

Fig.96. Number of hopping frequencies: $\pi/4$ DQPSK, Channel 0 - 39

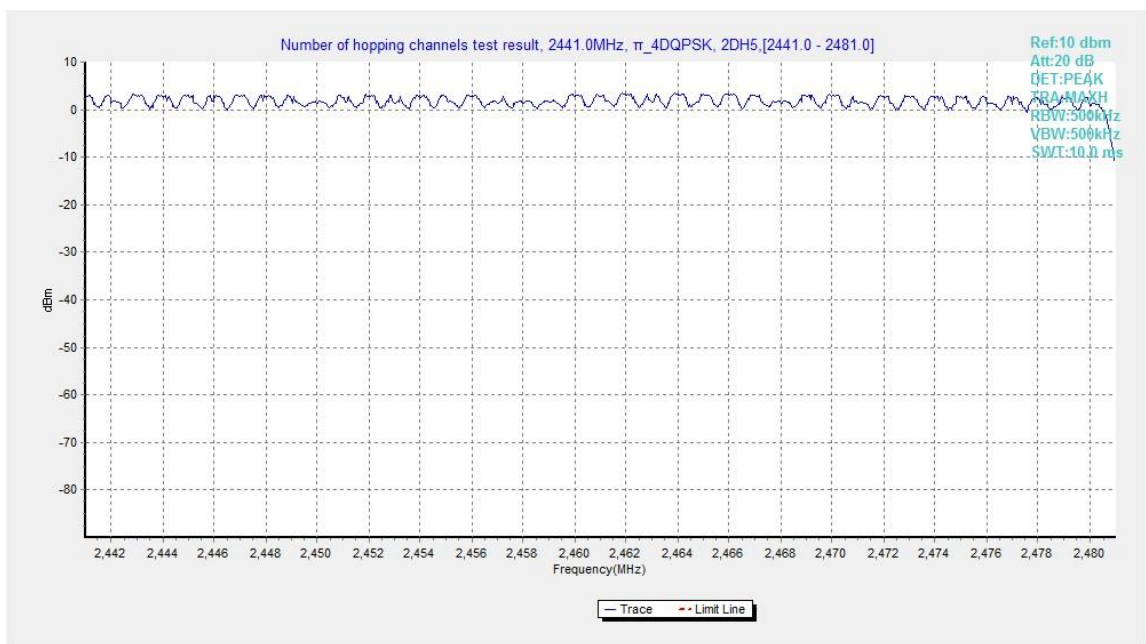


Fig.97. Number of hopping frequencies: $\pi/4$ DQPSK, Channel 40 - 78

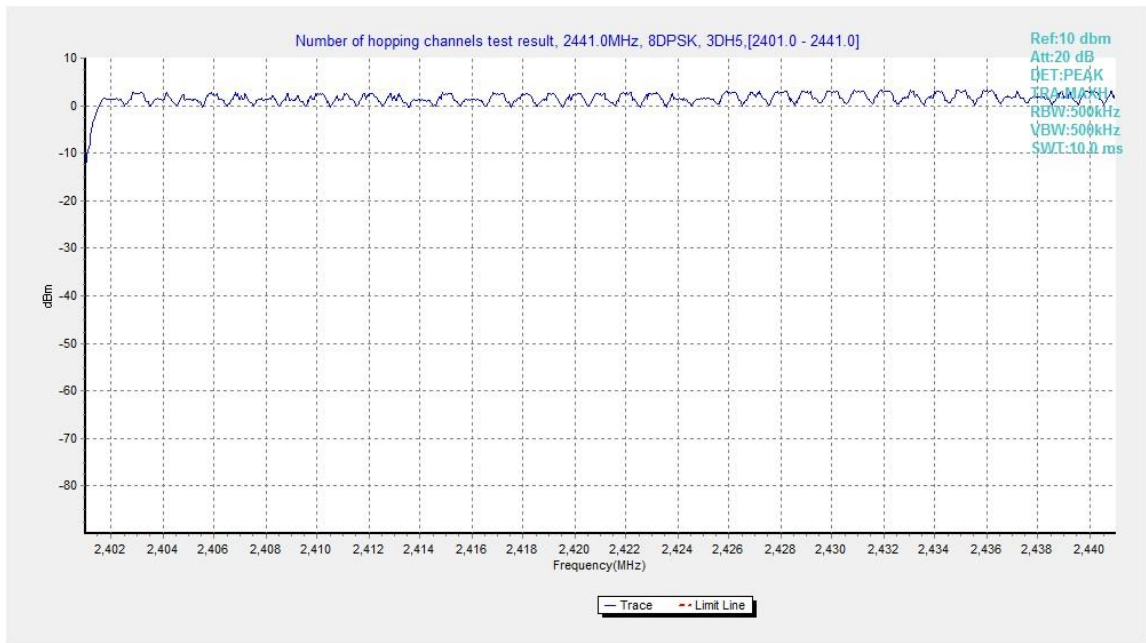


Fig.98. Number of hopping frequencies: 8DPSK, Channel 0 - 39

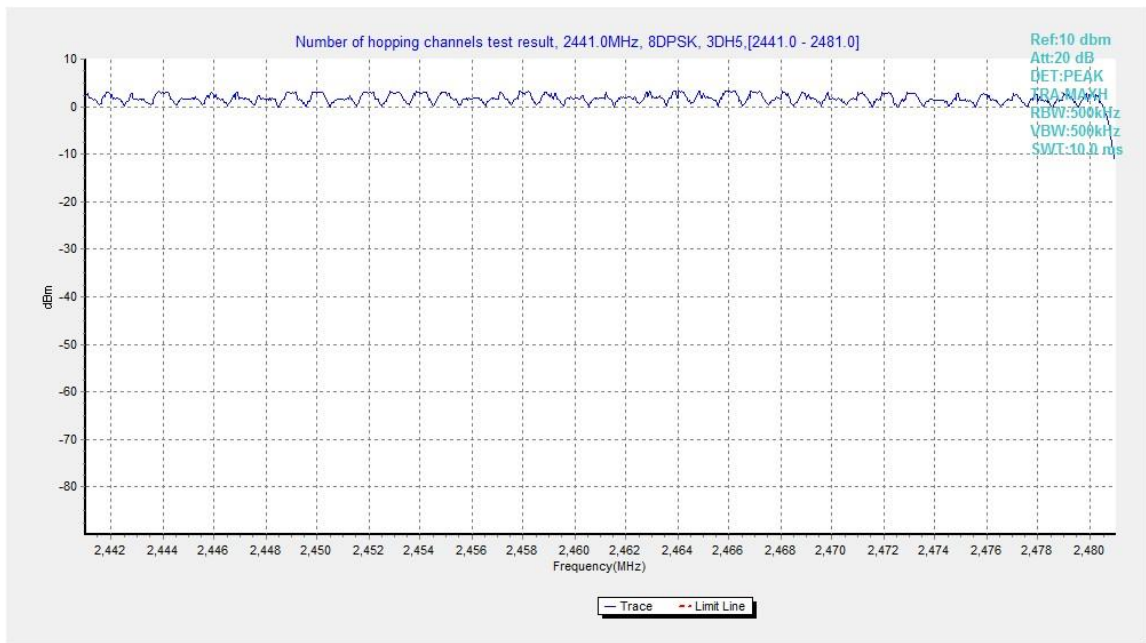


Fig.99. Number of hopping frequencies: 8DPSK, Channel 40 - 78

A.10. AC Powerline Conducted Emission

Method of Measurement: See ANSI C63.10-clause 6.2

1. the one EUT cable configuration and arrangement and mode of operation that produced the emission with the highest amplitude relative to the limit is selected for the final measurement, while applying the appropriate modulating signal to the EUT.
2. If the EUT is relocated from an exploratory test site to a final test site, the highest emissions shall be remaximized at the final test location before final ac power-line conducted emission measurements are performed.
3. The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment in the system) is then performed for the full frequency range for which the EUT is being tested for compliance without further variation of the EUT arrangement, cable positions, or EUT mode of operation.
4. If the EUT is comprised of equipment units that have their own separate ac power connections, e.g., floor-standing equipment with independent power cords for each shelf that are able to connect directly to the ac power network, each current-carrying conductor of one unit is measured while the other units are connected to a second (or more) LISN(s). All units shall be separately measured. If a power strip is provided by the manufacturer, to supply all of the units making up the EUT, only the conductors in the power cord of the power strip shall be measured.
5. If the EUT uses a detachable antenna, these measurements shall be made with a suitable dummy load connected to the antenna output terminals; otherwise, the tests shall be made with the antenna connected and, if adjustable, fully extended. When measuring the ac conducted emissions from a device that operates between 150 kHz and 30 MHz a non-detachable antenna may be replaced with a dummy load for the measurements within the fundamental emission band of the transmitter, but only for those measurements.³⁶ Record the six highest EUT emissions relative to the limit of each of the current-carrying conductors of the power cords of the equipment that comprises the EUT over the frequency range specified by the procuring or regulatory agency. Diagram or photograph the test setup that was used. See Clause 8 for full reporting requirements.

Test Condition

Voltage (V)	Frequency (Hz)
120	60

Measurement Result and limit:

Bluetooth (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Conclusion
0.15 to 0.5	66 to 56	P
0.5 to 5	56	
5 to 30	60	

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.



Bluetooth (Average Limit)

Frequency range (MHz)	Average Limit (dB μ V)	Conclusion
0.15 to 0.5	56 to 46	P
0.5 to 5	46	
5 to 30	50	

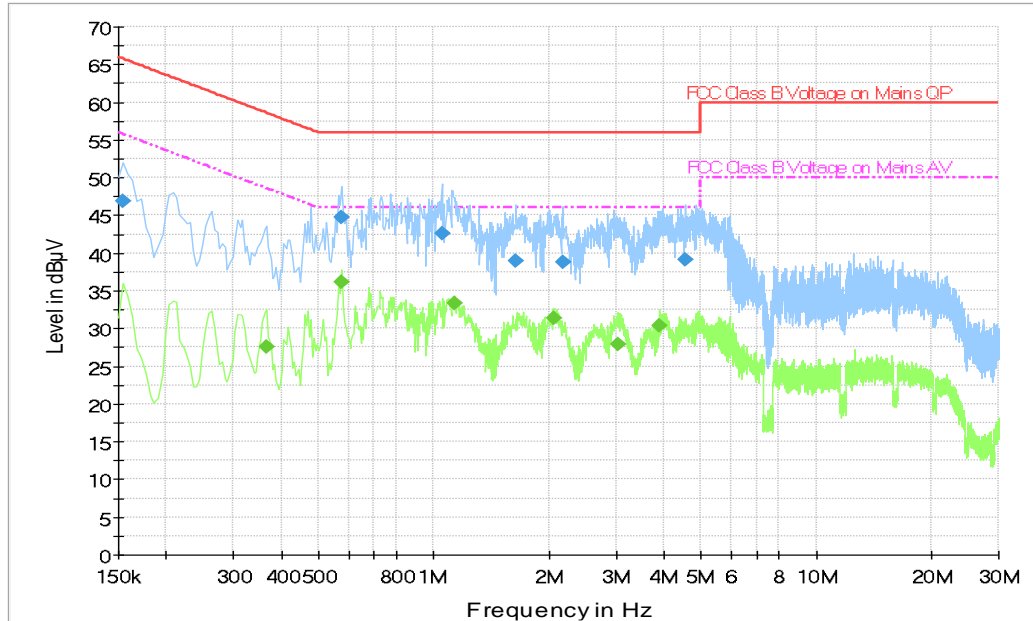
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

The measurement is made according to ANSI C63.10

Conclusion: PASS

Test graphs as below:

Traffic: Set.1



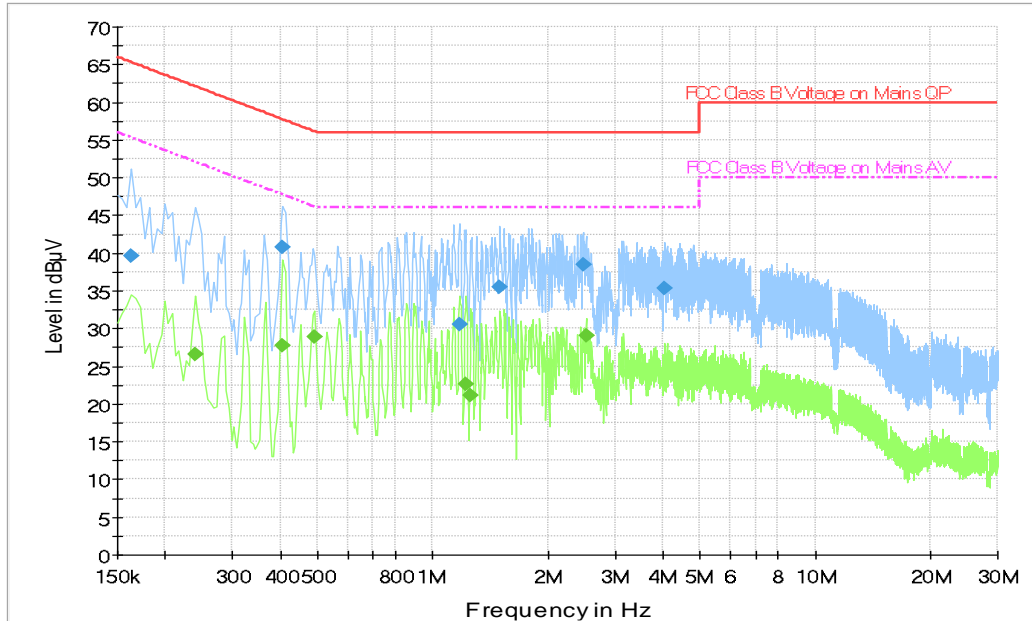
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154500	46.9	2000.0	9.000	On	L1	20.0	18.9	65.8
0.573000	44.7	2000.0	9.000	On	L1	19.9	11.3	56.0
1.050000	42.6	2000.0	9.000	On	L1	19.8	13.4	56.0
1.639500	39.0	2000.0	9.000	On	N	19.7	17.0	56.0
2.175000	38.8	2000.0	9.000	On	N	19.7	17.2	56.0
4.560000	39.1	2000.0	9.000	On	N	19.7	16.9	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.366000	27.5	2000.0	9.000	On	L1	19.9	21.1	48.6
0.573000	36.2	2000.0	9.000	On	L1	19.9	9.8	46.0
1.140000	33.4	2000.0	9.000	On	L1	19.8	12.6	46.0
2.058000	31.4	2000.0	9.000	On	L1	19.7	14.6	46.0
3.025500	27.9	2000.0	9.000	On	L1	19.7	18.1	46.0
3.907500	30.5	2000.0	9.000	On	L1	19.7	15.5	46.0

Traffic: Set.2



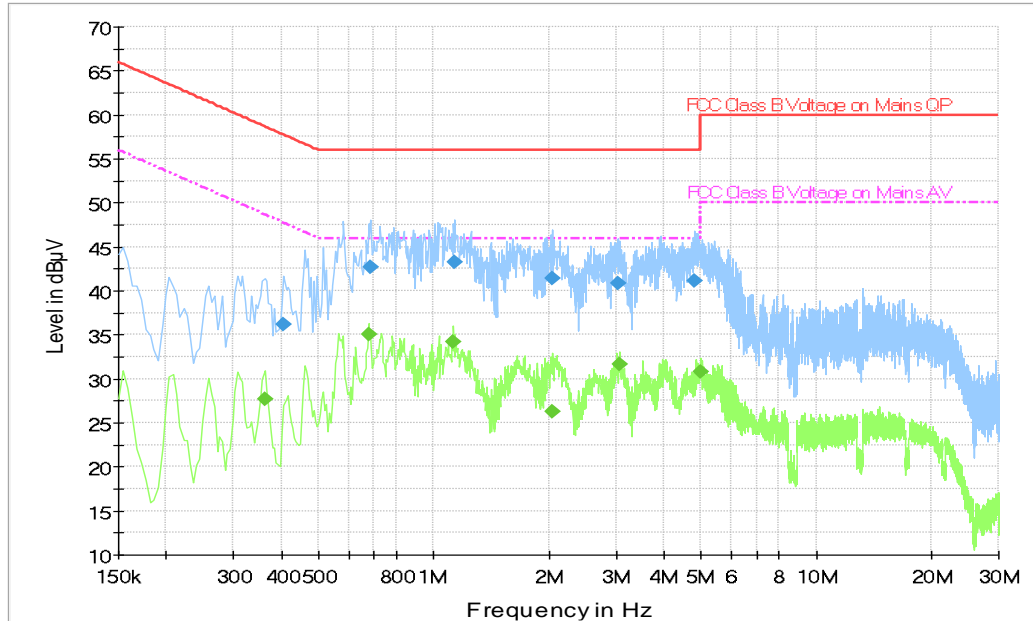
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.163500	39.7	2000.0	9.000	On	L1	19.9	25.6	65.3
0.406500	40.7	2000.0	9.000	On	L1	19.9	17.0	57.7
1.176000	30.6	2000.0	9.000	On	L1	19.8	25.4	56.0
1.500000	35.4	2000.0	9.000	On	L1	19.7	20.6	56.0
2.472000	38.4	2000.0	9.000	On	L1	19.7	17.6	56.0
4.056000	35.3	2000.0	9.000	On	L1	19.7	20.7	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.240000	26.6	2000.0	9.000	On	L1	19.9	25.5	52.1
0.406500	27.7	2000.0	9.000	On	L1	19.9	20.0	47.7
0.492000	28.9	2000.0	9.000	On	L1	19.9	17.2	46.1
1.225500	22.6	2000.0	9.000	On	N	19.8	23.4	46.0
1.261500	21.1	2000.0	9.000	On	L1	19.8	24.9	46.0
2.517000	29.0	2000.0	9.000	On	L1	19.7	17.0	46.0

Idle: Set.1






Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.406500	36.2	2000.0	9.000	On	N	19.9	21.6	57.7
0.685500	42.7	2000.0	9.000	On	L1	19.9	13.3	56.0
1.135500	43.3	2000.0	9.000	On	L1	19.8	12.7	56.0
2.049000	41.4	2000.0	9.000	On	L1	19.7	14.6	56.0
3.025500	40.8	2000.0	9.000	On	L1	19.7	15.2	56.0
4.816500	41.1	2000.0	9.000	On	L1	19.7	14.9	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.361500	27.7	2000.0	9.000	On	N	19.9	21.0	48.7
0.676500	35.1	2000.0	9.000	On	L1	19.9	10.9	46.0
1.126500	34.2	2000.0	9.000	On	L1	19.8	11.8	46.0
2.049000	26.3	2000.0	9.000	On	L1	19.7	19.7	46.0
3.057000	31.7	2000.0	9.000	On	L1	19.7	14.3	46.0
4.983000	30.7	2000.0	9.000	On	L1	19.7	15.3	46.0

ANNEX E: Accreditation Certificate

<p>United States Department of Commerce National Institute of Standards and Technology</p>  <hr/> <p>Certificate of Accreditation to ISO/IEC 17025:2005</p> <hr/> <p>NVLAP LAB CODE: 600118-0</p> <p>Telecommunication Technology Labs, CAICT Beijing China</p> <p><i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i></p> <p>Electromagnetic Compatibility & Telecommunications</p> <p><i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).</i></p> <table border="0" style="width: 100%;"><tr><td style="width: 40%;"><hr/><p>2016-09-29 through 2017-09-30 <i>Effective Dates</i></p></td><td style="width: 20%; text-align: center;"></td><td style="width: 40%; text-align: right;"><hr/><p><i>For the National Voluntary Laboratory Accreditation Program</i></p></td></tr></table>		<hr/> <p>2016-09-29 through 2017-09-30 <i>Effective Dates</i></p>		 <hr/> <p><i>For the National Voluntary Laboratory Accreditation Program</i></p>
<hr/> <p>2016-09-29 through 2017-09-30 <i>Effective Dates</i></p>		 <hr/> <p><i>For the National Voluntary Laboratory Accreditation Program</i></p>		

END OF REPORT