

# FCC RADIO TEST REPORT FCC ID: 2AAE9CAPHG65

Product:Mobile PhoneTrade Mark:CellAllureModel No.:Amazing CFamily Model:N/AReport No.:STR210318003004EIssue Date:31 Mar, 2021

# **Prepared for**

GNJ Manufacturing Inc.

5811 West Hallandale Beach Blvd.West Park, FL 33023, Hallandale, Florida, United States

# Prepared by

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# **1 TEST RESULT CERTIFICATION**

Applicant's name:	GNJ Manufacturing Inc.
Address:	5811 West Hallandale Beach Blvd.West Park, FL 33023, Hallandale, Florida, United States
Manufacturer's Name:	GNJ Manufacturing Inc. china
Address:	4/F,Building A, No.45 Industrial Park, ZhongKai HiTech Zone, HuiZhou City, GuangDong Province, 516006.
Product description	
Product name:	Mobile Phone
Model and/or type reference:	Amazing C
Family Model:	N/A

## Measurement Procedure Used:

# APPLICABLE STANDARDS

APPLICABLE STANDARD/ TEST PROCEDURE	TEST RESULT	
47 CFR Part 2, Part 22H, Part 24E, Part 27L		
ANSI/TIA-603-E-2016	Complied	
FCC KDB 971168 D01 Power Meas License Digital Systems v03r01	Complied	
ANSI C63.26:2015		

This device described above has been tested by Shenzhen NTEK Testing Technology Co., Ltd., and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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The test results of this report relate only to the tested sample identified in this report.

Date of Test	:	18 Mar. 2021 ~30 Mar, 2021	
Testing Engineer	:	Aven lin	
		(Allen Liu)	
Technical Manager	:	Jasonches	
		(Jason Chen)	
Authorized Signatory	:	Great	
		(Alex Li)	

# NTEK北测 ACCREDITED Certificate #4298.01

2 SUMMARY OF TEST RESULTS									
FCC Part22, Subpart H/ FCC Part24, Subpart E, FCC Part27, Subpart L,									
KDB 971168 D01 Power Meas License Digital Systems v03r01       FCC Rule     Test Item     Verdict     Remark									
2.1046	Conducted Output Power	PASS							
24.232(d) 27.50(d)(5) KDB 971168 D01 Clause 5.7	Peak-to-Average Ratio	PASS							
2.1049 22.917(b) 24.238(b) KDB 971168 D01 Clause 4.2	Occupied Bandwidth	PASS							
2.1051 22.917(a) 24.238(a) 27.53(h) KDB 971168 D01 Clause 6	Band Edge	PASS							
22.913(a)(5) KDB 971168 D01 Clause 5.6	Effective Radiated Power	PASS							
24.232(c) 27.50(d)(4) KDB 971168 D01 Clause 5.6	Equivalent Isotropic Radiated Power	PASS							
2.1053 22.917(a) 24.238(a) 27.53(h) KDB 971168 D01 Clause 7	Field Strength of Spurious Radiation	PASS							
2.1055 22.355 24.235 27.54 KDB 971168 D01 Clause 9	Frequency Stability for Temperature & Voltage	PASS							
2.1051 22.917(a) 24.238(a) 27.53(h) KDB 971168 D01 Clause 6	Conducted Emission	PASS							

Remark:

1. "N/A" denotes test is not applicable in this Test Report.

2. All test items were verified and recorded according to the standards and without any deviation during the test.

 No modifications are made to the EUT during all test items.
This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.





# **3 FACILITIES AND ACCREDITATIONS**

# 3.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China.

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.26 and CISPR Publication 22.

## 3.2 LABORATORY ACCREDITATIONS AND LISTINGS

Site Description	
CNAS-Lab.	: The Certificate Registration Number is L5516.
IC-Registration	The Certificate Registration Number is 9270A.
	CAB identifier:CN0074
FCC- Accredited	Test Firm Registration Number: 463705.
	Designation Number: CN1184
A2LA-Lab.	The Certificate Registration Number is 4298.01
Name of Firm	: Shenzhen NTEK Testing Technology Co., Ltd.
Site Location	: 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang
	Street, Bao'an District, Shenzhen 518126 P.R. China.

## 3.3 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Measuring Uncertainty for a Level of Confidence of $95\%$ (U = $2Uc(y)$ )	2.5dB
2	Conducted Emission Test	±1.38dB
3	RF power, conducted	±0.16dB
4	Spurious emissions, conducted	±0.21dB
5	All emissions, radiated(<1G)	±4.68dB
6	All emissions, radiated(>1G)	±4.89dB
7	Temperature	±0.5°C
8	Humidity	±2%
9	Frequency error, conducted	±0.19 ppm



4	GENERAL DESCRIPTION OF EUT
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	Product Feature and Specification			
Equipment	Mobile Phone			
Trade Mark	CellAllure			
FCC ID 2AAE9CAPHG65				
Model No.	Amazing C			
Family Model	N/A			
Model Difference	N/A			
Operating Frequency	□   GSM850: TX824.2MHz~848.8MHz /RX869.2MHz~893.8MHz;     □   UMTS FDD Band V: TX826.4MHz~846.6MHz /RX871.4MHz~891.6MHz;     □   PCS1900: TX1850.2MHz~1909.8MHz /RX1930.2MHz~1989.8MHz;     □   UMTS FDD Band II: TX1852.4MHz~1907.6MHz /RX1932.4MHz~1987.6MHz;     □   UMTS-FDD Band IV: TX1710MHz~1755MHz /RX2110MHz~2155MHz			
Modulation Modulation MOdulation MOdulation MODULATION MODUL				
GPRS Class   Multi-Class12     Only 4 timeslots are used for GPRS				
Antenna Type	PIFA Antenna			
Antenna Gain	GSM850:-4.37 dBi; PCS1900:-2.87 dBi; Band V:-4.37 dBi; Band II:-2.87 dBi; Band IV:-3.08 dBi			
	DC supply: DC 3.8V/2800mAh from battery or DC 5V from Adapter.			
Power supply	Adapter supply: Model: 853-5010 Input: 100-240V~50/60Hz 150mA Output: 5.0V1A			
HW Version	J107_7731EMB_D3V1.0			
Firmware version	N/A			
SW Version	CellAllure_Amazing C_V001_20210322			

Note: Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual. The High Voltage 4.4V and Low Voltage 3.6V was declared by manufacturer, The EUT couldn't be operate normally with higher or lower voltage.



Revision History						
Report No.	Version	Description	Issued Date			
STR210318003004E	Rev.01	Initial issue of report	31 Mar, 2021			





# 5 DESCRIPTION OF TEST MODES

During the testing, the EUT was controlled via Rhode & Schwarz Digital Radio Communication Tester(CMU 200) to ensure max power transmission and proper modulation. Three channels (The low channel, the middle channel and the high channel) were chosen for testing on all frequency band.

Note: GSM/GPRS 850, GSM/GPRS 1900, HSDPA band II, HSUPA band II, RMC 12.2k band II, HSDPA band V, HSUPA band V, RMC 12.2k band V, HSDPA band IV, HSUPA band IV. RMC 12.2k HSDPA band IV, modes have been tested during the test. the worst condition (GSM850, GSM1900, RMC 12.2k) be recorded in the test report if no other modes test data.

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 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:

1. 30 MHz to 10th harmonic for GSM850/UMTS FDD Band V/ UMTS FDD Band  $\rm IV.$ 

2. 30 MHz to 10th harmonic for GSM1900/UMTS FDD Band II.

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	For Conducted Test Cases	For Radiated Test Cases			
GSM 850	GSM Link	GSM Link			
GSM 1900	GSM Link	GSM Link			
UMTS Band II	RMC 12.2Kbps Link	RMC 12.2Kbps Link			
UMTS Band V	RMC 12.2Kbps Link	RMC 12.2Kbps Link			
UMTS Band IV	RMC 12.2Kbps Link	RMC 12.2Kbps Link			

# Test Frequency and Channels:

Frequency Band	🖾 GSM 850		⊠GSM 1900		🛛 UMTS Band II		UMTS Band V	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
CH_H	251	848.8	810	1909.8	9538	1907.6	4233	846.6
CH_M	189	836.4	661	1880.0	9400	1880.0	4182	836.4
CH_L	128	824.2	512	1850.2	9262	1852.4	4132	826.4

Frequenc	🛛 UMTS Band IV				
y Band	Channel	Frequency (MHz)			
CH_H	1513	1752.6			
CH_M	1412	1732.4			
CH_L	1312	1712.4			

Note:

power control level

GSM850:5 GSM1900:0 WCDMA:Class 3



# 6 SETUP OF EQUIPMENT UNDER TEST

# 6.1 BLOCK DIAGRAM CONFIGURATION OF TEST SYSTEM

For Radiated Test Cases
EUT
For Conducted Output Dower
For Conducted Output Power
Measurement C1 C1
Instrument Attenuator EUT
For Peak-to Average Ratio, Occupied Bandwidth, Conducted Band edge and Conducted Spurious Emission
System Simulator
Power Divider
Spectrum Analyzer Attenuator EUT
C4
For Frequency Stability
Measurement Instrument Attenuator C5 EUT C6 DC Power
Instrument Instrument Source
Note: EUT built-in battery-powered, the battery is fully-charged.





# 6.2 SUPPORT EQUIPMENT

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note

Item	Cable Type	Shielded Type	Ferrite Core	Length
C-1	RF Cable	YES	NO	0.1m
C-2	RF Cable	YES	NO	0.1m
C-3	RF Cable	YES	NO	0.1m
C-4	RF Cable	YES	NO	0.2m
C-5	RF Cable	YES	NO	0.2m
C-6	DC Cable	NO	NO	1.0m

## Notes:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in [Length] column.
- (3) "YES" is means "shielded" "with core"; "NO" is means "unshielded" "without core".



#### 6.3 EQUIPMENTS LIST FOR ALL TEST ITEMS

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	MXA Signal Analyzer	Agilent	N9020A	MY49100060	2020.07.13	2021.07.12	1 year
2	Test Receiver	R&S	ESPI	101318	2020.05.11	2021.05.10	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2020.04.11	2021.04.10	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2020.05.11	2023.05.10	3 year
5	Horn Antenna	EM	EM-AH-10180	2011071402	2020.04.11	2021.04.10	1 year
6	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2020.11.19	2021.11.18	1 year
7	Amplifier	EM	EM-30180	060538	2020.07.13	2021.07.12	1 year
8	Loop Antenna	ARA	PLA-1030/B	1029	2020.05.11	2021.05.10	1 year
9	Power Meter	R&S	NRVS	100696	2020.07.13	2021.07.12	1 year
10	Power Sensor	R&S	URV5-Z4	0395.1619.05	2020.05.11	2021.05.10	1 year
11	Test Cable	N/A	R-01	N/A	2019.08.06	2022.08.05	3 year
12	Test Cable	N/A	R-02	N/A	2020.07.13	2021.07.12	3 year
13	Test Cable	N/A	R-03	N/A	2019.06.28	2022.06.27	3 year
14	Test Receiver	R&S	ESCI	101160	2020.05.11	2021.05.10	1 year
15	LISN	R&S	ENV216	101313	2020.05.11	2021.05.10	1 year
16	LISN	EMCO	3816/2	00042990	2020.05.11	2021.05.10	1 year
17	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2020.05.11	2021.05.10	1 year
18	Passive Voltage Probe	R&S	ESH2-Z3	100196	2020.04.11	2021.04.10	3 year
19	Test Cable	N/A	C01	N/A	2020.05.11	2023.05.10	3 year
20	Test Cable	N/A	C02	N/A	2020.05.11	2023.05.10	3 year
21	Test Cable	N/A	C03	N/A	2020.05.11	2021.05.10	1 year
22	Attenuator	MCE	24-10-34	BN9258	2020.05.11	2021.05.10	1 year
23	Spectrum Analyzer	agilent	e4440a	us44300399	2020.05.11	2021.05.10	1 year
24	test receiver	R&S	ESCI	a0304218	2020.05.11	2021.05.10	1 year
25	Communication Tester	R&S	CMU200	A0304247	2020.07.13	2021.07.12	1 year
26	Thermal Chamber	Ten Billion	TTC-B3C	TBN-960502	2020.05.11	2021.05.10	1 year
27	DC Power Source	N/A	PS-6005D	20170402923	2019.08.06	2022.08.05	3 year
28	PSG Analog Signal Generator	Agilent	E8257D	MY51110112	2020.07.13	2021.07.12	1 year
Note:	Each piece of ec	aulpment is sch	equied for calib	pration once a	vear except the	e Test Cable& I	DC Power

Note: Each piece of equipment is scheduled for calibration once a year except the Test Cable& DC Power Source which is scheduled for calibration every 3 years.



# 7 TEST REQUIREMENTS

# 7.1 FIELD STRENGTH OF SPURIOUS RADIATION

# 7.1.1 Applicable Standard

According to FCC KDB 971168 D01 v03r01 Section 5.8 and ANSI/TIA-603-E-2016 Section 2.2.12

# 7.1.2 Conformance Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $43 + 10 \log (P) dB$ . The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

# 7.1.3 Measuring Instruments

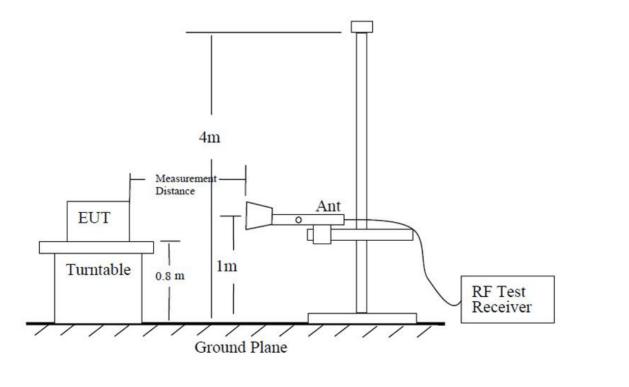
The Measuring equipment is listed in the section 6.3 of this test report.

# 7.1.4 Test Configuration

According to the ANSI/TIA-603-E-2016 test method, The Receiver or Spectrum was scanned from 9 KHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier that can be as high as 1910 MHz The resolution bandwidth is set as outlined in Part 24.238, Part 22.917,Part 27.53 The spectrum is scanned with the mobile station transmitting at carrier frequencies that pertain

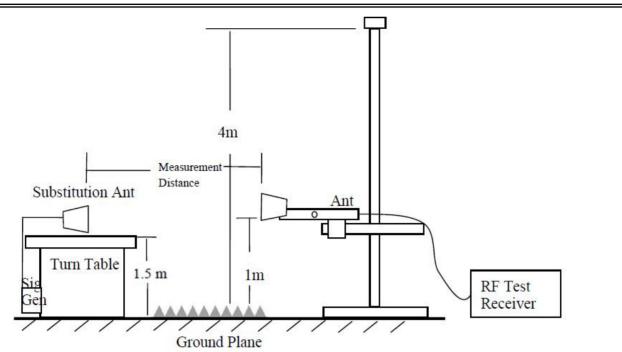
to low, mid and high channels of WCDMA Band II / WCDMA Band IV/WCDMA Band V / GSM 850/ GSM 1900.

# **TEST CONFIGURATION**



# NTEKJL

#### Report No.: STR210318003004E



ACCREDITED

Certificate #4298.01

# 7.1.5 Test Procedure

- 1. EUT was placed on a 0.8 meter(For frequency above 1G, EUT should be placed on 1.5m) 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 1.50 meter. 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, And the maximum value of the receiver should be recorded as (P<sub>r</sub>).
- 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 is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (SG Level) 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 (P<sub>r</sub>). The power of signal source (SG Level) 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 (Cable Loss) ,the Substitution Antenna Gain should be recorded after test. The measurement results are obtained as described below: Power(EIRP)= SG Level- Cable Loss+ Antenna Gain
- 6. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
- 7. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dBi.



# 7.1.6 Test Results

EUT:	Mobile Phone	Model No.:	Amazing C
Temperature:	20 °C	Relative Humidity:	48%
	GSM/GPRS 850/ GSM/GPRS 1900 UMTS band II/ UMTS band V/ UMTS band IV	Test By:	Allen Liu
	inter Englanden		

#### Radiated Spurious Emission

	GSM 850									
Frequency	SG Level	Cable Loss	Antenna Gain	Absolute Level	Limit	Over Limit	Polarity			
(MHz)	(dBm)	(dB)	(dB)	(dBm)	(dBm)	(dBm)				
		Test Re	sults for Cha	annel 128/82	4.2 MHz	-				
1648.4	-47.29	2.80	27.50	-22.59	-13	-9.59	Vertical			
1648.4	-45.13	2.80	27.50	-20.43	-13	-7.43	Horizontal			
2472.6	-45.99	2.91	27.80	-21.10	-13	-8.10	Vertical			
2472.6	-46.13	2.91	27.80	-21.24	-13	-8.24	Horizontal			
3296.8	-52.76	4.02	29.87	-26.91	-13	-13.91	Vertical			
3296.8	-53.48	4.02	29.87	-27.63	-13	-14.63	Horizontal			
131.2	-52.09	1.35	17.77	-35.67	-13	-22.67	Vertical			
116.8	-45.25	1.77	17.83	-29.19	-13	-16.19	Horizontal			
		Test Re	sults for Cha	annel 189/83	6.4 MHz					
1673.2	-46.46	2.80	27.48	-21.78	-13	-8.78	Vertical			
1673.2	-50.37	2.80	27.48	-25.69	-13	-12.69	Horizontal			
2509.8	-50.53	2.91	27.70	-25.74	-13	-12.74	Vertical			
2509.8	-52.7	2.91	27.70	-27.91	-13	-14.91	Horizontal			
3346.4	-45.26	4.02	29.82	-19.46	-13	-6.46	Vertical			
3346.4	-45.82	4.02	29.82	-20.02	-13	-7.02	Horizontal			
208.8	-46.72	1.44	15.26	-32.91	-13	-19.91	Vertical			
131.6	-47.23	1.51	17.23	-31.51	-13	-18.51	Horizontal			
		Test Re	sults for Cha	annel 251/84	8.8 MHz					
1697.6	-51.74	2.80	27.42	-27.12	-13	-14.12	Vertical			
1697.6	-50.37	2.80	27.42	-25.75	-13	-12.75	Horizontal			
2546.4	-48.53	2.91	27.68	-23.76	-13	-10.76	Vertical			
2546.4	-44.68	2.91	27.68	-19.91	-13	-6.91	Horizontal			
3395.2	-48.41	4.02	29.80	-22.63	-13	-9.63	Vertical			
3395.2	-46.62	4.02	29.80	-20.84	-13	-7.84	Horizontal			
95.0	-51.45	1.74	16.46	-36.73	-13	-23.73	Vertical			
208.3	-47.09	1.68	16.21	-32.56	-13	-19.56	Horizontal			

Remark:

We were tested all Configuration refer 3GPP TS134 121.
Absolute Level = SG Level- Cable Loss+ Antenna Gain

3. Over Limit= Absolute Level (dBm)-Limit(dBm)



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	GPRS 850								
Frequency	SG Level	Cable Loss	Antenna Gain	Absolute Level	Limit	Over Limit	Polarity		
(MHz)	(dBm)	(dB)	(dB)	(dBm)	(dBm)	(dBm)			
		Test Re	sults for Cha	annel 128/82	4.2 MHz	•			
1648.4	-46.65	2.80	27.50	-21.95	-13	-8.95	Vertical		
1648.4	-51.02	2.80	27.50	-26.32	-13	-13.32	Horizontal		
2472.6	-49.14	2.91	27.80	-24.25	-13	-11.25	Vertical		
2472.6	-45.7	2.91	27.80	-20.81	-13	-7.81	Horizontal		
3296.8	-48.02	4.02	29.87	-22.17	-13	-9.17	Vertical		
3296.8	-44.83	4.02	29.87	-18.98	-13	-5.98	Horizontal		
154.8	-47.42	1.35	16.91	-31.86	-13	-18.86	Vertical		
238.4	-46.71	1.59	17.39	-30.90	-13	-17.90	Horizontal		
		Test Re	sults for Cha	annel 189/83	6.4 MHz				
1673.2	-44.48	2.80	27.48	-19.80	-13	-6.80	Vertical		
1673.2	-53.09	2.80	27.48	-28.41	-13	-15.41	Horizontal		
2509.8	-49.15	2.91	27.70	-24.36	-13	-11.36	Vertical		
2509.8	-47.35	2.91	27.70	-22.56	-13	-9.56	Horizontal		
3346.4	-48.45	4.02	29.82	-22.65	-13	-9.65	Vertical		
3346.4	-51.53	4.02	29.82	-25.73	-13	-12.73	Horizontal		
110.1	-48.96	1.36	17.36	-32.96	-13	-19.96	Vertical		
148.2	-45.69	1.32	15.19	-31.83	-13	-18.83	Horizontal		
		Test Re	sults for Cha	annel 251/84	8.8 MHz				
1697.6	-51.7	2.80	27.42	-27.08	-13	-14.08	Vertical		
1697.6	-47.35	2.80	27.42	-22.73	-13	-9.73	Horizontal		
2546.4	-52.99	2.91	27.68	-28.22	-13	-15.22	Vertical		
2546.4	-52.57	2.91	27.68	-27.80	-13	-14.80	Horizontal		
3395.2	-48.81	4.02	29.80	-23.03	-13	-10.03	Vertical		
3395.2	-48.75	4.02	29.80	-22.97	-13	-9.97	Horizontal		
198.1	-46.45	1.46	17.68	-30.23	-13	-17.23	Vertical		
220.2	-53.71	1.31	15.79	-39.23	-13	-26.23	Horizontal		

#### Remark:



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			GSN	1900			
Frequency	SG Level	Cable Loss	Antenna Factor	Absolute Level	Limit	Over Limit	Polarity
(MHz)	(dBm)	(dB)	(dB)	(dBm)	(dBm)	(dBm)	
		Test Re	sults for Cha	nnel 512/18	50.2MHz		
3700.4	-48.85	4.04	33.51	-19.38	-13	-6.38	Vertical
3700.4	-49.05	4.04	33.51	-19.58	-13	-6.58	Horizontal
5550.6	-48.16	5.24	35.84	-17.56	-13	-4.56	Vertical
5550.6	-44.63	5.24	35.84	-14.03	-13	-1.03	Horizontal
105.3	-53.23	1.40	15.14	-39.49	-13	-26.49	Vertical
247.6	-51.38	1.45	17.54	-35.29	-13	-22.29	Horizontal
		Test Re	sults for Cha	innel 661/188	80.0MHz		
3760	-50.18	4.04	33.56	-20.66	-13	-7.66	Vertical
3760	-52.92	4.04	33.56	-23.40	-13	-10.40	Horizontal
5640	-52.6	5.24	35.91	-21.93	-13	-8.93	Vertical
5640	-52.39	5.24	35.91	-21.72	-13	-8.72	Horizontal
187.9	-46.57	1.74	16.40	-31.91	-13	-18.91	Vertical
86.7	-45.92	1.42	15.72	-31.61	-13	-18.61	Horizontal
		Test Re	sults for Cha	innel 810/190	09.8MHz		
3819.6	-46.67	4.04	34.00	-16.71	-13	-3.71	Vertical
3819.6	-44.76	4.04	34.00	-14.80	-13	-1.80	Horizontal
5729.4	-48.22	5.24	36.04	-17.42	-13	-4.42	Vertical
5729.4	-46.17	5.24	36.04	-15.37	-13	-2.37	Horizontal
217.3	-51.22	1.67	17.51	-35.38	-13	-22.38	Vertical
112.7	-45.12	1.58	17.73	-28.97	-13	-15.97	Horizontal

Remark:



# Report No.: STR210318003004E

			000	0 4000					
GPRS 1900									
Frequency	SG Level	Cable Loss	Antenna Factor	Absolute Level	Limit	Over Limit	Polarity		
(MHz)	(dBm)	(dB)	(dB)	(dBm)	(dBm)	(dBm)			
		Test Re	sults for Cha	innel 512/18	50.2MHz				
3700.4	-47.94	4.04	33.51	-18.47	-13	-5.47	Vertical		
3700.4	-49.18	4.04	33.51	-19.71	-13	-6.71	Horizontal		
5550.6	-44.63	5.24	35.84	-14.03	-13	-1.03	Vertical		
5550.6	-50.11	5.24	35.84	-19.51	-13	-6.51	Horizontal		
249.9	-44.27	1.66	17.06	-28.88	-13	-15.88	Vertical		
237.9	-47.87	1.34	15.54	-33.67	-13	-20.67	Horizontal		
		Test Re	sults for Cha	innel 661/188	80.0MHz				
3760	-48.3	4.04	33.56	-18.78	-13	-5.78	Vertical		
3760	-53.44	4.04	33.56	-23.92	-13	-10.92	Horizontal		
5640	-48.36	5.24	35.91	-17.69	-13	-4.69	Vertical		
5640	-44.31	5.24	35.91	-13.64	-13	-0.64	Horizontal		
168.5	-49.05	1.33	16.18	-34.20	-13	-21.20	Vertical		
249.4	-47.71	1.60	17.99	-31.32	-13	-18.32	Horizontal		
		Test Re	sults for Cha	innel 810/190	09.8MHz				
3819.6	-44.12	4.04	34.00	-14.16	-13	-1.16	Vertical		
3819.6	-53.82	4.04	34.00	-23.86	-13	-10.86	Horizontal		
5729.4	-45.24	5.24	36.04	-14.44	-13	-1.44	Vertical		
5729.4	-48.41	5.24	36.04	-17.61	-13	-4.61	Horizontal		
206.6	-46.29	1.65	17.27	-30.68	-13	-17.68	Vertical		
227.8	-47.42	1.39	15.49	-33.33	-13	-20.33	Horizontal		

Remark:



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WCDMA Band II								
Frequency	SG Level	Cable Loss	Antenna Factor	Absolute Level	Limit	Over Limit	Polarity	
(MHz)	(dBm)	(dB)	(dB)	(dBm)	(dBm)	(dBm)		
		Test Res	ults for Cha	nnel 9262/18	52.4MHz			
3704.8	-44.37	4.04	33.51	-14.90	-13	-1.90	Vertical	
3704.8	-44.94	4.04	33.51	-15.47	-13	-2.47	Horizontal	
5557.2	-48.16	5.24	35.84	-17.56	-13	-4.56	Vertical	
5557.2	-47.32	5.24	35.84	-16.72	-13	-3.72	Horizontal	
91.6	-50.15	1.66	17.47	-34.34	-13	-21.34	Vertical	
104.4	-49.48	1.38	16.18	-34.68	-13	-21.68	Horizontal	
		Test Re	sults for Cha	annel 9400/1	880MHz			
3760	-48.21	4.04	33.56	-18.69	-13	-5.69	Vertical	
3760	-49.12	4.04	33.56	-19.60	-13	-6.60	Horizontal	
5640	-53.48	5.24	35.91	-22.81	-13	-9.81	Vertical	
5640	-53.05	5.24	35.91	-22.38	-13	-9.38	Horizontal	
121.2	-45.39	1.38	16.34	-30.43	-13	-17.43	Vertical	
167.8	-49.41	1.34	16.03	-34.72	-13	-21.72	Horizontal	
		Test Res	ults for Cha	nnel 9538/19	07.6MHz			
3815.2	-53.14	4.04	34.00	-23.18	-13	-10.18	Vertical	
3815.2	-48.16	4.04	34.00	-18.20	-13	-5.20	Horizontal	
5722.8	-50.06	5.24	36.04	-19.26	-13	-6.26	Vertical	
5722.8	-53.93	5.24	36.04	-23.13	-13	-10.13	Horizontal	
135.9	-49.45	1.51	15.52	-35.44	-13	-22.44	Vertical	
247.5	-51.32	1.32	17.18	-35.47	-13	-22.47	Horizontal	

Remark:



			WCDMA	Band IV				
Frequency	SG Level	Cable Loss	Antenna Factor	Absolute Level	Limit	Over Limit	Polarity	
(MHz)	(dBm)	(dB)	(dB)	(dBm)	(dBm)	(dBm)		
Test Results for Channel 1312/1712.4MHz								
3424.8	-48.51	4.02	29.80	-22.73	-13	-9.73	Vertical	
3424.8	-46.01	4.02	29.80	-20.23	-13	-7.23	Horizontal	
5137.2	-53.75	5.24	35.84	-23.15	-13	-10.15	Vertical	
5137.2	-50.31	5.24	35.84	-19.71	-13	-6.71	Horizontal	
81.8	-46.48	1.66	15.00	-33.14	-13	-20.14	Vertical	
115.1	-50.44	1.58	16.20	-35.82	-13	-22.82	Horizontal	
		Test Res	ults for Cha	nnel 1412/17	32.4MHz			
3464.8	-51.3	4.03	30.00	-25.33	-13	-12.33	Vertical	
3464.8	-46.38	4.03	30.00	-20.41	-13	-7.41	Horizontal	
5197.2	-45.54	5.25	35.86	-14.93	-13	-1.93	Vertical	
5197.2	-47.94	5.25	35.86	-17.33	-13	-4.33	Horizontal	
246.8	-47.97	1.55	16.39	-33.12	-13	-20.12	Vertical	
101.0	-51.79	1.32	16.25	-36.86	-13	-23.86	Horizontal	
		Test Res	sults for Cha	nnel 1513/17	52.6MHz			
3505.2	-53.99	2.91	27.68	-29.22	-13	-16.22	Vertical	
3505.2	-53.72	2.91	27.68	-28.95	-13	-15.95	Horizontal	
5257.8	-46.56	5.26	35.86	-15.96	-13	-2.96	Vertical	
5257.8	-47.01	5.26	35.86	-16.41	-13	-3.41	Horizontal	
199.0	-49.6	1.33	15.78	-35.15	-13	-22.15	Vertical	
193.1	-47.59	1.47	17.42	-31.64	-13	-18.64	Horizontal	

Remark:

1. We were tested all Configuration refer 3GPP TS134 121.

2. Absolute Level = SG Level- Cable Loss+ Antenna Gain

3. Over Limit= Absolute Level (dBm)-Limit(dBm)

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			WCDMA	A Band V					
Frequency	SG Level	Cable Loss	Antenna Gain	Absolute Level	Limit	Over Limit	Polarity		
(MHz)	(dBm)	(dB)	(dB)	(dBm)	(dBm)	(dBm)	-		
Test Results for Channel 4233/846.6MHz									
1693.2	-49.53	2.80	27.50	-24.83	-13	-11.83	Vertical		
1693.2	-50.78	2.80	27.50	-26.08	-13	-13.08	Horizonta		
2539.8	-48.86	2.91	27.80	-23.97	-13	-10.97	Vertical		
2539.8	-51.8	2.91	27.80	-26.91	-13	-13.91	Horizonta		
3386.4	-49.6	4.02	29.87	-23.75	-13	-10.75	Vertical		
3386.4	-45.23	4.02	29.87	-19.38	-13	-6.38	Horizonta		
264.3	-44.4	1.75	15.49	-30.66	-13	-17.66	Vertical		
209.9	-48.23	1.37	16.58	-33.02	-13	-20.02	Horizonta		
Test Results for Channel 4182/836.4MHz									
1672.8	-45.62	2.80	27.48	-20.94	-13	-7.94	Vertical		
1672.8	-44.04	2.80	27.48	-19.36	-13	-6.36	Horizonta		
2509.2	-45.36	2.91	27.70	-20.57	-13	-7.57	Vertical		
2509.2	-53.05	2.91	27.70	-28.26	-13	-15.26	Horizonta		
3345.6	-49.99	4.02	29.82	-24.19	-13	-11.19	Vertical		
3345.6	-44.62	4.02	29.82	-18.82	-13	-5.82	Horizonta		
255.8	-46.99	1.68	17.84	-30.83	-13	-17.83	Vertical		
129.8	-49.24	1.49	16.34	-34.38	-13	-21.38	Horizonta		
		Test Re	sults for Cha	innel 4132/82	26.4MHz				
1652.8	-49.86	2.80	27.42	-25.24	-13	-12.24	Vertical		
1652.8	-50.82	2.80	27.42	-26.20	-13	-13.20	Horizonta		
2479.2	-48.82	2.91	27.68	-24.05	-13	-11.05	Vertical		
2479.2	-53.7	2.91	27.68	-28.93	-13	-15.93	Horizontal		
3305.6	-52.42	4.02	29.80	-26.64	-13	-13.64	Vertical		
3305.6	-48.23	4.02	29.80	-22.45	-13	-9.45	Horizonta		
135.6	-48.74	1.36	17.52	-32.58	-13	-19.58	Vertical		
190.6	-44.29	1.63	15.02	-30.90	-13	-17.90	Horizonta		

#### Remark:

We were tested all Configuration refer 3GPP TS134 121.
Absolute Level = SG Level- Cable Loss+ Antenna Gain

3. Over Limit= Absolute Level (dBm)-Limit(dBm)



# 7.2 EFFECTIVE RADIATED POWER AND EFFECTIVE ISOTROPIC RADIATED POWER

## 7.2.1 Applicable Standard

According to FCC KDB 971168 D01 v03r01 Section 5.2.1/ Section 5.2.2.2 and ANSI/TIA-603-E-2016 Section 2.2.17

### 7.2.2 Conformance Limit

The substitution method, in ANSI/TIA-603-E-2016, was used for ERP/EIRP measurement, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v03r01. The ERP of mobile transmitters must not exceed 7 Watts (Cellular Band) and the EIRP of mobile transmitters are limited to 2 Watts (PCS Band), and the EIRP of mobile transmitters are limited to 1 Watts (PCS Band)

#### 7.2.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

# 7.2.4 Test Configuration

Reference 7.1.4

## 7.2.5 Test Procedure

The measurements procedures specified in ANSI/TIA-603-E-2016 were applied. In an anechoic antenna test chamber, a half-wave dipole antenna for the frequency band of interest is placed at the reference centre of the chamber. An RF Signal source for the frequency band of interest is connected to the dipole with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A known (measured) power (Pin) is applied to the input of the dipole, and the power received (Pr) at the chamber's probe antenna is recorded.

The relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

ERP/EIRP = SGLevel -Pcl +Ga

where:

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as SGLevel, typically dBW or dBm);

SGLevel = Signal generator output power or PSD, in dBm or dBW;

Ga = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

Pcl = signal attenuation in the connecting cable between the transmitter and antenna, in dB.<sup>2</sup>

The EUT is substituted for the dipole at the reference centre of the chamber and a scan is performed to obtain the radiation pattern.

From the radiation pattern, the co-ordinates where the maximum antenna gain occurs are identified.

The EUT is then put into continuously transmitting mode at its maximum power level.

Power mode measurements are performed with the receiving antenna placed at the coordinates determined in Step 3 to determine the output power as defined in Rule 24.232 (b) and (c). The "reference path loss" from Step1 is added to this result.

This value is EIRP since the measurement is calibrated using a half-wave dipole antenna of known gain (2.15 dBi) and known input power (Pin).



ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dBi.

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

Substitution antenna and Receiving Antenna:

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Character	Note
1	Bilog Antenna	TESEQ	CBL6111D	31216	30MHz~2GHz	Receiving Antenna
2	Horn Antenna	EM	EM-AH-10180	2011071402	1GHz~18GHz	Receiving Antenna
3	Bilog Antenna	TESEQ	CBL6111D	31216	30MHz~2GHz	Substitution antenna
4	Horn Antenna	EM	EM-AH-10180	2011071402	1GHz~18GHz	Substitution antenna

Use the following spectrum analyzer settings:

	GSM/GPRS	UMTS band
Span	500KHz	10MHz
RBW	10KHz	300KHz
VBW	30KHz	1MHz
Detector	RMS	RMS
Trace	Average	Average
Average Type	Power	Power
Sweep Count	100	100



# 7.2.6 Test Results

EUT:	Mobile Phone	Model No.:	Amazing C
Temperature:	20 °C	Relative Humidity:	48%
Test Mode:	GSM/GPRS 850/ GSM/GPRS 1900 UMTS band II/ UMTS band V/ UMTS band IV	Test By:	Allen Liu

# Effective Radiated Power

	Radiated Power (ERP) for GSM850									
Frequency	Polarization	SG Level	Pcl	Ga Antenna Gain	Correction	ERP	ERP			
(MHz)		(dBm)	(dB)	(dB)	(dB)	(dBm)	(W)			
824.2	Н	13.96	2.11	23.84	2.15	33.54	2.259436			
836.4	Н	14.57	2.13	23.15	2.15	33.44	2.208005			
848.8	Н	14.69	2.13	23.06	2.15	33.47	2.223310			
824.2	V	13.98	2.11	23.11	2.15	32.83	1.918669			
836.4	V	14.66	2.13	23.07	2.15	33.45	2.213095			
848.8	V	14.42	2.13	23.25	2.15	33.39	2.182730			

	Radiated Power (ERP) for GPRS850									
Frequency	Polarization	SG Level	Pcl	Ga Antenna Gain	Correction	ERP	ERP			
(MHz)		(dBm)	(dB)	(dB)	(dB)	(dBm)	(W)			
824.2	Н	13.97	2.11	23.84	2.15	33.55	2.264644			
836.4	Н	14.56	2.13	23.15	2.15	33.43	2.202926			
848.8	Н	14.69	2.13	23.06	2.15	33.47	2.223310			
824.2	V	14.86	2.11	23.11	2.15	33.71	2.349633			
836.4	V	14.52	2.13	23.07	2.15	33.31	2.142891			
848.8	V	13.83	2.13	23.25	2.15	32.80	1.905461			



	Radiated Power (ERP) for UMTS band V									
Frequency	Polarization	SG Level	Pcl	Ga Antenna Gain	Correction	ERP	ERP			
(MHz)		(dBm)	(dB)	(dB)	(dB)	(dBm)	(W)			
826.4	Н	5.34	2.11	23.84	2.15	24.92	0.310456			
835	Н	5.96	2.13	23.15	2.15	24.83	0.304089			
846.6	Н	5.78	2.13	23.06	2.15	24.56	0.285759			
826.4	V	6.08	2.11	23.11	2.15	24.93	0.311172			
835	V	5.57	2.13	23.07	2.15	24.36	0.272898			
846.6	V	5.57	2.13	23.25	2.15	24.54	0.284446			

Note:

SG Level= Signal generator output Pcl= cable loss Ga= Antenna Gain Peak EIRP(dBm)= SGLevel -Pcl +Ga ERP(dBm)=EIRP-2.15



# Effective Isotropic Radiated Power

	Radiated Power (E.I.R.P) for GSM1900									
Frequency	Polarization	SG Level	Pcl	Ga Antenna Gain	EIRP	EIRP				
(MHz)		(dBm)	(dB)	(dB)	(dBm)	(W)				
1850.2	Н	7.68	3.76	28.24	32.16	1.644372				
1880	H	8.07	3.91	28.22	32.38	1.729816				
1909.8	H	8.09	3.93	28.20	32.36	1.721869				
1850.2	V	9.26	3.76	27.32	32.82	1.914256				
1880	V	9.34	3.91	27.33	32.76	1.887991				
1909.8	V	8.53	3.93	27.31	31.91	1.552387				

	Radiated Power (E.I.R.P) for GPRS1900								
Frequency	Polarization	SG Level	Pcl	Ga Antenna Gain	EIRP	EIRP			
(MHz)		(dBm)	(dB)	(dB)	(dBm)	(W)			
1850.2	Н	7.67	3.76	28.24	32.15	1.640590			
1880	Н	8.07	3.91	28.22	32.38	1.729816			
1909.8	Н	8.07	3.93	28.20	32.34	1.713957			
1850.2	V	8.70	3.76	27.32	32.26	1.682674			
1880	V	8.78	3.91	27.33	32.20	1.659587			
1909.8	V	9.44	3.93	27.31	32.82	1.914256			



	Radiated Power (E.I.R.P) for UMTS band II								
Frequency	Polarization	SG Level	Pcl	Ga Antenna Gain	EIRP	EIRP			
(MHz)		(dBm)	(dB)	(dB)	(dBm)	(W)			
1852.4	Н	1.24	3.76	28.24	25.72	0.373250			
1880	H	1.40	3.91	28.22	25.71	0.372392			
1907.6	Н	1.60	3.93	28.20	25.87	0.386367			
1852.4	V	1.68	3.76	27.32	25.24	0.334195			
1880	V	1.48	3.91	27.33	24.90	0.309030			
1907.6	V	1.67	3.93	27.31	25.05	0.319890			

	Radiated Power (E.I.R.P) for UMTS band $\mathrm{IV}$								
Frequency	Polarization	SG Level	Pcl	Ga Antenna Gain	EIRP	EIRP			
(MHz)		(dBm)	(dB)	(dB)	(dBm)	(W)			
1712.4	Н	0.06	3.13	27.63	24.56	0.285759			
1732.4	H	0.26	3.27	27.61	24.60	0.288403			
1752.6	H	0.36	3.30	27.60	24.66	0.292415			
1712.4	V	0.39	3.13	27.63	24.89	0.308319			
1732.4	V	-0.14	3.27	27.61	24.20	0.263027			
1752.6	V	0.59	3.30	27.60	24.89	0.308319			

Note:

SG Level= Signal generator output Pcl= cable loss Ga= Antenna Gain Peak EIRP(dBm)= SGLevel –Pcl+Ga.



# 7.3 CONDUCTED OUTPUT POWER

## 7.3.1 Applicable Standard

According to FCC Part 2.1046 and FCC Part 22.913(a)(2) and FCC Part 24.232(c) and FCC KDB 971168 D01 v03r01 Section 5.2

## 7.3.2 Conformance Limit

Extend coverage on a secondary basis into cellular unserved areas, as those areas are defined in §22.949, the ERP of base transmitters and cellular repeaters of such systems must not exceed 1000 Watts. The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts(38.5dBm).

Mobile and portable stations are limited to 2 watts (33dBm)EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

#### 7.3.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

#### 7.3.4 Test Setup

Please refer to Section 6.1 of this test report.

### 7.3.5 Test Procedure

Connect the EUT to Universal Radio Communication Tester CMU200 or CMU500 via the antenna connector. A call is set up by the SS according to the generic call set up procedure on a channel with ARFCN in the ARFCN range, power control level set to Max power. The frequency band is set as selected frequency, The RF output of the transmitter was connected to base station simulator.

Set EUT at maximum average power by base station simulator.

Set RBW = 1-5% of the OBW, not to exceed 1 MHz.

Set VBW ≥ 3 × RBW.

Number of points in sweep  $\geq$  2 × span / RBW. (This gives bin-to-bin spacing  $\leq$  RBW/2, so that narrowband signals are not lost between frequency bins.)

Sweep time = auto.

Detector = RMS (power averaging).

Set sweep trigger to "free run".

Trace average at least 100 traces in power averaging (i.e., RMS) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the on and off periods of the transmitter.

Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add 10 log (1/0.25) = 6 dB if the duty cycle is a constant 25%.

Measure lowest, middle, and highest channels for each bandwidth and different modulation. Measure and record the results in the test report.



# 7.3.6 Test Results

EUT:	Mobile Phone	Model No.:	Amazing C
Temperature:	20 °C	Relative Humidity:	48%
Test Mode:	GSM/GPRS 850/ GSM/GPRS 1900 UMTS band II/ UMTS band V/ UMTS band IV	Test By:	Allen Liu

Test data reference attachment



# 7.4 FREQUENCY STABILITY

#### 7.4.1 Applicable Standard

According to FCC Part 2.1055 and FCC Part 22.355 and FCC Part 24.235 and FCC KDB 971168 D01 Section 9.0

#### 7.4.2 Conformance Limit

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within  $\pm 0.00025\%$  ( $\pm 2.5$ ppm) of the center frequency.

#### 7.4.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

#### 7.4.4 Test Setup

Please refer to Section 6.1 of this test report.

#### 7.4.5 Test Procedure

Connect the EUT to Universal Radio Communication Tester CMU200 or CMU500 via the antenna connector. A call is set up by the SS according to the generic call set up procedure on a channel with ARFCN in the ARFCN range, power control level set to Max power. MS TXPWR\_MAX\_CCH is set to the maximum value supported by the Power Class of the Mobile under test.

EUT was placed at temperature chamber and connected to an external power supply.

Temperature and voltage condition shall be tested to confirm frequency stability.

For Temperature Variation

- 1. The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.
- 2. The EUT was set up in the thermal chamber and connected with the system simulator.
- 3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
- 4. With power OFF, the temperature was raised in 10°C steps up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

For Voltage Variation

- 1. The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.
- 2. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator.
- 3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
- 4. The variation in frequency was measured for the worst case.



# 7.4.6 Test Results

EUT:	Mobile Phone	Model No.:	Amazing C
Temperature:	20 °C	Relative Humidity:	48%
Test Mode:	GSM/GPRS 850/ GSM/GPRS 1900 UMTS band II/ UMTS band V/ UMTS band IV	Test By:	Allen Liu
Results: PASS			

Frequency Error Against Voltage for GSM 850 band Mid CH		
Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
3.6	6.15	0.007353
3.8	9.53	0.011394
4.4	6.35	0.007592

Frequency Error Against Temperature for GSM 850 band Mid CH		
Temperature (°C)	Frequency Error (Hz)	Frequency Error (ppm)
-30	5.13	0.006133
-20	7.8	0.009326
-10	8.41	0.010055
0	6.14	0.007341
10	9.47	0.011322
20	8.96	0.010713
30	7.14	0.008537
40	8.9	0.010641
50	9.15	0.010940



Frequency Error Against Voltage for GPRS850 band Mid CH		
Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
3.6	6.42	0.007676
3.8	7.43	0.008883
4.4	6.33	0.007568

Frequency Error Against Temperature for GPRS850 band Mid CH		
Temperature (°C)	Frequency Error (Hz)	Frequency Error (ppm)
-30	5.31	0.006349
-20	7.19	0.008596
-10	7.49	0.008955
0	6.52	0.007795
10	6.14	0.007341
20	6.89	0.008238
30	6.94	0.008297
40	6.11	0.007305
50	11.61	0.013881

Note:

- 1. Normal Voltage = 3.8V; Battery End Point (BEP) = 3.6V; Maximum Voltage =4.4V
- 2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



Frequency Error Against Voltage for PCS 1900 band Mid CH		
Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
3.6	19.82	0.010543
3.8	16.32	0.008681
4.4	16.98	0.009032

Frequency Error Against Temperature for PCS 1900 band Mid CH		
Temperature (℃)	Frequency Error (Hz)	Frequency Error (ppm)
-30	17.93	0.009537
-20	20.98	0.011160
-10	18.31	0.009739
0	18.98	0.010096
10	19.97	0.010622
20	18.43	0.009803
30	20.66	0.010989
40	18.99	0.010101
50	21.12	0.011234

Frequency Error Against Voltage for GPRS1900 band Mid CH		
Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
3.6	20.09	0.010686
3.8	18.98	0.010096
4.4	18.81	0.010005

Frequency Error Against Temperature for GPRS1900 band Mid CH		
Temperature (°C)	Frequency Error (Hz)	Frequency Error (ppm)
-30	22.31	0.011867
-20	16.01	0.008516
-10	20.86	0.011096
0	18.4	0.009787
10	16.39	0.008718
20	20.25	0.010771
30	17.7	0.009415
40	18.35	0.009761
50	21.03	0.011186



Frequency Error Against Voltage for UMTS band II Mid CH		
Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)
3.6	-18.31	-0.009739
3.8	-18.8	-0.010000
4.4	-15.83	-0.008420

Frequency Error Against Temperature for UMTS band II Mid CH		
Temperature (℃)	Frequency Error (Hz)	Frequency Error (ppm)
-30	-17.02	-0.009053
-20	-17.9	-0.009521
-10	-16.18	-0.008606
0	-17.5	-0.009309
10	-15.68	-0.008340
20	-16.86	-0.008968
30	-17.12	-0.009106
40	-19.9	-0.010585
50	-21.61	-0.011495

Frequency Error Against Voltage for UMTS band V Mid CH			
Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)	
3.6	-17.25	-0.020624	
3.8	-19.78	-0.023649	
4.4	-17.95	-0.021461	

Frequency Error Against Temperature for UMTS band V Mid CH				
Temperature (°C)	Frequency Error (Hz)	Frequency Error (ppm)		
-30	-19.54	-0.023362		
-20	-16.34	-0.019536		
-10	-18.95	-0.022657		
0	-17	-0.020325		
10	-19.2	-0.022956		
20	-19.55	-0.023374		
30	-19.65	-0.023494		
40	-19.13	-0.022872		
50	-24.25	-0.028993		



Frequency Error Against Voltage for UMTS band IV Mid CH				
Voltage (V)	Frequency Error (Hz)	Frequency Error (ppm)		
3.4	-18.09	-0.010442		
3.8	-12.5	-0.007215		
4.4	-19.34	-0.011164		

Frequency Error Against Temperature for UMTS band IV Mid CH				
Temperature (℃)	Frequency Error (Hz)	Frequency Error (ppm)		
-30	-6.16	-0.003556		
-20	-14.14	-0.008162		
-10	-10.79	-0.006228		
0	-8.97	-0.005178		
10	-15.03	-0.008676		
20	-15.79	-0.009115		
30	-18.71	-0.010800		
40	-19.06	-0.011002		
50	-22.57	-0.013028		

Note:

1.

Normal Voltage = 3.8V; Battery End Point (BEP) = 3.6V; Maximum Voltage =4.4V The frequency fundamental emissions stay within the authorized frequency block based on the 2. frequency deviation measured is small.



# 7.5 PEAK-TO-AVERAGE RATIO

### 7.5.1 Applicable Standard

According to FCC 22.913 and FCC 24.232(d) and FCC KDB 971168 D01 Section 5.7.1

### 7.5.2 Conformance Limit

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

#### 7.5.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

#### 7.5.4 Test Setup

Please refer to Section 6.1 of this test report.

#### 7.5.5 Test Procedure

The EUT was connected to Spectrum Analyzer and Base Station via power divider.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

Set the number of counts to a value that stabilizes the measured CCDF curve.

Set the measurement interval to 1 ms.

Record the maximum PAPR level associated with a probability of 0.1%.

a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;

b) Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;

c) Set the number of counts to a value that stabilizes the measured CCDF curve;

d) Set the measurement interval as follows:

1) for continuous transmissions, set to 1 ms,

2) for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.

e) Record the maximum PAPR level associated with a probability of 0.1%.

#### 7.5.6 Test Results

EUT:	Mobile Phone	Model No.:	Amazing C		
Temperature:	<b>20</b> ℃	Relative Humidity:	48%		
Test Mode:	GSM/GPRS 850/ GSM/GPRS 1900 UMTS band II/ UMTS band V/ UMTS band IV	Test By:	Allen Liu		
Results: PASS					



# 7.6 26DB BANDWIDTH AND 99% OCCUPIED BANDWIDTH

#### 7.6.1 Applicable Standard

According to FCC Part 2.1049 and FCC Part 22H and FCC Part 24E and FCC KDB 971168 D01 Section 4.0

#### 7.6.2 Conformance Limit

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

#### 7.6.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

#### 7.6.4 Test Setup

Please refer to Section 6.1 of this test report.

#### 7.6.5 Test Procedure

The testing follows FCC KDB 971168 v03r01 Section 4.0.

The EUT was connected to Spectrum Analyzer and Base Station via power divider.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.

The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.

Set the detection mode to peak, and the trace mode to max hold.

Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.

(this is the reference value)

Determine the "-26 dB down amplitude" as equal to (Reference Value – X).

Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the "–X dB down amplitude" determined in step 6. If a marker is below this "-X dB down amplitude" value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.

Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.



## 7.6.6 Test Results

EUT:	Mobile Phone	Model No.:	Amazing C
Temperature:	<b>20</b> ℃	Relative Humidity:	48%
Test Mode:	GSM/GPRS 850/ GSM/GPRS 1900 UMTS band II/ UMTS band V/ UMTS band IV	Test By:	Allen Liu
Results: PASS			

Test data reference attachment



## 7.7 CONDUCTED BAND EDGE

### 7.7.1 Applicable Standard

According to FCC Part 2.1051 and FCC Part 22.917(a) and 24.238(a) and FCC KDB 971168 D01 Section6.0

### 7.7.2 Conformance Limit

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least  $43 + 10 \log (P) dB$ .

#### 7.7.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

## 7.7.4 Test Setup

Please refer to Section 6.1 of this test report.

## 7.7.5 Test Procedure

The testing follows FCC KDB 971168 v03r01 Section 6.0.

The EUT was connected to Spectrum Analyzer and Base Station via power divider.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.

The path loss was compensated to the results for each measurement.

The band edges of low and high channels for the highest RF powers were measured.

The RF fundamental frequency should be excluded against the limit line in the operating frequency band. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

- = P(W) [43 + 10log(P)] (dB)
- $= [30 + 10\log(P)] (dBm) [43 + 10\log(P)] (dB)$
- = -13dBm.

#### 7.7.6 Test Results

EUT:	Mobile Phone	Model No.:	Amazing C
Temperature:	<b>20</b> ℃	Relative Humidity:	48%
Test Mode:	GSM/GPRS 850/ GSM/GPRS 1900 UMTS band II/ UMTS band V/ UMTS band IV	Test By:	Allen Liu
Results: PASS			

Test data reference attachment



## 7.8 CONDUCTED SPURIOUS EMISSION AT ANTENNA TERMINAL

#### 7.8.1 Applicable Standard

According to FCC Part 2.1051 and FCC Part 22.917(a) and Part 24.238(a) and FCC KDB 971168 D01 Section6.0

#### 7.8.2 Conformance Limit

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least  $43 + 10 \log (P) dB$ .

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

#### 7.8.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

#### 7.8.4 Test Setup

Please refer to Section 6.1 of this test report.

#### 7.8.5 Test Procedure

The testing follows FCC KDB 971168 v03r01 Section 6.0.

The EUT was connected to Spectrum Analyzer and Base Station via power divider.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.

The path loss was compensated to the results for each measurement.

The middle channel for the highest RF power within the transmitting frequency was measured.

The conducted spurious emission for the whole frequency range was taken.

The RF fundamental frequency should be excluded against the limit line in the operating frequency band. The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power P(Watts)

= P(W) - [43 + 10log(P)] (dB)

= [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

= -13dBm.

#### 7.8.6 Test Results

EUT:	Mobile Phone	Model No.:	Amazing C
Temperature:	<b>20</b> ℃	Relative Humidity:	48%
Test Mode:	GSM/GPRS 850/ GSM/GPRS 1900 UMTS band II/ UMTS band V/ UMTS band IV	Test By:	Allen Liu
Results: PASS			

Test data reference attachment



## 8 TEST RESULTS

## 8.1 CONDUCTED OUTPUT POWER

Band	Channel	Frequency (MHz)	Power (dBm)	Verdict
WCDMA Band2	9262	1852.4	23.30	PASS
WCDMA Band2	9400	1880	23.14	PASS
WCDMA Band2	9538	1907.6	23.08	PASS
WCDMA Band4	1312	1712.4	22.92	PASS
WCDMA Band4	1413	1732.6	23.15	PASS
WCDMA Band4	1513	1752.6	23.10	PASS
WCDMA Band5	4132	826.4	23.36	PASS
WCDMA Band5	4182	836.4	23.32	PASS
WCDMA Band5	4233	846.6	23.17	PASS
GSM1900	512	1850.2	30.00	PASS
GSM1900	661	1880	29.71	PASS
GSM1900	810	1909.8	29.27	PASS
GSM850	128	824.2	32.30	PASS
GSM850	189	836.4	32.21	PASS
GSM850	251	848.8	32.13	PASS



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## 8.2 PEAK-TO-AVERAGE RATIO

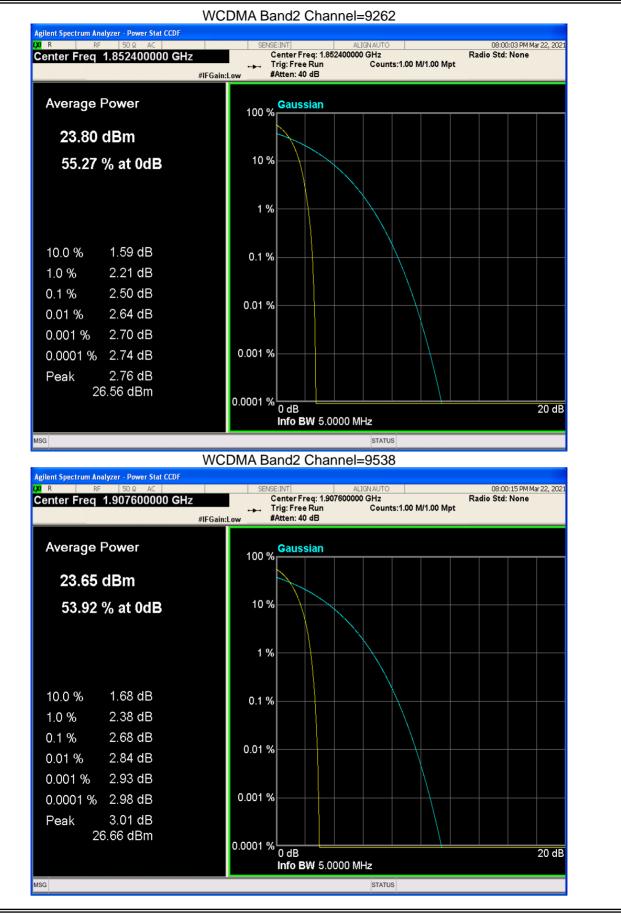
0.2 I LAN-IO-A					
Band	Channel	Frequency (MHz)	Result (dB)	high Limit (dB)	Verdict
WCDMA Band2	9262	1852.4	2.50	13	PASS
WCDMA Band2	9400	1880	2.96	13	PASS
WCDMA Band2	9538	1907.6	2.68	13	PASS
WCDMA Band4	1312	1712.4	2.91	13	PASS
WCDMA Band4	1413	1732.6	2.99	13	PASS
WCDMA Band4	1513	1752.6	3.01	13	PASS
WCDMA Band5	4132	826.4	2.85	13	PASS
WCDMA Band5	4182	836.4	3.00	13	PASS
WCDMA Band5	4233	846.6	2.91	13	PASS
GSM1900	512	1850.2	2.69	13	PASS
GSM1900	661	1880	2.68	13	PASS
GSM1900	810	1909.8	2.67	13	PASS
GSM850	128	824.2	2.64	13	PASS
GSM850	189	836.4	2.64	13	PASS
GSM850	251	848.8	2.66	13	PASS

#### Agilent Spectrum Analyzer - Power Stat CCDF XI R 08:00:09 PM Mar 22, 202: Center Freq 1.880000000 GHz Center Freq: 1.880000000 GHz Radio Std: None Trig: Free Run #Atten: 40 dB Counts:1.00 M/1.00 Mpt -#IFGain:Low Average Power Gaussian 100 % 23.52 dBm 10 % 53.90 % at 0dB 1% 10.0 % 1.70 dB 0.1 % 1.0 % 2.54 dB 0.1 % 2.96 dB 0.01 % 3.16 dB 0.01 % 0.001 % 3.26 dB 0.001 % 0.0001 % 3.30 dB Peak 3.31 dB 26.83 dBm 0.0001 % 0 dB 20 dB Info BW 5.0000 MHz MSG STATUS

#### WCDMA Band2 Channel=9400

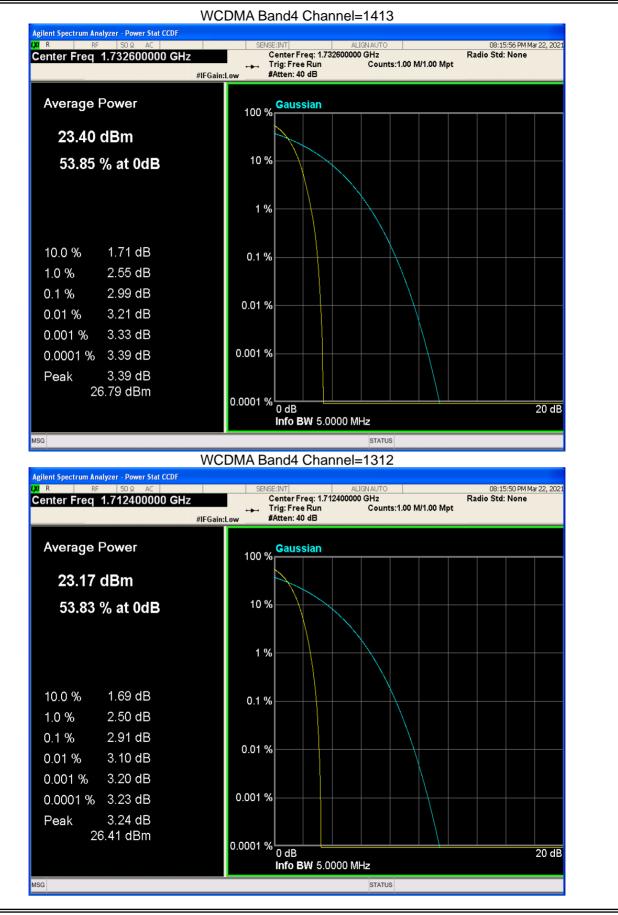






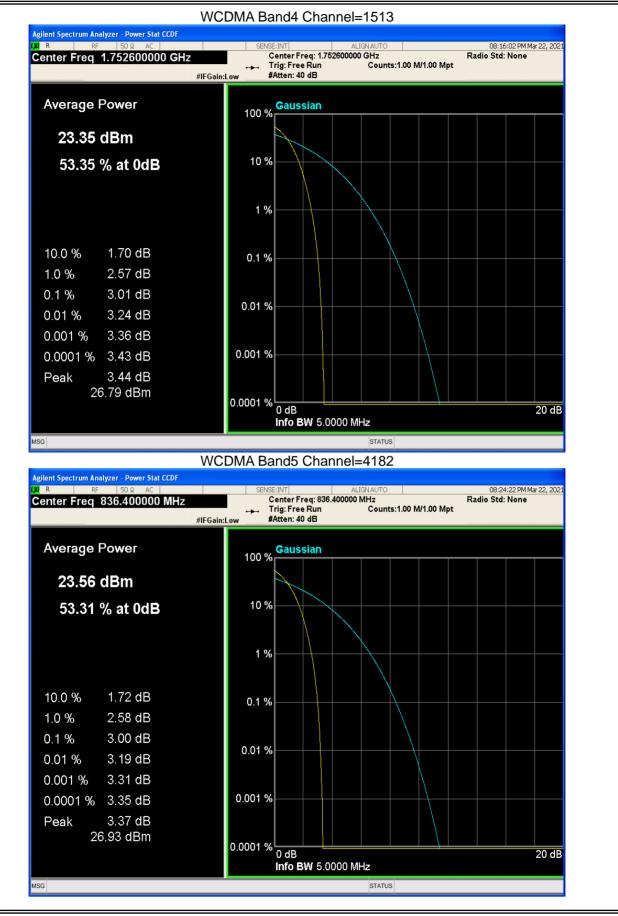
Version.1.3







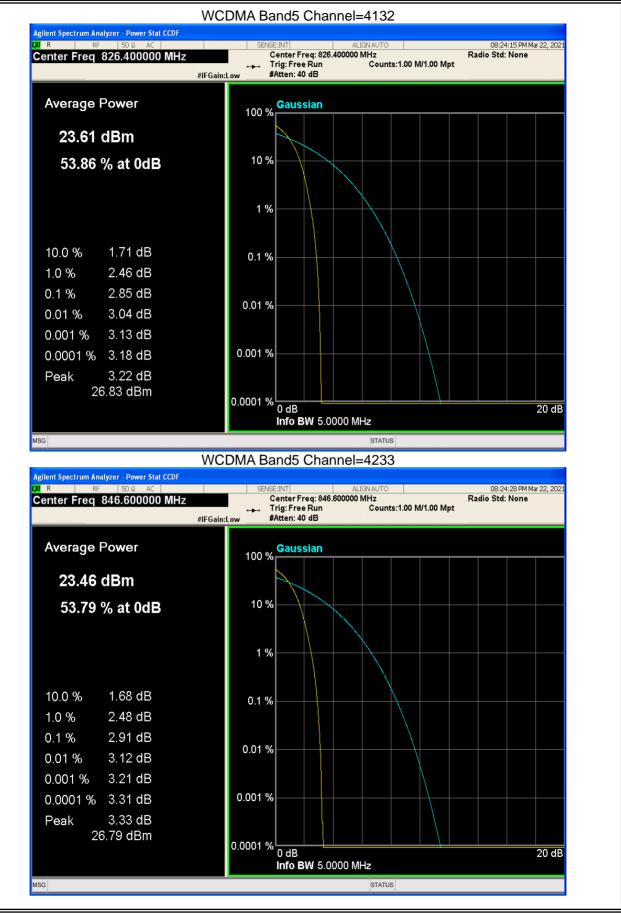
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Version.1.3



#### Report No.: STR210318003004E



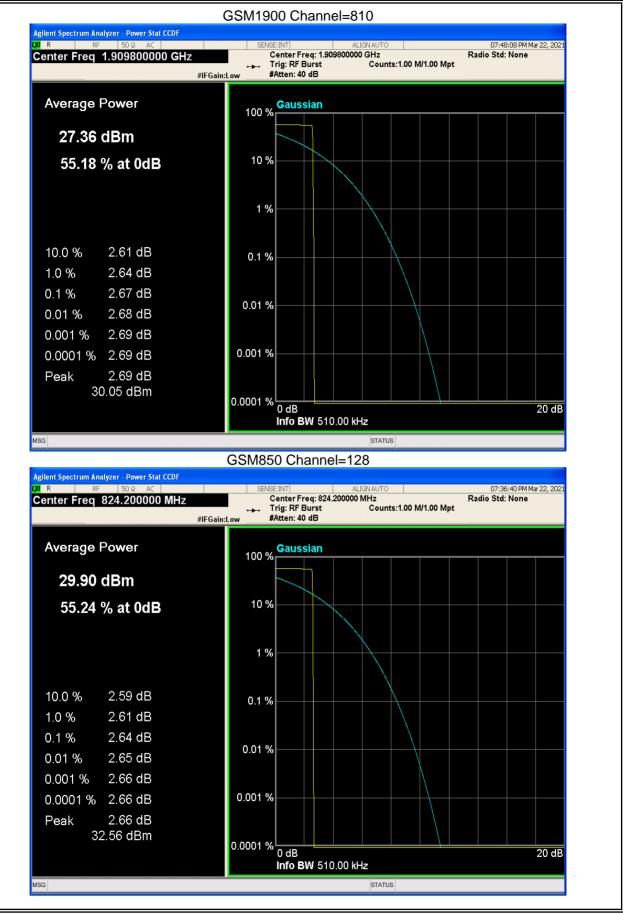
Version.1.3







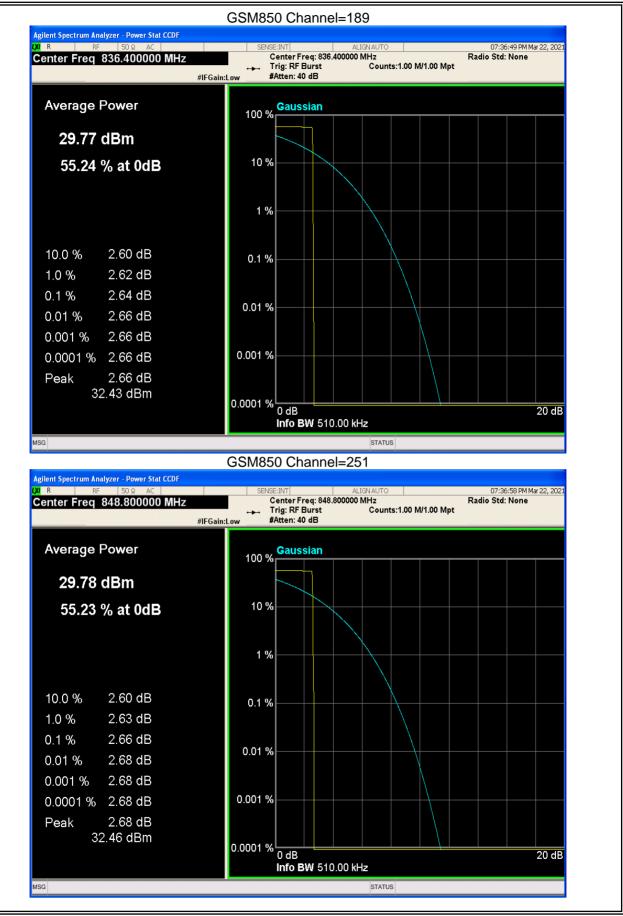
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Version.1.3



#### Report No.: STR210318003004E



Version.1.3



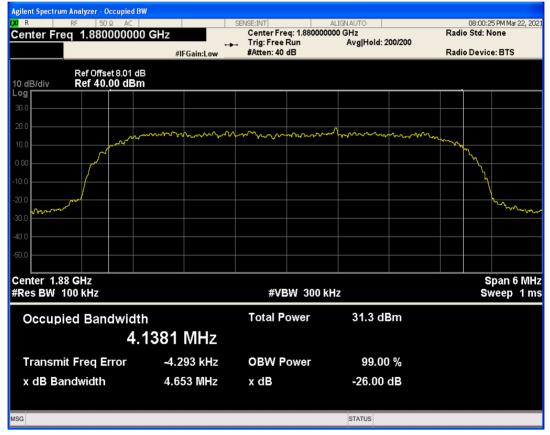
## 8.3 OCCUPIED BANDWIDTH

		<u></u>			
Band	Channel	Frequency (MHz)	99% OBW (kHz)	-26dB EBW (kHz)	Verdict
WCDMA Band2	9262	1852.4	4161.796	4682.390	PASS
WCDMA Band2	9400	1880	4138.101	4653.190	PASS
WCDMA Band2	9538	1907.6	4134.433	4663.905	PASS
WCDMA Band4	1312	1712.4	4133.366	4680.177	PASS
WCDMA Band4	1413	1732.6	4157.531	4678.919	PASS
WCDMA Band4	1513	1752.6	4140.540	4666.790	PASS
WCDMA Band5	4132	826.4	4160.597	4657.695	PASS
WCDMA Band5	4182	836.4	4142.537	4659.295	PASS
WCDMA Band5	4233	846.6	4159.634	4669.835	PASS
GSM1900	512	1850.2	249.511	312.639	PASS
GSM1900	661	1880	245.576	305.453	PASS
GSM1900	810	1909.8	251.833	320.915	PASS
GSM850	128	824.2	244.346	319.847	PASS
GSM850	189	836.4	241.851	309.710	PASS
GSM850	251	848.8	241.691	302.117	PASS

ACCREDITED

Certificate #4298.01

#### WCDMA Band2 Channel=9400















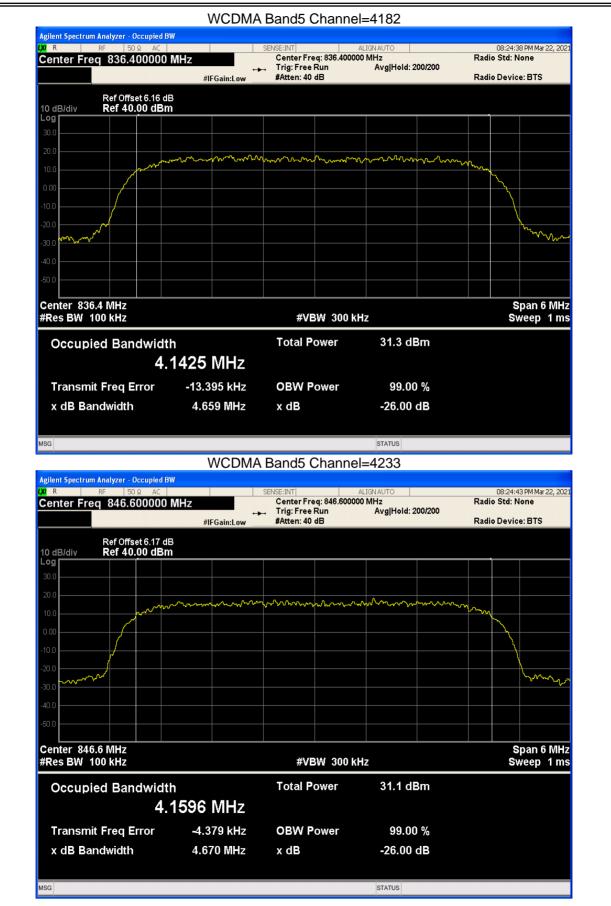






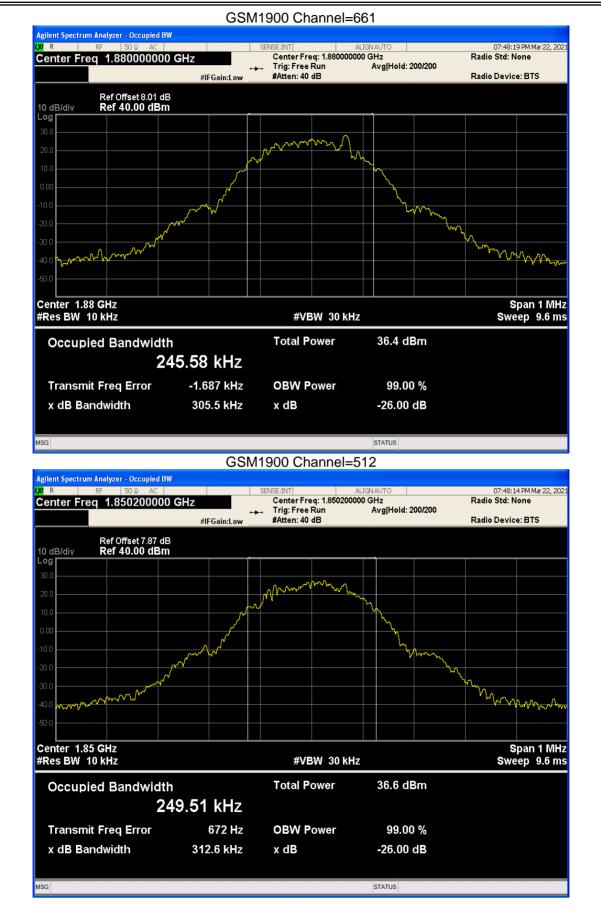






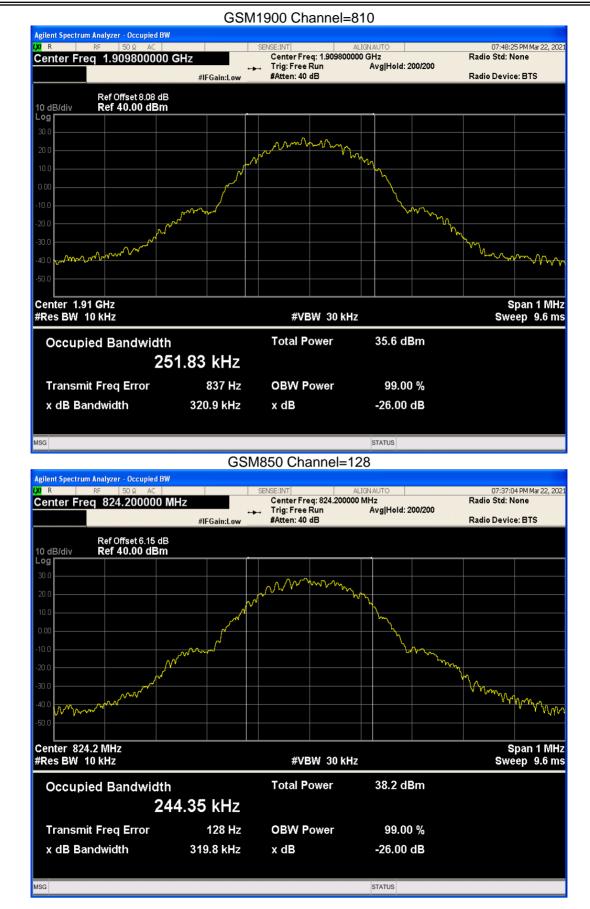


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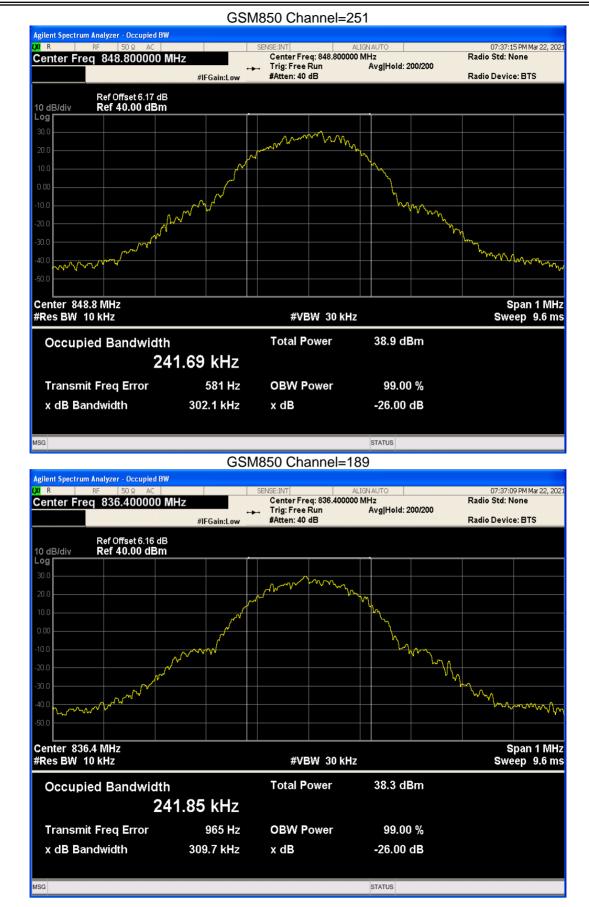




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## 8.4 BAND EDGE

0.4 DANDEDGE						
Band	Channel	Frequency	Spur Freq	Spur Level	Limit	Verdict
		(MHz)	(MHz)	(dBm)	(dBm)	
WCDMA Band2	9262	1852.4	1850.00	-22.44	-13	PASS
WCDMA Band2	9538	1907.6	1910.00	-25.13	-13	PASS
WCDMA Band4	1312	1712.4	1710.00	-24.65	-13	PASS
WCDMA Band4	1513	1752.6	1755.00	-25.95	-13	PASS
WCDMA Band5	4132	826.4	824.00	-23.10	-13	PASS
WCDMA Band5	4233	846.6	849.00	-24.83	-13	PASS
GSM1900	512	1850.2	1849.98	-28.70	-13	PASS
GSM1900	810	1909.8	1910.02	-26.57	-13	PASS
GSM850	128	824.2	823.98	-26.85	-13	PASS
GSM850	251	848.8	849.01	-27.61	-13	PASS

ACCREDITED

Certificate #4298.01

#### WCDMA Band2 Channel=9538



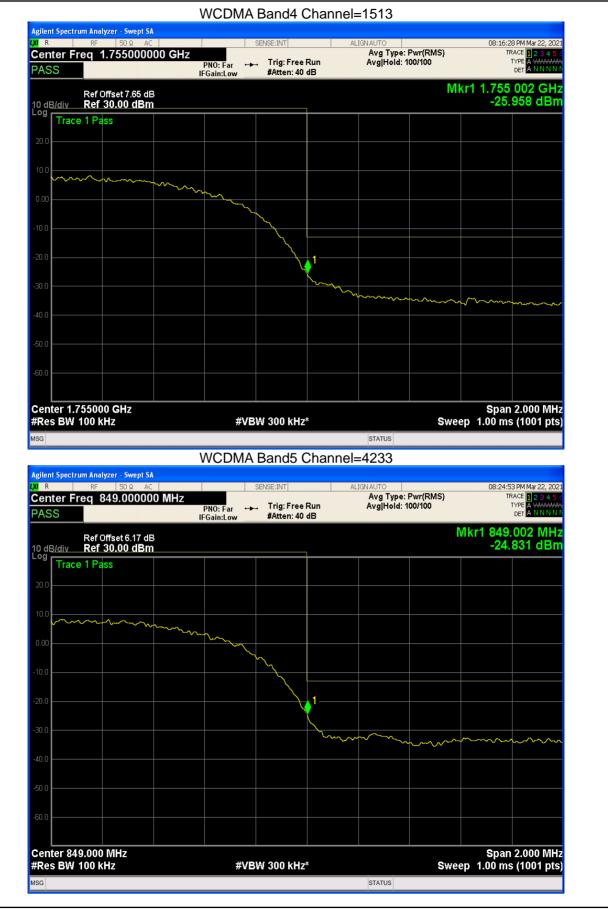












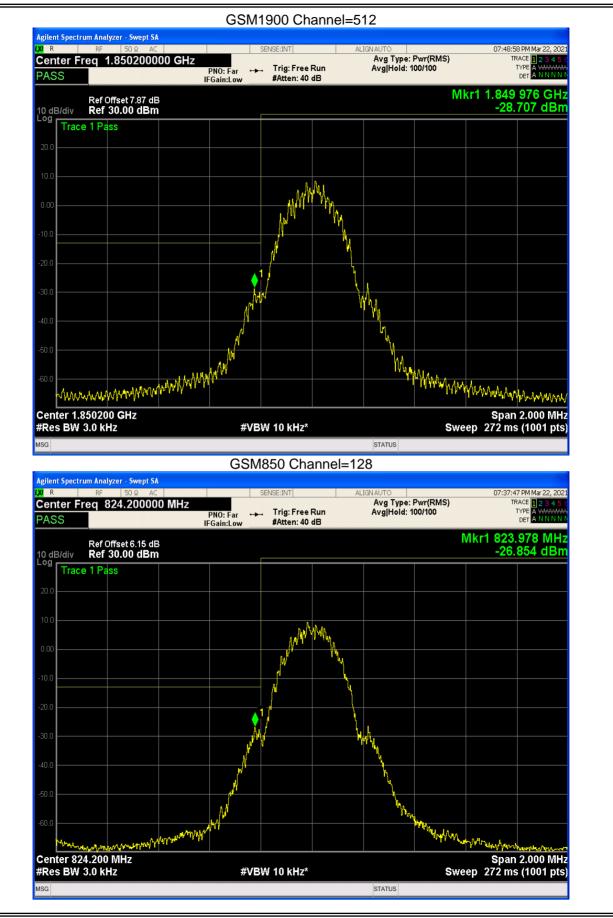






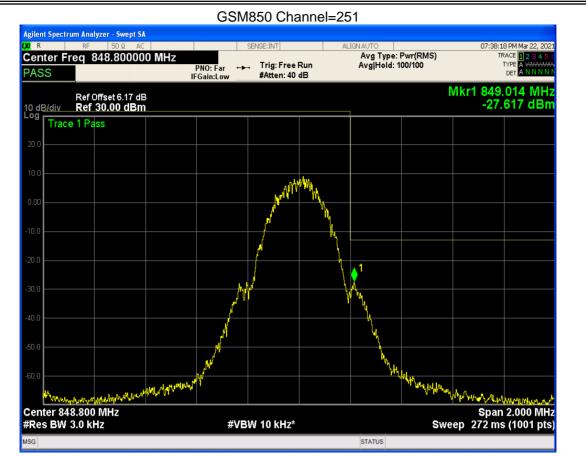










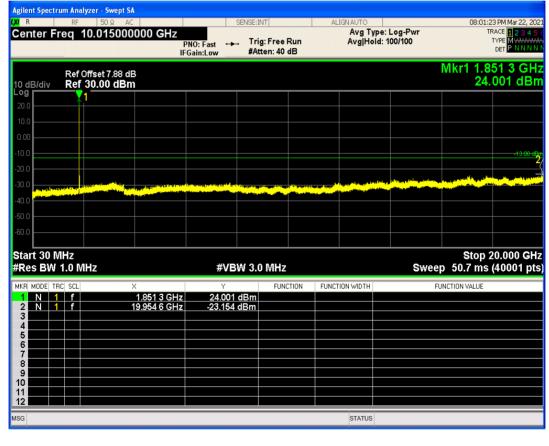




#### 8.5 OUT-OF-BAND EMISSIONS

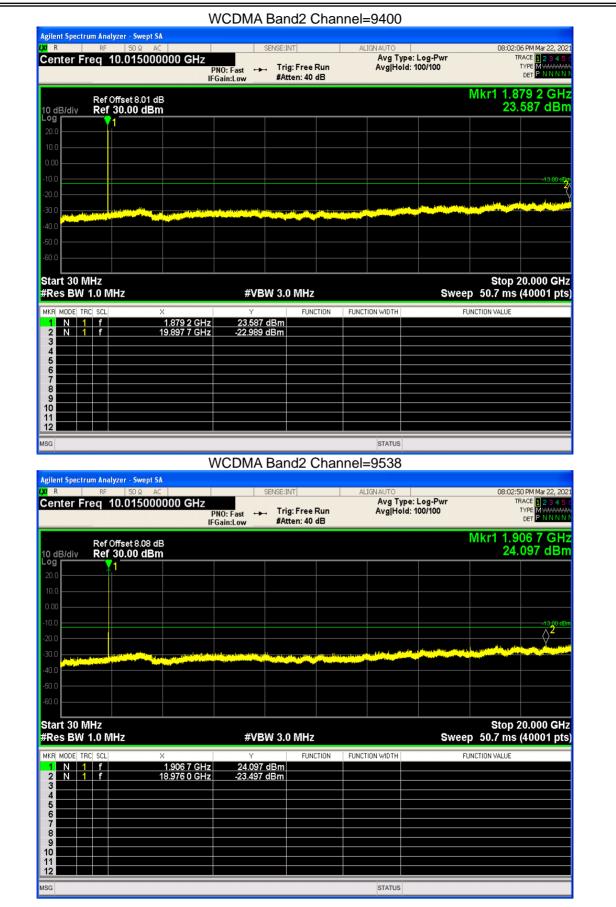
8.5 OUT-OF-BA	ND EMISSI	ONS				
Band	Channel	Frequency (MHz)	Spur Freq (MHz)	Spur Level	Limit	Verdict
				(dBm)	(dBm)	
WCDMA Band2	9262	1852.4	19954.57	-23.15	-13	PASS
WCDMA Band2	9400	1880	19897.65	-22.98	-13	PASS
WCDMA Band2	9538	1907.6	18976.04	-23.49	-13	PASS
WCDMA Band4	1312	1712.4	19950.57	-22.13	-13	PASS
WCDMA Band4	1413	1732.6	19919.12	-22.66	-13	PASS
WCDMA Band4	1513	1752.6	18047.43	-24.39	-13	PASS
WCDMA Band5	4132	826.4	3271.99	-29.96	-13	PASS
WCDMA Band5	4182	836.4	3294.43	-29.29	-13	PASS
WCDMA Band5	4233	846.6	3114.72	-30.05	-13	PASS
GSM1900	512	1850.2	19765.85	-23.98	-13	PASS
GSM1900	661	1880	17916.13	-23.33	-13	PASS
GSM1900	810	1909.8	19026.46	-23.83	-13	PASS
GSM850	128	824.2	2827.58	-30.22	-13	PASS
GSM850	189	836.4	3135.41	-28.15	-13	PASS
GSM850	251	848.8	2535.46	-30.06	-13	PASS

#### WCDMA Band2 Channel=9262

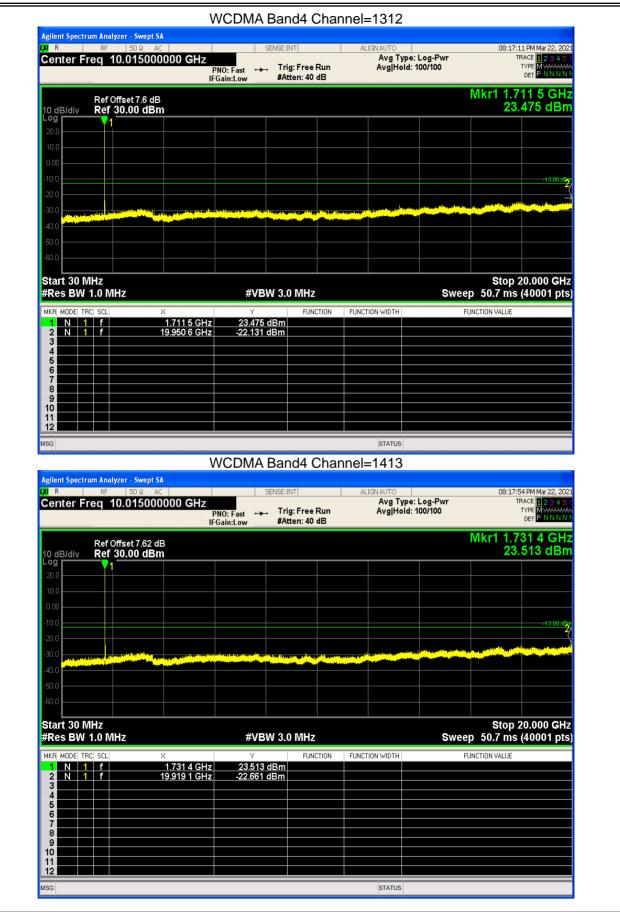






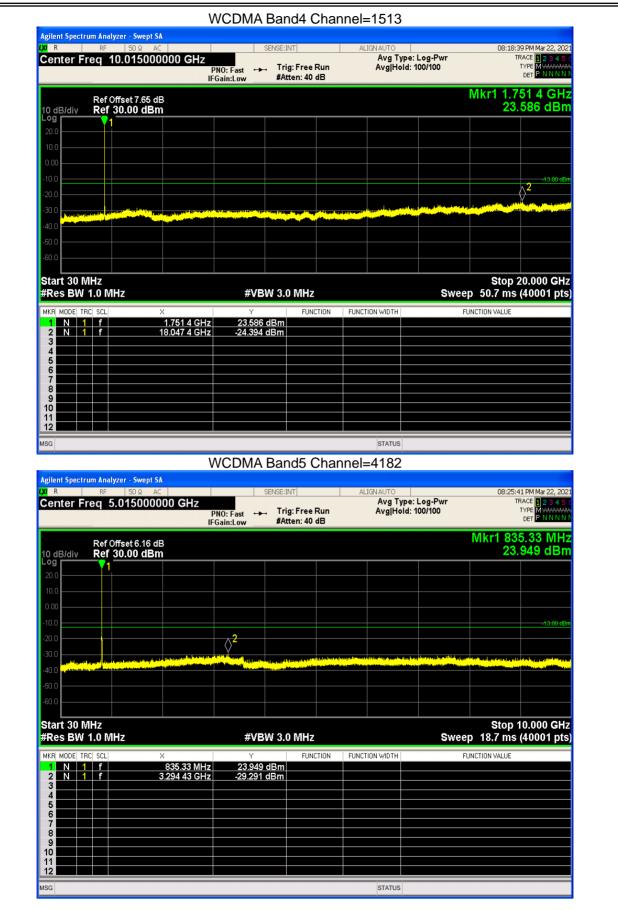






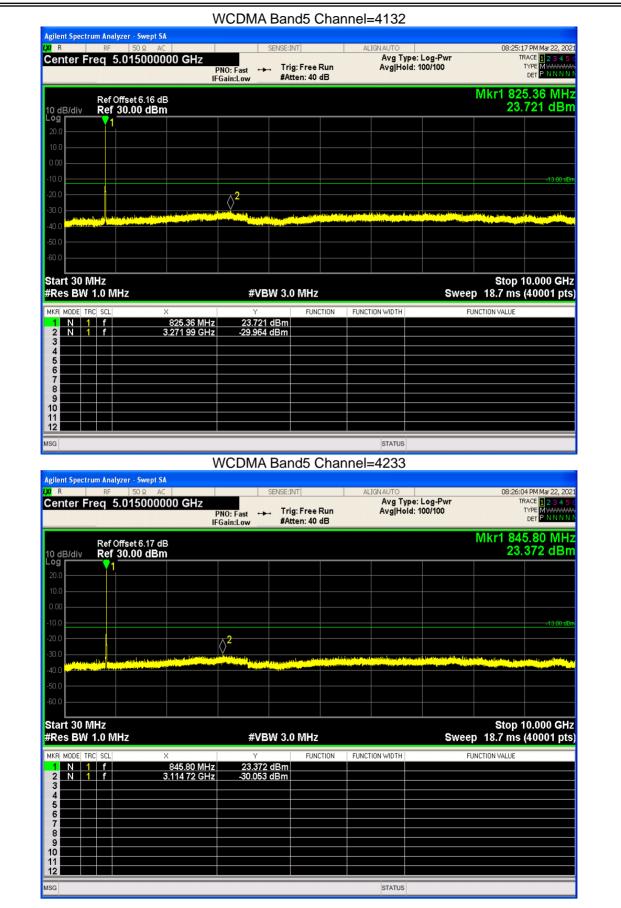
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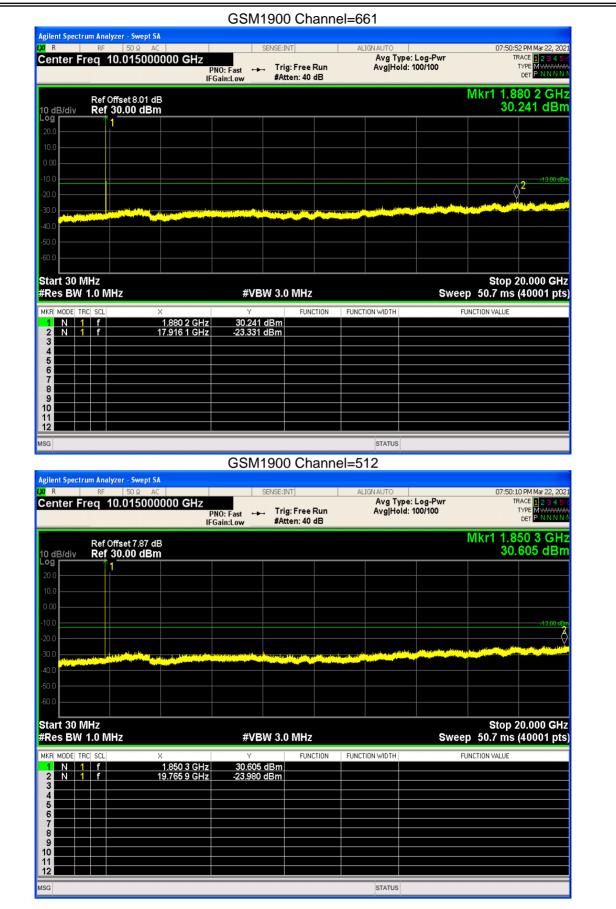
ACCREDITED





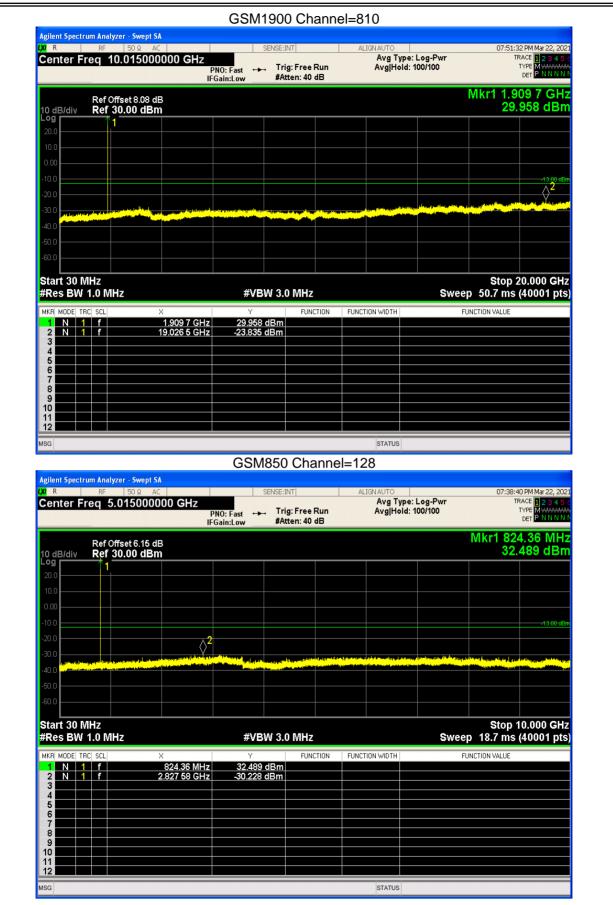
ACCREDITED





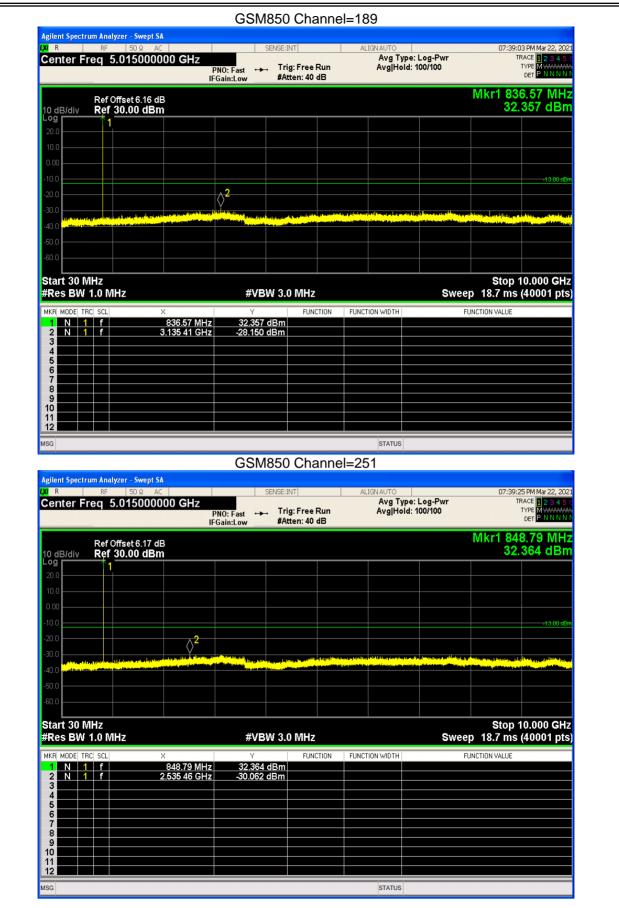
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## 8.6 CONDUCTED OUTPUT POWER

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Band	Channel		Power (dBm)	Verdict
HSDPA Band2 Subtest1		Frequency (MHz)	· · /	
	9262	1852.4	22.55	PASS
HSDPA Band2 Subtest2		1852.4	22.20	PASS
HSDPA Band2 Subtest3		1852.4	21.75	PASS
HSDPA Band2 Subtest4	9262	1852.4	21.47	PASS
HSDPA Band2 Subtest1	9400	1880	21.53	PASS
HSDPA Band2 Subtest2	9400	1880	21.46	PASS
HSDPA Band2 Subtest3	9400	1880	21.02	PASS
HSDPA Band2 Subtest4	9400	1880	21.09	PASS
HSDPA Band2 Subtest1	9538	1907.6	21.70	PASS
HSDPA Band2 Subtest2	9538	1907.6	21.56	PASS
HSDPA Band2 Subtest3	9538	1907.6	21.32	PASS
HSDPA Band2 Subtest4	9538	1907.6	21.01	PASS
HSDPA Band4 Subtest1	1312	1712.4	21.35	PASS
HSDPA Band4 Subtest2	1312	1712.4	21.10	PASS
HSDPA Band4 Subtest3	1312	1712.4	20.80	PASS
HSDPA Band4 Subtest4	1312	1712.4	20.57	PASS
HSDPA Band4 Subtest1	1413	1732.6	21.83	PASS
HSDPA Band4 Subtest2	1413	1732.6	21.57	PASS
HSDPA Band4 Subtest3	1413	1732.6	21.40	PASS
HSDPA Band4 Subtest4	1413	1732.6	21.40	PASS
HSDPA Band4 Subtest1	1413	1752.6	21.65	PASS
			21.05	
HSDPA Band4 Subtest2	1513	1752.6		PASS
HSDPA Band4 Subtest3	1513	1752.6	21.21	PASS
HSDPA Band4 Subtest4	1513	1752.6	21.16	PASS
HSDPA Band5 Subtest1	4132	826.4	21.99	PASS
HSDPA Band5 Subtest2	4132	826.4	21.71	PASS
HSDPA Band5 Subtest3	4132	826.4	21.46	PASS
HSDPA Band5 Subtest4	4132	826.4	21.28	PASS
HSDPA Band5 Subtest1	4182	836.4	22.10	PASS
HSDPA Band5 Subtest2	4182	836.4	21.79	PASS
HSDPA Band5 Subtest3	4182	836.4	21.59	PASS
HSDPA Band5 Subtest4	4182	836.4	21.47	PASS
HSDPA Band5 Subtest1	4233	846.6	21.56	PASS
HSDPA Band5 Subtest2	4233	846.6	21.30	PASS
HSDPA Band5 Subtest3	4233	846.6	21.11	PASS
HSDPA Band5 Subtest4	4233	846.6	20.92	PASS
GPRS1900 1 Slot	512	1850.2	29.96	PASS
GPRS1900 1 Slot	661	1880	29.67	PASS
GPRS1900 1 Slot	810	1909.8	29.27	PASS
GPRS1900 2 Slot	512	1850.2	28.02	PASS
GPRS1900 2 Slot	661	1880	28.16	PASS
GPRS1900 2 Slot	810	1909.8	28.03	PASS
GPRS1900 2 Slot GPRS1900 3 Slot	512	1850.2	26.79	PASS
GPRS1900 3 Slot	661	1880	27.01	PASS
GPRS1900 3 Slot	810	1909.8	26.91	PASS
GPRS1900 4 Slot	512	1850.2	25.04	PASS
GPRS1900 4 Slot	661	1880	25.34	PASS
GPRS1900 4 Slot	810	1909.8	25.29	PASS
GPRS850 1 Slot	128	824.2	32.29	PASS
GPRS850 1 Slot	189	836.4	32.18	PASS
GPRS850 1 Slot	251	848.8	32.11	PASS
GPRS850 2 Slot	128	824.2	30.49	PASS

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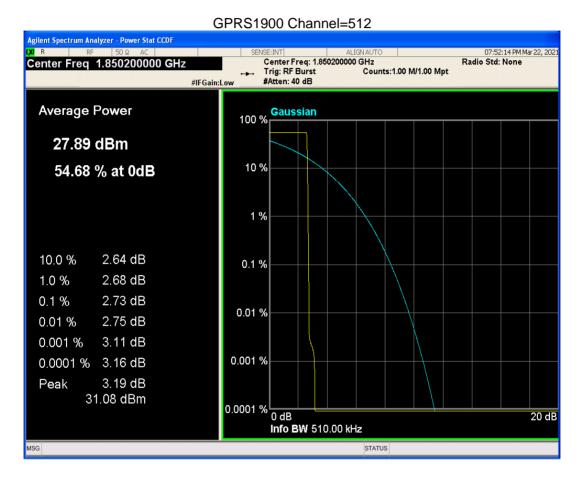


GPRS850 2 Slot	189	836.4	30.36	PASS
GPRS850 2 Slot	251	848.8	30.30	PASS
GPRS850 3 Slot	128	824.2	29.07	PASS
GPRS850 3 Slot	189	836.4	28.87	PASS
GPRS850 3 Slot	251	848.8	28.77	PASS
GPRS850 4 Slot	128	824.2	27.39	PASS
GPRS850 4 Slot	189	836.4	27.23	PASS
GPRS850 4 Slot	251	848.8	27.08	PASS



### 8.7 PEAK-TO-AVERAGE RATIO

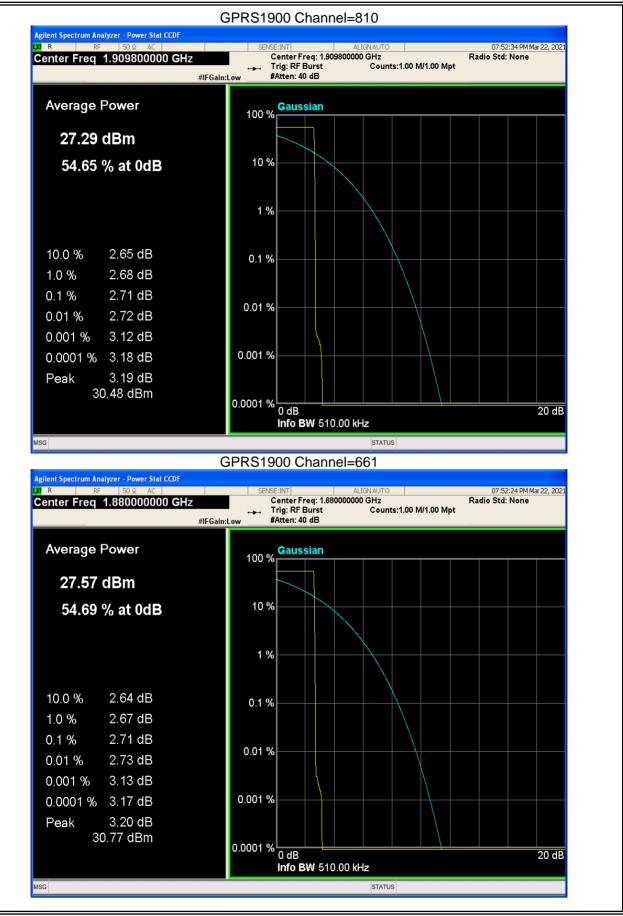
Band	Channel	Frequency (MHz)	Result (dB)	high Limit (dB)	Verdict				
GPRS1900	512	1850.2	2.725040128	13.00	PASS				
GPRS1900	661	1880	2.710556348	13.00	PASS				
GPRS1900	810	1909.8	2.706889439	13.00	PASS				
GPRS850	128	824.2	2.682683673	13.00	PASS				
GPRS850	189	836.4	2.663989021	13.00	PASS				
GPRS850	251	848.8	2.699945946	13.00	PASS				





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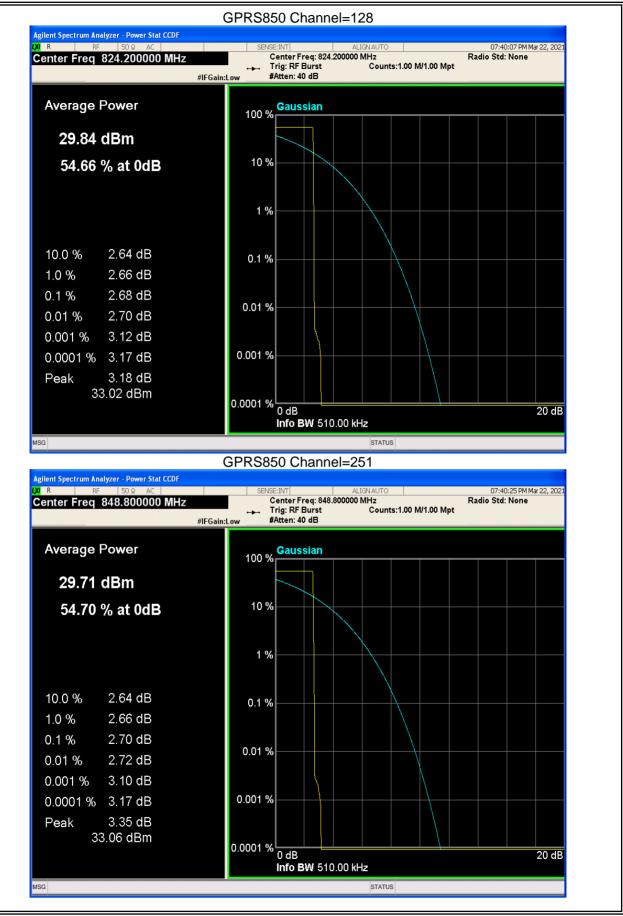
#### Report No.: STR210318003004E



Version.1.3

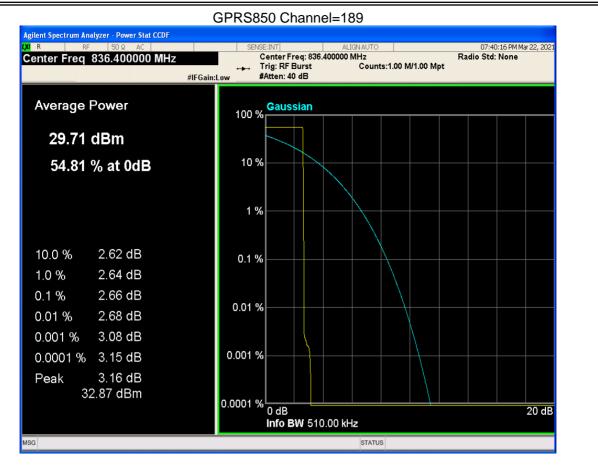


Certificate #4298.01





ACCREDITED Certificate #4298.01





### 8.8 OCCUPIED BANDWIDTH

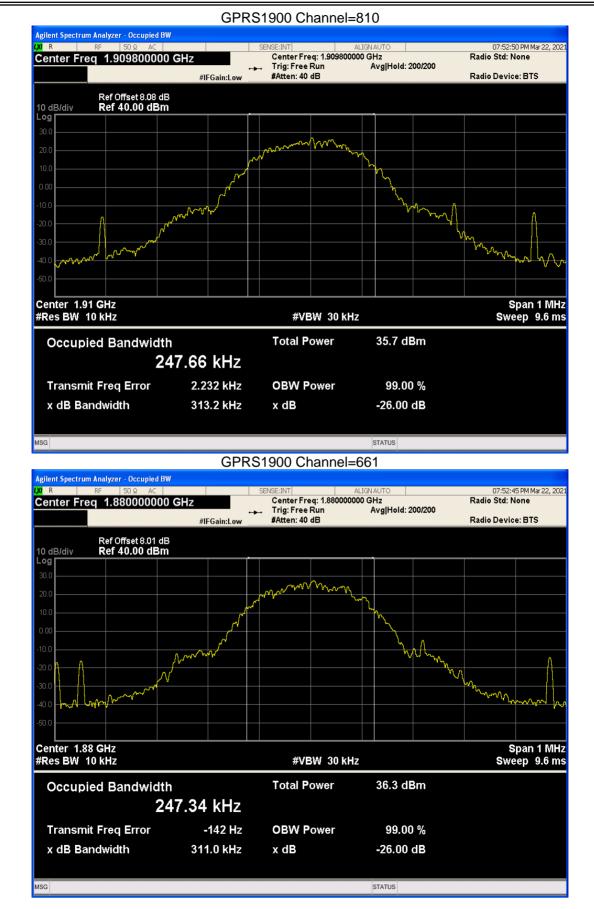
Band	Channel	Frequency (MHz)	99% OBW (kHz)	-26dB EBW (kHz)	Verdict			
GPRS1900	512	1850.2	244.422	312.862	PASS			
GPRS1900	661	1880	247.343	311.040	PASS			
GPRS1900	810	1909.8	247.661	313.165	PASS			
GPRS850	128	824.2	244.901	314.336	PASS			
GPRS850	189	836.4	248.917	324.144	PASS			
GPRS850	251	848.8	246.766	309.713	PASS			
	251	848.8		-				

#### GPRS1900 Channel=512 Agilent Spectrum Analyzer - Occupied BW XI R 07:52:39 PM Mar 22, 202 Center Freq: 1.850200000 GHz Center Freq 1.850200000 GHz Radio Std: None Trig: Free Run #Atten: 40 dB Avg|Hold: 200/200 Radio Device: BTS #IFGain:Low Ref Offset 7.87 dB Ref 40.00 dBm 10 dB/div Log mmm non WM Span 1 MHz Sweep 9.6 ms Center 1.85 GHz #Res BW 10 kHz #VBW 30 kHz **Total Power** 36.6 dBm **Occupied Bandwidth** 244.42 kHz **Transmit Freq Error** 46 Hz **OBW Power** 99.00 % x dB Bandwidth 312.9 kHz x dB -26.00 dB STATUS MSG

# Version.1.3

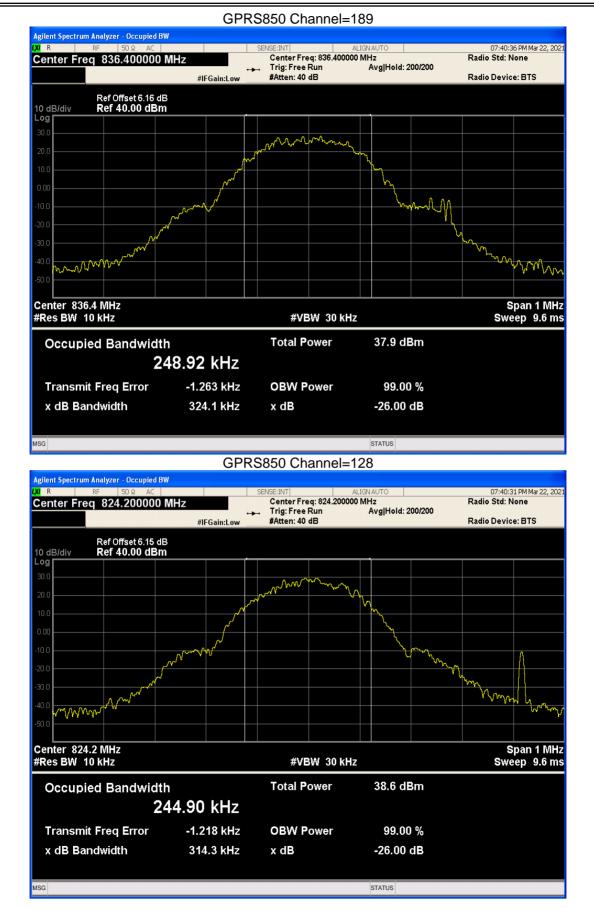


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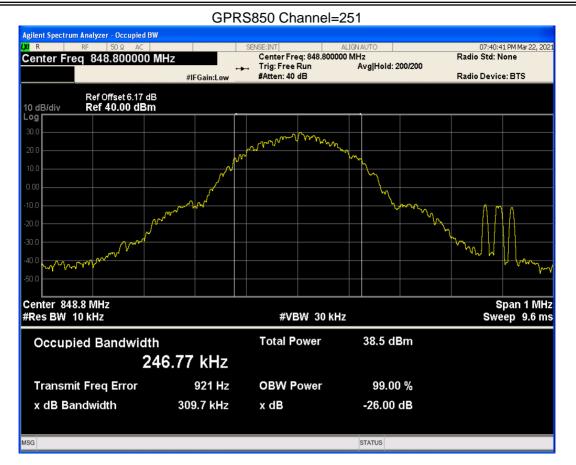


Certificate #4298.01





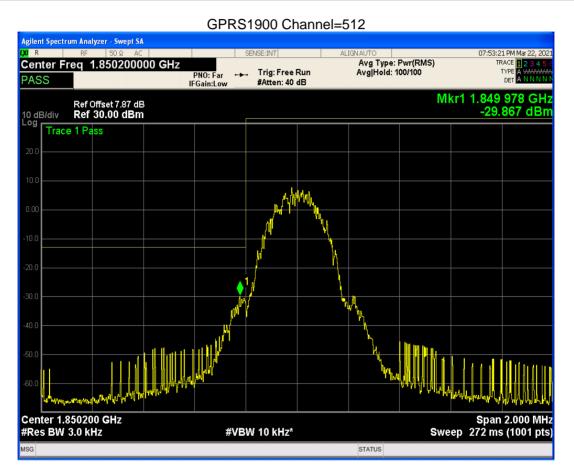
Certificate #4298.01



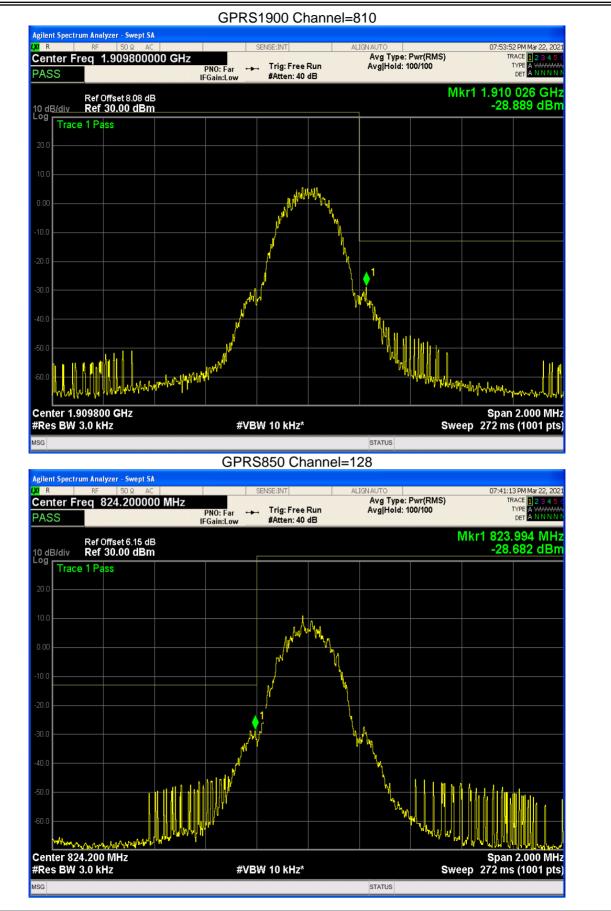


### 8.9 BAND EDGE

Band	Channel	Frequency (MHz)	Spur Freq (MHz)	Spur Level	Limit	Verdict			
				(dBm)	(dBm)				
GPRS1900	512	1850.2	1849.98	-29.86	-13	PASS			
GPRS1900	810	1909.8	1910.03	-28.88	-13	PASS			
GPRS850	128	824.2	823.99	-28.68	-13	PASS			
GPRS850	251	848.8	849.01	-27.13	-13	PASS			







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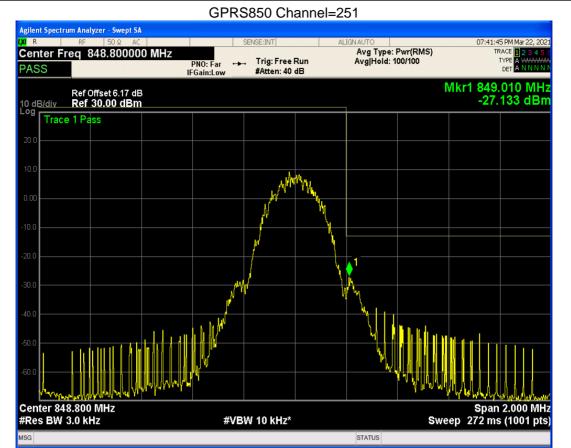
Certificate #4298.01

Version.1.3

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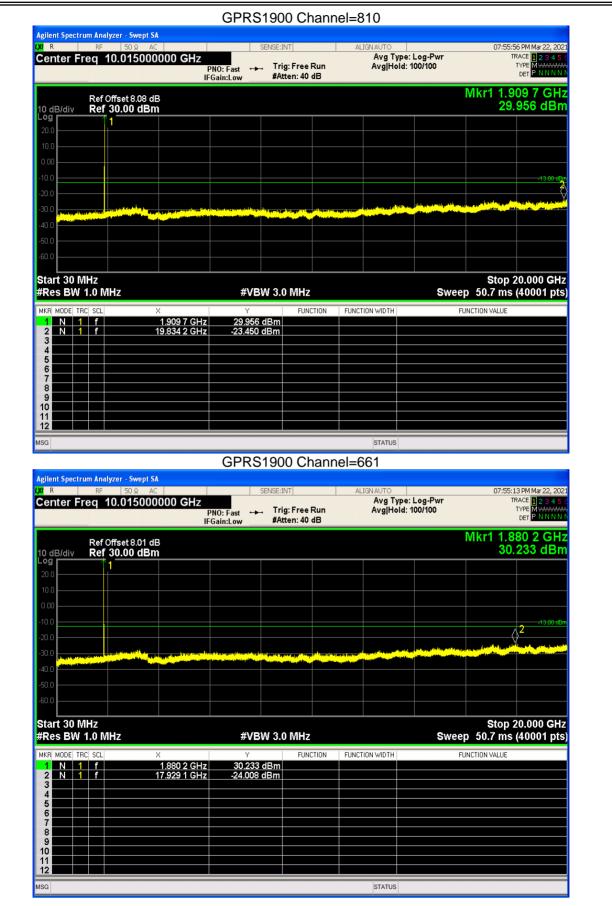
## 8.10 OUT-OF-BAND EMISSIONS

8.10001-OF-BAND EWISSIONS								
Band	Channel	Frequency (MHz)	Spur Freq (MHz)	Spur Level	Limit	Verdict		
				(dBm)	(dBm)			
GPRS1900	512	1850.2	19889.17	-23.31	-13	PASS		
GPRS1900	661	1880	17929.11	-24.00	-13	PASS		
GPRS1900	810	1909.8	19834.25	-23.45	-13	PASS		
GPRS850	128	824.2	3282.21	-29.50	-13	PASS		
GPRS850	189	836.4	2654.10	-30.06	-13	PASS		
GPRS850	251	848.8	3173.54	-29.71	-13	PASS		



Agilent Spectru	m Analyzer - Swej RF 50 Q							07.544	
		00000 GHz	PNO: Fast ↔→ Gain:Low	Trig: Free   #Atten: 40			pe: Log-Pwr d: 100/100		33 PM Mar 22, 203 RACE 1 2 3 4 5 TYPE MWWWW DET P N N N N
10 dB/div	Ref Offset 7.83 Ref 30.00 d							Mkr1 1.8 30.	50 3 GH 608 dBr
20.0									
-10.0									10.00.10
-20.0						الأرب ( ) ( الأرب	alian a material and the statistics of	and the second second	the self-termination of the
-40.0									
-60.0									
Start 30 M #Res BW 1			#VBV	V 3.0 MHz			Swee	Stop: p 50.7 ms	20.000 GH (40001 pt
MKR MODE TRO	SCL	× 1.850 3 GHz	Y 30.608 d	FUNG	TION	FUNCTION WIDTH		FUNCTION VALUE	
2 N 1 3 4 5	ŕ	19.889 2 GHz	-23.313 d	Bm					
6 <b>6</b> 7 8 8									
9 10 11 12									
ISG						STATUS			





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Agilent Spectrum Analyzer - Swa L <mark>XI</mark> R RF 50 Ω	AC	SEN	SE:INT	ALIGNAUTO	on-Dur		08 PM Mar 22, 2021
Center Freq 5.0150	PN	IO: Fast ↔→ ain:Low	Trig: Free Run #Atten: 40 dB	Avg Type: L Avg Hold: 10			RACE 123456 TYPE MWWWWM DET P N N N N
Ref Offset 6.1	15 dB				N	/kr1 82	4.36 MHz 476 dBm
10 dB/div Ref 30.00 c	dBm						470 UBIII
20.0							
0.00							
-10.0							-13.00 dDm
-30.0			والشراب أوراد أوراد المرسين مترابا				
-50.0							
-60.0							
Start 30 MHz #Res BW 1.0 MHz		#VBW	3.0 MHz		Sweep	Stop / 18.7 ms	10.000 GHz (40001 pts)
MKR MODE TRC SCL	× 824.36 MHz	۲ <b>32.476 d</b> E	FUNCTION	FUNCTION WIDTH	FUN	CTION VALUE	
2 N 1 f 3	3.282 21 GHz	-29.502 dB	m				
4 5 6							
7 8							
9 10 11							
12				074740			
MSG		GPRS8	50 Chann	el=251			
Agilent Spectrum Analyzer - Swe							
ଅ	00000 GHz	IO: Fast ↔→	SE:INT	ALIGNAUTO Avg Type: L Avg Hold: 10		U7:42:5 T	52 PM Mar 22, 2021 RACE <b>1 2 3 4 5</b> 6 TYPE MWWWWW DET PNNNN
Def Offects		ain:Low	#Atten: 40 dB		N		9.04 MHz
Ref Offset 6.1 10 dB/div Ref 30.00 c Log	dBm					32.	349 dBm
20.0							
10.0							
0.00							-13 00 dBm
-10.0		2					
-10.0		2	The second s	all for the state of the state	Of the log	a serie a la serie de la s	alierella, <sub>a s</sub> a anti <sup>bita</sup> na, a.
-10.0 -20.0 -30.0 -40.0		Å		ng pagana ing sara kang ng mang ng man Ing ng mga ing ng mga ng mg			
-10.0		Å		ng ng na bhfar de na hAr na Na na hAr na Na hAr na hAr	tt and spin of the Shift Super Particular		
-10.0 -20.0 -30.0 -40.0 -50.0 -60.0 Start 30 MHz						Stop '	10.000 GHz
-10.0 -20.0 -30.0 -40.0 -50.0 -60.0 Start 30 MHz #Res BW 1.0 MHz			3.0 MHz		Sweep	Stop 7 18.7 ms	
-10.0 -20.0 -30.0 -30.0 -5		#VBW	3.0 MHz FUNCTION		Sweep	Stop '	10.000 GHz
-10.0 -20.0 -30.0 -30.0 -40.0 -50.0 -50.0 -50.0 -50.0 -50.0 -50.0 -50.0 -60.0 -50.0 -60.0 -50.0 -60.0 -7	Alexandrid later Area Service International	#VBW 32.349 dE	3.0 MHz FUNCTION		Sweep	Stop 7 18.7 ms	10.000 GHz
-10.0 -20.0 -30.0 -40.0 -50.0 -50.0 -50.0 -50.0 -50.0 -50.0 -50.0 -50.0 -50.0 -60.0 -50.0 -60.0 -50.0 -60.0 -50.0 -60.0 -50.0 -60.0 -50.0 -60.0 -50.0 -60.0 -50.0 -60.0 -50.0 -60.0 -7	Alexandrid later Area Service International	#VBW 32.349 dE	3.0 MHz FUNCTION		Sweep	Stop 7 18.7 ms	10.000 GHz
-10.0 -20.0 -30.0 -40.0 -40.0 -5	Alexandrid data Arri Januari X 849.04 MHz	#VBW 32.349 dE	3.0 MHz FUNCTION		Sweep	Stop 7 18.7 ms	10.000 GHz

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			GPRS	S850	Chann	el=189	9			
gilent Spectrum	n Analyzer - Swept	SA								
X/R	RF 50 Ω			SENSE:IN	T	ALIGN		e: Log-Pwr		30 PM Mar 22, 2021
Center Fre	eq 5.015000	Р	NO: Fast 🔸		: Free Run en: 40 dB			1: 100/100		TRACE 123456 TYPE MWWWWM DET PNNNNN
10 dB/div	Ref Offset 6.16 <b>Ref 30.00 dB</b>								Mkr1 83 32	6.57 MHz .356 dBm
Log	1									
20.0										
10.0										
0.00										
-10.0										-13.00 dBm
-20.0		<mark>2</mark>								
-30.0	المحمد المحمد المحمد المحمد			المراجع والمراجع	والالار بالكرية ومروري ورور	and the state of the	undel y Delver (1960).	and the state of the	a in the second	Anterna I
-40.0			and the second	AND A LAND AND A LAND	NAMES OF TAXABLE PARTY.	an a se additional a part	and the second second	<u>مع مستثلاث في من الغا</u>	and the second second second	an and a superior of the second s
-50.0										
-60.0										
Start 30 MH #Res BW 1.			#VB	W 3.0	MHz			Swee	Stop p 18.7 ms	10.000 GHz (40001 pts)
MKR MODE TRC		Х	Y		FUNCTION	FUNCTION	N WIDTH	FL	JNCTION VALUE	
1 N 1 2 N 1	f	836.57 MHz 2.654 10 GHz	<u>32.356</u> -30.062							
3		2.034 10 GHZ	-30.002	иып						
4 5										
6										
8										
9										
10										

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### 8.11 CONDUCTED OUTPUT POWER

8.11 CONDUCTED OUTPUT POWER										
Band	Channel	Frequency (MHz)	Power (dBm)	Verdict						
HSUPA Band2 Subtest1	9262	1852.4	22.35	PASS						
HSUPA Band2 Subtest2	9262	1852.4	22.44	PASS						
HSUPA Band2 Subtest3	9262	1852.4	22.14	PASS						
HSUPA Band2 Subtest4	9262	1852.4	22.00	PASS						
HSUPA Band2 Subtest5	9262	1852.4	21.94	PASS						
HSUPA Band2 Subtest1	9400	1880	21.48	PASS						
HSUPA Band2 Subtest2	9400	1880	21.54	PASS						
HSUPA Band2 Subtest3	9400	1880	20.93	PASS						
HSUPA Band2 Subtest4	9400	1880	21.56	PASS						
HSUPA Band2 Subtest5	9400	1880	21.16	PASS						
HSUPA Band2 Subtest1	9538	1907.6	21.54	PASS						
HSUPA Band2 Subtest2	9538	1907.6	21.65	PASS						
HSUPA Band2 Subtest3	9538	1907.6	21.12	PASS						
HSUPA Band2 Subtest4	9538	1907.6	21.60	PASS						
HSUPA Band2 Subtest5	9538	1907.6	21.35	PASS						
HSUPA Band4 Subtest1	1312	1712.4	21.28	PASS						
HSUPA Band4 Subtest2	1312	1712.4	21.25	PASS						
HSUPA Band4 Subtest3	1312	1712.4	21.17	PASS						
HSUPA Band4 Subtest4	1312	1712.4	21.05	PASS						
HSUPA Band4 Subtest5	1312	1712.4	20.93	PASS						
HSUPA Band4 Subtest1	1413	1732.6	21.63	PASS						
HSUPA Band4 Subtest2	1413	1732.6	21.75	PASS						
HSUPA Band4 Subtest3	1413	1732.6	21.24	PASS						
HSUPA Band4 Subtest4	1413	1732.6	21.50	PASS						
HSUPA Band4 Subtest5	1413	1732.6	21.48	PASS						
HSUPA Band4 Subtest1	1513	1752.6	21.58	PASS						
HSUPA Band4 Subtest2	1513	1752.6	21.57	PASS						
HSUPA Band4 Subtest3	1513	1752.6	21.23	PASS						
HSUPA Band4 Subtest4	1513	1752.6	21.48	PASS						
HSUPA Band4 Subtest5	1513	1752.6	21.35	PASS						
HSUPA Band5 Subtest1	4132	826.4	22.00	PASS						
HSUPA Band5 Subtest2	4132	826.4	21.70	PASS						
HSUPA Band5 Subtest3	4132	826.4	21.56	PASS						
HSUPA Band5 Subtest4	4132	826.4	21.67	PASS						
HSUPA Band5 Subtest5	4132	826.4	21.59	PASS						
HSUPA Band5 Subtest1	4182	836.4	21.87	PASS						
HSUPA Band5 Subtest2	4182	836.4	22.07	PASS						
HSUPA Band5 Subtest3	4182	836.4	21.71	PASS						
HSUPA Band5 Subtest4	4182	836.4	21.84	PASS						
HSUPA Band5 Subtest5	4182	836.4	21.64	PASS						
HSUPA Band5 Subtest1	4233	846.6	21.45	PASS						
HSUPA Band5 Subtest2	4233	846.6	21.43	PASS						
HSUPA Band5 Subtest3	4233	846.6	21.05	PASS						
HSUPA Band5 Subtest4	4233	846.6	21.05	PASS						
HSUPA Band5 Subtest5				PASS						
130FA Dallus Sublesis	4233	846.6	21.35	FASS						

END OF REPORT