

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 1 of 41

TEST REPORT

Application No.:	SZCR2404001524AT		
Applicant:	WowWee Gourp Limited		
Address of Applicant:	Energy Plaza, Suite 301A - C 92 Granville Road, TST EAST, Kowloon, Hong Kong		
Manufacturer:	WowWee Group Limited		
Address of Manufacturer:	3/F, Energy Plaza, Suite 301A-C, 92 Granville Road, T.S.T. East, Kowloon, Hong Kong		
Factory:	Chen Zhou Wealthwise Enterprise Ltd.		
Address of Factory:	Shou Fo Road No 050, Dong Jiang Street, Zi Xing City, Chen Zhou City, Hu Nan Province		
Equipment Under Test (EUT):		
EUT Name:	Twirl Along Dancing Doll		
Model No.:	1191, 1191-02-M01, 1191-02-MA 🛛 🐥		
*	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.		
Trade Mark:	WowWee		
FCC ID:	OKP1191RX		
Standard(s) :	47 CFR Part 15, Subpart C 15.249		
Date of Receipt:	2024-04-25		
Date of Test:	2024-04-28 to 2024-05-14		
Date of Issue:	2024-05-14		
Test Result:	Pass*		

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

Keny. XM

Keny Xu EMC Laboratory Manager





SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 2 of 41

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2024-05-14		Original

Authorized for issue by:			
	Price Chan		
	Bill Chen/Project Engineer		
	Eric Fu		
	Eric Fu/Reviewer	-	



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN. Doccheck@egs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t(86-755)26012053 f(86-755)26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 3 of 41

Test Summary 2

Radio Spectrum Technical Requirement				
ltem	Standard	Method	Requirement	Result
Antenna Requirement	47 CFR Part 15, Subpart C 15.249	N/A	47 CFR Part 15, Subpart C 15.203	Pass

Radio Spectrum Matter Part					
ltem	Standard	Method	Requirement	Result	
Field Strength of the Fundamental Signal (15.249(a))		ANSI C63.10 (2013) Section 6.5&6.6	47 CFR Part 15, Subpart C 15.249(a)	Pass	
Restricted Band Around Fundamental Frequency	47 CFR Part 15,	ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209	Pass	
Radiated Emissions Below 1GHz	Subpart C 15.249	ANSI C63.10 (2013) Section 6.4&6.5	47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)	Pass	
Radiated Emissions Above 1GHz		ANSI C63.10 (2013) Section 6.6	47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)	Pass	
20dB Bandwidth		ANSI C63.10 (2013) Section 6.9	47 CFR Part 15, Subpart C 15.215	Pass	

Declaration of EUT Family Grouping:

Model No.: 1191, 1191-02-M01, 1191-02-MA

Only the model 1191 was tested, since according to the declaration from the applicant, the electrical circuit design, PCB layout, components used, internal wiring and functions were identical for all the above models, with only difference on customer item number.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fulles extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com">https://www.sgs.com/en/Terms-and-Conditions.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t(86-755)26012053 f(86-755)26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 4 of 41

3 Contents

		Page
1	Cover Page	1
2	Test Summary	3
-		
3	Contents	4
4	General Information	6
	4.1 Details of E.U.T.	6
	4.2 Description of Support Units	
	4.3 Measurement Uncertainty	
	4.4 Test Location	8
	4.5 Test Facility	
	4.6 Deviation from Standards	
	4.7 Abnormalities from Standard Conditions	8
5	Equipment List	9
_		
6		
	6.1 Antenna Requirement	
	6.1.1 Test Requirement:	
	6.1.2 Conclusion	
7	Radio Spectrum Matter Test Results	12
	7.1 Field Strength of the Fundamental Signal (15.249(a))	12
	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 Restricted Band Around Fundamental Frequency	
	7.2.1 E.U.T. Operation7.2.2 Test Mode Description	
	7.2.2 Test Mode Description	
	7.2.4 Measurement Procedure and Data	
	7.3 Radiated Emissions Below 1GHz	
	7.3.1 E.U.T. Operation	
	7.3.2 Test Mode Description	
	7.3.3 Test Setup Diagram	26
	7.3.4 Measurement Procedure and Data	
	7.4 Radiated Emissions Above 1GHz	
	7.4.1 E.U.T. Operation	
	7.4.2 Test Mode Description	
	7.4.3 Test Setup Diagram	
	7.4.4 Measurement Procedure and Data7.5 20dB Bandwidth	
	7.5 20dB Bandwidth 7.5.1 E.U.T. Operation	



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 83071443, or email: CN_Doccheck@gs.com
[h.!Workshu, H.!Mide&dock, Skine& Ikanka Distric, Shanda, Chanda, Distric, Shanda, Chanda, Shanda, Shanda, Shanda, Distric, Shanda, Chanda, Jehn, Mide, Sacta, Shanda, Shanda, Distric, Shanda, Chanda, Shanda, Distric, Shanda, Chanda, Distric, Shanda, Distric, Shanda, Chanda, Distric, Shanda, Chanda, Distric, Shanda, Distric, Shan



SZEN	IC-TRF-0	1 Rev. A/1	Report N	o.: SZCR2404001524	03
			Page:	5 of 41	
		Test Mode Description			
	7.5.3	Test Setup Diagram			38
	7.5.4	Measurement Procedure and Data			38
8	Test S	etup Photo			41
9	EUT C	onstructional Details (EUT Photos)			41



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN. Doccheck@egs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn

中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t(86-755)26012053 f(86-755)26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 6 of 41

4 General Information

4.1 Details of E.U.T.

Power supply:	receiver:4.5V DC (1.5V x 3"AAA" Size Batteries)	
Operating Frequency:	: 2405MHz - 2475MHz	
Channel number:	24	
Modulation Type:	GFSK	
Sample Type:	Portable production	
Antenna Type:	Integral Antenna	
Antenna Gain:	1.9dBi	
Cable Loss (for RF conducted test):	0.4dB	

Operation Frequency each of channel

operation requerely caon of onaliner					
Channel	Frequency	Channel	Frequency	Channel	Frequency
1 CH	2405MHz	9 CH	2425MHz	17 CH	2462MHz
2 CH	2407MHz	10 CH	2427MHz	18 CH	2469MHz
3 CH	2408MHz	11 CH	2428MHz	19 CH	2470MHz
4 CH	2410MHz	12 CH	2435MHz	20 CH	2471MHz
5 CH	2411MHz	13 CH	2445MHz	21 CH	2472MHz
6 CH	2414MHz	14 CH	2451MHz	22 CH	2473MHz
7 CH	2418MHz	15 CH	2452MHz	23 CH	2474MHz
8 CH	2422MHz	16 CH	2453MHz	24 CH	2475MHz

Using test software was control EUT work in continuous transmitter and receiver mode.and select test channel as below:

Channel	Frequency
The Lowest channel(CH1)	2405MHz
The Middle channel(CH12)	2435MHz
The Highest channel(CH24)	2475MHz

Remark: The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
RF cable	Client Provided	N/A	N/A



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indennification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or faisification of the content or appearance of this document is unlawfull and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 28071459, or email: CN_Doccheck@ags.com" (No Working. Julin Julin Juling Seding / Juling Path kantan Distrid, Sharaba, Guargoing, Clina 518057 to (86-755) 26710594 www.sgsgroup.com.cn

中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t(86-755)26012053 f(86-755)26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 7 of 41

4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Field Strength of the Fundamental Signal (15.249(a))	± 4.5dB (Below 1GHz);± 4.8dB (Above 1GHz)
Restricted Band Around Fundamental Frequency	± 6.0dB (Below 1GHz);± 4.6dB (Above 1GHz)
Radiated Emissions Below 1GHz	\pm 6.0dB for 3m; \pm 5.0dB for 10m
Radiated Emissions Above 1GHz	± 4.6dB (1GHz-18GHz);± 4.8dB (18MHz-40GHz)
20dB Bandwidth	± 3%

Remark:

The Ulab (lab Uncertainty) is less than Ucispr/ETSI (CISPR/ETSI 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.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fulles extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com">https://www.sgs.com/en/Terms-and-Conditions.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn

中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t(86-755)26012053 f(86-755)26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 8 of 41

4.4 Test Location

All tests were performed at: SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057. 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: CN1336

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

Designation Number: CN1336. Test Firm Registration Number: 787754.

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

None

4.7 Abnormalities from Standard Conditions

None



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 9 of 41

5 **Equipment List**

Field Strength of the Fundamental Signal (15.249(a))					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
3m Fully-Anechoic Chamber	AUDIX	N/A	SEM001-02	2023-04-01	2026-03-31
Signal Analyzer	Rohde & Schwarz	FSV40	SEM008-04	2024-03-15	2025-03-14
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2023-07-23	2025-07-22
Microwave system amplifier	Agilent	83017A	SEM005-25	2023-09-19	2024-09-18
Measurement Software	AUDIX	e3 V8.2014-6- 27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2023-07-07	2024-07-06

Restricted Band Around Fundamental Frequency					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
3m Fully-Anechoic Chamber	AUDIX	N/A	SEM001-02	2023-04-01	2026-03-31
Signal Analyzer	Rohde & Schwarz	FSV40	SEM008-04	2024-03-15	2025-03-14
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2023-07-23	2025-07-22
Microwave system amplifier	Agilent	83017A	SEM005-25	2023-09-19	2024-09-18
Measurement Software	AUDIX	e3 V8.2014-6- 27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2023-07-07	2024-07-06
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	SEM003-15	2022-08-10	2024-08-09
Pre-Amplifier	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2024-03-15	2025-03-14

Radiated Emissions Below 1GHz					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Loop Antenna	ETS-Lindgren	6502	SEM003-08	2023-11-20	2025-11-19
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2023-06-19	2026-06-18
MXE EMI Receiver	Agilent Technologies	N9038A	SEM004-15	2023-10-19	2024-10-18
BiConiLog Antenna	ETS-LINDGREN	3142C	SEM003-01	2023-09-16	2025-09-15
Pre-Amplifier	Agilent Technologies	8447D	SEM005-01	2024-03-14	2025-03-13
Measurement Software	AUDIX	e3 V8.2014-6- 27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2023-07-07	2024-07-06



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN. Doccheck@egs.com

中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t(86–755)26012053 f(86–755)26710594 sgs.china@sgs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 10 of 41

Radiated Emissions Abo	ove 1GHz				
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
3m Fully-Anechoic Chamber	AUDIX	N/A	SEM001-02	2023-04-01	2026-03-31
Signal Analyzer	Rohde & Schwarz	FSV40	SEM008-04	2024-03-15	2025-03-14
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2023-07-23	2025-07-22
Microwave system amplifier	Agilent	83017A	SEM005-25	2023-09-19	2024-09-18
Measurement Software	AUDIX	e3 V8.2014-6- 27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2023-07-07	2024-07-06

RF Conducted Test					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
DC Power Supply	Chroma	62012P-80-60	SEM011-11	2023-10-19	2024-10-18
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-19	2024-03-14	2025-03-13
Measurement Software	TST PASS	TST PASS V2.0	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2023-07-07	2024-07-06
Attenuator	Huber+Suhner	6620_SMA-50- 1	SEM021-09	2024-03-27	2025-03-26
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2024-03-19	2025-03-18

General used equipmen	t				
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	deli	8838	SEM002-32	2023-07-28	2024-07-27
Humidity/ Temperature Indicator	deli	8838	SEM002-33	2023-07-28	2024-07-27
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2024-03-18	2025-03-17



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@gs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn

中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t(86-755)26012053 f(86-755)26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 11 of 41

6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

6.1.2 Conclusion

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 1.9dBi.

Antenna location: Refer to internal photos



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any under the transaction documents, This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CM_Doccheck@gss.com

No.1 Workshop, II-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guargdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgs.group.com.cn 中国・广东・深圳市南山区科技园中区M−10栋1号厂房 邮编: 518057 t (86–755) 26012053 f (86–755) 26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 12 of 41

Radio Spectrum Matter Test Results 7

7.1 Field Strength of the Fundamental Signal (15.249(a))

47 CFR Part 15, Subpart C 15.249(a) **Test Requirement** ANSI C63.10 (2013) Section 6.5&6.6 Test Method: Measurement Distance: 3m

Limit:

Fundamental frequency(MHz)	Field strength of fundamental(millivolts/meter)	Field strength of harmonics(microvolts/meter)
902-928	50	500
2400-2483.5	50	500
5725-5875	50	500
24000-24250	250	2500

Remark: The frequencies above 1000MHz 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 fundamental frequency in "902-928MHz", the field strength of fundamental is based on Quasi-Peak.

7.1.1 E.U.T. Operation

Operating Environment: Temperature: 21.5 °C Humidity: 55.3 % RH

Atmospheric Pressure: 1020 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode(receiver)_Keep the EUT in transmitting with modulation mode.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn

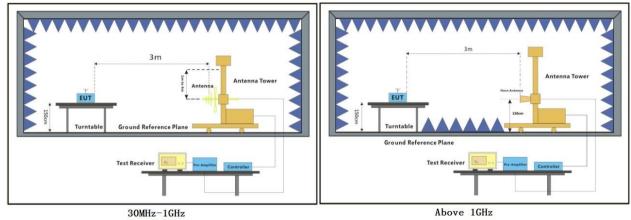
中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 13 of 41

7.1.3 Test Setup Diagram



7.1.4 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.

j.Repeat above procedures until all frequencies measured was complete.

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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or faisification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: Ch.Doccheck@gs.com

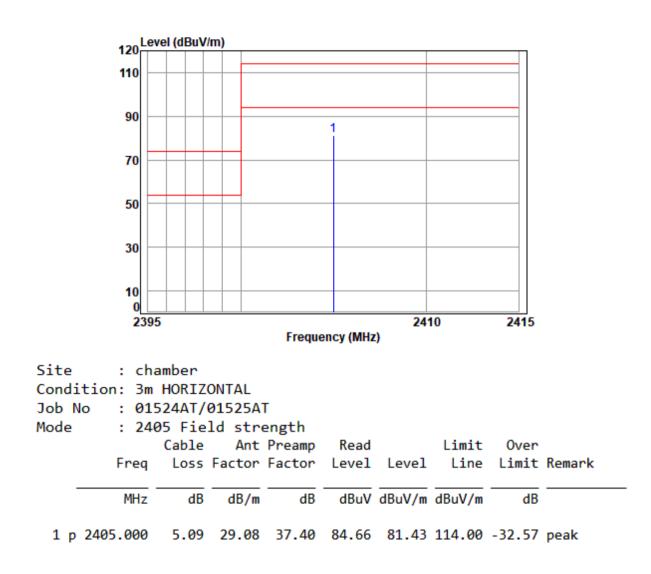
non-monission, #=/u, would seculin, colline a featimity rain, featimitin, callelizatii, callelizatii calleizatii callelizatii



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 14 of 41

Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:Low





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

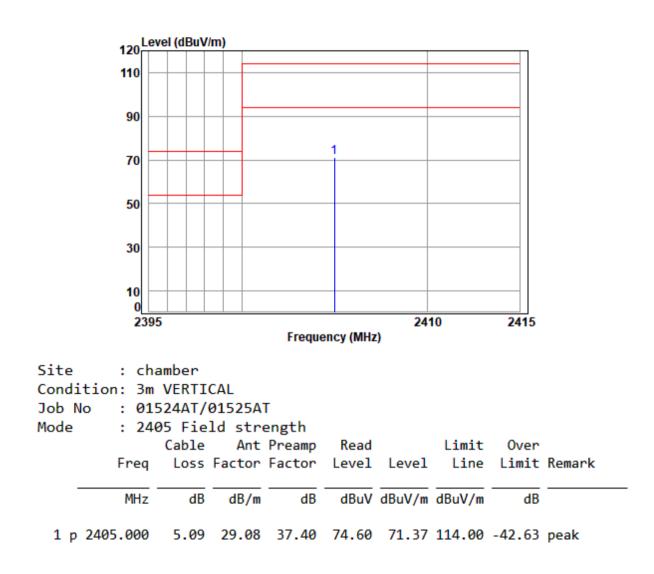
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 15 of 41

Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:Low





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

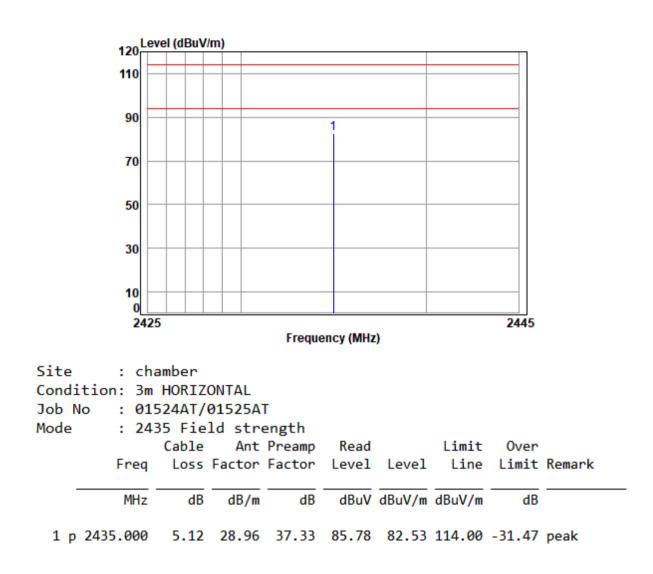
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 16 of 41

Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:middle





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

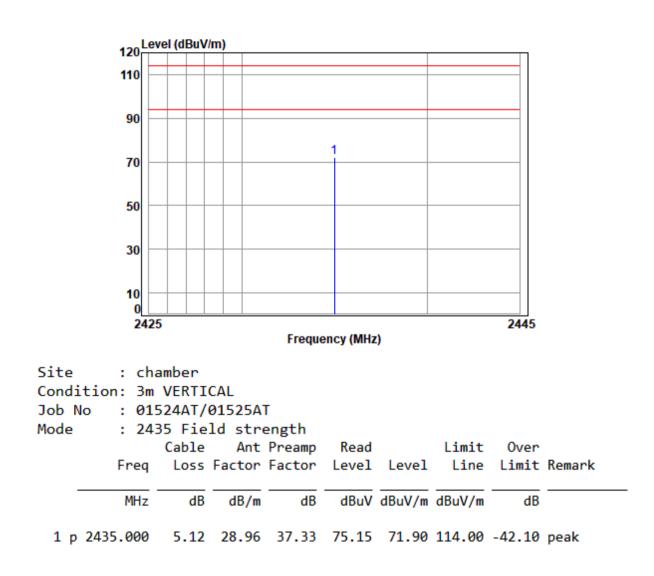
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 17 of 41

Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:middle





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

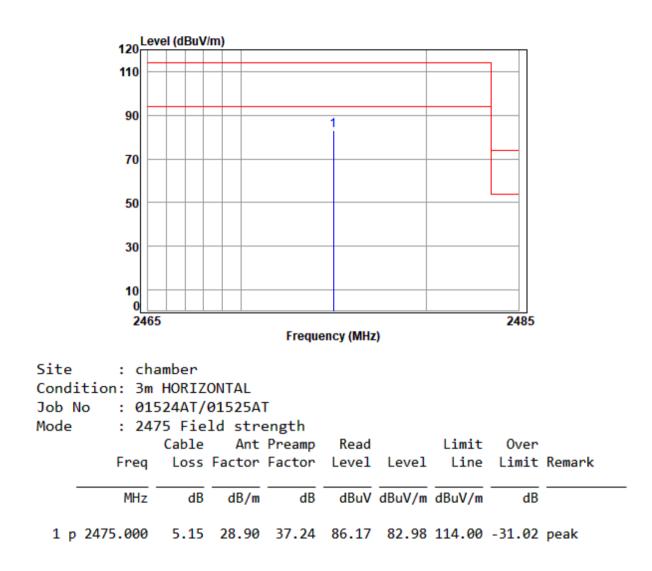
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 18 of 41

Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:High





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

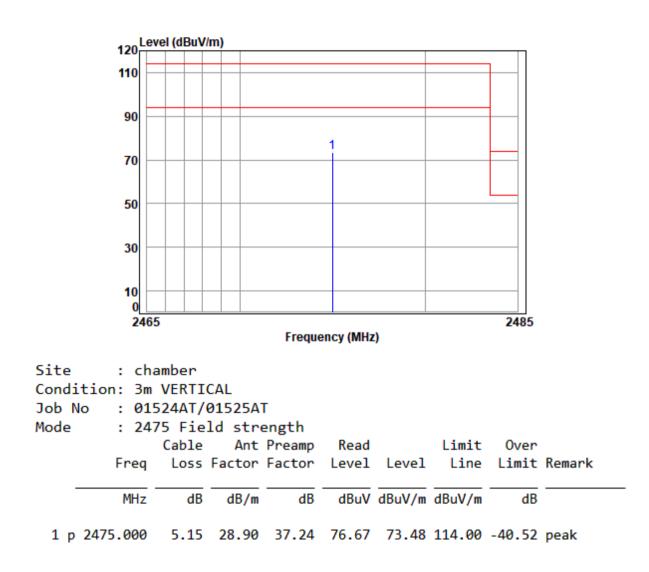
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 19 of 41

Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:High





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 20 of 41

7.2 Restricted Band Around Fundamental Frequency

47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209 Test Requirement Test Method: ANSI C63.10 (2013) Section 6.10.5 Measurement Distance: 3m

Limit:

Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value
Above 1GHz	74.0	Peak Value

Emission radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209.whichever is the lesser attenuation.

7.2.1 E.U.T. Operation

Operating Environ	ment:					
Temperature:	21.5 °C	Humidity:	55.5 % RH	Atmospheric Pressure:	1020	mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode(receiver)_Keep the EUT in transmitting with modulation mode.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn

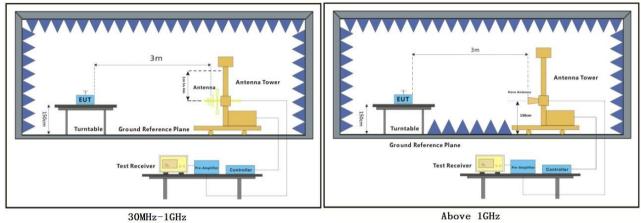
中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 21 of 41

7.2.3 Test Setup Diagram



7.2.4 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 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 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.

j. Repeat above procedures until all frequencies measured was complete.

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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or faisification of the content or appearance of this document is unlawfull and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. **Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 28071459, to (Moldbisching, Same & Itamiang/ Pat, Manhan Dishtid, Shanzhen, Guangdong, Cline 518057 to (86-755) 26710594 www.sgsgroup.com.cn**

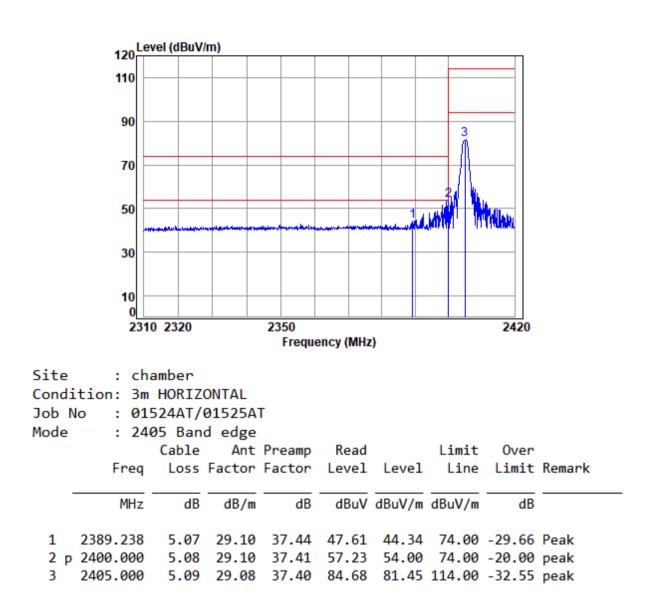
中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t(86-755)26012053 f(86-755)26710594 sgs.china@sgs.com Member of the SGS Group (SGS SA)



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 22 of 41

Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:Low





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn

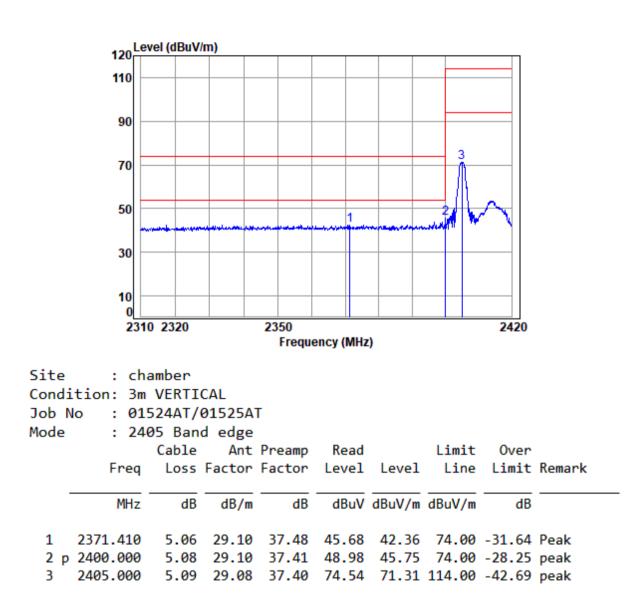
中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 23 of 41

Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:Low





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

or email: <u>CN.Doccheck@sgs.com</u> Wo1Workshop, N=10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86–755) 26012053 f (86–755) 26710594 sgs.cohina@sgs.com

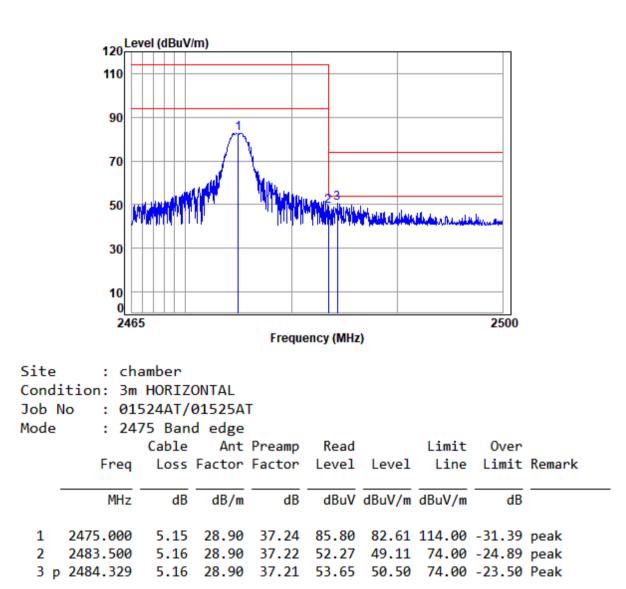
2055 1 (60-755) 267 10594 593.011112(2393.0011



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 24 of 41

Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:High





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

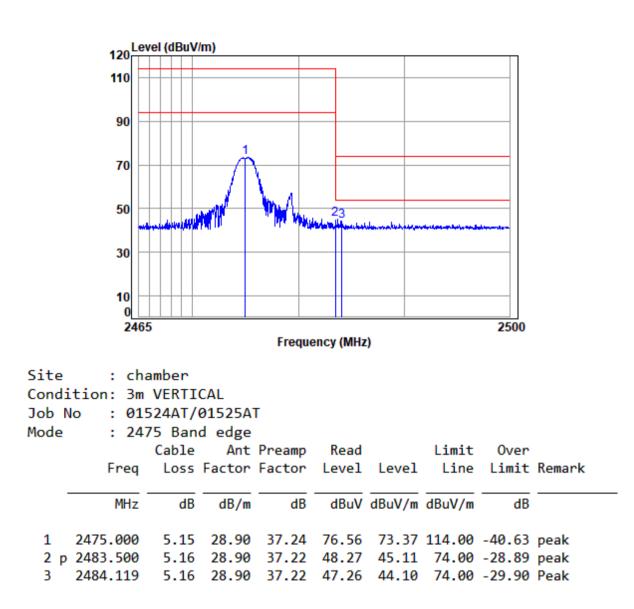
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 25 of 41

Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:High





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn

中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 26 of 41

7.3 Radiated Emissions Below 1GHz

Test Requirement	47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)
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

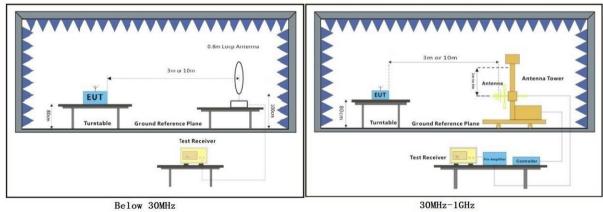
7.3.1 E.U.T. Operation

Operating Enviro	nment:					
Temperature:	23.2 °C	Humidity:	45.8 % RH	Atmospheric Pressure:	1020	mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode(receiver)_Keep the EUT in transmitting with modulation mode.

7.3.3 Test Setup Diagram





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN. Doccheck@egs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057

Member of the SGS Group (SGS SA)



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 27 of 41

7.3.4 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 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 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.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

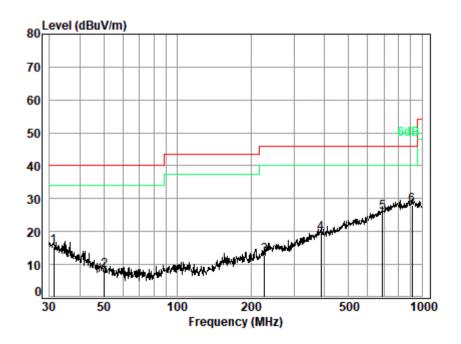
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 28 of 41

Test Mode: 01; Polarity: Horizontal



Site : chamber Condition: 3m HORIZONTAL Job No. : 01524AT Test Mode: 01

		Ant	Cable	Preamp	Read		Limit	0ver	
	Freq	Factor	Loss	Factor	Level	Level	Line	Limit	Remark
-									
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB	
1	31 29	20.60	0 65	27 80	22 02	15 /17	10 00	-24 53	OP
2		12.72							-
									-
3	226.89	16.00	1.85	27.15	22.09	12.79	46.00	-33.21	QP
4	386.63	20.85	2.50	27.28	23.34	19.41	46.00	-26.59	QP
5	689.56	25.69	3.48	27.95	24.51	25.73	46.00	-20.27	QP
6 q	909.67	27.97	4.12	27.08	22.86	27.87	46.00	-18.13	QP



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fulles extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com">Chechec@sgs.com

or email: <u>CN.Doccheck@sgs.com</u> No.1 Workshop, NJ-10, Midde Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn

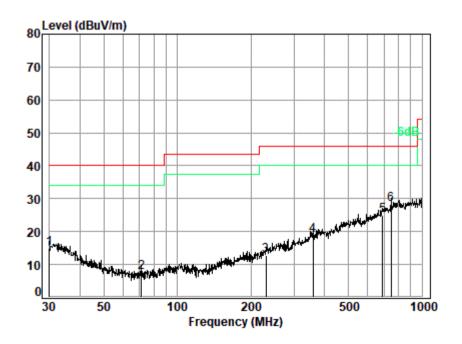
中国・广东・深圳市南山区科技园中区M−10栋1号厂房 邮编:518057 t(86-755)26012053 f(86-755)26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 29 of 41

Test Mode: 01; Polarity: Vertical



Site : chamber Condition: 3m VERTICAL Job No. : 01524AT Test Mode: 01

		Ant	Cable	Preamp	Read		Limit	0ver	
	Freq	Factor	Loss	Factor	Level	Level	Line	Limit	Remark
-									
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB	
1	30.00	21.20	0.64	27.80	21.01	15.05	40.00	-24.95	QP
2	71.33	10.54	1.00	27.69	23.83	7.68	40.00	-32.32	QP
3	230.10	16.46	1.86	27.14	21.66	12.84	46.00	-33.16	QP
4	357.93	20.16	2.39	27.15	23.46	18.86	46.00	-27.14	QP
5	691.99	25.74	3.49	27.94	23.65	24.94	46.00	-21.06	QP
6 q	747.48	26.43	3.66	27.77	25.94	28.26	46.00	-17.74	QP



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fulles extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com">Chechec@sgs.com

or email: <u>CN.Doccheck@sgs.com</u> No.1 Workshop, M-10, Midde Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn

中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t(86-755)26012053 f(86-755)26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 30 of 41

7.4 Radiated Emissions Above 1GHz

Test Requirement	47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)
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

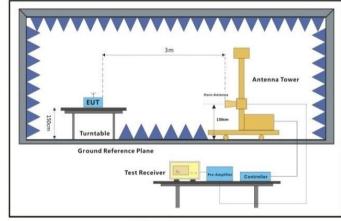
7.4.1 E.U.T. Operation

Operating Environment:						
Temperature:	21.5 °C	Humidity:	55.4 % RH	Atmospheric Pressure:	1020	mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode(receiver)_Keep the EUT in transmitting with modulation mode.

7.4.3 Test Setup Diagram



Above 1GHz



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: <u>CN.Doccheck@egs.com</u>

Wei Microsoft, U.H., Middie Seetin, Seine a Flanhing y Park, Nanshan District, Shenzhen, Guangdong, China 518057 t(86–755) 26012053 f(86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M−10栋1号厂房 邮编: 518057 t(86–755) 26012053 f(86–755) 26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 31 of 41

7.4.4 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.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

2. Scan from 18GHz to 40GHz, 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.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

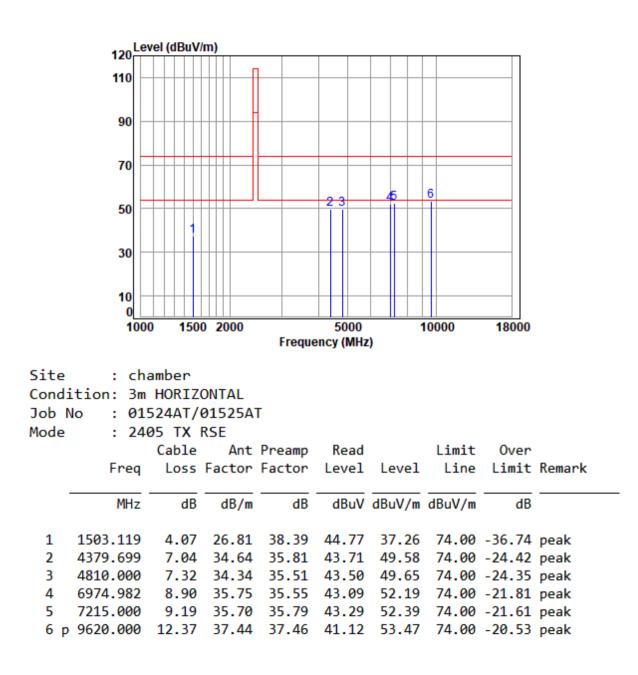
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 32 of 41

Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:Low





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

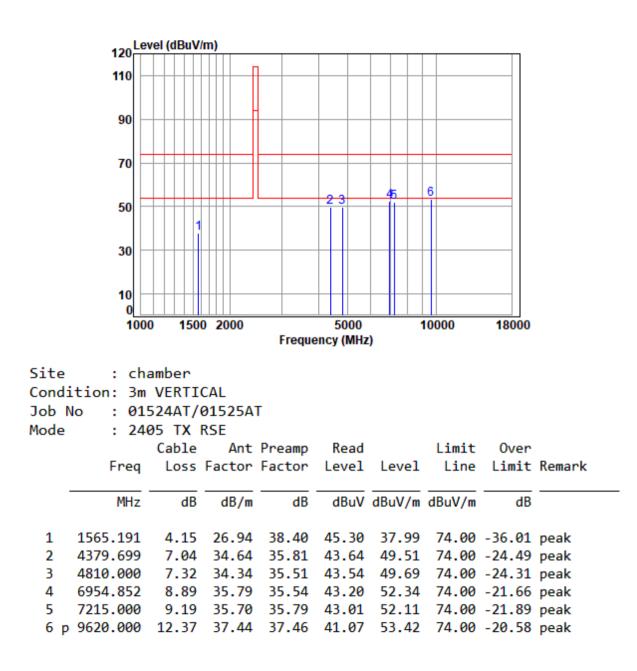
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 33 of 41

Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:Low





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

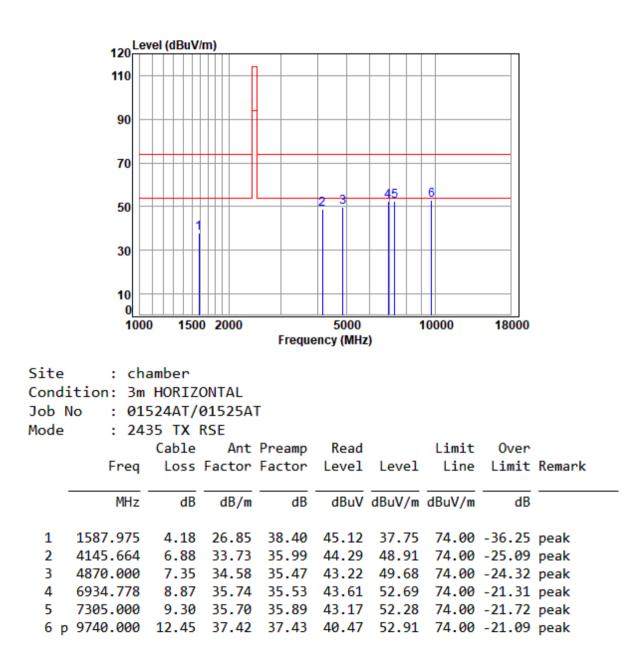
or email: <u>CN.Doccheck@sgs.com</u> No.1Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86–755) 26012053 f (86–755) 26710594 sgs.cchina@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 34 of 41

Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:middle





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

of email: <u>CN_Doceneck@sgs.com</u> No Workshow, <u>HVM</u> Middlesden, Galera E Tabellogy Pian, Kanshan District, Shenzhen, Guangtong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86–755) 26012053 f (86–755) 26710594 sgs.china@sgs.com

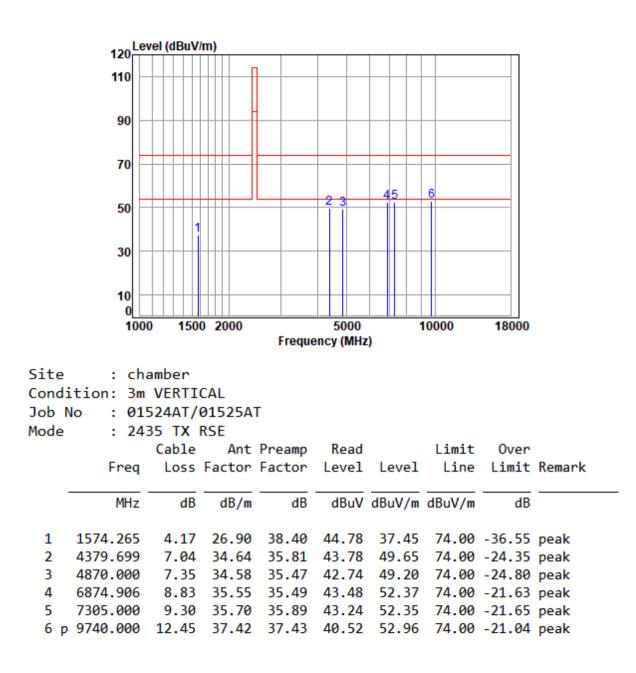
t (86–755) 26012053 f (86–755) 26710594 sgs.china@sgs.com Member of the SGS Group (SGS SA)



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 35 of 41

Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:middle





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

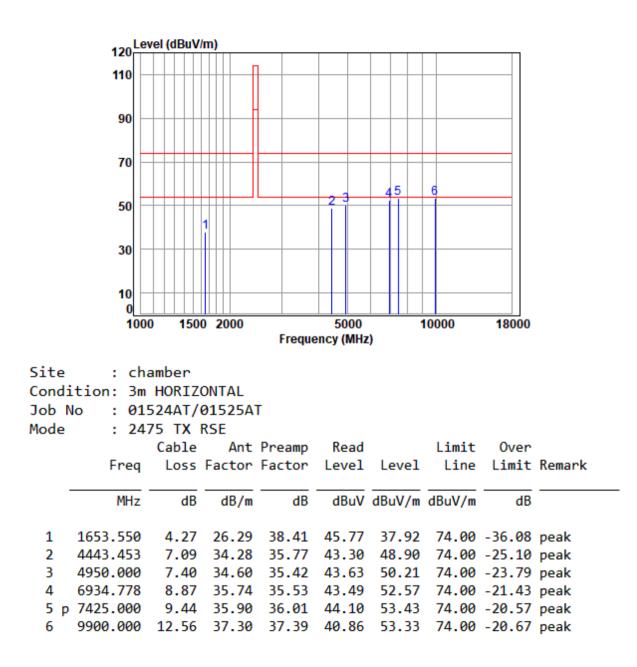
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 36 of 41

Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:High





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

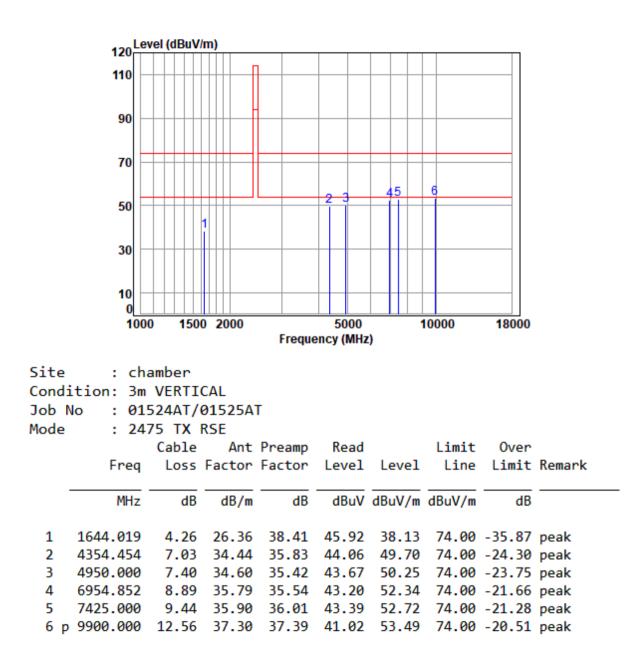
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 37 of 41

Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:High





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 38 of 41

7.5 20dB Bandwidth

Test Requirement	47 CFR Part 15, Subpart C 15.215
Test Method:	ANSI C63.10 (2013) Section 6.9

7.5.1 E.U.T. Operation

Operating Environment: 23.5 °C Temperature:

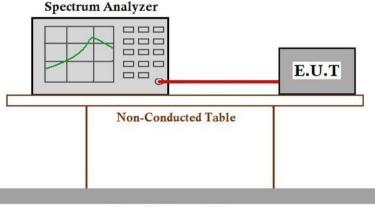
Humidity: 50.3 % RH

Atmospheric Pressure: 1020 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode(receiver)_Keep the EUT in transmitting with modulation mode.

7.5.3 Test Setup Diagram



Ground Reference Plane

7.5.4 Measurement Procedure and Data

Test channel	20dB bandwidth (MHz)	Results
Lowest	1.4415	Pass
Middle	1.3580	Pass
Highest	1.1389	Pass



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn

中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t(86-755)26012053 f(86-755)26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 39 of 41

Channel: Low



Channel: Middle





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com"

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t(86-755)26012053 f(86-755)26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 40 of 41

Channel: Highest

Keysight Spectrum Analyzer - Occupied BW					- 6 💌
M RF 50 R AC SENSE.INT ALIGN OFF [94:01:49 PM May 14, 2024] Center Freq 2.475000000 GHz Center Freq: 2.475000000 GHz Radio Std: None #IFGain:Low #IFGain:Low Avg Hold:>10/10 Radio Device: BTS					Frequency
10 dB/div Ref -16.00 dBm			•		
-26.0		www.			Center Freq 2.475000000 GHz
-46.0 -66.0			h	M M M	
-76.0 -86.0 -96.0					
-106				Span 3 MHz	
#Res BW 30 kHz	#VBW 100 kHz Sweep 3.2 ms			300.000 kHz	
Occupied Bandwidth		Total Power	-15.2 d	IBm	<u>Auto</u> Man
1.1389 MHz					Freq Offset
Transmit Freq Error	4.246 kHz	% of OBW Pov	ver 99.0	0 %	0 Hz
x dB Bandwidth	1.166 MHz	x dB	-20.00) dB	
MSG			STATUS		



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN. Doccheck@egs.com

or email: <u>CN.Doccheck@sgs.com</u> No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn

中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t(86-755)26012053 f(86-755)26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240400152403 Page: 41 of 41

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for SZCR2404001524AT

9 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for SZCR2404001524AT

- End of the Report -



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN. Doccheck@egs.com

or email: <u>CIN_DECENTERWESS</u>.com No.1 Worksho, IMJ, Midle Seetins, Searae Teaming yeark, Narshan District, Shanzhan, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86–755) 26012053 f (86–755) 26710594 sgs.china@sgs.com