



TESTING LABORATORY  
CERTIFICATE # 4297.01



# FCC PART 22H, PART 24E

## MEASUREMENT AND TEST REPORT

For

### Shenzhen Digidragon Technology Co., Ltd

F02-3, Block 36, Dayun Software Town, Longgang District, Shenzhen, China

**FCC ID: 2AW7SG37**

<b>Report Type:</b> Original Report	<b>Product Type:</b> Mobile phone
<b>Report Number:</b> SZ2210601-20745E-07B	
<b>Report Date:</b> 2021-07-16	
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## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

Product	Mobile phone
Tested Model	G37
Frequency Range	GSM850: 824-849 MHz (TX), 869-894 MHz (RX) PCS1900: 1850-1910 MHz (TX), 1930-1990 MHz (RX)
Maximum Conducted Power	GSM850: 30.44dBm PCS1900: 28.88dBm
Modulation Technique	GMSK
Antenna Specification*	PIFA Antenna (provided by the applicant) GSM850: 1dBi PCS1900: 1dBi
Voltage Range	DC 3.7 V from battery or DC 5.0V from adapter
Date of Test	2021-06-30 to 2021-07-05
Sample serial number	SZ2210601-20745E-RF-S1(Assigned by ATC, Shenzhen)
Received date	2021-06-01
Sample/EUT Status	Good condition
Adapter information	Model: J001-1 Input: AC 100-240V, 50/60Hz, 500mA Output: DC 5.0V, 500mA

### Objective

This test report is in accordance with Part 2, Part 22-Subpart H, Part 24-Subpart E of the Federal Communication Commission's rules.

The objective is to determine the compliance of EUT with FCC rules for output power, modulation characteristic, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability, and band edge.

### Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-Part J as well as the following parts:

Part 22 Subpart H - Public Mobile Services

Part 24 Subpart E - Personal Communication Services

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

## Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		±5%
RF output power, conducted		±0.73dB
Unwanted Emission, conducted		±1.6dB
RF Frequency		±0.082*10 <sup>-7</sup>
Emissions, Radiated	30MHz - 1GHz	±4.28dB
	1GHz - 18GHz	±4.98dB
	18GHz - 26.5GHz	±5.06dB
Temperature		±1°C
Humidity		±6%
Supply voltages		±0.4%

*Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.*

## Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189.

The test site has been registered with ISED Canada under ISED Canada Registration Number 5077A-2.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

The final qualification test was performed with the EUT operating at normal mode.

Band	Channel Bandwidth	Frequency
GSM 850	0.3 MHz	824.2MHz, 836.6MHz, 848.8MHz
PCS 1900	0.3 MHz	1850.2MHz, 1880.0MHz, 1909.8MHz;

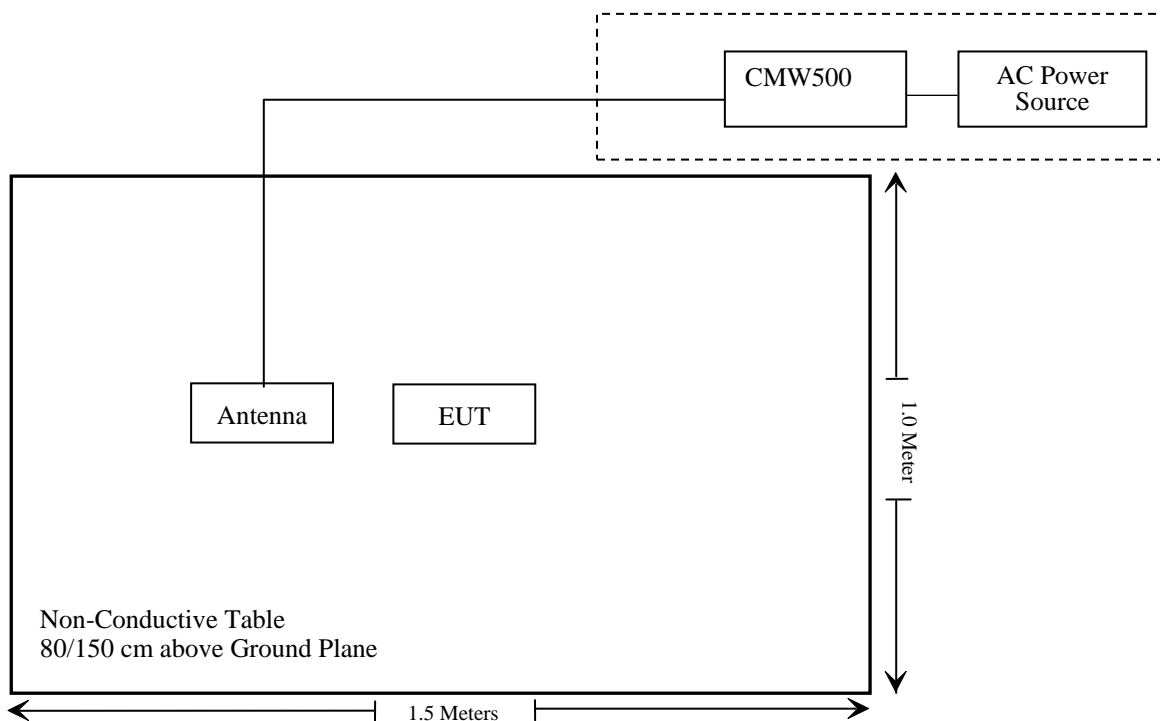
### Equipment Modifications

No modification was made to the EUT.

### Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606

### Block Diagram of Test Setup



## SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307, §2.1093	RF Exposure (SAR)	Compliance*
§2.1046; § 22.913 (a); § 24.232 (c)	RF Output Power	Compliance
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905; § 22.917; § 24.238	Occupied Bandwidth	Compliance
§ 2.1051; § 22.917 (a); § 24.238 (a)	Spurious Emissions at Antenna Terminal	Compliance
§ 2.1053; § 22.917 (a); § 24.238 (a)	Field Strength of Spurious Radiation	Compliance
§ 22.917 (a); § 24.238 (a)	Band Edge	Compliance
§ 2.1055; § 22.355; § 24.235	Frequency stability	Compliance

Compliance\*: Please refer to SAR report released by BACL, report number: SZ2210601-20745E-SA.

**TEST EQUIPMENT LIST**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
<b>Radiated Emission Test</b>					
Rohde & Schwarz	Test Receiver	ESR	101817	2020/12/24	2021/12/23
SONOMA INSTRUMENT	Amplifier	310 N	186131	2020/12/25	2021/12/24
A.H. Systems, inc.	Preamplifier	PAM-0118P	531	2020/07/08	2021/07/07
Schwarzbeck	Bilog Antenna	VULB9163	9163-194	2021-01-05	2023-01-04
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021-01-05	2023-01-04
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-655	2021-01-05	2023-01-04
Schwarzbeck	Horn Antenna	BBHA9170	9170-359	2021-01-05	2023-01-04
Rohde & Schwarz	Spectrum Analyzer	FSV-40	101495	2020/12/24	2021/12/23
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2020/12/25	2021/12/24
Anritsu	Signal Generator	68369B	004114	2020/7/31	2021/7/30
Unknown	RF Coaxial Cable	N-5m	No.3	2020/12/25	2021/12/24
Unknown	RF Coaxial Cable	N-5m	No.4	2020/12/25	2021/12/24
Unknown	RF Coaxial Cable	N-1m	No.5	2020/12/25	2021/12/24
Unknown	RF Coaxial Cable	N-1m	No.6	2020/12/25	2021/12/24
<b>RF Conducted Test</b>					
Rohde & Schwarz	Spectrum Analyzer	FSV-40	101495	2020/12/24	2021/12/23
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2020/12/25	2021/12/24
Gongwen	Temp. & Humid. Chamber	JB913R	GZ-WS004	2020/12/25	2021/12/24
UNI-T	DC Power Supply	UTP8305B	10584	NCR	NCR
Fluke	Desktop Multi Meter	45	7664009	2020/12/25	2021/12/24

**\*Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

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## **FCC §1.1307(b) & §2.1093 - RF EXPOSURE INFORMATION**

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### **Applicable Standard**

FCC§1.1310 and §2.1093.

### **Test Result**

Compliance, please refer to the SAR report: SZ2210601-20745E-SA.



## **FCC §2.1047 - MODULATION CHARACTERISTIC**

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According to FCC §2.1047(d), Part 22H, 24E there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

## FCC § 2.1046, § 22.913 (a) & § 24.232 (c) - RF OUTPUT POWER

### Applicable Standard

According to FCC §2.1046 and §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

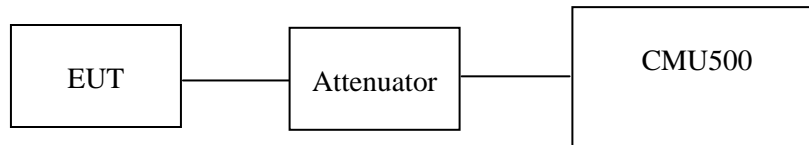
According to FCC §2.1046 and §24.232 (C), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

### Test Procedure

*Conducted method:*

The RF output of the transmitter was connected to the CMU500 through sufficient attenuation.



*Radiated method:*

ANSI C63.26-2015 section 5.5.3.

### Test Data

#### Environmental Conditions

<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	50 %
<b>ATM Pressure:</b>	101.0 kPa

*The testing was performed by Ting on 2021-07-05.*

**Conducted Power****Cellular Band (Part 22H)**

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
GSM	128	824.2	30.24	29.09	38.45
	190	836.6	30.44	<b>29.29</b>	38.45
	251	848.8	30.27	29.12	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	128	824.2	30.09	29.20	28.45	27.82	28.94	28.05	27.30	26.67	38.45
	190	836.6	30.11	29.43	28.56	27.51	28.96	28.28	27.41	26.36	38.45
	251	848.8	30.15	29.17	28.49	27.28	<b>29.00</b>	28.02	27.34	26.13	38.45

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)  
For GSM850: Antenna Gain = 1dBi = -1.15dBd (0dBd=2.15dBi), No Cable loss  
Limit: ERP≤38.45dBm

**PCS Band (Part 24E)**

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	EIRP(dBm)	Limit (dBm)
GSM	512	1850.2	28.34	29.34	33
	661	1880.0	28.59	28.59	33
	810	1909.8	28.88	<b>29.88</b>	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				EIRP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	512	1850.2	26.28	25.29	24.63	23.79	27.28	26.29	25.63	24.79	33
	661	1880.0	26.31	25.74	24.78	23.82	27.31	26.74	25.78	24.82	33
	810	1909.8	26.43	25.19	24.52	23.64	<b>27.43</b>	26.19	25.52	24.64	33

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)  
For PCS190: Antenna Gain = 1dBi, No Cable loss  
Limit: EIRP≤33dBm

**Peak-to-average ratio (PAR)****Cellular Band**

<b>Mode</b>	<b>Channel</b>	<b>PAR (dB)</b>	<b>Limit (dB)</b>
GSM	Low	2.42	13
	Middle	2.14	13
	High	3.03	13

**PCS Band**

<b>Mode</b>	<b>Channel</b>	<b>PAR (dB)</b>	<b>Limit (dB)</b>
GSM	Low	3.12	13
	Middle	2.93	13
	High	3.05	13

## FCC §2.1049, §22.917, §22.905 & §24.238 - OCCUPIED BANDWIDTH

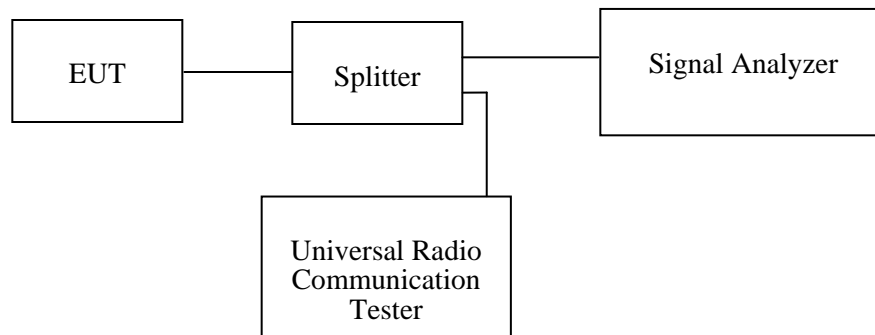
### Applicable Standard

FCC 47 §2.1049, §22.917, §22.905 and §24.238.

### Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 5 kHz (GSM) and the 26 dB & 99% bandwidth was recorded.



### Test Data

#### Environmental Conditions

<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	50 %
<b>ATM Pressure:</b>	101.0 kPa

*The testing was performed by Ting on 2021-07-04.*

*EUT operation mode: Transmitting*

*Test Result: Compliance. Please refer to the following tables and plots.*

**Cellular Band (Part 22H)**

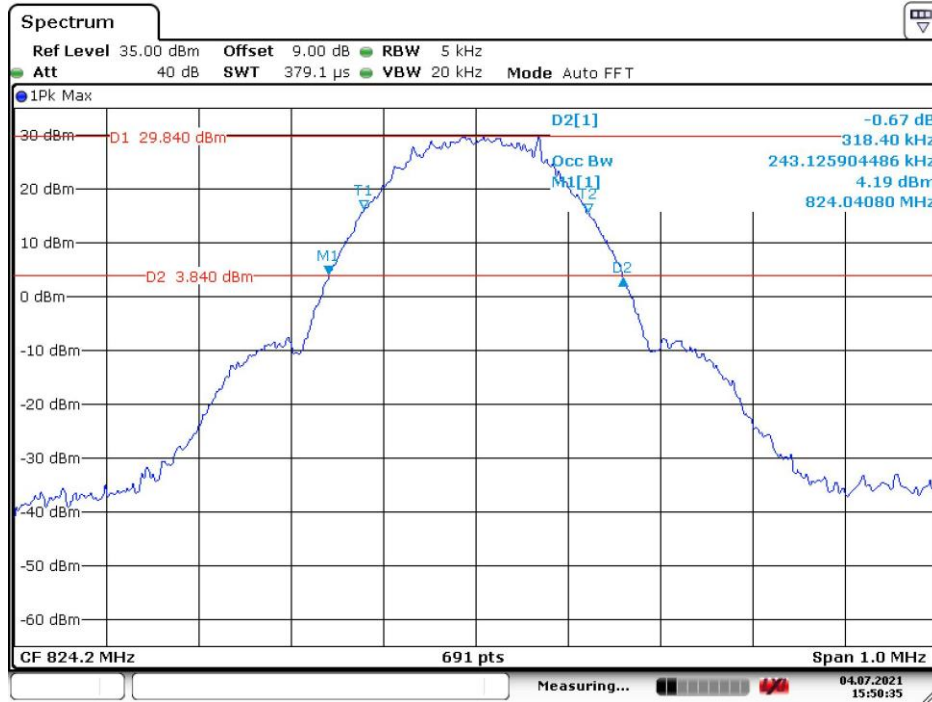
<b>Mode</b>	<b>Frequency (MHz)</b>	<b>99% Occupied Bandwidth (kHz)</b>	<b>26 dB Emission Bandwidth (kHz)</b>
GSM(GMSK)	824.2	243.125	318.40
	836.6	243.126	316.90
	848.8	241.679	315.50

**PCS Band (Part 24E)**

<b>Mode</b>	<b>Frequency (MHz)</b>	<b>99% Occupied Bandwidth (kHz)</b>	<b>26 dB Emission Bandwidth (kHz)</b>
GSM(GMSK)	1850.2	243.126	315.50
	1880.0	244.573	314.00
	1909.8	241.679	309.70

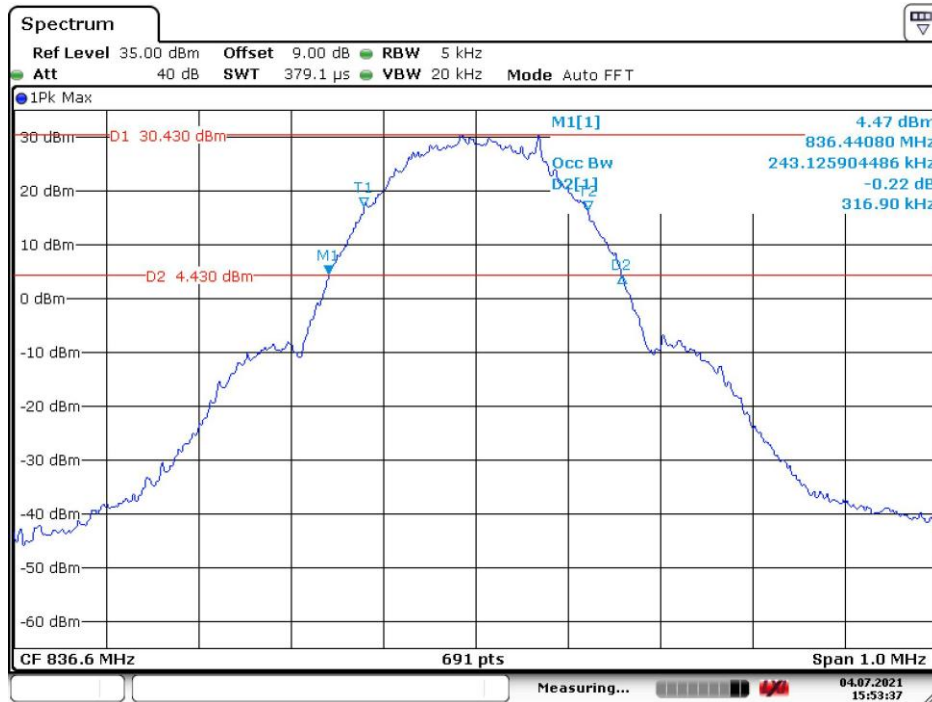
### Cellular Band (Part 22H)

#### 26 dB Emissions & 99% Occupied Bandwidth for GSM (GMSK) Mode, Low Channel



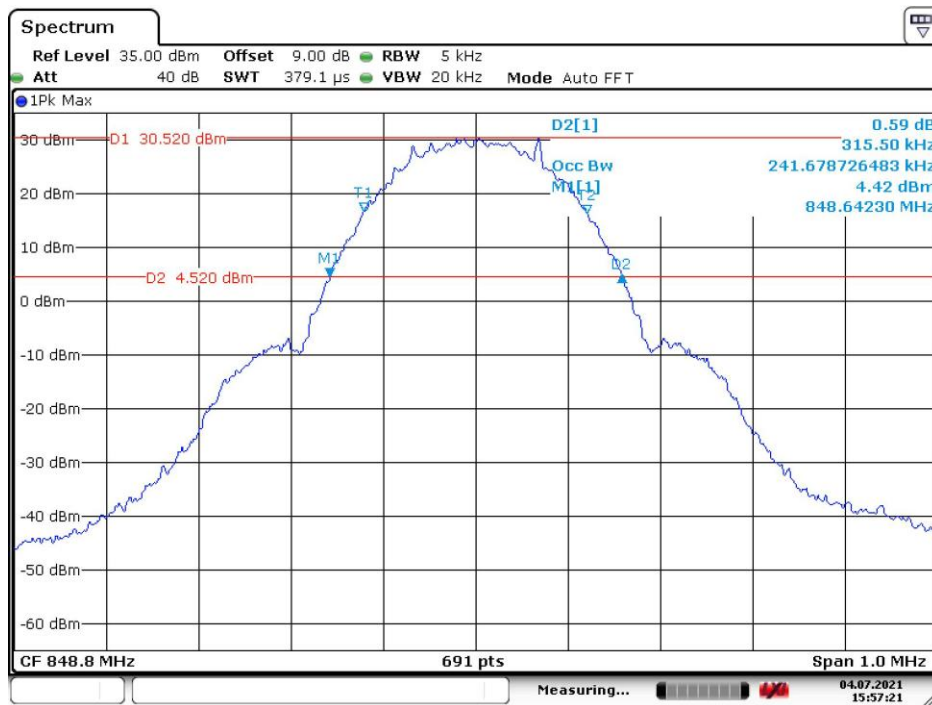
Date: 4.JUL.2021 15:50:35

#### 26 dB Emissions & 99% Occupied Bandwidth for GSM (GMSK) Mode, Middle Channel



Date: 4.JUL.2021 15:53:37

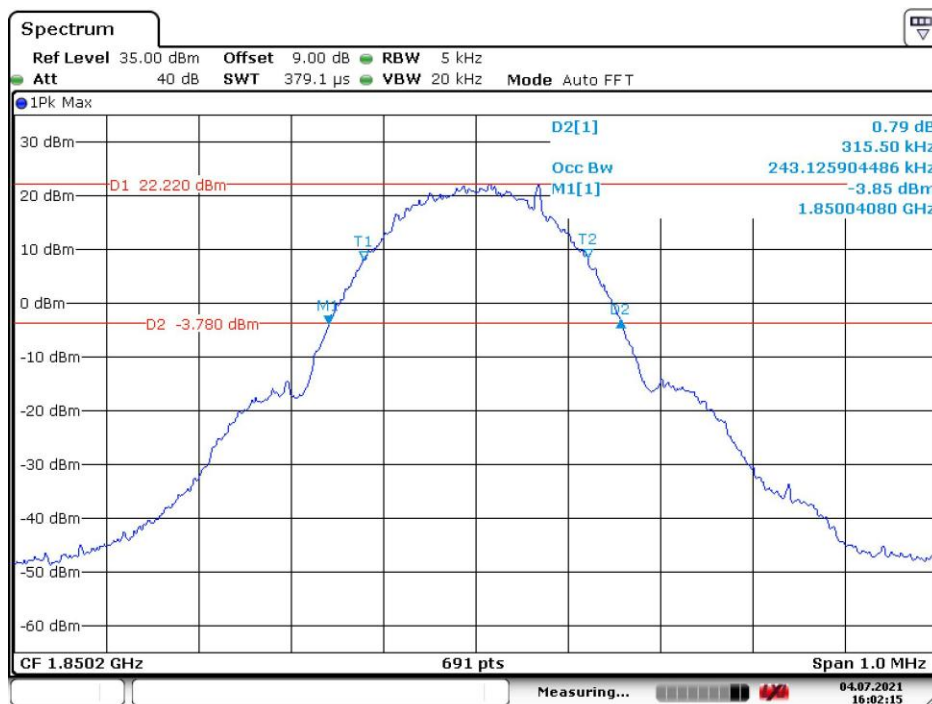
### 26 dB Emissions & 99% Occupied Bandwidth for GSM (GMSK) Mode, High Channel



Date: 4.JUL.2021 15:57:21

### PCS Band (Part 24E)

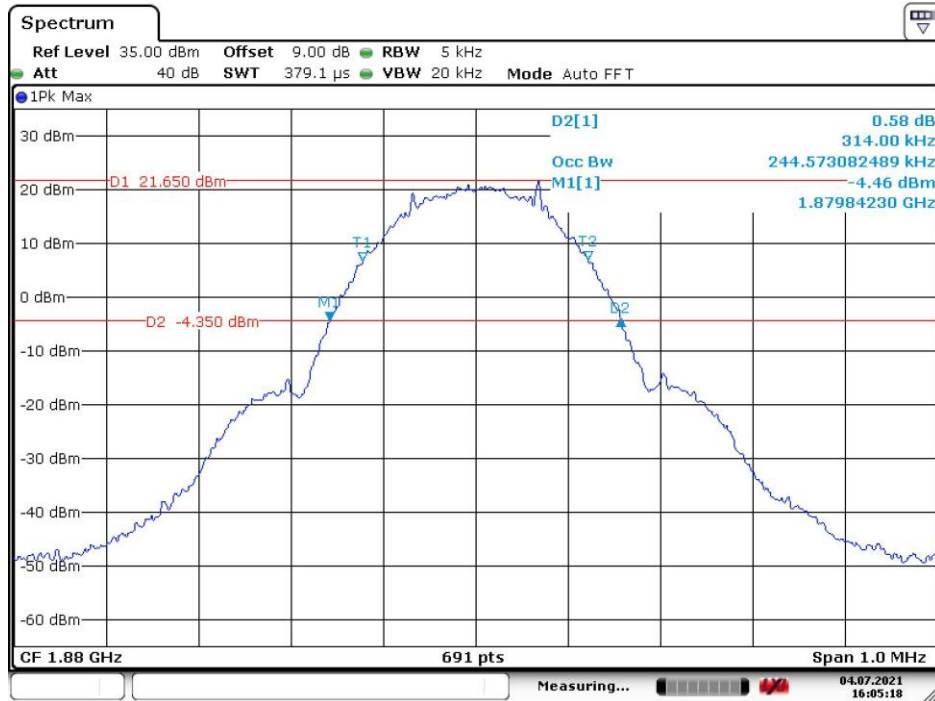
### 26 dB Emissions & 99% Occupied Bandwidth for GSM (GMSK) Mode, Low Channel



Date: 4.JUL.2021 16:02:15

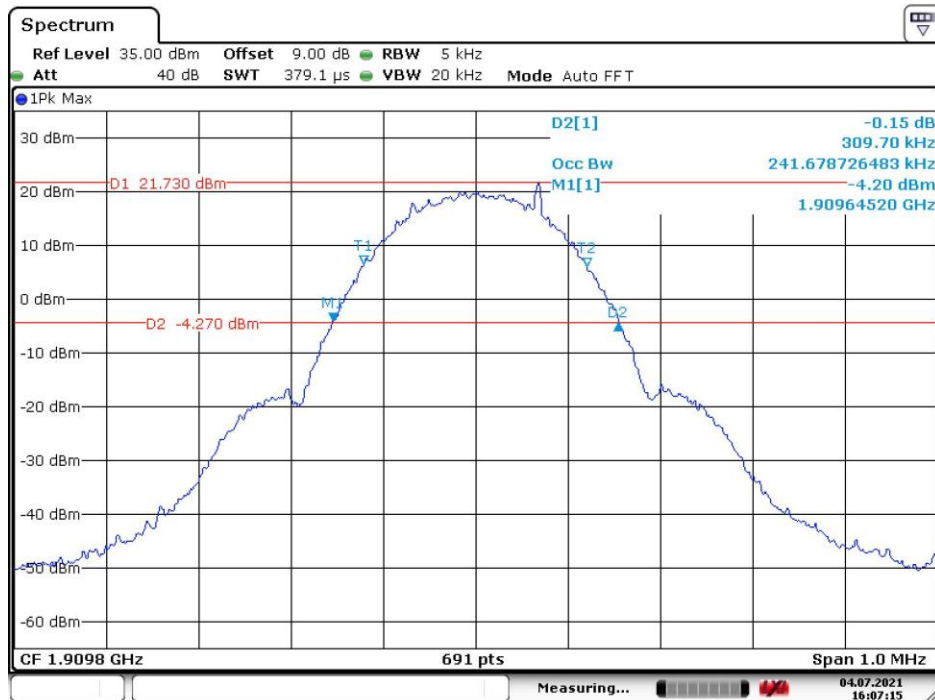


### 26 dB Emissions & 99% Occupied Bandwidth for GSM (GMSK) Mode, Middle Channel



Date: 4.JUL.2021 16:05:18

### 26 dB Emissions & 99% Occupied Bandwidth for GSM (GMSK) Mode, High Channel



Date: 4.JUL.2021 16:07:15

## FCC §2.1051, §22.917(a) & §24.238(a) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

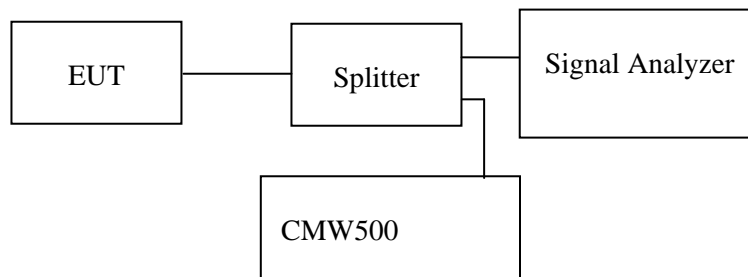
### Applicable Standard

FCC §2.1051, §22.917(a) and §24.238(a).

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in §2.1051.

### Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100kHz for below 1GHz and 1MHz for above 1GHz. Sufficient scans were taken to show any out of band emissions up to 10<sup>th</sup> harmonic.



### Test Data

#### Environmental Conditions

<b>Temperature:</b>	2 °C
<b>Relative Humidity:</b>	50 %
<b>ATM Pressure:</b>	101.0 kPa

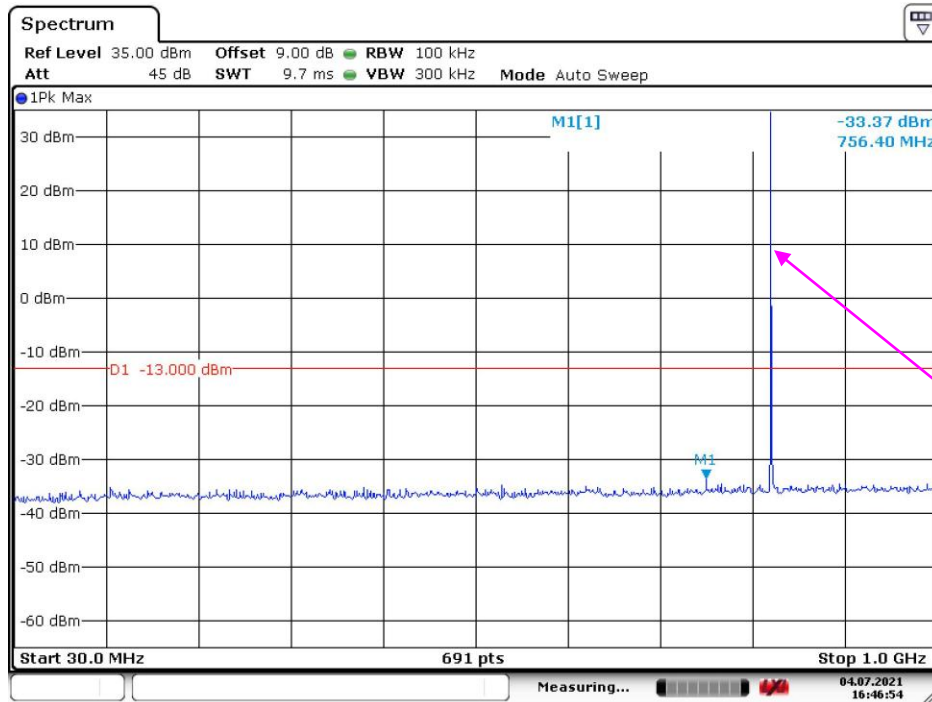
*The testing was performed by Ting on 2021-07-04.*

*EUT operation mode: Transmitting*

*Test result: Compliance, please refer to the following plots.*

### Cellular Band (Part 22H)

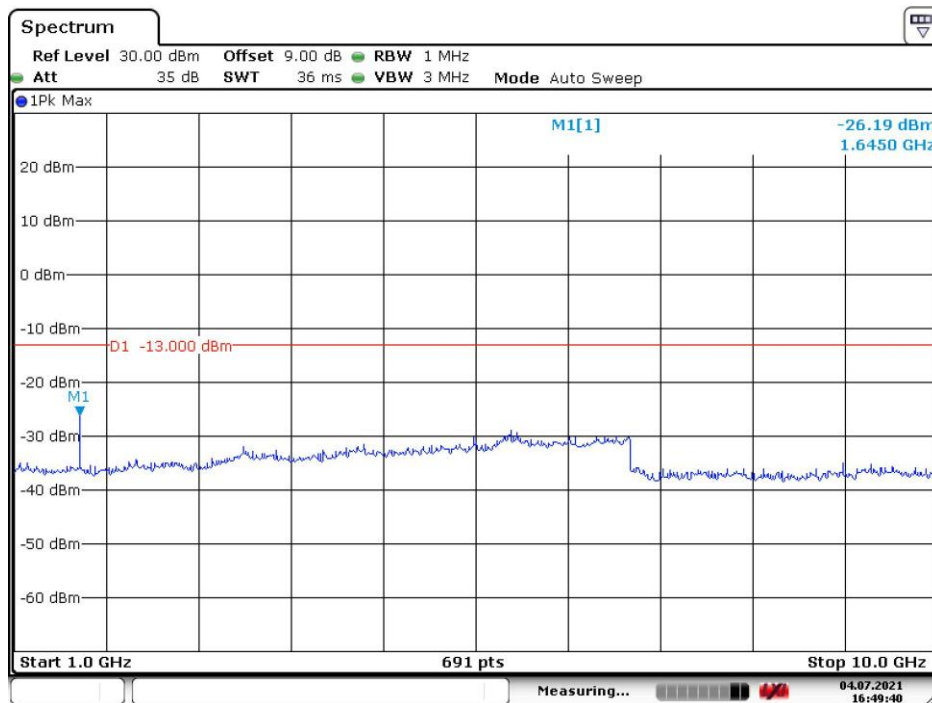
#### 30 MHz – 1 GHz (GSM Mode), Low Channel



Date: 4.JUL.2021 16:46:54

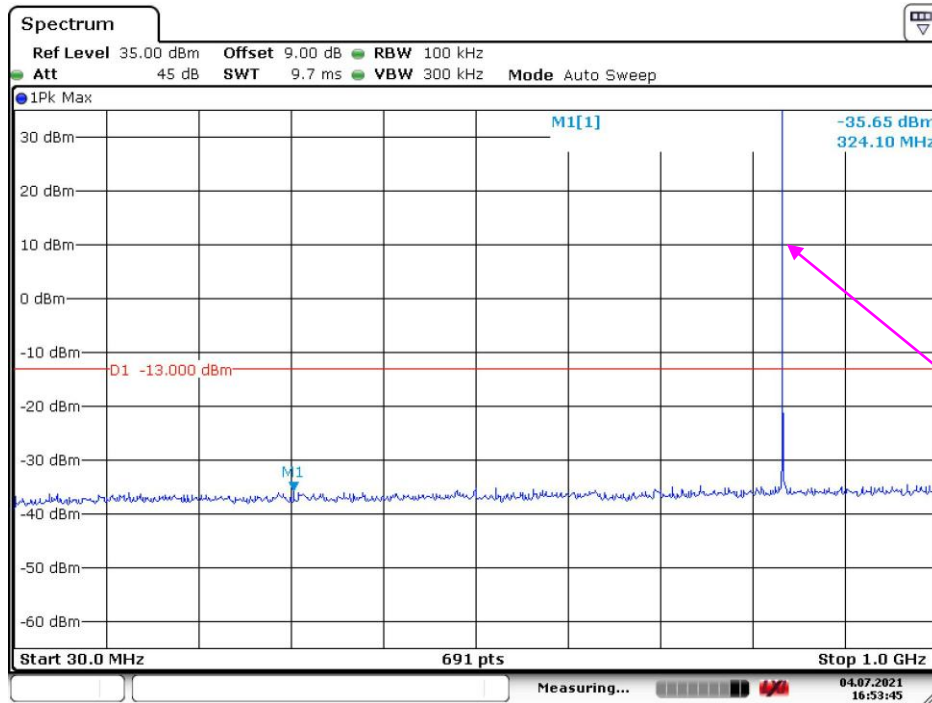
Fundamental test

#### 1 GHz – 10 GHz (GSM Mode), Low Channel



Date: 4.JUL.2021 16:49:40

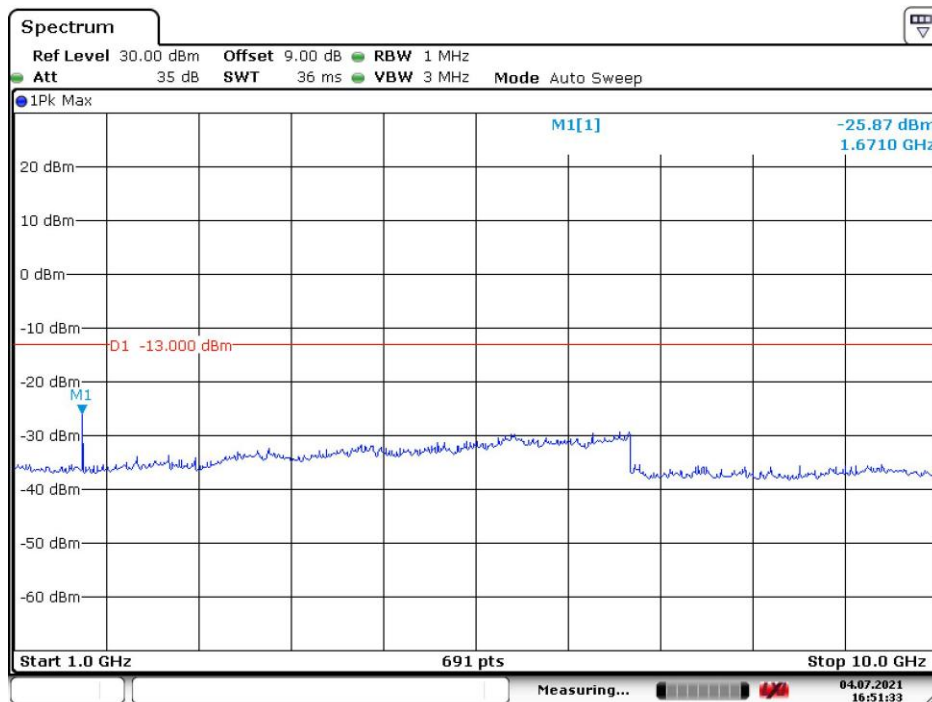
### 30 MHz – 1 GHz (GSM Mode), Middle Channel



Fundamental test

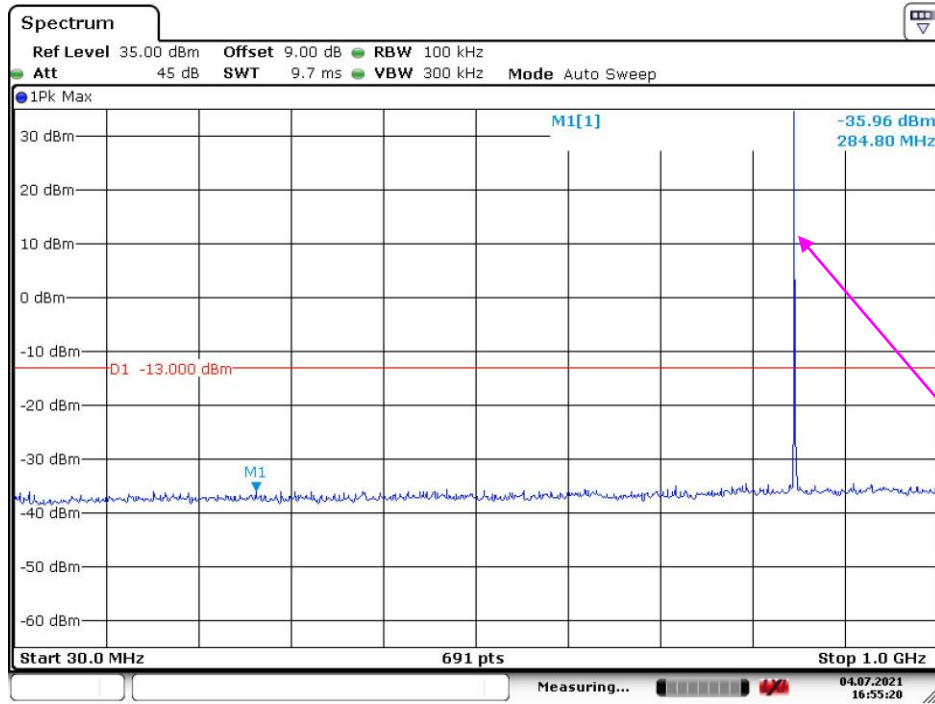
Date: 4.JUL.2021 16:53:46

### 1 GHz – 10 GHz (GSM Mode), Middle Channel



Date: 4.JUL.2021 16:51:34

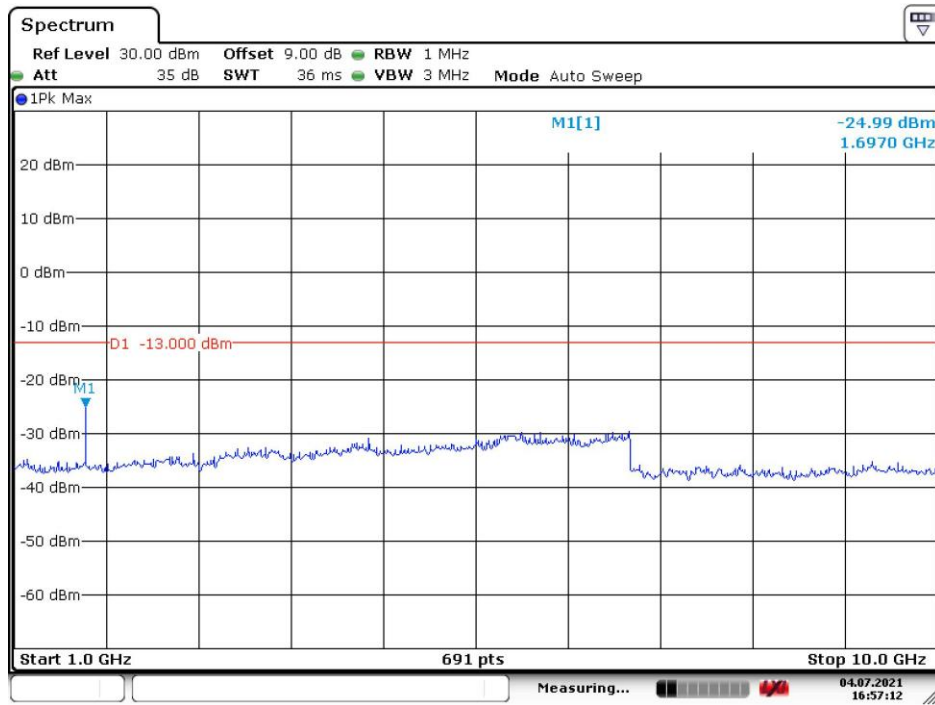
### 30 MHz – 1 GHz (GSM Mode), High Channel



Fundamental test

Date: 4.JUL.2021 16:55:20

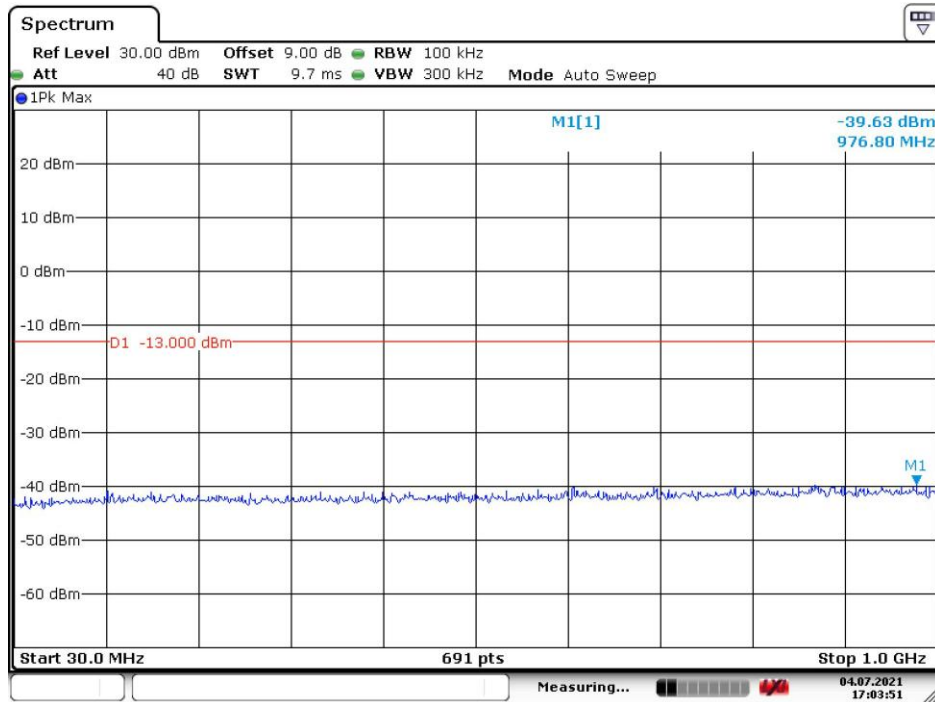
### 1 GHz – 10 GHz (GSM Mode), High Channel



Date: 4.JUL.2021 16:57:12

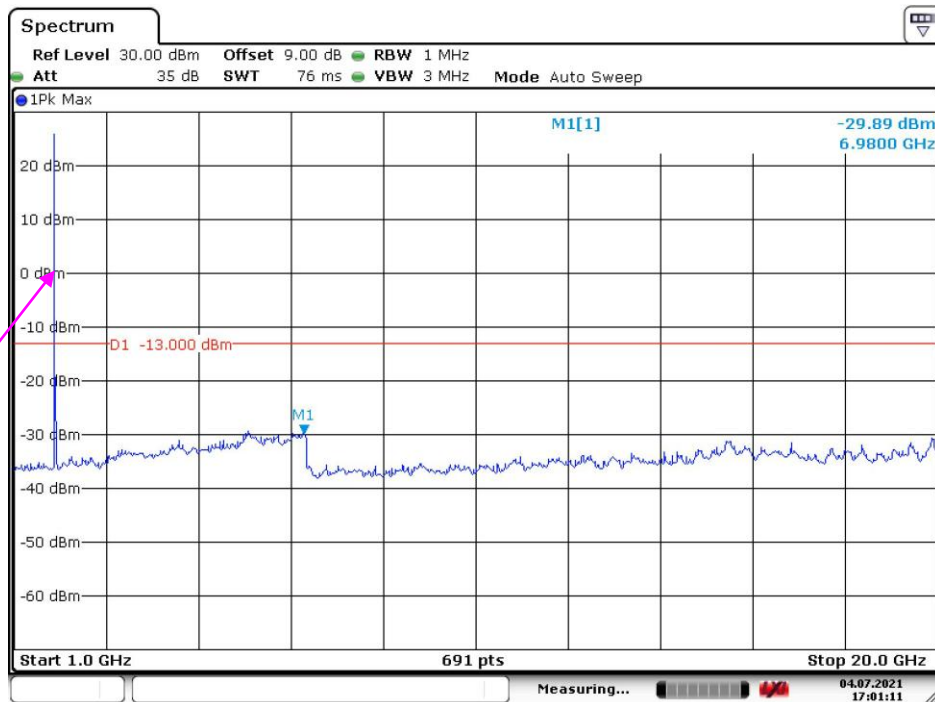
### PCS Band (Part 24E)

#### 30 MHz – 1 GHz (GSM Mode), Low Channel



Date: 4.JUL.2021 17:03:51

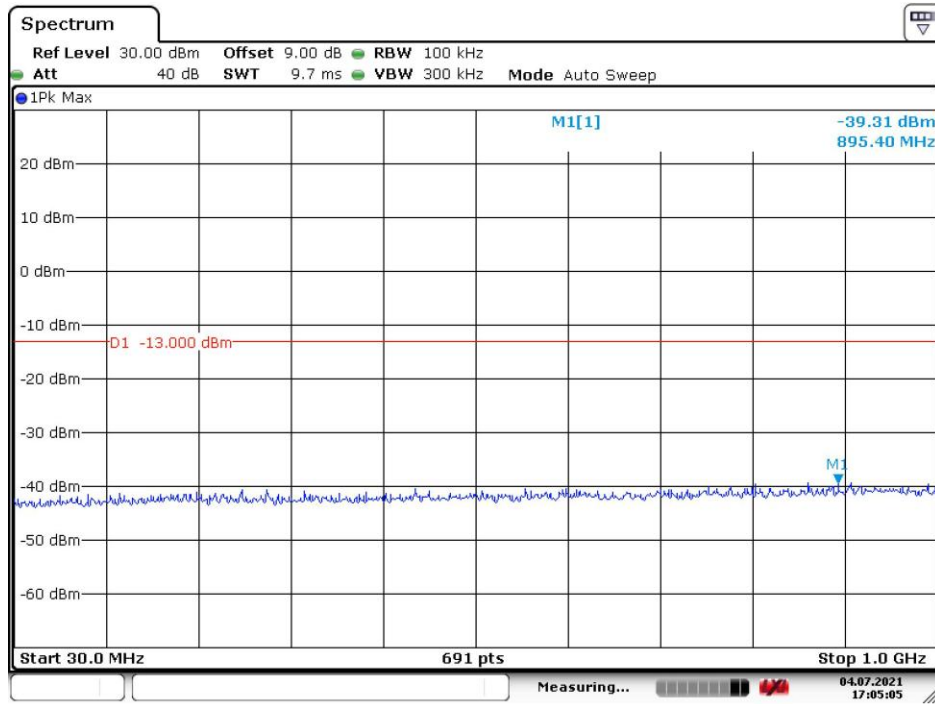
#### 1 GHz – 20 GHz (GSM Mode), Low Channel



Fundamental test

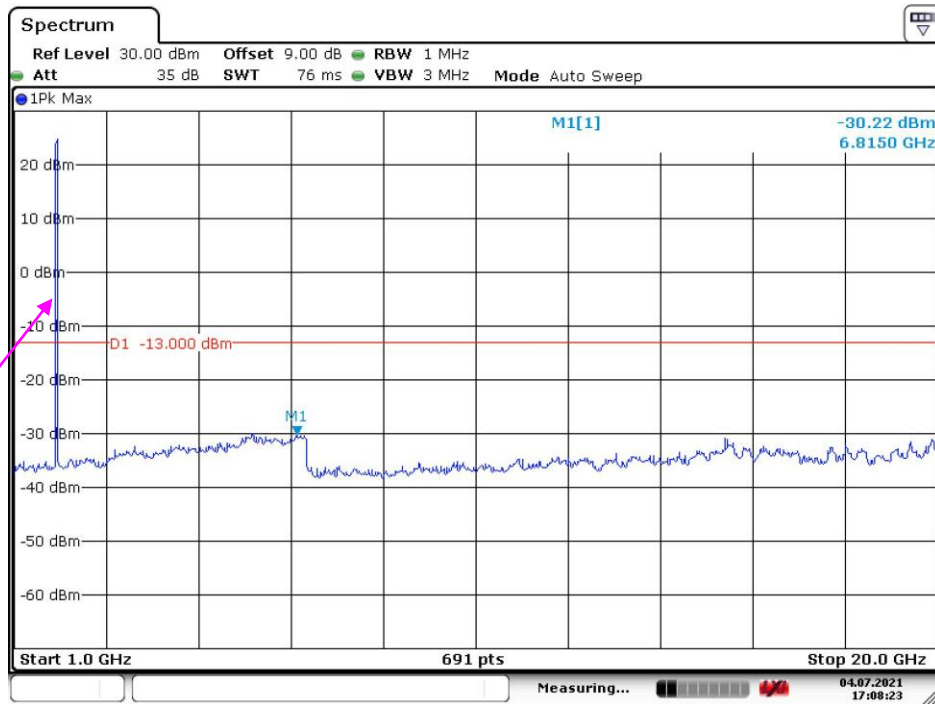
Date: 4.JUL.2021 17:01:12

### 30 MHz – 1 GHz (GSM Mode), Middle Channel



Date: 4.JUL.2021 17:05:05

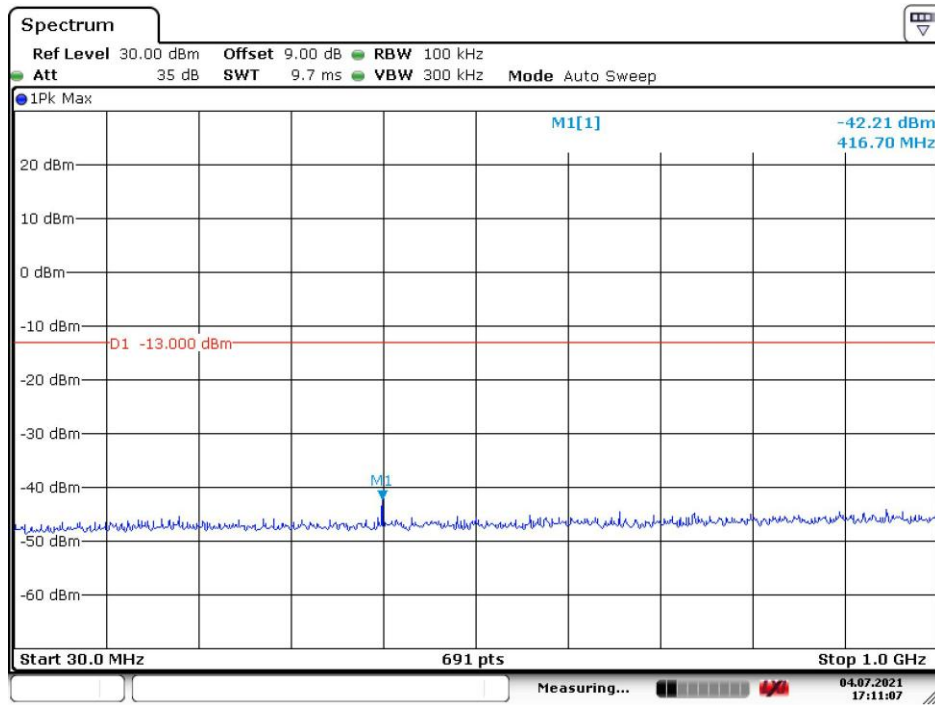
### 1 GHz – 20 GHz (GSM Mode), Middle Channel



Fundamental test

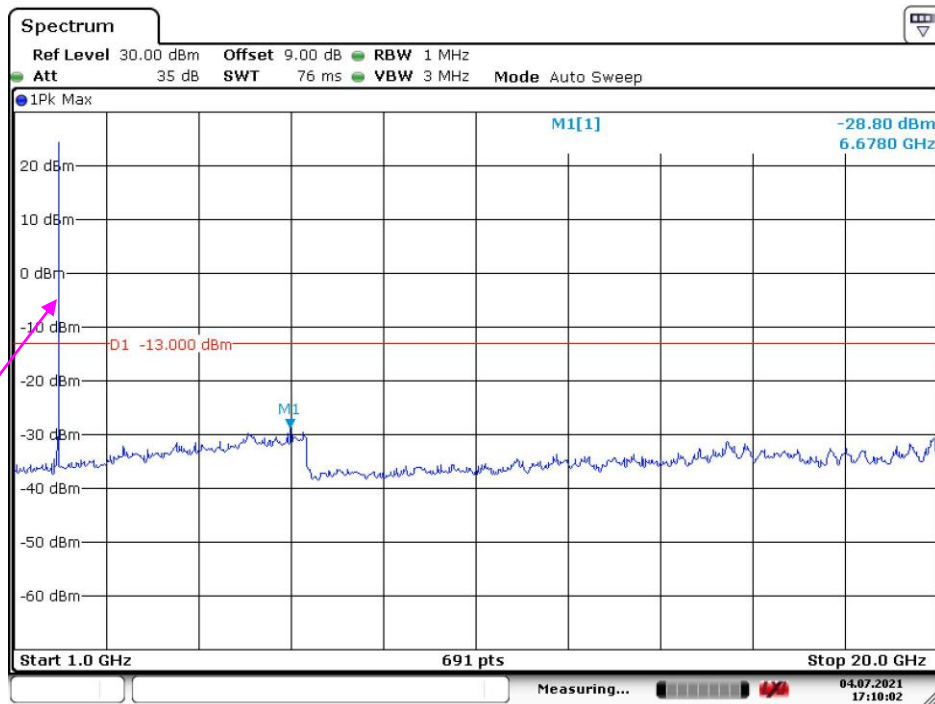
Date: 4.JUL.2021 17:08:23

### 30 MHz – 1 GHz (GSM Mode), High Channel



Date: 4.JUL.2021 17:11:08

### 1 GHz – 20 GHz (GSM Mode), High Channel



Fundamental test



## **FCC § 2.1053; § 22.917 (a); § 24.238 (a) -SPURIOUS RADIATED EMISSIONS**

### **Applicable Standard**

FCC § 2.1053, §22.917(a) and § 24.238(a).

### **Test Procedure**

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the receiving 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.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

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 emissions in dB =  $10 \lg(\text{TX pwr in Watts}/0.001)$  – the absolute level

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

### **Test Data**

#### **Environmental Conditions**

<b>Temperature:</b>	24 °C
<b>Relative Humidity:</b>	54 %
<b>ATM Pressure:</b>	101.0 kPa

*The testing was performed by Ting on 2021-07-05.*

*EUT operation mode: Transmitting*

**30 MHz ~ 10 GHz:****Cellular Band (Part 22H)**

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Substituted Factor (dB/m)	Absolute Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
	Reading (dBuV)	PK/Ave		Height (m)	Polar (H/V)				
GSM850, Low Channel									
32.40	-67.66	PK	232	1.2	H	3.12	-64.54	-13	51.54
36.38	-53.94	PK	78	2.1	V	-3.89	-57.83	-13	44.83
1648.40	-35.01	PK	156	1.4	H	-2.73	-37.74	-13	24.74
1648.40	-39.03	PK	189	1.8	V	-2.79	-41.82	-13	28.82
2472.60	-27.77	PK	170	1.9	H	-5.11	-32.88	-13	19.88
2472.60	-33.68	PK	344	1.4	V	-5.09	-38.77	-13	25.77
3296.80	-50.15	PK	250	1.6	H	3.23	-46.92	-13	33.92
3296.80	-51.76	PK	142	1.3	V	3.25	-48.51	-13	35.51
GSM850, Middle Channel									
46.17	-75.29	PK	4	1.9	H	3.12	-72.17	-13	59.17
46.50	-61.35	PK	26	1.3	V	-3.89	-65.24	-13	52.24
2509.8	-26.29	PK	121	1.1	H	-5.16	-31.45	-13	18.45
2509.8	-27.68	PK	111	1.8	V	-5.04	-32.72	-13	19.72
3346.4	-29.61	PK	69	1.9	H	-1.28	-30.89	-13	17.89
3346.4	-30.28	PK	197	1.8	V	-1.25	-31.53	-13	18.53
GSM850, High Channel									
56.99	-64.35	PK	359	2.1	H	3.12	-61.23	-13	48.23
53.31	-62.97	PK	261	1.4	V	-3.89	-66.86	-13	53.86
2546.4	-28.29	PK	175	1.4	H	-4.76	-33.05	-13	20.05
2546.4	-32.02	PK	71	1.7	V	-4.74	-36.76	-13	23.76

**30 MHz ~ 20 GHz:****PCS Band (Part 24E)**

Frequency (MHz)	Receiver		Turntable Angle Degree	Rx Antenna		Substituted Factor (dB/m)	Absolute Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
	Reading (dBuV)	PK/Ave		Height (m)	Polar (H/V)				
PCS1900, Low Channel									
32.40	-63.91	PK	215	1.9	H	3.12	-60.79	-13	47.79
36.38	-58.59	PK	36	1.4	V	-3.89	-62.48	-13	49.48
3700.4	-50.13	PK	205	1.7	H	4.72	-45.41	-13	32.41
3700.4	-47.38	PK	357	1.7	V	4.61	-42.77	-13	29.77
PCS1900, Middle Channel									
46.17	-73.68	PK	349	2.0	H	3.12	-70.56	-13	57.56
46.50	-61.08	PK	182	1.9	V	-3.89	-64.97	-13	51.97
3760	-48.42	PK	282	1.7	H	4.94	-43.48	-13	30.48
3760	-49.88	PK	110	1.5	V	4.85	-45.03	-13	32.03
PCS1900, High Channel									
56.99	-63.61	PK	2	1.5	H	3.12	-60.49	-13	47.49
53.31	-61.52	PK	204	1.9	V	-3.89	-65.41	-13	52.41
3819.6	-47.53	PK	327	1.3	H	5.25	-42.28	-13	29.28
3819.6	-50.02	PK	158	1.1	V	5.08	-44.94	-13	31.94

**Note:**

Absolute Level = Reading Level + Substituted Factor

Substituted Factor contains: SG Level - Cable loss+ Antenna Gain

Margin = Limit - Absolute Level

## FCC § 22.917 (a); § 24.238 (a) - BAND EDGES

### Applicable Standard

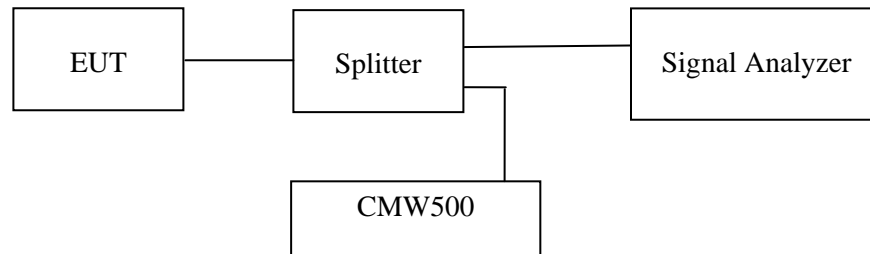
According to § 22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

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.

### Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency



### Test Data

#### Environmental Conditions

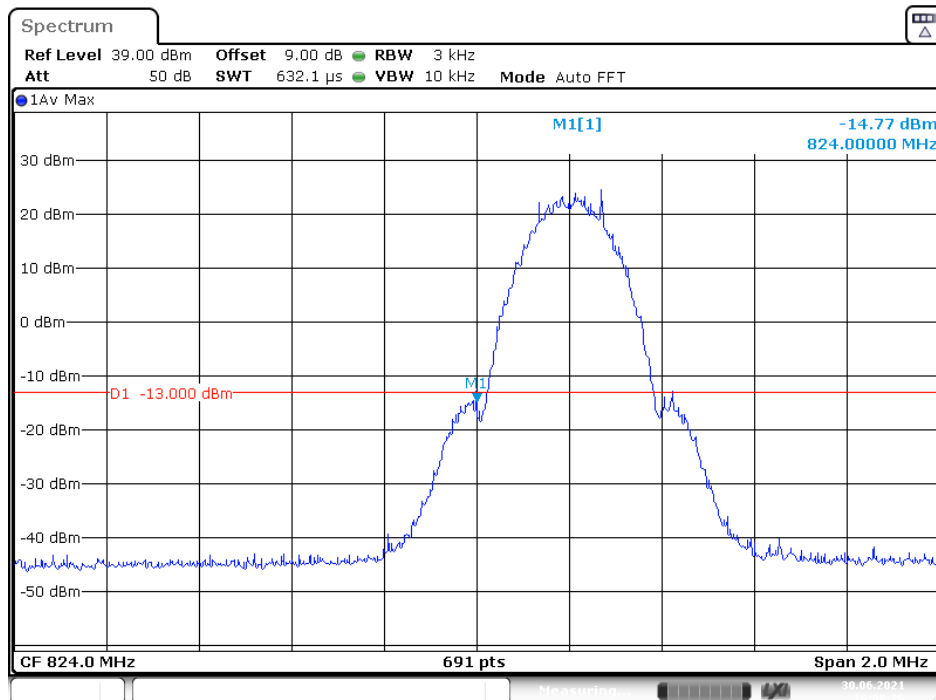
<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	52 %
<b>ATM Pressure:</b>	101.0 kPa

*The testing was performed by Ting on 2021-06-30.*

*EUT operation mode: Transmitting*

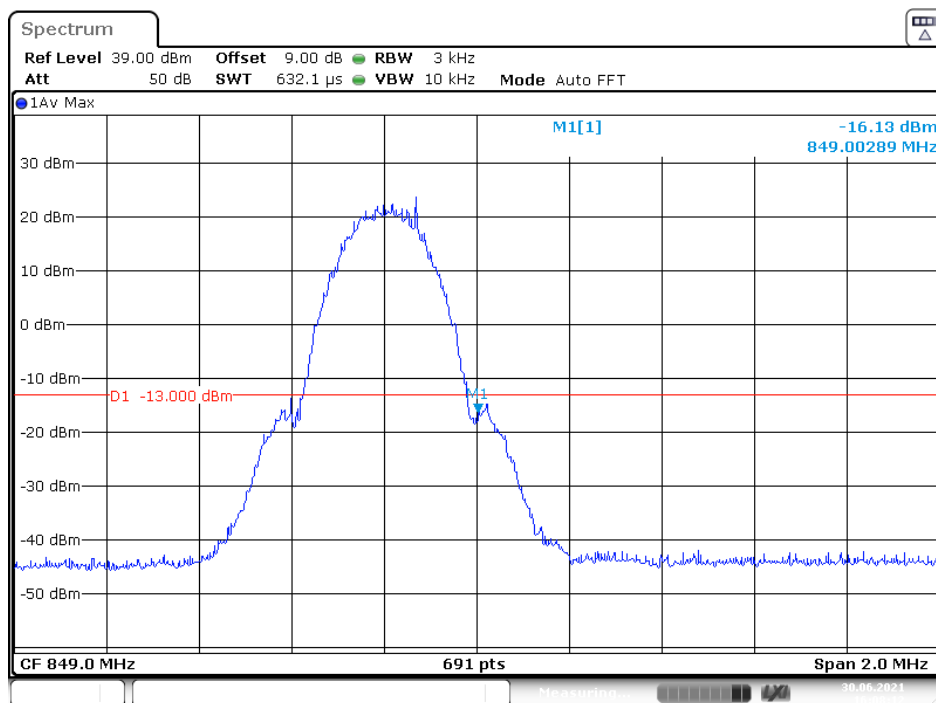
*Test Result: Compliance. Please refer to the following plots.*

### Cellular Band, Left Band Edge for GSM (GMSK) Mode



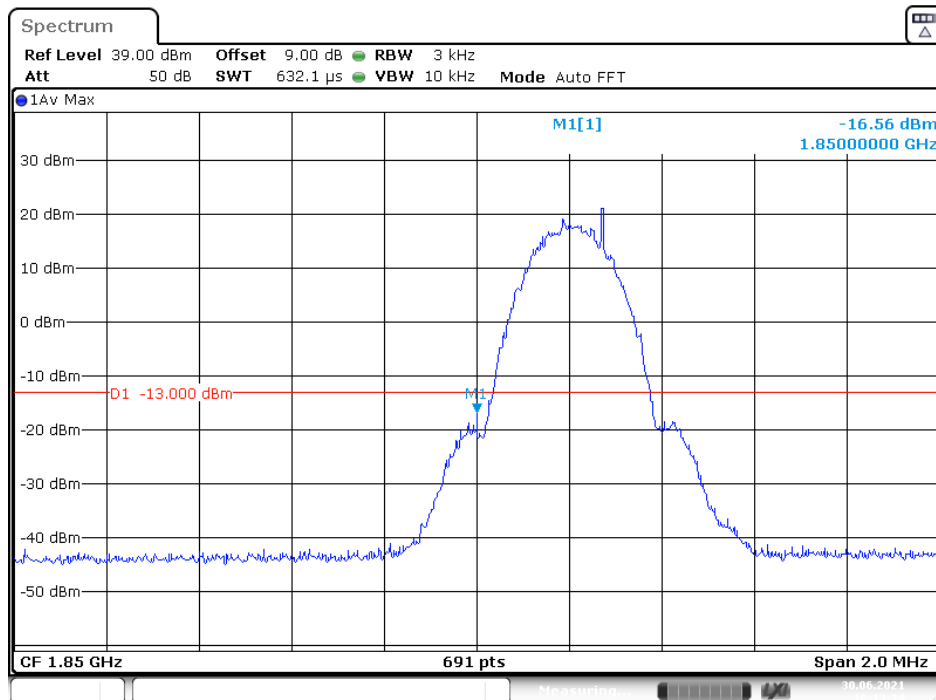
Date: 30.JUN.2021 16:09:27

### Cellular Band, Right Band Edge for GSM (GMSK) Mode



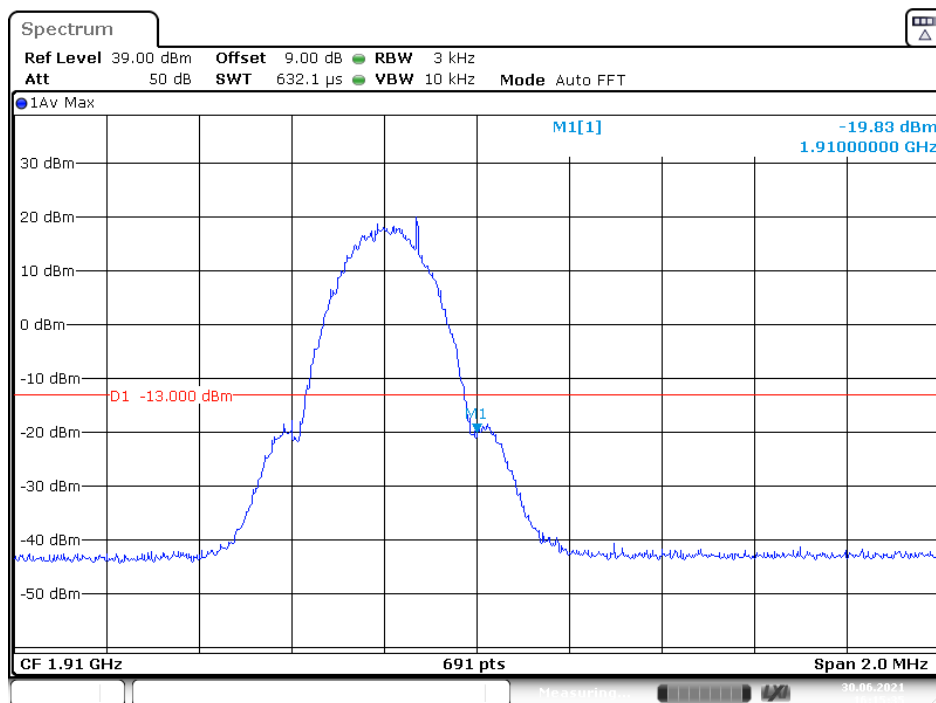
Date: 30.JUN.2021 16:08:13

### PCS Band, Left Band Edge for GSM (GMSK) Mode



Date: 30.JUN.2021 16:13:34

### PCS Band, Right Band Edge for GSM (GMSK) Mode



Date: 30.JUN.2021 16:15:36

Note: All the emissions for band edge are below the limit.

## FCC § 2.1055; § 22.355; § 24.235 - FREQUENCY STABILITY

### Applicable Standard

FCC § 2.1055, §22.355 and §24.235.

According to FCC §2.1055, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≤ 3 watts (ppm)	Mobile > 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929.	5.0	N/A	N/A
929 to 960.	1.5	N/A	N/A
2110 to 2220	10.0	N/A	N/A

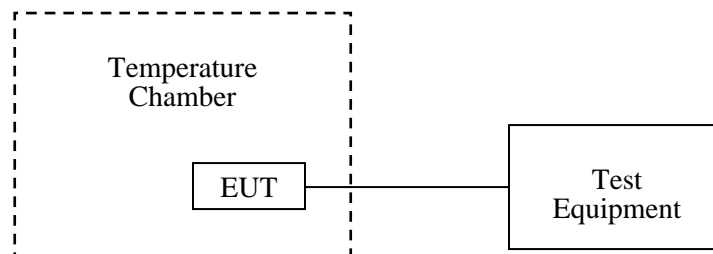
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

### Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



**Test Data****Environmental Conditions**

<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	52 %
<b>ATM Pressure:</b>	101.0 kPa

The testing was performed by Ting on 2021-07-05.

EUT operation mode: Transmitting

Test Result: Compliance. Please refer to the following tables.

**Cellular Band (Part 22H)****GSM Mode**

Middle Channel, $f_0 = 836.6\text{MHz}$				
Temperature (°C)	Power Supplied (V <sub>DC</sub> )	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	3.7	4	0.0048	2.5
-20		5	0.0060	2.5
-10		3	0.0036	2.5
0		1	0.0012	2.5
10		3	0.0036	2.5
20		6	0.0072	2.5
30		5	0.0060	2.5
40		3	0.0036	2.5
50		7	0.0084	2.5
20		V min.= 3.6	4	0.0048
20	V max.= 4.2	3	0.0036	2.5



**PCS Band (Part 24E)****GSM Mode**

<b>Middle Channel, <math>f_0 = 1880.0</math> MHz</b>				
<b>Temperature (°C)</b>	<b>Power Supplied (V<sub>DC</sub>)</b>	<b>Frequency Error (Hz)</b>	<b>Frequency Error (ppm)</b>	<b>Result</b>
-30	3.7	4	0.0021	pass
-20		2	0.0011	pass
-10		6	0.0032	pass
0		2	0.0011	pass
10		-4	-0.0021	pass
20		3	0.0016	pass
30		-5	-0.0027	pass
40		-6	-0.0032	pass
50		-3	-0.0016	pass
20	V min.= 3.6	-5	-0.0027	pass
20	V max.= 4.2	-2	-0.0011	pass

**\*\*\*\*\* END OF REPORT \*\*\*\*\***