

TEST REPORT

Applicant: Moman Technology Limited

Address of Applicant: 12/F, SanToi Building, 137-139 Connaught Road, Central Hong Kong China

Manufacturer: Moman Technology Limited

Address of Manufacturer: 12/F, SanToi Building, 137-139 Connaught Road, Central Hong Kong China

Equipment Under Test (EUT)

Product Name: UHF Wireless Microphone

Model No.: T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T1S, T2S, T3S, T4S, T5S, T6S, T7S, T8S, T9S, T10S

Trade Mark: MOMAN

FCC ID: 2AZKG-MTS

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.236

Date of sample receipt: Mar.03,2021

Date of Test: Mar.03,2021- Apr.09,2021

Date of report issued: Apr.09,2021

Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Luo

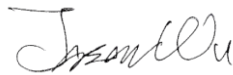
Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

2 Version

Version No.	Date	Description
00	Apr.09,2021	Original

Tested/Prepared By:



Date:

Apr.09,2021

Project Engineer

Check By:


Reviewer

Date:

Apr.09,2021

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4 Test Summary

Test Specification clause	Test case	Test result
§15.236(d)	RF Power Output	Compliant
§15.236(f)(2)	Occupied Bandwidth	Compliant
§15.236(g)	Necessary Bandwidth	Compliant
§15.236(g)	Spurious emissions	Compliant
§15.236(f)(3)	Frequency Stability	Compliant
§15.207	Conducted Emissions	N/A

1. Pass: The EUT complies with the essential requirements in the standard.

Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	30MHz-200MHz	3.8039dB	(1)
Radiated Emission	200MHz-1GHz	3.9679dB	(1)
Radiated Emission	1GHz-18GHz	4.29dB	(1)
Radiated Emission	18GHz-40GHz	3.30dB	(1)
AC Power Line Conducted Emission	0.15MHz ~ 30MHz	3.44dB	(1)

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

5 General Information

5.1 General Description of EUT

Product Name:	UHF Wireless Microphone
Model No.:	T1
Series model:	T2, T3, T4, T5, T6, T7, T8, T9, T10, T1S, T2S, T3S, T4S, T5S, T6S, T7S, T8S, T9S, T10S
Power supply:	DC 3.0V(AA 1.5V x 2) From Battery
Test sample(s) ID:	GTSL202103000146-1(Engineer sample) GTSL202103000146-2(Normal sample)
Frequency range:	From 570MHz to 586MHz
Channel number:	16
Nominal channel bandwidth	200KHz
Modulation Type:	FM
Antenna Type:	Integral antenna
Antenna Gain:	1.00dBi
Equipment Category	3

5.2 Operation Frequency:

Channel	frequency	Channel	frequency
1	570.225	9	578.375
2	571.575	10	579.100
3	572.250	11	580.175
4	573.550	12	581.175
5	576.100	13	583.125
6	575.750	14	583.625
7	577.450	15	584.825
8	577.950	16	585.800

Note: The line display in grey were the channel selected for testing

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	570.225MHz
The middle channel	578.375MHz
The Highest channel	585.800MHz

5.3 Environmental conditions

Radiated Emission:

Temperature:	25 ° C
Humidity:	52 %
Atmospheric pressure:	950-1050mbar

Conducted testing:

Temperature:	24 ° C
Humidity:	48 %
Atmospheric pressure:	950-1050mbar

5.4 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode
<i>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.</i>	

5.5 Description of Support Units

None.

5.6 Deviation from Standards

None.

5.7 Abnormalities from Standard Conditions

None.

5.8 Test Facility

The test facility is recognized, certified, or accredited by the following organizations: ● FCC —Registration No.: 381383 Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 381383. ● IC —Registration No.: 9079A The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A ● NVLAP (LAB CODE:600179-0) Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). LAB CODE:600179-0

5.9 Test Location

All tests were performed at:
Global United Technology Services Co., Ltd. Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102 Tel: 0755-27798480 Fax: 0755-27798960

5.10 Additional Instructions

Test Software	Special AT test command provided by manufacturer to Keep the EUT in continuously transmitting mode and hopping mode
Power level setup	Default

6 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July. 02 2020	July. 01 2025
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June. 25 2020	June. 24 2021
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 25 2020	June. 24 2021
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 25 2020	June. 24 2021
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 25 2020	June. 24 2021
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	June. 25 2020	June. 24 2021
9	Coaxial Cable	GTS	N/A	GTS211	June. 25 2020	June. 24 2021
10	Coaxial cable	GTS	N/A	GTS210	June. 25 2020	June. 24 2021
11	Coaxial Cable	GTS	N/A	GTS212	June. 25 2020	June. 24 2021
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 25 2020	June. 24 2021
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 25 2020	June. 24 2021
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 25 2020	June. 24 2021
15	Band filter	Amindeon	82346	GTS219	June. 25 2020	June. 24 2021
16	Power Meter	Anritsu	ML2495A	GTS540	June. 25 2020	June. 24 2021
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 25 2020	June. 24 2021
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 25 2020	June. 24 2021
19	Splitter	Agilent	11636B	GTS237	June. 25 2020	June. 24 2021
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 25 2020	June. 24 2021
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 18 2020	Oct. 17 2021
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 18 2020	Oct. 17 2021
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 18 2020	Oct. 17 2021
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 25 2020	June. 24 2021

Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	May.15 2019	May.14 2022
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 25 2020	June. 24 2021
3	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	June. 25 2020	June. 24 2021
4	ENV216 2-L-V-NETZNACHB.DE	ROHDE&SCHWARZ	ENV216	GTS226	June. 25 2020	June. 24 2021
5	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
7	Thermo meter	KTJ	TA328	GTS233	June. 25 2020	June. 24 2021
8	Absorbing clamp	Elektronik-Feinmechanik	MDS21	GTS229	June. 25 2020	June. 24 2021
9	ISN	SCHWARZBECK	NTFM 8158	GTD565	June. 25 2020	June. 24 2021

RF Conducted Test:						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	MXA Signal Analyzer	Agilent	N9020A	GTS566	June. 25 2020	June. 24 2021
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 25 2020	June. 24 2021
3	Spectrum Analyzer	Agilent	E4440A	GTS533	June. 25 2020	June. 24 2021
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	June. 25 2020	June. 24 2021
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	June. 25 2020	June. 24 2021
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	June. 25 2020	June. 24 2021
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	June. 25 2020	June. 24 2021
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	June. 25 2020	June. 24 2021

General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Humidity/ Temperature Indicator	KTJ	TA328	GTS243	June. 25 2020	June. 24 2021
2	Barometer	ChangChun	DYM3	GTS255	June. 25 2020	June. 24 2021

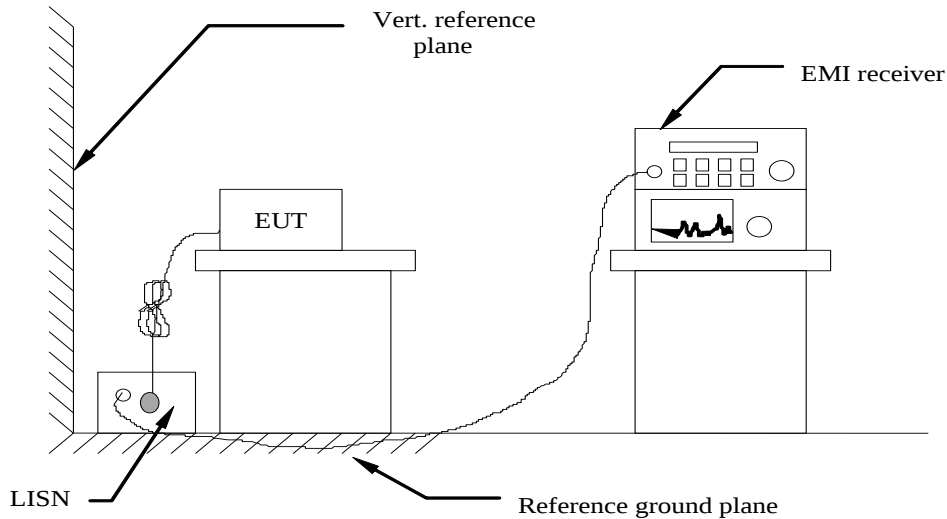
7 Test results and Measurement Data

7.1 Antenna requirement

Standard requirement:	FCC Part15 C Section 15.203 /247(c)
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.	
15.247(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.	
E.U.T Antenna:	
<i>The antenna is Integrated antenna, the best case gain of the is 1.00dBi, reference to the appendix II for details</i>	

7.2 Conducted Emissions

TEST CONFIGURATION



TEST PROCEDURE

- 1 The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10-2013.
- 2 Support equipment, if needed, was placed as per ANSI C63.10-2013
- 3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10-2013
- 4 The EUT received DC12V power from adapter, the adapter received AC120V/60Hz and AC 240V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5 All support equipments received AC power from a second LISN, if any.
- 6 The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7 Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
- 8 During the above scans, the emissions were maximized by cable manipulation.

AC Power Conducted Emission Limit

For intentional device, according to § 15.207(a) AC Power Conducted Emission Limits is as following :

Frequency range (MHz)	Limit (dBuV)	
	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 RESULTS

The EUT is powered by Battery, So this test item is not applicable for the EUT.

7.3 Conducted Output Power

Limit

The maximum radiated power shall not exceed the following values:

- (1) In the bands allocated and assigned for broadcast television and in the 600 MHz service band: 50 mW EIRP
- (2) In the 600 MHz guard band and the 600 MHz duplex gap: 20 mW EIRP.

Test Procedure

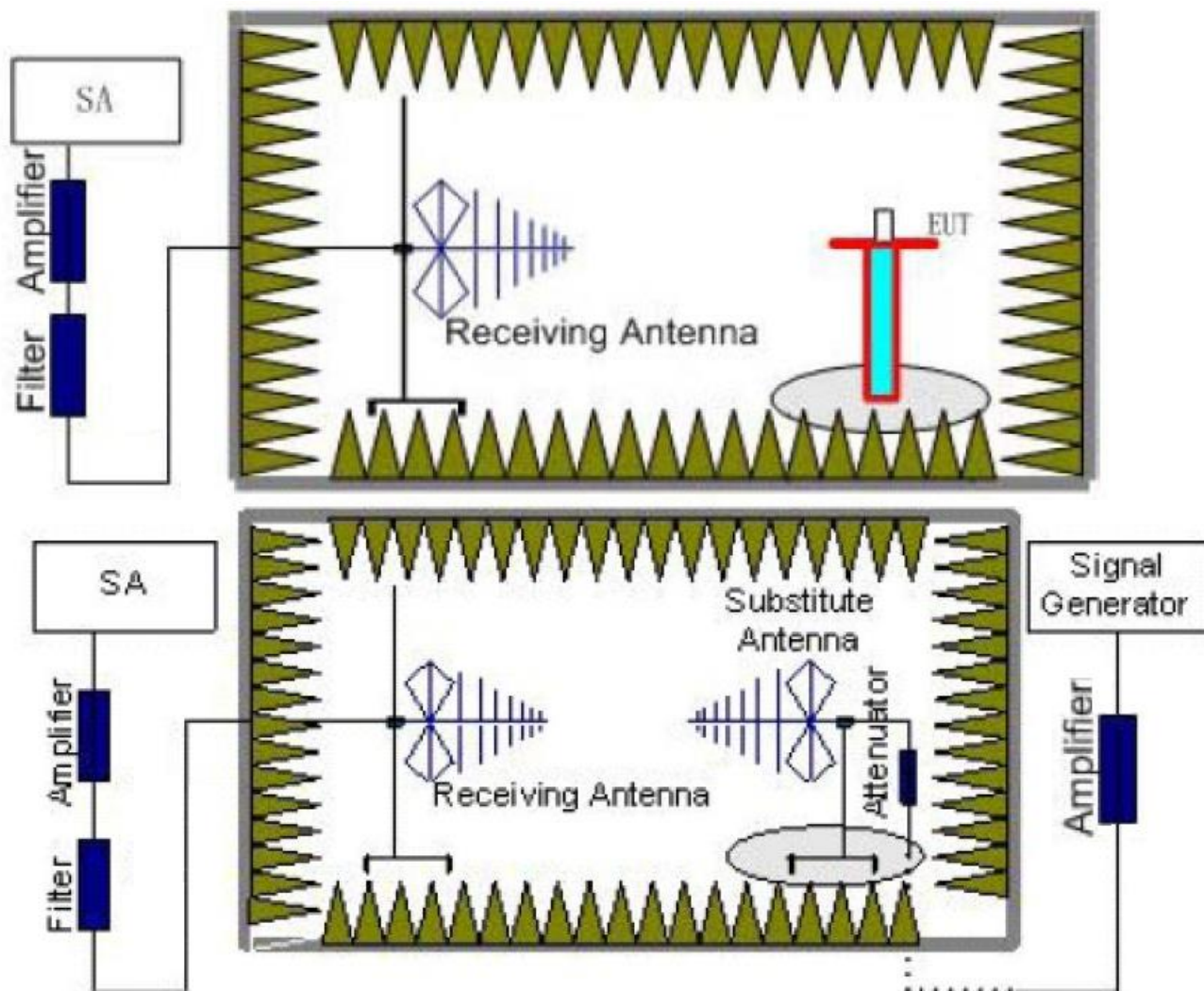
1. EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.5m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all test transmit frequencies were measured with peak detector.
2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
3. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz, And the maximum value of the receiver should be recorded as (P_r).
4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
5. An amplifier may be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (P_{cl}), the Substitution Antenna Gain (G_a) and the Amplifier Gain (P_{Ag}) should be recorded after test.

The measurement results are obtained as described below:

$$\text{Power(EIRP)} = P_{Mea} + P_{Ag} - P_{cl} + G_a$$

6. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
7. ERP can be calculated from EIRP by subtracting the gain of the dipole, $ERP = EIRP - 2.15\text{dBi}$.

Test Configuration



Test Results

Remark;

The field strength of radiation emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The data show in this report only with the worst case setup. After exploratory measurement the worst case of Z axis and receiver antenna at vertical polarization was reported.

Test Frequency (MHz)	P _{Mea} (dBm)	P _{cl} (dB)	G _a Antenna Gain(dBi)	P _{Ag} (dB)	EIRP (dBm)	EIRP (mW)	FCC Limit (mW)	Polarization
570.225	-23.12	1.85	8.54	26.87	10.44	11.07	50	V
578.375	-22.98	1.85	8.54	26.87	10.58	11.43	50	V
585.800	-23.07	1.85	8.54	26.87	10.49	11.19	50	V

Remark: $EIRP = P_{Mea}(dBm) + P_{Ag}(dB) - P_{cl}(dB) + G_a(dBi)$

7.4 Occupied Bandwidth

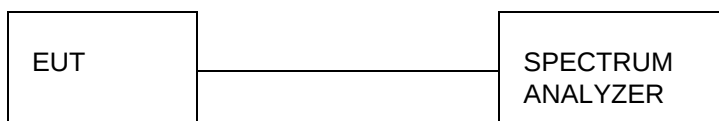
Limit

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 200 kHz.

Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 3 KHz RBW and 10 KHz VBW.

Test Configuration

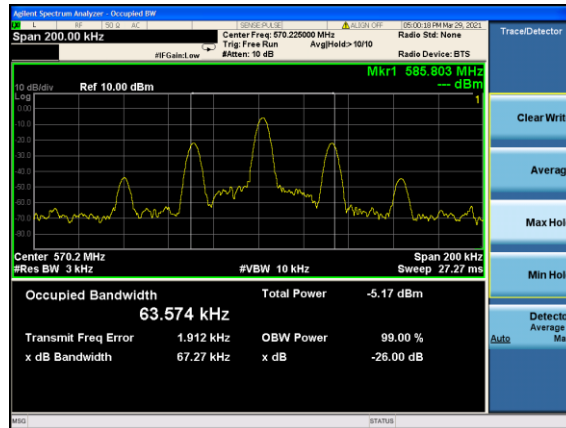


Test Results

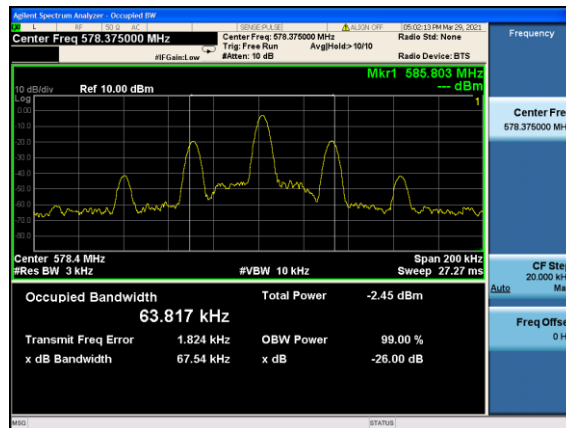
Measurement Data

Test channel	99% OBW (KHz)	Limit (KHz)	Result
Lowest	63.574	200	Pass
Middle	63.817		
Highest	63.872		

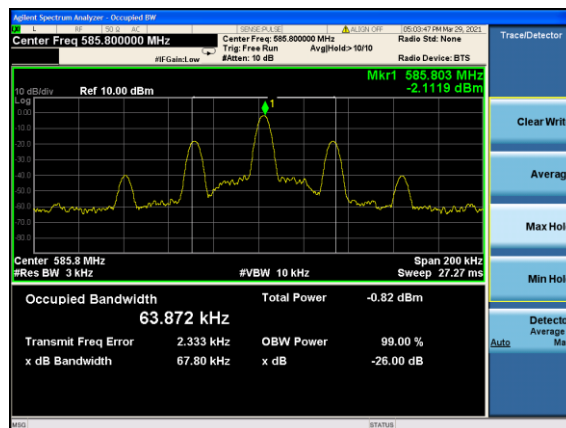
Test plot as follows:



Lowest channel



Middle channel



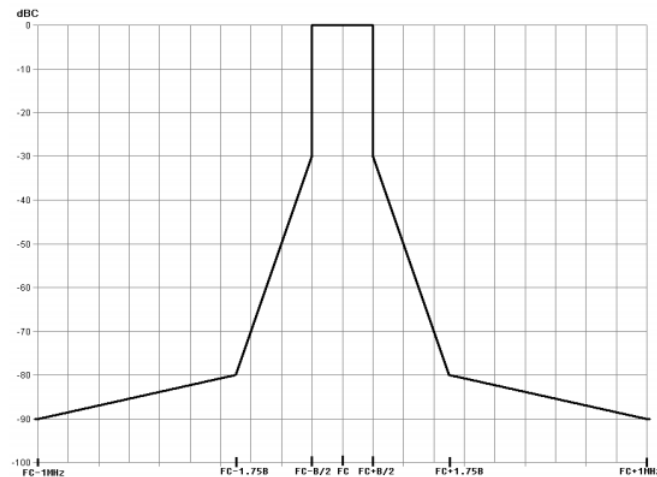
Highest channel

7.5 Necessary Bandwidth

LIMIT

Emissions within the band from one megahertz below to one megahertz above the carrier frequency shall comply with the emission mask in §8.3 of ETSI EN 300 422-1 V1.4.2 (2011-08) as below:

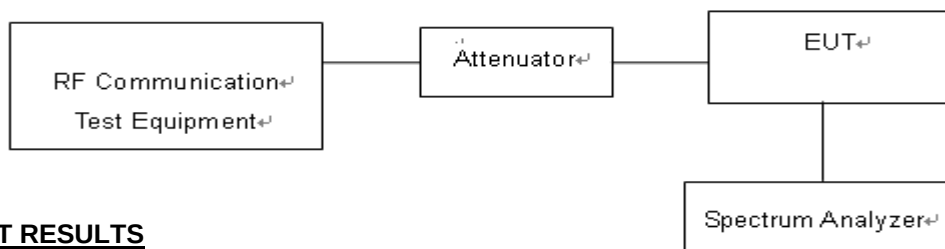
The transmitter output spectrum shall be within the mask defined in figure below where B is the declared channel bandwidth



TEST PROCEDURE

1. With the Low Frequency (LF) audio signal generator set to 500 Hz, the audio input level to the EUT shall be Adjusted to 8 dB below the limiting threshold (-8dB limit) as declared by the manufacturer.
2. The corresponding audio output level from the demodulator shall be measured and recorded.
3. The input impedance of the noise meter shall be sufficiently high to avoid more than 0.1 dB changes in input level when the meter is switched between input and output.
4. The audio input level shall be increased by 20 dB, i.e. to 12 dB (lim), and the corresponding change in output level shall be measured.
5. It shall be checked that the audio output level has increased by ≤ 10 dB.
6. If the step 5 is not met, the initial audio input level shall be increased from -8 dB (lim) in 1 dB steps until the above condition is fulfilled, and the input level recorded in the test report. This level replaces the value derived from the manufacturer's declaration and is defined as -8dB (lim).
7. Measure the input level at the transmitter required to give +12 dB (lim) and record the EUT output level test plots by the spectrum analyzer.
8. The transmitter RF output spectrum shall be measured, using a spectrum analyser with the following settings:
 - 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.

TEST CONFIGURATION

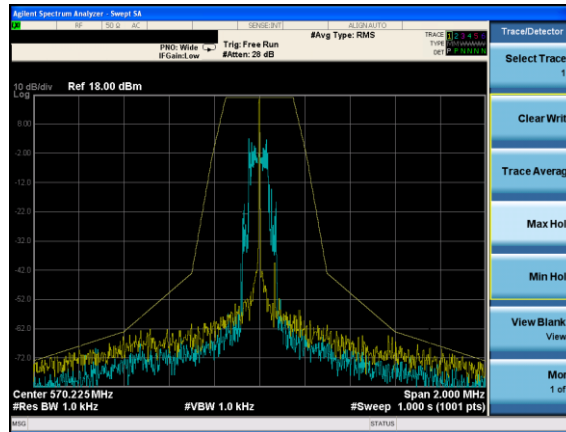


TEST RESULTS

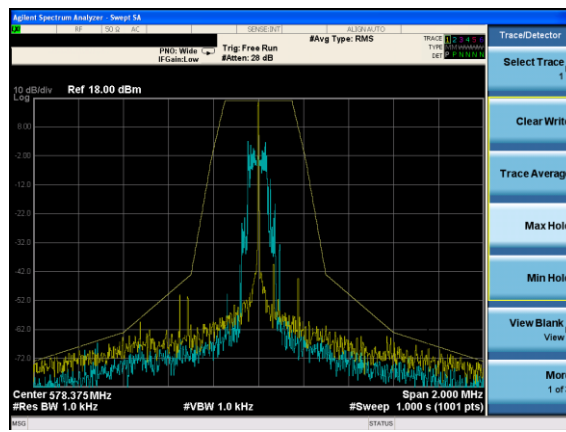
Note:

	Bandwidth(B)	B/2	0.35B
Manufacturer declare	200 KHz	100KHz	70KHz

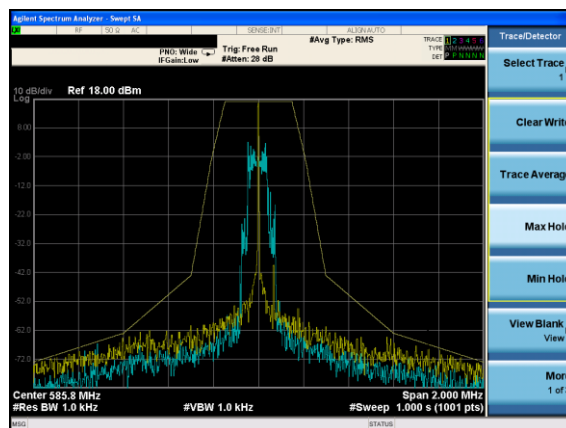
Test plot as follows:



Lowest channel



Middle channel



Highest channel

7.6 Transmitter spurious emissions

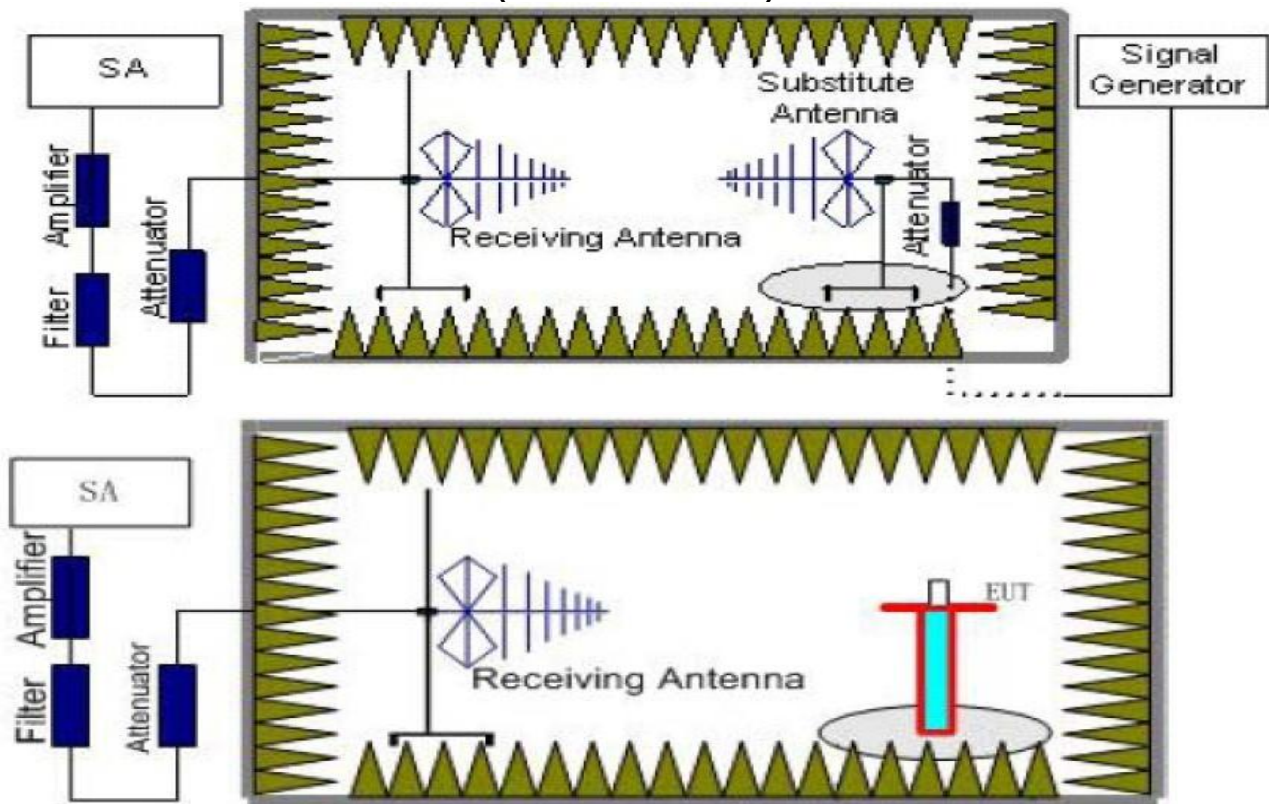
Limit

Spurious emissions are emissions outside the frequency range(s) of the equipment. The power of the spurious emissions shall not exceed the limits of table as below:

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 μ W
Standby	2 nW	2 nW	20 nW

Test Configuration

Effective Radiated Power measurement (30 MHz to 12.75 GHz)



TEST PROCEDURE

1. The EUT was placed on a turntable with 1.5m height.
2. The test distance between the receiving antenna and the EUT is 3 meter, while the receiving (test) antenna is kept at 1.5 meter height.
3. Set EUT in continuous transmitting with maximum output power at test frequency.

4. The table was rotated from 0 to 360 degree to search the highest radiated emission.
5. Repeat step 3 to 4 for each polarization and test channel to find the worst emission level.
6. The results obtained are compared to the limits in order to prove compliance with the requirement.

TEST RESULTS

The test frequency range from 25MHz to 4GHz and recorded worst at below:

Test mode: Tx (570.225MHz)					
Frequency (MHz)	Pol./Ant	Measurement EIRP (dBm)	Limit (dBm)	Margin (dB)	Result
1140.450	V	-57.42	-54	3.42	PASS
1710.675	V	-59.69	-54	5.69	
2280.900	V	-61.32	-54	7.32	
--	V	--	--	--	
1140.450	H	-57.49	-54	3.429	
1710.675	H	-59.68	-54	5.68	
2280.900	H	-61.43	-54	7.43	
--	H	--	--	--	

Test mode: Tx (578.375MHz)					
Frequency (MHz)	Pol./Ant	Measurement EIRP (dBm)	Limit (dBm)	Margin (dB)	Result
1156.750	V	-58.12	-54	4.12	PASS
1735.125	V	-59.49	-54	5.49	
2313.500	V	-61.22	-54	7.22	
--	V	--	--	--	
1156.750	H	-56.75	-54	2.75	
1735.125	H	-59.21	-54	5.21	
2313.500	H	-60.97	-54	6.97	
--	H	--	--	--	

Test mode: Tx (585.800MHz)					
Frequency (MHz)	Pol./Ant	Measurement EIRP (dBm)	Limit (dBm)	Margin (dB)	Result
1171.600	V	-58.34	-54	4.34	PASS
1757.400	V	-59.43	-54	5.43	
2343.200	V	-60.65	-54	6.65	
--	V	--	--	--	
1171.600	H	-57.82	-54	3.82	
1757.400	H	-60.11	-54	6.11	
2343.200	H	-61.27	-54	7.27	
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Remark:

1. The test frequency range from 25MHz to 4GHz, RBW/VBW: 100 KHz/300KHz below 1GHz, RBW/VBW: 1000 KHz/3000KHz above 1GHz.
2. "--"Other emission levels were very low against the limit and not reported.

7.7 Frequency Stability

Limit

The frequency tolerance of the carrier signal shall be maintained within $\pm 0.005\%$ 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 temperature of 20 degrees C. Battery operated equipment shall be tested using a new battery.

Test Procedure

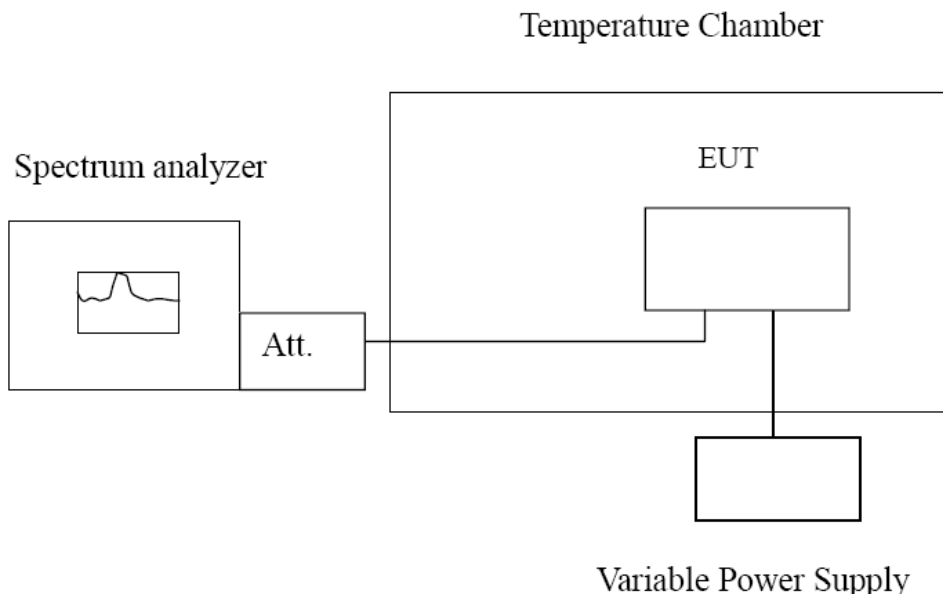
a) Frequency stability versus environmental temperature

1. Setup as Test Configuration for frequencies measured at ambient temperature if it is within 15°C to 25°C . Otherwise, an environmental chamber set for a temperature of 20°C shall be used.
2. Turn on EUT and set SA center frequency to the right frequency needs to be measured. Then set SA RBW to 3 kHz, VBW to 10kHz and frequency span to 500 kHz. Record this frequency to be a reference.
3. Set the temperature of chamber to 50°C . Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize. While maintaining a constant temperature inside the chamber, turn the EUT on and measure the EUT operating frequency.
4. Repeat step 2 with a 10°C decreased per stage until the lowest temperature -20°C is measured, record all measurement frequencies.

b) Frequency stability versus input voltage

1. Setup as Test Configuration for frequencies measured at ambient temperature if it is within 15°C to 25°C . Otherwise, an environmental chamber set for a temperature of 20°C shall be used. Install new batteries in the EUT.
2. Set SA center frequency to the right frequency needs to be measured. Then set SA RBW to 3kHz, VBW to 10kHz and frequency span to 500 kHz. Record this frequency to be a reference.
3. For non hand carried, battery operated device, supply the EUT primary voltage with 85 and 115 percent of the nominal value and record the frequency.

Test Configuration



Test Results

Reference Frequency: 570.225MHz					
Voltage (V)	Temperature (°C)	Frequency error (MHz)	Frequency Tolerance (%)	Limit (%)	Result
3.0	-20	0.00065	0.000114%	±0.005	PASS
	-10	0.00092	0.000161%		
	0	0.00037	0.000065%		
	10	0.00042	0.000074%		
	20	0.00068	0.000119%		
	30	0.00092	0.000161%		
	40	0.00077	0.000135%		
	50	0.00068	0.000119%		
3.45	20	0.00059	0.000103%	±0.005	PASS
2.55	20	0.00066	0.000116%		

Reference Frequency: 578.375MHz					
Voltage (V)	Temperature (°C)	Frequency error (MHz)	Frequency Tolerance (%)	Limit (%)	Result
3.0	-20	0.00098	0.000169%	±0.005	PASS
	-10	0.00102	0.000176%		
	0	0.00089	0.000154%		
	10	0.00111	0.000192%		
	20	0.00097	0.000168%		
	30	0.00105	0.000182%		
	40	0.00095	0.000164%		
	50	0.00105	0.000182%		
3.45	20	0.00084	0.000145%	±0.005	PASS
2.55	20	0.00102	0.000176%		

Reference Frequency: 585.800MHz					
Voltage (V)	Temperature (°C)	Frequency error (MHz)	Frequency Tolerance (%)	Limit (%)	Result
3.0	-20	0.00103	0.000176%	±0.005	PASS
	-10	0.00089	0.000152%		
	0	0.00097	0.000166%		
	10	0.00105	0.000179%		
	20	0.00109	0.000186%		
	30	0.00111	0.000189%		
	40	0.00097	0.000166%		
	50	0.00089	0.000152%		
3.45	20	0.00102	0.000174%	±0.005	PASS
2.55	20	0.00097	0.000166%		

8 Test Setup Photo

Reference to the **appendix I** for details.

9 EUT Constructional Details

Reference to the **appendix II** for details.

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