

Appendix A. Test Result of RF Output Power

Measured values of RF Power Output (measured with Spectrum Analyzer in any 4kHz band)

Channel (MHz)	Conducted output power (dBm)	Antenna gain (dBi)	EIRP (dBm/4kHz)
1637.83	26.92	2	28.92
1649.16	26.20	2	28.20

Note:

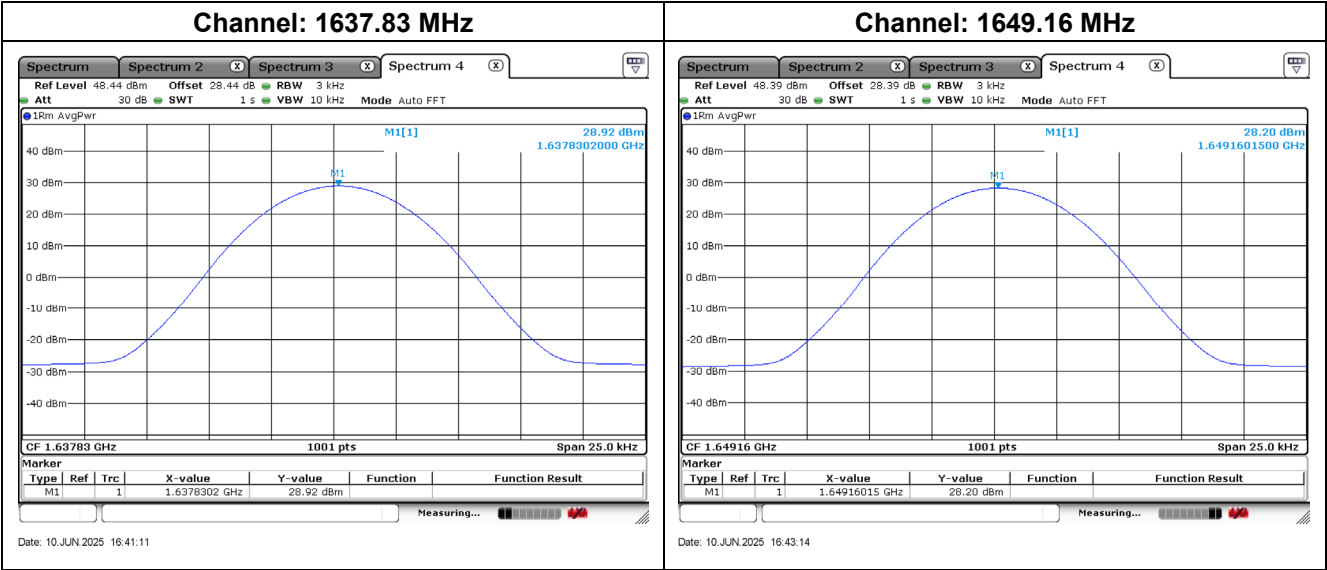
1. $EIRP(dBm) = \text{Conducted output power (dBm)} + \text{Antenna gain(dBi)}$
2. The insertion loss (external attenuator / RF cable assembly) and bandwidth correction factor (1.25 dB, when RBW 3 kHz was used) were included in the spectrum analyzer as the Offset.

Measured values of Total power

Channel (MHz)	Conducted output power (dBm)	Antenna gain (dBi)	EIRP (dBm)
1637.83	26.99	2	28.99
1649.16	26.18	2	28.18

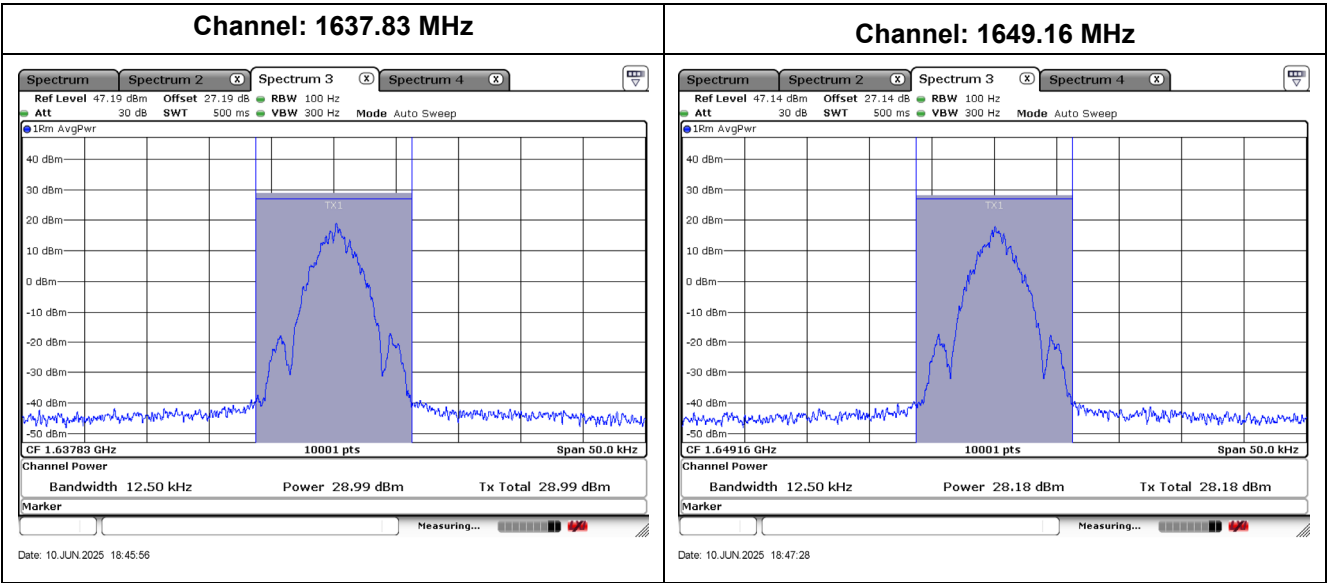
Note: $EIRP(dBm) = \text{Conducted output power (dBm)} + \text{Antenna gain(dBi)}$

RF Power Output (measured with Spectrum Analyzer in any 4kHz band)



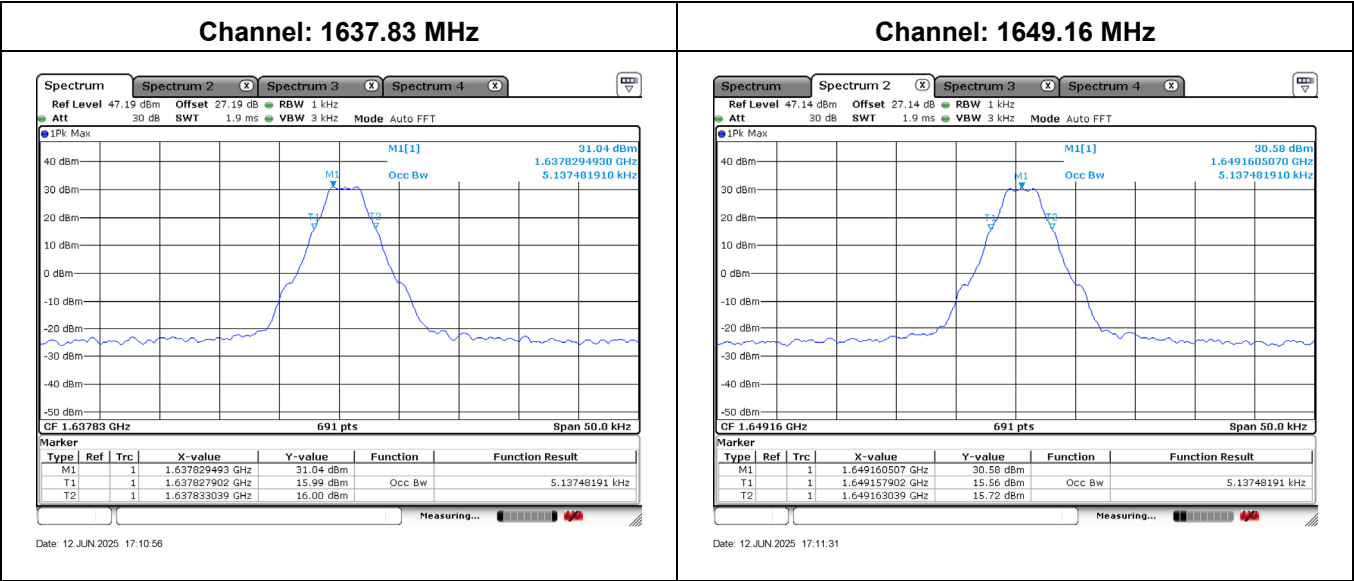
Note: The insertion loss (external attenuator / RF cable assembly) and bandwidth correction factor (1.25 dB, when RBW 3 kHz was used) were included in the spectrum analyzer as the Offset.

Total power



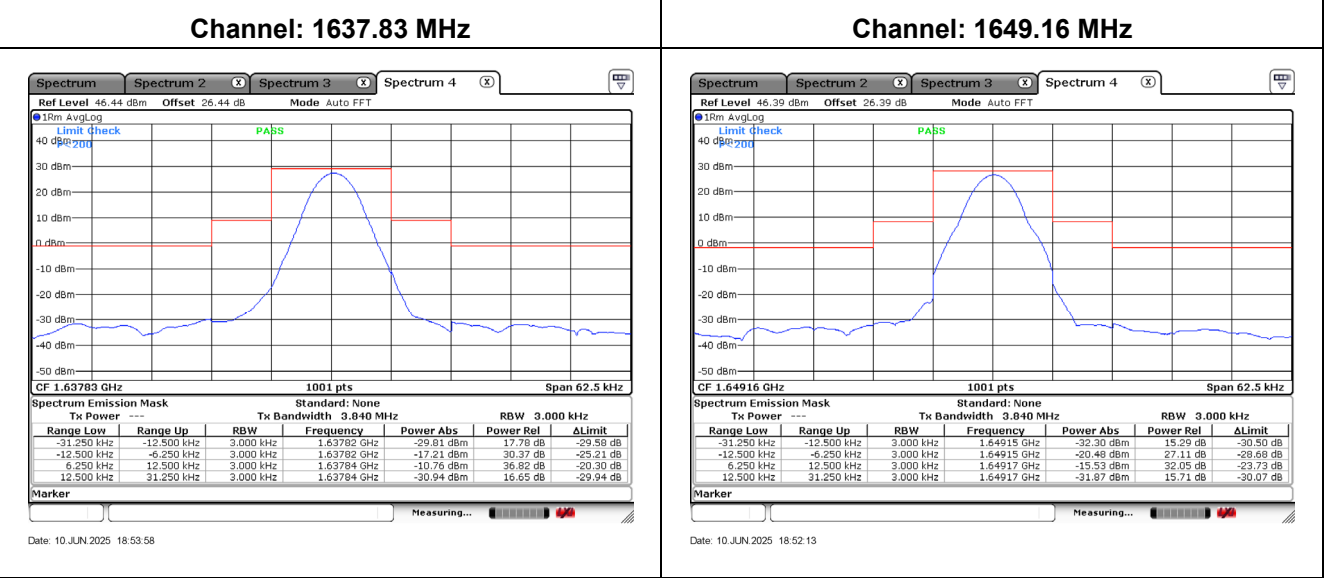
Appendix B. Test Result of Occupied Bandwidth

Channel (MHz)	Occupied Bandwidth (kHz)
1637.83	5.137
1649.16	5.137



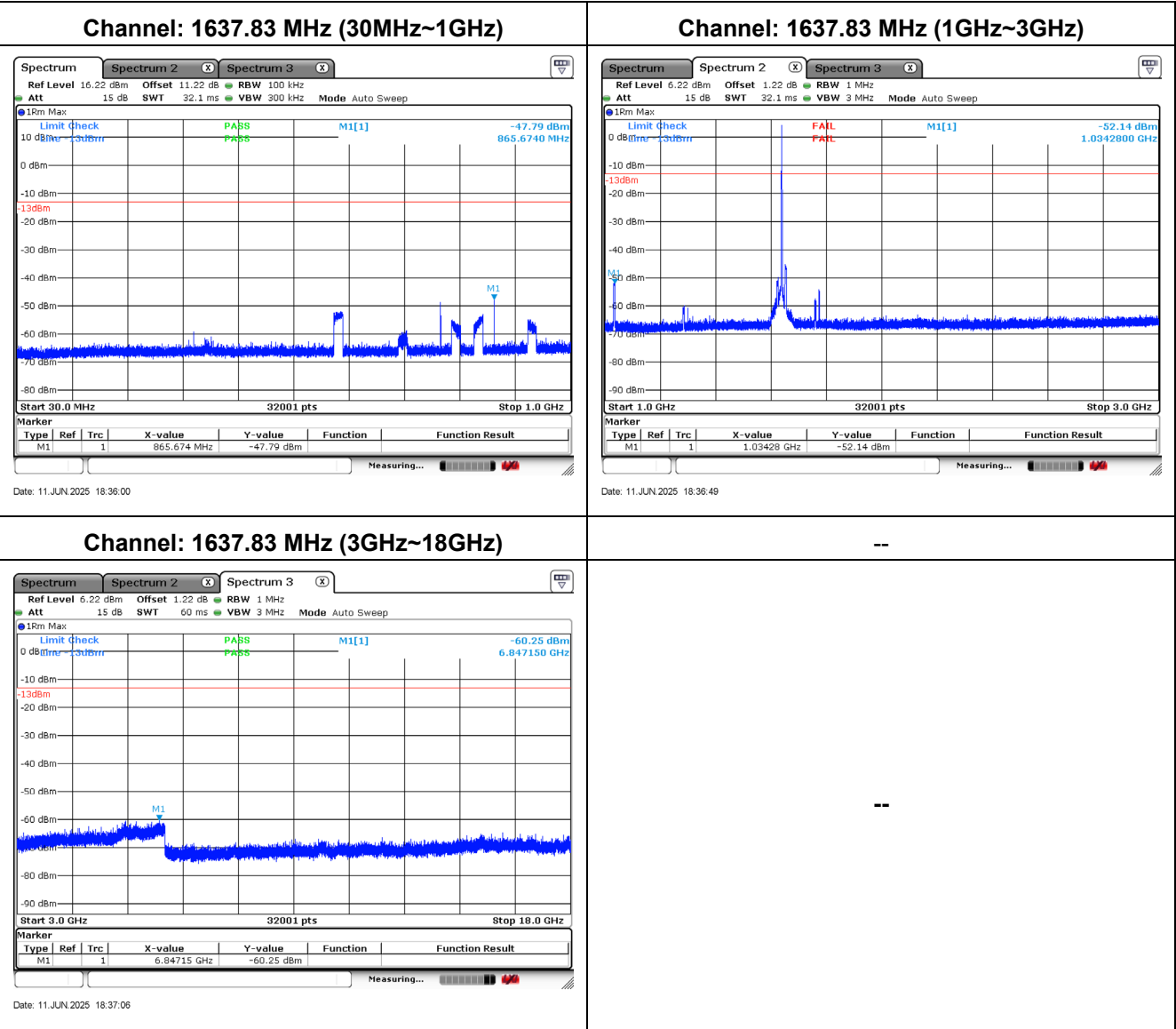
Appendix C. Test Result of Spurious Emissions at Antenna Terminals (Conducted emissions)

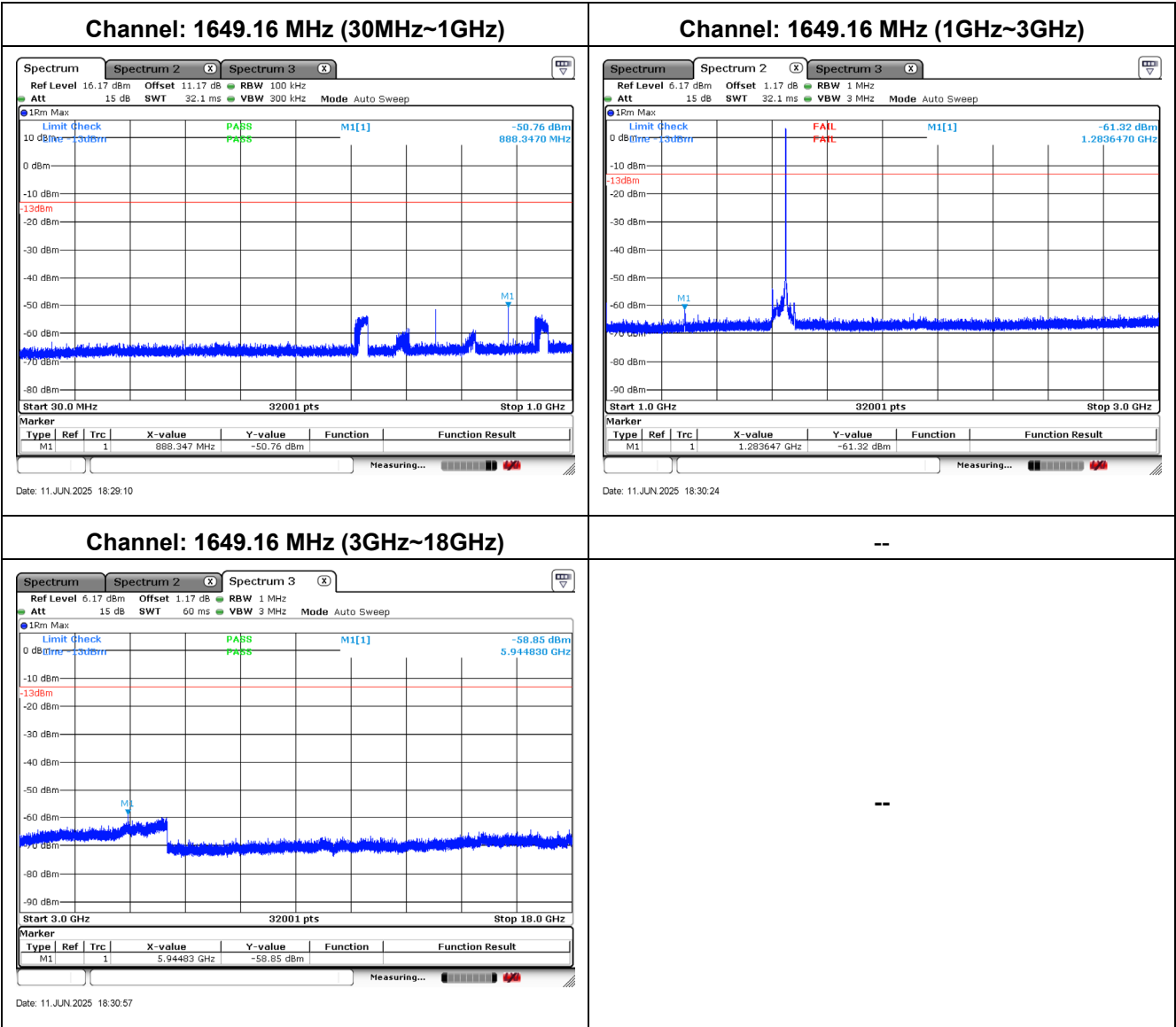
Within 250 percent of the authorized bandwidth (authorized bandwidth= 12.5kHz)



Note: The insertion loss (external attenuator / RF cable assembly) and bandwidth correction factor (1.25 dB, when RBW 3 kHz was used) were included in the spectrum analyzer as the Offset.

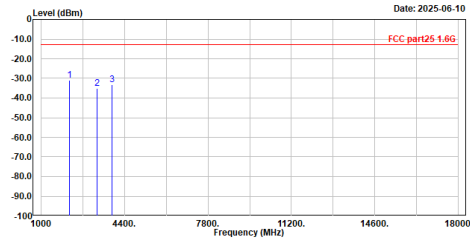
More than 250 percent of the authorized bandwidth (authorized bandwidth= 12.5kHz)





Appendix D. Test Result of Spurious Emission (radiated emission)

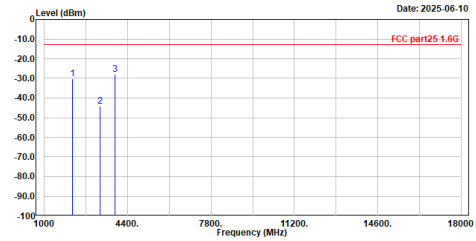
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_F2_1637.83MHz
Test by :Caster



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	2163.969	-31.08	-13.00	-18.08	-27.37	-3.71	RMS
2	3275.660	-35.03	-13.00	-22.03	-34.63	-0.40	RMS
3	3895.313	-33.10	-13.00	-20.10	-33.99	0.89	RMS

Note:
1. Level = Read Level + Factor
2. Over Limit = Level - Limit Line

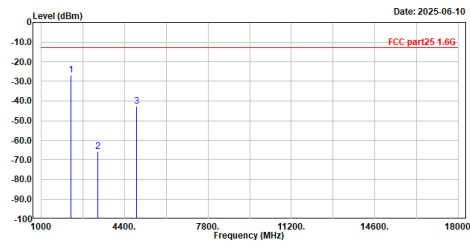
Site :HY-CB02
Condition :3m ,VERTICAL
mode :TX_F2_1637.83MHz
Test by :Caster



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	2163.969	-30.16	-13.00	-17.16	-26.79	-3.37	RMS
2	3275.660	-44.12	-13.00	-31.12	-43.72	-0.40	RMS
3	3895.313	-27.91	-13.00	-14.91	-28.78	0.87	RMS

Note:
1. Level = Read Level + Factor
2. Over Limit = Level - Limit Line

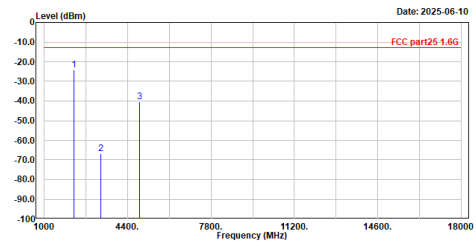
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_F3_1649.16MHz
Test by :Caster



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	2220.813	-26.80	-13.00	-13.80	-23.15	-3.65	RMS
2	3298.320	-65.79	-13.00	-52.79	-65.44	-0.35	RMS
3	4885.563	-42.79	-13.00	-29.79	-46.22	3.43	RMS

Note:
1. Level = Read Level + Factor
2. Over Limit = Level - Limit Line

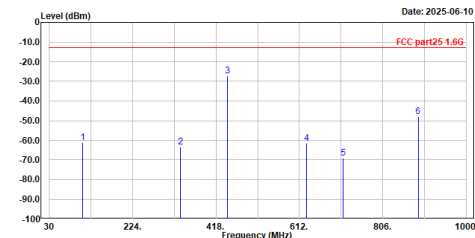
Site :HY-CB02
Condition :3m ,VERTICAL
mode :TX_F3_1649.16MHz
Test by :Caster



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	2220.813	-24.13	-13.00	-11.13	-20.85	-3.28	RMS
2	3298.320	-66.66	-13.00	-53.66	-66.31	-0.35	RMS
3	4885.563	-40.29	-13.00	-27.29	-43.98	3.69	RMS

Note:
1. Level = Read Level + Factor
2. Over Limit = Level - Limit Line

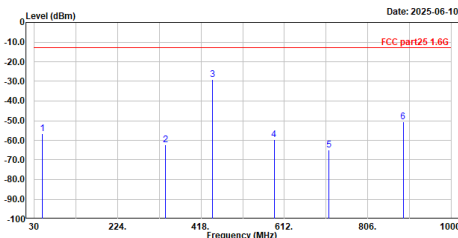
Site :HY-CB02
Condition :3m ,HORIZONTAL
mode :TX_F3_1649.16MHz
Test by :Caster



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
			dBuV/m	dB	dBuV	dB/m	
1	107.630	-61.25	-13.00	-48.25	-42.16	-19.09	RMS
2	335.974	-63.40	-13.00	-50.40	-50.66	-12.74	RMS
3	444.160	-27.11	-13.00	-14.11	-16.17	-10.94	RMS
4	628.945	-61.59	-13.00	-48.59	-54.16	-7.43	RMS
5	714.638	-69.23	-13.00	-56.23	-63.27	-5.96	RMS
6	888.329	-47.78	-13.00	-34.78	-44.73	-3.05	RMS

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Site :HY-CB02
Condition :3m ,VERTICAL
mode :TX_F3_1649.16MHz
Test by :Caster



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
			dBuV/m	dB	dBuV	dB/m	
1	49.612	-56.63	-13.00	-43.63	-42.48	-14.15	RMS
2	335.974	-62.36	-13.00	-49.36	-51.12	-11.24	RMS
3	444.160	-29.00	-13.00	-16.00	-20.82	-8.18	RMS
4	587.962	-59.65	-13.00	-46.65	-53.49	-6.16	RMS
5	714.820	-64.81	-13.00	-51.81	-60.59	-4.22	RMS
6	888.329	-50.54	-13.00	-37.54	-48.72	-1.82	RMS

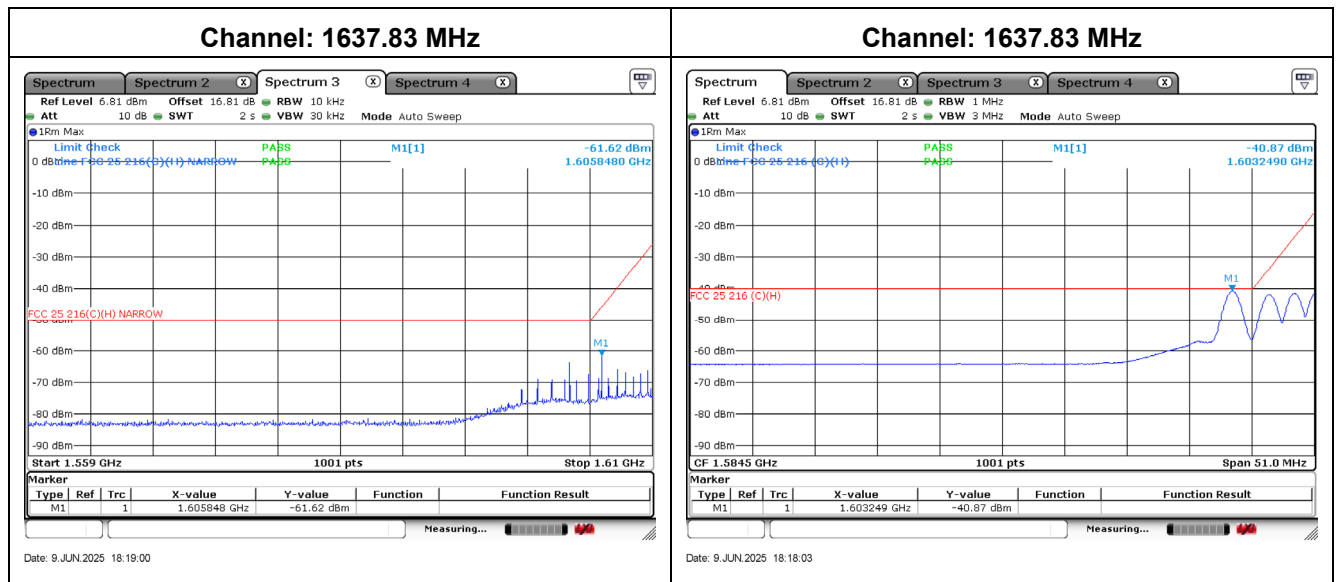
Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Appendix E. Test Result of Limits on emissions from mobile earth stations for protection of aeronautical radio navigation satellite service / Carrier-off state emissions (conducted emissions)

Conducted emissions from 1605 MHz to 1610 MHz

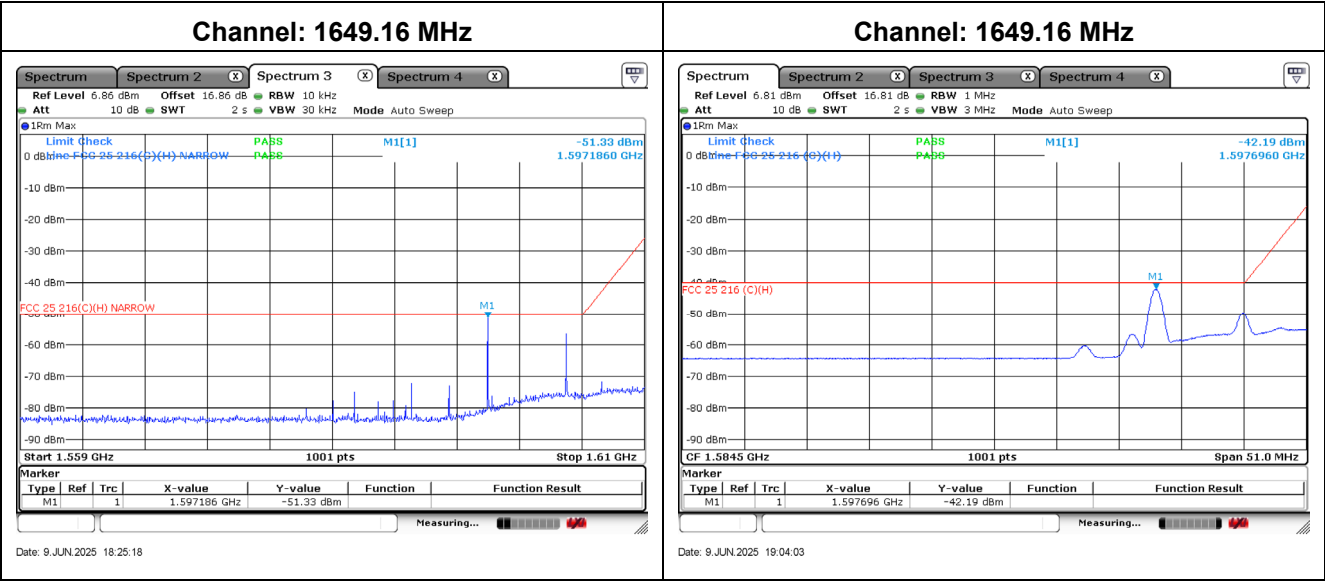
Emission limits (PSD in 1MHz)

Test Channel (MHz)	Measurement Frequency (MHz)	Emission Level (dBm)	Margin (dB)	Limit (dBm)
1637.83	1605.848	-61.62	-17.39	-44.23
1637.83	1603.249	-40.87	-0.87	-40.00



Emission limits (PSD in 100 kHz)

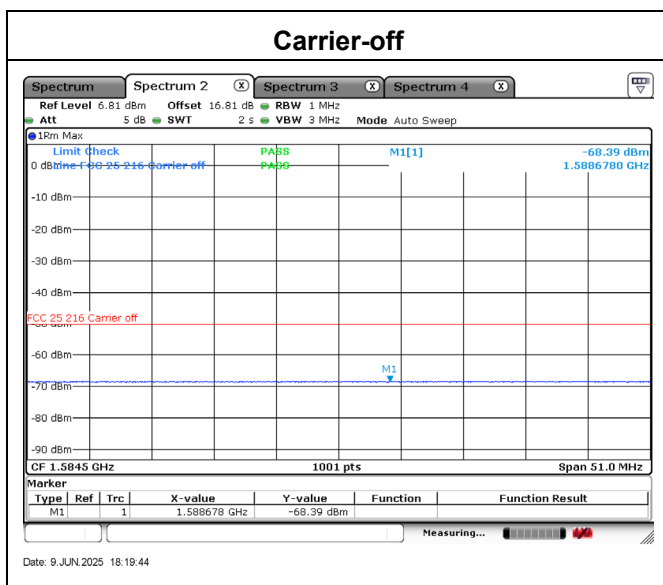
Test Channel (MHz)	Measurement Frequency (MHz)	Emission Level (dBm)	Margin (dB)	Limit (dBm)
1649.16	1597.186	-51.33	-1.33	-50.00
1649.16	1597.696	-42.19	-2.19	-40.00



Conducted emissions from 1559 MHz to 1610 MHz (carrier-off state emissions)

Emission limits (carrier-off)

State	Measurement Frequency (dBm)	Emission Level (dBm)	Margin (dB)	Limit (dBm)
Carrier-off	1588.678	-68.39	-18.39	-50



Appendix F. Test Result of Frequency Stability

Temperature Variations

Temperature (°C)	Voltage (V)	Observe Time	Declared Frequency (MHz)	Read Frequency (MHz)	Tolerance (%)	Limit (%)
20	12	start	1637.83	1637.83022	0.000013	0.001
		2mins	1637.83	1637.83022	0.000013	
		5mins	1637.83	1637.83022	0.000013	
		10mins	1637.83	1637.83022	0.000013	
20	13.8	start	1637.83	1637.83015	0.000009	0.001
		2mins	1637.83	1637.83015	0.000009	
		5mins	1637.83	1637.83015	0.000009	
		10mins	1637.83	1637.83015	0.000009	
20	10.2	start	1637.83	1637.83014	0.000009	0.001
		2mins	1637.83	1637.83014	0.000009	
		5mins	1637.83	1637.83014	0.000009	
		10mins	1637.83	1637.83014	0.000009	
50	12	start	1637.83	1637.82998	-0.000001	0.001
		2mins	1637.83	1637.82998	-0.000001	
		5mins	1637.83	1637.82998	-0.000001	
		10mins	1637.83	1637.82998	-0.000001	
40	12	start	1637.83	1637.83011	0.000007	0.001
		2mins	1637.83	1637.83011	0.000007	
		5mins	1637.83	1637.83011	0.000007	
		10mins	1637.83	1637.83011	0.000007	
30	12	start	1637.83	1637.83018	0.000011	0.001
		2mins	1637.83	1637.83018	0.000011	
		5mins	1637.83	1637.83018	0.000011	
		10mins	1637.83	1637.83018	0.000011	
10	12	start	1637.83	1637.83036	0.000022	0.001
		2mins	1637.83	1637.83036	0.000022	
		5mins	1637.83	1637.83036	0.000022	
		10mins	1637.83	1637.83036	0.000022	
0	12	start	1637.83	1637.83047	0.000029	0.001
		2mins	1637.83	1637.83047	0.000029	
		5mins	1637.83	1637.83047	0.000029	
		10mins	1637.83	1637.83047	0.000029	
-10	12	start	1637.83	1637.83047	0.000029	0.001
		2mins	1637.83	1637.83047	0.000029	
		5mins	1637.83	1637.83047	0.000029	
		10mins	1637.83	1637.83047	0.000029	
-20	12	start	1637.83	1637.83040	0.000024	0.001
		2mins	1637.83	1637.83040	0.000024	
		5mins	1637.83	1637.83040	0.000024	
		10mins	1637.83	1637.83040	0.000024	

Temperature (°C)	Voltage (V)	Observe Time	Declared Frequency (MHz)	Read Frequency (MHz)	Tolerance (%)	Limit (%)
20	12	start	1649.16	1649.16007	0.000004	0.001
		2mins	1649.16	1649.16007	0.000004	
		5mins	1649.16	1649.16007	0.000004	
		10mins	1649.16	1649.16007	0.000004	
20	13.8	start	1649.16	1649.16011	0.000007	0.001
		2mins	1649.16	1649.16011	0.000007	
		5mins	1649.16	1649.16011	0.000007	
		10mins	1649.16	1649.16011	0.000007	
20	10.2	start	1649.16	1649.16018	0.000011	0.001
		2mins	1649.16	1649.16018	0.000011	
		5mins	1649.16	1649.16018	0.000011	
		10mins	1649.16	1649.16018	0.000011	
50	12	start	1649.16	1649.15989	-0.000007	0.001
		2mins	1649.16	1649.15989	-0.000007	
		5mins	1649.16	1649.15989	-0.000007	
		10mins	1649.16	1649.15989	-0.000007	
40	12	start	1649.16	1649.16014	0.000009	0.001
		2mins	1649.16	1649.16014	0.000009	
		5mins	1649.16	1649.16014	0.000009	
		10mins	1649.16	1649.16014	0.000009	
30	12	start	1649.16	1649.16018	0.000011	0.001
		2mins	1649.16	1649.16018	0.000011	
		5mins	1649.16	1649.16018	0.000011	
		10mins	1649.16	1649.16018	0.000011	
10	12	start	1649.16	1649.16040	0.000024	0.001
		2mins	1649.16	1649.16040	0.000024	
		5mins	1649.16	1649.16040	0.000024	
		10mins	1649.16	1649.16040	0.000024	
0	12	start	1649.16	1649.16041	0.000025	0.001
		2mins	1649.16	1649.16041	0.000025	
		5mins	1649.16	1649.16041	0.000025	
		10mins	1649.16	1649.16041	0.000025	
-10	12	start	1649.16	1649.16047	0.000029	0.001
		2mins	1649.16	1649.16047	0.000029	
		5mins	1649.16	1649.16047	0.000029	
		10mins	1649.16	1649.16047	0.000029	
-20	12	start	1649.16	1649.16043	0.000026	0.001
		2mins	1649.16	1649.16043	0.000026	
		5mins	1649.16	1649.16043	0.000026	
		10mins	1649.16	1649.16043	0.000026	