

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 13

1 RF Power Output

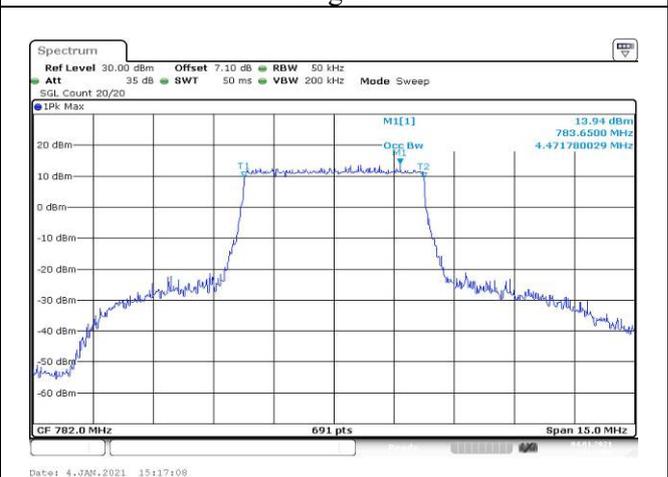
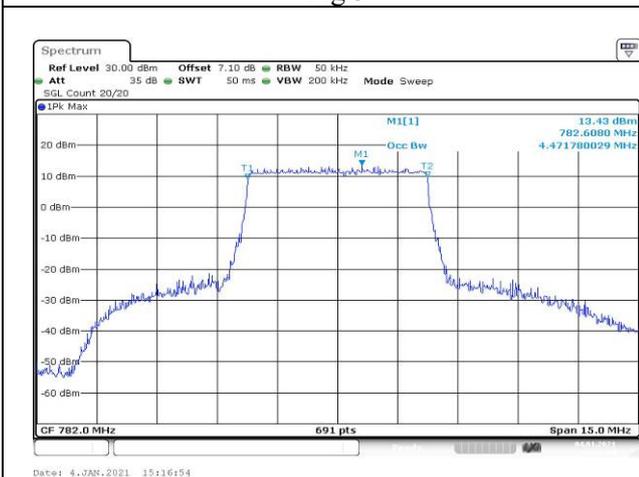
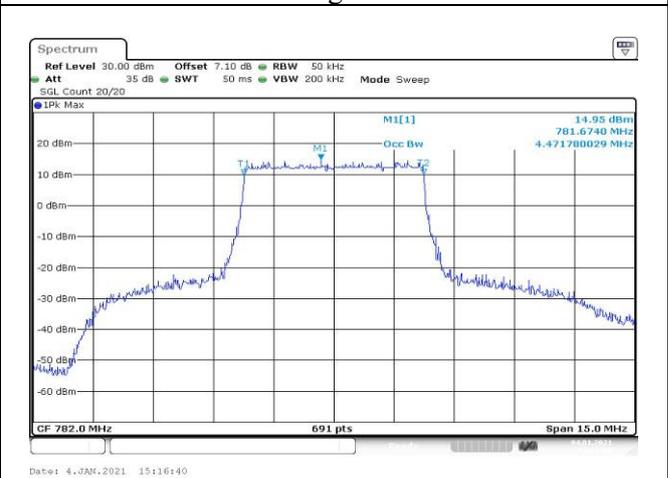
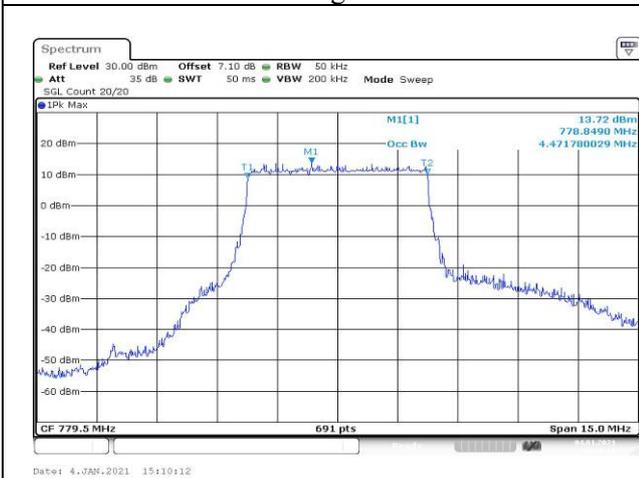
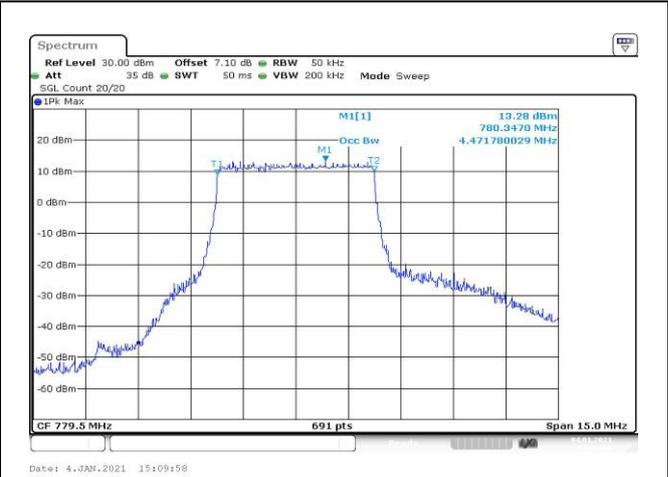
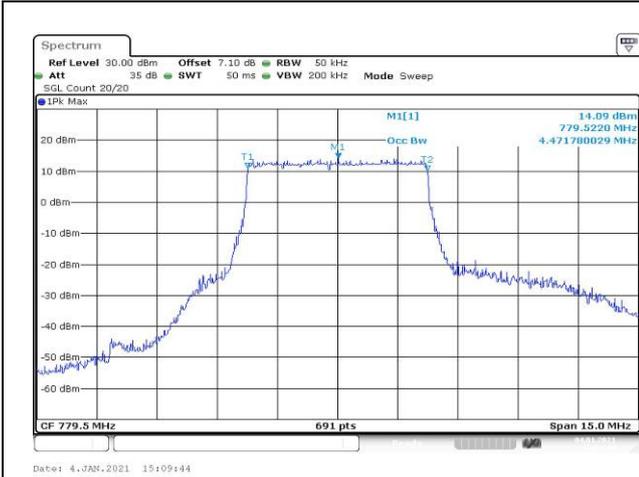
Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	779.5	23205	5	1	0	24.04
				1	12	24.07
				1	24	23.97
				12	0	22.98
				12	7	23.12
				12	13	23.12
				25	0	23.10
	782	23230		1	0	24.05
				1	12	24.05
				1	24	24.07
				12	0	23.16
				12	7	23.19
				12	13	23.13
				25	0	23.10
	784.5	23255		1	0	24.10
				1	12	24.13
				1	24	24.13
				12	0	23.15
				12	7	23.14
				12	13	23.13
				25	0	23.11
16QAM	779.5	23205	1	0	23.16	
			1	12	23.24	
			1	24	23.28	
			12	0	21.98	
			12	7	22.19	
			12	13	22.19	
			25	0	22.06	
	782	23230	1	0	23.10	
			1	12	23.08	
			1	24	23.10	
			12	0	21.99	
			12	7	22.03	
			12	13	22.13	
			25	0	22.20	
	784.5	23255	1	0	23.00	
			1	12	22.98	
			1	24	23.00	
			12	0	22.15	
			12	7	22.10	
			12	13	22.05	
			25	0	22.18	

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
64QAM	779.5	23205	5	1	0	22.07
				1	12	22.08
				1	24	22.10
				12	0	22.10
				12	7	22.08
				12	13	22.09
				25	0	22.10
	782	23230		1	0	22.13
				1	12	22.18
				1	24	22.13
				12	0	22.19
				12	7	22.17
				12	13	22.17
				25	0	22.17
	784.5	23255		1	0	22.20
				1	12	22.12
				1	24	22.14
				12	0	22.16
				12	7	22.12
				12	13	22.14
				25	0	22.14

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	782	23230	10	1	0	24.27
				1	25	24.19
				1	49	24.18
				25	0	23.16
				25	12	23.13
				25	25	23.15
16QAM				50	0	23.18
				1	0	23.52
				1	25	23.60
				1	49	23.60
				25	0	22.17
				25	12	22.21
64QAM				25	25	22.21
				50	0	22.13
				1	0	22.11
				1	25	22.11
				1	49	22.11
				25	0	22.11
	25	12	22.11			
	25	25	22.11			
	50	0	22.11			

2 Occupied Bandwidth

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of 99% Power (MHz)					
						QPSK		16-QAM		64-QAM	
13	779.5	23205	5	25	0	4.472	Fig.1	4.472	Fig.2	4.472	Fig.3
	782	23230		25	0	4.472	Fig.4	4.472	Fig.5	4.472	Fig.6
	784.5	23255		25	0	4.472	Fig.7	4.472	Fig.8	4.472	Fig.9
	782	23230	10	50	0	8.944	Fig.10	8.944	Fig.11	8.944	Fig.12



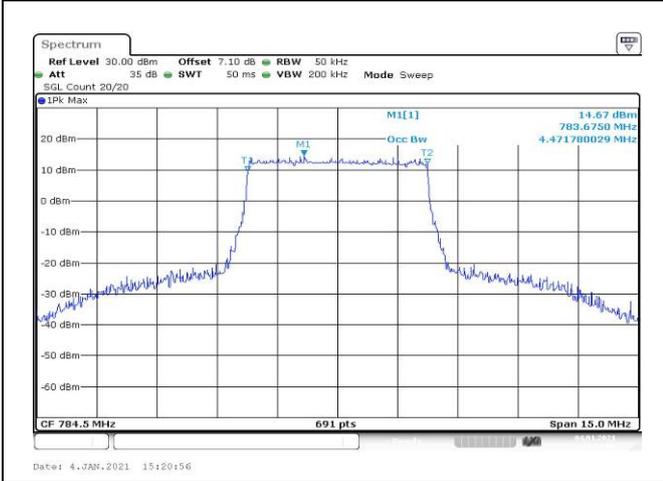


Fig.7

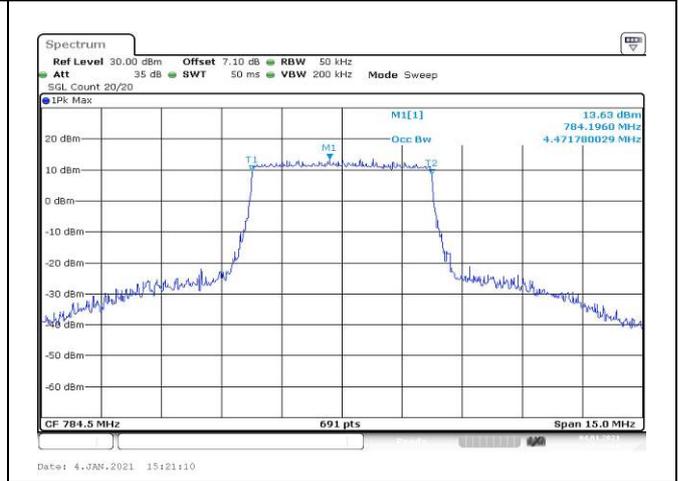


Fig.8

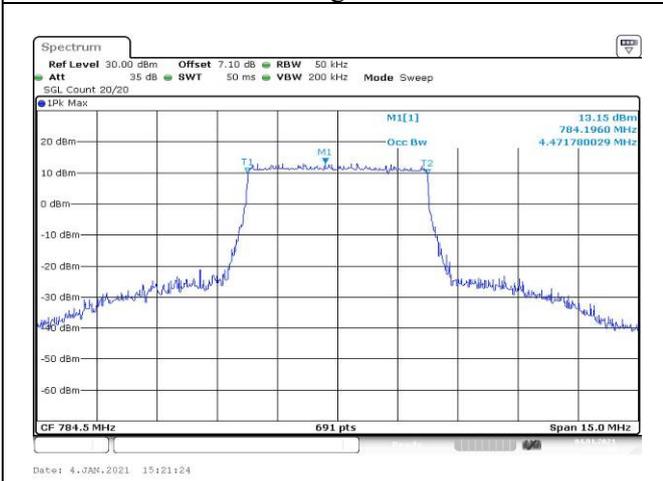


Fig.9

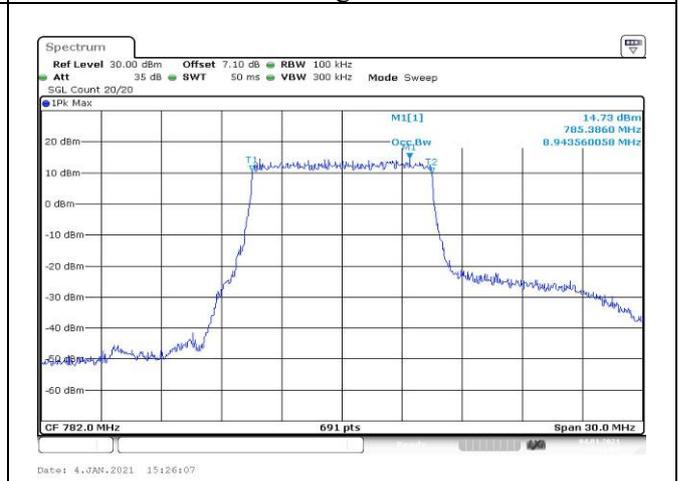


Fig.10

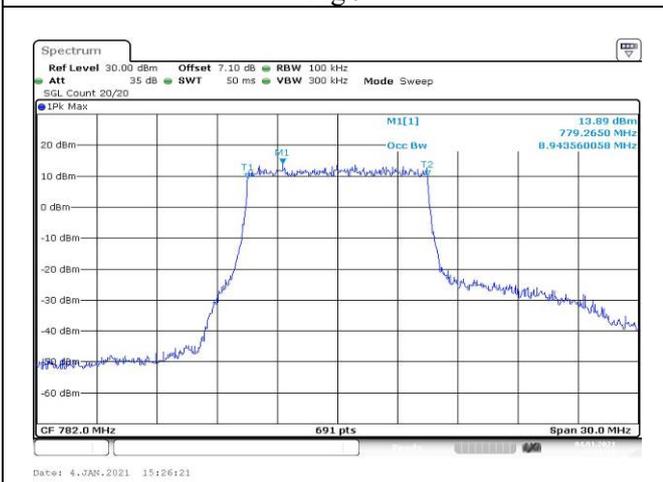


Fig.11

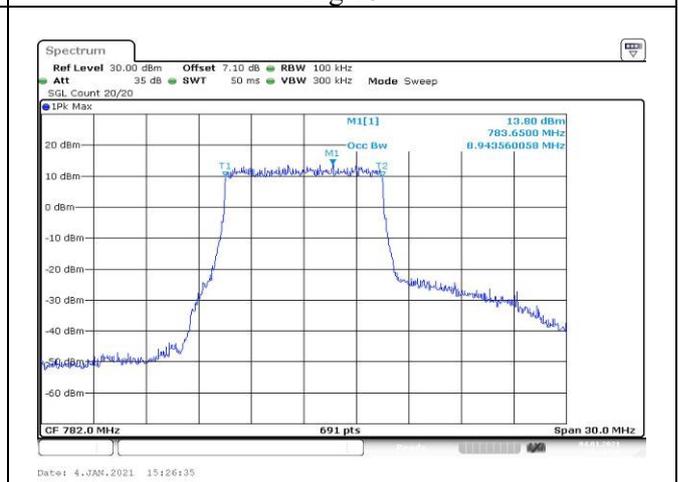


Fig.12

3 Emission Bandwidth

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
13	779.5	23205	5	25	0	4.928	Fig.1	4.928	Fig.2	4.928	Fig.3
	782	23230		25	0	4.971	Fig.4	4.971	Fig.5	5.036	Fig.6
	784.5	23255		25	0	4.993	Fig.7	4.949	Fig.8	5.036	Fig.9
	782	23230	10	50	0	9.768	Fig.10	9.638	Fig.11	9.682	Fig.12

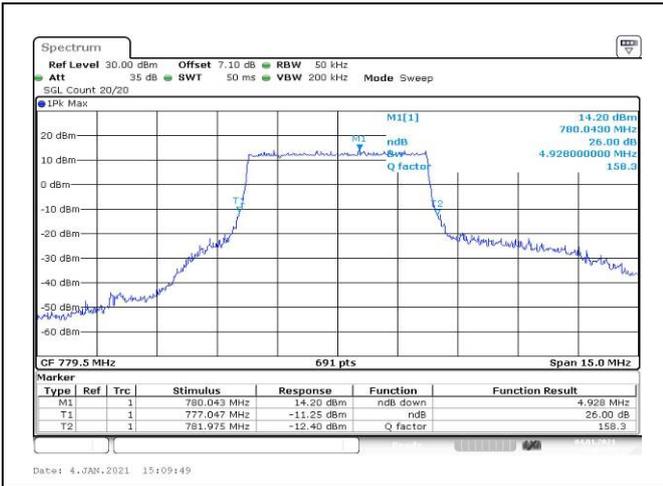


Fig.1

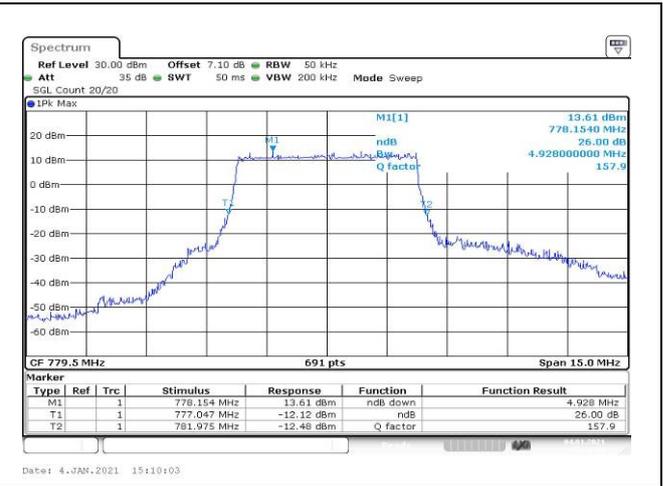


Fig.2

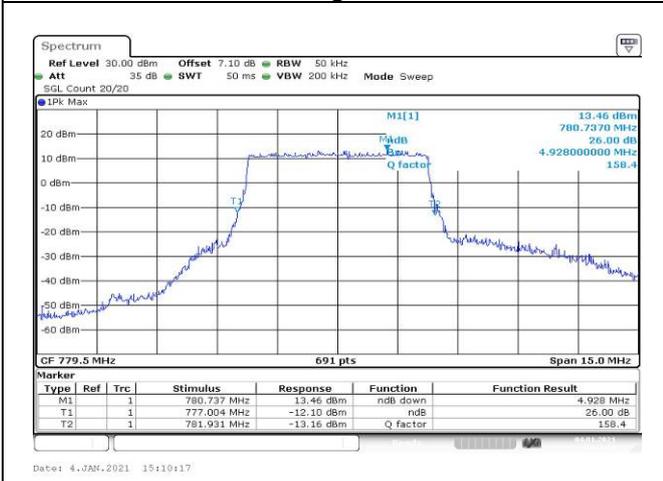


Fig.3

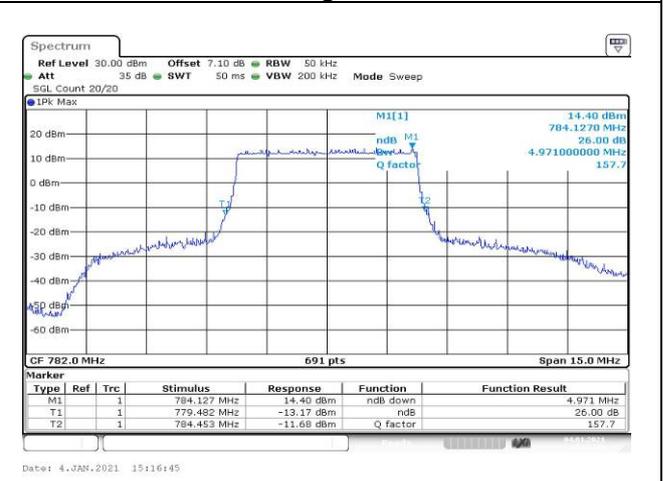


Fig.4

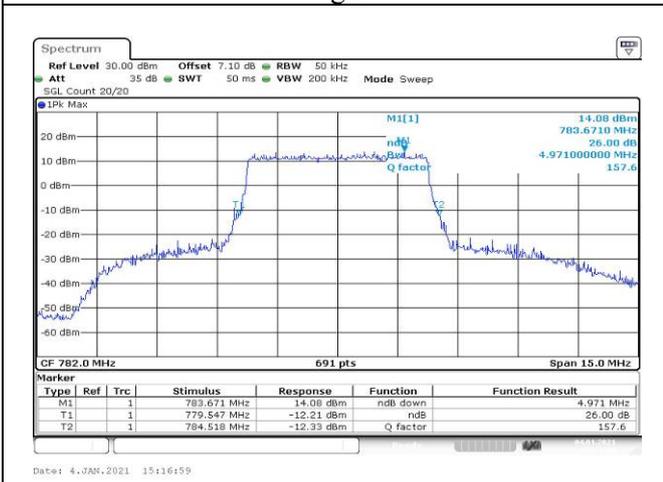


Fig.5

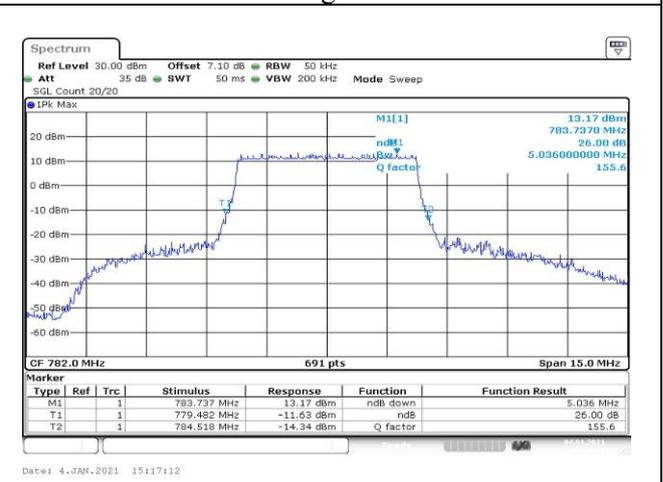


Fig.6

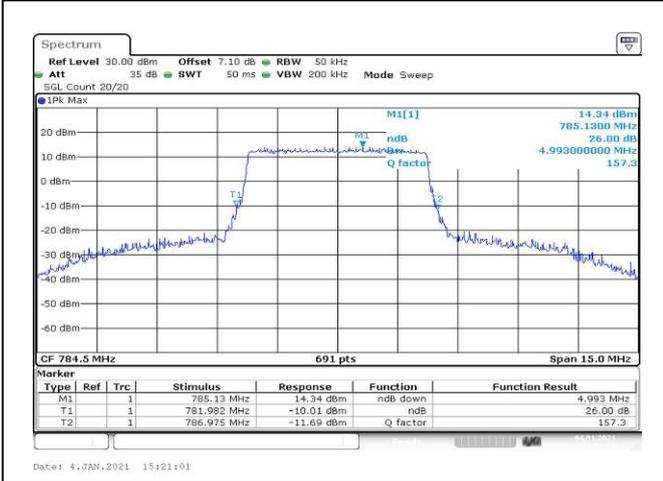


Fig.7

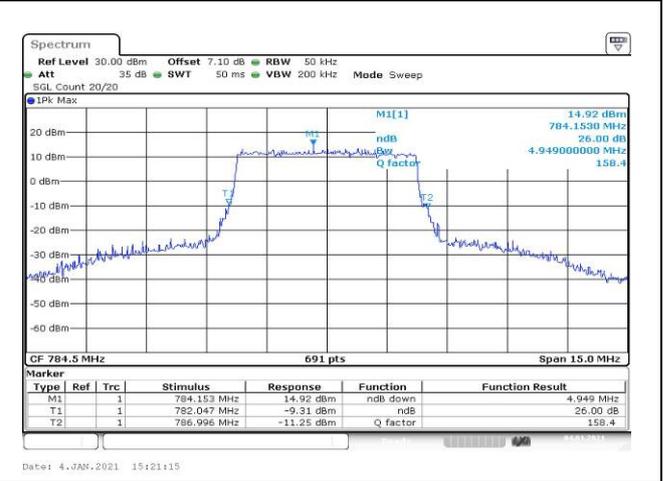


Fig.8

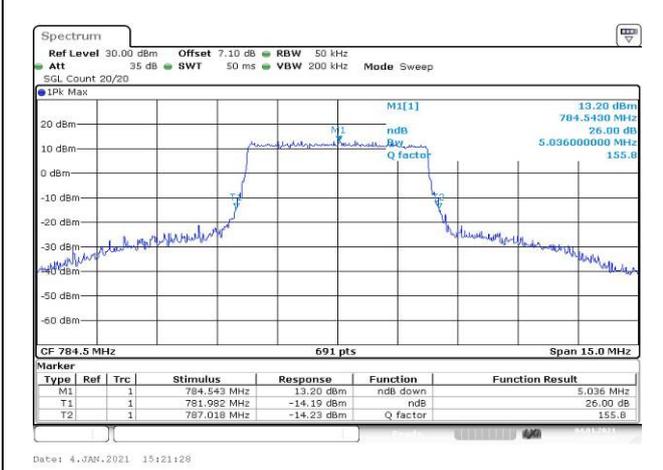


Fig.9

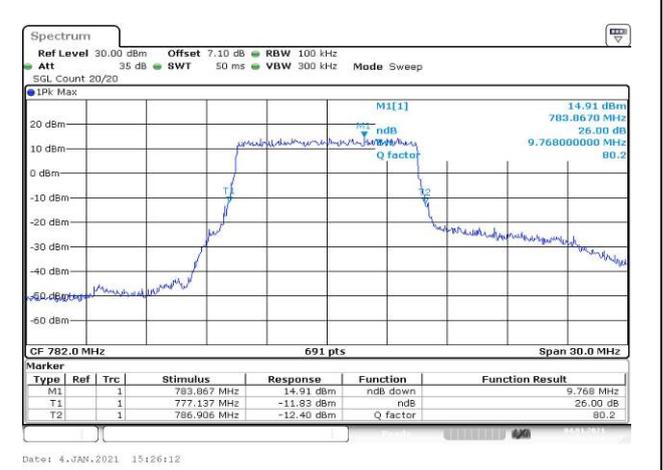


Fig.10

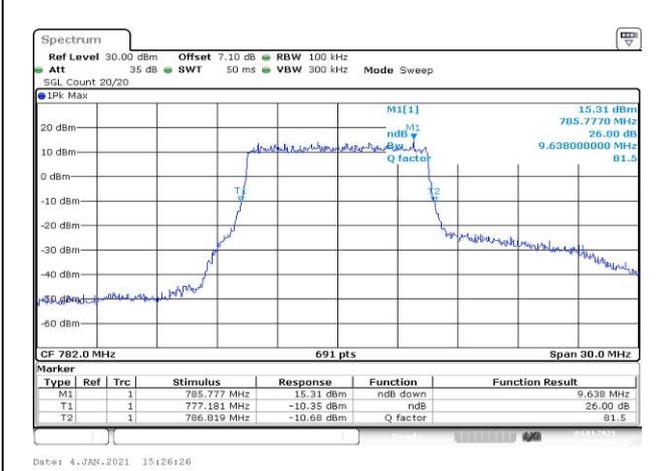


Fig.11

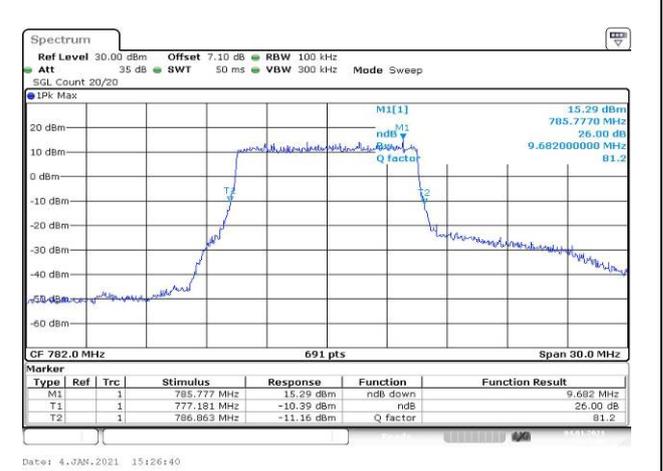


Fig.12

4 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM	64-QAM
13	779.5	23205	5	1	24	Fig.1	Fig.2	Fig.3
	779.5	23205		25	0	Fig.4	Fig.5	Fig.6
	782	23230		1	24	Fig.7	Fig.8	Fig.9
	782	23230		25	0	Fig.10	Fig.11	Fig.12
	784.5	23255		1	24	Fig.13	Fig.14	Fig.15
	784.5	23255		25	0	Fig.16	Fig.17	Fig.18
	782	23230	10	1	49	Fig.19	Fig.20	Fig.21
	782	23230		50	0	Fig.22	Fig.23	Fig.24

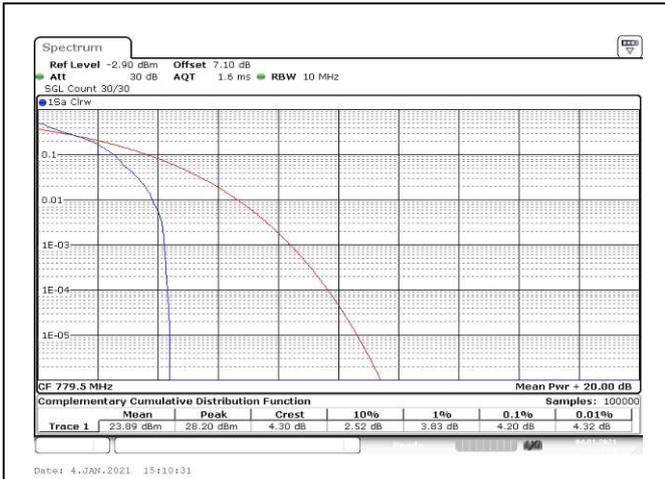


Fig.1

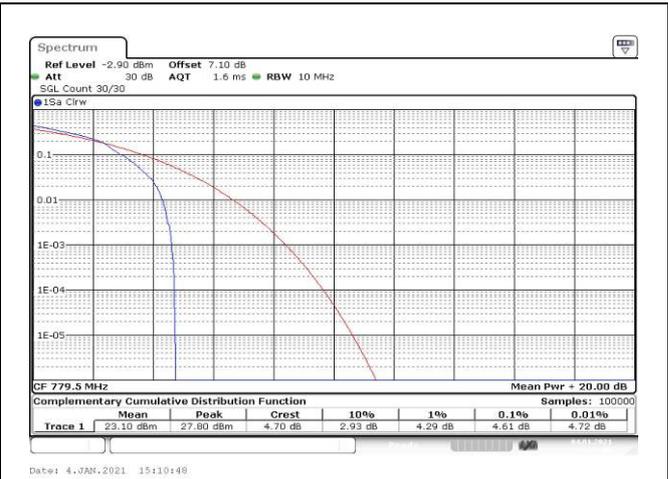


Fig.2



Fig.3

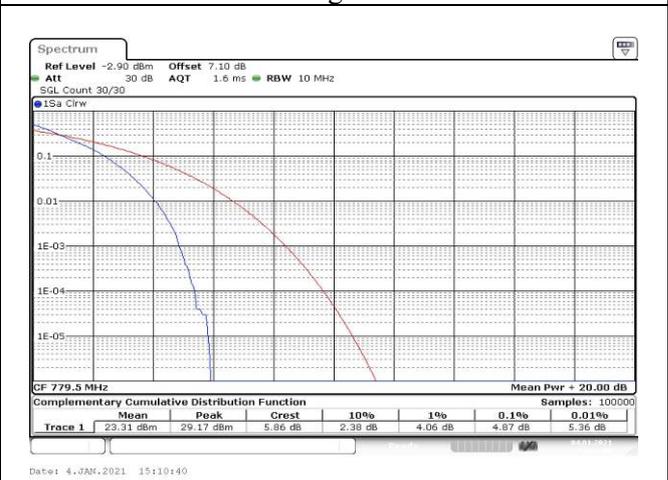


Fig.4

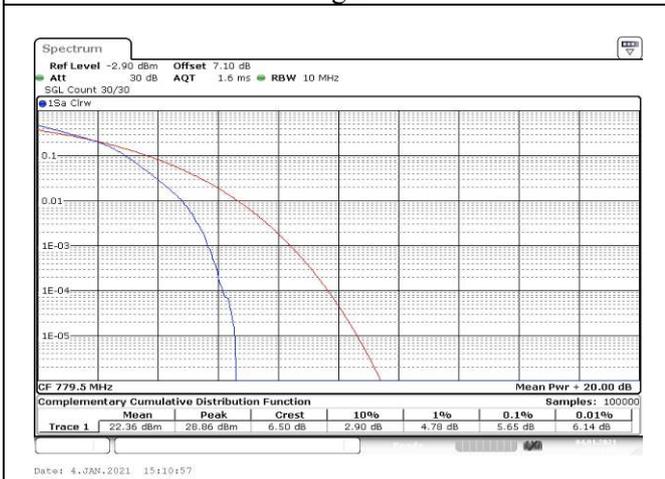


Fig.5

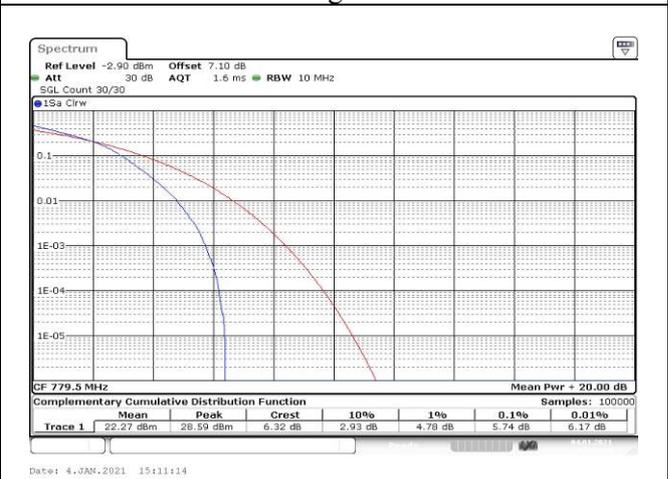


Fig.6

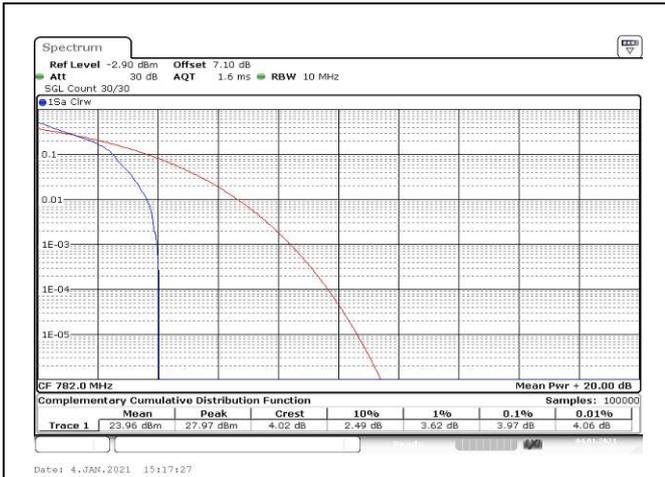


Fig.7

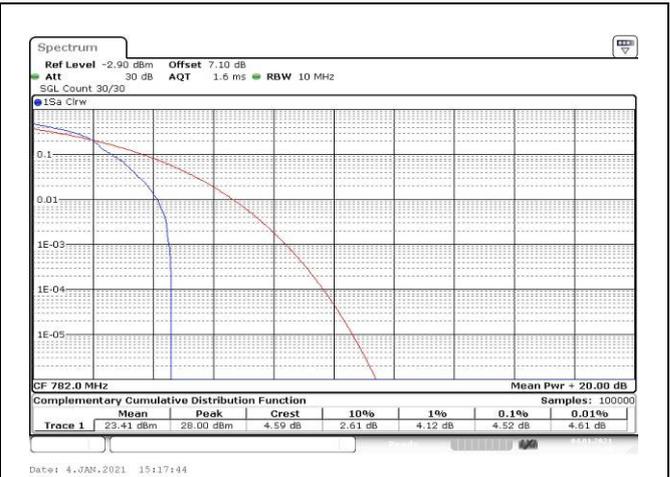


Fig.8

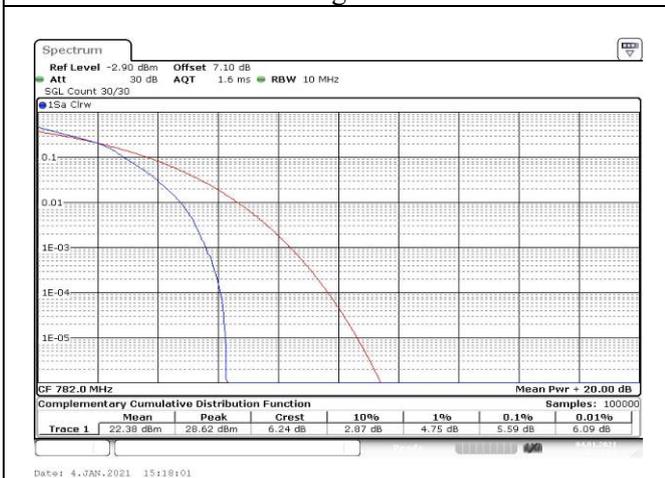


Fig.9

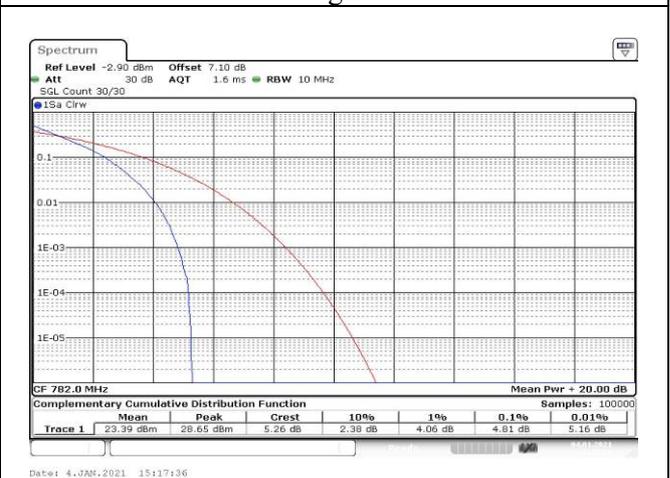


Fig.10

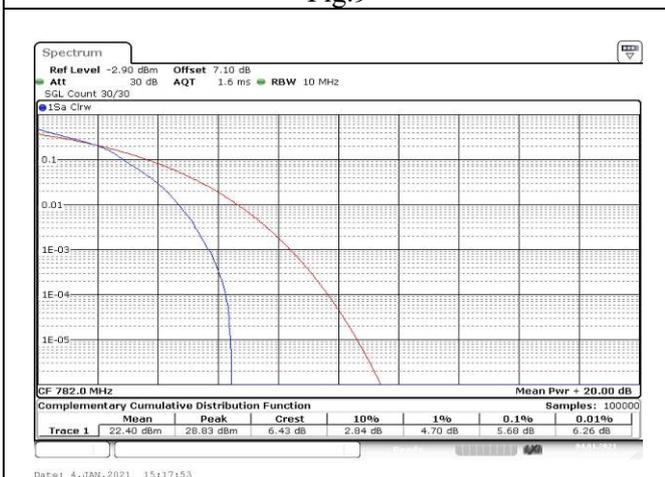


Fig.11

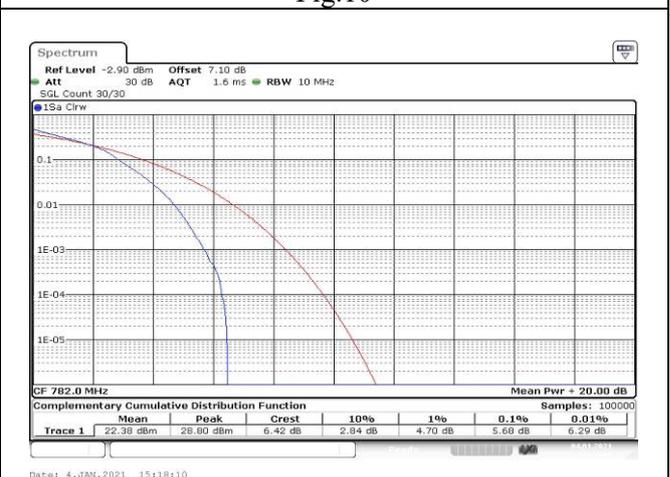


Fig.12

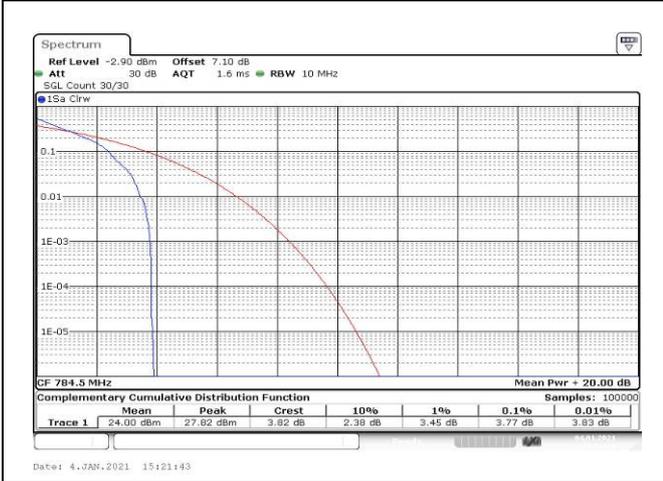


Fig.13

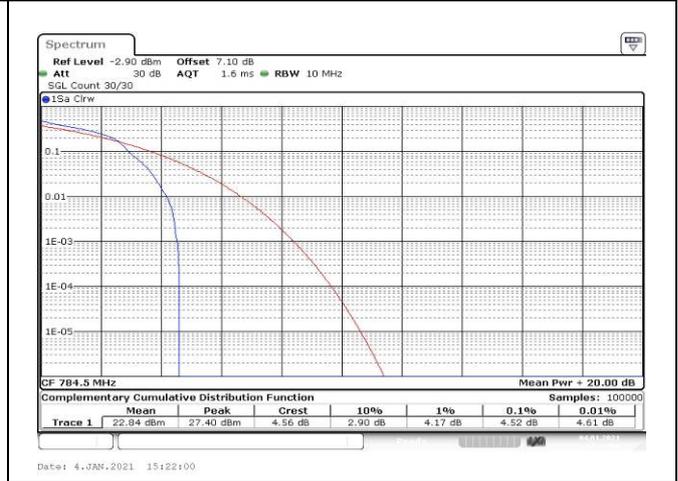


Fig.14

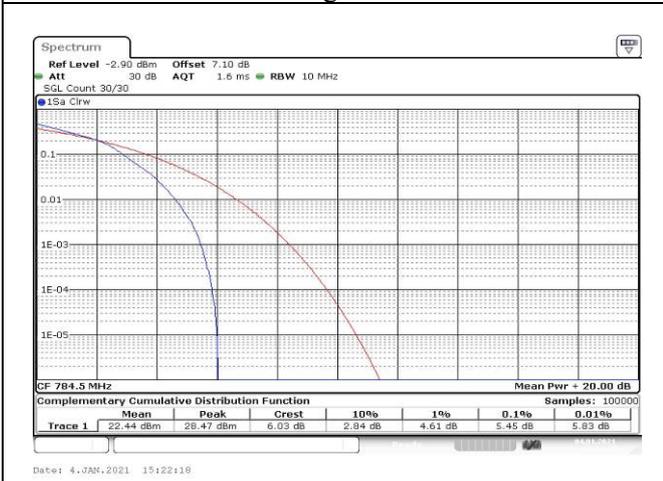


Fig.15

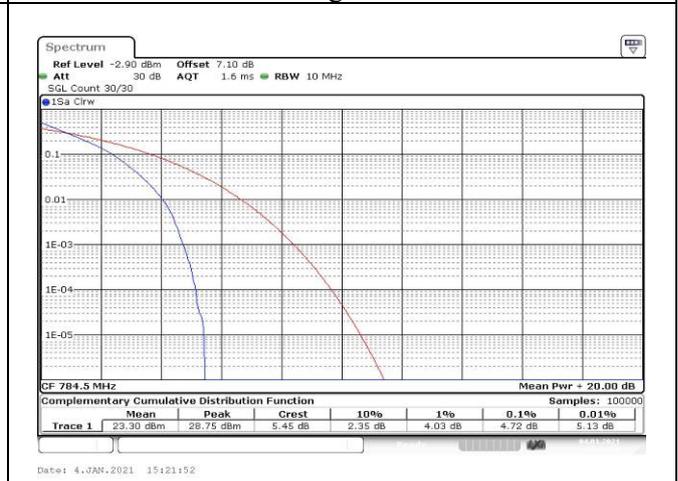


Fig.16

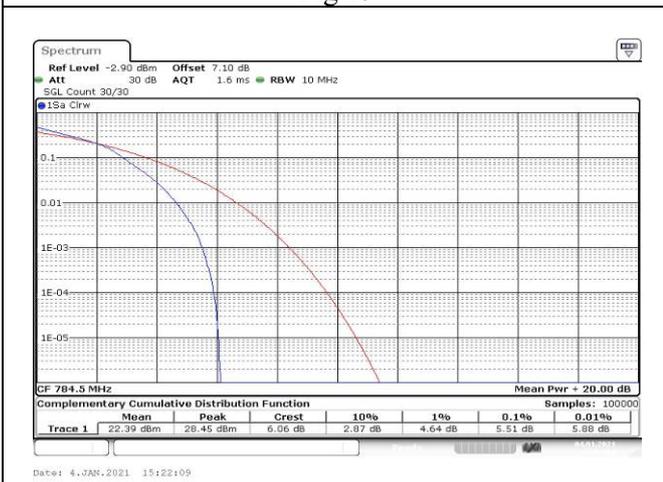


Fig.17

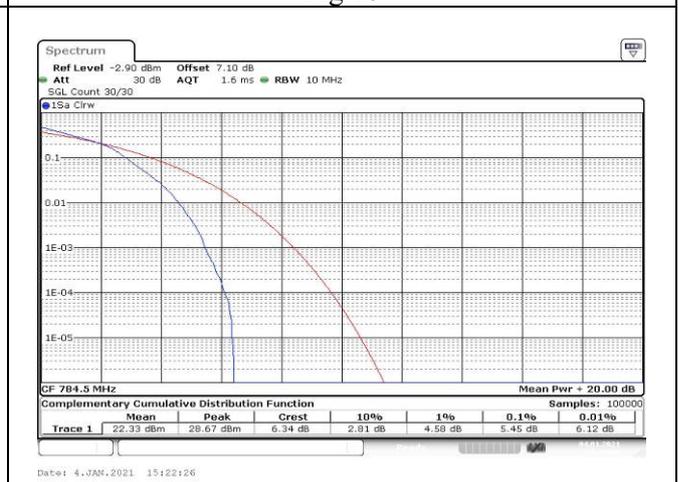


Fig.18

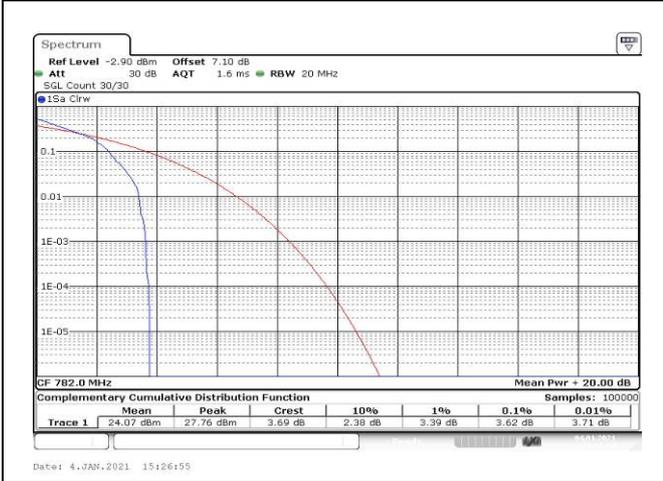


Fig.19

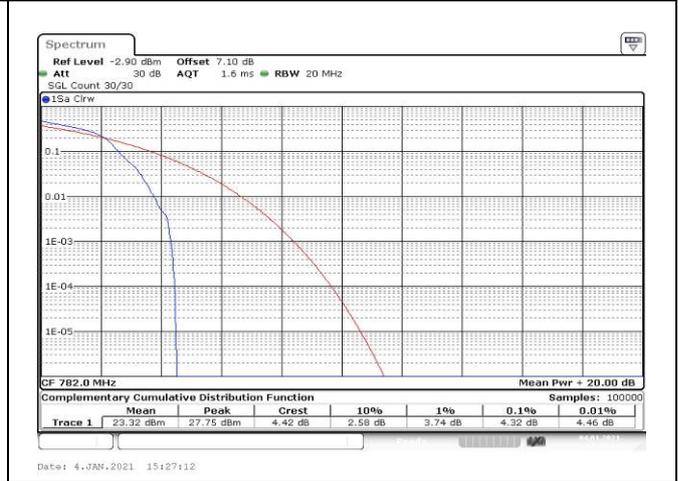


Fig.20

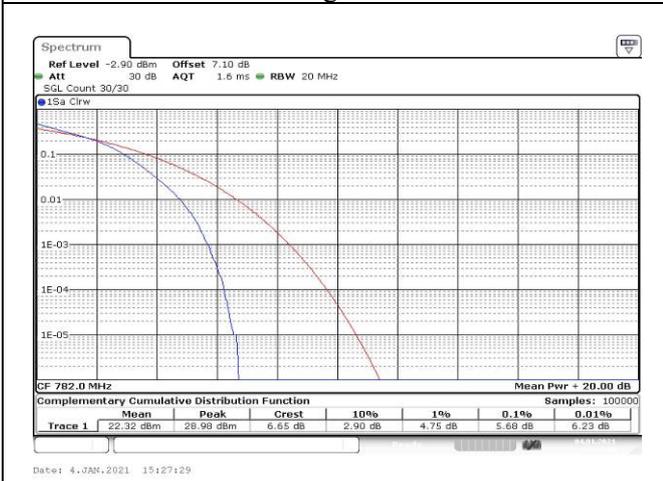


Fig.21

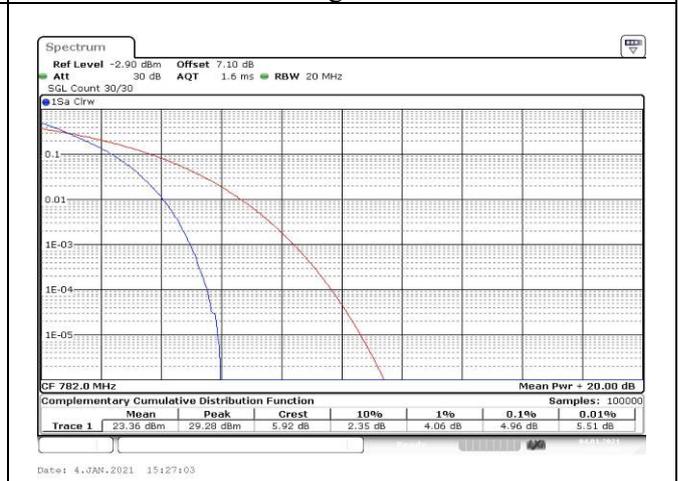


Fig.22

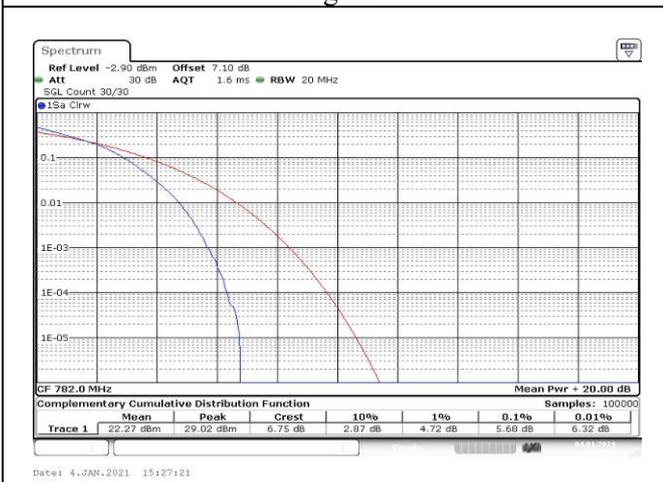


Fig.23

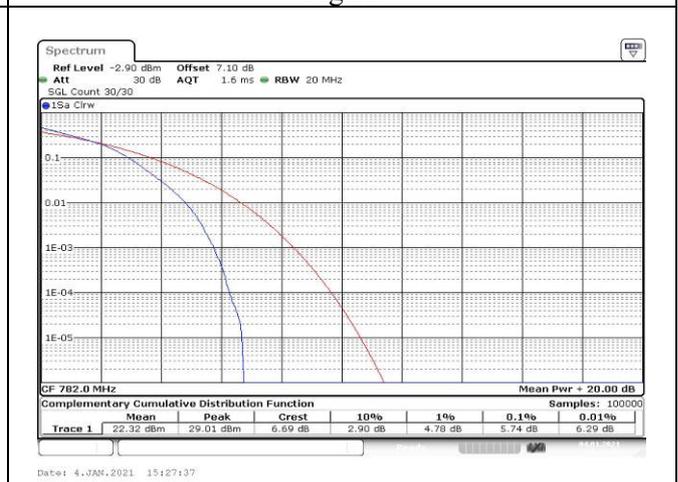


Fig.24

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

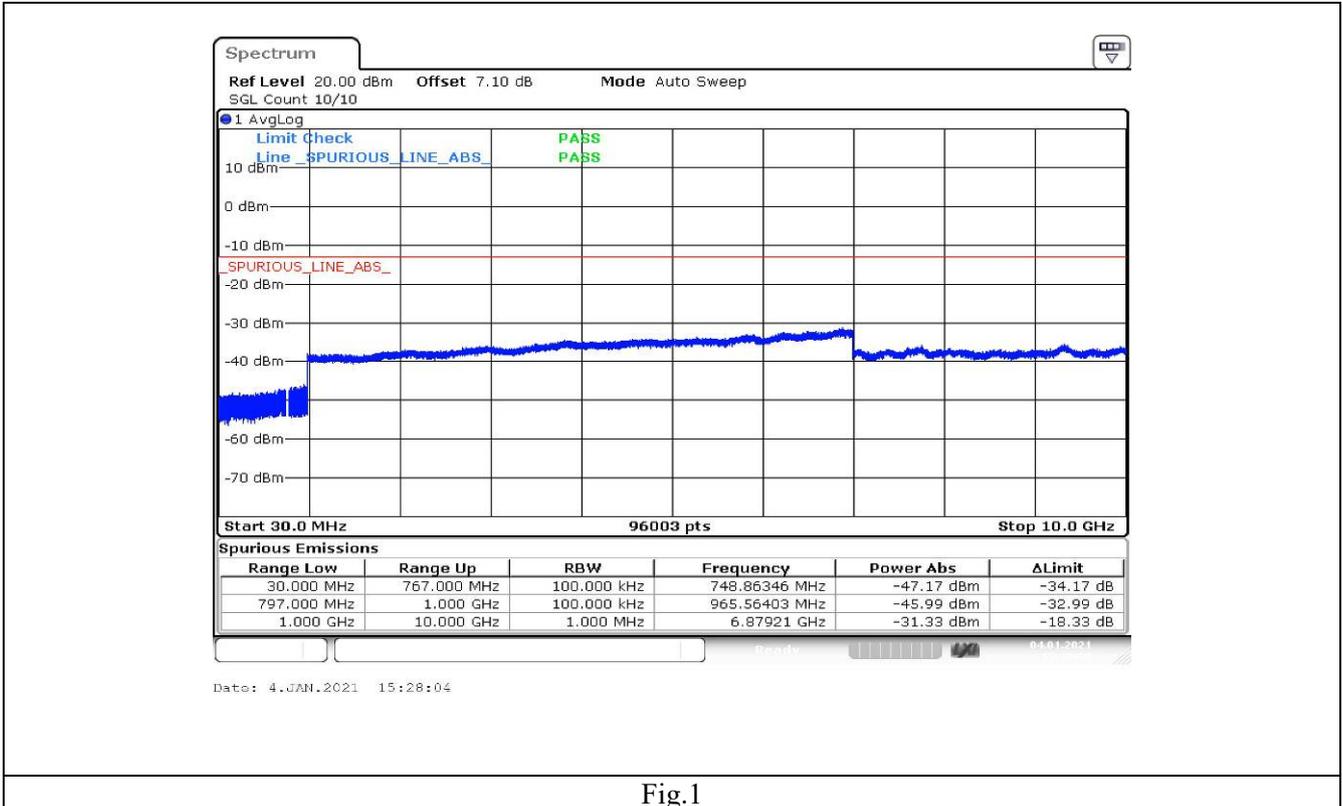


Fig.1

6 Band Edges Compliance

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

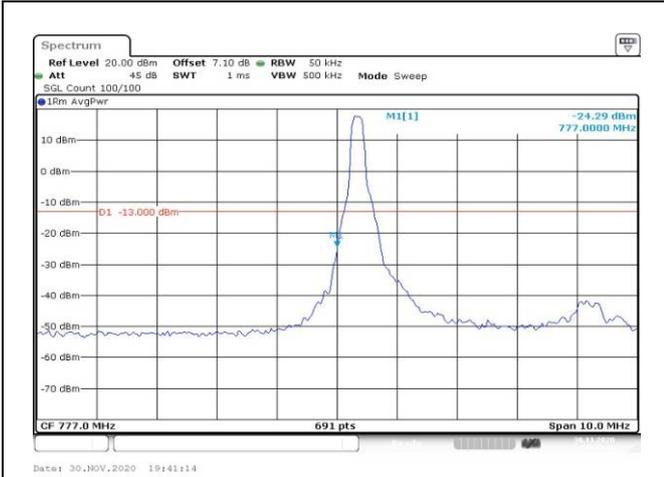


Fig.1

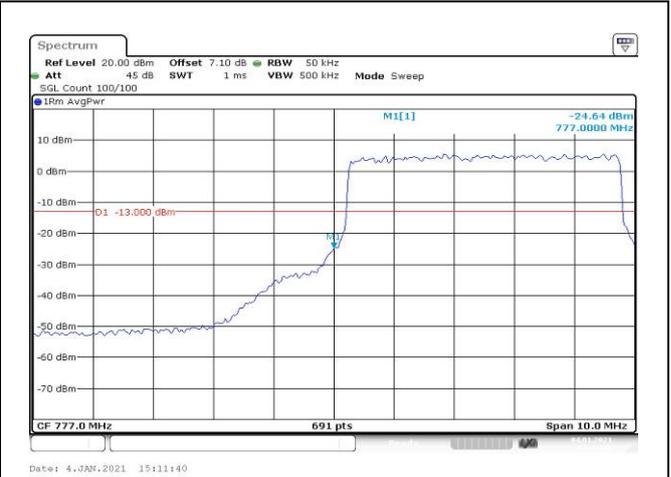


Fig.2

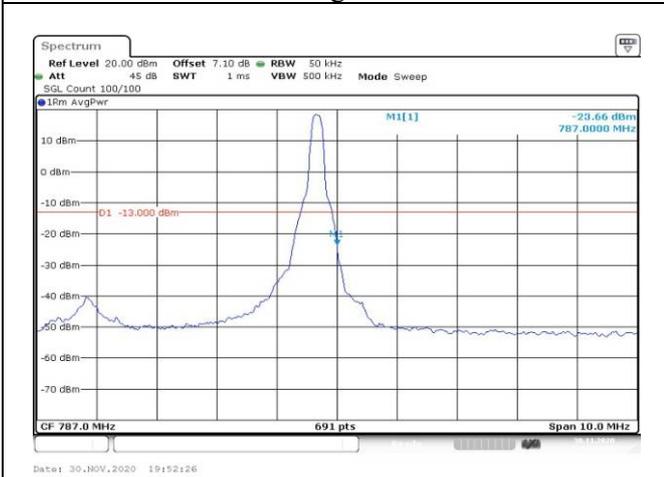


Fig.3



Fig.4

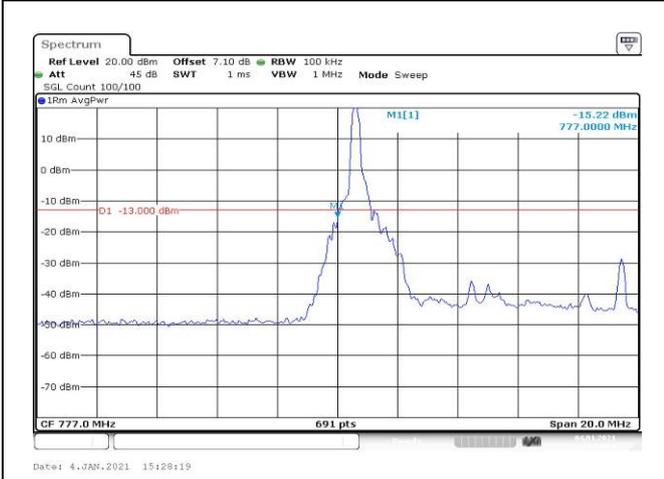


Fig.5

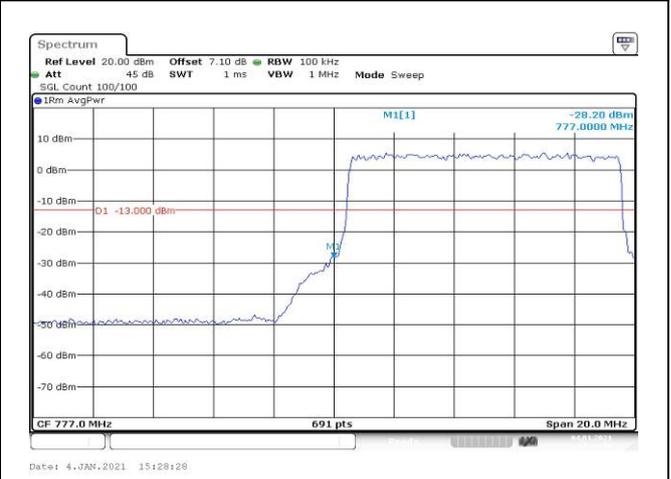


Fig.6

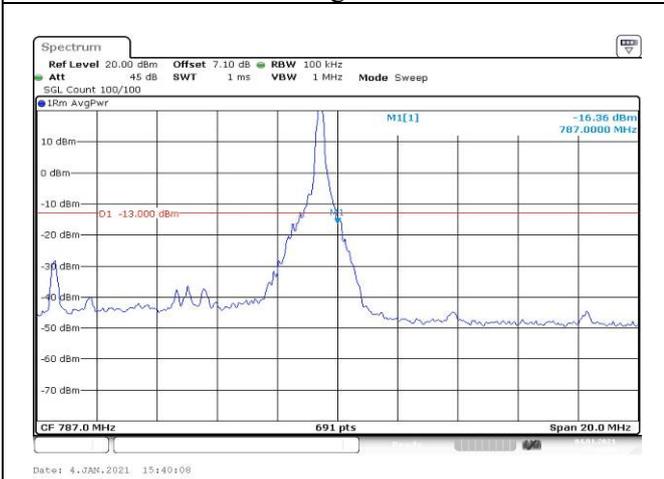


Fig.7



Fig.8

7 Emission Mask Edge

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



Fig.1



Fig.2

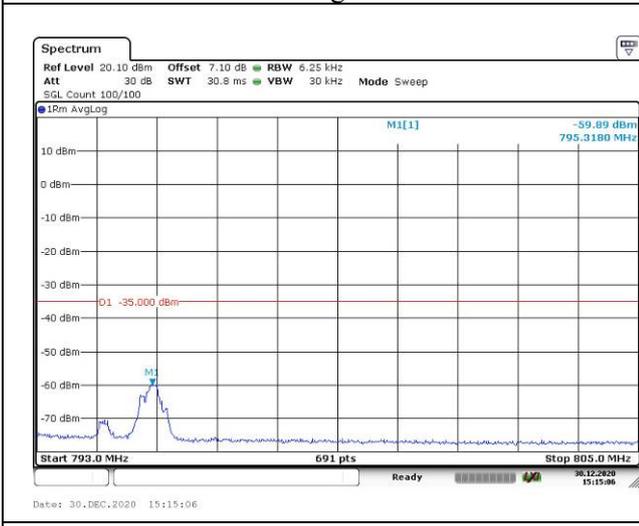


Fig.3

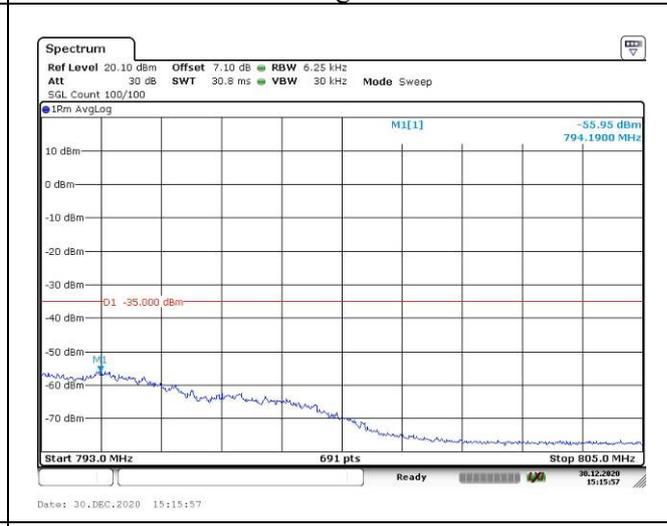


Fig.4

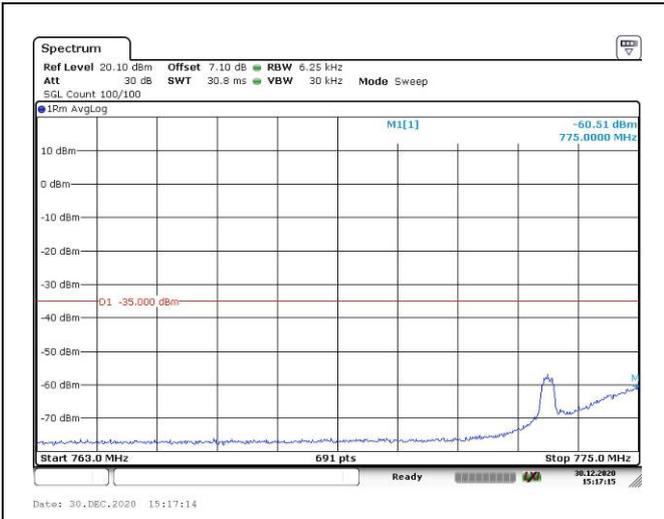


Fig.5

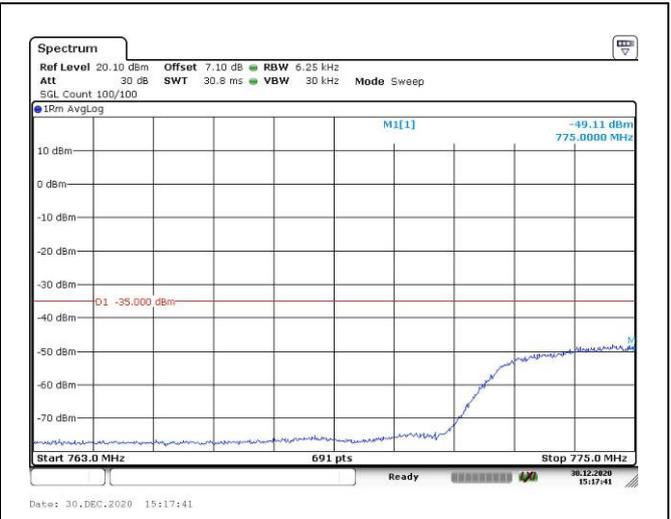


Fig.6

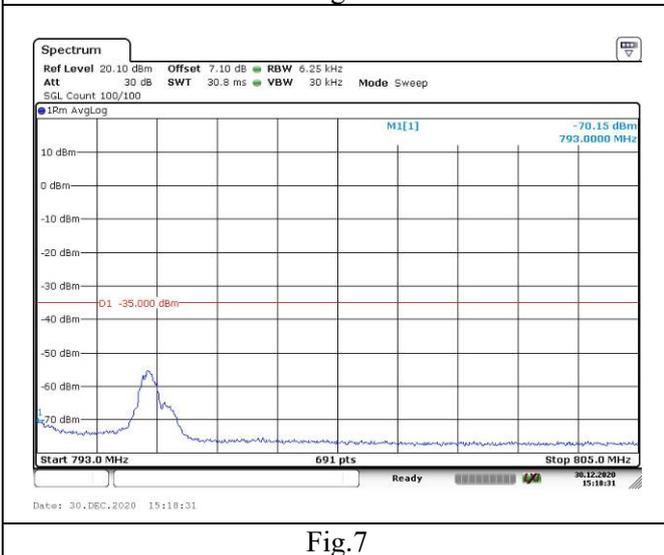


Fig.7

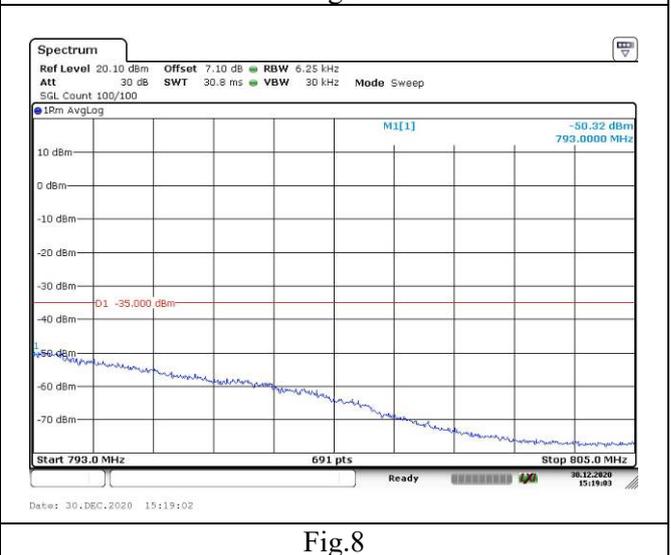


Fig.8

8 Frequency Stability

Temperature(°C)	Voltage	Test Result (ppm) Band13 Low Channel QPSK					
		1.4M	3M	5M	10M	15M	20M
-10	NV	---	---	-0.001	-0.003	---	---
0	NV	---	---	-0.003	-0.007	---	---
+10	NV	---	---	-0.005	-0.005	---	---
+20	NV	---	---	0.000	0.000	---	---
+30	NV	---	---	-0.001	-0.002	---	---
+40	NV	---	---	-0.014	-0.009	---	---
+50	NV	---	---	-0.007	-0.007	---	---
+55	NV	---	---	-0.009	-0.004	---	---
+20	LV	---	---	-0.006	-0.009	---	---
+20	HV	---	---	-0.003	-0.008	---	---

Temperature(°C)	Voltage	Test Result (ppm) Band13 High Channel QPSK					
		1.4M	3M	5M	10M	15M	20M
-10	NV	---	---	-0.012	-0.011	---	---
0	NV	---	---	-0.005	-0.010	---	---
+10	NV	---	---	-0.012	-0.005	---	---
+20	NV	---	---	0.000	0.000	---	---
+30	NV	---	---	-0.008	-0.006	---	---
+40	NV	---	---	-0.006	-0.002	---	---
+50	NV	---	---	-0.006	-0.010	---	---
+55	NV	---	---	-0.008	-0.008	---	---
+20	LV	---	---	-0.013	-0.010	---	---
+20	HV	---	---	-0.015	-0.008	---	---

9 Effective Radiated Power and Effective Isotropic Radiated Power

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conduct ed power (dBm)	ERP/ EIRP (dBm)	ERP/ EIRP (W)
QPSK	779.5	23205	5	1	0	24.04	18.19	0.066
				1	12	24.07	18.22	0.066
				1	24	23.97	18.12	0.065
				12	0	22.98	17.13	0.052
				12	7	23.12	17.27	0.053
				12	13	23.12	17.27	0.053
				25	0	23.10	17.25	0.053
	782	23230		1	0	24.05	18.20	0.066
				1	12	24.05	18.20	0.066
				1	24	24.07	18.22	0.066
				12	0	23.16	17.31	0.054
				12	7	23.19	17.34	0.054
				12	13	23.13	17.28	0.053
				25	0	23.10	17.25	0.053
	784.5	23255		1	0	24.10	18.25	0.067
				1	12	24.13	18.28	0.067
				1	24	24.13	18.28	0.067
				12	0	23.15	17.30	0.054
				12	7	23.14	17.29	0.054
				12	13	23.13	17.28	0.053
				25	0	23.11	17.26	0.053
16QAM	779.5	23205	1	0	23.16	17.31	0.054	
			1	12	23.24	17.39	0.055	
			1	24	23.28	17.43	0.055	
			12	0	21.98	16.13	0.041	
			12	7	22.19	16.34	0.043	
			12	13	22.19	16.34	0.043	
			25	0	22.06	16.21	0.042	
	782	23230	1	0	23.10	17.25	0.053	
			1	12	23.08	17.23	0.053	
			1	24	23.10	17.25	0.053	
			12	0	21.99	16.14	0.041	
			12	7	22.03	16.18	0.041	
			12	13	22.13	16.28	0.042	
			25	0	22.20	16.35	0.043	
	784.5	23255	1	0	23.00	17.15	0.052	
			1	12	22.98	17.13	0.052	
			1	24	23.00	17.15	0.052	
			12	0	22.15	16.30	0.043	
			12	7	22.10	16.25	0.042	
			12	13	22.05	16.20	0.042	
			25	0	22.18	16.33	0.043	

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conduct ed power (dBm)	ERP/ EIRP (dBm)	ERP/ EIRP (W)
64QAM	779.5	23205	5	1	0	22.07	16.22	0.042
				1	12	22.08	16.23	0.042
				1	24	22.10	16.25	0.042
				12	0	22.10	16.25	0.042
				12	7	22.08	16.23	0.042
				12	13	22.09	16.24	0.042
				25	0	22.10	16.25	0.042
	782	23230		1	0	22.13	16.28	0.042
				1	12	22.18	16.33	0.043
				1	24	22.13	16.28	0.042
				12	0	22.19	16.34	0.043
				12	7	22.17	16.32	0.043
				12	13	22.17	16.32	0.043
				25	0	22.17	16.32	0.043
	784.5	23255		1	0	22.20	16.35	0.043
				1	12	22.12	16.27	0.042
				1	24	22.14	16.29	0.043
				12	0	22.16	16.31	0.043
				12	7	22.12	16.27	0.042
				12	13	22.14	16.29	0.043
				25	0	22.14	16.29	0.043

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conduct ed power (dBm)	ERP/ EIRP (dBm)	ERP/ EIRP (W)
QPSK	782	23230	10	1	0	24.27	18.42	0.070
				1	25	24.19	18.34	0.068
				1	49	24.18	18.33	0.068
				25	0	23.16	17.31	0.054
				25	12	23.13	17.28	0.053
				25	25	23.15	17.30	0.054
				50	0	23.18	17.33	0.054
16QAM				1	0	23.52	17.67	0.058
				1	25	23.61	17.76	0.060
				1	49	23.57	17.72	0.059
				25	0	22.10	16.25	0.042
				25	12	22.22	16.37	0.043
				25	25	22.20	16.35	0.043
				50	0	22.11	16.26	0.042
64QAM				1	0	22.11	16.26	0.042
				1	25	22.11	16.26	0.042
				1	49	22.11	16.26	0.042
				25	0	22.11	16.26	0.042
				25	12	22.11	16.26	0.042
				25	25	22.11	16.26	0.042
				50	0	22.11	16.26	0.042