

Mode	802.11ac(VHT80)	Channel	155
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		5630	48.86	18.65	67.51	68.2	-0.69	PK
		5684.5	66.7	18.66	85.36	93.76	-8.4	PK
	@	5775	93.39	19.14	112.53	N/A	N/A	PK
		5876	51.27	19.74	71.01	104.46	-33.45	PK
		5929	42.4	19.77	62.17	68.2	-6.03	PK
Vertical		5649	45.19	18.62	63.81	68.2	-4.39	PK
		5691	63.62	18.66	82.28	98.56	-16.28	PK
	@	5775	91.03	19.14	110.17	N/A	N/A	PK
		5875.5	49.98	19.74	69.72	104.83	-35.11	PK
		5927.5	42.4	19.78	62.18	68.2	-6.02	PK

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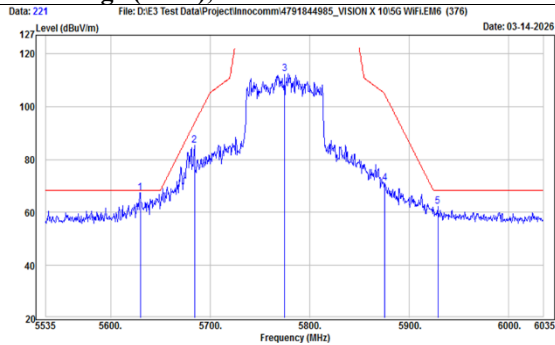
Building A, B and E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

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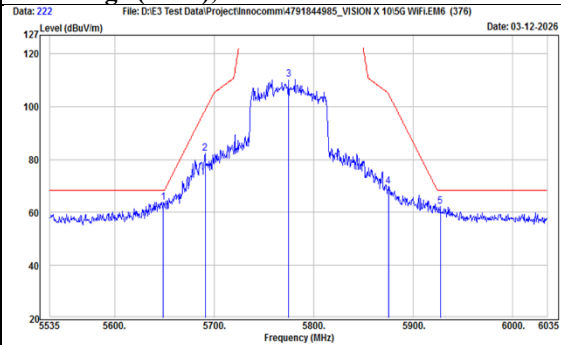
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TX, 802.11ac(VHT80) (Ch 155)
Band Edge (Peak), Horizontal



TX, 802.11ac(VHT80) (Ch 155)
Band Edge (Peak), Vertical



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Mode	802.11ac(VHT80) - Emission	Channel	42
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	*	10420	31.37	20.22	51.59	68.2	-16.61	PK
		14500	28.33	28	56.33	68.2	-11.87	PK
		14500	20.06	28	48.06	54	-5.94	AVG
		15445	28.87	26.05	54.92	74	-19.08	PK
		15445	20.04	26.05	46.09	54	-7.91	AVG
	*	20840	39.52	5.14	44.66	74	-29.34	PK
	*	26050	33.7	10.66	44.36	68.2	-23.84	PK
	*	31260	32.48	14.52	47	74	-27	PK
	*	36470	36.76	12.64	49.4	74	-24.6	PK
		39040	38.89	16.78	55.67	74	-18.33	PK
		39040	29.05	16.78	45.83	54	-8.17	AVG
Vertical	*	10420	32.38	20.22	52.6	68.2	-15.6	PK
		14470	28.49	27.97	56.46	68.2	-11.74	PK
		14470	20.22	27.97	48.19	54	-5.81	AVG
		15430	28.02	26.08	54.1	74	-19.9	PK
		15430	19.19	26.08	45.27	54	-8.73	AVG
	*	20840	34.9	5.14	40.04	74	-33.96	PK
	*	26050	33.46	10.66	44.12	68.2	-24.08	PK
	*	31260	32.17	14.52	46.69	74	-27.31	PK
	*	36470	37.32	12.64	49.96	74	-24.04	PK
		39520	37.47	17.31	54.78	74	-19.22	PK
		39520	27.63	17.31	44.94	54	-9.06	AVG

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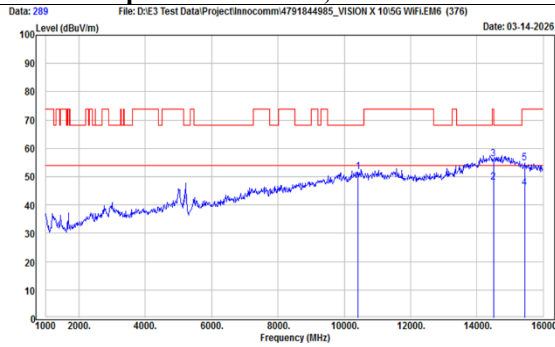
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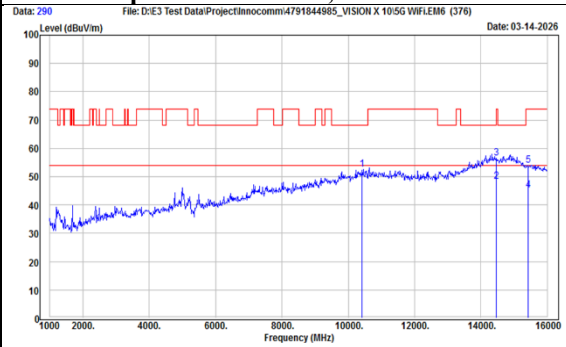
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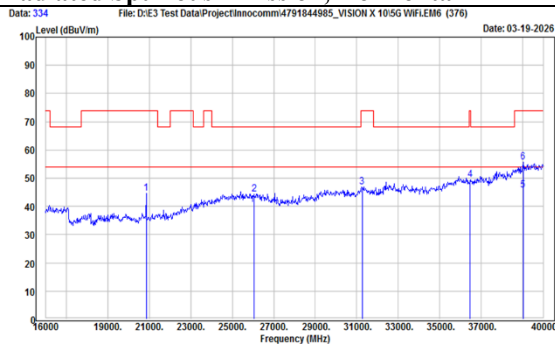
TX, 802.11ac(VHT80) - Emission (Ch 42)
Radiated Spurious Emission, Horizontal



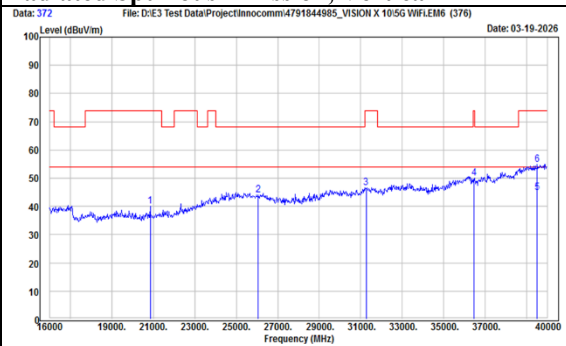
TX, 802.11ac(VHT80) - Emission (Ch 42)
Radiated Spurious Emission, Vertical



TX, 802.11ac(VHT80) - Emission (Ch 42)
Radiated Spurious Emission, Horizontal



TX, 802.11ac(VHT80) - Emission (Ch 42)
Radiated Spurious Emission, Vertical



Mode	802.11ac(VHT80) - Emission	Channel	58
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	*	10580	31.56	20.35	51.91	68.2	-16.29	PK
		14470	30.28	27.97	58.25	68.2	-9.95	PK
		14470	22.01	27.97	49.98	54	-4.02	AVG
		15400	29.57	26.14	55.71	74	-18.29	PK
		15400	20.74	26.14	46.88	54	-7.12	AVG
	*	21160	37.22	5.63	42.85	74	-31.15	PK
	*	26450	33.04	11.07	44.11	68.2	-24.09	PK
	*	31740	32.82	13.01	45.83	74	-28.17	PK
	*	37030	36.61	13.57	50.18	68.2	-18.02	PK
		39616	38.13	17.46	55.59	74	-18.41	PK
		39616	28.29	17.46	45.75	54	-8.25	AVG
Vertical	*	10580	31.67	20.35	52.02	68.2	-16.18	PK
		14470	28.72	27.97	56.69	68.2	-11.51	PK
		14470	20.45	27.97	48.42	54	-5.58	AVG
		15475	29.84	25.98	55.82	74	-18.18	PK
		15475	21.01	25.98	46.99	54	-7.01	AVG
	*	21160	32.78	5.63	38.41	74	-35.59	PK
	*	26450	33.43	11.07	44.5	68.2	-23.7	PK
	*	31740	32.75	13.01	45.76	74	-28.24	PK
	*	37030	36.44	13.57	50.01	68.2	-18.19	PK
		39784	37.64	17.72	55.36	74	-18.64	PK
		39784	27.8	17.72	45.52	54	-8.48	AVG

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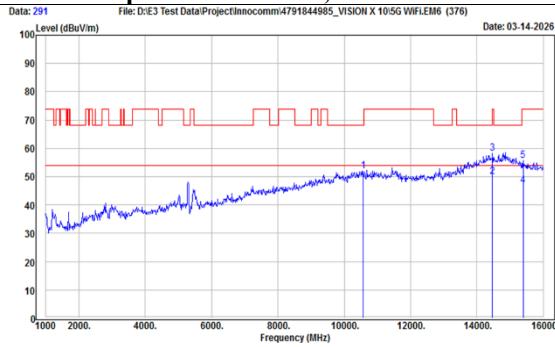
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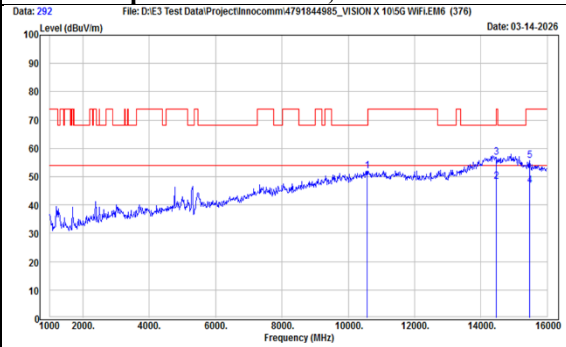
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Doc No: Form-ULID-004739 (DCS:17-EM-F0878) / 6.1

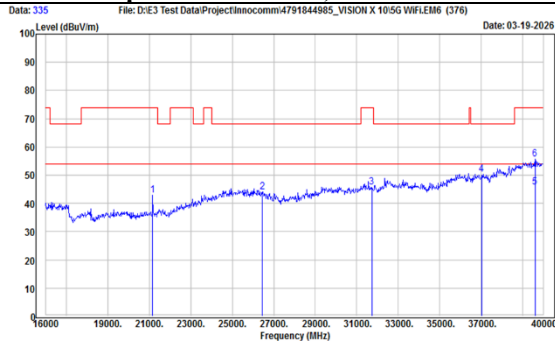
TX, 802.11ac(VHT80) - Emission (Ch 58)
Radiated Spurious Emission, Horizontal



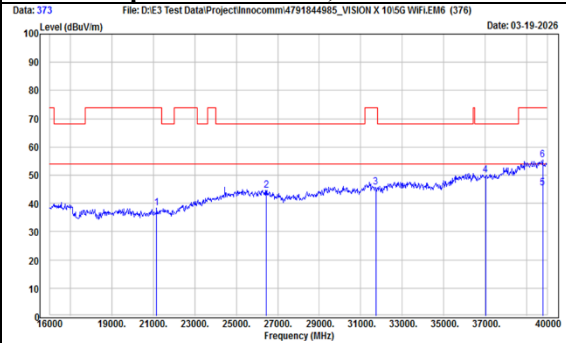
TX, 802.11ac(VHT80) - Emission (Ch 58)
Radiated Spurious Emission, Vertical



TX, 802.11ac(VHT80) - Emission (Ch 58)
Radiated Spurious Emission, Horizontal



TX, 802.11ac(VHT80) - Emission (Ch 58)
Radiated Spurious Emission, Vertical



Mode	802.11ac(VHT80) - Emission	Channel	106
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	*	11060	32.33	20.58	52.91	74	-21.09	PK
		14500	28.94	28	56.94	68.2	-11.26	PK
		14500	20.67	28	48.67	54	-5.33	AVG
		15550	29.01	25.7	54.71	74	-19.29	PK
		15550	20.18	25.7	45.88	54	-8.12	AVG
	*	16590	35.31	5.22	40.53	68.2	-27.67	PK
	*	22120	35.91	6.52	42.43	74	-31.57	PK
	*	27650	32.1	10.72	42.82	68.2	-25.38	PK
	*	33180	35.54	12.6	48.14	68.2	-20.06	PK
		38992	38.74	16.66	55.4	74	-18.6	PK
		38992	28.9	16.66	45.56	54	-8.44	AVG
Vertical	*	11060	32.91	20.58	53.49	74	-20.51	PK
		14485	27.55	27.98	55.53	74	-18.47	PK
		14485	19.28	27.98	47.26	54	-6.74	AVG
		15340	29.76	26.45	56.21	68.2	-11.99	PK
		15340	20.93	26.45	47.38	54	-6.62	AVG
	*	16590	37.51	5.22	42.73	68.2	-25.47	PK
	*	22120	33.01	6.52	39.53	74	-34.47	PK
	*	27650	32.21	10.72	42.93	68.2	-25.27	PK
	*	33180	35.84	12.6	48.44	68.2	-19.76	PK
		39928	37.69	18	55.69	74	-18.31	PK
		39928	27.85	18	45.85	54	-8.15	AVG

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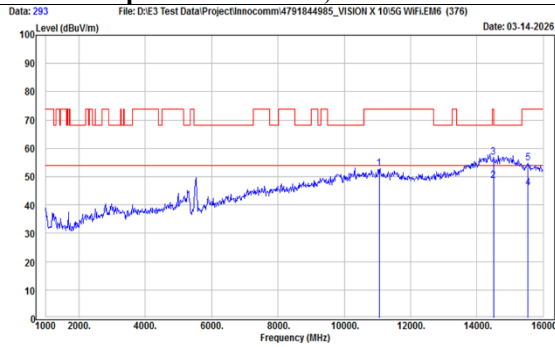
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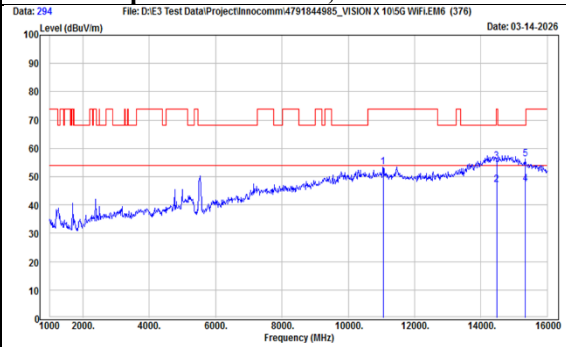
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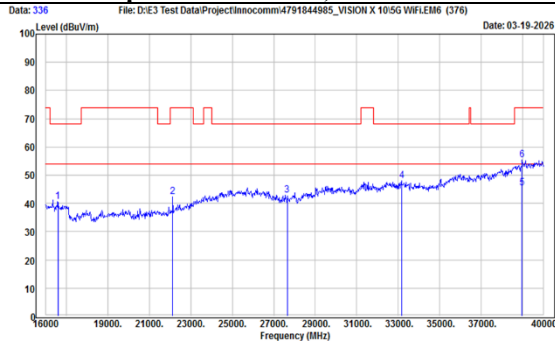
TX, 802.11ac(VHT80) - Emission (Ch 106)
Radiated Spurious Emission, Horizontal



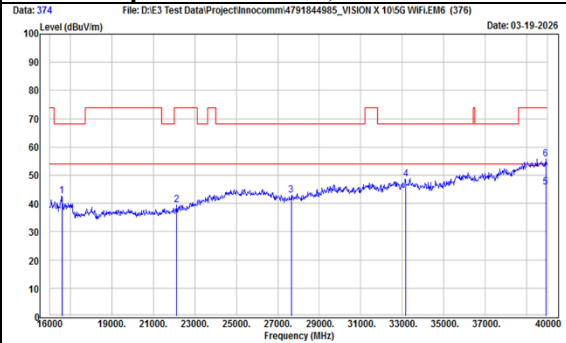
TX, 802.11ac(VHT80) - Emission (Ch 106)
Radiated Spurious Emission, Vertical



TX, 802.11ac(VHT80) - Emission (Ch 106)
Radiated Spurious Emission, Horizontal



TX, 802.11ac(VHT80) - Emission (Ch 106)
Radiated Spurious Emission, Vertical



Mode	802.11ac(VHT80) - Emission	Channel	122
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		11220	37.07	20.48	57.55	74	-16.45	PK
		11220	26.73	20.48	47.21	54	-6.79	AVG
		14470	28.44	27.97	56.41	68.2	-11.79	PK
		14470	20.17	27.97	48.14	54	-5.86	AVG
		15535	28.99	25.76	54.75	74	-19.25	PK
		15535	20.16	25.76	45.92	54	-8.08	AVG
	*	16830	49.96	5.43	55.39	68.2	-12.81	PK
	*	22440	35.48	7.18	42.66	74	-31.34	PK
	*	28050	32.27	10.91	43.18	68.2	-25.02	PK
	*	33660	34.14	12.62	46.76	68.2	-21.44	PK
		39784	37.2	17.72	54.92	74	-19.08	PK
		39784	27.36	17.72	45.08	54	-8.92	AVG
Vertical		11220	42.73	20.48	63.21	74	-10.79	PK
		11220	33.3	20.48	53.78	54	-0.22	AVG
		14500	28.75	28	56.75	68.2	-11.45	PK
		14500	20.48	28	48.48	54	-5.52	AVG
		15310	28.88	26.6	55.48	68.2	-12.72	PK
		15310	20.05	26.6	46.65	54	-7.35	AVG
	*	16830	49.86	5.43	55.29	68.2	-12.91	PK
	*	22440	33.59	7.18	40.77	74	-33.23	PK
	*	28050	32.13	10.91	43.04	68.2	-25.16	PK
	*	33660	34.63	12.62	47.25	68.2	-20.95	PK
		39352	38	17.3	55.3	74	-18.7	PK
		39352	28.16	17.3	45.46	54	-8.54	AVG

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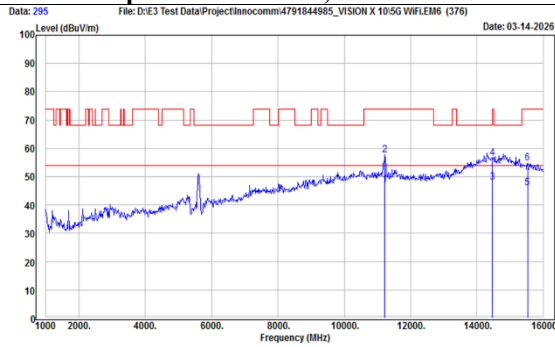
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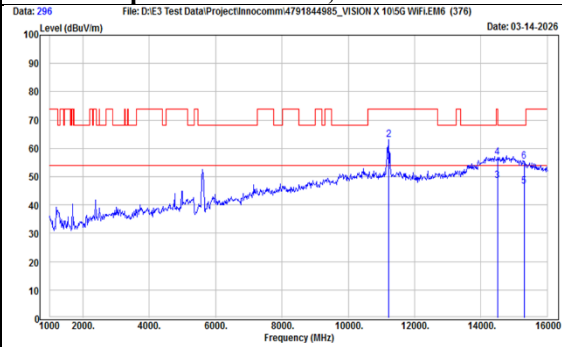
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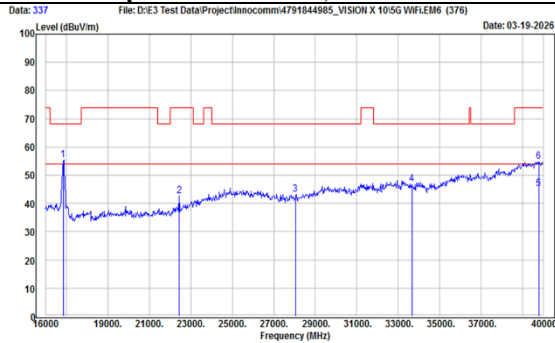
TX, 802.11ac(VHT80) - Emission (Ch 122)
Radiated Spurious Emission, Horizontal



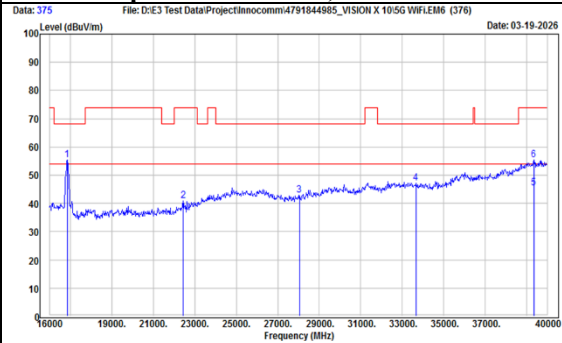
TX, 802.11ac(VHT80) - Emission (Ch 122)
Radiated Spurious Emission, Vertical



TX, 802.11ac(VHT80) - Emission (Ch 122)
Radiated Spurious Emission, Horizontal



TX, 802.11ac(VHT80) - Emission (Ch 122)
Radiated Spurious Emission, Vertical



Mode	802.11ac(VHT80) - Emission	Channel	155
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		11550	35.32	21.34	56.66	74	-17.34	PK
		11550	26.97	21.34	48.31	54	-5.69	AVG
		14500	28.83	28	56.83	68.2	-11.37	PK
		14500	20.56	28	48.56	54	-5.44	AVG
		15355	28.32	26.36	54.68	74	-19.32	PK
		15355	19.49	26.36	45.85	54	-8.15	AVG
	*	17325	47.15	4.96	52.11	68.2	-16.09	PK
	*	23100	36.9	8.73	45.63	74	-28.37	PK
	*	28875	32.08	11.58	43.66	68.2	-24.54	PK
	*	34650	34.89	12.11	47	68.2	-21.2	PK
		39016	39.15	16.72	55.87	74	-18.13	PK
		39016	29.31	16.72	46.03	54	-7.97	AVG
Vertical		11550	35.8	21.34	57.14	74	-16.86	PK
		11550	27.45	21.34	48.79	54	-5.21	AVG
		14470	28.83	27.97	56.8	68.2	-11.4	PK
		14470	20.56	27.97	48.53	54	-5.47	AVG
		15355	29.07	26.36	55.43	74	-18.57	PK
		15355	20.24	26.36	46.6	54	-7.4	AVG
	*	17325	47.86	4.96	52.82	68.2	-15.38	PK
	*	23100	32.9	8.73	41.63	74	-32.37	PK
	*	28875	32	11.58	43.58	68.2	-24.62	PK
	*	34650	34.5	12.11	46.61	68.2	-21.59	PK
		39064	38.92	16.84	55.76	74	-18.24	PK
		39064	29.08	16.84	45.92	54	-8.08	AVG

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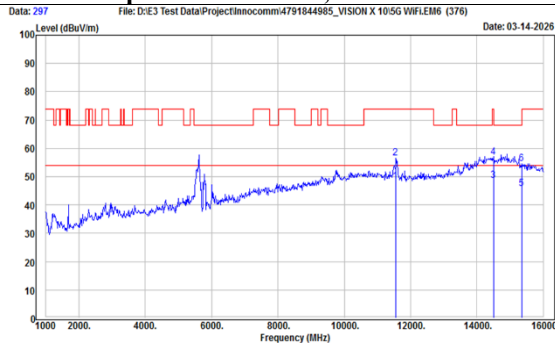
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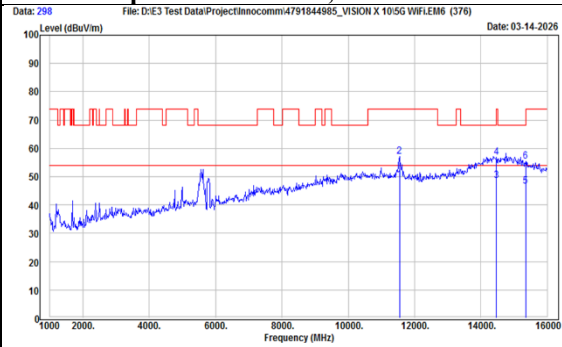
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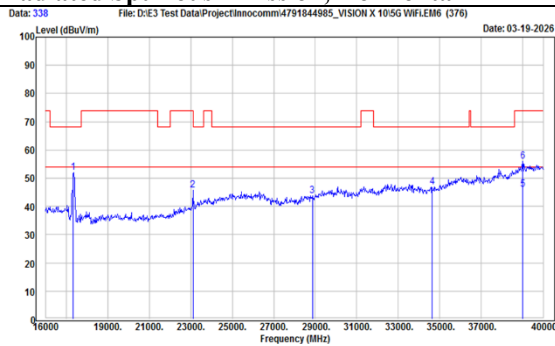
TX, 802.11ac(VHT80) - Emission (Ch 155)
Radiated Spurious Emission, Horizontal



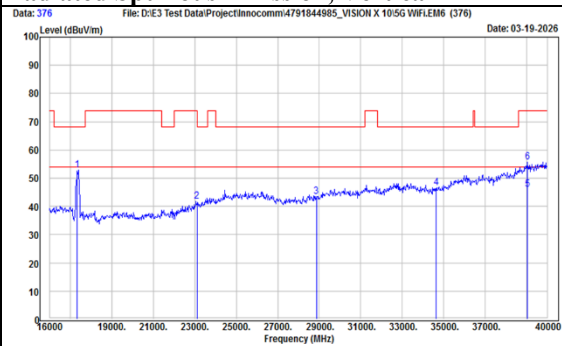
TX, 802.11ac(VHT80) - Emission (Ch 155)
Radiated Spurious Emission, Vertical



TX, 802.11ac(VHT80) - Emission (Ch 155)
Radiated Spurious Emission, Horizontal



TX, 802.11ac(VHT80) - Emission (Ch 155)
Radiated Spurious Emission, Vertical



Below 1 GHz

Mode	802.11ac(VHT20)	Channel	100
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		55.22	40.31	-12.25	28.06	40	-11.94	PK
		134.76	54.37	-16.96	37.41	43.5	-6.09	PK
		145.43	51.95	-16.91	35.04	43.5	-8.46	PK
		217.21	53.1	-13.35	39.75	46	-6.25	QP
		237.58	57.69	-11.81	45.88	46	-0.12	QP
		373.38	39.69	-8.19	31.5	46	-14.5	PK
Vertical		35.82	50.77	-14.81	35.96	40	-4.04	QP
		56.19	49.56	-12.26	37.3	40	-2.7	QP
		135.73	49.02	-17	32.02	43.5	-11.48	PK
		237.58	50.18	-11.81	38.37	46	-7.63	PK
		403.45	40.57	-7.26	33.31	46	-12.69	PK
		439.34	39.23	-6.32	32.91	46	-13.09	PK

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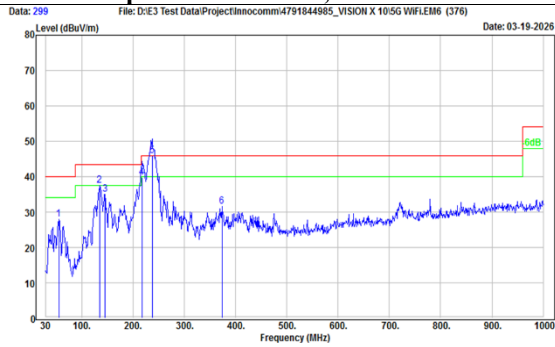
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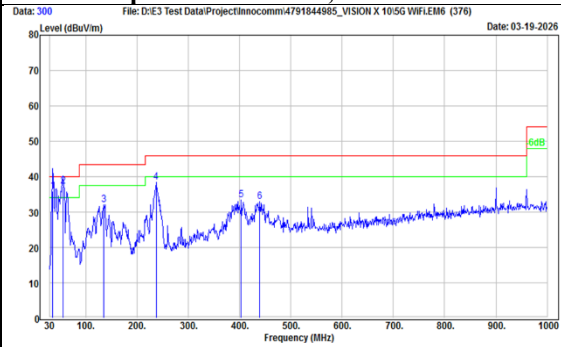
TX, 802.11ac(VHT20) (Ch 100)

Radiated Spurious Emission, Horizontal



TX, 802.11ac(VHT20) (Ch 100)

Radiated Spurious Emission, Vertical



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Doc No: Form-ULID-004739 (DCS:17-EM-F0878) / 6.1

9 kHz ~ 30 MHz Data:

For 9 kHz to 30 MHz radiated emission have performed all modes of operation were investigated. The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

No non-compliance noted:

KDB 414788 D01 OATS and Chamber Correlation Justification

- Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

- OATs and chamber correlation testing had been performed and chamber measured test results is the worst case test result.

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

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9.8. AC Power Line Conducted Emission

Requirements

Frequency (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note:

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

Test Procedures

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.
2. All modes of operation were investigated (includes all external accessories) and the worst-case emissions are reported, the other emission levels were low against the limit.
3. Test data of Result value (dB μ V) = Reading value (dB μ V) + Correction Factor (dB).
4. Test data of Margin(dB) = Result value (dB μ V) - Limit value (dB μ V).
5. Test data of Correction Factor (dB) = Insertion loss(dB) + Cable loss(dB).

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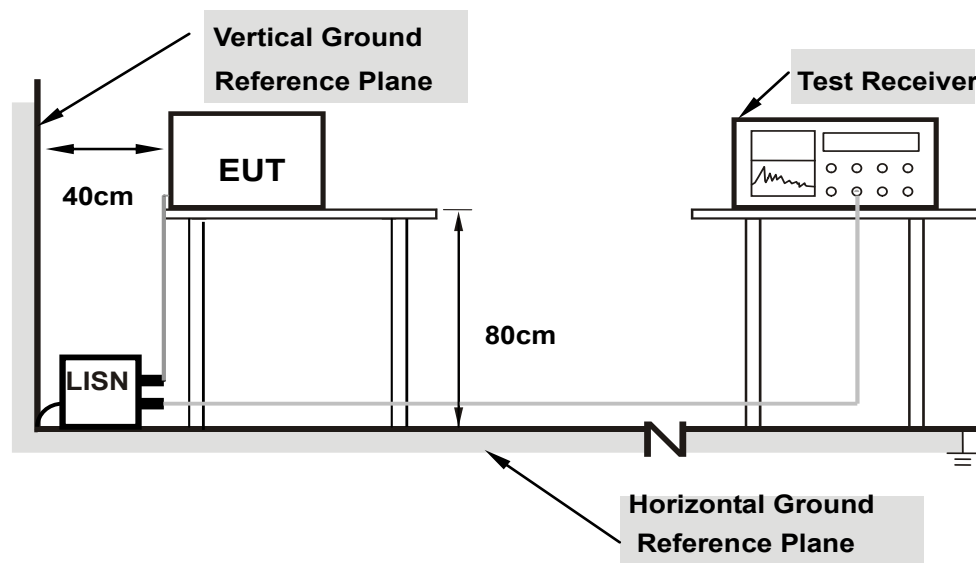
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Test Setup

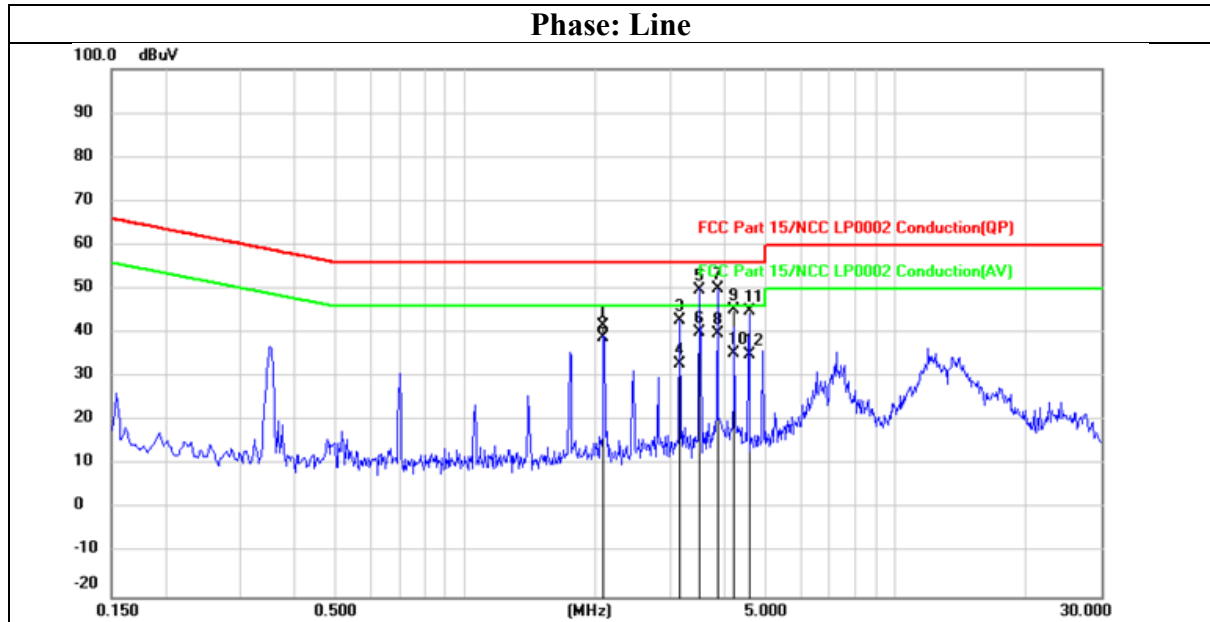


Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the Setup Configurations.

Test Data

Mode	11ac40_TX5795	Channel	159
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2.1012	31.45	10.09	41.54	56.00	-14.46	QP
2	2.1012	28.76	10.09	38.85	46.00	-7.15	AVG
3	3.1520	32.83	10.13	42.96	56.00	-13.04	QP
4	3.1520	22.97	10.13	33.10	46.00	-12.90	AVG
5	3.5024	39.70	10.14	49.84	56.00	-6.16	QP
6	3.5024	29.90	10.14	40.04	46.00	-5.96	AVG
7	3.8529	39.86	10.16	50.02	56.00	-5.98	QP
8	3.8529	29.83	10.16	39.99	46.00	-6.01	AVG
9	4.2032	35.06	10.16	45.22	56.00	-10.78	QP
10	4.2032	25.31	10.16	35.47	46.00	-10.53	AVG
11	4.5538	34.89	10.18	45.07	56.00	-10.93	QP
12	4.5538	24.73	10.18	34.91	46.00	-11.09	AVG

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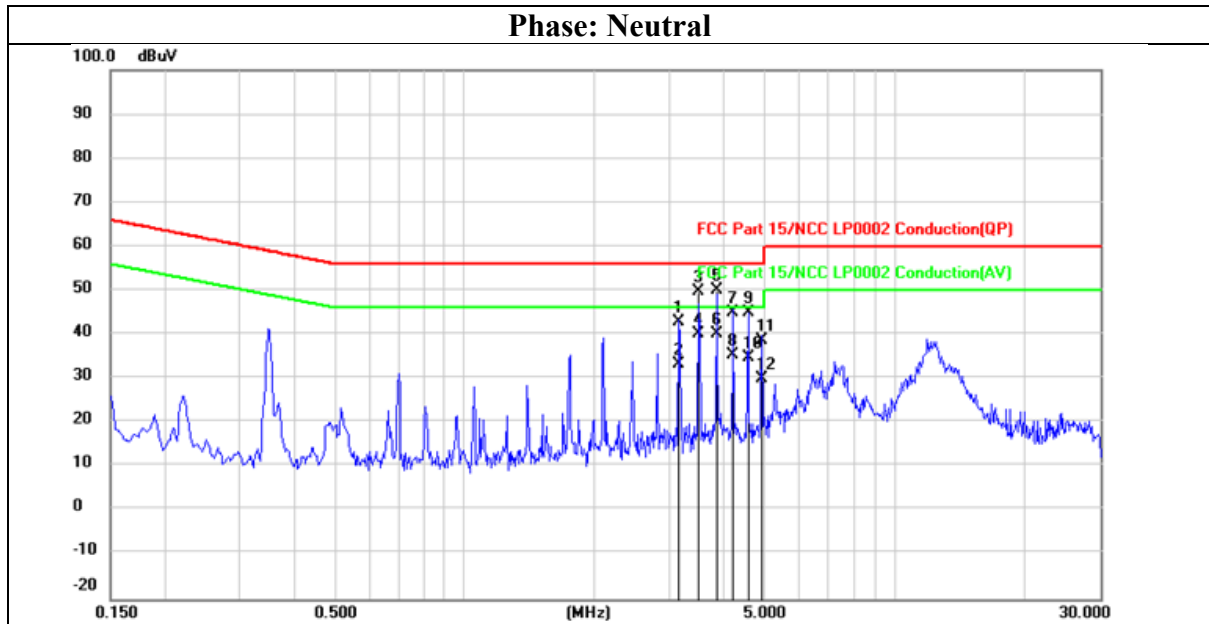
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Mode	11ac40_TX5795	Channel	159
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	3.1541	32.96	10.03	42.99	56.00	-13.01	QP
2	3.1541	23.23	10.03	33.26	46.00	-12.74	AVG
3	3.5047	39.86	10.03	49.89	56.00	-6.11	QP
4	3.5047	30.17	10.03	40.20	46.00	-5.80	AVG
5	3.8554	40.07	10.05	50.12	56.00	-5.88	QP
6	3.8554	30.09	10.05	40.14	46.00	-5.86	AVG
7	4.2060	35.04	10.05	45.09	56.00	-10.91	QP
8	4.2060	25.37	10.05	35.42	46.00	-10.58	AVG
9	4.5566	34.89	10.07	44.96	56.00	-11.04	QP
10	4.5566	24.59	10.07	34.66	46.00	-11.34	AVG
11	4.9071	28.71	10.07	38.78	56.00	-17.22	QP
12	4.9071	19.85	10.07	29.92	46.00	-16.08	AVG

END OF REPORT

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