

EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 1 of 41 FCC ID: UHW-7020008

# TEST REPORT

Application No.: GZEM2401000220HS

**Applicant:** Guangdong Galanz Enterprises Co., Ltd.

Address of Applicant: 25 Ronggui Nan Road, Shunde, Foshan, Guangdong, China

Manufacturer: Guangdong Galanz Microwave Electrical Appliances Manufacturing Co.,

Ltd.

Address of Manufacturer: 3 Xingpu Avenue, Huangpu, Zhongshan, Guangdong, China.

Factory: 1. Guangdong Galanz Microwave Electrical Appliances Manufacturing Co.,

Ltd.

2. Guangdong Galanz Microwave Oven and Electrical Appliances

Manufacturing Co., Ltd.

**Address of Factory:** 1. 3 Xingpu Avenue, Huangpu, Zhongshan, Guangdong, China.

2. 25 Ronggui Nan Road, Shunde, Foshan, Guangdong, China

Product Name: Microwave oven

Model No.: Please refer to page 2.

Trade Mark: GALANZ, MAINSTAYS, Hamilton Beach

Standard(s): 47 CFR Part 18

**Date of Receipt:** 2024-01-09

**Date of Test:** 2024-01-09 to 2024-01-10

**Date of Issue:** 2024-01-15

Test Result: Pass\*

Sday Liv



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. 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: ON Docsback@ses contact.

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555

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



EMC-TRF-01 Rev 1 1 Report No.: GZEM240100022002

Page: 2 of 41

Model No.:

P70J20AL-V1(L2), P70J20AL-V2(L2), P70J20AP-V2(L2), P70J20L-V1(L2), P70J20L-V2(L2), P70J20P-V2(L2), P70J20AP-V3(L2), P70J20AP-V4(L2), P70J20AP-V5(L2), P70J20AP-V6(L2), P70J20AL-V7(L2), P70J20AL-V8(L2), P70J20P-V3(L2), P70J20P-V4(L2), P70J20P-V5(L2), P70J20P-V6(L2), P70J20L-V7(L2), P70J20L-V8(L2), P70T20AL-V1(L2), P70T20AL-V2(L2), P70T20AP-V2(L2), P70T20AP-V3(L2), P70T20AP-V4(L2), P70T20AP-V5(L2), P70T20AP-V6(L2), P70T20AL-V7(L2), P70T20AL-V8(L2), P70T20L-V1(L2), P70T20L-V2(L2), P70T20P-V2(L2), P70T20P-V3(L2), P70T20P-V4(L2), P70T20P-V5(L2), P70T20P-V6(L2), P70T20L-V7(L2), P70T20L-V8(L2), P70J17AL-V1(L2), P70J17AL-V2(L2), P70J17AP-V2(L2), P70J17AP-V3(L2), P70J17AP-V4(L2), P70J17AP-V5(L2). P70J17AP-V6(L2), P70J17AL-V7(L2), P70J17AL-V8(L2), P70J17L-V1(L2), P70J17L-V2(L2), P70J17P-V2(L2), P70J17P-V3(L2), P70J17P-V4(L2), P70J17P-V5(L2), P70J17P-V6(L2), P70J17L-V7(L2), P70J17L-V8(L2), PS-P70T20AL-V1B, PS-P70T20AL-V1W, PS-P70T20AL-V1R, P70T20AL-V1B, P70T20AL-V1W(L2), P70T20AL-V1R(L2), OGCMV107WE-07, OGCMV107WB-07, OGCMV107RD-07, MSV1701, MSV1702, MSV1703, SGCMV107BK-07, SGCMV107WE-07, SGCMV107RD-07, WLCMV107BK-07, WLCMV107WE-07, WLCMV107RD-07, MSF0W100072352, MSF0R100072352, MSF0B100072352, MS8436127995-01, MS8436127995-02, MS8436127995-03, HBCMV207BK-07, HBCMV207WE-07, MSF0\*100072352, HBCMV207BK-L2, HBCMV207WE-L2, P70T20AP-VB(L2)

P70J17(X)-(Y), P70J17(X)-(Y)(L2), P70T20(X)-(Y), P70T20(X)-(Y)(L2), P70J20(X)-(Y), P70J20(X)-(Y)(L2)

Variable (X) may be L, P, SL, SP, TL, TP, AL, AP, ASL, ASP, ATL, ATP, EL, EP, ESL, ESP, ETL, ETP.

Variable (Y) may compose by one to five characters from A to Z and/or numbers from 0 to 9. It represents the differences of the appearance.

Remark: \* could be from 0 to 9 or from A to Z or blank .

Please refer to section 2 of this report which indicates which item was actually tested and which were electrically identical.



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extend of the leaf. Allocations 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,

Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号

邮编:510663 t (86-20) 82155555

t (86-20) 82155555 www.sgsgroup.com.cn

Member of the SGS Group (SGS SA)



EMC-TRF-01 Rev 1.1

Report No.: GZEM240100022002

Page: 3 of 41

Revision Record					
Report No.	Date	Remark			
GZEM240100022002	2024-01-15	Original			
	Report No.	Report No. Date			

Authorized for issue by:			
	Damon. Guan		
	Damon Guan/Project Engineer	_	
	Terry laj		
	Terry Lai/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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. 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 indigns 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: CN.Doccheck@sgs.com"

es Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663



Report No.: GZEM240100022002 EMC-TRF-01 Rev 1.1

> Page: 4 of 41

# **Test Summary**

<b>Emission Part</b>	Emission Part							
Item	Standard	Method	Requirement	Result				
Conducted Emissions at Mains Terminals (150kHz-30MHz)		FCC/OST MP-5:1986	18.307	Pass				
Radiated Emissions (Magnetic field Strength)(9kHz- 30MHz)		FCC/OST MP-5:1986	18.305(b)	Pass				
Radiated Emissions (30MHz-1GHz)	47 CFR Part 18	FCC/OST MP-5:1986	18.305(b)	Pass				
Radiated Emissions (above 1GHz)		FCC/OST MP-5:1986	18.305(b)	Pass				
Output Power Measurement		FCC OST/MP-5:1986	FCC OST/MP-5:1986 Clause 4.3	Pass				
Operating Frequency Measurement		FCC OST/MP-5:1986	18.301	Pass				
Radiation Hazard Test		FCC OST/MP-5:1986	1 mW/cm <sup>2</sup>	Pass				

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extent of the law. Offices of the state of the fullest extent of the fullest extent of the law. Offices of 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 5 of 41

# **♣** Declaration of EUT Family Grouping:

Model No.: P70J20AL-V1(L2), P70J20AL-V2(L2), P70J20AP-V2(L2), P70J20L-V1(L2), V2(L2), P70J20P-V2(L2), P70J20AP-V3(L2), P70J20AP-V4(L2), P70J20AP-V5(L2), P70J20AP-V6(L2), P70J20AL-V7(L2), P70J20AL-V8(L2), P70J20P-V3(L2), P70J20P-V4(L2), P70J20P-V5(L2), P70J20P-V6(L2), P70J20L-V7(L2), P70J20L-V8(L2), P70T20AL-V1(L2), P70T20AL-V2(L2), P70T20AP-V2(L2), P70T20AP-V3(L2), P70T20AP-V4(L2), P70T20AP-V5(L2), P70T20AP-V6(L2), P70T20AL-V7(L2), P70T20AL-V8(L2), P70T20L-V1(L2), P70T20L-V2(L2), P70T20P-V2(L2), P70T20P-V3(L2), P70T20P-V4(L2), P70T20P-V5(L2), P70T20P-V6(L2), P70T20L-V7(L2), P70T20L-V8(L2), P70J17AL-V1(L2), P70J17AL-V2(L2), P70J17AP-V2(L2), P70J17AP-V3(L2), P70J17AP-V4(L2), P70J17AP-V5(L2), P70J17AP-V6(L2), P70J17AL-V7(L2), P70J17AL-V8(L2), P70J17L-V1(L2), P70J17L-V2(L2), P70J17P-V2(L2), P70J17P-V3(L2), P70J17P-V4(L2), P70J17P-V5(L2), P70J17P-V6(L2), P70J17L-V7(L2), P70J17L-V8(L2), PS-P70T20AL-V1B, PS-P70T20AL-V1W, PS-P70T20AL-V1R, P70T20AL-V1B, P70T20AL-V1W(L2), P70T20AL-V1R(L2), OGCMV107WE-07, OGCMV107WB-07, OGCMV107RD-07, MSV1701, MSV1702, MSV1703, SGCMV107BK-07, SGCMV107WE-07, SGCMV107RD-07, WLCMV107BK-07, WLCMV107WE-07, WLCMV107RD-07, MSF0W100072352, MSF0R100072352, MSF0B100072352, MS8436127995-01, MS8436127995-02, MS8436127995-03, HBCMV207BK-07, HBCMV207WE-07, MSF0\*100072352, HBCMV207BK-L2, HBCMV207WE-L2, P70T20AP-VB(L2)

P70J17(X)-(Y), P70J17(X)-(Y)(L2), P70T20(X)-(Y), P70T20(X)-(Y)(L2), P70J20(X)-(Y), P70J20(X)-(Y)(L2)

Variable (X) may be L, P, SL, SP, TL, TP, AL, AP, ASL, ASP, ATL, ATP, EL, EP, ESL, ESP, ETL, ETP.

Variable (Y) may compose by one to five characters from A to Z and/or numbers from 0 to 9. It represents the differences of the appearance.

Remark: \* could be from 0 to 9 or from A to Z or blank

According to the declaration from the applicant, the electrical circuit design, layout, components used and internal wiring were identical for all models, with only difference on the outer appearance and model name.

Therefore, only one model P70T20AP-VB(L2) was tested in this 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extend of the leaf. Allocations 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,

Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555

Member of the SGS Group (SGS SA)



EMC-TRF-01 Rev 1.1

Report No.: GZEM240100022002

Page: 6 of 41

#### 3 **Contents**

			Page
1	Cove	r Page	1
2	Test	Summary	4
		•	
3	Conte	ents	6
4	Gene	ral Information	8
	4.1	Details of E.U.T.	8
		Description of Support Units	
		Measurement Uncertainty	
	4.4	Test Location	8
		Test Facility	9
		Deviation from Standards	
		Abnormalities from Standard Conditions	
5	Equip	oment List	10
6	Fmis	sion Test Results	12
Ū			
	6.1 6.1.1	Conducted Emissions at Mains Terminals (150kHz-30MHz)	
	6.1.1	E.U.T. Operation  Test Mode Description	
	6.1.3	Test Setup Diagram	
	6.1.4	Measurement Procedure and Data	
		Radiated Emissions (Magnetic field Strength)(9kHz-30MHz)	
	6.2.1	E.U.T. Operation	
	6.2.2	Test Mode Description	
	6.2.3	Test Setup Diagram	
	6.2.4	Measurement Procedure and Data	16
	6.3	Radiated Emissions (30MHz-1GHz)	20
	6.3.1	E.U.T. Operation	
	6.3.2	Test Mode Description	
	6.3.3	Test Setup Diagram	
	6.3.4	Measurement Procedure and Data	
		Radiated Emissions (above 1GHz)	
	6.4.1 6.4.2	E.U.T. Operation  Test Mode Description	
	6.4.3	Test Setup Diagram	
	6.4.4	Measurement Procedure and Data	
		Output Power Measurement	
	6.5.1	E.U.T. Operation	
	6.5.2	Test Mode Description	
	6.5.3	Measurement Procedure and Data	
		Operating Frequency Measurement	
	6.6.1	E.U.T. Operation	
	6.6.2	Test Mode Description	
	6.6.3	Measurement Procedure and Data	
	6.7	Radiation Hazard Test	39



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. 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 indigns 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: CN.Doccheck@sgs.com"

es Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



0 EII	IT Constructional Details (FUT Photos)			41
7 Tes	st Setup Photo			.40
6.7	7.3 Measurement Procedure and Data			39
6.7	7.2 Test Mode Description			39
6.7	7.1 E.U.T. Operation			39
		Page:	7 of 41	
EMC-TRF-	-01 Rev 1.1	•	o.: GZEM240100022002	



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. 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 indigns 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: CN.Doccheck@sgs.com"

es Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663

中国・广东・广州高新技术产业开发区科学城科珠路198号

邮编:510663 t (86-20) 82155555



Report No.: GZEM240100022002 EMC-TRF-01 Rev 1.1

> Page: 8 of 41

# **General Information**

## 4.1 Details of E.U.T.

Power supply: AC 120V 60Hz Test voltage: AC 120V 60Hz Microwave frequency: 2450MHz

Cable(s): About 1.0m x 3 wires unscreened AC mains cable.

# 4.2 Description of Support Units

1000mL of water in the beaker for power output and frequency measurement.

One of 700 and the other of 300mL of water for second and third harmonic radiation

measurement.

700mL of water for all other measurement

# 4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions at Mains Terminals (150kHz-30MHz)	2.76dB (150kHz to 30MHz)
Radiated Emissions (Magnetic field Strength)(9kHz- 30MHz)	3.08dB(9kHz to 150kHz), 3.12dB(150kHz to 30MHz)
Radiated Emissions (30MHz-1GHz)	5.00dB (30MHz-1GHz):3m; 4.38dB (30MHz-1GHz):10m
Radiated Emissions (above 1GHz)	5.12dB (1GHz-6GHz); 5.38dB (6GHz- 18GHz); 5.61dB(18GHz-40GHz)

## Remark:

The  $U_{lab}$  (lab Uncertainty) is less than  $U_{cispr}$  (CISPR Uncertainty), so the test results

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

## 4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory, 198 Kezhu Road, Scientech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extend of the leaf. Allocations 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,

邮编:510663

Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663



Report No.: GZEM240100022002 EMC-TRF-01 Rev 1.1

> Page: 9 of 41

# 4.5 Test Facility

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

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

## • SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

#### FCC Recognized Accredited Test Firm(Registration No.: 486818)

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

## • ISED (Registration No.: 4620B, CAB identifier: CN0052)

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

## VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

## CBTL (Lab Code: TL129)

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

# 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extent of the learn School of 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,

Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-TRF-01 Rev 1.1

Report No.: GZEM240100022002

Page: 10 of 41

#### **Equipment List** 5

Conducted Emissions at Mains Terminals (150kHz-30MHz)						
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date	
Coaxial Cable	HangTianXing	2m	EMC0107	2023-08-04	2024-08-03	
Shielding Room	ChangZhou ZhongYu	8m x 3m x 3.8m	EMC0306	2022-10-16	2025-10-15	
Two-Line V-Network-GZ	Rohde & Schwarz	ENV216	EMC2135	2023-09-08	2024-09-07	
EMI Test Receiver (9kHz-3.6GHz)	Rohde & Schwarz	ESR3	EMC2221	2023-05-19	2024-05-18	
Test Software E3r	Audix	Ver.6.11812	GZE100-77	N/A	N/A	
Artificial Mains Network (LISN)	AFJ Instruments	LT32C	EMC2046	2023-10-20	2024-10-19	

Radiated Emissions (Magnetic field Strength)(9kHz-30MHz)						
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date	
Coaxial Cable (RE 2m Loop)	INFINITE	CC223N-10	EMC0703	2023-06-25	2025-06-24	
2m Large Loop Antenna System (ZN3040)	ZHINAN	ZN3040	EMC2187	2022-03-26	2024-03-25	
Amplifier(9k-1000MHz)	SONOMA	310	EMC2237	2023-04-13	2024-04-12	
Active Loop Antenna- RED	ETS-Lindgren	6502	EMC2190	2022-04-06	2024-04-05	
EMI Test Receiver (1Hz- 8GHz)	Rohde & Schwarz	ESW8	EMC2229	2023-02-20	2024-02-19	
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A	
966 Anechoic Chamber	Shenzhen C.R.T	CRTSGSSAC9 66	EMC2230	2022-04-12	2025-04-11	
Coaxial Cable	Mirco-COAX UTIFLEX ve	LA2-C125- 8000	EMC2239	2023-06-14	2025-06-13	

Radiated Emissions (30MHz-1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
966 Anechoic Chamber	Shenzhen C.R.T	CRTSGSSAC9 66	EMC2230	2022-04-12	2025-04-11
EMI Test Receiver(1Hz- 8GHz)	Rohde & Schwarz	ESW8	EMC2229	2023-02-20	2024-02-19
Amplifier(9k-1000MHz)	SONOMA	310	EMC2237	2023-04-13	2024-04-12
TRILOG Broadband Antenna (25M-2GHz)	SCHWRZBECK	VULB 9168	EMC2238	2022-04-20	2025-04-19
Coaxial Cable	Mirco-COAX UTIFLEX ve	LA2-C125- 8000	EMC2239	2023-06-14	2025-06-13
Test Software E3	Audix	Ver.6.191211	GZE100-81	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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. 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 indigns 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: CN.Doccheck@sgs.com"

es Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-TRF-01 Rev 1.1

Report No.: GZEM240100022002

Page: 11 of 41

Radiated Emissions (ab	Radiated Emissions (above 1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date	
1GHz-26.5 GHz Pre- Amplifier	Agilent	8449B	EMC0521	2023-11-10	2024-11-09	
EMI Test Receiver (10Hz-26.5GHz)	Rohde & Schwarz	ESIB26	EMC0522	2023-12-15	2024-12-14	
Chamber cable (Above 1GHz)	Scoflex	KMKM-8.0m	EMC0545	2022-08-24	2024-08-23	
Horn Antenna (1GHz- 18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2022-09-23	2025-09-22	
2.4GHz Filter	Micro-Tronics	BRM 50702	EMC2069	2023-11-10	2024-11-09	
EXA Signal Analyzer (10Hz-44GHz)	Keysight	N9010A	EMC2138	2023-08-23	2024-08-22	
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2023-12-20	2026-12-19	
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A	

Output Power Measurement					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Digital thermometer	FLUKE	51_2	EMC2200	2023-07-25	2024-07-24

Operating Frequency Measurement						
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date	
EMI Test Receiver (10Hz-26.5GHz)	Rohde & Schwarz	ESIB26	EMC0522	2023-12-15	2024-12-14	
Chamber cable (Above 1GHz)	Scoflex	KMKM-8.0m	EMC0545	2022-08-24	2024-08-23	
Horn Antenna (1GHz- 18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2022-09-23	2025-09-22	
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2023-12-23	2026-12-22	
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A	

Radiation Hazard Test					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Electric Field Probe(100KHz-3GHz)	WANDEL & GOLTERMANN	EMR-20	EMC0907	2023-05-11	2024-05-10

General used equipmen	t				
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
DMM	Fluke	73	EMC0006	2023-06-11	2024-06-10



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. 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 indigns 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: CN.Doccheck@sgs.com"

es Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-TRF-01 Rev 1.1

Report No.: GZEM240100022002

Page: 12 of 41

# 6 Emission Test Results

# 6.1 Conducted Emissions at Mains Terminals (150kHz-30MHz)

Test Requirement: 47 CFR Part 18

Test Method: FCC/OST MP-5:1986

Limit:

Frequency Range: 150kHz to 30MHz

0.15 to 0.5 MHz:  $66dB(\mu V)$ - $56dB(\mu V)$  quasi-peak,  $56dB(\mu V)$ - $46dB(\mu V)$  average

0.5 to 5 MHz: 56dB( $\mu$ V) quasi-peak, 46dB( $\mu$ V) average 5 to 30 MHz: 60dB( $\mu$ V) quasi-peak, 50dB( $\mu$ V) average

Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

## 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22.5 °C Humidity: 52.4 % RH Atmospheric Pressure: 1021 mbar

## 6.1.2 Test Mode Description

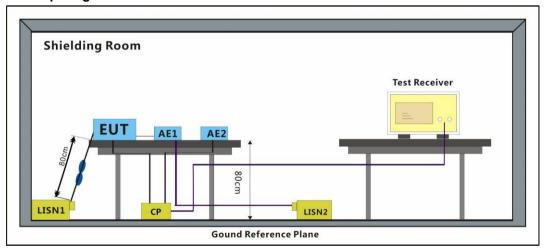
Pre-scan / Mode Final test Code Description

Final test 00 Test the EUT in microwave mode with maximum power.

Pre-scan 01 Test the EUT in microwave mode with middle power.

Pre-scan 02 Test the EUT in microwave mode with lowest power.

## 6.1.3 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extent of the fact. Since of 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.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86–20) 82155555 t (86–20) 82155555

Member of the SGS Group (SGS SA)



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 13 of 41

#### 6.1.4 Measurement Procedure and Data

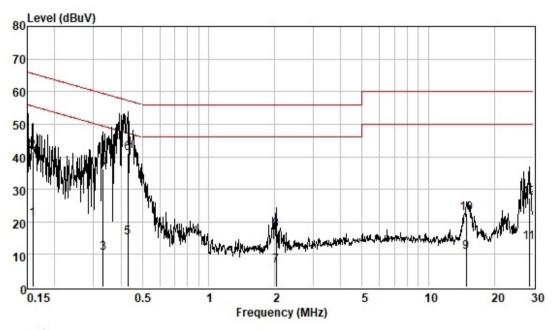
Frequency range: 150KHz-30MHz

An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.

The red line show in graphic is the limit in standard used in this section.

Measured Level = Read level + Cable Loss + LISN Factor

Test Mode: 00: Line: Live line



:LINE Pol Mode Model: Power :

	Frequenc MHz	Read Level dBuV	Cable Loss dB	LISN Factor dB	Measured Level dBuV	Limit Line dBuV	Over Limit dB	Remark
1	0.159	11.10	0.04	9.61	20.75	55.52	-34.77	Average
2	0.159	31.90	0.04	9.61	41.55	65.52	-23.97	QP
3	0.332	0.64	0.04	9.61	10.29	49.40	-39.11	Average
4	0.332	26.51	0.04	9.61	36.16	59.40	-23.24	QP
5	0.431	5.54	0.05	9.59	15.18	47.24	-32.06	Average
6	0.431	31.40	0.05	9.59	41.04	57.24	-16.20	QP
7	2.033	-3.23	0.13	9.62	6.52	46.00	-39.48	Average
8	2.033	7.85	0.13	9.62	17.60	56.00	-38.40	QP
9	14.828	0.73	0.33	9.70	10.76	50.00	-39.24	Average
10	14.828	12.59	0.33	9.70	22.62	60.00	-37.38	QP
11	28.755	3.58	0.45	9.64	13.67	50.00	-36.33	Average
12	28.755	17.19	0.45	9.64	27.28	60.00	-32.72	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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extent of the learn School of 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,

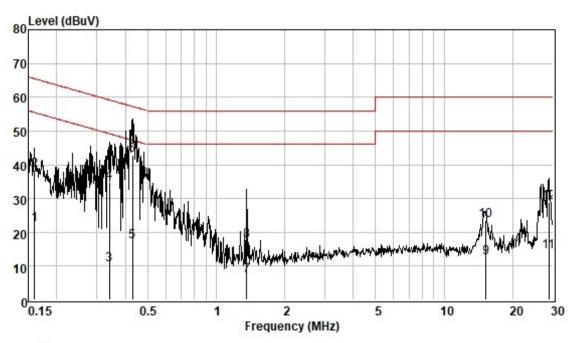
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 14 of 41

Test Mode: 00; Line: Neutral Line



Pol :NEUTRAL

Mode Model: Power :

	Frequenc MHz	Read Level dBuV	Cable Loss dB	LISN Factor dB	Measured Level dBuV	Limit Line dBuV	Over Limit dB	Remark
1	0.160	12.72	0.04	9.61	22.37	55.47	-33.10	Average
2	0.160	28.77	0.04	9.61	38.42	65.47	-27.05	QP
3	0.341	0.69	0.05	9.61	10.35	49.18	-38.83	Average
4	0.341	25.10	0.05	9.61	34.76	59.18	-24.42	QP
5	0.431	7.54	0.05	9.61	17.20	47.24	-30.04	Average
6	0.431	33.03	0.05	9.61	42.69	57.24	-14.55	QP
7	1.359	-2.57	0.09	9.60	7.12	46.00	-38.88	Average
8	1.359	7.87	0.09	9.60	17.56	56.00	-38.44	QP
9	15.226	2.33	0.33	9.80	12.46	50.00	-37.54	Average
10	15.226	13.39	0.33	9.80	23.52	60.00	-36.48	QP
11	28.755	3.83	0.45	9.92	14.20	50.00	-35.80	Average
12	28.755	18.55	0.45	9.92	28.92	60.00	-31.08	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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extent of the law. Offices of the state of the fullest extent of the fullest extent of the law. Offices of 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,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 15 of 41

# 6.2 Radiated Emissions (Magnetic field Strength)(9kHz-30MHz)

Test Requirement: 47 CFR Part 18 Test Method: FCC/OST MP-5:1986

Limit:

Measurement Distance: 3 m

Frequency Range: 9kHz to 30MHz

Detector: Peak for pre-scan, Average for the final result

> (200Hz Resolution Bandwidth for 9kHz to 150kHz; 9kHz Resolution Bandwidth for 150kHz to 30MHz)

Equipment:	Operating frequency:	RF Power generated by equipment (watts):	Limit dB(uV/m) average:
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	675.6	Limit=20lg(25*SQRT( <b>675.6</b> / 500))+20lg(300/3)= <b>69.27</b> <b>dBuV/m</b> @ 3m distance.

## 6.2.1 E.U.T. Operation

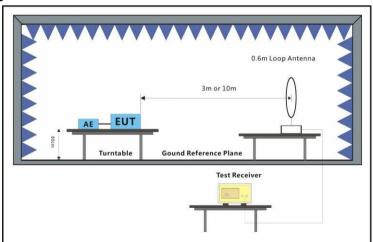
Operating Environment:

Temperature: 25.2 °C Humidity: Atmospheric Pressure: 1021 mbar 55.7 % RH

# 6.2.2 Test Mode Description Pre-scan / Mode

Final test Code Final test 00 Test the EUT in microwave mode with maximum power. Pre-scan 01 Test the EUT in microwave mode with middle power. Test the EUT in microwave mode with lowest power. Pre-scan 02

#### 6.2.3 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extend of the leaf. Allocations 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,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 t (86-20) 82155555 t (86-20) 82155555



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 16 of 41

#### 6.2.4 Measurement Procedure and Data

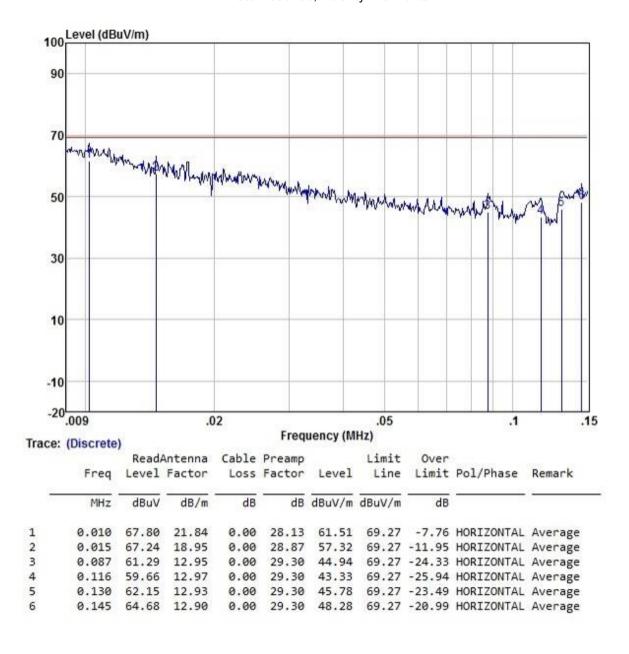
Frequency range: 9KHz-30MHz

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Average measurements were conducted based on the peak sweep graph. The EUT was measured by loop antenna with 2 orthogonal polarities.

The red line show in graphic is the limit in standard used in this section.

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

Test Mode: 00: Polarity: Horizontal





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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extent of the last of the second state of the full state of the full

Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

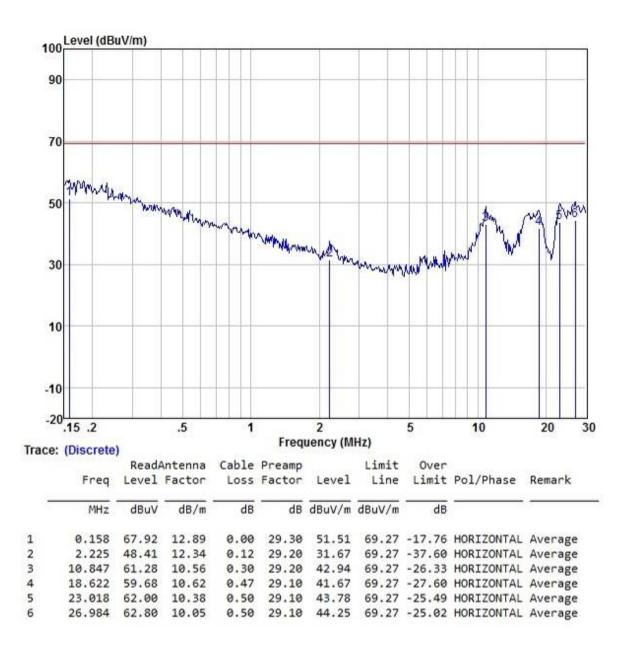
t (86-20) 82155555



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

17 of 41 Page:

Test Mode: 00; Polarity: Horizontal





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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extend of the leaf. Allocations 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,

Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555

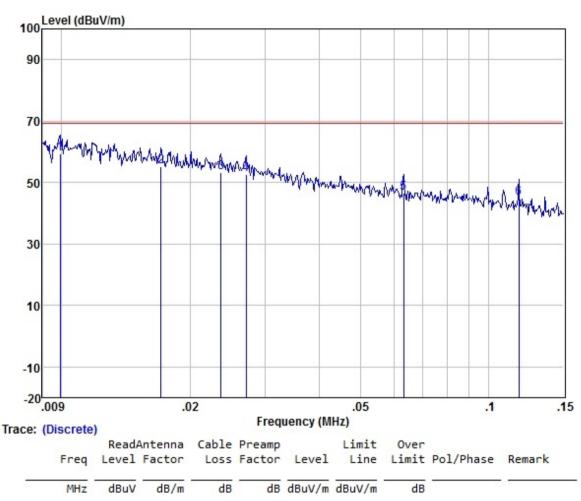


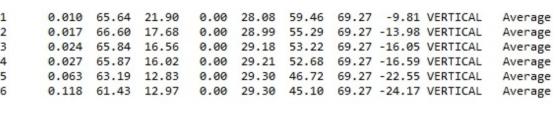
EMC-TRF-01 Rev 1.1

Report No.: GZEM240100022002

Page: 18 of 41

Test Mode: 00; Polarity: Vertical







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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extent of the land state. State of the state of the full state of the state of th

SCO.Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 Noraloy. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86–20) 82155555 sgs

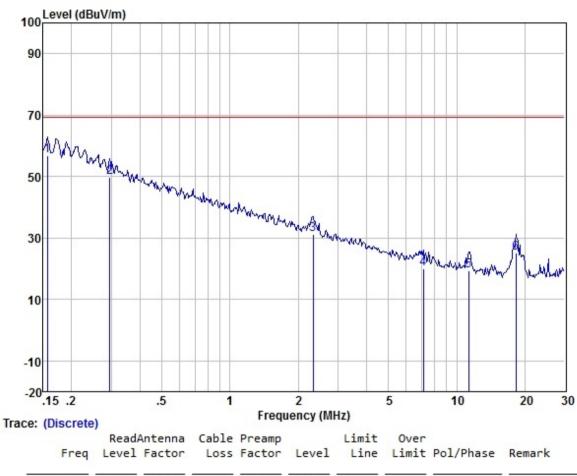


EMC-TRF-01 Rev 1.1

Report No.: GZEM240100022002

Page: 19 of 41

Test Mode: 00; Polarity: Vertical



	12.00.00	,								
			ntenna							Comment of grant
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		(d)
1	0.156	73.23	12.90	0.00	29.30	56.83	69.27	-12.44	VERTICAL	Average
2	0.296	66.16	12.76	0.10	29.30	49.72	69.27	-19.55	VERTICAL	Average
3	2.321	47.80	12.31	0.13	29.20	31.04	69.27	-38.23	VERTICAL	Average
4	7.137	38.26	10.74	0.30	29.20	20.10	69.27	-49.17	VERTICAL	Average
5	11.317	37.63	10.53	0.32	29.20	19.28	69.27	-49.99	VERTICAL	Average
6	18.232	43.17	10.60	0.42	29.10	25.09	69.27	-44.18	VERTICAL	Average



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extent of the law. Offices of the state of the fullest extent of the fullest extent of the law. Offices of 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,

S Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663



Report No.: GZEM240100022002 EMC-TRF-01 Rev 1.1

> Page: 20 of 41

# 6.3 Radiated Emissions (30MHz-1GHz)

Test Requirement: 47 CFR Part 18 Test Method: FCC/OST MP-5:1986

Limit:

Measurement Distance: 3 m

Frequency Range: 30 MHz to 1 GHz

Detector: Peak for pre-scan, average for the final result

(120 kHz Resolution Bandwidth for 30 MHz to 1 GHz)

Equipment:	Operating frequency:	RF Power generated by equipment (watts):	Limit dB(uV/m) average:
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	675.6	Limit=20lg(25*SQRT( <b>675.6</b> / 500))+20lg(300/3)= <b>69.27</b> <b>dBuV/m</b> @ 3m distance.

## 6.3.1 E.U.T. Operation

Operating Environment:

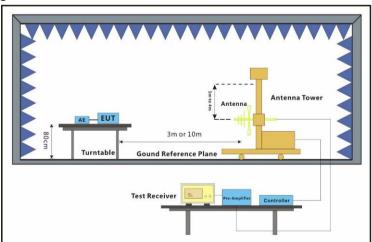
Temperature: 25.2 °C Humidity: 55.6 % RH Atmospheric Pressure: 1021 mbar

#### 6.3.2 Test Mode Description

Pre-scan / Mode Description Final test Code

Final test 00 Test the EUT in microwave mode with maximum power. Pre-scan 01 Test the EUT in microwave mode with middle power. Test the EUT in microwave mode with lowest power. Pre-scan

## 6.3.3 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extend of the leaf. Allocations 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,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555 t (86-20) 82155555



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 21 of 41

#### 6.3.4 Measurement Procedure and Data

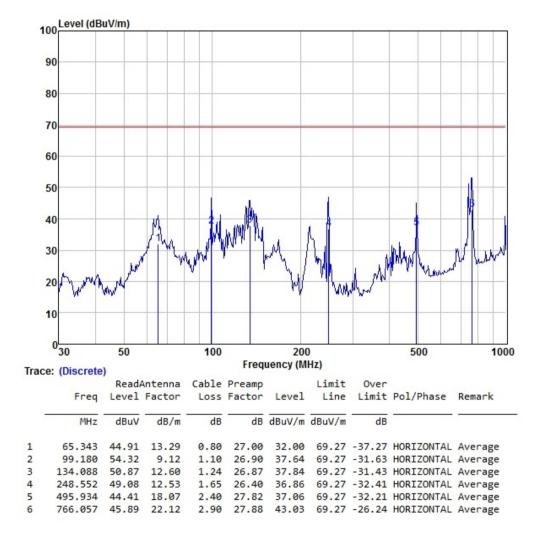
Frequency range: 30MHz-1GHz

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

The red line show in graphic is the limit in standard used in this section.

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

Test Mode: 00; Polarity: Horizontal





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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extend of the leaf. Allocations 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,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

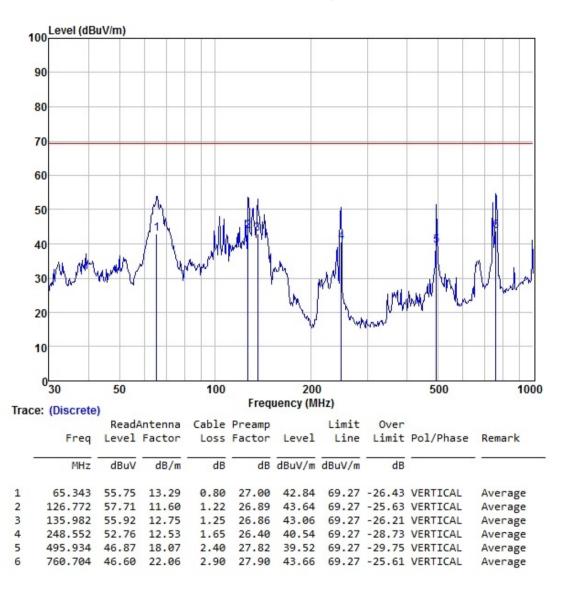
t (86-20) 82155555 t (86-20) 82155555



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 22 of 41

Test Mode: 00; Polarity: Vertical





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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extend of the leaf. Allocations 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 23 of 41

# 6.4 Radiated Emissions (above 1GHz)

Test Requirement: 47 CFR Part 18
Test Method: FCC/OST MP-5:1986

Limit:

Measurement Distance: 3 m

Frequency Range: Above 1GHz

Detector: Peak for pre-scan, Average for the final result

(1MHz Resolution Bandwidth for 1000MHz Above)

Equipment:	Operating frequency:	RF Power generated by equipment (watts):	Limit dB(uV/m) average:
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	675.6	Limit=20lg(25*SQRT( <b>675.6</b> / 500))+20lg(300/3)= <b>69.27</b> <b>dBuV/m</b> @ 3m distance.

## 6.4.1 E.U.T. Operation

Operating Environment:

Temperature: 22.7 °C Humidity: 61.5 % RH Atmospheric Pressure: 1021 mbar

#### 6.4.2 Test Mode Description

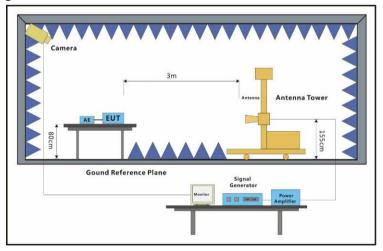
Pre-scan / Mode Final test Code Description

Final test 00 Test the EUT in microwave mode with maximum power.

Pre-scan 01 Test the EUT in microwave mode with middle power.

Pre-scan 02 Test the EUT in microwave mode with lowest power.

## 6.4.3 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extent of the lath. Affice of 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 amail: CN Descheck@sqs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86–20) 82155555 www.sg t (86–20) 82155555 sgs.chi



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 24 of 41

#### 6.4.4 Measurement Procedure and Data

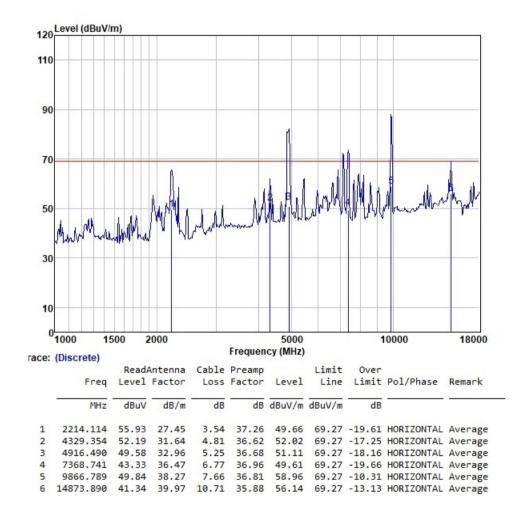
Frequency range: Above 1GHz

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Average measurements were conducted based on the peak sweep graph. The EUT was measured by Horn antenna with 2 orthogonal polarities.

The red line show in graphic is the limit in standard used in this section.

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

Test Mode: 00; Polarity: Horizontal





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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extend of the leaf. Allocations 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,

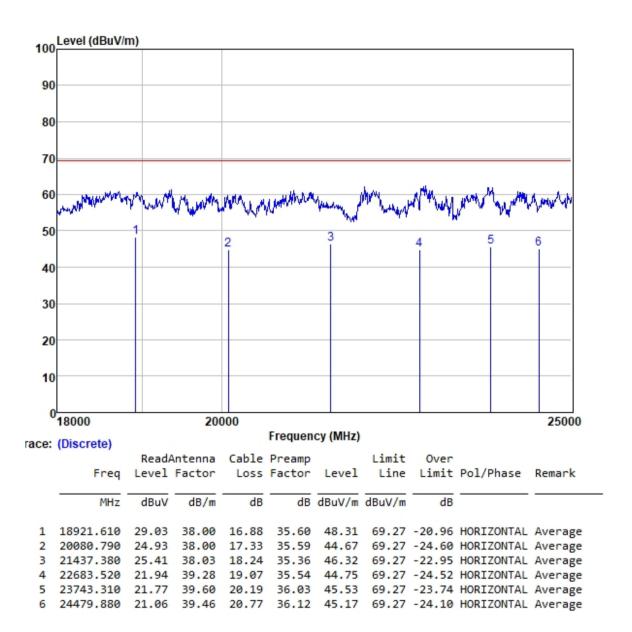
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555 t (86-20) 82155555



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 25 of 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extent of the last of the second state of the full state of the full

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

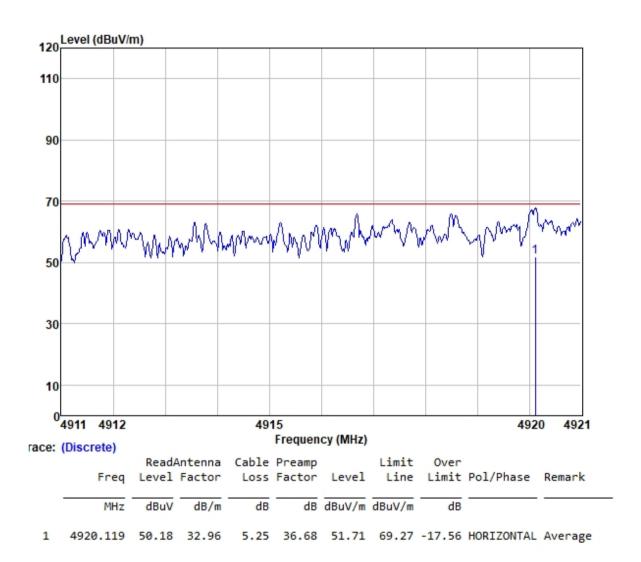


EMC-TRF-01 Rev 1.1

Report No.: GZEM240100022002

Page: 26 of 41

Test Mode: 00; Polarity: Horizontal





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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extent of the law. Offices of the state of the fullest extent of the law. Offices of the state of the state

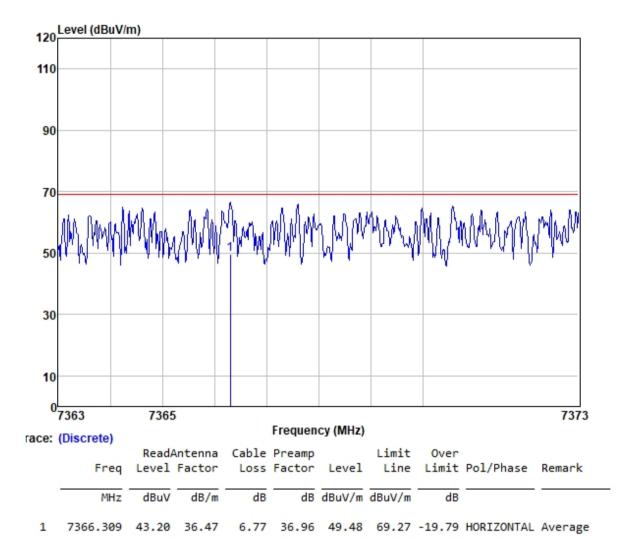
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86–20) 82155555 w t (86–20) 82155555 s



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 27 of 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extent of the law. Offices of the state of the fullest extent of the fullest extent of the law. Offices of 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,

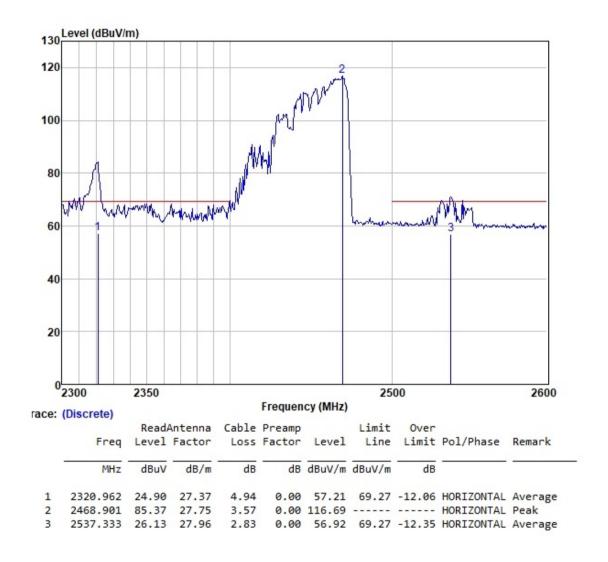
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 28 of 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extent of the law. Offices of the state of the fullest extent of the fullest extent of the law. Offices of 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,

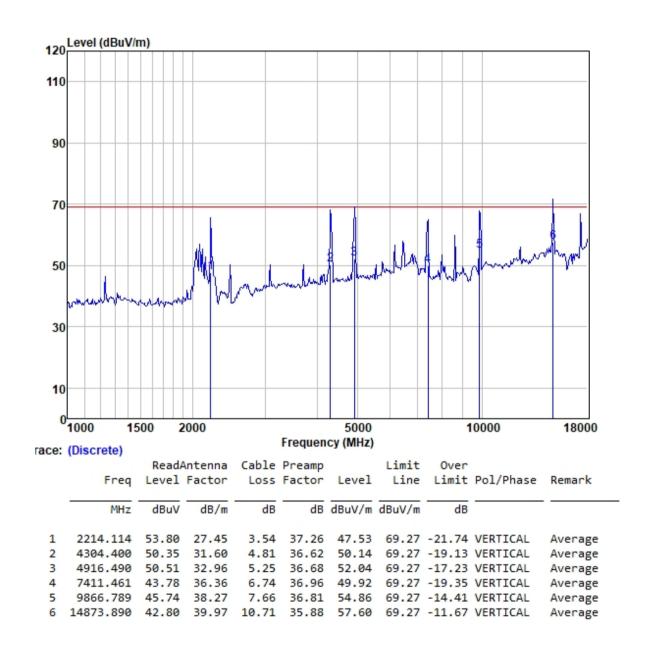
Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

29 of 41 Page:

Test Mode: 00; Polarity: Vertical





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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extend of the leaf. Allocations are retained for 30 days only.

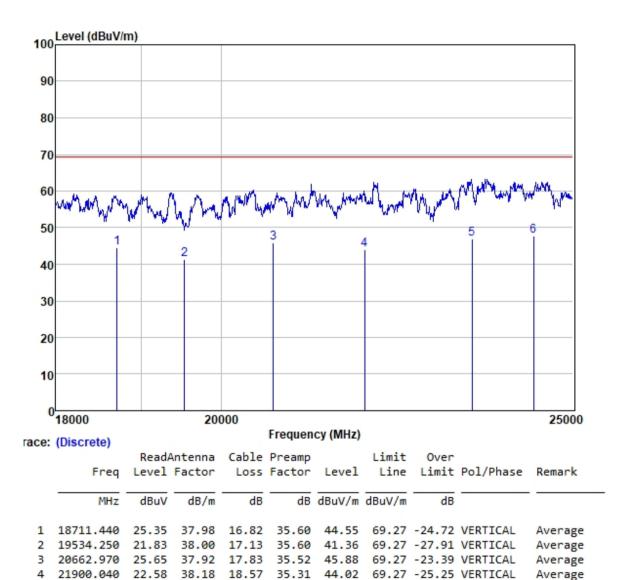
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 t (86-20) 82155555 t (86-20) 82155555



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 30 of 41





23441.060

24375.560

23.46

23.78

39.60

39.50

19.68

20.65

35.93

46.81

36.11 47.82

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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extend of the leaf. Allocations 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555

69.27 -22.46 VERTICAL

69.27 -21.45 VERTICAL

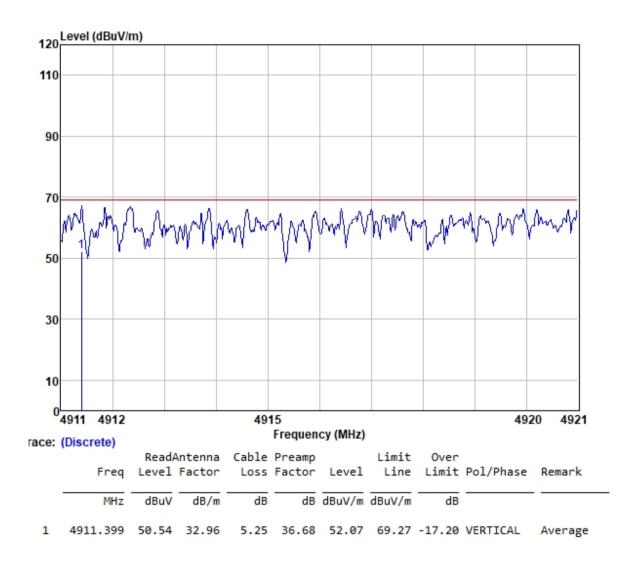
Average

Average



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 31 of 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extent of the law. Offices of the state of the fullest extent of the fullest extent of the law. Offices of 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

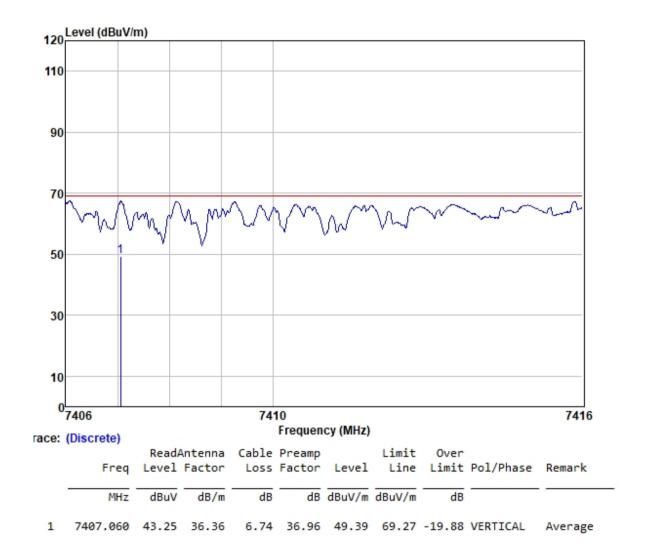
t (86-20) 82155555



EMC-TRF-01 Rev 1.1

Report No.: GZEM240100022002

Page: 32 of 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extent of the law. Offices of the state of the fullest extent of the fullest extent of the law. Offices of 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,

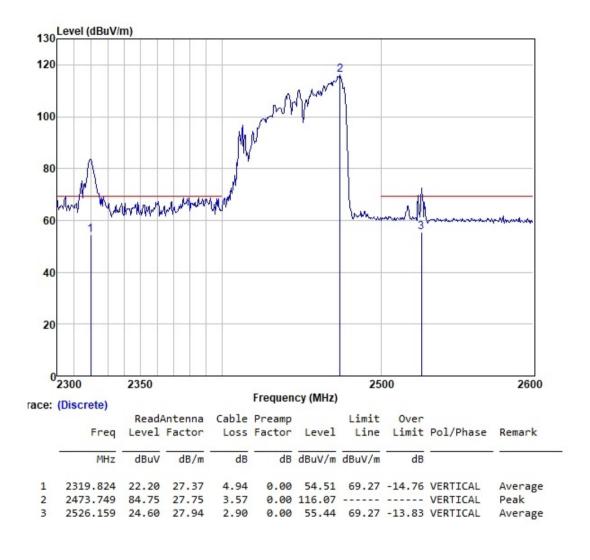
Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 33 of 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extent of the law. Offices of the state of the fullest extent of the fullest extent of the law. Offices of 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,

S Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-TRF-01 Rev 1.1 Report No.: GZEM240100022002

Page: 34 of 41

# 6.5 Output Power Measurement

Test Requirement: 47 CFR Part 18
Test Method: FCC OST/MP-5:1986

Limit:

## **Power output Measurement:**

#### Formula:

$$P = \frac{4,187 \cdot m_{\rm W} (T_2 - T_1) + 0,55 \cdot m_{\rm C} (T_2 - T_0)}{t}$$

NOTE:

P is the microwave power output, in watts

mw is the mass of the water, in grams

mc is the mass of the container, in grams

To is the ambient temperature, in degrees Celsius

T<sub>1</sub> is the initial temperature of the water, in degrees Celsius

T<sub>2</sub> is the final temperature of the water, in degrees Celsius

t is the heating time, in seconds, excluding the magnetron filament heating-up time.

#### **Input Power Measurement:**

The EUT was set up according to the MP-5 for input power measurement, the input power and current was measured using a power analyzer. Water load in a beaker was located in the center of the oven and the microwave oven was set to maximum power.

Base on the measured input power it was found that the microwave oven can operating as the user manual's specifications.

# 6.5.1 E.U.T. Operation

Operating Environment:

Temperature: 20.1 °C Humidity: 53.1 % RH Atmospheric Pressure: 1021 mbar

#### 6.5.2 Test Mode Description

Pre-scan / Mode Final test Code Description

Final test 00 Test the EUT in microwave mode with maximum power.



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extend of the fundamental state of 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 small: CN\_Doccheck@sqs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

0663 t (86–20) 82155555 0663 t (86–20) 82155555

www.sgsgroup.com.cn sgs.china@sgs.com



EMC-TRF-01 Rev 1.1

Report No.: GZEM240100022002

Page: 35 of 41

#### 6.5.3 Measurement Procedure and Data

# **Output Power Data**

Mass of water (g)	Mass of the container (g)	Ambient temperature (°C)	Initial temperature (°ℂ)	Final temperature (°C)	Heating time (s)	Power output (W)
1005	513	20.1	10.2	19.7	59	675.6

## Input Power Data

Input Voltage (V)	Input Current (A)	Power Factor	Measured input power (W)	Rated input power (W)
120.06	9.56	0.926	1063	1100



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. 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 indings 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 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@sgs.com"

es Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663



Report No.: GZEM240100022002 EMC-TRF-01 Rev 1.1

> Page: 36 of 41

# 6.6 Operating Frequency Measurement

Test Requirement: 47 CFR Part 18 Test Method: FCC OST/MP-5:1986

Limit:

Frequency Range: 2400-2500 MHz

Detector: Average for the final result for outside ISM band(2450MHz±50MHz)

Outside band limit: (a) ISM equipment operation on a frequency specified in §18.301 is permitted unlimited radiated energy in the band specified for that

frequency.

(b) The field strength levels of emissions which lie outside the bands specified in §18.301, unless otherwise indicated, shall not exceed the following:

RF Power generated by equipment(watts)	Field strength Limit(uV/m) @300m
500 or more	25*SQRT(power/500)

Power =675.6 W according to clause 6.1.2

Limit=20lg(25\*SQRT(power/500))+20lg(300/3)=69.27dBuV/m @ 3m

distance.

ISM band: ISM equipment may be operated on any frequency above 9 kHz.

And the frequency band 2400-2500MHz is allocated for use by ISM

equipment.

(§18.301)

,	
ISM frequency	Tolerance
6.78MHz	±15.0kHz
13.56MHz	±7.0kHz
27.12MHz	±163.0kHz
40.68MHz	±20.0kHz
915MHz	±13.0MHz
2450MHz	±50.0MHz
5800MHz	±75.0MHz
24125MHz	±125.0MHz
61.25GHz	±250.0MHz
122.5GHz	±500.0MHz
245.00GHz	±1.0GHz

## 6.6.1 E.U.T. Operation

Operating Environment:

Temperature: 22.7 °C Humidity: 61.5 % RH Atmospheric Pressure: 1021 mbar



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extent of the learn School of 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号



EMC-TRF-01 Rev 1.1

Report No.: GZEM240100022002

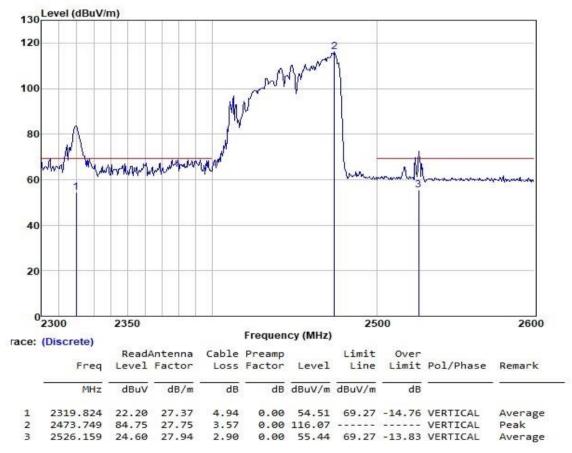
Page: 37 of 41

#### 6.6.2 Test Mode Description

Pre-scan / Final test		Description
Final test	00	Test the EUT in microwave mode with maximum power.
Pre-scan	01	Test the EUT in microwave mode with middle power.
Pre-scan	02	Test the EUT in microwave mode with lowest power.

#### 6.6.3 Measurement Procedure and Data

Test Mode: 00: The variation of frequency with time



#### The variation of frequency with time

The operating frequency was measured using a spectrum analyzer, the supply voltage was setting at the rated AC voltage, measured was start with EUT at room temperature, the operating frequency was monitored until the water load was reduced to 20 percent of the original quantity.

Test record was found the worst situation is when the water load is reduced to 20 percent of the original quantity.

ISM frequency(MHz)	Tolerance(MHz)	Measurement Data(MHz)
2450	±50	2474



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extent of the last of the second of the full 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 amail: CN\_Doccheck@sqs.com

SCO.Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 Noraloy. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86–20) 82155555 www.sgsgroup.c t (86–20) 82155555 sgs.china@sgs.c

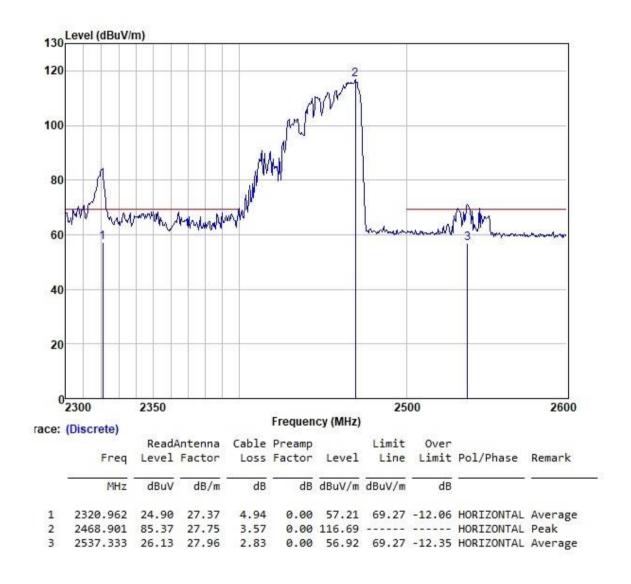


EMC-TRF-01 Rev 1.1

Report No.: GZEM240100022002

Page: 38 of 41

Test Mode: 00; The variation of frequency with line voltage



The variation of frequency with line voltage.

The operating frequency was measured using a spectrum analyzer, the supply voltage was setting at the rated AC voltage, measured was start with EUT at room temperature. The EUT was started to warm by at least 10 minutes, the operating frequency was monitored as the rated voltage was varied from 80% to 125%.

Test record was found the worst situation is when the line voltage is 125% of rated AC voltage.

ISM frequency(MHz)	Tolerance(MHz)	Measurement Data(MHz)
2450	±50	2469



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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.

to the fullest extent of the lath. Since of the state of the full state of the full

SCO.Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 Noralon. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86–20) 82155555 w t (86–20) 82155555 sg



Report No.: GZEM240100022002 EMC-TRF-01 Rev 1.1

> Page: 39 of 41

## 6.7 Radiation Hazard Test

Test Requirement: 47 CFR Part 18 Test Method: FCC OST/MP-5:1986

Test distance: Five centimeters from the oven surface

## 6.7.1 E.U.T. Operation

Operating Environment:

Temperature: 21.2 °C Humidity: 52.7 % RH Atmospheric Pressure: 1021 mbar

## 6.7.2 Test Mode Description

Pre-scan / Mode Description Final test Code

Final test 00 Test the EUT in microwave mode with maximum power. Pre-scan 01 Test the EUT in microwave mode with middle power. Test the EUT in microwave mode with lowest power. Pre-scan 02

#### 6.7.3 Measurement Procedure and Data

Maximum measure level (mW/cm²)		Limit (mW/cm²)	Test Result
	0.02	1	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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extent of the law. Offices of the state of the fullest extent of the fullest extent of the law. Offices of 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555



Report No.: GZEM240100022002 EMC-TRF-01 Rev 1.1

> Page: 40 of 41

#### **Test Setup Photo** 7

Refer to Appendix - Test Setup Photo for GZEM240100022002



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. 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 indings 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 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@sgs.com"

S Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663



EMC-TRF-01 Rev 1.1

Report No.: GZEM240100022002

Page: 41 of 41

#### **EUT Constructional Details (EUT Photos)** 8

Refer to Appendix - External and Internal Photos for GZEM2401000220HS

- 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containied 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. to the fullest extent of the law. Offices of the state of the fullest extent of the fullest extent of the law. Offices of 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555