Certificate Number: 5055.02

TEST REPORT FOR GSM TESTING

Report No.: SRTC2021-9004(F)-21030306(A)

Product Name: LTE Wireless Router

Product Model: MF266, MF266B

Applicant: ZTE CORPORATION

Manufacturer: ZTE CORPORATION

Specification: FCC Part 24E, Part 22H, Part 2 (2020)

FCC ID: SRQ-MF266

The State Radio_monitoring_center Testing Center (SRTC)

15th Building, No.30 Shixing Street, Shijingshan District,

Beijing, P.R.China

Tel: 86-10-57996183 Fax: 86-10-57996388

CONTENTS

1. GENERAL INFORMATION

1.1 Notes of the test report

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1.2 Information about the testing laboratory

Company:	The State Radio_monitoring_center Testing Center (SRTC)
Address:	15th Building, No.30 Shixing Street, Shijingshan District, P.R.China
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1.3 Applicant's details

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1.4 Manufacturer's details

Company:	ZTE CORPORATION
Address:	ZTE Plaza, #55 Keji Road South, Hi-Tech, Industrial Park, Nanshan District,Guangdong
City:	Shenzhen
Country or Region:	China
Contacted person:	Gong Yu
Tel:	+86-21-68895397
Fax:	---
Email:	gongyu@zte.com.cn

1.5 Test Environment

Date of Receipt of test sample at SRTC:	2021-03-03
Testing Start Date:	2021-03-03
Testing End Date:	2021-04-26

Environmental Data:	Temperature (°C)	Humidity (%)
Ambient	25	40
Maximum Extreme	55	---
Minimum Extreme	-40	---

Normal Supply Voltage (V d.c.):	48.0
Maximum Extreme Supply Voltage (V d.c.):	50.4
Minimum Extreme Supply Voltage (V d.c.):	45.6

2 DESCRIPTION OF THE DEVICE UNDER TEST

2.1 Final Equipment Build Status

Frequency Range	GSM850: Tx:824~849MHz Rx:869~894MHz PCS1900: Tx:1850~1910MHz Rx:1930~1990MHz
Modulation Type	GPRS:GMSK EDGE:GMSK/8PSK
Emission Designator	300KGXW/300KG7W
Duplex Mode	FDD
Duplex Spacing	GSM850:45MHz PCS1900:80MHz
Antenna Type	Fixed Internal Antenna
Antenna Gain	GSM850: 1.5dBi/PCS1900: 4.0dBi
Power Supply	Charger
Hardware Version	PCBMF266B-1.0
Software Version	BD_CLAPEODUMF266BV1.0.0B01
IMEI	866227050009630

2.2 Support Equipment

The following support equipment was used to exercise the DUT during testing:

Equipment	Charger1
Manufacturer	Shanghai Biaojun Electronic Technology Co,.LTD
Model Number	POE-A4803-Z

2.3 Summary table

FCC Rule Part	Mode	Frequency Range (MHz)	ERP/ EIRP (dBm)	ERP/ EIRP (W)	Frequency Tolerance (ppm)	Emission Designator
22H	GPRS850	824.2-848.8	31.87	1.537	-0.016	252KGXW
22H	EDGE850	824.2-848.8	26.24	0.421	-0.010	255KG7W
24E	GPRS1900	1850.2-1909.8	32.26	1.685	-0.008	249KGXW
24E	EDGE1900	1850.2-1909.8	29.39	0.869	0.009	245KG7W

3 REFERENCE SPECIFICATION

Specification	Version	Title
FCC Part2	2020	Frequency allocations and radio treaty matters; general rules and regulations
FCC Part22	2020	Public mobile services
FCC Part24	2020	Personal communications services
ANSI C63.26	2020	American national standard for compliance testing of transmitters used in licensed radio services
KDB 971168 D01	April 9, 2018	Measurement guidance for certification of licensed digital transmitters
TIA-603-E-2016	March 2016	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards

4 KEY TO NOTES AND RESULT CODES

The following are the definition of the test result.

Code	Meaning
PASS	Test result shows that the requirements of the relevant specification have been met.
FAIL	Test result shows that the requirements of the relevant specification have not been met.
NT	Normal Temperature
NV	Nominal voltage
HV	High voltage
LV	Low voltage

5 RESULT SUMMARY

No.	Test case	FCC reference	Verdict
1	RF Power Output	2.1046	Pass
2	Effective Radiated Power and Effective Isotropic Radiated Power	22.913(a)(5)/24.232(c)	Pass
3	Occupied Bandwidth	2.1049	Pass
4	Emission Bandwidth	2.1049	Pass
5	Spurious Emissions at antenna terminals	2.1051/22.917(a)/24.238(a)	Pass
6	Band Edges Compliance	2.1051/22.917(a)/24.238(a)	Pass
7	Frequency Stability	2.1055/22.355/24.235	Pass
8	Radiated Spurious Emissions	2.1053/22.917(a)/24.238(a)	Pass
9	Peak-Average Ratio	24.232(d)	Pass

This Test Report Is Issued by: Mr. Peng Zhen	Checked by: Mr. Li Bin
Tested by: Mr. Tong Daocheng	Issued date: 20210427

6 TEST RESULT

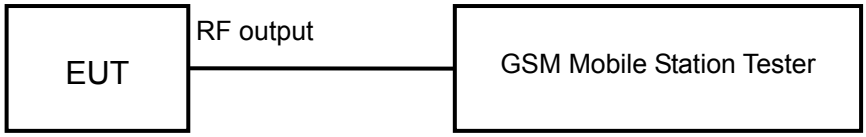
6.1 RF Power Output

Rule Part(s)
FCC Part 2.1046

Ambient condition:

Temperature	Relative humidity	Pressure
25°C	40%	101.9kPa

Test Setup:



Test procedure:
After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. Then the test data can be read at the tester screen. The loss between RF output port of the EUT and the input port of the tester will be taken into consideration.
The measurement will be conducted at three channels (Low, Middle and High channels)

Limits: No specific conduct power requirements in part 2.1046.

Test result:
The test results are shown in Appendix A.

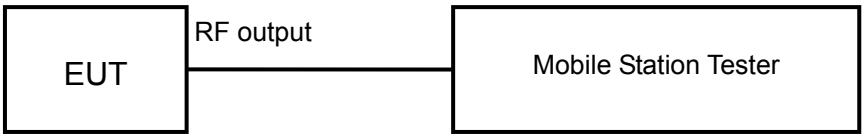
6.2 Effective Radiated Power and Effective Isotropic Radiated Power

Rule Part(s)
FCC Part 22.913(a)(5)/Part 24.232(c)

Ambient condition:

Temperature	Relative humidity	Pressure
25°C	40%	101.9kPa

Test setup:



Test procedure:
KDB 971168 D01 v03r01 – Section 5.6
Test Settings
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 is:
ERP/EIRP = PMeas – LC + GT
Where:
ERP/EIRP = effective or equivalen radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm)
PMeas = measured transmitter output power or PSD, in dBW or dBm
LC = signal attenuation in the connecting cable between the transmitter and antenna in dB
GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)
Limits for GSM850:

Operation Mode	Power Step	E.R.P. (dBm)
GSM	5	≤38.45
GPRS	3	≤38.45
EDGE	6	≤38.45

Limits for PCS1900:

Operation Mode	Power Step	E.I.R.P. (dBm)
GSM	0	≤33
GPRS	3	≤33
EDGE	5	≤33

Test result:
The test results are shown in Appendix A.

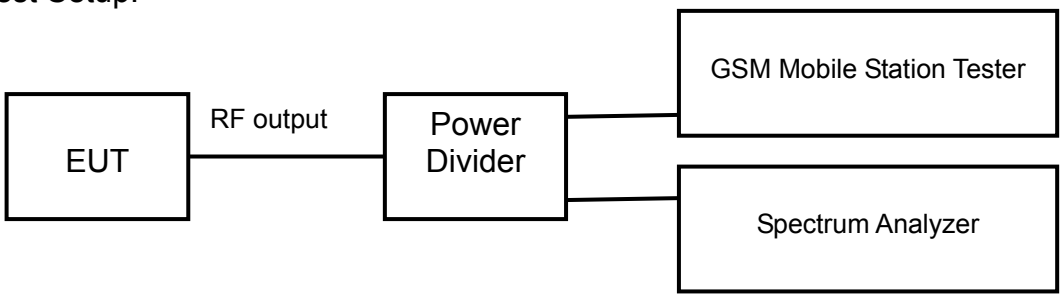
6.3 Occupied Bandwidth

Rule Part(s)
Part 2.1049

Ambient condition:

Temperature	Relative humidity	Pressure
25°C	40%	101.9kPa

Test Setup:



Test procedure:
KDB 971168 D01 v03r01 – Section 4.2

Test Settings
1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5% of the expected OBW
3. VBW ≥ 3 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5% of the 99% occupied bandwidth observed in Step 7

Limits: No specific occupied bandwidth requirements in part 2.1049

Test result:
The test results are shown in Appendix A.

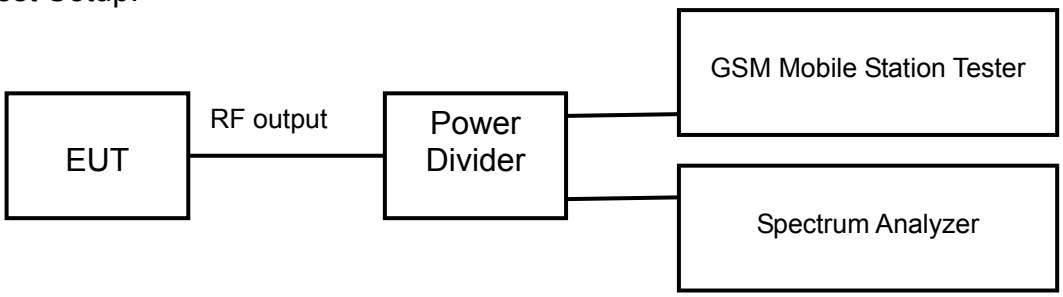
6.4 Emission Bandwidth-

Rule Part(s)
Part 2.1049

Ambient condition:

Temperature	Relative humidity	Pressure
25°C	40%	101.9kPa

Test Setup:



Test procedure:
KDB 971168 D01 v03r01 – Section 4.2

Test Settings
1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 26dB occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5% of the expected OBW
3. VBW ≥ 3 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5% of the emission bandwidth observed in Step 7

Limits: No specific occupied bandwidth requirements in part 2.1049

Test result:
The test results are shown in Appendix A.

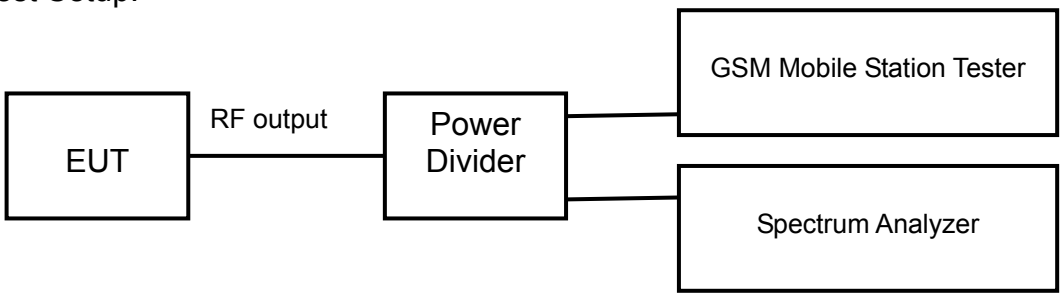
6.5 Spurious Emissions at antenna terminal

Rule Part(s)
FCC Part 2.1053/22.917 (a)/ 24.238(a)

Ambient condition:

Temperature	Relative humidity	Pressure
25°C	40%	101.9kPa

Test Setup:



Test procedure:
KDB 971168 D01 v03r01 – Section 6.0

Test Settings
1. Start frequency was set to 30MHz and stop frequency was set to 10GHz for Cell, 20GHz for PCS
2. RBW=100 kHz (For below 1GHz), 1MHz (For above 1GHz)
3. VBW ≥ 3 x RBW
4. Detector = RMS
5. Trace mode = trace average for continuous emissions, max hold for pulse emissions
6. Sweep time = auto couple
7. The trace was allowed to stabilize

Limits:
The minimum permissible attenuation level of any spurious emission is $43+\log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

Test result:
The test results are shown in Appendix A.

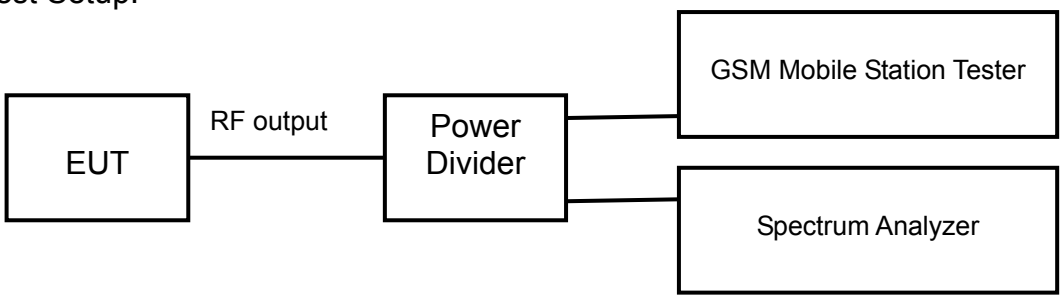
6.6 Band Edges Compliance

Rule Part (s)
FCC Part 2.1051/ 22.917(a) /Part 24.238(a)

Ambient condition:

Temperature	Relative humidity	Pressure
25°C	40%	101.9kPa

Test Setup:



Test procedure:
KDB 971168 D01 v03r01 – Section 6.0

Test Settings
1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span=2MHz
3. RBW > 1% of the emission bandwidth
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW
7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Limit: The minimum permissible attenuation level of any spurious emission is $43+\log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

Test result:
The test results are shown in Appendix A.

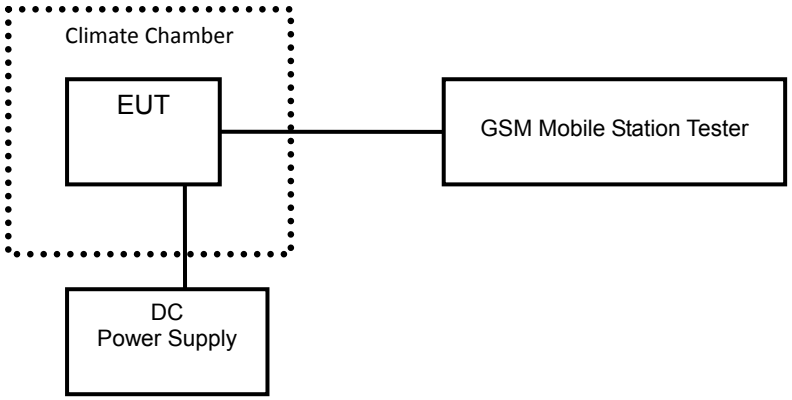
6.7 Frequency Stability

Rule Part(s)
FCC Part 2.1055/22.355 /Part 24.235

Ambient condition:

Temperature	Relative humidity	Pressure
25°C	40%	101.9kPa

Test setup:



Test Procedure:
ANSI/TIA-603-E-2016

Test Settings
1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C (The temperature range can be declared by the manufacturer). A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

Limits: For Part 22, the frequency stability of the transmitter shall be maintained within±0.00025% (±2.5 ppm) of the center frequency. For Part 24, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test result:
The test results are shown in Appendix A.

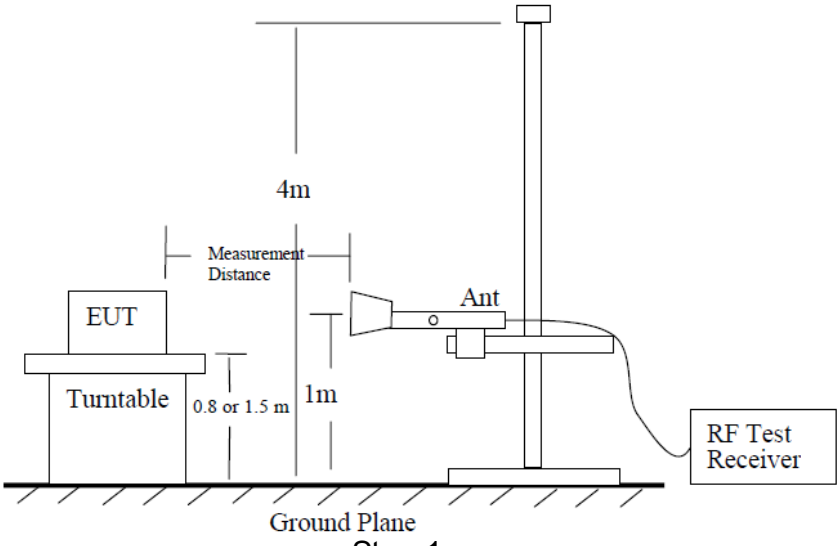
6.8 Radiated Spurious Emissions

Rule Part(s)
FCC Part2.1053/ 22.917(a)/Part 24.238(a)

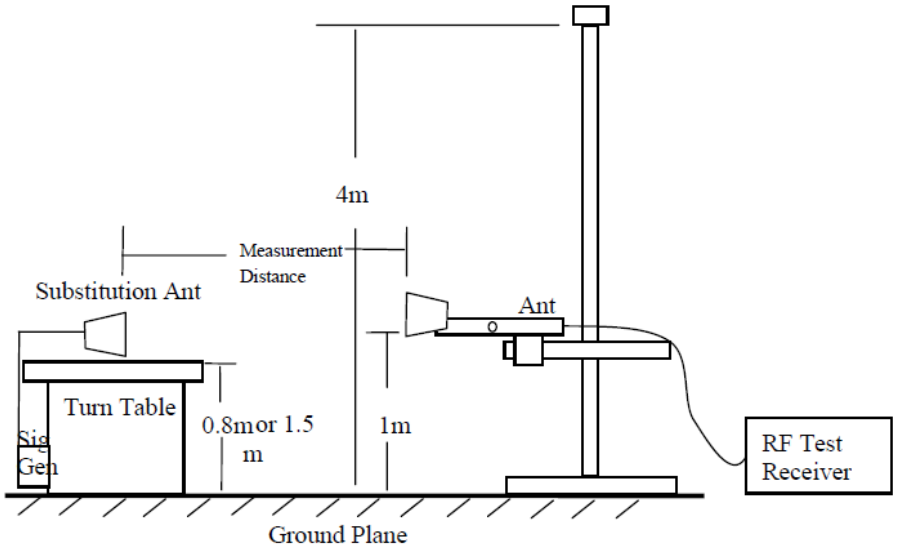
Ambient condition:

Temperature	Relative humidity	Pressure
25°C	40%	101.9kPa

Test Setup:



Step 1



Step 2

Test procedure:
The measurements procedures in TIA-603-E-2016 are used.
The spectrum was scanned from 30MHz to the 10th harmonic of the highest frequency generated within the equipment.
Step 1:
The measurement is carried out in the chamber. EUT was placed on a 0.8m (f<1GHz)/ 1.5m (f>1GHz) high non-conductive table at a 3 meters test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT. The height of receiving antenna from 1m to 4m and varies in certain range to find the maximum power value. A radio link shall be established between EUT and Tester. The output power of the cell signal of the tester will be decreased until the output power of the EUT reach a maximum value. A peak detector is used and RBW is set to 100 kHz (f<1GHz)/1MHz (f>1GHz). The antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum power value on spectrum analyzer or receiver. The spectrum analyzer scans from 30MHz to 10th harmonic of the carrier. A notch filter is necessary in the band near to the carrier frequency. A high pass filter is needed to avoid the distortion of the testing equipment in the band above the carrier frequency.
Step 2:
A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
A power (Pmea) is applied to the input of the substitution antenna, and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (Pmea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
A “reference path loss” should be calculated after test. The attenuation of “reference path loss” is the cable loss between the Signal Source with the Substitution Antenna (Pca) and the Substitution Antenna Gain (Ga).
Calculation procedure:
The data of cable loss and antenna gain has been calibrated in full testing frequency range before the testing.
The power of the Radiated Spurious Emissions is calculated by adding the cable loss and antenna gain. The basic equation with a sample calculation is as followed:
Power (EIRP) = Pmea+ Pca + Ga
This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15dB) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP – 2.15 (dB).
Assumed the power of signal source record is -20dBm. A cable loss of -30dB, and an antenna gain of 11dB are added.
P=Pmea+Pca+Ga=(-20dBm)+(-30dB)+(11dB)= -39dBm
Note: We tested both horizontal and vertical polarization, but only the largest numerical polarity of the two polarities was recorded in the final report.
Test result:
The test results are shown in Appendix B.

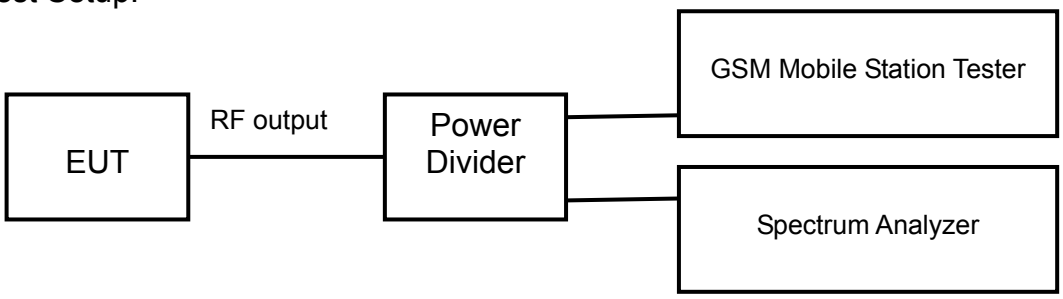
6.9 Peak-Average Ratio

Rule Part(s)
FCC Part 24.232(d)

Ambient condition:

Temperature	Relative humidity	Pressure
25°C	40%	101.9kPa

Test Setup:



Test procedure:
KDB 971168 D01 v03r01 – Section 5.7.1

Test settings:
1. The signal analyzer's CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW > Emission bandwidth of signal
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

Limits: the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

Test result:
The test results are shown in Appendix A

7 MEASUREMENT UNCERTAINTIES

Items	Uncertainty	
Occupied Bandwidth	3kHz	
Peak power output	0.67dB	
Band edge compliance	1.20dB	
Spurious emissions	30MHz～1GHz	2.83dB
	1GHz～12.75GHz	2.50dB
	12.75GHz～25GHz	2.75dB

8 TEST EQUIPMENTS

No.	Name/Model	Manufacturer	S/N	Calibration Date	Calibration Due Date
1	MT8820C Mobile Station Tester	Anritsu	6201300660	2020.08.20	2021.08.19
2	CMW500 Radio Communication Station	R&S	161702	2020.08.20	2021.08.19
2	FSV40 Spectrum Analyzer	R&S	101065	2020.08.20	2021.08.19
3	N9020A Spectrum Analyzer	Agilent	MY48010771	2020.08.20	2021.08.19
4	6007 Power Divider	Weinschel	6007-GJ-1	2020.08.20	2021.08.19
5	DC Power Supply E3645A	Agilent	MY40000741	2021.04.15	2022.04.14
6	Temperature chamber SH241	ESPEC	92013758	2020.08.20	2021.08.19
7	12.65m×8.03m×7.50m Fully-Anechoic Chamber	FRANKONIA	-----	-----	-----
8	23.18m×16.88m×9.60m Semi-Anechoic Chamber	FRANKONIA	---	-----	-----
9	Turn table Diameter:1m	FRANKONIA	-----	-----	-----
10	Turn table Diameter:5m	FRANKONIA	-----	-----	-----
11	Antenna master FAC(MA4.0)	MATURO	-----	-----	-----
12	Antenna master SAC(MA4.0)	MATURO	-----	-----	-----
13	9.080m×5.255m×3.525m Shielding room	FRANKONIA	-----	-----	-----
14	HF 907 Double-Ridged Waveguide Horn Antenna	R&S	100512	2020.08.20	2021.08.19
15	HF 907 Double-Ridged Waveguide Horn Antenna	R&S	100513	2020.08.20	2021.08.19
16	HL562 Ultra log antenna	R&S	100016	2020.08.20	2021.08.19
17	3160-09 Receive antenna	SCHWARZ-BECK	002058-002	2020.08.20	2021.08.19
18	ESI 40 EMI test receiver	R&S	100015	2020.08.20	2021.08.19
19	ESCS30 EMI test receiver	R&S	100029	2020.08.20	2021.08.19
20	HL562 Receive antenna	R&S	100167	2020.08.20	2021.08.19
21	ENV216 AMN	R&S	3560.6550.12	2020.08.20	2021.08.19

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

1. RF Power Output

GSM850

GPRS Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	RF Power Output (dBm)
836.4	189	4Downlink1uplink	32.52
848.8	251		32.30
824.2	128		32.34
836.4	189	3Downlink2uplink	32.04
848.8	251		31.80
824.2	128		31.86

EGPRS (8PSK) Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	RF Power Output (dBm)
836.4	189	8PSK 4Downlink1uplink	26.75
848.8	251		26.84
824.2	128		26.89
836.4	189	8PSK 3Downlink2uplink	26.58
848.8	251		26.68
824.2	128		26.75
836.4	189	8PSK 2Downlink3uplink	26.55
848.8	251		26.52
824.2	128		26.55
836.4	189	8PSK 1Downlink4uplink	26.35
848.8	251		26.33
824.2	128		27.39

PCS1900

GPRS Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	RF Power Output (dBm)
1850.2	512	4Downlink1uplink	28.26
1880.0	661		27.77
1909.8	810		27.85
1850.2	512	3Downlink2uplink	27.93
1880.0	661		27.45
1909.8	810		27.40

EGPRS (8PSK) Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	RF Power Output (dBm)
1850.2	512	8PSK 4Downlink1uplink	25.39
1880.0	661		24.86
1909.8	810		25.11
1850.2	512	8PSK 3Downlink2uplink	25.27
1880.0	661		25.34
1909.8	810		24.99
1850.2	512	8PSK 2Downlink3uplink	25.17
1880.0	661		24.99
1909.8	810		24.86
1850.2	512	8PSK 1Downlink4uplink	25.02
1880.0	661		24.52
1909.8	810		24.69

2. Occupied Bandwidth

GSM850

GPRS MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of 99% Power (kHz)
836.4	189	251.81
848.8	251	240.23
824.2	128	251.81

EDGE (8PSK) MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of 99% Power (kHz)
836.4	189	253.26
848.8	251	246.02
824.2	128	254.70

PCS1900

GPRS MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of 99% Power (kHz)
1850.2	512	247.47
1880	661	243.13
1909.8	810	248.91

EDGE (8PSK) MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of 99% Power (kHz)
1850.2	512	237.34
1880	661	244.57
1909.8	810	238.78

GSM850

GPRS MODE:

Channel 189

Channel 251

Channel 128

EDGE (8PSK) MODE:

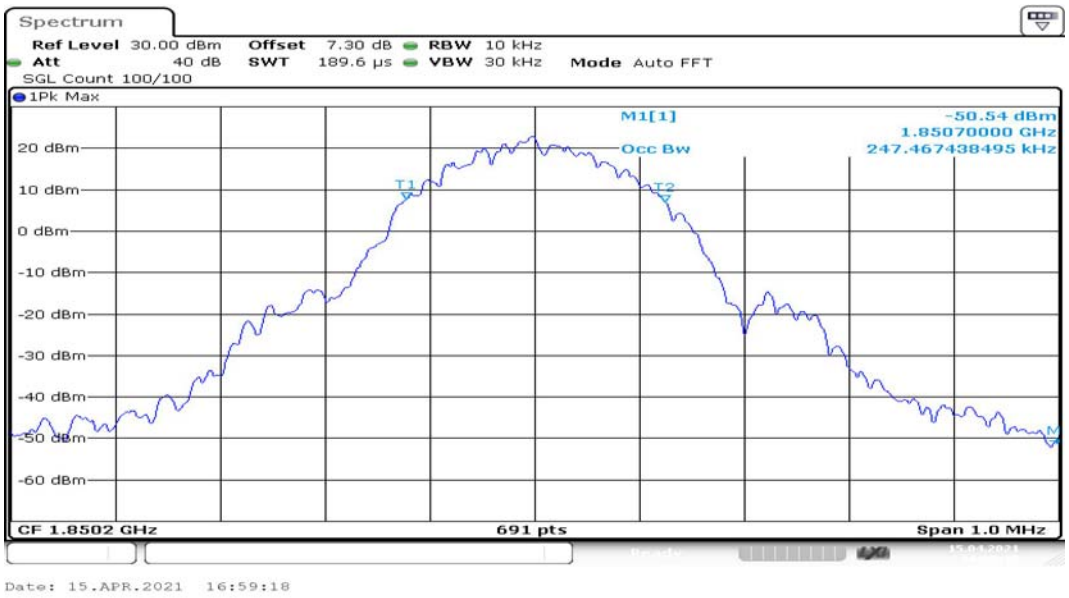
Channel 189

Channel 251

Channel 128

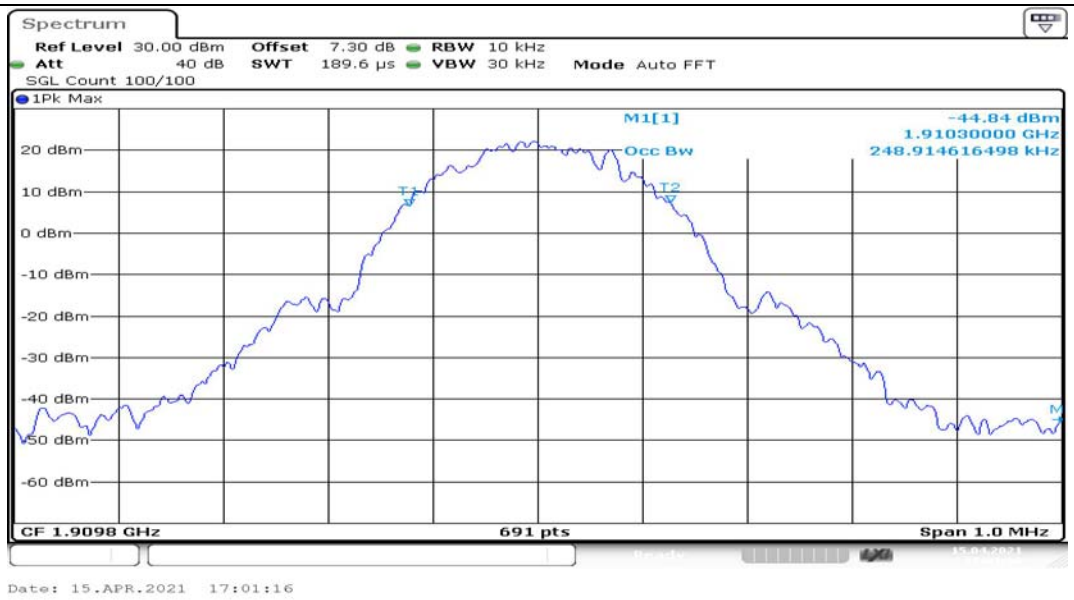
PCS1900

GPRS MODE:



Channel 512

Channel 661

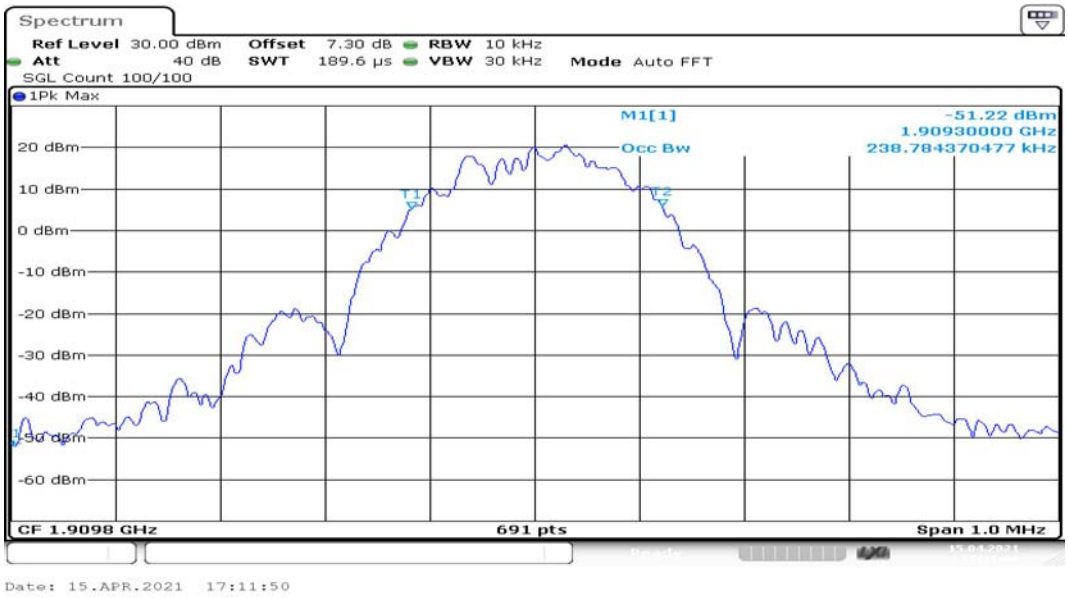


Channel 810

EDGE (8PSK) MODE:

Channel 512

Channel 661



Channel 810

3. Emission Bandwidth

GSM850

GPRS MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of 99% Power (kHz)
836.4	189	305.40
848.8	251	321.30
824.2	128	318.40

EDGE (8PSK) MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of -26dB transmitter power(kHz)
836.4	189	290.90
848.8	251	299.60
824.2	128	309.70

PCS1900

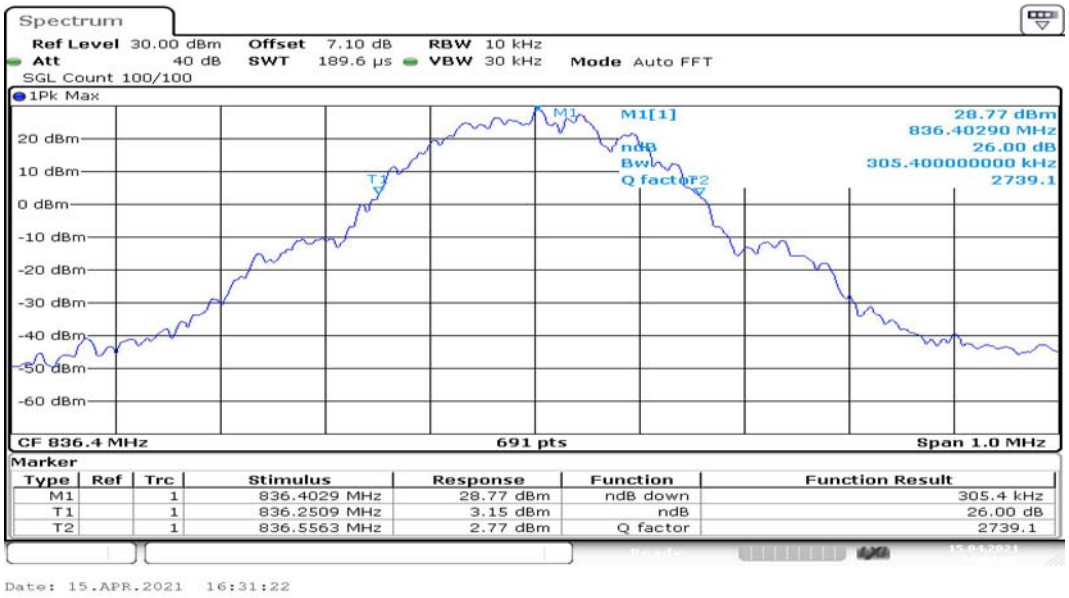
GPRS MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of 99% Power (kHz)
1850.2	512	309.70
1880	661	315.50
1909.8	810	303.90

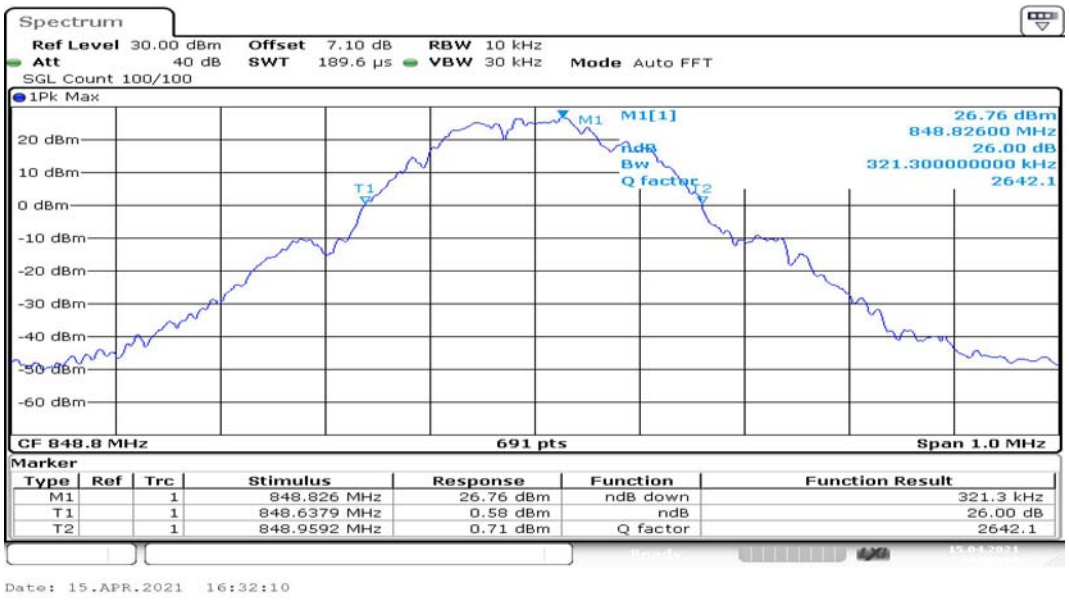
EDGE (8PSK) MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of -26dB transmitter power(kHz)
1850.2	512	312.60
1880	661	314.00
1909.8	810	303.90

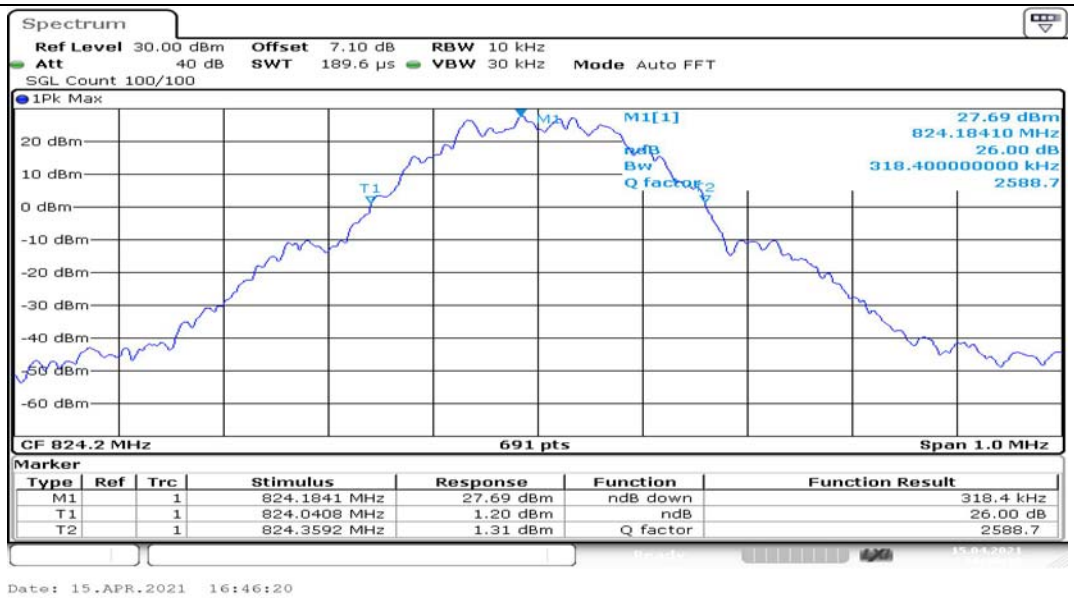
GSM850
GPRS MODE:



Channel 189

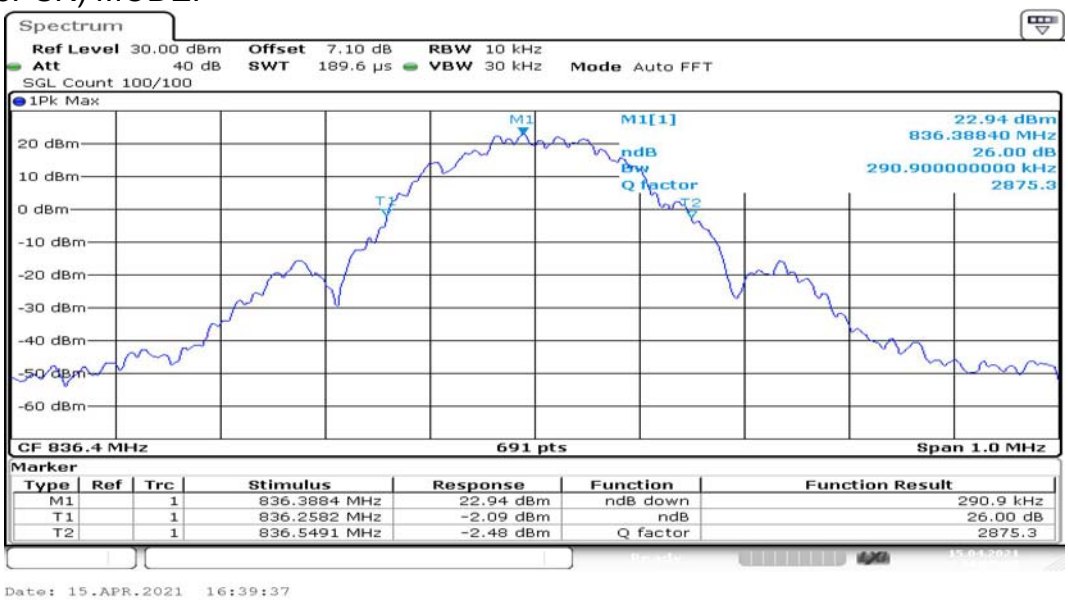


Channel 251

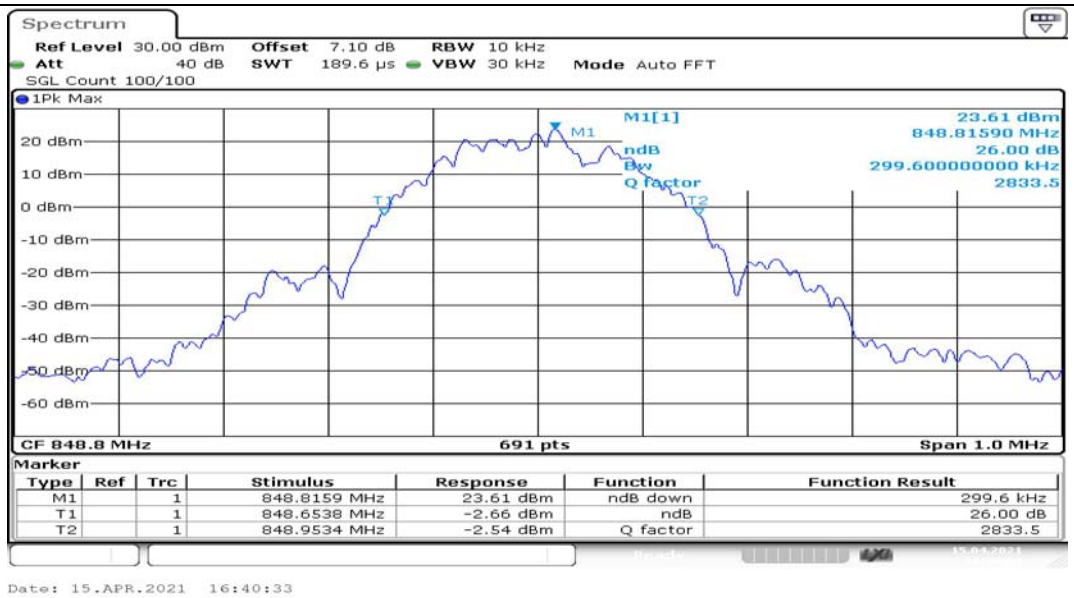


Channel 128

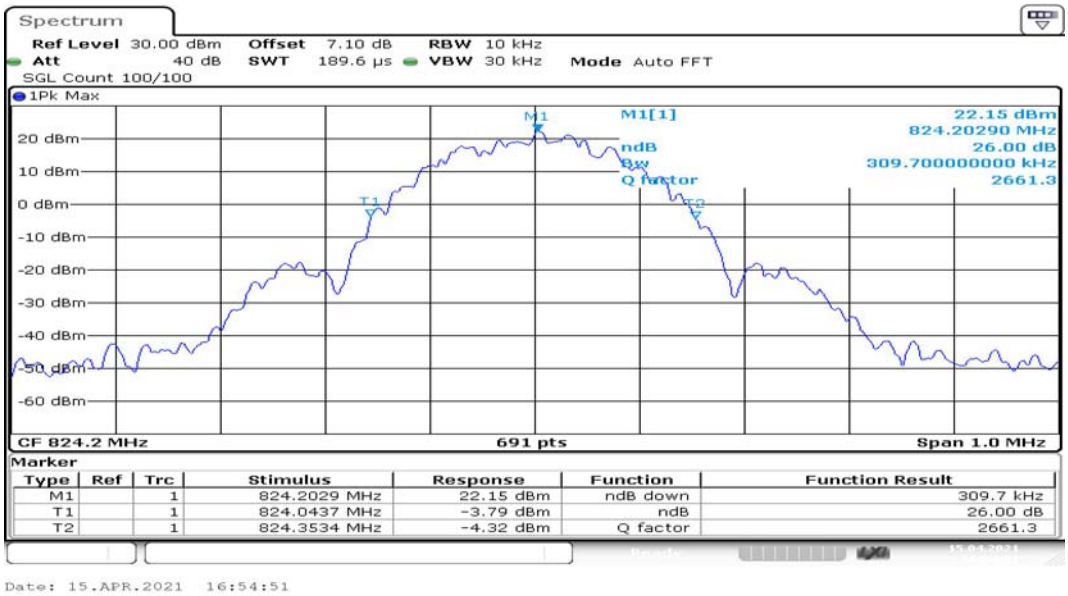
EDGE (8PSK) MODE:



Channel 189



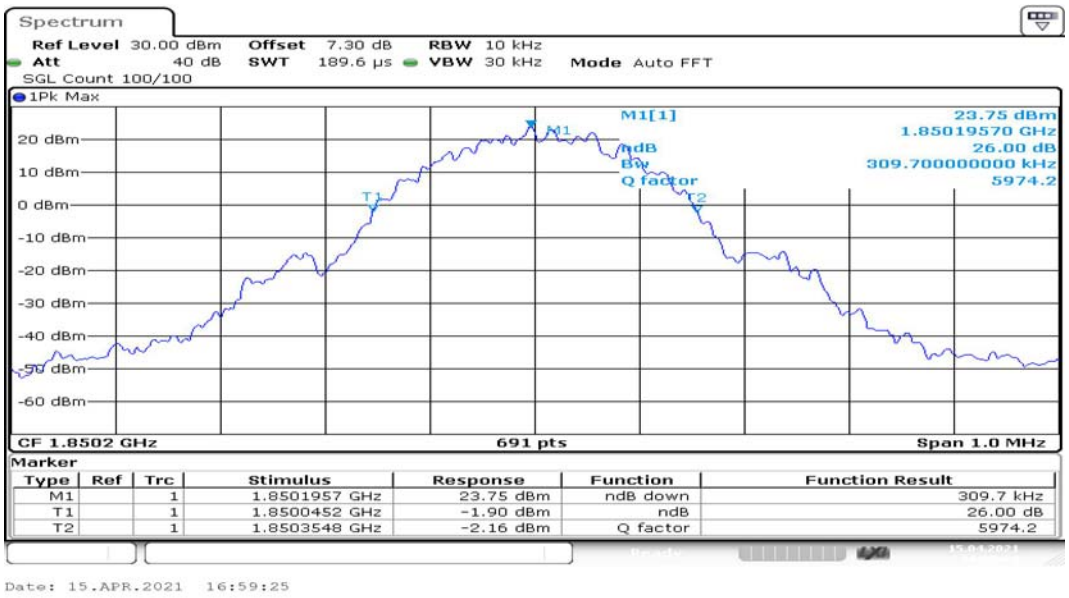
Channel 251



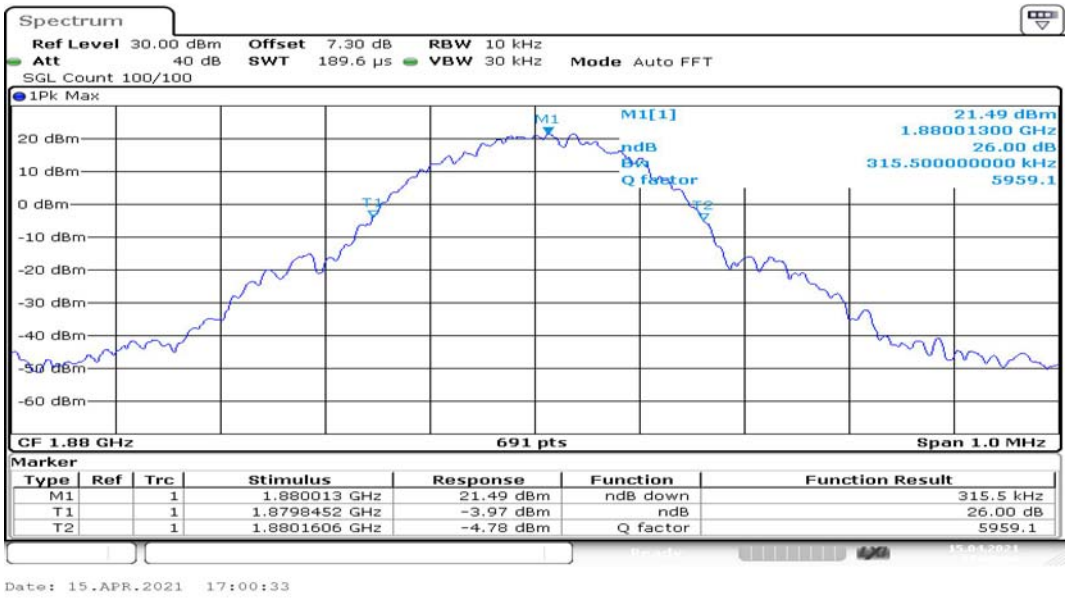
Channel 128

PCS1900

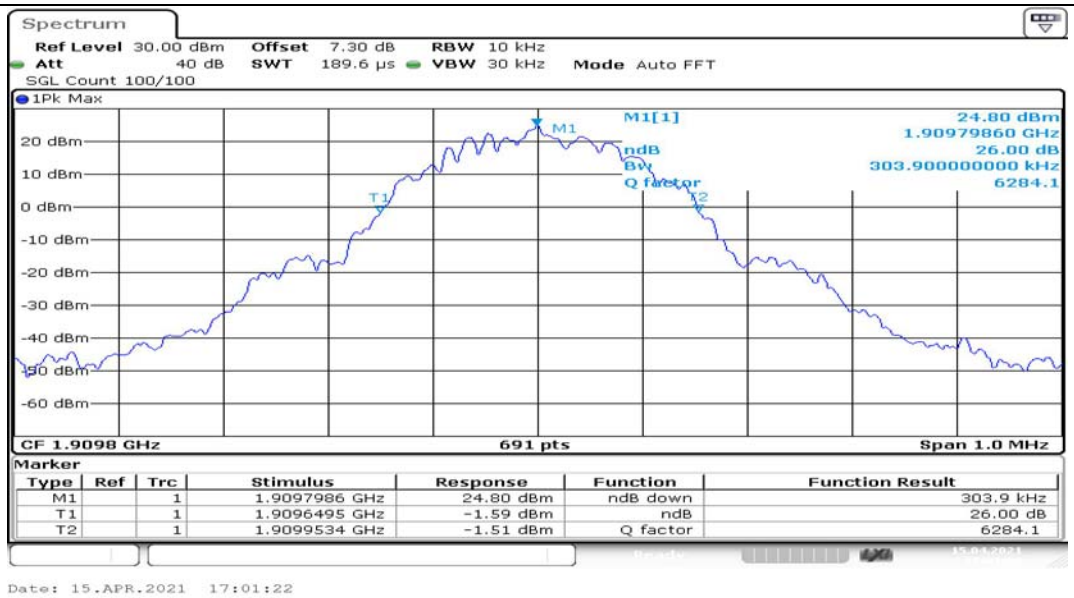
GPRS MODE:



Channel 512

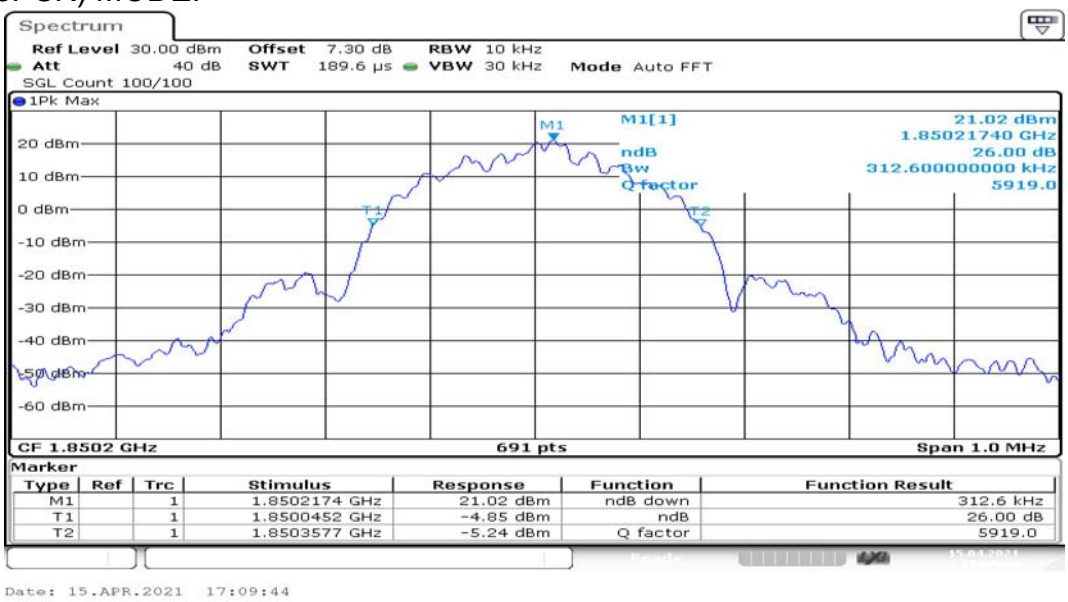


Channel 661

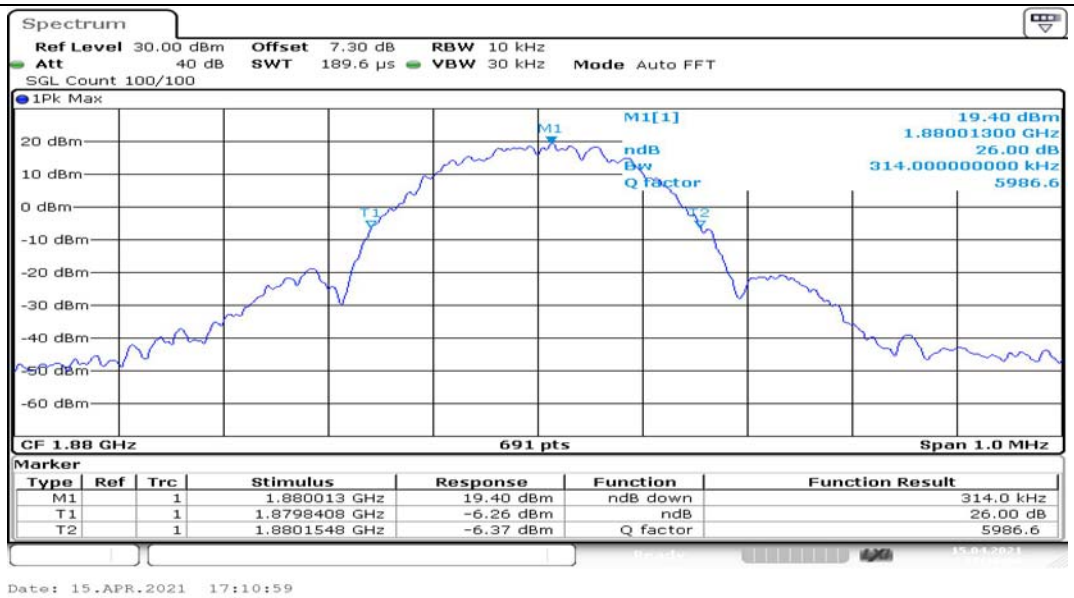


Channel 810

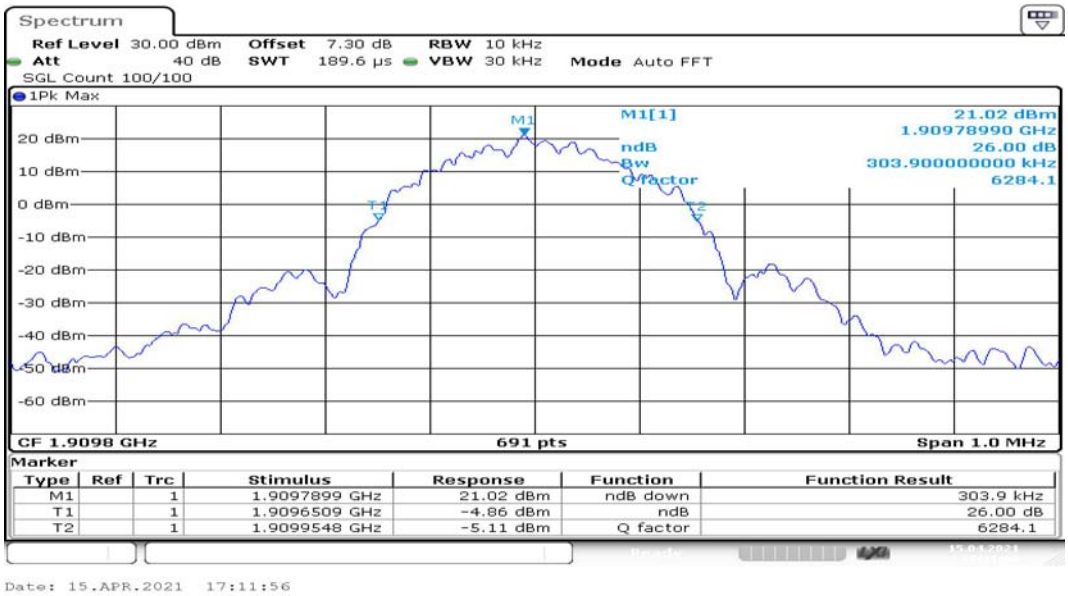
EDGE (8PSK) MODE:



Channel 512



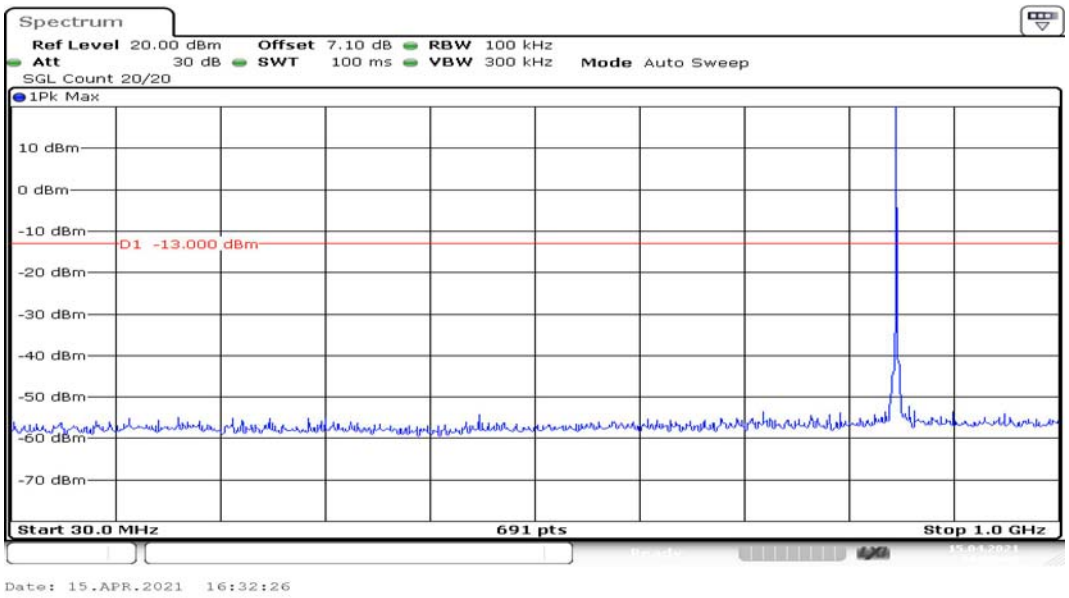
Channel 661



Channel 810

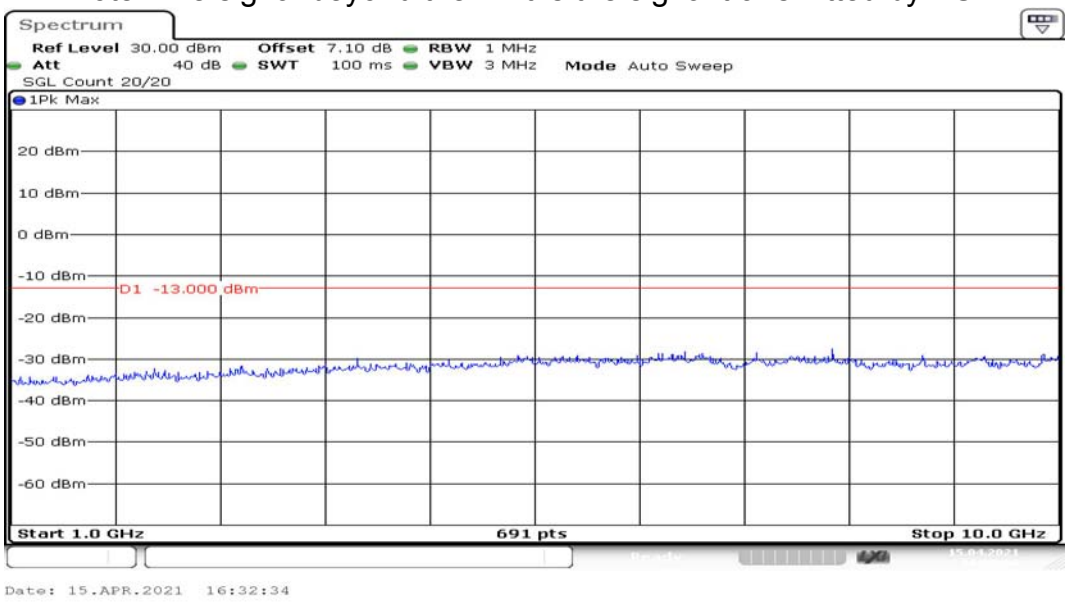
4. Spurious Emissions at antenna terminal
GSM850

GPRS MODE:



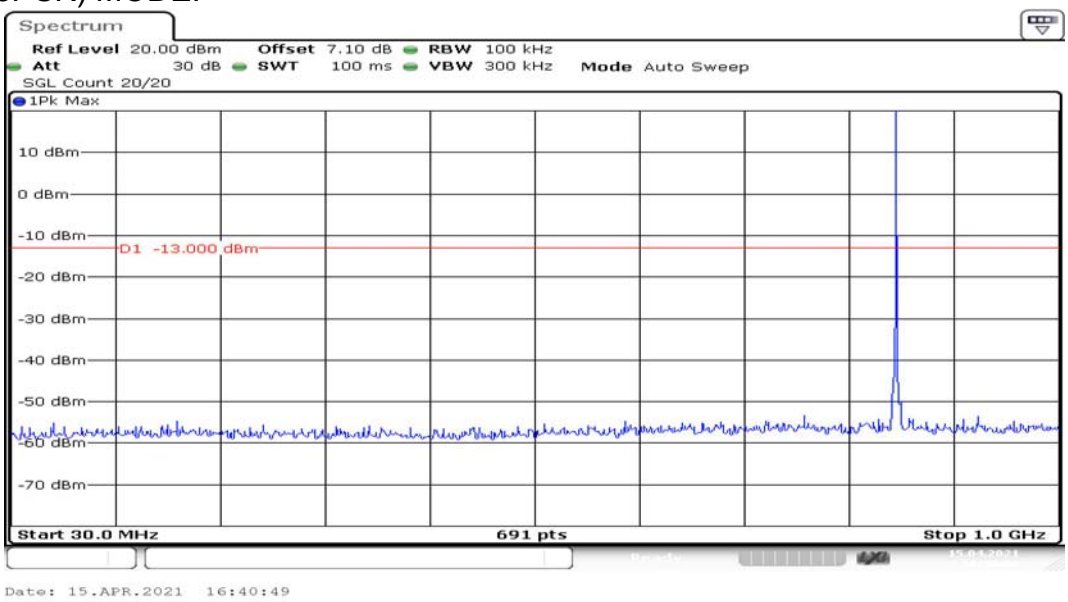
Channel 189 1GHz~10GHz(dBm)

Note: The signal beyond the limit is the signal transmitted by EUT.



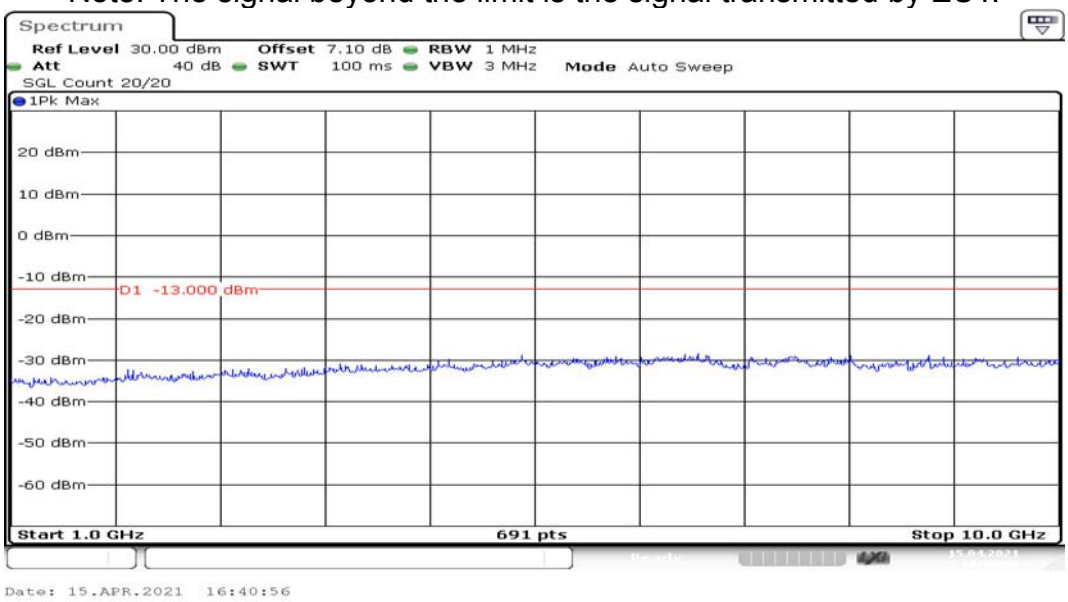
Channel 189 30MHz~1GHz(dBm)

EDGE (8PSK) MODE:



Channel 189 1GHz~10GHz(dBm)

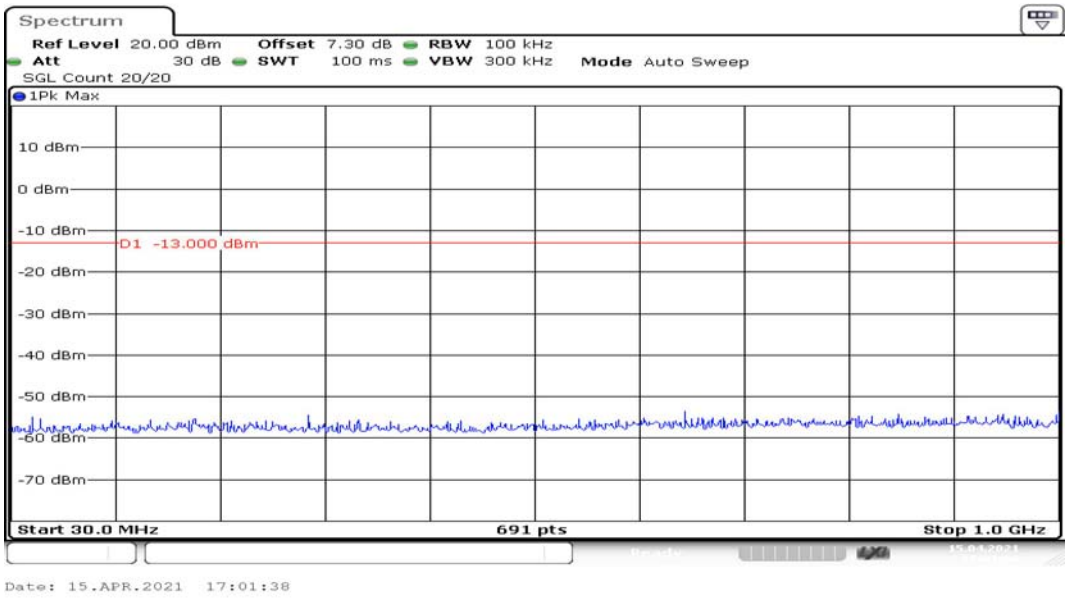
Note: The signal beyond the limit is the signal transmitted by EUT.



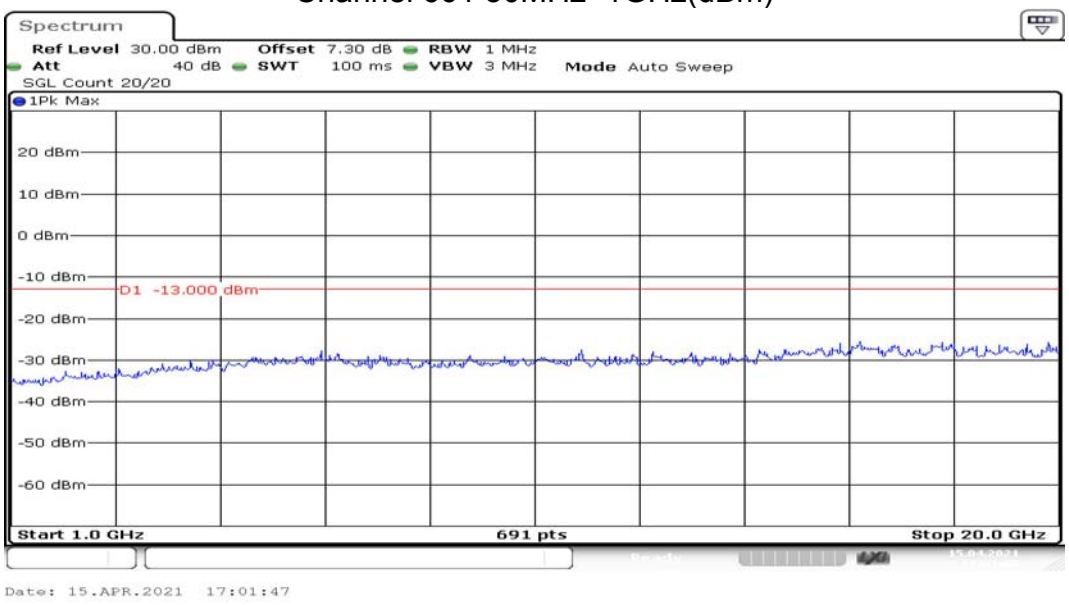
Channel 189 30MHz~1GHz(dBm)

PCS1900

GPRS MODE:



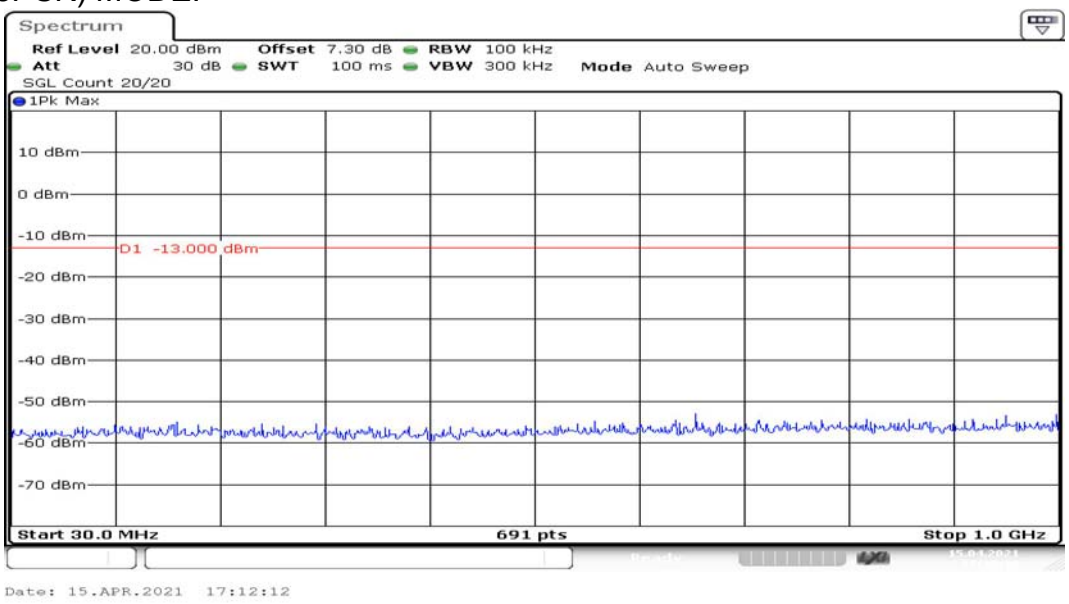
Channel 661 30MHz~1GHz(dBm)



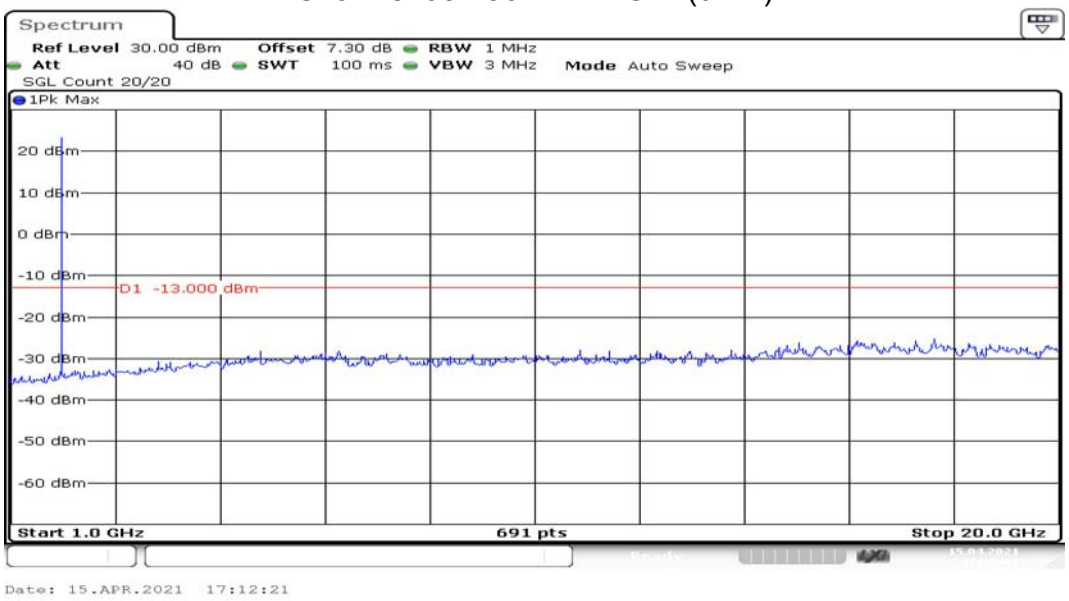
Channel 661 1GHz~20GHz(dBm)

Note: The signal beyond the limit is the signal transmitted by EUT.

EDGE (8PSK) MODE:



Channel 661 30MHz~1GHz(dBm)

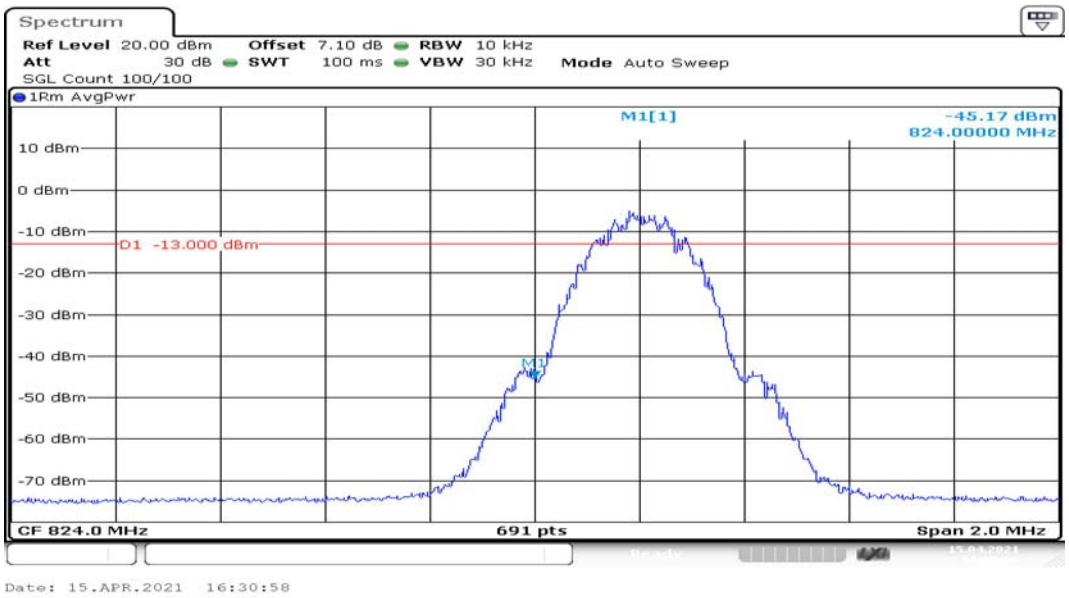


Channel 661 1GHz~20GHz(dBm)

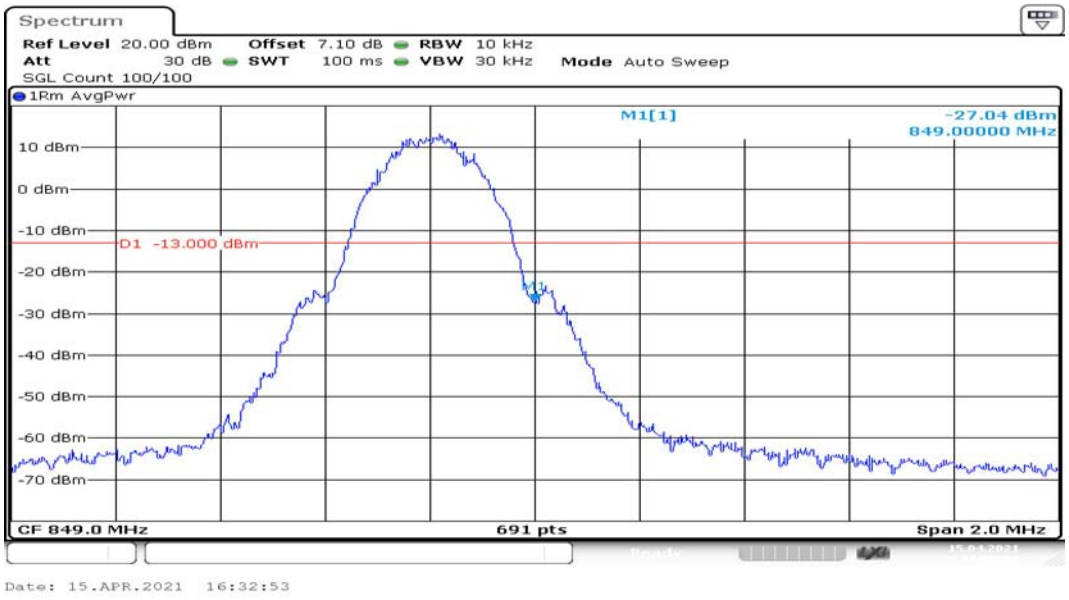
Note: The signal beyond the limit is the signal transmitted by EUT.

5. Band Edges Compliance
GSM850

GPRS MODE:

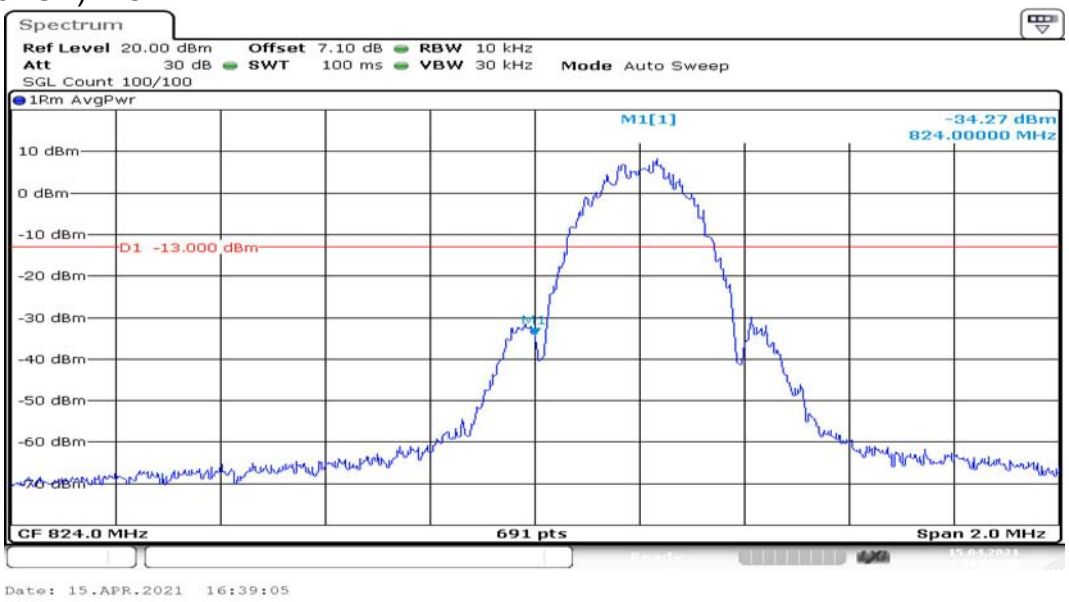


Channel 128

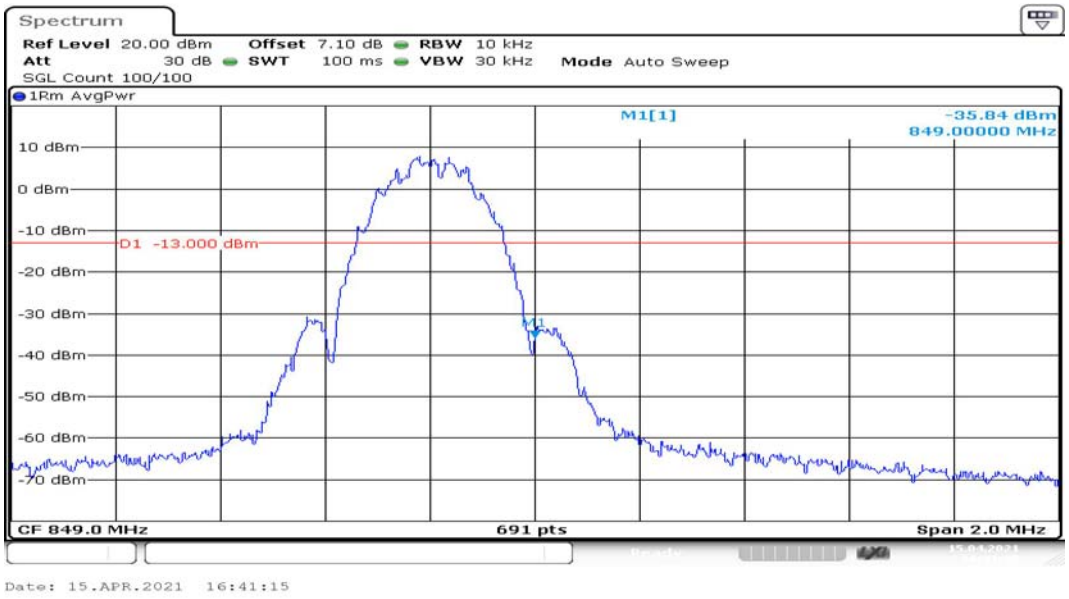


Channel 251

EDGE (8PSK) MODE:



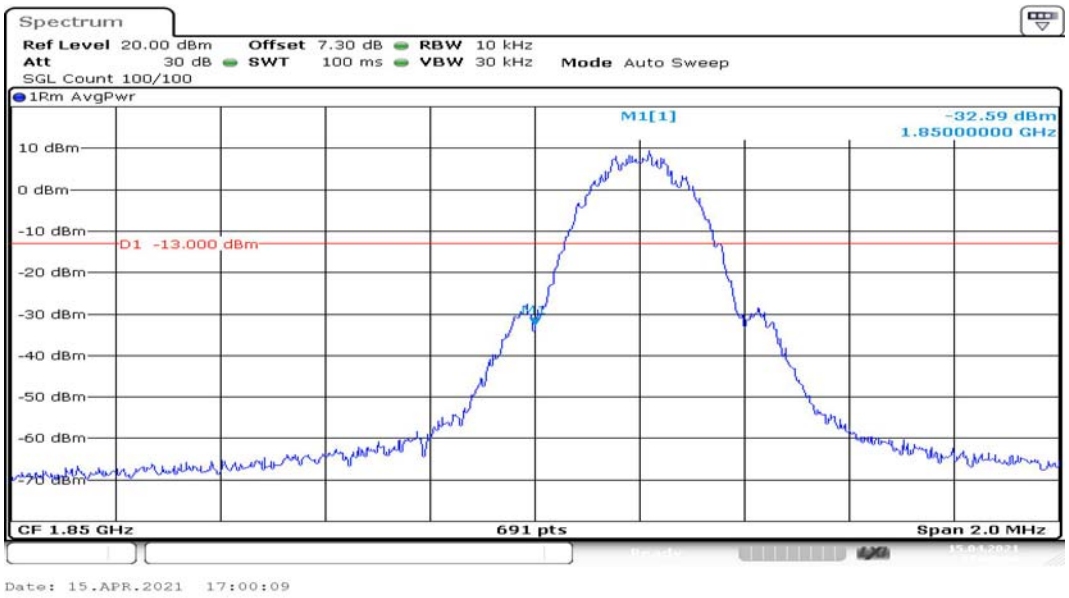
Channel 128



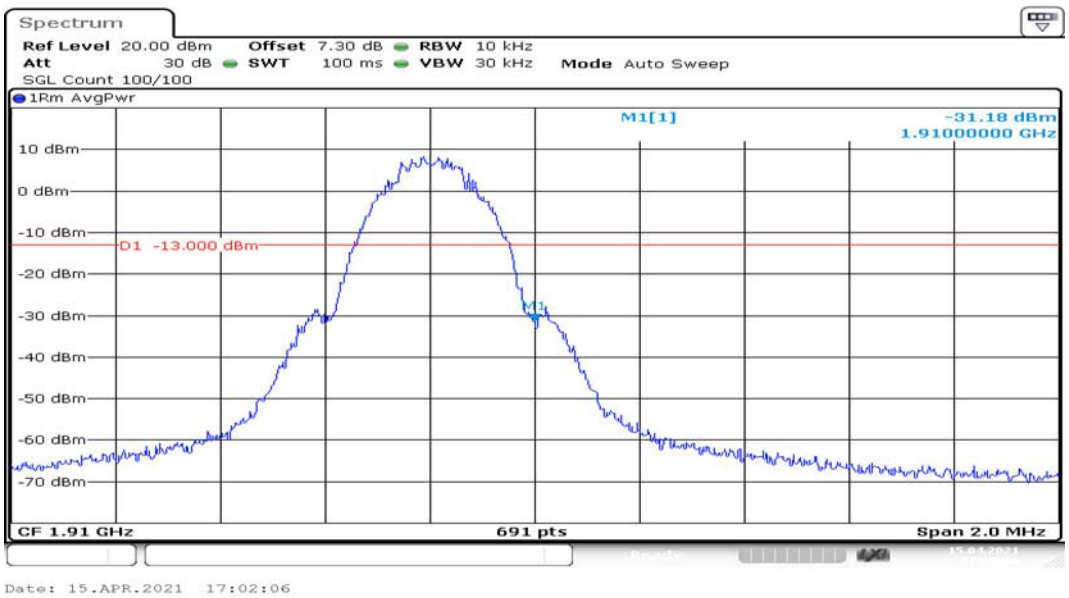
Channel 251

PCS1900

GPRS MODE:

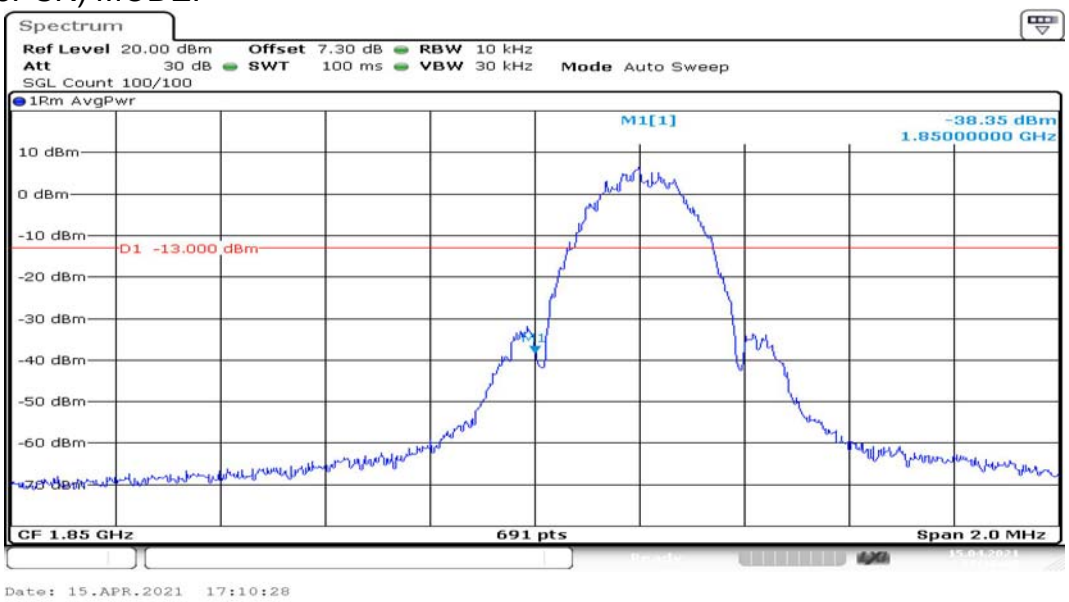


Channel 512

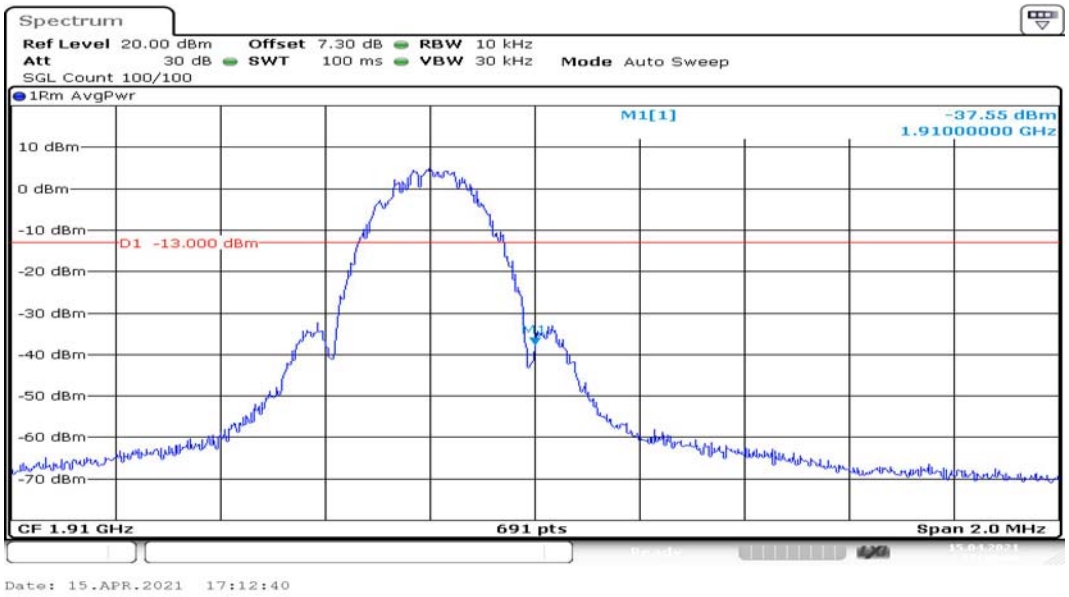


Channel 810

EDGE (8PSK) MODE:



Channel 512



Channel 810

6. Frequency Stability

GSM850

GPRS MODE:

Temperature(°C)	Test Result (ppm)@NV		
	Channel 128	Channel 189	Channel 251
-40	-0.006	-0.003	-0.008
-30	-0.004	-0.001	-0.007
-20	-0.005	-0.001	-0.005
-10	-0.016	0.002	-0.012
0	-0.009	-0.005	-0.008
+10	-0.004	-0.001	-0.003
+20	0.000	0.000	0.000
+30	-0.002	0.002	-0.010
+40	-0.007	0.001	0.000
+50	-0.006	-0.003	-0.005
+55	-0.009	-0.005	-0.008
Voltage	Test Result (ppm)@NT		
	Channel 128	Channel 189	Channel 251
LV	-0.011	-0.006	-0.009
HV	-0.008	-0.004	-0.006

EDGE (8PSK) MODE:

Temperature(°C)	Test Result (ppm)@NV		
	Channel 128	Channel 189	Channel 251
-40	0.003	0.004	0.005
-30	0.001	0.000	0.001
-20	-0.001	-0.002	0.008
-10	-0.006	-0.006	0.004
0	0.002	0.001	0.000
+10	-0.005	-0.007	0.003
+20	0.000	0.000	0.000
+30	-0.005	-0.005	0.005
+40	0.001	-0.001	-0.001
+50	0.001	-0.001	0.002
+55	0.003	-0.004	0.003
Voltage	Test Result (ppm)@NT		
	Channel 128	Channel 189	Channel 251
LV	0.001	-0.010	0.001
HV	0.003	-0.002	0.002

PCS1900

GPRS MODE:

Temperature(°C)	Test Result (ppm)@NV		
	Channel 512	Channel 661	Channel 810
-40	-0.004	-0.006	0.004
-30	-0.001	-0.005	0.002
-20	0.005	-0.003	0.001
-10	0.003	-0.007	-0.002
0	0.004	-0.004	-0.001
+10	0.003	-0.006	-0.004
+20	0.000	0.000	0.000
+30	0.007	-0.004	-0.001
+40	0.003	-0.008	-0.003
+50	0.007	-0.003	0.001
+55	0.004	-0.006	0.003
Voltage	Test Result (ppm)@NT		
	Channel 512	Channel 661	Channel 810
LV	0.002	-0.008	-0.001
HV	0.002	-0.002	-0.002

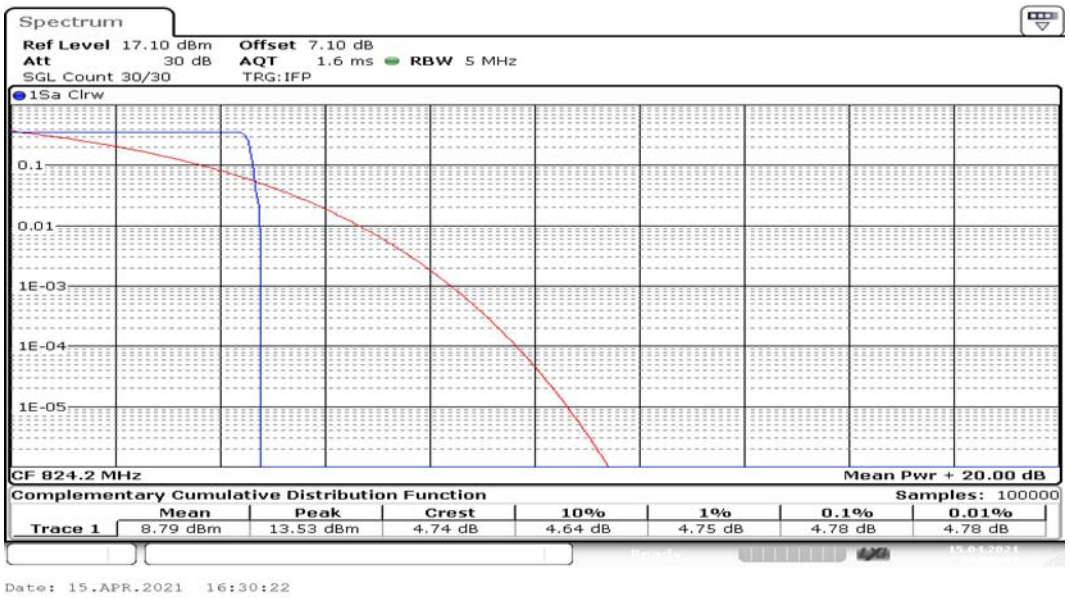
EDGE (8PSK) MODE:

Temperature(°C)	Test Result (ppm)@NV		
	Channel 512	Channel 661	Channel 810
-40	-0.005	0.004	-0.004
-30	-0.007	0.001	-0.001
-20	-0.003	0.004	0.003
-10	-0.007	0.009	0.007
0	-0.006	0.001	-0.001
+10	-0.004	0.001	-0.002
+20	0.000	0.000	0.000
+30	-0.004	0.002	0.001
+40	-0.007	0.004	0.000
+50	-0.004	0.009	-0.002
+55	-0.003	0.005	-0.006
Voltage	Test Result (ppm)@NT		
	Channel 512	Channel 661	Channel 810
LV	0.000	0.000	0.001
HV	-0.007	0.002	0.003

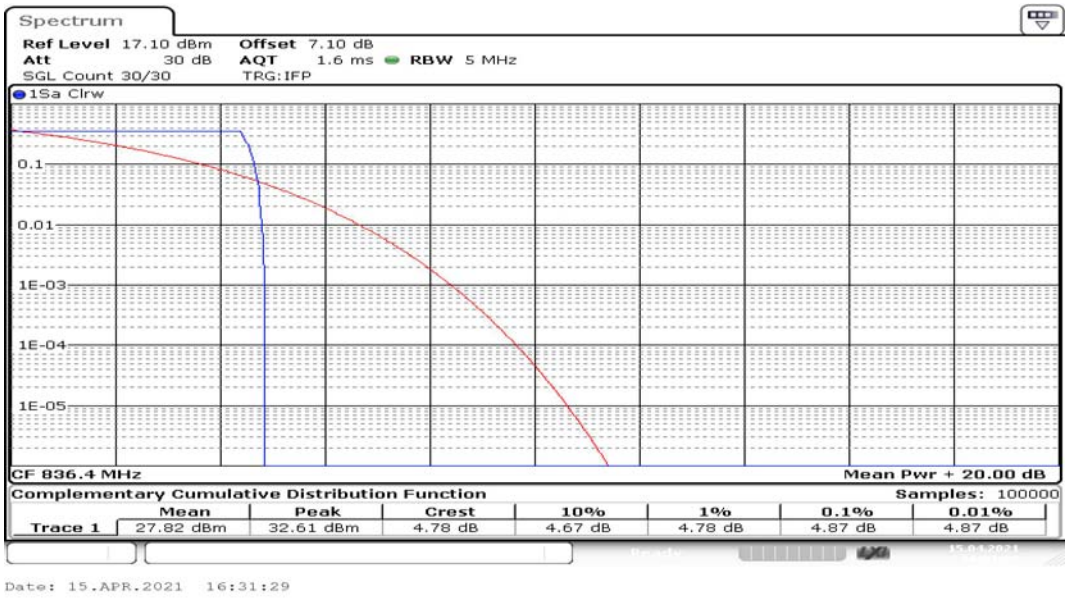
7. Peak-Average Ratio

GSM850

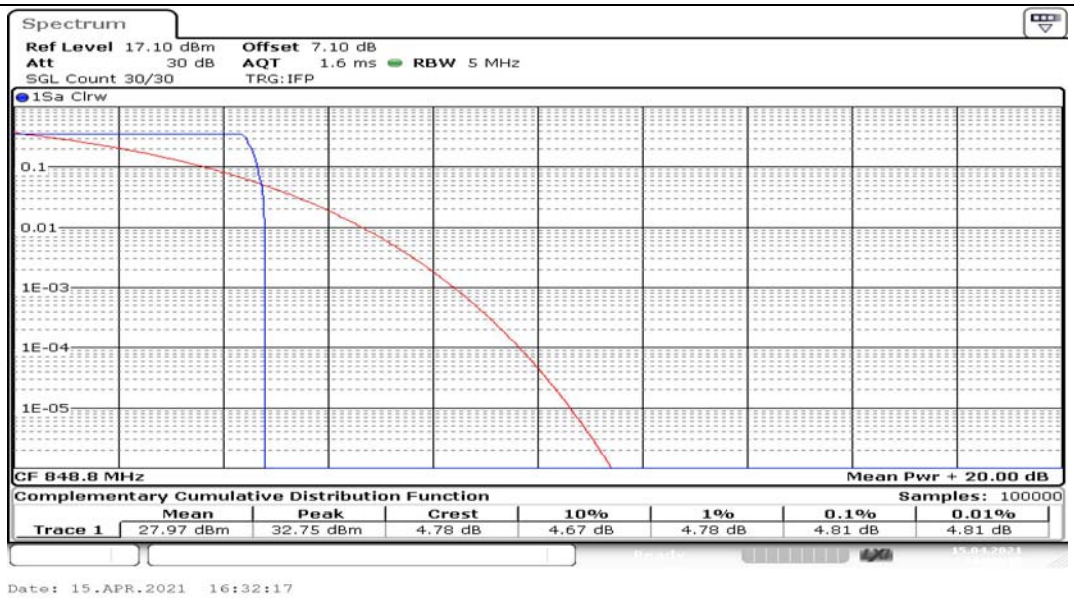
GPRS MODE:



Channel 128

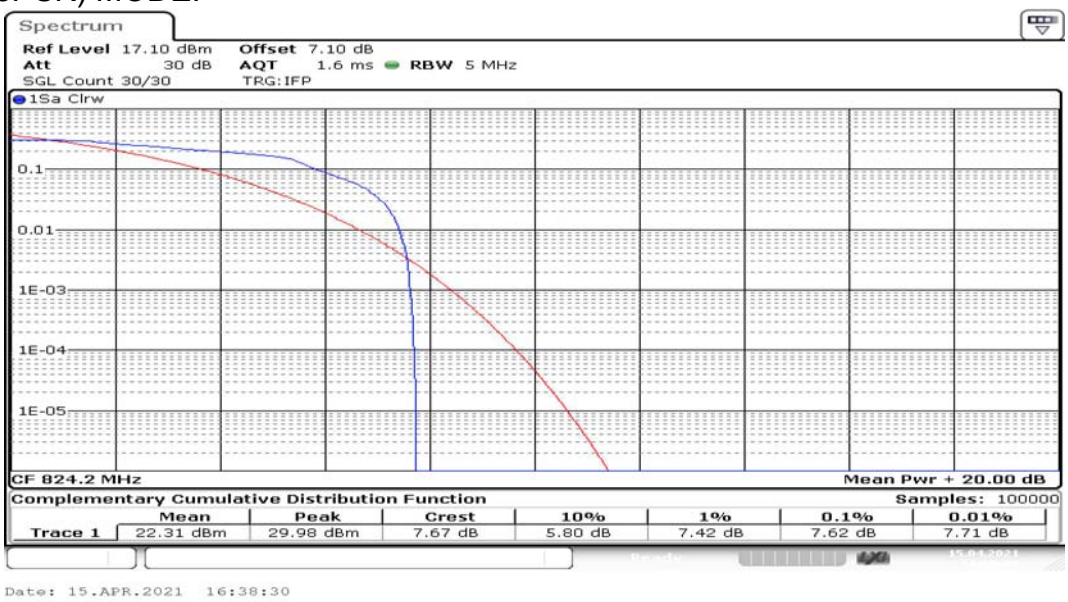


Channel 189

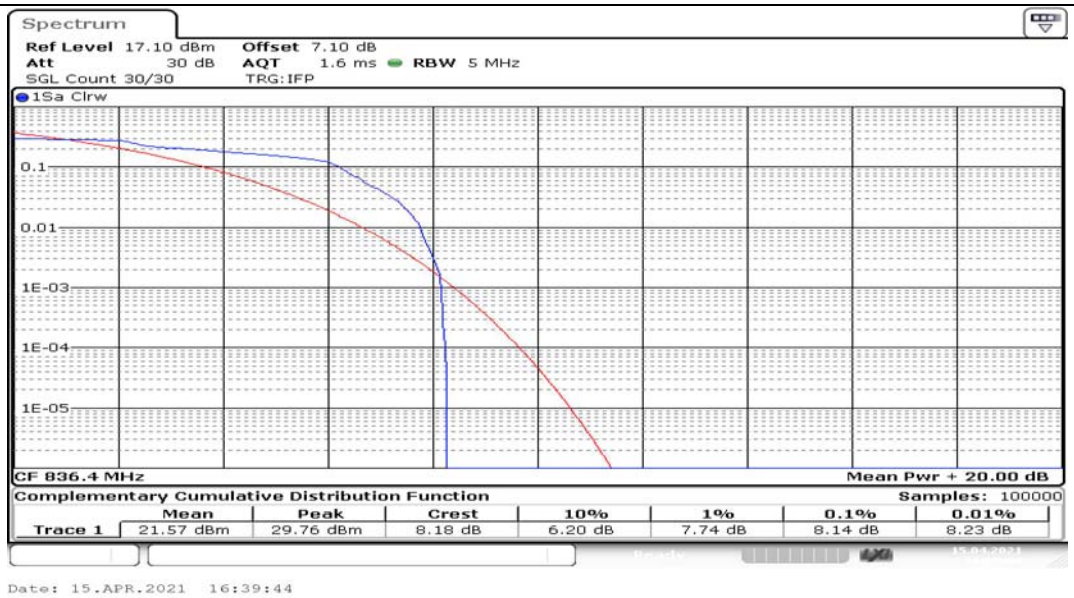


Channel 251

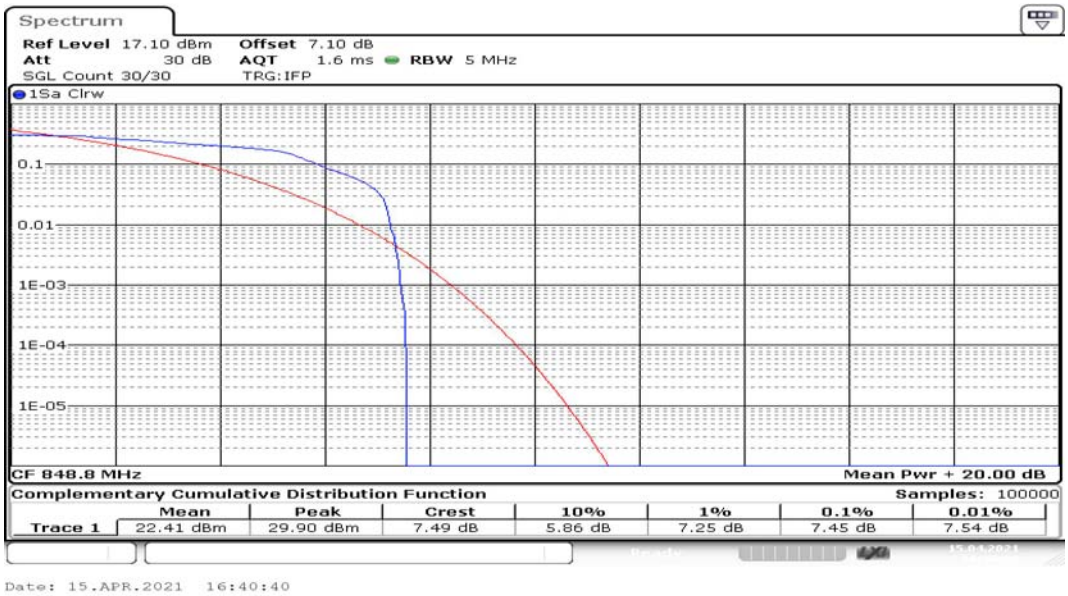
EDGE (8PSK) MODE:



Channel 128



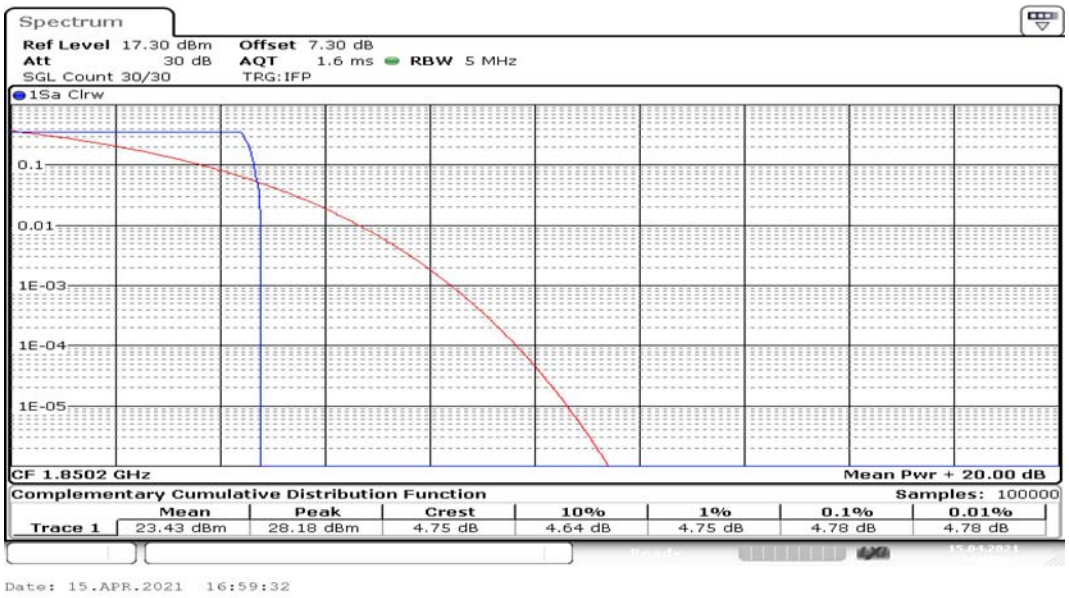
Channel 189



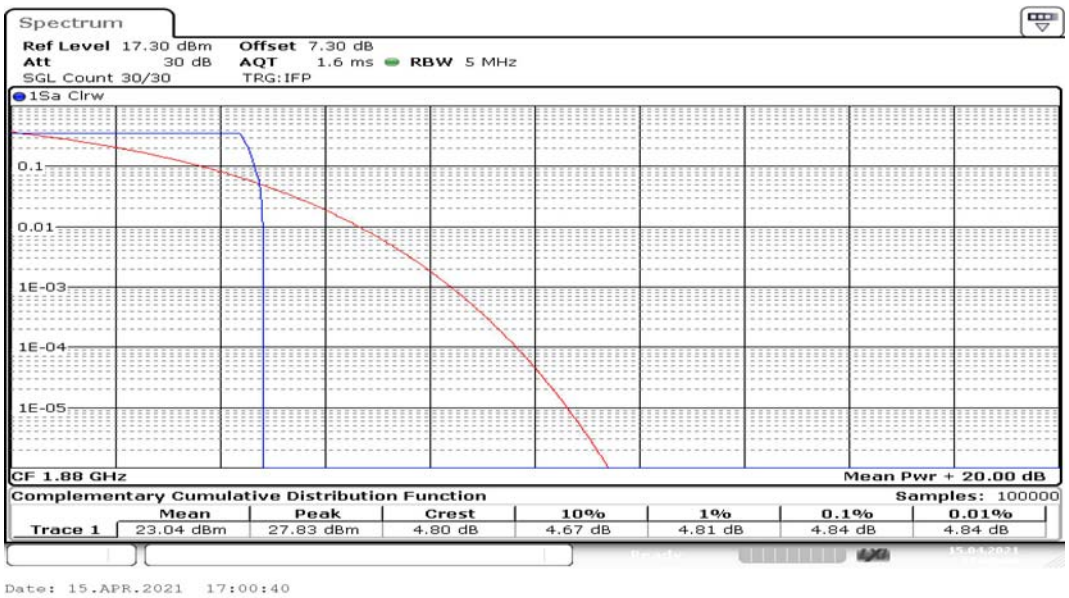
Channel 251

PCS1900

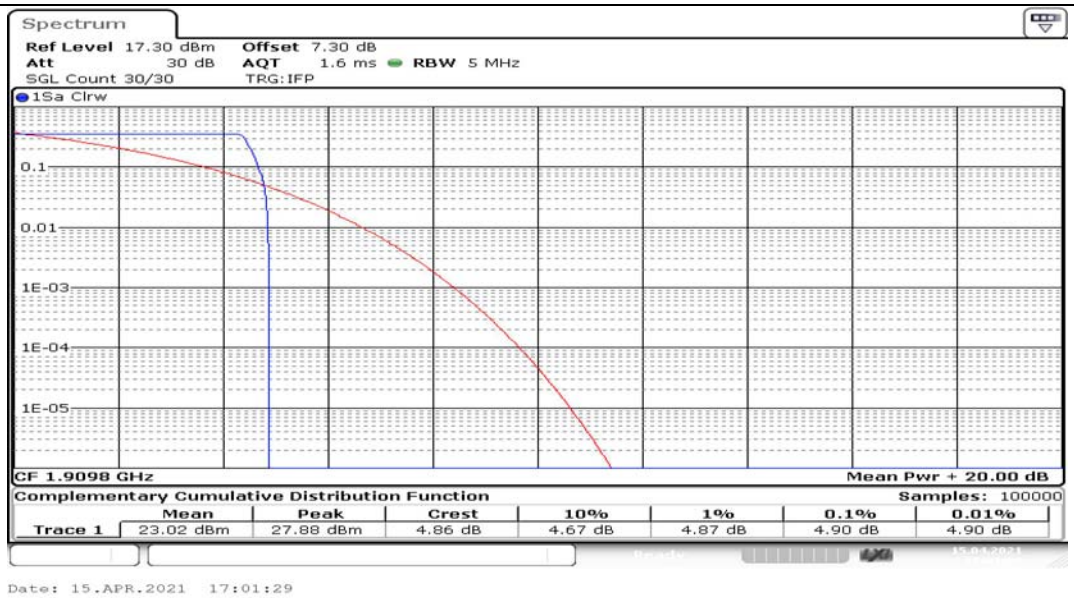
GPRS MODE:



Channel 512

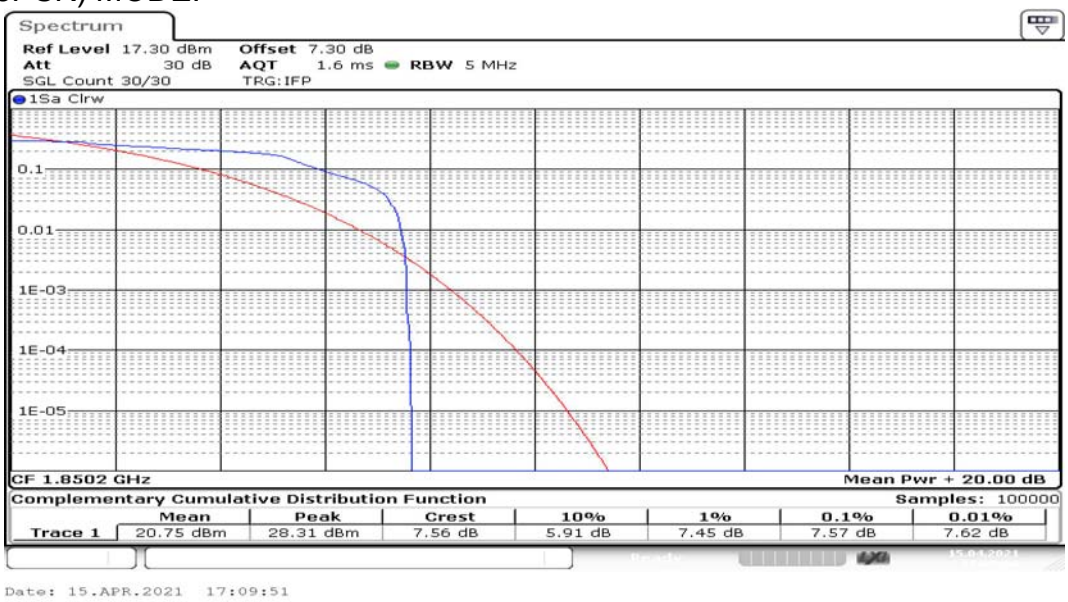


Channel 661

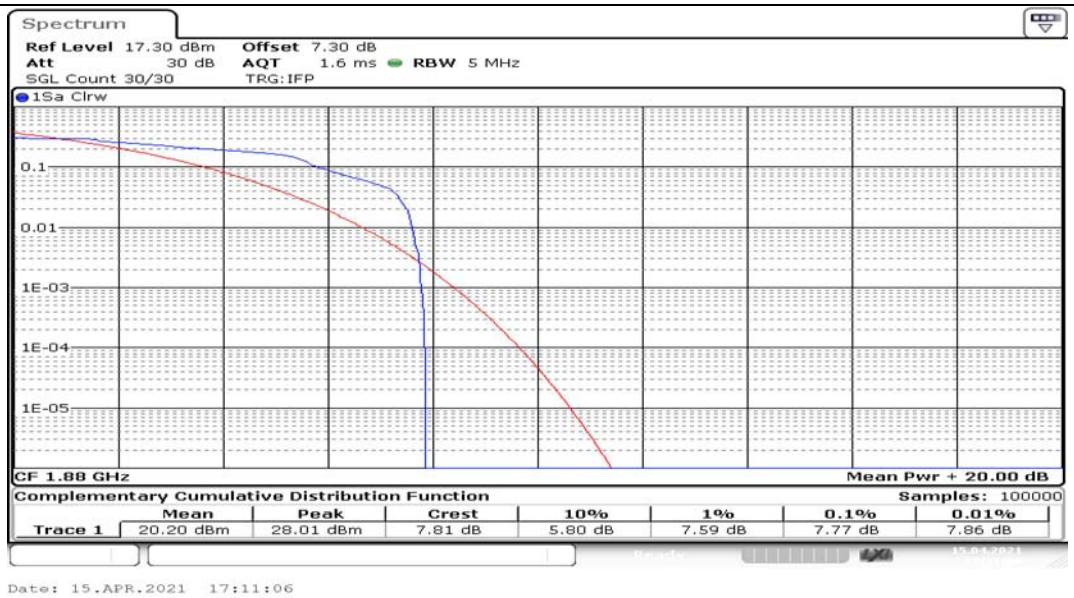


Channel 810

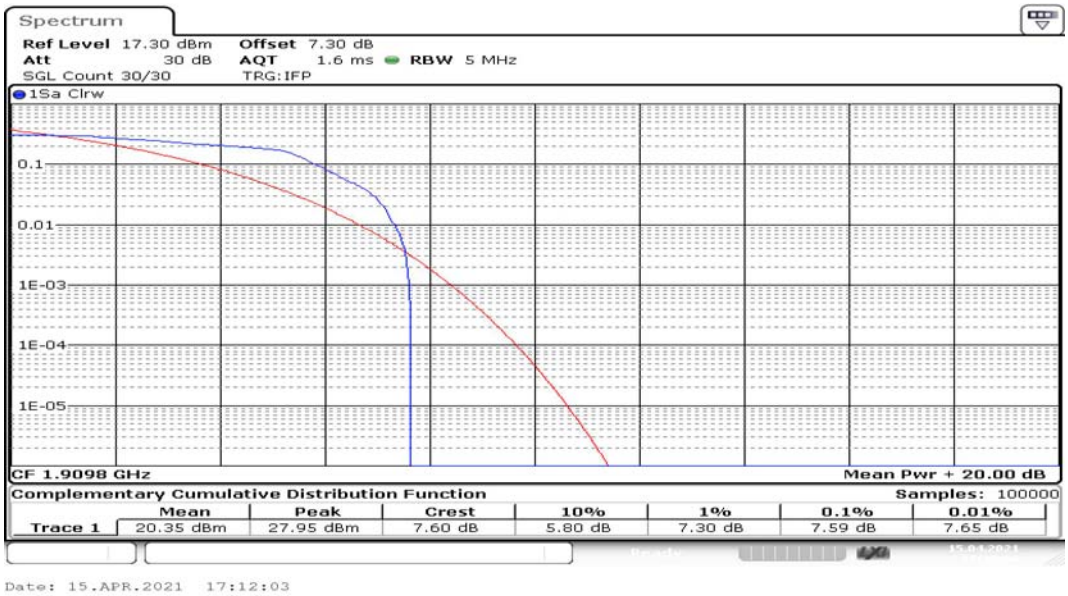
EDGE (8PSK) MODE:



Channel 512



Channel 661



Channel 810

8. Effective Radiated Power and Effective Isotropic Radiated Power

GSM850

GPRS Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP (W)
836.4	189	4Downlink1uplink	32.52	31.87	1.537
848.8	251		32.30	31.65	1.462
824.2	128		32.34	31.69	1.477
836.4	189	3Downlink2uplink	32.04	31.39	1.378
848.8	251		31.80	31.15	1.304
824.2	128		31.86	31.21	1.323

GPRS (8PSK) Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP (W)
836.4	189	8PSK 4Downlink1uplink	26.75	26.10	0.407
848.8	251		26.84	26.19	0.416
824.2	128		26.89	26.24	0.421
836.4	189	8PSK 3Downlink2uplink	26.58	25.93	0.391
848.8	251		26.68	26.03	0.401
824.2	128		26.75	26.10	0.407
836.4	189	8PSK 2Downlink3uplink	26.55	25.90	0.389
848.8	251		26.52	25.87	0.386
824.2	128		26.55	25.90	0.389
836.4	189	8PSK 1Downlink4uplink	26.35	25.70	0.372
848.8	251		26.33	25.68	0.369
824.2	128		26.39	25.74	0.375

PCS1900

GPRS Measured Power:

Carrier frequency (MHz)	Channel No.	TX Moce	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP (W)
1850.2	512	4Downlink1uplink	28.26	32.26	1.685
1880	661		27.77	31.77	1.503
1909.8	810		27.85	31.85	1.532
1850.2	512	3Downlink2uplink	27.93	31.93	1.558
1880	661		27.45	31.45	1.396
1909.8	810		27.40	31.40	1.381

EGPRS (8PSK) Measured Power:

Carrier frequency (MHz)	Channel No.	TX Moce	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP (W)
1850.2	512	8PSK 4Downlink1uplink	25.39	29.39	0.869
1880	661		24.86	28.86	0.770
1909.8	810		25.11	29.11	0.814
1850.2	512	8PSK 3Downlink2uplink	25.27	29.27	0.846
1880	661		25.34	29.34	0.859
1909.8	810		24.99	28.99	0.793
1850.2	512	8PSK 2Downlink3uplink	25.17	29.17	0.825
1880	661		24.99	28.99	0.793
1909.8	810		24.86	28.86	0.769
1850.2	512	8PSK 1Downlink4uplink	25.02	29.02	0.798
1880	661		24.52	28.52	0.711
1909.8	810		24.69	28.69	0.740

APPENDIX B – TEST DATA OF RADIATED EMISSION

Radiated Spurious Emissions

850 Test result:

GSM/GPRS MODE Channel 128:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1648.05	-52.92	-13	Vertical
1666.49	-51.18	-13	Vertical
2533.37	-44.14	-13	Vertical
2576.27	-44.49	-13	Vertical
8961.19	-39.56	-13	Vertical
9973.55	-36.71	-13	Vertical

EDGE (8PSK) MODE Channel 128:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1650.18	-52.78	-13	Vertical
1665.29	-51.20	-13	Vertical
2535.27	-44.00	-13	Vertical
2577.16	-44.61	-13	Vertical
8964.33	-39.19	-13	Vertical
9971.82	-36.64	-13	Vertical

GSM/GPRS MODE Channel 189:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1648.57	-53.14	-13	Vertical
1666.92	-50.83	-13	Vertical
2533.11	-44.24	-13	Vertical
2578.88	-43.72	-13	Vertical
8964.72	-39.38	-13	Vertical
9970.74	-36.24	-13	Vertical

EDGE (8PSK) MODE Channel 189:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1648.04	-52.69	-13	Vertical
1668.07	-51.64	-13	Vertical
2532.39	-44.35	-13	Vertical
2578.46	-44.01	-13	Vertical
8963.95	-39.13	-13	Vertical
9970.17	-36.00	-13	Vertical

GSM/GPRS MODE Channel 251:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1649.25	-53.06	-13	Vertical
1666.16	-50.78	-13	Vertical
2534.20	-44.22	-13	Vertical
2576.23	-44.03	-13	Vertical
8964.42	-39.24	-13	Vertical
9970.71	-35.97	-13	Vertical

EDGE (8PSK) MODE Channel 251:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1646.97	-52.58	-13	Vertical
1666.87	-51.12	-13	Vertical
2532.99	-44.45	-13	Vertical
2576.52	-44.55	-13	Vertical
8962.76	-39.87	-13	Vertical
9973.09	-36.46	-13	Vertical

1900 Test result:

GSM/GPRS MODE Channel 512

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2461.25	-48.78	-13	Vertical
2781.57	-47.46	-13	Vertical
3727.73	-40.73	-13	Vertical
6678.10	-39.27	-13	Vertical
9960.13	-37.34	-13	Vertical
17820.14	-34.39	-13	Vertical

EDGE (8PSK) MODE Channel 512:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2458.51	-49.21	-13	Vertical
2778.61	-47.56	-13	Vertical
3725.06	-40.38	-13	Vertical
6675.70	-39.98	-13	Vertical
9960.11	-36.83	-13	Vertical
17818.50	-33.76	-13	Vertical

GSM/GPRS MODE Channel 661:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2460.55	-49.39	-13	Vertical
2782.11	-47.78	-13	Vertical
3724.63	-40.36	-13	Vertical
6678.58	-39.67	-13	Vertical
9961.19	-37.26	-13	Vertical
17821.52	-33.55	-13	Vertical

EDGE (8PSK) MODE Channel 661:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2460.55	-49.39	-13	Vertical
2782.11	-47.78	-13	Vertical
3724.63	-40.36	-13	Vertical
6678.58	-39.67	-13	Vertical
9961.19	-37.26	-13	Vertical
17821.52	-33.55	-13	Vertical

GSM/GPRS MODE Channel 810:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2458.49	-49.42	-13	Vertical
2780.14	-47.33	-13	Vertical
3725.64	-40.80	-13	Vertical
6678.08	-39.55	-13	Vertical
9961.14	-37.59	-13	Vertical
17821.82	-34.35	-13	Vertical

EDGE (8PSK) MODE Channel 810:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2459.78	-48.76	-13	Vertical
2781.60	-46.93	-13	Vertical
3725.82	-40.39	-13	Vertical
6677.08	-39.63	-13	Vertical
9960.34	-37.59	-13	Vertical
17819.28	-33.72	-13	Vertical

---End of Test Report---