



CAT-M Band 26 Part90 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1629.36	-33.93	9.56	9.72	-34.09	-13.00	-21.09	H
2443.68	-35.27	10.50	10.86	-35.63	-13.00	-22.63	H
3258.59	-32.72	12.78	11.57	-31.51	-13.00	-18.51	H
1629.36	-34.58	9.56	9.72	-34.74	-13.00	-21.74	V
2443.68	-34.29	10.50	10.86	-34.65	-13.00	-21.65	V
3258.59	-31.82	12.78	11.57	-30.61	-13.00	-17.61	V
CAT-M Band 26 Part90/ 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1637.77	-33.71	9.56	9.72	-33.87	-13.00	-20.87	H
2457.11	-35.12	10.50	10.86	-35.48	-13.00	-22.48	H
3275.83	-32.43	12.78	11.57	-31.22	-13.00	-18.22	H
1637.77	-35.10	9.56	9.72	-35.26	-13.00	-22.26	V
2457.11	-33.92	10.50	10.86	-34.28	-13.00	-21.28	V
3275.83	-31.77	12.78	11.57	-30.56	-13.00	-17.56	V
CAT-M Band 26 Part90/ 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1646.48	-33.48	9.56	9.72	-33.64	-13.00	-20.64	H
2456.71	-34.82	10.50	10.86	-35.18	-13.00	-22.18	H
3258.20	-33.35	12.78	11.57	-32.14	-13.00	-19.14	H
1646.48	-35.17	9.56	9.72	-35.33	-13.00	-22.33	V
2456.71	-33.77	10.50	10.86	-34.13	-13.00	-21.13	V
3258.20	-32.38	12.78	11.57	-31.17	-13.00	-18.17	V



CAT-M Band 26 Part90/ 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1631.24	-33.53	9.56	9.72	-33.69	-13.00	-20.69	H
2446.31	-34.43	10.50	10.86	-34.79	-13.00	-21.79	H
3261.92	-33.22	12.78	11.57	-32.01	-13.00	-19.01	H
1631.24	-35.65	9.56	9.72	-35.81	-13.00	-22.81	V
2446.31	-34.41	10.50	10.86	-34.77	-13.00	-21.77	V
3261.92	-32.63	12.78	11.57	-31.42	-13.00	-18.42	V
CAT-M Band 26 Part90/ 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1638.16	-33.90	9.56	9.72	-34.06	-13.00	-21.06	H
2457.28	-34.67	10.50	10.86	-35.03	-13.00	-22.03	H
3276.24	-32.25	12.78	11.57	-31.04	-13.00	-18.04	H
1638.16	-34.90	9.56	9.72	-35.06	-13.00	-22.06	V
2457.28	-34.23	10.50	10.86	-34.59	-13.00	-21.59	V
3276.24	-33.08	12.78	11.57	-31.87	-13.00	-18.87	V
CAT-M Band 26 Part90/ 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1645.09	-33.76	9.56	9.72	-33.92	-13.00	-20.92	H
2467.47	-34.04	10.50	10.86	-34.40	-13.00	-21.40	H
3276.28	-33.47	12.78	11.57	-32.26	-13.00	-19.26	H
1645.09	-35.65	9.56	9.72	-35.81	-13.00	-22.81	V
2467.47	-34.63	10.50	10.86	-34.99	-13.00	-21.99	V
3276.28	-31.97	12.78	11.57	-30.76	-13.00	-17.76	V



CAT-M Band 26 Part90/ 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1632.94	-33.94	9.56	9.72	-34.10	-13.00	-21.10	H
2449.60	-35.16	10.50	10.86	-35.52	-13.00	-22.52	H
3266.50	-32.17	12.78	11.57	-30.96	-13.00	-17.96	H
1632.94	-35.26	9.56	9.72	-35.42	-13.00	-22.42	V
2449.60	-33.91	10.50	10.86	-34.27	-13.00	-21.27	V
3266.50	-32.25	12.78	11.57	-31.04	-13.00	-18.04	V
CAT-M Band 26 Part90/ 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1637.84	-33.47	9.56	9.72	-33.63	-13.00	-20.63	H
2457.03	-34.78	10.50	10.86	-35.14	-13.00	-22.14	H
3275.85	-32.99	12.78	11.57	-31.78	-13.00	-18.78	H
1637.84	-35.01	9.56	9.72	-35.17	-13.00	-22.17	V
2457.03	-35.22	10.50	10.86	-35.58	-13.00	-22.58	V
3275.85	-32.35	12.78	11.57	-31.14	-13.00	-18.14	V
CAT-M Band 26 Part90/ 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1642.83	-34.54	9.56	9.72	-34.70	-13.00	-21.70	H
2464.50	-34.05	10.50	10.86	-34.41	-13.00	-21.41	H
3286.16	-32.44	12.78	11.57	-31.23	-13.00	-18.23	H
1642.83	-35.77	9.56	9.72	-35.93	-13.00	-22.93	V
2464.50	-33.87	10.50	10.86	-34.23	-13.00	-21.23	V
3286.16	-32.66	12.78	11.57	-31.45	-13.00	-18.45	V
CAT-M Band 26 Part90/ 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1637.96	-33.95	9.56	9.72	-34.11	-13.00	-21.11	H
2457.26	-35.48	10.50	10.86	-35.84	-13.00	-22.84	H
3276.22	-33.61	12.78	11.57	-32.40	-13.00	-19.40	H
1637.96	-35.15	9.56	9.72	-35.31	-13.00	-22.31	V
2457.26	-34.81	10.50	10.86	-35.17	-13.00	-22.17	V
3276.22	-32.66	12.78	11.57	-31.45	-13.00	-18.45	V



CAT-M Band 66 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3421.39	-34.12	12.90	12.56	-33.78	-13.00	-20.78	H
5131.74	-35.46	13.10	16.32	-38.68	-13.00	-25.68	H
6842.41	-33.63	12.33	21.13	-42.43	-13.00	-29.43	H
3421.39	-35.15	12.90	12.56	-34.81	-13.00	-21.81	V
5131.74	-34.61	13.10	16.32	-37.83	-13.00	-24.83	V
6842.41	-32.14	12.33	21.13	-40.94	-13.00	-27.94	V
CAT-M Band 66 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3490.17	-33.57	12.90	12.56	-33.23	-13.00	-20.23	H
5234.86	-34.57	13.10	16.32	-37.79	-13.00	-24.79	H
6980.27	-32.95	12.33	21.13	-41.75	-13.00	-28.75	H
3490.17	-34.79	12.90	12.56	-34.45	-13.00	-21.45	V
5234.86	-34.98	13.10	16.32	-38.20	-13.00	-25.20	V
6980.27	-31.89	12.33	21.13	-40.69	-13.00	-27.69	V
CAT-M Band 66 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3558.02	-34.29	12.90	12.56	-33.95	-13.00	-20.95	H
5336.87	-34.25	13.10	16.32	-37.47	-13.00	-24.47	H
7117.16	-32.87	12.33	21.13	-41.67	-13.00	-28.67	H
3558.02	-35.35	12.90	12.56	-35.01	-13.00	-22.01	V
5336.87	-34.39	13.10	16.32	-37.61	-13.00	-24.61	V
7117.16	-32.82	12.33	21.13	-41.62	-13.00	-28.62	V



CAT-M Band 66 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3423.04	-33.72	12.90	12.56	-33.38	-13.00	-20.38	H
5134.51	-34.68	13.10	16.32	-37.90	-13.00	-24.90	H
6846.16	-33.08	12.33	21.13	-41.88	-13.00	-28.88	H
3423.04	-35.75	12.90	12.56	-35.41	-13.00	-22.41	V
5134.51	-33.86	13.10	16.32	-37.08	-13.00	-24.08	V
6846.16	-32.01	12.33	21.13	-40.81	-13.00	-27.81	V
CAT-M Band 66 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3489.91	-33.54	12.90	12.56	-33.20	-13.00	-20.20	H
5234.87	-35.11	13.10	16.32	-38.33	-13.00	-25.33	H
6980.26	-32.51	12.33	21.13	-41.31	-13.00	-28.31	H
3489.91	-35.58	12.90	12.56	-35.24	-13.00	-22.24	V
5234.87	-34.72	13.10	16.32	-37.94	-13.00	-24.94	V
6980.26	-31.92	12.33	21.13	-40.72	-13.00	-27.72	V
CAT-M Band 66 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3556.94	-33.82	12.90	12.56	-33.48	-13.00	-20.48	H
5262.19	-34.51	13.10	16.32	-37.73	-13.00	-24.73	H
7113.81	-33.24	12.33	21.13	-42.04	-13.00	-29.04	H
3556.94	-35.93	12.90	12.56	-35.59	-13.00	-22.59	V
5262.19	-33.79	13.10	16.32	-37.01	-13.00	-24.01	V
7113.81	-31.90	12.33	21.13	-40.70	-13.00	-27.70	V



CAT-M Band 66 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3425.13	-33.74	12.90	12.56	-33.40	-13.00	-20.40	H
5137.08	-34.80	13.10	16.32	-38.02	-13.00	-25.02	H
6850.34	-33.15	12.33	21.13	-41.95	-13.00	-28.95	H
3425.13	-34.72	12.90	12.56	-34.38	-13.00	-21.38	V
5137.08	-33.90	13.10	16.32	-37.12	-13.00	-24.12	V
6850.34	-32.18	12.33	21.13	-40.98	-13.00	-27.98	V
CAT-M Band 66 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3489.99	-34.69	12.90	12.56	-34.35	-13.00	-21.35	H
5235.18	-34.33	13.10	16.32	-37.55	-13.00	-24.55	H
6980.13	-33.20	12.33	21.13	-42.00	-13.00	-29.00	H
3489.99	-35.08	12.90	12.56	-34.74	-13.00	-21.74	V
5235.18	-35.20	13.10	16.32	-38.42	-13.00	-25.42	V
6980.13	-31.80	12.33	21.13	-40.60	-13.00	-27.60	V
CAT-M Band 66 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3557.88	-34.53	12.90	12.56	-34.19	-13.00	-21.19	H
52353.81	-35.18	13.10	16.32	-38.40	-13.00	-25.40	H
7109.80	-32.56	12.33	21.13	-41.36	-13.00	-28.36	H
3557.88	-35.45	12.90	12.56	-35.11	-13.00	-22.11	V
52353.81	-34.09	13.10	16.32	-37.31	-13.00	-24.31	V
7109.80	-33.19	12.33	21.13	-41.99	-13.00	-28.99	V



CAT-M Band 66 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3430.05	-34.03	12.90	12.56	-33.69	-13.00	-20.69	H
5145.10	-35.10	13.10	16.32	-38.32	-13.00	-25.32	H
6879.81	-33.51	12.33	21.13	-42.31	-13.00	-29.31	H
3430.05	-35.17	12.90	12.56	-34.83	-13.00	-21.83	V
5145.10	-34.67	13.10	16.32	-37.89	-13.00	-24.89	V
6879.81	-32.54	12.33	21.13	-41.34	-13.00	-28.34	V
CAT-M Band 66 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3489.98	-33.65	12.90	12.56	-33.31	-13.00	-20.31	H
5235.25	-34.45	13.10	16.32	-37.67	-13.00	-24.67	H
6980.13	-32.41	12.33	21.13	-41.21	-13.00	-28.21	H
3489.98	-35.61	12.90	12.56	-35.27	-13.00	-22.27	V
5235.25	-33.77	13.10	16.32	-36.99	-13.00	-23.99	V
6980.13	-32.32	12.33	21.13	-41.12	-13.00	-28.12	V
CAT-M Band 66 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3550.34	-34.36	12.90	12.56	-34.02	-13.00	-21.02	H
5235.47	-35.46	13.10	16.32	-38.68	-13.00	-25.68	H
7100.21	-33.20	12.33	21.13	-42.00	-13.00	-29.00	H
3550.34	-35.61	12.90	12.56	-35.27	-13.00	-22.27	V
5235.47	-34.80	13.10	16.32	-38.02	-13.00	-25.02	V
7100.21	-33.20	12.33	21.13	-42.00	-13.00	-29.00	V



CAT-M Band 66 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3434.87	-33.76	12.90	12.56	-33.42	-13.00	-20.42	H
5152.65	-34.53	13.10	16.32	-37.75	-13.00	-24.75	H
6869.96	-33.35	12.33	21.13	-42.15	-13.00	-29.15	H
3434.87	-35.99	12.90	12.56	-35.65	-13.00	-22.65	V
5152.65	-34.09	13.10	16.32	-37.31	-13.00	-24.31	V
6869.96	-32.93	12.33	21.13	-41.73	-13.00	-28.73	V
CAT-M Band 66 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3489.99	-34.86	12.90	12.56	-34.52	-13.00	-21.52	H
5235.12	-34.67	13.10	16.32	-37.89	-13.00	-24.89	H
6980.26	-33.50	12.33	21.13	-42.30	-13.00	-29.30	H
3489.99	-34.66	12.90	12.56	-34.32	-13.00	-21.32	V
5235.12	-34.59	13.10	16.32	-37.81	-13.00	-24.81	V
6980.26	-32.12	12.33	21.13	-40.92	-13.00	-27.92	V
CAT-M Band 66 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3544.78	-33.49	12.90	12.56	-33.15	-13.00	-20.15	H
5332.71	-34.11	13.10	16.32	-37.33	-13.00	-24.33	H
7089.92	-32.46	12.33	21.13	-41.26	-13.00	-28.26	H
3544.78	-35.85	12.90	12.56	-35.51	-13.00	-22.51	V
5332.71	-34.85	13.10	16.32	-38.07	-13.00	-25.07	V
7089.92	-31.84	12.33	21.13	-40.64	-13.00	-27.64	V



CAT-M Band 66 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3440.02	-34.63	12.90	12.56	-34.29	-13.00	-21.29	H
5160.13	-34.44	13.10	16.32	-37.66	-13.00	-24.66	H
6879.83	-32.94	12.33	21.13	-41.74	-13.00	-28.74	H
3440.02	-35.46	12.90	12.56	-35.12	-13.00	-22.12	V
5160.13	-35.20	13.10	16.32	-38.42	-13.00	-25.42	V
6879.83	-32.68	12.33	21.13	-41.48	-13.00	-28.48	V
CAT-M Band 66 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3490.01	-34.22	12.90	12.56	-33.88	-13.00	-20.88	H
5235.20	-34.79	13.10	16.32	-38.01	-13.00	-25.01	H
6979.96	-33.59	12.33	21.13	-42.39	-13.00	-29.39	H
3490.01	-35.71	12.90	12.56	-35.37	-13.00	-22.37	V
5235.20	-34.71	13.10	16.32	-37.93	-13.00	-24.93	V
6979.96	-32.58	12.33	21.13	-41.38	-13.00	-28.38	V
CAT-M Band 66 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3539.94	-33.83	12.90	12.56	-33.49	-13.00	-20.49	H
5309.82	-35.27	13.10	16.32	-38.49	-13.00	-25.49	H
7080.55	-32.96	12.33	21.13	-41.76	-13.00	-28.76	H
3539.94	-34.97	12.90	12.56	-34.63	-13.00	-21.63	V
5309.82	-34.18	13.10	16.32	-37.40	-13.00	-24.40	V
7080.55	-32.48	12.33	21.13	-41.28	-13.00	-28.28	V

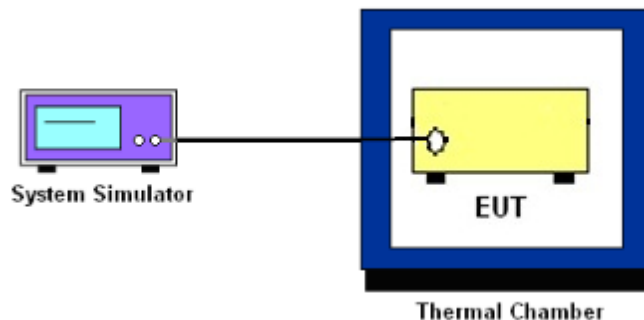
9. FREQUENCY STABILITY

9.1 DESCRIPTION OF FREQUENCY STABILITY MEASUREMENT

9.1.1 MEASUREMENT METHOD

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

9.1.2 TEST SETUP



9.1.3 TEST PROCEDURES FOR TEMPERATURE VARIATION

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

9.1.4 TEST PROCEDURES FOR VOLTAGE VARIATION

1. The testing follows FCC KDB 971168 D01v01r03 Section 9.
2. The EUT was placed in a temperature chamber at $25 \pm 5^{\circ}\text{C}$ and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.



9.1.5 TEST RESULTS

CAT-M Band 2 (QPSK) / 1880MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	18.23	0.010	2.5ppm	PASS
40		15.61	0.008		
30		17.17	0.009		
20		12.37	0.007		
10		35.38	0.019		
0		31.30	0.017		
-10		23.24	0.012		
-20		13.51	0.007		
-30		22.26	0.012		
20	Maximum Voltage	22.11	0.012		
20	BEP	30.18	0.016		

CAT-M Band 2 (QPSK) / 1880MHz / BW20M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	14.52	0.008	2.5ppm	PASS
40		25.84	0.014		
30		31.56	0.017		
20		28.28	0.015		
10		15.99	0.009		
0		36.26	0.019		
-10		17.78	0.009		
-20		17.88	0.010		
-30		26.65	0.014		
20	Maximum Voltage	25.38	0.014		
20	BEP	35.09	0.019		



CAT-M Band 4 (QPSK) / 1733MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	32.60	0.019	2.5ppm	PASS
40		29.36	0.017		
30		17.28	0.010		
20		21.17	0.012		
10		25.84	0.015		
0		12.00	0.007		
-10		23.60	0.014		
-20		15.26	0.009		
-30		12.41	0.007		
20	Maximum Voltage	15.45	0.009		
20	BEP	24.54	0.014		

CAT-M Band 4 (QPSK) / 1733MHz / BW20M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	15.06	0.009	2.5ppm	PASS
40		25.86	0.015		
30		34.48	0.020		
20		20.94	0.012		
10		12.88	0.007		
0		25.45	0.015		
-10		24.29	0.014		
-20		35.75	0.021		
-30		32.07	0.019		
20	Maximum Voltage	23.89	0.014		
20	BEP	23.99	0.014		



CAT-M Band 5 (QPSK) / 836.5MHz / BW5M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	19.41	0.027	2.5ppm	PASS
40		27.22	0.038		
30		31.83	0.045		
20		17.69	0.025		
10		16.16	0.023		
0		27.64	0.039		
-10		33.63	0.005		
-20		11.57	0.016		
-30		15.83	0.022		
20	Maximum Voltage	26.39	0.037		
20	BEP	26.03	0.037		

CAT-M Band 5 (QPSK) / 836.5MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	21.88	0.031	2.5ppm	PASS
40		24.30	0.034		
30		25.15	0.035		
20		19.82	0.028		
10		24.13	0.034		
0		31.18	0.044		
-10		21.89	0.003		
-20		18.29	0.026		
-30		18.87	0.027		
20	Maximum Voltage	15.12	0.021		
20	BEP	34.83	0.049		



CAT-M Band 12 (QPSK) / 707.5MHz / BW5M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	30.87	0.043	2.5ppm	PASS
40		20.34	0.029		
30		31.87	0.045		
20		15.73	0.022		
10		12.92	0.018		
0		29.65	0.042		
-10		30.63	0.004		
-20		35.81	0.050		
-30		31.63	0.045		
20	Maximum Voltage	27.72	0.039		
20	BEP	14.90	0.021		

CAT-M Band 12 (QPSK) / 707.5MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	22.86	0.032	2.5ppm	PASS
40		12.22	0.017		
30		26.76	0.038		
20		12.43	0.018		
10		32.76	0.046		
0		15.72	0.022		
-10		35.43	0.005		
-20		36.36	0.051		
-30		33.35	0.047		
20	Maximum Voltage	31.73	0.045		
20	BEP	33.20	0.047		



CAT-M Band 13 (QPSK) / 782MHz / BW5M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	11.58	0.016	2.5ppm	PASS
40		21.50	0.030		
30		25.64	0.036		
20		15.16	0.021		
10		24.62	0.035		
0		18.69	0.026		
-10		23.06	0.003		
-20		14.69	0.021		
-30		25.55	0.036		
20	Maximum Voltage	35.11	0.049		
20	BEP	32.06	0.045		

CAT-M Band 13 (QPSK) / 782MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	33.82	0.048	2.5ppm	PASS
40		35.22	0.050		
30		28.47	0.040		
20		17.50	0.025		
10		33.35	0.047		
0		18.76	0.026		
-10		31.81	0.004		
-20		21.26	0.030		
-30		18.89	0.027		
20	Maximum Voltage	14.21	0.020		
20	BEP	26.19	0.037		



CAT-M Band 14 (QPSK) / 793MHz / BW5M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	30.73	0.043	1.25ppm	PASS
40		35.16	0.050		
30		18.40	0.026		
20		28.70	0.040		
10		29.44	0.041		
0		11.96	0.017		
-10		29.56	0.004		
-20		31.45	0.044		
-30		15.25	0.021		
20	Maximum Voltage	14.20	0.020		
20	BEP	21.81	0.031		

CAT-M Band 14 (QPSK) / 793MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	22.29	0.031	1.25ppm	PASS
40		30.76	0.043		
30		34.24	0.048		
20		27.95	0.039		
10		22.96	0.032		
0		35.45	0.050		
-10		36.39	0.005		
-20		31.18	0.044		
-30		25.52	0.036		
20	Maximum Voltage	18.28	0.026		
20	BEP	13.17	0.019		



CAT-M Band 25 (QPSK) / 1882.5MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	18.23	0.010	2.5ppm	PASS
40		13.01	0.007		
30		20.43	0.011		
20		32.02	0.017		
10		11.93	0.006		
0		34.64	0.018		
-10		27.28	0.015		
-20		14.73	0.008		
-30		22.62	0.012		
20	Maximum Voltage	33.60	0.018		
20	BEP	29.41	0.016		

CAT-M Band 25 (QPSK) / 1882.5MHz / BW20M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	30.40	0.016	2.5ppm	PASS
40		19.78	0.011		
30		29.39	0.016		
20		25.97	0.014		
10		14.37	0.008		
0		27.39	0.015		
-10		11.66	0.006		
-20		18.28	0.010		
-30		35.22	0.019		
20	Maximum Voltage	29.31	0.016		
20	BEP	21.84	0.012		



CAT-M Band 26 Part22 (QPSK) / 836.5MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	34.80	0.020	2.5ppm	PASS
40		29.18	0.017		
30		22.24	0.013		
20		29.09	0.017		
10		14.42	0.008		
0		28.91	0.017		
-10		22.49	0.013		
-20		36.12	0.021		
-30		27.54	0.016		
20	Maximum Voltage	29.27	0.017		
20	BEP	12.89	0.007		

CAT-M Band 26 Part22 (QPSK) / 836.5MHz / BW20M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	29.81	0.017	2.5ppm	PASS
40		24.26	0.014		
30		22.81	0.013		
20		14.81	0.009		
10		17.64	0.010		
0		31.08	0.018		
-10		35.93	0.021		
-20		35.06	0.020		
-30		32.75	0.019		
20	Maximum Voltage	31.19	0.018		
20	BEP	28.53	0.016		



CAT-M Band 26 Part90 (QPSK) / 819MHz / BW5M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	21.83	0.013	2.5ppm	PASS
40		33.87	0.020		
30		20.33	0.012		
20		32.95	0.019		
10		26.02	0.015		
0		22.99	0.013		
-10		15.66	0.009		
-20		24.80	0.014		
-30		21.74	0.013		
20	Maximum Voltage	22.60	0.013		
20	BEP	35.53	0.021		

CAT-M Band 26 Part90 (QPSK) / 819MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	32.15	0.019	2.5ppm	PASS
40		26.08	0.015		
30		24.54	0.014		
20		23.63	0.014		
10		12.81	0.007		
0		23.99	0.014		
-10		12.48	0.007		
-20		14.32	0.008		
-30		23.16	0.013		
20	Maximum Voltage	25.37	0.015		
20	BEP	17.24	0.010		



CAT-M Band 66 (QPSK) / 1745MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	25.15	0.015	2.5ppm	PASS
40		16.07	0.009		
30		31.04	0.018		
20		32.40	0.019		
10		17.45	0.010		
0		32.98	0.019		
-10		16.64	0.010		
-20		30.12	0.017		
-30		20.74	0.012		
20	Maximum Voltage	23.46	0.014		
20	BEP	30.38	0.018		

CAT-M Band 66 (QPSK) / 1745MHz / BW20M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	25.17	0.015	2.5ppm	PASS
40		12.20	0.007		
30		19.50	0.011		
20		34.38	0.020		
10		26.61	0.015		
0		25.55	0.015		
-10		16.29	0.009		
-20		34.26	0.020		
-30		25.09	0.014		
20	Maximum Voltage	32.88	0.019		
20	BEP	27.62	0.016		



APPENDIX-PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

*****END OF THE REPORT*****