the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

5. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (P_{cl}) ,the Substitution Antenna Gain (G_a) and the Amplifier Gain (P_{Ag}) should be recorded after test.
   The measurement results are obtained as described below:
   Power(EIRP)=P_{Mea}+ P_{Ag} - P_{cl} + G_a
6. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
7. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

TEST LIMIT

According to 22.913(a)(5), 24.232(c), the ERP(EIRP) should be not exceeding following table limits:

	Burst Average EIRP
UMTS Band II	FCC: ≤33.01dBm (2W)

	Burst Average ERP
UMTS Band V	FCC: ≤38.45dBm (7W)

TEST RESULTS

Remark:

1. *We were tested all Configuration refer 3GPP TS134 121.*
2. *EIRP=P_{Mea}(dBm)-P_{cl}(dB)+P_{Ag}(dB)+G_a(dBi)*
3. *ERP = EIRP – 2.15dBi as EIRP by subtracting the gain of the dipole.*
4. *Margin = Emission Level - Limit*
5. *We test the H direction and V direction recorded worst case.*

UMTS/TM1/UMTS Band II

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	G_a Antenna Gain (dB)	P_{Ag} (dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1852.4	-16.71	4.03	8.38	35.51	23.15	33.00	-9.85	V
1880.0	-16.83	4.08	8.33	35.56	22.98	33.00	-10.02	V
1907.6	-17.82	4.14	8.26	35.63	21.93	33.00	-11.07	V

UMTS/TM1/UMTS Band V

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	G_a Antenna Gain (dB)	Correction (dB)	P_{Ag} (dB)	Burst Average ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
826.4	-15.84	3.45	8.45	2.15	33.79	20.80	38.45	-17.65	V
836.4	-16.50	3.49	8.45	2.15	33.85	20.16	38.45	-18.29	V
846.6	-17.17	3.55	8.36	2.15	33.88	19.37	38.45	-19.08	V

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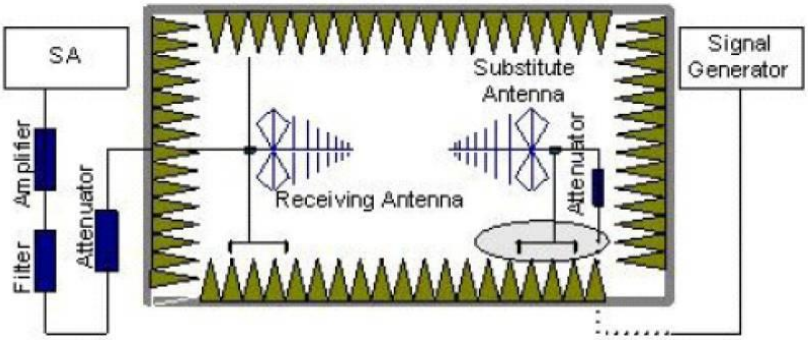
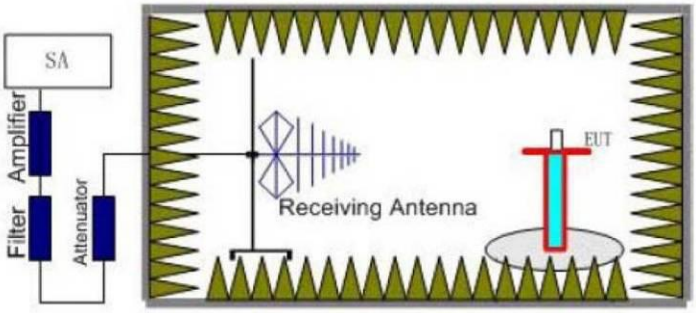
4.2 Radiated Spurious Emssion

TEST APPLICABLE

According to the TIA-603-E:2016 and FCC Part 2.1033 test method, The Receiver or Spectrum was scanned from lowest frequency frequency generated within the equipment to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier that can be as high as 1910 MHz. The resolution bandwidth is set as outlined in Part 24.238, Part 22.917, RSS-132 §5.5 and RSS-133 §6.5. The spectrum is scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of WCDMA Band II, WCDMA Band IV and WCDMA Band V.

TEST CONFIGURATION





TEST PROCEDURE

1. EUT was placed on a 1.50 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.50 m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
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.
3. The EUT is then put into continuously transmitting mode at its maximum power level during the test.Set Test Receiver or Spectrum RBW=1MHz,VBW=3MHz, And the maximum value of the receiver should be recorded as (P_r).
4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

5. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (P_{cl}) ,the Substitution Antenna Gain (G_a) and the Amplifier Gain (P_{Ag}) should be recorded after test.
   The measurement results are obtained as described below:
   Power(EIRP)=P_{Mea}+ P_{Ag} - P_{cl} + G_a
6. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
7. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dBi.
8. In order to make sure test results more clearly,we set frequency range and sweep time for difference frequency range as follows table:

Working Frequency	Subrange (GHz)	RBW	VBW	Sweep time (s)
UMTS/TM1/ WCDMA Band V	0.00009~0.15	1KHz	3KHz	30
	0.00015~0.03	10KHz	30KHz	10
	0.03~1	100KHz	300KHz	10
	1~2	1 MHz	3 MHz	2
	2~5	1 MHz	3 MHz	3
	5~8	1 MHz	3 MHz	3
	8~10	1 MHz	3 MHz	3
UMTS/TM1/ WCDMA Band II	0.00009~0.15	1KHz	3KHz	30
	0.00015~0.03	10KHz	30KHz	10
	0.03~1	100KHz	300KHz	10
	1~2	1 MHz	3 MHz	2
	2~5	1 MHz	3 MHz	3
	5~8	1 MHz	3 MHz	3
	8~11	1 MHz	3 MHz	3
	11~14	1 MHz	3 MHz	3
	14~18	1 MHz	3 MHz	3
	18~20	1 MHz	3 MHz	2

TEST LIMITS

According to 24.238, 22.917 specify that 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. 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.

Frequency	Channel	Frequency Range	Verdict
UMTS/TM1/ WCDMA Band V	Low	9KHz - 10GHz	PASS
	Middle	9KHz - 10GHz	PASS
	High	9KHz - 10GHz	PASS
UMTS/TM1/ WCDMA Band II	Low	9KHz - 20GHz	PASS
	Middle	9KHz - 20GHz	PASS
	High	9KHz - 20GHz	PASS

TEST RESULTS

Remark:
1. We were tested all Configuration refer 3GPP TS134 121.
2. EIRP=P_{Mea}(dBm)-P_{cl}(dB)+P_{Ag}(dB)+G_a(dBi)
3. ERP = EIRP – 2.15dBi as EIRP by subtracting the gain of the dipole.
4. Margin = EIRP - Limit

UMTS/TM1/ WCDMA Band II _ Low Channel

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	Diatance	G_a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3704.8	-43.57	5.26	3.00	9.88	-38.95	-13.00	-25.95	H
5557.2	-48.00	6.11	3.00	11.36	-42.75	-13.00	-29.75	H
3704.8	-47.26	5.26	3.00	9.88	-42.64	-13.00	-29.64	V
5557.2	-50.88	6.11	3.00	11.36	-45.63	-13.00	-32.63	V

UMTS/TM1/ WCDMA Band II _ Middle Channel

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	Diatance	G_a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3760.0	-42.95	5.32	3.00	10.03	-38.24	-13.00	-25.24	H
5640.0	-45.93	6.19	3.00	11.41	-40.71	-13.00	-27.71	H
3760.0	-46.80	5.32	3.00	10.03	-42.09	-13.00	-29.09	V
5640.0	-51.44	6.19	3.00	11.41	-46.22	-13.00	-33.22	V

UMTS/TM1/ WCDMA Band II _ High Channel

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	Diatance	G_a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3815.2	-41.60	5.36	3.00	9.62	-37.34	-13.00	-24.34	H
5722.8	-44.15	6.24	3.00	11.46	-38.93	-13.00	-25.93	H
3815.2	-45.64	5.36	3.00	9.62	-41.38	-13.00	-28.38	V
5722.8	-47.17	6.24	3.00	11.46	-41.95	-13.00	-28.95	V

UMTS/TM1/ WCDMA Band V _ Low Channel

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	Diatance	G_a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1652.8	-50.36	4.62	3.00	9.81	-45.17	-13.00	-32.17	H
2479.2	-51.06	5.94	3.00	10.86	-46.14	-13.00	-33.14	H
1652.8	-52.15	4.62	3.00	9.81	-46.96	-13.00	-33.96	V
2479.2	-54.09	5.94	3.00	10.86	-49.17	-13.00	-36.17	V

UMTS/TM1/ WCDMA Band V _ Middle Channel

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	Diatance	G_a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1672.8	-49.13	4.63	3.00	9.84	-43.92	-13.00	-30.92	H
2509.2	-51.28	5.94	3.00	10.86	-46.36	-13.00	-33.36	H
1672.8	-52.97	4.63	3.00	9.84	-47.76	-13.00	-34.76	V
2509.2	-54.42	5.94	3.00	10.86	-49.50	-13.00	-36.50	V

UMTS/TM1/ WCDMA Band V _ High Channel

Frequency (MHz)	P_{Mea} (dBm)	P_{cl} (dB)	Diatance	G_a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1693.2	-52.01	4.65	3.00	9.90	-46.76	-13.00	-33.76	H
2539.8	-53.09	5.95	3.00	10.91	-48.13	-13.00	-35.13	H
1693.2	-53.88	4.65	3.00	9.90	-48.63	-13.00	-35.63	V
2539.8	-55.02	5.95	3.00	10.91	-50.06	-13.00	-37.06	V

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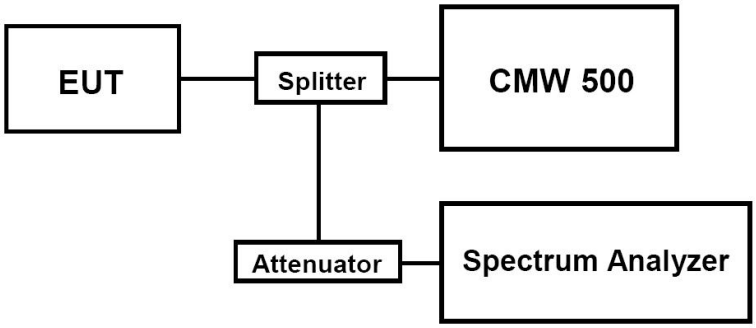
4.3 Occupied Bandwidth and Emission Bandwith

TEST APPLICABLE

Similar to conducted emissions; occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. The table below lists the measured 99% Bandwidth and -26dBc Bandwidth.

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was set up for the max output power with pseudo random data modulation;
2. The Occupied bandwidth and Emission Bandwidth were measured with Aglient Spectrum Analyzer N9020A (peak);
3. Set RBW=100KHz,VBW=300KHz,Span=10MHz,SWT=Auto;
4. Set SPA Max hold and View, Set 99% Occupied Bandwidth/ Set -26dBc Occupied Bandwidth
5. These measurements were done at 3 frequencies for WCDMA band II/IV/V. (low, middle and high of operational frequency range).

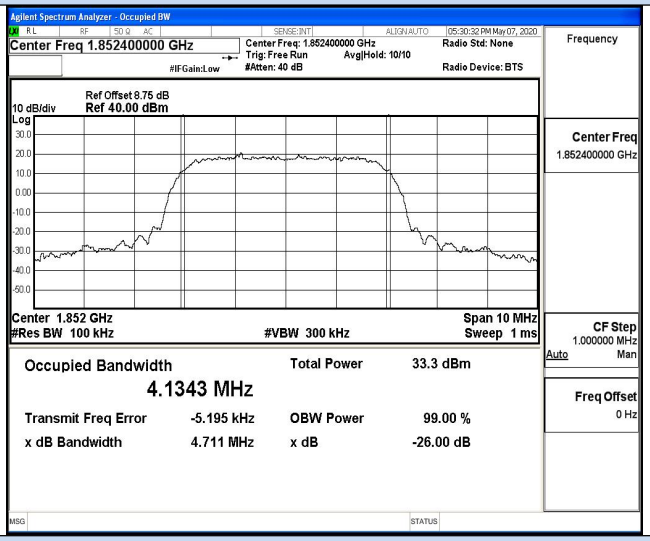
TEST RESULTS

Test Mode	Channel	Frequency (MHz)	Occupied Bandwidth (99% BW) (MHz)	Emission Bandwidth (-26 dBc BW) (MHz)	Verdict
UMTS/TM1/ WCDMA Band II	9262	1852.4	4.134	4.711	PASS
	9400	1880.0	4.130	4.703	PASS
	9538	1907.6	4.104	4.713	PASS
UMTS/TM1/ WCDMA Band V	4132	826.4	4.148	4.711	PASS
	4182	836.4	4.123	4.694	PASS
	4233	846.6	4.123	4.691	PASS

Remark:
1. *Test results including cable loss;*
2. *Please refer to following plots;*

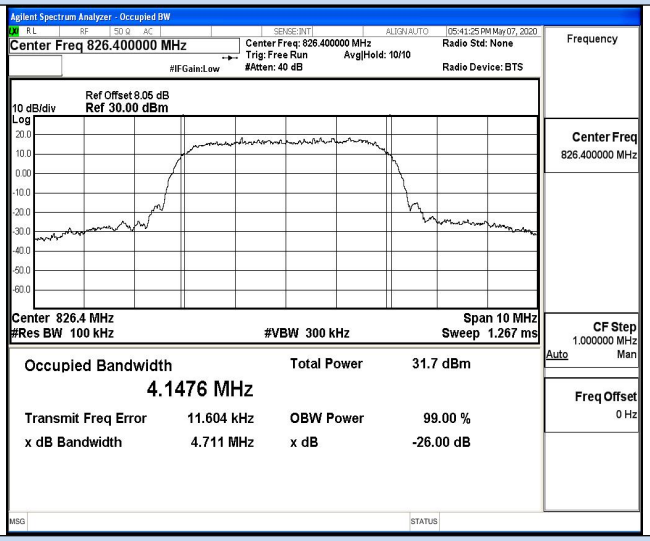
Occupied Bandwidth and Emission Bandwidth

UMTS/TM1/ WCDMA Band II

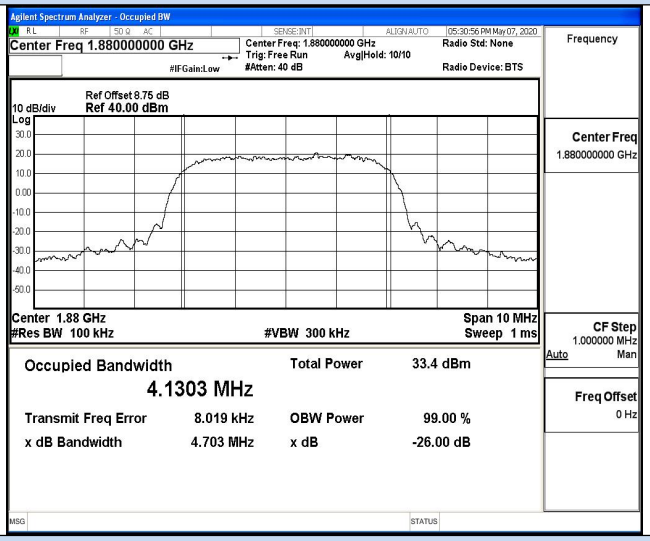


Channel 9262 / 1852.4 MHz

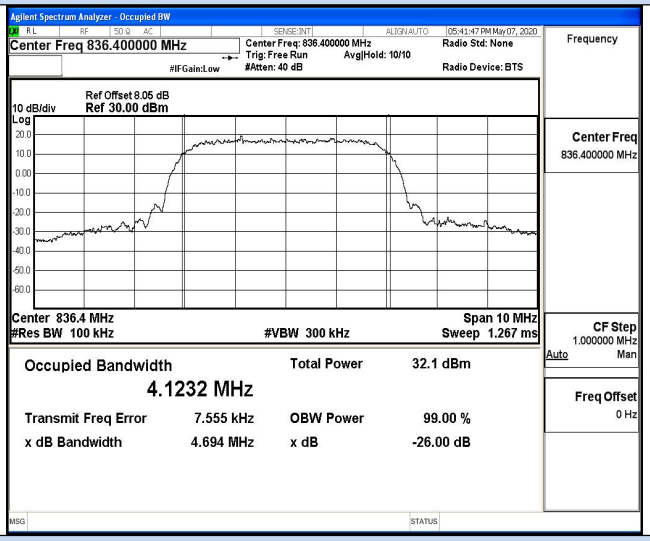
UMTS/TM1/ WCDMA Band IV



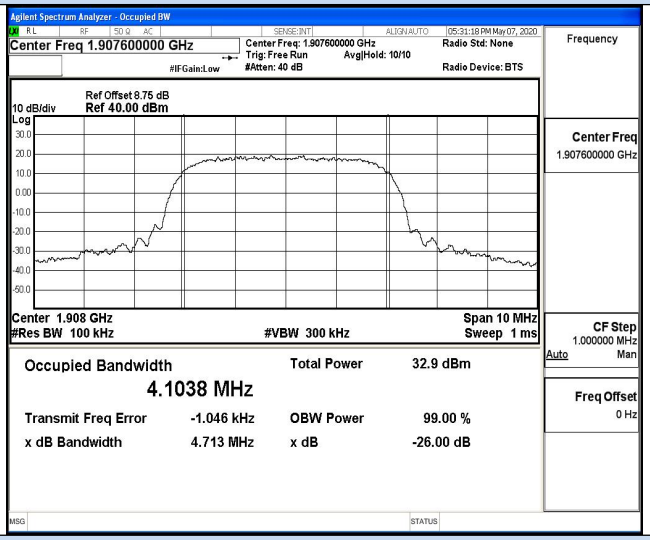
Channel 4132 / 826.4 MHz



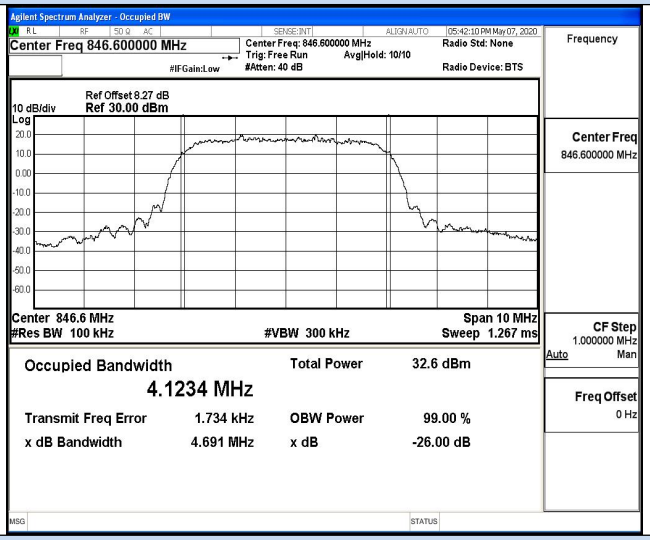
Channel 9400 / 1880.0 MHz



Channel 4182 / 836.4 MHz



Channel 9538 / 1907.6 MHz



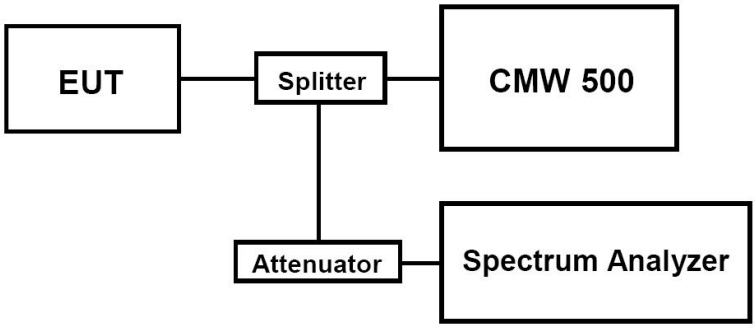
Channel 4233 / 846.6 MHz

4.4 Band Edge Compliance

TEST APPLICABLE

During the process of testing, the EUT was controlled via R&S WIDEBAND RADIO COMMUNICATION TESTER (CMW 500) to ensure max power transmission and proper modulation.

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was set up for the max output power with pseudo random data modulation;
2. The power was measured with Spectrum Analyzer N9020A;
3. Set RBW=51KHz,VBW=200KHz,Span=10MHz,SWT=Auto,Dector: RMS;

These measurements were done at 2 frequencies for WCDMA Band II/IV/V. (low and high of operational frequency range).

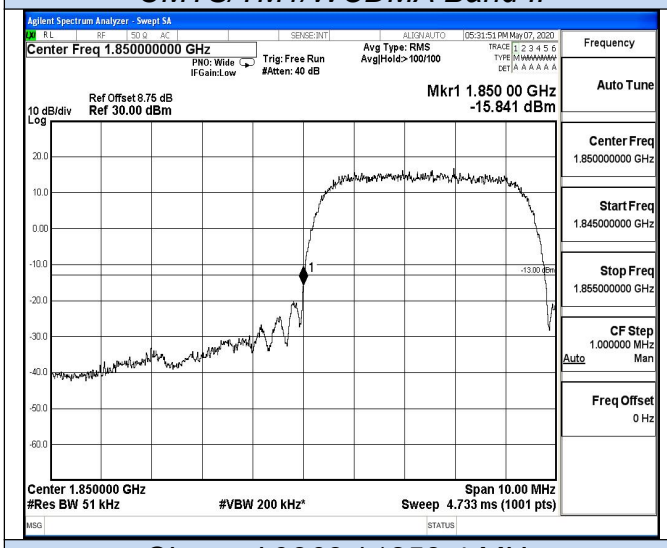
TEST RESULTS

UMTS/TM1/WCDMA Band II					
Test Mode	Channel	Frequency (MHz)	Band Edg Compliance (dBm)	Limits (dBm)	Verdict
UMTS/TM1/WCDMA Band II	9262	1852.4	<-13dBm	-13dBm	PASS
	9538	1907.6	<-13dBm	-13dBm	
UMTS/TM1/WCDMA Band V					
Test Mode	Channel	Frequency (MHz)	Band Edg Compliance (dBm)	Limits (dBm)	Verdict
UMTS/TM1/WCDMA Band V	4132	826.4	<-13dBm	-13dBm	PASS
	4233	846.6	<-13dBm	-13dBm	

Remark:
1. *Test results including cable loss;*
2. *Please refer to following plots;*

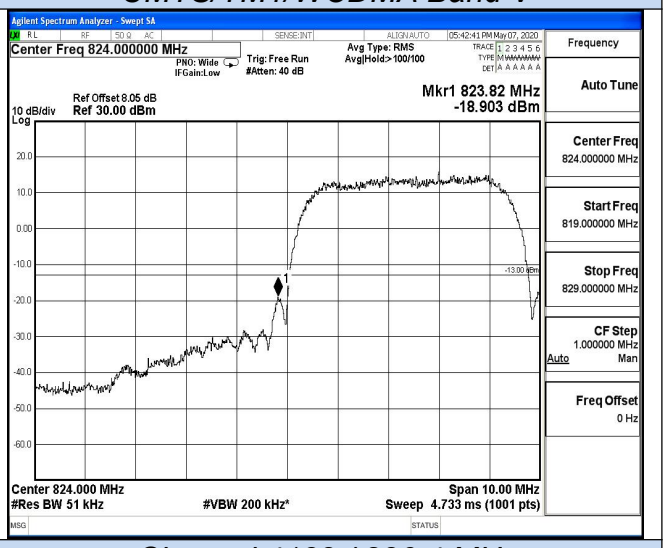
Band-edge Compliance

UMTS/TM1/WCDMA Band II

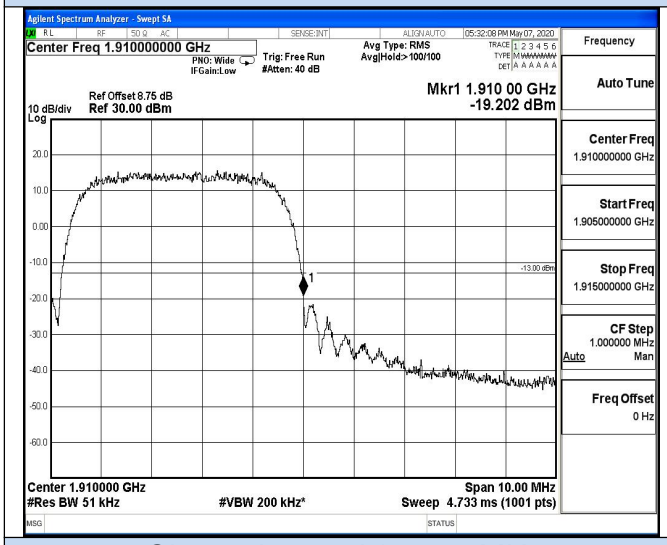


Channel 9262 / 1852.4 MHz

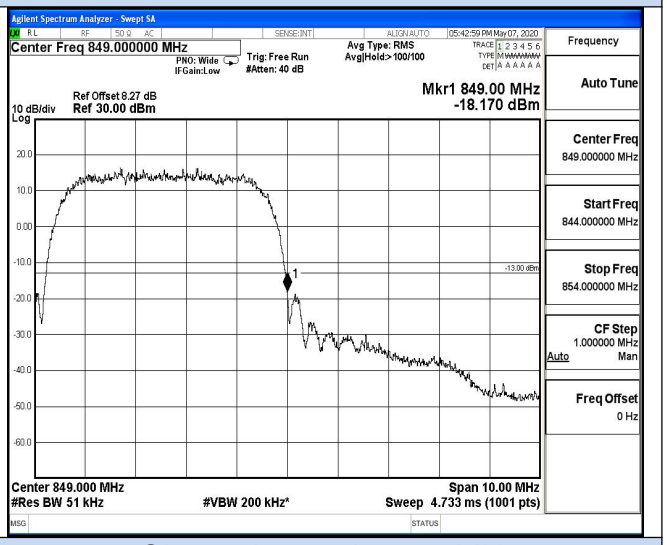
UMTS/TM1/WCDMA Band V



Channel 4132 / 826.4 MHz



Channel 9538 / 1907.6 MHz



Channel 4233 / 846.6 MHz

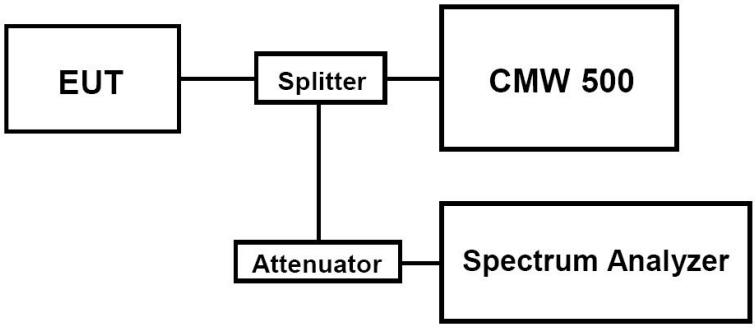
4.5 Spurious Emssion on Antenna Port

TEST APPLICABLE

The following steps outline the procedure used to measure the conducted emissions from the EUT.

1. Determine frequency range for measurements: From CFR 2.1057 the spectrum should be investigated from the lowest radio frequency generated in the equipment up to at least the 10th harmonic of the carrier frequency. For the equipment of WCDMA band II/IV, this equates to a frequency range of 9 KHz to 20GHz, data taken from 30 MHz to 20 GHz. For WCDMA Band V, this equates to a frequency range of 9 KHz to 20 GHz,data taken from 30 MHz to 20 GHz.
2. The sweep time is set automatically by instrument itself. That should be the optimal sweep time for the span and the RBW. If the sweep time is too short, that is sweep is too fast, the sweep result is not accurate; if the sweep time is too long, that is sweep is too low, some frequency components may be lost. The instrument will give an optimal sweep time according the selected span and RBW.
3. The procedure to get the conducted spurious emission is as follows:
   The trace mode is set to MaxHold to get the highest signal at each frequency;
   Wait 25 seconds;
   Get the result.
4. Determine EUT transmit frequencies: below outlines the band edge frequencies pertinent to conducted emissions testing.

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was set up for the max output power with pseudo random data modulation;
2. The power was measured with Spectrum Analyzer N9020A;
3. These measurements were done at 3 frequencies for WCDMA band II/IV/V. (low, middle and high of operational frequency range).

TEST LIMIT

Part 24.238, Part 22.917 specify that 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.
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.

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TEST RESULTS

Test Mode	Channel	Frequency (MHz)	Spurious RF Conducted Emission (dBm)	Limits (dBm)	Verdict
UMTS/TM1/WCDMA Band II	9262	1852.4	<-13dBm	-13dBm	PASS
	9400	1880.0	<-13dBm	-13dBm	
	9538	1907.6	<-13dBm	-13dBm	
UMTS/TM1/WCDMA Band V	4132	826.4	<-13dBm	-13dBm	PASS
	4182	836.4	<-13dBm	-13dBm	
	4233	846.6	<-13dBm	-13dBm	

Remark:
1. *Test results including cable loss;*
2. *Please refer to following plots;*
3. *Not reorded test plots from 9 KHz to 30 MHz as emission levels 20dB lower than emission limit;*

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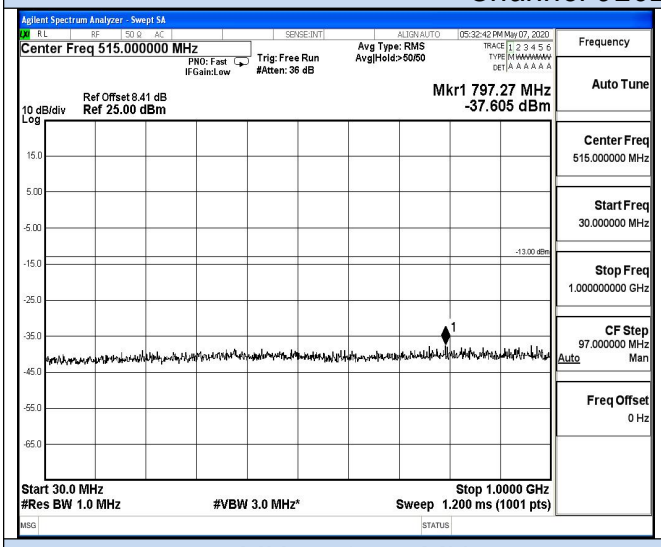
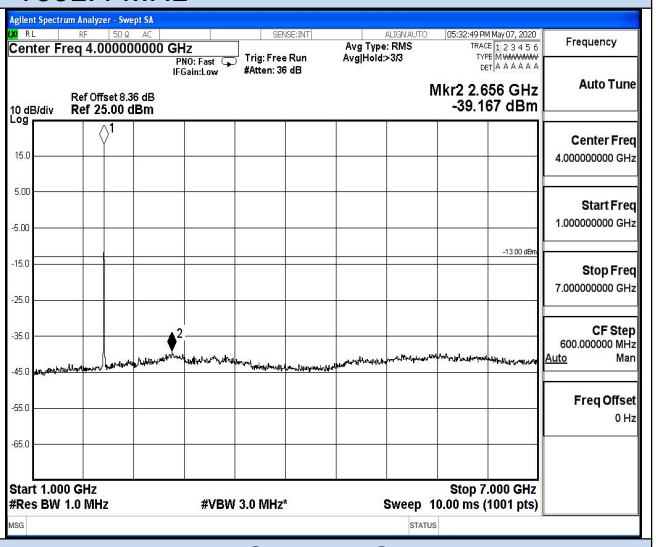
Spurious Emssion on Antenna Port

UMTS/TM1/WCDMA Band II

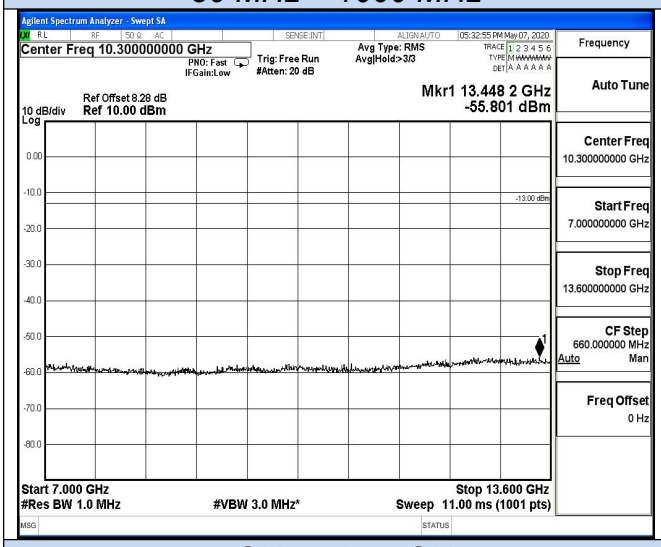
Channel 9262 / 1852.4 MHz



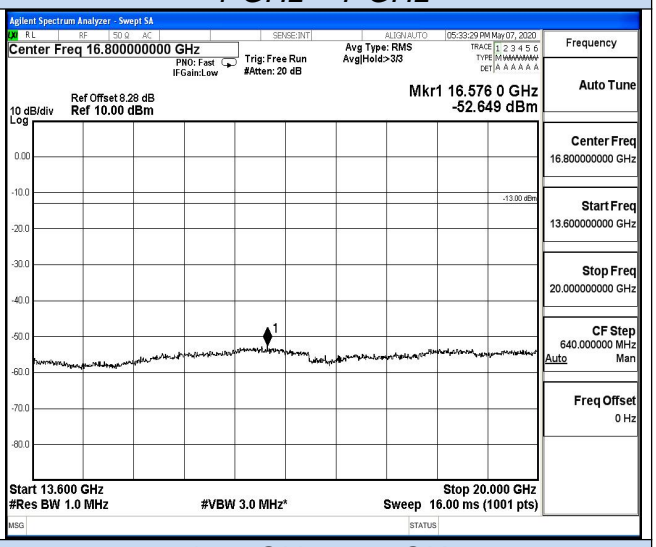
30 MHz – 1000 MHz



1 GHz – 7 GHz



7 GHz – 13.6 GHz

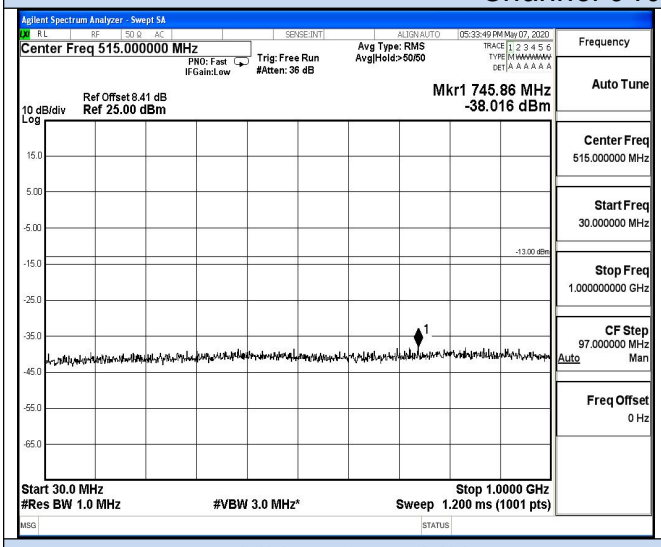


13.6 GHz – 20 GHz

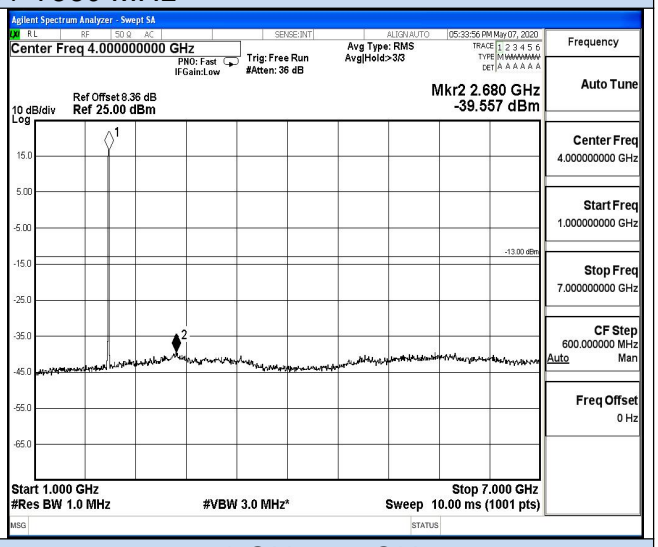
Spurious Emssion on Antenna Port

UMTS/TM1/WCDMA Band II

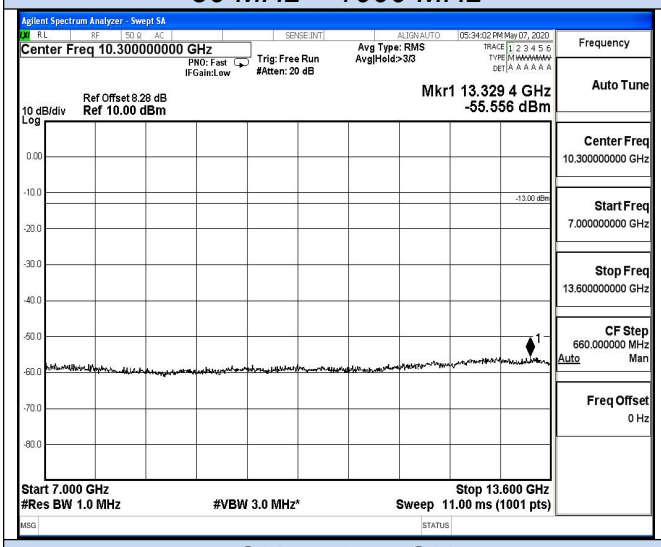
Channel 9400 / 1880 MHz



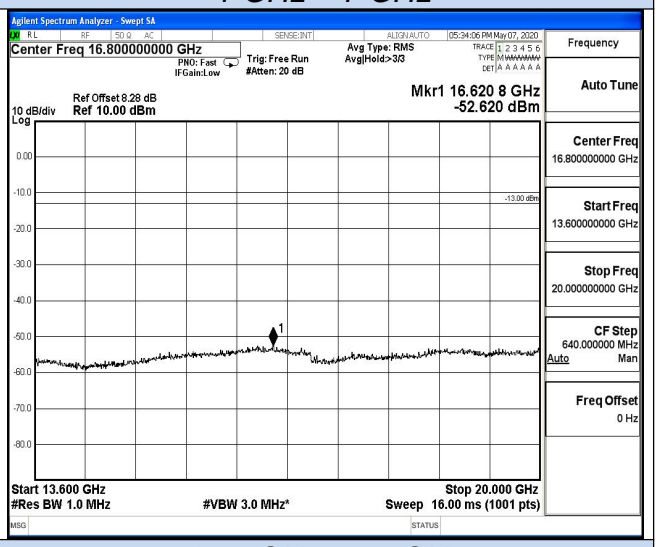
30 MHz – 1000 MHz



1 GHz – 7 GHz



7 GHz – 13.6 GHz

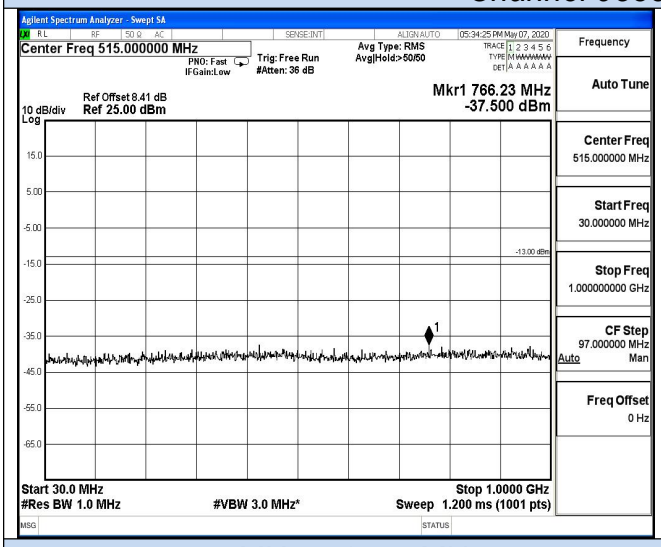


13.6 GHz – 20 GHz

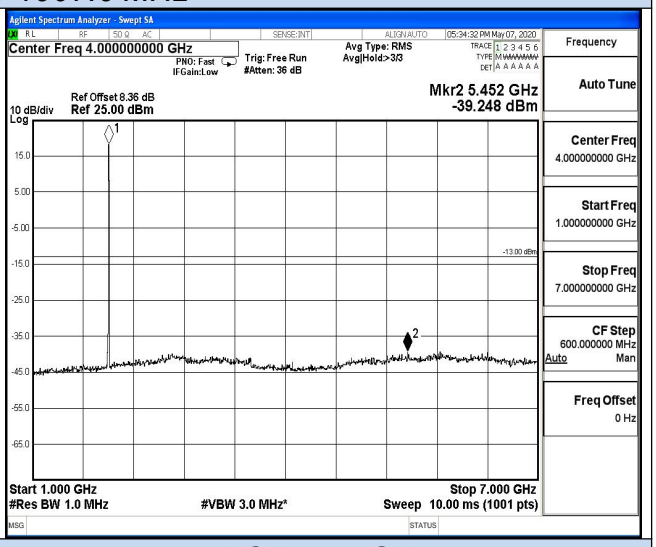
Spurious Emssion on Antenna Port

UMTS/TM1/WCDMA Band II

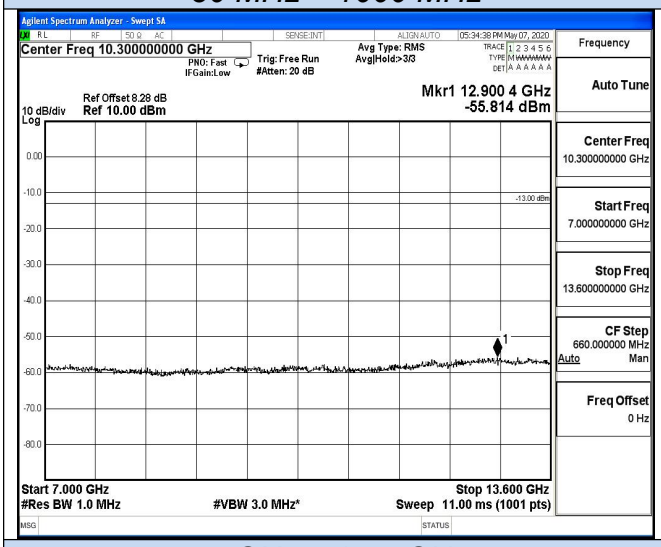
Channel 9538 / 1907.6 MHz



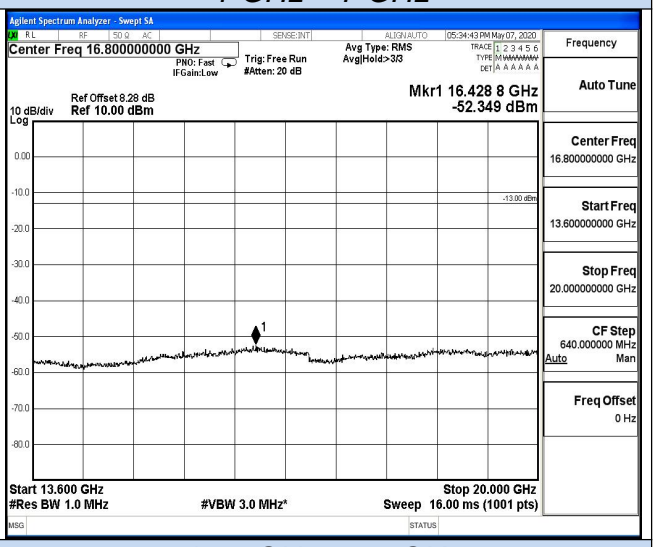
30 MHz – 1000 MHz



1 GHz – 7 GHz



7 GHz – 13.6 GHz

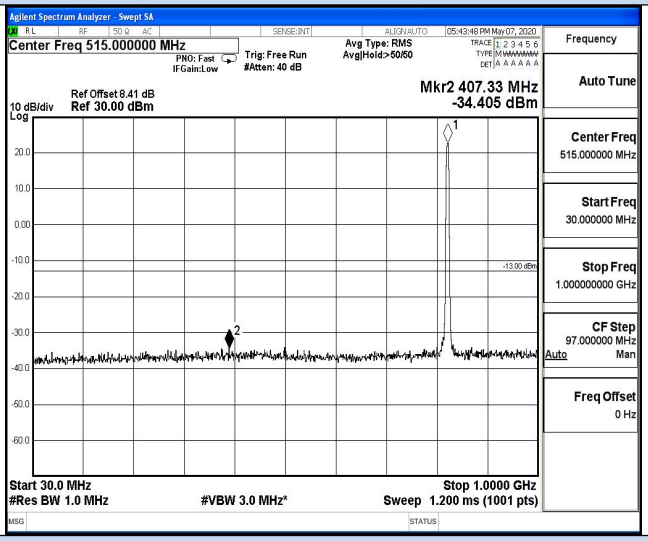


13.6 GHz – 20 GHz

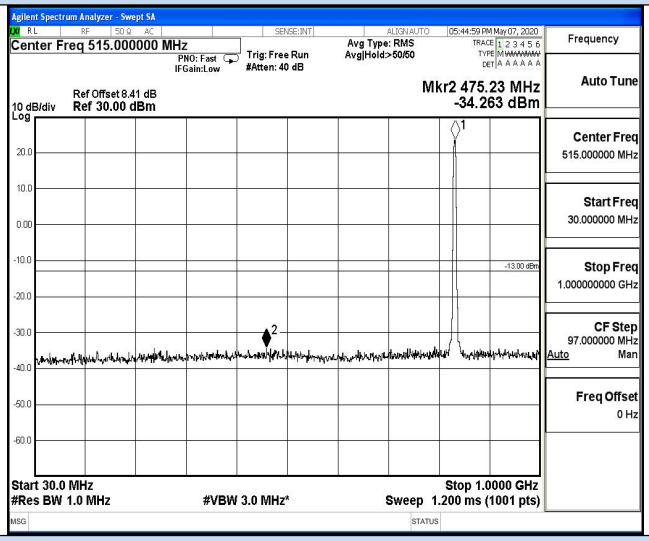
Spurious Emssion on Antenna Port

UMTS/TM1/WCDMA Band V

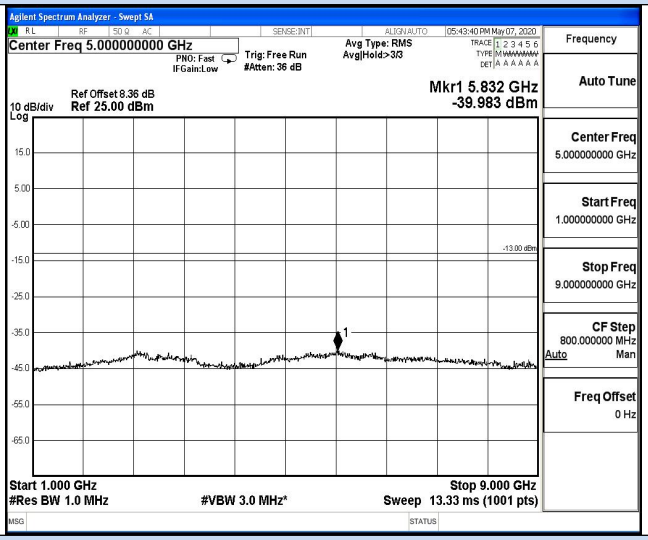
Channel 4132 / 826.4 MHz



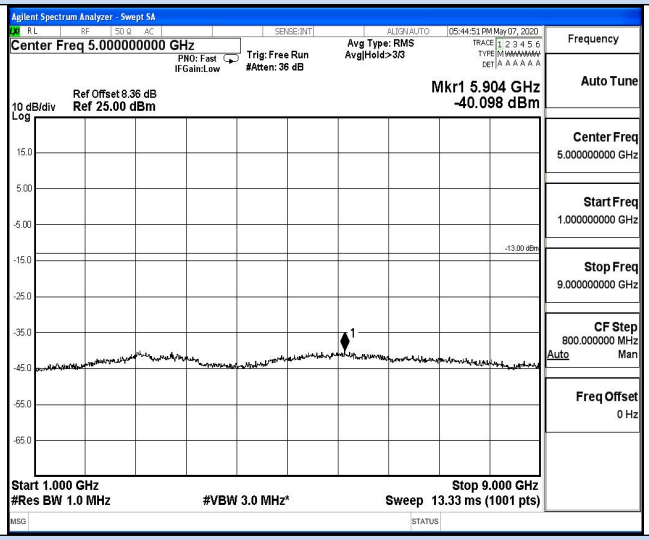
Channel 4182 / 836.4 MHz



30 MHz – 1000 MHz



30 MHz – 1000 MHz

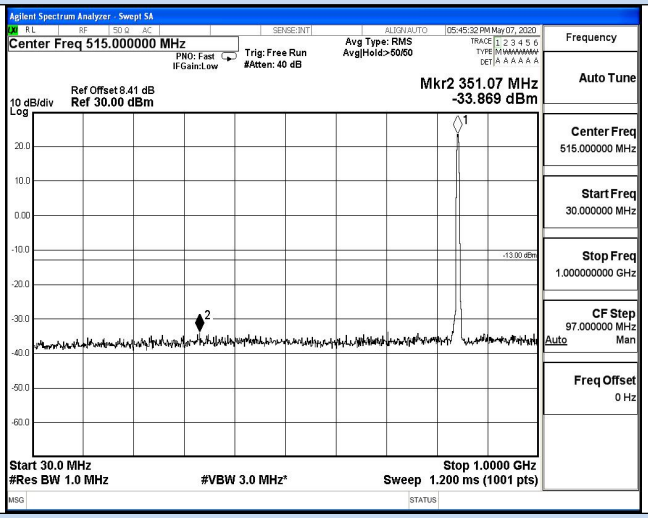


1 GHz – 9 GHz

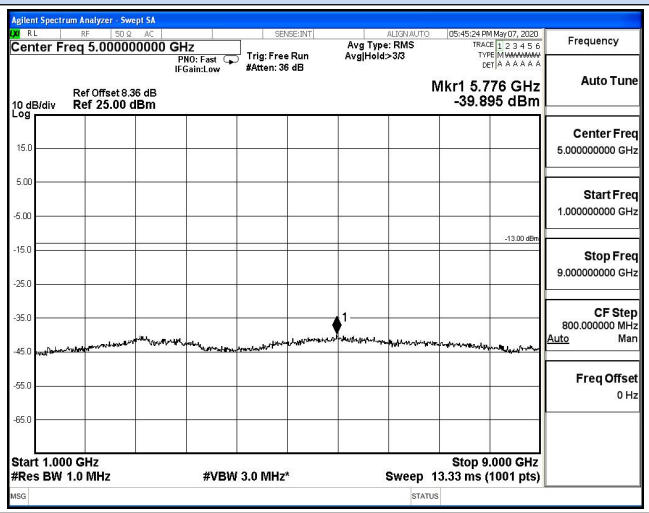
1 GHz – 9 GHz

UMTS/TM1/WCDMA Band V

Channel 4233 / 846.6 MHz



Channel 4233 / 846.6 MHz



30 MHz – 1000 MHz

1 GHz – 9 GHz

4.6 Frequency Stability Test

TEST APPLICABLE

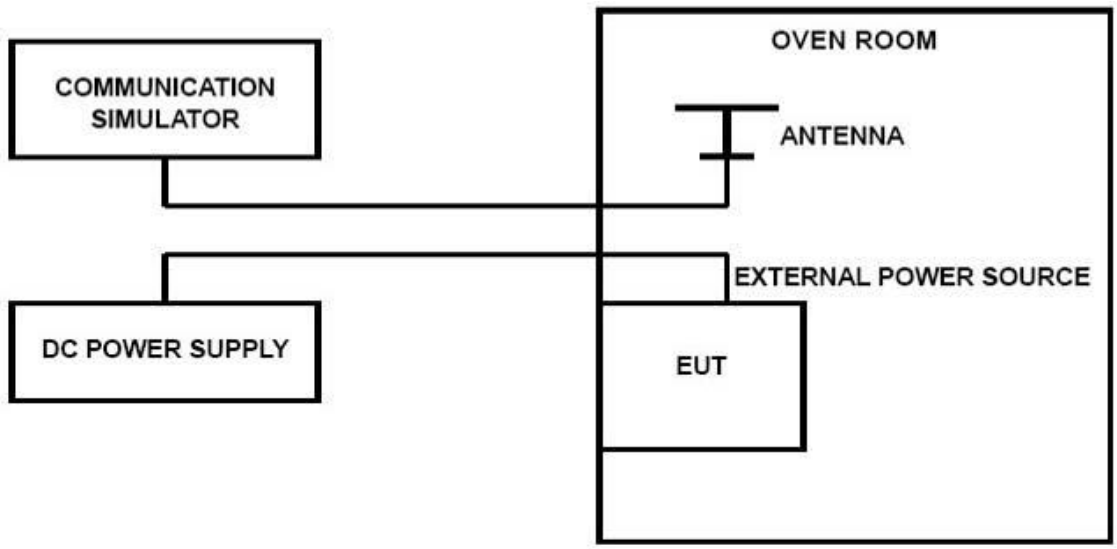
1. According to FCC Part 2 Section 2.1055 (a)(1), the frequency stability shall be measured with variation of ambient temperature from -30℃ to +50℃ centigrade.
2. According to FCC Part 2 Section 2.1055 (e)(2) and RSS-GEN, for battery powered equipment, the frequency stability shall be measured with reducing primary supply voltage to the battery operating end point, which is specified by the manufacture.
3. Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried voltage equipment and the end voltage point was 3.40V.

TEST PROCEDURE

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 WIDEBAND RADIO COMMUNICATION TESTER (CMW 500).

1. Measure the carrier frequency at room temperature;
2. Subject the EUT to overnight soak at -30℃;
3. With the EUT, powered via nominal voltage, connected to the CMW 500 and in a simulated call on middle channel of WCDMA Band II/IV/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℃ increments from -30℃ to +50℃. Allow at least 0.5 hours at each temperature, unpowered, before making measurements;
5. Remeasure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments remeasuring carrier frequency at each voltage. Pause at nominal voltage for 0.5 hours unpowered, to allow any self-heating to stabilize, before continuing;
6. Subject the EUT to overnight soak at +50℃;
7. With the EUT, powered via nominal voltage, connected to the CMW 500 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℃ increments from +50℃ to -30℃. Allow at least 0.5 hours at each temperature, unpowered, before making measurements;
9. At all temperature levels hold the temperature to +/- 0.5℃ during the measurement procedure;

TEST CONFIGURATION



TEST LIMITS

For Hand carried battery powered equipment

According to the JTC standard 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 3.40VDC and 4.30VDC, with a nominal voltage of 3.80DC. 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.

For equipment powered by primary supply voltage

According to the JTC standard 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.

TEST RESULTS

UMTS/TM1/WCDMA Band II					
DC Power	Temperature (℃)	Frequency error(Hz)	Frequency error(ppm)	Limit (ppm)	Verdict
3.15	25	-16	-0.009	2.50	PASS
3.85	25	-1	-0.001	2.50	PASS
4.43	25	-12	-0.006	2.50	PASS
3.85	-30	-10	-0.005	2.50	PASS
3.85	-20	19	0.010	2.50	PASS
3.85	-10	-17	-0.009	2.50	PASS
3.85	0	-3	-0.002	2.50	PASS
3.85	10	-20	-0.011	2.50	PASS
3.85	20	1	0.001	2.50	PASS
3.85	30	7	0.004	2.50	PASS
3.85	40	-6	-0.003	2.50	PASS
3.85	50	-10	-0.005	2.50	PASS

UMTS/TM1/WCDMA Band V					
DC Power	Temperature (℃)	Frequency error(Hz)	Frequency error(ppm)	Limit (ppm)	Verdict
3.15	25	12	0.006	2.50	PASS
3.85	25	1	0.001	2.50	PASS
4.43	25	-7	-0.004	2.50	PASS
3.85	-30	-10	-0.005	2.50	PASS
3.85	-20	15	0.008	2.50	PASS
3.85	-10	-7	-0.004	2.50	PASS
3.85	0	10	0.005	2.50	PASS
3.85	10	9	0.005	2.50	PASS
3.85	20	9	0.005	2.50	PASS
3.85	30	-3	-0.002	2.50	PASS
3.85	40	18	0.010	2.50	PASS
3.85	50	-4	-0.002	2.50	PASS

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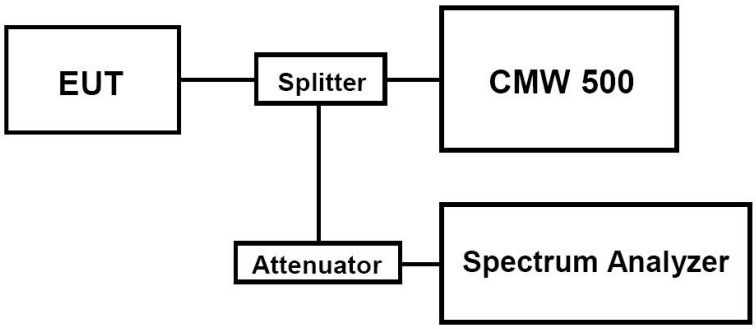
4.7 Peak-to-Average Ratio (PAR)

LIMIT

The Peak-to-Average Ratio (PAR) of the transmission may not exceed 13 dB.

TEST CONFIGURATION



TEST PROCEDURE

1. Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
2. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
3. Set the number of counts to a value that stabilizes the measured CCDF curve;
4. Set the measurement interval as follows:
   1). for continuous transmissions, set to 1 ms,
   2). for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
5. Record the maximum PAPR level associated with a probability of 0.1%.

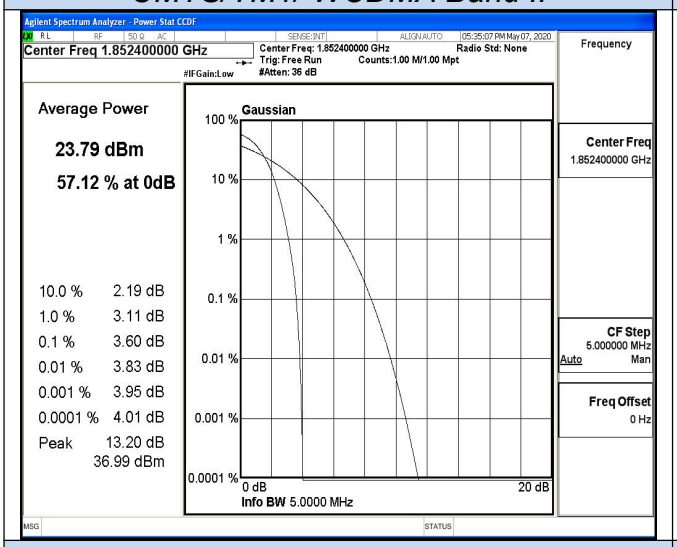
TEST RESULTS

Test Mode	Channel	Frequency (MHz)	PAPR Value (dB)	Limits (dB)	Verdict
UMTS/TM1/ WCDMA Band II	9262	1852.4	3.60	13.0	PASS
	9400	1880.0	4.37	13.0	PASS
	9538	1907.6	4.30	13.0	PASS
UMTS/TM1/ WCDMA Band V	4132	826.4	3.98	13.0	PASS
	4182	836.4	4.32	13.0	PASS
	4233	846.6	4.13	13.0	PASS

Remark:
1. *Test results including cable loss;*
2. *Please refer to following plots;*

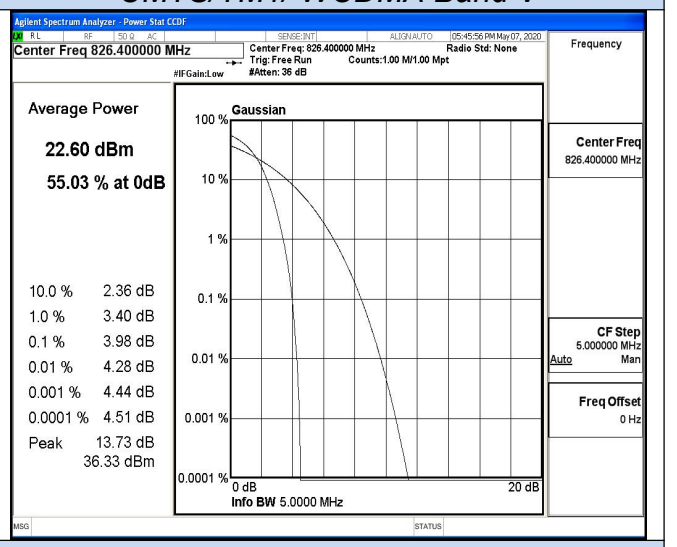
Peak-to-Average Ratio (PAR)

UMTS/TM1/ WCDMA Band II

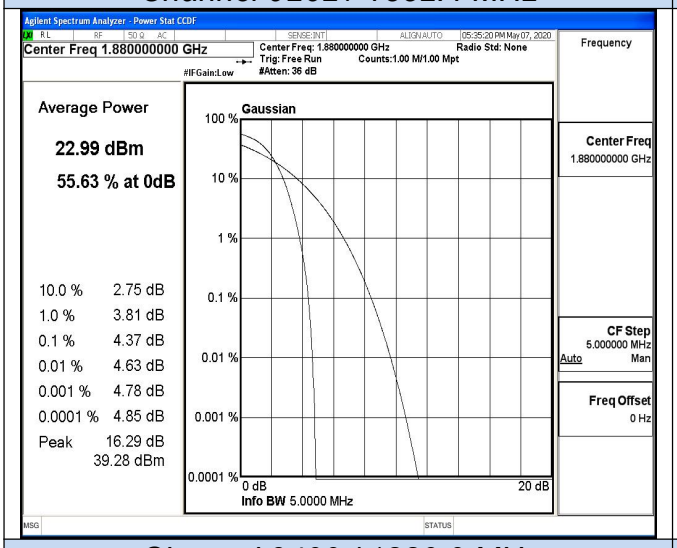


Channel 9262 / 1852.4 MHz

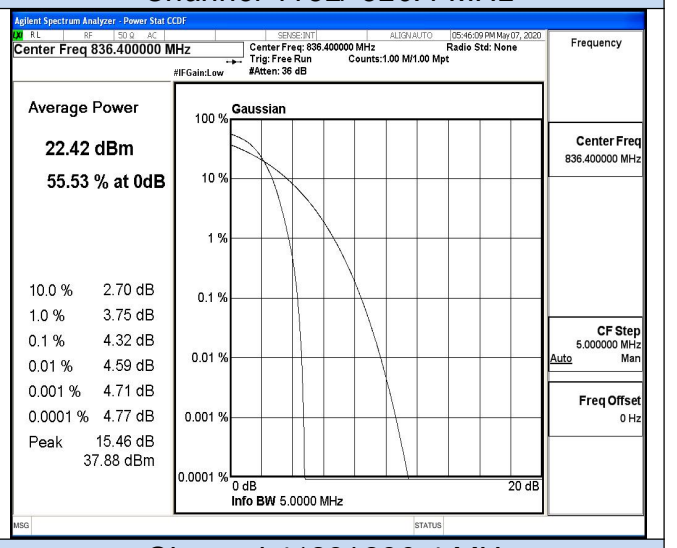
UMTS/TM1/ WCDMA Band V



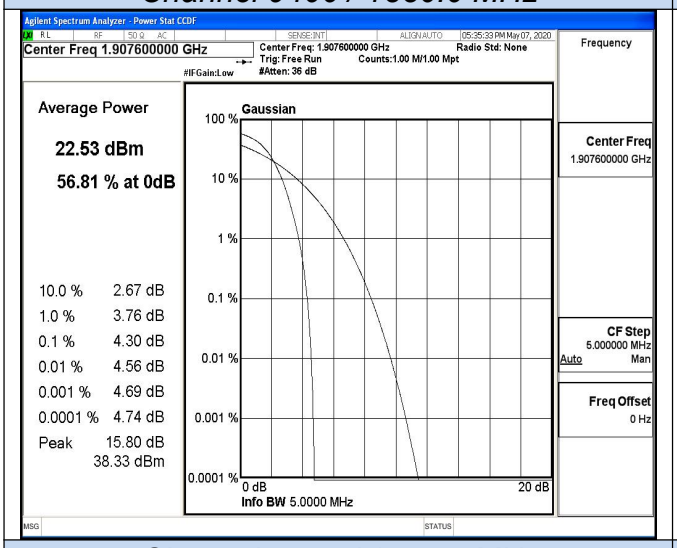
Channel 4132/ 826.4 MHz



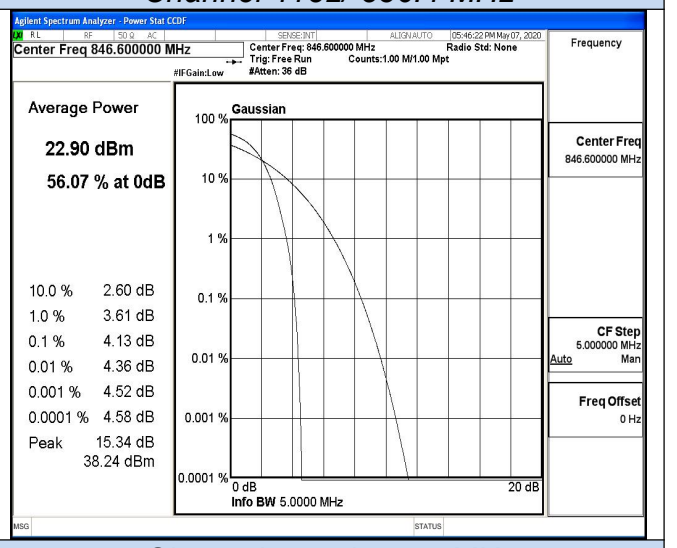
Channel 9400 / 1880.0 MHz



Channel 4182/ 836.4 MHz



Channel 9538 / 1907.6 MHz



Channel 4233/ 846.6 MHz

5 Test Setup Photos of the EUT

Please refer to separated files for Test Setup Photos of the EUT.

6 External Photos of the EUT

Please refer to separated files for External Photos of the EUT.

7 Internal Photos of the EUT

Please refer to separated files for Internal Photos of the EUT.

.....End of Report.....