FCC TEST REPORT
FCC ID:2A67Y-UHF-77WIFI

Report Number.....:	**ZKT-220524L3447**
Date of Test.....	May 23, 2022 to May 26, 2022
Date of issue.....:	May 26, 2022
Total number of pages.....	33
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 .....:	Mega Karaoke DJ Center
Address :	14929 Westpark Dr Ste A200 Houston, TX 77082
Manufacturer's name .....:	Huizhou Youshengdao Technology Co.,Ltd
Address .....:	10th Floor,Haoyikang Building,Danshui,Huiyang,Huizhou,Guangdong,China 516211
Test specification:	
Standard.....:	FCC CFR Title 47 Part 15 Subpart C Section 15.236 ANSI C63.10:2013
Test procedure.....:	/
Non-standard test method .....:	N/A
Test Report Form No.....:	TRF-EL-108_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.....:	**UHF Wireless microphone**
Trademark .....:	IMPRO
Model/Type reference.....:	uhf-77wifi
Ratings.....:	DC 3.7V For Battery

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).....:	Alen He
Reviewer (name + signature).....:	Joe Liu
Approved (name + signature).....:	Lake Xie

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1. VERSION

Report No.	Version	Description	Approved
ZKT-220524L3447	Rev.01	Initial issue of report	May 26, 2022

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.236) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.203	Antenna Requirement	N/A	
15.207	Conducted Emission	N/A	
15.236(d)(1)	Conducted Peak Output Power	PASS	
15.236(g)	Radiated Spurious Emission Measurement	PASS	
15.236(g)	Spurious Emission at Antenna Port	PASS	
15.236(f)(2)	Occupied Bandwidth Emission	PASS	
15.236(f)(3)	Frequency Stability	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: 692225
Designation Number: CN1299
IC Registered No.: 27033

2.2 MEASUREMENT UNCERTAINTY

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 %。

No.	Item	Uncertainty
1	AC Conduted Emission Test	±1.38dB
2	3m camber Radiated spurious emission(9KHz-30MHz)	U=4.5dB
3	3m camber Radiated spurious emission(30MHz-1GHz)	U=4.8dB
4	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.9dB
5	3m chamber Radiated spurious emission(18GHz-40GHz)	U=5.0dB
6	Conducted Adjacent channel power	U=1.38dB
7	Conducted output power uncertainty Above 1G	U=1.576dB
8	Conducted output power uncertainty below 1G	U=1.28dB
9	humidity uncertainty	U=5.3%
10	Temperature uncertainty	U=0.59℃

3.GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	UHF Wireless microphone
Trade Name	IMPRO
Model Name	uhf-77wifi
Serial Model	N/A
Model Difference	N/A
Hardware version	V1.0
Software version	V1.0
Operation Frequency:	540MHz~590MHz
Modulation Type:	FM
Antenna Type:	Internal Antenna
Antenna Gain:	0dBi(Declaration by applicant)
Ratings	DC 3.7V from battery

The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing.
Operation Frequency:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	**540.0**	52	565.6
2	540.6	53	566.1
3	541.1	54	566.6
4	541.6	55	567.1
5	542.1	56	567.6
6	542.6	57	568.1
7	543.1	58	568.6
8	543.6	59	569.1
9	544.1	60	569.6
10	544.6	61	570.1
11	545.1	62	570.6
12	545.6	63	571.1
13	546.1	64	571.6
14	546.6	65	572.1

15	547.1	66	572.6
16	547.6	67	573.1
17	548.1	68	573.6
18	548.6	69	574.1
19	549.1	70	574.6
20	549.6	71	575.1
21	550.1	72	575.6
22	550.6	73	576.1
23	551.1	74	576.6
24	551.6	75	577.1
25	552.1	76	577.6
26	552.6	77	578.1
27	553.1	78	578.6
28	553.6	79	579.1
29	554.1	80	579.6
30	554.6	81	580.1
31	555.1	82	580.6
32	555.6	83	581.1
33	556.1	84	581.6
34	556.6	85	582.1
35	557.1	86	582.6
36	557.6	87	583.1
37	558.1	88	583.6
38	558.6	89	584.1
39	559.1	90	584.6
40	559.6	91	585.1
41	560.1	92	585.6
42	560.6	93	586.1
43	561.1	94	586.6
44	561.6	95	587.1
45	562.1	96	**590.0**
46	562.6		
47	563.1		

48	563.6		
49	564.1		
50	564.6		
51	**565.1**		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle

3.2 DESCRIPTION OF TEST MODES

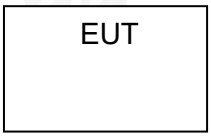
For All Emission	
Final Test Mode	Description
Transmitting mode	Keep the EUT in continuously transmitting mode

Note:

(1) Fully-charged battery is used during the test

3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Spurious emissions



3.4 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	/	/	/	/	/

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) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

3.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	9020A	MY45109572	Sep. 22, 2021	Sep. 21, 2022
2	Test Receiver (9kHz-7GHz)	R&S	ESCI7	101169	Sep. 22, 2021	Sep. 21, 2022
3	Bilog Antenna (30MHz-1400MHz)	Schwarzbeck	VULB9168	00877	Sep. 22, 2021	Sep. 21, 2022
4	Horn Antenna (1GHz-18GHz)	SCHWARZBECK	BBHA9120D	1541	Sep. 22, 2021	Sep. 21, 2022
5	Horn Antenna (18GHz-40GHz)	A.H. System	SAS-574	588	Sep. 22, 2021	Sep. 21, 2022
6	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	N/A	Sep. 22, 2021	Sep. 21, 2022
7	Amplifier (1GHz-40GHz)	全聚达	DLE-161	097	Sep. 22, 2021	Sep. 21, 2022
8	Loop Antenna (9KHz-30MHz)	SCHWARZBECK	FMZB1519B	014	Sep. 22, 2021	Sep. 21, 2022
9	RF cables1 (9kHz-30MHz)	N/A	9kHz-30MHz	N/A	Sep. 22, 2021	Sep. 21, 2022
10	RF cables2 (30MHz-1GHz)	N/A	30MHz-1GHz	N/A	Sep. 22, 2021	Sep. 21, 2022
11	RF cables3 (1GHz-40GHz)	N/A	1GHz-40GHz	N/A	Sep. 22, 2021	Sep. 21, 2022
12	CMW500 Test	R&S	CMW500	106504	Sep. 22, 2021	Sep. 21, 2022
13	ESG Signal Generator	Agilent	E4421B	GB40051203	Sep. 22, 2021	Sep. 21, 2022
14	Signal Generator	Agilent	N5182A	MY47420215	Sep. 22, 2021	Sep. 21, 2022
15	D.C. Power Supply	LongWei	TPR-6405D	\	\	\
16	Software	Frad	EZ-EMC	FA-03A2 RE	\	\

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10:2013
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS

(Frequency Range 150KHz-30MHz)

FREQUNCY (MHz)	Limit (dBuV)		Standard
	Quasi-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) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

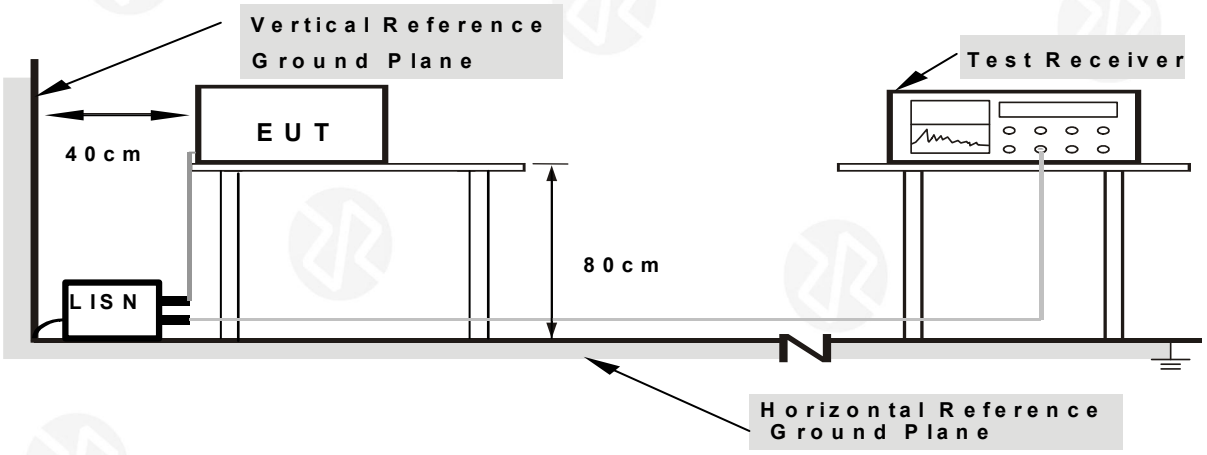
4.1.2 TEST PROCEDURE

a. 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.
b. 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.
c. 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.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. 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 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 RESULTS

N/A

（THE PRODUCT IS POWERED BY BATTERIES. THIS TEST ITEM IS NOT APPLICABLE）

4.2 RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209
Test Method:	ANSI C63.10:2013
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	100KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

4.2.1 RADIATED EMISSION LIMITS

According to 15.236(g)

Table 3: Limits for spurious emissions

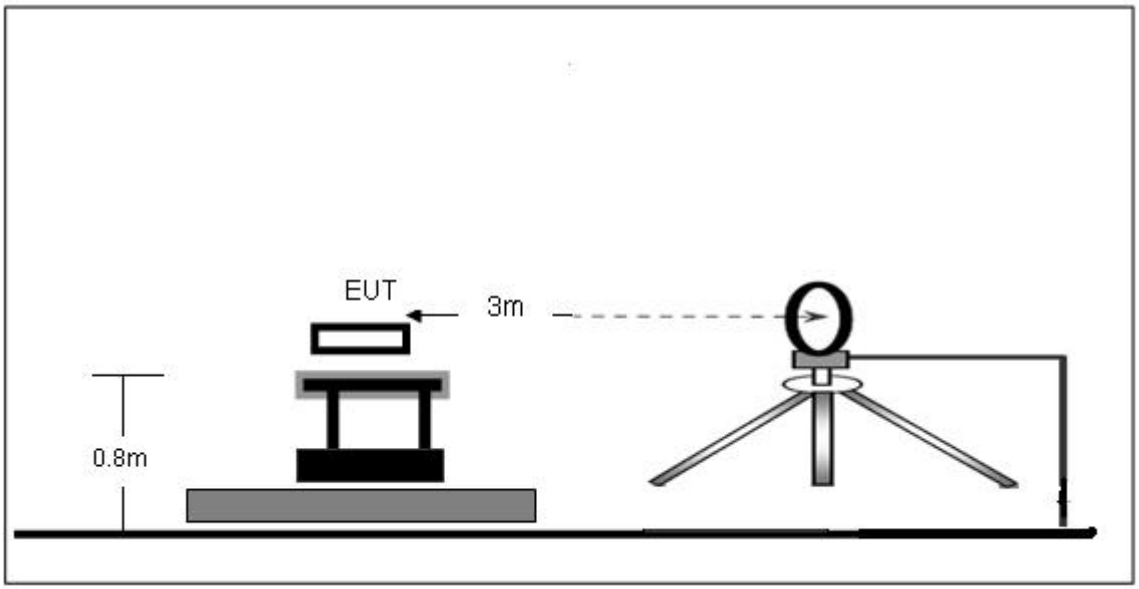
State	Frequency		
	47 MHz to 74 MHz 87,5 MHz to 137 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz	Other Frequencies below 1 000 MHz	Frequencies above 1 000 MHz
Operation	4 nW	250 nW	1 µW
Standby	2 nW	2 nW	20 nW

4.2.2 DEVIATION FROM TEST STANDARD

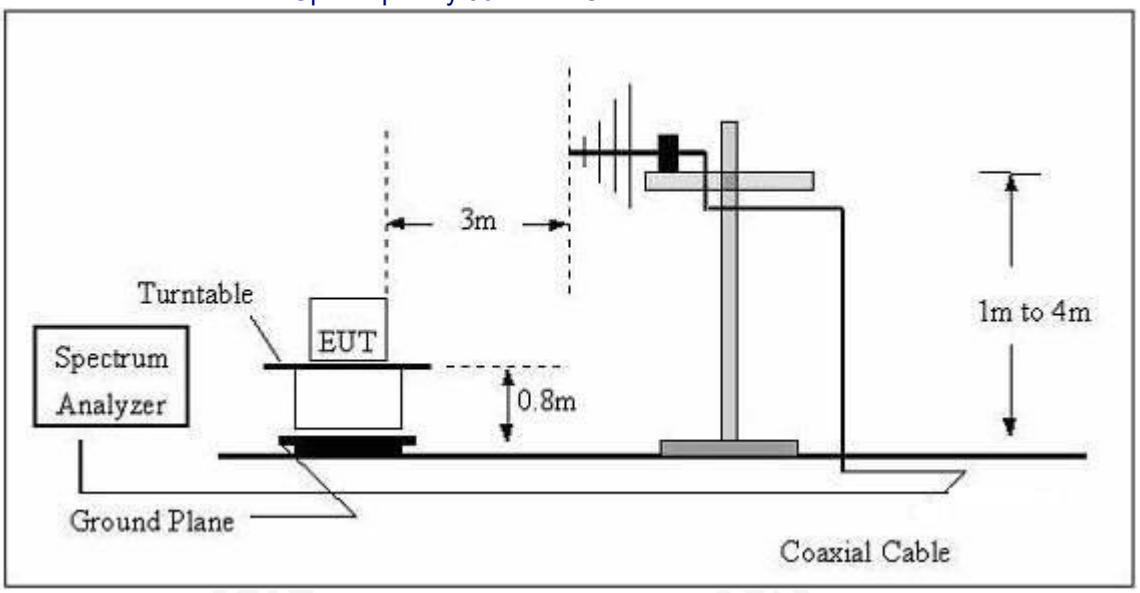
No deviation

4.2.3 TEST SETUP

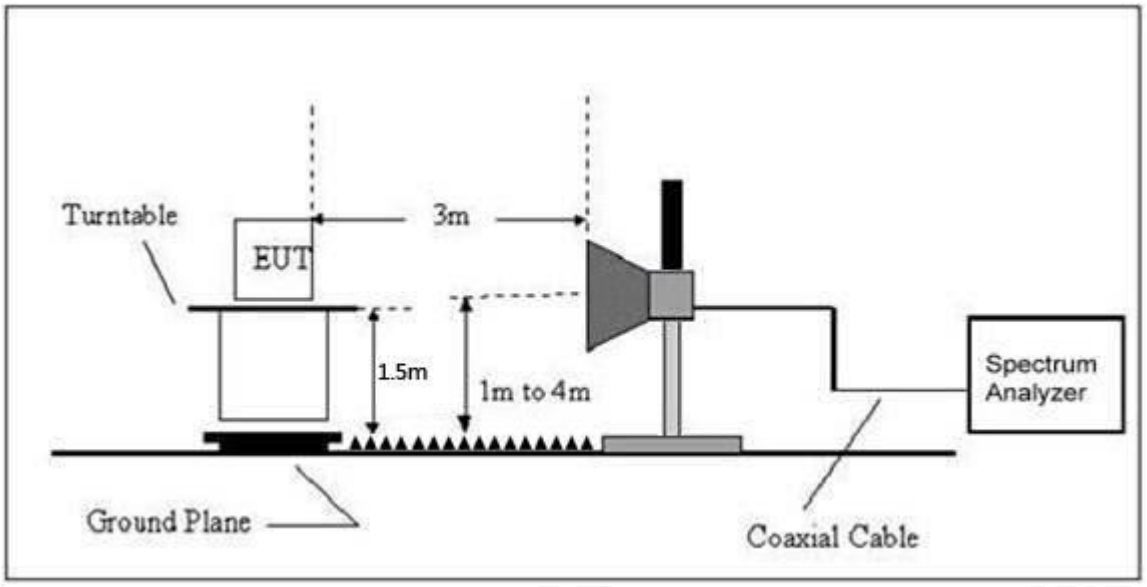
（A）Radiated Emission Test-Up Frequency Below 30MHz



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



（C）Radiated Emission Test-Up Frequency Above 1GHz



Frequency :9kHz-30MHz	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW =30KHz	VBW=300KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold	Trace = max hold
Detector function = peak	Detector function = peak	QP Detector function = peak, AV

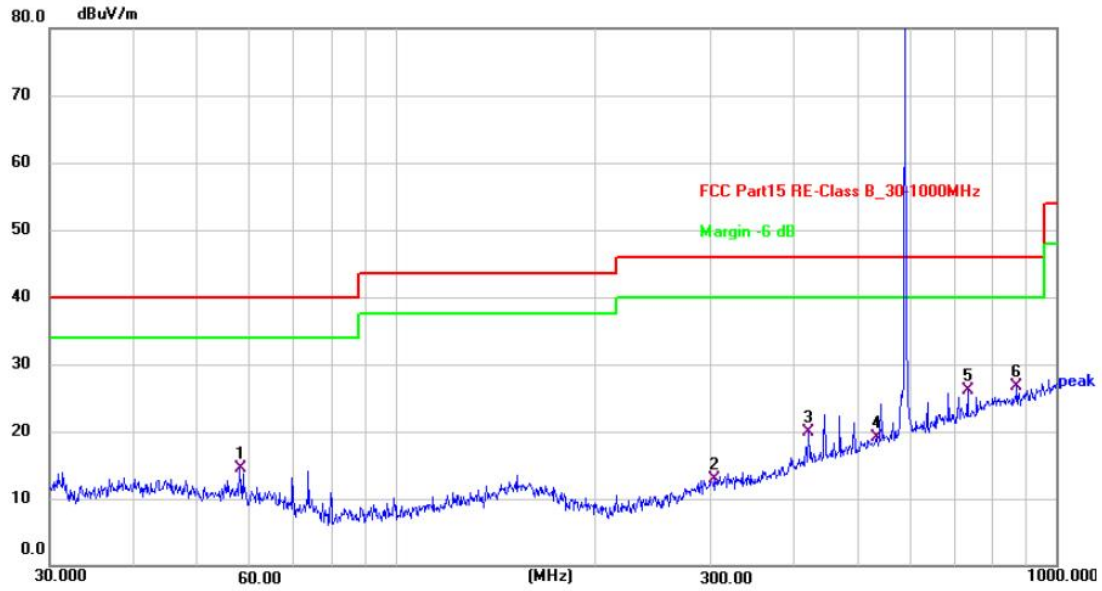
4.2.4 **TEST PROCEDURE**

1. The setup of EUT is according with per TIA/EIA Standard 603 and ANSI C63.4-2014 measurement procedure.
2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna heightand polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from theEUT. The test was performed by placing the EUT on 3-orthogonal axis.
3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

4.2.5 TEST RESULTS

Radiated Spurious Emission (Between 30MHz – 1GHz)

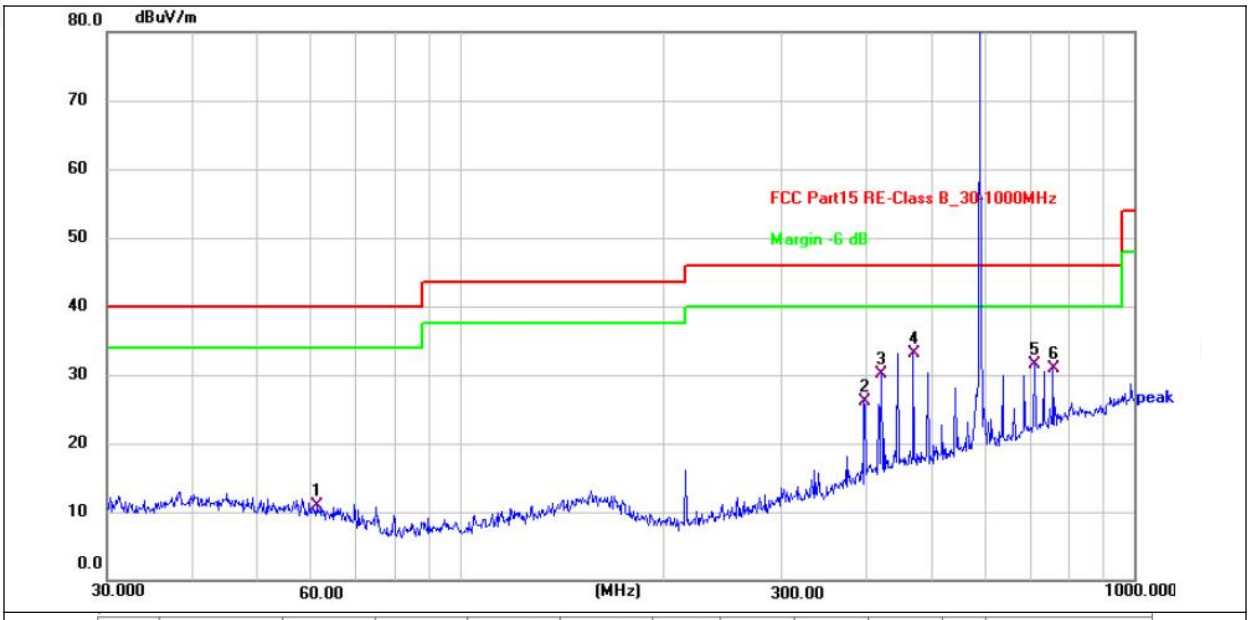
Temperature :	26 ℃	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	Horizontal
Test Voltage :	DC 3.7V		
Test Mode :	TX Mode		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	58.2030	31.82	-17.22	14.60	40.00	-25.40	QP	100	82	P	
2	304.6099	28.54	-15.57	12.97	46.00	-33.03	QP	100	242	P	
3	422.0577	32.47	-12.61	19.86	46.00	-26.14	QP	100	10	P	
4	535.7073	29.18	-10.06	19.12	46.00	-26.88	QP	100	75	P	
5	734.4913	32.31	-6.12	26.19	46.00	-19.81	QP	100	25	P	
6 *	872.1832	30.73	-4.01	26.72	46.00	-19.28	QP	100	257	P	

Remarks:
1.Final Level =Receiver Read level + Antenna Factor
2.The emission levels of other frequencies are very lower than the limit and not show in test report.

Temperature :	26 ℃	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	Vertical
Test Voltage :	DC 3.7V		
Test Mode :	TX Mode		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	61.3463	28.33	-17.46	10.87	40.00	-29.13	QP	100	38	P	
2	397.6334	39.43	-13.30	26.13	46.00	-19.87	QP	100	258	P	
3	422.0577	42.69	-12.61	30.08	46.00	-15.92	QP	100	285	P	
4 *	470.5232	44.60	-11.45	33.15	46.00	-12.85	QP	100	271	P	
5	711.6734	37.91	-6.50	31.41	46.00	-14.59	QP	100	68	P	
6	758.0408	36.51	-5.61	30.90	46.00	-15.10	QP	100	60	P	

Remarks:
1.Final Level =Receiver Read level + Antenna Factor
2.The emission levels of other frequencies are very lower than the limit and not show in test report.

Radiated Spurious Emission (Above 1GHz)

FREQUENCY (MHZ)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1380.125	-44.11	7.88	-36.23	-30	6.23	H
2043.247	-43.64	3.43	-40.21	-30	10.21	H
2752.698	-41.31	-1.83	-43.14	-30	13.14	H
1380.125	-42.56	6.31	-36.25	-30	6.25	V
2043.247	-41.38	3.03	-38.35	-30	8.35	V
2752.698	-38.75	-3.46	-42.21	-30	12.21	V

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

5. CONDUCTED OUTPUT POWER

5.1 APPLIED PROCEDURES / LIMIT

ACCORDING TO FCC 15.236(D)(1), FOR LOW POWER AUXILIARY STATION OPERATING IN THE 470-608, AND 614-698 MHZBANDS, IN THE BANDS ALLOCATED AND ASSIGNED FOR BROADCAST TELEVISION AND IN THE 600 MHZ SERVICE BAND: 50 MW EIRP

5.2 TEST PROCEDURE

1. THE MAXIMUM PEAK OUTPUT POWER WAS MEASURED WITH A SPECTRUM ANALYZER CONNECTED TO THE ANTENNA TERMINALWHILE EUT WAS OPERATING IN UNMODULATED SITUATION.
2. POWER WAS SUPPLIED TO THE BATTERY INPUT CONNECTOR A POWER SUPPLY. THE POWER SUPPLY WAS SET FOR +3.0VDC. THESPECTRUM ANALYZER WAS CONNECTED AT ANTENNA TERMINAL TO MEASURE RF POWER OF THE CARRIER.
3. A MULTIMETER WAS CONNECTED IN SERIES WITH FINAL RF STAGE TO MEASURE THE CURRENT; A MULTIMETER WAS USED TOMEASURE FINAL RF STAGE SUPPLY VOLTAGE. THEN THE VOLTAGE V.S. CURRENT OF THE FINAL RF STAGE CAN BE SHOWED.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP

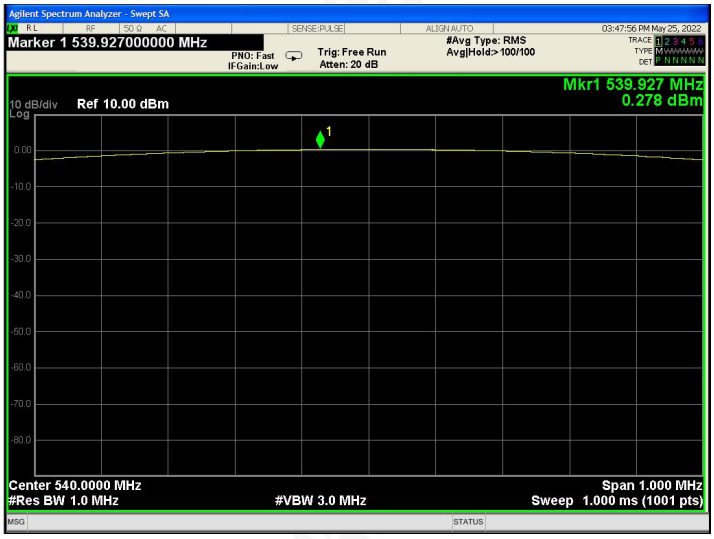
5.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

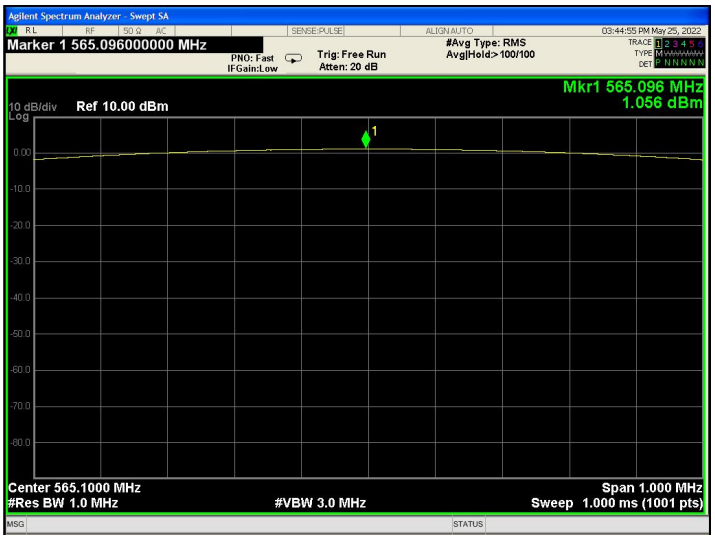
5.6 TEST RESULTS

FREQUENCY (MHZ)	CONDUCTED OUTPUT POWER (DBM)	ANT GAIN (DBI)	EIRP (DBM)	LIMIT (DBM)	RESULT
540.0	0.278	0	0.278	17	PASS
565.1	1.056	0	1.056		PASS
590.0	4.143	0	4.143		PASS

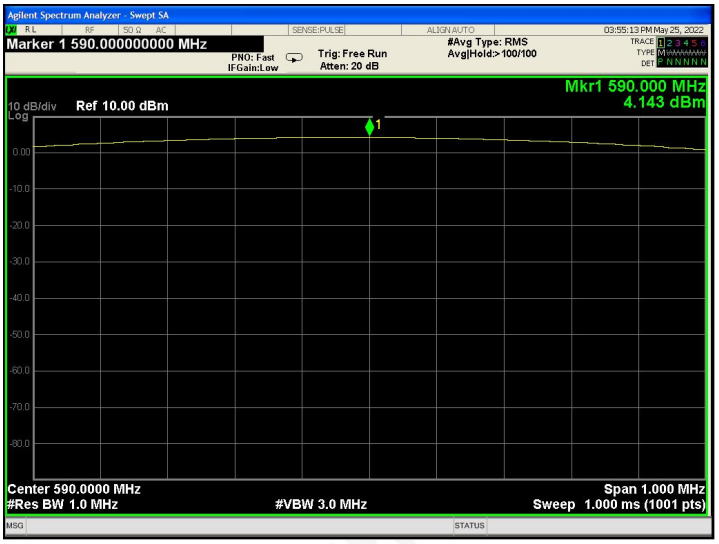
540.0MHZ



565.1MHZ



590.0MHZ


Agilent Spectrum Analyzer - Swept SA
Marker 1 590.000000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
#Avg Type: RMS
Avg|Hold:>100/100
03:55:13 PM May 25, 2022
Mkr1 590.000 MHz
4.143 dBm
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Center 590.0000 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 1.000 MHz
Sweep 1.000 ms (1001 pts)
MSG
STATUS

6. CHANNEL BANDWIDTH

6.1 APPLIED PROCEDURES / LIMIT

According to FCC 15.236(f)(2), The operating frequency within a permissible band of operation as defined inparagraph (c) must comply with the following requirements.

(1) The frequency selection shall be offset from the upper or lower band limits by 25 kHz or an integral multiple thereof.

(2) (2) One or more adjacent 25 kHz segments within the assignable frequencies may be combined to form a channel whose maximum bandwidth shall not exceed 200 kHz. The operating bandwidth shall not exceed 200kHz.

(3) Emissions within the band from one megahertz below to one megahertz above the carrier frequency shall comply with the emission mask in Section 8.3 of ETSI EN 300 422-1 V1.4.2 (2011-08) (incorporated by reference, see §15.38). Emissions outside this band shall comply with the limit specified at the edges of the ETSI mask

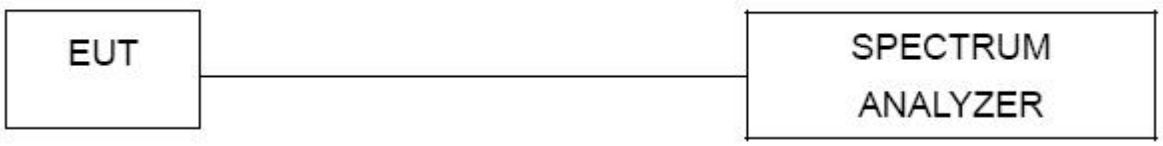
6.2 TEST PROCEDURE

According to TIA-603 for additional Test Set-Up procedures, the occupied bandwidth of emission was measuredwith a Spectrum Analyzer connected to the antenna terminal while EUT was operating in 2.5kHz tone at an inputlevel 16 dB greater than that necessary to produce 50 percent modulation. Then mark the -26dB Bandwidth andrecord it.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

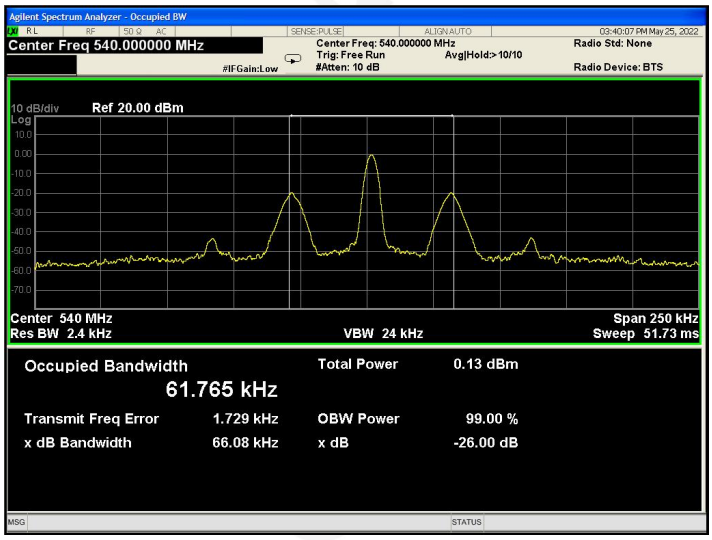
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULTS

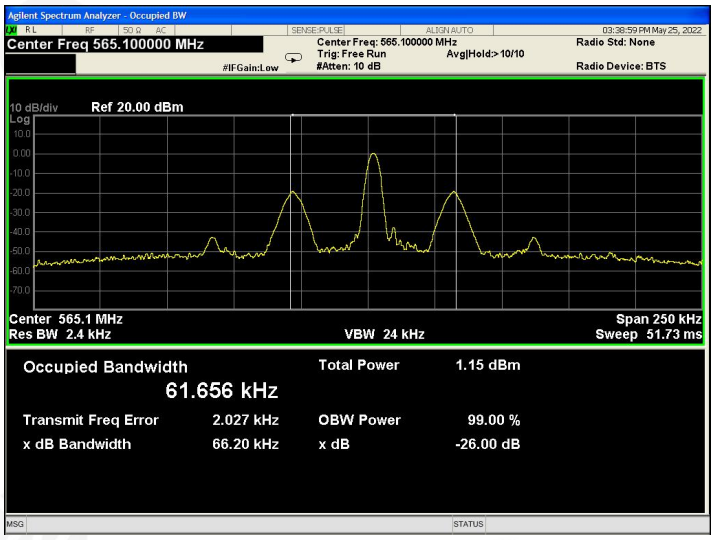
Temperature：	26℃	Relative Humidity：	54%
Test Mode ：	FM	Test Voltage ：	DC 3.7V

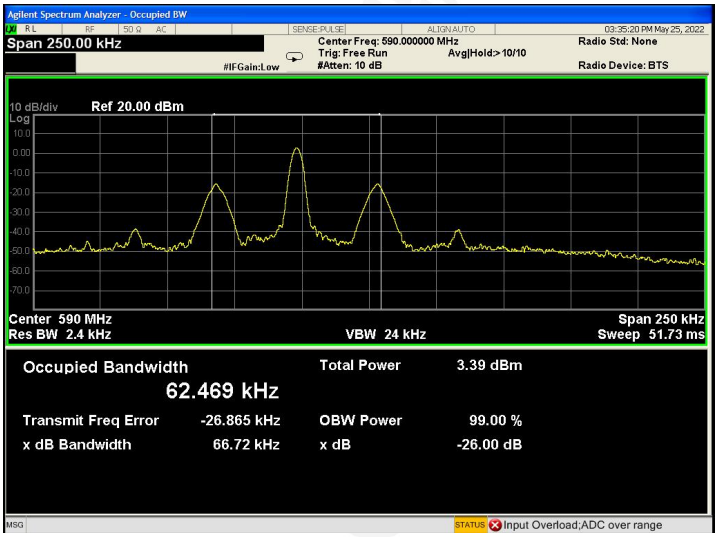
Test channel	26dB bandwidth (KHz)	99%Bandwidth (KHz)	Limit (KHz)	Result
Lowest	66.08	61.765	200	Pass
Middle	66.20	61.656		
Highest	66.72	62.469		

LCH



MCH

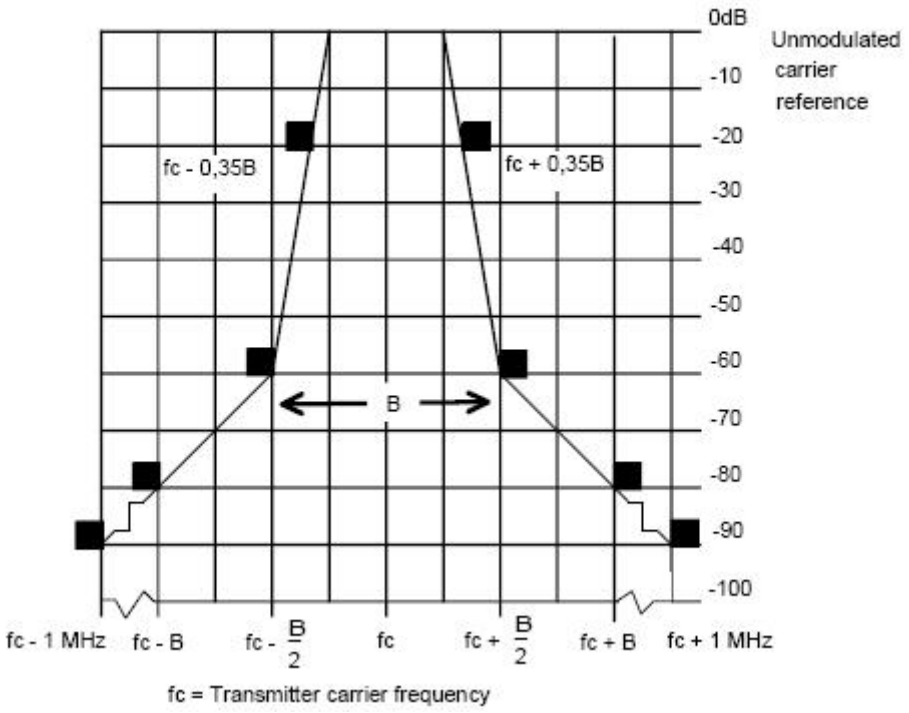


HCH


Agilent Spectrum Analyzer - Occupied BW
Span 250.00 kHz
Center Freq: 590.000000 MHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 10 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
10 dB/div
Ref 20.00 dBm
Log
Center 590 MHz
Res BW 2.4 kHz
VBW 24 kHz
Span 250 kHz
Sweep 51.73 ms
Occupied Bandwidth
62.469 kHz
Total Power
3.39 dBm
Transmit Freq Error
-26.865 kHz
OBW Power
99.00 %
x dB Bandwidth
66.72 kHz
x dB
-26.00 dB
Input Overload;ADC over range

7. NECESSARY BANDWIDTH

7.1 LIMIT



Standard Applicable

According to §15.236 (g) Emissions within the band from one megahertz below to one megahertz above thecarrier frequency shall comply with the emission mask in §8.3 of ETSI EN 300 422-1 V1.4.2 (2011-08),Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless microphones in the 25 MHz to 3GHz frequency range; Part 1: Technical characteristics and methods of measurement. Emissions outside of thisband shall comply with the limits specified in section 8.4 of ETSI EN 300 422-1 V1.4.2 (2011-08).

According to ETSI EN 300 422-2 V2.1.1 section 8.3, the transmitter output spectrum shall be within the maskdefined in the following figure.

7.2 TEST SETUP

7.3 TEST PROCEDURE

The arrangement of test equipment as shown in figure B.1 shall be used. Note that the noise meter conforms to (quasipeak) without weighting filter (flat).

With the Low Frequency (LF) audio signal generator set to 500 Hz, the audio input level to the DUT shall be adjustedto 8 dB below the limiting threshold (-8 dB (lim)) as declared by the manufacturer.

The corresponding audio output level from the demodulator shall be measured and recorded.

The input impedance of the noise meter shall be sufficiently high to avoid more than 0,1 dB change in input level whenthe meter is switched between input and output.

The audio input level shall be increased by 20 dB, i.e. to +12 dB (lim), and the corresponding change in output levelshall be measured.

It shall be checked that the audio output level has increased by ≤ 10 dB.

If this condition is not met, the initial audio input level shall be increased from -8 dB (lim) in 1 dB steps until the abovecondition is fulfilled, and the input level recorded in the test report. This level replaces the value derived from themanufacturer's declaration and is defined as -8 dB (lim).

Measure the input level at the transmitter required to give +12 dB (lim).

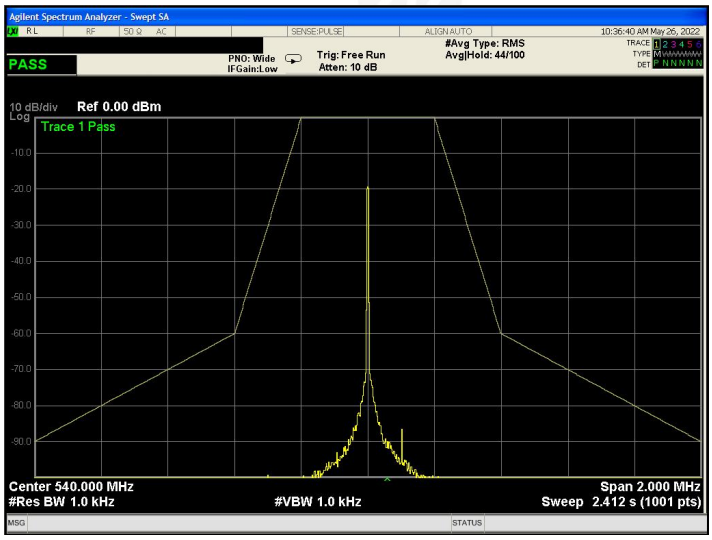
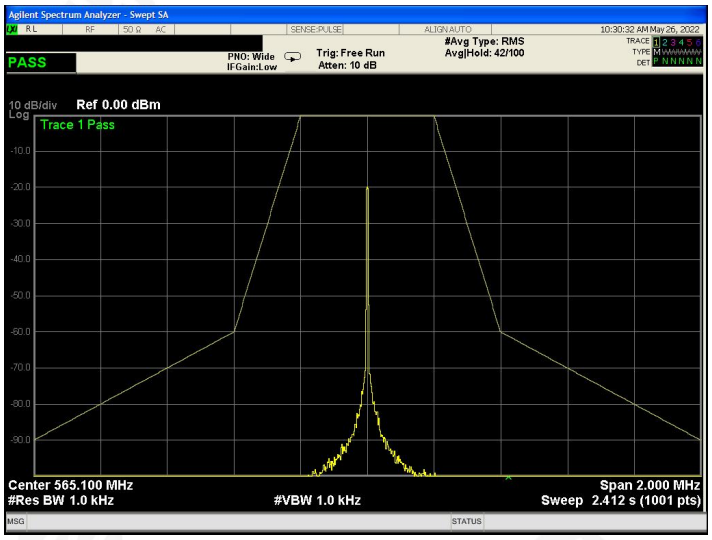
The LF generator shall be replaced with the weighted noise source to Recommendation ITU-R BS.559-2 [i.3], band-limited to 15 kHz as described in IEC 60244-13 [2], and the level shall be adjusted such that the measured input tothe transmitter corresponds to +12 dB (lim).

If the transmitter incorporates any ancillary coding or signalling channels (e.g. pilot-tones), these shall be enabled priorto any spectral measurements.

If the transmitter incorporates more than one audio input, e.g. stereo systems, the second and subsequent channels shallbe simultaneously driven from the same noise source, attenuated to a level of -6 dB (lim).

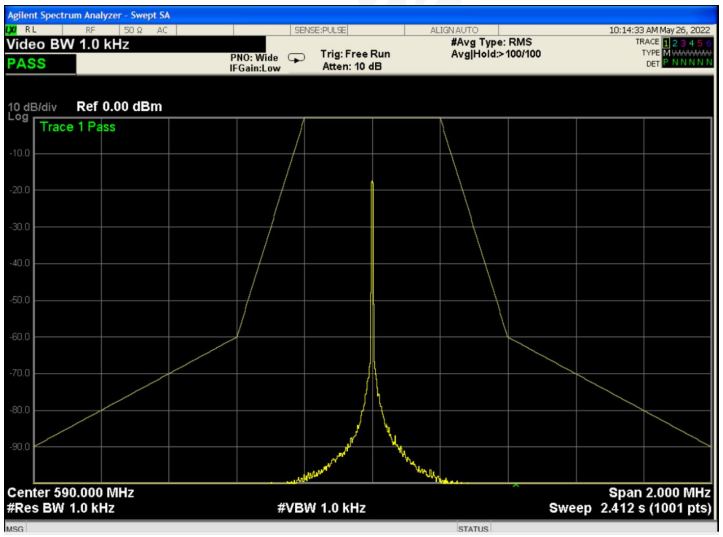
- centre frequency: fc: Transmitter (Tx) nominal frequency;
- dispersion (Span): fc - 1 MHz to fc + 1 MHz;
- Resolution BandWidth (RBW):1 kHz;
- Video BandWidth (VBW): 1 kHz;
- detector: Peak hold.

7.4 TEST RESULTS

LCH

MCH


Agilent Spectrum Analyzer - Swept SA
PASS
#Avg Type: RMS
Avg|Hold: 44/100
Trig: Free Run
Atten: 10 dB
10 dB/div
Ref 0.00 dBm
Trace 1 Pass
Center 540.000 MHz
#Res BW 1.0 kHz
#VBW 1.0 kHz
Span 2.000 MHz
Sweep 2.412 s (1001 pts)

Agilent Spectrum Analyzer - Swept SA
PASS
#Avg Type: RMS
Avg|Hold: 42/100
Trig: Free Run
Atten: 10 dB
10 dB/div
Ref 0.00 dBm
Trace 1 Pass
Center 565.100 MHz
#Res BW 1.0 kHz
#VBW 1.0 kHz
Span 2.000 MHz
Sweep 2.412 s (1001 pts)

HCH


Agilent Spectrum Analyzer - Swept SA
Video BW 1.0 kHz
PASS
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 10 dB
#Avg Type: RMS
Avg|Hold:>100/100
10:14:33 AM May 26, 2022
10 dB/div
Log
Ref 0.00 dBm
Trace 1 Pass
Center 590.000 MHz
#Res BW 1.0 kHz
#VBW 1.0 kHz
Span 2.000 MHz
Sweep 2.412 s (1001 pts)

8. FREQUENCY STABILITY

8.1 Limit

±50ppm

8.2 Standard Applicable

According to FCC 15.236(f)(3), The frequency tolerance of the carrier signal shall be maintained within ±0.005% 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 temperatureof 20 degrees C. Battery operated equipment shall be tested using a new battery

8.3 TEST SETUP

8.4 Test Procedure

1. Setup the configuration of the ambient temperature form -20ºC to 50ºC with sufficient time. And measurethe different power of the EUT with an artificial power from highest to end point voltage.
2. Set frequency counter center frequency to the right frequency needs to be measuredband.

8.5 Test Result

Test frequency	Test Conditions		Measure Frequency	Frequency Error		Limit	Result
(MHz)	Voltage (V)	Temperature (ºC)	(MHz)	(MHz)	ppm	ppm	
540.0MHz	N	N	540.0012	0.0012	2.22	±50ppm	PASS
		L	540.0026	0.0026	4.81		
		H	540.0015	0.0015	2.78		
	L	N	540.0073	0.0073	13.52		
		L	540.0039	0.0039	7.22		
		H	540.0052	0.0052	9.63		
	H	N	540.0056	0.0056	10.37		
		L	540.0042	0.0042	7.78		
		H	540.0047	0.0047	8.70		

Test frequency	Test Conditions		Measure Frequency	Frequency Error		Limit	Result
(MHz)	Voltage (V)	Temperature (ºC)	(MHz)	(MHz)	ppm	ppm	
565.1MHz	N	N	565.1036	0.0036	6.37	±50ppm	PASS
		L	565.1031	0.0031	5.49		
		H	565.1089	0.0089	15.75		
	L	N	565.1043	0.0043	7.61		
		L	565.1039	0.0039	6.90		
		H	565.1054	0.0054	9.56		
	H	N	565.1073	0.0073	12.92		
		L	565.1037	0.0037	6.55		
		H	565.1045	0.0045	7.96		

Test frequency	Test Conditions		Measure Frequency	Frequency Error		Limit	Result
(MHz)	Voltage (V)	Temperature (ºC)	(MHz)	(MHz)	ppm	ppm	
590MHz	N	N	590.0017	0.0017	2.88	±50ppm	PASS
		L	590.0021	0.0021	3.56		
		H	590.0041	0.0041	6.95		
	L	N	590.0044	0.0044	7.46		
		L	590.0053	0.0053	8.98		
		H	590.0039	0.0039	6.61		
	H	N	590.0013	0.0013	2.20		
		L	590.0047	0.0047	7.97		
		H	590.0033	0.0033	5.59		

9. ANTENNA REQUIREMENT

Compliance with Section 15.203 antenna requirements does not apply to devices operated under Section 15.236.

10. TEST SETUP PHOTO

Reference to the appendix I for details.

11. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

※※※※※ END OF REPORT ※※※※※