TEST REPORT

Report No.:	BCTC2504054763-5E
Applicant:	Shenzhen Huafurui Technology Co., Ltd.
Product Name:	Smartphone
Test Model:	KINGKONG ES 3
Tested Date:	2025-04-09 to 2025-05-26
Issued Date:	2025-05-27

Shenzhen BCTC Testing Co., Ltd.

FCC ID: 2AHZ5ES3

Product Name:	Smartphone
Trademark:	CUBOT
Model/Type reference:	KINGKONG ES 3
Prepared For:	Shenzhen Huafurui Technology Co., Ltd.
Address:	Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Shenzhen, China
Manufacturer:	Shenzhen Huafurui Technology Co., Ltd.
Address:	Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Shenzhen, 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:	2025-04-09
Sample tested Date:	2025-04-09 to 2025-05-26
Issue Date:	2025-05-27
Report No.:	BCTC2504054763-5E
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-603-E-2016; [1] or • ANSI/TIA-102.CAAA-E-2016; [1] or • ANSI C63.26-2015 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

(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2504054763-5E	2025-05-27	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,§2.1046	PASS
3	Peak-to-average Ratio(PAR) of Transmitter	§24.232(d),§22.913, §27.50,§2.1046	PASS
4	Emission Bandwidth	§22.917 (b), §24.238(b), §27.53,§2.1049	PASS
5	Spurious Emissions at Antenna Terminal	§22.917 (a), §24.238 (a), §27.53,§2.1051	PASS
6	Spurious Radiation Emissions	§22.917 (a), §24.238 (a), §27.53,§2.1051	PASS
7	Out of Band Emissions	§22.917 (a), §24.238 (a), §27.53,§2.1051	PASS
8	Frequency Stability	§22.355, §24.235, §27.54, §2.1055	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℃

4. Product Information And Test Setup

4.1 Product Information

Model/Type reference:	KINGKONG ES 3
Model differences:	N/A
Hardware Version:	S17F-MB-V2.0
Software Version:	CUBOT_KINGKONG_ES_3_F071C_V01
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: 32.68 dBm, GSM/GPRS/EGPRS 1900: 30.34 dBm WCDMA Band II: 22.76 dBm WCDMA Band IV: 23.54 dBm WCDMA Band V: 24.20 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: 249KGXW EGPRS 850:249KGXW GSM/GPRS 1900: 250KGXW EGPRS 1900:251KGXW WCDMA Band II: 4M17F9W WCDMA Band IV: 4M17F9W WCDMA Band V: 4M16F9W
Antenna installation:	Internal antenna
Antenna Gain:	GSM850: -1.13 dBi GSM1900: 0.23 dBi WCDMA Band II: 0.23 dBi WCDMA Band IV: -0.04 dBi WCDMA Band V: -1.13 dBi Remark: ☐ 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. ☒ 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-PD33W-US Input: 100-240V~50/60Hz 0.8A Output: DC 5.0V 3.0A 15.0W OR DC 9.0V 3.0A 27.0W OR DC 12.0V 2.75A 33.0W 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	Smartphone	CUBOT	KINGKONG ES 3	N/A	EUT
E-2	Adapter	/	HJ-PD33W-US	N/A	Auxiliary
E-3	TF card	SanDisk	32G	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	0M	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	RMC/HSDPA/ HSUPA	1852.4 MHz	9262
		1880.0 MHz	9400
		1907.6 MHz	9538
WCDMA Band IV	RMC/HSDPA/ HSUPA	1712.4 MHz	1312
		1740 MHz	1450
		1752.6 MHz	1513
WCDMA Band V	RMC/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 metter	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 11, 2024	Nov 10, 2025
Radio frequency control box	MAIWEI	MW200-RFCB	\	\	\
Software	MAIWEI	MTS 8200	\	\	\

RF Conducted Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Power metter	Keysight	E4419	\	May 14, 2025	May 13, 2026
Power Sensor (AV)	Keysight	E9300A	\	May 14, 2025	May 13, 2026
Signal Analyzer20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 14, 2025	May 13, 2026
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 14, 2025	May 13, 2026
Communication test set	R&S	CMW500	126173	May 14, 2025	May 13, 2026
Radio frequency control box	MAIWEI	MW200-RFCB	\	\	\
Software	MAIWEI	MTS 8200	\	\	\

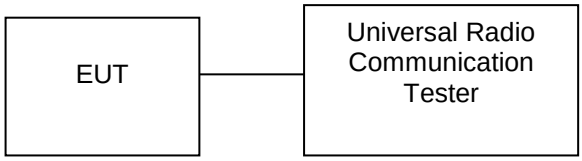
Radiated Emissions Test (966 Chamber01)					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
966 chamber	ChengYu	966 Room	966	May 15, 2023	May 14, 2026
Receiver	R&S	ESR	102075	May 16, 2024	May 15, 2025
Receiver	R&S	ESRP	101154	May 16, 2024	May 15, 2025
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 16, 2024	May 15, 2025
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 21, 2024	May 20, 2025
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 21, 2024	May 20, 2025
Amplifier	SKET	LAPA_01G18G-45dB	SK2021040901	May 16, 2024	May 15, 2025
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 21, 2024	May 20, 2025
Amplifier(18GHz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 16, 2024	May 15, 2025
Horn Antenna(18GHz-40GHz)	Schwarzbeck	BBHA9170	00822	May 21, 2024	May 20, 2025
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025
Communication test set	R&S	CMW500	126173	Nov 11, 2024	Nov 10, 2025
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

Radiated Emissions Test (966 Chamber01)					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
966 chamber	ChengYu	966 Room	966	May 15, 2023	May 14, 2026
Receiver	R&S	ESR	102075	May 08, 2025	May 07, 2026
Receiver	R&S	ESRP	101154	May 14, 2025	May 13, 2026
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 14, 2025	May 13, 2026
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 21, 2025	May 20, 2026
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 21, 2024	May 20, 2026
Amplifier	SKET	LAPA_01G18G-45dB	SK2021040901	May 14, 2025	May 13, 2026
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 21, 2025	May 20, 2026
Amplifier(18GHz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 14, 2025	May 13, 2026
Horn Antenna(18GHz-40GHz)	Schwarzbeck	BBHA9170	00822	May 21, 2025	May 20, 2026
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 14, 2025	May 13, 2026
Communication test set	R&S	CMW500	126173	Nov. 11. 2024	Nov. 10, 2025
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

6. RF Output Power

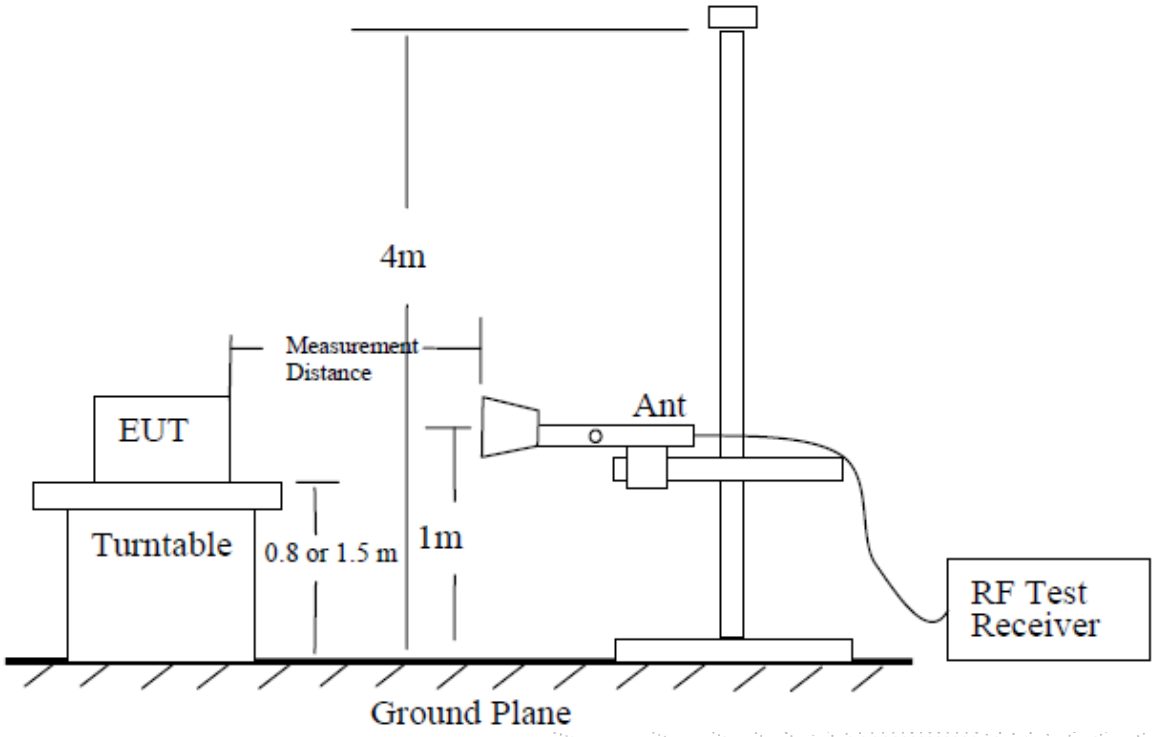
6.1 Block Diagram Of Test Setup

Conducted output power test method:

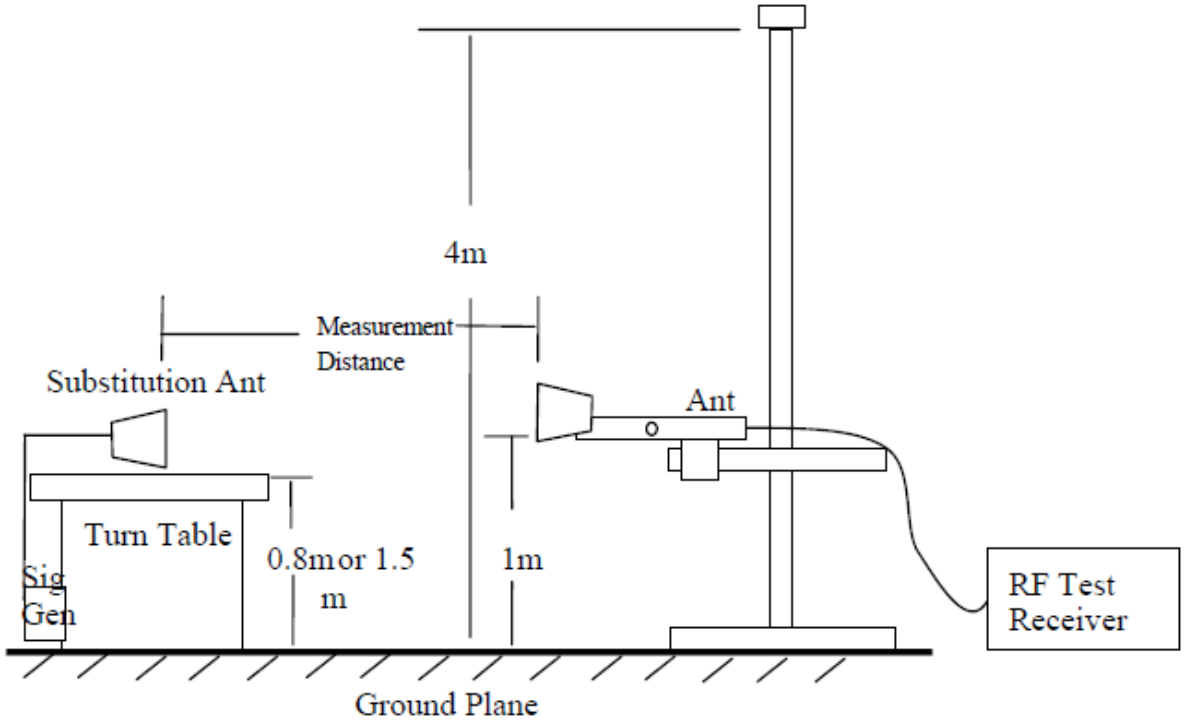


Radiated power test method:

（A）Test site-up for radiated ERP and/or EIRP measurements



（B）Substitution method set-up for radiated emission



6.2 Limit

According to §22.913(a)(2),The ERP of mobileand 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-603-E-2016 and ANSI C63.26-2015 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)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 22H Limits (dBm)	Result
Low Channel						
824.2	H	54.02	-26.29	27.73	38.45	PASS
824.2	V	54.20	-26.29	27.91	38.45	PASS
Middle Channel						
836.6	H	53.62	-26.35	27.27	38.45	PASS
836.6	V	53.05	-26.35	26.70	38.45	PASS
High Channel						
848.8	H	54.26	-26.42	27.84	38.45	PASS
848.8	V	54.11	-26.42	27.69	38.45	PASS

EIRP For GSM Mode PCS1900

Frequency (MHz)	Polar (H/V)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 24E Limits (dBm)	Result
Low Channel						
1850.2	H	54.79	-26.93	27.86	33.00	PASS
1850.2	V	54.72	-26.93	27.79	33.00	PASS
Middle Channel						
1880	H	54.00	-26.86	27.14	33.00	PASS
1880	V	53.98	-26.86	27.12	33.00	PASS
High Channel						
1909.8	H	54.35	-26.80	27.55	33.00	PASS
1909.8	V	53.99	-26.80	27.19	33.00	PASS

ERP For GPRS Mode GSM850

Frequency (MHz)	Polar (H/V)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 22H Limits (dBm)	Result
Low Channel						
824.2	H	53.52	-26.29	27.23	38.45	PASS
824.2	V	53.24	-26.29	26.95	38.45	PASS
Middle Channel						
836.6	H	53.63	-26.35	27.28	38.45	PASS
836.6	V	53.84	-26.35	27.49	38.45	PASS
High Channel						
848.8	H	54.31	-26.42	27.89	38.45	PASS
848.8	V	54.13	-26.42	27.71	38.45	PASS

EIRP For GPRS Mode PCS1900

Frequency (MHz)	Polar (H/V)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 24E Limits (dBm)	Result
Low Channel						
1850.2	H	54.44	-26.93	27.51	33.00	PASS
1850.2	V	54.27	-26.93	27.34	33.00	PASS
Middle Channel						
1880	H	54.47	-26.86	27.61	33.00	PASS
1880	V	53.81	-26.86	26.95	33.00	PASS
High Channel						
1909.8	H	54.39	-26.80	27.59	33.00	PASS
1909.8	V	53.92	-26.80	27.12	33.00	PASS

Note: All modes have been tested and only the worst mode is represented, with the worst data being Subtest1.

ERP For EGPRS Mode GSM850

Frequency (MHz)	Polar (H/V)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 22H Limits (dBm)	Result
Low Channel						
824.2	H	53.82	-26.29	27.53	38.45	PASS
824.2	V	53.29	-26.29	27.00	38.45	PASS
Middle Channel						
836.6	H	53.24	-26.35	26.89	38.45	PASS
836.6	V	52.97	-26.35	26.62	38.45	PASS
High Channel						
848.8	H	53.83	-26.42	27.41	38.45	PASS
848.8	V	54.01	-26.42	27.59	38.45	PASS

EIRP For EGPRS Mode PCS1900

Frequency (MHz)	Polar (H/V)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 24E Limits (dBm)	Result
Low Channel						
1850.2	H	54.40	-26.93	27.47	33.00	PASS
1850.2	V	54.06	-26.93	27.13	33.00	PASS
Middle Channel						
1880	H	54.24	-26.86	27.38	33.00	PASS
1880	V	54.35	-26.86	27.49	33.00	PASS
High Channel						
1909.8	H	54.45	-26.80	27.65	33.00	PASS
1909.8	V	54.38	-26.80	27.58	33.00	PASS

Note: All modes have been tested and only the worst mode is represented, with the worst data being Subtest1.

EIRP For RMC 12.2Kbps Mode Band II

Frequency (MHz)	Polar (H/V)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 24E Limits (dBm)	Result
Low Channel						
1852.4	H	50.32	-26.92	23.40	33.00	PASS
1852.4	V	48.83	-26.92	21.91	33.00	PASS
Middle Channel						
1880	H	49.52	-26.86	22.66	33.00	PASS
1880	V	48.44	-26.86	21.58	33.00	PASS
High Channel						
1907.6	H	48.83	-26.80	22.03	33.00	PASS
1907.6	V	48.60	-26.80	21.80	33.00	PASS

EIRP For HSDPA Mode Band II

Frequency (MHz)	Polar (H/V)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 24E Limits (dBm)	Result
Low Channel						
1852.4	H	49.38	-26.92	22.46	33.00	PASS
1852.4	V	49.19	-26.92	22.27	33.00	PASS
Middle Channel						
1880	H	49.72	-26.86	22.86	33.00	PASS
1880	V	48.76	-26.86	21.90	33.00	PASS
High Channel						
1907.6	H	48.61	-26.80	21.81	33.00	PASS
1907.6	V	48.73	-26.80	21.93	33.00	PASS

EIRP For HSUPA Mode Band II

Frequency (MHz)	Polar (H/V)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 24E Limits (dBm)	Result
Low Channel						
1852.4	H	50.14	-26.92	23.22	33.00	PASS
1852.4	V	49.19	-26.92	22.27	33.00	PASS
Middle Channel						
1880	H	48.70	-26.86	21.84	33.00	PASS
1880	V	49.06	-26.86	22.20	33.00	PASS
High Channel						
1907.6	H	49.50	-26.80	22.70	33.00	PASS
1907.6	V	48.69	-26.80	21.89	33.00	PASS

Note: The worst mode of HSDPA and HSUPA is Subtest1.

EIRP For RMC 12.2Kbps Mode Band IV

Frequency (MHz)	Polar (H/V)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 27L Limits (dBm)	Result
Low Channel						
1712.4	H	48.99	-27.23	21.76	33.00	PASS
1712.4	V	49.11	-27.23	21.88	33.00	PASS
Middle Channel						
1740	H	49.67	-27.19	22.48	33.00	PASS
1740	V	49.22	-27.19	22.03	33.00	PASS
High Channel						
1752.6	H	49.31	-27.14	22.17	33.00	PASS
1752.6	V	49.26	-27.14	22.12	33.00	PASS

EIRP For HSDPA Mode Band IV

Frequency (MHz)	Polar (H/V)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 27L Limits (dBm)	Result
Low Channel						
1712.4	H	48.21	-27.23	20.98	33.00	PASS
1712.4	V	47.60	-27.23	20.37	33.00	PASS
Middle Channel						
1740	H	48.86	-27.19	21.67	33.00	PASS
1740	V	48.17	-27.19	20.98	33.00	PASS
High Channel						
1752.6	H	47.95	-27.14	20.81	33.00	PASS
1752.6	V	47.72	-27.14	20.58	33.00	PASS

EIRP For HSUPA Mode Band IV

Frequency (MHz)	Polar (H/V)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 27L Limits (dBm)	Result
Low Channel						
1712.4	H	49.94	-27.23	22.71	33.00	PASS
1712.4	V	48.36	-27.23	21.13	33.00	PASS
Middle Channel						
1740	H	49.98	-27.19	22.79	33.00	PASS
1740	V	49.00	-27.19	21.81	33.00	PASS
High Channel						
1752.6	H	48.85	-27.14	21.71	33.00	PASS
1752.6	V	48.81	-27.14	21.67	33.00	PASS

Note: The worst mode of HSDPA and HSUPA is Subtest1.

ERP For RMC 12.2Kbps Mode Band V

Frequency (MHz)	Polar (H/V)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 22H Limits (dBm)	Result
Low Channel						
826.4	H	49.59	-26.29	23.30	38.45	PASS
826.4	V	48.88	-26.29	22.59	38.45	PASS
Middle Channel						
836.4	H	48.99	-26.35	22.64	38.45	PASS
836.4	V	48.91	-26.35	22.56	38.45	PASS
High Channel						
846.6	H	49.42	-26.42	23.00	38.45	PASS
846.6	V	48.71	-26.42	22.29	38.45	PASS

ERP For HSDPA Mode Band V

Frequency (MHz)	Polar (H/V)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 22H Limits (dBm)	Result
Low Channel						
826.4	H	50.29	-26.29	24.00	38.45	PASS
826.4	V	48.64	-26.29	22.35	38.45	PASS
Middle Channel						
836.4	H	48.34	-26.35	21.99	38.45	PASS
836.4	V	48.89	-26.35	22.54	38.45	PASS
High Channel						
846.6	H	49.98	-26.42	23.56	38.45	PASS
846.6	V	48.53	-26.42	22.11	38.45	PASS

ERP For HSUPA Mode Band V

Frequency (MHz)	Polar (H/V)	Reading Level (dBm)	Correct Factor (dB)	Measurement (dBm)	FCC Part 22H Limits (dBm)	Result
Low Channel						
826.4	H	49.40	-26.29	23.11	38.45	PASS
826.4	V	48.57	-26.29	22.28	38.45	PASS
Middle Channel						
836.4	H	50.19	-26.35	23.84	38.45	PASS
836.4	V	48.74	-26.35	22.39	38.45	PASS
High Channel						
846.6	H	48.86	-26.42	22.44	38.45	PASS
846.6	V	48.63	-26.42	22.21	38.45	PASS

Note: The worst mode of HSDPA and HSUPA is Subtest1.

Max. Conducted Output Power

For Cellular Band (GSM850)

Band	**GSM850**		
Channel	**128**	**190**	**251**
Frequency(MHz)	**824.2**	**836.6**	**848.8**
GSM	32.56	**32.68**	32.66
GPRS Subtest-1	32.49	32.66	32.61
GPRS Subtest-2	30.36	30.38	30.38
GPRS Subtest-3	28.46	28.56	28.62
GPRS Subtest-4	26.5	26.54	26.58
EGPRS Subtest-1	25.83	25.99	25.57
EGPRS Subtest-2	25.09	25.01	25.29
EGPRS Subtest-3	22.99	23.59	23.09
EGPRS Subtest-4	21.28	26.51	21.05

For PCS Band (GSM1900)

Band	**GSM1900**		
Channel	**512**	**661**	**810**
Frequency(MHz)	**1850.2**	**1880**	**1909.8**
GSM	**30.34**	30.15	30.00
GPRS Slot -1	30.34	30.16	30.01
GPRS Slot -2	27.74	27.33	27.06
GPRS Slot -3	26.15	25.74	25.48
GPRS Slot -4	24.29	23.86	23.62
EGPRS Slot -1	27.36	26.99	26.74
EGPRS Slot -2	25.44	25.62	24.75
EGPRS Slot -3	23.75	23.17	23.03
EGPRS Slot -4	22.49	21.71	21.47

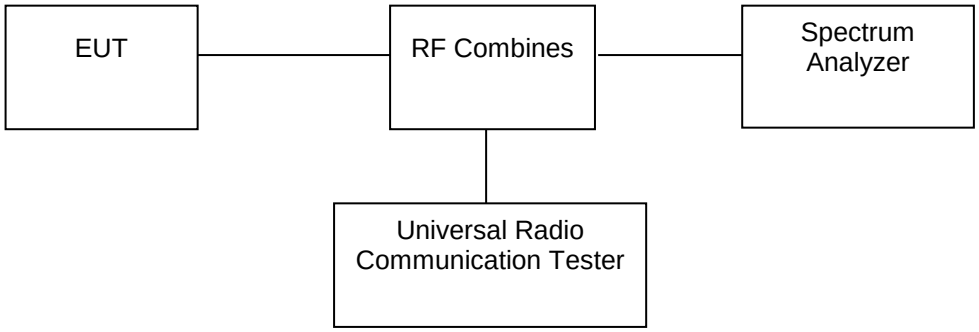
Band	WCDMA Band II		
Channel	**9262**	**9400**	**9538**
Frequency(MHz)	**1852.4**	**1880.0**	**1907.6**
WCDMA RMC 12.2K	**22.76**	22.44	22.31
HSDPA Subtest-1	22.65	21.81	22.08
HSDPA Subtest-2	22.25	21.61	21.85
HSDPA Subtest-3	21.74	21.07	21.39
HSDPA Subtest-4	21.92	21.15	21.38
HSUPA Subtest-1	22.58	21.61	21.91
HSUPA Subtest-2	22.58	21.86	21.94
HSUPA Subtest-3	22.11	21.47	21.64
HSUPA Subtest-4	22.56	21.79	22.02
HSUPA Subtest-5	22.12	21.45	21.54

Band	WCDMA Band IV		
Channel	**1312**	**1450**	**1513**
Frequency(MHz)	**1712.4**	**1740**	**1752.6**
WCDMA RMC 12.2K	23.29	**23.54**	23.42
HSDPA Subtest-1	22.55	22.73	22.20
HSDPA Subtest-2	22.29	22.26	21.81
HSDPA Subtest-3	22.13	22.05	21.52
HSDPA Subtest-4	22.04	21.81	21.47
HSUPA Subtest-1	22.43	22.62	21.99
HSUPA Subtest-2	22.60	22.62	22.14
HSUPA Subtest-3	22.00	22.19	22.04
HSUPA Subtest-4	22.60	22.69	22.14
HSUPA Subtest-5	22.23	22.35	22.15

Band	WCDMA Band V		
Channel	**4132**	**4182**	**4233**
Frequency(MHz)	**826.4**	**836.4**	**846.6**
WCDMA RMC 12.2K	**24.20**	23.95	23.86
HSDPA Subtest-1	22.82	22.26	22.35
HSDPA Subtest-2	22.49	21.95	22.26
HSDPA Subtest-3	21.94	21.87	21.74
HSDPA Subtest-4	22.08	21.37	21.79
HSUPA Subtest-1	22.70	22.19	22.19
HSUPA Subtest-2	22.61	22.27	22.41
HSUPA Subtest-3	22.32	22.14	22.15
HSUPA Subtest-4	22.57	22.19	22.38
HSUPA Subtest-5	22.36	22.22	22.27

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.

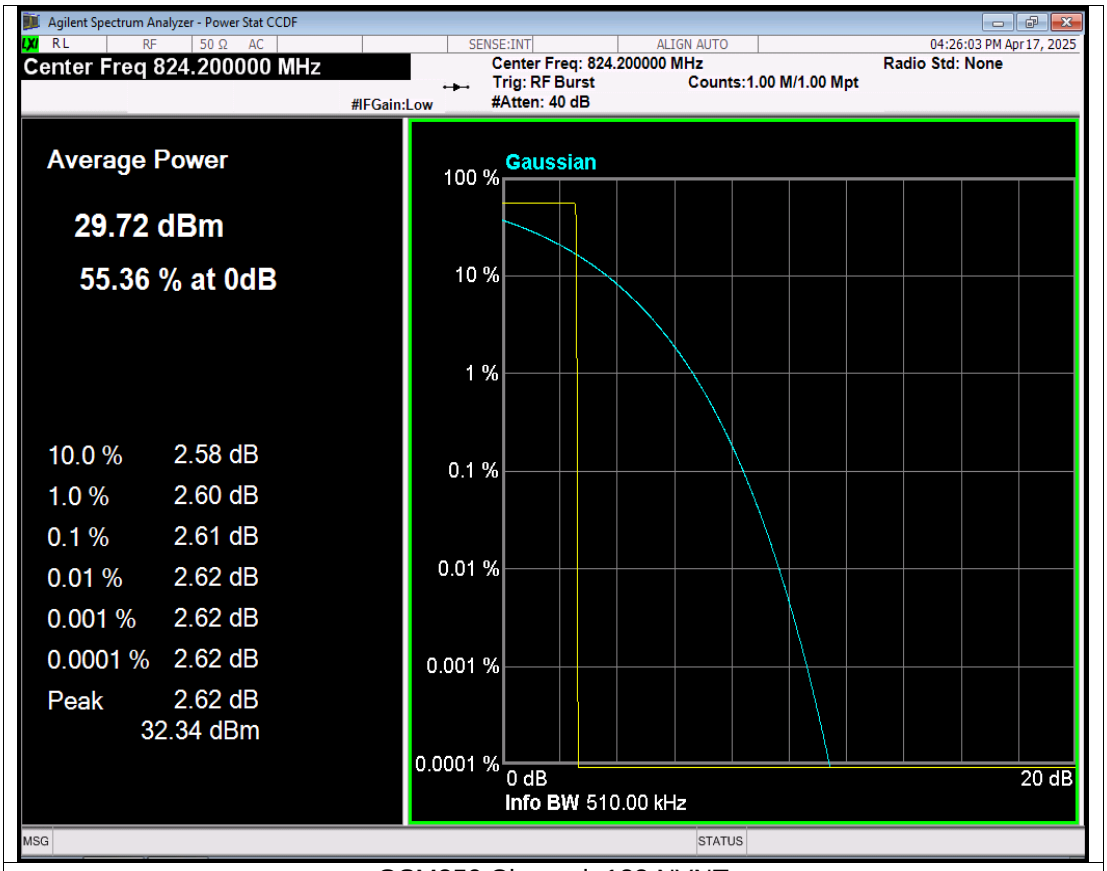
According to §22.913(d),The peak-to-average ratio (PAR) of the transmission must not exceed 13 dB.

7.3 Test procedure

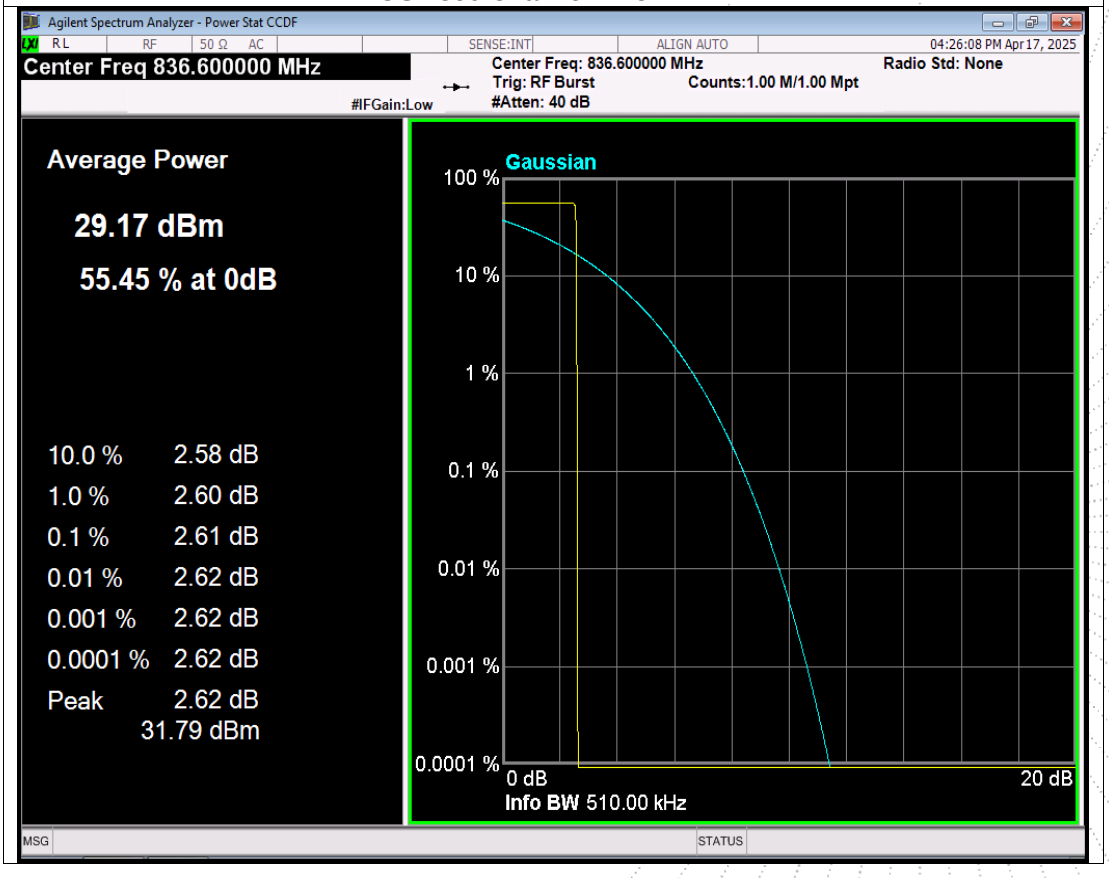
The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 30kHz and the peak-to-average ratio (PAR) of the transmission was recorded.Record the maximum PAPR level associated with a probability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

7.4 Test Result

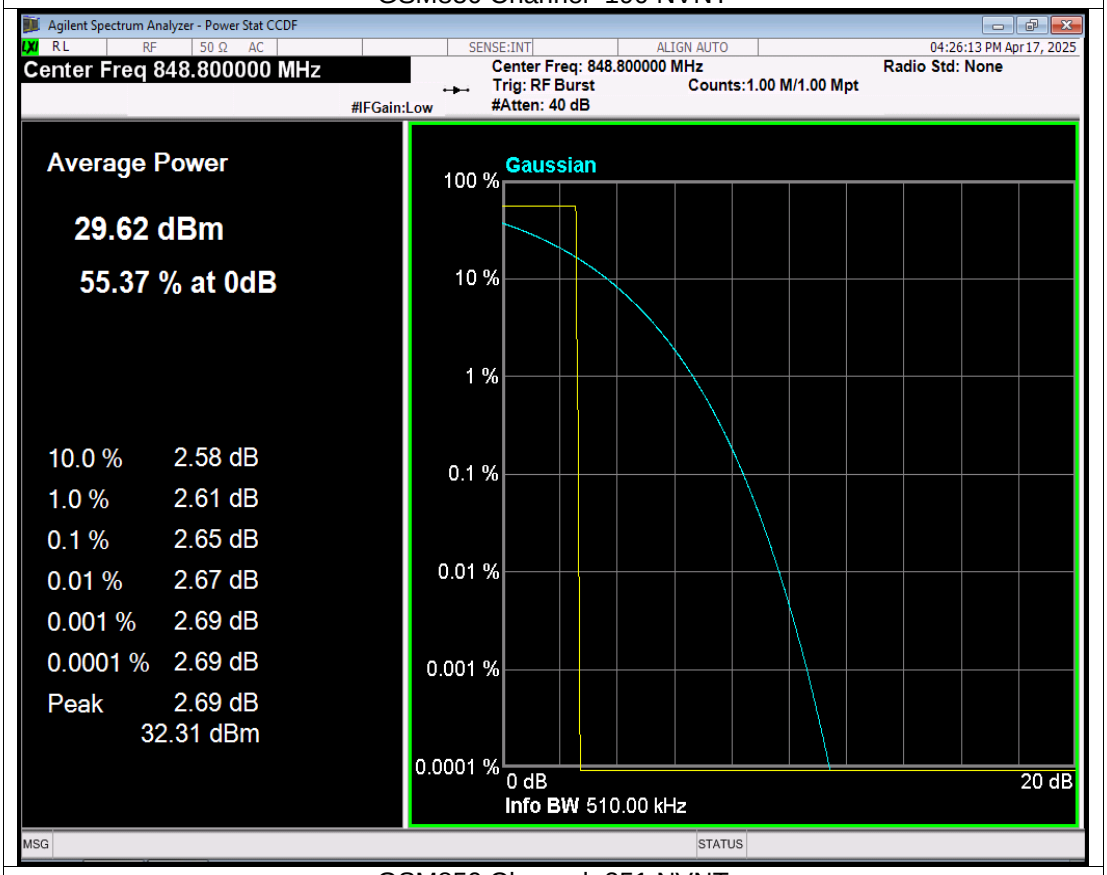
Band	Channel	Frequency (MHz)	Result (dB)	high Limit (dB)	Verdict
GSM850	128	824.2	2.61	13.00	PASS
GSM850	190	836.6	2.61	13.00	PASS
GSM850	251	848.8	2.65	13.00	PASS
GSM1900	512	1850.2	2.62	13.00	PASS
GSM1900	661	1880	2.77	13.00	PASS
GSM1900	810	1909.8	4.85	13.00	PASS
GPRS850	128	824.2	2.65	13.00	PASS
GPRS850	190	836.6	2.67	13.00	PASS
GPRS850	251	848.8	2.66	13.00	PASS
GPRS1900	512	1850.2	2.66	13.00	PASS
GPRS1900	661	1880	2.66	13.00	PASS
GPRS1900	810	1909.8	3.52	13.00	PASS
EGPRS850	128	824.2	9.18	13.00	PASS
EGPRS850	190	836.6	8.13	13.00	PASS
EGPRS850	251	848.8	9.17	13.00	PASS
EGPRS1900	512	1850.2	5.45	13.00	PASS
EGPRS1900	661	1880	5.99	13.00	PASS
EGPRS1900	810	1909.8	6.08	13.00	PASS



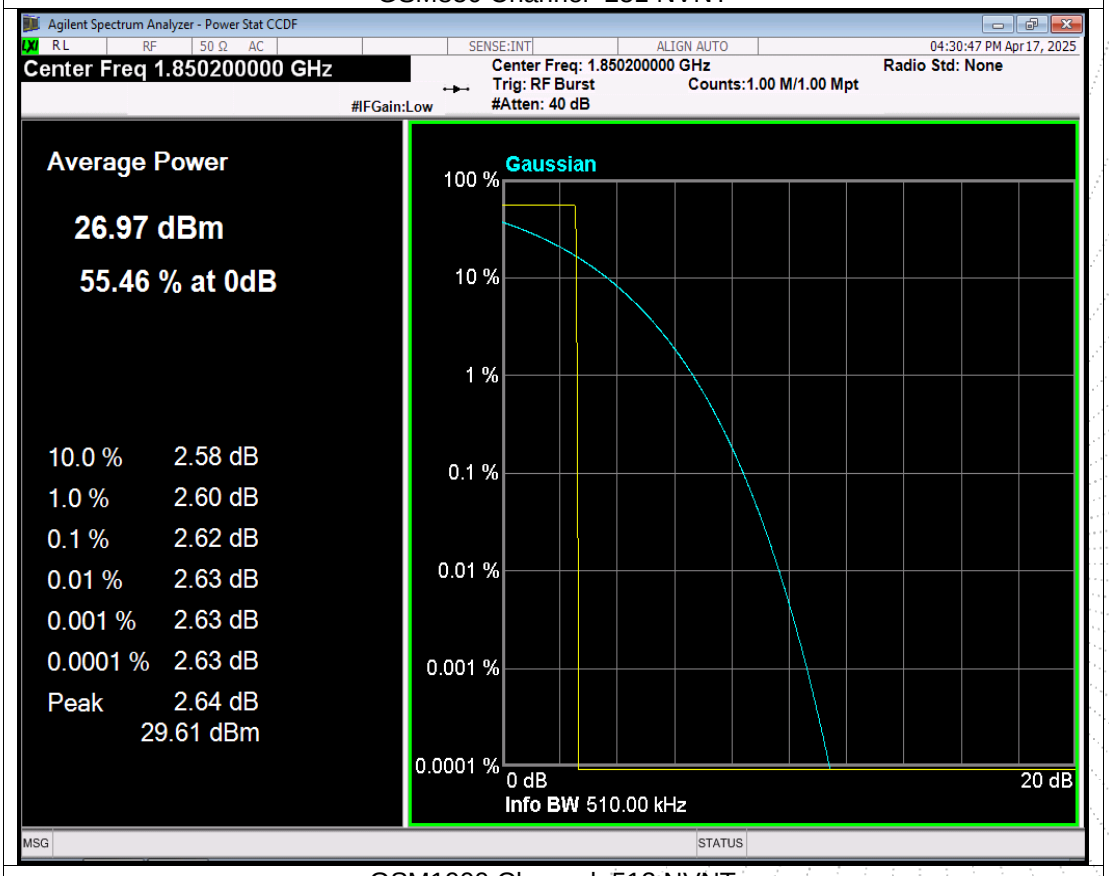
GSM850 Channel=128 NVNT



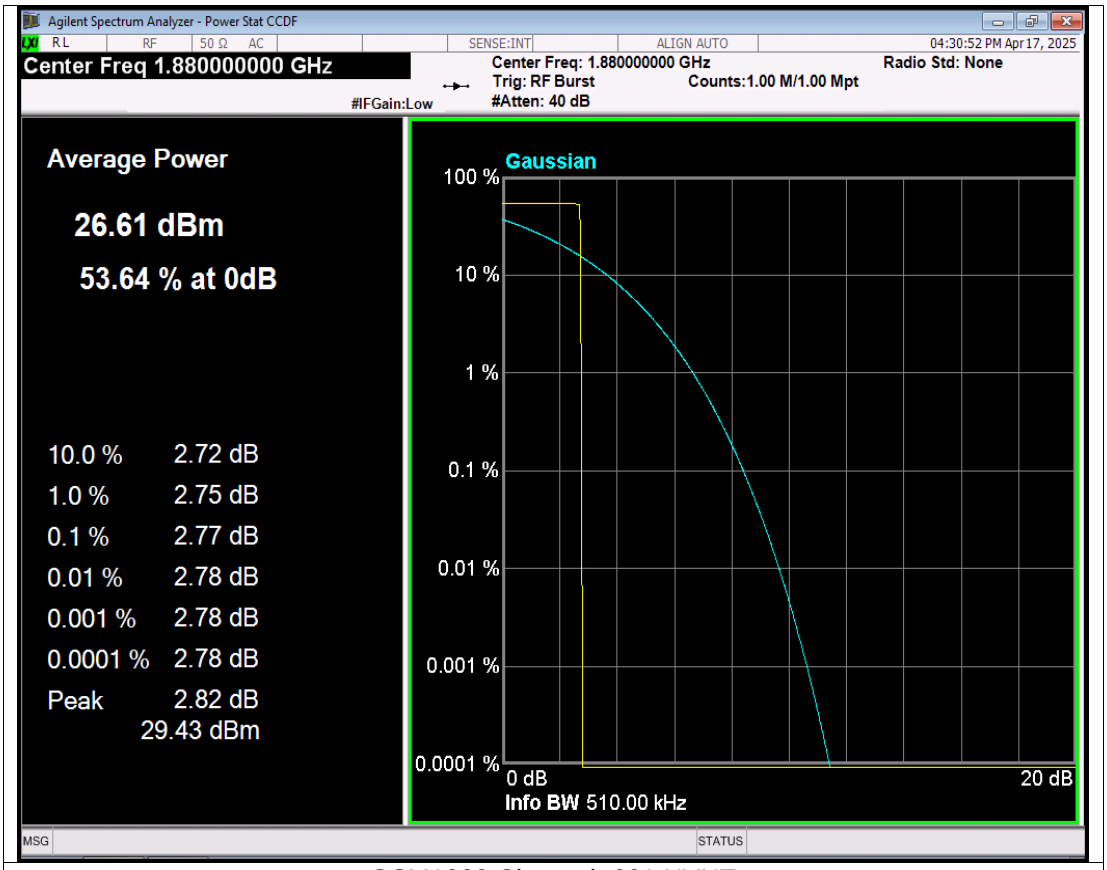
GSM850 Channel=190 NVNT



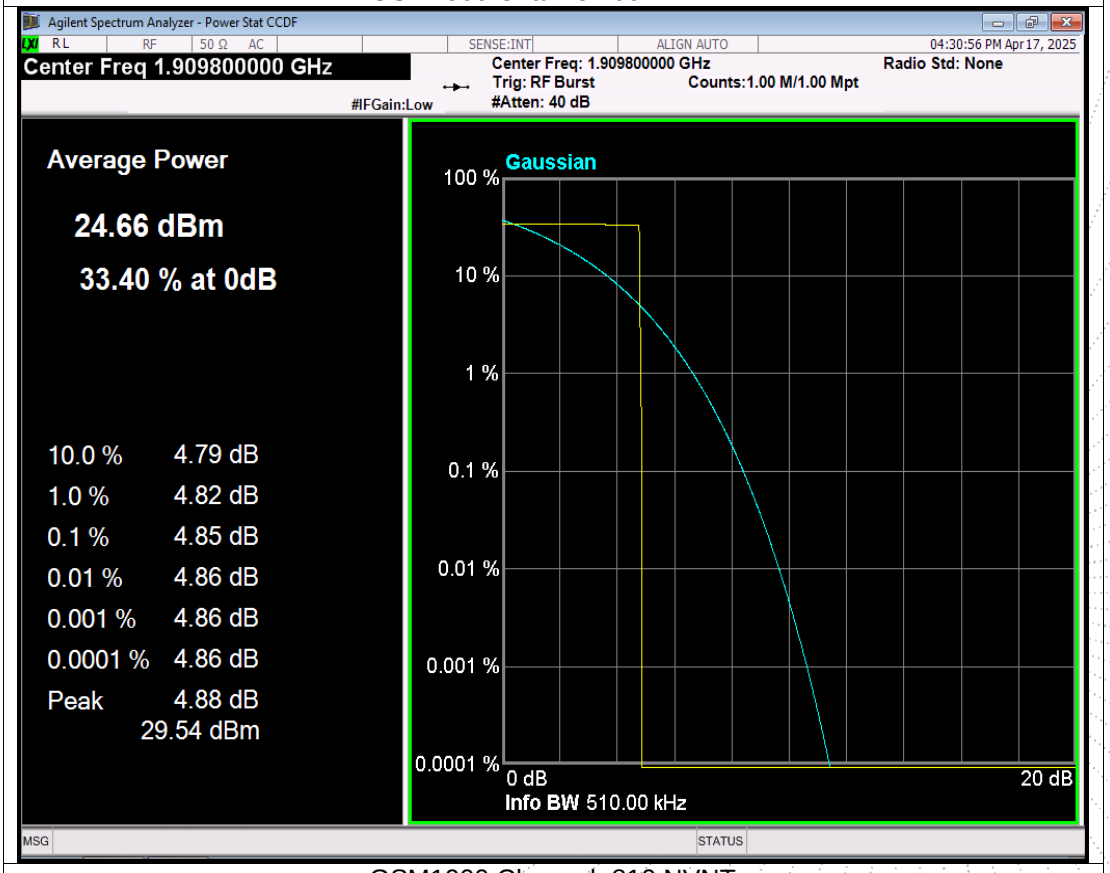
GSM850 Channel=251 NVNT



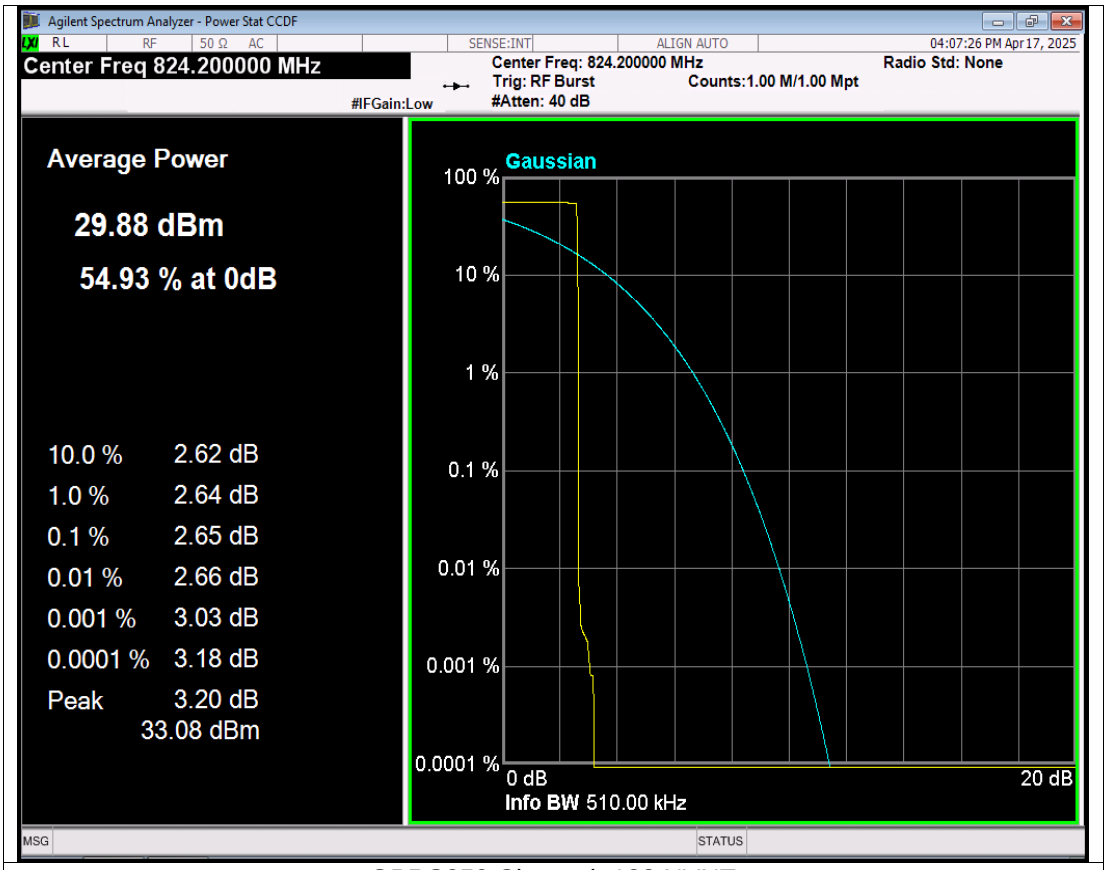
GSM1900 Channel=512 NVNT



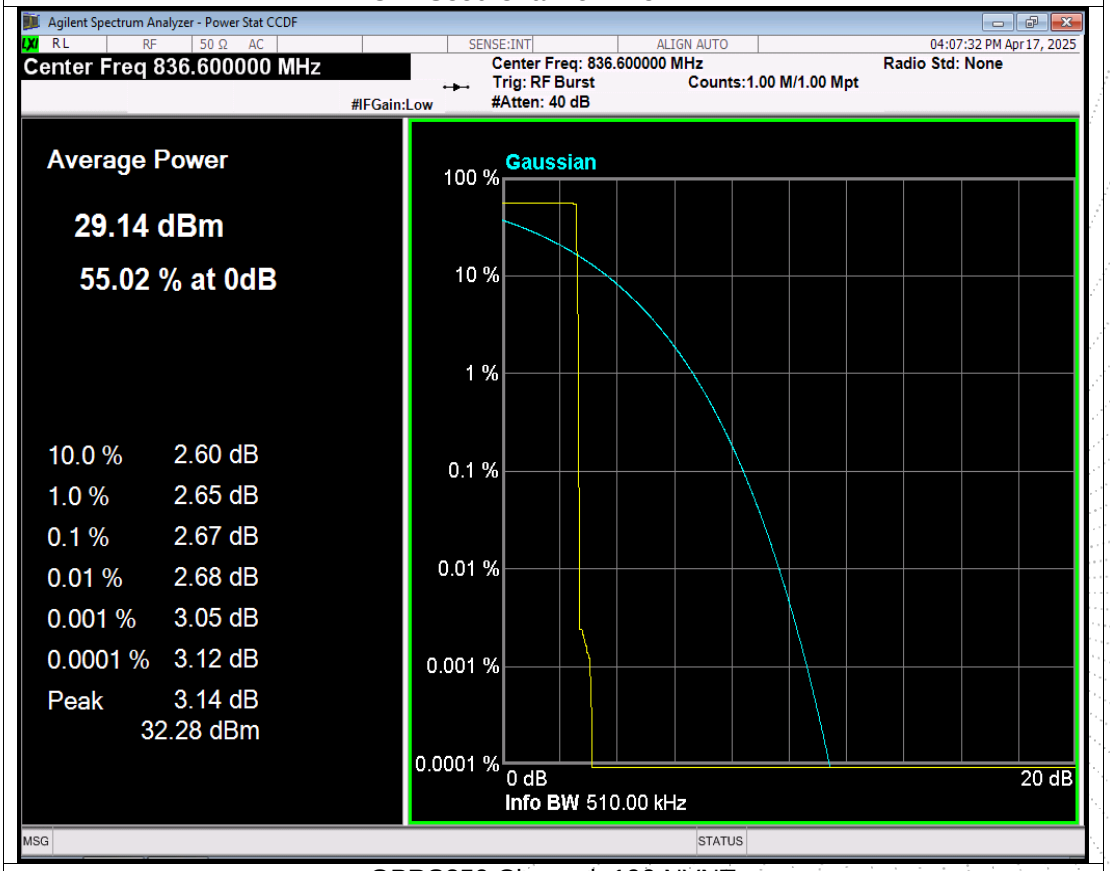
GSM1900 Channel=661 NVNT



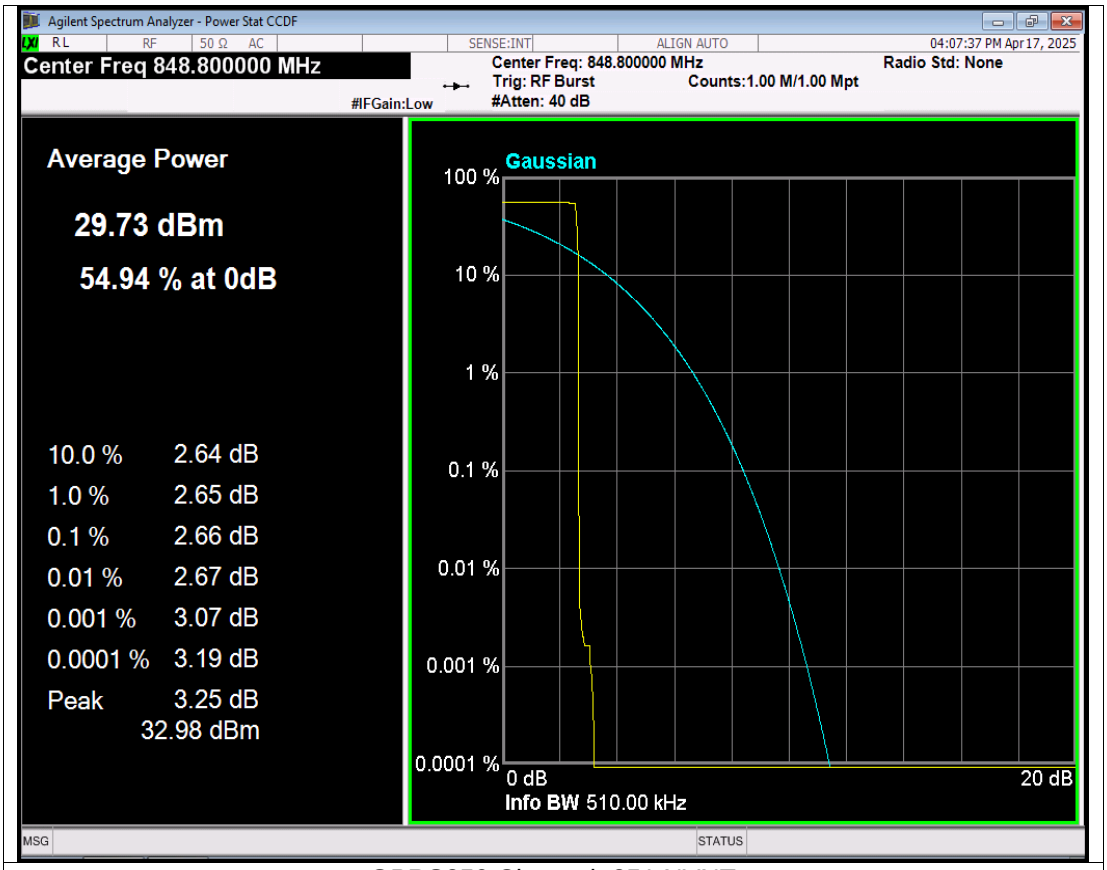
GSM1900 Channel=810 NVNT



GPRS850 Channel=128 NVNT



GPRS850 Channel=190 NVNT



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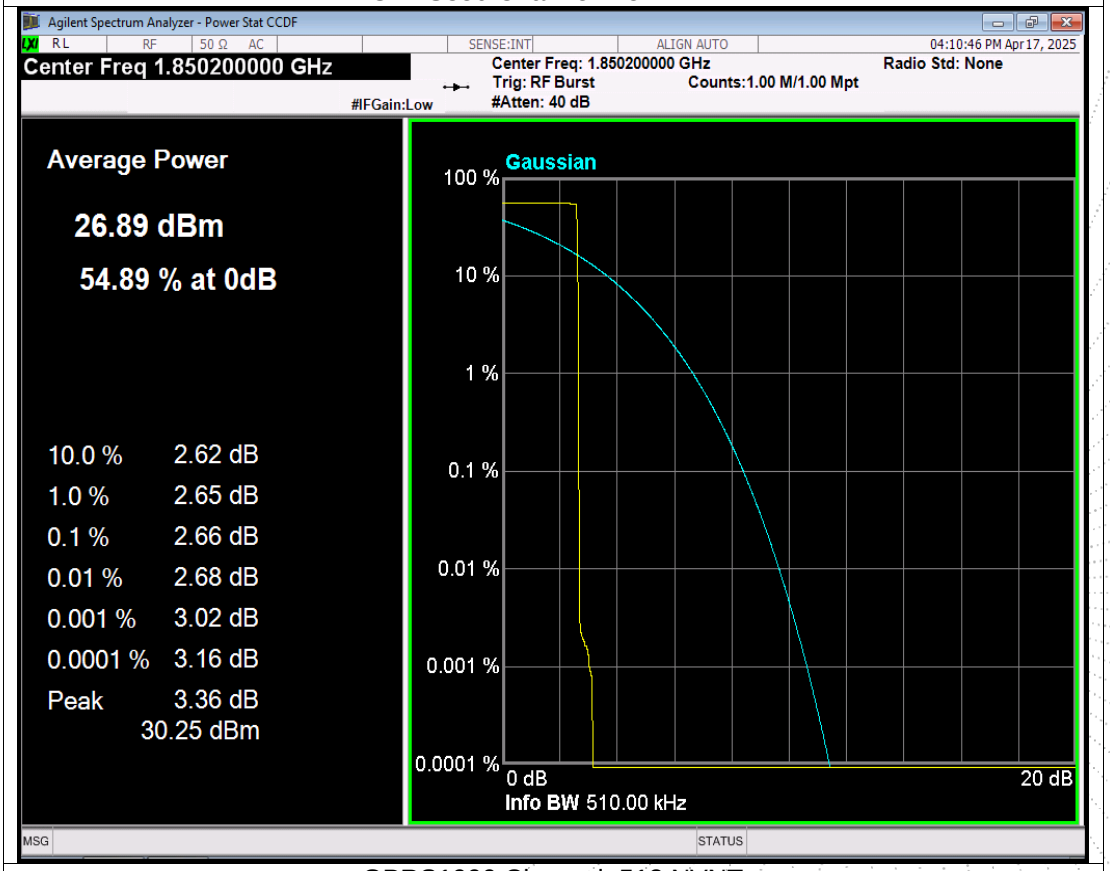
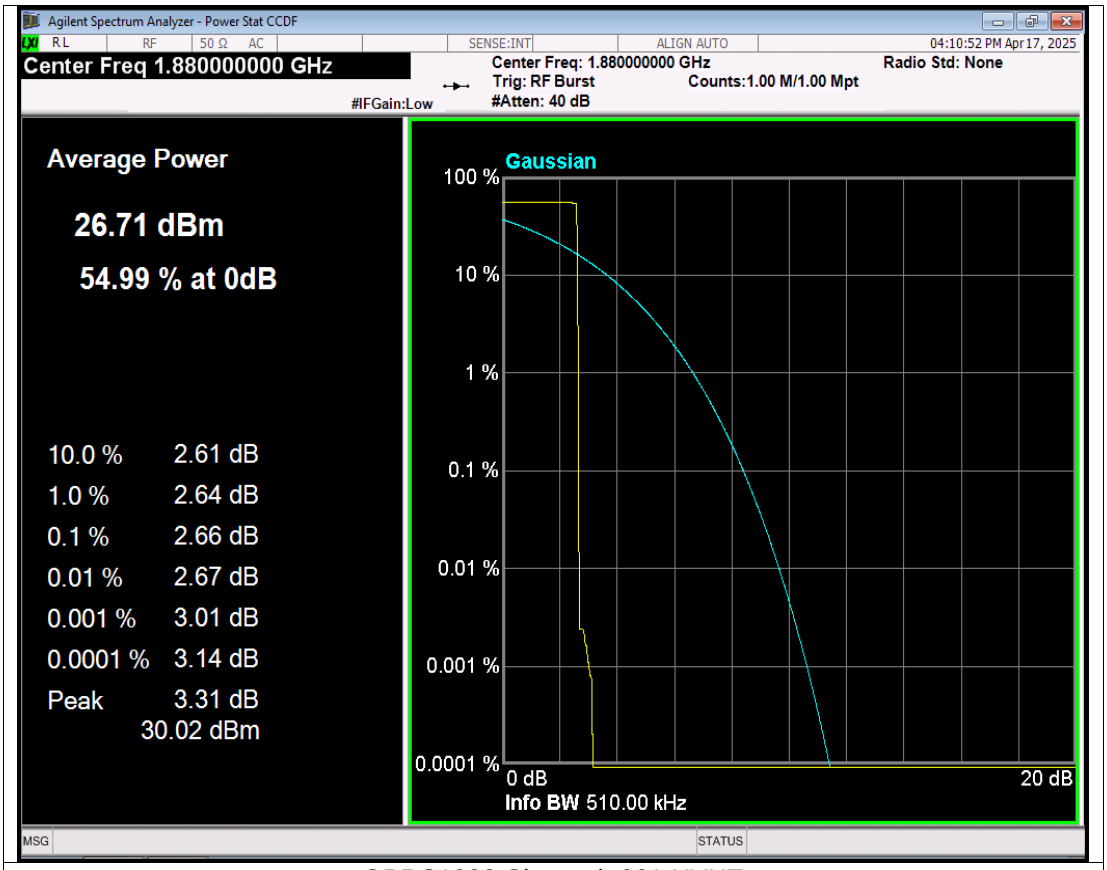
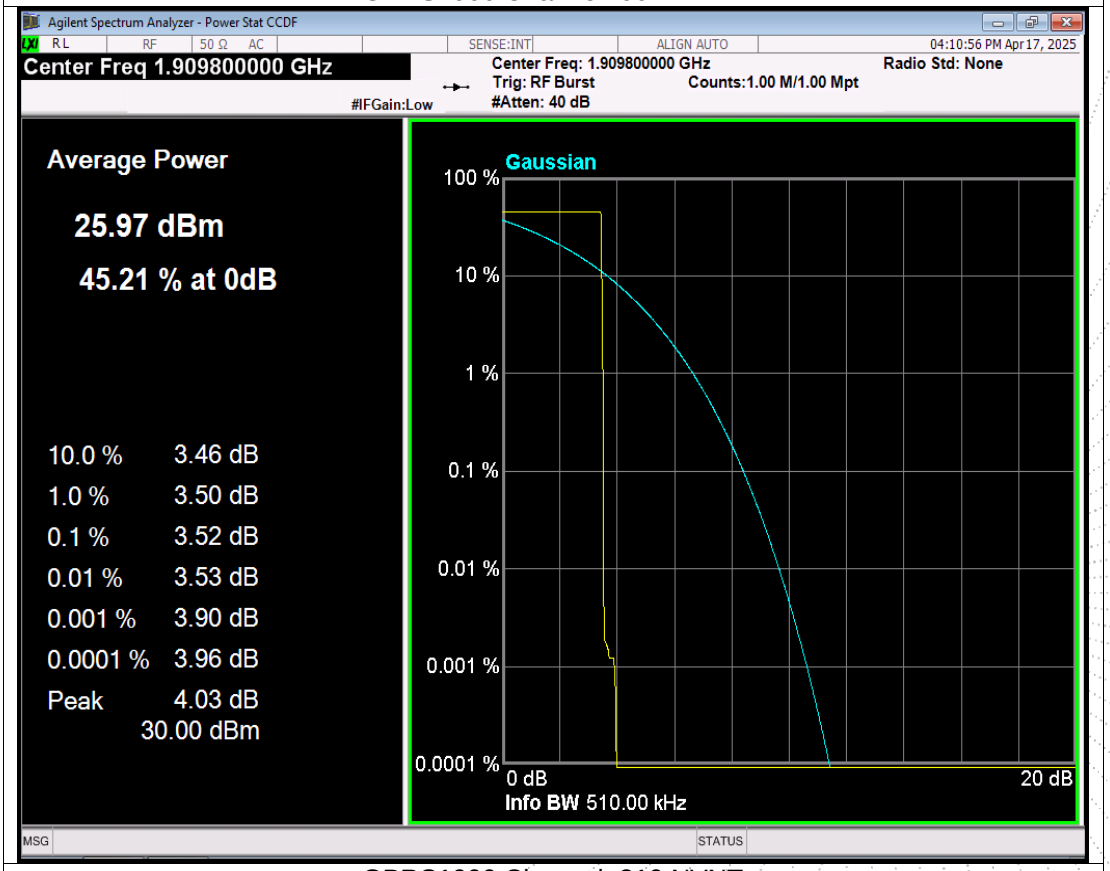


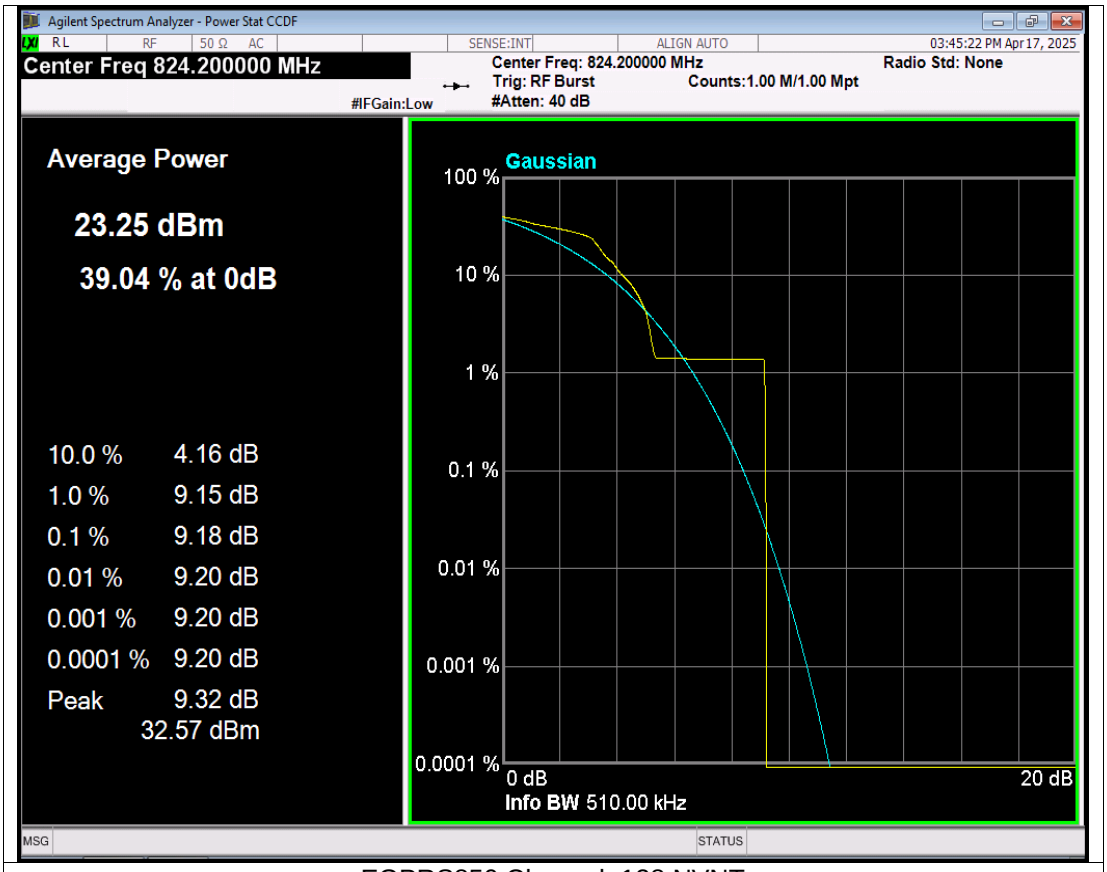
GPRS1900 Channel=512 NVNT



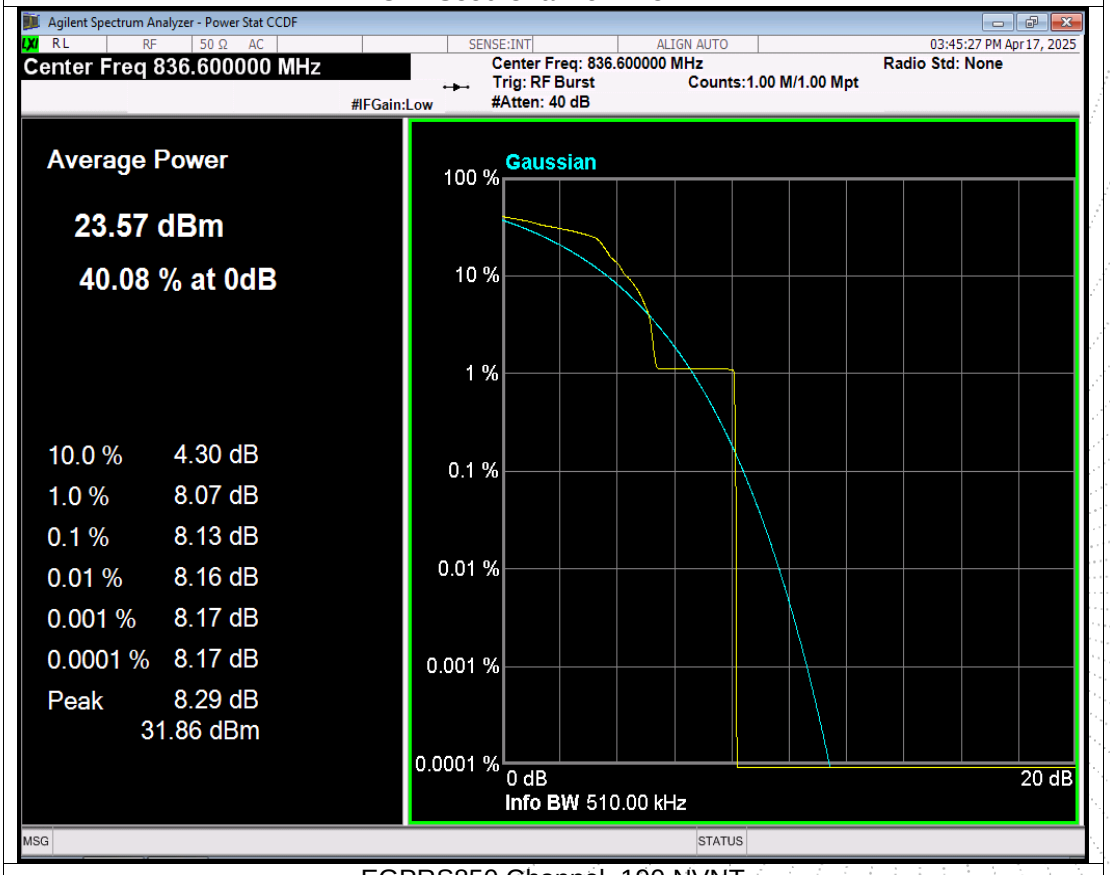
GPRS1900 Channel=661 NVNT



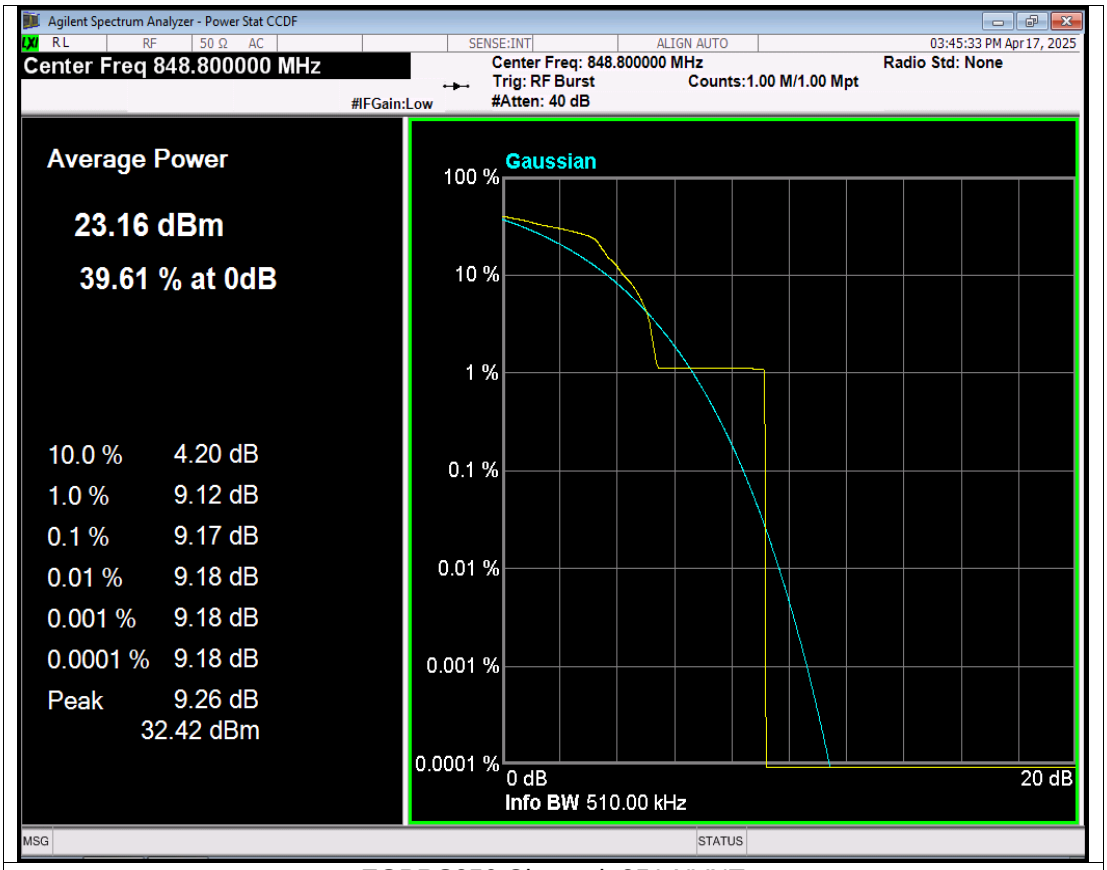
GPRS1900 Channel=810 NVNT



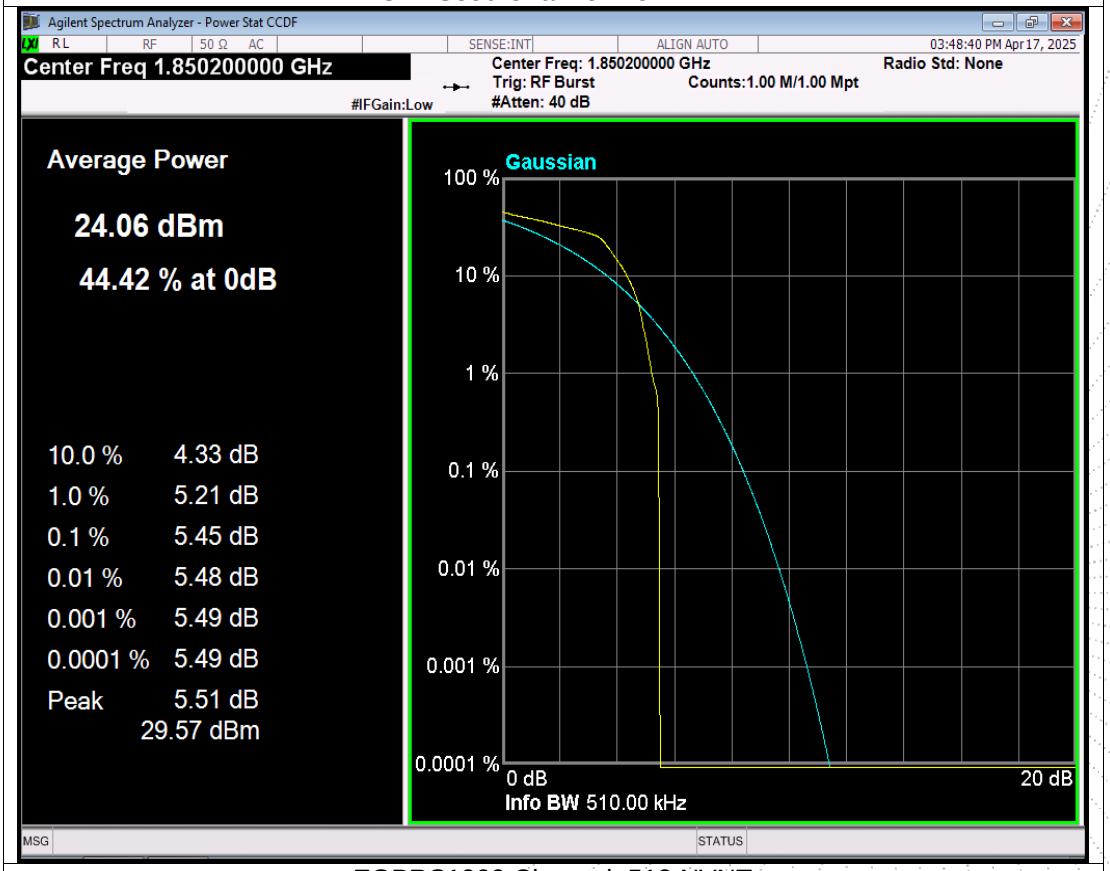
EGPRS850 Channel=128 NVNT



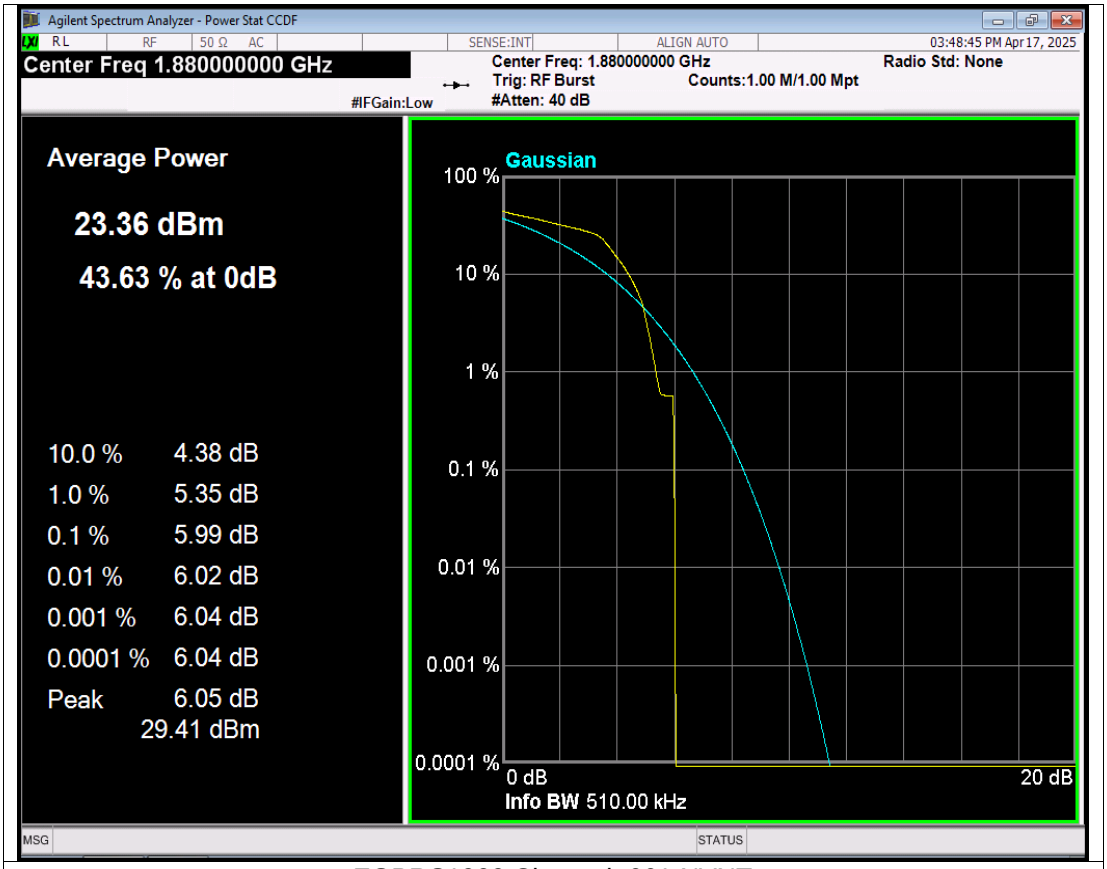
EGPRS850 Channel=190 NVNT



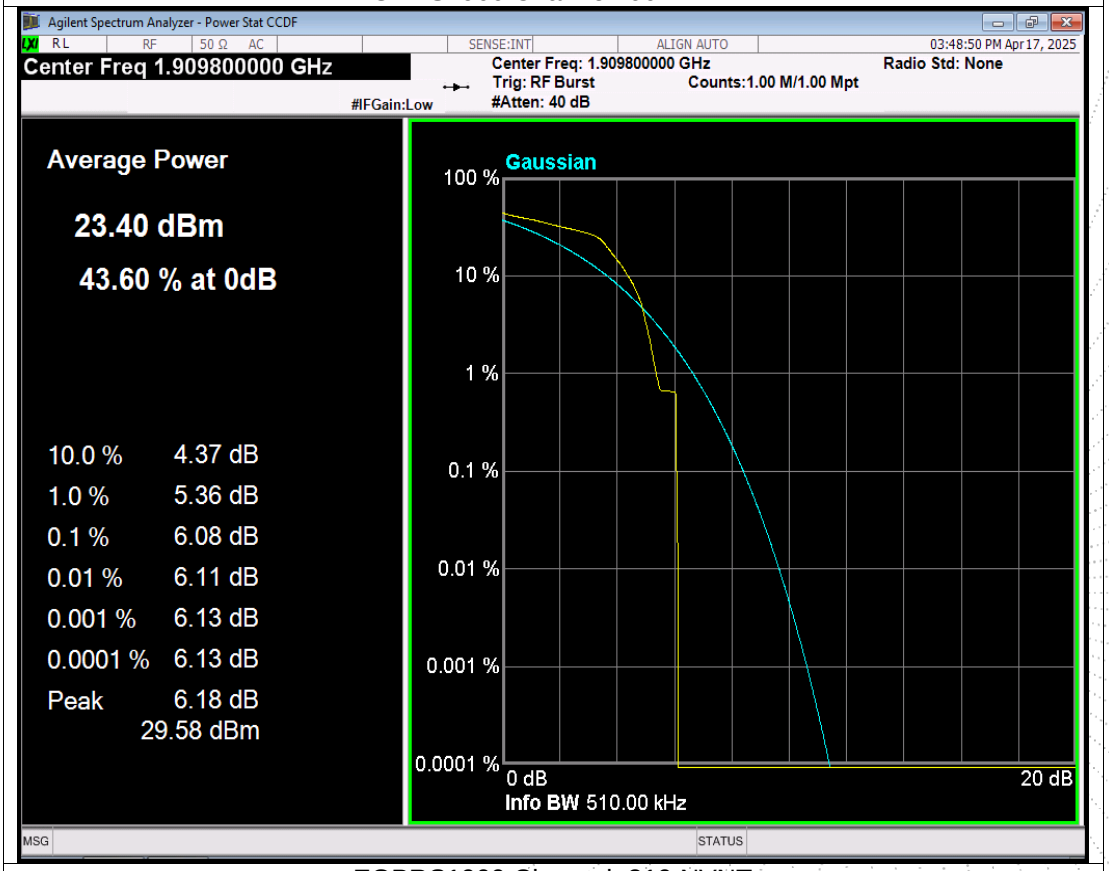
EGPRS850 Channel=251 NVNT



EGPRS1900 Channel=512 NVNT



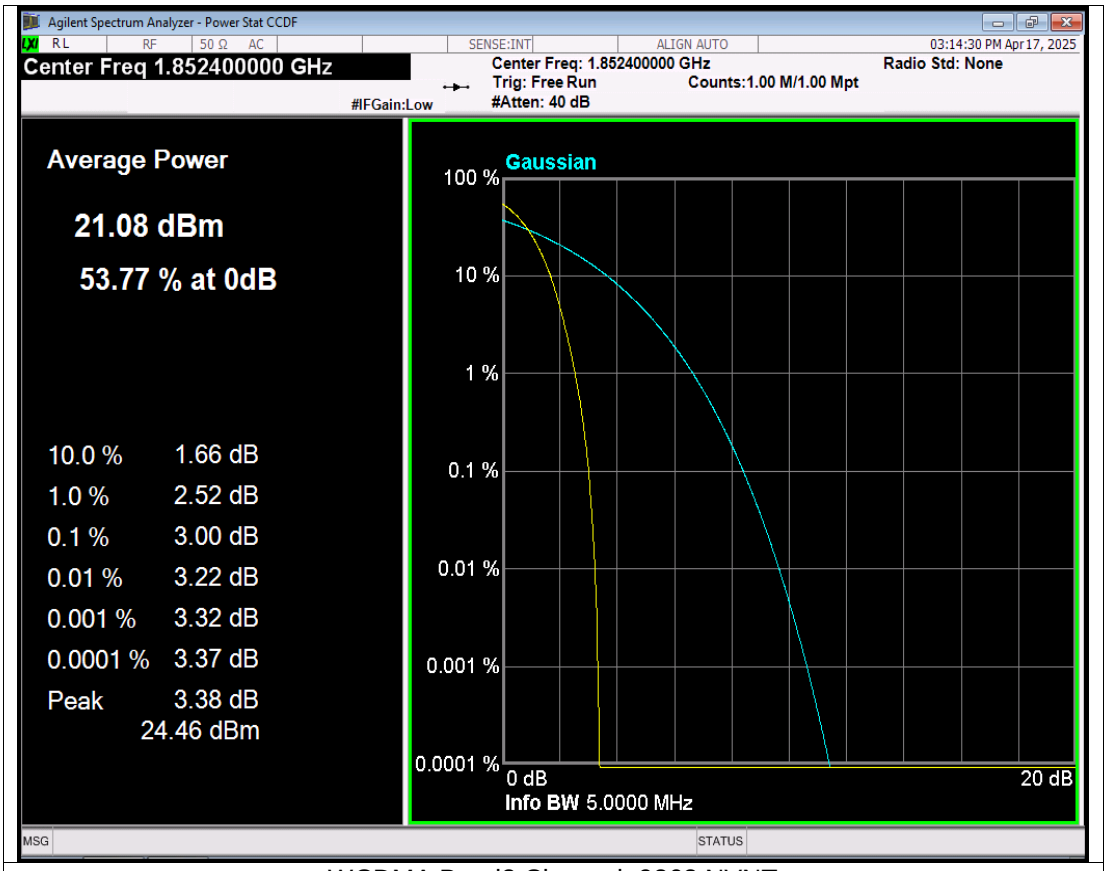
EGPRS1900 Channel=661 NVNT



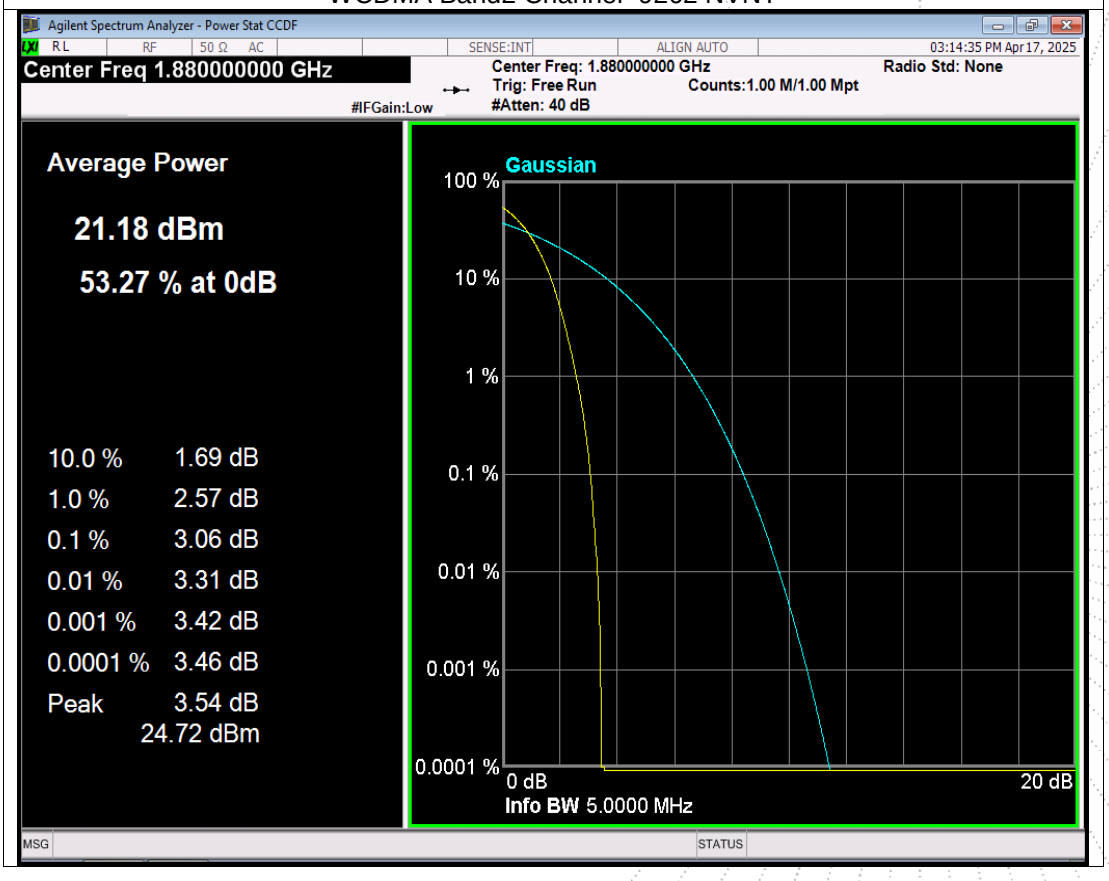
EGPRS1900 Channel=810 NVNT

Band	Channel	Frequency (MHz)	Result (dB)	high Limit (dB)	Verdict
WCDMA Band2	9262	1852.4	3.00	13	PASS
WCDMA Band2	9400	1880	3.06	13	PASS
WCDMA Band2	9538	1907.6	3.06	13	PASS
WCDMA Band4	1312	1712.4	2.91	13	PASS
WCDMA Band4	1450	1740	2.81	13	PASS
WCDMA Band4	1513	1752.6	2.48	13	PASS
WCDMA Band5	4132	826.4	3.12	13	PASS
WCDMA Band5	4182	836.4	2.96	13	PASS
WCDMA Band5	4233	846.6	2.55	13	PASS

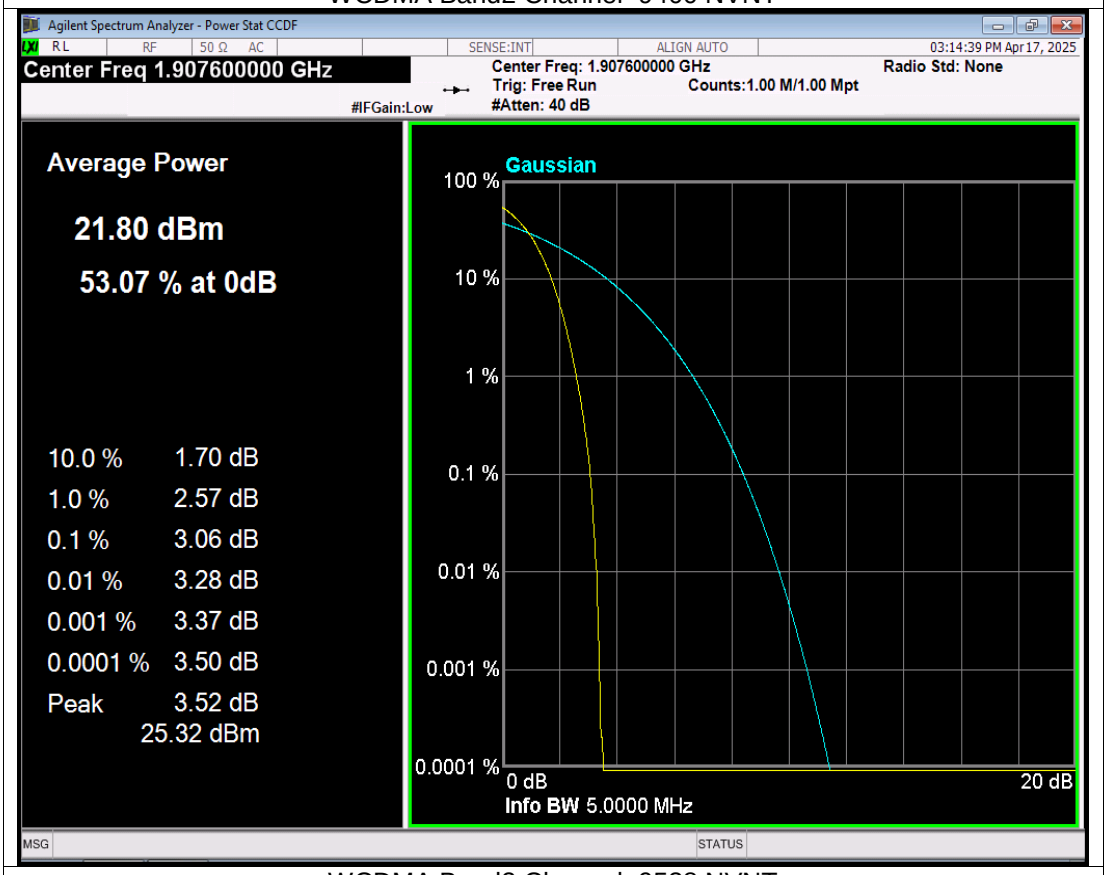
Note:In WCDMA, RMC, HSDPA and HSUPA all three tests only reflect the worst mode RMC.



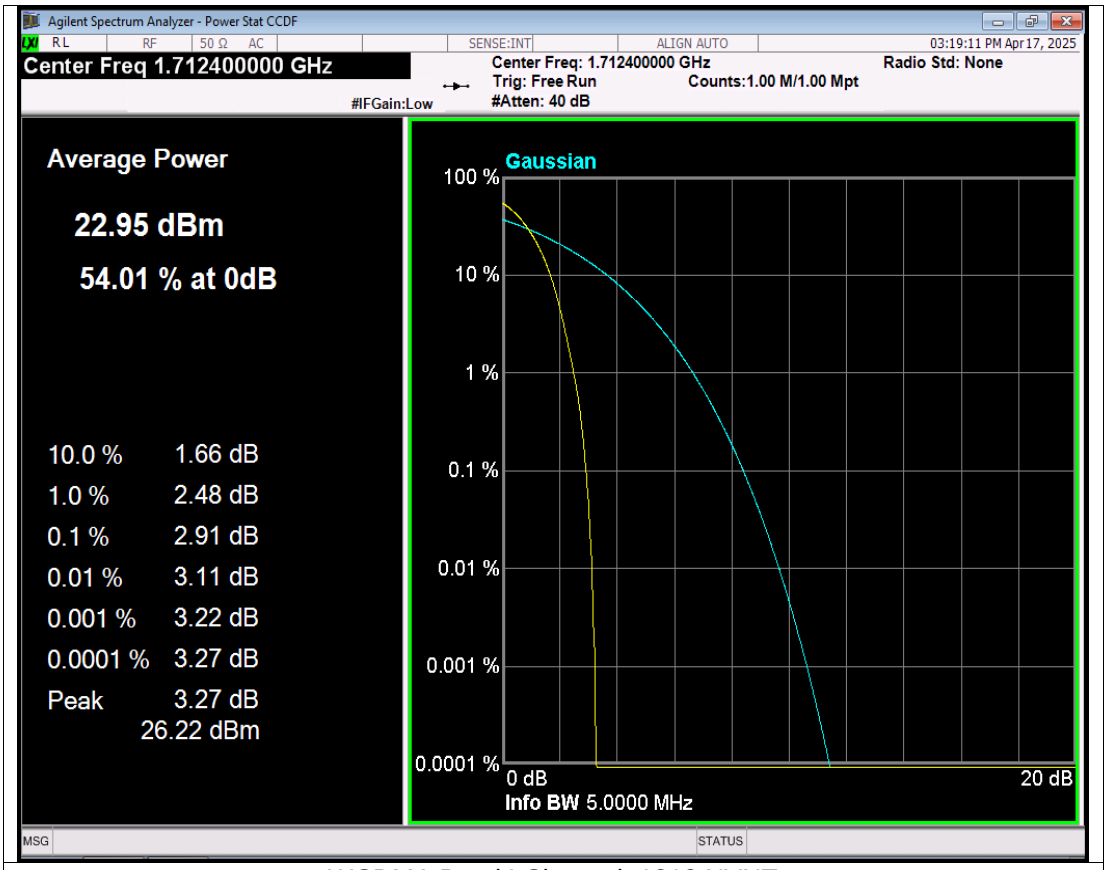
WCDMA Band2 Channel=9262 NVNT



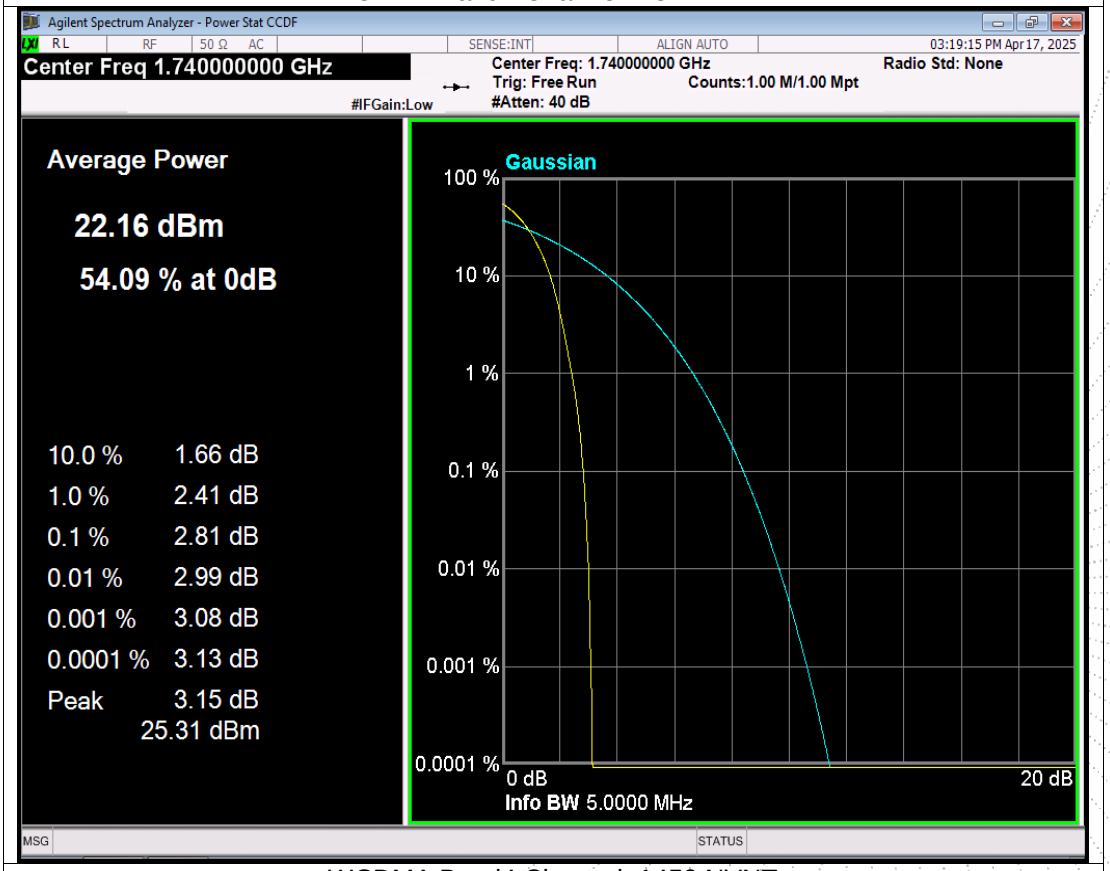
WCDMA Band2 Channel=9400 NVNT



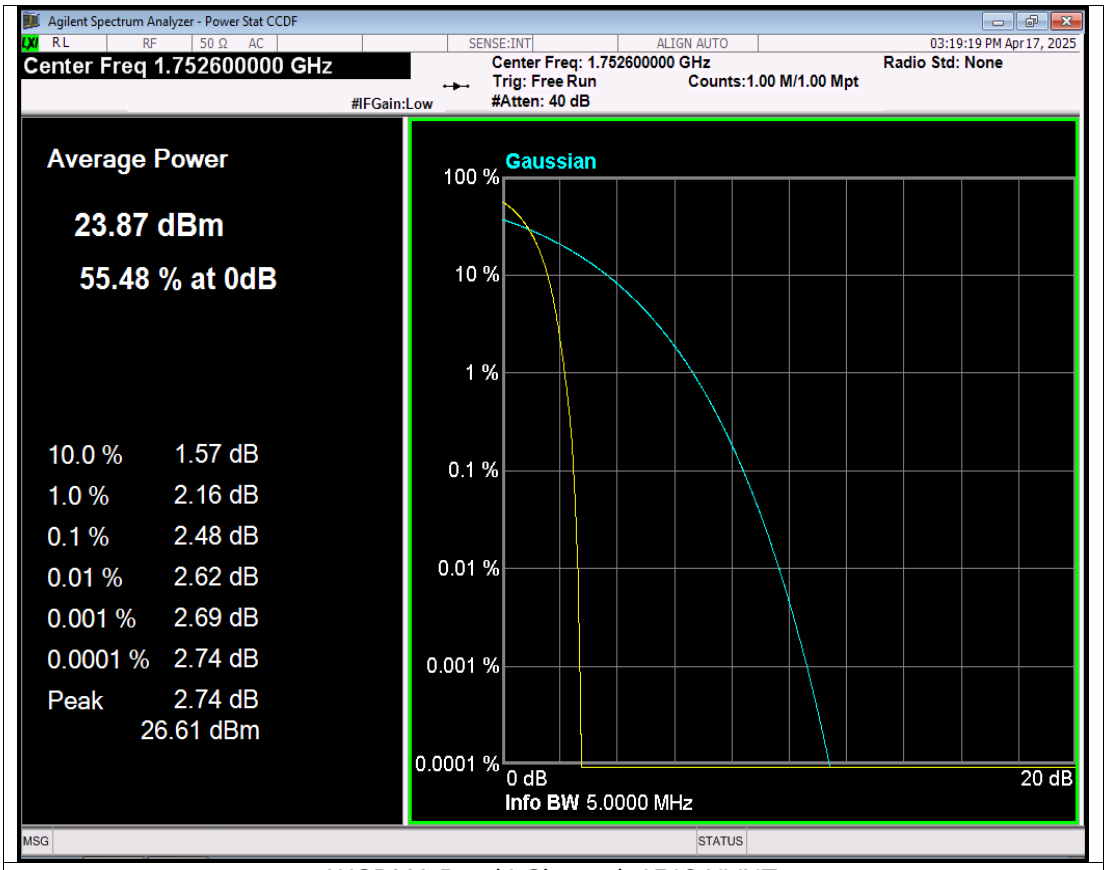
WCDMA Band2 Channel=9538 NVNT



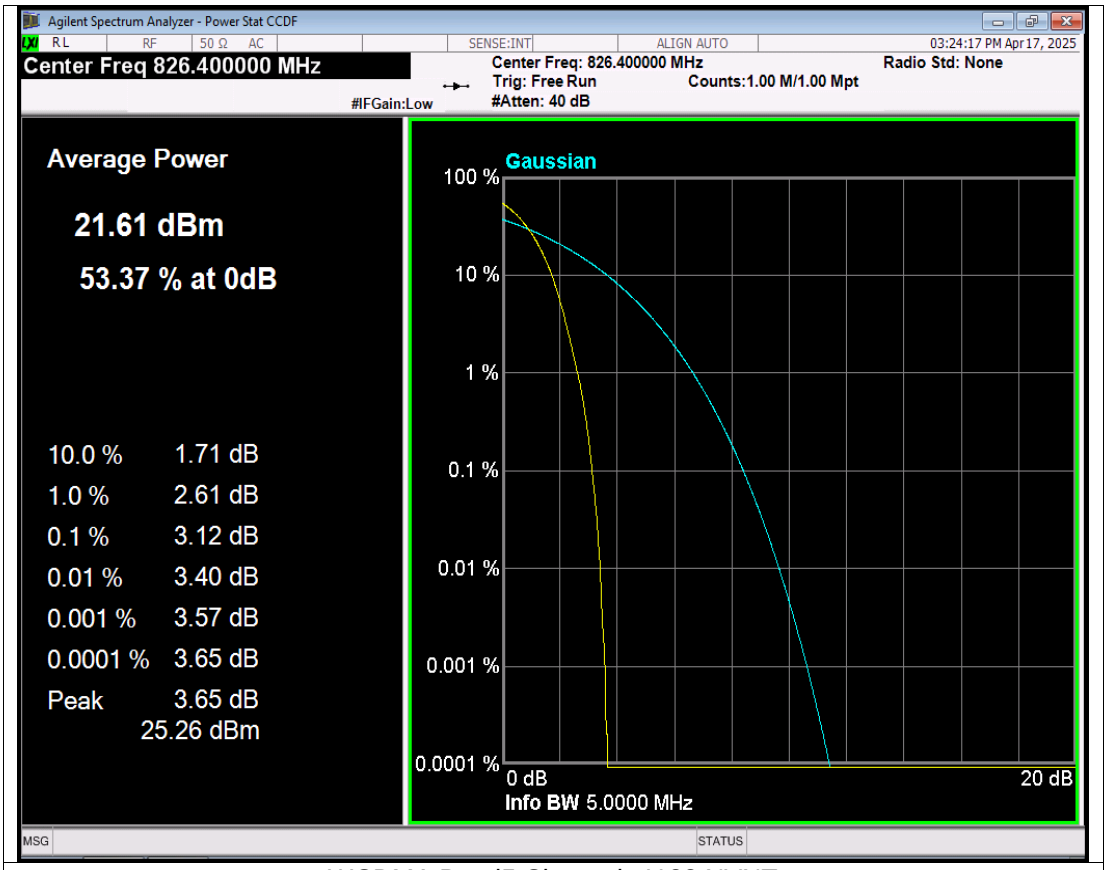
WCDMA Band4 Channel=1312 NVNT



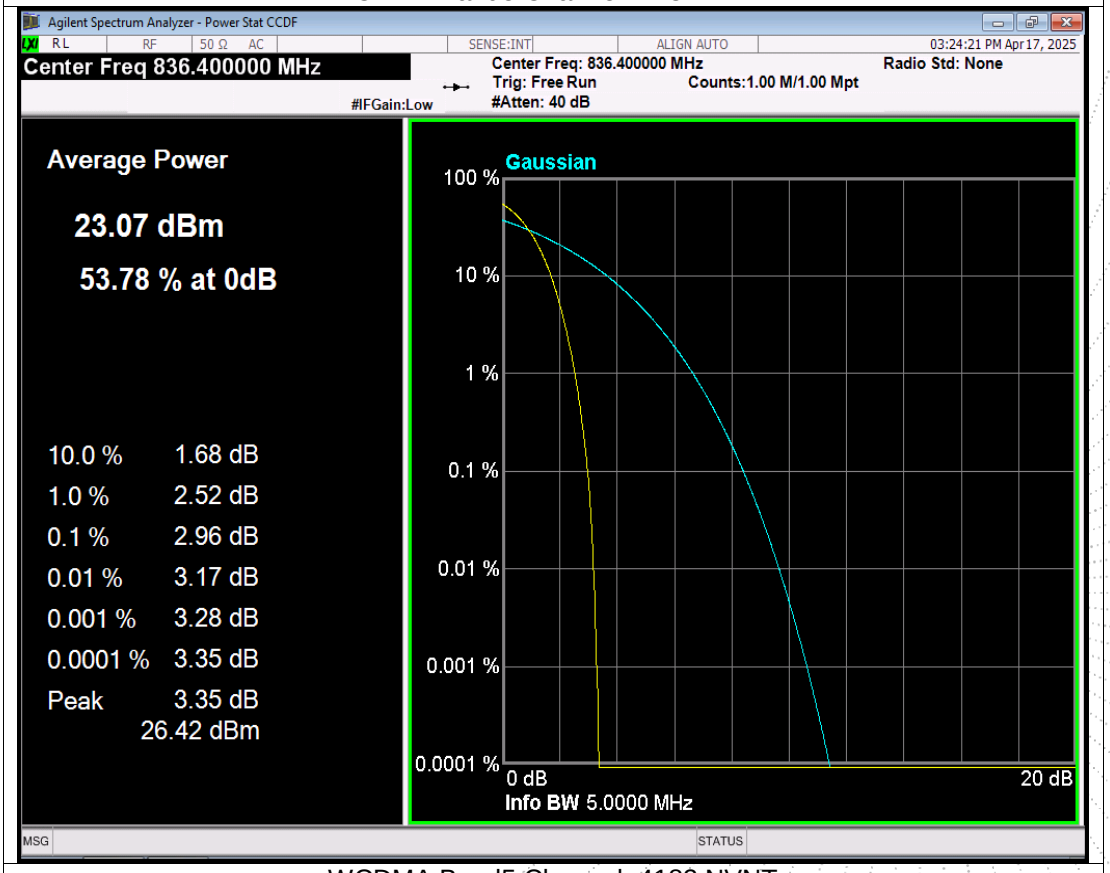
WCDMA Band4 Channel=1450 NVNT



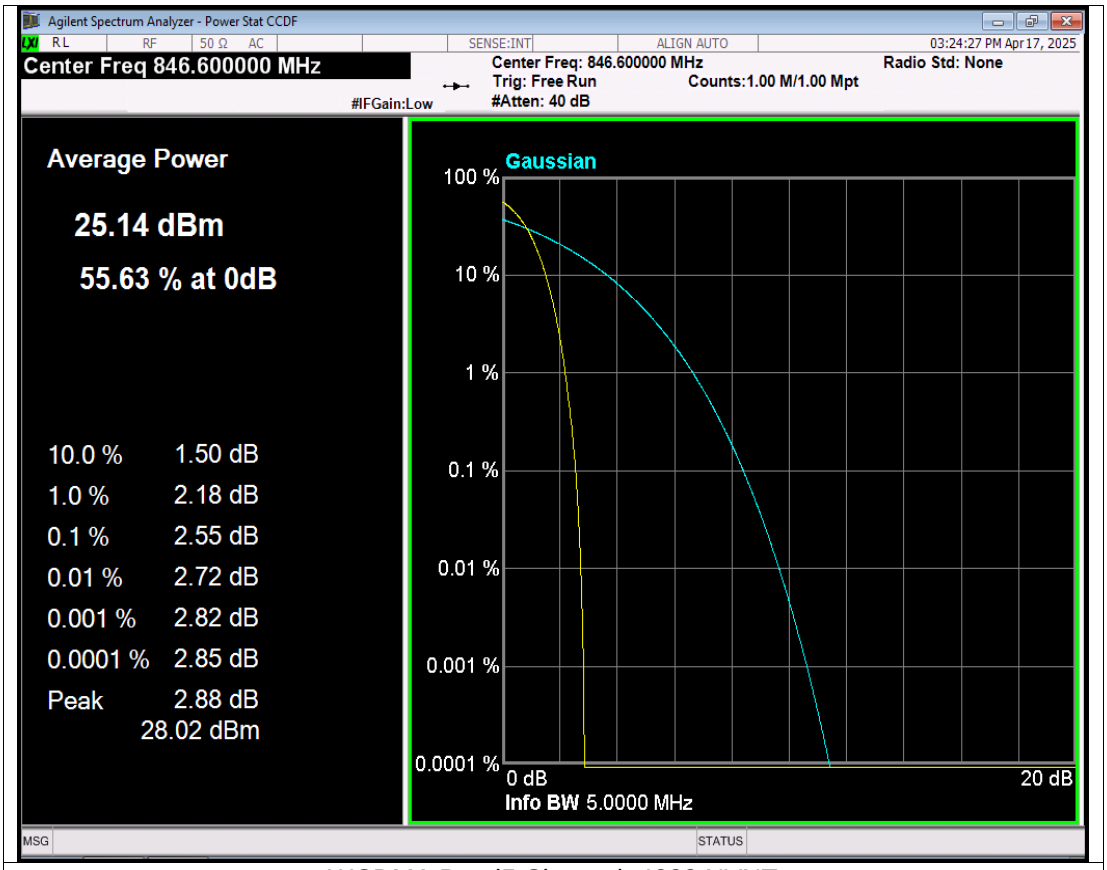
WCDMA Band4 Channel=1513 NVNT



WCDMA Band5 Channel=4132 NVNT



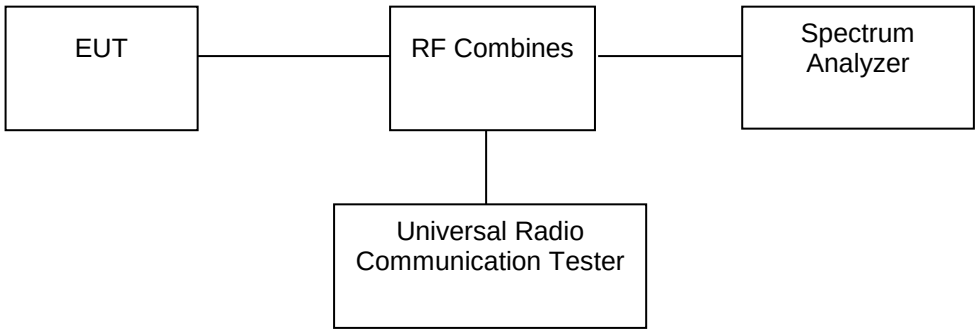
WCDMA Band5 Channel=4182 NVNT



WCDMA Band5 Channel=4233 NVNT

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.

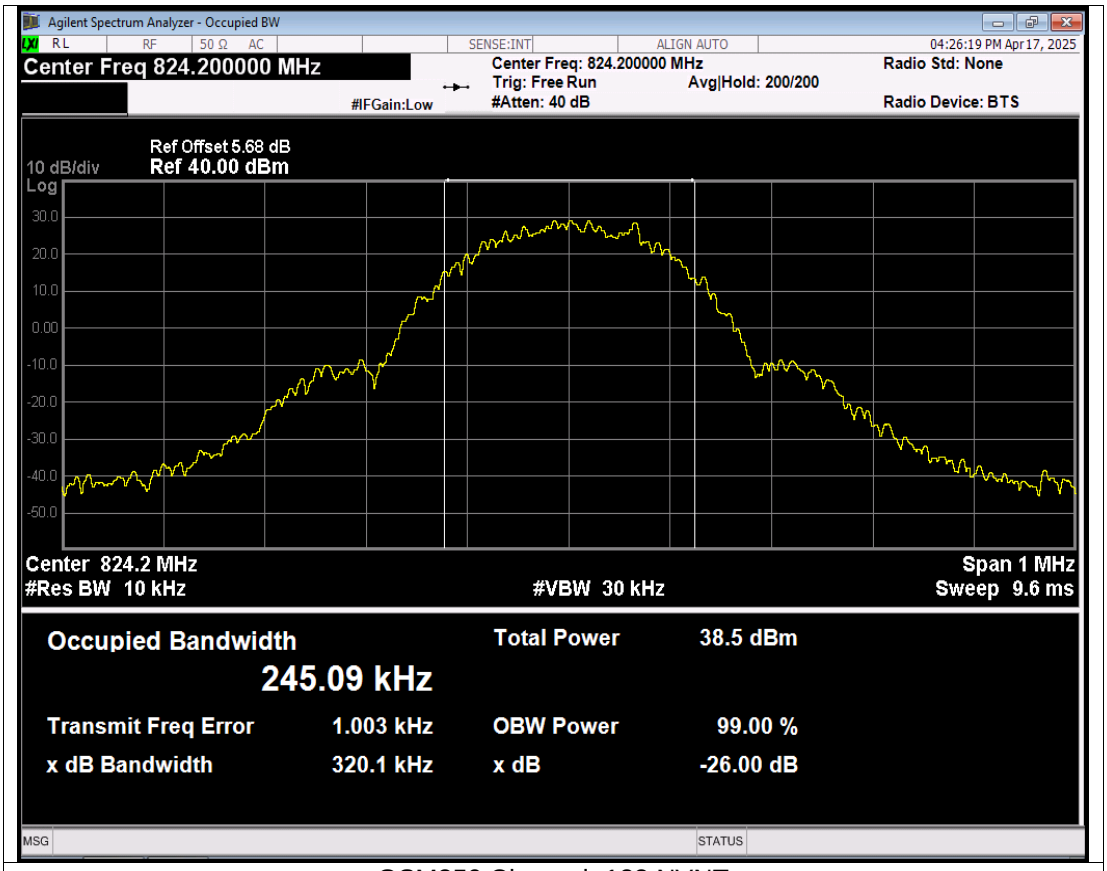
According to §27.53, The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

8.3 Test procedure

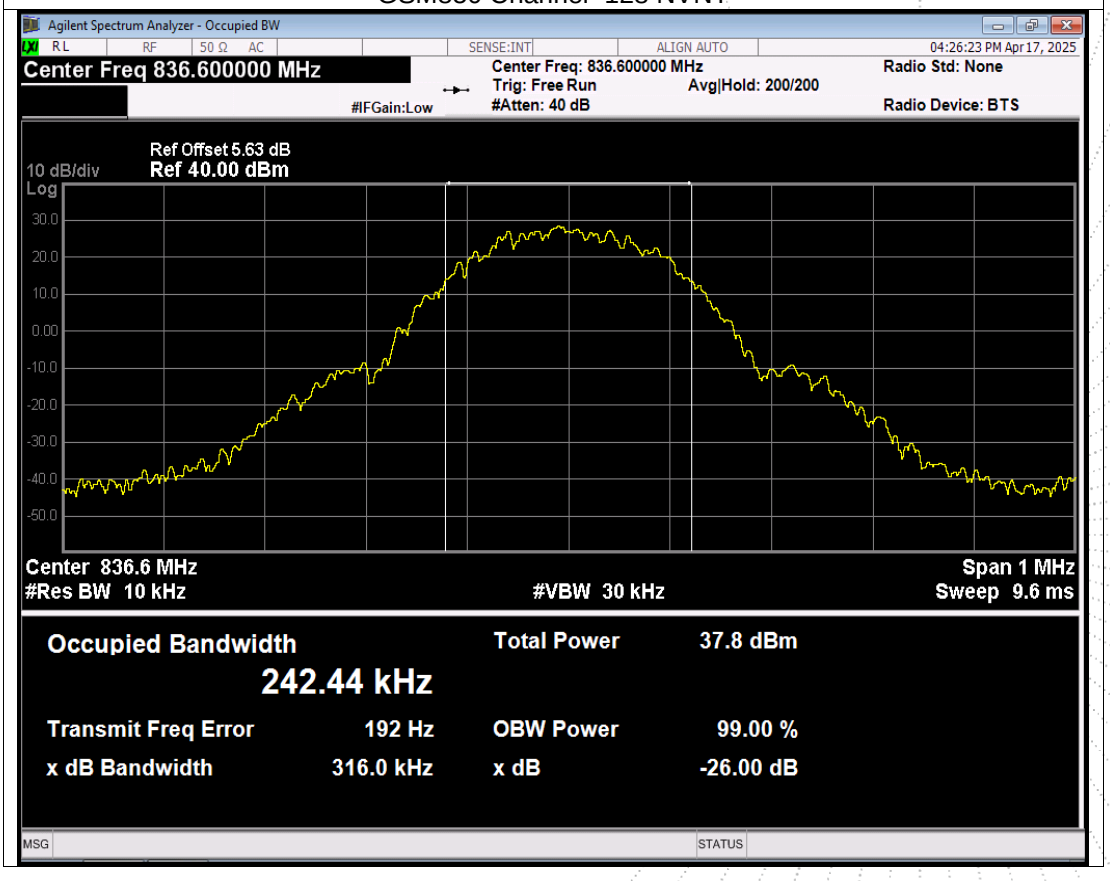
The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 10kHz for GSM mode and 100kHz for WCDMA mode, VBW shall be at least 3 times the RBW, and the 26dB bandwidth was recorded.

8.4 Test Result

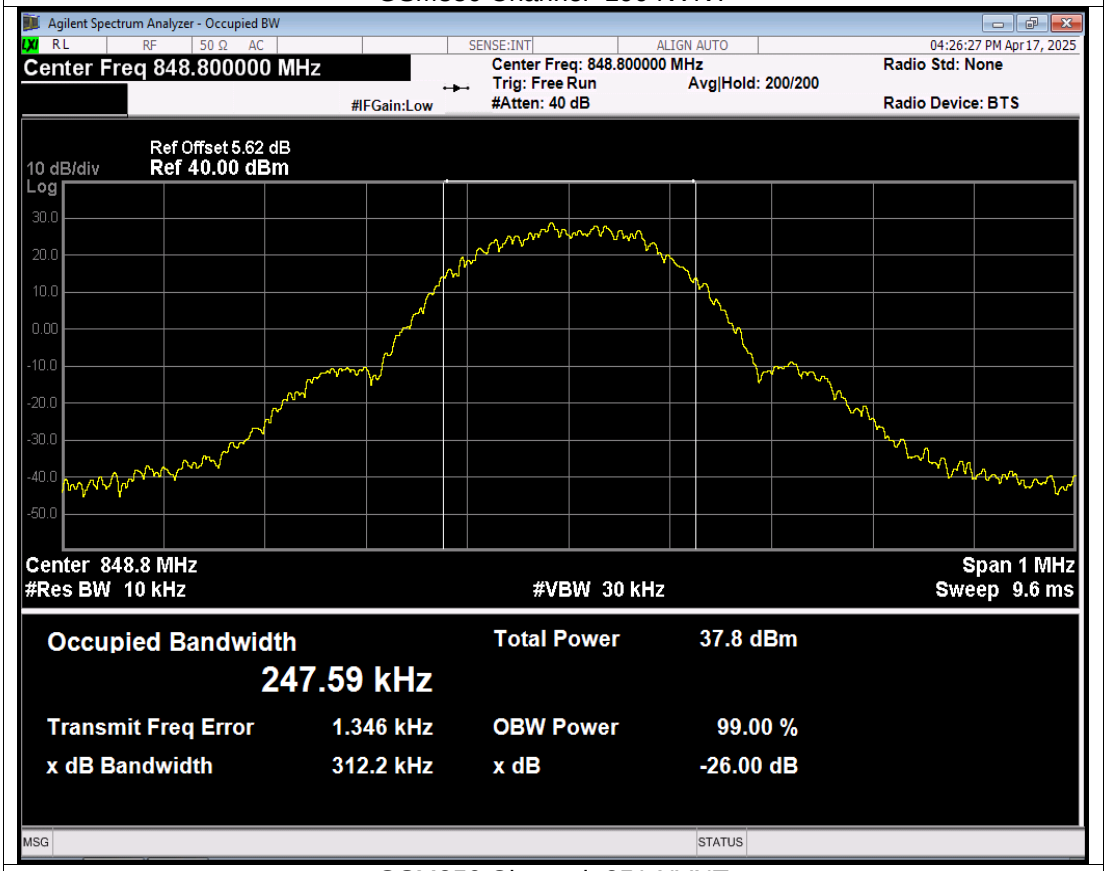
Band	Channel	Frequency (MHz)	99% OBW (kHz)	-26dB EBW (kHz)	Verdict
GSM850	128	824.2	245.093	320.096	PASS
GSM850	190	836.6	242.438	316.020	PASS
GSM850	251	848.8	247.589	312.238	PASS
GSM1900	512	1850.2	244.658	310.065	PASS
GSM1900	661	1880	245.925	319.122	PASS
GSM1900	810	1909.8	250.110	305.339	PASS
GPRS850	128	824.2	247.004	321.448	PASS
GPRS850	190	836.6	249.212	318.299	PASS
GPRS850	251	848.8	241.899	310.951	PASS
GPRS1900	512	1850.2	246.685	310.745	PASS
GPRS1900	661	1880	249.361	318.808	PASS
GPRS1900	810	1909.8	239.483	314.059	PASS
EGPRS850	128	824.2	236.335	288.528	PASS
EGPRS850	190	836.6	237.546	318.437	PASS
EGPRS850	251	848.8	248.896	305.962	PASS
EGPRS1900	512	1850.2	247.805	310.810	PASS
EGPRS1900	661	1880	248.298	309.493	PASS
EGPRS1900	810	1909.8	250.591	312.303	PASS



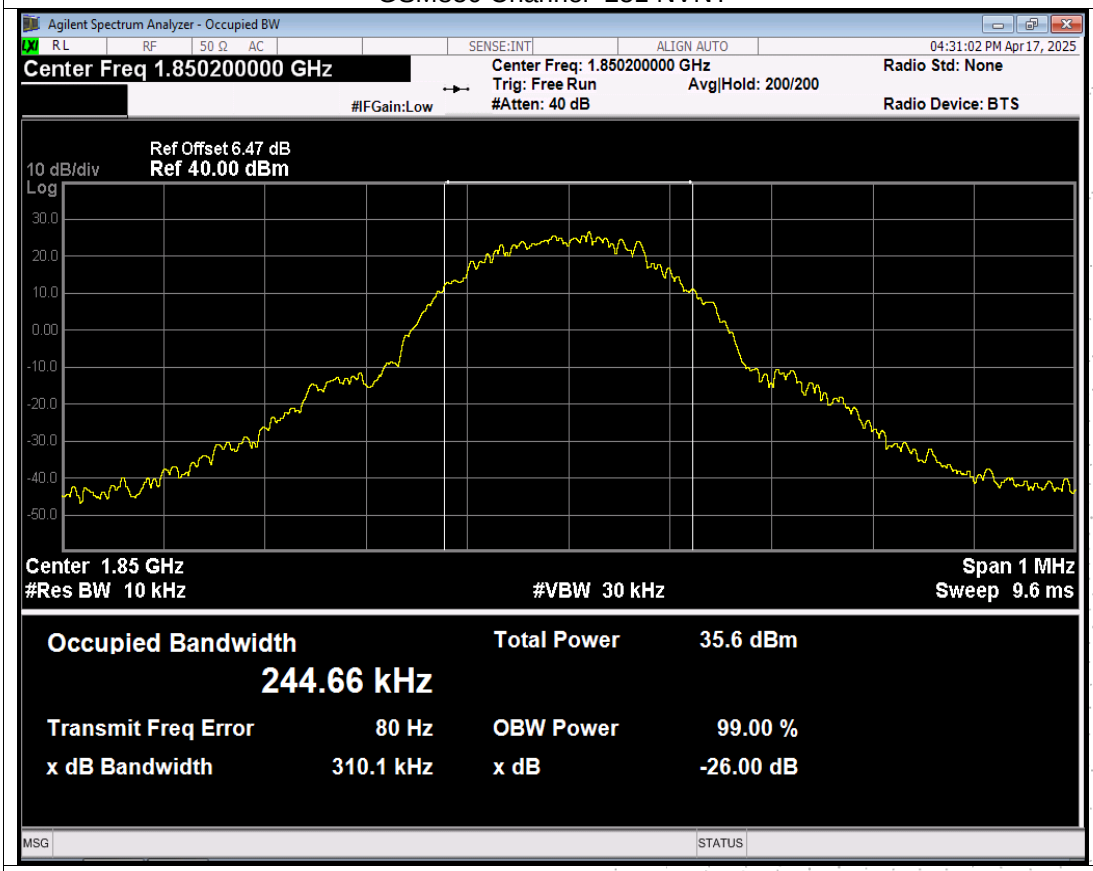
GSM850 Channel=128 NVNT



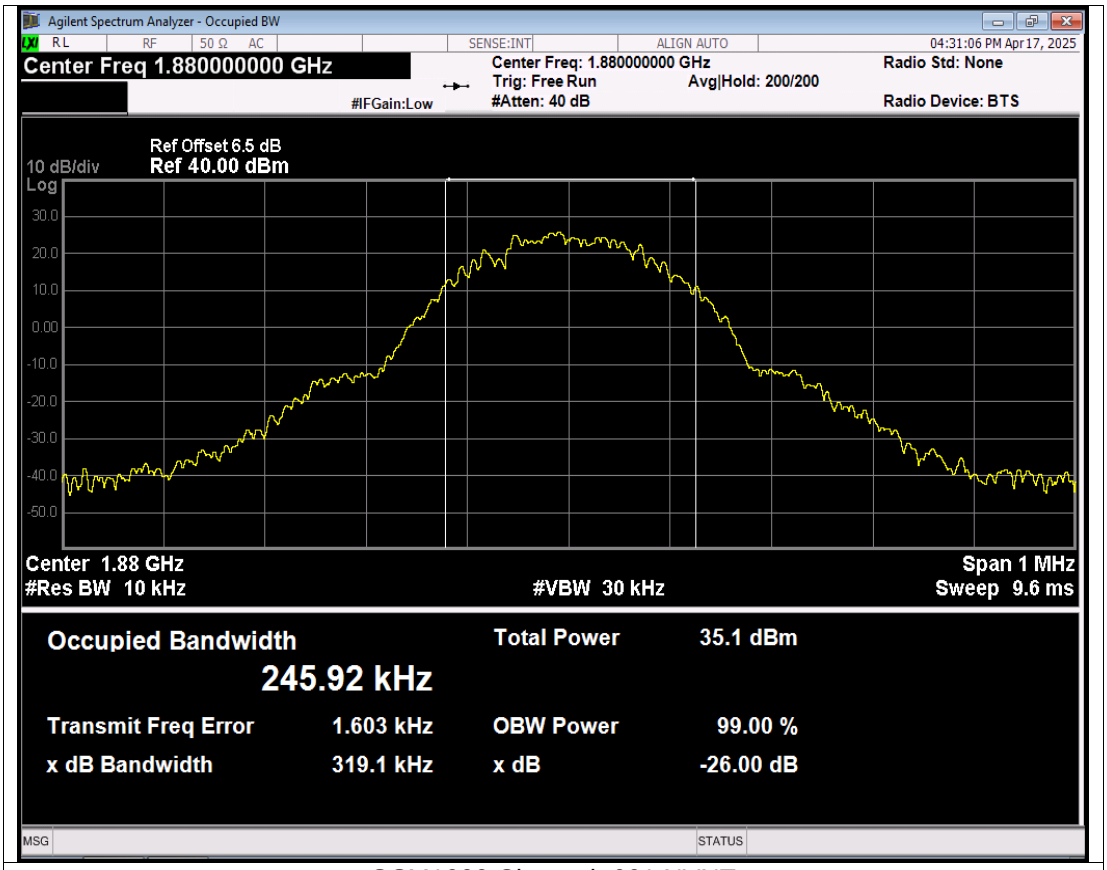
GSM850 Channel=190 NVNT



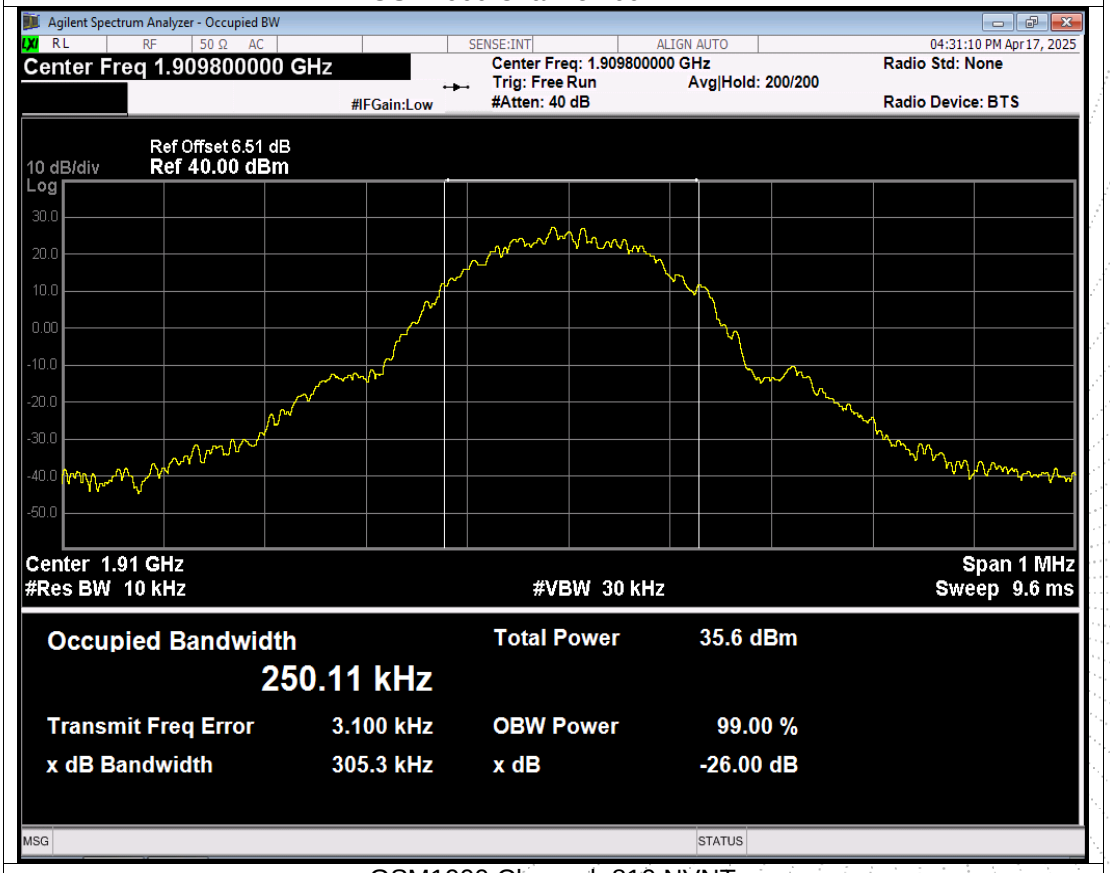
GSM850 Channel=251 NVNT



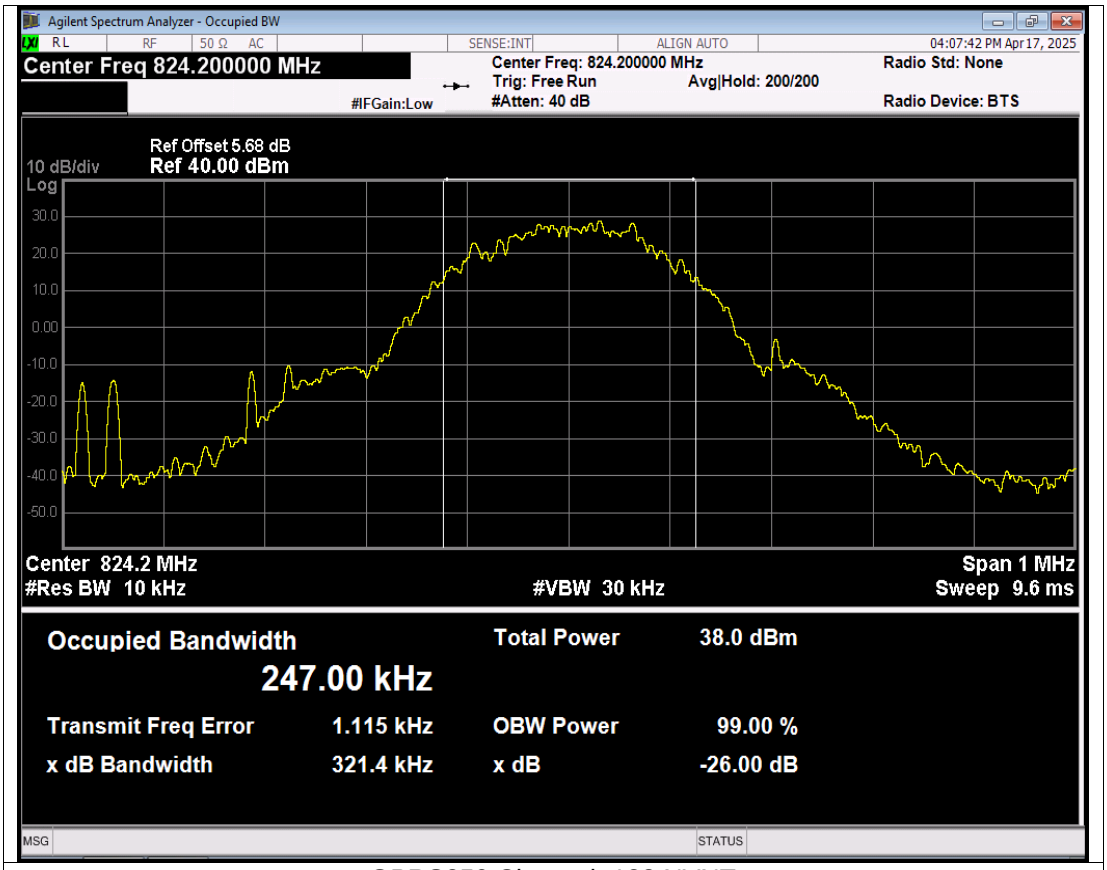
GSM1900 Channel=512 NVNT



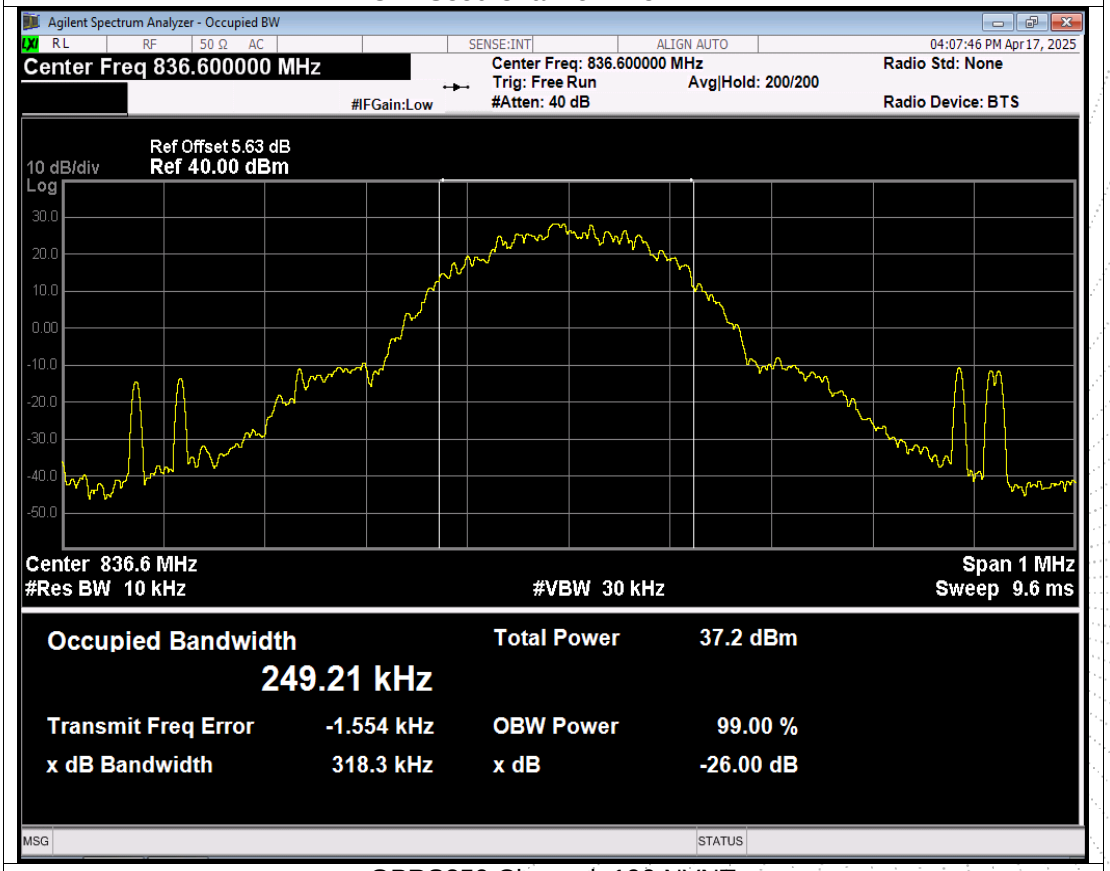
GSM1900 Channel=661 NVNT



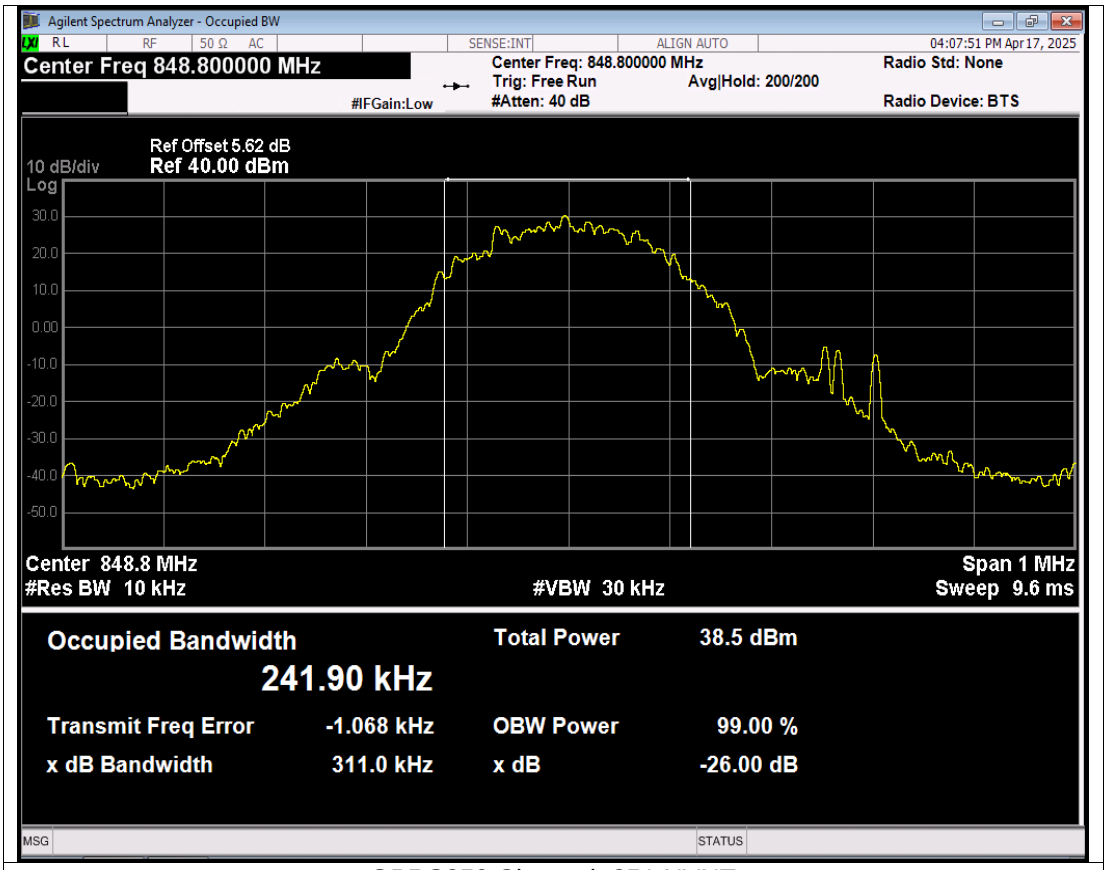
GSM1900 Channel=810 NVNT



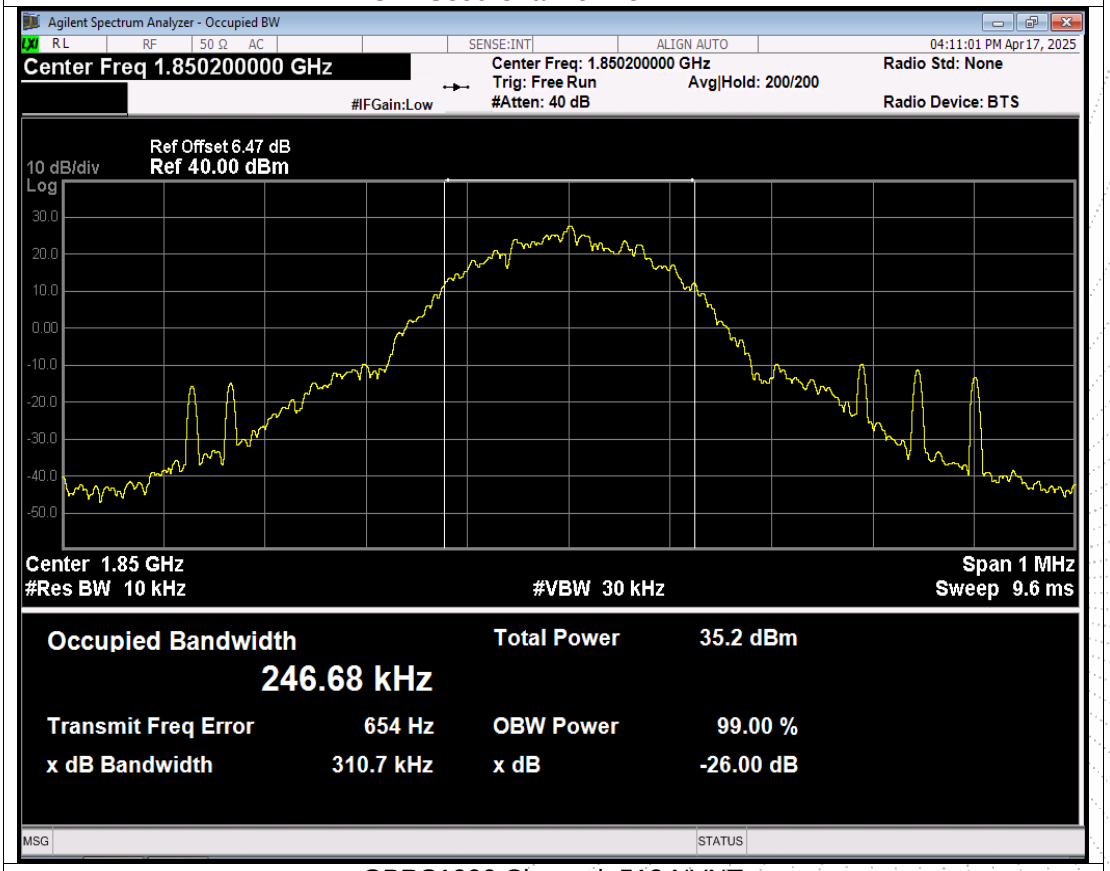
GPRS850 Channel=128 NVNT



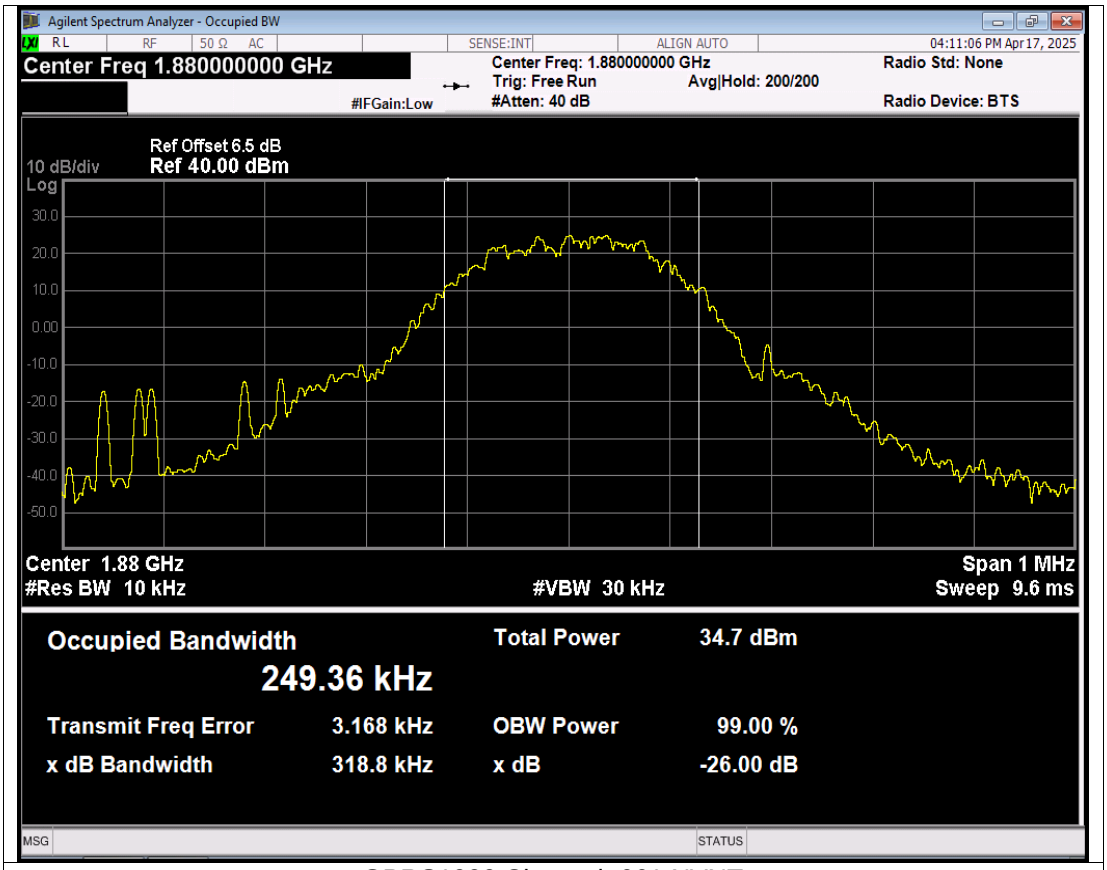
GPRS850 Channel=190 NVNT



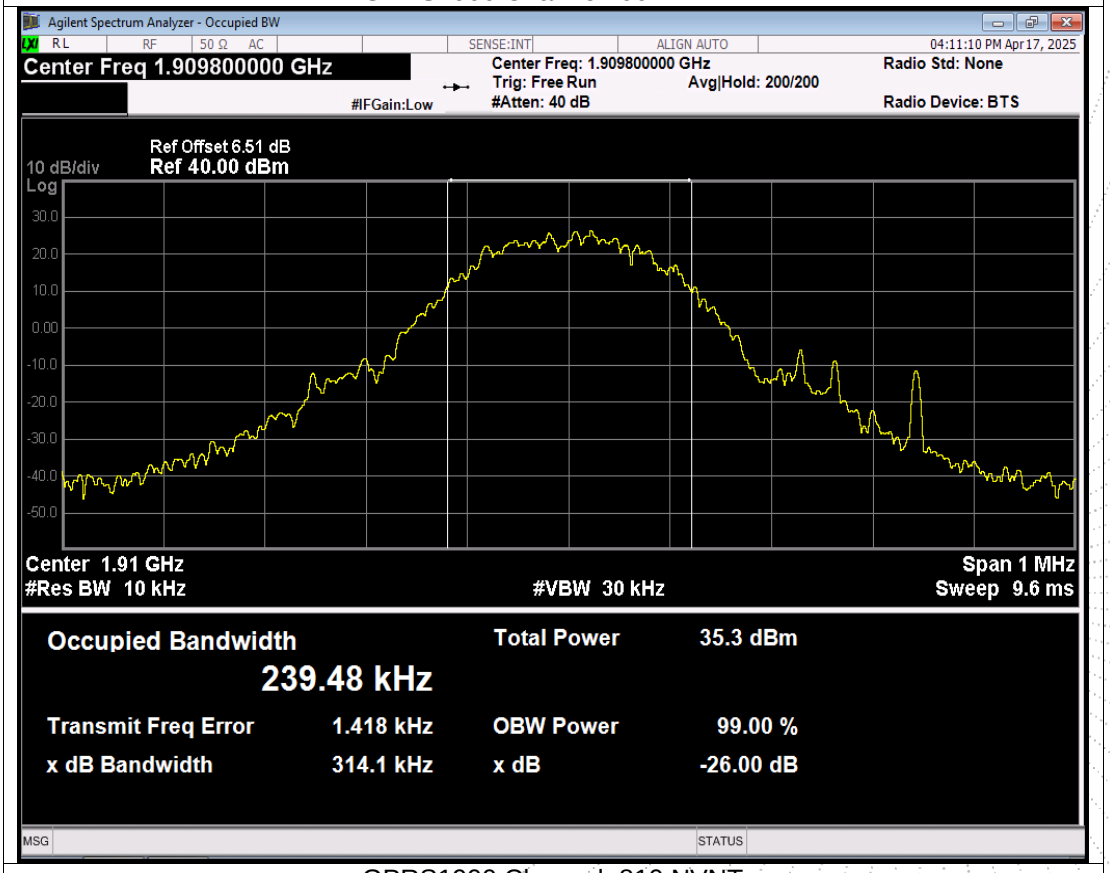
GPRS850 Channel=251 NVNT



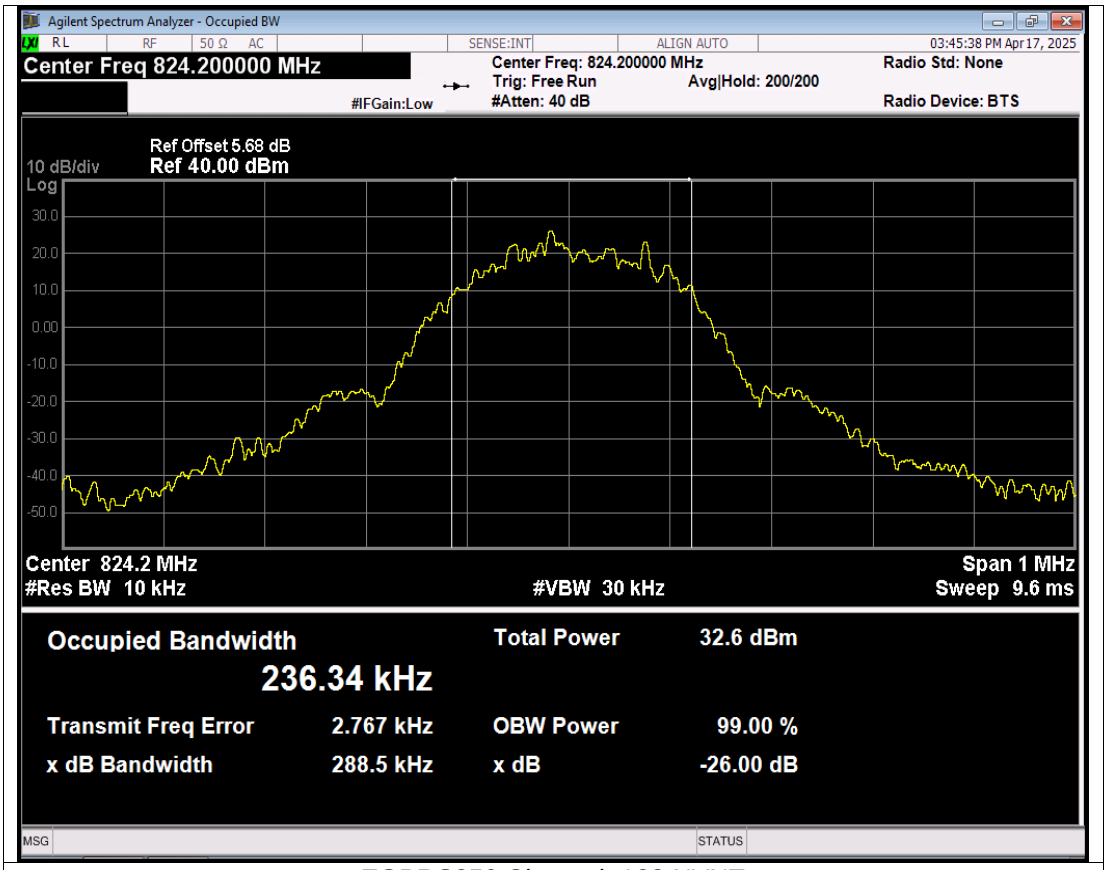
GPRS1900 Channel=512 NVNT



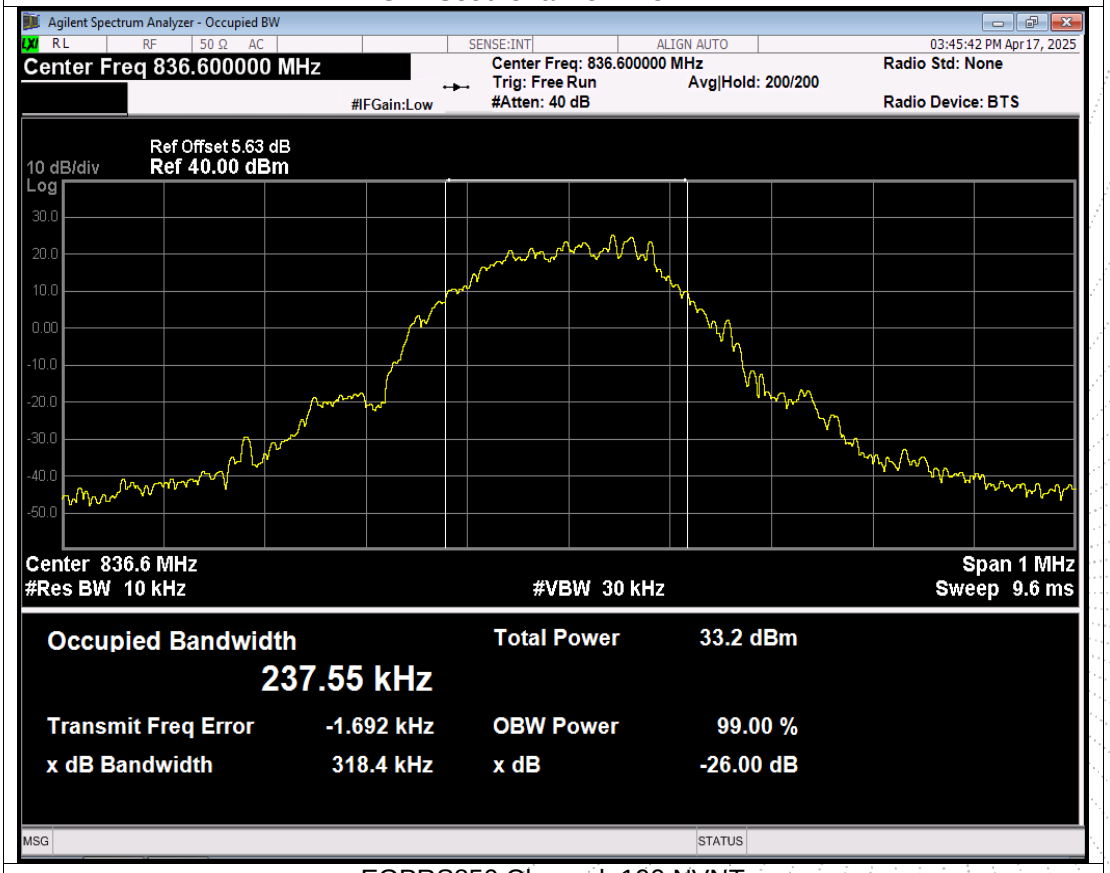
GPRS1900 Channel=661 NVNT



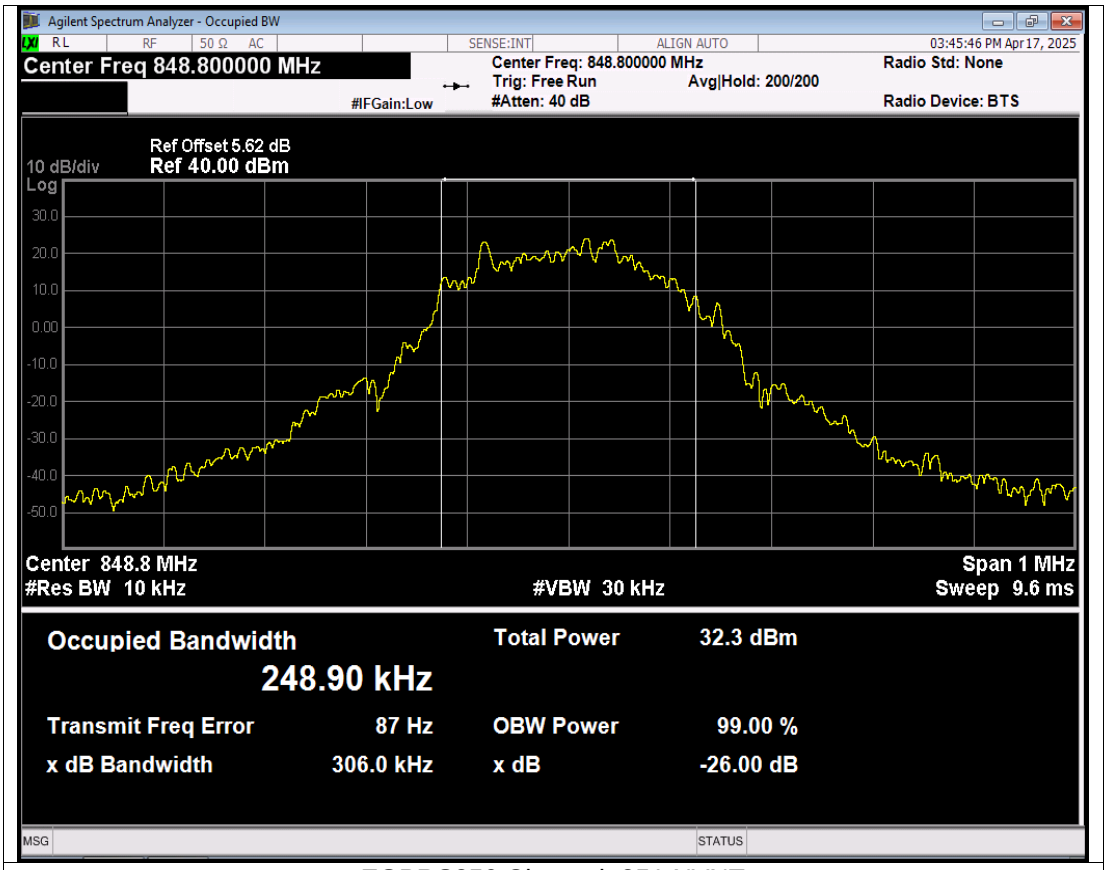
GPRS1900 Channel=810 NVNT



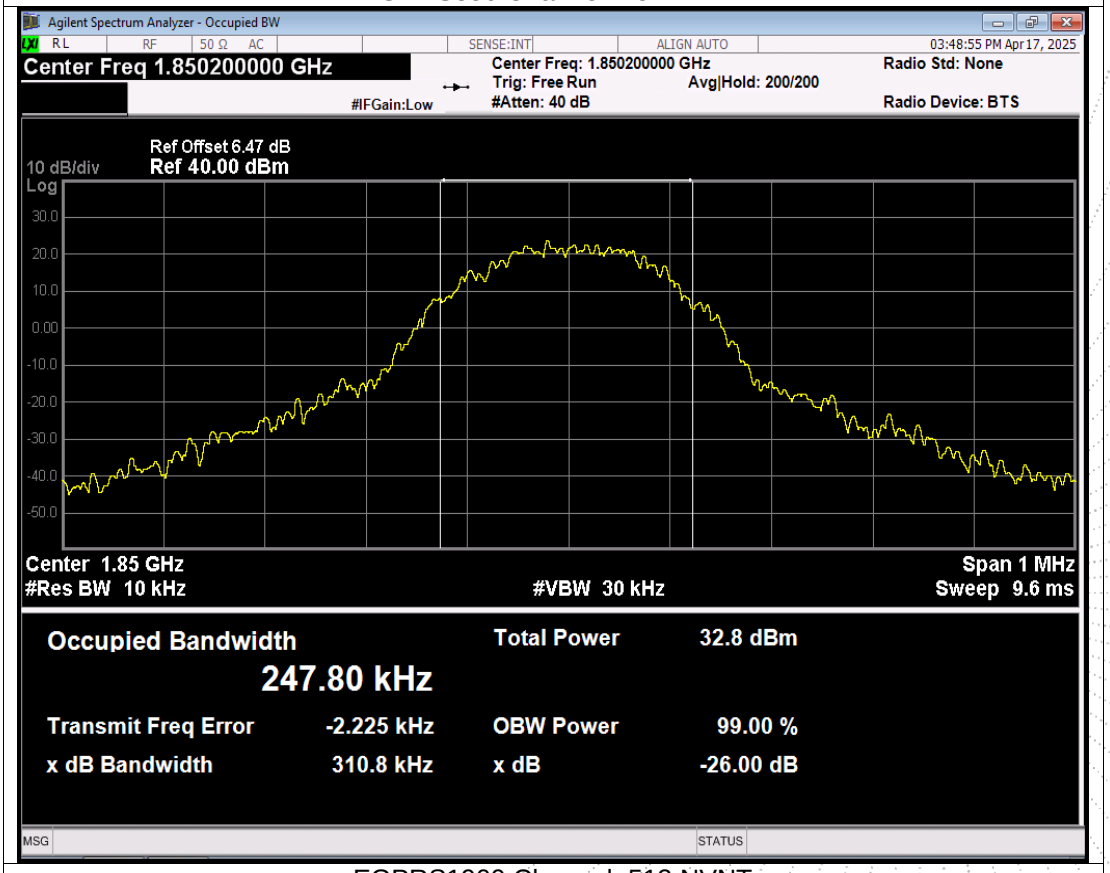
EGPRS850 Channel=128 NVNT



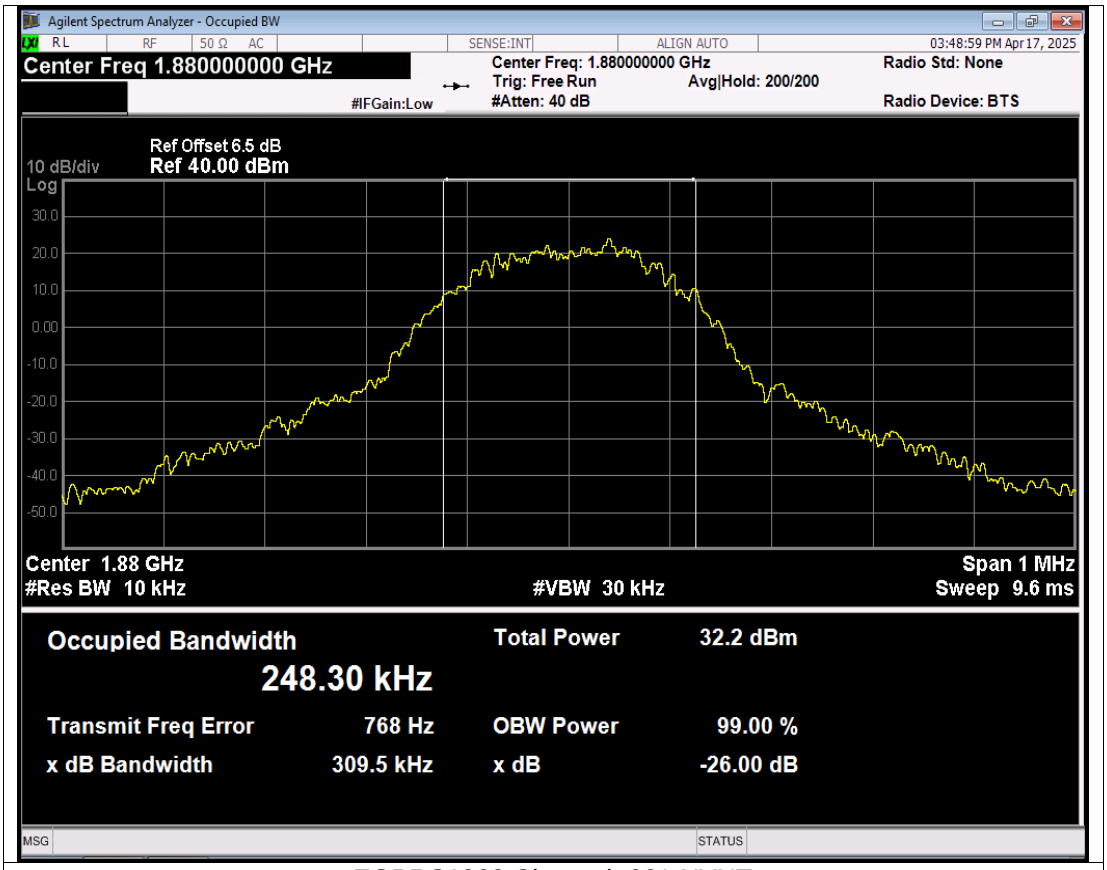
EGPRS850 Channel=190 NVNT



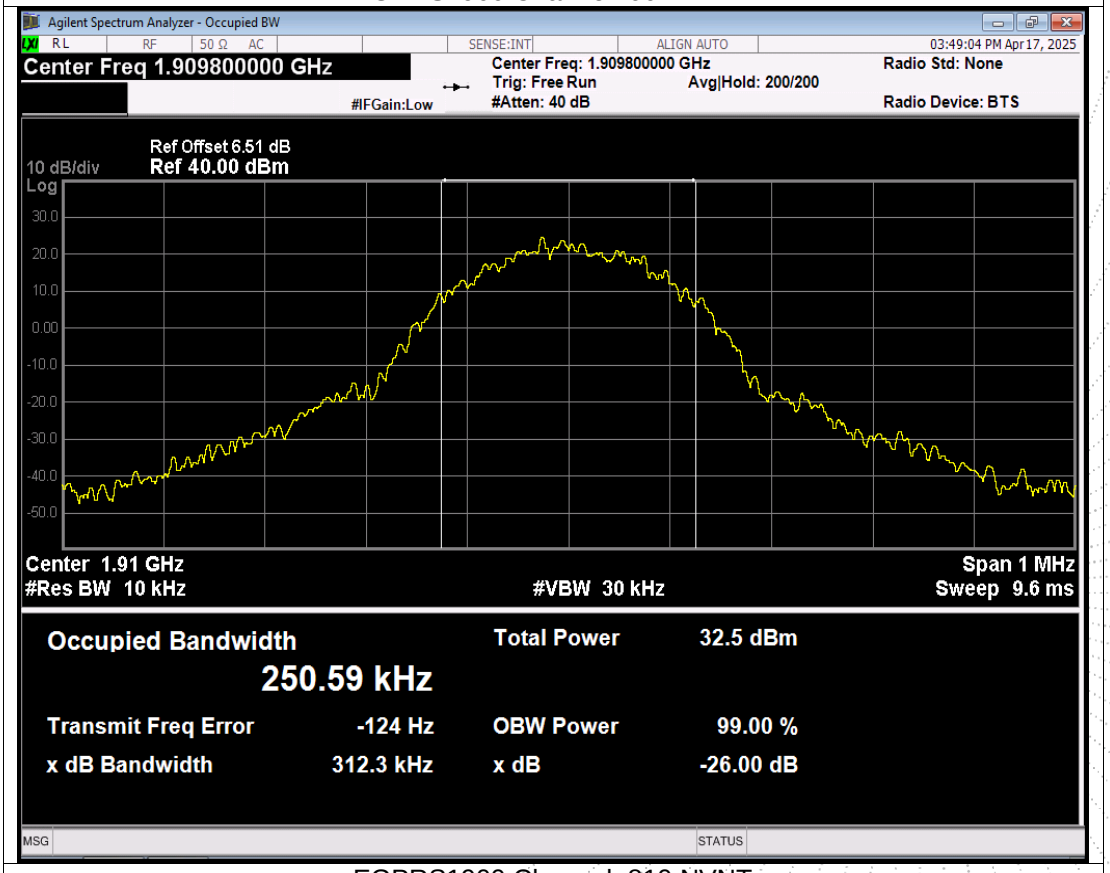
EGPRS850 Channel=251 NVNT



EGPRS1900 Channel=512 NVNT



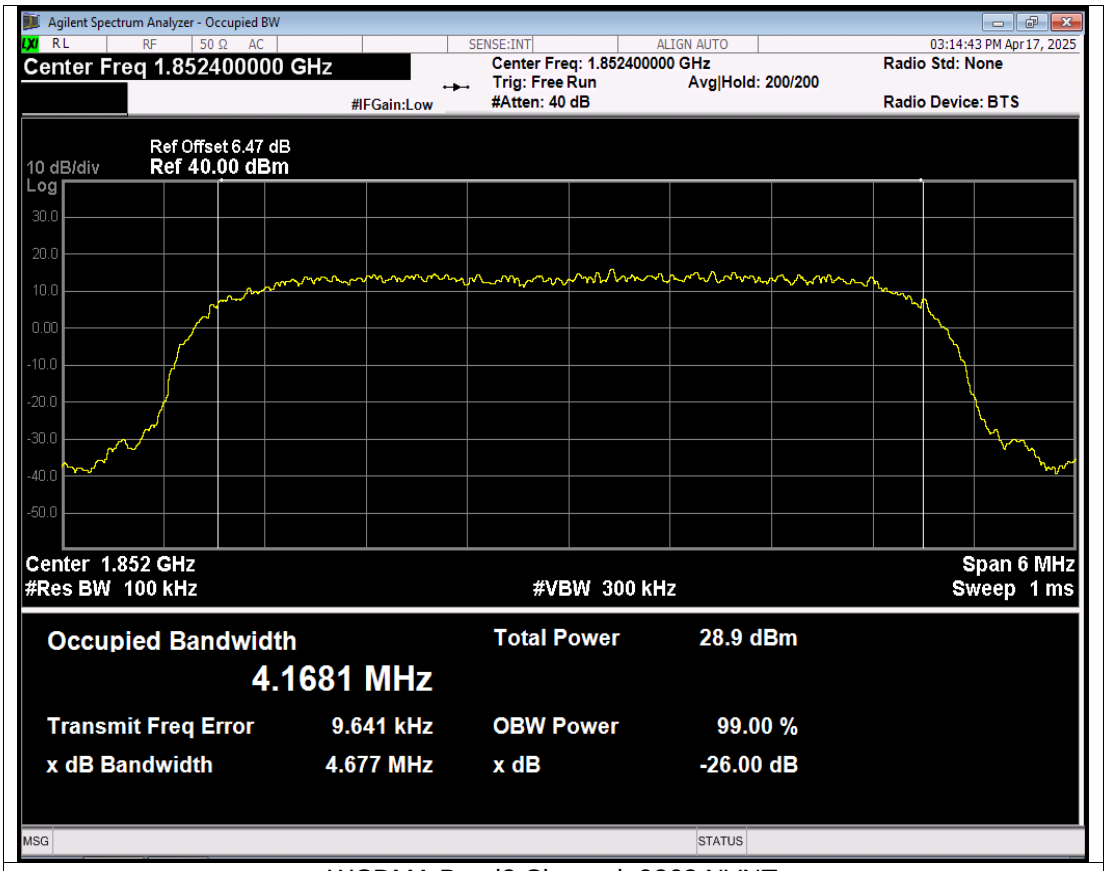
EGPRS1900 Channel=661 NVNT



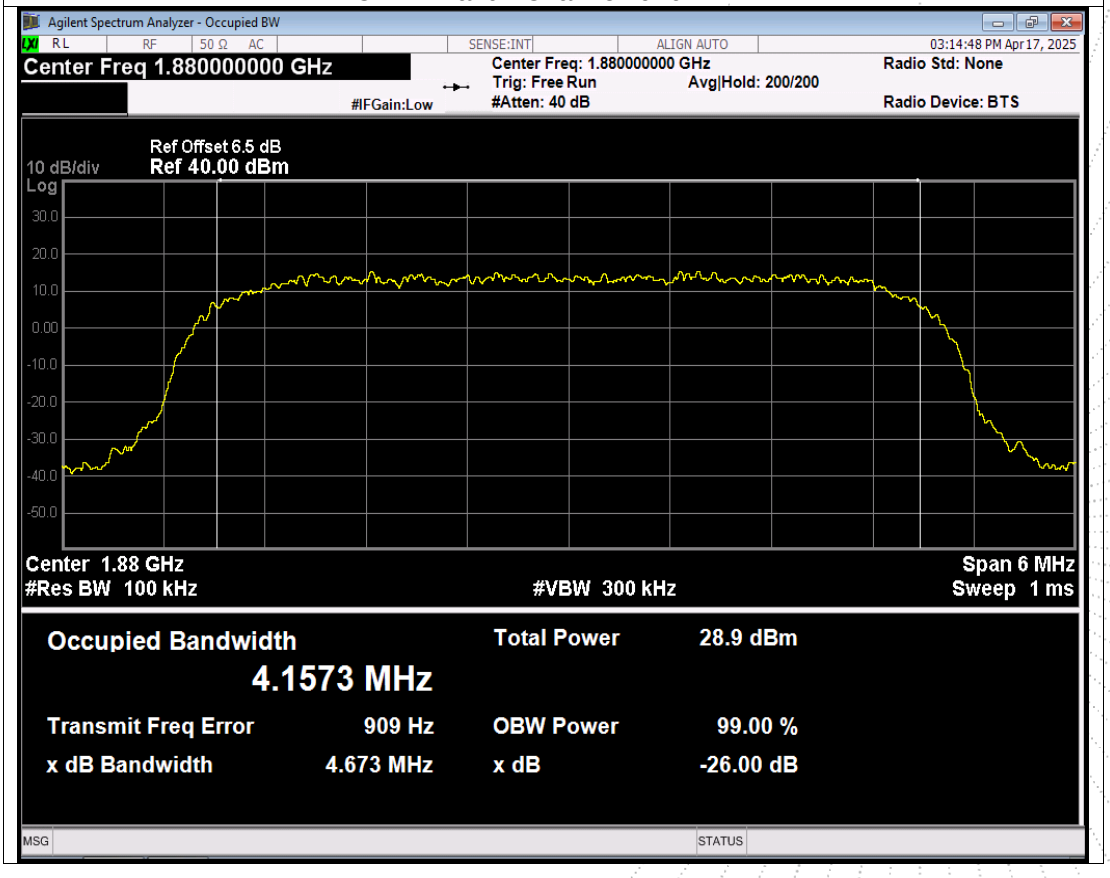
EGPRS1900 Channel=810 NVNT

Band	Channel	Frequency (MHz)	99% OBW (kHz)	-26dB EBW (kHz)	Verdict
WCDMA Band2	9262	1852.4	4168.101	4676.554	PASS
WCDMA Band2	9400	1880	4157.287	4672.580	PASS
WCDMA Band2	9538	1907.6	4141.797	4702.327	PASS
WCDMA Band4	1312	1712.4	4150.591	4690.211	PASS
WCDMA Band4	1450	1740	4166.533	4674.792	PASS
WCDMA Band4	1513	1752.6	4163.539	4654.655	PASS
WCDMA Band5	4132	826.4	4151.514	4653.290	PASS
WCDMA Band5	4182	836.4	4160.030	4701.781	PASS
WCDMA Band5	4233	846.6	4147.263	4659.476	PASS

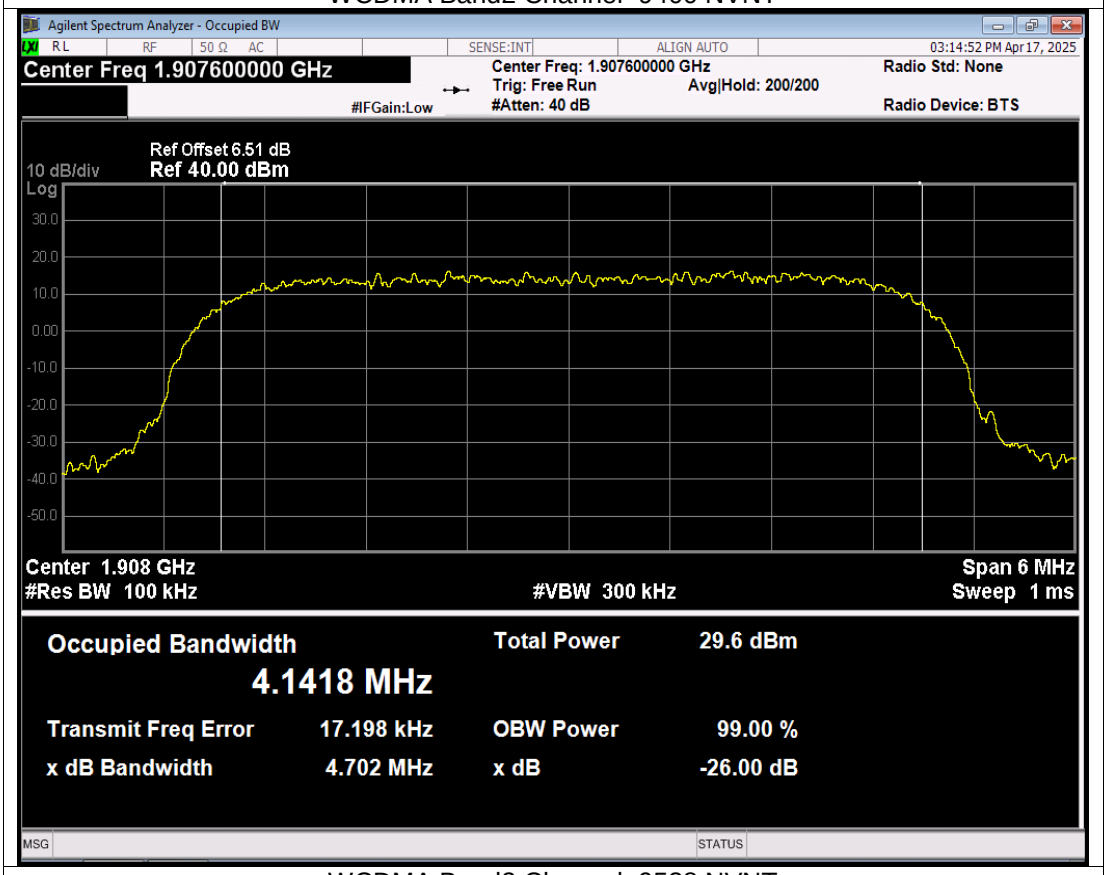
Note：In WCDMA, RMC, HSDPA and HSUPA all three tests only reflect the worst mode RMC.



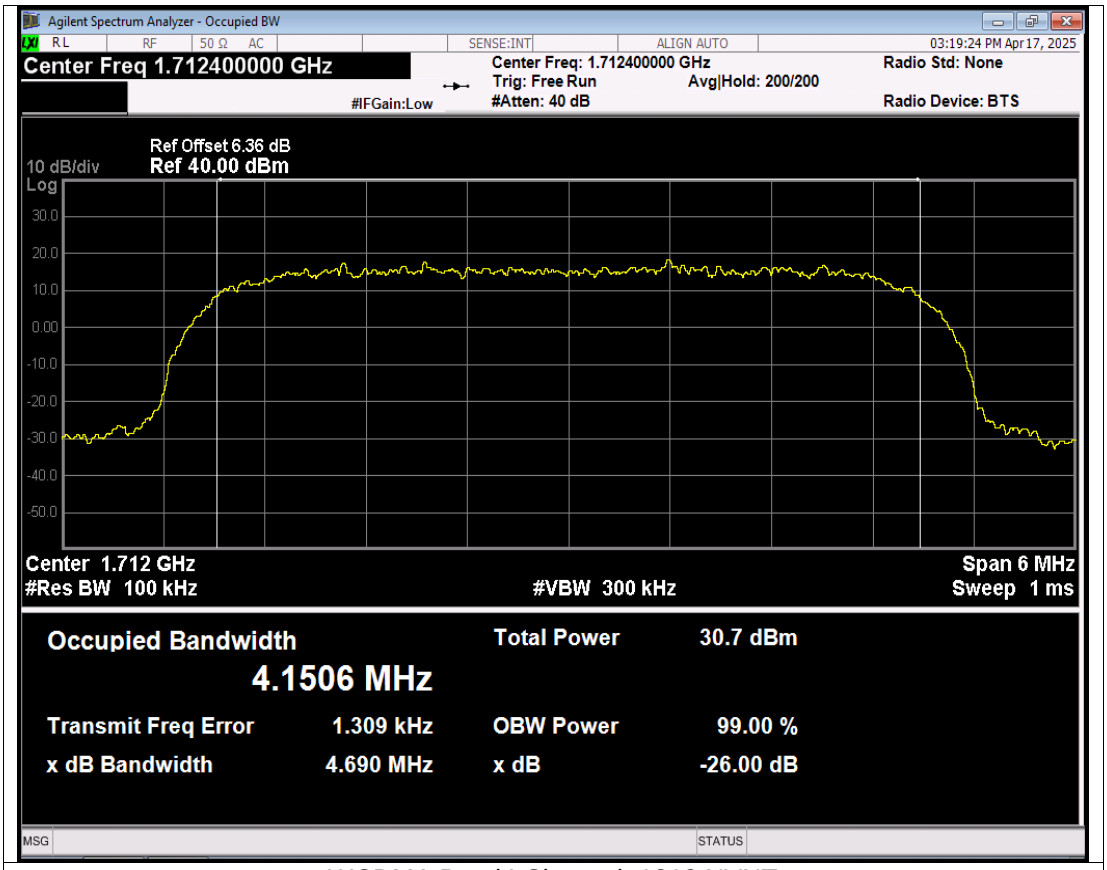
WCDMA Band2 Channel=9262 NVNT



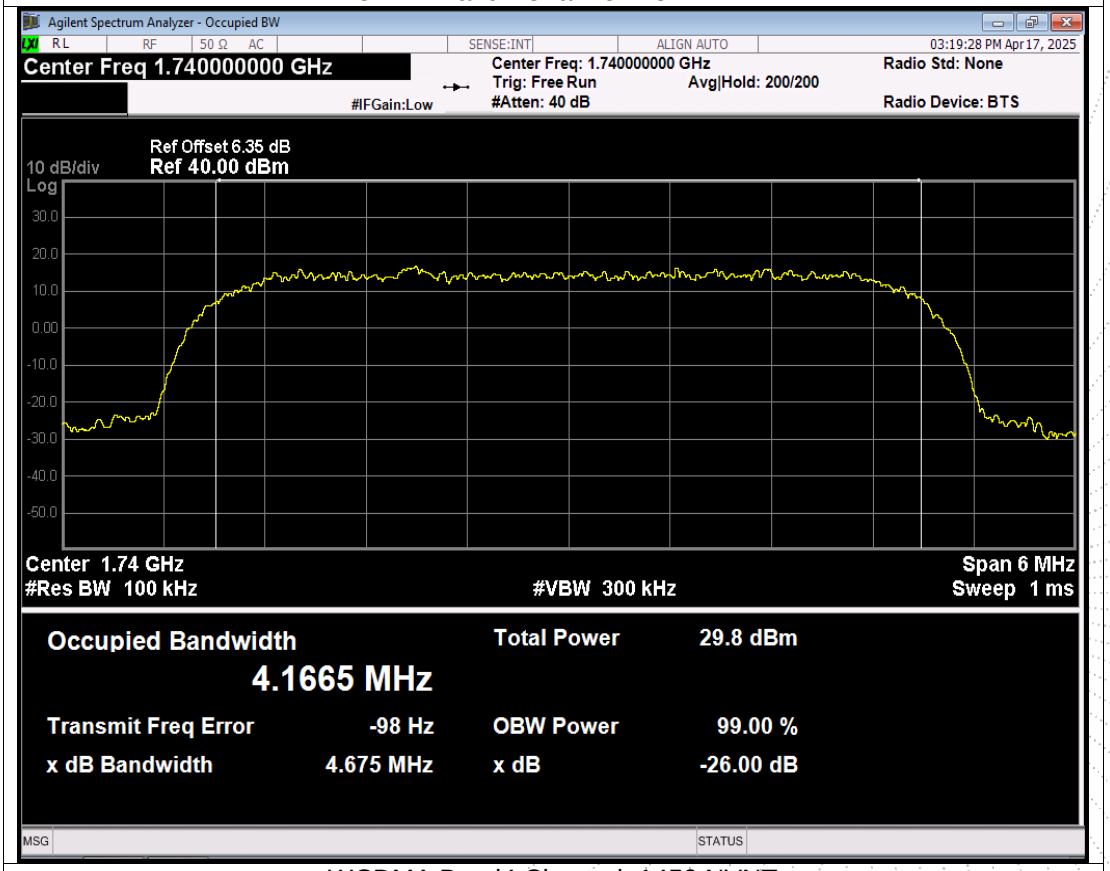
WCDMA Band2 Channel=9400 NVNT



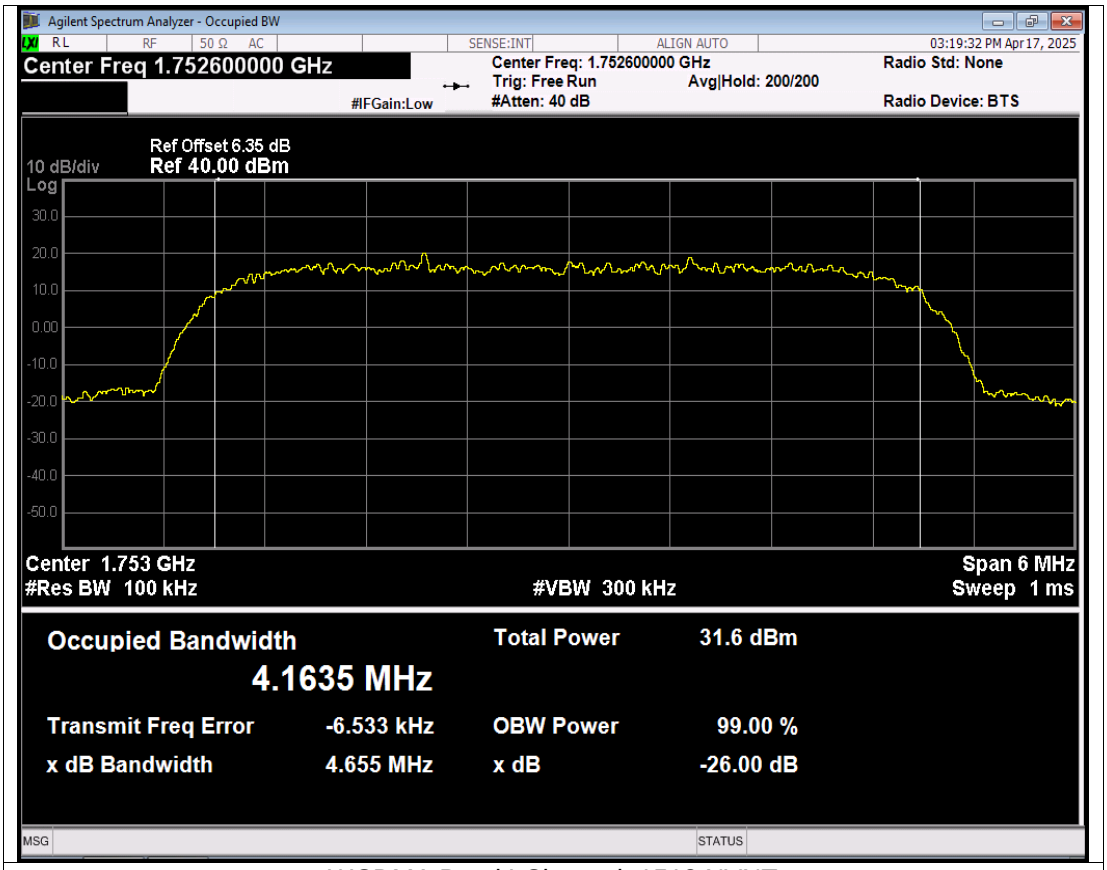
WCDMA Band2 Channel=9538 NVNT



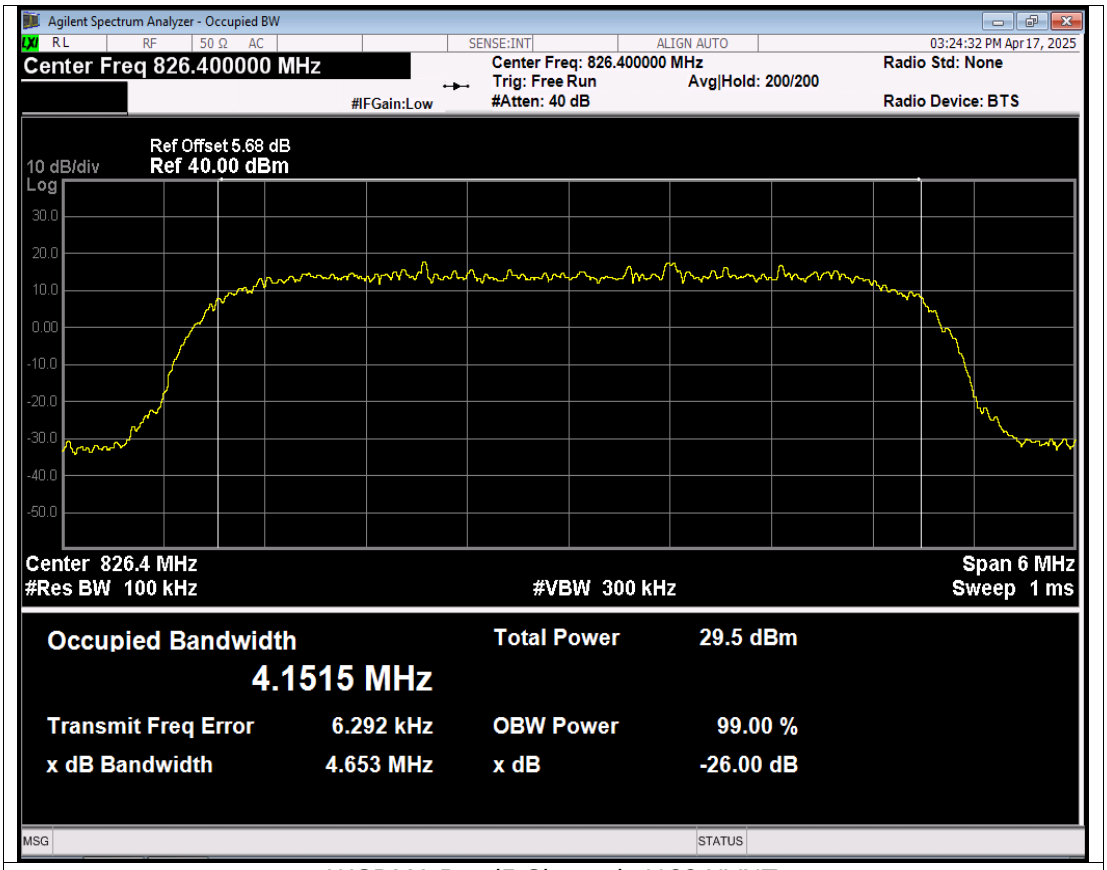
WCDMA Band4 Channel=1312 NVNT



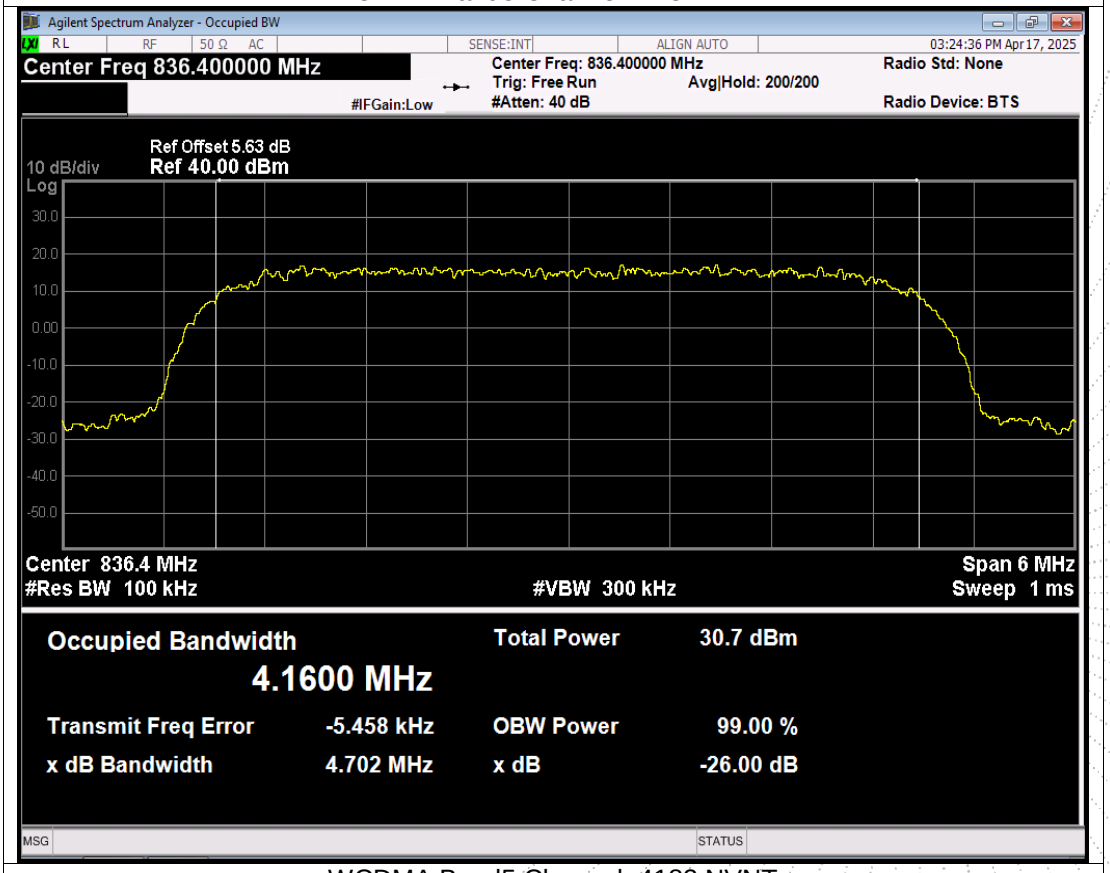
WCDMA Band4 Channel=1450 NVNT



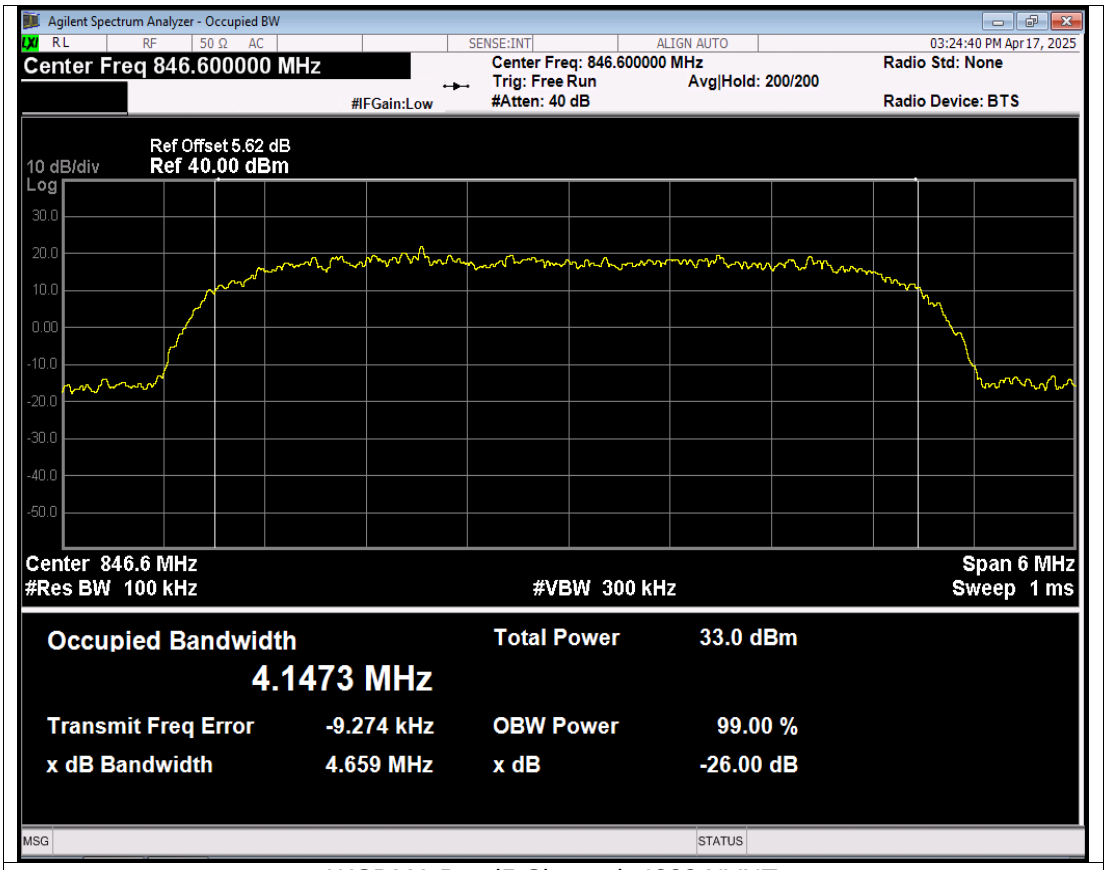
WCDMA Band4 Channel=1513 NVNT



WCDMA Band5 Channel=4132 NVNT



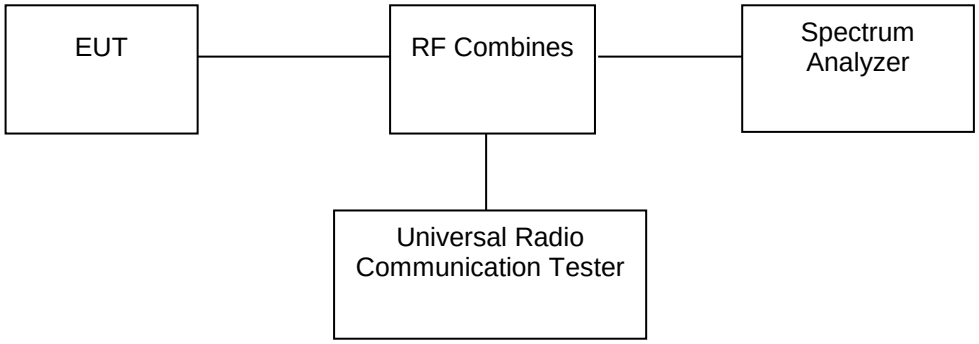
WCDMA Band5 Channel=4182 NVNT



WCDMA Band5 Channel=4233 NVNT

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.

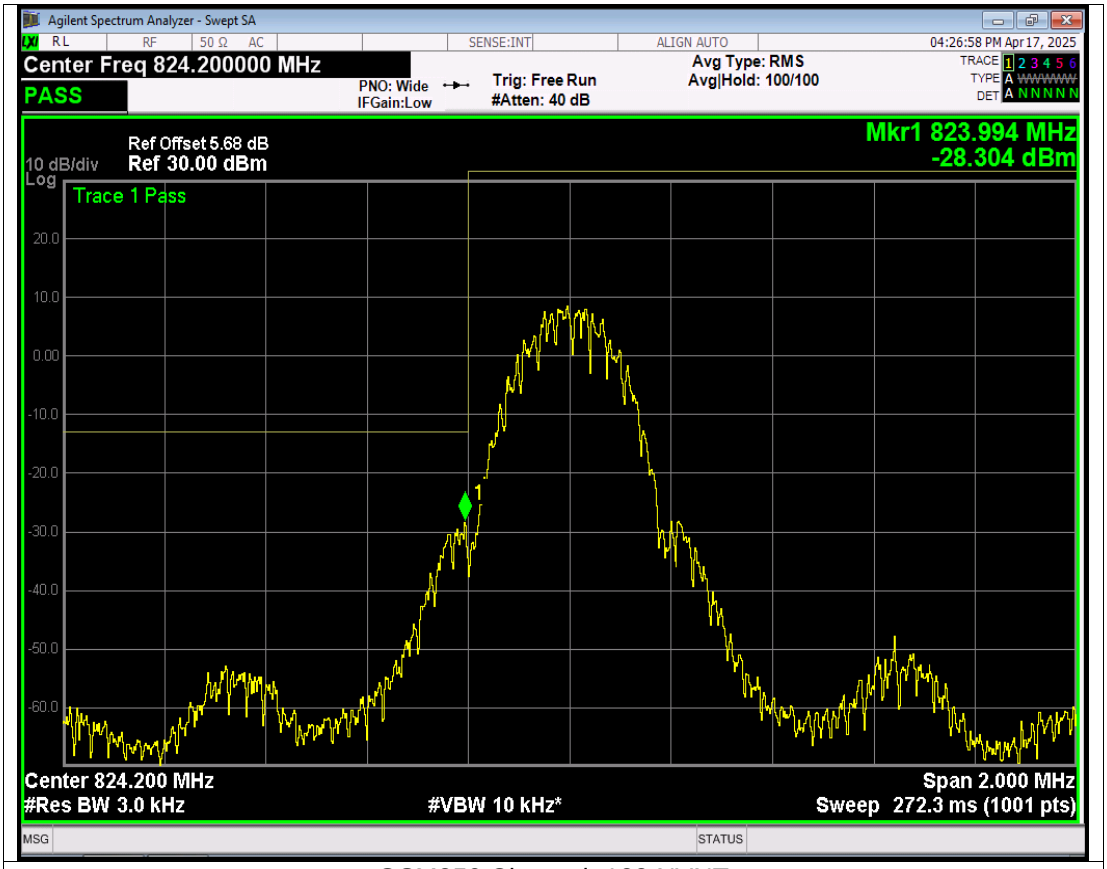
According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

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 log10 (P) dB.

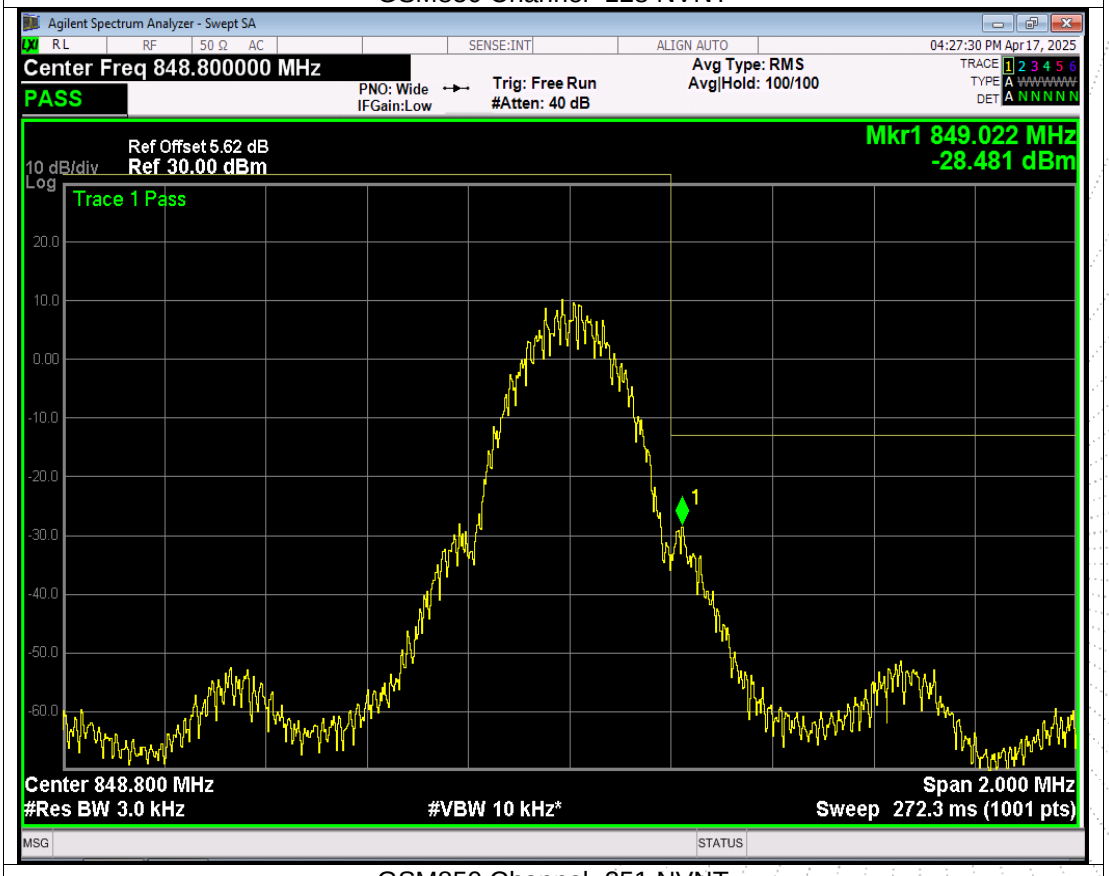
9.3 Test procedure

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 10th harmonic. At the edge of the authorized Frequency block/band: RBW set 1%-5%OBW.

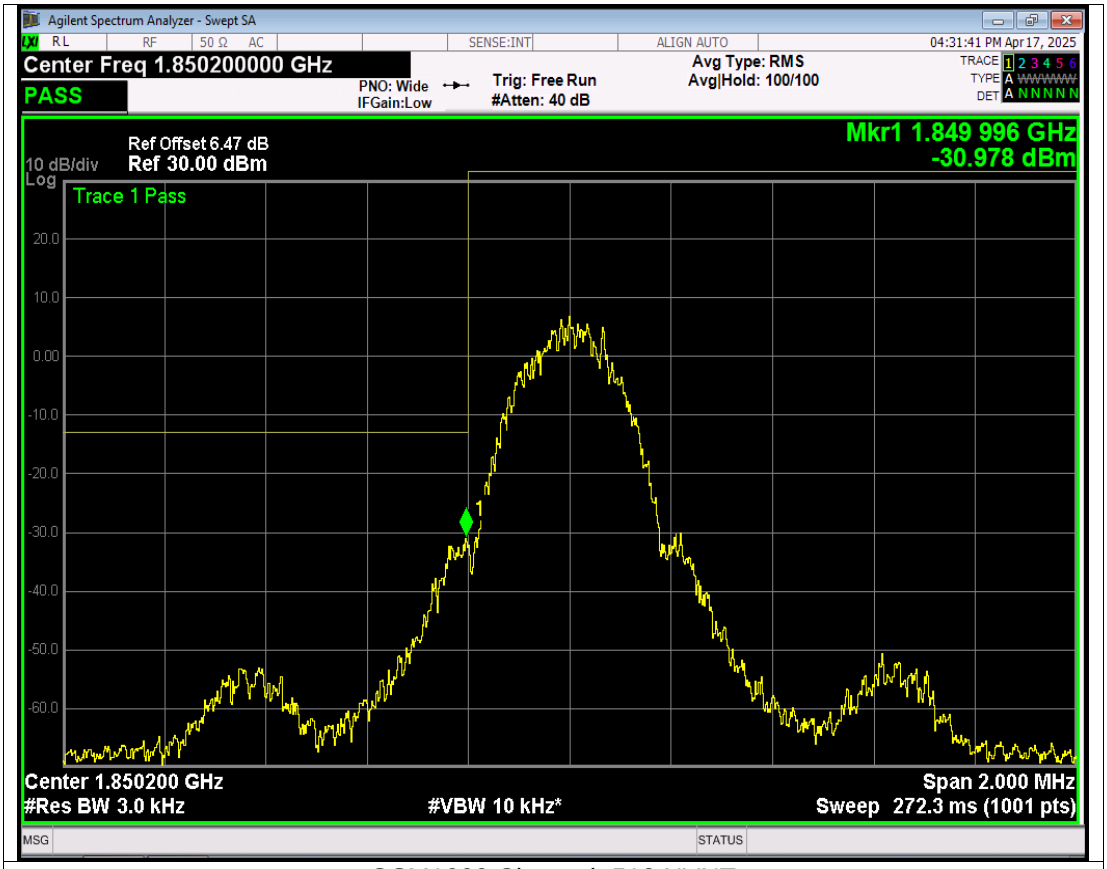
9.4 Test Result



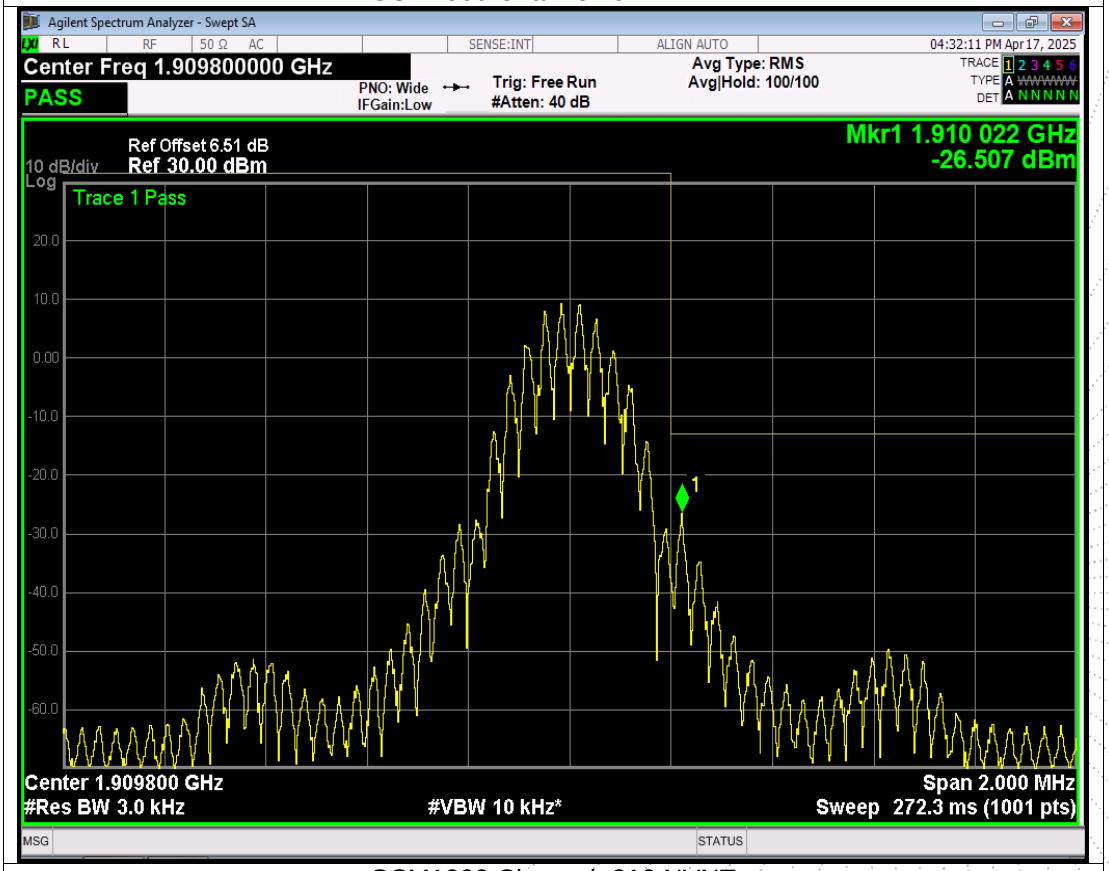
GSM850 Channel=128 NVNT



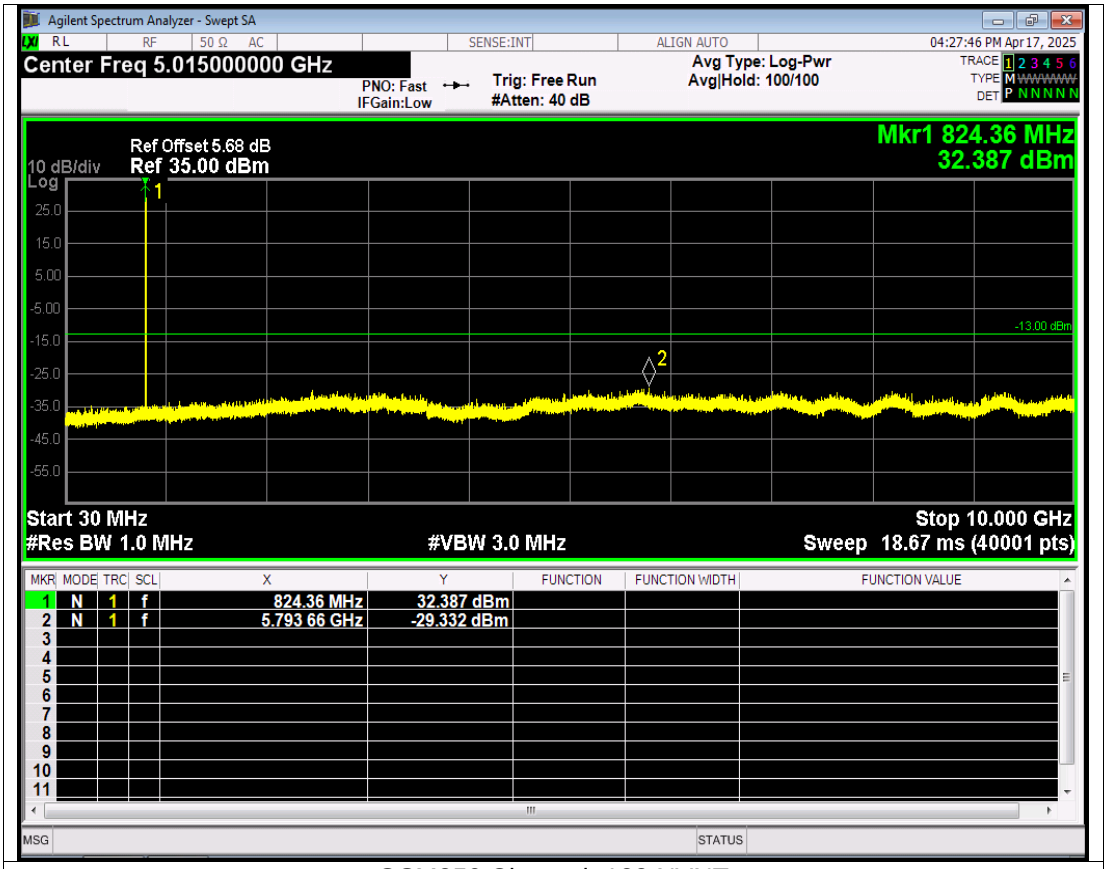
GSM850 Channel=251 NVNT



GSM1900 Channel=512 NVNT



GSM1900 Channel=810 NVNT



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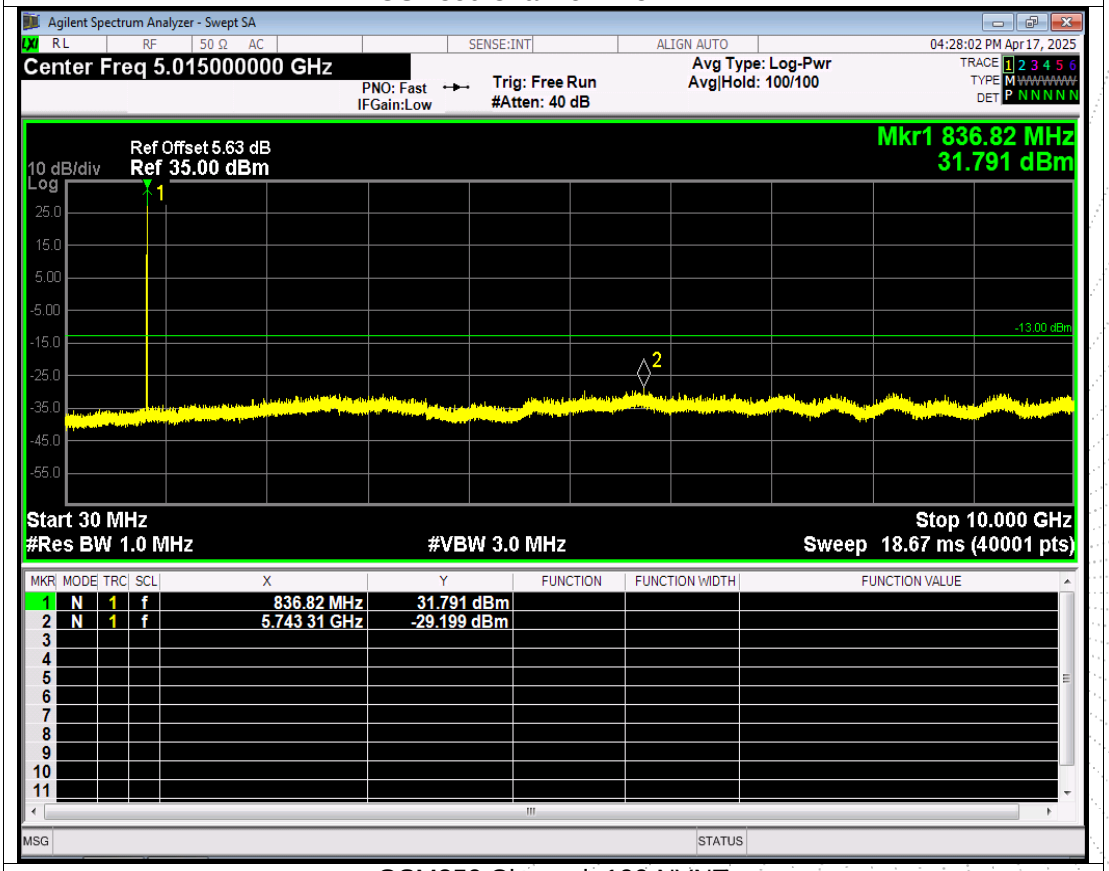
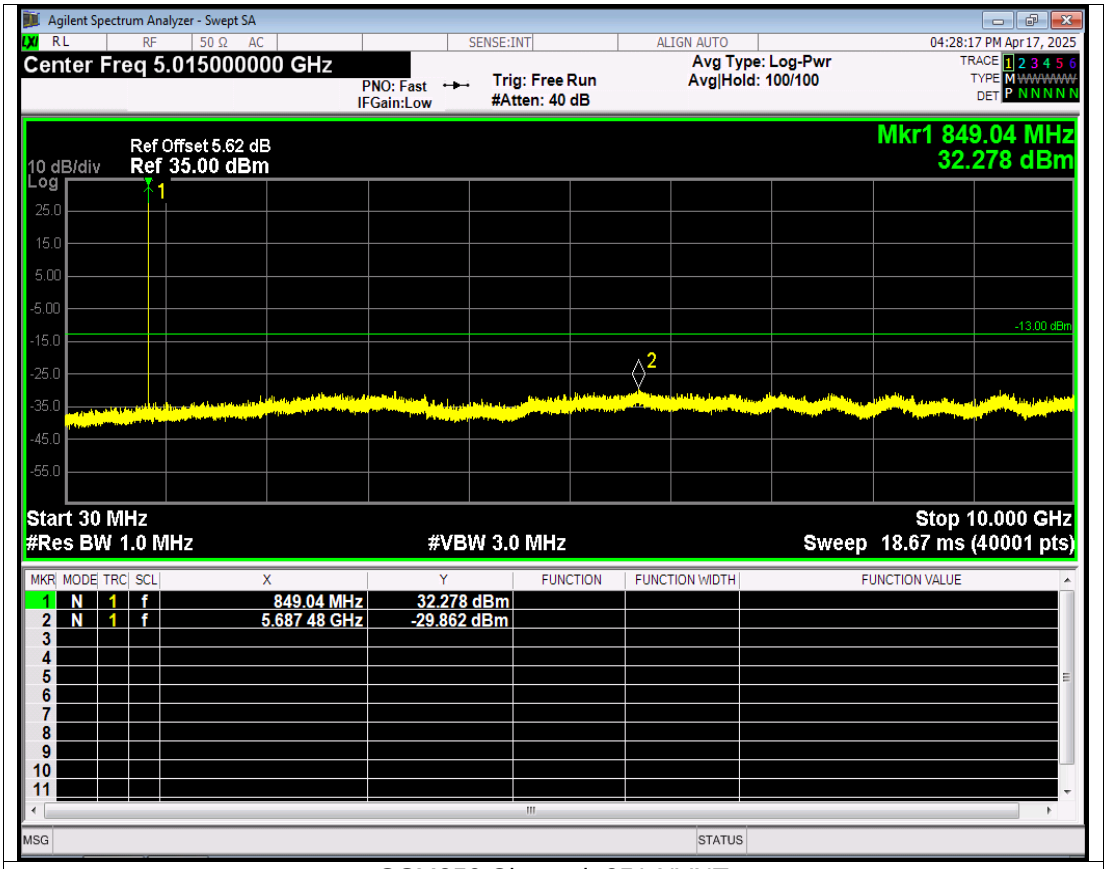
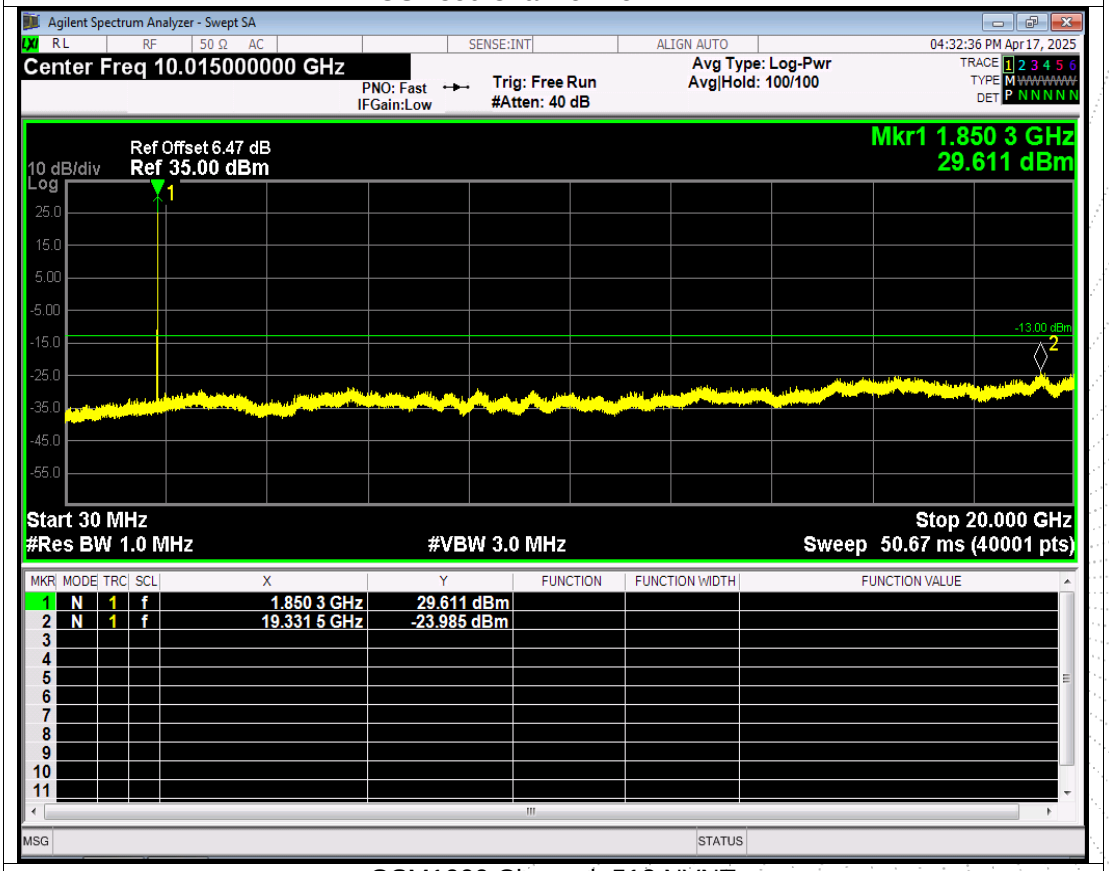


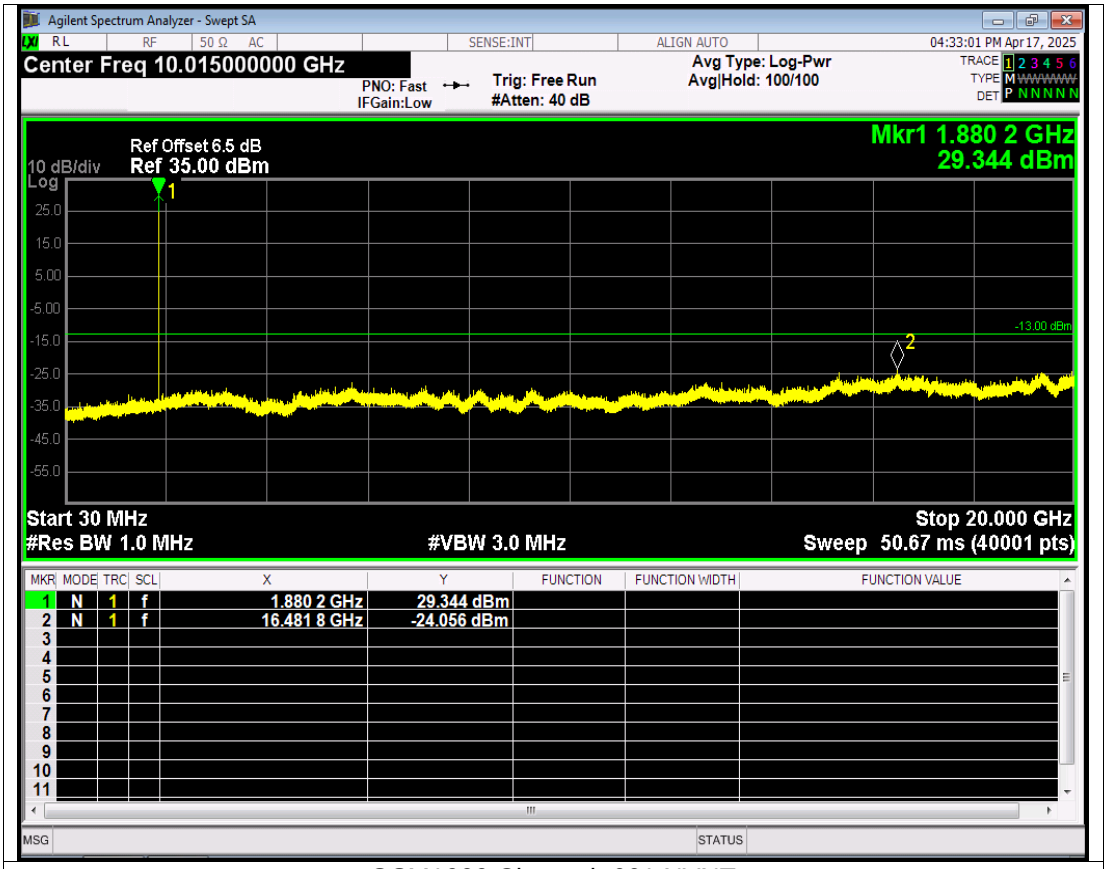
GSM850 Channel=190 NVNT



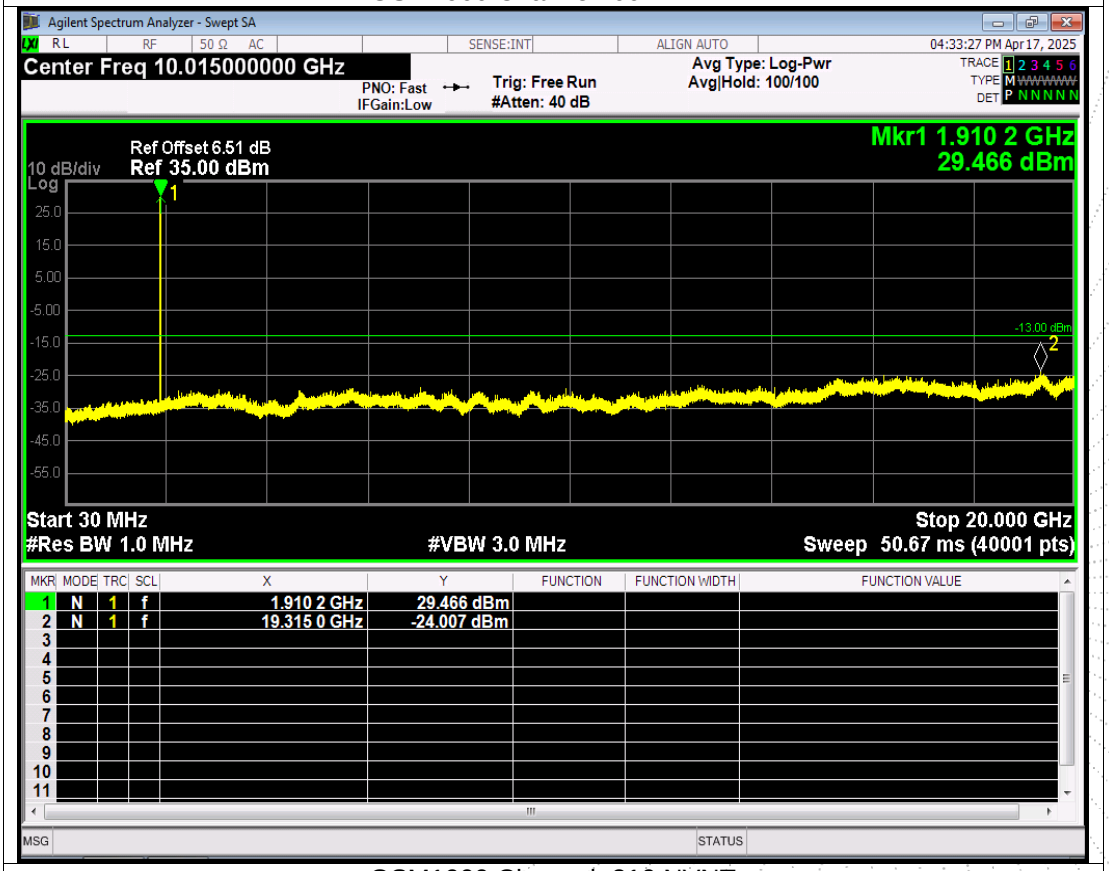
GSM850 Channel=251 NVNT



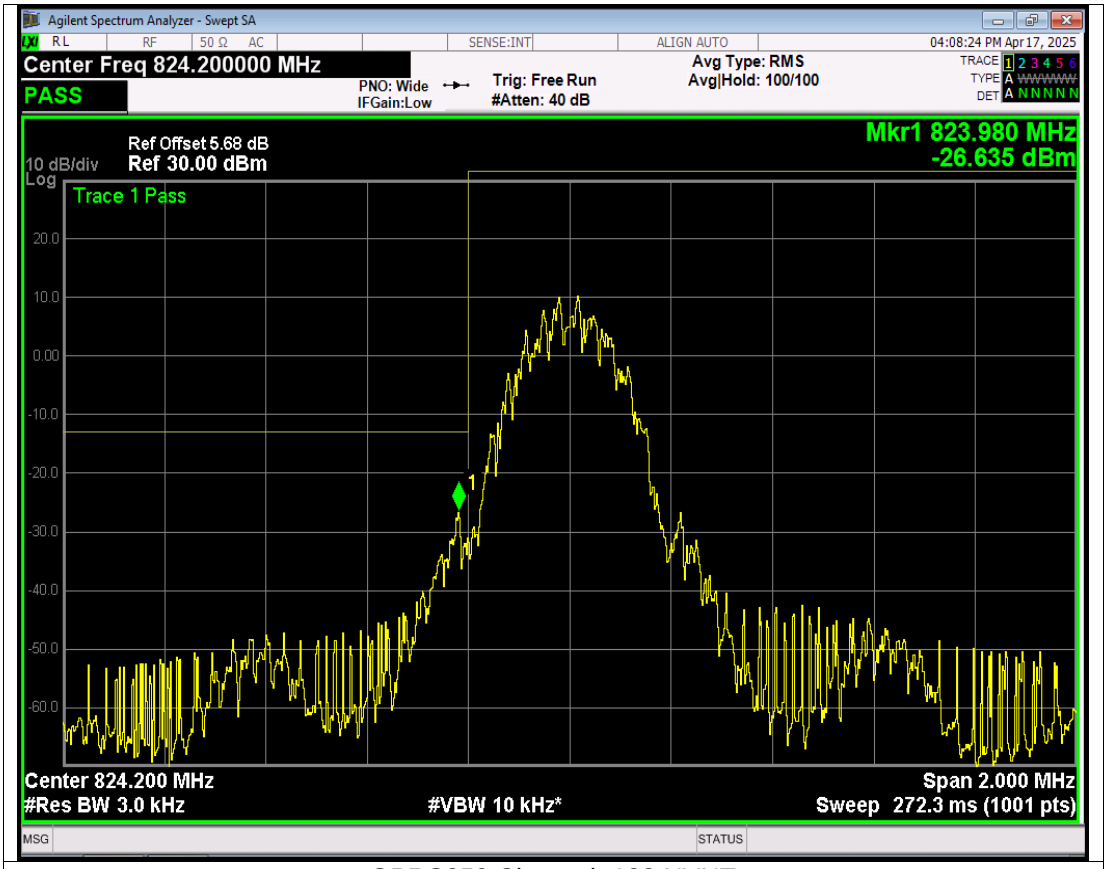
GSM1900 Channel=512 NVNT



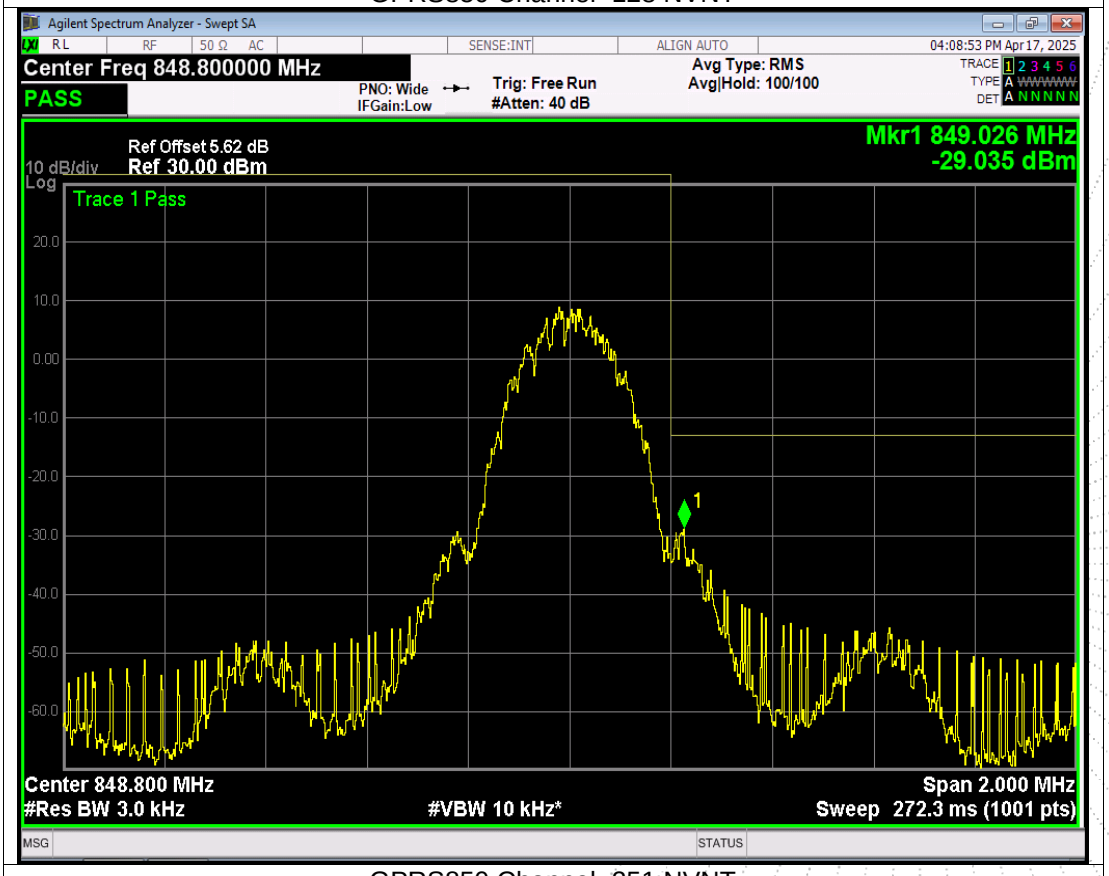
GSM1900 Channel=661 NVNT



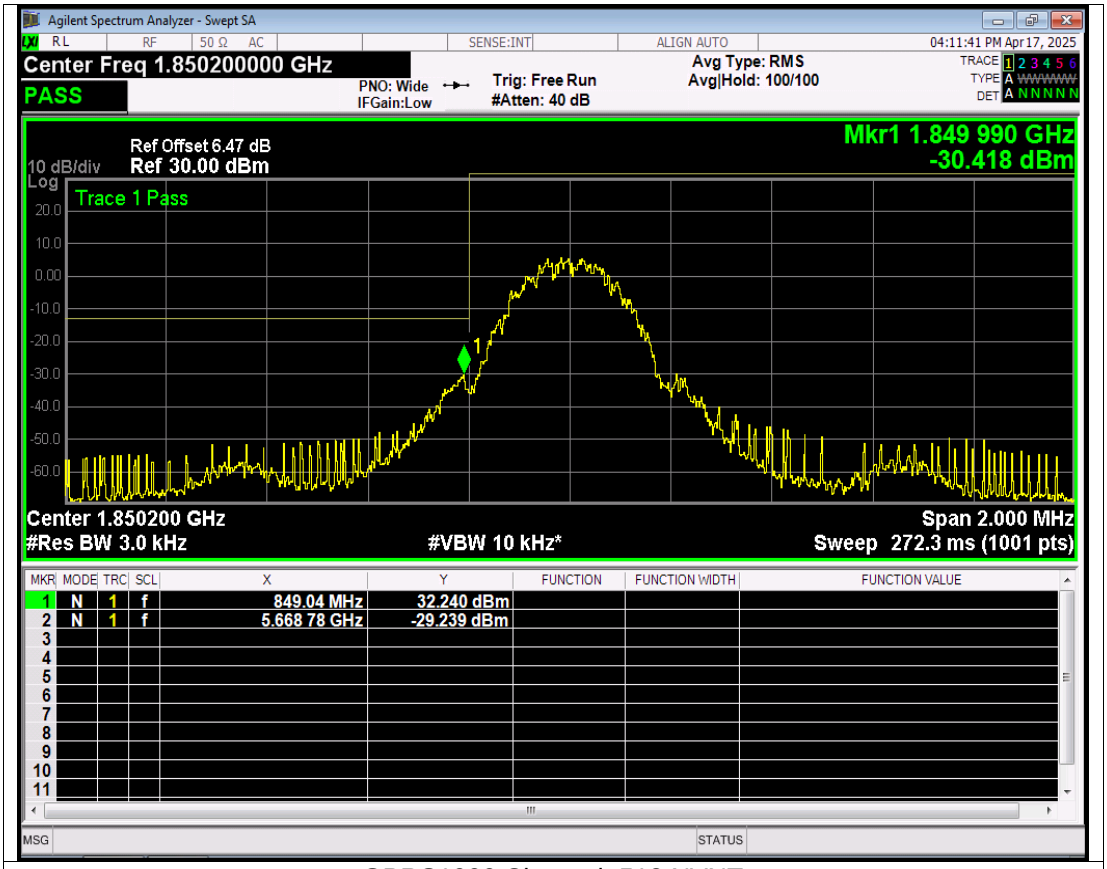
GSM1900 Channel=810 NVNT



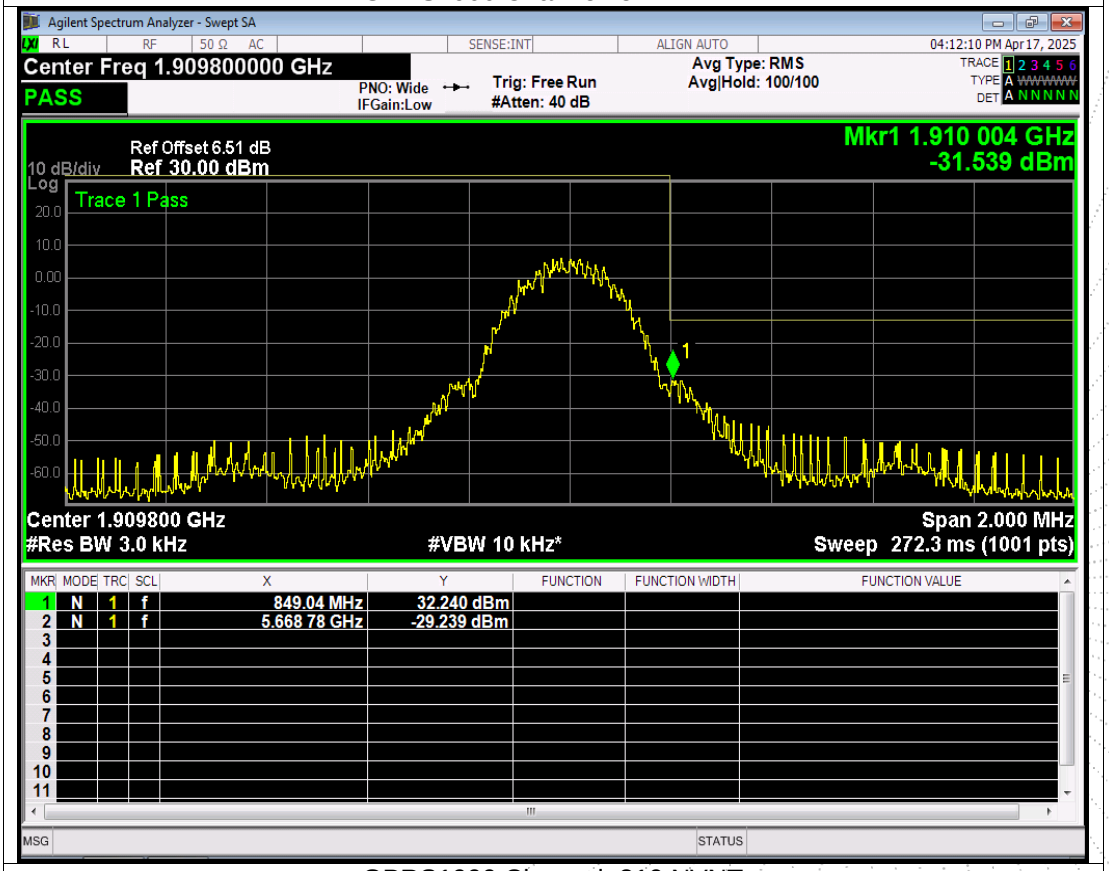
GPRS850 Channel=128 NVNT



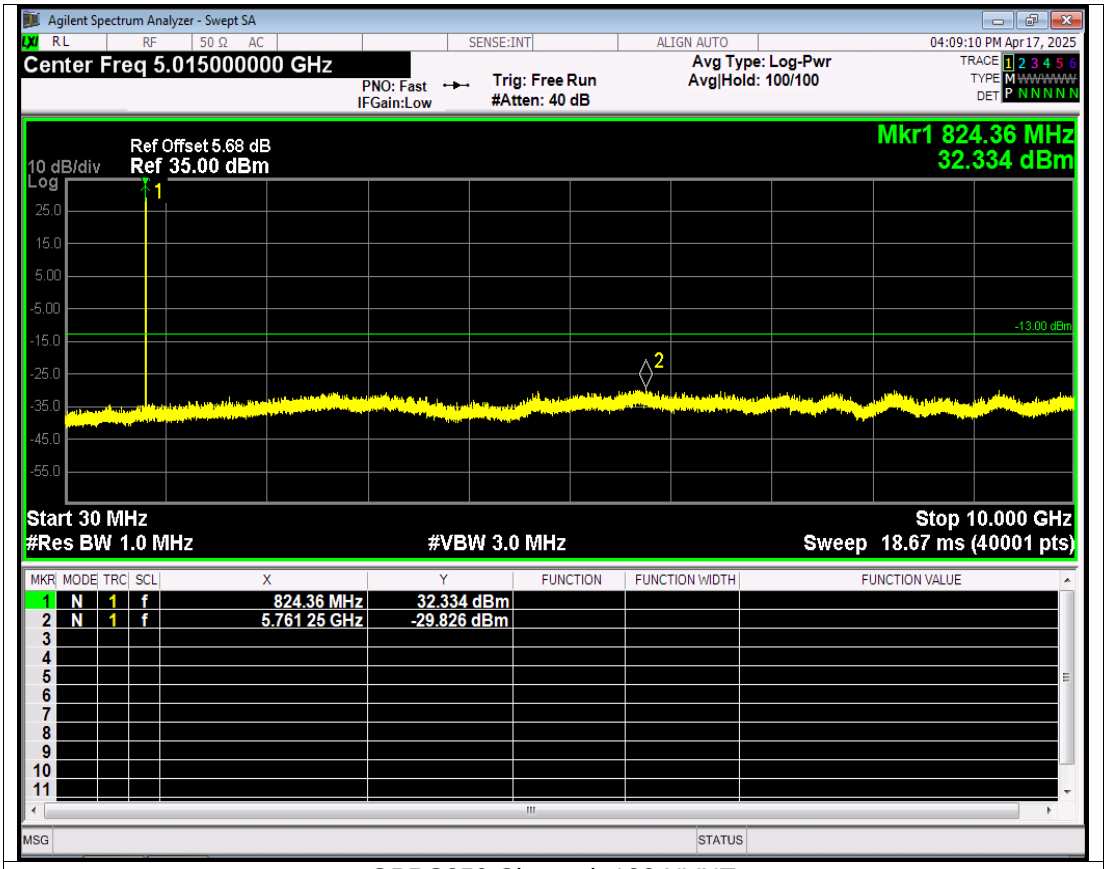
GPRS850 Channel=251 NVNT



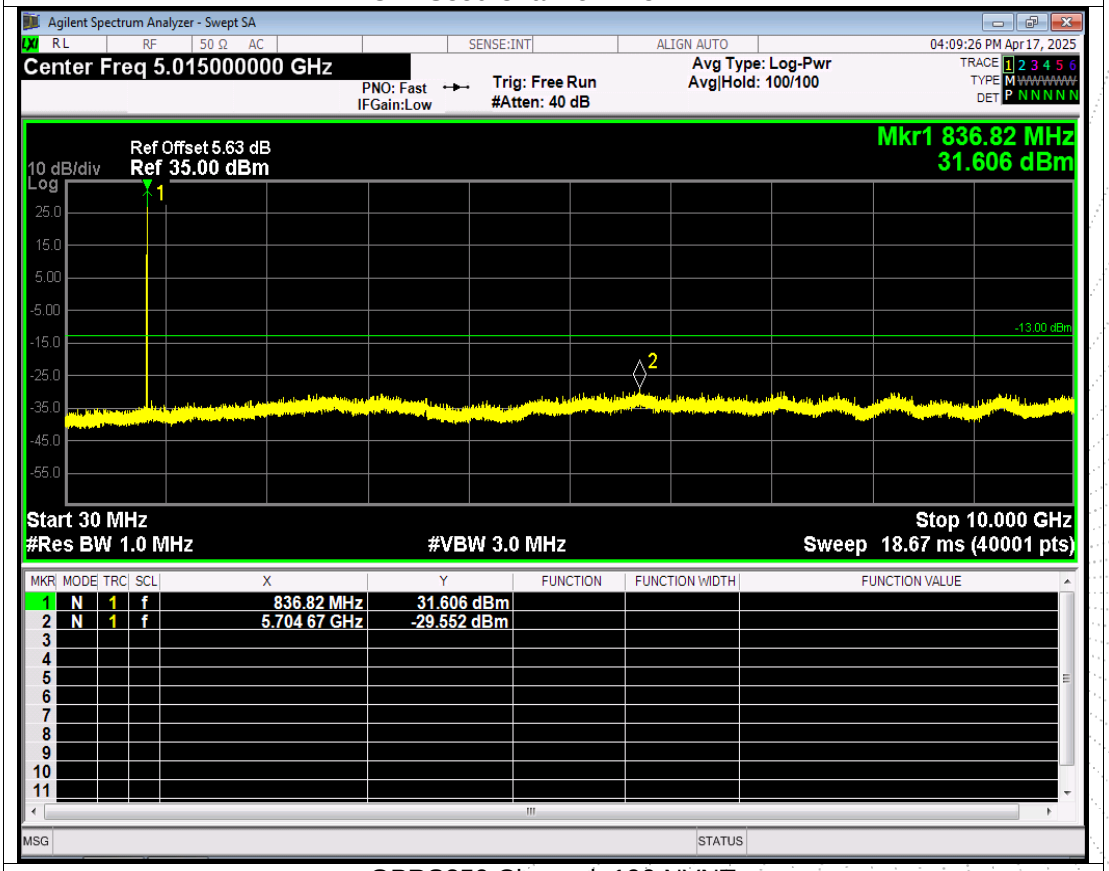
GPRS1900 Channel=512 NVNT



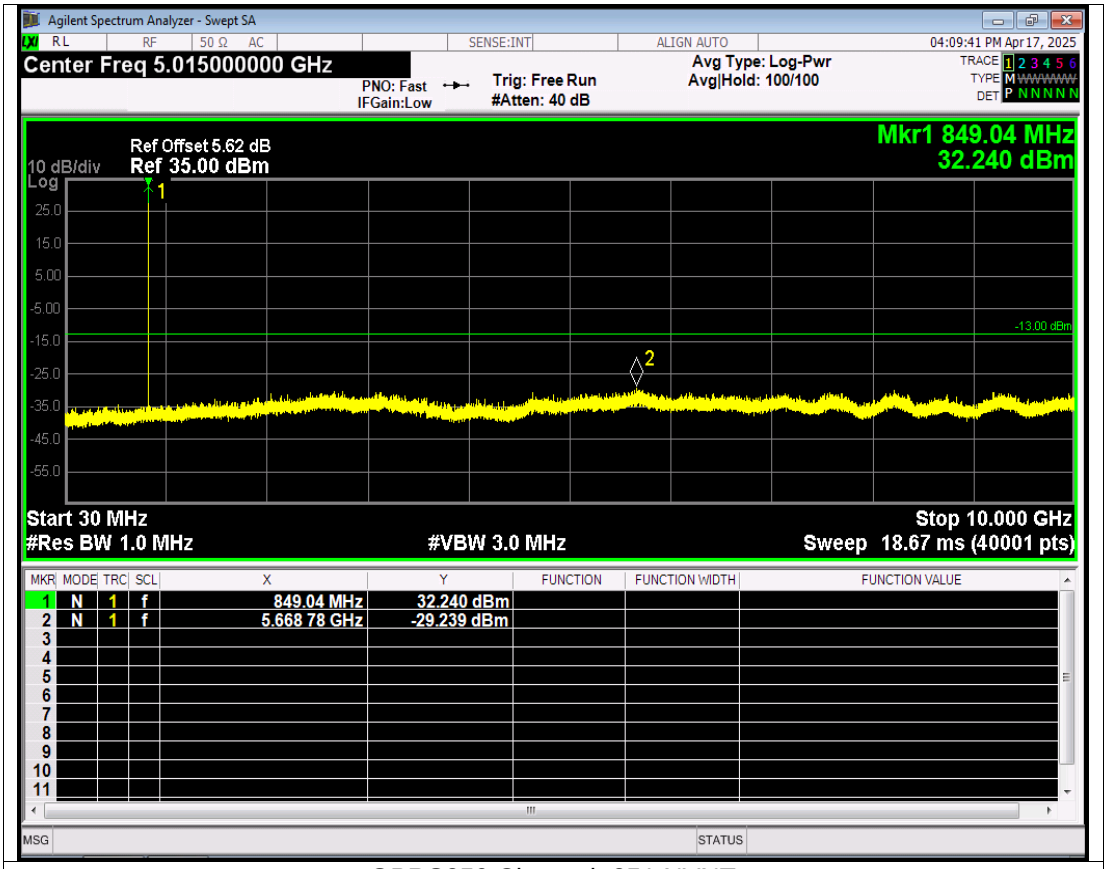
GPRS1900 Channel=810 NVNT



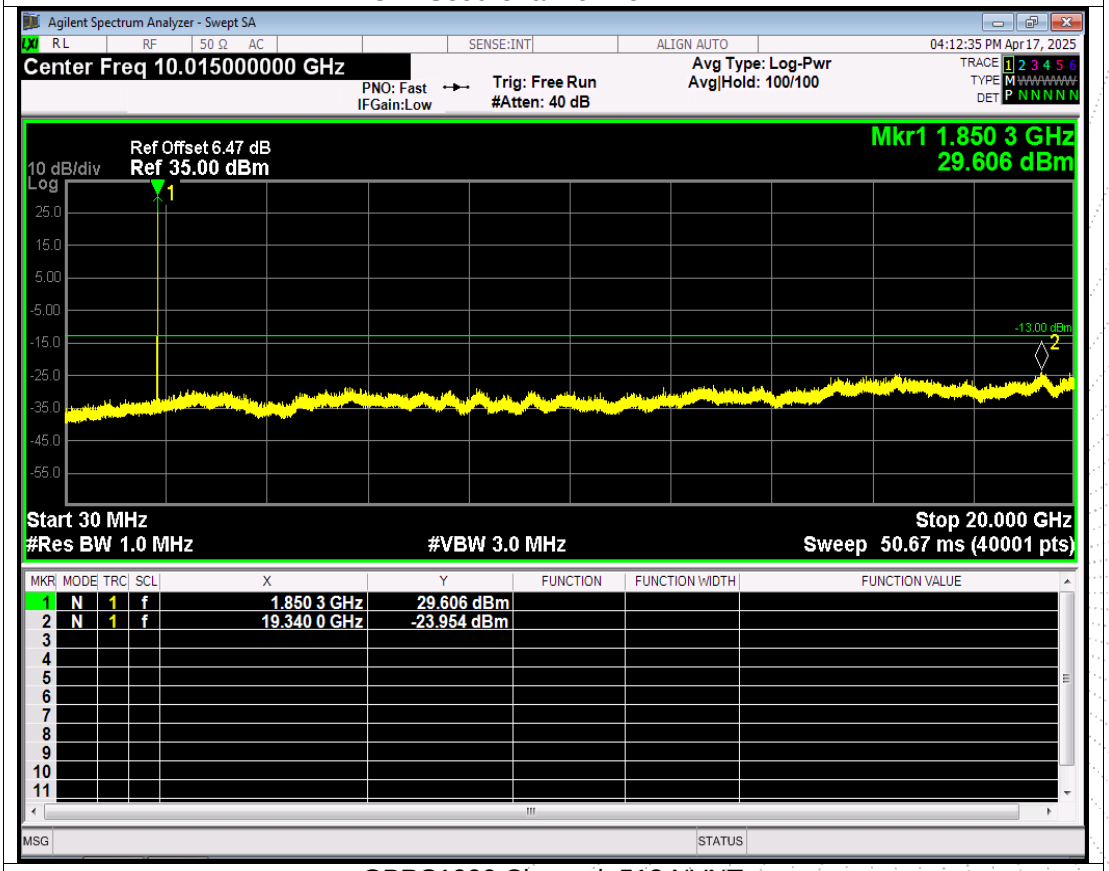
GPRS850 Channel=128 NVNT



GPRS850 Channel=190 NVNT



GPRS850 Channel=251 NVNT



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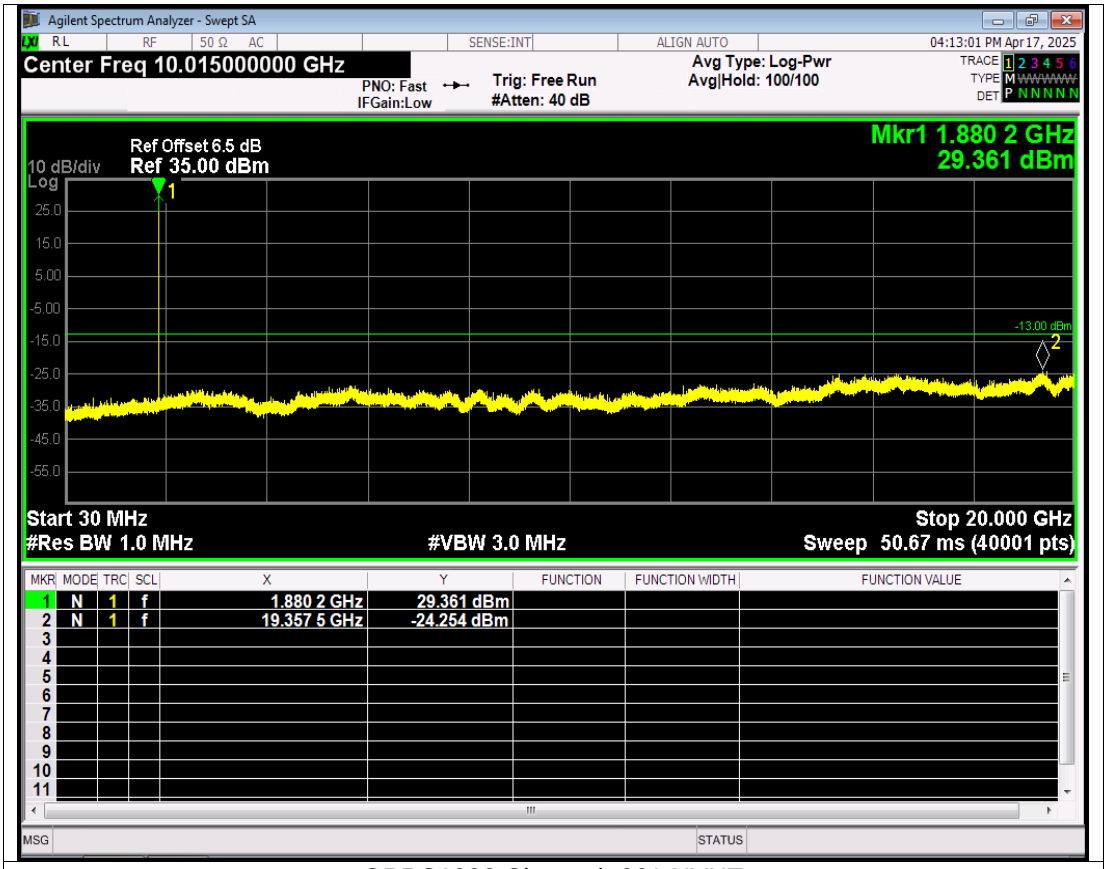
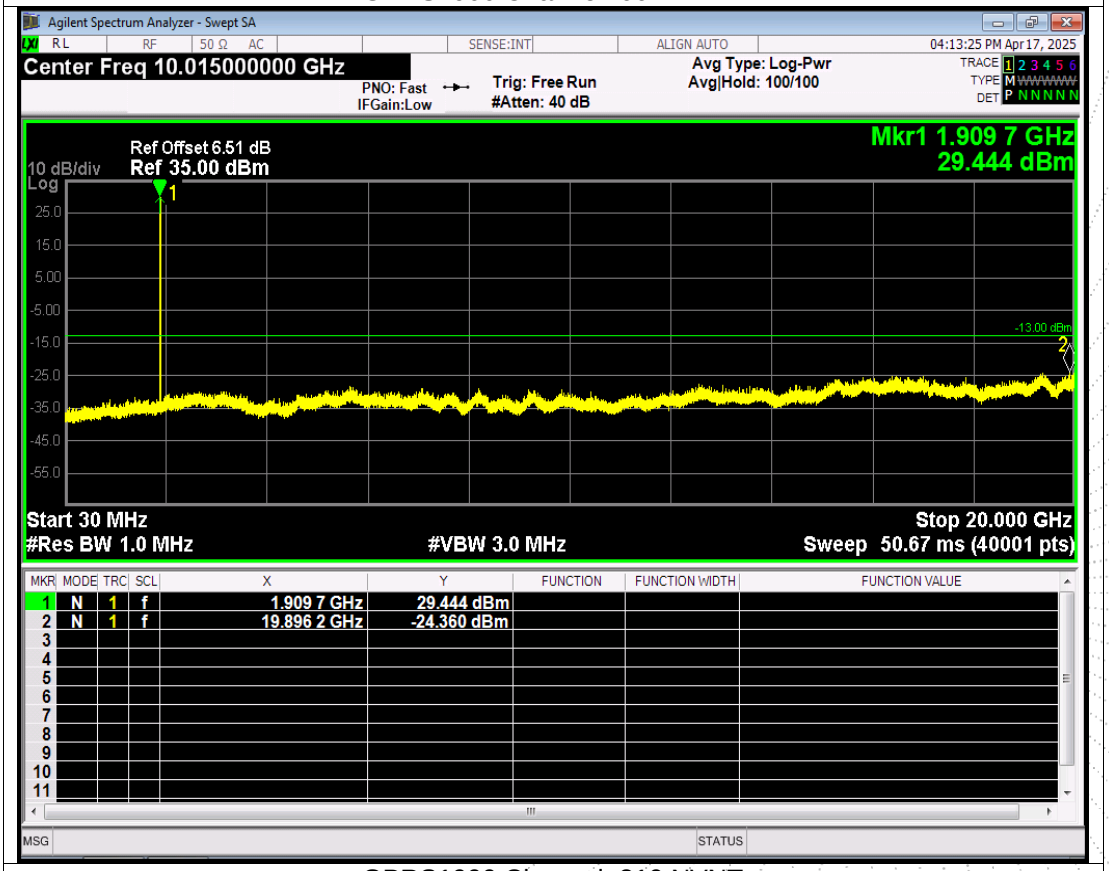


GPRS1900 Channel=661 NVNT



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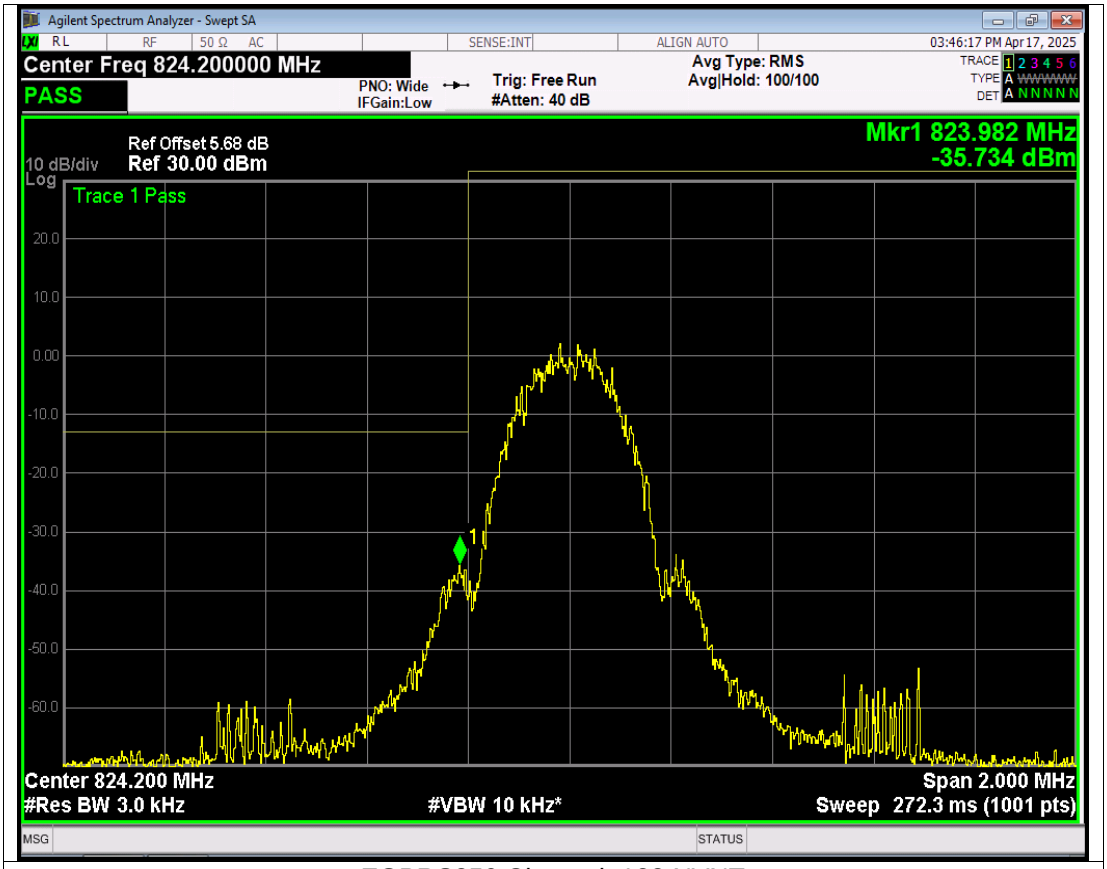
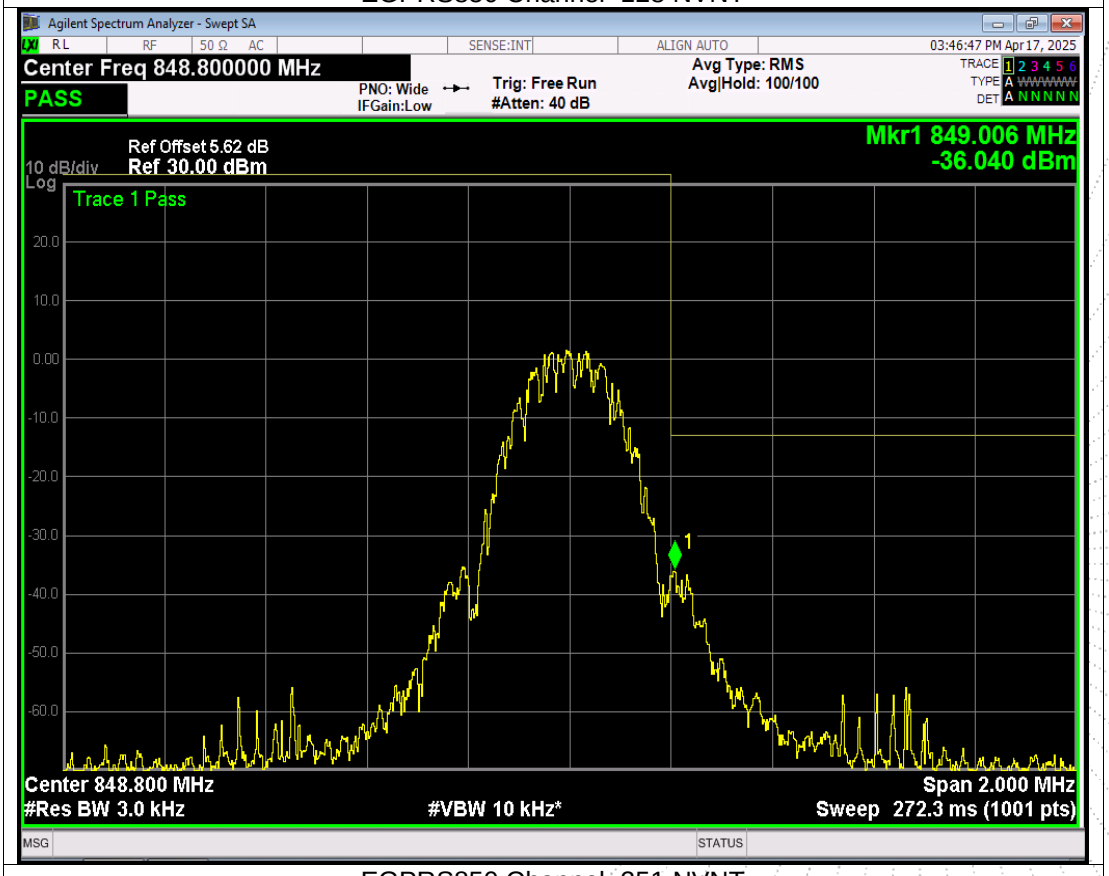


EGPRS850 Channel=128 NVNT



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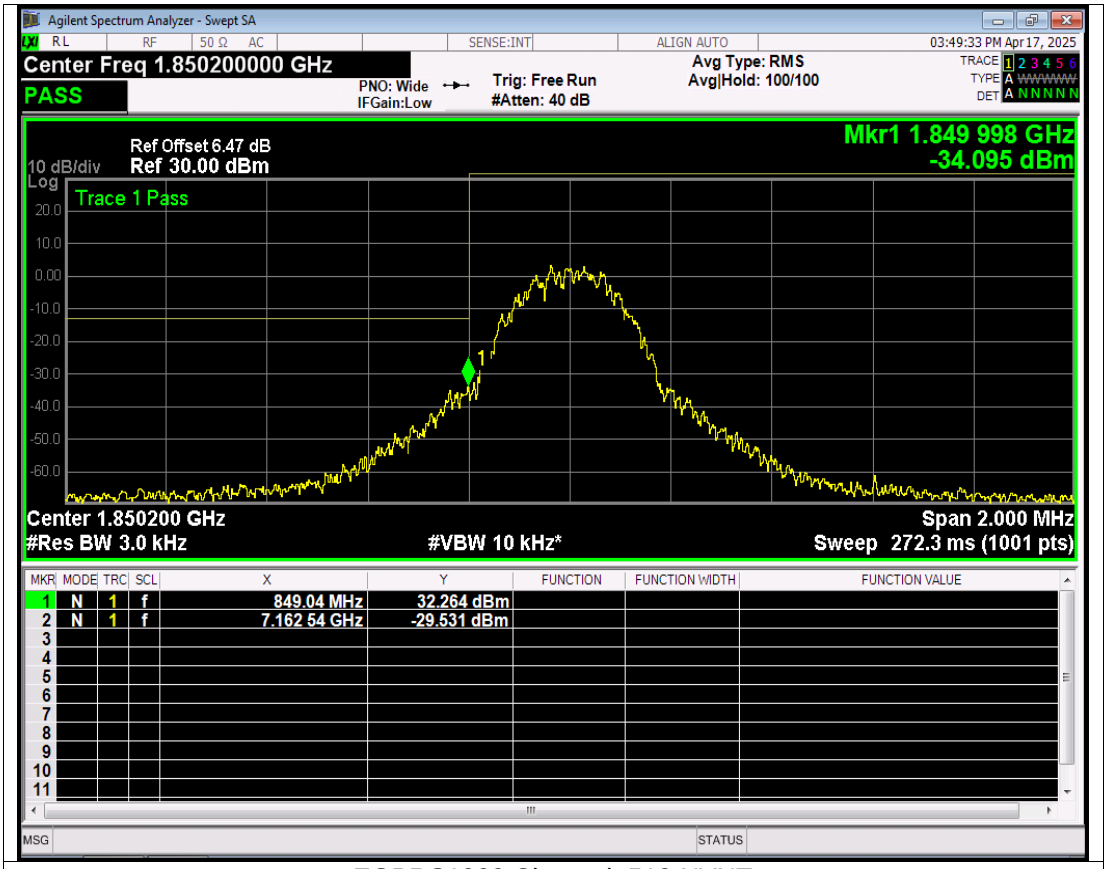

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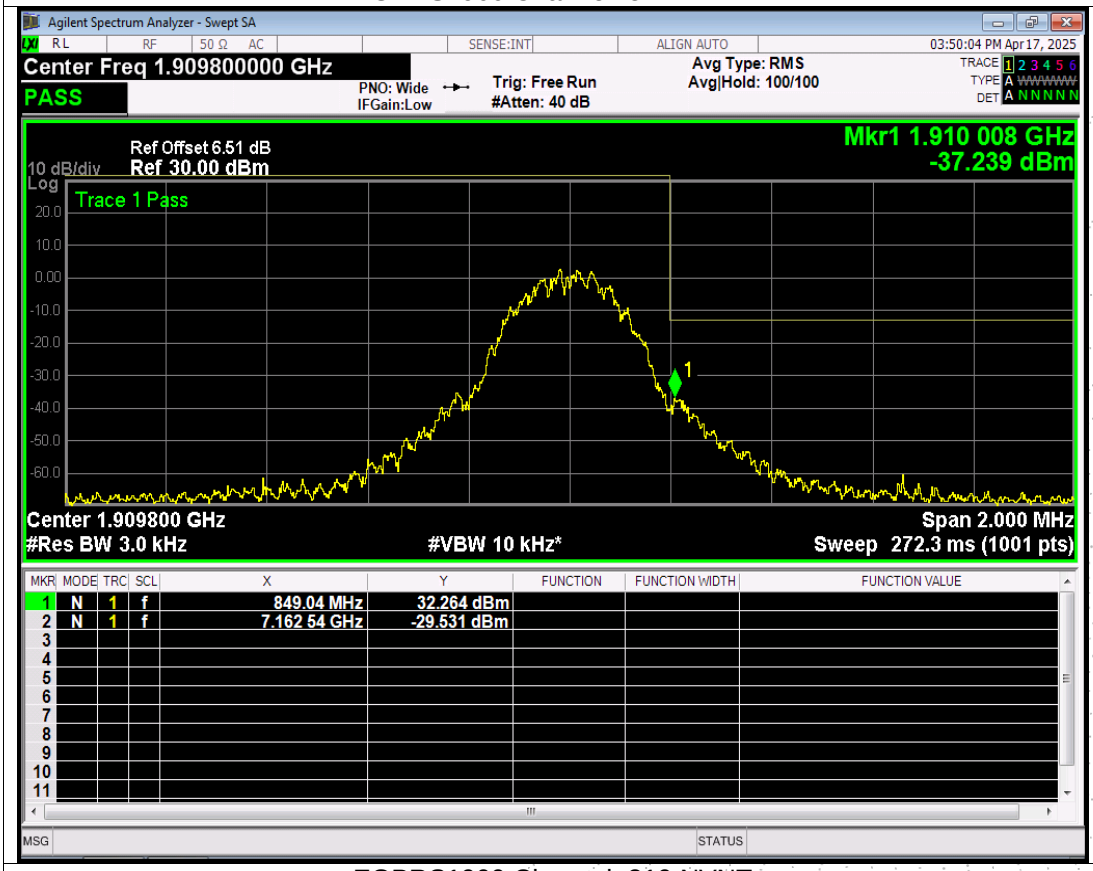

EGPRS1900 Channel=810 NVNT