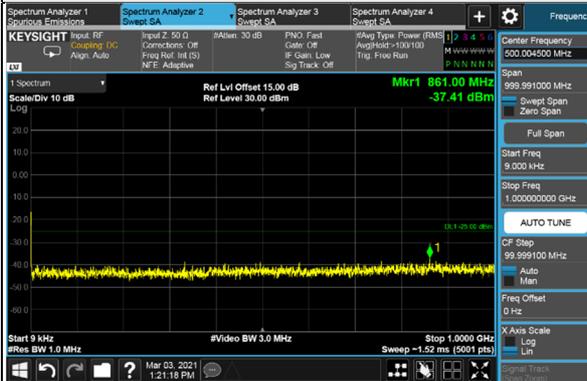


4.7.4 Test Results

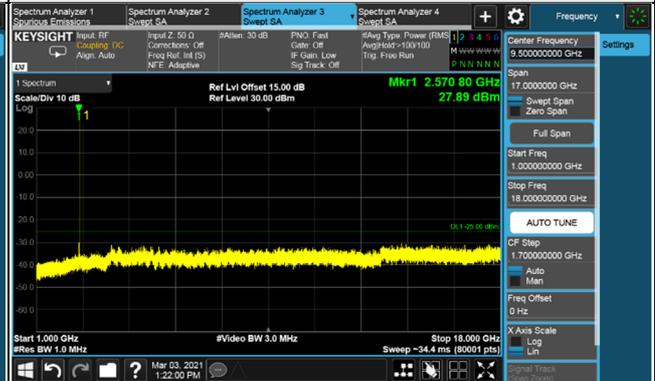
n38, Channel Bandwidth 20MHz

Channel 516000 (2580.0MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz



Frequency Range : 18GHz ~ 30GHz

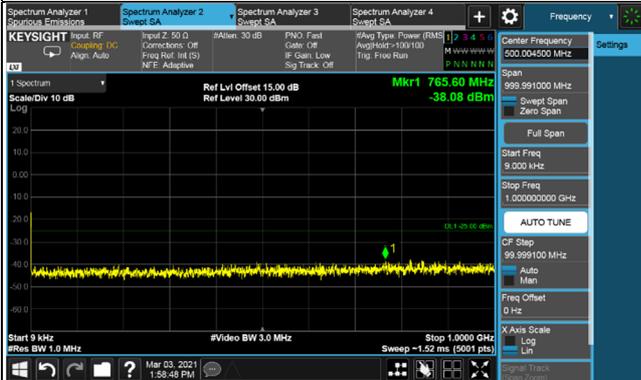


*The 9kHz signal over the limit is from Spectrum.

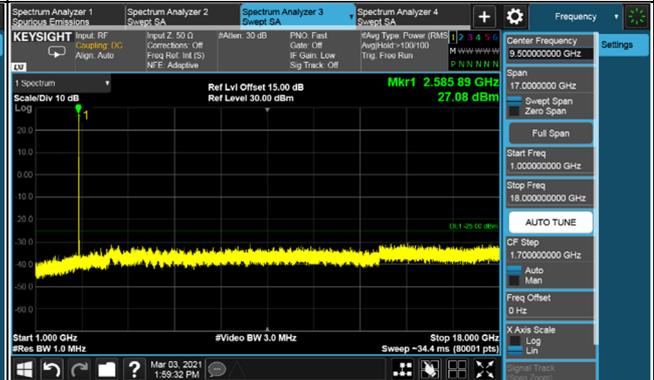
n38, Channel Bandwidth 20MHz

Channel 519000 (2595.0MHz)

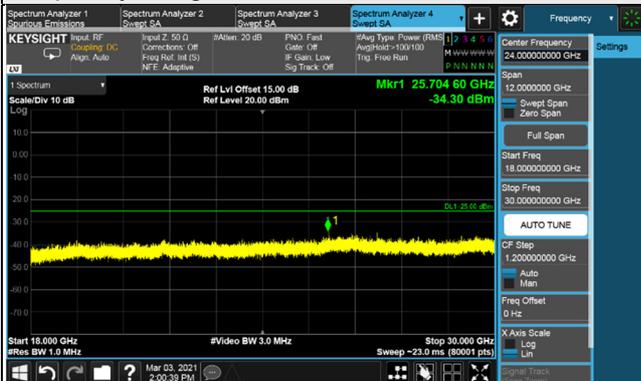
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz



Frequency Range : 18GHz ~ 30GHz

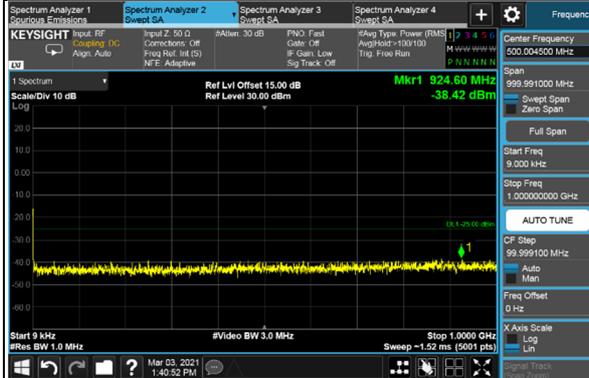


*The 9kHz signal over the limit is from Spectrum.

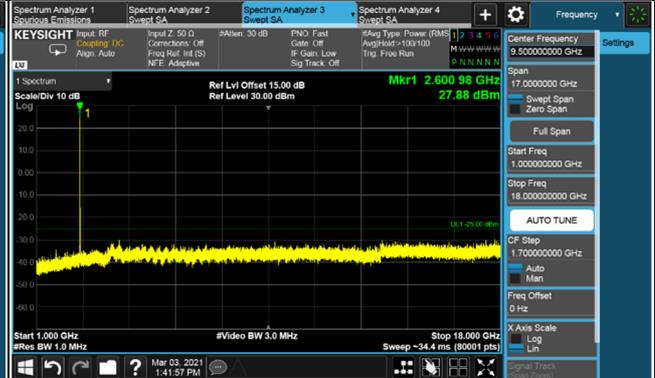
n38, Channel Bandwidth 20MHz

Channel 522000 (2610.0MHz)

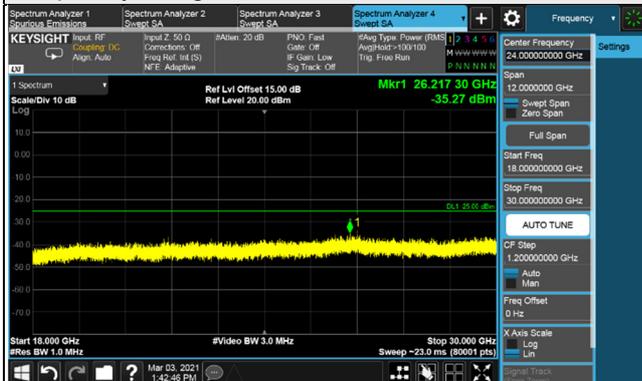
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz



Frequency Range : 18GHz ~ 30GHz

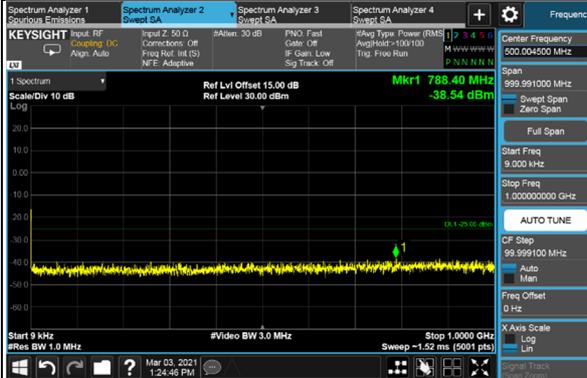


*The 9kHz signal over the limit is from Spectrum.

n38, Channel Bandwidth 30MHz

Channel 517000 (2585.0MHz)

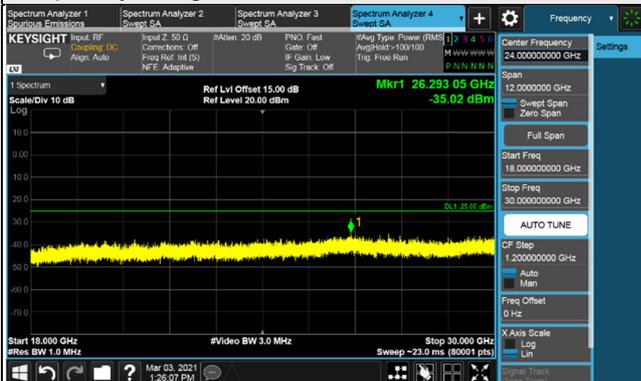
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz



Frequency Range : 18GHz ~ 30GHz

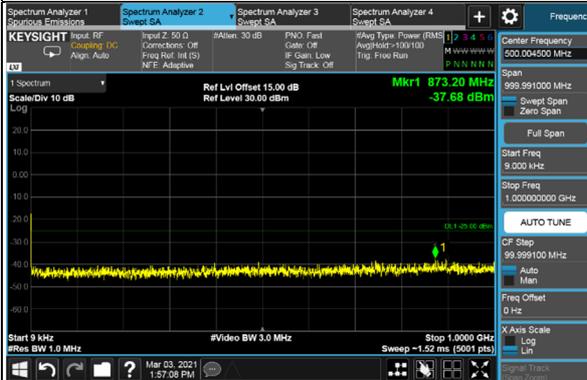


*The 9kHz signal over the limit is from Spectrum.

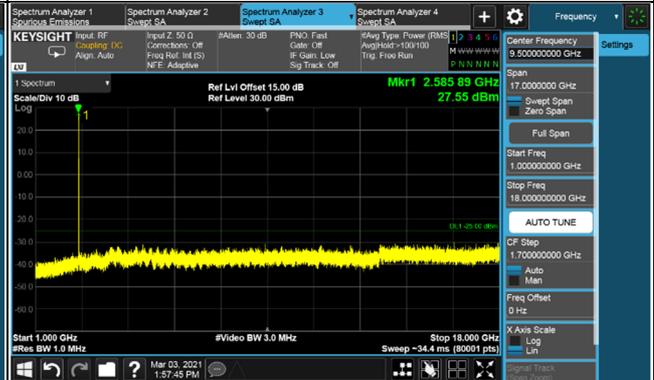
n38, Channel Bandwidth 30MHz

Channel 519000 (2595.0MHz)

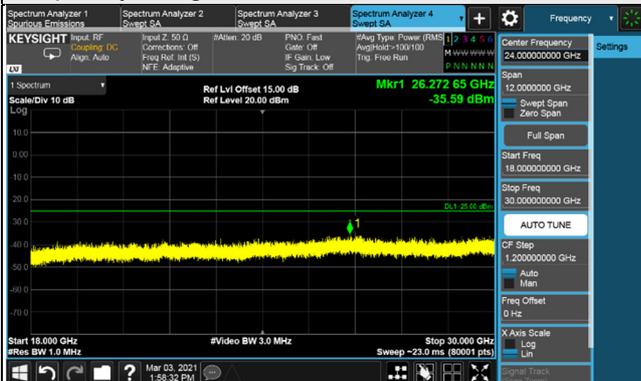
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz



Frequency Range : 18GHz ~ 30GHz

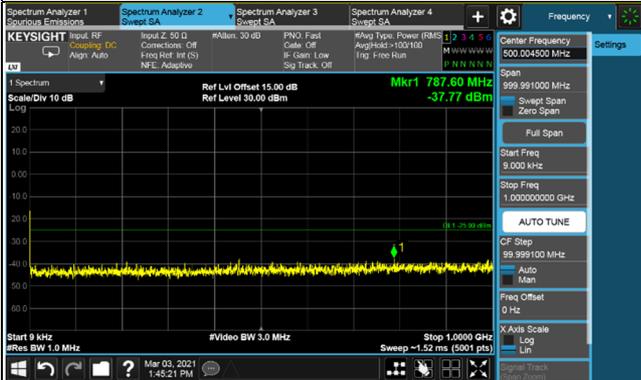


*The 9kHz signal over the limit is from Spectrum.

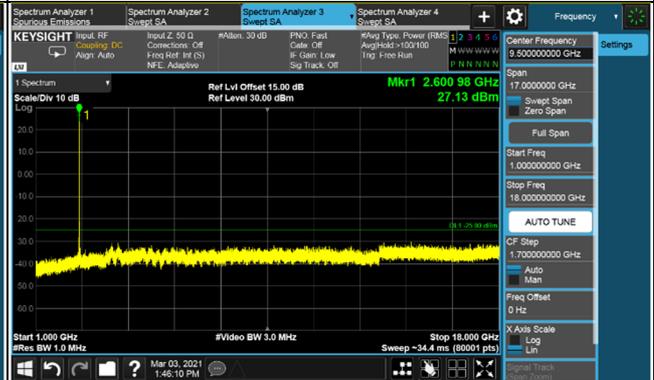
n38, Channel Bandwidth 30MHz

Channel 521000 (2605.0MHz)

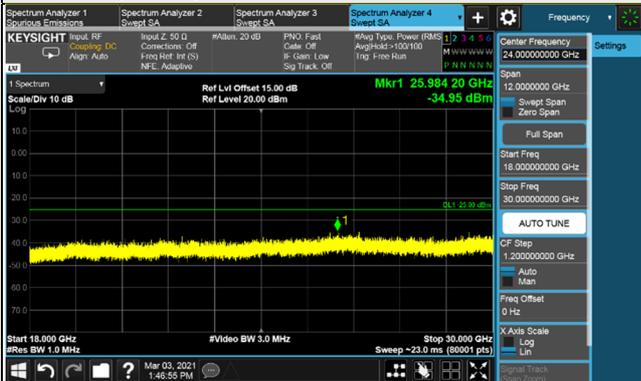
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz



Frequency Range : 18GHz ~ 30GHz

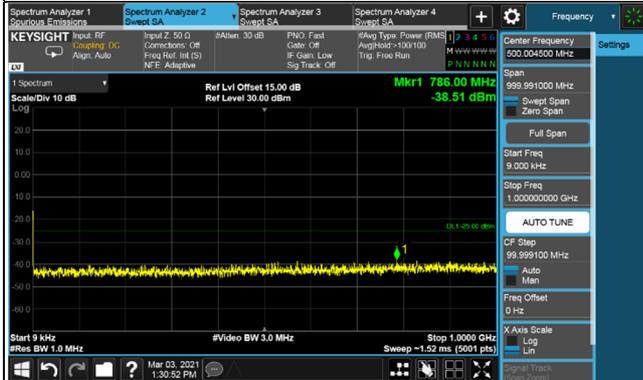


*The 9kHz signal over the limit is from Spectrum.

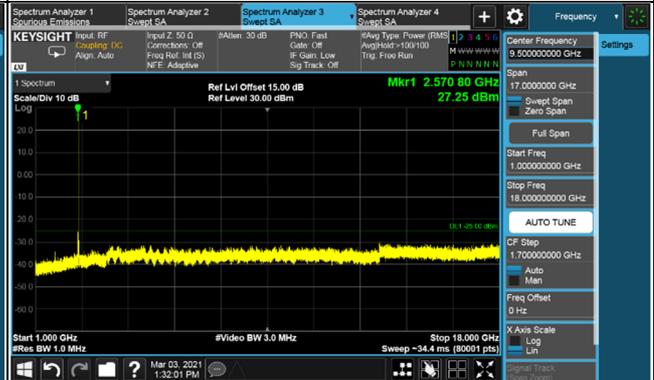
n38, Channel Bandwidth 40MHz

Channel 518000 (2590.0MHz)

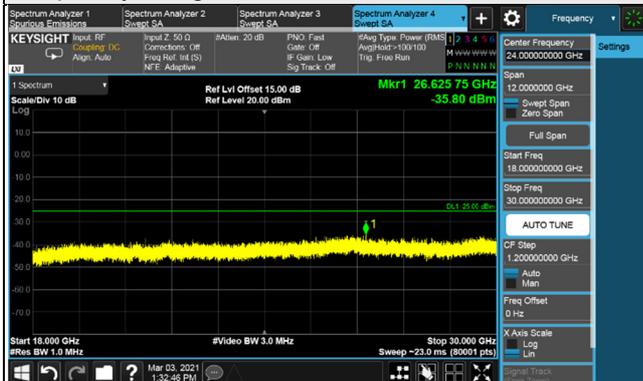
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz



Frequency Range : 18GHz ~ 30GHz

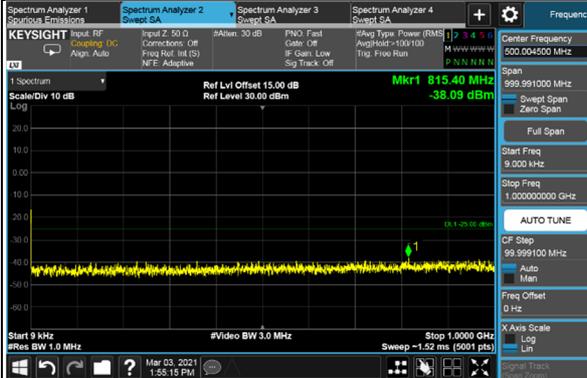


*The 9kHz signal over the limit is from Spectrum.

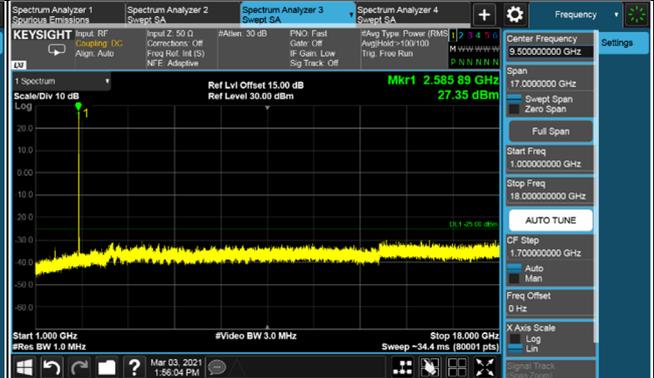
n38, Channel Bandwidth 40MHz

Channel 519000 (2595.0MHz)

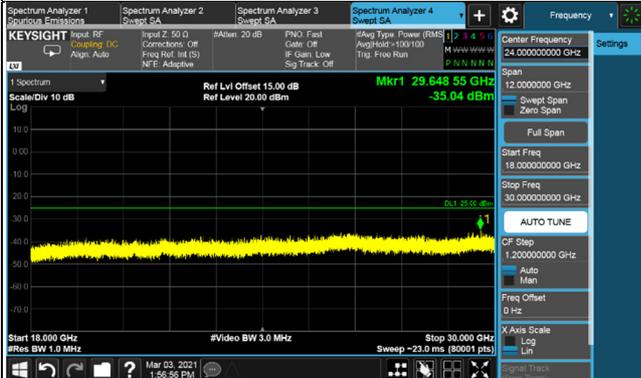
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz



Frequency Range : 18GHz ~ 30GHz

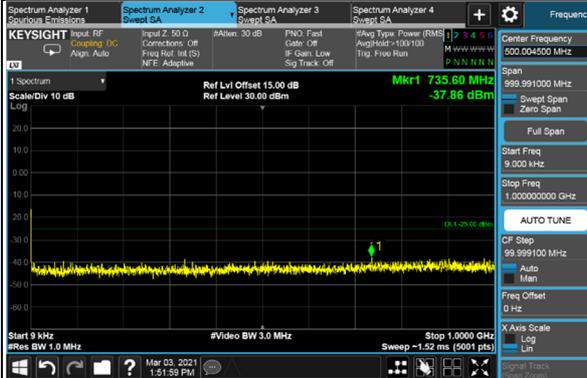


*The 9kHz signal over the limit is from Spectrum.

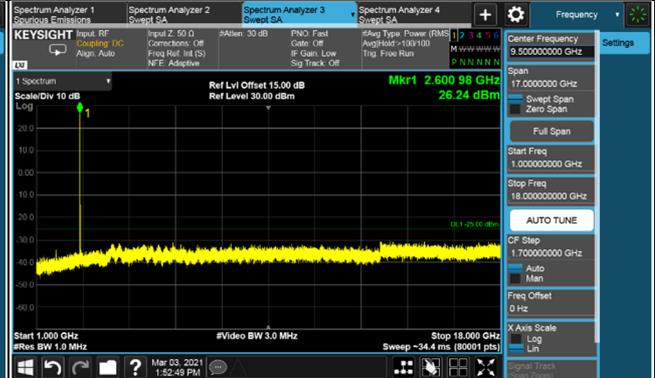
n38, Channel Bandwidth 40MHz

Channel 520000 (2600.0MHz)

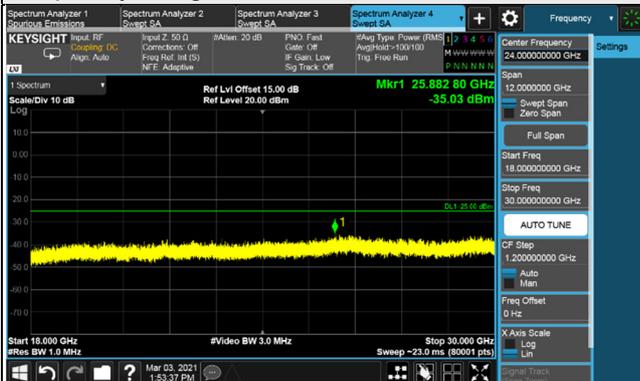
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz



Frequency Range : 18GHz ~ 30GHz



*The 9kHz signal over the limit is from Spectrum.

4.8 Radiated Emission Measurement

4.8.1 Limits of Radiated Emission Measurement

For n38:

In the FCC 27.53(m)(4), On any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least $55 + 10 \log(P)$ dB. The emission limit equal to -25dBm .

For LTE Band 2, LTE Band 5:

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 emission limit equal to -13dBm .

For LTE Band 4, LTE Band 66:

According to FCC 27.53(h) for operations in the 1695-1710MHz, 1710-1755MHz, 1755-1780 MHz, 1915-1920MHz, 1995-2000 MHz, 2000-2020MHz, 2110-2155MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log(P)$ dB.

For LTE Band 12, LTE Band 71:

According to FCC 27.53(g) for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater.

4.8.2 Test Procedure

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- d. Following C63.26 section 5.5 and 5.2.7
 - $\text{EIRP (dBm)} = E (\text{dB}\mu\text{V/m}) + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
 - $\text{ERP (dBm)} = E (\text{dB}\mu\text{V/m}) + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

Note:

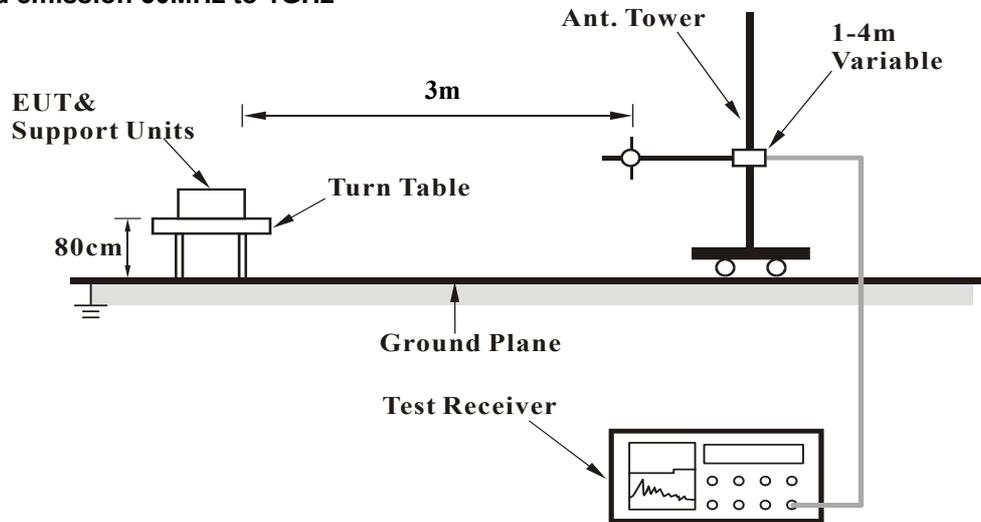
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

4.8.3 Deviation from Test Standard

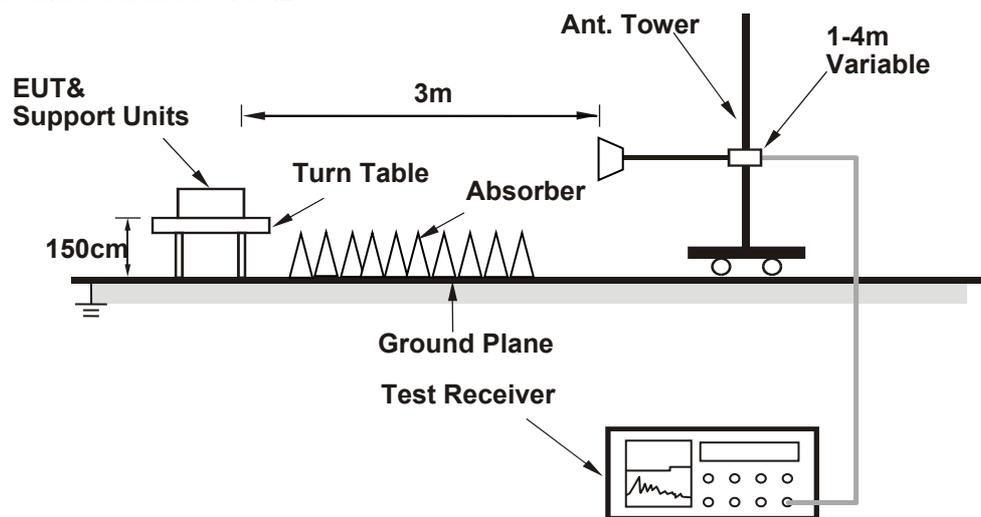
No deviation.

4.8.4 Test Setup

For radiated emission 30MHz to 1GHz



For radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.8.5 Test Results

Below 1GHz

n38, Channel Bandwidth 40MHz

Mode	TX channel 519000 (2595.0MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Adair Peng		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	79.47	-68.10	-25.00	-43.10	1.00 H	141	50.60	-118.70
2	163.86	-60.30	-25.00	-35.30	1.00 H	140	53.20	-113.50
3	188.11	-58.40	-25.00	-33.40	1.50 H	18	57.60	-116.00
4	246.31	-62.00	-25.00	-37.00	1.50 H	17	52.90	-114.90
5	350.10	-63.80	-25.00	-38.80	1.00 H	180	48.10	-111.90
6	477.17	-67.40	-25.00	-42.40	1.00 H	159	41.00	-108.40

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

