

Report No.: SZCR210502097603

Page: 1 of 54

# TEST REPORT

**Application No.:** SZCR2105020976HS(SGS SZ No.: T52110250319EM)

Applicant: Lucky Group(H.K.) Limited

Address of Applicant: Building B, Lucky Industrial Park, Hongjin Road, Hongmei Town Dongguan

China

Manufacturer: SHENZHEN YANBOCHUANG TECHNOLOGY CO., LTD

Address of Manufacturer: 1210, 12/f, Block A, Phase 2, Zhuoyue City, Shenzhen, Guangdong, China

Buyer: D & B

**Supplier:** Lucky Group(H.K.) Limited

**Importer:** Dave & Buster's

**Equipment Under Test (EUT):** 

**EUT Name:** Wireless Dual Stereo Speakers

Item No.: 18829

**Ref. No.:** LBC10082/LBD10171

Requested Age Grading: 3+
Country of Origin: China
Country of Destination: USA

**FCC ID:** 2ACO3-18829

Standard(s): 47 CFR Part 15, Subpart C 15.247

**Date of Receipt:** 2021-05-11

**Date of Test:** 2021-05-22 to 2021-06-09

**Date of Issue:** 2021-06-10

Test Result: Pass\*

Keny Xu EMC Laboratory Manager

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<sup>\*</sup> In the configuration tested, the EUT complied with the standards specified above.



Report No.: SZCR210502097603

Page: 2 of 54

	Revision Record							
Version	Chapter	Date	Modifier	Remark				
01		2021-06-10		Original				

Authorized for issue by:			
	Jones Bao		
	Powell Bao/Project Engineer	_	
	Exic Fu		
	Eric Fu/Reviewer	_	



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Report No.: SZCR210502097603

Page: 3 of 54

# **Test Summary**

Radio Spectrum Technical Requirement						
Item Standard Method Requirement Result						
Antenna Requirement	47 CFR Part 15, Subpart C 15.247		47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)			

Radio Spectrum Matter Part						
Item	Standard	Method	Requirement	Result		
Conducted Peak Output Power		ANSI C63.10 (2013) Section 11.9.1	47 CFR Part 15, Subpart C 15.247(b)(3)	Pass		
Minimum 6dB Bandwidth		ANSI C63.10 (2013) Section 11.8.1	47 CFR Part 15, Subpart C 15.247a(2)	Pass		
Power Spectrum Density		ANSI C63.10 (2013) Section 11.10.2	47 CFR Part 15, Subpart C 15.247€	Pass		
Conducted Band Edges Measurement		ANSI C63.10 (2013) Section 11.13.3.2	47 CFR Part 15, Subpart C 15.247(d)	Pass		
Conducted Spurious Emissions	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 11.11	47 CFR Part 15, Subpart C 15.247(d)	Pass		
Radiated Emissions which fall in the restricted bands		ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass		
Radiated Spurious Emissions Below 1GHz		ANSI C63.10 (2013) Section 6.4,6.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass		
Radiated Spurious Emissions Above 1GHz		ANSI C63.10 (2013) Section 6.6	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass		

Emission Part						
Item	Standard	Method	Requirement	Result		
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass		



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Report No.: SZCR210502097603

Page: 4 of 54

# **Contents**

1 COVER PAGE 2 TEST SUMMARY				Page
3 CONTENTS	1	COVI	ER PAGE	1
4.1 DETAILS OF E.U.T. 4.2 DESCRIPTION OF SUPPORT UNITS. 4.3 MEASUREMENT UNCERTAINTY. 4.4 TEST LOCATION. 4.5 TEST FACILITY. 4.6 DEVIATION FROM STANDARDS. 4.7 ABNORMALITIES FROM STANDARDS 4.7 ABNORMALITIES FROM STANDARD CONDITIONS.  5 EQUIPMENT LIST. 6 RADIO SPECTRUM TECHNICAL REQUIREMENT. 6.1.1 Test Requirement: 6.1.2 Conclusion. 7 RADIO SPECTRUM MATTER TEST RESULTS. 7.1 CONDUCTED PEAK OUTPUT POWER. 7.1.1 E.U.T. Operation. 7.1.2 Test Mode Description. 7.1.3 Test Setup Diagram. 7.1.4 Measurement Procedure and Data. 7.2 MINIMUM 6DB BANDWIDTH. 7.2.1 E.U.T. Operation. 7.2.2 Test Mode Description. 7.3 Test Setup Diagram. 7.4 Measurement Procedure and Data. 7.5 Test Mode Description. 7.6 Test Mode Description. 7.7.1 Test Set Setup Diagram. 7.2.1 E.U.T. Operation. 7.2.2 Test Mode Description. 7.3 Test Setup Diagram. 7.4 Measurement Procedure and Data. 7.5 Test Mode Description. 7.6 Test Mode Description. 7.7 Test Mode Description. 7.7 Test Mode Description. 7.8 Test Setup Diagram. 7.9 Test Setup Diagram. 7.1 Fest Mode Description. 7.1 Test Mode Description. 7.2 Test Mode Description. 7.3 Test Setup Diagram. 7.4 Measurement Procedure and Data. 7.5 Test Mode Description. 7.6 CONDUCTED BAND EDGES MEASUREMENT. 11 Fest Mode Description. 7.7 Test Setup Diagram. 7.7 Test Setup Diagram. 7.7 Test Setup Diagram. 7.7 Test Setup Diagram. 7.8 Test Setup Diagram. 7.9 Test S	2	TEST	Г SUMMARY	3
4.1 DETAILS OF E.U.T. 4.2 DESCRIPTION OF SUPPORT UNITS. 4.3 MEASUREMENT UNCERTAINTY. 4.4 TEST LOCATION. 4.5 TEST FACILITY. 4.6 DEVIATION FROM STANDARDS. 4.7 ABNORMALITIES FROM STANDARDS 4.7 ABNORMALITIES FROM STANDARD CONDITIONS.  5 EQUIPMENT LIST. 6 RADIO SPECTRUM TECHNICAL REQUIREMENT. 6.1.1 Test Requirement: 6.1.2 Conclusion. 7 RADIO SPECTRUM MATTER TEST RESULTS. 7.1 CONDUCTED PEAK OUTPUT POWER. 7.1.1 E.U.T. Operation. 7.1.2 Test Mode Description. 7.1.3 Test Setup Diagram. 7.1.4 Measurement Procedure and Data. 7.2 MINIMUM 6DB BANDWIDTH. 7.2.1 E.U.T. Operation. 7.2.2 Test Mode Description. 7.3 Test Setup Diagram. 7.4 Measurement Procedure and Data. 7.5 Test Mode Description. 7.6 Test Mode Description. 7.7.1 Test Set Setup Diagram. 7.2.1 E.U.T. Operation. 7.2.2 Test Mode Description. 7.3 Test Setup Diagram. 7.4 Measurement Procedure and Data. 7.5 Test Mode Description. 7.6 Test Mode Description. 7.7 Test Mode Description. 7.7 Test Mode Description. 7.8 Test Setup Diagram. 7.9 Test Setup Diagram. 7.1 Fest Mode Description. 7.1 Test Mode Description. 7.2 Test Mode Description. 7.3 Test Setup Diagram. 7.4 Measurement Procedure and Data. 7.5 Test Mode Description. 7.6 CONDUCTED BAND EDGES MEASUREMENT. 11 Fest Mode Description. 7.7 Test Setup Diagram. 7.7 Test Setup Diagram. 7.7 Test Setup Diagram. 7.7 Test Setup Diagram. 7.8 Test Setup Diagram. 7.9 Test S	2	CON	TENTO	4
4.1       DETAILS OF E.U.T.       4.2       DESCRIPTION OF SUPPORT UNITS.       4.3       MEASUREMENT UNCERTAINTY.       4.4       TEST LOCATION.       4.5       TEST LOCATION.       4.6       DEVIATION FROM STANDARDS.       4.6       DEVIATION FROM STANDARDS.       4.7       ABROGMALITIES FROM STANDARD CONDITIONS.       5       EQUIPMENT LIST.       6       6       RADIO SPECTRUM TECHNICAL REQUIREMENT.       1       6.1       ANTENNA REQUIREMENT.       1       6.1.1       Test Requirement:       1       6.1.2       Conclusion.       7       7       RADIO SPECTRUM MATTER TEST RESULTS       11       7.1       CONDUCTED PEAK OUTPUT POWER.       11       7.1.1       E.U.T. Operation.       1.7.2       7.1.2       Test Mode Description.       1.7.1.2       Test Mode Description.       1.7.2       Test Mode Description.       1.7.3       Test Set Up Diagram.       1.7.2       Test Mode Description.       1.7.2       Test Set Up Diagram.       1.7.3       Test Set Up Diagram.       1.7.3       Test Set Up Diagram.       1.7.3       Test Mode Description.       1.7.3.1       E.U.T. Operation.       1.7.3.2       T	3	CON	TENTS	4
4.2       DESCRIPTION OF SUPPORT UNITS       4.3         4.3       MEASUREMENT UNCERTAINTY       5         4.4       TEST LOCATION       1         4.5       TEST FACILITY       2         4.6       DEVIATION FROM STANDARDS       2         4.7       ABNORMALITIES FROM STANDARD CONDITIONS       3         5       EQUIPMENT LIST       1         6.1       ANTENNA REQUIREMENT       1*         6.1.1       Test Requirement       1         6.1.2       Conclusion       1         7       RADIO SPECTRUM MATTER TEST RESULTS       1*         7.1       CONDUCTED PEAK OUTPUT POWER       1*         7.1.1       E.U.T. Operation       1*         7.1.2       Test Mode Description       1*         7.1.4       Measurement Procedure and Data       1*         7.2.1       E.U.T. Operation       1*         7.2.2       Test Mode Description       1*         7.2.2       Test Mode Description       1*         7.2.3       Test Setup Diagram       1*         7.3.1       E.U.T. Operation       1*         7.3.2       Test Mode Description       1*         7.3.3       Test Setup Diagram <t< th=""><th>4</th><th>GENI</th><th>ERAL INFORMATION</th><th> 6</th></t<>	4	GENI	ERAL INFORMATION	6
4.3       MEASUREMENT UNCERTAINTY       4.4       TEST LOCATION       4.5       TEST FACILITY       5       TEST FACILITY       4.6       DEVIATION FROM STANDARDS       4.7       ABNORMALITIES FROM STANDARD CONDITIONS       5       EQUIPMENT LIST       6       RADIO SPECTRUM TECHNICAL REQUIREMENT       1       6.1       ANTENNA REQUIREMENT       1       6.1.1       TEST Requirement       1       6.1.2       CONCLUSION       7       7       RADIO SPECTRUM MATTER TEST RESULTS       11         7.1       CONDUCTED PEAK OUTPUT POWER       11         7.1.1       E.U.T. Operation       1       7.1.3       TEST Mode Description       1       7.1.4       Measurement Procedure and Data       1       7.1.4       Measurement Procedure and Data       1       7.2.2       Test Mode Description       1       7.2.2       Test Mode Description       1       7.2.2       Test Mode Description       1       7.2.3       Test Setup Diagram       1       7.3.3       Test Setup Diagram       1       7.3.3       Test Setup Diagram       1       7.3.3       Test Mode Description       1       7.3.2       Test Mode Description       1       7.3.3       Test Setup Diagram       1       7.4.1       E.U.T. Operation       1       7.4.2       Test Mode Description       1       7.4.2				
4.4 TEST LOCATION 4.5 TEST FACILITY 4.6 DEVIATION FROM STANDARDS 4.7 ABNORMALITIES FROM STANDARD CONDITIONS 5 EQUIPMENT LIST 6 RADIO SPECTRUM TECHNICAL REQUIREMENT 6.1 ANTENNA REQUIREMENT 6.1.1 Test Requirement: 6.1.2 Conclusion 7 RADIO SPECTRUM MATTER TEST RESULTS 1.7.1 CONDUCTED PEAK OUTPUT POWER 7.1.1 E.U.T. Operation 7.1.2 Test Mode Description 7.1.4 Measurement Procedure and Data. 7.1.5.1 E.U.T. Operation 7.2.2 Test Mode Description 7.3.3 Test Setup Diagram 7.4.4 Measurement Procedure and Data. 7.5.1 E.U.T. Operation 7.5.2 Test Mode Description 7.5.3 Test Setup Diagram 7.6.4 Measurement Procedure and Data. 7.7.5.6 Test Mode Description 7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.				
4.5       TEST FACILITY         4.6       DEVIATION FROM STANDARDS         4.7       ABNORMALITIES FROM STANDARD CONDITIONS         5       EQUIPMENT LIST         6       RADIO SPECTRUM TECHNICAL REQUIREMENT       1:         6.1       ANTENNA REQUIREMENT       1:         6.1.1       Test Requirement:       1         6.1.2       Conclusion       1         7       RADIO SPECTRUM MATTER TEST RESULTS       1:         7.1       CONDUCTED PEAK OUTPUT POWER       1:         7.1.1       E.U.T. Operation       1:         7.1.2       Test Mode Description       1:         7.1.3       Test Setup Diagram       1:         7.2.1       E.U.T. Operation       1:         7.2.2       Test Mode Description       1:         7.2.1       E.U.T. Operation       1:         7.2.2       Test Mode Description       1:         7.3.1       Test Setup Diagram       1:         7.3.2       Test Mode Description       1:         7.3.3       Test Setup Diagram       1:         7.3.1       E.U.T. Operation       1:         7.3.2       Test Mode Description       1:         7.3.1       E.U.T.				
4.6       DEVIATION FROM STANDARDS         4.7       ABNORMALITIES FROM STANDARD CONDITIONS         5       EQUIPMENT LIST         6       RADIO SPECTRUM TECHNICAL REQUIREMENT         1       6.1         6.1       ANTENNA REQUIREMENT         1       6.1.1         7       RADIO SPECTRUM MATTER TEST RESULTS         7       RADIO SPECTRUM MATTER TEST RESULTS         7.1       CONDUCTED PEAK OUTPUT POWER         7.1.1       E.U.T. Operation         7.1.2       Test Mode Description         7.1.3       Test Setup Diagram         7.1       1.         7.2       MINIMUM 60B BANDWIDTH         7.2.1       E.U.T. Operation         7.2.2       Test Mode Description         7.2.3       Test Setup Diagram         7.2.4       Measurement Procedure and Data         7.3.3       Test Setup Diagram         7.3.4       Measurement Procedure and Data         7.3.3       Test Setup Diagram         7.4       CONDUCTED BAND EDGES MEASUREMENT         7.4.1       E.U.T. Operation         7.4.2       Test Mode Description         7.4.4       Measurement Procedure and Data         7.5.5       CONDUCTED SPUR				
4.7 ABNORMALITIES FROM STANDARD CONDITIONS  5 EQUIPMENT LIST				
5         EQUIPMENT LIST         1           6         RADIO SPECTRUM TECHNICAL REQUIREMENT         1           6.1         ANTENNA REQUIREMENT         1           6.1.1         Test Requirement         1           6.1.2         Conclusion         1           7         RADIO SPECTRUM MATTER TEST RESULTS         12           7.1         CONDUCTED PEAK OUTPUT POWER         12           7.1.1         E.U.T. Operation         1           7.1.2         Test Mode Description         1           7.1.3         Test Setup Diagram         1           7.1.4         Measurement Procedure and Data         1           7.2.1         E.U.T. Operation         1           7.2.2         Test Mode Description         1           7.2.3         Test Setup Diagram         1           7.2.4         Measurement Procedure and Data         1           7.3.1         E.U.T. Operation         1           7.3.2         Test Mode Description         1           7.3.3         Test Setup Diagram         1           7.3.1         E.U.T. Operation         1           7.4.2         Test Mode Description         1           7.4.2         Test Mode Descri				
6 RADIO SPECTRUM TECHNICAL REQUIREMENT       1         6.1 ANTENNA REQUIREMENT       1         6.1.1 Test Requirement:       1         6.1.2 Conclusion       1         7 RADIO SPECTRUM MATTER TEST RESULTS       12         7.1 CONDUCTED PEAK OUTPUT POWER       12         7.1.1 E.U.T. Operation       1         7.1.2 Test Mode Description       1         7.1.3 Test Setup Diagram       1         7.1.4 Measurement Procedure and Data       1         7.2 MINIMUM 6DB BANDWIDTH       1         7.2.1 E.U.T. Operation       1         7.2.2 Test Mode Description       1         7.2.3 Test Setup Diagram       1         7.2.4 Measurement Procedure and Data       1         7.3 POWER SPECTRUM DENSITY       1         7.3.1 E.U.T. Operation       1         7.3.2 Test Mode Description       1         7.3.3 Test Setup Diagram       1         7.4.4 CONDUCTED BAND EDGES MEASUREMENT       1         7.4.2 Test Mode Description       1         7.4.3 Test Setup Diagram       1         7.4.4 Measurement Procedure and Data       1         7.5.1 E.U.T. Operation       1         7.5.2 Test Mode Description       1         7.5.1 E.U.T. Operation				
6.1       ANTENNA REQUIREMENT       1         6.1.1       Test Requirement:       1         6.1.2       Conclusion       1         7       RADIO SPECTRUM MATTER TEST RESULTS       12         7.1       CONDUCTED PEAK OUTPUT POWER       12         7.1.1       E.U.T. Operation       1.         7.1.2       Test Mode Description       1.         7.1.3       Test Setup Diagram       1.         7.1.4       Measurement Procedure and Data       1.         7.2.1       E.U.T. Operation       1.         7.2.2       Test Mode Description       1.         7.2.3       Test Setup Diagram       1.         7.2.4       Measurement Procedure and Data       1.         7.3.1       E.U.T. Operation       1.         7.3.2       Test Mode Description       1.         7.3.3       Test Setup Diagram       1.         7.4.1       E.U.T. Operation       1.         7.4.2       Test Mode Description       1.         7.4.2       Test Mode Description       1.         7.4.3       Test Setup Diagram       1.         7.4.4       Measurement Procedure and Data       1.         7.5.1       E.U.T. Operat	5	EQUI	IPMENT LIST	8
6.1       ANTENNA REQUIREMENT       1         6.1.1       Test Requirement:       1         6.1.2       Conclusion       1         7       RADIO SPECTRUM MATTER TEST RESULTS       12         7.1       CONDUCTED PEAK OUTPUT POWER       12         7.1.1       E.U.T. Operation       1.         7.1.2       Test Mode Description       1.         7.1.3       Test Setup Diagram       1.         7.1.4       Measurement Procedure and Data       1.         7.2.1       E.U.T. Operation       1.         7.2.2       Test Mode Description       1.         7.2.3       Test Setup Diagram       1.         7.2.4       Measurement Procedure and Data       1.         7.3.1       E.U.T. Operation       1.         7.3.2       Test Mode Description       1.         7.3.3       Test Setup Diagram       1.         7.4.1       E.U.T. Operation       1.         7.4.2       Test Mode Description       1.         7.4.2       Test Mode Description       1.         7.4.3       Test Setup Diagram       1.         7.4.4       Measurement Procedure and Data       1.         7.5.1       E.U.T. Operat	6	RΔDI	IO SPECTRUM TECHNICAL REQUIREMENT	11
6.1.1 Test Requirement:       1         6.1.2 Conclusion       1         7 RADIO SPECTRUM MATTER TEST RESULTS       1         7.1 CONDUCTED PEAK OUTPUT POWER       1         7.1.1 E.U.T. Operation       1         7.1.2 Test Mode Description       1         7.1.3 Test Setup Diagram       1         7.1.4 Measurement Procedure and Data       1         7.2 MINIMUM 60B BANDWIDTH       1         7.2.1 E.U.T. Operation       1         7.2.2 Test Mode Description       1         7.2.3 Test Setup Diagram       1         7.2.4 Measurement Procedure and Data       1         7.3.1 E.U.T. Operation       1         7.3.2 Test Mode Description       1         7.3.3 Test Setup Diagram       1         7.3.4 Measurement Procedure and Data       1         7.4.1 E.U.T. Operation       1         7.4.2 Test Mode Description       1         7.4.3 Test Setup Diagram       1         7.4.4 Measurement Procedure and Data       1         7.4.2 Test Mode Description       1         7.4.3 Test Setup Diagram       1         7.4.4 Measurement Procedure and Data       1         7.5. CONDUCTED SPURIOUS EMISSIONS       1         7.5.1 E.U.T. Operation	Ŭ			
6.1.2 Conclusion       1         7 RADIO SPECTRUM MATTER TEST RESULTS       11         7.1 CONDUCTED PEAK OUTPUT POWER       12         7.1.1 E.U.T. Operation       1.         7.1.2 Test Mode Description       1.         7.1.3 Test Setup Diagram       1.         7.1.4 Measurement Procedure and Data       1.         7.2 MINIMUM 6DB BANDWIDTH       1.         7.2.1 E.U.T. Operation       1.         7.2.2 Test Mode Description       1.         7.2.3 Test Setup Diagram       1.         7.2.4 Measurement Procedure and Data       1.         7.3.1 E.U.T. Operation       1.         7.3.2 Test Mode Description       1.         7.3.3 Test Setup Diagram       1.         7.3.4 Measurement Procedure and Data       1.         7.4.1 E.U.T. Operation       1.         7.4.2 Test Mode Description       1.         7.4.2 Test Mode Description       1.         7.4.3 Test Setup Diagram       1.         7.4.4 Measurement Procedure and Data       1.         7.4.2 Test Mode Description       1.         7.4.3 Test Setup Diagram       1.         7.4.4 Measurement Procedure and Data       1.         7.5.1 E.U.T. Operation       1.         7.5.2 Test				
7 RADIO SPECTRUM MATTER TEST RESULTS       12         7.1 CONDUCTED PEAK OUTPUT POWER       12         7.1.1 E.U.T. Operation       1.         7.1.2 Test Mode Description       1.         7.1.3 Test Setup Diagram       1.         7.1.4 Measurement Procedure and Data       1.         7.2 MINIMUM 6DB BANDWIDTH       1.         7.2.1 E.U.T. Operation       1.         7.2.2 Test Mode Description       1.         7.2.3 Test Setup Diagram       1.         7.2.4 Measurement Procedure and Data       1.         7.3 POWER SPECTRUM DENSITY       1.         7.3.1 E.U.T. Operation       1.         7.3.2 Test Mode Description       1.         7.3.3 Test Setup Diagram       1.         7.3.4 Measurement Procedure and Data       1.         7.4.1 E.U.T. Operation       1.         7.4.2 Test Mode Description       1.         7.4.3 Test Setup Diagram       1.         7.4.4 Measurement Procedure and Data       1.         7.5.1 E.U.T. Operation       1.         7.5.2 Test Mode Description       1.         7.5.1 E.U.T. Operation       1.         7.5.2 Test Mode Description       1.			·	
7.1       CONDUCTED PEAK OUTPUT POWER       12         7.1.1       E.U.T. Operation       1.         7.1.2       Test Mode Description       1.         7.1.3       Test Setup Diagram       1.         7.1.4       Measurement Procedure and Data       1.         7.2       MINIMUM 6DB BANDWIDTH       1.         7.2.1       E.U.T. Operation       1.         7.2.2       Test Mode Description       1.         7.2.3       Test Setup Diagram       1.         7.2.4       Measurement Procedure and Data       1.         7.3.1       E.U.T. Operation       1.         7.3.2       Test Mode Description       1.         7.3.3       Test Setup Diagram       1.         7.3.4       Measurement Procedure and Data       1.         7.4       CONDUCTED BAND EDGES MEASUREMENT       1.         7.4.1       E.U.T. Operation       1.         7.4.2       Test Mode Description       1.         7.4.4       Measurement Procedure and Data       1.         7.5       CONDUCTED SPURIOUS EMISSIONS       1.         7.5.1       E.U.T. Operation       1.         7.5.2       Test Mode Description       1.	_	_		
7.1.1 E.U.T. Operation       1.         7.1.2 Test Mode Description       1.         7.1.3 Test Setup Diagram       1.         7.1.4 Measurement Procedure and Data       1.         7.2 MINIMUM 6DB BANDWIDTH       1.         7.2.1 E.U.T. Operation       1.         7.2.2 Test Mode Description       1.         7.2.3 Test Setup Diagram       1.         7.2.4 Measurement Procedure and Data       1.         7.3.1 E.U.T. Operation       1.         7.3.2 Test Mode Description       1.         7.3.3 Test Setup Diagram       1.         7.3.4 Measurement Procedure and Data       1.         7.4.1 E.U.T. Operation       1.         7.4.2 Test Mode Description       1.         7.4.3 Test Setup Diagram       1.         7.4.4 Measurement Procedure and Data       1.         7.4.3 Test Setup Diagram       1.         7.4.4 Measurement Procedure and Data       1.         7.5.1 E.U.T. Operation       1.         7.5.2 Test Mode Description       1.	1			
7.1.2 Test Mode Description       1.         7.1.3 Test Setup Diagram       1.         7.1.4 Measurement Procedure and Data       1.         7.2 MINIMUM 6DB BANDWIDTH       1.         7.2.1 E.U.T. Operation       1.         7.2.2 Test Mode Description       1.         7.2.3 Test Setup Diagram       1.         7.2.4 Measurement Procedure and Data       1.         7.3 POWER SPECTRUM DENSITY       1.         7.3.1 E.U.T. Operation       1.         7.3.2 Test Mode Description       1.         7.3.3 Test Setup Diagram       1.         7.3.4 Measurement Procedure and Data       1.         7.4.1 E.U.T. Operation       1.         7.4.2 Test Mode Description       1.         7.4.3 Test Setup Diagram       1.         7.4.4 Measurement Procedure and Data       1.         7.4.3 Test Setup Diagram       1.         7.4.4 Measurement Procedure and Data       1.         7.5 CONDUCTED SPURIOUS EMISSIONS       1.         7.5.1 E.U.T. Operation       1.         7.5.2 Test Mode Description       1.         7.5.2 Test Mode Description       1.				
7.1.3 Test Setup Diagram       1.         7.1.4 Measurement Procedure and Data       1.         7.2 MINIMUM 6DB BANDWIDTH       1.         7.2.1 E.U.T. Operation       1.         7.2.2 Test Mode Description       1.         7.2.3 Test Setup Diagram       1.         7.2.4 Measurement Procedure and Data       1.         7.3 POWER SPECTRUM DENSITY       1.         7.3.1 E.U.T. Operation       1.         7.3.2 Test Mode Description       1.         7.3.3 Test Setup Diagram       1.         7.3.4 Measurement Procedure and Data       1.         7.4.1 E.U.T. Operation       1.         7.4.2 Test Mode Description       1.         7.4.2 Test Mode Description       1.         7.4.3 Test Setup Diagram       1.         7.4.4 Measurement Procedure and Data       1.         7.5.1 E.U.T. Operation       1.         7.5.1 E.U.T. Operation       1.         7.5.2 Test Mode Description       1.         7.5.2 Test Mode Description       1.         7.5.2 Test Mode Description       1.				
7.1.4 Measurement Procedure and Data       1.         7.2 MINIMUM 6DB BANDWIDTH       1.         7.2.1 E.U.T. Operation       1.         7.2.2 Test Mode Description       1.         7.2.3 Test Setup Diagram       1.         7.2.4 Measurement Procedure and Data       1.         7.3 POWER SPECTRUM DENSITY       1.         7.3.1 E.U.T. Operation       1.         7.3.2 Test Mode Description       1.         7.3.3 Test Setup Diagram       1.         7.3.4 Measurement Procedure and Data       1.         7.4.1 E.U.T. Operation       1.         7.4.2 Test Mode Description       1.         7.4.3 Test Setup Diagram       1.         7.4.4 Measurement Procedure and Data       1.         7.5 CONDUCTED SPURIOUS EMISSIONS       1.         7.5.1 E.U.T. Operation       1.         7.5.2 Test Mode Description       1.         7.5.2 Test Mode Description       1.				
7.2       MINIMUM 6DB BANDWIDTH       14         7.2.1       E.U.T. Operation       15         7.2.2       Test Mode Description       16         7.2.3       Test Setup Diagram       17         7.2.4       Measurement Procedure and Data       16         7.3       POWER SPECTRUM DENSITY       15         7.3.1       E.U.T. Operation       16         7.3.2       Test Mode Description       16         7.3.3       Test Setup Diagram       17         7.3.4       Measurement Procedure and Data       18         7.4.1       E.U.T. Operation       10         7.4.2       Test Mode Description       16         7.4.3       Test Setup Diagram       16         7.4.4       Measurement Procedure and Data       16         7.5       CONDUCTED SPURIOUS EMISSIONS       17         7.5.1       E.U.T. Operation       1         7.5.2       Test Mode Description       1         7.5.2       Test Mode Description       1				
7.2.1       E.U.T. Operation       1         7.2.2       Test Mode Description       1         7.2.3       Test Setup Diagram       1         7.2.4       Measurement Procedure and Data       1         7.3       POWER SPECTRUM DENSITY       1         7.3.1       E.U.T. Operation       1         7.3.2       Test Mode Description       1         7.3.3       Test Setup Diagram       1         7.3.4       Measurement Procedure and Data       1         7.4.1       E.U.T. Operation       1         7.4.2       Test Mode Description       1         7.4.3       Test Setup Diagram       1         7.4.4       Measurement Procedure and Data       1         7.5       CONDUCTED SPURIOUS EMISSIONS       1         7.5.1       E.U.T. Operation       1         7.5.2       Test Mode Description       1				
7.2.2 Test Mode Description       1-         7.2.3 Test Setup Diagram       1-         7.2.4 Measurement Procedure and Data       1-         7.3 POWER SPECTRUM DENSITY       15         7.3.1 E.U.T. Operation       15         7.3.2 Test Mode Description       15         7.3.3 Test Setup Diagram       15         7.3.4 Measurement Procedure and Data       15         7.4.1 E.U.T. Operation       16         7.4.2 Test Mode Description       16         7.4.3 Test Setup Diagram       16         7.4.4 Measurement Procedure and Data       16         7.5 CONDUCTED SPURIOUS EMISSIONS       17         7.5.1 E.U.T. Operation       1         7.5.2 Test Mode Description       1         7.5.2 Test Mode Description       1				
7.2.3 Test Setup Diagram       1.         7.2.4 Measurement Procedure and Data       1.         7.3 POWER SPECTRUM DENSITY       1.         7.3.1 E.U.T. Operation       1.         7.3.2 Test Mode Description       1.         7.3.3 Test Setup Diagram       1.         7.3.4 Measurement Procedure and Data       1.         7.4 CONDUCTED BAND EDGES MEASUREMENT       1.         7.4.1 E.U.T. Operation       1.         7.4.2 Test Mode Description       1.         7.4.3 Test Setup Diagram       1.         7.4.4 Measurement Procedure and Data       1.         7.5 CONDUCTED SPURIOUS EMISSIONS       1.         7.5.1 E.U.T. Operation       1.         7.5.2 Test Mode Description       1.			•	
7.2.4 Measurement Procedure and Data       1.         7.3 POWER SPECTRUM DENSITY       1.5         7.3.1 E.U.T. Operation       1.5         7.3.2 Test Mode Description       1.5         7.3.3 Test Setup Diagram       1.5         7.3.4 Measurement Procedure and Data       1.5         7.4 CONDUCTED BAND EDGES MEASUREMENT       1.6         7.4.1 E.U.T. Operation       1.6         7.4.2 Test Mode Description       1.6         7.4.3 Test Setup Diagram       1.6         7.4.4 Measurement Procedure and Data       1.6         7.5 CONDUCTED SPURIOUS EMISSIONS       1.7         7.5.1 E.U.T. Operation       1.7         7.5.2 Test Mode Description       1.7			<b>/</b>	
7.3       POWER SPECTRUM DENSITY       15         7.3.1       E.U.T. Operation       15         7.3.2       Test Mode Description       15         7.3.3       Test Setup Diagram       15         7.3.4       Measurement Procedure and Data       16         7.4.1       E.U.T. Operation       16         7.4.2       Test Mode Description       16         7.4.3       Test Setup Diagram       16         7.4.4       Measurement Procedure and Data       16         7.5       CONDUCTED SPURIOUS EMISSIONS       17         7.5.1       E.U.T. Operation       11         7.5.2       Test Mode Description       1			1 5	
7.3.1       E.U.T. Operation       15         7.3.2       Test Mode Description       15         7.3.3       Test Setup Diagram       15         7.3.4       Measurement Procedure and Data       15         7.4       CONDUCTED BAND EDGES MEASUREMENT       16         7.4.1       E.U.T. Operation       16         7.4.2       Test Mode Description       16         7.4.3       Test Setup Diagram       16         7.4.4       Measurement Procedure and Data       16         7.5       CONDUCTED SPURIOUS EMISSIONS       17         7.5.1       E.U.T. Operation       11         7.5.2       Test Mode Description       1				
7.3.2 Test Mode Description       15         7.3.3 Test Setup Diagram       15         7.3.4 Measurement Procedure and Data       15         7.4 CONDUCTED BAND EDGES MEASUREMENT       16         7.4.1 E.U.T. Operation       16         7.4.2 Test Mode Description       16         7.4.3 Test Setup Diagram       16         7.4.4 Measurement Procedure and Data       16         7.5 CONDUCTED SPURIOUS EMISSIONS       17         7.5.1 E.U.T. Operation       11         7.5.2 Test Mode Description       1				
7.3.3 Test Setup Diagram       15         7.3.4 Measurement Procedure and Data       15         7.4 CONDUCTED BAND EDGES MEASUREMENT       16         7.4.1 E.U.T. Operation       16         7.4.2 Test Mode Description       16         7.4.3 Test Setup Diagram       16         7.4.4 Measurement Procedure and Data       16         7.5 CONDUCTED SPURIOUS EMISSIONS       17         7.5.1 E.U.T. Operation       11         7.5.2 Test Mode Description       1		_		
7.3.4 Measurement Procedure and Data       15         7.4 CONDUCTED BAND EDGES MEASUREMENT       16         7.4.1 E.U.T. Operation       16         7.4.2 Test Mode Description       16         7.4.3 Test Setup Diagram       16         7.4.4 Measurement Procedure and Data       16         7.5 CONDUCTED SPURIOUS EMISSIONS       17         7.5.1 E.U.T. Operation       11         7.5.2 Test Mode Description       1				
7.4       CONDUCTED BAND EDGES MEASUREMENT       16         7.4.1       E.U.T. Operation       16         7.4.2       Test Mode Description       16         7.4.3       Test Setup Diagram       16         7.4.4       Measurement Procedure and Data       16         7.5       CONDUCTED SPURIOUS EMISSIONS       17         7.5.1       E.U.T. Operation       1         7.5.2       Test Mode Description       1				
7.4.2 Test Mode Description107.4.3 Test Setup Diagram107.4.4 Measurement Procedure and Data107.5 CONDUCTED SPURIOUS EMISSIONS117.5.1 E.U.T. Operation17.5.2 Test Mode Description1		7.4		
7.4.2 Test Mode Description107.4.3 Test Setup Diagram107.4.4 Measurement Procedure and Data107.5 CONDUCTED SPURIOUS EMISSIONS117.5.1 E.U.T. Operation117.5.2 Test Mode Description1				
7.4.4 Measurement Procedure and Data		7.4.2	·	
7.5 CONDUCTED SPURIOUS EMISSIONS		7.4.3	1 0	
7.5.1 E.U.T. Operation				
7.5.2 Test Mode Description1				17
ı			•	
7.5.3 Test Setup Diagram1			1	
		7.5.3	Test Setup Diagram	



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Report No.: SZCR210502097603

Page: 5 of 54

7.5.4	Measurement Procedure and Data	17
7.6	RADIATED EMISSIONS WHICH FALL IN THE RESTRICTED BANDS	
7.6.1	E.U.T. Operation	
7.6.2		
7.6.3	•	
7.6.4		
7.7	RADIATED SPURIOUS EMISSIONS BELOW 1GHz	
7.7.1		
7.7.2	r	
7.7.3	•	
7.7.4	· ·	
	RADIATED SPURIOUS EMISSIONS ABOVE 1GHz	
7.8.1		
7.8.2		
7.8.3	Test Setup Diagram	
7.8.4		
8 EMIS	SION TEST RESULTS	36
8.1	CONDUCTED EMISSIONS AT AC POWER LINE (150kHz-30MHz)	36
8.1.1		
8.1.2	·	
8.1.3		
8.1.4	Measurement Procedure and Data	
9 TEST	SETUP PHOTO	40
10 EUT (	CONSTRUCTIONAL DETAILS (EUT PHOTOS)	40
	ENDIX	41
II AFFE	-   1   1   1   1   1   1   1   1   1	<del>-</del>



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Report No.: SZCR210502097603

Page: 6 of 54

# **General Information**

#### 4.1 Details of E.U.T.

Power supply:	Rechargeable battery DC3.7V,1000mAh; Charged by DC5V
Cable(s):	USB cable:50cm unshielded
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V5.0 Dual mode
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Data Rate	1M/bit
Antenna Type:	PCB Antenna
Antenna Gain:	4.03dBi

# 4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Adapter	Apple	A1357	REF. No.SEA05A01A

# 4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions at AC Power Line (150kHz-30MHz)	± 3.0dB (150kHz to 30MHz)
Conducted Peak Output Power	± 0.75dB
Minimum 6dB Bandwidth	± 3%
Power Spectrum Density	± 2.84dB
Conducted Band Edges Measurement	± 0.75dB
Conducted Spurious Emissions	± 0.75dB
Radiated Emissions which fall in the restricted bands	± 4.5dB (Below 1GHz);± 4.8dB (Above 1GHz)
Radiated Spurious Emissions Below 1GHz	± 4.5dB
Radiated Spurious Emissions Above 1GHz	± 4.8dB

## Remark:

The Ulab (lab Uncertainty) is less than Ucispr (CISPR Uncertainty), so the test results

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.



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Page: 7 of 54

## 4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

Address 1: No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Address 2: Room 105, Building A, Xinlong Technology Industrial Park, No. 50 Fengtang Road, Xintian Community, Fuyong Street, Bao'an District, Shenzhen, China

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

## 4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

#### A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

## VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

## FCC –Designation Number: CN1178

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

## • Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

#### 4.6 Deviation from Standards

## **Abnormalities from Standard Conditions**

None



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Page: 8 of 54

# 5 Equipment List

Conducted Emissions at AC Power Line (150kHz-30MHz)							
Equipment Manufacturer Model No Inventory No Cal Date Cal Due Da							
EMI Test Receiver	Rohde & Schwarz	ESCI	SEM004-01	2021-03-24	2022-03-23		
Measurement Software	AUDIX	e3 V8.2014-6- 27	N/A	N/A	N/A		
LISN	Rohde & Schwarz	ENV216	SEM007-16	2021-04-07	2022-04-06		
Coaxial Cable	SGS	N/A	SEM033-02	2021-05-17	2022-05-16		

Conducted Peak Output Power						
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date	
Shielding Room	SAEMC	MSR733	SEM001-09	2019-06-13	2022-06-12	
DC Power Supply	Rohde & Schwarz	NGSM 32/10	SEM011-04	2021-03-23	2022-03-22	
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-17	2021-04-08	2022-04-07	
Measurement Software	TST	TST PASS V1.0.5	N/A	N/A	N/A	
Coaxial Cable	SGS	N/A	SEM031-01	2020-07-10	2021-07-09	
Attenuator	Huber+Suhner	6620_SMA-50- 1	SEM021-09	2021-04-08	2022-04-07	

Minimum 6dB Bandwidth						
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date	
Shielding Room	SAEMC	MSR733	SEM001-09	2019-06-13	2022-06-12	
DC Power Supply	Rohde & Schwarz	NGSM 32/10	2/10 SEM011-04 2021-		2022-03-22	
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-17	2021-04-08	2022-04-07	
Measurement Software	TST	TST PASS V1.0.5	N/A	N/A	N/A	
Coaxial Cable	SGS	N/A	SEM031-01	2020-07-10	2021-07-09	
Attenuator	Huber+Suhner	6620_SMA-50- 1	SEM021-09	2021-04-08	2022-04-07	

ower Spectrum Density					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	SAEMC	MSR733	SEM001-09	2019-06-13	2022-06-12
DC Power Supply	Rohde & Schwarz	NGSM 32/10	SEM011-04	2021-03-23	2022-03-22
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-17	2021-04-08	2022-04-07
Measurement Software	TST	TST PASS V1.0.5	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2020-07-10	2021-07-09
Attenuator	Huber+Suhner	6620_SMA-50- 1	SEM021-09	2021-04-08	2022-04-07



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Report No.: SZCR210502097603

Page: 9 of 54

conducted Band Edges Measurement						
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date	
Shielding Room	SAEMC	MSR733	SEM001-09	2019-06-13	2022-06-12	
DC Power Supply	Rohde & Schwarz	NGSM 32/10	SEM011-04	2021-03-23	2022-03-22	
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-17	2021-04-08	2022-04-07	
Measurement Software	TST	TST PASS V1.0.5	N/A	N/A	N/A	
Coaxial Cable	SGS	N/A	SEM031-01	2020-07-10	2021-07-09	
Attenuator	Huber+Suhner	6620_SMA-50- 1	SEM021-09	2021-04-08	2022-04-07	

Conducted Spurious Emissions					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	SAEMC	MSR733	SEM001-09	2019-06-13	2022-06-12
DC Power Supply	Rohde & Schwarz	NGSM 32/10	SEM011-04	2021-03-23	2022-03-22
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-17	2021-04-08	2022-04-07
Measurement Software	TST	TST PASS V1.0.5	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2020-07-10	2021-07-09
Attenuator	Huber+Suhner	6620_SMA-50- 1	SEM021-09	2021-04-08	2022-04-07

Radiated Emissions which fall in the restricted bands					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	AUDIX N/A	SEM001-02	2021-03-26	2024-03-25	
EXA Signal Analyzer	Agilent Technologies Inc	N9010A	SEM004-12	2021-02-01	2022-01-31
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2021-04-14	2024-04-13
Pre-Amplifier	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2020-09-23	2021-09-22
Measurement Software	AUDIX	e3 V8.2014-6- 27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2020-07-10	2021-07-09
Horn Antenna	Schwarzbeck	BBHA 9170	SEM003-15	2020-11-14	2023-11-13
Pre-Amplifier	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2021-03-24	2022-03-23



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Report No.: SZCR210502097603

Page: 10 of 54

Radiated Spurious Emissions Below 1GHz					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2020-07-19	2023-07-18
MXE EMI Receiver	Agilent Technologies	N9038A	SEM004-15	2020-11-02	2021-11-01
BiConiLog Antenna	ETS-LINDGREN	3142C	SEM003-02	2019-05-24	2022-05-23
Pre-Amplifier	Agilent Technologies	8447D	SEM005-01	2021-03-24	2022-03-23
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2020-07-10	2021-07-09

Radiated Spurious Emis	adiated Spurious Emissions Above 1GHz				
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2021-03-26	2024-03-25
EXA Signal Analyzer	Agilent Technologies Inc	N9010A	SEM004-12	2021-02-01	2022-01-31
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2021-04-14	2024-04-13
Pre-Amplifier	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2020-09-23	2021-09-22
Measurement Software	AUDIX	e3 V8.2014-6- 27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2020-07-10	2021-07-09

General used equipmen	eneral used equipment				
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2020-09-15	2021-09-14
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2020-09-15	2021-09-14
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2021-03-30	2022-03-29
Humidity/ Temperature Indicator	MINGGAO	TH607	SEM002-23	2020-09-15	2021-09-14
Barometer	Shanghai Meteorological Industry Factory	DYM3	SEM002-24	2020-09-20	2021-09-20



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Report No.: SZCR210502097603

Page: 11 of 54

#### Radio Spectrum Technical Requirement 6

## 6.1 Antenna Requirement

## 6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)

#### 6.1.2 Conclusion

#### Standard 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(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### **EUT Antenna:**

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 4.03 dBi.

Antenna location: Refer to internal photos.





Report No.: SZCR210502097603

Page: 12 of 54

#### **Radio Spectrum Matter Test Results** 7

# 7.1 Conducted Peak Output Power

47 CFR Part 15, Subpart C 15.247(b)(3) Test Requirement Test Method: ANSI C63.10 (2013) Section 11.9.1

Limit:

Frequency range(MHz)	Output power of the intentional radiator(watt)
	1 for ≥50 hopping channels
902-928	0.25 for 25≤ hopping channels <50
	1 for digital modulation
	1 for ≥75 non-overlapping hopping channels
2400-2483.5	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

## 7.1.1 E.U.T. Operation

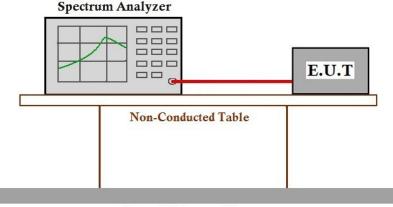
Operating Environment:

Temperature: 22.3 °C Humidity: 52.3 % RH Atmospheric Pressure: 1010 mbar

## 7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Pre-scan	06	TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Final test	02	Charge + TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

# 7.1.3 Test Setup Diagram



Ground Reference Plane



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Report No.: SZCR210502097603

Page: 13 of 54

#### 7.1.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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Report No.: SZCR210502097603

Page: 14 of 54

## 7.2 Minimum 6dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.247a(2)
Test Method: ANSI C63.10 (2013) Section 11.8.1

Limit: ≥500 kHz

## 7.2.1 E.U.T. Operation

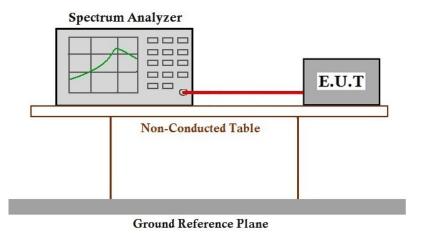
Operating Environment:

Temperature: 22.3 °C Humidity: 52.3 % RH Atmospheric Pressure: 1010 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description	
Final test	06	TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.	

## 7.2.3 Test Setup Diagram



#### 7.2.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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Report No.: SZCR210502097603

Page: 15 of 54

## 7.3 Power Spectrum Density

Test Requirement 47 CFR Part 15, Subpart C 15.247(e)
Test Method: ANSI C63.10 (2013) Section 11.10.2

Limit:

≤8dBm in any 3 kHz band during any time interval of continuous transmission

## 7.3.1 E.U.T. Operation

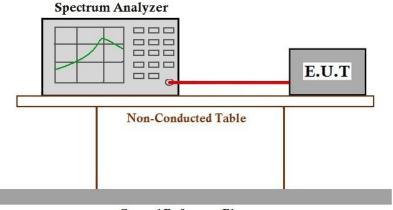
Operating Environment:

Temperature: 22.3 °C Humidity: 52.3 % RH Atmospheric Pressure: 1010 mbar

7.3.2 Test Mode Description

	· · · · · · · · · · · · · · · · · ·		
Pre-scan / Final test	Mode Code	Description	
Final test	06	TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.	

## 7.3.3 Test Setup Diagram



Ground Reference Plane

## 7.3.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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Report No.: SZCR210502097603

Page: 16 of 54

# 7.4 Conducted Band Edges Measurement

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)
Test Method: ANSI C63.10 (2013) Section 11.13.3.2

Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c).

### 7.4.1 E.U.T. Operation

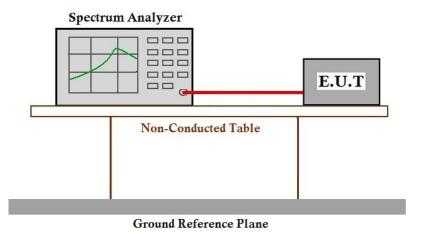
Operating Environment:

Temperature: 22.3 °C Humidity: 52.3 % RH Atmospheric Pressure: 1010 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	06	TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

## 7.4.3 Test Setup Diagram



#### 7.4.4 Measurement Procedure and Data

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Report No.: SZCR210502097603

Page: 17 of 54

## 7.5 Conducted Spurious Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)
Test Method: ANSI C63.10 (2013) Section 11.11

Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c).

#### 7.5.1 E.U.T. Operation

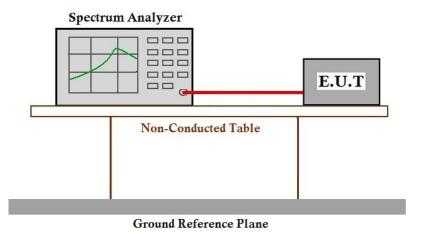
Operating Environment:

Temperature: 22.3 °C Humidity: 52.3 % RH Atmospheric Pressure: 1010 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	06	TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

## 7.5.3 Test Setup Diagram



#### 7.5.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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Report No.: SZCR210502097603

Page: 18 of 54

## 7.6 Radiated Emissions which fall in the restricted bands

47 CFR Part 15, Subpart C 15,205 & 15,209 Test Requirement

Test Method: ANSI C63.10 (2013) Section 6.10.5

Measurement Distance: 3m

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

## 7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 21.5 °C Humidity: 54.2 % RH Atmospheric Pressure: 1010 mbar

## 7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Pre-scan	06	TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Final test	02	Charge + TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.



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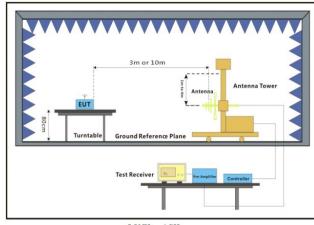
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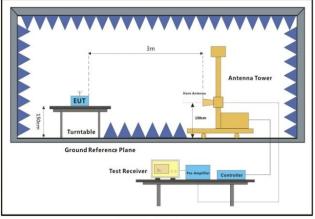


Report No.: SZCR210502097603

Page: 19 of 54

## 7.6.3 Test Setup Diagram





30MHz-1GHz

Above 1GHz

#### 7.6.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.



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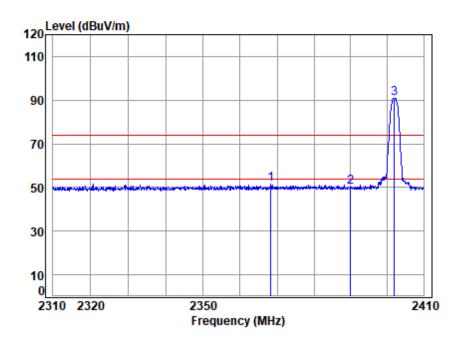
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Report No.: SZCR210502097603

Page: 20 of 54

Test Mode: 02; Polarity: Horizontal; Modulation: GFSK; Channel: Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 20976HS

Mode : 2402 Band edge

Note : BLE

> 1 2

	Cable	Ant	Preamp	Read		Limit	0ver		
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
									_
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
2368.286	4.31	28.83	40.41	58.77	51.50	74.00	-22.50	peak	
2390.000	4.34	28.88	40.42	57.44	50.24	74.00	-23.76	peak	
2402 000	4 36	28 90	40 43	98 18	91 01	74 00	17 01	neak	



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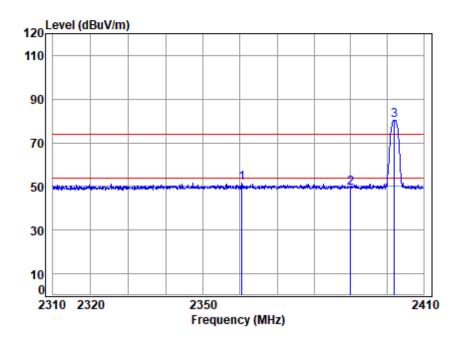
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Page: 21 of 54

Test Mode: 02; Polarity: Vertical; Modulation:GFSK; Channel:Low



Site : chamber

Condition: 3m VERTICAL

Job No : 20976HS

Mode : 2402 Band edge

Note : BLE

> 1 2 3

	Cable	Ant	Preamp	Read		Limit	0ver	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
						•		
2360.470	4.30	28.82	40.40	58.86	51.58	74.00	-22.42	peak
2390.000								•
. 2402.000								•



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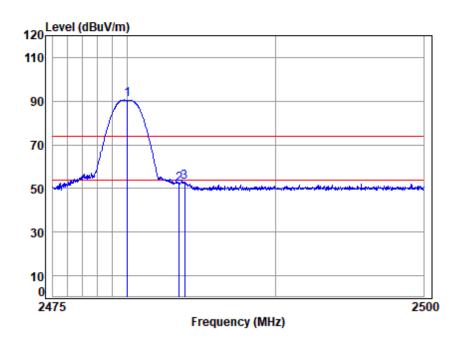
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Report No.: SZCR210502097603

Page: 22 of 54

Test Mode: 02; Polarity: Horizontal; Modulation:GFSK; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

Job No : 20976HS

Mode : 2480 Band edge

: BLE Note

> 1 2 3

Freq			Preamp Factor					Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
2480.000								•
2483.500	4.49	29.07	40.47	59.10	52.19	74.00	-21.81	peak
2483.846	4.49	29.07	40.47	59.87	52.96	74.00	-21.04	peak



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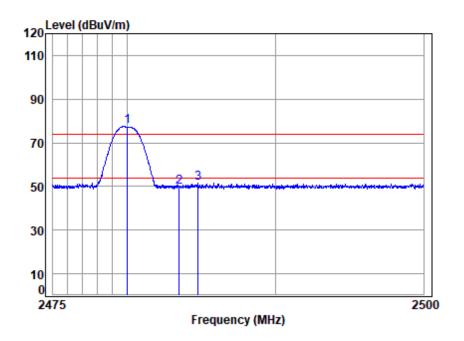
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Report No.: SZCR210502097603

Page: 23 of 54

Test Mode: 02; Polarity: Vertical; Modulation:GFSK; Channel:High



Site : chamber

Condition: 3m VERTICAL

Job No : 20976HS

Mode : 2480 Band edge

Note : BLE

		_								
		Cable	Ant	Preamp	Read		Limit	0ver		
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		_
1.	2480.000	4.49	29.06	40.47	84.41	77.49	74.00	3.49	peak	
	2483.500								•	
3	2484.770	4.50	29.07	40.47	58.40	51.50	74.00	-22.50	peak	



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Report No.: SZCR210502097603

Page: 24 of 54

## 7.7 Radiated Spurious Emissions Below 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.4,6.5

Measurement Distance: 3m

## Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
960-1000	500	3

# 7.7.1 E.U.T. Operation

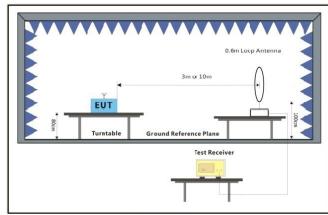
Operating Environment:

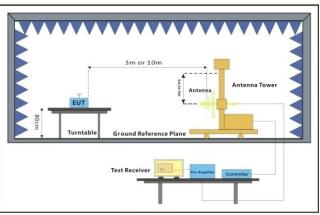
Temperature: 23.8 °C Humidity: 45.9 % RH Atmospheric Pressure: 1010 mbar

## 7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Pre-scan	06	TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Final test	02	Charge + TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

## 7.7.3 Test Setup Diagram





Below 30MHz 30MHz-1GHz



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Report No.: SZCR210502097603

Page: 25 of 54

#### 7.7.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of
- b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete. Remark:
- 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
- 2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
- 3. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.



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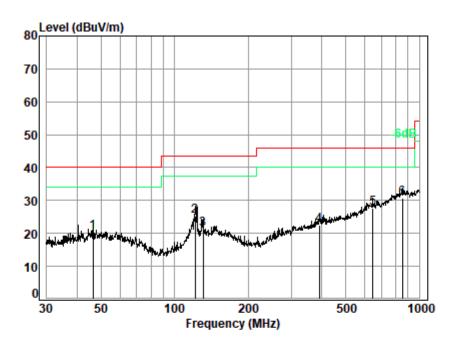
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Report No.: SZCR210502097603

26 of 54 Page:

Test Mode: 02; Polarity: Horizontal



Site : chamber

Condition: 3m HORIZONTAL

: 20976HS

Mode : 02

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	46.3402	0.21	19.92	25.87	26.20	20.46	40.00	-19.54	QP
2	121.1231	0.93	17.22	25.68	32.93	25.40	43.50	-18.10	QP
3	130.8369	0.92	18.17	25.63	27.96	21.42	43.50	-22.08	QP
4	390.7226	1.67	21.62	25.75	25.12	22.66	46.00	-23.34	QP
5	645.1195	2.06	26.50	26.75	26.00	27.81	46.00	-18.19	QP
6 r	854.0247	2.90	28.98	26.42	25.24	30.70	46.00	-15.30	OP



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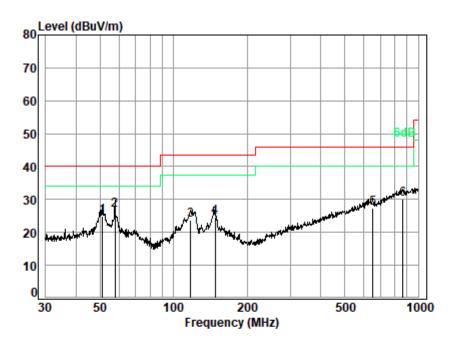
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Report No.: SZCR210502097603

27 of 54 Page:

Test Mode: 02; Polarity: Vertical



Site : chamber Condition: 3m VERTICAL : 20976HS

Mode : 02

ouc	. 02								
		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
_									
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	51.3005	0.22	19.93	25.86	30.71	25.00	40.00	-15.00	QP
2 p	57.5939	0.24	19.42	25.85	32.90	26.71	40.00	-13.29	QP
3	117.3603	0.92	16.87	25.70	31.56	23.65	43.50	-19.85	QP
4	147.9214	0.86	19.22	25.55	30.08	24.61	43.50	-18.89	QP
5	651.9418	2.03	26.50	26.74	25.49	27.28	46.00	-18.72	QP
6	866.0879	2.74	29.10	26.39	24.75	30.20	46.00	-15.80	QP



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Report No.: SZCR210502097603

Page: 28 of 54

## 7.8 Radiated Spurious Emissions Above 1GHz

47 CFR Part 15, Subpart C 15.205 & 15.209 Test Requirement

Test Method: ANSI C63.10 (2013) Section 6.6

Measurement Distance: 3m

## Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
Above 1000	500	3

## 7.8.1 E.U.T. Operation

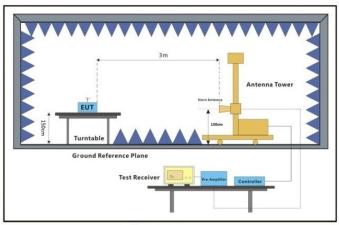
Operating Environment:

Temperature: 21.2 °C Humidity: 54.2 % RH Atmospheric Pressure: 1010 mbar

## 7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Pre-scan	06	TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Final test	02	Charge + TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

## 7.8.3 Test Setup Diagram



Above 1GHz



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Report No.: SZCR210502097603

Page: 29 of 54

#### 7.8.4 Measurement Procedure and Data

- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

- 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
- 2. Scan from 1GHz to 25GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
- 3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

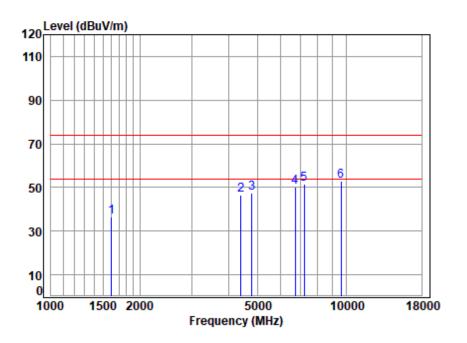




Report No.: SZCR210502097603

Page: 30 of 54

Test Mode: 02; Polarity: Horizontal; Modulation: GFSK; Channel: Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 20976HS Mode : 2402 TX SE

Note : BLE

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1601.804	3.35	26.22	40.01	47.16	36.72	74.00	-37.28	peak
2	4405.090	6.67	32.93	41.79	48.63	46.44	74.00	-27.56	peak
3	4804.000	7.10	33.62	42.14	48.74	47.32	74.00	-26.68	peak
4	6717.762	8.40	35.00	41.89	48.88	50.39	74.00	-23.61	peak
5	7206.000	8.74	35.67	41.50	48.52	51.43	74.00	-22.57	peak
6	9608.000	10.81	37.34	37.76	42.61	53.00	74.00	-21.00	peak



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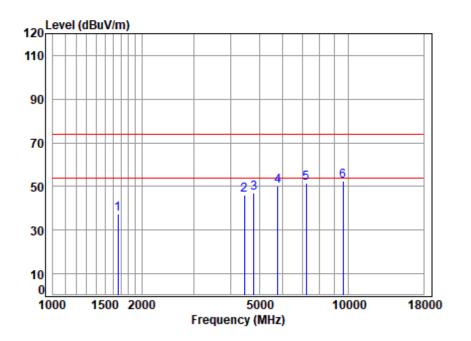
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Report No.: SZCR210502097603

Page: 31 of 54

Test Mode: 02; Polarity: Vertical; Modulation:GFSK; Channel:Low



Site : chamber

Condition: 3m VERTICAL

Job No : 20976HS Mode : 2402 TX SE

Note : BLE

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1658.337	3.40	26.50	40.04	47.60	37.46	74.00	-36.54	peak
2	4456.315	6.72	32.97	41.84	48.02	45.87	74.00	-28.13	peak
3	4804.000	7.10	33.62	42.14	48.42	47.00	74.00	-27.00	peak
4	5780.300	8.23	34.43	42.38	49.87	50.15	74.00	-23.85	peak
5	7206.000	8.74	35.67	41.50	48.61	51.52	74.00	-22.48	peak
6	9608.000	10.81	37.34	37.76	42.04	52.43	74.00	-21.57	peak



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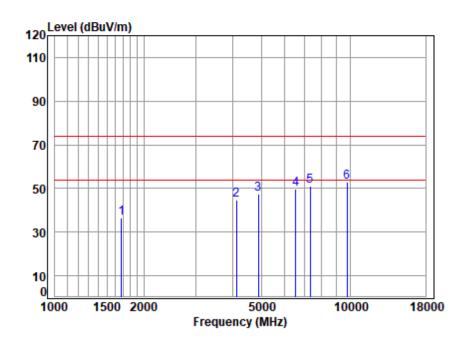
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Report No.: SZCR210502097603

Page: 32 of 54

Test Mode: 02; Polarity: Horizontal; Modulation: GFSK; Channel: middle



Site : chamber

Condition: 3m HORIZONTAL

Job No : 20976HS Mode : 2440 TX SE

Note : BLE

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1682.477	3.42	26.62	40.05	46.35	36.34	74.00	-37.66	peak
2	4121.768	6.40	32.70	41.52	47.13	44.71	74.00	-29.29	peak
3	4880.000	7.18	33.77	42.20	48.50	47.25	74.00	-26.75	peak
4	6545.263	8.30	34.68	42.01	48.70	49.67	74.00	-24.33	peak
5	7320.000	8.84	35.76	41.40	47.78	50.98	74.00	-23.02	peak
6	9760.000	10.76	37.41	37.50	42.10	52.77	74.00	-21.23	peak



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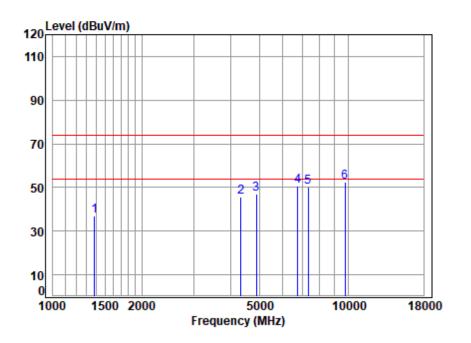
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Report No.: SZCR210502097603

Page: 33 of 54

Test Mode: 02; Polarity: Vertical; Modulation:GFSK; Channel:middle



Site : chamber

Condition: 3m VERTICAL

Job No : 20976HS Mode : 2440 TX SE

Note : BLE

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
_									
1	1382.262	3.08	25.48	39.88	48.14	36.82	/4.00	-3/.18	peak
2	4329.354	6.60	32.87	41.72	47.99	45.74	74.00	-28.26	peak
3	4880.000	7.18	33.77	42.20	48.04	46.79	74.00	-27.21	peak
4	6737.207	8.41	35.04	41.87	48.99	50.57	74.00	-23.43	peak
5	7320.000	8.84	35.76	41.40	46.95	50.15	74.00	-23.85	peak
6	9760.000	10.76	37.41	37.50	41.82	52.49	74.00	-21.51	peak



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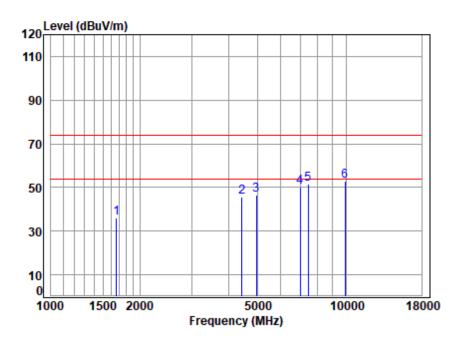
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Report No.: SZCR210502097603

Page: 34 of 54

Test Mode: 02; Polarity: Horizontal; Modulation:GFSK; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

Job No : 20976HS Mode : 2480 TX SE

Note : BLE

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	——dB	
1	1667.951	3.40	26.55	40.04	46.30	36.21	74.00	-37.79	peak
2	4443.453	6.71	32.96	41.82	47.89	45.74	74.00	-28.26	peak
3	4960.000	7.26	33.92	42.27	47.71	46.62	74.00	-27.38	peak
4	6974.982	8.53	35.46	41.72	48.14	50.41	74.00	-23.59	peak
5	7440.000	8.96	35.85	41.29	48.13	51.65	74.00	-22.35	peak
6	9920.000	10.71	37.47	37.23	41.79	52.74	74.00	-21.26	peak



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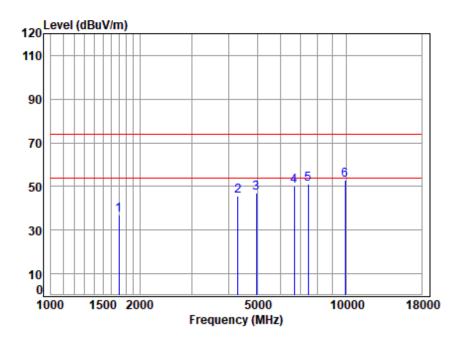
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Report No.: SZCR210502097603

Page: 35 of 54

Test Mode: 02; Polarity: Vertical; Modulation:GFSK; Channel:High



Site : chamber

Condition: 3m VERTICAL

Job No : 20976HS Mode : 2480 TX SE

Note : BLE

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1697.129	3.43	26.69	40.06	47.01	37.07	74.00	-36.93	peak
2	4304.400	6.58	32.85	41.70	47.74	45.47	74.00	-28.53	peak
3	4960.000	7.26	33.92	42.27	47.91	46.82	74.00	-27.18	peak
4	6659.763	8.37	34.89	41.93	48.78	50.11	74.00	-23.89	peak
5	7440.000	8.96	35.85	41.29	47.69	51.21	74.00	-22.79	peak
6	9920.000	10.71	37.47	37.23	41.88	52.83	74.00	-21.17	peak



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Report No.: SZCR210502097603

Page: 36 of 54

# 8 Emission Test Results

## 8.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement: 47 CFR Part 15, Subpart C 15.247 &15.207

Test Method: ANSI C63.10 (2013) Section 6.2

Limit:

Everyoney of emission/MU-	Conducted limit(dBµV)						
Frequency of emission(MHz)	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.							
Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz							

# 8.1.1 E.U.T. Operation

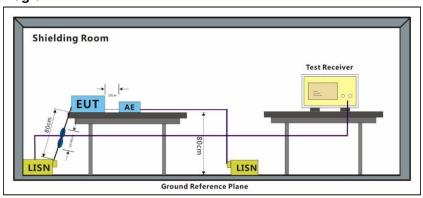
Operating Environment:

Temperature: 23.6 °C Humidity: 54.3 % RH Atmospheric Pressure: 1010 mbar

8.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	02	Charge + TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

## 8.1.3 Test Setup Diagram





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Report No.: SZCR210502097603

Page: 37 of 54

#### 8.1.4 Measurement Procedure and Data

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50µH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark: LISN=Read Level+ Cable Loss+ LISN Factor

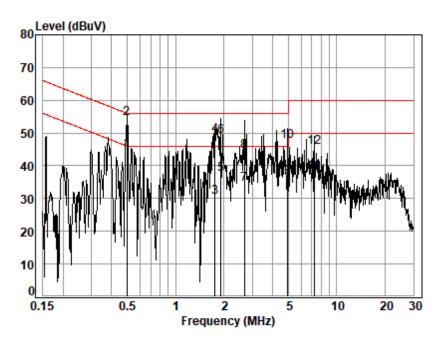




Report No.: SZCR210502097603

Page: 38 of 54

Test Mode: 02; Line: Live line; Modulation: GFSK; Channel: Low



Site : Shielding Room

Condition: Line Job No. : 20976HS

Test mode: 02

		Cable	LISN	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.4994	0.06	9.79	34.89	44.74	46.01	-1.27	Average
2	0.4994	0.06	9.79	44.49	54.34	56.01	-1.67	QP
3	1.7623	0.15	9.83	20.41	30.39	46.00	-15.61	Average
4	1.7623	0.15	9.83	39.42	49.40	56.00	-6.60	QP
5	1.9080	0.15	9.85	27.39	37.39	46.00	-8.61	Average
6	1.9080	0.15	9.85	38.95	48.95	56.00	-7.05	QP
7	2.6783	0.16	9.88	24.48	34.52	46.00	-11.48	Average
8	2.6783	0.16	9.88	34.35	44.39	56.00	-11.61	QP
9	4.9519	0.17	9.97	26.42	36.56	46.00	-9.44	Average
10	4.9519	0.17	9.97	37.42	47.56	56.00	-8.44	QP
11	7.2518	0.17	10.10	27.85	38.12	50.00	-11.88	Average
12	7.2518	0.17	10.10	35.49	45.76	60.00	-14.24	QP



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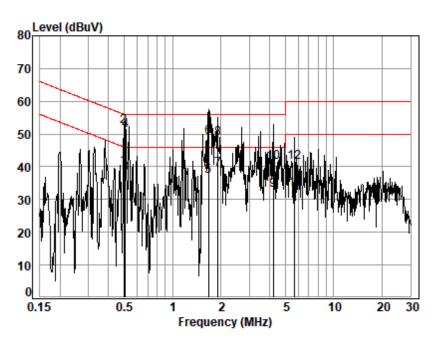
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Report No.: SZCR210502097603

39 of 54 Page:

Test Mode: 02; Line: Neutral Line; Modulation:GFSK; Channel:Low



Site : Shielding Room

Condition: Neutral Job No. : 20976HS

Test mode: 02

		Cable	LISN	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
4	0.4004	0.00	0.70	30.05	20.02	46 04	C 40	
1	0.4994	0.06	9.72	30.05	39.83	46.01	-6.18	Average
2	0.4994	0.06	9.72	42.67	52.45	56.01	-3.56	QP
3	0.5101	0.06	9.72	28.33	38.11	46.00	-7.89	Average
4	0.5101	0.06	9.72	41.43	51.21	56.00	-4.79	QP
5	1.6713	0.14	9.76	27.29	37.19	46.00	-8.81	Average
6	1.6713	0.14	9.76	39.01	48.91	56.00	-7.09	QP
7	1.9080	0.15	9.79	29.36	39.30	46.00	-6.70	Average
8	1.9080	0.15	9.79	38.75	48.69	56.00	-7.31	QP
9	4.2018	0.16	9.91	22.90	32.97	46.00	-13.03	Average
10	4.2018	0.16	9.91	31.32	41.39	56.00	-14.61	QP
11	5.7135	0.17	10.02	22.91	33.10	50.00	-16.90	Average
12	5.7135	0.17	10.02	31.13	41.32	60.00	-18.68	QP



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Report No.: SZCR210502097603

Page: 40 of 54

#### **Test Setup Photo** 9

Refer to Appendix - Test Setup Photo for SZCR2105020976HS

# 10 EUT Constructional Details (EUT Photos)

Refer to Refer to External and Internal Photos for SZCR2105020976HS



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Page: 41 of 54

# 11 Appendix

1. Duty Cycle

1.1 Ant1

### 1.1.1 Test Result

	Ant1								
	Mode	ТХ Туре	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)	
Ī			2402	0.38	0.62	61.44	2.12	0.10	
	1M	SISO	2440	0.38	0.63	61.34	2.12	0.10	
			2480	0.38	0.62	61.44	2.12	0.10	

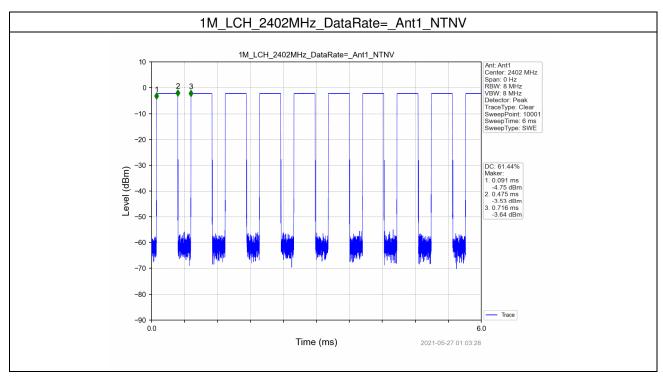


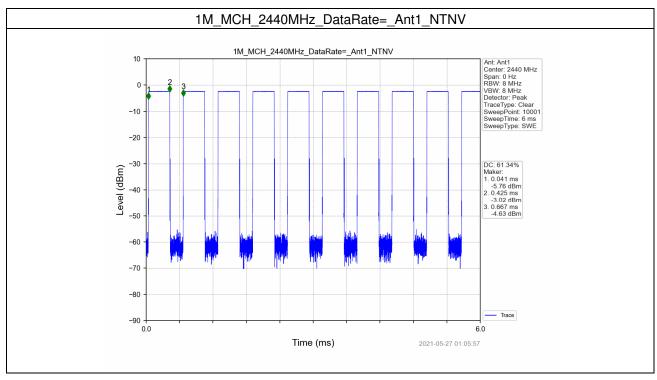


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Page: 42 of 54

## 1.1.2 Test Graph







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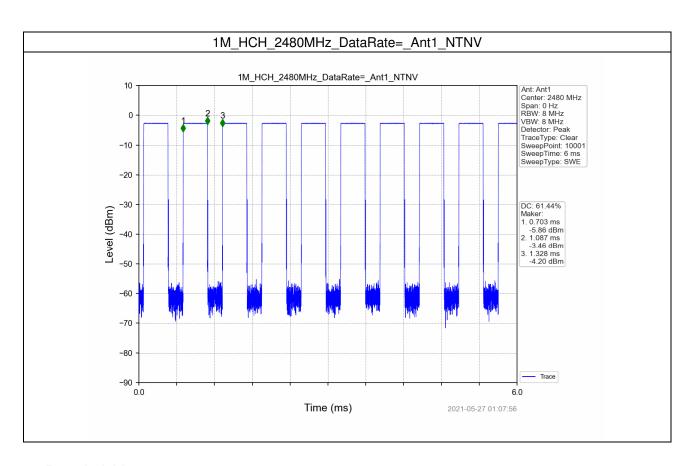
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Page: 43 of 54



### 2. Bandwidth

#### 2.1 -6dB Bandwidth

### 2.1.1 Test Result

	Mada	ТХ Туре	Fraguenov (MHz)	6dB Bandwidth (MHz)	Limit (MLIT)	Verdict						
	Mode		Frequency (MHz)	Ant1	Limit (MHz)							
		SISO	2402	0.700	>=0.50	Pass						
	1M		SISO	SISO	SISO	SISO	SISO	SISO	2440	0.696	>=0.50	Pass
			2480	0.705	>=0.50	Pass						



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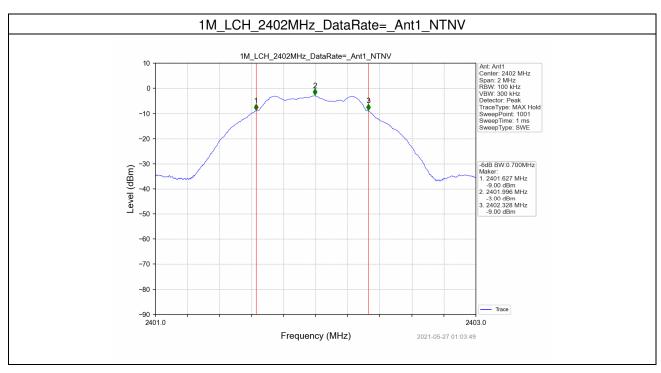
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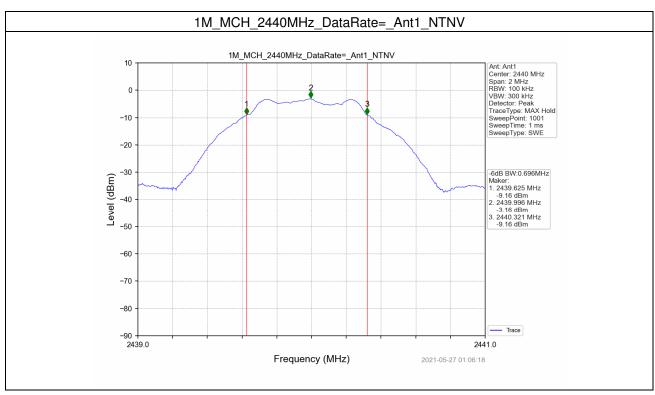


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## 2.1.2 Test Graph







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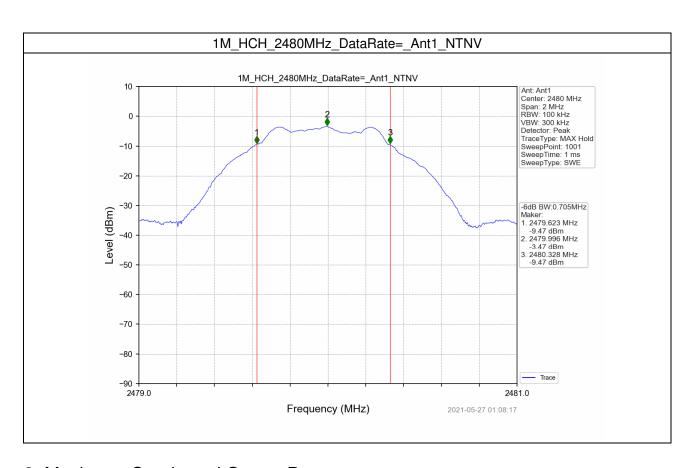
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Report No.: SZCR210502097603

Page: 45 of 54



# 3. Maximum Conducted Output Power

#### 3.1 Power

### 3.1.1 Test Result

Mode	TV Type	Frequency (MHz)	Measured Peak Output Power (dBm)	Limit (dBm)	Verdict				
iviode	1 × Type	rrequency (MHZ)	Ant1	LIIIII (GBIII)					
1M		2402	-2.05	<=30	Pass				
	SISO	2440	-2.23	<=30	Pass				
		2480	-2.56	<=30	Pass				
Note1: Ant	Note1: Antenna Gain: 4.03dBi;								



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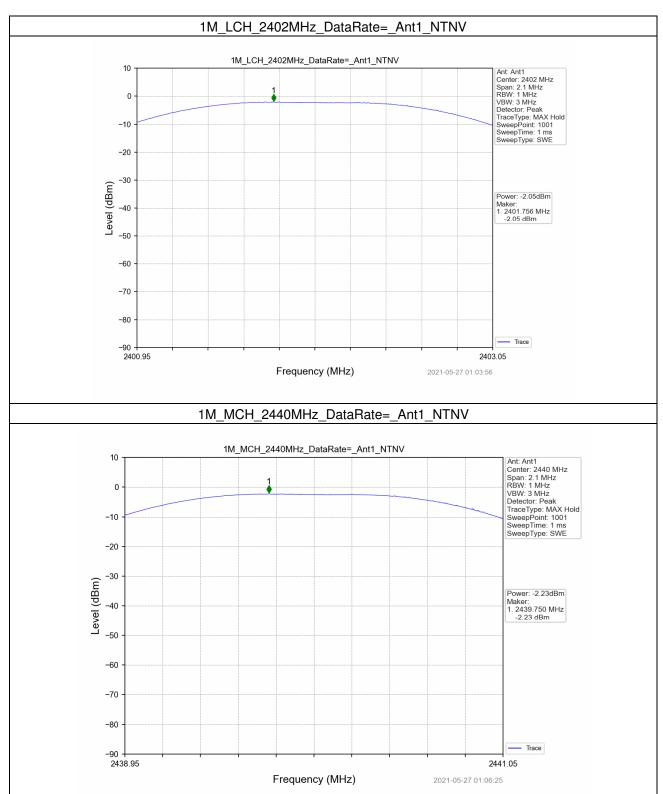
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## 3.1.2 Test Graph





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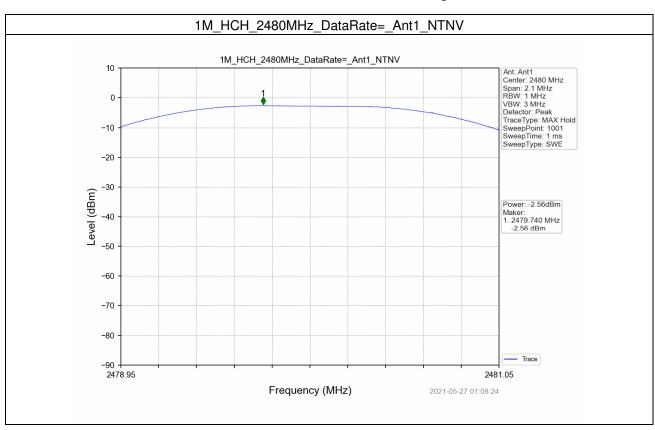
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Report No.: SZCR210502097603

Page: 47 of 54



## 4. Maximum Power Spectral Density

### 4.1 MeasuredPSD

### 4.1.1 Test Result

Mode	ТХ Туре	Fraguency (MUz)	Maximum PSD (dBm/3kHz)	Limit	Verdict
Mode		Frequency (MHz)	Ant1	(dBm/3kHz)	
	SISO	2402	-17.12	/	Note2
1M		2440	-17.23	/	Note2
		2480	-17.48	/	Note2

Note1: Antenna Gain: 1:0dBi; Note2: Only for Report Use



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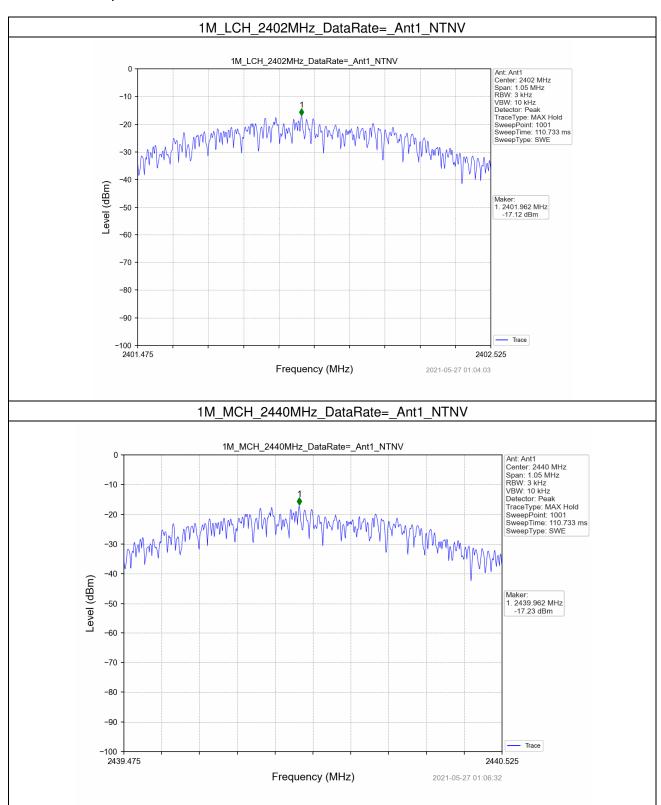
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Page: 48 of 54

## 4.1.2 Test Graph





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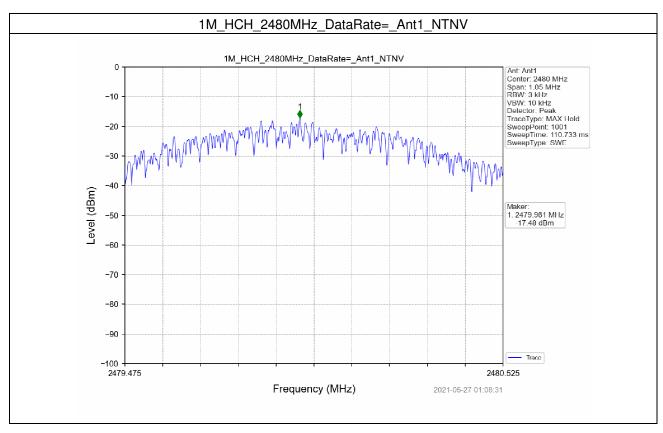
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Report No.: SZCR210502097603

Page: 49 of 54



## 5. Unwanted Emissions In Non-restricted Frequency Bands

#### 5.1 Ref

### 5.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Ant	Level of Reference (dBm)	Limit (dBm)	Verdict
		2402	1	-2.95	/	/
1M	SISO	2440	1	-3.12	/	/
		2480	1	-3.46	/	/

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level



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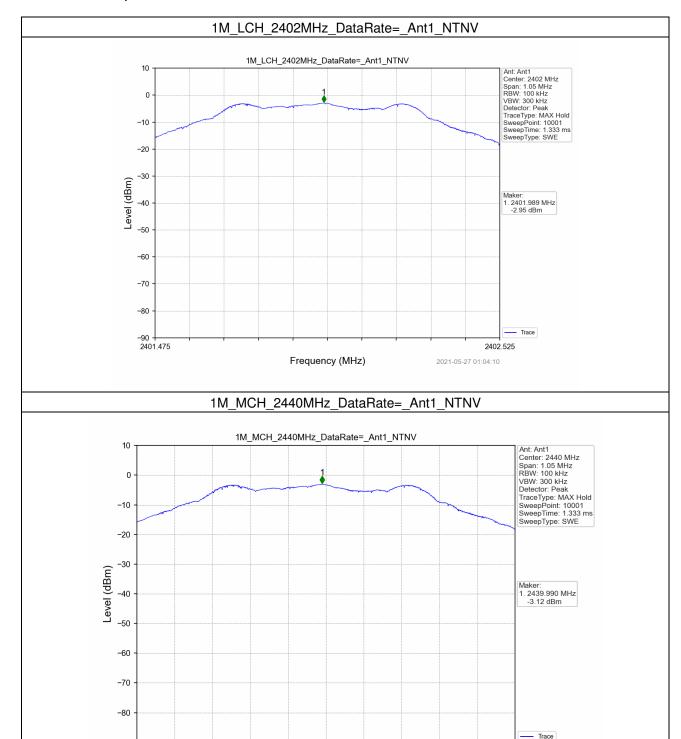
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Page: 50 of 54

## 5.1.2 Test Graph





-90 2439.475

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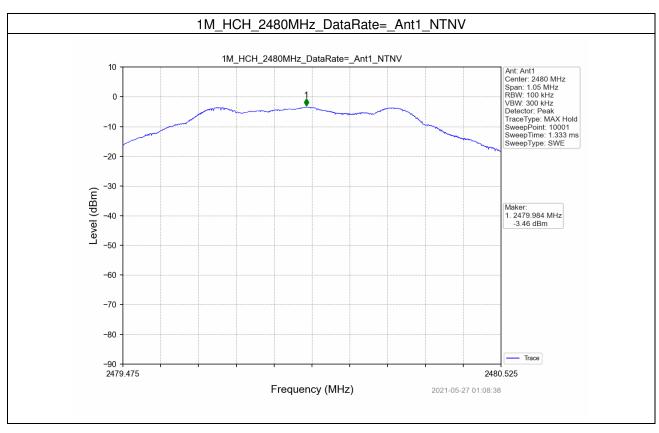
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2440.525



Report No.: SZCR210502097603

Page: 51 of 54



### 5.2 CSE

### 5.2.1 Test Result

Mode	TX Type	Frequency (MHz)	Ant	Level of Reference (dBm)	Limit (dBm)	Verdict
		2402	1	Refer To Test Graph	<=-22.95	Pass
1M	SISO	2440	1	Refer To Test Graph	<=-22.95	Pass
		2480	1	Refer To Test Graph	<=-22.95	Pass

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.



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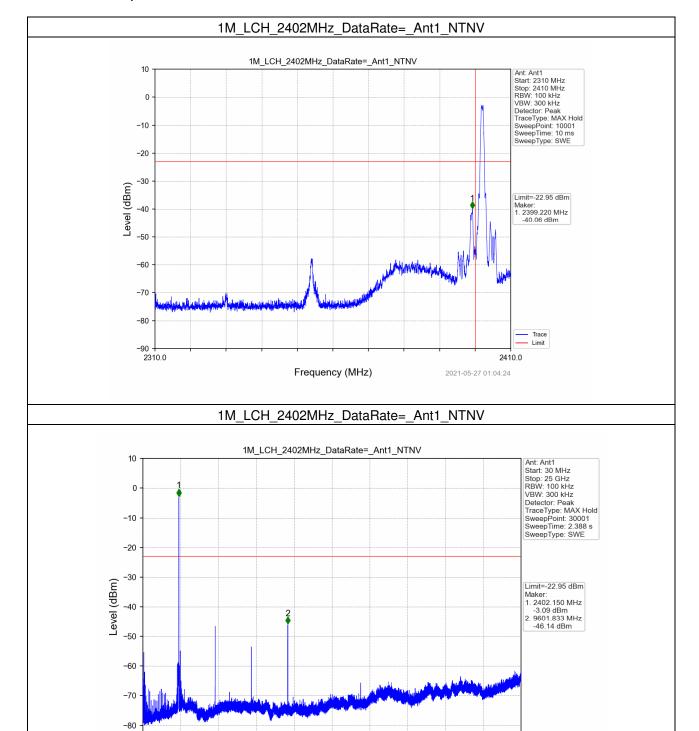
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Page: 52 of 54

### 5.2.2 Test Graph





-90 30.0

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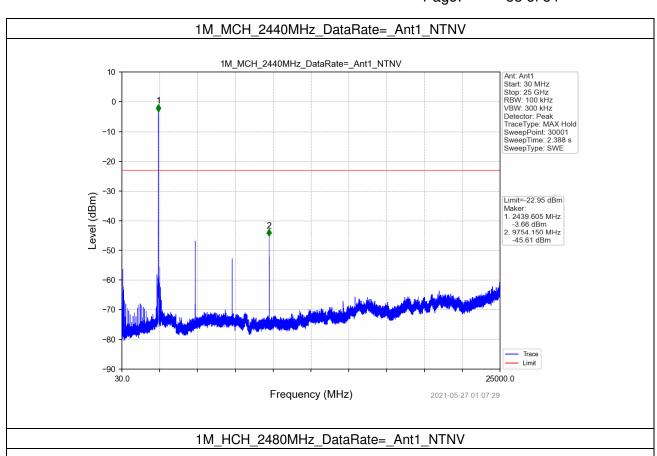
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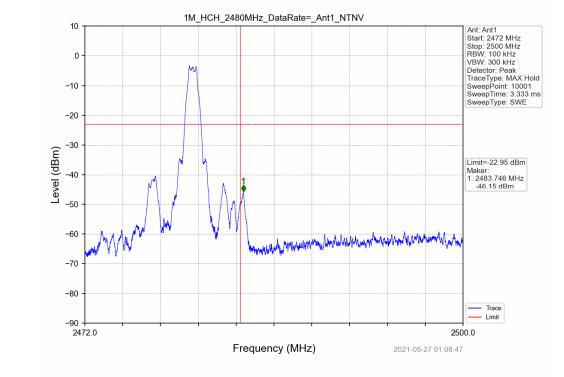
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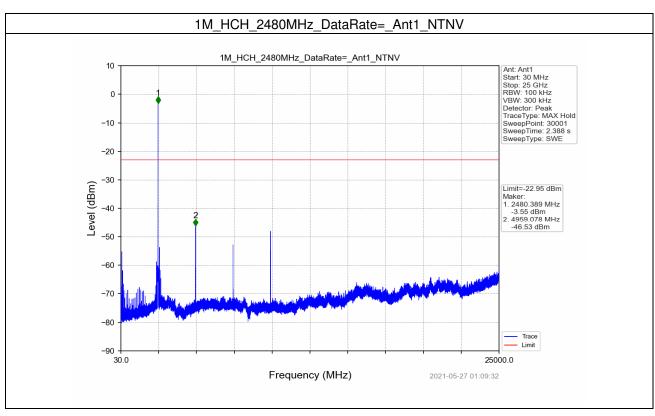
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