FCC Test Report

Report No.:	2405W56213EC
Applicant:	G-TOUCH LLC.
Address:	1750 NW 107TH Avenue, STE P-411 Miami Florida United States
Product Name:	Mobile feature phone 4G-LTE
Product Model:	Gravity
Multiple Models:	N/A
Trade Mark:	GTOUCH
FCC ID:	2AJDZGL24A
Standards:	FCC CFR Title 47 Part 2, 22H, 24E
Test Date:	2024-08-06 to 2024-08-27
Test Result:	Complied
Issue Date:	2024-08-27

Reviewed by: Frank Yin

Approved by: Jacob Gong

Frank Yin
Project Engineer

Jacob Kong
Manager

Prepared by:

World Alliance Testing & Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China

NVLAP TESTING NVLAP LAB CODE 600335-0

ilac-MRA

This report may contain data that are not covered by the NVLAP accreditation and shall be marked with an asterisk "★"

Announcement

1. This test report shall not be reproduced except in full, without the written approval of World Alliance Testing & Certification (Shenzhen) Co., Ltd

2. The results in this report apply only to the sample tested.

3. This sample tested is in compliance with the limits of the above regulation.

4. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

5. The information marked "#" is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

Revision History

Version No.	Issued Date	Description
00	2024-08-27	*Original*

Contents

1 General Information

1.1 Client Information

Applicant:	G-TOUCH LLC.
Address:	1750 NW 107TH Avenue, STE P-411 Miami Florida United States
Manufacturer:	G-TOUCH DEVICES LIMITED
Address:	Building 40 11C floor Wanghai RD, Rose Garden 2 Shekou Nanshan District Shenzhen City Guangdong China

1.2 Product Description of EUT

The EUT is Mobile feature phone 4G-LTE that contains Classic Bluetooth, GSM/GPRS and LTE radios, this report covers the full testing of GSM/GPRS and LTE radio.

Sample Serial number	2PCZ-1, 2PCZ-2 (assigned by WATC)				
Sample Received Date	2024-08-01				
Sample Status	Good Condition				
Frequency Range Maximum Conducted Power Antenna Gain	Band	TX Frequency (MHz)	RX Frequency (MHz)	Max. Conducted Power (dBm)	Antenna Gain# (dBi)
	GSM850	824-849	869-894	31.72	0.21
	PCS1900	1850-1910	1930-1990	24.58	0.66
	LTE B5	824-849	869-894	20.76	0.21
Modulation Technology	GMSK, QPSK, 16QAM				
Power Supply	DC 3.7V from battery or DC 5.0V from adapter				
Adapter Information	Input: AC100-240V, 50/60Hz, 0.15A Output: DC 5V/500mA				
Modification	Sample No Modification by the test lab				

1.3 Measurement Uncertainty

Parameter		Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))
Emissions, Radiated	Below 30MHz	±2.78dB
	Below 1GHz	±4.84dB
	Above 1GHz	±5.44dB
Emissions, Conducted		1.75dB
Conducted Power		0.74dB
Frequency Error		150Hz
Bandwidth		0.34%

Note 1: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Note 2: The Decision Rule is based on simple acceptance with ISO Guide 98-4:2012 Clause 8.2 (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

1.4 Laboratory Location

World Alliance Testing & Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China

Tel: +86-755-29691511, Email: qa@watc.com.cn

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 463912, the FCC Designation No. : CN5040.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0160.

1.5 Test Methodology

FCC CFR Title 47 Part 2, 22H, 24E

ANSI C63.26-2015

FCC KDB 971168 D01 Power Meas License Digital Systems v03r01

FCC KDB 412172 D01 Determining ERP and EIRP v01r01

2 Description of Measurement

2.1 Test Frequency of Low/Middle/High Channels

Band	Bandwidth (MHz)	Low Channel (MHz)	Middle Channel (MHz)	High Channel (MHz)
GSM850	0.2	824.2	836.6	848.8
PCS1900	0.2	1850.2	1880	1909.8
LTE B5	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844

2.2 Test Configuration for LTE bands

Test Items	Band	Bandwidth (MHz)						Modulation		RB#			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
RF Output Power ERP/EIRP	5	√	√	√	√	-	-	√	√	√	√	√	√	√	√
Peak-to-Average Ratio	5				√	-	-	√	√	√		√	√	√	√
26dB and 99% Bandwidth	5	√	√	√	√	-	-	√	√			√	√	√	√
Band Edge	5	√	√	√	√	-	-	√	√	√		√	√		√
Conducted Spurious Emission	5	√	√	√	√	-	-	√		√			√	√	√
Frequency Stability	5				√	-	-	√	√			√		√	
Radiated Spurious Emission	5	√				-	-	√		√			√	√	√

Note:
1. "√" means the configuration was chosen for testing
2. "-" means the not support the bandwidth

Worst-Case Configuration:
For radiated emissions, EUT was investigated in three orthogonal orientation, the worst-case orientation was recorded in report For radiated emissions, measurement was investigated from 30MHz to 10 times of fundamental, the worst case bandwidth, RB size and modulation test data was recorded.

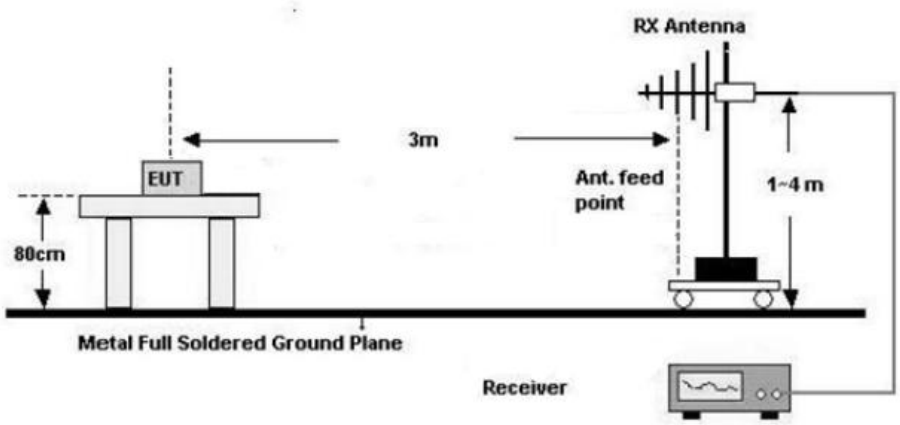
2.3 Test Auxiliary Equipment

Manufacturer	Description	Model	Serial Number
/	/	/	/

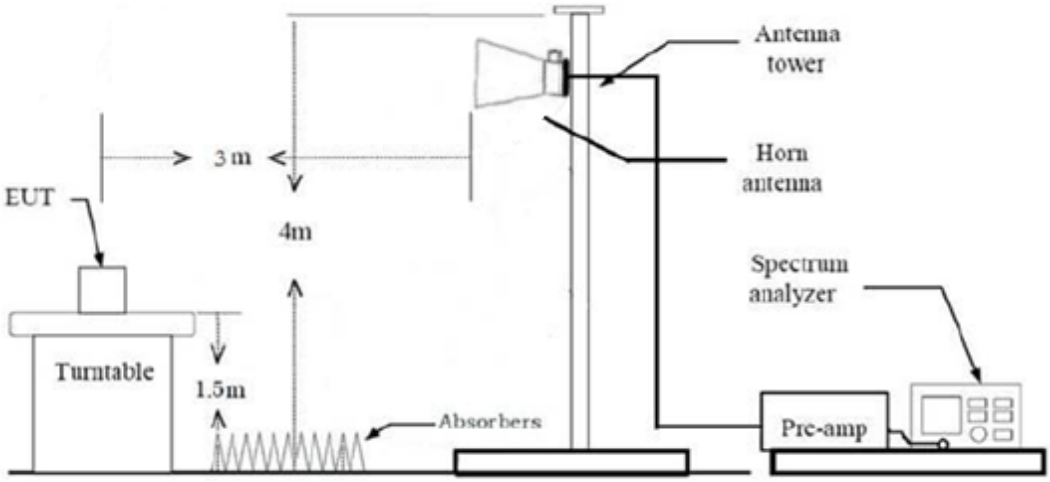
2.4 Test Setup

1) Radiated emission measurement:

30MHz-1GHz (3m SAC)

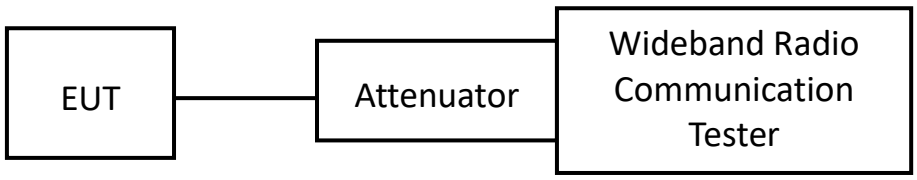


Above 1GHz (3m FAC)

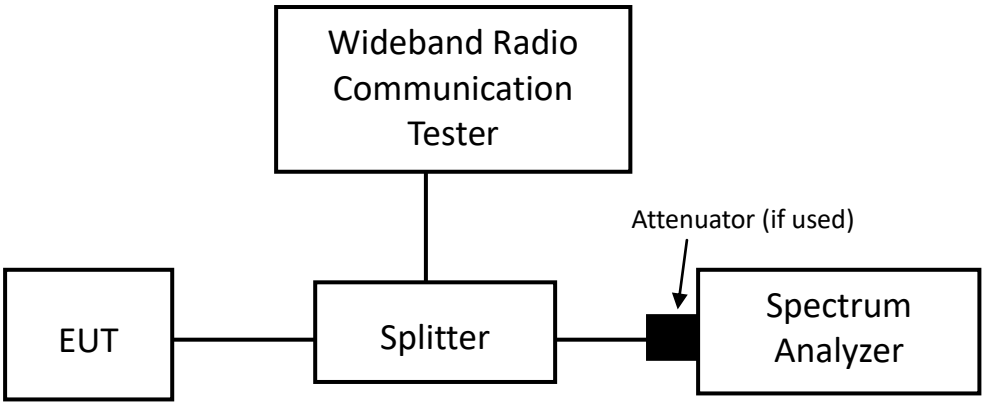


2) RF Conducted Test

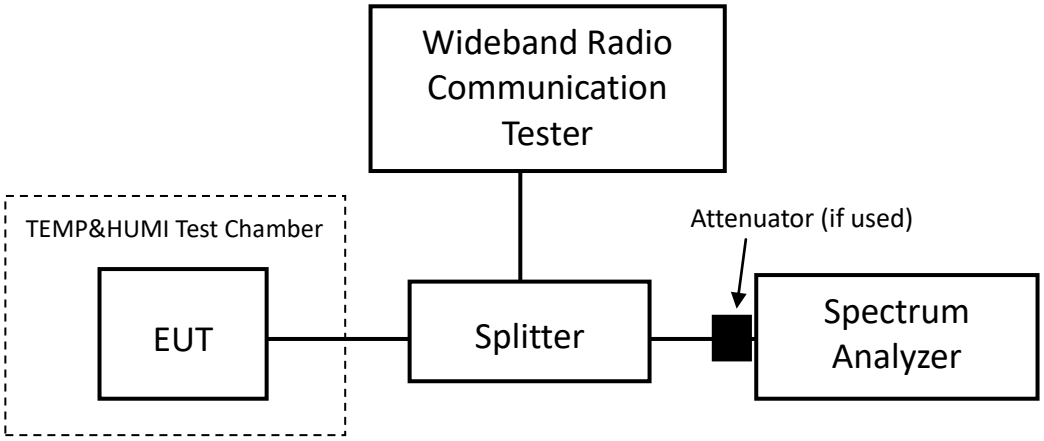
For RF Output Power test



For Bandwidth/Band edge/ PAR/Conducted spurious emissions Test



For Frequency Stability test



2.5 Test Procedure

Radiated Emission Procedure:

a) For 30MHz-1GHz:

1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m.
2. EUT works in each mode of operation that needs to be tested. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations.

b) For above 1GHz:

1. The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m.
2. EUT works in each mode of operation that needs to be tested， and having the EUT continuously working. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations.
3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.

RF Conducted Test:

1. The antenna port of EUT was connected to the RF port of the test equipment (Wideband Radio Communication Tester or Spectrum analyzer) through Attenuator and RF cable.
2. The cable assembly insertion loss of 7.5dB (including 6.0dB Splitter and 1.5dB cable) was entered as an offset in the power meter. Note: Actual cable loss was unavailable at the time of testing, therefore a loss of 1. 5dB was assumed as worst case. This was later verified to be true by laboratory. (if the RF cable provided by client, the cable loss declared by client)
3. The EUT is keeping in continuous transmission mode and tested in all modulation modes.

2.6 Measurement Method

Description of Test	Measurement Method
RF Output Power	ANSI C63.26-2015 section 5.2
ERP/EIRP	ANSI C63.26-2015 section 5.2.5.5
Peak-to-Average Ratio	ANSI C63.26-2015 section 5.2.3.4
26dB and 99% Bandwidth	ANSI C63.26-2015 section 5.4
Band Edge	ANSI C63.26-2015 section 5.7.3
Conducted Spurious Emissions	ANSI C63.26-2015 section 5.7.4
Frequency Stability	ANSI C63.26-2015 section 5.6
Radiated Spurious Emissions	ANSI C63.26-2015 section 5.5.4

2.7 Measurement Equipment

Manufacturer	Description	Model	Management No.	Calibration Date	Calibration Due Date
Radiated Emission Test					
R&S	EMI test receiver	ESR3	102758	2024/6/4	2025/6/3
ROHDE& SCHWARZ	SPECTRUM ANALYZER	FSV40-N	101608	2024/6/4	2025/6/3
SONOMA INSTRUMENT	Low frequency amplifier	310	186014	2024/6/4	2025/6/3
COM-POWER	preamplifier	PAM-118A	18040152	2024/6/4	2025/6/3
COM-POWER	Amplifier	PAM-840A	461306	2024/8/7	2025/8/6
SCHWARZBECK	Log - periodic wideband antenna	VULB 9163	9163-872	2023/7/7	2026/7/6
Astro Antenna Ltd	Horn antenna	AHA-118S	3015	2023/7/6	2026/7/5
Ducommun technologies	Horn Antenna	ARH-4223-02	1007726-03	2023/7/10	2026/7/9
N/A	Coaxial Cable	N/A	NO.9	2024/6/4	2025/6/3
N/A	Coaxial Cable	N/A	NO.14	2024/6/4	2025/6/3
N/A	Coaxial Cable	N/A	NO.15	2024/6/4	2025/6/3
N/A	Coaxial Cable	N/A	NO.16	2024/6/4	2025/6/3
Audix	Test Software	E3	191218 V9	/	/
RF Conducted Test					
ROHDE& SCHWARZ	SPECTRUM ANALYZER	FSU-26	200680/026	2024/6/4	2025/6/3
BACL	TEMP&HUMI Test Chamber	BTH-150	30022	2024/7/12	2025/7/11
HP	Power Splitter	11667A	1610A	2024/7/26	2025/7/25
FLUKE	Digital Multimeter	15B+	N/A	2024/6/6	2025/6/5
ROHDE& SCHWARZ	WIDEBAND RADIO COMMUNICATION TESTER	CMW500	116218	2023/9/12	2024/9/11

Note: All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or International standards.

3 Test Results

3.1 Test Summary

FCC Rules	Description of Test	Result
FCC§2.1046; § 22.913; § 24.232;	RF Output Power	Compliance
FCC§ 2.1047	Modulation Characteristics	Compliance
FCC§ 2.1049; § 22.905; § 22.917; § 24.238;	26dB and 99% Bandwidth	Compliance
FCC§ 2.1051; § 22.917; § 24.238;	Conducted Spurious Emissions	Compliance
FCC§ 22.917; § 24.238;	Out of band emission, Band Edge	Compliance
FCC§ 2.1055; § 22.355; § 24.235;	Frequency stability	Compliance
FCC§ 2.1053; § 22.917; § 24.238;	Radiated Spurious Emissions	Compliance

3.2 Limit

<table>
<tr><th>Test items</th><th>Limit</th></tr>
<tr><td>RF Output Power</td><td>
FCC §22.913:

(a)(5) The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7watts.

(d) Power measurement. Measurement of the ERP of Cellular base transmitters and repeaters must be made using an average power measurement technique. The peak-to average ratio (PAR) of the transmission must not exceed 13 dB. Power measurements for base transmitters and repeaters must be made in accordance with either of the following:

(1) A Commission-approved average power technique (see FCC Laboratory's Knowledge Database); or

(2) For purposes of this section, peak transmit power must be measured over an interval of continuous transmission using instrumentation calibrated in terms of an rms equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.
</td></tr>
<tr><td>Unwanted Emissions

(Out of band emission and spurious)</td><td>
FCC §22.917:

(a) Out of band emissions. 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.

(b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a reference bandwidth as follows:

(1) In the spectrum below 1 GHz, instrumentation should employ a reference bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy, provided that the measured power is integrated over the full required reference bandwidth (i.e., 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(2) In the spectrum above 1 GHz, instrumentation should employ a reference bandwidth of 1 MHz
</td></tr>
<tr><td>Frequency stability</td><td>
FCC §22.355:

Except as otherwise provided in this part, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C-1 of this section.

Table C–1—Frequency Tolerance for Transmitters in the Public Mobile Services
<table>
<tr><th>Frequency range (MHz)</th><th>Base, fixed (ppm)</th><th>Mobile >3 watts (ppm)</th><th>Mobile ≤3 watts (ppm)</th></tr>
<tr><td>25 to 50</td><td>20.0</td><td>20.0</td><td>50.0</td></tr>
<tr><td>50 to 450</td><td>5.0</td><td>5.0</td><td>50.0</td></tr>
<tr><td>450 to 512</td><td>2.5</td><td>5.0</td><td>5.0</td></tr>
<tr><td>821 to 896</td><td>1.5</td><td>2.5</td><td>2.5</td></tr>
<tr><td>928 to 929</td><td>5.0</td><td>n/a</td><td>n/a</td></tr>
<tr><td>929 to 960</td><td>1.5</td><td>n/a</td><td>n/a</td></tr>
<tr><td>2110 to 2220</td><td>10.0</td><td>n/a</td><td>n/a</td></tr>
</table>
</td></tr>
</table>

Test items	Limit
RF Output Power	**FCC §24.232:** (c)Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications. (d)Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of § 24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.
Unwanted Emissions (Out of band emission and spurious)	**FCC §24.238:** The rules in this section govern the spectral characteristics of emissions in the Broadband Personal Communications Service. (a) Out of band emissions. 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. (b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. (c) Alternative out of band emission limit. Licensees in this service may establish an alternative out of band emission limit to be used at specified band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC. (d) Interference caused by out of band emissions. If any emission from a transmitter operating in this service results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than specified in this section.
Frequency stability	**FCC §24.235:** The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

3.3 RF Conducted Test Data

Test Date:	2024/08/05~2024/08/20	Test By:	Ryan Zhang
Environment condition:	Temperature: 24.8~25.9°C; Relative Humidity: 37~46%; ATM Pressure: 100.5~101.2kPa		

3.3.1 RF Output Power&ERP/EIRP

GSM 850 , Normal

Mode	Conducted Power (dBm)	ERP (dBm)	Limit(dBm)	Result
GSM_Low	31.72	29.78	38.45	Pass
GSM_Middle	31.60	29.66	38.45	Pass
GSM_High	31.46	29.52	38.45	Pass
GPRS_Low_Solt1	30.35	28.41	38.45	Pass
GPRS_Low_Solt2	28.14	26.2	38.45	Pass
GPRS_Low_Solt3	26.15	24.21	38.45	Pass
GPRS_Low_Solt4	24.00	22.06	38.45	Pass
GPRS_Middle_Solt1	30.35	28.41	38.45	Pass
GPRS_Middle_Solt2	28.15	26.21	38.45	Pass
GPRS_Middle_Solt3	26.08	24.14	38.45	Pass
GPRS_Middle_Solt4	23.93	21.99	38.45	Pass
GPRS_High_Solt1	30.00	28.06	38.45	Pass
GPRS_High_Solt2	27.87	25.93	38.45	Pass
GPRS_High_Solt3	25.92	23.98	38.45	Pass
GPRS_High_Solt4	23.79	21.85	38.45	Pass

Note:

ERP = Conducted Power(dBm) - L_C(dB) + G_T(dBd)

G_T(dBd) = G_T(dBi) - 2.15

GSM 850:

1.Ant Gain = 0.21dBi;

2. L_C =0dB* (provided by the applicant)

GSM 1900 , Normal

Mode	Conducted Power (dBm)	EIRP (dBm)	Limit(dBm)	Result
GSM_Low	24.58	25.24	33	Pass
GSM_Middle	23.83	24.49	33	Pass
GSM_High	23.34	24.00	33	Pass
GPRS_Low_Solt1	24.42	25.08	33	Pass
GPRS_Low_Solt2	21.89	22.55	33	Pass
GPRS_Low_Solt3	20.20	20.86	33	Pass
GPRS_Low_Solt4	18.19	18.85	33	Pass
GPRS_Middle_Solt1	23.69	24.35	33	Pass
GPRS_Middle_Solt2	21.14	21.80	33	Pass
GPRS_Middle_Solt3	19.42	20.08	33	Pass
GPRS_Middle_Solt4	17.43	18.09	33	Pass
GPRS_High_Solt1	23.23	23.89	33	Pass
GPRS_High_Solt2	20.68	21.34	33	Pass
GPRS_High_Solt3	18.97	19.63	33	Pass
GPRS_High_Solt4	16.94	17.60	33	Pass

Note:

EIRP = Conducted Power(dBm) - L_C(dB) + G_T(dBi)

GSM 1900:

1.Ant Gain = 0.66dBi;

2. L_C =0dB* (provided by the applicant)

B5 , Normal

Mode	Conducted Power (dBm)	ERP (dBm)	ERP (W)	Limit (W)	Result
1.4MHz_Low_QPSK_1@0	20.05	18.11	0.152	7	Pass
1.4MHz_Low_QPSK_1@3	19.98	18.04	0.150	7	Pass
1.4MHz_Low_QPSK_1@5	20.00	18.06	0.150	7	Pass
1.4MHz_Low_QPSK_3@0	19.92	17.98	0.150	7	Pass
1.4MHz_Low_QPSK_3@1	19.94	18.00	0.149	7	Pass
1.4MHz_Low_QPSK_3@3	19.97	18.03	0.147	7	Pass
1.4MHz_Low_QPSK_6@0	19.75	17.81	0.116	7	Pass
1.4MHz_Low_16QAM_1@0	19.38	17.44	0.122	7	Pass
1.4MHz_Low_16QAM_1@3	19.60	17.66	0.123	7	Pass
1.4MHz_Low_16QAM_1@5	19.48	17.54	0.120	7	Pass
1.4MHz_Low_16QAM_3@0	19.86	17.92	0.120	7	Pass
1.4MHz_Low_16QAM_3@1	19.94	18.00	0.120	7	Pass
1.4MHz_Low_16QAM_3@3	19.91	17.97	0.120	7	Pass
1.4MHz_Low_16QAM_6@0	19.12	17.18	0.098	7	Pass
1.4MHz_Middle_QPSK_1@0	20.13	18.19	0.142	7	Pass
1.4MHz_Middle_QPSK_1@3	20.16	18.22	0.147	7	Pass
1.4MHz_Middle_QPSK_1@5	20.24	18.30	0.147	7	Pass
1.4MHz_Middle_QPSK_3@0	20.14	18.20	0.145	7	Pass
1.4MHz_Middle_QPSK_3@1	20.04	18.10	0.146	7	Pass
1.4MHz_Middle_QPSK_3@3	20.12	18.18	0.144	7	Pass
1.4MHz_Middle_QPSK_6@0	19.66	17.72	0.116	7	Pass
1.4MHz_Middle_16QAM_1@0	19.44	17.50	0.109	7	Pass
1.4MHz_Middle_16QAM_1@3	19.65	17.71	0.111	7	Pass
1.4MHz_Middle_16QAM_1@5	19.53	17.59	0.114	7	Pass
1.4MHz_Middle_16QAM_3@0	19.89	17.95	0.113	7	Pass
1.4MHz_Middle_16QAM_3@1	19.95	18.01	0.114	7	Pass
1.4MHz_Middle_16QAM_3@3	19.92	17.98	0.113	7	Pass
1.4MHz_Middle_16QAM_6@0	18.99	17.05	0.092	7	Pass

Mode	Conducted Power (dBm)	ERP (dBm)	ERP (W)	Limit (W)	Result
1.4MHz_High_QPSK_1@0	20.13	18.19	0.148	7	Pass
1.4MHz_High_QPSK_1@3	20.35	18.41	0.148	7	Pass
1.4MHz_High_QPSK_1@5	20.36	18.42	0.149	7	Pass
1.4MHz_High_QPSK_3@0	20.12	18.18	0.147	7	Pass
1.4MHz_High_QPSK_3@1	20.35	18.41	0.148	7	Pass
1.4MHz_High_QPSK_3@3	20.34	18.40	0.145	7	Pass
1.4MHz_High_QPSK_6@0	19.06	17.12	0.114	7	Pass
1.4MHz_High_16QAM_1@0	19.51	17.57	0.146	7	Pass
1.4MHz_High_16QAM_1@3	19.40	17.46	0.144	7	Pass
1.4MHz_High_16QAM_1@5	19.20	17.26	0.142	7	Pass
1.4MHz_High_16QAM_3@0	19.46	17.52	0.125	7	Pass
1.4MHz_High_16QAM_3@1	19.42	17.48	0.124	7	Pass
1.4MHz_High_16QAM_3@3	19.31	17.37	0.124	7	Pass
1.4MHz_High_16QAM_6@0	18.20	16.26	0.097	7	Pass
3MHz_Low_QPSK_1@0	20.12	18.18	0.153	7	Pass
3MHz_Low_QPSK_1@14	20.22	18.28	0.151	7	Pass
3MHz_Low_QPSK_1@8	20.13	18.19	0.152	7	Pass
3MHz_Low_QPSK_15@0	19.98	18.04	0.115	7	Pass
3MHz_Low_QPSK_8@0	19.88	17.94	0.114	7	Pass
3MHz_Low_QPSK_8@4	20.06	18.12	0.117	7	Pass
3MHz_Low_QPSK_8@7	20.14	18.20	0.115	7	Pass
3MHz_Low_16QAM_1@0	20.01	18.07	0.124	7	Pass
3MHz_Low_16QAM_1@14	20.38	18.44	0.117	7	Pass
3MHz_Low_16QAM_1@8	20.31	18.37	0.120	7	Pass
3MHz_Low_16QAM_15@0	19.13	17.19	0.101	7	Pass
3MHz_Low_16QAM_8@0	19.06	17.12	0.102	7	Pass
3MHz_Low_16QAM_8@4	19.21	17.27	0.102	7	Pass
3MHz_Low_16QAM_8@7	19.29	17.35	0.104	7	Pass
3MHz_Middle_QPSK_1@0	19.95	18.01	0.149	7	Pass

Mode	Conducted Power (dBm)	ERP (dBm)	ERP (W)	Limit (W)	Result
3MHz_Middle_QPSK_1@14	20.10	18.16	0.154	7	Pass
3MHz_Middle_QPSK_1@8	20.08	18.14	0.153	7	Pass
3MHz_Middle_QPSK_15@0	19.67	17.73	0.119	7	Pass
3MHz_Middle_QPSK_8@0	19.75	17.81	0.113	7	Pass
3MHz_Middle_QPSK_8@4	19.80	17.86	0.115	7	Pass
3MHz_Middle_QPSK_8@7	19.78	17.84	0.115	7	Pass
3MHz_Middle_16QAM_1@0	19.43	17.49	0.121	7	Pass
3MHz_Middle_16QAM_1@14	19.36	17.42	0.120	7	Pass
3MHz_Middle_16QAM_1@8	19.53	17.59	0.122	7	Pass
3MHz_Middle_16QAM_15@0	18.80	16.86	0.092	7	Pass
3MHz_Middle_16QAM_8@0	18.81	16.87	0.099	7	Pass
3MHz_Middle_16QAM_8@4	18.86	16.92	0.092	7	Pass
3MHz_Middle_16QAM_8@7	18.84	16.90	0.091	7	Pass
3MHz_High_QPSK_1@0	20.18	18.24	0.145	7	Pass
3MHz_High_QPSK_1@14	20.42	18.48	0.147	7	Pass
3MHz_High_QPSK_1@8	20.20	18.26	0.147	7	Pass
3MHz_High_QPSK_15@0	19.52	17.58	0.117	7	Pass
3MHz_High_QPSK_8@0	19.85	17.91	0.117	7	Pass
3MHz_High_QPSK_8@4	19.52	17.58	0.116	7	Pass
3MHz_High_QPSK_8@7	19.29	17.35	0.115	7	Pass
3MHz_High_16QAM_1@0	19.65	17.71	0.135	7	Pass
3MHz_High_16QAM_1@14	18.87	16.93	0.133	7	Pass
3MHz_High_16QAM_1@8	19.39	17.45	0.134	7	Pass
3MHz_High_16QAM_15@0	18.74	16.80	0.095	7	Pass
3MHz_High_16QAM_8@0	18.95	17.01	0.090	7	Pass
3MHz_High_16QAM_8@4	18.73	16.79	0.091	7	Pass
3MHz_High_16QAM_8@7	18.47	16.53	0.091	7	Pass
5MHz_Low_QPSK_1@0	19.94	18.00	0.153	7	Pass
5MHz_Low_QPSK_1@12	20.02	18.08	0.153	7	Pass

Mode	Conducted Power (dBm)	ERP (dBm)	ERP (W)	Limit (W)	Result
5MHz_Low_QPSK_1@24	20	18.06	0.152	7	Pass
5MHz_Low_QPSK_12@0	20.01	18.07	0.120	7	Pass
5MHz_Low_QPSK_12@13	20.29	18.35	0.115	7	Pass
5MHz_Low_QPSK_12@7	20.27	18.33	0.113	7	Pass
5MHz_Low_QPSK_25@0	20.10	18.16	0.116	7	Pass
5MHz_Low_16QAM_1@0	20.01	18.07	0.125	7	Pass
5MHz_Low_16QAM_1@12	20.76	18.82	0.122	7	Pass
5MHz_Low_16QAM_1@24	20.37	18.43	0.123	7	Pass
5MHz_Low_16QAM_12@0	19.10	17.16	0.100	7	Pass
5MHz_Low_16QAM_12@13	19.38	17.44	0.098	7	Pass
5MHz_Low_16QAM_12@7	19.46	17.52	0.101	7	Pass
5MHz_Low_16QAM_25@0	19.28	17.34	0.105	7	Pass
5MHz_Middle_QPSK_1@0	19.92	17.98	0.138	7	Pass
5MHz_Middle_QPSK_1@12	20.07	18.13	0.142	7	Pass
5MHz_Middle_QPSK_1@24	19.90	17.96	0.140	7	Pass
5MHz_Middle_QPSK_12@0	19.63	17.69	0.118	7	Pass
5MHz_Middle_QPSK_12@13	19.63	17.69	0.117	7	Pass
5MHz_Middle_QPSK_12@7	19.80	17.86	0.117	7	Pass
5MHz_Middle_QPSK_25@0	19.80	17.86	0.119	7	Pass
5MHz_Middle_16QAM_1@0	20.08	18.14	0.111	7	Pass
5MHz_Middle_16QAM_1@12	20.44	18.50	0.111	7	Pass
5MHz_Middle_16QAM_1@24	19.78	17.84	0.111	7	Pass
5MHz_Middle_16QAM_12@0	18.95	17.01	0.086	7	Pass
5MHz_Middle_16QAM_12@13	18.91	16.97	0.082	7	Pass
5MHz_Middle_16QAM_12@7	19.07	17.13	0.082	7	Pass
5MHz_Middle_16QAM_25@0	18.93	16.99	0.081	7	Pass
5MHz_High_QPSK_1@0	19.85	17.91	0.129	7	Pass
5MHz_High_QPSK_1@12	19.93	17.99	0.125	7	Pass
5MHz_High_QPSK_1@24	20.28	18.34	0.144	7	Pass

Mode	Conducted Power (dBm)	ERP (dBm)	ERP (W)	Limit (W)	Result
5MHz_High_QPSK_12@0	20.14	18.20	0.117	7	Pass
5MHz_High_QPSK_12@13	19.50	17.56	0.115	7	Pass
5MHz_High_QPSK_12@7	20.02	18.08	0.099	7	Pass
5MHz_High_QPSK_25@0	19.93	17.99	0.100	7	Pass
5MHz_High_16QAM_1@0	19.91	17.97	0.092	7	Pass
5MHz_High_16QAM_1@12	19.88	17.94	0.106	7	Pass
5MHz_High_16QAM_1@24	18.67	16.73	0.106	7	Pass
5MHz_High_16QAM_12@0	19.42	17.48	0.083	7	Pass
5MHz_High_16QAM_12@13	18.65	16.71	0.092	7	Pass
5MHz_High_16QAM_12@7	19.19	17.25	0.093	7	Pass
5MHz_High_16QAM_25@0	19.04	17.10	0.096	7	Pass
10MHz_Low_QPSK_1@0	19.99	18.05	0.154	7	Pass
10MHz_Low_QPSK_1@25	20.07	18.13	0.152	7	Pass
10MHz_Low_QPSK_1@49	20.46	18.52	0.147	7	Pass
10MHz_Low_QPSK_25@0	20.14	18.20	0.113	7	Pass
10MHz_Low_QPSK_25@12	20.45	18.51	0.116	7	Pass
10MHz_Low_QPSK_25@25	20.56	18.62	0.111	7	Pass
10MHz_Low_QPSK_50@0	20.40	18.46	0.119	7	Pass
10MHz_Low_16QAM_1@0	19.90	17.96	0.141	7	Pass
10MHz_Low_16QAM_1@25	20.57	18.63	0.138	7	Pass
10MHz_Low_16QAM_1@49	20.41	18.47	0.140	7	Pass
10MHz_Low_16QAM_25@0	19.31	17.37	0.102	7	Pass
10MHz_Low_16QAM_25@12	19.58	17.64	0.103	7	Pass
10MHz_Low_16QAM_25@25	19.66	17.72	0.093	7	Pass
10MHz_Low_16QAM_50@0	19.46	17.52	0.100	7	Pass
10MHz_Middle_QPSK_1@0	20.22	18.28	0.148	7	Pass
10MHz_Middle_QPSK_1@25	19.96	18.02	0.149	7	Pass
10MHz_Middle_QPSK_1@49	19.91	17.97	0.146	7	Pass
10MHz_Middle_QPSK_25@0	19.88	17.94	0.103	7	Pass

Mode	Conducted Power (dBm)	ERP (dBm)	ERP (W)	Limit (W)	Result
10MHz_Middle_QPSK_25@12	19.87	17.93	0.097	7	Pass
10MHz_Middle_QPSK_25@25	19.92	17.98	0.100	7	Pass
10MHz_Middle_QPSK_50@0	19.95	18.01	0.099	7	Pass
10MHz_Middle_16QAM_1@0	19.83	17.89	0.095	7	Pass
10MHz_Middle_16QAM_1@25	19.55	17.61	0.098	7	Pass
10MHz_Middle_16QAM_1@49	19.60	17.66	0.096	7	Pass
10MHz_Middle_16QAM_25@0	19.09	17.15	0.089	7	Pass
10MHz_Middle_16QAM_25@12	19.01	17.07	0.082	7	Pass
10MHz_Middle_16QAM_25@25	19.06	17.12	0.083	7	Pass
10MHz_Middle_16QAM_50@0	19.03	17.09	0.082	7	Pass
10MHz_High_QPSK_1@0	20.06	18.12	0.134	7	Pass
10MHz_High_QPSK_1@25	20.46	18.52	0.137	7	Pass
10MHz_High_QPSK_1@49	20.51	18.57	0.133	7	Pass
10MHz_High_QPSK_25@0	20.38	18.44	0.103	7	Pass
10MHz_High_QPSK_25@12	20.46	18.52	0.104	7	Pass
10MHz_High_QPSK_25@25	20.19	18.25	0.103	7	Pass
10MHz_High_QPSK_50@0	20.34	18.40	0.111	7	Pass
10MHz_High_16QAM_1@0	19.67	17.73	0.131	7	Pass
10MHz_High_16QAM_1@25	20.16	18.22	0.130	7	Pass
10MHz_High_16QAM_1@49	19.25	17.31	0.133	7	Pass
10MHz_High_16QAM_25@0	19.66	17.72	0.095	7	Pass
10MHz_High_16QAM_25@12	19.76	17.82	0.100	7	Pass
10MHz_High_16QAM_25@25	19.44	17.50	0.095	7	Pass
10MHz_High_16QAM_50@0	19.45	17.51	0.098	7	Pass

3.3.2 Peak-to-average ratio (PAR)

GSM 850 , Normal

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	3.35	13
	Middle	3.52	13
	High	3.21	13
GPRS	Low	5.30	13
	Middle	5.16	13
	High	5.19	13

GSM 1900, Normal

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	1.12	13
	Middle	1.09	13
	High	0.98	13
GPRS	Low	2.86	13
	Middle	2.97	13
	High	2.88	13

B5 , Normal

Mode	Value (dB)	Limit (dB)
10MHz_Low_QPSK_1@0	3.62	13
10MHz_Low_QPSK_50@0	5.13	13
10MHz_Low_16QAM_1@0	5.00	13
10MHz_Low_16QAM_50@0	5.93	13
10MHz_Middle_QPSK_1@0	3.88	13
10MHz_Middle_QPSK_50@0	5.13	13
10MHz_Middle_16QAM_1@0	4.58	13
10MHz_Middle_16QAM_50@0	5.93	13
10MHz_High_QPSK_1@0	3.46	13
10MHz_High_QPSK_50@0	4.94	13
10MHz_High_16QAM_1@0	4.10	13
10MHz_High_16QAM_50@0	5.74	13

3.3.3 26dB and 99% Bandwidth

GSM 850 , Normal

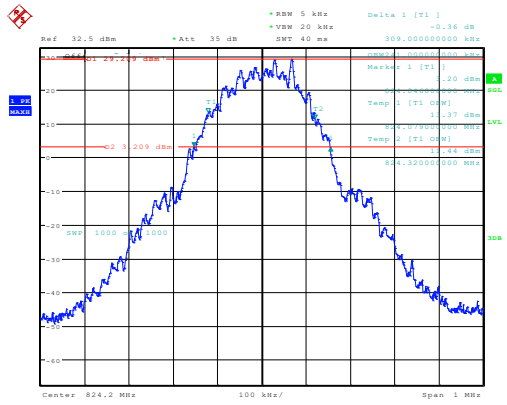
Mode	99% OBW (MHz)	EBW (MHz)
GSM_Low	0.241	0.309
GSM_Middle	0.239	0.312
GSM_High	0.242	0.311
GPRS_Low_Solt1	0.243	0.310
GPRS_Middle_Solt1	0.243	0.317
GPRS_High_Solt1	0.242	0.320

GSM 1900 , Normal

Mode	99% OBW (MHz)	EBW (MHz)
GSM_Low	0.241	0.304
GSM_Middle	0.241	0.310
GSM_High	0.241	0.310
GPRS_Low_Solt1	0.243	0.318
GPRS_Middle_Solt1	0.242	0.314
GPRS_High_Solt1	0.243	0.315

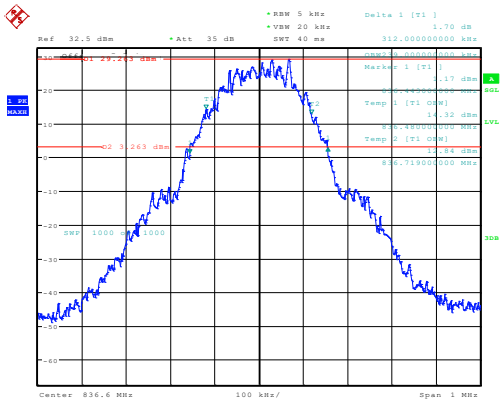
GSM 850 , Normal

GSM_Low 0.241MHz



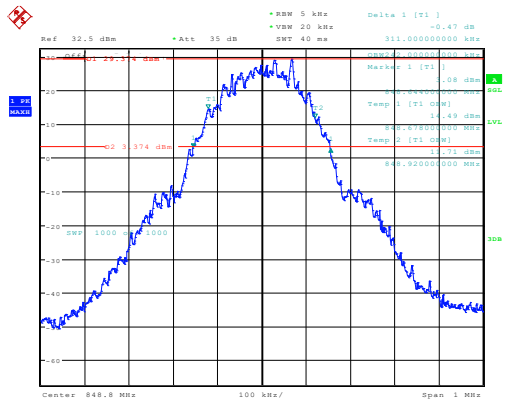
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 6.AUG.2024 11:07:30

GSM_Middle 0.239MHz



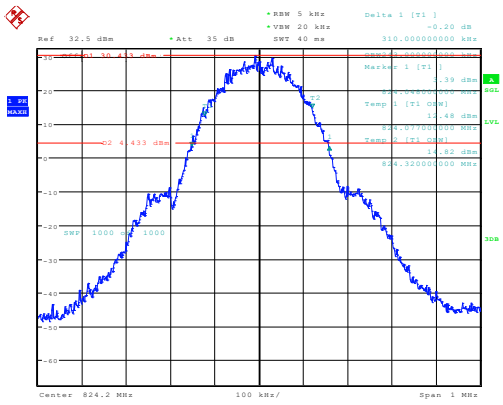
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 6.AUG.2024 11:13:55

GSM_High 0.242MHz



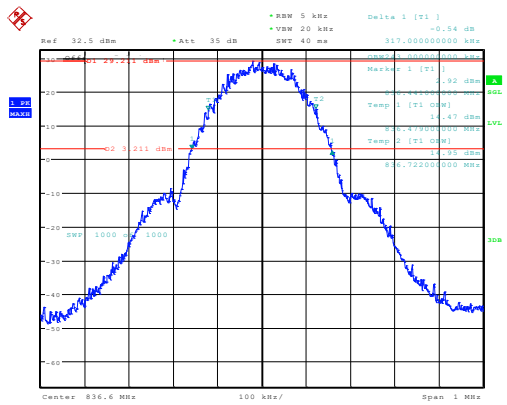
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 6.AUG.2024 11:16:37

GPRS_Low_Solt1 0.243MHz



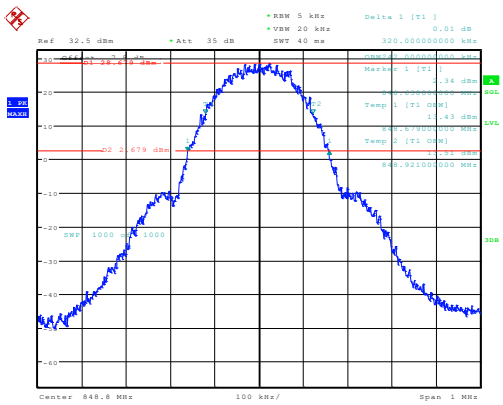
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 6.AUG.2024 11:20:41

GPRS_Middle_Solt1 0.243MHz



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 09:42:50

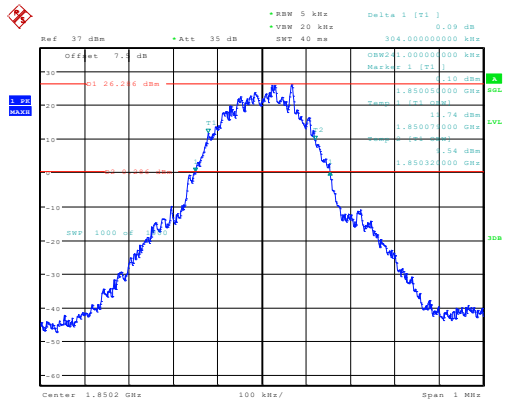
GPRS_High_Solt1 0.242MHz



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 10:01:00

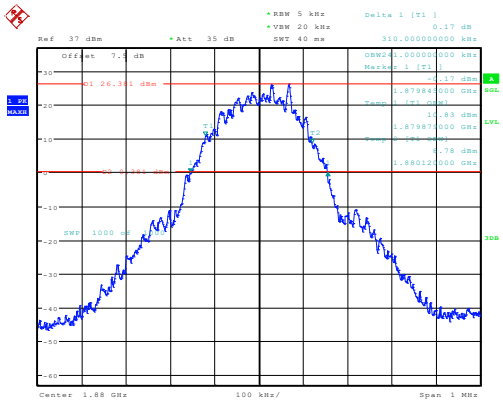
GSM 1900 , Normal

GSM_Low 0.241MHz



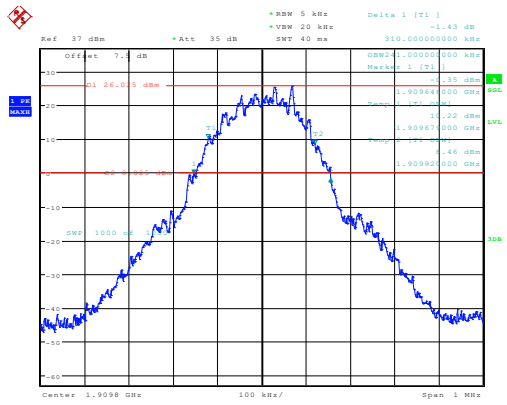
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 11:33:43

GSM_Middle 0.241MHz



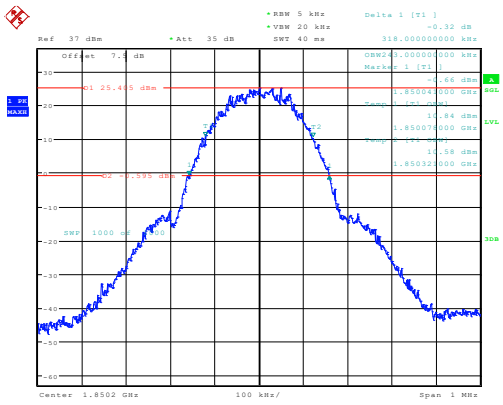
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 11:36:41

GSM_High 0.241MHz



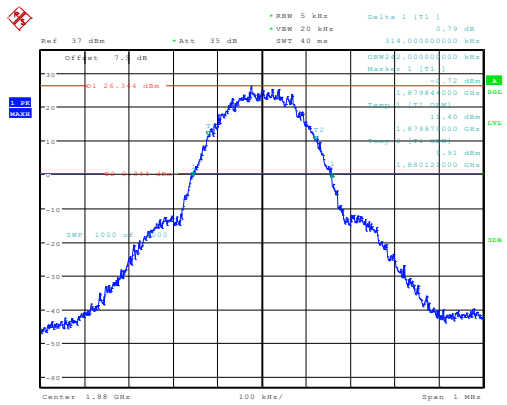
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 11:40:42

GPRS_Low_Solt1 0.243MHz



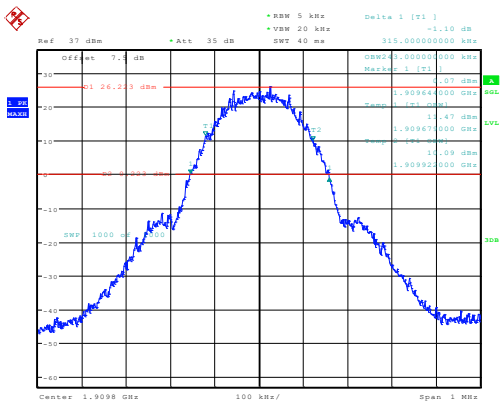
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 11:46:49

GPRS_Middle_Solt1 0.242MHz



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 11:49:34

GPRS_High_Solt1 0.243MHz



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 11:52:56

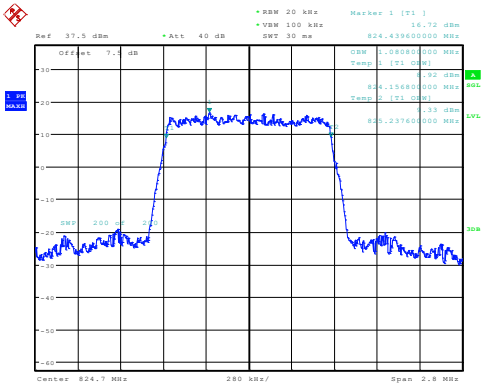
B5 , Normal

Mode	99% OBW (MHz)	EBW (MHz)
1.4MHz_Low_QPSK_6@0	1.081	1.238
1.4MHz_Low_16QAM_6@0	1.095	1.240
1.4MHz_Middle_QPSK_6@0	1.092	1.243
1.4MHz_Middle_16QAM_6@0	1.084	1.240
1.4MHz_High_QPSK_6@0	1.086	1.238
1.4MHz_High_16QAM_6@0	1.095	1.240
3MHz_Low_QPSK_15@0	2.688	3.108
3MHz_Low_16QAM_15@0	2.688	3.114
3MHz_Middle_QPSK_15@0	2.694	3.096
3MHz_Middle_16QAM_15@0	2.694	3.114
3MHz_High_QPSK_15@0	2.682	3.144
3MHz_High_16QAM_15@0	2.694	3.102
5MHz_Low_QPSK_25@0	4.470	4.910
5MHz_Low_16QAM_25@0	4.470	4.920
5MHz_Middle_QPSK_25@0	4.470	4.890
5MHz_Middle_16QAM_25@0	4.460	4.880
5MHz_High_QPSK_25@0	4.480	4.900
5MHz_High_16QAM_25@0	4.470	4.890
10MHz_Low_QPSK_50@0	8.960	9.720
10MHz_Low_16QAM_50@0	8.940	9.780
10MHz_Middle_QPSK_50@0	8.960	9.780
10MHz_Middle_16QAM_50@0	8.980	9.820
10MHz_High_QPSK_50@0	8.920	9.700
10MHz_High_16QAM_50@0	8.920	9.720

B5 , Normal

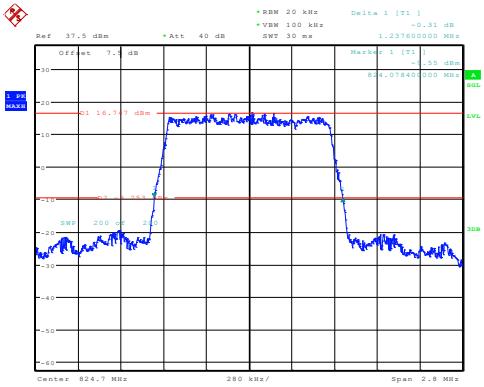
1.4MHz_Low_QPSK_6@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:13:51

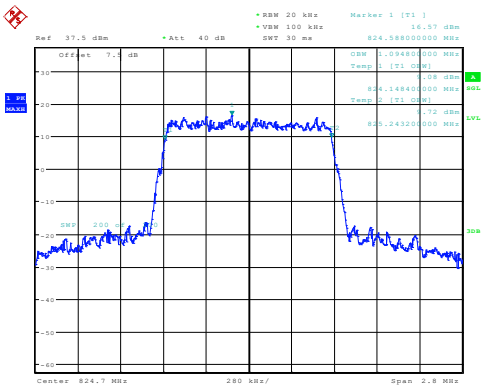
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:14:10

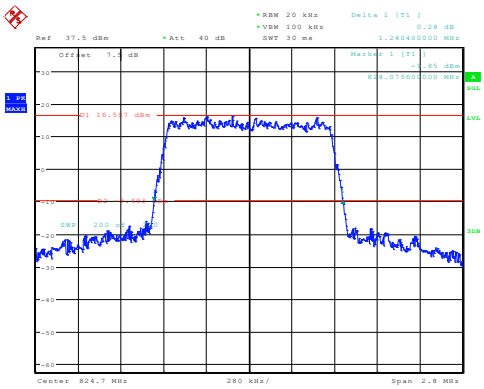
1.4MHz_Low_16QAM_6@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:14:58

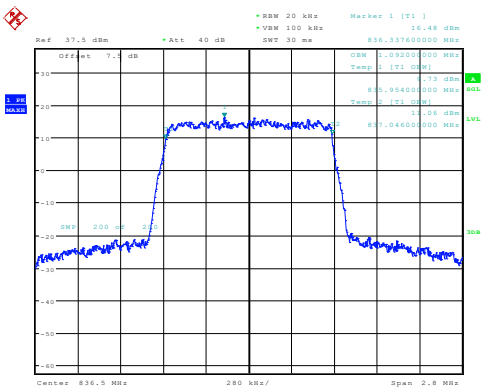
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:15:16

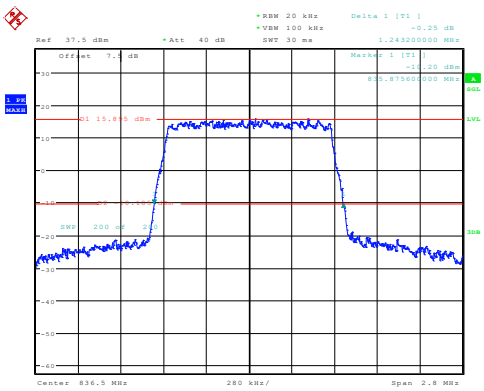
1.4MHz_Middle_QPSK_6@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:16:14

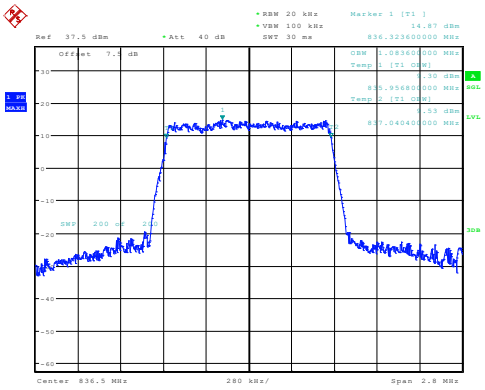
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:16:37

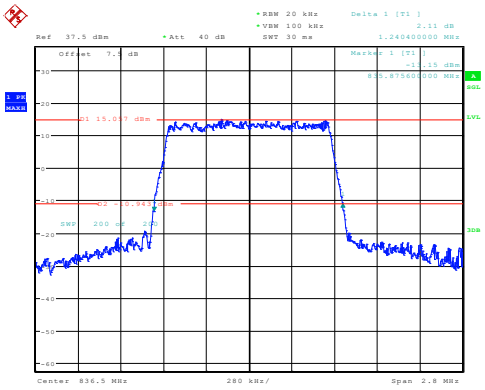
1.4MHz_Middle_16QAM_6@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:17:35

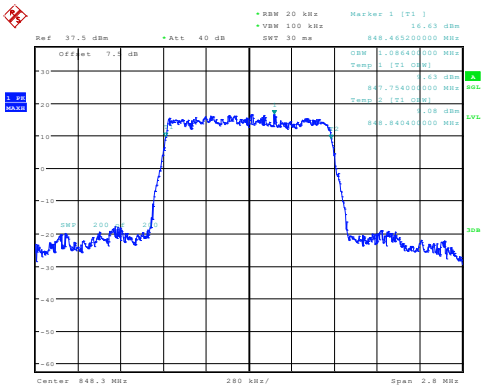
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:17:58

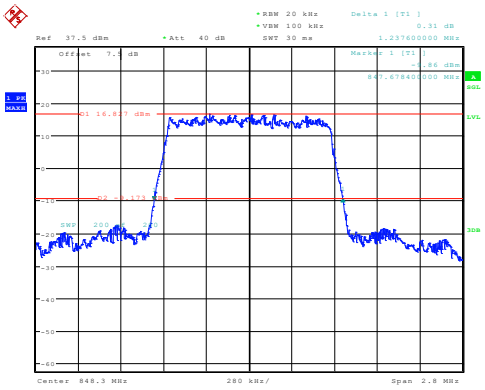
1.4MHz_High_QPSK_6@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:18:49

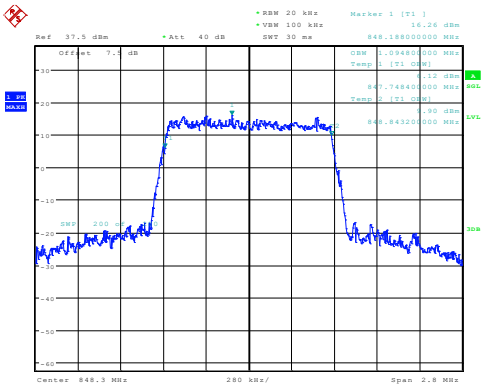
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:19:07

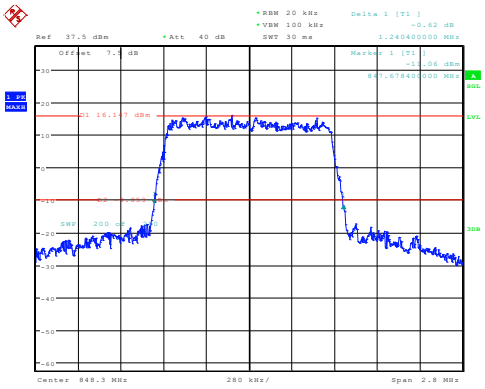
1.4MHz_High_16QAM_6@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:19:55

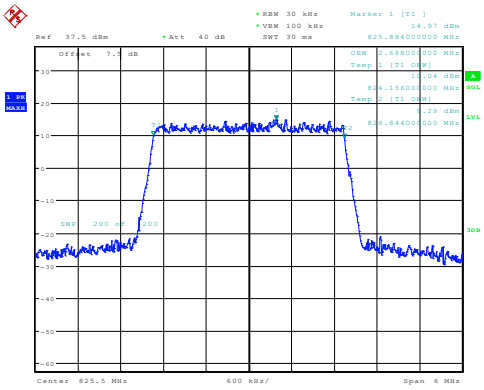
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:20:14

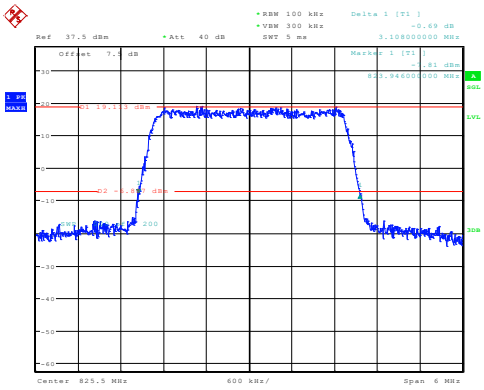
3MHz_Low_QPSK_15@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:20:46

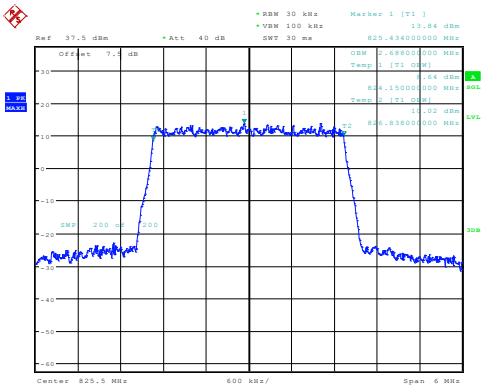
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:21:14

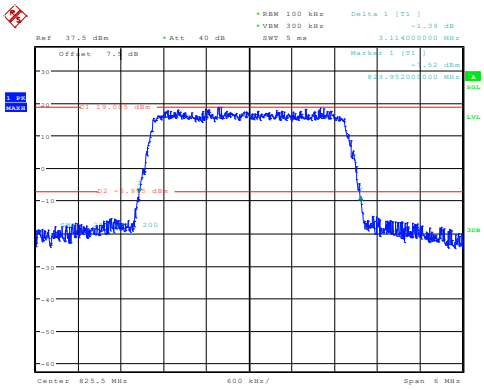
3MHz_Low_16QAM_15@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:21:44

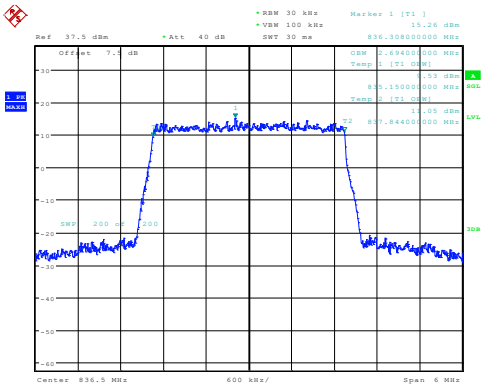
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:22:12

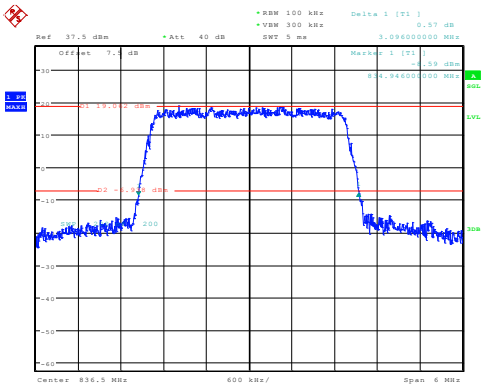
3MHz_Middle_QPSK_15@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:22:46

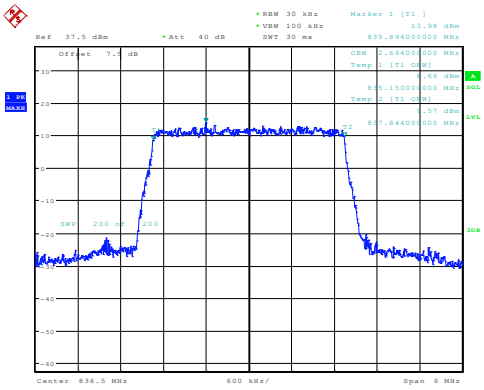
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:23:23

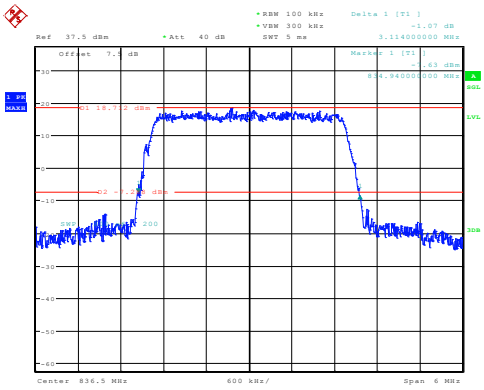
3MHz_Middle_16QAM_15@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:23:56

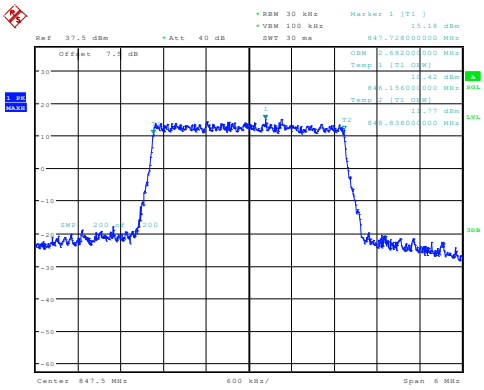
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:24:33

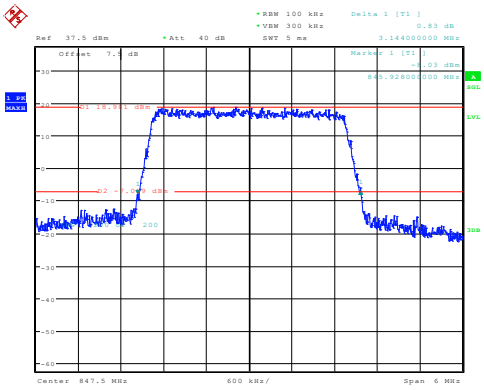
3MHz_High_QPSK_15@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:25:04

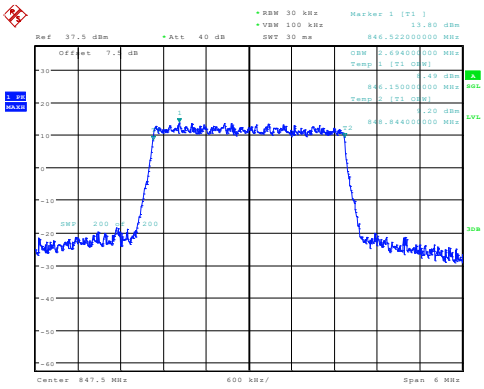
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:25:34

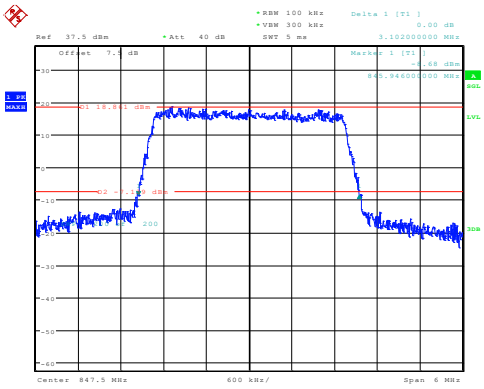
3MHz_High_16QAM_15@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:26:04

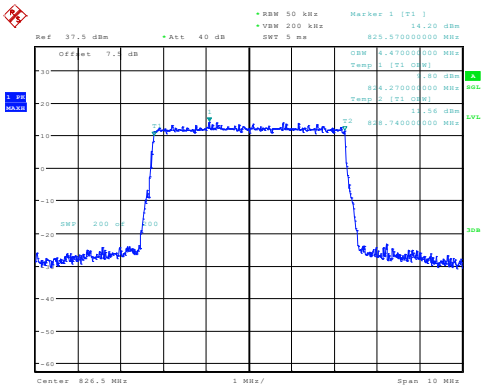
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:26:34

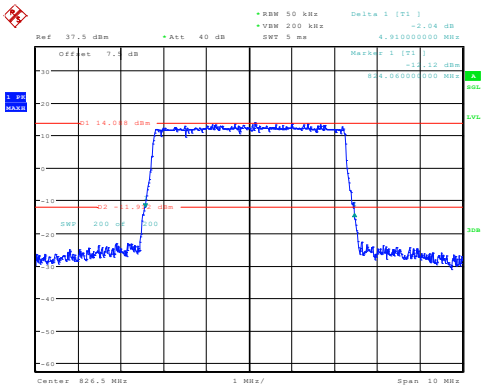
5MHz_Low_QPSK_25@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:27:01

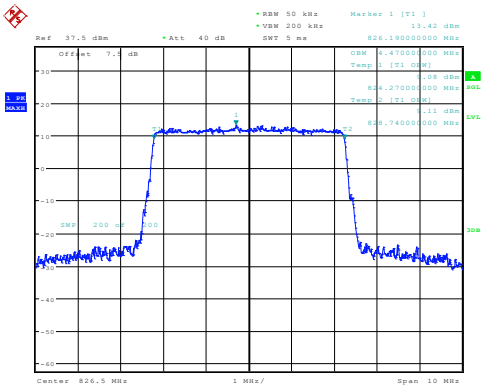
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:27:16

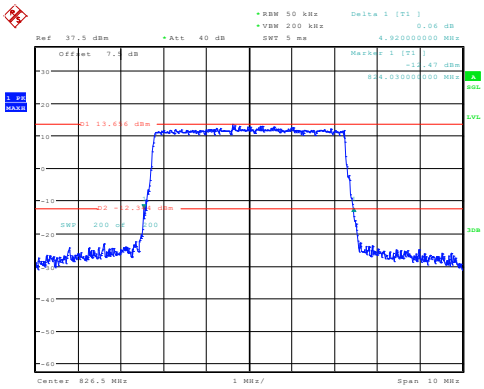
5MHz_Low_16QAM_25@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:27:42

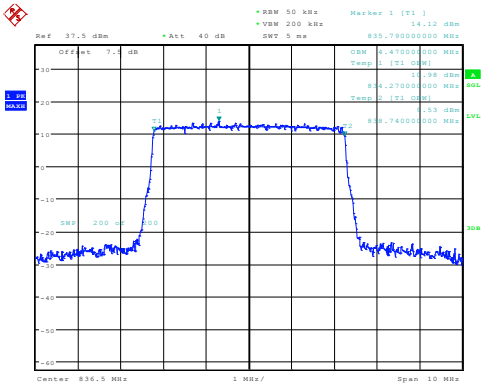
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:27:57

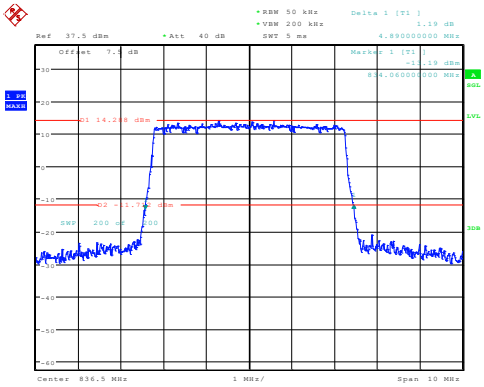
5MHz_Middle_QPSK_25@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:28:30

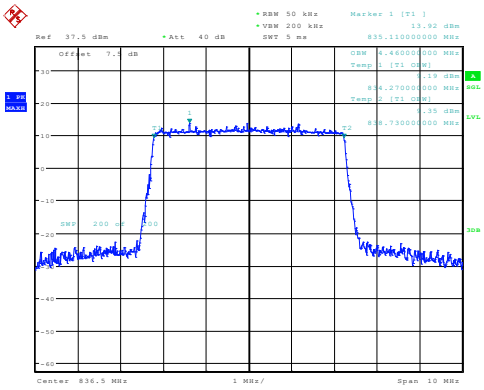
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:28:53

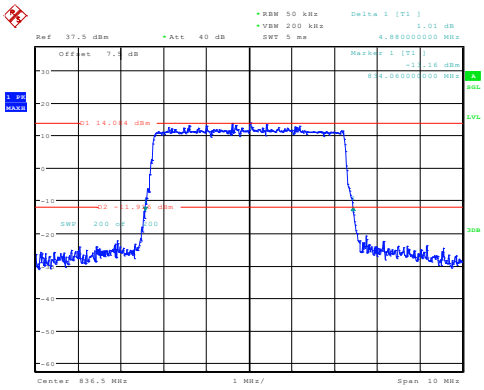
5MHz_Middle_16QAM_25@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:29:26

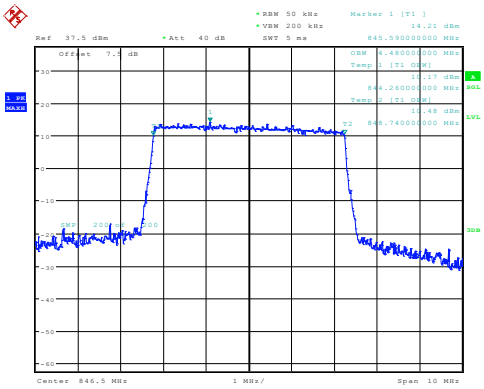
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:29:48

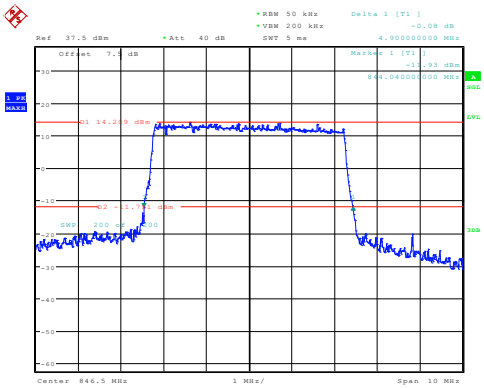
5MHz_High_QPSK_25@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:30:15

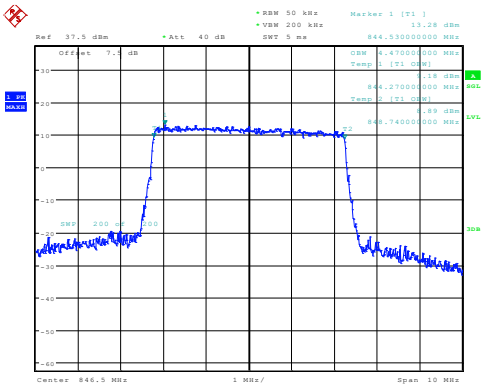
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:30:31

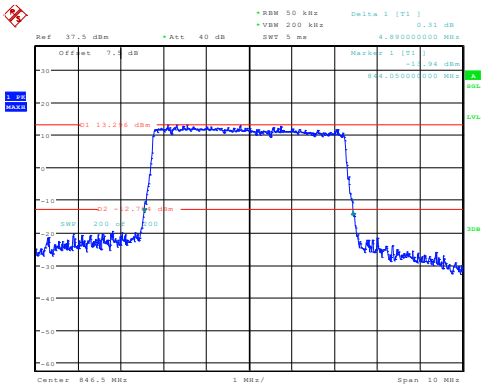
5MHz_High_16QAM_25@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:30:58

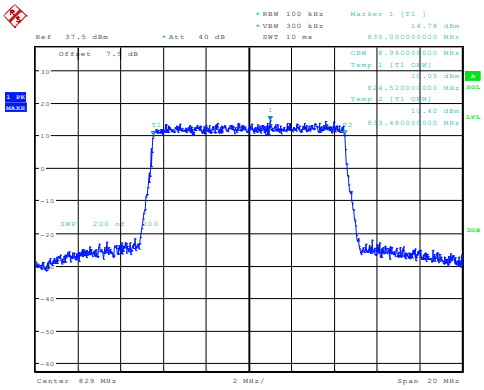
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:31:14

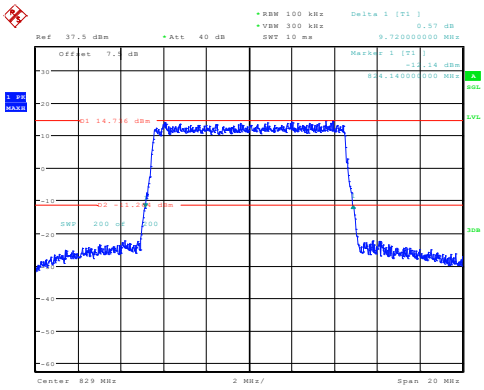
10MHz_Low_QPSK_50@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:31:50

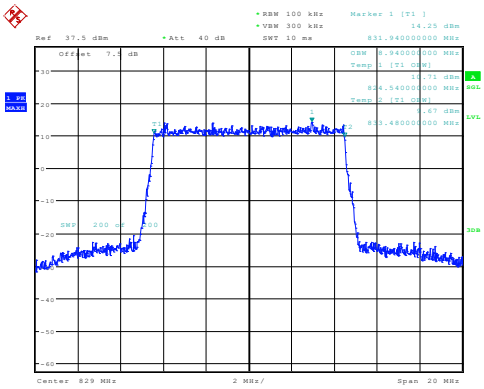
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:32:13

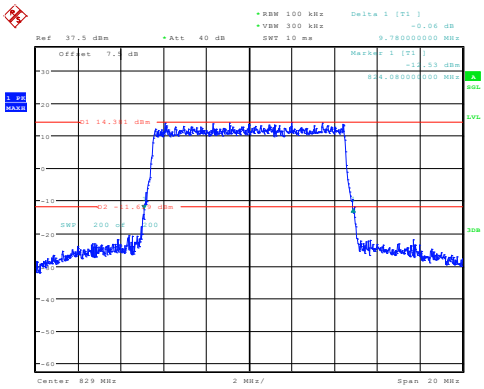
10MHz_Low_16QAM_50@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:32:47

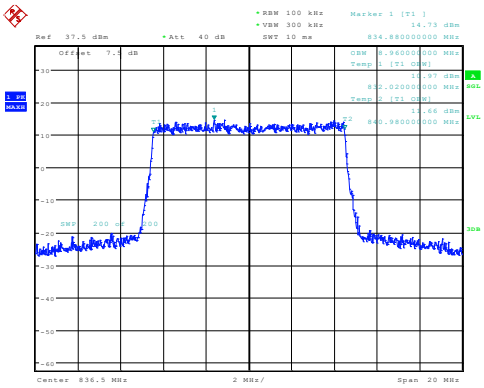
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:33:10

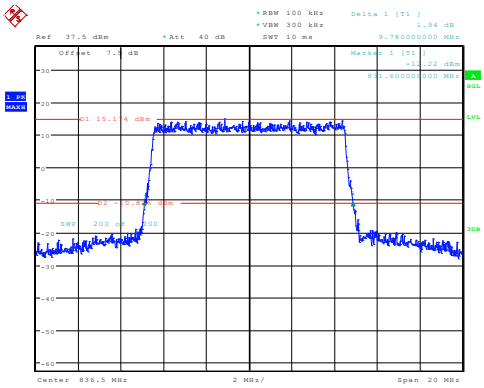
10MHz_Middle_QPSK_50@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:33:46

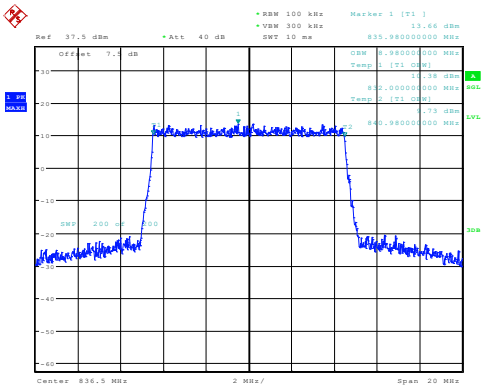
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:34:10

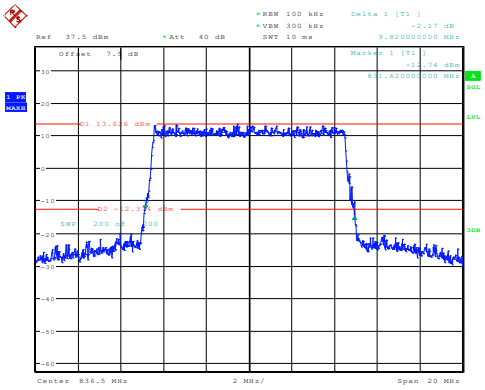
10MHz_Middle_16QAM_50@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:34:46

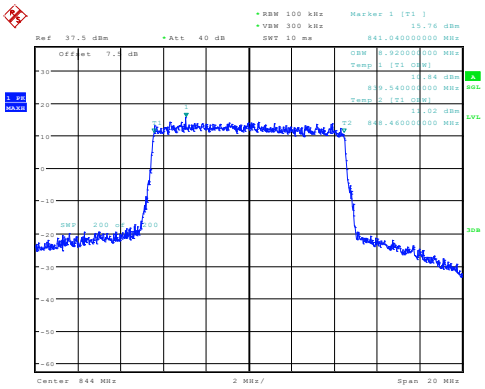
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:35:11

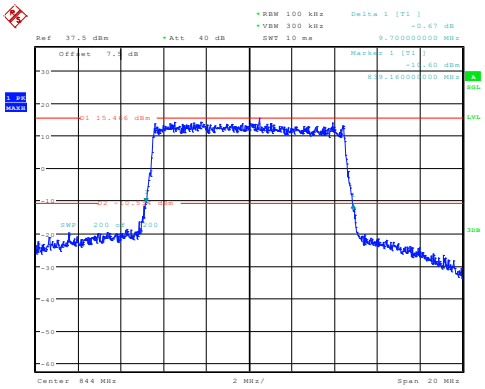
10MHz_High_QPSK_50@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:35:48

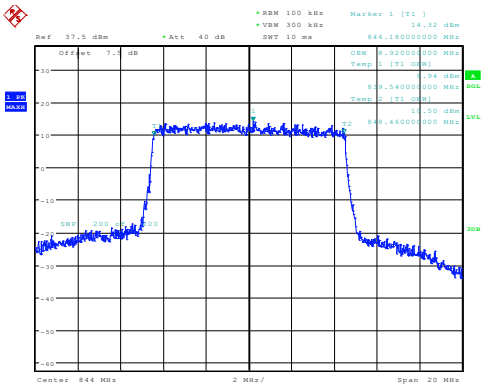
26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:36:14

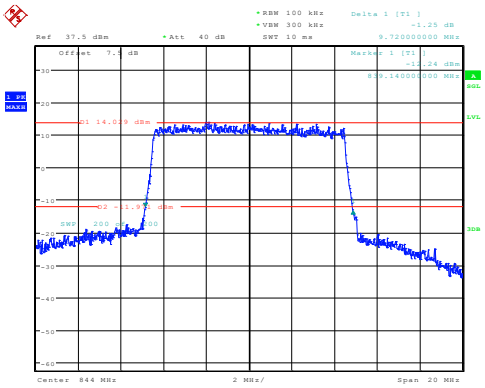
10MHz_High_16QAM_50@0

Occupied Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:36:51

26dB Bandwidth



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:37:17

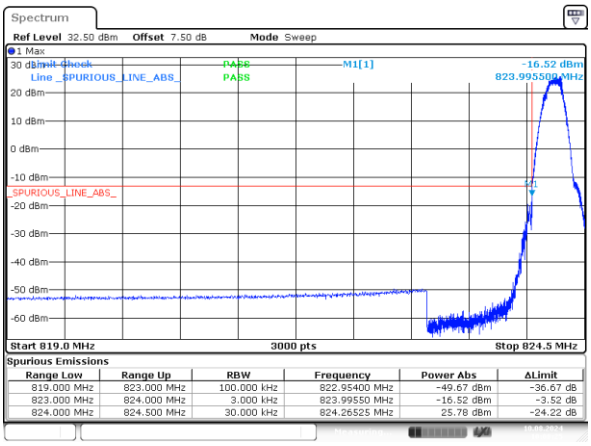
3.3.4 Out of band emission, Band Edge

GSM 850 , Normal

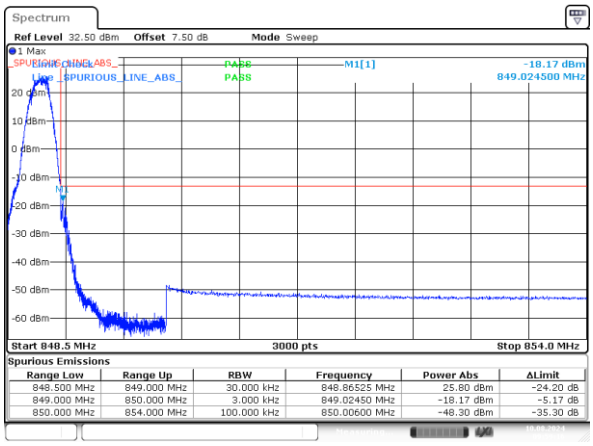
Mode	Value (dBm)	Limit	Result
GSM_Low	-16.52	See Graphs	Pass
GSM_High	-18.17	See Graphs	Pass
GPRS_Low_Solt1	-17.24	See Graphs	Pass
GPRS_High_Solt1	-17.42	See Graphs	Pass

GSM 850 , Normal

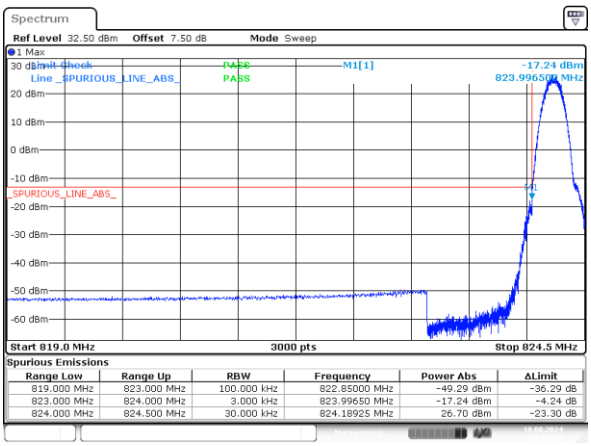
GSM_Low -16.52dBm



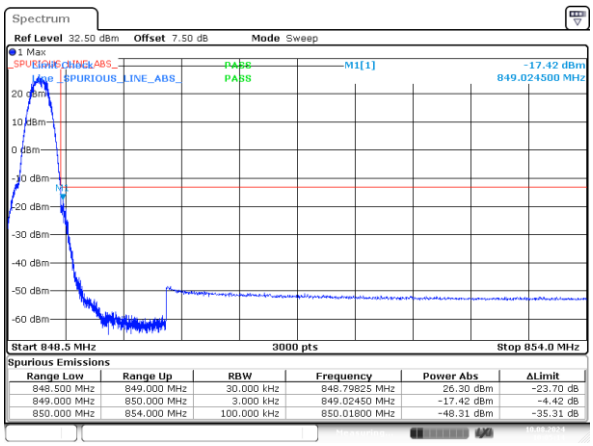
GSM_High -18.17dBm



GPRS_Low_Solt1 -17.24dBm



GPRS_High_Solt1 -17.42dBm

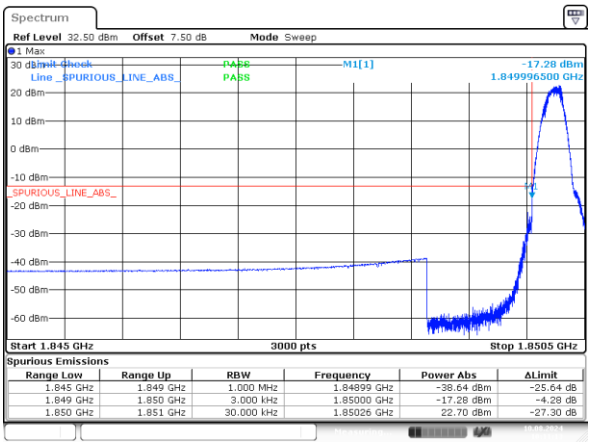


GSM 1900 , Normal

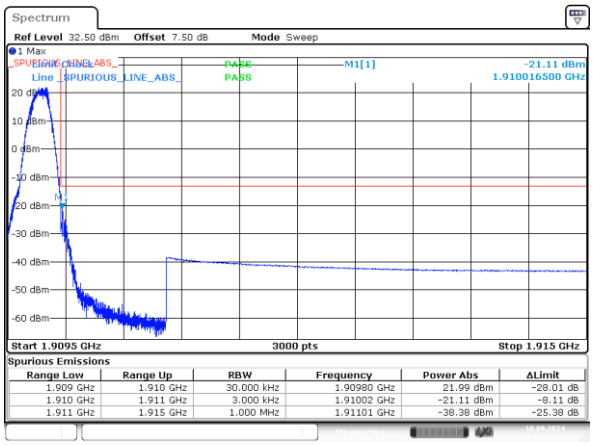
Mode	Value (dBm)	Limit	Result
GSM_Low	-17.28	See Graphs	Pass
GSM_High	-21.11	See Graphs	Pass
GPRS_Low_Solt1	-20.47	See Graphs	Pass
GPRS_High_Solt1	-19.11	See Graphs	Pass

GSM 1900 , Normal

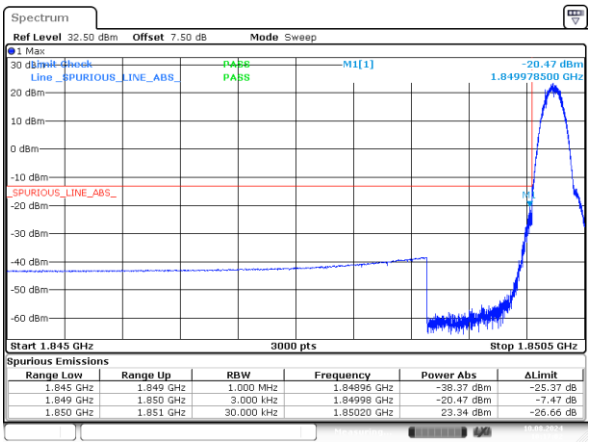
GSM_Low -19.64dBm



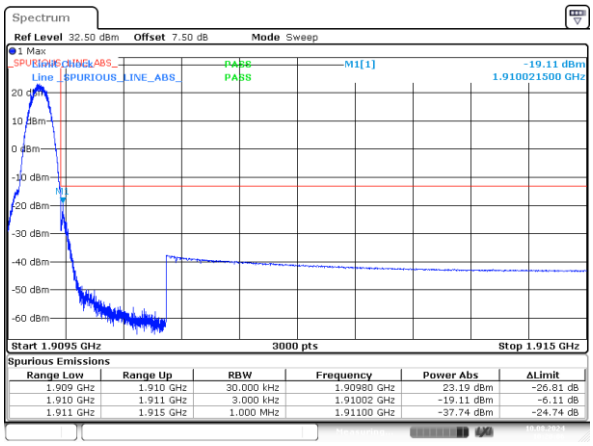
GSM_High -21.11dBm



GPRS_Low_Solt1 -20.47dBm



GPRS_High_Solt1 -19.11dBm

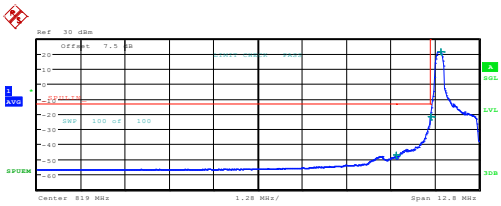


B5 , Normal

Mode	Value (dBm)	Limit	Result
1.4MHz_Low_QPSK_1@0	-22.01	See Graphs	Pass
1.4MHz_Low_QPSK_6@0	-28.34	See Graphs	Pass
1.4MHz_Low_16QAM_1@0	-25.90	See Graphs	Pass
1.4MHz_Low_16QAM_6@0	-28.34	See Graphs	Pass
1.4MHz_High_QPSK_1@5	-19.77	See Graphs	Pass
1.4MHz_High_QPSK_6@0	-26.01	See Graphs	Pass
1.4MHz_High_16QAM_1@5	-19.02	See Graphs	Pass
1.4MHz_High_16QAM_6@0	-27.40	See Graphs	Pass
3MHz_Low_QPSK_1@0	-13.30	See Graphs	Pass
3MHz_Low_QPSK_15@0	-24.35	See Graphs	Pass
3MHz_Low_16QAM_1@0	-16.19	See Graphs	Pass
3MHz_Low_16QAM_15@0	-24.77	See Graphs	Pass
3MHz_High_QPSK_1@14	-13.41	See Graphs	Pass
3MHz_High_QPSK_15@0	-23.48	See Graphs	Pass
3MHz_High_16QAM_1@14	-13.04	See Graphs	Pass
3MHz_High_16QAM_15@0	-24.52	See Graphs	Pass
5MHz_Low_QPSK_1@0	-21.63	See Graphs	Pass
5MHz_Low_QPSK_25@0	-29.30	See Graphs	Pass
5MHz_Low_16QAM_1@0	-23.46	See Graphs	Pass
5MHz_Low_16QAM_25@0	-28.60	See Graphs	Pass
5MHz_High_QPSK_1@24	-20.12	See Graphs	Pass
5MHz_High_QPSK_25@0	-27.59	See Graphs	Pass
5MHz_High_16QAM_1@24	-22.30	See Graphs	Pass
5MHz_High_16QAM_25@0	-29.18	See Graphs	Pass
10MHz_Low_QPSK_1@0	-28.16	See Graphs	Pass
10MHz_Low_QPSK_50@0	-29.03	See Graphs	Pass
10MHz_Low_16QAM_1@0	-29.28	See Graphs	Pass
10MHz_Low_16QAM_50@0	-30.54	See Graphs	Pass
10MHz_High_QPSK_1@49	-27.54	See Graphs	Pass
10MHz_High_QPSK_50@0	-26.85	See Graphs	Pass
10MHz_High_16QAM_1@49	-27.39	See Graphs	Pass
10MHz_High_16QAM_50@0	-27.85	See Graphs	Pass

B5 , Normal

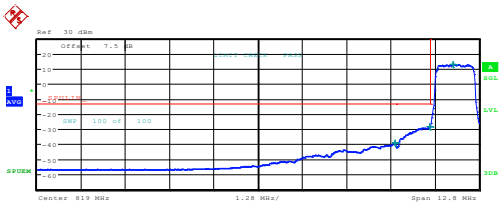
1.4MHz_Low_QPSK_1@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
812.600 M	823.000 M	100.00 k	822.994800 M	-47.03	-34.03
823.000 M	824.000 M	50.00 k	823.998500 M	-22.01	-9.01
824.000 M	825.400 M	100.00 k	824.287700 M	21.47	-28.53

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:49:57

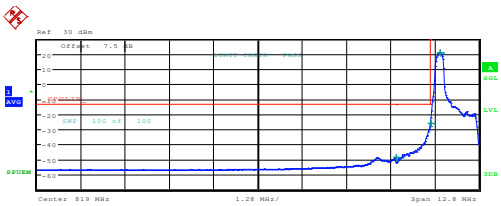
1.4MHz_Low_QPSK_6@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
812.600 M	823.000 M	100.00 k	822.953200 M	-39.17	-26.17
823.000 M	824.000 M	50.00 k	823.963500 M	-28.34	-15.34
824.000 M	825.400 M	100.00 k	824.632100 M	12.92	-37.08

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:49:09

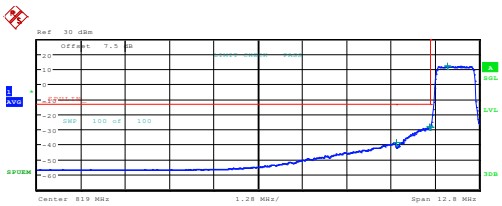
1.4MHz_Low_16QAM_1@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
812.600 M	823.000 M	100.00 k	823.000000 M	-48.42	-35.42
823.000 M	824.000 M	50.00 k	823.998000 M	-25.90	-12.90
824.000 M	825.400 M	100.00 k	824.279300 M	21.07	-28.93

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:51:32

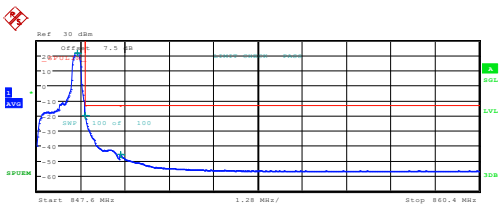
1.4MHz_Low_16QAM_6@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
812.600 M	823.000 M	100.00 k	822.994800 M	-38.74	-25.74
823.000 M	824.000 M	50.00 k	823.972000 M	-28.34	-15.34
824.000 M	825.400 M	100.00 k	824.473200 M	12.05	-37.95

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:50:45

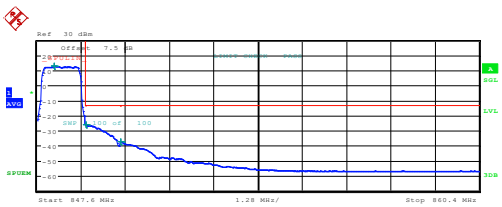
1.4MHz_High_QPSK_1@5



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
847.600 M	849.000 M	100.00 k	848.778800 M	21.50	-28.50
849.000 M	850.000 M	50.00 k	849.000500 M	-19.77	-6.77
850.000 M	860.400 M	100.00 k	850.010400 M	-46.03	-33.03

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:53:26

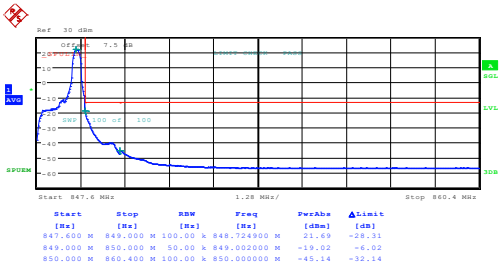
1.4MHz_High_QPSK_6@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
847.600 M	849.000 M	100.00 k	848.085100 M	12.84	-37.16
849.000 M	850.000 M	50.00 k	849.014000 M	-26.01	-13.01
850.000 M	860.400 M	100.00 k	850.020800 M	-37.56	-24.56

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:52:37

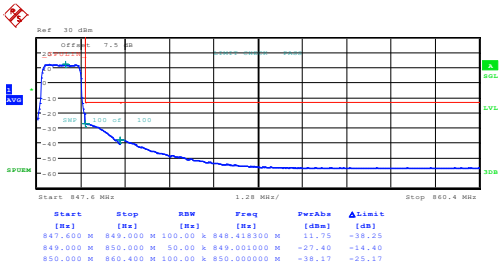
1.4MHz_High_16QAM_1@5



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
847.600 M	849.000 M	100.00 k	848.724900 M	21.69	-28.31
849.000 M	850.000 M	50.00 k	849.002000 M	-19.02	-6.02
850.000 M	860.400 M	100.00 k	850.000000 M	-45.14	-32.14

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:55:05

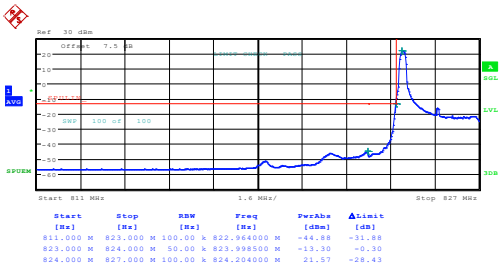
1.4MHz_High_16QAM_6@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
847.600 M	849.000 M	100.00 k	848.418300 M	11.75	-38.25
849.000 M	850.000 M	50.00 k	849.001000 M	-27.40	-14.40
850.000 M	860.400 M	100.00 k	850.000000 M	-38.17	-25.17

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:54:16

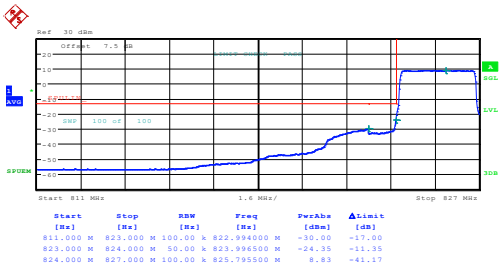
3MHz_Low_QPSK_1@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
811.000 M	823.000 M	100.00 k	822.964000 M	-44.88	-31.88
823.000 M	824.000 M	50.00 k	823.998500 M	-13.30	-0.30
824.000 M	827.000 M	100.00 k	824.204000 M	21.57	-28.43

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:57:12

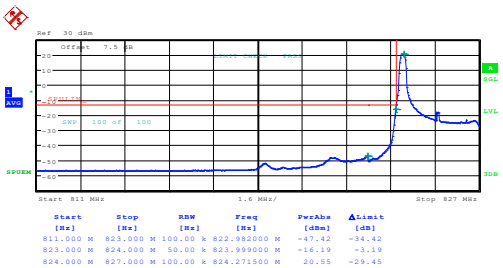
3MHz_Low_QPSK_15@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
811.000 M	823.000 M	100.00 k	822.994000 M	-35.00	-17.00
823.000 M	824.000 M	50.00 k	823.996500 M	-24.35	-11.35
824.000 M	827.000 M	100.00 k	825.795500 M	8.83	-41.17

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:56:17

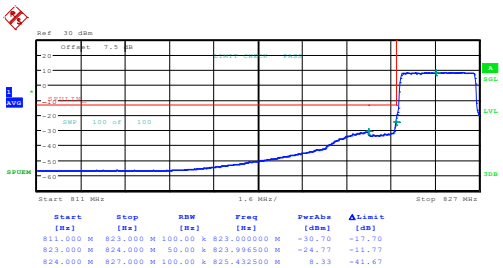
3MHz_Low_16QAM_1@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
811.000 M	823.000 M	100.00 k	822.982000 M	-47.42	-34.42
823.000 M	824.000 M	50.00 k	823.999000 M	-16.19	-3.19
824.000 M	827.000 M	100.00 k	824.271500 M	20.55	-29.45

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:59:00

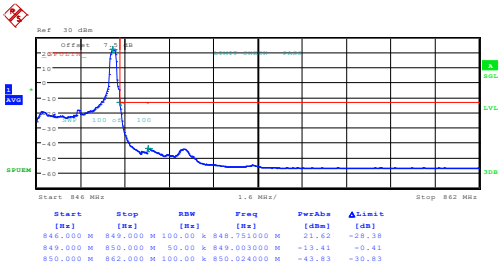
3MHz_Low_16QAM_15@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
811.000 M	823.000 M	100.00 k	823.000000 M	-30.70	-17.70
823.000 M	824.000 M	50.00 k	823.996500 M	-24.77	-11.77
824.000 M	827.000 M	100.00 k	825.432500 M	8.33	-41.67

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 15:58:06

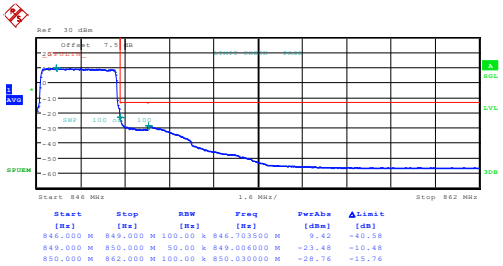
3MHz_High_QPSK_1@14



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
846.000 M	849.000 M	100.00 k	848.751000 M	21.62	-28.38
849.000 M	850.000 M	50.00 k	849.003000 M	-13.41	-0.41
850.000 M	862.000 M	100.00 k	850.024000 M	-43.83	-30.83

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 19.AUG.2024 15:11:30

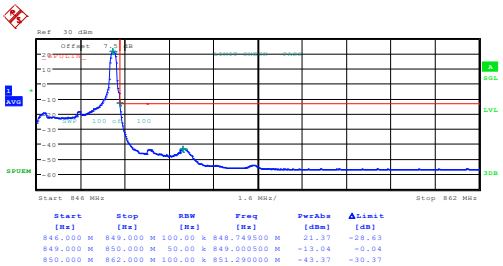
3MHz_High_QPSK_15@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
846.000 M	849.000 M	100.00 k	846.703500 M	9.42	-40.58
849.000 M	850.000 M	50.00 k	849.006000 M	-23.48	-10.48
850.000 M	862.000 M	100.00 k	850.030000 M	-28.76	-15.76

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:00:12

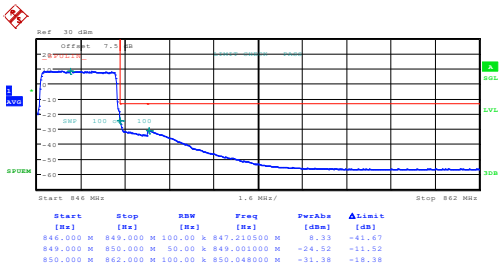
3MHz_High_16QAM_1@14



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
846.000 M	849.000 M	100.00 k	848.749500 M	21.37	-28.63
849.000 M	850.000 M	50.00 k	849.000500 M	-13.04	-0.04
850.000 M	862.000 M	100.00 k	851.290000 M	-43.37	-30.37

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 19.AUG.2024 15:12:25

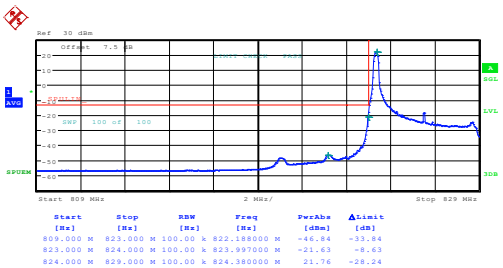
3MHz_High_16QAM_15@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
846.000 M	849.000 M	100.00 k	847.210500 M	8.33	-41.67
849.000 M	850.000 M	50.00 k	849.001000 M	-24.52	-11.52
850.000 M	862.000 M	100.00 k	850.048000 M	-31.38	-18.38

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:02:04

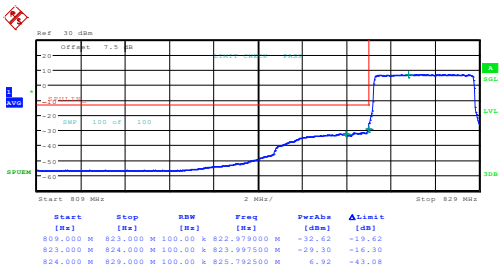
5MHz_Low_QPSK_1@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
809.000 M	823.000 M	100.00 k	822.188000 M	-46.84	-33.84
823.000 M	824.000 M	100.00 k	823.997000 M	-21.63	-8.63
824.000 M	829.000 M	100.00 k	824.380000 M	21.76	-28.24

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:05:08

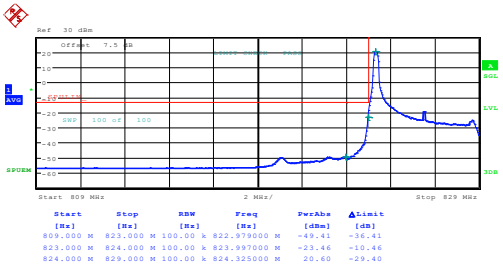
5MHz_Low_QPSK_25@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
809.000 M	823.000 M	100.00 k	822.979000 M	-32.62	-19.62
823.000 M	824.000 M	100.00 k	823.997500 M	-29.30	-16.30
824.000 M	829.000 M	100.00 k	825.792500 M	6.92	-43.08

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:04:13

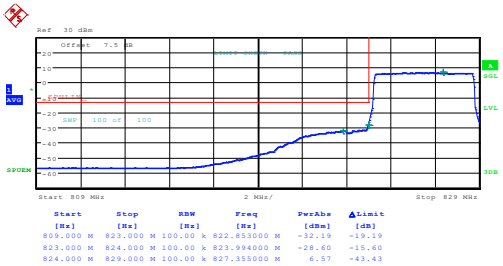
5MHz_Low_16QAM_1@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
809.000 M	823.000 M	100.00 k	822.979000 M	-49.41	-36.41
823.000 M	824.000 M	100.00 k	823.997000 M	-23.46	-10.46
824.000 M	829.000 M	100.00 k	824.325000 M	20.60	-29.40

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:06:59

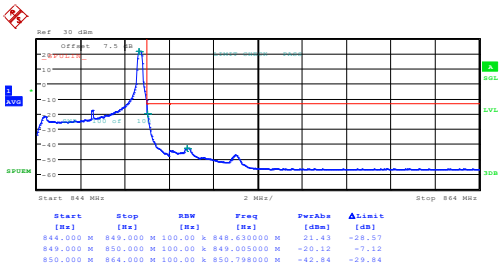
5MHz_Low_16QAM_25@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
809.000 M	823.000 M	100.00 k	822.853000 M	-32.19	-19.19
823.000 M	824.000 M	100.00 k	823.994000 M	-28.60	-15.60
824.000 M	829.000 M	100.00 k	827.355000 M	6.57	-43.43

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:06:04

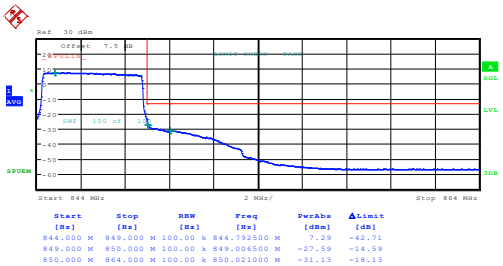
5MHz_High_QPSK_1@24



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
844.000 M	849.000 M	100.00 k	848.630000 M	21.43	-28.57
849.000 M	850.000 M	100.00 k	849.005000 M	-20.12	-7.12
850.000 M	864.000 M	100.00 k	850.798000 M	-42.84	-29.84

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:09:11

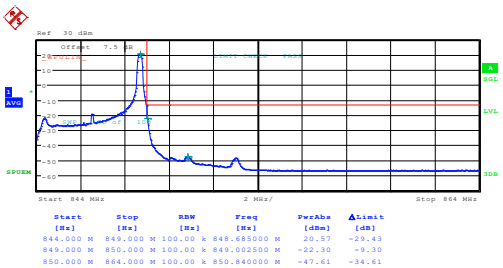
5MHz_High_QPSK_25@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
844.000 M	849.000 M	100.00 k	844.792500 M	7.29	-42.71
849.000 M	850.000 M	100.00 k	849.006500 M	-27.59	-14.59
850.000 M	864.000 M	100.00 k	850.021000 M	-31.13	-18.13

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:08:13

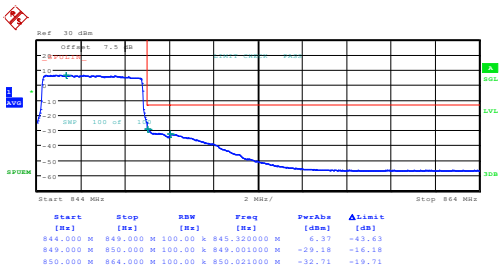
5MHz_High_16QAM_1@24



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
844.000 M	849.000 M	100.00 k	848.685000 M	20.57	-29.43
849.000 M	850.000 M	100.00 k	849.002500 M	-22.30	-9.30
850.000 M	864.000 M	100.00 k	850.840000 M	-47.61	-34.61

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:11:07

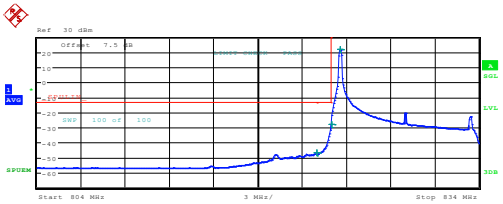
5MHz_High_16QAM_25@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
844.000 M	849.000 M	100.00 k	845.320000 M	6.37	-43.63
849.000 M	850.000 M	100.00 k	849.001000 M	-29.18	-16.18
850.000 M	864.000 M	100.00 k	850.021000 M	-32.71	-19.71

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:10:09

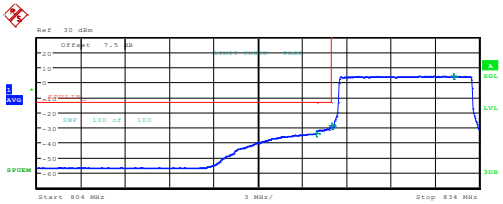
10MHz_Low_QPSK_1@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
804.000 M	823.000 M	100.00 k	823.000000 M	-46.60	-33.60
823.000 M	824.000 M	200.00 k	823.992000 M	-28.16	-15.16
824.000 M	834.000 M	100.00 k	824.555000 M	21.67	-28.33

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:14:00

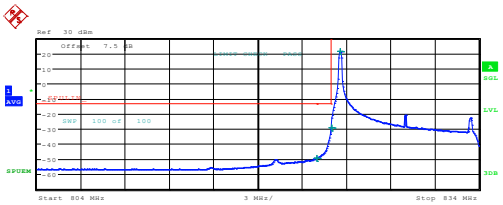
10MHz_Low_QPSK_50@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
804.000 M	823.000 M	100.00 k	822.943000 M	-34.01	-21.01
823.000 M	824.000 M	200.00 k	823.999000 M	-29.03	-16.03
824.000 M	834.000 M	100.00 k	832.285000 M	4.00	-46.00

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:12:43

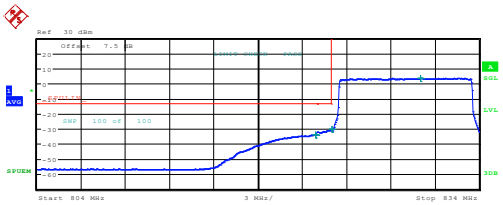
10MHz_Low_16QAM_1@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
804.000 M	823.000 M	100.00 k	822.971500 M	-49.57	-36.57
823.000 M	824.000 M	200.00 k	823.997000 M	-29.28	-16.28
824.000 M	834.000 M	100.00 k	824.560000 M	21.11	-28.89

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:16:34

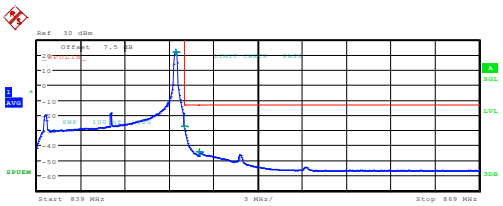
10MHz_Low_16QAM_50@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
804.000 M	823.000 M	100.00 k	822.876500 M	-34.03	-21.03
823.000 M	824.000 M	200.00 k	823.983000 M	-30.54	-17.54
824.000 M	834.000 M	100.00 k	830.020000 M	3.48	-46.52

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:15:17

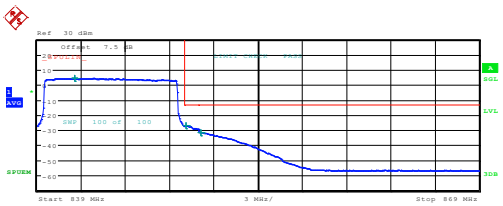
10MHz_High_QPSK_1@49



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
839.000 M	849.000 M	100.00 k	848.435000 M	21.84	-28.16
849.000 M	850.000 M	200.00 k	849.011500 M	-27.54	-14.54
850.000 M	869.000 M	100.00 k	850.009500 M	-44.60	-31.60

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:19:31

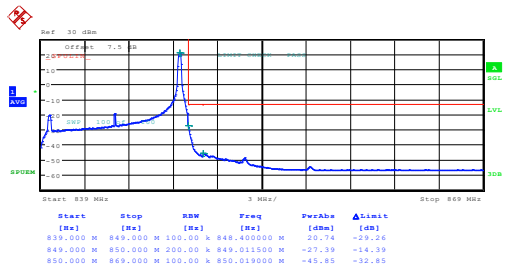
10MHz_High_QPSK_50@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
839.000 M	849.000 M	100.00 k	841.550000 M	4.39	-45.61
849.000 M	850.000 M	200.00 k	849.078500 M	-26.85	-13.85
850.000 M	869.000 M	100.00 k	850.085500 M	-31.59	-18.59

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:18:10

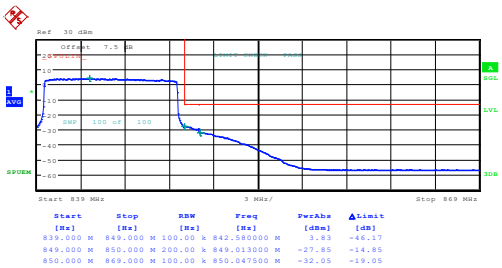
10MHz_High_16QAM_1@49



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
839.000 M	849.000 M	100.00 k	848.400000 M	20.74	-29.26
849.000 M	850.000 M	200.00 k	849.011500 M	-27.39	-14.39
850.000 M	869.000 M	100.00 k	850.019000 M	-45.85	-32.85

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:22:12

10MHz_High_16QAM_50@0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
839.000 M	849.000 M	100.00 k	842.580000 M	3.83	-46.17
849.000 M	850.000 M	200.00 k	849.013000 M	-27.85	-14.85
850.000 M	869.000 M	100.00 k	850.047500 M	-32.05	-19.05

ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:20:52

3.3.5 Spurious Emissions at Antenna Terminal

GSM 850 , Normal

Mode	Below 1G Value (dBm)	Above 1G Value (dBm)	Limit	Result
GSM_Low	-38.59	-33.64	See Graphs	Pass
GSM_Middle	-32.20	-34.11	See Graphs	Pass
GSM_High	-30.24	-21.53	See Graphs	Pass
GPRS_Low_Solt1	-32.86	-22.41	See Graphs	Pass
GPRS_Middle_Solt1	-31.94	-32.42	See Graphs	Pass
GPRS_High_Solt1	-38.46	-33.58	See Graphs	Pass

GSM 1900 , Normal

Mode	Below 1G Value (dBm)	Above 1G Value (dBm)	Limit	Result
GSM_Low	-38.96	-34.38	See Graphs	Pass
GSM_Middle	-39.28	-34.59	See Graphs	Pass
GSM_High	-39.32	-34.31	See Graphs	Pass
GPRS_Low_Solt1	-39.40	-34.13	See Graphs	Pass
GPRS_Middle_Solt1	-38.96	-34.27	See Graphs	Pass
GPRS_High_Solt1	-38.52	-34.40	See Graphs	Pass

B5 , Normal

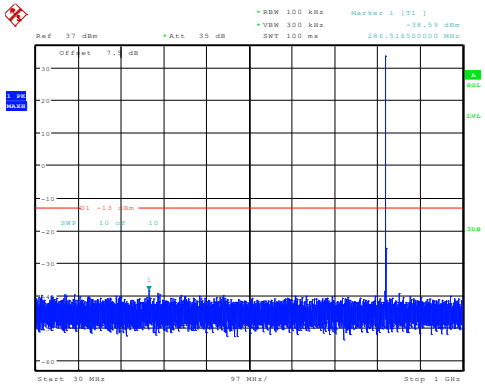
Mode	Value (dBm)	Limit	Result
1.4MHz_Low_QPSK_1@0	-30.24	See Graphs	Pass
1.4MHz_Low_QPSK_6@0	-29.83	See Graphs	Pass
1.4MHz_Middle_QPSK_1@0	-29.04	See Graphs	Pass
1.4MHz_Middle_QPSK_6@0	-29.91	See Graphs	Pass
1.4MHz_High_QPSK_1@0	-29.81	See Graphs	Pass
1.4MHz_High_QPSK_6@0	-29.39	See Graphs	Pass
3MHz_Low_QPSK_1@0	-29.61	See Graphs	Pass

Mode	Value (dBm)	Limit	Result
3MHz_Low_QPSK_15@0	-30.40	See Graphs	Pass
3MHz_Middle_QPSK_1@0	-30.40	See Graphs	Pass
3MHz_Middle_QPSK_15@0	-30.35	See Graphs	Pass
3MHz_High_QPSK_1@0	-29.73	See Graphs	Pass
3MHz_High_QPSK_15@0	-30.22	See Graphs	Pass
5MHz_Low_QPSK_1@0	-29.02	See Graphs	Pass
5MHz_Low_QPSK_25@0	-30.40	See Graphs	Pass
5MHz_Middle_QPSK_1@0	-30.47	See Graphs	Pass
5MHz_Middle_QPSK_25@0	-29.86	See Graphs	Pass
5MHz_High_QPSK_1@0	-29.74	See Graphs	Pass
5MHz_High_QPSK_25@0	-30.22	See Graphs	Pass
10MHz_Low_QPSK_1@0	-29.99	See Graphs	Pass
10MHz_Low_QPSK_50@0	-30.39	See Graphs	Pass
10MHz_Middle_QPSK_1@0	-28.62	See Graphs	Pass
10MHz_Middle_QPSK_50@0	-30.19	See Graphs	Pass
10MHz_High_QPSK_1@0	-30.01	See Graphs	Pass
10MHz_High_QPSK_50@0	-30.57	See Graphs	Pass

GSM 850 , Normal

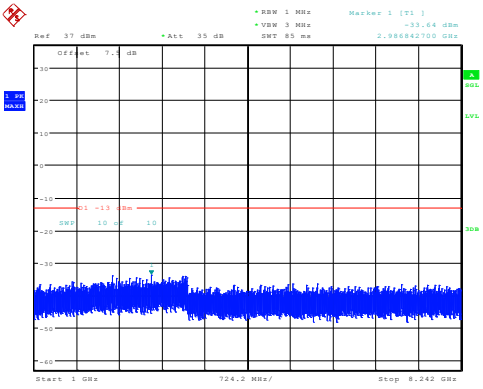
GSM_Low

Below 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 10:25:28

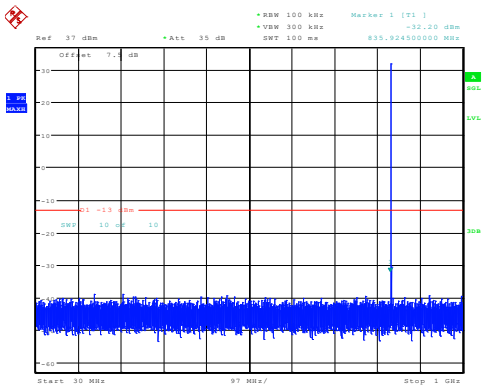
Above 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 10:25:38

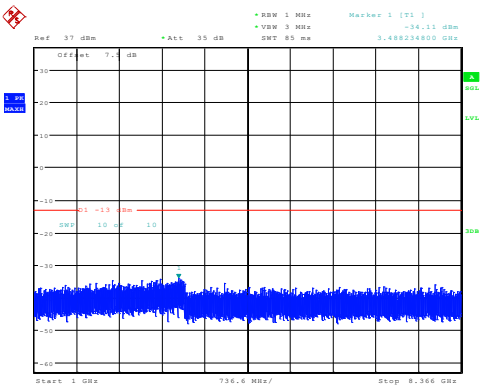
GSM_Middle

Below 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 10:34:43

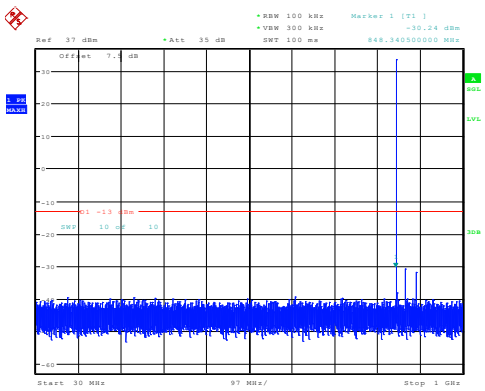
Above 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 10:34:53

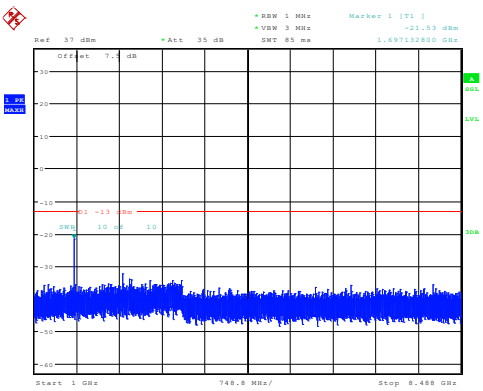
GSM_High

Below 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 21.AUG.2024 14:39:25

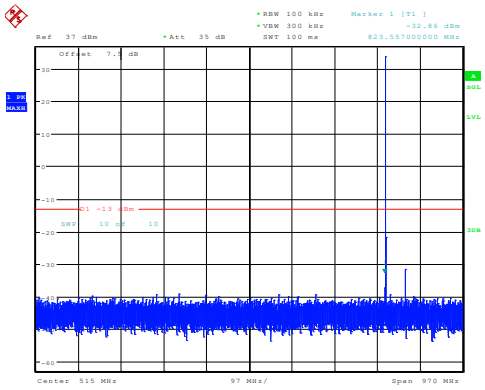
Above 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 21.AUG.2024 14:39:36

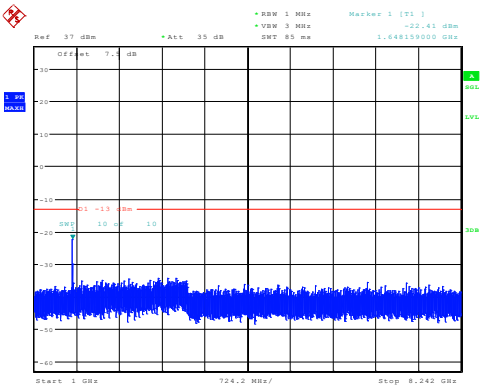
GPRS_Low_Solt1

Below 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 21.AUG.2024 15:16:26

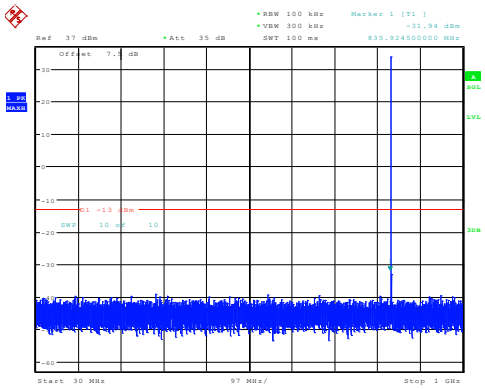
Above 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 21.AUG.2024 15:16:36

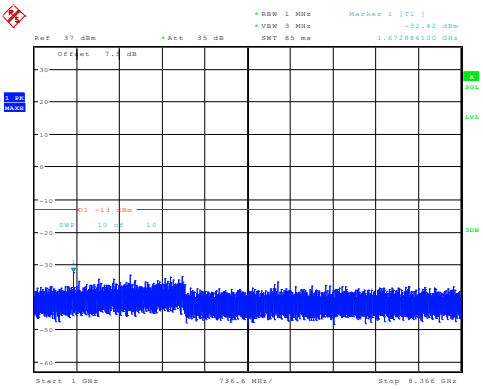
GPRS_Middle_Solt1

Below 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 11:10:34

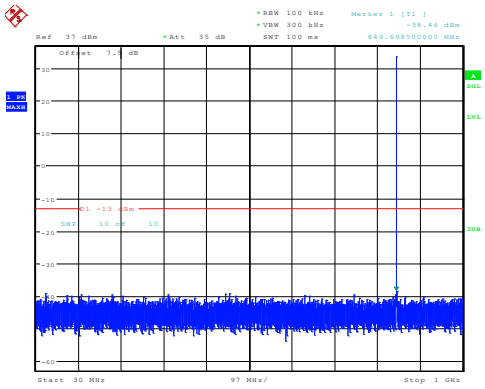
Above 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 11:10:44

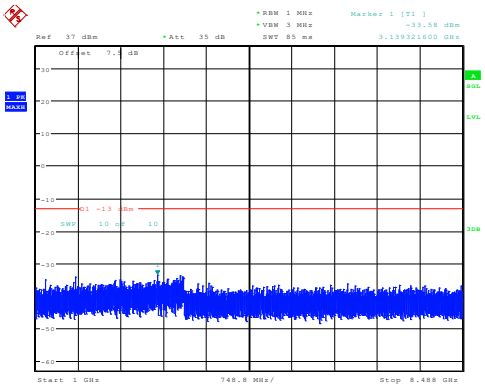
GPRS_High_Solt1

Below 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 11:12:13

Above 1G

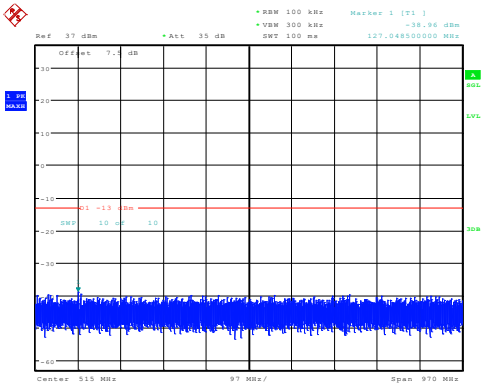


ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 11:12:24

GSM 1900 , Normal

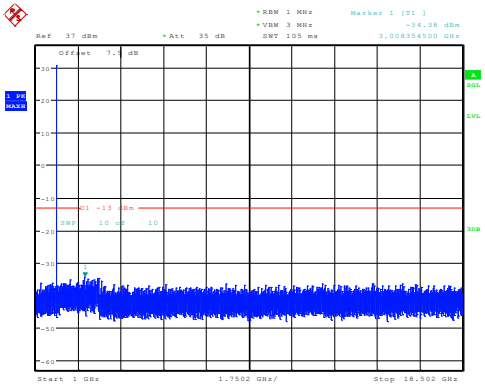
GSM_Low

Below 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 13:33:19

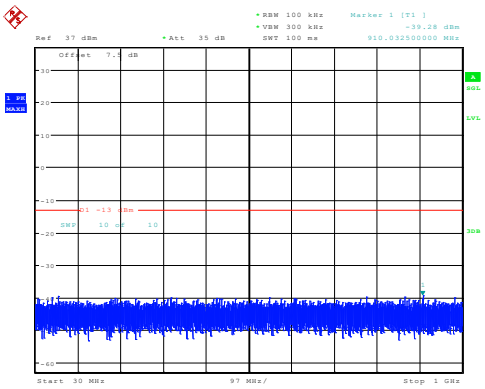
Above 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 13:33:29

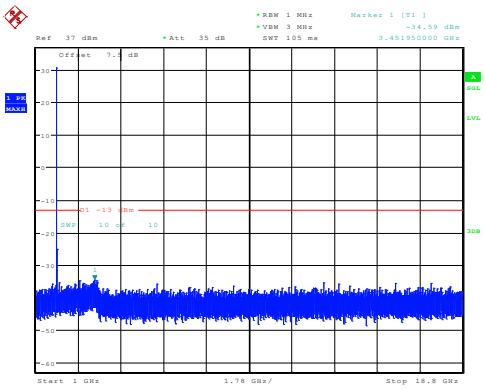
GSM_Middle

Below 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 13:35:05

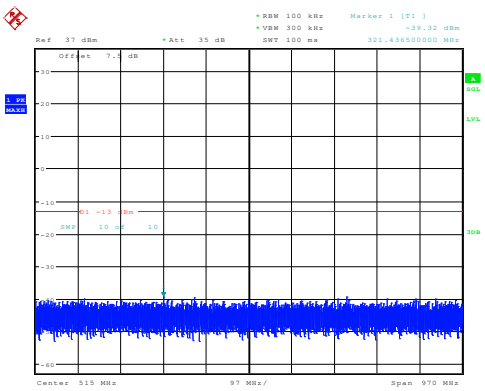
Above 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 13:35:16

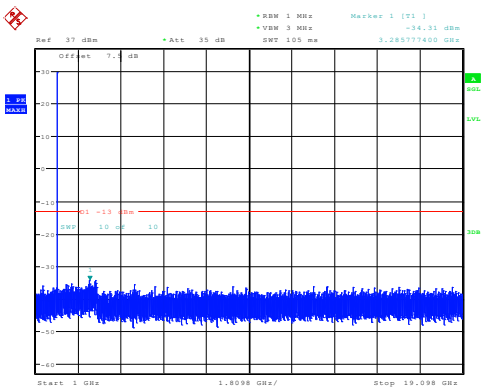
GSM_High

Below 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 13:37:00

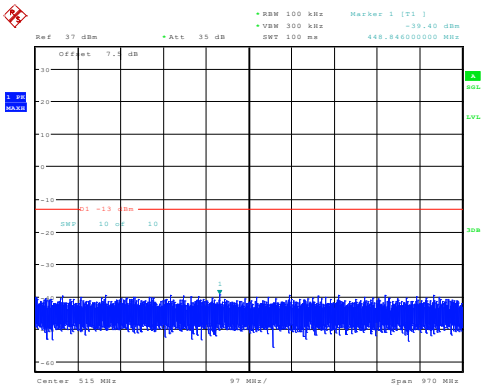
Above 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 13:37:10

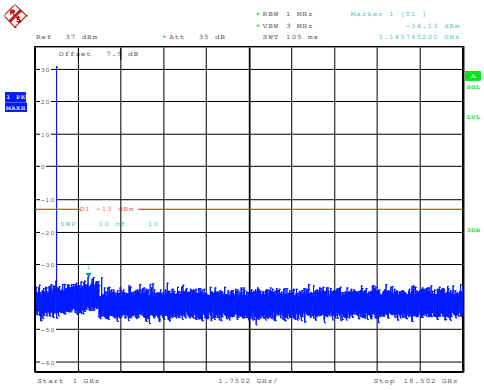
GPRS_Low_Solt1

Below 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 13:50:51

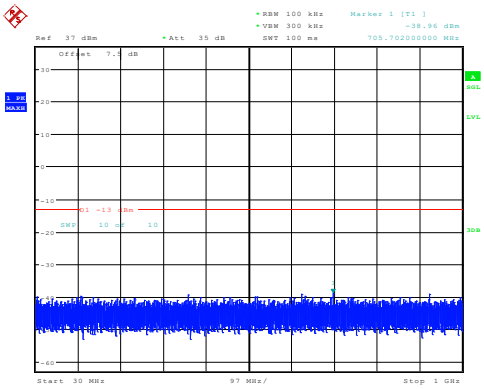
Above 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 13:51:02

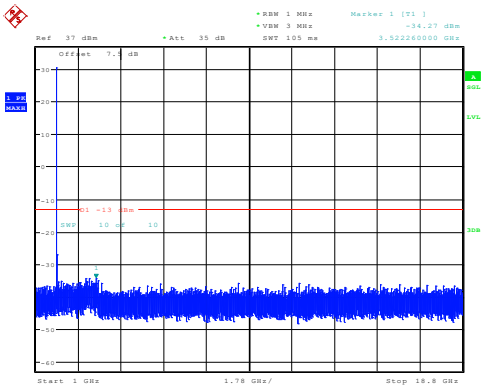
GPRS_Middle_Solt1

Below 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 13:42:34

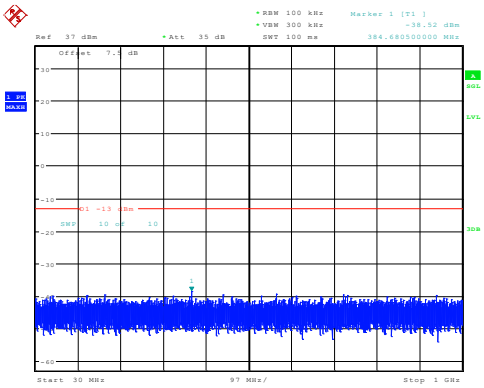
Above 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 13:42:45

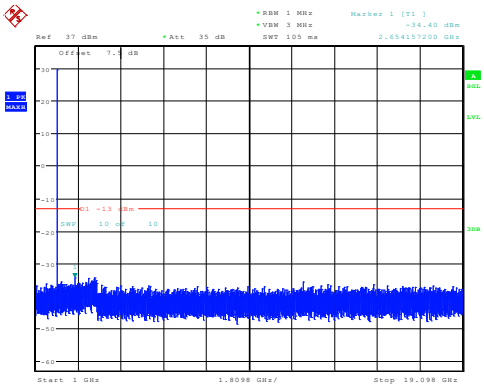
GPRS_High_Solt1

Below 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 13:44:29

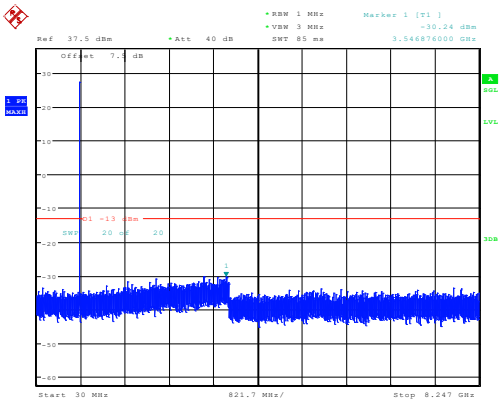
Above 1G



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 20.AUG.2024 13:44:39

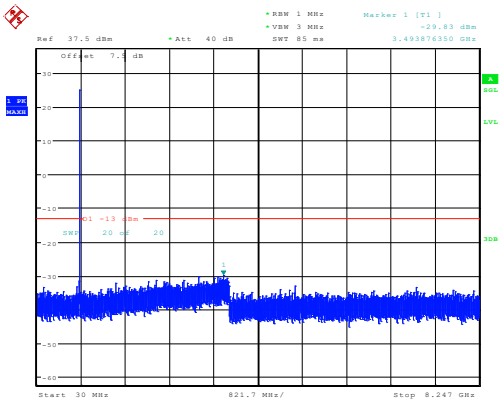
B5 , Normal

1.4MHz_Low_QPSK_1@0



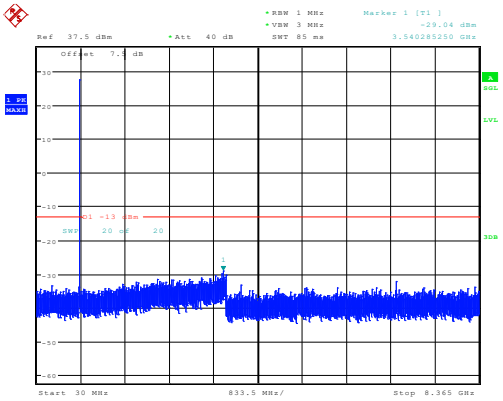
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:52:42

1.4MHz_Low_QPSK_6@0



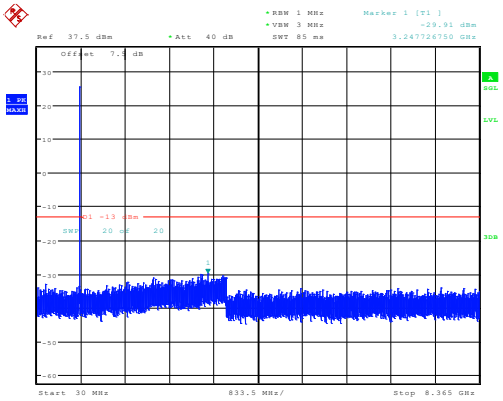
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:53:03

1.4MHz_Middle_QPSK_1@0



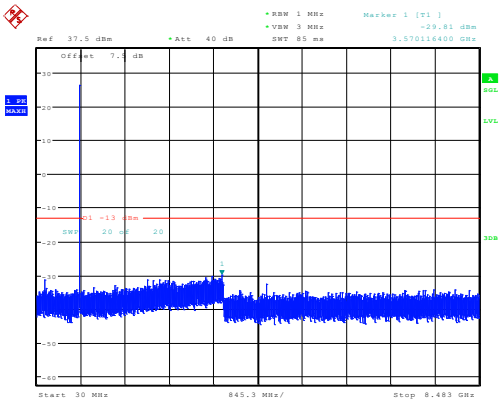
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:53:23

1.4MHz_Middle_QPSK_6@0



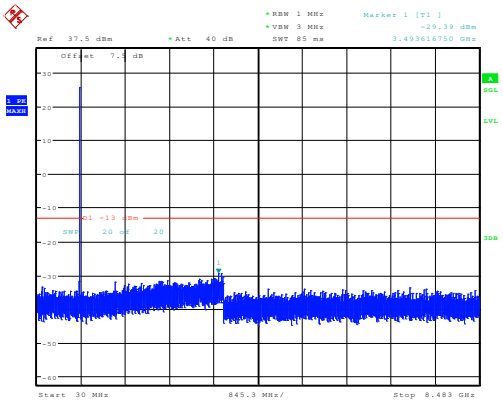
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:53:43

1.4MHz_High_QPSK_1@0



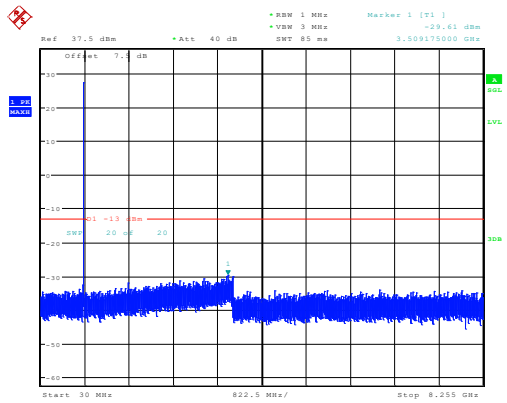
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:54:04

1.4MHz_High_QPSK_6@0



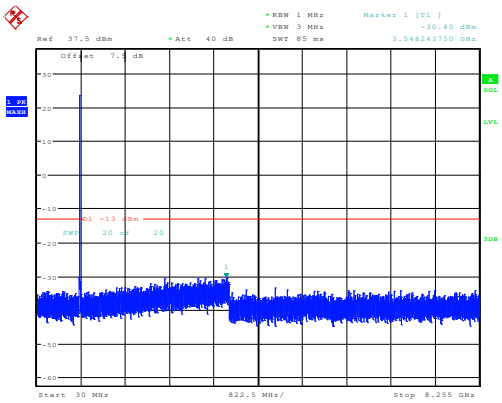
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:54:24

3MHz_Low_QPSK_1@0



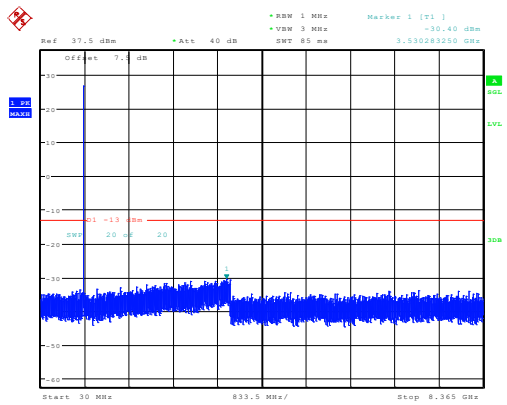
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:54:46

3MHz_Low_QPSK_15@0



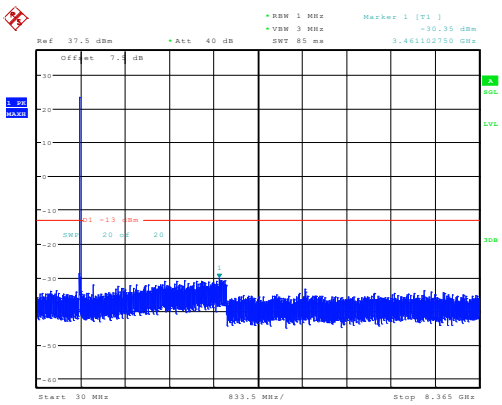
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:55:07

3MHz_Middle_QPSK_1@0



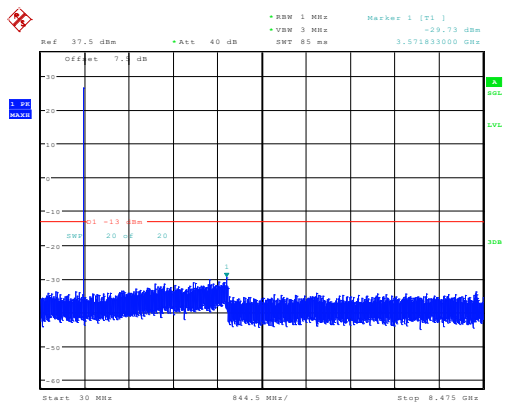
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:55:27

3MHz_Middle_QPSK_15@0



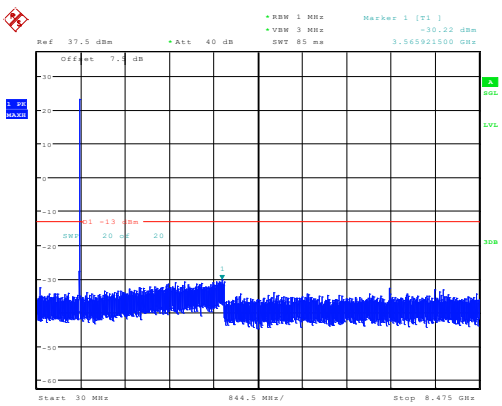
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:55:48

3MHz_High_QPSK_1@0



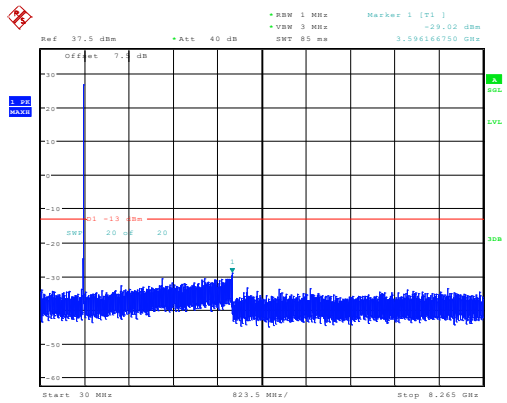
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:56:08

3MHz_High_QPSK_15@0



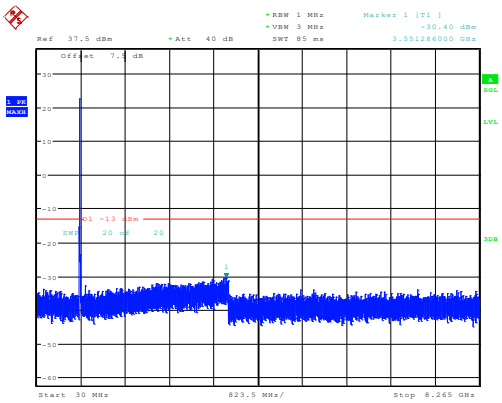
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:56:29

5MHz_Low_QPSK_1@0



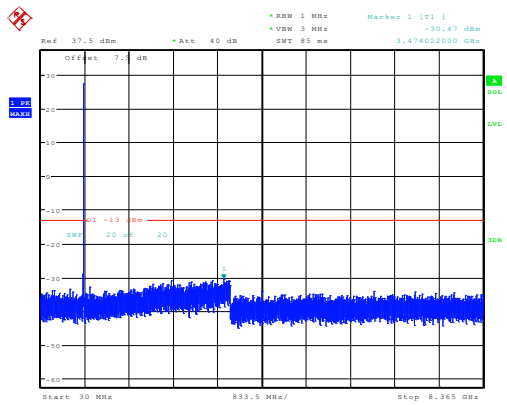
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:56:53

5MHz_Low_QPSK_25@0



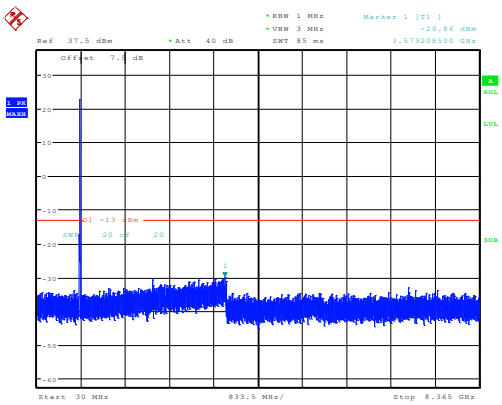
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:57:14

5MHz_Middle_QPSK_1@0



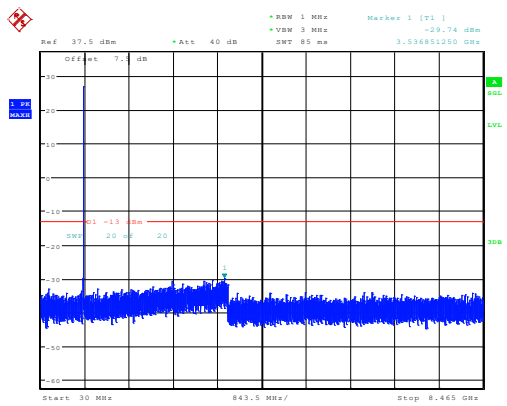
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:57:35

5MHz_Middle_QPSK_25@0



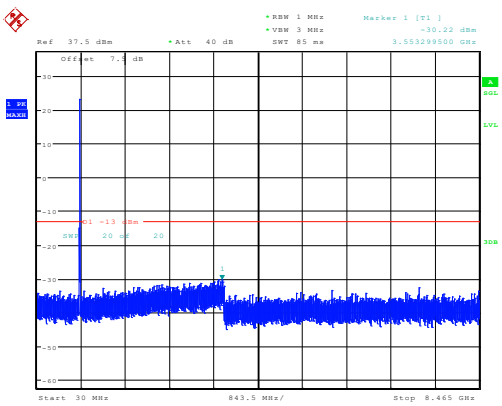
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:57:56

5MHz_High_QPSK_1@0



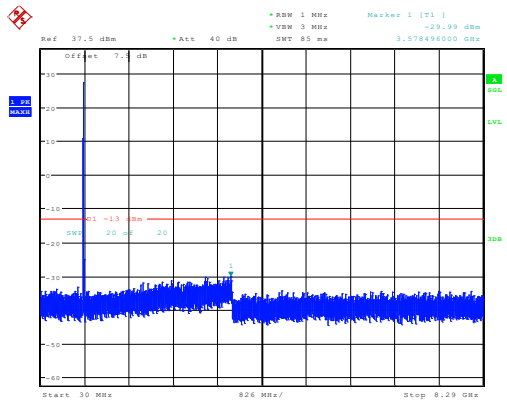
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:58:18

5MHz_High_QPSK_25@0



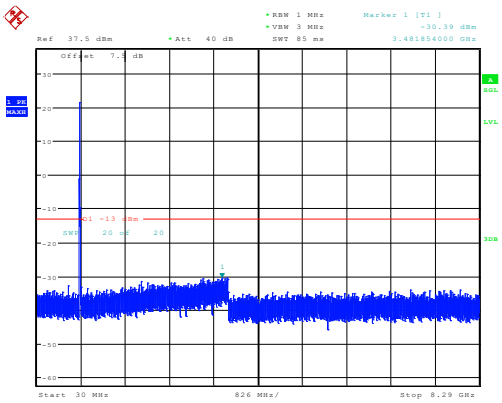
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:58:39

10MHz_Low_QPSK_1@0



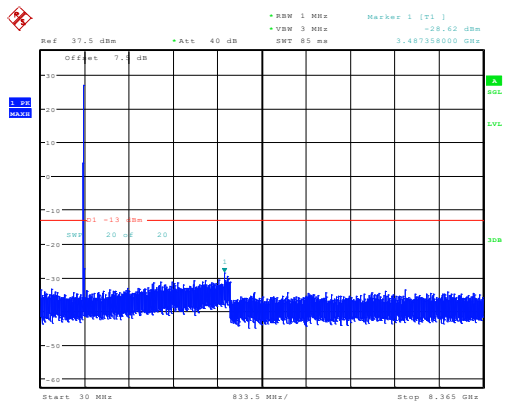
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:59:02

10MHz_Low_QPSK_50@0



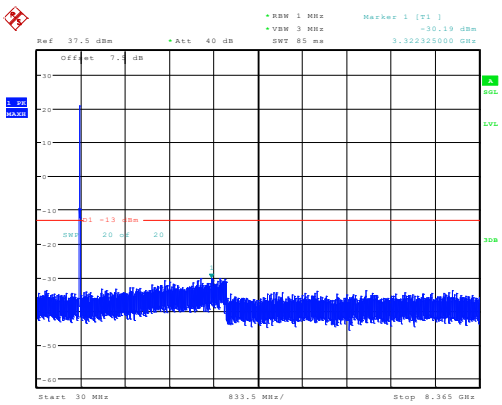
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:59:23

10MHz_Middle_QPSK_1@0



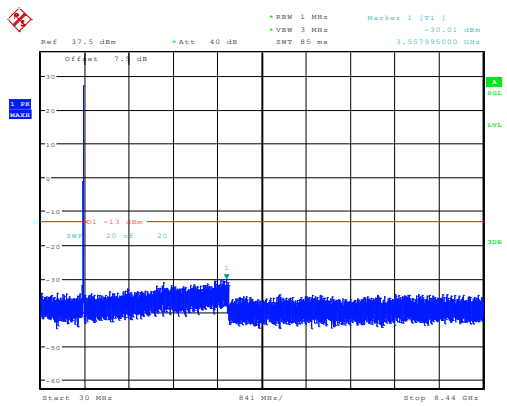
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 16:59:44

10MHz_Middle_QPSK_50@0



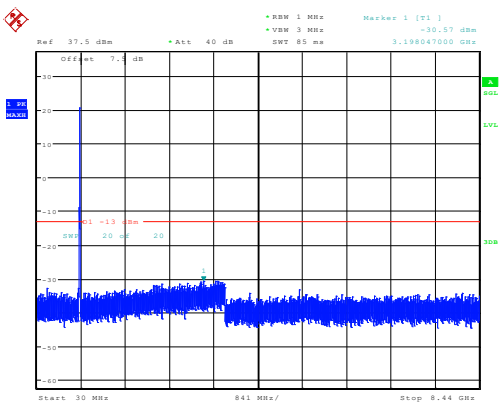
ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 17:00:06

10MHz_High_QPSK_1@0



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 17:00:27

10MHz_High_QPSK_50@0



ProjectNo.:2405W56213E-RF Tester:Ryan Zhang
Date: 5.AUG.2024 17:00:48

3.3.6 FREQUENCY STABILITY

GSM 850

Middle Channel, fo =836.6MHz					
Mode	**Temperature (℃)**	**Voltage Supplied (VDC)**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
GSM	-30	3.7	9.6	0.01	±2.5
	-20		11.3	0.01	±2.5
	-10		8.9	0.01	±2.5
	0		13.6	0.02	±2.5
	10		12.1	0.01	±2.5
	20		10.1	0.01	±2.5
	30		9.5	0.01	±2.5
	40		10.2	0.01	±2.5
	50		12.3	0.01	±2.5
	20	3.3	14.2	0.02	±2.5
		4.2	12.8	0.02	±2.5
GPRS	-30	3.7	14.5	0.02	±2.5
	-20		18.1	0.02	±2.5
	-10		15.1	0.02	±2.5
	0		17.0	0.02	±2.5
	10		15.4	0.02	±2.5
	20		9.4	0.01	±2.5
	30		9.9	0.01	±2.5
	40		12.4	0.01	±2.5
	50		11.2	0.01	±2.5
	20	3.3	15.5	0.02	±2.5
		4.2	11.4	0.01	±2.5

Note:

Frequency Error (ppm)=Frequency Error (MHz)/Test Channel(MHz)

GSM 1900

Lowest channel for F_L, Highest channel for F_H						
Mode	**Temperature (℃)**	**Voltage Supplied (VDC)**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
GSM	-30	3.7	1850.091	1909.895	1850	1910
	-20		1850.078	1909.935	1850	1910
	-10		1850.064	1909.906	1850	1910
	0		1850.104	1909.895	1850	1910
	10		1850.056	1909.915	1850	1910
	20		1850.078	1909.919	1850	1910
	30		1850.065	1909.912	1850	1910
	40		1850.075	1909.944	1850	1910
	50		1850.105	1909.914	1850	1910
	20	3.3	1850.071	1909.934	1850	1910
		4.2	1850.068	1909.918	1850	1910
GPRS	-30	3.7	1850.095	1909.915	1850	1910
	-20		1850.060	1909.896	1850	1910
	-10		1850.057	1909.920	1850	1910
	0		1850.090	1909.910	1850	1910
	10		1850.099	1909.906	1850	1910
	20		1850.078	1909.923	1850	1910
	30		1850.076	1909.894	1850	1910
	40		1850.076	1909.917	1850	1910
	50		1850.077	1909.910	1850	1910
	20	3.3	1850.101	1909.906	1850	1910
		4.2	1850.059	1909.941	1850	1910

Note:

VN: Normal Voltage; VL: Low Voltage; VH: High Voltage.

B5

Middle Channel, fo =836.6MHz					
Mode	**Temperature (℃)**	**Voltage Supplied (VDC)**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
QPSK	-30	3.7	15.80	0.02	±2.5
	-20		19.60	0.02	±2.5
	-10		17.80	0.02	±2.5
	0		20.80	0.02	±2.5
	10		19.80	0.02	±2.5
	20		20.90	0.02	±2.5
	30		14.20	0.02	±2.5
	40		17.40	0.02	±2.5
	50		11.90	0.01	±2.5
	20	3.3	13.10	0.02	±2.5
		4.2	19.70	0.02	±2.5
16QAM	-30	3.7	25.60	0.03	±2.5
	-20		23.30	0.03	±2.5
	-10		20.70	0.02	±2.5
	0		24.90	0.03	±2.5
	10		25.90	0.03	±2.5
	20		16.20	0.02	±2.5
	30		25.80	0.03	±2.5
	40		22.70	0.03	±2.5
	50		19.20	0.02	±2.5
	20	3.3	25.30	0.03	±2.5
		4.2	16.10	0.02	±2.5

Note:

Frequency Error (ppm)=Frequency Error (MHz)/Test Channel(MHz)

3.4 Radiated Spurious emission Test Data

Test Date:	2024-08-07	Test By:	Luke Li
Environment condition:	Temperature: 22.8°C; Relative Humidity:62%; ATM Pressure: 99.9kPa		

Frequency (MHz)	Reading level (dBμV)	Polar (H/V)	Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Remark
GSM850								
Low Channel								
1648.400	53.51	horizontal	-2.02	51.49	95.20	-13.00	-30.71	Peak
2472.600	50.31	horizontal	-1.72	48.59	95.20	-13.00	-33.61	Peak
3296.800	57.66	horizontal	-2.00	55.66	95.20	-13.00	-26.54	Peak
4121.000	54.40	horizontal	-2.54	51.86	95.20	-13.00	-30.34	Peak
1648.400	61.37	vertical	-2.02	59.35	95.20	-13.00	-22.85	Peak
2472.600	55.91	vertical	-1.72	54.19	95.20	-13.00	-28.01	Peak
3296.800	60.23	vertical	-2.00	58.23	95.20	-13.00	-23.97	Peak
4121.000	57.02	vertical	-2.54	54.48	95.20	-13.00	-27.72	Peak
Middle Channel								
1673.200	48.80	horizontal	-1.90	46.9	95.20	-13.00	-35.30	Peak
2509.800	52.45	horizontal	-1.72	50.73	95.20	-13.00	-31.47	Peak
3346.400	61.52	horizontal	-1.89	59.63	95.20	-13.00	-22.57	Peak
4183.000	54.53	horizontal	-2.47	52.06	95.20	-13.00	-30.14	Peak
1673.200	61.94	vertical	-1.90	60.04	95.20	-13.00	-22.16	Peak
2509.800	56.23	vertical	-1.72	54.51	95.20	-13.00	-27.69	Peak
3346.400	62.81	vertical	-1.89	60.92	95.20	-13.00	-21.28	Peak
4183.000	57.03	vertical	-2.47	54.56	95.20	-13.00	-27.64	Peak
High Channel								
1697.600	50.49	horizontal	-1.81	48.68	95.20	-13.00	-33.52	Peak
2546.400	55.27	horizontal	-1.78	53.49	95.20	-13.00	-28.71	Peak
3395.200	64.23	horizontal	-1.78	62.45	95.20	-13.00	-19.75	Peak
4244.000	53.74	horizontal	-2.62	51.12	95.20	-13.00	-31.08	Peak
1697.600	67.52	vertical	-1.81	65.71	95.20	-13.00	-16.49	Peak
2546.400	65.31	vertical	-1.78	63.53	95.20	-13.00	-18.67	Peak
3395.200	62.87	vertical	-1.78	61.09	95.20	-13.00	-21.11	Peak
4244.000	55.47	vertical	-2.62	52.85	95.20	-13.00	-29.35	Peak
PCS1900								
Low Channel								

3700.400	66.46	horizontal	-2.57	63.89	95.20	-13.00	-18.31	Peak
5550.600	54.27	horizontal	0.95	55.22	95.20	-13.00	-26.98	Peak
7400.800	51.06	horizontal	1.44	52.5	95.20	-13.00	-29.70	Peak
3700.400	65.70	vertical	-2.57	63.13	95.20	-13.00	-19.07	Peak
5550.600	56.97	vertical	0.95	57.92	95.20	-13.00	-24.28	Peak
7400.800	56.42	vertical	1.44	57.86	95.20	-13.00	-24.34	Peak
Middle Channel								
3760.000	64.85	horizontal	-2.69	62.16	95.20	-13.00	-20.04	Peak
5640.000	47.52	horizontal	1.28	48.8	95.20	-13.00	-33.40	Peak
7520.000	53.01	horizontal	1.73	54.74	95.20	-13.00	-27.46	Peak
3760.000	65.17	vertical	-2.69	62.48	95.20	-13.00	-19.72	Peak
5640.000	51.39	vertical	1.28	52.67	95.20	-13.00	-29.53	Peak
7520.000	56.77	vertical	1.73	58.5	95.20	-13.00	-23.70	Peak
High Channel								
3819.600	63.76	horizontal	-2.77	60.99	95.20	-13.00	-21.21	Peak
5729.400	45.14	horizontal	1.66	46.8	95.20	-13.00	-35.40	Peak
7639.200	54.40	horizontal	2.64	57.04	95.20	-13.00	-25.16	Peak
3819.600	66.62	vertical	-2.77	63.85	95.20	-13.00	-18.35	Peak
5729.400	44.59	vertical	1.66	46.25	95.20	-13.00	-35.95	Peak
7639.200	54.90	vertical	2.64	57.54	95.20	-13.00	-24.66	Peak
LTE Band5								
Low Channel								
1649.400	48.03	horizontal	-2.00	46.03	95.20	-13.00	-36.17	Peak
2474.100	48.15	horizontal	-1.72	46.43	95.20	-13.00	-35.77	Peak
3298.800	48.93	horizontal	-1.99	46.94	95.20	-13.00	-35.26	Peak
1649.400	50.52	vertical	-2.00	48.52	95.20	-13.00	-33.68	Peak
2474.100	49.09	vertical	-1.72	47.37	95.20	-13.00	-34.83	Peak
3298.800	48.08	vertical	-1.99	46.09	95.20	-13.00	-36.11	Peak
Middle Channel								
1673.000	46.32	horizontal	-1.90	44.42	95.20	-13.00	-37.78	Peak
2509.500	50.47	horizontal	-1.72	48.75	95.20	-13.00	-33.45	Peak
3346.000	48.43	horizontal	-1.89	46.54	95.20	-13.00	-35.66	Peak
1673.000	48.85	vertical	-1.90	46.95	95.20	-13.00	-35.25	Peak
2509.500	52.60	vertical	-1.72	50.88	95.20	-13.00	-31.32	Peak
3346.000	48.22	vertical	-1.89	46.33	95.20	-13.00	-35.87	Peak
High Channel								
1696.600	46.18	horizontal	-1.82	44.36	95.20	-13.00	-37.84	Peak
2544.900	56.69	horizontal	-1.78	54.91	95.20	-13.00	-27.29	Peak

3393.200	49.52	horizontal	-1.79	47.73	95.20	-13.00	-34.47	Peak
1696.600	48.72	vertical	-1.82	46.9	95.20	-13.00	-35.30	Peak
2544.900	55.84	vertical	-1.78	54.06	95.20	-13.00	-28.14	Peak
3393.200	50.97	vertical	-1.79	49.18	95.20	-13.00	-33.02	Peak

Remark:

Corrected Amplitude= Reading level + corrected Factor

Corrected Factor = Antenna factor + Cable loss – Amplifier gain

Margin = Result – Limit

According to ANSI C63.26-2015 section 5.2.7:

> EIRP (dBm) = E (dBµV/m) + 20log(D) − 104.8; where D is the measurement distance (in the far field region) in m.

Test was performed on 3meters distance, so

Result = Corrected Amplitude + 20log(3) – 104.8

= Corrected Amplitude - 95.2

The emission levels of other frequencies that were lower than the limit 20dB, not show in test report.

4 Test Setup Photo

Please refer to the attachment 2405W56213EC Test Setup photo.

5 E.U.T Photo

Please refer to the attachment 2405W56213E External photo and 2405W56213E Internal photo.

---End of Report---