



FCC REPORT

Report Reference No:	TRE1805016601 R/C: 83276
FCC ID:	QRP-AZUMIKA5QP
Applicant's name:	Azumi S.A
Address	Avenida Aquilino de la Guardia con Calle 47, PH Ocean Plaza, Piso 16 of. 16-01, Marbella, Ciudad de Panama, Panama
Manufacturer	AZUMI HK LTD
Address:	FLAT/RM 18 BLK 1 14/F GOLDEN INDUSTRIAL BUILDING 16-26 KWAI TAK STREET KWAI CHUNG,HK
Test item description:	Mobile Phone
Trade Mark	AZUMI
Model/Type reference	KIREI A5Q PLUS
Listed Model(s)	
Standard:	FCC CFR Title 47 Part 2 FCC CFR Title 47 Part 22 FCC CFR Title 47 Part 24
Date of receipt of test sample	May.18,2018
Date of testing	May.19,2018- May.31,2018
Date of issue	Jun.01,2018
Result	Pass
Compiled by (position+printedname+signature):	File administrators Candy Liu
Supervised by (position+printed name+signature):	Project Engineer Aaron Fang Manager Hans Hu
Approved by (position+printedname+signature):	Manager Hans Hu
Testing Laboratory Name	Shenzhen Huatongwei International Inspection Co., Ltd.
Address	1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China
Shenzhen Huatongwei International	Inspection Co., Ltd. All rights reserved.
Shenzhen Huatongwei International Ins	whole or in part for non-commercial purposes as long as the spection Co., Ltd. is acknowledged as copyright owner and source International Inspection Co., Ltd. takes no responsibility for and will

Shenzhen Huatongwei International Inspection Co., Ltd. is acknowledged as copyright owner and source of the material. Shenzhen Huatongwei International Inspection Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

The test report merely correspond to the test sample.

Contents

<u>1.</u>	TEST STANDARDS AND REPORT VERSION	3
1.1. 1.2.	Applicable Standards Report version information	3 3
<u>2.</u>	TEST DESCRIPTION	4
<u>3.</u>	SUMMARY	5
3.1.	Client Information	5
3.2. 3.3.	Product Description Operation state	5 6
3.3. 3.4.	EUT configuration	6
3.5.	Modifications	6
<u>4.</u>	TEST ENVIRONMENT	7
4.1.	Address of the test laboratory	7
4.2.	Test Facility	7
4.3.	Equipments Used during the Test	8
4.4.	Environmental conditions	9
4.5.	Statement of the measurement uncertainty	9
<u>5.</u>	TEST CONDITIONS AND RESULTS	10
5.1.	Conducted Output Power	10
5.2.	Peak-to-Average Ratio	11
5.3.	99% Occupied Bandwidth & 26 dB Bandwidth	12
5.4.	Band Edge	13
5.5.	Conducted Spurious Emissions	14
5.6.	Frequency stability VS Temperature measurement	15
5.7. 5.8.	Frequency stability VS Voltage measurement ERP and EIRP	16 17
5.8. 5.9.	Radiated Spurious Emission	20
<u>6.</u>	TEST SETUP PHOTOS OF THE EUT	24
<u>7.</u>	EXTERNAL AND INTERNAL PHOTOS OF THE EUT	25
8.	APPENDIX REPORT	31

1. TEST STANDARDS AND REPORT VERSION

1.1. Applicable Standards

The tests were performed according to following standards:

FCC Rules Part 2: FREQUENCY ALLOCA-TIONS AND RADIO TREATY MAT-TERS; GENERAL RULES AND REG-ULATIONS

FCC Rules Part 22: PRIVATE LAND MOBILE RADIO SERVICES.

FCC Rules Part 24: PUBLIC MOBILE SERVICES

TIA/EIA 603 E March 2016: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

KDB 971168 D01 Power Meas License Digital Systems v03: MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS

1.2. Report version information

Revision No.	Date of issue	Description
N/A	Jun.01,2018	Original

2. <u>Test Description</u>

Test Item	Section in CFR 47	Result	Test Engineer	
	Part 2.1046			
Conducted Output Power	Part 22.913(a)	Pass	Baozhu Hu	
	Part 24.232(c)			
Peak-to-Average Ratio	Part 24.232	Pass	Baozhu Hu	
	Part 2.1049			
99% Occupied Bandwidth & 26 dB Bandwidth	Part 22.917(b)	Pass	Baozhu Hu	
Bandwidth	Part 24.238(b)			
	Part 2.1051			
Band Edge	Part 22.917	Pass	Baozhu Hu	
	Part 24.238			
	Part 2.1051			
Conducted Spurious Emissions	Part 22.917	Pass	Baozhu Hu	
	Part 24.238			
	Part 2.1055(a)(1)(b)			
Frequency stability VS Temperature	Part 22.355	Pass	Baozhu Hu	
	Part 24.235			
	Part 2.1055(d)(1)(2)			
Frequency stability VS Voltage	Part 22.355	Pass	Baozhu Hu	
	Part 24.235			
ERP and EIRP	Part 22.913(a)	Pass	liuru Don	
	Part 24.232(b)	F d 3 3	Jiuru Pan	
	Part 2.1053			
Radiated Spurious Emissions	Part 22.917	Pass	Jiuru Pan	
	Part 24.238			

Note: The measurement uncertainty is not included in the test result.

3. SUMMARY

3.1. Client Information

Applicant:	Azumi S.A	
Address:	Avenida Aquilino de la Guardia con Calle 47, PH Ocean Plaza, Piso of. 16-01, Marbella, Ciudad de Panama, Panama	
Manufacturer:	AZUMI HK LTD	
Address:	FLAT/RM 18 BLK 1 14/F GOLDEN INDUSTRIAL BUILDING 16-26 KWAI TAK STREET KWAI CHUNG,HK	

3.2. Product Description

Name of EUT:	Mobile Phone		
Trade Mark:	AZUMI		
Model No.:	KIREI A5Q PLUS		
Listed Model(s):	-		
IMEI Code:	Conducted: 358798898788979 Radiated: 35301803000082		
SIM Information:	Support One SIM Card		
Hardware version:	S511_MB_V1.3		
Software version:	Azumi_s5015_base_v001(20180416)		
Power supply:	DC 3.7V		
Adapter information:	Input: 100-240Va.c., 50/60Hz, 0.2A Output: 5Vd.c.,0.7A		
2G:			
Support Network:	GSM, GPRS, EGPRS		
Support Band:	GSM850, PCS1900		
Modulation:	GSM/GPRS: GMSK		
	EGPRS: 8PSK		
Transmit Frequency:	GSM850: 824.20MHz-848.80MHz		
	PCS1900: 1850.20MHz-1909.80MHz		
Receive Frequency:	GSM850: 869.20MHz-893.80MHz		
	PCS1900: 1930.20MHz-1989.80MHz		
GPRS Class:	12		
EGPRS Class:	12		
Antenna type:	PIFA Antenna		
Antenna gain:	GSM850: -1.0dBi PCS1900: -1.0dBi		

Shenzhen Huatongwei International Inspection Co., Ltd.

3.3. Operation state

Test frequency list

GSM850		PCS1900		
Channel	Frequency (MHz)	Channel	Frequency (MHz)	
128	824.20	512	1850.20	
190	836.60	661	1880.00	
251	848.80	810	1909.80	

Test mode

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems v03 and ANSI C63.26-2015 with maximum output power.

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

Radiated emissions were investigated as following frequency range:

30 MHz to 10th harmonic for GSM850, PCS1900.

All modes and data rates and positions were investigated.

Test modes are chosen to be reported as the worst case configuration below:

	Test modes				
Band	Radiated	Conducted			
GSM 850	 GSM link GPRS Class 8 link EGPRS Class 8 link 	 GSM link GPRS Class 8 link EGPRS Class 8 link 			
PCS 1900	 GSM link GPRS Class 8 link EGPRS Class 8 link 	 GSM link GPRS Class 8 link EGPRS Class 8 link 			

3.4. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

- supplied by the manufacturer

0	- supplied by the lab		
0	o /	Manufacturer:	/
0		Model No.:	/
	,	Manufacturer:	/
0	/	Model No.:	/

3.5. Modifications

No modifications were implemented to meet testing criteria.

4. TEST ENVIRONMENT

4.1. Address of the test laboratory

Laboratory: Shenzhen Huatongwei International Inspection Co., Ltd. Address: 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

4.2. Test Facility

CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No.: 3902.01

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 762235

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files.

IC-Registration No.:5377B-1

Two 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No.: 5377B-1.

ACA

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

4.3.	Equipments	Used during the Test
------	------------	----------------------

RF Co	RF Conducted Test					
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal. (mm-dd-yy)	Next Cal. (mm-dd-yy)
1	Universal Radio Communication	Rohde&Schwarz	CMU200	112012	11/11/2017	11/11/2018
2	Wide Radio communication tester	Rohde&Schwarz	CMW500	137688	10/26/2017	10/25/2018
3	Spectrum Analyzer	Rohde&Schwarz	FSW26	103440	11/11/2017	11/10/2018
4	MXA Signal Analyzer	Agilent	N9020A	MY5050187	11/10/2017	11/09/2018
5	Splitter	Mini-Circuit	ZAPD-4	400059	03/19/2018	03/18/2019
6	Climate Chamber	ESPEC	EL-10KA	05107008	11/10/2017	11/09/2018
Radia	ted Emissions					
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal. (mm-dd-yy)	Next Cal. (mm-dd-yy)
1	EMI Test Receiver	R&S	ESCI	101247	11/11/2017	11/10/2018
2	Loop Antenna	R&S	HFH2-Z2	100020	11/20/2017	11/19/2018
3	Ultra-Broadband Antenna	SCHWARZBECK	VULB9163	538	04/05/2017	04/04/2020
4	Preamplifier	SCHWARZBECK	BBV 9743	9743-0022	10/18/2017	10/17/2018
5	RF Connection Cable	HUBER+SUHNER	RE-7-FL	N/A	11/21/2017	11/20/2018
6	EMI Test Software	R&S	ESK1	N/A	N/A	N/A
7	Spectrum Analyzer	R&S	FSP40	100597	11/11/2017	11/10/2018
8	Horn Antenna	SCHWARZBECK	9120D	1011	03/27/2017	03/26/2020
9	Horn Antenna	SCHWARZBECK	BBHA9170	25841	03/27/2017	03/26/2020
10	Broadband Preamplifier	SCHWARZBECK	BBV 9718	9718-248	10/18/2017	10/17/2018
11	High pass filter	Compliance Direction systems	BSU-6	34202	11/11/2017	11/10/2018

RE-7-FH

SMB100A

CMU200

CMW500

E3

TT2.0

TAM-4.0-P

Audix

MATURO

MATURO

HUBER+SUHNER

Rohde&Schwarz

Rohde&Schwarz

Rohde&Schwarz

RF Connection

Signal Generator

Universal Radio

Communication Wide Radio

communication

Cable

tester EMI Test

Software

Turntable

Antenna Mast

12

13

14

15

16

17

18

11/21/2017

06/13/2017

11/11/2017

10/26/2017

N/A

N/A

N/A

N/A

114360

112012

137688

N/A

N/A

N/A

11/20/2018

06/12/2018

11/11/2018

10/25/2018

N/A

N/A

N/A

4.4. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

	VN=Nominal Voltage	DC 3.70V	
Voltage	VL=Lower Voltage	DC 3.60V	
	VH=Higher Voltage	DC 4.20V	
Tomporatura	TN=Normal Temperature	25 °C	
Temperature	Extreme Temperature From -30° to + 50° centigrade		
Humidity	30~60 %		
Air Pressure	950-1050 hPa		

4.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01"Electromagnetic compatibilityand Radio spectrum Matters (ERM);Uncertainties in the measurementof mobile radio equipment characteristics;Part 1"and TR-100028-02 "Electromagnetic compatibilityand Radio spectrum Matters (ERM);Uncertainties in the measurement characteristics;Part 2 " and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

Test Items	MeasurementUncertainty	Notes
Frequency stability	25 Hz	(1)
Transmitter power conducted	0.57 dB	(1)
Transmitter power Radiated	2.20 dB	(1)
Conducted spurious emission 9KHz-12.75 GHz	1.60 dB	(1)
Conducted Emission 9KHz-30MHz	3.39 dB	(1)
Radiated Emission 30~1000MHz	4.24 dB	(1)
Radiated Emissio 1~18GHz	5.16 dB	(1)
Radiated Emissio 18-40GHz	5.54 dB	(1)
Occupied Bandwidth		(1)

 This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

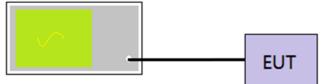
5. TEST CONDITIONS AND RESULTS

5.1. Conducted Output Power

<u>LIMIT</u>

N/A

TEST CONFIGURATION



Communication Tester

TEST PROCEDURE

- 1. The EUT output port was connected to communication tester.
- 2. Set EUT at maximum power through communication tester.
- 3. Select lowest, middle, and highest channels for each band and different modulation.
- 4. Measure the maximum burst average power.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

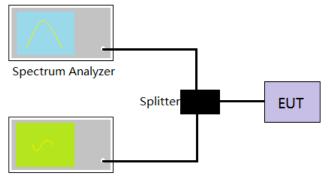
Refer to appendix A on the section 8 appendix report

5.2. Peak-to-Average Ratio

<u>LIMIT</u>

13dB

TEST CONFIGURATION



Communication Tester

TEST PROCEDURE

- 1. The EUT was connected to the spectrum analyzer and communication tester via a power splitter
- 2. Set EUT in maximum power output.
- 3. Center Frequency = Carrier frequency, RBW > Emission bandwidth of signal
- 4. The signal analyzer was set to collect one million samples to generate the CCDF curve
- 5. The measurement interval was set depending on the type of signal analyzed.
 - i. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms.
 - ii. For bursttransmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that issynced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in whichthetransmitter is operating at maximum power
- 6. Record the maximum PAPR level associated with a probability of 0.1%.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

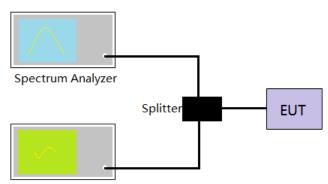
☑ Passed □ Not Applicable

Refer to appendix B on the section 8 appendix report

5.3. 99% Occupied Bandwidth & 26 dB Bandwidth

<u>LIMIT</u> N/A

TEST CONFIGURATION



Communication Tester

TEST PROCEDURE

- 1. The EUT was connected to the spectrum analyzer and communication tester via a power splitter
- 2. Set EUT in maximum power output.
- 3. Spectrum analyzer setting as follow:

Center Frequency= Carrier frequency, RBW=1% to 5% of anticipated OBW, VBW= 3 * RBW, Detector=Peak,

Trace maximum hold.

4. Record the value of 99% Occupied bandwidth and -26dB bandwidth.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

🛛 Passed

Not Applicable

Refer to appendix C on the section 8 appendix report

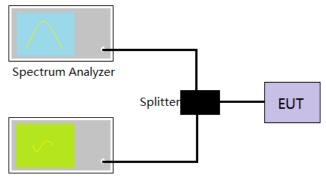
5.4. Band Edge

<u>LIMIT</u>

Part 24.238 and Part 22.917 specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P) dB$.

The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

TEST CONFIGURATION



Communication Tester

TEST PROCEDURE

- 1. The EUT was connected to the spectrum analyzer and communication tester via a power splitter
- 2. Set EUT in maximum power output.
- 3. The band edges of low and high channels were measured.
- 4. Spectrum analyzer setting as follow:

RBW=3KHz, VBW = 10KHz, Sweep time= Auto

5. Record the test plot.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

Refer to appendix D on the section 8 appendix report

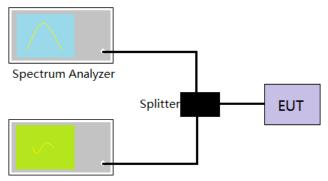
5.5. Conducted Spurious Emissions

<u>LIMIT</u>

Part 24.238 and Part 22.917 specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

TEST CONFIGURATION



Communication Tester

TEST PROCEDURE

- 1. The EUT was connected to the spectrum analyzer and communication tester via a power splitter
- 2. Set EUT in maximum power output.
- Spectrum analyzer setting as follow: Below 1GHz, RBW=100KHz, VBW = 300KHz, Detector=Peak, Sweep time= Auto Above 1GHz, RBW=1MHz, VBW=3MHz, Detector=Peak, Sweep time= Auto Scan frequency range up to 10th harmonic.
- 4. Record the test plot.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

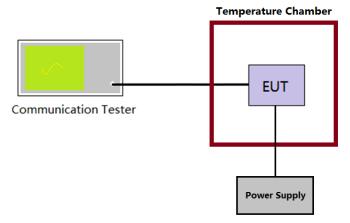
Refer to appendix E on the section 8 appendix report

5.6. Frequency stability VS Temperature measurement

LIMIT

2.5ppm

TEST CONFIGURATION



TEST PROCEDURE

- 1. The equipment under test was connected to an external DC power supply and input rated voltage.
- 2. The EUT output port was connected to communication tester.
- 3. The EUT was placed inside the temperature chamber.
- 4. Turn EUT off and set the chamber temperature to –30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.
- 5. Repeat step 4 measure with 10°C increased per stage until the highest temperature of +50°C reached.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

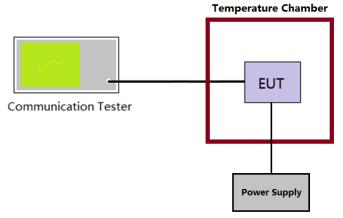
Refer to appendix F on the section 8 appendix report

5.7. Frequency stability VS Voltage measurement

<u>LIMIT</u>

2.5ppm

TEST CONFIGURATION



TEST PROCEDURE

- 1. The equipment under test was connected to an external DC power supply and input rated voltage.
- 2. The EUT output port was connected to communication tester.
- 3. The EUT was placed inside the temperature chamber at 25°C
- The power supply voltage to the EUT was varied ±15% of the nominal value measured at the input to the EUT
- 5. Record the maximum frequency change.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

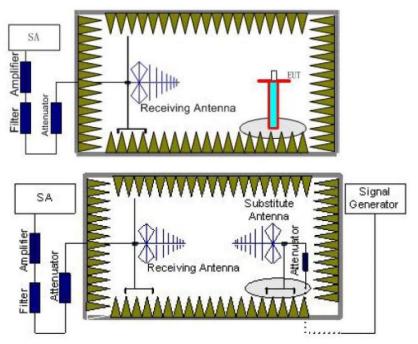
Refer to appendix F on the section 8 appendix report

5.8. ERP and EIRP

<u>LIMIT</u>

GSM850: 7W (38.45dBm) ERP PCS1900: 2W (33dBm) EIRP

TEST CONFIGURATION



TEST PROCEDURE

- EUT was placed on a 0.8 meter for below 1GHz and 1.5 meter for above 1GHz high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.0m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
- 2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
- 3. The EUT is then put into continuously transmitting mode at its maximum power level during the test.Set Test Receiver or Spectrum RBW=1MHz,VBW=3MHz for above 1GHz and RBW=100kHz,VBW=300kHz for 30MHz to 1GHz,, And the maximum value of the receiver should be recorded as (Pr).
- 4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest isconnected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
- A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (PcI), the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.

- The measurement results are obtained as described below: Power(EIRP)=PMea- PAg - Pcl + Ga We used SMF100A micowave signal generator which signal level can up to 33dBm,so we not used power Amplifier for substituation test; The measurement results are amend as described below: Power(EIRP)=PMea- Pcl + Ga
- This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
 ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

Mode	Channel	Antenna Pol.	ERP	Limit (dBm)	Result
	400	V	31.52		
	128	Н	21.45		
GSM850	100	V	31.14	-20.45	Pass
GSIM050	190	Н	21.67	<38.45	
	251	V	30.82		
	251	Н	21.73		
	128	V	31.48		Pass
	120	Н	20.89		
	100	V	30.04	-20.45	
GPRS850	190	Н	20.21	<38.45	
	251	V	29.74		
		Н	20.66		
	100	V	26.89		
	128	Н	17.28		
EGPRS850	400	V	26.41	00.45	
	190	Н	16.76	<38.45	Pass
	251	V	26.44		
	251	Н	17.10		

Report No.: TRE1805016601

Pag

Page: 19 of 31

Issued: 2018-06-01

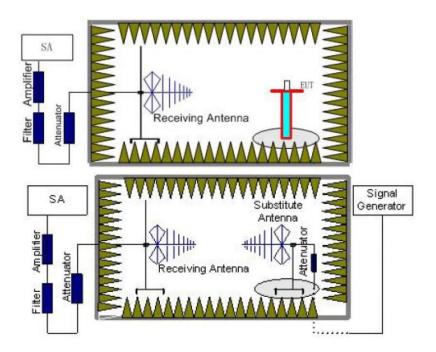
Mode	Channel	Antenna Pol.	EIRP	Limit (dBm)	Result
	540	V	13.40		
	512	Н	26.75		
DCC1000	004	V	10.89	.22.00	Deee
PCS1900	661	Н	26.71	<33.00	Pass
	910	V	13.72		
	810	Н	26.95		
	510	V	13.67		Pass Pass Pass
	512	Н	27.29		
	661	V	13.54	-22.00	
GPRS1900	661	Н	26.72	<33.00	
	810	V	13.51		
		Н	25.94		
	512	V	12.84		Dees
	512	Н	25.43		
EGPRS1900	661	V	12.46	<33.00	
	661	Н	25.61	<33.00	Pass
	910	V	12.31		
	810	Н	25.15		

5.9. Radiated Spurious Emission

LIMIT

-13dBm

TEST CONFIGURATION



TEST RESULTS

- EUT was placed on a 0.8 meter for below 1GHz and 1.5 meter for above 1GHz high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.0m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
- 2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
- 3. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz for above 1GHz and RBW=100kHz, VBW=300kHz for 30MHz to 1GHz, And the maximum value of the receiver should be recorded as (Pr).
- 4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest isconnected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
- A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (PcI) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.

- The measurement results are obtained as described below: Power(EIRP)=PMea- PAg - Pcl + Ga We used SMF100A micowave signal generator which signal level can up to 33dBm,so we not used power Amplifier for substituation test; The measurement results are amend as described below: Power(EIRP)=PMea- Pcl + Ga
- This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
 ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

Note: Worst case at GSM850/PCS1900

		GS	M850			
	Channel Frequency Spurious Emission				D	
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
	182.21	Vertical	-52.61			
312.06 1648.51	V	-52.22		_		
	V	-43.16	40.00			
	2475.28	V	-41.92	<-13.00	Pass	
	3295.11	V	-48.69			
100	4119.70	V	-40.87			
128	156.09	Horizontal	-56.07			
	312.06	Н	-57.12			
	1648.51	Н	-39.36	40.00	5	
	2472.57	Н	-42.38	<-13.00	Pass	
	4119.70	Н	-42.56			
	5218.30	Н	-46.11			
	182.21 600.20	Vertical	-52.57		Pass	
		V	-53.00			
1674.06	1674.06	V	-41.55	40.00		
	2510.89	V	-42.50	<-13.00		
	3343.25	V	-47.65			
100	4179.88	V	-43.89			
190	156.09	Horizontal	-57.47		_	
	312.06	н	-56.78			
	1672.22	н	-45.23			
	2510.89	н	-43.66	<-13.00	Pass	
	3343.25	н	-48.38			
	4179.88	н	-45.73			
	182.21	Vertical	-53.52			
	600.20	V	-52.65			
	1698.14	V	-41.22	. 12.00	Deee	
	2547.01	V	-43.21	<-13.00	Pass	
	3392.09	V	-51.96			
051	4240.94	V	-46.58			
251 156.09 598.09	156.09	Horizontal	-56.95			
	598.09	н	-57.88			
	1698.14	н	-46.26	10.00	D	
	2547.01	н	-41.03	<-13.00	Pass	
	3392.09	н	-51.52			
	4240.94	н	-44.49			

Remark:

1. The emission behaviour belongs to narrowband spurious emission.

2. The emission levels of not record in the report are very lower than the limit and not show in test report.

Report No.: TRE1805016601

Page: 23 of 31

Issued: 2018-06-01

		PCS	S1900			
Channel	Frequency	Spurious Emission		Lingit (dDmg)	Result	
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
	182.21 312.06	Vertical	-50.55		Deer	
		V	-56.46			
	1259.49	V	-50.85	. 12.00		
	2340.41	V	-49.49	<-13.00	Pass	
	3700.48	V	-44.11			
540	5554.08	V	-47.04			
512	182.21	Horizontal	-57.67			
	598.09	Н	-59.13			
	1451.26	Н	-50.99	10.00	Dese	
	2060.37	Н	-48.43	<-13.00	Pass	
	3700.48	Н	-39.47			
	5554.08	Н	-48.68			
	182.21	Vertical	-50.23		Pass	
	312.06	V	-52.28			
	1766.64	V	-46.88	40.00		
	2445.55	V	-45.26	<-13.00		
	3738.23	V	-45.88			
004	5742.47	V	-50.30			
661	156.09	Horizontal	-56.36			
	312.06	Н	-55.98			
	1259.49	Н	-55.14	10.00		
	2060.37	Н	-48.86	<-13.00	Pass	
	3738.23	Н	-46.87			
	5610.76	Н	-51.40			
	182.21	Vertical	-50.91			
	600.20	V	-52.98			
	1259.49	V	-50.38	10.00	_	
	2426.82	V	-42.76	<-13.00	Pass	
	3820.45	V	-46.48			
040	5725.84	V	-48.81			
810	156.09	Horizontal	-59.06			
	312.06	Н	-56.61			
	1574.17	Н	-50.66	10.00	5	
	1956.69	Н	-43.41	<-13.00	Pass	
	3820.45	Н	-44.86			
	5725.84	Н	-50.85			

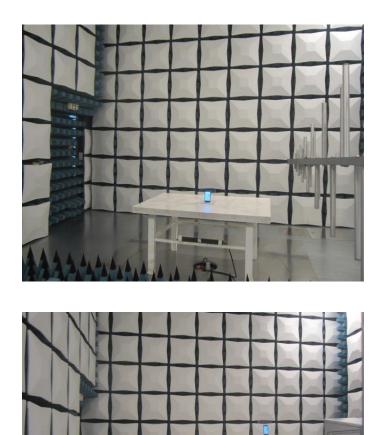
Remark:

1. The emission behaviour belongs to narrowband spurious emission.

2. The emission levels of not record in the report are very lower than the limit and not show in test report.

6. TEST SETUP PHOTOS OF THE EUT

Radiated emission:



7. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

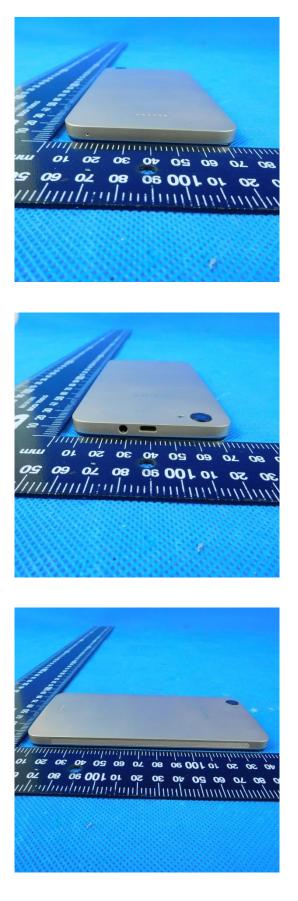
External photos of the EUT

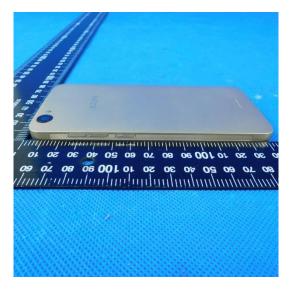






Shenzhen Huatongwei International Inspection Co., Ltd.



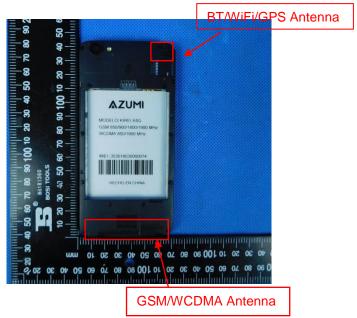




Internal photos of the EUT

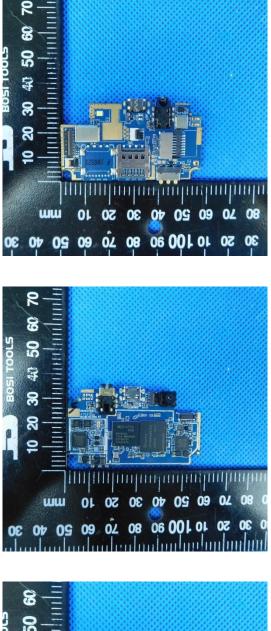


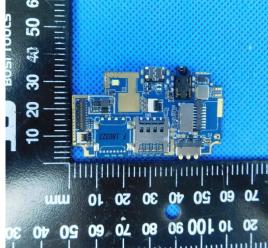




Shenzhen Huatongwei International Inspection Co., Ltd.









8. APPENDIX REPORT

Shenzhen Huatongwei International Inspection Co., Ltd.



8.1 Appendix A: Conducted Output Power

Test Result

Band	Channel	PCL	Power(dBm)	Limit(dBm)	Verdict
GSM850	128	5	33.10	38.5	PASS
GSM850	190	5	33.14	38.5	PASS
GSM850	251	5	33.03	38.5	PASS
GSM1900	512	0	29.22	33	PASS
GSM1900	661	0	29.32	33	PASS
GSM1900	810	0	29.11	33	PASS



Band	Channel	PCL	Slot	Power(dBm)	Limit(dBm)	Verdict
GPRS850	128	5	1	32.88	38.5	PASS
GPRS850	128	5	2	32.78	38.5	PASS
GPRS850	128	5	3	31.99	38.5	PASS
GPRS850	128	5	4	30.39	38.5	PASS
GPRS850	190	5	1	32.91	38.5	PASS
GPRS850	190	5	2	32.77	38.5	PASS
GPRS850	190	5	3	32.03	38.5	PASS
GPRS850	190	5	4	30.41	38.5	PASS
GPRS850	251	5	1	32.81	38.5	PASS
GPRS850	251	5	2	32.67	38.5	PASS
GPRS850	251	5	3	31.93	38.5	PASS
GPRS850	251	5	4	30.34	38.5	PASS
GPRS1900	512	0	1	29.08	33	PASS
GPRS1900	512	0	2	29.02	33	PASS
GPRS1900	512	0	3	28.21	33	PASS
GPRS1900	512	0	4	26.57	33	PASS
GPRS1900	661	0	1	29.20	33	PASS
GPRS1900	661	0	2	29.12	33	PASS
GPRS1900	661	0	3	28.04	33	PASS
GPRS1900	661	0	4	26.63	33	PASS
GPRS1900	810	0	1	28.97	33	PASS
GPRS1900	810	0	2	28.85	33	PASS
GPRS1900	810	0	3	28.11	33	PASS
GPRS1900	810	0	4	26.51	33	PASS



Band	Channel	PCL	Slot	Power(dBm)	Limit(dBm)	Verdict
EGPRS850	128	8	1	28.23	38.5	PASS
EGPRS850	128	8	2	27.46	38.5	PASS
EGPRS850	128	8	3	25.73	38.5	PASS
EGPRS850	128	8	4	25.32	38.5	PASS
EGPRS850	190	8	1	28.14	38.5	PASS
EGPRS850	190	8	2	27.38	38.5	PASS
EGPRS850	190	8	3	25.83	38.5	PASS
EGPRS850	190	8	4	24.96	38.5	PASS
EGPRS850	251	8	1	28.17	38.5	PASS
EGPRS850	251	8	2	27.27	38.5	PASS
EGPRS850	251	8	3	25.51	38.5	PASS
EGPRS850	251	8	4	25.09	38.5	PASS
EGPRS1900	512	2	1	24.72	33	PASS
EGPRS1900	512	2	2	23.81	33	PASS
EGPRS1900	512	2	3	22.72	33	PASS
EGPRS1900	512	2	4	22.02	33	PASS
EGPRS1900	661	2	1	24.84	33	PASS
EGPRS1900	661	2	2	24.00	33	PASS
EGPRS1900	661	2	3	22.84	33	PASS
EGPRS1900	661	2	4	22.18	33	PASS
EGPRS1900	810	2	1	24.89	33	PASS
EGPRS1900	810	2	2	24.31	33	PASS
EGPRS1900	810	2	3	22.99	33	PASS
EGPRS1900	810	2	4	22.16	33	PASS



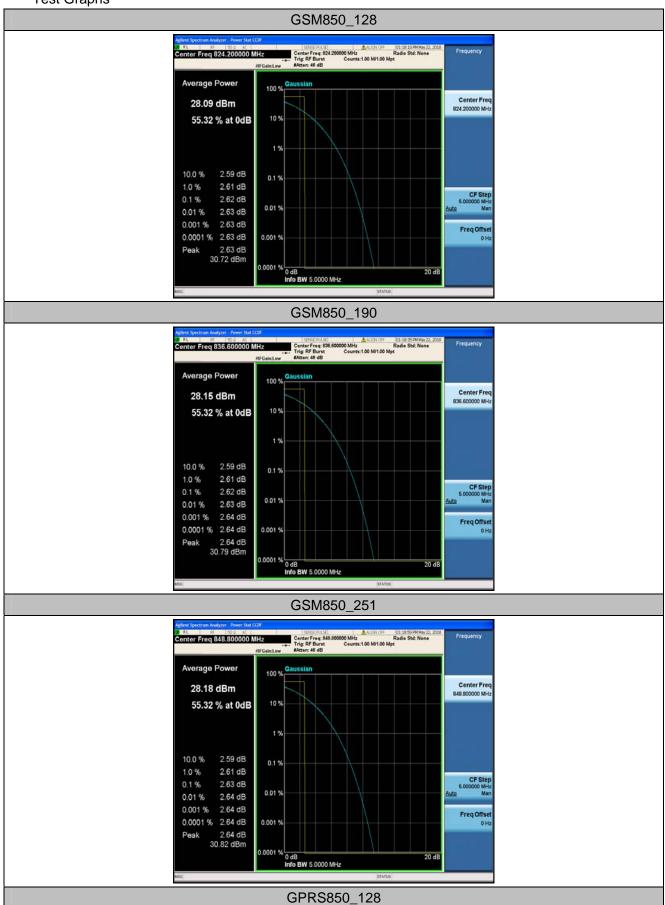
8.2 Appendix B: Peak-to-Average Ratio

Test Result

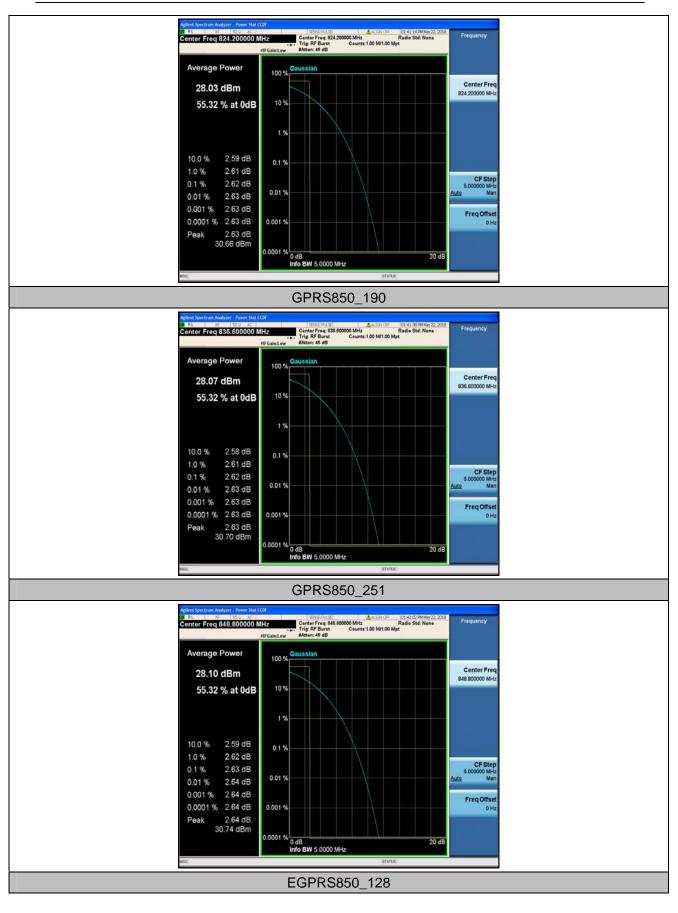
Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
GSM850	128	2.62	13	PASS
GSM850	190	2.62	13	PASS
GSM850	251	2.63	13	PASS
GPRS850	128	2.62	13	PASS
GPRS850	190	2.62	13	PASS
GPRS850	251	2.63	13	PASS
EGPRS850	128	5.85	13	PASS
EGPRS850	190	5.84	13	PASS
GSM1900	512	2.65	13	PASS
GSM1900	661	2.64	13	PASS
GSM1900	810	2.65	13	PASS
GPRS1900	512	2.67	13	PASS
GPRS1900	661	2.65	13	PASS
GPRS1900	810	2.64	13	PASS
EGPRS1900	512	6.26	13	PASS
EGPRS1900	661	5.95	13	PASS
EGPRS1900	810	5.89	13	PASS



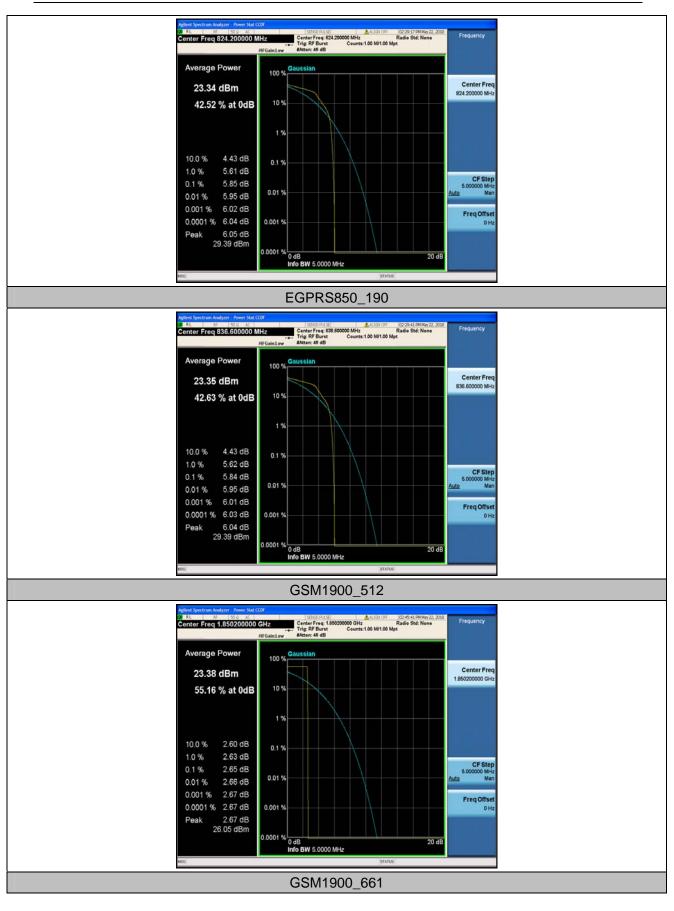
Test Graphs







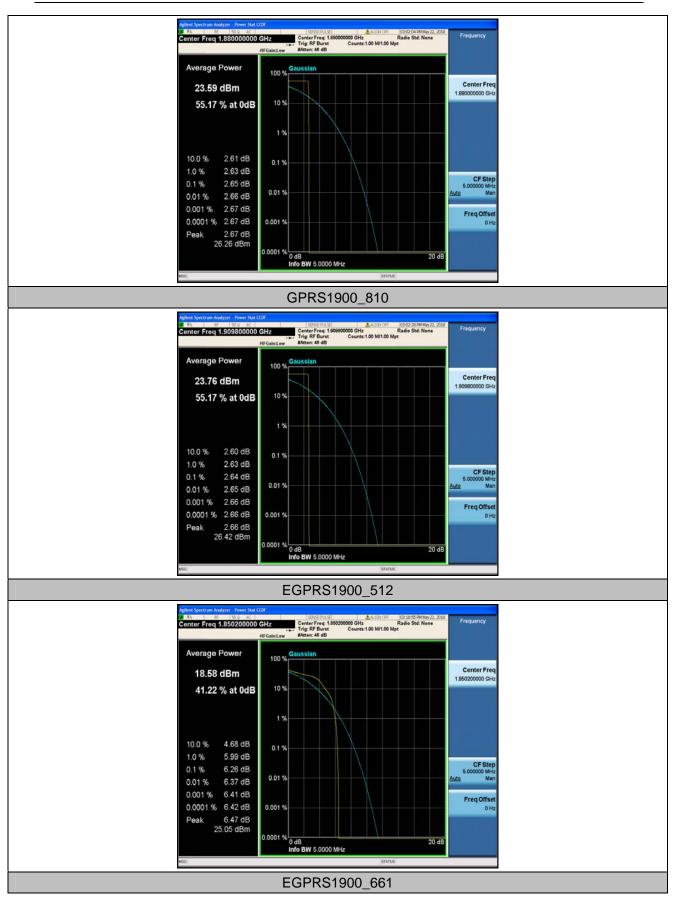




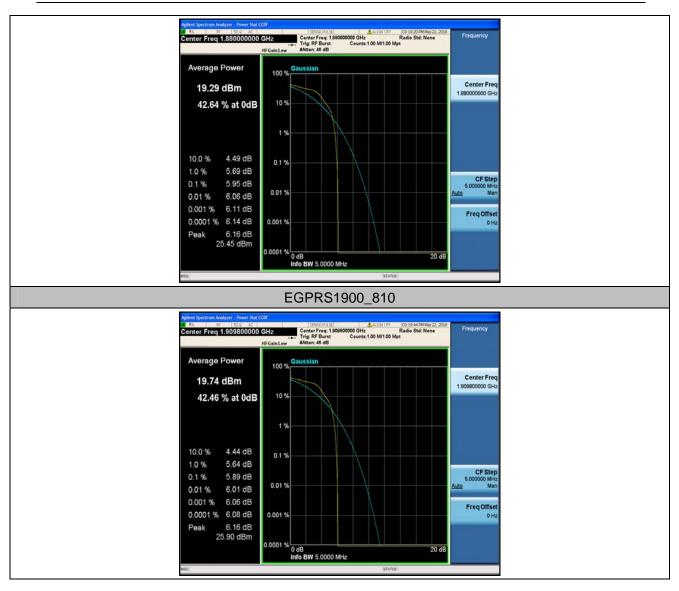












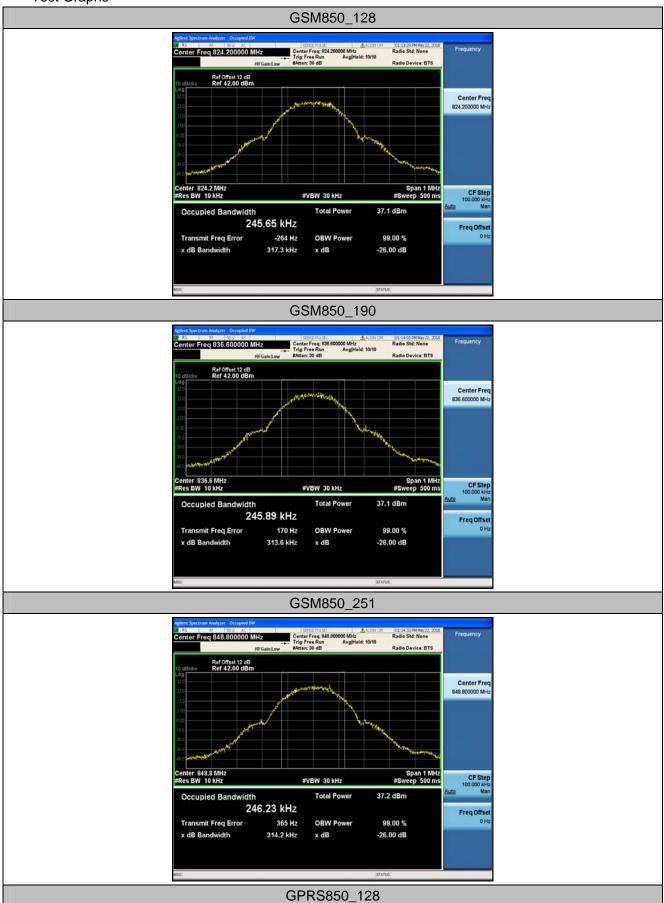


8.3 Appendix C: 26dB Bandwidth and Occupied Bandwidth

Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
GSM850	128	245.65	317.3		PASS
GSM850	190	245.89	313.6		PASS
GSM850	251	246.23	314.2		PASS
GPRS850	128	246.39	315.5		PASS
GPRS850	190	246.91	316.9		PASS
GPRS850	251	245.84	321.8		PASS
EGPRS850	128	246.64	313.4		PASS
EGPRS850	190	244.12	316.4		PASS
EGPRS850	251	248.41	317.3		PASS
GSM1900	512	245.89	319.8		PASS
GSM1900	661	245.97	320.9		PASS
GSM1900	810	246.82	316.3		PASS
GPRS1900	512	246.75	314.7		PASS
GPRS1900	661	245.62	314.5		PASS
GPRS1900	810	246.48	320.2		PASS
EGPRS1900	512	248.14	311.7		PASS
EGPRS1900	661	246.78	316.4		PASS
EGPRS1900	810	247.97	314.7		PASS

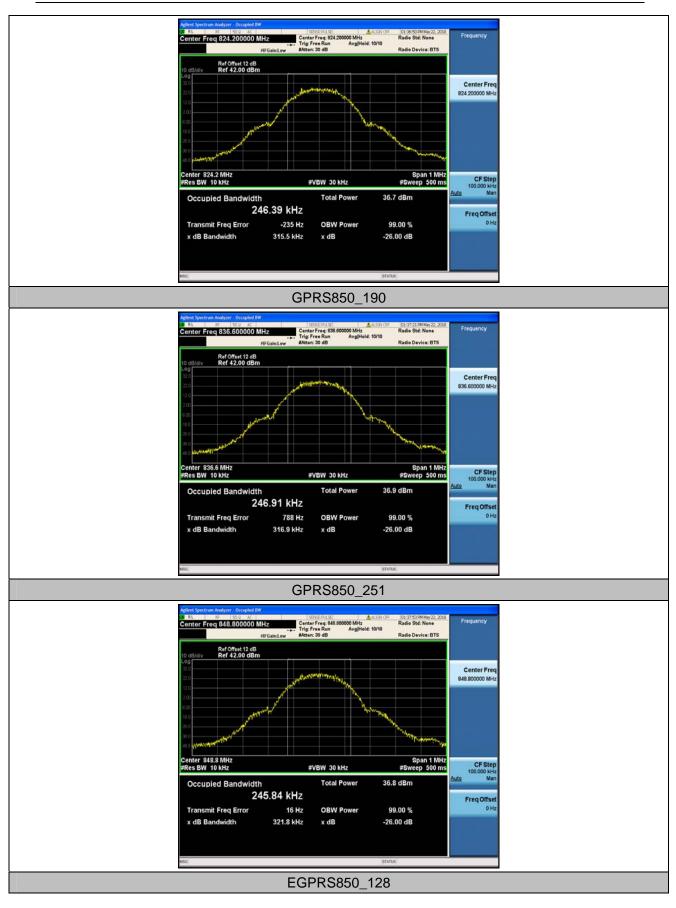


Test Graphs



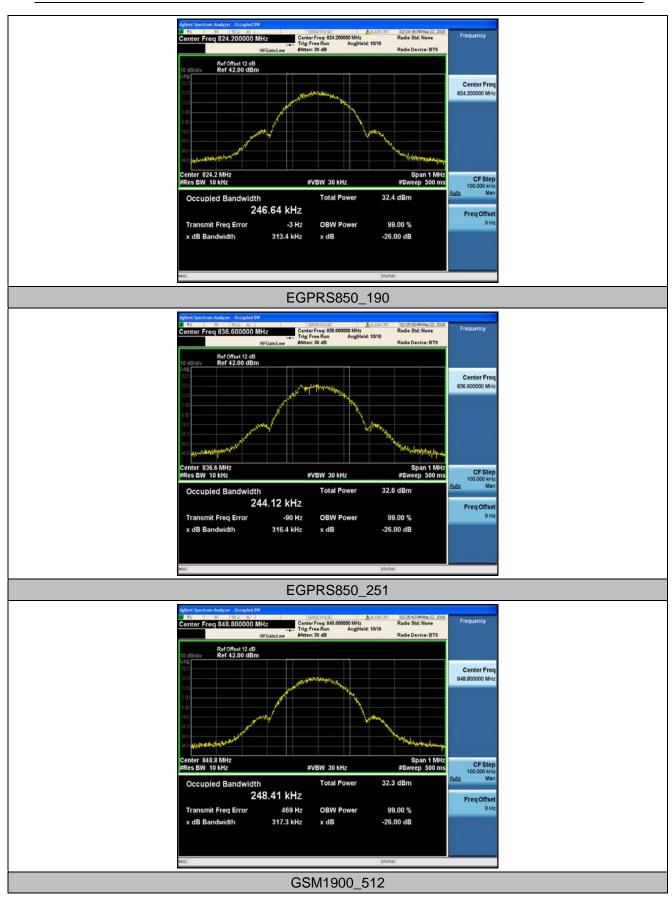


: TRE1805016601



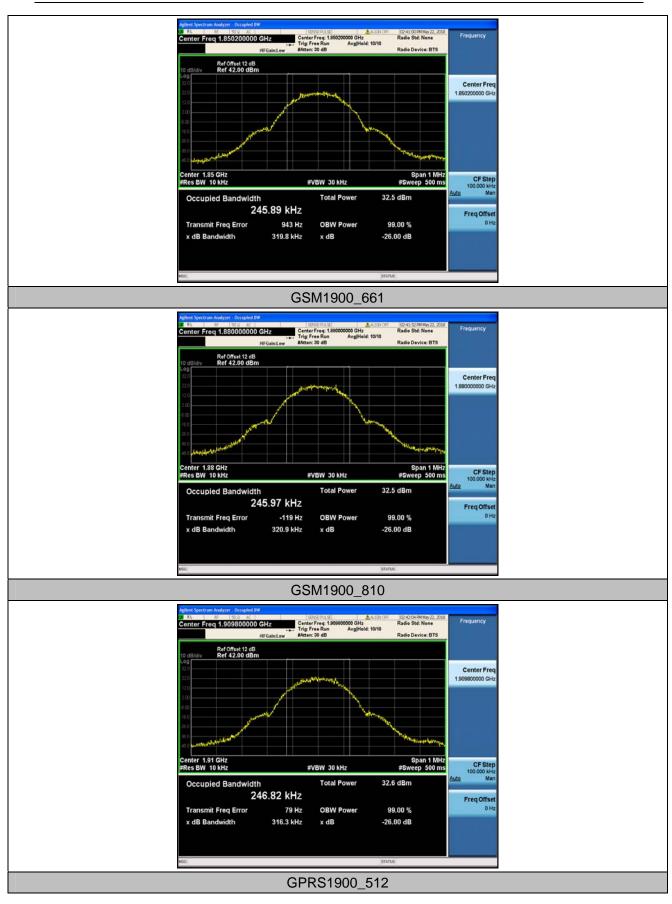


.: TRE1805016601



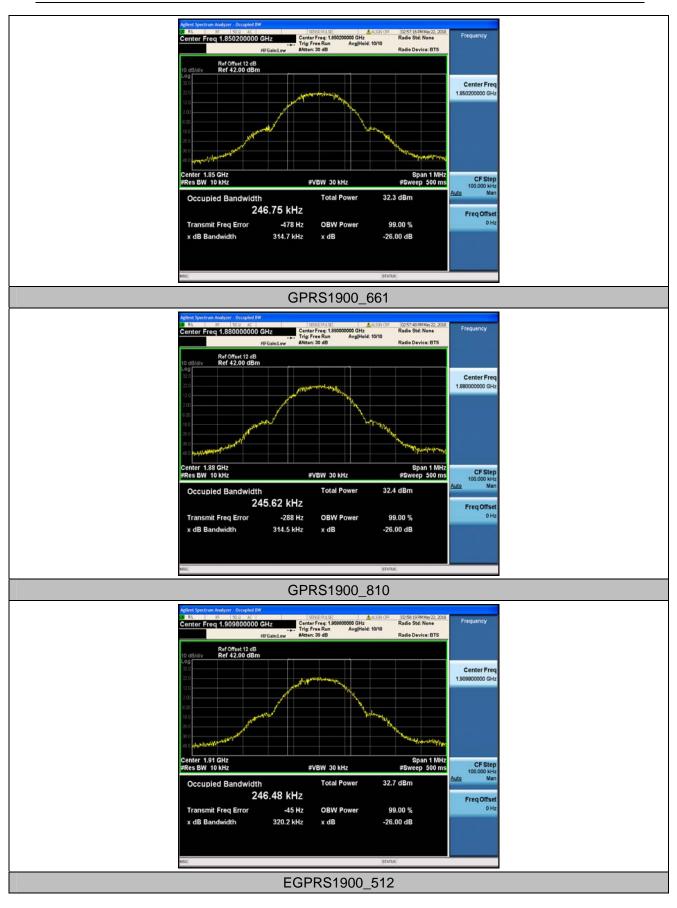


.: TRE1805016601



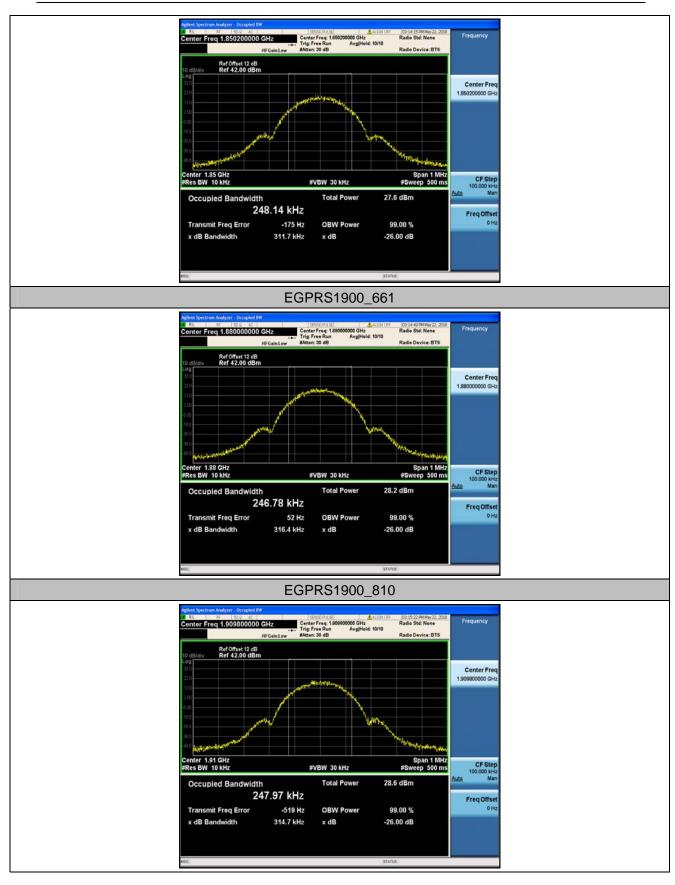


: TRE1805016601





.: TRE1805016601



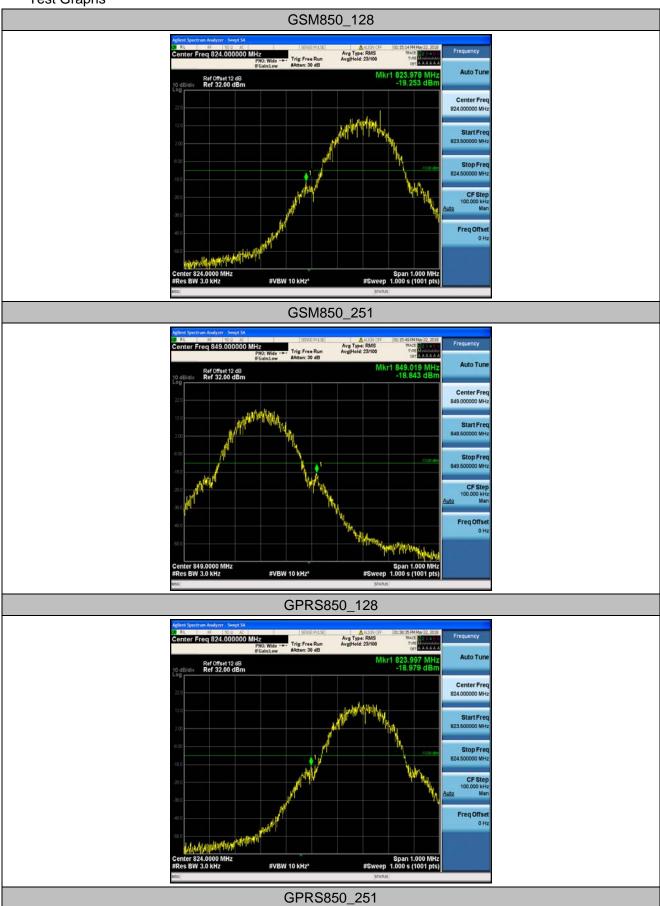


8.4 Appendix D: Band Edge

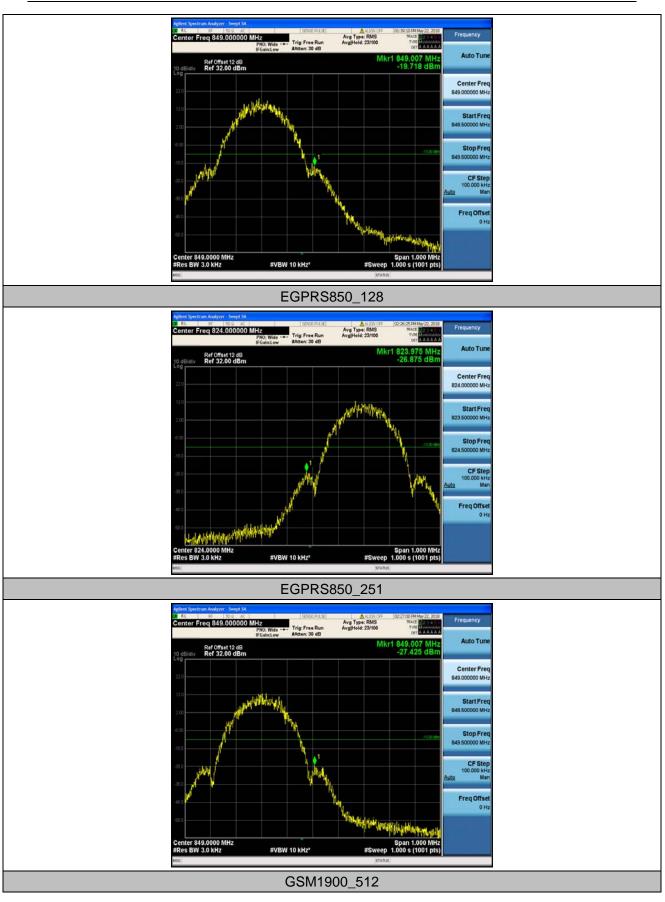
Band	Channel	Value(dBm)	Limit(dBm)	Verdict
GSM850	128	-19.25	-13	PASS
GSM850	251	-18.84	-13	PASS
GPRS850	128	-18.98	-13	PASS
GPRS850	251	-19.72	-13	PASS
EGPRS850	128	-26.87	-13	PASS
EGPRS850	251	-27.43	-13	PASS
GSM1900	512	-21.43	-13	PASS
GSM1900	810	-22.58	-13	PASS
GPRS1900	512	-24.20	-13	PASS
GPRS1900	810	-23.07	-13	PASS
EGPRS1900	512	-27.60	-13	PASS
EGPRS1900	810	-27.52	-13	PASS



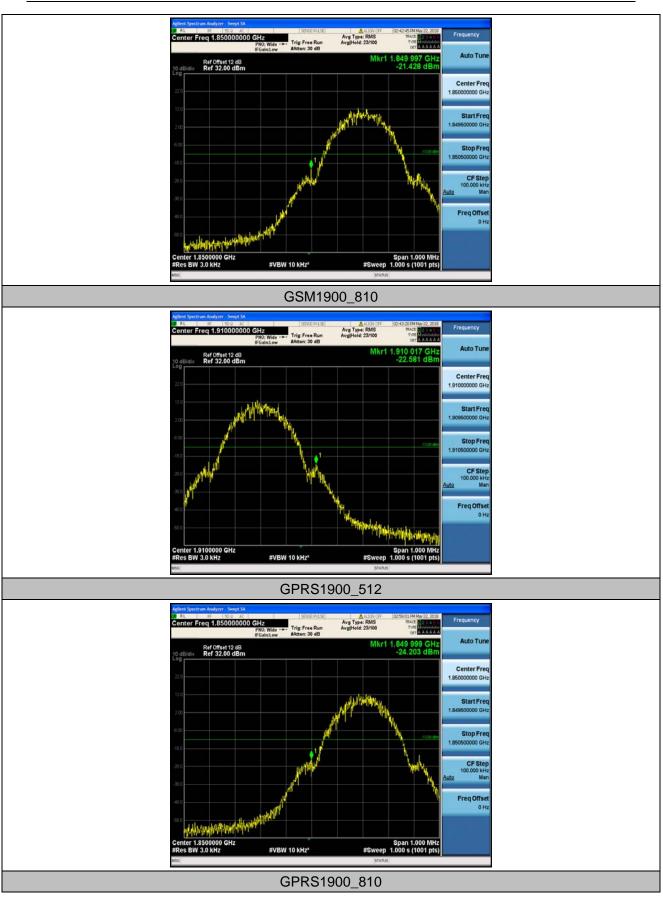
Test Graphs



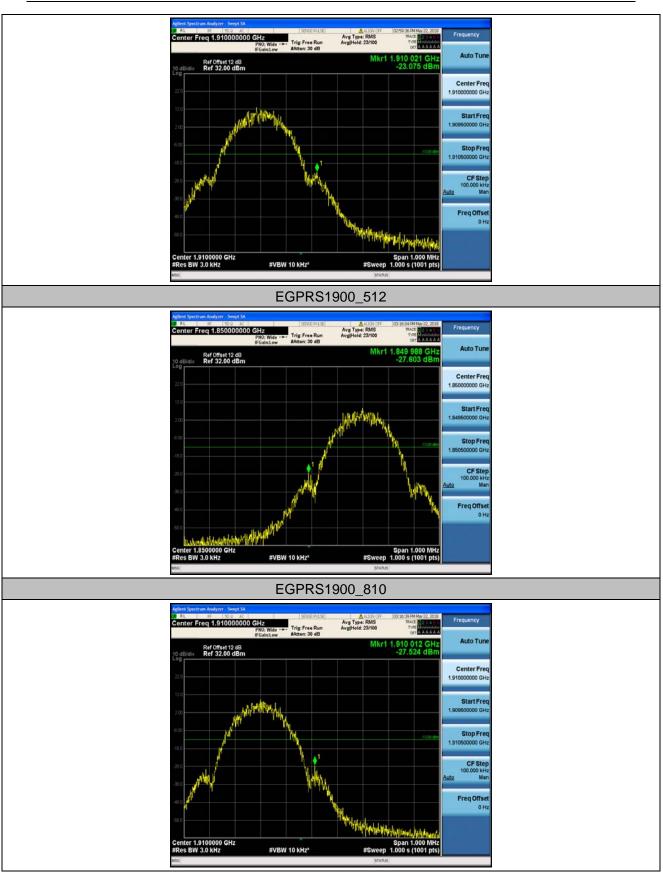














8.5 Appendix E: Conducted Spurious Emission

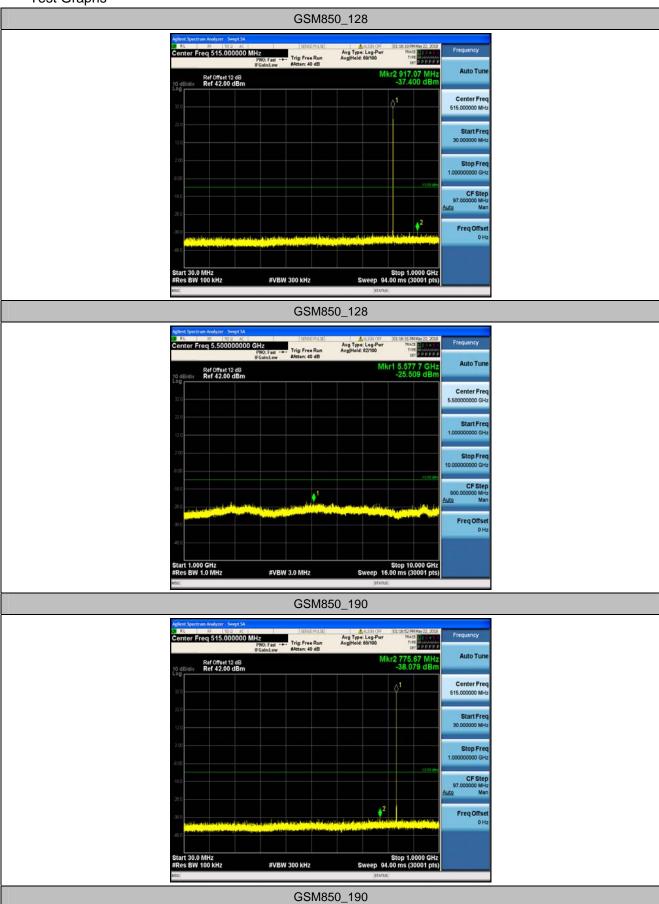
Test Result

Band	Channel	Frequency Rang(Mhz)	Value(dBm)	Limit(dBm)	Verdict
GSM850	128	30~1000	-37.40	-13	PASS
GSM850	128	1000~10000	-25.51	-13	PASS
GSM850	190	30~1000	-38.08	-13	PASS
GSM850	190	1000~10000	-25.90	-13	PASS
GSM850	251	30~1000	-38.15	-13	PASS
GSM850	251	1000~10000	-25.65	-13	PASS
GPRS850	128	30~1000	-38.81	-13	PASS
GPRS850	128	1000~10000	-25.59	-13	PASS
GPRS850	190	30~1000	-38.34	-13	PASS
GPRS850	190	1000~10000	-25.46	-13	PASS
GPRS850	251	30~1000	-37.88	-13	PASS
GPRS850	251	1000~10000	-26.02	-13	PASS
EGPRS850	128	30~1000	-38.42	-13	PASS
EGPRS850	128	1000~10000	-26.14	-13	PASS
EGPRS850	190	30~1000	-38.34	-13	PASS
EGPRS850	190	1000~10000	-25.33	-13	PASS
EGPRS850	251	30~1000	-37.37	-13	PASS
EGPRS850	251	1000~10000	-25.20	-13	PASS
GSM1900	512	30~1000	-38.51	-13	PASS
GSM1900	512	1000~20000	-18.74	-13	PASS
GSM1900	661	30~1000	-38.10	-13	PASS
GSM1900	661	1000~20000	-19.05	-13	PASS
GSM1900	810	30~1000	-38.25	-13	PASS
GSM1900	810	1000~20000	-19.11	-13	PASS
GPRS1900	512	30~1000	-38.25	-13	PASS
GPRS1900	512	1000~20000	-19.22	-13	PASS
GPRS1900	661	30~1000	-38.72	-13	PASS
GPRS1900	661	1000~20000	-19.52	-13	PASS
GPRS1900	810	30~1000	-38.32	-13	PASS
GPRS1900	810	1000~20000	-19.05	-13	PASS
EGPRS1900	512	30~1000	-38.49	-13	PASS
EGPRS1900	512	1000~20000	-19.02	-13	PASS
EGPRS1900	661	30~1000	-38.10	-13	PASS
EGPRS1900	661	1000~20000	-19.51	-13	PASS
EGPRS1900	810	30~1000	-38.65	-13	PASS
EGPRS1900	810	1000~20000	-18.86	-13	PASS

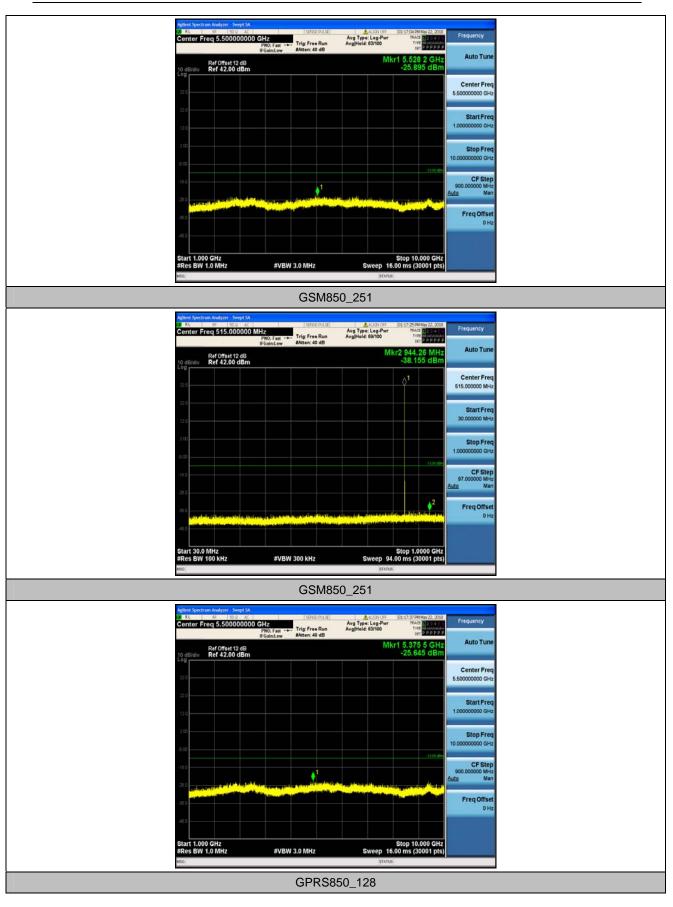


2018-06-01

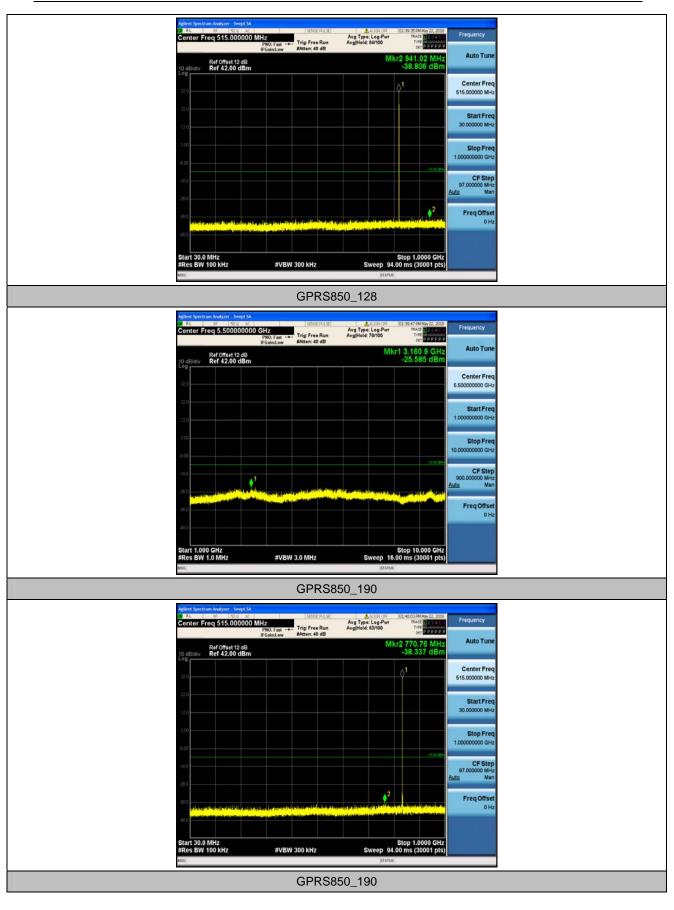
Test Graphs



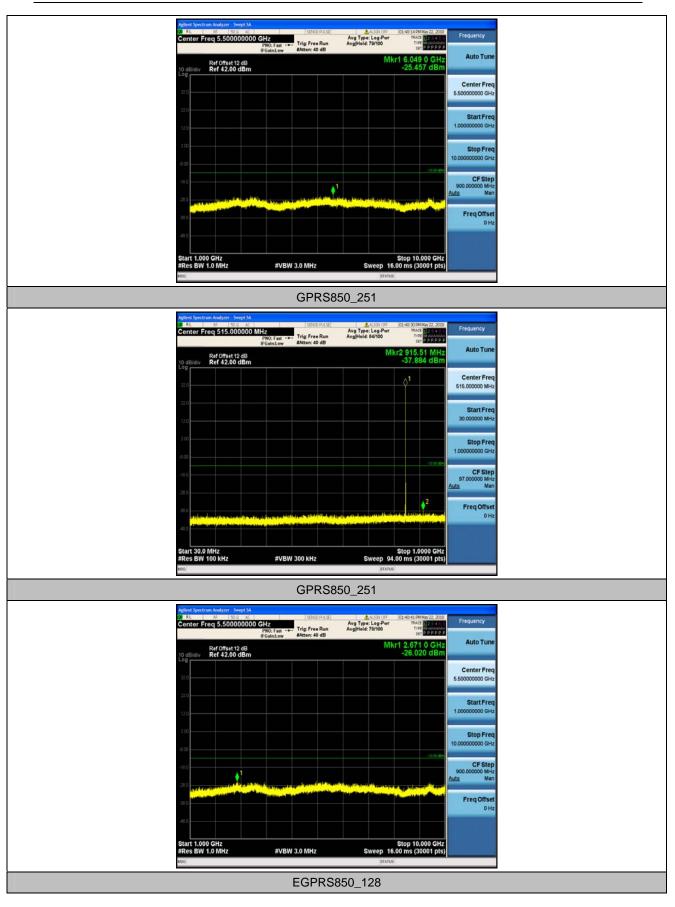








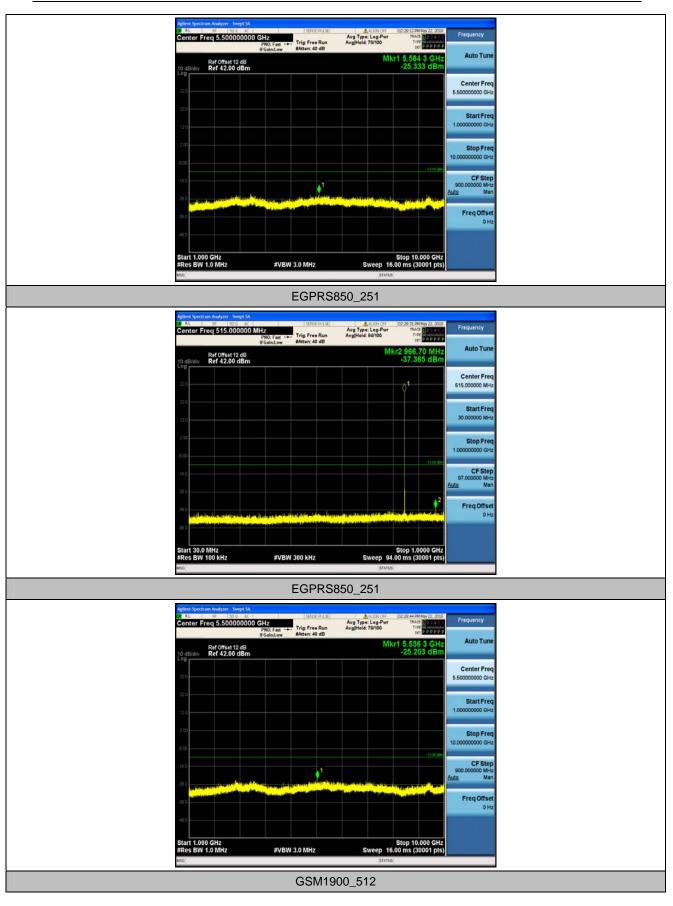




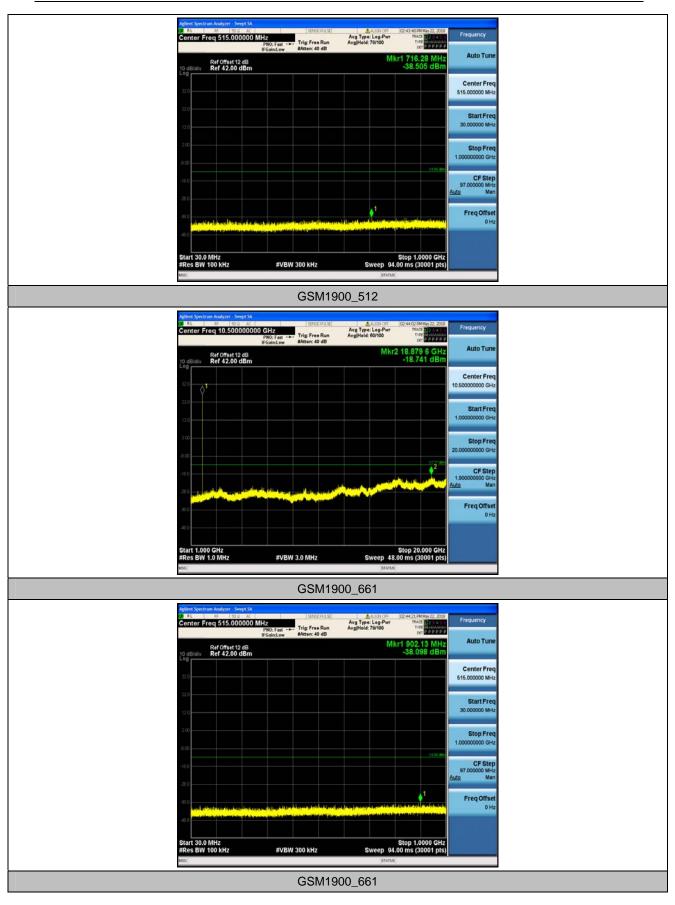




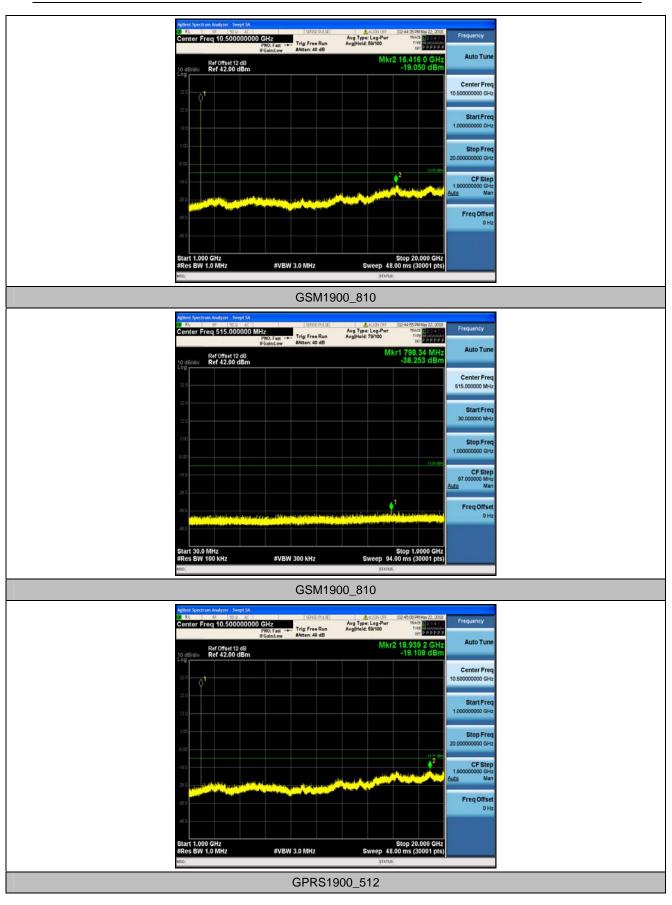




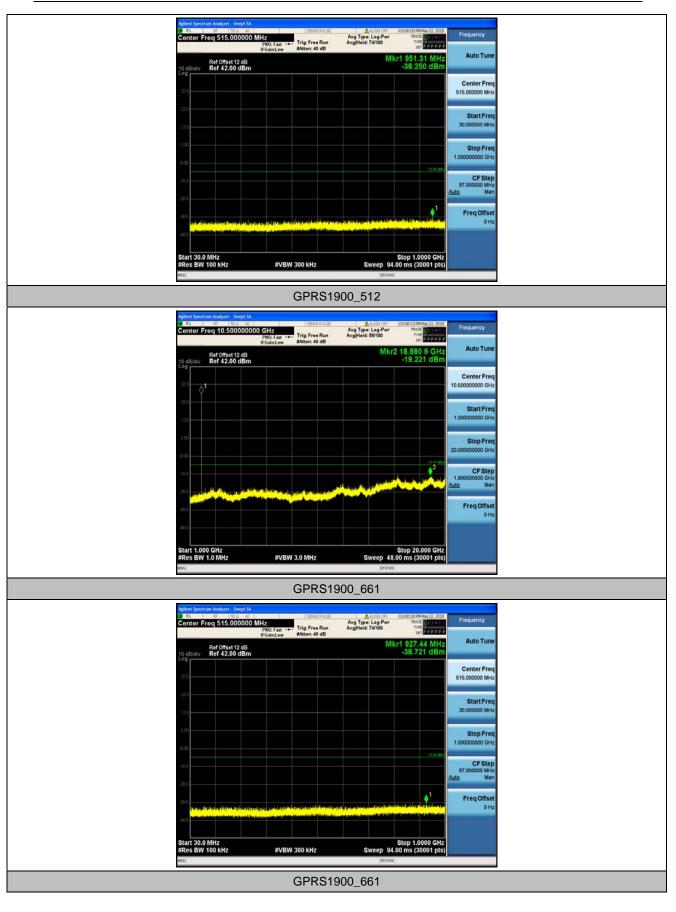




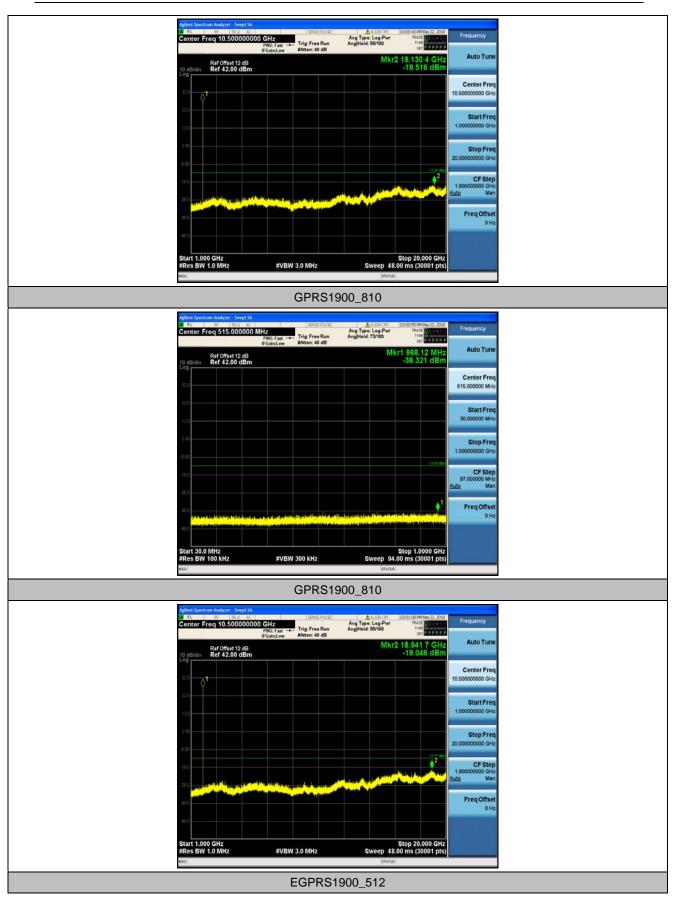




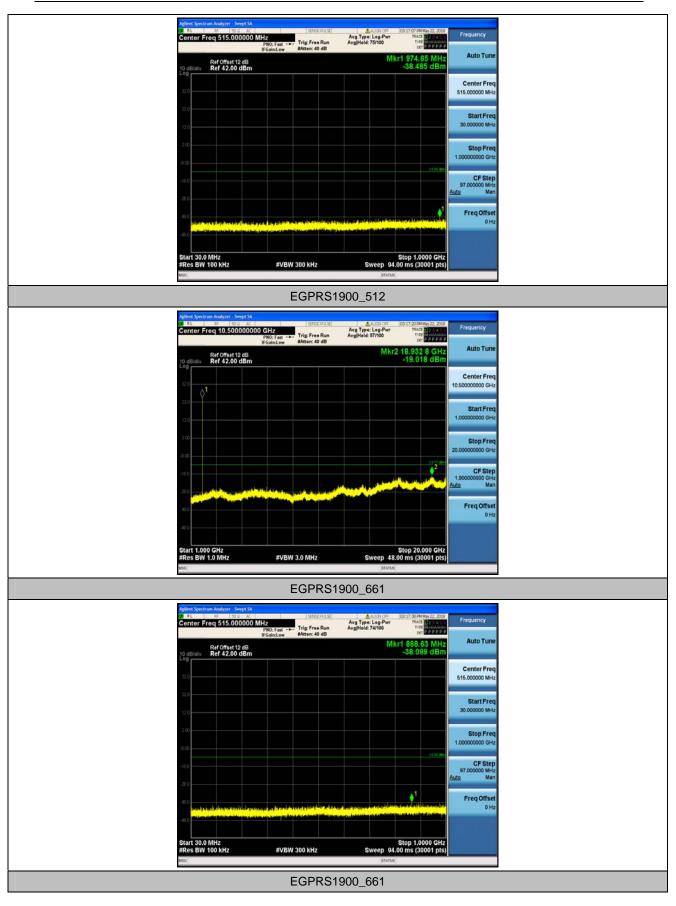




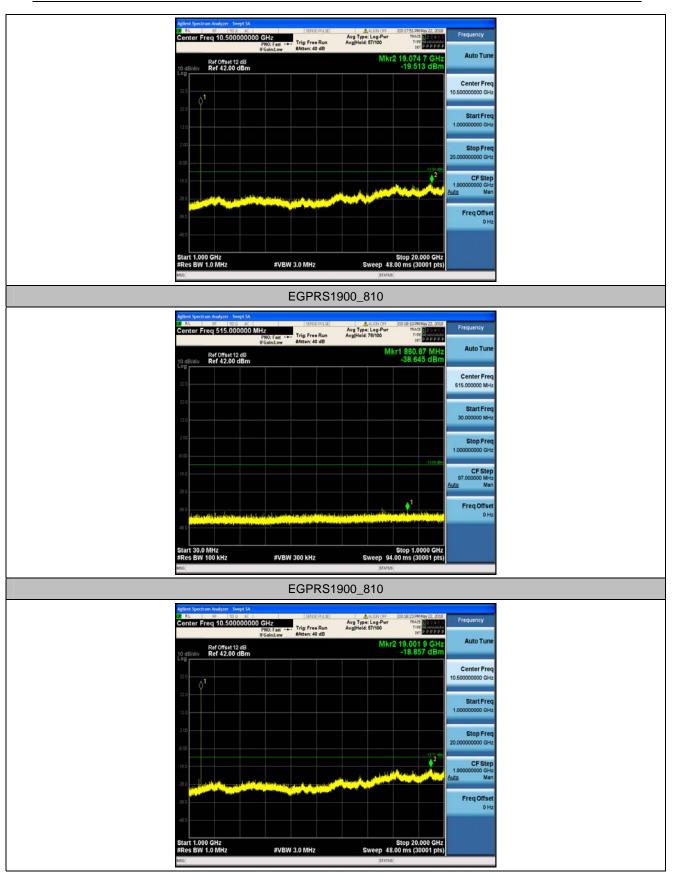














8.6 Appendix F: Frequency Stability

Test Result

Band Channel Volage (Vdc) Tm Deviation (C) Deviation (Pm) Limit (ppm) Vendict (ppm) GSM850 128 VL TN 12.45 0.015591 2.5 PASS GSM850 128 VH TN 7.46 0.009049 2.5 PASS GSM850 190 VL TN 9.98 0.011925 2.5 PASS GSM850 190 VL TN 6.75 0.008869 2.5 PASS GSM850 251 VL TN 10.72 0.012812 2.5 PASS GSM850 251 VL TN 13.77 0.012895 2.5 PASS GPR8580 128 VL TN 6.75 0.008147 2.5 PASS GPR8580 128 VH TN 7.26 0.008141 2.5 PASS GPR8580 190 VL TN 6.26 0.00742 2.5 PASS GPR8580 <td< th=""><th></th><th></th><th></th><th></th><th>Voltage</th><th></th><th></th><th></th></td<>					Voltage			
GSM850 128 VN TN 7.46 0.009049 2.5 PASS GSM850 128 VH TN 12.37 0.015003 2.5 PASS GSM850 190 VL TN 9.88 0.01925 2.5 PASS GSM850 190 VH TN 5.75 0.006869 2.5 PASS GSM850 251 VL TN 10.72 0.014378 2.5 PASS GSM850 251 VN TN 10.94 0.014378 2.5 PASS GPR8550 128 VL TN 6.75 0.008187 2.5 PASS GPR8560 128 VL TN 6.72 0.008147 2.5 PASS GPR8560 128 VH TN 13.75 0.016687 2.5 PASS GPR8560 190 VL TN 6.26 0.007487 2.5 PASS GPR8580 190 VL	Band	Channel		Temperature	Deviation			Verdict
GSM850 128 VH TN 12.37 0.015003 2.5 PASS GSM850 190 VL TN 9.98 0.011925 2.5 PASS GSM850 190 VH TN 10.72 0.012812 2.5 PASS GSM850 251 VL TN 13.17 0.015819 2.5 PASS GSM850 251 VL TN 13.17 0.01687 2.5 PASS GPR3850 128 VL TN 6.75 0.001877 2.5 PASS GPR3850 128 VL TN 6.75 0.001877 2.5 PASS GPR3850 128 VH TN 7.26 0.008814 2.5 PASS GPR3850 190 VL TN 6.76 0.007477 2.5 PASS GPR3850 251 VL TN 11.98 0.014188 2.5 PASS GPR3850 251 VL <t< td=""><td>GSM850</td><td>128</td><td>VL</td><td>TN</td><td>12.85</td><td>0.015591</td><td>2.5</td><td>PASS</td></t<>	GSM850	128	VL	TN	12.85	0.015591	2.5	PASS
GSM850 190 VL TN 9.98 0.011925 2.5 PASS GSM850 190 VN TN 5.75 0.006869 2.5 PASS GSM850 261 VL TN 10.72 0.012812 2.5 PASS GSM850 251 VN TN 10.94 0.012895 2.5 PASS GSM850 251 VN TN 12.20 0.014378 2.5 PASS GSM850 251 VL TN 6.75 0.008147 2.5 PASS GPR8560 128 VN TN 13.75 0.006814 2.5 PASS GPR8560 190 VL TN 6.26 0.007487 2.5 PASS GPR8560 190 VL TN 11.98 0.011616 2.5 PASS GPR8560 251 VL TN 8.62 0.011418 2.5 PASS GPR8560 251 VL <t< td=""><td>GSM850</td><td>128</td><td>VN</td><td>TN</td><td>7.46</td><td>0.009049</td><td>2.5</td><td>PASS</td></t<>	GSM850	128	VN	TN	7.46	0.009049	2.5	PASS
GSM850 190 VN TN 5.75 0.006869 2.5 PASS GSM850 190 VH TN 10.72 0.012812 2.5 PASS GSM850 251 VL TN 10.94 0.012895 2.5 PASS GSM850 251 VN TN 10.94 0.012895 2.5 PASS GPR8560 128 VL TN 6.75 0.008187 2.5 PASS GPR8560 128 VN TN 13.75 0.006814 2.5 PASS GPR8560 128 VH TN 7.26 0.006814 2.5 PASS GPR8560 190 VL TN 6.26 0.07487 2.5 PASS GPR8560 251 VL TN 11.98 0.014318 2.5 PASS GPR8560 251 VL TN 12.04 0.01166 2.5 PASS GPR8560 261 VH <	GSM850	128	VH	TN	12.37	0.015003	2.5	PASS
GSM850 190 VH TN 10.72 0.012812 2.5 PASS GSM850 251 VL TN 13.17 0.015519 2.5 PASS GSM850 251 VN TN 10.94 0.012895 2.5 PASS GPR8560 128 VL TN 6.75 0.008187 2.5 PASS GPR8560 128 VN TN 13.75 0.016687 2.5 PASS GPR8560 128 VH TN 7.26 0.008814 2.5 PASS GPR8560 190 VL TN 6.26 0.007487 2.5 PASS GPR8560 190 VL TN 8.62 0.011616 2.5 PASS GPR8560 251 VL TN 8.62 0.014188 2.6 PASS GPR8560 128 VL TN 12.04 0.014188 2.5 PASS GPR8560 128 VL	GSM850	190	VL	TN	9.98	0.011925	2.5	PASS
GSM850 251 VL TN 13.17 0.015519 2.5 PASS GSM850 251 VN TN 10.94 0.012895 2.5 PASS GSM850 251 VH TN 12.0 0.014378 2.5 PASS GPR8550 128 VL TN 6.75 0.008187 2.5 PASS GPR8550 128 VN TN 13.75 0.016687 2.5 PASS GPR8550 190 VL TN 6.26 0.007487 2.5 PASS GPR8550 190 VL TN 8.26 0.010166 2.5 PASS GPR8550 251 VL TN 12.04 0.01418 2.5 PASS GPR8560 251 VN TN 12.04 0.01418 2.5 PASS EGPR850 128 VL TN 3.81 0.00422 2.5 PASS EGPR850 128 VN <t< td=""><td>GSM850</td><td>190</td><td>VN</td><td>TN</td><td>5.75</td><td>0.006869</td><td>2.5</td><td>PASS</td></t<>	GSM850	190	VN	TN	5.75	0.006869	2.5	PASS
GSM850 251 VN TN 10.94 0.012895 2.5 PASS GSM850 251 VH TN 12.20 0.014378 2.5 PASS GPRS850 128 VL TN 6.75 0.008187 2.5 PASS GPRS850 128 VH TN 13.75 0.016687 2.5 PASS GPRS850 128 VH TN 6.26 0.007487 2.5 PASS GPRS850 190 VL TN 6.26 0.001616 2.5 PASS GPRS850 251 VL TN 8.62 0.010156 2.5 PASS GPRS850 251 VH TN 12.04 0.014188 2.5 PASS GPRS850 128 VH TN 2.26 0.002742 2.5 PASS EGPRS850 128 VH TN 3.81 0.004622 2.5 PASS EGPRS850 190 VL	GSM850	190	VH	TN	10.72	0.012812	2.5	PASS
GSM850 251 VH TN 12.20 0.014378 2.5 PASS GPRS850 128 VL TN 6.75 0.008187 2.5 PASS GPRS850 128 VN TN 13.75 0.016687 2.5 PASS GPRS850 128 VH TN 7.26 0.00814 2.5 PASS GPRS850 190 VL TN 6.26 0.00747 2.5 PASS GPRS850 190 VH TN 9.72 0.011616 2.5 PASS GPRS850 251 VL TN 8.62 0.010156 2.5 PASS GPRS850 251 VH TN 10.20 0.012020 2.5 PASS EGPRS850 128 VL TN 3.81 0.00422 2.5 PASS EGPRS850 128 VH TN 5.81 0.007051 2.5 PASS EGPRS850 190 VL	GSM850	251	VL	TN	13.17	0.015519	2.5	PASS
GPRS850 128 VL TN 6.75 0.008187 2.5 PASS GPRS850 128 VN TN 13.75 0.016687 2.5 PASS GPRS850 128 VH TN 7.26 0.008814 2.5 PASS GPRS850 190 VL TN 6.26 0.007487 2.5 PASS GPRS850 190 VN TN 9.72 0.011616 2.5 PASS GPRS850 251 VL TN 8.62 0.010156 2.5 PASS GPRS850 251 VL TN 12.04 0.014188 2.5 PASS GPRS850 251 VH TN 12.04 0.0014202 2.5 PASS EGPRS850 128 VH TN 3.81 0.004622 2.5 PASS EGPRS850 190 VL TN 1.13 0.001351 2.5 PASS EGPRS850 190 VL	GSM850	251	VN	TN	10.94	0.012895	2.5	PASS
GPRS850 128 VN TN 13.75 0.016687 2.5 PASS GPRS850 128 VH TN 7.26 0.00844 2.5 PASS GPRS850 190 VL TN 6.26 0.007487 2.5 PASS GPRS850 190 VN TN 9.72 0.011616 2.5 PASS GPRS850 190 VH TN 11.98 0.014318 2.5 PASS GPRS850 251 VL TN 8.62 0.010166 2.5 PASS GPRS850 251 VH TN 10.20 0.012020 2.5 PASS GPRS850 128 VL TN 5.81 0.0004622 2.5 PASS EGPRS850 128 VH TN 5.81 0.001351 2.5 PASS EGPRS850 190 VL TN 1.13 0.001351 2.5 PASS EGPRS850 251 VL	GSM850	251	VH	TN	12.20	0.014378	2.5	PASS
GPRS850 128 VH TN 7.26 0.008814 2.5 PASS GPRS850 190 VL TN 6.26 0.007487 2.5 PASS GPRS850 190 VN TN 9.72 0.011616 2.5 PASS GPRS850 251 VL TN 8.62 0.014318 2.5 PASS GPRS850 251 VL TN 12.04 0.014318 2.5 PASS GPRS850 251 VH TN 12.04 0.014188 2.5 PASS GPRS850 128 VL TN 2.26 0.002742 2.5 PASS EGPRS850 128 VH TN 5.81 0.007051 2.5 PASS EGPRS850 190 VL TN 1.13 0.001351 2.5 PASS EGPRS850 190 VH TN 0.78 0.007988 2.5 PASS EGPRS850 251 VH	GPRS850	128	VL	TN	6.75	0.008187	2.5	PASS
GPRS850 190 VL TN 6.26 0.007487 2.5 PASS GPRS850 190 VN TN 9.72 0.011616 2.5 PASS GPRS850 190 VH TN 11.98 0.014318 2.5 PASS GPRS850 251 VL TN 8.62 0.010156 2.5 PASS GPRS850 251 VL TN 12.04 0.014188 2.5 PASS GPRS850 251 VH TN 12.04 0.0014188 2.5 PASS GPRS850 128 VL TN 2.26 0.002742 2.5 PASS EGPRS850 128 VH TN 5.81 0.007051 2.5 PASS EGPRS850 190 VN TN 2.00 0.002393 2.5 PASS EGPRS850 190 VH TN 0.94 0.001119 2.5 PASS EGPRS850 251 VL	GPRS850	128	VN	TN	13.75	0.016687	2.5	PASS
GPRS850 190 VN TN 9.72 0.011616 2.5 PASS GPRS850 190 VH TN 11.98 0.014318 2.5 PASS GPRS850 251 VL TN 8.62 0.010156 2.5 PASS GPRS850 251 VN TN 12.04 0.012020 2.5 PASS GPRS850 128 VL TN 2.26 0.002742 2.5 PASS EGPRS850 128 VL TN 3.81 0.004622 2.5 PASS EGPRS850 128 VH TN 5.81 0.007051 2.5 PASS EGPRS850 190 VL TN 1.13 0.001351 2.5 PASS EGPRS850 190 VL TN 4.81 0.002393 2.5 PASS EGPRS850 251 VL TN 4.81 0.007988 2.5 PASS GSM1900 512 VL	GPRS850	128	VH	TN	7.26	0.008814	2.5	PASS
GPRS850 190 VH TN 11.98 0.014318 2.5 PASS GPRS850 251 VL TN 8.62 0.010156 2.5 PASS GPRS850 251 VH TN 12.04 0.014188 2.5 PASS GPRS850 251 VH TN 10.020 0.012020 2.5 PASS EGPRS850 128 VL TN 2.26 0.002742 2.5 PASS EGPRS850 128 VH TN 5.81 0.004622 2.5 PASS EGPRS850 128 VH TN 1.13 0.001351 2.5 PASS EGPRS850 190 VL TN 1.13 0.001391 2.5 PASS EGPRS850 190 VH TN 6.78 0.001119 2.5 PASS EGPRS850 251 VL TN 6.78 0.002986 2.5 PASS GSM1900 512 VL	GPRS850	190	VL	TN	6.26	0.007487	2.5	PASS
GPRS850 251 VL TN 8.62 0.010156 2.5 PASS GPRS850 251 VN TN 12.04 0.014188 2.5 PASS GPRS850 251 VH TN 10.20 0.012020 2.5 PASS EGPRS850 128 VL TN 2.26 0.002742 2.5 PASS EGPRS850 128 VH TN 3.81 0.004622 2.5 PASS EGPRS850 128 VH TN 5.81 0.007051 2.5 PASS EGPRS850 190 VL TN 1.13 0.00131 2.5 PASS EGPRS850 190 VH TN 2.00 0.002393 2.5 PASS EGPRS850 251 VL TN 4.81 0.005668 2.5 PASS EGPRS850 251 VL TN 18.05 0.009755 2.5 PASS GSM1900 512 VL	GPRS850	190	VN	TN	9.72	0.011616	2.5	PASS
GPRS850 251 VN TN 12.04 0.014188 2.5 PASS GPRS850 251 VH TN 10.20 0.012020 2.5 PASS EGPRS850 128 VL TN 2.26 0.002742 2.5 PASS EGPRS850 128 VN TN 3.81 0.004622 2.5 PASS EGPRS850 128 VH TN 5.81 0.007051 2.5 PASS EGPRS850 190 VL TN 1.13 0.001351 2.5 PASS EGPRS850 190 VH TN 2.00 0.002393 2.5 PASS EGPRS850 251 VL TN 4.81 0.005668 2.5 PASS EGPRS850 251 VH TN 6.78 0.007988 2.5 PASS GSM1900 512 VL TN 12.95 0.006997 2.5 PASS GSM1900 512 VH	GPRS850	190	VH	TN	11.98	0.014318	2.5	PASS
GPRS850 251 VH TN 10.20 0.012020 2.5 PASS EGPRS850 128 VL TN 2.26 0.002742 2.5 PASS EGPRS850 128 VN TN 3.81 0.004622 2.5 PASS EGPRS850 128 VH TN 5.81 0.007051 2.5 PASS EGPRS850 190 VL TN 1.13 0.001351 2.5 PASS EGPRS850 190 VH TN 0.94 0.001119 2.5 PASS EGPRS850 251 VL TN 4.81 0.005668 2.5 PASS EGPRS850 251 VH TN 6.78 0.007988 2.5 PASS GSM1900 512 VL TN 18.05 0.0012551 2.5 PASS GSM1900 661 VL TN 12.36 0.01254 2.5 PASS GSM1900 661 VH	GPRS850	251	VL	TN	8.62	0.010156	2.5	PASS
EGPRS850 128 VL TN 2.26 0.002742 2.5 PASS EGPRS850 128 VN TN 3.81 0.004622 2.5 PASS EGPRS850 128 VH TN 5.81 0.007051 2.5 PASS EGPRS850 190 VL TN 1.13 0.001351 2.5 PASS EGPRS850 190 VN TN 2.00 0.002393 2.5 PASS EGPRS850 190 VH TN 0.94 0.001119 2.5 PASS EGPRS850 251 VL TN 4.81 0.005668 2.5 PASS EGPRS850 251 VL TN 18.05 0.009755 2.5 PASS GSM1900 512 VL TN 18.05 0.0012651 2.5 PASS GSM1900 661 VL TN 23.60 0.012654 2.5 PASS GSM1900 661 VH <td>GPRS850</td> <td>251</td> <td>VN</td> <td>TN</td> <td>12.04</td> <td>0.014188</td> <td>2.5</td> <td>PASS</td>	GPRS850	251	VN	TN	12.04	0.014188	2.5	PASS
EGPRS850 128 VN TN 3.81 0.004622 2.5 PASS EGPRS850 128 VH TN 5.81 0.007051 2.5 PASS EGPRS850 190 VL TN 1.13 0.001351 2.5 PASS EGPRS850 190 VN TN 2.00 0.002393 2.5 PASS EGPRS850 190 VH TN 0.94 0.001119 2.5 PASS EGPRS850 251 VL TN 4.81 0.005668 2.5 PASS EGPRS850 251 VL TN 6.78 0.007988 2.5 PASS EGPRS850 251 VL TN 18.05 0.009755 2.5 PASS GSM1900 512 VL TN 12.95 0.006997 2.5 PASS GSM1900 661 VL TN 23.60 0.012554 2.5 PASS GSM1900 661 VL <td>GPRS850</td> <td>251</td> <td>VH</td> <td>TN</td> <td>10.20</td> <td>0.012020</td> <td>2.5</td> <td>PASS</td>	GPRS850	251	VH	TN	10.20	0.012020	2.5	PASS
EGPRS850 128 VH TN 5.81 0.007051 2.5 PASS EGPRS850 190 VL TN 1.13 0.001351 2.5 PASS EGPRS850 190 VN TN 2.00 0.002393 2.5 PASS EGPRS850 190 VH TN 0.94 0.001119 2.5 PASS EGPRS850 251 VL TN 4.81 0.006668 2.5 PASS EGPRS850 251 VN TN 6.78 0.007988 2.5 PASS EGPRS850 251 VN TN 6.78 0.007958 2.5 PASS GSM1900 512 VL TN 18.05 0.009755 2.5 PASS GSM1900 661 VL TN 23.60 0.012554 2.5 PASS GSM1900 661 VN TN 23.60 0.012554 2.5 PASS GSM1900 661 VH	EGPRS850	128	VL	TN	2.26	0.002742	2.5	PASS
EGPRS850 190 VL TN 1.13 0.001351 2.5 PASS EGPRS850 190 VN TN 2.00 0.002393 2.5 PASS EGPRS850 190 VH TN 0.94 0.001119 2.5 PASS EGPRS850 251 VL TN 4.81 0.005668 2.5 PASS EGPRS850 251 VL TN 6.78 0.007988 2.5 PASS EGPRS850 251 VH TN 3.07 0.003614 2.5 PASS GSM1900 512 VL TN 18.05 0.009755 2.5 PASS GSM1900 512 VH TN 12.95 0.006997 2.5 PASS GSM1900 661 VL TN 23.60 0.012554 2.5 PASS GSM1900 661 VH TN 38.29 0.020050 2.5 PASS GSM1900 810 VH	EGPRS850	128	VN	TN	3.81	0.004622	2.5	PASS
EGPRS850 190 VN TN 2.00 0.002393 2.5 PASS EGPRS850 190 VH TN 0.94 0.001119 2.5 PASS EGPRS850 251 VL TN 4.81 0.005668 2.5 PASS EGPRS850 251 VL TN 6.78 0.007988 2.5 PASS EGPRS850 251 VL TN 6.78 0.007988 2.5 PASS EGPRS850 251 VL TN 3.07 0.003614 2.5 PASS GSM1900 512 VL TN 18.05 0.009755 2.5 PASS GSM1900 512 VH TN 12.95 0.006997 2.5 PASS GSM1900 661 VL TN 23.60 0.012554 2.5 PASS GSM1900 810 VL TN 38.29 0.020050 2.5 PASS GSM1900 810 VL	EGPRS850	128	VH	TN	5.81	0.007051	2.5	PASS
EGPRS850 190 VN TN 2.00 0.002393 2.5 PASS EGPRS850 190 VH TN 0.94 0.001119 2.5 PASS EGPRS850 251 VL TN 4.81 0.005668 2.5 PASS EGPRS850 251 VL TN 6.78 0.007988 2.5 PASS EGPRS850 251 VH TN 6.78 0.007988 2.5 PASS EGPRS850 251 VH TN 3.07 0.003614 2.5 PASS GSM1900 512 VL TN 18.05 0.009755 2.5 PASS GSM1900 512 VH TN 12.95 0.006997 2.5 PASS GSM1900 661 VL TN 23.60 0.012554 2.5 PASS GSM1900 810 VL TN 38.29 0.020050 2.5 PASS GSM1900 810 VL			VL	TN				
EGPRS850 251 VL TN 4.81 0.005668 2.5 PASS EGPRS850 251 VN TN 6.78 0.007988 2.5 PASS EGPRS850 251 VH TN 3.07 0.003614 2.5 PASS GSM1900 512 VL TN 18.05 0.009755 2.5 PASS GSM1900 512 VH TN 23.41 0.012651 2.5 PASS GSM1900 512 VH TN 23.60 0.012554 2.5 PASS GSM1900 661 VL TN 25.8 0.013447 2.5 PASS GSM1900 661 VH TN 14.21 0.007556 2.5 PASS GSM1900 810 VL TN 38.29 0.020050 2.5 PASS GSM1900 810 VH TN 29.25 0.015316 2.5 PASS GPRS1900 512 VL			VN					
EGPRS850 251 VL TN 4.81 0.005668 2.5 PASS EGPRS850 251 VN TN 6.78 0.007988 2.5 PASS EGPRS850 251 VH TN 3.07 0.003614 2.5 PASS GSM1900 512 VL TN 18.05 0.009755 2.5 PASS GSM1900 512 VH TN 23.41 0.012651 2.5 PASS GSM1900 512 VH TN 23.60 0.012554 2.5 PASS GSM1900 661 VL TN 25.8 0.013447 2.5 PASS GSM1900 661 VH TN 14.21 0.007556 2.5 PASS GSM1900 810 VL TN 38.29 0.020050 2.5 PASS GSM1900 810 VH TN 29.25 0.015316 2.5 PASS GPRS1900 512 VL	EGPRS850	190	VH	TN	0.94	0.001119	2.5	PASS
EGPRS850 251 VH TN 3.07 0.003614 2.5 PASS GSM1900 512 VL TN 18.05 0.009755 2.5 PASS GSM1900 512 VN TN 23.41 0.012651 2.5 PASS GSM1900 512 VH TN 12.95 0.006997 2.5 PASS GSM1900 661 VL TN 23.60 0.012554 2.5 PASS GSM1900 661 VH TN 14.21 0.007556 2.5 PASS GSM1900 661 VH TN 38.29 0.020050 2.5 PASS GSM1900 810 VL TN 38.29 0.020050 2.5 PASS GSM1900 810 VH TN 29.25 0.015823 2.5 PASS GSM1900 810 VH TN 29.25 0.015316 2.5 PASS GPRS1900 512 VL <td>EGPRS850</td> <td>251</td> <td>VL</td> <td>TN</td> <td>4.81</td> <td>0.005668</td> <td>2.5</td> <td>PASS</td>	EGPRS850	251	VL	TN	4.81	0.005668	2.5	PASS
GSM1900 512 VL TN 18.05 0.009755 2.5 PASS GSM1900 512 VN TN 23.41 0.012651 2.5 PASS GSM1900 512 VH TN 12.95 0.006997 2.5 PASS GSM1900 661 VL TN 23.60 0.012554 2.5 PASS GSM1900 661 VL TN 23.60 0.012554 2.5 PASS GSM1900 661 VH TN 14.21 0.007556 2.5 PASS GSM1900 810 VL TN 38.29 0.020050 2.5 PASS GSM1900 810 VH TN 29.25 0.015823 2.5 PASS GSM1900 810 VH TN 29.25 0.015316 2.5 PASS GPRS1900 512 VL TN 12.24 0.006614 2.5 PASS GPRS1900 512 VH <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
GSM1900512VNTN23.410.0126512.5PASSGSM1900512VHTN12.950.0069972.5PASSGSM1900661VLTN23.600.0125542.5PASSGSM1900661VNTN25.280.0134472.5PASSGSM1900661VHTN14.210.0075562.5PASSGSM1900810VLTN38.290.0200502.5PASSGSM1900810VNTN30.220.0158232.5PASSGSM1900810VHTN29.250.0153162.5PASSGPRS1900512VLTN12.240.0066142.5PASSGPRS1900512VHTN27.380.0147982.5PASSGPRS1900512VHTN21.180.0112662.5PASSGPRS1900661VLTN28.210.0140992.5PASSGPRS1900661VHTN28.220.0147752.5PASSGPRS1900810VLTN28.510.0149272.5PASSGPRS1900810VHTN28.510.0149272.5PASSGPRS1900810VHTN28.510.0149272.5PASSGPRS1900810VHTN28.510.0149272.5PASSGPRS1900810VHTN0.770.	EGPRS850	251	VH	TN	3.07	0.003614	2.5	PASS
GSM1900512VHTN12.950.0069972.5PASSGSM1900661VLTN23.600.0125542.5PASSGSM1900661VNTN25.280.0134472.5PASSGSM1900661VHTN14.210.0075562.5PASSGSM1900810VLTN38.290.0200502.5PASSGSM1900810VNTN30.220.0158232.5PASSGSM1900810VHTN29.250.0153162.5PASSGSM1900810VHTN29.250.0161592.5PASSGPRS1900512VLTN12.240.0066142.5PASSGPRS1900512VHTN27.380.0147982.5PASSGPRS1900661VLTN21.180.012662.5PASSGPRS1900661VHTN28.510.017282.5PASSGPRS1900810VLTN28.220.0147752.5PASSGPRS1900810VLTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSGPRS1900512VLTN0.770.0004192.5PASSGPRS1900810VHTN28.510.0175142.5PASSGPRS1900810VHTN0.770.000	GSM1900	512	VL	TN	18.05	0.009755	2.5	PASS
GSM1900661VLTN23.600.0125542.5PASSGSM1900661VNTN25.280.0134472.5PASSGSM1900661VHTN14.210.0075562.5PASSGSM1900810VLTN38.290.0200502.5PASSGSM1900810VNTN30.220.0158232.5PASSGSM1900810VHTN29.250.0153162.5PASSGPRS1900512VLTN12.240.0066142.5PASSGPRS1900512VHTN29.900.0147982.5PASSGPRS1900512VHTN21.180.0112662.5PASSGPRS1900661VLTN26.510.0140992.5PASSGPRS1900661VHTN28.220.0147752.5PASSGPRS1900810VLTN28.220.0147752.5PASSGPRS1900810VLTN28.510.0149972.5PASSGPRS1900810VLTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSGPRS1900810VHTN0.770.0004192.5PASSGPRS1900512VLTN0.770.0004192.5PASS	GSM1900	512	VN	TN	23.41	0.012651	2.5	PASS
GSM1900661VNTN25.280.0134472.5PASSGSM1900661VHTN14.210.0075562.5PASSGSM1900810VLTN38.290.0200502.5PASSGSM1900810VNTN30.220.0158232.5PASSGSM1900810VHTN29.250.0153162.5PASSGSM1900810VHTN29.250.0153162.5PASSGPRS1900512VLTN12.240.0066142.5PASSGPRS1900512VNTN29.900.0161592.5PASSGPRS1900512VHTN27.380.0147982.5PASSGPRS1900661VLTN21.180.0112662.5PASSGPRS1900661VHTN28.220.0147752.5PASSGPRS1900810VLTN28.220.0147752.5PASSGPRS1900810VHTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSGPRS1900512VLTN0.770.0004192.5PASS	GSM1900	512	VH	TN	12.95	0.006997	2.5	PASS
GSM1900661VHTN14.210.0075562.5PASSGSM1900810VLTN38.290.0200502.5PASSGSM1900810VNTN30.220.0158232.5PASSGSM1900810VHTN29.250.0153162.5PASSGPRS1900512VLTN12.240.0066142.5PASSGPRS1900512VNTN29.900.0161592.5PASSGPRS1900512VHTN27.380.0147982.5PASSGPRS1900661VLTN21.180.0112662.5PASSGPRS1900661VLTN26.510.0140992.5PASSGPRS1900661VHTN28.220.0147752.5PASSGPRS1900810VLTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSGPRS1900810VHTN0.770.0004192.5PASSGPRS1900512VLTN0.770.0004192.5PASS	GSM1900	661	VL	TN	23.60	0.012554	2.5	PASS
GSM1900810VLTN38.290.0200502.5PASSGSM1900810VNTN30.220.0158232.5PASSGSM1900810VHTN29.250.0153162.5PASSGPRS1900512VLTN12.240.0066142.5PASSGPRS1900512VLTN29.900.0161592.5PASSGPRS1900512VHTN29.900.0161592.5PASSGPRS1900512VHTN27.380.0147982.5PASSGPRS1900661VLTN21.180.0112662.5PASSGPRS1900661VNTN26.510.0140992.5PASSGPRS1900661VHTN14.530.0077282.5PASSGPRS1900810VLTN28.220.0147752.5PASSGPRS1900810VHTN33.450.0175142.5PASSGPRS1900810VHTN33.450.0175142.5PASSGPRS1900512VLTN0.770.0004192.5PASS	GSM1900	661	VN	TN	25.28	0.013447	2.5	PASS
GSM1900810VNTN30.220.0158232.5PASSGSM1900810VHTN29.250.0153162.5PASSGPRS1900512VLTN12.240.0066142.5PASSGPRS1900512VNTN29.900.0161592.5PASSGPRS1900512VHTN27.380.0147982.5PASSGPRS1900661VLTN21.180.0112662.5PASSGPRS1900661VNTN26.510.0140992.5PASSGPRS1900661VHTN14.530.0077282.5PASSGPRS1900661VHTN28.220.0147752.5PASSGPRS1900810VNTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSGPRS1900512VLTN0.770.0004192.5PASS	GSM1900	661	VH	TN	14.21	0.007556	2.5	PASS
GSM1900810VNTN30.220.0158232.5PASSGSM1900810VHTN29.250.0153162.5PASSGPRS1900512VLTN12.240.0066142.5PASSGPRS1900512VNTN29.900.0161592.5PASSGPRS1900512VHTN27.380.0147982.5PASSGPRS1900661VLTN21.180.0112662.5PASSGPRS1900661VNTN26.510.0140992.5PASSGPRS1900661VHTN14.530.0077282.5PASSGPRS1900661VHTN28.220.0147752.5PASSGPRS1900810VLTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSGPRS1900512VLTN0.770.0004192.5PASS	GSM1900	810	VL	TN	38.29			
GSM1900810VHTN29.250.0153162.5PASSGPRS1900512VLTN12.240.0066142.5PASSGPRS1900512VNTN29.900.0161592.5PASSGPRS1900512VHTN27.380.0147982.5PASSGPRS1900661VLTN21.180.0112662.5PASSGPRS1900661VNTN26.510.0140992.5PASSGPRS1900661VHTN14.530.0077282.5PASSGPRS1900661VLTN28.220.0147752.5PASSGPRS1900810VLTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSEGPRS1900512VLTN0.770.0004192.5PASS								
GPRS1900512VLTN12.240.0066142.5PASSGPRS1900512VNTN29.900.0161592.5PASSGPRS1900512VHTN27.380.0147982.5PASSGPRS1900661VLTN21.180.0112662.5PASSGPRS1900661VNTN26.510.0140992.5PASSGPRS1900661VHTN14.530.0077282.5PASSGPRS1900810VLTN28.220.0147752.5PASSGPRS1900810VNTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSEGPRS1900512VLTN0.770.0004192.5PASS			VH	TN		0.015316		
GPRS1900512VNTN29.900.0161592.5PASSGPRS1900512VHTN27.380.0147982.5PASSGPRS1900661VLTN21.180.0112662.5PASSGPRS1900661VNTN26.510.0140992.5PASSGPRS1900661VHTN14.530.0077282.5PASSGPRS1900661VHTN28.220.0147752.5PASSGPRS1900810VLTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSEGPRS1900512VLTN0.770.0004192.5PASS			VL	TN		0.006614		
GPRS1900512VHTN27.380.0147982.5PASSGPRS1900661VLTN21.180.0112662.5PASSGPRS1900661VNTN26.510.0140992.5PASSGPRS1900661VHTN14.530.0077282.5PASSGPRS1900810VLTN28.220.0147752.5PASSGPRS1900810VNTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSGPRS1900512VLTN0.770.0004192.5PASS								
GPRS1900661VLTN21.180.0112662.5PASSGPRS1900661VNTN26.510.0140992.5PASSGPRS1900661VHTN14.530.0077282.5PASSGPRS1900810VLTN28.220.0147752.5PASSGPRS1900810VNTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSEGPRS1900512VLTN0.770.0004192.5PASS			VH	TN				
GPRS1900661VNTN26.510.0140992.5PASSGPRS1900661VHTN14.530.0077282.5PASSGPRS1900810VLTN28.220.0147752.5PASSGPRS1900810VNTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSEGPRS1900512VLTN0.770.0004192.5PASS				TN				
GPRS1900661VHTN14.530.0077282.5PASSGPRS1900810VLTN28.220.0147752.5PASSGPRS1900810VNTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSEGPRS1900512VLTN0.770.0004192.5PASS								
GPRS1900810VLTN28.220.0147752.5PASSGPRS1900810VNTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSEGPRS1900512VLTN0.770.0004192.5PASS		661	VH	TN		0.007728		
GPRS1900810VNTN28.510.0149272.5PASSGPRS1900810VHTN33.450.0175142.5PASSEGPRS1900512VLTN0.770.0004192.5PASS	GPRS1900	810	VL	TN		0.014775		
GPRS1900 810 VH TN 33.45 0.017514 2.5 PASS EGPRS1900 512 VL TN 0.77 0.000419 2.5 PASS								
EGPRS1900 512 VL TN 0.77 0.000419 2.5 PASS								
EGPRS1900 512 VN TN 10.14 0.005479 2.5 PASS	EGPRS1900	512	VN	TN	10.14	0.005479	2.5	PASS
EGPRS1900 512 VH TN 8.17 0.004415 2.5 PASS								



Report No.:

TRE1805016601

Issued:

EGPRS1900	661	VL	TN	-5.84	-0.003108	2.5	PASS
EGPRS1900	661	VN	TN	-0.45	-0.000240	2.5	PASS
EGPRS1900	661	VH	TN	3.42	0.001820	2.5	PASS
EGPRS1900	810	VL	TN	-0.06	-0.000034	2.5	PASS
EGPRS1900	810	VN	TN	-6.04	-0.003161	2.5	PASS
EGPRS1900	810	VH	TN	0.39	0.000203	2.5	PASS



Temperature									
Band	Channel	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict		
GSM850	128	VN	-30	5.49	0.006659	2.5	PASS		
GSM850	128	VN	-20	15.46	0.018764	2.5	PASS		
GSM850	128	VN	-10	8.94	0.010851	2.5	PASS		
GSM850	128	VN	0	23.05	0.027969	2.5	PASS		
GSM850	128	VN	10	2.45	0.002977	2.5	PASS		
GSM850	128	VN	20	7.07	0.008579	2.5	PASS		
GSM850	128	VN	30	4.00	0.004857	2.5	PASS		
GSM850	128	VN	40	7.85	0.009519	2.5	PASS		
GSM850	128	VN	50	1.03	0.001254	2.5	PASS		
GSM850	190	VN	-30	4.75	0.005673	2.5	PASS		
GSM850	190	VN	-20	13.04	0.015591	2.5	PASS		
GSM850	190	VN	-10	8.56	0.010227	2.5	PASS		
GSM850	190	VN	0	17.63	0.021071	2.5	PASS		
GSM850	190	VN	10	-0.26	-0.000309	2.5	PASS		
GSM850	190	VN	20	13.08	0.015630	2.5	PASS		
GSM850	190	VN	30	-3.75	-0.004477	2.5	PASS		
GSM850	190	VN	40	6.55	0.007834	2.5	PASS		
GSM850	190	VN	50	1.61	0.001930	2.5	PASS		
GSM850	251	VN	-30	11.49	0.013541	2.5	PASS		
GSM850	251	VN	-20	14.40	0.016965	2.5	PASS		
GSM850	251	VN	-10	8.49	0.010004	2.5	PASS		
GSM850	251	VN	0	19.24	0.022670	2.5	PASS		
GSM850	251	VN	10	5.81	0.006847	2.5	PASS		
GSM850 GSM850	251	VN	20	31.06	0.036592	2.5	PASS		
GSM850 GSM850	251	VN	30	5.07	0.005972	2.5	PASS		
						2.5			
GSM850	251	VN	40	17.50	0.020616		PASS		
GSM850	251	VN	50	3.39	0.003994	2.5	PASS		
GPRS850	128	VN	-30	11.20	0.013593	2.5	PASS		
GPRS850	128	VN	-20	5.07	0.006150	2.5	PASS		
GPRS850	128	VN	-10	7.43	0.009010	2.5	PASS		
GPRS850	128	VN	0	4.29	0.005210	2.5	PASS		
GPRS850	128	VN	10	12.82	0.015551	2.5	PASS		
GPRS850	128	VN	20	15.82	0.019194	2.5	PASS		
GPRS850	128	VN	30	14.66	0.017784	2.5	PASS		
GPRS850	128	VN	40	13.30	0.016139	2.5	PASS		
GPRS850	128	VN	50	17.08	0.020722	2.5	PASS		
GPRS850	190	VN	-30	2.07	0.002470	2.5	PASS		
GPRS850	190	VN	-20	8.88	0.010613	2.5	PASS		
GPRS850	190	VN	-10	8.46	0.010111	2.5	PASS		
GPRS850	190	VN	0	10.43	0.012465	2.5	PASS		
GPRS850	190	VN	10	14.63	0.017482	2.5	PASS		
GPRS850	190	VN	20	9.30	0.011114	2.5	PASS		
GPRS850	190	VN	30	19.95	0.023850	2.5	PASS		
GPRS850	190	VN	40	9.20	0.010999	2.5	PASS		
GPRS850	190	VN	50	29.32	0.035041	2.5	PASS		
GPRS850	251	VN	-30	11.49	0.013541	2.5	PASS		
GPRS850	251	VN	-20	6.75	0.007950	2.5	PASS		
GPRS850	251	VN	-10	14.56	0.017155	2.5	PASS		
GPRS850	251	VN	0	14.40	0.016965	2.5	PASS		
GPRS850	251	VN	10	14.95	0.017611	2.5	PASS		
GPRS850	251	VN	20	6.65	0.007836	2.5	PASS		



Issued:

GPRS850	251	VN	30	28.61	0.033701	2.5	PASS
GPRS850	251	VN	40	6.46	0.007607	2.5	PASS
GPRS850	251	VN	50	24.54	0.028908	2.5	PASS
EGPRS850	128	VN	-30	6.01	0.007286	2.5	PASS
EGPRS850	128	VN	-20	4.65	0.005641	2.5	PASS
EGPRS850	128	VN	-10	8.88	0.010772	2.5	PASS
EGPRS850	128	VN	0	3.78	0.004583	2.5	PASS
EGPRS850	128	VN	10	9.30	0.011282	2.5	PASS
EGPRS850	128	VN	20	9.10	0.011047	2.5	PASS
EGPRS850	128	VN	30	8.75	0.010616	2.5	PASS
EGPRS850	128	VN	40	8.49	0.010302	2.5	PASS
EGPRS850	128	VN	50	7.07	0.008579	2.5	PASS
EGPRS850	190	VN	-30	1.26	0.001505	2.5	PASS
EGPRS850	190	VN	-20	0.23	0.000270	2.5	PASS
EGPRS850	190	VN	-10	2.78	0.003319	2.5	PASS
EGPRS850	190	VN	0	2.23	0.002663	2.5	PASS
EGPRS850	190	VN	10	3.81	0.002003	2.5	PASS
		VN	20	5.07			
EGPRS850	190		-	-1.10	0.006059	2.5	PASS
EGPRS850	190	VN	30		-0.001312	2.5	PASS
EGPRS850	190	VN	40	3.29	0.003936	2.5	PASS
EGPRS850	190	VN	50	3.94	0.004708	2.5	PASS
EGPRS850	251	VN	-30	5.65	0.006656	2.5	PASS
EGPRS850	251	VN	-20	1.19	0.001407	2.5	PASS
EGPRS850	251	VN	-10	4.88	0.005744	2.5	PASS
EGPRS850	251	VN	0	5.26	0.006200	2.5	PASS
EGPRS850	251	VN	10	2.58	0.003043	2.5	PASS
EGPRS850	251	VN	20	6.33	0.007455	2.5	PASS
EGPRS850	251	VN	30	4.04	0.004755	2.5	PASS
EGPRS850	251	VN	40	1.03	0.001217	2.5	PASS
EGPRS850	251	VN	50	1.94	0.002282	2.5	PASS
GSM1900	512	VN	-30	17.50	0.009458	2.5	PASS
GSM1900	512	VN	-20	18.50	0.009999	2.5	PASS
GSM1900	512	VN	-10	20.57	0.011116	2.5	PASS
GSM1900	512	VN	0	24.50	0.013244	2.5	PASS
GSM1900	512	VN	10	15.43	0.008341	2.5	PASS
GSM1900	512	VN	20	5.42	0.002932	2.5	PASS
GSM1900	512	VN	30	14.82	0.008010	2.5	PASS
GSM1900	512	VN	40	7.75	0.004188	2.5	PASS
GSM1900	512	VN	50	15.95	0.008620	2.5	PASS
GSM1900	661	VN	-30	18.37	0.009772	2.5	PASS
GSM1900	661	VN	-20	20.57	0.010939	2.5	PASS
GSM1900	661	VN	-10	18.24	0.009703	2.5	PASS
GSM1900	661	VN	0	10.56	0.005616	2.5	PASS
GSM1900	661	VN	10	0.61	0.000326	2.5	PASS
GSM1900	661	VN	20	12.79	0.006801	2.5	PASS
GSM1900	661	VN	30	26.02	0.013842	2.5	PASS
GSM1900	661	VN	40	22.18	0.011798	2.5	PASS
GSM1900	661	VN	50	16.95	0.009016	2.5	PASS
GSM1900	810	VN	-30	34.03	0.017818	2.5	PASS
GSM1900	810	VN	-20	27.60	0.014454	2.5	PASS
GSM1900	810	VN	-10	26.31	0.013778	2.5	PASS
GSM1900	810	VN	0	19.66	0.010295	2.5	PASS
22	810	VN	10	34.00	0.017801	2.5	PASS
GSM1900							
GSM1900 GSM1900	810	VN	20	30.77	0.016111	2.5	PASS



GSM1900	810	VN	40	6.62	0.003466	2.5	PASS
GSM1900	810	VN	50	36.35	0.019035	2.5	PASS
GPRS1900	512	VN	-30	28.61	0.015461	2.5	PASS
GPRS1900	512	VN	-20	41.29	0.022318	2.5	PASS
GPRS1900	512	VN	-10	25.18	0.013611	2.5	PASS
GPRS1900	512	VN	0	25.86	0.013977	2.5	PASS
GPRS1900	512	VN	10	25.09	0.013559	2.5	PASS
GPRS1900	512	VN	20	50.98	0.027553	2.5	PASS
GPRS1900	512	VN	30	54.69	0.029560	2.5	PASS
GPRS1900	512	VN	40	49.88	0.026960	2.5	PASS
GPRS1900	512	VN	50	44.01	0.023784	2.5	PASS
GPRS1900	661	VN	-30	16.11	0.008569	2.5	PASS
GPRS1900	661	VN	-20	20.95	0.011145	2.5	PASS
GPRS1900	661	VN	-10	11.24	0.005976	2.5	PASS
GPRS1900	661	VN	0	2.07	0.001099	2.5	PASS
GPRS1900	661	VN	10	22.05	0.011729	2.5	PASS
GPRS1900	661	VN	20	37.94	0.020179	2.5	PASS
GPRS1900	661	VN	30	30.19	0.016057	2.5	PASS
GPRS1900	661	VN	40	21.66	0.011523	2.5	PASS
GPRS1900	661	VN	50	29.64	0.015765	2.5	PASS
GPRS1900	810	VN	-30	27.83	0.014572	2.5	PASS
GPRS1900	810	VN	-20	34.74	0.018190	2.5	PASS
GPRS1900	810	VN	-10	28.61	0.014978	2.5	PASS
GPRS1900	810	VN	0	29.90	0.015654	2.5	PASS
GPRS1900	810	VN	10	38.61	0.020219	2.5	PASS
GPRS1900	810	VN	20	47.23	0.024733	2.5	PASS
GPRS1900	810	VN	30	36.06	0.018883	2.5	PASS
GPRS1900	810	VN	40	30.96	0.016212	2.5	PASS
GPRS1900	810	VN	50	41.94	0.021960	2.5	PASS
EGPRS1900	512	VN	-30	5.49	0.002966	2.5	PASS
EGPRS1900	512	VN	-20	7.43	0.004013	2.5	PASS
EGPRS1900	512	VN	-10	-0.65	-0.000349	2.5	PASS
EGPRS1900	512	VN	0	8.10	0.004380	2.5	PASS
EGPRS1900	512	VN	10	6.91	0.003734	2.5	PASS
EGPRS1900	512	VN	20	11.17	0.006038	2.5	PASS
EGPRS1900	512	VN	30	14.37	0.007765	2.5	PASS
EGPRS1900	512	VN	40	12.37	0.006683	2.5	PASS
EGPRS1900	512	VN	50	7.72	0.004171	2.5	PASS
EGPRS1900	661	VN	-30	5.55	0.002954	2.5	PASS
EGPRS1900	661	VN	-20	-7.85	-0.004173	2.5	PASS
EGPRS1900	661	VN	-10	0.77	0.000412	2.5	PASS
EGPRS1900	661	VN	0	4.46	0.002370	2.5	PASS
EGPRS1900	661	VN	10	5.00	0.002662	2.5	PASS
EGPRS1900	661	VN	20	-3.62	-0.001923	2.5	PASS
EGPRS1900	661	VN	30	6.13	0.003263	2.5	PASS
EGPRS1900	661	VN	40	4.71	0.002507	2.5	PASS
EGPRS1900	661	VN	50	1.52	0.000807	2.5	PASS
EGPRS1900	810	VN	-30	-2.55	-0.001336	2.5	PASS
EGPRS1900	810	VN	-20	0.39	0.000203	2.5	PASS
EGPRS1900	810	VN	-10	-3.71	-0.001944	2.5	PASS
EGPRS1900	810	VN	0	-4.39	-0.002299	2.5	PASS
EGPRS1900	810	VN	10	1.61	0.000845	2.5	PASS
EGPRS1900	810	VN	20	-6.65	-0.003483	2.5	PASS
EGPRS1900	810	VN	30	-1.03	-0.000541	2.5	PASS
EGPRS1900	810	VN	40	6.65	0.003483	2.5	PASS

		Report No	.: TRE18	305016601	Issued: 20		18-06-01
EGPRS1900	810	VN	50	-4.65	-0.002434	2.5	PASS

-----End of the Report -----