



FCC TEST REPORT

FCC ID:2BVKP-STCG-01

Report Number..... : ZKT-2601302268E

Date of Test..... Apr. 15, 2026 to Apr. 20, 2026

Date of issue..... : Apr. 20, 2026

Total number of pages..... 27

Test Result : PASS

Testing Laboratory..... : Shenzhen ZKT Technology Co., Ltd.

Address : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

Applicant's name : Shenzhen Lingtong Cultural and Creative Co., Ltd.

Address : Room 1202, Building 4, Qianhai Kexing Science Park, Labor Community, Xixiang Subdistrict, Bao'an District, Shenzhen City, Guangdong Province, China

Manufacturer's name : Shenzhen Lingtong Cultural and Creative Co., Ltd.

Address : Room 1202, Building 4, Qianhai Kexing Science Park, Labor Community, Xixiang Subdistrict, Bao'an District, Shenzhen City, Guangdong Province, China

Test specification:

Standard..... : FCC CFR Title 47 Part 15 Subpart C Section 15.225
ANSI C63.10-2020+Cor 1-2023

Test procedure..... : /

Non-standard test method : N/A

Test Report Form No..... : TRF-EL-179_V0

Test Report Form(s) Originator..... : ZKT Testing

Master TRF : Dated: 2020-01-06

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Product name..... : Smart TCG

Trademark : STCG

Model/Type reference..... : STCG-01

Ratings..... : Input: 5 V --- 1 A
Battery: 3.7V, 3200mAh, 11.84Wh



Testing procedure and testing location:

Testing Laboratory.....: **Shenzhen ZKT Technology Co., Ltd.**

Address.....: 1/F, No. 101, Building B, No. 6, Tangwei Community
Industrial Avenue, Fuhai Street, Bao'an District,
Shenzhen, China

Tested by (name + signature).....: Jim Liu

Reviewer (name + signature).....: Jackson Fang

Approved (name + signature).....: Lake Xie





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1.VERSION

Report No.	Version	Description	Approved
ZKT-2601302268E	Rev.01	Initial issue of report	Apr. 20, 2026



2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.225) , Subpart C			
Standard Section	Test Item	Judgment	Remark
FCC part 15.203	Antenna requirement	PASS	
FCC part 15.207	AC Power Line Conducted Emission	PASS	
FCC part 15.225(a)(b)(c)(d)	Fundamental &Radiated Spurious Emission Measurement	PASS	
FCC part 15.215	20dB Occupied Bandwidth	PASS	
FCC part 15.225(e)	Frequency Tolerance	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report



2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.

Add. : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 927491

Designation Number: CN1431

IC Registered No.: 27033

CAB identifier: CN0110

Designation Number: CN0110

2.2 MEASUREMENT UNCERTAINTY

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

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission (9KHz-30MHz)	U=4.5dB
2	3m chamber Radiated spurious emission (30MHz-1GHz)	U=4.8dB
3	3m chamber Radiated spurious emission (1GHz-6GHz)	U=4.9dB
4	3m chamber Radiated spurious emission (6GHz-40GHz)	U=5.0dB
5	Conducted Disturbance	U=3.2dB
6	RF Occupied Bandwidth	U=1.8MHz
7	Frequency Tolerance	U=0.2%
8	Humidity Uncertainty	U=5.3%
9	Temperature Uncertainty	U=0.59°C



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Product Name:	Smart TCG
Trade Mark:	STCG
Model No.:	STCG-01
Serial No.:	N/A
Model Different.:	N/A
Hardware Version:	H1.0
Software Version:	S1.0
Sample(s) Status:	Engineer sample
Channel Numbers:	1 Channels
Operation Frequency:	13.56MHz
Modulation Technology:	ASK
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi
Power Supply:	Input: 5 V $\overline{\text{---}}$ 1A Battery: 3.7V, 3200mAh, 11.84Wh

Note1: For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

Note2: The EUT's all information provided by client.



3.2 CHANNEL LIST

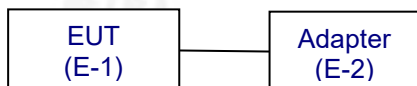
Channel List	
Channel	Frequency(MHz)
01	13.56

3.3 DESCRIPTION OF TEST MODES

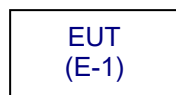
Transmitting mode	Keep the EUT in continuously transmitting NFC mode
Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.	

3.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

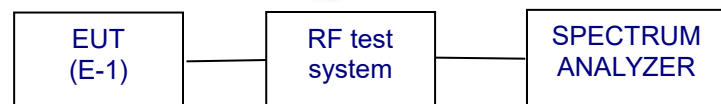
Conducted Emission



Radiated Emission



Conducted Spurious



3.5 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Smart TCG	STCG	STCG-01	N/A	EUT
E-1	AC/DC Adapter	N/A	X569	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



3.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

Conduction Emissions Test

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	N/A	Sep. 23, 2025	Sep. 22, 2026
2	LISN	CYBERTEK	EM5040A	E1850400149	N/A	Sep. 19, 2025	Sep. 18, 2026
3	Test Cable	N/A	C-01	N/A	N/A	May. 22, 2025	May. 21, 2026
4	EMI Test Receiver	R&S	ESCI3	101393	4.42 SP3	Oct. 24, 2025	Oct. 23, 2026
5	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	N/A	\	\

Radiation Emissions & Radiation Spurious Emissions Test

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	N9020A	MY55370835	A.17.05	Sep. 20, 2025	Sep. 19, 2026
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Sep. 20, 2025	Sep. 19, 2026
3	EMI Test Receiver (9kHz-7GHz)	R&S	ESCI7	100969	4.32	Oct. 24, 2025	Oct. 23, 2026
4	Bilog Antenna (30MHz-1500MHz)	Schwarzbeck	VULB9168	00877	N/A	Sep. 20, 2025	Sep. 19, 2026
5	Horn Antenna (1GHz-18GHz)	Agilent	AH-118	071145	N/A	Sep. 20, 2025	Sep. 19, 2026
6	Horn Antenna (15GHz-40GHz)	A.H.System	SAS-574	588	N/A	Sep. 30, 2025	Sep. 29, 2026
7	Loop Antenna	TESEQ	HLA6121	58357	N/A	Sep. 20, 2025	Sep. 19, 2026
8	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	60747	N/A	Sep. 19, 2025	Sep. 18, 2026
9	Amplifier (1GHz-26.5GHz)	HuiPu	8449B	3008A00315	N/A	Sep. 19, 2025	Sep. 18, 2026
10	Amplifier (500MHz-40GHz)	QuanJuDa	DLE-161	097	N/A	Oct. 24, 2025	Oct. 23, 2026
11	Test Cable	N/A	R-01	N/A	N/A	May. 25, 2025	May. 24, 2026
12	Test Cable	N/A	R-02	N/A	N/A	May. 25, 2025	May. 24, 2026
13	Test Cable	N/A	R-03	N/A	N/A	May. 25, 2025	May. 24, 2026
14	D.C. Power Supply	LongWei	TPR-6405D	N/A	N/A	\	\
15	EMC Software	Frad	EZ-EMC	Ver.EMC-CO N 3A1.1	N/A	\	\
16	Turntable	MF	MF-7802BS	N/A	N/A	\	\
17	Antenna tower	MF	MF-7802BS	N/A	N/A	\	\



RF Conducted Test

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	N9020A	MY55370835	A.17.05	Sep. 20, 2025	Sep. 19, 2026
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Sep. 20, 2025	Sep. 19, 2026
3	Test Cable	N/A	RF-01	N/A	N/A	May. 25, 2025	May. 24, 2026
4	Test Cable	N/A	RF-02	N/A	N/A	May. 25, 2025	May. 24, 2026
5	Test Cable	N/A	RF-03	N/A	N/A	May. 25, 2025	May. 24, 2026
6	ESG Signal Generator	Agilent	E4421B	GB40051203	B.03.84	Sep. 19, 2025	Sep. 18, 2026
7	Signal Generator	Agilent	N5182A	MY47420215	A.01.87	Sep. 20, 2025	Sep. 19, 2026
8	Magnetic Field Probe Tester	Narda	ELT-400	0-0344	N/A	Sep. 25, 2025	Sep. 24, 2026
9	SHIELD BOX	TESCOM	TC-5970C	5970C015553	N/A	Dec. 18, 2025	Dec. 17, 2026
10	Wideband Radio Communication Test	R&S	CMW500	106504	V 3.7.22	Sep. 28, 2025	Sep. 27, 2026
11	MWRF Power Meter Test system	MW	MW100-R FCB	10371	N/A	Sep. 19, 2025	Sep. 18, 2026
12	MWRF Power Sensor	MW	MW100-P SB	10371	N/A	Sep. 19, 2025	Sep. 18, 2026
13	Power Meter	KEYSIGHT	N1912AP	926431	A.05.00	Sep. 19, 2025	Sep. 18, 2026
14	D.C. Power Supply	LongWei	TPR-6405 D	GQ7516	N/A	Sep. 19, 2025	Sep. 18, 2026
15	Attenuators	XINQY	XQY-SMAJ KS-12-2W	N/A	N/A	Sep. 19, 2025	Sep. 18, 2026
16	RF Software	MW	MTS8310	V2.0.0.0	N/A	\	\



4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10-2020+Cor 1-2023
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS

Frequency (MHz)	Limit (dBuV)		Standard
	Quas-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) *Decreases with the logarithm of the frequency.

4.1.2 TEST PROCEDURE

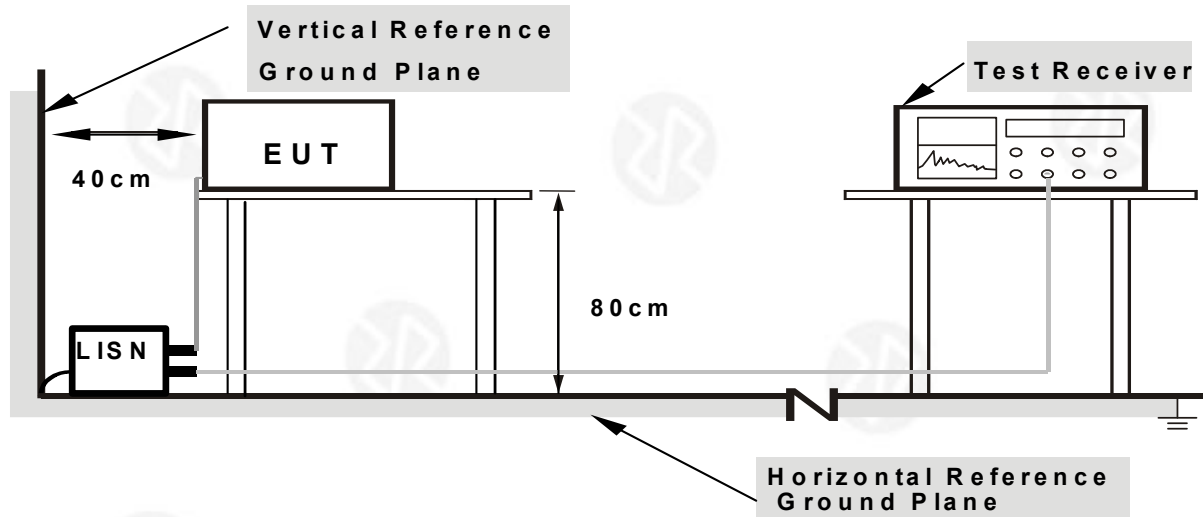
- The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation



4.1.4 TEST SETUP



- Note:** 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

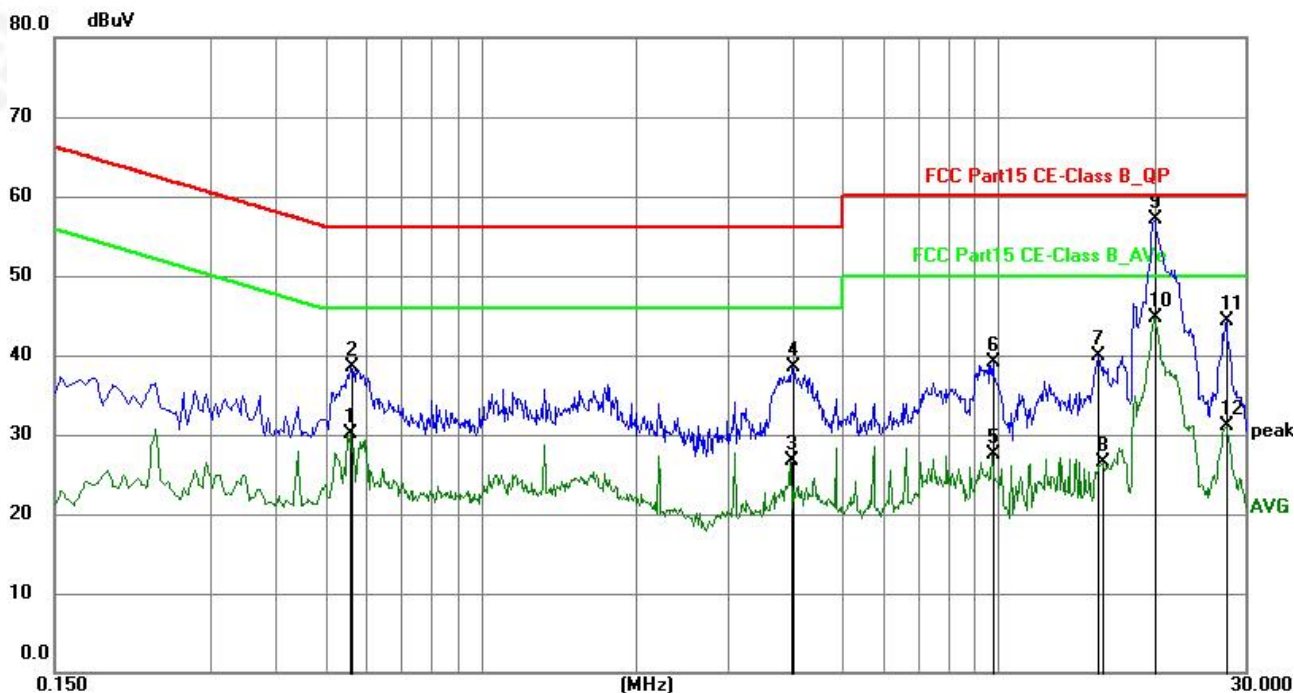
4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



4.1.6 Test Result

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	L
Test Voltage:	AC 120V/60Hz	Test Mode:	TX - 13.56MHz



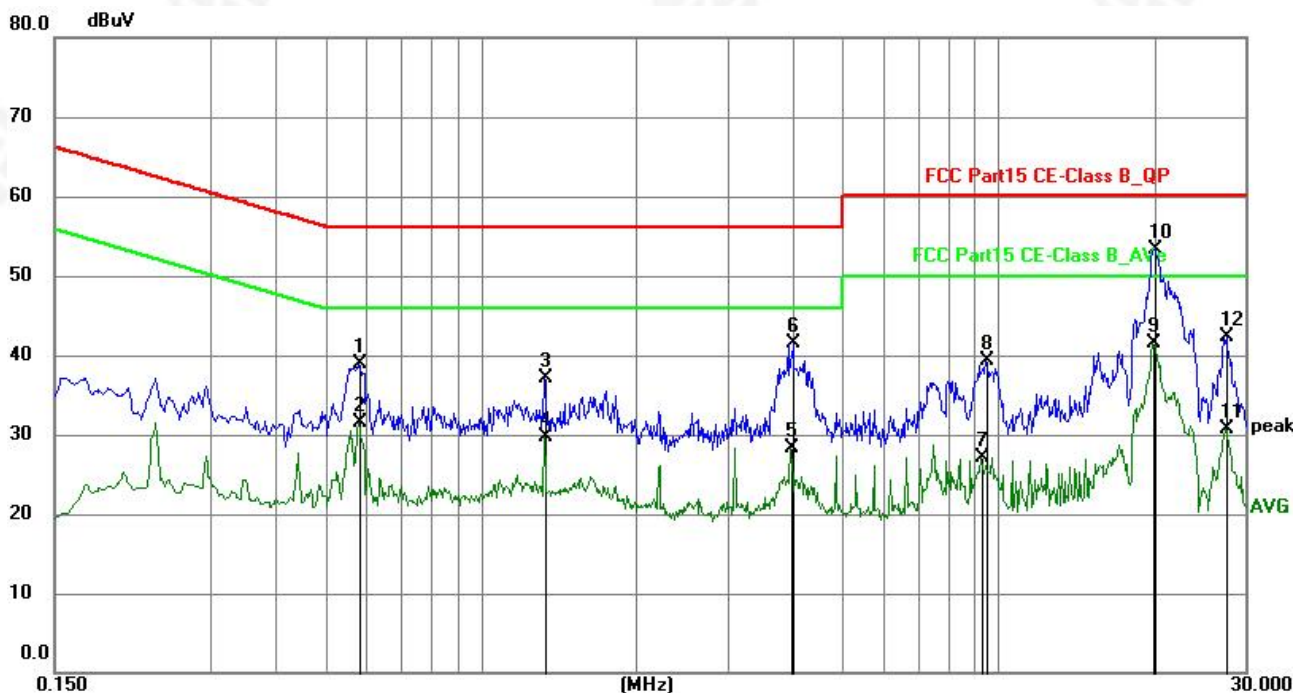
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.5594	10.49	19.63	30.12	46.00	-15.88	AVG	P	
2	0.5637	18.82	19.63	38.45	56.00	-17.55	QP	P	
3	3.9794	6.99	19.71	26.70	46.00	-19.30	AVG	P	
4	3.9929	18.82	19.71	38.53	56.00	-17.47	QP	P	
5	9.7303	7.79	19.76	27.55	50.00	-22.45	AVG	P	
6	9.8025	19.28	19.76	39.04	60.00	-20.96	QP	P	
7	15.6343	20.03	19.78	39.81	60.00	-20.19	QP	P	
8	15.9223	6.80	19.78	26.58	50.00	-23.42	AVG	P	
9	20.0849	37.23	19.80	57.03	60.00	-2.97	QP	P	
10	20.0849	24.97	19.80	44.77	50.00	-5.23	AVG	P	
11	27.5865	24.57	19.76	44.33	60.00	-15.67	QP	P	
12	27.5865	11.26	19.76	31.02	50.00	-18.98	AVG	P	

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi - Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Reading level + Correct Factor.
4. Correct Factor = Liss factor + Cable loss factor + limiter factor.
5. Margin = Measurement Level - Limit.



Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	N
Test Voltage:	AC 120V/60Hz	Test Mode:	TX - 13.56MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.5817	19.23	19.62	38.85	56.00	-17.15	QP	P	
2	0.5817	11.96	19.62	31.58	46.00	-14.42	AVG	P	
3	1.3287	17.42	19.65	37.07	56.00	-18.93	QP	P	
4	1.3287	10.02	19.65	29.67	46.00	-16.33	AVG	P	
5	3.9839	8.67	19.69	28.36	46.00	-17.64	AVG	P	
6	4.0064	21.75	19.69	41.44	56.00	-14.56	QP	P	
7	9.2985	7.43	19.75	27.18	50.00	-22.82	AVG	P	
8	9.5008	19.58	19.75	39.33	60.00	-20.67	QP	P	
9	19.9363	21.73	19.77	41.50	50.00	-8.50	AVG	P	
10	20.0218	33.61	19.77	53.38	60.00	-6.62	QP	P	
11	27.5503	10.91	19.73	30.64	50.00	-19.36	AVG	P	
12	27.6358	22.67	19.73	42.40	60.00	-17.60	QP	P	

Notes:

- 1.An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2.Quasi - Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Liss factor+ Cable loss factor + limiter factor.
- 5.Margin = Measurement Level-Limit.



4.2 RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.10-2020+Cor 1-2023				
Test Frequency Range:	9kHz to 25GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
	150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Average	1MHz	3MHz	Average

4.2.1 RADIATED EMISSION LIMITS

Frequencies (MHz)	Field Strength (micровolts/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

Notes:

- (1) The limit for radiated test was performed according to ANSI C63.10-2020+Cor 1-2023
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuA/m)=20log Emission level (uA/m).
- (4) Limit dBuV/m @3m = Limit dBuV/m @300m+ 80.
- (5) Limit dBuV/m @3m = Limit dBuV/m @30m + 40.

Field Strength of Fundamental Limit:

(a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters. 15,848 microvolts/meter at 3 meters=124 dBuV/m.

(b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters. 334 microvolts/meter at 3 meters=90.47 dBuV/m.

(c) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in § 15.209.



4.2.2 TEST PROCEDURE

- The measuring distance of at 3 m shall be used for measurements at frequency up to 25GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-chamber test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8m; above 1GHz, the height was 1.5m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the 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 Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.
- For the radiated emission test above 1GHz:
Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.

The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

Note:

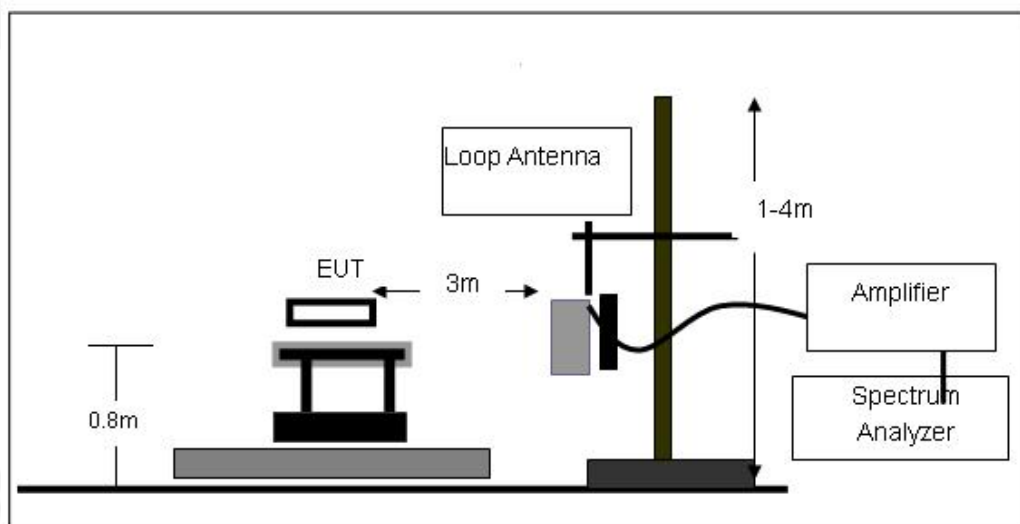
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

4.2.3 DEVIATION FROM TEST STANDARD

No deviation

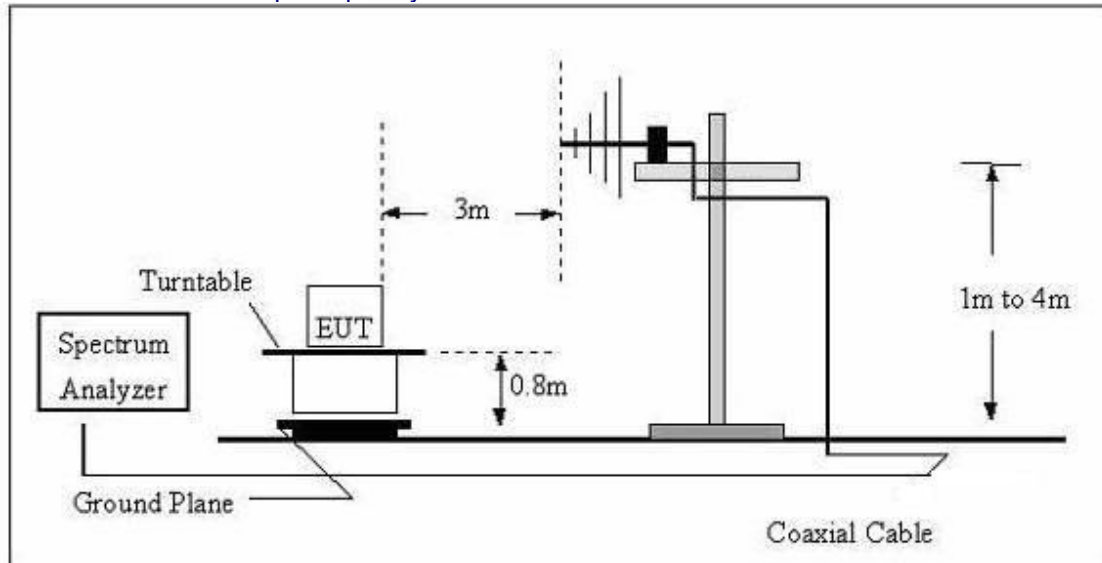
4.2.4 TEST SETUP

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





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



4.2.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



4.2.6 TEST RESULTS

Field Strength of Fundamental - Between 9KHz – 30 MHz

Frequency (MHz)	Meter Reading (dBμV/m)	Correction Factor (dB)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polar	Detector
13.440	52.54	15.62	68.16	90.47	-22.31	Coaxial	QP
13.440	51.63	15.62	67.25	90.47	-23.22	Coplanar	QP
13.550	57.88	15.58	73.46	90.47	-17.01	Coaxial	QP
13.550	56.52	15.58	72.10	90.47	-18.37	Coplanar	QP
13.560	87.84	12.53	100.37	124.00	-23.63	Coaxial	Peak
13.560	82.43	12.53	94.96	124.00	-29.04	Coplanar	Peak
13.569	56.82	12.52	69.34	90.47	-21.13	Coaxial	QP
13.569	54.89	12.52	67.41	90.47	-23.06	Coplanar	QP
13.650	50.73	15.5	66.23	90.47	-24.24	Coaxial	QP
13.650	49.52	15.5	65.02	90.47	-25.45	Coplanar	QP

Frequency (kHz)	Meter Reading (dBμV/m)	Correction Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
23.95	37.62	17.35	54.97	120.05	-65.08	AV
59.45	38.45	16.26	54.71	112.14	-57.43	AV
161.75	39.63	15.12	54.75	103.44	-48.69	AV
1237.24	38.33	14.87	53.20	65.76	-12.56	QP
2136.56	36.62	14.48	51.10	69.54	-18.44	QP
3217.83	34.55	13.72	48.27	69.54	-21.27	QP
6845.75	32.36	12.34	44.70	69.54	-24.84	QP
9272.36	30.72	11.85	42.57	69.54	-26.97	QP
11136.68	31.68	10.36	42.04	69.54	-27.50	QP

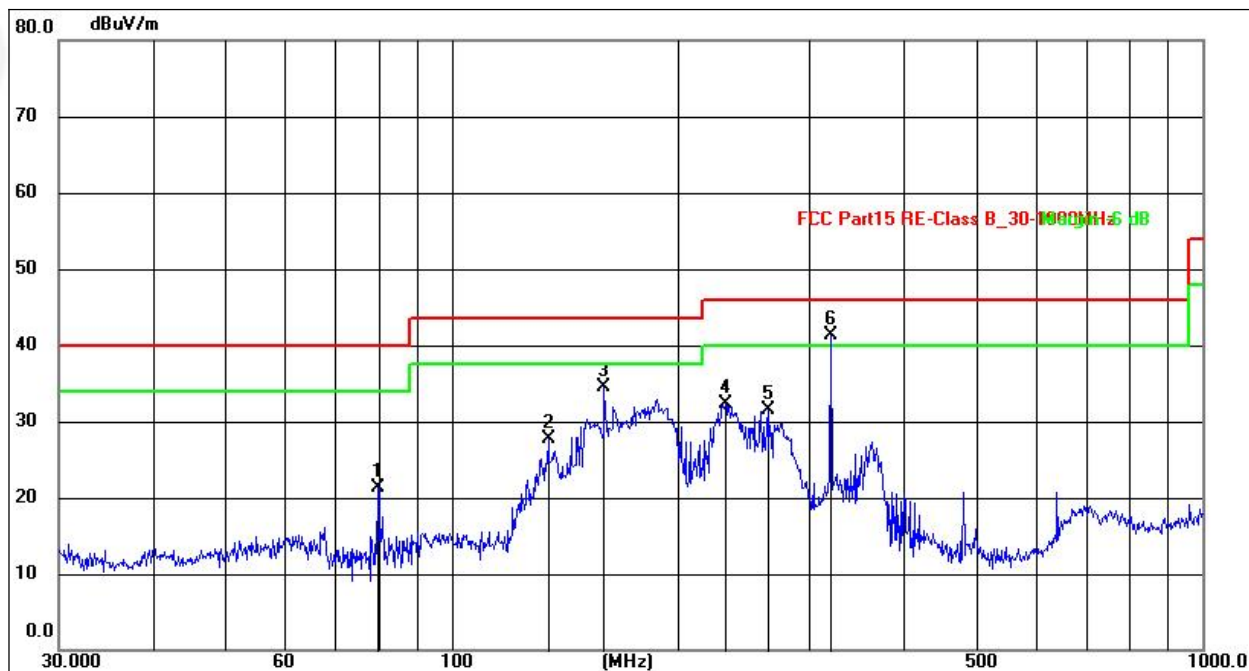
Note:

Pre-scan in the all of mode, the worst case in of was recorded;
Factor = antenna factor + cable loss – pre-amplifier;
Margin = Emission Level- Limit.



Between 30MHz – 1GHz

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	Horizontal
Test Voltage :	DC 3.7V	Test Mode :	TX - 13.56MHz



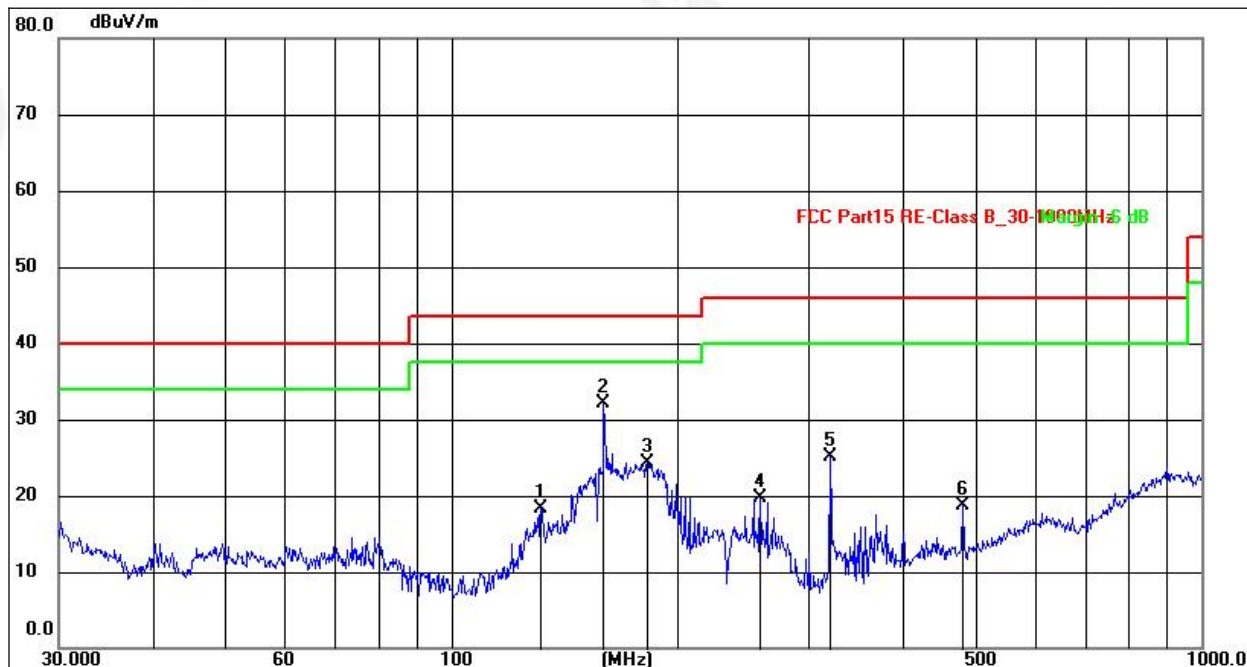
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	79.8002	42.22	-20.90	21.32	40.00	-18.68	QP
2	134.5591	47.29	-19.52	27.77	43.50	-15.73	QP
3	159.7844	53.15	-18.72	34.43	43.50	-9.07	QP
4	231.7178	52.76	-20.51	32.25	46.00	-13.75	QP
5	263.8190	50.91	-19.39	31.52	46.00	-14.48	QP
6	319.9368	62.77	-21.52	41.25	46.00	-4.75	QP

Remarks:

1. An initial pre-scan was performed on the peak detector.
2. Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.
4. Final Level = Reading level + Correct Factor.
5. Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
6. Margin= Measurement Level-Limit.



Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	Vertical
Test Voltage :	DC 3.7V	Test Mode :	TX - 13.56MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	131.7572	41.62	-23.22	18.40	43.50	-25.10	QP
2	159.7844	54.77	-22.72	32.05	43.50	-11.45	QP
3	182.5592	47.24	-22.84	24.40	43.50	-19.10	QP
4	258.3263	43.35	-23.69	19.66	46.00	-26.34	QP
5	319.9368	47.49	-22.29	25.20	46.00	-20.80	QP
6	480.5276	36.08	-17.28	18.80	46.00	-27.20	QP

Remarks:

1. An initial pre-scan was performed on the peak detector.
2. Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.
4. Final Level = Reading level + Correct Factor.
5. Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
6. Margin= Measurement Level-Limit.



5. FREQUENCY TOLERANCE

Test Requirement:	FCC Part15 C Section 15.225(e)
Test Method:	ANSI C63.10-2020+Cor 1-2023

5.1 LIMIT

The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency over a temperature variation of -20 degrees to $+ 50$ degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

Limit: $\pm 0.01\%$

5.2 TEST PROCEDURE

1. Set RBW = 10 kHz.
2. Set the video bandwidth (VBW) $\geq$ RBW.
3. Detector = peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. The transmitter output (antenna port) was connected to the spectrum analyzer.

5.3 DEVIATION FROM TEST STANDARD

No deviation

5.4 TEST SETUP



5.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of chapter 3, Unless otherwise a special operating condition is specified in the follows during the testing.



5.6 TEST RESULT

Test Frequency: ASK - 13.56MHz				
Environment Temperature (°C)	Power Supplied (VDC)	Frequency measure with frequency tolerance		
		Measured Frequency (MHz)	Deviation (%)	Limit (%)
50	3.7	13.5604	0.003	±0.01
40	3.7	13.5605	0.004	±0.01
30	3.7	13.5606	0.004	±0.01
25	3.7	13.5602	0.001	±0.01
10	3.7	13.5607	0.005	±0.01
0	3.7	13.5609	0.007	±0.01
-10	3.7	13.5607	0.005	±0.01
-20	3.7	13.5608	0.006	±0.01

Test Frequency: ASK - 13.56MHz				
Environment Temperature (°C)	Power Supplied (VDC)	Frequency measure with frequency tolerance		
		Measured Frequency (MHz)	Deviation (%)	Limit (%)
20	4.26	13.5609	0.007	±0.01
20	3.89	13.5601	0.001	±0.01
20	3.7	13.5603	0.002	±0.01
20	3.52	13.5608	0.006	±0.01
20	3.15	13.5609	0.007	±0.01



6. 20DB OCCUPIED BANDWIDTH

Test Requirement:	FCC Part15 C Section 15.215
Test Method:	ANSI C63.10-2020+Cor 1-2023

6.1 APPLIED PROCEDURES / LIMIT

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in subpart E of this part, must be designed to ensure that 20dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equip compliance with the 20dB attenuation specification may base on measurement at the intentional radiator's antenna output terminal unless the intentional radiator uses a permanently attached antenna, in which case compliance shall be demonstrated by measuring the radiated emissions.

6.2 TEST PROCEDURE

1. Set RBW = 100 Hz.
2. Set the video bandwidth (VBW) $\geq$ RBW.
3. Detector = peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. 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 20 dB relative to the maximum level measured in the fundamental emission.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of chapter 3, Unless otherwise a special operating condition is specified in the follows during the testing.

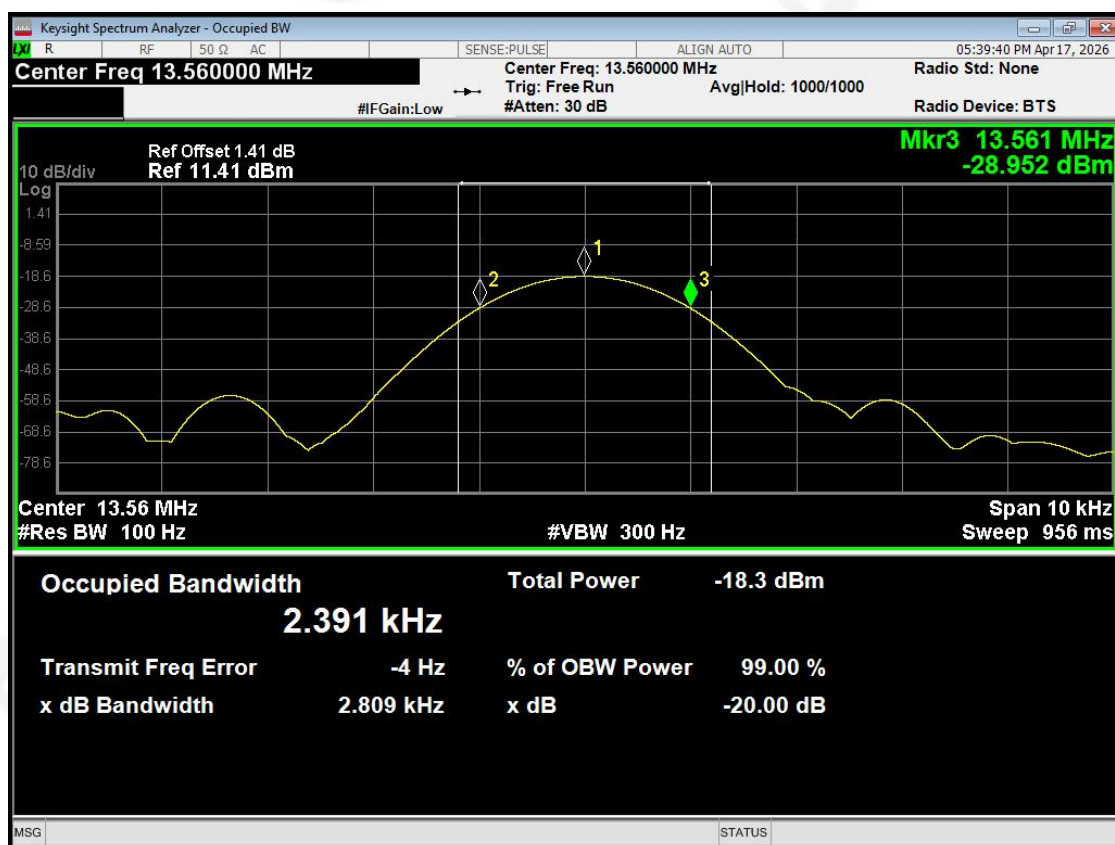


6.6 TEST RESULT

Temperature :	26°C	Relative Humidity :	54%
Test Mode :	ASK	Test Voltage :	DC 3.7V

Test Channel (MHz)	20dB Bandwidth (kHz)	Result
13.56	2.809	Pass

Test Chart





7.ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203
15.203 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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
EUT Antenna:	
The antennas is PCB Antenna, the best case gain of the antennas is 0dBi, reference to the appendix II for details	



8. TEST SETUP PHOTO

Reference to the appendix I for details.

9. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

***** END OF REPORT *****