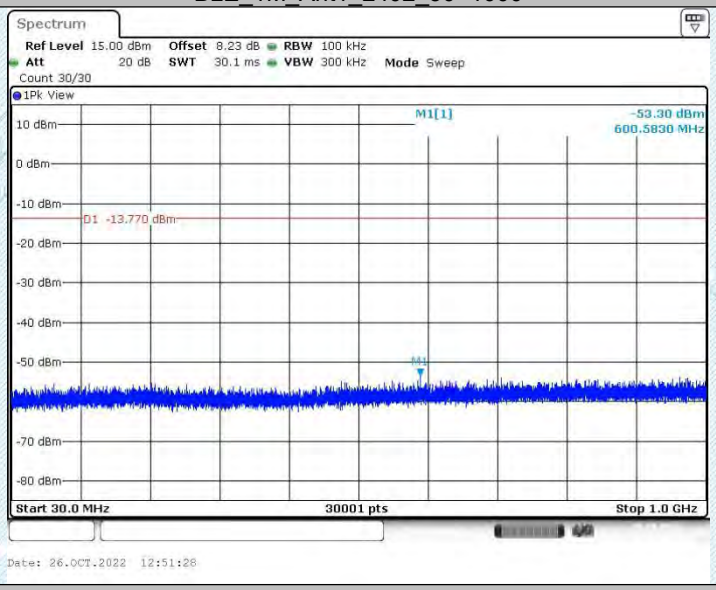
6.7.1. Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~1000	6.23	-53.3	≤-13.77	PASS
			1000~26500	6.23	-42.74	≤-13.77	PASS
		2440	30~1000	6.09	-53.05	≤-13.91	PASS
			1000~26500	6.09	-41.49	≤-13.91	PASS
		2480	30~1000	6.04	-54.01	≤-13.96	PASS
			1000~26500	6.04	-45.09	≤-13.96	PASS
BLE_2M	Ant1	2402	30~1000	5.81	-53.88	≤-14.19	PASS
			1000~26500	5.81	-43.23	≤-14.19	PASS
		2440	30~1000	5.70	-53.71	≤-14.3	PASS
			1000~26500	5.70	-42.83	≤-14.3	PASS
		2480	30~1000	5.64	-53.51	≤-14.36	PASS
			1000~26500	5.64	-46.89	≤-14.36	PASS

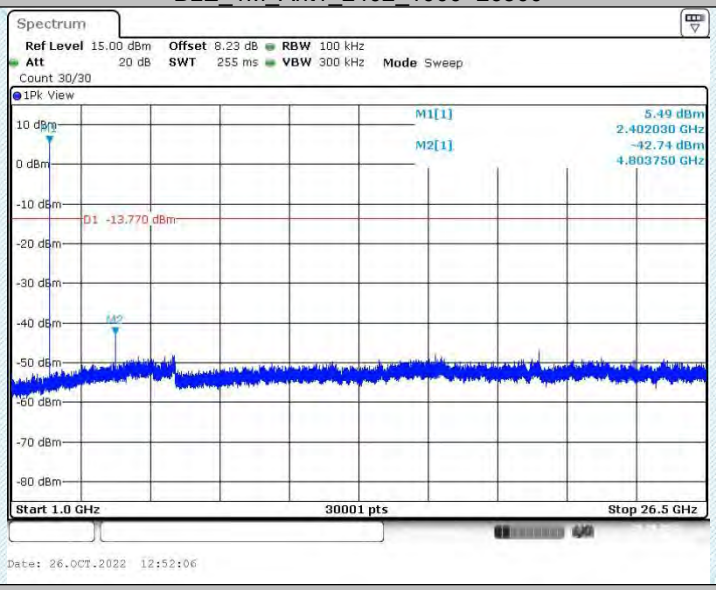
Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com

6.7.2. Test Graphs

BLE_1M_Ant1_2402_30~1000

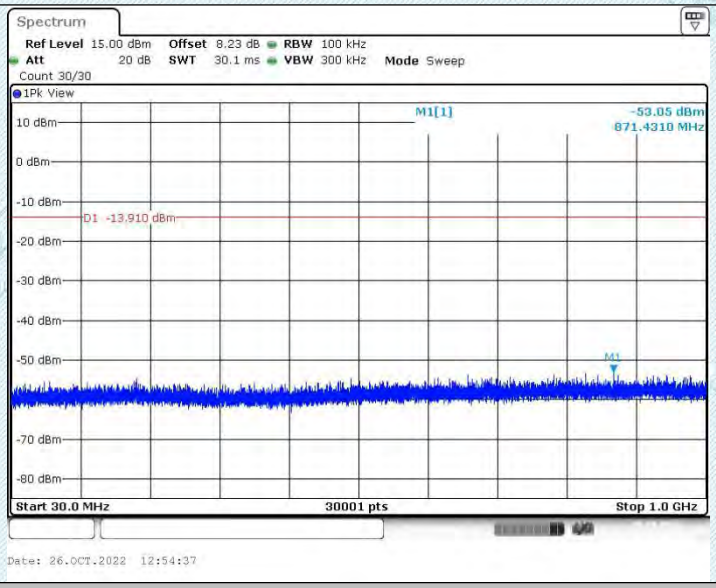


BLE_1M_Ant1_2402_1000~26500

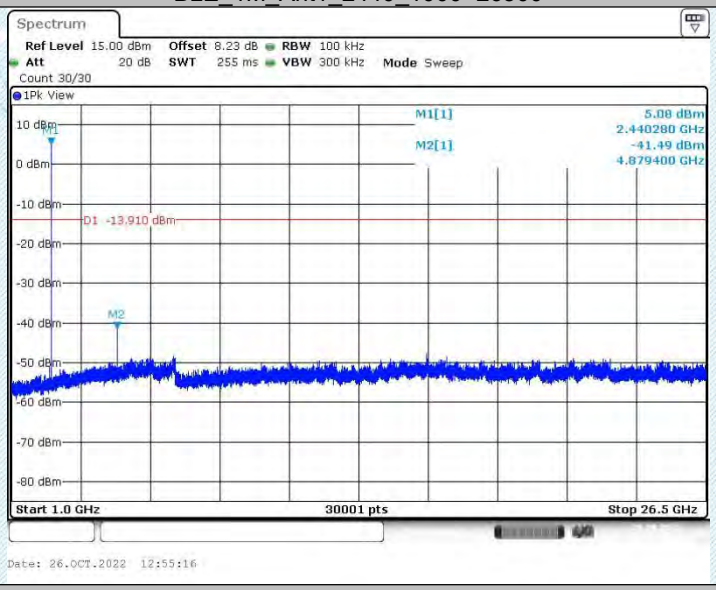


BLE_1M_Ant1_2440_30~1000

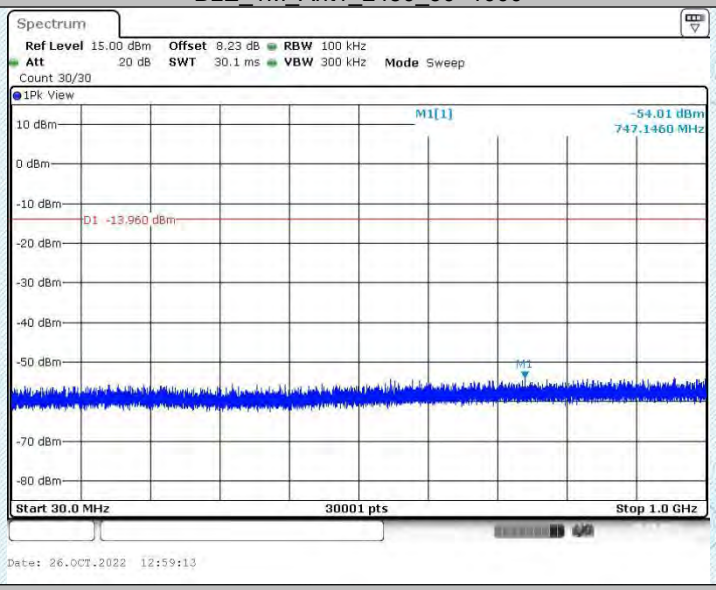
Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



BLE_1M_Ant1_2440_1000~26500

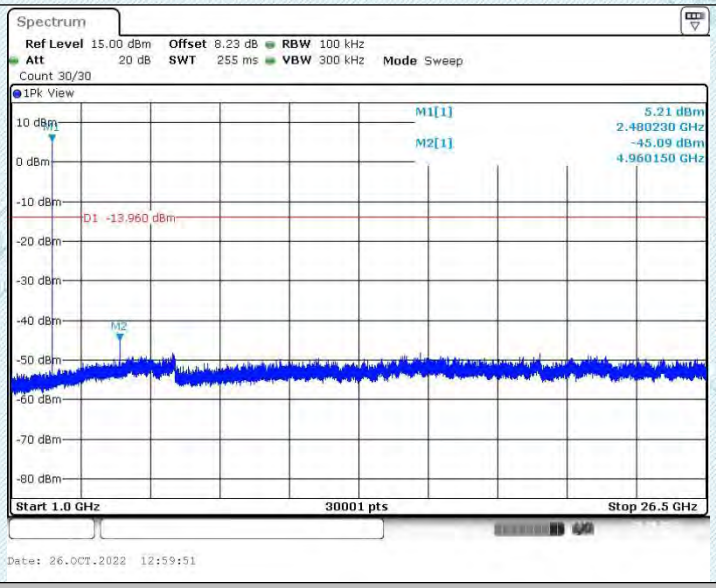


BLE_1M_Ant1_2480_30~1000

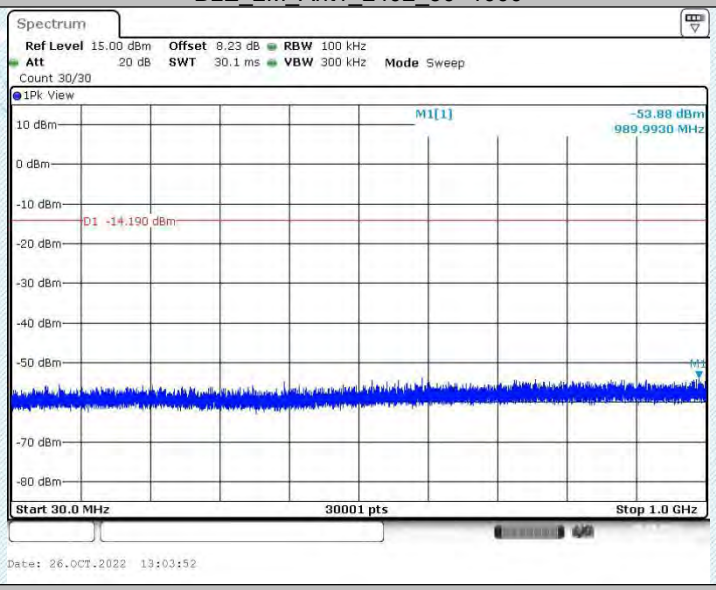


BLE_1M_Ant1_2480_1000~26500

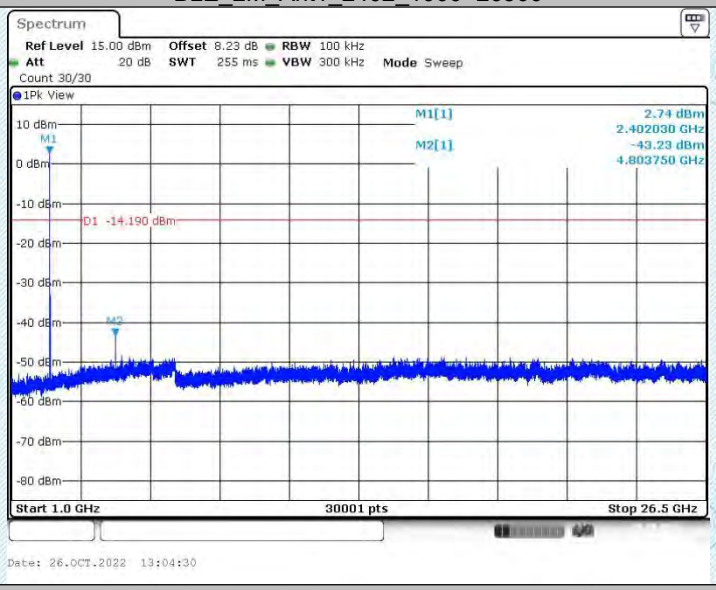
Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



BLE_2M_Ant1_2402_30~1000



BLE_2M_Ant1_2402_1000~26500



BLE_2M_Ant1_2440_30~1000

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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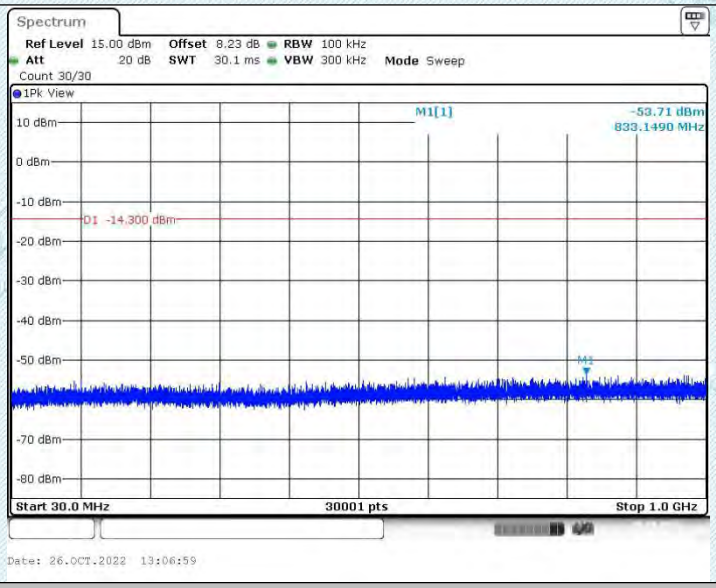
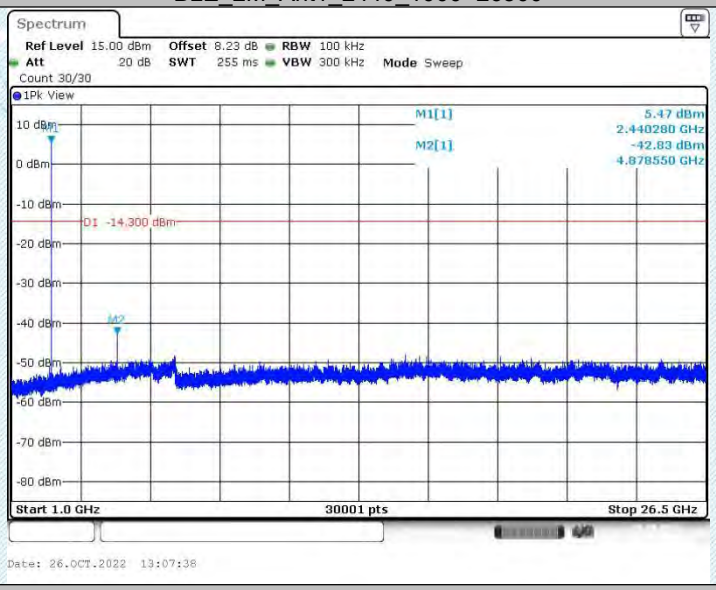
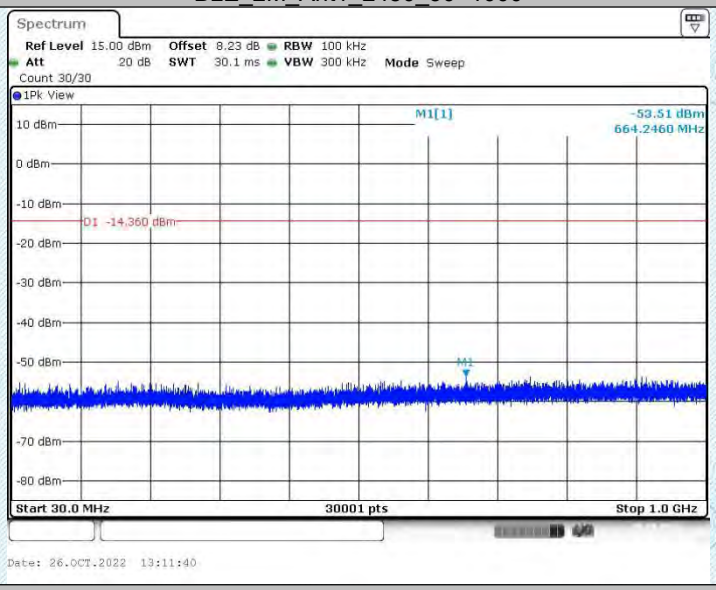


BLE_2M_Ant1_2440_1000~26500

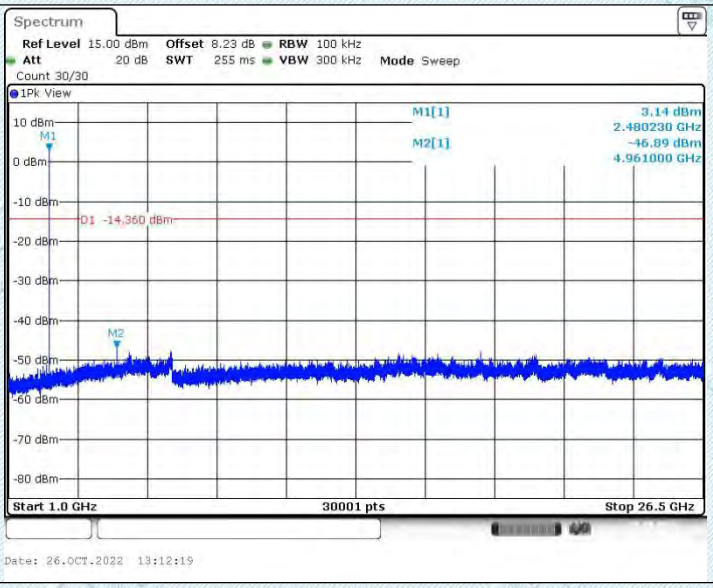


BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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6.8. Appendix H: Duty Cycle

6.8.1. Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	2.16	2.50	0.8640	86.40	0.63	---	PASS
		2440	2.16	2.50	0.8640	86.40	0.63	---	PASS
		2480	2.16	2.50	0.8640	86.40	0.63	---	PASS
BLE_2M	Ant1	2402	1.11	1.88	0.5904	59.04	2.29	---	PASS
		2440	1.11	1.88	0.5904	59.04	2.29	---	PASS
		2480	1.11	1.88	0.5904	59.04	2.29	---	PASS

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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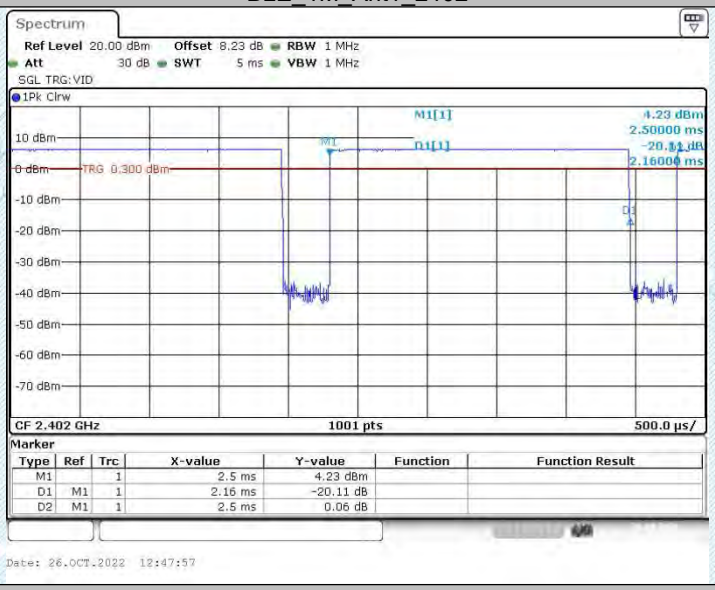
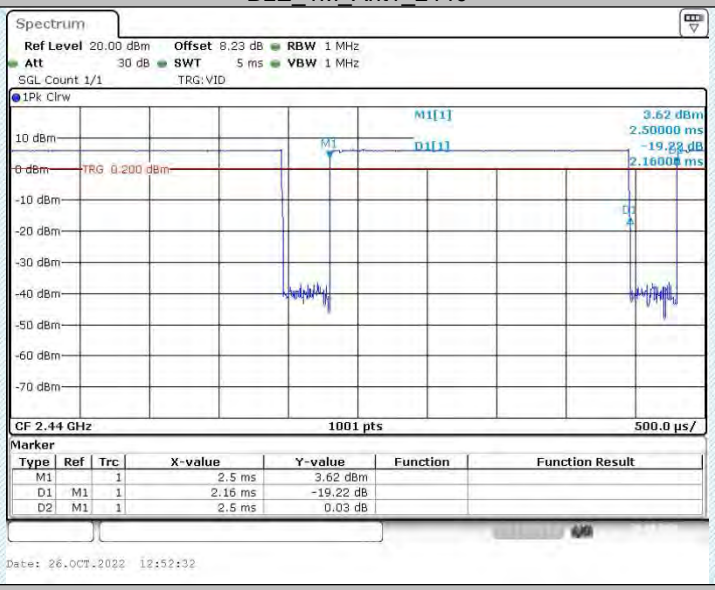
6.8.2. Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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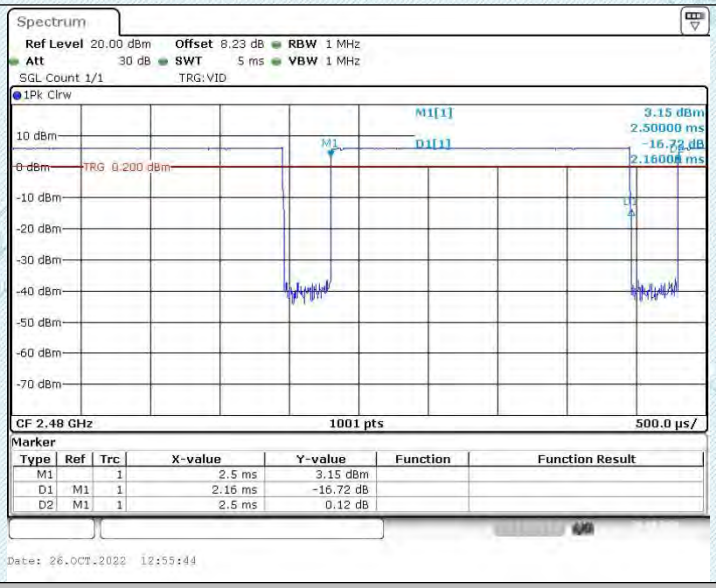
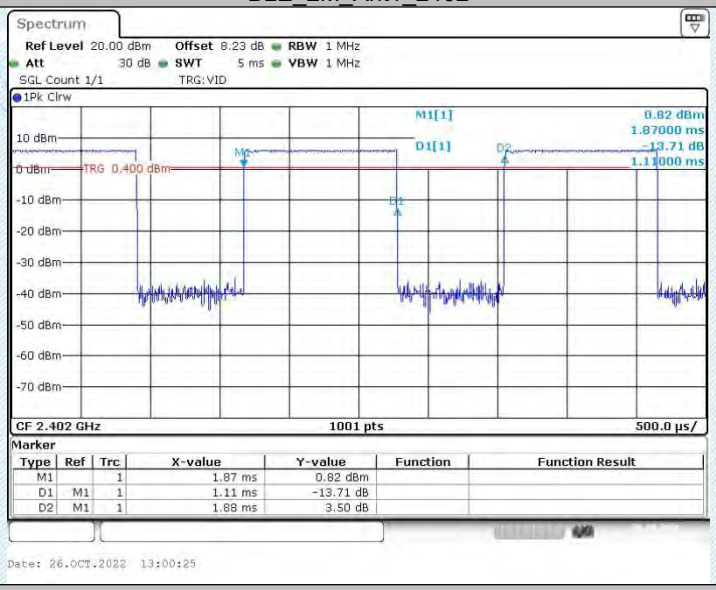
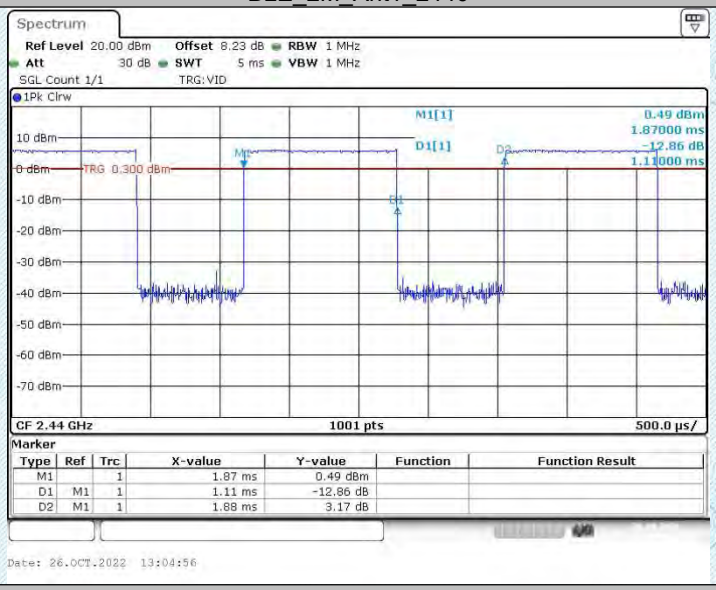


BLE_2M_Ant1_2402

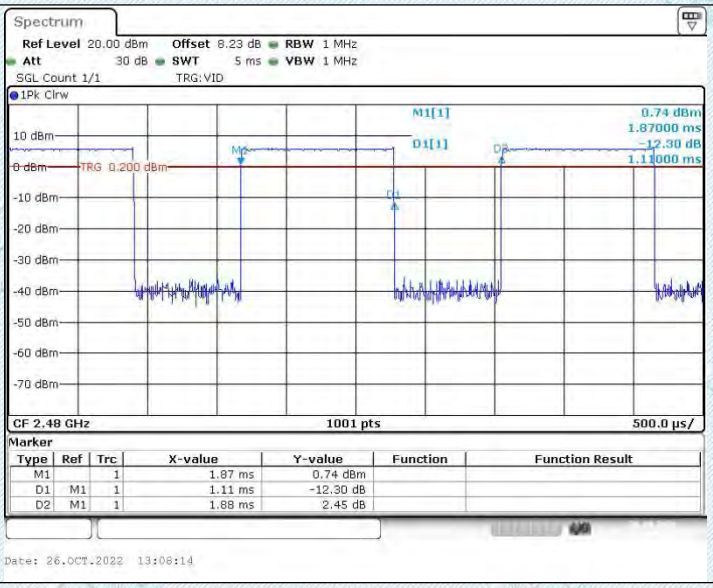


BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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6.9. Appendix I: Emissions in Restricted Bands

6.9.1. Test Result

TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-52.47	≤-41.20	42.73	≤54	PASS
				AV	2341.391	-50.92	≤-41.20	44.28	≤54	PASS
				AV	2390.000	-52.43	≤-41.20	42.77	≤54	PASS
				Peak	2310.000	-31.78	≤-21.20	63.42	≤74	PASS
				Peak	2316.739	-30.23	≤-21.20	64.97	≤74	PASS
				Peak	2390.000	-32.09	≤-21.20	63.11	≤74	PASS
		High	2480	AV	2483.500	-51.68	≤-41.20	43.52	≤54	PASS
				AV	2483.913	-51.37	≤-41.20	43.83	≤54	PASS
				AV	2500.000	-52.14	≤-41.20	43.06	≤54	PASS
				Peak	2483.500	-31.94	≤-21.20	63.26	≤74	PASS
				Peak	2493.420	-30.07	≤-21.20	65.13	≤74	PASS
				Peak	2500.000	-31.4	≤-21.20	63.80	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-52.28	≤-41.20	42.92	≤54	PASS
				AV	2340.630	-50.43	≤-41.20	44.77	≤54	PASS
				AV	2390.000	-51.98	≤-41.20	43.22	≤54	PASS
				Peak	2310.000	-31.66	≤-21.20	63.54	≤74	PASS
				Peak	2369.696	-29.76	≤-21.20	65.44	≤74	PASS
				Peak	2390.000	-32.33	≤-21.20	62.87	≤74	PASS
		High	2480	AV	2483.500	-49.29	≤-41.20	45.91	≤54	PASS
				AV	2483.565	-50.13	≤-41.20	45.07	≤54	PASS
				AV	2500.000	-51.62	≤-41.20	43.58	≤54	PASS
				Peak	2483.500	-30.79	≤-21.20	64.41	≤74	PASS
				Peak	2498.406	-29.53	≤-21.20	65.67	≤74	PASS
				Peak	2500.000	-31.19	≤-21.20	64.01	≤74	PASS

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
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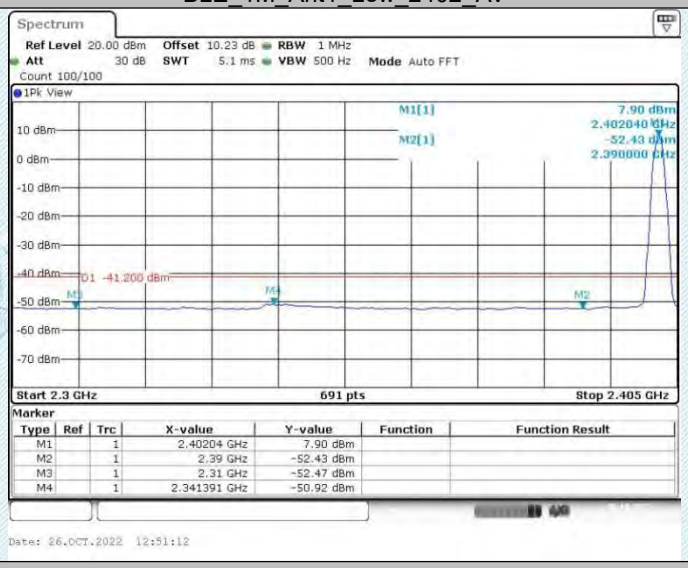
Note：

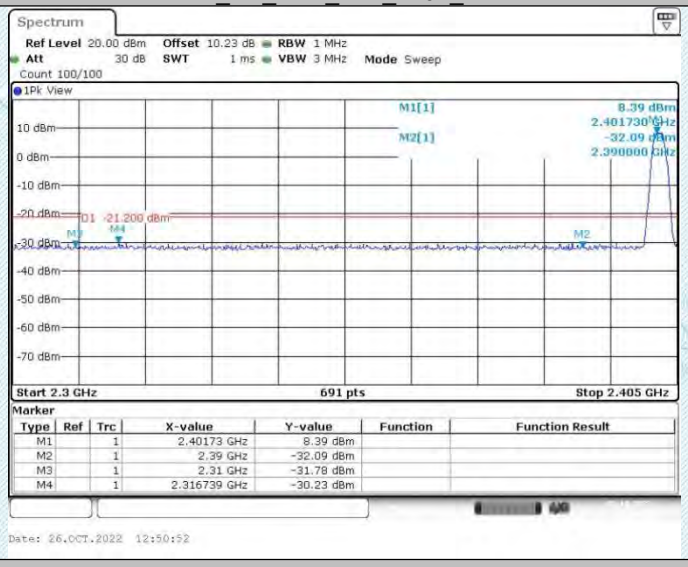
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

6.9.2. Test Graphs

BLE_1M_Ant1_Low_2402_AV

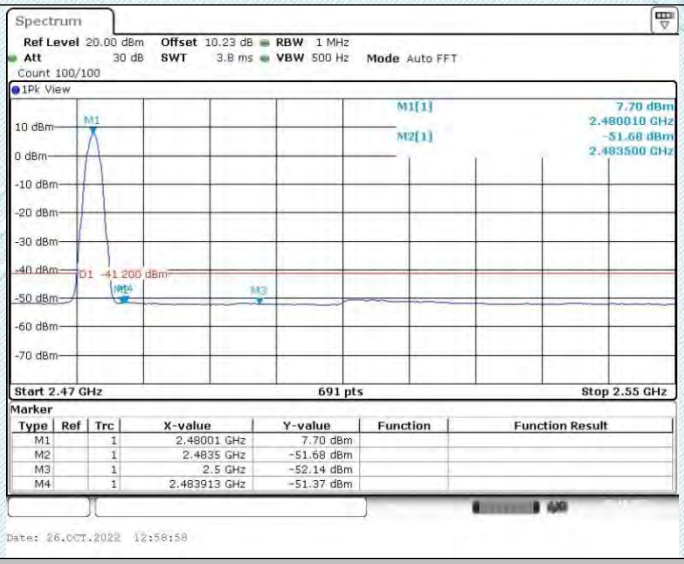


BLE_1M_Ant1_Low_2402_Peak

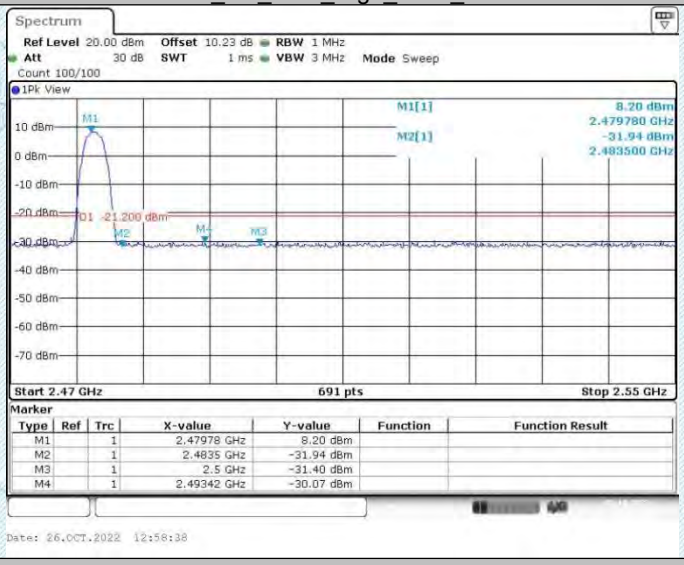


BLE_1M_Ant1_High_2480_AV

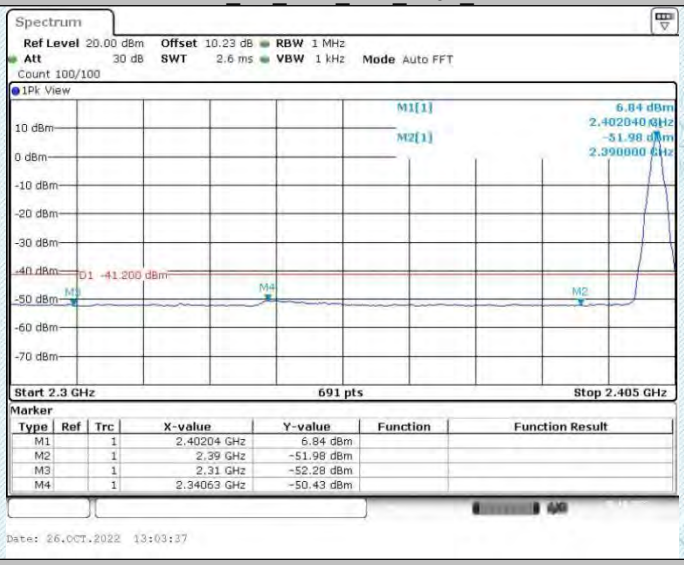
Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



BLE_1M_Ant1_High_2480_Peak

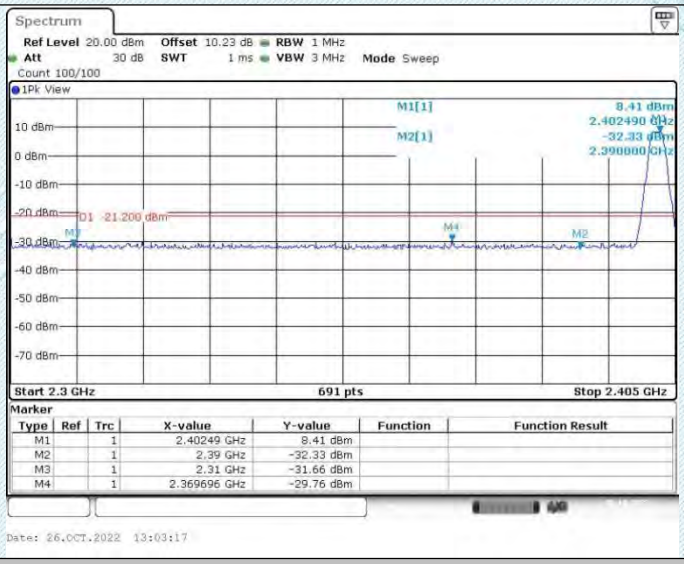


BLE_2M_Ant1_Low_2402_AV

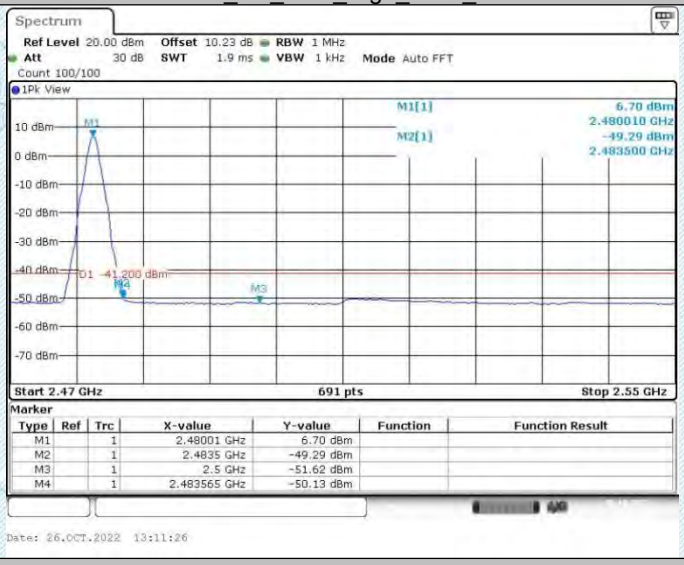


BLE_2M_Ant1_Low_2402_Peak

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak

--THE END--

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