

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 13

1 RF Power Output

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	779.5	23205	5	1	0	2.60
QPSK	779.5	23205	5	1	12	2.61
QPSK	779.5	23205	5	1	24	2.67
QPSK	779.5	23205	5	12	0	1.66
QPSK	779.5	23205	5	12	7	1.71
QPSK	779.5	23205	5	12	13	1.67
QPSK	779.5	23205	5	25	0	1.68
QPSK	782	23230	5	1	0	2.65
QPSK	782	23230	5	1	12	2.71
QPSK	782	23230	5	1	24	2.67
QPSK	782	23230	5	12	0	1.75
QPSK	782	23230	5	12	7	1.73
QPSK	782	23230	5	12	13	1.69
QPSK	782	23230	5	25	0	1.71
QPSK	784.5	23255	5	1	0	2.68
QPSK	784.5	23255	5	1	12	2.70
QPSK	784.5	23255	5	1	24	2.74
QPSK	784.5	23255	5	12	0	1.75
QPSK	784.5	23255	5	12	7	1.74
QPSK	784.5	23255	5	12	13	1.71
QPSK	784.5	23255	5	25	0	1.78

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
16QAM	779.5	23205	5	1	0	1.86
16QAM	779.5	23205	5	1	12	1.92
16QAM	779.5	23205	5	1	24	1.91
16QAM	779.5	23205	5	12	0	0.71
16QAM	779.5	23205	5	12	7	0.72
16QAM	779.5	23205	5	12	13	0.65
16QAM	779.5	23205	5	25	0	0.71
16QAM	782	23230	5	1	0	1.74
16QAM	782	23230	5	1	12	1.81
16QAM	782	23230	5	1	24	1.85
16QAM	782	23230	5	12	0	0.72
16QAM	782	23230	5	12	7	0.73
16QAM	782	23230	5	12	13	0.71
16QAM	782	23230	5	25	0	0.67
16QAM	784.5	23255	5	1	0	2.06
16QAM	784.5	23255	5	1	12	2.09
16QAM	784.5	23255	5	1	24	2.14
16QAM	784.5	23255	5	12	0	0.65
16QAM	784.5	23255	5	12	7	0.74
16QAM	784.5	23255	5	12	13	0.76
16QAM	784.5	23255	5	25	0	0.67

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	782	23230	10	1	0	2.73
QPSK	782	23230	10	1	25	2.65
QPSK	782	23230	10	1	49	2.77
QPSK	782	23230	10	25	0	1.77
QPSK	782	23230	10	25	12	1.69
QPSK	782	23230	10	25	25	1.70
QPSK	782	23230	10	50	0	1.77
QPSK	782	23230	10	1	0	2.62
QPSK	782	23230	10	1	25	2.69
QPSK	782	23230	10	1	49	2.77
QPSK	782	23230	10	25	0	1.67
QPSK	782	23230	10	25	12	1.69
QPSK	782	23230	10	25	25	1.69
QPSK	782	23230	10	50	0	1.77
QPSK	782	23230	10	1	0	2.59
QPSK	782	23230	10	1	25	2.70
QPSK	782	23230	10	1	49	2.81
QPSK	782	23230	10	25	0	1.71
QPSK	782	23230	10	25	12	1.73
QPSK	782	23230	10	25	25	1.73
QPSK	782	23230	10	50	0	1.70

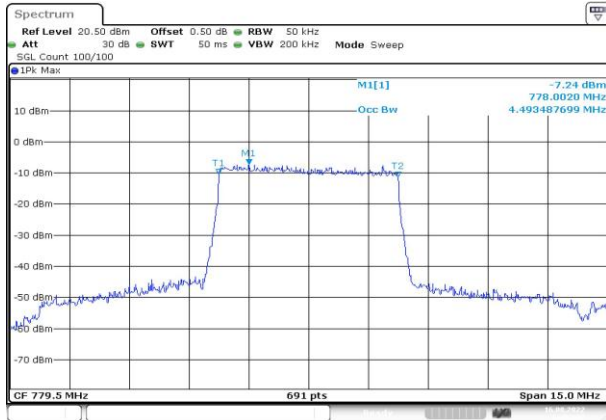
Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
16QAM	782	23230	10	1	0	2.15
16QAM	782	23230	10	1	25	2.25
16QAM	782	23230	10	1	49	2.32
16QAM	782	23230	10	25	0	0.74
16QAM	782	23230	10	25	12	0.75
16QAM	782	23230	10	25	25	0.72
16QAM	782	23230	10	50	0	0.71
16QAM	782	23230	10	1	0	2.17
16QAM	782	23230	10	1	25	2.25
16QAM	782	23230	10	1	49	2.28
16QAM	782	23230	10	25	0	0.74
16QAM	782	23230	10	25	12	0.75
16QAM	782	23230	10	25	25	0.76
16QAM	782	23230	10	50	0	0.79
16QAM	782	23230	10	1	0	2.32
16QAM	782	23230	10	1	25	2.27
16QAM	782	23230	10	1	49	2.37
16QAM	782	23230	10	25	0	0.76
16QAM	782	23230	10	25	12	0.70
16QAM	782	23230	10	25	25	0.64
16QAM	782	23230	10	50	0	0.78

2 Occupied Bandwidth

Band	Mode	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of 99% Power (MHz)	
13	QPSK	779.5	23205	5	25	0	4.493	Fig.1
13	QPSK	782	23230	5	25	0	4.493	Fig.2
13	QPSK	784.5	23255	5	25	0	4.493	Fig.3
13	QPSK	782	23230	10	50	0	8.944	Fig.4
13	QPSK	782	23230	10	50	0	8.987	Fig.5
13	QPSK	782	23230	10	50	0	8.944	Fig.6

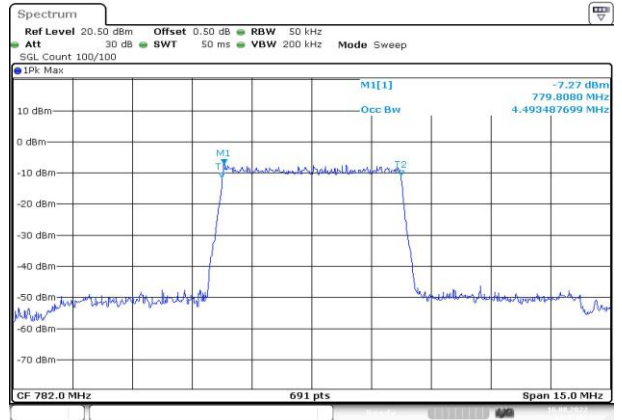
Band	Mode	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of 99% Power (MHz)	
13	16QAM	779.5	23205	5	25	0	4.472	Fig.7
13	16QAM	782	23230	5	25	0	4.472	Fig.8
13	16QAM	784.5	23255	5	25	0	4.472	Fig.9
13	16QAM	782	23230	10	50	0	8.944	Fig.10
13	16QAM	782	23230	10	50	0	8.944	Fig.11
13	16QAM	782	23230	10	50	0	8.944	Fig.12

Test Mode: QPSK



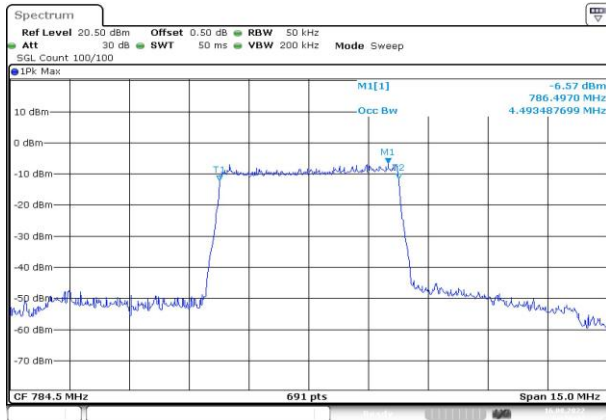
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Fig.1



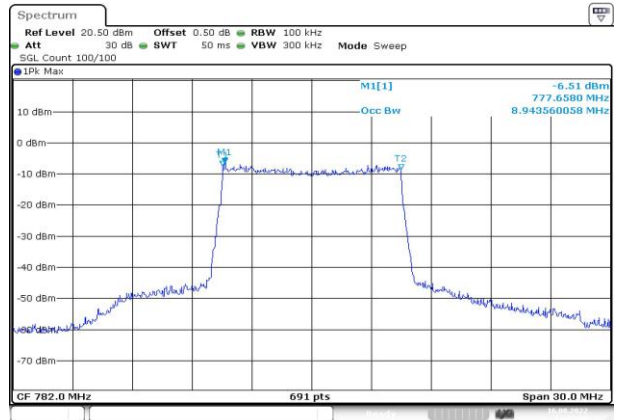
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Fig.2



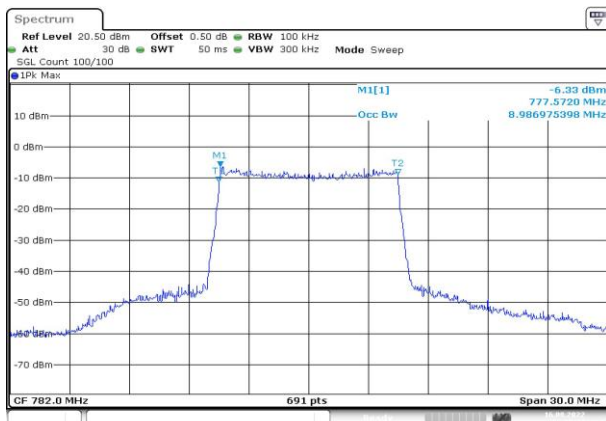
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Fig.3



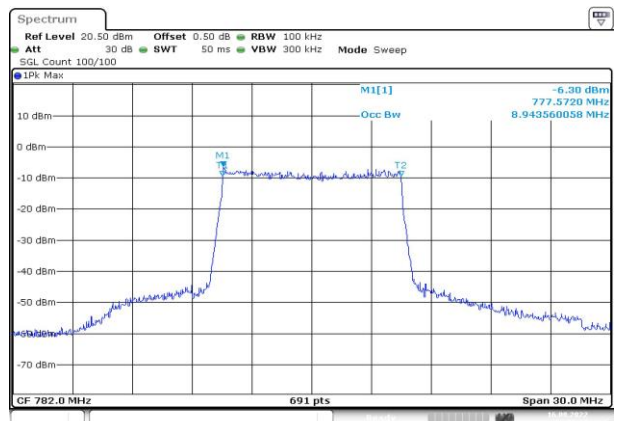
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Fig.4



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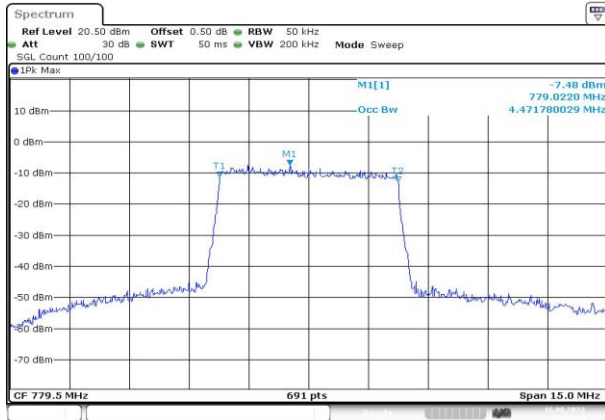
Fig.5



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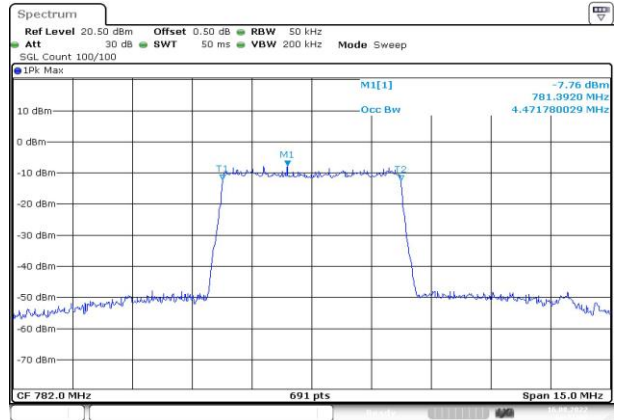
Fig.6

Test Mode: 16QAM



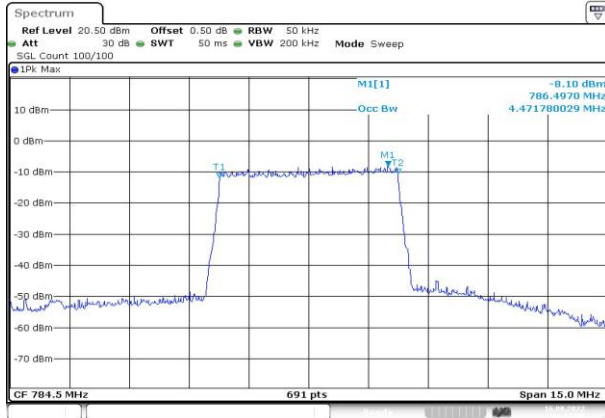
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Fig.7



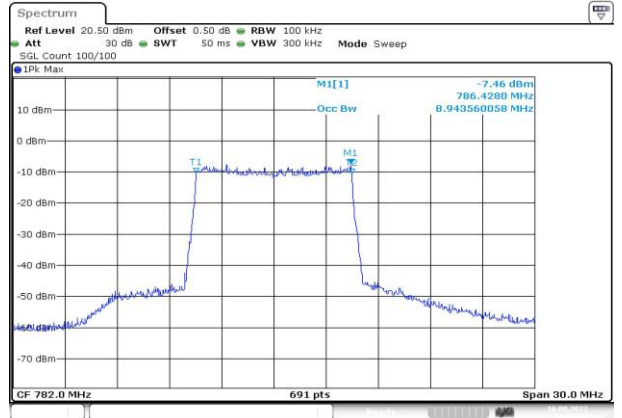
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Fig.8



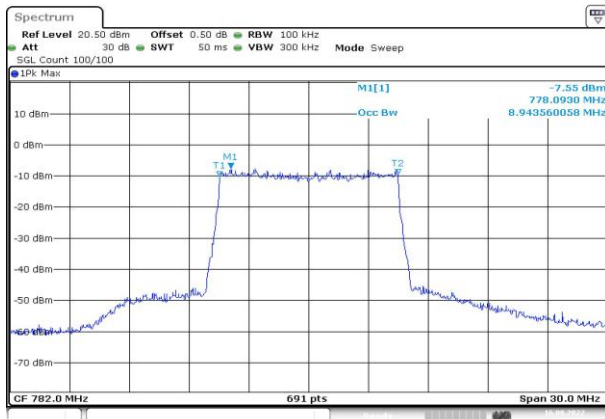
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Fig.9



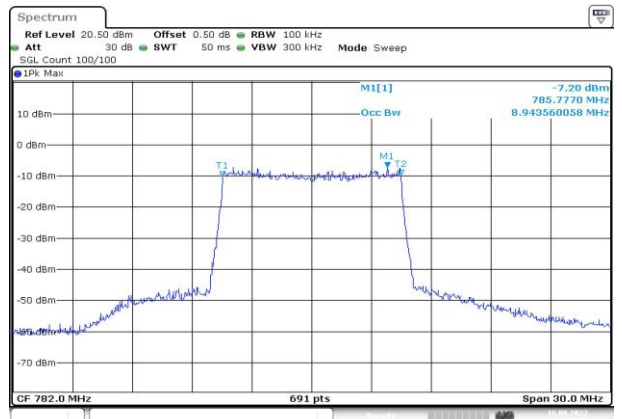
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Fig.10



Date: 16.AUG.2022 16:31:09

Fig.11



Date: 16.AUG.2022 16:36:36

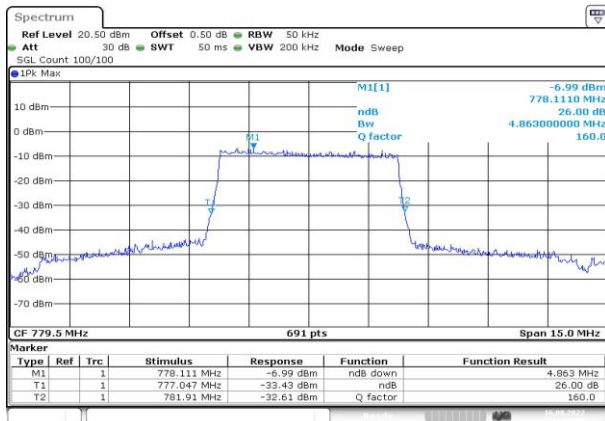
Fig.12

3 Emission Bandwidth

Band	Mode	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)	
13	QPSK	779.5	23205	5	25	0	4.863	Fig.1
13	QPSK	782	23230	5	25	0	4.928	Fig.2
13	QPSK	784.5	23255	5	25	0	4.884	Fig.3
13	QPSK	782	23230	10	50	0	9.768	Fig.4
13	QPSK	782	23230	10	50	0	9.768	Fig.5
13	QPSK	782	23230	10	50	0	9.768	Fig.6

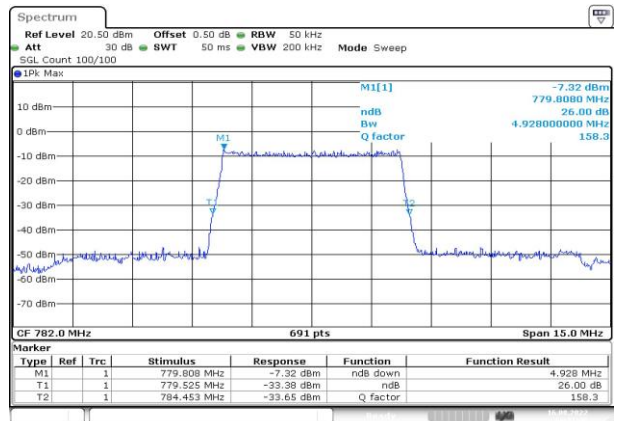
Band	Mode	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)	
13	16QAM	779.5	23205	5	25	0	4.884	Fig.7
13	16QAM	782	23230	5	25	0	4.884	Fig.8
13	16QAM	784.5	23255	5	25	0	4.906	Fig.9
13	16QAM	782	23230	10	50	0	9.682	Fig.10
13	16QAM	782	23230	10	50	0	9.725	Fig.11
13	16QAM	782	23230	10	50	0	9.768	Fig.12

Test Mode: QPSK



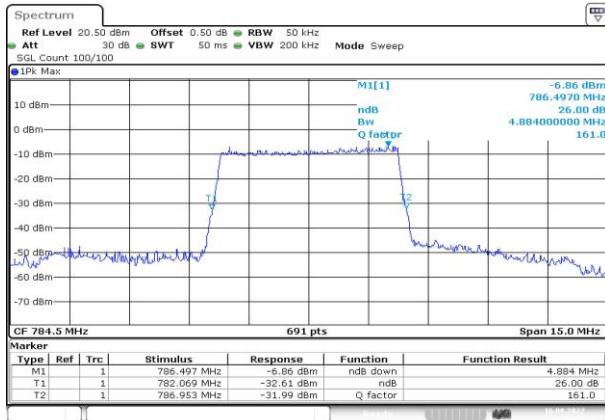
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Fig.1



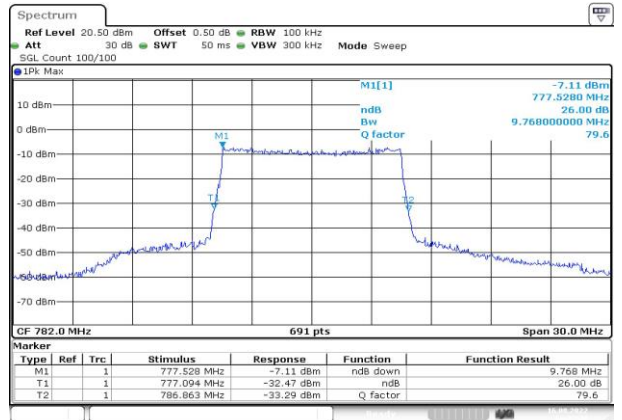
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Fig.2



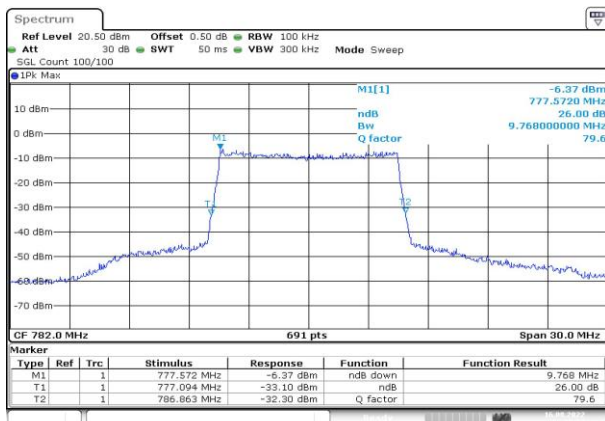
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Fig.3



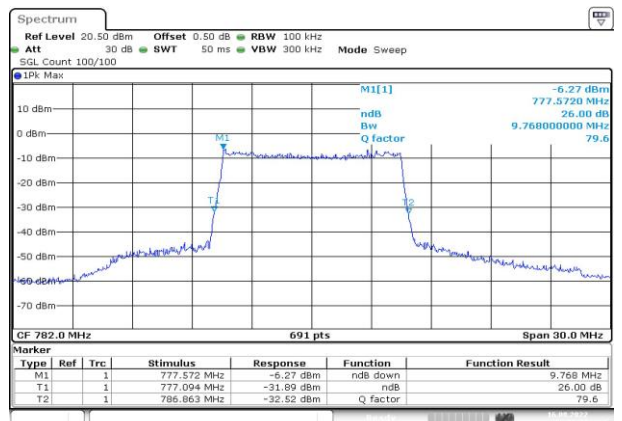
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Fig.4



Date: 16.AUG.2022 16:30:53

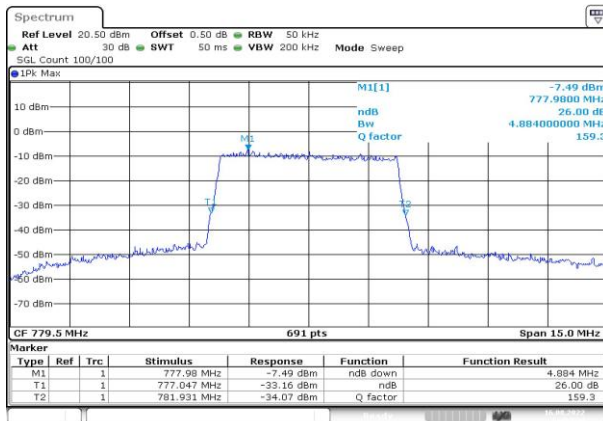
Fig.5



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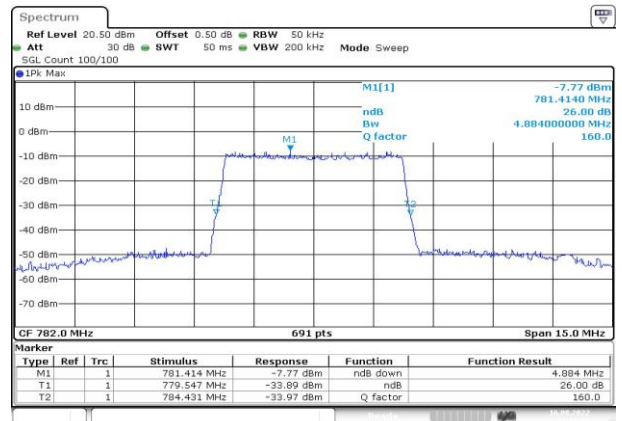
Fig.6

Test Mode: 16QAM



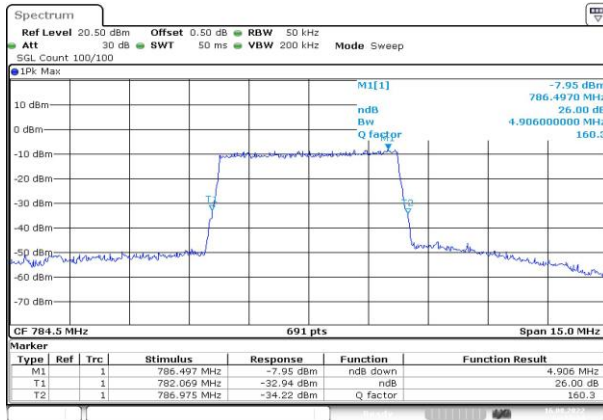
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Fig.7



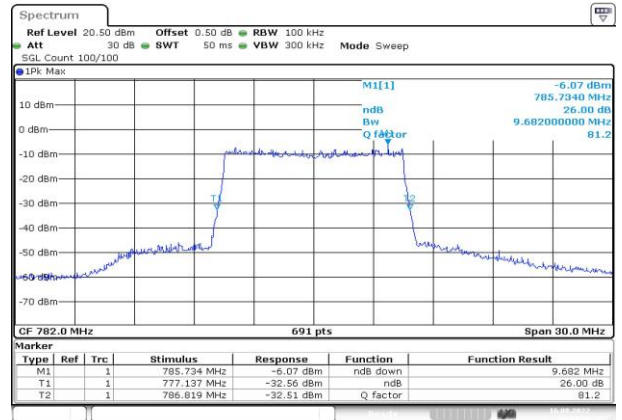
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Fig.8



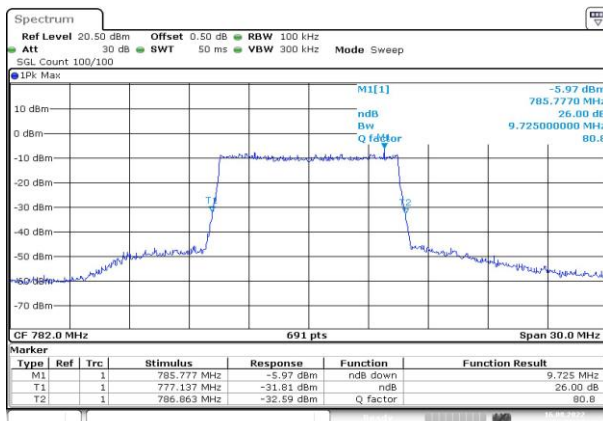
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Fig.9



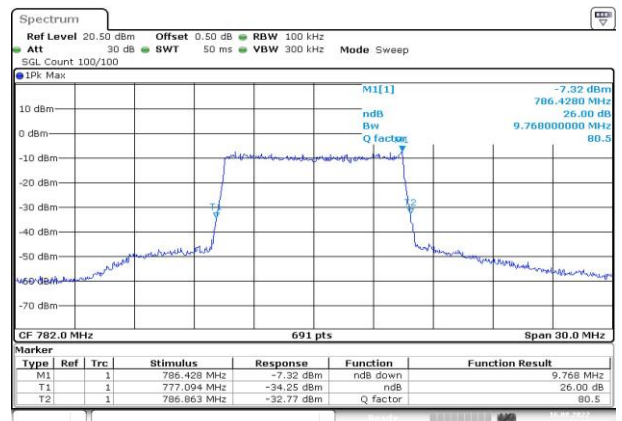
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Fig.10



Date: 16.AUG.2022 16:31:19

Fig.11



Date: 16.AUG.2022 16:36:46

Fig.12

4 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM
13	779.5	23205	5	1	24	Fig.1	Fig.2
13	779.5	23205	5	25	0	Fig.4	Fig.5
13	782	23230	5	1	24	Fig.7	Fig.8
13	782	23230	5	25	0	Fig.10	Fig.11
13	784.5	23255	5	1	24	Fig.13	Fig.14
13	784.5	23255	5	25	0	Fig.16	Fig.17
13	782	23230	10	1	49	Fig.19	Fig.20
13	782	23230	10	50	0	Fig.22	Fig.23
13	782	23230	10	1	49	Fig.25	Fig.26
13	782	23230	10	50	0	Fig.28	Fig.29
13	782	23230	10	1	49	Fig.31	Fig.32
13	782	23230	10	50	0	Fig.34	Fig.35



Fig.1



Fig.2

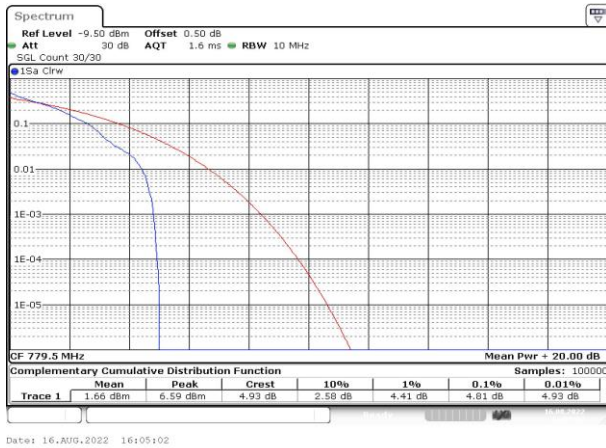


Fig.3

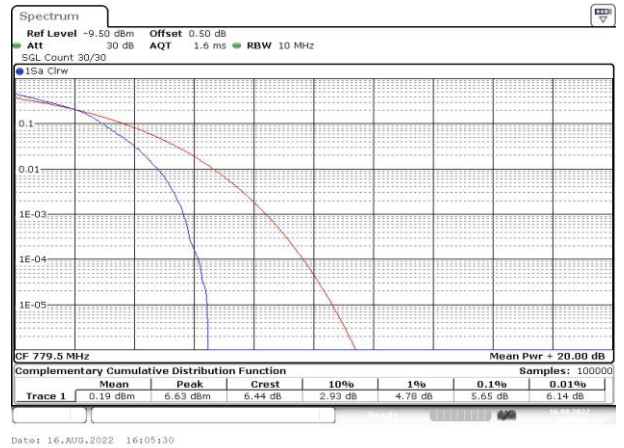


Fig.4

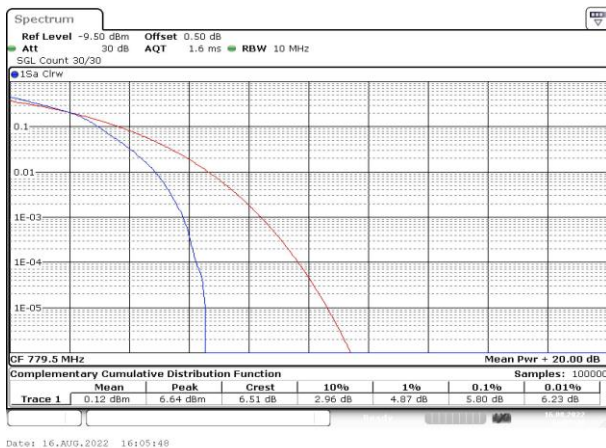


Fig.5

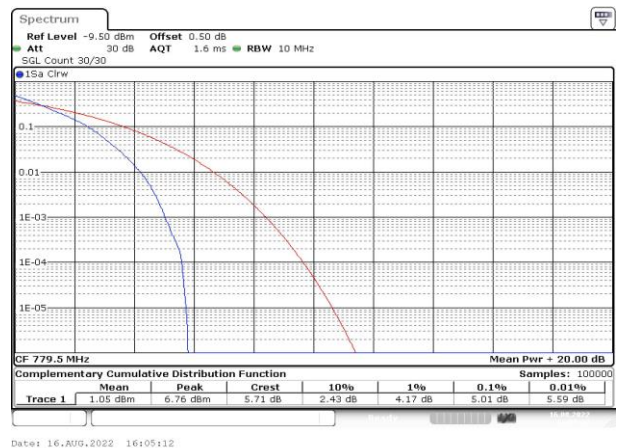


Fig.6

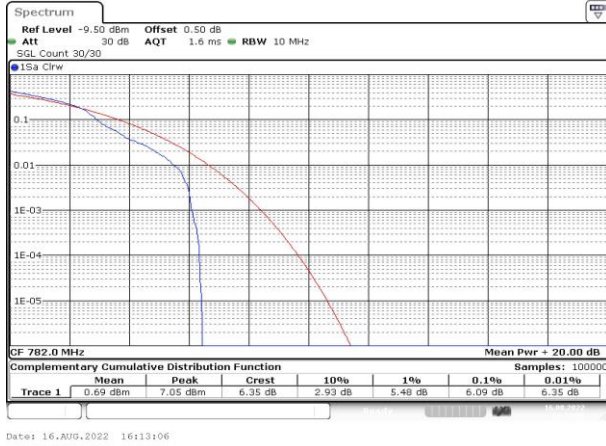


Fig.7

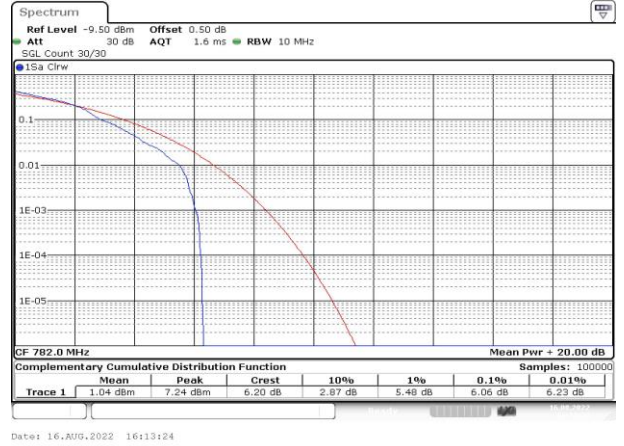


Fig.8

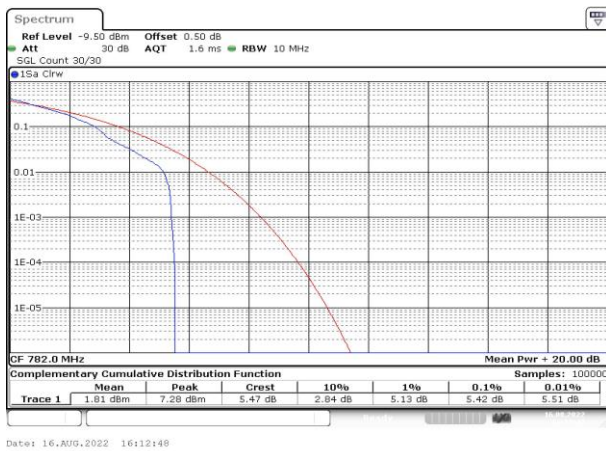


Fig.9

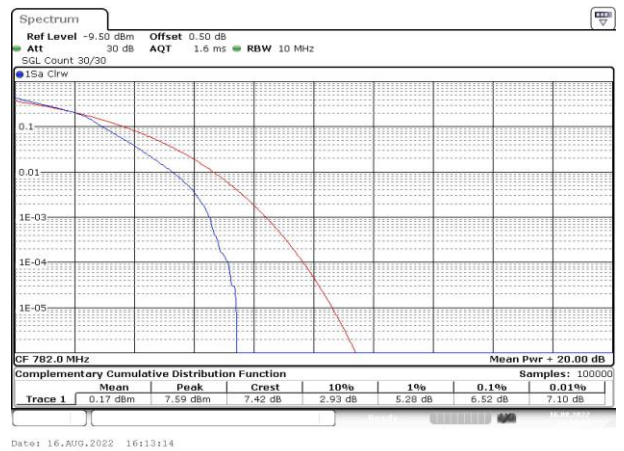


Fig.10

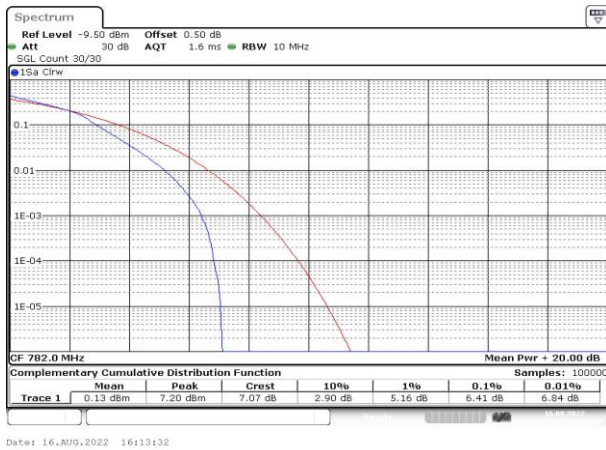


Fig.11

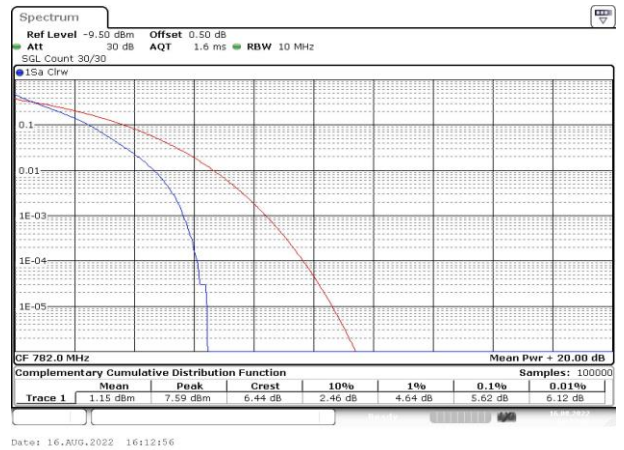


Fig.12

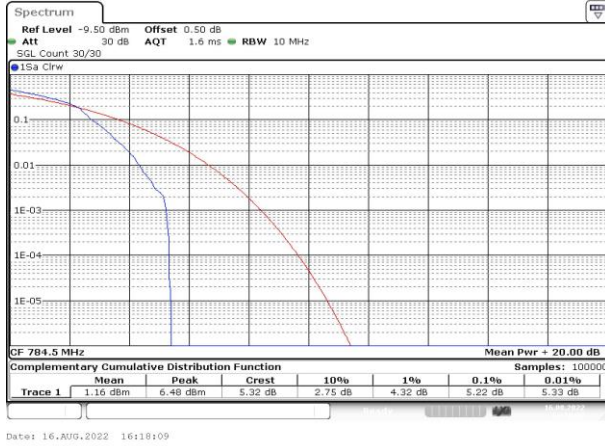


Fig.13

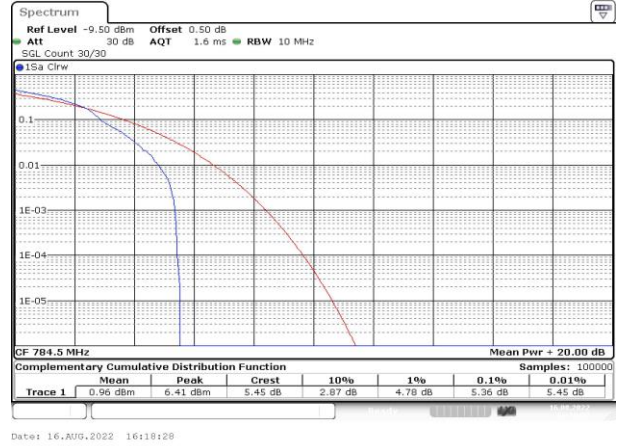


Fig.14

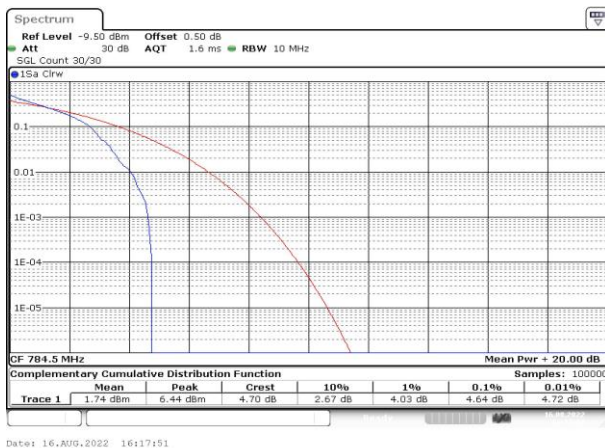


Fig.15

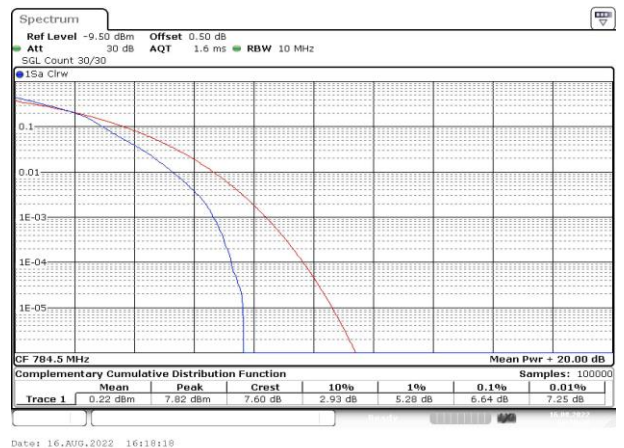


Fig.16

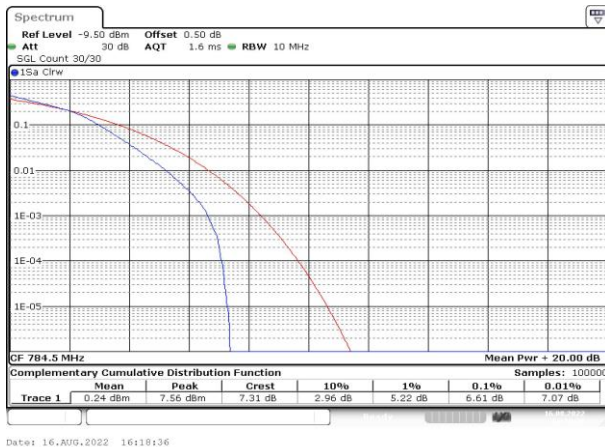


Fig.17

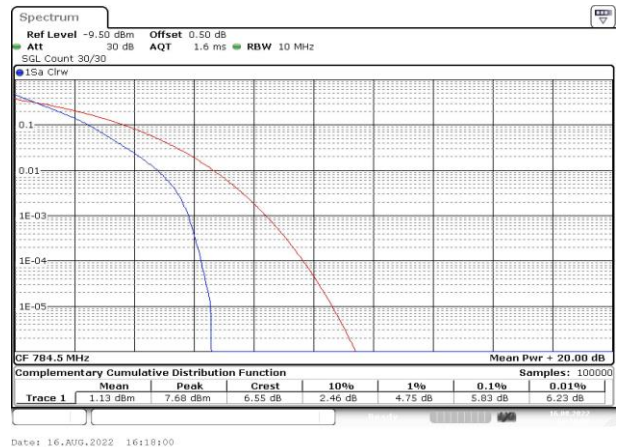


Fig.18

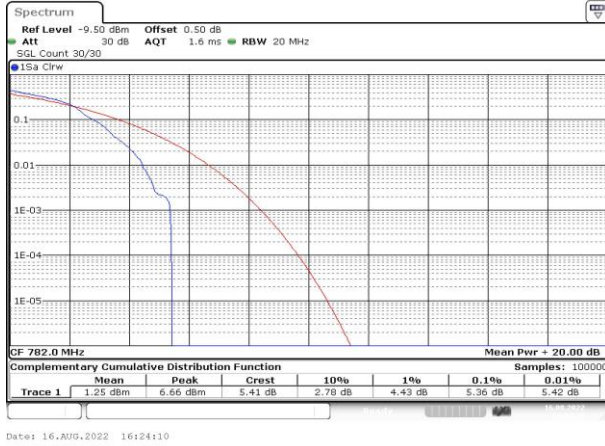


Fig.19

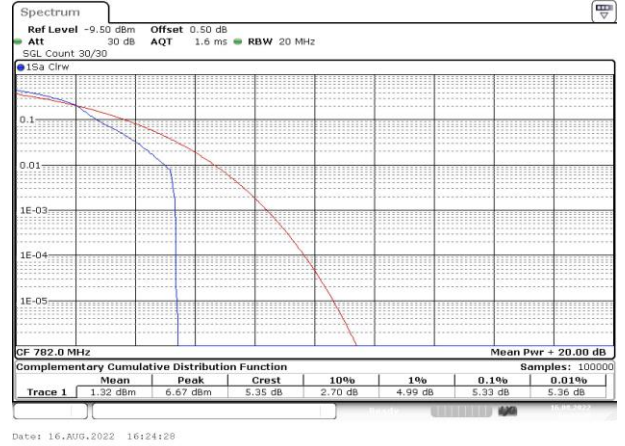


Fig.20

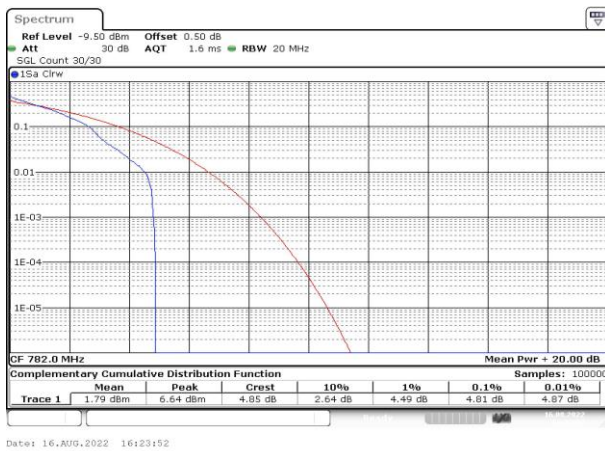


Fig.21

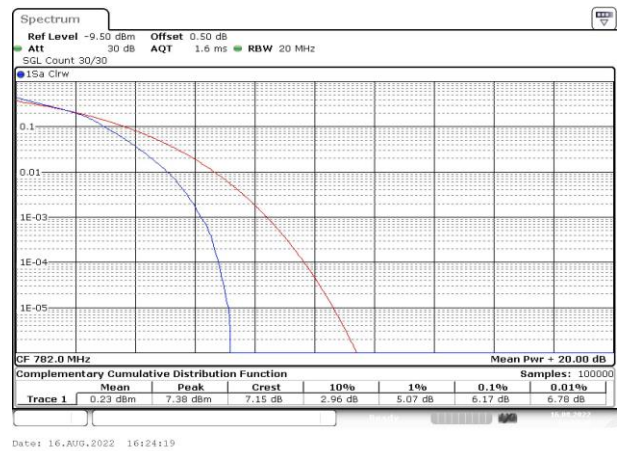


Fig.22

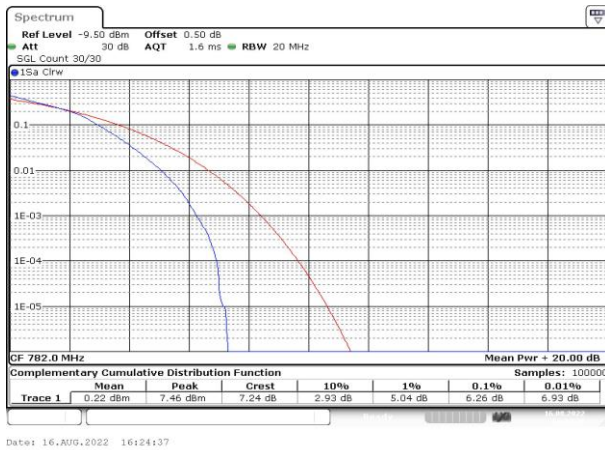


Fig.23

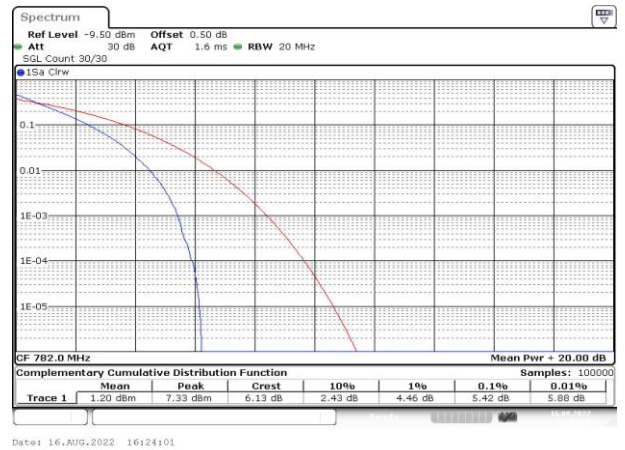


Fig.24

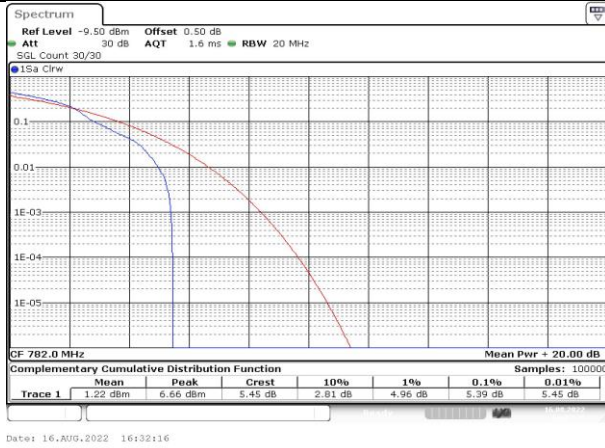


Fig.25

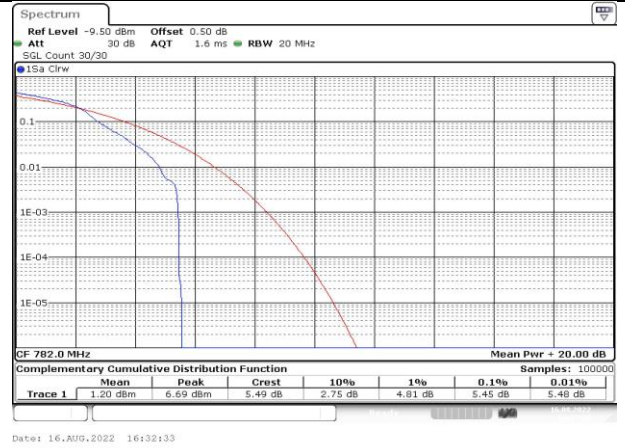


Fig.26

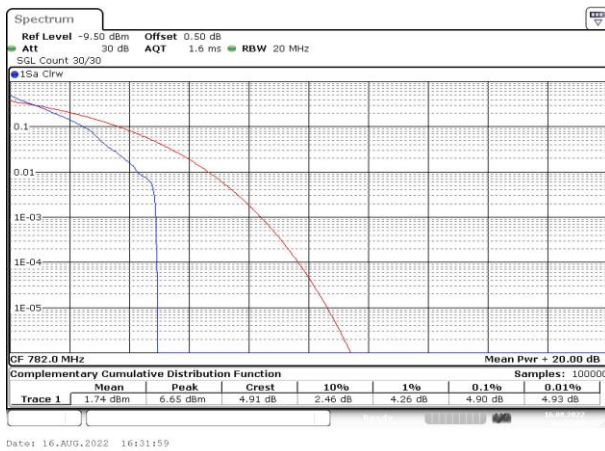


Fig.27

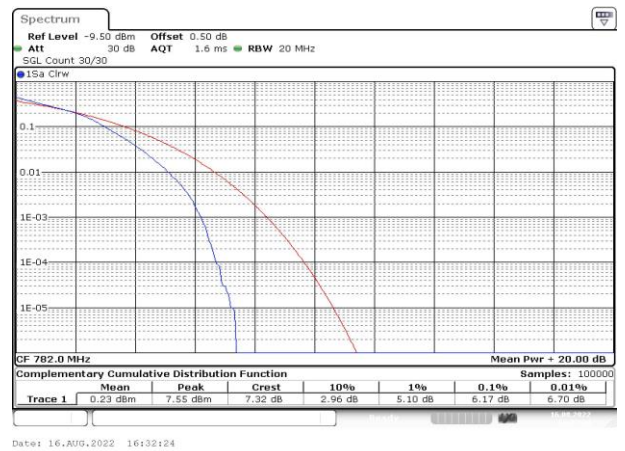


Fig.28

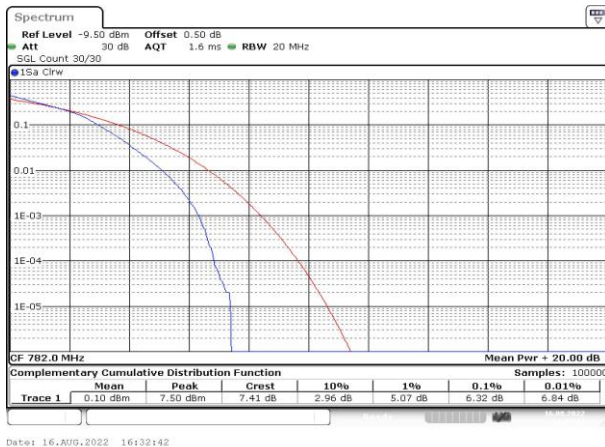


Fig.29

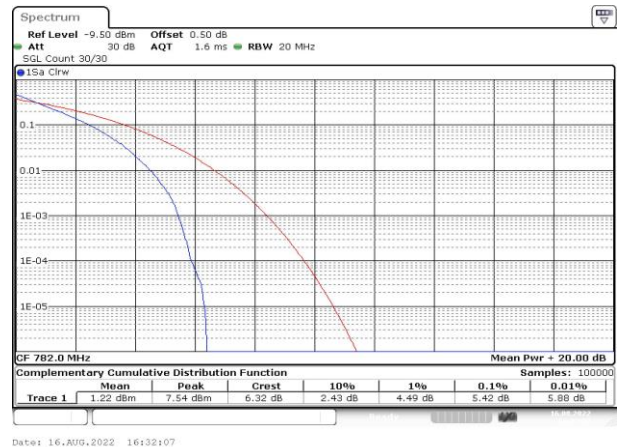


Fig.30

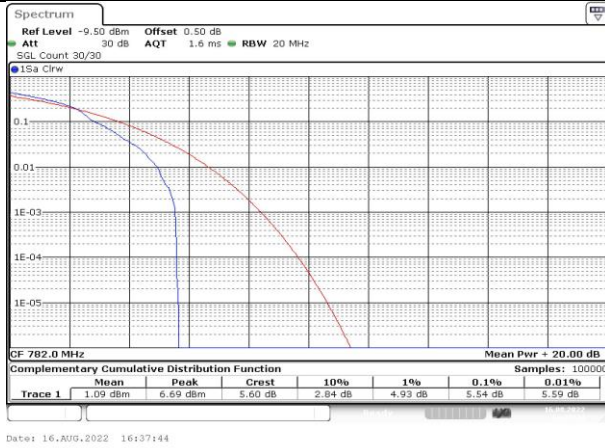


Fig.31

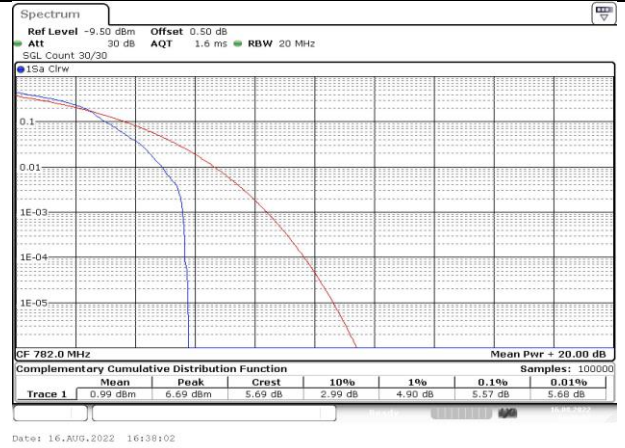


Fig.32

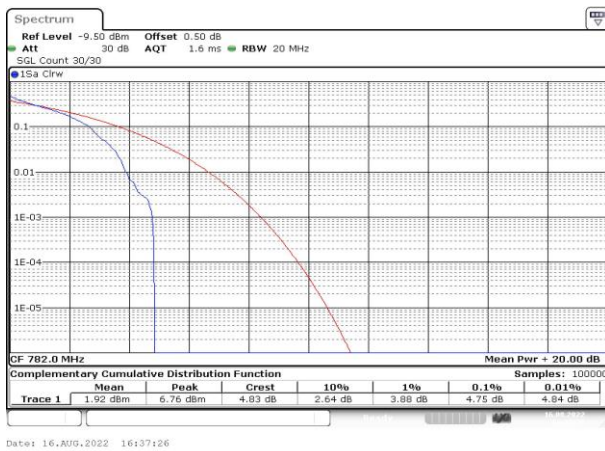


Fig.33

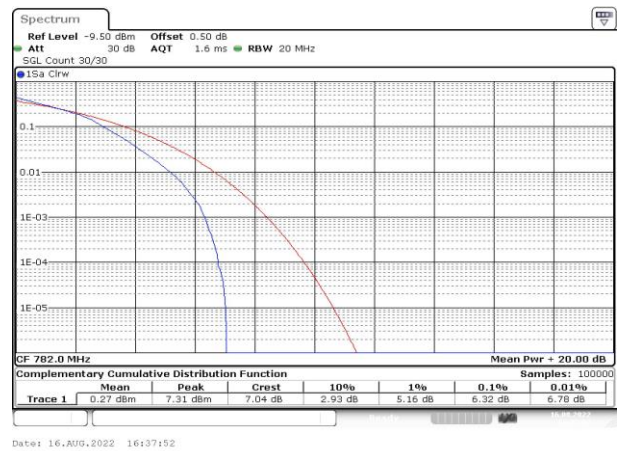


Fig.34

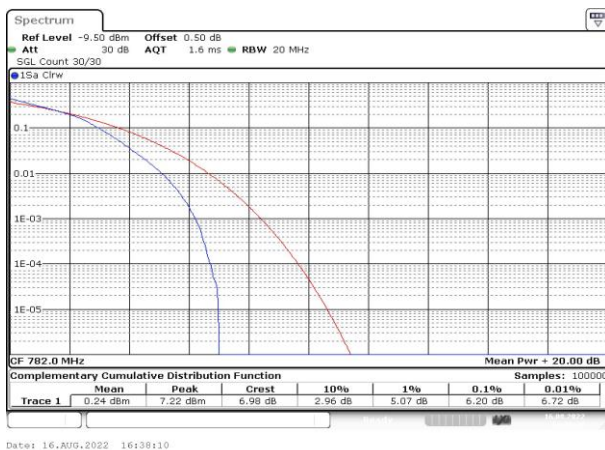


Fig.35

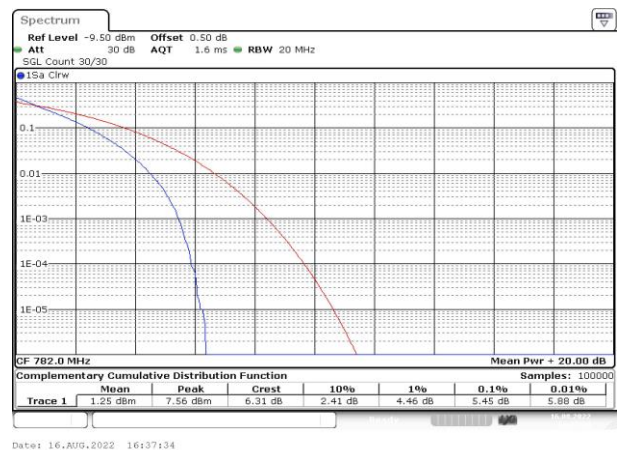


Fig.36

5 Spurious Emissions at antenna terminal

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
13	782	23230	10	1	0	Fig.1
13	782	23230	10	1	0	Fig.2
13	782	23230	10	1	0	Fig.3

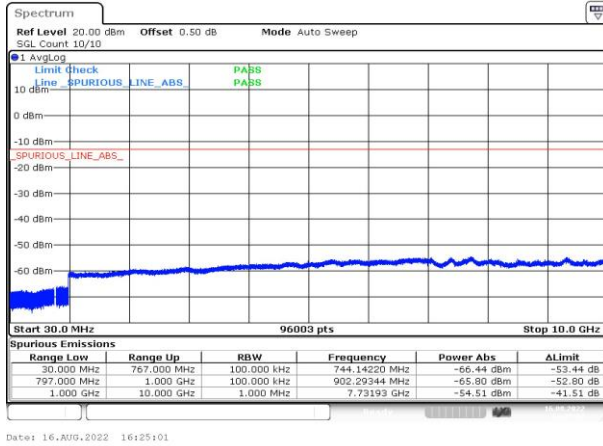


Fig.1

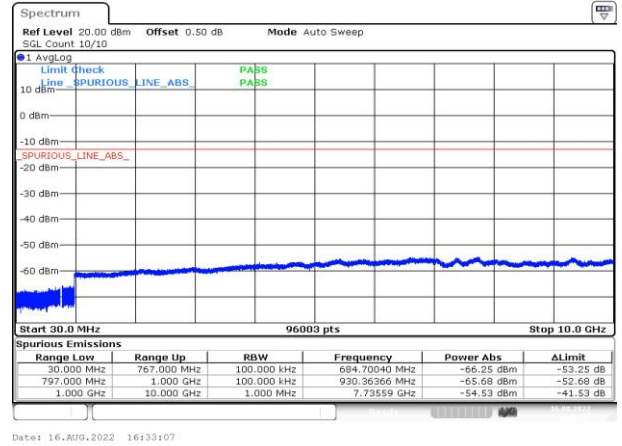


Fig.2

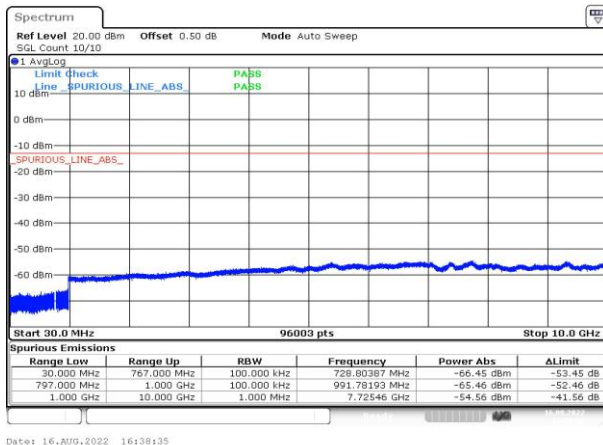


Fig.3

6 Band Edges Compliance

Band	Mode	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Band Edges Plot
13	QPSK	779.5	23205	5	1	0	Fig.1
13	QPSK	779.5	23205	5	25	0	Fig.2
13	QPSK	784.5	23255	5	1	24	Fig.3
13	QPSK	784.5	23255	5	25	0	Fig.4
13	QPSK	782	23230	10	1	0	Fig.5
13	QPSK	782	23230	10	50	0	Fig.6
13	QPSK	782	23230	10	1	49	Fig.7
13	QPSK	782	23230	10	50	0	Fig.8

Band	Mode	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Band Edges Plot
13	QPSK	779.5	23205	5	1	0	Fig.9
13	QPSK	779.5	23205	5	25	0	Fig.10
13	QPSK	784.5	23255	5	1	24	Fig.11
13	QPSK	784.5	23255	5	25	0	Fig.12
13	QPSK	782	23230	10	1	0	Fig.13
13	QPSK	782	23230	10	50	0	Fig.14
13	QPSK	782	23230	10	1	49	Fig.15
13	QPSK	782	23230	10	50	0	Fig.16

Test Mode: QPSK

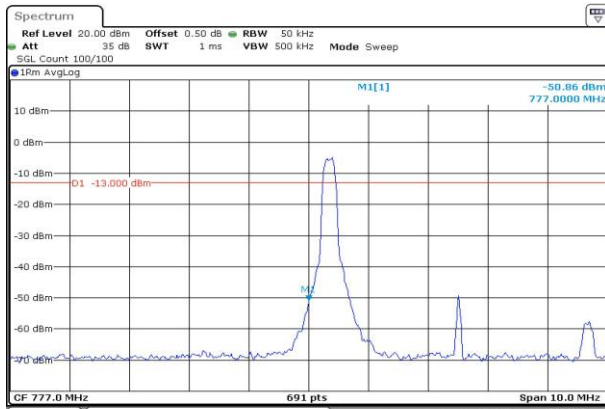


Fig.1

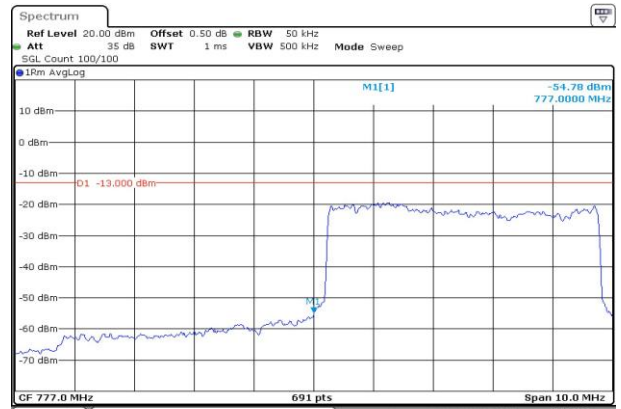


Fig.2

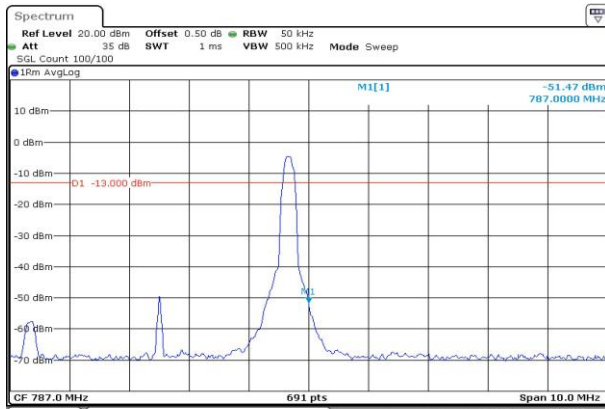


Fig.3

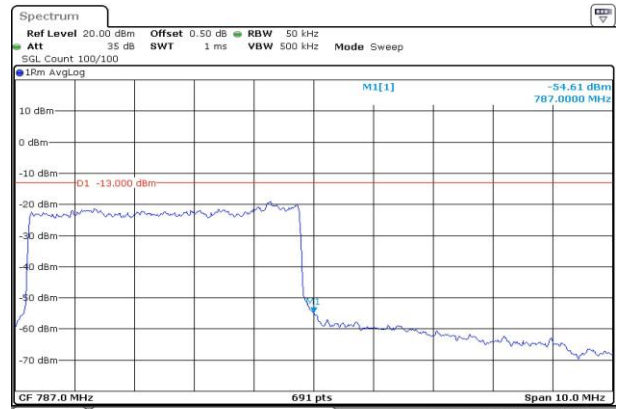


Fig.4

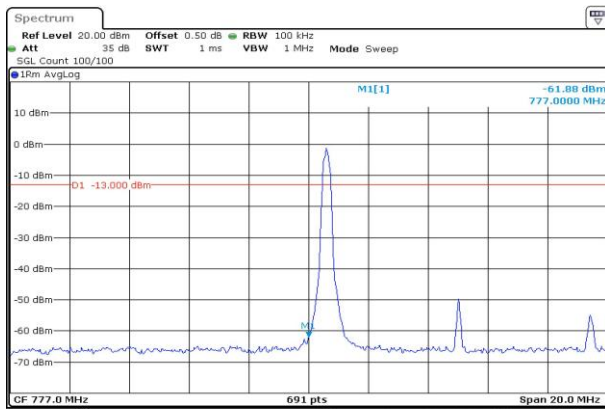


Fig.5

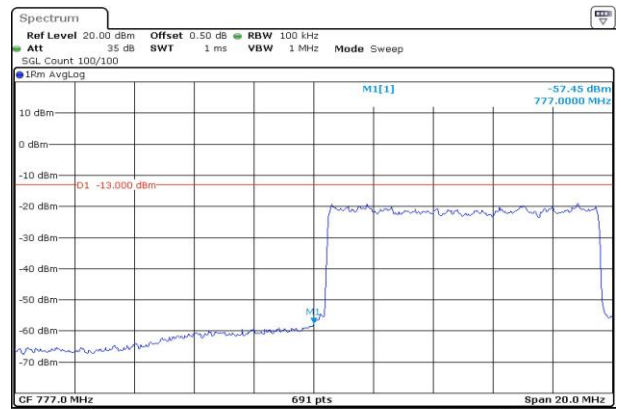


Fig.6

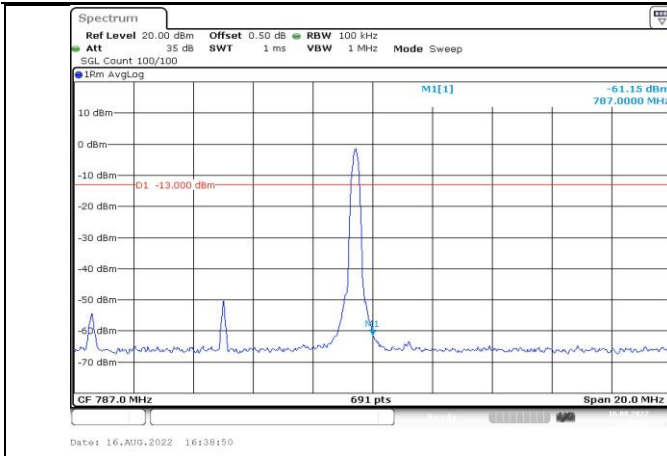


Fig.7

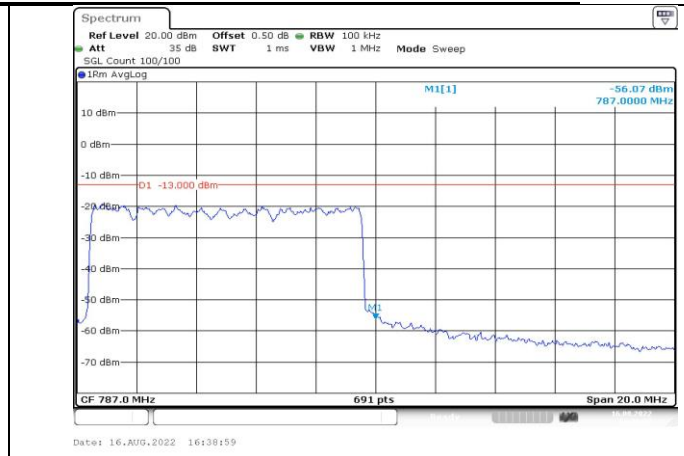


Fig.8

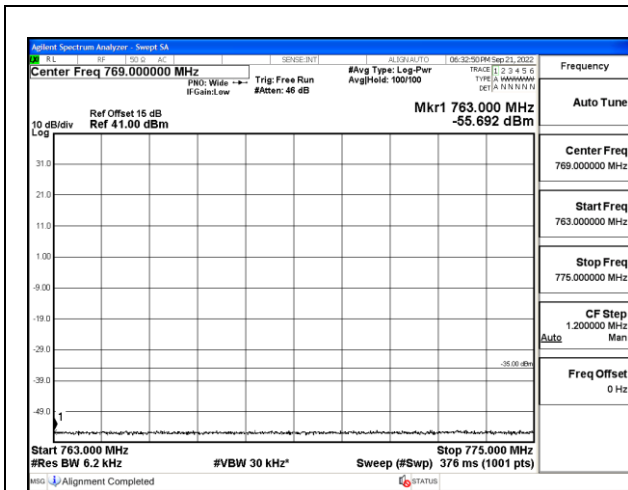


Fig.9

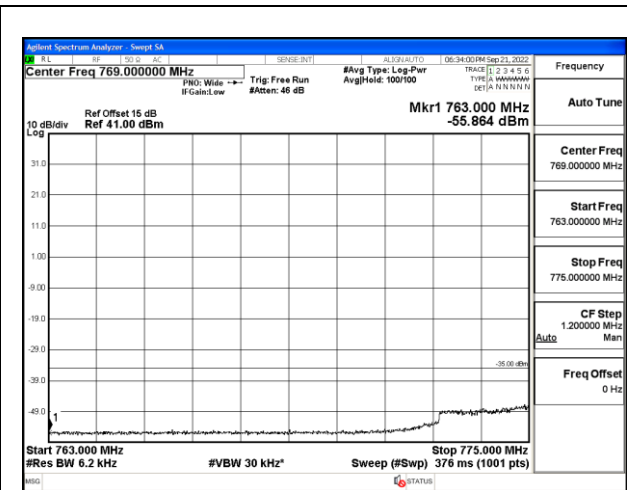


Fig.10

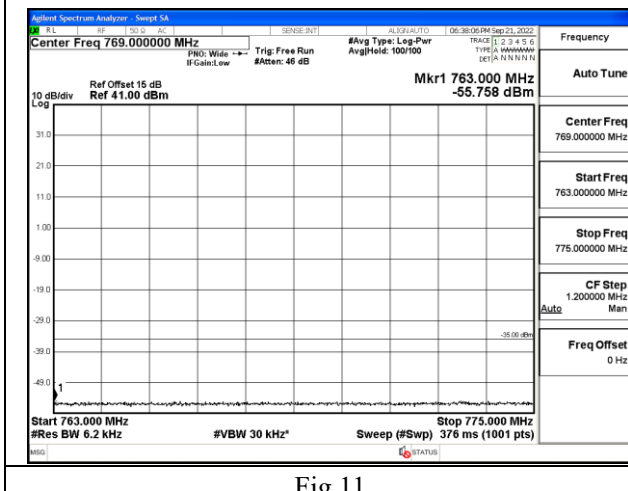


Fig.11

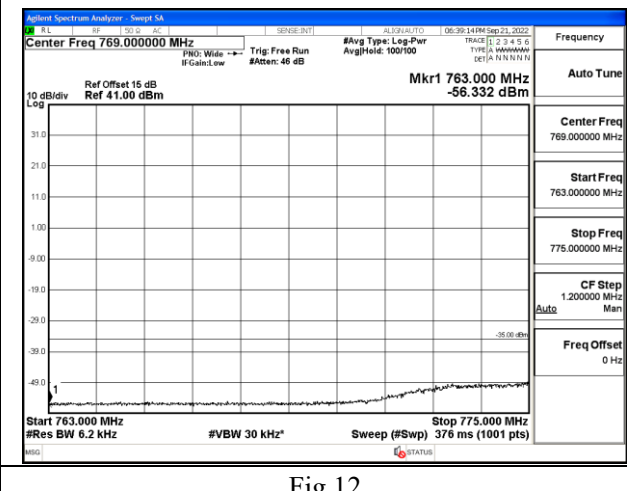


Fig.12

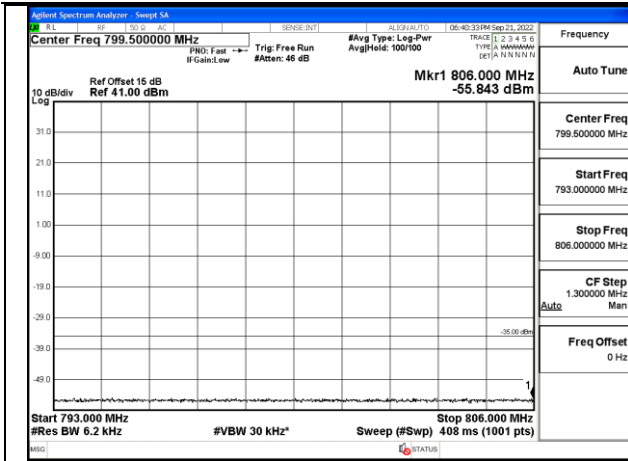


Fig.13

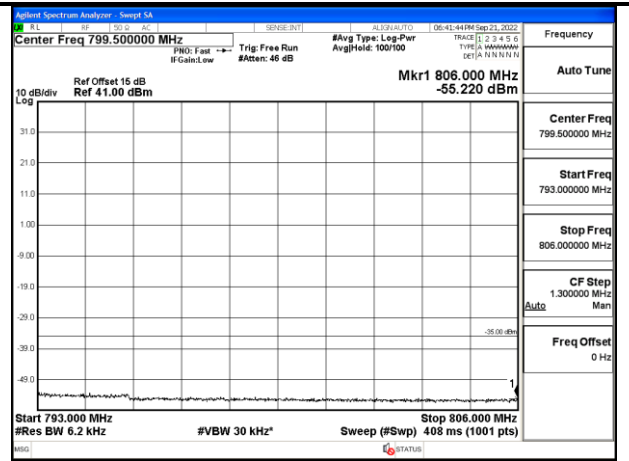


Fig.14

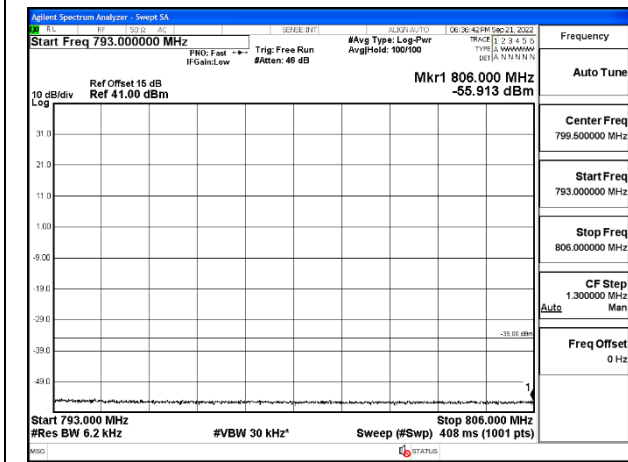


Fig.15

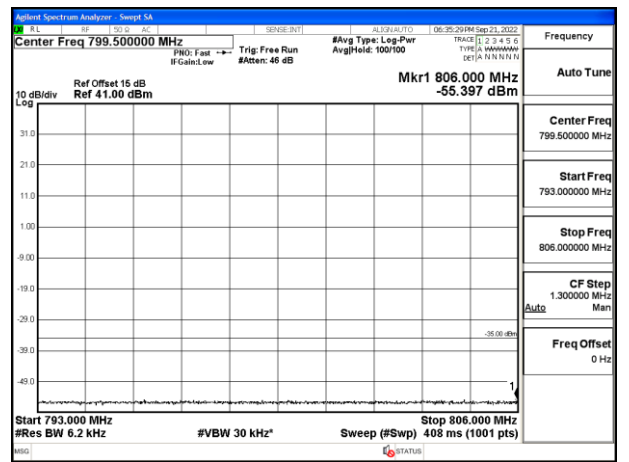


Fig.16

7 Frequency Stability

Temperature(°C)	Voltage	Test Result (ppm) Band 13 Low Channel QPSK	
		5M	10M
-20	NV	0.027	-0.006
-10	NV	-0.027	-0.009
0	NV	-0.016	-0.005
+10	NV	0.022	-0.008
+30	NV	0.011	0.000
+40	NV	-0.003	0.004
+55	NV	0.005	-0.019
+20	LV	0.011	-0.005
+20	HV	0.010	0.025

Temperature(°C)	Voltage	Test Result (ppm) Band 13 High Channel QPSK	
		5M	10M
-20	NV	0.004	0.000
-10	NV	-0.024	0.032
0	NV	0.000	-0.027
+10	NV	-0.007	0.089
+30	NV	0.018	0.024
+40	NV	0.011	0.012
+55	NV	-0.023	-0.014
+20	LV	-0.001	0.030
+20	HV	0.008	0.001

8 Effective Radiated Power and Effective Isotropic Radiated Power

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)	ERP/EIRP (dBm)	ERP/EIRP (W)
QPSK	779.5	23205	5	1	0	2.60	20.56	0.114
QPSK	779.5	23205	5	1	12	2.61	20.57	0.114
QPSK	779.5	23205	5	1	24	2.67	20.63	0.116
QPSK	779.5	23205	5	12	0	1.66	19.62	0.092
QPSK	779.5	23205	5	12	7	1.71	19.67	0.093
QPSK	779.5	23205	5	12	13	1.67	19.63	0.092
QPSK	779.5	23205	5	25	0	1.68	19.64	0.092
QPSK	782	23230	5	1	0	2.65	20.61	0.115
QPSK	782	23230	5	1	12	2.71	20.67	0.117
QPSK	782	23230	5	1	24	2.67	20.63	0.116
QPSK	782	23230	5	12	0	1.75	19.71	0.094
QPSK	782	23230	5	12	7	1.73	19.69	0.093
QPSK	782	23230	5	12	13	1.69	19.65	0.092
QPSK	782	23230	5	25	0	1.71	19.67	0.093
QPSK	784.5	23255	5	1	0	2.68	20.64	0.116
QPSK	784.5	23255	5	1	12	2.70	20.66	0.116
QPSK	784.5	23255	5	1	24	2.74	20.70	0.117
QPSK	784.5	23255	5	12	0	1.75	19.71	0.094
QPSK	784.5	23255	5	12	7	1.74	19.70	0.093
QPSK	784.5	23255	5	12	13	1.71	19.67	0.093
QPSK	784.5	23255	5	25	0	1.78	19.74	0.094

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)	ERP/EIRP (dBm)	ERP/EIRP (W)
16QAM	779.5	23205	5	1	0	1.86	19.82	0.096
16QAM	779.5	23205	5	1	12	1.92	19.88	0.097
16QAM	779.5	23205	5	1	24	1.91	19.87	0.097
16QAM	779.5	23205	5	12	0	0.71	18.67	0.074
16QAM	779.5	23205	5	12	7	0.72	18.68	0.074
16QAM	779.5	23205	5	12	13	0.65	18.61	0.073
16QAM	779.5	23205	5	25	0	0.71	18.67	0.074
16QAM	782	23230	5	1	0	1.74	19.70	0.093
16QAM	782	23230	5	1	12	1.81	19.77	0.095
16QAM	782	23230	5	1	24	1.85	19.81	0.096
16QAM	782	23230	5	12	0	0.72	18.68	0.074
16QAM	782	23230	5	12	7	0.73	18.69	0.074
16QAM	782	23230	5	12	13	0.71	18.67	0.074
16QAM	782	23230	5	25	0	0.67	18.63	0.073
16QAM	784.5	23255	5	1	0	2.06	20.02	0.100
16QAM	784.5	23255	5	1	12	2.09	20.05	0.101
16QAM	784.5	23255	5	1	24	2.14	20.10	0.102
16QAM	784.5	23255	5	12	0	0.65	18.61	0.073
16QAM	784.5	23255	5	12	7	0.74	18.70	0.074
16QAM	784.5	23255	5	12	13	0.76	18.72	0.074
16QAM	784.5	23255	5	25	0	0.67	18.63	0.073

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)	ERP/ EIRP (dBm)	ERP/ EIRP (W)
QPSK	782	23230	10	1	0	2.73	20.69	0.117
QPSK	782	23230	10	1	25	2.65	20.61	0.115
QPSK	782	23230	10	1	49	2.77	20.73	0.118
QPSK	782	23230	10	25	0	1.77	19.73	0.094
QPSK	782	23230	10	25	12	1.69	19.65	0.092
QPSK	782	23230	10	25	25	1.70	19.66	0.092
QPSK	782	23230	10	50	0	1.77	19.73	0.094
QPSK	782	23230	10	1	0	2.62	20.58	0.114
QPSK	782	23230	10	1	25	2.69	20.65	0.116
QPSK	782	23230	10	1	49	2.77	20.73	0.118
QPSK	782	23230	10	25	0	1.67	19.63	0.092
QPSK	782	23230	10	25	12	1.69	19.65	0.092
QPSK	782	23230	10	25	25	1.69	19.65	0.092
QPSK	782	23230	10	50	0	1.77	19.73	0.094
QPSK	782	23230	10	1	0	2.59	20.55	0.114
QPSK	782	23230	10	1	25	2.70	20.66	0.116
QPSK	782	23230	10	1	49	2.81	20.77	0.119
QPSK	782	23230	10	25	0	1.71	19.67	0.093
QPSK	782	23230	10	25	12	1.73	19.69	0.093
QPSK	782	23230	10	25	25	1.73	19.69	0.093
QPSK	782	23230	10	50	0	1.70	19.66	0.092

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)	ERP/EIRP (dBm)	ERP/EIRP (W)
16QAM	782	23230	10	1	0	2.15	20.11	0.103
16QAM	782	23230	10	1	25	2.25	20.21	0.105
16QAM	782	23230	10	1	49	2.32	20.28	0.107
16QAM	782	23230	10	25	0	0.74	18.70	0.074
16QAM	782	23230	10	25	12	0.75	18.71	0.074
16QAM	782	23230	10	25	25	0.72	18.68	0.074
16QAM	782	23230	10	50	0	0.71	18.67	0.074
16QAM	782	23230	10	1	0	2.17	20.13	0.103
16QAM	782	23230	10	1	25	2.25	20.21	0.105
16QAM	782	23230	10	1	49	2.28	20.24	0.106
16QAM	782	23230	10	25	0	0.74	18.70	0.074
16QAM	782	23230	10	25	12	0.75	18.71	0.074
16QAM	782	23230	10	25	25	0.76	18.72	0.074
16QAM	782	23230	10	50	0	0.79	18.75	0.075
16QAM	782	23230	10	1	0	2.32	20.28	0.107
16QAM	782	23230	10	1	25	2.27	20.23	0.105
16QAM	782	23230	10	1	49	2.37	20.33	0.108
16QAM	782	23230	10	25	0	0.76	18.72	0.074
16QAM	782	23230	10	25	12	0.70	18.66	0.073
16QAM	782	23230	10	25	25	0.64	18.60	0.072
16QAM	782	23230	10	50	0	0.78	18.74	0.075