

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Report No.: SHEM210400327101 Page: 1 of 46

TEST REPORT

Application No.:	SHEM2104003271CR
FCC ID:	2A2JJW10X
Applicant:	Jiangsu Yuyue Medical Equipment & Supply Co., Ltd.
Address of Applicant:	No.1 Baisheng Road Development Zone, Danyang , Jiangsu province,China
Manufacturer:	Jiangsu Yuyue Medical Equipment & Supply Co., Ltd.
Address of Manufacturer:	No.1 Baisheng Road Development Zone, Danyang , Jiangsu province,China
Factory:	Jiangsu Yuyue Medical Equipment & Supply Co., Ltd.
Address of Factory:	No.1 Baisheng Road Development Zone, Danyang , Jiangsu province,China
Equipment Under Test (EU	Т):
EUT Name:	Electronic Blood Pressure Monitor
Model No.:	W10F, W10T ¤
¤	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Standard(s) :	47 CFR Part 15, Subpart C 15.247
Date of Receipt:	2021-04-14
Date of Test:	2021-07-02 to 2021-08-03
Date of Issue:	2021-08-09
Test Result:	Pass*

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

parlan share

Parlam Zhan Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.



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

|Co.,Ltd NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612 中国・上海・松江区金都西路588号 邮编: 201612



Report No.: SHEM210400327101 Page: 2 of 46

Revision Record					
Version Description Date Remark					
00	Original	2021-08-09	1		

Authorized for issue by:	
	Bril WN
	Bill Wu / Project Engineer
	parlam zhan
	Parlam Zhan / 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 http://www.sgs.com/en/Terms-and-Conditions/Terms-enDocument.systep: 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 is atransaction from exercising all their rights and obligations under the transaction documents. This document is encoded 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@ess.com

NO.588 West Jindu Road, Songjiang District, Shanghai, China	201612
中国・上海・松江区金都西路588号 邮编:	201612

t(86-21) 61915666 f(86-21) 61915678 www.sgsgroup.com.cn t(86-21) 61915666 f(86-21) 61915678 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)



Report No.: SHEM210400327101 Page: 3 of 46

Test Summary 2

Radio Spectrum Technical Requirement					
ltem	Standard	Method	Requirement	Result	
Antenna Requirement	47 CFR Part 15, Subpart C 15.247	N/A	47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)	Custome r Declarati on	

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

Declaration of EUT Family Grouping:

Note: There are series models mentioned in this report, they have the same appearance, essential design and manufacturing characteristics, and they are similar in electrical and electronic characters. The only difference is that there is no component for voice function attached on the PCB board of model W10T. So model W10F is equipped with voice function, while model W10T isn't.



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 http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755)8307 1443, or email: Mtesting /inspection report & certificate, please contact us at telephone: (86-755)8307 1443, or email: Mtesting /inspection report & certificate, please contact us at telephone: (86-75)8307 1443, or email: http://www.sogsroup.com.cm (86-71)61915666 (186-21)61915678 www.sogsroup.com.cm

NO.588	West J	ndu Road, Songjiang District, 8	Shanghai,China	201612
中国・	上海·	松江区金都西路588号	邮编:	201612



SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Report No.: SHEM210400327101 Page: 4 of 46

3 **Contents**

			Page
1	cc	OVER PAGE	1
2	TE	EST SUMMARY	3
3	cc	ONTENTS	4
4	GE	ENERAL INFORMATION	5
56		DETAILS OF E.U.T DESCRIPTION OF SUPPORT UNITS POWER LEVEL SETTING USING IN TEST MEASUREMENT UNCERTAINTY TEST LOCATION TEST FACILITY DEVIATION FROM STANDARDS ABNORMALITIES FROM STANDARD CONDITIONS QUIPMENT LIST	
	6.1	ANTENNA REQUIREMENT	
7	RA	ADIO SPECTRUM MATTER TEST RESULTS	10
	7.1 7.2 7.3 7.4 7.5 7.6 7.7	MINIMUM 6DB BANDWIDTH CONDUCTED PEAK OUTPUT POWER POWER SPECTRUM DENSITY CONDUCTED BAND EDGES MEASUREMENT CONDUCTED SPURIOUS EMISSIONS RADIATED EMISSIONS WHICH FALL IN THE RESTRICTED BANDS RADIATED SPURIOUS EMISSIONS	
8	TE	EST SETUP PHOTOGRAPHS	46
9	EU	JT CONSTRUCTIONAL DETAILS	46



L F

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 http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 8307 1443, or email: Mtertion company (86-71)61915666 (86-71)61915678 www.sustorup.com.cm

NO.588 We	est Ji	ndu Road, Songjia	ang District, Shanghai	i,China	201612
中国・上述	海・	松江区金都西	路588号	邮编:	201612

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.



Report No.: SHEM210400327101 Page: 5 of 46

4 General Information

4.1 Details of E.U.T.

Power supply:	DC 3.7V 500mAh rechargeable battery
Test voltage:	DC 3.7V
Antenna Gain:	0dBi (Provided by manufacturer)
Antenna Type:	PCB Antenna
Bluetooth Version:	V5.1 LE
Data Rate:	1Mbps,2Mbps
Channel Spacing:	2MHz
Modulation Type:	GFSK
Number of Channels:	40
Operation Frequency:	2402MHz to 2480MHz

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Laptop	Lenovo	ThinkPad X100e	/
Serial port adapter plate	/	Test Plate 3	/

4.3 Power level setting using in test

Channel	BLE
0	Default
19	Default
39	Default



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

NO.588 West	Jindu Road, Songjiang District, Sha	nghai,China 201612	
中国・上海	・松江区金都西路588号	邮编: 201612	



Report No.: SHEM210400327101 Page: 6 of 46

4.4 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4 x 10 ⁻⁸
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
0	DE Dedicted Dewer	5.2dB (Below 1GHz)
8	RF Radiated Power	5.9dB (Above 1GHz)
		4.2dB (Below 30MHz)
0		4.5dB (30MHz-1GHz)
9	Radiated Spurious Emission Test	5.1dB (1GHz-18GHz)
		5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.



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 http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 8307 1443, or email: Mtertion company (86-71)61915666 (86-71)61915678 www.sustorup.com.cm

NO.588 West Jindu Road, Songjiang District, Shanghai, China	201612
中国・上海・松江区金都西路588号 邮编:	201612



Report No.: SHEM210400327101 Page: 7 of 46

4.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. E&E Lab

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Tel: +86 21 6191 5666 Fax: +86 21 6191 5678

No tests were sub-contracted.

4.6 Test Facility

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

• CNAS (No. CNAS L0599)

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

• A2LA (Certificate No. 6332.01)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the American Association for Laboratory Accreditation(A2LA).

• FCC (Designation Number: CN1301)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

• ISED (CAB Identifier: CN0020)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 8617A

• VCCI (Member No.: 3061)

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 respectively.

4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions



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 http://www.sgs.com/en/Terms-and-Conditions_aspx_and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-eDocument.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document. Snot exonerise particles to a transaction from exercising all their rights and obligations under the transaction documents. 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:

NO.588 West	Jiı	ndu Road,Songjiang District,Sh	nanghai,China	201612
中国・上海	•	松江区金都西路588号	邮编:	201612



Report No.: SHEM210400327101 Page: 8 of 46

5 Equipment List

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
RF Conducted Test					
Spectrum Analyzer	R&S	FSP-30	SHEM002-1	2020-12-20	2021-12-19
Spectrum Analyzer	Agilent	N9020A	SHEM181-1	2020-08-13	2021-08-12
Signal Generator	R&S	SMR20	SHEM006-1	2020-08-13	2021-08-12
Signal Generator	Agilent	N5182A	SHEM182-1	2020-08-13	2021-08-12
Communication Tester	R&S	CMW270	SHEM183-1	2020-08-13	2021-08-12
Switcher	Tonscend	JS0806	SHEM184-1	2020-08-13	2021-08-12
Power Sensor	Keysight	U2021XA * 4	SHEM184-1	2020-08-13	2021-08-12
Splitter	Anritsu	MA1612A	SHEM185-1	/	/
Coupler	e-meca	803-S-1	SHEM186-1	/	/
High-low Temp Cabinet	Suzhou Zhihe	TL-40	SHEM087-1	2018-09-25	2021-09-24
AC Power Stabilizer	APC	KDF-31020T-V0-F0	SHEM216-1	2020-12-20	2021-12-19
DC Power Supply	MCH	MCH-303A	SHEM210-1	2020-12-20	2021-12-19
Conducted test Cable	/	RF01~RF04	/	2020-12-20	2021-12-19
Test software	Tonscend	JS Tonscend BT/WIFI System	Version: 2.6	/	/
RF Radiated Test					
EMI test Receiver	R&S	ESU40	SHEM051-1	2020-12-20	2021-12-19
Spectrum Analyzer	R&S	FSP-30	SHEM002-1	2020-12-20	2021-12-19
Loop Antenna (9kHz-30MHz)	Schwarzbeck	FMZB1519	SHEM135-1	2020-12-20	2021-12-19
Antenna (25MHz-2GHz)	Schwarzbeck	VULB9168	SHEM048-1	2019-10-14	2021-10-13
Antenna (25MHz-2GHz)	Schwarzbeck	VULB9168	SHEM202-1	2020-04-30	2022-04-29
Horn Antenna (1-18GHz)	Schwarzbeck	HF906	SHEM009-1	2018-10-24	2021-10-23
Horn Antenna (1-18GHz)	Schwarzbeck	BBHA9120D	SHEM050-1	2019-10-14	2021-10-13
Horn Antenna (14-40GHz)	Schwarzbeck	BBHA 9170	SHEM049-1	2018-10-31	2021-10-30
Pre-amplifier (9KHz-2GHz)	CLAVIIO	BDLNA-0001	SHEM164-1	2020-08-13	2021-08-12
Pre-amplifier (1-18GHz)	CLAVIIO	BDLNA-0118	SHEM050-2	2020-08-13	2021-08-12
High-amplifier (14-40GHz)	Schwarzbeck	10001	SHEM049-2	2020-12-20	2021-12-19
Signal Generator	R&S	SMR40	SHEM058-1	2020-08-13	2021-08-12
Band Filter	LORCH	9BRX-875/X150	SHEM156-1	/	/
Band Filter	LORCH	13BRX-1950/X500	SHEM083-2	/	/
Band Filter	LORCH	5BRX-2400/X200	SHEM155-1	/	/
Band Filter	LORCH	5BRX-5500/X1000	SHEM157-2	/	/
High pass Filter	Wainwright	WHK3.0/18G	SHEM157-1	/	/
High pass Filter	Wainwright	WHKS1700	SHEM157-3	/	/
Semi/Fully Anechoic	ST	11*6*6M	SHEM078-2	2020-05-25	2023-05-24
RE test Cable	/	RE01, RE02, RE06	/	2020-12-20	2021-12-19
Test software	ESE	E3	Version: 6.111221a	/	/



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com/en/Terms-and-Conditions.aspx</u> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com/en/Terms-and-Conditions/Terms-and-Condita</u>

Ltd.	NO.588 West Jindu Road, Songjiang District, Shanghai, China	201612
	中国・上海・松江区金都西路588号 邮编:	201612





Report No.: SHEM210400327101 Page: 9 of 46

6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

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

6.1.2 Conclusion

Standard Requirement:

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

15.247(b) (4) requirement:

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

EUT Antenna:

The antenna is PCB antenna and no consideration of replacement. The best case gain of the antenna is 0dBi.

Antenna location: Refer to Appendix (Internal Photos)



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions of Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions of Ilability, 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. Sone exercising all their rights and obligations under the transaction documents. 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@esg.com

NO.588 West Jindu Road, Songjiang District, Shanghai, China	201612
中国・上海・松江区金都西路588号 邮编:	201612



Report No.: SHEM210400327101 Page: 10 of 46

7 Radio Spectrum Matter Test Results

7.1 Minimum 6dB Bandwidth

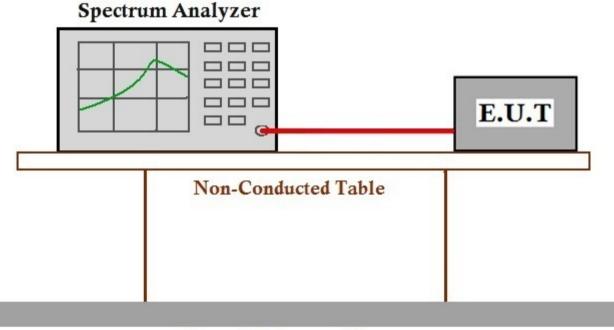
Test Requirement	47 CFR Part 15, Subpart C 15.247a(2)
Test Method:	ANSI C63.10 (2013) Section 11.8.1
Limit:	≥500 kHz

7.1.1 E.U.T. Operation

Operating Environment:

Temperature:22 °CHumidity:50 % RHAtmospheric Pressure:1001 mbarTest modea:TX mode_Keep the EUT in continuously transmitting mode with GFSK
modulation

7.1.2 Test Setup Diagram



Ground Reference Plane

7.1.3 Measurement Procedure and Data

The detailed test data see: Appendix A for SHEM210400327101



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 http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-en-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction 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.
Attack of the second
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,
or amail: CN Decebeek@egg.com

NO.588 West Jindu Road, Songjiang District, Shangha	ai,China	201612
中国・上海 ・松江区金都西路588号	邮编:	201612



Report No.: SHEM210400327101 Page: 11 of 46

7.2 Conducted Peak Output Power

Test Requirement47 CFR Part 15, Subpart C 15.247(b)(3)Test Method:ANSI C63.10 (2013) Section 11.9.1Limit:Limit:

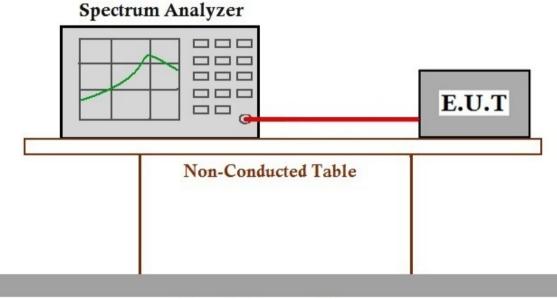
Frequency range(MHz)	Output power of the intentional radiator(watt)
	1 for ≥50 hopping channels
902-928	0.25 for 25≤ hopping channels <50
	1 for digital modulation
	1 for ≥75 non-overlapping hopping channels
2400-2483.5	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850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

7.2.1 E.U.T. Operation

Operating Environment:

Temperature:22 °CHumidity:50 % RHAtmospheric Pressure:1001 mbarTest modea:TX mode_Keep the EUT in continuously transmitting mode with GFSK
modulation

7.2.2 Test Setup Diagram



Ground Reference Plane

7.2.3 Measurement Procedure and Data

The detailed test data see: Appendix A for SHEM210400327101





Report No.: SHEM210400327101 Page: 12 of 46

7.3 Power Spectrum Density

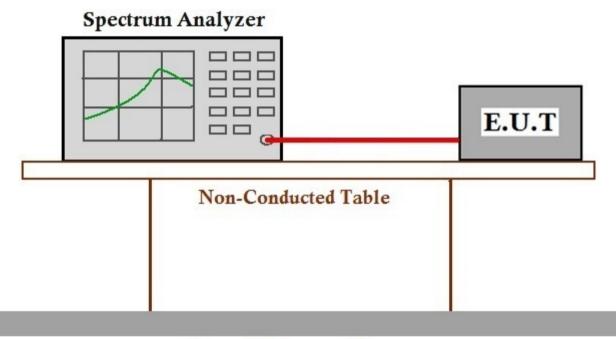
Test Requirement	47 CFR Part 15, Subpart C 15.247(e)
Test Method:	ANSI C63.10 (2013) Section 11.10.2
Limit:	${\leq}8\text{dBm}$ in any 3 kHz band during any time interval of continuous transmission

7.3.1 E.U.T. Operation

Operating Environment:

Temperature:22 °CHumidity:50 % RHAtmospheric Pressure:1001 mbarTest modea:TX mode_Keep the EUT in continuously transmitting mode with GFSK
modulation

7.3.2 Test Setup Diagram



Ground Reference Plane

7.3.3 Measurement Procedure and Data

The detailed test data see: Appendix A for SHEM210400327101



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 http://www.sgs.com/en/Terms-and-Conditions/aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/terms-e-Document.aspx. 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 limitation to its to its collegations under the transaction from exercising all their rights and obligations under the transaction documents. This document is approace 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@esg.com

NO.588 West Jir	ndu Road, Songjiang District, Shai	nghai,China	201612
中国・上海・	松江区金都西路588号	邮编:	201612



SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Report No.: SHEM210400327101 Page: 13 of 46

7.4 Conducted Band Edges Measurement

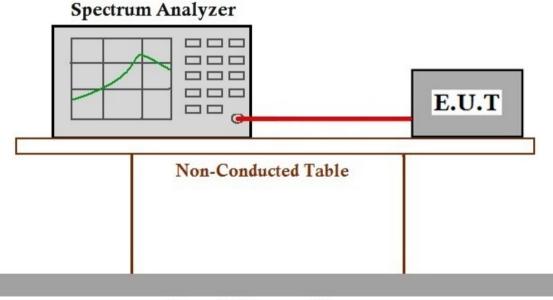
Test Requirement	47 CFR Part 15, Subpart C 15.247(d)
•	
Test Method:	ANSI C63.10 (2013) Section 11.13.3.2
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)

7.4.1 E.U.T. Operation

Operating Environment:

Temperature:	22 °C	Humidity:	50	% RH	Atmospheric Pressure: 1001	mbar
Test mode	a:TX mode_ modulation	Keep the EUT	in co	ntinuously	transmitting mode with GFSK	

7.4.2 Test Setup Diagram



Ground Reference Plane

7.4.3 Measurement Procedure and Data

The detailed test data see: Appendix A for SHEM210400327101





Report No.: SHEM210400327101 Page: 14 of 46

7.5 Conducted Spurious Emissions

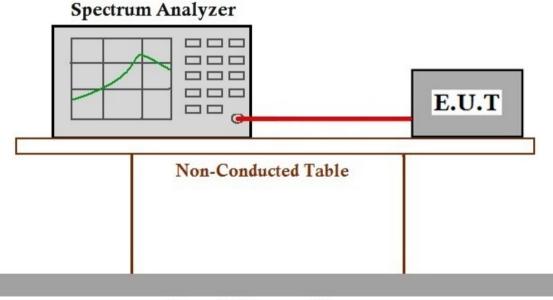
Test Requirement	47 CFR Part 15, Subpart C 15.247(d)
Test Method:	ANSI C63.10 (2013) Section 11.11
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)

7.5.1 E.U.T. Operation

Operating Environment:

Temperature:	22 °C	Humidity:	50	% RH	Atmospheric Pressure: 1001	mbar
Test mode	a:TX mode_ modulation	Keep the EUT	in co	ntinuously	transmitting mode with GFSK	

7.5.2 Test Setup Diagram



Ground Reference Plane

7.5.3 Measurement Procedure and Data

The detailed test data see: Appendix A for SHEM210400327101





Report No.: SHEM210400327101 Page: 15 of 46

7.6 Radiated Emissions which fall in the restricted bands

Test Requirement47 CFR Part 15, Subpart C 15.205 & 15.209Test Method:ANSI C63.10 (2013) Section 6.10.5Limit:Limit:

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

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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com/en/Terms-and-Conditions.aspx</u> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document is encent 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 linspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email. CN.Doccheck@esg.com

NO.588 West Jindu Road, Songjiang District, Shanghai, China	201612
中国・上海・松江区金都西路588号 邮编:	201612

t(86-21) 61915666 f(86-21)61915678 www.sgsgroup.com.cn t(86-21) 61915666 f(86-21)61915678 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)



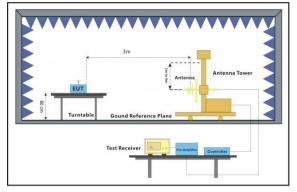
Report No.: SHEM210400327101 Page: 16 of 46

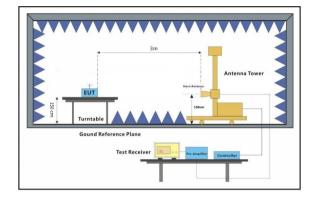
7.6.1 E.U.T. Operation

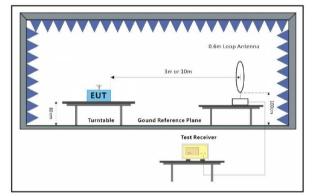
Operating Environment:

Temperature: 22 °C 50 % RH Atmospheric Pressure: 1001 mbar Humidity: Test mode a:TX mode Keep the EUT in continuously transmitting mode with GFSK modulation

7.6.2 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 http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. 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 limitato Company's sole responsibility is to its Cilent's 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 faisfication 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) lested 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: (86-756) 8307 1443, or email: CN_Doccheck@sgs.com (100.588 West Jindu Road.Songiand District.Shanghai,China 201612 (186-21)61915666 file-21)61915678 www.sgsgroup.com.cn

NO.588 West Jindu Road, Songjiang District, Shanghai, China	201612
中国・上海・松江区金都西路588号 邮编:	201612

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.



Report No.: SHEM210400327101 Page: 17 of 46

7.6.3 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

h. Test the EUT in the lowest channel, the middle channel, the Highest channel.

i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

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

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

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

Remark 3: Prescan both W10F and W10T, but only the worse case date was show in the test 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 http://www.ggs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.ggs.com/en/Terms-and-Conditions/Terms-end-Conditions/T

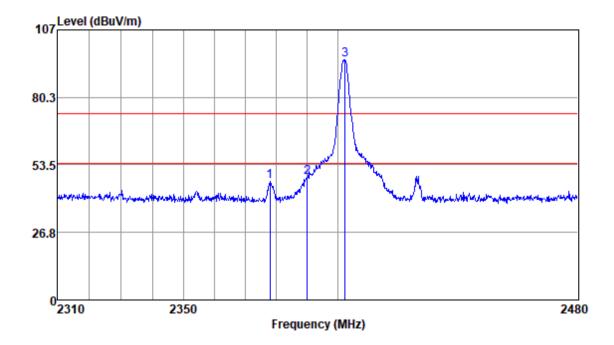
or email: CN.Doccheck@sgs.com	mspc	chonrepor
NO.588 West Jindu Road, Songjiang District, Shanghai,	China	201612
中国・上海・松江区金都西路588号	邮编:	201612



Report No.: SHEM210400327101 Page: 18 of 46

1MHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low



Antenna Polarity :HORIZONTAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
2377.91	53.08	28.40	2.76	37.39	46.85	74.00	-27.15	Peak
2390.00	54.32	28.97	2.77	37.40	48.66	74.00	-25.34	Peak
2402.35	100.69	29.01	2.79	37.40	95.09	74.00	21.09	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



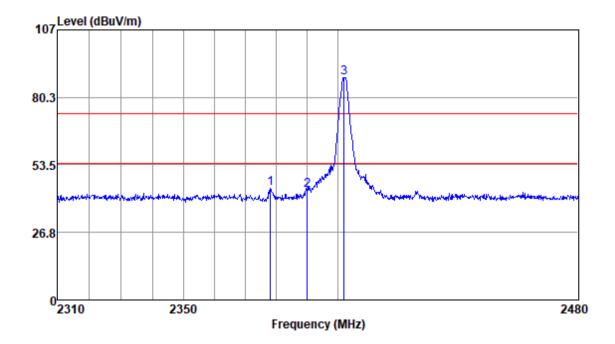
NO.588	3 West	Jir	ndu Road,Songjiang District,Shan	ghai,China	201612	
中国・	上海	•	松江区金都西路588号	邮编:	201612	



Report No.: SHEM210400327101 Page: 19 of 46

1MHz

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:Low



Antenna Polarity :VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
2378.07	50.34	28.40	2.76	37.39	44.11	74.00	-29.89	Peak
2390.00	49.05	28.97	2.77	37.40	43.39	74.00	-30.61	Peak
2402.00	93.74	29.01	2.79	37.40	88.14	74.00	14.14	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com/en/Terms-and-Conditions.aspx</u> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755)83071443, or email: CN_Doccheck@gs.com

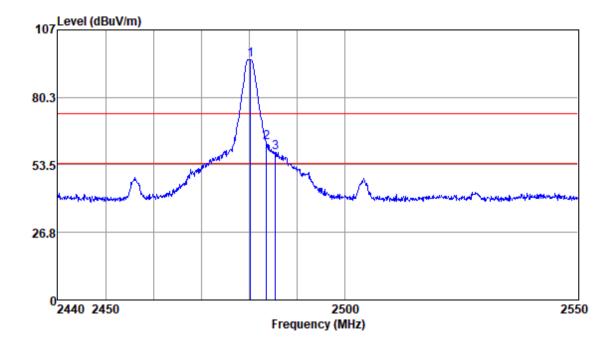
NO.588	West Ji	ndu Road,Songjiang District,S	Shanghai,China	201612
中国・	上海·	松江区金都西路588号	邮编:	201612



Report No.: SHEM210400327101 Page: 20 of 46

1MHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High



Antenna Polarity :HORIZONTAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
2480.14	100.88	29.10	2.88	37.57	95.29	74.00	21.29	Peak
2483.50	67.93	29.11	2.88	37.57	62.35	74.00	-11.65	Peak
2485.39	64.20	29.11	2.88	37.57	58.62	74.00	-15.38	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com/en/Terms-and-Conditions.aspx</u> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document 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 relatined for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755)8307 1443, or email: CN_Doccheck@gs.com

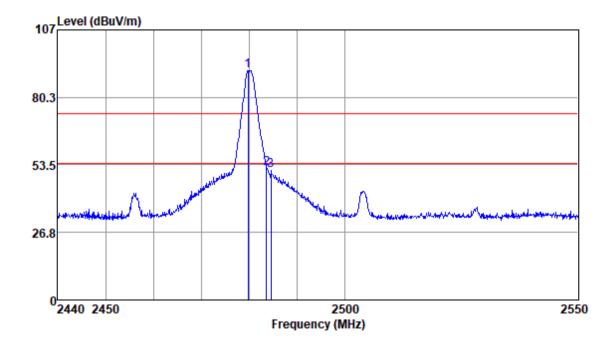
NO.588	3 West	Jir	ndu Road,Songjiang District,Shan	ghai,China	201612	
中国・	上海	•	松江区金都西路588号	邮编:	201612	



Report No.: SHEM210400327101 Page: 21 of 46

1MHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High



Antenna Polarity :HORIZONTAL

Freq					Emission Level			Remark
 MH-7	dBuy	dB/m			dBuv/m	dBuy/m		
					90.92			Average
					52.30			
2484.51	57.01	29.11	2.88	37.57	51.43	54.00	-2.57	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exoenteat 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 (NO.588 West Jindu Road.Songiiand District.Shanghai,China 201612 (86-21)61915668 (86-21)61915678 www.sgsgroup.com.cn

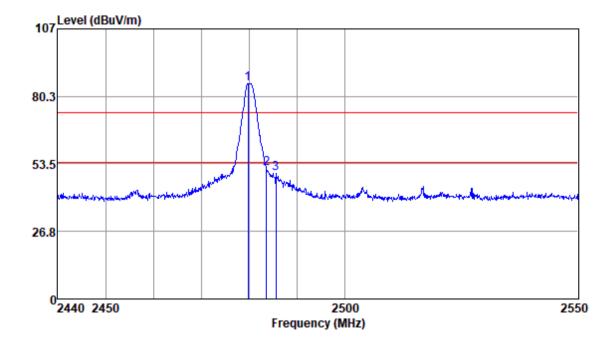
NO.588	West Ji	ndu Road,Songjiang District,Sha	inghai,China	201612	
中国・	上海·	松江区金都西路588号	邮编:	201612	



Report No.: SHEM210400327101 Page: 22 of 46

1MHz

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Antenna Polarity :VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
2479.70	90.91	29.10	2.88	37.57	85.32	74.00	11.32	Peak
2483.50	57.25	29.11	2.88	37.57	51.67	74.00	-22.33	Peak
2485.50	55.36	29.11	2.88	37.57	49.78	74.00	-24.22	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exoenteat 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 (NO.588 West Jindu Road.Songiiand District.Shanghai,China 201612 (86-21)61915668 (86-21)61915678 www.sgsgroup.com.cn

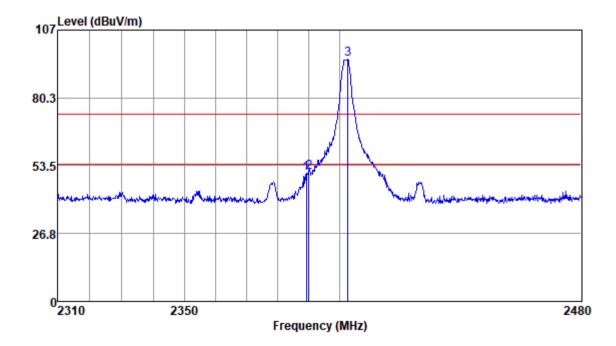
NO.588	West Ji	ndu Road,Songjiang District,S	Shanghai,China	201612
中国・	上海·	松江区金都西路588号	邮编:	201612



Report No.: SHEM210400327101 Page: 23 of 46

2MHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low



Antenna Polarity :HORIZONTAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
2389.25	56.34	28.97	2.77	37.40	50.68	74.00	-23.32	Peak
2390.00	56.55	28.97	2.77	37.40	50.89	74.00	-23.11	Peak
2402.69	101.06	29.01	2.79	37.43	95.43	74.00	21.43	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. 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 limitato Company's sole responsibility is to its Cilent's 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 faisfication 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) lested 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: (86-756) 8307 1443, or email: CN_Doccheck@sgs.com (100.588 West Jindu Road.Songiand District.Shanghai,China 201612 (186-21)61915666 file-21)61915678 www.sgsgroup.com.cn

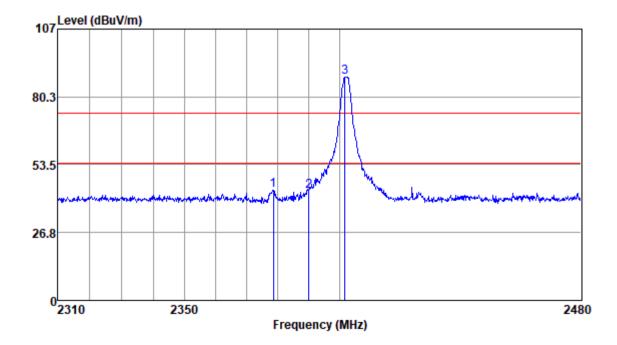
NO.58	8 West	Jir	ndu Road,Songjiang District,Sha	inghai,China	201612
中国・	上海	•	松江区金都西路588号	邮编:	201612



Report No.: SHEM210400327101 Page: 24 of 46

2MHz

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:Low



Antenna Polarity :VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
2378.58	49.83	28.40	2.76	37.39	43.60	74.00	-30.40	Peak
2390.00	48.53	28.97	2.77	37.40	42.87	74.00	-31.13	Peak
2401.66	93.64	29.01	2.79	37.40	88.04	74.00	14.04	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. 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 limitato Company's sole responsibility is to its Cilent's 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 faisfication 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) lested 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: (86-756) 8307 1443, or email: CN_Doccheck@sgs.com (100.588 West Jindu Road.Songiand District.Shanghai,China 201612 (186-21)61915666 file-21)61915678 www.sgsgroup.com.cn

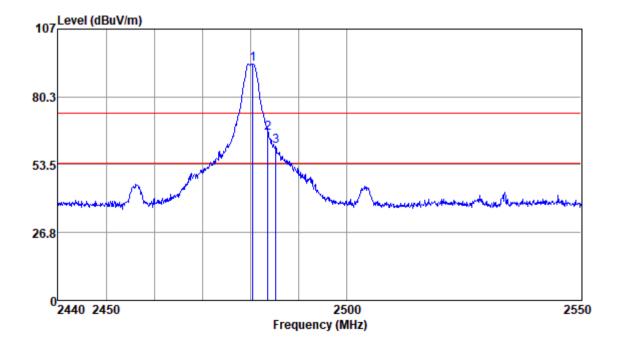
NO.58	8 West	Jir	ndu Road,Songjiang District,Sha	inghai,China	201612
中国・	上海	•	松江区金都西路588号	邮编:	201612



Report No.: SHEM210400327101 Page: 25 of 46

2MHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High



Antenna Polarity :HORIZONTAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
2480.35	98.84	29.10	2.88	37.57	93.25	74.00	19.25	Peak
2483.50	71.70	29.11	2.88	37.57	66.12	74.00	-7.88	Peak
2485.17	66.53	29.11	2.88	37.57	60.95	74.00	-13.05	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction 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 (NO.588 West Jindu Road.Songiiand District.Shanghai,China 201612 (86-21)61915668 (86-21)61915678 www.sgsgroup.com.cn

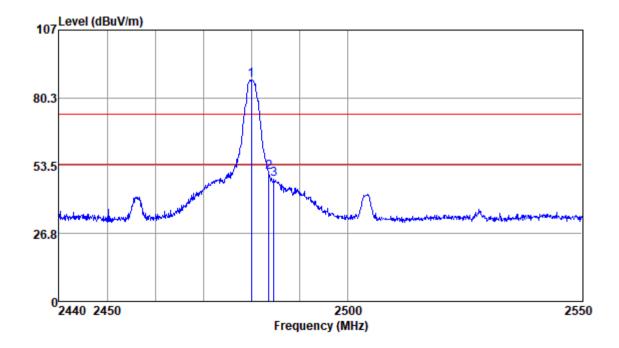
NO.58	8 West	Jir	ndu Road,Songjiang District,Sha	inghai,China	201612
中国・	上海	•	松江区金都西路588号	邮编:	201612



Report No.: SHEM210400327101 Page: 26 of 46

2MHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High



Antenna Polarity :HORIZONTAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
2479.92	92.98	29.10	2.88	37.57	87.39	54.00	33.39	Average
2483.50	56.50	29.11	2.88	37.57	50.92	54.00	-3.08	Average
2484.62	53.92	29.11	2.88	37.57	48.34	54.00	-5.66	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction 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 (NO.588 West Jindu Road.Songiiand District.Shanghai,China 201612 (86-21)61915668 (86-21)61915678 www.sgsgroup.com.cn

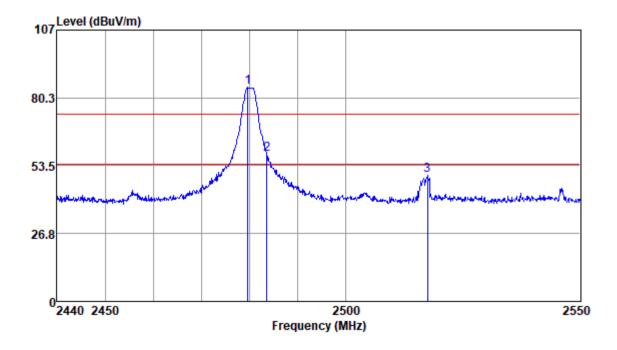
NO.58	8 West	Jir	ndu Road,Songjiang District,Sha	inghai,China	201612
中国・	上海	•	松江区金都西路588号	邮编:	201612



Report No.: SHEM210400327101 Page: 27 of 46

2MHz

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Antenna Polarity :VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
2479.59	89.90	29.10	2.88	37.57	84.31	74.00	10.31	Peak
2483.50	63.69	29.11	2.88	37.57	58.11	74.00	-15.89	Peak
2517.38	55.28	29.24	2.91	37.61	49.82	74.00	-24.18	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. 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 limitato Company's sole responsibility is to its Cilent's 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 faisfication 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) lested 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: (86-756) 8307 1443, or email: CN_Doccheck@sgs.com (100.588 West Jindu Road.Songiand District.Shanghai,China 201612 (186-21)61915666 file-21)61915678 www.sgsgroup.com.cn

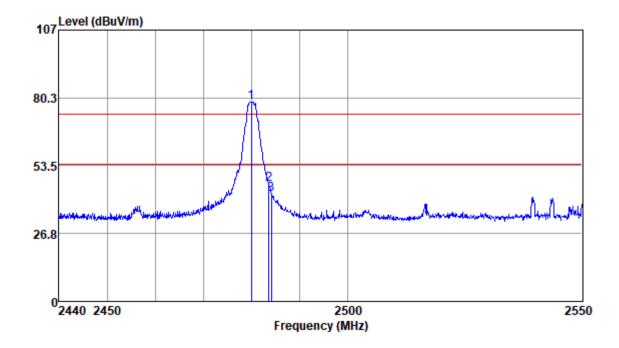
NO.588 We	st Ji	ndu Road,Songjiang District,Shar	nghai,China	201612	
中国・上潟	₿•	松江区金都西路588号	邮编:	201612	



Report No.: SHEM210400327101 Page: 28 of 46

2MHz

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Antenna Polarity :VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
2479.92	84.33	29.10	2.88	37.57	78.74	54.00	24.74	Average
2483.50	51.62	29.11	2.88	37.57	46.04	54.00	-7.96	Average
2484.08	47.78	29.11	2.88	37.57	42.20	54.00	-11.80	Average

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction 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 (NO.588 West Jindu Road.Songiiand District.Shanghai,China 201612 (86-21)61915668 (86-21)61915678 www.sgsgroup.com.cn

NO.58	8 West	Jir	ndu Road,Songjiang District,Sha	inghai,China	201612
中国・	上海	•	松江区金都西路588号	邮编:	201612



Report No.: SHEM210400327101 Page: 29 of 46

7.7 Radiated Spurious Emissions

Test Requirement	47 CFR Part 15, Subpart C 15.205 & 15.209
Test Method:	ANSI C63.10 (2013) Section 6.4,6.5,6.6
Limit:	

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

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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com/en/Terms-and-Conditions.aspx</u> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document is encent 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 linspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email. CN.Doccheck@esg.com

NO.588 West Jindu Road, Songjiang District, Shanghai, China	201612
中国・上海・松江区金都西路588号 邮编:	201612



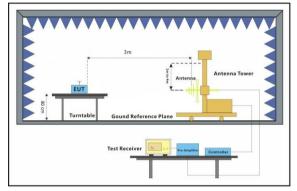
Report No.: SHEM210400327101 Page: 30 of 46

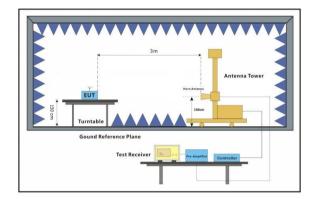
7.7.1 E.U.T. Operation

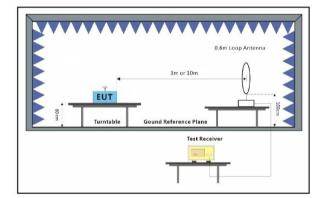
Operating Environment:

Temperature:22 °CHumidity:50 % RHAtmospheric Pressure:1001 mbarTest modea:TX mode_Keep the EUT in continuously transmitting mode with GFSK
modulation

7.7.2 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 http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemrification 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 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 rappearance 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 telephoner. (86-75) 8307 1443, or email: CN_Doccheck@sgs.com

		ndu Road, Songjiang District,	Shanghai,China	201612
中国・上海	•	松江区金都西路588号	邮编:	201612

t(86-21) 61915666 f(86-21) 61915678 www.sgsgroup.com.cn t(86-21) 61915666 f(86-21) 61915678 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.



Report No.: SHEM210400327101 Page: 31 of 46

7.7.3 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

h. Test the EUT in the lowest channel, the middle channel, the Highest channel.

i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

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

Remark:

1) For emission below 1GHz, through pre-scan found the worst case is the lowest channel. Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

3) Scan from 9kHz to 25GHz, the disturbance above 18GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

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

5) Prescan both W10F and W10T, but only the worse case date was show in the test report.



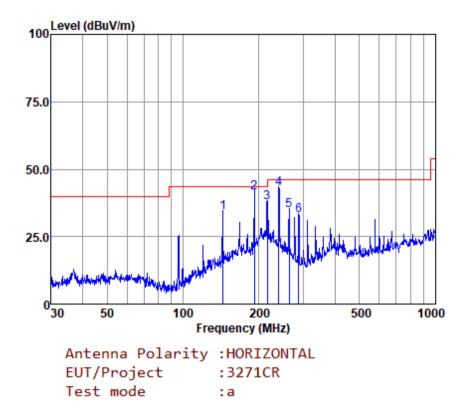
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issued defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document loss and offenders may be prosecuted to the fullest extend of the asp. 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@gss.com

NO.588	West Jir	ndu Road,Songjiang District,	Shanghai,China	201612
中国・	上海・	松江区金都西路588号	邮编:	201612



Report No.: SHEM210400327101 Page: 32 of 46

30MHz-1GHz: Mode:a; Polarization:Horizontal



	Freq		Antenna Factor						Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	143.830	50.95	12.66	1.82	31.62	33.81	43.50	-9.69	QP
2	191.745	60.61	10.38	2.18	31.75	41.42	43.50	-2.08	QP
3	216.024	56.62	9.71	2.36	31.20	37.49	46.00	-8.51	QP
4	239.987	60.43	10.86	2.51	31.10	42.70	46.00	-3.30	QP
5	263.819	50.77	12.26	2.67	31.11	34.59	46.00	-11.41	QP
6	286.982	48.30	12.99	2.78	31.32	32.75	46.00	-13.25	QP

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



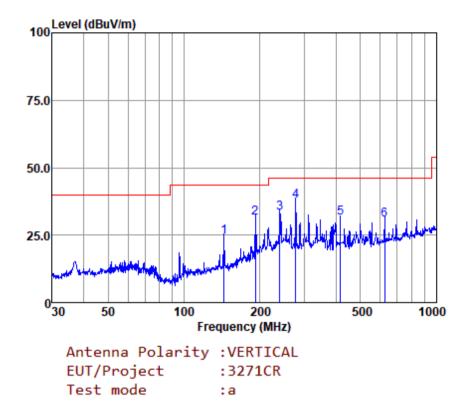
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic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

NO.588 West Jindu Road, Songjiang District, Shanghai, Ch	na	201612	
中国・上海・松江区金都西路588号 邮約	編:	201612	



Report No.: SHEM210400327101 Page: 33 of 46

Mode:a; Polarization:Vertical



	Freq		Antenna Factor						Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	143.830	41.54	12.66	1.82	31.62	24.40	43.50	-19.10	QP
2	191.745	50.70	10.38	2.18	31.75	31.51	43.50	-11.99	QP
3	239.987	50.92	10.86	2.51	31.10	33.19	46.00	-12.81	QP
4	277.094	53.74	12.75	2.73	31.40	37.82	46.00	-8.18	QP
5	416.179	42.57	16.02	3.16	30.48	31.27	46.00	-14.73	QP
6	625.078	37.74	19.97	3.98	30.90	30.79	46.00	-15.21	QP

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. 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 limitato Company's sole responsibility is to its Cilent's 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 faisfication 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) lested 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: (86-756) 8307 1443, or email: CN_Doccheck@sgs.com (100.588 West Jindu Road.Songiand District.Shanghai,China 201612 (186-21)61915666 file-21)61915678 www.sgsgroup.com.cn

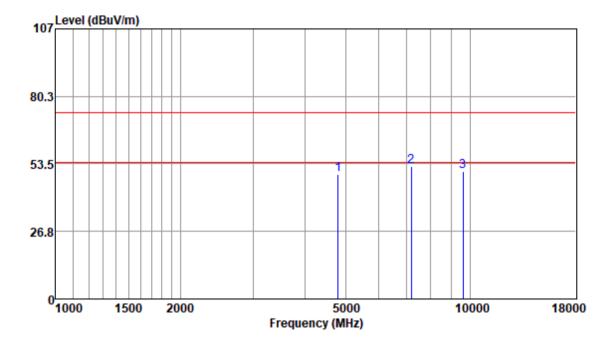
NO.588 West	Jindu Road,Songjiang District,Sha	anghai,China 🕻	201612
中国・上海	・松江区金都西路588号	邮编: 2	201612

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.



Report No.: SHEM210400327101 Page: 34 of 46

Above 1GHz 1MHz Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low



Antenna Polarity :HORIZONTAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4804.00	49.80	33.72	4.46	38.71	49.27	74.00	-24.73	Peak
7206.00	47.88	36.28	5.72	37.18	52.70	74.00	-21.30	Peak
9608.00	40.30	37.70	6.53	34.18	50.35	74.00	-23.65	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are relatined for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755)83071443, or email: CN.Doccheck@gs.com (§ No.S88 West Jindu Road.Songiano District.Shanghai,China 201612 (186-21)61915666 (186-21)61915678 www.sgsgroup.com.cn

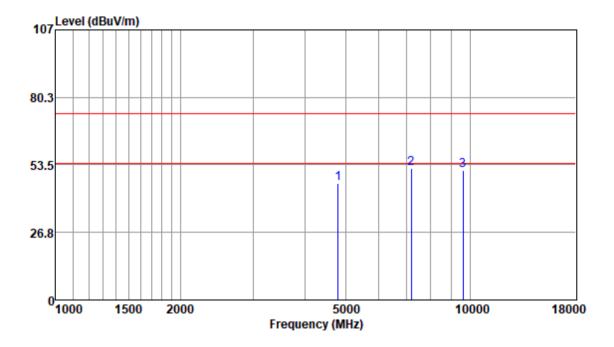
NO.588	8 West	Jir	ndu Road,Songjiang District,Sha	nghai,China	201612	
中国・	上海	•	松江区金都西路588号	邮编:	201612	



Report No.: SHEM210400327101 Page: 35 of 46

1MHz

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:Low



Antenna Polarity :VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4804.00	46.87	33.72	4.46	38.71	46.34	74.00	-27.66	Peak
7206.00	47.17	36.28	5.72	37.18	51.99	74.00	-22.01	Peak
9608.00	41.38	37.70	6.53	34.18	51.43	74.00	-22.57	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. 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 limitato Company's sole responsibility is to its Cilent's 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 faisfication 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) lested 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: (86-756) 8307 1443, or email: CN_Doccheck@sgs.com (100.588 West Jindu Road.Songiand District.Shanghai,China 201612 (186-21)61915666 file-21)61915678 www.sgsgroup.com.cn

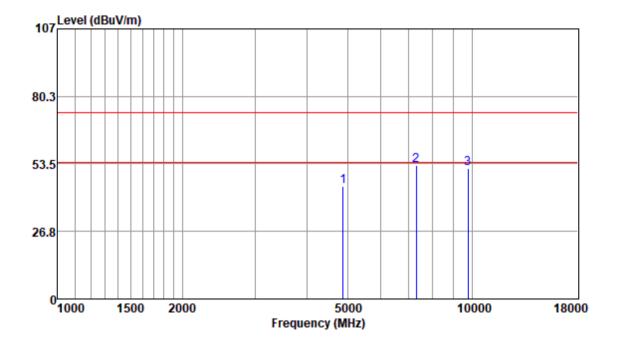
NO.588 West Ji	ndu Road, Songjiang District, Shar	nghai,China	201612	
中国・上海・	松江区金都西路588号	邮编:	201612	



Report No.: SHEM210400327101 Page: 36 of 46

1MHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:middle



Antenna Polarity :HORIZONTAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4880.00	45.05	33.93	4.47	38.78	44.67	74.00	-29.33	Peak
7320.00	47.59	36.47	5.85	37.10	52.81	74.00	-21.19	Peak
9760.00	41.77	37.68	6.50	34.15	51.80	74.00	-22.20	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



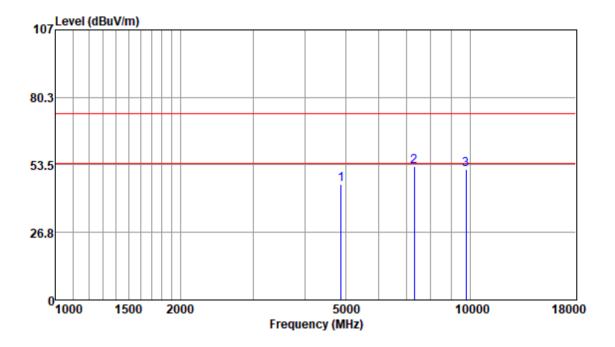
NO.58	8 West	Jiı	ndu Road,Songjiang District,Shan	ghai,China	201612	
中国	・上海	•	松江区金都西路588号	邮编:	201612	



Report No.: SHEM210400327101 Page: 37 of 46

1MHz

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:middle



Antenna Polarity :VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4880.00	46.13	33.93	4.47	38.78	45.75	74.00	-28.25	Peak
7320.00	47.67	36.47	5.85	37.10	52.89	74.00	-21.11	Peak
9760.00	41.61	37.68	6.50	34.15	51.64	74.00	-22.36	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



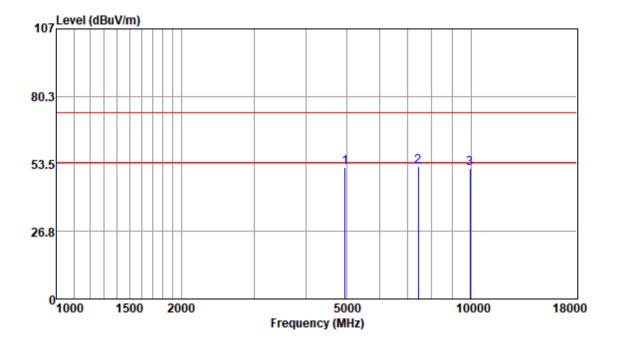
NO.58	8 West	Jiı	ndu Road,Songjiang District,Shan	ghai,China	201612	
中国	・上海	•	松江区金都西路588号	邮编:	201612	



Report No.: SHEM210400327101 Page: 38 of 46

1MHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High



Antenna Polarity :HORIZONTAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4960.00	52.58	33.98	4.48	38.87	52.17	74.00	-21.83	Peak
7440.00	47.08	36.40	5.97	37.03	52.42	74.00	-21.58	Peak
9920.00	41.61	37.81	6.47	34.11	51.78	74.00	-22.22	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



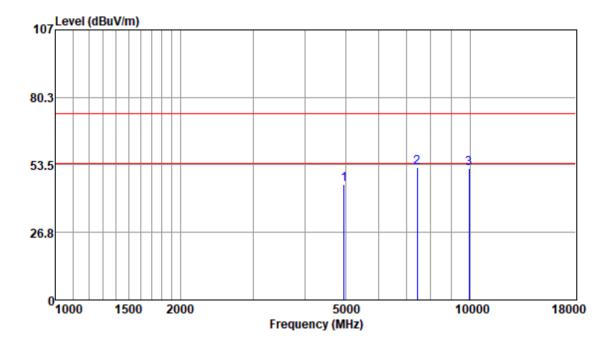
NO.58	8 West	Jiı	ndu Road,Songjiang District,Shan	ghai,China	201612	
中国	・上海	•	松江区金都西路588号	邮编:	201612	



Report No.: SHEM210400327101 Page: 39 of 46

1MHz

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Antenna Polarity :VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4960.00	46.10	33.98	4.48	38.87	45.69	74.00	-28.31	Peak
7440.00	47.18	36.40	5.97	37.03	52.52	74.00	-21.48	Peak
9920.00	41.75	37.81	6.47	34.11	51.92	74.00	-22.08	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. 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 limitato Company's sole responsibility is to its Cilent's 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 faisfication 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) lested 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: (86-756) 8307 1443, or email: CN_Doccheck@sgs.com (100.588 West Jindu Road.Songiand District.Shanghai,China 201612 (186-21)61915666 file-21)61915678 www.sgsgroup.com.cn

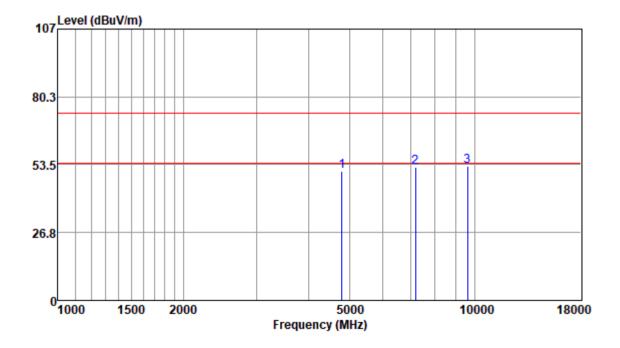
NO.588 \	Nest Jir	idu Road,Songjiang District,Shai	nghai,China	201612	
中国・	上海 ・	松江区金都西路588号	邮编:	201612	



Report No.: SHEM210400327101 Page: 40 of 46

2MHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low



Antenna Polarity :HORIZONTAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4804.00	51.65	33.72	4.46	38.71	51.12	74.00	-22.88	Peak
7206.00	47.53	36.28	5.72	37.18	52.35	74.00	-21.65	Peak
9608.00	42.67	37.70	6.53	34.18	52.72	74.00	-21.28	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



l c

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 http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. 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 limitato Company's sole responsibility is to its Cilent's 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 faisfication 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) lested 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: (86-756) 8307 1443, or email: CN_Doccheck@sgs.com (100.588 West Jindu Road.Songiand District.Shanghai,China 201612 (186-21)61915666 file-21)61915678 www.sgsgroup.com.cn

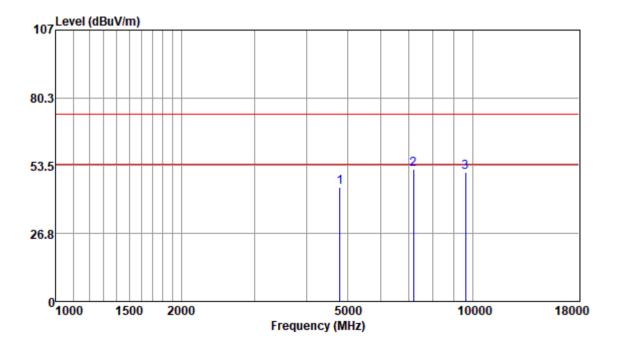
NO.588	West J	ndu Road, Songjiar	ng District, Shanghai	,China	201612
中国・	上海·	松江区金都西距	格588号	邮编:	201612



Report No.: SHEM210400327101 Page: 41 of 46

2MHz

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:Low



Antenna Polarity :VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4804.00	45.38	33.72	4.46	38.71	44.85	74.00	-29.15	Peak
7206.00	47.35	36.28	5.72	37.18	52.17	74.00	-21.83	Peak
9608.00	40.96	37.70	6.53	34.18	51.01	74.00	-22.99	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



l c

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 http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. 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 limitato Company's sole responsibility is to its Cilent's 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 faisfication 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) lested 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: (86-756) 8307 1443, or email: CN_Doccheck@sgs.com (100.588 West Jindu Road.Songiand District.Shanghai,China 201612 (186-21)61915666 file-21)61915678 www.sgsgroup.com.cn

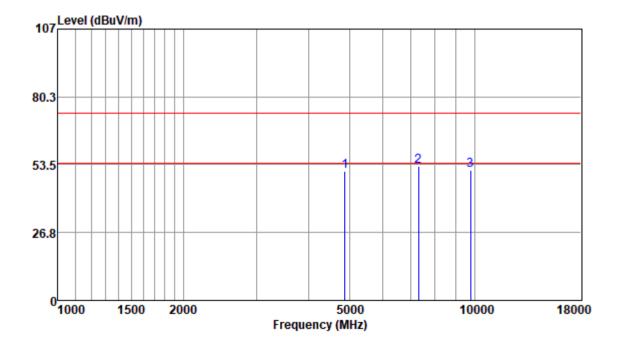
NO.588 W	/est Jir	du Road, Song	jiang District, Shangha	ai,China	201612
中国・上	海・	松江区金都福	西路588号	邮编:	201612



Report No.: SHEM210400327101 Page: 42 of 46

2MHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:middle



Antenna Polarity :HORIZONTAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4880.00	51.42	33.93	4.47	38.78	51.04	74.00	-22.96	Peak
7320.00	47.49	36.47	5.85	37.10	52.71	74.00	-21.29	Peak
9760.00	41.13	37.68	6.50	34.15	51.16	74.00	-22.84	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



l c

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 http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. 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 limitato Company's sole responsibility is to its Cilent's 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 faisfication 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) lested 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: (86-756) 8307 1443, or email: CN_Doccheck@sgs.com (100.588 West Jindu Road.Songiand District.Shanghai,China 201612 (186-21)61915666 file-21)61915678 www.sgsgroup.com.cn

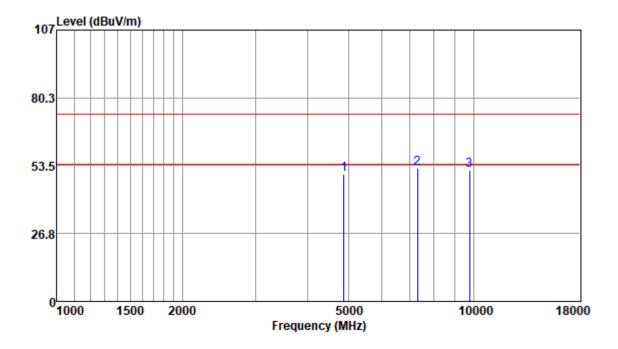
NO.588 We	st Ji	ndu Road,Songjiang District,Shar	nghai,China	201612	
中国・上潟	₿•	松江区金都西路588号	邮编:	201612	



Report No.: SHEM210400327101 Page: 43 of 46

2MHz

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:middle



Antenna Polarity :VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4880.00	50.46	33.93	4.47	38.78	50.08	74.00	-23.92	Peak
7320.00	47.26	36.47	5.85	37.10	52.48	74.00	-21.52	Peak
9760.00	41.63	37.68	6.50	34.15	51.66	74.00	-22.34	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



l c

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 http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. 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 limitato Company's sole responsibility is to its Cilent's 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 faisfication 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) lested 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: (86-756) 8307 1443, or email: CN_Doccheck@sgs.com (100.588 West Jindu Road.Songiand District.Shanghai,China 201612 (186-21)61915666 file-21)61915678 www.sgsgroup.com.cn

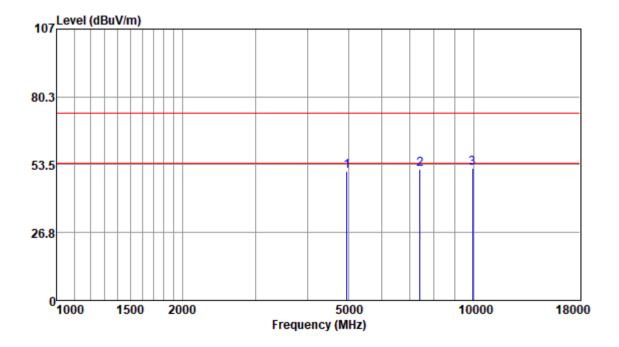
NO.588	West	Jindu Road	Songjiang District,	Shanghai, China	201612
中国・	上海	•松江区:	金都西路588号	邮编:	201612



Report No.: SHEM210400327101 Page: 44 of 46

2MHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High



Antenna Polarity :HORIZONTAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4959.31	51.31	33.98	4.48	38.87	50.90	74.00	-23.10	Peak
7432.91	46.51	36.40	5.97	37.04	51.84	74.00	-22.16	Peak
9923.99	42.15	37.81	6.47	34.11	52.32	74.00	-21.68	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. 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 limitato Company's sole responsibility is to its Cilent's 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 faisfication 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) lested 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: (86-756) 8307 1443, or email: CN_Doccheck@sgs.com (100.588 West Jindu Road.Songiand District.Shanghai,China 201612 (186-21)61915666 file-21)61915678 www.sgsgroup.com.cn

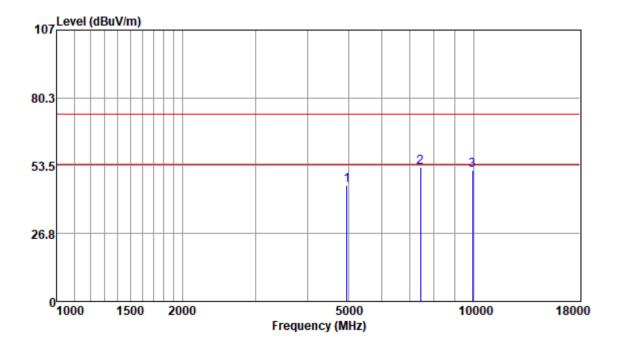
NO.58	8 West	Jiı	ndu Road,Songjiang District,Shan	ghai,China	201612	
中国	・上海	•	松江区金都西路588号	邮编:	201612	



Report No.: SHEM210400327101 Page: 45 of 46

2MHz

Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Antenna Polarity :VERTICAL

Freq					Emission Level			Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
4960.00	46.34	33.98	4.48	38.87	45.93	74.00	-28.07	Peak
7440.00	47.59	36.40	5.97	37.03	52.93	74.00	-21.07	Peak
9920.00	41.61	37.81	6.47	34.11	51.78	74.00	-22.22	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. 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 limitato Company's sole responsibility is to its Cilent's 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 faisfication 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) lested 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: (86-756) 8307 1443, or email: CN_Doccheck@sgs.com (100.588 West Jindu Road.Songiand District.Shanghai,China 201612 (186-21)61915666 file-21)61915678 www.sgsgroup.com.cn

NO.58	8 West	Jiı	ndu Road,Songjiang District,Shan	ghai,China	201612	
中国	・上海	•	松江区金都西路588号	邮编:	201612	



Report No.: SHEM210400327101 Page: 46 of 46

8 Test Setup Photographs

Refer to the < Test Setup photos-FCC>.

9 EUT Constructional Details

Refer to the < External Photos > & <Internal Photos >.

- 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 http://www.sgs.com/en/Terms-and-Conditions/service format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. 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 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 30x only. Attention: To check the authenticity of testing linspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@esp.com

NO.588 West Jindu Road, Songjiang District, Shanghai, China	201612
中国・上海・松江区金都西路588号 邮编:	201612

t(86-21) 61915666 f(86-21)61915678 www.sgsgroup.com.cn t(86-21) 61915666 f(86-21)61915678 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)