

# Test Report No.50344114 002

## Appendix D: Radiated and Mains Spurious Emission Data

(File: 50344114 002 Appendix D)

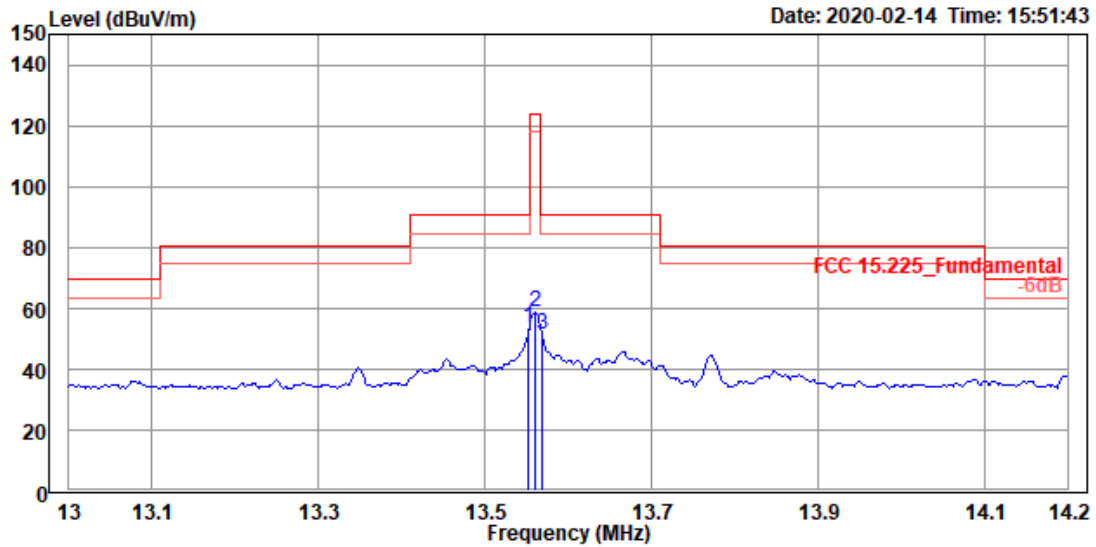
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# Spurious Emissions, Fundamental



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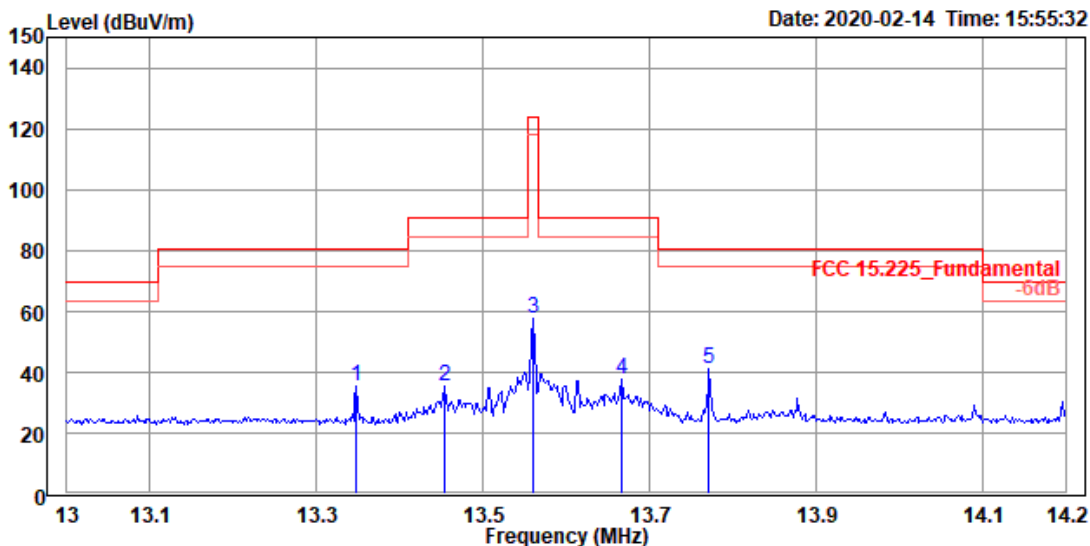
Site : 966A Chamber A  
 Condition : FCC 15.225\_Fundamental 3m horizontal  
 Test Engineer: Kevin Kuo  
 Applicant : Nedap  
 Product : Reader  
 Model No. : NVITE  
 Test Rating : 24Vdc  
 Tmp/Hum : 20°C/53%  
 Memo : Normal Operation  
       : Fundamental

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	13.553	53.76	33.00	20.76	90.47	-36.71	100	144	QP	
2	13.560	58.57	37.81	20.76	124.00	-65.43	100	222	QP	
3	13.569	51.31	30.55	20.76	90.47	-39.16	100	239	QP	

# Spurious Emissions, TX Mode, Mask

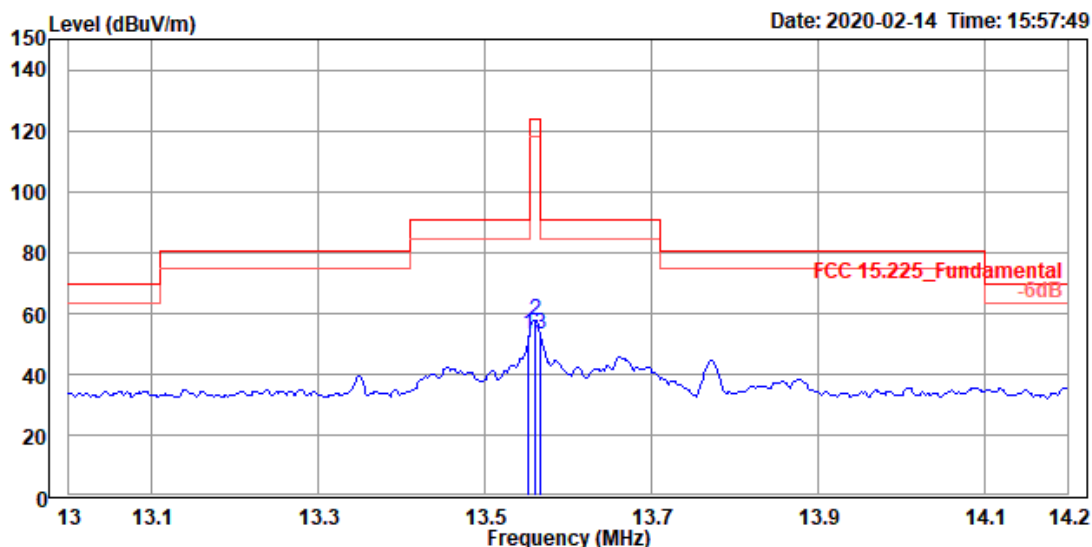


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Site : 966A Chamber A  
 Condition : FCC 15.225\_Fundamental 3m horizontal  
 Test Engineer: Kevin Kuo  
 Applicant : Nedap  
 Product : Reader  
 Model No. : NVITE  
 Test Rating : 24Vdc  
 Tmp/Hum : 20°C/53%  
 Memo : Normal Operation  
       : Emission Mask  
       : 1K

	Read	Limit	Over	APos	TPos	Remark	Note
Freq	Level	Level	Factor	Line	Limit		
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg
1	13.348	35.19	14.46	20.73	80.51	-45.32	100 147 QP
2	13.454	35.29	14.55	20.74	90.47	-55.18	100 208 QP
3	13.560	57.37	36.61	20.76	124.00	-66.63	100 222 QP
4	13.666	37.60	16.83	20.77	90.47	-52.87	100 317 QP
5	13.772	41.11	20.33	20.78	80.51	-39.40	100 296 QP



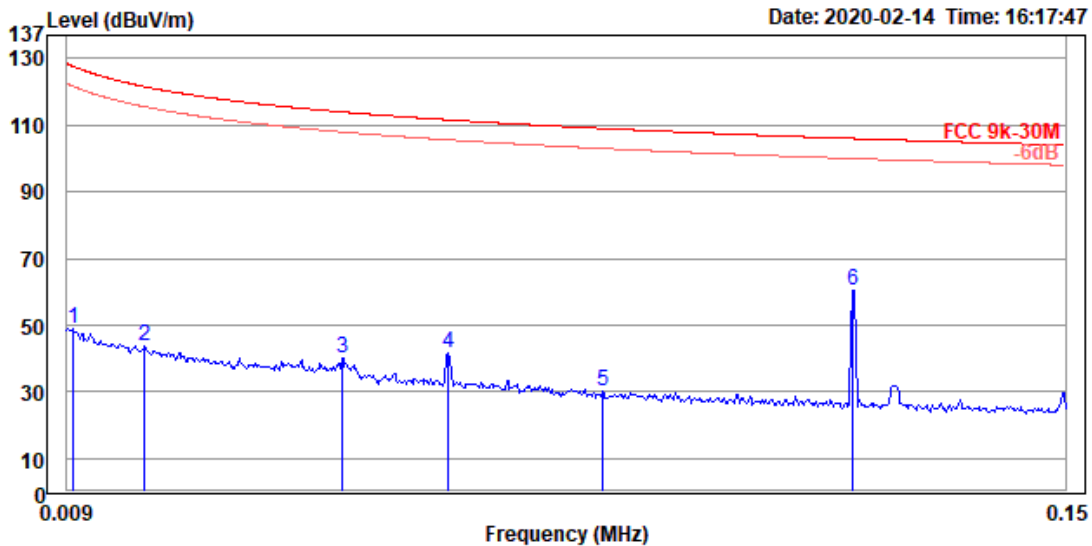
Site : 966A Chamber A  
 Condition : FCC 15.225\_Fundamental 3m horizontal  
 Test Engineer: Kevin Kuo  
 Applicant : Nedap  
 Product : Reader  
 Model No. : NVITE  
 Test Rating : 24Vdc  
 Tmp/Hum : 20°C/53%  
 Memo : Normal Operation  
       : Emission Mask  
       : 9K

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	13.553	53.18	32.42	20.76	90.47	-37.29	100	208	QP	
2	13.560	57.65	36.89	20.76	124.00	-66.35	100	222	QP	
3	13.567	52.94	32.18	20.76	90.47	-37.53	100	196	QP	

# Spurious Emissions, TX+RX Mode, 9kHz-30MHz

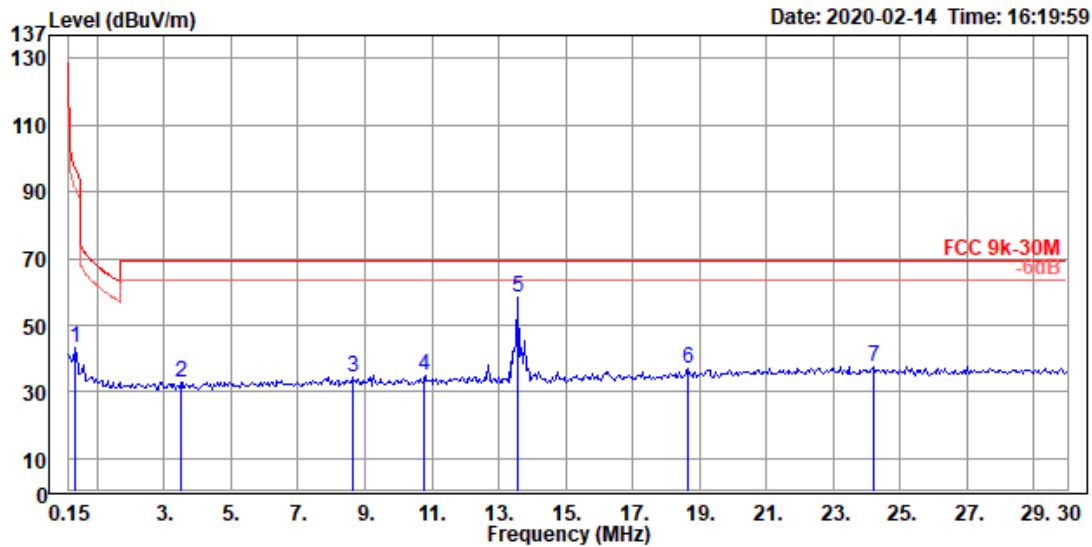


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Site : 966A Chamber A  
 Condition : FCC 9k-30M 3m horizontal  
 Test Engineer: Kevin Kuo  
 Applicant : Nedap  
 Product : Reader  
 Model No. : NVITE  
 Test Rating : 24Vdc  
 Tmp/Hum : 20°C/53%  
 Memo : Normal Operation  
 : TX+RX 13.56

	Read	Limit	Over	APos	TPos	Remark	Note
Freq	Level	Level	Factor	Line	Limit		
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg
1	0.010	48.84	30.79	18.05	127.75	-78.91	100 65 QP
2	0.020	43.74	25.21	18.53	121.55	-77.81	100 312 QP
3	0.048	40.12	21.23	18.89	114.00	-73.88	100 284 QP
4	0.063	41.90	23.32	18.58	111.61	-69.71	100 42 QP
5	0.085	30.12	12.06	18.06	109.05	-78.93	100 18 QP
6	0.120	60.33	42.55	17.78	106.02	-45.69	100 206 QP



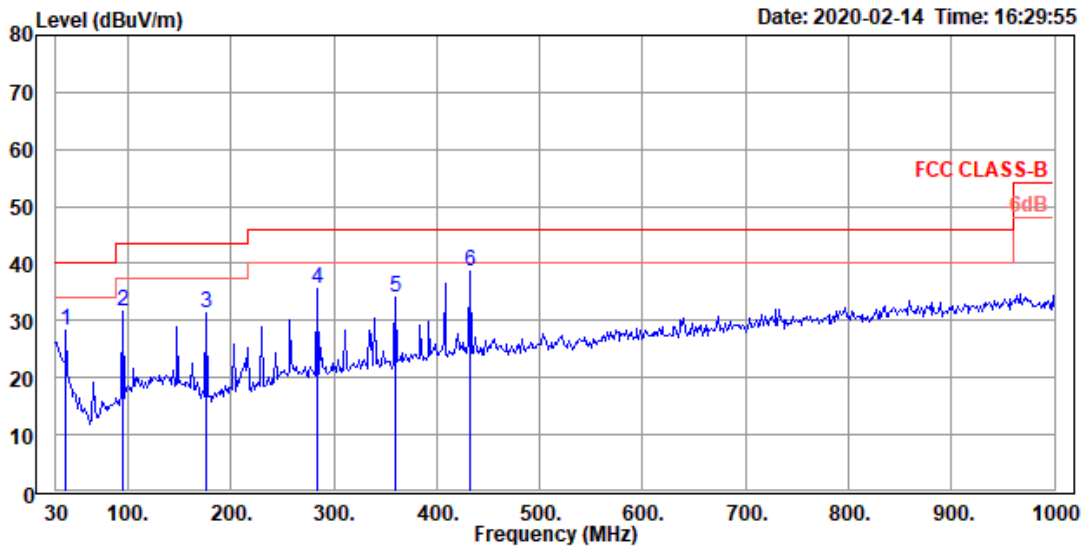
Site : 966A Chamber A  
 Condition : FCC 9k-30M 3m horizontal  
 Test Engineer: Kevin Kuo  
 Applicant : Nedap  
 Product : Reader  
 Model No. : NVITE  
 Test Rating : 24Vdc  
 Tmp/Hum : 20°C/53%  
 Memo : Normal Operation  
 : TX+RX 13.56

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.323	43.39	24.87	18.52	97.42	-54.03	100	49	QP	
2	3.481	33.01	14.23	18.78	69.50	-36.49	100	78	QP	
3	8.629	34.27	14.16	20.11	69.50	-35.23	100	136	QP	
4	10.792	34.98	14.50	20.48	69.50	-34.52	100	244	QP	
5	13.561	58.26	37.50	20.76	69.50	-11.24	100	117	QP	TX
6	18.666	36.88	15.61	21.27	69.50	-32.62	100	326	QP	
7	24.203	37.65	16.06	21.59	69.50	-31.85	100	285	QP	

# Spurious Emissions, TX+RX Mode, 30MHz-1GHz

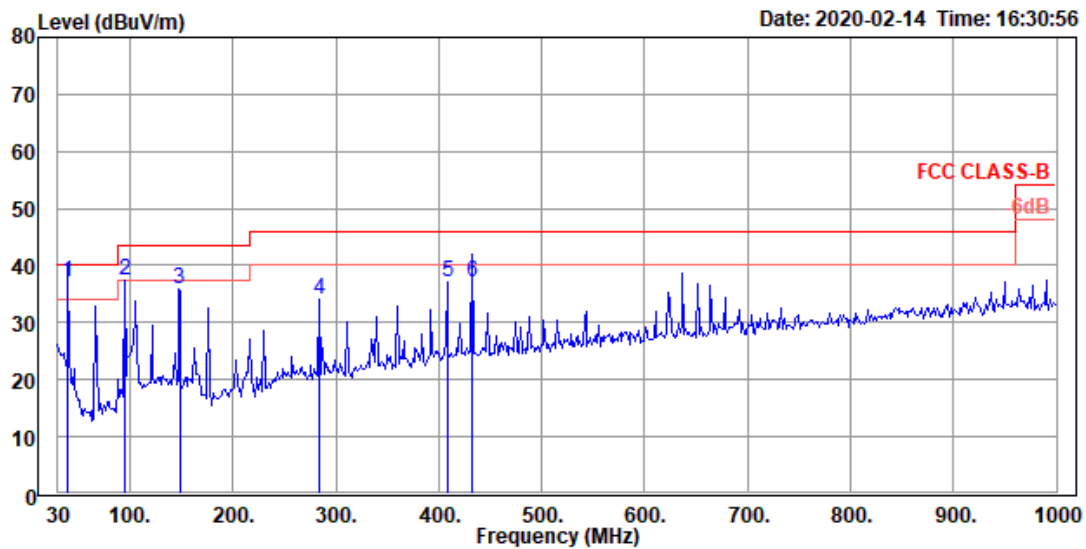


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Site : 966A Chamber A  
 Condition : FCC CLASS-B 3m horizontal  
 Test Engineer: Kevin Kuo  
 Applicant : Nedap  
 Product : Reader  
 Model No. : NVITE  
 Test Rating : 24Vdc  
 Tmp/Hum : 20°C/53%  
 Memo : Normal Operation  
 : TX+RX 13.56

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	39.841	28.32	33.68	-5.36	40.00	-11.68	100	146	QP	
2	94.667	31.57	41.81	-10.24	43.50	-11.93	100	109	QP	
3	176.203	31.30	40.79	-9.49	43.50	-12.20	100	92	QP	
4	284.449	35.44	40.42	-4.98	46.00	-10.56	100	231	QP	
5	360.362	34.08	37.43	-3.35	46.00	-11.92	100	111	QP	
6	432.058	38.55	40.75	-2.20	46.00	-7.45	100	222	QP	



Site : 966A Chamber A  
 Condition : FCC CLASS-B 3m vertical  
 Test Engineer: Kevin Kuo  
 Applicant : Nedap  
 Product : Reader  
 Model No. : NVITE  
 Test Rating : 24Vdc  
 Tmp/Hum : 20°C/53%  
 Memo : Normal Operation  
 : TX+RX 13.56

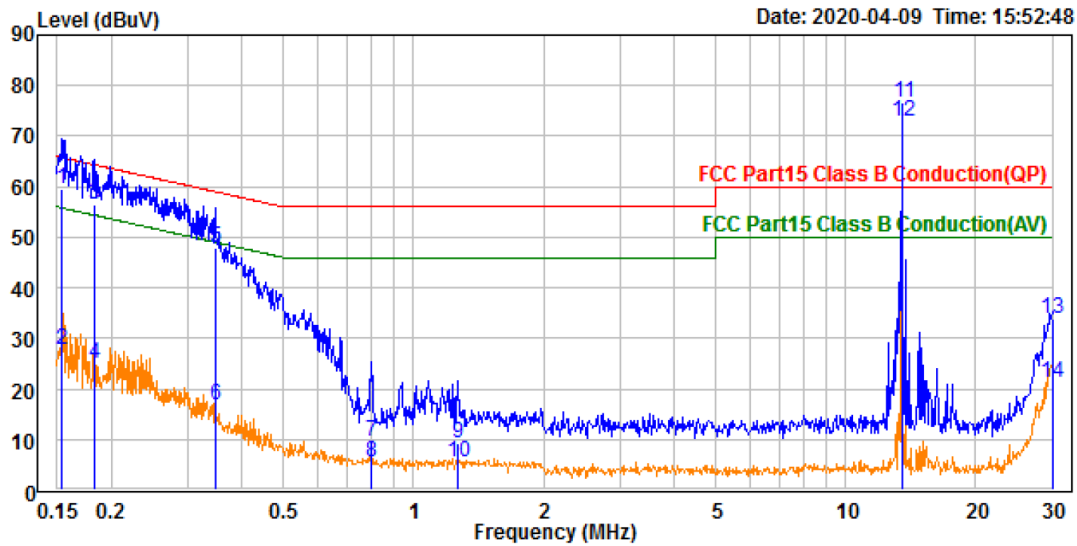
	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1 !	39.841	37.13	42.49	-5.36	40.00	-2.87	100	83	QP	
2	94.667	37.47	47.71	-10.24	43.50	-6.03	100	102	QP	
3	148.087	35.77	42.94	-7.17	43.50	-7.73	100	267	QP	
4	284.449	33.93	38.91	-4.98	46.00	-12.07	100	97	QP	
5	408.159	37.13	39.52	-2.39	46.00	-8.87	100	155	QP	
6	432.058	37.09	39.29	-2.20	46.00	-8.91	100	151	QP	



# Spurious Emissions, AC Mains

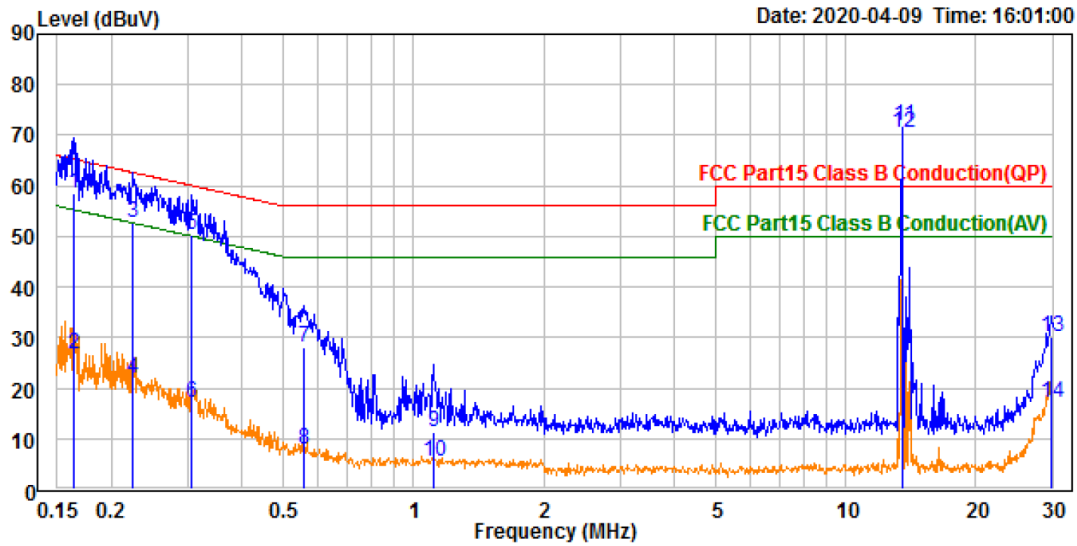


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Trace: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Note
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.154	49.82	9.61	59.43	65.79	-6.36	QP	
2	0.154	17.96	9.61	27.57	55.79	-28.22	Average	
3	0.183	46.73	9.61	56.34	64.34	-8.00	QP	
4	0.183	15.22	9.61	24.83	54.34	-29.51	Average	
5	0.348	38.19	9.61	47.80	59.00	-11.20	QP	
6	0.348	7.19	9.61	16.80	49.00	-32.20	Average	
7	0.801	-0.09	9.62	9.53	56.00	-46.47	QP	
8	0.801	-4.14	9.62	5.48	46.00	-40.52	Average	
9	1.266	-0.23	9.62	9.39	56.00	-46.61	QP	
10	1.266	-4.28	9.62	5.34	46.00	-40.66	Average	
11 *	13.560	66.80	9.75	76.55	60.00	16.55	QP	TX
12 *	13.560	63.00	9.75	72.75	50.00	22.75	Average	TX
13	30.000	24.03	9.76	33.79	60.00	-26.21	QP	
14	30.000	11.54	9.76	21.30	50.00	-28.70	Average	

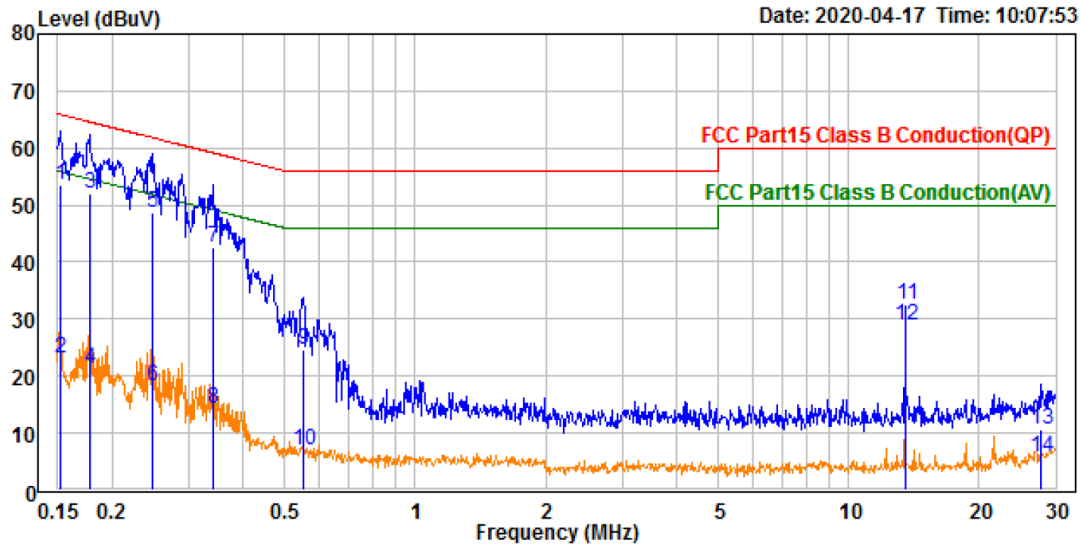


Trace: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Note
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.163	48.92	9.62	58.54	65.30	-6.76	QP	
2	0.163	17.07	9.62	26.69	55.30	-28.61	Average	
3	0.223	43.11	9.62	52.73	62.69	-9.96	QP	
4	0.223	12.37	9.62	21.99	52.69	-30.70	Average	
5	0.306	40.66	9.62	50.28	60.08	-9.80	QP	
6	0.306	7.66	9.62	17.28	50.08	-32.80	Average	
7	0.559	18.45	9.63	28.08	56.00	-27.92	QP	
8	0.559	-1.76	9.63	7.87	46.00	-38.13	Average	
9	1.112	1.66	9.63	11.29	56.00	-44.71	QP	
10	1.112	-4.14	9.63	5.49	46.00	-40.51	Average	
11 *	13.560	62.00	9.78	71.78	60.00	11.78	QP	TX
12 *	13.560	60.60	9.78	70.38	50.00	20.38	Average	TX
13	29.851	20.24	9.84	30.08	60.00	-29.92	QP	
14	29.851	7.24	9.84	17.08	50.00	-32.92	Average	

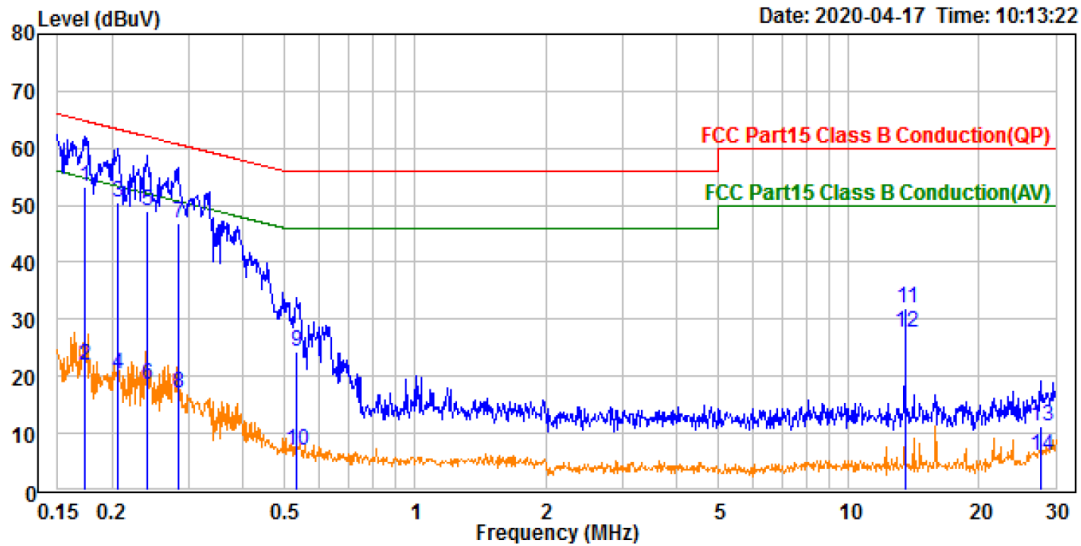


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Trace: 1

	Read Freq	Read Level	Factor	Level	Limit	Over	Remark	Note
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.152	44.07	9.61	53.68	65.92	-12.24	QP	
2	0.152	13.58	9.61	23.19	55.92	-32.73	Average	
3	0.178	42.43	9.61	52.04	64.59	-12.55	QP	
4	0.178	11.65	9.61	21.26	54.59	-33.33	Average	
5	0.247	39.06	9.61	48.67	61.86	-13.19	QP	
6	0.247	8.76	9.61	18.37	51.86	-33.49	Average	
7	0.341	32.84	9.61	42.45	59.17	-16.72	QP	
8	0.341	4.57	9.61	14.18	49.17	-34.99	Average	
9	0.554	14.94	9.62	24.56	56.00	-31.44	QP	
10	0.554	-2.60	9.62	7.02	46.00	-38.98	Average	
11	13.560	22.90	9.75	32.65	60.00	-27.35	QP	TX
12	13.560	19.20	9.75	28.95	50.00	-21.05	Average	TX
13	27.700	0.85	9.77	10.62	60.00	-49.38	QP	
14	27.700	-4.08	9.77	5.69	50.00	-44.31	Average	



Trace: 1

	Read Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Note
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.173	43.52	9.62	53.14	64.80	-11.66	QP	
2	0.173	12.25	9.62	21.87	54.80	-32.93	Average	
3	0.206	40.80	9.62	50.42	63.35	-12.93	QP	
4	0.206	10.64	9.62	20.26	53.35	-33.09	Average	
5	0.242	39.36	9.62	48.98	62.03	-13.05	QP	
6	0.242	9.06	9.62	18.68	52.03	-33.35	Average	
7	0.284	37.17	9.62	46.79	60.70	-13.91	QP	
8	0.284	7.43	9.62	17.05	50.70	-33.65	Average	
9	0.532	14.63	9.63	24.26	56.00	-31.74	QP	
10	0.532	-2.72	9.63	6.91	46.00	-39.09	Average	
11	13.560	22.20	9.78	31.98	60.00	-28.02	QP	TX
12	13.560	17.80	9.78	27.58	50.00	-22.42	Average	TX
13	27.700	1.36	9.84	11.20	60.00	-48.80	QP	
14	27.700	-3.75	9.84	6.09	50.00	-43.91	Average	