

FCC Test Report

Report No.: AGC13779230301FE02

FCC ID : Z63-V3E7PRO

APPLICATION PURPOSE: Original Equipment

PRODUCT DESIGNATION: Wireless Headphones

BRAND NAME : AUSDOM, Mixcder

MODEL NAME : E7, ANC8, E7 PRO

APPLICANT: SHENZHEN AONI ELECTRONIC CO., LTD.

DATE OF ISSUE : Oct. 19, 2023

STANDARD(S) : FCC Part 15.247

REPORT VERSION: V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd



Page 2 of 43

REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Oct. 19, 2023	Valid	Initial Release



Page 3 of 43

TABLE OF CONTENTS

1. VERIFICATION OF COMPLIANCE	5
2. GENERAL INFORMATION	6
2.1. PRODUCT DESCRIPTION 2.2. TABLE OF CARRIER FREQUENCYS 2.3. RELATED SUBMITTAL(S)/GRANT(S)	6 7 7
2.6. EQUIPMENT MODIFICATIONS	7 7
3. MEASUREMENT UNCERTAINTY	9
4. DESCRIPTION OF TEST MODES	10
5. SYSTEM TEST CONFIGURATION	11
5.1. CONFIGURATION OF TESTED SYSTEM 5.2. EQUIPMENT USED IN TESTED SYSTEM 5.3. SUMMARY OF TEST RESULTS	11
6. TEST FACILITY	12
7. PEAK OUTPUT POWER	13
7.1. MEASUREMENT PROCEDURE 7.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) 7.3. LIMITS AND MEASUREMENT RESULT	13
8. BANDWIDTH	16
8.1. MEASUREMENT PROCEDURE	
9. CONDUCTED SPURIOUS EMISSION	20
9.1. MEASUREMENT PROCEDURE 9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) 9.3. MEASUREMENT EQUIPMENT USED 9.4. LIMITS AND MEASUREMENT RESULT	20 20 20
10. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY	27
10.1. MEASUREMENT PROCEDURE	27 27
11. RADIATED EMISSION	29
11.1. MEASUREMENT PROCEDURE	30 31
12. LINE CONDUCTED EMISSION TEST	41
12.1. LIMITS OF LINE CONDUCTED EMISSION TEST	41



Page 4 of 43

12.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST	41
12.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST	
12.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST	42
12.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST	42
APPENDIX A: PHOTOGRAPHS OF TEST SETUP	43
APPENDIX B: PHOTOGRAPHS OF EUT	43



Page 5 of 43

1. VERIFICATION OF COMPLIANCE

Applicant	SHENZHEN AONI ELECTRONIC CO., LTD.		
Applicant			
Address	No.5, Bldg., Honghui Industrial Park, 2nd Liuxian Road, Xin'An streets, Baoan		
	District, Shenzhen, China		
Manufacturer	SHENZHEN AONI ELECTRONIC CO., LTD.		
Address	No.5, Bldg., Honghui Industrial Park, 2nd Liuxian Road, Xin'An streets, Baoan		
Address	District, Shenzhen, China		
Factory	SHENZHEN AONI ELECTRONIC CO., LTD.		
Address	No.5, Bldg., Honghui Industrial Park, 2nd Liuxian Road, Xin'An streets, Baoan		
Address	District, Shenzhen, China		
Product Designation	Wireless Headphones		
Brand Name	AUSDOM, Mixcder		
Test Model	E7		
Series Model	ANC8, E7 PRO		
Declaration of Difference	All the same except for the model name		
Date of receipt of test item	Apr. 18, 2023		
Date of test	Apr. 18, 2023 to Oct. 19, 2023		
Deviation	No any deviation from the test method		
Condition of Test Sample	Normal		
Test Result	Pass		
Report Template	AGCRT-US-BLE/RF		

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC part 15.247.

Prepared By	Ay Zhou	
	Sky Zhou (Project Engineer)	Oct. 19, 2023
Reviewed By	Calin Lin	
	Calvin Liu (Reviewer)	Oct. 19, 2023
Approved By	Max Zhang	
	Max Zhang (Authorized Officer)	Oct. 19, 2023



Page 6 of 43

2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

The EUT is designed as a "Wireless Headphones". It is designed by way of utilizing the GFSK technology to achieve the system operation.

A major technical description of EUT is described as following

Operation Frequency	2.402GHz to 2.480GHz		
RF Output Power	-1.982dBm (Max)		
Bluetooth Version	V5.3		
Modulation	BR□GFSK, EDR□π /4-DQPSK, □8DPSK BLE☑GFSK 1Mbps □GFSK 2Mbps		
Number of channels	40 Channels		
Antenna Designation	PCB Antenna (Comply with requirements of the FCC part 15.203)		
Antenna Gain	-0.68dBi		
Hardware Version	V10		
Software Version	V03		
Power Supply	DC 3.7V by battery		

2.2. TABLE OF CARRIER FREQUENCYS

Frequency Band Channel Number		Frequency	
	0	2402 MHz	
	1	2404 MHz	
2400~2483.5MHz	:	·	
	38	2478 MHz	
	39	2480 MHz	



Page 7 of 43

2.3. RELATED SUBMITTAL(S)/GRANT(S)

This submittal(s) (test report) is intended for **FCC ID**: **Z63-V3E7PRO** filing to comply with the FCC Part 15.247 requirements.

2.4. TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013). Radiated testing was performed at an antenna to EUT distance 3 meters.

2.5. SPECIAL ACCESSORIES

Refer to section 5.2.

2.6. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

2.7. ANTENNA REQUIREMENT

This intentional radiator is designed with a permanently attached antenna of an antenna to ensure that no antenna other than that furnished by the responsible party shall be used with the device. For more information of the antenna, please refer to the APPENDIX B: PHOTOGRAPHS OF EUT.



Page 8 of 43

2.8 DUTY CYCLE MEASUREMENT

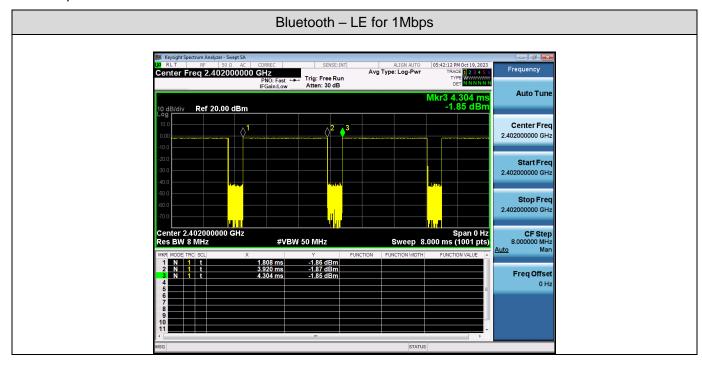
The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz, and detector = Peak. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

Operating mode	T(µs)	Duty Cycle (%)	Duty Cycle Factor (dB)	1/ T Minimum VBW (kHz)
BLE_1Mbps	2112	84.62	0.725	0.473

Remark:

- Duty Cycle factor = 10 * log (1/ Duty cycle)
- The duty cycle of each frequency band mode reflects the determination requirements of the low channel measurement value

The test plots as follows:





Page 9 of 43

3. 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%.

Item	Measurement Uncertainty	
Uncertainty of Conducted Emission for AC Port	$U_c = \pm 2.9 \text{ dB}$	
Uncertainty of Radiated Emission below 1GHz	$U_c = \pm 3.9 \text{ dB}$	
Uncertainty of Radiated Emission above 1GHz	$U_c = \pm 4.9 \text{ dB}$	
Uncertainty of total RF power, conducted	$U_c = \pm 0.8 \text{ dB}$	
Uncertainty of RF power density, conducted	$U_c = \pm 2.6 \text{ dB}$	
Uncertainty of spurious emissions, conducted	$U_c = \pm 2.7 \%$	
Uncertainty of Occupied Channel Bandwidth	$U_c = \pm 2 \%$	

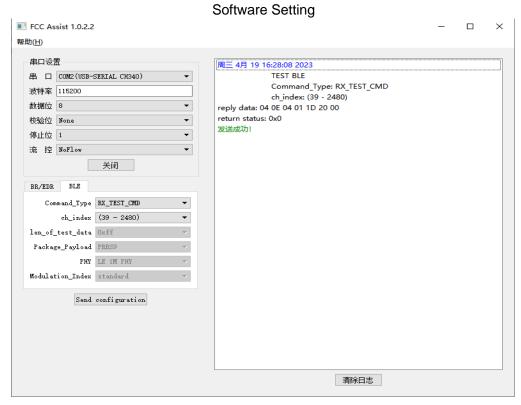


Page 10 of 43

4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION	
1	Low channel TX_2402MHz_GFSK_1Mbps	
2	Middle channel TX_2440MHz_GFSK_1Mbps	
3	High channel TX_2480MHz_GFSK_1Mbps	

- Note: 1. Only the result of the worst case was recorded in the report, if no other cases.
 - 2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
 - 3. For Conducted Test method, a temporary antenna connector is provided by the manufacture.





Page 11 of 43

5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF TESTED SYSTEM

Radiated Emission Configure:



Conducted Emission Configure:

EUT	AE

5.2. EQUIPMENT USED IN TESTED SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	Wireless Headphones	E7	Z63-V3E7PRO	EUT
2	Control Box	USB TO TTL	N/A	AE

5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
15.247 (b)(3)	Peak Output Power	Compliant
15.247 (a)(2)	6 dB Bandwidth	Compliant
15.247 (d)	Conducted Spurious Emission	Compliant
15.247 (e)	Maximum Conducted Output Power Density	Compliant
15.209	Radiated Emission	Compliant
15.207	Conducted Emission	Not applicable

Note: The BT function cannot transmit when charging.



Page 12 of 43

6. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Designation Number	CN1259
FCC Test Firm Registration Number	975832
A2LA Cert. No.	5054.02
Description	Attestation of Global Compliance (Shenzhen) Co., Ltd is accredited by A2LA

TEST EQUIPMENT OF RADIATED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
Test Receiver	R&S	ESCI	100034	Aug. 03, 2022	Aug. 02, 2023
Wideband Antenna	SCHWARZBECK	VULB9168	D69250	May 11, 2022	May 10, 2025
EXA Signal Analyzer	Agilent	N9010A	MY53470504	Aug. 04, 2022	Aug. 03, 2023
EXA Signal Analyzer	Agilent	N9010A	MY53470504	Jun. 01, 2023	May 31, 2024
Signal Analyzer	Aglient	N9020A	MY52090123	Aug. 04, 2022	Aug. 03, 2023
2.4GHz Filter	EM Electronics	N/A	N/A	Mar. 18, 2022	Mar. 19, 2024
Attenuator	ZHINAN	E-002	N/A	Aug. 04, 2022	Aug. 03, 2024
Horn Antenna	SCHWARZBEC	BBHA9170	768	Oct. 31, 2021	Oct. 30, 2023
Active Loop Antenna (9K-30Mhz)	ZHINAN	ZN30900C	18051	Mar. 12, 2022	Mar. 11, 2024
Double-Ridged Waveguide Horn	ETS	3117	00154520	Sep. 06, 2021	Sep. 05, 2023
Preamplifer	ETS	3117-PA	00246148	Aug. 04, 2022	Aug. 03, 2024
Test software	FARA	V.RA-03A	N/A	N/A	N/A



Page 13 of 43

7. PEAK OUTPUT POWER

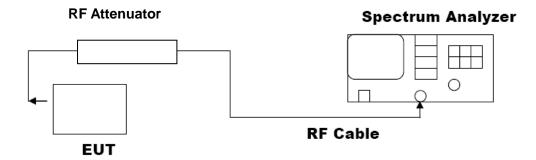
7.1. MEASUREMENT PROCEDURE

For peak power test:

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. RBW ≥ DTS bandwidth.
- 3. VBW≥3*RBW.
- 4. SPAN≥VBW.
- 5. Sweep: Auto.
- 6. Detector function: Peak.
- 7. Trace: Max hold.

Allow trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power, after any corrections for external attenuators and cables.

7.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) PEAK POWER TEST SETUP





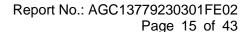
Page 14 of 43

7.3. LIMITS AND MEASUREMENT RESULT

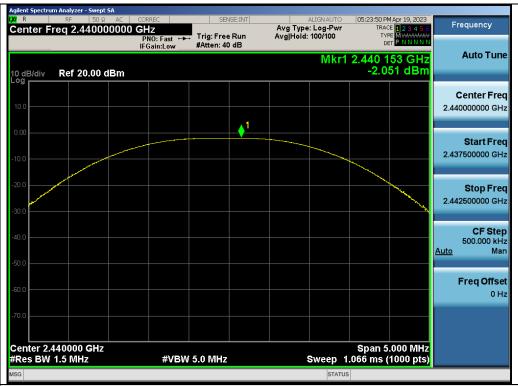
	Test Data of Conducted Output Power							
Test Mode Test Channel (MHz) Peak Power (dBm) Limits (dBm) Pass or Fail								
	2402	-1.982	≤30	Pass				
GFSK 1M	2440	-2.051	≤30	Pass				
	2480	-2.227	≤30	Pass				

Test Graphs of Conducted Output Power













Page 16 of 43

8. BANDWIDTH

8.1. MEASUREMENT PROCEDURE

6dB bandwidth:

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 3. Set SPA Centre Frequency = Operation Frequency, RBW= 100 kHz, VBW ≥ 3×RBW.
- 4. Set SPA Trace 1 Max hold, then View.

Occupied bandwidth:

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2, Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 3. Set Span = approximately 2 to 5 times the 20 dB bandwidth, centered on a hoping channel The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW; Sweep = auto; Detector function = peak
- 4. Set SPA Trace 1 Max hold, then View.

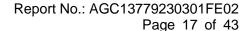
Note: The EUT was tested according to ANSI C63.10 for compliance to FCC PART 15.247 requirements.

8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 7.2.

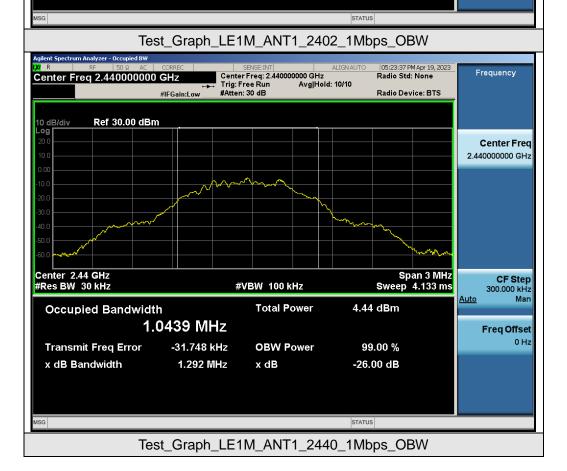
8.3. LIMITS AND MEASUREMENT RESULTS

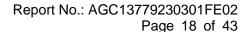
	Test Data of Occupied Bandwidth and DTS Bandwidth							
Test Mode Test Channel 99% Occupied -6dB Limits Bandwidth (MHz) Bandwidth (MHz) Pass or Fail								
	2402	1.043	0.679	≥0.5	Pass			
GFSK 1M	2440	1.044	0.675	≥0.5	Pass			
	2480	1.046	0.671	≥0.5	Pass			



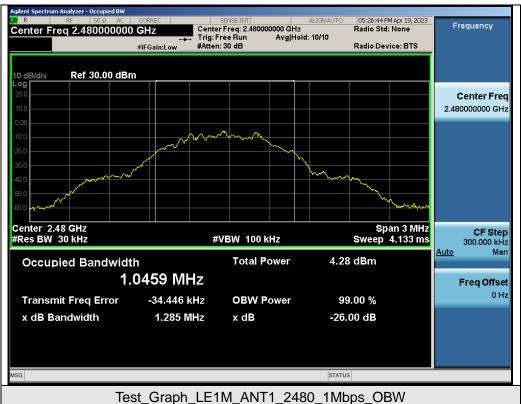


Test Graphs of Occupied Bandwidth |05:19:00 PM Apr 19, 2023 Radio Std: None Center Freq: 2.402000000 GHz Trig: Free Run Avg|Hol #Atten: 30 dB Frequency Center Freq 2.402000000 GHz Avg|Hold:>10/10 #IFGain:Low Radio Device: BTS Ref 30.00 dBm Center Freq 2.402000000 GHz Span 3 MHz Sweep 4.133 ms Center 2.402 GHz #Res BW 30 kHz **CF Step #VBW 100 kHz** 300.000 kHz <u>Auto</u> Man **Total Power** 4.55 dBm Occupied Bandwidth 1.0428 MHz Freq Offset -29.926 kHz **OBW Power** 99.00 % **Transmit Freq Error** x dB Bandwidth 1.299 MHz -26.00 dB x dB

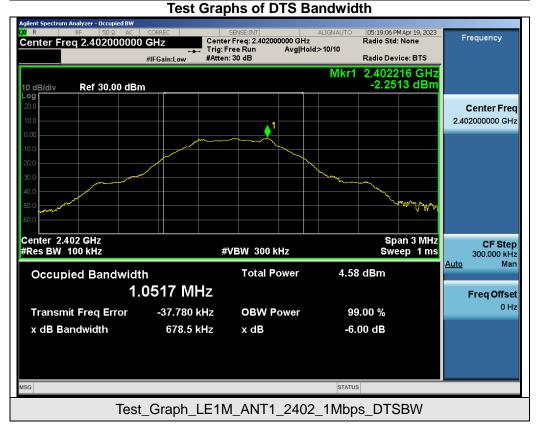


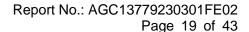






rest_Graph_LE fivi_ANTT_2460_Tivibps_t











Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/



Page 20 of 43

9. CONDUCTED SPURIOUS EMISSION

9.1. MEASUREMENT PROCEDURE

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2, Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 3. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to ANSI C63.10 for compliance to FCC PART 15.247 requirements.

9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

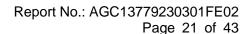
The same as described in section 7.2.

9.3. MEASUREMENT EQUIPMENT USED

The same as described in section 6.

9.4. LIMITS AND MEASUREMENT RESULT

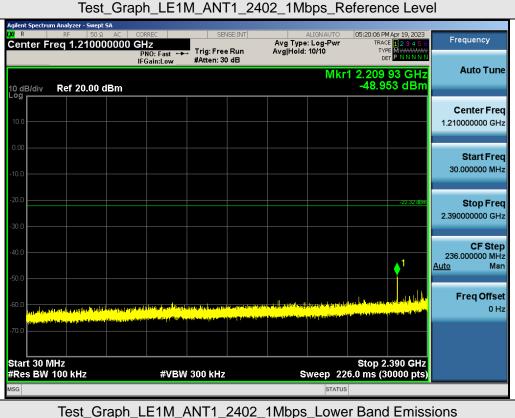
LIMITS AND MEASUREMENT RESULT						
Applicable Limits Measurement Result						
Applicable Limits	Test Data	Criteria				
In any 100 kHz Bandwidth Outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produce by the intentional radiator shall be at least 20 dB below that in 100KHz bandwidth within the band that contains the highest level of the desired power.	At least -20dBc than the reference level	PASS				

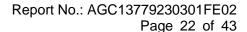




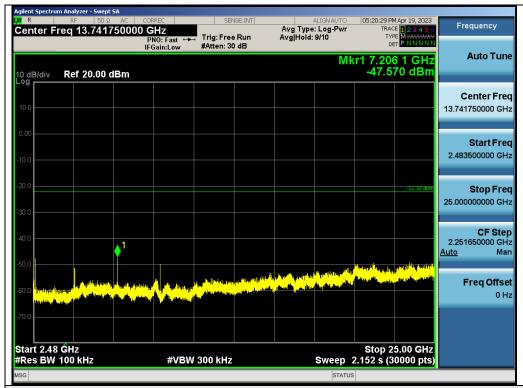
Test Graphs of Spurious Emissions in Non-Restricted Frequency Bands



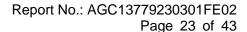




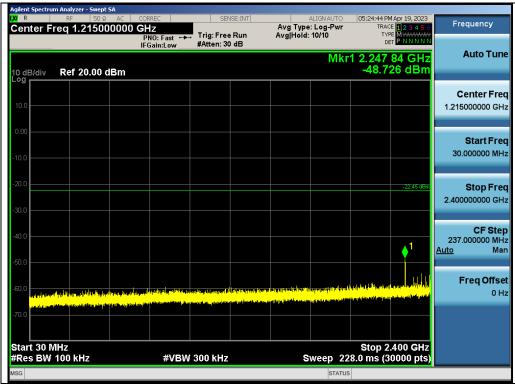


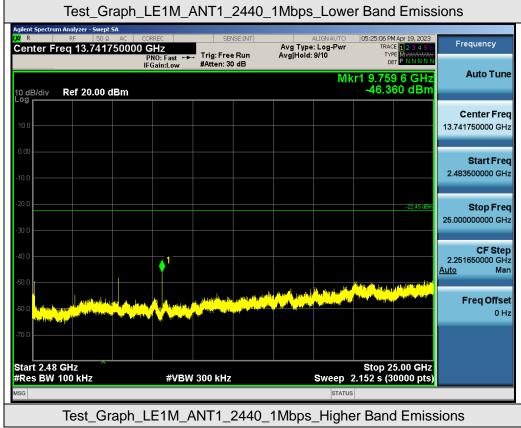


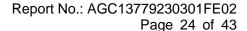






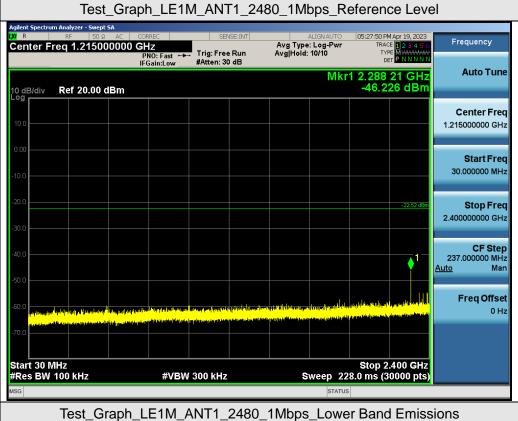


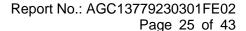




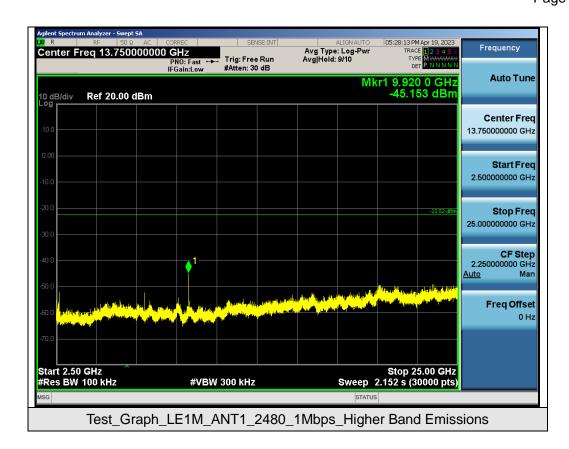


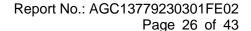






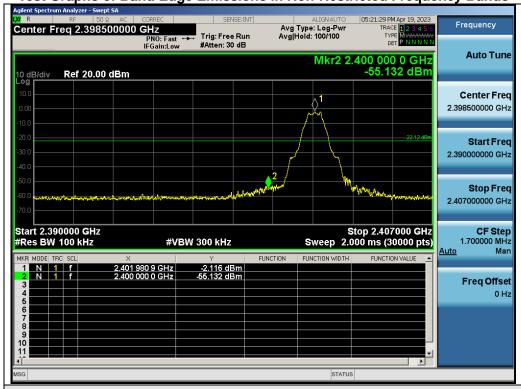


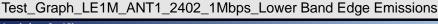


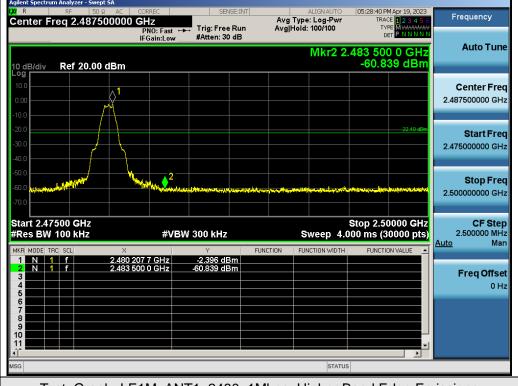




Test Graphs of Band Edge Emissions in Non-Restricted Frequency Bands







Test_Graph_LE1M_ANT1_2480_1Mbps_Higher Band Edge Emissions



Page 27 of 43

10. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY

10.1. MEASUREMENT PROCEDURE

- (1). Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- (2). Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- (3). Set the SPA Trace 1 Max hold, then View.

Note: The method of PKPSD in the KDB 558074 item 8.4 was used in this testing.

10.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer to Section 7.2.

10.3. MEASUREMENT EQUIPMENT USED

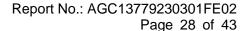
Refer to Section 6.

10.4. LIMITS AND MEASUREMENT RESULT

Test Data of Conducted Output Power Spectral Density							
Test Mode Test Channel Power density Limit (MHz) (dBm/3kHz) Pass or Fail							
	2402	-18.110	≤8	Pass			
GFSK 1M	2440	-18.002	≤8	Pass			
	2480	-18.157	≤8	Pass			

Test Graphs of Conducted Output Power Spectral Density











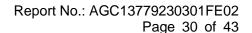


Page 29 of 43

11. RADIATED EMISSION

11.1. MEASUREMENT PROCEDURE

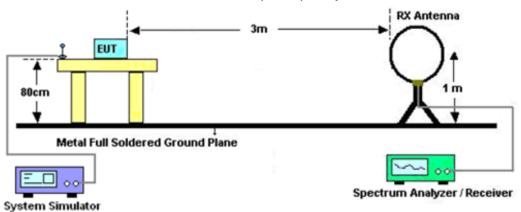
- 1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. 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.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8.If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.



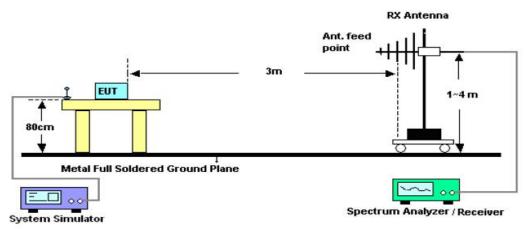


11.2. TEST SETUP

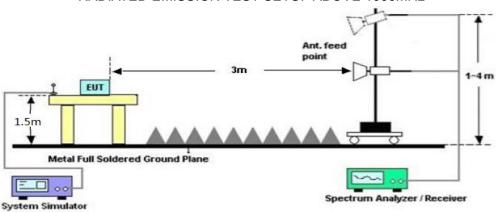
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz





Page 31 of 43

11.3. LIMITS AND MEASUREMENT RESULT

15.209 Limit in the below table has to be followed

Frequencies (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

Note: All modes were tested for restricted band radiated emission, the test records reported below are the worst result compared to other modes.

11.4. TEST RESULT

Radiated emission below 30MHz

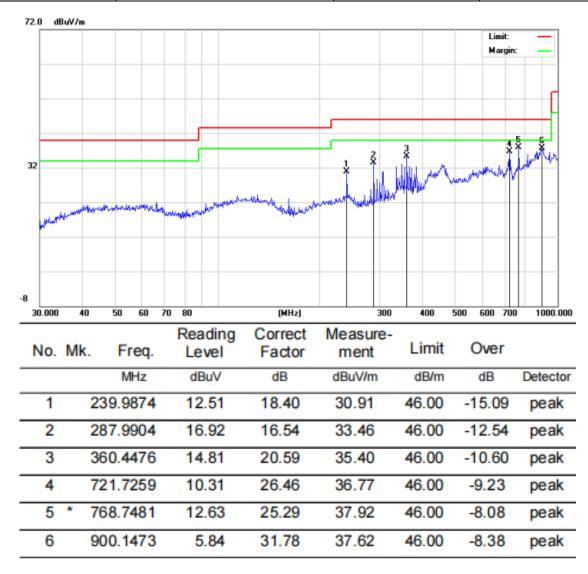
The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.



Page 32 of 43

Radiated emission from 30MHz to 1000MHz

EUT	Wireless Headphones	Model Name	E7
Temperature	24.3°C	Relative Humidity	54.9%
Pressure	985hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Horizontal

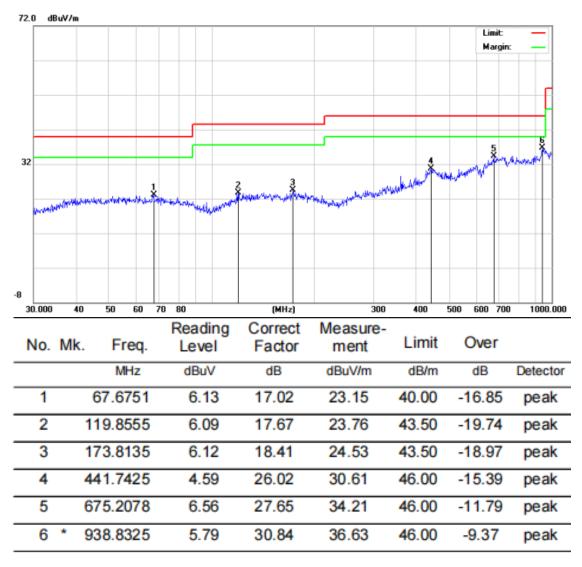


RESULT: PASS



Page 33 of 43

EUT	Wireless Headphones	Model Name	E7
Temperature	24.3°C	Relative Humidity	54.9%
Pressure	985hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Vertical



RESULT: PASS

Note: 1. Factor=Antenna Factor + Cable loss, Over=Measurement-Limit.

2. All test modes had been tested. The mode 1 is the worst case and recorded in the report.



Page 34 of 43

Radiated emission above 1GHz

EUT	Wireless Headphones	Model Name	E7
Temperature	23.6°C	Relative Humidity	55.9%
Pressure	985hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4804.000	50.67	0.08	50.75	74	-23.25	peak
4804.000	38.16	0.08	38.24	54	-15.76	AVG
7206.000	47.95	2.21	50.16	74	-23.84	peak
7206.000	37.06	2.21	39.27	54	-14.73	AVG
Remark:						
Factor = Antenna Factor + Cable Loss - Pre-amplifier.						

EUT	Wireless Headphones	Model Name	E7
Temperature	23.6°C	Relative Humidity	55.9%
Pressure	985hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	\/alua Tima	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type	
4804.000	48.97	0.08	49.05	74	-24.95	peak	
4804.000	37.54	0.08	37.62	54	-16.38	AVG	
7206.000	46.37	2.21	48.58	74	-25.42	peak	
7206.000	36.82	2.21	39.03	54	-14.97	AVG	
Remark:							
Factor = Anter	Factor = Antenna Factor + Cable Loss - Pre-amplifier.						



Page 35 of 43

EUT	Wireless Headphones	Model Name	E7
Temperature	23.6°C	Relative Humidity	55.9%
Pressure	985hPa	Test Voltage	Normal Voltage
Test Mode	Mode 2	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	\/alua Tima
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
4880.000	52.64	0.14	52.78	74	-21.22	peak
4880.000	40.12	0.14	40.26	54	-13.74	AVG
7320.000	49.66	2.36	52.02	74	-21.98	peak
7320.000	38.36	2.36	40.72	54	-13.28	AVG
						-
Remark:						
Factor = Anter	nna Factor + Cabl	e Loss – Pre-a	amplifier.			

EUT	Wireless Headphones	Model Name	E7
Temperature	23.6°C	Relative Humidity	55.9%
Pressure	985hPa	Test Voltage	Normal Voltage
Test Mode	Mode 2	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Time
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
4880.000	50.35	0.14	50.49	74	-23.51	peak
4880.000	37.47	0.14	37.61	54	-16.39	AVG
7320.000	47.67	2.36	50.03	74	-23.97	peak
7320.000	35.87	2.36	38.23	54	-15.77	AVG
emark:						



Page 36 of 43

EUT	Wireless Headphones	Model Name	E7
Temperature	23.6°C	Relative Humidity	55.9%
Pressure	985hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
4960.000	50.53	0.22	50.75	74	-23.25	peak
4960.000	39.76	0.22	39.98	54	-14.02	AVG
7440.000	48.72	2.64	51.36	74	-22.64	peak
7440.000	36.42	2.64	39.06	54	-14.94	AVG
						<u> </u>
Remark:						
Factor = Anter	nna Factor + Cabl	e Loss – Pre-	amplifier.			

Factor	Antenna I	Factor ⊦	⊦ Cable	Loss –	Pre-amplifier.

EUT	Wireless Headphones	Model Name	E7
Temperature	23.6°C	Relative Humidity	55.9%
Pressure	985hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	\/alua Tima
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
4960.000	50.89	0.22	51.11	74	-22.89	peak
4960.000	40.37	0.22	40.59	54	-13.41	AVG
7440.000	47.24	2.64	49.88	74	-24.12	peak
7440.000	37.55	2.64	40.19	54	-13.81	AVG
Remark:	'				1	1
Factor = Anter	nna Factor + Cabl	<u>e Loss – Pre-a</u>	mplifier.			

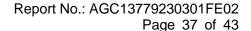
RESULT: PASS

Note:

The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.

Factor = Antenna Factor + Cable loss - Amplifier gain, Margin=Emission Level-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

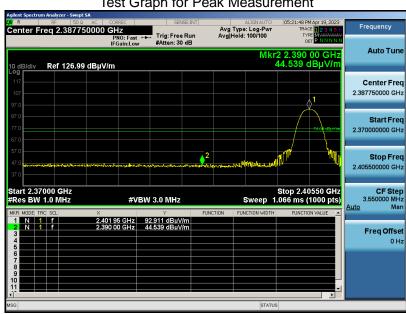




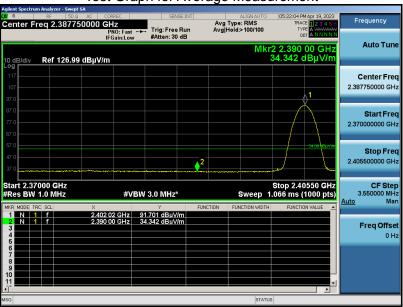
Test result for band edge emission at restricted bands

EUT	Wireless Headphones	Model Name	E7
Temperature	21°C	Relative Humidity	66%
Pressure	985hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Horizontal

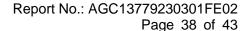
Test Graph for Peak Measurement







RESULT: PASS

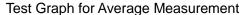


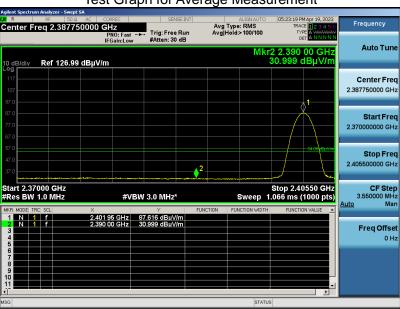


EUT Model Name E7 Wireless Headphones 21°C **Temperature Relative Humidity** 66% 985hPa **Test Voltage** Normal Voltage **Pressure Test Mode** Mode 1 **Antenna** Vertical

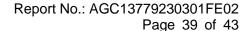
Test Graph for Peak Measurement







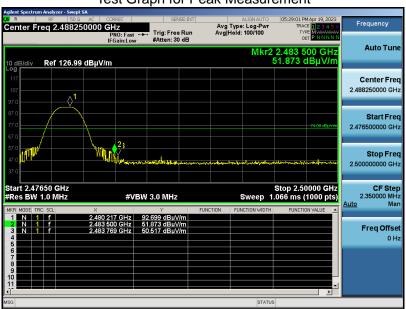
RESULT: PASS



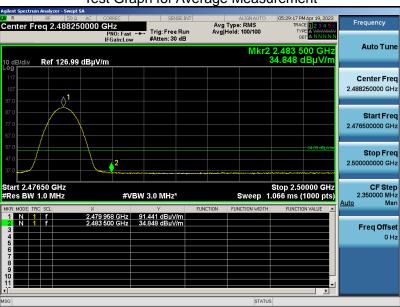


EUT Wireless Headphones **Model Name E7** 21°C **Temperature Relative Humidity** 66% 985hPa **Test Voltage** Normal Voltage **Pressure Test Mode** Mode 3 **Antenna** Horizontal

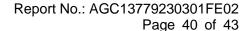
Test Graph for Peak Measurement







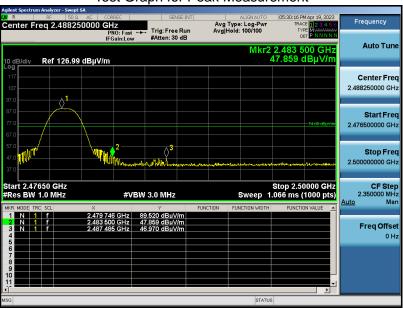
RESULT: PASS



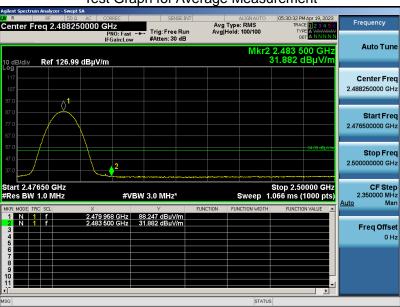


EUT Model Name E7 Wireless Headphones 21°C **Temperature Relative Humidity** 66% 985hPa **Test Voltage** Normal Voltage **Pressure Test Mode** Mode 3 **Antenna** Vertical

Test Graph for Peak Measurement







RESULT: PASS

Note: The factor had been edited in the "Input Correction" of the Spectrum Analyzer.



Page 41 of 43

12. LINE CONDUCTED EMISSION TEST

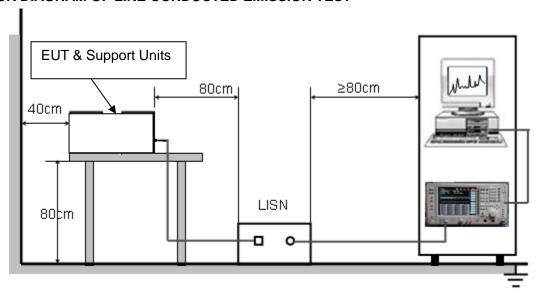
12.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Note: 1. The lower limit shall apply at the transition frequency.

2. The limit decreases linearly with the logarithm of the frequency in the range $0.15\,\mathrm{MHz}$ to $0.50\,\mathrm{MHz}$.

12.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST





Page 42 of 43

12.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When 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 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipment received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received AC120V/60Hz power from a LISN.
- 6. The 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.
- 9. The test mode(s) were scanned during the preliminary test.

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

12.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- 2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less 2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 3. The test data of the worst case condition(s) was reported on the Summary Data page.

12.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

N/A

Note: The BT function cannot transmit when charging.



Page 43 of 43

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

Refer to the Report No.: AGC13779230301AP02

APPENDIX B: PHOTOGRAPHS OF EUT Refer to the Report No.: AGC13779230301AP03

----END OF REPORT----



Conditions of Issuance of Test Reports

- 1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").
- 2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
- 3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
- 4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
- 5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
- 6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
- 7.Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
- 8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
- 9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.