TEST REPORT

Report No.:	BCTC2203731178E
Applicant:	SEEWORLD Technology Co., ltd
Product Name:	GPS Tracker
Model/Type reference:	R11
Tested Date:	2022-03-28 to 2022-04-02
Issued Date:	2022-04-02

Shenzhen BCTC Testing Co., Ltd.

FCC ID:2AWTV-R11

Product Name:	GPS Tracker
Trademark:	N/A
Model/Type reference:	R11 S102A,S22,S106,S06A,S5L,S15,S15L,S13,S116L,S116MINI,S709, R12,R12L,R31,R31L,R56,R56L,W15,W15L
Prepared For:	SEEWORLD Technology Co., ltd
Address:	4th Floor, No.121, Kecheng Building, Science Road, Luogang District, Guangzhou, Guangdong Province, China. 510700
Manufacturer:	SEEWORLD Technology Co., ltd
Address:	4th Floor, No.121, Kecheng Building, Science Road, Luogang District, Guangzhou, Guangdong Province, China. 510700
Prepared By:	Shenzhen BCTC Testing Co., Ltd.
Address:	1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date:	2022-03-28
Sample tested Date:	2022-03-28 to 2022-04-02
Issue Date:	2022-04-02
Report No.:	BCTC2203731178E
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 v02v02
Test Results:	PASS
Remark:	This is GSM radio 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
BCTC2203731178E	2022-04-02	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 (d),	PASS
3	Peak-to-average Ratio(PAR) of Transmitter	§24.232(d),§22.913, §27.50(d),	PASS
4	Emission Bandwidth	§22.917 (b), §24.238(b), §27.53(g)	PASS
5	Spurious Emissions at Antenna Terminal	§22.917 (a), §24.238 (a), §27.53(g),§27.53(h)	PASS
6	Spurious Radiation Emissions	§22.917 (a), §24.238 (a), §27.53(g),§27.53(h)	PASS
7	Out of Band Emissions	§22.917 (a), §24.238 (a), §27.53(g),§27.53(h)	PASS
8	Frequency Stability	§22.355, §24.235, §27.54	PASS

3. Measurement Uncertainty

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

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

4. Product Information And Test Setup

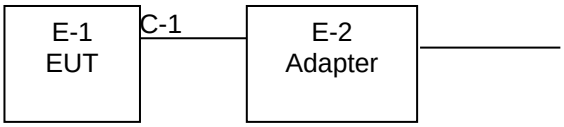
4.1 Product Information

Model/Type reference:	R11 S102A,S22,S106,S06A,S5L,S15,S15L,S13,S116L,S116MINI,S709, R12,R12L,R31,R31L,R56,R56L,W15,W15L
Model differences:	All the model are the same circuit and RF module, except model names.
Hardware Version:	N/A
Software Version:	N/A
Operation Frequency:	GPRS 850: TX: 824~849MHz; RX: 869~894MHz; GPRS 1900: TX:1850~1910MHz; RX:1930~1990MHz.
GPRS Class:	Class 12
MaxRF Output Power:	GPRS 850: 31.91dBm, GPRS 1900: 28.46dBm
Type of Modulation:	GPRS with GMSK Modulation
Type of Emission:	GPRS 850: 248KGXW GPRS 1900: 251KGXW
Antenna installation:	Internal antenna
Antenna Gain:	GPRS 850: 1 dBi GPRS 1900: 1 dBi
Connecting I/O Port(s)	Please refer to the User's Manual
Ratings:	DC 12V

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	R11	N/A	R11	Ref. the Section 4.1	EUT
E-2	N/A	N/A	N/A	N/A	Auxiliary

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

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

4.5 Test Mode

Testing Configure			
Support Band	Support Standard	Channel Frequency	Channel Number
GSM 850	GPRS	824.2 MHz	128
		836.6 MHz	190
		848.8 MHz	251
PCS 1900	GPRS	1850.2 MHz	512
		1880.0 MHz	661
		1909.8 MHz	810

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, Tangwei, 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
IC Registered No.: 23583

5.2 Test Instrument Used

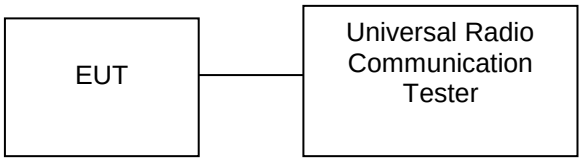
RF Conducted Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Power Metter	Keysight	E4419	\	May 28, 2021	May 27, 2022
Power Sensor (AV)	Keysight	E9300A	\	May 28, 2021	May 27, 2022
Signal Analyzer 20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 28, 2021	May 27, 2022
Spectrum Analyzer 9kHz-40GHz	R&S	FSP 40	\	May 28, 2021	May 27, 2022

Radiated Emissions Test (966 Chamber)					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
966 chamber	ChengYu	966 Room	966	Jun. 06. 2020	Jun. 05, 2023
Receiver	R&S	ESR3	102075	May 28, 2021	May 27, 2022
Receiver	R&S	ESRP	101154	May 28, 2021	May 27, 2022
Amplifier	SKET	LAPA_01G18G-45dB	\	May 28, 2021	May 27, 2022
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 28, 2021	May 27, 2022
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	Jun. 01, 2021	May 31, 2022
Horn Antenna	Schwarzbeck	BBHA9120D	1541	Jun. 02, 2021	Jun. 01, 2022
Horn Antenn (18GHz-40GHz)	Schwarzbeck	BBHA9170	00822	Jun. 15, 2021	Jun. 14, 2022
Amplifier (18GHz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 28, 2021	May 27, 2022
Loop Antenna (9KHz-30MHz)	Schwarzbeck	FMZB1519B	00014	Jun. 02, 2021	Jun. 01, 2022
RF cables1 (9kHz-30MHz)	Huber+Suhnar	9kHz-30MHz	B1702988-0008	May 28, 2021	May 27, 2022
RF cables2 (30MHz-1GHz)	Huber+Suhnar	30MHz-1GHz	1486150	May 28, 2021	May 27, 2022
RF cables3 (1GHz-40GHz)	Huber+Suhnar	1GHz-40GHz	1607106	May 28, 2021	May 27, 2022
Power Metter	Keysight	E4419	\	May 28, 2021	May 27, 2022
Power Sensor (AV)	Keysight	E9300A	\	May 28, 2021	May 27, 2022
Signal Analyzer 20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 28, 2021	May 27, 2022
Spectrum Analyzer 9kHz-40GHz	R&S	FSP 40	\	May 28, 2021	May 27, 2022
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

6. RF Output Power

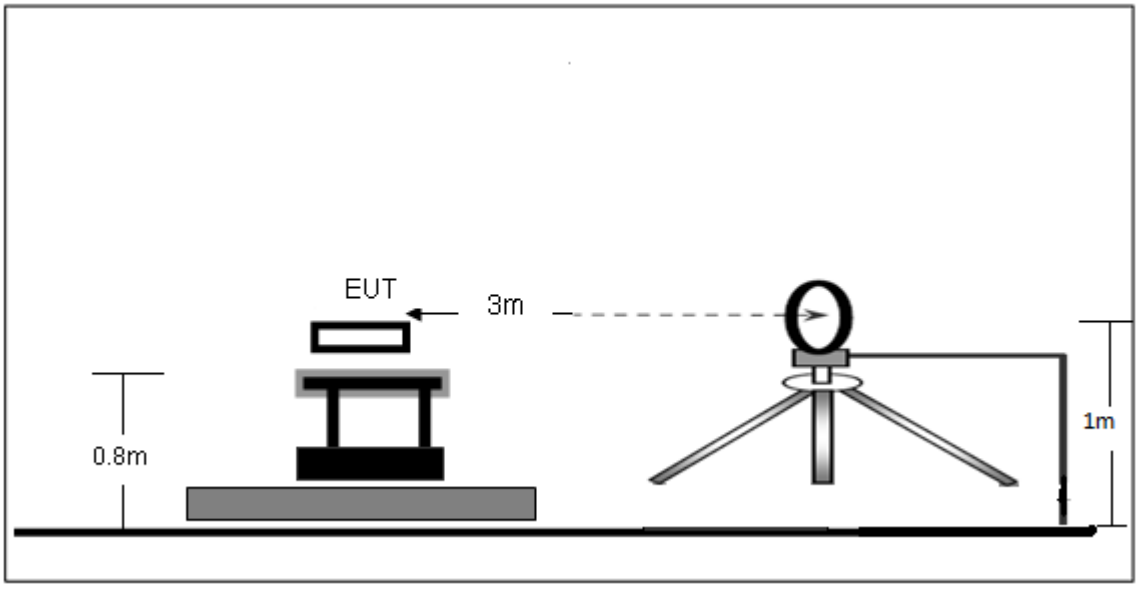
6.1 Block Diagram Of Test Setup

Conducted output power test method:

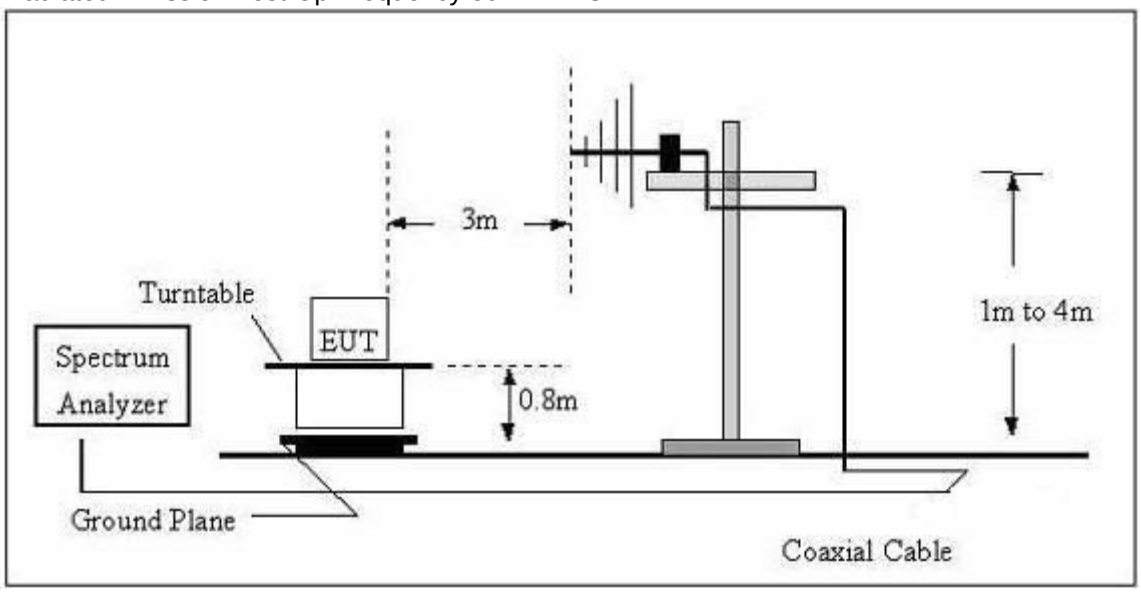


Radiated power test method:

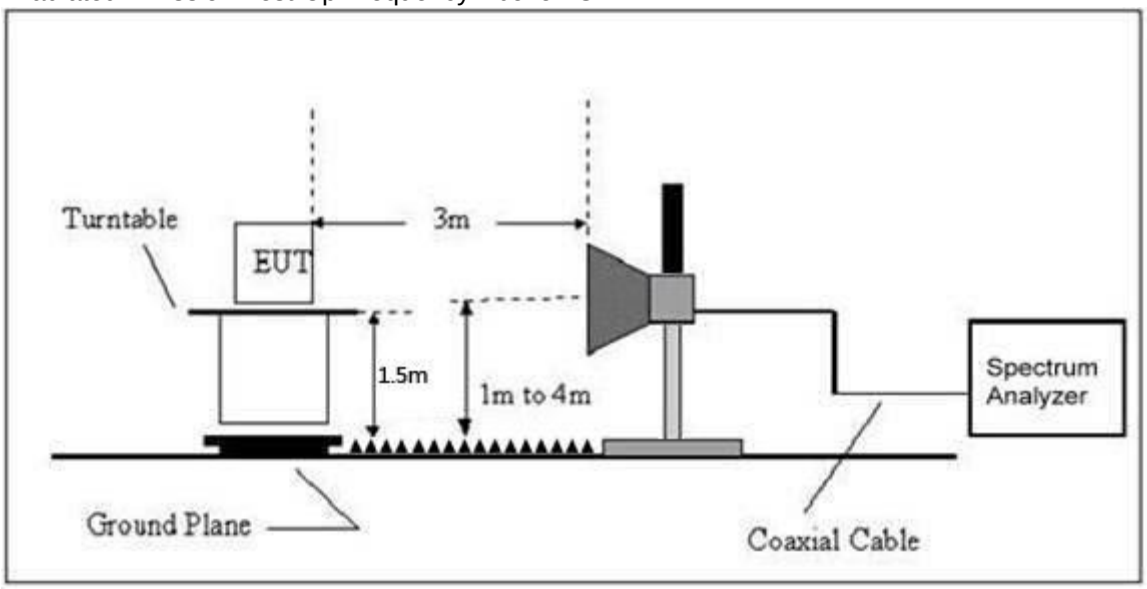
（A）Radiated Emission Test-Up Frequency Below 30MHz



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



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



6.2 Limit

According to §22.913(a)(2),The ERP of 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 Standard 603D and ANSI C63.4-2014 measurement procedure.
2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

6.4 Test Result

ERP For GPRS Mode GSM850

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measure-ment (dBm)	FCC Part 22H Limits (dBm)	Result
Low Channel								
824.2	H	1.5	0	26.98	-1.38	25.60	38.45	PASS
824.2	V	1.5	0	26.13	-1.38	24.75	38.45	PASS
Middle Channel								
836.6	H	1.5	0	25.97	-1.10	24.87	38.45	PASS
836.6	V	1.5	0	25.45	-1.10	26.55	38.45	PASS
High Channel								
848.8	H	1.5	0	25.19	-0.82	24.37	38.45	PASS
848.8	V	1.5	0	25.78	-0.82	24.96	38.45	PASS

EIRP For GPRS Mode PCS1900

Frequency (MHz)	Polar (H/V)	Height (Meter)	Table (Degree)	Reading Level (dBm)	Correct Factor (dB)	Measure-ment (dBm)	FCC Part 24E Limits (dBm)	Result
Low Channel								
1850.2	H	1.5	0	47.69	-22.26	25.43	33.00	PASS
1850.2	V	1.5	0	47.98	-22.26	25.72	33.00	PASS
Middle Channel								
1880.0	H	1.5	0	48.75	-22.16	26.59	33.00	PASS
1880.0	V	1.5	0	47.83	-22.16	25.67	33.00	PASS
High Channel								
1909.8	H	1.5	0	47.39	-22.05	25.34	33.00	PASS
1909.8	V	1.5	0	47.43	-22.05	25.38	33.00	PASS

Max. Conducted Output Power

For Cellular Band (GPRS850)

Test Mode	Channel	Frequency (MHz)	Average Power (dBm)	FCC Part 22.913 Limit (dBm)
GPRS(1 Slot)	Low Channel	824.2	31.91	38.45
	Middle Channel	836.6	31.72	38.45
	High Channel	848.8	31.78	38.45
GPRS(2 Slot)	Low Channel	824.2	31.15	38.45
	Middle Channel	836.6	30.81	38.45
	High Channel	848.8	30.94	38.45
GPRS(3 Slot)	Low Channel	824.2	29.34	38.45
	Middle Channel	836.6	28.90	38.45
	High Channel	848.8	29.01	38.45
GPRS(4 Slot)	Low Channel	824.2	28.43	38.45
	Middle Channel	836.6	27.9	38.45
	High Channel	848.8	28.03	38.45

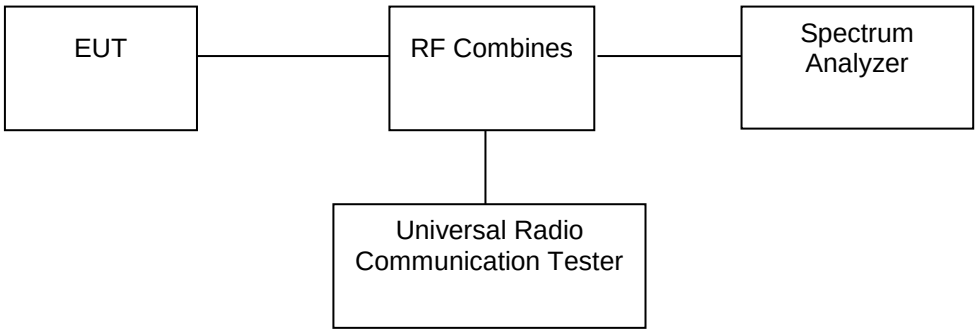
For PCS Band (GPRS1900)

Test Mode	Channel	Frequency (MHz)	Average Power (dBm)	FCC Part 24.232 Limit (dBm)
GPRS(1 Slot)	Low Channel	1850.2	28.24	33.0
	Middle Channel	1880.0	28.46	33.0
	High Channel	1909.8	28.23	33.0
GPRS(2 Slot)	Low Channel	1850.2	27.37	33.0
	Middle Channel	1880.0	27.84	33.0
	High Channel	1909.8	27.75	33.0
GPRS(3 Slot)	Low Channel	1850.2	25.06	33.0
	Middle Channel	1880.0	25.82	33.0
	High Channel	1909.8	25.98	33.0

GPRS(4 Slot)	Low Channel	1850.2	23.72	33.0
	Middle Channel	1880.0	24.59	33.0
	High Channel	1909.8	24.84	33.0

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

7.1 Block Diagram Of Test Setup



7.2 Limit

According to §24.232(d), Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

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

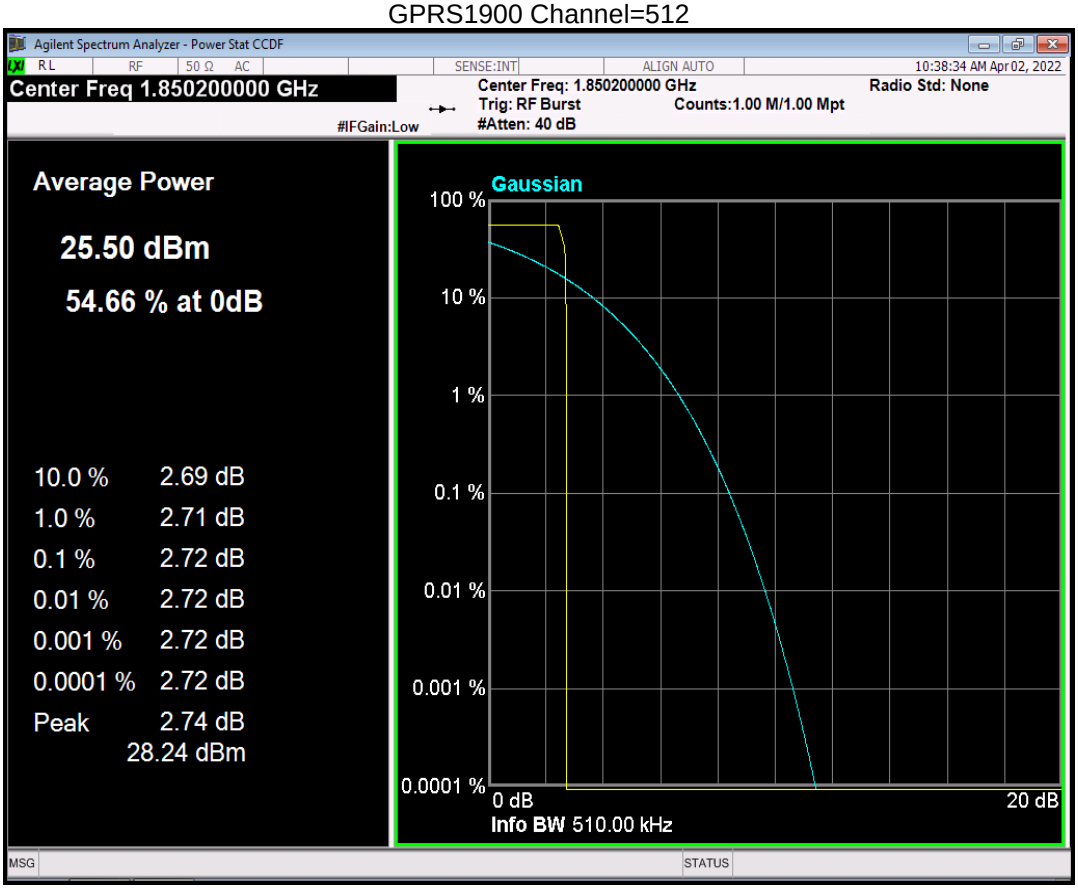
7.3 Test procedure

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

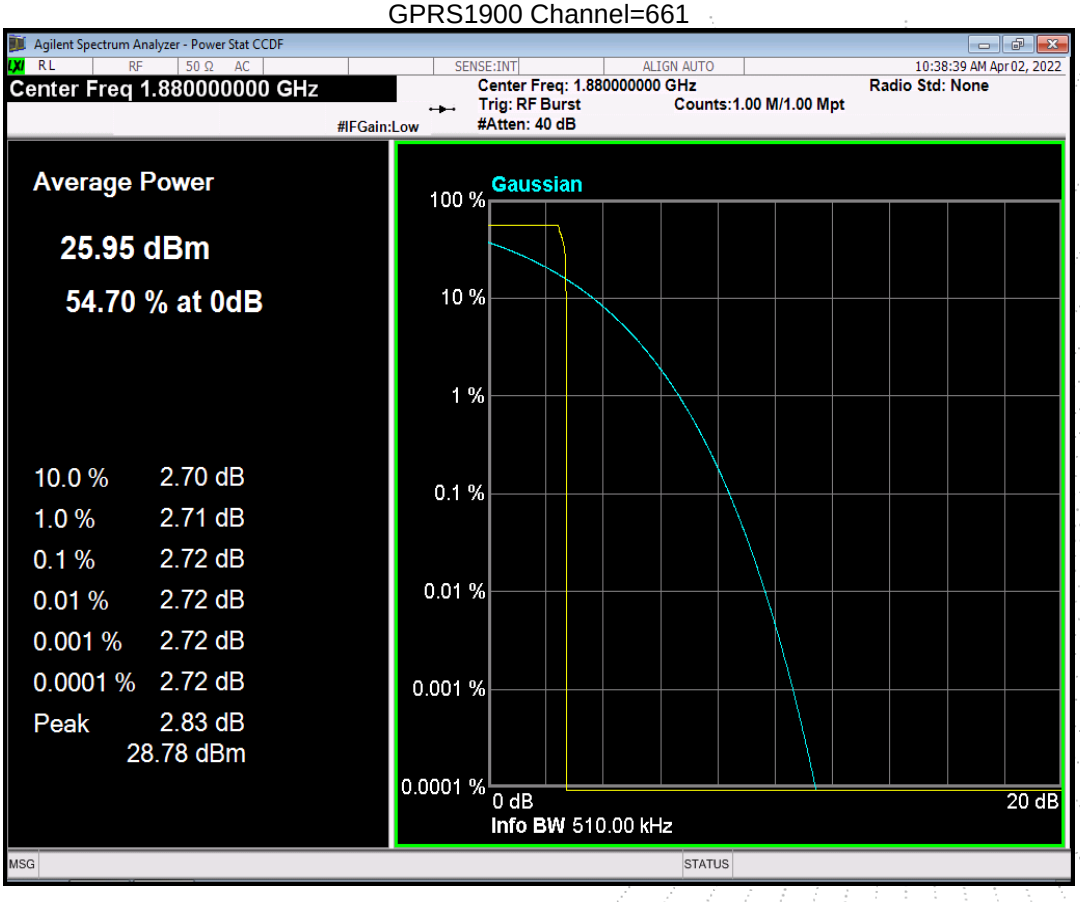
7.4 Test Result

Band	Channel	Frequency (MHz)	Result (dB)	high Limit (dB)	Verdict
GPRS1900	512	1850.2	2.72	13	PASS
GPRS1900	661	1880	2.72	13	PASS
GPRS1900	810	1909.8	2.71	13	PASS
GPRS850	128	824.2	2.81	13	PASS
GPRS850	190	836.6	2.75	13	PASS
GPRS850	251	848.8	2.67	13	PASS

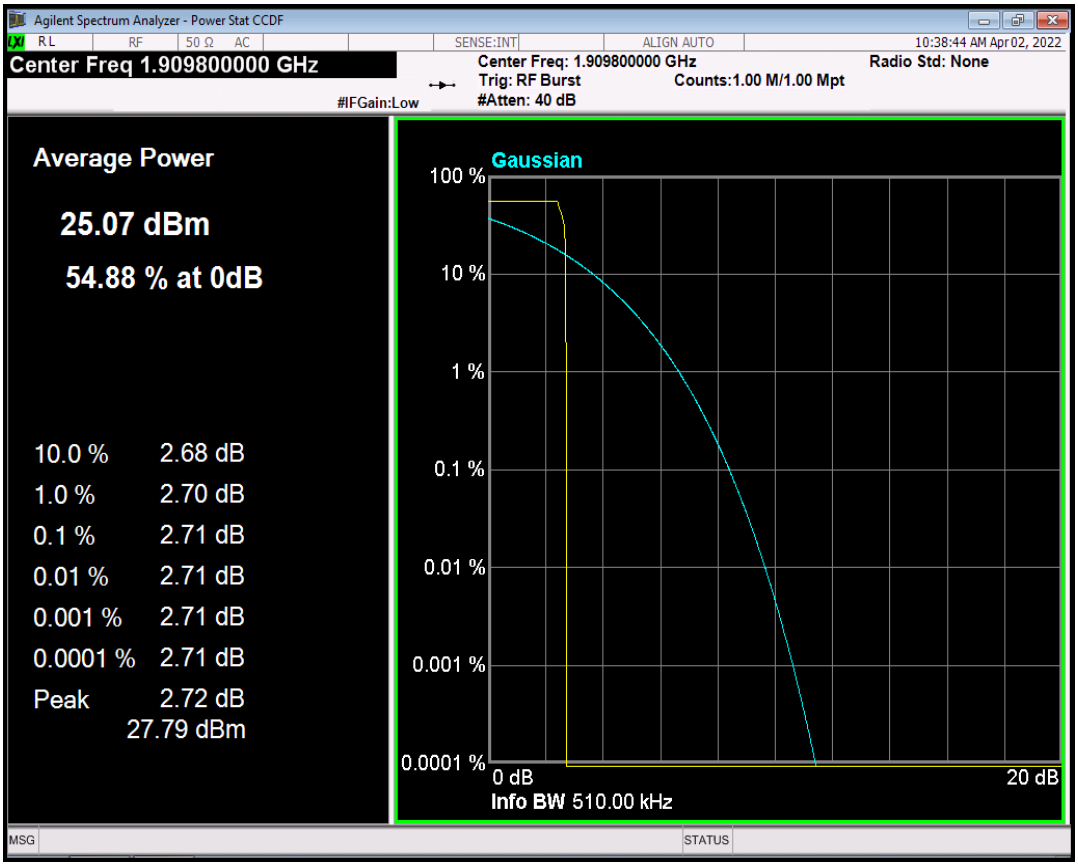
GPRS1900 Channel=512



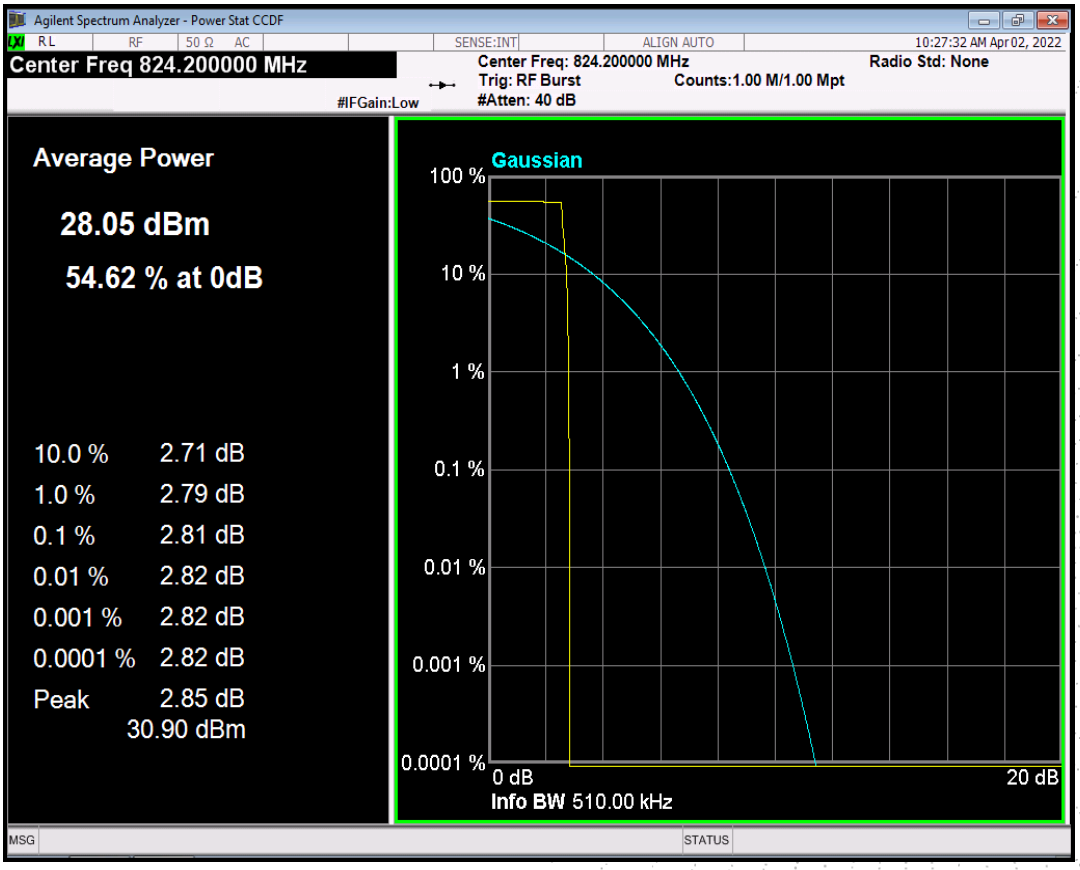
GPRS1900 Channel=661



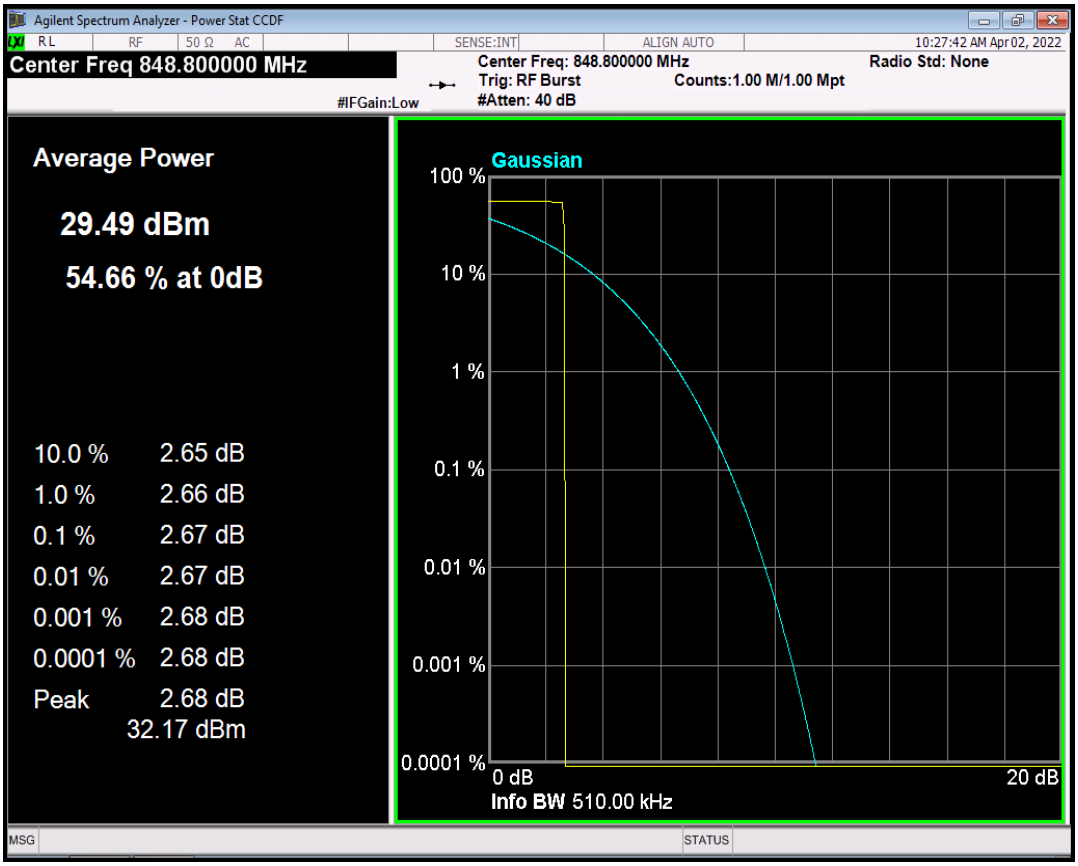
GPRS1900 Channel=810



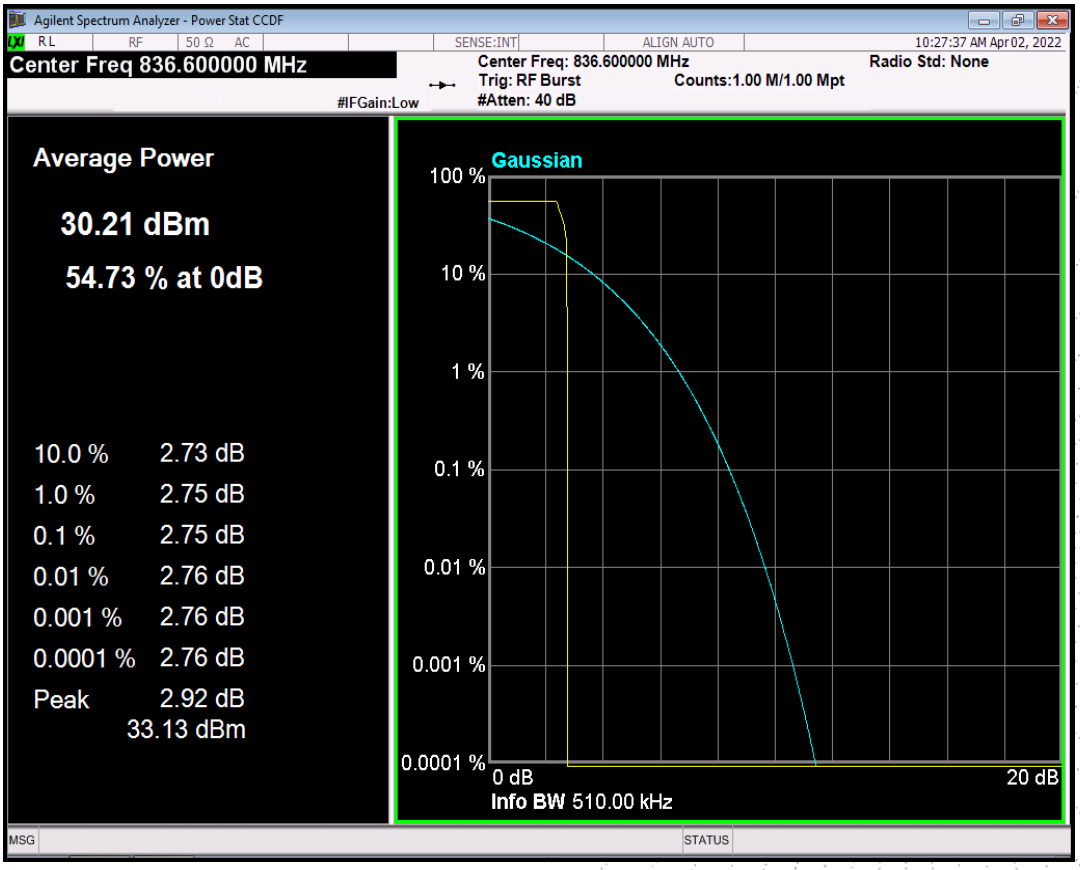
GPRS850 Channel=128



GPRS850 Channel=251

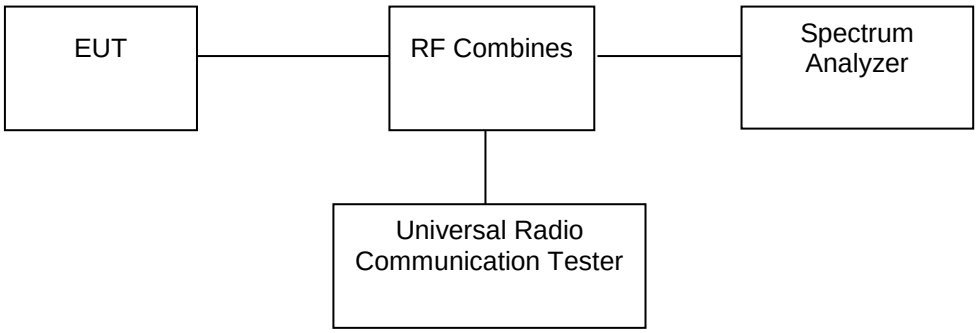


GPRS850 Channel=190



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.

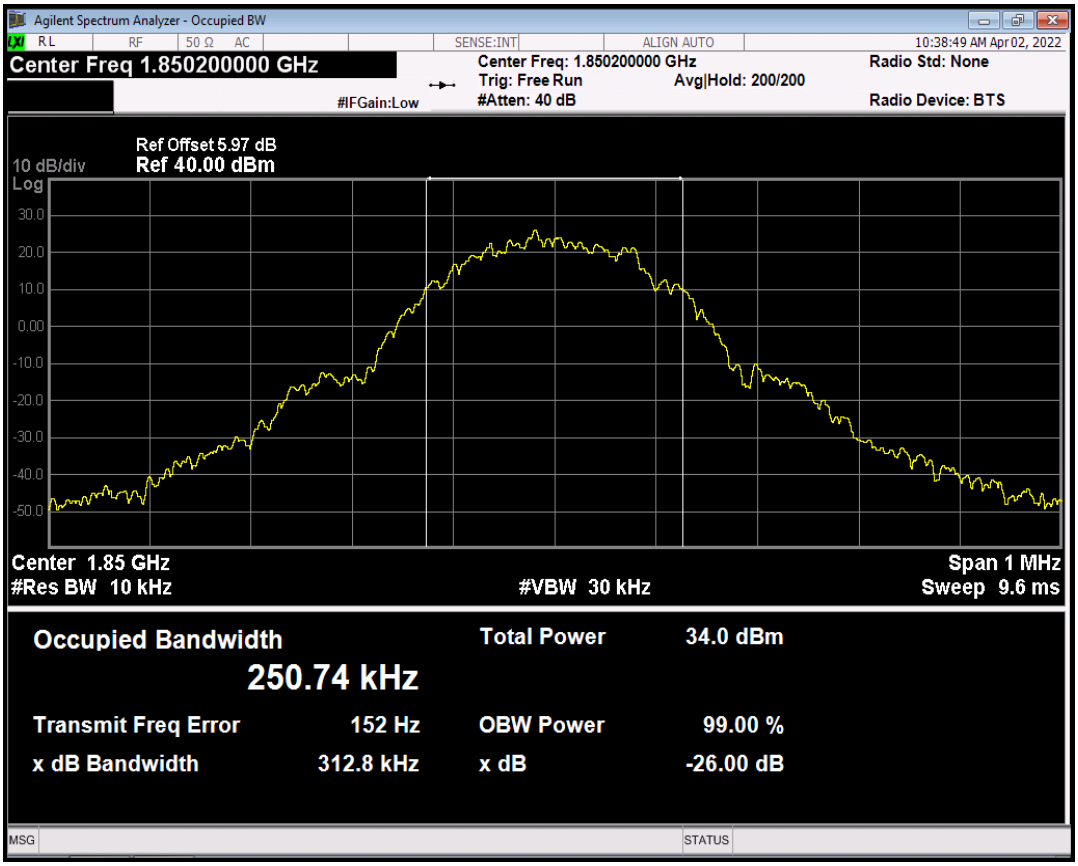
8.3 Test procedure

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.

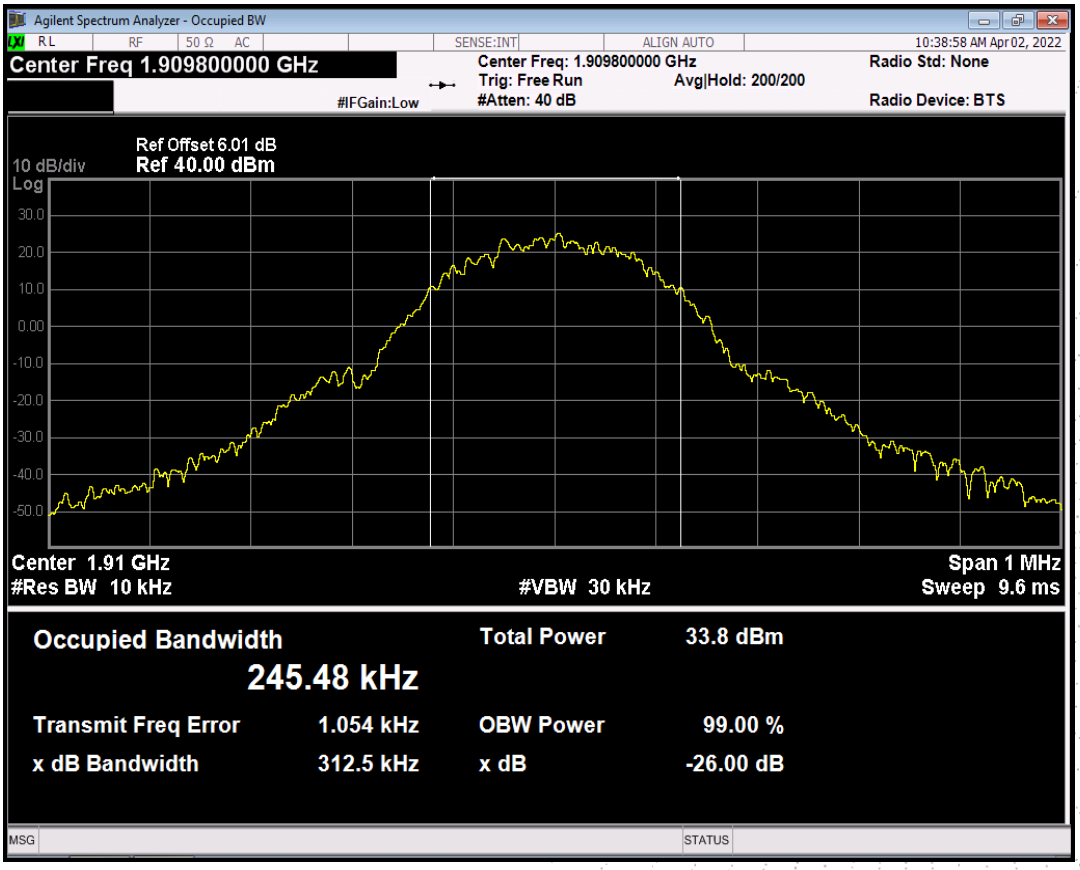
8.4 Test Result

Band	Channel	Frequency (MHz)	99% OBW (kHz)	-26dB EBW (kHz)	Verdict
GPRS1900	512	1850.2	250.738	312.762	PASS
GPRS1900	661	1880	243.742	318.376	PASS
GPRS1900	810	1909.8	245.475	312.533	PASS
GPRS850	128	824.2	246.700	316.851	PASS
GPRS850	190	836.6	247.985	319.888	PASS
GPRS850	251	848.8	243.736	317.831	PASS

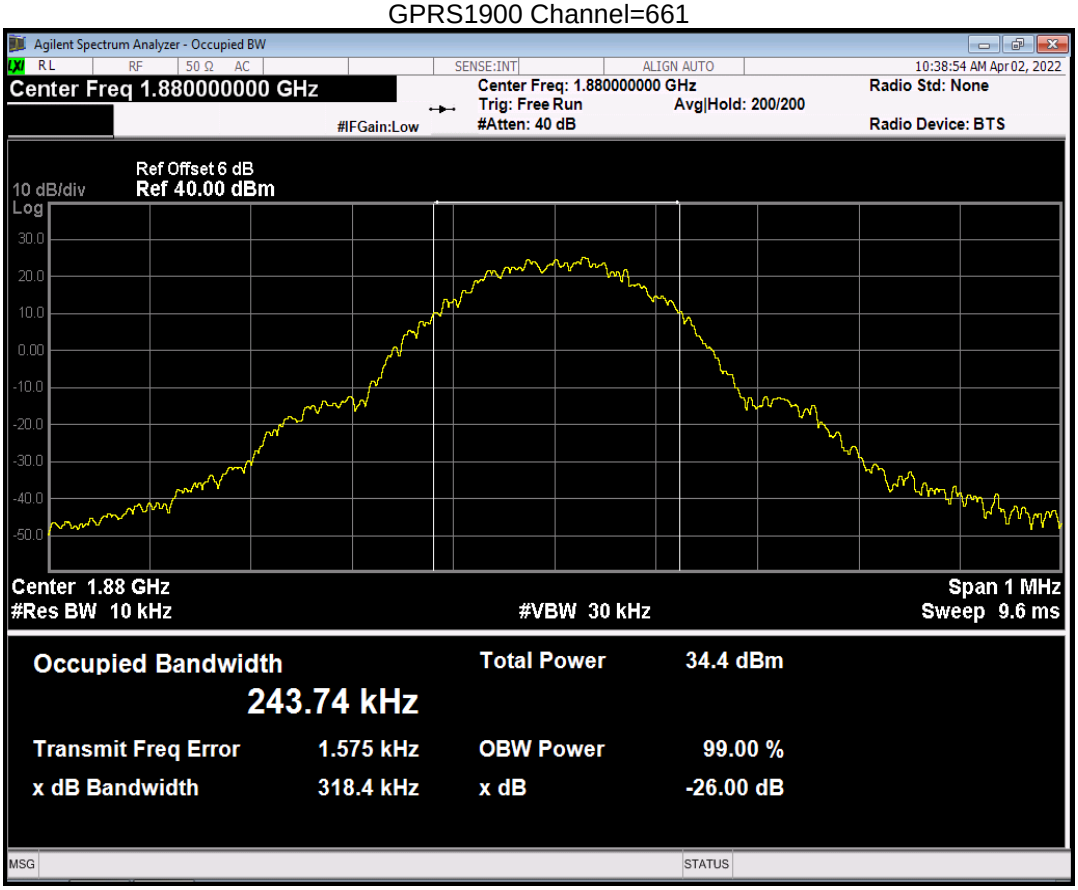
GPRS1900 Channel=512



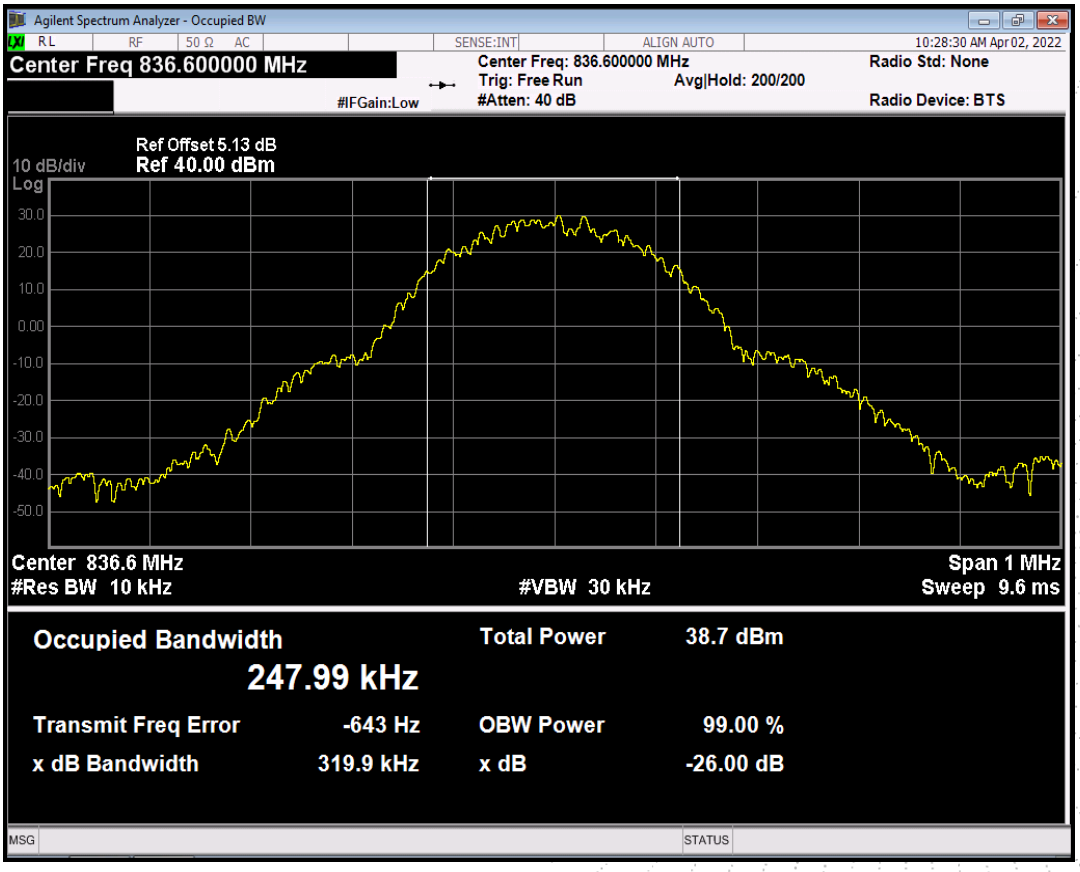
GPRS1900 Channel=810



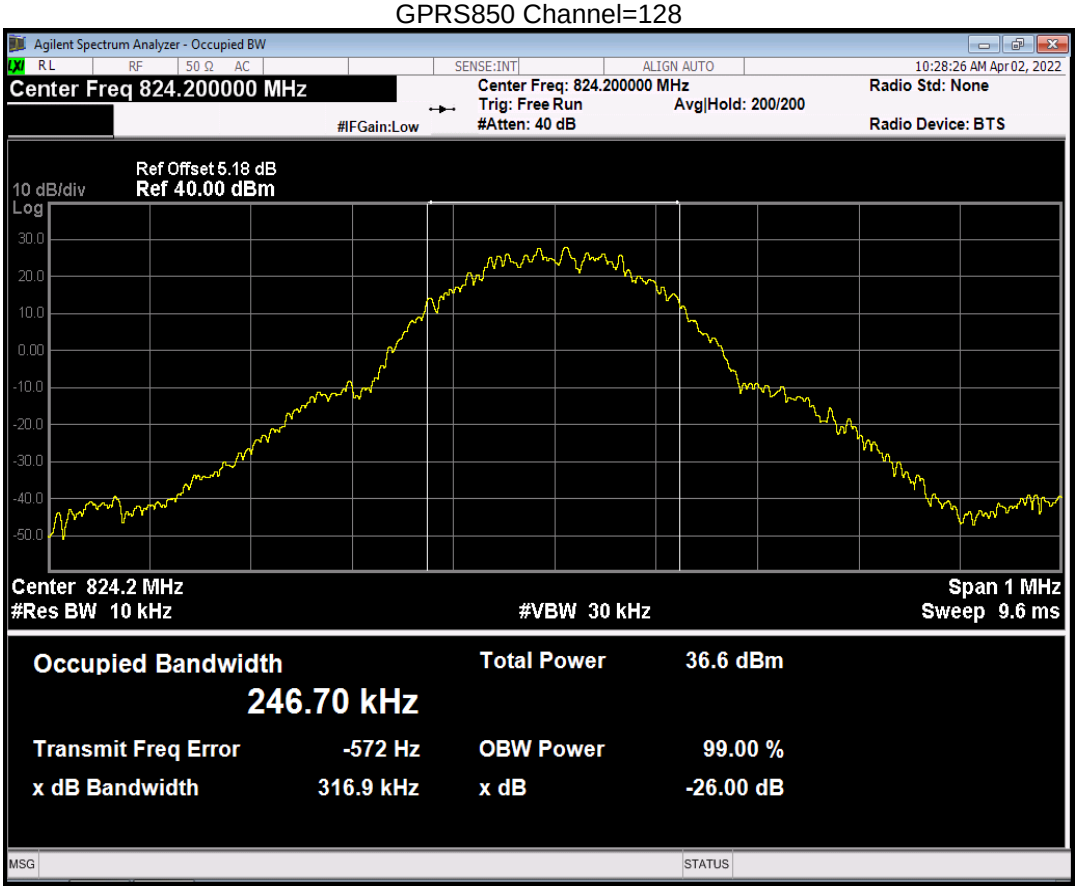
GPRS1900 Channel=661



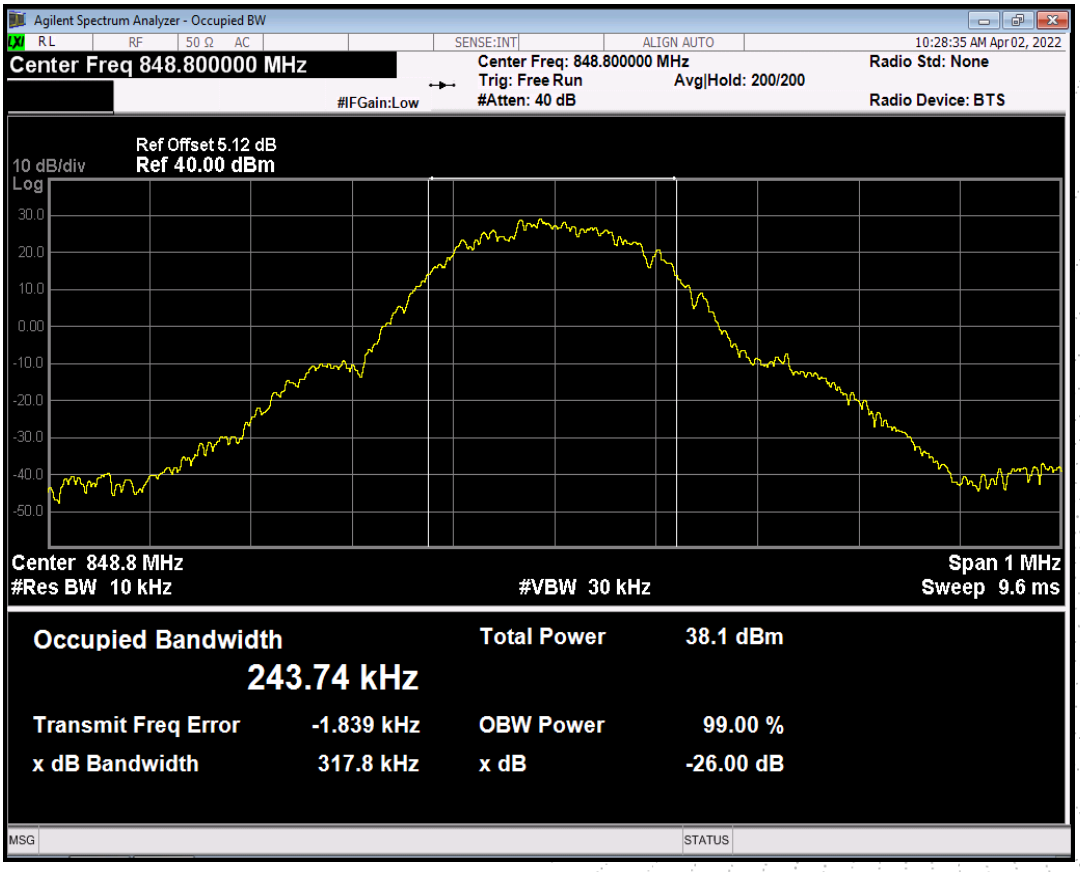
GPRS850 Channel=190



GPRS850 Channel=128

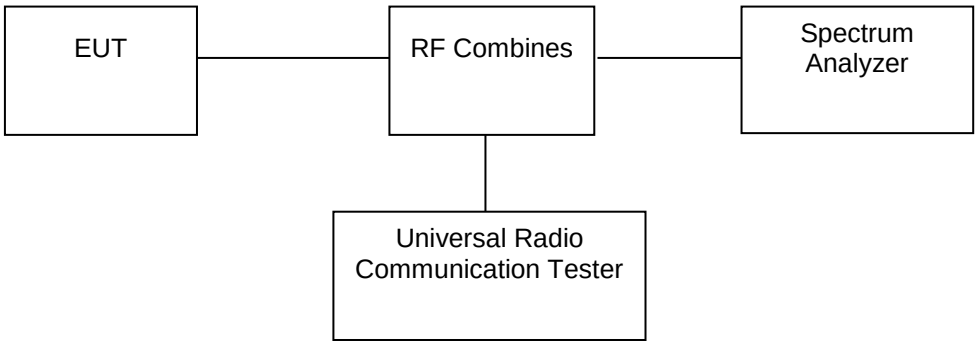


GPRS850 Channel=251



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.

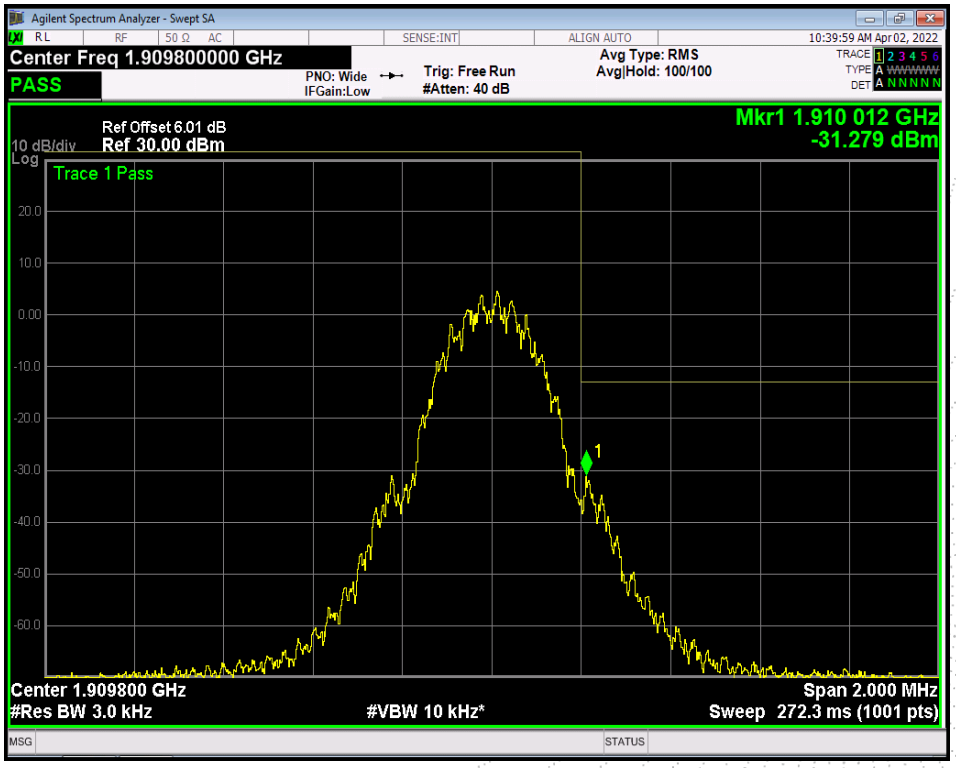
9.3 Test procedure

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.

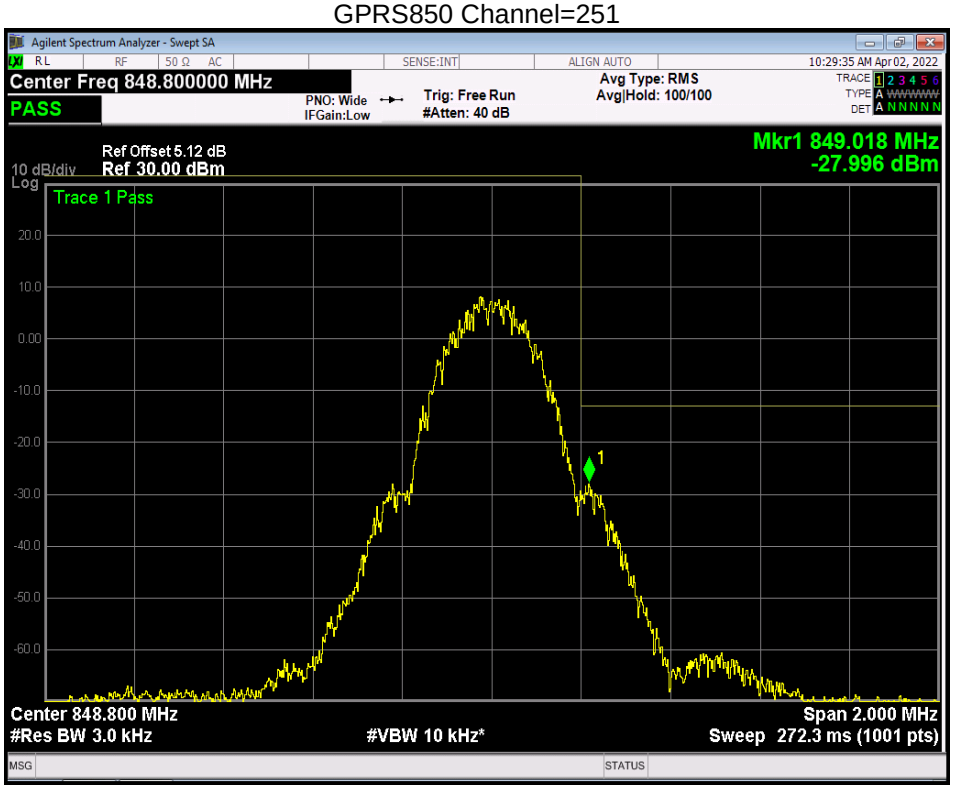
9.4 Test Result

GPRS1900 Channel=512

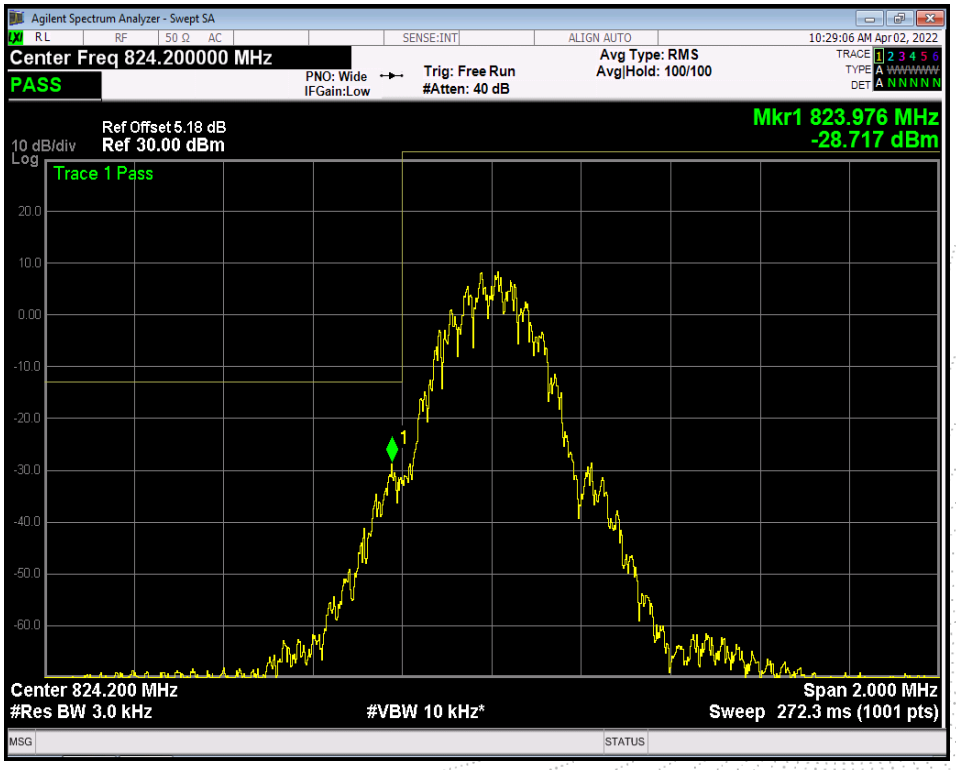
GPRS1900 Channel=810



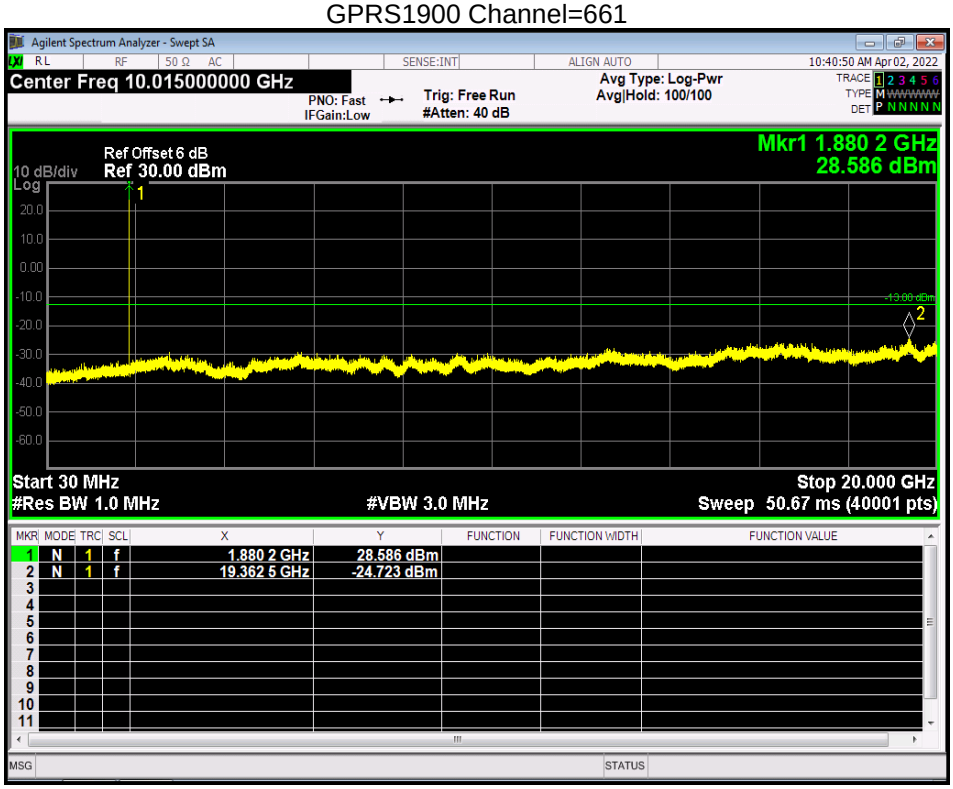
GPRS850 Channel=251



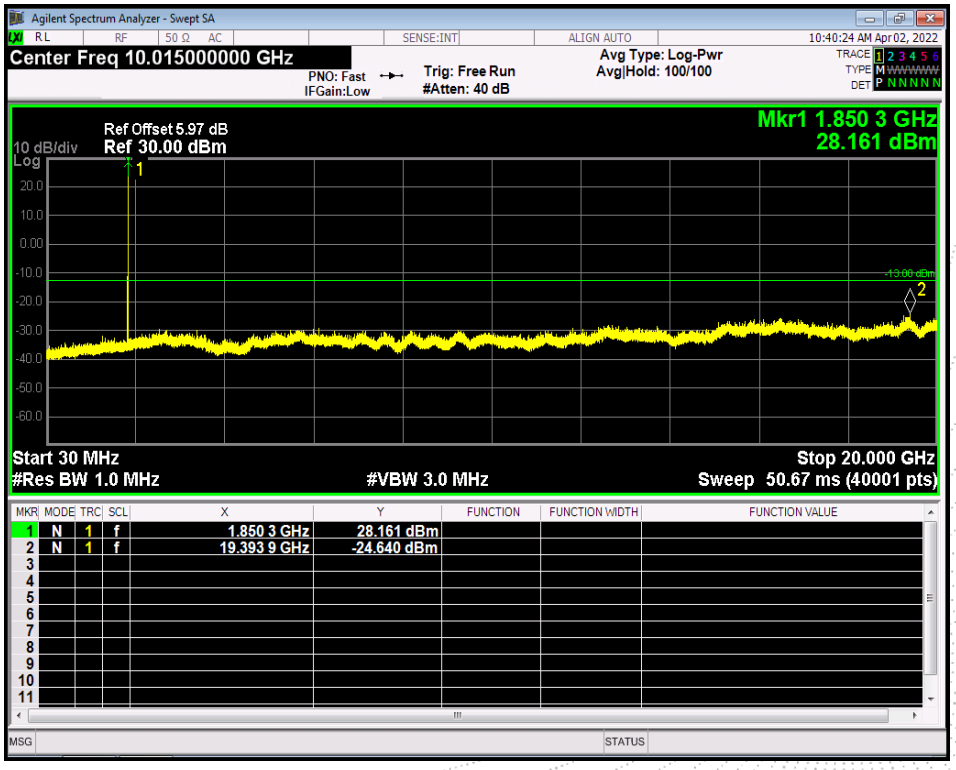
GPRS850 Channel=128



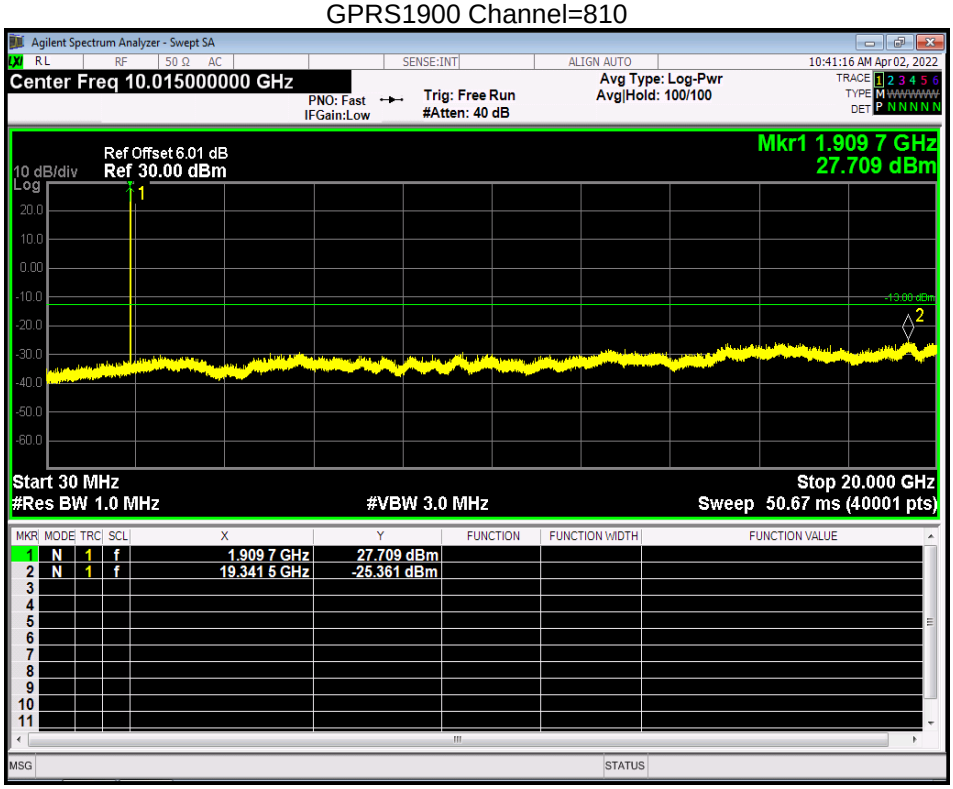
GPRS1900 Channel=661



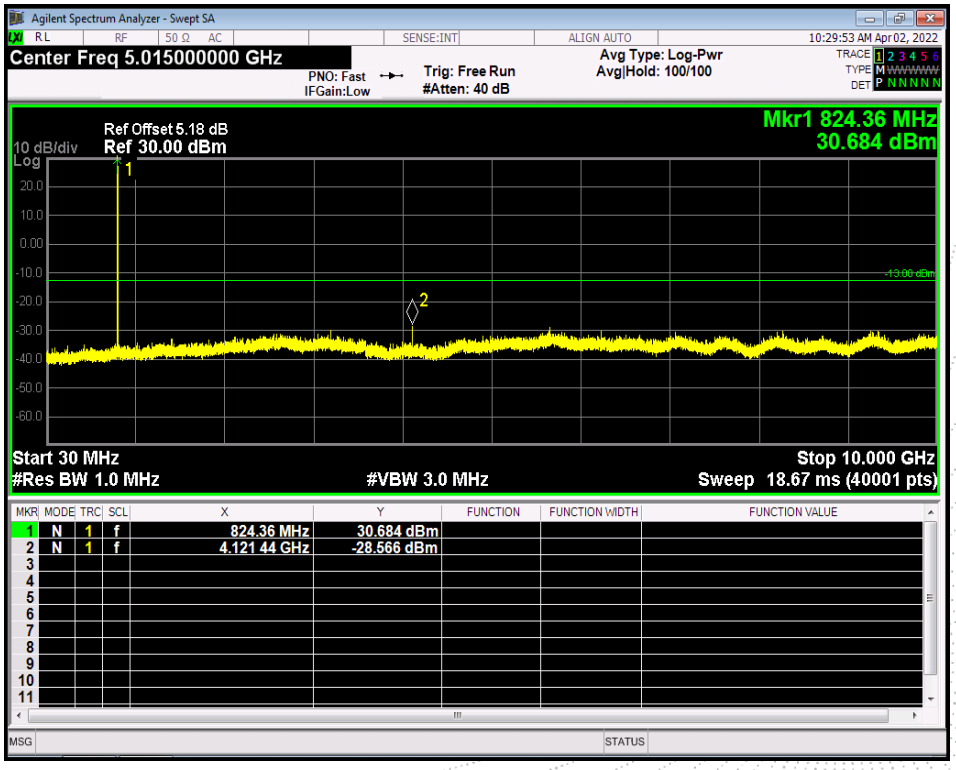
GPRS1900 Channel=512



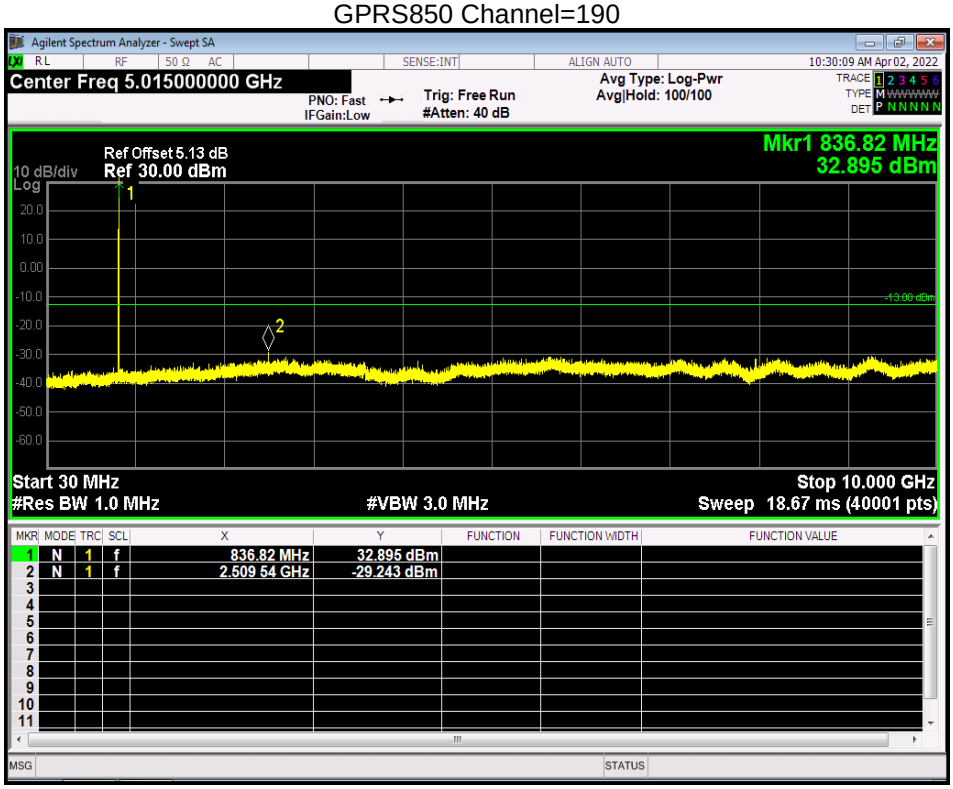
GPRS1900 Channel=810



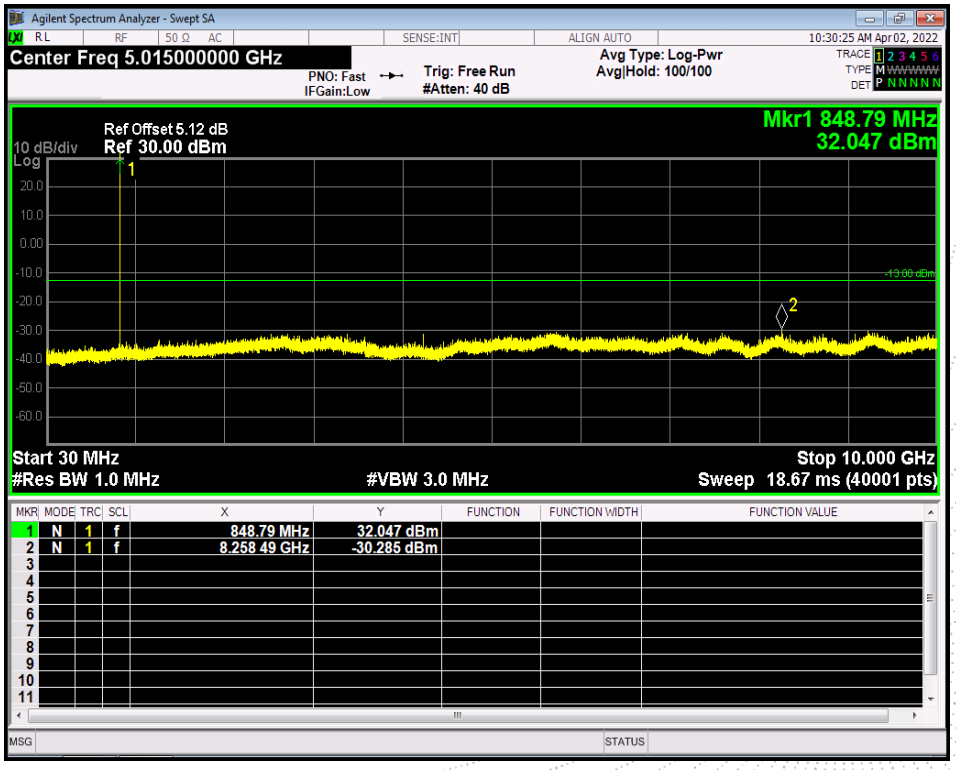
GPRS850 Channel=128



GPRS850 Channel=190



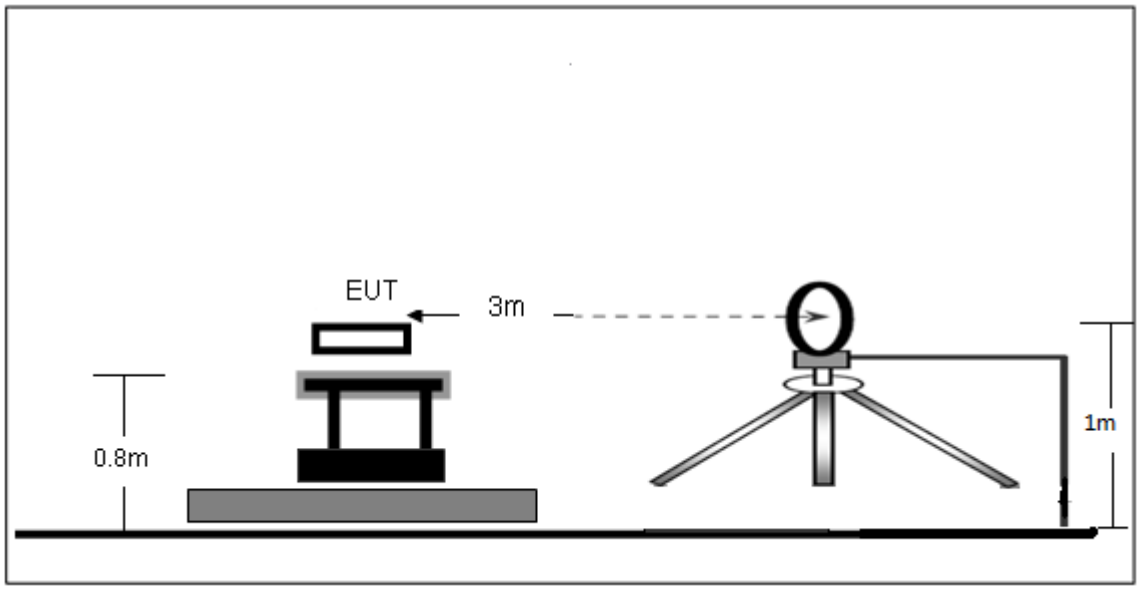
GPRS850 Channel=251



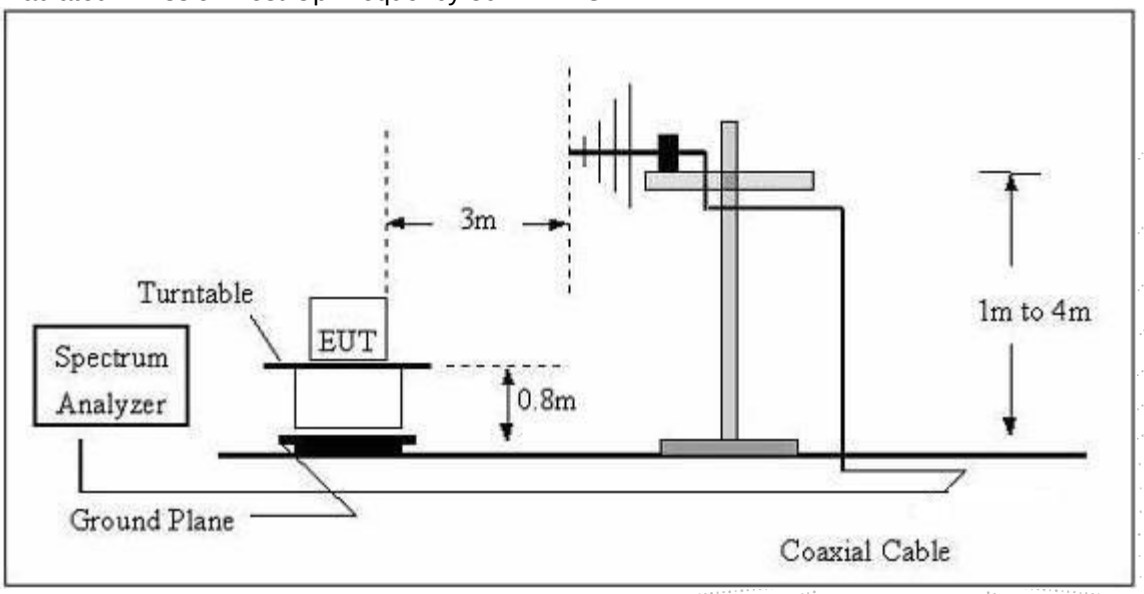
10. Spurious Radiated Emissions

10.1 Block Diagram Of Test Setup

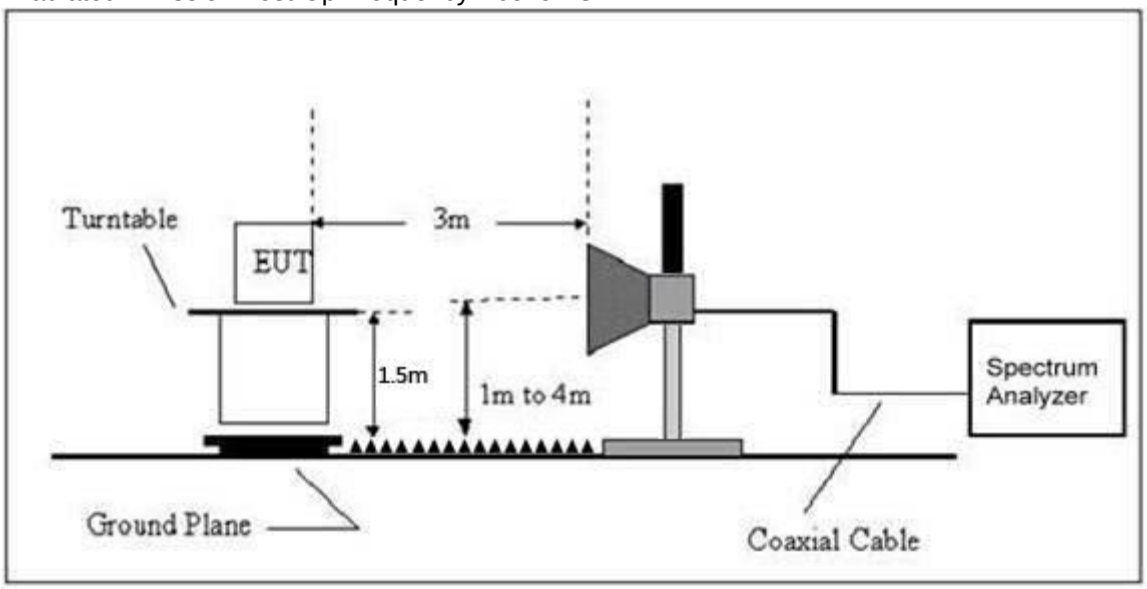
（A）Radiated Emission Test-Up Frequency Below 30MHz



（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 Log_{10} (power out in Watts)

10.4 Test Result

For Cellular Band_GPRS 850 Mode

Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (824.2MHz)						
71.62	-43.73	-15.73	-59.46	-13.00	-46.46	H
1648.40	-18.08	-22.93	-41.01	-13.00	-28.01	H
2472.60	-25.68	-22.45	-48.13	-13.00	-35.13	H
71.62	-41.09	-15.73	-56.82	-13.00	-43.82	V
1648.40	-21.88	-22.93	-44.81	-13.00	-31.81	V
2472.60	-25.58	-22.45	-48.03	-13.00	-35.03	V
Middle Channel (836.6MHz)						
71.62	-43.96	-15.73	-59.69	-13.00	-46.69	H
1673.20	-18.58	-22.87	-41.45	-13.00	-28.45	H
2509.80	-23.63	-22.50	-46.13	-13.00	-33.13	H
71.62	-43.69	-15.73	-59.42	-13.00	-46.42	V
1673.20	-21.63	-22.87	-44.50	-13.00	-31.50	V
2509.80	-24.20	-22.50	-46.70	-13.00	-33.70	V
High Channel (848.8MHz)						
71.62	-43.93	-15.73	-59.66	-13.00	-46.66	H
1697.60	-21.74	-22.79	-44.53	-13.00	-31.53	H
2546.40	-25.90	-22.56	-48.46	-13.00	-35.46	H
71.62	-42.67	-15.73	-58.40	-13.00	-45.40	V
1697.60	-18.87	-22.79	-41.66	-13.00	-28.66	V
2546.40	-25.36	-22.56	-47.92	-13.00	-34.92	V

For PCS Band_GPRS 1900 Mode

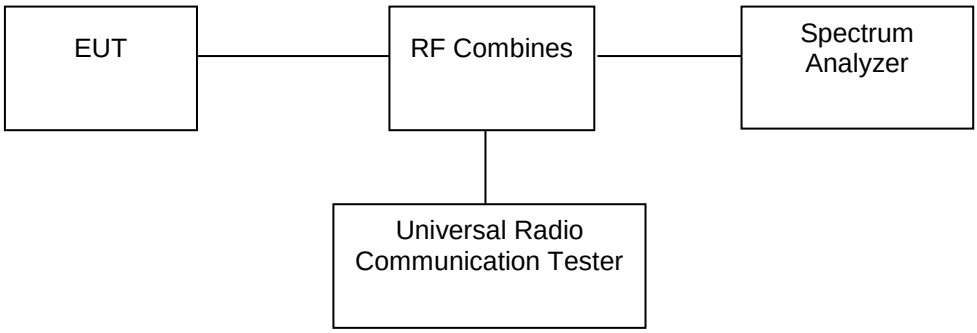
Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (1850.2MHz)						
71.62	-44.50	-15.73	-60.23	-13.00	-47.23	H
3700.40	-24.39	-17.47	-41.86	-13.00	-28.86	H
5550.60	-30.71	-11.76	-42.47	-13.00	-29.47	H
71.62	-41.65	-15.73	-57.39	-13.00	-44.39	V
3700.40	-26.11	-17.47	-43.58	-13.00	-30.58	V
5550.60	-28.65	-11.76	-40.41	-13.00	-27.41	V
Middle Channel (1880MHz)						
71.62	-44.19	-15.73	-59.93	-13.00	-46.93	H
3760.00	-27.05	-16.98	-44.03	-13.00	-31.03	H
5640.00	-32.41	-11.33	-43.74	-13.00	-30.74	H
71.62	-43.51	-15.73	-59.24	-13.00	-46.24	V
3760.00	-26.10	-16.98	-43.08	-13.00	-30.08	V
5640.00	-29.40	-11.33	-40.73	-13.00	-27.73	V
High Channel (1909.8MHz)						
71.62	-43.70	-15.73	-59.43	-13.00	-46.43	H
3819.60	-24.33	-16.49	-40.82	-13.00	-27.82	H
5729.40	-29.93	-10.90	-40.83	-13.00	-27.83	H
71.62	-43.37	-15.73	-59.10	-13.00	-46.10	V
3819.60	-27.53	-16.49	-44.02	-13.00	-31.02	V
5729.40	-28.44	-10.90	-39.34	-13.00	-26.34	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

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.

11.3 Test procedure

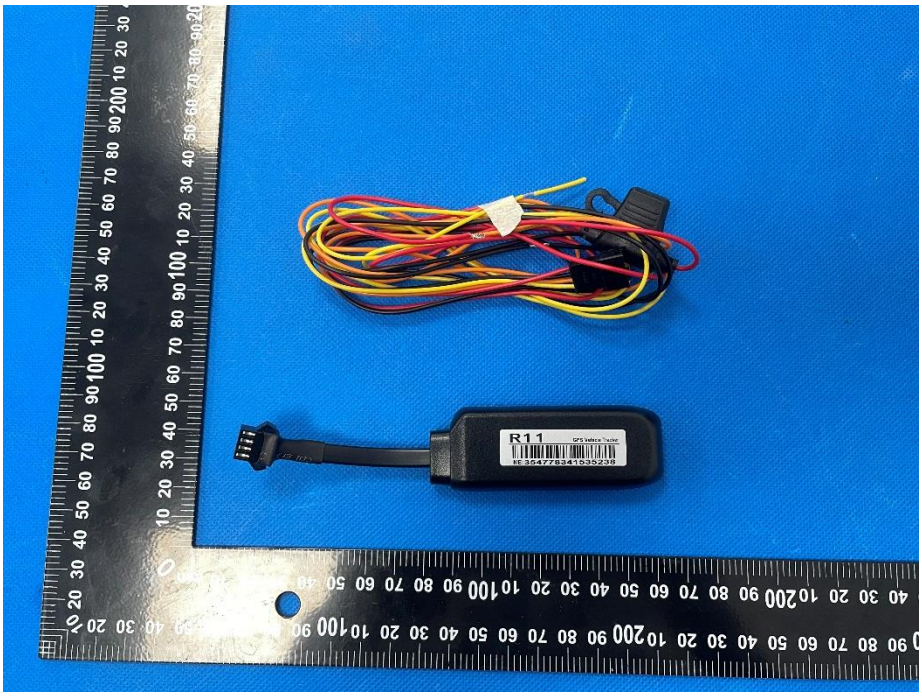
The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 10kHz for GSM mode and 100kHz for WCDMA mode, VBW shall be at least 3 times the RBW, and the 26dB bandwidth was recorded.

11.4 Test Result

Band	Channel	Frequency (MHz)	Result(Hz)	Result (ppm)	Low Limit (ppm)	high Limit (ppm)	Verdict
GPRS1900	512	1850.2	-32.54414	-0.02	-2.500	2.5	PASS
GPRS1900	661	1880	-33.96471	-0.02	-2.500	2.5	PASS
GPRS1900	810	1909.8	-32.93157	-0.02	-2.500	2.5	PASS
GPRS850	128	824.2	-18.62894	-0.02	-2.500	2.5	PASS
GPRS850	190	836.6	-15.04521	-0.02	-2.500	2.5	PASS
GPRS850	251	848.8	-12.94663	-0.02	-2.500	2.5	PASS

12. EUT Photographs

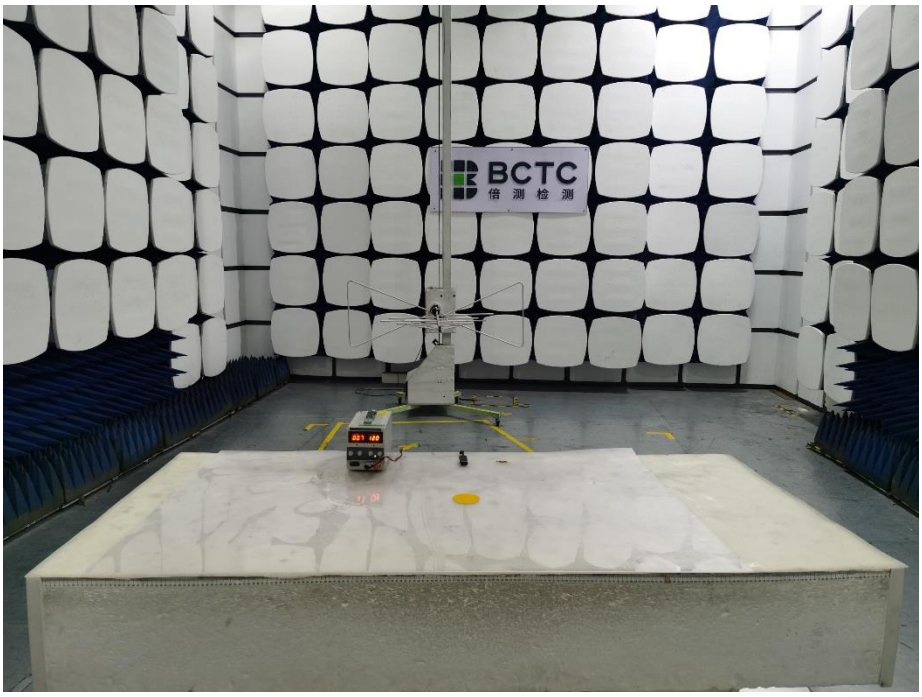
EUT Photo

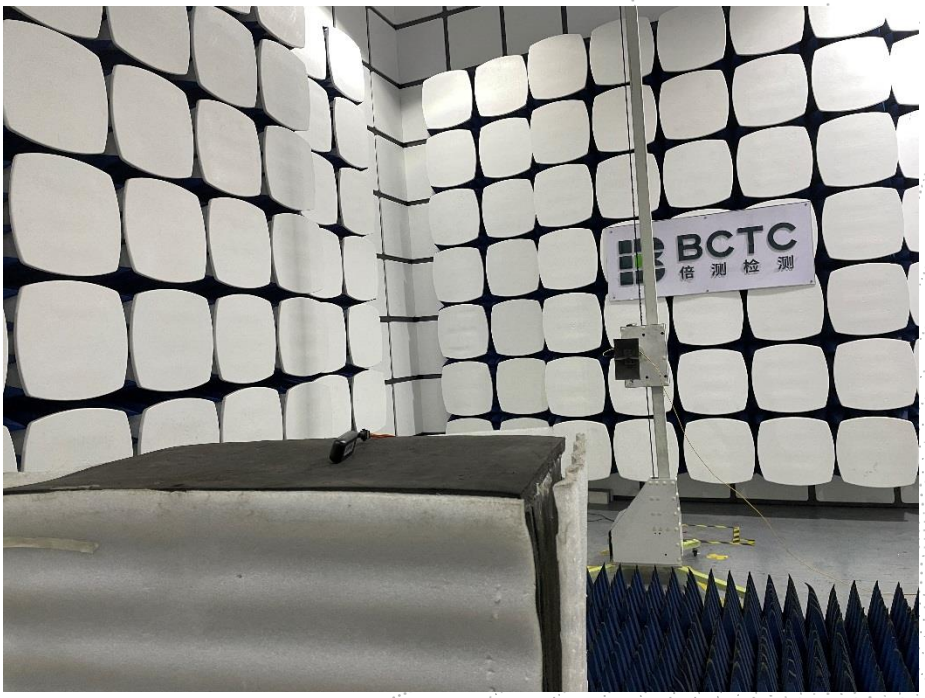


Appendix-Photographs Of EUT Constructional Details

13. EUT Test Setup Photographs

Radiated Measurement Photos





STATEMENT

1.The equipment lists are traceable to the national reference standards.

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 stamp of laboratory.

4.The test report is invalid without signature of person(s) testing and authorizing.

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

6.The quality system of our laboratory is in accordance with ISO/IEC17025.

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

Address:
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TEL：400-788-9558

P.C.: 518103

FAX：0755-33229357

Website：http://www.chnbctc.com

E-Mail：bctc@bctc-lab.com.cn

※※※※※ **END** ※※※※※