

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 30

1 RF Power Output

RF Power Output						
Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2307.5	27685	5	1	0	24.00
				1	12	24.13
				1	24	24.13
				12	0	23.09
				12	7	23.20
				12	13	23.22
				25	0	23.23
	2310	27710		1	0	23.46
				1	12	23.47
				1	24	23.34
				12	0	22.61
				12	7	22.75
				12	13	22.74
				25	0	22.76
	2312.5	27735		1	0	23.56
				1	12	23.60
				1	24	23.67
				12	0	22.62
				12	7	22.78
				12	13	22.75
				25	0	22.69
16QAM	2307.5	27685	1	0	22.40	
			1	12	22.57	
			1	24	22.56	
			12	0	21.20	
			12	7	21.27	
			12	13	21.30	
			25	0	22.17	
	2310	27710	1	0	22.60	
			1	12	22.79	
			1	24	22.83	
			12	0	21.57	
			12	7	21.74	
			12	13	21.71	
			25	0	21.74	
	2312.5	27735	1	0	22.55	
			1	12	22.64	
			1	24	22.65	
			12	0	21.57	
			12	7	21.68	
			12	13	21.73	
			25	0	21.78	

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
64QAM	2307.5	27685	5	1	0	22.24
				1	12	22.21
				1	24	22.17
				12	0	22.24
				12	7	22.26
				12	13	22.26
	25	0		22.16		
	2310	27710		1	0	21.75
				1	12	21.68
				1	24	21.71
				12	0	20.67
				12	7	20.70
				12	13	20.72
	25	0		20.72		
	2312.5	27735		1	0	21.80
				1	12	21.74
				1	24	21.80
				12	0	20.75
				12	7	20.80
				12	13	20.79
				25	0	20.73

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2310	27710	10	1	0	24.19
				1	25	23.97
				1	49	23.92
				25	0	23.19
				25	12	23.32
				25	25	23.34
				50	0	23.32
16QAM				1	0	23.01
				1	25	22.78
				1	49	22.75
				25	0	21.23
				25	12	21.48
				25	25	21.47
				50	0	21.27
64QAM				1	0	22.21
				1	25	22.20
				1	49	22.23
				25	0	21.21
				25	12	21.28
				25	25	21.19
				50	0	21.25

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2310	27710	10	1	0	24.19
				1	25	23.97
				1	49	23.92
				25	0	23.19
				25	12	23.32
				25	25	23.34
				50	0	23.32
16QAM				1	0	24.01
				1	25	23.78
				1	49	23.75
				25	0	22.23
				25	12	22.48
				25	25	22.47
				50	0	22.27
64QAM				1	0	22.21
				1	25	22.20
				1	49	22.23
				25	0	22.21
				25	12	22.28
				25	25	22.19
				50	0	22.25

2 Occupied Bandwidth

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of 99% Power (MHz)					
						QPSK		16-QAM		64-QAM	
30	2307.5	27685	5	25	0	4.472	Fig.1	4.472	Fig.2	4.472	Fig.3
	2310	27710		25	0	4.472	Fig.4	4.472	Fig.5	4.472	Fig.6
	2312.5	27735		25	0	4.472	Fig.7	4.472	Fig.8	4.472	Fig.9
	2310	27710	10	50	0	8.944	Fig.10	8.944	Fig.11	8.944	Fig.12

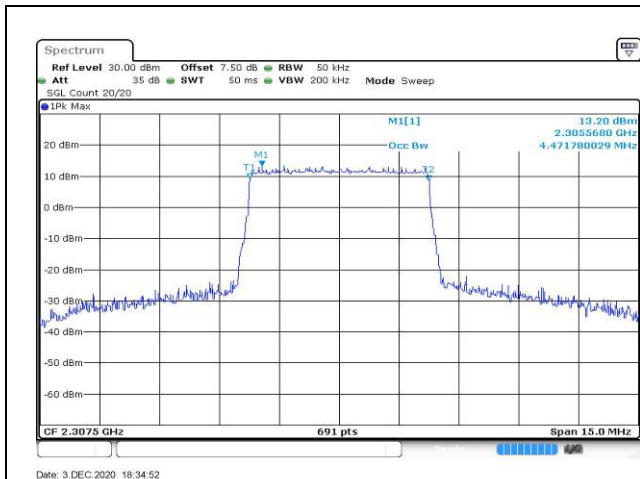


Fig.1

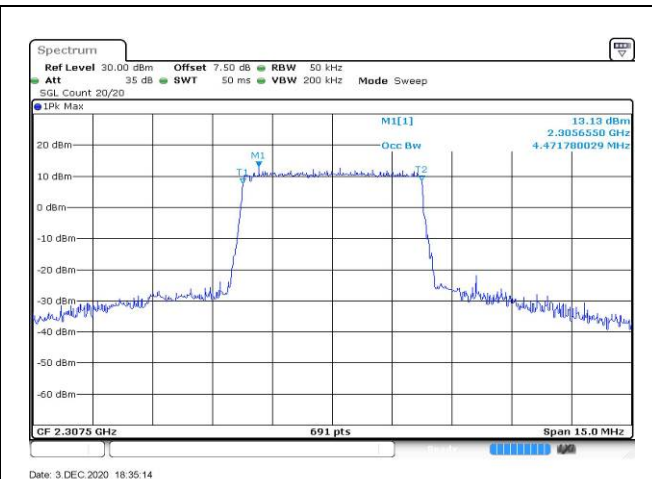


Fig.2

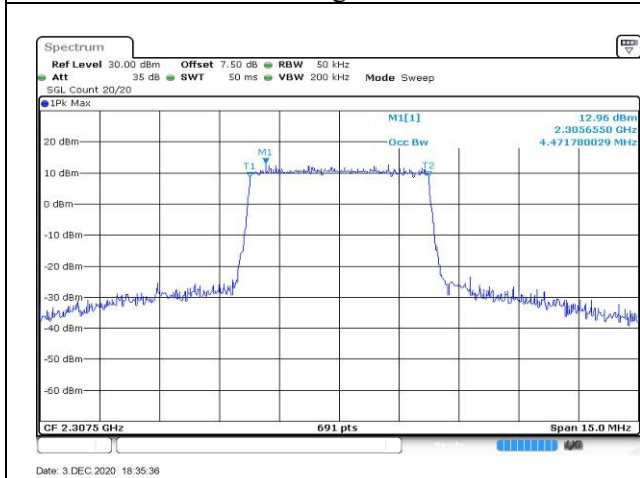


Fig.3

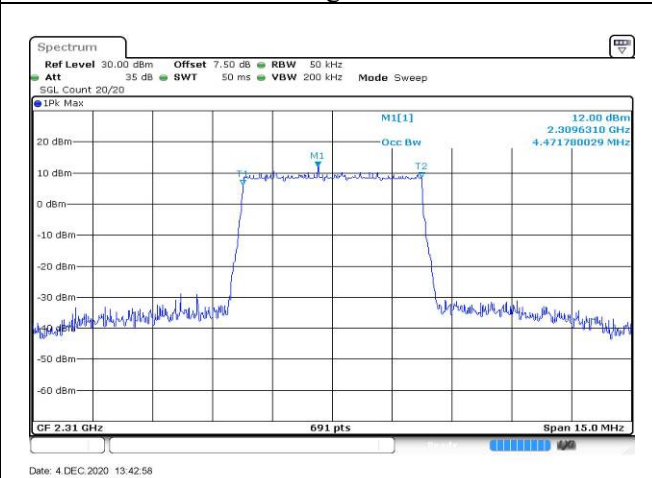


Fig.4

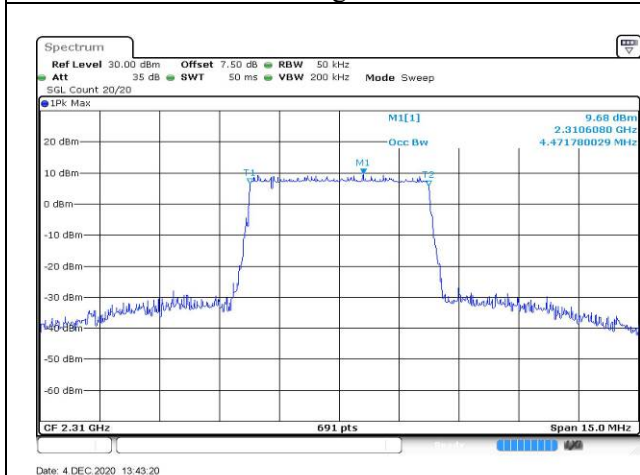


Fig.5

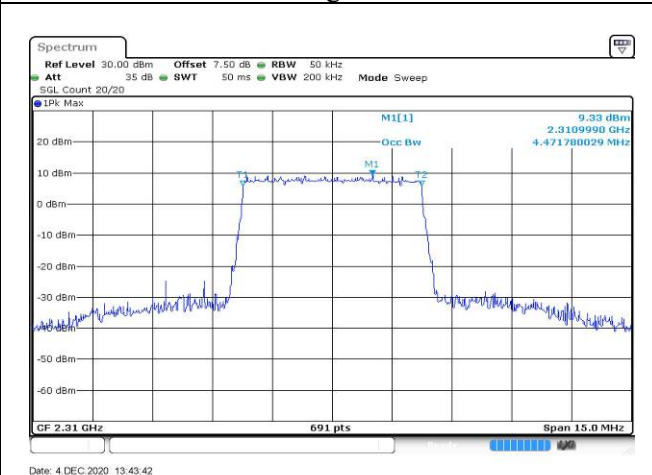
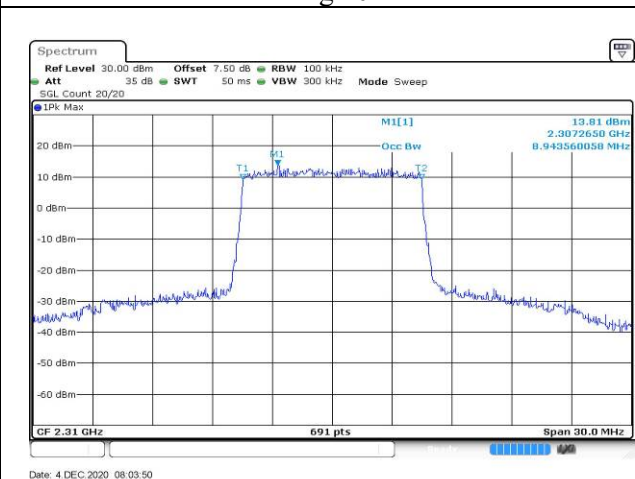
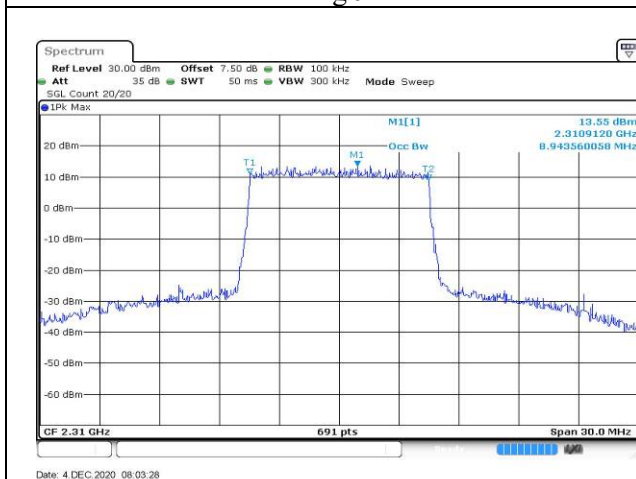
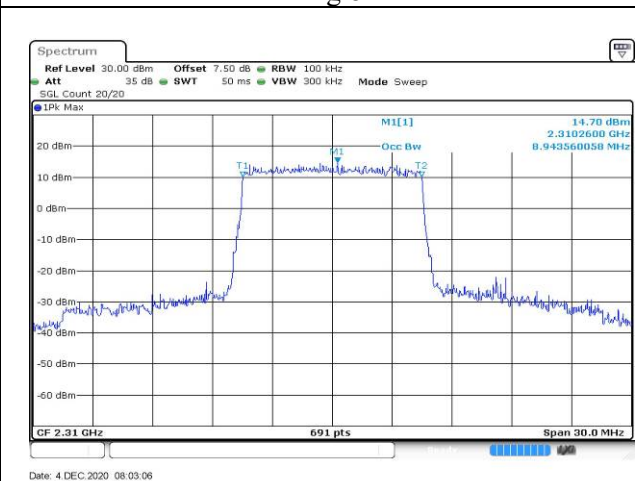
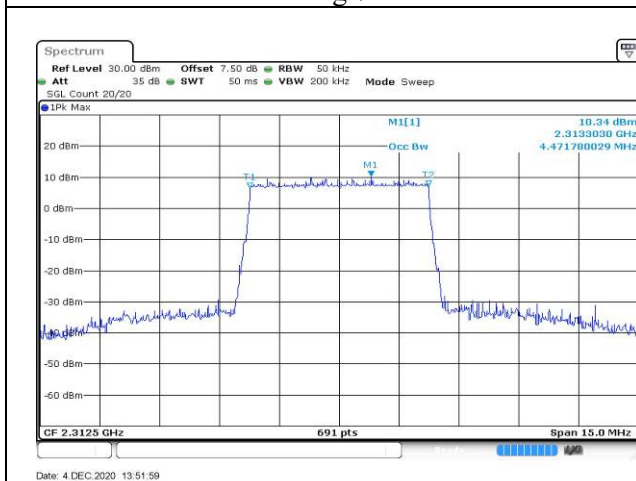
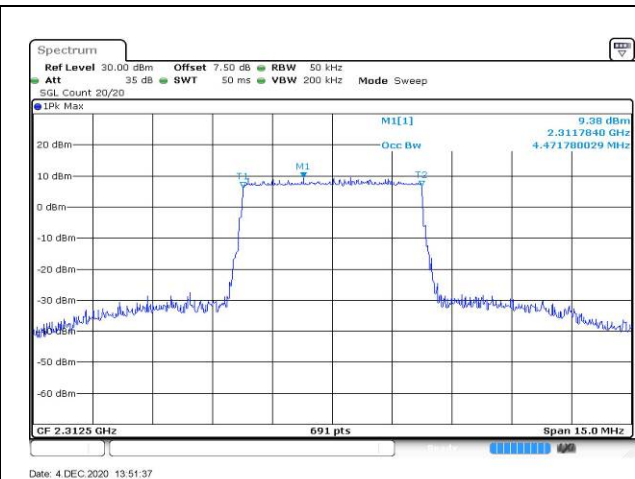
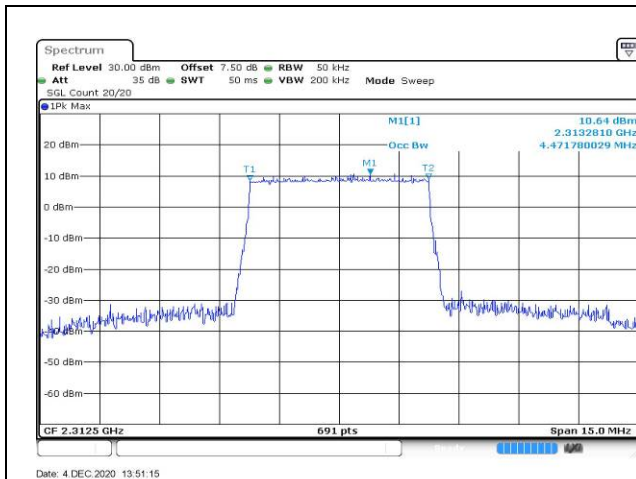


Fig.6



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	
30	2307.5	27685	5	25	0	4.863	Fig.1	4.819	Fig.2	4.884	Fig.3
	2310	27710		25	0	4.841	Fig.4	4.884	Fig.5	4.906	Fig.6
	2312.5	27735		25	0	4.884	Fig.7	4.841	Fig.8	4.819	Fig.9
	2310	27710	10	50	0	9.595	Fig.10	9.551	Fig.11	9.551	Fig.12

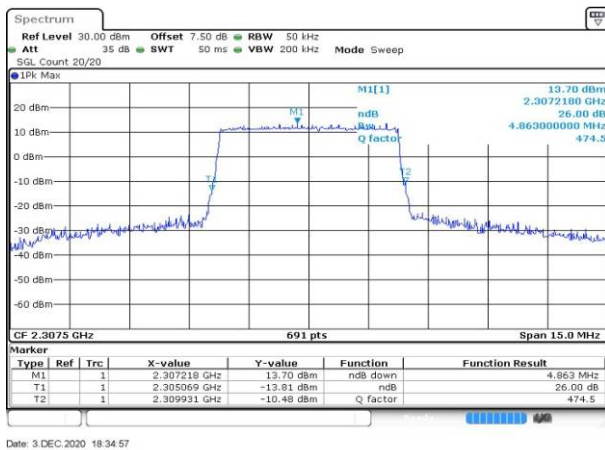


Fig.1

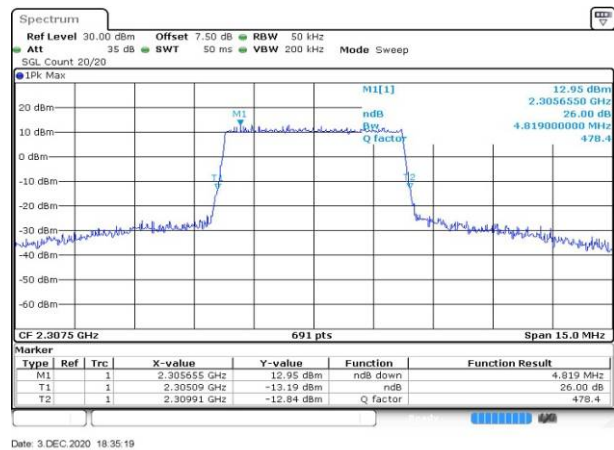


Fig.2

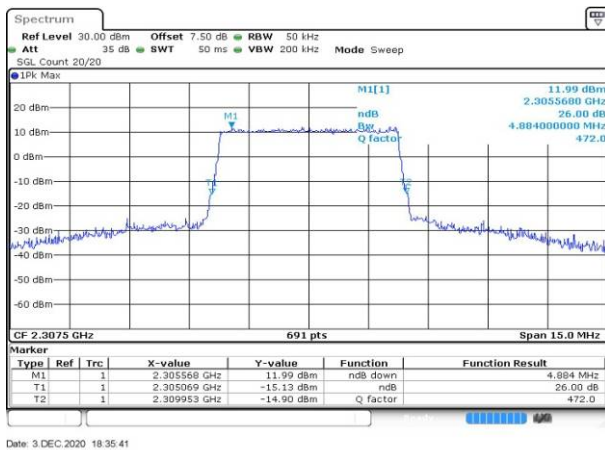


Fig.3

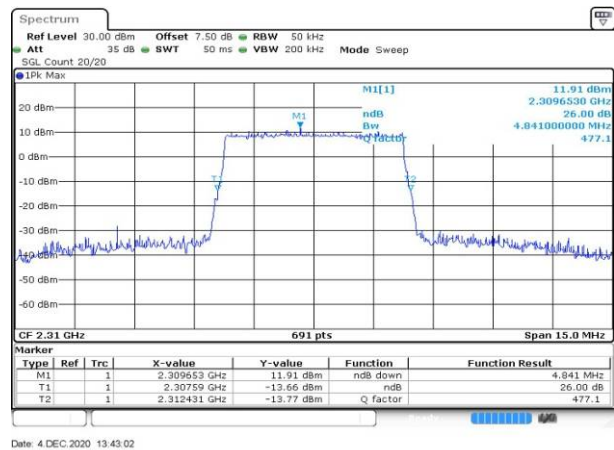


Fig.4

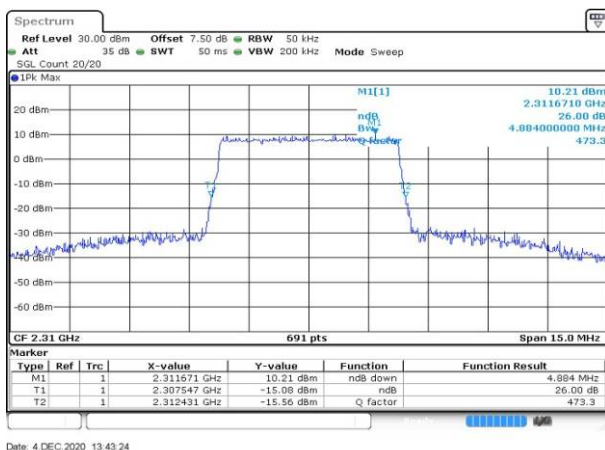


Fig.5

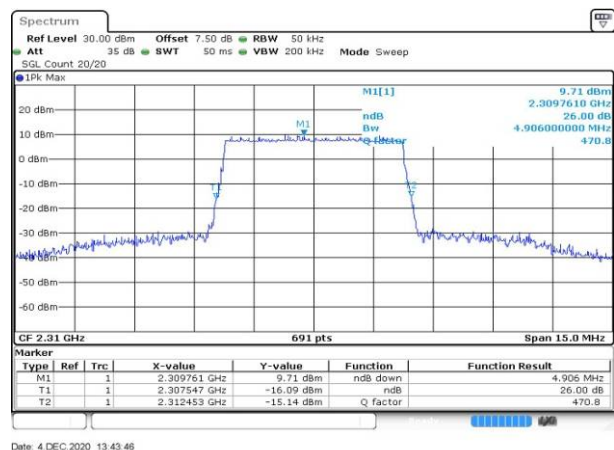


Fig.6

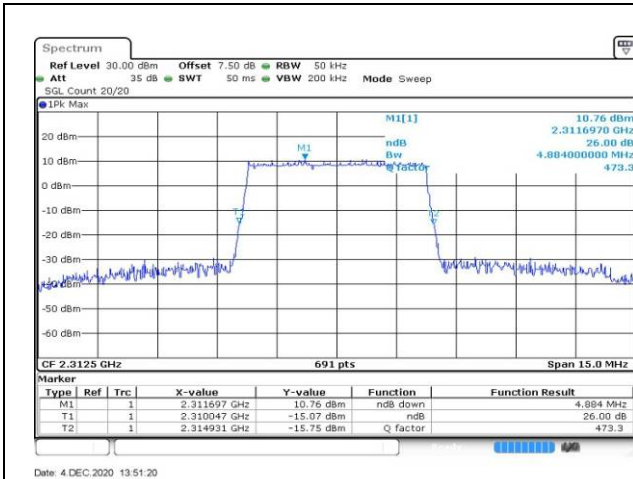


Fig.7

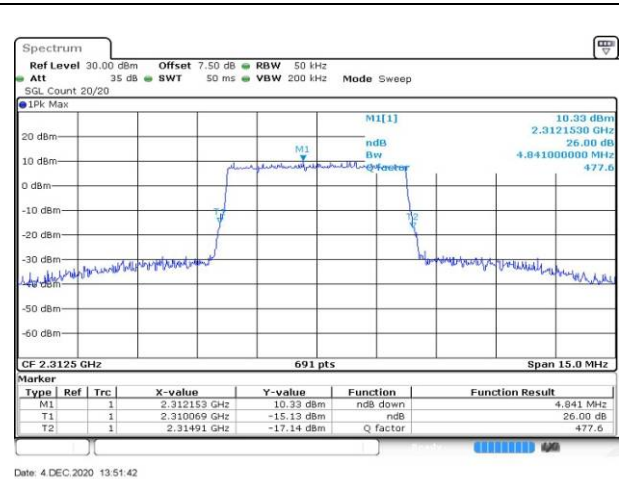


Fig.8

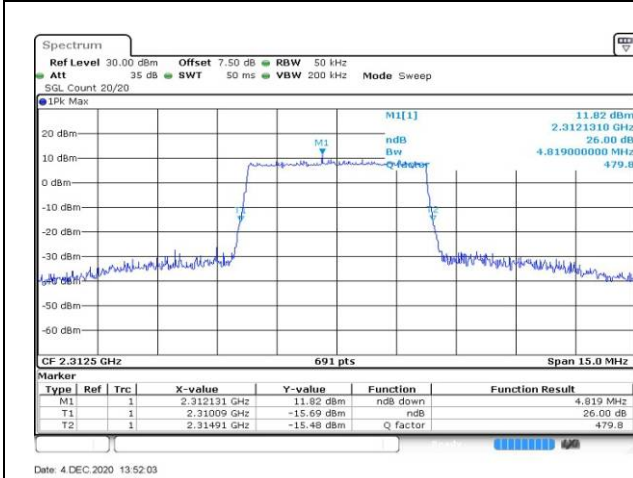


Fig.9

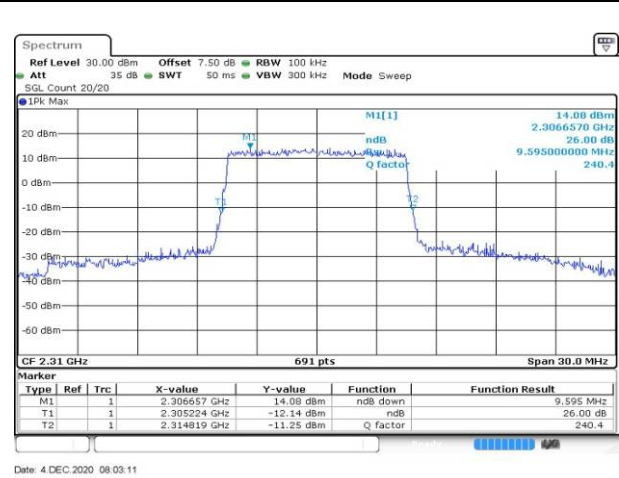


Fig.10

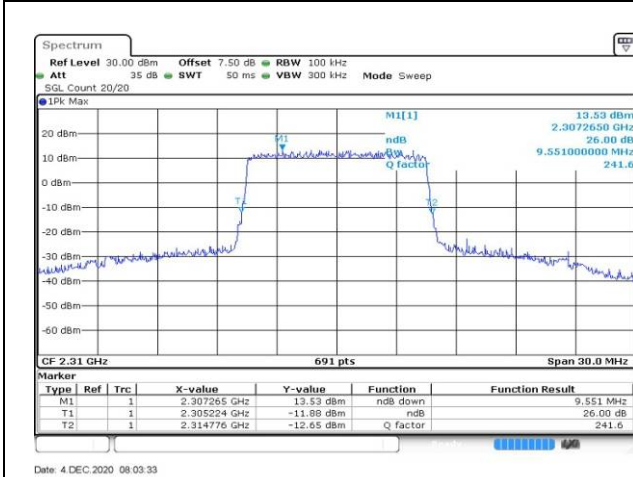


Fig.11

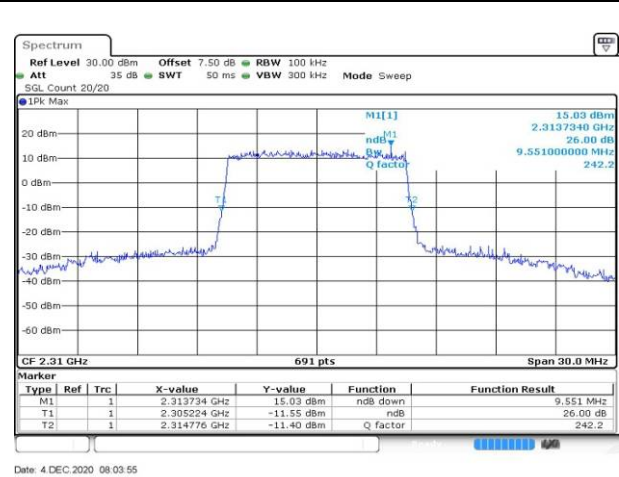


Fig.12

4 Peak-Average Ratio

4. Peak Average Ratio								
Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM	64-QAM
30	2307.5	27685	5	1	24	Fig.1	Fig.2	Fig.3
				25	0	Fig.4	Fig.5	Fig.6
	2310	27710		1	24	Fig.7	Fig.8	Fig.9
				25	0	Fig.10	Fig.11	Fig.12
	2312.5	27735		1	24	Fig.13	Fig.14	Fig.15
				25	0	Fig.16	Fig.17	Fig.18
	2310	27710	10	1	49	Fig.19	Fig.20	Fig.21
				50	0	Fig.22	Fig.23	Fig.24

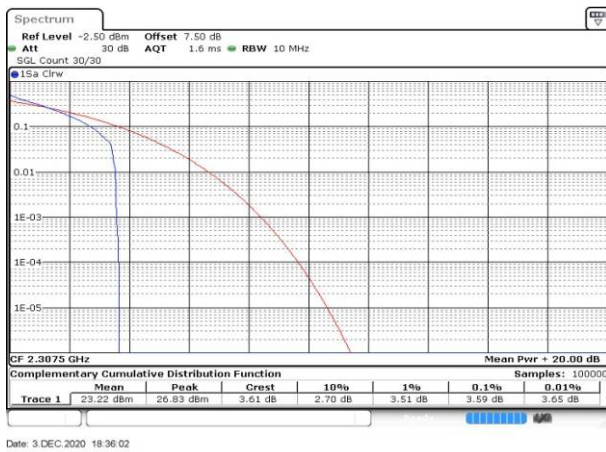


Fig.1

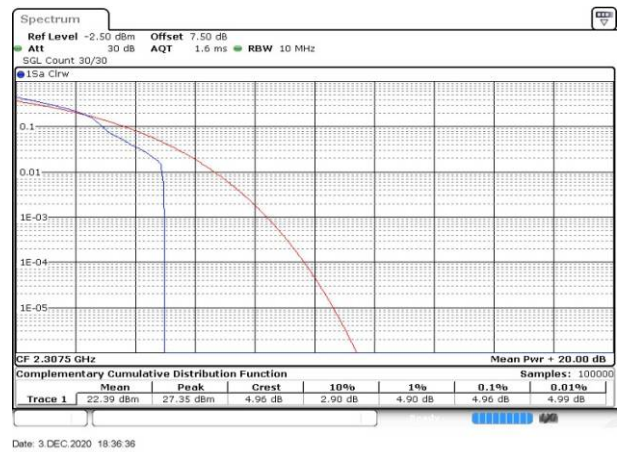


Fig.2

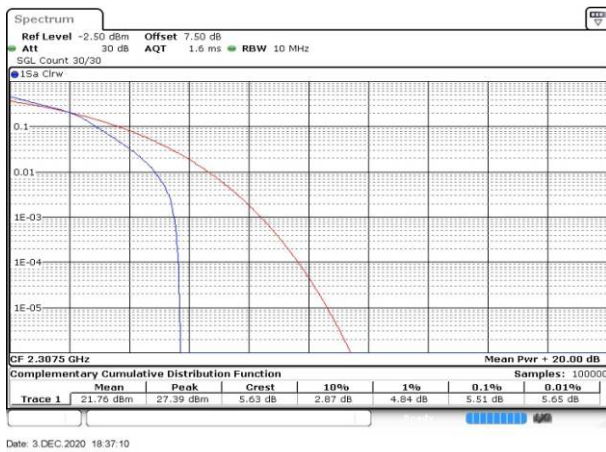


Fig.3

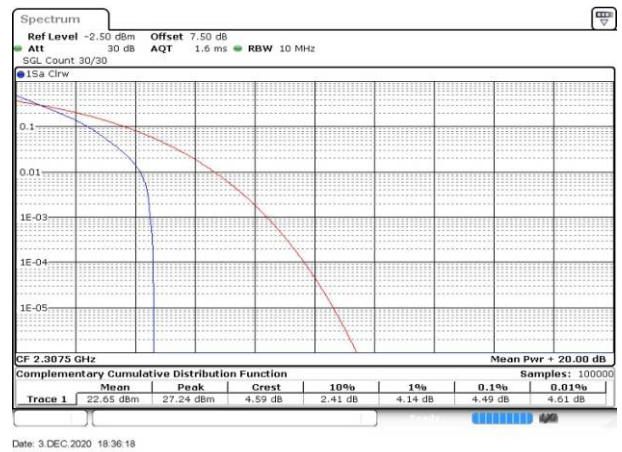


Fig.4

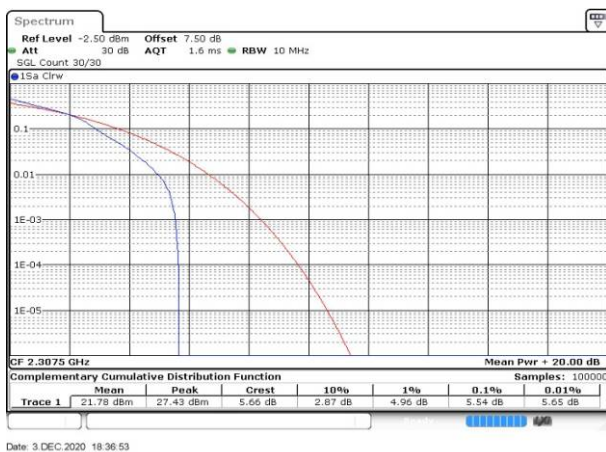


Fig.5

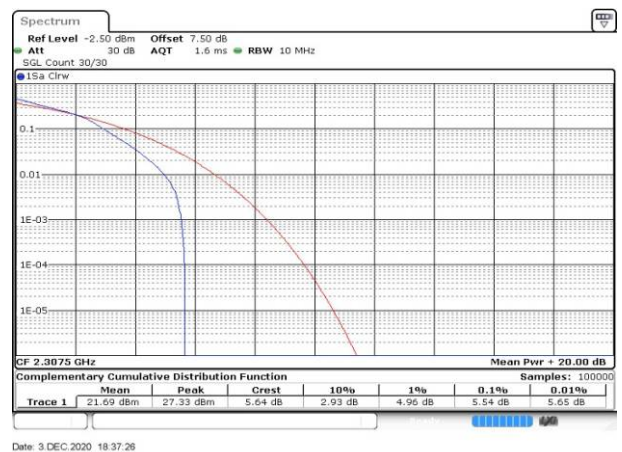


Fig.6

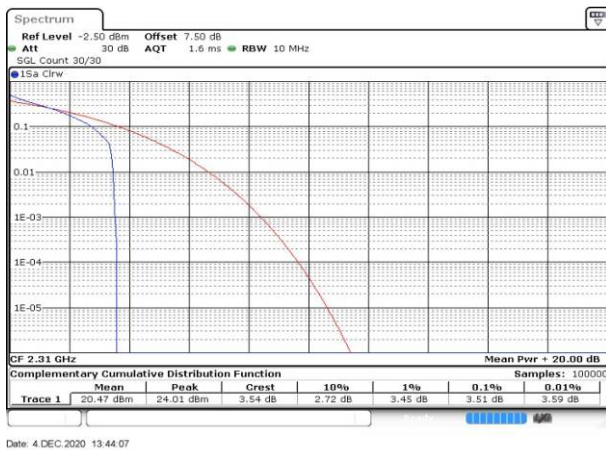


Fig.7

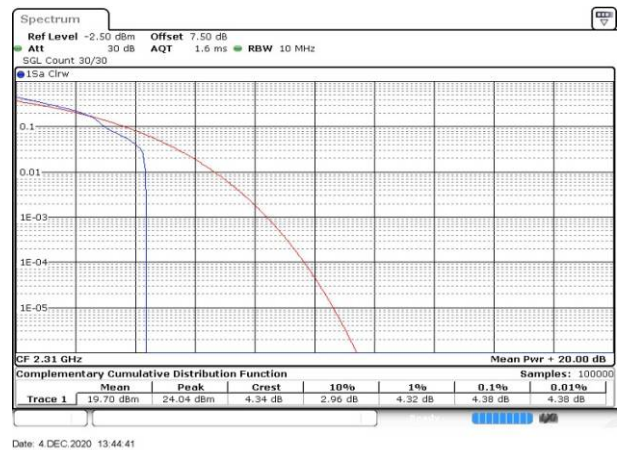


Fig.8

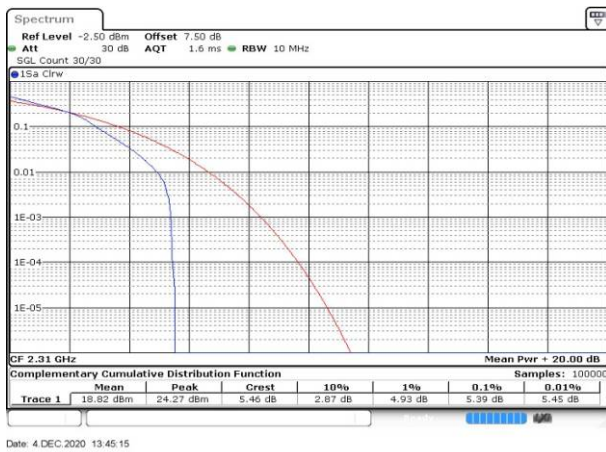


Fig.9

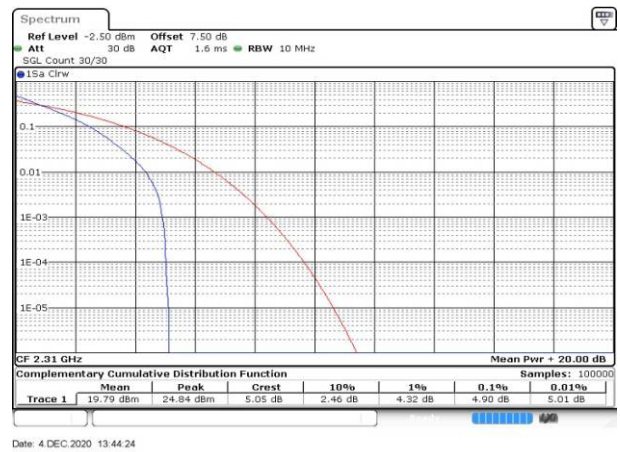


Fig.10

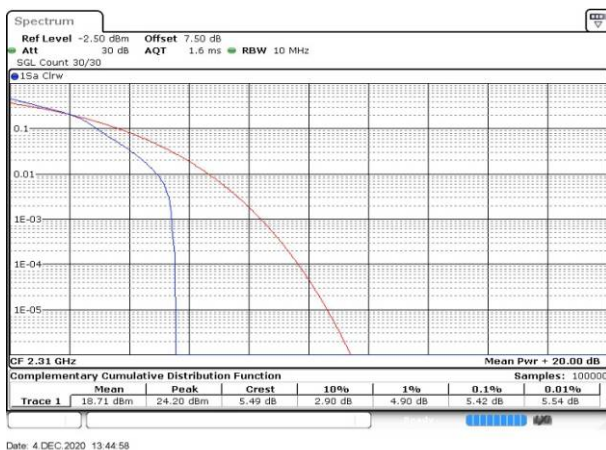


Fig.11

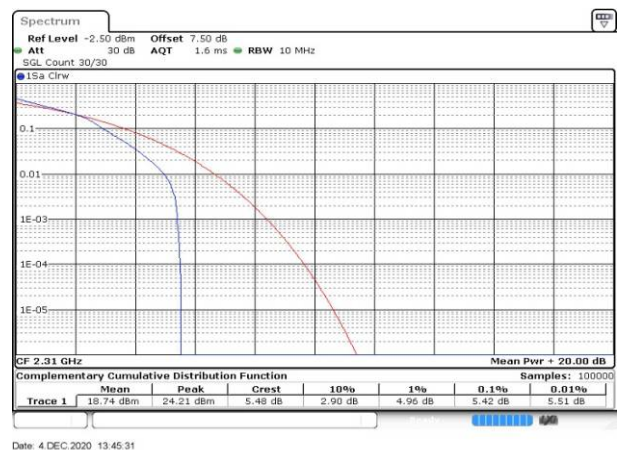


Fig.12

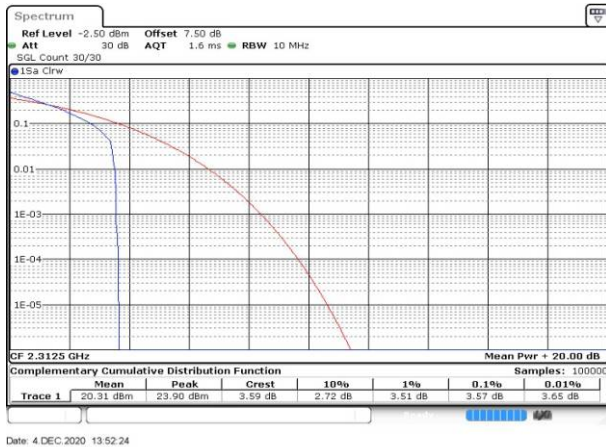


Fig.13

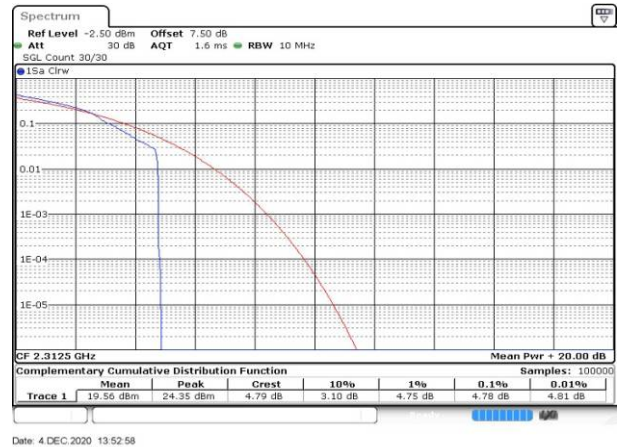


Fig.14

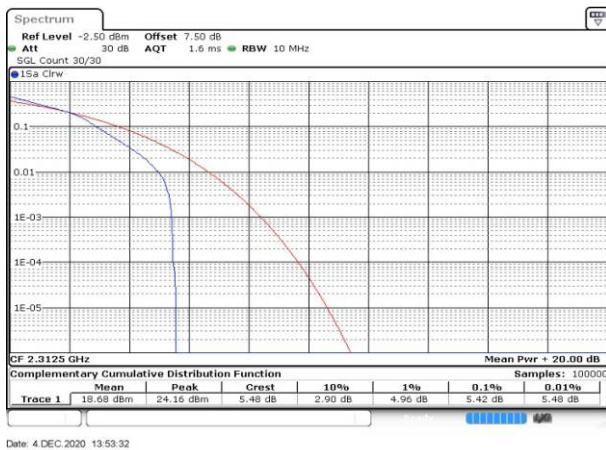


Fig.15

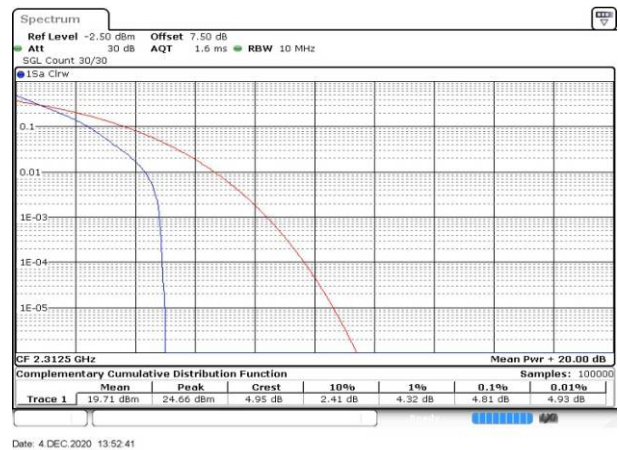


Fig.16

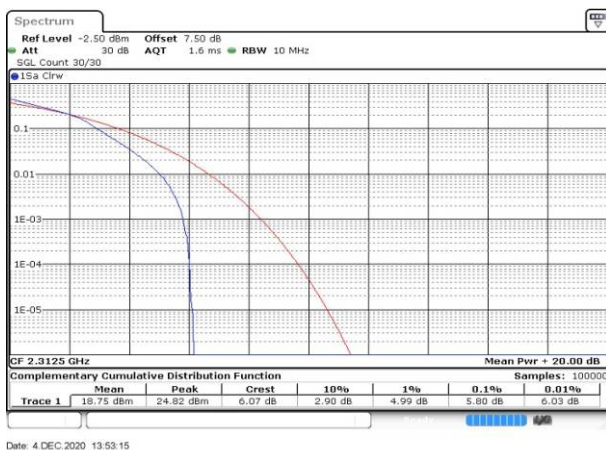


Fig.17

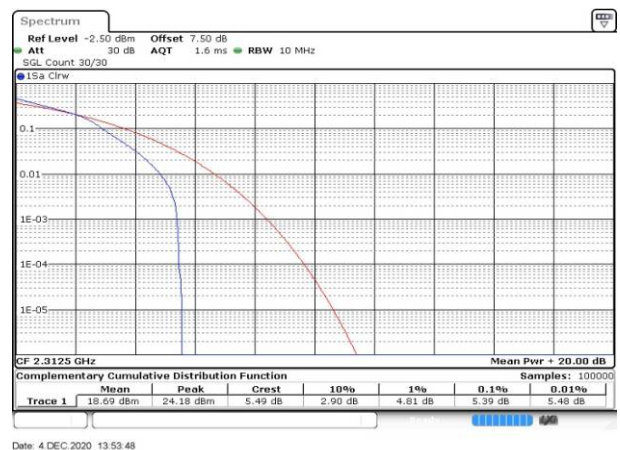


Fig.18

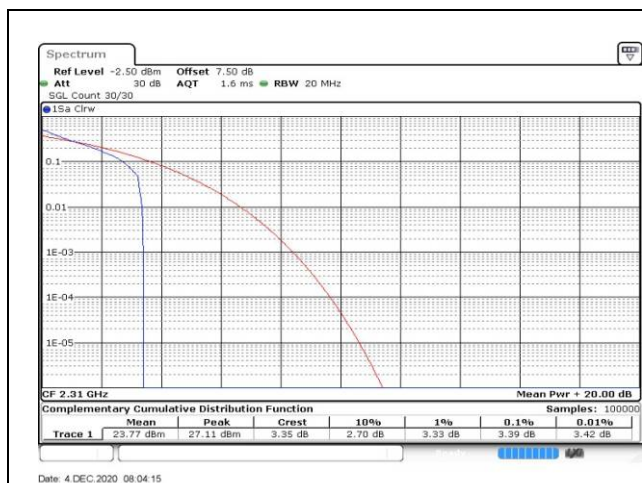


Fig.19

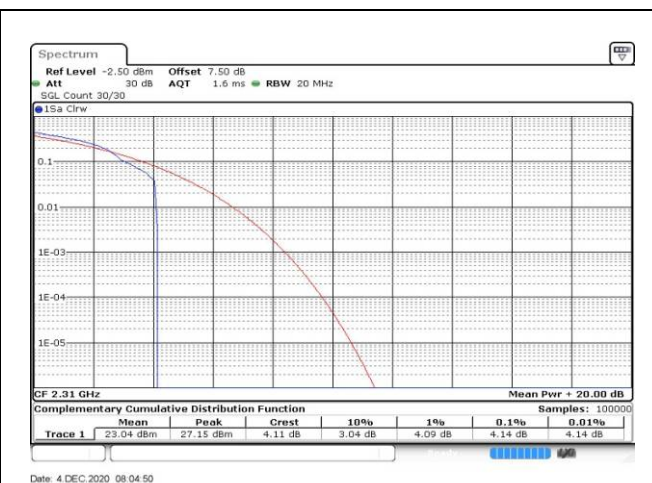


Fig.20

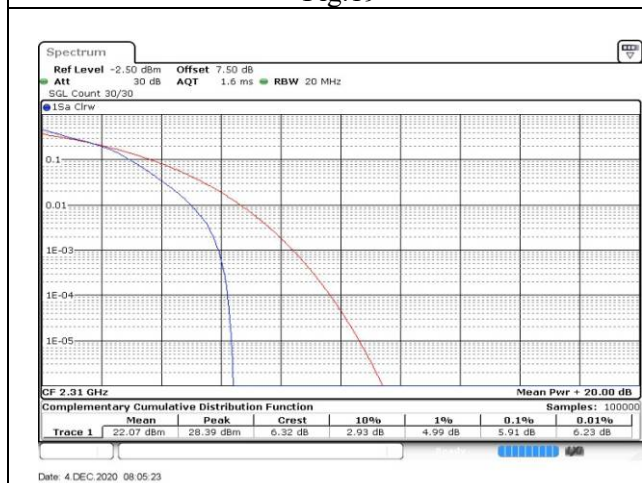


Fig.21

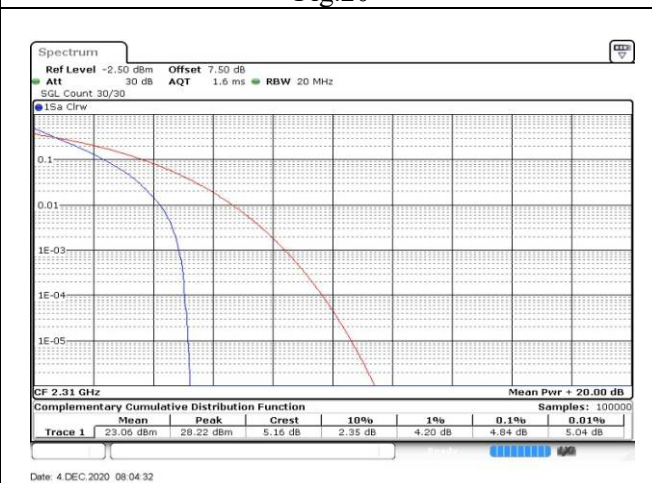


Fig.22

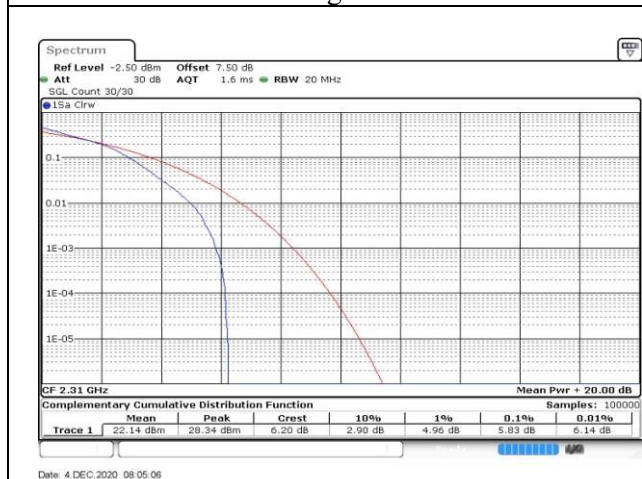


Fig.23

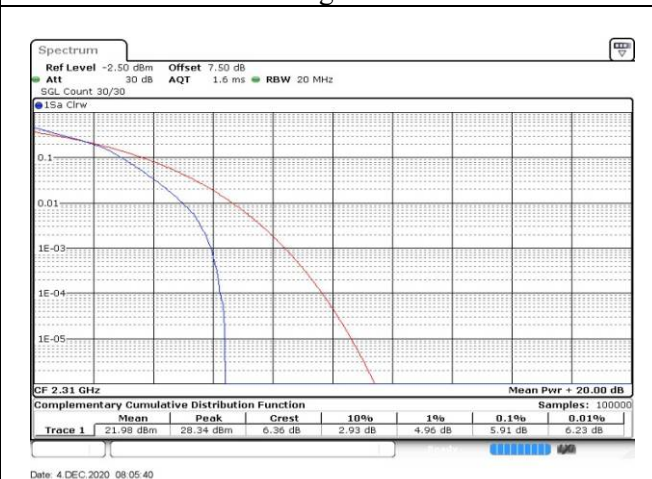


Fig.24

5 Spurious Emissions at antenna terminal

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
30	2310	27710	10	1	99	Fig.1-2

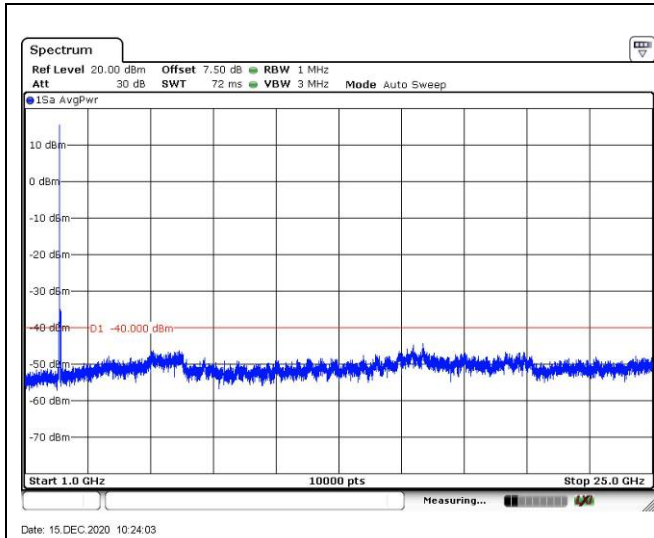


Fig.1

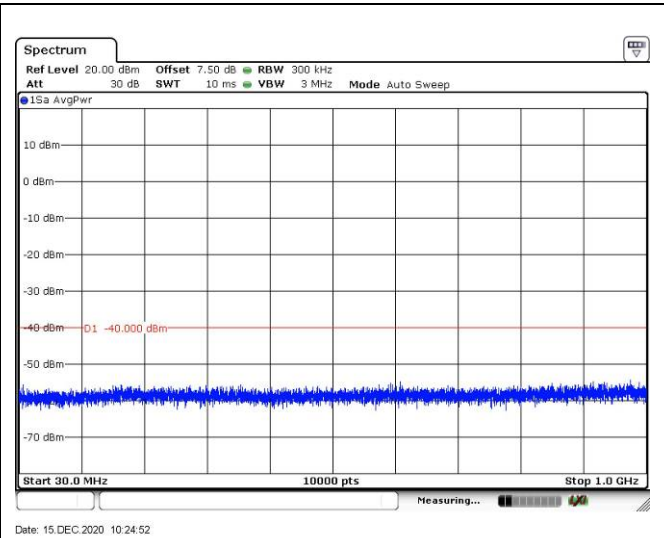


Fig.2

6 Band Edge Compliance

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Band Edges Plot
30	2307.5	27685	5	1	0	Fig.1
				25	0	Fig.2
				1	24	Fig.3
				25	0	Fig.4
	2312.5	27735	5	1	0	Fig.5
				50	0	Fig.6
				1	49	Fig.7
				50	0	Fig.8
	2310	27710	10			

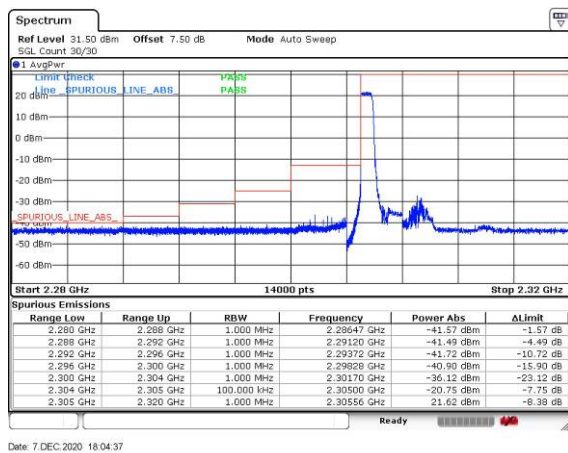


Fig.1

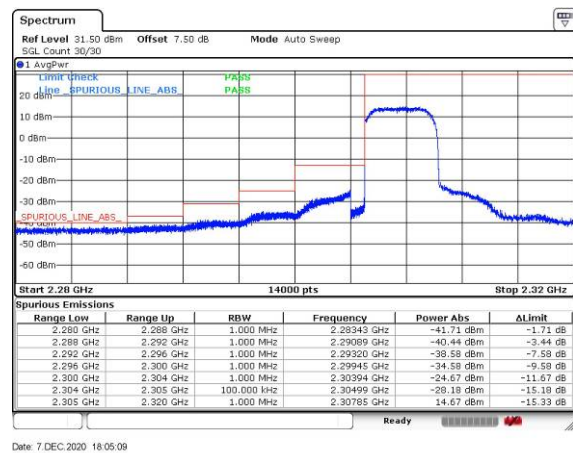


Fig.2

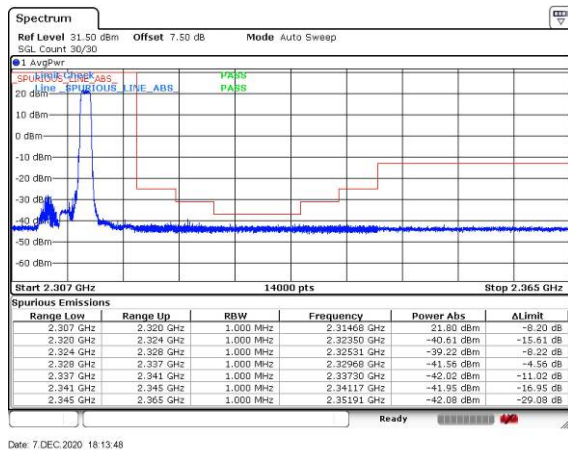


Fig.3

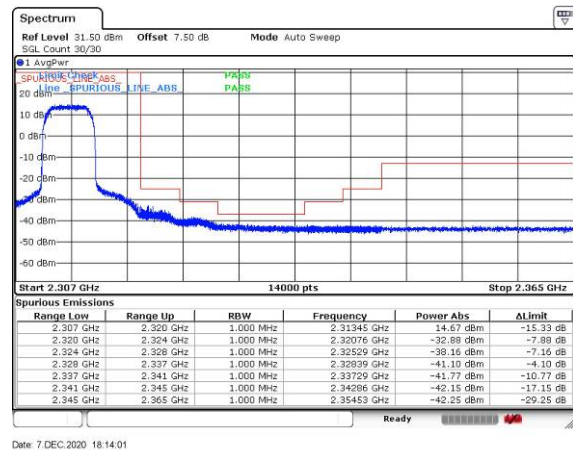


Fig.4

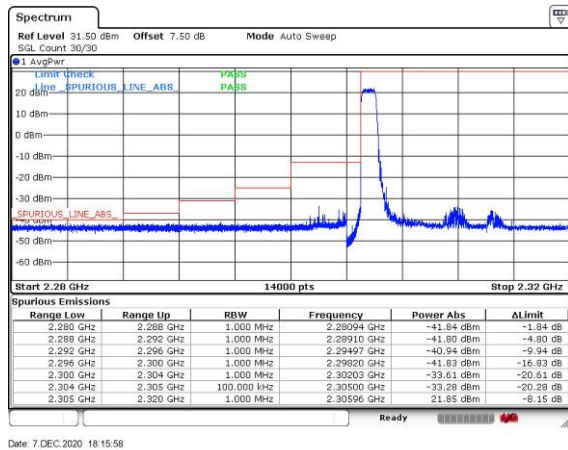


Fig.5

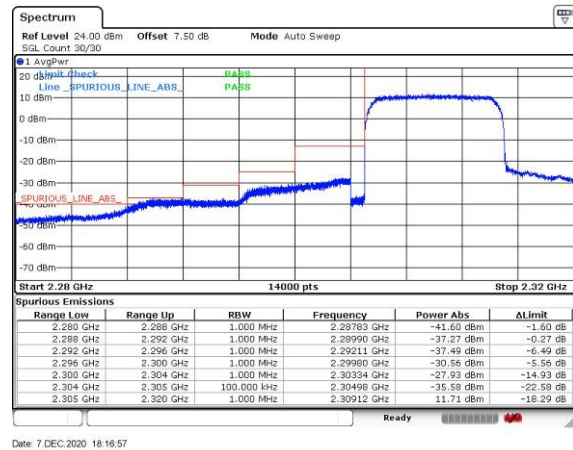


Fig.6

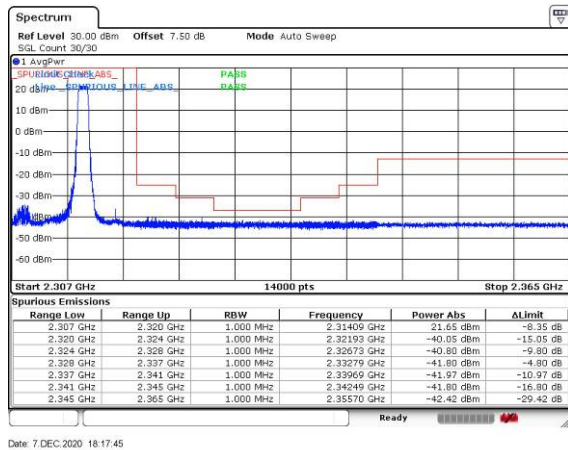


Fig.7

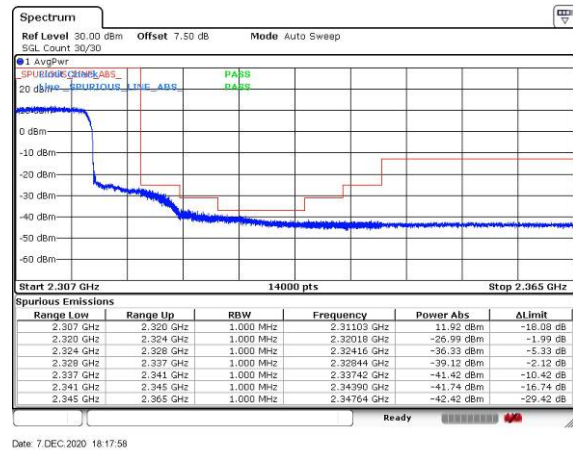


Fig.8

7 Frequency Stability

Temperature(°C)	Voltage	Test Result (ppm) Band30 Low Channel QPSK	
		5M	10M
-20	NV	0.001	0.005
-10	NV	-0.003	-0.001
0	NV	-0.001	0.003
+10	NV	0.002	0.006
+20	NV	0.002	0.001
+30	NV	0.000	0.005
+40	NV	0.003	0.001
+50	NV	-0.001	0.005
+55	NV	-0.003	0.002
+20	LV	-0.004	0.005
+20	HV	0.003	-0.003

Temperature(°C)	Voltage	Test Result (ppm) Band30 High Channel QPSK	
		5M	10M
-20	NV	-0.001	-0.001
-10	NV	-0.002	0.005
0	NV	0.003	0.002
+10	NV	-0.003	-0.004
+20	NV	0.002	0.006
+30	NV	0.001	-0.004
+40	NV	-0.001	0.005
+50	NV	-0.001	0.000
+55	NV	-0.003	0.002
+20	LV	0.000	0.001
+20	HV	-0.001	0.003

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	2307.5	27685	5	1	0	24.00	26.00	0.398
				1	12	24.13	26.13	0.410
				1	24	24.13	26.13	0.410
				12	0	23.09	25.09	0.323
				12	7	23.20	25.20	0.331
				12	13	23.22	25.22	0.333
				25	0	23.23	25.23	0.333
	2310	27710		1	0	23.46	25.46	0.352
				1	12	23.47	25.47	0.352
				1	24	23.34	25.34	0.342
				12	0	22.61	24.61	0.289
				12	7	22.75	24.75	0.299
				12	13	22.74	24.74	0.298
				25	0	22.76	24.76	0.299
	2312.5	27735		1	0	23.56	25.56	0.360
				1	12	23.60	25.60	0.363
				1	24	23.67	25.67	0.369
				12	0	22.62	24.62	0.290
				12	7	22.78	24.78	0.301
				12	13	22.75	24.75	0.299
				25	0	22.69	24.69	0.294
16QAM	2307.5	27685		1	0	22.40	24.40	0.275
				1	12	22.57	24.57	0.286
				1	24	22.56	24.56	0.286
				12	0	21.20	23.20	0.209
				12	7	21.27	23.27	0.212
				12	13	21.30	23.30	0.214
				25	0	22.17	24.17	0.261
	2310	27710	1	0	22.60	24.60	0.288	
			1	12	22.79	24.79	0.301	
			1	24	22.83	24.83	0.304	
			12	0	21.57	23.57	0.228	
			12	7	21.74	23.74	0.237	
			12	13	21.71	23.71	0.235	
			25	0	21.74	23.74	0.237	
	2312.5	27735	1	0	22.55	24.55	0.285	
			1	12	22.64	24.64	0.291	
			1	24	22.65	24.65	0.292	
			12	0	21.57	23.57	0.228	
			12	7	21.68	23.68	0.233	
			12	13	21.73	23.73	0.236	
			25	0	21.78	23.78	0.239	

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)	ERP/ EIRP (dBm)	ERP/ EIRP (W)
64QAM	2307.5	27685	5	1	0	22.24	24.24	0.265
				1	12	22.21	24.21	0.264
				1	24	22.17	24.17	0.261
				12	0	22.24	24.24	0.265
				12	7	22.26	24.26	0.267
				12	13	22.26	24.26	0.267
				25	0	22.16	24.16	0.261
	2310	27710		1	0	21.75	23.75	0.237
				1	12	21.68	23.68	0.233
				1	24	21.71	23.71	0.235
				12	0	20.67	22.67	0.185
				12	7	20.70	22.70	0.186
				12	13	20.72	22.72	0.187
				25	0	20.72	22.72	0.187
	2312.5	27735		1	0	21.80	23.80	0.240
				1	12	21.74	23.74	0.237
				1	24	21.80	23.80	0.240
				12	0	20.75	22.75	0.188
				12	7	20.80	22.80	0.191
				12	13	20.79	22.79	0.190
				25	0	20.73	22.73	0.187

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)	ERP/ EIRP (dBm)	ERP/ EIRP (W)
QPSK	2310	27710	10	1	0	24.19	26.19	0.416
				1	25	23.97	25.97	0.395
				1	49	23.92	25.92	0.391
				25	0	23.19	25.19	0.330
				25	12	23.32	25.32	0.340
				25	25	23.34	25.34	0.342
				50	0	23.32	25.32	0.340
16QAM				1	0	23.01	25.01	0.317
				1	25	22.78	24.78	0.301
				1	49	22.75	24.75	0.299
				25	0	21.23	23.23	0.210
				25	12	21.48	23.48	0.223
				25	25	21.47	23.47	0.222
				50	0	21.27	23.27	0.212
64QAM				1	0	22.21	24.21	0.264
				1	25	22.20	24.20	0.263
				1	49	22.23	24.23	0.265
				25	0	21.21	23.21	0.209
				25	12	21.28	23.28	0.213
				25	25	21.19	23.19	0.208
				50	0	21.25	23.25	0.211