

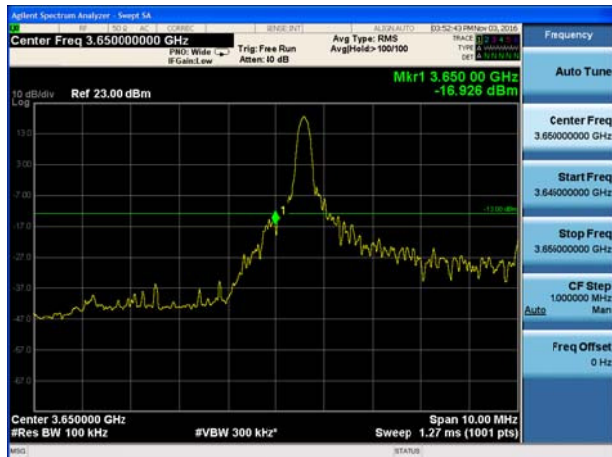
LTE Band 43 16QAM Bandwidth = 5MHz
CH44115, RB 25



LTE Band 43 16QAM Bandwidth = 5MHz
CH44565, RB 25



LTE Band 43 16QAM Bandwidth = 10MHz
CH44140, RB 1



LTE Band 43 16QAM Bandwidth = 10MHz
CH44540, RB 1



LTE Band 43 16QAM Bandwidth = 10MHz
CH44140, RB 50



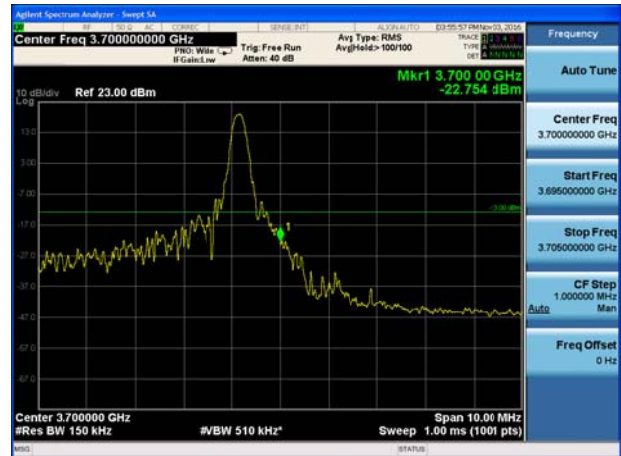
LTE Band 43 16QAM Bandwidth = 10MHz
CH44540, RB 50



LTE Band 43 16QAM Bandwidth = 15MHz
CH44165, RB 1



LTE Band 43 16QAM Bandwidth = 15MHz
CH44515, RB 1



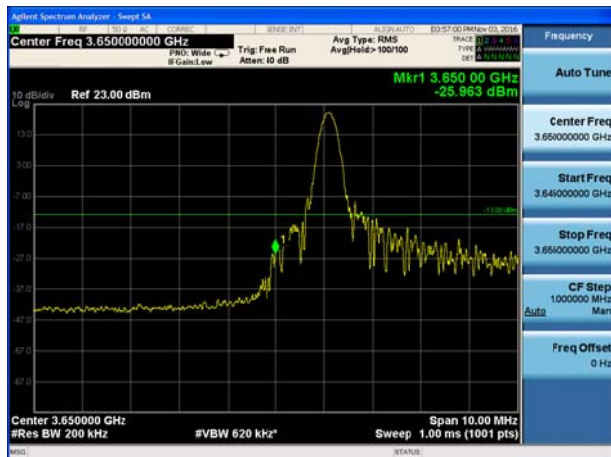
LTE Band 43 16QAM Bandwidth = 15MHz
CH44165, RB 75



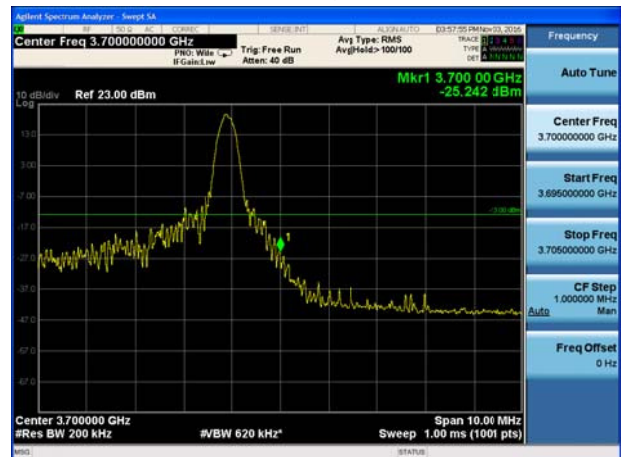
LTE Band 43 16QAM Bandwidth = 15MHz
CH44515, RB 75



LTE Band 43 16QAM Bandwidth = 20MHz
CH44190, RB 1



LTE Band 43 16QAM Bandwidth = 20MHz
CH44490, RB 1





LTE Band 43 16QAM Bandwidth = 20MHz
CH44190, RB 100

LTE Band 43 16QAM Bandwidth = 20MHz
CH44490, RB 100



5.4. Frequency Stability

Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

Method of Measurement

1. Frequency Stability (Temperature Variation)

The temperature inside the climate chamber is varied from -10°C to +45°C in 10°C step size,

(1) With all power removed, the temperature was decreased to 0°C and permitted to stabilize for three hours.

(2) Measure the carrier frequency with the test equipment in a “call mode”. These measurements should be made within 1 minute of powering up the mobile station, to prevent significant self warming.

(3) Repeat the above measurements at 10°C increments from -10°C to +45°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements.

2. Frequency Stability (Voltage Variation)

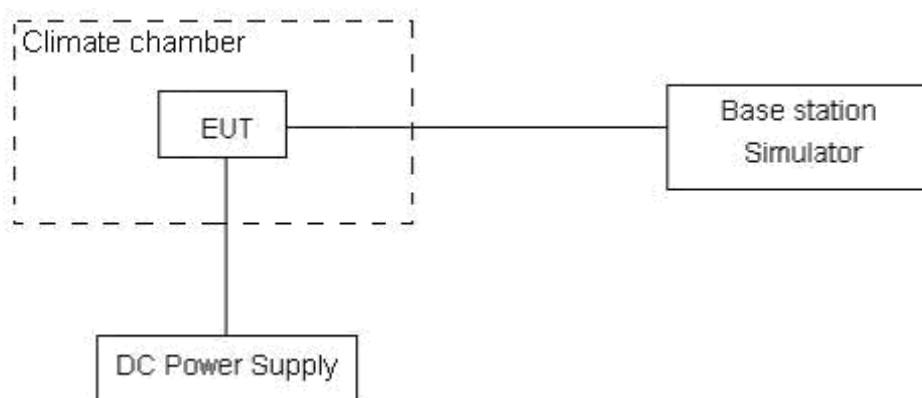
The frequency stability shall be measured with variation of primary supply voltage as follows:

(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.

(2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery-operating end point which shall be specified by the manufacturer.

This transceiver is specified to operate with an input voltage of between 9 V and 15 V, with a nominal voltage of 12V.

Test setup



Limits

Requirements: FCC § 2.1055 (a)(d), The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor $k = 3$, $U = 0.01$ ppm.

Test Result

Bandwidth	Test status	LTE Band 43 Channel 44340		
		Test Results (ppm)		
		QPSK	16QAM	Conclusion
5MHz	50°C/12 V	-0.00116	-0.00090	PASS
	40°C/12 V	0.00102	-0.00054	PASS
	30°C/12 V	0.00253	0.00186	PASS
	20°C/12 V	-0.00171	-0.00120	PASS
	10°C/12 V	0.00290	0.00097	PASS
	0°C/12 V	-0.00182	0.00188	PASS
	-10°C/12 V	0.00187	0.00281	PASS
	20°C/15 V	0.00151	0.00199	PASS
	20°C/9 V	0.00177	0.00262	PASS
10MHz	50°C/12 V	0.00118	0.00237	PASS
	40°C/12 V	-0.00096	0.00393	PASS
	30°C/12 V	-0.00206	0.00228	PASS
	20°C/12 V	-0.00114	0.00246	PASS
	10°C/12 V	-0.00305	0.00153	PASS
	0°C/12 V	-0.00203	0.00178	PASS
	-10°C/12 V	-0.00265	0.00339	PASS
	20°C/15 V	-0.00290	0.00162	PASS
	20°C/9 V	-0.00233	0.00214	PASS
15MHz	50°C/12 V	-0.00266	0.00251	PASS
	40°C/12 V	-0.00170	0.00246	PASS
	30°C/12 V	-0.00110	0.00140	PASS
	20°C/12 V	-0.00212	0.00179	PASS
	10°C/12 V	-0.00262	0.00342	PASS
	0°C/12 V	-0.00293	0.00160	PASS
	-10°C/12 V	-0.00230	0.00213	PASS
	20°C/15 V	-0.00363	0.00201	PASS
	20°C/9 V	-0.00270	0.00254	PASS
20MHz	50°C/12 V	-0.00115	0.00143	PASS
	40°C/12 V	-0.00209	0.00179	PASS
	30°C/12 V	0.00429	-0.00141	PASS
	20°C/12 V	0.00358	-0.00211	PASS
	10°C/12 V	-0.00173	0.00182	PASS
	0°C/12 V	0.00157	0.00170	PASS
	-10°C/12 V	-0.00229	0.00219	PASS
	20°C/15 V	0.00176	-0.00132	PASS
	20°C/9 V	0.00213	0.00222	PASS

5.5. Spurious Emissions at Antenna Terminals

Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 9kHz to the 10th harmonic of the carrier. The peak detector is used.

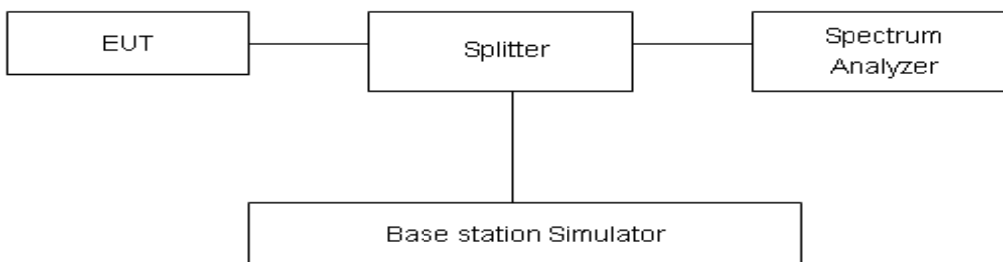
RBW =0.001MHz,VBW=0.003MHz for 9kHz-150kHz;

RBW =0.01MHz,VBW=0.03MHzfor 150kHz-30MHz;

RBW =0.1MHz, VBW=0.3MHzfor 30MHz-1GHz;

RBW =1MHz, VBW=3MHzfor above 1GHz;Sweep is set to ATUO.

Test setup



Limits

Rule Part 2.1051&90.1323 specifies 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.”

Limit	-13 dBm

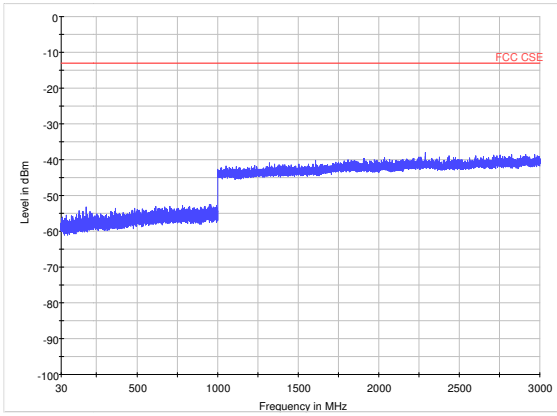
Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

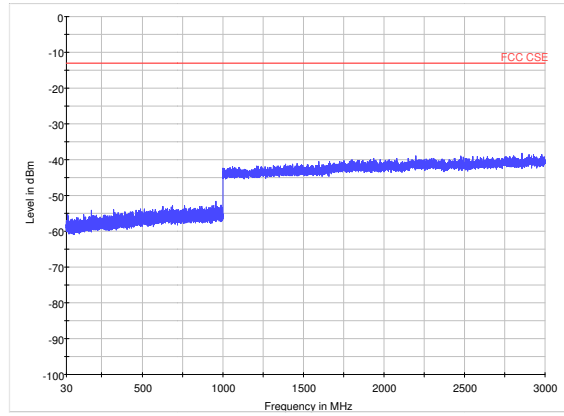
Frequency	Uncertainty
9kHz-2GHz	0.684 dB
2GHz-18GHz	1.407 dB
18GHz-40GHz	1.815 dB

Test Result:

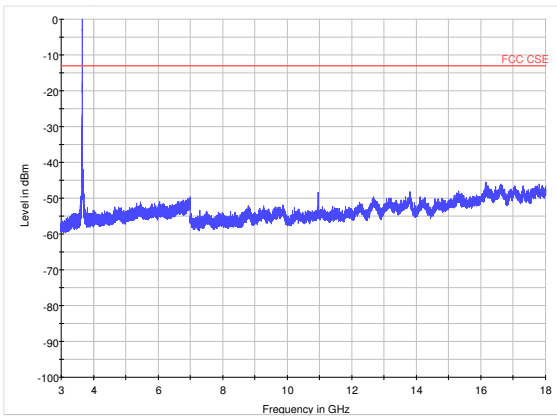
If disturbances were found more than 20dB below limit line, the mark is not required for the EUT.
The signal beyond the limit is carrier in the following plots.



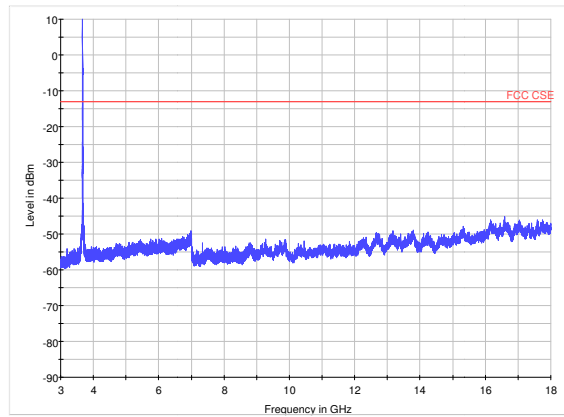
LTE Band 43 5MHz CH44115 30MHz~3GHz



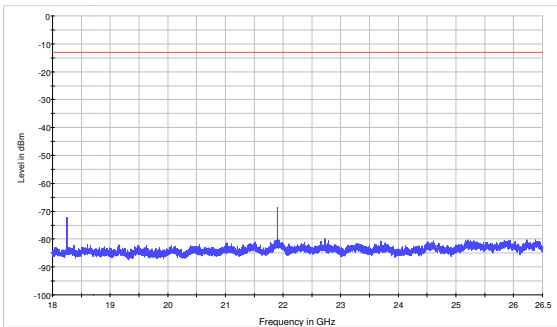
LTE Band 43 5MHz CH44340 30MHz~3GHz



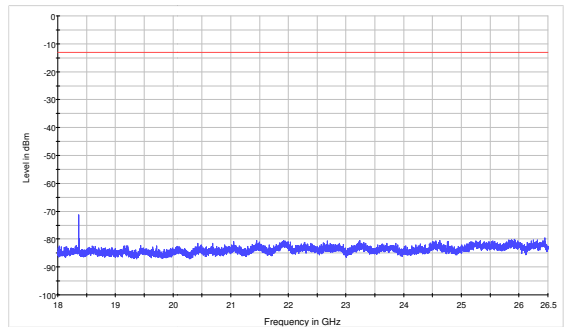
LTE Band 43 5MHz CH44115 3GHz~18GHz



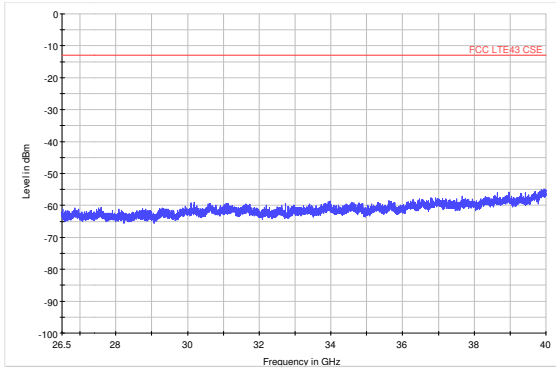
LTE Band 43 5MHz CH44340 3GHz~18GHz



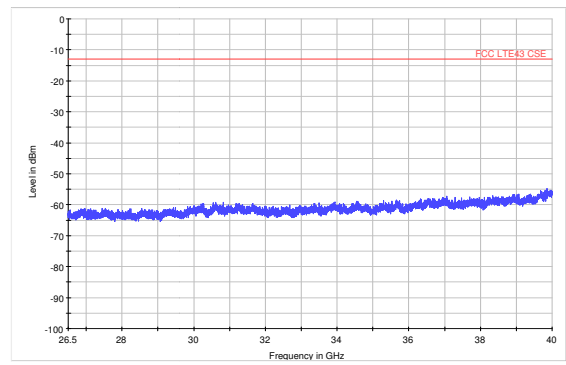
LTE Band 43 5MHz CH44115 18GHz~26.5GHz



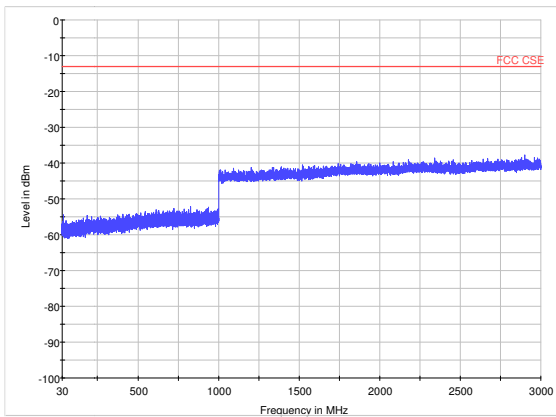
LTE Band 43 5MHz CH44340 18GHz~26.5GHz



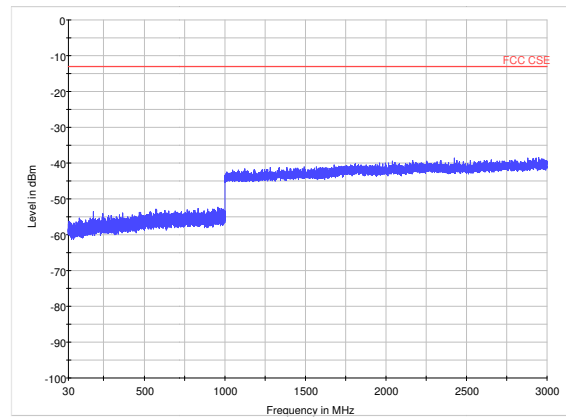
LTE Band 43 5MHz CH44115 26.5GHz~40GHz



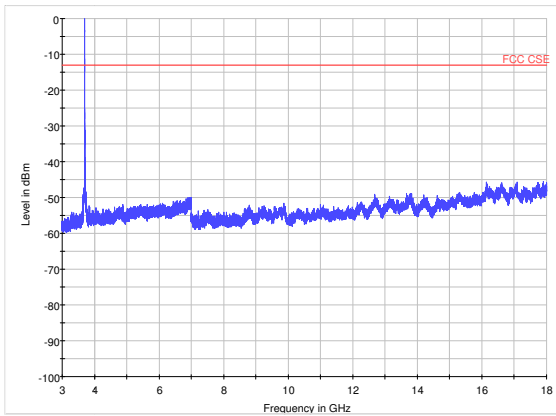
LTE Band 43 5MHz CH44340 26.5GHz~40GHz



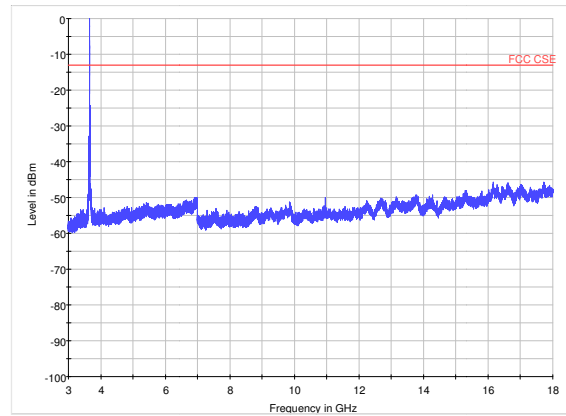
LTE Band 43 5MHz CH44565 30MHz~3GHz



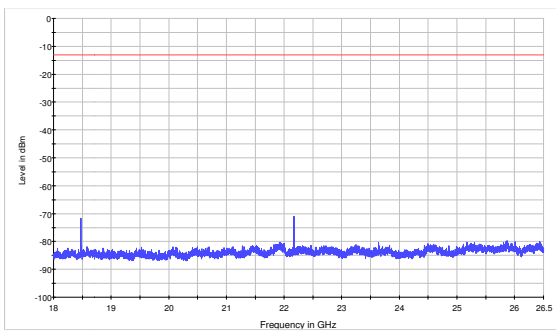
LTE Band 43 10MHz CH44140 30MHz~3GHz



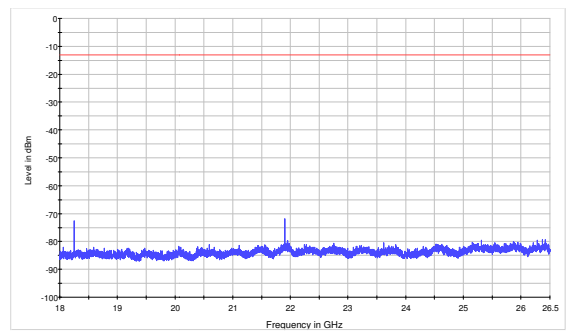
LTE Band 43 5MHz CH44565 3GHz~18GHz



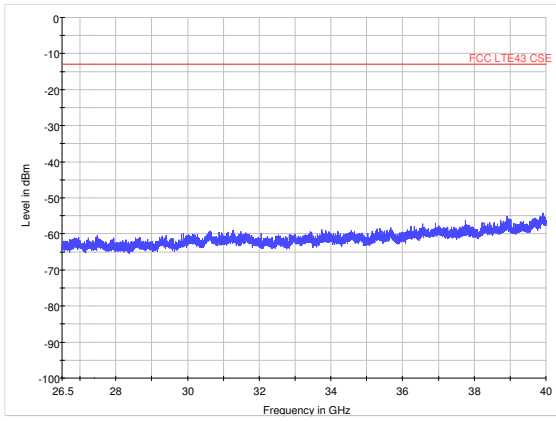
LTE Band 43 10MHz CH44140 3GHz~18GHz



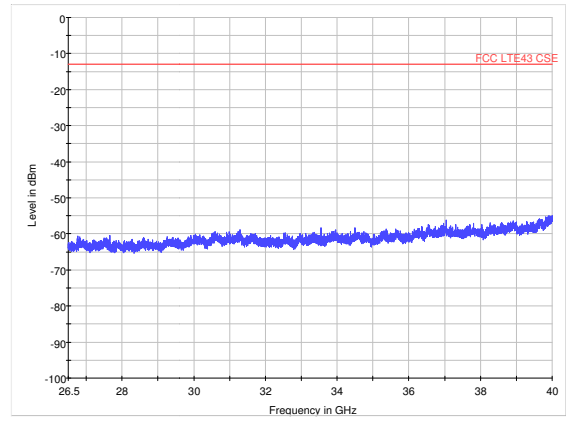
LTE Band 43 5MHz CH44565 18GHz~26.5GHz



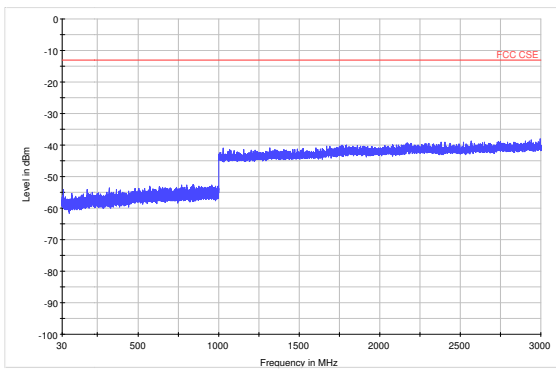
LTE Band 43 10MHz CH44140 18GHz~26.5GHz



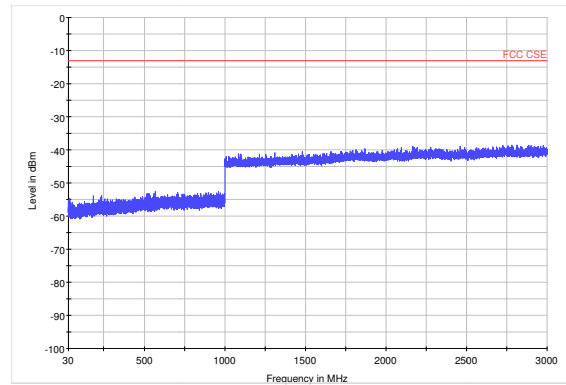
LTE Band 43 5MHz CH44565 26.5GHz~40GHz



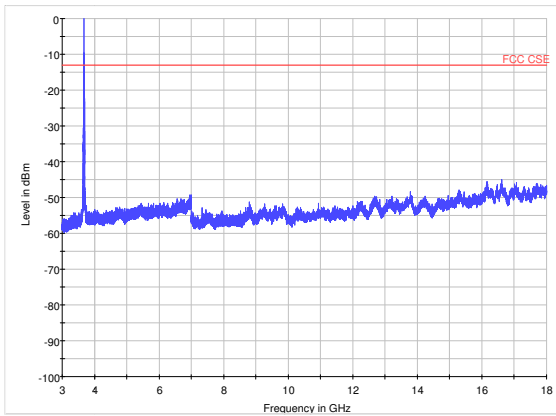
LTE Band 43 10MHz CH44140 26.5GHz~40GHz



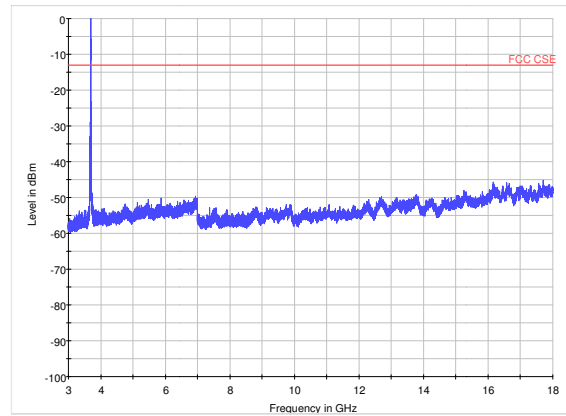
LTE Band 43 10MHz CH44340 30MHz~3GHz



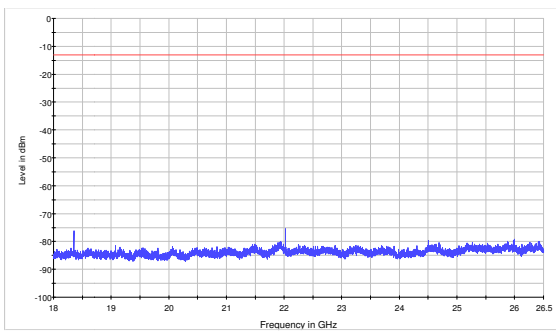
LTE Band 43 10MHz CH44540 30MHz~3GHz



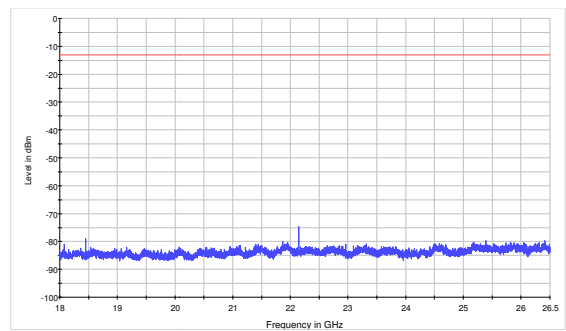
LTE Band 43 10MHz CH44340 3GHz~18GHz



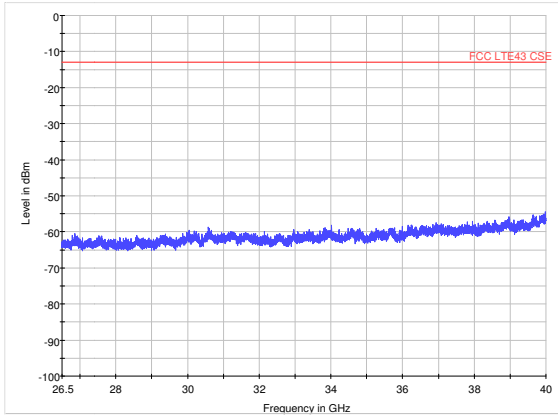
LTE Band 43 10MHz CH44540 3GHz~18GHz



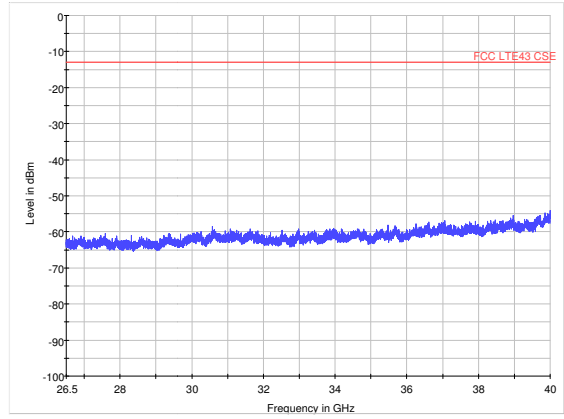
LTE Band 43 10MHz CH44340 18GHz~26.5GHz



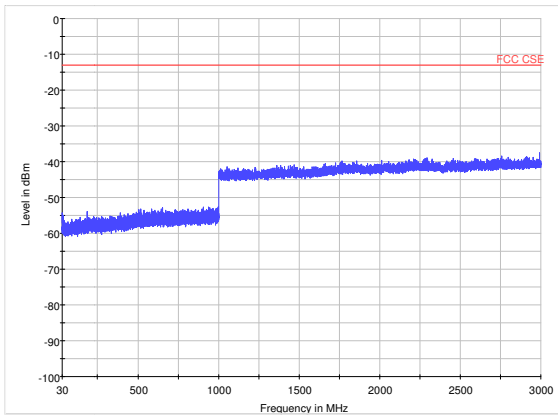
LTE Band 43 10MHz CH44540 18GHz~26.5GHz



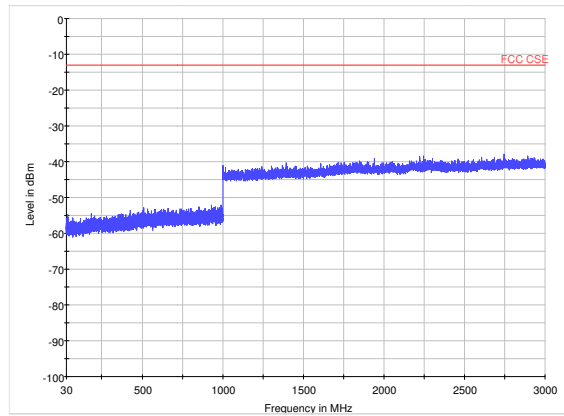
LTE Band 43 10MHz CH44340 26.5GHz~40GHz



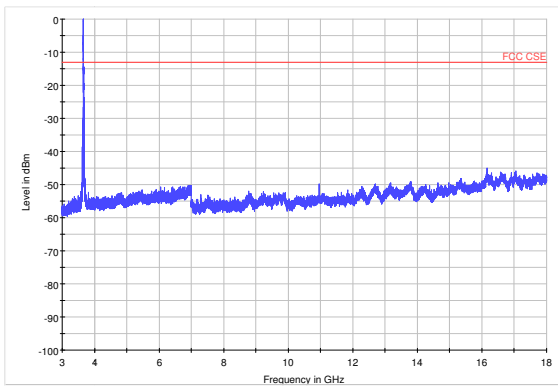
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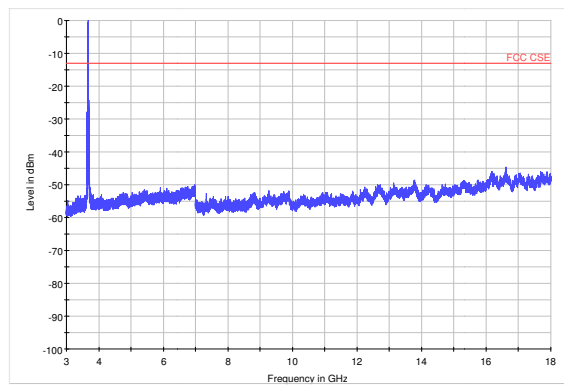
LTE Band 43 15MHz CH44165 30MHz~3GHz



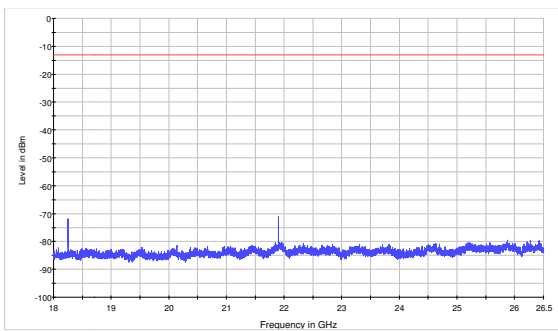
LTE Band 43 15MHz CH44340 30MHz~3GHz



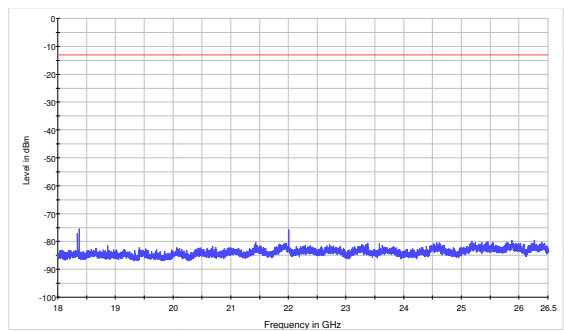
LTE Band 43 15MHz CH44165 3GHz~18GHz



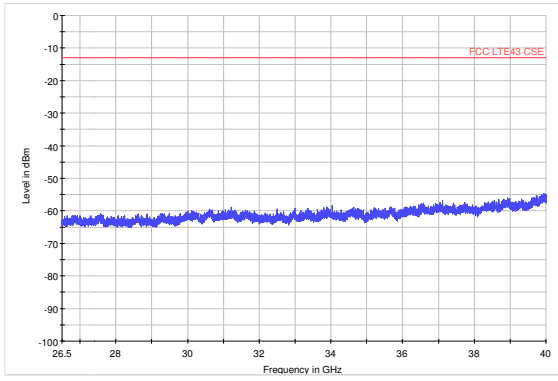
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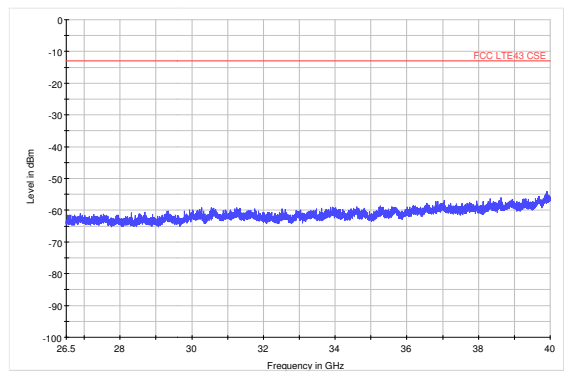
LTE Band 43 15MHz CH44165 18GHz~26.5GHz



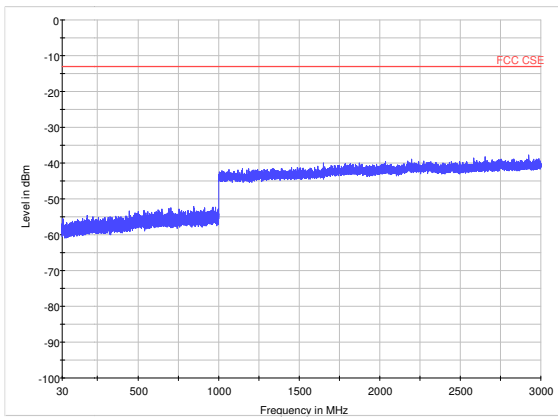
LTE Band 43 15MHz CH44340 18GHz~26.5GHz



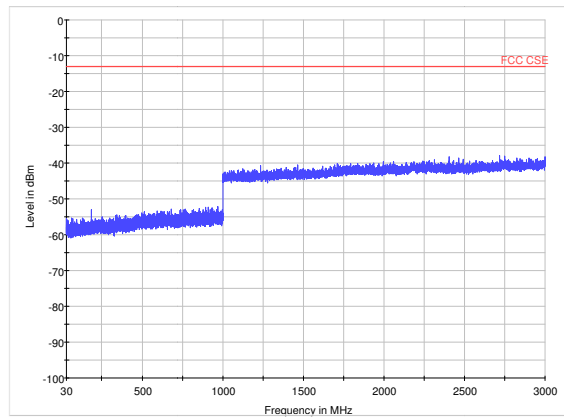
LTE Band 43 15MHz CH44165 26.5GHz~40GHz



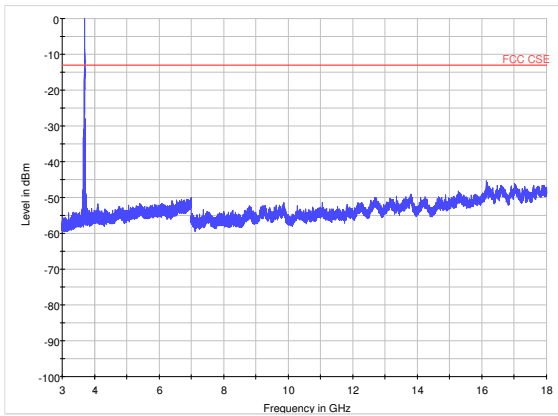
LTE Band 43 15MHz CH44340 26.5GHz~40GHz



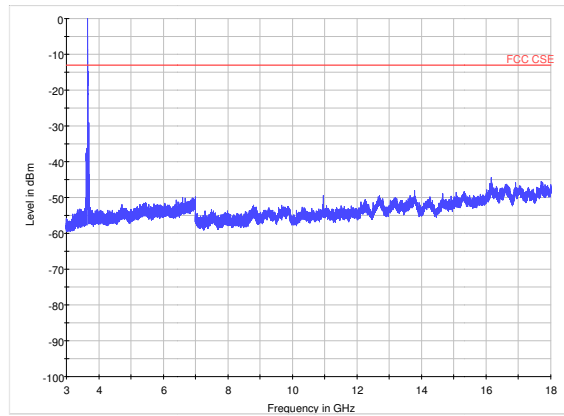
LTE Band 43 15MHz CH44515 30MHz~3GHz



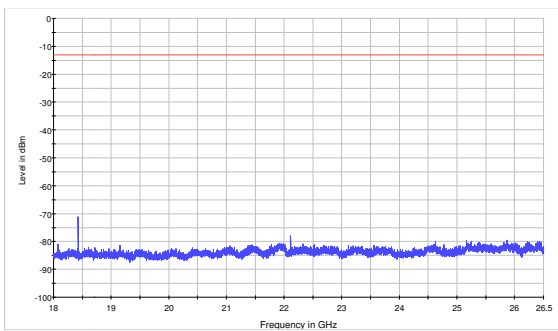
LTE Band 43 20MHz CH44190 30MHz~3GHz



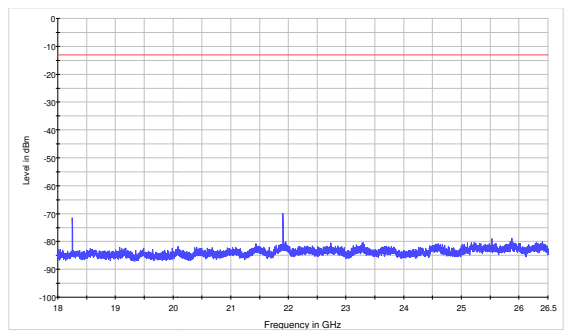
LTE Band 43 15MHz CH44515 3GHz~18GHz



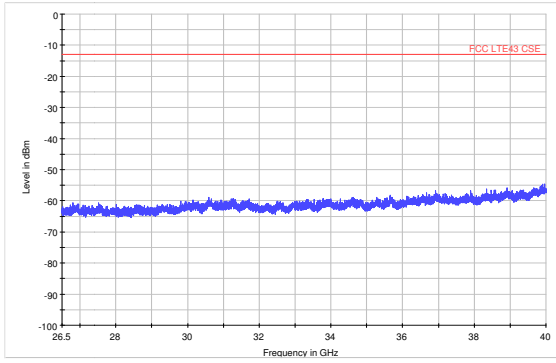
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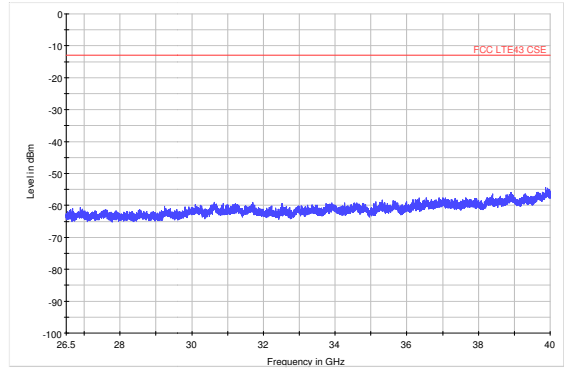
LTE Band 43 15MHz CH44515 18GHz~26.5GHz



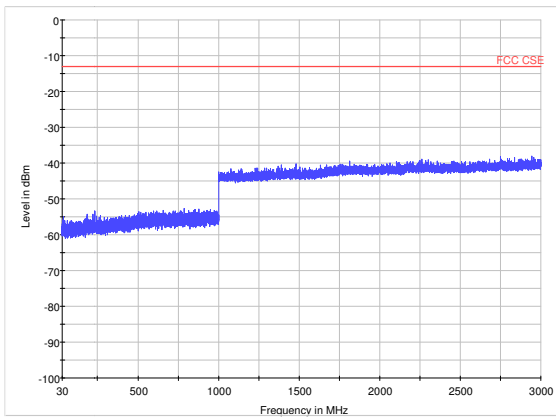
LTE Band 43 20MHz CH44190 18GHz~26.5GHz



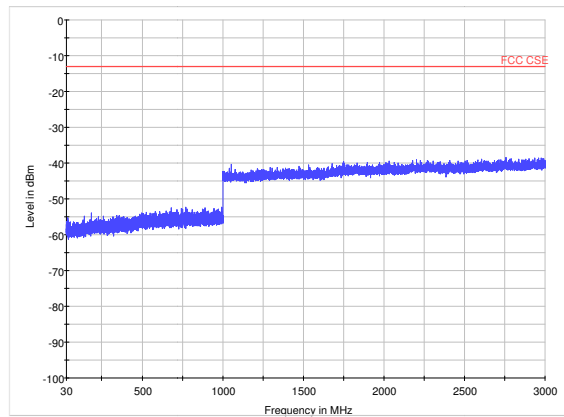
LTE Band 43 15MHz CH44515 26.5GHz~40GHz



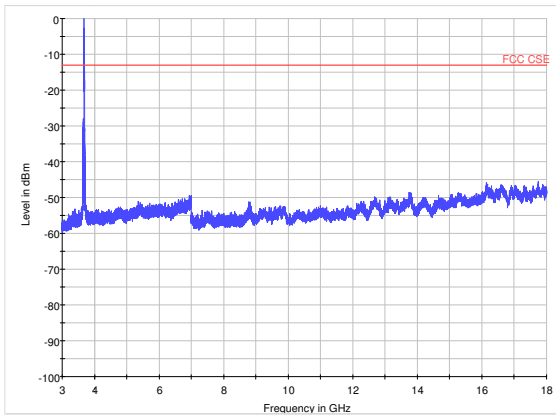
LTE Band 43 20MHz CH44190 26.5GHz~40GHz



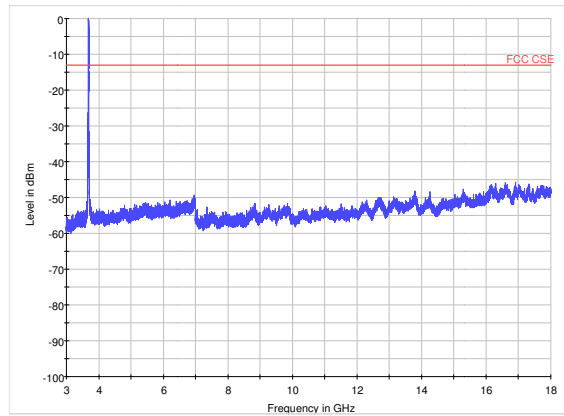
LTE Band 43 20MHz CH44340 30MHz~3GHz



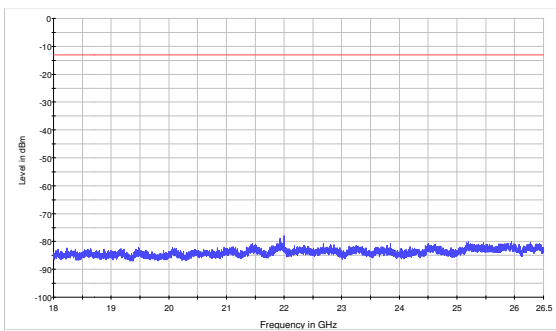
LTE Band 43 20MHz CH44490 30MHz~3GHz



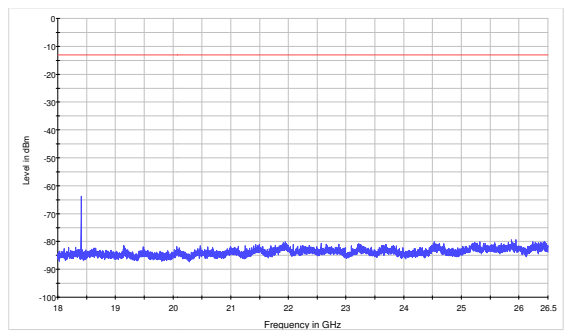
LTE Band 43 20MHz CH44340 3GHz~18GHz



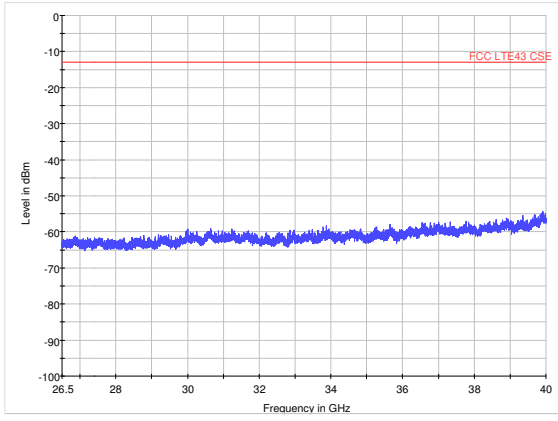
LTE Band 43 20MHz CH44490 3GHz~18GHz



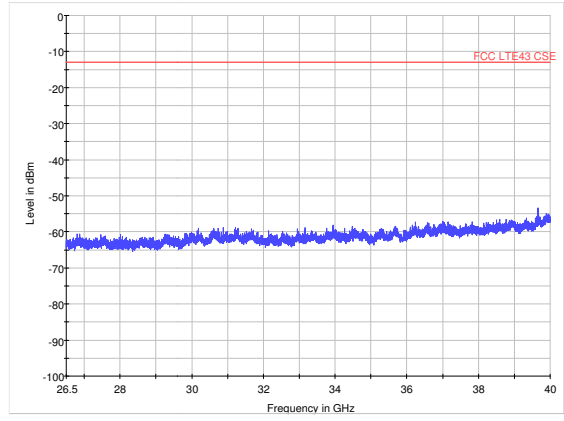
LTE Band 43 20MHz CH44340 18GHz~26.5GHz



LTE Band 43 20MHz CH44490 18GHz~26.5GHz



LTE Band 43 20MHz CH44340 26.5GHz~40GHz



LTE Band 43 20MHz CH44490 26.5GHz~40GHz

5.6. Field Strength of Spurious Radiation/ Radiated Spurious Emissions

Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

Method of Measurement

1. The testing follows FCC KDB 971168 v02r02 Section 5.8 and ANSI / TIA-603-D-2010 Section 2.2.12.
2. Above 30MHz: The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H). Above 1GHz: (Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.) The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
3. 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.
4. 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 for above 1GHz and RBW=100kHz, VBW=300kHz for 30MHz to 1GHz, And the maximum value of the receiver should be recorded as (Pr).
5. 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 (PMea) 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 (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
6. 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 (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
7. The measurement results are obtained as described below:

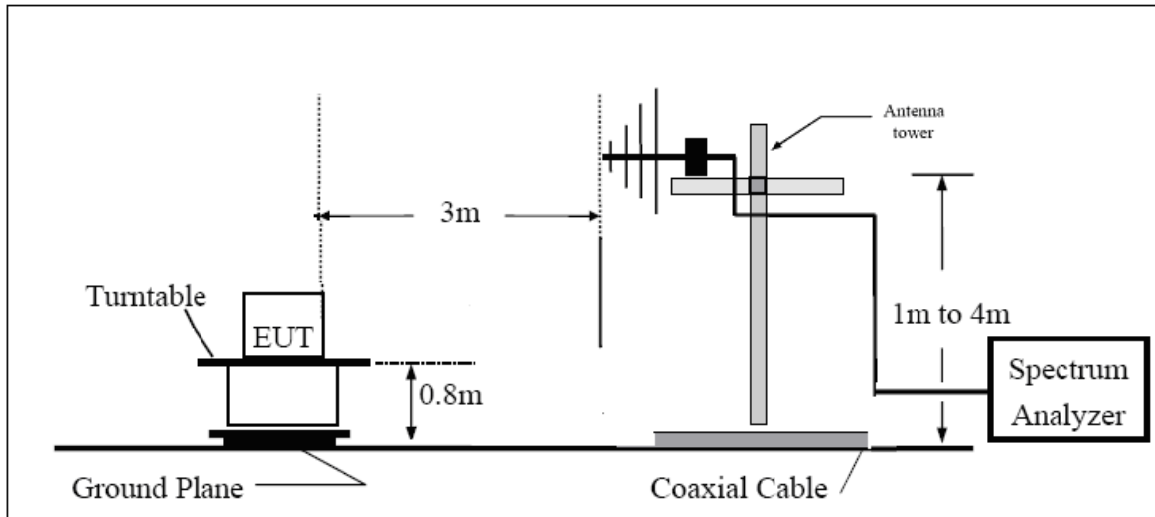
$$\text{Power(EIRP)} = \text{PMea} - \text{PAg} - \text{Pcl} + \text{Ga}$$
The measurement results are amend as described below:

$$\text{Power(EIRP)} = \text{PMea} - \text{Pcl} + \text{Ga}$$

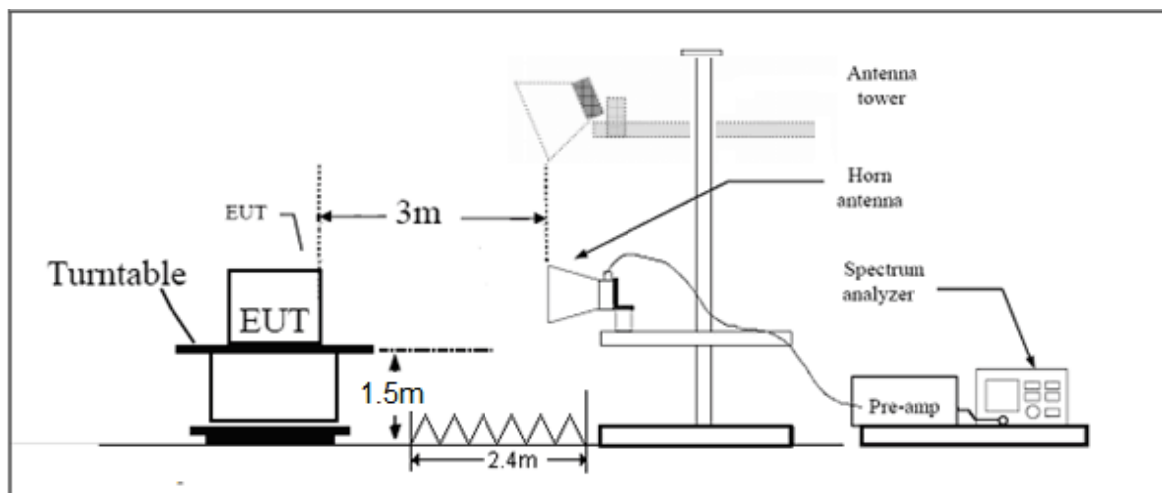
7. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, $ERP = EIRP - 2.15\text{dBi}$.

Test setup

30MHz~~~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

Limits

Rule Part 90.1323 specifies 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.”

Limit	-13 dBm
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U = 3.55$ dB.

Test Result

Receiver antenna polarization (horizontal and vertical), the worst emission was found in horizontal polarization, and the worst case in horizontal polarization was recorded. If disturbances were found more than 20dB below limit line, the mark is not required for the EUT.

LTE Band 43 5MHz CH44115

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	7302.3	-47.7	2.50	11.35	horizontal	-38.85	-13.00	34.7	180
3	10954.5	-36.9	4.20	12.05	horizontal	-29.05	-13.00	23.9	135
4	14609.3	-42.6	5.50	14.23	horizontal	-33.87	-13.00	29.6	270
5	18253.1	-84.35	5.70	14.15	horizontal	-75.90	-13.00	62.9	270
6	21903.8	-87.95	6.80	14.05	horizontal	-80.70	-13.00	67.7	90
7	25554.4	-86.34	6.90	14.84	horizontal	-78.40	-13.00	65.4	315
8	29205.0	--	--	--	--	--	--	--	--
9	32855.6	--	--	--	--	--	--	--	--
10	36506.3	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is horizontal position.

LTE Band 43 5MHz CH44340

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	7349.3	-48.3	2.50	11.35	horizontal	-39.45	-13.00	35.3	135
3	11020.5	-36.5	4.20	12.05	horizontal	-28.65	-13.00	23.5	315
4	14691.4	-35.13	5.50	14.23	horizontal	-26.40	-13.00	13.4	0
5	18364.3	-83.65	5.70	14.15	horizontal	-75.20	-13.00	62.2	315
6	22037.1	-87.55	6.80	14.05	horizontal	-80.30	-13.00	67.3	225
7	25710.0	-86.04	6.90	14.84	horizontal	-78.10	-13.00	65.1	0
8	29382.8	--	--	--	--	--	--	--	--
9	33055.7	--	--	--	--	--	--	--	--
10	36728.5	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is horizontal position.

LTE Band 43 5MHz CH44565

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	7390.7	-50.45	2.50	11.35	horizontal	-41.60	-13.00	28.6	90
3	11092.0	-36.0	4.20	12.05	horizontal	-28.15	-13.00	23.0	135
4	14781.4	-47.83	5.50	14.23	horizontal	-39.10	-13.00	26.1	0
5	18476.8	-84.05	5.70	14.15	horizontal	-75.60	-13.00	62.6	90
6	22172.1	-87.75	6.80	14.05	horizontal	-80.50	-13.00	67.5	0
7	25867.5	-86.84	6.90	14.84	horizontal	-78.90	-13.00	65.9	270
8	29562.8	--	--	--	--	--	--	--	--
9	33258.2	--	--	--	--	--	--	--	--
10	36953.5	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is horizontal position.

LTE Band 43 10MHz CH44140

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	7308.0	-47.3	2.50	11.35	horizontal	-38.45	-13.00	34.3	135
3	10965.5	-34.6	4.20	12.05	horizontal	-26.75	-13.00	21.6	270
4	14620.3	-40.7	5.50	14.23	horizontal	-31.97	-13.00	27.7	180
5	18353.9	-84.25	5.70	14.15	horizontal	-75.80	-13.00	62.8	90
6	21998.4	-87.55	6.80	14.05	horizontal	-80.30	-13.00	67.3	45
7	25710.0	-86.44	6.90	14.84	horizontal	-78.50	-13.00	65.5	270
8	29364.3	--	--	--	--	--	--	--	--
9	32855.6	--	--	--	--	--	--	--	--
10	36706.9	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
 2.The worst emission was found in the antenna is horizontal position.

LTE Band 43 10MHz CH44340

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	7346.5	-46.1	2.50	11.35	horizontal	-37.25	-13.00	33.1	180
3	11026.0	-34.9	4.20	12.05	horizontal	-27.05	-13.00	21.9	90
4	14700.0	-42.7	5.50	14.23	horizontal	-33.97	-13.00	29.7	135
5	18353.0	-83.75	5.70	14.15	horizontal	-75.30	-13.00	62.3	90
6	22023.6	-87.25	6.80	14.05	horizontal	-80.00	-13.00	67.0	270
7	25694.2	-86.24	6.90	14.84	horizontal	-78.30	-13.00	65.3	45
8	29364.8	--	--	--	--	--	--	--	--
9	33035.4	--	--	--	--	--	--	--	--
10	36706.0	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
 2.The worst emission was found in the antenna is horizontal position.

LTE Band 43 10MHz CH44540

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	7381.2	-48.65	2.50	11.35	horizontal	-39.80	-13.00	26.8	270
3	11086.5	-33.7	4.20	12.05	horizontal	-25.85	-13.00	20.7	135
4	14762.3	-34.63	5.50	14.23	horizontal	-25.90	-13.00	12.9	315
5	18452.9	-85.05	5.70	14.15	horizontal	-76.60	-13.00	63.6	180
6	22143.5	-87.55	6.80	14.05	horizontal	-80.30	-13.00	67.3	0
7	25834.0	-86.14	6.90	14.84	horizontal	-78.20	-13.00	65.2	270
8	29524.6	--	--	--	--	--	--	--	--
9	33215.2	--	--	--	--	--	--	--	--
10	36905.8	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2.The worst emission was found in the antenna is horizontal position.

LTE Band 43 15MHz CH44165

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	7306.3	-49.15	2.50	11.35	horizontal	-40.30	-13.00	27.3	270
3	10962.8	-39.6	4.20	12.05	horizontal	-31.75	-13.00	26.6	180
4	14612.6	-35.03	5.50	14.23	horizontal	-26.30	-13.00	13.3	270
5	18265.8	-82.95	5.70	14.15	horizontal	-74.50	-13.00	61.5	0
6	21918.9	-88.55	6.80	14.05	horizontal	-81.30	-13.00	68.3	90
7	25572.1	-87.14	6.90	14.84	horizontal	-79.20	-13.00	66.2	270
8	29225.2	--	--	--	--	--	--	--	--
9	32878.4	--	--	--	--	--	--	--	--
10	36531.5	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2.The worst emission was found in the antenna is horizontal position.

LTE Band 43 15MHz CH44340

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	7341.2	-48.85	2.50	11.35	horizontal	-40.00	-13.00	27.0	270
3	11028.0	-39.5	4.20	12.05	horizontal	-31.65	-13.00	26.5	135
4	14682.4	-38.17	5.50	14.23	horizontal	-29.44	-13.00	-39.9	0
5	18353.0	-83.55	5.70	14.15	horizontal	-75.10	-13.00	62.1	90
6	22023.6	-88.25	6.80	14.05	horizontal	-81.00	-13.00	68.0	270
7	25694.2	-86.24	6.90	14.84	horizontal	-78.30	-13.00	65.3	270
8	29364.8	--	--	--	--	--	--	--	--
9	33035.4	--	--	--	--	--	--	--	--
10	36706.0	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is horizontal position.

LTE Band 43 15MHz CH44515

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	7376.1	-47.65	2.50	11.35	horizontal	-38.80	-13.00	25.8	45
3	11078.3	-40.3	4.20	12.05	horizontal	-32.45	-13.00	27.3	180
4	14752.1	-39.03	5.50	14.23	horizontal	-30.30	-13.00	17.3	225
5	18440.1	-83.95	5.70	14.15	horizontal	-75.50	-13.00	62.5	270
6	22128.2	-87.55	6.80	14.05	horizontal	-80.30	-13.00	67.3	0
7	25816.2	-86.54	6.90	14.84	horizontal	-78.60	-13.00	65.6	90
8	29504.2	--	--	--	--	--	--	--	--
9	33192.2	--	--	--	--	--	--	--	--
10	36880.3	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is horizontal position.

LTE Band 43 20MHz CH44190

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	7305.3	-47.3	2.50	11.35	horizontal	-38.45	-13.00	34.3	225
3	10957.3	-36.5	4.20	12.05	horizontal	-28.65	-13.00	23.5	180
4	14612.0	-41.8	5.50	14.23	horizontal	-33.07	-13.00	28.8	135
5	18278.5	-84.75	5.70	14.15	horizontal	-76.30	-13.00	63.3	270
6	21934.2	-88.05	6.80	14.05	horizontal	-80.80	-13.00	67.8	0
7	25589.9	-86.04	6.90	14.84	horizontal	-78.10	-13.00	65.1	315
8	29245.6	--	--	--	--	--	--	--	--
9	32901.3	--	--	--	--	--	--	--	--
10	36557.0	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2.The worst emission was found in the antenna is horizontal position.

LTE Band 43 20MHz CH44340

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	7341.2	-48.65	2.50	11.35	horizontal	-39.80	-13.00	26.8	270
3	11001.3	-36.9	4.20	12.05	horizontal	-29.05	-13.00	23.9	225
4	14669.8	-43.1	5.50	14.23	horizontal	-34.37	-13.00	30.1	270
5	18352.9	-84.65	5.70	14.15	horizontal	-76.20	-13.00	63.2	270
6	22023.5	-87.55	6.80	14.05	horizontal	-80.30	-13.00	67.3	0
7	25694.0	-86.94	6.90	14.84	horizontal	-79.00	-13.00	66.0	90
8	29364.6	--	--	--	--	--	--	--	--
9	33035.2	--	--	--	--	--	--	--	--
10	36705.8	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2.The worst emission was found in the antenna is horizontal position.

LTE Band 43 20MHz CH44490

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	7363.0	-47.2	2.50	11.35	horizontal	-38.35	-13.00	34.2	90
3	11048.0	-37.6	4.20	12.05	horizontal	-29.75	-13.00	24.6	45
4	14735.8	-44.5	5.50	14.23	horizontal	-35.77	-13.00	31.5	180
5	18427.5	-83.75	5.70	14.15	horizontal	-75.30	-13.00	62.3	90
6	22113.0	-88.45	6.80	14.05	horizontal	-81.20	-13.00	68.2	90
7	25798.5	-86.44	6.90	14.84	horizontal	-78.50	-13.00	65.5	45
8	29484.0	--	--	--	--	--	--	--	--
9	33169.5	--	--	--	--	--	--	--	--
10	36855.0	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is horizontal position.

6. Main Test Instruments

Name	Type	Manufacturer	Serial Number	Calibration Date	Expiration Time
Base Station Simulator	CMW500	R&S	113645	2016-05-21	2017-05-20
Power Splitter	SHX-GF2-2-13	Hua Xiang	10120101	NA	NA
Spectrum Analyzer	N9010A	Agilent	MY47191109	2016-05-21	2017-05-20
Signal Analyzer	FSV40	R&S	15195-01-00	2016-05-26	2017-05-25
EMI Test Receiver	ESCI	R&S	100948	2016-06-01	2017-05-31
Trilog Antenna	VUBL 9163	SCHWARZBECK	9163-201	2014-12-06	2017-12-05
Horn Antenna	HF907	R&S	100126	2014-12-06	2017-12-05
Horn Antenna	HF907	R&S	100125	2014-12-06	2017-12-05
Horn Antenna	3160-09	ETS-Lindgren	00102643	2015-01-30	2018-01-29
Horn Antenna	QSH-SL-26-40-K-15	STEATITE	16779	2016-03-21	2019-03-20
Climatic Chamber	PT-30B	Re Ce	20101891	2016-07-17	2017-07-16
RF Cable	SMA 15cm	Agilent	0001	2016-10-04	2016-12-03

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

ANNEX A:EUT Appearanceand Test Setup

A.1 EUT Appearance



Front Side



Back Side

a: EUT



b: Adapter



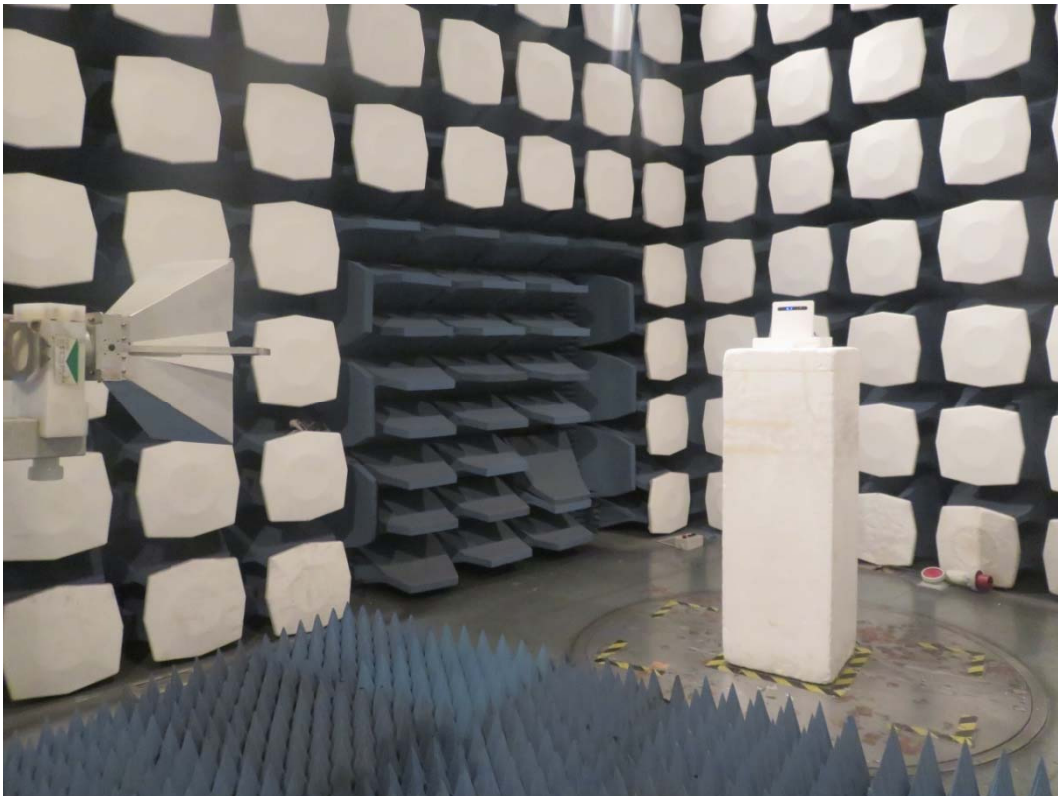
c: Ethernet cables

Picture 1: EUT and Auxiliary

A.2 Test Setup



Below 1GHz



Above 1GHz

Picture 2: Radiated Spurious Emissions Test setup