

### **9.1.2 PROVISIONS APPLICABLE**

On any frequency outside frequency band of the USPCS spectrum, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least  $43+10\text{Log}(P)$  dB. For all power levels +30 dBm to 0 dBm, this becomes a constant specification limit of -13 dBm.

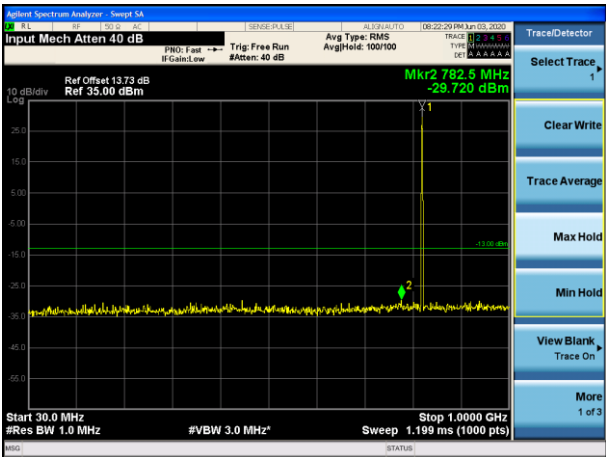
9.1.3 MEASUREMENT RESULT

Test Results

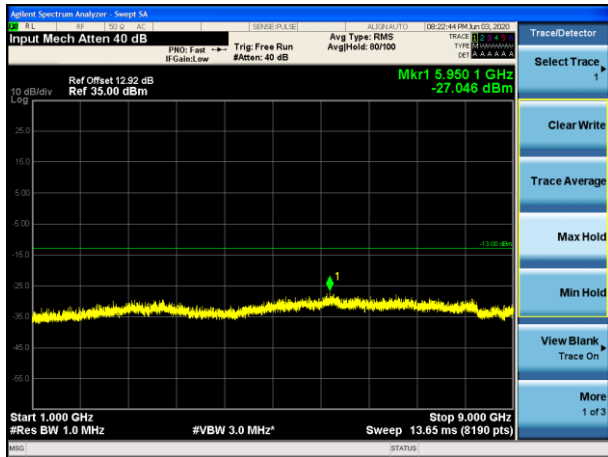
Test Band=GSM 850/PCS1900

Test Mode=GSM/EGPRS

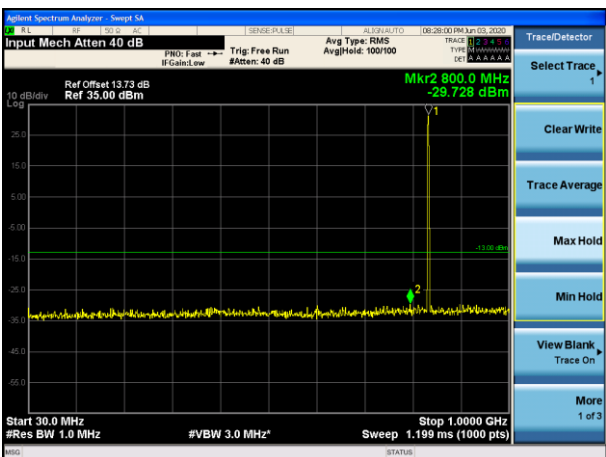
GSM 850-LCH



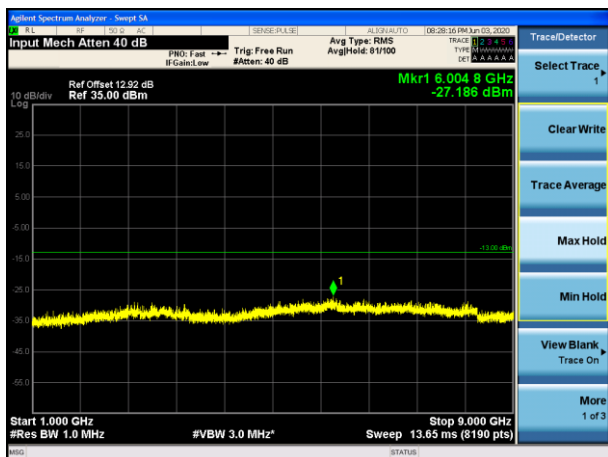
GSM 850-LCH



GSM 850-MCH

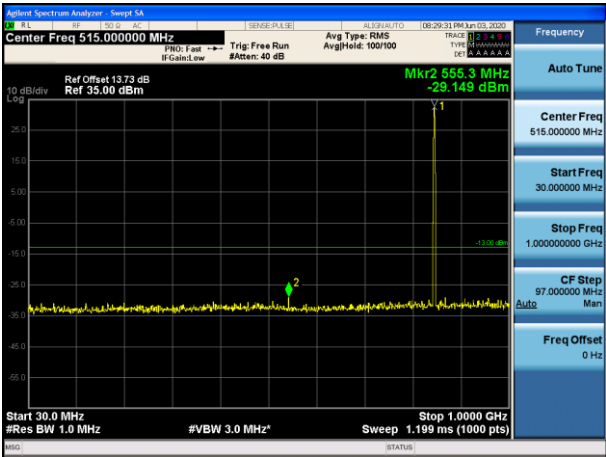


GSM 850-MCH



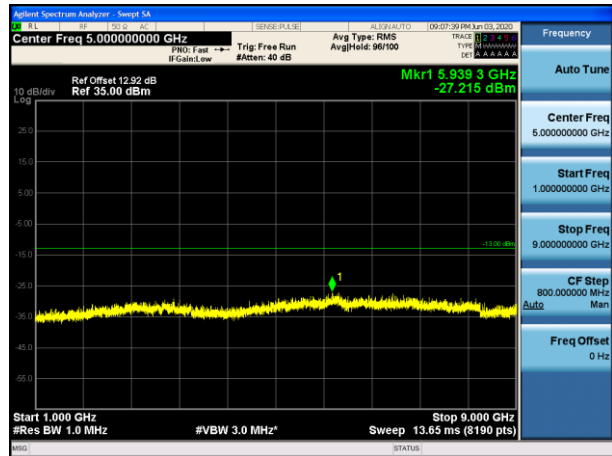
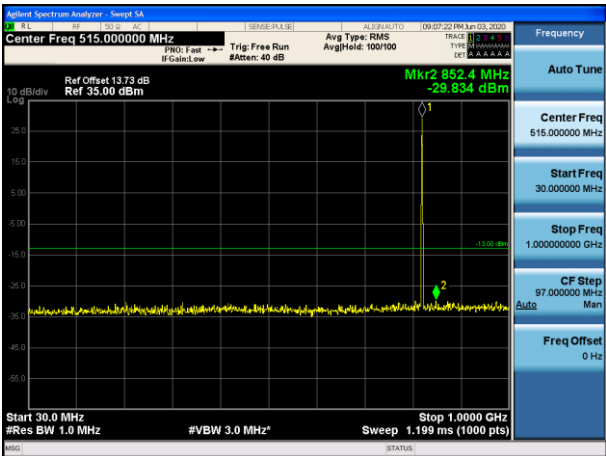
GSM 850-HCH

GSM 850-HCH

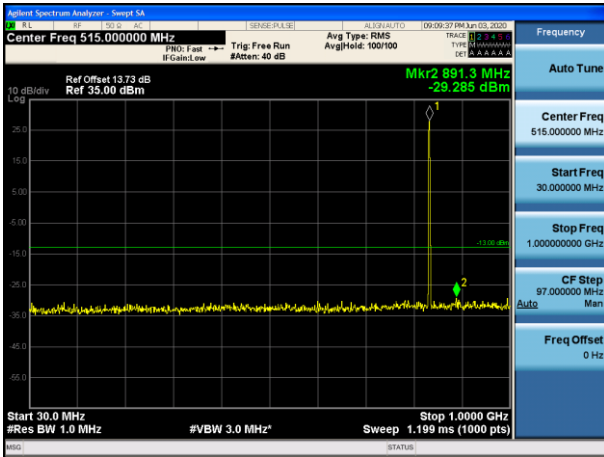


GSM 850-LCH-EGPRS

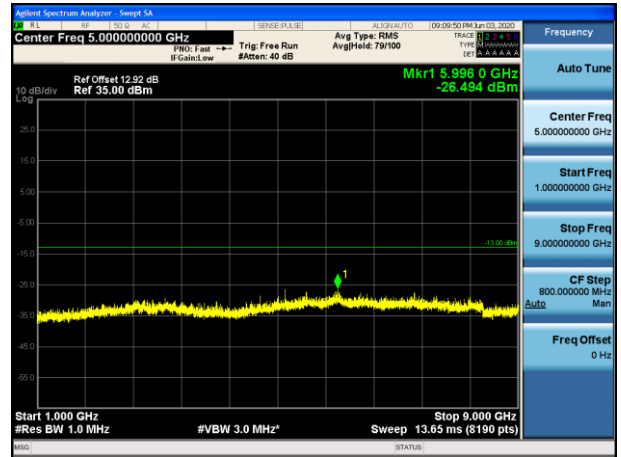
GSM 850-LCH-EGPRS



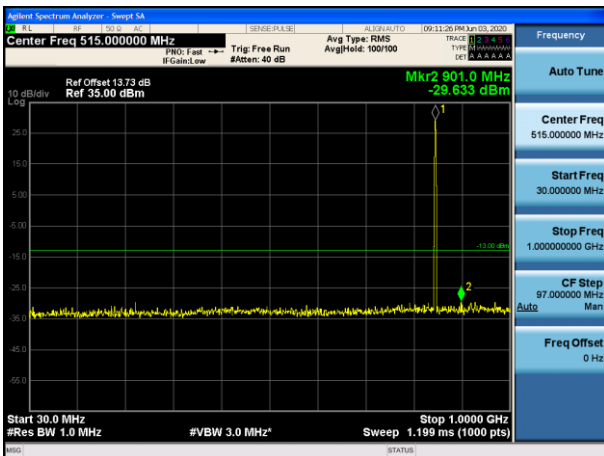
GSM 850-MCH-EGPRS



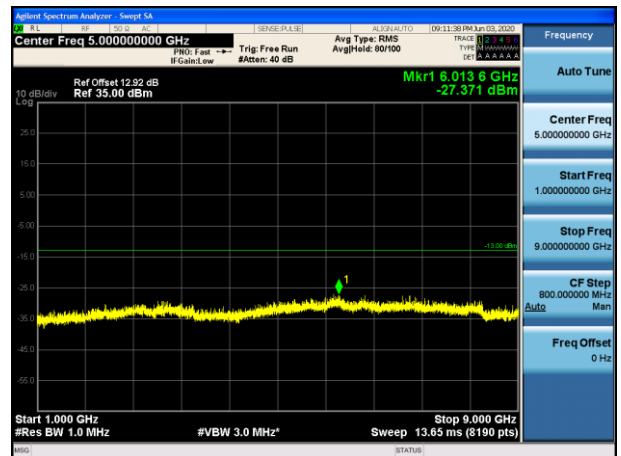
GSM 850-MCH-EGPRS



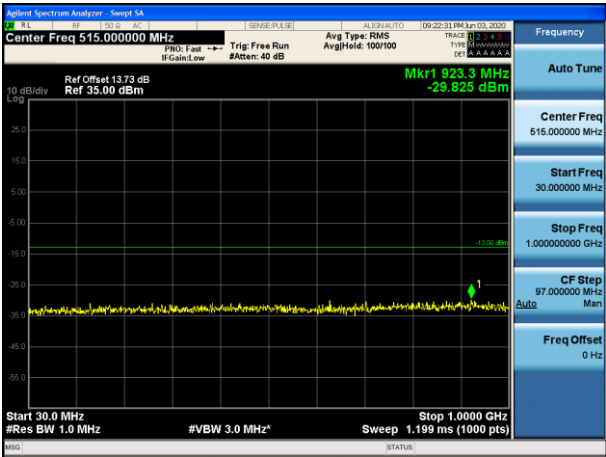
GSM 850-HCH-EGPRS



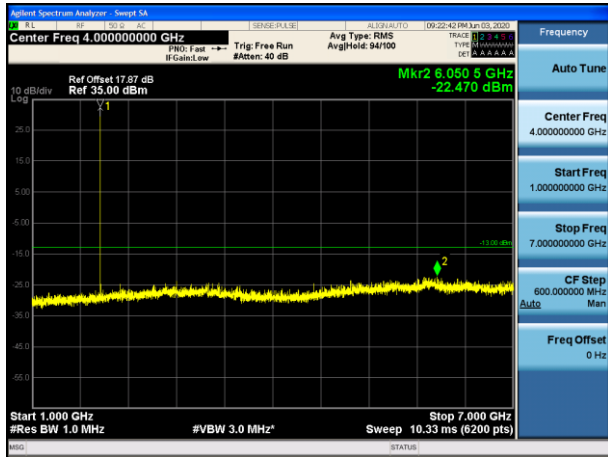
GSM 850-HCH-EGPRS



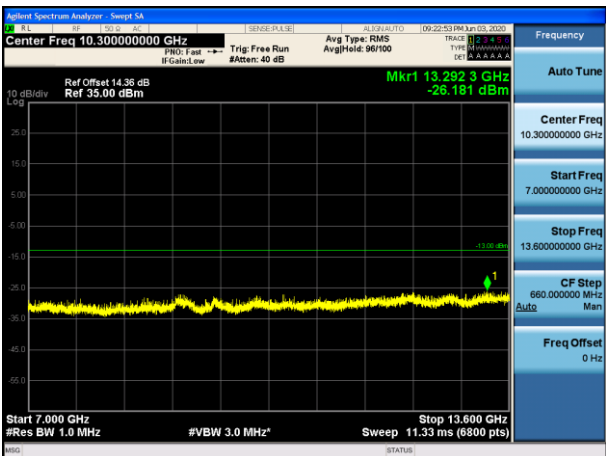
PCS 1900-LCH



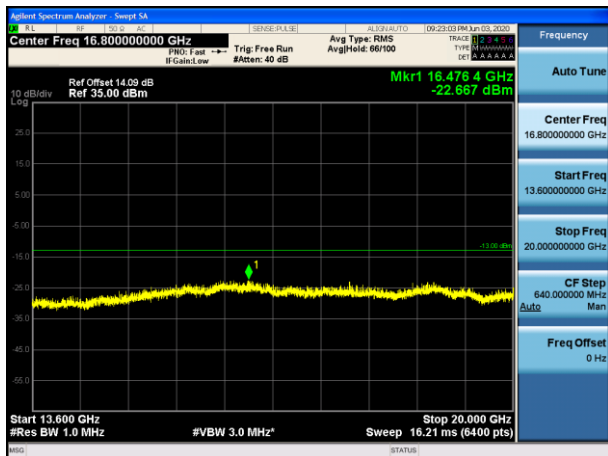
PCS 1900-LCH



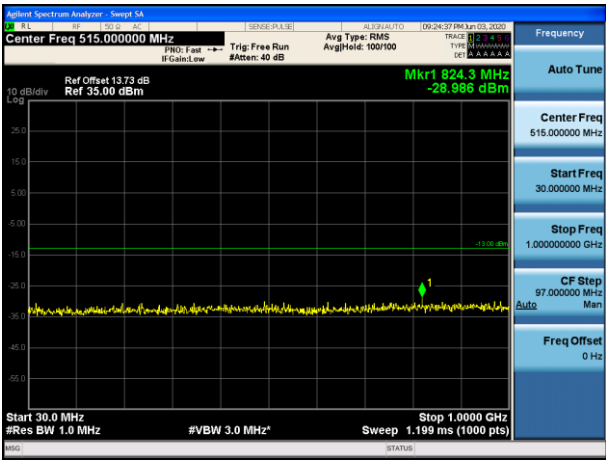
PCS 1900-LCH



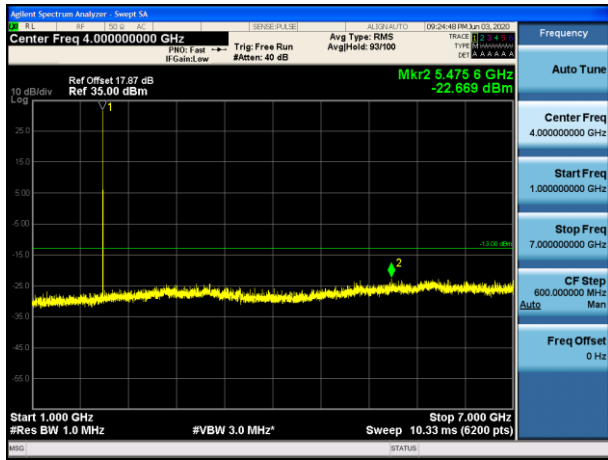
PCS 1900-LCH



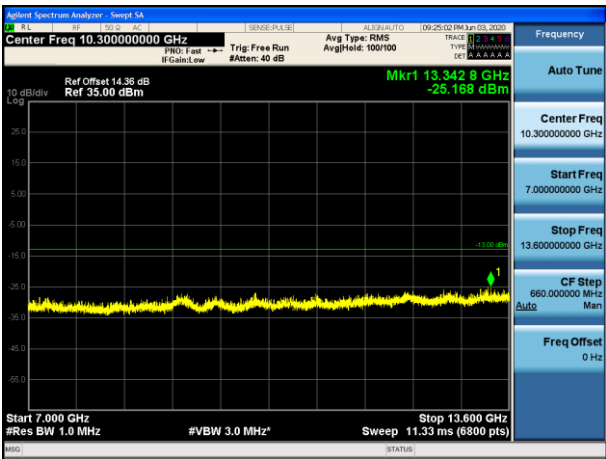
PCS 1900-MCH



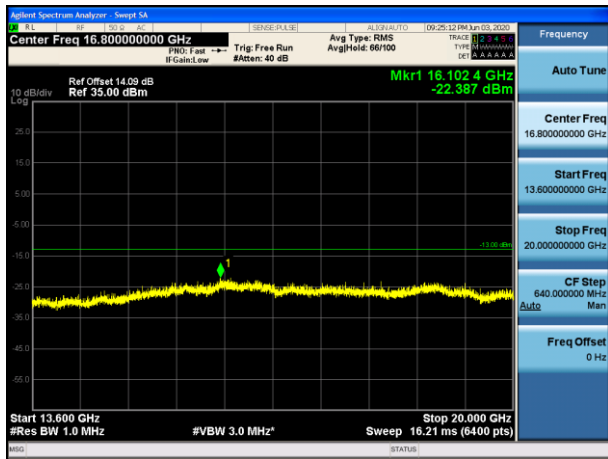
PCS 1900-MCH



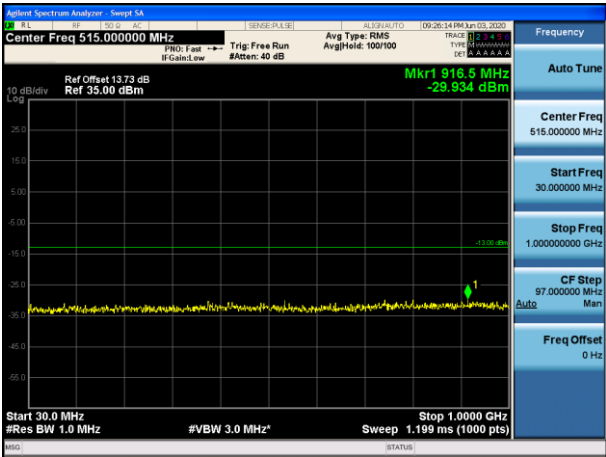
PCS 1900-MCH



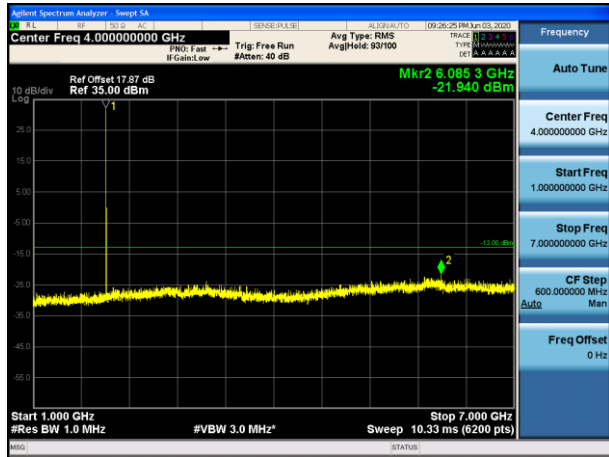
PCS 1900-MCH



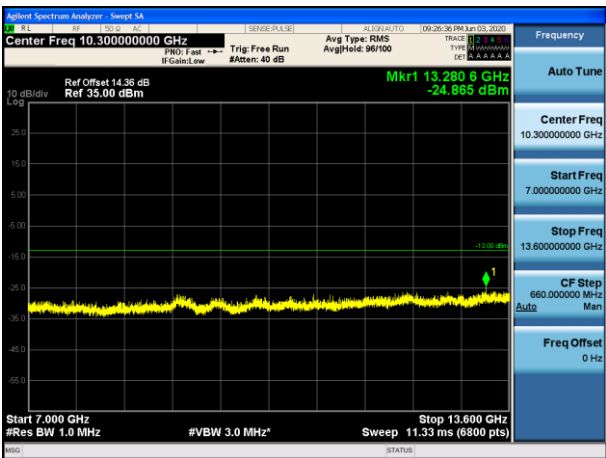
PCS 1900-HCH



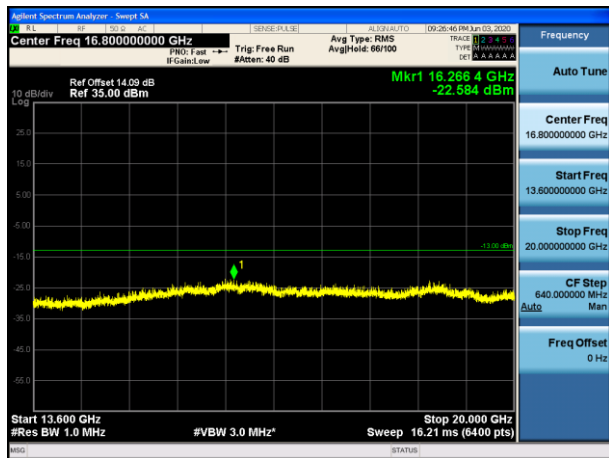
PCS 1900-HCH



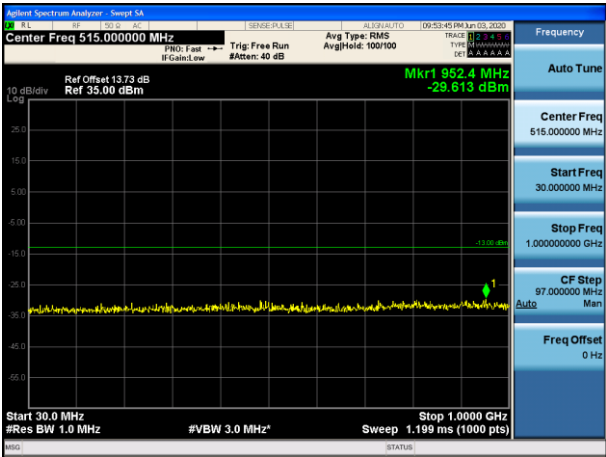
PCS 1900-HCH



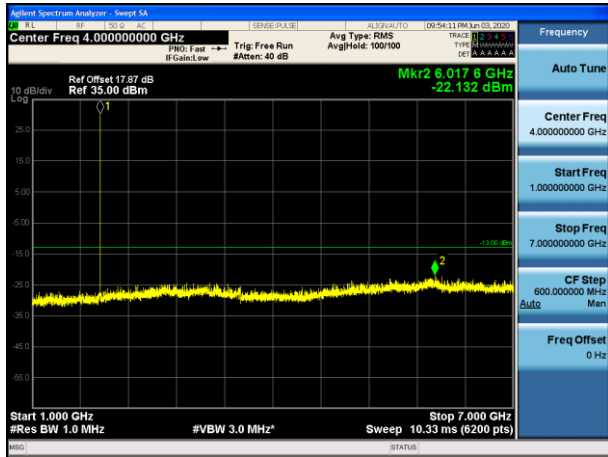
PCS 1900-HCH



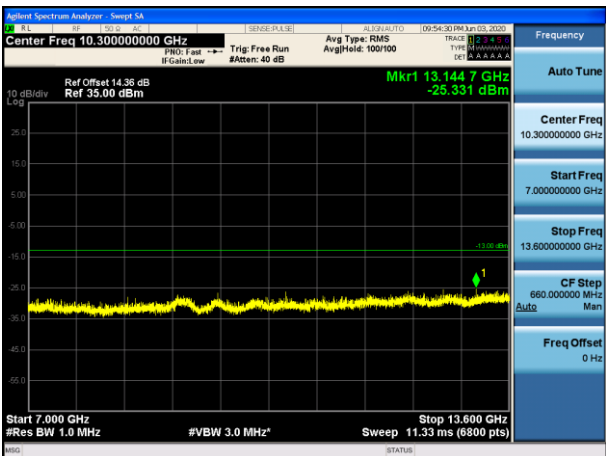
PCS 1900-LCH-EGPRS



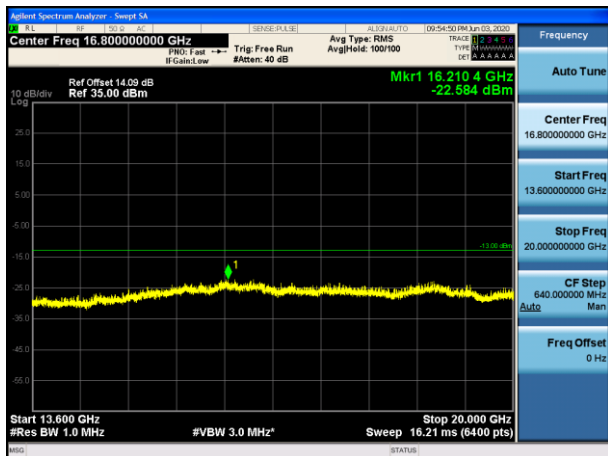
PCS 1900- LCH-EGPRS



PCS 1900-LCH-EGPRS

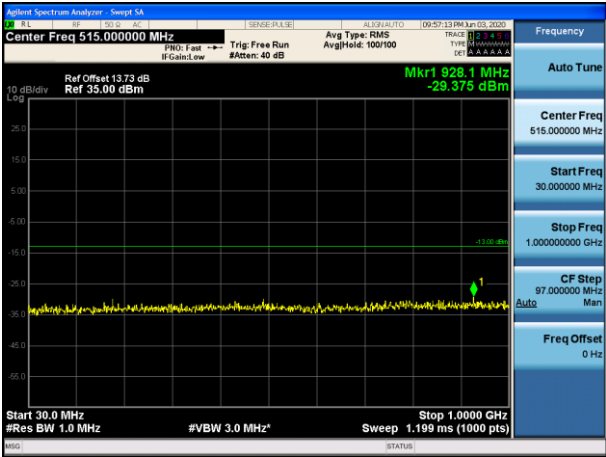


PCS 1900- LCH-EGPRS

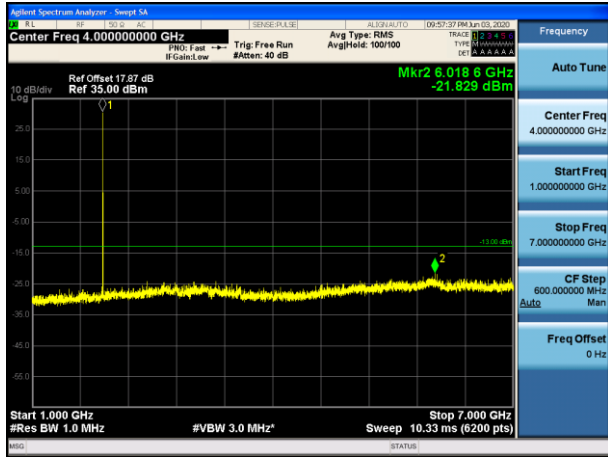




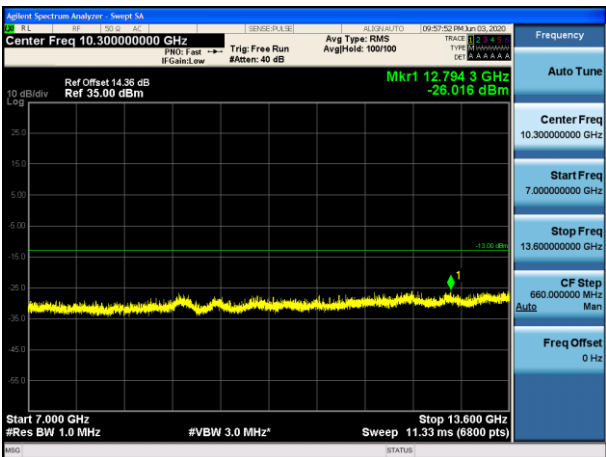
PCS 1900-MCH-EGPRS



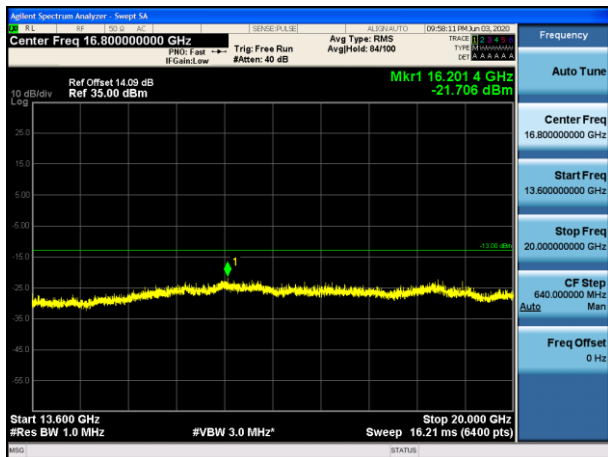
PCS 1900- MCH-EGPRS



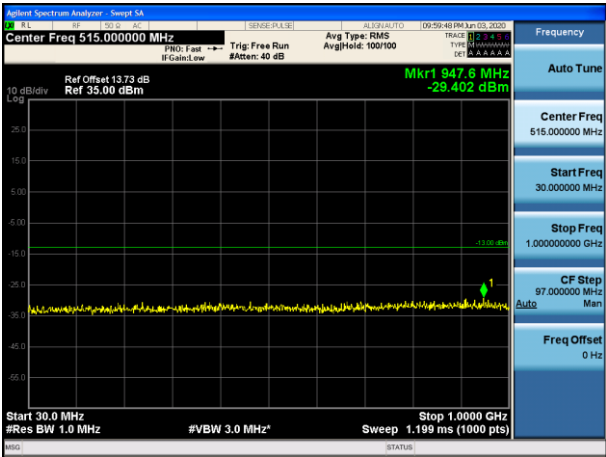
PCS 1900-MCH-EGPRS



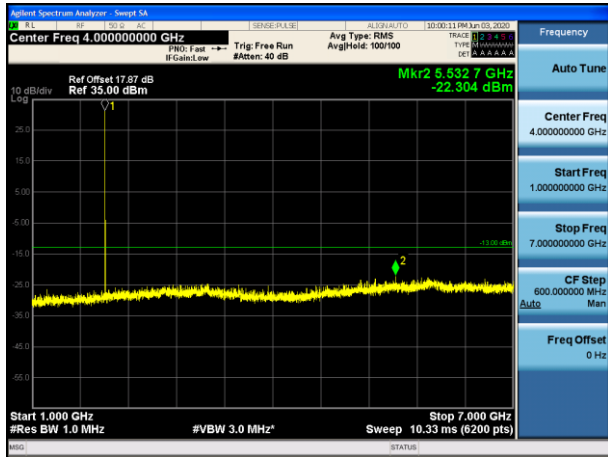
PCS 1900- MCH-EGPRS



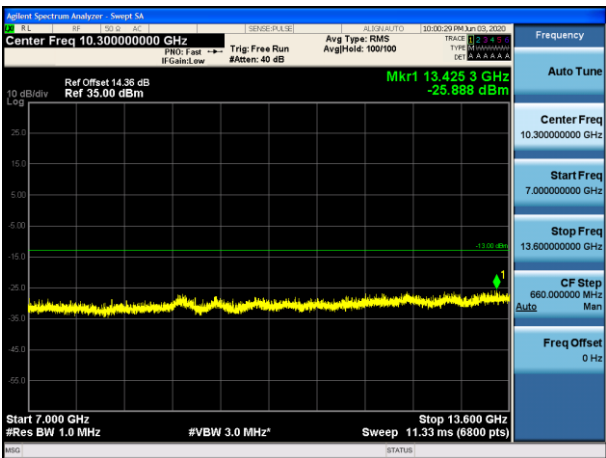
PCS 1900-HCH-EGPRS



PCS 1900- HCH-EGPRS



PCS 1900- HCH-GPRS

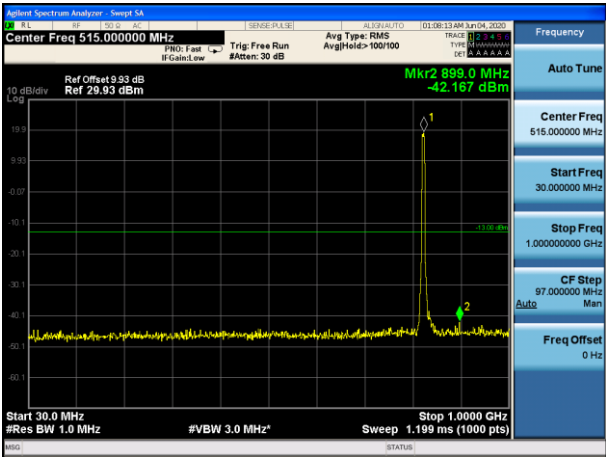


PCS 1900- HCH-EGPRS

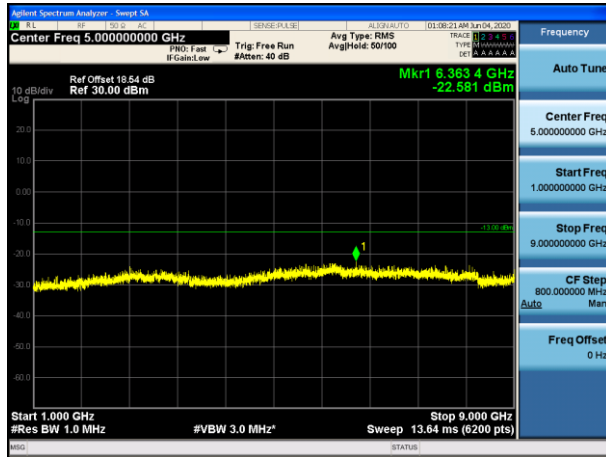


Test Band=WCDMA850/WCDMA1900  
 Test Mode=UMTS

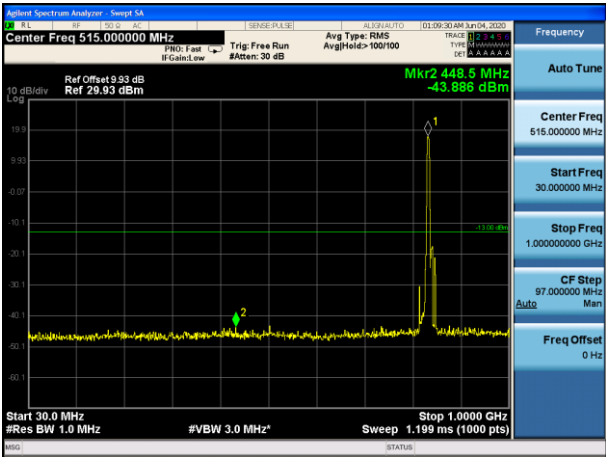
WCDMA 850-LCH



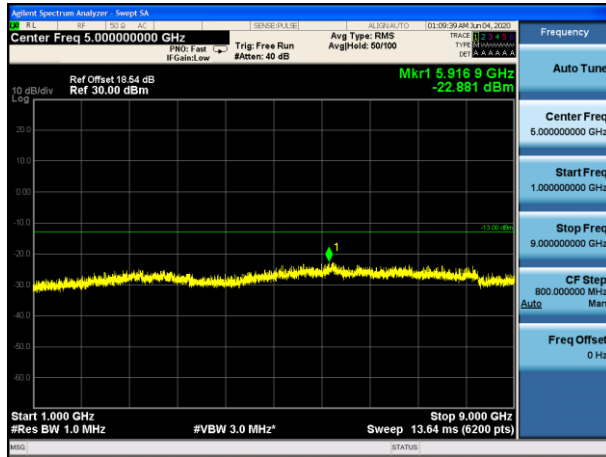
WCDMA 850-LCH



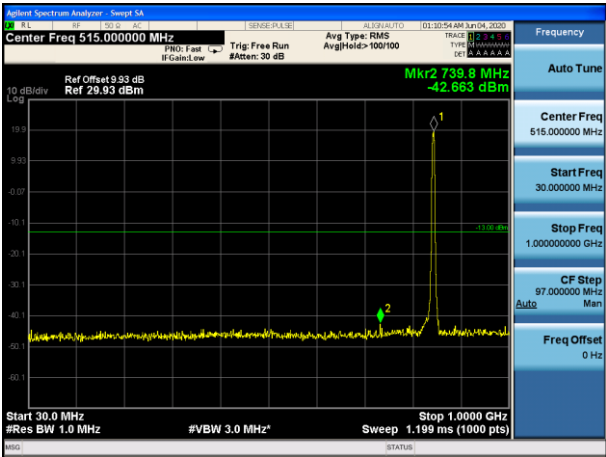
WCDMA 850-MCH



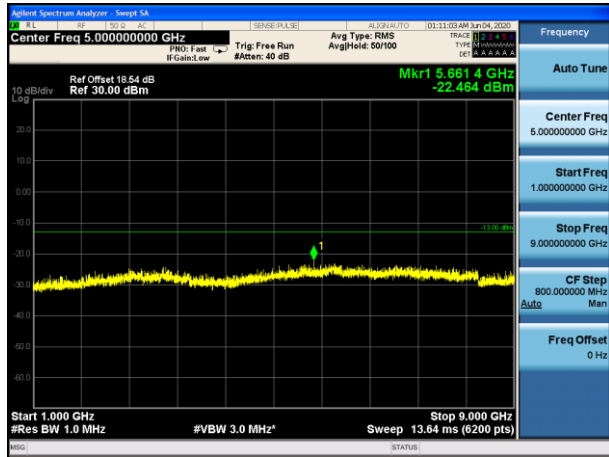
WCDMA 850-MCH



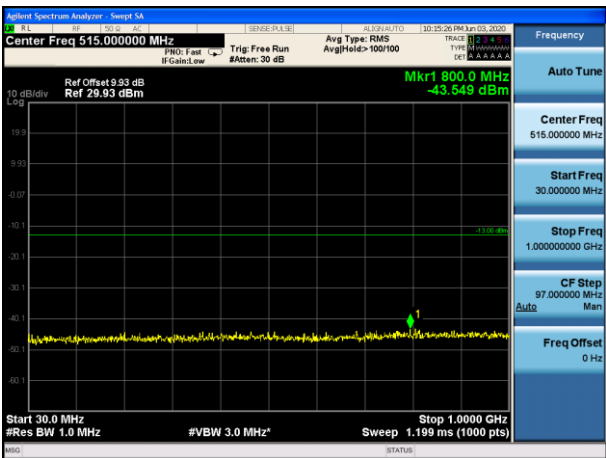
WCDMA 850-HCH



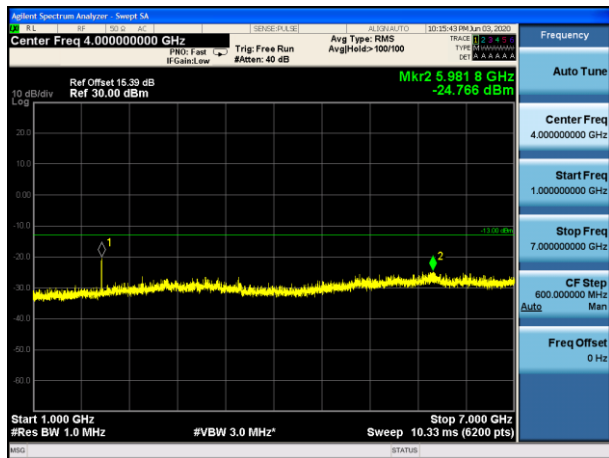
WCDMA 850-HCH



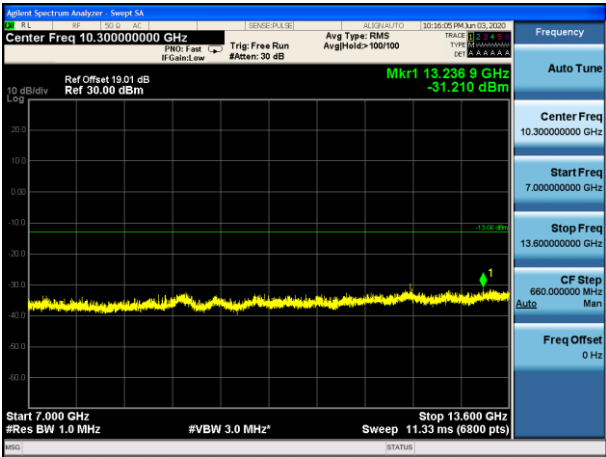
WCDMA 1900-LCH



WCDMA 1900-LCH



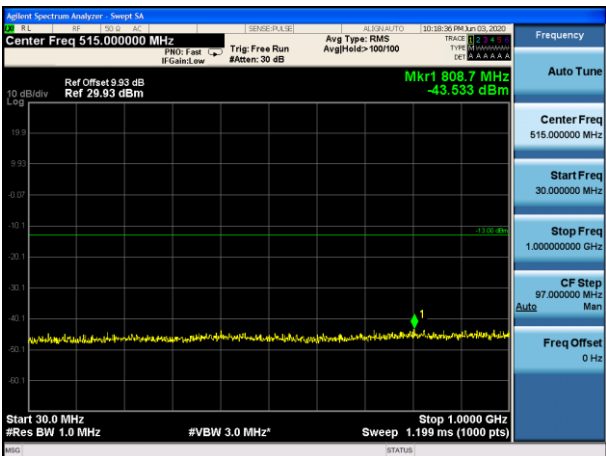
WCDMA 1900-LCH



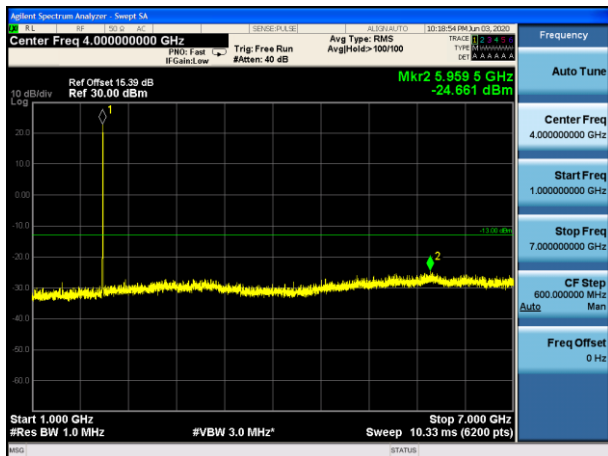
WCDMA 1900-LCH



WCDMA 1900-MCH

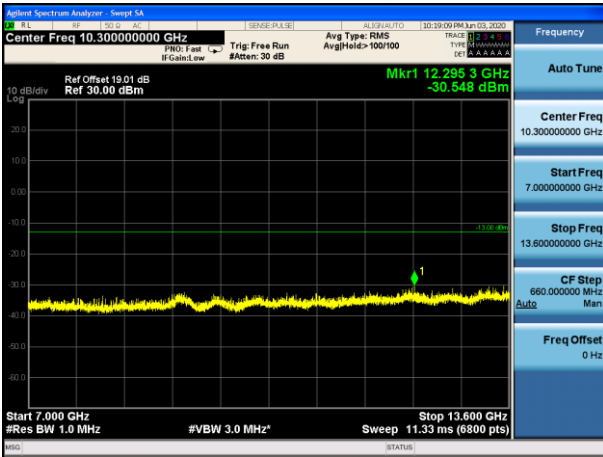


WCDMA 1900-MCH



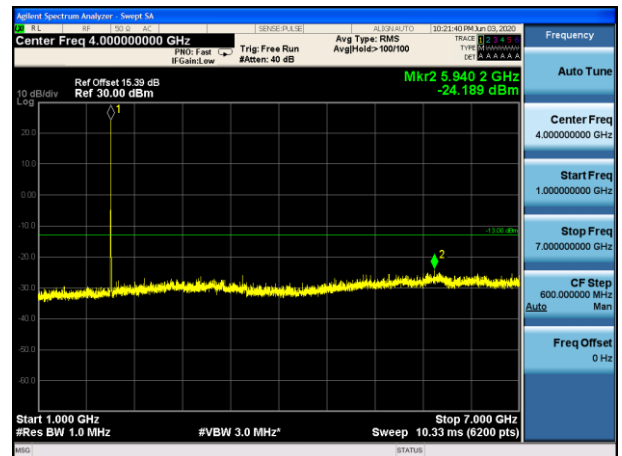
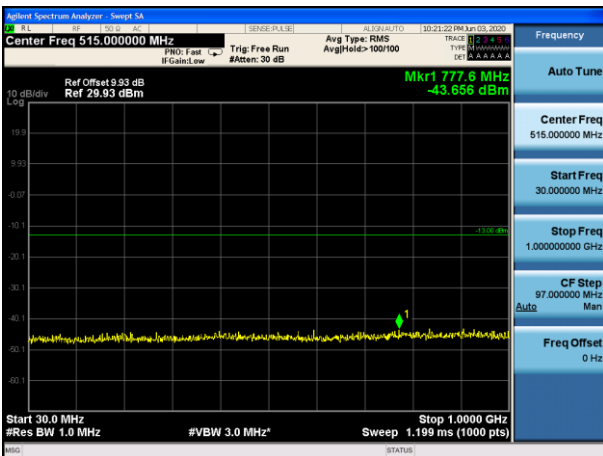
WCDMA 1900-MCH

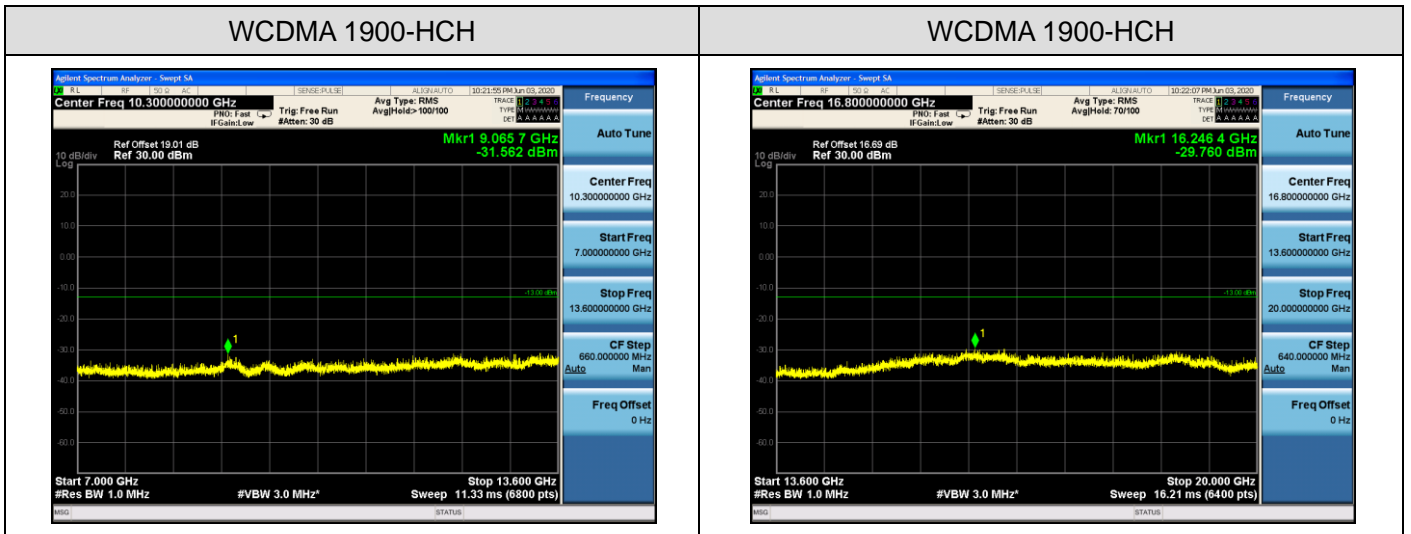
WCDMA 1900-MCH



WCDMA 1900-HCH

WCDMA 1900-HCH





- Note:** 1. Below 30MHz no Spurious found and Above is the worst mode data.  
2. As no emission found in standby or receive mode, no recording in this report.

## 9.2 RADIATED SPURIOUS EMISSION

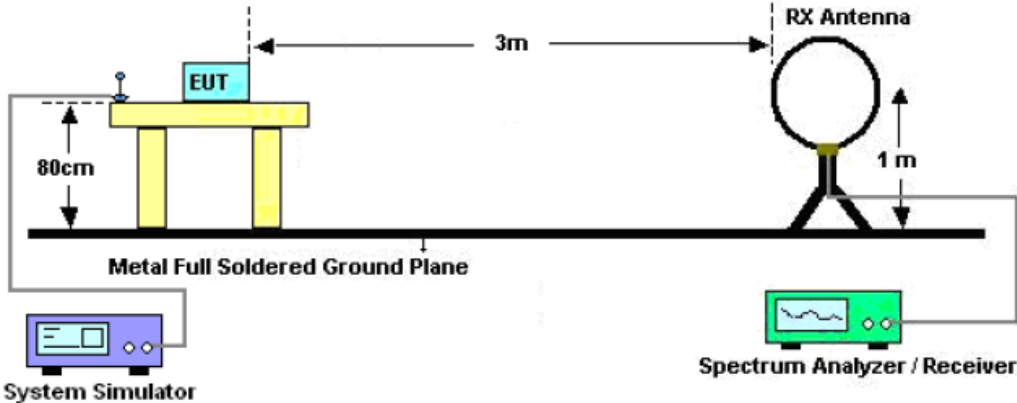
### 9.2.1 MEASUREMENT METHOD

1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

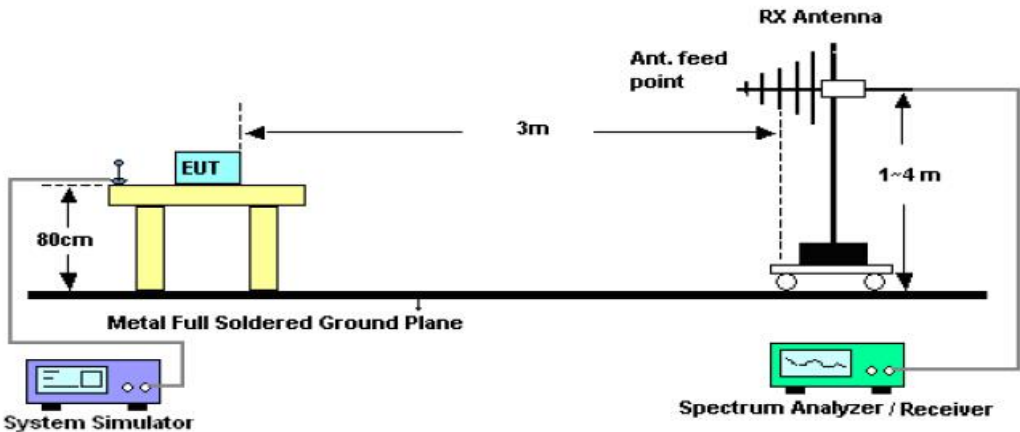


9.2.2 TEST SETUP

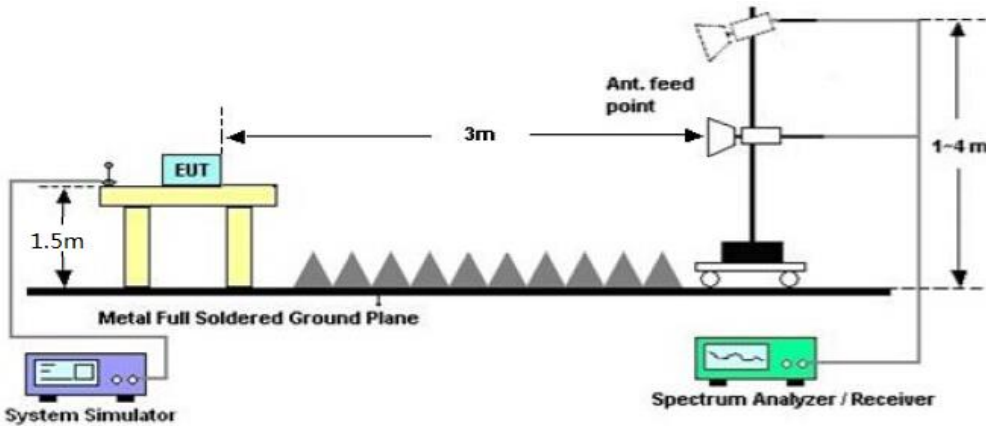
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



### 9.2.3 PROVISIONS APPLICABLE

(a) On any frequency outside a licensee's frequency block (e.g. A, D, B, etc.) within the USPCS spectrum, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least  $43+10\text{Log}(P)$  dB. The specification that emissions shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log (P)$  dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

**Note:** only result the worst condition of each test mode:

**9.2.4 MEASUREMENT RESULT**

**GSM 850:**

<b>The Worst Test Results for Channel 251/848.8 MHz</b>				
Frequency	Emission Level	Limits	Margin	Comment
(MHz)	(dBm)	(dBm)	(dB)	
1697.60	-55.00	-13	-42.00	Horizontal
4521.23	-52.51	-13	-39.51	Horizontal
7049.68	-49.91	-13	-36.91	Horizontal
1697.60	-53.21	-13	-40.21	Vertical
3361.47	-52.40	-13	-39.40	Vertical
7145.66	-49.40	-13	-36.40	Vertical

**PCS 1900:**

<b>The Worst Test Results for Channel 810/1909.8MHz</b>				
Frequency	Emission Level	Limits	Margin	Comment
(MHz)	(dBm)	(dBm)	(dB)	
1119.53	-52.90	-13	-39.90	Horizontal
3819.60	-54.74	-13	-41.74	Horizontal
6574.58	-52.74	-13	-39.74	Horizontal
1289.36	-53.11	-13	-40.11	Vertical
3819.60	-55.53	-13	-42.53	Vertical
5974.31	-53.20	-13	-40.20	Vertical

**HSPA band II:**

The Worst Test Results for Channel 9538/1907.6MHz				
Frequency	Emission Level	Limits	Margin	Comment
(MHz)	(dBm)	(dBm)	(dB)	
1659.58	-50.54	-13	-37.54	Horizontal
3815.20	-49.14	-13	-36.14	Horizontal
6491.22	-48.33	-13	-35.33	Horizontal
1695.47	-48.13	-13	-35.13	Vertical
3815.20	-49.53	-13	-36.53	Vertical
7063.52	-46.24	-13	-33.24	Vertical

**HSPA band V:**

The Worst Test Results for Channel 4233/846.6MHz				
Frequency	Emission Level	Limits	Margin	Comment
(MHz)	(dBm)	(dBm)	(dB)	
1693.20	-51.57	-13	-38.57	Horizontal
3964.77	-50.82	-13	-37.82	Horizontal
5969.44	-51.01	-13	-38.01	Horizontal
1693.20	-52.71	-13	-39.71	Vertical
3369.19	-49.08	-13	-36.08	Vertical
6874.53	-49.45	-13	-36.45	Vertical

**RESULT: PASS**

**Note:**

1. Margin = Emission Level -Limit
2. Below 30MHZ no Spurious found and Above is the worst mode data

## 10. FREQUENCY STABILITY

### 10.1 MEASUREMENT METHOD

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a "call mode". This is accomplished with the use of R&S CMU200 DIGITAL RADIO COMMUNICATION TESTER.

- 1 Measure the carrier frequency at room temperature.
- 2 Subject the EUT to overnight soak at -10°C.
- 3 With the EUT, powered via nominal voltage, connected to the CMU200 and in a simulated call on channel 661 for PCS 1900 band , channel 190 for GSM 850 band, channel 9400 for UMTS band II and channel 4175 for UMTS band V measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
- 4 Repeat the above measurements at 10°C increments from -10°C to +40°C. Allow at least 1 1/2 hours at each temperature, unpowered, before making measurements.
- 5 Re-measure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments re-measuring carrier frequency at each voltage. Pause at nominal voltage for 1 1/2 hours unpowered, to allow any self-heating to stabilize, before continuing.
- 6 Subject the EUT to overnight soak at +40°C.
- 7 With the EUT, powered via nominal voltage, connected to the CMU200 and in a simulated call on the centre channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
- 8 Repeat the above measurements at 10°C increments from +40°C to -10°C. Allow at least 1 1/2 hours at each temperature, unpowered, before making measurements.
- 9 At all temperature levels hold the temperature to +/- 0.5°C during the measurement procedure.

## **10.2 PROVISIONS APPLICABLE**

### **10.2.1 FOR HAND CARRIED BATTERY POWERED EQUIPMENT**

According to the ANSI/TIA-603-E-2016, the frequency stability of the carrier shall be accurate to within 0.1 ppm of the received frequency from the base station. This accuracy is sufficient to meet Sec. 24.235, Frequency Stability. The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. As this transceiver is considered "Hand carried, battery powered equipment" Section 2.1055(d)(2) applies. This requires that the lower voltage for frequency stability testing be specified by the manufacturer. This transceiver is specified to operate with an input voltage of between 3.23 VDC and 4.35VDC, with a nominal voltage of 3.8 VDC. Operation above or below these voltage limits is prohibited by transceiver software in order to prevent improper operation as well as to protect components from overstress. These voltages represent a tolerance of -10 % and +12.5 %. For the purposes of measuring frequency stability these voltage limits are to be used.

### **10.2.2 FOR EQUIPMENT POWERED BY PRIMARY SUPPLY VOLTAGE**

According to the ANSI/TIA-603-E-2016, the frequency stability of the carrier shall be accurate to within 0.1 ppm of the received frequency from the base station. This accuracy is sufficient to meet Sec. 24.235, Frequency Stability. The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. For this EUT section 2.1055(d)(1) applies. This requires varying primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment, the normal environment temperature is 20°C.

### 10.3 MEASUREMENT RESULT

#### Test Results

#### Frequency Error vs. Voltage:

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.(V)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	GSM	LCH	TN	VL	8.07	0.009791	±2.5	PASS
			TN	VN	8.07	0.009791	±2.5	PASS
			TN	VH	7.75	0.009403	±2.5	PASS
		MCH	TN	VL	8.46	0.010112	±2.5	PASS
			TN	VN	9.88	0.011810	±2.5	PASS
			TN	VH	10.07	0.012037	±2.5	PASS
		HCH	TN	VL	10.20	0.012017	±2.5	PASS
			TN	VN	8.14	0.009590	±2.5	PASS
			TN	VH	9.30	0.010957	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.(V)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	EGPRS	LCH	TN	VL	-0.52	-0.000631	±2.5	PASS
			TN	VN	-0.65	-0.000789	±2.5	PASS
			TN	VH	0.16	0.000194	±2.5	PASS
		MCH	TN	VL	-0.13	-0.000155	±2.5	PASS
			TN	VN	1.23	0.001470	±2.5	PASS
			TN	VH	0.32	0.000383	±2.5	PASS
		HCH	TN	VL	1.52	0.001791	±2.5	PASS
			TN	VN	2.32	0.002733	±2.5	PASS
			TN	VH	2.03	0.002392	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt. (V)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
PCS1900	GSM	LCH	TN	VL	26.15	0.014134	PASS
			TN	VN	29.83	0.016123	PASS
			TN	VH	28.93	0.015636	PASS
		MCH	TN	VL	23.63	0.012569	PASS
			TN	VN	23.89	0.012707	PASS
			TN	VH	25.31	0.013463	PASS
		HCH	TN	VL	28.61	0.014981	PASS
			TN	VN	24.47	0.012813	PASS
			TN	VH	26.02	0.013624	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt. (V)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
GSM1900	EGPRS	LCH	TN	VL	21.89	0.011831	PASS
			TN	VN	21.70	0.011728	PASS
			TN	VH	24.63	0.013312	PASS
		MCH	TN	VL	25.80	0.013723	PASS
			TN	VN	20.40	0.010851	PASS
			TN	VH	22.89	0.012176	PASS
		HCH	TN	VL	26.38	0.013813	PASS
			TN	VN	22.96	0.012022	PASS
			TN	VH	22.63	0.011849	PASS

Note: Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.



**Frequency Error vs. Temperature:**

Test Band	Test Mode	Test Channel	Test Volt.	Test Tem. (°C)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	GSM	LCH	VN	-10	6.84	0.008299	±2.5	PASS
			VN	0	4.71	0.005715	±2.5	PASS
			VN	10	8.39	0.010180	±2.5	PASS
			VN	20	6.20	0.007522	±2.5	PASS
			VN	30	7.30	0.008857	±2.5	PASS
			VN	40	6.01	0.007292	±2.5	PASS
GSM850	GSM	MCH	VN	-10	9.75	0.011654	±2.5	PASS
			VN	0	8.46	0.010112	±2.5	PASS
			VN	10	8.33	0.009957	±2.5	PASS
			VN	20	9.36	0.011188	±2.5	PASS
			VN	30	10.20	0.012192	±2.5	PASS
			VN	40	9.94	0.011881	±2.5	PASS
GSM850	GSM	HCH	VN	-10	8.85	0.010426	±2.5	PASS
			VN	0	10.85	0.012783	±2.5	PASS
			VN	10	7.75	0.009131	±2.5	PASS
			VN	20	9.49	0.011180	±2.5	PASS
			VN	30	7.55	0.008895	±2.5	PASS
			VN	40	5.62	0.006621	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Tem. (°C)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	EGPRS	LCH	VN	-10	-1.74	-0.002111	±2.5	PASS
			VN	0	3.39	0.004113	±2.5	PASS
			VN	10	3.49	0.004234	±2.5	PASS
			VN	20	-0.94	-0.001140	±2.5	PASS
			VN	30	3.97	0.004817	±2.5	PASS
			VN	40	3.00	0.003640	±2.5	PASS
GSM850	EGPRS	MCH	VN	-10	3.26	0.003897	±2.5	PASS
			VN	0	4.49	0.005367	±2.5	PASS
			VN	10	-1.00	-0.001195	±2.5	PASS
			VN	20	7.85	0.009383	±2.5	PASS
			VN	30	4.39	0.005247	±2.5	PASS
			VN	40	2.62	0.003132	±2.5	PASS
GSM850	EGPRS	HCH	VN	-10	3.39	0.003994	±2.5	PASS
			VN	0	5.68	0.006692	±2.5	PASS
			VN	10	2.84	0.003346	±2.5	PASS
			VN	20	5.71	0.006727	±2.5	PASS
			VN	30	5.55	0.006539	±2.5	PASS
			VN	40	3.52	0.004147	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Tem. (°C)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
PCS1900	GSM	LCH	VN	-10	27.77	0.015009	PASS
			VN	0	30.93	0.016717	PASS
			VN	10	31.70	0.017133	PASS
			VN	20	33.25	0.017971	PASS
			VN	30	30.99	0.016750	PASS
			VN	40	31.77	0.017171	PASS
PCS1900	GSM	MCH	VN	-10	23.96	0.012745	PASS
			VN	0	23.18	0.012330	PASS
			VN	10	26.28	0.013979	PASS
			VN	20	22.34	0.011883	PASS
			VN	30	22.73	0.012090	PASS
			VN	40	26.15	0.013910	PASS
PCS1900	GSM	HCH	VN	-10	28.73	0.015043	PASS
			VN	0	30.80	0.016127	PASS
			VN	10	28.93	0.015148	PASS
			VN	20	27.70	0.014504	PASS
			VN	30	24.73	0.012949	PASS
			VN	40	26.93	0.014101	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Tem. (°C)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
GSM1900	EGPRS	LCH	VN	-10	28.83	0.015582	PASS
			VN	0	24.50	0.013242	PASS
			VN	10	32.67	0.017658	PASS
			VN	20	38.13	0.020609	PASS
			VN	30	37.39	0.020209	PASS
			VN	40	36.10	0.019511	PASS
GSM1900	EGPRS	MCH	VN	-10	31.03	0.016505	PASS
			VN	0	17.98	0.009564	PASS
			VN	10	26.05	0.013856	PASS
			VN	20	25.31	0.013463	PASS
			VN	30	24.54	0.013053	PASS
			VN	40	27.67	0.014718	PASS
GSM1900	EGPRS	HCH	VN	-10	30.61	0.016028	PASS
			VN	0	24.89	0.013033	PASS
			VN	10	27.15	0.014216	PASS
			VN	20	22.99	0.012038	PASS
			VN	30	24.44	0.012797	PASS
			VN	40	21.02	0.011006	PASS

Note: Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

**Frequency Error vs. Voltage:**

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.(V)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
WCDMA850	UMTS	LCH	TN	VL	-8.83	-0.01	±2.5	PASS
			TN	VN	-20.10	-0.02	±2.5	PASS
			TN	VH	-12.45	-0.02	±2.5	PASS
		MCH	TN	VL	-14.85	-0.02	±2.5	PASS
			TN	VN	-8.16	-0.01	±2.5	PASS
			TN	VH	-7.69	-0.01	±2.5	PASS
		HCH	TN	VL	-11.72	-0.01	±2.5	PASS
			TN	VN	-15.58	-0.02	±2.5	PASS
			TN	VH	-9.17	-0.01	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.(V)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
WCDMA1900	UMTS	LCH	TN	VL	-19.73	-0.01	PASS
			TN	VN	-14.98	-0.01	PASS
			TN	VH	-15.99	-0.01	PASS
		MCH	TN	VL	-17.81	-0.01	PASS
			TN	VN	-20.02	-0.01	PASS
			TN	VH	-13.50	-0.01	PASS
		HCH	TN	VL	-21.73	-0.01	PASS
			TN	VN	-19.55	-0.01	PASS
			TN	VH	-13.87	-0.01	PASS

Note: Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

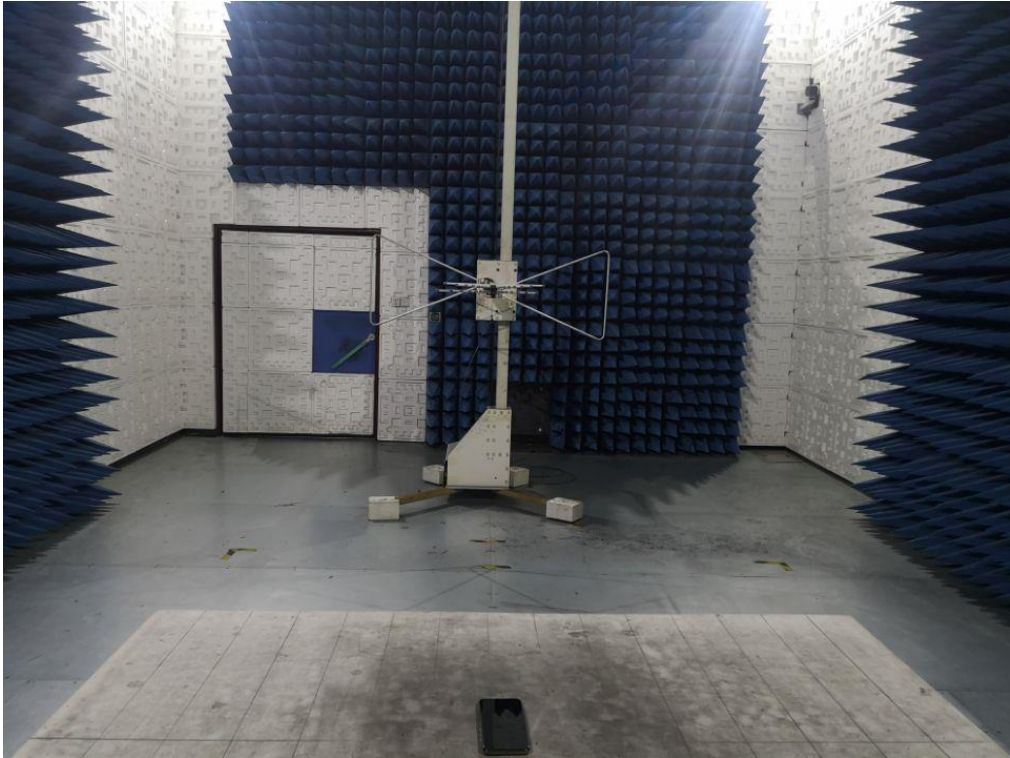
**Frequency Error vs. Temperature:**

Test Band	Test Mode	Test Channel	Test Volt.	Test Tem. (°C)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
WCDMA850	UMTS	LCH	VN	-10	-12.73	-0.02	±2.5	PASS
			VN	0	-18.78	-0.02	±2.5	PASS
			VN	10	-12.45	-0.02	±2.5	PASS
			VN	20	-13.14	-0.02	±2.5	PASS
			VN	30	-18.19	-0.02	±2.5	PASS
			VN	40	-14.43	-0.02	±2.5	PASS
WCDMA850	UMTS	MCH	VN	-10	-9.83	-0.01	±2.5	PASS
			VN	0	-17.78	-0.02	±2.5	PASS
			VN	10	-9.84	-0.01	±2.5	PASS
			VN	20	-16.19	-0.02	±2.5	PASS
			VN	30	-14.69	-0.02	±2.5	PASS
			VN	40	-8.44	-0.01	±2.5	PASS
WCDMA850	UMTS	HCH	VN	-10	-16.59	-0.02	±2.5	PASS
			VN	0	-19.65	-0.02	±2.5	PASS
			VN	10	-15.12	-0.02	±2.5	PASS
			VN	20	-12.16	-0.01	±2.5	PASS
			VN	30	-9.25	-0.01	±2.5	PASS
			VN	40	-13.75	-0.02	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Tem. (°C)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
WCDMA1900	UMTS	LCH	VN	-10	-17.49	-0.01	PASS
			VN	0	-12.86	-0.01	PASS
			VN	10	-14.74	-0.01	PASS
			VN	20	-15.26	-0.01	PASS
			VN	30	-8.94	0.00	PASS
			VN	40	-12.48	-0.01	PASS
WCDMA1900	UMTS	MCH	VN	-10	-15.76	-0.01	PASS
			VN	0	-13.93	-0.01	PASS
			VN	10	-18.91	-0.01	PASS
			VN	20	-19.33	-0.01	PASS
			VN	30	-18.94	-0.01	PASS
			VN	40	-20.80	-0.01	PASS
WCDMA1900	UMTS	HCH	VN	-10	-12.73	-0.01	PASS
			VN	0	-16.34	-0.01	PASS
			VN	10	-17.64	-0.01	PASS
			VN	20	-11.54	-0.01	PASS
			VN	30	-14.83	-0.01	PASS
			VN	40	-13.41	-0.01	PASS

Note: Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

**APPENDIX A: PHOTOGRAPHS OF TEST SETUP**  
**RADIATED SPURIOUS EMISSION**



**RADIATED SPURIOUS ABOVE 1G EMISSION**



**----END OF REPORT----**