

Report No.: SZEM201001042206

Page: 1 of 26

TEST REPORT

Application No.: SZEM2010010422CR
Applicant: PAX Technology Limited

Address of Applicant: Room 2416, 24/F., Sun Hung Kai Centre, 30 Harbour, Hong Kong, China

Manufacturer: PAX Computer Technology(Shenzhen) Co., Ltd.

Address of Manufacturer: 4/F, No.3 Building, Software Park, Second Central Science-Tech Road,

High-Tech industrial Park, Shenzhen, Guangdong, P.R.C.

Factory: Guangzhou PAX Computer Technology Co., Ltd

Address of factory: No.2 Bldg, No.113 Jinyang Road, Hualong Town, Panyu, Guangzhou,

Guangdong, China

Equipment Under Test (EUT):

EUT Name: Mobile Payment Terminal

 Model No.:
 D170

 Trade mark:
 PAX

 FCC ID:
 V5PD170

 Standard(s):
 47 CFR Part 2

47 CFR Part 22 subpart H 47 CFR Part 24 subpart E

Date of Receipt: 2020-10-19

Date of Test: 2020-10-21 to 2020-11-05

Date of Issue: 2020-11-05

Test Result: Pass*

Keny Xu EMC Laboratory Manager

Ceny. Ku



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, repair.

or email: <u>CN.Doccheck@sgs.com</u> No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.c 中国 · 宋圳· 科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

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



Report No.: SZEM190801779003

Page: 2 of 26

	Revision Record							
Version	Modifier	Remark						
01		2020-11-05		Original				

Authorized for issue by:		
	Calvin Wong	
	Calvin Weng /Project Engineer	-
	EvicFu	
	Eric Fu /Reviewer	-



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at 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,

of enal: CN. Dockneck(@sgs_com No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国・深圳・科技図中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 3 of 26

2 Test Summary

Test Item	FCC	Requirements	Verdict
rest item	Rule No.	Requirements	verdict
Effective (Instruction) Builting	§2.1046,	EDD-7M/CCM050 M/CDMA bond //	
Effective (Isotropic) Radiated Power Output Data	§22.913,	ERP≤7W(GSM850, WCDMA band V) EIRP≤2W(GSM1900, WCDMA band II)	PASS
, ever carput zata	§24.232	EIRT =2VV(GGWT300, VVGBW/V band II)	
Peak-Average Ratio	§24.232	≤13dB	PASS
Modulation Characteristics	§2.1047	Digital modulation	PASS
Bandwidth	\$2.4040(b)	OBW: No limit	PASS
Baridwidtri	§2.1049(h)	EBW: No limit	PASS
	§2.1051,	≤ -13dBm/1%*EBW, in 1 MHz bands	
Band Edge Compliance	§22.917,	immediately outside and adjacent to the	PASS
	§24.238	frequency block.	
0	§2.1051,		
Spurious emissions at antenna terminals	§22.917,	≤ -13dBm	PASS
terrinals	§24.238		
Field store with a famous and	§2.1051,		
Field strength of spurious radiation	§22.917,	≤ -13dBm	PASS
radiano.	§24.238		
	§2.1055,		
Frequency stability	§22.355,	≤ ±2.5ppm.	PASS
	§24.235		



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.

| No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国・深圳・科技図中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 4 of 26

3 Contents

		Pa	ge
1	COVE	ER PAGE	1
2	TEST	SUMMARY	3
3	CONT	TENTS	,
J	CON	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
4	GENE	ERAL INFORMATION	6
		DETAILS OF E.U.T.	
		Test Frequency	
		TEST ENVIRONMENT	
		DESCRIPTION OF SUPPORT UNITS	
		TEST LOCATION	
		TEST FACILITY	
		DEVIATION FROM STANDARDS	
		ABNORMALITIES FROM STANDARD CONDITIONS	
5	FQUI	PMENT LIST	10
Ŭ			
6	RADI	O SPECTRUM MATTER TEST RESULTS	.12
	6.1	EFFECTIVE (ISOTROPIC) RADIATED POWER OUTPUT DATA	.12
	6.1.1	E.U.T. Operation	.12
	6.1.2	, ,	
	6.1.3		
		PEAK-AVERAGE RATIO	
	6.2.1 6.2.2	E.U.T. Operation Test Setup Diagram	
	6.2.3		
		Bandwidth	
	6.3.1		
	6.3.2		
	6.3.3	Measurement Data	.14
		Band Edge Compliance	
	6.4.1		
	6.4.2		
	6.4.3 6.5		
	6.5.1	Spurious emissions at antenna terminals	
	6.5.2	Test Setup Diagram	
	6.5.3		
		FIELD STRENGTH OF SPURIOUS RADIATION	
	6.6.1	E.U.T. Operation	
	6.6.2	Test Setup Diagram	.17
	6.6.3		
	6.7	FREQUENCY STABILITY	.23



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.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国 ·深圳 · 科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 5 of 26

	6.7.1	E.U.T. Operation	23
		Test Setup Diagram	
	6.7.3	Measurement Data	23
(6.8 M	MODULATION CHARACTERISTICS	24
	6.8.1	E.U.T. Operation	24
	6.8.2	Test Setup Diagram	24
		Measurement Data	
7	TEST	SETUP PHOTO	25
8	EUT C	CONSTRUCTIONAL DETAILS (EUT PHOTOS)	26



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.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国 - 深圳 - 科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 6 of 26

4 General Information

4.1 Details of E.U.T.

Rated voltage:	DC3.7V		
Power adapter:	Adapter M/N: A18A-050100U-US2		
,	Adapter input: AC100-240V, 50/60Hz, 0.2A		
	Adapter output: DC5V/1A		
Battery:	DC3.7V(1100mAh)		
Sample Type:	Portable production		
Support Network:	GPRS, EGPRS, RMC, HSDPA, HSUPA		
Operation Frequency Band:	GSM850/GSM1900/UMTS FDD Band II/V		
	GMSK for GPRS/EGPRS;		
Modulation Type:	8PSK for EGPRS;		
	QPSK for WCDMA		
Supported Channel Bandwidth:	200KHz for GSM; 5MHz for WCDMA		
GPRS Class:	12		
EGPRS Class:	12		
UMTS Power Class:	Level 3		
Antenna Type:	PIFA antenna		
Antenna Gain:	GSM850MHz: 1dBi, DCS1900MHz: 0.5dBi.		
Antenna Gain.	UMTS band II: 0.5dBi UMTS band V: 1dBi		
SIM Card:	This device has dual SIM Card sockets. Both the SIM sockets have been tested. SIM1 was worst case, only record SIM1.		
Extreme temp. Tolerance:	-30°C to +50°C		
Extreme vol. Limits:	3.3VDC to 4.2VDC (nominal: 3.7VDC)		



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.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国 ·深圳 · 科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 7 of 26

4.2 Test Frequency

Testered	,	RF Channel				
Test mode:	TX / RX	Low (L)	Middle (M)	High (H)		
	TV	Channel 128	Channel 190	Channel 251		
CCMOEO	TX	824.2MHz	836.6 MHz	848.8 MHz		
GSM850	RX	Channel 128	Channel 190	Channel 251		
	KA	869.2 MHz	881.6 MHz	893.8 MHz		
Test mode:	TX / RX		RF Channel			
rest mode.	IA/KA	Low (L)	Middle (M)	High (H)		
	-	Channel 512	Channel 661	Channel 810		
GSM1900	TX	1850.2MHz	1880.0 MHz	1909.8 MHz		
GSW1900	RX -	Channel 512	Channel 661	Channel 810		
		1930.2 MHz	1960.0 MHz	1989.8 MHz		
Test Mode	TX/RX	RF Channel				
rest wode		Low(L)	Middle (M)	High (H)		
	TX	Channel 4132	Channel 4183	Channel 4233		
WCDMA Band	17	826.4 MHz	836.6 MHz	846.6 MHz		
V	RX	Channel 4357	Channel 4407	Channel 4458		
		871.4 MHz	881.4 MHz	891.6 MHz		
Test Mode	TX/RX		RF Channel			
rest wode	TAIKA	Low(L)	Middle (M)	High (H)		
	TX	Channel 9262	Channel 9400	Channel 9538		
WCDMA Band	1 ^	1852.4 MHz	1880.0 MHz	1907.6 MHz		
II	RX	Channel 9662	Channel 9800	Channel 9938		
	KX	1932.4 MHz	1960.0 MHz	1987.6 MHz		

4.3 Test Environment

Environment Parameter	Selected Values During Tests			
Relative Humidity	52%			
Atmospheric Pressure:	,	1015Pa		
Temperature:	TN	20 °C		
	VL	3.3 V		
Voltage:	VN	3.7 V		
	VH	4.2 V		

NOTE: VL= lower extreme test voltage

VN= nominal voltage

VH= upper extreme test voltage

TN= normal temperature



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 document. 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: CND.Doccheck@sqs.com.

or email: <u>CN.Doccheck@sgs.com</u>
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn
中国・深圳・科技园中区M−10栋一号厂房 邮编: 518057 t (86–755) 26012053 f (86–755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 8 of 26

4.4 Description of Support Units

The EUT has been tested independent unit.

4.5 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	± 7.25 x 10 ⁻⁸
2	Duty cycle	± 0.37%
3	Occupied Bandwidth	± 3%
4	RF conducted power	± 0.75dB
5	RF power density	± 2.84dB
6	Conducted Spurious emissions	± 0.75dB
7	DE Dadiated navor	± 4.5dB (below 1GHz)
'	RF Radiated power	± 4.8dB (above 1GHz)
8	Dedicted Courieus emission test	± 4.5dB (Below 1GHz)
0	Radiated Spurious emission test	± 4.8dB (Above 1GHz)
9	Temperature test	± 1°C
10	Humidity test	± 3%
11	Supply voltages	± 1.5%
12	Time	± 3%



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, **Certificate**.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZEM190801779003

Page: 9 of 26

4.6 Test Location

All tests were performed at:

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

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

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

No tests were sub-contracted.

4.7 Test Facility

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

• CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 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. 3816.01)

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

VCCI

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

• FCC -Designation Number: CN1178

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

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

• Innovation, Science and Economic Development Canada

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

CAB identifier: CN0006.

IC#: 4620C.

4.8 Deviation from Standards

None

4.9 Abnormalities from Standard Conditions

None



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at 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 issue 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,

To enait: CH. Doceneck@ssgs.com No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.ci 中国 · 深圳 · 科技园中区M-10株一号厂房 邮编: 518057 t (86–755) 26012053 f (86–755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 10 of 26

5 Equipment List

RF conducted test						
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date	Cal. Due date	
DC Power Supply	ZhaoXin	PS-3005D	SEM011-05	2020-09-23	2021-09-22	
Signal Analyzer (10Hz-40GHz)	Rohde & Schwarz	FSV40	SEM008-04	2020-03-31	2021-03-30	
Measurement Software	JS Tonscend	JS1120-2 BT/WIFI V2.6	N/A	N/A	N/A	
Coaxial Cable	SGS	N/A	SEM031-01	2020-07-10	2021-07-09	
Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A	
Universal Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-03	2020-03-31	2021-03-30	
Power Sensor	KEYSIGHT	U2021XA	SEM009-13	2020-04-11	2021-04-10	

RE in Chamber						
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date	Cal. Due date	
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018-03-13	2021-03-12	
EXA Signal Analyzer (10Hz-44GHz)	Agilent Technologies Inc	N9010A	SEM004-12	2020-04-11	2021-04-10	
Horn Antenna (800MHz-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018-04-13	2021-04-12	
Horn Antenna (15-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2020-10-16	2023-10-15	
Amplifier (0.1-1300MHz)	HP	8447D	SEM005-02	2020-09-23	2021-09-22	
Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2019-11-11	2020-11-10	
Pre-amplifier (26-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2020-03-31	2021-03-30	
Universal Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-03	2020-03-31	2021-03-30	
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A	
Coaxial Cable	SGS	N/A	SEM026-01	2020-07-10	2021-07-09	
Substitution Antenna	ETS-Lindgren	3142C	SEM003-01	2020-06-26	2023-06-25	
Signal Generator	R&S	SMA100A	102174	2020-07-10	2021-07-09	

RE in Chamber					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date	Cal. Due date



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 https://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,

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国 ·深圳 · 科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 11 of 26

3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2020-07-19	2023-07-18
MXE EMI Receiver (20Hz-8.4GHz)	Agilent Technologies	N9038A	SEM004-05	2020-09-23	2021-09-22
BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2020-06-26	2023-06-25
Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEM005-01	2020-03-31	2021-03-30
Measurement Software	AUDIX	e3 V8.2014-6- 27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2020-07-10	2021-07-09
Universal Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-03	2020-03-31	2021-03-30

General used equipmen	t				
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2020-09-15	2021-09-14
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2020-09-15	2021-09-14
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2020-04-07	2021-04-06



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at 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 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国 ·深圳 · 科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 12 of 26

6 Radio Spectrum Matter Test Results

6.1 Effective (Isotropic) Radiated Power Output Data

Test Requirement: §2.1046, §22.913, §24.232

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: ERP≤7W(GSM850, WCDMA BAND V)

EIRP ≤ 2W(GSM1900, WCDMA BAND II)

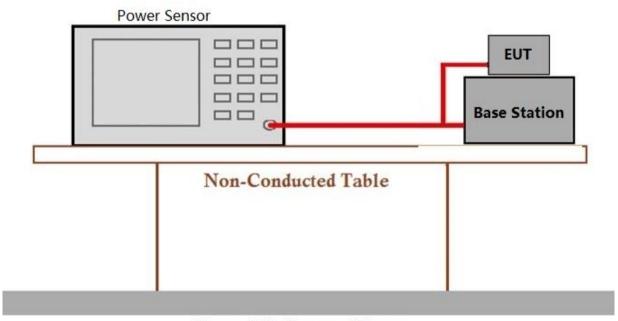
6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22.5 °C Humidity: 65.0 % RH Atmospheric Pressure: 1015 mbar

Test mode: f:TX mode_Keep the EUT in transmitting mode

6.1.2 Test Setup Diagram



Ground Reference Plane

6.1.3 Measurement Data

Please refer to Appendix A-2G3G RF conducted test data



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.sepx and for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://mww.sgs.com/en/Terms-and-Conditions/Terms-en-Document.sepx. 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 souch sample(s) served and telephone: (86-755) 8307 1443, Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

referential: <u>CHI.OCENDECEMBSQS.COM</u> No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国 • 深圳 • 科技园中区M-10株一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 13 of 26

6.2 Peak-Average Ratio

Test Requirement: §24.232

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: ≤13dB

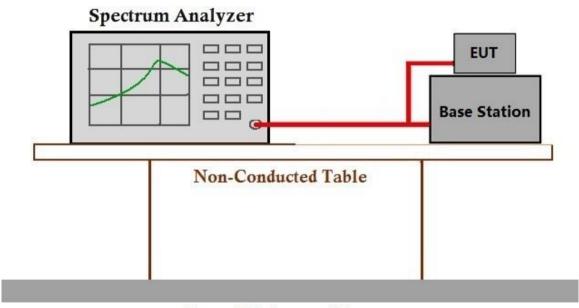
6.2.1 E.U.T. Operation

Operating Environment:

Temperature: 22.5 °C Humidity: 65.0 % RH Atmospheric Pressure: 1015 mbar

Test mode: f:TX mode Keep the EUT in transmitting mode

6.2.2 Test Setup Diagram



Ground Reference Plane

6.2.3 Measurement Data

Please refer to Appendix A-2G3G RF conducted test data



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,

referential: <u>CRI. Doce the Exigosa. Com</u> No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国 • 深圳 • 科技园中区M-10株一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 14 of 26

6.3 Bandwidth

Test Requirement: §2.1049(h), §22.917, §24.238

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: OBW: No limit

EBW: No limit

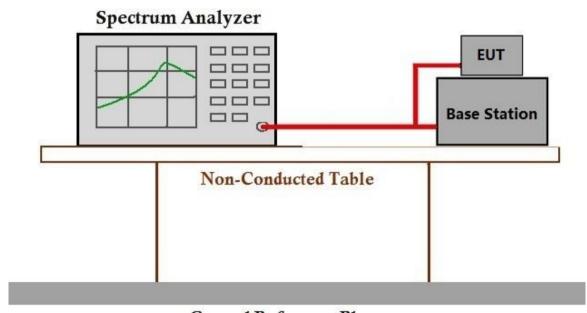
6.3.1 E.U.T. Operation

Operating Environment:

Temperature: 22.5 °C Humidity: 65.0 % RH Atmospheric Pressure: 1015 mbar

Test mode: f:TX mode_Keep the EUT in transmitting mode

6.3.2 Test Setup Diagram



Ground Reference Plane

6.3.3 Measurement Data

Please refer to Appendix A-2G3G RF conducted test data



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.spx and conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.spx. 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 souch sample(s) exert retained for 30 days only.

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

referential: <u>CHI.OCENDECEMBSQS.COM</u> No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国 • 深圳 • 科技园中区M-10株一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 15 of 26

6.4 Band Edge Compliance

Test Requirement: §2.1051, §22.917, §24.238

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: ≤ -13dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to

the frequency block.

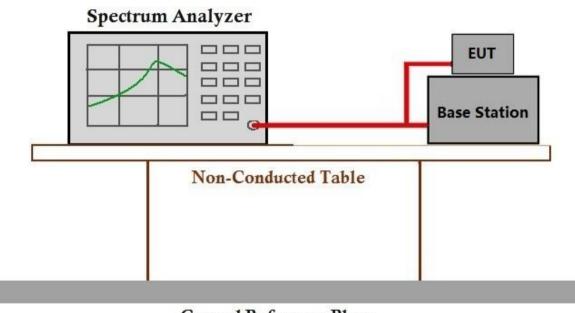
6.4.1 E.U.T. Operation

Operating Environment:

Temperature: 22.5 °C Humidity: 65.0 % RH Atmospheric Pressure: 1015 mbar

Test mode: f:TX mode_Keep the EUT in transmitting mode

6.4.2 Test Setup Diagram



Ground Reference Plane

6.4.3 Measurement Data

Please refer to Appendix A-2G3G RF conducted test data



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 souch sample(s) are retained for 30 days only.

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

or email: CN_Doccheck@sgs.com No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.d 中国・深圳・科技园中区M−10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 16 of 26

6.5 Spurious emissions at antenna terminals

Test Requirement: §2.1051, §22.917, §24.238

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: ≤ -13dBm

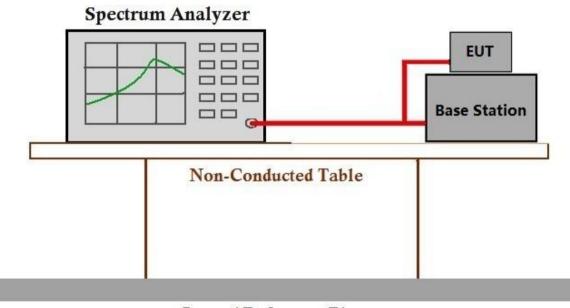
6.5.1 E.U.T. Operation

Operating Environment:

Temperature: 22.5 °C Humidity: 65.0 % RH Atmospheric Pressure: 1015 mbar

Test mode: f:TX mode_Keep the EUT in transmitting mode

6.5.2 Test Setup Diagram



Ground Reference Plane

6.5.3 Measurement Data

Please refer to Appendix A-2G3G RF conducted test data



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,

referential: <u>CHI.OCENDECEMBSQS.COM</u> No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国 • 深圳 • 科技园中区M-10株一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 17 of 26

6.6 Field strength of spurious radiation

Test Requirement: §2.1051, §22.917, §24.238,

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: ≤ -13dBm

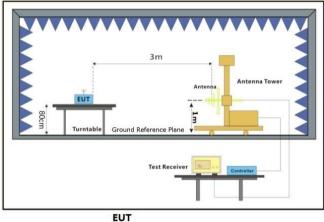
6.6.1 E.U.T. Operation

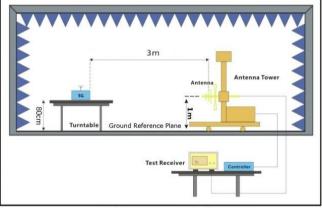
Operating Environment:

Temperature: 22.5 °C Humidity: 65.0 % RH Atmospheric Pressure: 1015 mbar

Test mode: f:TX mode_Keep the EUT in transmitting mode

6.6.2 Test Setup Diagram





Substitue Antenna+Signal Generator



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,

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 tt (86-755) 26012053 ft (86-755) 26710594 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 tt (86-755) 26012053 ft (86-755) 26710594

www.sgsgroup.com.cn

sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 18 of 26

6.6.3 Measurement Procedure and Data

Test Procedure:

- (1)On a test site, the EUT shall be placed on a turntable and in the position closest to the normal use as declared by the user.
- (2) The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the transmitter.
- (3) The output of the antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.
- (4) The transmitter shall be switched on; if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
- (5) The test antenna shall be raised and lowered through the specified range of height until the measuring receiver detects a maximum signal level.
- (6) The transmitter shall than be rotated through 360 in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
- (7) The test antenna shall be raised and lowered again through the specified range of height until the measuring receiver detects a maximum signal level.
- (8) The maximum signal level detected by the measuring receiver shall be noted.
- (9) The measurement shall be repeated with the test antenna set to horizontal polarization.
- (10) Replace the antenna with a proper Antenna (substitution antenna).
- (11)The substitution antenna shall be oriented for vertical polarization and, if necessary, the length of the substitution antenna shall be adjusted to correspond to the frequency of transmitting.
- (12) The substitution antenna shall be connected to a calibrated signal generator.
- (13)If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
- (14)The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.
- (15)The input signal to substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
- (16) The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
- (17)The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.



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 issue 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,



Report No.: SZEM190801779003

19 of 26 Page:

			GPRS	350-Low c	hannel			
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1648.4	-64.73	0.52	6	-46.38	-13	-33.38	Horizontal	Pass
2472.6	-60.44	0.53	5.8	-49.15	-13	-36.15	Horizontal	Pass
3296.8	-57.57	0.65	6.2	-46.07	-13	-33.07	Horizontal	Pass
1648.4	-65.29	0.52	6	-49.1	-13	-36.1	Vertical	Pass
2472.6	-61.92	0.53	5.8	-49.08	-13	-36.08	Vertical	Pass
3296.8	-57.97	0.65	6.2	-46.87	-13	-33.87	Vertical	Pass

			GPRS85	50-Middle	channel			
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1672.8	-63.96	0.52	6	-44.46	-13	-31.46	Horizontal	Pass
2509.2	-60.47	0.59	5.3	-47.05	-13	-34.05	Horizontal	Pass
3345.6	-56.38	0.65	6.2	-44.66	-13	-31.66	Horizontal	Pass
1672.8	-60.57	0.52	6	-48.04	-13	-35.04	Vertical	Pass
2509.2	-61.68	0.59	5.3	-46.88	-13	-33.88	Vertical	Pass
3345.6	-57.9	0.65	6.2	-42.05	-13	-29.05	Vertical	Pass

			GPRS8	50-High cl	hannel			
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1697.6	-53.21	0.52	6	-47.73	-13	-34.73	Horizontal	Pass
2546.4	-50.12	0.59	5.3	-45.41	-13	-32.41	Horizontal	Pass
3395.2	-47.65	0.65	6.2	-42.1	-13	-29.1	Horizontal	Pass
1697.6	-53.67	0.52	6	-48.19	-13	-35.19	Vertical	Pass
2546.4	-54.3	0.59	5.3	-49.59	-13	-36.59	Vertical	Pass
3395.2	-48.27	0.65	6.2	-42.72	-13	-29.72	Vertical	Pass



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at 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@sqs.com

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZEM190801779003

20 of 26 Page:

			GPRS1	900-Low c	hannel			
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
3700.4	-50.19	0.71	7.6	-43.3	-13	-30.3	Horizontal	Pass
5550.6	-48.93	0.85	10.3	-39.48	-13	-26.48	Horizontal	Pass
7400.8	-49.3	1	12.9	-37.4	-13	-24.4	Horizontal	Pass
3700.4	-48.35	0.71	7.6	-41.46	-13	-28.46	Vertical	Pass
5550.6	-51.43	0.85	10.3	-41.98	-13	-28.98	Vertical	Pass
7400.8	-51.1	1	12.9	-39.2	-13	-26.2	Vertical	Pass

			GPRS19	00-Middle	channel			
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
3760	-47.54	0.71	7.6	-40.65	-13	-27.65	Horizontal	Pass
5640	-47.19	0.85	10.3	-37.74	-13	-24.74	Horizontal	Pass
7520	-48.43	0.99	13.2	-36.22	-13	-23.22	Horizontal	Pass
3760	-45.87	0.71	7.6	-38.98	-13	-25.98	Vertical	Pass
5640	-49.78	0.85	10.3	-40.33	-13	-27.33	Vertical	Pass
7520	-50.98	0.99	13.2	-38.77	-13	-25.77	Vertical	Pass

			GPRS1	900-High c	hannel			
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
3819.6	-45.32	0.71	7.6	-38.43	-13	-25.43	Horizontal	Pass
5729.4	-48.55	0.85	10.3	-39.1	-13	-26.1	Horizontal	Pass
7639.2	-49.41	0.99	13.2	-37.2	-13	-24.2	Horizontal	Pass
3819.6	-47.03	0.71	7.6	-40.14	-13	-27.14	Vertical	Pass
5729.4	-46.73	0.85	10.3	-37.28	-13	-24.28	Vertical	Pass
7639.2	-51.1	0.99	13.2	-38.89	-13	-25.89	Vertical	Pass



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at 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,

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

中国·深圳·科技园中区M-10栋一号厂房

sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 21 of 26

			WCDMA B	AND V-Lo	w channel			
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1649.4	-61.63	0.52	6	-56.15	-13	-43.15	Horizontal	Pass
2474.1	-57.23	0.53	5.8	-51.96	-13	-38.96	Horizontal	Pass
3298.8	-51.76	0.65	6.2	-46.21	-13	-33.21	Horizontal	Pass
1649.4	-58.42	0.52	6	-52.94	-13	-39.94	Vertical	Pass
2474.1	-58.33	0.53	5.8	-53.06	-13	-40.06	Vertical	Pass
3298.8	-51.58	0.65	6.2	-46.03	-13	-33.03	Vertical	Pass

			WCDMA BA	ND V-Mid	dle channel			
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1673.04	-62.46	0.52	6	-56.98	-13	-43.98	Horizontal	Pass
2509.56	-57.57	0.59	5.3	-52.86	-13	-39.86	Horizontal	Pass
3346.08	-50.76	0.65	6.2	-45.21	-13	-32.21	Horizontal	Pass
1673.04	-60.28	0.52	6	-54.8	-13	-41.8	Vertical	Pass
2509.56	-59.93	0.59	5.3	-55.22	-13	-42.22	Vertical	Pass
3346.08	-53.13	0.65	6.2	-47.58	-13	-34.58	Vertical	Pass

			WCDMA B	AND V-Hig	gh channel			
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1696.62	-61.41	0.52	6	-55.93	-13	-42.93	Horizontal	Pass
2544.93	-55.12	0.59	5.3	-50.41	-13	-37.41	Horizontal	Pass
3393.24	-51.17	0.65	6.2	-45.62	-13	-32.62	Horizontal	Pass
1696.62	-57.74	0.52	6	-52.26	-13	-39.26	Vertical	Pass
2544.93	-55.46	0.59	5.3	-50.75	-13	-37.75	Vertical	Pass
3393.24	-53.25	0.65	6.2	-47.7	-13	-34.7	Vertical	Pass



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at 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,

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 22 of 26

			WCDMA B	and II-Low	/ channel			
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization (H/V)	Result
3704.8	-53.08	0.71	7.6	-46.19	-13	-33.19	Horizontal	Pass
5557.2	-52.81	0.85	10.3	-43.36	-13	-30.36	Horizontal	Pass
7411.461	-52.85	1	12.9	-40.95	-13	-27.95	Horizontal	Pass
3704.8	-51.58	0.71	7.6	-44.69	-13	-31.69	Vertical	Pass
5557.2	-51.3	0.85	10.3	-41.85	-13	-28.85	Vertical	Pass
7409.6	-52.09	1	12.9	-40.19	-13	-27.19	Vertical	Pass

WCDMA Band II-Middle channel												
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization (H/V)	Result				
3760	-49.75	0.71	7.6	-42.86	-13	-29.86	Horizontal	Pass				
5640	-50.57	0.85	10.3	-41.12	-13	-28.12	Horizontal	Pass				
7520	-51.15	0.99	13.2	-38.94	-13	-25.94	Horizontal	Pass				
3760	-50.07	0.71	7.6	-43.18	-13	-30.18	Vertical	Pass				
5640	-50.78	0.85	10.3	-41.33	-13	-28.33	Vertical	Pass				
7520	-52.54	0.99	13.2	-40.33	-13	-27.33	Vertical	Pass				

WCDMA Band II-High channel											
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization (H/V)	Result			
3815.2	-50.02	0.71	7.6	-43.13	-13	-30.13	Horizontal	Pass			
5722.8	-51.26	0.85	10.3	-41.81	-13	-28.81	Horizontal	Pass			
7630.4	-49.3	0.99	13.2	-37.09	-13	-24.09	Horizontal	Pass			
3815.2	-50.69	0.71	7.6	-43.8	-13	-30.8	Vertical	Pass			
5722.8	-51.84	0.85	10.3	-42.39	-13	-29.39	Vertical	Pass			
7630.4	-52.14	0.99	13.2	-39.93	-13	-26.93	Vertical	Pass			

Note:

For GSM, all modes have been tested and we found GPRS Test mode has the worst test result. Only record the worst test result.

For WCDMA, all modes have been tested and we found RMC Test mode has the worst test result. Only record the worst test result.



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,

| No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国・深圳・科技図中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 23 of 26

6.7 Frequency stability

Test Requirement: §2.1055, §22.355, §24.235

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: $\leq \pm 2.5$ ppm.

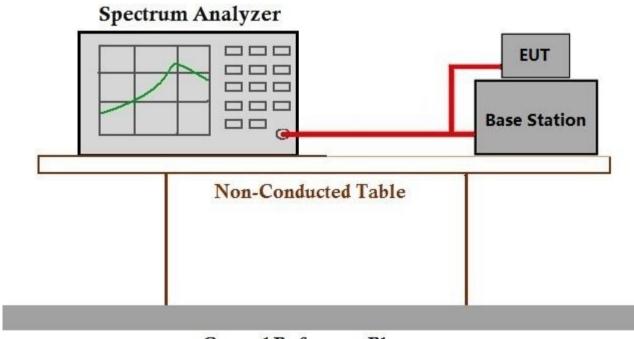
6.7.1 E.U.T. Operation

Operating Environment:

Temperature: 22.5 °C Humidity: 65.0 % RH Atmospheric Pressure: 1015 mbar

Test mode: f:TX mode Keep the EUT in transmitting mode

6.7.2 Test Setup Diagram



Ground Reference Plane

6.7.3 Measurement Data

Please refer to Appendix A-2G3G RF conducted test data



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,

referential: <u>CHI.OCENDECEMBSQS.COM</u> No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国 • 深圳 • 科技园中区M-10株一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 24 of 26

6.8 Modulation Characteristics

Test Requirement: §2.1047

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: Digital modulation

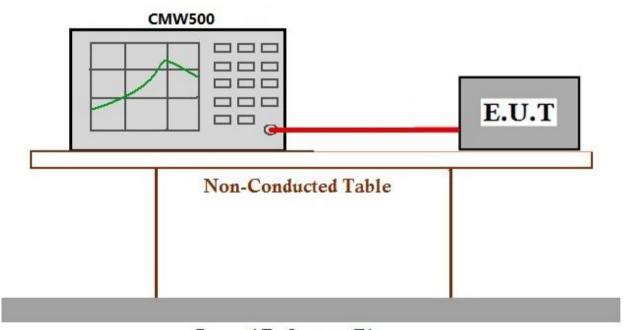
6.8.1 E.U.T. Operation

Operating Environment:

Temperature: 22.5 °C Humidity: 65.0 % RH Atmospheric Pressure: 1015 mbar

Test mode: f:TX mode_Keep the EUT in transmitting mode

6.8.2 Test Setup Diagram



Ground Reference Plane

6.8.3 Measurement Data

Please refer to Appendix A-2G3G RF conducted test data



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,

Mol. Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国 • 深圳 • 科技园中区M-10株一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 25 of 26

7 Test Setup Photo

Please refer to setup 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 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, **Certificate**.

| No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国・深圳・科技図中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZEM190801779003

Page: 26 of 26

8 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for SZEM2010010422CR

- 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.spx and for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://tww.sgs.com/en/Terms-and-Conditions/Terms-e-Document.spx. 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 souch sample(s) served at telephone: (86-755) 8307 1443,

| No. 1 Workshop, M-10, Middle Sections, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国・深圳・科技図中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com