

4.7 RADIATED EMISSION MEASUREMENT

4.7.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log 10(P) dB$. The limit of emission equal to -13dBm

4.7.2 TEST PROCEDURES

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m 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 substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G
- c. EIRP = Output power level of S.G TX cable loss + Antenna gain of substitution horn.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.P.R power 2.15dBi.

NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

4.7.3 DEVIATION FROM TEST STANDARD

No deviation



4.7.4 TEST SETUP



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



4.7.5 TEST RESULTS

WCDMA











LTE BAND 12

CHANNEL BANDWIDTH: 5MHz / QPSK























CHANNEL BANDWIDTH: 5MHz / 16QAM























CHANNEL BANDWIDTH: 10MHz / QPSK























CHANNEL BANDWIDTH: 10MHz / 16QAM























LTE BAND 17

CHANNEL BANDWIDTH: 5MHz / QPSK























CHANNEL BANDWIDTH: 5MHz / 16QAM























CHANNEL BANDWIDTH: 10MHz / QPSK























CHANNEL BANDWIDTH: 10MHz / 16QAM























LTE BAND 4

CHANNEL BANDWIDTH: 5MHz / QPSK























CHANNEL BANDWIDTH: 5MHz / 16QAM























CHANNEL BANDWIDTH: 10MHz / QPSK























CHANNEL BANDWIDTH: 10MHz / 16QAM























CHANNEL BANDWIDTH: 15MHz / QPSK























CHANNEL BANDWIDTH: 15MHz / 16QAM























CHANNEL BANDWIDTH: 20MHz / QPSK























CHANNEL BANDWIDTH: 20MHz / 16QAM























5 INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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The address and road map of all our labs can be found in our web site also.



6 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

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