CFR 47 FCC PART 15 SUBPART C
ISED RSS-247 ISSUE 2

CERTIFICATION TEST REPORT

For

Milo

MODEL NUMBER: M01

FCC ID: 2A6M9-MV01

IC: 28476-MV01

REPORT NUMBER: 4790371944-9

ISSUE DATE: July 18, 2022

Prepared for

Loose Cannon Systems, Inc.
PO Box 1447, Ross, CA. 94957 USA

Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	7/18/2022	Initial Issue	

Summary of Test Results			
Clause	**Test Items**	**FCC/ISED Rules**	**Test Results**
1	20dB Bandwidth and 99% Occupied Bandwidth	FCC 15.247 (a) (1) RSS-247 Clause 5.1 (a) RSS-Gen Clause 6.7	Pass
2	Conducted Output Power	FCC 15.247 (b) (1) RSS-247 Clause 5.1 (b)	Pass
3	Carrier Hopping Channel Separation	FCC 15.247 (a) (1) RSS-247 Clause 5.1 (b)	Pass
4	Number of Hopping Frequency	15.247 (a) (1) III RSS-247 Clause 5.1 (d)	Pass
5	Time of Occupancy (Dwell Time)	15.247 (a) (1) III RSS-247 Clause 5.1 (d)	Pass
6	Conducted Bandedge	FCC 15.247 (d) RSS-247 Clause 5.5	Pass
7	Radiated Bandedge and Spurious	FCC 15.247 (d) FCC 15.209 FCC 15.205 RSS-247 Clause 5.5 RSS-GEN Clause 8.9 RSS-GEN Clause 8.10	Pass
8	Conducted Emission Test for AC Power Port	FCC 15.207 RSS-GEN Clause 8.8	Pass
9	Antenna Requirement	FCC 15.203 RSS-GEN Clause 6.8	Pass

Note:
1.This test report is only published to and used by the applicant, and it is not for evidence purpose in China.
2. The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 15 SUBPART C >< ISED RSS-247 > when <Accuracy Method> decision rule is applied.

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: Loose Cannon Systems, Inc.
Address: PO Box 1447, Ross, CA. 94957 USA

Manufacturer Information

Company Name: Loose Cannon Systems, Inc.
Address: PO Box 1447, Ross, CA. 94957 USA

EUT Information

EUT Name: Milo
Model: M01
Brand: milo
Sample Received Date: April 20, 2022
Sample Status: Normal
Sample ID: 4881135
Date of Tested: April 25, 2022~July 18, 2022

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 FCC PART 15 SUBPART C	PASS
ISED RSS-247 Issue 2	PASS
ISED RSS-GEN Issue 5	PASS

Prepared By:

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Project Engineer

Checked By:

Shawn Wen
Laboratory Leader

Approved By:

Stephen Guo

Laboratory Manager

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 414788 D01 Radiated Test Site v01r01, CFR 47 FCC Part 2, CFR 47 FCC Part 15, ANSI C63.10-2013, ISED RSS-247 Issue 2 and ISED RSS-GEN Issue 5.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 4102.01)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA. **FCC (FCC Designation No.: CN1187)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Delcaration of Conformity (DoC) and Certification rules **ISED (Company No.: 21320)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046. **VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30 MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30 MHz had been correlated to measurements performed on an OFS.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognize national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty
Conduction emission	3.62 dB
Radiated Emission (Included Fundamental Emission) (9 kHz ~ 30 MHz)	2.2 dB
Radiated Emission (Included Fundamental Emission) (30 MHz ~ 1 GHz)	4.00 dB
Radiated Emission (Included Fundamental Emission) (1 GHz to 26 GHz)	5.78 dB (1 GHz ~ 18 GHz)
	5.23 dB (18 GHz ~ 26 GHz)
Duty Cycle	±0.028%
DTS and 99% Occupied Bandwidth	±0.0196%
Maximum Conducted Output Power	±0.686 dB
Maximum Power Spectral Density Level	±0.743 dB
Conducted Band-edge Compliance	±1.328 dB
Conducted Unwanted Emissions In Non-restricted Frequency Bands	±0.746 dB (9 kHz ~ 1 GHz)
	±1.328dB (1 GHz ~ 26 GHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	Milo
Model	M01
Power Supply	DC 5 V

Note: The product has 3 power supply modes: battery(DC 3.7 V), USB(DC 5 V), AC adapter, we had pre-scan for all the 3 modes, and only the worst data for DC 5 V supply are recorded in the report.

Modulation	Bit Rate	Operation Frequency	Number of Channels
2GFSK	500 kbps	2403.25 MHz-2475.85 MHz	67
	400 kbps	2403.075 MHz-2476.785 MHz	82
	250 kbps	2402.83 MHz-2480.11 MHz	139
	150 kbps	2402.82 MHz-2480.68 MHz	230
	75 kbps	2404.5865 MHz-2478.9135 MHz	320

5.2. MAXIMUM OUTPUT POWER

Modulation	Bit Rate	Transmit Frequency Range	Maximum Conducted PEAK Output Power (dBm)
2GFSK	500 kbps	2403.25 MHz-2475.85 MHz	24.81
	400 kbps	2403.075 MHz-2476.785 MHz	24.99
	250 kbps	2402.83 MHz-2480.11 MHz	24.98
	150 kbps	2402.82 MHz-2480.68 MHz	24.81
	75 kbps	2404.5865 MHz-2478.9135 MHz	25.21

5.3. CHANNEL LIST

Channel List for 2400 MHz 2GFSK/500 kbps									
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
11	2403.25	25	2418.65	39	2434.05	53	2449.45	67	2464.85
12	2404.35	26	2419.75	40	2435.15	54	2450.55	68	2465.95
13	2405.45	27	2420.85	41	2436.25	55	2451.65	69	2467.05
14	2406.55	28	2421.95	42	2437.35	56	2452.75	70	2468.15
15	2407.65	29	2423.05	43	2438.45	57	2453.85	71	2469.25
16	2408.75	30	2424.15	44	2439.55	58	2454.95	72	2470.35
17	2409.85	31	2425.25	45	2440.65	59	2456.05	73	2471.45
18	2410.95	32	2426.35	46	2441.75	60	2457.15	74	2472.55
19	2412.05	33	2427.45	47	2442.85	61	2458.25	75	2473.65
20	2413.15	34	2428.55	48	2443.95	62	2459.35	76	2474.75
21	2414.25	35	2429.65	49	2445.05	63	2460.45	77	2475.85
22	2415.35	36	2430.75	50	2446.15	64	2461.55	/	/
23	2416.45	37	2431.85	51	2447.25	65	2462.65	/	/
24	2417.55	38	2432.95	52	2448.35	66	2463.75	/	/

Channel List for 2400 MHz 2GFSK/400 kbps									
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
11	2403.075	32	2422.185	53	2441.295	74	2460.405	/	/
12	2403.985	33	2423.095	54	2442.205	75	2461.315	/	/
13	2404.895	34	2424.005	55	2443.115	76	2462.225	/	/
14	2405.805	35	2424.915	56	2444.025	77	2463.135	/	/
15	2406.715	36	2425.825	57	2444.935	78	2464.045	/	/
16	2407.625	37	2426.735	58	2445.845	79	2464.955	/	/
17	2408.535	38	2427.645	59	2446.755	80	2465.865	/	/
18	2409.445	39	2428.555	60	2447.665	81	2466.775	/	/
19	2410.355	40	2429.465	61	2448.575	82	2467.685	/	/
20	2411.265	41	2430.375	62	2449.485	83	2468.595	/	/
21	2412.175	42	2431.285	63	2450.395	84	2469.505	/	/
22	2413.085	43	2432.195	64	2451.305	85	2470.415	/	/
23	2413.995	44	2433.105	65	2452.215	86	2471.325	/	/
24	2414.905	45	2434.015	66	2453.125	87	2472.235	/	/
25	2415.815	46	2434.925	67	2454.035	88	2473.145	/	/
26	2416.725	47	2435.835	68	2454.945	89	2474.055	/	/
27	2417.635	48	2436.745	69	2455.855	90	2474.965	/	/
28	2418.545	49	2437.655	70	2456.765	91	2475.875	/	/
29	2419.455	50	2438.565	71	2457.675	92	2476.785	/	/
30	2420.365	51	2439.475	72	2458.585	/	/	/	/
31	2421.275	52	2440.385	73	2459.495	/	/	/	/

Channel List for 2400 MHz 2GFSK/250 kbps									
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
11	2402.83	44	2421.31	77	2439.79	110	2458.27	143	2476.75
12	2403.39	45	2421.87	78	2440.35	111	2458.83	144	2477.31
13	2403.95	46	2422.43	79	2440.91	112	2459.39	145	2477.87
14	2404.51	47	2422.99	80	2441.47	113	2459.95	146	2478.43
15	2405.07	48	2423.55	81	2442.03	114	2460.51	147	2478.99
16	2405.63	49	2424.11	82	2442.59	115	2461.07	148	2479.55
17	2406.19	50	2424.67	83	2443.15	116	2461.63	149	2480.11
18	2406.75	51	2425.23	84	2443.71	117	2462.19	/	/
19	2407.31	52	2425.79	85	2444.27	118	2462.75	/	/
20	2407.87	53	2426.35	86	2444.83	119	2463.31	/	/
21	2408.43	54	2426.91	87	2445.39	120	2463.87	/	/
22	2408.99	55	2427.47	88	2445.95	121	2464.43	/	/
23	2409.55	56	2428.03	89	2446.51	122	2464.99	/	/
24	2410.11	57	2428.59	90	2447.07	123	2465.55	/	/
25	2410.67	58	2429.15	91	2447.63	124	2466.11	/	/
26	2411.23	59	2429.71	92	2448.19	125	2466.67	/	/
27	2411.79	60	2430.27	93	2448.75	126	2467.23	/	/
28	2412.35	61	2430.83	94	2449.31	127	2467.79	/	/
29	2412.91	62	2431.39	95	2449.87	128	2468.35	/	/
30	2413.47	63	2431.95	96	2450.43	129	2468.91	/	/
31	2414.03	64	2432.51	97	2450.99	130	2469.47	/	/
32	2414.59	65	2433.07	98	2451.55	131	2470.03	/	/
33	2415.15	66	2433.63	99	2452.11	132	2470.59	/	/
34	2415.71	67	2434.19	100	2452.67	133	2471.15	/	/
35	2416.27	68	2434.75	101	2453.23	134	2471.71	/	/
36	2416.83	69	2435.31	102	2453.79	135	2472.27	/	/
37	2417.39	70	2435.87	103	2454.35	136	2472.83	/	/
38	2417.95	71	2436.43	104	2454.91	137	2473.39	/	/
39	2418.51	72	2436.99	105	2455.47	138	2473.95	/	/
40	2419.07	73	2437.55	106	2456.03	139	2474.51	/	/
41	2419.63	74	2438.11	107	2456.59	140	2475.07	/	/
42	2420.19	75	2438.67	108	2457.15	141	2475.63	/	/
43	2420.75	76	2439.23	109	2457.71	142	2476.19	/	/

Channel List for 2400 MHz 2GFSK/150 kbps									
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
11	2402.82	57	2418.46	103	2434.1	149	2449.74	195	2465.38
12	2403.16	58	2418.8	104	2434.44	150	2450.08	196	2465.72
13	2403.5	59	2419.14	105	2434.78	151	2450.42	197	2466.06
14	2403.84	60	2419.48	106	2435.12	152	2450.76	198	2466.4
15	2404.18	61	2419.82	107	2435.46	153	2451.1	199	2466.74
16	2404.52	62	2420.16	108	2435.8	154	2451.44	200	2467.08
17	2404.86	63	2420.5	109	2436.14	155	2451.78	201	2467.42
18	2405.2	64	2420.84	110	2436.48	156	2452.12	202	2467.76
19	2405.54	65	2421.18	111	2436.82	157	2452.46	203	2468.1
20	2405.88	66	2421.52	112	2437.16	158	2452.8	204	2468.44
21	2406.22	67	2421.86	113	2437.5	159	2453.14	205	2468.78
22	2406.56	68	2422.2	114	2437.84	160	2453.48	206	2469.12
23	2406.9	69	2422.54	115	2438.18	161	2453.82	207	2469.46
24	2407.24	70	2422.88	116	2438.52	162	2454.16	208	2469.8
25	2407.58	71	2423.22	117	2438.86	163	2454.5	209	2470.14
26	2407.92	72	2423.56	118	2439.2	164	2454.84	210	2470.48
27	2408.26	73	2423.9	119	2439.54	165	2455.18	211	2470.82
28	2408.6	74	2424.24	120	2439.88	166	2455.52	212	2471.16
29	2408.94	75	2424.58	121	2440.22	167	2455.86	213	2471.5
30	2409.28	76	2424.92	122	2440.56	168	2456.2	214	2471.84
31	2409.62	77	2425.26	123	2440.9	169	2456.54	215	2472.18
32	2409.96	78	2425.6	124	2441.24	170	2456.88	216	2472.52
33	2410.3	79	2425.94	125	2441.58	171	2457.22	217	2472.86
34	2410.64	80	2426.28	126	2441.92	172	2457.56	218	2473.2
35	2410.98	81	2426.62	127	2442.26	173	2457.9	219	2473.54
36	2411.32	82	2426.96	128	2442.6	174	2458.24	220	2473.88
37	2411.66	83	2427.3	129	2442.94	175	2458.58	221	2474.22
38	2412	84	2427.64	130	2443.28	176	2458.92	222	2474.56
39	2412.34	85	2427.98	131	2443.62	177	2459.26	223	2474.9
40	2412.68	86	2428.32	132	2443.96	178	2459.6	224	2475.24
41	2413.02	87	2428.66	133	2444.3	179	2459.94	225	2475.58
42	2413.36	88	2429	134	2444.64	180	2460.28	226	2475.92
43	2413.7	89	2429.34	135	2444.98	181	2460.62	227	2476.26
44	2414.04	90	2429.68	136	2445.32	182	2460.96	228	2476.6
45	2414.38	91	2430.02	137	2445.66	183	2461.3	229	2476.94
46	2414.72	92	2430.36	138	2446	184	2461.64	230	2477.28
47	2415.06	93	2430.7	139	2446.34	185	2461.98	231	2477.62
48	2415.4	94	2431.04	140	2446.68	186	2462.32	232	2477.96
49	2415.74	95	2431.38	141	2447.02	187	2462.66	233	2478.3
50	2416.08	96	2431.72	142	2447.36	188	2463	234	2478.64
51	2416.42	97	2432.06	143	2447.7	189	2463.34	235	2478.98
52	2416.76	98	2432.4	144	2448.04	190	2463.68	236	2479.32
53	2417.1	99	2432.74	145	2448.38	191	2464.02	237	2479.66
54	2417.44	100	2433.08	146	2448.72	192	2464.36	238	2480
55	2417.78	101	2433.42	147	2449.06	193	2464.7	239	2480.34
56	2418.12	102	2433.76	148	2449.4	194	2465.04	240	2480.68

Channel List for 2400 MHz 2GFSK/75 kbps									
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
11	2404.5865	75	2419.4985	139	2434.4105	203	2449.3225	267	2464.2345
12	2404.8195	76	2419.7315	140	2434.6435	204	2449.5555	268	2464.4675
13	2405.0525	77	2419.9645	141	2434.8765	205	2449.7885	269	2464.7005
14	2405.2855	78	2420.1975	142	2435.1095	206	2450.0215	270	2464.9335
15	2405.5185	79	2420.4305	143	2435.3425	207	2450.2545	271	2465.1665
16	2405.7515	80	2420.6635	144	2435.5755	208	2450.4875	272	2465.3995
17	2405.9845	81	2420.8965	145	2435.8085	209	2450.7205	273	2465.6325
18	2406.2175	82	2421.1295	146	2436.0415	210	2450.9535	274	2465.8655
19	2406.4505	83	2421.3625	147	2436.2745	211	2451.1865	275	2466.0985
20	2406.6835	84	2421.5955	148	2436.5075	212	2451.4195	276	2466.3315
21	2406.9165	85	2421.8285	149	2436.7405	213	2451.6525	277	2466.5645
22	2407.1495	86	2422.0615	150	2436.9735	214	2451.8855	278	2466.7975
23	2407.3825	87	2422.2945	151	2437.2065	215	2452.1185	279	2467.0305
24	2407.6155	88	2422.5275	152	2437.4395	216	2452.3515	280	2467.2635
25	2407.8485	89	2422.7605	153	2437.6725	217	2452.5845	281	2467.4965
26	2408.0815	90	2422.9935	154	2437.9055	218	2452.8175	282	2467.7295
27	2408.3145	91	2423.2265	155	2438.1385	219	2453.0505	283	2467.9625
28	2408.5475	92	2423.4595	156	2438.3715	220	2453.2835	284	2468.1955
29	2408.7805	93	2423.6925	157	2438.6045	221	2453.5165	285	2468.4285
30	2409.0135	94	2423.9255	158	2438.8375	222	2453.7495	286	2468.6615
31	2409.2465	95	2424.1585	159	2439.0705	223	2453.9825	287	2468.8945
32	2409.4795	96	2424.3915	160	2439.3035	224	2454.2155	288	2469.1275
33	2409.7125	97	2424.6245	161	2439.5365	225	2454.4485	289	2469.3605
34	2409.9455	98	2424.8575	162	2439.7695	226	2454.6815	290	2469.5935
35	2410.1785	99	2425.0905	163	2440.0025	227	2454.9145	291	2469.8265
36	2410.4115	100	2425.3235	164	2440.2355	228	2455.1475	292	2470.0595
37	2410.6445	101	2425.5565	165	2440.4685	229	2455.3805	293	2470.2925
38	2410.8775	102	2425.7895	166	2440.7015	230	2455.6135	294	2470.5255
39	2411.1105	103	2426.0225	167	2440.9345	231	2455.8465	295	2470.7585
40	2411.3435	104	2426.2555	168	2441.1675	232	2456.0795	296	2470.9915
41	2411.5765	105	2426.4885	169	2441.4005	233	2456.3125	297	2471.2245
42	2411.8095	106	2426.7215	170	2441.6335	234	2456.5455	298	2471.4575
43	2412.0425	107	2426.9545	171	2441.8665	235	2456.7785	299	2471.6905
44	2412.2755	108	2427.1875	172	2442.0995	236	2457.0115	300	2471.9235
45	2412.5085	109	2427.4205	173	2442.3325	237	2457.2445	301	2472.1565
46	2412.7415	110	2427.6535	174	2442.5655	238	2457.4775	302	2472.3895
47	2412.9745	111	2427.8865	175	2442.7985	239	2457.7105	303	2472.6225
48	2413.2075	112	2428.1195	176	2443.0315	240	2457.9435	304	2472.8555
49	2413.4405	113	2428.3525	177	2443.2645	241	2458.1765	305	2473.0885
50	2413.6735	114	2428.5855	178	2443.4975	242	2458.4095	306	2473.3215
51	2413.9065	115	2428.8185	179	2443.7305	243	2458.6425	307	2473.5545
52	2414.1395	116	2429.0515	180	2443.9635	244	2458.8755	308	2473.7875
53	2414.3725	117	2429.2845	181	2444.1965	245	2459.1085	309	2474.0205
54	2414.6055	118	2429.5175	182	2444.4295	246	2459.3415	310	2474.2535
55	2414.8385	119	2429.7505	183	2444.6625	247	2459.5745	311	2474.4865
56	2415.0715	120	2429.9835	184	2444.8955	248	2459.8075	312	2474.7195
57	2415.3045	121	2430.2165	185	2445.1285	249	2460.0405	313	2474.9525
58	2415.5375	122	2430.4495	186	2445.3615	250	2460.2735	314	2475.1855
59	2415.7705	123	2430.6825	187	2445.5945	251	2460.5065	315	2475.4185
60	2416.0035	124	2430.9155	188	2445.8275	252	2460.7395	316	2475.6515
61	2416.2365	125	2431.1485	189	2446.0605	253	2460.9725	317	2475.8845
62	2416.4695	126	2431.3815	190	2446.2935	254	2461.2055	318	2476.1175
63	2416.7025	127	2431.6145	191	2446.5265	255	2461.4385	319	2476.3505
64	2416.9355	128	2431.8475	192	2446.7595	256	2461.6715	320	2476.5835
65	2417.1685	129	2432.0805	193	2446.9925	257	2461.9045	321	2476.8165
66	2417.4015	130	2432.3135	194	2447.2255	258	2462.1375	322	2477.0495
67	2417.6345	131	2432.5465	195	2447.4585	259	2462.3705	323	2477.2825
68	2417.8675	132	2432.7795	196	2447.6915	260	2462.6035	324	2477.5155
69	2418.1005	133	2433.0125	197	2447.9245	261	2462.8365	325	2477.7485
70	2418.3335	134	2433.2455	198	2448.1575	262	2463.0695	326	2477.9815
71	2418.5665	135	2433.4785	199	2448.3905	263	2463.3025	327	2478.2145
72	2418.7995	136	2433.7115	200	2448.6235	264	2463.5355	328	2478.4475
73	2419.0325	137	2433.9445	201	2448.8565	265	2463.7685	329	2478.6805
74	2419.2655	138	2434.1775	202	2449.0895	266	2464.0015	330	2478.9135

5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel	Frequency
2GFSK-500kbps	CH 11(Low Channel), CH 46(MID Channel), CH 77(High Channel)	2403.25 MHz, 2441.75 MHz, 2475.85 MHz
2GFSK-400 kbps	CH 11(Low Channel), CH 53(MID Channel), CH 92(High Channel)	2403.075 MHz, 2441.295 MHz, 2476.785 MHz
2GFSK-250 kbps	CH 11(Low Channel), CH 80(MID Channel), CH 149(High Channel)	2402.83 MHz, 2441.47 MHz, 2480.11 MHz
2GFSK-150 kbps	CH 11(Low Channel), CH 125(MID Channel), CH 240(High Channel)	2402.82 MHz, 2441.58 MHz, 2480.68 MHz
2GFSK-75 kbps	CH 11(Low Channel), CH 170(MID Channel), CH 320(High Channel)	2404.5865 MHz, 2441.6335 MHz, 2478.9135 MHz

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter				
Test Software		Yukon		
Test Mode	Transmit Antenna Number	Test Software Setting Value		
		Low	Middle	High
2GFSK-500kbps	1	Default	Default	Default
2GFSK-400 kbps	1	Default	Default	Default
2GFSK-250 kbps	1	Default	Default	Default
2GFSK-150 kbps	1	Default	Default	Default
2GFSK-75 kbps	1	Default	Default	Default

5.6. THE WORSE CASE CONFIGURATIONS

The EUT was tested in the following configuration(s):

Controlled in test mode using a software application on the EUT supplied by customer. The application was used to enable a continuous transmission and to select the mode, test channels, bandwidth, data rates as required.

Test channels referring to section 5.4.

Maximum power setting referring to section 5.5.

The measured additional path loss was included in any path loss calculations for all RF cable used during tested.

5.7. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency (MHz)	Antenna Type	MAX Antenna Gain (dBi)
1	2400-2483.5	Inverted F	2.65

Test Mode	Transmit and Receive Mode	Description
2GFSK-500 kbps	☒1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.
2GFSK-400 kbps	☒1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.
2GFSK-250 kbps	☒1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.
2GFSK-150 kbps	☒1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.
2GFSK-75 kbps	☒1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.

Note: The value of the antenna gain was declared by customer.

5.8. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	P/N	Remarks
1	PC	Dell	Vostro 3902	8KNDDB2	/
2	USB TO UART	/	/	/	/
3	AC Adapter	/	HW-100225C00	/	Input: AC 100-240V, 50/60Hz,0.75A Output: DC 5V,2A

I/O PORT

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	/	/	1.0	/

ACCESSORY

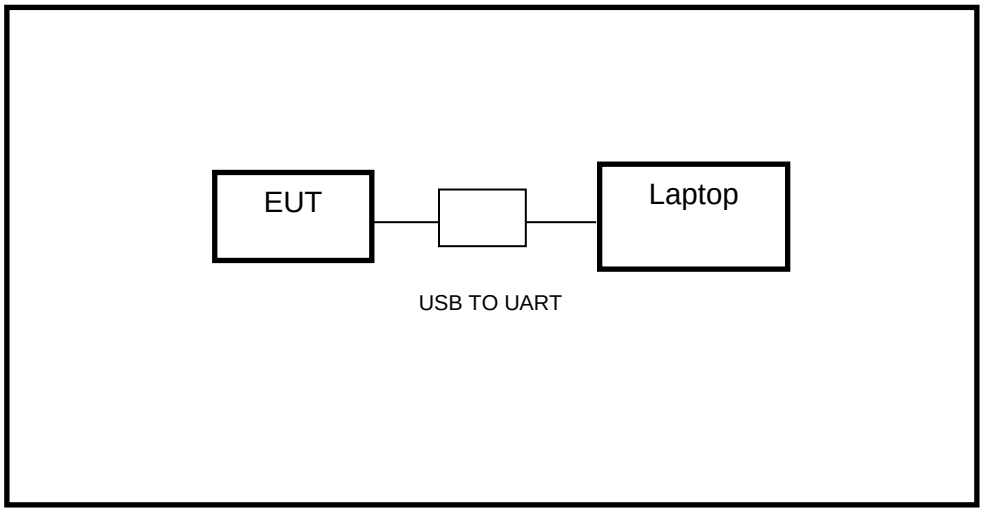
Item	Accessory	Brand Name	Model Name	Description
/	/	/	/	/

TEST SETUP

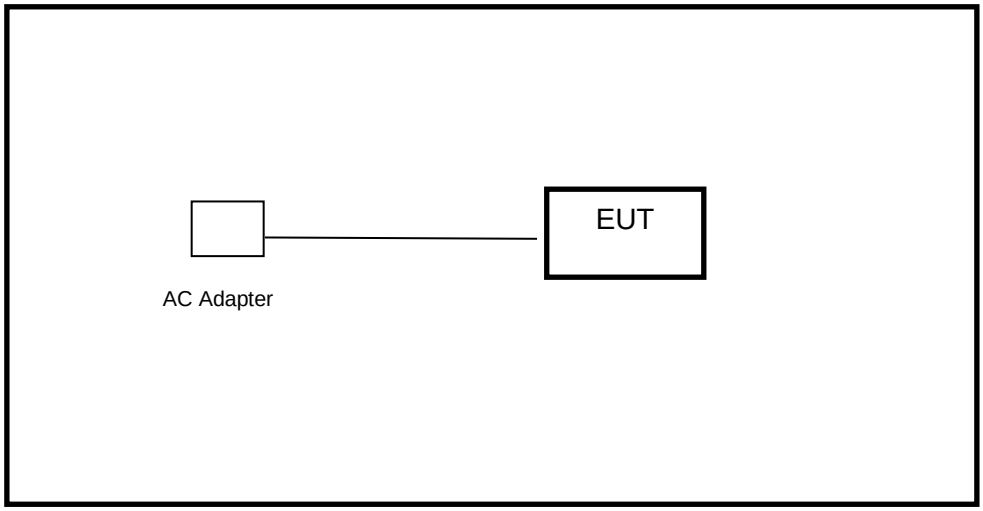
The EUT can work in engineering mode with a software through a Laptop.

SETUP DIAGRAM FOR TESTS

For others:



For AC POWER LINE CONDUCTED EMISSIONS only:



6. MEASURING INSTRUMENT AND SOFTWARE USED

Conducted Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
EMI Test Receiver	R&S	ESR3	101961	Oct.30, 2021	Oct.29, 2022
Two-Line V-Network	R&S	ENV216	101983	Oct.30, 2021	Oct.29, 2022
Software					
Description			Manufacturer	Name	Version
Test Software for Conducted Emissions			Farad	EZ-EMC	Ver. UL-3A1

Radiated Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Oct.30, 2021	Oct.29, 2022
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130959	Aug.02, 2021	Aug.01, 2024
Preamplifier	HP	8447D	2944A09099	Oct.30, 2021	Oct.29, 2022
EMI Measurement Receiver	R&S	ESR26	101377	Oct.30, 2021	Oct.29, 2022
Horn Antenna	TDK	HRN-0118	130940	July 20, 2021	July 19, 2024
Preamplifier	TDK	PA-02-0118	TRS-305-00067	Oct.30, 2021	Oct.29, 2022
Horn Antenna	Schwarzbeck	BBHA9170	697	July 20, 2021	July 19, 2024
Preamplifier	TDK	PA-02-2	TRS-307-00003	Oct.31, 2021	Oct.30, 2022
Preamplifier	TDK	PA-02-3	TRS-308-00002	Oct.31, 2021	Oct.30, 2022
Loop antenna	Schwarzbeck	1519B	00008	Dec.14, 2021	Dec.13, 2024
Preamplifier	TDK	PA-02-001-3000	TRS-302-00050	Oct.31, 2021	Oct.30, 2022
Preamplifier	Mini-Circuits	ZX60-83LN-S+	SUP01201941	Oct.31, 2021	Oct.30, 2022
High Pass Filter	Wi	WHKX10-2700-3000-18000-40SS	23	Oct.31, 2021	Oct.30, 2022
Band Reject Filter	Wainwright	WRCJV8-2350-2400-2483.5-2533.5-40SS	4	Oct.31, 2021	Oct.30, 2022
Software					
Description			Manufacturer	Name	Version

Test Software for Radiated Emissions	Farad	EZ-EMC	Ver. UL-3A1

Tonsend RF Test System					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
PXA Signal Analyzer	Keysight	N9030A	MY55410512	Oct.30, 2021	Oct.29, 2022
Signal Analyzer	R&S	FSV40	101118	Oct.30, 2021	Oct.29, 2022
MXG Vector Signal Generator	Keysight	N5182B	MY56200284	Oct.30, 2021	Oct.29, 2022
MXG Vector Signal Generator	Keysight	N5172B	MY56200301	Oct.30, 2021	Oct.29, 2022
Software					
Description	Manufacturer	Name		Version	
Tonsend SRD Test System	Tonsend	JS1120-3 RF Test System		2.6.77.0518	

Other Instruments					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Dual Channel Power Meter	Keysight	N1912A	MY55416024	Oct.30, 2021	Oct.29, 2022
Power Sensor	Keysight	USB Wideband Power Sensor	MY5100022	Oct.30, 2021	Oct.29, 2022
Signal Analyzer	R&S	FSV40	101118	Oct.30, 2021	Oct.29, 2022

7. ANTENNA PORT TEST RESULTS

7.1. ON TIME AND DUTY CYCLE

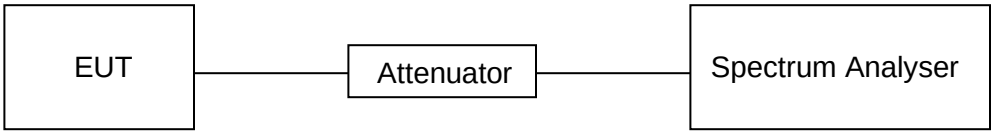
LIMITS

None; for reporting purposes only

PROCEDURE

Refer to ANSI C63.10-2013 clause 11.6 Zero – Span Spectrum Analyzer method.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.3 °C	Relative Humidity	62.1 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5 V

RESULTS

Please refer to appendix G.

7.2. 20 dB BANDWIDTH AND 99 % OCCUPIED BANDWIDTH

LIMITS

CFR 47FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247 (a) (1) RSS-247 Clause 5.1 (a)	20 dB Bandwidth	None; for reporting purposes only.	2400-2483.5
ISED RSS-Gen Clause 6.7	99 % Occupied Bandwidth	None; for reporting purposes only.	2400-2483.5

TEST PROCEDURE

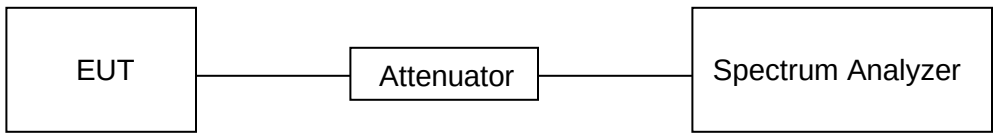
Refer to ANSI C63.10-2013 clause 6.9.2.

Connect the EUT to the spectrum analyser and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	For 20 dB Bandwidth: 1 % to 5 % of the 20 dB bandwidth For 99 % Occupied Bandwidth: 1 % to 5 % of the occupied bandwidth
VBW	For 20 dB Bandwidth: approximately 3×RBW For 99 % Occupied Bandwidth: ≥ 3×RBW
Span	Approximately 2 to 3 times the 20dB bandwidth
Trace	Max hold
Sweep	Auto couple

a) Use the occupied bandwidth function of the instrument, allow the trace to stabilize and report the measured 99 % occupied bandwidth and 20 dB Bandwidth.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.3 °C	Relative Humidity	62.1 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5 V

RESULTS

Please refer to appendix A.

7.3. CONDUCTED OUTPUT POWER

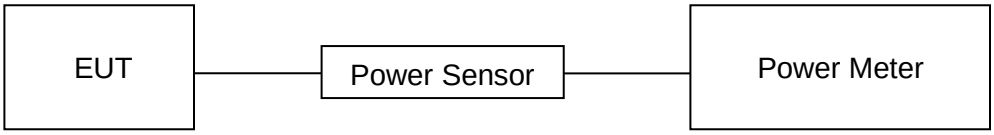
LIMITS

CFR 47 FCC Part15 (15.247), Subpart C ISED RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247 (b) (1) ISED RSS-247 Clause 5.4 (b)	Peak Conducted Output Power	Hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel: 1 watt or 30 dBm; Hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel: 125 mW or 21 dBm	2400-2483.5

TEST PROCEDURE

Connect the EUT to a low loss RF cable from the antenna port to the power sensor (video bandwidth is greater than the occupied bandwidth).
Measure peak emission level, the indicated level is the peak output power, after any corrections for external attenuators and cables.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.3 °C	Relative Humidity	62.1 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5 V

RESULTS

Please refer to appendix B.

7.4. CARRIER FREQUENCY SEPARATION

LIMITS

CFR 47 FCC Part15 (15.247), Subpart C ISED RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247 (a) (1) ISED RSS-247 Clause 5.1 (b)	Carrier Frequency Separation	Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel.	2400-2483.5

TEST PROCEDURE

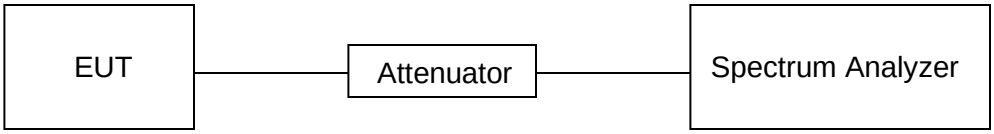
Refer to ANSI C63.10-2013 clause 7.8.2.

Connect the EUT to the spectrum analyzer and use the following settings:

Center Frequency	The center frequency of the channel under test
Span	wide enough to capture the peaks of two adjacent channels
Detector	Peak
RBW	Start with the RBW set to approximately 30 % of the channel spacing; adjust as necessary to best identify the center of each individual channel.
VBW	≥RBW
Trace	Max hold
Sweep time	Auto couple

Allow the trace to stabilize and use the marker-delta function to determine the separation between the peaks of the adjacent channels.
Compliance of an EUT with the appropriate regulatory limit shall be determined.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.3 °C	Relative Humidity	62.1 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5 V

RESULTS

Please refer to Appendix C.

7.5. NUMBER OF HOPPING FREQUENCIES

LIMITS

CFR 47 FCC Part15 (15.247), Subpart C ISED RSS-247 ISSUE 2		
Section	Test Item	Limit
CFR 47 15.247 (a) (1) III ISED RSS-247 Clause 5.1 (d)	Number of Hopping Frequency	at least 15 hopping channels

TEST PROCEDURE

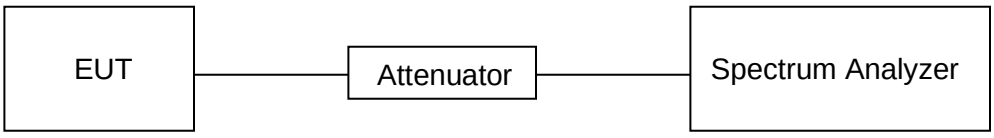
Refer to ANSI C63.10-2013 clause 7.8.3.

Connect the EUT to the spectrum Analyzer and use the following settings:

Detector	Peak
RBW	To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
VBW	≥RBW
Span	The frequency band of operation. Depending on the number of channels the device supports, it may be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.
Trace	Max hold
Sweep time	Auto couple

Set EUT to transmit maximum output power and switch on frequency hopping function. then set enough count time (larger than 5000 times) to get all the hopping frequency channel displayed on the screen of spectrum analyzer, count the quantity of peaks to get the number of hopping channels.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.3 °C	Relative Humidity	62.1 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5 V

RESULTS

Please refer to appendix E.

7.6. TIME OF OCCUPANCY (DWELL TIME)

LIMITS

CFR 47 FCC Part15 (15.247), Subpart C ISED RSS-247 ISSUE 2		
Section	Test Item	Limit
CFR 47 15.247 (a) (1) III ISED RSS-247 Clause 5.1 (d)	Time of Occupancy (Dwell Time)	The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds, multiplied by the number of hopping channels employed.

TEST PROCEDURE

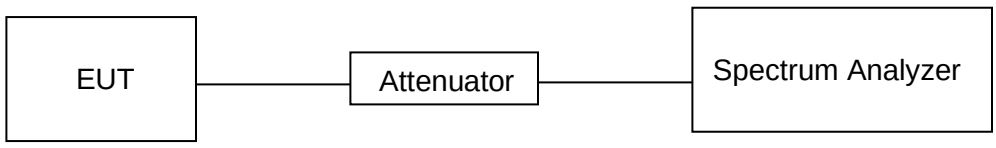
Refer to ANSI C63.10-2013 clause 7.8.4.

Connect the EUT to the spectrum Analyzer and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	≤ channel spacing and where possible RBW should be set >> 1 / T, where T is the expected dwell time per channel.
VBW	≥RBW
Span	Zero span, centered on a hopping channel
Trace	Max hold
Sweep time	As necessary to capture the entire dwell time per hopping channel; where possible use a video trigger and trigger delay so that the transmitted signal starts a little to the right of the start of the plot. The trigger level might need slight adjustment to prevent triggering when the system hops on an adjacent channel

Use the marker-delta function to determine the transmit time per hop (Burst Width). If this value varies with different modes of operation (data rate, modulation format, number of hopping channels, etc.), then repeat this test for each variation in transmit time.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.3 °C	Relative Humidity	62.1 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5 V

RESULTS

Please refer to appendix D.

7.7. CONDUCTED BANDEDGE AND SPURIOUS EMISSION

LIMITS

CFR 47 FCC Part15 (15.247), Subpart C ISED RSS-247 ISSUE 2		
Section	Test Item	Limit
CFR 47 FCC §15.247 (d) ISED RSS-247 5.5	Conducted Spurious Emission	at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 7.8.6 and 7.8.8.

Connect the EUT to the spectrum analyser and use the following settings for reference level measurement:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	100 kHz
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

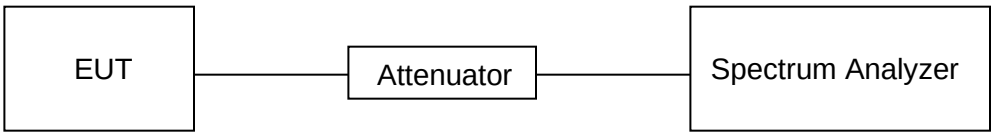
Allow trace to fully stabilize and use the peak marker function to determine the maximum PSD level.

Change the settings for emission level measurement:

Span	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100 kHz
VBW	≥3 × RBW
measurement points	≥span/RBW
Trace	Max hold
Sweep time	Auto couple.

Allow trace to fully stabilize and use the peak marker function to determine the maximum PSD level. Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.3 °C	Relative Humidity	62.1 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5 V

RESULTS

Please refer to appendix F .

8. RADIATED TEST RESULTS

Please refer to CFR 47 FCC §15.205 and §15.209.

Please refer to ISED RSS-GEN Clause 8.9 and Clause 8.10.

Radiation Disturbance Test Limit for FCC (Class B) (9 kHz ~ 1 GHz)

Emissions radiated outside of the specified frequency bands above 30 MHz			
Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m	
		Quasi-Peak	
30 - 88	100	40	
88 - 216	150	43.5	
216 - 960	200	46	
Above 960	500	54	
Above 1000	500	Peak	Average
		74	54

FCC Emissions radiated outside of the specified frequency bands below 30 MHz		
Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30

ISED General field strength limits at frequencies below 30 MHz

Table 6 – General field strength limits at frequencies below 30 MHz

Frequency	Magnetic field strength (H-Field) (µA/m)	Measurement distance (m)
9 - 490 kHz[Note 1]	6.37/F (F in kHz)	300
490 - 1705 kHz	63.7/F (F in kHz)	30
1.705 - 30 MHz	0.08	30

Note 1: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

ISED Restricted bands please refer to ISED RSS-GEN Clause 8.10

Table 7 – Restricted frequency bands[Note 1]		
MHz	MHz	GHz
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 – 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 – 3267	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	3345.8 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 – 8500	
108 – 138		

Note 1: Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

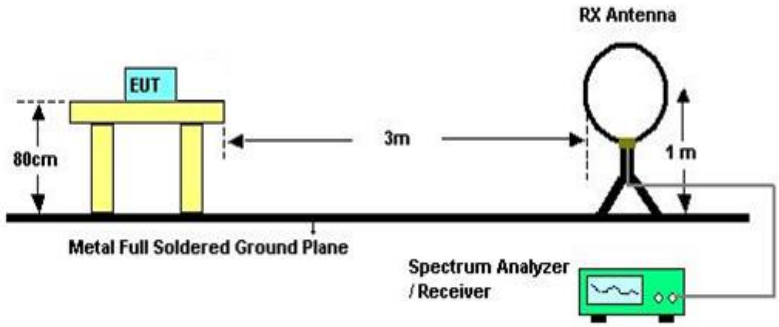
FCC Restricted bands of operation refer to FCC §15.205 (a):

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

Note: [1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
[2]Above 38.6c

TEST SETUP AND PROCEDURE

Below 30 MHz



The setting of the spectrum analyser

RBW	200 Hz (From 9 kHz to 0.15 MHz)/ 9 kHz (From 0.15 MHz to 30 MHz)
VBW	200 Hz (From 9 kHz to 0.15 MHz)/ 9 kHz (From 0.15 MHz to 30 MHz)
Sweep	Auto
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.4.

2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 80 cm above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1 m height antenna tower.

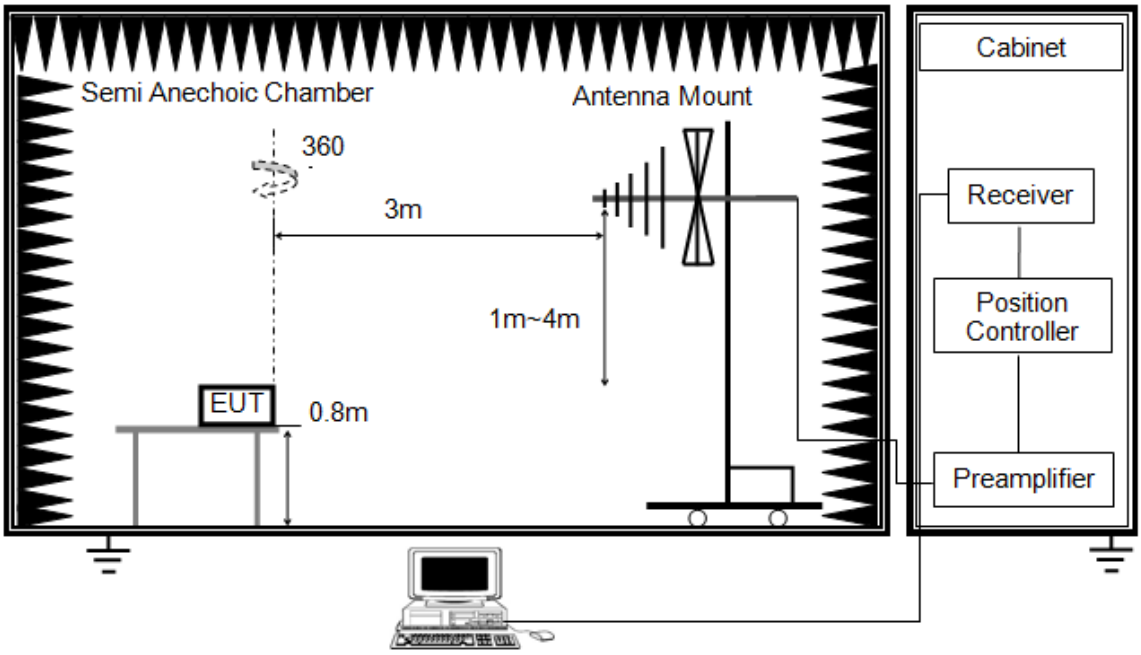
5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

6. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak and average detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak and average detector and reported.

7. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30m open field 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 site based on KDB 414788.

8. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377 Ω; For example, the measurement frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to Y-51.5 = Z dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

Below 1 GHz and above 30 MHz



The setting of the spectrum analyser

RBW	120 kHz
VBW	300 kHz
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.5.

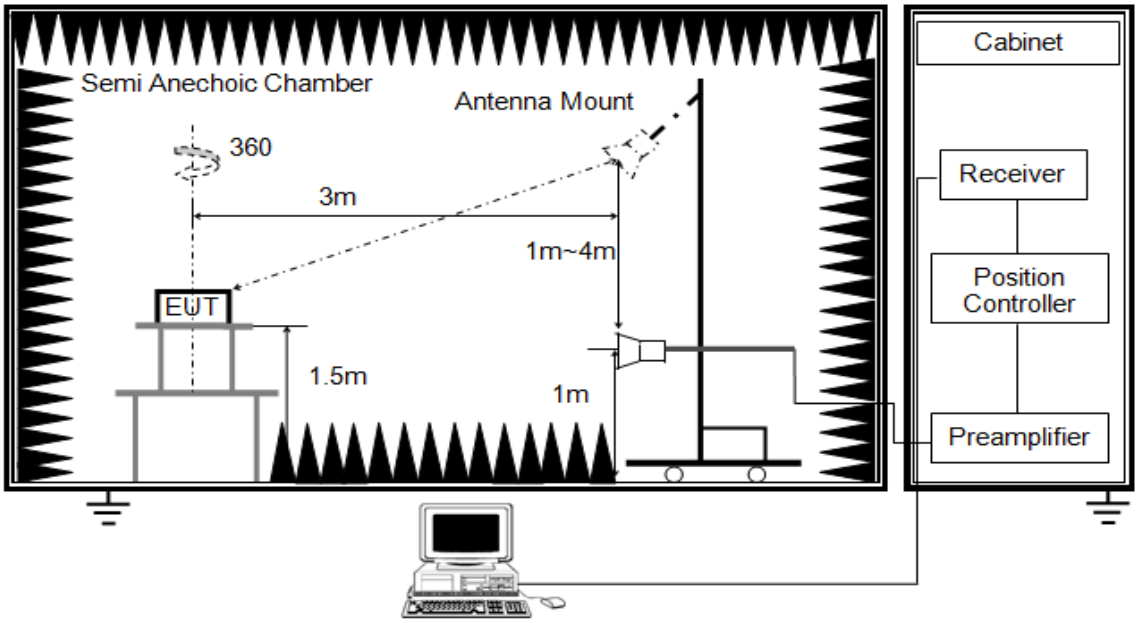
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 80 cm above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

Above 1 GHz



The setting of the spectrum analyser

RBW	1 MHz
VBW	PEAK: 3 MHz AVG: see note 6
Sweep	Auto
Detector	Peak
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.6.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

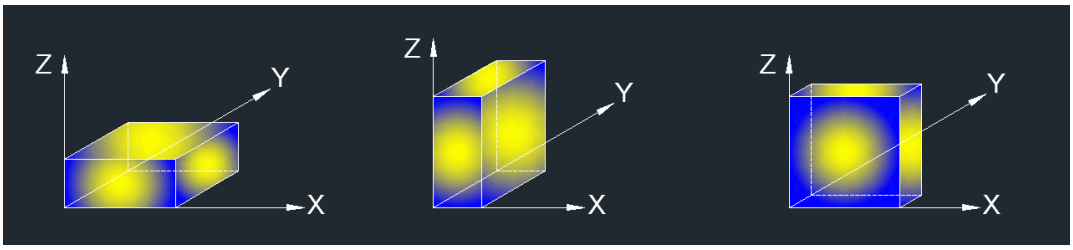
3. The EUT was placed on a turntable with 1.5 m above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement above 1 GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.

6. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 7.1.ON TIME AND DUTY CYCLE.

X axis, Y axis, Z axis positions:



Note 1: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.

Note 2: The EUT was fully exercised with external accessories during the test. In the case of multiple accessory external ports, an external accessory shall be connected to one of each type of port.

TEST ENVIRONMENT

Temperature	24.4 °C	Relative Humidity	61.1 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5 V

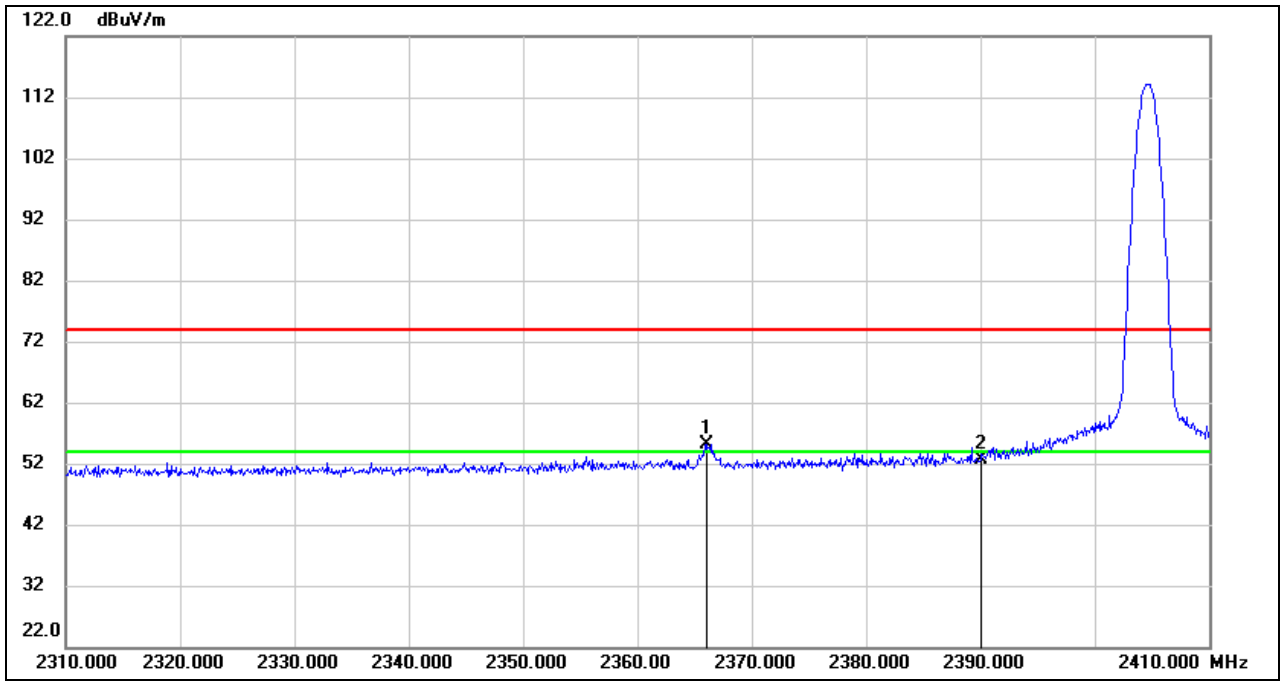
RESULTS

8.1. RESTRICTED BANDEDGE

8.1.1. 2GFSK - 75 kbps MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

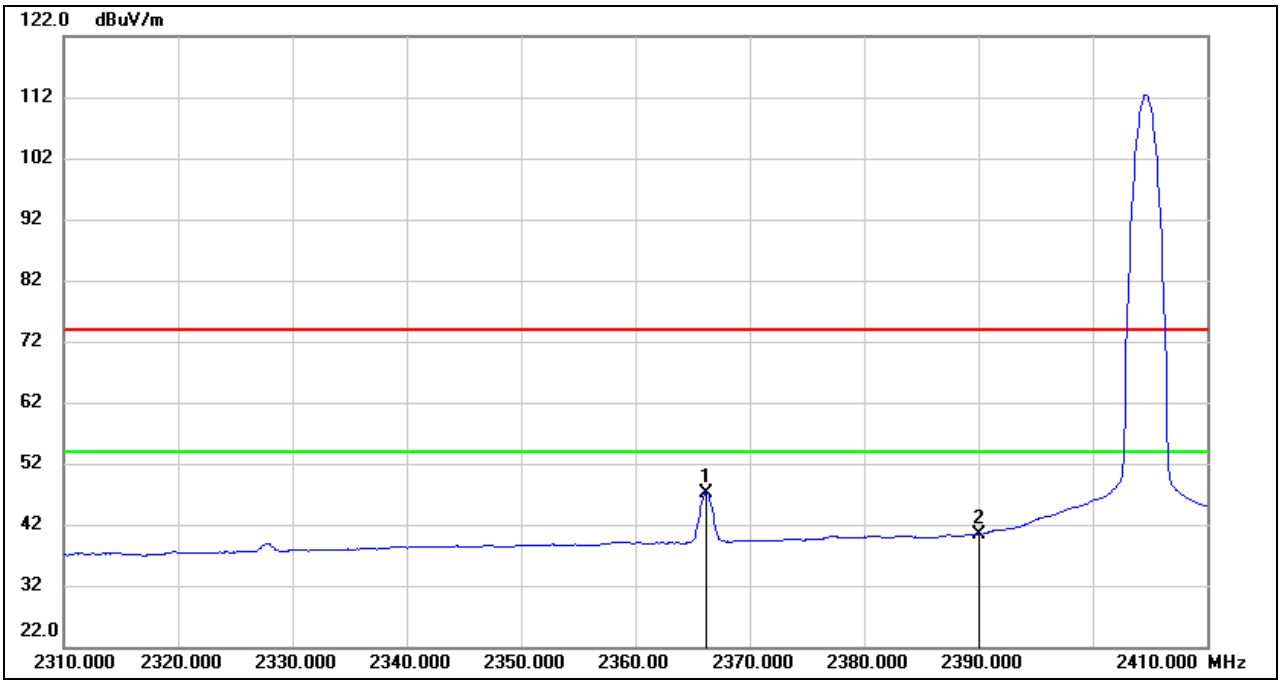
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2366.100	22.74	32.46	55.20	74.00	-18.80	peak
2	2390.000	19.89	32.66	52.55	74.00	-21.45	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

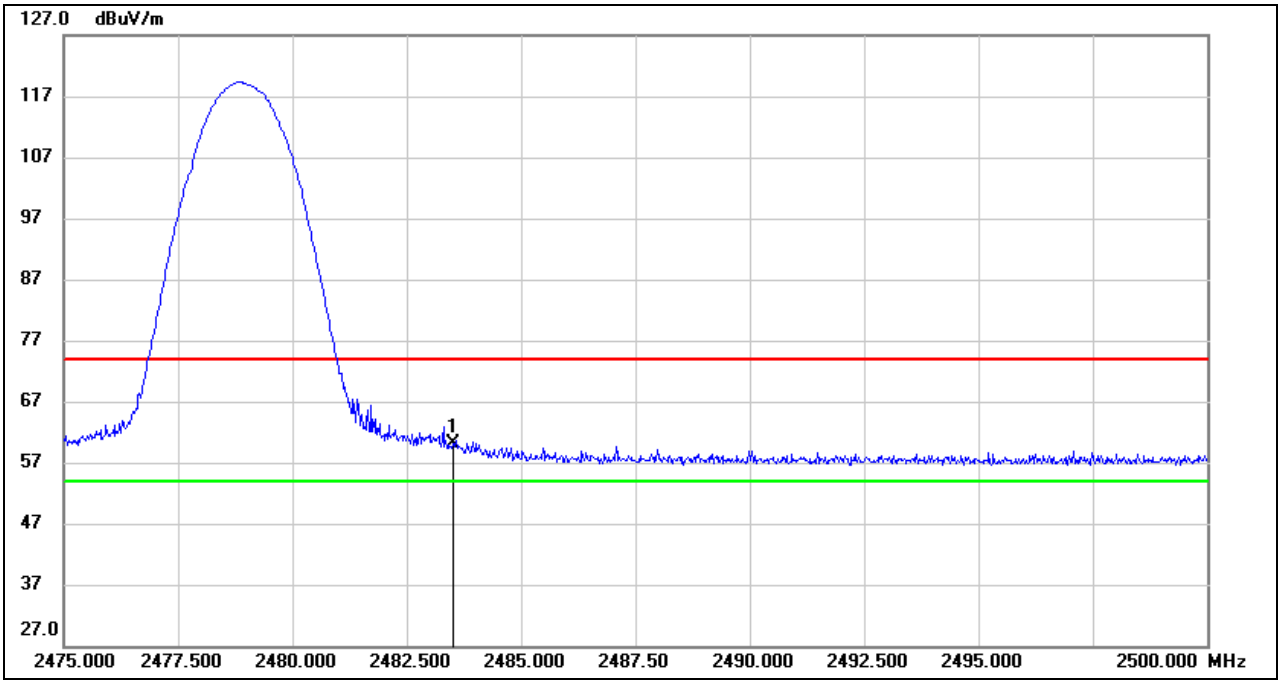


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2366.100	14.78	32.46	47.24	54.00	-6.76	AVG
2	2390.000	7.69	32.66	40.35	54.00	-13.65	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

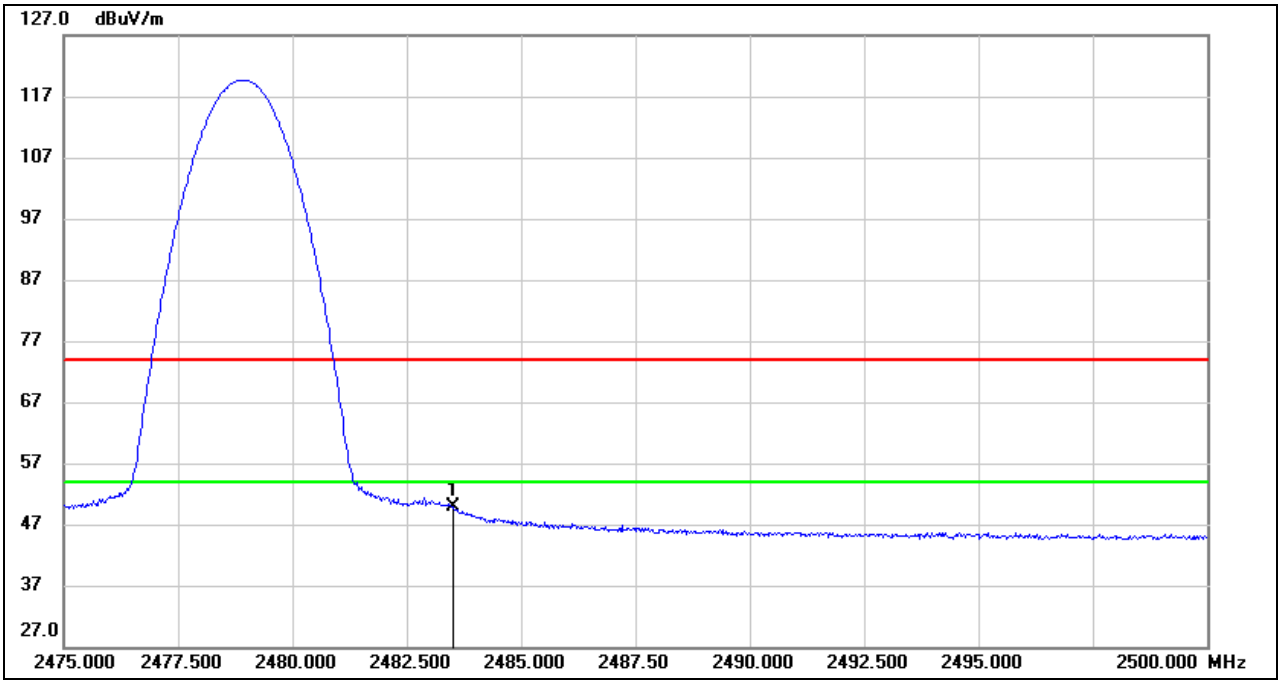
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	26.96	33.10	60.06	74.00	-13.94	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	16.68	33.10	49.78	54.00	-4.22	AVG

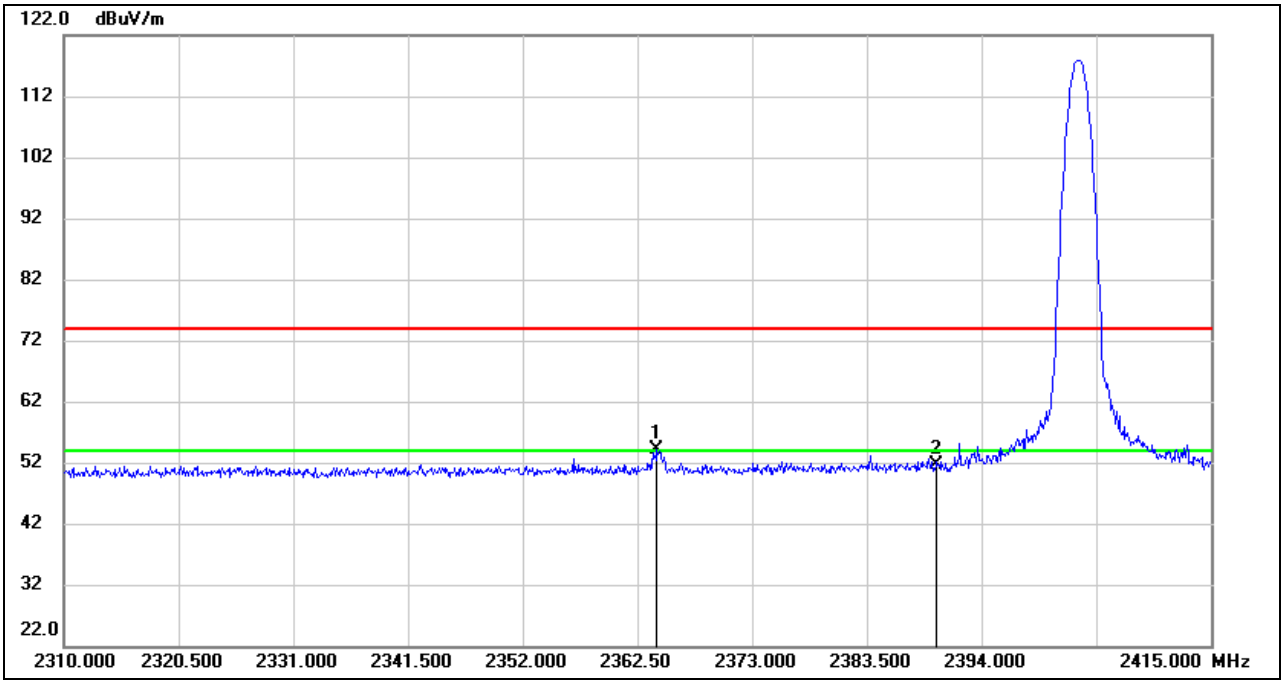
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: All the polarities (Vertical & Horizontal) had been tested, only the worst data was recorded in the report.

8.1.2. 2GFSK - 150 kbps MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

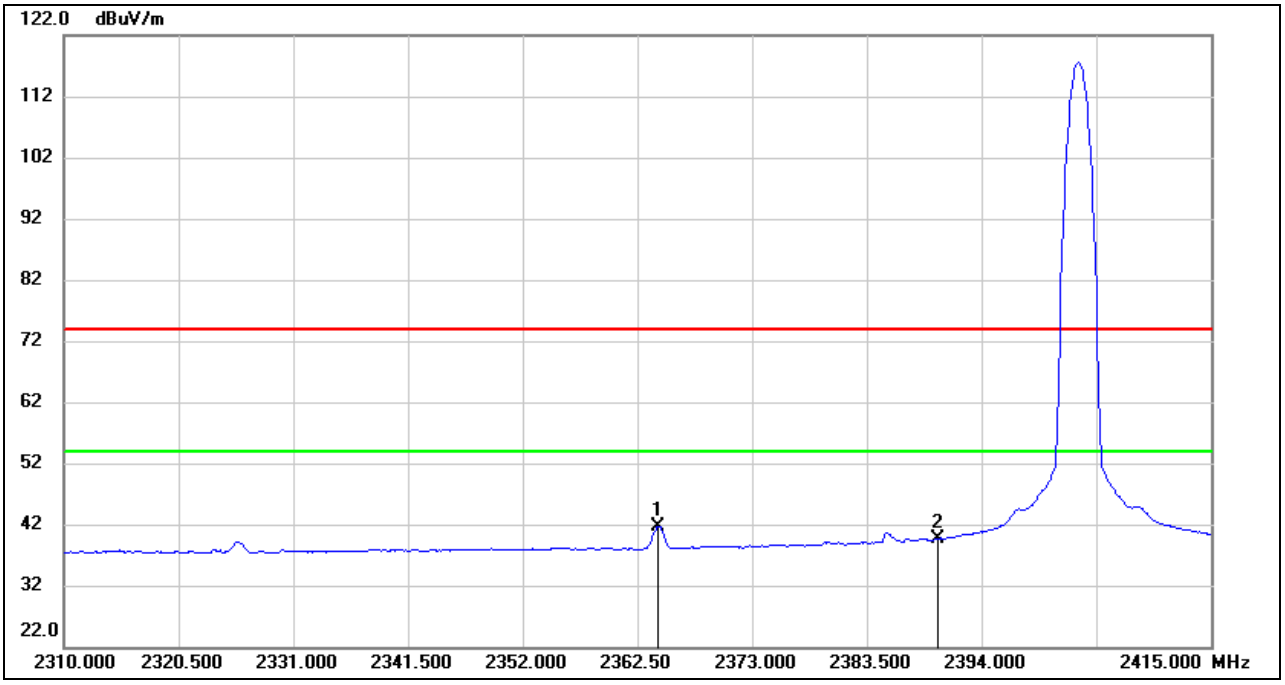
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2364.285	22.03	32.09	54.12	74.00	-19.88	peak
2	2390.000	19.43	32.16	51.59	74.00	-22.41	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

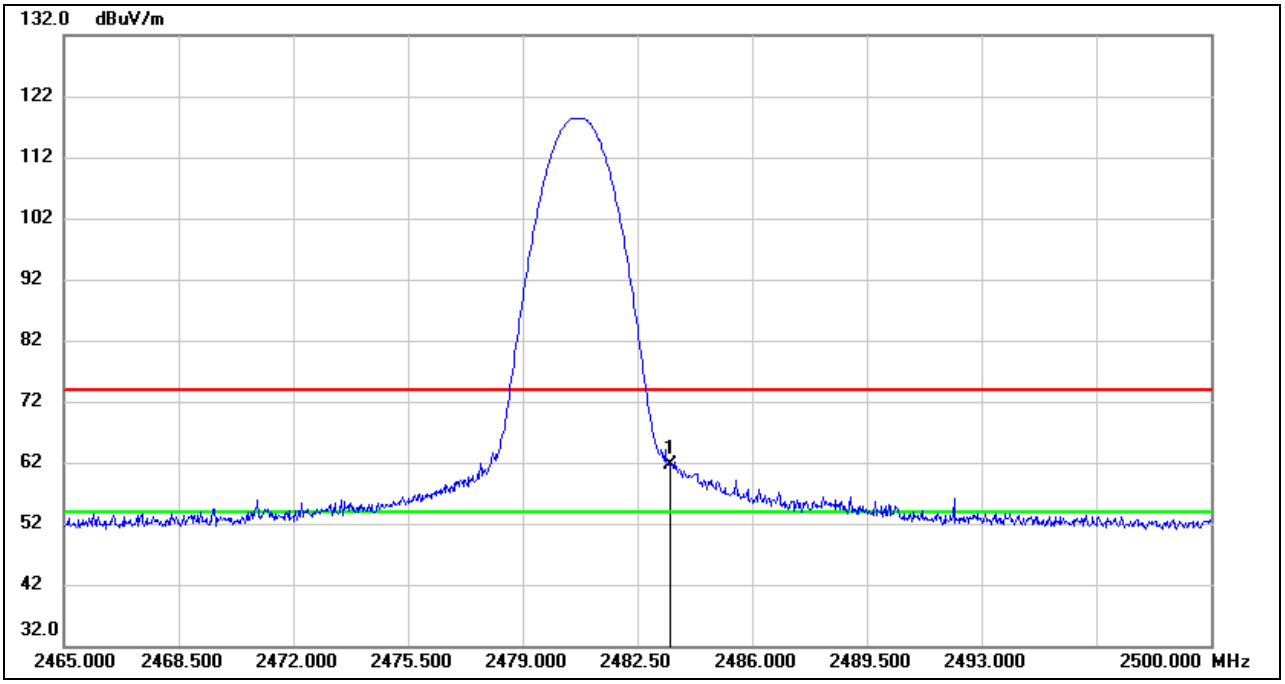


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2364.285	9.64	32.09	41.73	54.00	-12.27	AVG
2	2390.000	7.59	32.16	39.75	54.00	-14.25	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

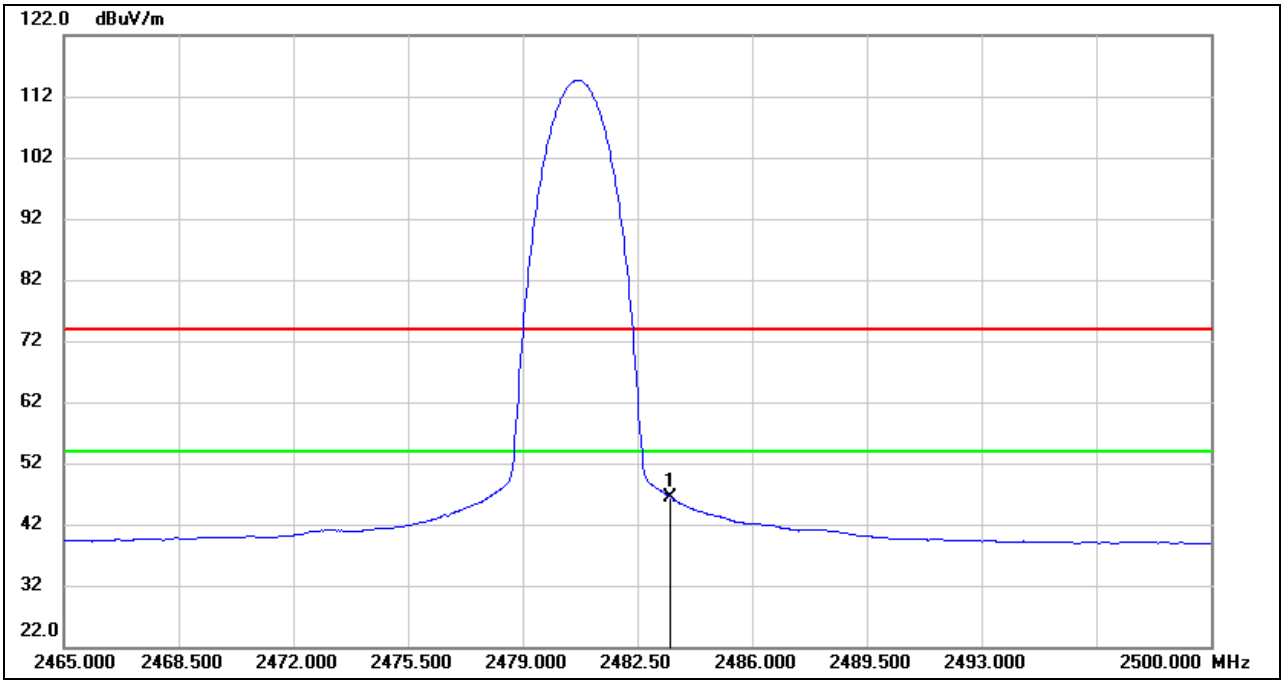
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	29.26	32.44	61.70	74.00	-12.30	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	14.06	32.44	46.50	54.00	-7.50	AVG

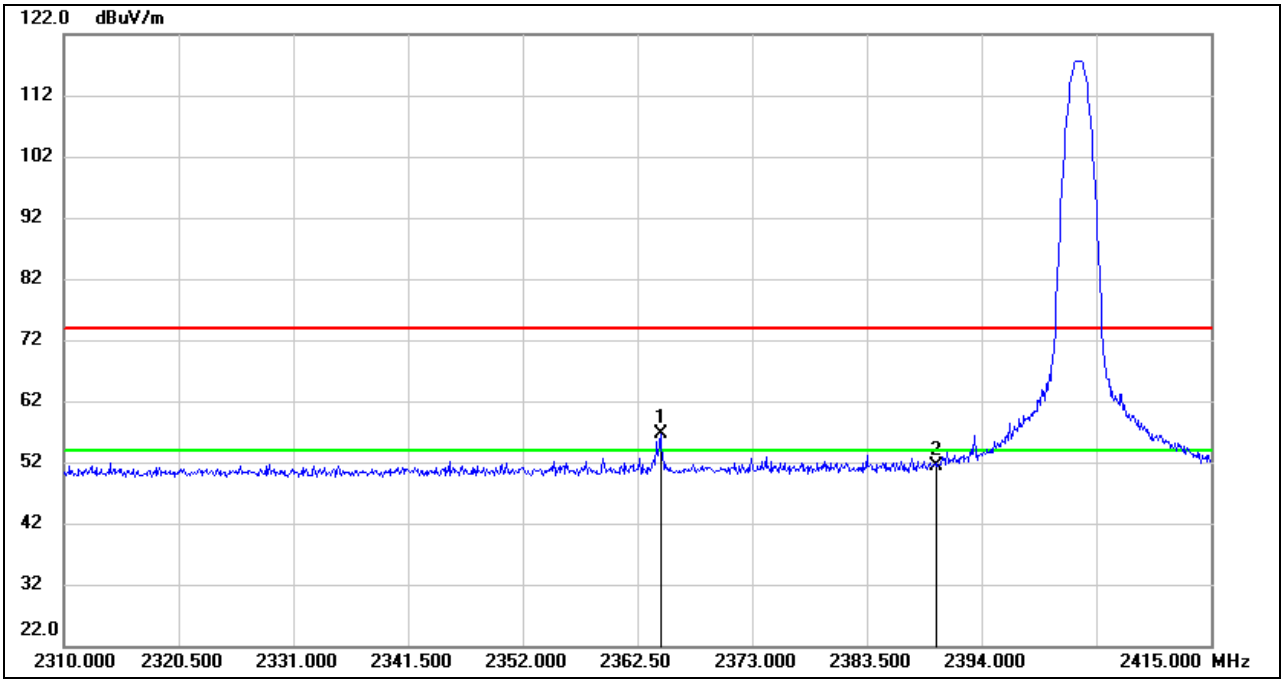
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: All the polarities (Vertical & Horizontal) had been tested, only the worst data was recorded in the report.

8.1.3. 2GFSK - 250 kbps MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

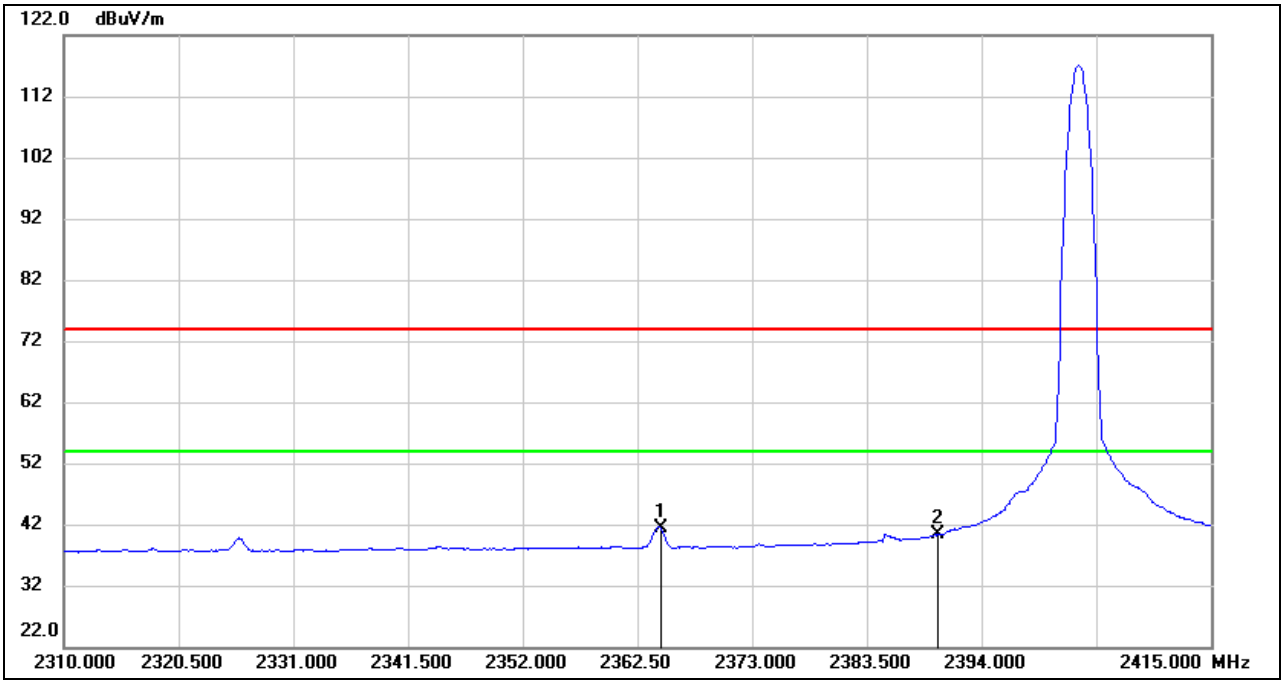
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2364.600	24.47	32.09	56.56	74.00	-17.44	peak
2	2390.000	19.16	32.16	51.32	74.00	-22.68	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

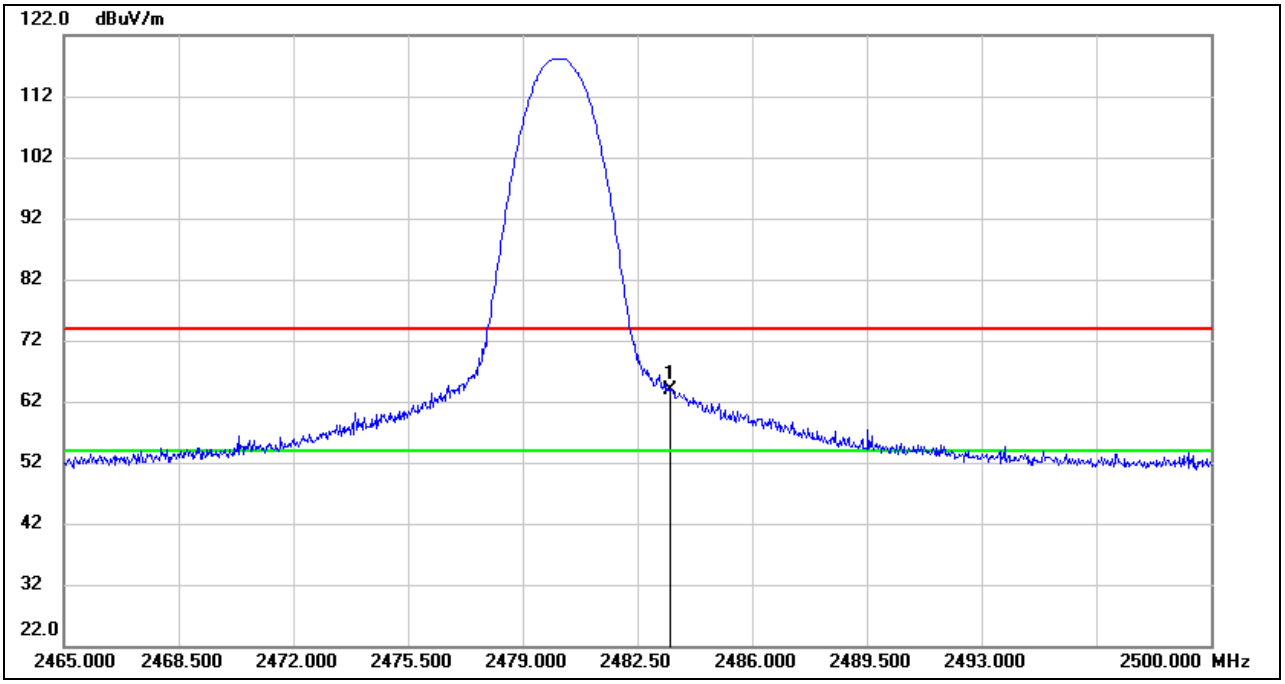


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2364.600	9.40	32.09	41.49	54.00	-12.51	AVG
2	2390.000	8.12	32.16	40.28	54.00	-13.72	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

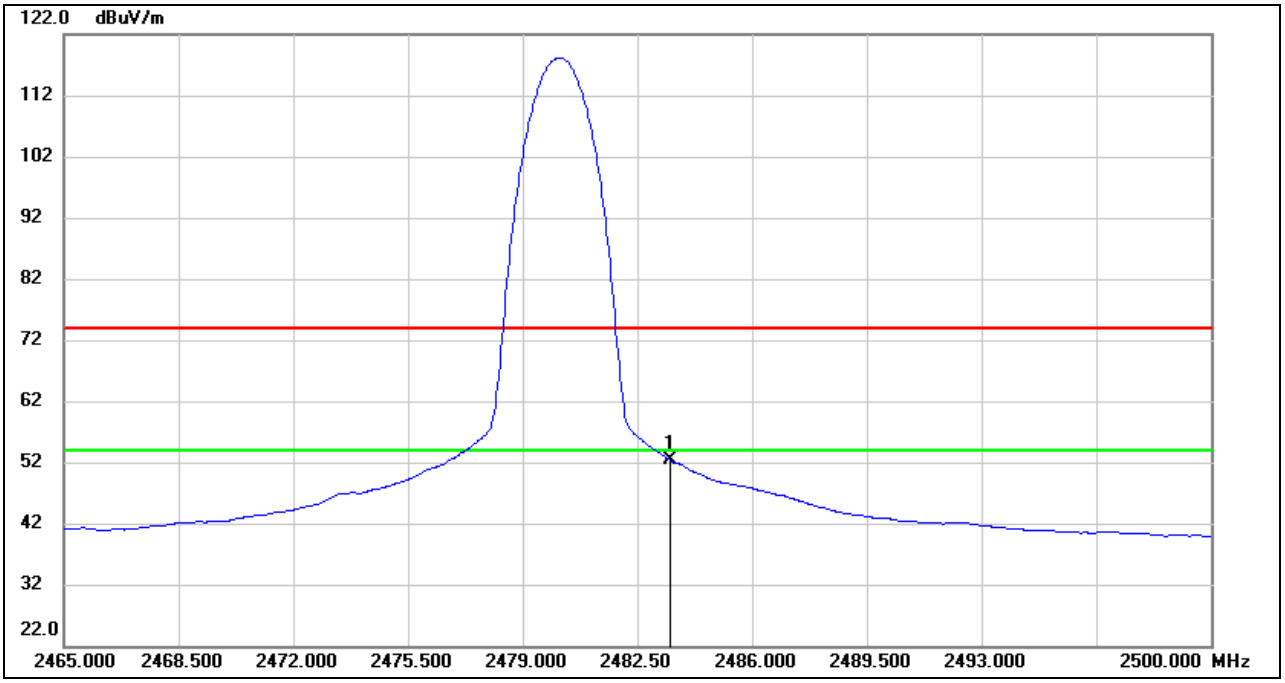
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	31.54	32.44	63.98	74.00	-10.02	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	19.89	32.44	52.33	54.00	-1.67	AVG

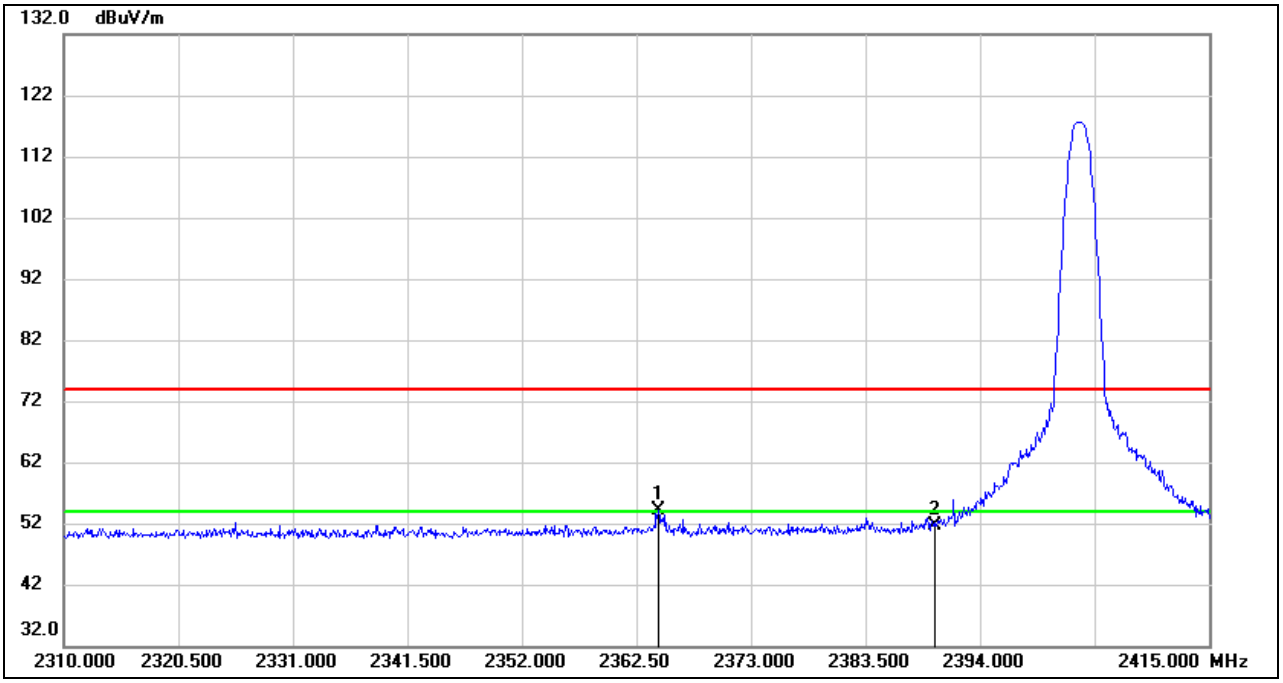
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: All the polarities (Vertical & Horizontal) had been tested, only the worst data was recorded in the report.

8.1.4. 2GFSK - 400 kbps MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

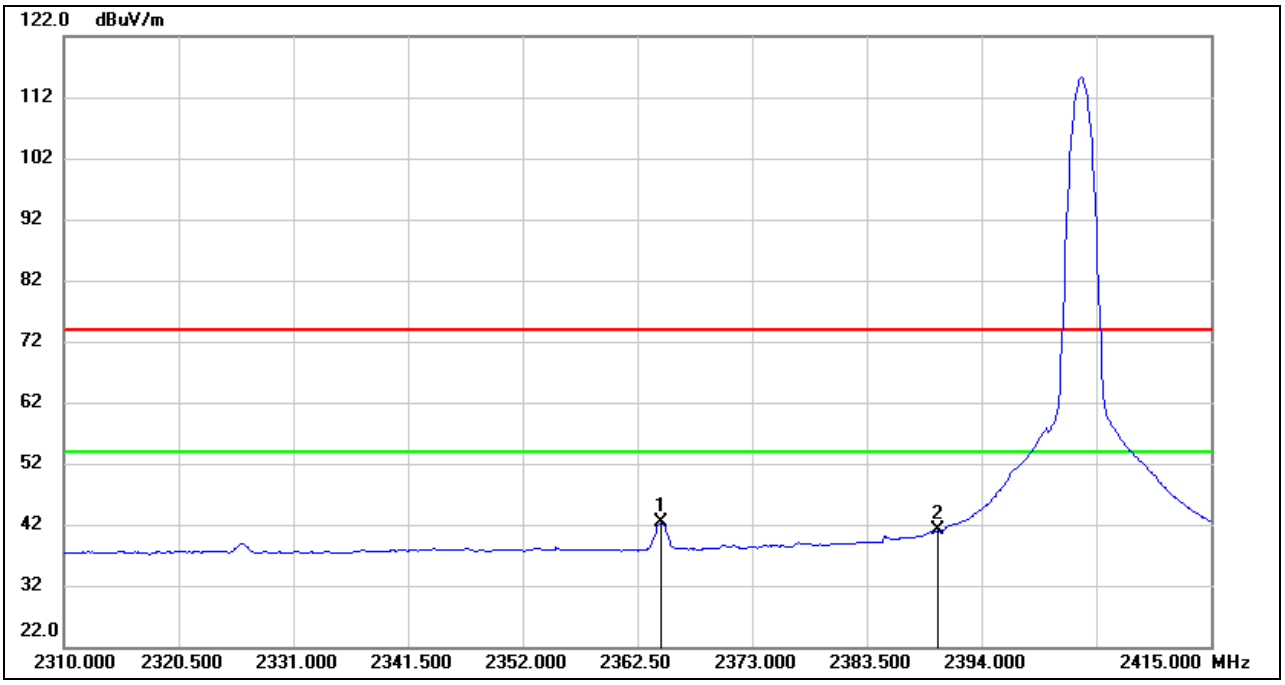
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2364.495	21.94	32.09	54.03	74.00	-19.97	peak
2	2390.000	19.47	32.16	51.63	74.00	-22.37	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

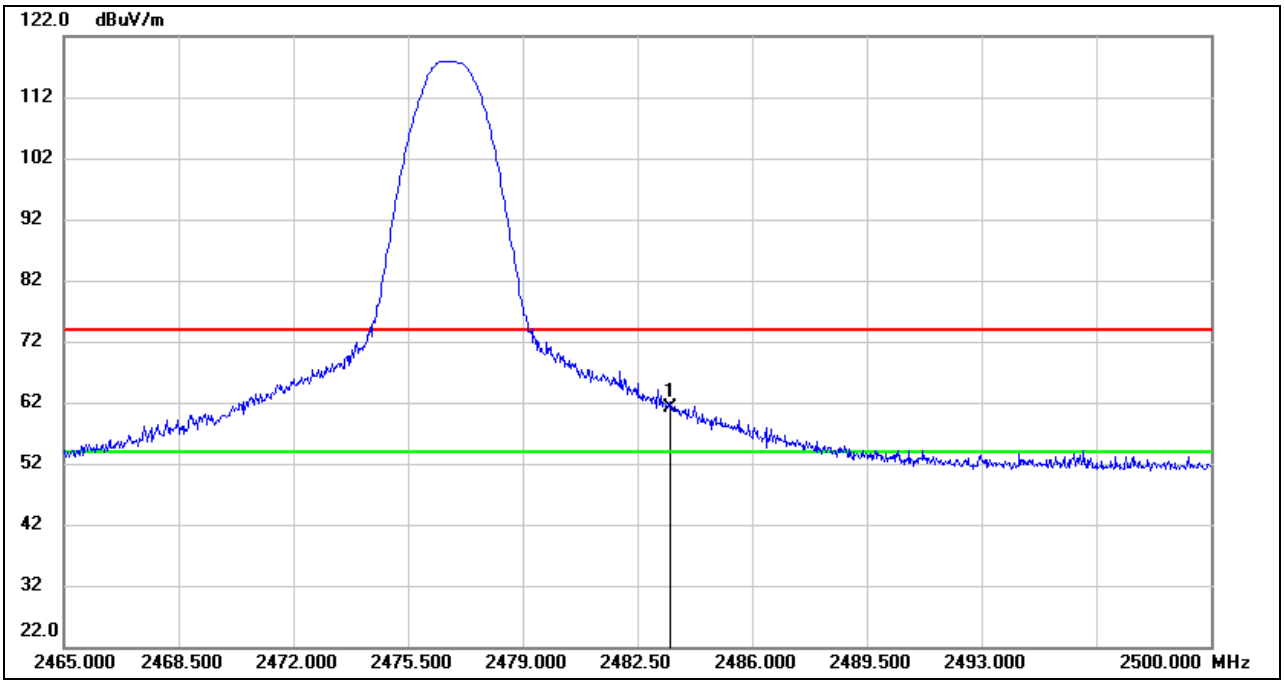


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2364.495	10.27	32.09	42.36	54.00	-11.64	AVG
2	2390.000	8.88	32.16	41.04	54.00	-12.96	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

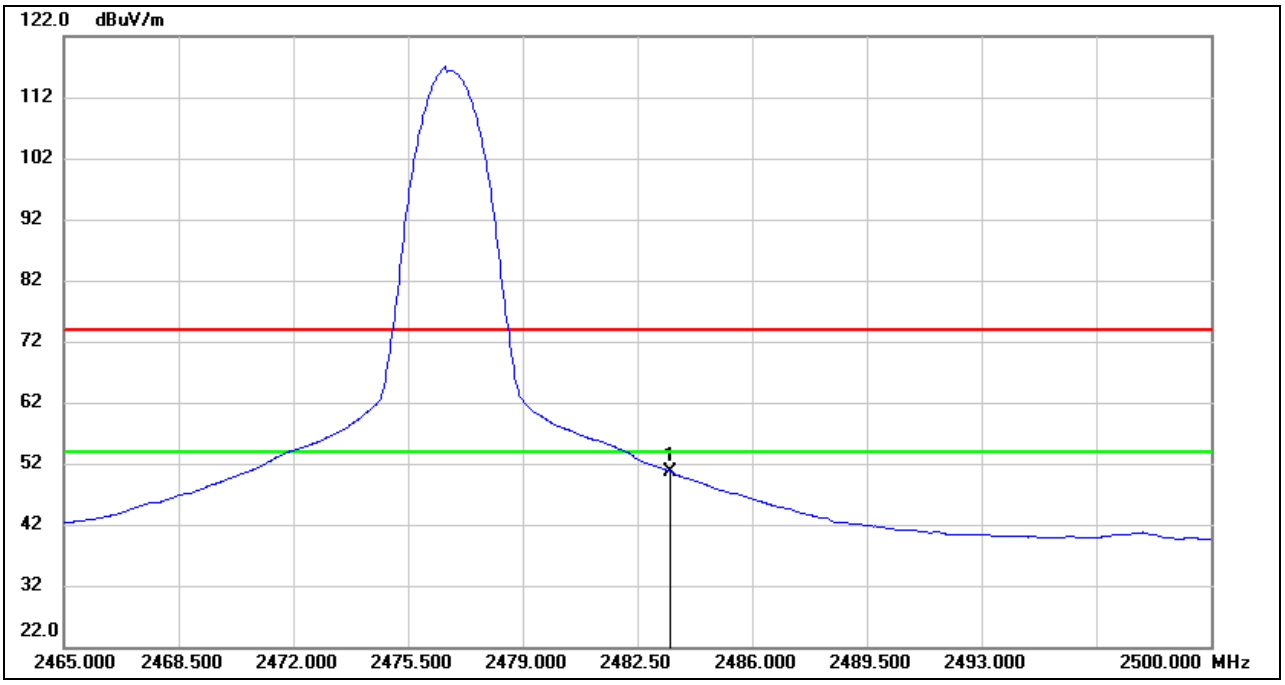
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	28.68	32.44	61.12	74.00	-12.88	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	18.28	32.44	50.72	54.00	-3.28	AVG

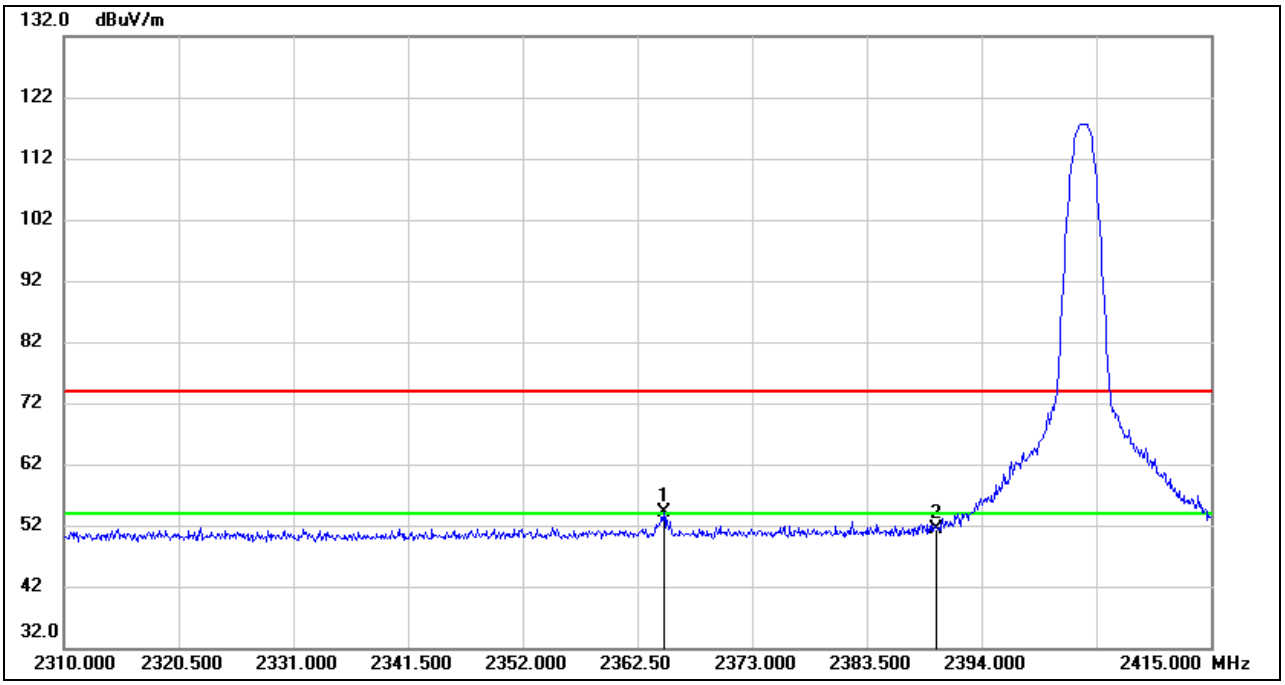
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: All the polarities (Vertical & Horizontal) had been tested, only the worst data was recorded in the report.

8.1.5. 2GFSK - 500 kbps MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

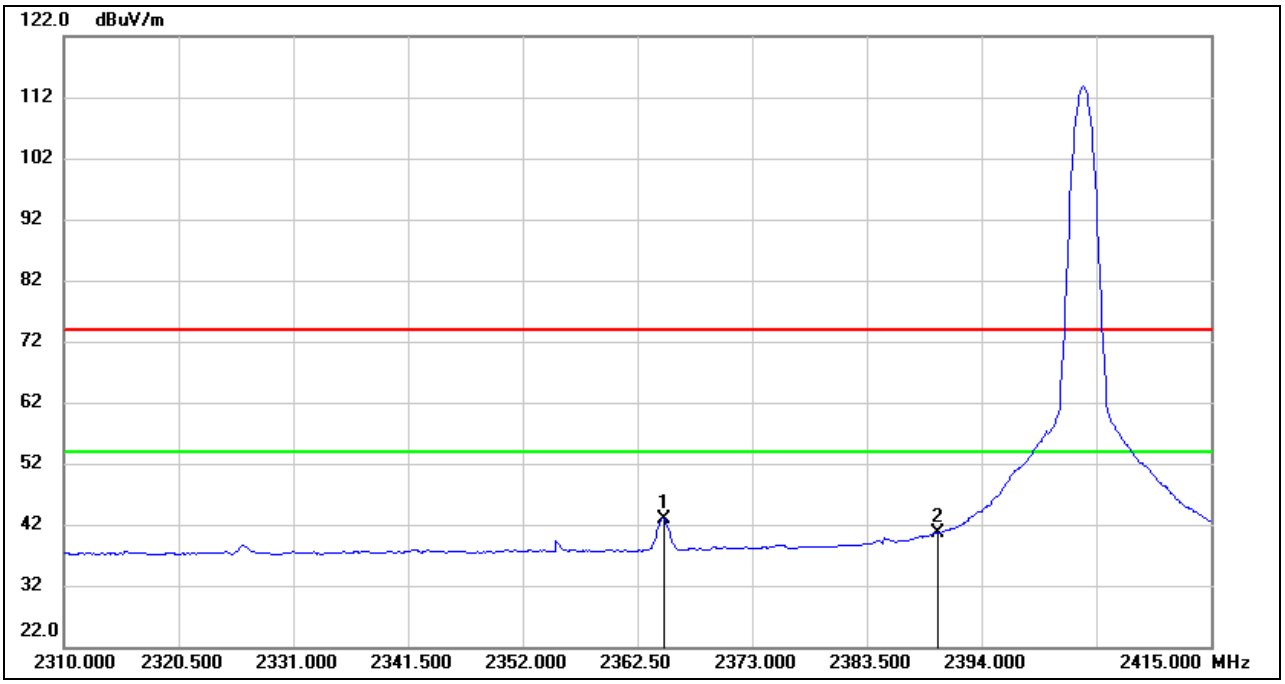
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2364.915	22.12	32.09	54.21	74.00	-19.79	peak
2	2390.000	19.12	32.16	51.28	74.00	-22.72	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

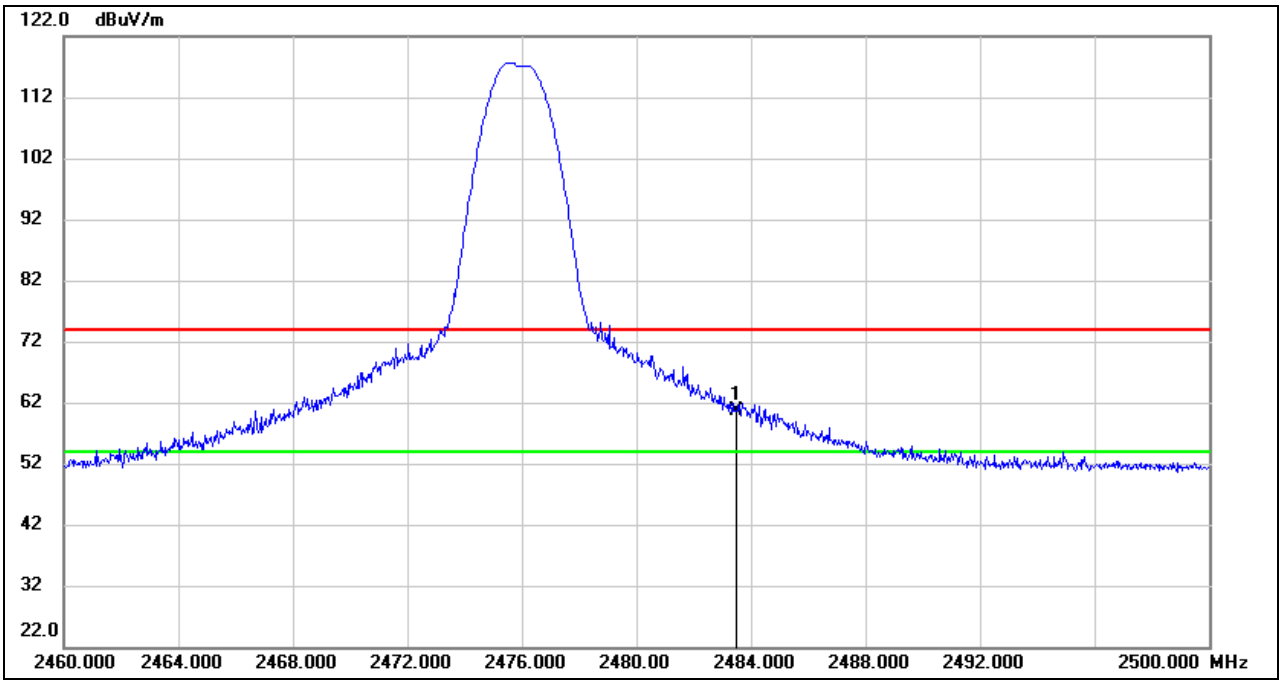


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2364.915	10.72	32.09	42.81	54.00	-11.19	AVG
2	2390.000	8.49	32.16	40.65	54.00	-13.35	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

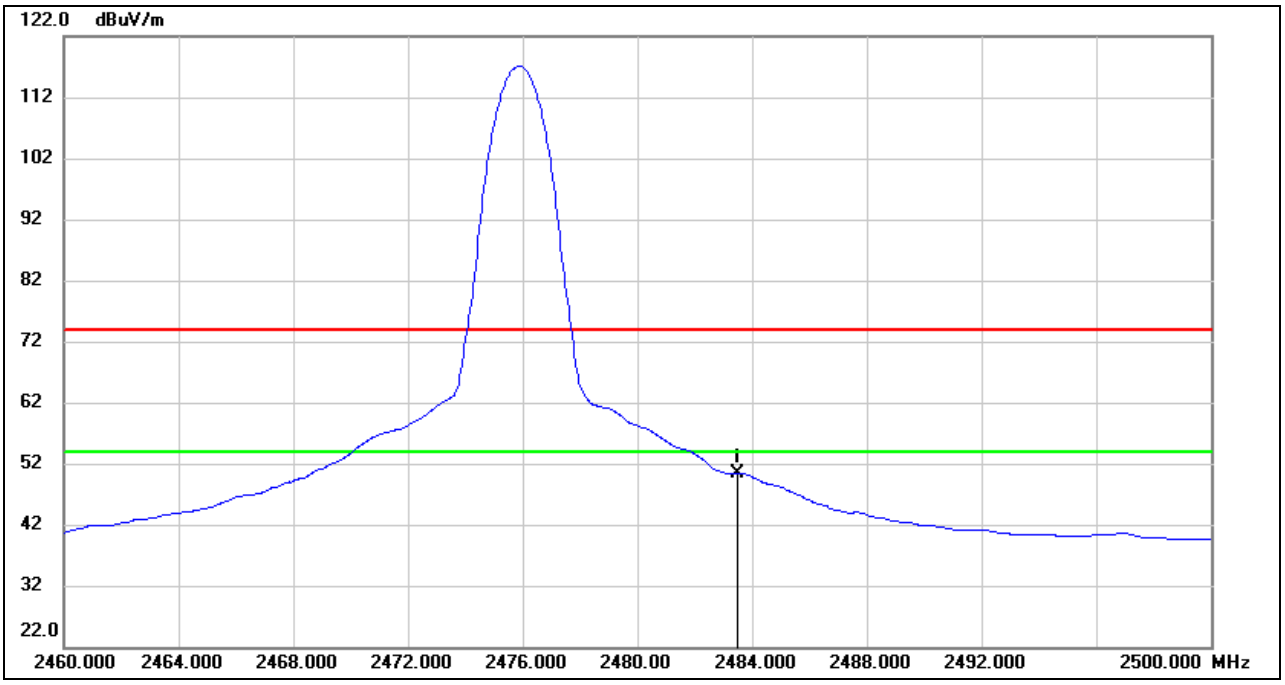
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	28.11	32.44	60.55	74.00	-13.45	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	17.87	32.44	50.31	54.00	-3.69	AVG

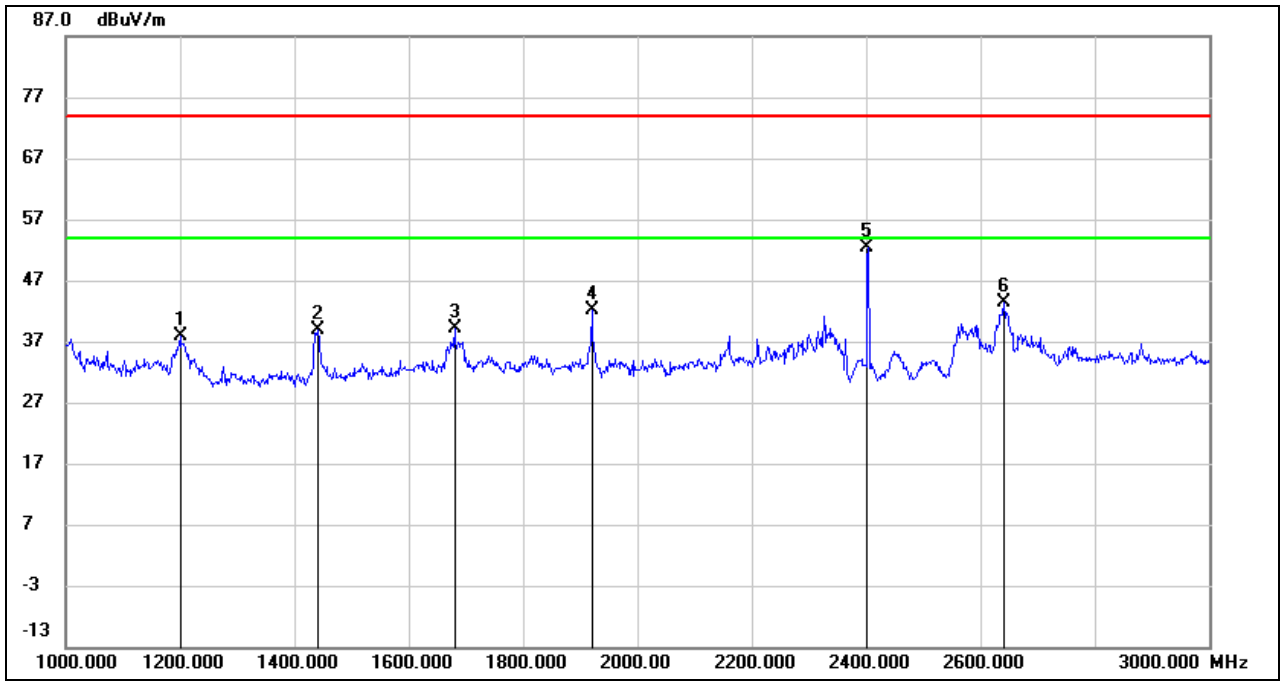
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: All the polarities (Vertical & Horizontal) had been tested, only the worst data was recorded in the report.

8.2. SPURIOUS EMISSIONS (1 GHz ~ 3 GHz)

8.2.1. 2GFSK - 500 kbps MODE

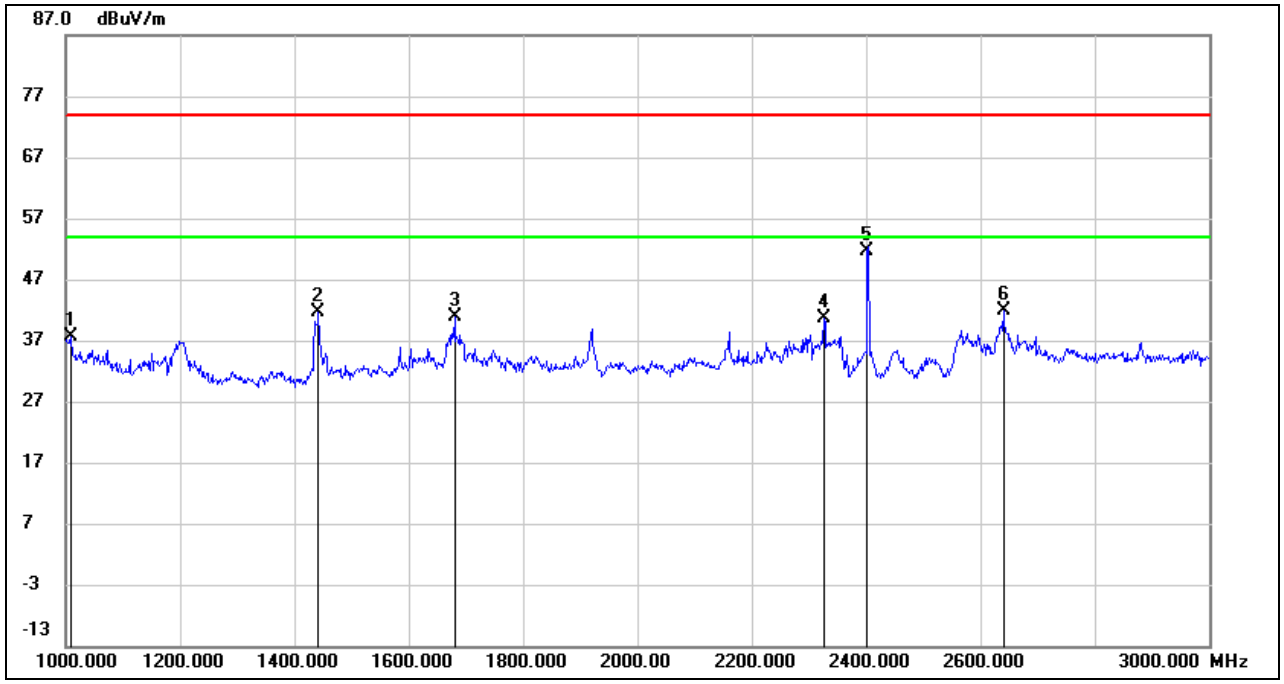
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1200.000	51.65	-13.71	37.94	74.00	-36.06	peak
2	1442.000	51.64	-12.79	38.85	74.00	-35.15	peak
3	1680.000	50.50	-11.34	39.16	74.00	-34.84	peak
4	1920.000	53.05	-10.81	42.24	74.00	-31.76	peak
5	2402.000	61.30	-8.94	52.36	74.00	-21.64	peak
6	2640.000	51.66	-8.39	43.27	74.00	-30.73	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

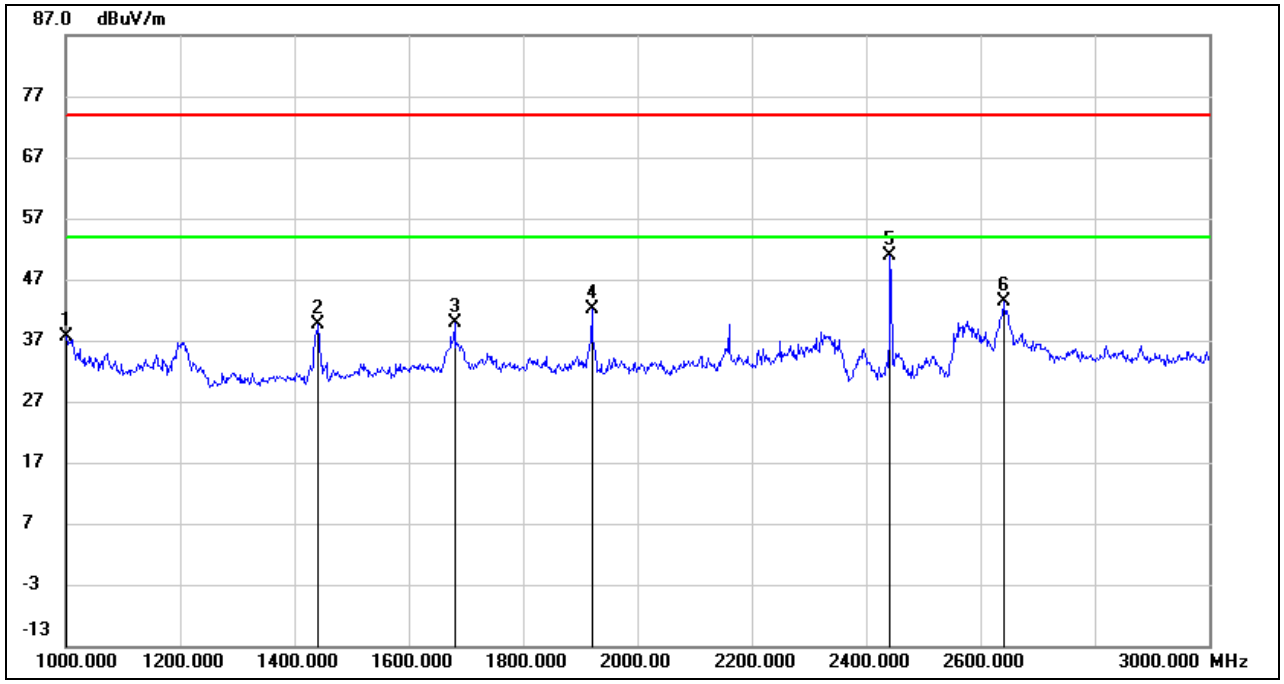
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1008.000	52.57	-15.00	37.57	74.00	-36.43	peak
2	1442.000	54.53	-12.79	41.74	74.00	-32.26	peak
3	1680.000	52.12	-11.34	40.78	74.00	-33.22	peak
4	2326.000	49.86	-9.23	40.63	74.00	-33.37	peak
5	2402.000	60.66	-8.94	51.72	74.00	-22.28	peak
6	2640.000	50.28	-8.39	41.89	74.00	-32.11	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

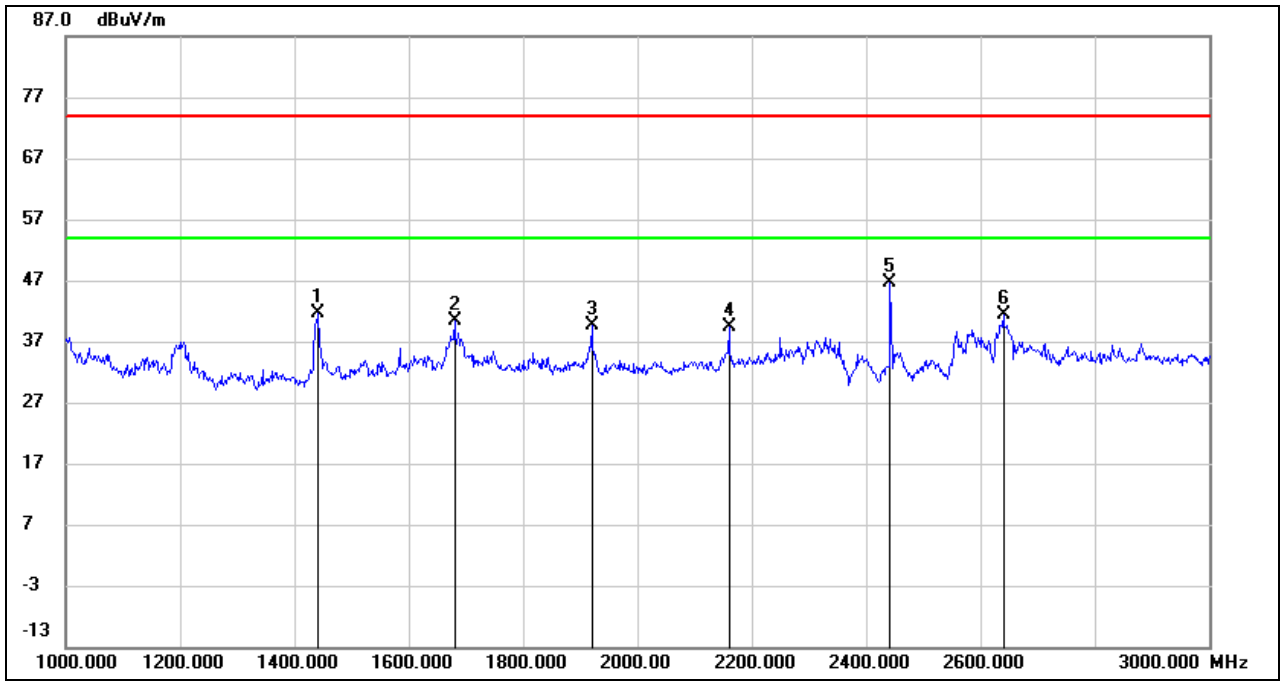
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1002.000	52.75	-15.04	37.71	74.00	-36.29	peak
2	1442.000	52.52	-12.79	39.73	74.00	-34.27	peak
3	1680.000	51.18	-11.34	39.84	74.00	-34.16	peak
4	1920.000	52.93	-10.81	42.12	74.00	-31.88	peak
5	2441.000	59.66	-8.85	50.81	74.00	-23.19	peak
6	2640.000	51.73	-8.39	43.34	74.00	-30.66	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

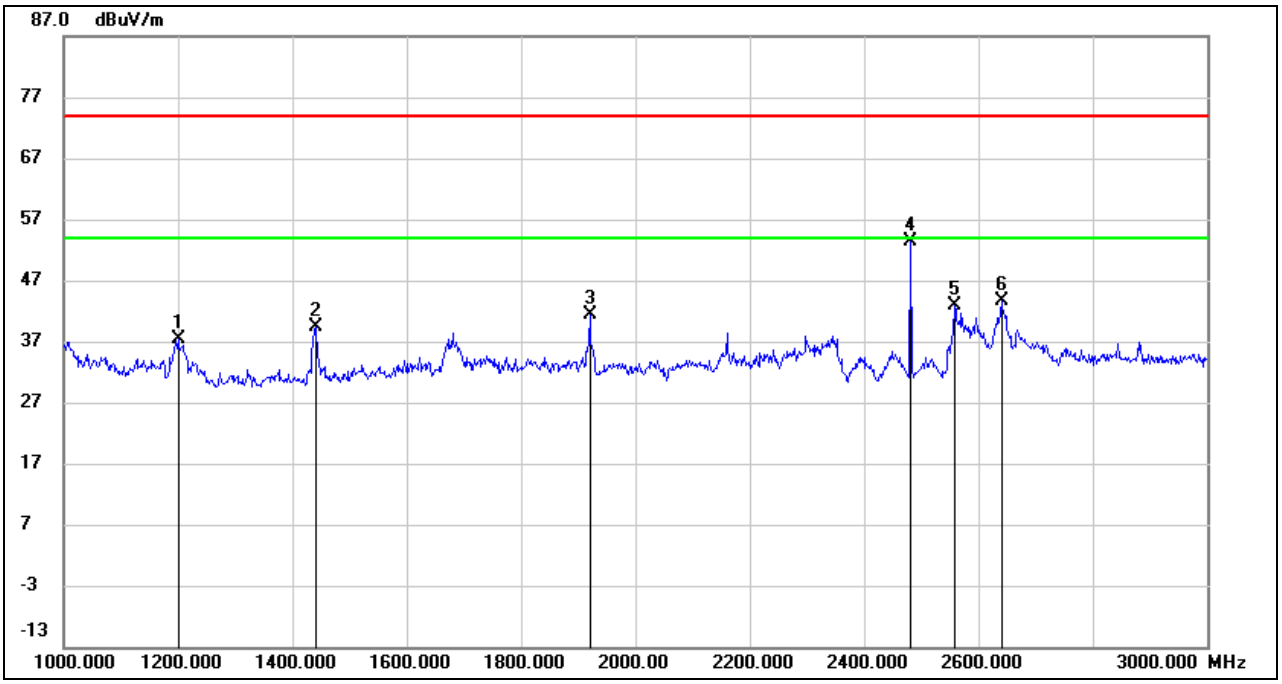
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1442.000	54.37	-12.79	41.58	74.00	-32.42	peak
2	1680.000	51.80	-11.34	40.46	74.00	-33.54	peak
3	1920.000	50.56	-10.81	39.75	74.00	-34.25	peak
4	2160.000	49.40	-9.96	39.44	74.00	-34.56	peak
5	2441.000	55.41	-8.85	46.56	74.00	-27.44	peak
6	2640.000	49.88	-8.39	41.49	74.00	-32.51	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

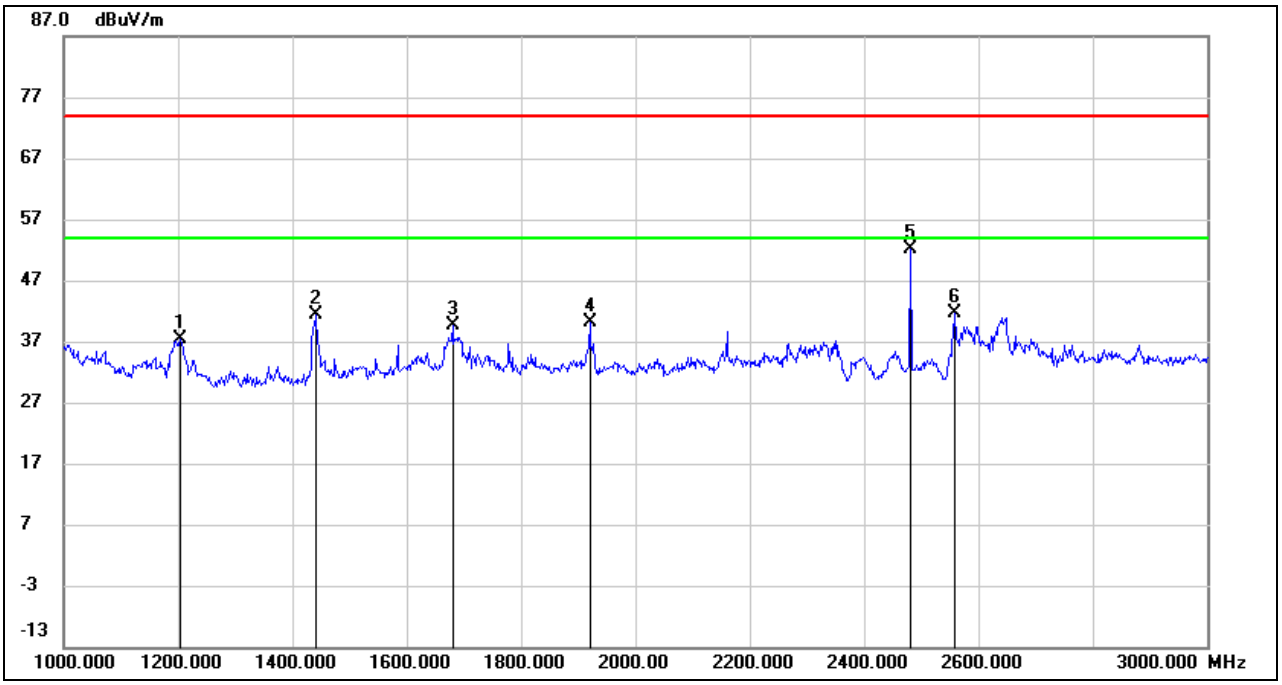
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1200.000	50.99	-13.71	37.28	74.00	-36.72	peak
2	1440.000	52.07	-12.79	39.28	74.00	-34.72	peak
3	1920.000	52.10	-10.81	41.29	74.00	-32.71	peak
4	2480.000	62.21	-8.76	53.45	74.00	-20.55	peak
5	2558.000	51.52	-8.64	42.88	74.00	-31.12	peak
6	2640.000	52.06	-8.39	43.67	74.00	-30.33	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1204.000	51.03	-13.70	37.33	74.00	-36.67	peak
2	1440.000	54.20	-12.79	41.41	74.00	-32.59	peak
3	1680.000	50.86	-11.34	39.52	74.00	-34.48	peak
4	1920.000	50.86	-10.81	40.05	74.00	-33.95	peak
5	2480.000	60.90	-8.76	52.14	74.00	-21.86	peak
6	2558.000	50.39	-8.64	41.75	74.00	-32.25	peak

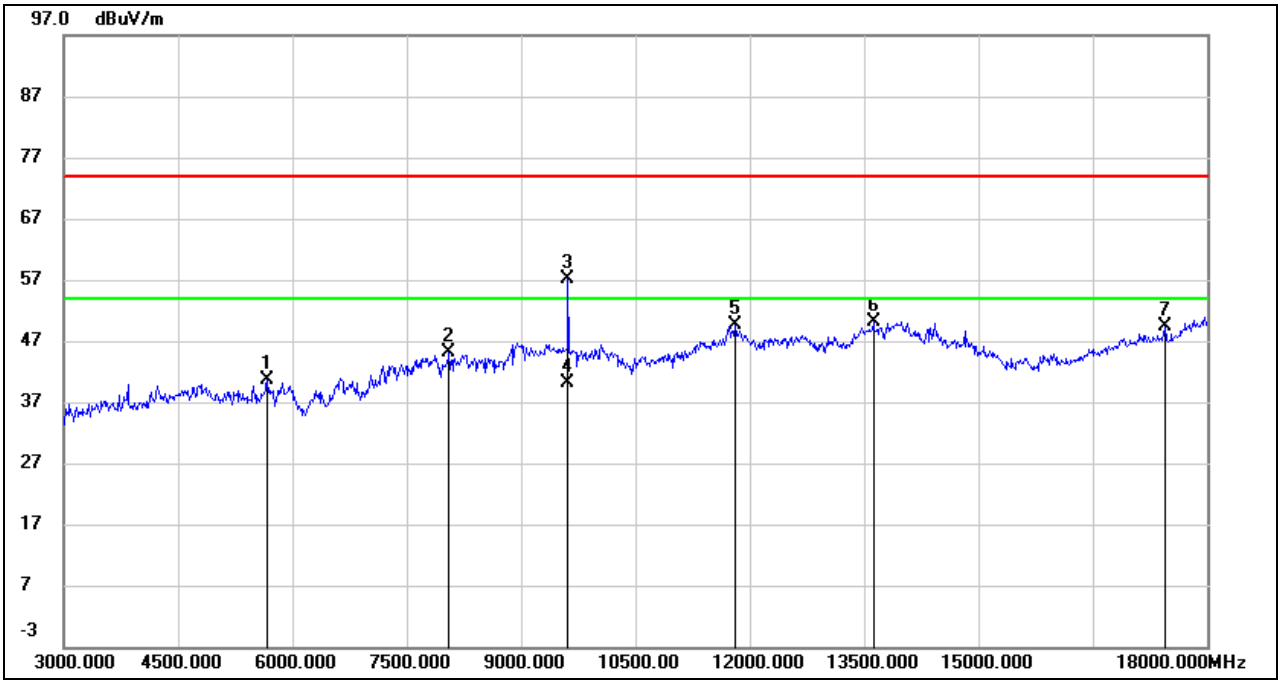
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

Note: All the modes and channels had been tested, but only the worst data was recorded in the report.

8.3. SPURIOUS EMISSIONS (3 GHz ~ 18 GHz)

8.3.1. 2GFSK - 75 kbps MODE

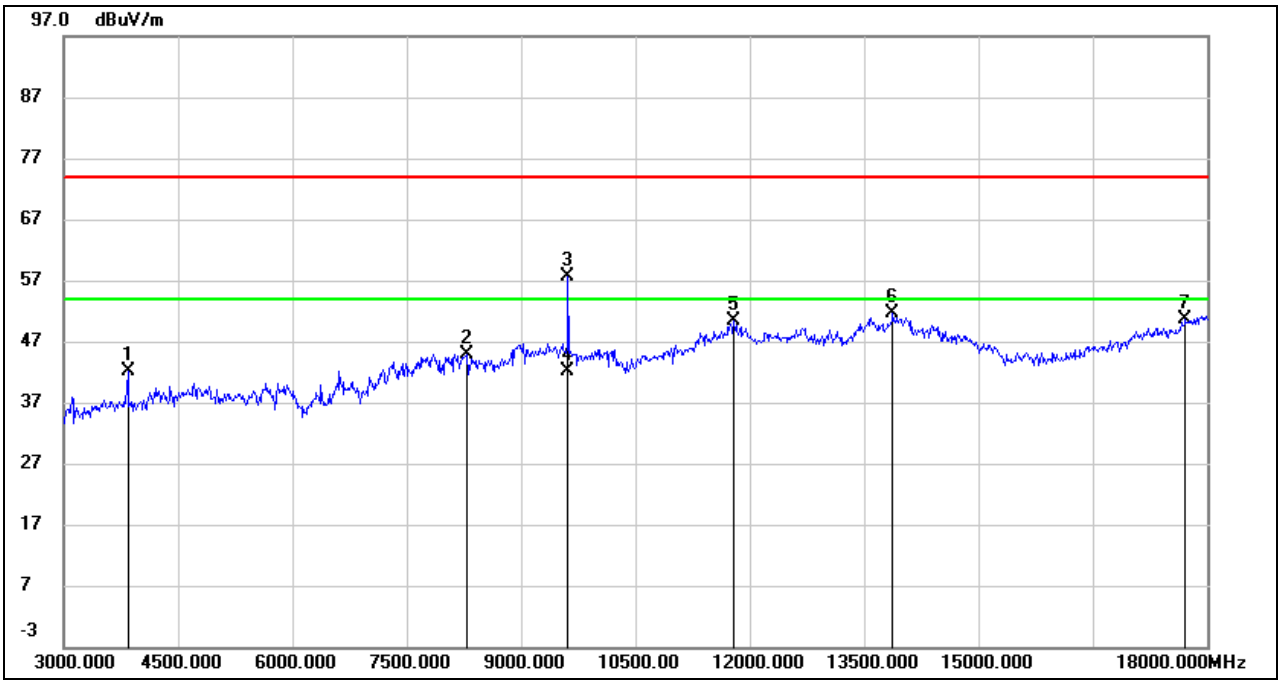
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5670.000	39.94	0.68	40.62	74.00	-33.38	peak
2	8055.000	39.34	5.87	45.21	74.00	-28.79	peak
3	9615.000	46.89	10.13	57.02	74.00	-16.98	peak
4	9615.000	29.89	10.13	40.02	54.00	-13.98	AVG
5	11805.000	32.33	17.21	49.54	74.00	-24.46	peak
6	13620.000	30.39	19.79	50.18	74.00	-23.82	peak
7	17445.000	29.00	20.35	49.35	74.00	-24.65	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

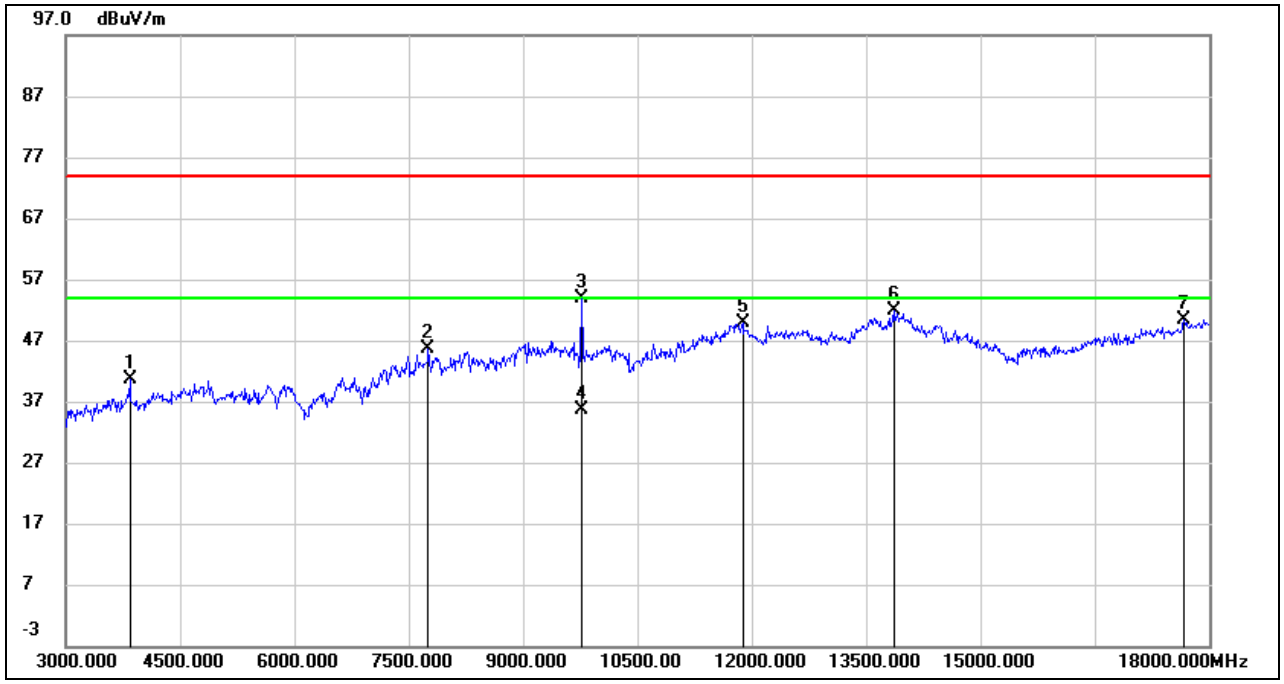
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3840.000	46.49	-4.40	42.09	74.00	-31.91	peak
2	8280.000	37.91	7.00	44.91	74.00	-29.09	peak
3	9615.000	47.47	10.13	57.60	74.00	-16.40	peak
4	9615.000	32.09	10.13	42.22	54.00	-11.78	AVG
5	11790.000	33.12	17.15	50.27	74.00	-23.73	peak
6	13875.000	31.00	20.55	51.55	74.00	-22.45	peak
7	17715.000	28.39	22.31	50.70	74.00	-23.30	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

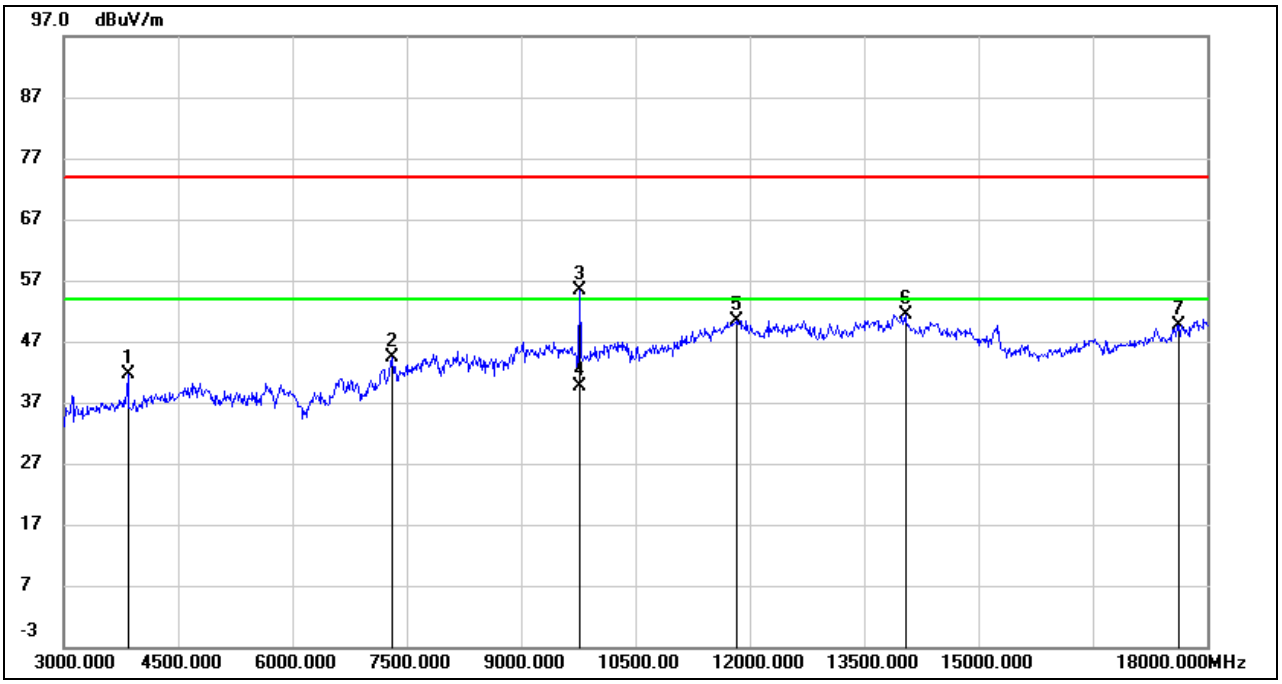
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3840.000	44.93	-4.40	40.53	74.00	-33.47	peak
2	7755.000	39.78	5.93	45.71	74.00	-28.29	peak
3	9765.000	43.90	10.02	53.92	74.00	-20.08	peak
4	9765.000	25.69	10.02	35.71	54.00	-18.29	AVG
5	11880.000	32.63	17.17	49.80	74.00	-24.20	peak
6	13860.000	31.27	20.55	51.82	74.00	-22.18	peak
7	17670.000	28.51	21.83	50.34	74.00	-23.66	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

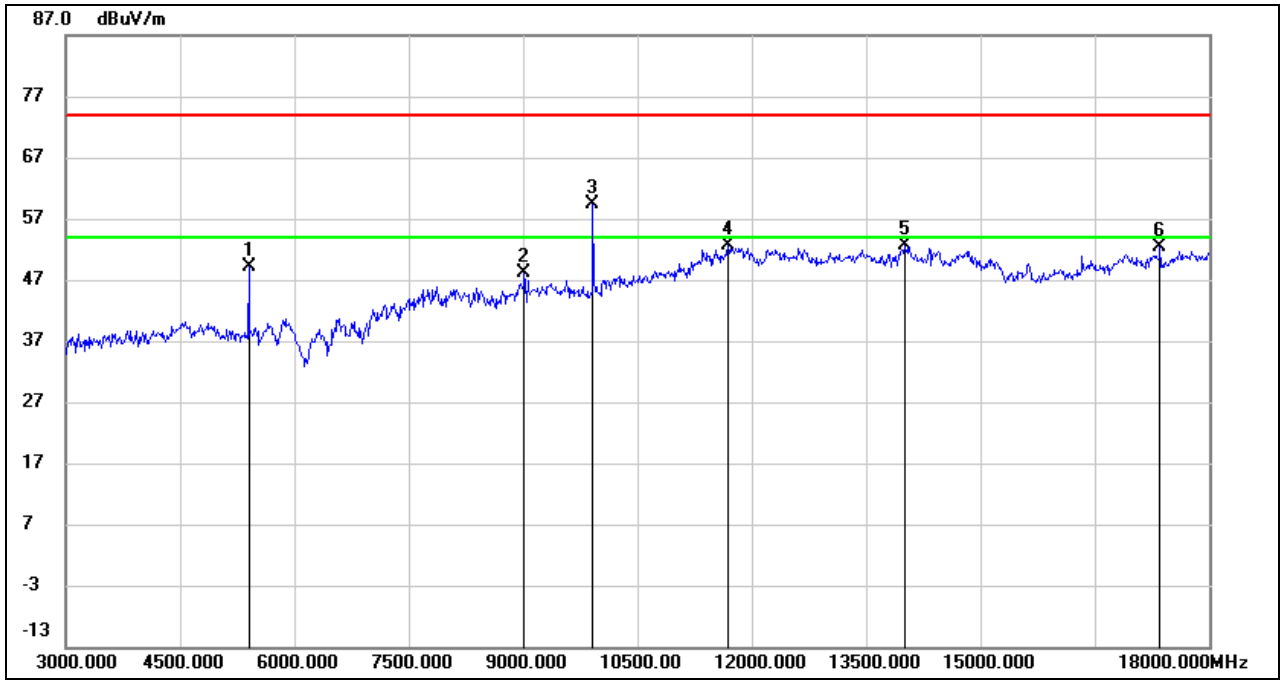
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3840.000	46.00	-4.40	41.60	74.00	-32.40	peak
2	7305.000	38.82	5.48	44.30	74.00	-29.70	peak
3	9765.000	45.29	10.02	55.31	74.00	-18.69	peak
4	9765.000	29.60	10.02	39.62	54.00	-14.38	AVG
5	11820.000	33.29	17.21	50.50	74.00	-23.50	peak
6	14040.000	31.00	20.44	51.44	74.00	-22.56	peak
7	17625.000	28.35	21.37	49.72	74.00	-24.28	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

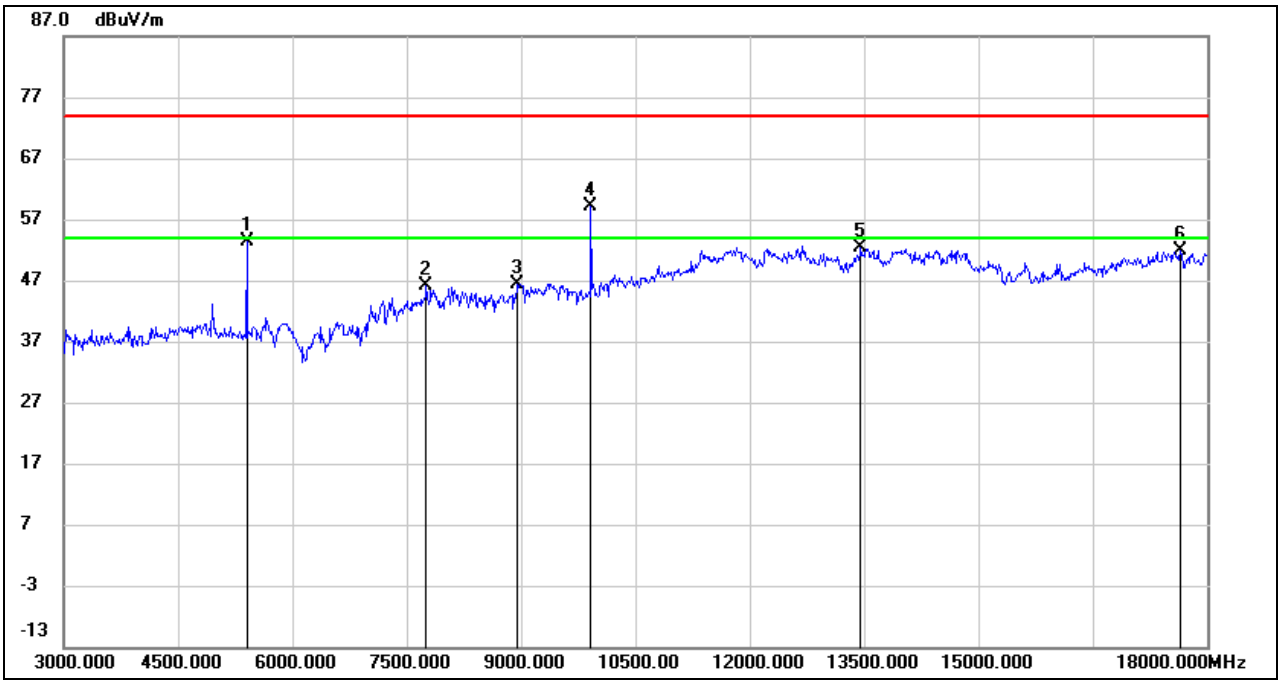
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5400.000	47.95	1.11	49.06	74.00	-24.94	peak
2	9015.000	38.01	10.02	48.03	74.00	-25.97	peak
3*	9915.000	48.14	11.31	59.45	/	/	peak
4	11685.000	35.78	16.76	52.54	74.00	-21.46	peak
5	14010.000	31.13	21.40	52.53	74.00	-21.47	peak
6	17355.000	30.70	21.59	52.29	74.00	-21.71	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

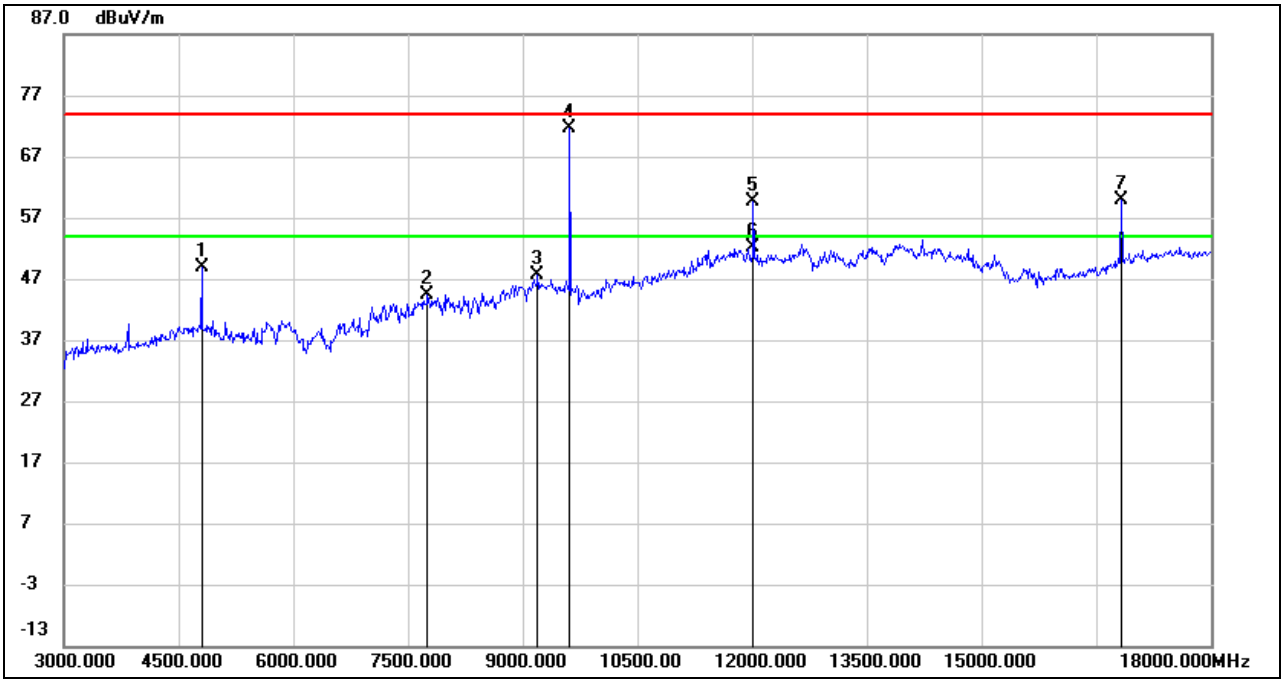


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5400.000	52.26	1.11	53.37	74.00	-20.63	peak
2	7755.000	39.40	6.80	46.20	74.00	-27.80	peak
3	8955.000	37.17	9.25	46.42	74.00	-27.58	peak
4*	9915.000	47.74	11.31	59.05	/	/	peak
5	13455.000	32.11	20.18	52.29	74.00	-21.71	peak
6	17640.000	28.75	23.08	51.83	74.00	-22.17	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

8.3.2. 2GFSK - 150 kbps MODE

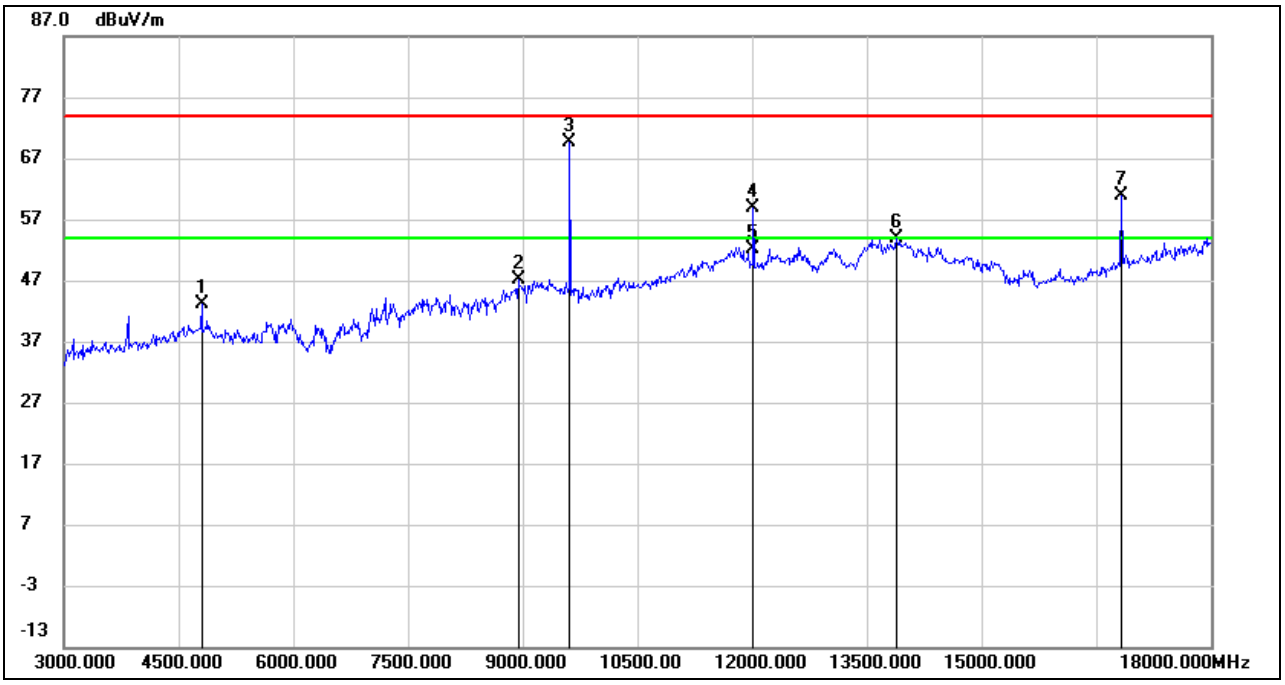
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.000	49.85	-0.88	48.97	74.00	-25.03	peak
2	7755.000	38.75	5.69	44.44	74.00	-29.56	peak
3	9195.000	37.79	9.80	47.59	74.00	-26.41	peak
4*	9615.000	61.24	10.32	71.56	/	/	peak
5	12015.000	42.54	17.00	59.54	74.00	-14.46	peak
6	12015.000	35.06	17.00	52.06	54.00	-1.94	AVG
7*	16830.000	40.75	19.12	59.87	/	/	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

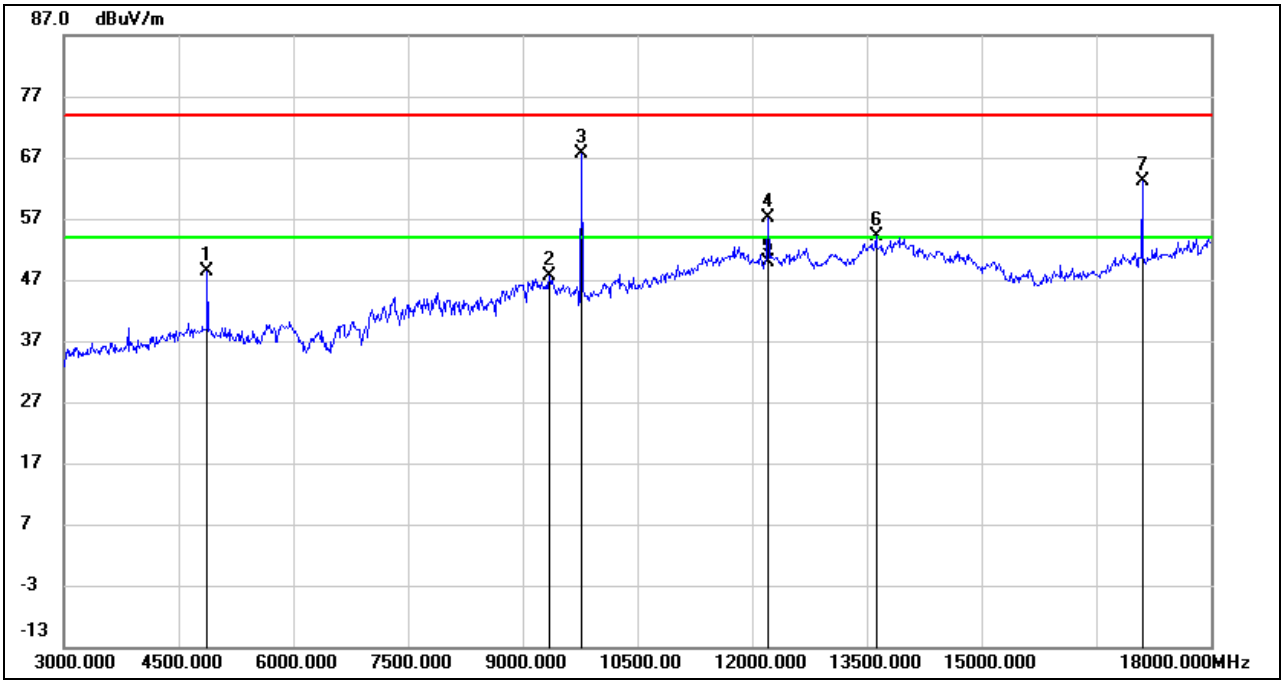
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.000	44.01	-0.88	43.13	74.00	-30.87	peak
2	8940.000	37.83	9.24	47.07	74.00	-26.93	peak
3*	9615.000	59.43	10.32	69.75	/	/	peak
4	12015.000	41.76	17.00	58.76	74.00	-15.24	peak
5	12015.000	35.06	17.00	52.06	54.00	-1.94	AVG
6	13890.000	33.01	20.80	53.81	74.00	-20.19	peak
7*	16830.000	41.70	19.12	60.82	/	/	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

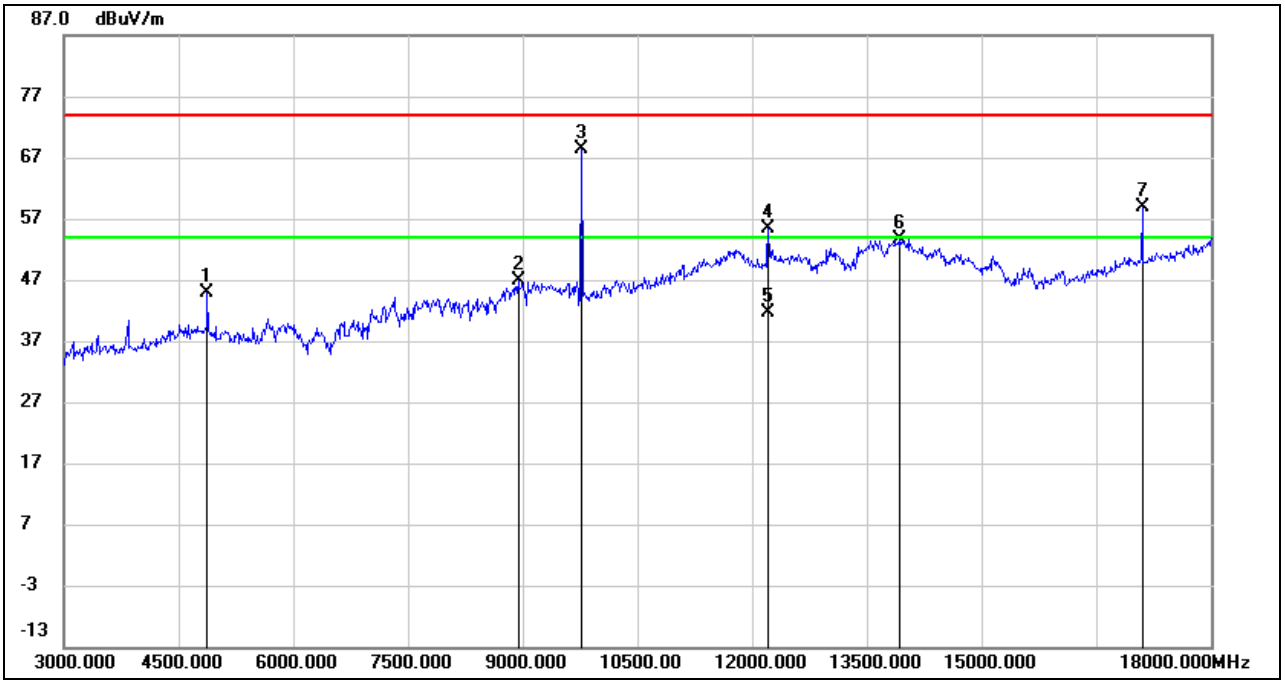
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	48.88	-0.58	48.30	74.00	-25.70	peak
2	9345.000	37.64	9.94	47.58	74.00	-26.42	peak
3*	9765.000	57.06	10.60	67.66	/	/	peak
4	12210.000	40.21	16.99	57.20	74.00	-16.80	peak
5	12210.000	32.77	16.99	49.76	54.00	-4.24	AVG
6	13620.000	33.99	20.10	53.98	74.00	-19.91	peak
7*	17100.000	43.01	20.11	63.12	/	/	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

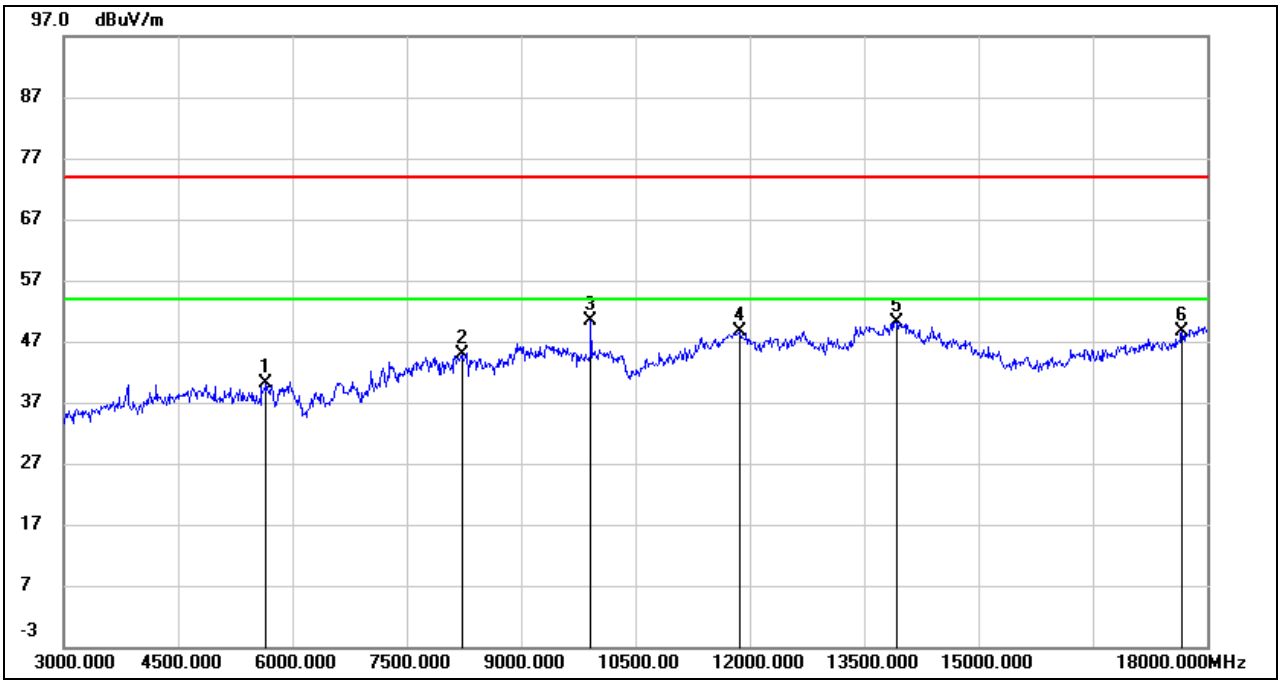
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	45.52	-0.58	44.94	74.00	-29.06	peak
2	8940.000	37.72	9.24	46.96	74.00	-27.04	peak
3*	9765.000	57.81	10.60	68.41	/	/	peak
4	12210.000	38.37	16.99	55.36	74.00	-18.64	peak
5	12210.000	24.69	16.99	41.68	54.00	-12.32	AVG
6	13920.000	32.83	20.87	53.70	74.00	-20.30	peak
7*	17100.000	38.85	20.11	58.96	/	/	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

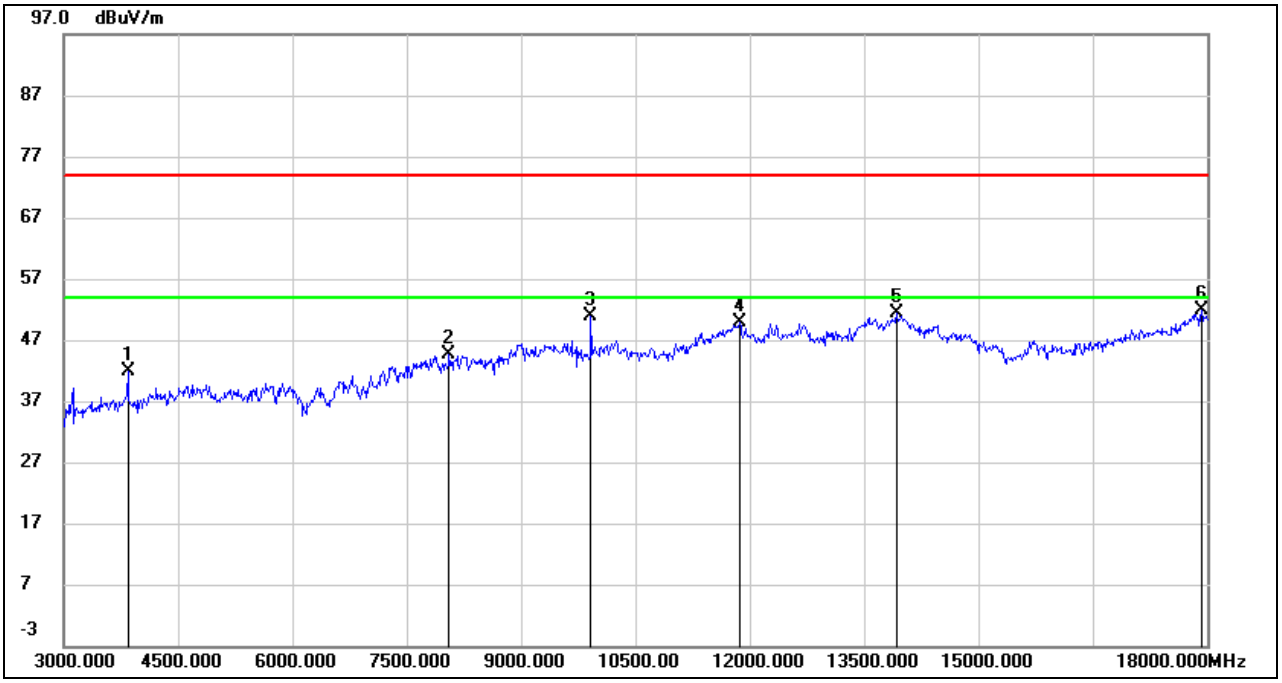
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5655.000	39.35	0.69	40.04	74.00	-33.96	peak
2	8220.000	37.60	7.17	44.77	74.00	-29.23	peak
3	9915.000	40.07	10.35	50.42	74.00	-23.58	peak
4	11865.000	31.47	17.18	48.65	74.00	-25.35	peak
5	13920.000	29.63	20.58	50.21	74.00	-23.79	peak
6	17670.000	26.81	21.83	48.64	74.00	-25.36	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

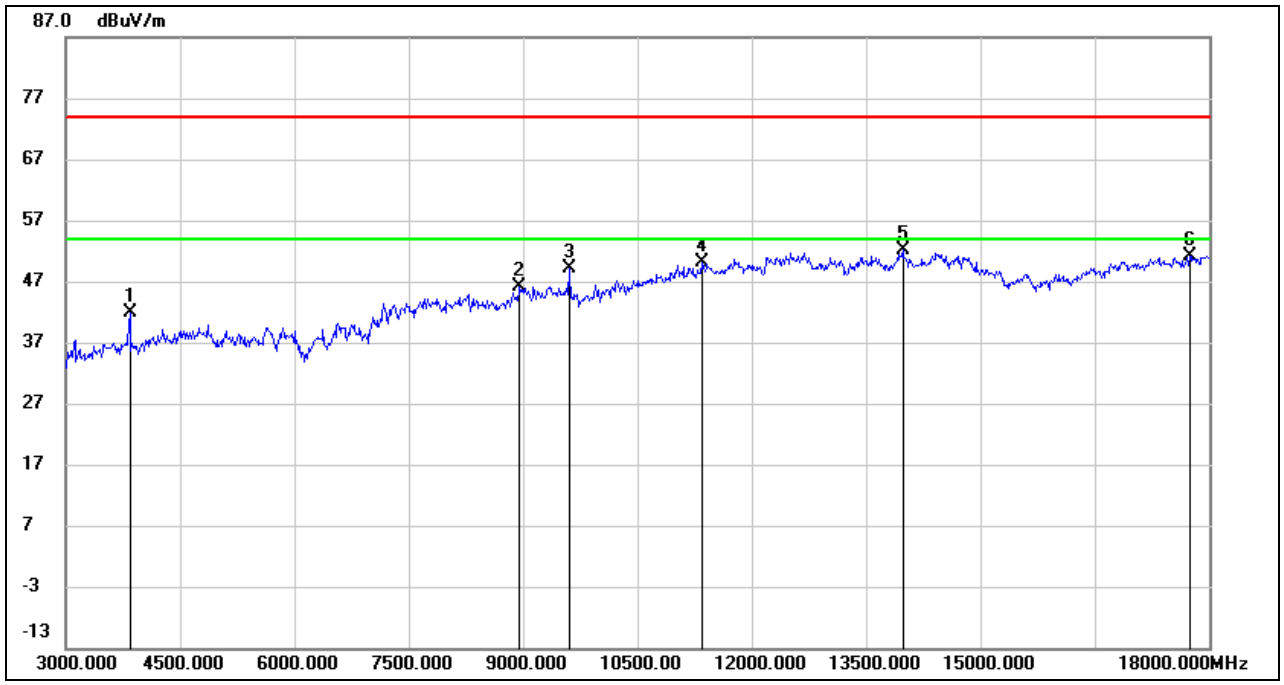


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3840.000	46.20	-4.40	41.80	74.00	-32.20	peak
2	8055.000	38.71	5.87	44.58	74.00	-29.42	peak
3	9915.000	40.45	10.35	50.80	74.00	-23.20	peak
4	11865.000	32.63	17.18	49.81	74.00	-24.19	peak
5	13920.000	30.86	20.58	51.44	74.00	-22.56	peak
6	17925.000	28.44	23.50	51.94	74.00	-22.06	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8.3.3. 2GFSK - 250 kbps MODE

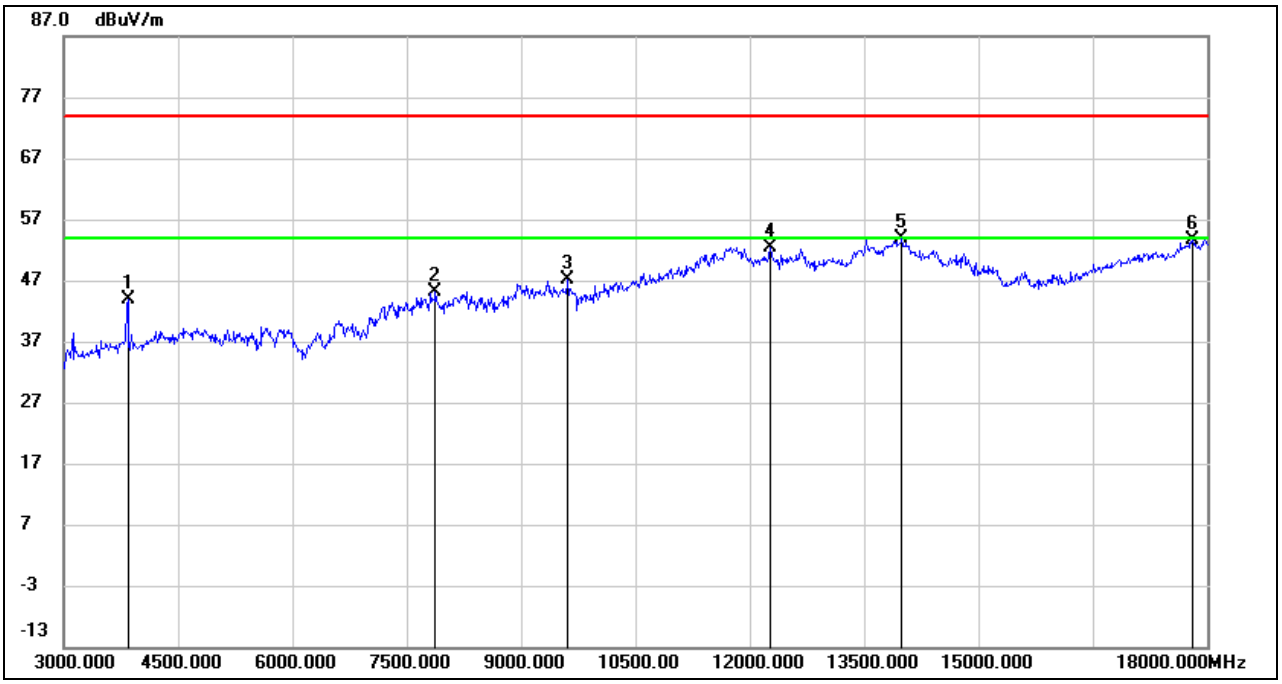
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3840.000	46.29	-4.40	41.89	74.00	-32.11	peak
2	8955.000	37.24	8.99	46.23	74.00	-27.77	peak
3	9607.500	39.08	10.13	49.21	74.00	-24.79	peak
4	11347.500	35.05	14.97	50.02	74.00	-23.98	peak
5	13980.000	31.43	20.63	52.06	74.00	-21.94	peak
6	17752.500	28.41	22.70	51.11	74.00	-22.89	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

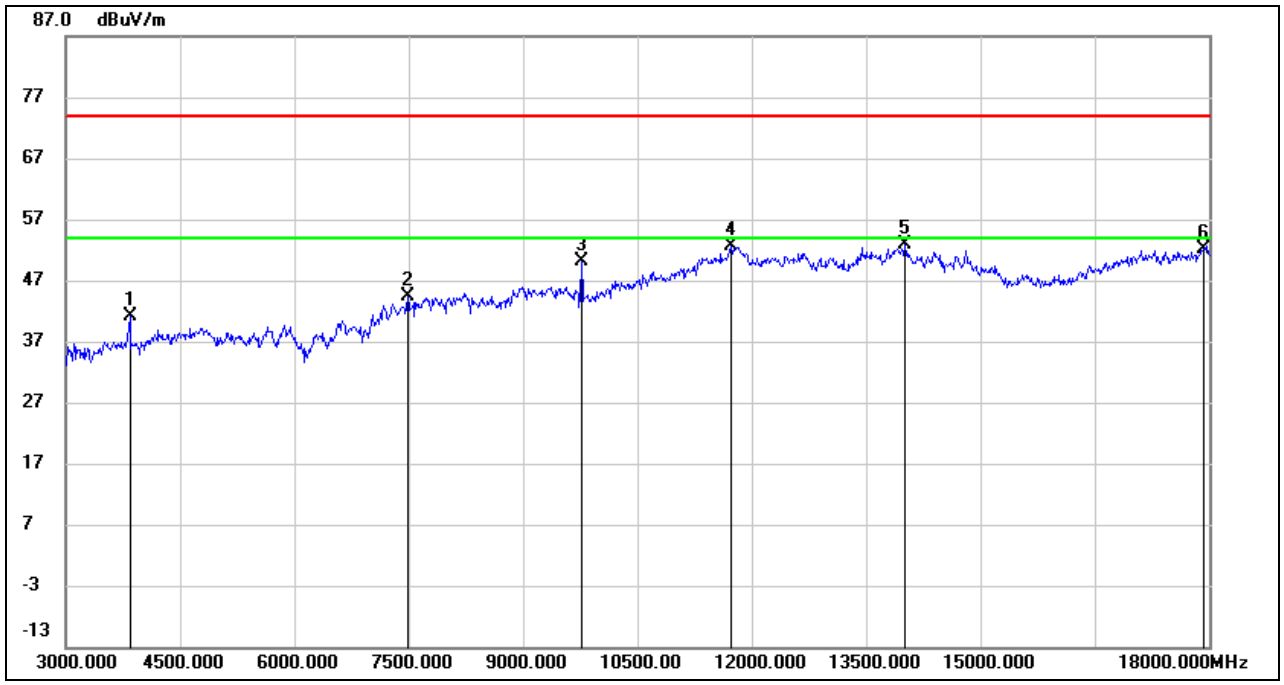
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3840.000	48.17	-4.40	43.77	74.00	-30.23	peak
2	7882.500	39.33	5.78	45.11	74.00	-28.89	peak
3	9615.000	36.90	10.13	47.03	74.00	-26.97	peak
4	12270.000	35.58	16.86	52.44	74.00	-21.56	peak
5	13995.000	33.33	20.63	53.96	74.00	-20.04	peak
6	17805.000	30.45	23.20	53.65	74.00	-20.35	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

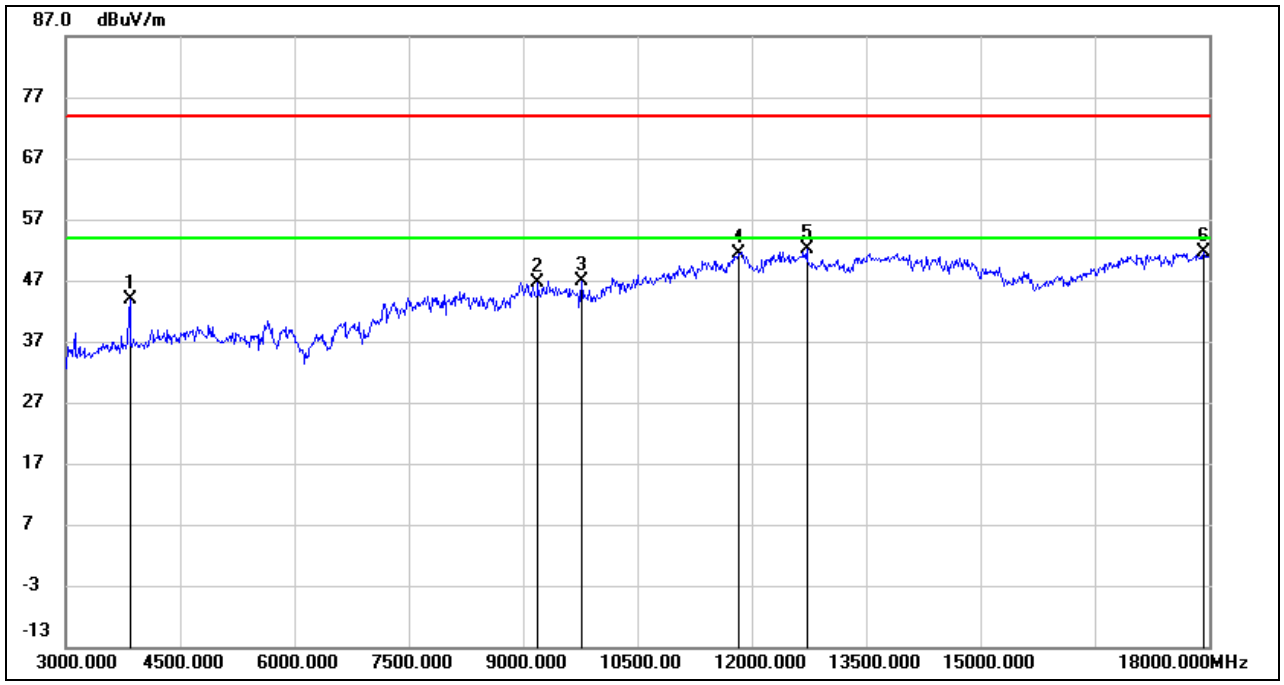
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3840.000	45.45	-4.40	41.05	74.00	-32.95	peak
2	7492.500	38.66	5.66	44.32	74.00	-29.68	peak
3	9765.000	40.19	10.02	50.21	74.00	-23.79	peak
4	11737.500	35.89	16.82	52.71	74.00	-21.29	peak
5	14010.000	32.16	20.60	52.76	74.00	-21.24	peak
6	17932.500	28.57	23.51	52.08	74.00	-21.92	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

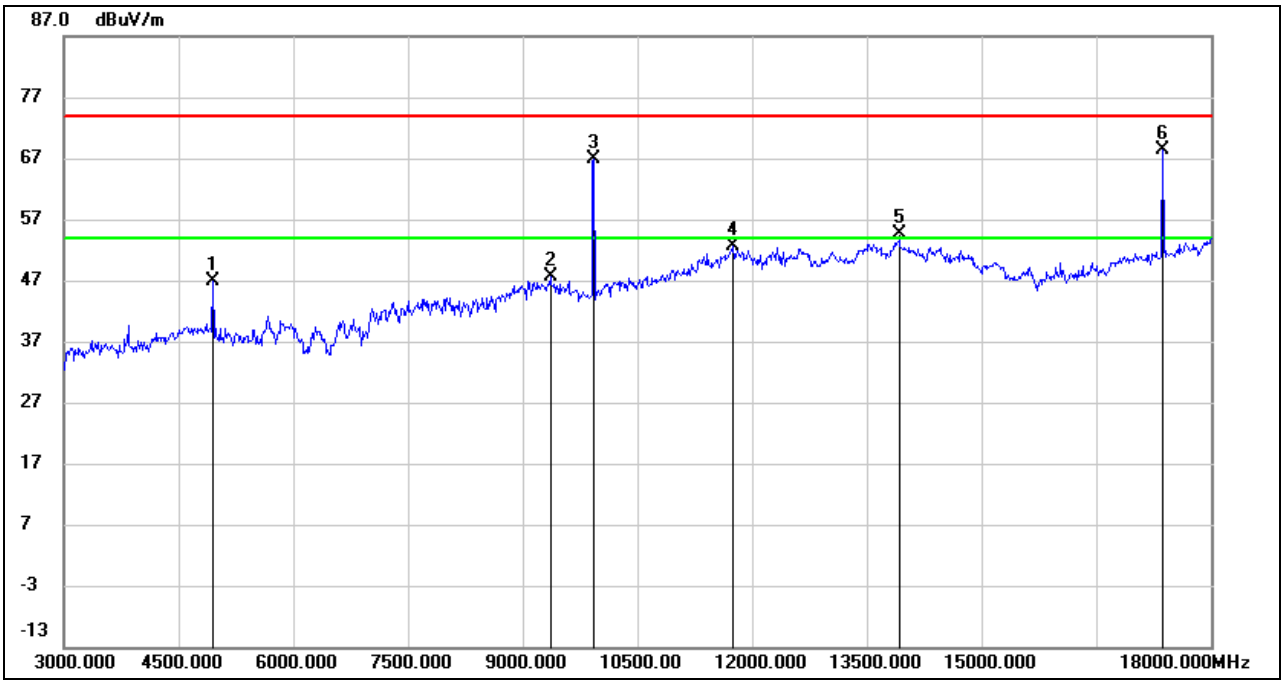
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3840.000	48.22	-4.40	43.82	74.00	-30.18	peak
2	9195.000	38.27	8.45	46.72	74.00	-27.28	peak
3	9765.000	36.83	10.02	46.85	74.00	-27.15	peak
4	11835.000	34.29	17.20	51.49	74.00	-22.51	peak
5	12720.000	35.03	17.09	52.12	74.00	-21.88	peak
6	17932.500	28.10	23.51	51.61	74.00	-22.39	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

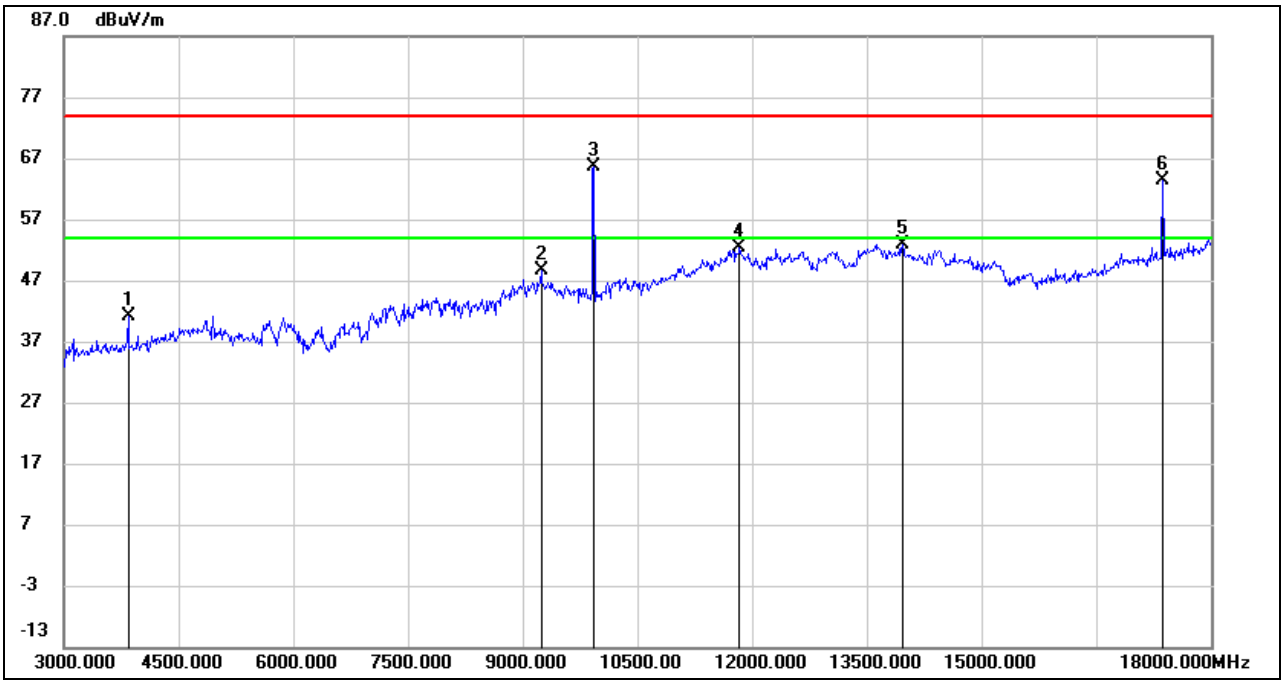
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4950.000	47.11	-0.29	46.82	74.00	-27.18	peak
2	9360.000	37.55	9.96	47.51	74.00	-26.49	peak
3*	9930.000	55.87	10.91	66.78	/	/	peak
4	11745.000	36.30	16.28	52.58	74.00	-21.42	peak
5	13920.000	33.80	20.87	53.99	74.00	-19.33	peak
6*	17370.000	47.21	21.11	68.32	/	/	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

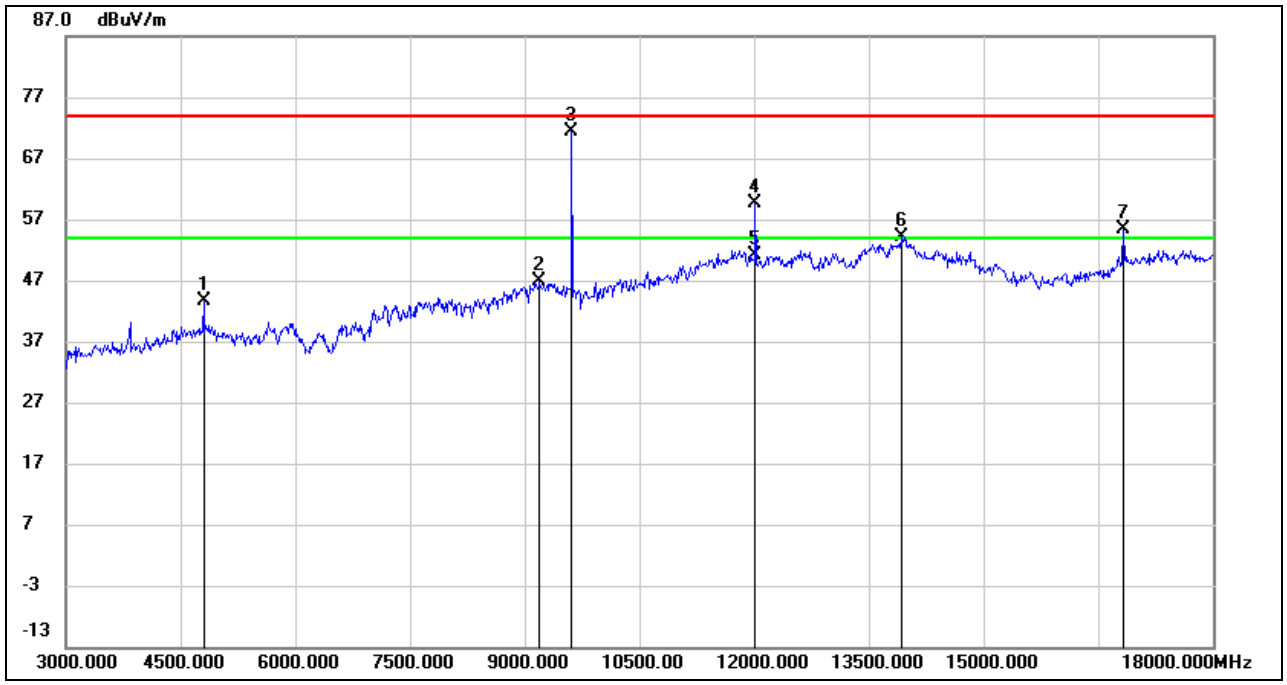


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3840.000	46.07	-4.86	41.21	74.00	-32.79	peak
2	9240.000	38.86	9.84	48.70	74.00	-25.30	peak
3*	9930.000	54.71	10.91	65.62	/	/	peak
4	11835.000	35.81	16.53	52.34	74.00	-21.66	peak
5	13965.000	31.90	20.99	52.89	74.00	-21.11	peak
6*	17370.000	42.26	21.11	63.37	/	/	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

8.3.4. 2GFSK - 400 kbps MODE

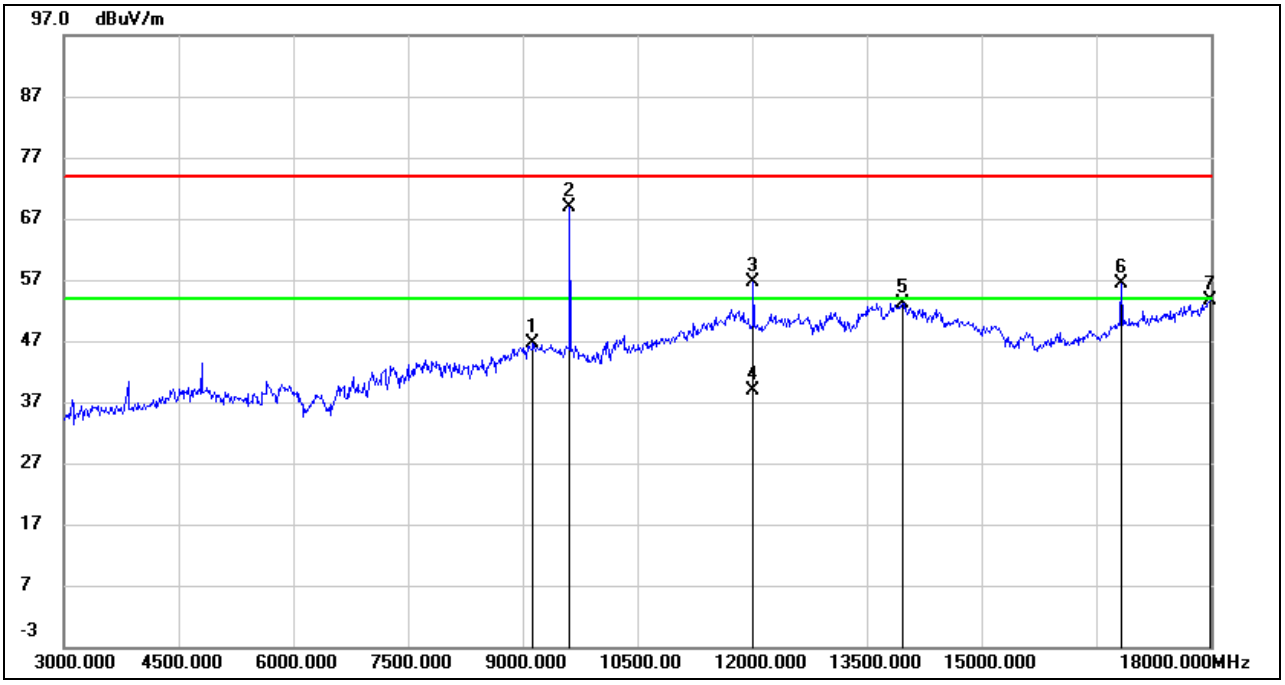
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.000	44.61	-0.88	43.73	74.00	-30.27	peak
2	9195.000	37.15	9.80	46.95	74.00	-27.05	peak
3*	9615.000	60.99	10.32	71.31	/	/	peak
4	12015.000	42.52	17.00	59.52	74.00	-14.48	peak
5	12015.000	34.25	17.00	51.25	54.00	-2.75	AVG
6	13920.000	33.18	20.87	53.96	74.00	-19.95	peak
7*	16830.000	36.32	19.12	55.44	/	/	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

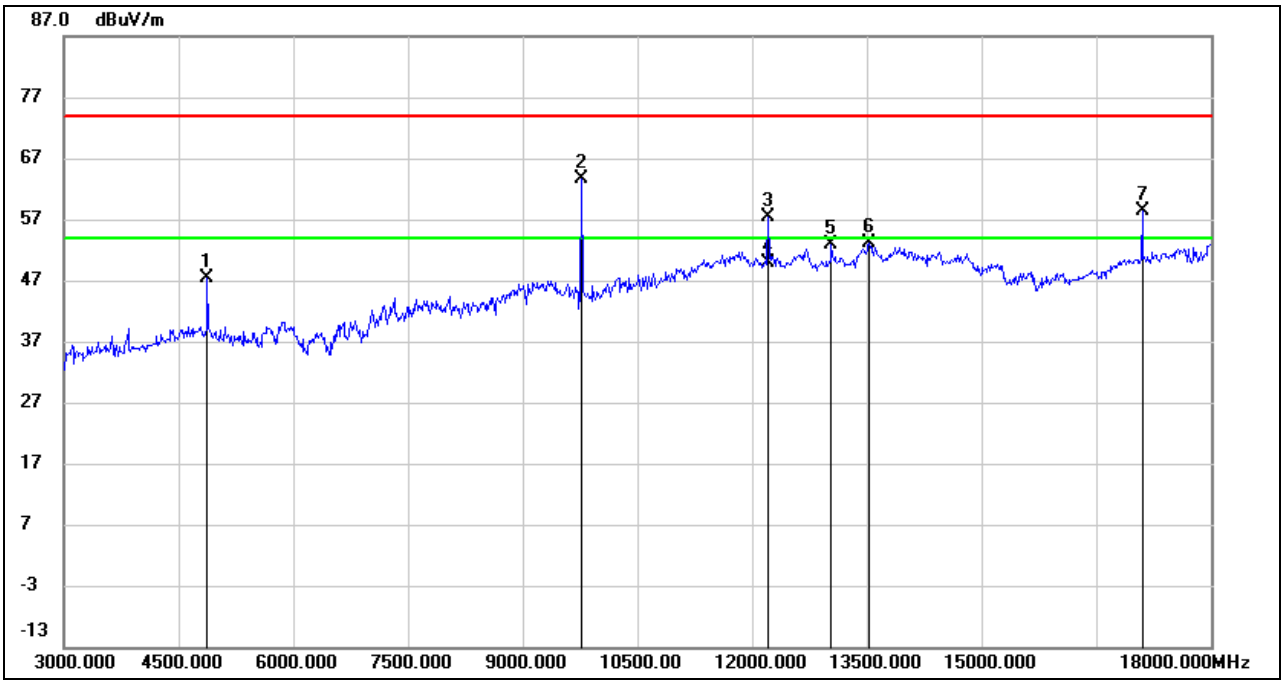
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9135.000	36.77	9.75	46.52	74.00	-27.48	peak
2*	9615.000	58.45	10.32	68.77	/	/	peak
3	12015.000	39.62	17.00	56.62	74.00	-17.38	peak
4	12015.000	21.87	17.00	38.87	54.00	-15.13	AVG
5	13965.000	32.21	20.99	53.20	74.00	-20.80	peak
6*	16830.000	37.16	19.12	56.28	/	/	peak
7	17985.000	29.13	24.53	53.66	74.00	-20.34	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

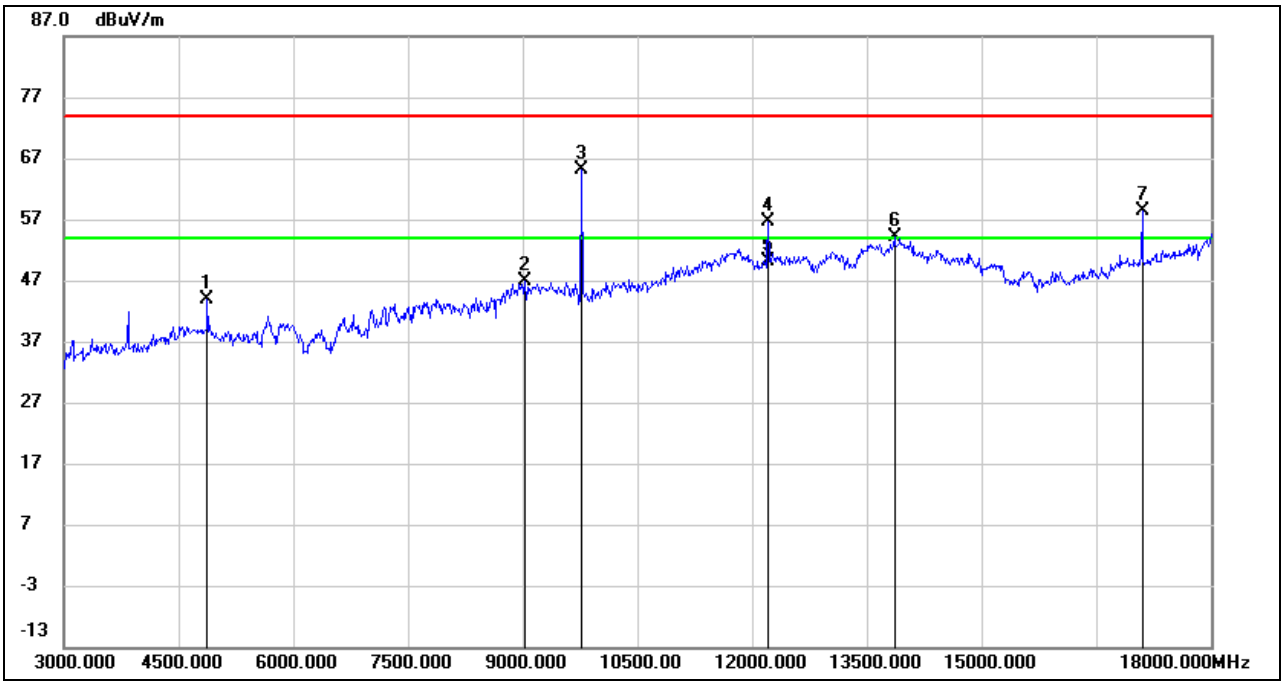
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	48.04	-0.58	47.46	74.00	-26.54	peak
2*	9765.000	53.09	10.60	63.69	/	/	peak
3	12210.000	40.50	16.99	57.49	74.00	-16.51	peak
4	12210.000	32.78	16.99	49.77	54.00	-4.23	AVG
5	13035.000	34.95	17.95	52.90	74.00	-21.10	peak
6	13530.000	33.35	19.88	53.23	74.00	-20.77	peak
7*	17100.000	38.19	20.11	58.30	/	/	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

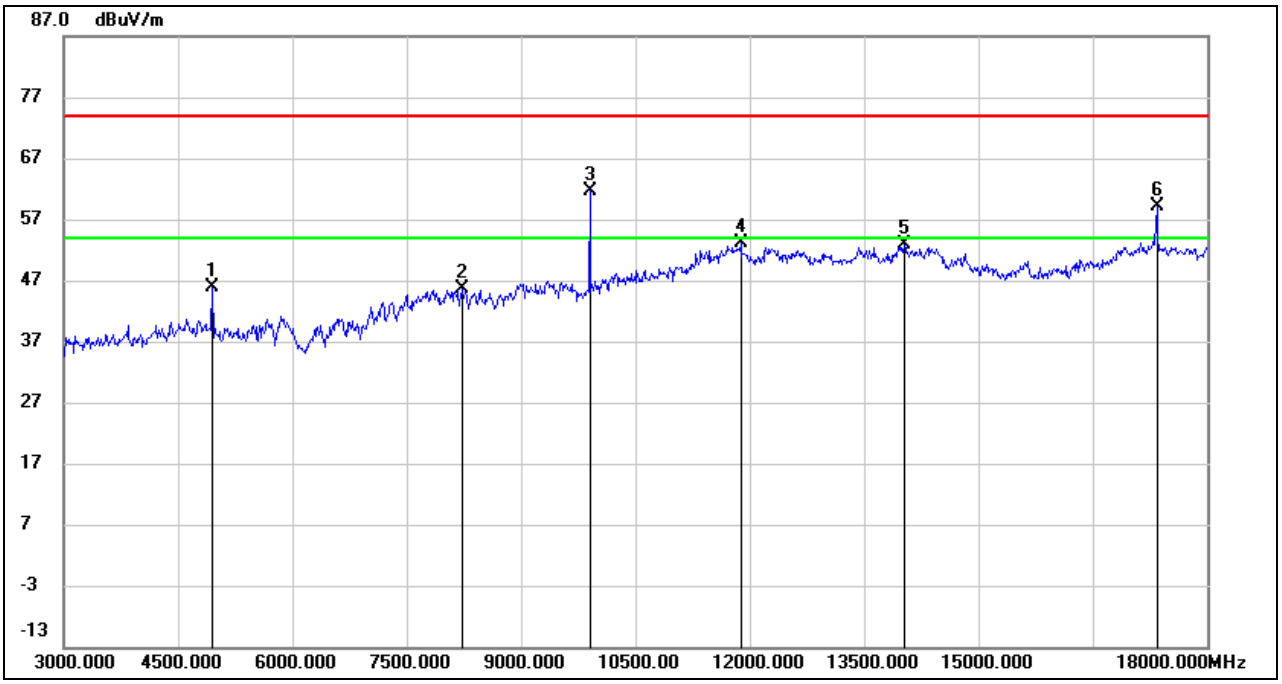
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	44.52	-0.58	43.94	74.00	-30.06	peak
2	9030.000	37.23	9.64	46.87	74.00	-27.13	peak
3*	9765.000	54.54	10.60	65.14	/	/	peak
4	12210.000	39.63	16.99	56.62	74.00	-17.38	peak
5	12210.000	33.12	16.99	50.11	54.00	-3.89	AVG
6	13860.000	33.46	20.73	53.97	74.00	-19.81	peak
7*	17100.000	38.21	20.11	58.32	/	/	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

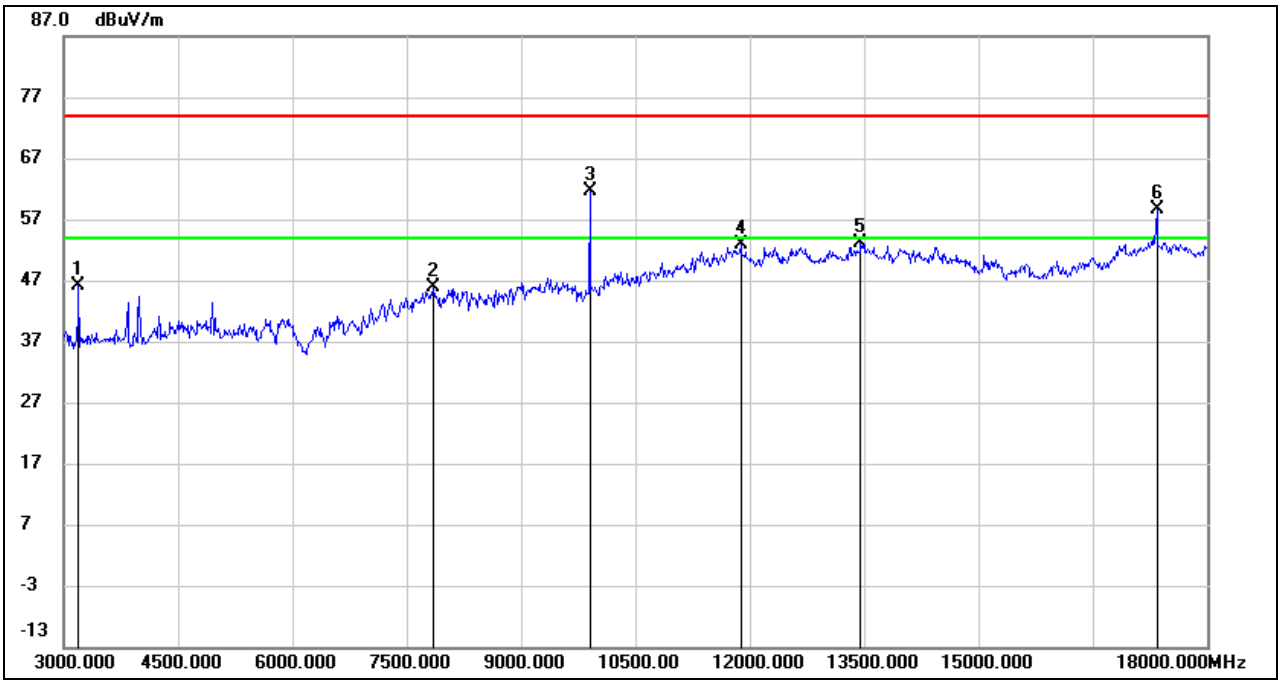
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4950.000	46.11	-0.23	45.88	74.00	-28.12	peak
2	8235.000	37.96	7.67	45.63	74.00	-28.37	peak
3*	9900.000	50.39	11.30	61.69	/	/	peak
4	11880.000	35.96	17.14	53.10	74.00	-20.90	peak
5	14025.000	31.59	21.30	52.89	74.00	-21.11	peak
6*	17340.000	37.45	21.68	59.13	/	/	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

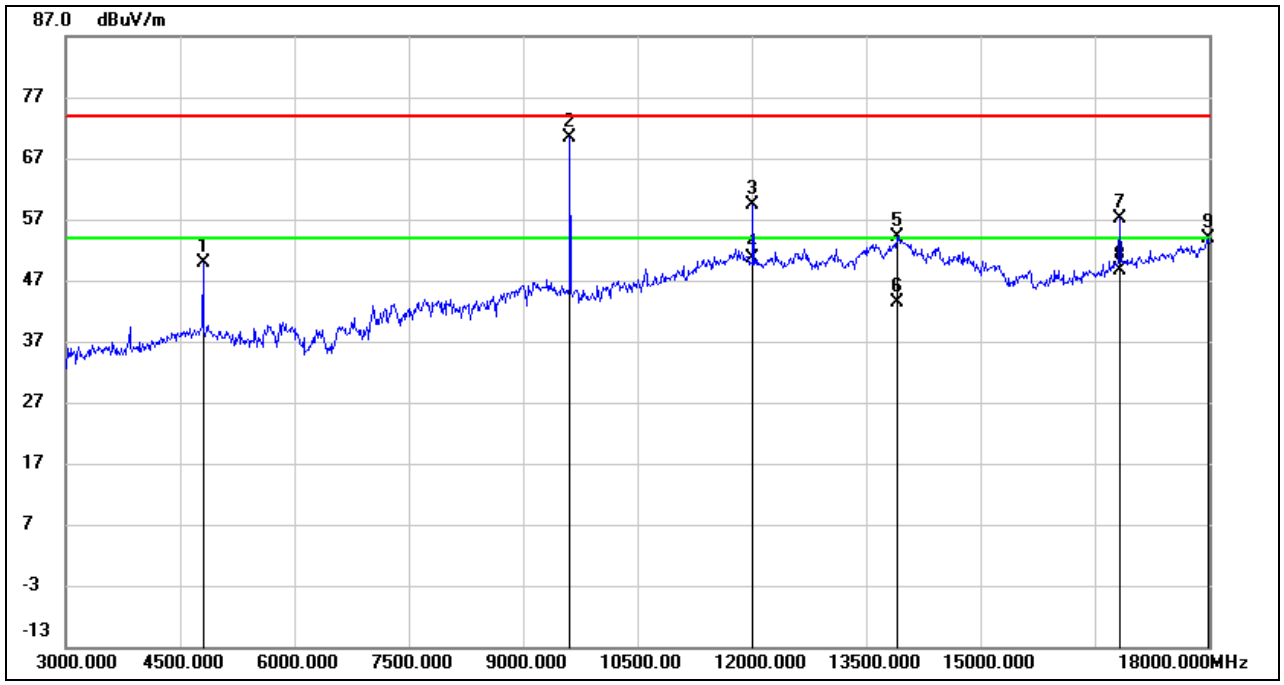


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	51.34	-5.28	46.06	74.00	-27.94	peak
2	7845.000	38.89	6.94	45.83	74.00	-28.17	peak
3*	9900.000	50.42	11.30	61.72	/	/	peak
4	11880.000	35.78	17.14	52.92	74.00	-21.08	peak
5	13455.000	33.05	20.18	53.23	74.00	-20.77	peak
6*	17340.000	37.03	21.68	58.71	/	/	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

8.3.5. 2GFSK - 500 kbps MODE

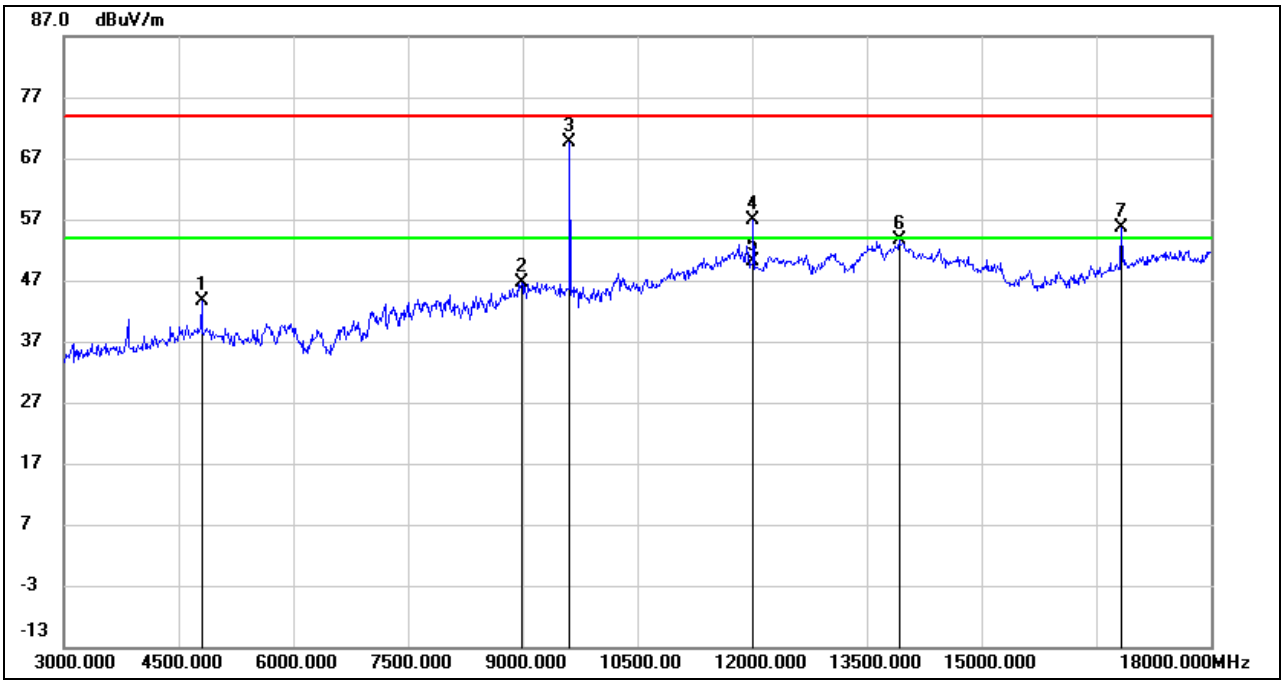
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.000	50.86	-0.88	49.98	74.00	-24.02	peak
2	9615.000	60.16	10.32	70.48	74.00	-3.52	peak
3	12015.000	42.26	17.00	59.26	74.00	-14.74	peak
4	12015.000	33.55	17.00	50.55	54.00	-3.45	AVG
5	13905.000	33.36	20.84	54.20	74.00	-19.80	peak
6	13905.000	22.64	20.84	43.48	54.00	-10.52	AVG
7	16830.000	38.01	19.12	57.13	74.00	-16.87	peak
8	16830.000	29.50	19.12	48.62	54.00	-5.38	AVG
9	17985.000	29.26	24.53	53.79	74.00	-20.21	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

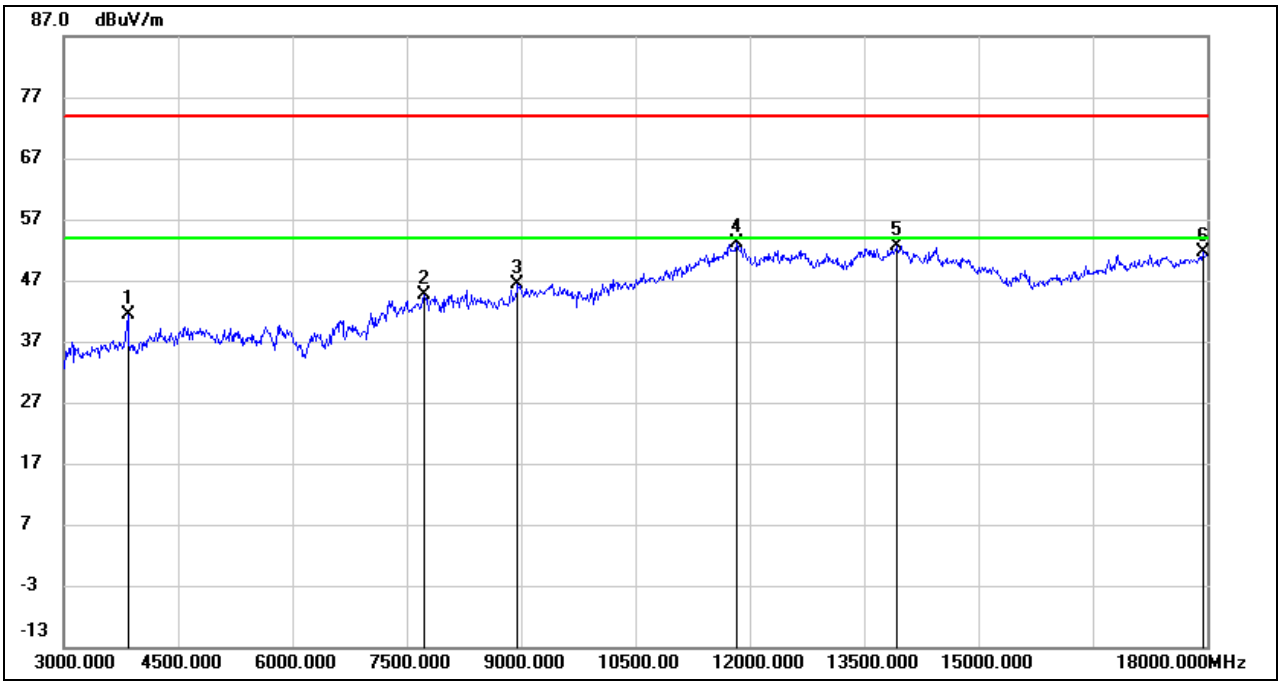
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.000	44.49	-0.88	43.61	74.00	-30.39	peak
2	8985.000	37.15	9.51	46.66	74.00	-27.34	peak
3*	9615.000	59.34	10.32	69.66	/	/	peak
4	12015.000	39.89	17.00	56.89	74.00	-17.11	peak
5	12015.000	33.25	17.00	50.25	54.00	-3.75	AVG
6	13920.000	32.70	20.87	53.57	74.00	-20.43	peak
7*	16830.000	36.57	19.12	55.69	/	/	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8.*-indicates frequency is out of the restricted bands and the limit is referring to 15.247 (d) and RSS-247 clause 5.5. We had already performed the conducted non-restricted bands test, please refer to clause 7.7.

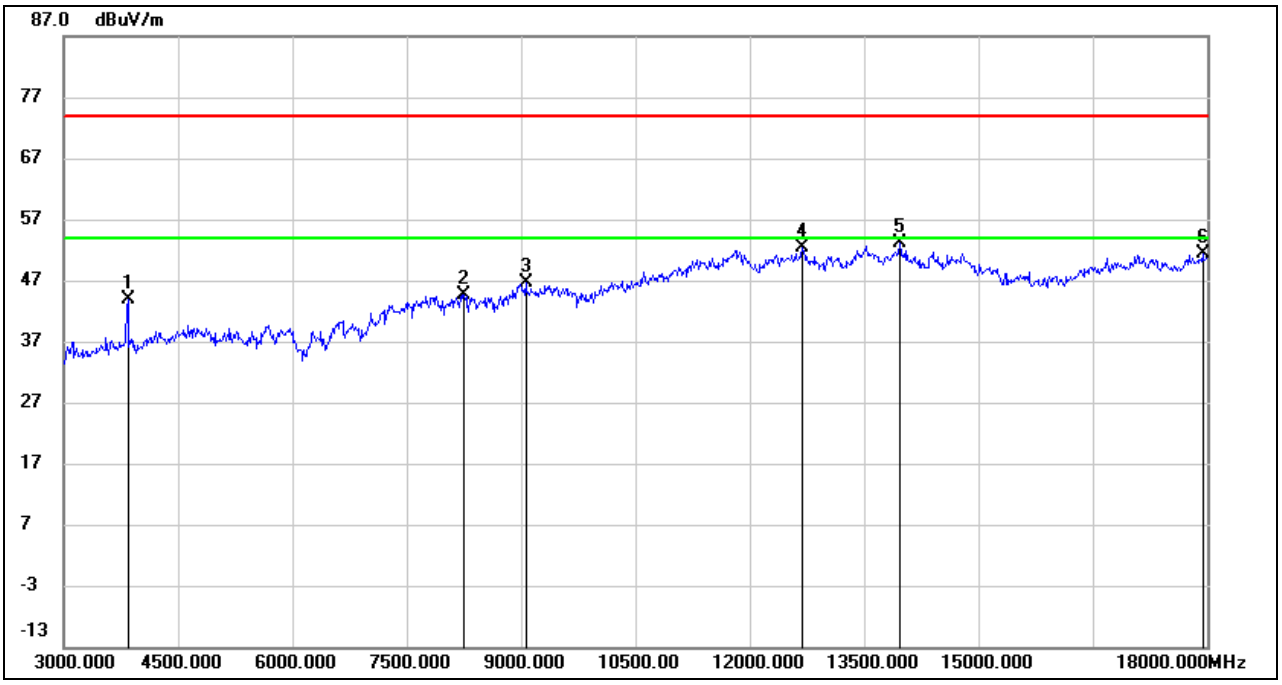
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3840.000	45.89	-4.40	41.49	74.00	-32.51	peak
2	7725.000	38.80	5.84	44.64	74.00	-29.36	peak
3	8962.500	37.36	9.07	46.43	74.00	-27.57	peak
4	11842.500	35.93	17.19	53.12	74.00	-20.88	peak
5	13927.500	31.95	20.59	52.54	74.00	-21.46	peak
6	17940.000	28.08	23.54	51.62	74.00	-22.38	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

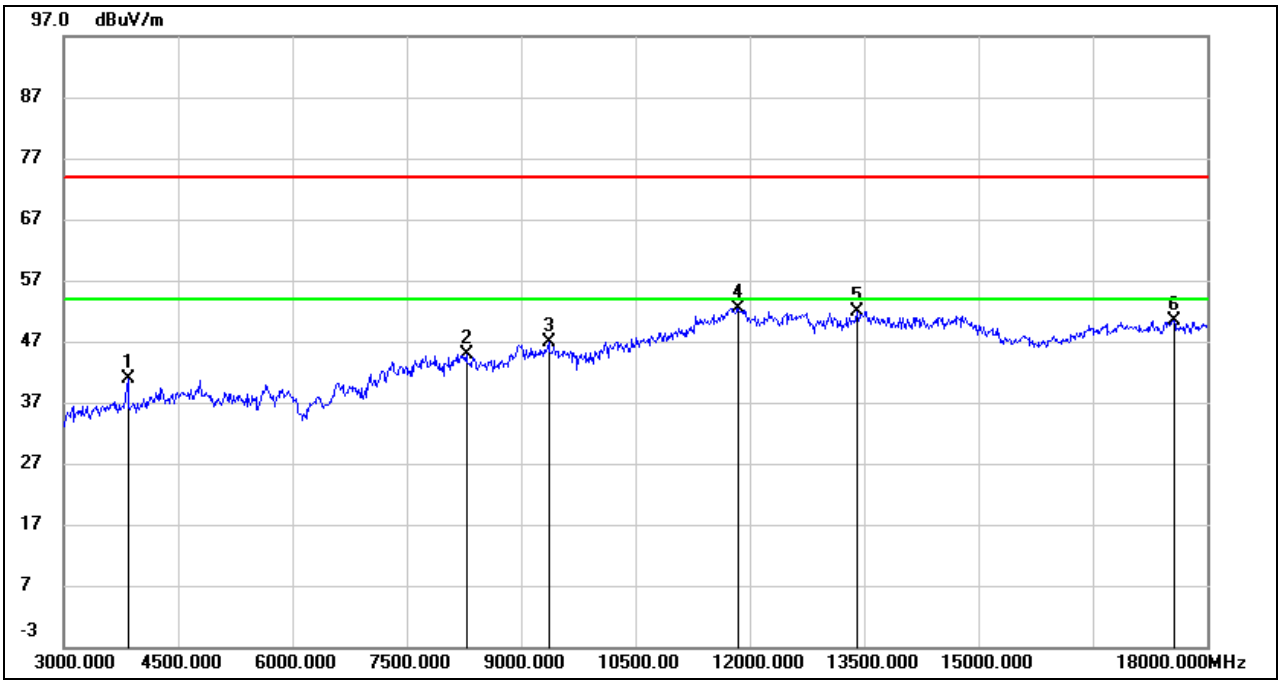
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3840.000	48.21	-4.40	43.81	74.00	-30.19	peak
2	8250.000	37.63	7.09	44.72	74.00	-29.28	peak
3	9067.500	37.39	9.16	46.55	74.00	-27.45	peak
4	12690.000	35.42	17.02	52.44	74.00	-21.56	peak
5	13972.500	32.46	20.62	53.08	74.00	-20.92	peak
6	17940.000	27.93	23.54	51.47	74.00	-22.53	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

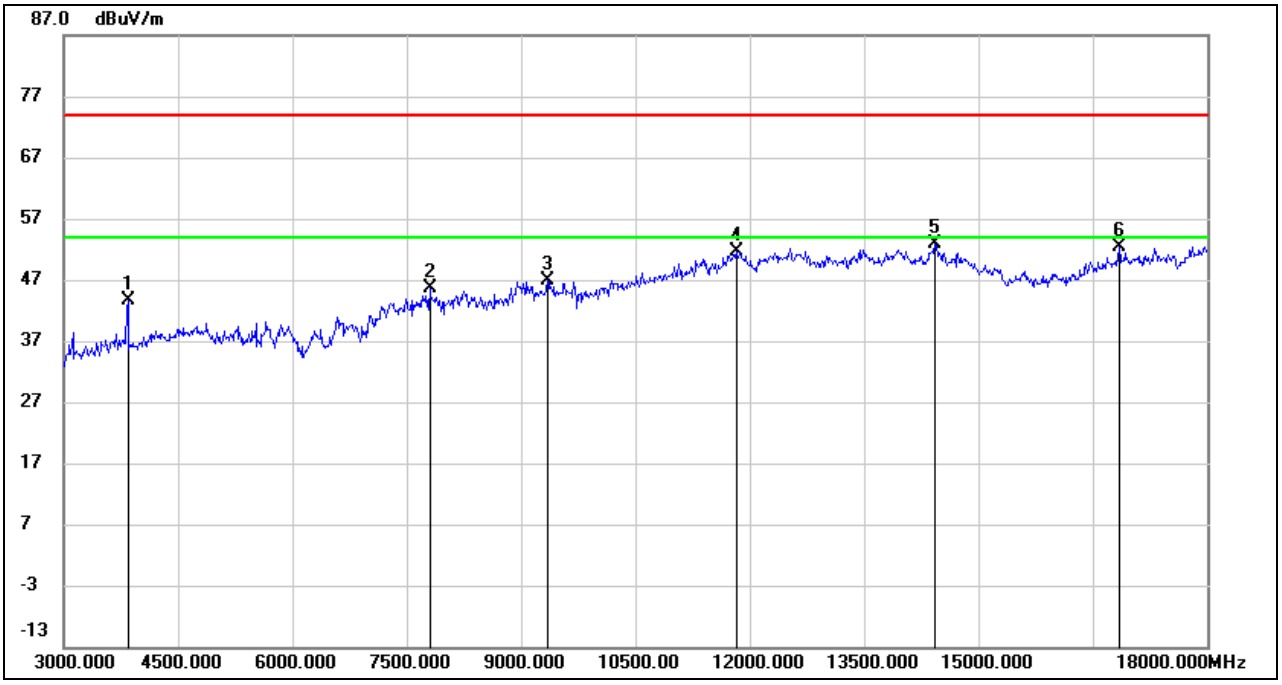
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3840.000	45.35	-4.40	40.95	74.00	-33.05	peak
2	8280.000	37.91	7.00	44.91	74.00	-29.09	peak
3	9367.500	37.37	9.48	46.85	74.00	-27.15	peak
4	11850.000	35.30	17.19	52.49	74.00	-21.51	peak
5	13417.500	32.74	19.26	52.00	74.00	-22.00	peak
6	17565.000	29.54	20.89	50.43	74.00	-23.57	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



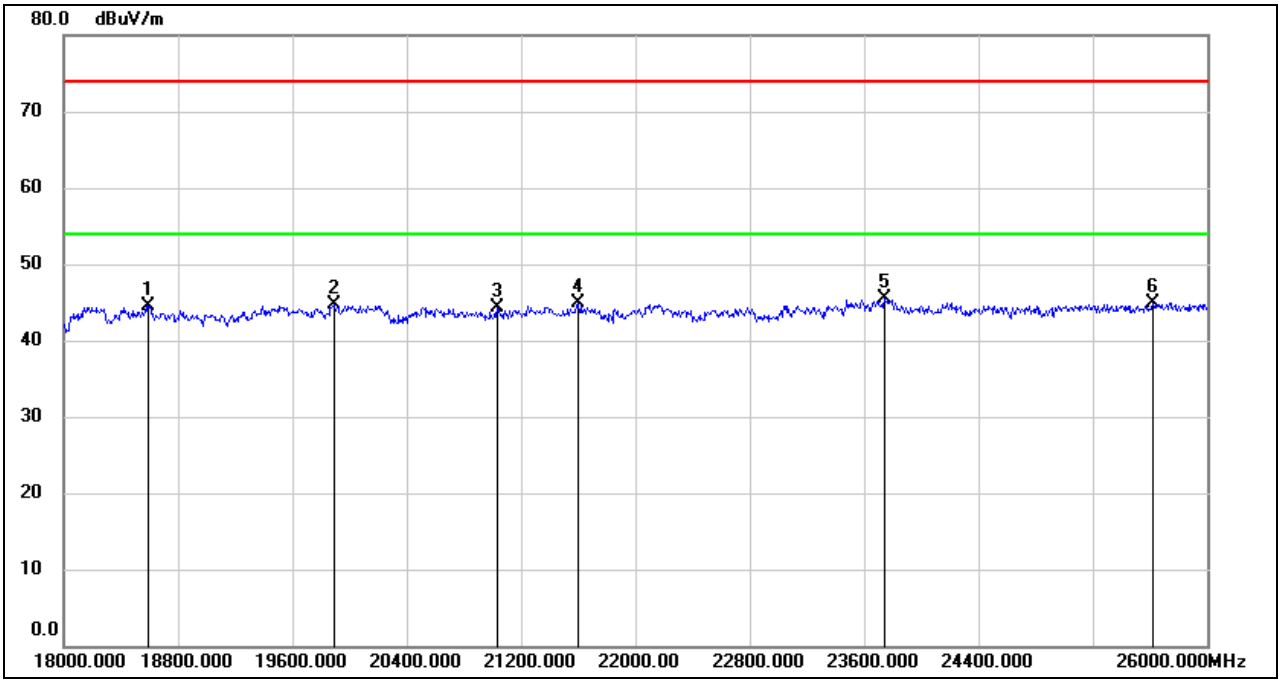
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3840.000	48.07	-4.40	43.67	74.00	-30.33	peak
2	7807.500	39.60	6.05	45.65	74.00	-28.35	peak
3	9352.500	37.50	9.37	46.87	74.00	-27.13	peak
4	11820.000	34.41	17.21	51.62	74.00	-22.38	peak
5	14430.000	34.05	18.78	52.83	74.00	-21.17	peak
6	16852.500	34.01	18.45	52.46	74.00	-21.54	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8.4. SPURIOUS EMISSIONS (18 GHz ~ 26 GHz)

8.4.1. 2GFSK - 500 kbps MODE

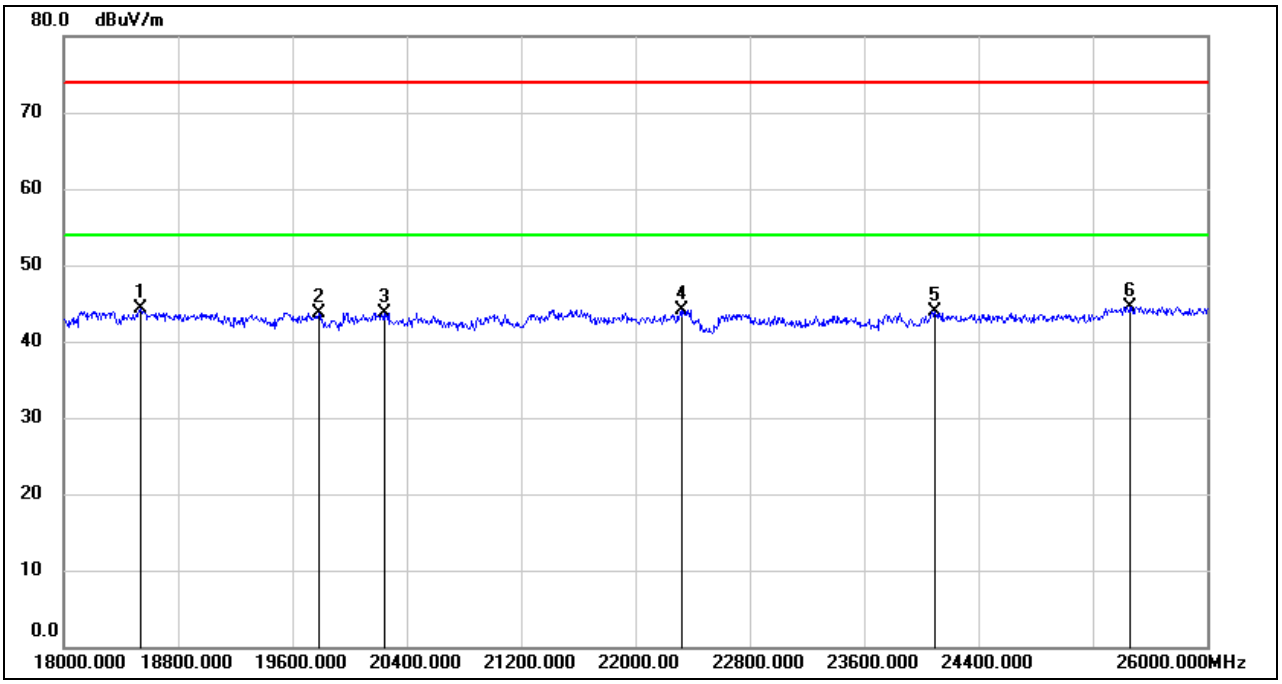
SPURIOUS EMISSIONS (MID CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18592.000	49.75	-5.31	44.44	74.00	-29.56	peak
2	19888.000	50.07	-5.36	44.71	74.00	-29.29	peak
3	21032.000	49.15	-4.87	44.28	74.00	-29.72	peak
4	21600.000	49.52	-4.54	44.98	74.00	-29.02	peak
5	23744.000	48.65	-3.20	45.45	74.00	-28.55	peak
6	25616.000	46.18	-1.24	44.94	74.00	-29.06	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

SPURIOUS EMISSIONS (MID CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18536.000	49.60	-5.27	44.33	74.00	-29.67	peak
2	19784.000	49.07	-5.28	43.79	74.00	-30.21	peak
3	20240.000	49.32	-5.61	43.71	74.00	-30.29	peak
4	22328.000	48.20	-4.11	44.09	74.00	-29.91	peak
5	24096.000	46.61	-2.78	43.83	74.00	-30.17	peak
6	25456.000	46.22	-1.75	44.47	74.00	-29.53	peak

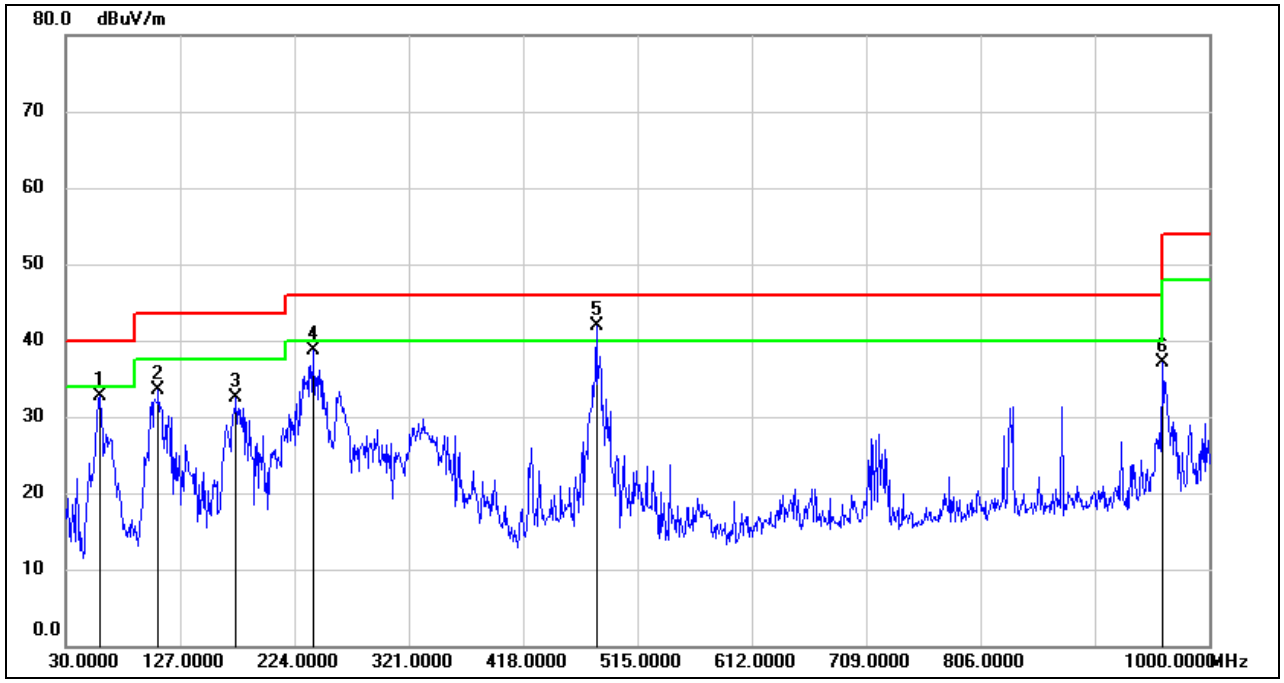
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

Note: All the modes had been tested, but only the worst data was recorded in the report.

8.5. SPURIOUS EMISSIONS (30 MHz ~ 1 GHz)

8.5.1. 2GFSK - 500 kbps MODE

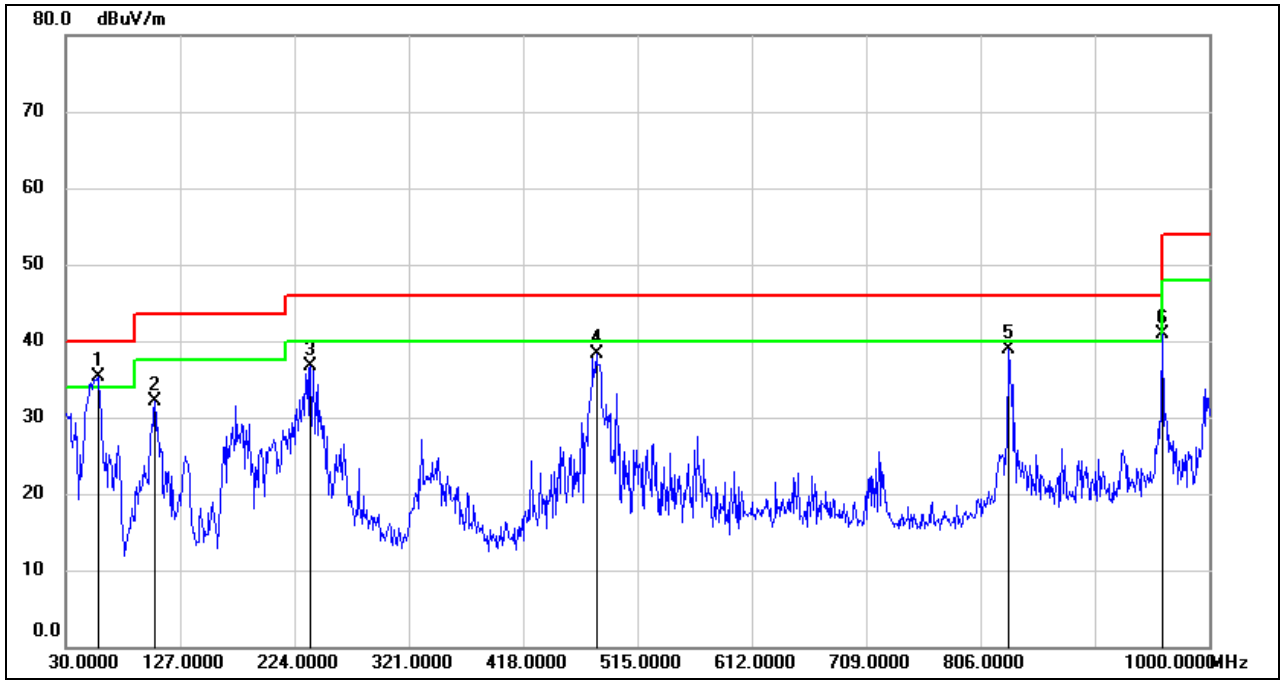
SPURIOUS EMISSIONS (MID CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	59.1000	53.30	-20.52	32.78	40.00	-7.22	QP
2	108.5700	53.94	-20.53	33.41	43.50	-10.09	QP
3	174.5300	49.54	-17.12	32.42	43.50	-11.08	QP
4	239.5200	57.84	-19.16	38.68	46.00	-7.32	QP
5	480.0800	53.78	-11.79	41.99	46.00	-4.01	QP
6	960.2300	41.58	-4.54	37.04	54.00	-16.96	QP

Note: 1. Result Level = Read Level + Correct Factor.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

SPURIOUS EMISSIONS (MID CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	57.1600	55.80	-20.58	35.22	40.00	-4.78	QP
2	105.6600	52.75	-20.70	32.05	43.50	-11.45	QP
3	237.5800	55.71	-19.06	36.65	46.00	-9.35	QP
4	480.0800	50.10	-11.79	38.31	46.00	-7.69	QP
5	829.2800	45.51	-6.69	38.82	46.00	-7.18	QP
6	960.2300	45.46	-4.54	40.92	54.00	-13.08	QP

Note: 1. Result Level = Read Level + Correct Factor.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto

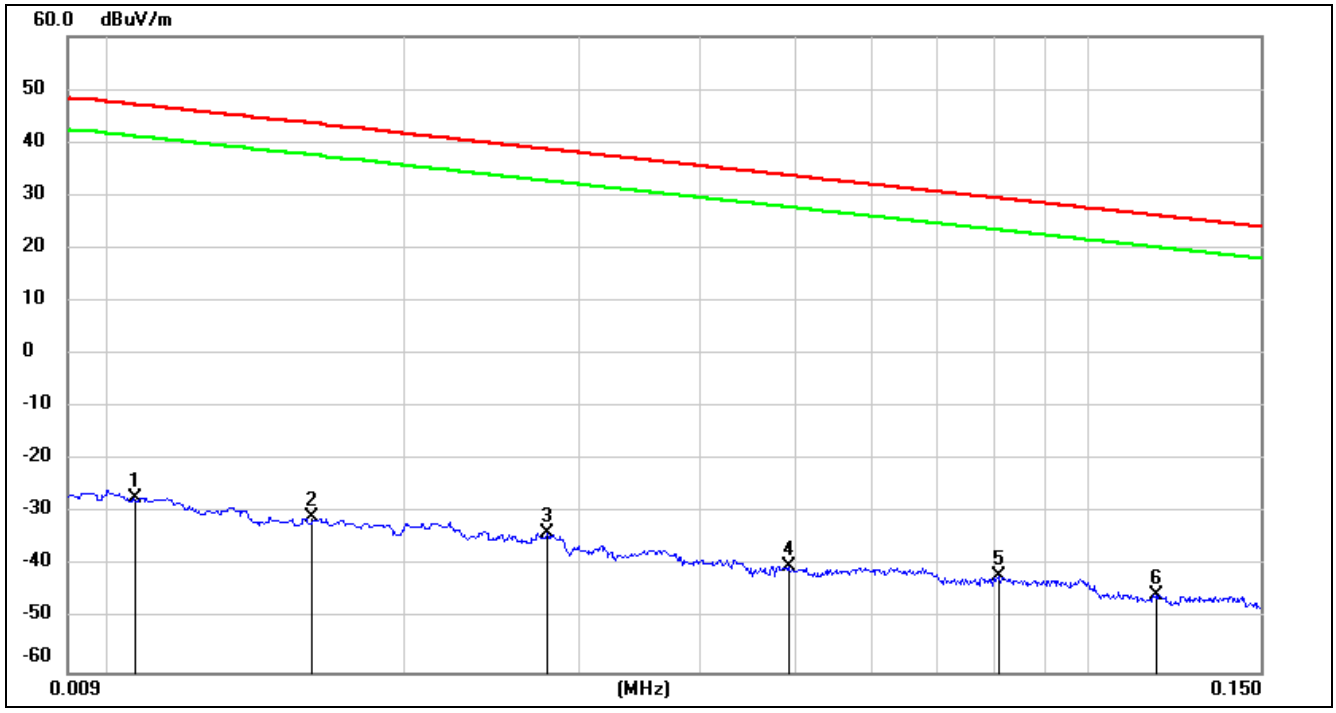
Note: All the modes had been tested, but only the worst data was recorded in the report.

8.6. SPURIOUS EMISSIONS BELOW 30 MHz

8.6.1. 2GFSK - 500 kbps MODE

SPURIOUS EMISSIONS (MID CHANNEL, LOOP ANTENNA FACE ON TO THE EUT, WORST-CASE CONFIGURATION)

9 kHz ~ 150 kHz



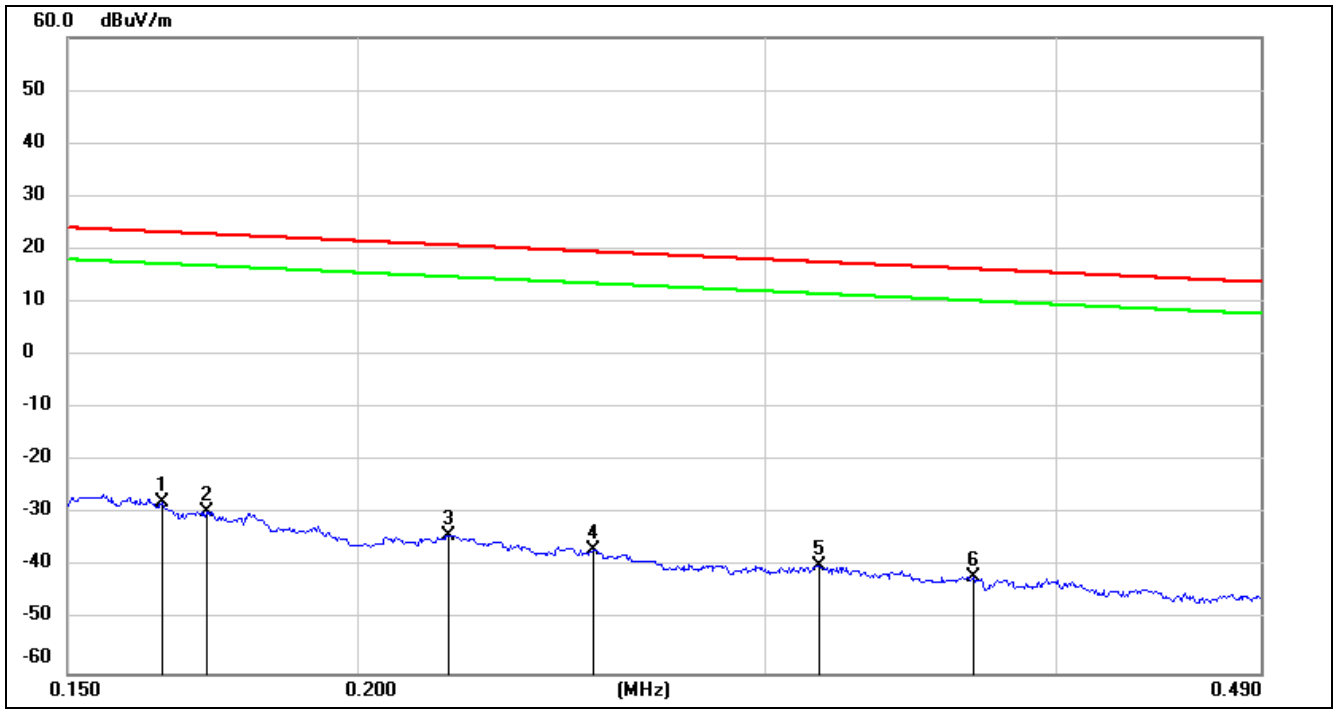
No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.0106	74.38	-101.39	-27.01	47.09	-78.51	-4.41	-74.10	peak
2	0.0160	70.47	-101.37	-30.9	43.52	-82.40	-7.98	-74.42	peak
3	0.0279	67.67	-101.38	-33.71	38.69	-85.21	-12.81	-72.40	peak
4	0.0492	61.55	-101.47	-39.92	33.76	-91.42	-17.74	-73.68	peak
5	0.0806	59.68	-101.63	-41.95	29.47	-93.45	-22.03	-71.42	peak
6	0.1174	56.33	-101.74	-45.41	26.21	-96.91	-25.29	-71.62	peak

Note: 1. Measurement = Reading Level + Correct Factor (dBuA/m= dBuV/m- 20Log10[120π] = dBuV/m- 51.5).

2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

150 kHz ~ 490 kHz



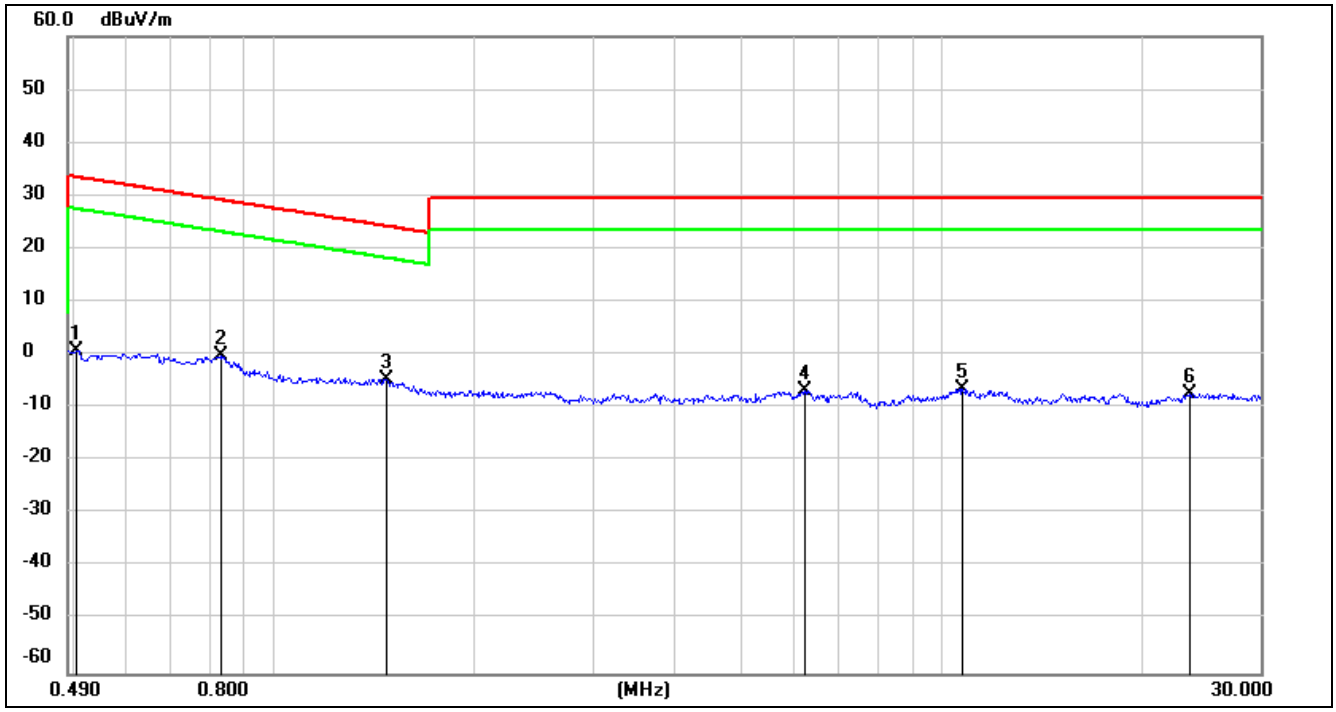
No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.1647	73.76	-101.66	-27.9	23.27	-79.40	-28.23	-51.17	peak
2	0.1720	72.19	-101.67	-29.48	22.9	-80.98	-28.60	-52.38	peak
3	0.2190	67.77	-101.75	-33.98	20.79	-85.48	-30.71	-54.77	peak
4	0.2530	65.14	-101.80	-36.66	19.54	-88.16	-31.96	-56.20	peak
5	0.3163	62.20	-101.87	-39.67	17.6	-91.17	-33.90	-57.27	peak
6	0.3684	59.98	-101.93	-41.95	16.27	-93.45	-35.23	-58.22	peak

Note: 1. Measurement = Reading Level + Correct Factor (dBuA/m= dBuV/m- 20Log10[120π] = dBuV/m- 51.5).

2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

490 kHz ~ 30 MHz



No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.5039	62.93	-62.07	0.86	33.56	-50.64	-17.94	-32.70	peak
2	0.8296	61.94	-62.17	-0.23	29.23	-51.73	-22.27	-29.46	peak
3	1.4700	57.39	-62.05	-4.66	24.26	-56.16	-27.24	-28.92	peak
4	6.2445	54.63	-61.32	-6.69	29.54	-58.19	-21.96	-36.23	peak
5	10.7299	54.48	-60.83	-6.35	29.54	-57.85	-21.96	-35.89	peak
6	23.4783	53.24	-60.56	-7.32	29.54	-58.82	-21.96	-36.86	peak

Note: 1. Measurement = Reading Level + Correct Factor (dBuA/m= dBuV/m- 20Log10[120π] = dBuV/m- 51.5).

2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

Note: All the modes had been tested, but only the worst data was recorded in the report.

9. AC POWER LINE CONDUCTED EMISSIONS

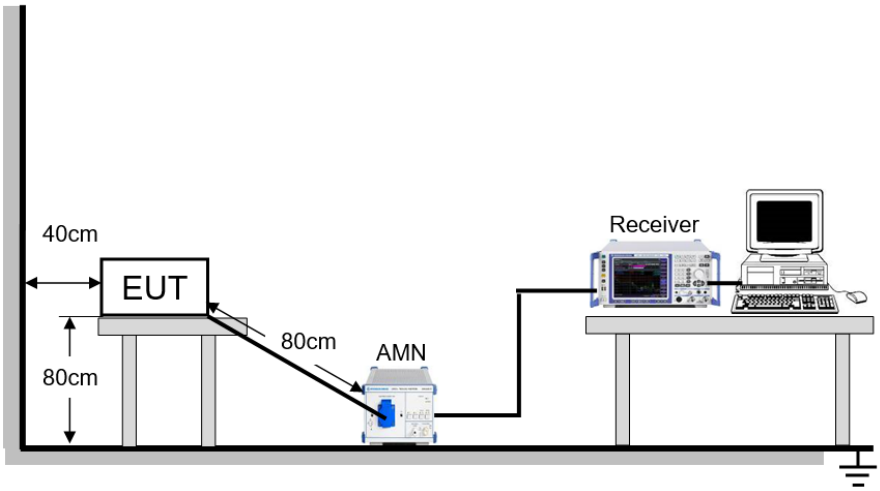
LIMITS

Please refer to CFR 47 FCC §15.207 (a).

FREQUENCY (MHz)	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

TEST SETUP AND PROCEDURE

Refer to ANSI C63.10-2013 clause 6.2.



The EUT is put on a table of non-conducting material that is 80 cm high. The vertical conducting wall of shielding is located 40 cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10-2013.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9 kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

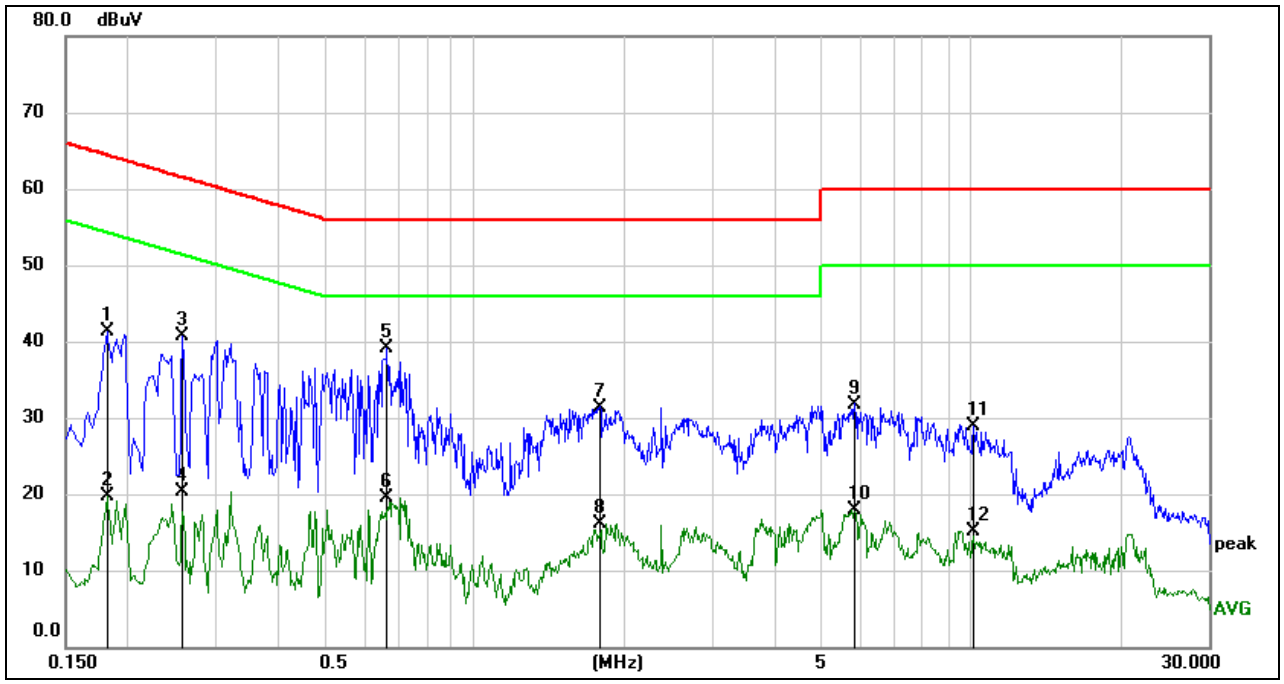
TEST ENVIRONMENT

Temperature	23.5 °C	Relative Humidity	61.2 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V/60 Hz

RESULTS

9.1.1. 2GFSK - 500 kbps MODE

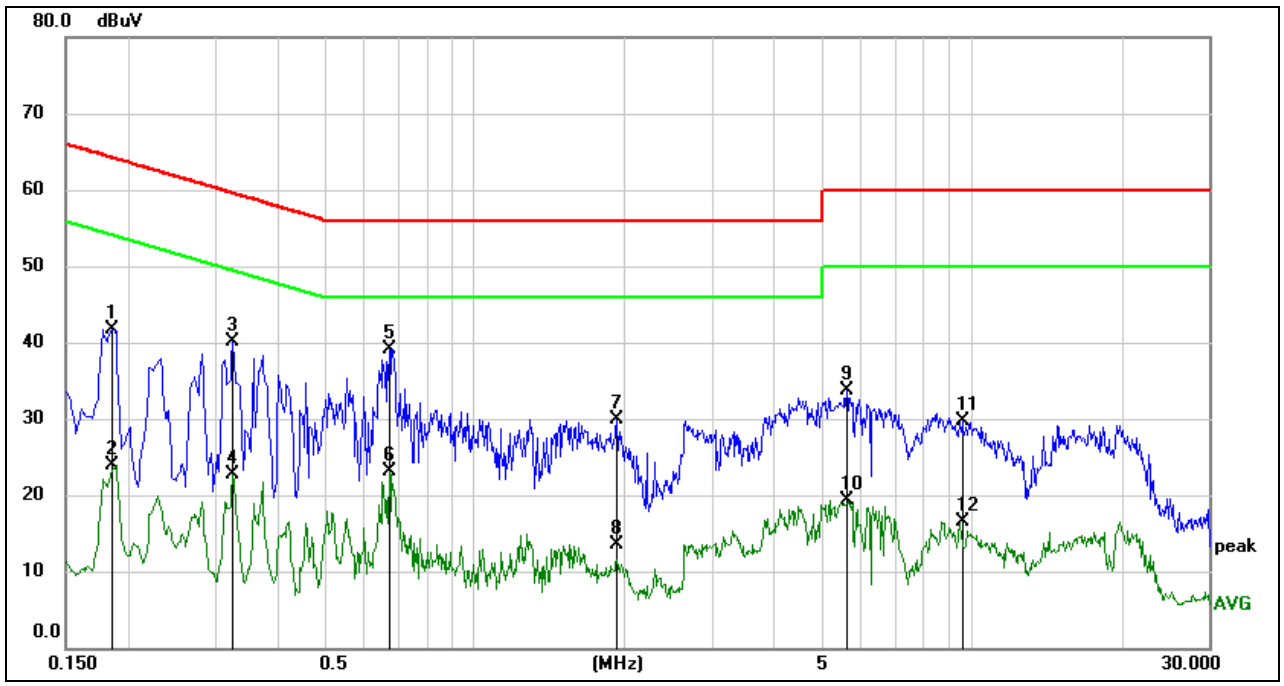
LINE L RESULTS (MID CHANNEL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1819	31.62	9.59	41.21	64.40	-23.19	QP
2	0.1819	10.05	9.59	19.64	54.40	-34.76	AVG
3	0.2580	31.21	9.53	40.74	61.50	-20.76	QP
4	0.2580	10.76	9.53	20.29	51.50	-31.21	AVG
5	0.6660	29.52	9.55	39.07	56.00	-16.93	QP
6	0.6660	9.97	9.55	19.52	46.00	-26.48	AVG
7	1.7900	21.78	9.62	31.40	56.00	-24.60	QP
8	1.7900	6.44	9.62	16.06	46.00	-29.94	AVG
9	5.8100	22.17	9.63	31.80	60.00	-28.20	QP
10	5.8100	8.22	9.63	17.85	50.00	-32.15	AVG
11	10.0739	19.14	9.72	28.86	60.00	-31.14	QP
12	10.0739	5.45	9.72	15.17	50.00	-34.83	AVG

Note: 1. Result = Reading +Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

LINE N RESULTS (MID CHANNEL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1859	32.23	9.56	41.79	64.22	-22.43	QP
2	0.1859	14.38	9.56	23.94	54.22	-30.28	AVG
3	0.3260	30.63	9.55	40.18	59.55	-19.37	QP
4	0.3260	13.24	9.55	22.79	49.55	-26.76	AVG
5	0.6740	29.54	9.50	39.04	56.00	-16.96	QP
6	0.6740	13.60	9.50	23.10	46.00	-22.90	AVG
7	1.9337	20.28	9.62	29.90	56.00	-26.10	QP
8	1.9337	3.90	9.62	13.52	46.00	-32.48	AVG
9	5.6139	24.46	9.31	33.77	60.00	-26.23	QP
10	5.6139	9.96	9.31	19.27	50.00	-30.73	AVG
11	9.5539	20.17	9.53	29.70	60.00	-30.30	QP
12	9.5539	6.93	9.53	16.46	50.00	-33.54	AVG

Note: 1. Result = Reading +Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Note: All the modes had been tested, but only the worst data was recorded in the report.

10. ANTENNA REQUIREMENTS

APPLICABLE REQUIREMENTS

Please refer to FCC §15.203
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Please refer to FCC §15.247(b)(4)
The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

RESULTS

Complies

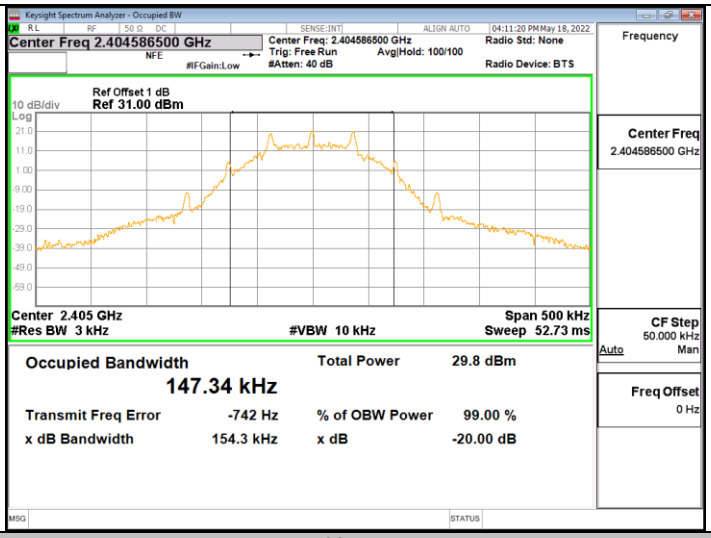
11. Appendix

11.1. Appendix A: 20dB Emission Bandwidth and Occupied Channel Bandwidth

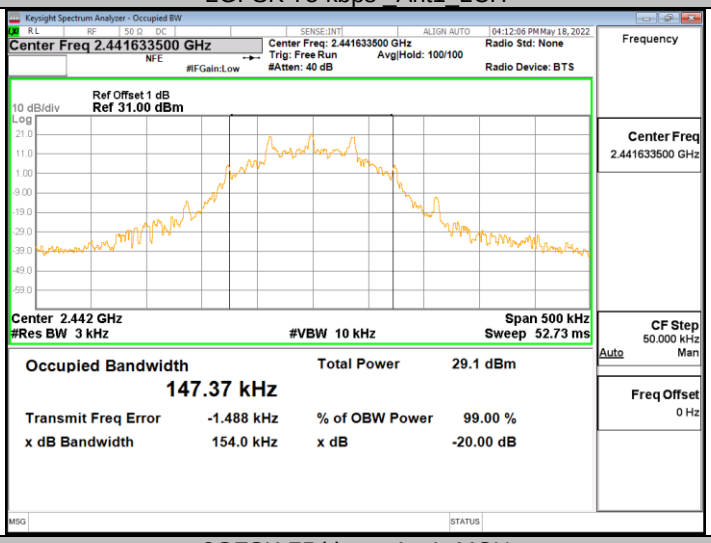
11.1.1. Test Result

Test Mode	Antenna	Channel	20db EBW[MHz]	OCB [MHz]	Verdict
2GFSK-75kbps	Ant1	LCH	0.1543	0.1473	PASS
		MCH	0.1540	0.1474	PASS
		HCH	0.1546	0.1491	PASS
2GFSK-150 kbps	Ant1	LCH	0.2878	0.2838	PASS
		MCH	0.3055	0.2988	PASS
		HCH	0.3044	0.2987	PASS
2GFSK-250 kbps	Ant1	LCH	0.4817	0.4730	PASS
		MCH	0.5142	0.4961	PASS
		HCH	0.4717	0.4745	PASS
2GFSK-400 kbps	Ant1	LCH	0.7738	0.7638	PASS
		MCH	0.8174	0.7986	PASS
		HCH	0.8175	0.8005	PASS
2GFSK-500 kbps	Ant1	LCH	1.020	0.9957	PASS
		MCH	1.029	0.9888	PASS
		HCH	1.021	0.9939	PASS

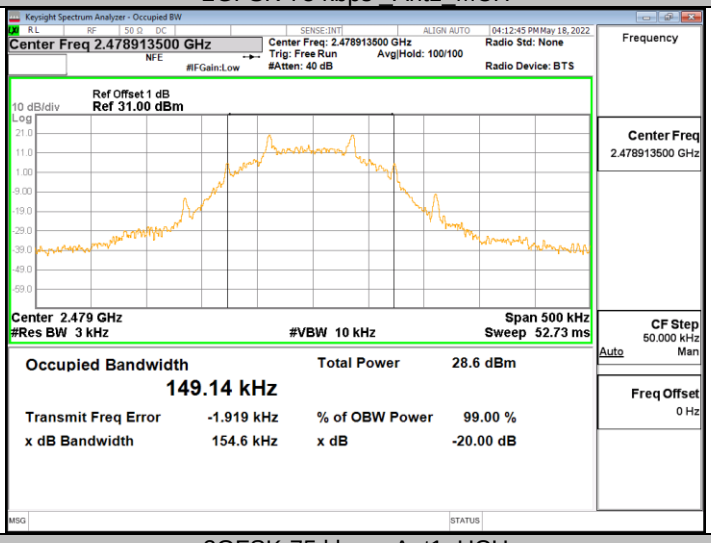
11.1.2. Test Graphs



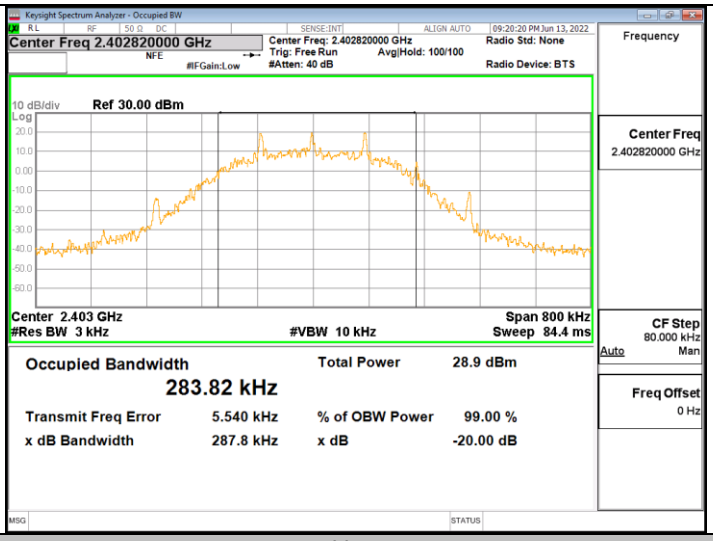
2GFSK-75 kbps _Ant1_LCH



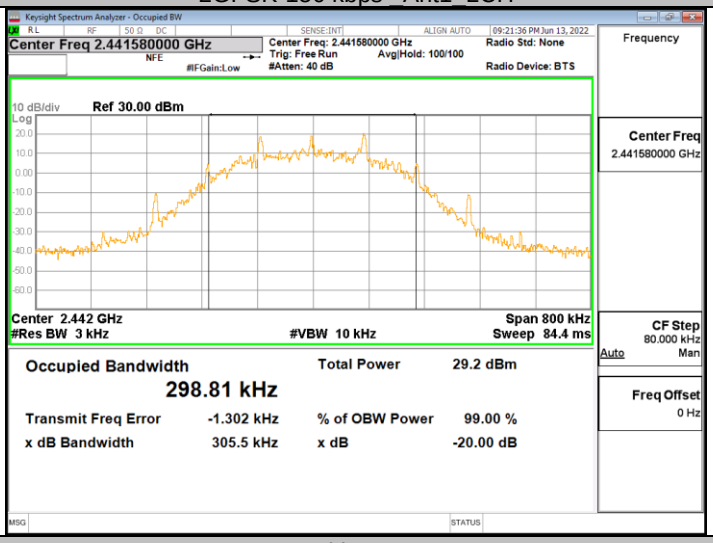
2GFSK-75 kbps _Ant1_MCH



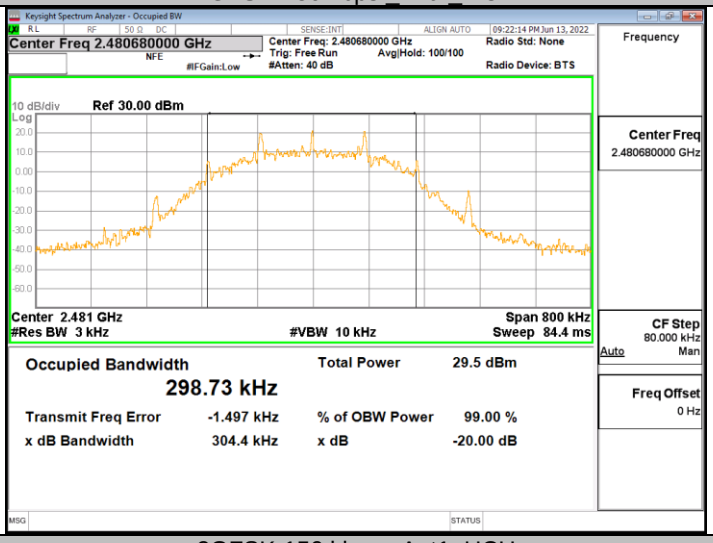
2GFSK-75 kbps _Ant1_HCH



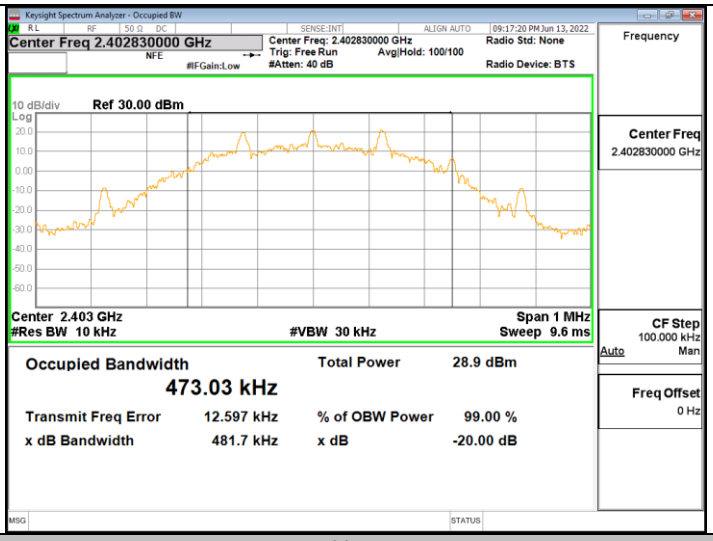
2GFSK-150 kbps _Ant1_ LCH



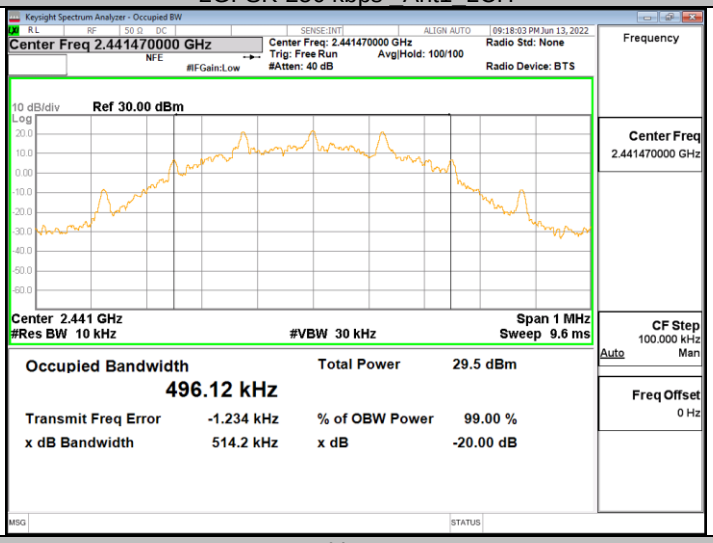
2GFSK-150 kbps _Ant1_ MCH



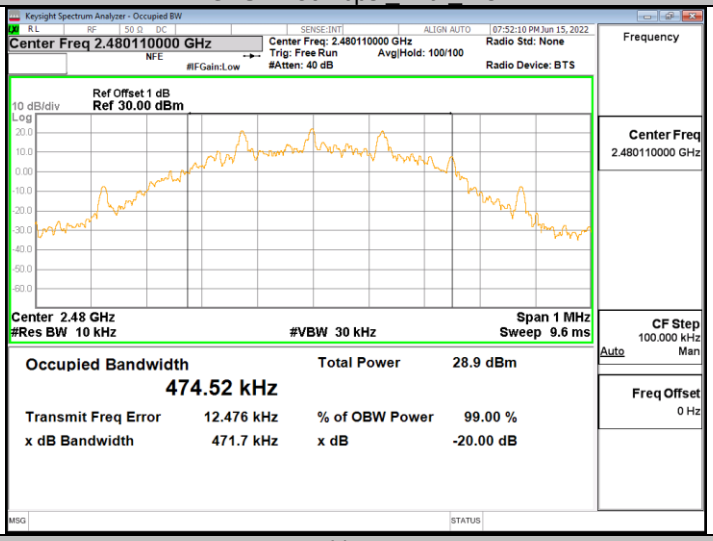
2GFSK-150 kbps _Ant1_ HCH



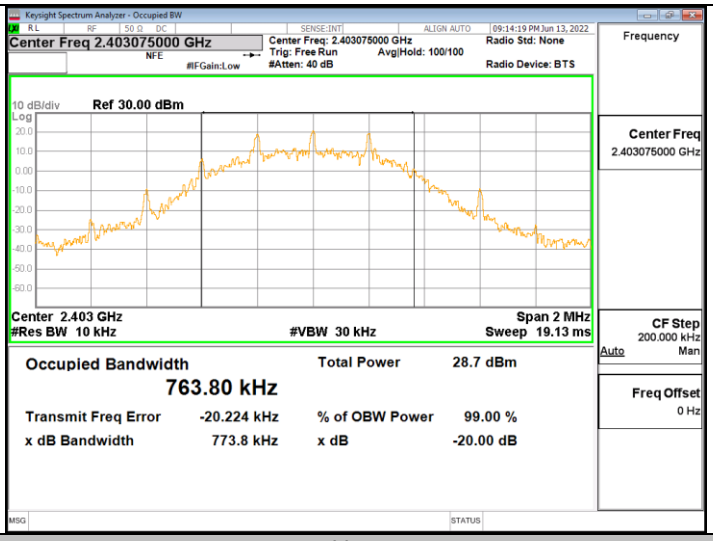
2GFSK-250 kbps _Ant1_ LCH



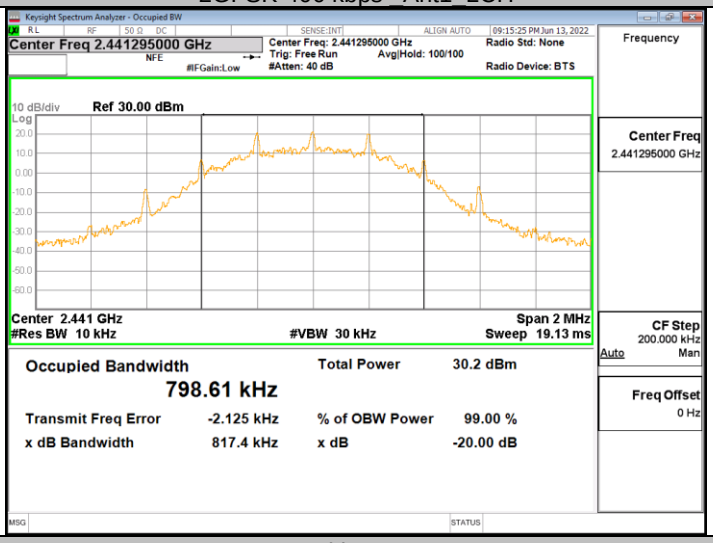
2GFSK-250 kbps _Ant1_ MCH



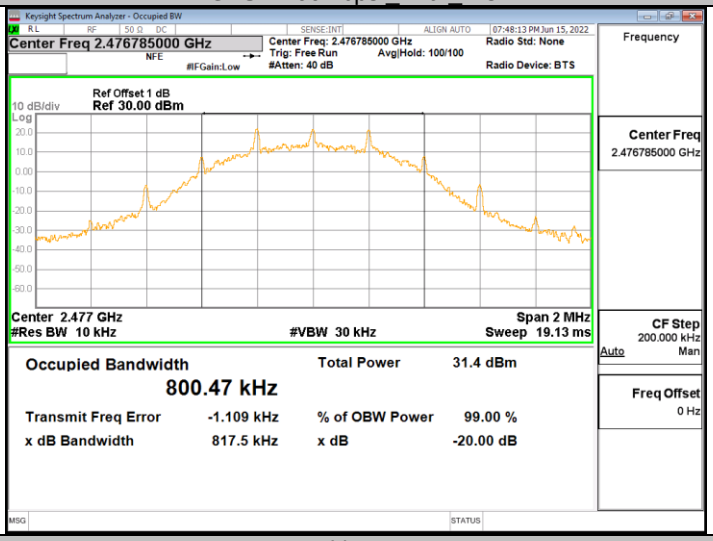
2GFSK-250 kbps _Ant1_ HCH



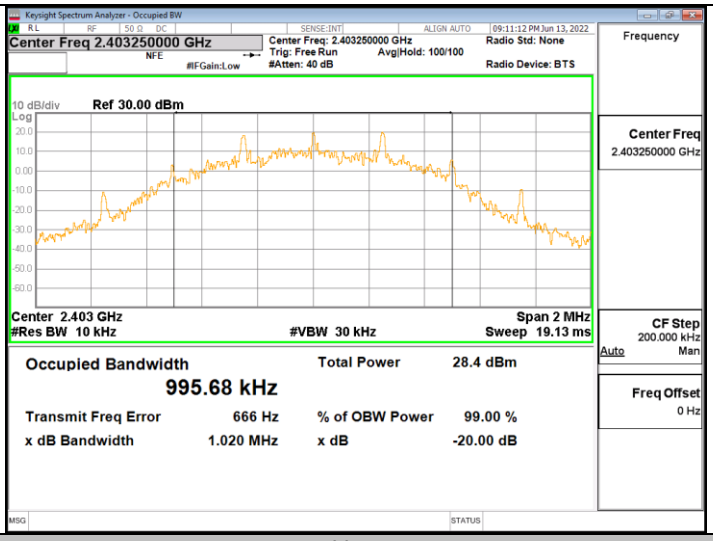
2GFSK-400 kbps _Ant1_ LCH



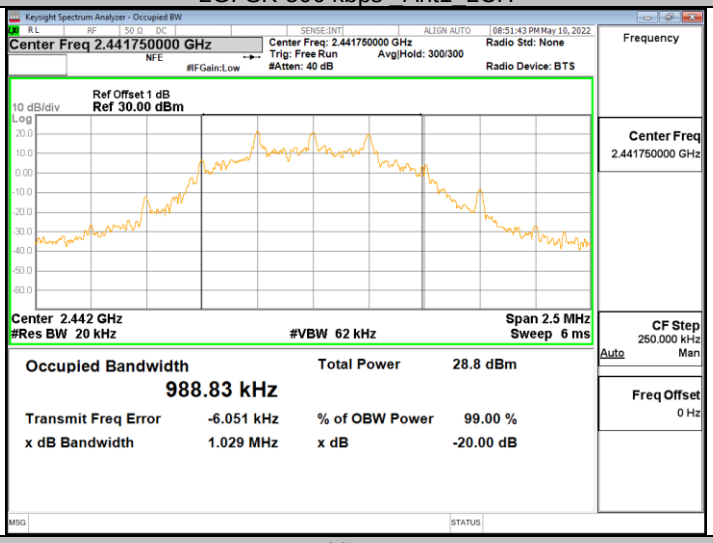
2GFSK-400 kbps _Ant1_ MCH



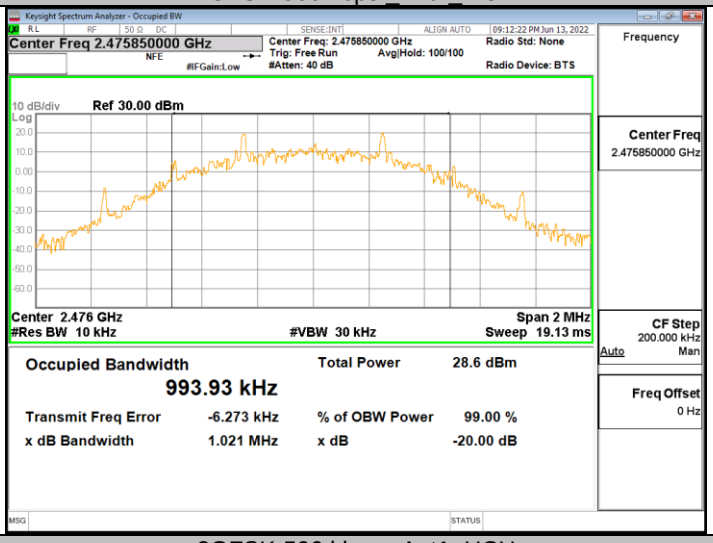
2GFSK-400 kbps _Ant1_ HCH



2GFSK-500 kbps _Ant1_ LCH



2GFSK-500 kbps _Ant1_ MCH



2GFSK-500 kbps _Ant1_ HCH

11.2. Appendix B: Maximum conducted output power

11.2.1. Test Result

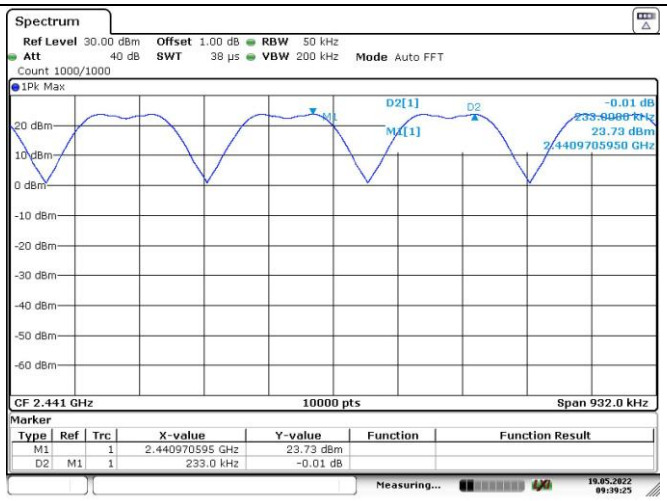
Test Mode	Antenna	Channel	PEAK Result[dBm]	AVG Result[dBm]	Limit[dBm]	Verdict
2GFSK-75kbps	Ant1	Low	25.21	24.94	≤30	PASS
		Mid	25.15	24.93	≤30	PASS
		High	25.14	24.91	≤30	PASS
2GFSK-150 kbps	Ant1	Low	24.79	24.31	≤30	PASS
		Mid	24.81	24.39	≤30	PASS
		High	24.75	24.33	≤30	PASS
2GFSK-250 kbps	Ant1	Low	24.98	24.84	≤30	PASS
		Mid	24.81	25.01	≤30	PASS
		High	24.96	24.82	≤30	PASS
2GFSK-400 kbps	Ant1	Low	24.99	24.81	≤30	PASS
		Mid	24.94	24.86	≤30	PASS
		High	24.98	24.83	≤30	PASS
2GFSK-500 kbps	Ant1	Low	24.79	24.56	≤30	PASS
		Mid	24.81	24.62	≤30	PASS
		High	24.73	24.57	≤30	PASS

11.3. Appendix C: Carrier frequency separation

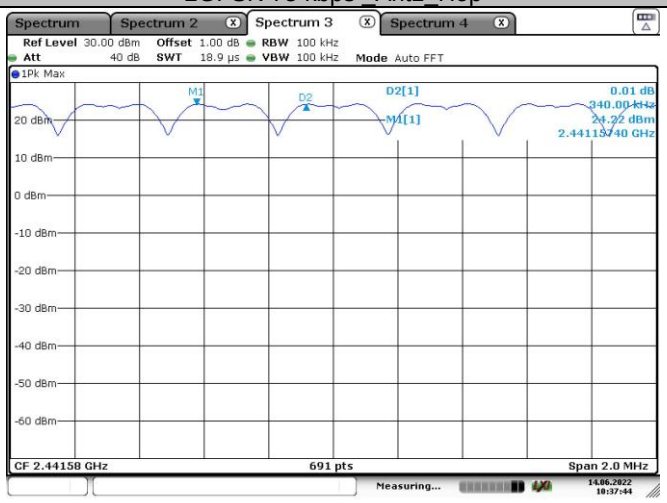
11.3.1. Test Result

Test Mode	Antenna	Channel	Result [MHz]	Limit[MHz]	Verdict
2GFSK-75 kbps	Ant1	Hop	0.233	0.155	PASS
2GFSK-150 kbps	Ant1	Hop	0.340	0.306	PASS
2GFSK-250 kbps	Ant1	Hop	0.562	0.514	PASS
2GFSK-400 kbps	Ant1	Hop	0.910	0.817	PASS
2GFSK-500 kbps	Ant1	Hop	1.100	1.03	PASS

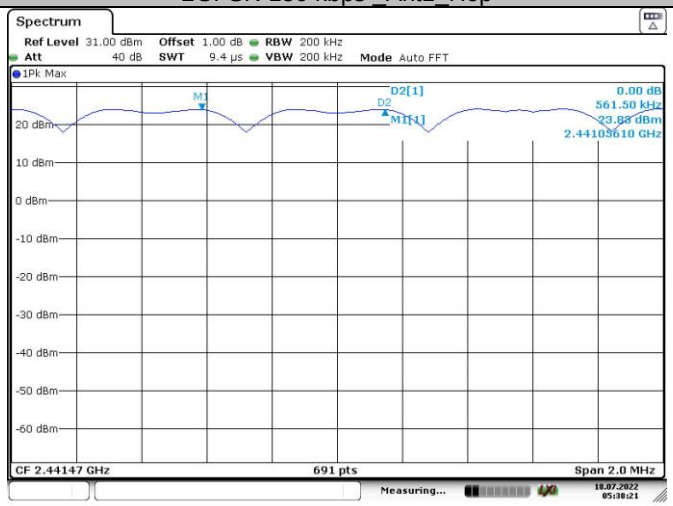
11.3.2. Test Graphs



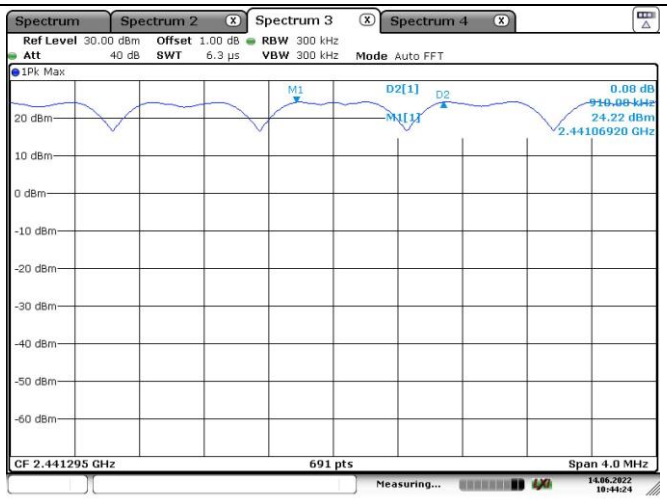
2GFSK-75 kbps _Ant1_Hop



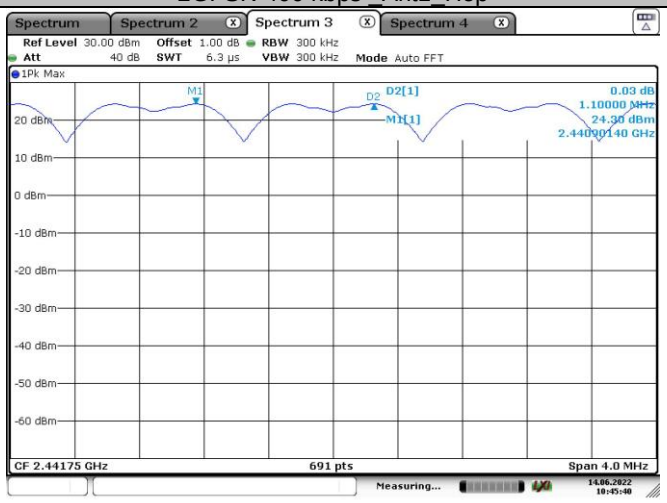
2GFSK-150 kbps _Ant1_Hop



2GFSK-250 kbps _Ant1_Hop



2GFSK-400 kbps _Ant1_Hop



2GFSK-500 kbps _Ant1_Hop

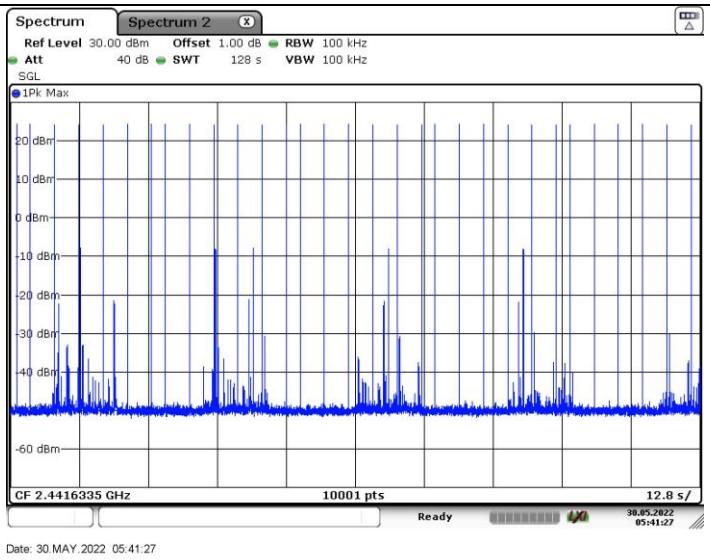
11.4. Appendix D: Time of occupancy

11.4.1. Test Result

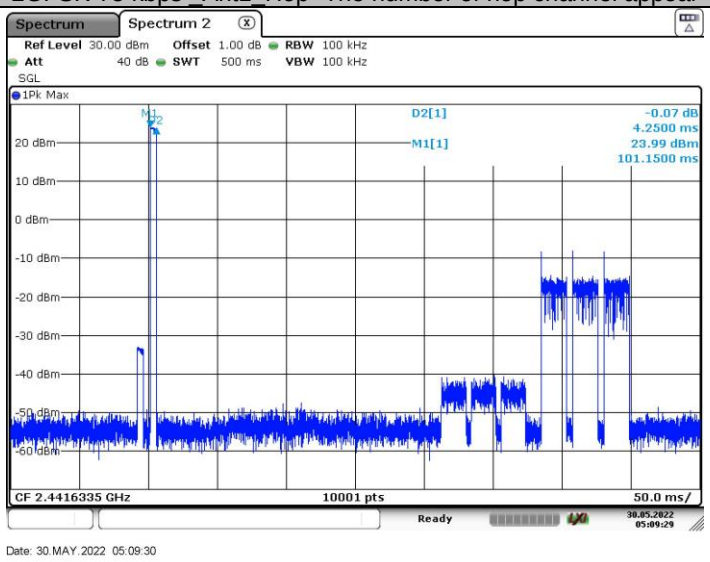
FHSS Mode									
Test Mode	Antenna	Channel	Time of single slot [ms]	number of single slot	BurstWidth [ms]	The number of hop channel appear	Result[ms]	Limit[ms]	Verdict
2GFSK-75 kbps	Ant1	Hop	4.25	1	4.25	31	131.75	<=400	PASS
2GFSK-150 kbps	Ant1	Hop	9.00	4	36.00	3	108.00	<=400	PASS
2GFSK-250 kbps	Ant1	Hop	5.40	4	21.60	1	21.60	<=400	PASS
2GFSK-400 kbps	Ant1	Hop	3.30	6	19.80	2	39.60	<=400	PASS
2GFSK-500 kbps	Ant1	Hop	2.70	7	18.90	2	37.80	<=400	PASS

Note:
Dwell time = Time of single slot * The number of hop channel appear within 0.4s* the number of hopping channels
BurstWidth =Time of single slot*number of single slot

11.4.2. Test Graphs



2GFSK-75 kbps _Ant1_Hop- The number of hop channel appear



2GFSK-75 kbps _Ant1_Hop- BurstWidth