

Fig. 76 Hopping channel ch40~78 (GFSK, Ch39)

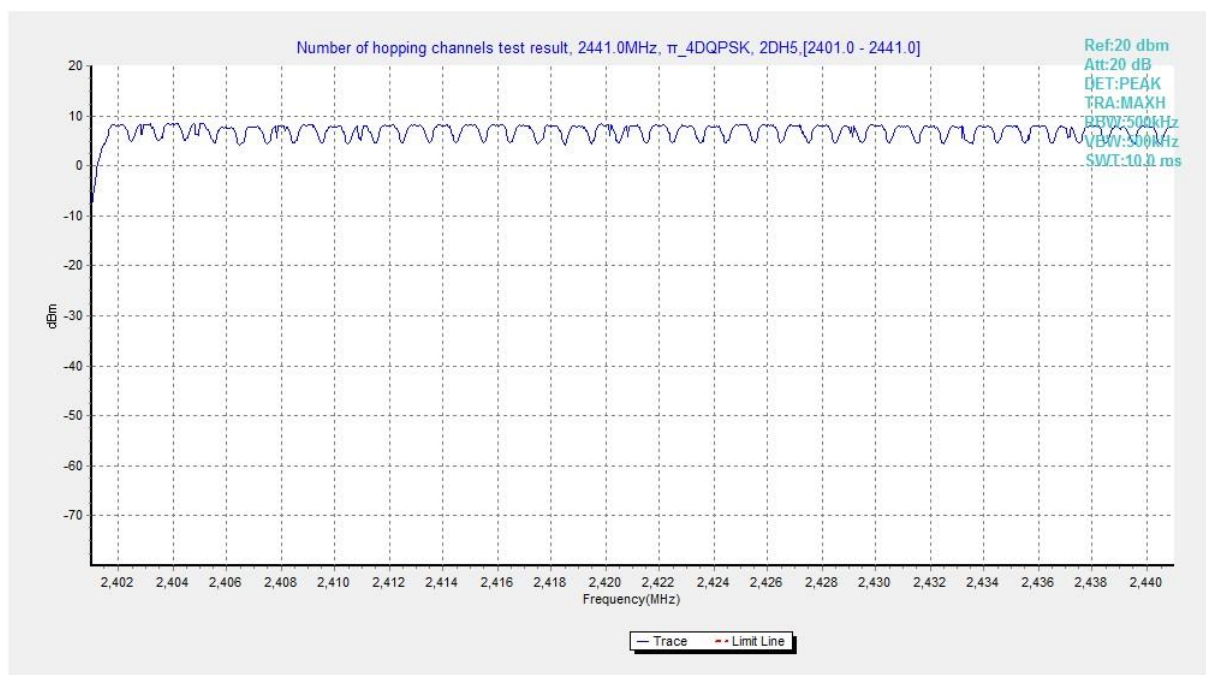


Fig. 77 Hopping channel ch0~39 ( $\pi/4$  DQPSK, Ch39)

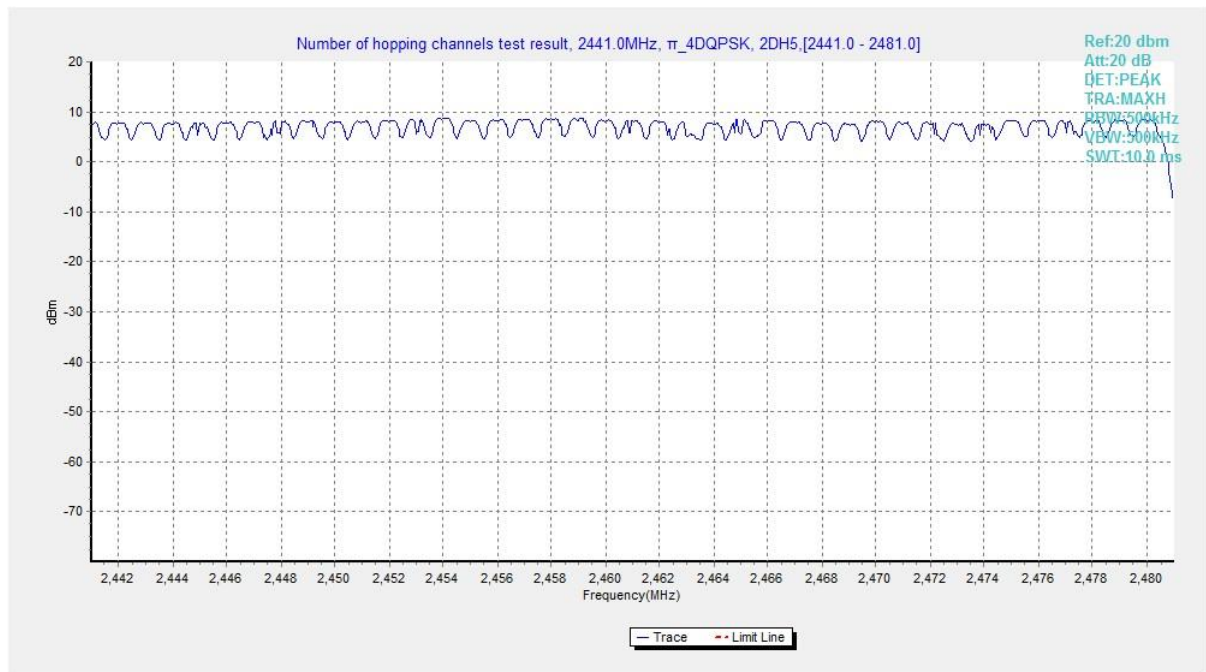


Fig. 78 Hopping channel ch40~78 ( $\pi/4$  DQPSK, Ch39)

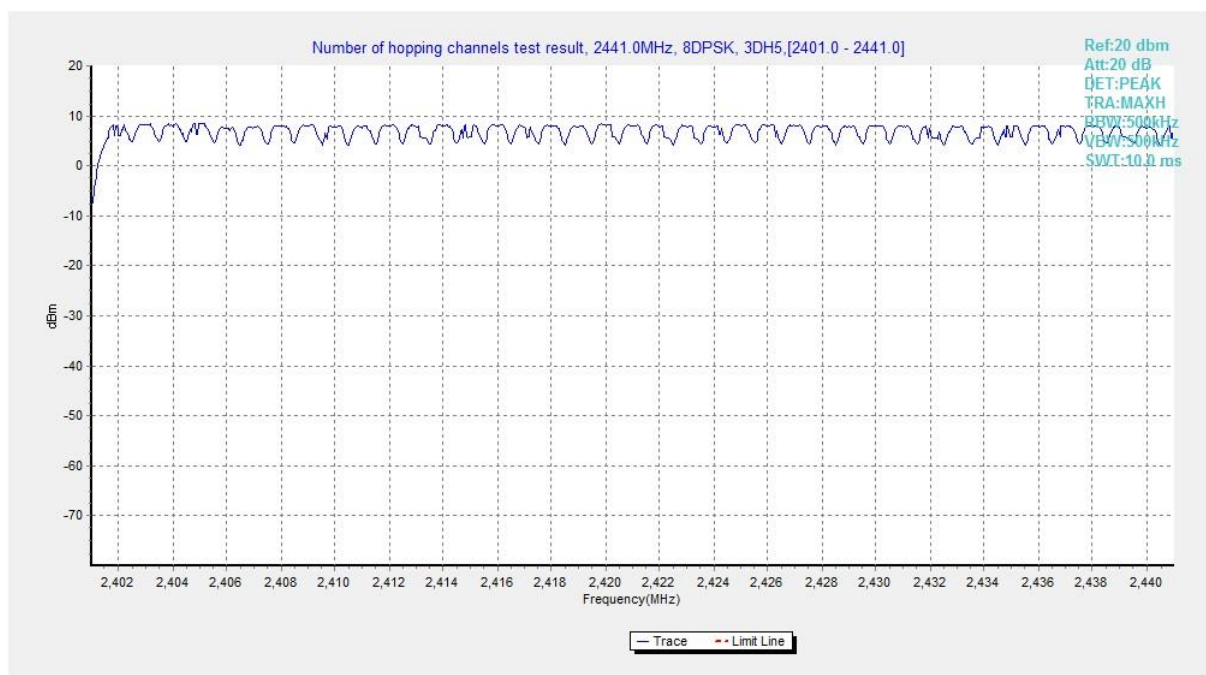
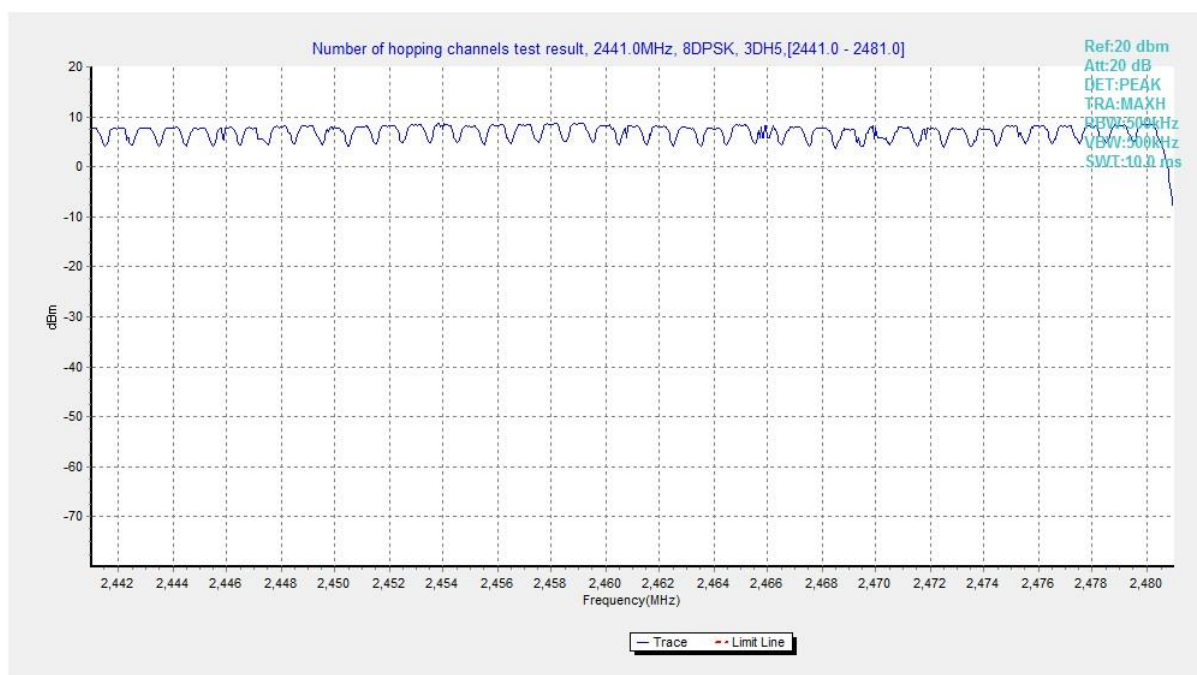


Fig. 79 Hopping channel ch0~39 (8DPSK, Ch39)



**Fig. 80 Hopping channel ch40~78 (8DPSK, Ch39)**

## A.8 Carrier Frequency Separation

### Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247(a)	By a minimum of 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater

### Measurement Results:

Mode	Channel	Packet	Separation of hopping channels	Test result (MHz)	Conclusion
GFSK	39	DH5	Fig.81	1.00	<b>P</b>
$\pi/4$ DQPSK	39	2-DH5	Fig.82	1.01	<b>P</b>
8DPSK	39	3-DH5	Fig.83	1.00	<b>P</b>

See below for test graphs.

Conclusion: Pass

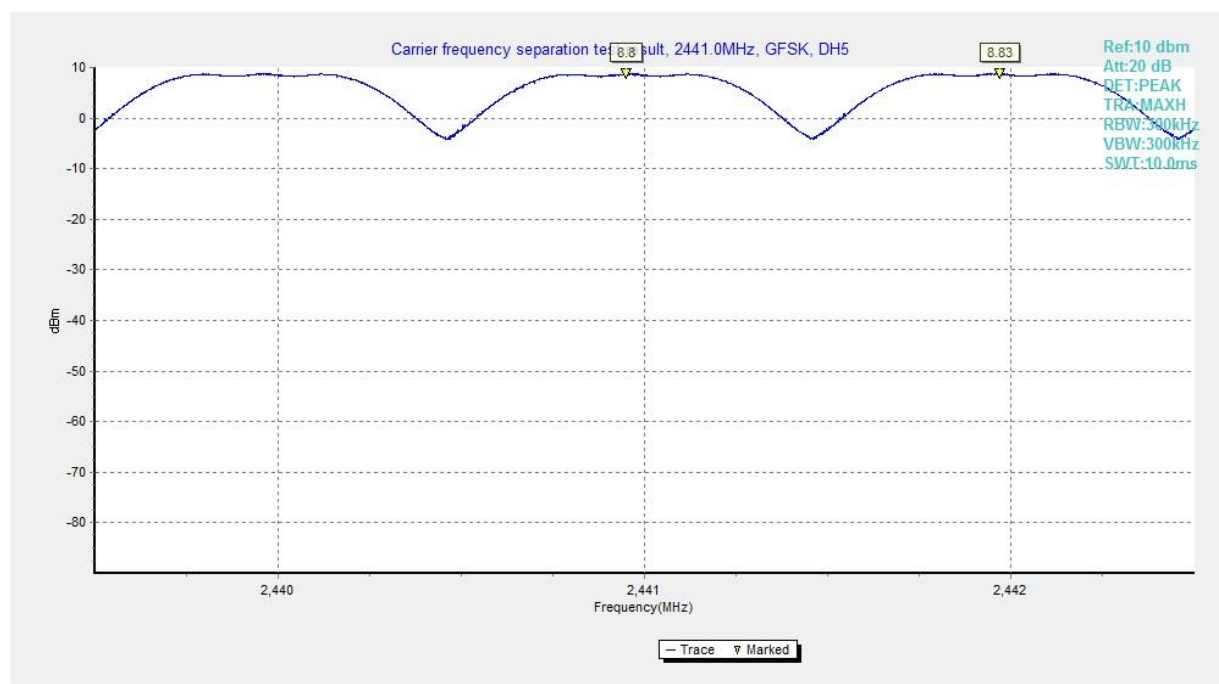
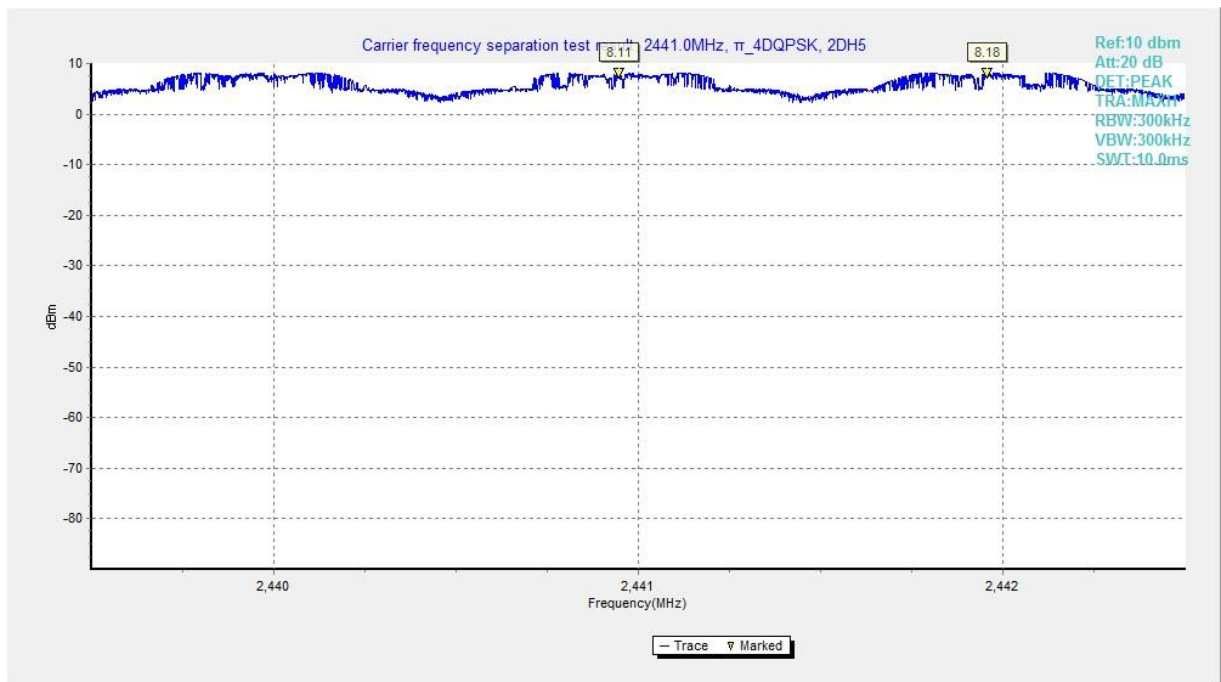
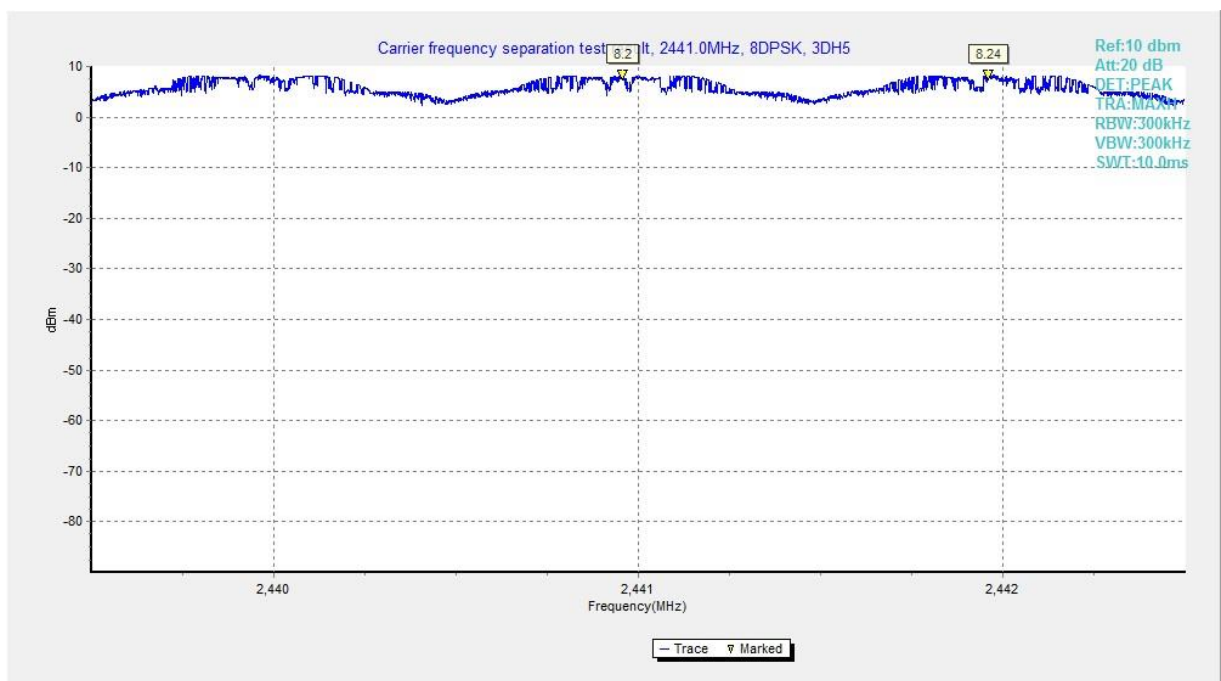


Fig. 81 Carrier Frequency Separation (GFSK, Ch39)



**Fig. 82 Carrier Frequency Separation ( $\pi$ /4 DQPSK, Ch39)**



**Fig. 83 Carrier Frequency Separation (8DPSK, Ch39)**

## A.9 AC Power line Conducted Emission

### Test Condition:

Voltage (V)	Frequency (Hz)
120	60

### Measurement Result and limit:

BT (Quasi-peak Limit) - AE2

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		Traffic	Idle	
0.15 to 0.5	66 to 56	Fig.84	Fig.85	<b>P</b>
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.

BT (Average Limit) - AE2

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		Traffic	Idle	
0.15 to 0.5	56 to 46	Fig.84	Fig.85	<b>P</b>
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.

Note: The measurement results include the L1 and N measurements.

See below for test graphs.

Conclusion: Pass

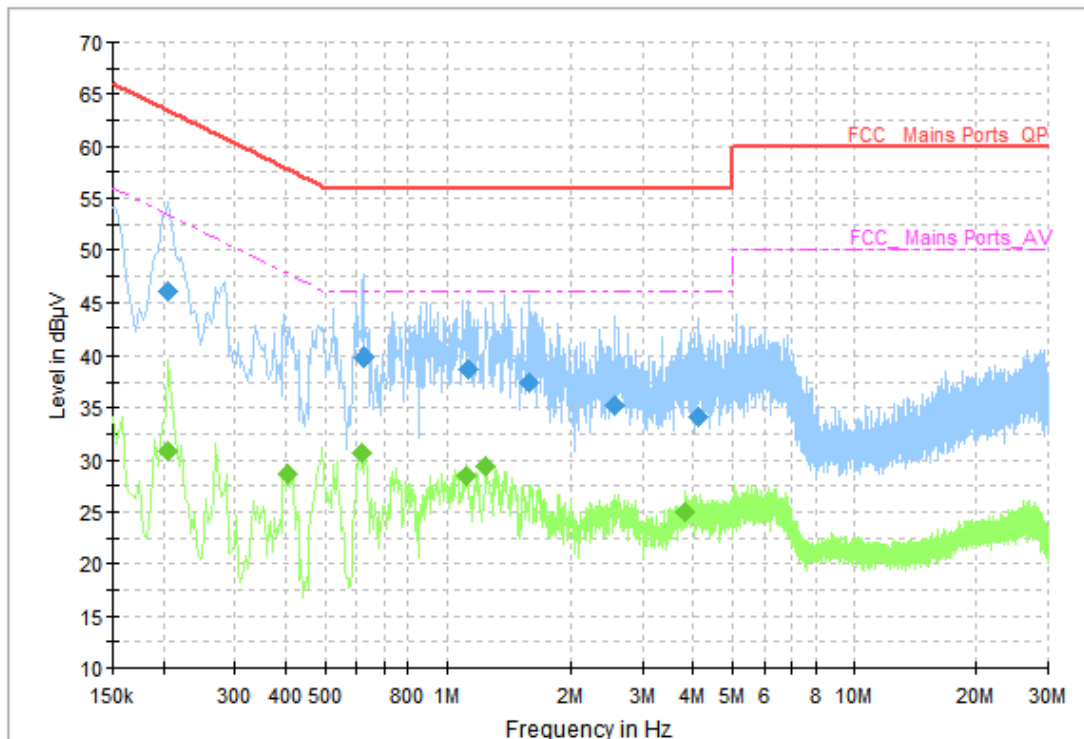


Fig. 84 AC Powerline Conducted Emission (Traffic, AE2, 120V)

#### Measurement Results: Quasi Peak

Frequency (MHz)	Quasi Peak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.206000	46.12	63.37	17.24	N	ON	10
0.622000	39.87	56.00	16.13	L1	ON	10
1.126000	38.65	56.00	17.35	L1	ON	10
1.574000	37.37	56.00	18.63	L1	ON	10
2.566000	35.25	56.00	20.75	L1	ON	10
4.118000	34.08	56.00	21.92	L1	ON	10

#### Measurement Results: Average

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.206000	30.79	53.37	22.58	N	ON	10
0.406000	28.66	47.73	19.07	N	ON	10
0.618000	30.58	46.00	15.42	N	ON	10
1.114000	28.48	46.00	17.52	N	ON	10
1.250000	29.35	46.00	16.65	N	ON	10
3.834000	24.94	46.00	21.06	N	ON	10

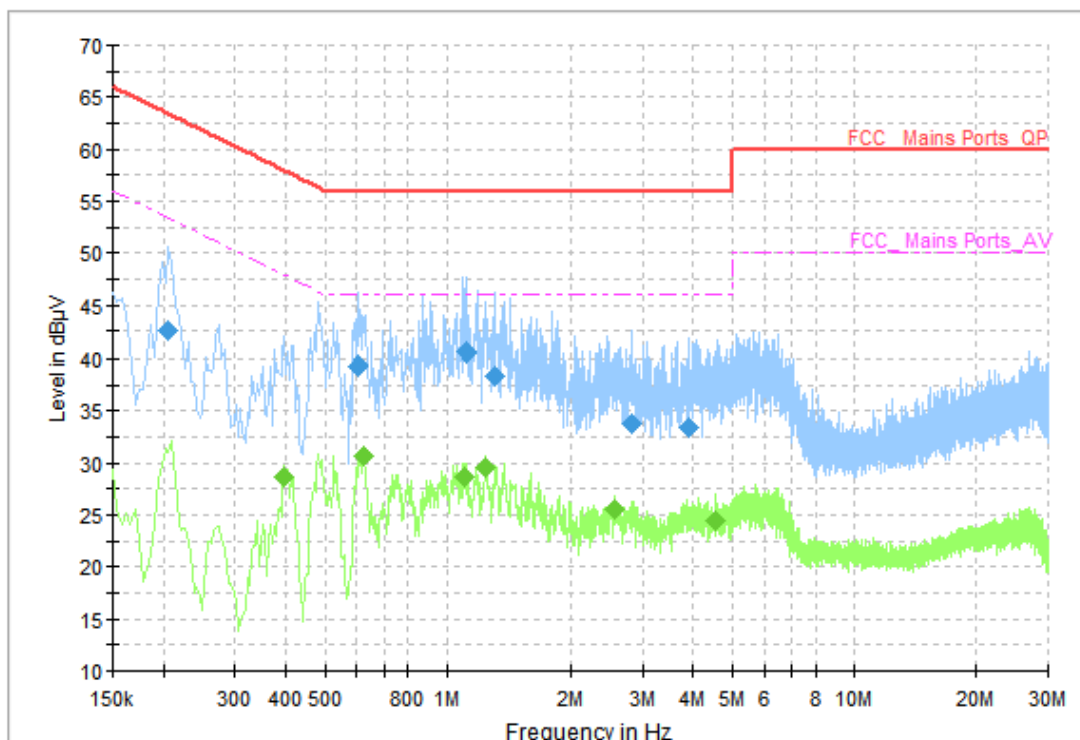


Fig. 85 AC Power line Conducted Emission (Idle, AE2, 120V)

#### Measurement Results: Quasi Peak

Frequency (MHz)	Quasi Peak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.206000	42.61	63.37	20.75	N	ON	10
0.606000	39.33	56.00	16.67	L1	ON	10
1.114000	40.55	56.00	15.45	L1	ON	10
1.306000	38.44	56.00	17.56	L1	ON	10
2.834000	33.82	56.00	22.18	L1	ON	10
3.898000	33.44	56.00	22.56	L1	ON	10

#### Measurement Results: Average

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.398000	28.68	47.90	19.22	N	ON	10
0.622000	30.66	46.00	15.34	N	ON	10
1.102000	28.69	46.00	17.31	N	ON	10
1.250000	29.60	46.00	16.40	N	ON	10
2.566000	25.47	46.00	20.53	N	ON	10
4.526000	24.47	46.00	21.53	N	ON	10

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