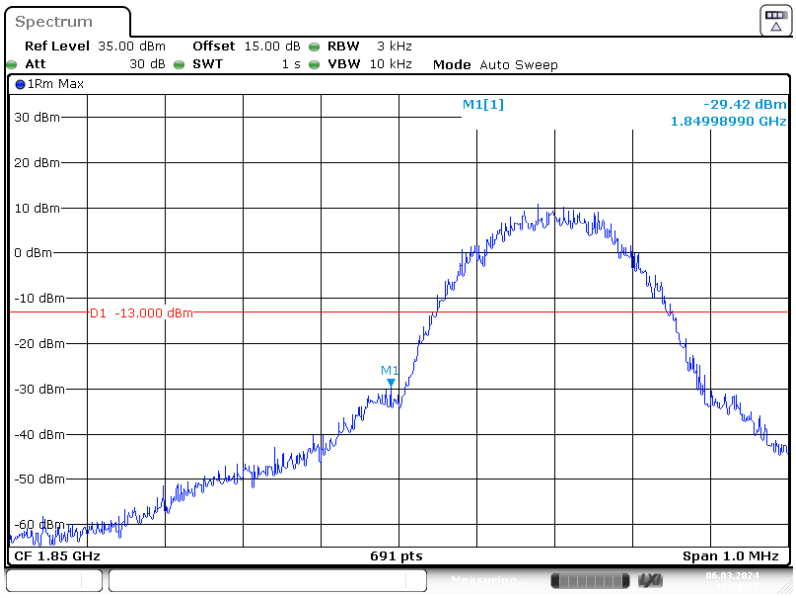
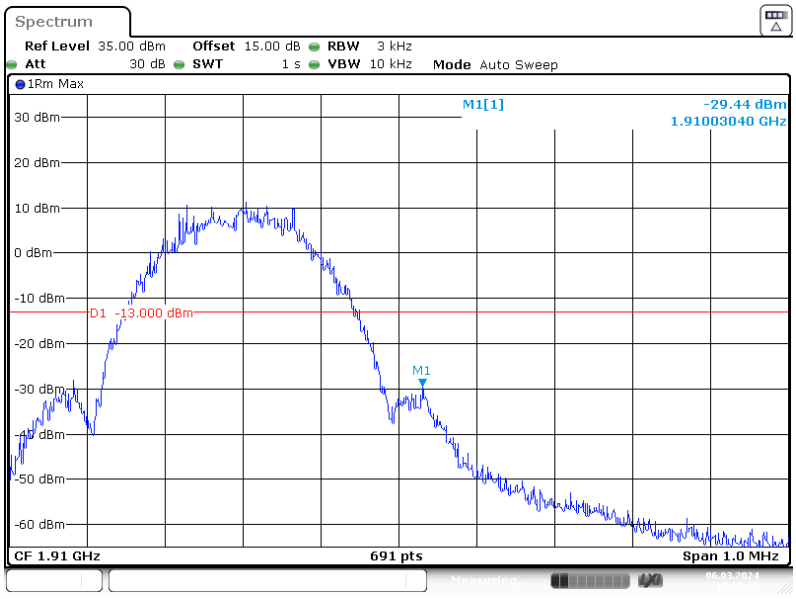
EGPRS Mode, Left Band Edge



ProjectNo.:RKSA231222001 Tester:Bard Liu

Date: 6.MAR.2024 17:26:28

EGPRS Mode, Right Band Edge

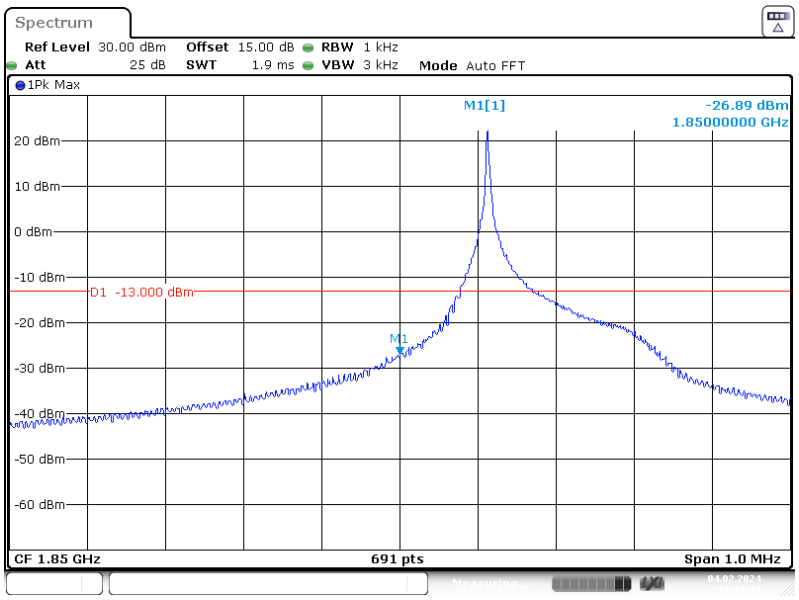


ProjectNo.:RKSA231222001 Tester:Bard Liu

Date: 6.MAR.2024 17:25:25

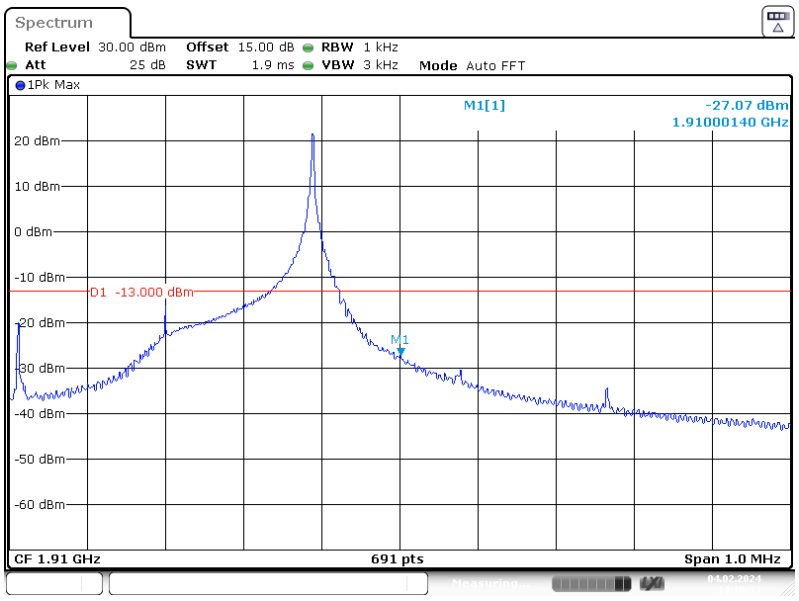
NB-IoT Band 2:

BPSK (3.75kHz, 1#0) - Left Band Edge



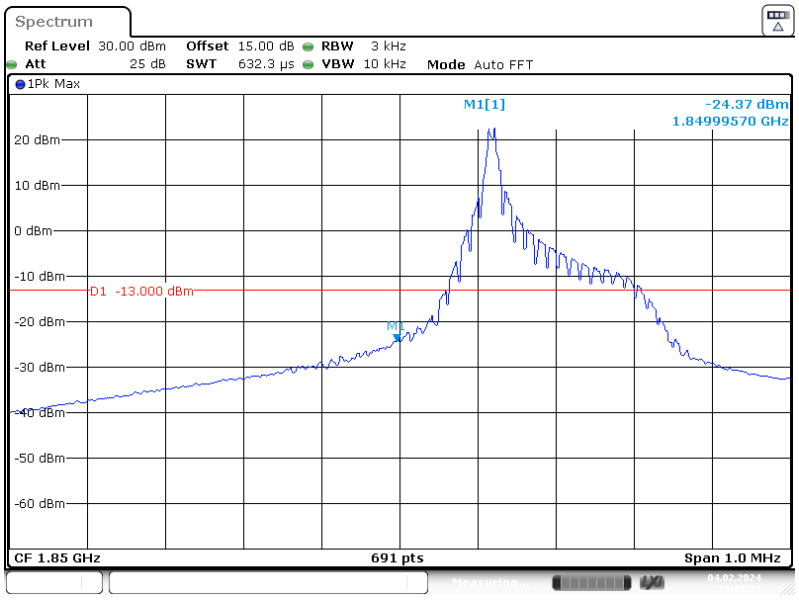
Project No.:RKSA231222001 Tester:Baird Liu
Date:4.FEB.2024 13:10:32

BPSK (3.75kHz, 1#47) - Right Band Edge



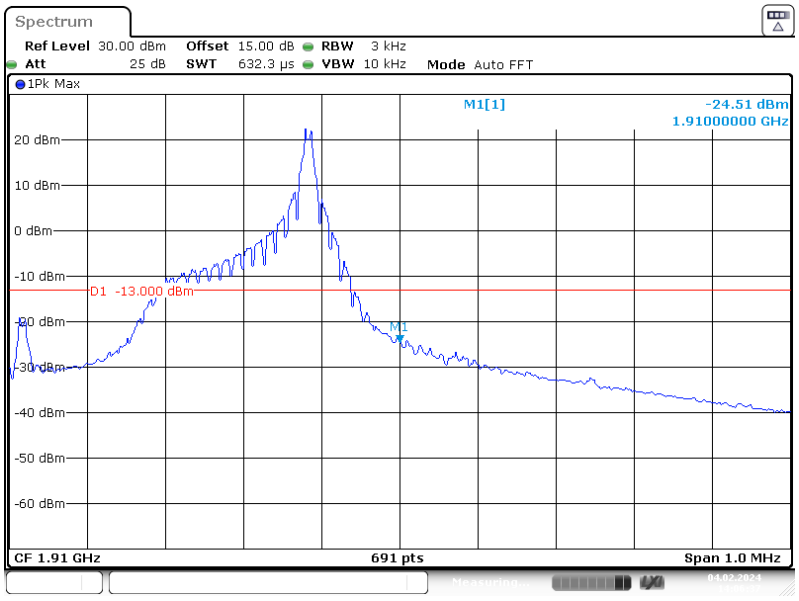
Project No.:RKSA231222001 Tester:Baird Liu
Date:4.FEB.2024 14:10:33

BPSK (15kHz, 1#0) - Left Band Edge



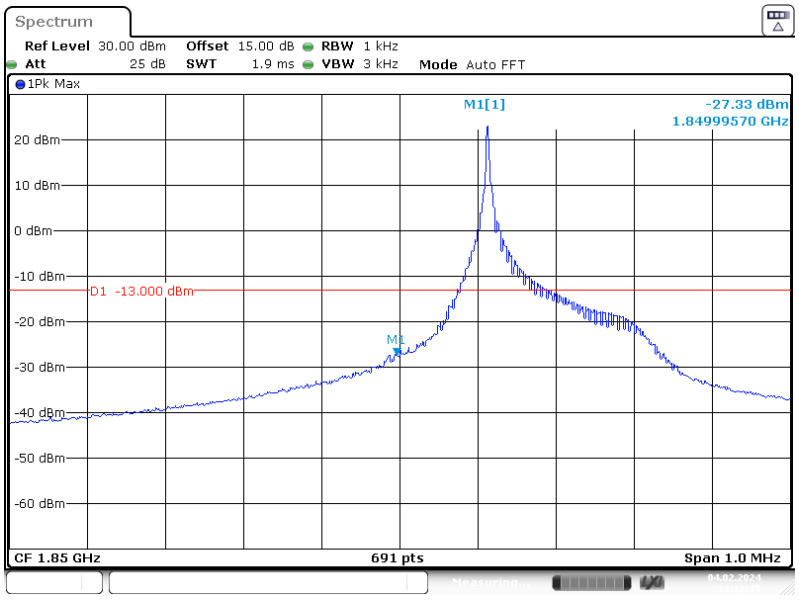
Project No.:RKSA231222001 Tester:Bard Liu
Date:4.FEB.2024 13:16:32

BPSK (15kHz, 1#11) - Right Band Edge



Project No.:RKSA231222001 Tester:Bard Liu
Date:4.FEB.2024 14:06:37

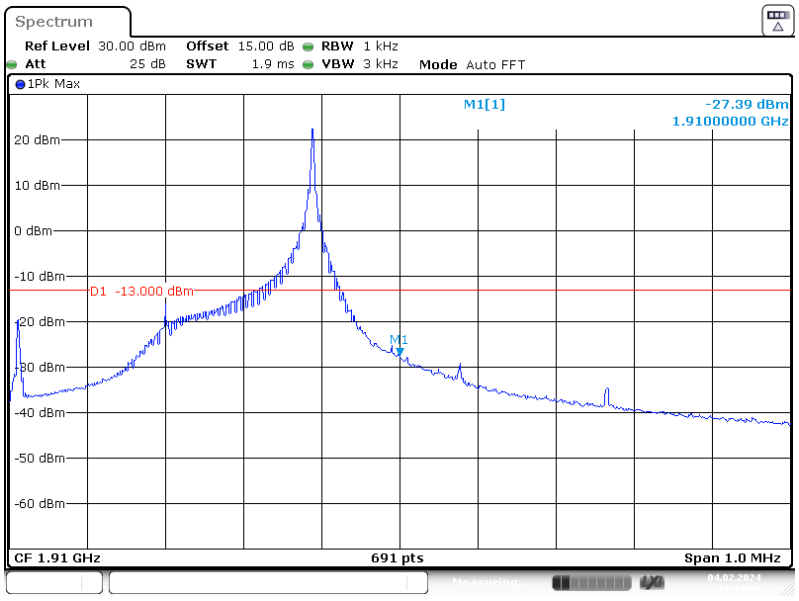
QPSK (3.75kHz, 1#0) - Left Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 13:12:16

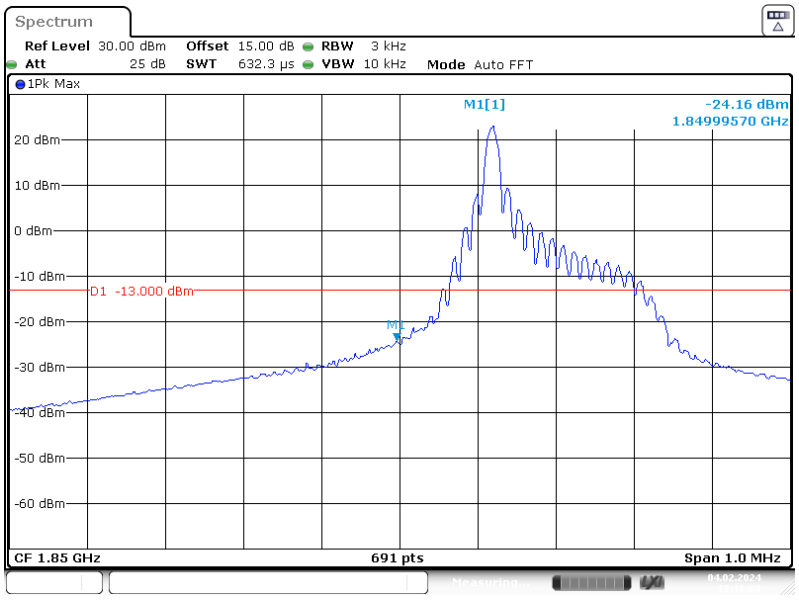
QPSK (3.75kHz, 1#47) - Right Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

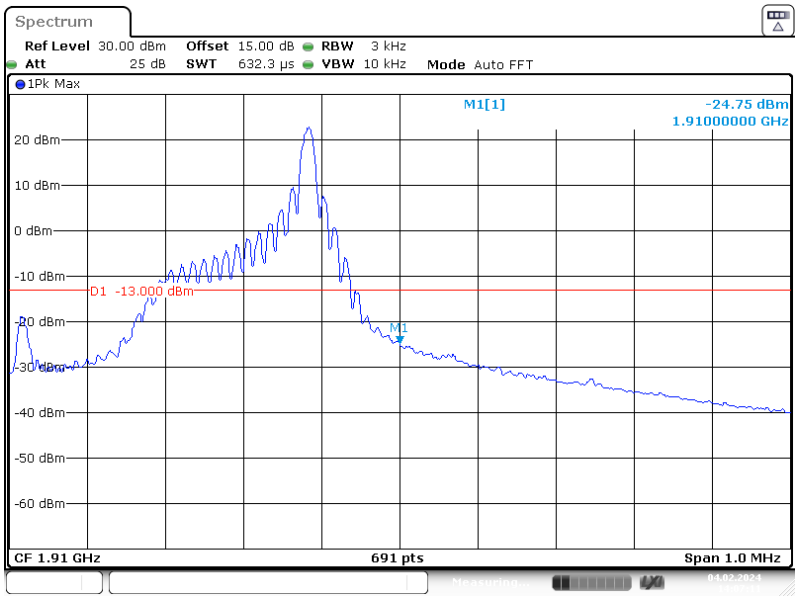
Date:4.FEB.2024 14:10:08

QPSK (15kHz, 1#0) - Left Band Edge



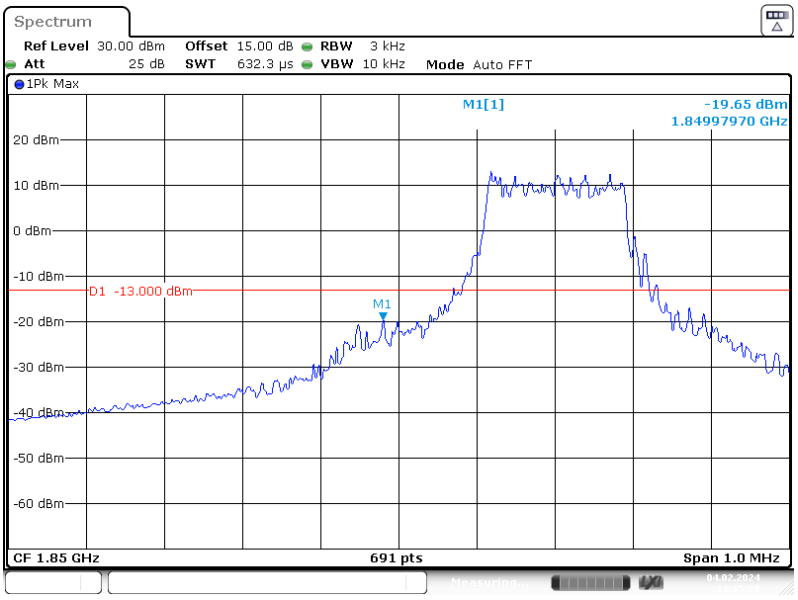
Project No.:RKSA231222001 Tester:Bard Liu
Date:4.FEB.2024 13:16:01

QPSK (15kHz, 1#11) - Right Band Edge



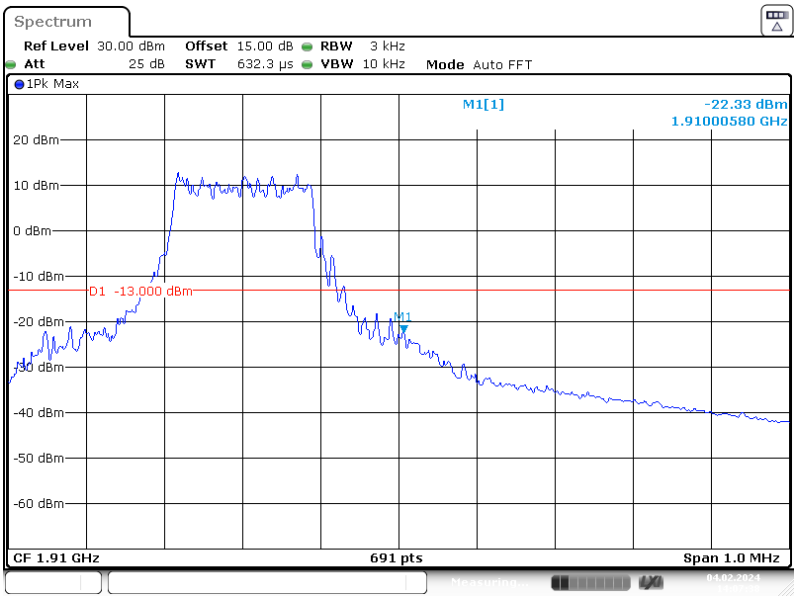
Project No.:RKSA231222001 Tester:Bard Liu
Date:4.FEB.2024 14:07:12

QPSK (15kHz, 12#0) - Left Band Edge



Project No.:RKSA231222001 Tester:Bard Liu
Date:4.FEB.2024 13:15:29

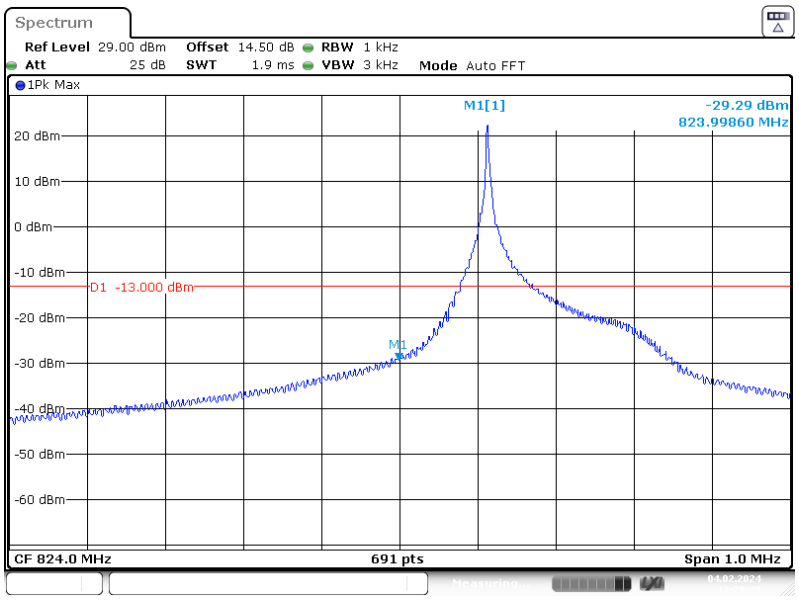
QPSK (15kHz, 12#0) - Right Band Edge



Project No.:RKSA231222001 Tester:Bard Liu
Date:4.FEB.2024 14:07:38

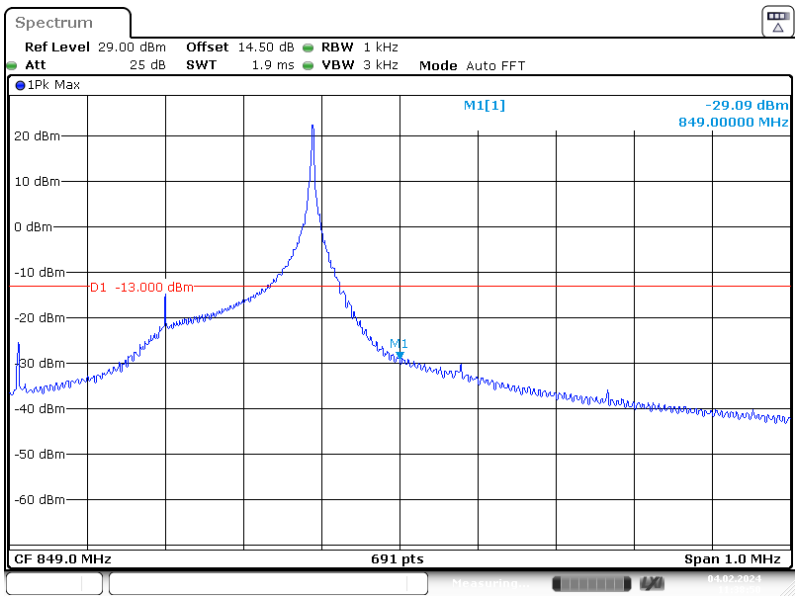
NB-IoT Band 5:

BPSK (3.75kHz, 1#0) - Left Band Edge



Project No.:RKSA231222001 Tester:Baird Liu
Date:4.FEB.2024 11:28:40

BPSK (3.75kHz, 1#47) - Right Band Edge



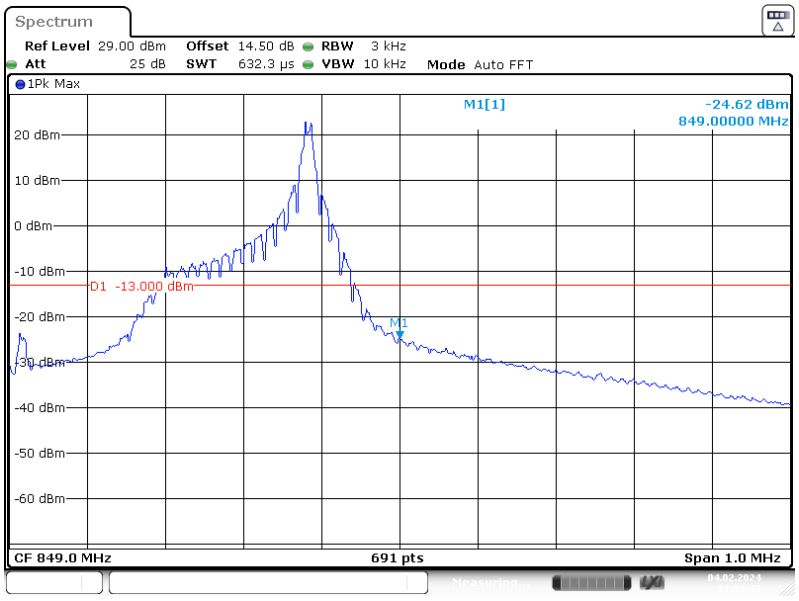
Project No.:RKSA231222001 Tester:Baird Liu
Date:4.FEB.2024 11:38:51

BPSK (15kHz, 1#0) - Left Band Edge

Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 11:25:58

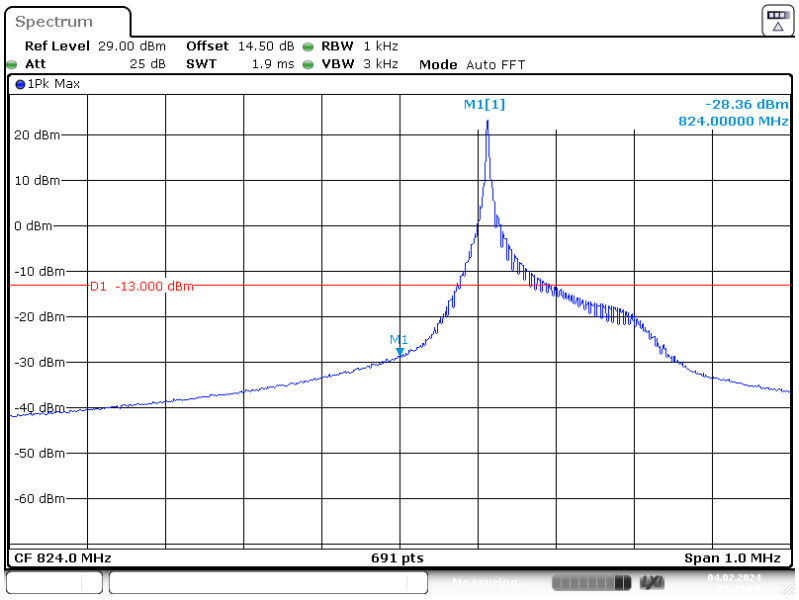
BPSK (15kHz, 1#11) - Right Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 11:39:43

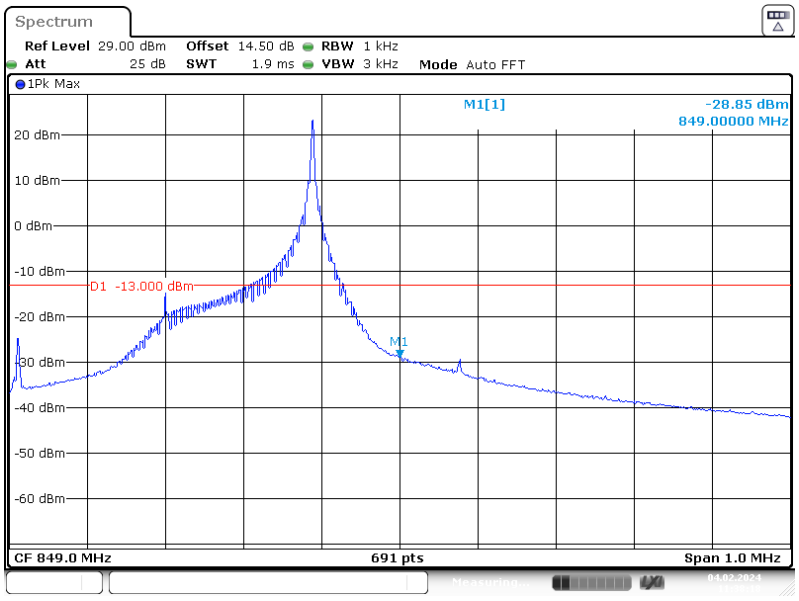
QPSK (3.75kHz, 1#0) - Left Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 11:29:10

QPSK (3.75kHz, 1#47) - Right Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

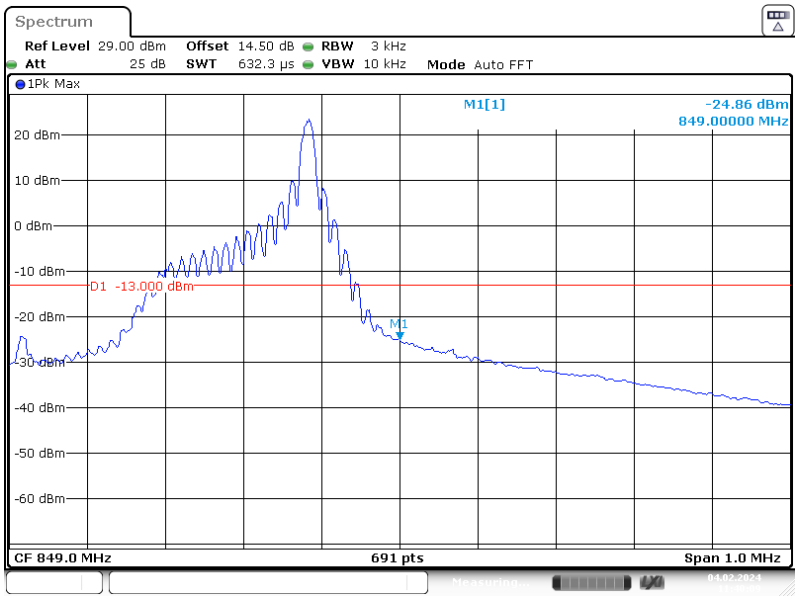
Date:4.FEB.2024 11:38:18

QPSK (15kHz, 1#0) - Left Band Edge

Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 11:26:32

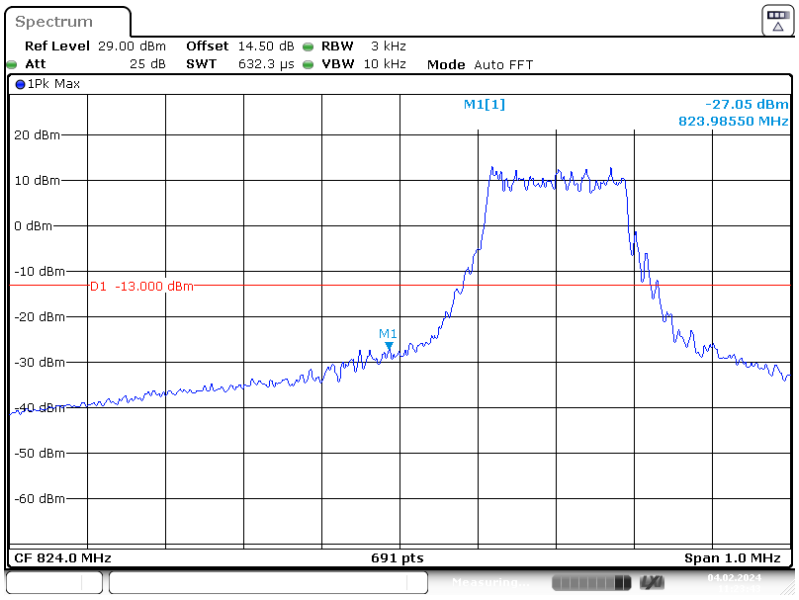
QPSK (15kHz, 1#11) - Right Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 11:40:09

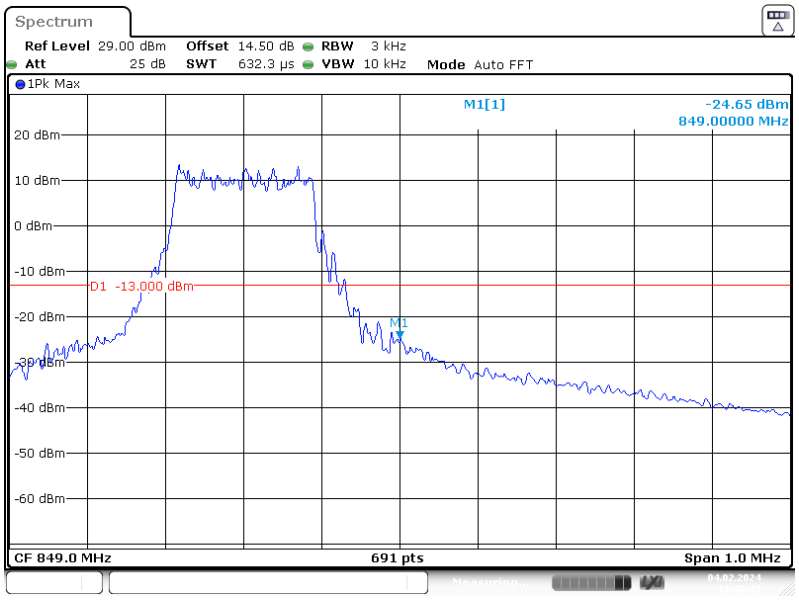
QPSK (15kHz, 12#0) - Left Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 11:23:44

QPSK (15kHz, 12#0) - Right Band Edge

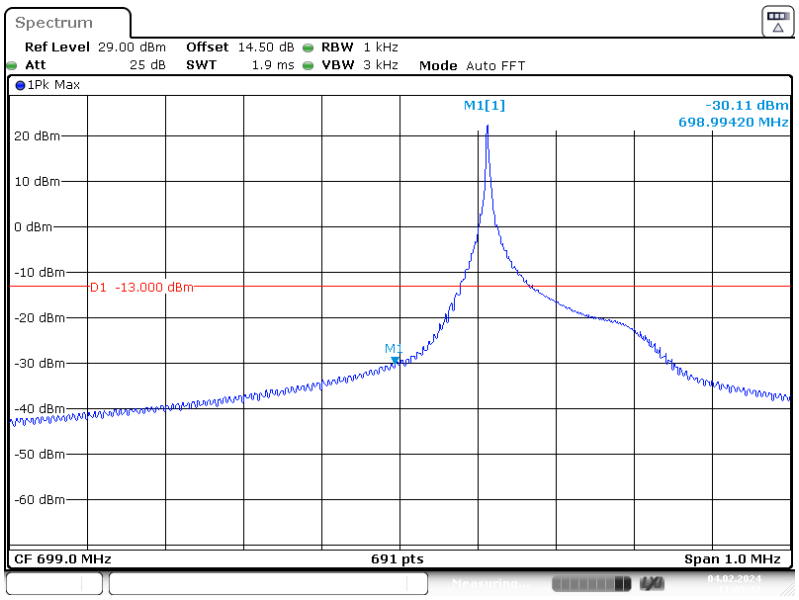


Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 11:40:50

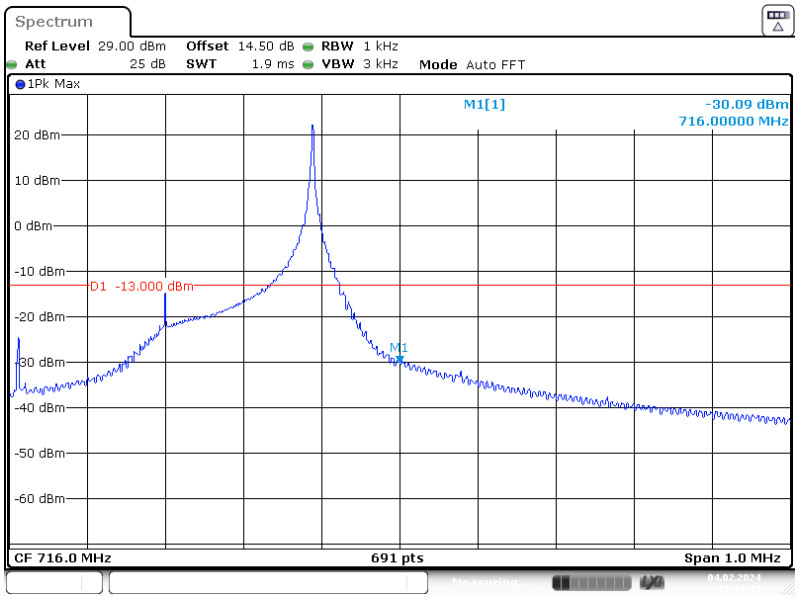
NB-IoT Band 12:

BPSK (3.75kHz, 1#0) - Left Band Edge



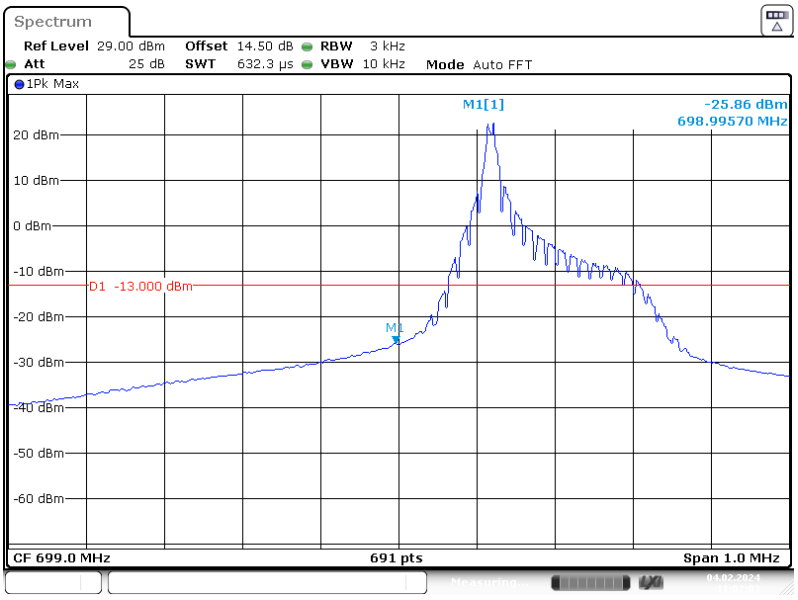
Project No.:RKSA231222001 Tester:Baird Liu
Date:4.FEB.2024 11:05:32

BPSK (3.75kHz, 1#47) - Right Band Edge



Project No.:RKSA231222001 Tester:Baird Liu
Date:4.FEB.2024 11:14:18

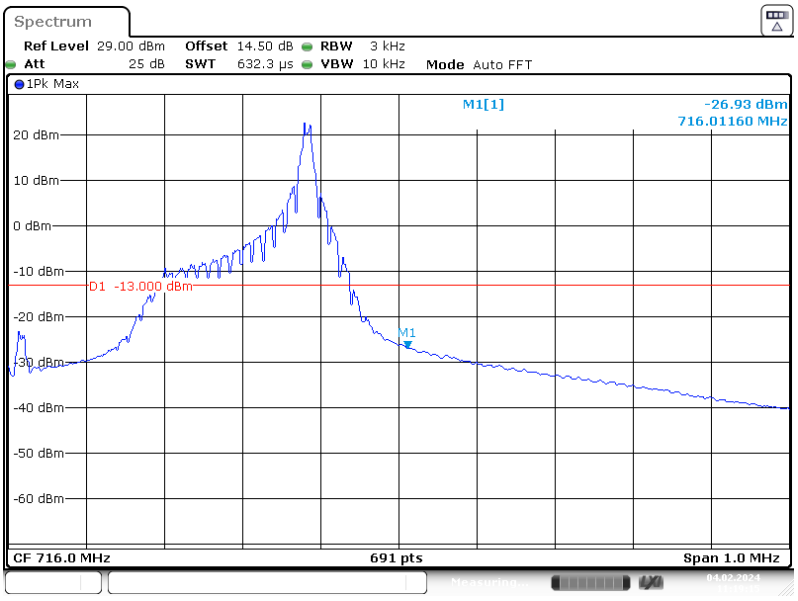
BPSK (15kHz, 1#0) - Left Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 11:02:03

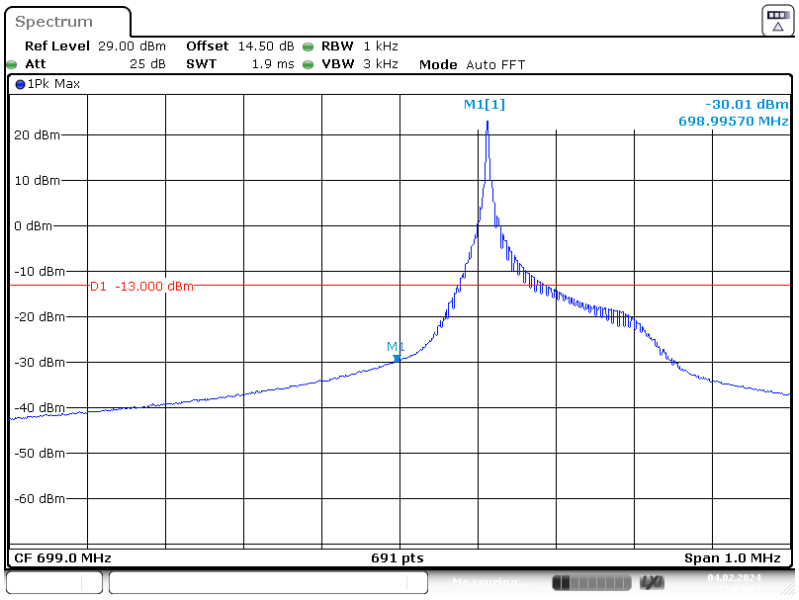
BPSK (15kHz, 1#11) - Right Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 11:19:15

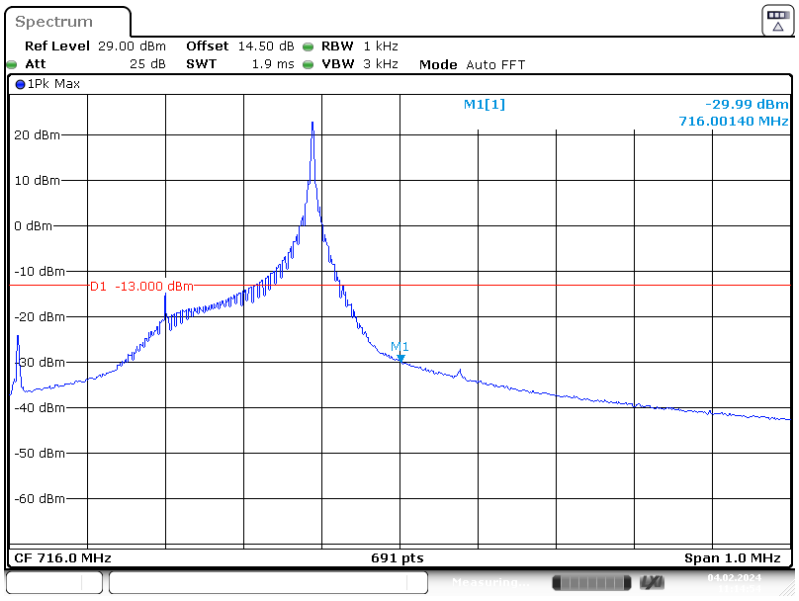
QPSK (3.75kHz, 1#0) - Left Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 11:04:45

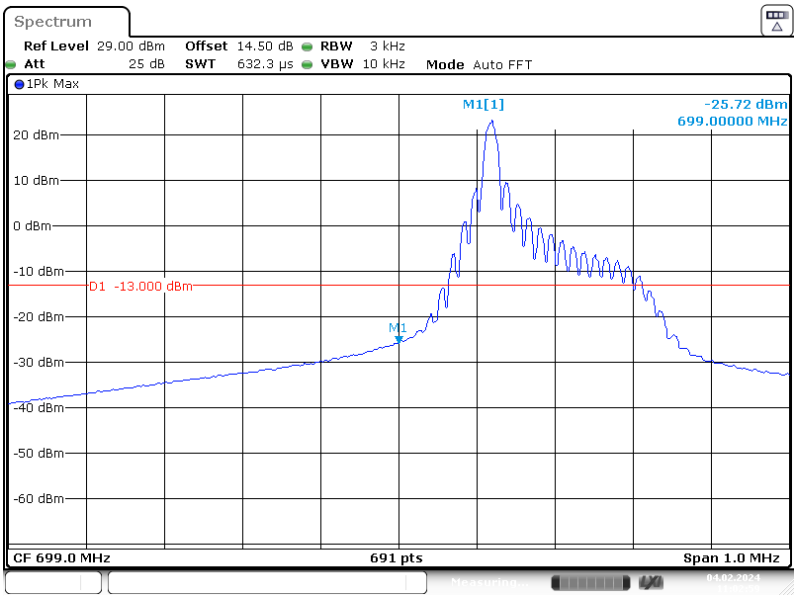
QPSK (3.75kHz, 1#47) - Right Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 11:14:54

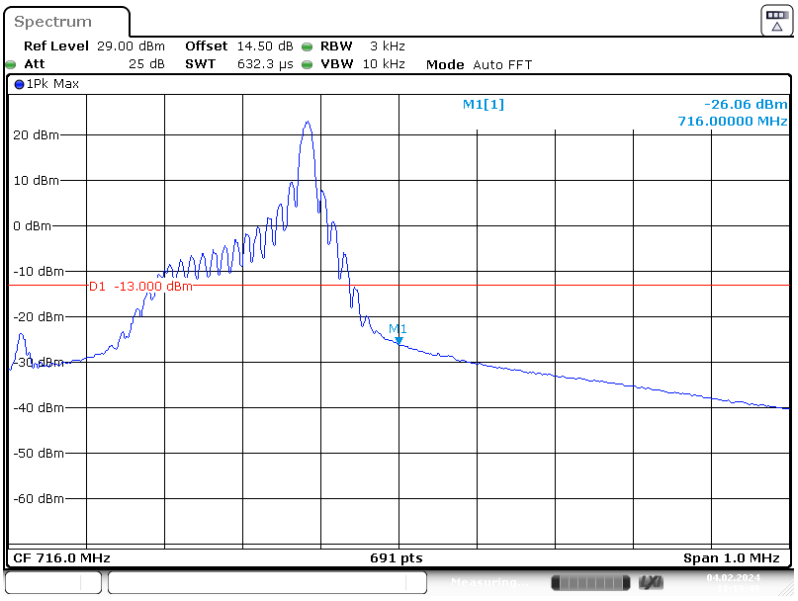
QPSK (15kHz, 1#0) - Left Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 11:02:59

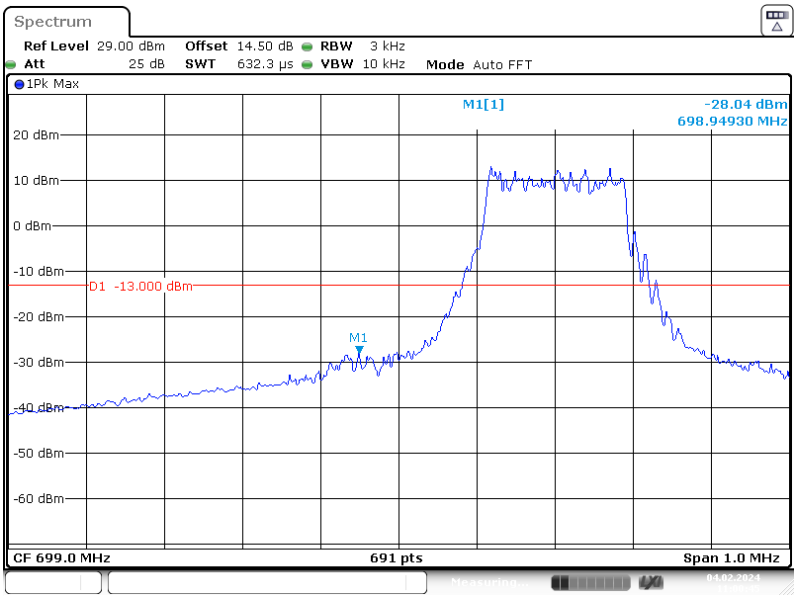
QPSK (15kHz, 1#11) - Right Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

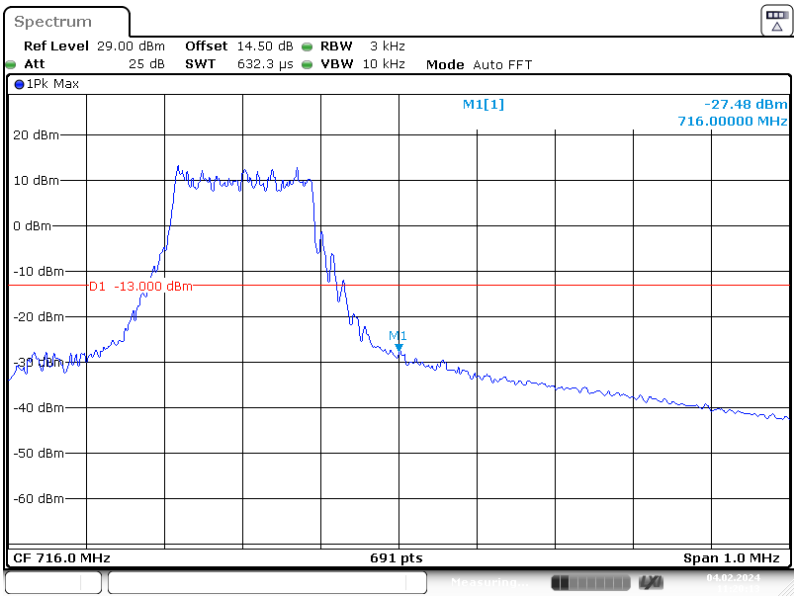
Date:4.FEB.2024 11:19:49

QPSK (15kHz, 12#0) - Left Band Edge



Project No.:RKSA231222001 Tester:Bard Liu
Date:4.FEB.2024 11:00:45

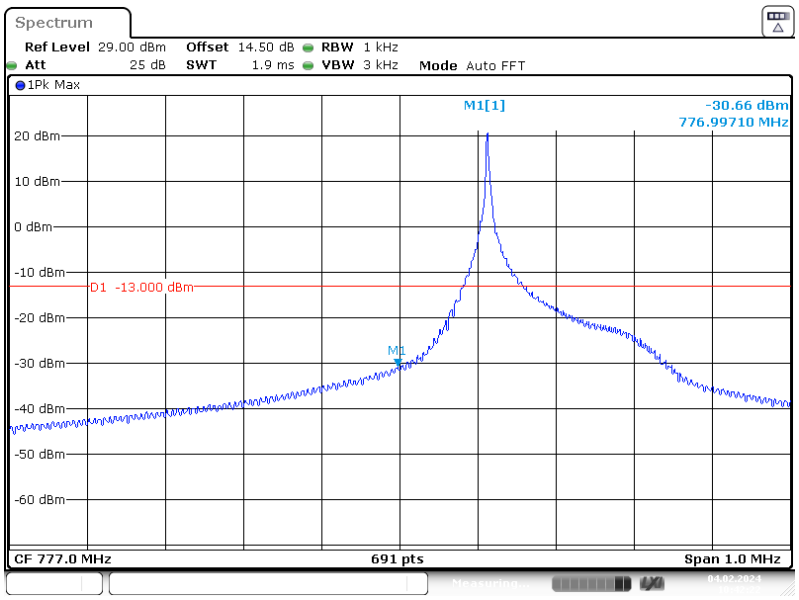
QPSK (15kHz, 12#0) - Right Band Edge



Project No.:RKSA231222001 Tester:Bard Liu
Date:4.FEB.2024 11:20:13

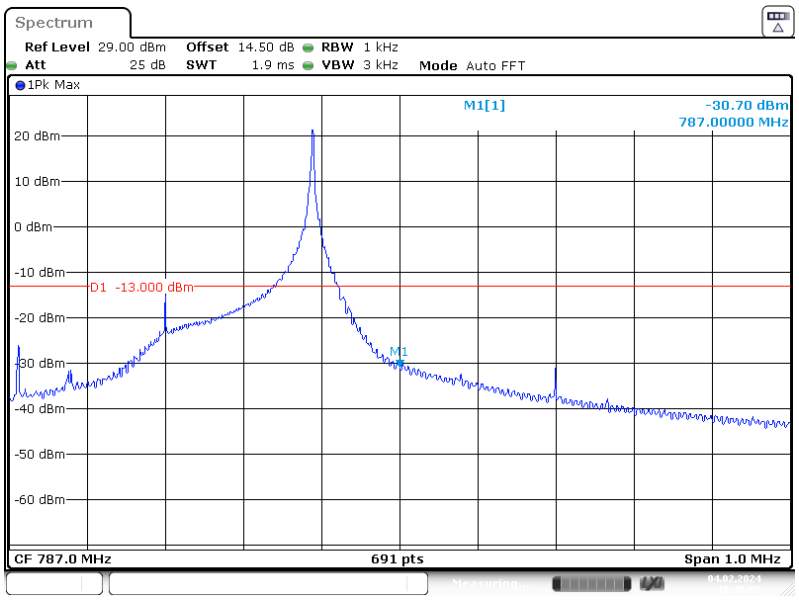
NB-IoT Band 13:

BPSK (3.75kHz, 1#0) - Left Band Edge



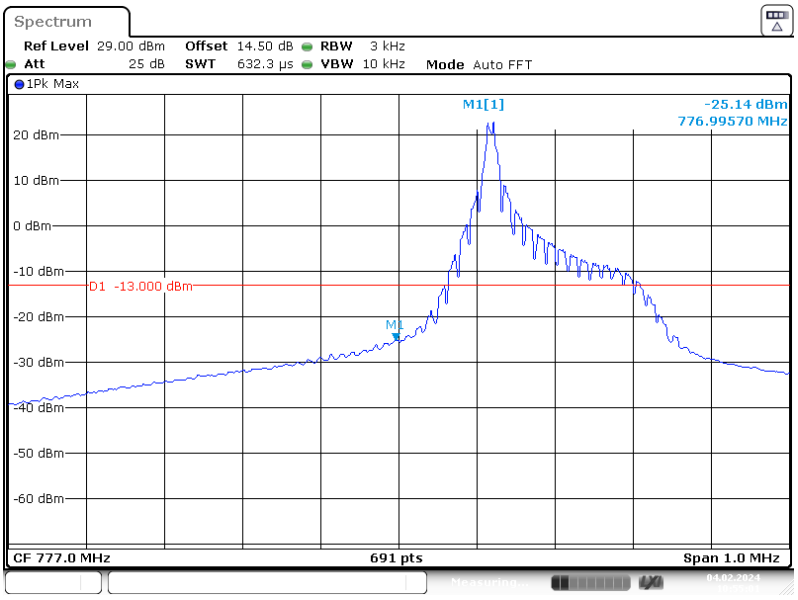
Project No.:RKSA231222001 Tester:Baird Liu
Date:4.FEB.2024 10:42:22

BPSK (3.75kHz, 1#47) - Right Band Edge



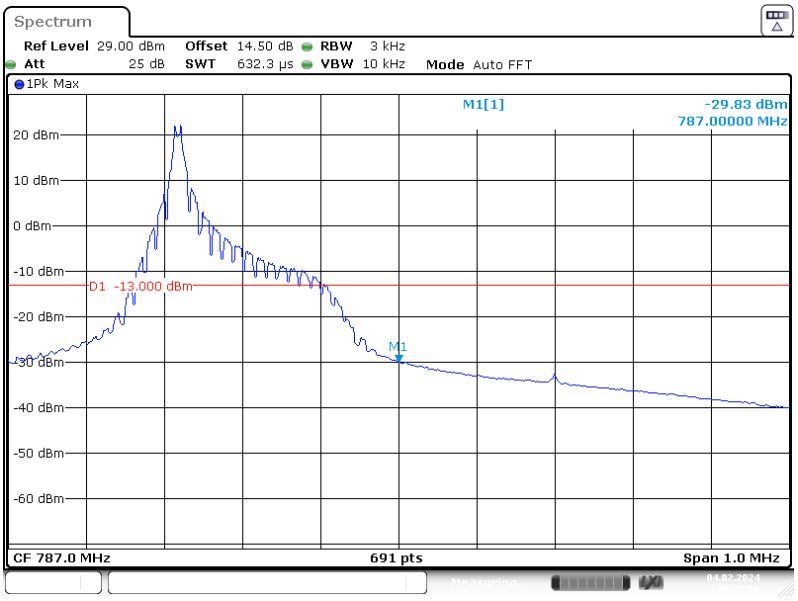
Project No.:RKSA231222001 Tester:Baird Liu
Date:4.FEB.2024 10:38:55

BPSK (15kHz, 1#0) - Left Band Edge



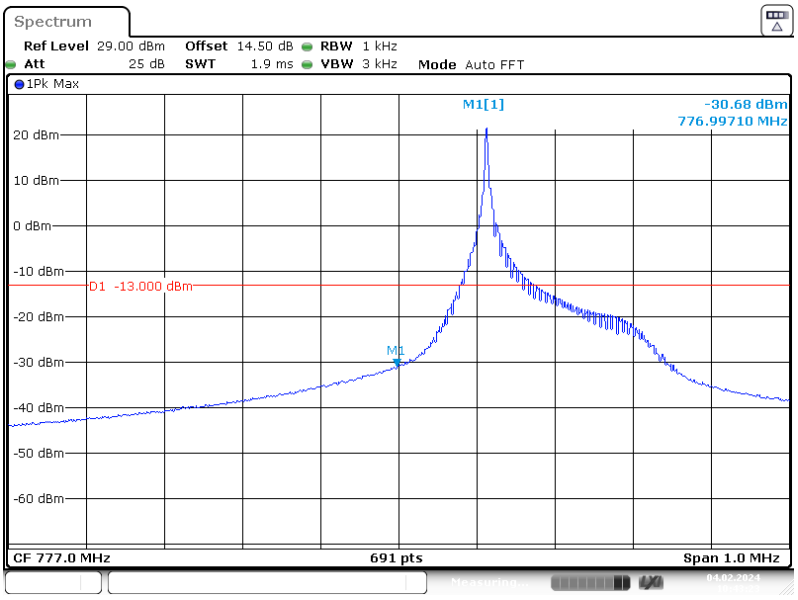
Project No.:RKSA231222001 Tester:Bard Liu
Date:4.FEB.2024 10:55:02

BPSK (15kHz, 1#11) - Right Band Edge



Project No.:RKSA231222001 Tester:Bard Liu
Date:4.FEB.2024 10:32:56

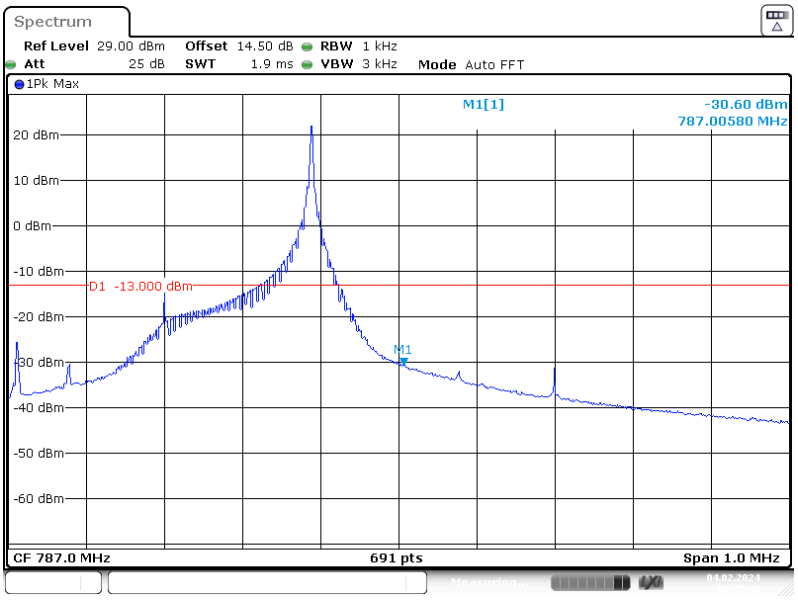
QPSK (3.75kHz, 1#0) - Left Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 10:43:24

QPSK (3.75kHz, 1#47) - Right Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

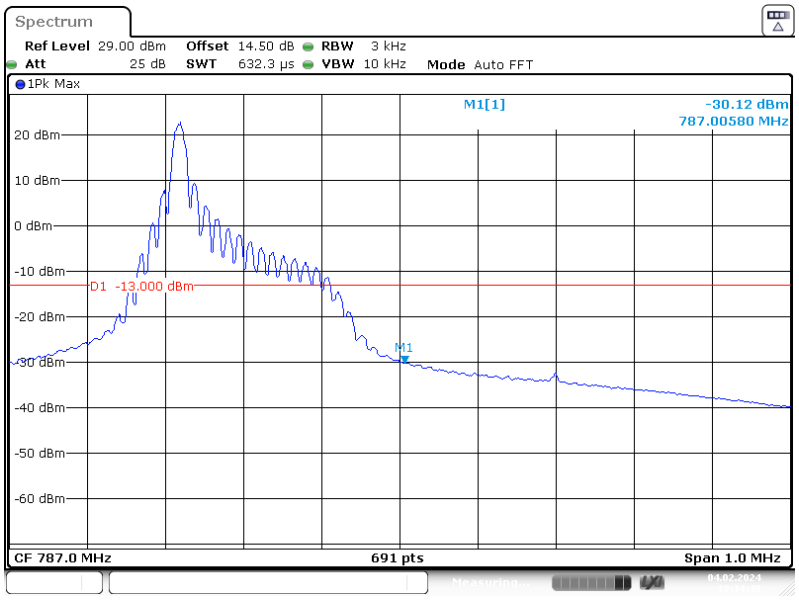
Date:4.FEB.2024 10:39:41

QPSK (15kHz, 1#0) - Left Band Edge

Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 10:55:49

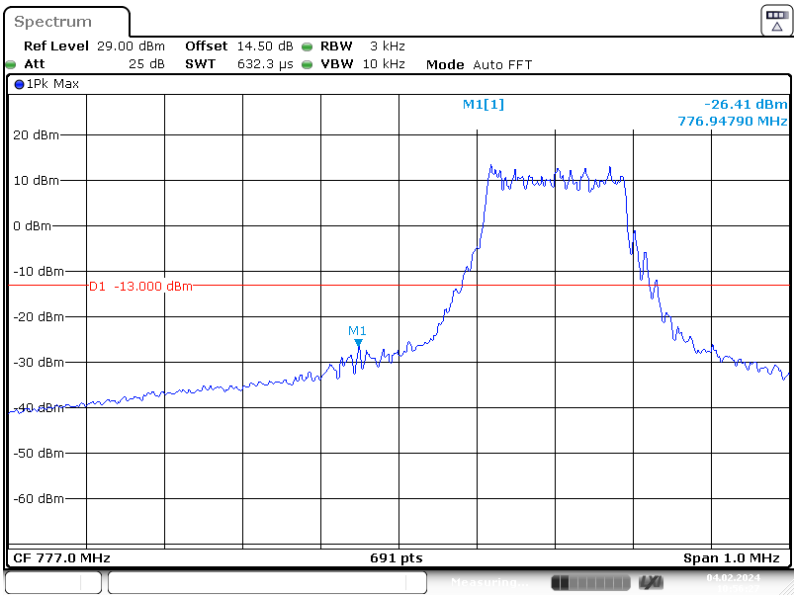
QPSK (15kHz, 1#11) - Right Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 10:34:50

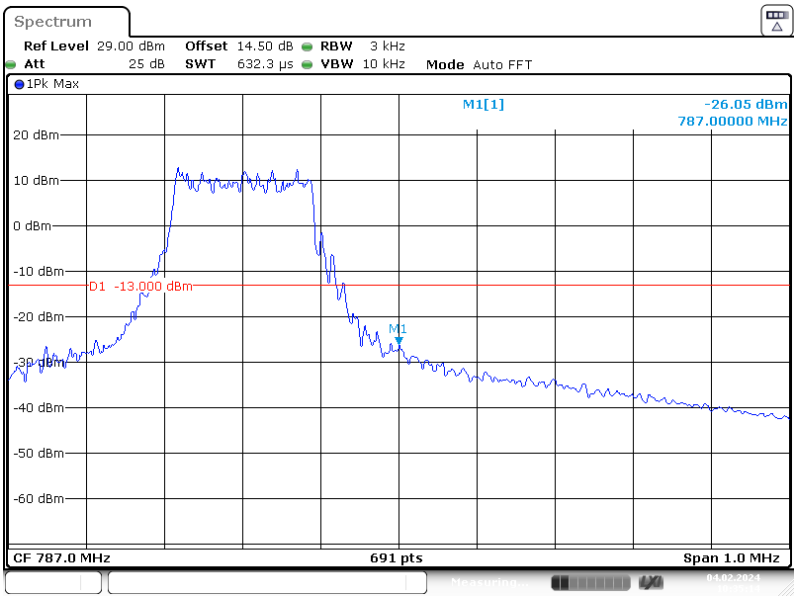
QPSK (15kHz, 12#0) - Left Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 10:56:28

QPSK (15kHz, 12#0) - Right Band Edge



Project No.:RKSA231222001 Tester:Bard Liu

Date:4.FEB.2024 10:35:14

FREQUENCY STABILITY

EUT operation mode: Transmitting(worst case)

Test Result: Compliance.

Note：Pre-Scan DC 36V from DC power supply and DC 3.6V from battery，the worst case is powered by DC 36V from DC power supply

GSM 850 Band

GPRS (GMSK) Mode

Middle Channel, fo =836.6MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	36	7	0.00372	2.5
-20		-3	-0.00160	2.5
-10		-5	-0.00266	2.5
0		6	0.00319	2.5
10		2	0.00106	2.5
20		-4	-0.00213	2.5
30		-8	-0.00426	2.5
40		4	0.00213	2.5
50		-5	-0.00266	2.5
20	V min.= 30.6	2	0.00106	2.5
20	V max.= 41.4	3	0.00160	2.5

EGPRS (8PSK) Mode

Middle Channel, fo =836.6MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	36	-4	-0.00213	2.5
-20		5	0.00266	2.5
-10		-1	-0.00053	2.5
0		5	0.00266	2.5
10		3	0.00160	2.5
20		-2	-0.00106	2.5
30		-3	-0.00160	2.5
40		5	0.00266	2.5
50		2	0.00106	2.5
20	V min.= 30.6	-4	-0.00213	2.5
20	V max.= 41.4	3	0.00160	2.5

PCS 1900 Band

GPRS (GMSK) Mode

Low Channel & High Channel					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	1850.086	1909.993	1850	1910
-20		1850.049	1909.994	1850	1910
-10		1850.066	1909.988	1850	1910
0		1850.064	1909.994	1850	1910
10		1850.053	1909.992	1850	1910
20		1850.046	1909.99	1850	1910
30		1850.055	1909.989	1850	1910
40		1850.082	1909.99	1850	1910
50		1850.067	1909.988	1850	1910
20	V min.= 30.6	1850.08	1909.989	1850	1910
20	V max.= 41.4	1850.068	1909.985	1850	1910

EGPRS (8PSK) Mode

Low Channel & High Channel					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	1850.057	1909.994	1850	1910
-20		1850.076	1909.986	1850	1910
-10		1850.098	1909.995	1850	1910
0		1850.052	1909.989	1850	1910
10		1850.075	1909.992	1850	1910
20		1850.079	1909.995	1850	1910
30		1850.093	1909.99	1850	1910
40		1850.08	1909.988	1850	1910
50		1850.079	1909.995	1850	1910
20	V min.= 30.6	1850.071	1909.994	1850	1910
20	V max.= 41.4	1850.089	1909.986	1850	1910

NB-IoT Band 2:

3.75kHz Low Channel & High Channel (BPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	1850.087	1909.988	1850	1910
-20		1850.087	1909.985	1850	1910
-10		1850.072	1909.994	1850	1910
0		1850.058	1909.984	1850	1910
10		1850.075	1909.991	1850	1910
20		1850.088	1909.987	1850	1910
30		1850.067	1909.991	1850	1910
40		1850.061	1909.987	1850	1910
50		1850.076	1909.984	1850	1910
20	V min.= 30.6	1850.059	1909.988	1850	1910
20	V max.= 41.4	1850.094	1909.989	1850	1910

3.75kHz Low Channel & High Channel (QPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	1850.09	1909.985	1850	1910
-20		1850.071	1909.992	1850	1910
-10		1850.077	1909.992	1850	1910
0		1850.08	1909.991	1850	1910
10		1850.093	1909.991	1850	1910
20		1850.085	1909.989	1850	1910
30		1850.063	1909.994	1850	1910
40		1850.079	1909.991	1850	1910
50		1850.064	1909.985	1850	1910
20	V min.= 30.6	1850.07	1909.994	1850	1910
20	V max.= 41.4	1850.092	1909.985	1850	1910

15kHz Low Channel & High Channel (BPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	1850.057	1909.985	1850	1910
-20		1850.074	1909.986	1850	1910
-10		1850.071	1909.989	1850	1910
0		1850.094	1909.99	1850	1910
10		1850.077	1909.987	1850	1910
20		1850.056	1909.992	1850	1910
30		1850.07	1909.987	1850	1910
40		1850.079	1909.986	1850	1910
50		1850.1	1909.984	1850	1910
20	V min.= 30.6	1850.09	1909.987	1850	1910
20	V max.= 41.4	1850.068	1909.984	1850	1910

15kHz Low Channel & High Channel (QPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	1850.069	1909.992	1850	1910
-20		1850.093	1909.989	1850	1910
-10		1850.086	1909.985	1850	1910
0		1850.069	1909.994	1850	1910
10		1850.052	1909.991	1850	1910
20		1850.094	1909.994	1850	1910
30		1850.052	1909.986	1850	1910
40		1850.087	1909.987	1850	1910
50		1850.052	1909.99	1850	1910
20	V min.= 30.6	1850.093	1909.986	1850	1910
20	V max.= 41.4	1850.063	1909.991	1850	1910

CAT-M Band 2:

20.0 MHz Low Channel & High Channel (QPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	1850.1	1909.992	1850	1910
-20		1850.091	1909.995	1850	1910
-10		1850.085	1909.987	1850	1910
0		1850.065	1909.988	1850	1910
10		1850.092	1909.986	1850	1910
20		1850.072	1909.994	1850	1910
30		1850.058	1909.994	1850	1910
40		1850.095	1909.986	1850	1910
50		1850.075	1909.993	1850	1910
20	V min.= 30.6	1850.098	1909.99	1850	1910
20	V max.= 41.4	1850.091	1909.989	1850	1910

20.0 MHz Low Channel & High Channel (16QAM)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	1850.074	1909.985	1850	1910
-20		1850.094	1909.991	1850	1910
-10		1850.063	1909.992	1850	1910
0		1850.057	1909.993	1850	1910
10		1850.091	1909.988	1850	1910
20		1850.096	1909.991	1850	1910
30		1850.047	1909.987	1850	1910
40		1850.056	1909.985	1850	1910
50		1850.088	1909.985	1850	1910
20	V min.= 30.6	1850.07	1909.994	1850	1910
20	V max.= 41.4	1850.07	1909.993	1850	1910

NB-IoT Band 4:

3.75kHz Low Channel & High Channel (BPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	1710.114	1754.982	1710	1755
-20		1710.114	1754.983	1710	1755
-10		1710.093	1754.98	1710	1755
0		1710.1	1754.984	1710	1755
10		1710.089	1754.983	1710	1755
20		1710.096	1754.984	1710	1755
30		1710.085	1754.984	1710	1755
40		1710.093	1754.983	1710	1755
50		1710.099	1754.983	1710	1755
20	V min.= 30.6	1710.084	1754.98	1710	1755
20	V max.= 41.4	1710.1	1754.983	1710	1755

3.75kHz Low Channel & High Channel (QPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	1710.077	1754.982	1710	1755
-20		1710.079	1754.981	1710	1755
-10		1710.118	1754.98	1710	1755
0		1710.1	1754.984	1710	1755
10		1710.103	1754.984	1710	1755
20		1710.117	1754.984	1710	1755
30		1710.076	1754.982	1710	1755
40		1710.085	1754.984	1710	1755
50		1710.085	1754.982	1710	1755
20	V min.= 30.6	1710.113	1754.981	1710	1755
20	V max.= 41.4	1710.107	1754.981	1710	1755

15kHz Low Channel & High Channel (BPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	1710.088	1754.983	1710	1755
-20		1710.113	1754.981	1710	1755
-10		1710.105	1754.984	1710	1755
0		1710.114	1754.983	1710	1755
10		1710.12	1754.982	1710	1755
20		1710.091	1754.98	1710	1755
30		1710.102	1754.982	1710	1755
40		1710.094	1754.985	1710	1755
50		1710.095	1754.981	1710	1755
20	V min.= 30.6	1710.094	1754.985	1710	1755
20	V max.= 41.4	1710.083	1754.982	1710	1755

15kHz Low Channel & High Channel (QPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	1710.108	1754.982	1710	1755
-20		1710.094	1754.984	1710	1755
-10		1710.092	1754.985	1710	1755
0		1710.101	1754.982	1710	1755
10		1710.086	1754.981	1710	1755
20		1710.096	1754.984	1710	1755
30		1710.108	1754.984	1710	1755
40		1710.12	1754.983	1710	1755
50		1710.09	1754.982	1710	1755
20	V min.= 30.6	1710.099	1754.983	1710	1755
20	V max.= 41.4	1710.1	1754.983	1710	1755

CAT-M Band 4:

20.0 MHz Low Channel & High Channel (QPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	1710.077	1754.98	1710	1755
-20		1710.082	1754.985	1710	1755
-10		1710.09	1754.984	1710	1755
0		1710.11	1754.98	1710	1755
10		1710.097	1754.982	1710	1755
20		1710.097	1754.983	1710	1755
30		1710.099	1754.981	1710	1755
40		1710.084	1754.982	1710	1755
50		1710.108	1754.984	1710	1755
20	V min.= 30.6	1710.093	1754.981	1710	1755
20	V max.= 41.4	1710.095	1754.984	1710	1755

20.0 MHz Low Channel & High Channel (16QAM)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	1710.085	1754.984	1710	1755
-20		1710.118	1754.984	1710	1755
-10		1710.085	1754.984	1710	1755
0		1710.1	1754.983	1710	1755
10		1710.116	1754.984	1710	1755
20		1710.097	1754.981	1710	1755
30		1710.114	1754.983	1710	1755
40		1710.114	1754.98	1710	1755
50		1710.115	1754.982	1710	1755
20	V min.= 30.6	1710.091	1754.98	1710	1755
20	V max.= 41.4	1710.117	1754.983	1710	1755

NB-IoT Band 5:

3.75kHz Middle Channel, fo =836.5 MHz (BPSK)				
Temperature (°C)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	36	2	0.00106	2.5
-20		1	0.00053	2.5
-10		8	0.00426	2.5
0		-4	-0.00213	2.5
10		3	0.00160	2.5
20		3	0.00160	2.5
30		-1	-0.00053	2.5
40		3	0.00160	2.5
50		-2	-0.00106	2.5
20	V min.= 30.6	-5	-0.00266	2.5
20	V max.= 41.4	4	0.00213	2.5

3.75kHz Middle Channel, fo =836.5 MHz (QPSK)				
Temperature (°C)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	36	-3	-0.00160	2.5
-20		-5	-0.00266	2.5
-10		2	0.00106	2.5
0		4	0.00213	2.5
10		3	0.00160	2.5
20		-8	-0.00426	2.5
30		5	0.00266	2.5
40		3	0.00160	2.5
50		-4	-0.00213	2.5
20	V min.= 30.6	-8	-0.00426	2.5
20	V max.= 41.4	11	0.00585	2.5

15kHz Middle Channel, fo =836.5 MHz (BPSK)				
Temperature (°C)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	36	10	0.00532	2.5
-20		6	0.00319	2.5
-10		7	0.00372	2.5
0		9	0.00479	2.5
10		-1	-0.00053	2.5
20		5	0.00266	2.5
30		-2	-0.00106	2.5
40		-4	-0.00213	2.5
50		-1	-0.00053	2.5
20	V min.= 30.6	3	0.00160	2.5
20	V max.= 41.4	-4	-0.00213	2.5

15kHz Middle Channel, fo =836.5 MHz (QPSK)				
Temperature (°C)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	36	-9	-0.00479	2.5
-20		-5	-0.00266	2.5
-10		2	0.00106	2.5
0		-3	-0.00160	2.5
10		5	0.00266	2.5
20		-7	-0.00372	2.5
30		-5	-0.00266	2.5
40		1	0.00053	2.5
50		-6	-0.00319	2.5
20	V min.= 30.6	3	0.00160	2.5
20	V max.= 41.4	-5	-0.00266	2.5

CAT-M Band 5:

10MHz Middle Channel, f_o =836.5 MHz (QPSK)				
Temperature	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	36	4	0.00213	2.5
-20		**5**	0.00266	2.5
-10		**9**	0.00479	2.5
0		-8	-0.00426	2.5
10		**5**	0.00266	2.5
20		6	0.00319	2.5
30		**1**	0.00053	2.5
40		4	0.00213	2.5
50		5	0.00266	2.5
20	V min.= 30.6	-4	-0.00213	2.5
20	V max.= 41.4	1	0.00053	2.5

10MHz Middle Channel, f_o =836.5 MHz (16QAM)				
Temperature (°C)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	36	4	0.00213	2.5
-20		-3	-0.00160	2.5
-10		**5**	0.00266	2.5
0		-1	-0.00053	2.5
10		0	0.00000	2.5
20		**-3**	-0.00160	2.5
30		4	0.00213	2.5
40		1	0.00053	2.5
50		7	0.00372	2.5
20	V min.= 30.6	-4	-0.00213	2.5
20	V max.= 41.4	-2	-0.00106	2.5

NB-IoT Band 12:

3.75kHz Low Channel & High Channel (BPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	699.102	715.975	699	716
-20		699.117	715.98	699	716
-10		699.107	715.98	699	716
0		699.101	715.976	699	716
10		699.11	715.974	699	716
20		699.105	715.978	699	716
30		699.107	715.976	699	716
40		699.106	715.98	699	716
50		699.108	715.976	699	716
20	V min.= 30.6	699.107	715.975	699	716
20	V max.= 41.4	699.111	715.976	699	716

3.75kHz Low Channel & High Channel (QPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	699.109	715.976	699	716
-20		699.111	715.979	699	716
-10		699.097	715.976	699	716
0		699.115	715.976	699	716
10		699.102	715.98	699	716
20		699.12	715.977	699	716
30		699.113	715.977	699	716
40		699.098	715.976	699	716
50		699.11	715.978	699	716
20	V min.= 30.6	699.098	715.977	699	716
20	V max.= 41.4	699.111	715.977	699	716

15kHz Low Channel & High Channel (BPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	699.109	715.978	699	716
-20		699.1	715.979	699	716
-10		699.115	715.978	699	716
0		699.115	715.978	699	716
10		699.118	715.974	699	716
20		699.105	715.976	699	716
30		699.116	715.979	699	716
40		699.116	715.979	699	716
50		699.116	715.98	699	716
20	V min.= 30.6	699.109	715.975	699	716
20	V max.= 41.4	699.117	715.977	699	716

15kHz Low Channel & High Channel (QPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	699.114	715.975	699	716
-20		699.118	715.975	699	716
-10		699.115	715.979	699	716
0		699.098	715.977	699	716
10		699.117	715.979	699	716
20		699.119	715.978	699	716
30		699.105	715.977	699	716
40		699.107	715.975	699	716
50		699.109	715.978	699	716
20	V min.= 30.6	699.108	715.977	699	716
20	V max.= 41.4	699.107	715.98	699	716

CAT-M Band 12:

10MHz Low Channel & High Channel (QPSK)					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	699.101	715.977	699	716
-20		699.097	715.98	699	716
-10		699.109	715.974	699	716
0		699.103	715.978	699	716
10		699.116	715.976	699	716
20		699.112	715.977	699	716
30		699.115	715.976	699	716
40		699.119	715.978	699	716
50		699.109	715.977	699	716
20	V min.= 30.6	699.105	715.977	699	716
20	V max.= 41.4	699.116	715.979	699	716

10MHz Low Channel & High Channel (16QAM)					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	699.103	715.98	699	716
-20		699.099	715.978	699	716
-10		699.104	715.976	699	716
0		699.108	715.977	699	716
10		699.113	715.976	699	716
20		699.101	715.975	699	716
30		699.117	715.98	699	716
40		699.098	715.977	699	716
50		699.106	715.976	699	716
20	V min.= 30.6	699.099	715.976	699	716
20	V max.= 41.4	699.097	715.98	699	716

NB-IoT Band 13:

3.75kHz Low Channel & High Channel (BPSK)					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	777.075	786.98	777	787
-20		777.114	786.976	777	787
-10		777.076	786.975	777	787
0		777.104	786.983	777	787
10		777.113	786.98	777	787
20		777.118	786.977	777	787
30		777.117	786.981	777	787
40		777.093	786.977	777	787
50		777.101	786.984	777	787
20	V min.= 30.6	777.088	786.983	777	787
20	V max.= 41.4	777.115	786.981	777	787

3.75kHz Low Channel & High Channel (QPSK)					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	777.1	786.983	777	787
-20		777.109	786.978	777	787
-10		777.087	786.978	777	787
0		777.091	786.974	777	787
10		777.079	786.976	777	787
20		777.088	786.974	777	787
30		777.117	786.982	777	787
40		777.091	786.982	777	787
50		777.1	786.979	777	787
20	V min.= 30.6	777.078	786.977	777	787
20	V max.= 41.4	777.12	786.976	777	787

3.75kHz Low Channel & High Channel (BPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	777.101	786.974	777	787
-20		777.113	786.977	777	787
-10		777.085	786.98	777	787
0		777.107	786.972	777	787
10		777.111	786.976	777	787
20		777.092	786.98	777	787
30		777.103	786.973	777	787
40		777.085	786.983	777	787
50		777.103	786.972	777	787
20	V min.= 30.6	777.087	786.984	777	787
20	V max.= 41.4	777.087	786.973	777	787

3.75kHz Low Channel & High Channel (QPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	777.119	786.976	777	787
-20		777.079	786.978	777	787
-10		777.087	786.977	777	787
0		777.096	786.98	777	787
10		777.084	786.976	777	787
20		777.076	786.975	777	787
30		777.115	786.982	777	787
40		777.103	786.978	777	787
50		777.098	786.981	777	787
20	V min.= 30.6	777.084	786.977	777	787
20	V max.= 41.4	777.111	786.985	777	787

CAT-M Band 13:

10MHz Low Channel & High Channel (QPSK)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	777.115	786.979	777	787
-20		777.085	786.975	777	787
-10		777.111	786.983	777	787
0		777.085	786.983	777	787
10		777.102	786.984	777	787
20		777.121	786.976	777	787
30		777.107	786.976	777	787
40		777.118	786.984	777	787
50		777.085	786.982	777	787
20	V min.= 30.6	777.083	786.973	777	787
20	V max.= 41.4	777.104	786.983	777	787

10MHz Low Channel & High Channel (16QAM)					
Temperature (°C)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	36	777.098	786.982	777	787
-20		777.11	786.972	777	787
-10		777.099	786.979	777	787
0		777.101	786.977	777	787
10		777.12	786.975	777	787
20		777.094	786.983	777	787
30		777.109	786.984	777	787
40		777.099	786.975	777	787
50		777.111	786.973	777	787
20	V min.= 30.6	777.11	786.974	777	787
20	V max.= 41.4	777.102	786.985	777	787

Declarations

1. The laboratory is not responsible for the authenticity of any information provided by the applicant. Information from the applicant that may affect test results is marked with "★".

2. The test data was only valid for the test sample(s).

3. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor k=2 with the 95.45% confidence interval.

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