

Mode	802.11n(HT20)	Channel	2
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2389.04	42.86	20.83	63.69	74	-10.31	PK
		2389.61	32.59	20.83	53.42	54	-0.58	AVG
	@	2417	91.07	20.73	111.8	N/A	N/A	PK
	@	2417	83.48	20.73	104.21	N/A	N/A	AVG
Vertical		2389.04	30.74	20.83	51.57	54	-2.43	AVG
		2389.99	42.4	20.83	63.23	74	-10.77	PK
	@	2417	86.46	20.73	107.19	N/A	N/A	PK
	@	2417	78.64	20.73	99.37	N/A	N/A	AVG

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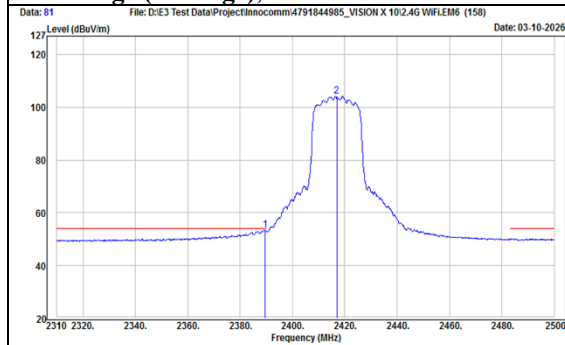
Building A, B and E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Telephone :+886-2-7737-3000

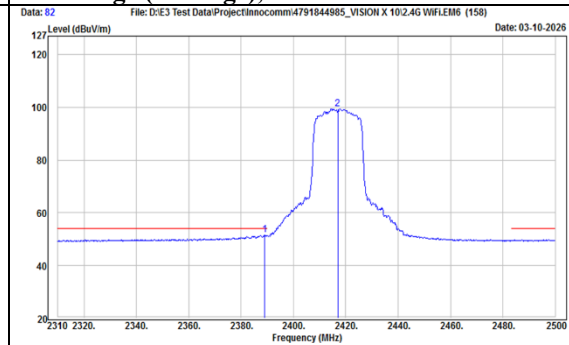
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Doc No: Form-ULID-004737 (DCS:17-EM-F0876) / 7.0

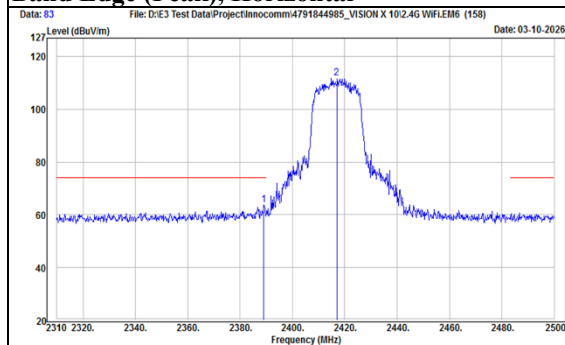
TX, 802.11n(HT20) (Ch 2)
Band Edge (Average), Horizontal



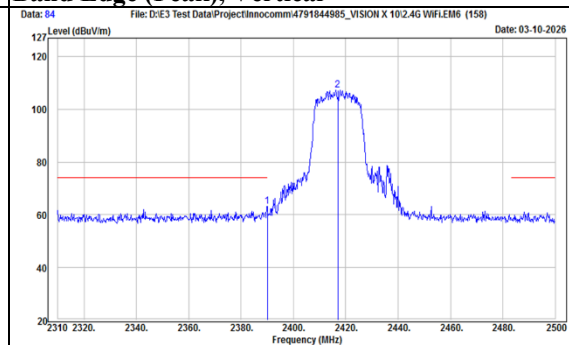
TX, 802.11n(HT20) (Ch 2)
Band Edge (Average), Vertical



TX, 802.11n(HT20) (Ch 2)
Band Edge (Peak), Horizontal



TX, 802.11n(HT20) (Ch 2)
Band Edge (Peak), Vertical



Mode	802.11n(HT20)	Channel	6
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2385.62	41.67	20.84	62.51	74	-11.49	PK
		2389.99	31.24	20.83	52.07	54	-1.93	AVG
	@	2437	94.68	20.65	115.33	N/A	N/A	PK
	@	2437	87.64	20.65	108.29	N/A	N/A	AVG
		2484.04	32.26	20.65	52.91	54	-1.09	AVG
		2486.89	43.78	20.66	64.44	74	-9.56	PK
Vertical		2387.33	40.36	20.84	61.2	74	-12.8	PK
		2389.99	29.51	20.83	50.34	54	-3.66	AVG
	@	2437	89.76	20.65	110.41	N/A	N/A	PK
	@	2437	83.52	20.65	104.17	N/A	N/A	AVG
		2483.66	42.27	20.65	62.92	74	-11.08	PK
		2484.04	30.17	20.65	50.82	54	-3.18	AVG

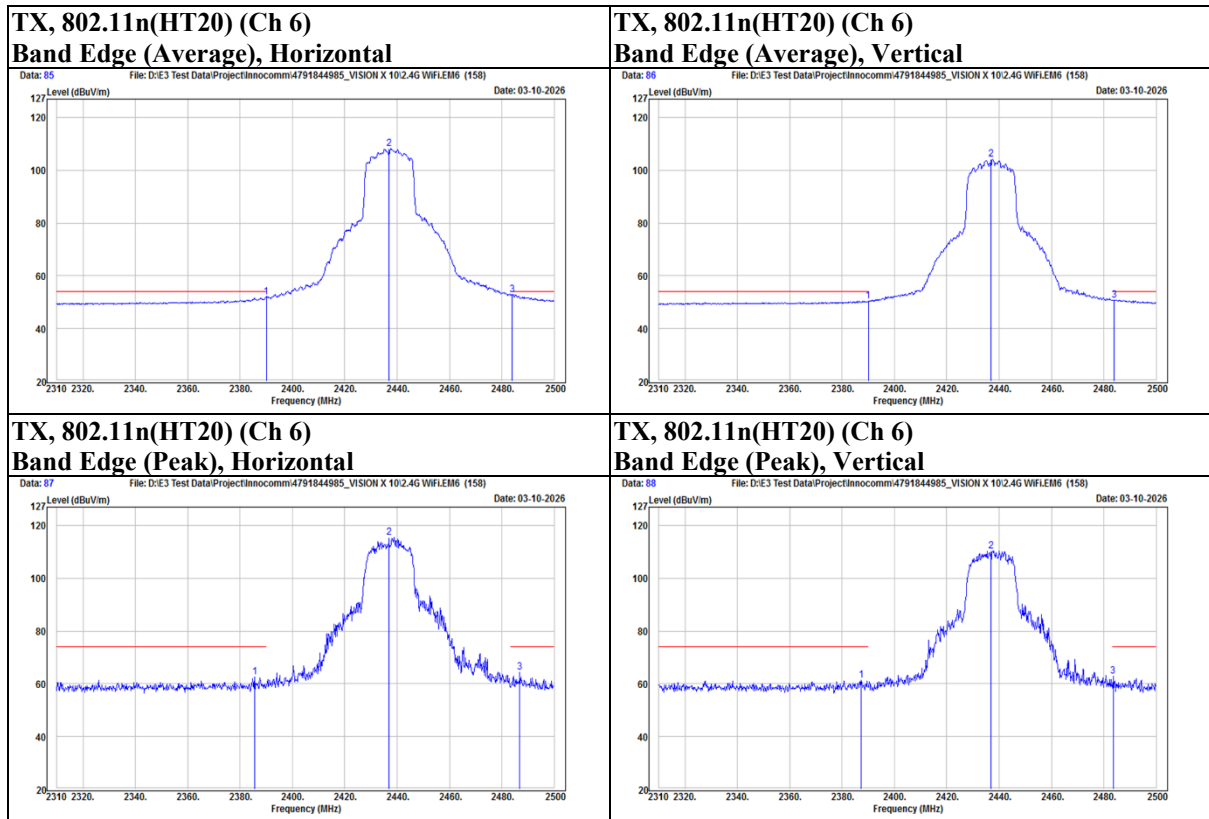
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Mode	802.11n(HT20)	Channel	10
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	@	2457	91.95	20.61	112.56	N/A	N/A	PK
	@	2457	84.38	20.61	104.99	N/A	N/A	AVG
		2483.66	32.77	20.65	53.42	54	-0.58	AVG
		2488.22	43.38	20.66	64.04	74	-9.96	PK
Vertical	@	2457	86.97	20.61	107.58	N/A	N/A	PK
	@	2457	79.87	20.61	100.48	N/A	N/A	AVG
		2484.99	30.55	20.65	51.2	54	-2.8	AVG
		2499.81	41.59	20.68	62.27	74	-11.73	PK

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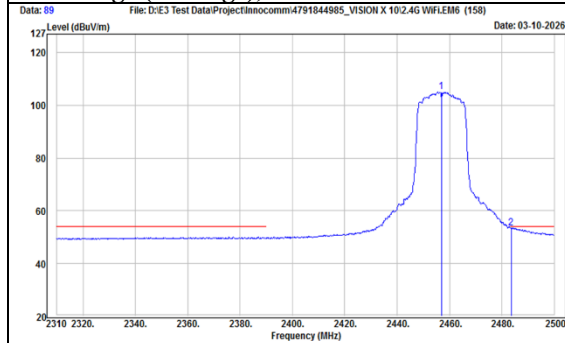
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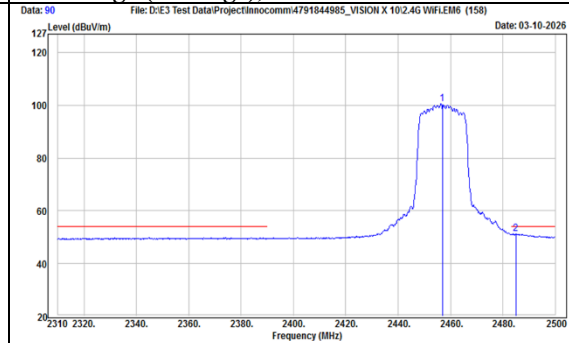
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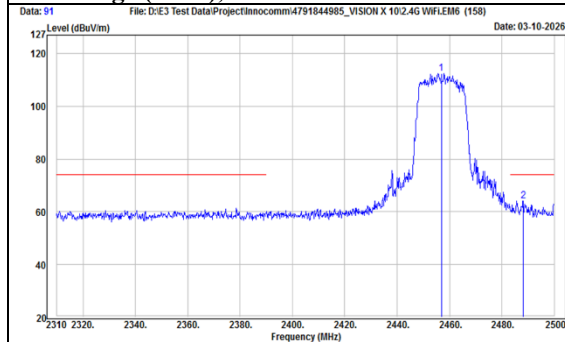
TX, 802.11n(HT20) (Ch 10)
Band Edge (Average), Horizontal



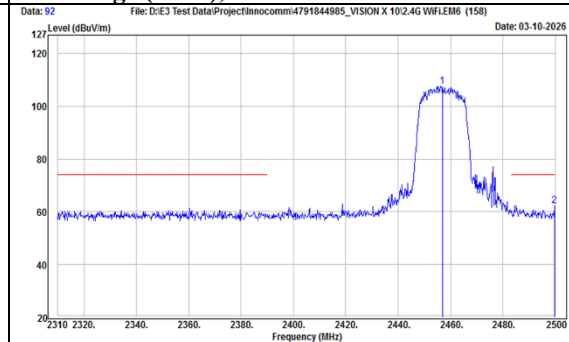
TX, 802.11n(HT20) (Ch 10)
Band Edge (Average), Vertical



TX, 802.11n(HT20) (Ch 10)
Band Edge (Peak), Horizontal



TX, 802.11n(HT20) (Ch 10)
Band Edge (Peak), Vertical



Mode	802.11n(HT20)	Channel	11
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	@	2462	91.79	20.62	112.41	N/A	N/A	PK
	@	2462	83.38	20.62	104	N/A	N/A	AVG
		2483.66	32.16	20.65	52.81	54	-1.19	AVG
		2486.89	46.65	20.66	67.31	74	-6.69	PK
Vertical	@	2462	86.09	20.62	106.71	N/A	N/A	PK
	@	2462	78.62	20.62	99.24	N/A	N/A	AVG
		2484.99	30.4	20.65	51.05	54	-2.95	AVG
		2486.13	45.79	20.65	66.44	74	-7.56	PK

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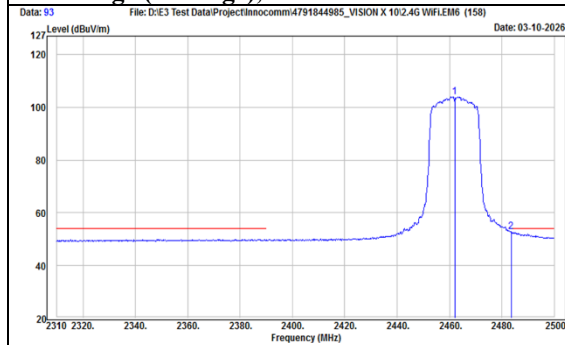
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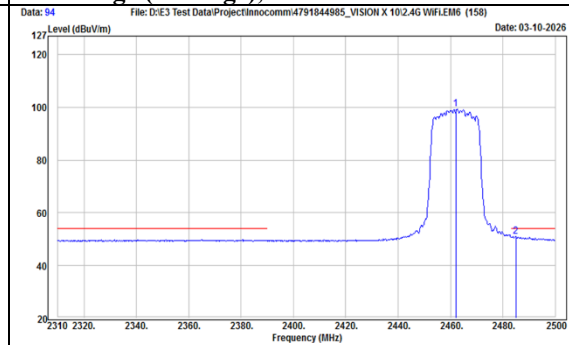
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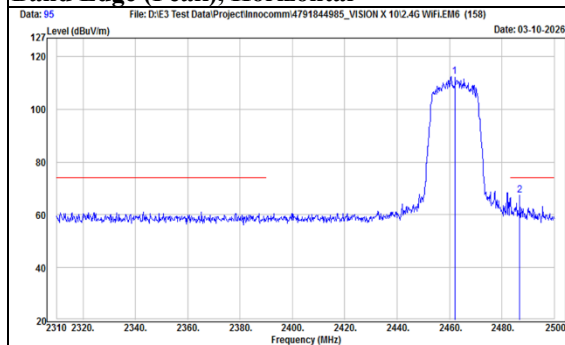
TX, 802.11n(HT20) (Ch 11)
Band Edge (Average), Horizontal



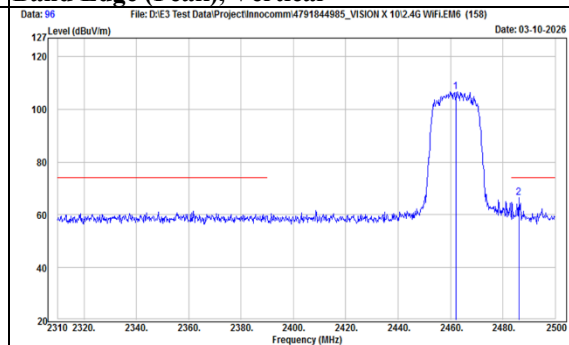
TX, 802.11n(HT20) (Ch 11)
Band Edge (Average), Vertical



TX, 802.11n(HT20) (Ch 11)
Band Edge (Peak), Horizontal



TX, 802.11n(HT20) (Ch 11)
Band Edge (Peak), Vertical



Mode	802.11n(HT40)	Channel	3
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2389.04	32.69	20.83	53.52	54	-0.48	AVG
		2389.61	43.18	20.83	64.01	74	-9.99	PK
	@	2422	86.13	20.71	106.84	N/A	N/A	PK
	@	2422	78.18	20.71	98.89	N/A	N/A	AVG
Vertical		2343.06	40.95	20.91	61.86	74	-12.14	PK
		2389.61	30.61	20.83	51.44	54	-2.56	AVG
	@	2422	80.84	20.71	101.55	N/A	N/A	PK
	@	2422	73.44	20.71	94.15	N/A	N/A	AVG

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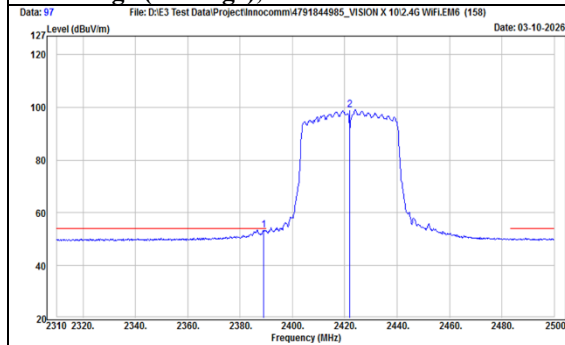
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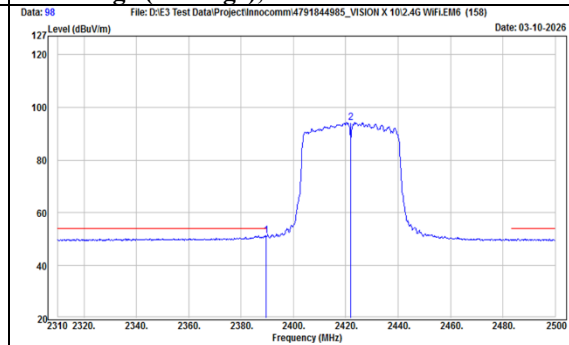
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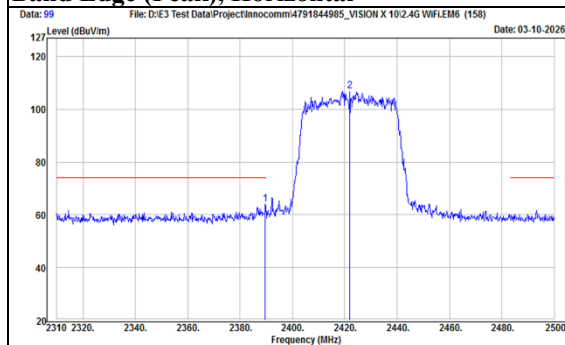
TX, 802.11n(HT40) (Ch 3)
Band Edge (Average), Horizontal



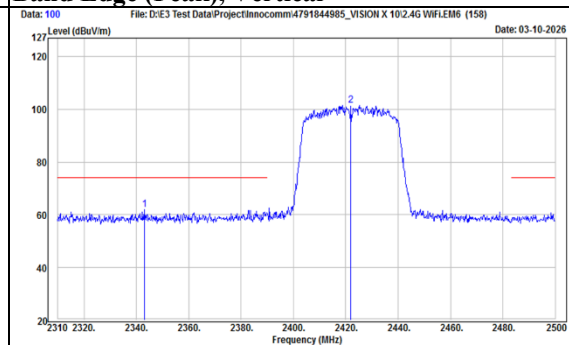
TX, 802.11n(HT40) (Ch 3)
Band Edge (Average), Vertical



TX, 802.11n(HT40) (Ch 3)
Band Edge (Peak), Horizontal



TX, 802.11n(HT40) (Ch 3)
Band Edge (Peak), Vertical



Mode	802.11n(HT40)	Channel	6
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2389.42	44.67	20.83	65.5	74	-8.5	PK
		2389.8	32.29	20.83	53.12	54	-0.88	AVG
	@	2437	88.5	20.65	109.15	N/A	N/A	PK
	@	2437	81.65	20.65	102.3	N/A	N/A	AVG
		2483.66	33.22	20.65	53.87	54	-0.13	AVG
		2489.74	43.55	20.66	64.21	74	-9.79	PK
Vertical		2376.88	41.14	20.86	62	74	-12	PK
		2389.04	30.79	20.83	51.62	54	-2.38	AVG
	@	2437	84.85	20.65	105.5	N/A	N/A	PK
	@	2437	77.03	20.65	97.68	N/A	N/A	AVG
		2484.61	31.38	20.65	52.03	54	-1.97	AVG
		2491.45	40.43	20.66	61.09	74	-12.91	PK

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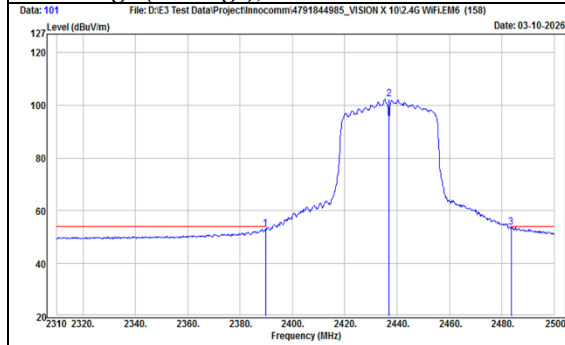
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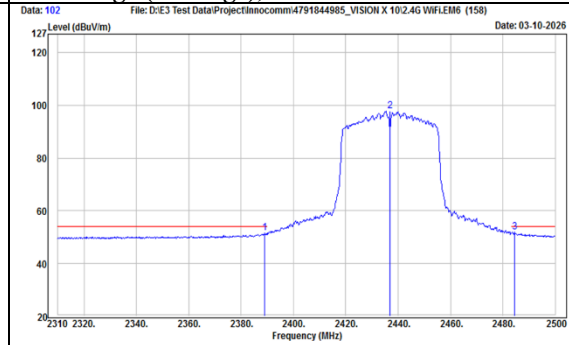
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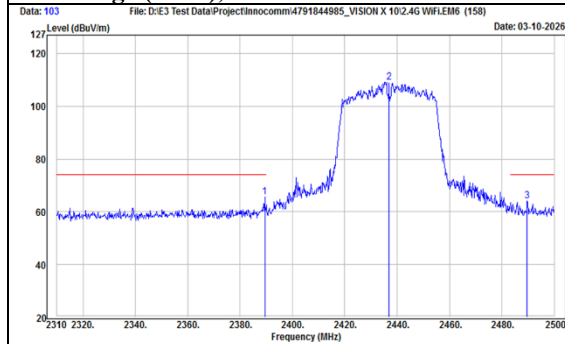
TX, 802.11n(HT40) (Ch 6)
Band Edge (Average), Horizontal



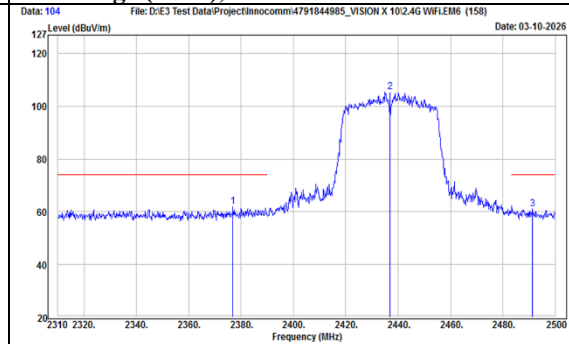
TX, 802.11n(HT40) (Ch 6)
Band Edge (Average), Vertical



TX, 802.11n(HT40) (Ch 6)
Band Edge (Peak), Horizontal



TX, 802.11n(HT40) (Ch 6)
Band Edge (Peak), Vertical



Mode	802.11n(HT40)	Channel	9
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	@	2452	87.4	20.6	108	N/A	N/A	PK
	@	2452	78.84	20.6	99.44	N/A	N/A	AVG
		2484.23	32.55	20.65	53.2	54	-0.8	AVG
		2486.13	42.13	20.65	62.78	74	-11.22	PK
Vertical	@	2452	81.9	20.6	102.5	N/A	N/A	PK
	@	2452	74.45	20.6	95.05	N/A	N/A	AVG
		2483.85	30.58	20.65	51.23	54	-2.77	AVG
		2491.64	40.29	20.66	60.95	74	-13.05	PK

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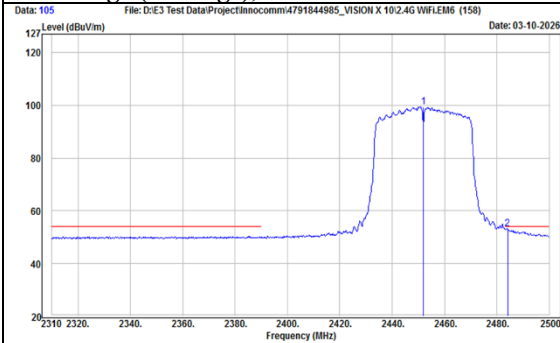
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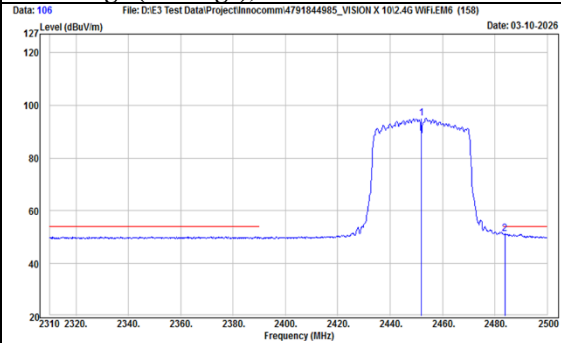
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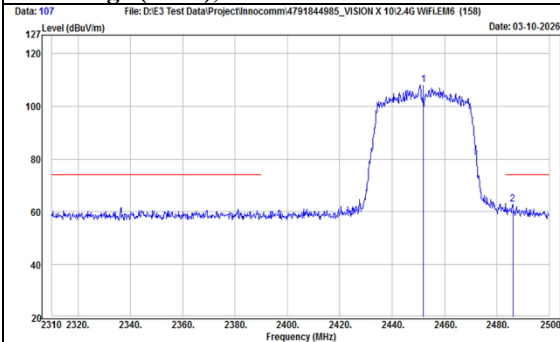
TX, 802.11n(HT40) (Ch 9)
Band Edge (Average), Horizontal



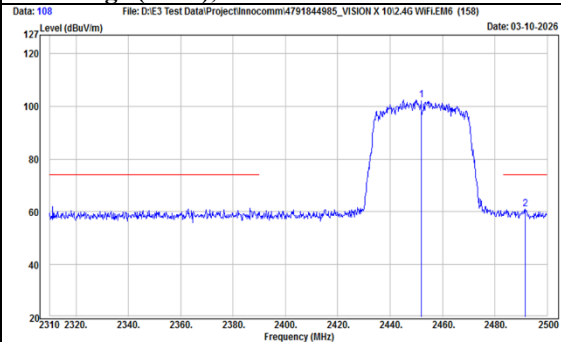
TX, 802.11n(HT40) (Ch 9)
Band Edge (Average), Vertical



TX, 802.11n(HT40) (Ch 9)
Band Edge (Peak), Horizontal



TX, 802.11n(HT40) (Ch 9)
Band Edge (Peak), Vertical



Below 1 GHz

Mode	802.11b	Channel	6
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		56.19	41.49	-12.26	29.23	40	-10.77	PK
		134.76	55.82	-16.96	38.86	43.5	-4.64	PK
		145.43	51.47	-16.91	34.56	43.5	-8.94	PK
		216.24	53.2	-13.39	39.81	46	-6.19	QP
		237.58	57.71	-11.81	45.9	46	-0.1	QP
		576.11	41.5	-3.92	37.58	46	-8.42	PK
Vertical		35.82	50.7	-14.81	35.89	40	-4.11	QP
		55.22	49.5	-12.25	37.25	40	-2.75	QP
		62.98	49.22	-14.06	35.16	40	-4.84	PK
		135.73	48.71	-17	31.71	43.5	-11.79	PK
		235.64	49.2	-11.97	37.23	46	-8.77	PK
		396.66	40.68	-7.38	33.3	46	-12.7	PK

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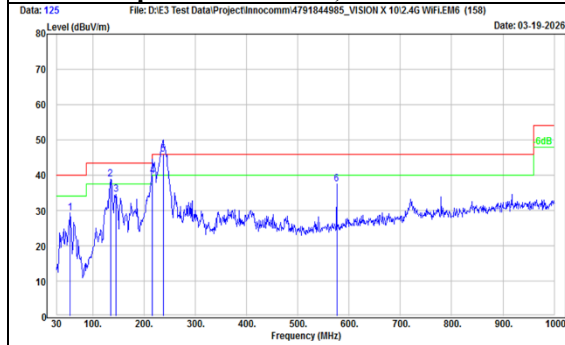
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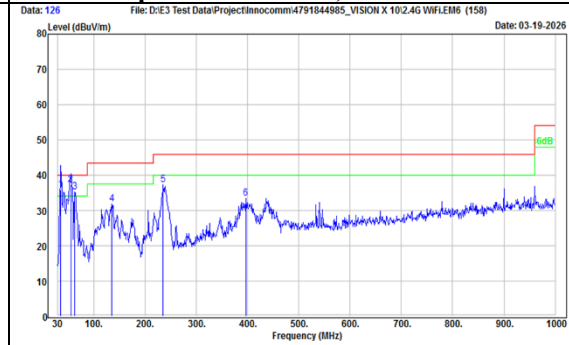
TX, 802.11b (Ch 6)

Radiated Spurious Emission, Horizontal



TX, 802.11b (Ch 6)

Radiated Spurious Emission, Vertical



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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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9.6. 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:

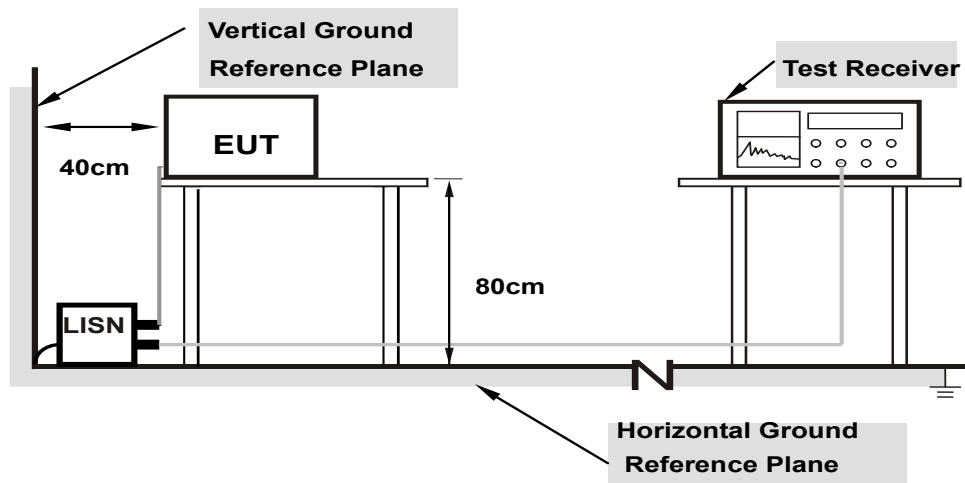
1. The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.
2. All modes of operation were investigated (includes all external accessories) and the worst-case emissions are reported, the other emission levels 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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Test Setup

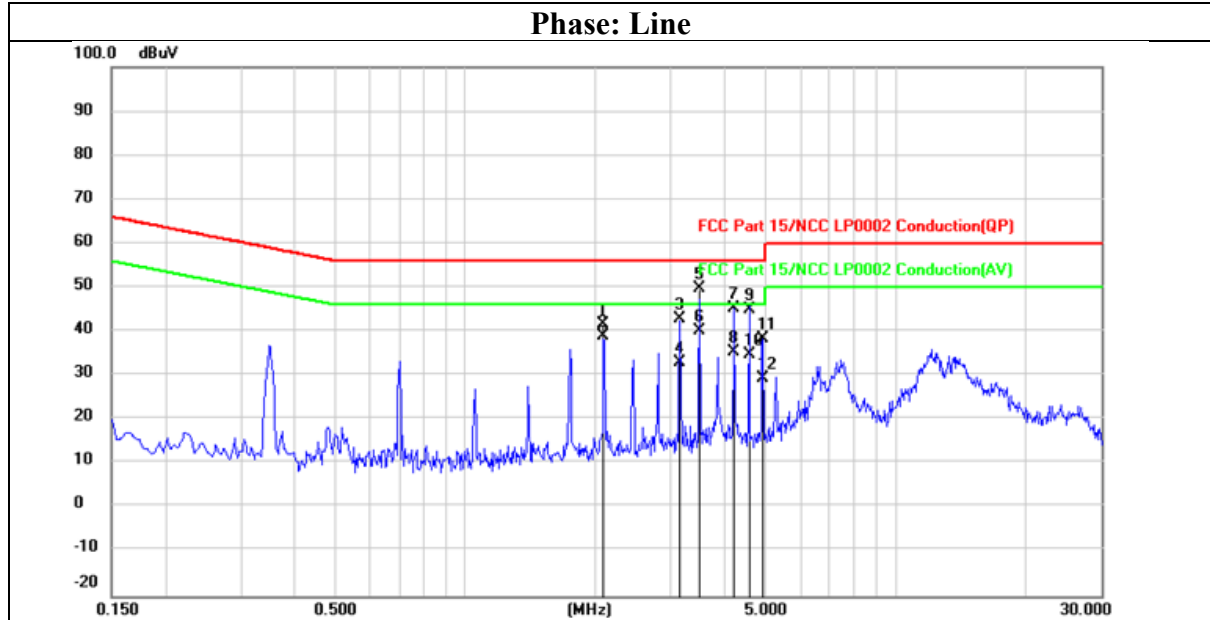


Note: 1.Support units were connected to second LISN.

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

Test Data

Mode	11g_TX2437	Channel	6
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2.1002	31.49	10.09	41.58	56.00	-14.42	QP
2	2.1002	28.82	10.09	38.91	46.00	-7.09	AVG
3	3.1505	32.77	10.13	42.90	56.00	-13.10	QP
4	3.1505	22.91	10.13	33.04	46.00	-12.96	AVG
5	3.5008	39.69	10.14	49.83	56.00	-6.17	QP
6	3.5008	29.88	10.14	40.02	46.00	-5.98	AVG
7	4.2012	35.06	10.16	45.22	56.00	-10.78	QP
8	4.2012	25.27	10.16	35.43	46.00	-10.57	AVG
9	4.5516	34.91	10.18	45.09	56.00	-10.91	QP
10	4.5516	24.72	10.18	34.90	46.00	-11.10	AVG
11	4.9020	28.28	10.19	38.47	56.00	-17.53	QP
12	4.9020	19.21	10.19	29.40	46.00	-16.60	AVG

Underwriters Laboratories Taiwan Co., Ltd.

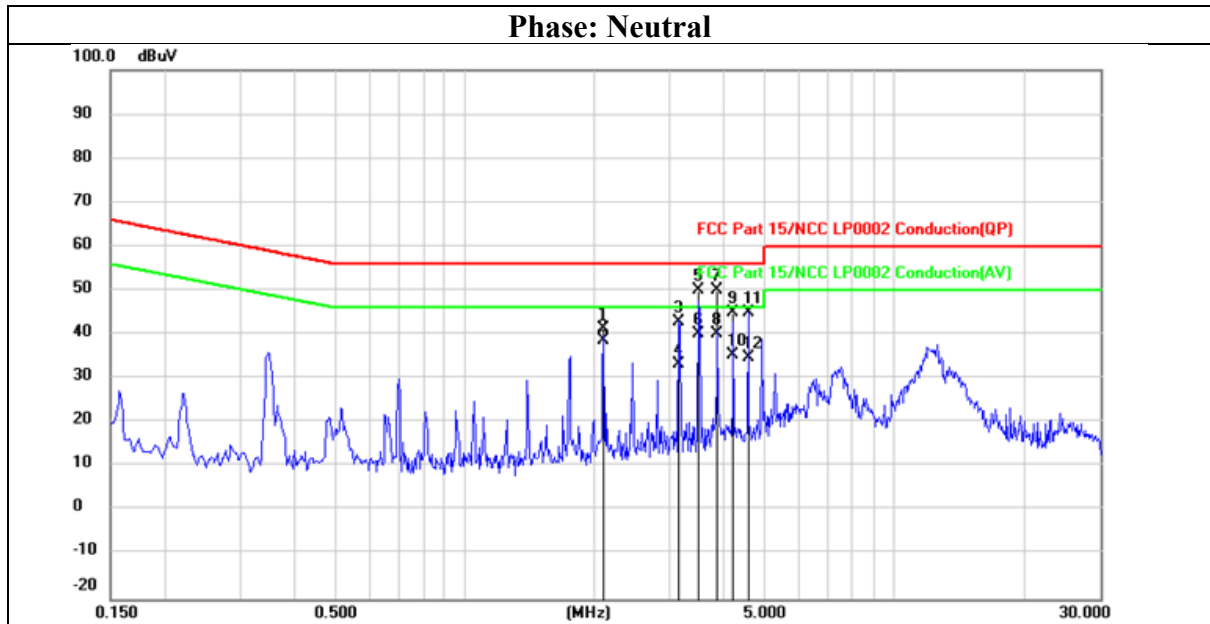
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Mode	11g_TX2437	Channel	6
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2.1034	31.48	10.00	41.48	56.00	-14.52	QP
2	2.1034	28.54	10.00	38.54	46.00	-7.46	AVG
3	3.1552	32.97	10.03	43.00	56.00	-13.00	QP
4	3.1552	23.21	10.03	33.24	46.00	-12.76	AVG
5	3.5058	39.88	10.03	49.91	56.00	-6.09	QP
6	3.5058	30.19	10.03	40.22	46.00	-5.78	AVG
7	3.8565	40.00	10.05	50.05	56.00	-5.95	QP
8	3.8565	30.07	10.05	40.12	46.00	-5.88	AVG
9	4.2073	34.98	10.05	45.03	56.00	-10.97	QP
10	4.2073	25.35	10.05	35.40	46.00	-10.60	AVG
11	4.5580	34.86	10.07	44.93	56.00	-11.07	QP
12	4.5580	24.59	10.07	34.66	46.00	-11.34	AVG

END OF REPORT

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