TEST REPORT

Report No.:	BCTC2605005052-4E
Applicant:	Shenzhen Feiyufei Digital Technology Co., Ltd
Product Name:	Tablet
Test Model:	NET Z3
Tested Date:	2026-06-02 to 2026-06-15
Issued Date:	2026-07-31

Shenzhen BCTC Technology Co., Ltd.

FCC ID:2BCOA-NETZ3

Product Name:	Tablet
Trademark:	Krono
Model/Type reference:	NET Z3
Prepared For:	Shenzhen Feiyufei Digital Technology Co., Ltd
Address:	3A18, Building A2, Fuhai Technology Industrial Park, Fuyong Community, Baoan, Shenzhen, China.
Manufacturer:	Shenzhen Feiyufei Digital Technology Co., Ltd
Address:	3A18, Building A2, Fuhai Technology Industrial Park, Fuyong Community, Baoan, Shenzhen, China.
Prepared By:	Shenzhen BCTC Technology Co., Ltd.
Address:	Room 101M, Unit 1, Building1, Pengyuan, No.18, Lilang Road, Shanglilang, Nanwan Subdistrict, Longgang District, Shenzhen, Guangdong, China.
Sample Received Date:	2026-06-02
Sample Tested Date:	2026-06-02 to 2026-06-15
Report No.:	BCTC2605005052-4E
Test Standards:	FCC CFR Title 47 Part 2 FCC CFR Title 47 Part22 Subpart H FCC CFR Title 47 Part24 Subpart E ANSI/ TIA/ EIA-603-D-2010 FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
Test Results:	PASS
Remark:	This is GSM & WCDMAradio test report.

Prepared by :	Reviewer by :	Approved by:
Louis Zeng /Editor	Mike Zheng / Supervisor	Sewen Guo/Manager

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 Technology 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

Test Report Declaration Page
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 8
5. Test Facility And Test Instrument Used 10
5.1 Test Facility 10
5.2 Test Instrument Used 10
6. RF Output Power 12
6.1 Block Diagram Of Test Setup 12
6.2 Limit 13
6.3 Test procedure 13
6.4 Test Result 16
7. Peak-to-average Ratio(PAR) of Transmitter 19
7.1 Block Diagram Of Test Setup 19
7.2 Limit 19
7.3 Test procedure 19
7.4 Test Result 20
8. Emission Bandwidth 35
8.1 Block Diagram Of Test Setup 35
8.2 Limit 35
8.3 Test procedure 35
8.4 Test Result 36
9. Out of Band Emissions at Antenna Terminal 52
9.1 Block Diagram Of Test Setup 52
9.2 Limit 52
9.3 Test procedure 52
9.4 Test Result 52
10. Spurious Radiated Emissions 73
10.1 Block Diagram Of Test Setup 73
10.2 Limit 74
10.3 Test procedure 74
10.4 Test Result 75
11. Frequency Stability 77
11.1 Block Diagram Of Test Setup 77
11.2 Limit 77
11.3 Test procedure 77
11.4 Test Result 78
12. EUT Test Setup Photographs 80

(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2605005052-4E	2026-07-31	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),	PASS
3	Peak-to-average Ratio(PAR) of Transmitter	§22.913,§24.232(d)	PASS
4	Emission Bandwidth	§22.917 (b), §24.238(b),	PASS
5	Spurious Emissions at Antenna Terminal	§22.917 (a), §24.238 (a),	PASS
6	Spurious Radiation Emissions	§22.917 (a), §24.238 (a),	PASS
7	Out of Band Emissions	§22.917 (a), §24.238 (a),	PASS
8	Frequency Stability	§22.355, §24.235,	PASS

NOTE1: N/A (Not Applicable)
NOTE2: According to FCC OET KDB 971168 D01 Power Meas License Digital Systems v03r01 ： MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS, ANSI C63.26-2015：American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
Note 3: "*" indicates that the test results are determined base on CFR 47 FCC Part 22/24. And the test results are took into account measurement uncertainty(see section 3 for measurement uncertainty information)

3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2:2011/AMD2:2018. 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(9kHz-30MHz)	U=3.7dB
2	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.8dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=5.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=5.0dB
5	Conducted Emission(150kHz-30MHz)	U=3.0dB
6	Power Spectral Density	U=3.46dB
7	Peak Power	U=0.31dB
8	Occupied Bandwidth/Frequency Range	U=3.46%
9	Conducted output power uncertainty	U=0.55dB
10	Frequency Error	U= 53.50 Hz
11	Frequency Drift	U=0.64 KHz
12	Temperature	U= 0.59 ℃
13	Humidity	U= 5.3 %

4. Product Information And Test Setup

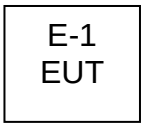
4.1 Product Information

Model/Type reference:	NET Z3	
Model differences:	N/A	
Hardware Version:	N/A	
Software Version:	N/A	
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 V: TX: 826.40~846.60MHz; RX: 871.40~ 891.60MHz;	
Max RF Output Power:	GSM/GPRS/EGPRS 850: 33.21dBm, GSM/GPRS/EGPRS 1900: 30.53dBm WCDMA Band II: 22.77dBm WCDMA Band V: 23.96dBm	
Type of Modulation:	GSM /GPRS	GMSK
	EDGE	GMSK, 8PSK
	WCDMA /HSDPA/USUPA	QPSK/16QAM
Multiplot Class	GPRS/EGPRS: 12	
Type of Emission:	GSM/GPRS/EGPRS 850: 251KGXW GSM/GPRS/EGPRS 1900: 254KGXW WCDMA Band II: 4M17F9W WCDMA Band V: 4M17F9W	
Antenna installation:	Internal antenna	
Antenna Gain:	GSM850: -0.24 dBi GSM1900: 1.87 dBi WCDMA Band II: 1.87 dBi WCDMA Band V: -0.24 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. Antenna gain information is provided by the client and the laboratory is not responsible for its authenticity ☐The antenna gain of the product is provided by the customer, and the test data is affected by the customer information. Antenna gain information is provided by the client and the laboratory is not responsible for its authenticity	
Power Rating	DC 5V/2A	
Adapter:	Input: AC 100-240V,50/60Hz,0.5A,Max Output: DC 5V/2.0A,10W	
Battery:	DC 3.7 V,3000mAh	

4.2 Test Setup Configuration

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

Radiated Spurious Emission



4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Tablet	N/A	NET Z3	N/A	EUT
N/A	N/A	N/A	N/A	N/A	N/A

Item	Shielded Type	Ferrite Core	Length	Note
N/A	N/A	N/A	N/A	N/A

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.

4.4 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 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.			

4.5 Measurement Test Environments

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

Test Voltage	NV (Normal Voltage):	DC 3.7V
	LV (Low Voltage) :	DC 3.3V
	HV (High Voltage) :	DC 4.07V
Test Temperature	NV (Normal Voltage) :	25 °C
	LV (Low Voltage) :	-10 °C
	HV (High Voltage) :	55 °C
Humidity	25% to 75%	

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 Technology Co., Ltd.
Address: Room 101M, Unit 1, Building1, Pengyuan, No.18, Lilang Road, Shanglilang, Nanwan Subdistrict, Longgang District, Shenzhen, Guangdong, China.
The site and apparatus are constructed in conformance with the requirements of ANSI C63.4a-2017 and CISPR 16-1-1:2019 other equivalent standards.
FCC Test Firm Registration Number: 754702
ANAB certificate registration number is: CN3479

5.2 Test Instrument Used

Conducted emissions Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Receiver	R&S	ESCI	101421	2025.08.30	2026.08.29
AMN	SCHWHRZBECK	NSLK8128	05152	2026.01.22	2027.01.21
AMN	SCHWHRZBECK	NSLK8127	8127739	2025.09.16	2026.09.15
Pulse Limiter	SCHWHRZBECK	VTSD 9561-F-N	00547	2025.08.30	2026.08.29
Temperature & Humidity	Wetest	HTC-1	/	2025.09.01	2026.08.31
Software	EZ-EMC	Ver.EMC-CON 3A1	/	/	/

Radiated Emissions Test (966 Chamber)					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
966 chamber	ChengYu	966 Room	966	2023.09.25	2026.09.24
Loop Antenna	Schwarzbeck	FMZB1519B	00014	2026.01.05	2027.01.04
Broadband antenna	SCHWHRZBECK	VULB9168	01620	2025.08.29	2026.08.28
Horn antenna (1 GHz -18GHz)	SCHWARZBECK	BBHA 9120 D	2792	2025.08.29	2026.08.28
Horn antenna (18 GHz -40GHz)	SCHWARZBECK	BBHA9170	00822	2025.12.29	2026.12.28
Receiver	R&S	ESR	1316	2025.08.30	2026.08.29
Spectrum Analyzer	R&S	FSV40	101328	2026.01.22	2027.01.21
Amplifier	SCHWHRZBECK	BBV9744	568	2025.08.30	2026.08.29
Amplifier	EMC INSTRUMENTS	EMC0518A45SEE	EMT-SZ2233	2025.08.30	2026.08.29

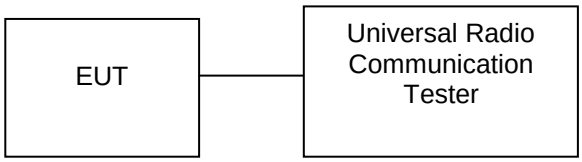
	CORPORATION				
Amplifier (18GHz-40GHz)	MITEQ	TTA1840-35-HG	2034381	2026.05.09	2027.05.08
Band 2.4G-2.5G Filter	COM-MW	ZBSF6-C5150-5350-1117	2220980	2025.08.30	2026.08.29
RF cable 3# (9kHz-6GHz)	Yunyi	10M	/	2025.08.30	2026.08.29
RF cable 9# (9kHz-1GHz)	Yunyi	2M	/	2025.10.28	2026.10.27
RF cable 5# (1GHz -18GHz)	SKET	9M	18038626	2025.08.30	2026.08.29
RF cable 6# (1GHz -18GHz)	SKET	5M	#10	2025.09.05	2026.09.04
RF cable 10# (18GHz-40GHz)	/	2M	2M	2026.05.09	2027.05.08
RF cable 11# (18GHz-40GHz)	/	2.5M	2.5M	2026.05.09	2027.05.08
Temperature & Humidity	Wetest	HTC-1	/	2025.09.05	2026.09.04
Communication test set	R&S	CMW500	157483	2025.08.30	2026.08.29
Software	EZ-EMC	Ver.FA-03A2	/	/	/

RF Conducted Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Spectrum Analyzer	Keysight	N9020A	MY51287403	2025.08.30	2026.08.29
Signal Generator	Keysight	N5182A	MY50144088	2025.08.30	2026.08.29
Power Sensor	Keysight	U2001	MY51250006	2025.10.28	2026.10.27
Temperature & Humidity	Wetest	HTC-1	/	2025.09.01	2026.08.31
Communication test set	R&S	CMW500	157483	2025.08.30	2026.08.29
Radio frequency control box	MWRFtest	MW100-RFCB	\	\	\
Software	MWRFtest	MTS 8310	V 3.0.0.0	\	\
D.C. Power Supply	Elektro-Automatik GmbH & Co.KG	D-41747 Viersen	6230316	2025.09.30	2026.08.29
Temperature and humidity test chamber	Auchno	OJN-9606-408L	19120183	2025.07.09	2026.07.08

6. RF Output Power

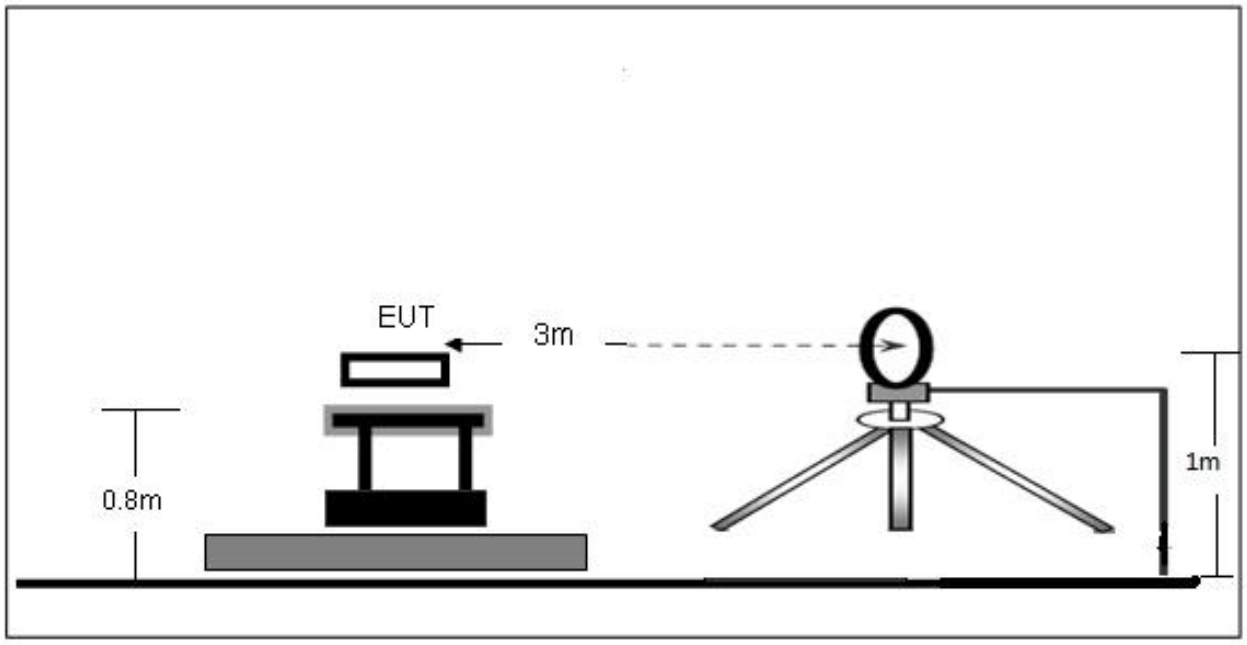
6.1 Block Diagram Of Test Setup

Conducted output power test method:

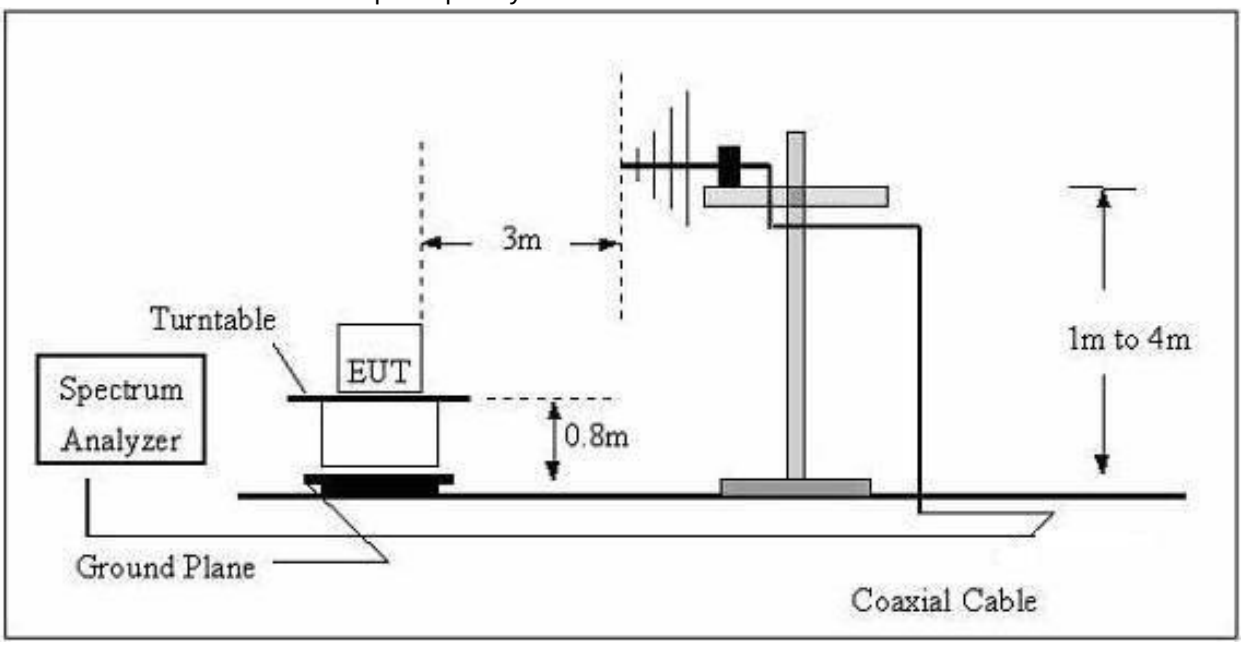


Radiated power test method:

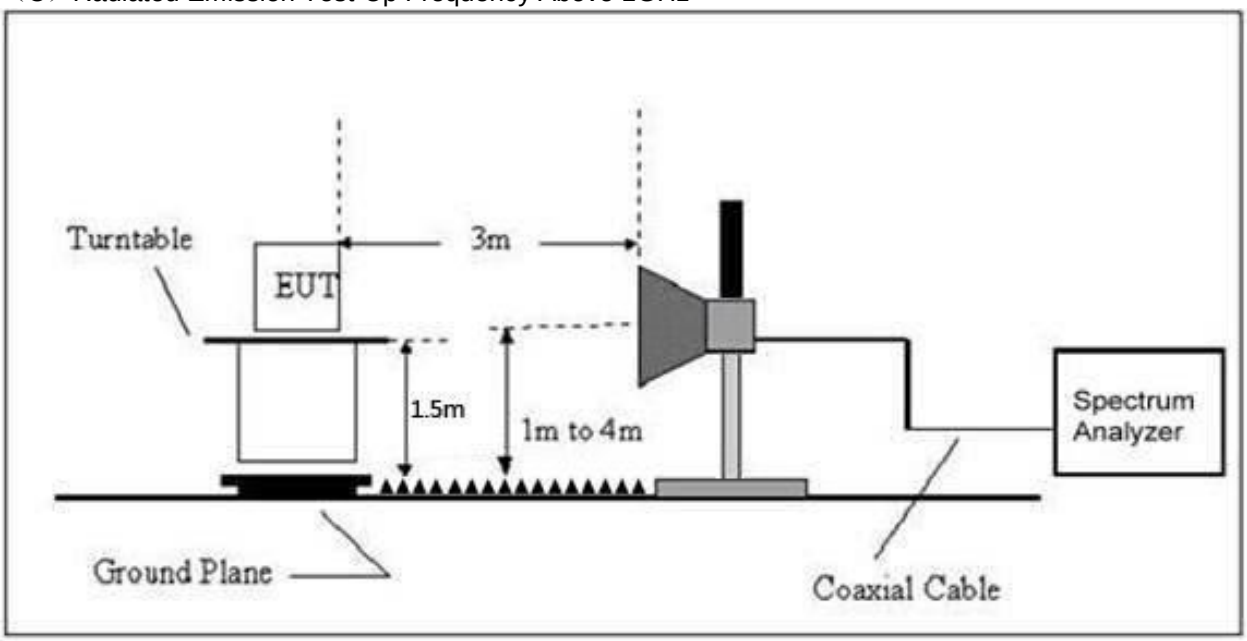
（A）Radiated Emission Test-Up Frequency Below 30MHz



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



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



6.2 Limit

According to FCC section 22.913(a) (5), the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC section 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.

6.3 Test procedure

Description of the Conducted Output Power Measurement

The EUT is coupled to the SS with attenuator through power splitter; the RF load attached to EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. A system simulator is used to establish communication with the EUT, and its parameters are set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The relevant equation for determining the conducted measured value is:

Conducted Output Power Value (dBm) = Measured Value (dBm) + Path Loss (dB)

where:

Conducted Output Power Value = final conducted measured value in the conducted power test, in dBm;

Measured Value = measured conducted power received by spectrum analyzer or power meter, in dBm;

Path Loss = signal attenuation in the connecting cable between the transmitter and spectrum analyzer or power meter, including external cable loss, in dB;

During the test, the data of Path Loss (dB) is added in the spectrum analyzer or power meter, so Measured Value (dBm) is the final values which contains the data of Path Loss (dB).

Description of the Transmitter Radiated Power Measurement

In many cases, the RF output power limits for licensed digital transmission devices is specified in terms of effective radiated power (ERP) or equivalent isotropic radiated power (EIRP). Typically, ERP is specified when the operating frequency is less than or equal to 1 GHz and EIRP is specified when the operating frequency is greater than 1 GHz. Both are determined by adding the transmit antenna gain to the conducted RF output power with the primary difference between the two being that when determining the ERP, the transmit antenna gain is referenced to a dipole antenna (i.e., dBd) whereas when determining the EIRP, the transmit antenna gain is referenced to an isotropic antenna (dBi).

Final measurement calculation as below:

Determining ERP and EIRP from conducted RF output power measurement results

Subclause 5.2.5.5 of ANSI C63.26-2015 is applicable, along with the following provisions. For personal/portable radios utilizing an integral antenna, the factor LC is typically negligible. However, in a fixed station transmit system that utilizes a long cable run between the transmitter and the transmitting antenna, this factor can be significant. The minimum cable loss should be used in this equation.

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

ERP or EIRP = P_{Meas} + GT − LC

where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas}, typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

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

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

dBd (ERP)=dBi (EIRP) -2.15 dB

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

The relevant equation for determining the ERP/EIRP from the radiated RF output power is:

ERP/EIRP (dBm) = SA Read Value (dBm) + Correction Factor (dB)

where:

ERP/EIRP = effective or equivalent radiated power, in dBm;

SA Read Value = measured transmitter power received by EMI receiver or spectrum analyzer, in dBm;

Correction Factor = total correction factor including cable loss, in dB;

During the test, the data of Correction Factor (dB) is added in the EMI receiver or spectrum analyzer, so SA Read Value (dBm) is the final values which contains the data of Correction Factor (dB).

The distance between the EUT and the test antenna shall be adequate to ensure that the measurements are performed in the radiated far-field. The maximum amplitude of the radiated output power must be found by employing a volume search comprising both the horizontal (azimuth) and vertical (elevation) planes. The polarization of the measurement antenna must also be matched with the EUT to determine the maximum amplitude. The procedures given in ANSI C63.26 for ensuring that the radiated amplitude is maximized shall be used.

6.4 Test Result

GSM Mode Test Data

Test Band	Test Channel	Conducted Output Peak Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
GSM 850	LCH	33.08	-0.24	-2.39	30.69	1.172	7.000	Pass
	MCH	33.21	-0.24	-2.39	30.82	1.208	7.000	Pass
	HCH	32.95	-0.24	-2.39	30.56	1.138	7.000	Pass
GPRS 850	LCH	33.08	-0.24	-2.39	30.69	1.172	7.000	Pass
	MCH	33.20	-0.24	-2.39	30.81	1.205	7.000	Pass
	HCH	32.96	-0.24	-2.39	30.57	1.140	7.000	Pass

Test Band	Test Channel	Conducted Output Peak Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
GSM 1900	LCH	30.16	1.87	32.03	1.596	2.000	Pass
	MCH	30.41	1.87	32.28	1.690	2.000	Pass
	HCH	30.53	1.87	32.4	1.738	2.000	Pass
GPRS 1900	LCH	30.10	1.87	31.97	1.574	2.000	Pass
	MCH	30.30	1.87	32.17	1.648	2.000	Pass
	HCH	30.39	1.87	32.26	1.683	2.000	Pass

Note 1: For the GPRS and EGPRS mode, all slots were tested and just the worst data were recorded in this table.
Note 2: ERP/EIRP = P_{Meas} + GT − LC
ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as P_{Meas}, typically dBW or dBm);
P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;
GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);
LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.
ERP = EIRP – 2.15; where ERP and EIRP are expressed in consistent units.
Note 3: Set PCL to 5 for GSM/GPRS 850 (power class 4) and 0 for GSM/GPRS 1900 (power class 1). Set PCL to 8 for EGPRS850 (power class E2) and 2 for EGPRS1900 (power class E2).

GPRS Conducted Output Power

Band	Channel	Conducted Output Peak Power							
		1 Slot (dBm)	1 Slot (W)	2 Slots (dBm)	2 Slots (W)	3 Slots (dBm)	3 Slots (W)	4 Slots (dBm)	4 Slots (W)
GPRS 850	LCH	33.08	2.032	32.34	1.714	30.55	1.135	29.40	0.871
	MCH	33.20	2.089	32.44	1.754	30.64	1.159	29.50	0.891
	HCH	32.96	1.977	32.17	1.648	30.44	1.107	29.28	0.847
GPRS 1900	LCH	30.10	1.023	29.37	0.865	27.63	0.579	26.57	0.454
	MCH	30.30	1.072	29.55	0.902	27.89	0.615	26.81	0.480
	HCH	30.39	1.094	29.70	0.933	28.01	0.632	26.95	0.495

EGPRS Conducted Output Power

Band	Channel	Conducted Output Peak Power							
		1 Slot (dBm)	1 Slot (W)	2 Slots (dBm)	2 Slots (W)	3 Slots (dBm)	3 Slots (W)	4 Slots (dBm)	4 Slots (W)
EGPRS 850	LCH	27.78	0.600	26.63	0.460	24.50	0.282	23.54	0.226
	MCH	27.62	0.578	26.18	0.415	24.74	0.298	23.51	0.224
	HCH	27.56	0.570	26.63	0.460	25.16	0.328	23.62	0.230
EGPRS 1900	LCH	24.99	0.316	24.02	0.252	21.70	0.148	20.65	0.116
	MCH	25.30	0.339	24.40	0.275	21.93	0.156	20.91	0.123
	HCH	25.72	0.373	24.51	0.282	21.81	0.152	20.77	0.119

WCDMA Mode Test Data

Test Band	Test Channel	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
WCDMA Band 2	LCH	22.26	1.87	24.13	0.259	2.000	Pass
	MCH	22.65	1.87	24.52	0.283	2.000	Pass
	HCH	22.77	1.87	24.64	0.291	2.000	Pass
HSDPA Band 2	LCH	21.41	1.87	23.28	0.213	2.000	Pass
	MCH	21.74	1.87	23.61	0.230	2.000	Pass
	HCH	21.90	1.87	23.77	0.238	2.000	Pass
HSUPA Band 2	LCH	20.80	1.87	22.67	0.185	2.000	Pass
	MCH	21.57	1.87	23.44	0.221	2.000	Pass
	HCH	21.68	1.87	23.55	0.226	2.000	Pass

Test Band	Test Channel	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
WCDMA Band 5	LCH	23.88	1.87	-0.28	23.6	0.229	7.000	Pass
	MCH	23.96	1.87	-0.28	23.68	0.233	7.000	Pass
	HCH	23.82	1.87	-0.28	23.54	0.226	7.000	Pass
HSDPA Band 5	LCH	22.90	1.87	-0.28	22.62	0.183	7.000	Pass
	MCH	22.94	1.87	-0.28	22.66	0.185	7.000	Pass
	HCH	22.85	1.87	-0.28	22.57	0.181	7.000	Pass
HSUPA Band 5	LCH	22.02	1.87	-0.28	21.74	0.149	7.000	Pass
	MCH	22.79	1.87	-0.28	22.51	0.178	7.000	Pass
	HCH	22.72	1.87	-0.28	22.44	0.175	7.000	Pass

Note 1: For the HSDPA and HSUPA mode, all subtests were tested and just the worst data were recorded in this table.
Note 2: ERP/EIRP = PMeas + GT − LC
ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm);
PMeas = measured transmitter output power or PSD, in dBm or dBW;
GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);
LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.
ERP = EIRP – 2.15; where ERP and EIRP are expressed in consistent units.

HSDPA Conducted Output Power

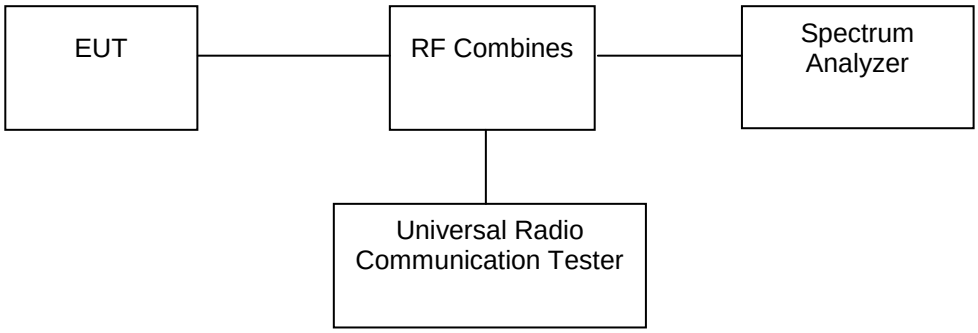
Conducted Output Power		EIRP (dBm)			EIRP (W)		
Band	Configuration	LCH	MCH	HCH	LCH	MCH	HCH
HSDPA B2	Subtest 1	21.41	21.74	21.90	0.138	0.149	0.155
	Subtest 2	21.01	21.45	21.39	0.126	0.140	0.138
	Subtest 3	19.85	20.24	20.55	0.097	0.106	0.114
	Subtest 4	19.99	20.21	20.55	0.100	0.105	0.114
Conducted Output Power		ERP (dBm)			ERP (W)		
Band	Configuration	LCH	MCH	HCH	LCH	MCH	HCH
HSDPA B5	Subtest 1	22.90	22.94	22.85	0.195	0.197	0.193
	Subtest 2	22.39	22.58	22.51	0.173	0.181	0.178
	Subtest 3	21.31	21.37	21.52	0.135	0.137	0.142
	Subtest 4	21.39	21.47	21.64	0.138	0.140	0.146

HSUPA Conducted Output Power

Conducted Output Power		EIRP (dBm)			EIRP (W)		
Band	Configuration	LCH	MCH	HCH	LCH	MCH	HCH
HSUPA B2	Subtest 1	20.80	21.57	21.68	0.120	0.144	0.147
	Subtest 2	21.18	21.65	21.86	0.131	0.146	0.153
	Subtest 3	19.90	20.49	20.59	0.098	0.112	0.115
	Subtest 4	21.39	21.75	21.94	0.138	0.150	0.156
	Subtest 5	20.08	21.24	21.34	0.102	0.133	0.136
Conducted Output Power		ERP (dBm)			ERP (W)		
Band	Configuration	LCH	MCH	HCH	LCH	MCH	HCH
HSUPA B5	Subtest 1	22.02	22.79	22.72	0.159	0.190	0.187
	Subtest 2	22.85	23.03	22.83	0.193	0.201	0.192
	Subtest 3	21.53	21.90	21.66	0.142	0.155	0.147
	Subtest 4	22.91	22.95	22.87	0.195	0.197	0.194
	Subtest 5	21.60	22.40	22.58	0.145	0.174	0.181

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 inherent randomness of the power peaks in a noise-like signal and the wide bandwidths associated with modern technologies makes it difficult to quantify the peak power using traditional measurement techniques. Because the peak power of a noise-like signal is predictable only on a statistical basis, a statistical measurement of the peak power is preferred.

CCDF curves provide a means for characterizing the power peaks of a noise-like signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation offers the capability to produce CCDF curves for a noise-like input signal.

See instrumentation-specific application literature for further guidance regarding use of the CCDF capability. The following guidelines are offered for performing a CCDF measurement.

a) Set resolution/measurement bandwidth ≥ OBW or specified reference bandwidth.

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

c) Set the measurement interval as follows:

1) For continuous transmissions, set to the greater of [10 × (number of points in sweep) × (transmission symbol period)] or 1 ms.

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

3) If there are several carriers in a single antenna port, the peak power shall be determined for each individual carrier (by disabling the other carriers while measuring the required carrier) and the total peak power calculated from the sum of the individual carrier peak powers.

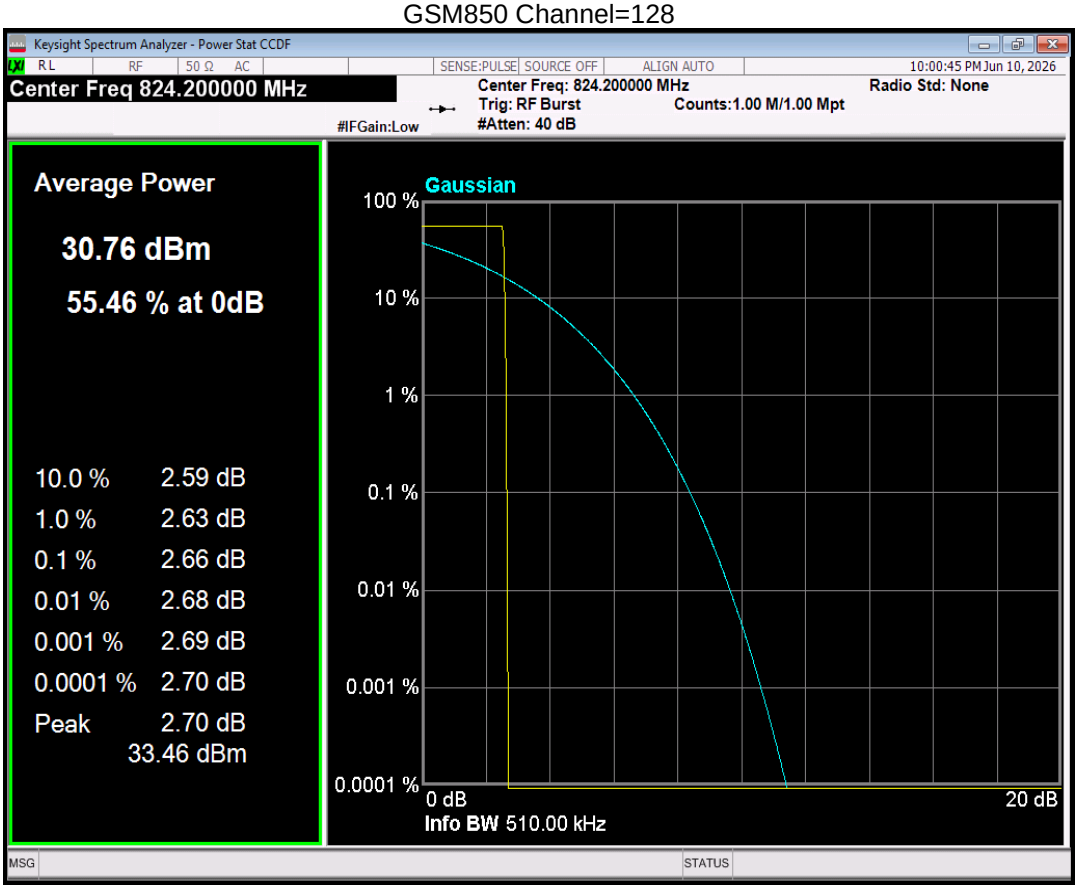
d) Record the maximum PAPR level associated with a probability of 0.1%.

e) The peak power level is calculated form the sum of the PAPR value from step d) to the measured average power.

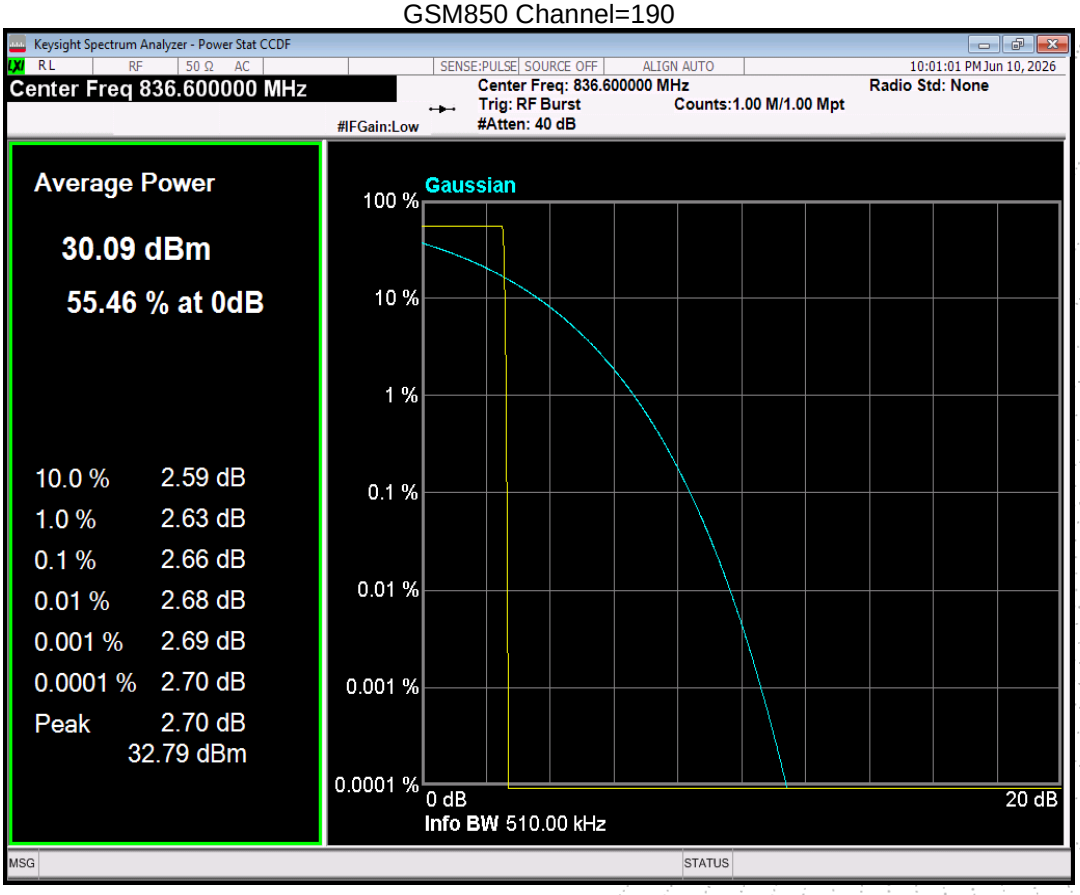
7.4 Test Result

Band	Channel	Frequency (MHz)	Result (dB)	high Limit (dB)	Verdict
GSM850	128	824.2	2.66	13.00	PASS
GSM850	190	836.6	2.66	13.00	PASS
GSM850	251	848.8	2.68	13.00	PASS
GPRS850	128	824.2	2.68	13.00	PASS
GPRS850	190	836.6	2.68	13.00	PASS
GPRS850	251	848.8	2.72	13.00	PASS
EGPRS850	128	824.2	9.15	13.00	PASS
EGPRS850	190	836.6	8.35	13.00	PASS
EGPRS850	251	848.8	8.73	13.00	PASS

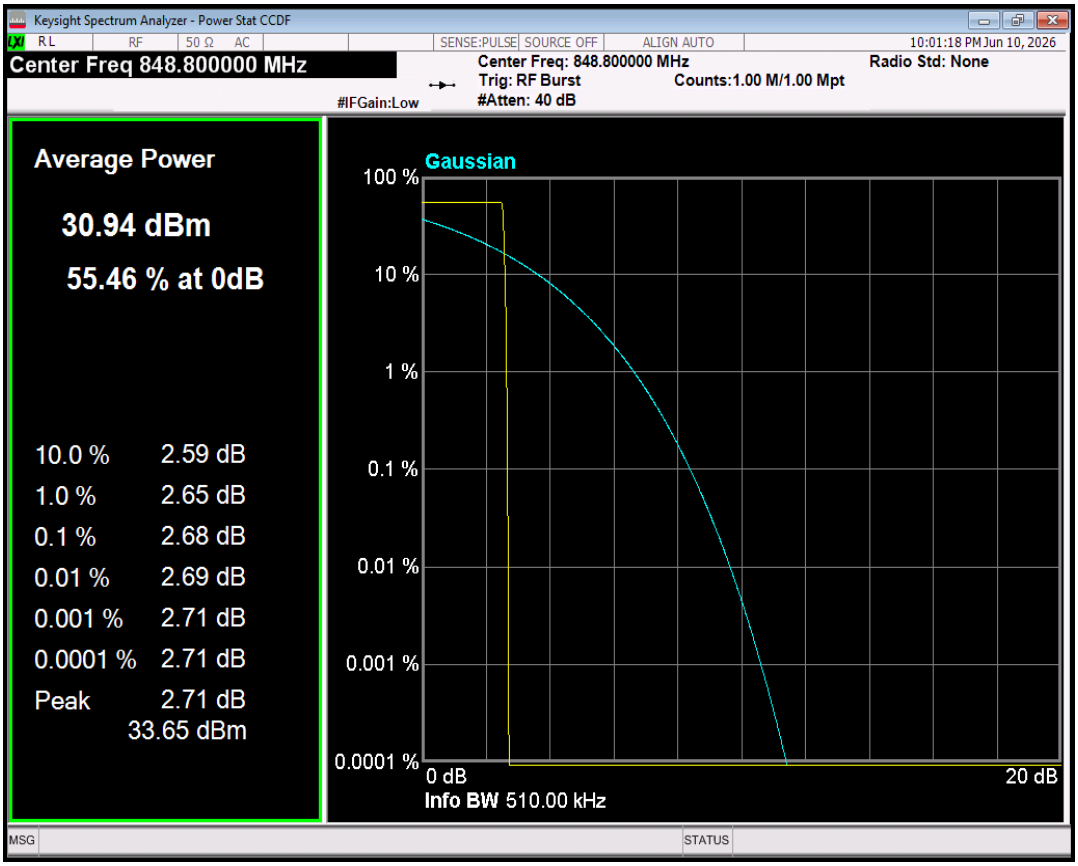
GSM850 Channel=128



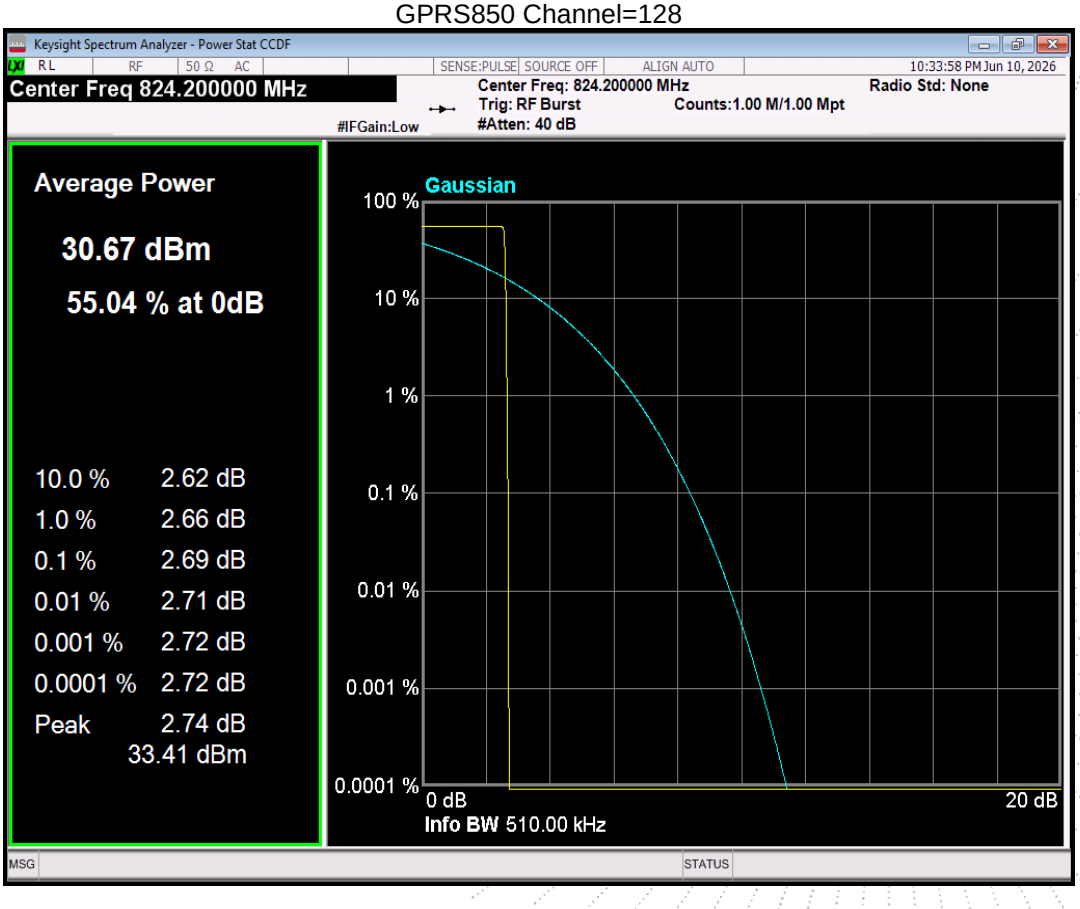
GSM850 Channel=190



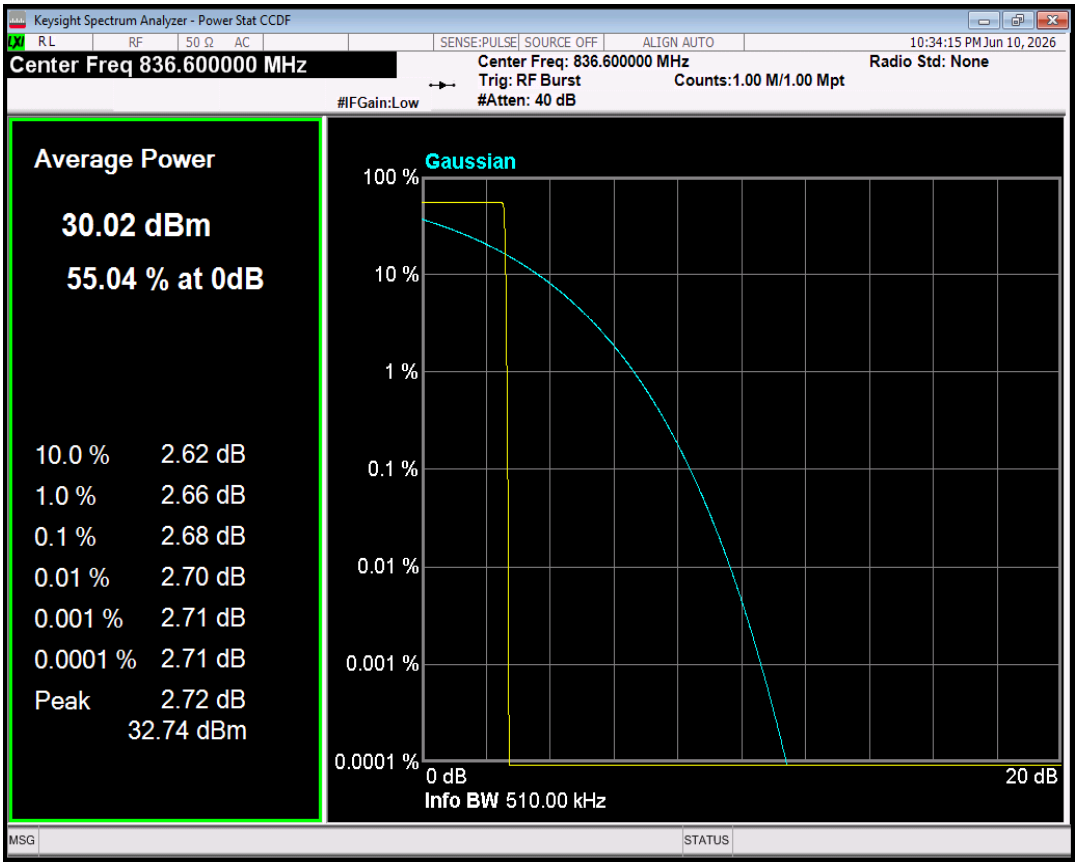
GSM850 Channel=251



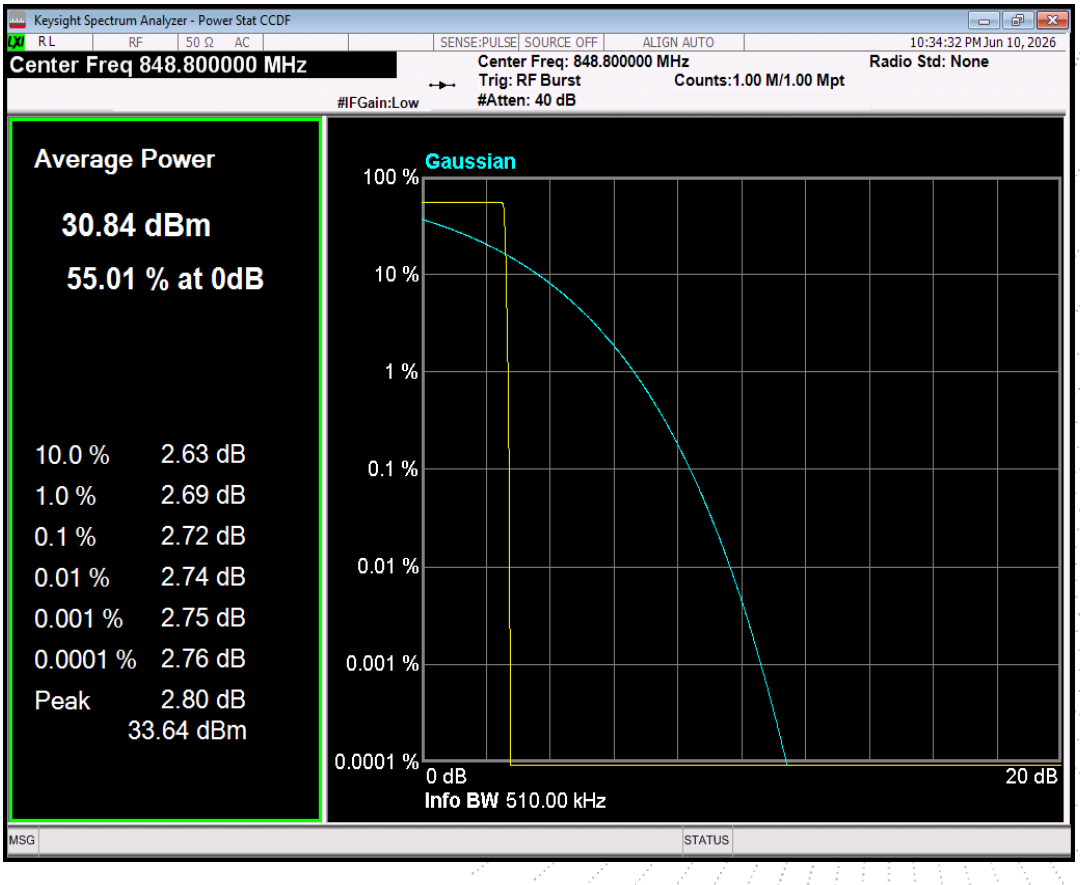
GPRS850 Channel=128



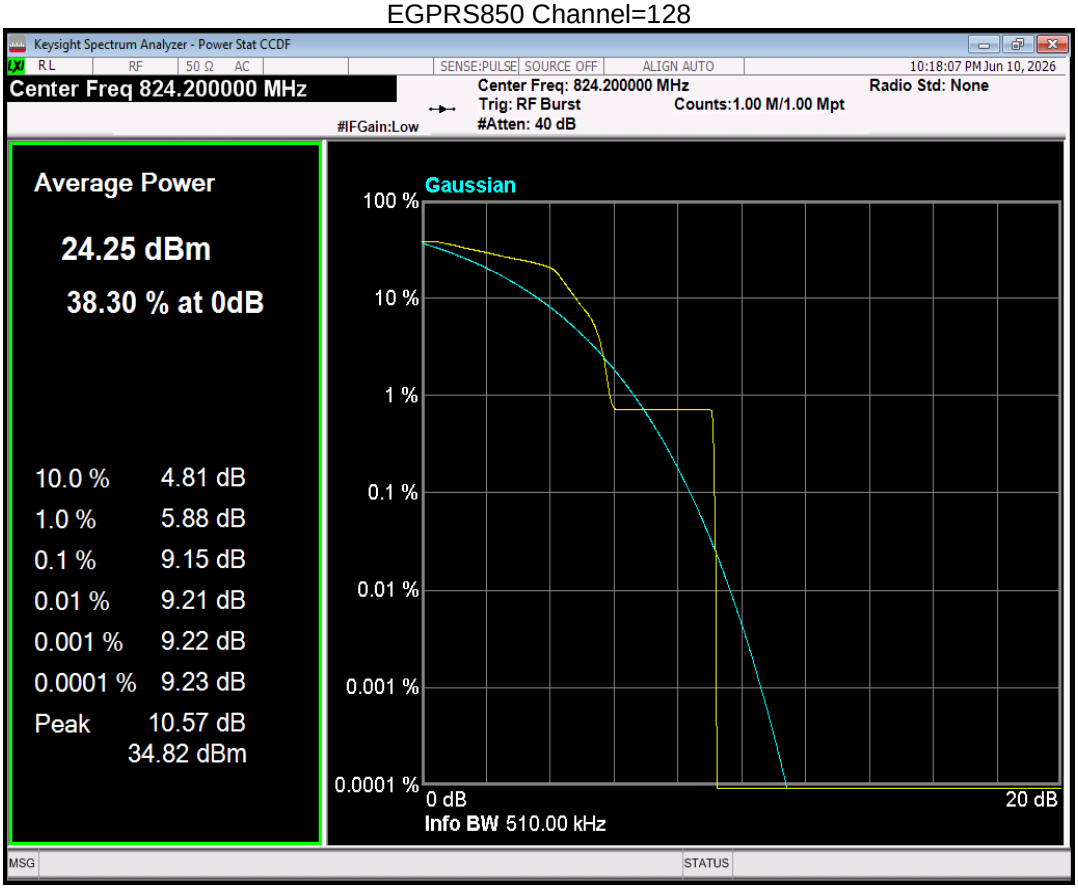
GPRS850 Channel=190



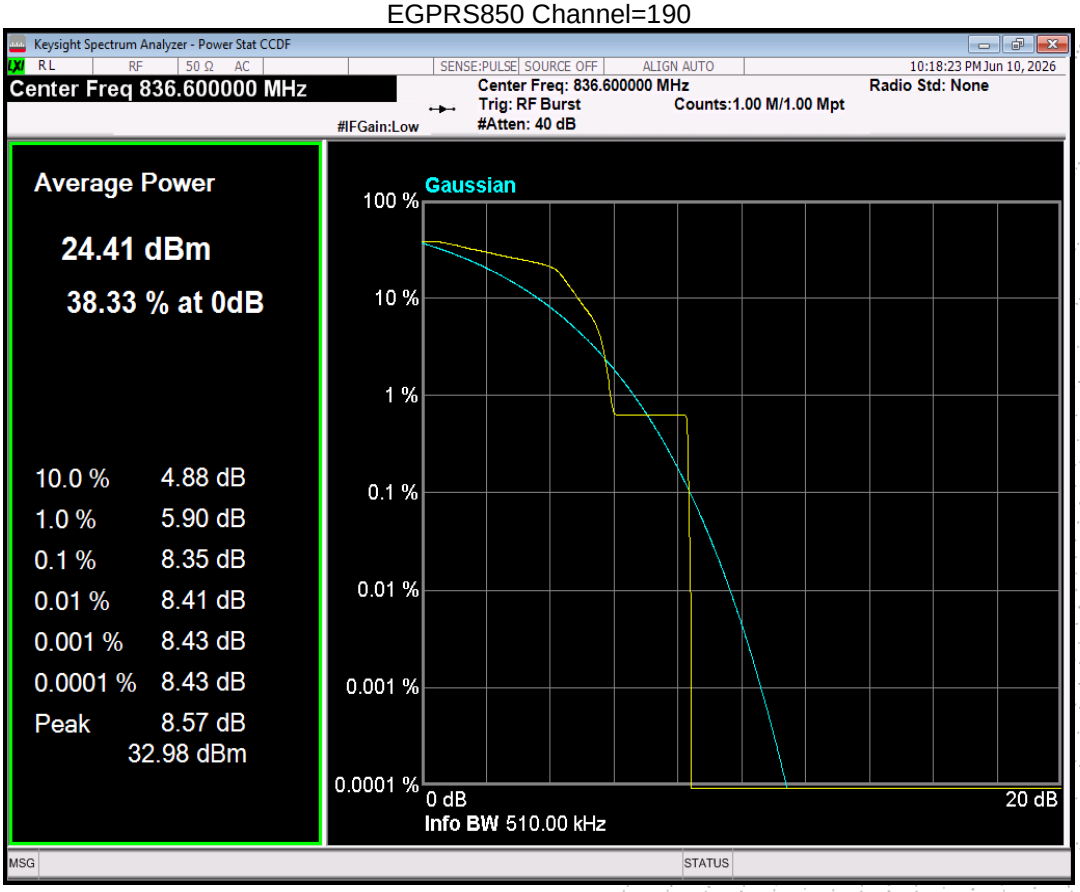
GPRS850 Channel=251



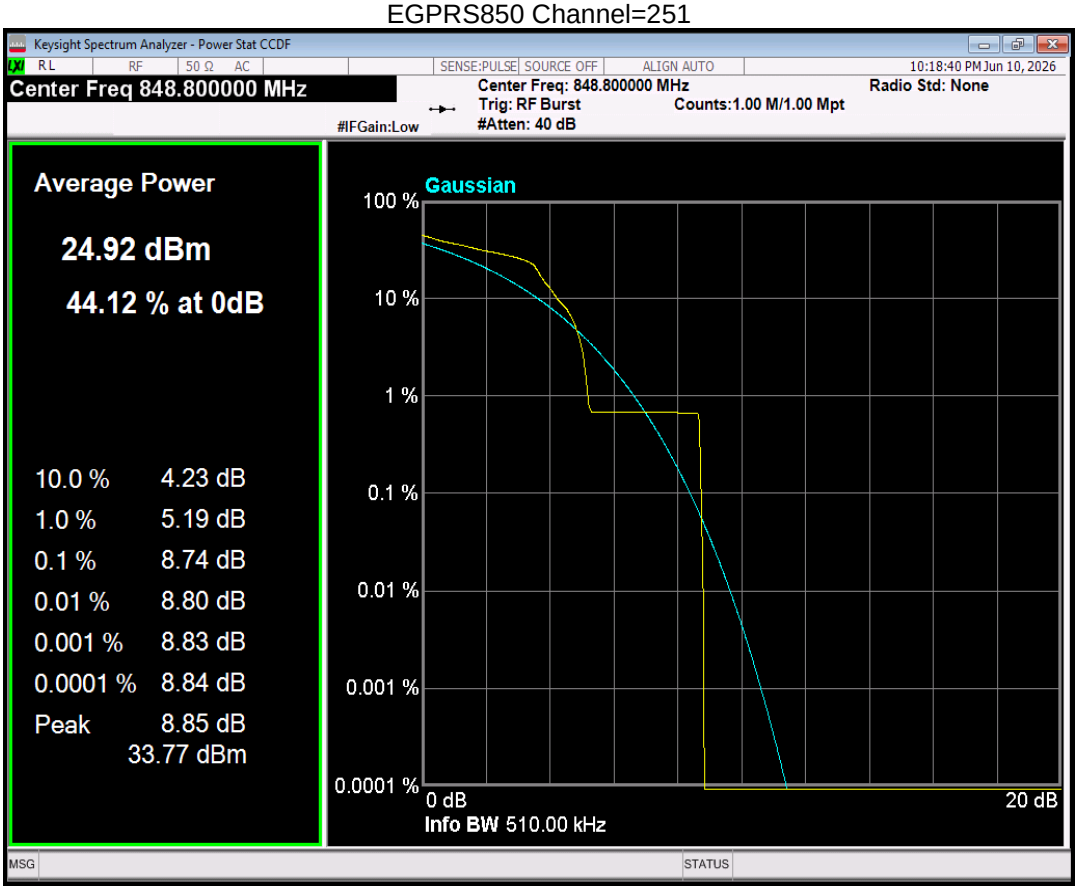
EGPRS850 Channel=128



EGPRS850 Channel=190

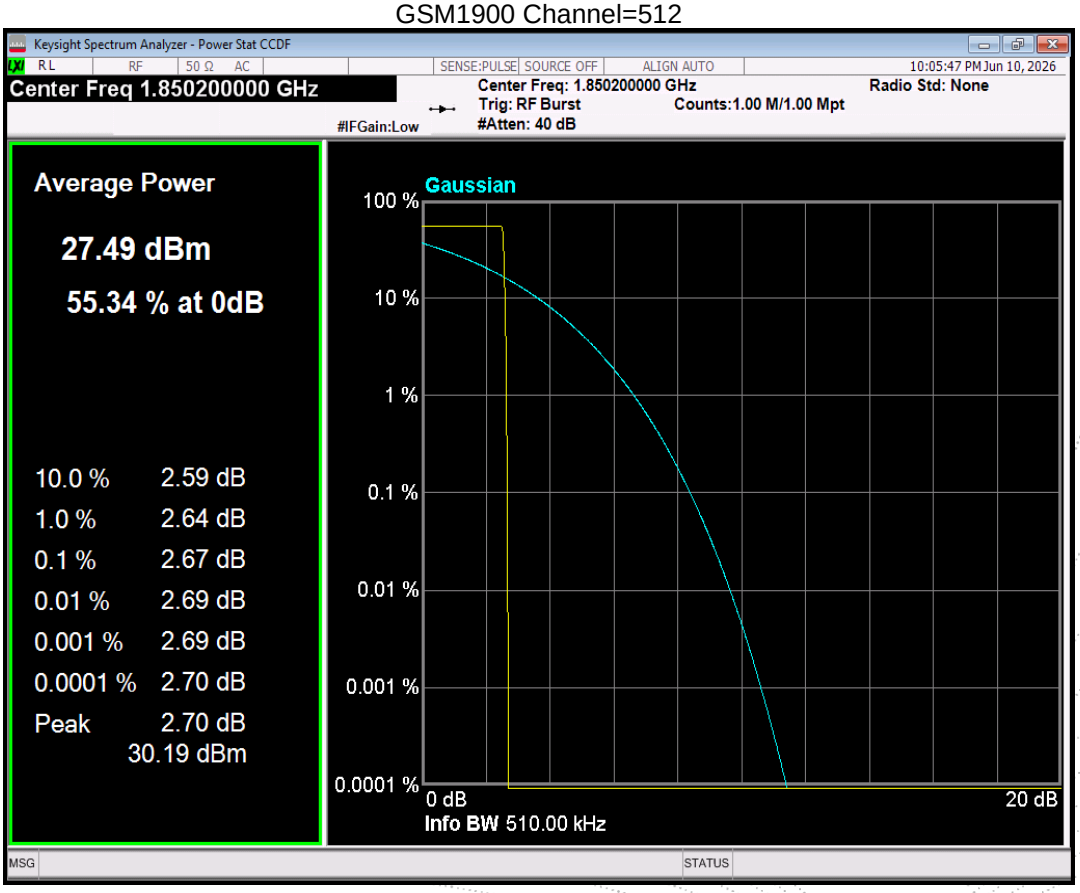


EGPRS850 Channel=251

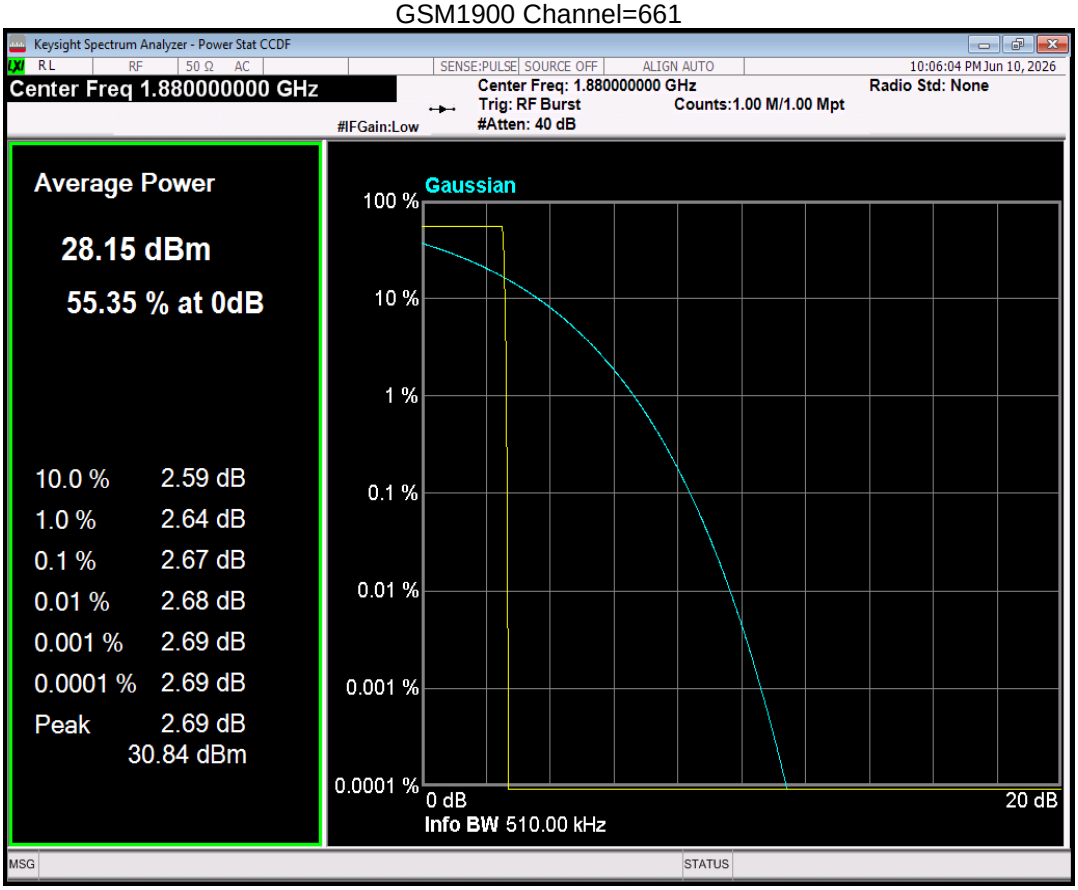


Band	Channel	Frequency (MHz)	Result (dB)	high Limit (dB)	Verdict
GSM1900	512	1850.2	2.67	13.00	PASS
GSM1900	661	1880	2.67	13.00	PASS
GSM1900	810	1909.8	2.66	13.00	PASS
GPRS1900	512	1850.2	2.71	13.00	PASS
GPRS1900	661	1880	2.71	13.00	PASS
GPRS1900	810	1909.8	2.70	13.00	PASS
EGPRS1900	512	1850.2	8.48	13.00	PASS
EGPRS1900	661	1880	8.37	13.00	PASS
EGPRS1900	810	1909.8	8.61	13.00	PASS

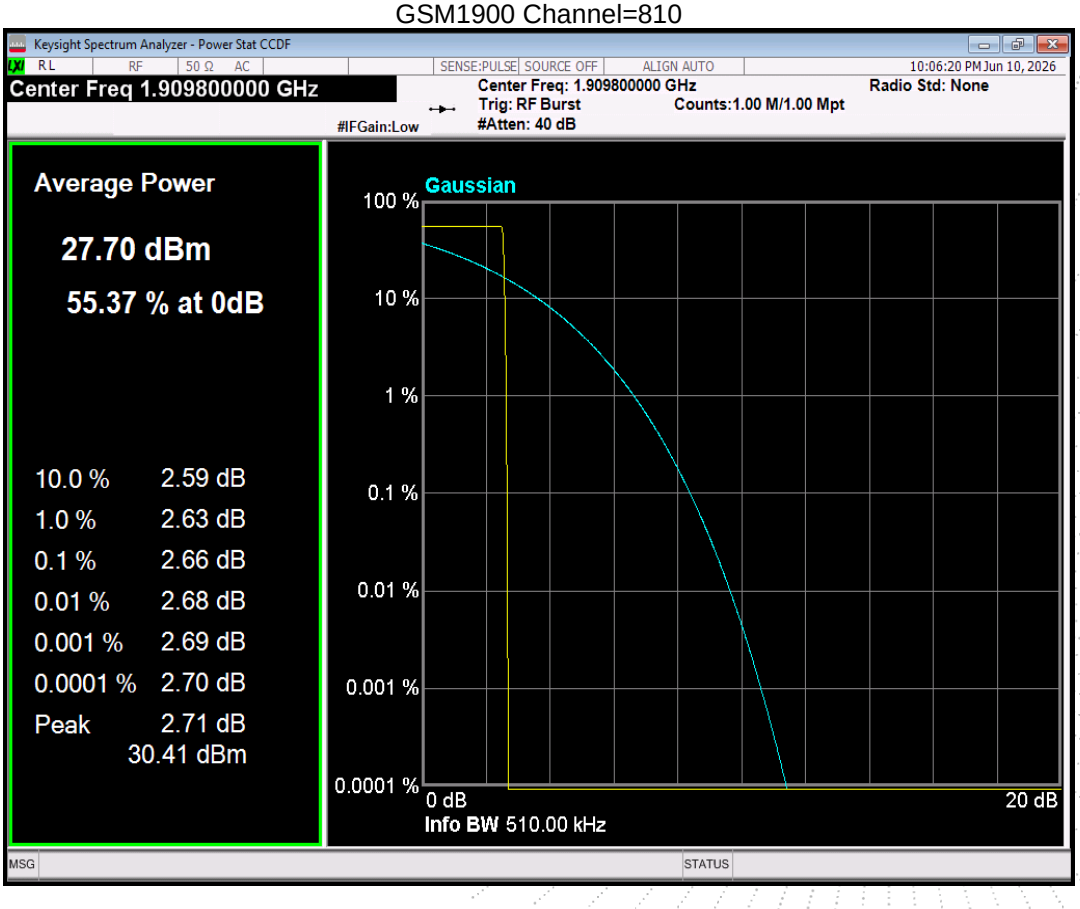
GSM1900 Channel=512



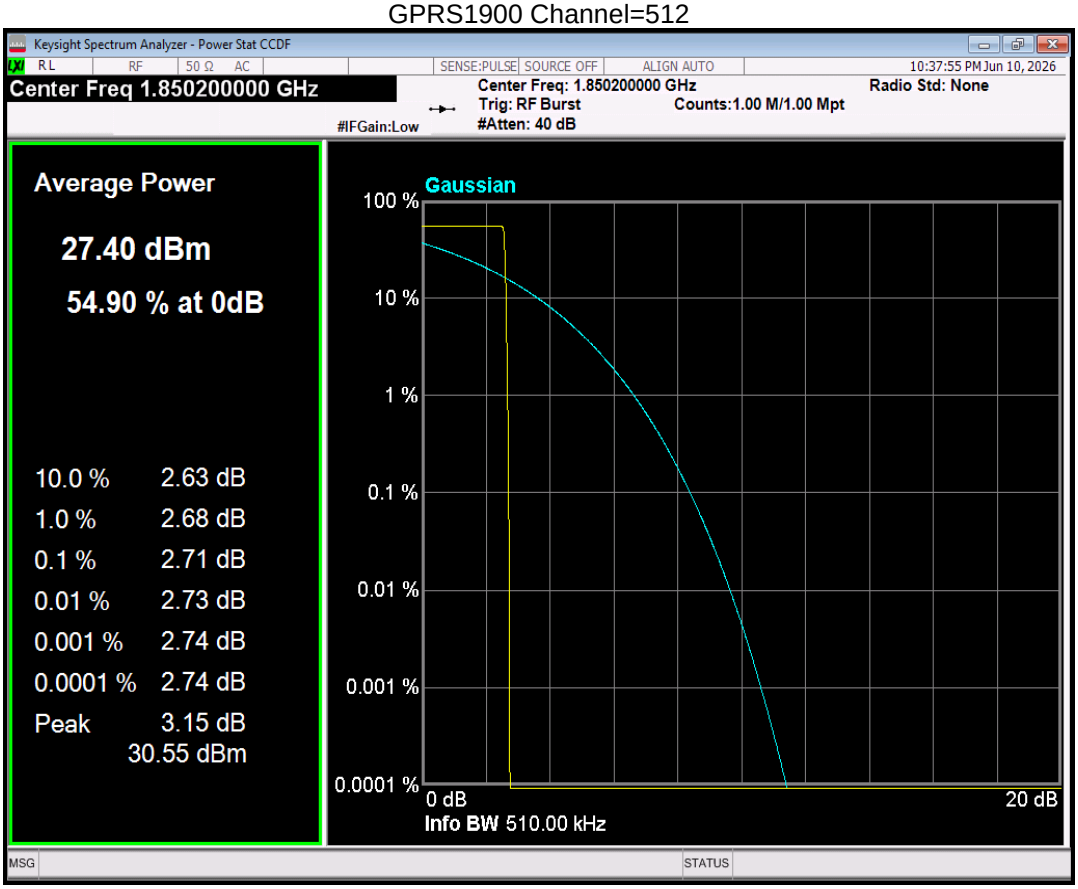
GSM1900 Channel=661



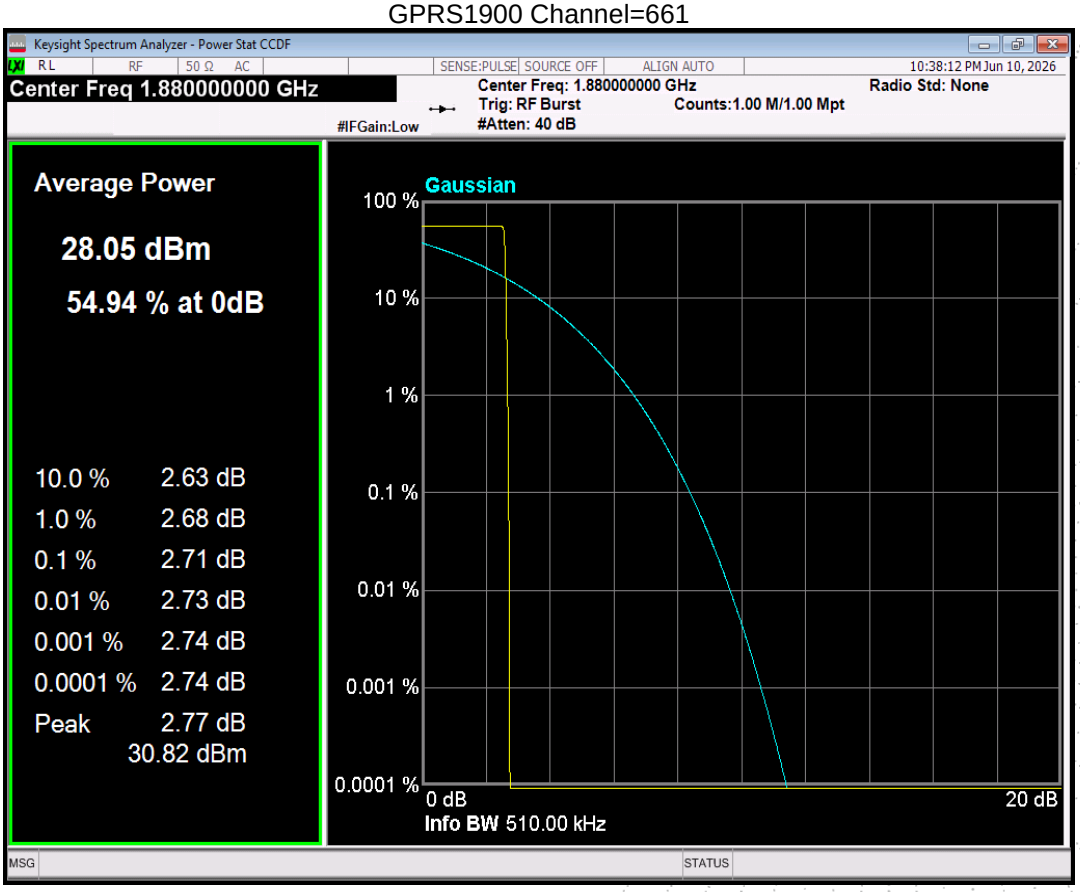
GSM1900 Channel=810



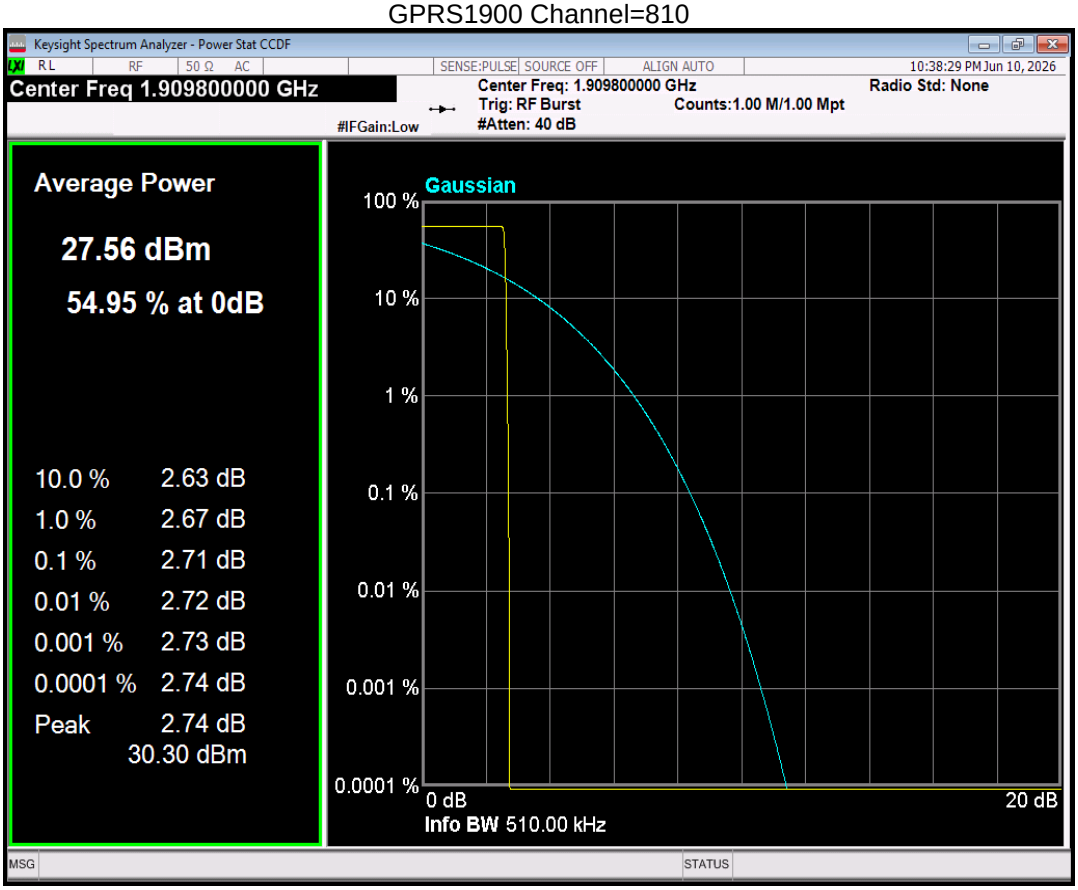
GPRS1900 Channel=512



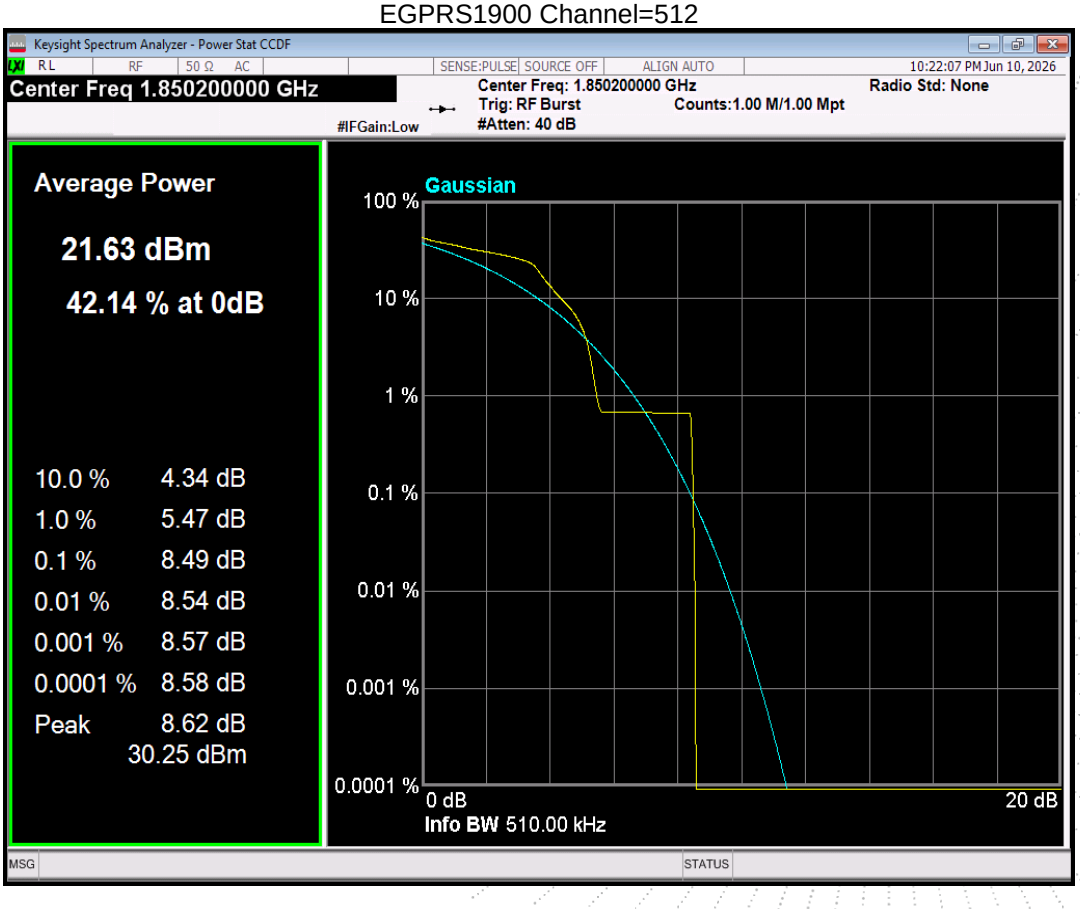
GPRS1900 Channel=661



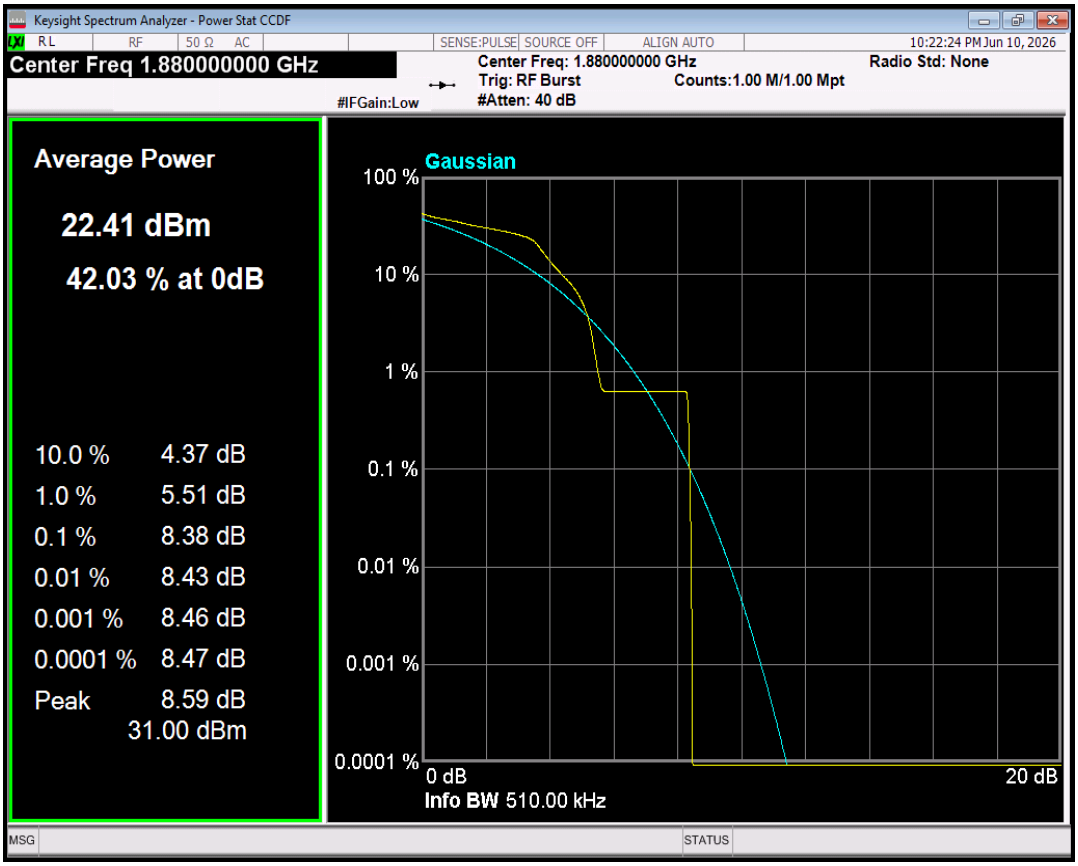
GPRS1900 Channel=810



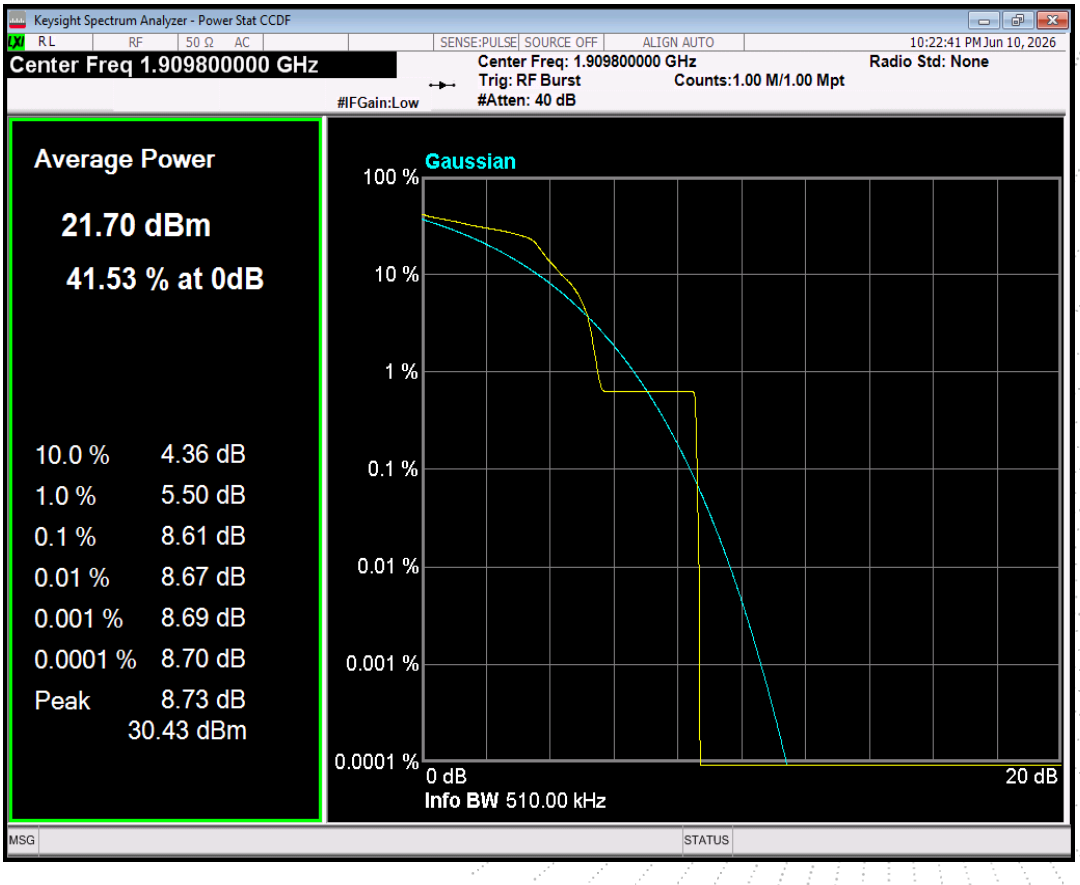
EGPRS1900 Channel=512



EGPRS1900 Channel=661



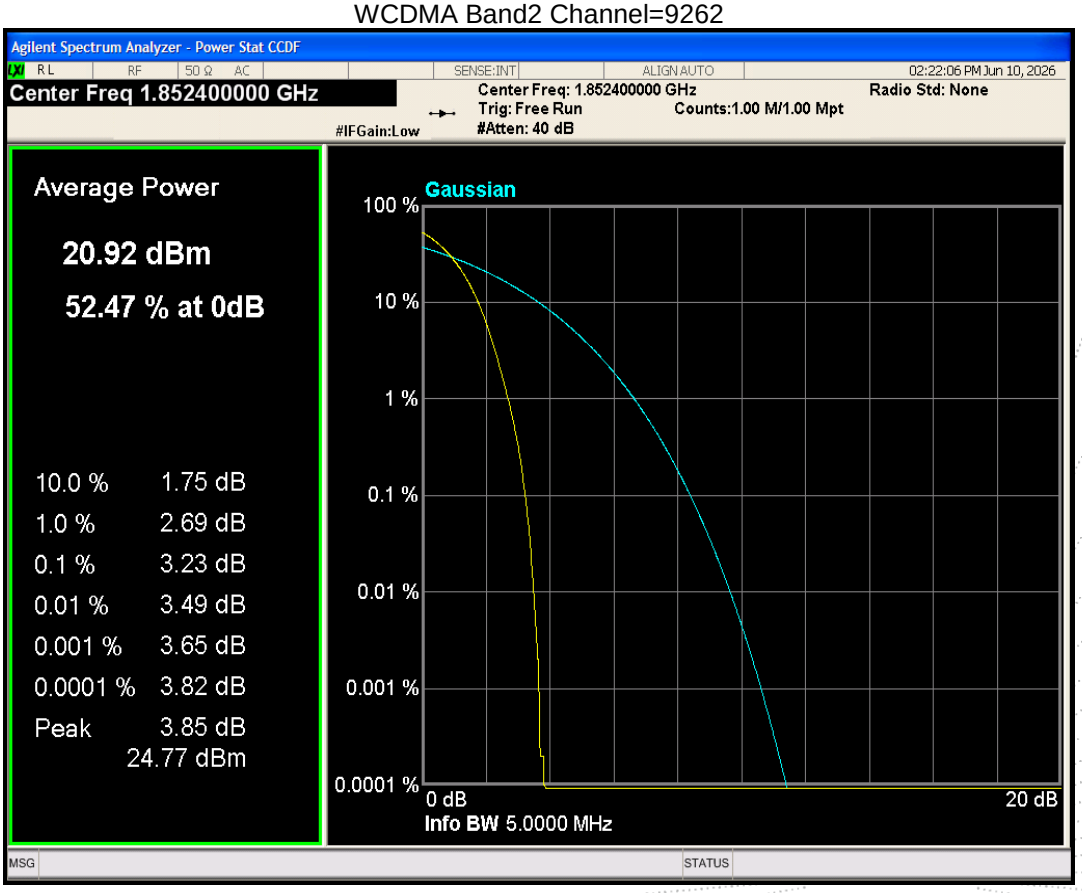
EGPRS1900 Channel=810



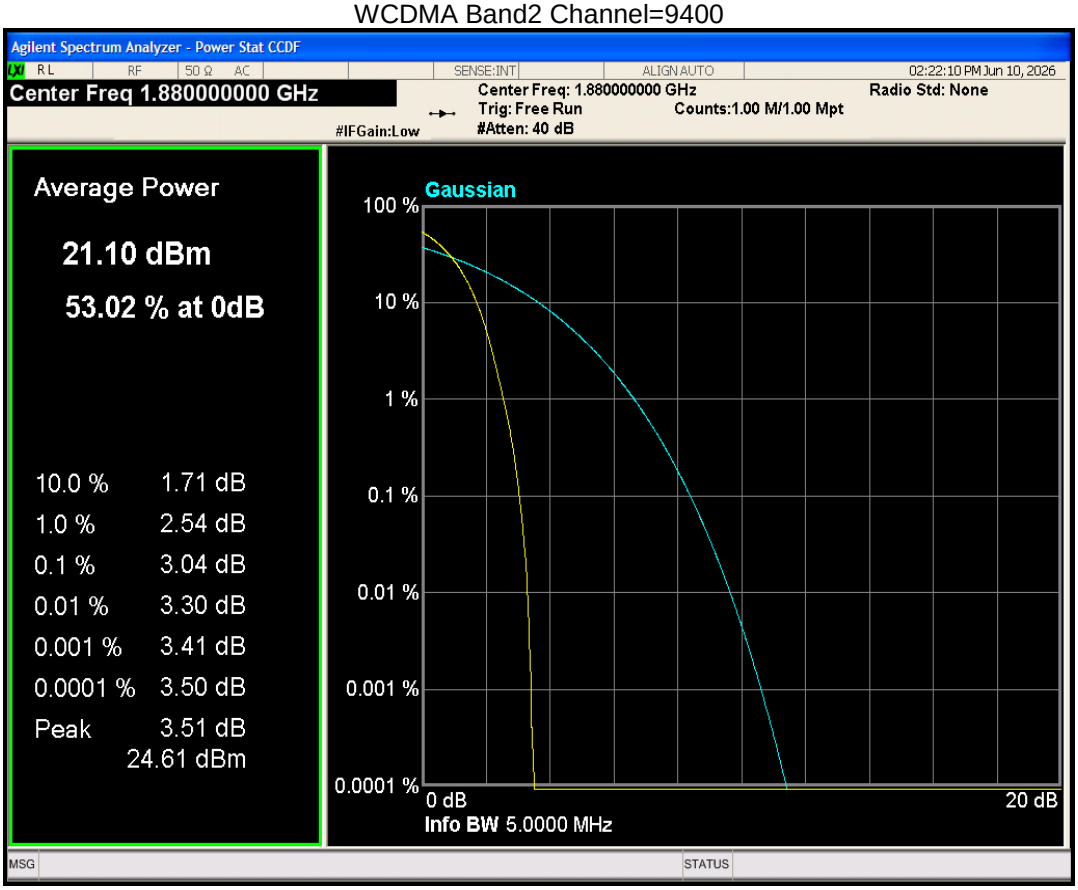
Band	Channel	Frequency (MHz)	Result (dB)	high Limit (dB)	Verdict
WCDMA Band2	9262	1852.4	3.23	13	PASS
WCDMA Band2	9400	1880	3.04	13	PASS
WCDMA Band2	9538	1907.6	3.17	13	PASS
WCDMA Band5	4132	826.4	2.78	13	PASS
WCDMA Band5	4182	836.4	2.55	13	PASS
WCDMA Band5	4233	846.6	2.57	13	PASS

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

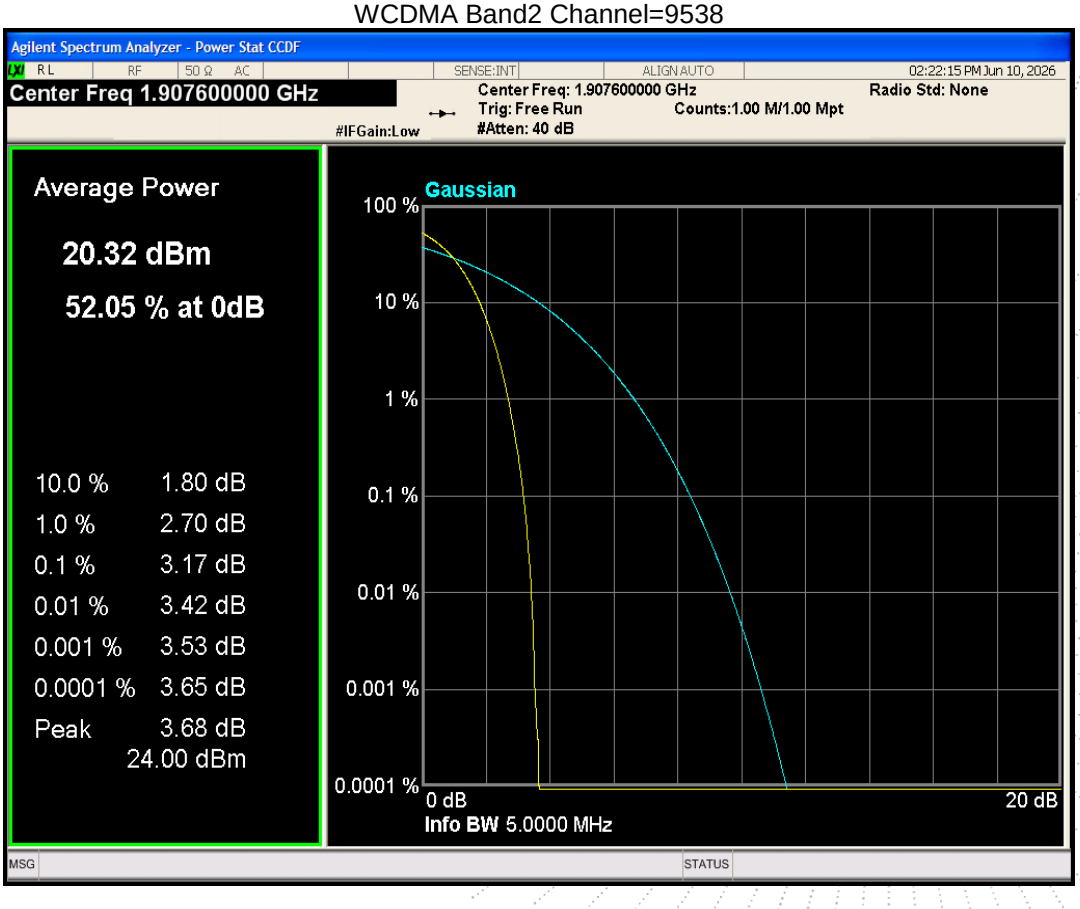
WCDMA Band2 Channel=9262



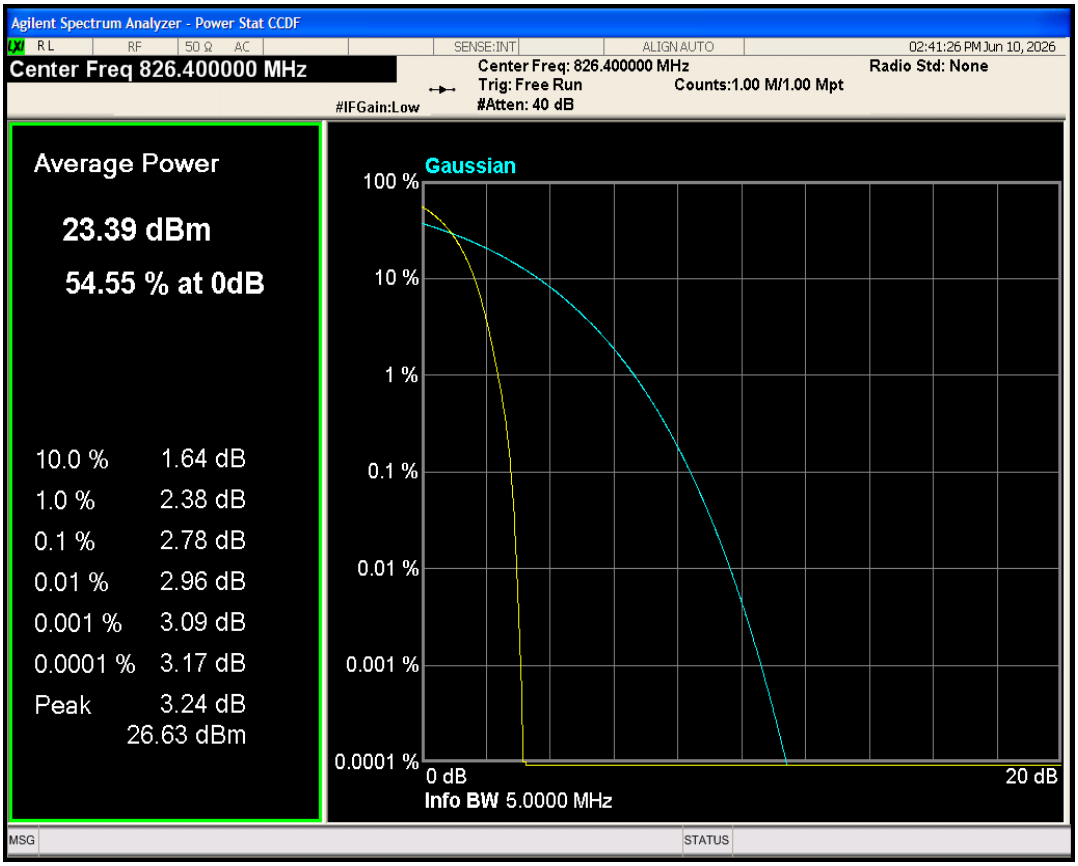
WCDMA Band2 Channel=9400



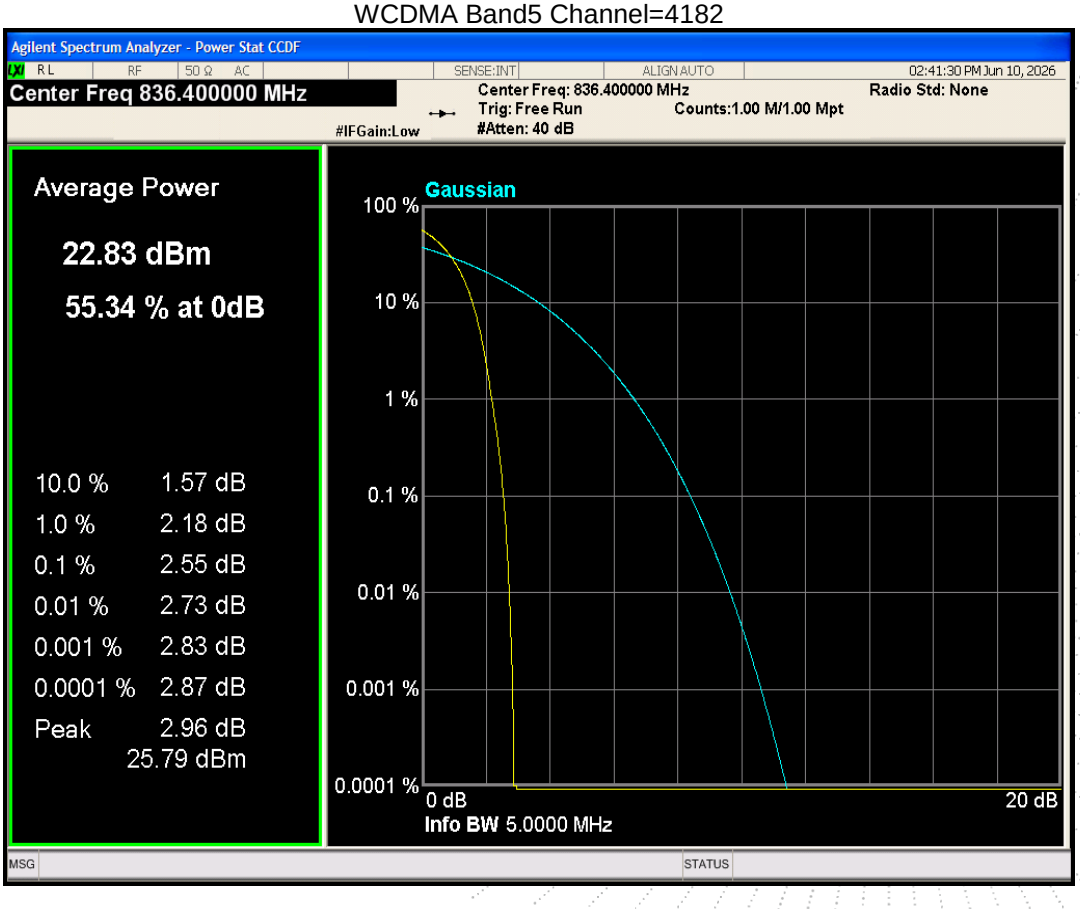
WCDMA Band2 Channel=9538



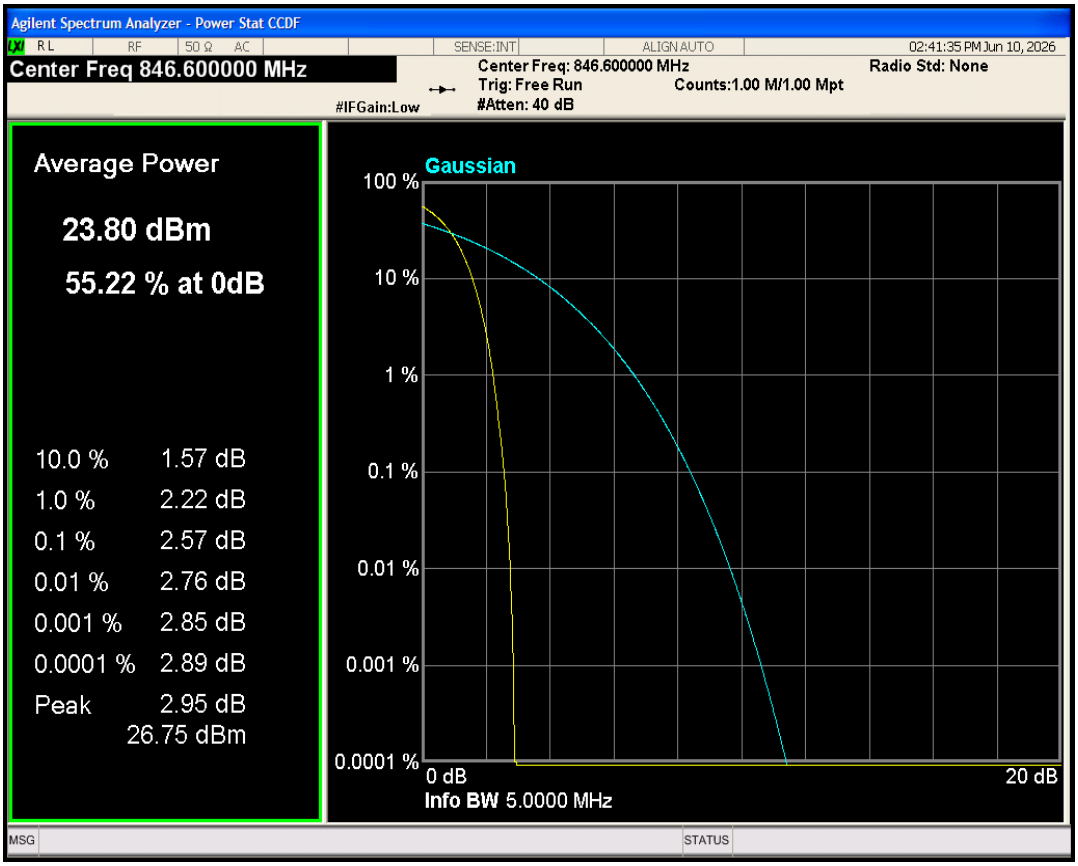
WCDMA Band5 Channel=4132



WCDMA Band5 Channel=4182

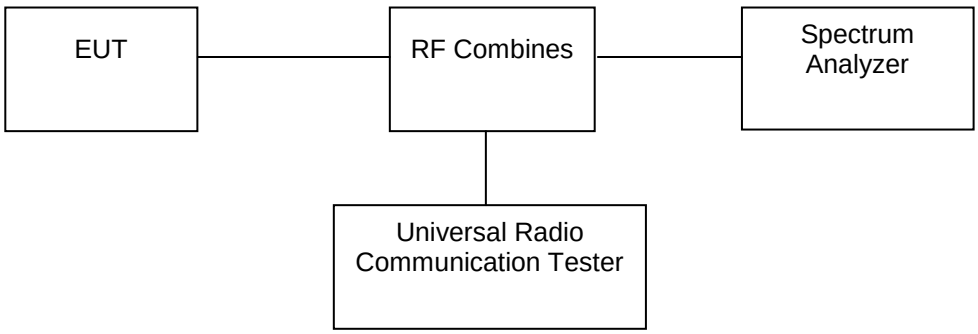


WCDMA Band5 Channel=4233



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 following procedure shall be used for measuring power bandwidth.
a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (i.e., two to five times the anticipated OBW).
b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
c) Set the reference level of the instrument as required to keep the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least 10log (OBW / RBW) below the reference level.
d) NOTE—Steps a) through c) may require iteration to adjust within the specified tolerances.
e) For -26 dB OBW, the dynamic range of the spectrum analyzer at the selected RBW shall be at least

10dB below the target “-X dB down” requirement, e.g. -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be 36dB below the reference value.

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

g) For 99% OBW, use the 99 % power bandwidth function of the spectrum analyzer (if available) and report the measured bandwidth.

If the instrument does not have a 99 % power bandwidth function, the trace data points are to be recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99 % power bandwidth is the difference between these two frequencies.

h) For -26 dB OBW, determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).

Determine the “-X dB down amplitude” as equal to (reference value -X). Alternatively, this calculation can be performed by the analyzer by using the marker-delta function.

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

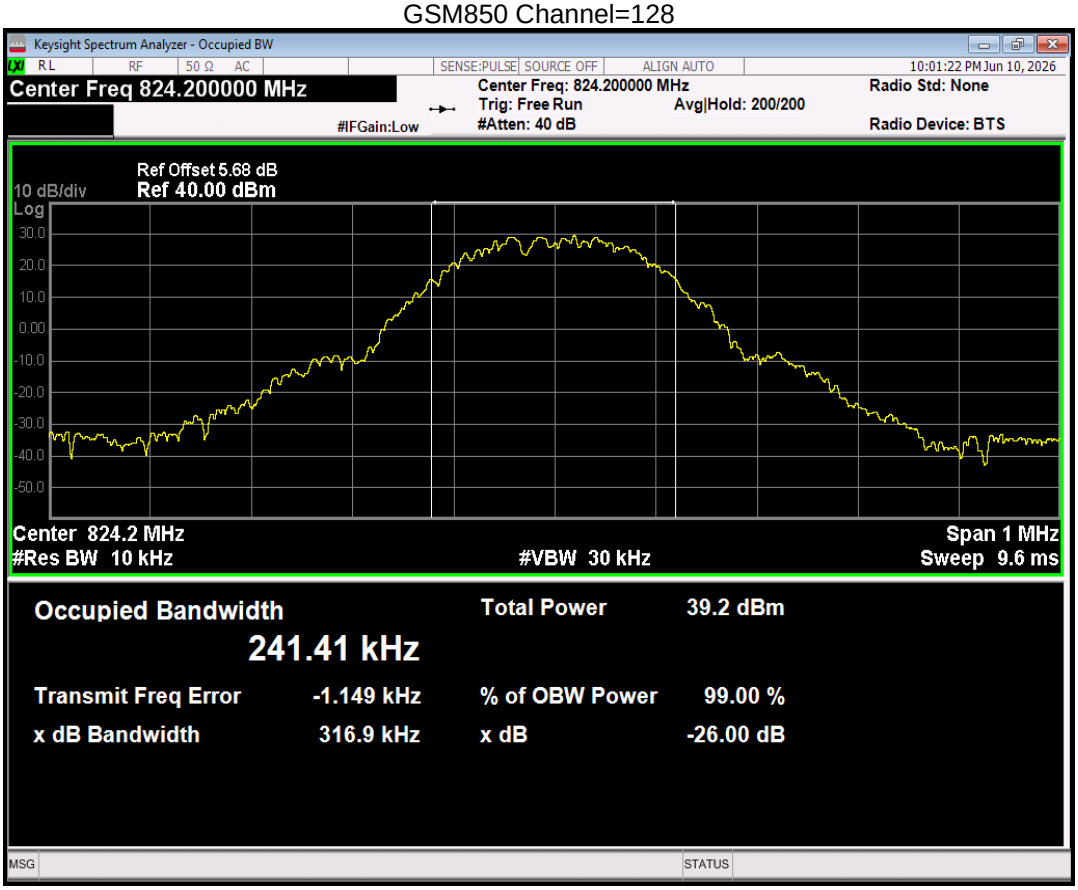
i) The OBW shall be reported by providing plot(s) of the measuring instrument display. The frequency and amplitude axes and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

j) Change variable modulations, coding, or channel bandwidth settings, then repeat above test procedures.

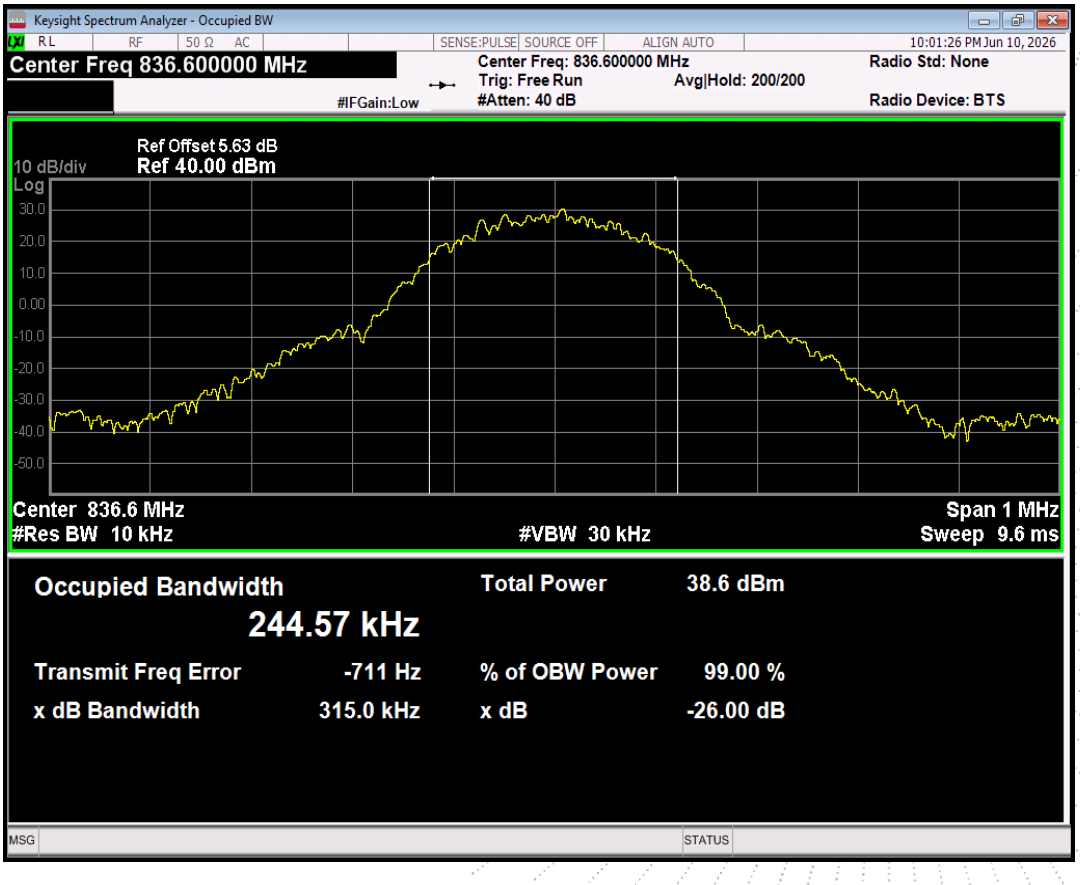
8.4 Test Result

Band	Channel	Frequency (MHz)	99% OBW (kHz)	-26dB EBW (kHz)	Verdict
GSM850	128	824.2	241.411	316.934	PASS
GSM850	190	836.6	244.566	315.002	PASS
GSM850	251	848.8	243.683	315.508	PASS
GPRS850	128	824.2	243.139	318.934	PASS
GPRS850	190	836.6	242.817	323.196	PASS
GPRS850	251	848.8	247.839	323.907	PASS
EGPRS850	128	824.2	251.780	321.975	PASS
EGPRS850	190	836.6	248.786	312.724	PASS
EGPRS850	251	848.8	244.544	302.610	PASS

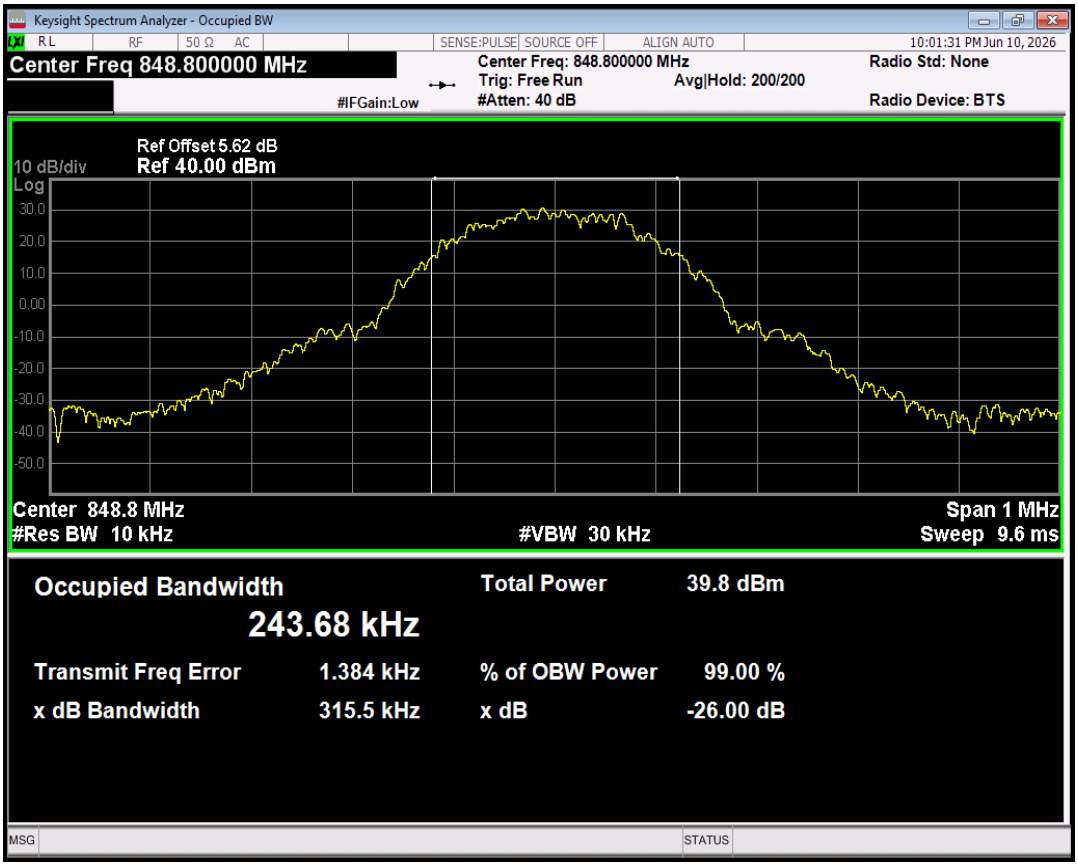
GSM850 Channel=128



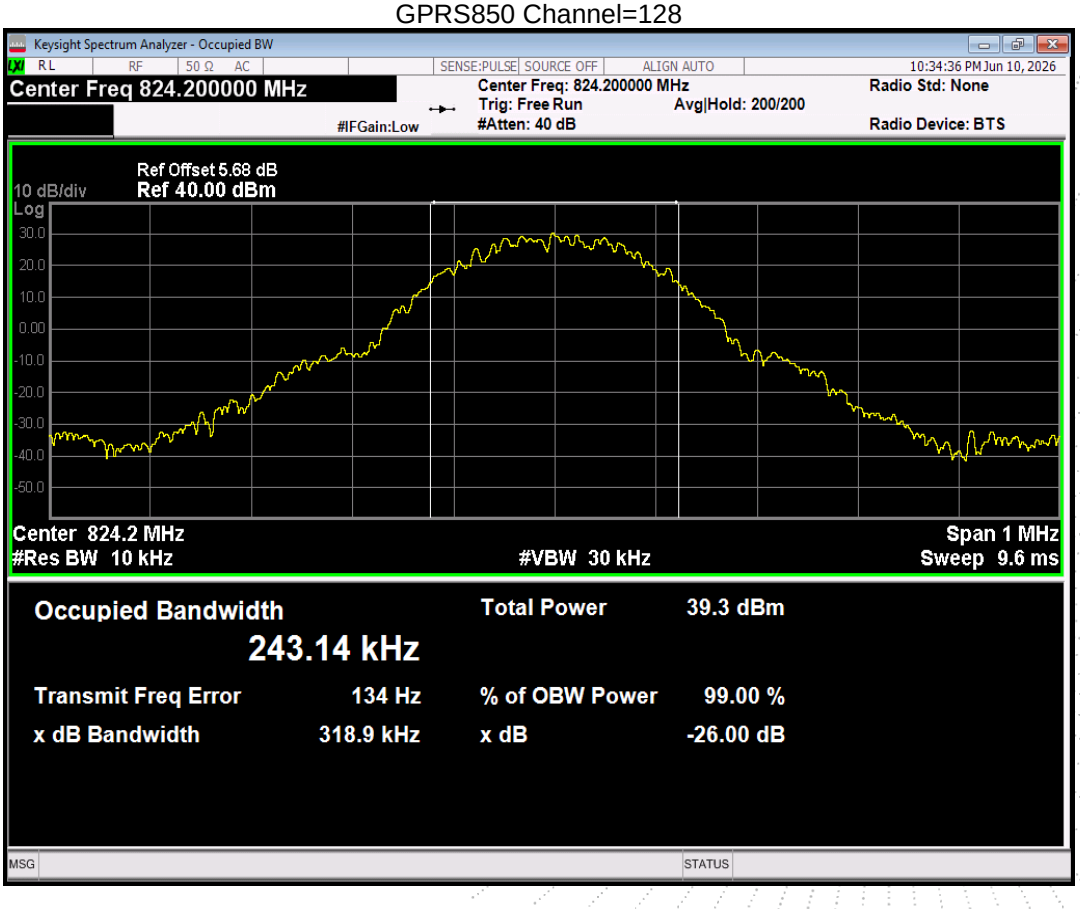
GSM850 Channel=190



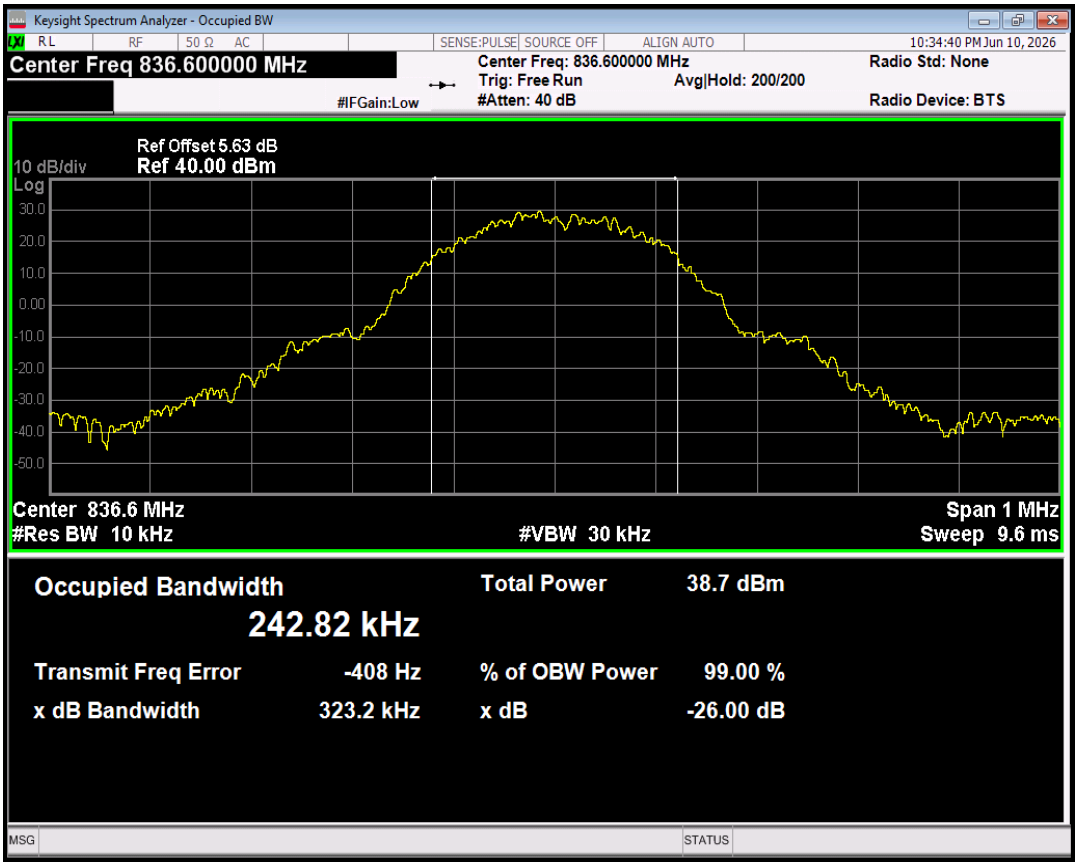
GSM850 Channel=251



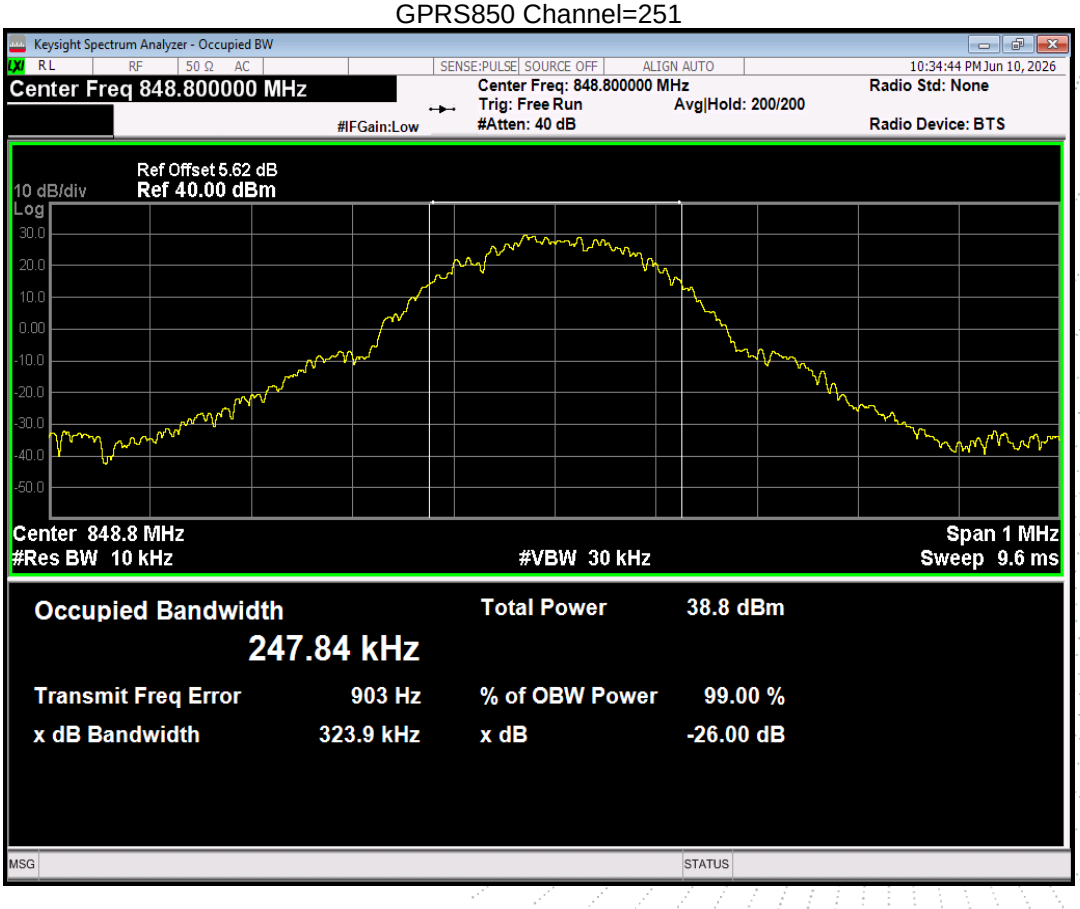
GPRS850 Channel=128



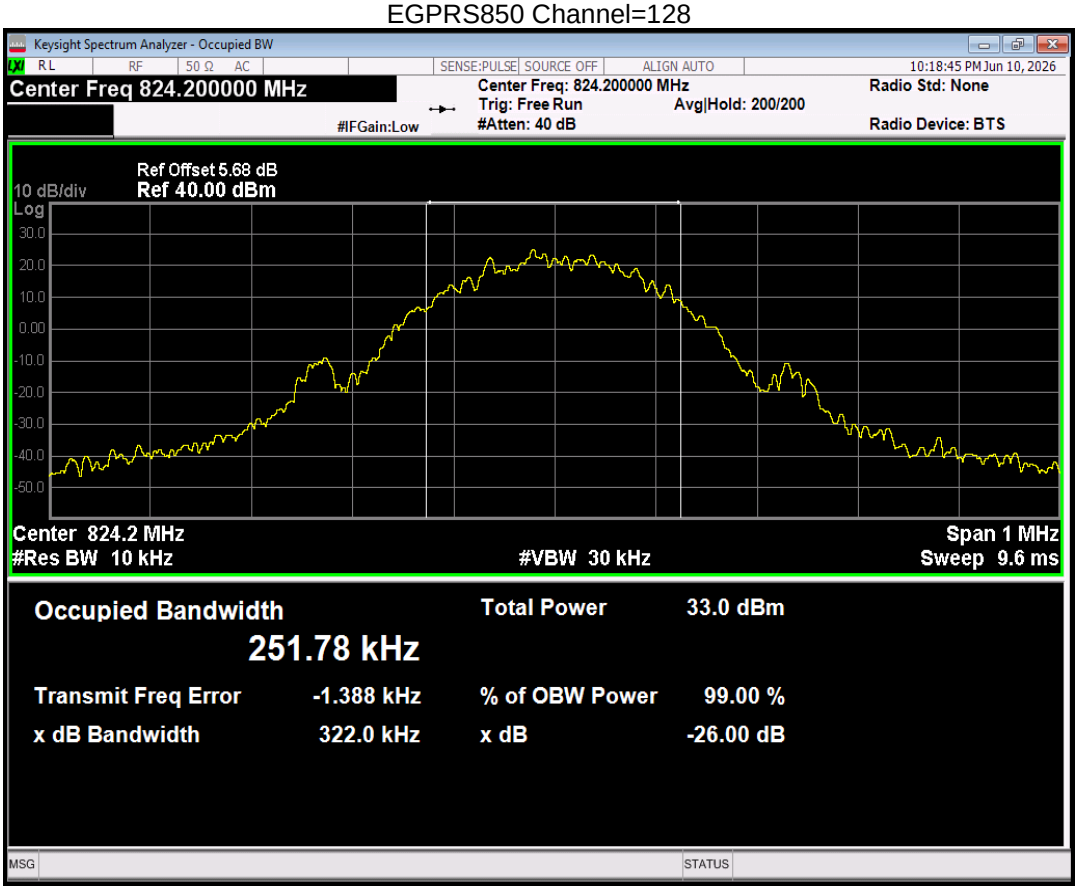
GPRS850 Channel=190



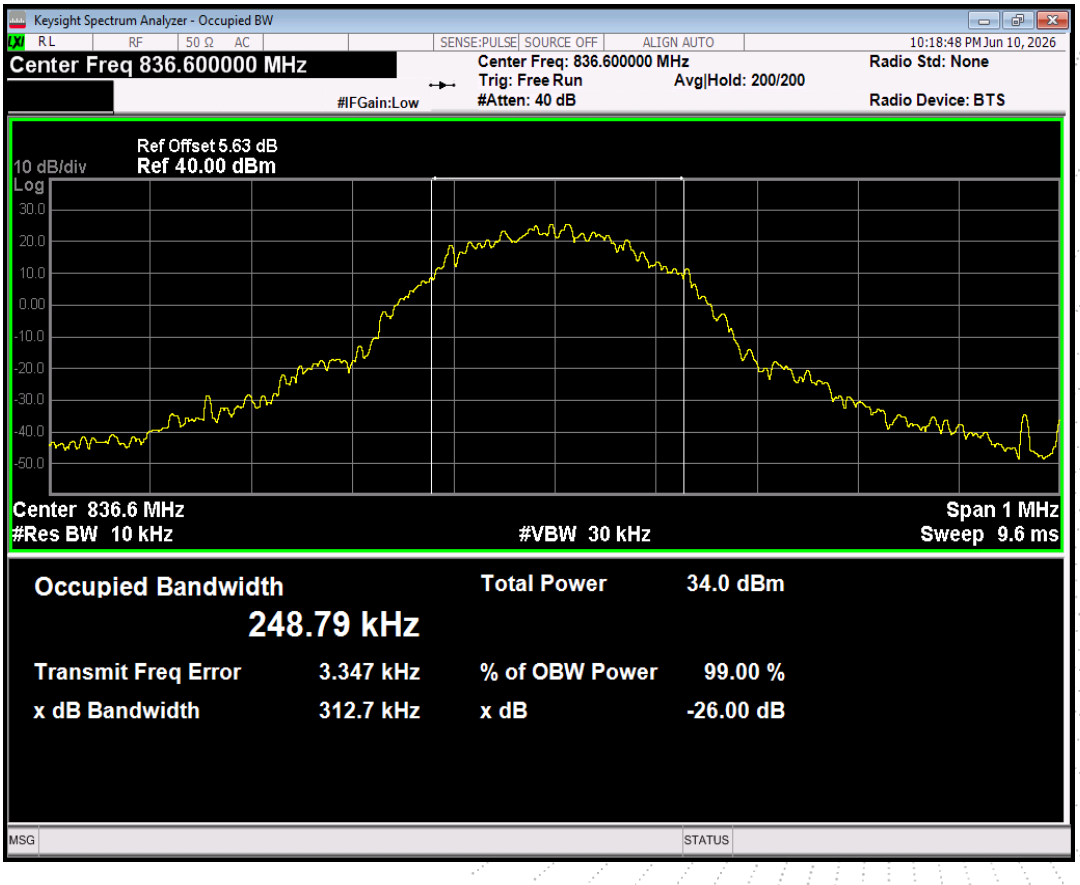
GPRS850 Channel=251



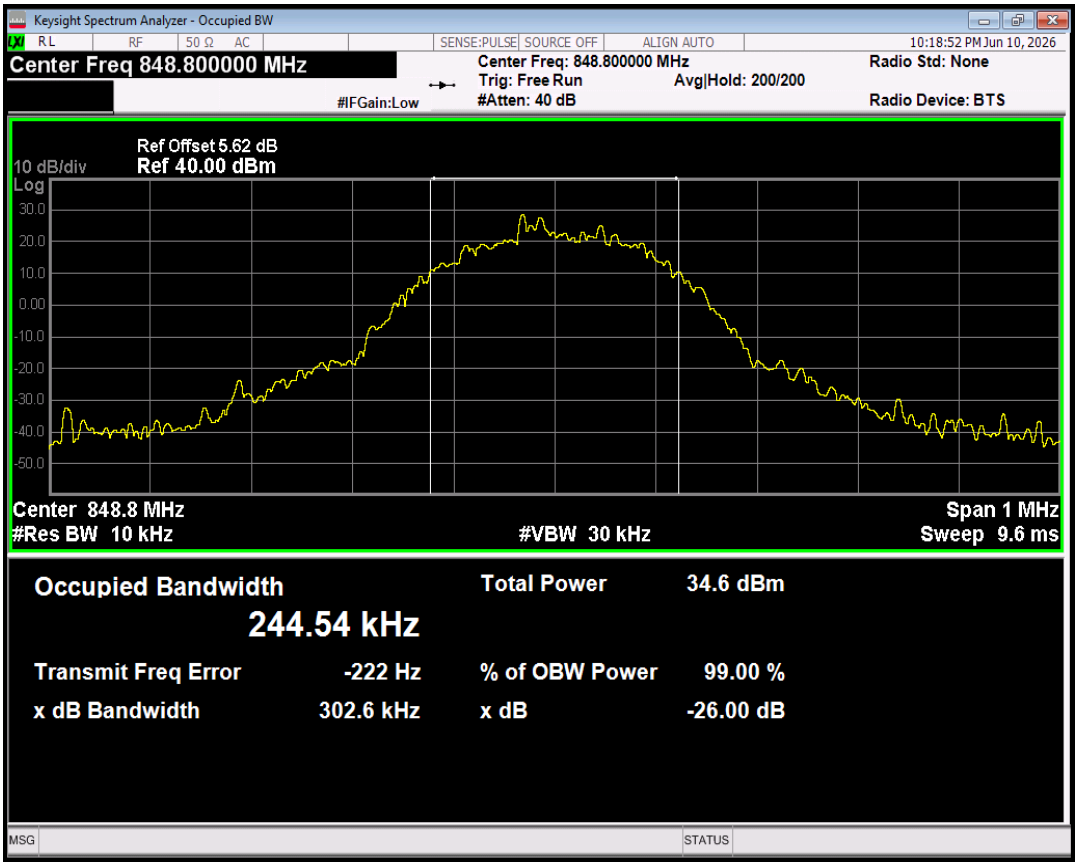
EGPRS850 Channel=128



EGPRS850 Channel=190

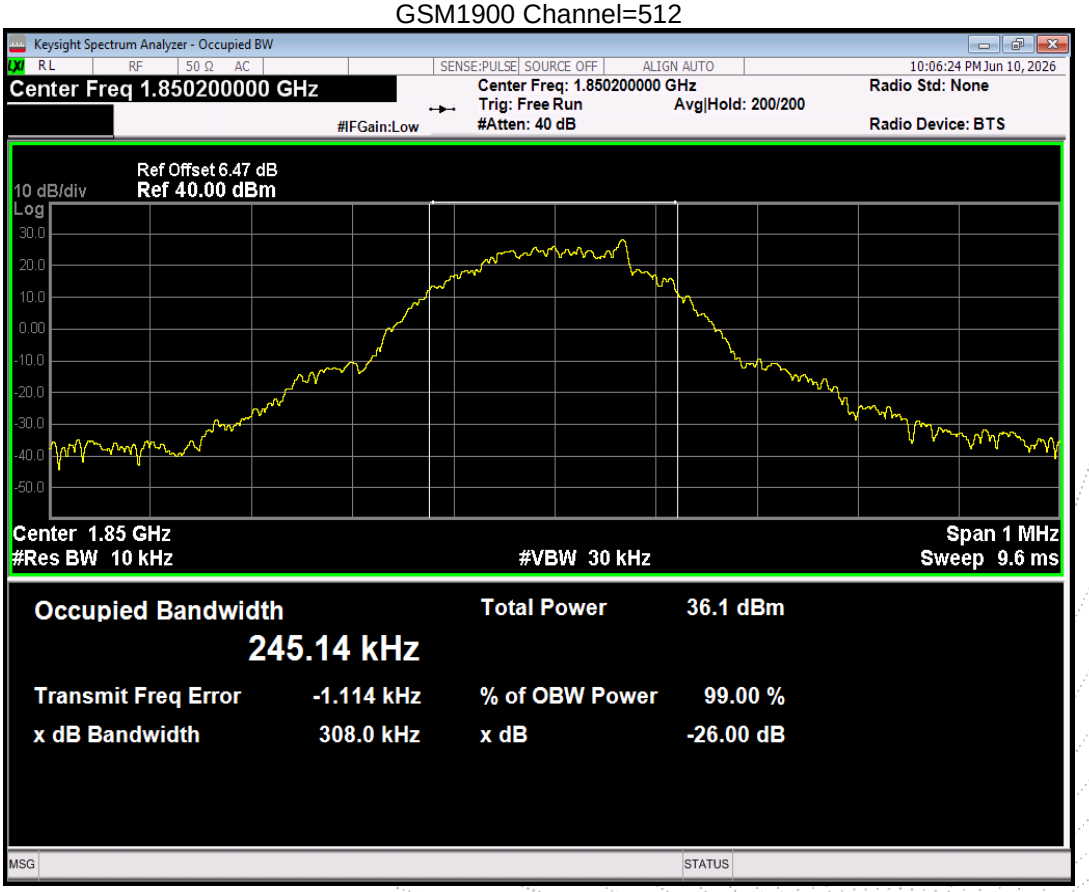


EGPRS850 Channel=251

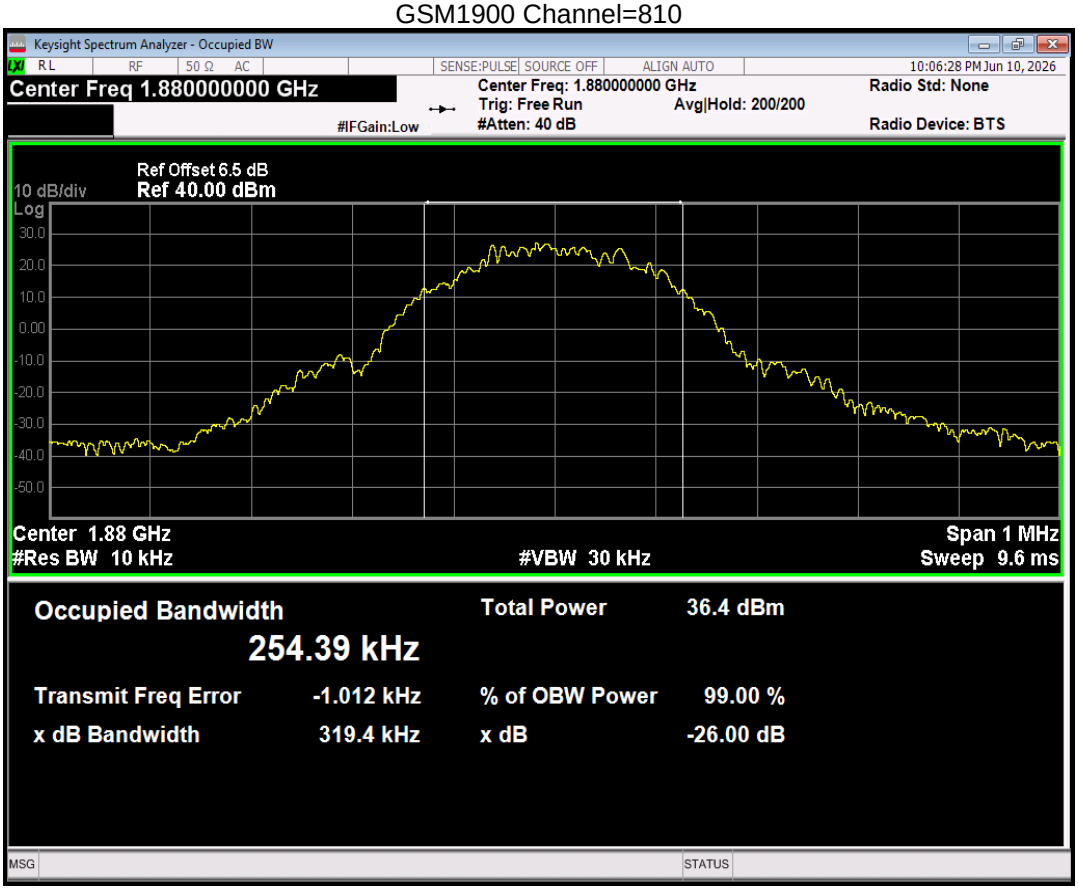


Band	Channel	Frequency (MHz)	99% OBW (kHz)	-26dB EBW (kHz)	Verdict
GSM1900	512	1850.2	245.137	308.004	PASS
GSM1900	661	1880	254.388	319.398	PASS
GSM1900	810	1909.8	247.989	314.999	PASS
GPRS1900	512	1850.2	244.628	316.878	PASS
GPRS1900	661	1880	239.576	307.056	PASS
GPRS1900	810	1909.8	249.179	322.982	PASS
EGPRS1900	512	1850.2	243.580	299.170	PASS
EGPRS1900	661	1880	253.248	309.324	PASS
EGPRS1900	810	1909.8	237.904	296.879	PASS

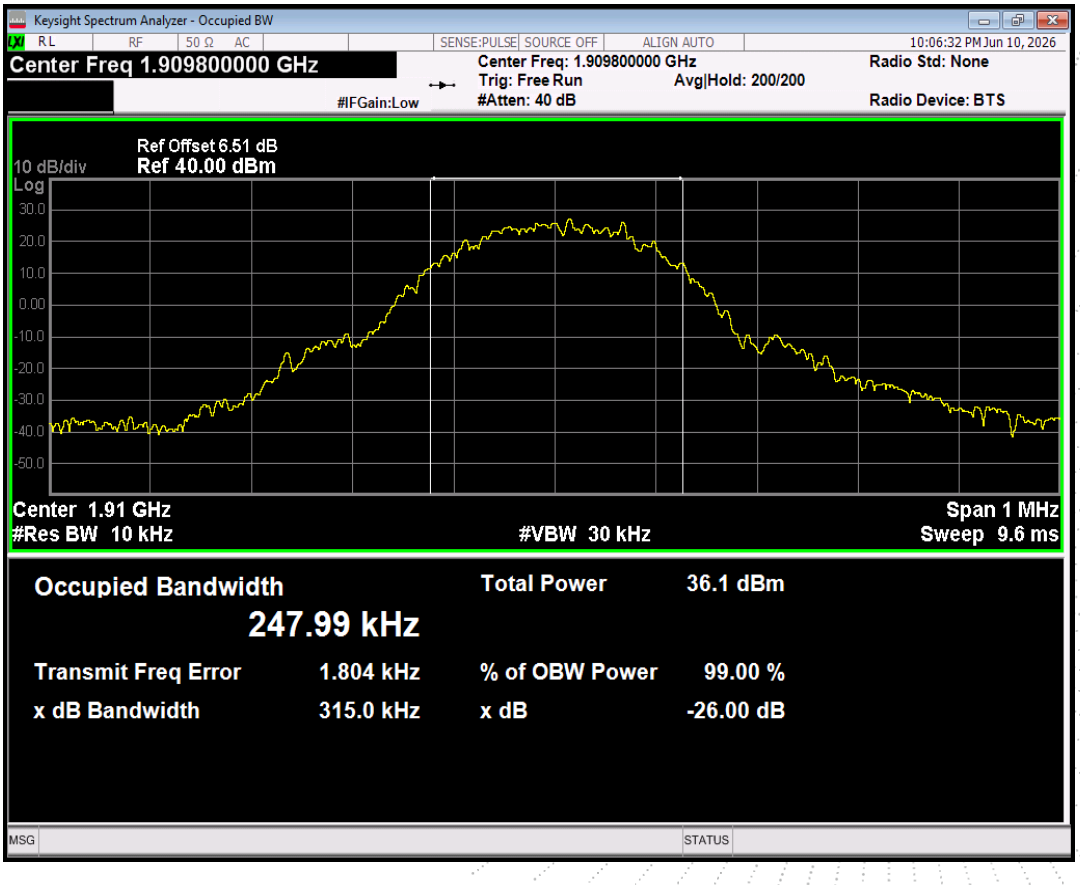
GSM1900 Channel=512



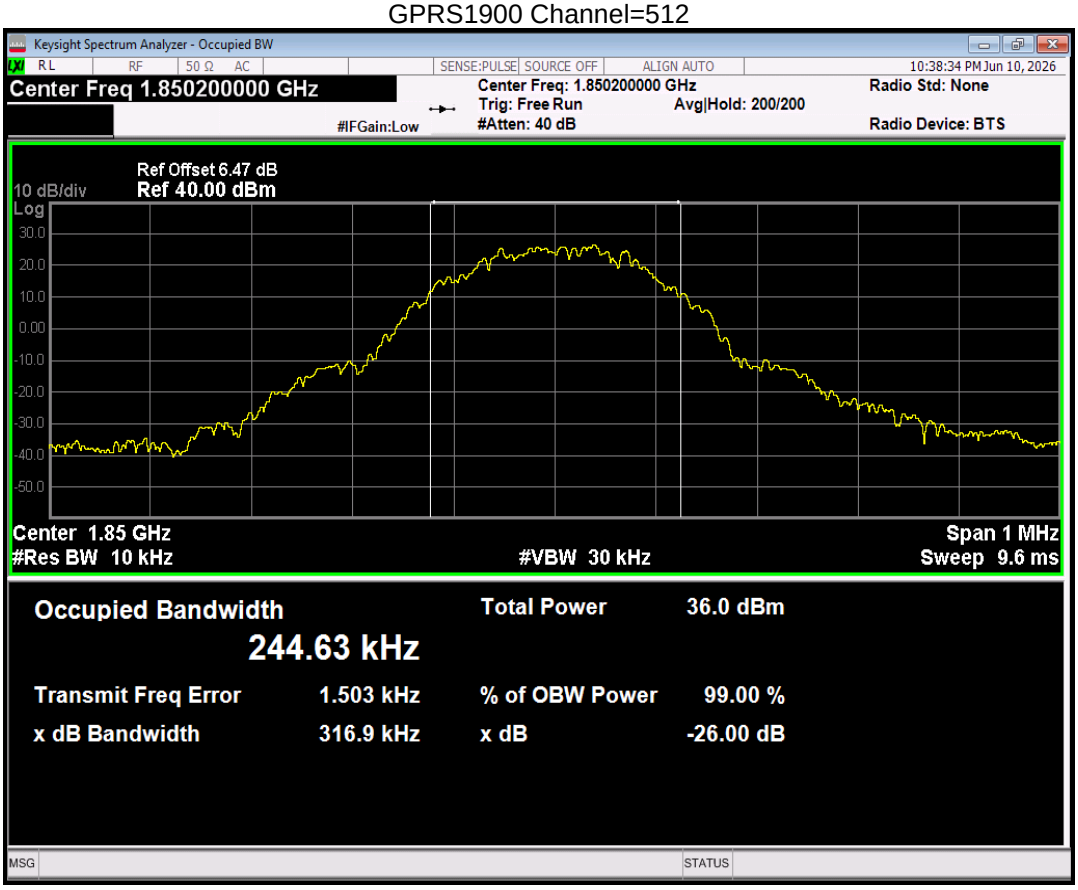
GSM1900 Channel=810



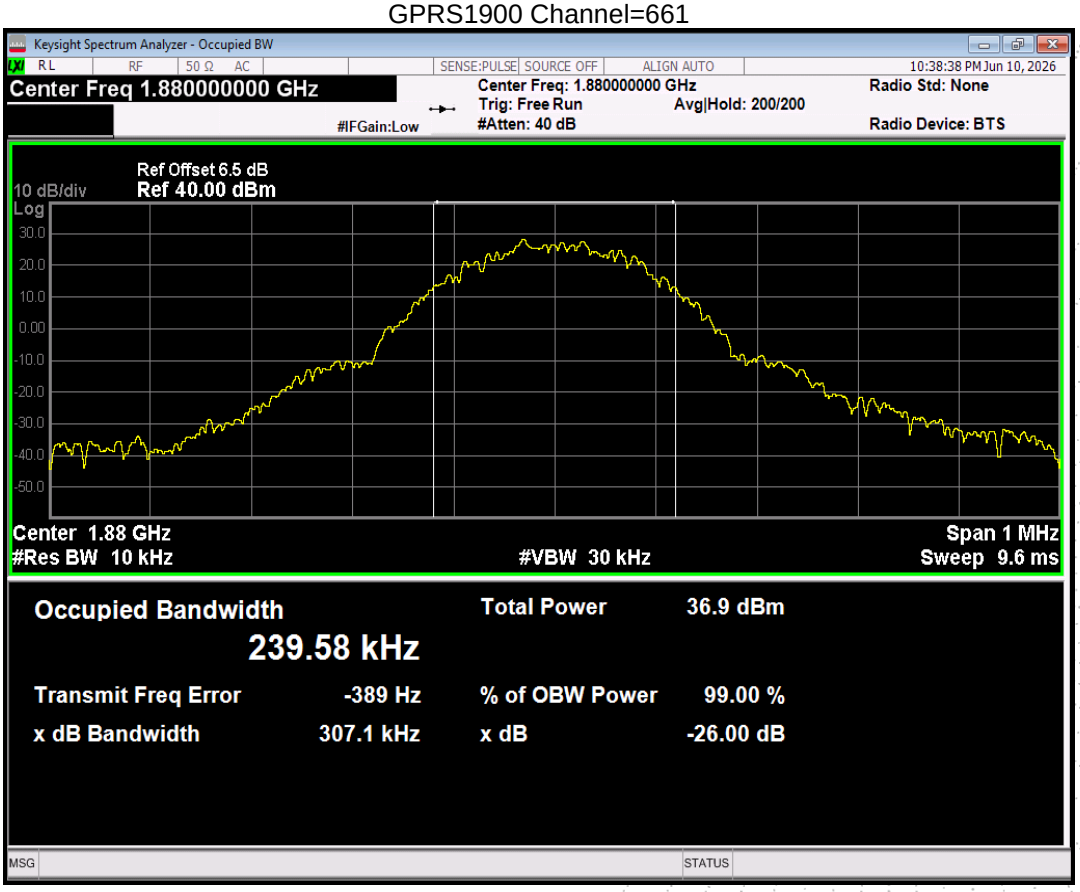
GSM1900 Channel=661



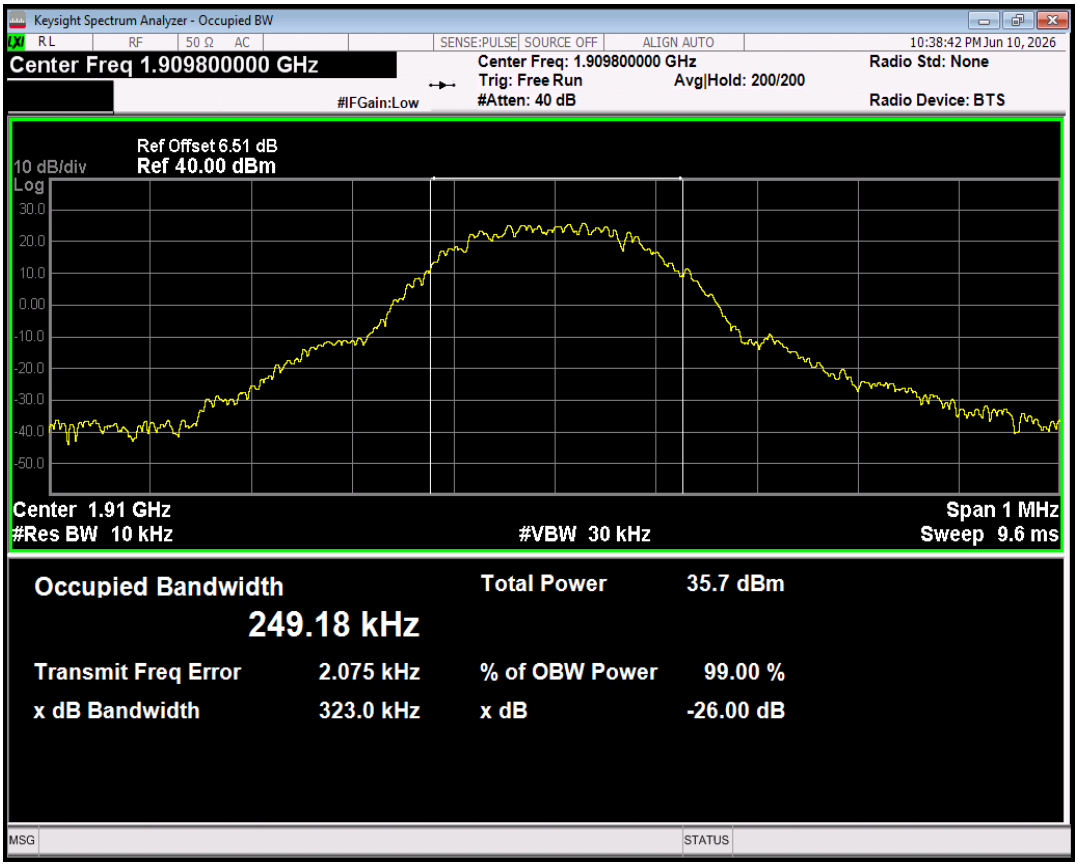
GPRS1900 Channel=512



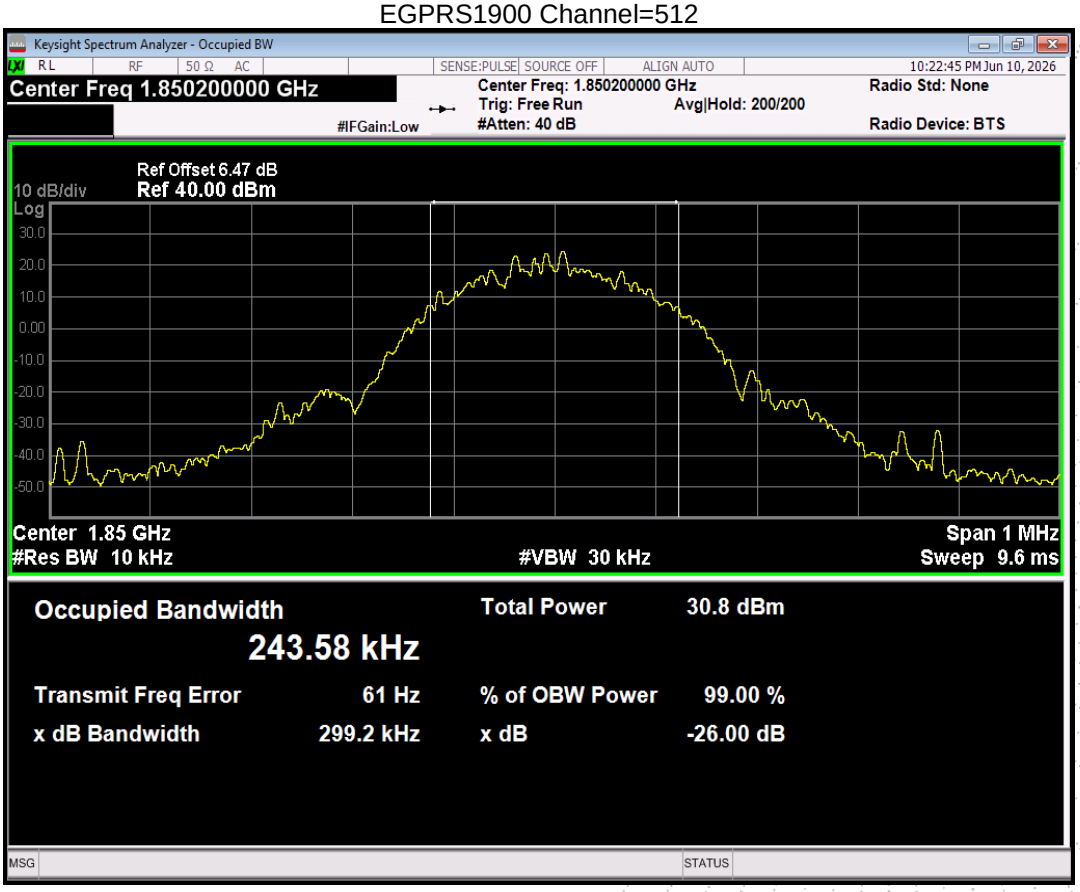
GPRS1900 Channel=661



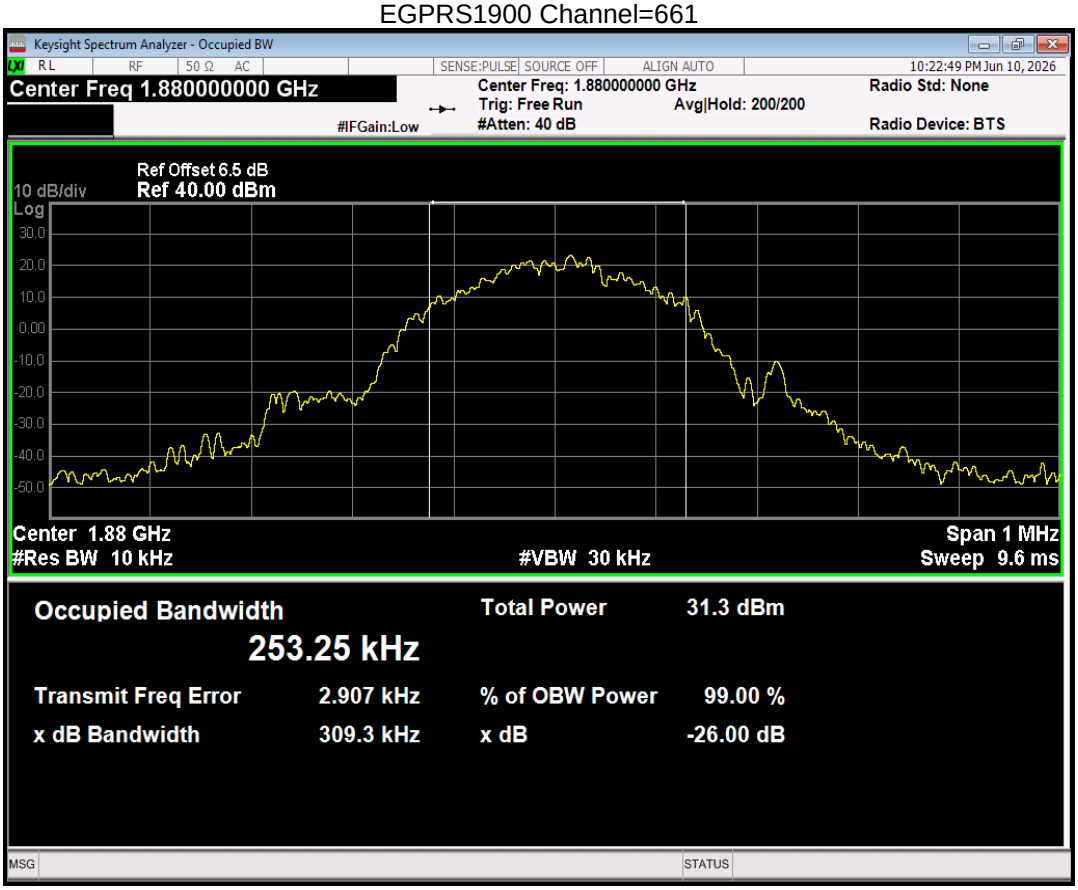
GPRS1900 Channel=810



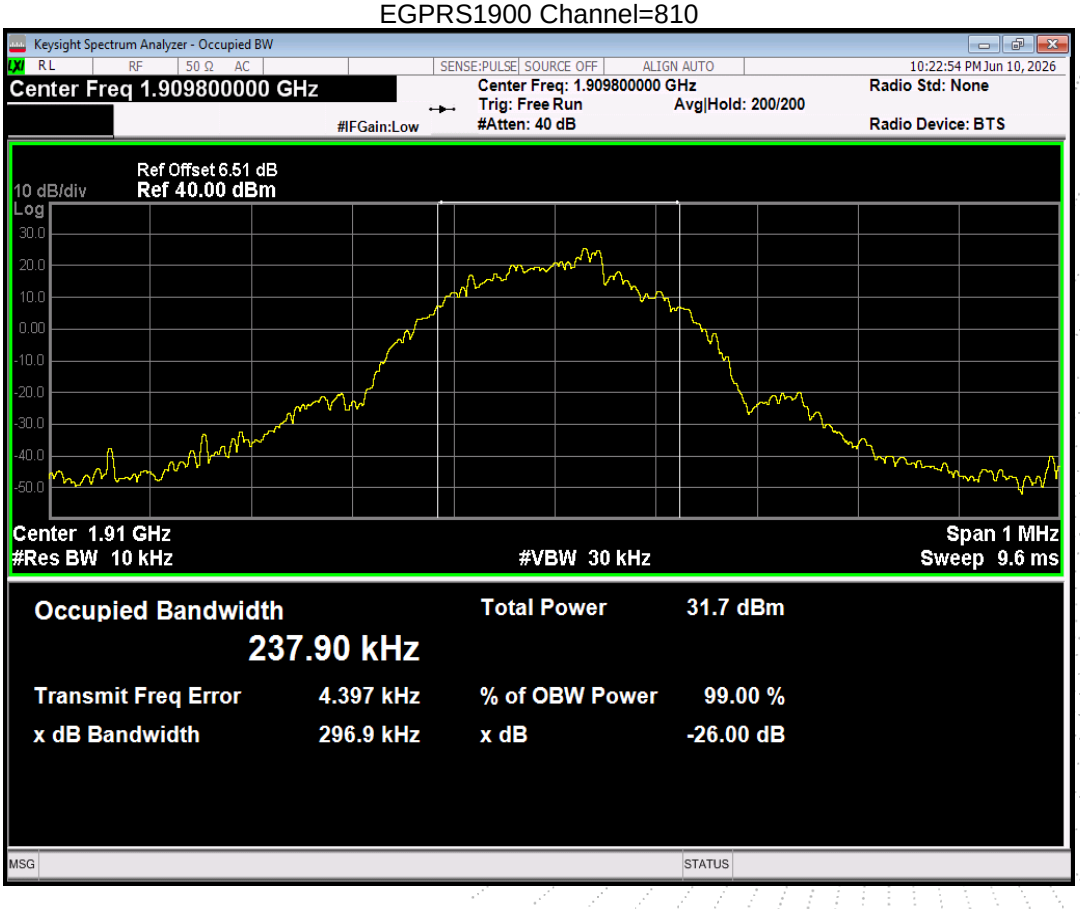
EGPRS1900 Channel=512



EGPRS1900 Channel=661



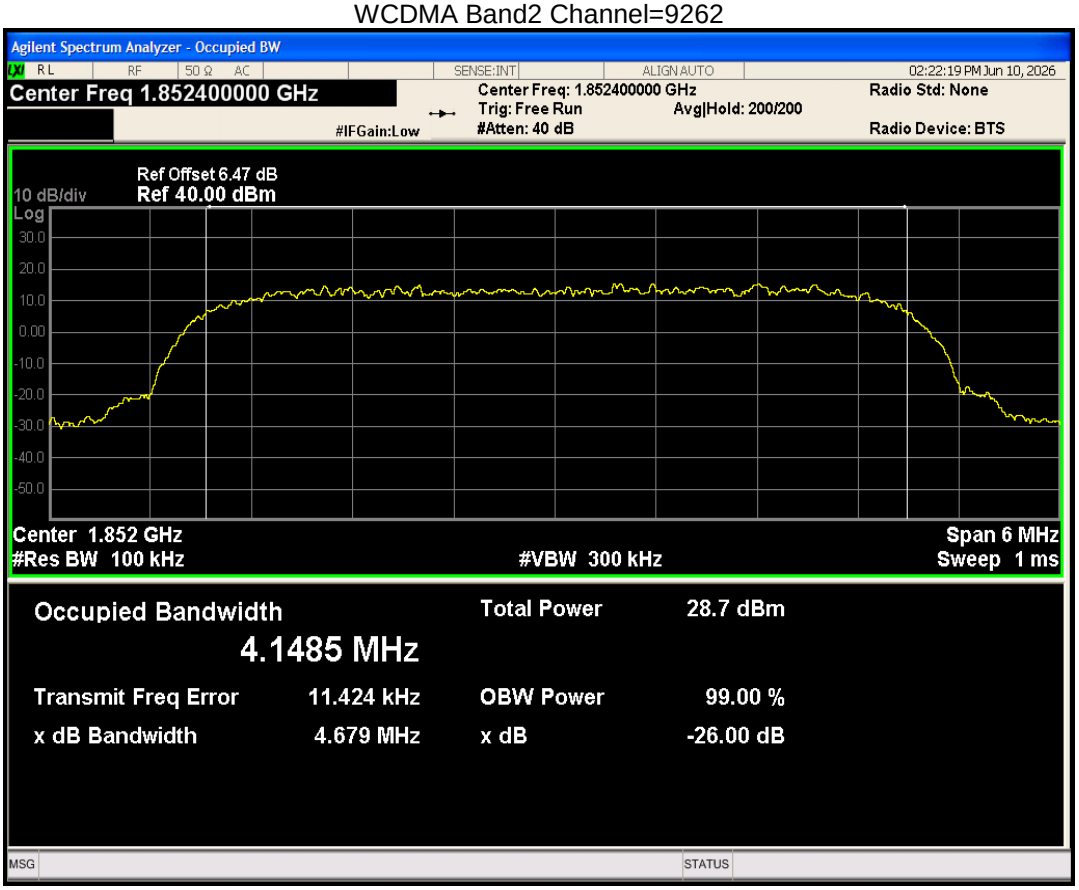
EGPRS1900 Channel=810



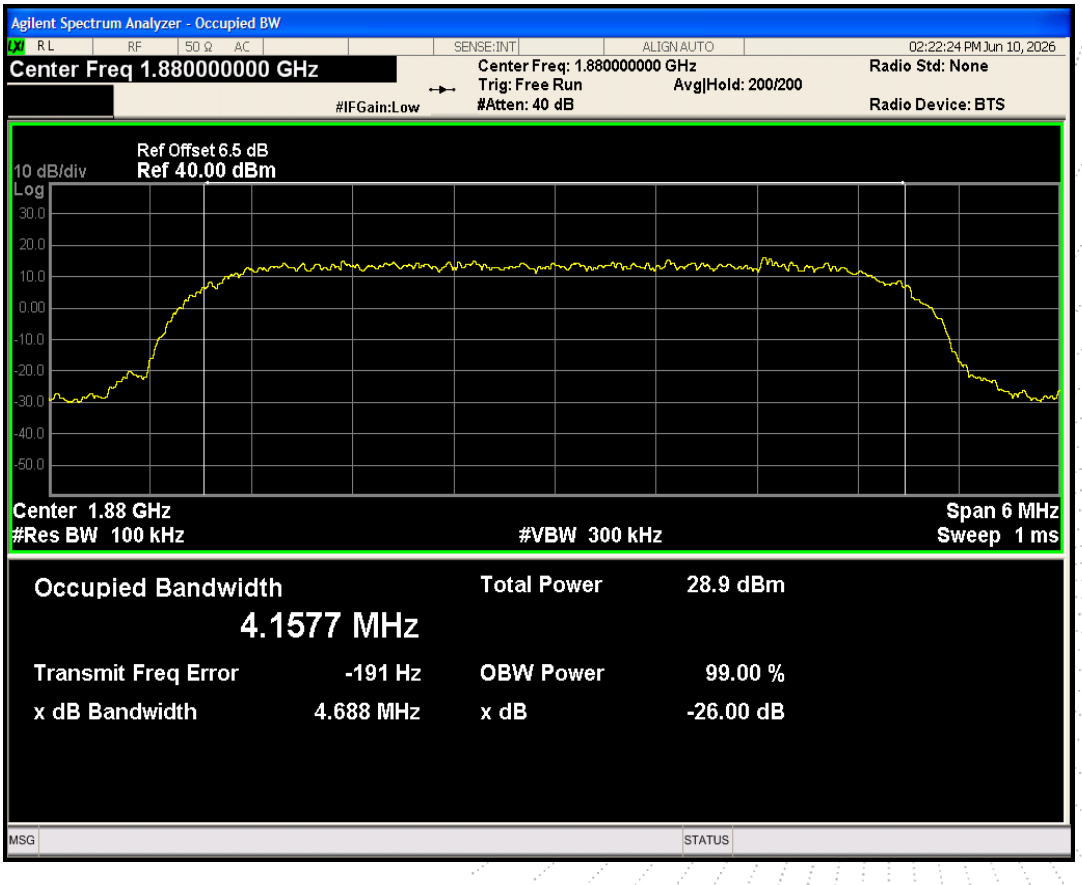
Band	Channel	Frequency (MHz)	99% OBW (kHz)	-26dB EBW (kHz)	Verdict
WCDMA Band2	9262	1852.4	4148.506	4679.401	PASS
WCDMA Band2	9400	1880	4157.707	4687.845	PASS
WCDMA Band2	9538	1907.6	4171.214	4669.921	PASS
WCDMA Band5	4132	826.4	4148.975	4683.901	PASS
WCDMA Band5	4182	836.4	4173.287	4693.653	PASS
WCDMA Band5	4233	846.6	4156.014	4728.308	PASS

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

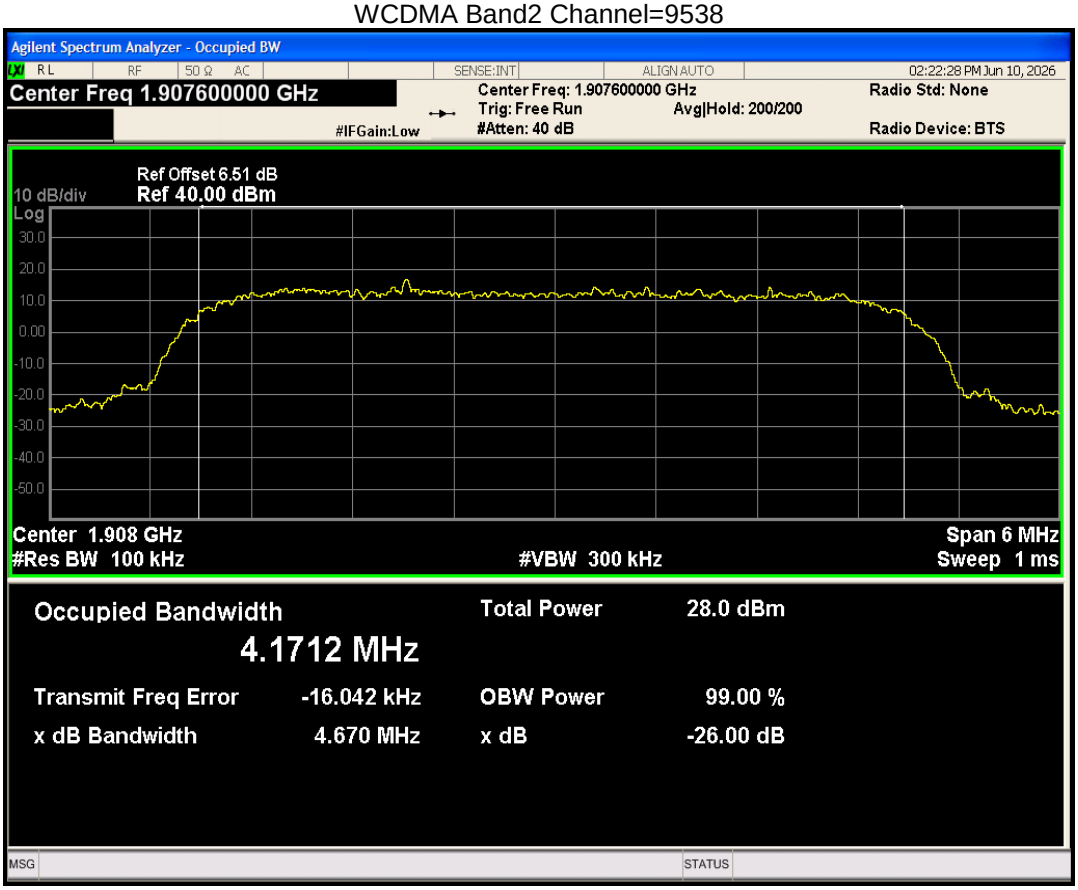
WCDMA Band2 Channel=9262



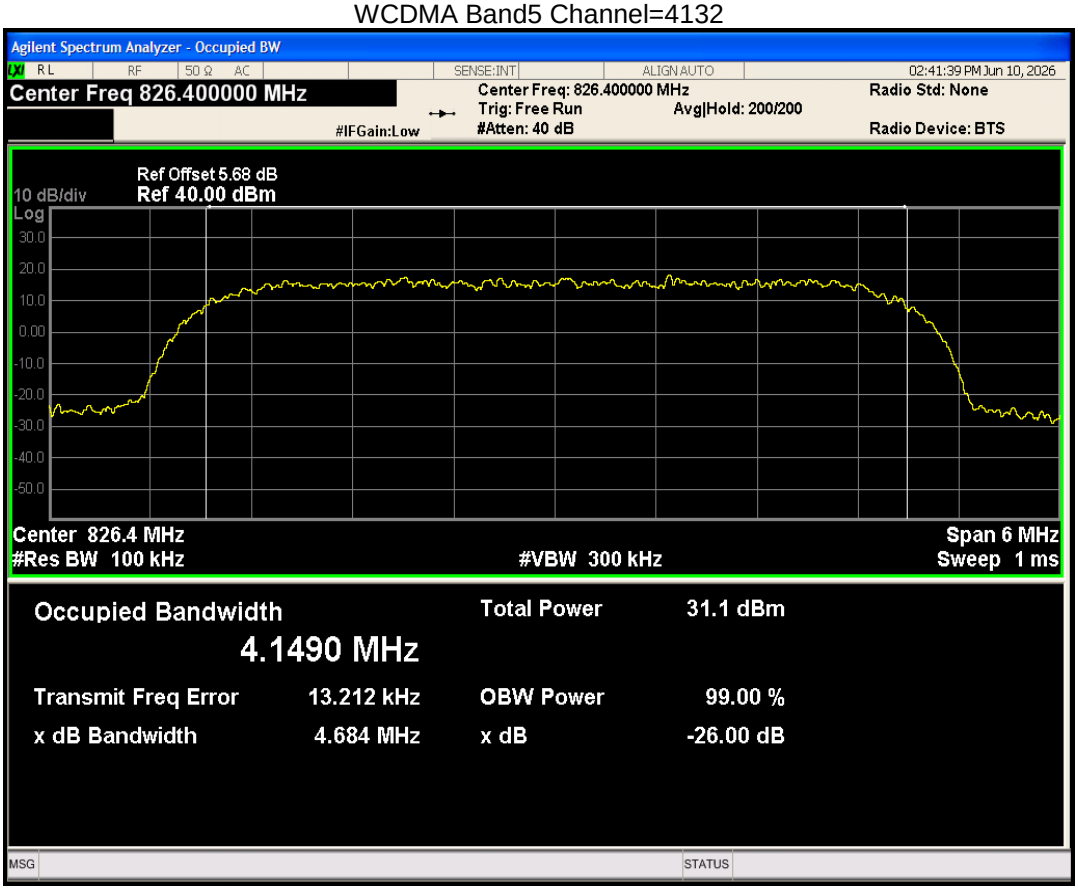
WCDMA Band2 Channel=9400



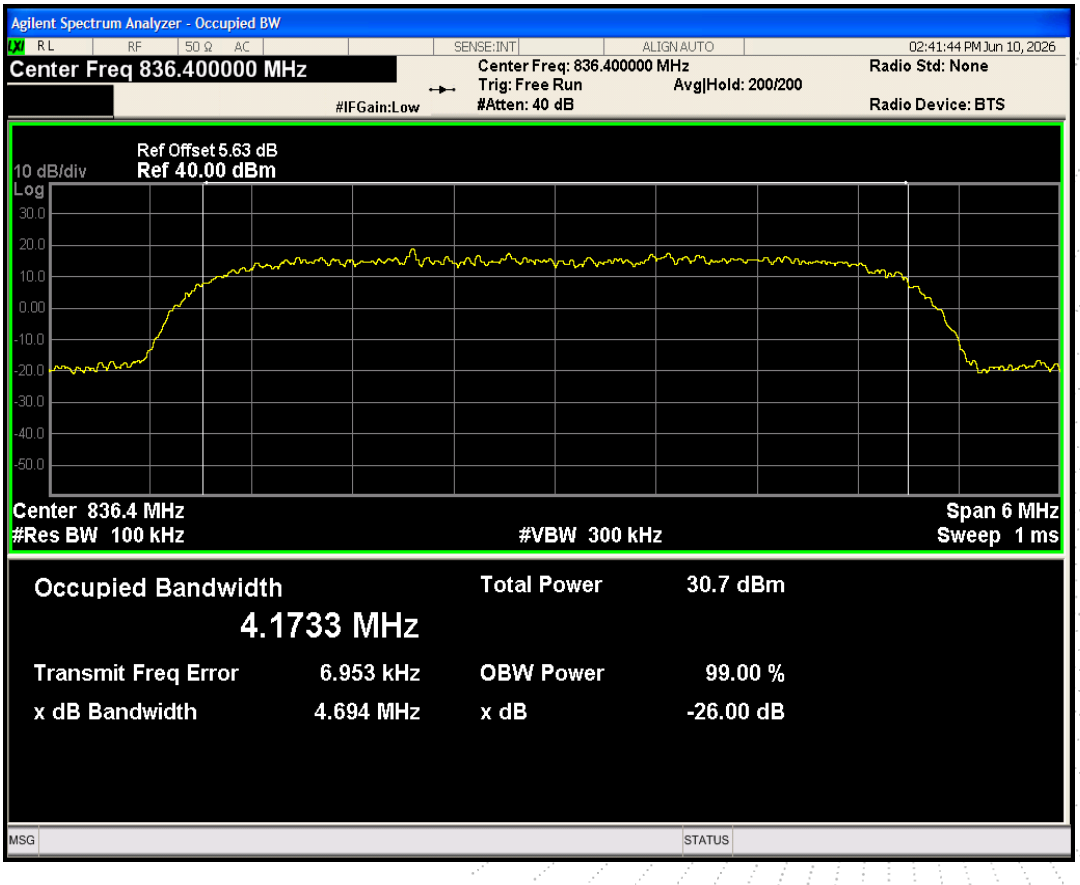
WCDMA Band2 Channel=9538



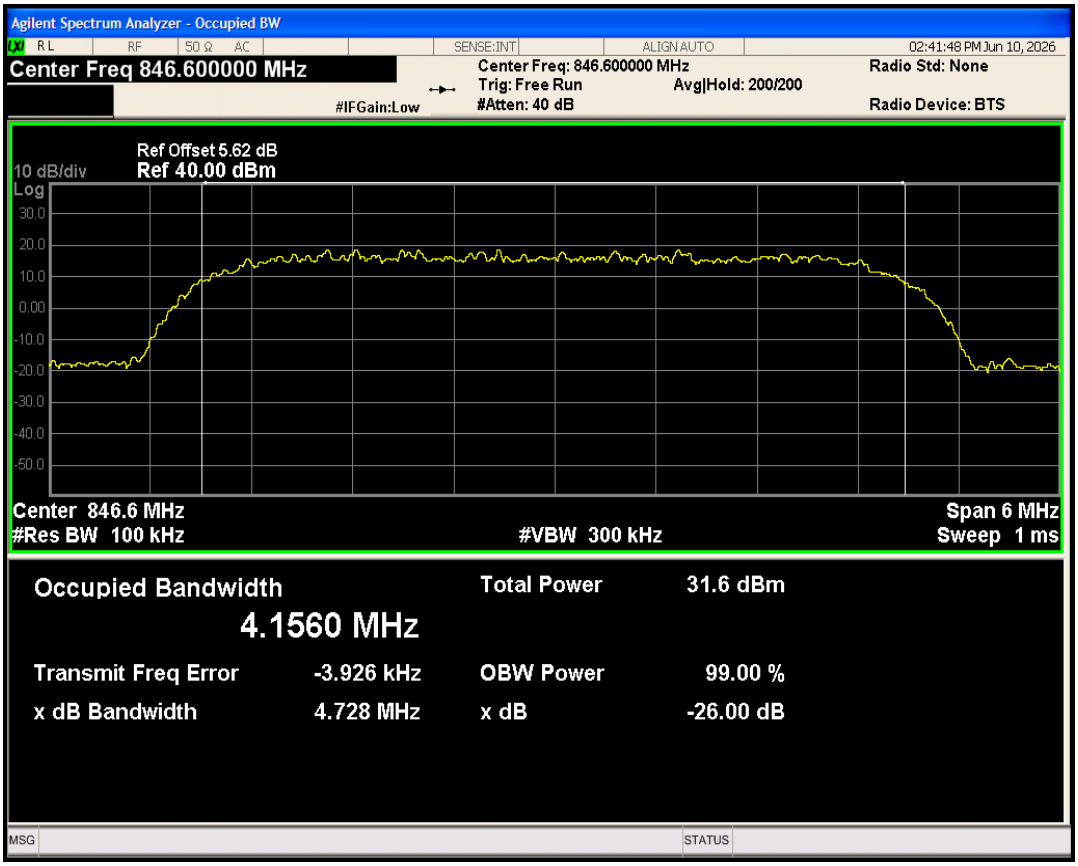
WCDMA Band5 Channel=4132



WCDMA Band5 Channel=4182

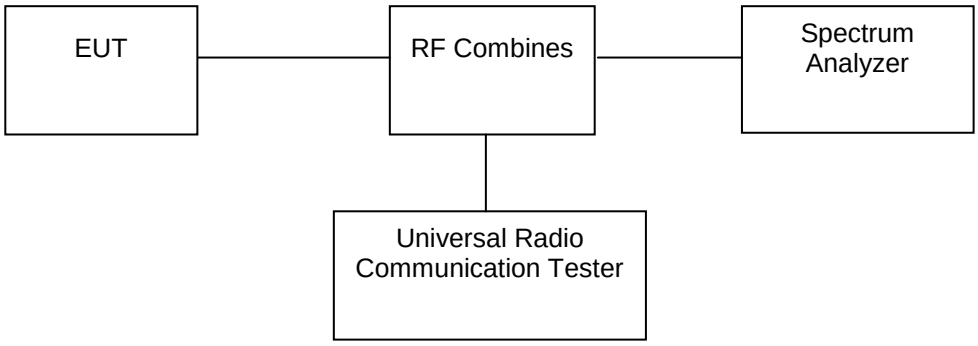


WCDMA Band5 Channel=4233



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.

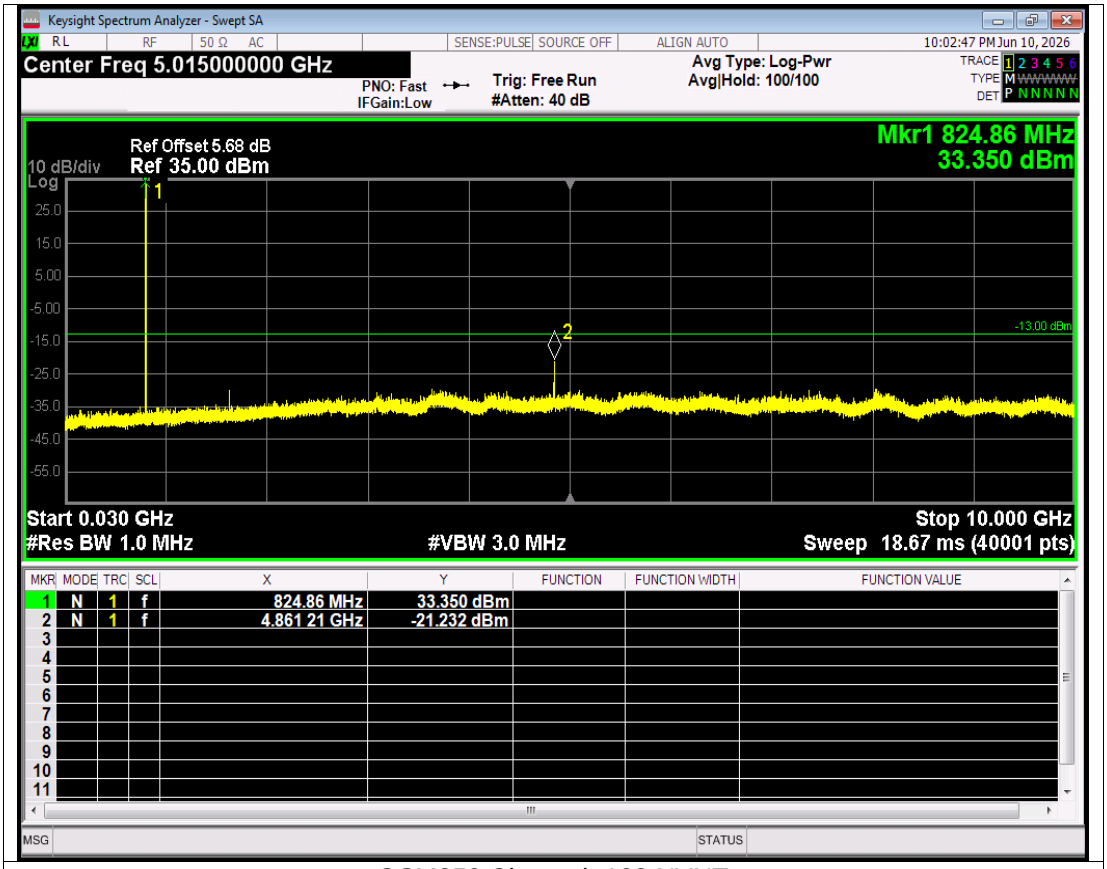
According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

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 log10 (P) dB.

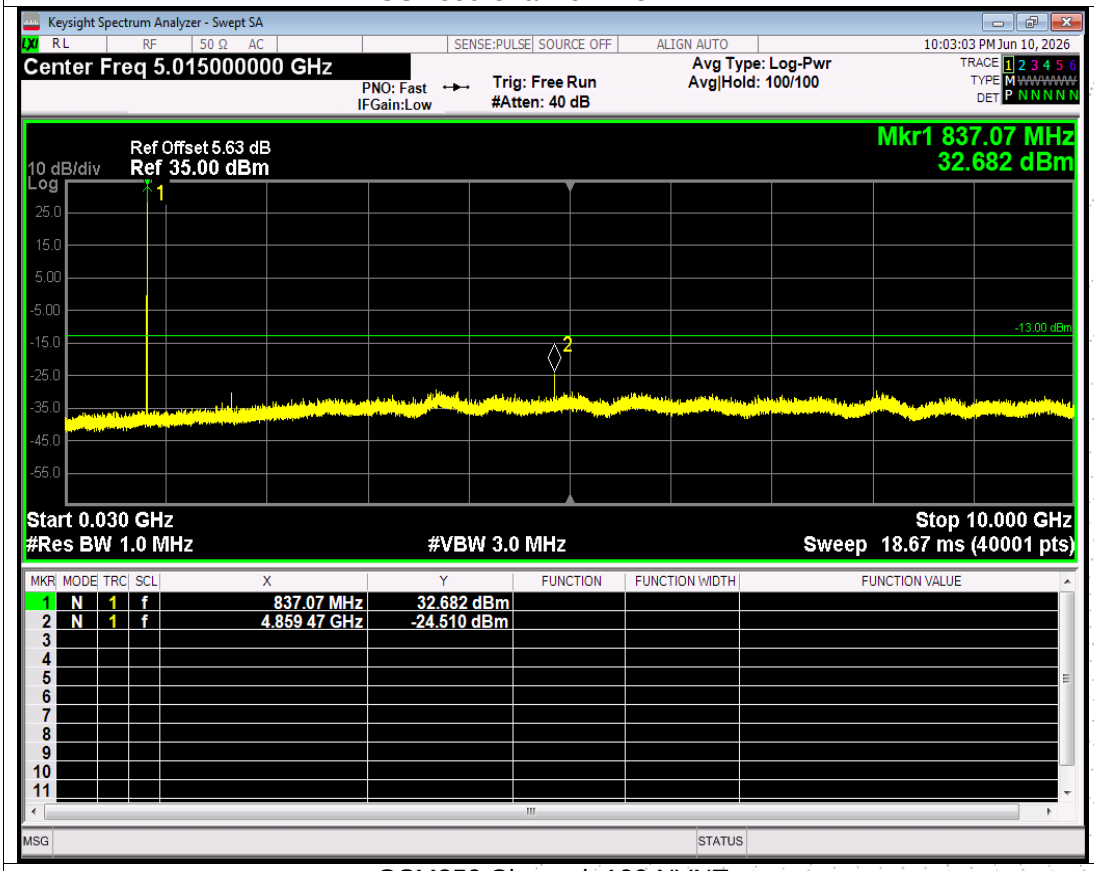
9.3 Test procedure

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

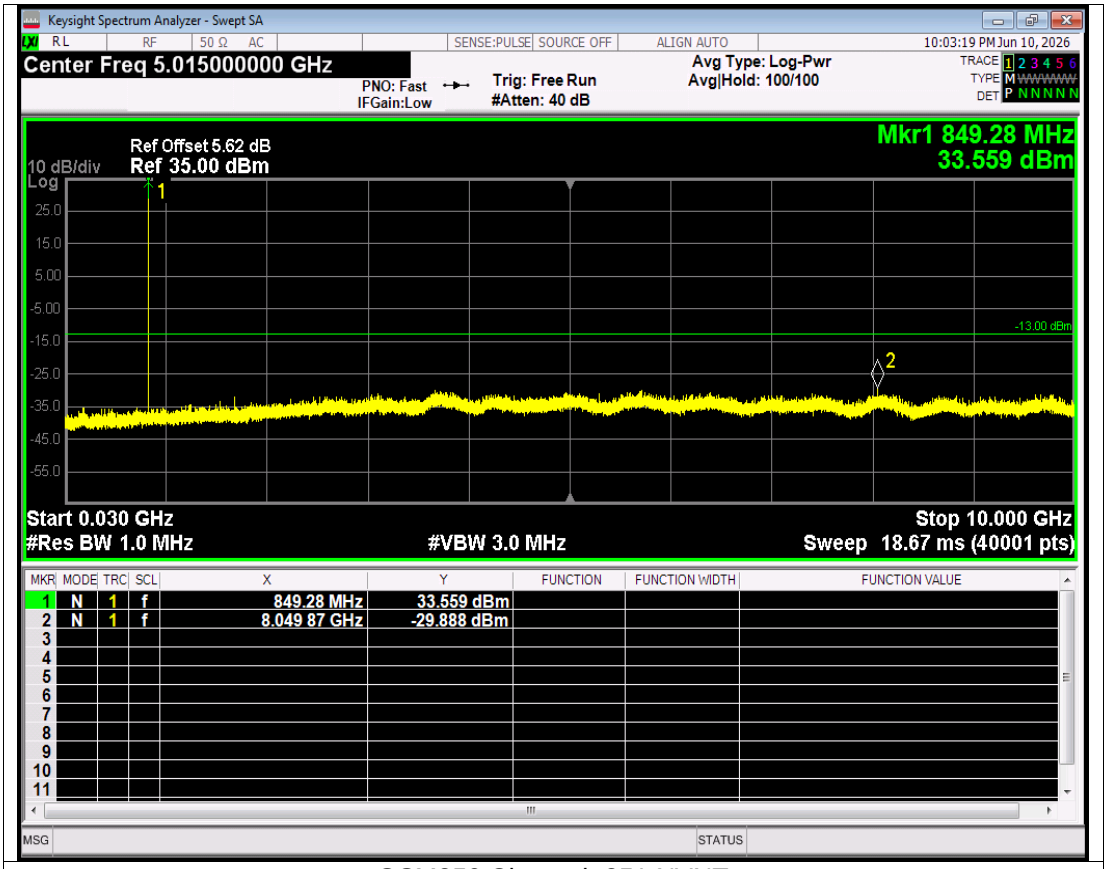
9.4 Test Result



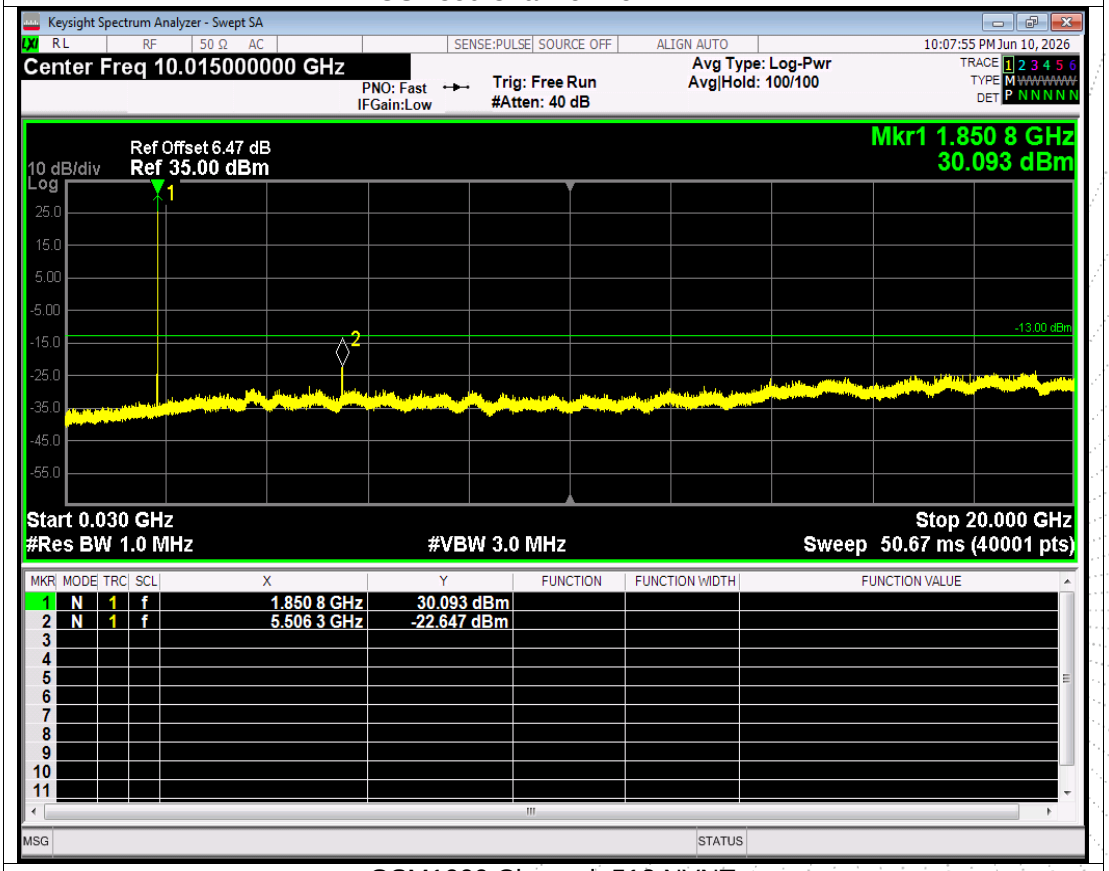
GSM850 Channel=128 NVNT



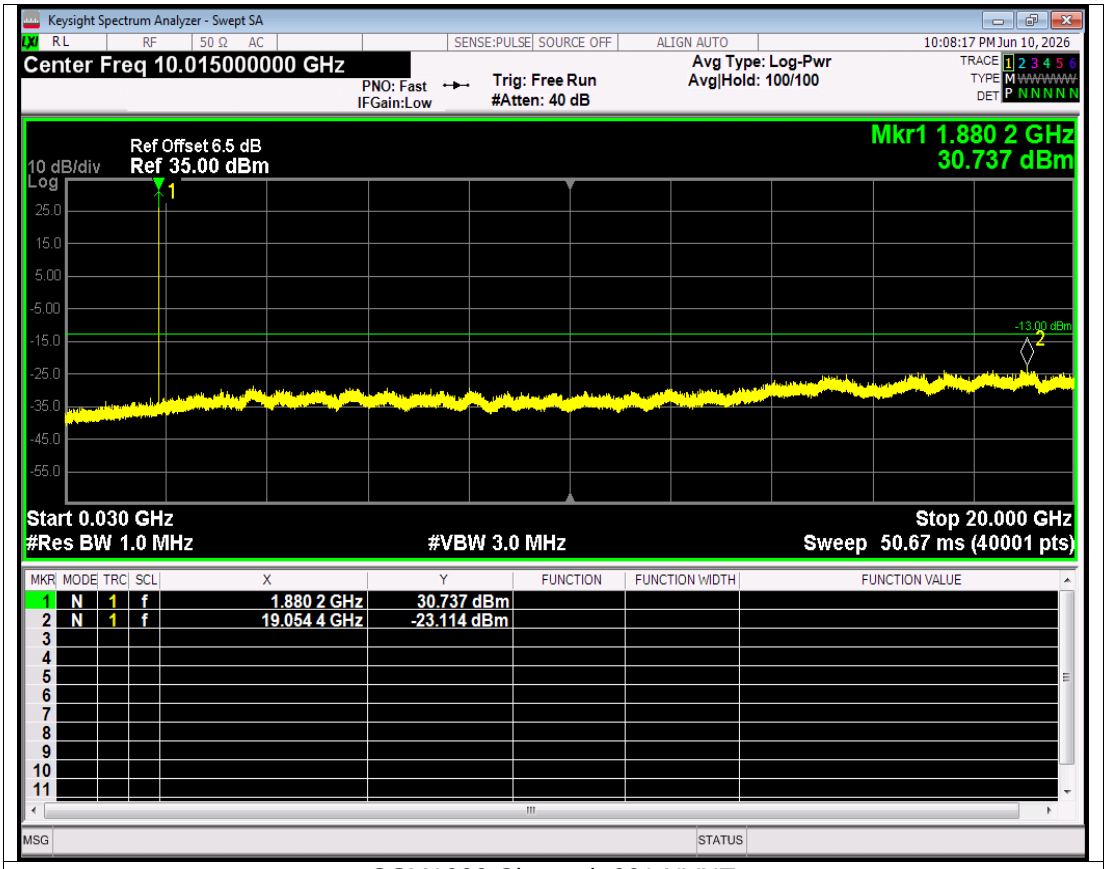
GSM850 Channel=190 NVNT



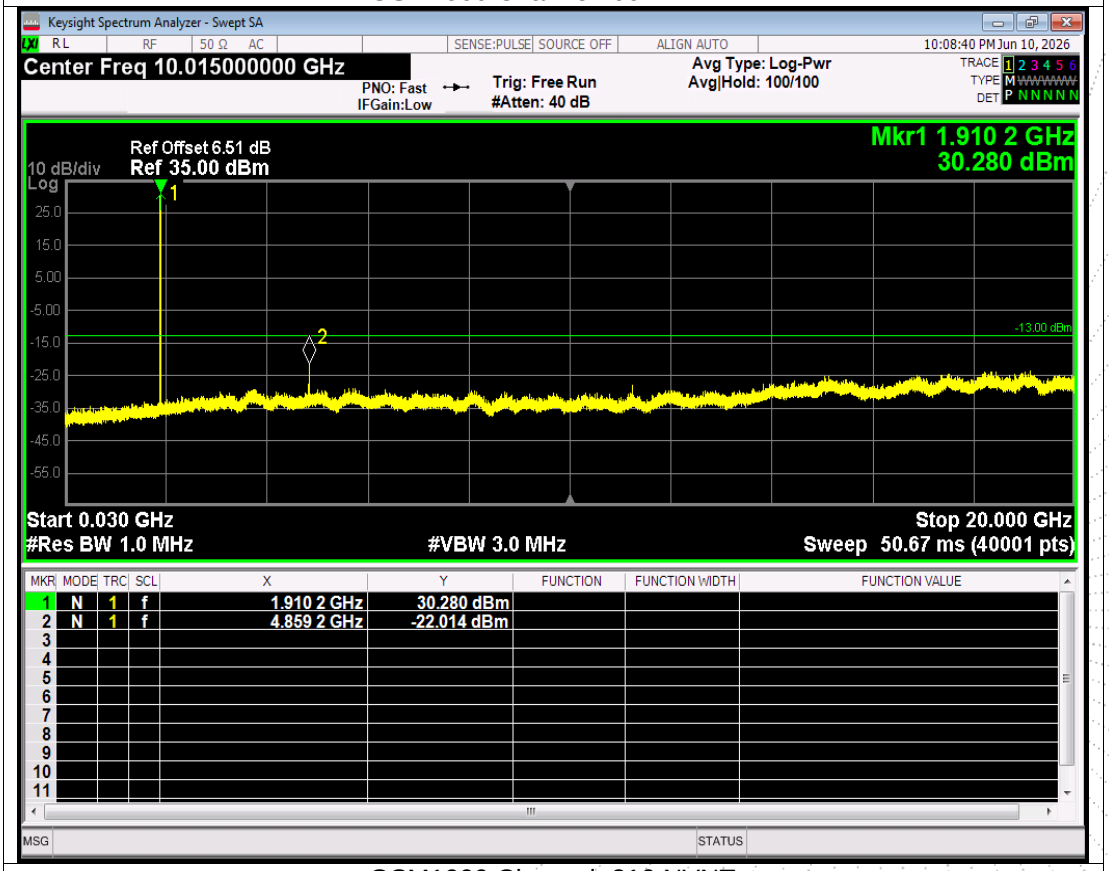
GSM850 Channel=251 NVNT



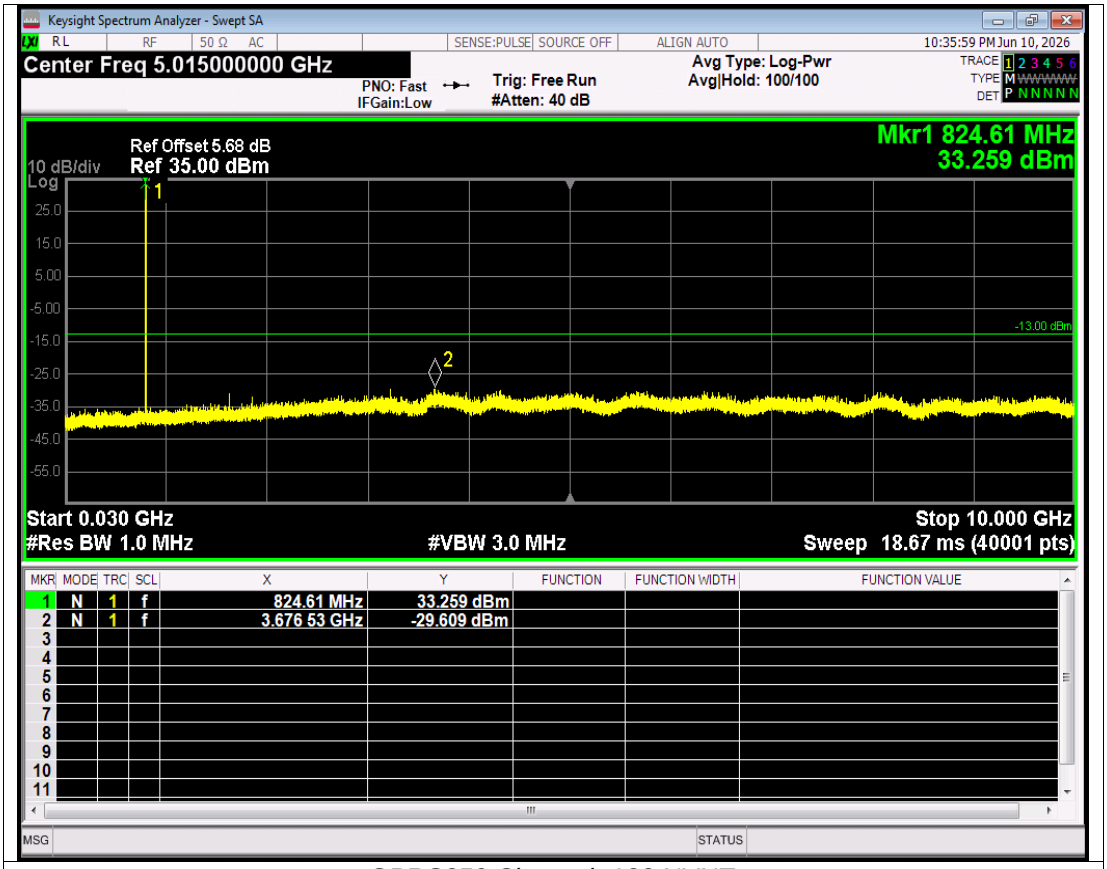
GSM1900 Channel=512 NVNT



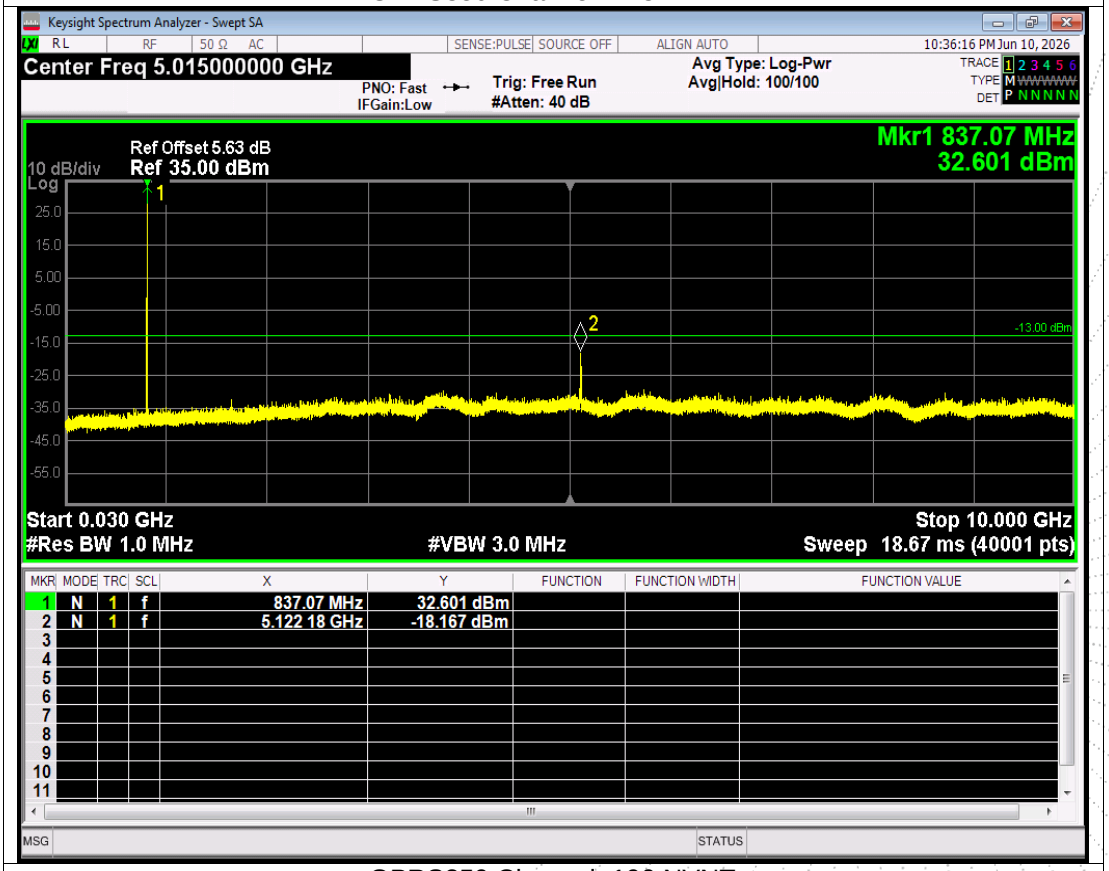
GSM1900 Channel=661 NVNT



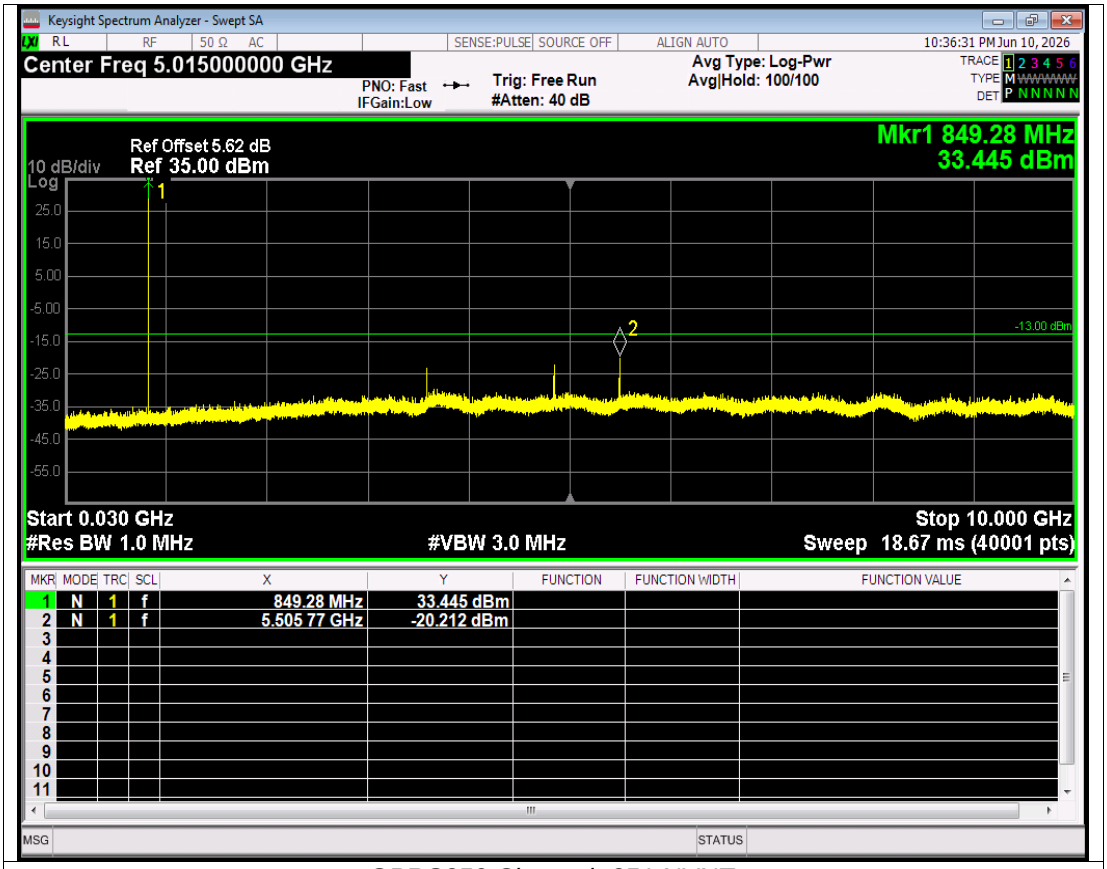
GSM1900 Channel=810 NVNT



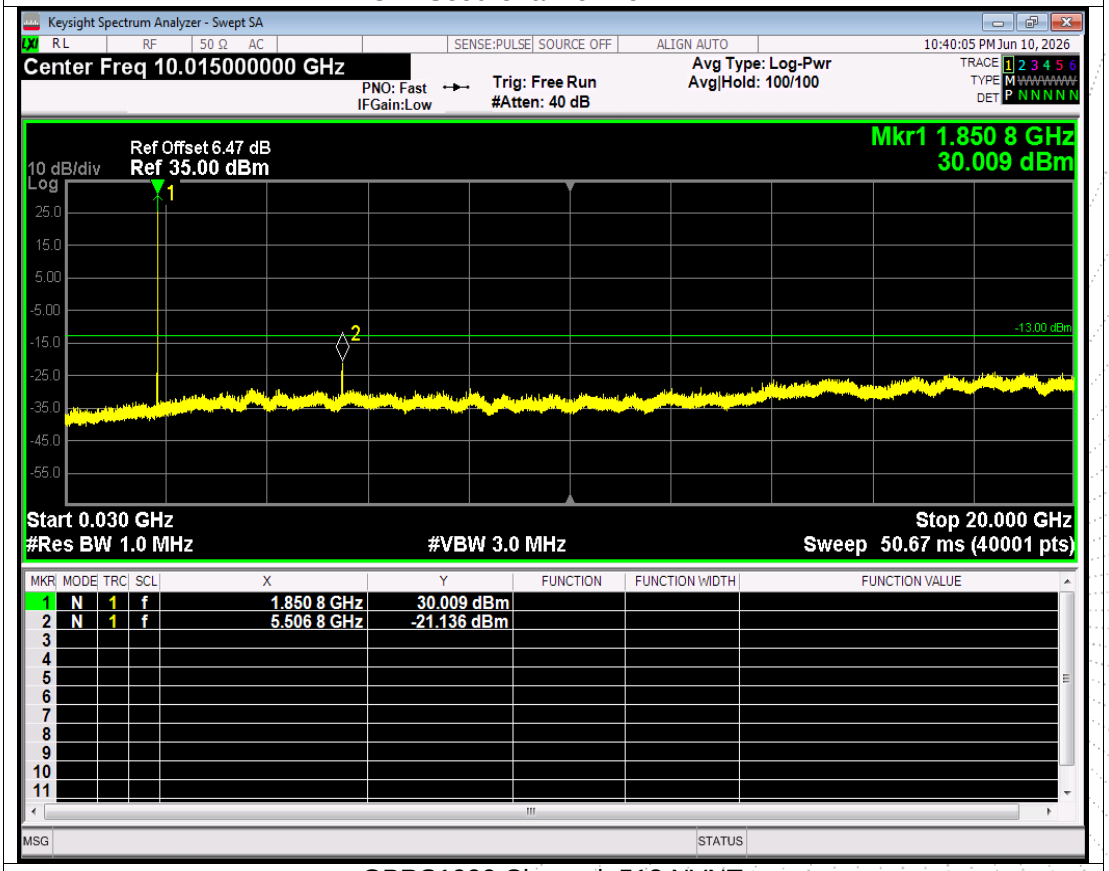
GPRS850 Channel=128 NVNT



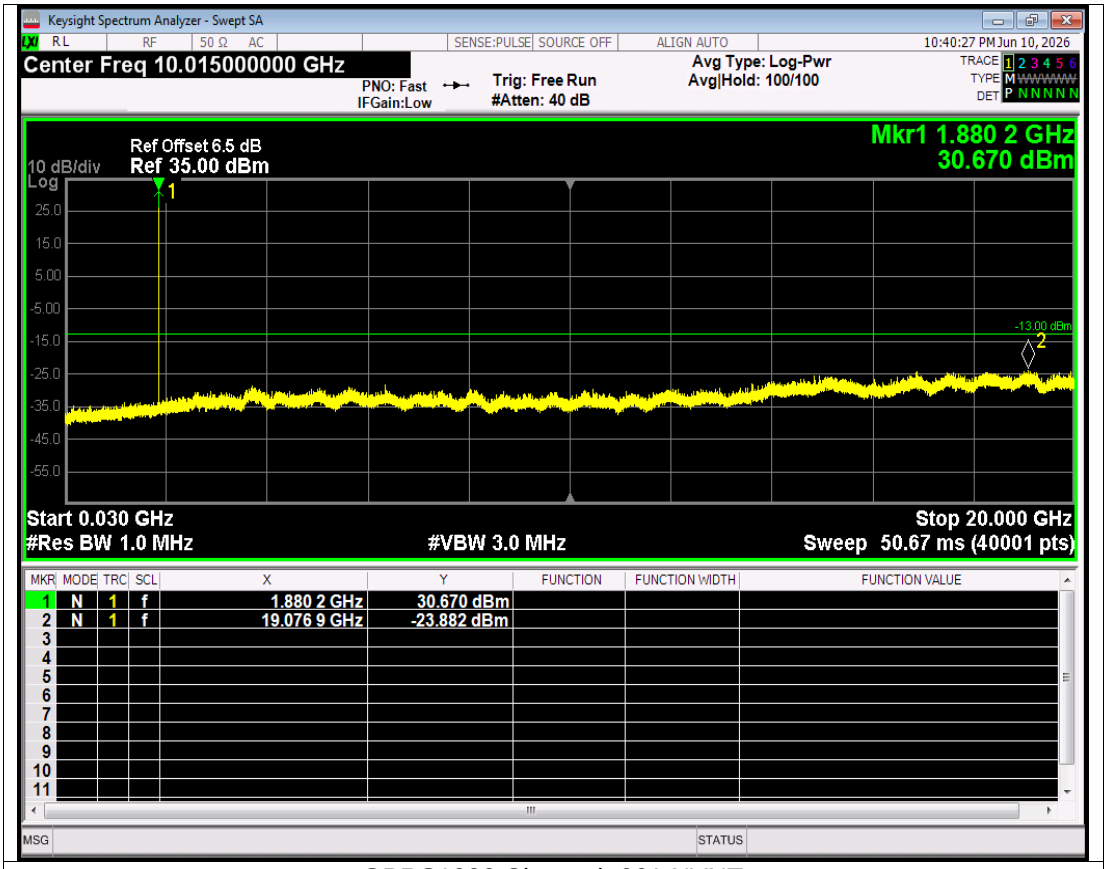
GPRS850 Channel=190 NVNT



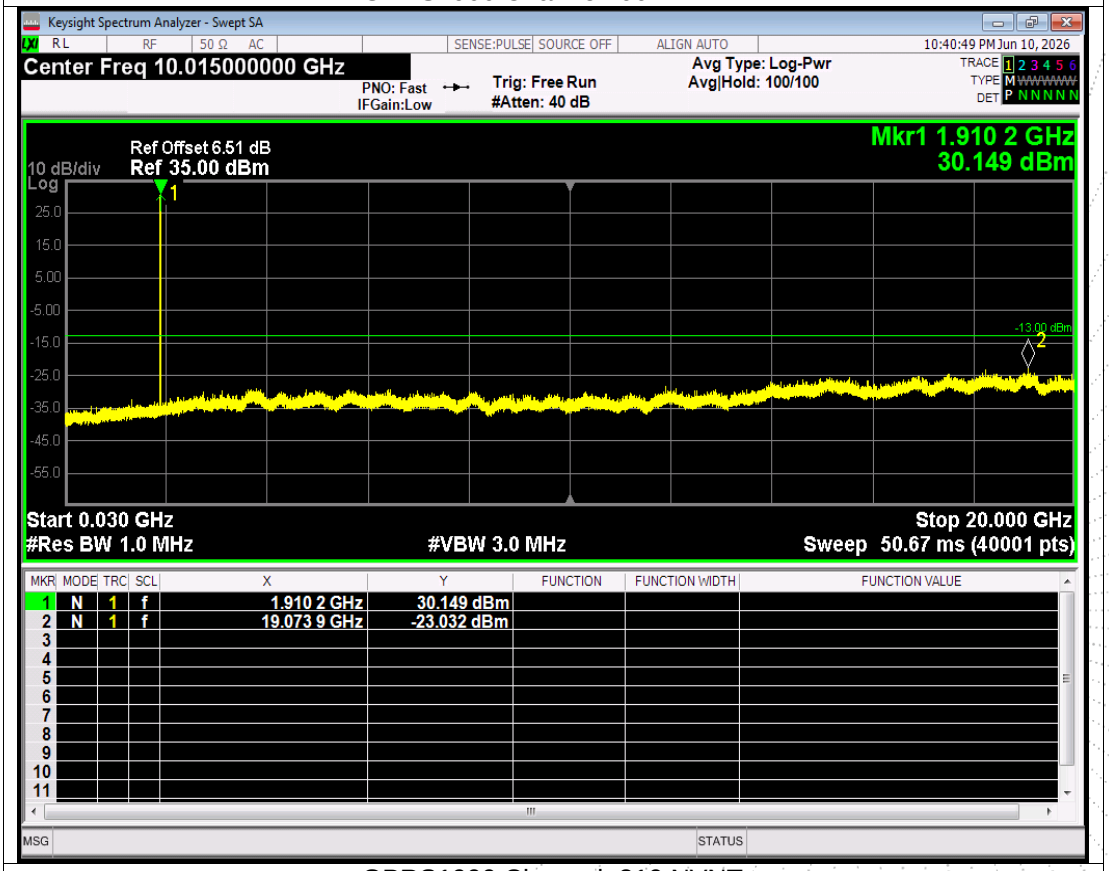
GPRS850 Channel=251 NVNT



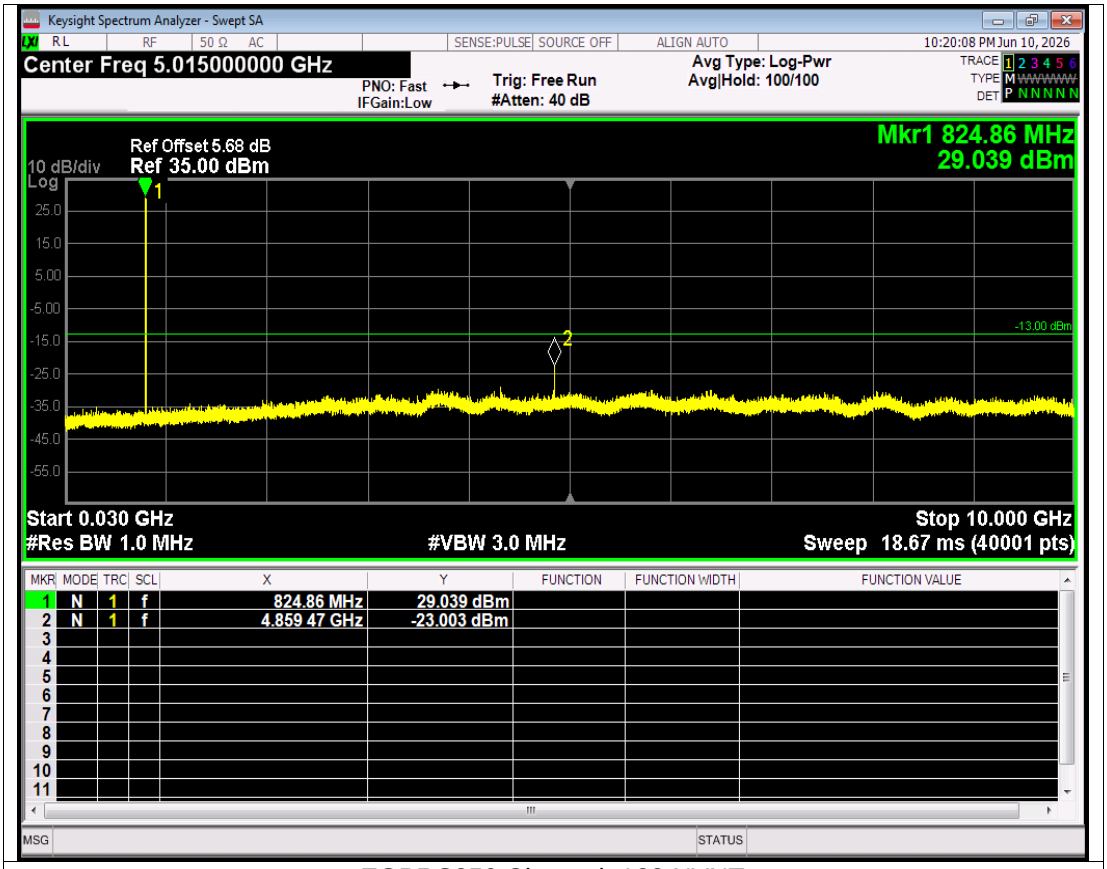
GPRS1900 Channel=512 NVNT



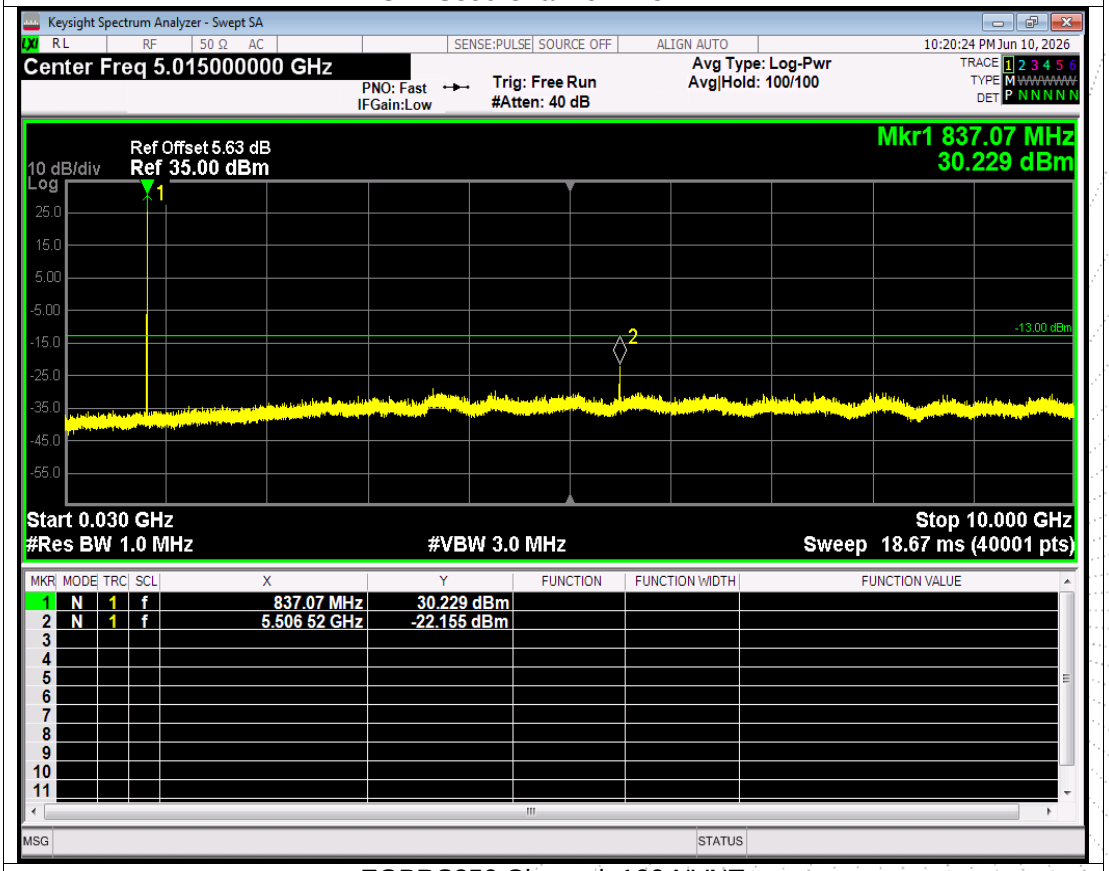
GPRS1900 Channel=661 NVNT



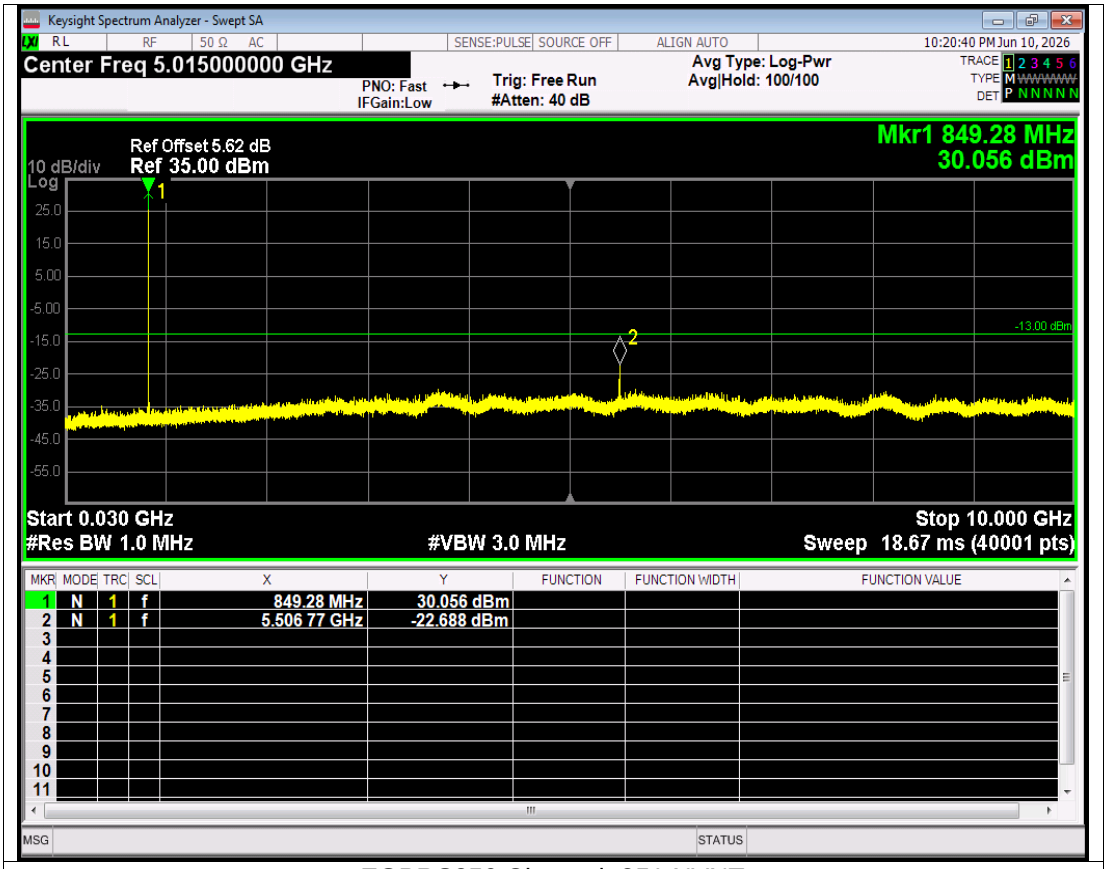
GPRS1900 Channel=810 NVNT



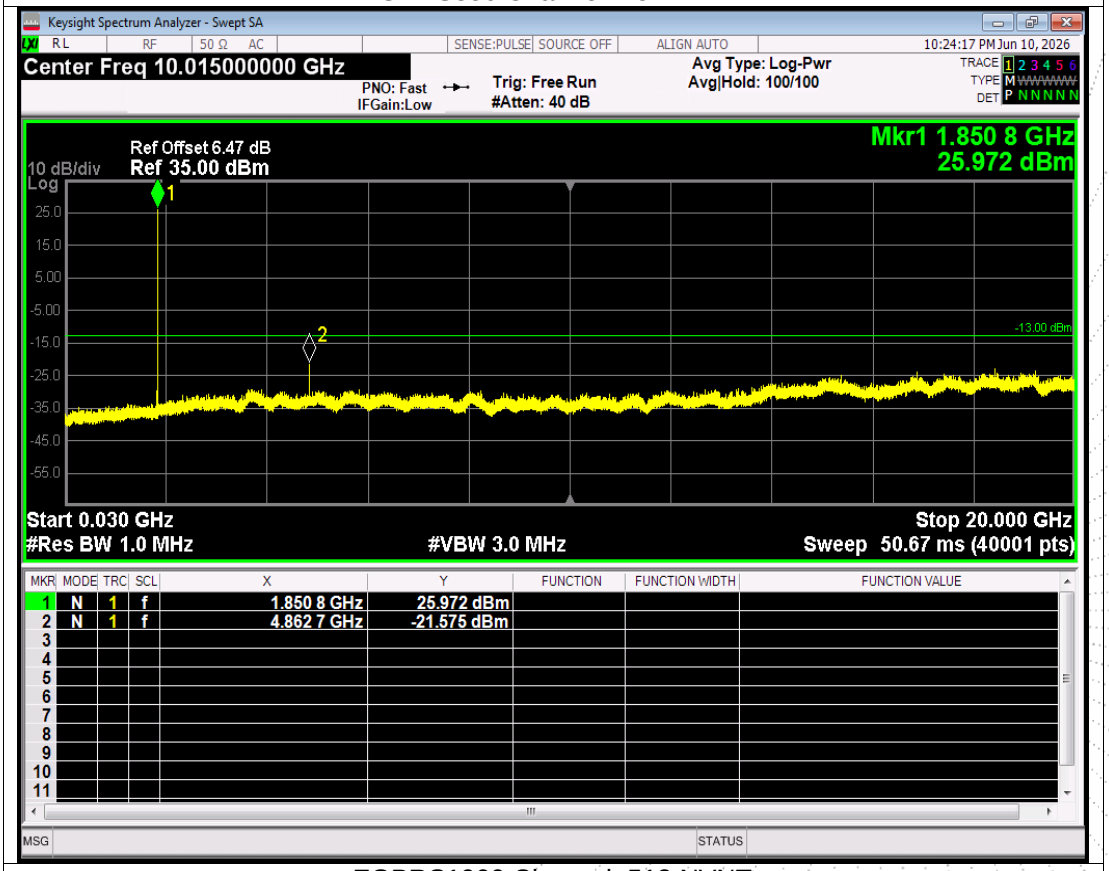
EGPRS850 Channel=128 NVNT



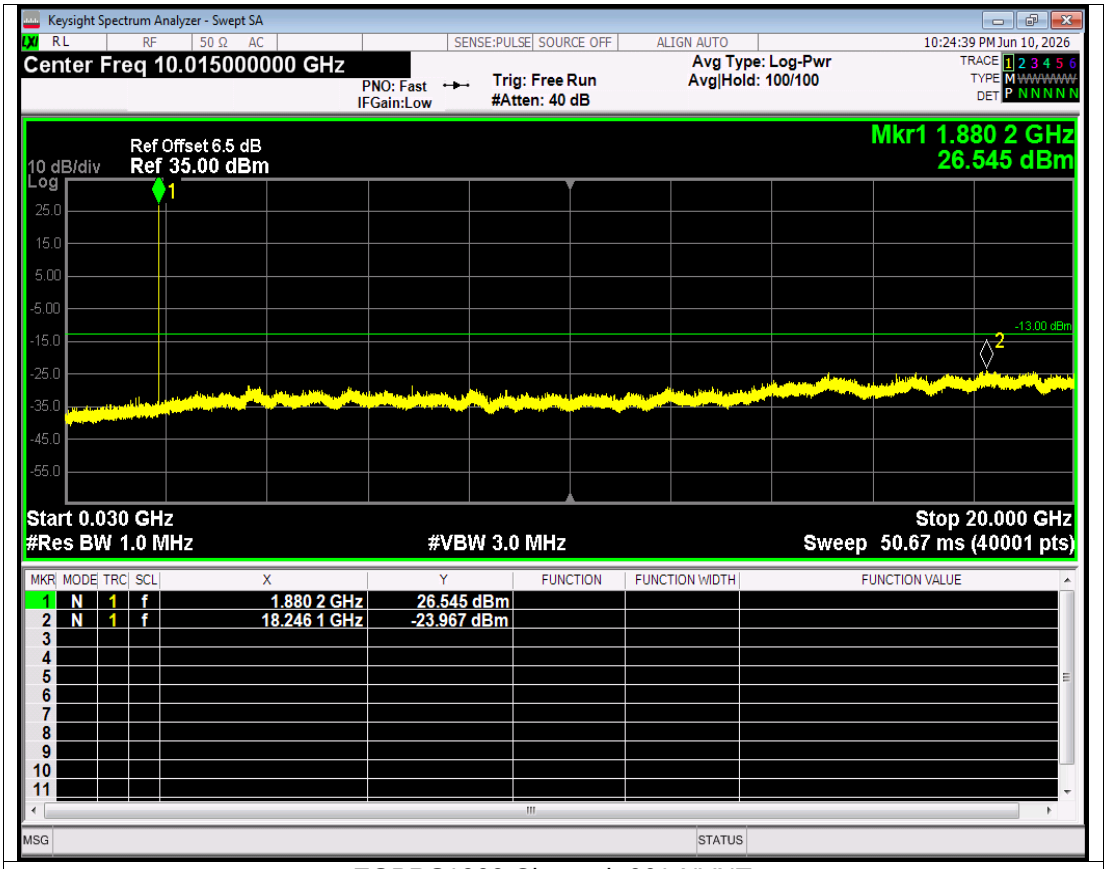
EGPRS850 Channel=190 NVNT



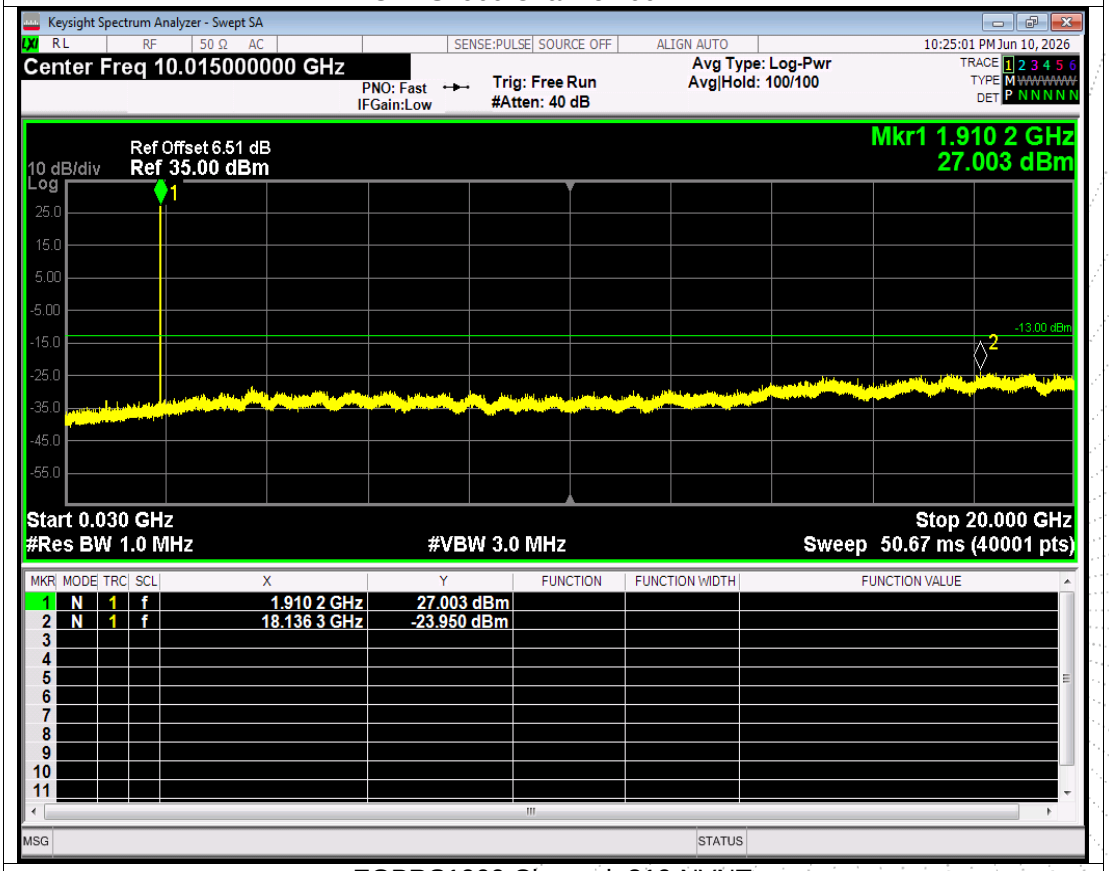
EGPRS850 Channel=251 NVNT



EGPRS1900 Channel=512 NVNT

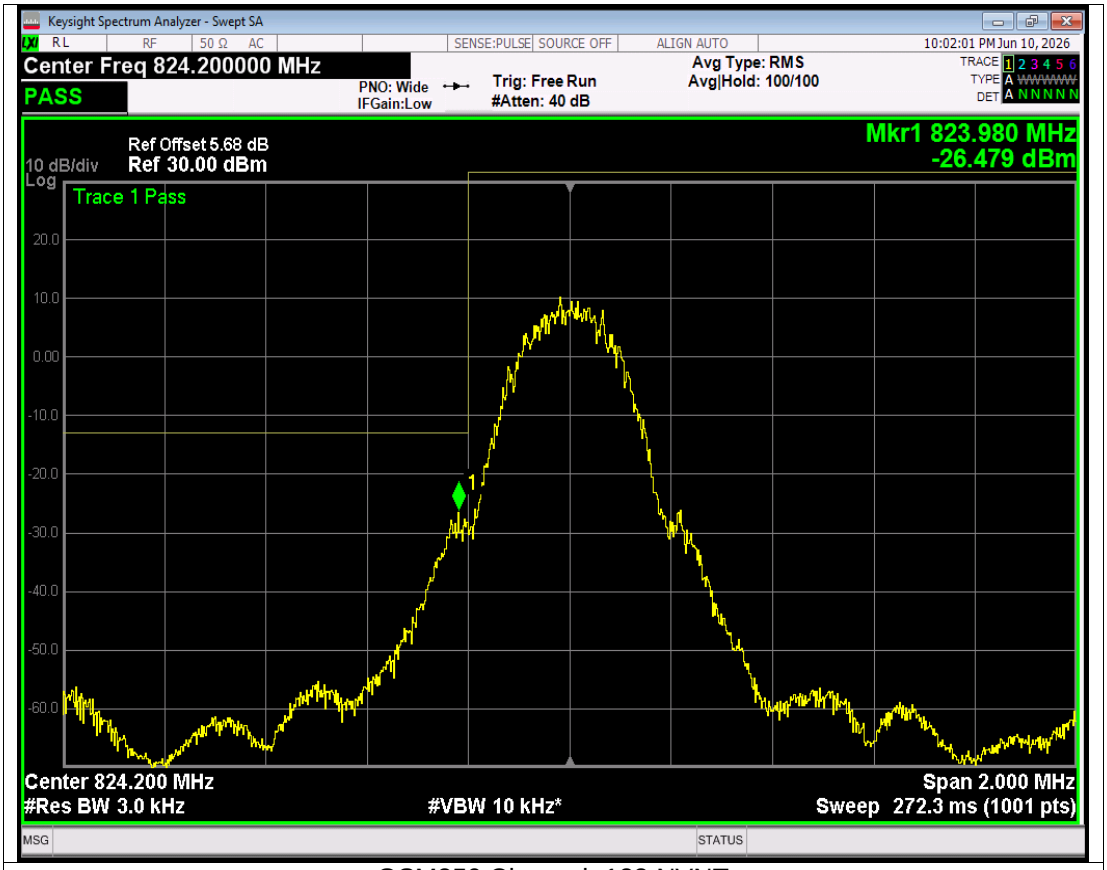


EGPRS1900 Channel=661 NVNT



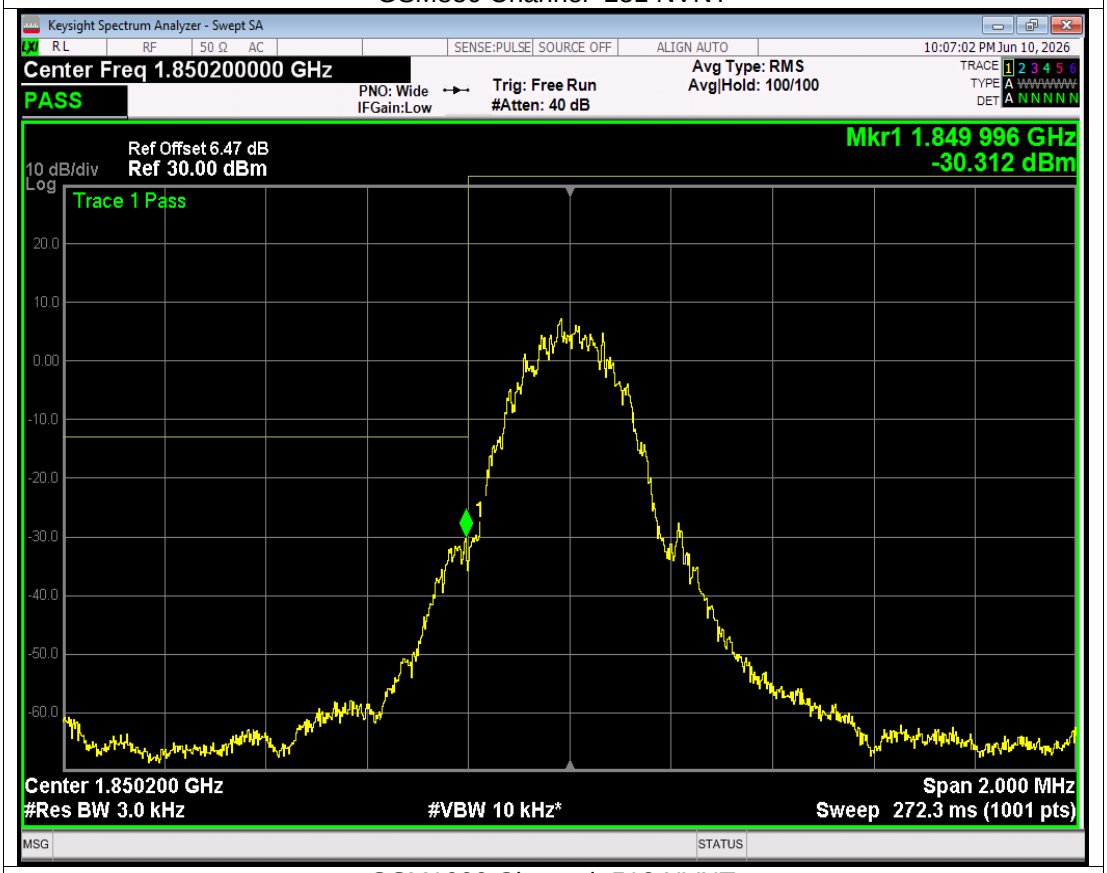
EGPRS1900 Channel=810 NVNT

Band edge

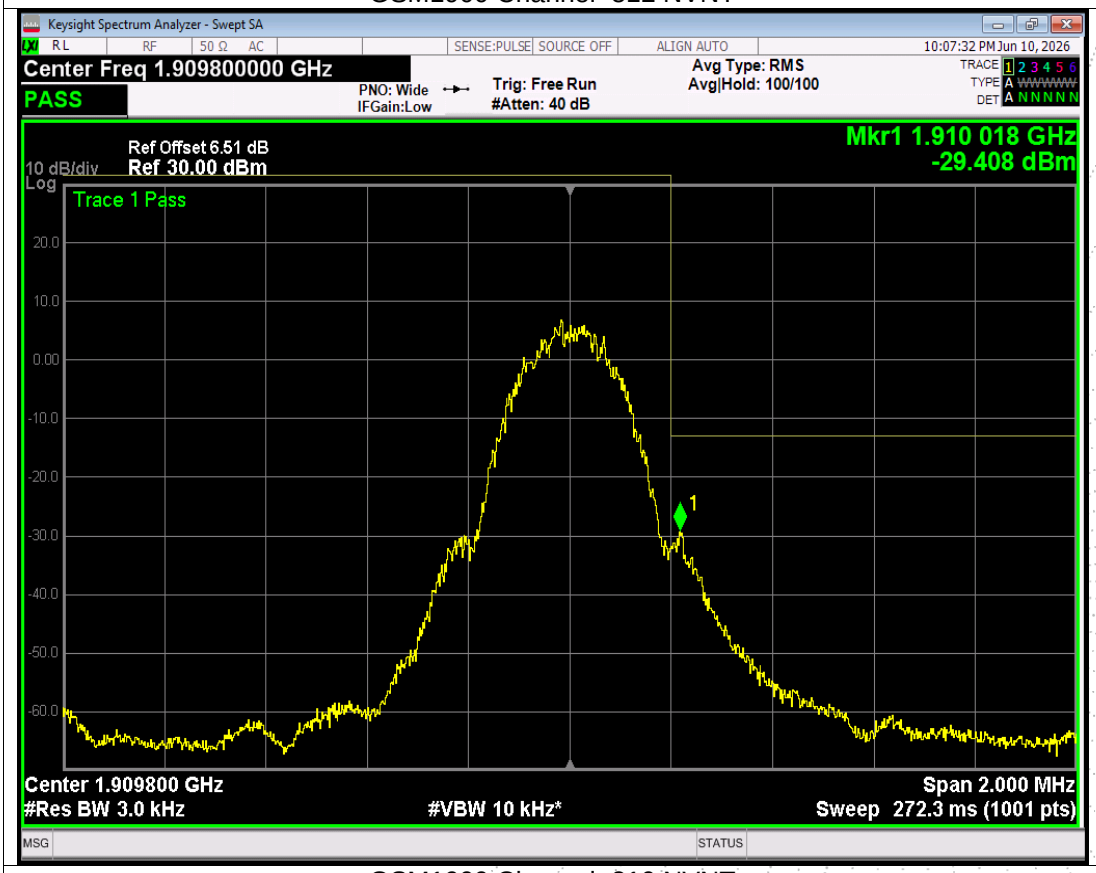


GSM850 Channel=128 NVNT

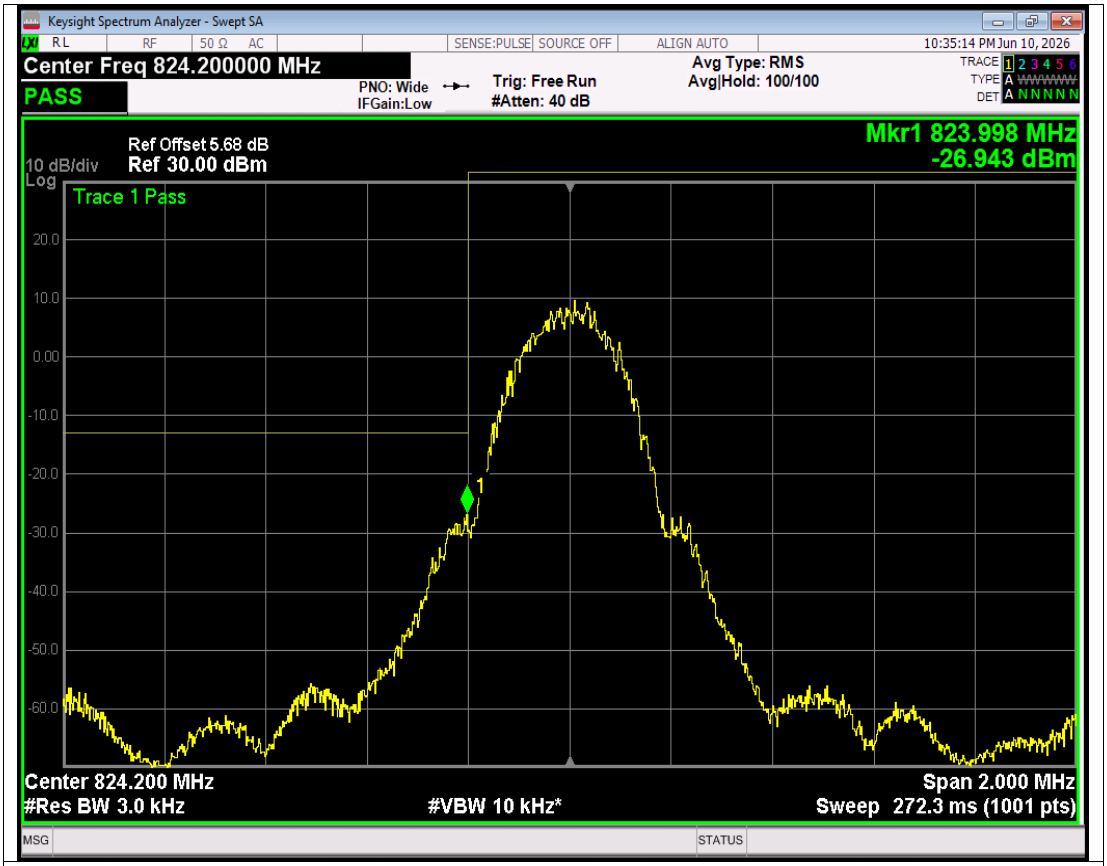
GSM850 Channel=251 NVNT



GSM1900 Channel=512 NVNT

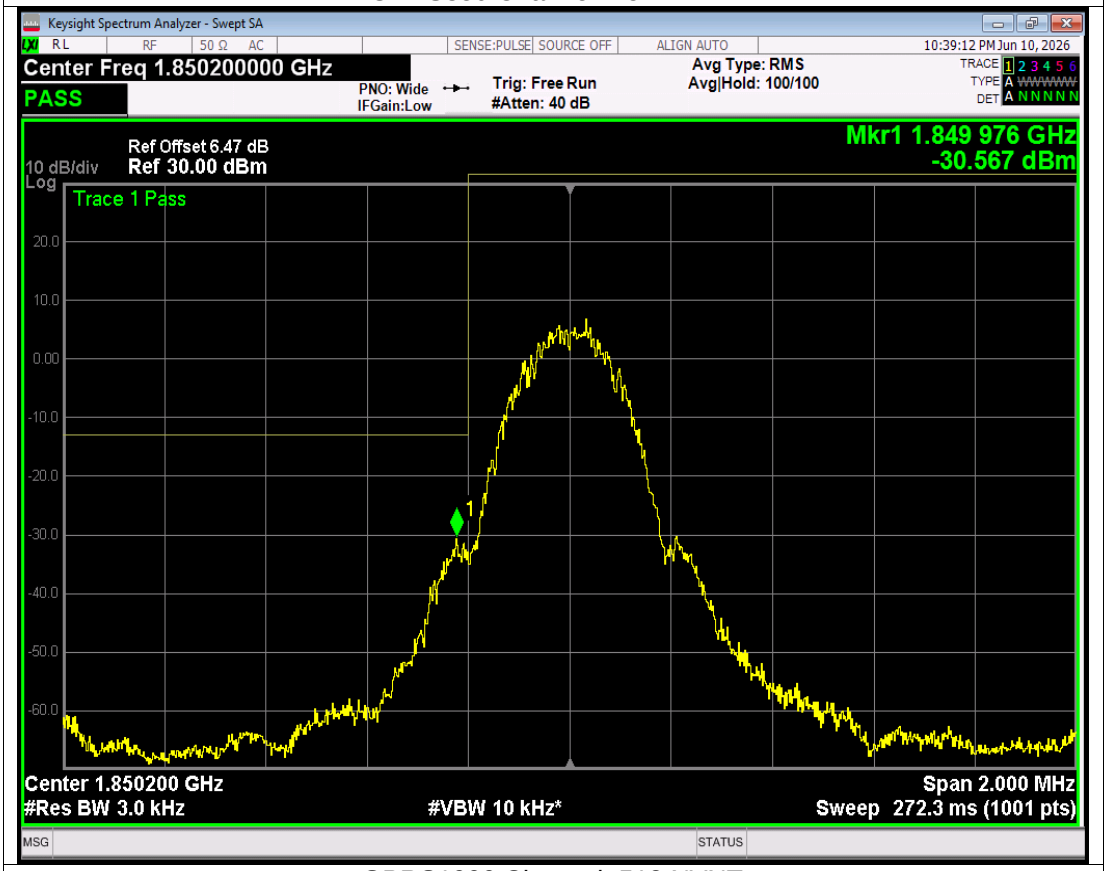


GSM1900 Channel=810 NVNT

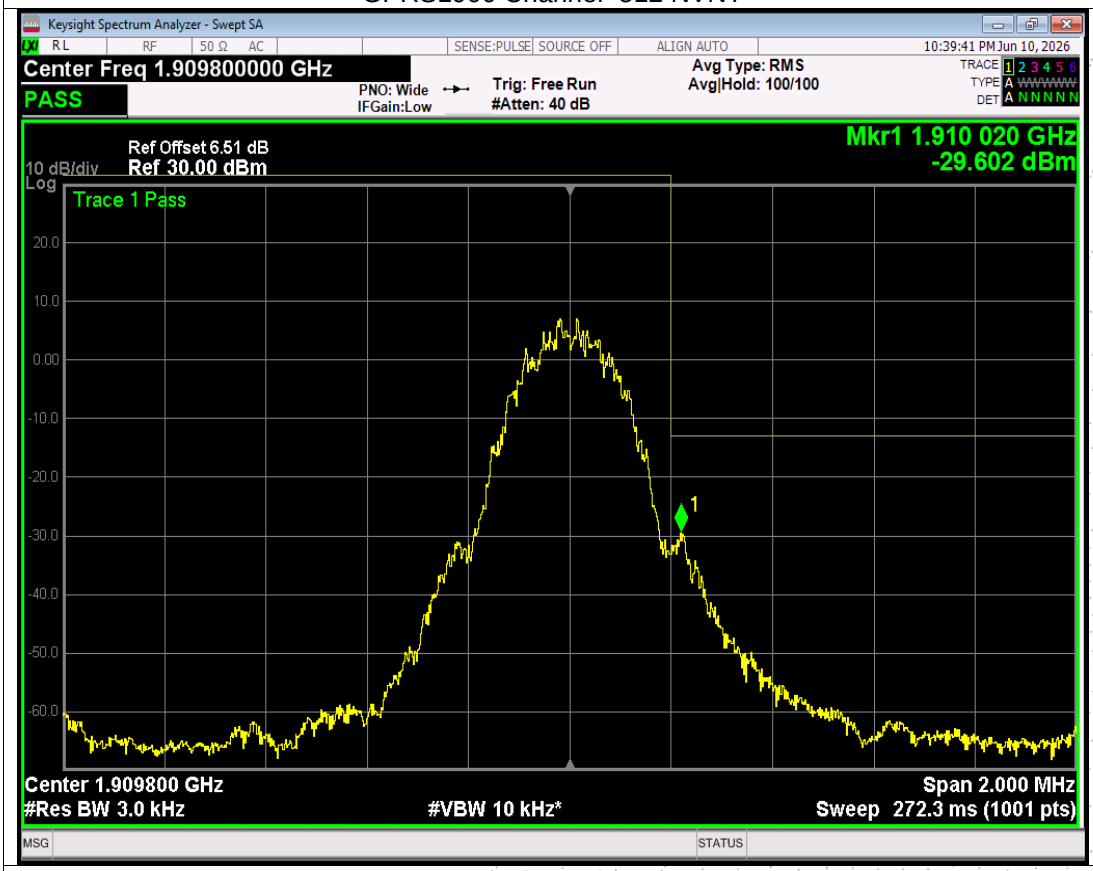


GPRS850 Channel=128 NVNT

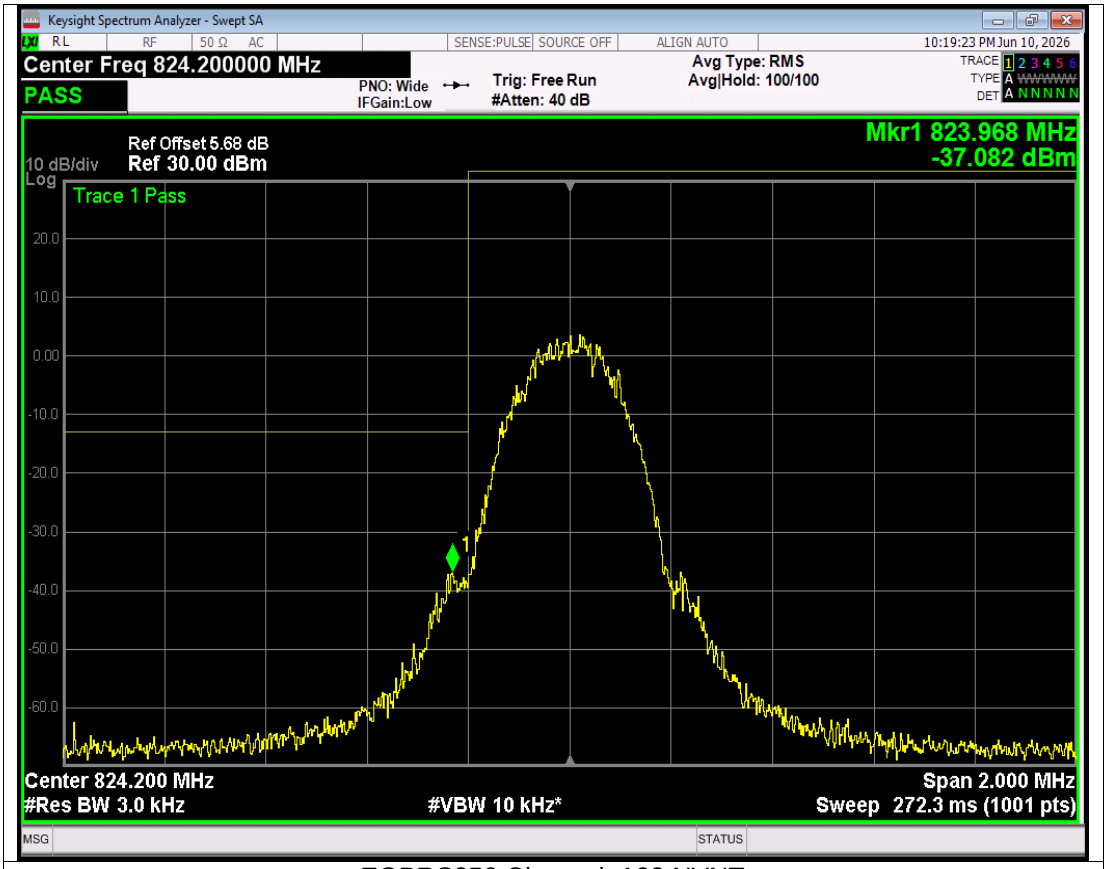
GPRS850 Channel=251 NVNT



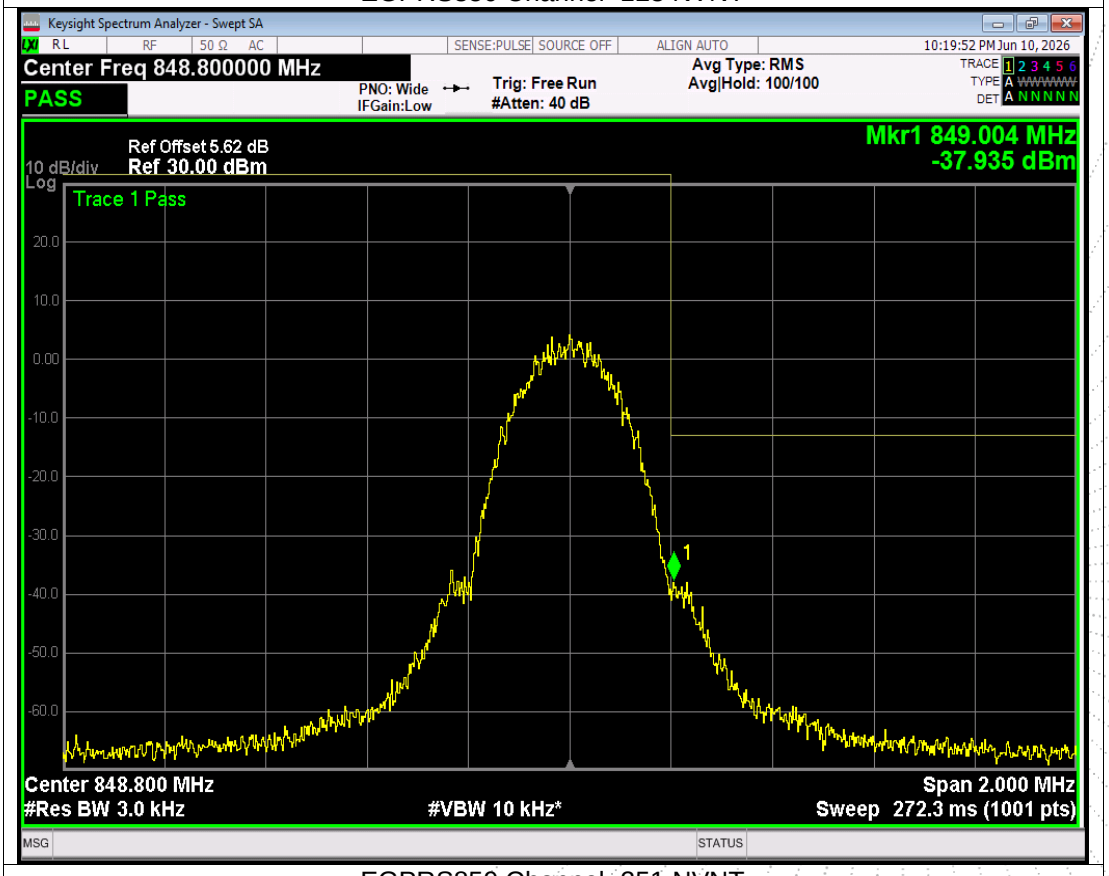
GPRS1900 Channel=512 NVNT



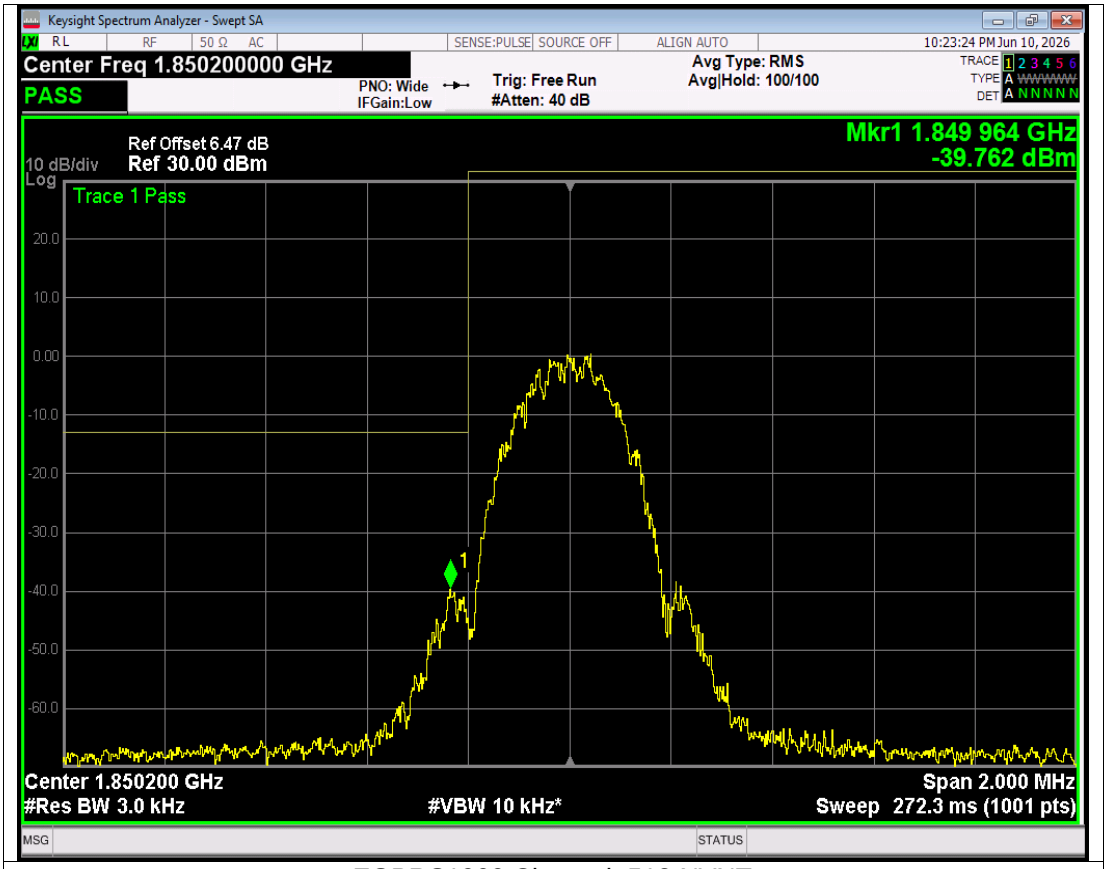
GPRS1900 Channel=810 NVNT



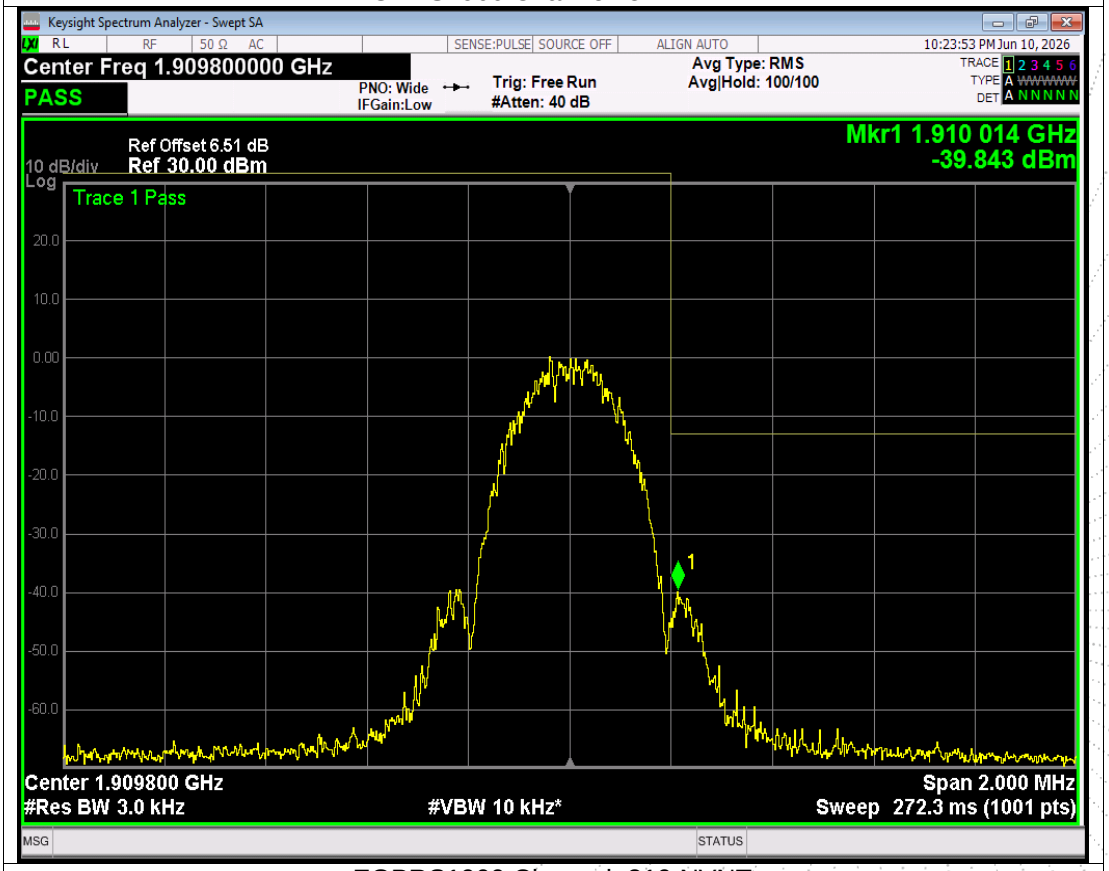
EGPRS850 Channel=128 NVNT



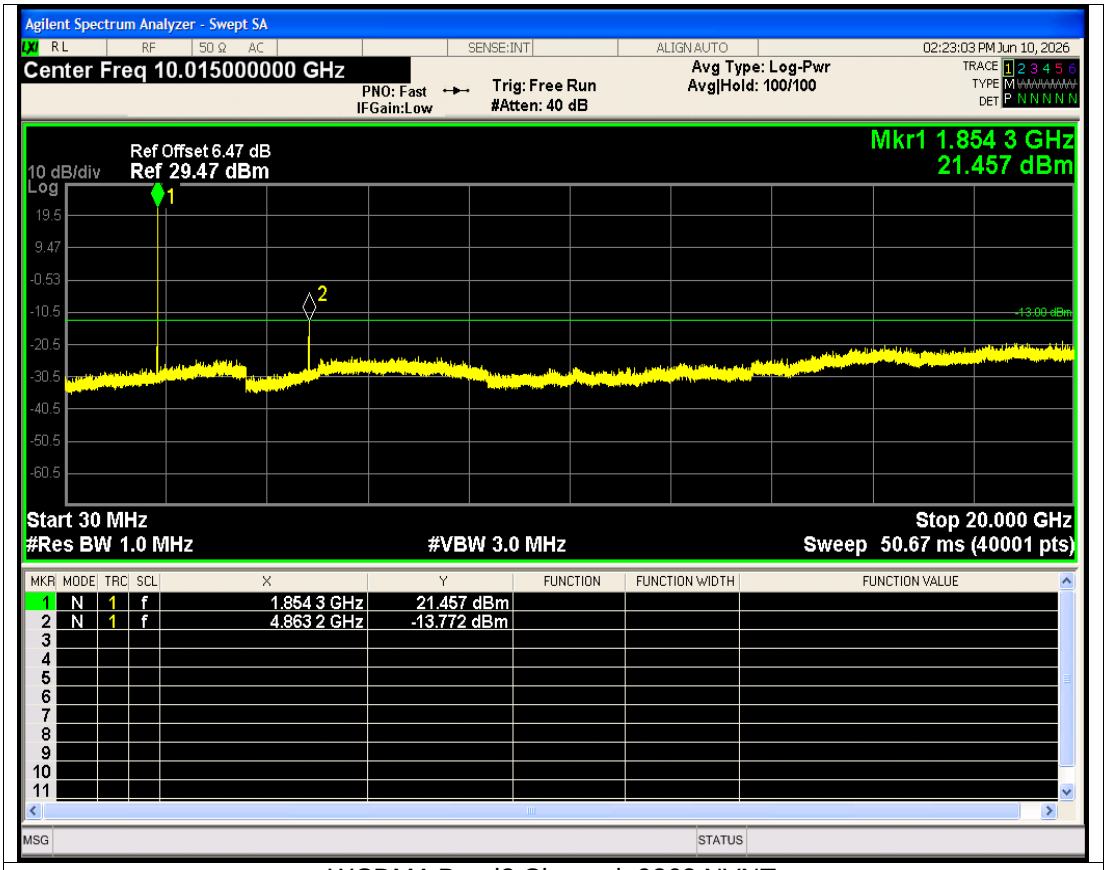
EGPRS850 Channel=251 NVNT



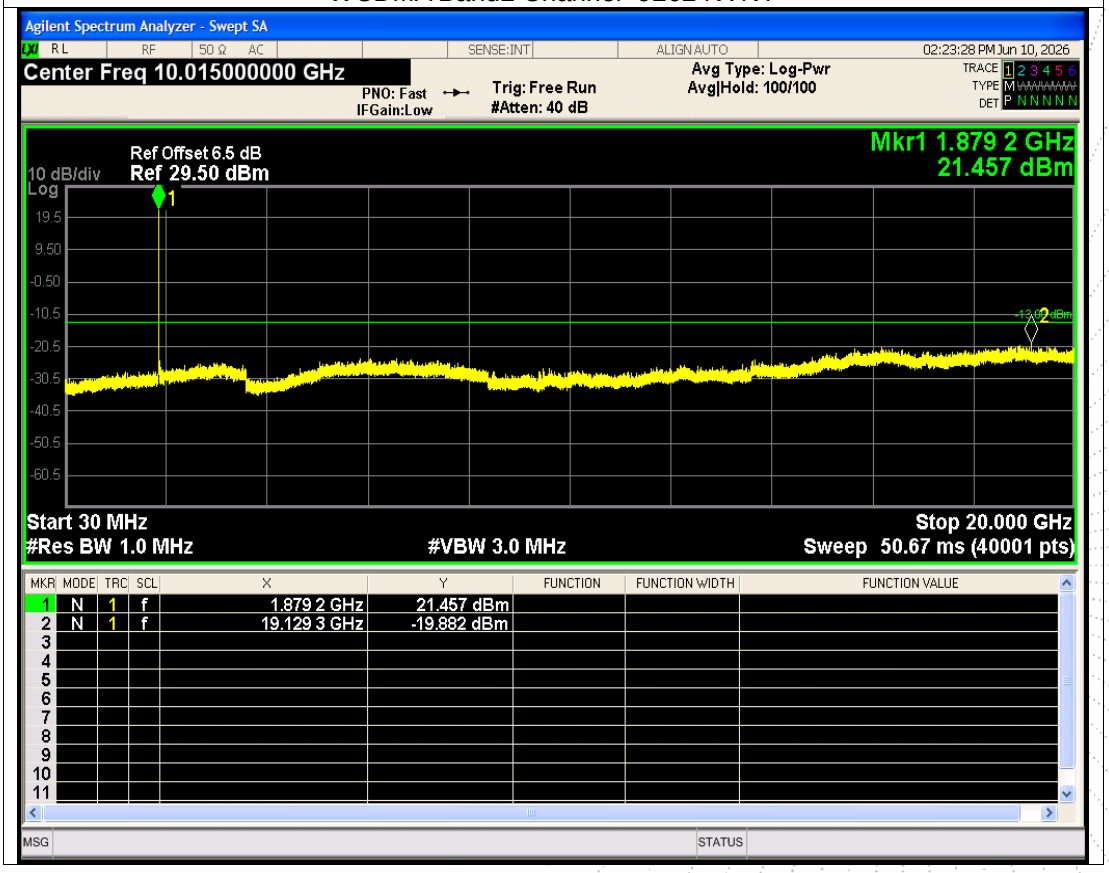
EGPRS1900 Channel=512 NVNT



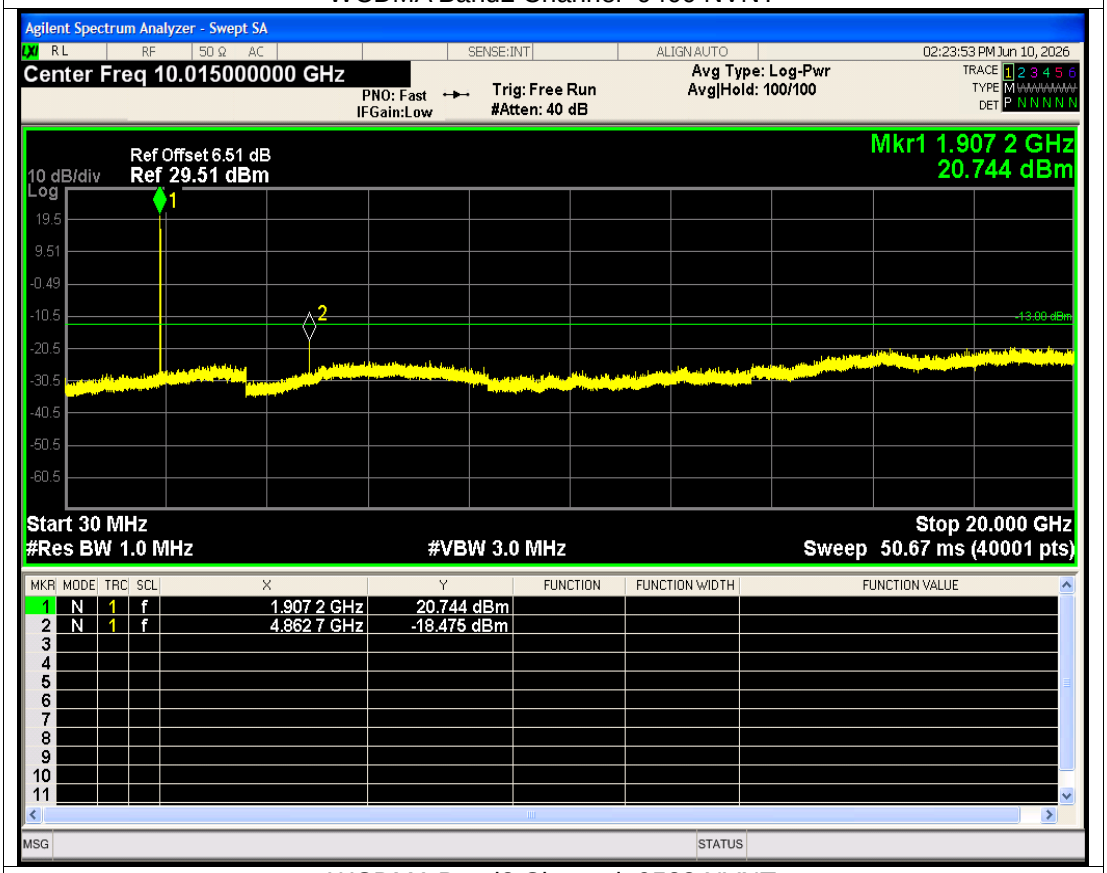
EGPRS1900 Channel=810 NVNT



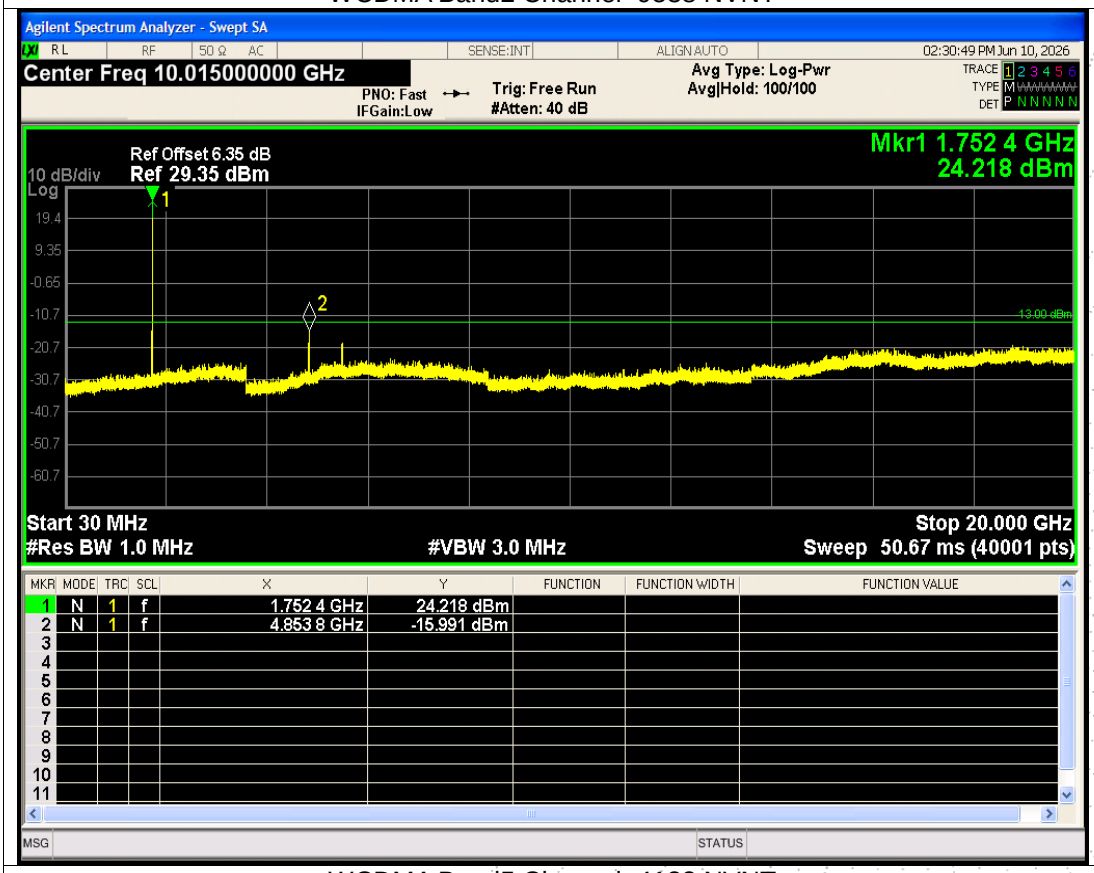
WCDMA Band2 Channel=9262 NVNT



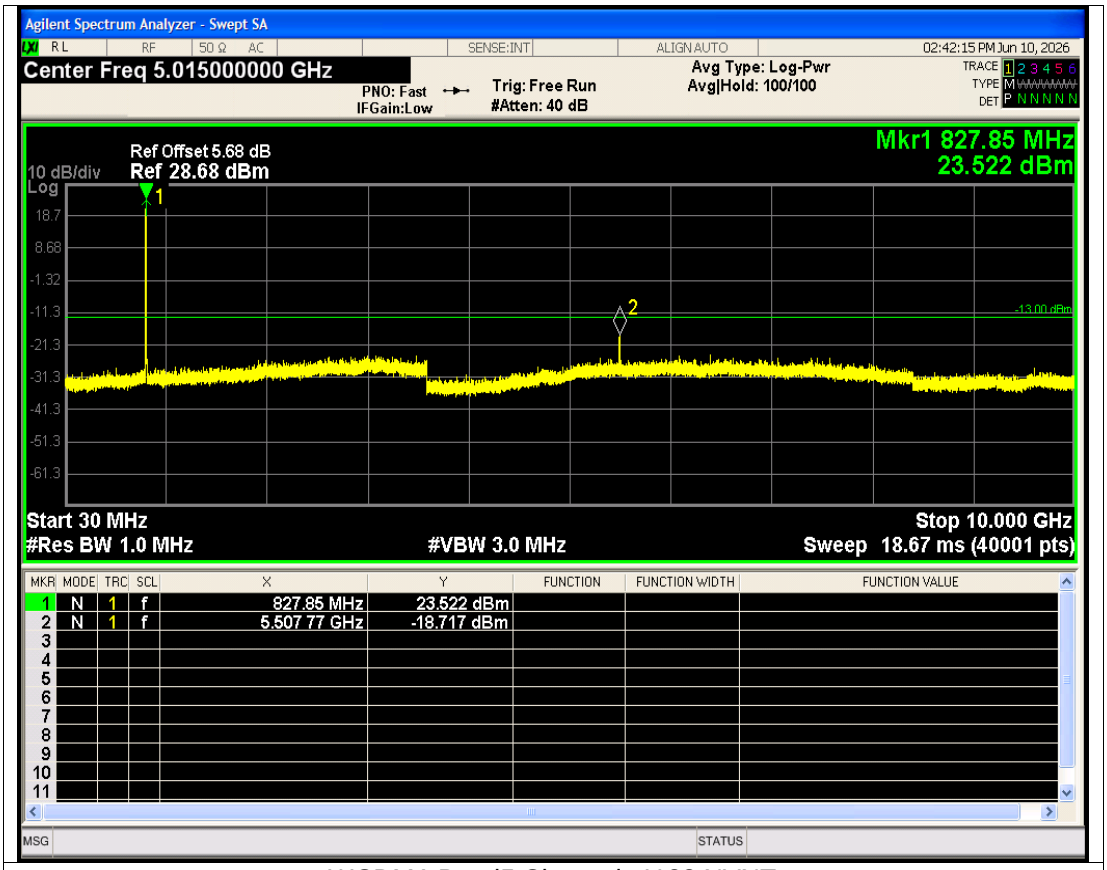
WCDMA Band2 Channel=9400 NVNT



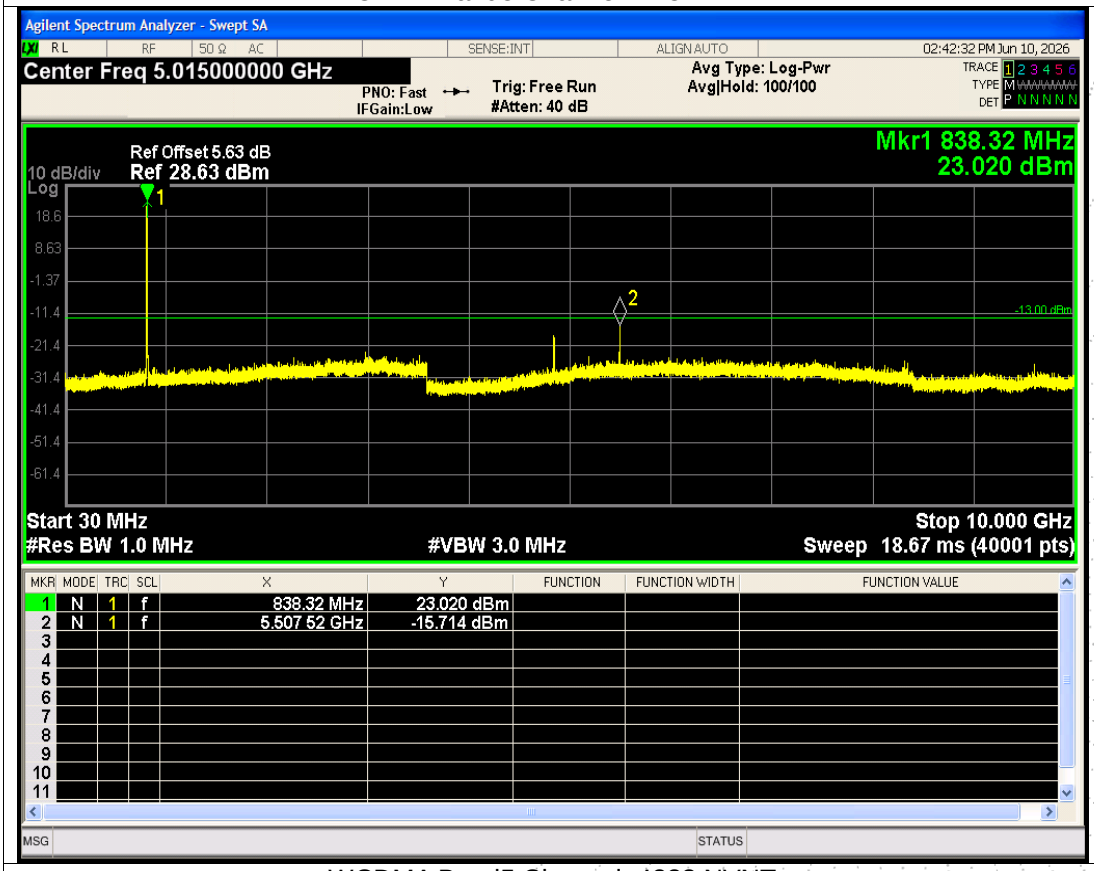
WCDMA Band2 Channel=9538 NVNT



WCDMA Band5 Channel=4132 NVNT

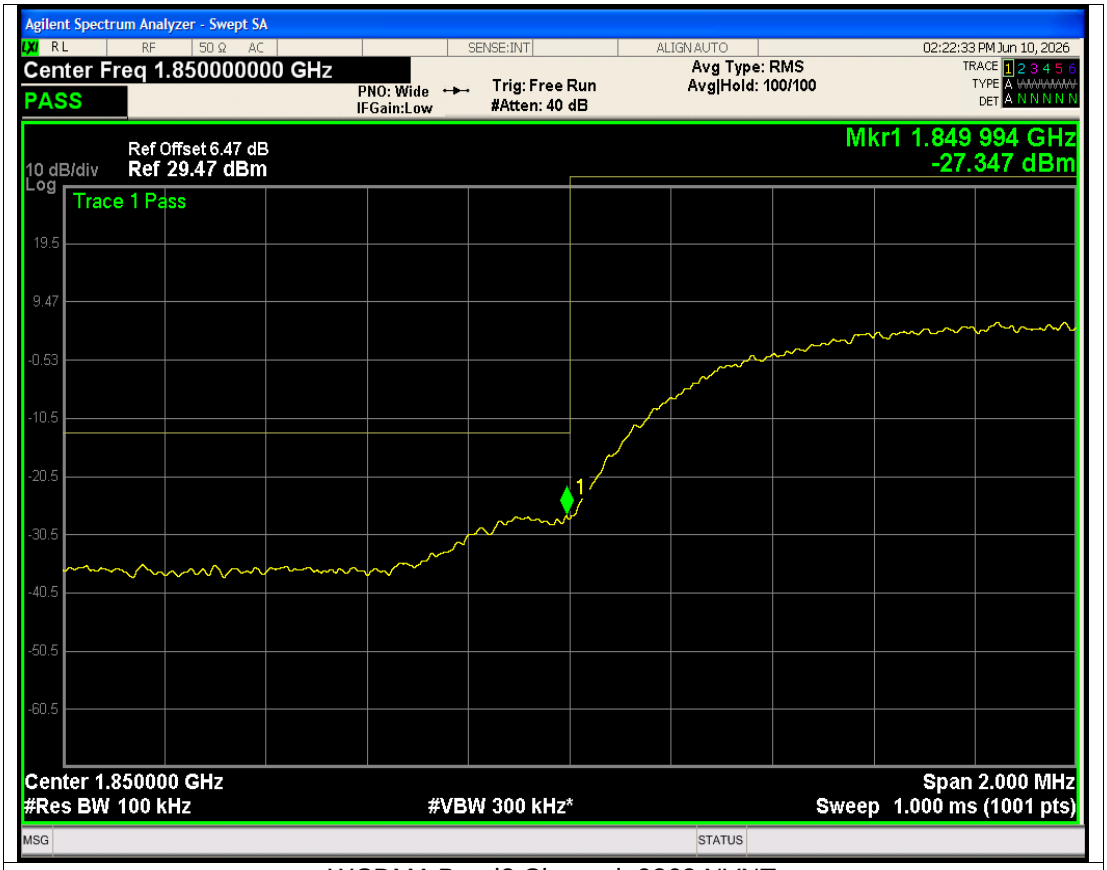


WCDMA Band5 Channel=4182 NVNT



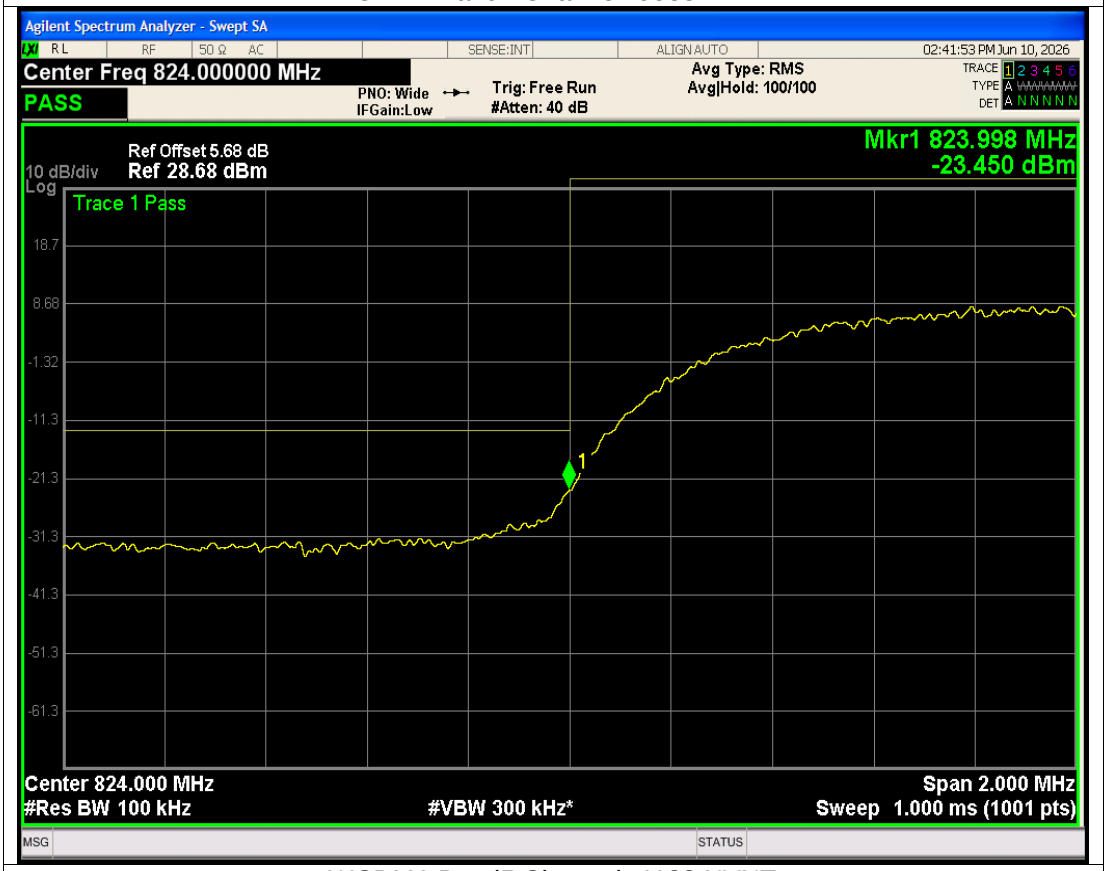
WCDMA Band5 Channel=4233 NVNT

Band edge

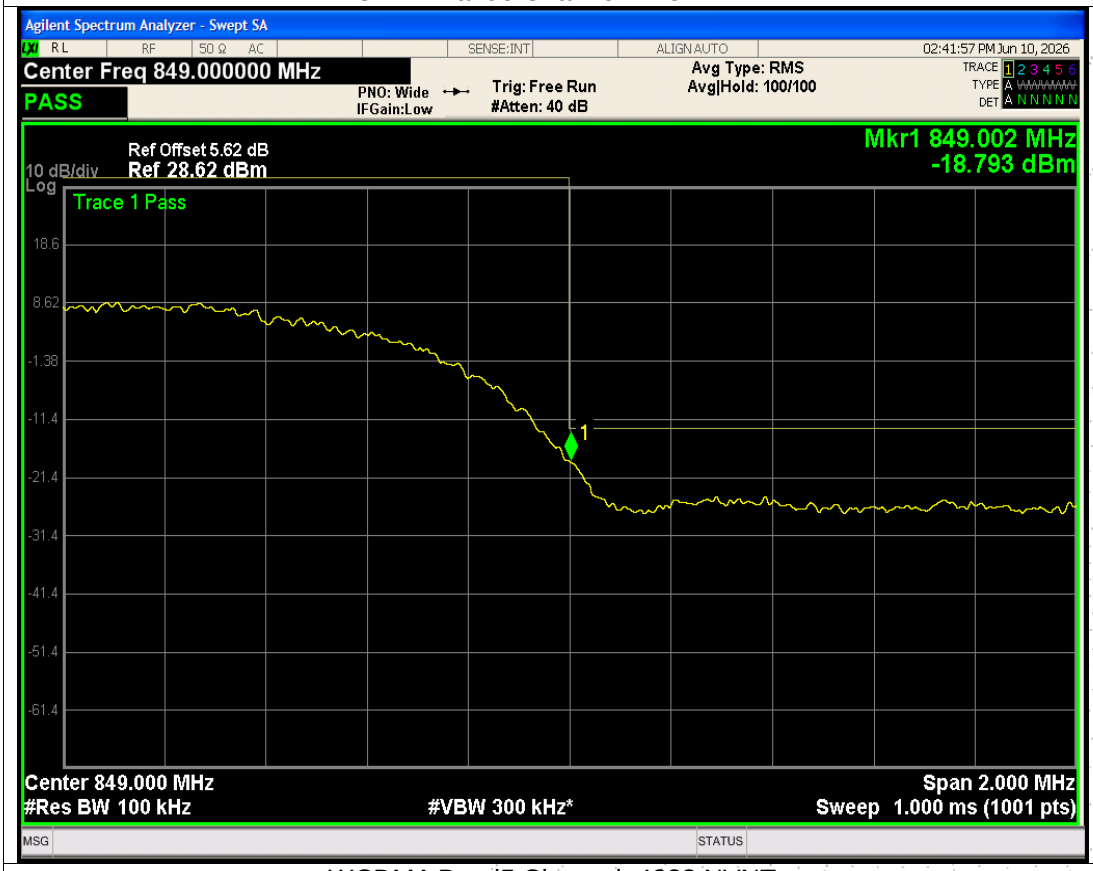


WCDMA Band2 Channel=9262 NVNT

WCDMA Band2 Channel=9538 NVNT



WCDMA Band5 Channel=4132 NVNT

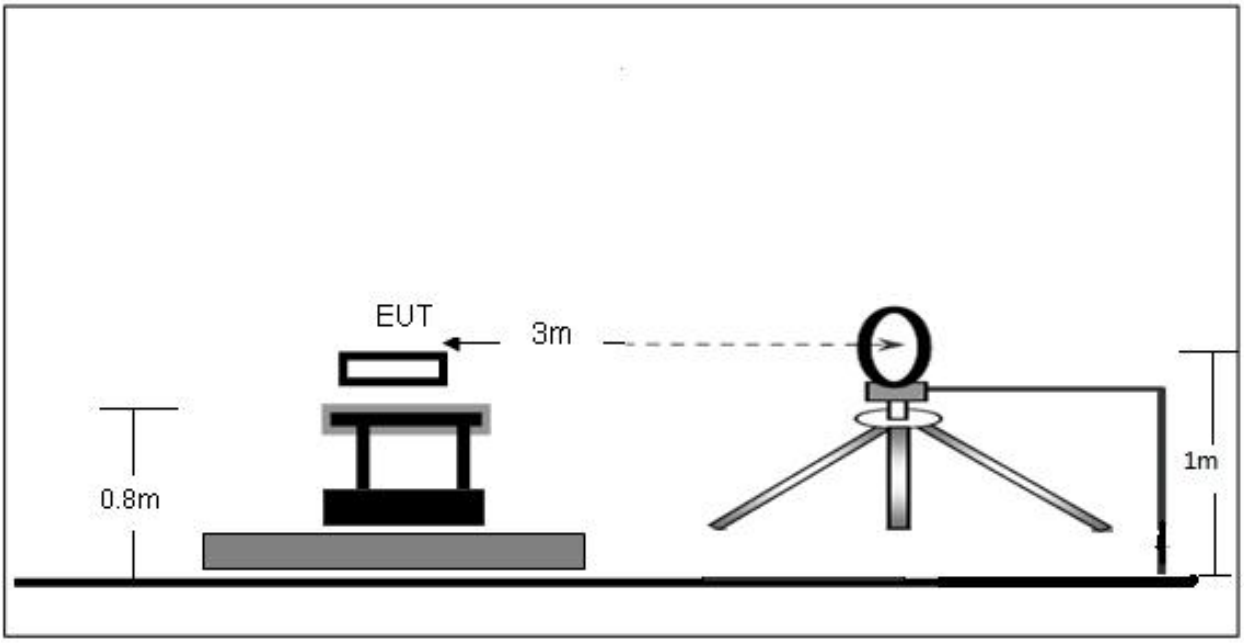


WCDMA Band5 Channel=4233 NVNT

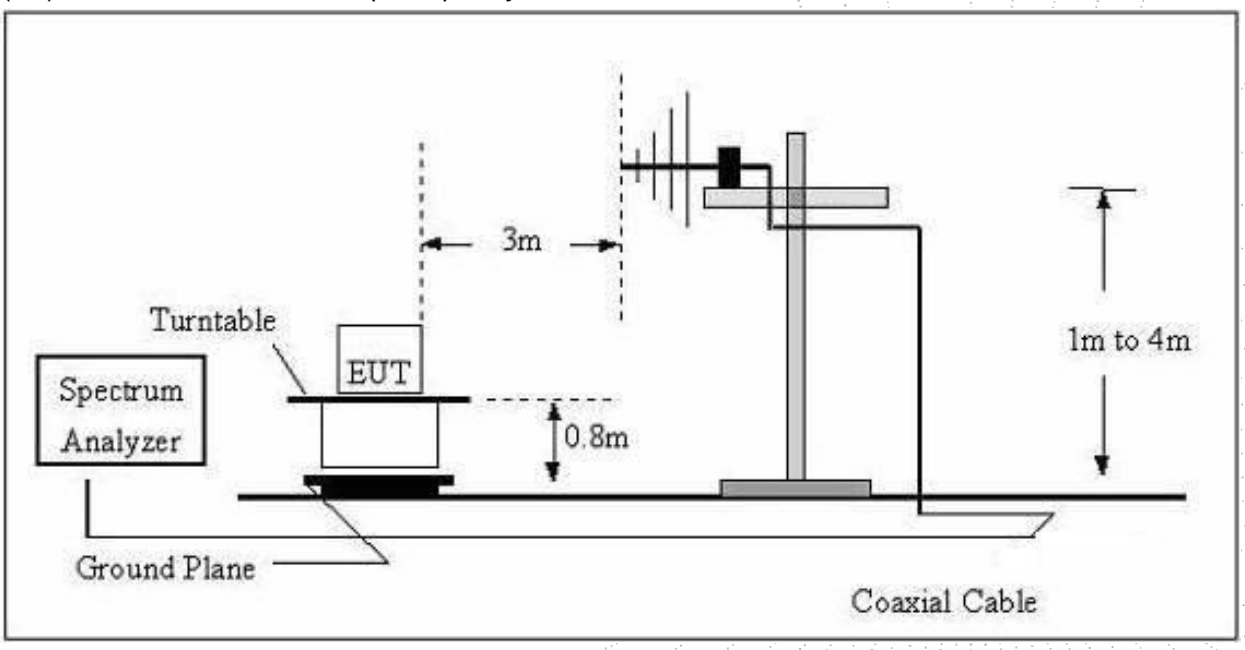
10. Spurious Radiated Emissions

10.1 Block Diagram Of Test Setup

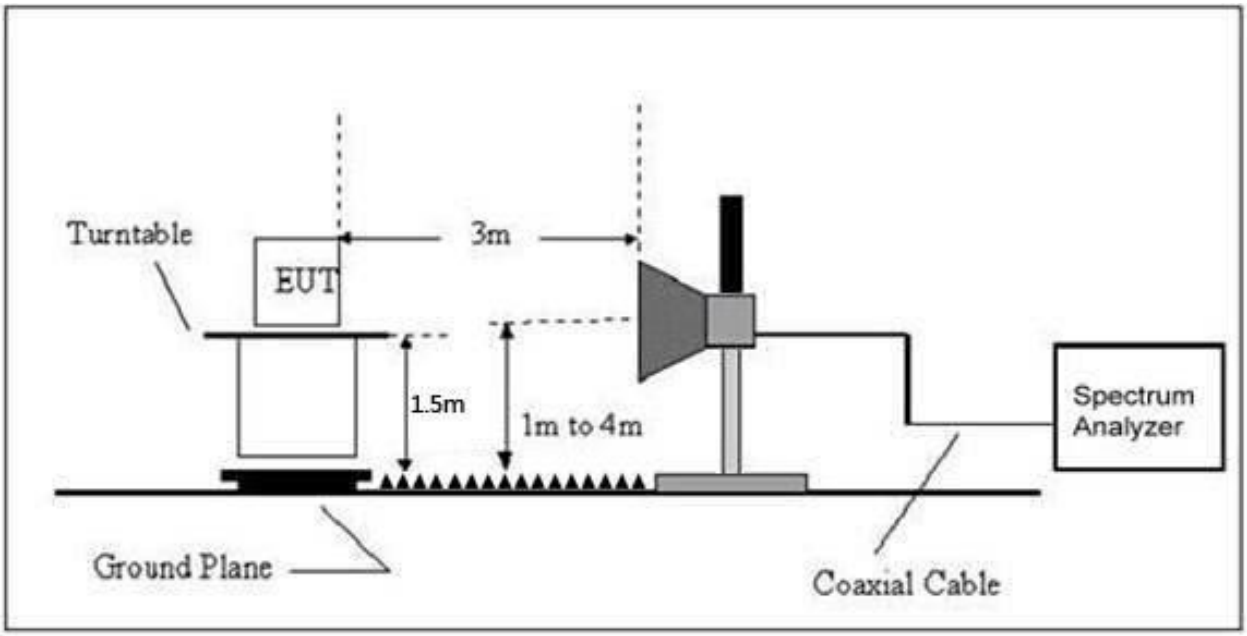
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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 log10 (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 Log10 (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)						
530.55	-18.31	2.05	-16.26	-13.00	-3.26	H
530.55	-17.36	2.68	-14.68	-13.00	-1.68	H
1648.40	-19.07	-7.16	-26.23	-13.00	-13.23	H
1648.40	-17.37	-7.52	-24.89	-13.00	-11.89	V
2472.60	-19.54	-4.04	-23.58	-13.00	-10.58	V
2472.60	-17.64	-4.13	-21.77	-13.00	-8.77	V
Middle Channel (836.6MHz)						
514.19	-18.12	-0.70	-18.82	-13.00	-5.82	H
514.19	-18.36	0.27	-18.09	-13.00	-5.09	H
1673.20	-18.21	-6.87	-25.08	-13.00	-12.08	H
1673.20	-17.35	-7.18	-24.53	-13.00	-11.53	V
2509.80	-19.91	-3.86	-23.77	-13.00	-10.77	V
2509.80	-17.61	-3.94	-21.55	-13.00	-8.55	V
High Channel (848.8MHz)						
612.39	-18.84	1.83	-17.01	-13.00	-4.01	H
612.39	-18.82	2.48	-16.34	-13.00	-3.34	H
1697.60	-17.63	-6.60	-24.23	-13.00	-11.23	H
1697.60	-19.94	-6.84	-26.78	-13.00	-13.78	V
2546.40	-17.04	-3.67	-20.71	-13.00	-7.71	V
2546.40	-19.07	-3.75	-22.82	-13.00	-9.82	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)						
621.26	-18.45	0.26	-18.19	-13.00	-5.19	H
621.26	-19.89	1.10	-18.79	-13.00	-5.79	H
3700.40	-19.26	0.55	-18.71	-13.00	-5.71	H
3700.40	-18.95	0.72	-18.23	-13.00	-5.23	V
5550.60	-22.66	4.39	-18.27	-13.00	-5.27	V
5550.60	-24.8	4.35	-20.45	-13.00	-7.45	V
Middle Channel (1880MHz)						
539.53	-17.45	-0.59	-18.04	-13.00	-5.04	H
539.53	-17.56	0.36	-17.20	-13.00	-4.20	H
3760.00	-18.66	0.73	-17.93	-13.00	-4.93	H
3760.00	-18.46	0.92	-17.54	-13.00	-4.54	V
5640.00	-22	4.57	-17.43	-13.00	-4.43	V
5640.00	-22.62	4.55	-18.07	-13.00	-5.07	V
High Channel (1909.8MHz)						
540.30	-17.73	1.87	-15.86	-13.00	-2.86	H
540.30	-19.34	2.52	-16.82	-13.00	-3.82	H
3819.60	-19.41	0.91	-18.50	-13.00	-5.50	H
3819.60	-19.54	1.12	-18.42	-13.00	-5.42	V
5729.40	-23.57	4.74	-18.83	-13.00	-5.83	V
5729.40	-24.88	4.74	-20.14	-13.00	-7.14	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)						
627.81	-17.54	1.94	-15.60	-13.00	-2.60	H
627.81	-18.67	2.58	-16.09	-13.00	-3.09	H
3704.80	-17.45	0.57	-16.88	-13.00	-3.88	H
3704.80	-19.4	0.73	-18.67	-13.00	-5.67	V
5557.20	-23.56	4.40	-19.16	-13.00	-6.16	V
5557.20	-23.49	4.37	-19.12	-13.00	-6.12	V
Middle Channel (1880MHz)						
595.39	-17.98	1.40	-16.58	-13.00	-3.58	H
595.39	-18.74	2.11	-16.63	-13.00	-3.63	H
3760.00	-17.5	0.73	-16.77	-13.00	-3.77	H
3760.00	-17.44	0.92	-16.52	-13.00	-3.52	V
5640.00	-23.63	4.57	-19.06	-13.00	-6.06	V
5640.00	-22.71	4.55	-18.16	-13.00	-5.16	V
High Channel (1907.6MHz)						
504.79	-19.19	1.12	-18.07	-13.00	-5.07	H
504.79	-18.14	1.86	-16.28	-13.00	-3.28	H
3815.20	-18.57	0.89	-17.68	-13.00	-4.68	H
3815.20	-17.47	1.11	-16.36	-13.00	-3.36	V
5722.80	-24.16	4.73	-19.43	-13.00	-6.43	V
5722.80	-23.58	4.73	-18.85	-13.00	-5.85	V

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

For Band WCDMA Band V Mode

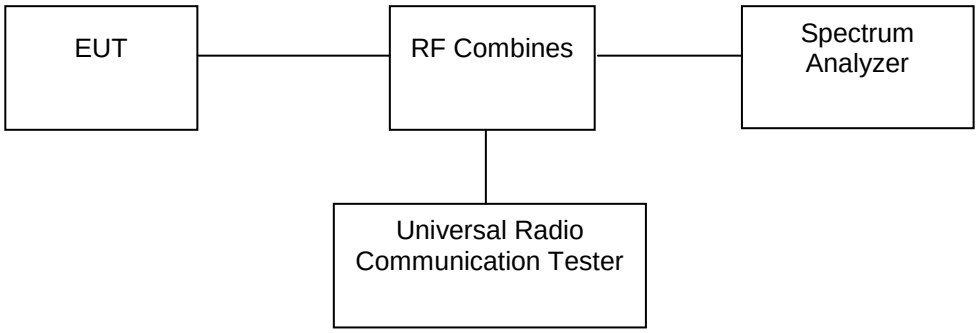
Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (826.4MHz)						
535.48	-17.3	0.41	-16.89	-13.00	-3.89	H
535.48	-19.43	1.24	-18.19	-13.00	-5.19	H
1652.80	-17.43	-7.11	-24.54	-13.00	-11.54	H
1652.80	-19.79	-7.46	-27.25	-13.00	-14.25	V
2479.20	-19.7	-4.01	-23.71	-13.00	-10.71	V
2479.20	-17.81	-4.10	-21.91	-13.00	-8.91	V
Middle Channel (836.4MHz)						
624.03	-18.74	0.90	-17.84	-13.00	-4.84	H
624.03	-18.12	1.66	-16.46	-13.00	-3.46	H
1672.80	-17.72	-6.88	-24.60	-13.00	-11.60	H
1672.80	-17.27	-7.18	-24.45	-13.00	-11.45	V
2509.20	-18.87	-3.86	-22.73	-13.00	-9.73	V
2509.20	-17.45	-3.94	-21.39	-13.00	-8.39	V
High Channel (846.6MHz)						
565.41	-19.69	1.38	-18.31	-13.00	-5.31	H
565.41	-19.04	2.09	-16.95	-13.00	-3.95	H
1693.20	-19.17	-6.65	-25.82	-13.00	-12.82	H
1693.20	-17.64	-6.90	-24.54	-13.00	-11.54	V
2539.80	-18.06	-3.70	-21.76	-13.00	-8.76	V
2539.80	-17.7	-3.78	-21.48	-13.00	-8.48	V

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

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, other than listedin 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 : ±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.

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°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in 10°C steps up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

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±5° 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.

11.4 Test Result

Operation Mode	Channel Number	Test Condition		Channel Frequency (MHz)	Freq.Dev. (Hz)	Deviation (ppm)	Limit (ppm)
		Voltage (V)	Temp (℃)				
GSM850	190	3.7	-20	836.60	66	0.079	2.5
			-10	836.60	65	0.078	2.5
			0	836.60	62	0.074	2.5
			10	836.60	68	0.081	2.5
			20	836.60	72	0.087	2.5
			30	836.60	62	0.074	2.5
			40	836.60	80	0.096	2.5
			50	836.60	49	0.058	2.5
		VL:3.3	20	836.60	73	0.088	2.5
		VH:4.07	20	836.60	60	0.072	2.5
VERDICT				PASS			

Operation Mode	Channel Number	Test Condition		Channel Frequency (MHz)	Freq.Dev. (Hz)	Deviation (ppm)	Limit (ppm)
		Voltage (V)	Temp (℃)				
GSM1900	512	3.7	-20	1850.20	80	0.096	2.5
			-10	1850.20	74	0.088	2.5
			0	1850.20	53	0.064	2.5
			10	1850.20	63	0.075	2.5
			20	1850.20	51	0.061	2.5
			30	1850.20	79	0.094	2.5
			40	1850.20	47	0.056	2.5
			50	1850.20	71	0.085	2.5
		VL:3.3	20	1850.20	59	0.070	2.5
		VH:4.07	20	1850.20	73	0.087	2.5
VERDICT				PASS			

All modes have been tested, and the worst result recorded was report as below

Band V

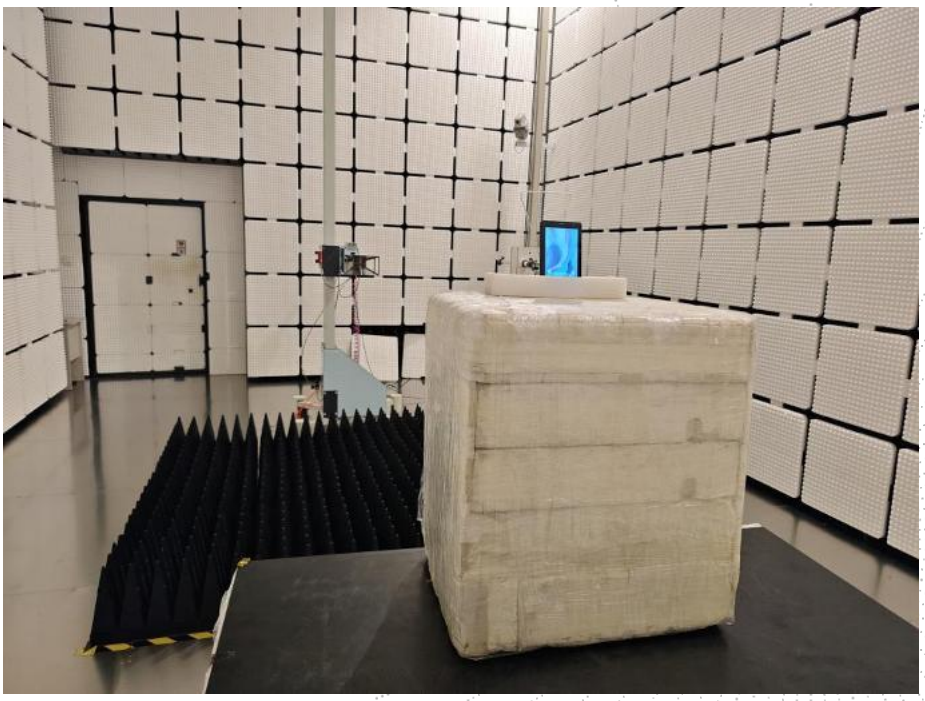
Operation Mode	Channel Number	Test Condition		Channel Frequency (MHz)	Freq.Dev. (Hz)	Deviation (ppm)	Limit (ppm)
		Voltage (V)	Temp (℃)				
WCDMA850	4132	3.7	-20	836.40	70	0.083	2.5
			-10	836.40	66	0.079	2.5
			0	836.40	43	0.052	2.5
			10	836.40	47	0.056	2.5
			20	836.40	47	0.056	2.5
			30	836.40	78	0.094	2.5
			40	836.40	42	0.050	2.5
			50	836.40	77	0.093	2.5
		VL:3.3	20	836.40	56	0.067	2.5
		VH:4.07	20	836.40	48	0.057	2.5
VERDICT				PASS			

Band II

Operation Mode	Channel Number	Test Condition		Channel Frequency (MHz)	Freq.Dev. (Hz)	Deviation (ppm)	Limit (ppm)
		Voltage (V)	Temp (℃)				
WCDMA1900	9262	3.7	-20	1852.40	58	0.069	2.5
			-10	1852.40	71	0.084	2.5
			0	1852.40	56	0.067	2.5
			10	1852.40	76	0.091	2.5
			20	1852.40	46	0.055	2.5
			30	1852.40	41	0.049	2.5
			40	1852.40	68	0.082	2.5
			50	1852.40	62	0.074	2.5
		VL:3.3	20	1852.40	71	0.085	2.5
		VH:4.07	20	1852.40	78	0.093	2.5
VERDICT				PASS			

12. EUT Test Setup Photographs

Radiated Measurement Photos



RF Conducted Test

STATEMENT

1. The equipment lists are traceable to the International System of Units (SI)

2. The test report can not be partially copied unless prior written approval is issued from our lab.

3. The test report is invalid without the "special seal for inspection and testing".

4. The test report is invalid without the signature of the approver.

5. The test process and test result is only related to the Unit Under Test.

6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.

7. The quality system of our laboratory is in accordance with ISO/IEC 17025:2017.

8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

Address:
Room 101M, Unit 1, Building1, Pengyuan, No.18, Lilang Road, Shanglilang, Nanwan Subdistrict, Longgang District, Shenzhen, Guangdong, China

TEL: 400-788-9558

P.C.: 518103

FAX: 0755-33229357

Website: http://www.chnbctc.com

Consultation E-mail: bctc@bctc-lab.com.cn

Complaint/Advice E-mail: advice@bctc-lab.com.cn

※※※※※ END ※※※※※