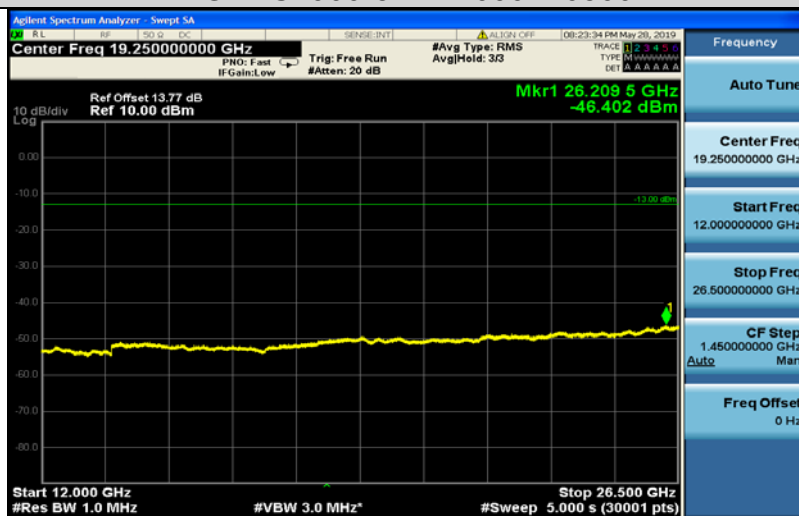
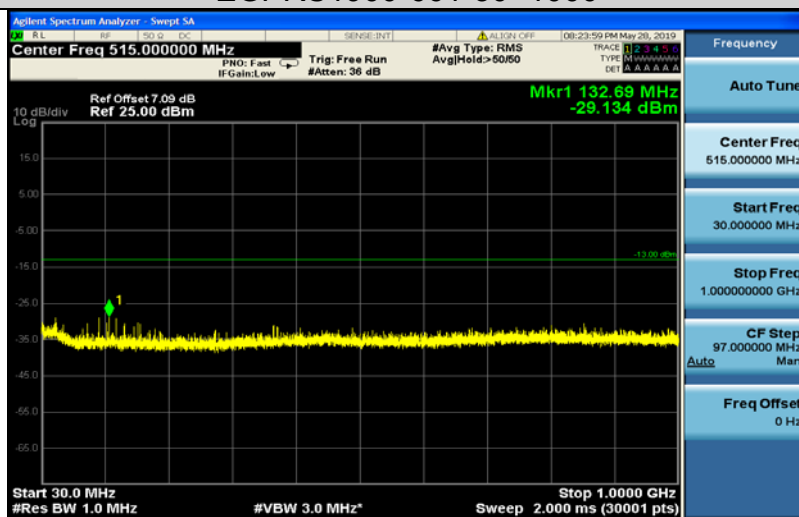


### EGPRS1900-512-12000~26500

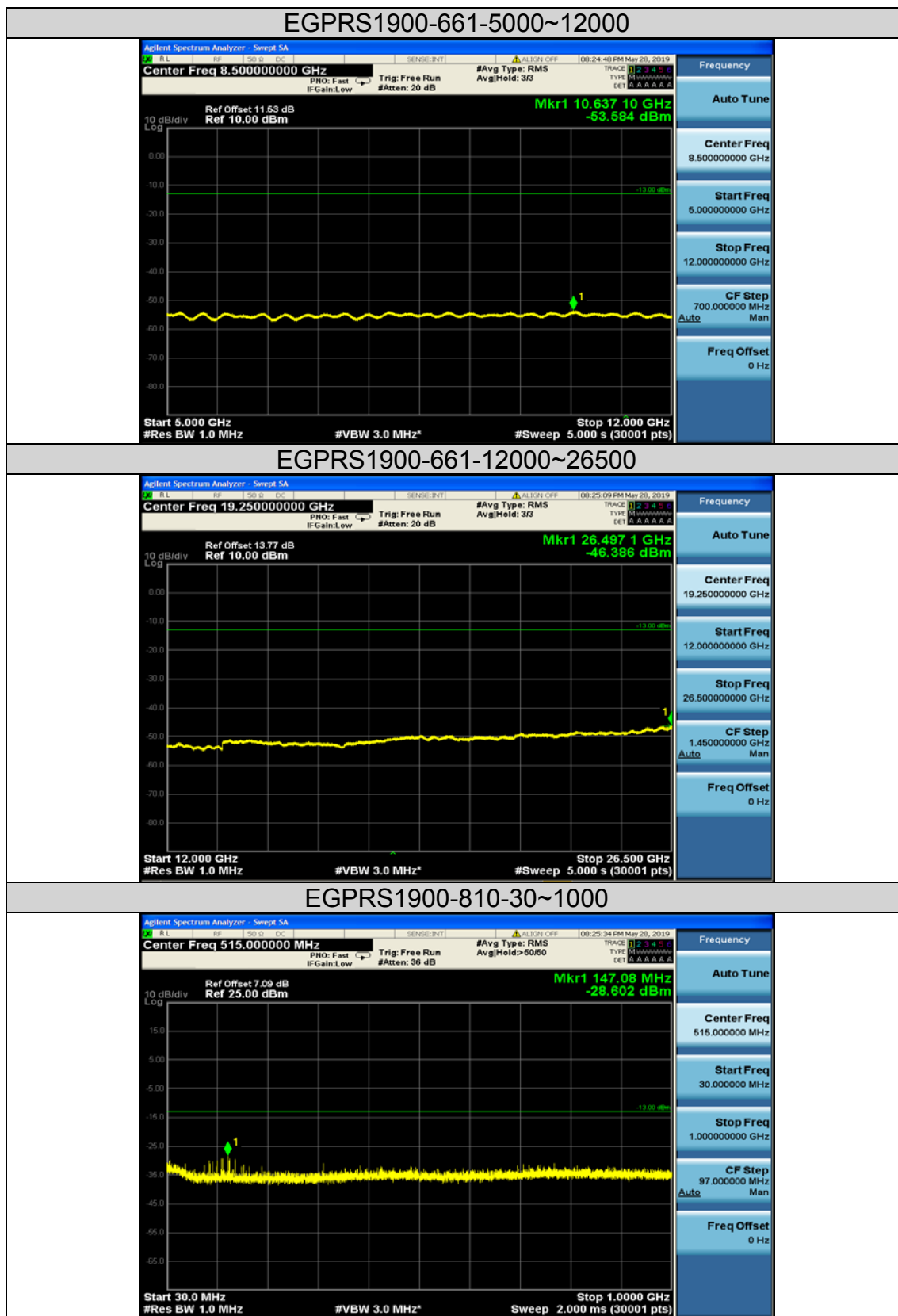


### EGPRS1900-661-30~1000



### EGPRS1900-661-1000~5000

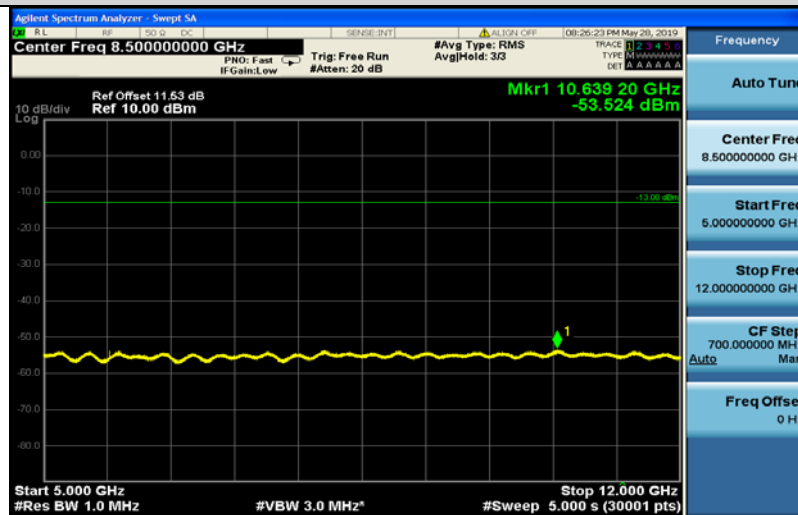




### EGPRS1900-810-1000~5000



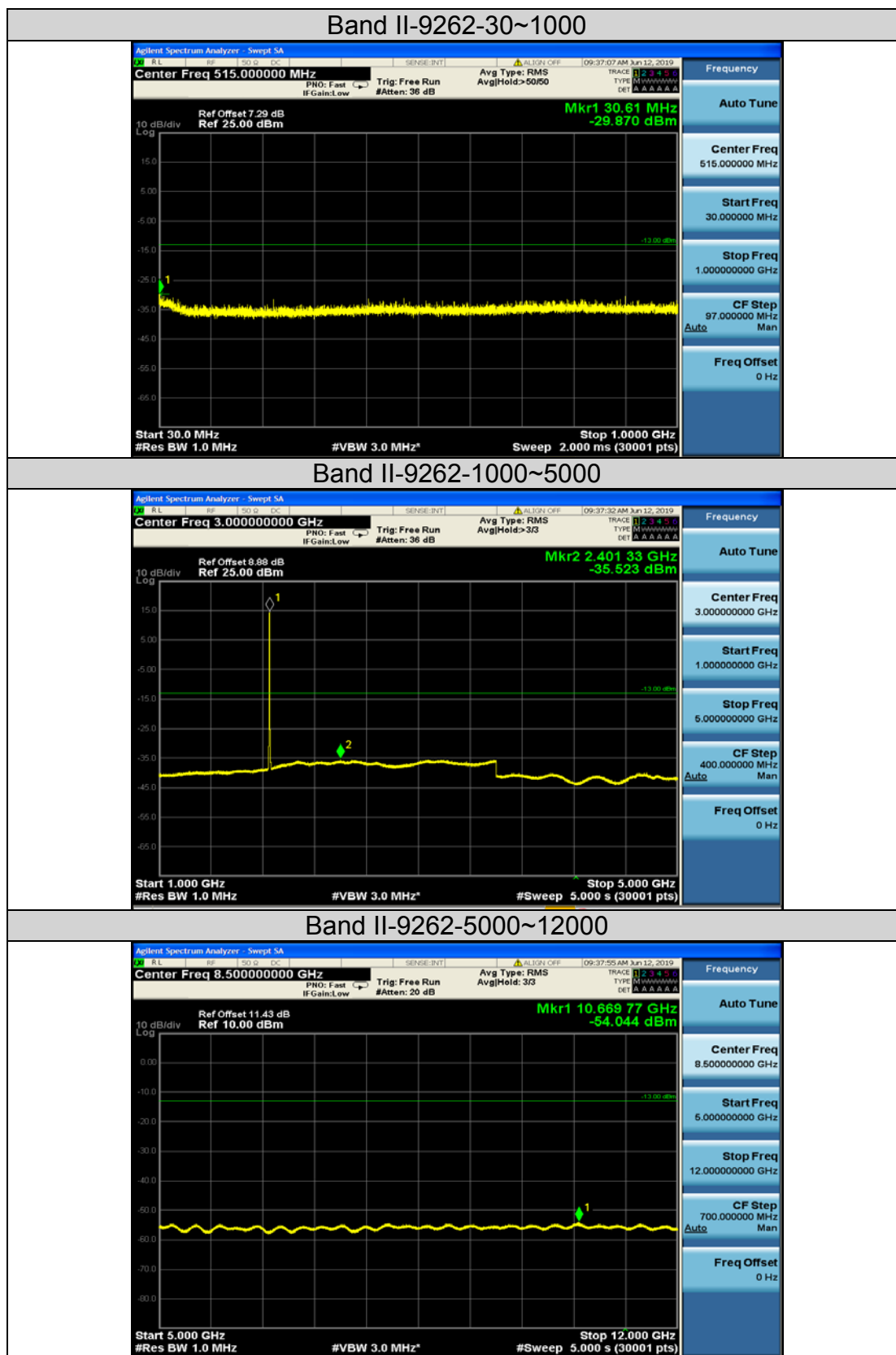
### EGPRS1900-810-5000~12000



### EGPRS1900-810-12000~26500



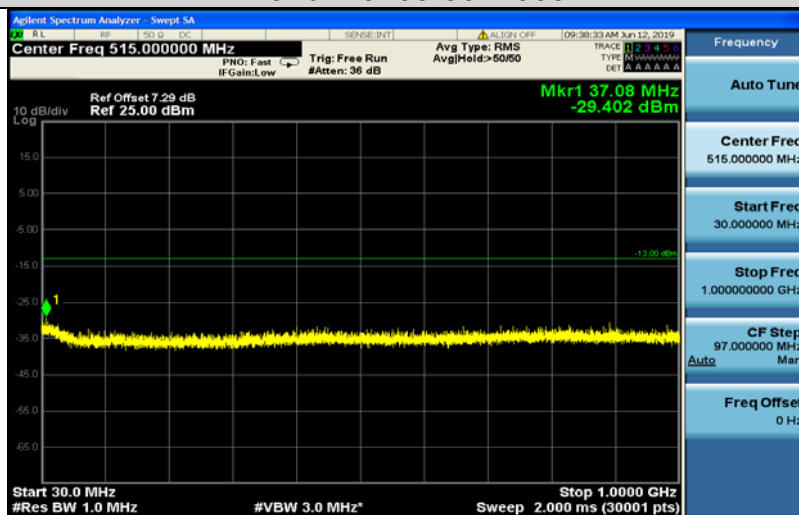
WCDMA Band II



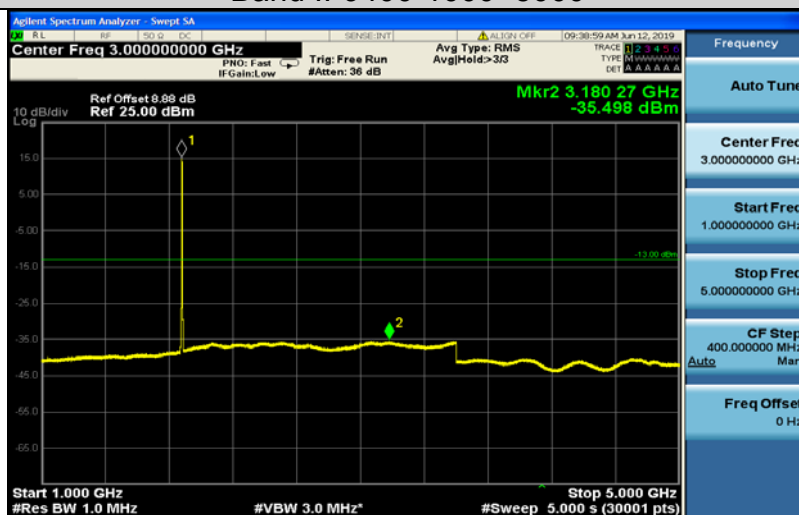
### Band II-9262-12000~20000



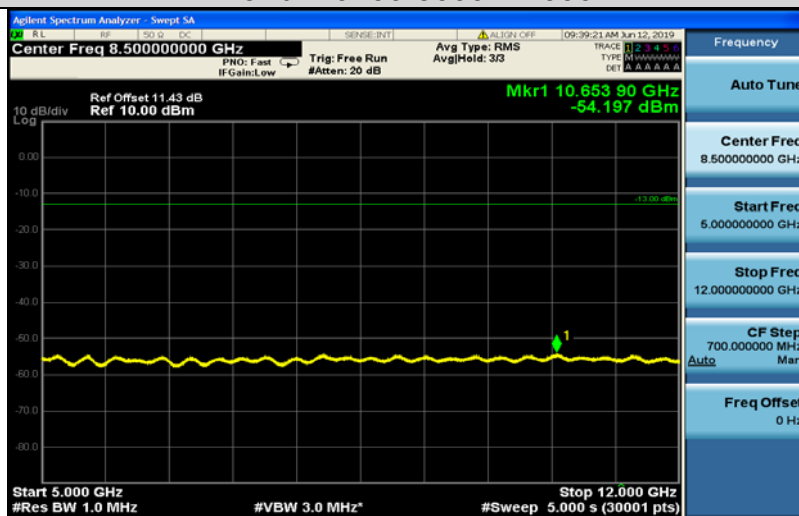
### Band II-9400-30~1000



### Band II-9400-1000~5000



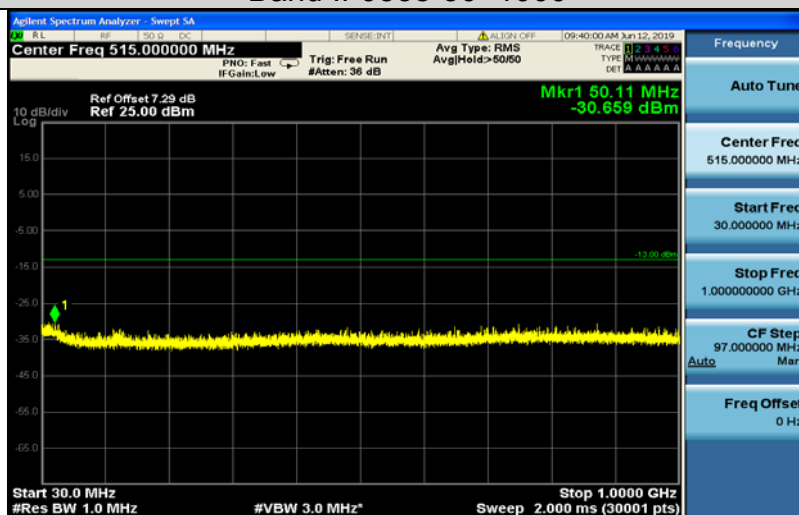
### Band II-9400-5000~12000



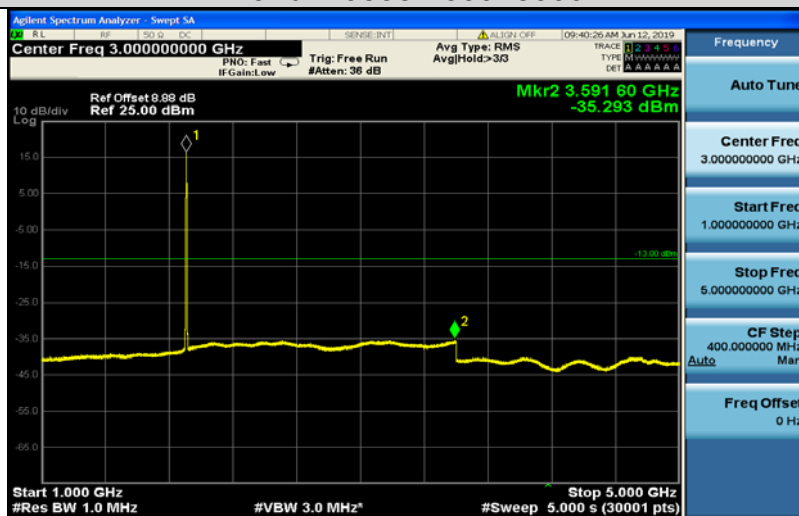
### Band II-9400-12000~20000



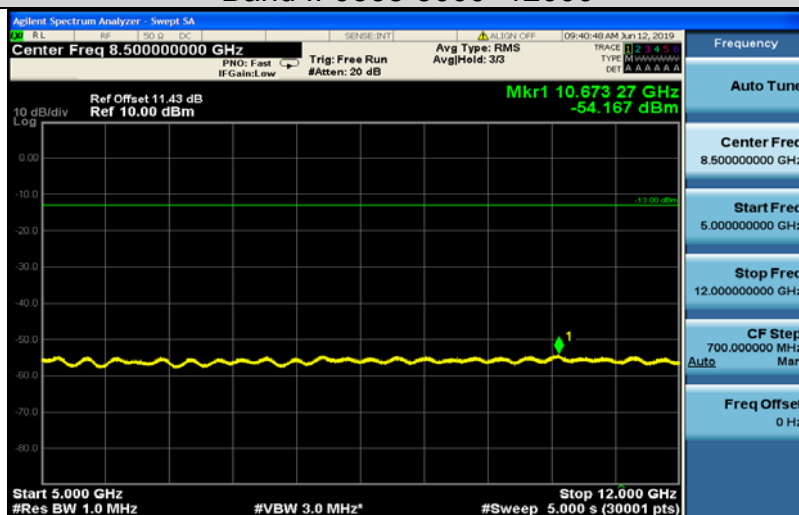
### Band II-9538-30~1000



### Band II-9538-1000~5000



### Band II-9538-5000~12000

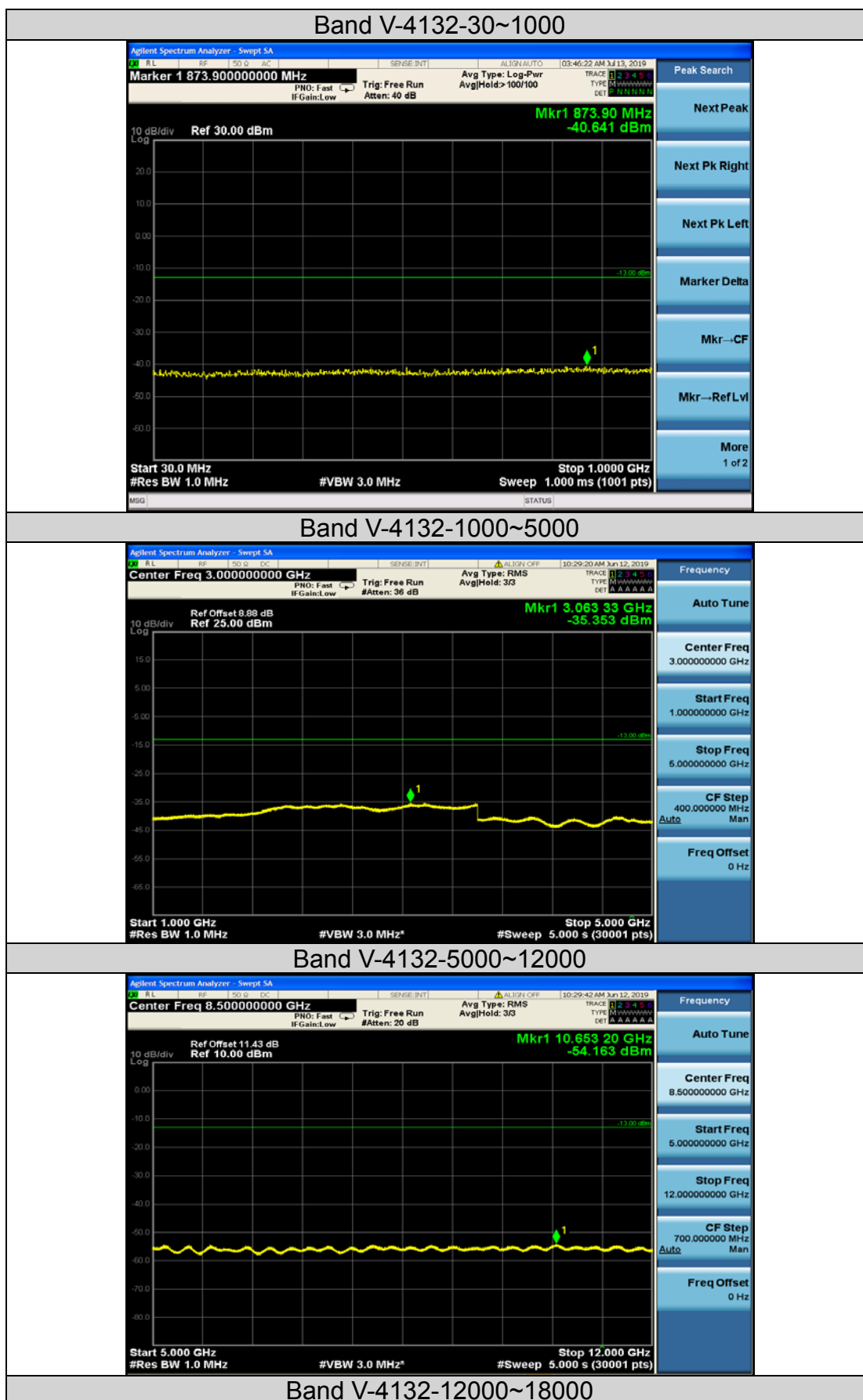


### Band II-9538-12000~20000





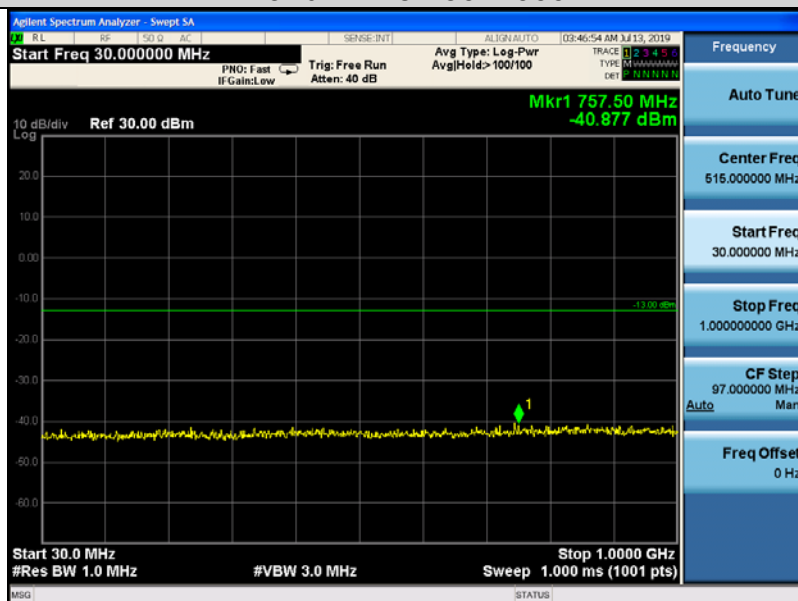
WCDMA Band V







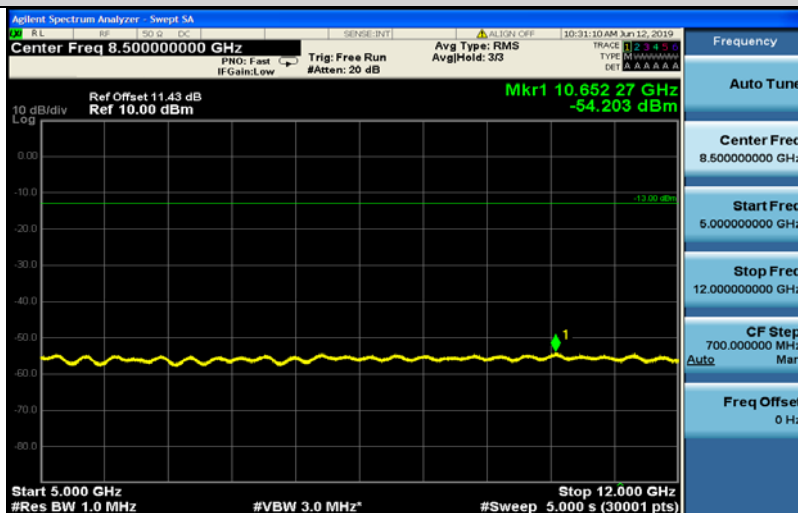
### Band V-4182-30~1000



### Band V-4182-1000~5000



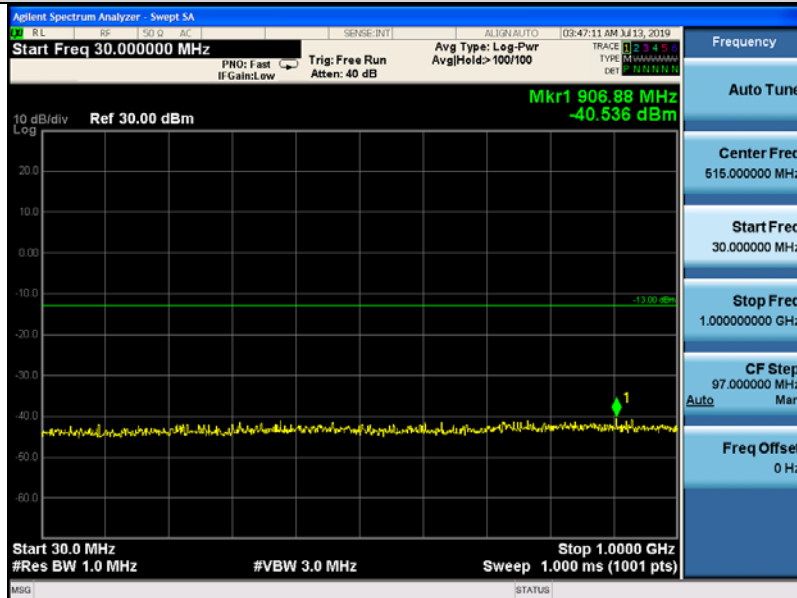
### Band V-4182-5000~12000



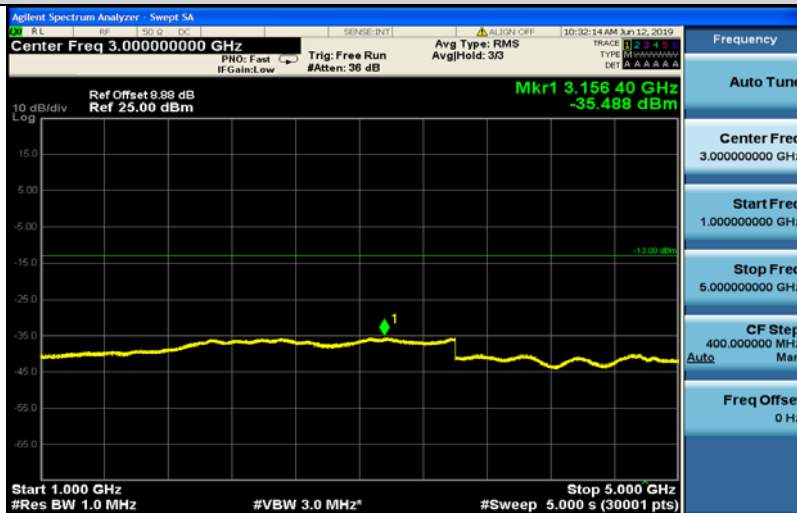
### Band V-4182-12000~18000



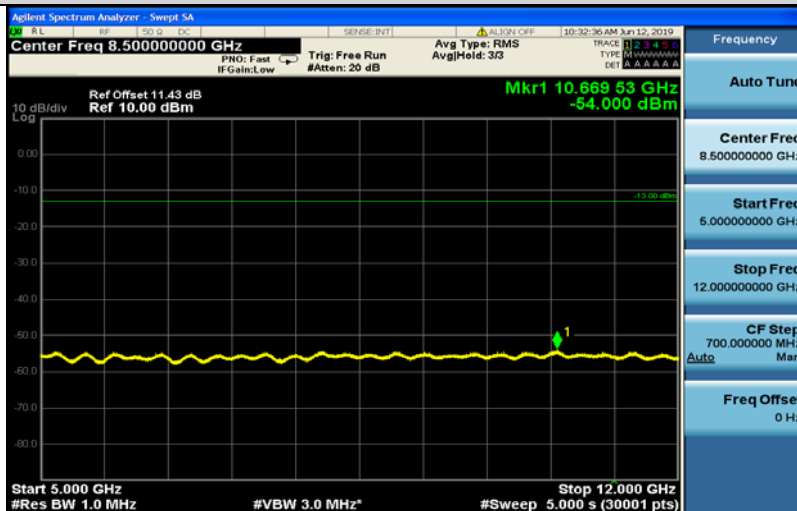
### Band V-4233-30~1000



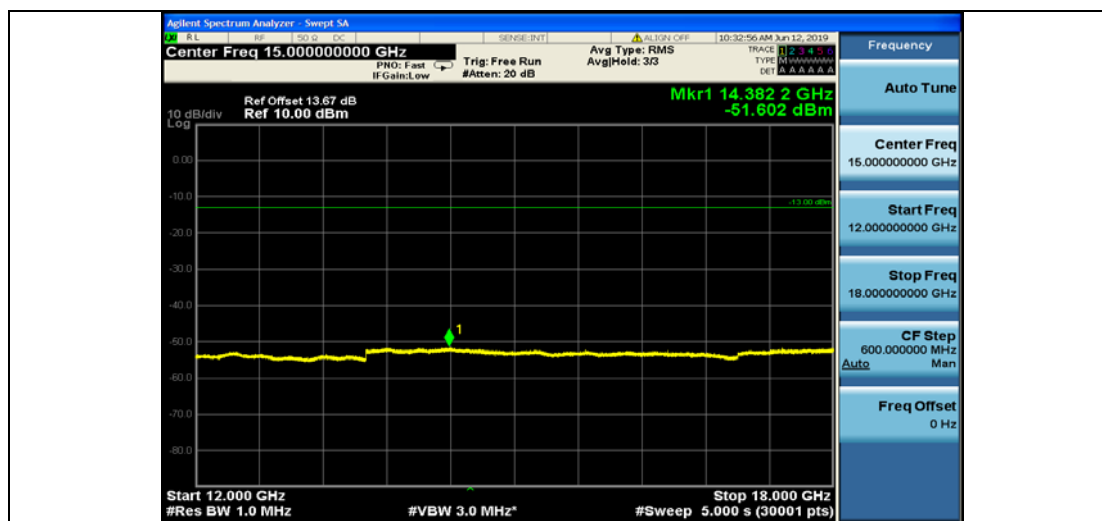
### Band V-4233-1000~5000



### Band V-4233-5000~12000



### Band V-4233-12000~18000



Note: all modes of EUT have been tested; only the data of worst case mode is reported.

## 5.5 Band edge

### 5.5.1 Limits

The power of any emission 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, for all power levels +30 dBm to 0 dBm, this becomes a constant specification limit of -13 dBm

### 5.5.2 Test method

The testing follows FCC KDB 971168 D01v03r01 Section 6.0.

The EUT was connected to Spectrum Analyzer and Base Station via power divider.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.

The path loss was compensated to the results for each measurement.

The band edges of low and high channels for the highest RF powers were measured.

The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power P(Watts)

=  $P(W) - [43 + 10\log(P)]$  (dB)

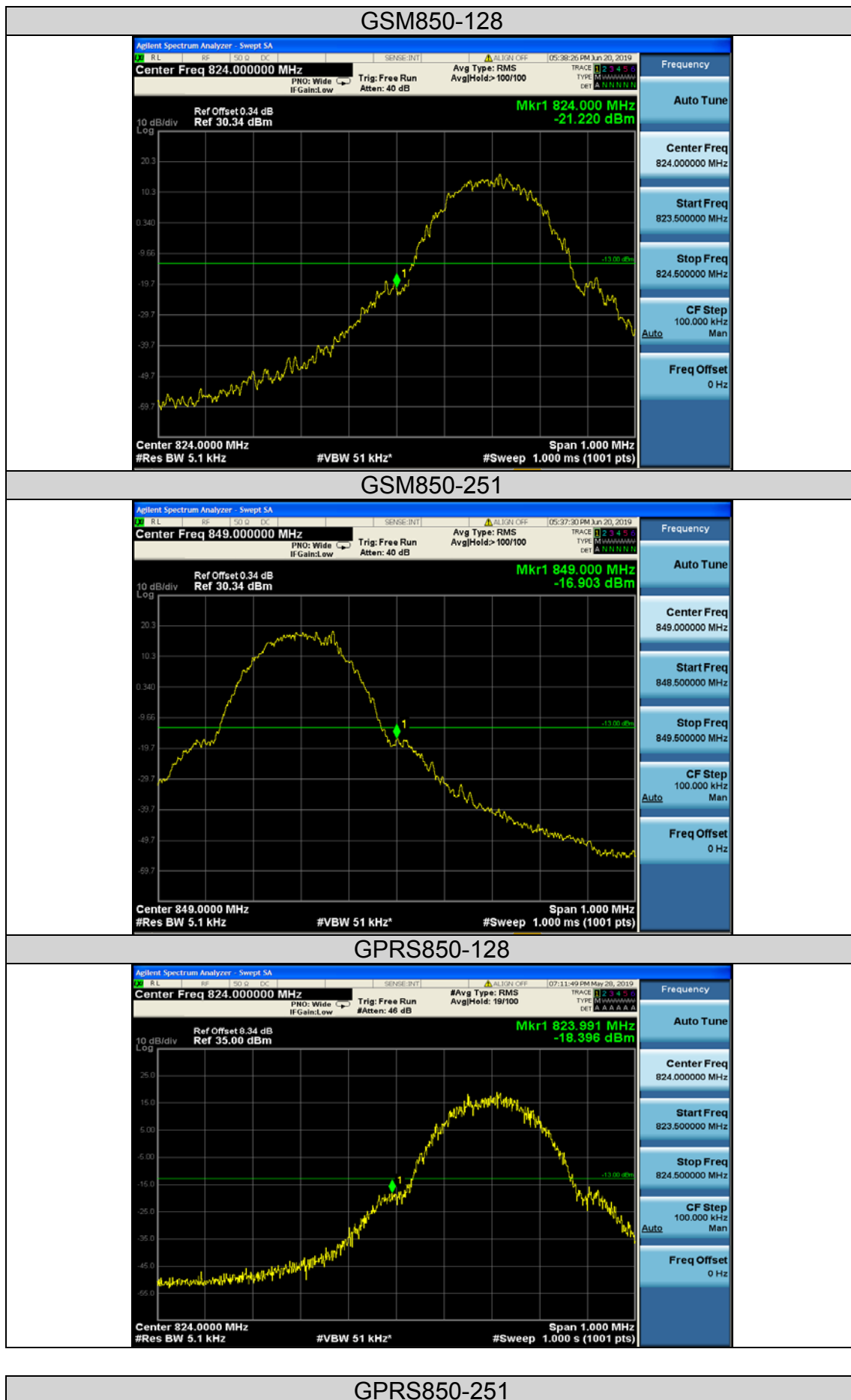
=  $[30 + 10\log(P)]$  (dBm) -  $[43 + 10\log(P)]$  (dB)

= -13dBm.

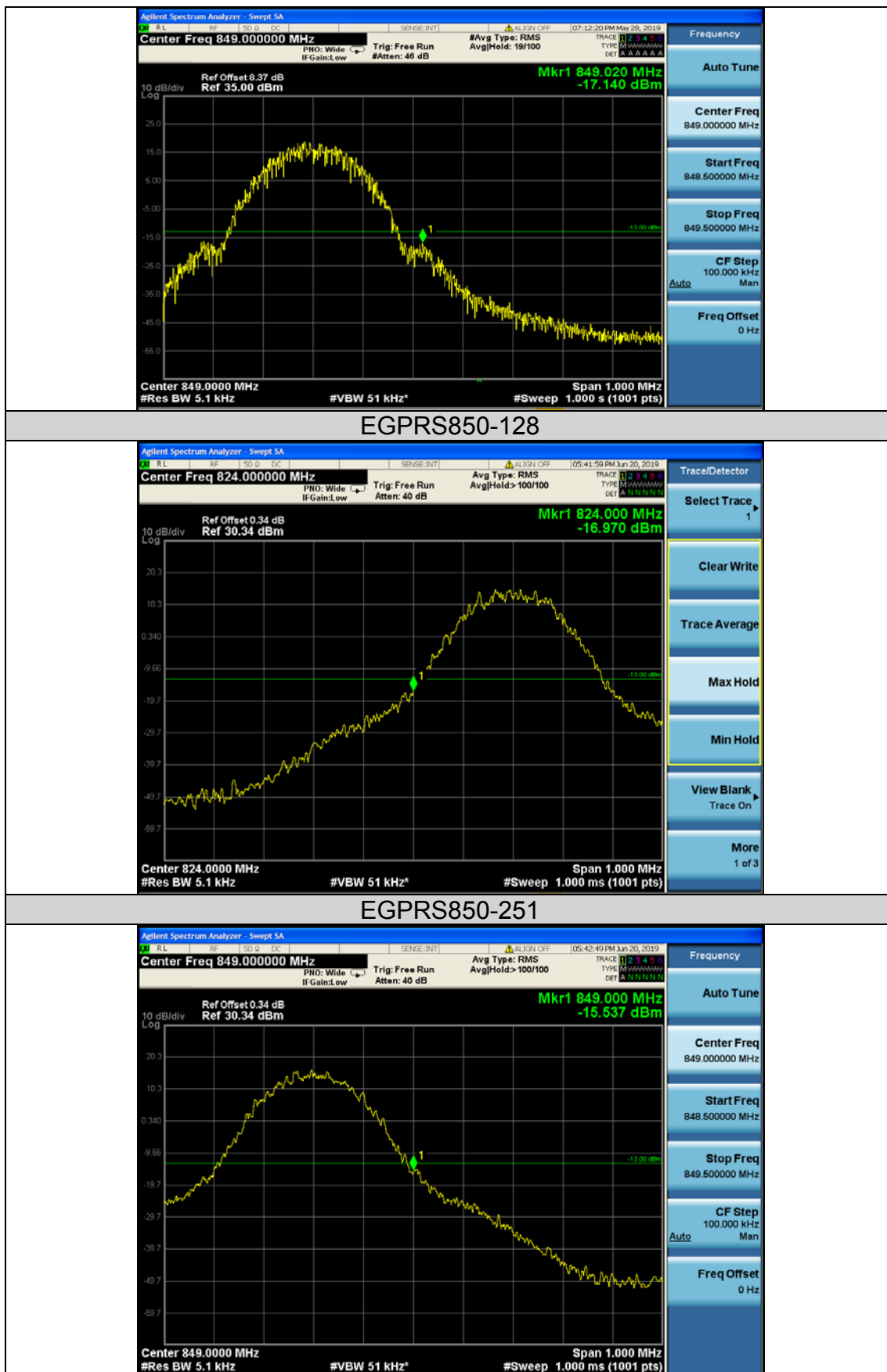
### 5.5.3 Test result

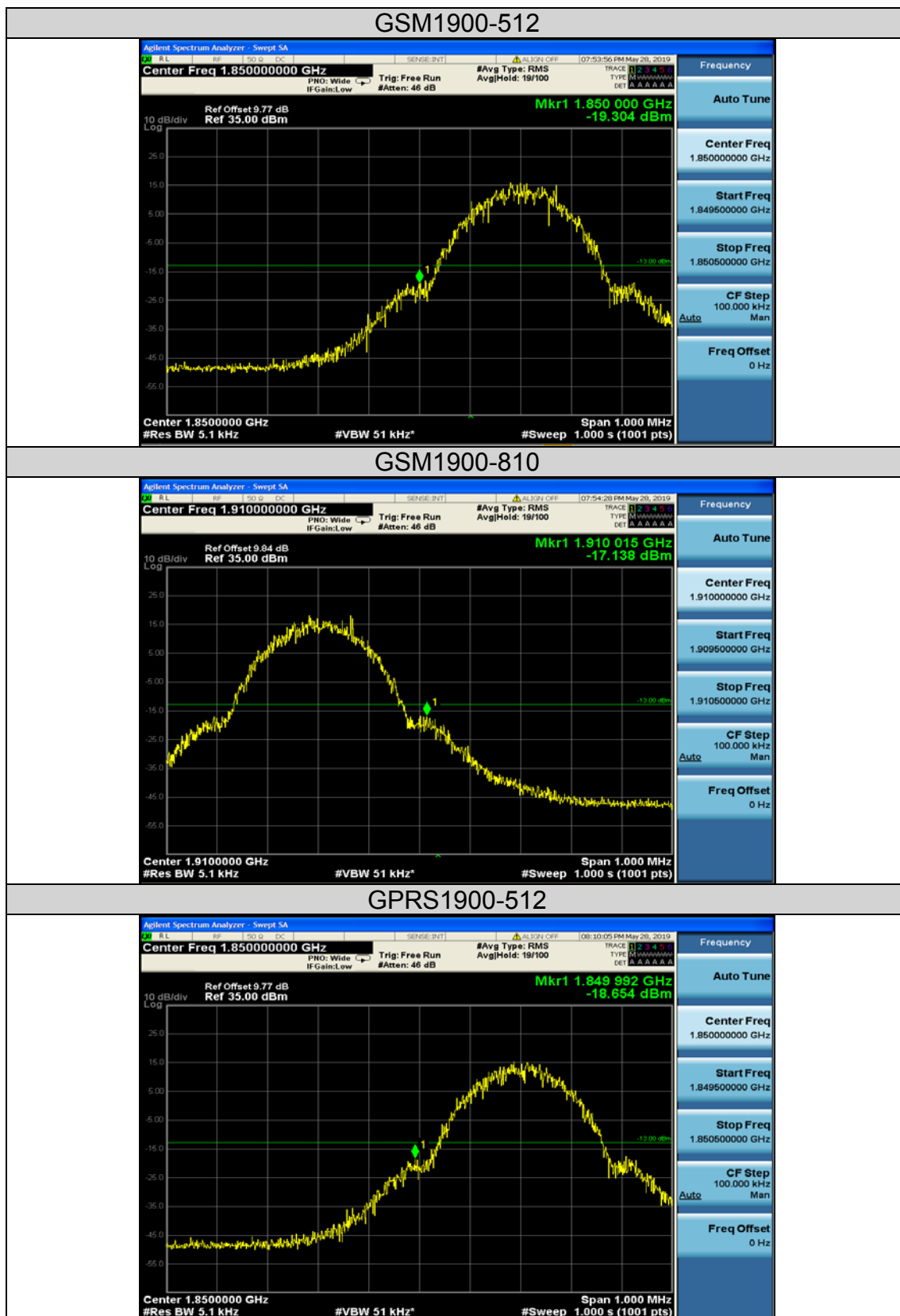
Band	Channel	Value(dBm)	Limit(dBm)	Verdict
GSM850	128	-21.22	-13	PASS
GSM850	251	-16.90	-13	PASS
GPRS850	128	-18.40	-13	PASS
GPRS850	251	-17.14	-13	PASS
EGPRS850	128	-16.97	-13	PASS
EGPRS850	251	-15.54	-13	PASS
GSM1900	512	-19.30	-13	PASS
GSM1900	810	-17.14	-13	PASS
GPRS1900	512	-18.65	-13	PASS
GPRS1900	810	-16.50	-13	PASS
EGPRS1900	512	-14.78	-13	PASS
EGPRS1900	810	-17.60	-13	PASS

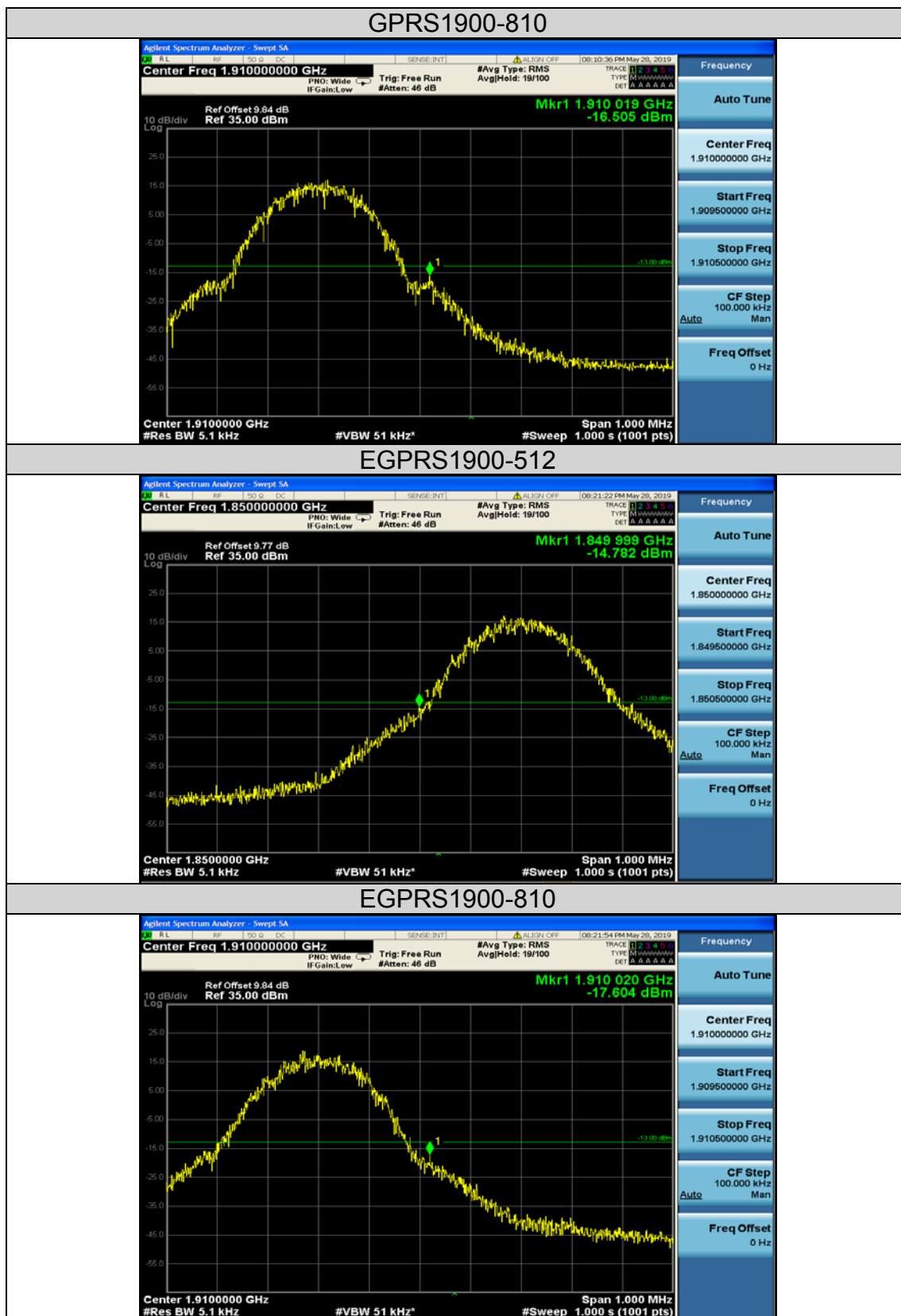
Band	Channel	Value(dBm)	Limit(dBm)	Verdict
Band II	9262	-13.81	-13	PASS
Band II	9538	-13.14	-13	PASS
Band V	4132	-22.38	-13	PASS
Band V	4233	-20.46	-13	PASS

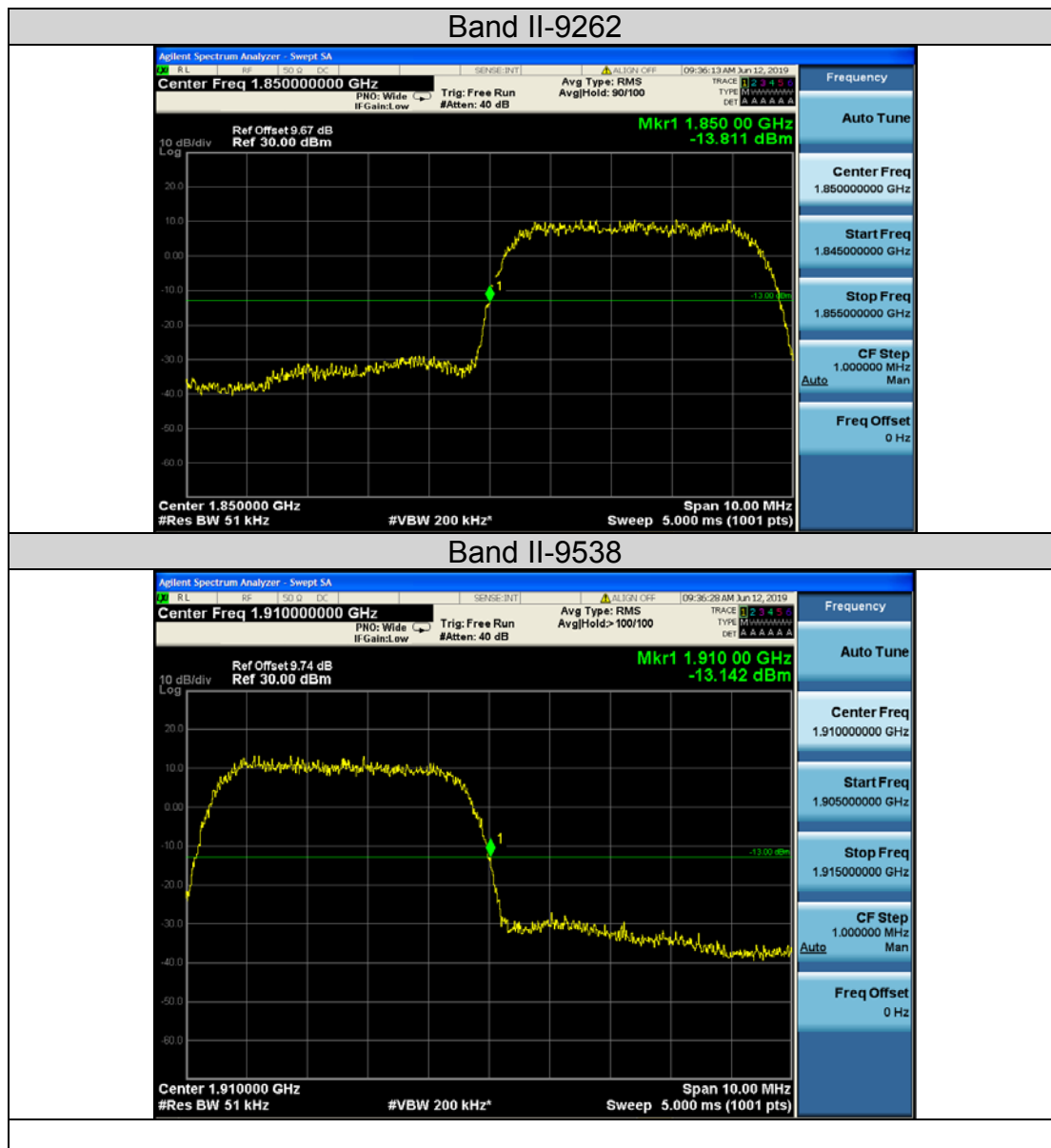


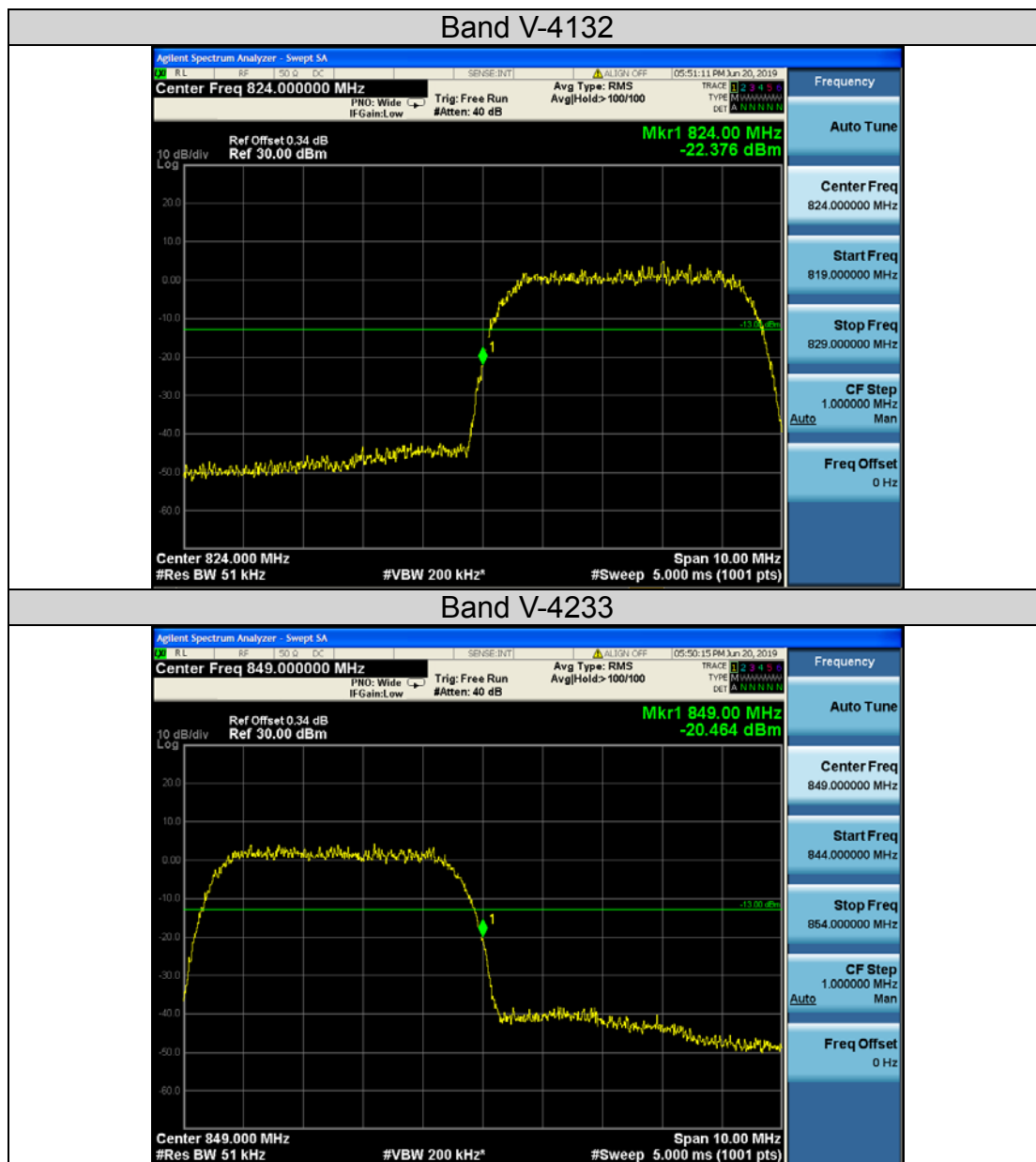












Note: all modes of EUT have been tested; only the data of worst case mode is reported.

## 5.6 Radiated spurious emission

### 5.6.1 Limit

The power of any emission 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

### 5.6.2 Test method

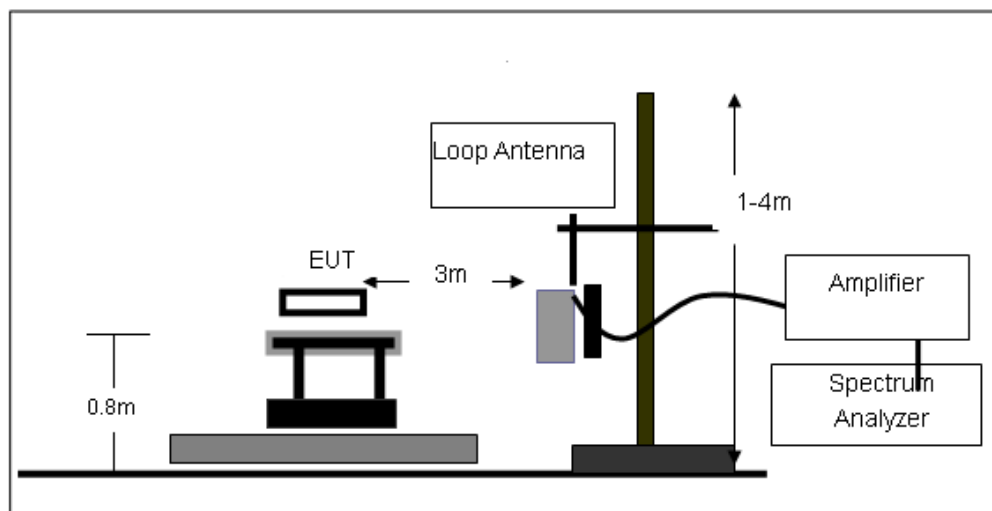
1. The test system setup as show in the block diagram above.
2. The EUT was placed on an non-conductive rotating platform in an anechoic chamber. The radiated spurious emissions from 30MHz to 10<sup>th</sup> harmonious of fundamental frequency were measured at 3 m with a test antenna and a spectrum analyzer with RBW=1 MHz, VBW=1 MHz, peak detector settings.
3. During the measurement, the EUT was enforced in maximum power and linked with a base station. All the spurious emissions at 3m were measured by rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
4. When found the maximum level of emissions from the EUT. 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= $10 \log(\text{TX power in Watts}/0.001)$ -the absolute level

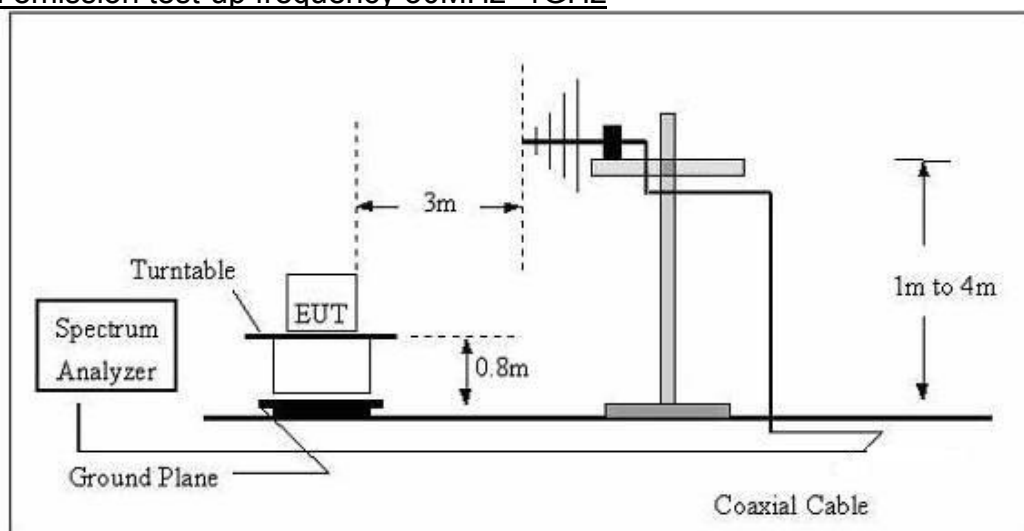
Spurious attenuation limit in dB= $43+10 \log(\text{power out in Watts})$ .

### 5.6.3 Test setup

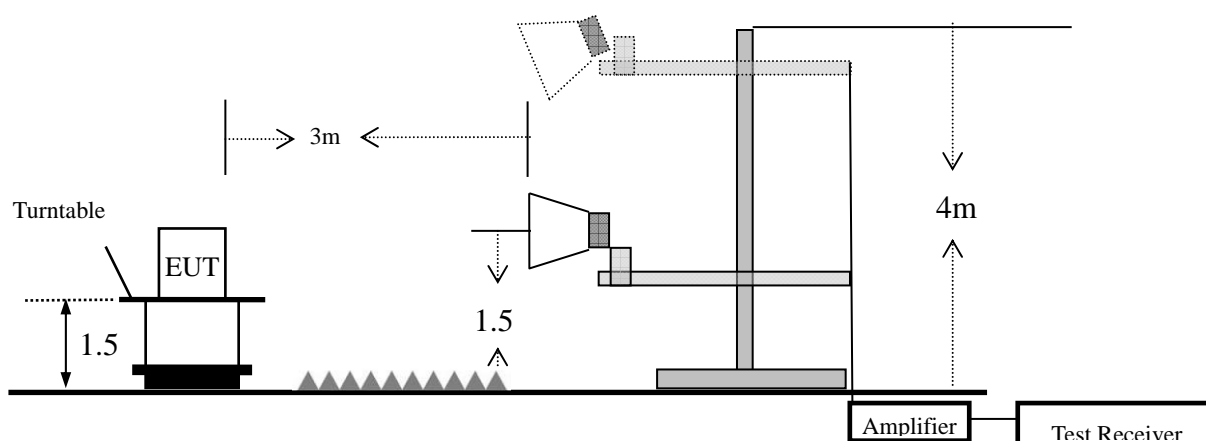
#### Radiated emission test-up frequency below 30MHz



### Radiated emission test-up frequency 30MHz~1GHz



### Radiated emission test-up frequency above 1GHz





#### 5.6.4 Test Result

Note: All the configuration was tested and only the worse case was reported

#### For GSM850(30MHz – 9GHz)

<b>GSM850_Low Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
1648.4	-42.07	5.98	3	9.11	-38.94	-13	-25.94	H
2472.6	-46.45	6.84	3	9.56	-43.73	-13	-30.73	H
1648.4	-37.50	5.98	3	9.11	-34.37	-13	-21.37	V
2472.6	-42.42	6.84	3	9.56	-39.70	-13	-26.70	V
<b>GSM850_Middle Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
1673.2	-39.68	5.98	3	9.11	-36.55	-13	-23.55	H
2509.8	-42.03	6.84	3	9.56	-39.31	-13	-26.31	H
1673.2	-35.07	5.98	3	9.11	-31.94	-13	-18.94	V
2509.8	-37.68	6.84	3	9.56	-34.96	-13	-21.96	V
<b>GSM850_High Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
1697.6	-45.66	5.98	3	9.11	-42.53	-13	-29.53	H
2546.4	-50.26	6.84	3	9.56	-47.54	-13	-34.54	H
1697.6	-41.51	5.98	3	9.11	-38.38	-13	-25.38	V
2546.4	-45.40	6.84	3	9.56	-42.68	-13	-29.68	V

<b>GPRS850_Low Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
1648.4	-49.20	3.86	3	8.56	-44.50	-13	-31.50	H
2472.6	-52.95	4.29	3	6.98	-50.26	-13	-37.26	H
1648.4	-44.15	3.86	3	8.56	-39.45	-13	-26.45	V
2472.6	-51.30	4.29	3	6.98	-48.61	-13	-35.61	V
<b>GPRS850_Middle Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
1673.2	-47.17	3.9	3	8.58	-42.49	-13	-29.49	H
2509.8	-51.91	4.32	3	6.8	-49.43	-13	-36.43	H
1673.2	-41.46	3.9	3	8.58	-36.78	-13	-23.78	V
2509.8	-49.30	4.32	3	6.8	-46.82	-13	-33.82	V
<b>GPRS850_High Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
1697.6	-53.51	3.91	3	9.06	-48.36	-13	-35.36	H
2546.4	-55.48	4.32	3	6.65	-53.15	-13	-40.15	H
1697.6	-50.89	3.91	3	9.06	-45.74	-13	-32.74	V
2546.4	-51.83	4.32	3	6.65	-49.50	-13	-36.50	V

<b>EGPRS850 Low Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
1648.4	-51.58	3.86	3	8.56	-46.88	-13	-33.88	H
2472.6	-52.99	4.29	3	6.98	-50.30	-13	-37.30	H
1648.4	-48.96	3.86	3	8.56	-44.26	-13	-31.26	V
2472.6	-49.57	4.29	3	6.98	-46.88	-13	-33.88	V
<b>EGPRS850 Middle Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
1673.2	-51.68	3.9	3	8.58	-47.00	-13	-34.00	H
2509.8	-53.03	4.32	3	6.8	-50.55	-13	-37.55	H
1673.2	-49.15	3.9	3	8.58	-44.47	-13	-31.47	V
2509.8	-49.55	4.32	3	6.8	-47.07	-13	-34.07	V
<b>EGPRS850 High Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
1697.6	-51.65	3.91	3	9.06	-46.50	-13	-33.50	H
2546.4	-53.08	4.32	3	6.65	-50.75	-13	-37.75	H
1697.6	-48.70	3.91	3	9.06	-43.55	-13	-30.55	V
2546.4	-49.82	4.32	3	6.65	-47.49	-13	-34.49	V

<b>GSM1900_ Low Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
3700.4	-43.11	5.26	3	9.88	-38.49	-13	-25.49	H
5550.6	-47.29	6.11	3	11.36	-42.04	-13	-29.04	H
3700.4	-45.21	5.26	3	9.88	-40.59	-13	-27.59	V
5550.6	-49.29	6.11	3	11.36	-44.04	-13	-31.04	V
<b>GSM1900_ Middle Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
3760	-40.22	5.32	3	10.03	-35.51	-13	-22.51	H
5640	-44.88	6.19	3	11.41	-39.66	-13	-26.66	H
3760	-43.27	5.32	3	10.03	-38.56	-13	-25.56	V
5640	-47.34	6.19	3	11.41	-42.12	-13	-29.12	V
<b>GSM1900_ High Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
3819.6	-46.96	5.36	3	9.62	-42.70	-13	-29.70	H
5729.4	-51.43	6.24	3	11.46	-46.21	-13	-33.21	H
3819.6	-49.29	5.36	3	9.62	-45.03	-13	-32.03	V
5729.4	-55.35	6.24	3	11.46	-50.13	-13	-37.13	V

<b>GPRS1900_Low Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
3700.4	-51.47	5.26	3	9.88	-46.85	-13	-33.85	H
5550.6	-57.93	6.11	3	11.36	-52.68	-13	-39.68	H
3700.4	-54.41	5.26	3	9.88	-49.79	-13	-36.79	V
5550.6	-62.49	6.11	3	11.36	-57.24	-13	-44.24	V
<b>GPRS1900_Middle Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	EIRP(dBm)	(dBm)	(dB)	
3760	-47.09	5.32	3	10.03	-42.38	-13	-29.38	H
5640	-56.42	6.19	3	11.41	-51.20	-13	-38.20	H
3760	-49.73	5.32	3	10.03	-45.02	-13	-32.02	V
5640	-58.35	6.19	3	11.41	-53.13	-13	-40.13	V
<b>GPRS1900_High Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
3819.6	-58.94	5.36	3	9.62	-54.68	-13	-41.68	H
5729.4	-61.70	6.24	3	11.46	-56.48	-13	-43.48	H
3819.6	-60.52	5.36	3	9.62	-56.26	-13	-43.26	V
5729.4	-64.07	6.24	3	11.46	-58.85	-13	-45.85	V

<b>EGPRS1900_ Low Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dBi)	(dBm)	(dBm)	(dB)	
3700.4	-57.38	5.26	3	9.88	-52.76	-13	-39.76	H
5550.6	-48.75	6.11	3	11.36	-43.50	-13	-30.50	H
3700.4	-57.25	5.26	3	9.88	-52.63	-13	-39.63	V
5550.6	-50.22	6.11	3	11.36	-44.97	-13	-31.97	V
<b>EGPRS1900_ Middle Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dBi)	EIRP(dBm)	(dBm)	(dB)	
3760	-56.02	5.32	3	10.03	-51.31	-13	-38.31	H
5640	-51.25	6.19	3	11.41	-46.03	-13	-33.03	H
3760	-50.36	5.32	3	10.03	-45.65	-13	-32.65	V
5640	-52.58	6.19	3	11.41	-47.36	-13	-34.36	V
<b>EGPRS1900_ High Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dBi)	(dBm)	(dBm)	(dB)	
3819.6	-51.35	5.36	3	9.62	-47.09	-13	-34.09	H
5729.4	-45.35	6.24	3	11.46	-40.13	-13	-27.13	H
3819.6	-40.15	5.36	3	9.62	-35.89	-13	-22.89	V
5729.4	-38.25	6.24	3	11.46	-33.03	-13	-20.03	V

<b>WCDMA Band II _ Low Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
3704.8	-44.87	5.26	3	9.88	-40.25	-13	-27.25	H
5557.2	-49.11	6.11	3	11.36	-43.86	-13	-30.86	H
3704.8	-50.23	5.26	3	9.88	-45.61	-13	-32.61	V
5557.2	-55.74	6.11	3	11.36	-50.49	-13	-37.49	V
<b>WCDMA Band II _ Middle Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
3760	-39.02	5.32	3	10.03	-34.31	-13	-21.31	H
5640	-48.24	6.19	3	11.41	-43.02	-13	-30.02	H
3760	-46.91	5.32	3	10.03	-42.20	-13	-29.20	V
5640	-54.25	6.19	3	11.41	-49.03	-13	-36.03	V
<b>WCDMA Band II _ High Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
3815.2	-49.50	5.36	3	9.62	-45.24	-13	-32.24	H
5722.8	-54.61	6.24	3	11.46	-49.39	-13	-36.39	H
3815.2	-53.53	5.36	3	9.62	-49.27	-13	-36.27	V
5722.8	-57.30	6.24	3	11.46	-52.08	-13	-39.08	V



<b>WCDMA Band IV _ Low Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
1946.4	-45.73	3.86	3	8.56	-41.03	-13	-28.03	H
3424.8	-48.38	4.29	3	6.98	-45.69	-13	-32.69	H
1946.4	-42.82	3.86	3	8.56	-38.12	-13	-25.12	V
3424.8	-42.61	4.29	3	6.98	-39.92	-13	-26.92	V
<b>WCDMA Band IV _ Middle Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
1982.4	-43.71	3.9	3	8.58	-39.03	-13	-26.03	H
3480	-45.02	4.32	3	6.8	-42.54	-13	-29.54	H
1982.4	-38.92	3.9	3	8.58	-34.24	-13	-21.24	V
3480	-42.50	4.32	3	6.8	-40.02	-13	-27.02	V
<b>WCDMA Band IV _ High Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
2015.2	-47.82	3.91	3	9.06	-42.67	-13	-29.67	H
3505.2	-48.26	4.32	3	6.65	-45.93	-13	-32.93	H
2015.2	-44.14	3.91	3	9.06	-38.99	-13	-25.99	V
3505.2	-44.52	4.32	3	6.65	-42.19	-13	-29.19	V

<b>WCDMA Band V _ Low Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
1652.8	-46.72	3.86	3	8.56	-42.02	-13	-29.02	H
2479.2	-48.35	4.29	3	6.98	-45.66	-13	-32.66	H
1652.8	-42.06	3.86	3	8.56	-37.36	-13	-24.36	V
2479.2	-42.01	4.29	3	6.98	-39.32	-13	-26.32	V
<b>WCDMA Band V _ Middle Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
1672.8	-44.29	3.9	3	8.58	-39.61	-13	-26.61	H
2509.2	-45.33	4.32	3	6.8	-42.85	-13	-29.85	H
1672.8	-38.39	3.9	3	8.58	-33.71	-13	-20.71	V
2509.2	-42.92	4.32	3	6.8	-40.44	-13	-27.44	V
<b>WCDMA Band V _ High Channel</b>								
Frequency	SG Level	Cable Loss	Diatance	Antenna Gain	Absolute Level	Limit	Margin	Polarization
(MHz)	(dBm)	(dB)	(m)	(dB)	(dBm)	(dBm)	(dB)	
1693.2	-47.34	3.91	3	9.06	-42.19	-13	-29.19	H
2539.8	-48.82	4.32	3	6.65	-46.49	-13	-33.49	H
1693.2	-43.93	3.91	3	9.06	-38.78	-13	-25.78	V
2539.8	-44.88	4.32	3	6.65	-42.55	-13	-29.55	V

## **5.7 Frequency stability**

### **5.7.1 Limit**

For FCC part 22.355: the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances 2.5ppm for mobile  $\leq 3W$  condition.

For FCC part 24.235: The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

### **5.7.2 Test method**

#### **Test Procedures for Temperature Variation:**

- 1, The EUT was set up in the thermal chamber and connected with the base station.
- 2, With power off, the temperature was decreased to  $-30^{\circ}\text{C}$  and the EUT was stabilized for three hours. Power was applied and the maximum change in frequency was recorded within one minute.
- 3, With power off, the temperature was raised in  $10^{\circ}\text{C}$  set up to  $50^{\circ}\text{C}$  and the EUT was stabilized for three hours. Power was applied and the maximum change in frequency was recorded within one minute.
- 4, measure the carrier frequency error.

#### **Test Procedures for Voltage Variation:**

- 1, The EUT was placed in a temperature chamber at  $25\pm 5^{\circ}\text{C}$  and connected with the base station.
- 2, Reduce the primary supply voltage to the battery operating end point.
- 3, measure the carrier frequency error.

### **5.7.3 Test Result**

Voltage							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	VL	TN	-0.77	-0.000940	±2.5	PASS
GSM850	128	VN	TN	-1.39	-0.001684	±2.5	PASS
GSM850	128	VH	TN	0.90	0.001097	±2.5	PASS
GSM850	190	VL	TN	0.23	0.000270	±2.5	PASS
GSM850	190	VN	TN	1.32	0.001582	±2.5	PASS
GSM850	190	VH	TN	3.26	0.003898	±2.5	PASS
GSM850	251	VL	TN	-0.23	-0.000266	±2.5	PASS
GSM850	251	VN	TN	0.68	0.000799	±2.5	PASS
GSM850	251	VH	TN	1.58	0.001864	±2.5	PASS
GPRS850	128	VL	TN	1.26	0.001528	±2.5	PASS
GPRS850	128	VN	TN	-1.90	-0.002311	±2.5	PASS
GPRS850	128	VH	TN	-4.10	-0.004975	±2.5	PASS
GPRS850	190	VL	TN	-3.39	-0.004052	±2.5	PASS
GPRS850	190	VN	TN	-1.61	-0.001930	±2.5	PASS
GPRS850	190	VH	TN	-2.84	-0.003396	±2.5	PASS
GPRS850	251	VL	TN	-1.07	-0.001255	±2.5	PASS
GPRS850	251	VN	TN	-1.16	-0.001369	±2.5	PASS
GPRS850	251	VH	TN	-0.77	-0.000913	±2.5	PASS
EGPRS850	128	VL	TN	-1.39	-0.001684	±2.5	PASS
EGPRS850	128	VN	TN	-1.26	-0.001528	±2.5	PASS
EGPRS850	128	VH	TN	-5.59	-0.006777	±2.5	PASS
EGPRS850	190	VL	TN	3.49	0.004168	±2.5	PASS
EGPRS850	190	VN	TN	2.42	0.002894	±2.5	PASS
EGPRS850	190	VH	TN	3.62	0.004322	±2.5	PASS
EGPRS850	251	VL	TN	0.90	0.001065	±2.5	PASS
EGPRS850	251	VN	TN	2.55	0.003005	±2.5	PASS
EGPRS850	251	VH	TN	5.36	0.006314	±2.5	PASS

GSM1900	512	VL	TN	9.40	0.005078	within1850-1910	PASS
GSM1900	512	VN	TN	10.04	0.005427	within1850-1910	PASS
GSM1900	512	VH	TN	9.62	0.005200	within1850-1910	PASS
GSM1900	661	VL	TN	14.24	0.007573	within1850-1910	PASS
GSM1900	661	VN	TN	6.55	0.003486	within1850-1910	PASS
GSM1900	661	VH	TN	7.91	0.004207	within1850-1910	PASS
GSM1900	810	VL	TN	11.49	0.006018	within1850-1910	PASS
GSM1900	810	VN	TN	11.69	0.006120	within1850-1910	PASS
GSM1900	810	VH	TN	11.20	0.005866	within1850-1910	PASS
GPRS1900	512	VL	TN	4.16	0.002251	within1850-1910	PASS
GPRS1900	512	VN	TN	7.10	0.003839	within1850-1910	PASS
GPRS1900	512	VH	TN	6.49	0.003507	within1850-1910	PASS
GPRS1900	661	VL	TN	10.30	0.005478	within1850-1910	PASS
GPRS1900	661	VN	TN	3.87	0.002061	within1850-1910	PASS
GPRS1900	661	VH	TN	9.59	0.005100	within1850-1910	PASS
GPRS1900	810	VL	TN	7.46	0.003905	within1850-1910	PASS
GPRS1900	810	VN	TN	6.42	0.003364	within1850-1910	PASS
GPRS1900	810	VH	TN	4.10	0.002147	within1850-1910	PASS
EGPRS1900	512	VL	TN	-3.97	-0.002146	within1850-1910	PASS
EGPRS1900	512	VN	TN	-3.55	-0.001919	within1850-1910	PASS
EGPRS1900	512	VH	TN	-4.88	-0.002635	within1850-1910	PASS
EGPRS1900	661	VL	TN	-10.40	-0.005530	within1850-1910	PASS
EGPRS1900	661	VN	TN	-15.34	-0.008157	within1850-1910	PASS
EGPRS1900	661	VH	TN	-7.59	-0.004036	within1850-1910	PASS
EGPRS1900	810	VL	TN	-13.40	-0.007016	within1850-1910	PASS
EGPRS1900	810	VN	TN	-14.21	-0.007438	within1850-1910	PASS
EGPRS1900	810	VH	TN	-16.50	-0.008639	within1850-1910	PASS

Voltage							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band II	9262	VL	TN	-0.67	-0.000363	within1850-1910	PASS
Band II	9262	VN	TN	4.36	0.002351	within1850-1910	PASS
Band II	9262	VH	TN	6.06	0.003270	within1850-1910	PASS
Band II	9400	VL	TN	4.41	0.002347	within1850-1910	PASS
Band II	9400	VN	TN	0.54	0.000285	within1850-1910	PASS
Band II	9400	VH	TN	0.17	0.000091	within1850-1910	PASS
Band II	9538	VL	TN	1.42	0.000746	within1850-1910	PASS
Band II	9538	VN	TN	2.31	0.001211	within1850-1910	PASS
Band II	9538	VH	TN	4.14	0.002171	within1850-1910	PASS

Temperature							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band II	9262	VN	-30	2.22	0.001197	within1850-1910	PASS
Band II	9262	VN	-20	0.60	0.000324	within1850-1910	PASS
Band II	9262	VN	-10	-1.65	-0.000888	within1850-1910	PASS
Band II	9262	VN	0	4.28	0.002309	within1850-1910	PASS
Band II	9262	VN	10	1.16	0.000626	within1850-1910	PASS
Band II	9262	VN	20	0.74	0.000398	within1850-1910	PASS
Band II	9262	VN	30	2.56	0.001382	within1850-1910	PASS
Band II	9262	VN	40	4.38	0.002367	within1850-1910	PASS
Band II	9262	VN	50	2.76	0.001490	within1850-1910	PASS
Band II	9400	VN	-30	0.89	0.000476	within1850-1910	PASS
Band II	9400	VN	-20	4.70	0.002500	within1850-1910	PASS
Band II	9400	VN	-10	4.20	0.002233	within1850-1910	PASS
Band II	9400	VN	0	3.40	0.001811	within1850-1910	PASS
Band II	9400	VN	10	3.10	0.001647	within1850-1910	PASS
Band II	9400	VN	20	4.10	0.002180	within1850-1910	PASS
Band II	9400	VN	30	2.02	0.001077	within1850-1910	PASS
Band II	9400	VN	40	0.44	0.000232	within1850-1910	PASS
Band II	9400	VN	50	-0.99	-0.000529	within1850-1910	PASS
Band II	9538	VN	-30	4.72	0.002475	within1850-1910	PASS
Band II	9538	VN	-20	1.49	0.000784	within1850-1910	PASS
Band II	9538	VN	-10	2.98	0.001560	within1850-1910	PASS
Band II	9538	VN	0	0.97	0.000506	within1850-1910	PASS
Band II	9538	VN	10	0.61	0.000319	within1850-1910	PASS
Band II	9538	VN	20	0.51	0.000270	within1850-1910	PASS
Band II	9538	VN	30	-1.46	-0.000765	within1850-1910	PASS
Band II	9538	VN	40	1.82	0.000956	within1850-1910	PASS
Band II	9538	VN	50	5.14	0.002692	within1850-1910	PASS

Temperature							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band V	4132	VL	TN	-1.18	-0.001428	±2.5	PASS
Band V	4132	VN	TN	-1.98	-0.002397	±2.5	PASS
Band V	4132	VH	TN	-1.70	-0.002051	±2.5	PASS
Band V	4182	VL	TN	1.47	0.001762	±2.5	PASS
Band V	4182	VN	TN	1.20	0.001437	±2.5	PASS
Band V	4182	VH	TN	-0.69	-0.000821	±2.5	PASS
Band V	4233	VL	TN	-1.52	-0.001791	±2.5	PASS
Band V	4233	VN	TN	1.39	0.001647	±2.5	PASS
Band V	4233	VH	TN	-0.96	-0.001132	±2.5	PASS

Temperature							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band V	4132	VN	-30	-2.06	-0.002493	±2.5	PASS
Band V	4132	VN	-20	-0.99	-0.001203	±2.5	PASS
Band V	4132	VN	-10	-0.85	-0.001030	±2.5	PASS
Band V	4132	VN	0	-2.63	-0.003185	±2.5	PASS
Band V	4132	VN	10	-2.22	-0.002683	±2.5	PASS
Band V	4132	VN	20	-0.92	-0.001117	±2.5	PASS
Band V	4132	VN	30	-2.01	-0.002432	±2.5	PASS
Band V	4132	VN	40	0.51	0.000615	±2.5	PASS
Band V	4132	VN	50	0.18	0.000216	±2.5	PASS
Band V	4182	VN	-30	0.49	0.000590	±2.5	PASS
Band V	4182	VN	-20	1.32	0.001573	±2.5	PASS
Band V	4182	VN	-10	-0.54	-0.000641	±2.5	PASS
Band V	4182	VN	0	-2.68	-0.003207	±2.5	PASS
Band V	4182	VN	10	0.31	0.000368	±2.5	PASS
Band V	4182	VN	20	-1.49	-0.001779	±2.5	PASS
Band V	4182	VN	30	-0.55	-0.000658	±2.5	PASS
Band V	4182	VN	40	-0.28	-0.000334	±2.5	PASS
Band V	4182	VN	50	-0.05	-0.000060	±2.5	PASS
Band V	4233	VN	-30	-1.45	-0.001715	±2.5	PASS
Band V	4233	VN	-20	-0.84	-0.000988	±2.5	PASS
Band V	4233	VN	-10	0.61	0.000718	±2.5	PASS
Band V	4233	VN	0	-1.01	-0.001191	±2.5	PASS
Band V	4233	VN	10	0.73	0.000862	±2.5	PASS
Band V	4233	VN	20	0.39	0.000465	±2.5	PASS
Band V	4233	VN	30	-0.49	-0.000583	±2.5	PASS
Band V	4233	VN	40	0.09	0.000110	±2.5	PASS
Band V	4233	VN	50	-1.19	-0.001402	±2.5	PASS

Note:

1. Normal Voltage = 3.7V; Battery End Point (BEP) = 3.33V; Maximum Voltage = 4.07V
2. All modes of EUT have been tested; only the data of worst case mode is reported.



## Photographs of the Test Setup

Radiated emission



## **Photographs of the EUT**

See the APPENDIX 1: EUT PHOTO in the report No.: MTi190611E067-1.

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