

# TEST REPORT

Report No.: BCTC2408023427-5E

---

Applicant: SHENZHEN YUNJI INTELLIGENT TECHNOLOGY  
CO.,LTD

---

Product Name: Smart Phone

---

Test Model: P1

---

Tested Date: 2024-08-27 to 2024-09-27

---

Issued Date: 2024-10-08

---

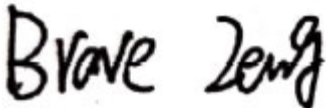
**Shenzhen BCTC Testing Co., Ltd.**



# FCC ID: 2ANMU-24136

Product Name: Smart Phone  
Trademark: OUKITEL  
Model/Type reference: P1  
P1S, P1 Pro, P1 Ultra, P1 TITAN  
Prepared For: SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD  
Address: A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU INDUSTRIAL ZONE,  
GUANLAN, LONGHUA SHENZHEN, 518XXX China  
Manufacturer: SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD  
Address: A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU INDUSTRIAL ZONE,  
GUANLAN, LONGHUA SHENZHEN, 518XXX China  
Prepared By: Shenzhen BCTC Testing Co., Ltd.  
Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road,  
Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China  
Sample Received Date: 2024-08-27  
Sample tested Date: 2024-08-27 to 2024-09-27  
Issue Date: 2024-10-08  
Report No.: BCTC2408023427-5E  
Test Standards: FCC CFR Title 47 Part 2  
FCC CFR Title 47 Part22 Subpart H  
FCC CFR Title 47 Part24 Subpart E  
FCC CFR Title 47 Part27 Subpart L  
ANSI/ TIA/ EIA-603-D-2010  
FCC KDB 971168 D01 Power Meas. License Digital Systems v03v01  
Test Results: PASS  
Remark: This is GSM & WCDMAradio test report.

Tested by:



Brave Zeng/ Project Handler

Approved by:



Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

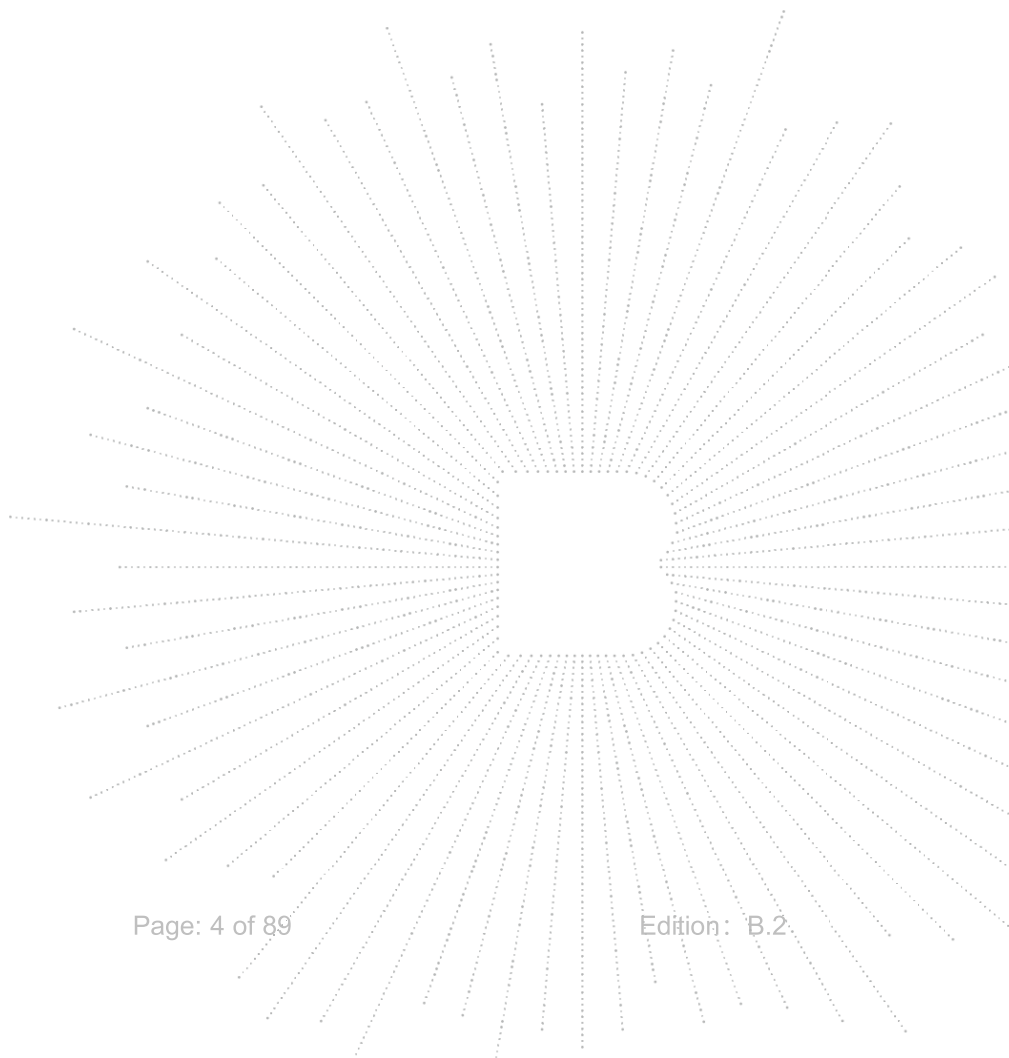
## Table Of Content

	Page
Test Report Declaration	
1. Version .....	4
2. Test Summary .....	5
3. Measurement Uncertainty .....	6
4. Product Information And Test Setup .....	7
4.1 Product Information .....	7
4.2 Test Setup Configuration .....	8
4.3 Support Equipment .....	8
4.5 Test Mode .....	9
5. Test Facility And Test Instrument Used .....	10
5.1 Test Facility .....	10
5.2 Test Instrument Used .....	10
6. RF Output Power .....	11
6.1 Block Diagram Of Test Setup .....	11
6.2 Limit .....	12
6.3 Test procedure .....	13
6.4 Test Result .....	13
7. Peak-to-average Ratio(PAR) of Transmitter .....	22
7.1 Block Diagram Of Test Setup .....	22
7.2 Limit .....	22
7.3 Test procedure .....	22
7.4 Test Result .....	22
8. Emission Bandwidth .....	38
8.1 Block Diagram Of Test Setup .....	38
8.2 Limit .....	38
8.3 Test procedure .....	38
8.4 Test Result .....	38
9. Out of Band Emissions at Antenna Terminal .....	54
9.1 Block Diagram Of Test Setup .....	54
9.2 Limit .....	54
9.3 Test procedure .....	54
9.4 Test Result .....	54
10. Spurious Radiated Emissions .....	78
10.1 Block Diagram Of Test Setup .....	78
10.2 Limit .....	79
10.3 Test procedure .....	79
10.4 Test Result .....	80
11. Frequency Stability .....	83
11.1 Block Diagram Of Test Setup .....	83
11.2 Limit .....	83
11.3 Test procedure .....	83
11.4 Test Result .....	84
12. EUT Photographs .....	87
13. EUT Test Setup Photographs .....	88

(Note: N/A Means Not Applicable)

**1. Version**

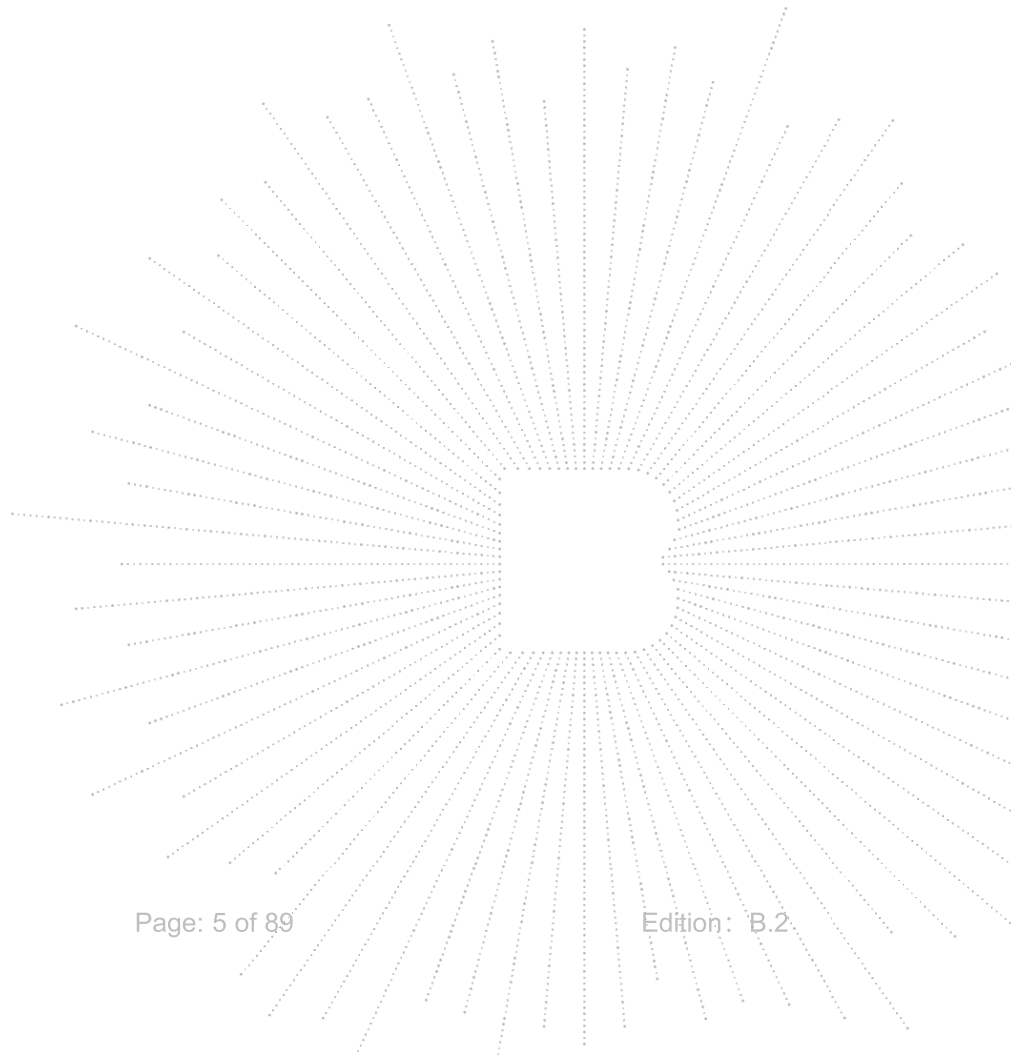
<b>Report No.</b>	<b>Issue Date</b>	<b>Description</b>	<b>Approved</b>
BCTC2408023427-5E	2024-08-23	Original	Valid



## 2. Test Summary

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No.	Results
1	RF Exposure	§1.1307, §2.1093	PASS
2	RF Output Power	§22.913 (a), §24.232 (c), §27.50,	PASS
3	Peak-to-average Ratio(PAR) of Transmitter	§24.232(d), §22.913, §27.50,	PASS
4	Emission Bandwidth	§22.917 (b), §24.238(b), §27.53	PASS
5	Spurious Emissions at Antenna Terminal	§22.917 (a), §24.238 (a), §27.53	PASS
6	Spurious Radiation Emissions	§22.917 (a), §24.238 (a), §27.53	PASS
7	Out of Band Emissions	§22.917 (a), §24.238 (a), §27.53	PASS
8	Frequency Stability	§22.355, §24.235, §27.54	PASS






### 3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
2	3m chamber Radiated spurious emission(9KHz-30MHz)	U=3.7dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
5	Conducted Emission (150kHz-30MHz)	U=3.20dB
6	Conducted Adjacent channel power	U=1.38dB
7	Conducted output power uncertainty Above 1G	U=1.576dB
8	Conducted output power uncertainty below 1G	U=1.28dB
9	humidity uncertainty	U=5.3%
10	Temperature uncertainty	U=0.59°C

## 4. Product Information And Test Setup

### 4.1 Product Information

Model/Type reference:	P1 P1S, P1 Pro, P1 Ultra, P1 TITAN
Model differences:	All the model are the same circuit and RF module, except model names.
Hardware Version:	M8902_MB_V2.0
Software Version:	V02
Operation Frequency:	GSM/GPRS/EGPRS 850: TX: 824~849MHz; RX: 869~894MHz; GSM/GPRS/EGPRS 1900: TX:1850~1910MHz; RX:1930~1990MHz; WCDMA Band II: TX: 1852.40~1907.60MHz; Rx: 1932.60~1987.40MHz; WCDMA Band IV: TX: 1712.40~1752.60MHz; RX: 2112.60 – 2452.40MHz WCDMA Band V: TX: 826.40~846.60MHz; RX: 871.40~ 891.60MHz;
GPRS Class:	Class 12
Max RF Output Power:	GSM/GPRS/EGPRS 850: 32.95 dBm, GSM/GPRS/EGPRS 1900: 29.3 dBm WCDMA Band II: 21.93 dBm WCDMA Band IV: 21.99 dBm WCDMA Band V: 22.92 dBm
Type of Modulation:	GSM with GMSK Modulation WCDMA Mode with BPSK Modulation HSDPA Mode with QPSK, 16QAM Modulation HSUPA Mode with QPSK, 16QAM Modulation
Type of Emission:	GSM/GPRS 850: 250KGXW EGPRS 850:259KG7W GSM/GPRS 1900: 251KGXW EGPRS 1900:250KG7W WCDMA Band II: 4M18F9W WCDMA Band IV: 4M16F9W WCDMA Band V: 4M17F9W
Antenna installation:	Internal antenna
Antenna Gain:	GSM850: -1.47 dBi GSM1900: -0.41 dBi WCDMA Band II: -0.41 dBi WCDMA Band IV: -0.38 dBi WCDMA Band V: -1.47 dBi Remark: <input type="checkbox"/> The antenna gain of the product comes from the antenna report provided by the customer, and the test data is affected by the customer information. <input checked="" type="checkbox"/> The antenna gain of the product is provided by the customer, and the test data is affected by the customer information.
Connecting I/O Port(s)	Please refer to the User's Manual
Ratings:	DC 9V from adapter/DC 3.87V from battery
Adapter Information:	Model: HJ-FC001K7-US Input: 100-240V- 50/60Hz 0.6A Output: 5.0V  3.0A 15.0W OR 9.0V  2.0A 18.0W OR 12.0V  1.5A 18.0W MAX

## 4.2 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

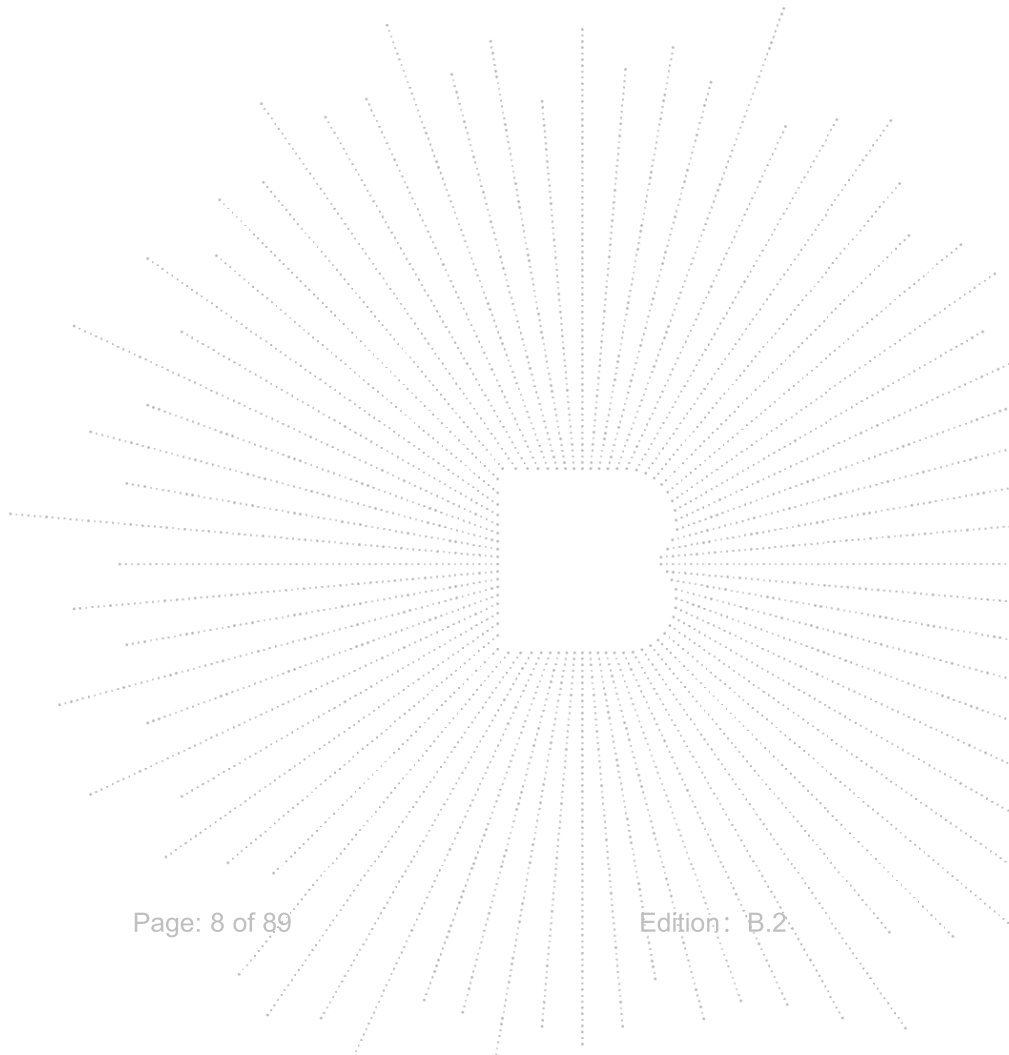
## 4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Smart Phone	OUKITEL	P1	N/A	EUT
E-2	Adapter	N/A	HJ-FC001K7-US	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	1M	DC cable unshielded

**Notes:**

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.





## 4.5 Test Mode

Testing Configure			
Support Band	Support Standard	Channel Frequency	Channel Number
GSM 850	GSM/GPRS/EGPRS	824.2 MHz	128
		836.6 MHz	190
		848.8 MHz	251
PCS 1900	GSM/GPRS/EGPRS	1850.2 MHz	512
		1880.0 MHz	661
		1909.8 MHz	810
WCDMA Band II	WCDMA/HSDPA/HSUPA	1852.4 MHz	9262
		1880.0 MHz	9400
		1907.6 MHz	9538
WCDMA Band IV	WCDMA/HSDPA/HSUPA	1712.4 MHz	1312
		1740 MHz	1450
		1752.6 MHz	1513
WCDMA Band V	WCDMA/HSDPA/HSUPA	826.4 MHz	4132
		836.4 MHz	4182
		846.6 MHz	4233

Note 1: the transmitter has been tested on the communications mode of WCDMA, HSDPA, HSUPA compliance test and record the worst case.  
 Note 2: Both the SIM 1 and SIM 2 were tested, the worst mode is the SIM 1, the data recording in the report.

## EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/ Without Core
/	/	/	/
/	/	/	/

## Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
/	/	/	/

## Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/ Without Core
/	/	/	/

## 5. Test Facility And Test Instrument Used

### 5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address:1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: 712850

A2LA certificate registration number is: CN1212

ISED Registered No.: 23583

ISED CAB identifier: CN0017

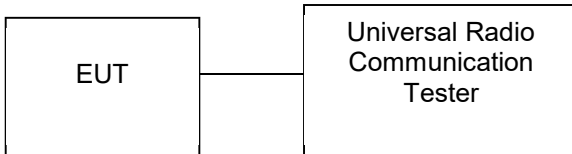
### 5.2 Test Instrument Used

RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power meter	Keysight	E4419	\	May 16, 2024	May 15, 2025
Power Sensor (AV)	Keysight	E9300A	\	May 16, 2024	May 15, 2025
Signal Analyzer20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 16, 2024	May 15, 2025
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025
Communication test set	R&S	CMW500	126173	Nov. 13. 2023	Nov. 12, 2024
Radio frequency control box	MAIWEI	MW200-RFCB	\	\	\
Software	MAIWEI	MTS 8200	\	\	\

## 6. RF Output Power

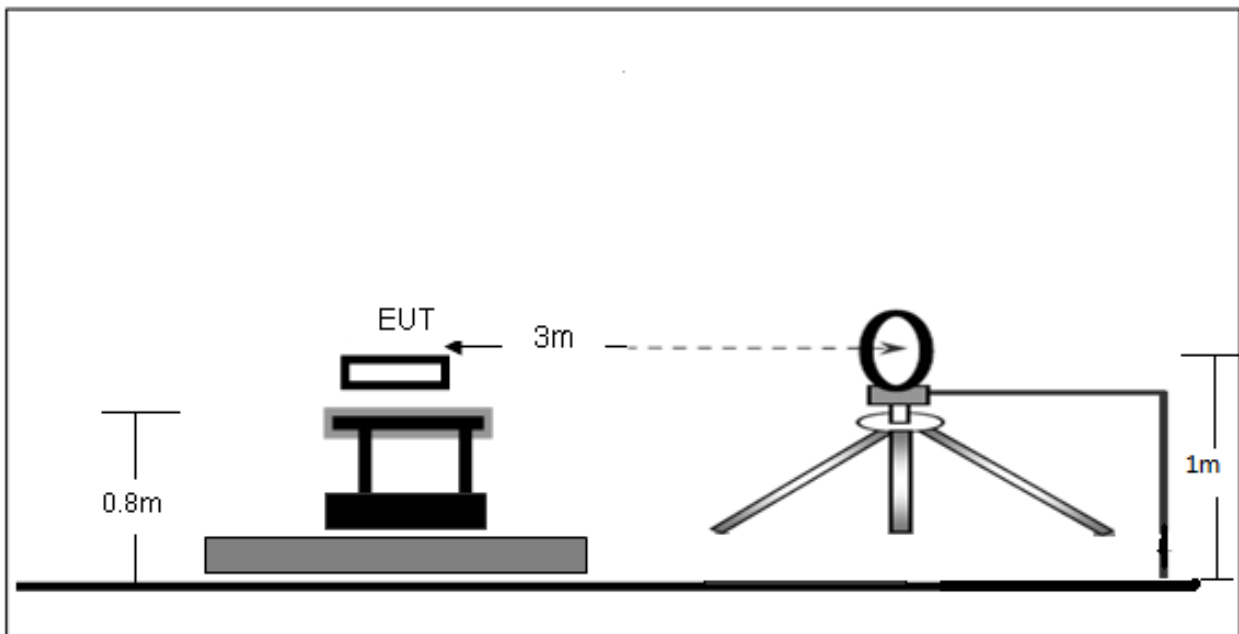
### 6.1 Block Diagram Of Test Setup

Conducted output power test method:

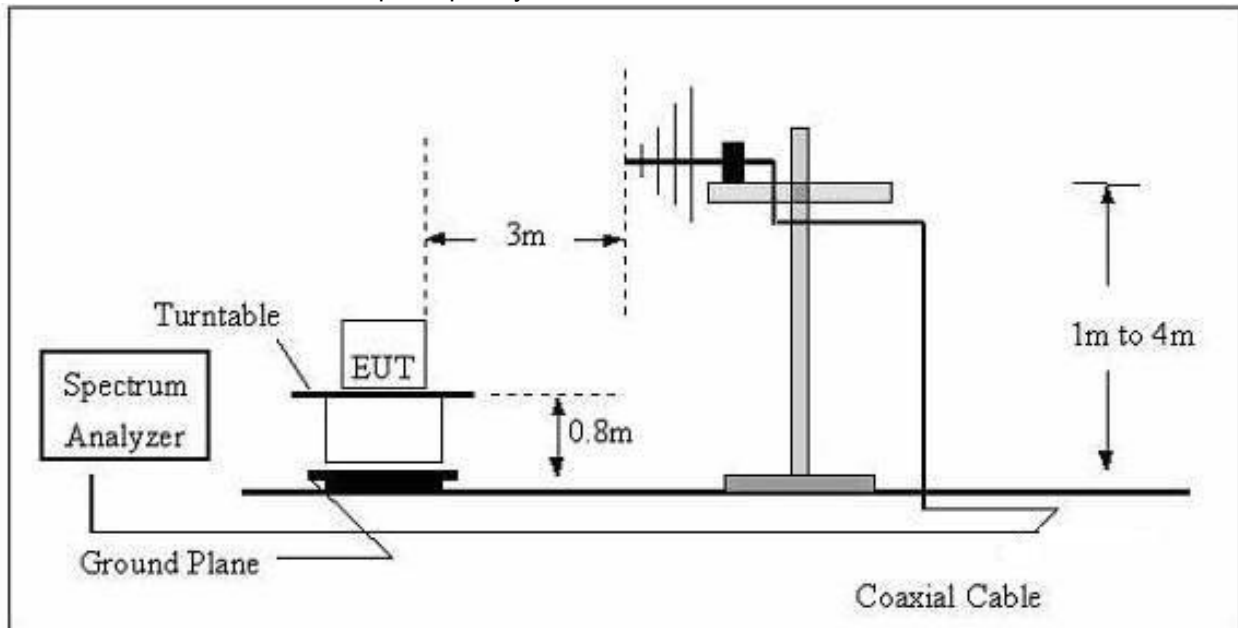


Radiated power test method:

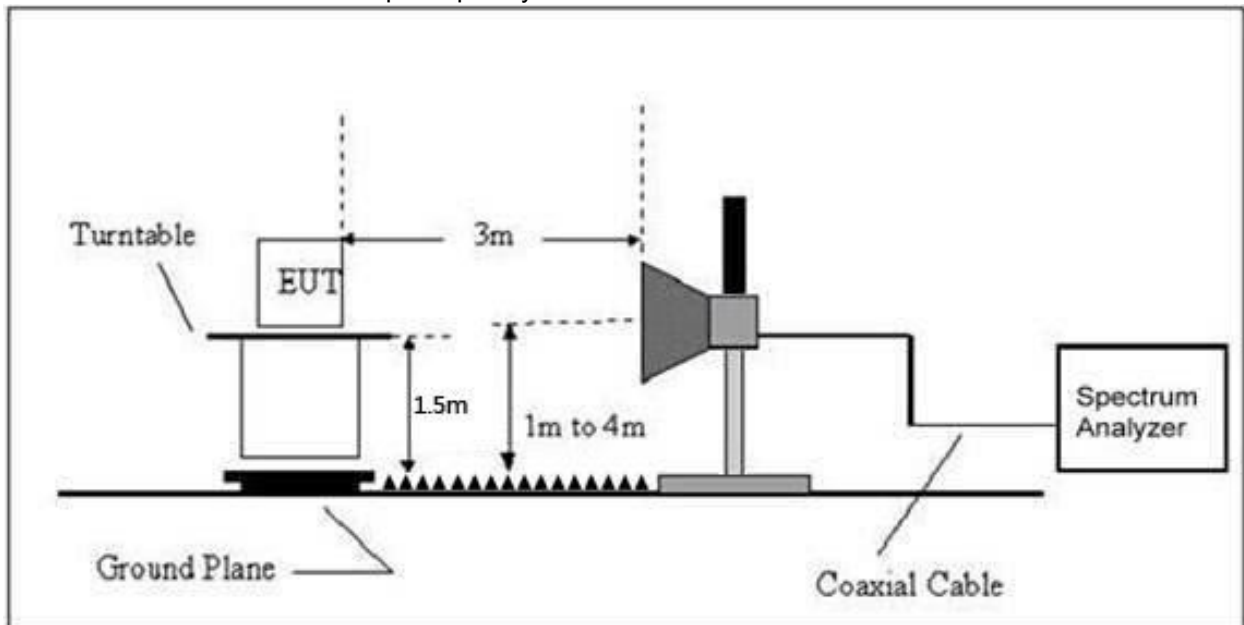
(A) Radiated Emission Test-Up Frequency Below 30MHz



## (B) Radiated Emission Test-Up Frequency 30MHz~1GHz



## (C) Radiated Emission Test-Up Frequency Above 1GHz



## 6.2 Limit

According to §22.913(a)(2), The ERP of mobile and portable stations transmitters and auxiliary test transmitters must not exceed 7 Watts.

According to §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.

According to §27.50(d)(4), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

### 6.3 Test procedure

Radiated power test method:

1. The setup of EUT is according with per ANSI/TIA Standard 603D and ANSI C63.4-2014 measurement procedure.
2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

### 6.4 Test Result

ERP For GSM Mode GSM850

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 22H Limits (dBm)	Result
Low Channel								
824.2	H	1.5	0	55.18	-26.29	28.89	38.45	PASS
824.2	V	1.5	0	54.75	-26.29	28.46	38.45	PASS
Middle Channel								
836.6	H	1.5	0	54.35	-26.35	28.00	38.45	PASS
836.6	V	1.5	0	54.72	-26.35	28.37	38.45	PASS
High Channel								
848.8	H	1.5	0	55.12	-26.42	28.70	38.45	PASS
848.8	V	1.5	0	55.17	-26.42	28.75	38.45	PASS

EIRP For GSM Mode PCS1900

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 24E Limits (dBm)	Result
Low Channel								
1850.2	H	1.5	0	54.76	-26.93	27.83	33.00	PASS
1850.2	V	1.5	0	55.14	-26.93	28.21	33.00	PASS
Middle Channel								
1880	H	1.5	0	55.33	-26.86	28.47	33.00	PASS
1880	V	1.5	0	54.20	-26.86	27.34	33.00	PASS
High Channel								
1909.8	H	1.5	0	55.87	-26.80	29.07	33.00	PASS
1909.8	V	1.5	0	55.14	-26.80	28.34	33.00	PASS

## ERP For GPRS Mode GSM850

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 22H Limits (dBm)	Result
Low Channel								
824.2	H	1.5	0	56.11	-26.29	29.82	38.45	PASS
824.2	V	1.5	0	55.07	-26.29	28.78	38.45	PASS
Middle Channel								
836.6	H	1.5	0	55.59	-26.35	29.24	38.45	PASS
836.6	V	1.5	0	54.45	-26.35	28.10	38.45	PASS
High Channel								
848.8	H	1.5	0	55.57	-26.42	29.15	38.45	PASS
848.8	V	1.5	0	55.03	-26.42	28.61	38.45	PASS

## EIRP For GPRS Mode PCS1900

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 24E Limits (dBm)	Result
Low Channel								
1850.2	H	1.5	0	54.66	-26.93	27.73	33.00	PASS
1850.2	V	1.5	0	54.51	-26.93	27.58	33.00	PASS
Middle Channel								
1880	H	1.5	0	54.86	-26.86	28.00	33.00	PASS
1880	V	1.5	0	55.11	-26.86	28.25	33.00	PASS
High Channel								
1909.8	H	1.5	0	54.86	-26.80	28.06	33.00	PASS
1909.8	V	1.5	0	54.25	-26.80	27.45	33.00	PASS

## ERP For EGPRS Mode GSM850

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 22H Limits (dBm)	Result
Low Channel								
824.2	H	1.5	0	55.31	-26.29	29.02	38.45	PASS
824.2	V	1.5	0	55.27	-26.29	28.98	38.45	PASS
Middle Channel								
836.6	H	1.5	0	55.12	-26.35	28.77	38.45	PASS
836.6	V	1.5	0	55.30	-26.35	28.95	38.45	PASS
High Channel								
848.8	H	1.5	0	55.39	-26.42	28.97	38.45	PASS
848.8	V	1.5	0	54.78	-26.42	28.36	38.45	PASS

## EIRP For EGPRS Mode PCS1900

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 24E Limits (dBm)	Result
Low Channel								
1850.2	H	1.5	0	55.98	-26.93	29.05	33.00	PASS
1850.2	V	1.5	0	55.37	-26.93	28.44	33.00	PASS
Middle Channel								
1880	H	1.5	0	56.23	-26.86	29.37	33.00	PASS
1880	V	1.5	0	54.81	-26.86	27.95	33.00	PASS
High Channel								
1909.8	H	1.5	0	54.78	-26.80	27.98	33.00	PASS
1909.8	V	1.5	0	54.80	-26.80	28.00	33.00	PASS

## EIRP For WCDMA Mode Band II

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 24E Limits (dBm)	Result
Low Channel								
1852.4	H	1.5	0	49.53	-26.92	22.61	33.00	PASS
1852.4	V	1.5	0	48.81	-26.92	21.89	33.00	PASS
Middle Channel								
1880	H	1.5	0	49.61	-26.86	22.75	33.00	PASS
1880	V	1.5	0	48.44	-26.86	21.58	33.00	PASS
High Channel								
1907.6	H	1.5	0	48.79	-26.80	21.99	33.00	PASS
1907.6	V	1.5	0	49.18	-26.80	22.38	33.00	PASS

## EIRP For HSDPA Mode Band II

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 24E Limits (dBm)	Result
Low Channel								
1852.4	H	1.5	0	49.94	-26.92	23.02	33.00	PASS
1852.4	V	1.5	0	49.04	-26.92	22.12	33.00	PASS
Middle Channel								
1880	H	1.5	0	49.42	-26.86	22.56	33.00	PASS
1880	V	1.5	0	48.96	-26.86	22.10	33.00	PASS
High Channel								
1907.6	H	1.5	0	49.74	-26.80	22.94	33.00	PASS
1907.6	V	1.5	0	48.96	-26.80	22.16	33.00	PASS

## EIRP For HSUPA Mode Band II

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 24E Limits (dBm)	Result
Low Channel								
1852.4	H	1.5	0	49.12	-26.92	22.20	33.00	PASS
1852.4	V	1.5	0	48.86	-26.92	21.94	33.00	PASS
Middle Channel								
1880	H	1.5	0	48.79	-26.86	21.93	33.00	PASS
1880	V	1.5	0	48.80	-26.86	21.94	33.00	PASS
High Channel								
1907.6	H	1.5	0	48.97	-26.80	22.17	33.00	PASS
1907.6	V	1.5	0	48.90	-26.80	22.10	33.00	PASS



## EIRP For WCDMA Mode Band IV

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 27L Limits (dBm)	Result
Low Channel								
1712.4	H	1.5	0	49.80	-27.23	22.57	33.00	PASS
1712.4	V	1.5	0	48.50	-27.23	21.27	33.00	PASS
Middle Channel								
1740	H	1.5	0	49.83	-27.19	22.64	33.00	PASS
1740	V	1.5	0	49.15	-27.19	21.96	33.00	PASS
High Channel								
1752.6	H	1.5	0	49.38	-27.14	22.24	33.00	PASS
1752.6	V	1.5	0	48.48	-27.14	21.34	33.00	PASS

## EIRP For HSDPA Mode Band IV

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 27L Limits (dBm)	Result
Low Channel								
1712.4	H	1.5	0	48.66	-27.23	21.43	33.00	PASS
1712.4	V	1.5	0	47.23	-27.23	20.00	33.00	PASS
Middle Channel								
1740	H	1.5	0	47.26	-27.19	20.07	33.00	PASS
1740	V	1.5	0	48.00	-27.19	20.81	33.00	PASS
High Channel								
1752.6	H	1.5	0	47.16	-27.14	20.02	33.00	PASS
1752.6	V	1.5	0	47.66	-27.14	20.52	33.00	PASS

## EIRP For HSUPA Mode Band IV

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 27L Limits (dBm)	Result
Low Channel								
1712.4	H	1.5	0	48.37	-27.23	21.14	33.00	PASS
1712.4	V	1.5	0	48.19	-27.23	20.96	33.00	PASS
Middle Channel								
1740	H	1.5	0	49.84	-27.19	22.65	33.00	PASS
1740	V	1.5	0	48.87	-27.19	21.68	33.00	PASS
High Channel								
1752.6	H	1.5	0	49.38	-27.14	22.24	33.00	PASS
1752.6	V	1.5	0	48.65	-27.14	21.51	33.00	PASS

## ERP For WCDMA Mode Band V

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 22H Limits (dBm)	Result
Low Channel								
826.4	H	1.5	0	49.13	-26.29	22.84	30	PASS
826.4	V	1.5	0	48.64	-26.29	22.35	30	PASS
Middle Channel								
836.4	H	1.5	0	48.78	-26.35	22.43	30	PASS
836.4	V	1.5	0	48.33	-26.35	21.98	30	PASS
High Channel								
846.6	H	1.5	0	48.61	-26.42	22.19	30	PASS
846.6	V	1.5	0	48.86	-26.42	22.44	30	PASS

## ERP For HSDPA Mode Band V

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 22H Limits (dBm)	Result
Low Channel								
826.4	H	1.5	0	49.80	-26.29	23.51	30	PASS
826.4	V	1.5	0	48.31	-26.29	22.02	30	PASS
Middle Channel								
836.4	H	1.5	0	50.06	-26.35	23.71	30	PASS
836.4	V	1.5	0	48.79	-26.35	22.44	30	PASS
High Channel								
846.6	H	1.5	0	48.47	-26.42	22.05	30	PASS
846.6	V	1.5	0	49.09	-26.42	22.67	30	PASS

## ERP For HSUPA Mode Band V

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 22H Limits (dBm)	Result
Low Channel								
826.4	H	1.5	0	49.79	-26.29	23.50	30	PASS
826.4	V	1.5	0	48.49	-26.29	22.20	30	PASS
Middle Channel								
836.4	H	1.5	0	49.71	-26.35	23.36	30	PASS
836.4	V	1.5	0	48.36	-26.35	22.01	30	PASS
High Channel								
846.6	H	1.5	0	49.59	-26.42	23.17	30	PASS
846.6	V	1.5	0	48.53	-26.42	22.11	30	PASS

Correction Factor= S.G. Power - Cable loss + Antenna Gain- SPA. Reading

**Max. Conducted Output Power**

For Cellular Band (GSM850)

<b>Band</b>	<b>GSM850</b>		
<b>Channel</b>	<b>128</b>	<b>190</b>	<b>251</b>
<b>Frequency(MHz)</b>	<b>824.2</b>	<b>836.6</b>	<b>848.8</b>
GSM	32.87	32.91	<b>32.95</b>
GPRS Slot -1	32.84	32.9	32.94
GPRS Slot -2	31.77	31.71	31.77
GPRS Slot -3	29.6	29.44	29.44
GPRS Slot -4	28.34	28.34	28.2
EGPRS Slot -1	26.94	26.74	27.16
EGPRS Slot -2	26.25	25.88	25.91
EGPRS Slot -3	24.07	23.92	24.09
EGPRS Slot -4	23.19	22.78	23.23

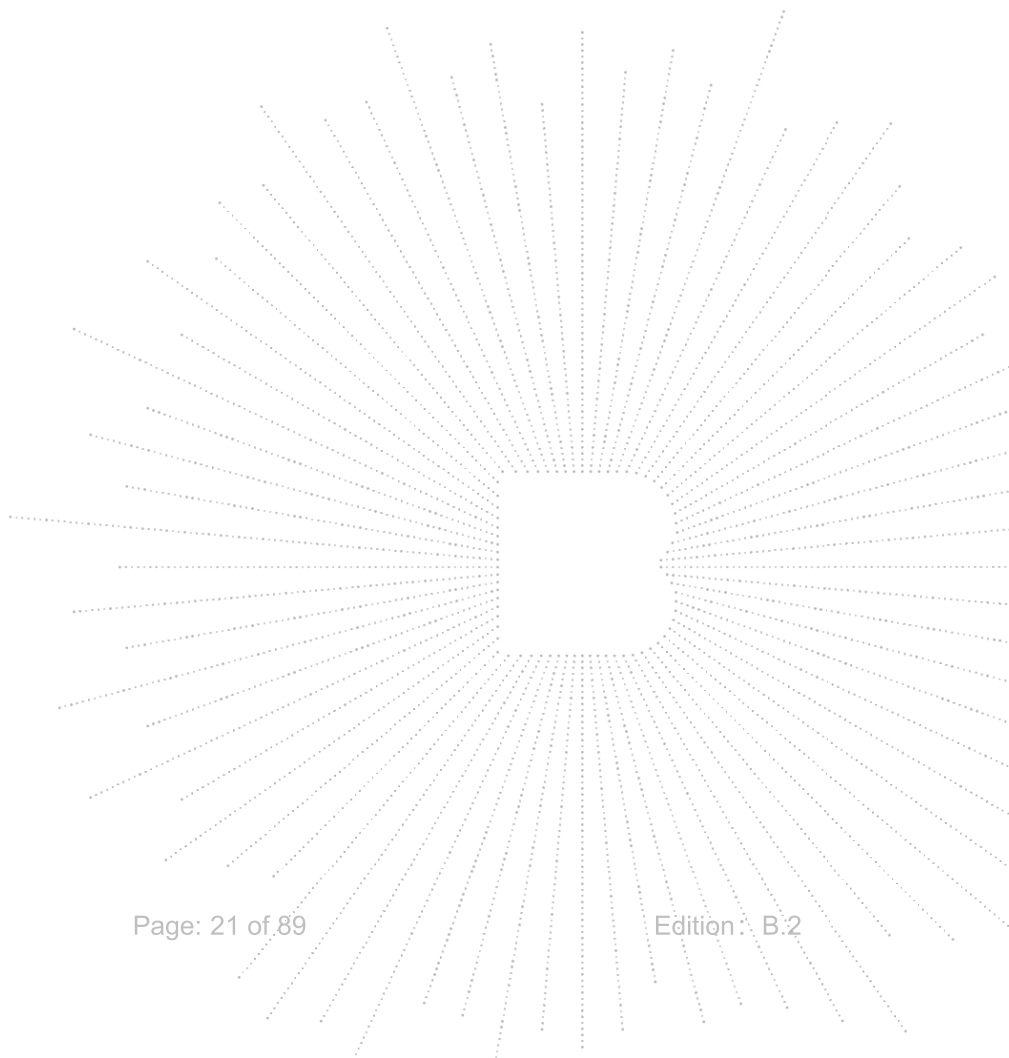
For PCS Band (GSM1900)

<b>Band</b>	<b>GSM1900</b>		
<b>Channel</b>	<b>512</b>	<b>661</b>	<b>810</b>
<b>Frequency(MHz)</b>	<b>1850.2</b>	<b>1880</b>	<b>1909.8</b>
GSM	29.27	29.16	29.11
GPRS Slot -1	<b>29.3</b>	29.18	29.16
GPRS Slot -2	28.17	28.03	28.07
GPRS Slot -3	25.93	25.86	25.91
GPRS Slot -4	24.67	24.59	24.61
EGPRS Slot -1	25.78	25.34	25.74
EGPRS Slot -2	24.59	24.54	24.72
EGPRS Slot -3	22.56	22.45	22.46
EGPRS Slot -4	21.4	21.18	21.54

<b>Band</b>	<b>WCDMA Band II</b>		
<b>Channel</b>	<b>9262</b>	<b>9400</b>	<b>9538</b>
<b>Frequency(MHz)</b>	<b>1852.4</b>	<b>1880.0</b>	<b>1907.6</b>
WCDMA RMC 12.2K	21.85	<b>21.93</b>	21.75
HSDPA Subtest-1	20.90	20.98	20.80
HSDPA Subtest-2	20.25	20.66	20.43
HSDPA Subtest-3	19.49	19.56	19.41
HSDPA Subtest-4	19.54	19.76	19.36
HSUPA Subtest-1	19.85	20.77	20.62
HSUPA Subtest-2	20.79	20.83	20.68
HSUPA Subtest-3	19.12	19.79	19.57
HSUPA Subtest-4	20.90	20.97	20.80
HSUPA Subtest-5	19.37	20.24	20.24

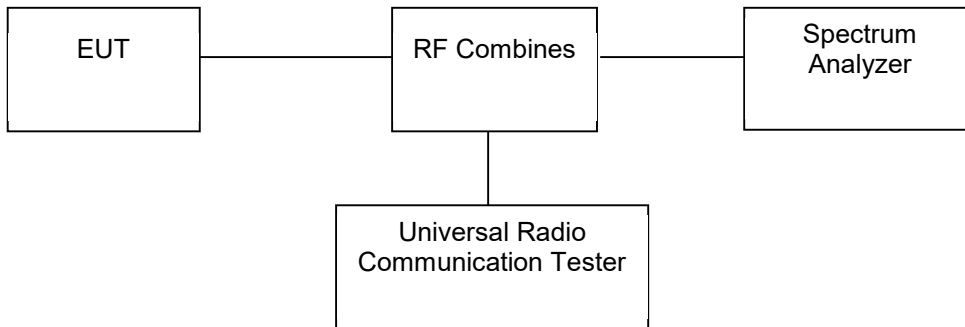
<b>Band</b>	<b>WCDMA Band IV</b>		
<b>Channel</b>	<b>1312</b>	<b>1450</b>	<b>1513</b>
<b>Frequency(MHz)</b>	<b>1712.4</b>	<b>1740</b>	<b>1752.6</b>
WCDMA RMC 12.2K	<b>21.99</b>	21.86	21.85
HSDPA Subtest-1	21.05	20.94	20.89
HSDPA Subtest-2	20.78	20.51	20.42
HSDPA Subtest-3	19.40	19.46	19.35
HSDPA Subtest-4	19.74	19.33	19.26
HSUPA Subtest-1	19.71	20.82	20.69
HSUPA Subtest-2	21.03	20.81	20.80
HSUPA Subtest-3	19.20	19.52	19.59
HSUPA Subtest-4	21.05	20.98	20.91
HSUPA Subtest-5	19.65	20.32	20.30

Band	WCDMA Band V		
	4132	4182	4233
Channel	<b>826.4</b>	<b>836.4</b>	<b>846.6</b>
Frequency(MHz)	<b>826.4</b>	<b>836.4</b>	<b>846.6</b>
WCDMA RMC 12.2K	22.71	<b>22.92</b>	22.92
HSDPA Subtest-1	21.73	21.92	21.96
HSDPA Subtest-2	21.32	21.43	21.43
HSDPA Subtest-3	20.12	20.66	20.05
HSDPA Subtest-4	20.30	20.37	20.63
HSUPA Subtest-1	20.56	21.70	21.79
HSUPA Subtest-2	21.66	21.82	21.78
HSUPA Subtest-3	20.17	20.73	20.73
HSUPA Subtest-4	21.69	21.94	21.96
HSUPA Subtest-5	19.99	21.18	21.34



## 7. Peak-to-average Ratio(PAR) of Transmitter

### 7.1 Block Diagram Of Test Setup



### 7.2 Limit

According to §24.232(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.

According to §27.50(B), the peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

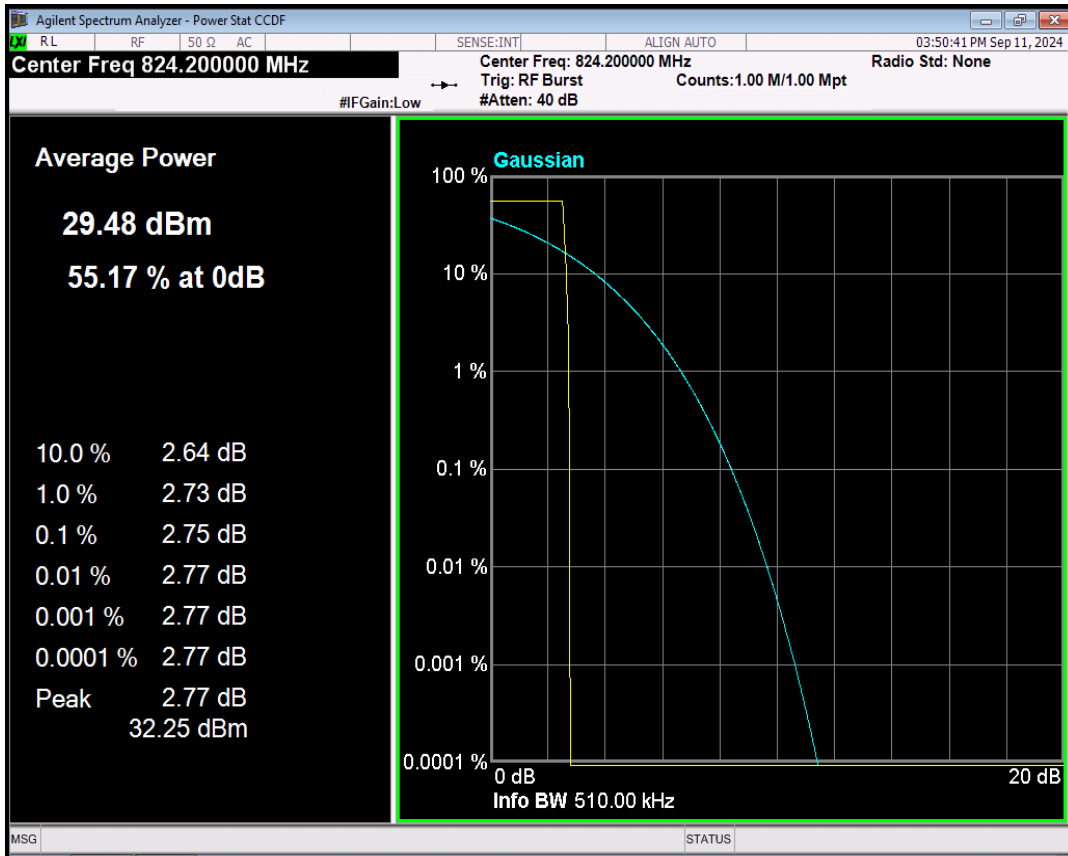
### 7.3 Test procedure

The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 30kHz and the peak-to-average ratio (PAR) of the transmission was recorded. Record the maximum PAPR level associated with a probability of 0.1%.

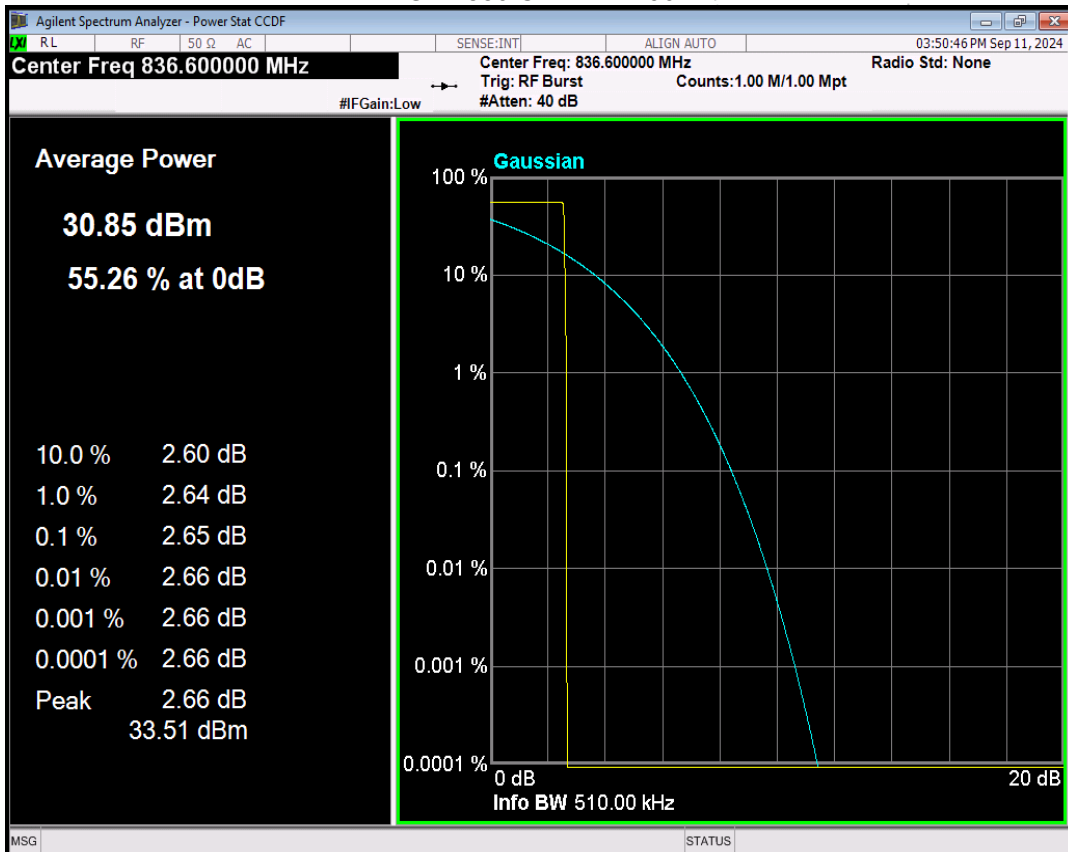
### 7.4 Test Result

Band	Channel	Frequency (MHz)	Result (dB)	high Limit (dB)	Verdict
GSM850	128	824.2	2.75	13.00	PASS
GSM850	190	836.6	2.65	13.00	PASS
GSM850	251	848.8	2.75	13.00	PASS
GPRS850	128	824.2	2.80	13.00	PASS
GPRS850	190	836.6	2.70	13.00	PASS
GPRS850	251	848.8	2.80	13.00	PASS
EGPRS850	128	824.2	8.12	13.00	PASS
EGPRS850	190	836.6	8.46	13.00	PASS
EGPRS850	251	848.8	8.29	13.00	PASS

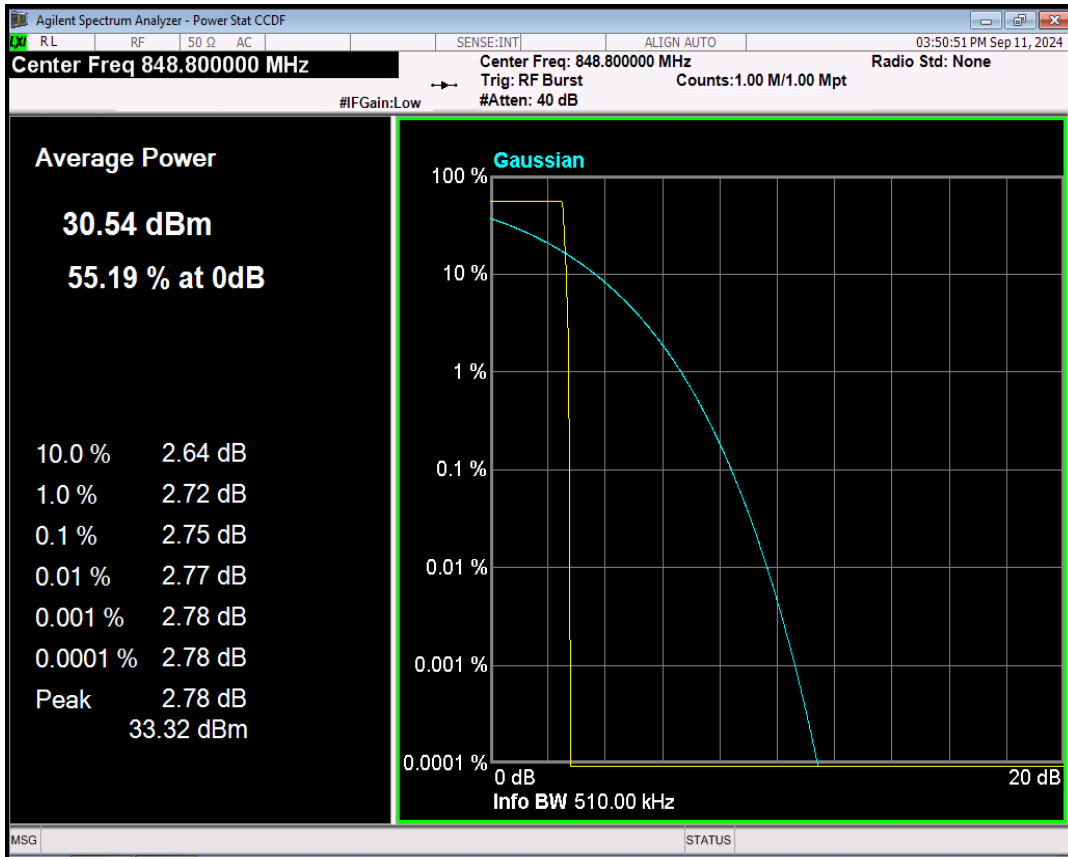
## GSM850 Channel=128



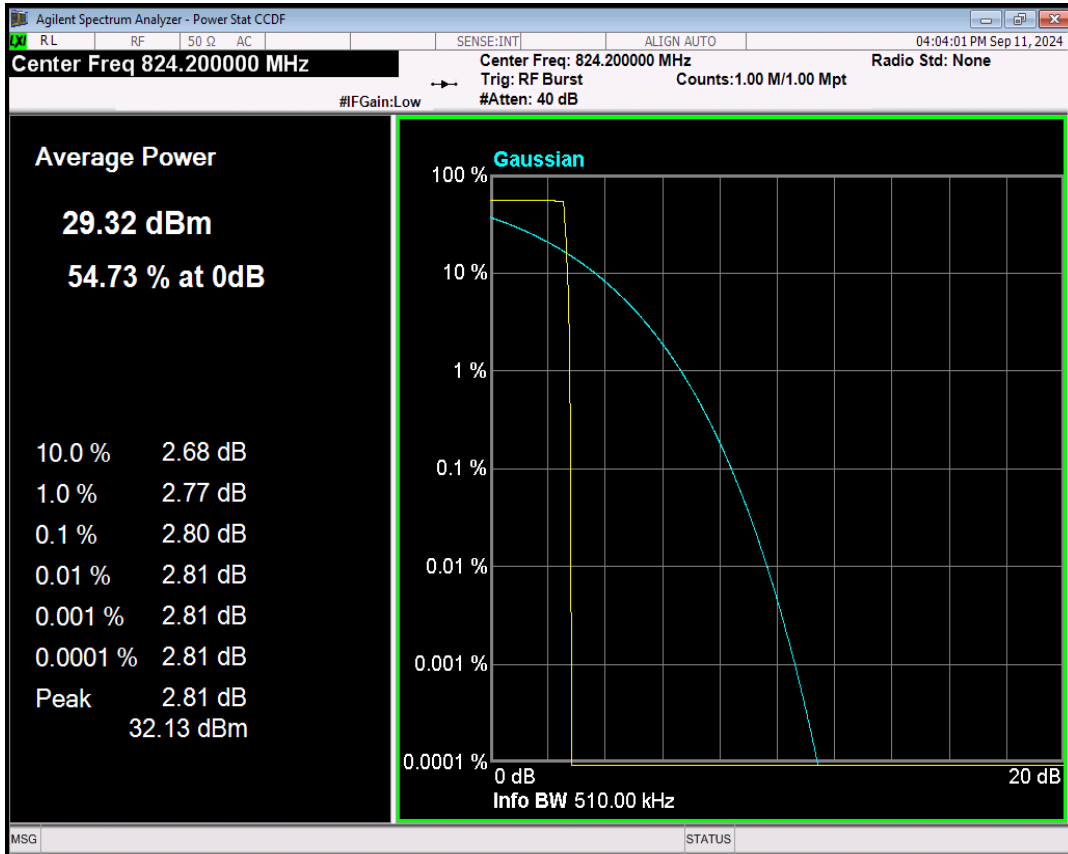
## GSM850 Channel=190



## GSM850 Channel=251

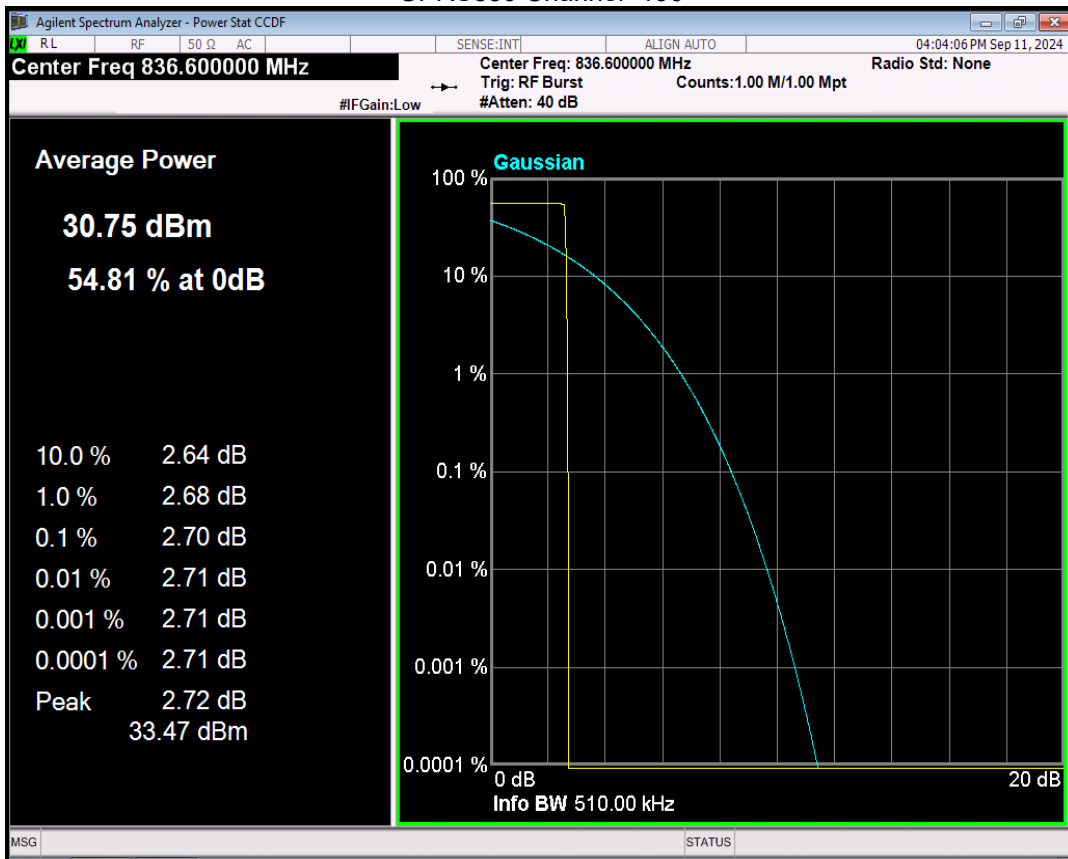


## GPRS850 Channel=128

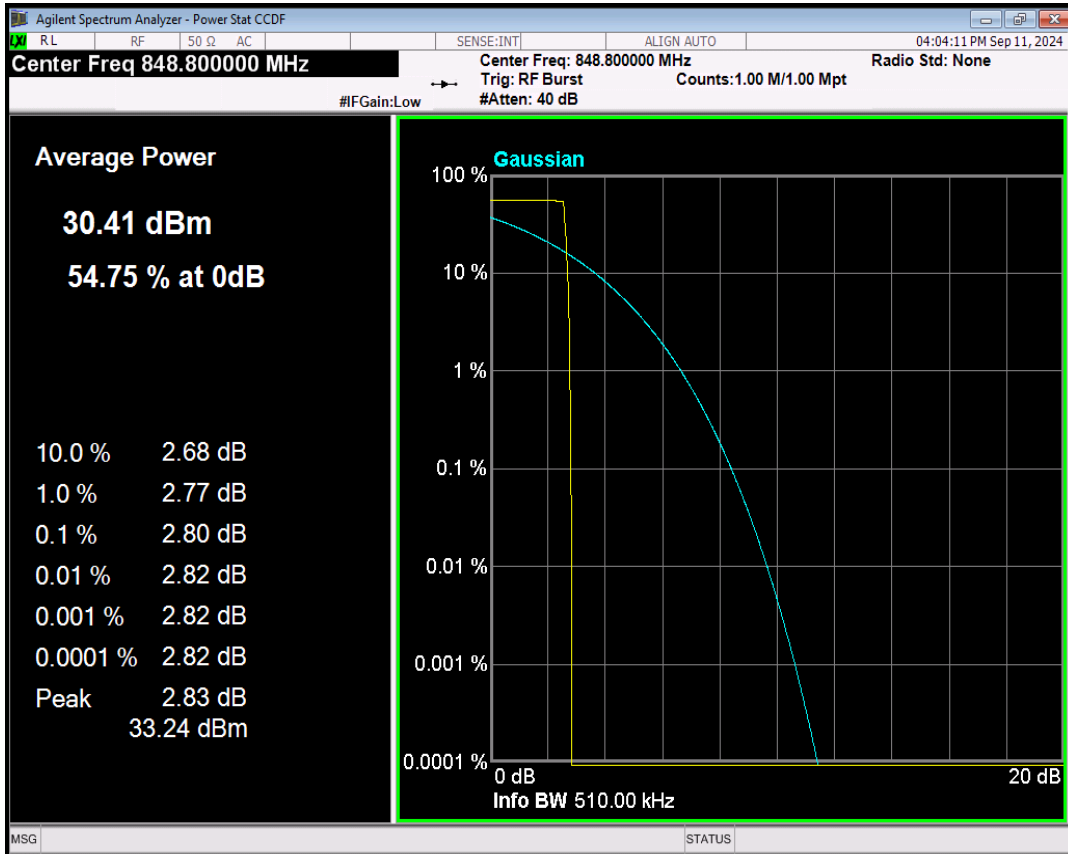




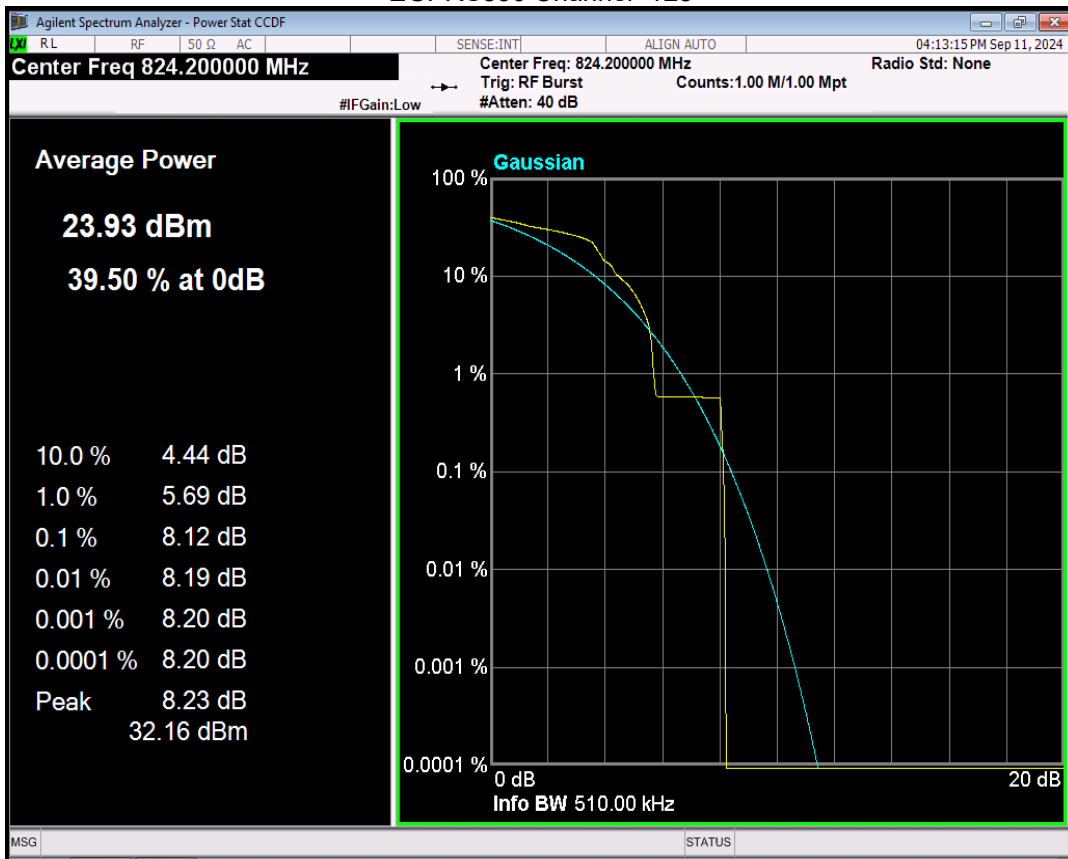
## GPRS850 Channel=190



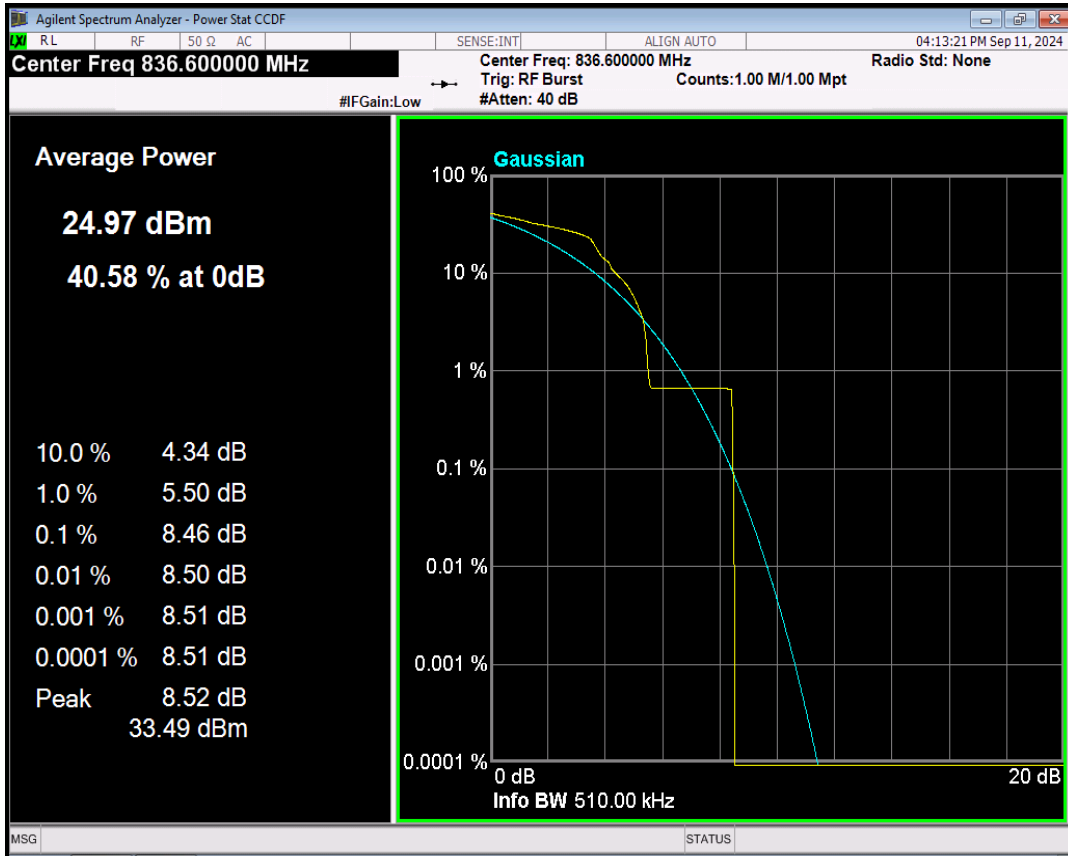
## GPRS850 Channel=251



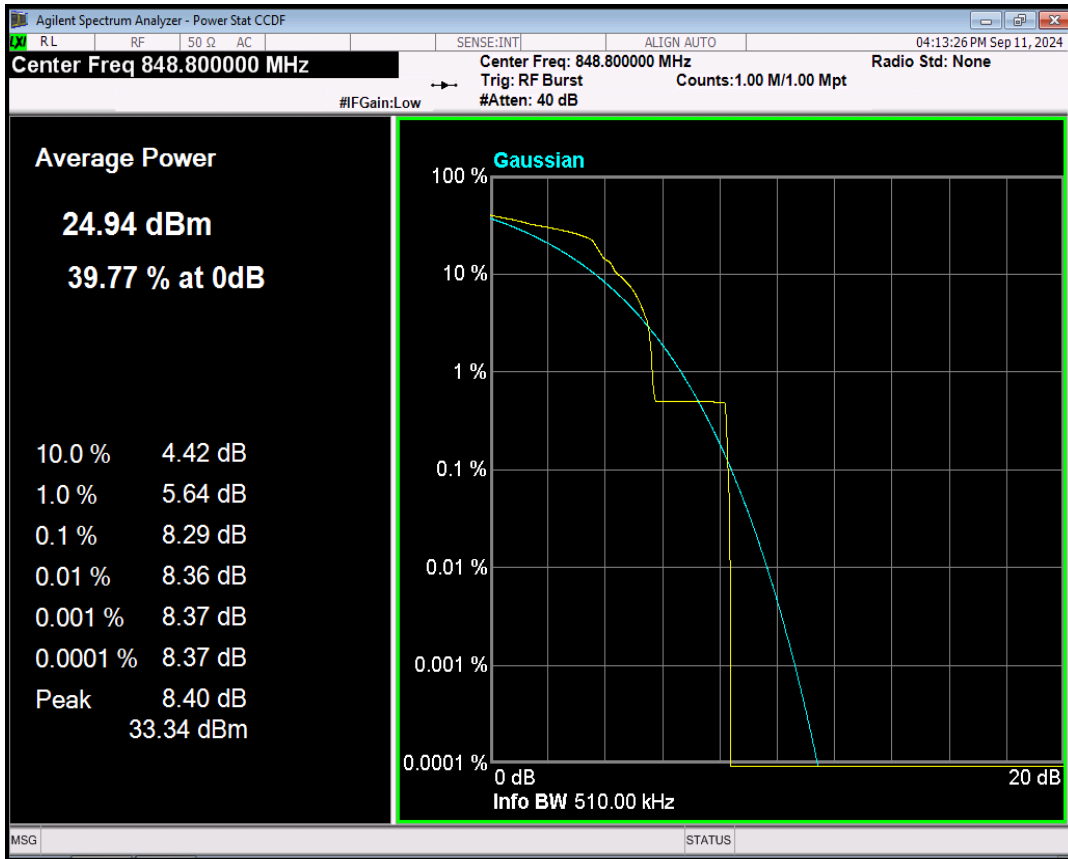
## EGPRS850 Channel=128



## EGPRS850 Channel=190

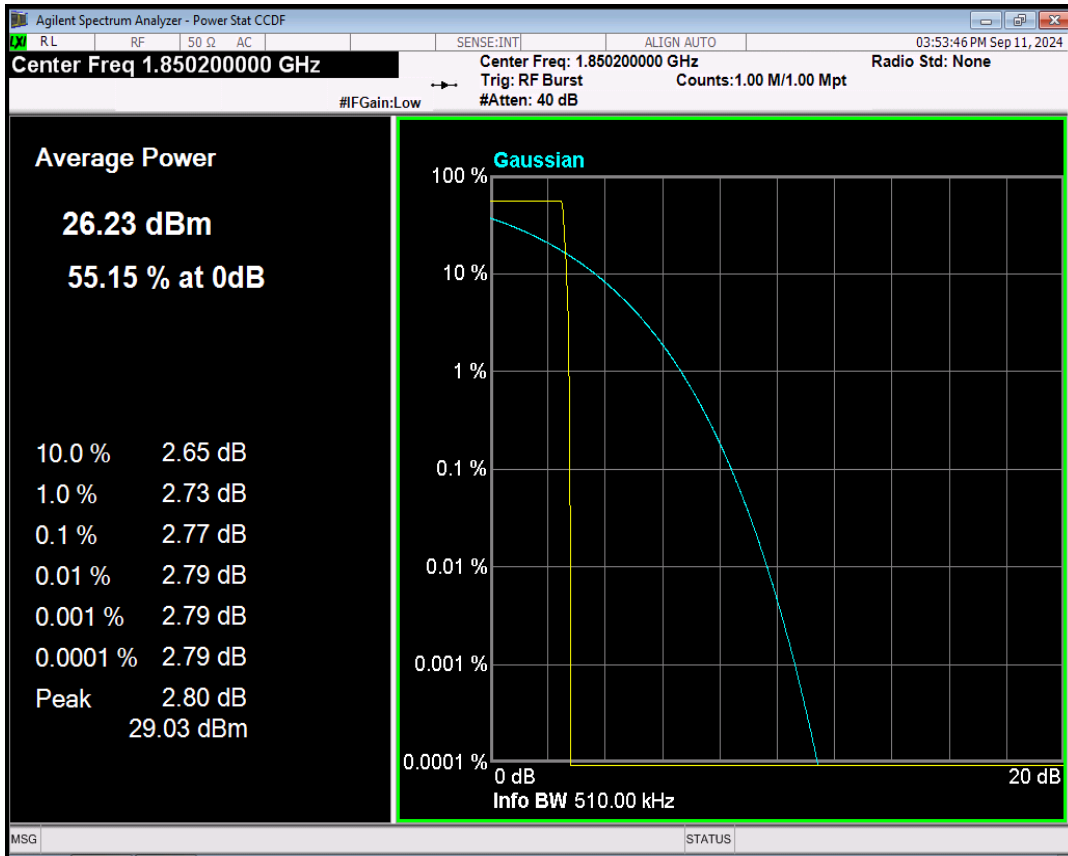


## EGPRS850 Channel=251

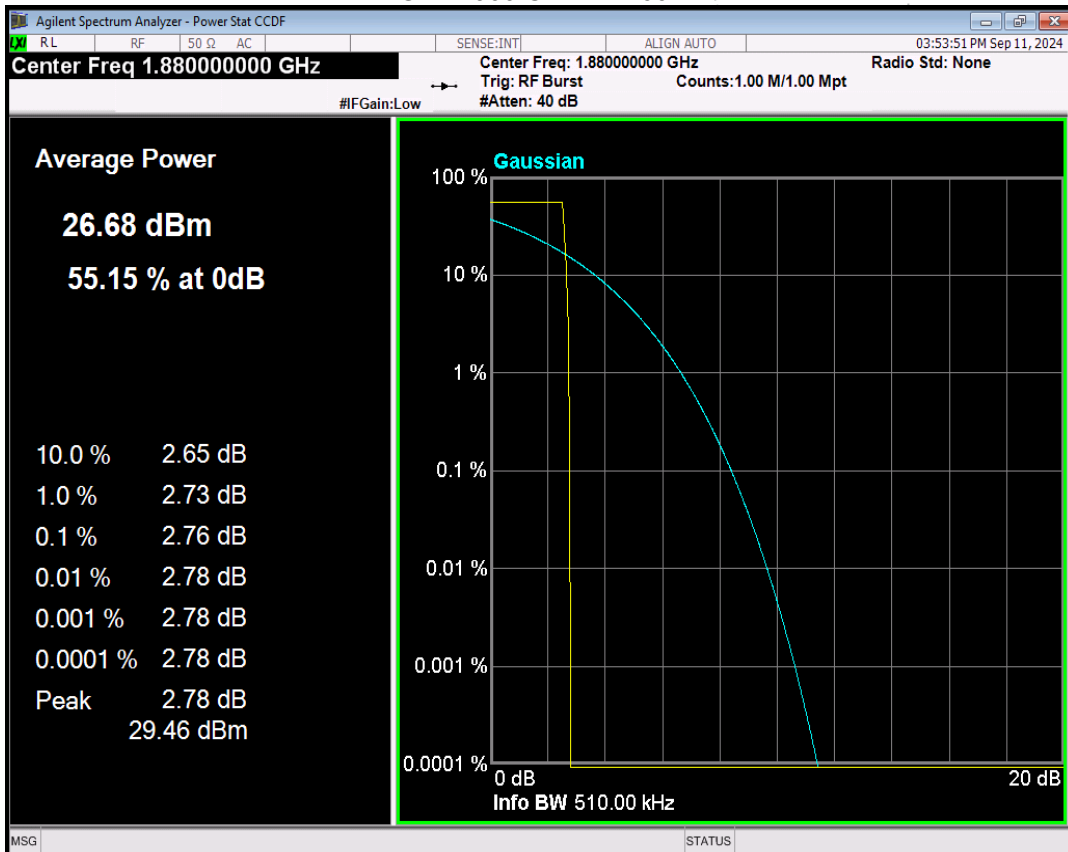


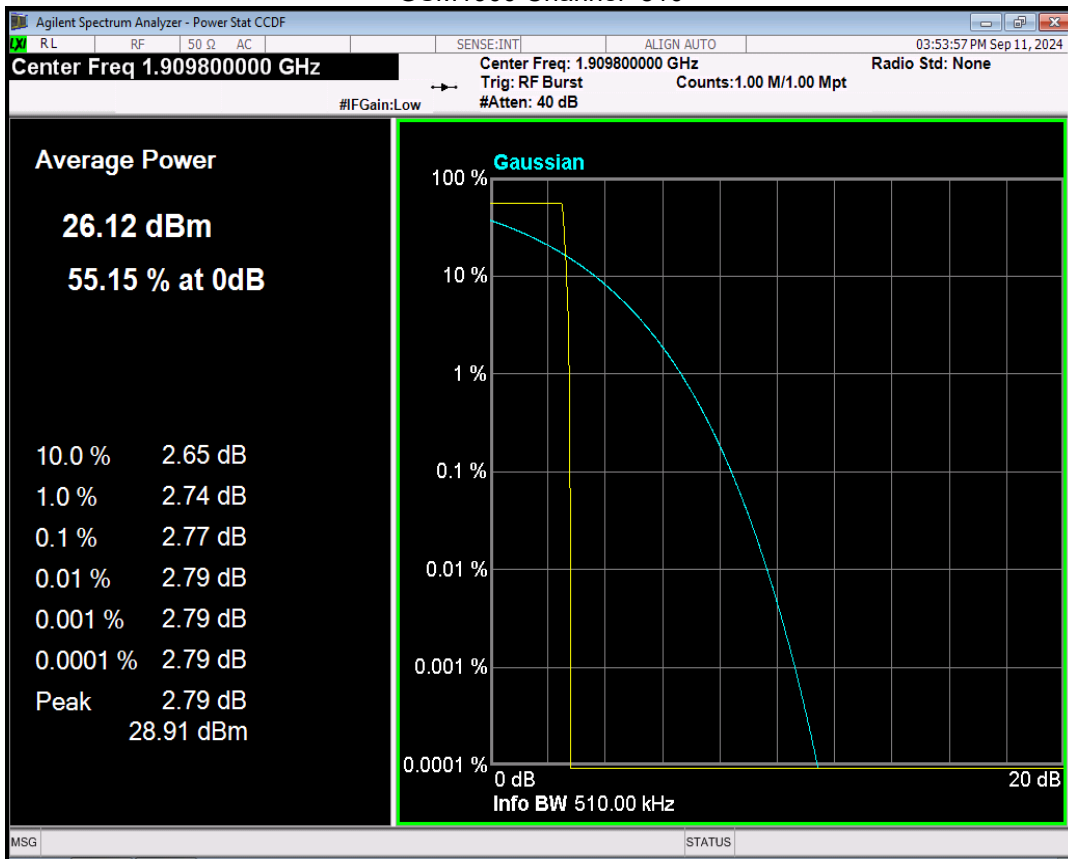
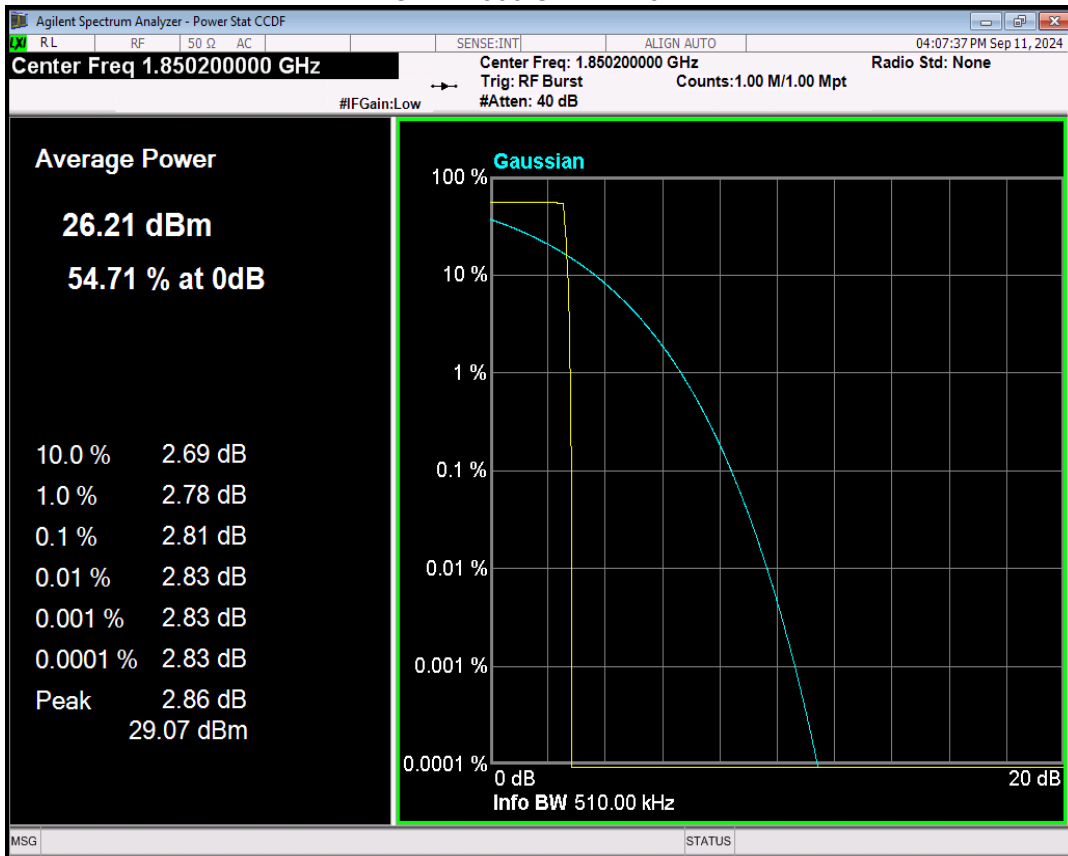
Band	Channel	Frequency (MHz)	Result (dB)	high Limit (dB)	Verdict
GSM1900	512	1850.2	2.77	13.00	PASS
GSM1900	661	1880	2.76	13.00	PASS
GSM1900	810	1909.8	2.77	13.00	PASS
GPRS1900	512	1850.2	2.81	13.00	PASS
GPRS1900	661	1880	2.80	13.00	PASS
GPRS1900	810	1909.8	2.81	13.00	PASS
EGPRS1900	512	1850.2	6.01	13.00	PASS
EGPRS1900	661	1880	6.16	13.00	PASS
EGPRS1900	810	1909.8	6.00	13.00	PASS

## GSM1900 Channel=512

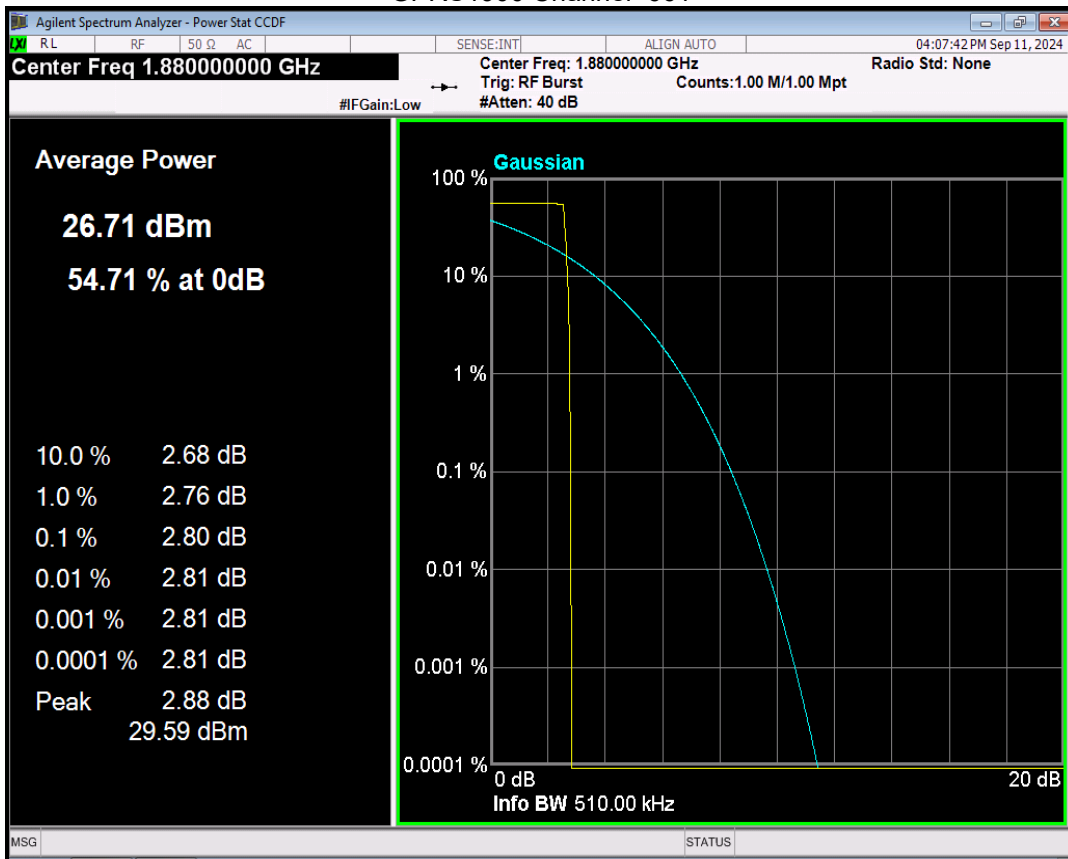


## GSM1900 Channel=661

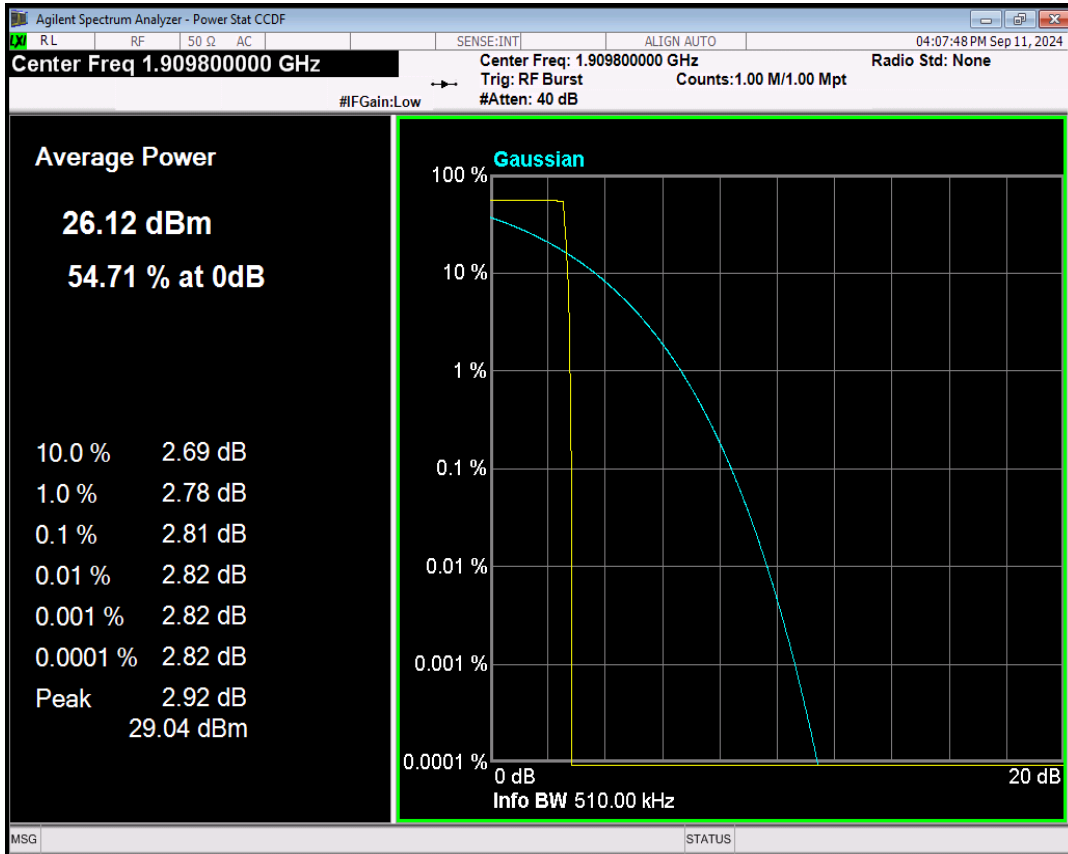


**GSM1900 Channel=810**

**GPRS1900 Channel=512**


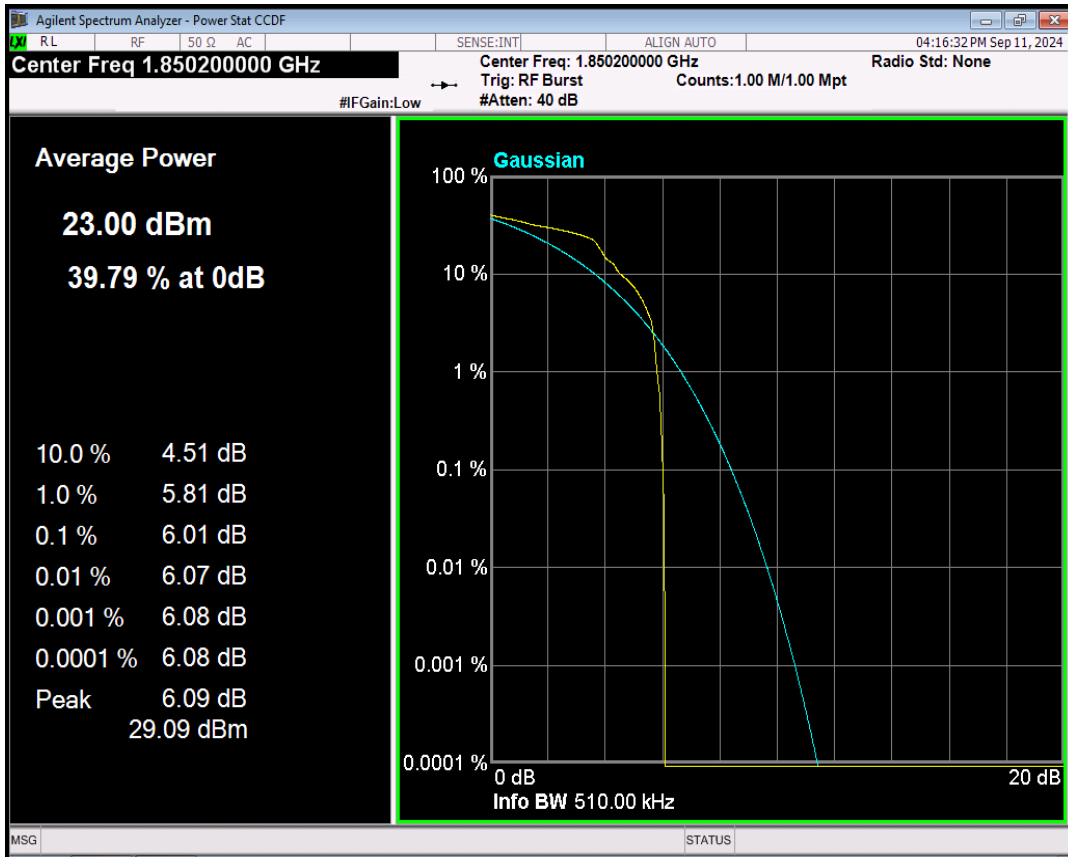
## GPRS1900 Channel=661



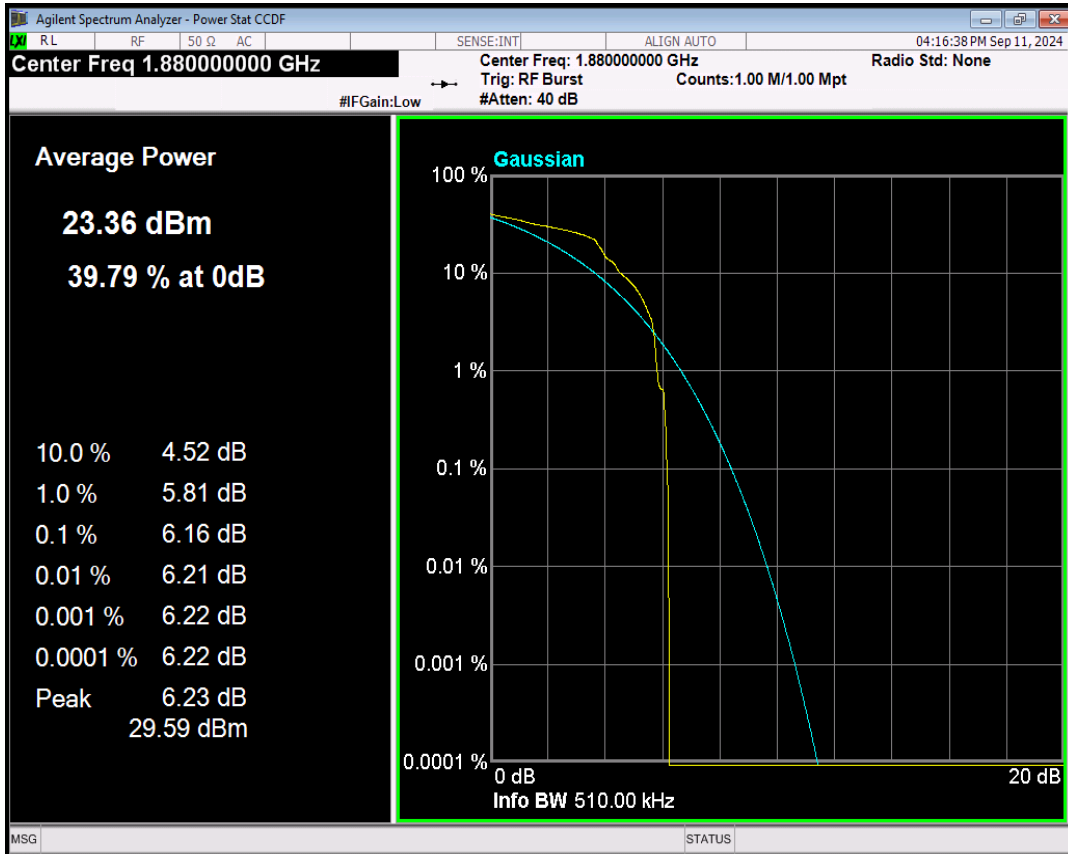
## GPRS1900 Channel=810



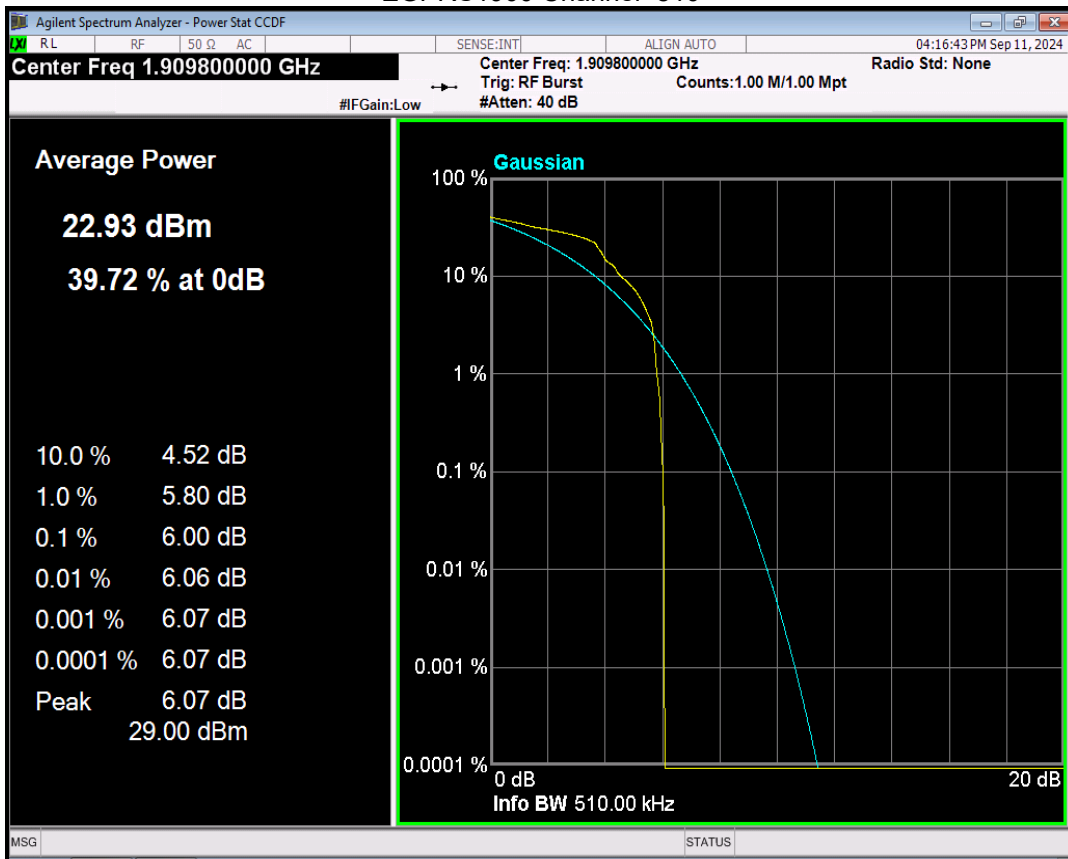
## EGPRS1900 Channel=512



## EGPRS1900 Channel=661



## EGPRS1900 Channel=810

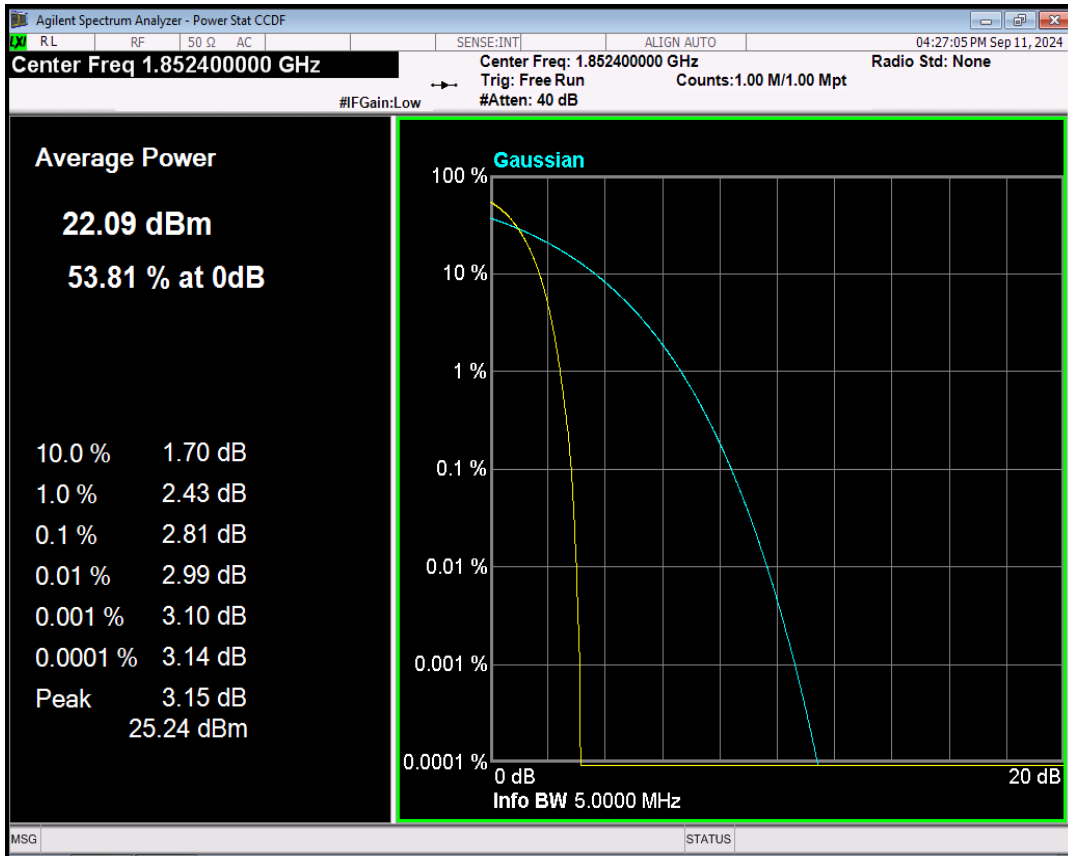


Band	Channel	Frequency (MHz)	Result (dB)	high Limit (dB)	Verdict
WCDMA Band2	9262	1852.4	2.81	13	PASS
WCDMA Band2	9400	1880	3.08	13	PASS
WCDMA Band2	9538	1907.6	3.08	13	PASS
WCDMA Band4	1312	1712.4	3.10	13	PASS
WCDMA Band4	1450	1740	3.22	13	PASS
WCDMA Band4	1513	1752.6	2.95	13	PASS
WCDMA Band5	4132	826.4	3.12	13	PASS
WCDMA Band5	4182	836.4	3.19	13	PASS
WCDMA Band5	4233	846.6	3.18	13	PASS

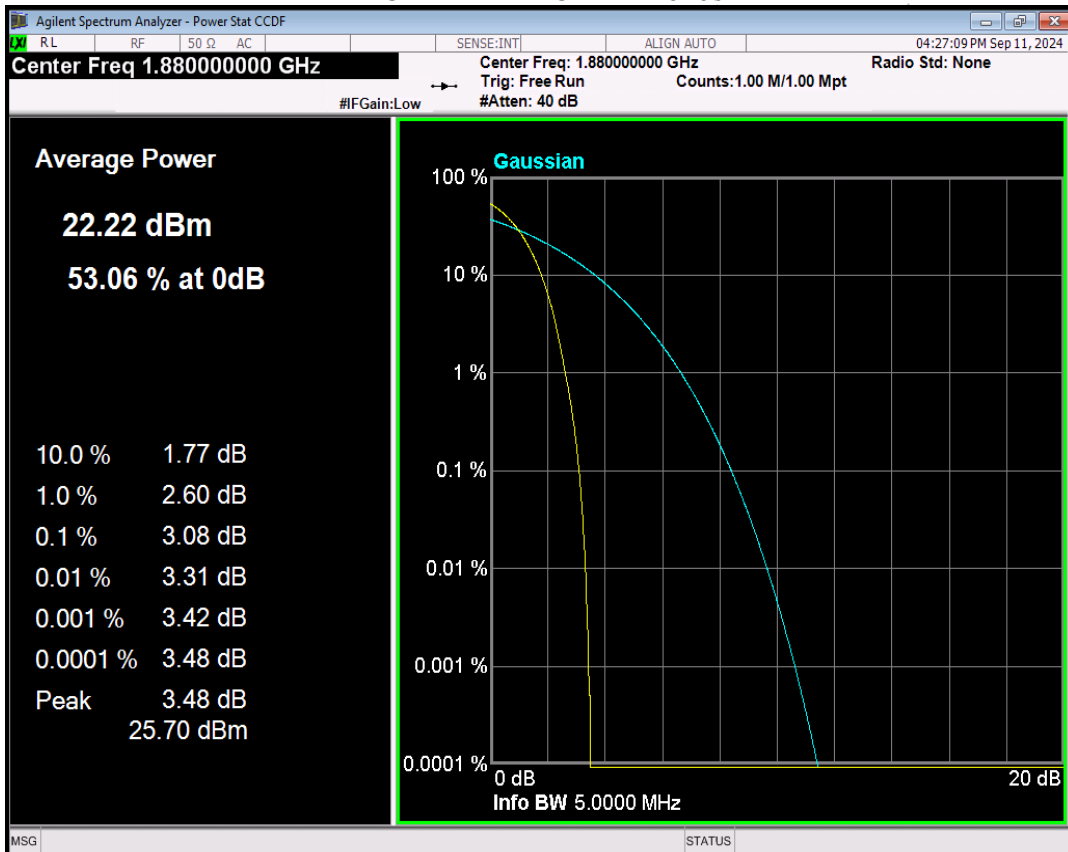
Note: In WCDMA, RMC, HSDPA and HSUPA all three tests only reflect the worst mode RMC.



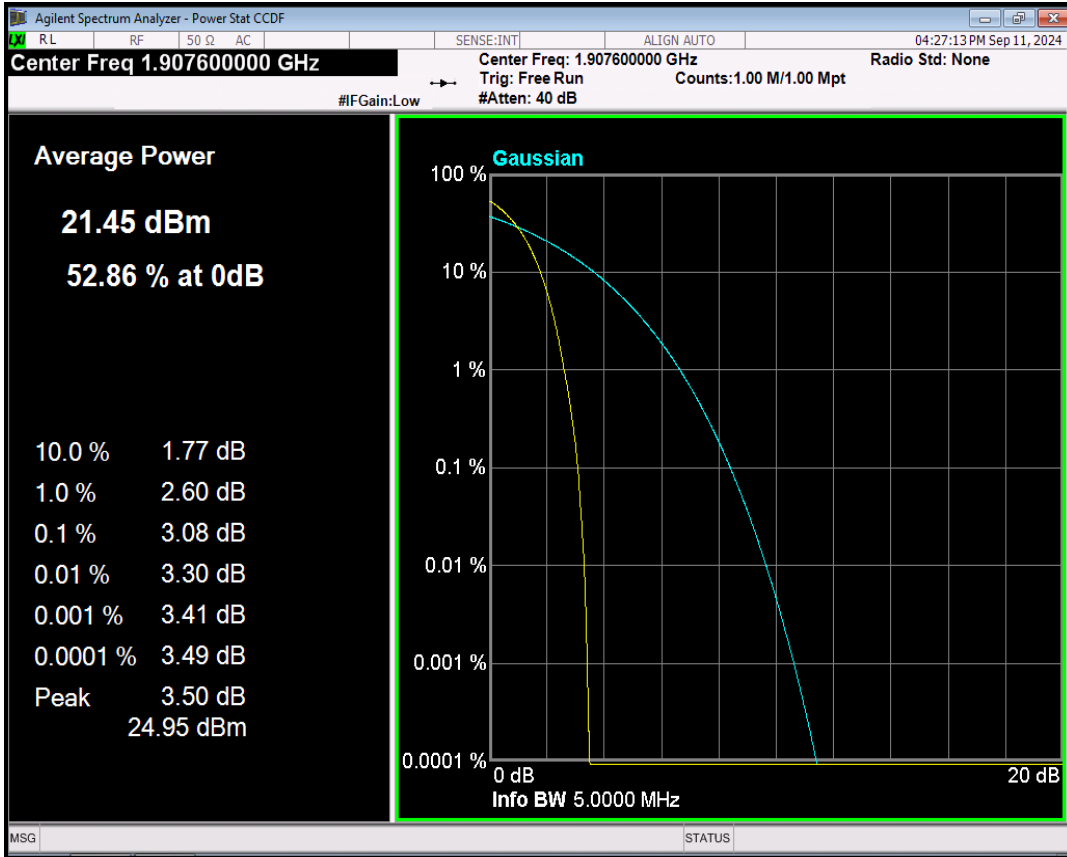
## WCDMA Band2 Channel=9262



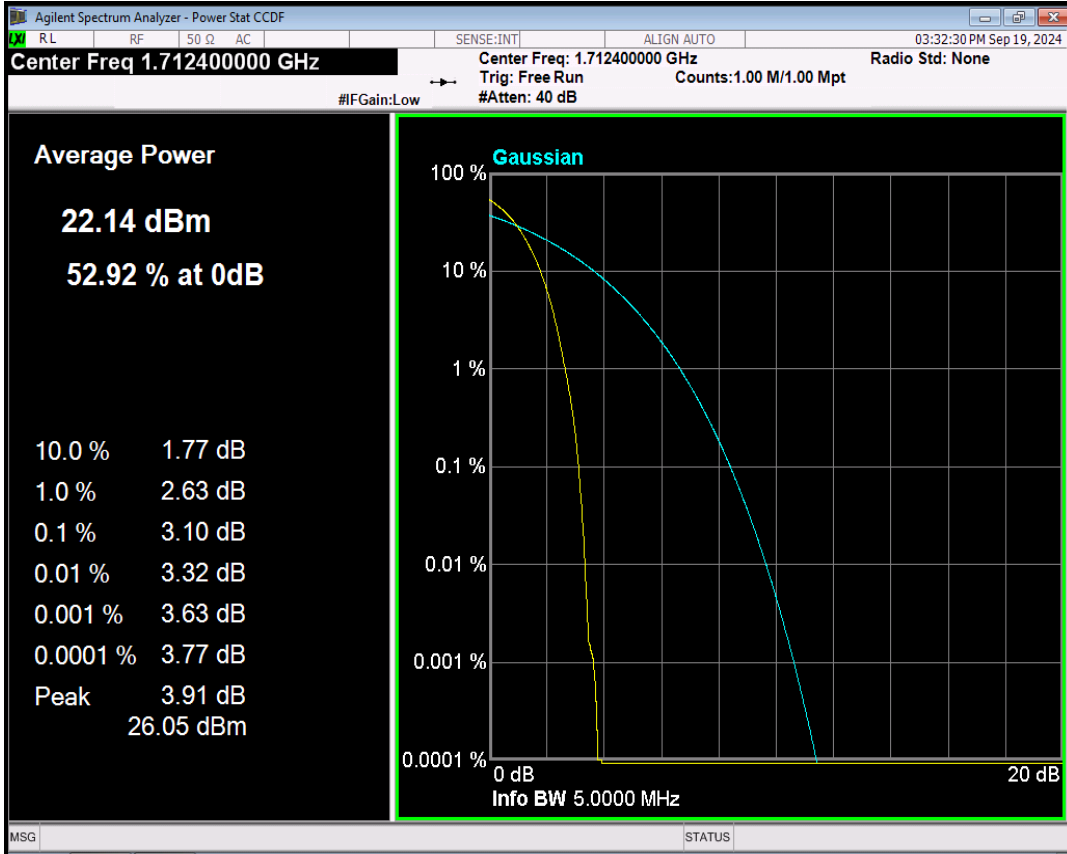
## WCDMA Band2 Channel=9400



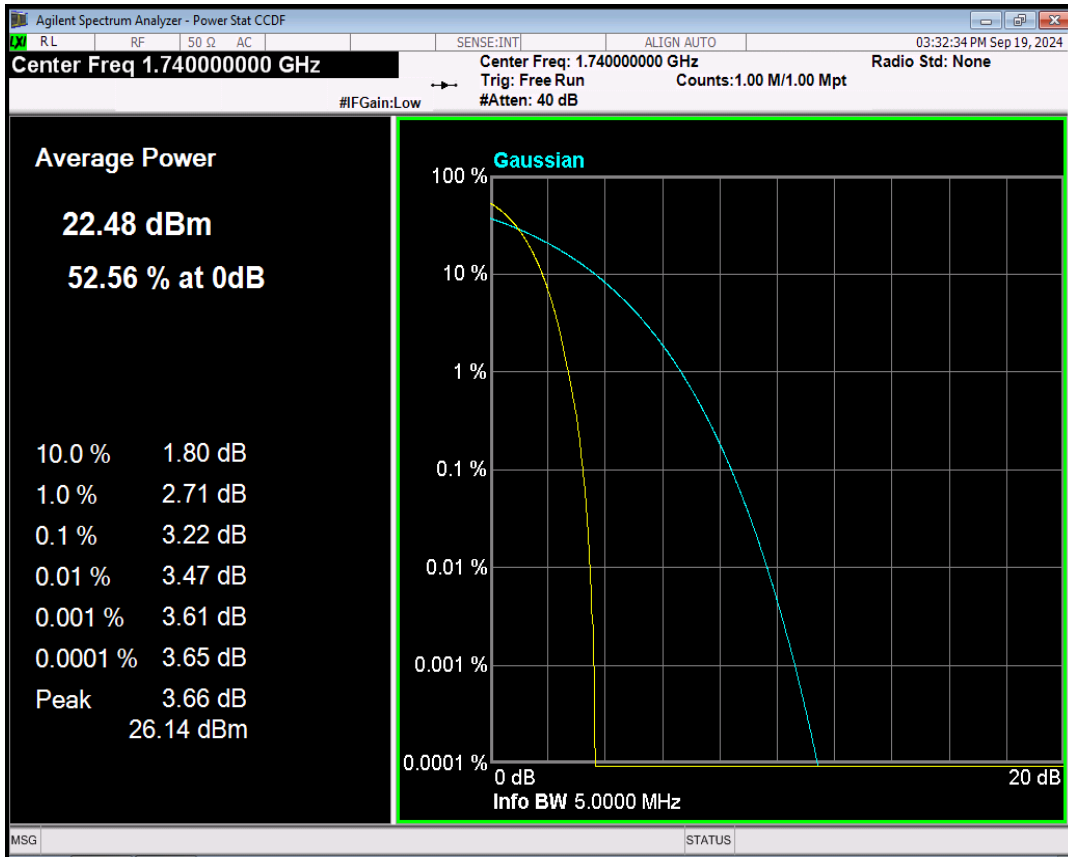
## WCDMA Band2 Channel=9538



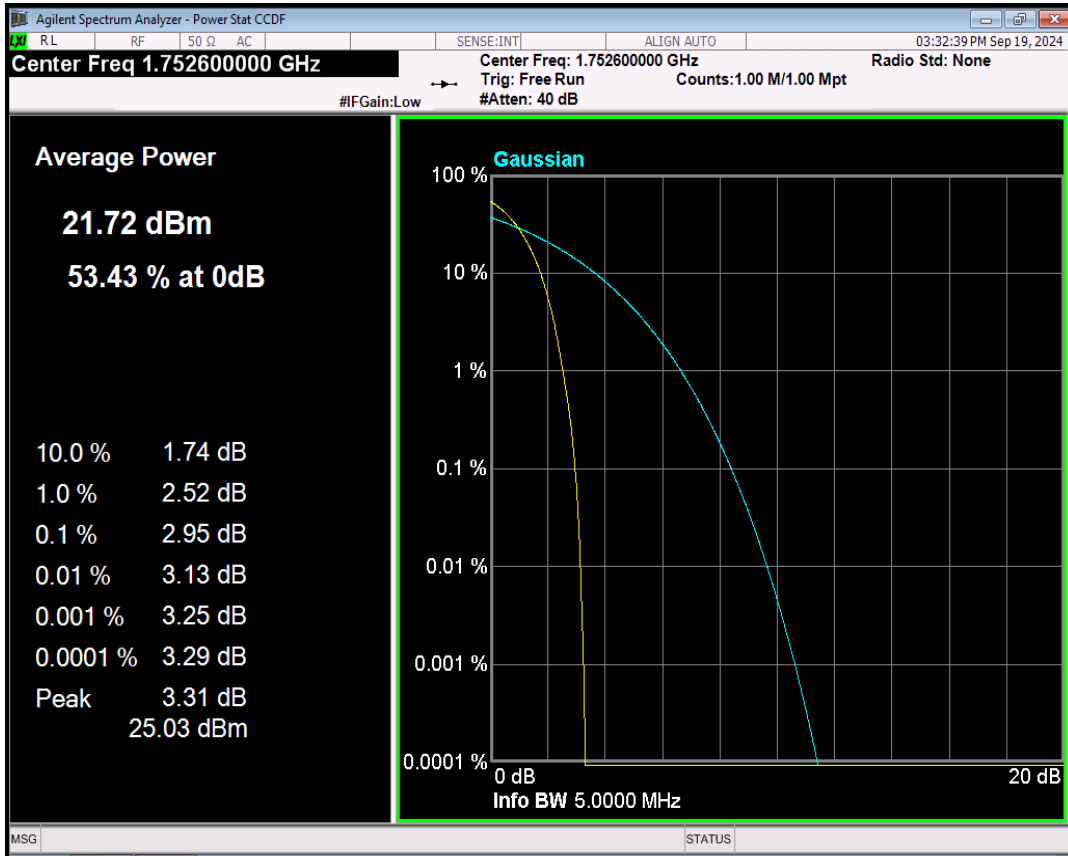
## WCDMA Band4 Channel=1312



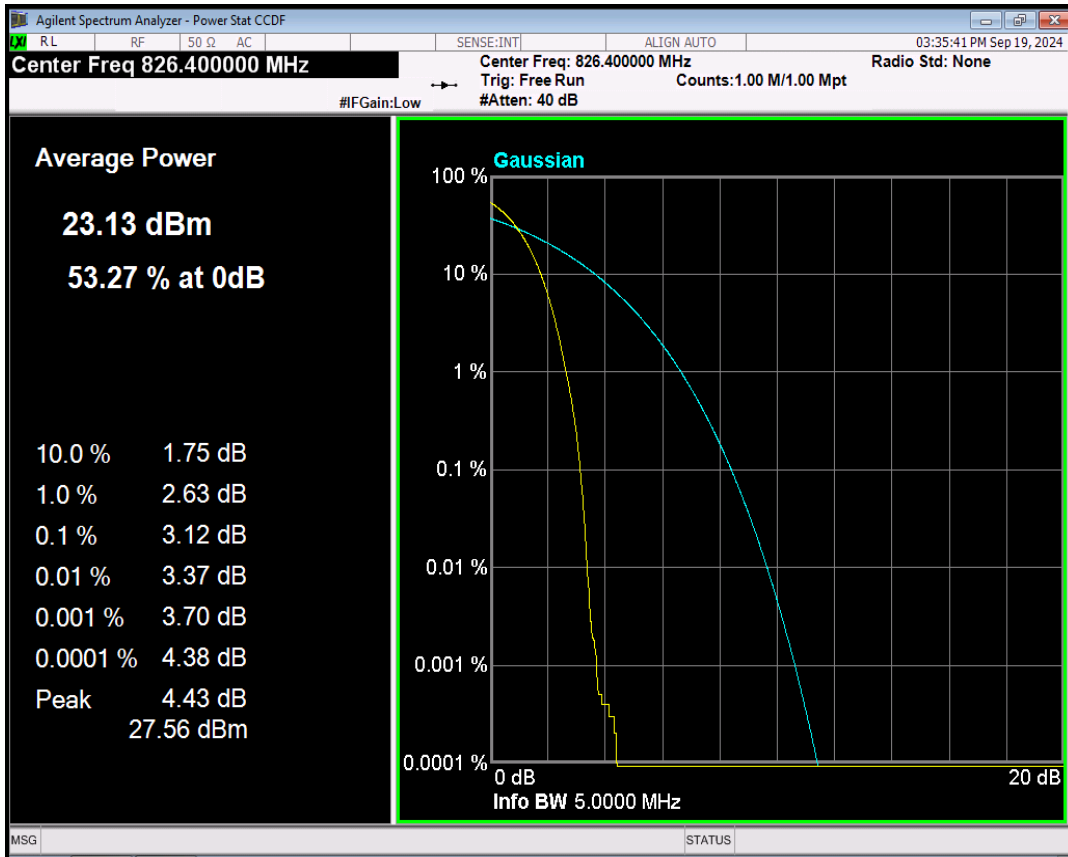
## WCDMA Band4 Channel=1450



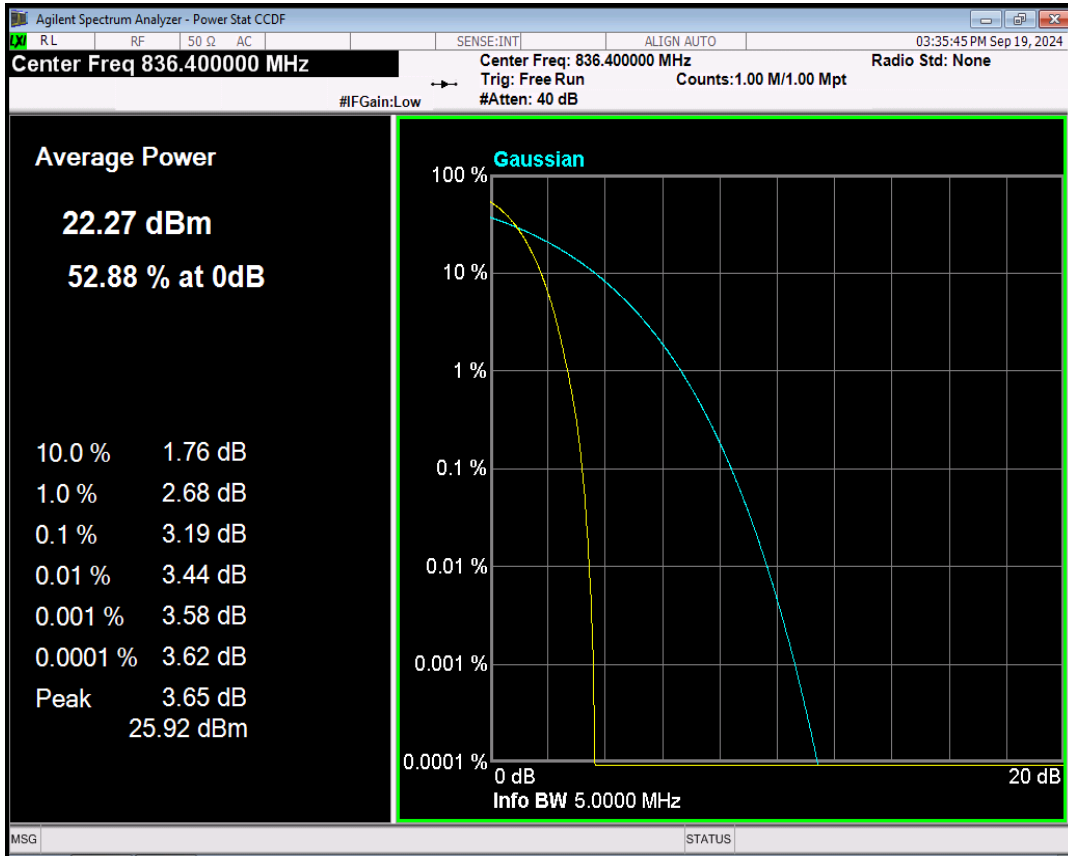
## WCDMA Band4 Channel=1513



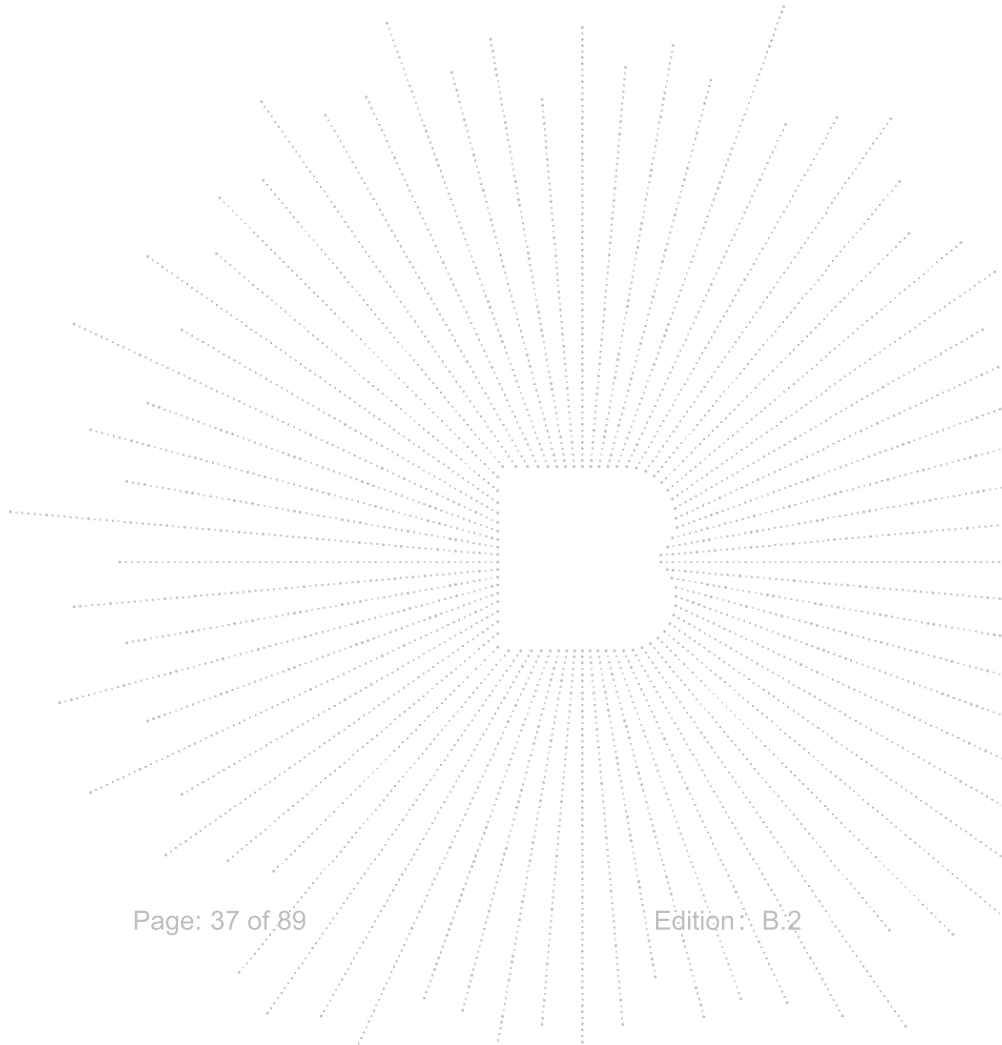
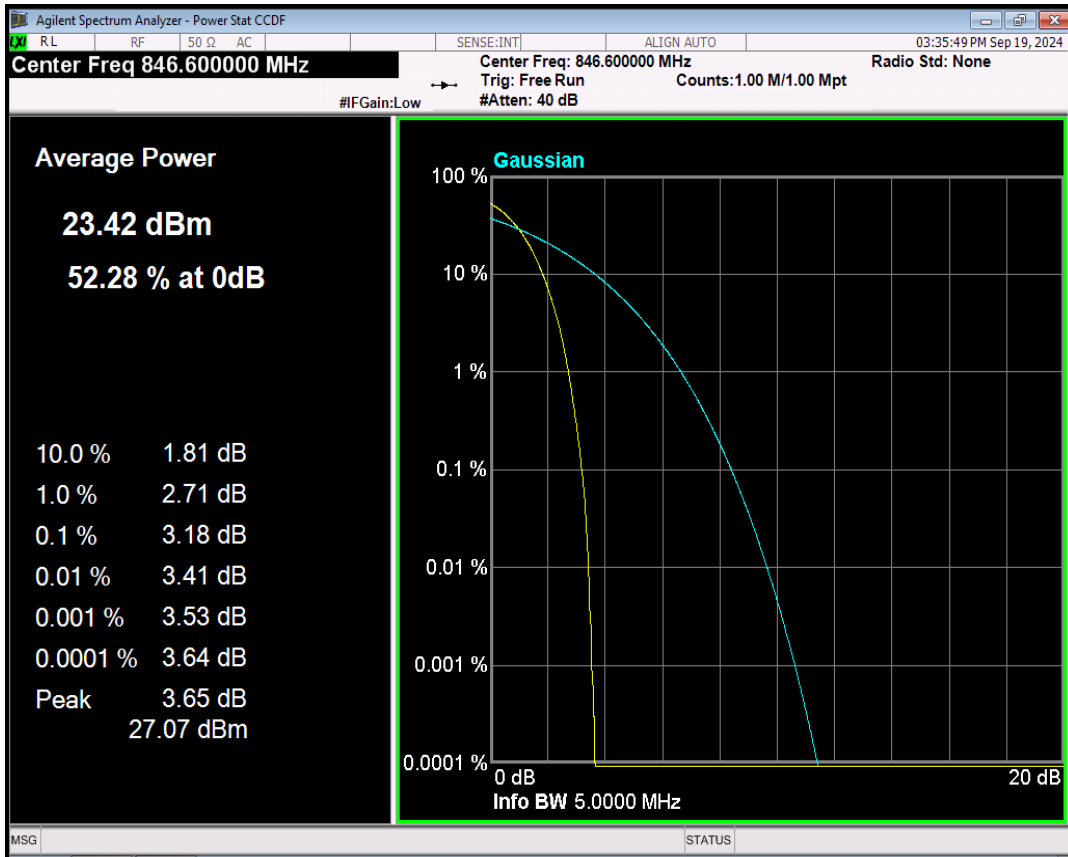
## WCDMA Band5 Channel=4132



## WCDMA Band5 Channel=4182

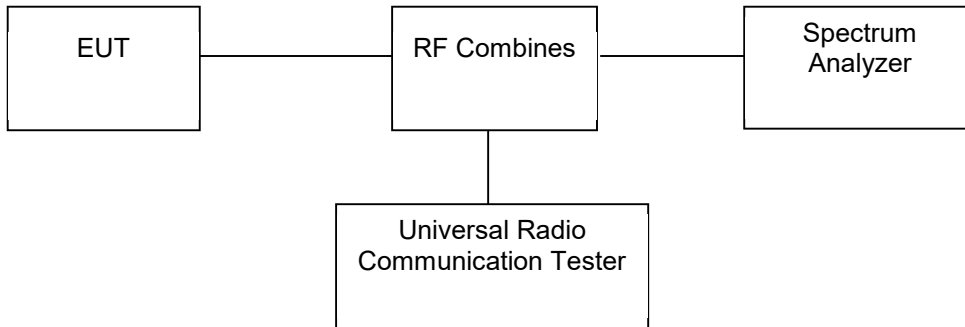


## WCDMA Band5 Channel=4233



## 8. Emission Bandwidth

### 8.1 Block Diagram Of Test Setup



### 8.2 Limit

According to §22.917(b), 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.

According to §24.238(b), 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.

According to §27.53, 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.

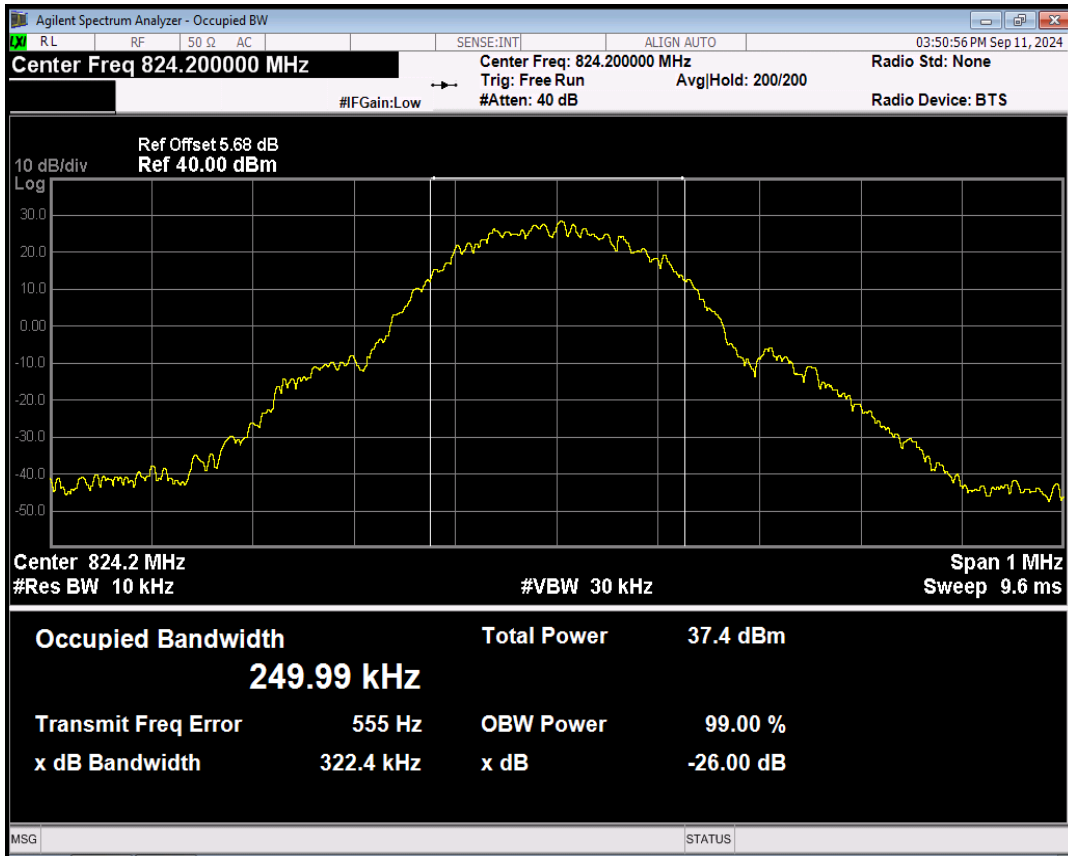
### 8.3 Test procedure

The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 10kHz for GSM mode and 100kHz for WCDMA mode, VBW shall be at least 3 times the RBW, and the 26dB bandwidth was recorded.

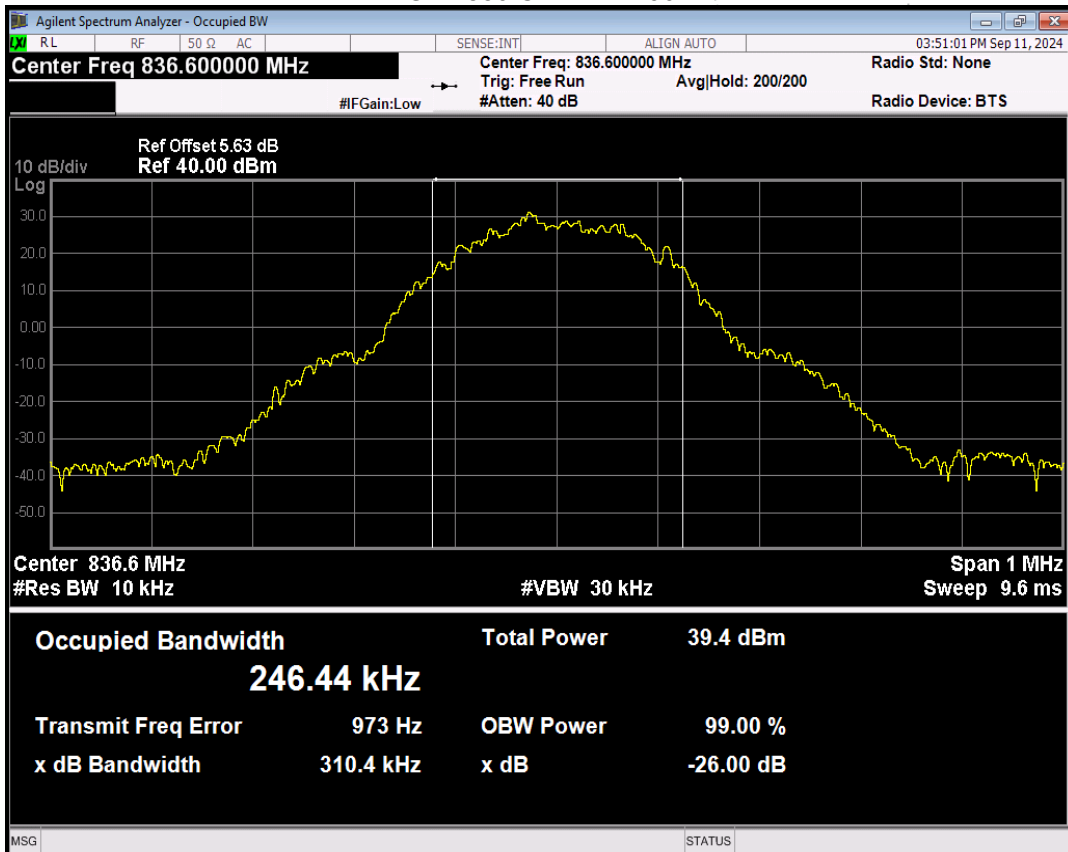
### 8.4 Test Result

Band	Channel	Frequency (MHz)	99% OBW (kHz)	-26dB EBW (kHz)	Verdict
GSM850	128	824.2	249.991	322.416	PASS
GSM850	190	836.6	246.436	310.426	PASS
GSM850	251	848.8	244.050	313.085	PASS
GPRS850	128	824.2	250.131	325.658	PASS
GPRS850	190	836.6	244.983	310.956	PASS
GPRS850	251	848.8	248.380	317.167	PASS
EGPRS850	128	824.2	253.298	314.359	PASS
EGPRS850	190	836.6	259.328	330.249	PASS
EGPRS850	251	848.8	235.564	303.440	PASS

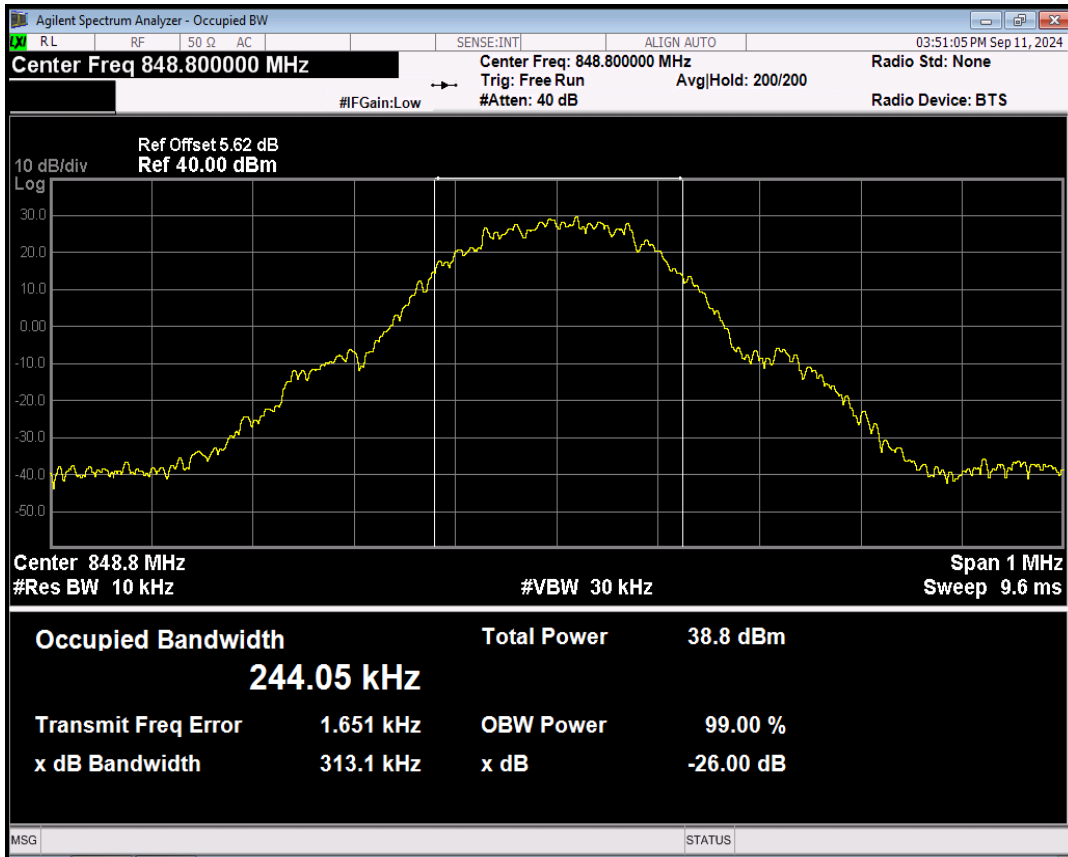
## GSM850 Channel=128



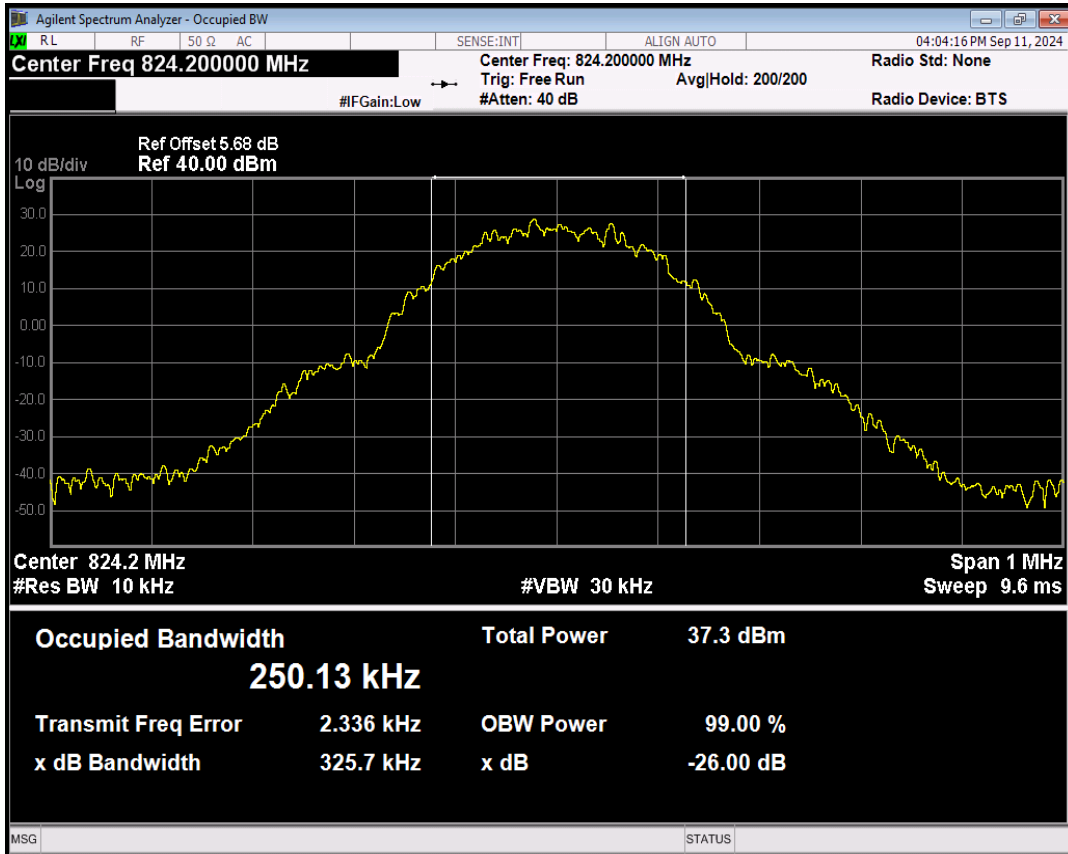
## GSM850 Channel=190



## GSM850 Channel=251

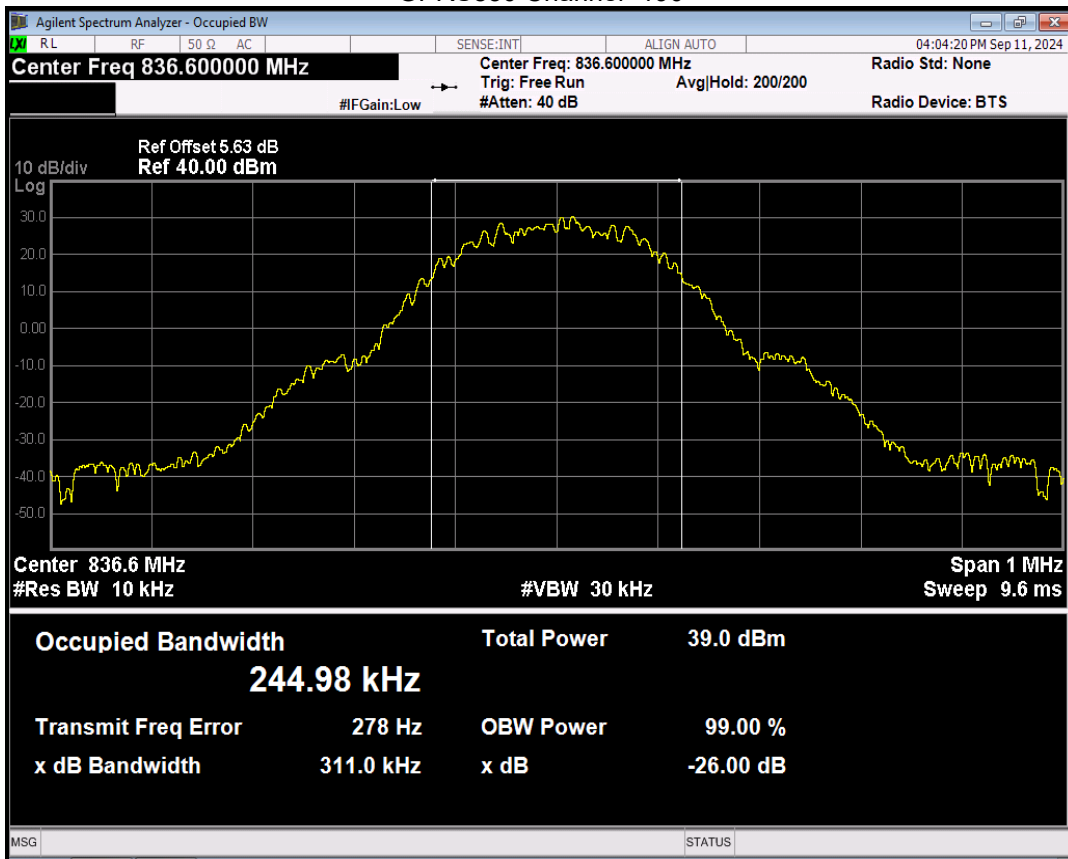


## GPRS850 Channel=128

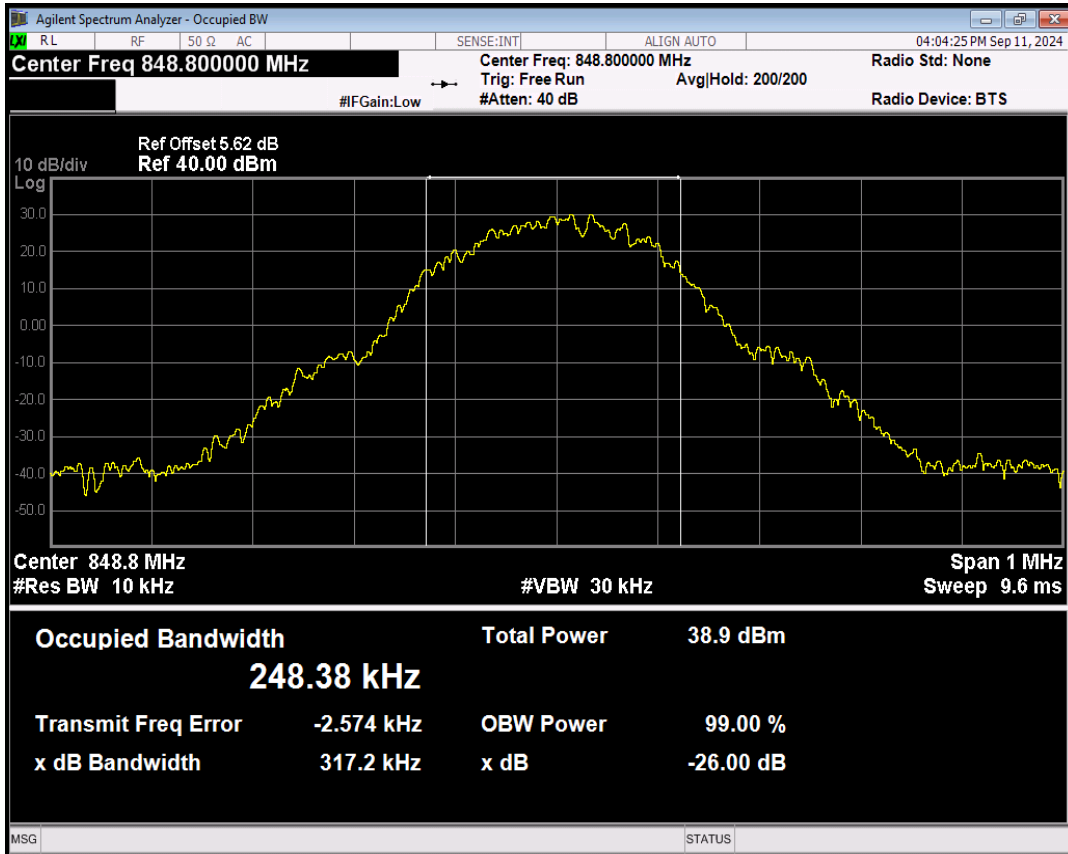




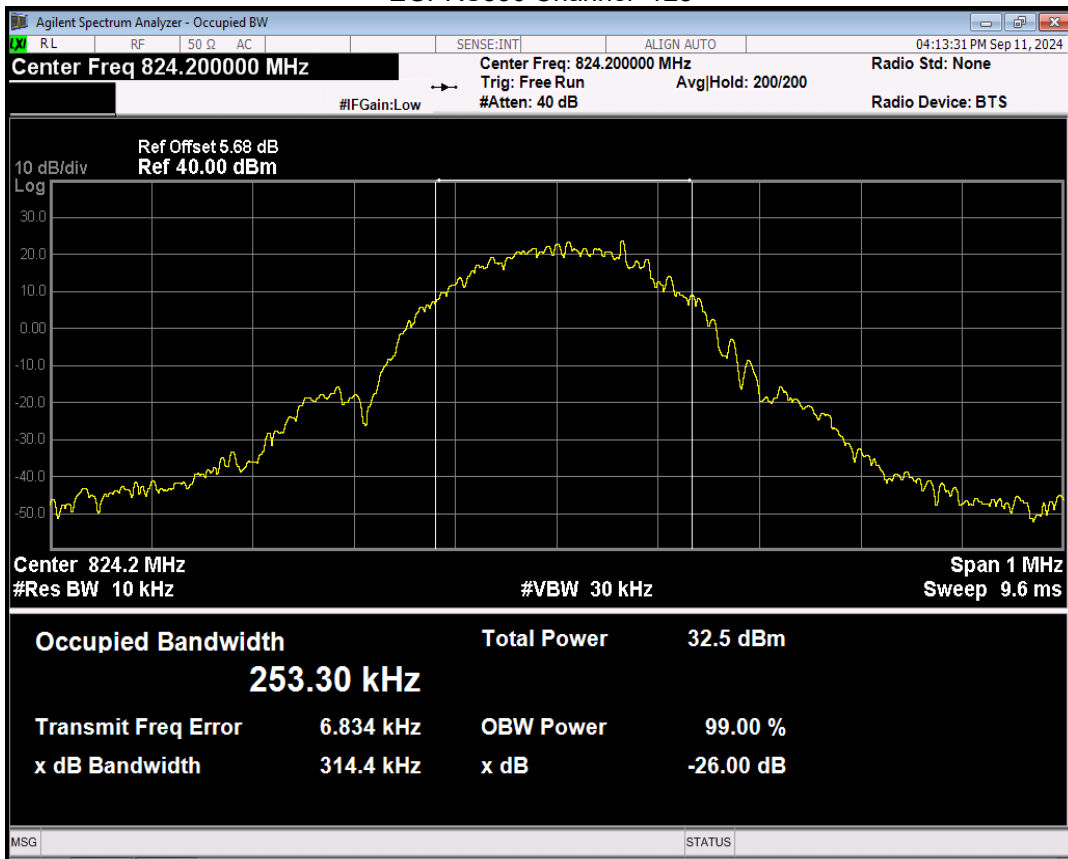
## GPRS850 Channel=190



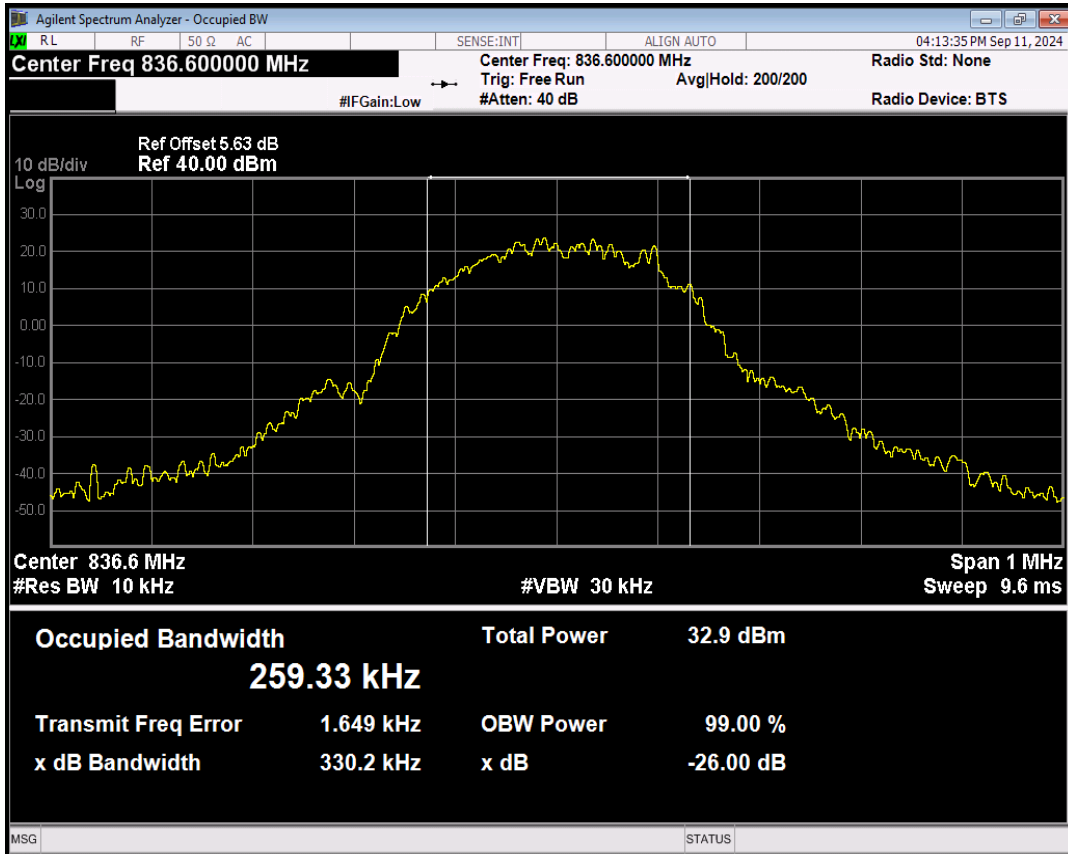
## GPRS850 Channel=251



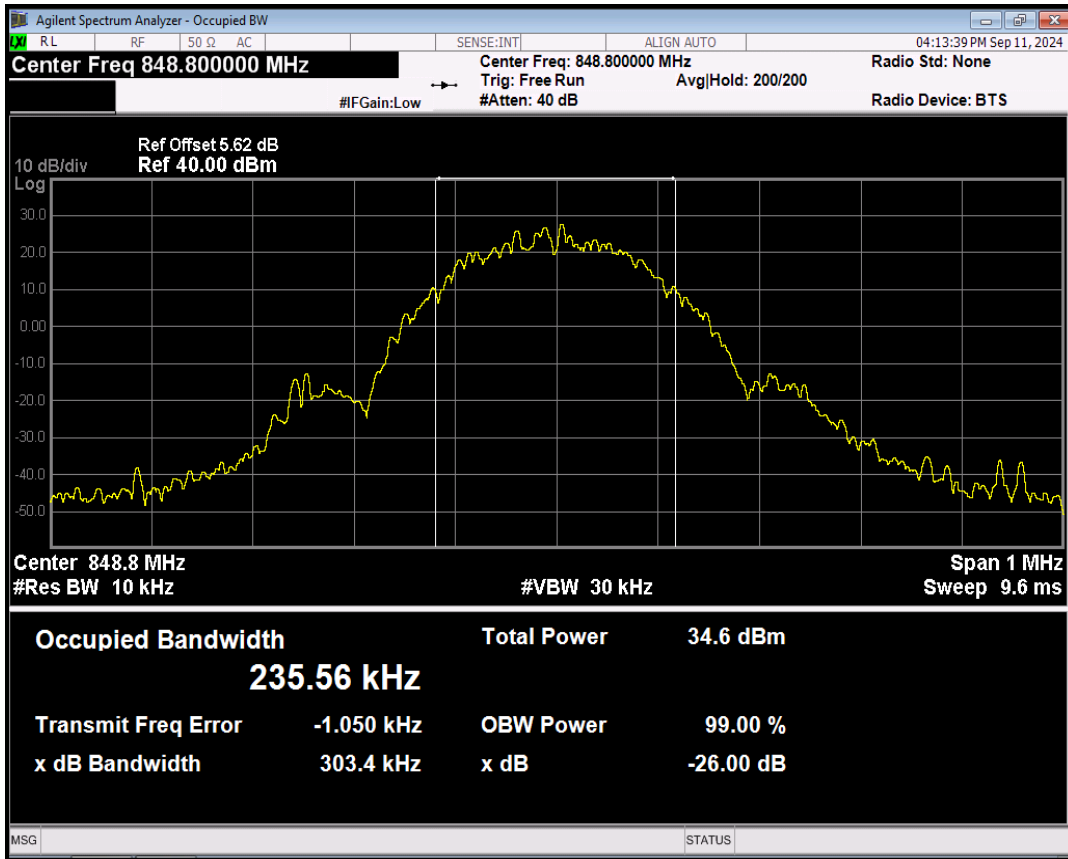
## EGPRS850 Channel=128



## EGPRS850 Channel=190

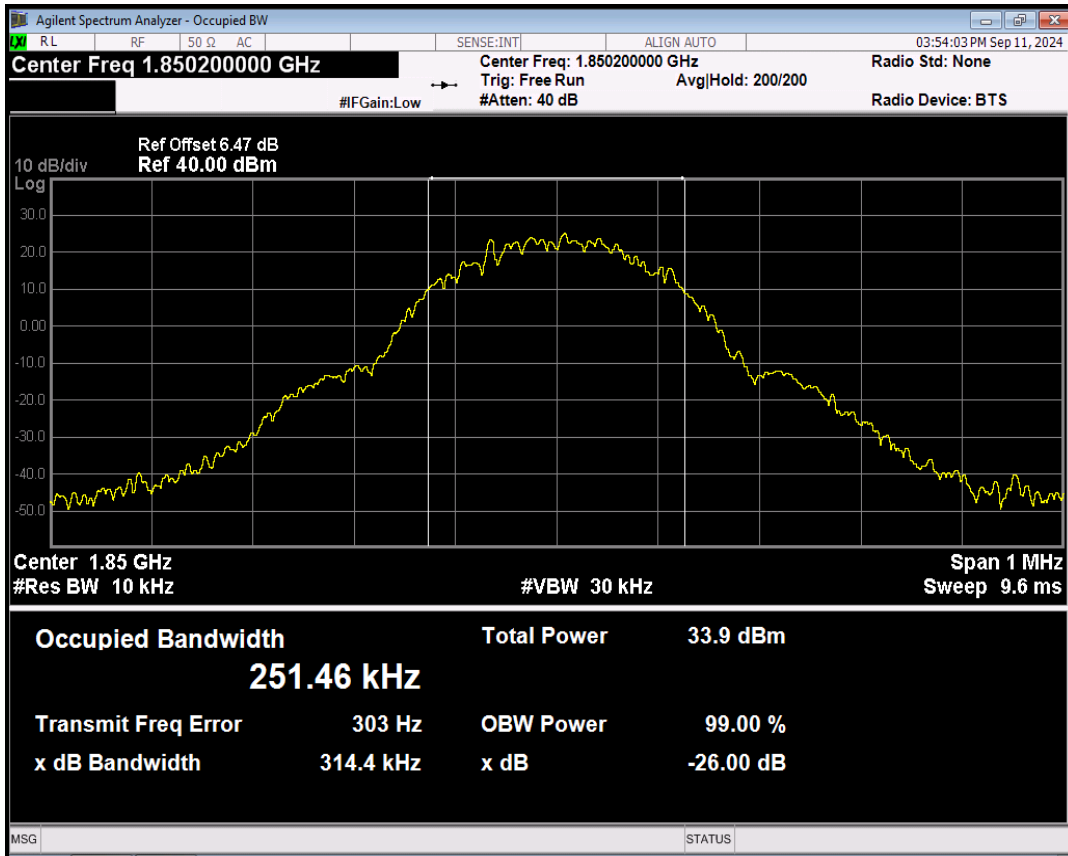


## EGPRS850 Channel=251

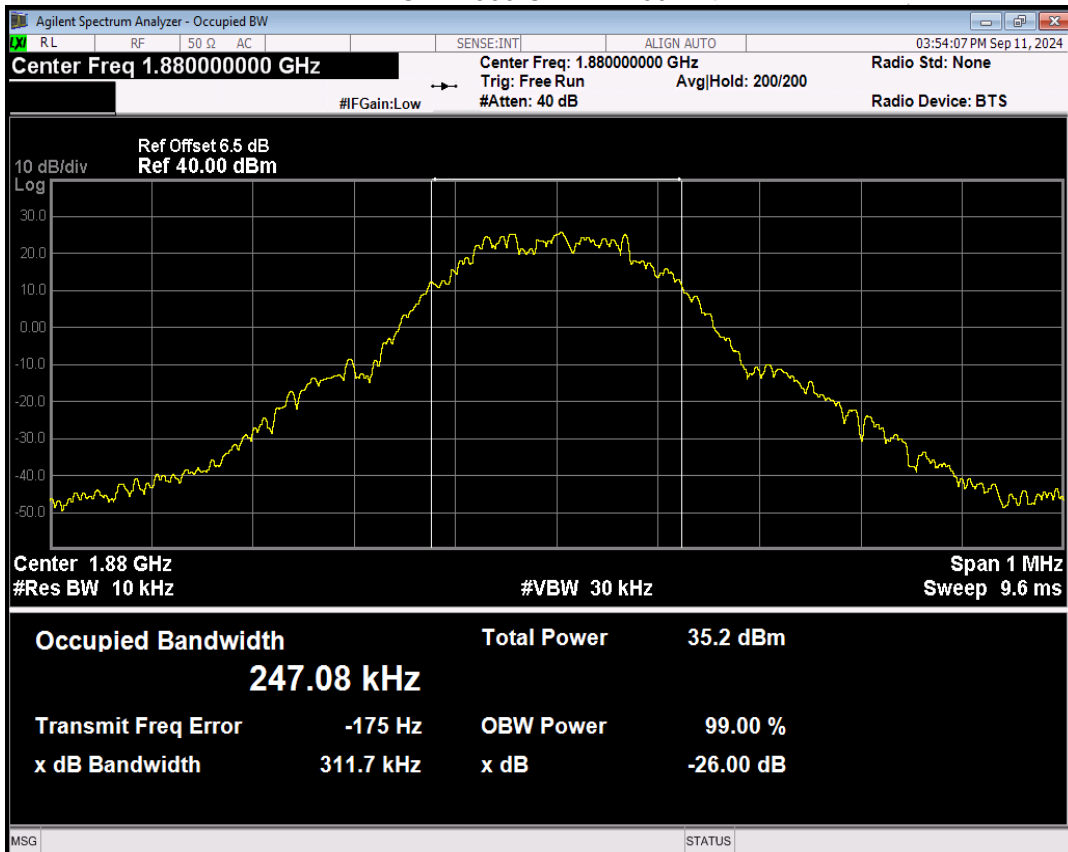


Band	Channel	Frequency (MHz)	99% OBW (kHz)	-26dB EBW (kHz)	Verdict
GSM1900	512	1850.2	251.457	314.365	PASS
GSM1900	661	1880	247.075	311.748	PASS
GSM1900	810	1909.8	247.853	319.986	PASS
GPRS1900	512	1850.2	243.774	316.576	PASS
GPRS1900	661	1880	245.173	325.220	PASS
GPRS1900	810	1909.8	242.648	303.778	PASS
EGPRS1900	512	1850.2	239.760	300.675	PASS
EGPRS1900	661	1880	243.783	316.351	PASS
EGPRS1900	810	1909.8	250.410	319.251	PASS

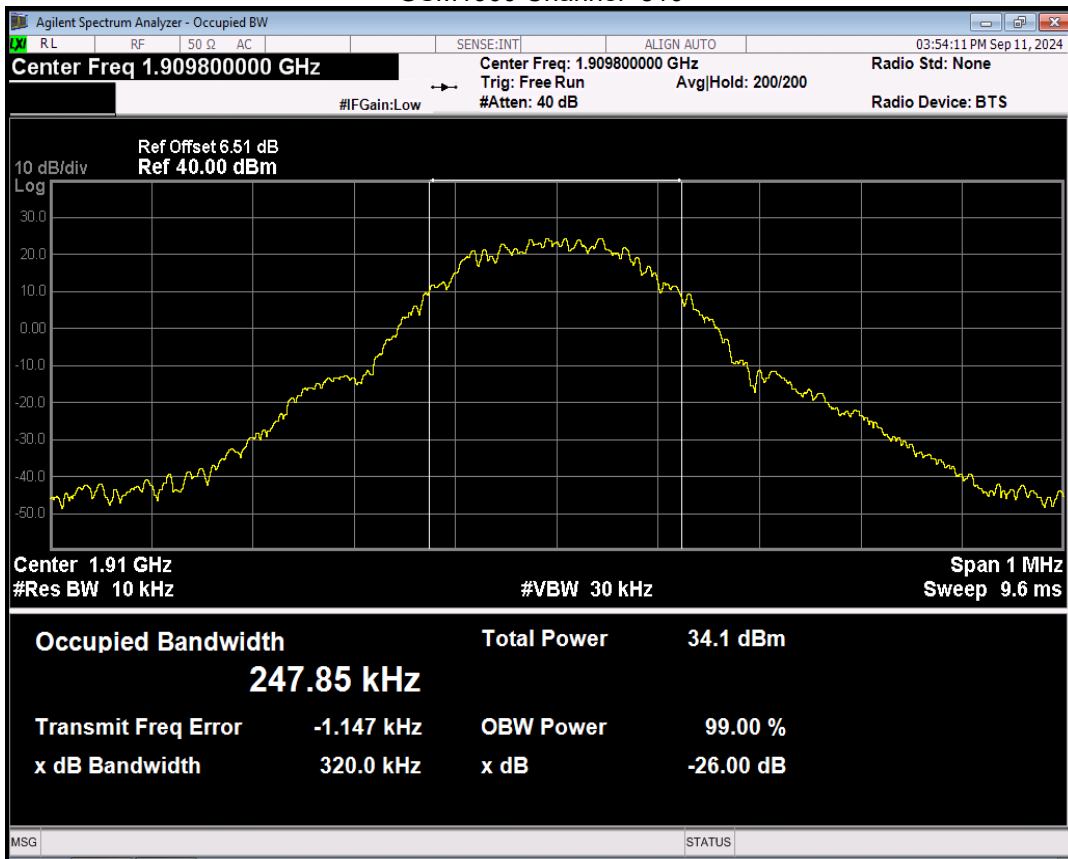
## GSM1900 Channel=512



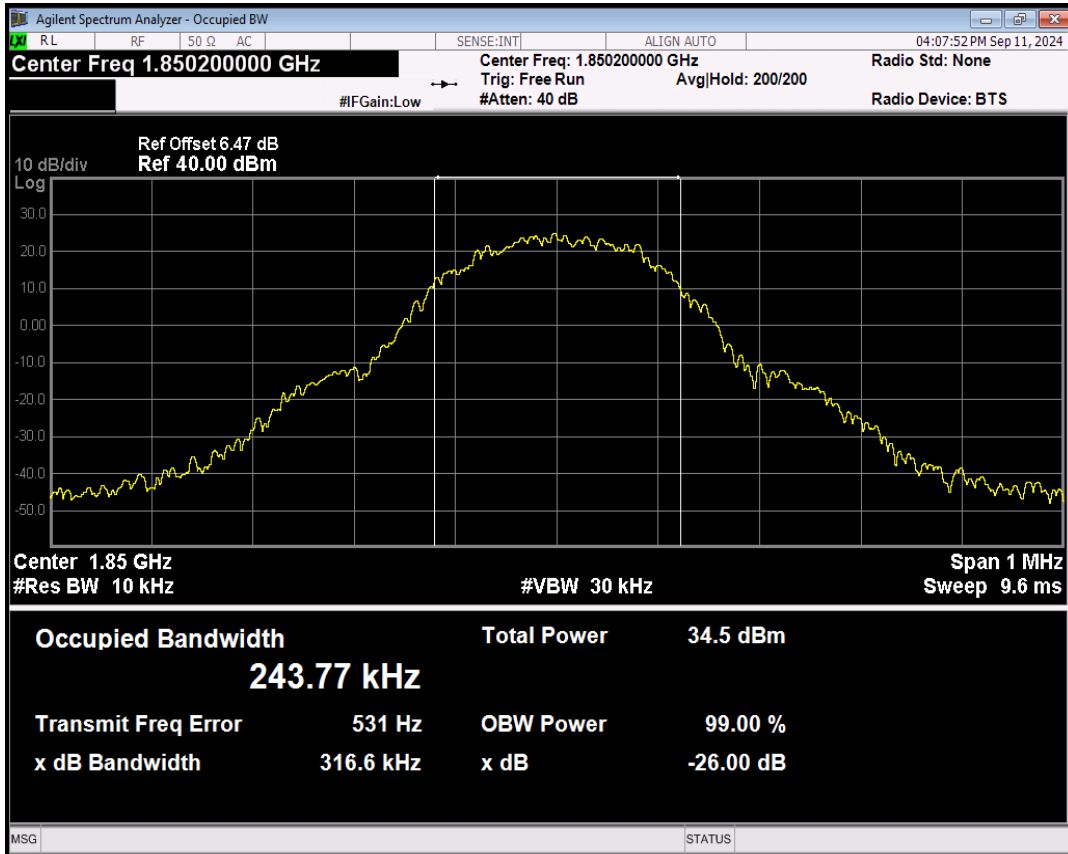
## GSM1900 Channel=661



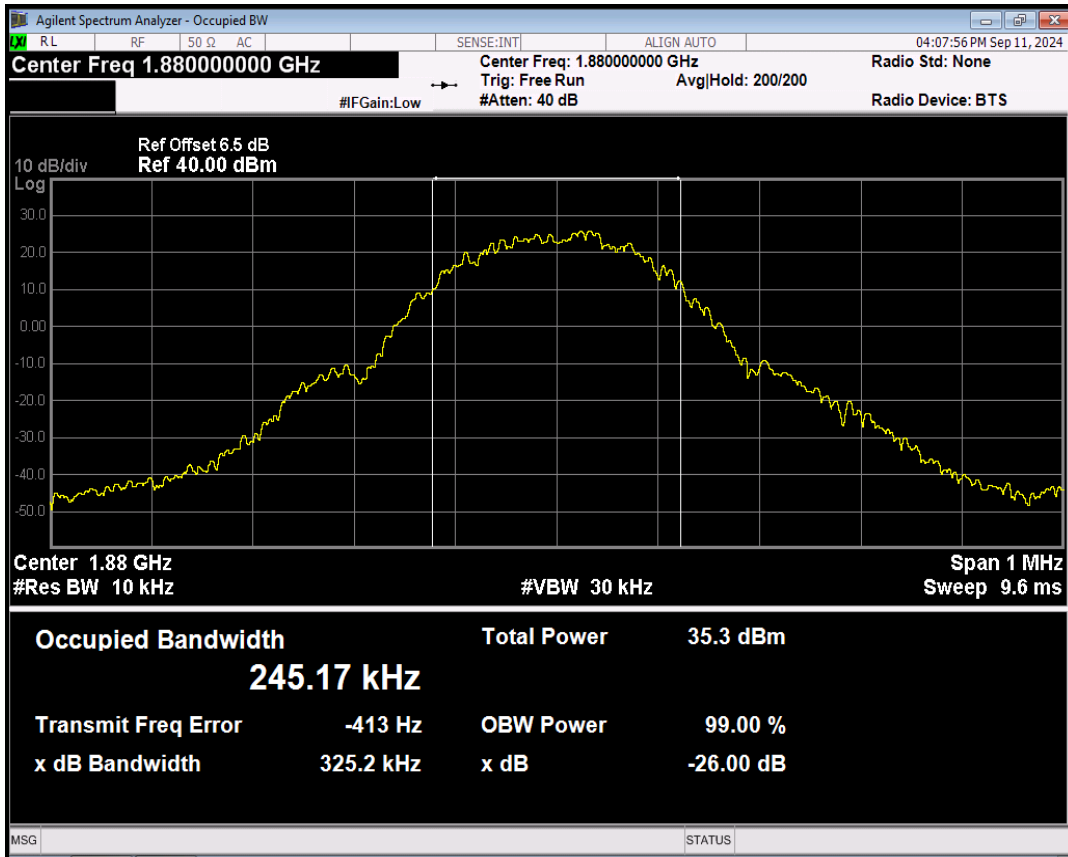
## GSM1900 Channel=810



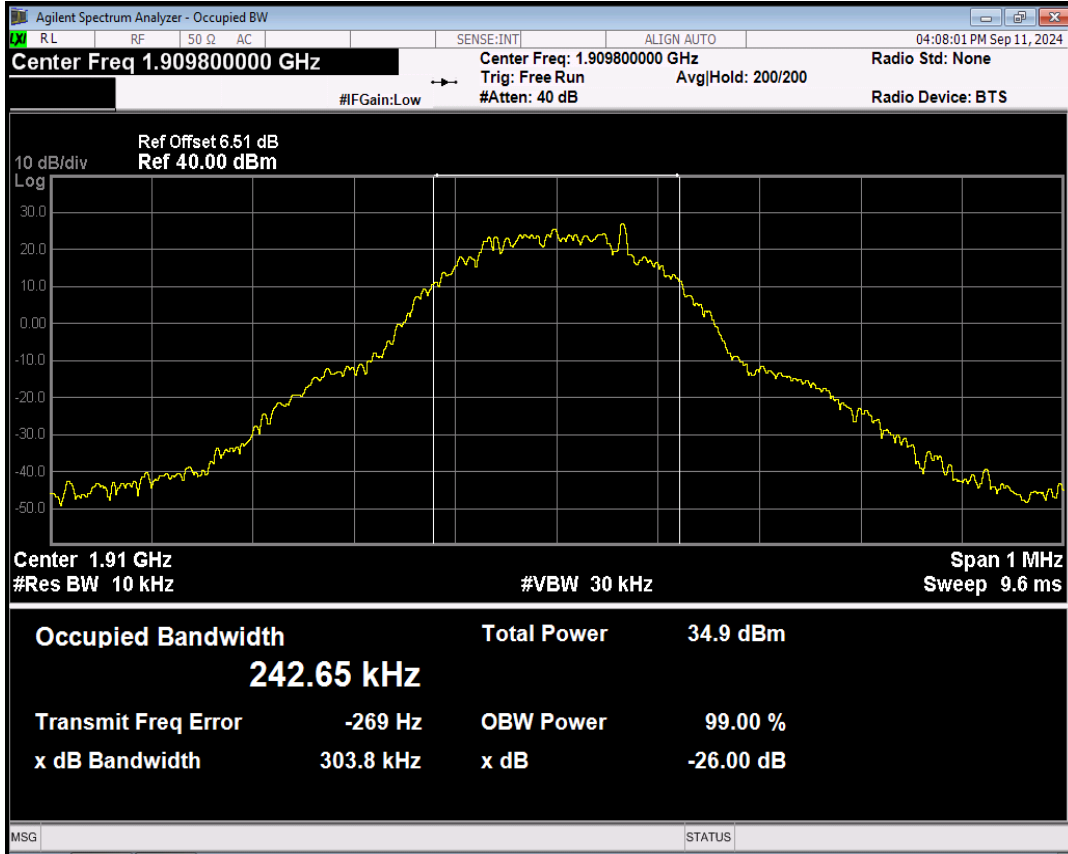
## GPRS1900 Channel=512



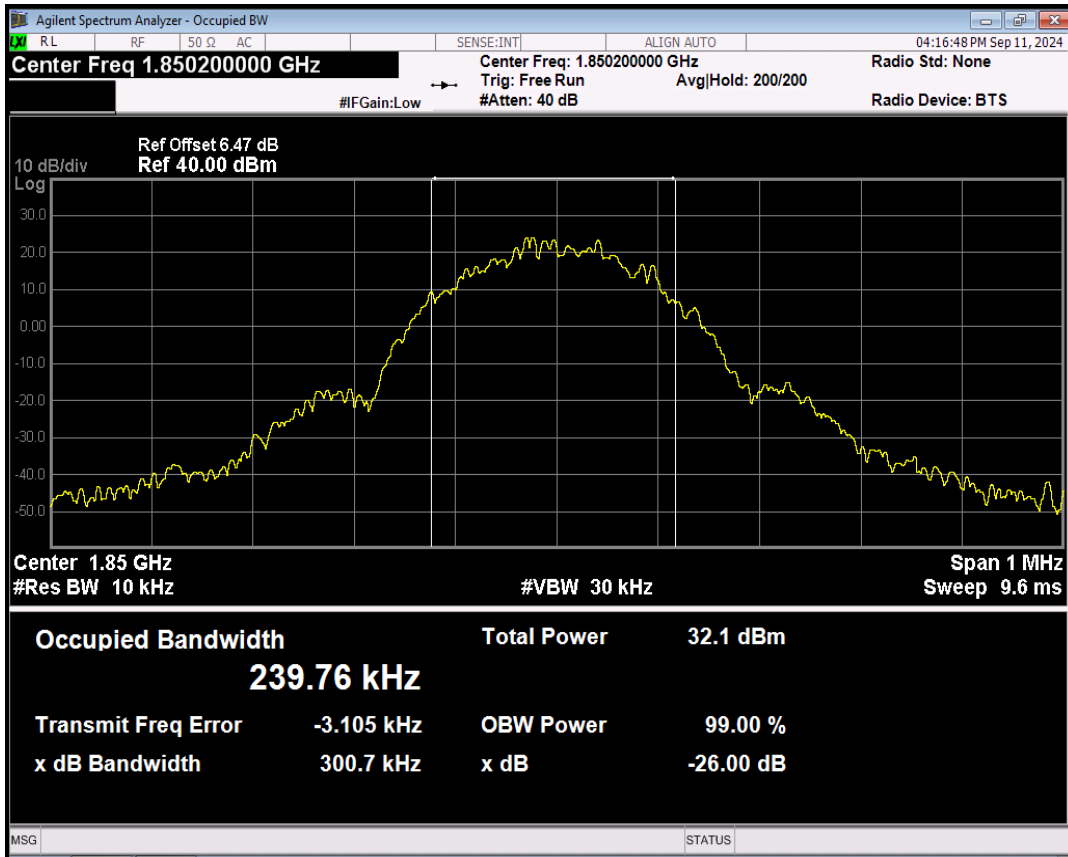
## GPRS1900 Channel=661



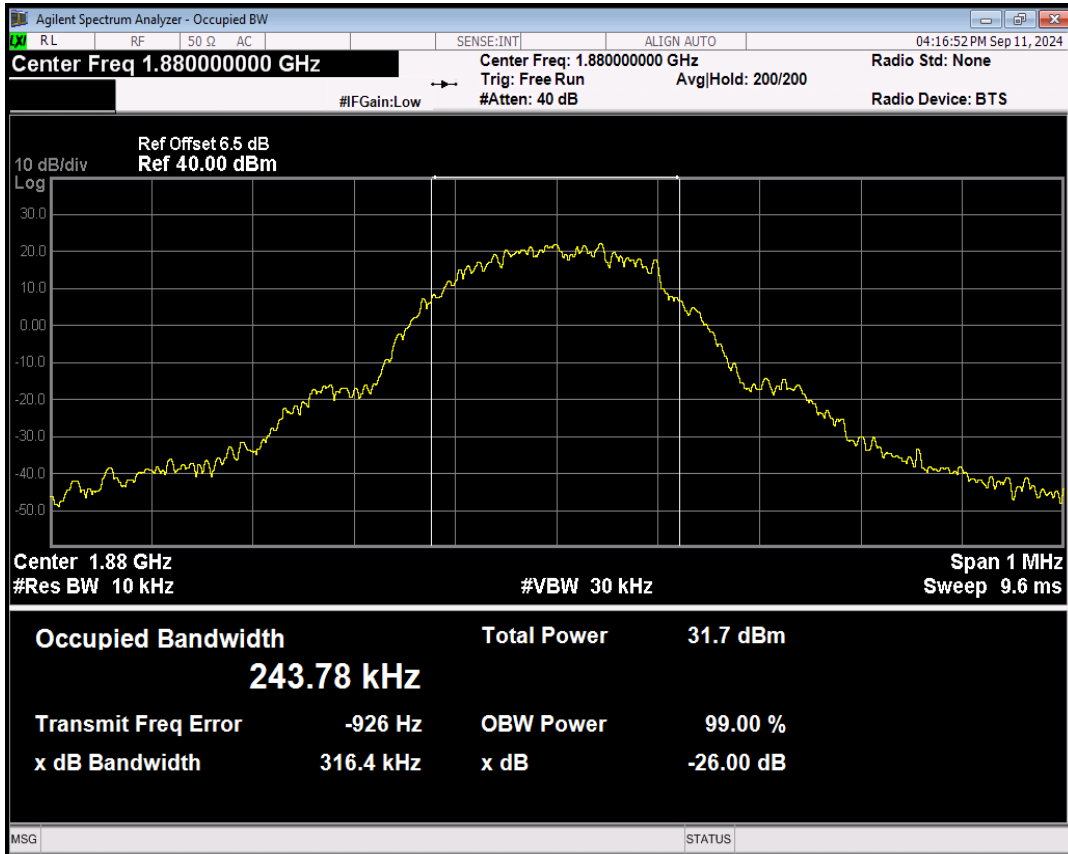
## GPRS1900 Channel=810



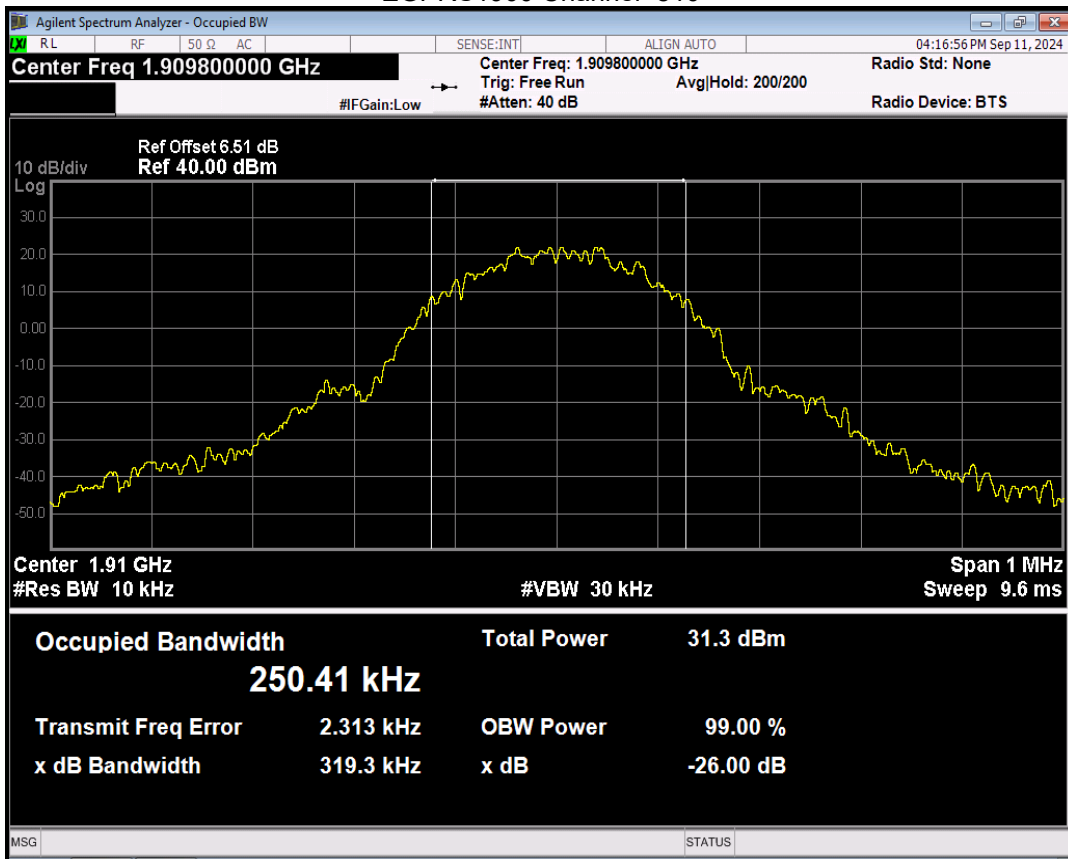
## EGPRS1900 Channel=512



## EGPRS1900 Channel=661



## EGPRS1900 Channel=810

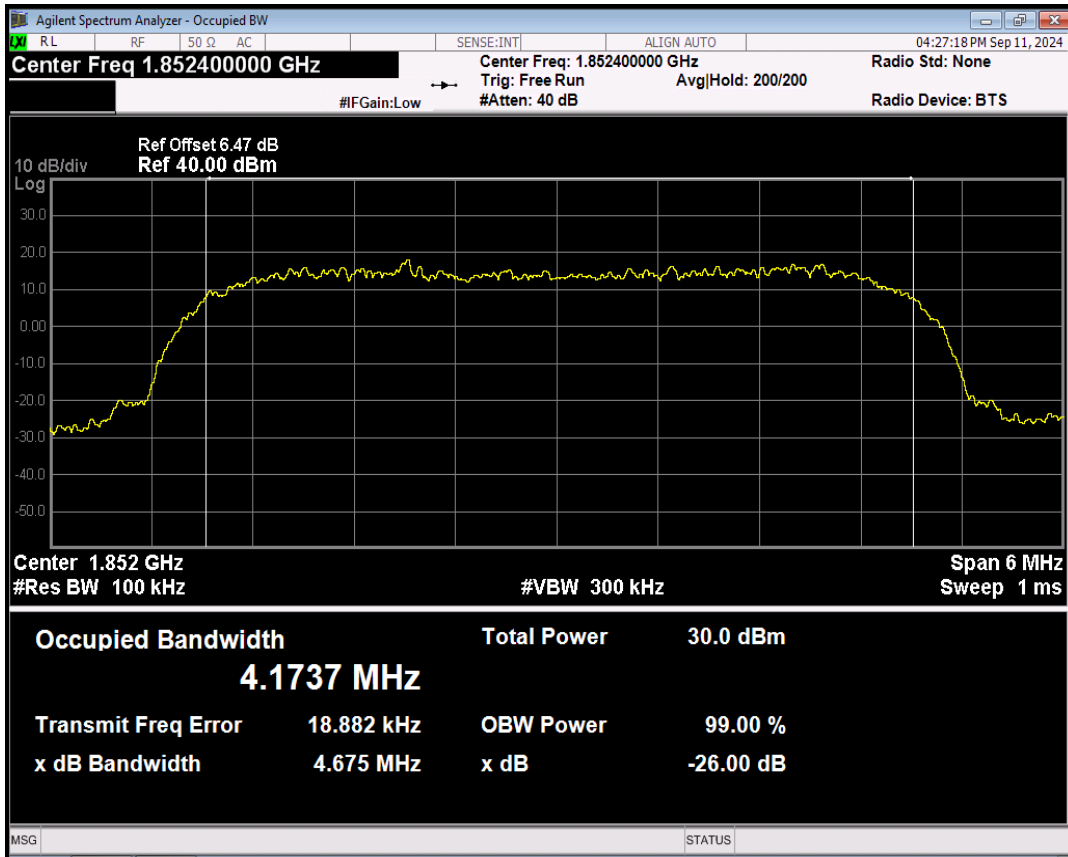


Band	Channel	Frequency (MHz)	99% OBW (kHz)	-26dB EBW (kHz)	Verdict
WCDMA Band2	9262	1852.4	4173.683	4675.247	PASS
WCDMA Band2	9400	1880	4178.023	4699.830	PASS
WCDMA Band2	9538	1907.6	4171.858	4720.524	PASS
WCDMA Band4	1312	1712.4	4148.648	4673.648	PASS
WCDMA Band4	1450	1740	4157.921	4678.690	PASS
WCDMA Band4	1513	1752.6	4156.160	4703.749	PASS
WCDMA Band5	4132	826.4	4161.290	4687.215	PASS
WCDMA Band5	4182	836.4	4167.766	4662.450	PASS
WCDMA Band5	4233	846.6	4156.461	4684.178	PASS

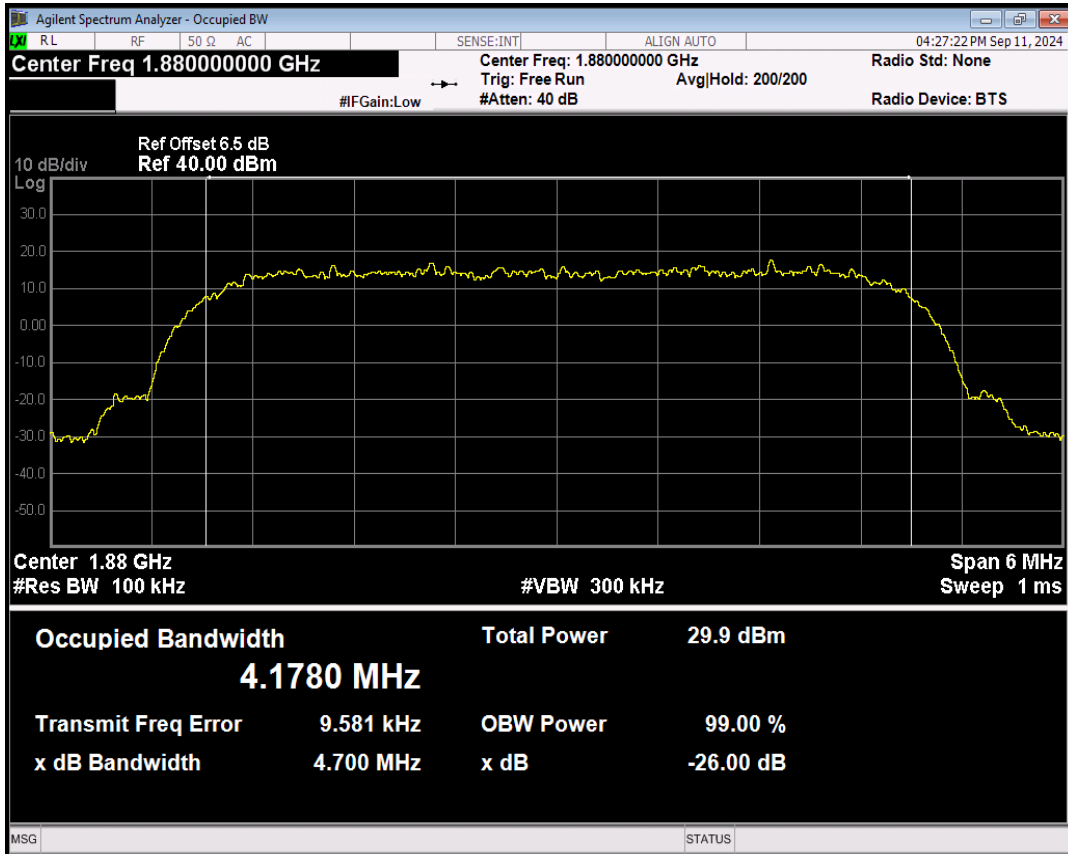
Note: In WCDMA, RMC, HSDPA and HSUPA all three tests only reflect the worst mode RMC.



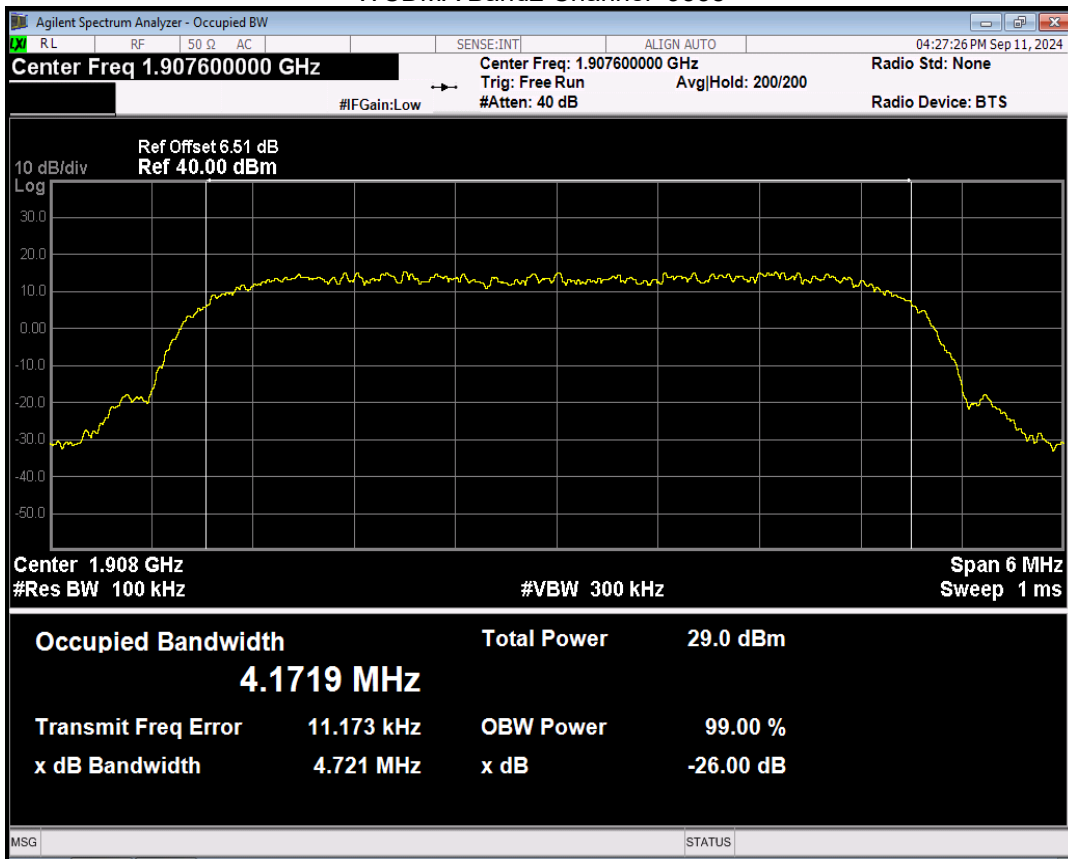
## WCDMA Band2 Channel=9262



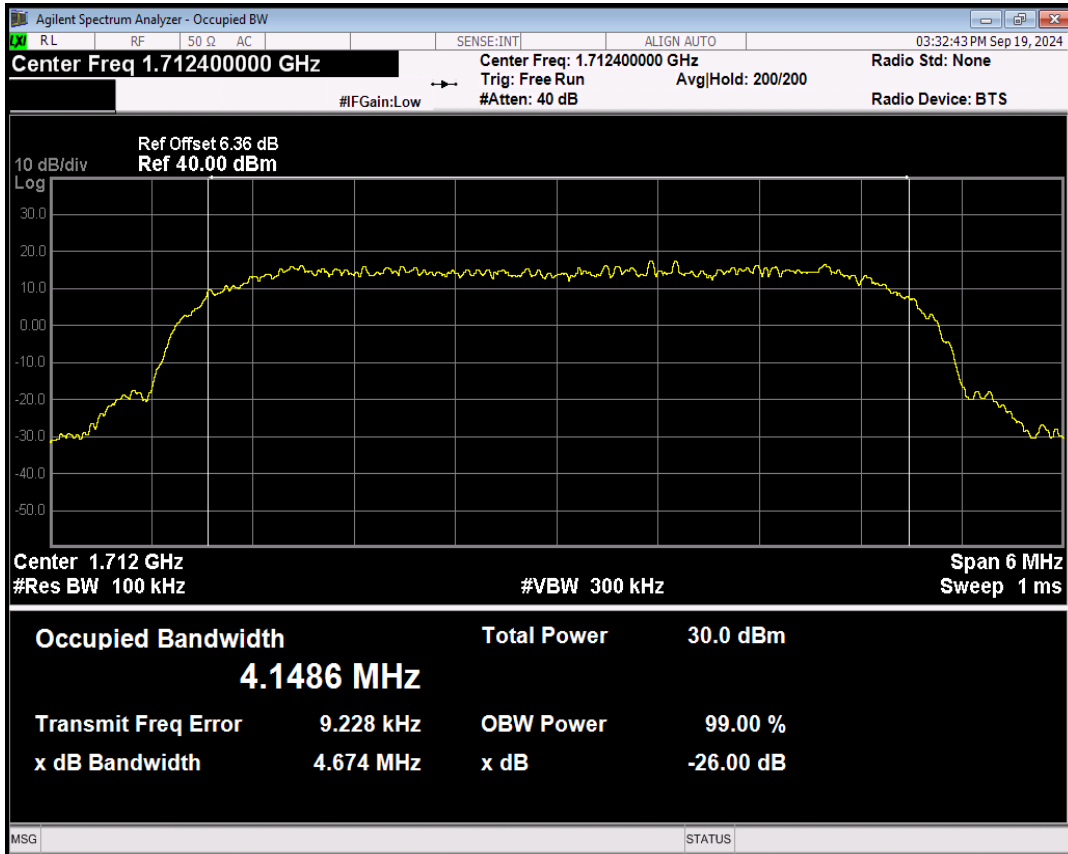
## WCDMA Band2 Channel=9400



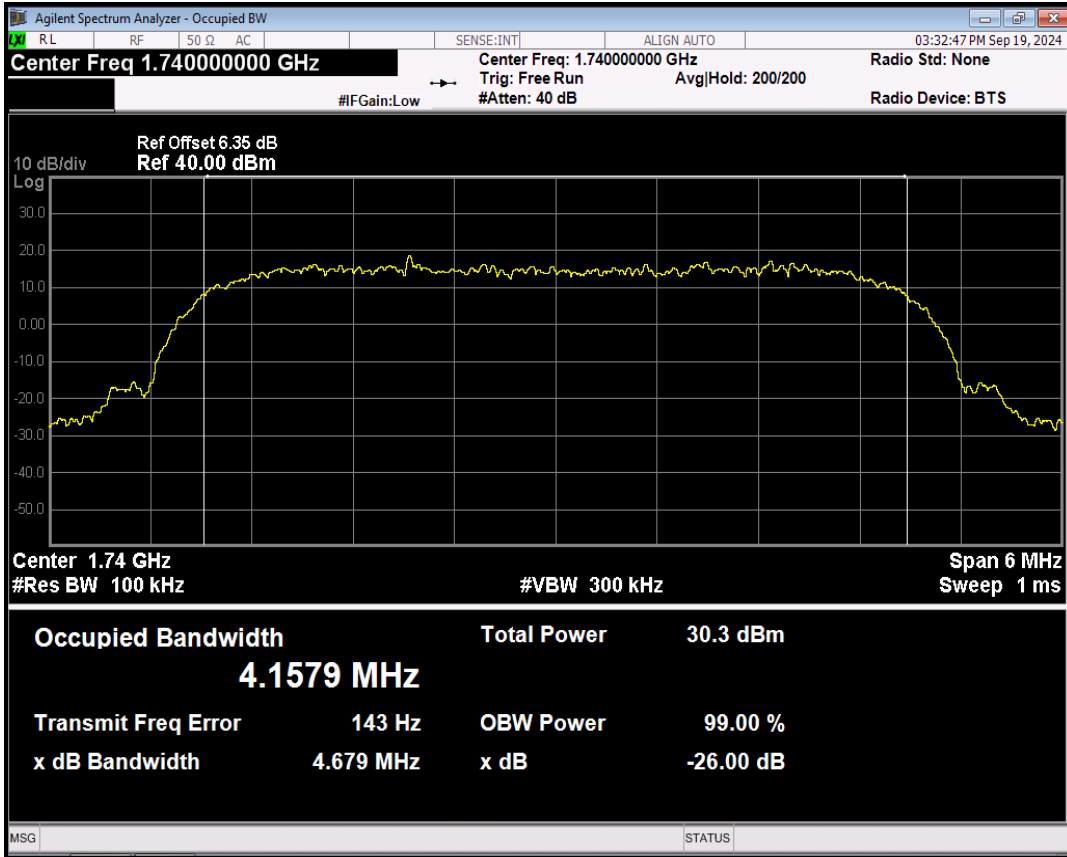
## WCDMA Band2 Channel=9538



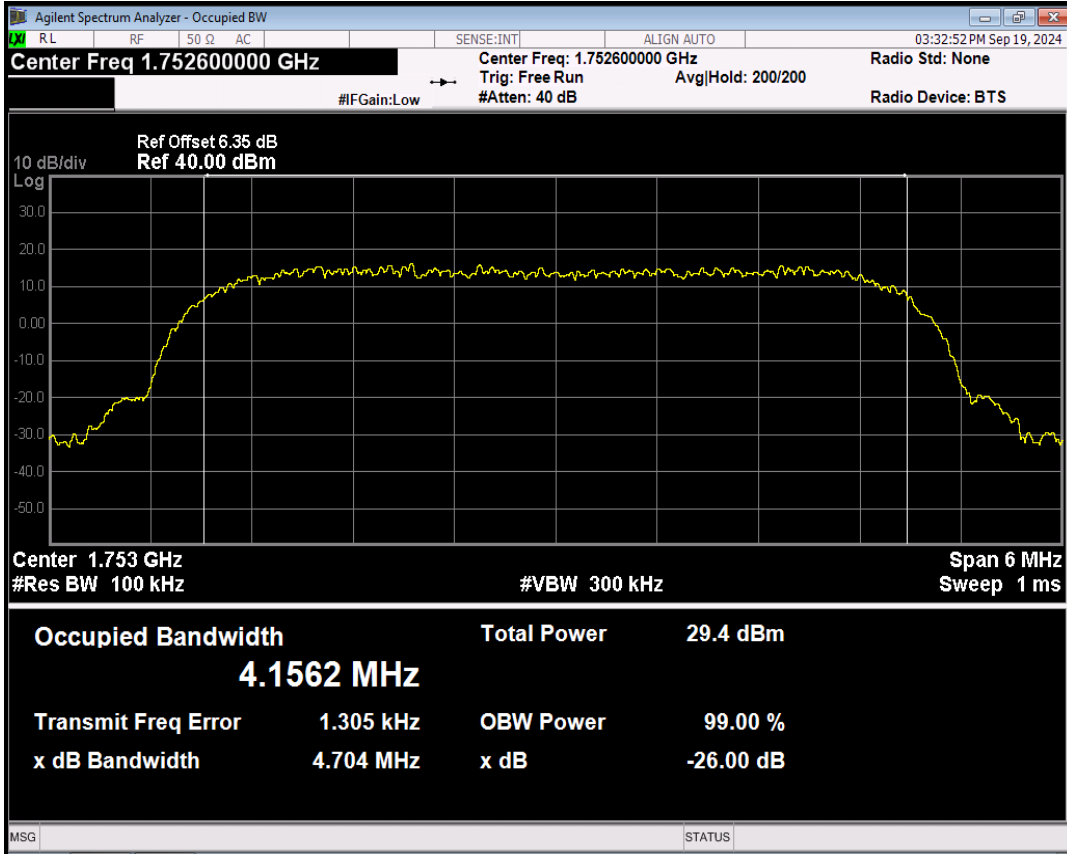
## WCDMA Band4 Channel=1312



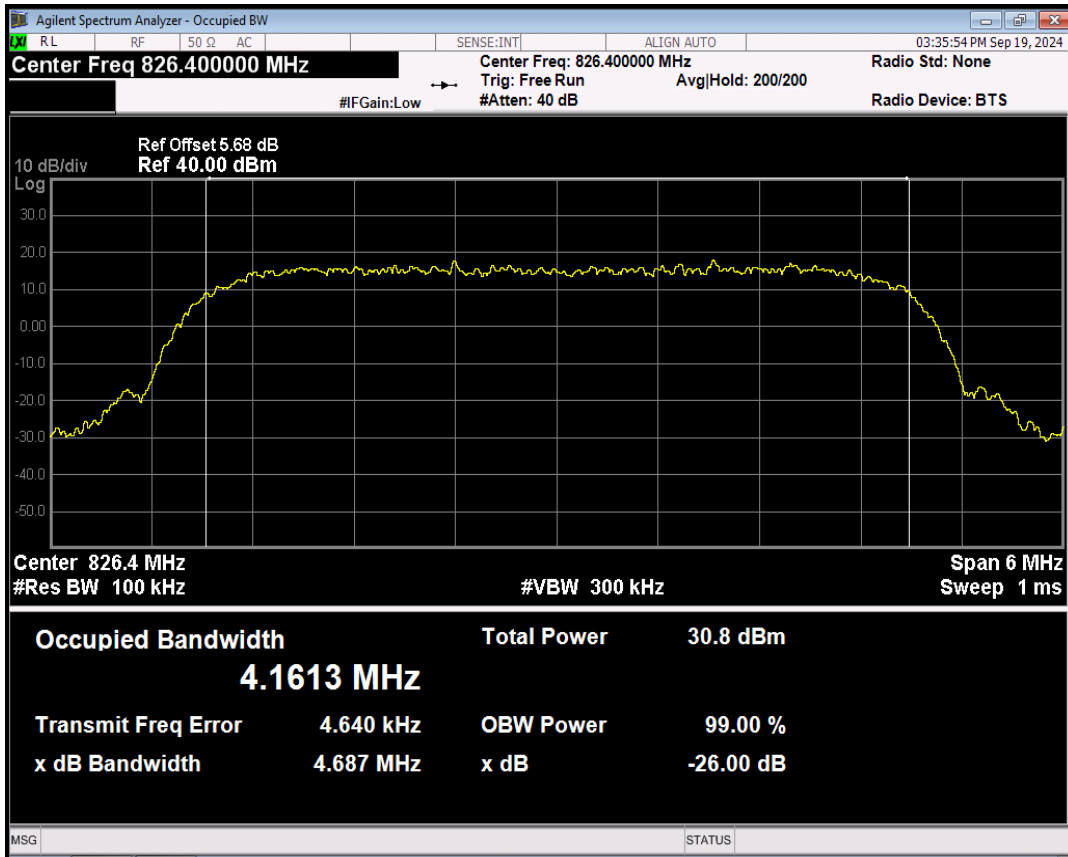
## WCDMA Band4 Channel=1450



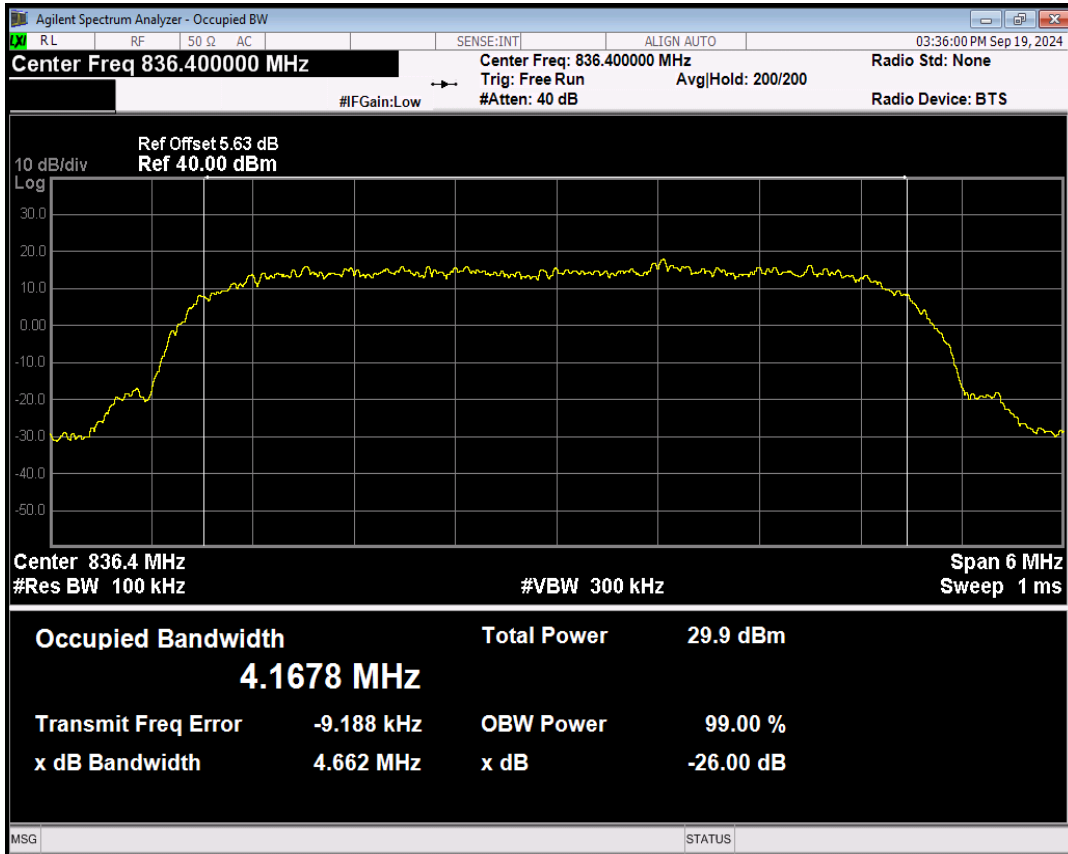
## WCDMA Band4 Channel=1513



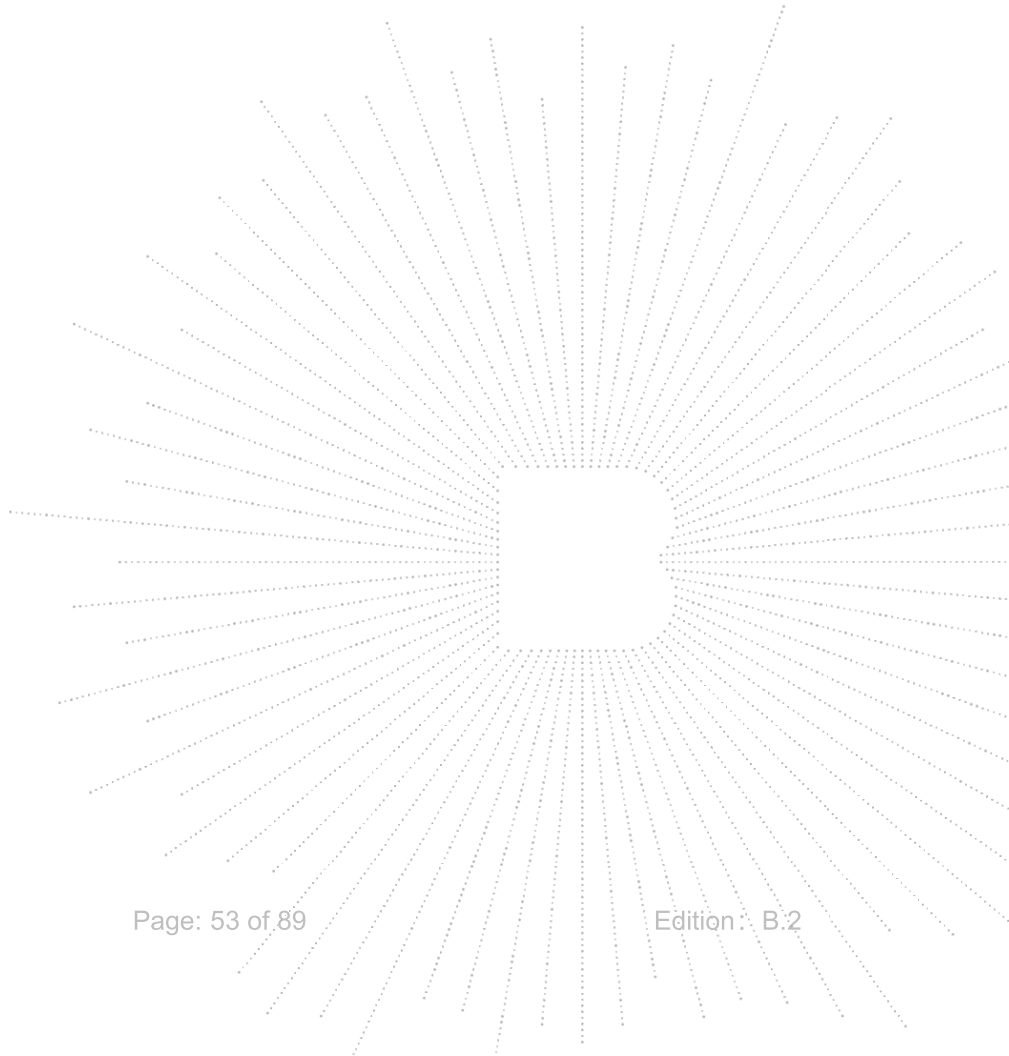
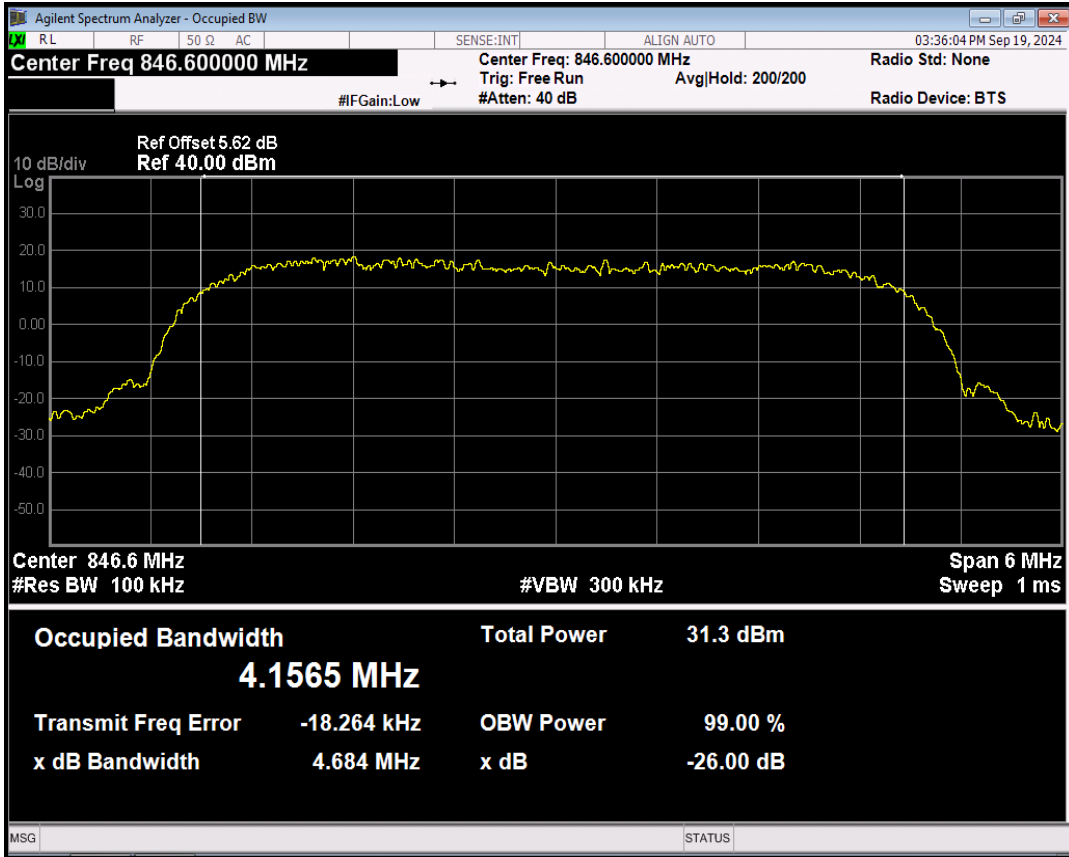
## WCDMA Band5 Channel=4132



## WCDMA Band5 Channel=4182

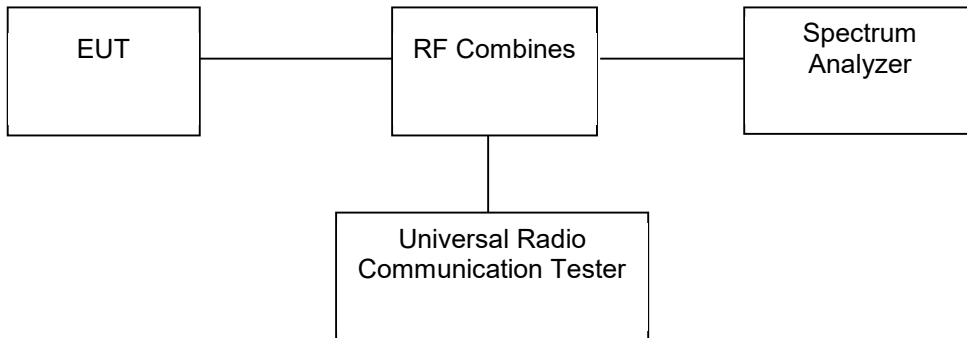


## WCDMA Band5 Channel=4233



## 9. Out of Band Emissions at Antenna Terminal

### 9.1 Block Diagram Of Test Setup



### 9.2 Limit

According to §22.917(a), the power of any emissions 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.

According to §24.238(a), the power of any emissions 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.

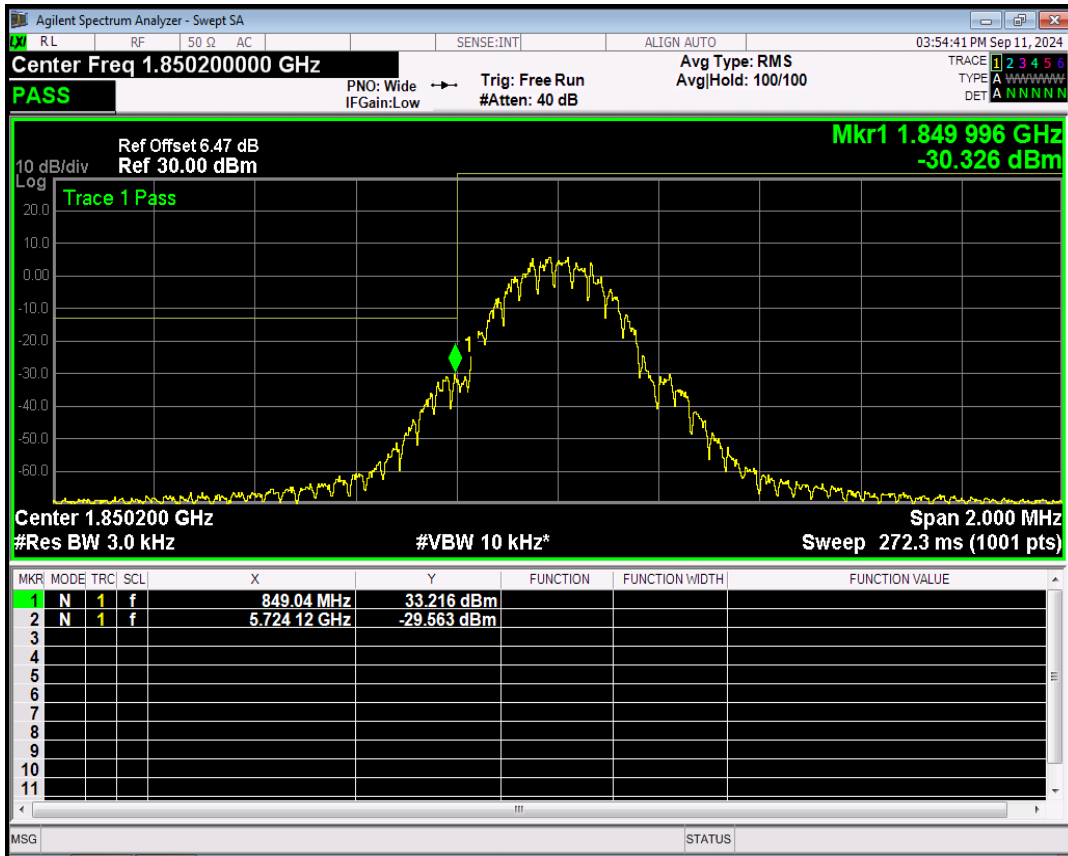
According to §27.53 (h), the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \log_{10}(P)$  dB.

### 9.3 Test procedure

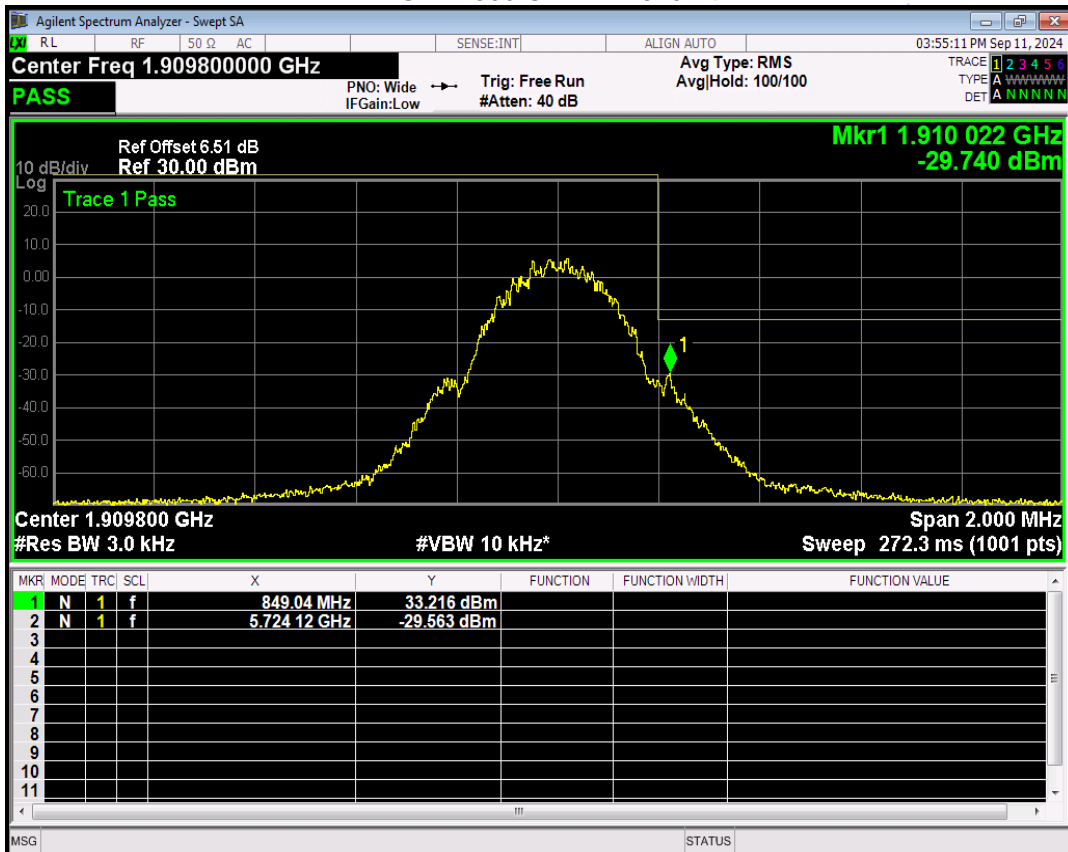
The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 100kHz and 1MHz for the scan frequency from 30MHz to 1GHz and the scan frequency from 1GHz to up to 10<sup>th</sup> harmonic. At the edge of the authorized Frequency block/band: RBW set 1%-5%OBW.

### 9.4 Test Result

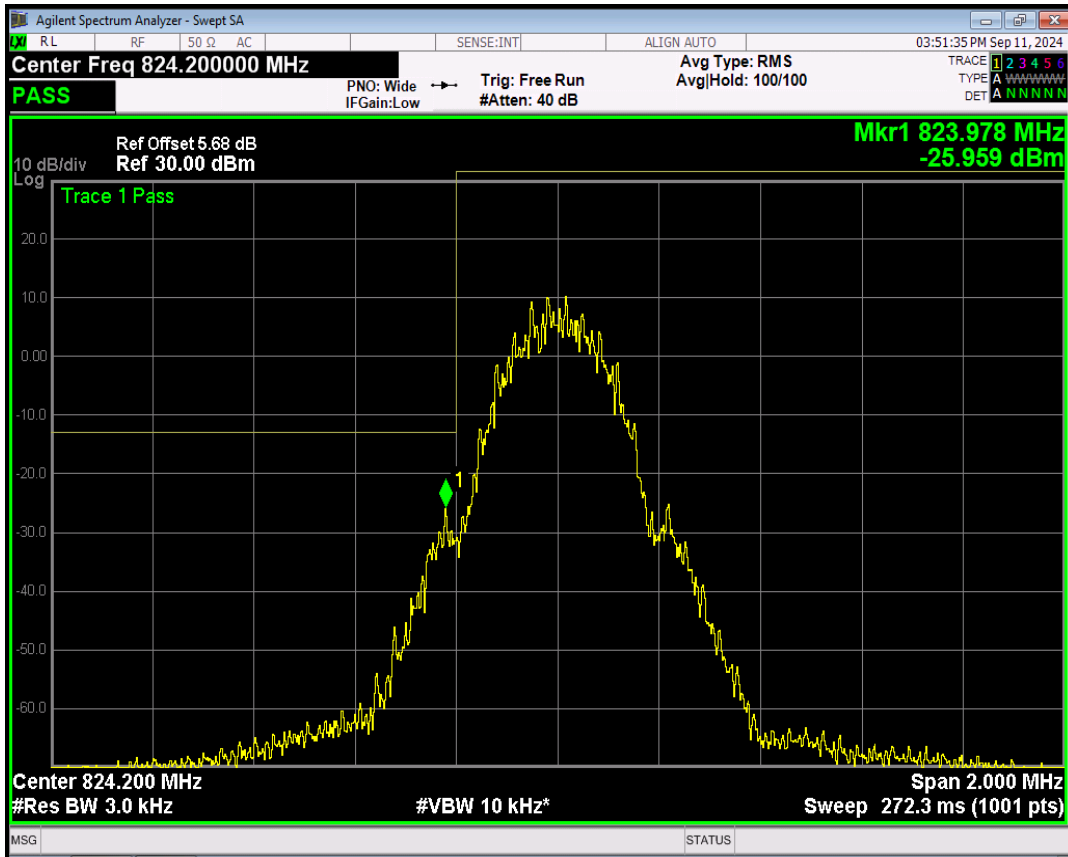
## GSM1900 Channel=512



## GSM1900 Channel=810



## GSM850 Channel=128

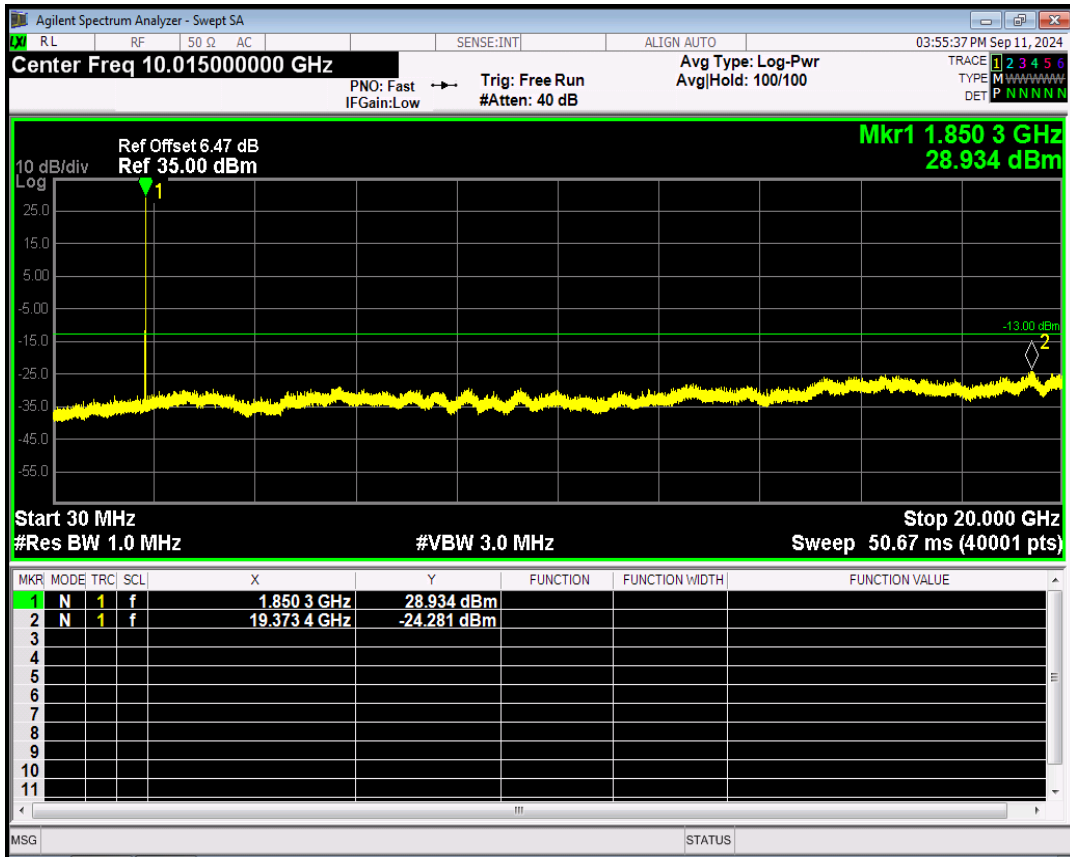


## GSM850 Channel=251

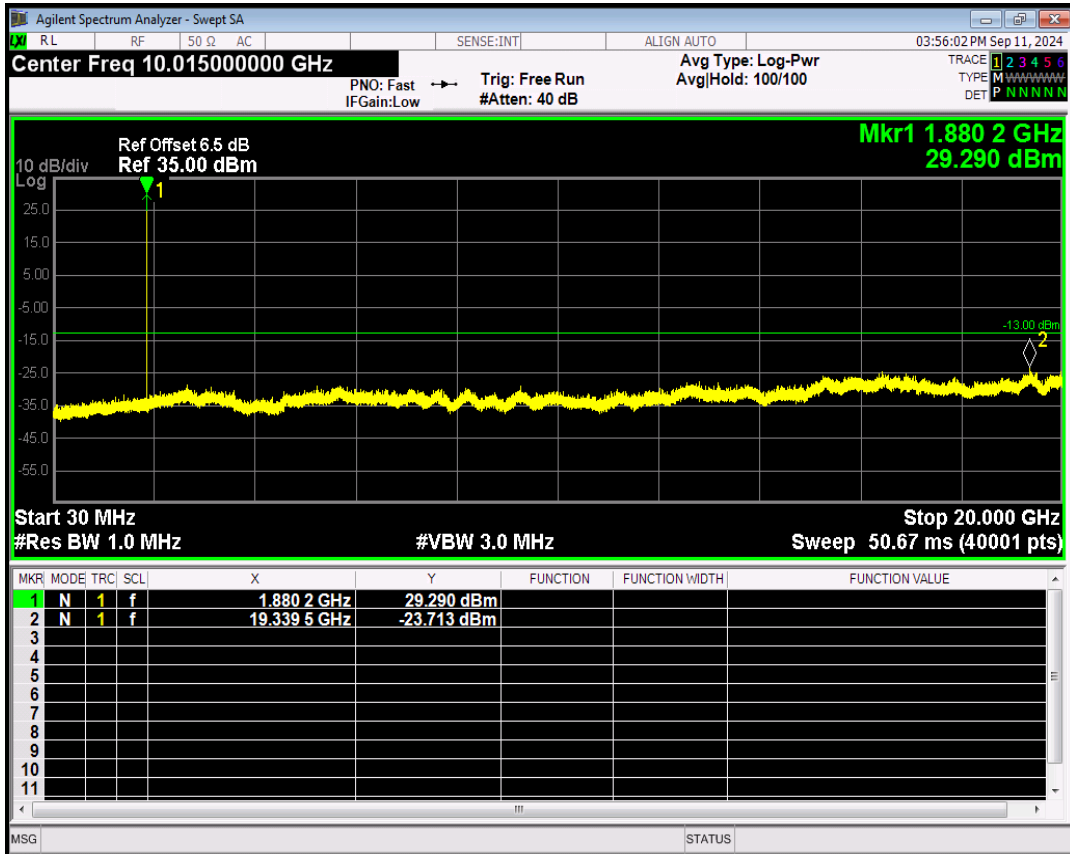




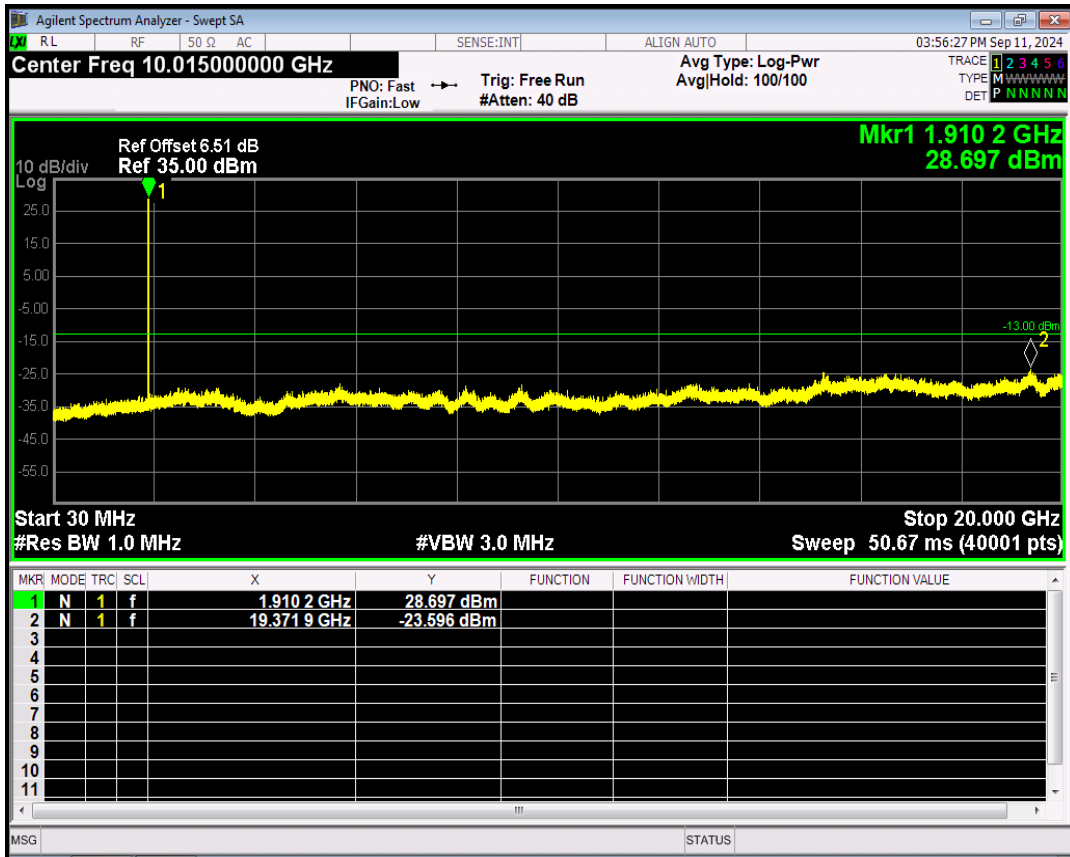
## GSM1900 Channel=512



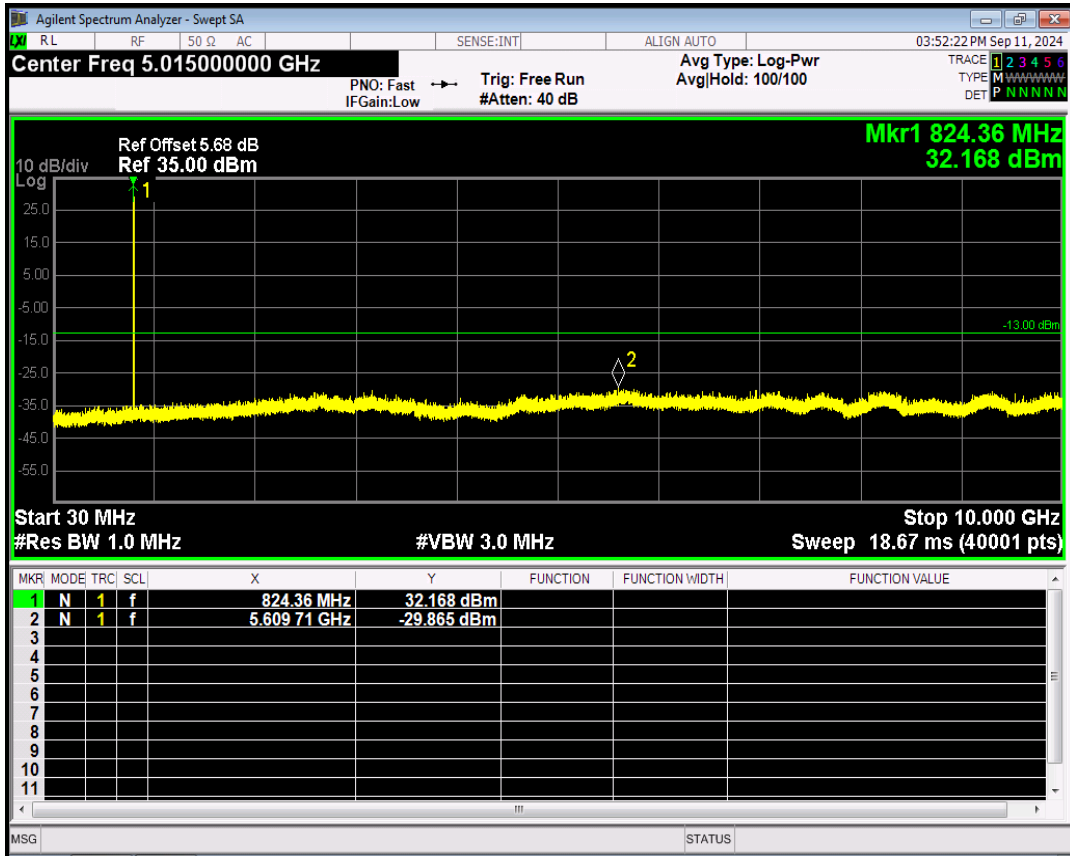
## GSM1900 Channel=661



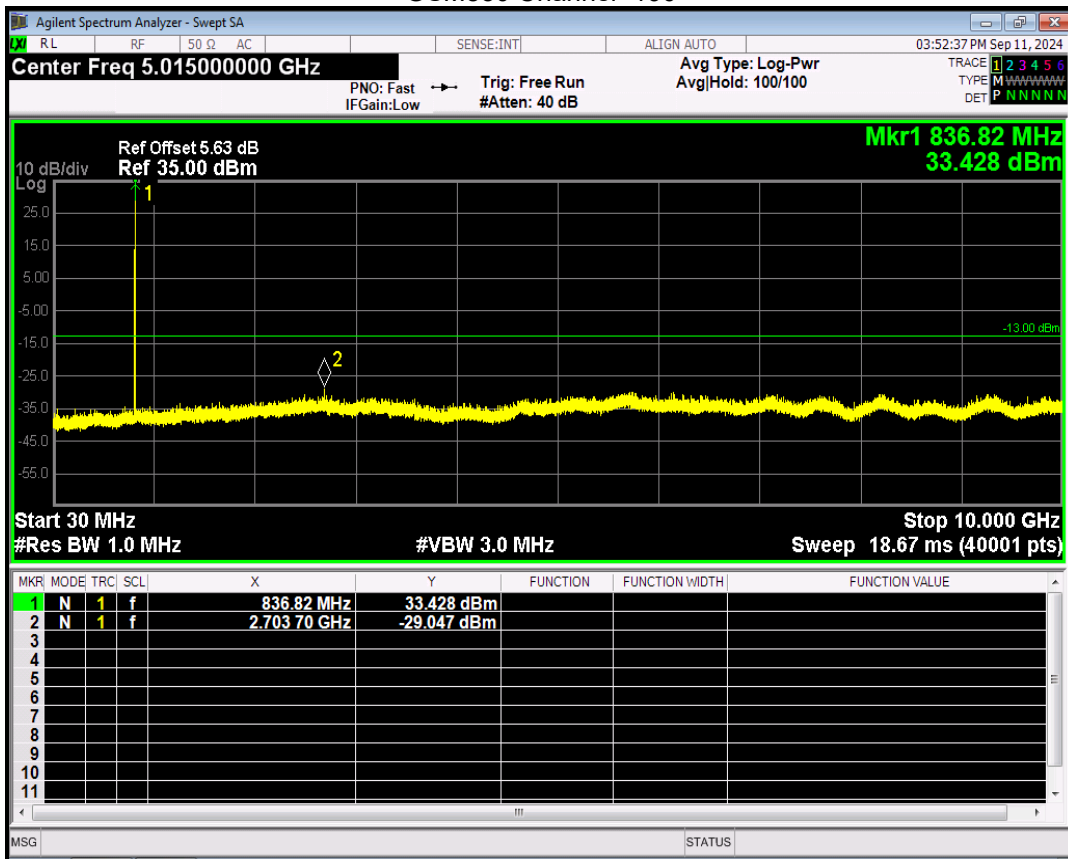
## GSM1900 Channel=810



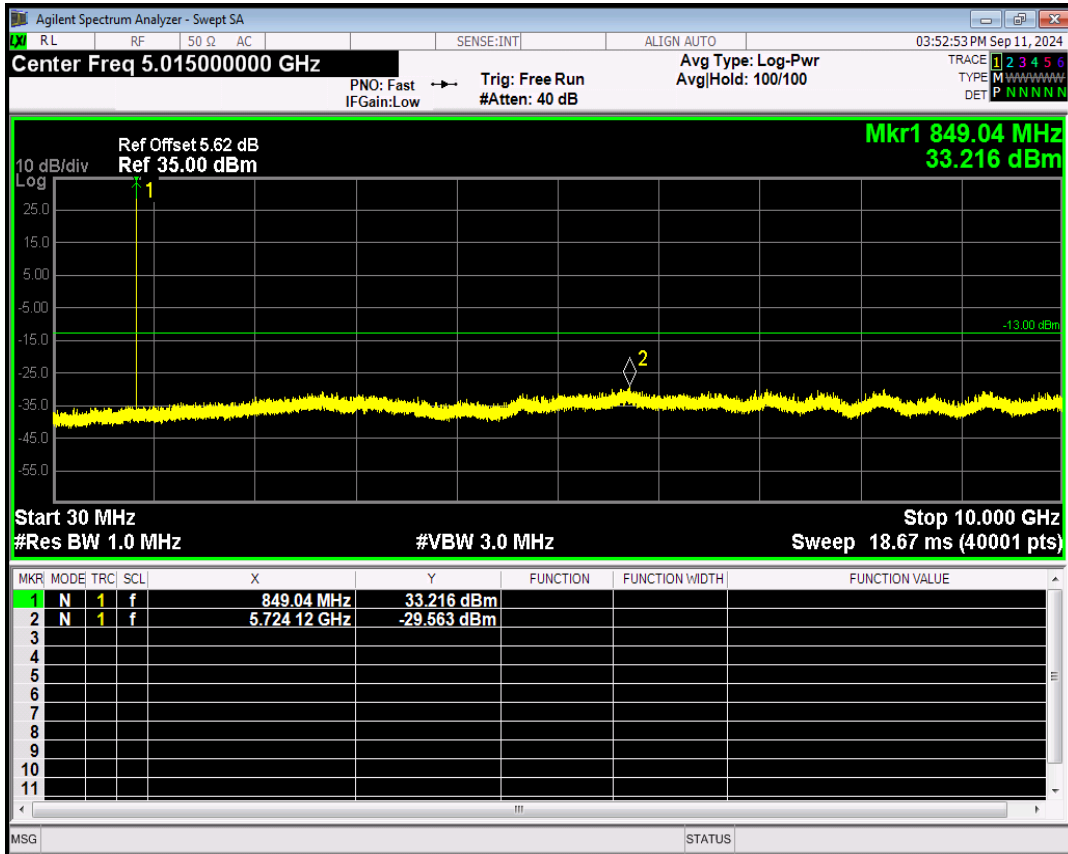
## GSM850 Channel=128



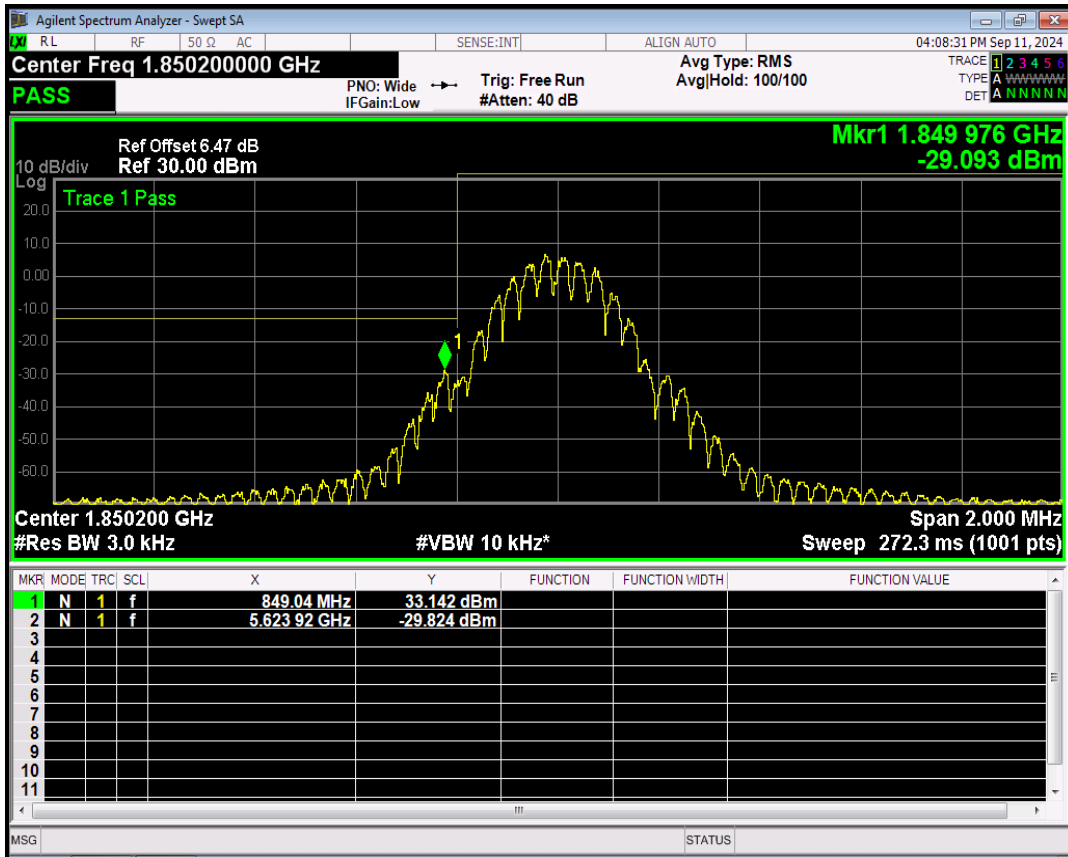
## GSM850 Channel=190



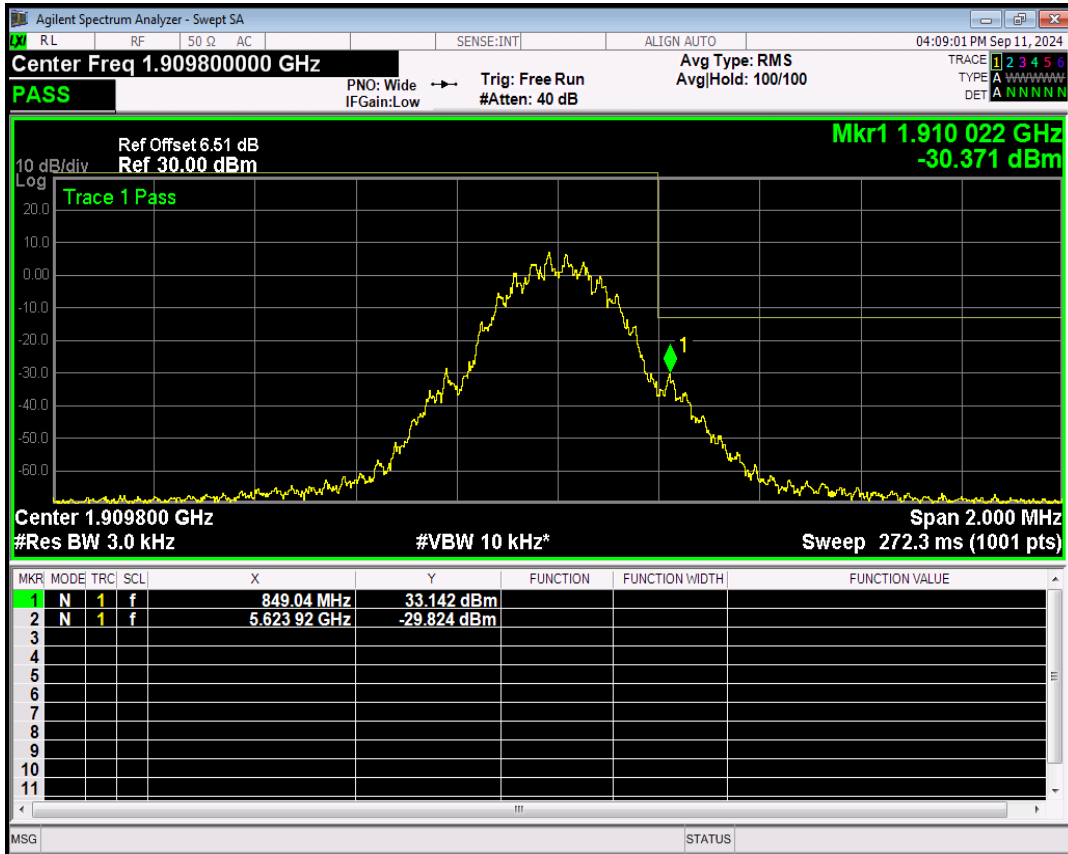
## GSM850 Channel=251



## GPRS1900 Channel=512



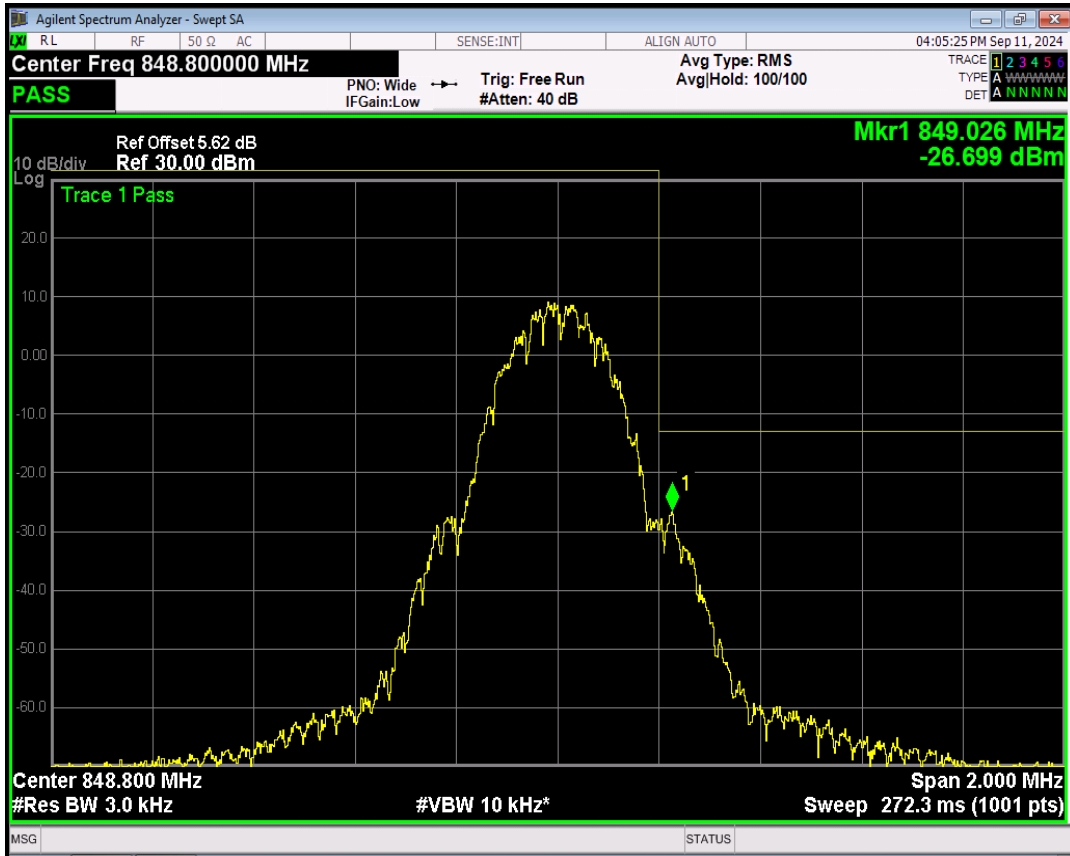
## GPRS1900 Channel=810



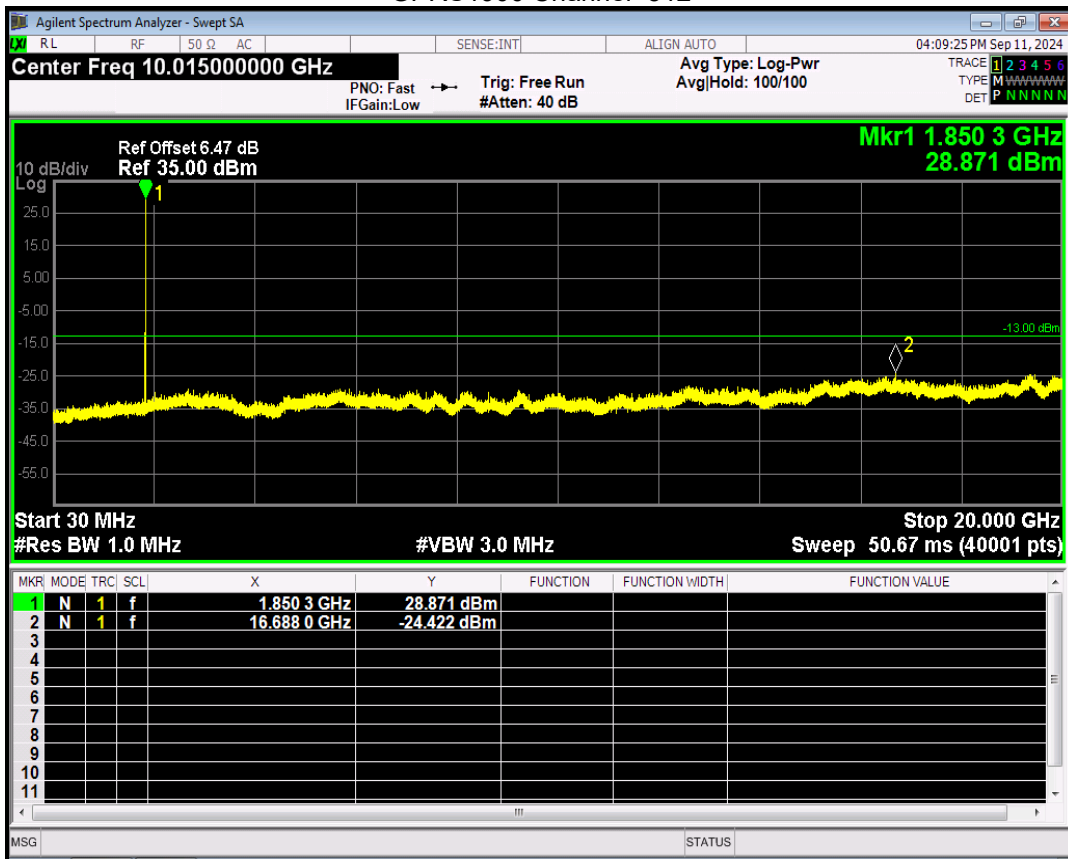
## GPRS850 Channel=128



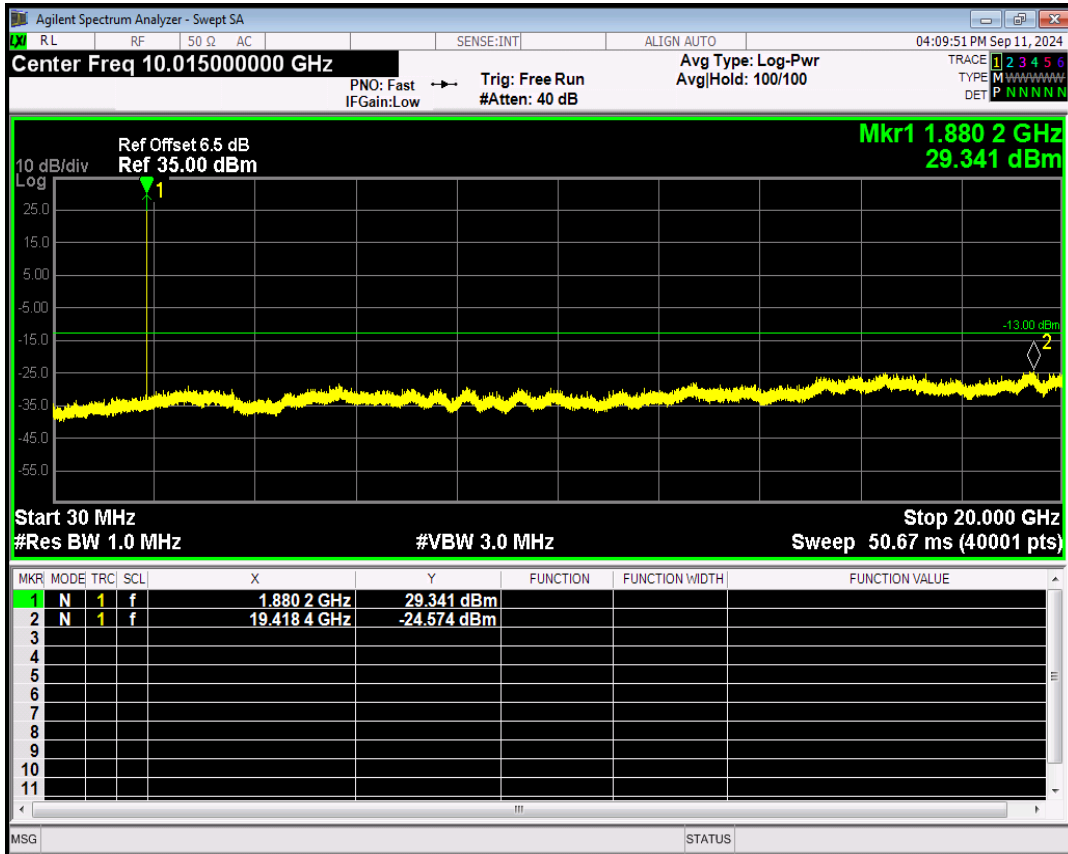
## GPRS850 Channel=251



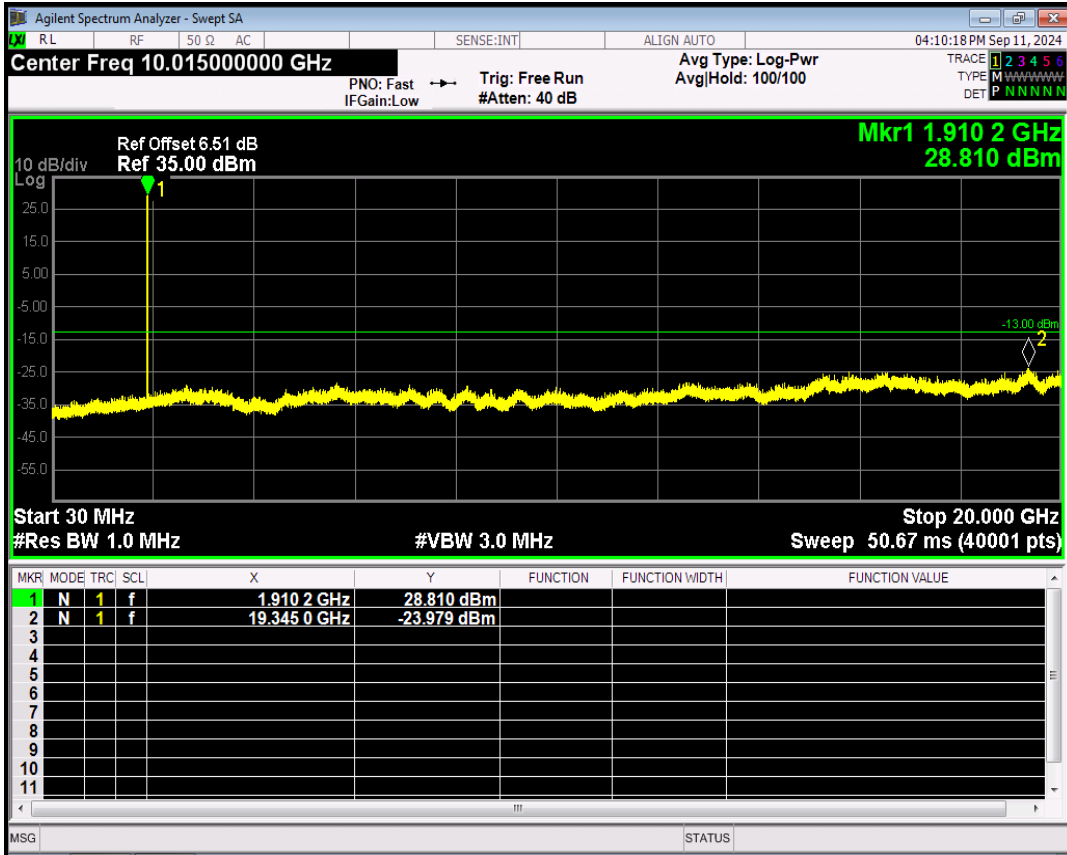
## GPRS1900 Channel=512



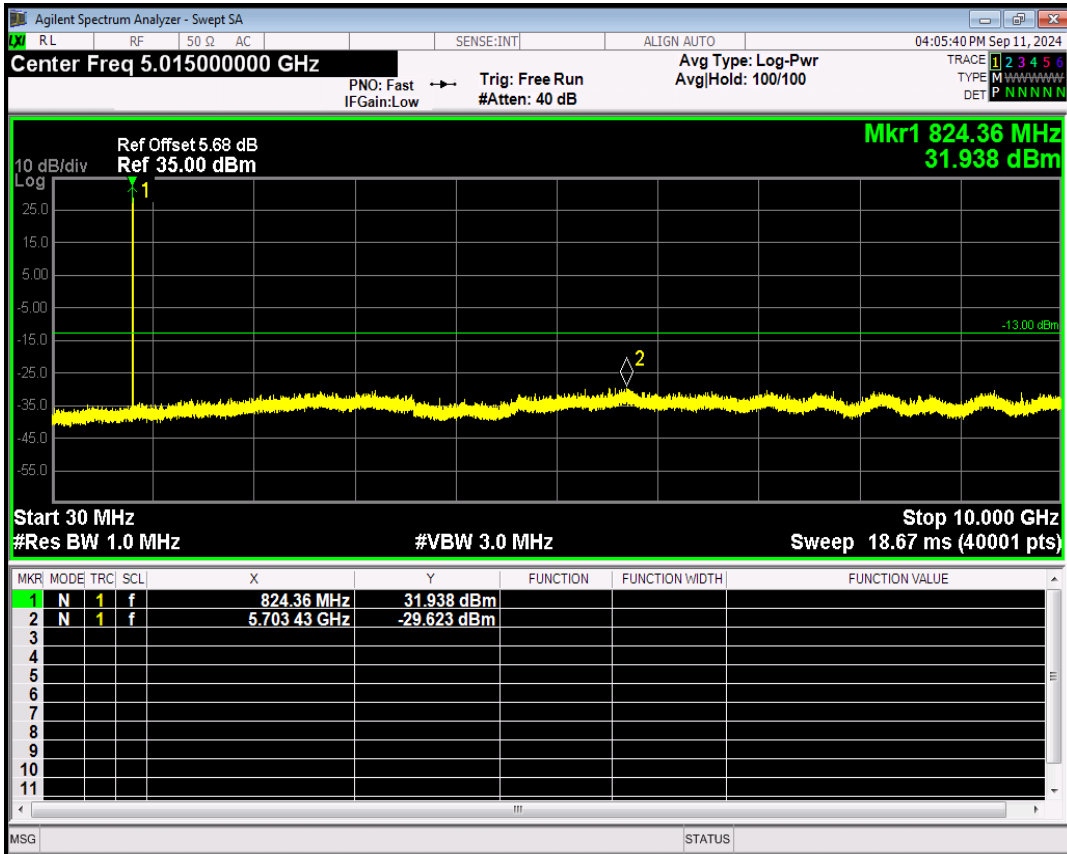
## GPRS1900 Channel=661



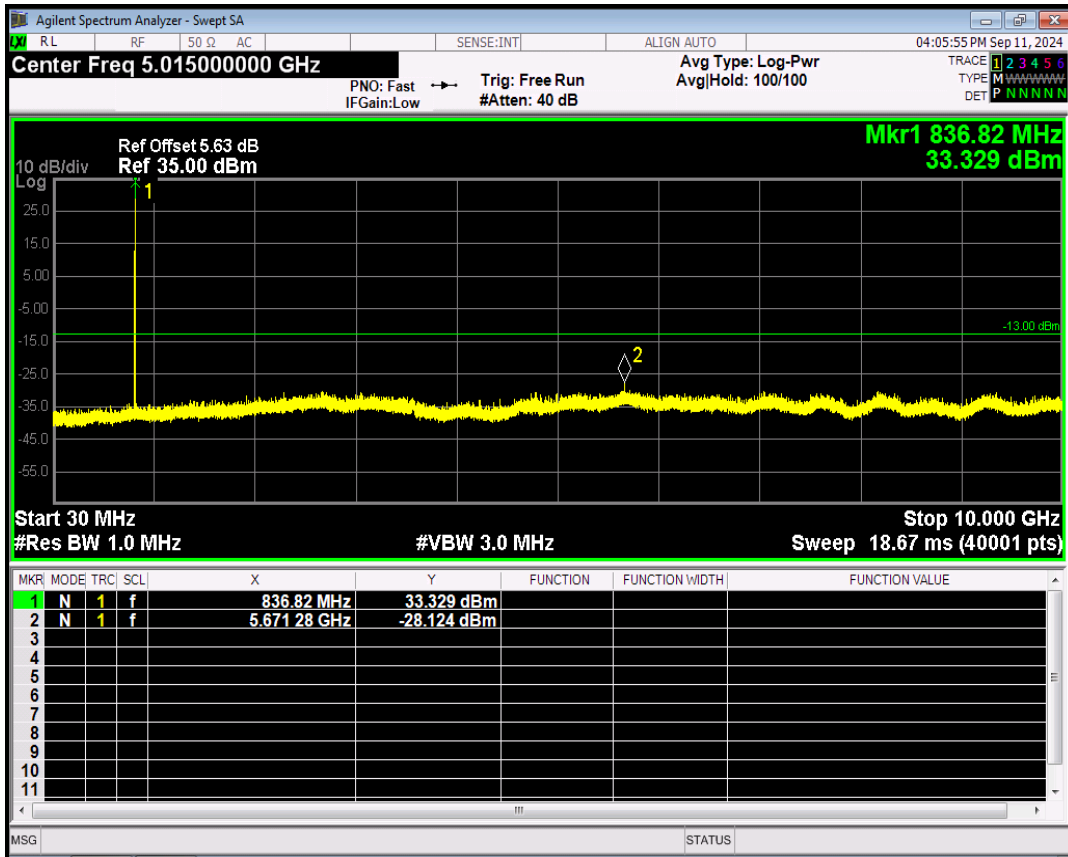
## GPRS1900 Channel=810



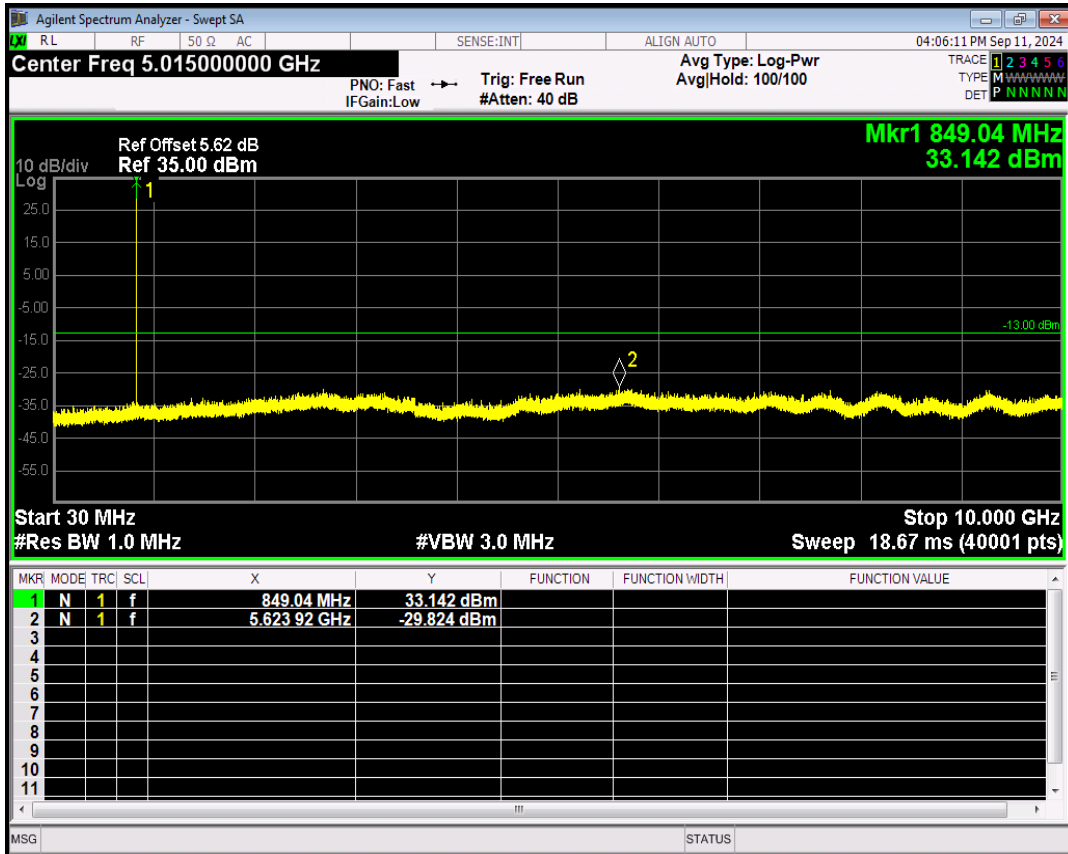
## GPRS850 Channel=128



## GPRS850 Channel=190

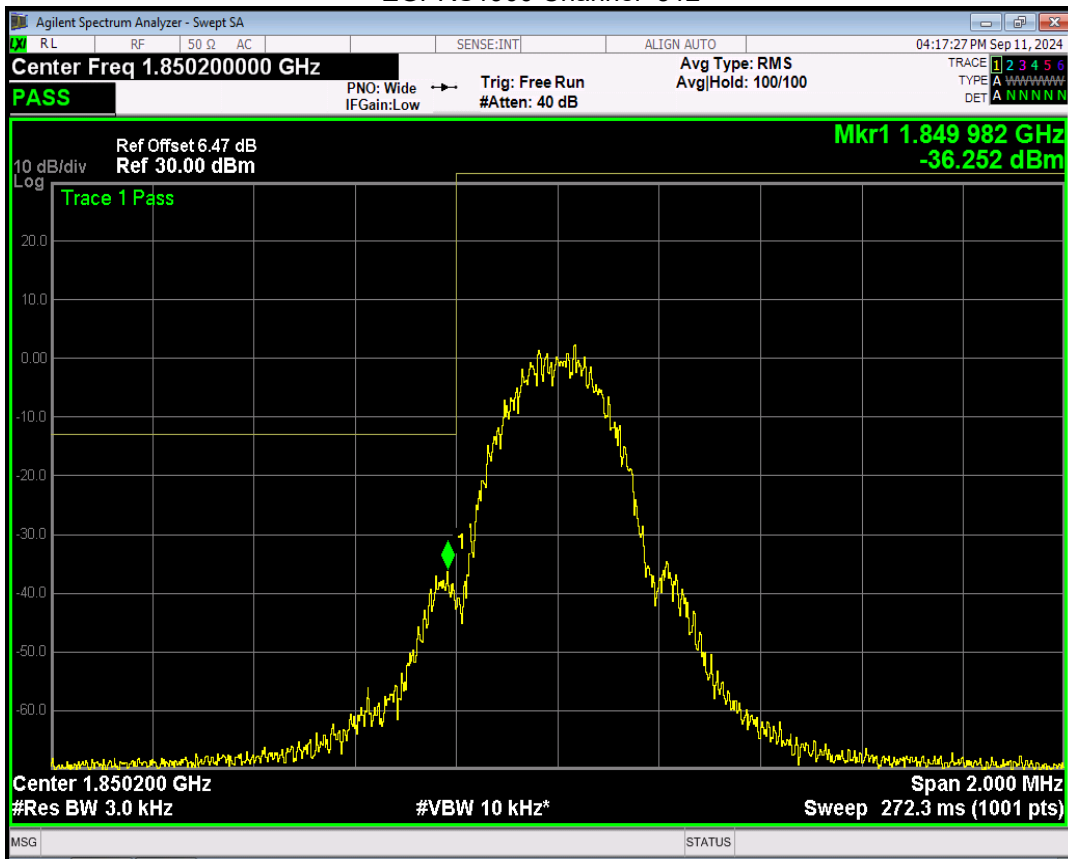


## GPRS850 Channel=251

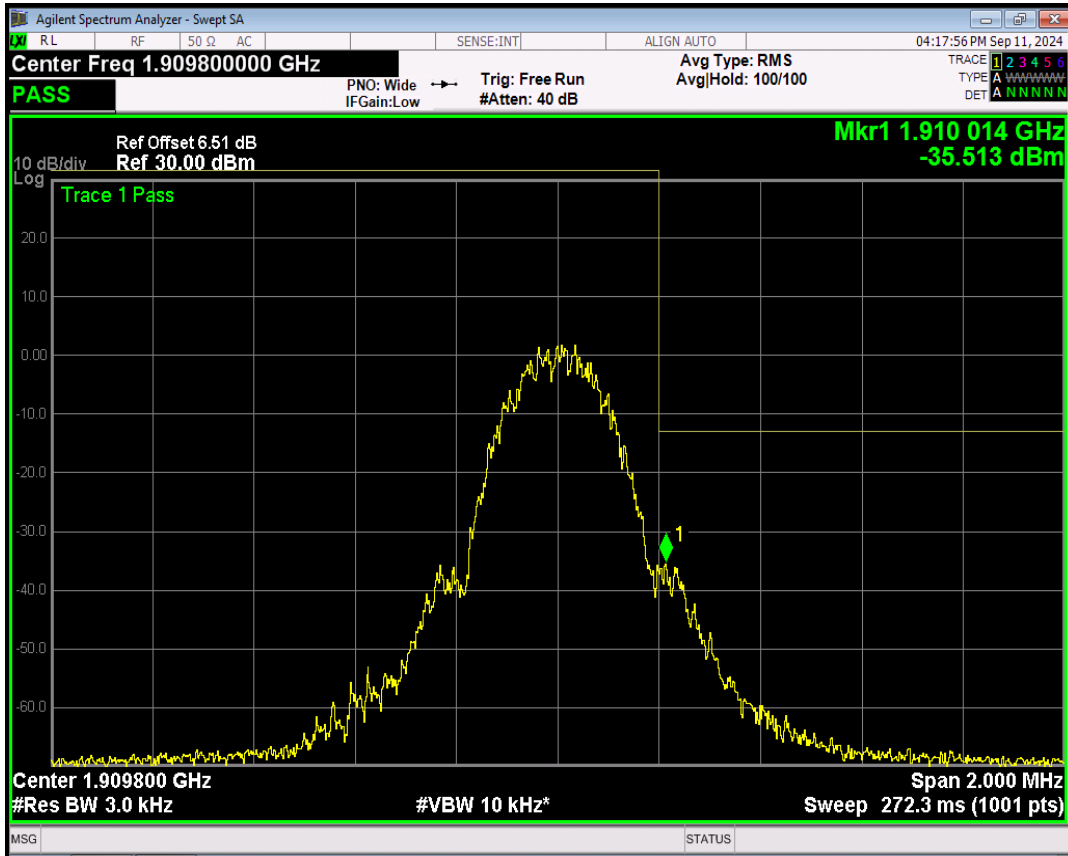




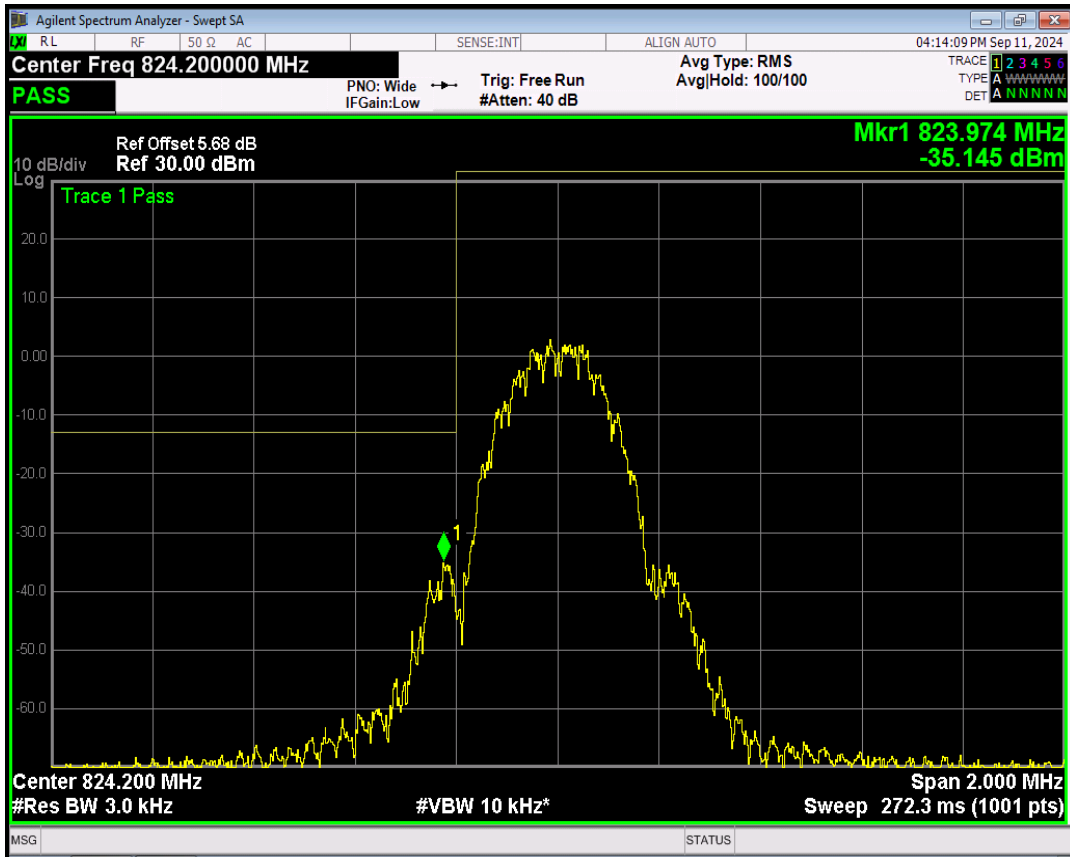
## EGPRS1900 Channel=512



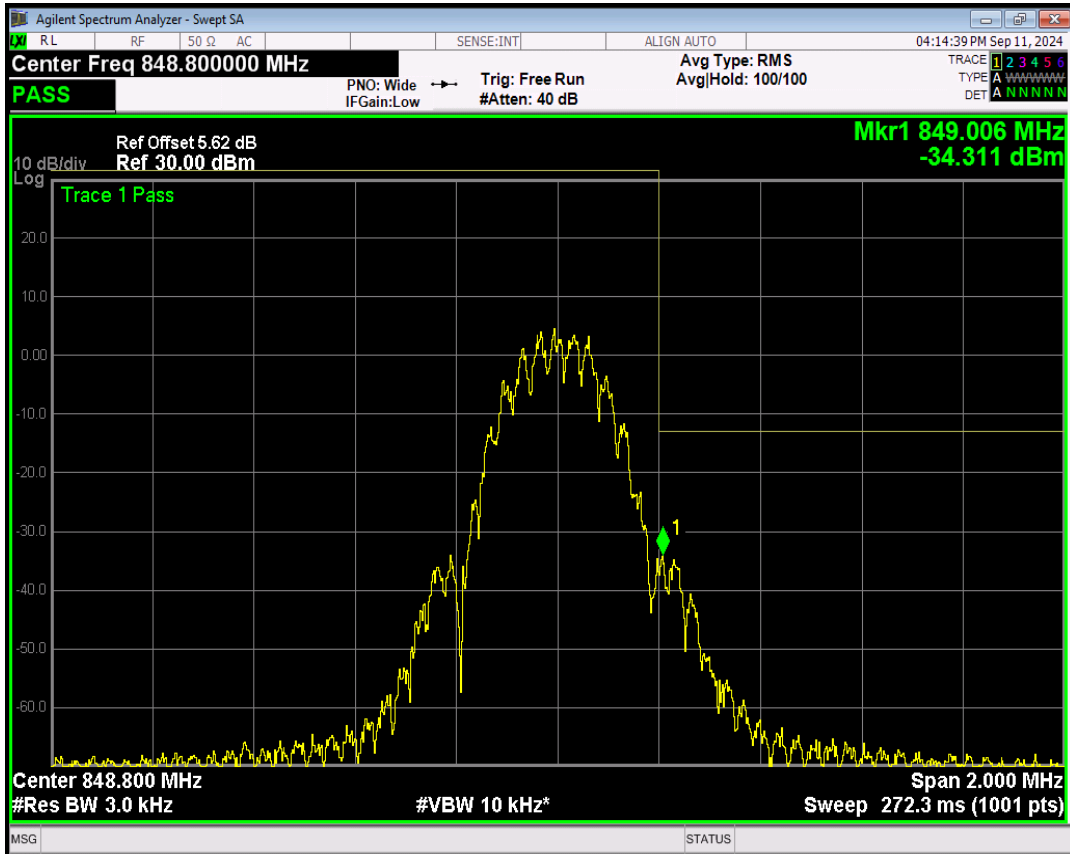
## EGPRS1900 Channel=810



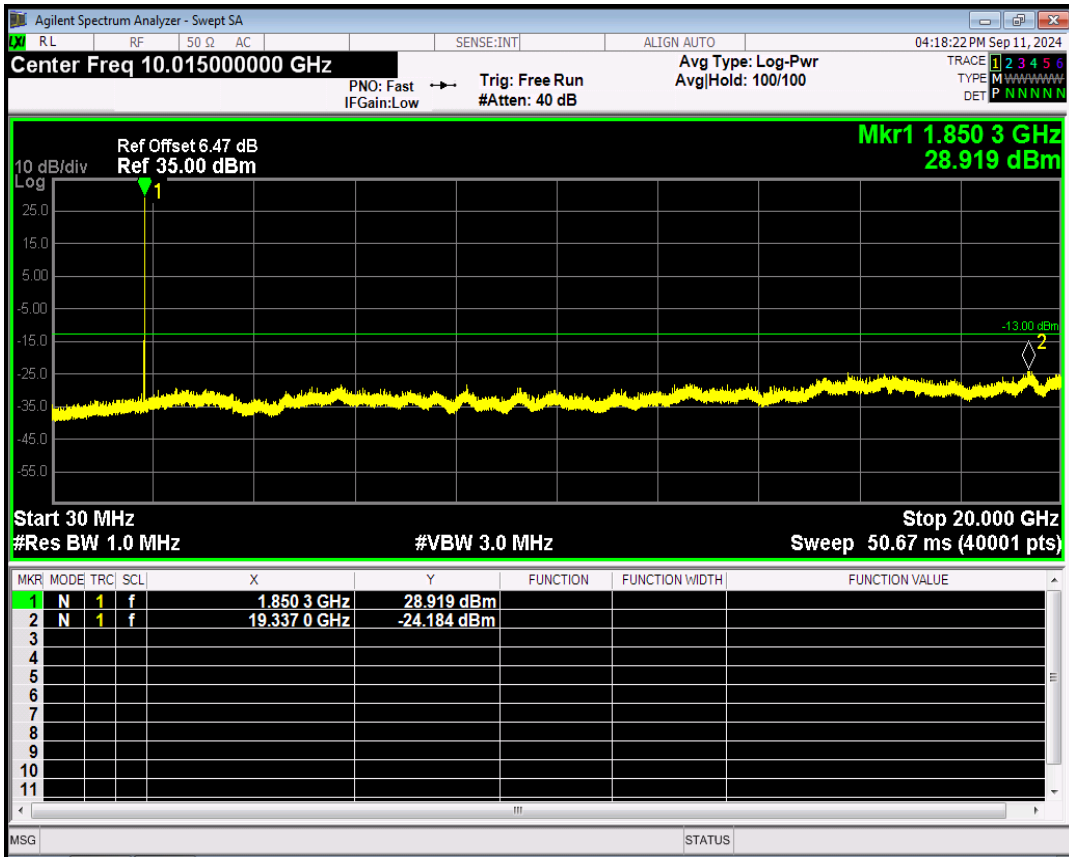
## EGPRS850 Channel=128



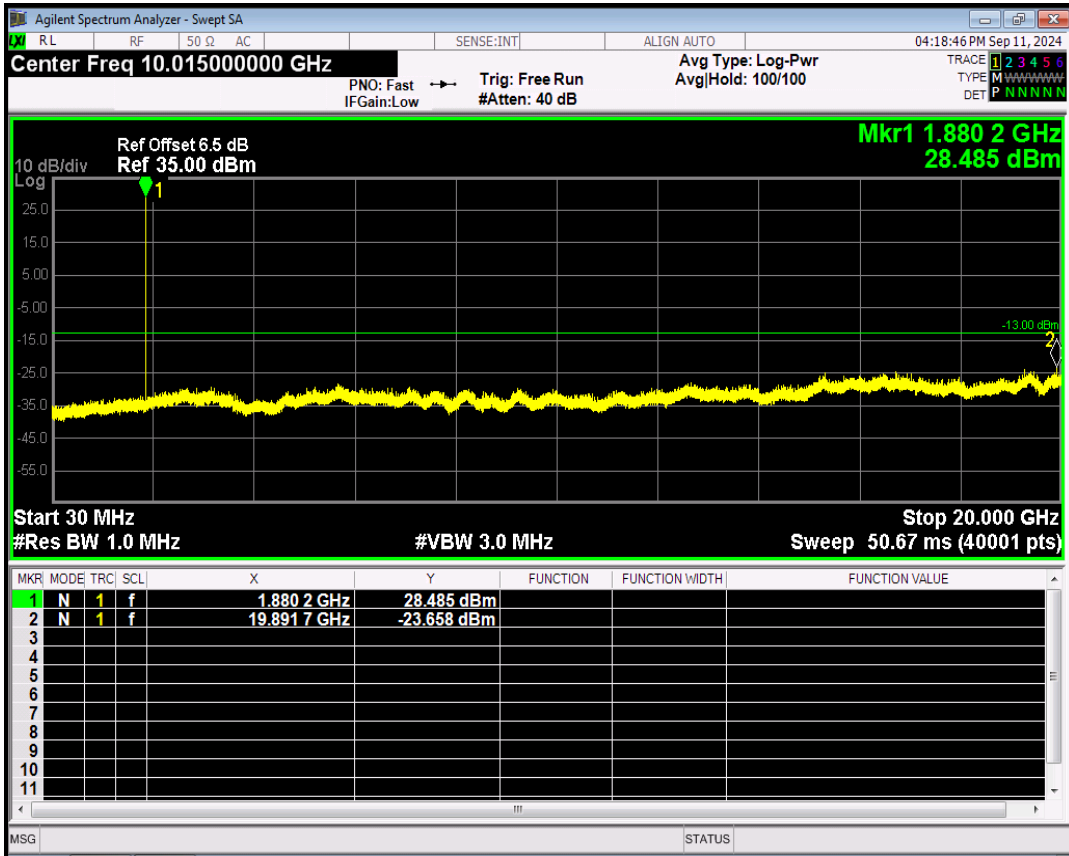
## EGPRS850 Channel=251



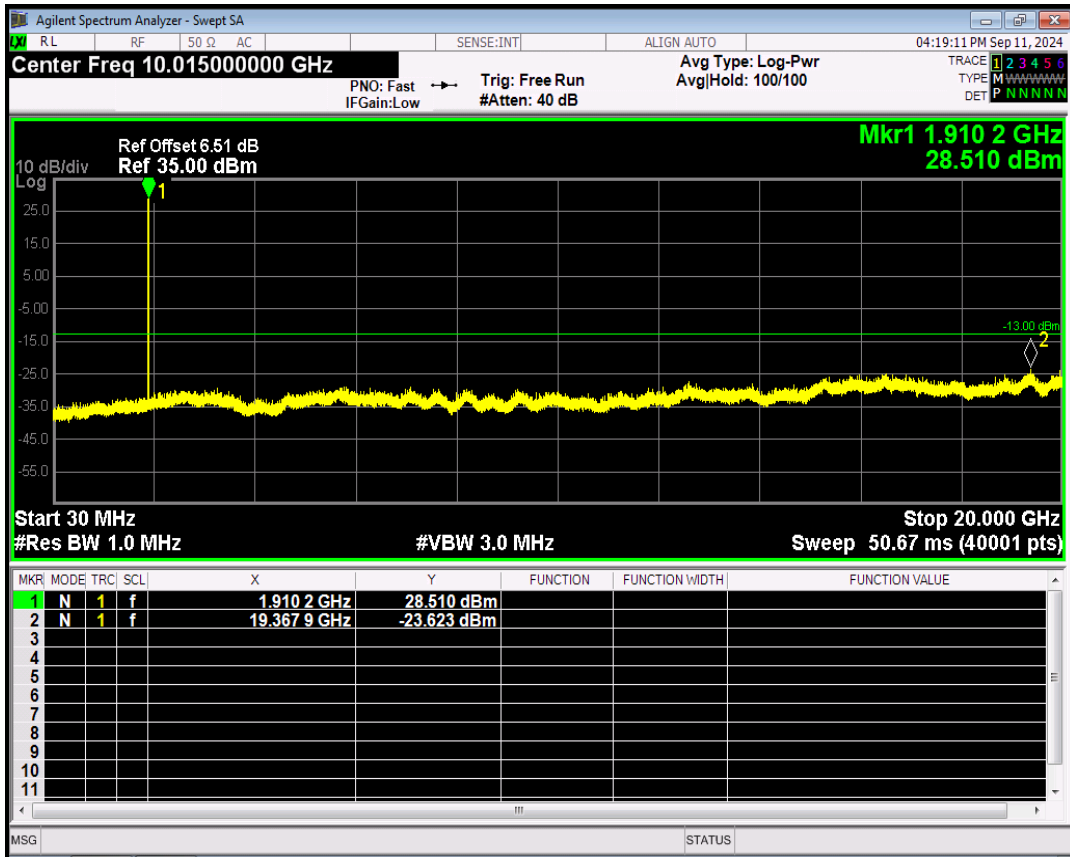
## EGPRS1900 Channel=512



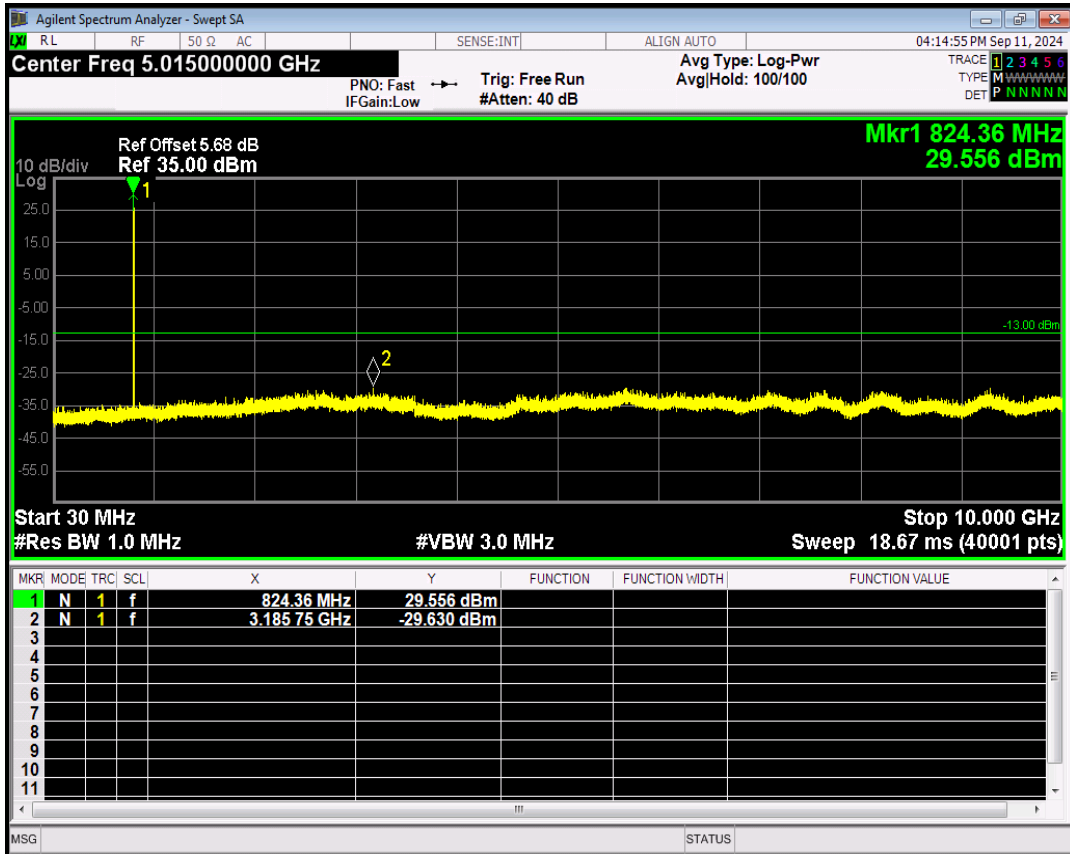
## EGPRS1900 Channel=661



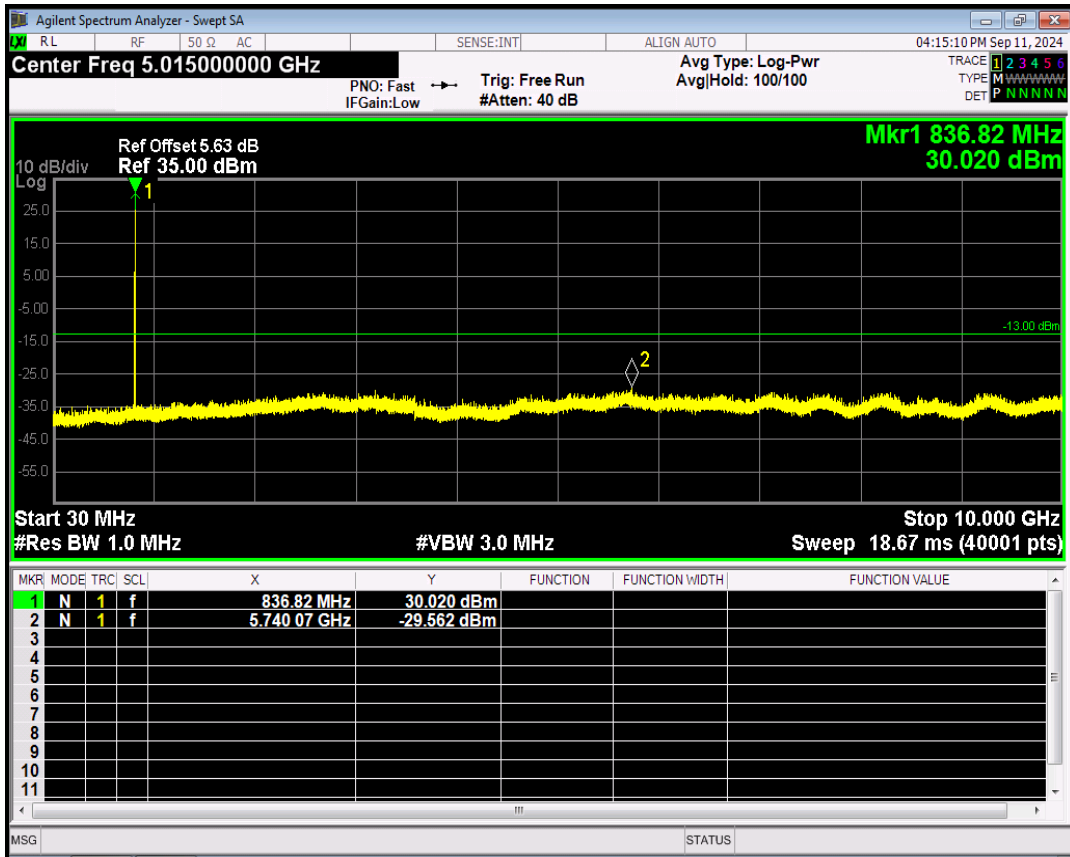
## EGPRS1900 Channel=810



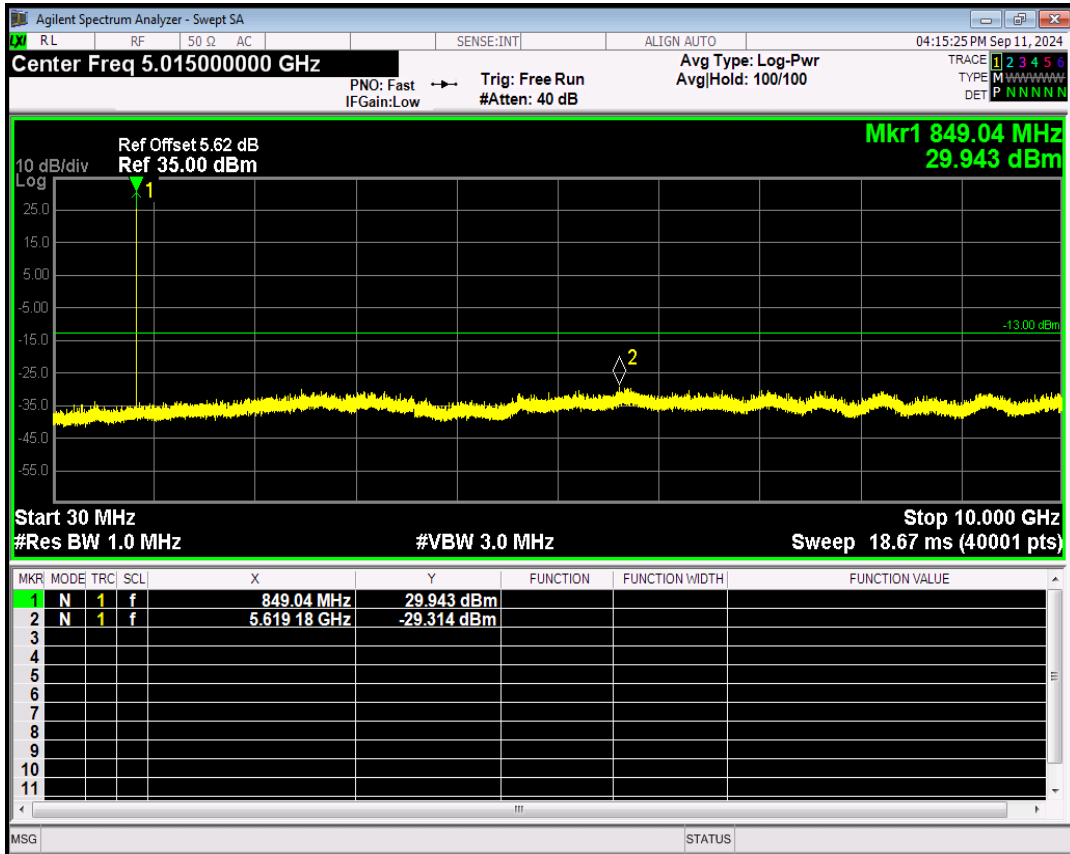
## EGPRS850 Channel=128



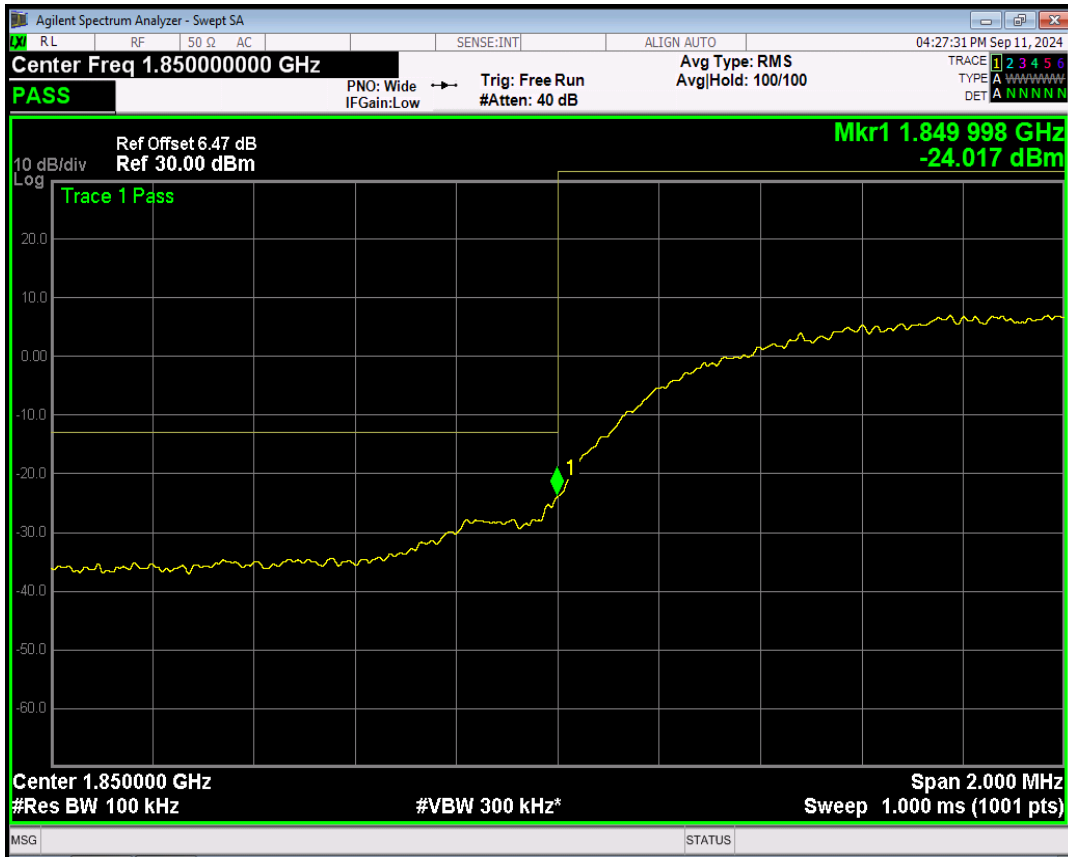
## EGPRS850 Channel=190



## EGPRS850 Channel=251



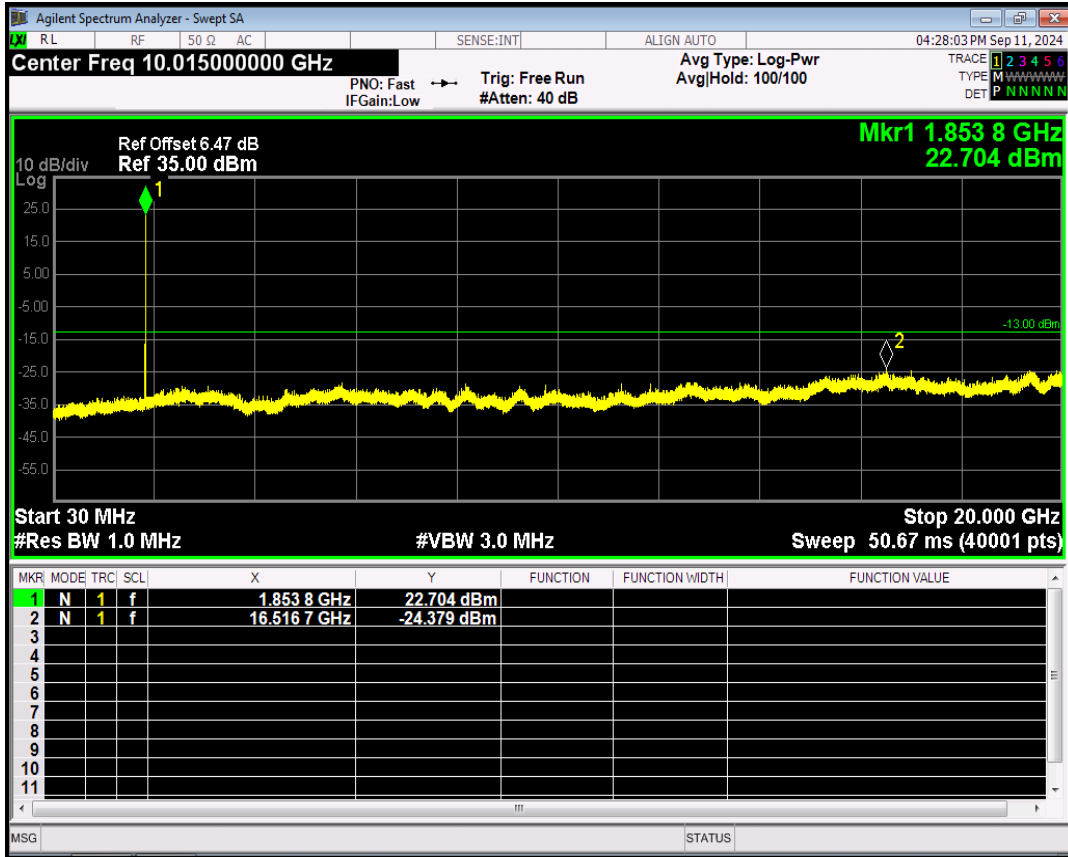
## WCDMA Band2 Channel=9262



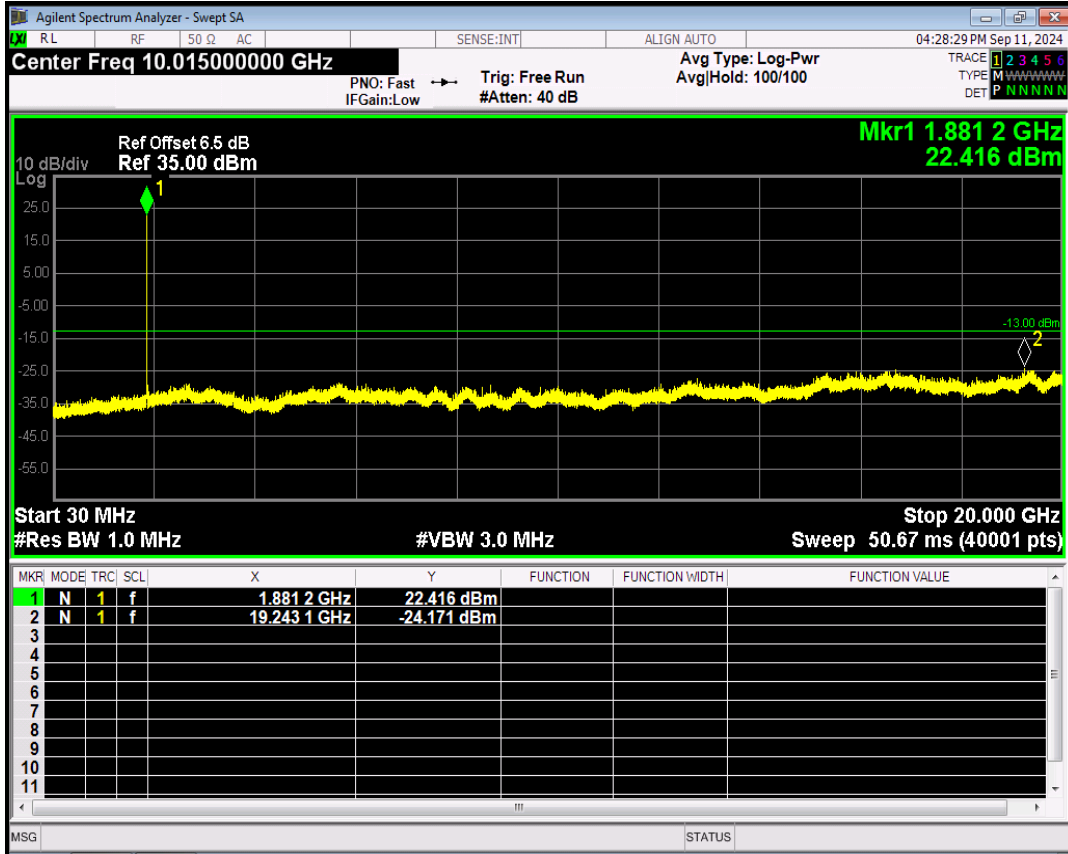
## WCDMA Band2 Channel=9538



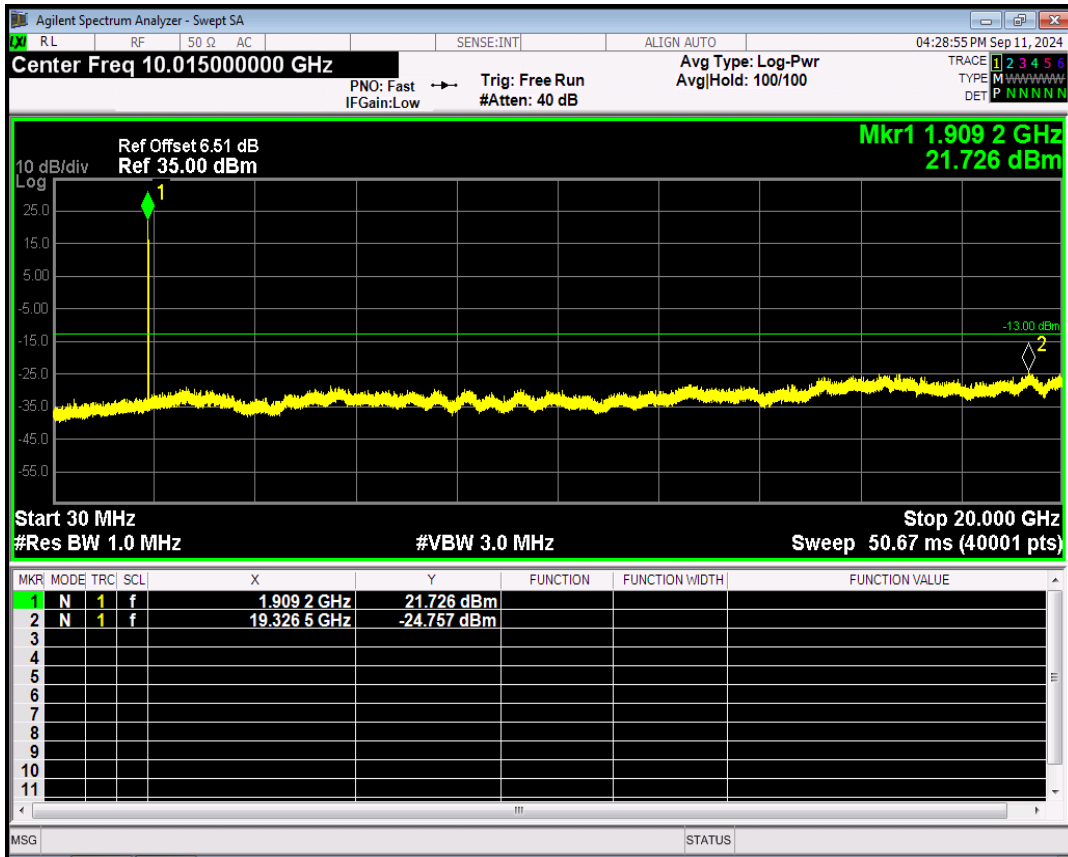
## WCDMA Band2 Channel=9262



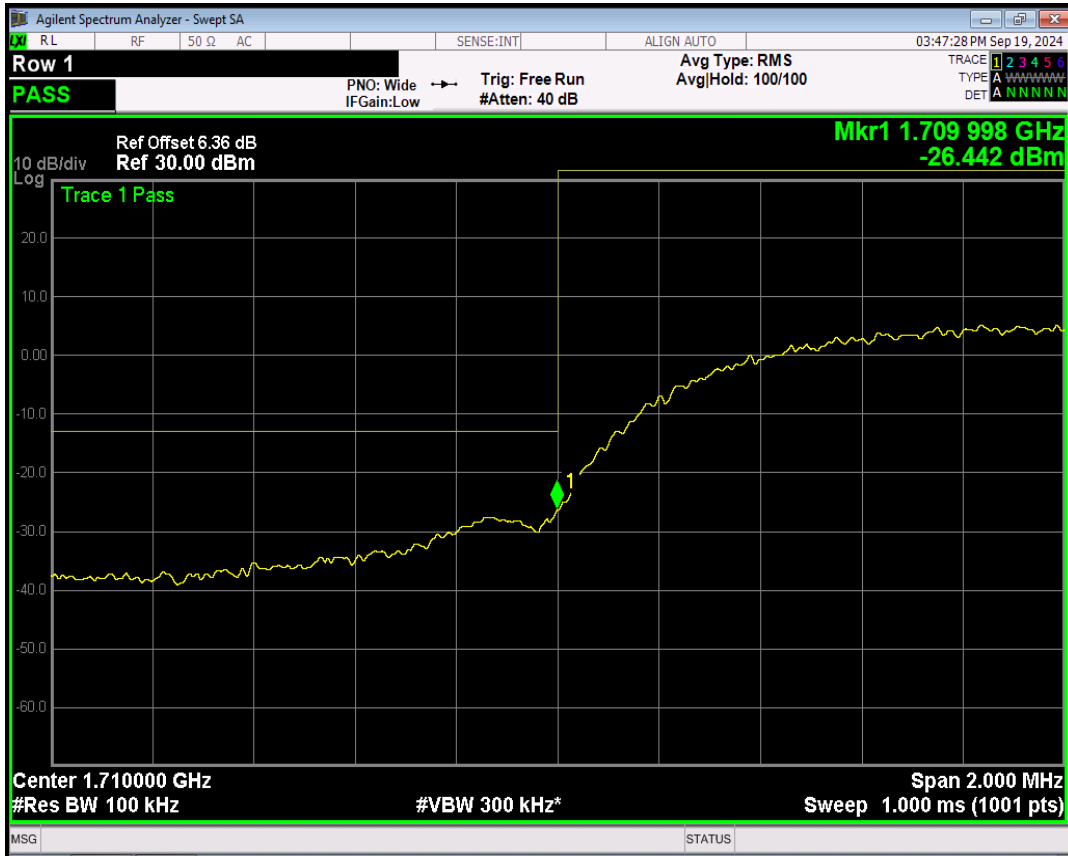
## WCDMA Band2 Channel=9400



## WCDMA Band2 Channel=9538

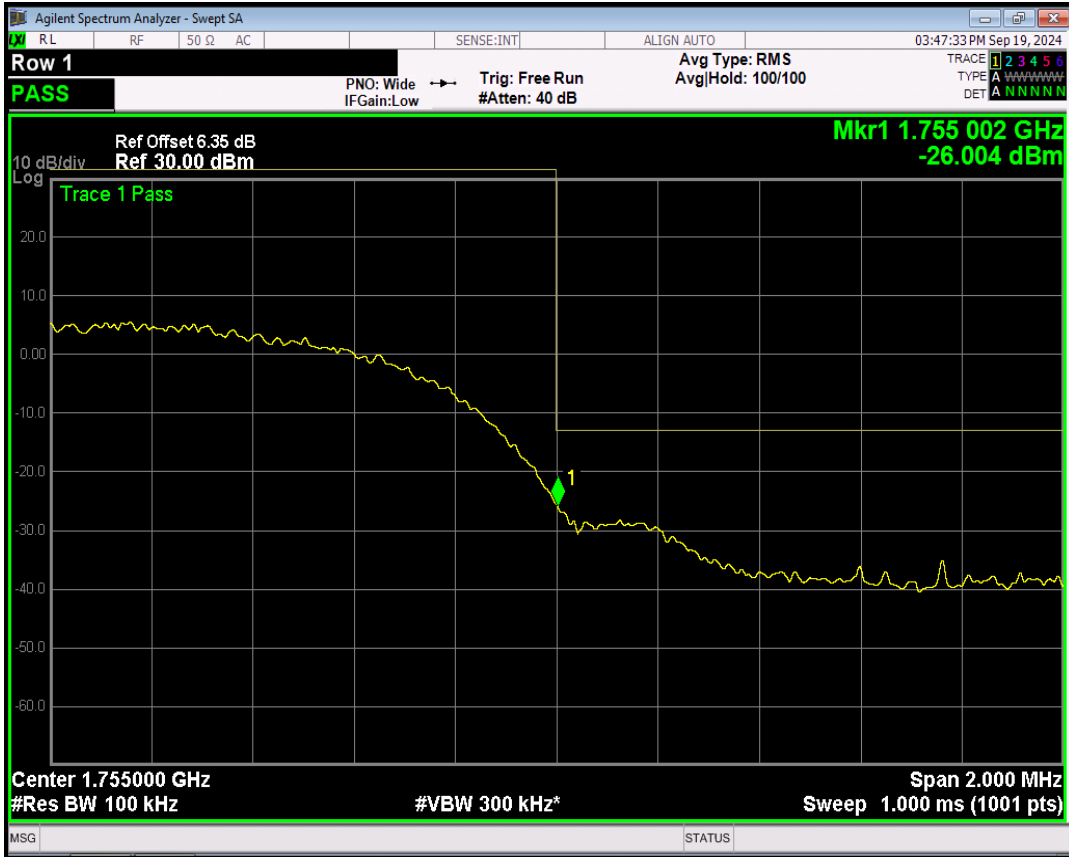


## WCDMA Band4 Channel=1312

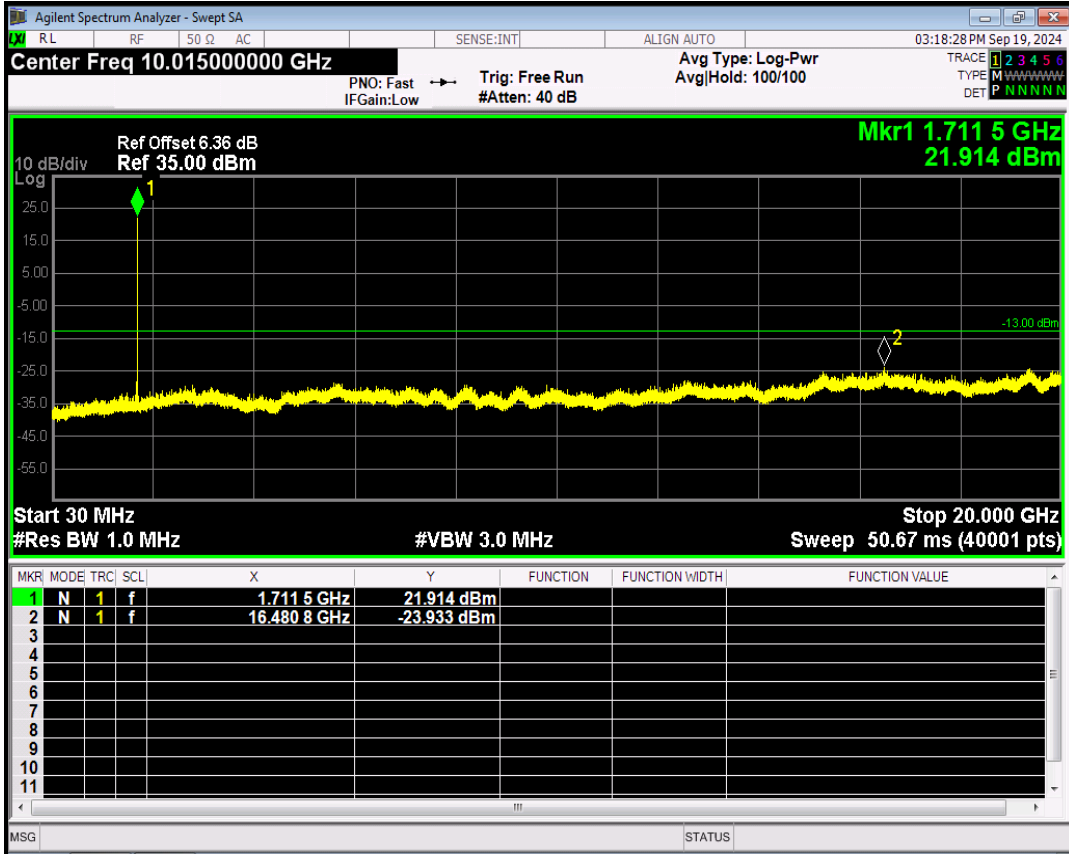




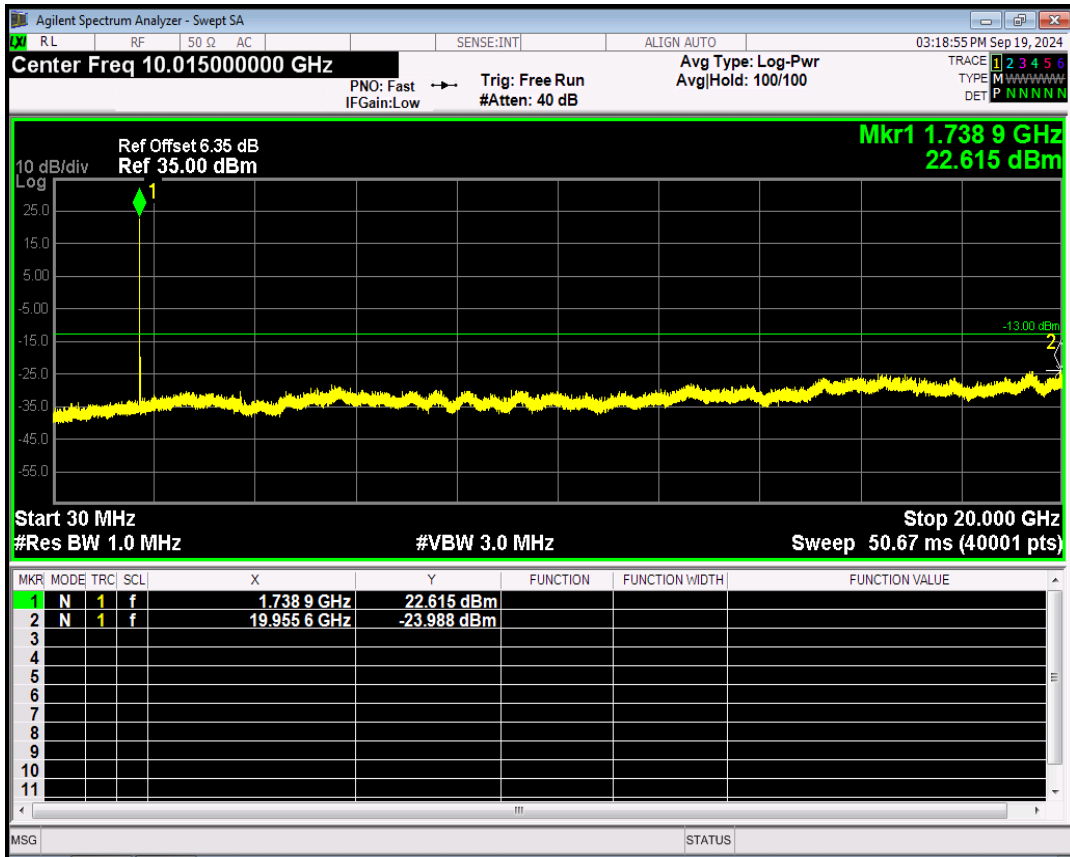
## WCDMA Band4 Channel=1513



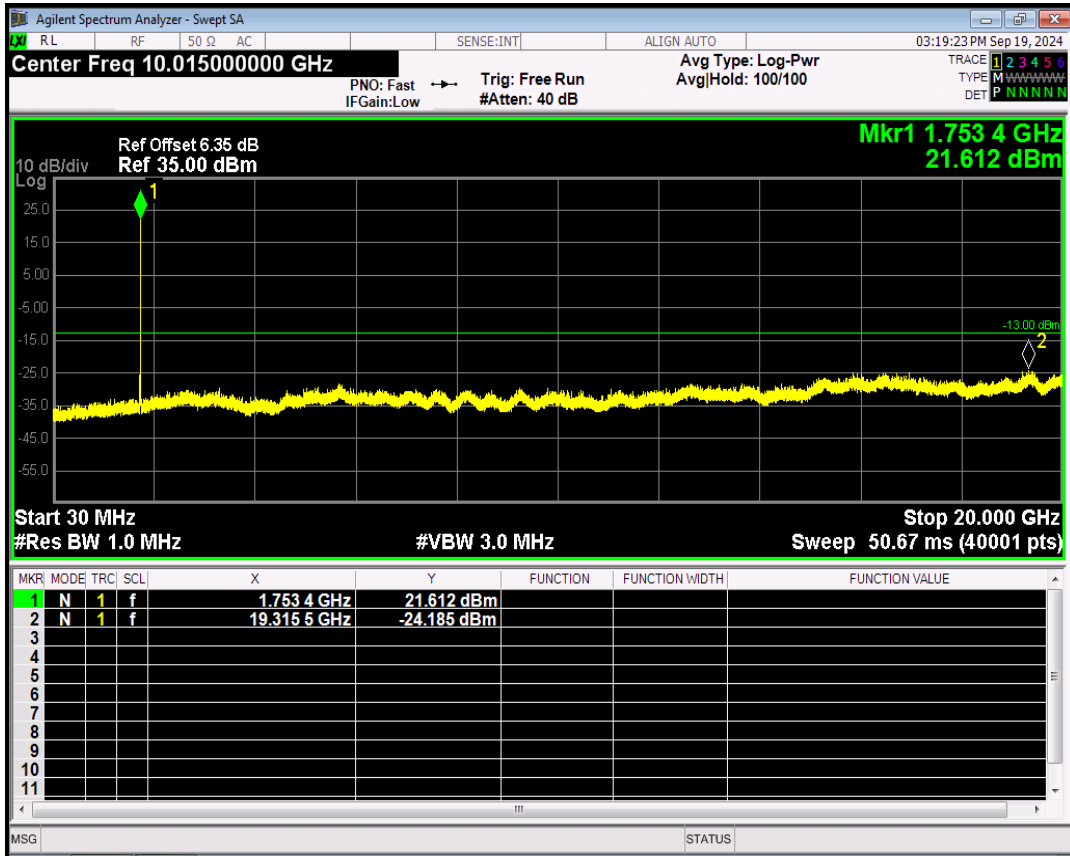
## WCDMA Band4 Channel=1312



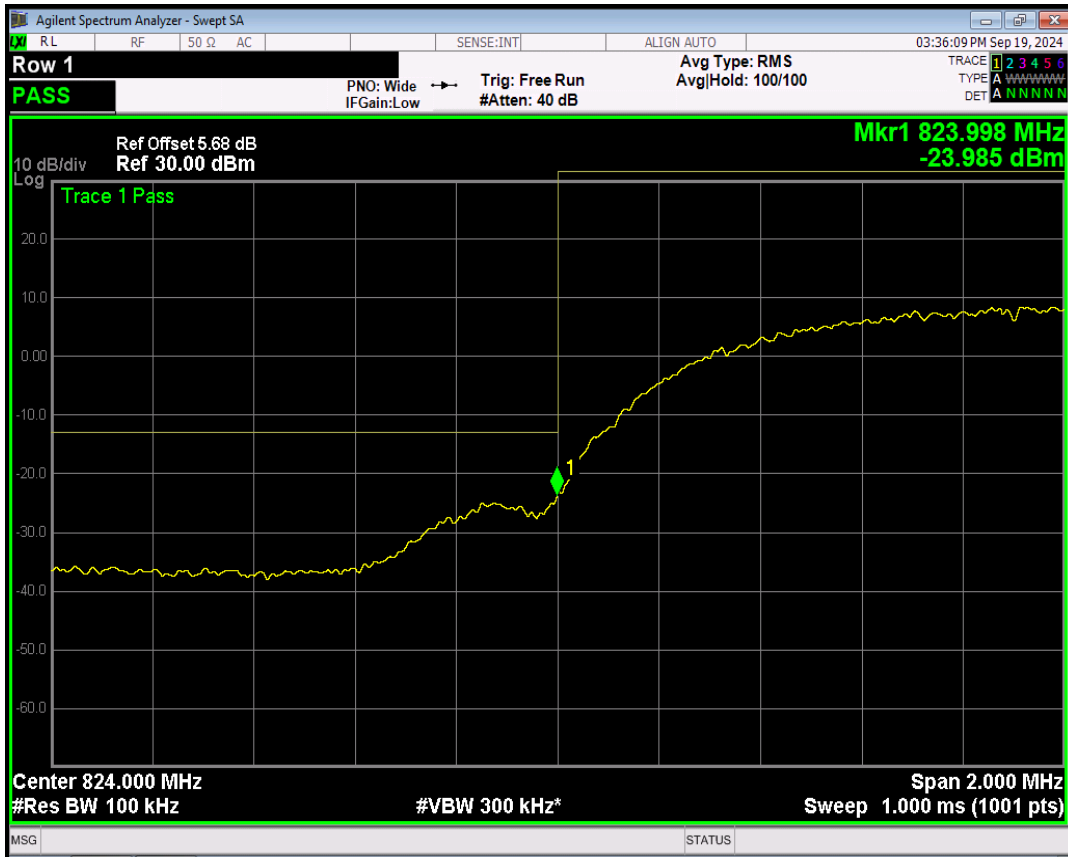
## WCDMA Band4 Channel=1450



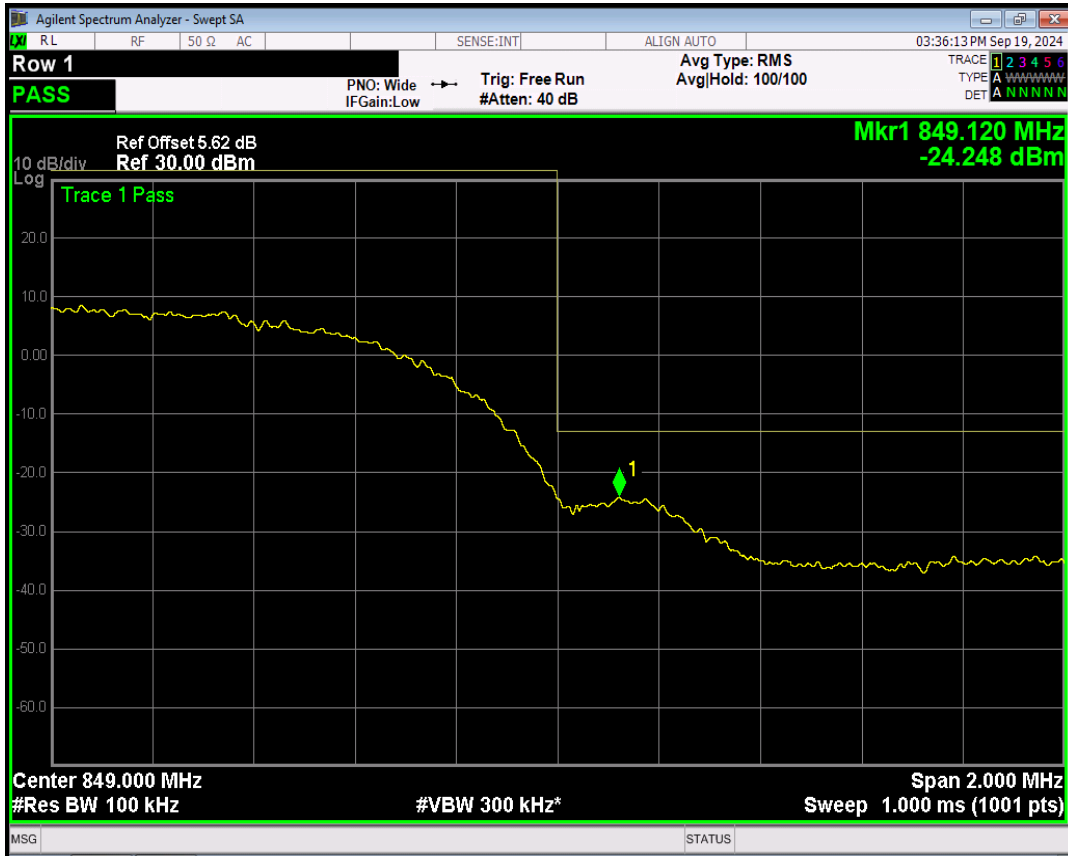
## WCDMA Band4 Channel=1513



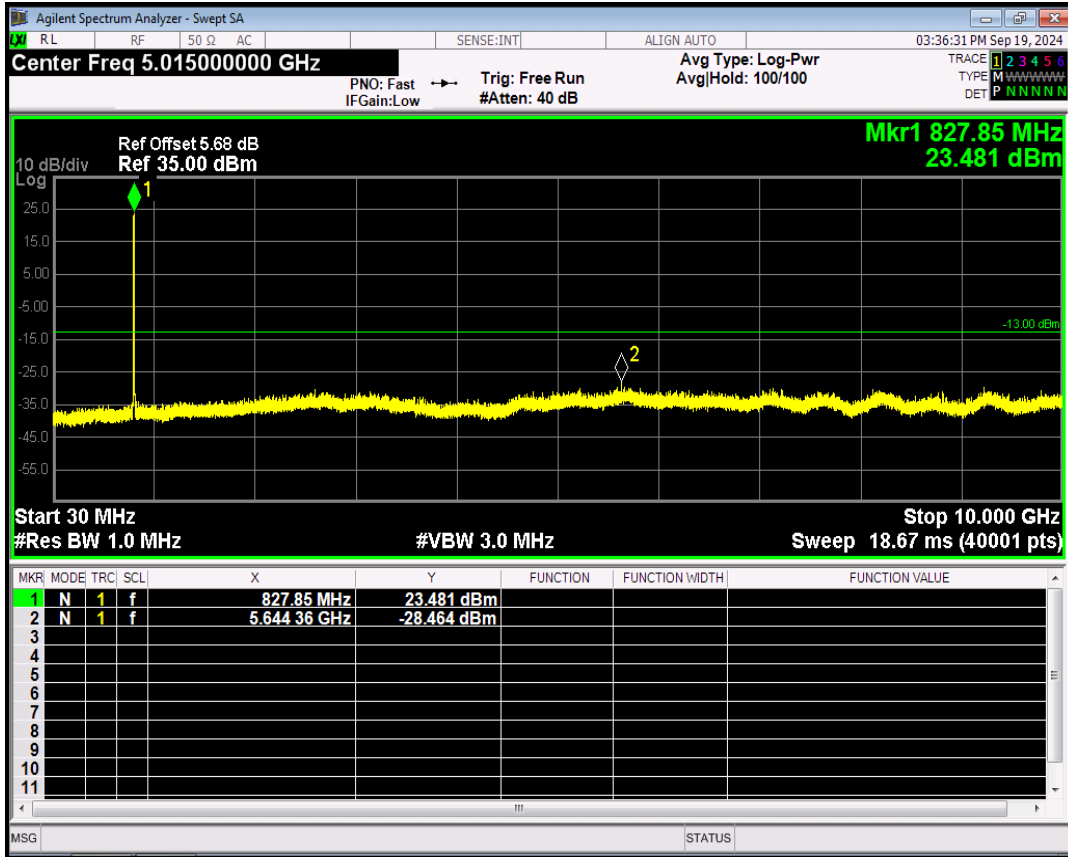
## WCDMA Band5 Channel=4132



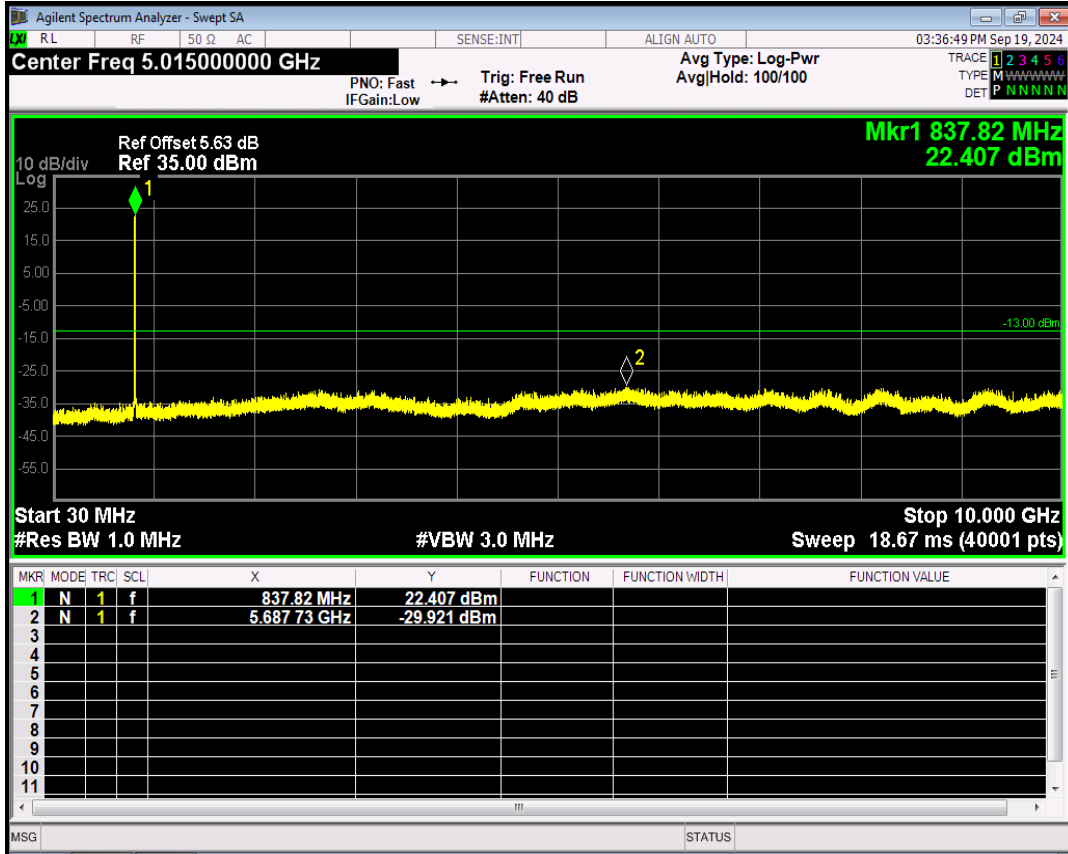
## WCDMA Band5 Channel=4233



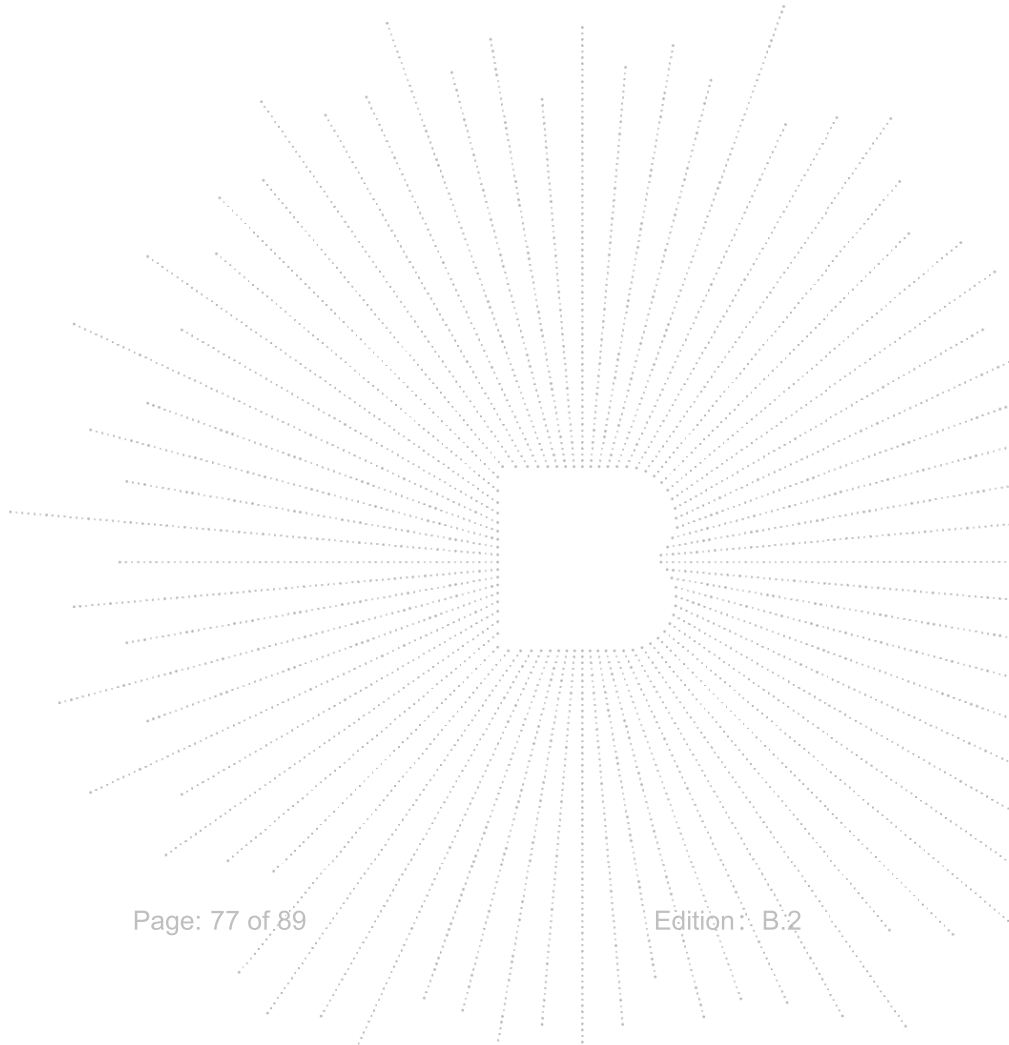
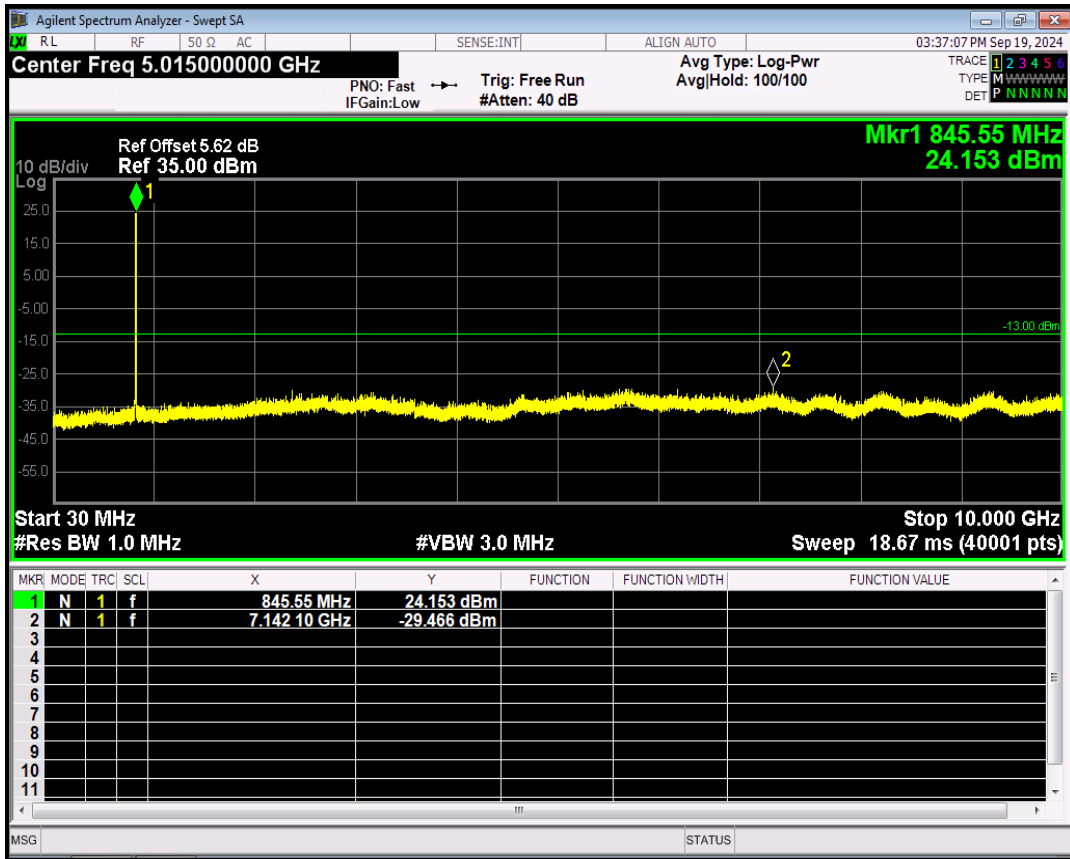
## WCDMA Band5 Channel=4132



## WCDMA Band5 Channel=4182



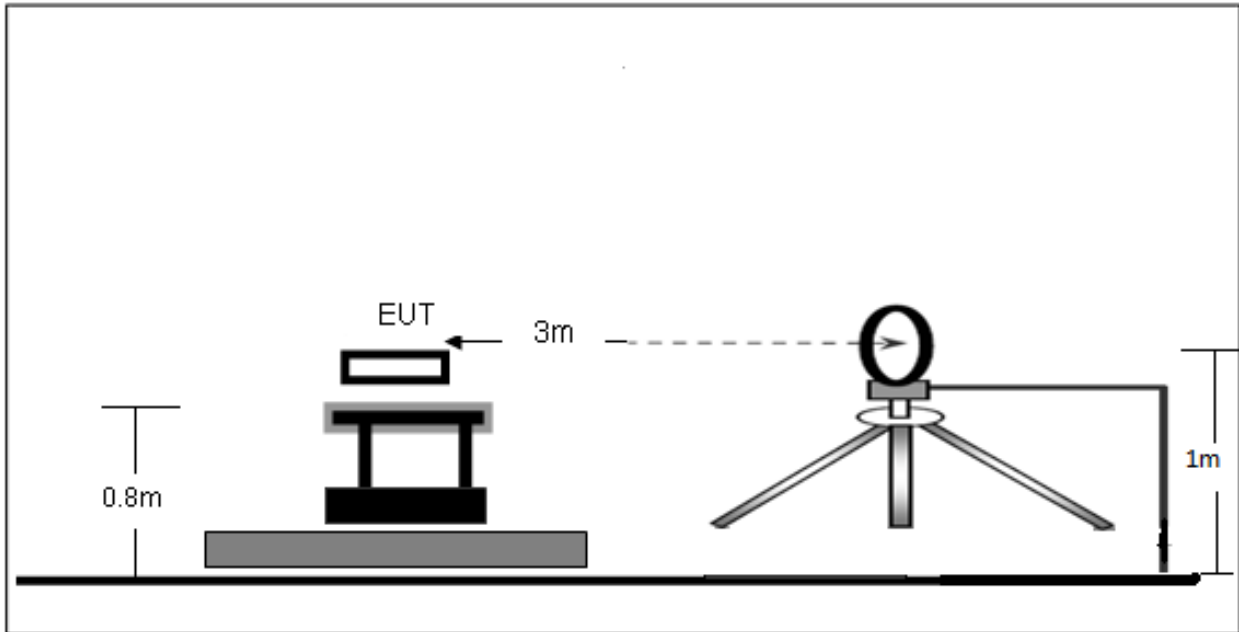
## WCDMA Band5 Channel=4233



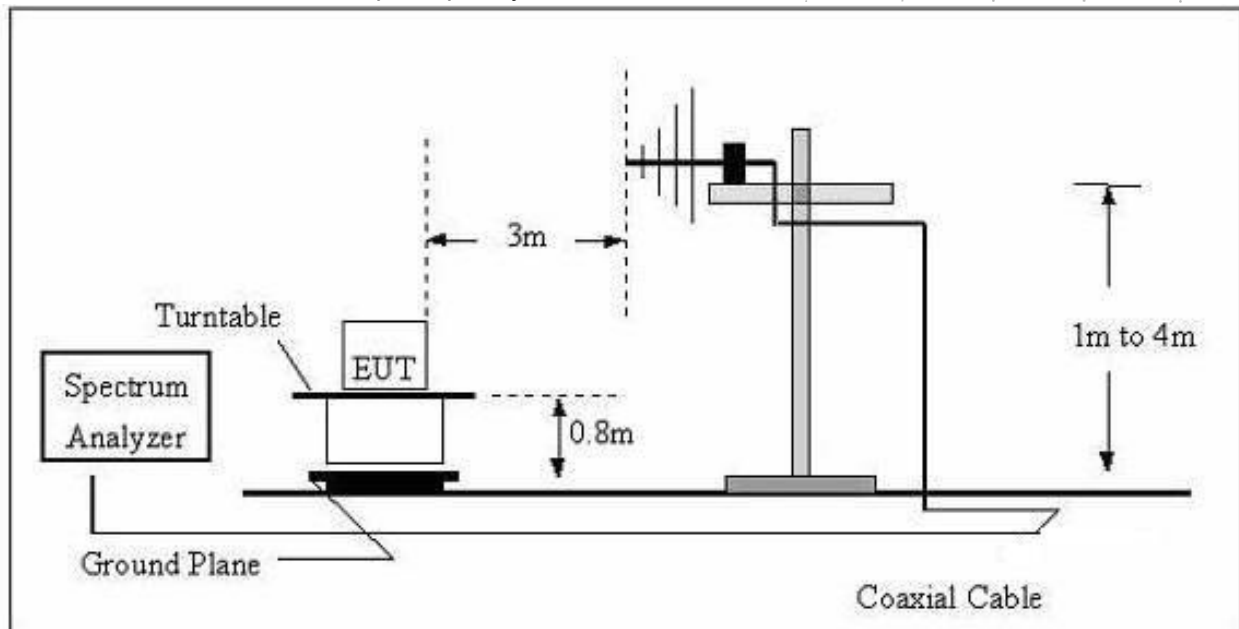
## 10. Spurious Radiated Emissions

### 10.1 Block Diagram Of Test Setup

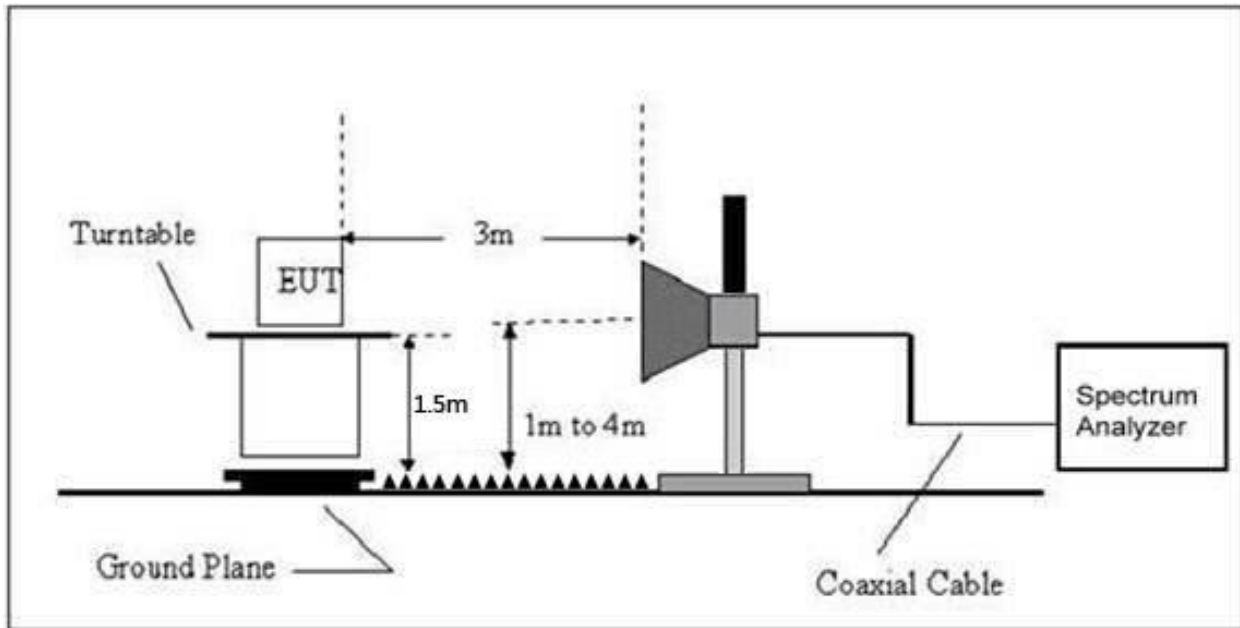
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



## (C) Radiated Emission Test-Up Frequency Above 1GHz



## 10.2 Limit

According to §22.917(a), the power of any emissions 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.

According to §24.238(a), the power of any emissions 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.

According to §27.53 (h), the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \log_{10}(P)$  dB.

## 10.3 Test procedure

1. The setup of EUT is according with per ANSI/TIA Standard 603D and ANSI C63.4-2014 measurement procedure.
2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious attenuation limit in dB =  $43 + 10 \log_{10}(\text{power out in Watts})$

## 10.4 Test Result

For Cellular Band\_GSM850 Mode

Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (824.2MHz)						
78.93	-23.49	-30.54	-54.03	-13.00	-41.03	H
1648.40	-19.93	-27.29	-47.22	-13.00	-34.22	H
2472.60	-25.39	-25.18	-50.57	-13.00	-37.57	H
78.93	-33.93	-30.54	-64.47	-13.00	-51.47	V
1648.40	-18.54	-27.29	-45.83	-13.00	-32.83	V
2472.60	-25.05	-25.18	-50.23	-13.00	-37.23	V
Middle Channel (836.6MHz)						
78.93	-31.95	-30.54	-62.49	-13.00	-49.49	H
1673.20	-20.06	-27.32	-47.38	-13.00	-34.38	H
2509.80	-23.39	-25.07	-48.46	-13.00	-35.46	H
78.93	-41.14	-30.54	-71.68	-13.00	-58.68	V
1673.20	-18.63	-27.32	-45.95	-13.00	-32.95	V
2509.80	-25.31	-25.07	-50.38	-13.00	-37.38	V
High Channel (848.8MHz)						
78.93	-41.68	-30.54	-72.22	-13.00	-59.22	H
1697.60	-19.01	-27.27	-46.28	-13.00	-33.28	H
2546.40	-23.44	-24.96	-48.40	-13.00	-35.40	H
78.93	-42.60	-30.54	-73.14	-13.00	-60.14	V
1697.60	-20.74	-27.27	-48.01	-13.00	-35.01	V
2546.40	-23.40	-24.96	-48.36	-13.00	-35.36	V

For PCS Band\_GSM1900 Mode

Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (1850.2MHz)						
78.93	-31.64	-30.54	-62.18	-13.00	-49.18	H
3700.40	-27.88	-22.20	-50.08	-13.00	-37.08	H
5550.60	-30.33	-19.32	-49.65	-13.00	-36.65	H
78.93	-44.72	-30.54	-75.26	-13.00	-62.26	V
3700.40	-29.86	-22.20	-52.06	-13.00	-39.06	V
5550.60	-29.50	-19.32	-48.82	-13.00	-35.82	V
Middle Channel (1880MHz)						
78.93	-31.79	-30.54	-62.33	-13.00	-49.33	H
3760.00	-26.01	-22.08	-48.09	-13.00	-35.09	H
5640.00	-32.37	-19.28	-51.65	-13.00	-38.65	H
78.93	-42.80	-30.54	-73.34	-13.00	-60.34	V
3760.00	-28.28	-22.08	-50.36	-13.00	-37.36	V
5640.00	-29.96	-19.28	-49.24	-13.00	-36.24	V
High Channel (1909.8MHz)						
78.93	-33.66	-30.54	-64.20	-13.00	-51.20	H
3819.60	-27.41	-21.96	-49.37	-13.00	-36.37	H
5729.40	-31.58	-19.24	-50.82	-13.00	-37.82	H
78.93	-41.42	-30.54	-71.96	-13.00	-58.96	V
3819.60	-27.66	-21.96	-49.62	-13.00	-36.62	V
5729.40	-29.82	-19.24	-49.06	-13.00	-36.06	V



## For Band WCDMA Band II Mode

Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (1852.4MHz)						
78.93	-44.50	-30.54	-75.04	-13.00	-62.04	H
3704.80	-26.66	-22.19	-48.85	-13.00	-35.85	H
5557.20	-31.80	-19.32	-51.12	-13.00	-38.12	H
78.93	-44.67	-30.54	-75.21	-13.00	-62.21	V
3704.80	-26.41	-22.19	-48.60	-13.00	-35.60	V
5557.20	-31.88	-19.32	-51.20	-13.00	-38.20	V
Middle Channel (1880MHz)						
78.93	-44.98	-30.54	-75.52	-13.00	-62.52	H
3760.00	-26.91	-22.08	-48.99	-13.00	-35.99	H
5640.00	-30.61	-19.28	-49.89	-13.00	-36.89	H
78.93	-41.21	-30.54	-71.75	-13.00	-58.75	V
3760.00	-26.23	-22.08	-48.31	-13.00	-35.31	V
5640.00	-29.98	-19.28	-49.26	-13.00	-36.26	V
High Channel (1907.6MHz)						
78.93	-43.31	-30.54	-73.85	-13.00	-60.85	H
3815.20	-25.25	-21.97	-47.22	-13.00	-34.22	H
5722.80	-29.66	-19.24	-48.90	-13.00	-35.90	H
78.93	-42.33	-30.54	-72.87	-13.00	-59.87	V
3815.20	-26.32	-21.97	-48.29	-13.00	-35.29	V
5722.80	-30.36	-19.24	-49.60	-13.00	-36.60	V

Note: Result=Reading+ Correct, Margin= Result- Limit

## For Band WCDMA Band IV Mode

Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (1712.4MHz)						
78.93	-41.74	-30.54	-72.28	-13.00	-59.28	H
3424.80	-24.49	-22.75	-47.24	-13.00	-34.24	H
5137.20	-32.11	-19.53	-51.64	-13.00	-38.64	H
78.93	-42.81	-30.54	-73.35	-13.00	-60.35	V
3424.80	-29.15	-22.75	-51.90	-13.00	-38.90	V
5137.20	-30.56	-19.53	-50.09	-13.00	-37.09	V
Middle Channel (1740MHz)						
78.93	-41.42	-30.54	-71.96	-13.00	-58.96	H
3480.00	-24.71	-22.64	-47.35	-13.00	-34.35	H
5220.00	-30.33	-19.49	-49.82	-13.00	-36.82	H
78.93	-41.61	-30.54	-72.15	-13.00	-59.15	V
3480.00	-26.96	-22.64	-49.60	-13.00	-36.60	V
5220.00	-31.29	-19.49	-50.78	-13.00	-37.78	V
High Channel (1752.6MHz)						
78.93	-43.39	-30.54	-73.93	-13.00	-60.93	H
3505.20	-26.42	-22.59	-49.01	-13.00	-36.01	H
5257.80	-31.74	-19.47	-51.21	-13.00	-38.21	H
78.93	-43.72	-30.54	-74.26	-13.00	-61.26	V
3505.20	-26.13	-22.59	-48.72	-13.00	-35.72	V
5257.80	-30.80	-19.47	-50.27	-13.00	-37.27	V

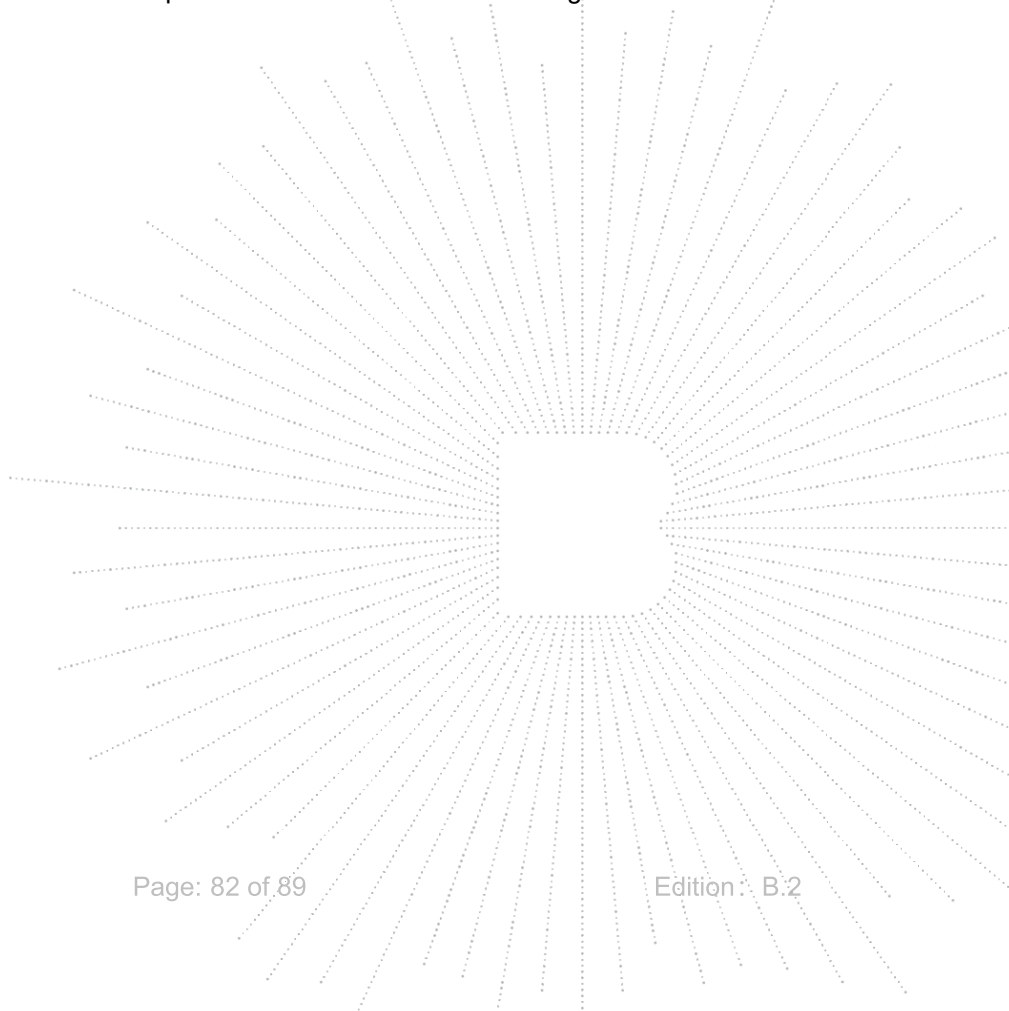
Note: Result=Reading+ Correct, Margin= Result- Limit

For Band WCDMA Band V Mode

Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (826.4MHz)						
78.93	-42.90	-30.54	-73.44	-13.00	-60.44	H
1652.80	-18.64	-27.36	-46.00	-13.00	-33.00	H
2479.20	-23.11	-25.16	-48.27	-13.00	-35.27	H
78.93	-43.96	-30.54	-74.50	-13.00	-61.50	V
1652.80	-19.94	-27.36	-47.30	-13.00	-34.30	V
2479.20	-24.48	-25.16	-49.64	-13.00	-36.64	V
Middle Channel (836.4MHz)						
78.93	-41.64	-30.54	-72.18	-13.00	-59.18	H
1672.80	-20.71	-27.32	-48.03	-13.00	-35.03	H
2509.20	-23.69	-25.07	-48.76	-13.00	-35.76	H
78.93	-42.76	-30.54	-73.30	-13.00	-60.30	V
1672.80	-18.82	-27.32	-46.14	-13.00	-33.14	V
2509.20	-23.51	-25.07	-48.58	-13.00	-35.58	V
High Channel (846.6MHz)						
78.93	-43.08	-30.54	-73.62	-13.00	-60.62	H
1693.20	-18.51	-27.27	-45.78	-13.00	-32.78	H
2539.80	-24.41	-24.98	-49.39	-13.00	-36.39	H
78.93	-42.46	-30.54	-73.00	-13.00	-60.00	V
1693.20	-19.80	-27.27	-47.07	-13.00	-34.07	V
2539.80	-24.46	-24.98	-49.44	-13.00	-36.44	V

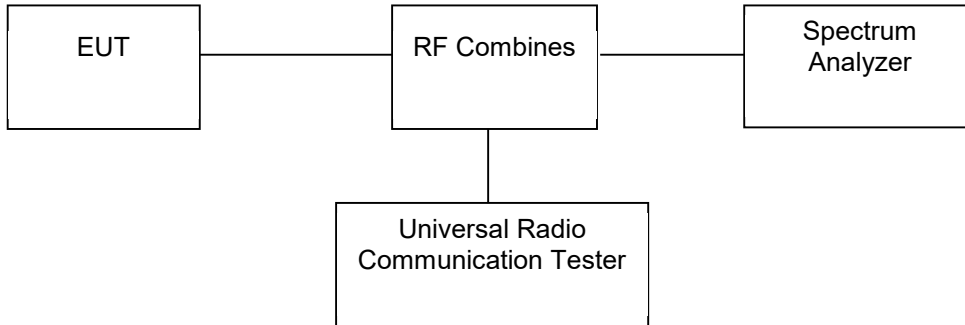
Note: Result=Reading+ Correct, Margin= Result- Limit

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, other than listed in the table above are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



## 11. Frequency Stability

### 11.1 Block Diagram Of Test Setup



### 11.2 Limit

FCC Part 22.355:  $\pm 2.5$  ppm

FCC Part 24.235:

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

FCC Part 27.54

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

### 11.3 Test procedure

1. The testing follows FCC KDB 971168 D01v03r01 Section 9.0.
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to  $-30^{\circ}\text{C}$  and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in  $10^{\circ}\text{C}$  steps up to  $50^{\circ}\text{C}$ . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

#### Test Procedures for Voltage Variation

1. The testing follows FCC KDB 971168 D01v03r01 Section 9.0.
2. The EUT was placed in a temperature chamber at  $25 \pm 5^{\circ}\text{C}$  and connected with the system simulator.
3. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.