

Test Data

Above 1 GHz

Mode	GFSK	Channel	0
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2338.69	31.64	12.71	44.35	54	-9.65	AVG
		2379.16	41.95	12.54	54.49	74	-19.51	PK
	@	2402	91.7	12.43	104.13	N/A	N/A	PK
	@	2402	91.47	12.43	103.9	N/A	N/A	AVG
	*	4804	41.9	2.88	44.78	74	-29.22	PK
Vertical		2318.74	29.79	12.79	42.58	54	-11.42	AVG
		2335.27	42.87	12.72	55.59	74	-18.41	PK
	@	2402	103.82	12.43	116.25	N/A	N/A	PK
	@	2402	103.81	12.43	116.24	N/A	N/A	AVG
	*	4804	40.22	2.88	43.1	74	-30.9	PK

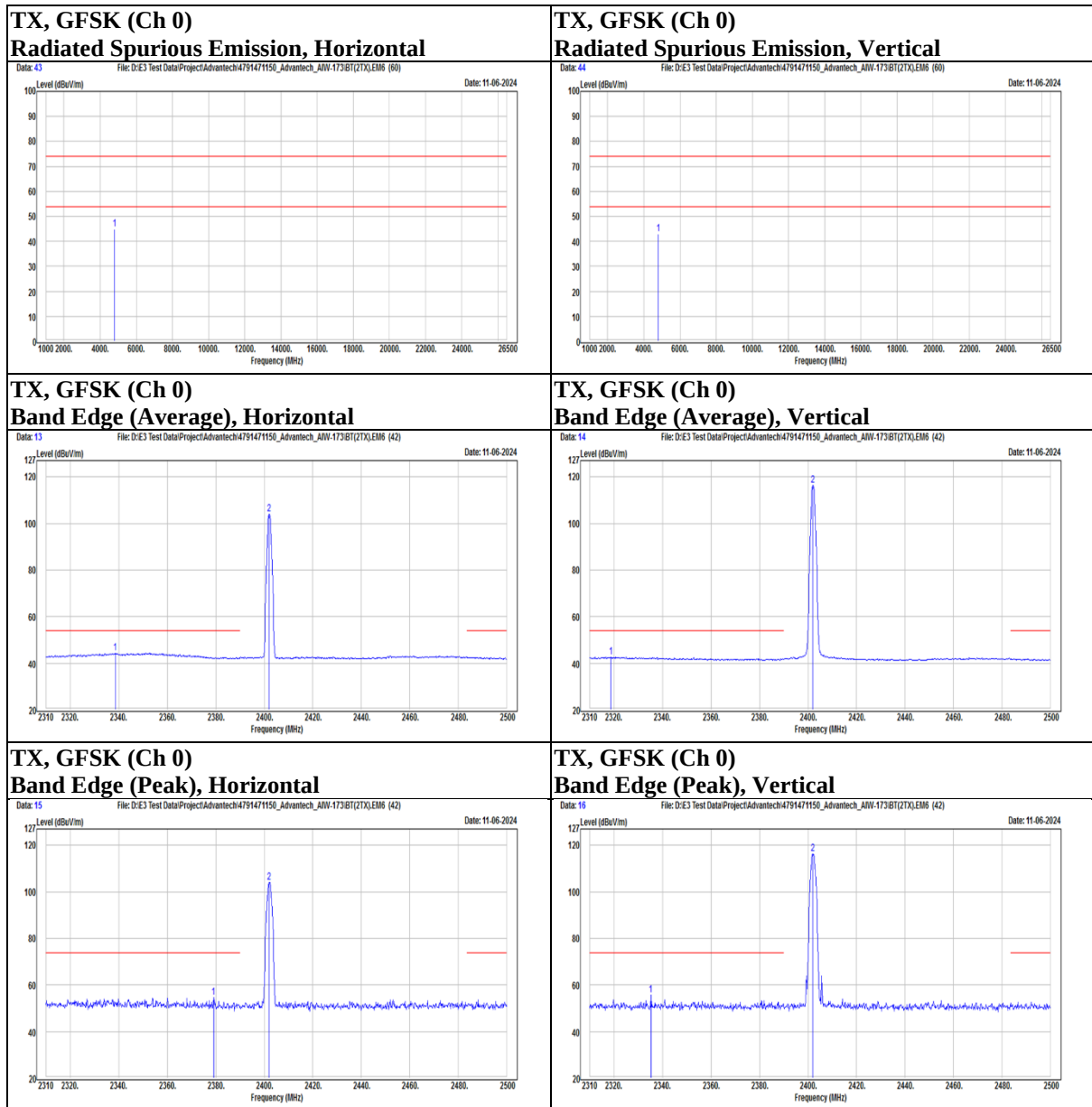
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Doc No: Form-ULID-004737 (DCS:17-EM-F0876) / 6.1



Mode	GFSK	Channel	39
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2334.7	41.67	12.72	54.39	74	-19.61	PK
		2348.57	31.53	12.66	44.19	54	-9.81	AVG
	@	2441	91.38	12.18	103.56	N/A	N/A	PK
	@	2441	91.11	12.18	103.29	N/A	N/A	AVG
		2487.46	30.11	12.41	42.52	54	-11.48	AVG
		2500	41.38	12.51	53.89	74	-20.11	PK
	*	4882	40.11	3.06	43.17	74	-30.83	PK
	*	7323	33.05	11.27	44.32	74	-29.68	PK
Vertical		2313.23	41.05	12.81	53.86	74	-20.14	PK
		2316.08	29.88	12.8	42.68	54	-11.32	AVG
	@	2441	103.23	12.18	115.41	N/A	N/A	PK
	@	2441	102.85	12.18	115.03	N/A	N/A	AVG
		2489.36	29.55	12.43	41.98	54	-12.02	AVG
		2495.06	39.88	12.47	52.35	74	-21.65	PK
	*	4882	37.89	3.06	40.95	74	-33.05	PK
	*	7323	33.13	11.27	44.4	74	-29.6	PK

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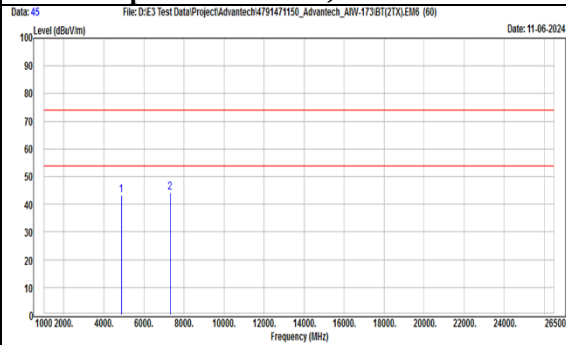
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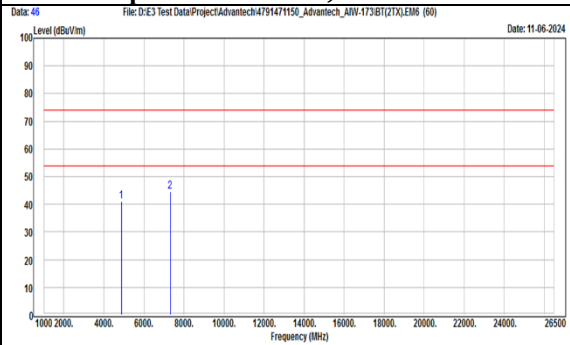
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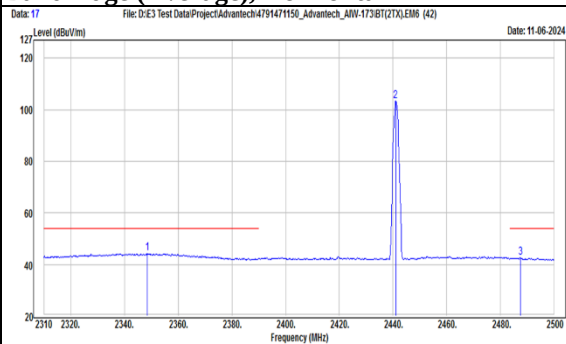
TX, GFSK (Ch 39)
Radiated Spurious Emission, Horizontal



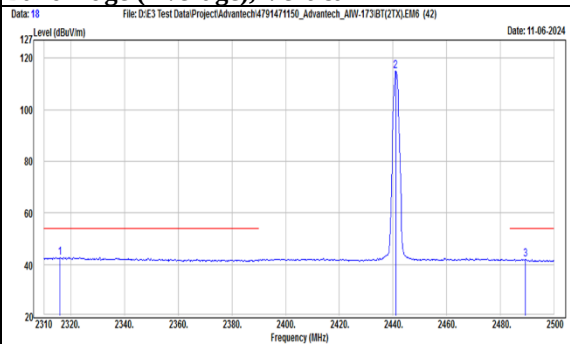
TX, GFSK (Ch 39)
Radiated Spurious Emission, Vertical



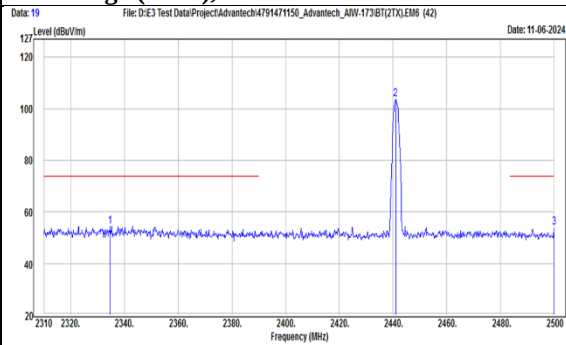
TX, GFSK (Ch 39)
Band Edge (Average), Horizontal



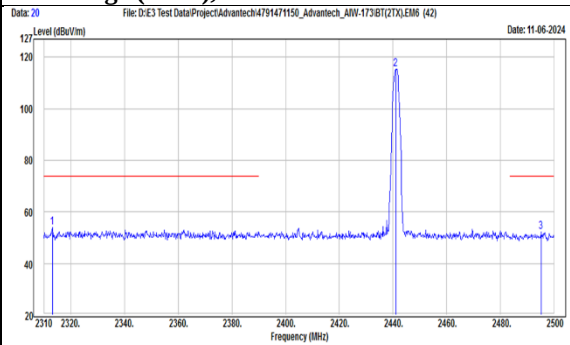
TX, GFSK (Ch 39)
Band Edge (Average), Vertical



TX, GFSK (Ch 39)
Band Edge (Peak), Horizontal



TX, GFSK (Ch 39)
Band Edge (Peak), Vertical



Mode	GFSK	Channel	78
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	@	2480	91.27	12.35	103.62	N/A	N/A	PK
	@	2480	91.06	12.35	103.41	N/A	N/A	AVG
		2484.61	30.23	12.39	42.62	54	-11.38	AVG
		2487.84	40.44	12.42	52.86	74	-21.14	PK
	*	4960	37.98	3.2	41.18	74	-32.82	PK
	*	7440	32.44	11.17	43.61	74	-30.39	PK
Vertical	@	2480	102.39	12.35	114.74	N/A	N/A	PK
	@	2480	102.26	12.35	114.61	N/A	N/A	AVG
		2483.66	29.99	12.38	42.37	54	-11.63	AVG
		2496.01	41.84	12.48	54.32	74	-19.68	PK
	*	4960	38.44	3.2	41.64	74	-32.36	PK
	*	7440	31.8	11.17	42.97	74	-31.03	PK

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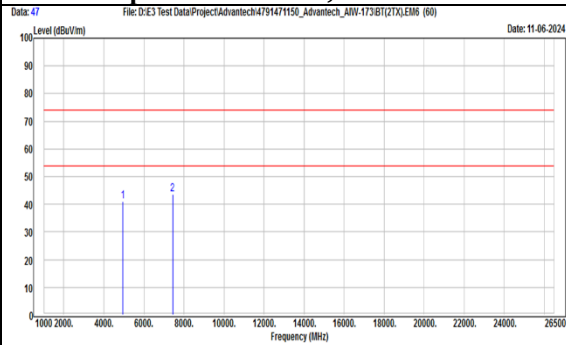
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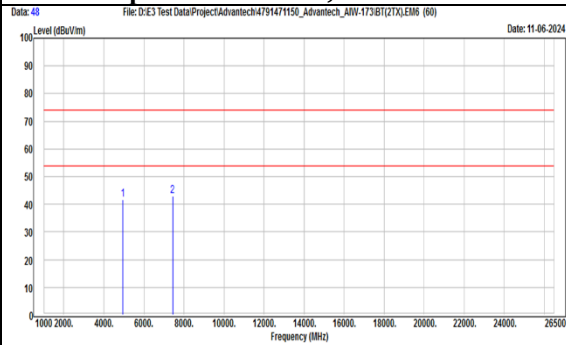
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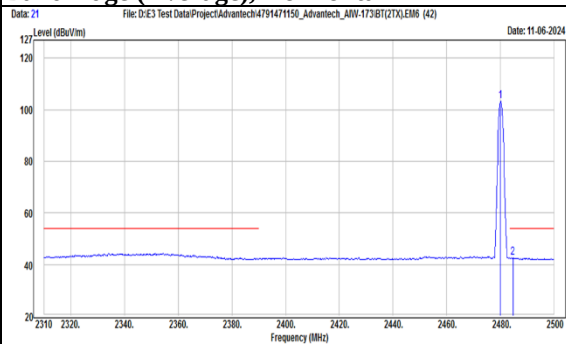
TX, GFSK (Ch 78)
Radiated Spurious Emission, Horizontal



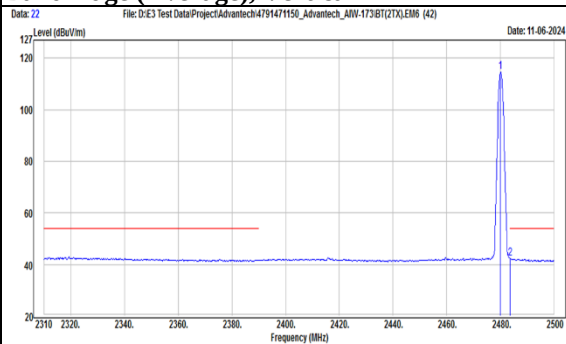
TX, GFSK (Ch 78)
Radiated Spurious Emission, Vertical



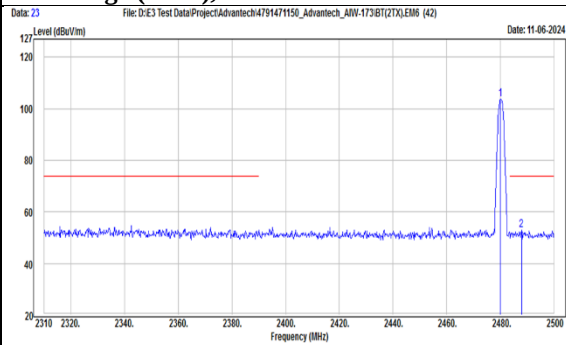
TX, GFSK (Ch 78)
Band Edge (Average), Horizontal



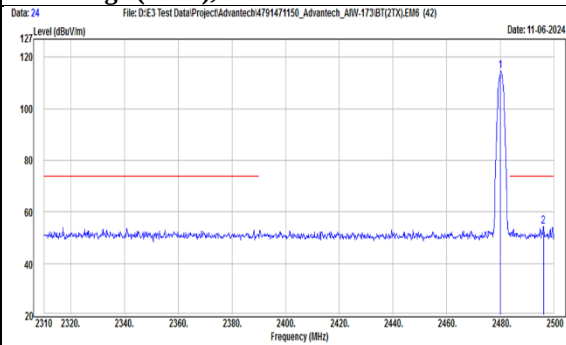
TX, GFSK (Ch 78)
Band Edge (Average), Vertical



TX, GFSK (Ch 78)
Band Edge (Peak), Horizontal



TX, GFSK (Ch 78)
Band Edge (Peak), Vertical



Mode	8DPSK	Channel	0
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2331.47	42.98	12.74	55.72	74	-18.28	PK
		2337.17	31.65	12.72	44.37	54	-9.63	AVG
	@	2402	89.36	12.43	101.79	N/A	N/A	PK
	@	2402	87.54	12.43	99.97	N/A	N/A	AVG
	*	4804	41.31	2.88	44.19	74	-29.81	PK
Vertical		2323.11	29.94	12.77	42.71	54	-11.29	AVG
		2356.74	40.36	12.63	52.99	74	-21.01	PK
	@	2402	102.94	12.43	115.37	N/A	N/A	PK
	@	2402	100.09	12.43	112.52	N/A	N/A	AVG
	*	4804	37.92	2.88	40.8	74	-33.2	PK

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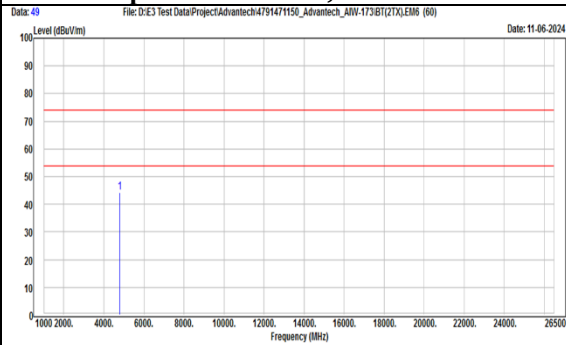
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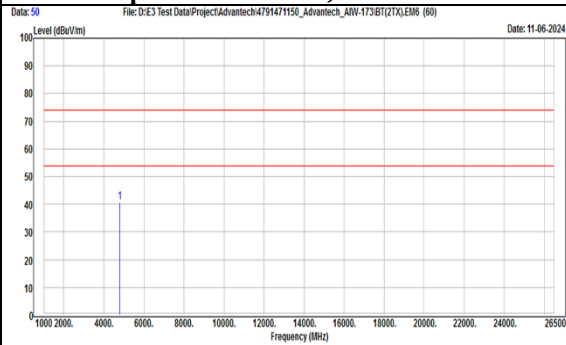
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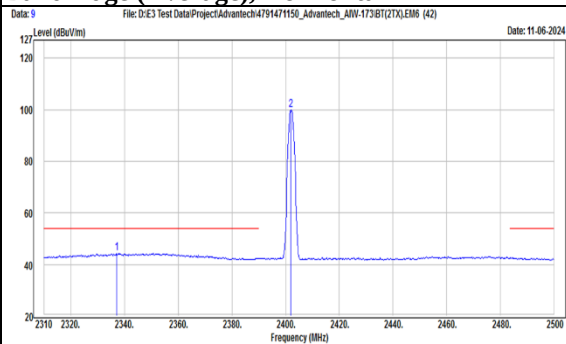
TX, 8DPSK (Ch 0)
Radiated Spurious Emission, Horizontal



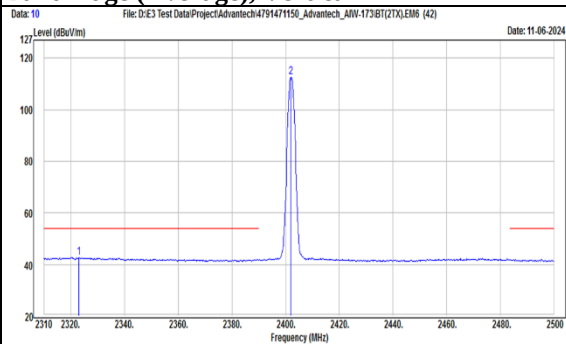
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Radiated Spurious Emission, Vertical



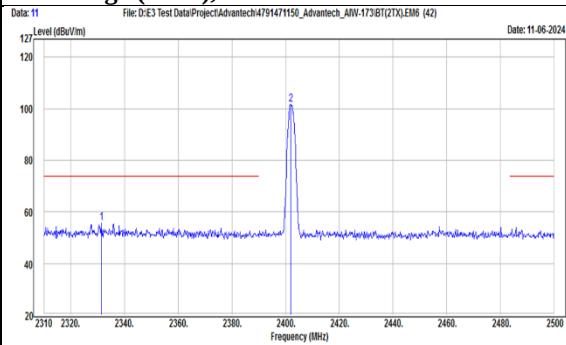
TX, 8DPSK (Ch 0)
Band Edge (Average), Horizontal



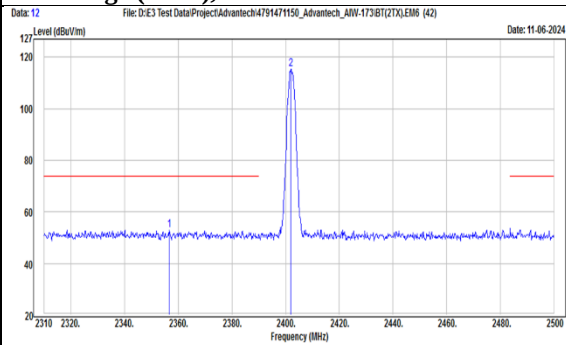
TX, 8DPSK (Ch 0)
Band Edge (Average), Vertical



TX, 8DPSK (Ch 0)
Band Edge (Peak), Horizontal



TX, 8DPSK (Ch 0)
Band Edge (Peak), Vertical



Mode	8DPSK	Channel	39
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2337.93	31.6	12.71	44.31	54	-9.69	AVG
		2367.95	42.33	12.58	54.91	74	-19.09	PK
	@	2441	90.37	12.18	102.55	N/A	N/A	PK
	@	2441	88.32	12.18	100.5	N/A	N/A	AVG
		2485.18	42.17	12.39	54.56	74	-19.44	PK
		2488.79	30.2	12.42	42.62	54	-11.38	AVG
	*	4882	40.51	3.06	43.57	74	-30.43	PK
	*	7323	33.04	11.27	44.31	74	-29.69	PK
Vertical		2316.08	29.91	12.8	42.71	54	-11.29	AVG
		2357.12	40.72	12.63	53.35	74	-20.65	PK
	@	2441	102.62	12.18	114.8	N/A	N/A	PK
	@	2441	99.6	12.18	111.78	N/A	N/A	AVG
		2483.85	29.56	12.38	41.94	54	-12.06	AVG
		2496.2	42.01	12.48	54.49	74	-19.51	PK
	*	4882	38.34	3.06	41.4	74	-32.6	PK
	*	7323	33.07	11.27	44.34	74	-29.66	PK

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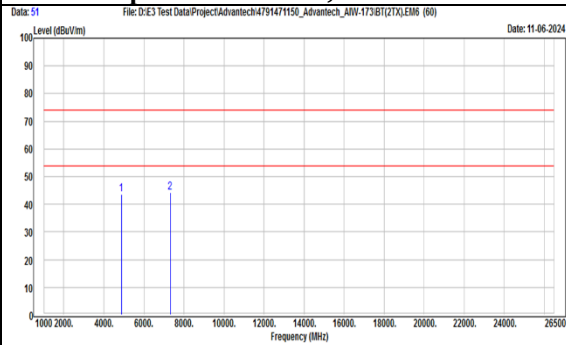
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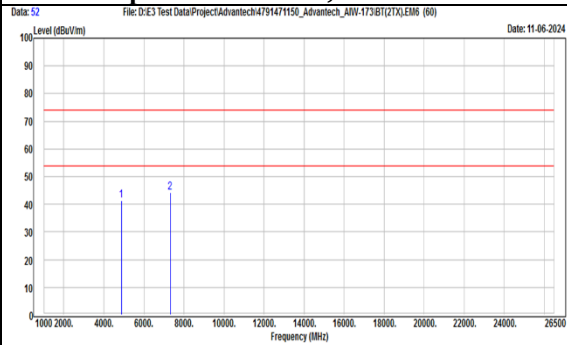
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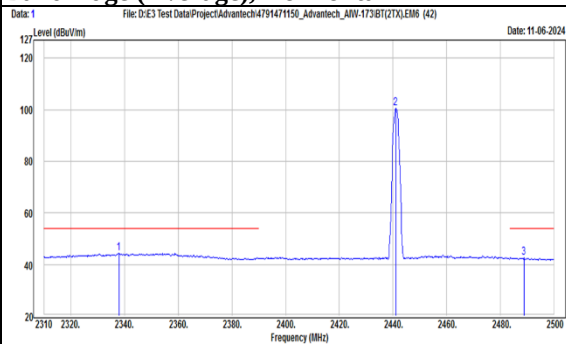
TX, 8DPSK (Ch 39)
Radiated Spurious Emission, Horizontal



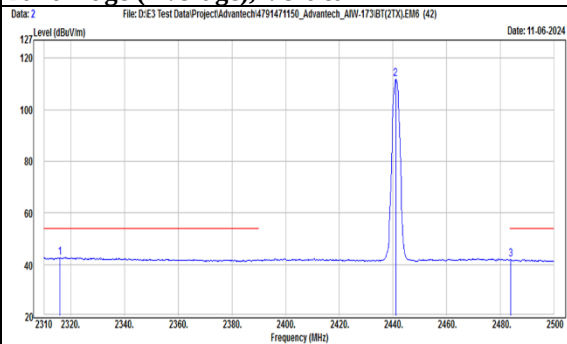
TX, 8DPSK (Ch 39)
Radiated Spurious Emission, Vertical



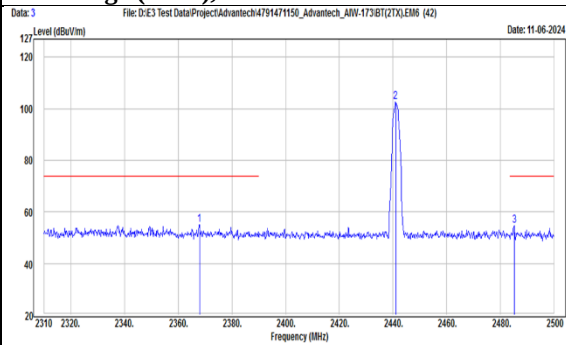
TX, 8DPSK (Ch 39)
Band Edge (Average), Horizontal



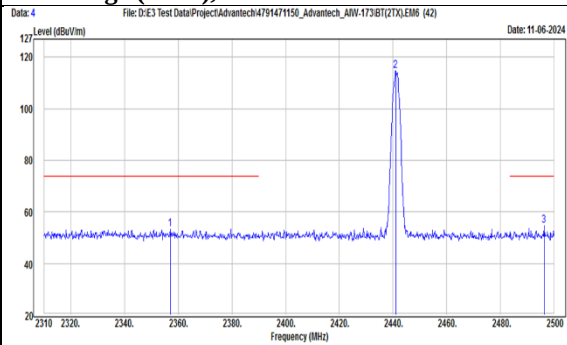
TX, 8DPSK (Ch 39)
Band Edge (Average), Vertical



TX, 8DPSK (Ch 39)
Band Edge (Peak), Horizontal



TX, 8DPSK (Ch 39)
Band Edge (Peak), Vertical



Mode	8DPSK	Channel	78
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	@	2480	89.13	12.35	101.48	N/A	N/A	PK
	@	2480	87.56	12.35	99.91	N/A	N/A	AVG
		2483.66	30.7	12.38	43.08	54	-10.92	AVG
		2484.04	40.51	12.38	52.89	74	-21.11	PK
	*	4960	38.94	3.2	42.14	74	-31.86	PK
	*	7440	32.09	11.17	43.26	74	-30.74	PK
Vertical	@	2480	100.23	12.35	112.58	N/A	N/A	PK
	@	2480	98.14	12.35	110.49	N/A	N/A	AVG
		2483.66	45.37	12.38	57.75	74	-16.25	PK
		2483.66	33.65	12.38	46.03	54	-7.97	AVG
	*	4960	37.39	3.2	40.59	74	-33.41	PK
	*	7440	32.76	11.17	43.93	74	-30.07	PK

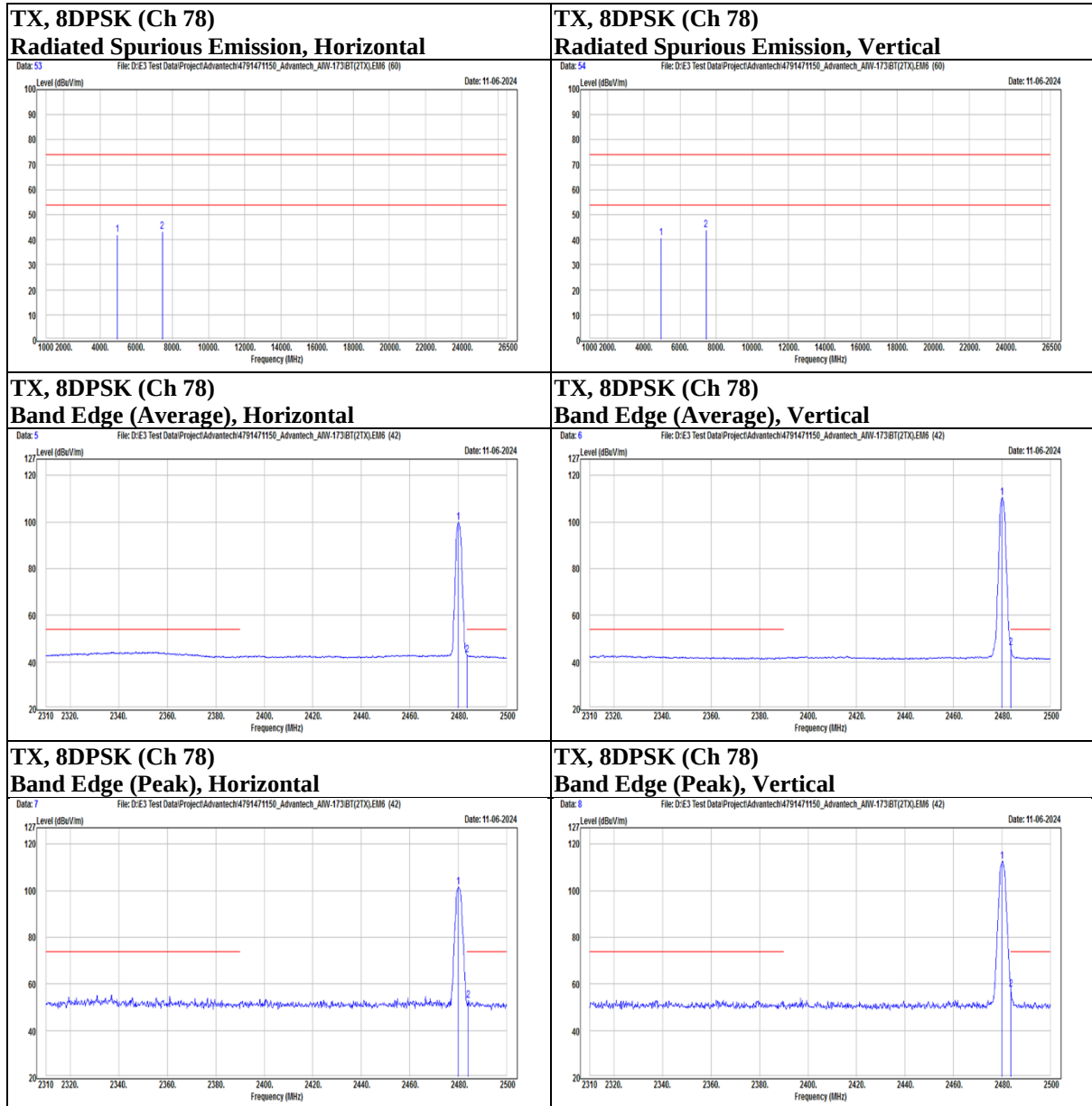
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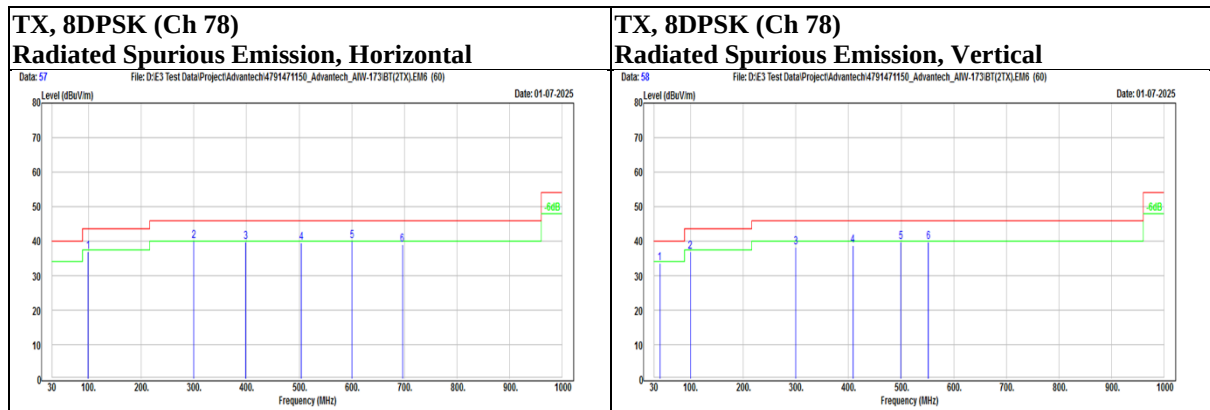
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Below 1 GHz

Mode	8DPSK	Channel	78
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Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		98.87	53.58	-16.53	37.05	43.5	-6.45	PK
		299.66	50.43	-10.49	39.94	46	-6.06	PK
		398.6	47.32	-7.63	39.69	46	-6.31	PK
		504.33	44.42	-4.84	39.58	46	-6.42	PK
		600.36	42.35	-2.39	39.96	46	-6.04	PK
		696.39	39.76	-0.68	39.08	46	-6.92	PK
Vertical		41.64	47.01	-13.52	33.49	40	-6.51	PK
		99.84	53.21	-16.34	36.87	43.5	-6.63	PK
		299.66	48.81	-10.49	38.32	46	-7.68	PK
		408.3	46.18	-7.38	38.8	46	-7.2	PK
		499.48	44.75	-4.97	39.78	46	-6.22	PK
		551.86	43.75	-3.97	39.78	46	-6.22	PK



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 (dBuV) = Reading value (dBuV) + Correction Factor (dB).
4. Test data of Margin(dB) = Result value (dBuV) - Limit value (dBuV).
5. Test data of Correction Factor (dB) = Insertion loss(dB) + Cable loss(dB).

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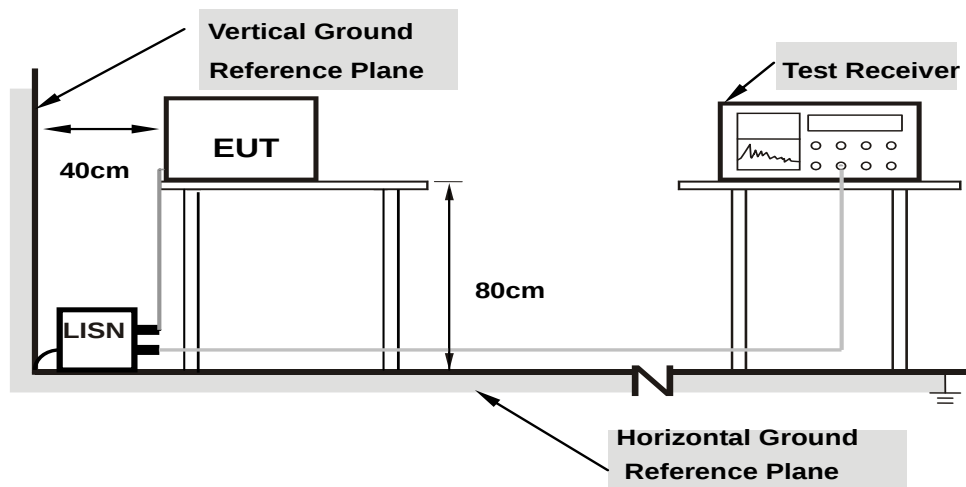
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Doc No: Form-ULID-004737 (DCS:17-EM-F0876) / 6.1

Test Setup

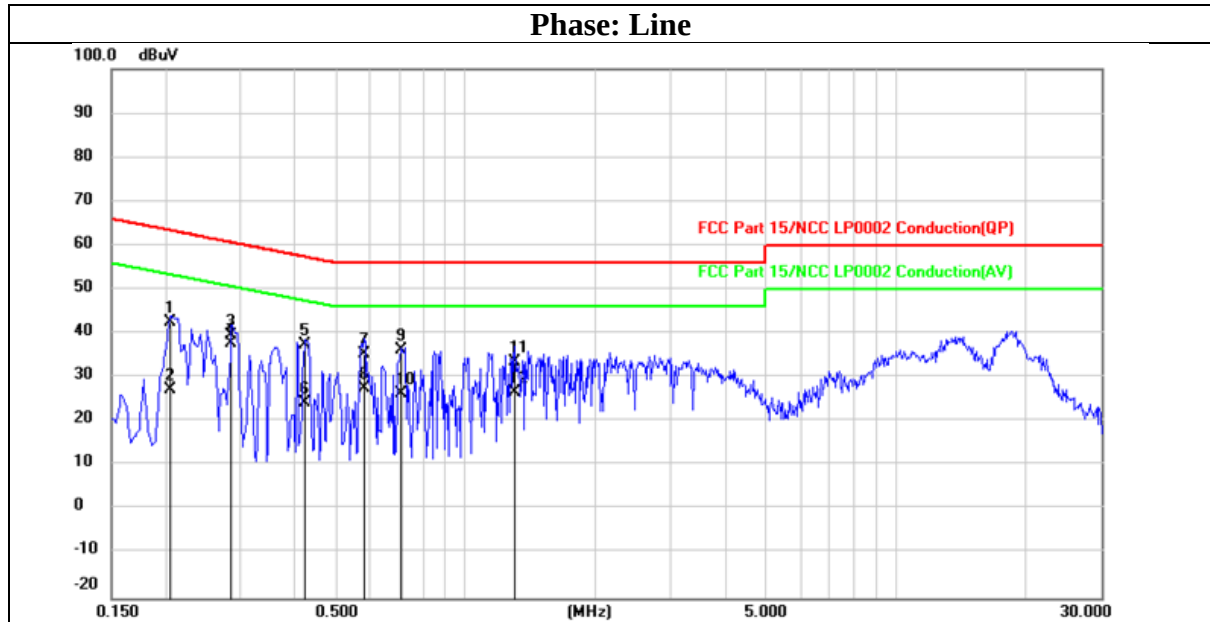


Note: 1.Support units were connected to second LISN.

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

Test Data

Mode	3DH5_TX2480	Channel	78
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2060	32.54	9.96	42.50	63.37	-20.87	QP
2	0.2060	17.23	9.96	27.19	53.37	-26.18	AVG
3	0.2860	29.71	9.96	39.67	60.64	-20.97	QP
4	0.2860	27.88	9.96	37.84	50.64	-12.80	AVG
5	0.4220	27.45	9.96	37.41	57.41	-20.00	QP
6	0.4220	14.16	9.96	24.12	47.41	-23.29	AVG
7	0.5820	25.27	9.98	35.25	56.00	-20.75	QP
8	0.5820	17.63	9.98	27.61	46.00	-18.39	AVG
9	0.7100	26.30	9.98	36.28	56.00	-19.72	QP
10	0.7100	16.34	9.98	26.32	46.00	-19.68	AVG
11	1.2980	23.61	10.01	33.62	56.00	-22.38	QP
12	1.2980	16.63	10.01	26.64	46.00	-19.36	AVG

Underwriters Laboratories Taiwan Co., Ltd.

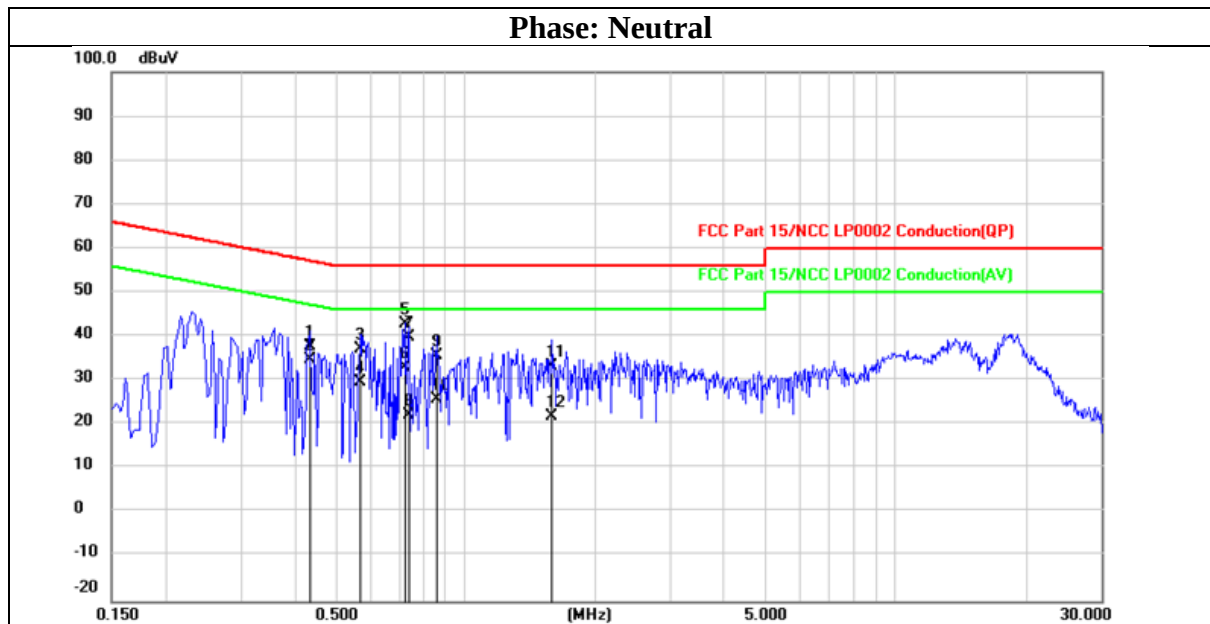
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Mode	3DH5_TX2480	Channel	78
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.4340	27.96	9.94	37.90	57.18	-19.28	QP
2	0.4340	24.70	9.94	34.64	47.18	-12.54	AVG
3	0.5700	27.19	9.95	37.14	56.00	-18.86	QP
4	0.5700	19.77	9.95	29.72	46.00	-16.28	AVG
5	0.7220	32.81	9.96	42.77	56.00	-13.23	QP
6	0.7220	22.90	9.96	32.86	46.00	-13.14	AVG
7	0.7380	29.99	9.96	39.95	56.00	-16.05	QP
8	0.7380	12.09	9.96	22.05	46.00	-23.95	AVG
9	0.8540	25.66	9.96	35.62	56.00	-20.38	QP
10	0.8540	15.71	9.96	25.67	46.00	-20.33	AVG
11	1.5859	23.22	9.99	33.21	56.00	-22.79	QP
12	1.5859	11.95	9.99	21.94	46.00	-24.06	AVG

END OF REPORT

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