

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 4

1 RF Power Output

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1710.7	19957	1.4	1	0	22.69
				1	3	22.70
				1	5	22.76
				3	0	21.78
				3	1	21.74
				3	3	21.72
	6	0		20.76		
	1732.5	20175		1	0	22.81
				1	3	22.81
				1	5	22.92
				3	0	21.80
				3	1	21.85
				3	3	21.77
	1754.3	20393		6	0	20.84
				1	0	22.70
				1	3	22.74
				1	5	22.68
				3	0	21.70
3			1	21.63		
16QAM	1710.7	19957	3	3	21.66	
			6	0	20.75	
			1	0	21.97	
			1	3	21.80	
			1	5	21.98	
			3	0	21.04	
	1732.5	20175	3	1	21.07	
			3	3	21.12	
			6	0	20.39	
			1	0	21.91	
			1	3	21.94	
			1	5	22.02	
	1754.3	20393	3	0	21.03	
			3	1	21.15	
			3	3	21.12	
			6	0	20.23	
			1	0	21.85	
			1	3	21.92	
			1	5	21.89	
			3	0	20.87	
			3	1	20.87	
			3	3	20.94	
			6	0	20.07	

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
64QAM	1710.7	19957	1.4	1	0	20.78
				1	3	20.92
				1	5	20.81
				3	0	19.83
				3	1	19.76
				3	3	19.79
				6	0	18.82
	1732.5	20175		1	0	20.97
				1	3	20.99
				1	5	20.94
				3	0	19.99
				3	1	19.99
				3	3	19.93
				6	0	18.91
	1754.3	20393		1	0	20.64
				1	3	20.61
				1	5	20.64
				3	0	19.59
				3	1	19.65
				3	3	19.62
				6	0	18.67

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1711.5	19965	3	1	0	22.77
				1	8	22.81
				1	14	22.80
				8	0	21.83
				8	4	21.83
				8	7	21.82
	15	0		20.88		
	1732.5	20175		1	0	22.82
				1	8	22.81
				1	14	22.94
				8	0	21.81
				8	4	21.95
				8	7	21.98
	1753.5	20385		15	0	20.91
				1	0	22.85
1			8	22.86		
1			14	22.74		
8			0	21.90		
8			4	21.92		
16QAM	1711.5	19965	8	7	21.83	
			15	0	20.88	
			1	0	22.28	
			1	8	22.36	
			1	14	22.43	
			8	0	20.99	
	1732.5	20175	8	4	20.92	
			8	7	20.96	
			15	0	19.94	
			1	0	22.01	
			1	8	22.02	
			1	14	22.14	
	1753.5	20385	8	0	20.84	
			8	4	20.90	
			8	7	20.90	
15			0	19.83		
1			0	22.01		
1			8	21.99		
			1	14	22.14	
			8	0	20.97	
			8	4	20.94	
			8	7	20.98	
			15	0	19.91	

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
64QAM	1711.5	19965	3	1	0	20.88
				1	8	20.97
				1	14	20.94
				8	0	19.95
				8	4	19.91
				8	7	19.05
				15	0	18.91
	1732.5	20175		1	0	20.82
				1	8	20.78
				1	14	20.77
				8	0	19.89
				8	4	19.89
				8	7	19.85
				15	0	18.74
	1753.5	20385		1	0	20.91
				1	8	21.02
				1	14	20.98
				8	0	19.91
				8	4	19.92
				8	7	20.02
				15	0	18.91

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1712.5	19975	5	1	0	22.71
				1	12	22.74
				1	24	22.76
				12	0	21.78
				12	7	21.83
				12	13	21.77
	1732.5	20175		25	0	20.82
				1	0	22.82
				1	12	22.94
				1	24	22.87
				12	0	21.85
				12	7	21.89
	1752.5	20375		12	13	21.97
				25	0	20.86
				1	0	22.75
				1	12	22.82
				1	24	22.69
				12	0	21.83
16QAM	1712.5	19975	12	7	21.87	
			12	13	21.90	
			25	0	20.87	
			1	0	21.85	
			1	12	21.69	
			1	24	21.87	
	1732.5	20175	12	0	20.78	
			12	7	20.80	
			12	13	20.77	
			25	0	19.83	
			1	0	22.15	
			1	12	22.06	
	1752.5	20375	1	24	22.09	
			12	0	20.86	
			12	7	20.91	
			12	13	20.85	
			25	0	19.90	
			1	0	21.68	
			1	12	21.95	
			1	24	21.83	
			12	0	20.84	
			12	7	20.83	
			12	13	20.80	
			25	0	19.93	

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
64QAM	1712.5	19975	5	1	0	20.81
				1	12	20.84
				1	24	20.80
				12	0	19.83
				12	7	19.75
				12	13	19.88
				25	0	18.88
	1732.5	20175		1	0	20.75
				1	12	20.79
				1	24	20.85
				12	0	19.89
				12	7	19.82
				12	13	19.86
				25	0	18.90
	1752.5	20375		1	0	20.88
				1	12	20.97
				1	24	20.93
				12	0	19.88
				12	7	19.88
				12	13	19.95
				25	0	18.85

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1715	20000	10	1	0	22.75
				1	25	22.76
				1	49	22.72
				25	0	21.87
				25	12	21.93
				25	25	21.86
	1732.5	20175		50	0	20.81
				1	0	22.91
				1	25	22.88
				1	49	22.95
				25	0	21.89
				25	12	21.99
	1750	20350		25	25	21.94
				50	0	20.92
				1	0	22.84
				1	25	22.77
				1	49	22.71
				25	0	21.85
16QAM	1715	20000	25	12	21.92	
			25	25	21.88	
			50	0	20.89	
			1	0	22.39	
			1	25	22.43	
			1	49	22.43	
	1732.5	20175	25	0	20.97	
			25	12	21.01	
			25	25	20.95	
			50	0	19.81	
			1	0	22.09	
			1	25	22.01	
	1750	20350	1	49	22.12	
			25	0	20.93	
			25	12	21.03	
			25	25	21.07	
			50	0	19.93	
			1	0	22.63	
1715	20000	1	25	22.44		
		1	49	22.43		
		25	0	20.88		
		25	12	20.98		
		25	25	20.96		
		50	0	19.82		

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
64QAM	1715	20000	10	1	0	20.92
				1	25	20.89
				1	49	20.91
				25	0	19.85
				25	12	19.88
				25	25	19.78
	1732.5	20175		50	0	18.85
				1	0	20.98
				1	25	21.01
				1	49	20.99
				25	0	19.97
				25	12	19.91
	1750	20350		25	25	19.96
				50	0	18.92
				1	0	20.84
				1	25	20.91
				1	49	20.90
				25	0	19.86
				25	12	19.84
				25	25	19.90
				50	0	18.84

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1717.5	20025	15	1	0	22.75
				1	37	22.71
				1	74	22.80
				36	0	21.75
				36	29	21.82
				36	30	21.85
	1732.5	20175		75	0	20.86
				1	0	22.88
				1	37	22.62
				1	74	22.78
				36	0	21.97
				36	29	21.87
	1747.5	20325		36	30	21.87
				75	0	20.84
				1	0	22.91
1			37	22.65		
1			74	22.71		
36			0	21.88		
16QAM	1717.5	20025	36	29	21.84	
			36	30	21.87	
			75	0	20.82	
			1	0	22.56	
			1	37	22.39	
			1	74	22.38	
	1732.5	20175	36	0	20.81	
			36	29	20.92	
			36	30	20.88	
			75	0	19.89	
			1	0	22.52	
			1	37	22.41	
	1747.5	20325	1	74	22.00	
			36	0	21.05	
			36	29	20.94	
36			30	20.91		
75			0	19.89		
1			0	22.27		
			1	37	21.88	
			1	74	22.04	
			36	0	20.99	
			36	29	20.82	
			36	30	20.92	
			75	0	19.87	

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
64QAM	1717.5	20025	15	1	0	20.88
				1	37	20.82
				1	74	20.79
				36	0	19.85
				36	29	19.81
				36	30	19.84
	1732.5	20175		75	0	18.81
				1	0	20.88
				1	37	20.93
				1	74	20.91
				36	0	19.92
				36	29	19.92
	1747.5	20325		36	30	19.94
				75	0	18.95
				1	0	20.83
				1	37	20.90
				1	74	20.87
				36	0	19.89
			36	29	19.93	
			36	30	19.85	
			75	0	18.86	

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1720	20050	20	1	0	22.90
				1	49	22.85
				1	99	22.87
				50	0	21.86
				50	24	21.88
				50	50	21.87
	100	0		20.94		
	1	0		22.95		
	1	49		22.97		
	1	99		22.96		
	50	0		21.95		
	50	24		21.91		
	50	50		21.86		
	100	0		20.94		
	1	0		22.88		
	1	49		22.69		
	1	99		22.78		
	50	0		21.96		
50	24	21.92				
50	50	21.88				
100	0	20.92				
16QAM	1720	20050	20	1	0	22.17
				1	49	22.18
				1	99	22.15
				50	0	20.82
				50	24	20.84
				50	50	20.84
	100	0		19.95		
	1	0		22.30		
	1	49		22.18		
	1	99		22.14		
	50	0		20.96		
	50	24		20.89		
	50	50		20.98		
	100	0		19.90		
	1	0		22.64		
	1	49		22.41		
	1	99		22.35		
	50	0		20.97		
50	24	20.88				
50	50	20.87				
100	0	19.93				

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
64QAM	1720	20050	20	1	0	20.92
				1	49	20.88
				1	99	20.91
				50	0	19.87
				50	24	19.91
				50	50	19.91
				100	0	18.89
	1732.5	20175		1	0	20.87
				1	49	20.94
				1	99	20.88
				50	0	19.91
				50	24	19.92
				50	50	19.95
				100	0	18.93
	1745	20300		1	0	20.78
				1	49	20.90
				1	99	20.83
				50	0	19.90
				50	24	19.86
				50	50	19.89
				100	0	18.86

2 Occupied Bandwidth

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of 99% Power (MHz)					
						QPSK		16-QAM		64-QAM	
4	1710.7	19957	1.4	6	0	1.082	Fig.1	1.082	Fig.2	1.082	Fig.3
	1732.5	20175		6	0	1.082	Fig.4	1.076	Fig.5	1.070	Fig.6
	1754.3	20393		6	0	1.082	Fig.7	1.082	Fig.8	1.082	Fig.9
	1711.5	19965	3	15	0	2.696	Fig.10	2.683	Fig.11	2.696	Fig.12
	1732.5	20175		15	0	2.683	Fig.13	2.683	Fig.14	2.683	Fig.15
	1753.5	20385		15	0	2.683	Fig.16	2.683	Fig.17	2.683	Fig.18
	1712.5	19975	5	25	0	4.472	Fig.19	4.472	Fig.20	4.472	Fig.21
	1732.5	20175		25	0	4.472	Fig.22	4.472	Fig.23	4.472	Fig.24
	1752.5	20375		25	0	4.472	Fig.25	4.472	Fig.26	4.472	Fig.27
	1715	20000	10	50	0	8.944	Fig.28	8.944	Fig.29	8.944	Fig.30
	1732.5	20175		50	0	8.944	Fig.31	8.944	Fig.32	8.944	Fig.33
	1750	20350		50	0	8.944	Fig.34	8.944	Fig.35	8.944	Fig.36
	1717.5	20025	15	75	0	13.415	Fig.37	13.415	Fig.38	13.480	Fig.39
	1732.5	20175		75	0	13.415	Fig.40	13.415	Fig.41	13.415	Fig.42
	1747.5	20325		75	0	13.415	Fig.43	13.415	Fig.44	13.415	Fig.45
	1720	20050	20	100	0	17.800	Fig.46	17.800	Fig.47	17.800	Fig.48
1732.5	20175	100		0	17.887	Fig.49	17.887	Fig.50	17.887	Fig.51	
1745	20300	100		0	17.887	Fig.52	17.887	Fig.53	17.887	Fig.54	

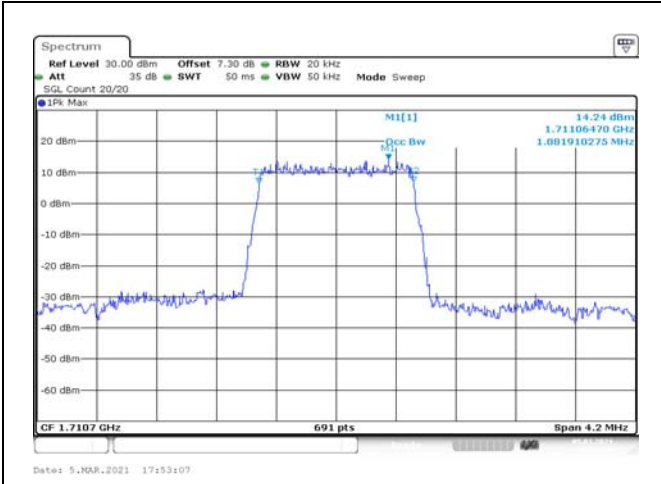


Fig.1

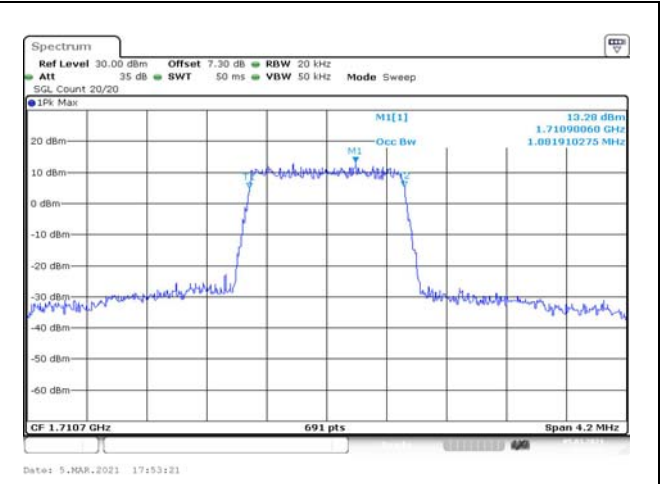


Fig.2

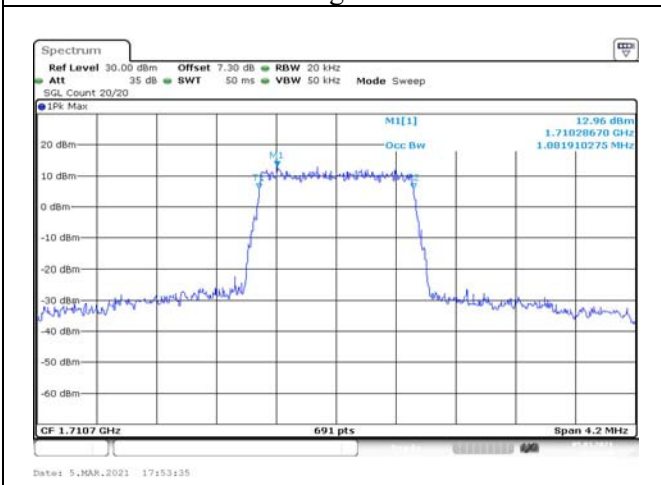


Fig.3

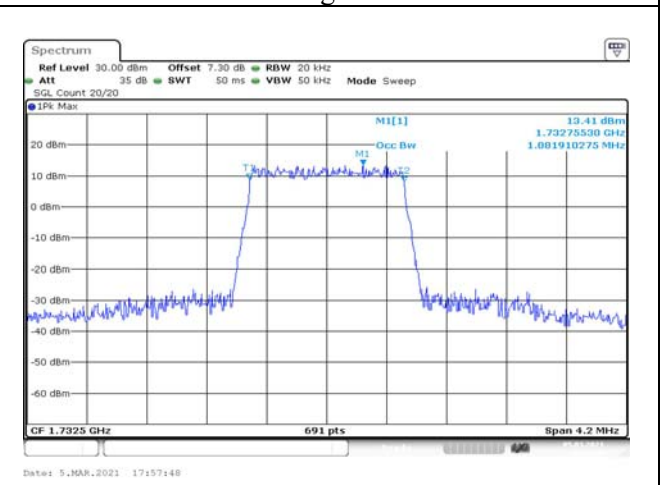


Fig.4

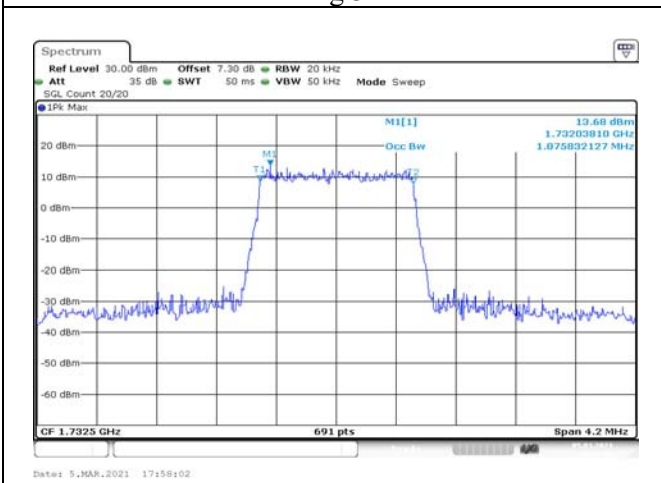


Fig.5

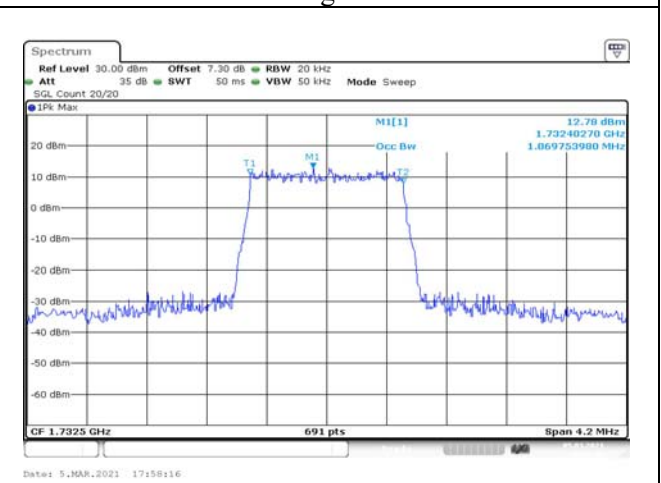


Fig.6

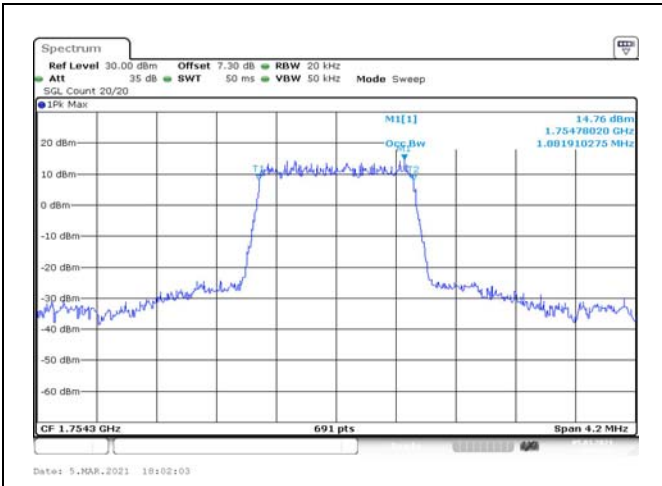


Fig.7

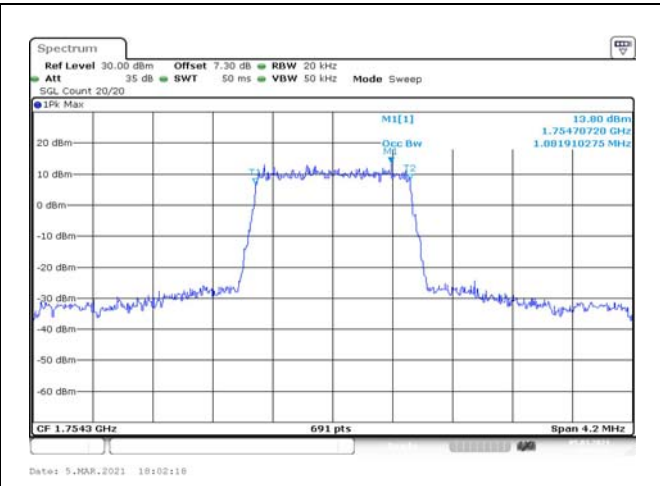


Fig.8

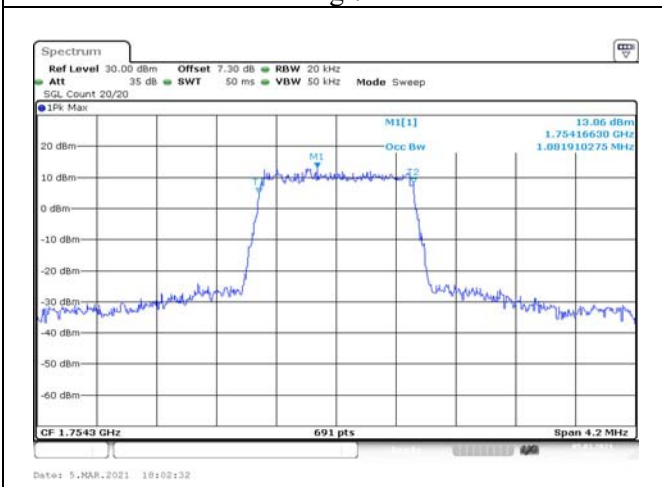


Fig.9

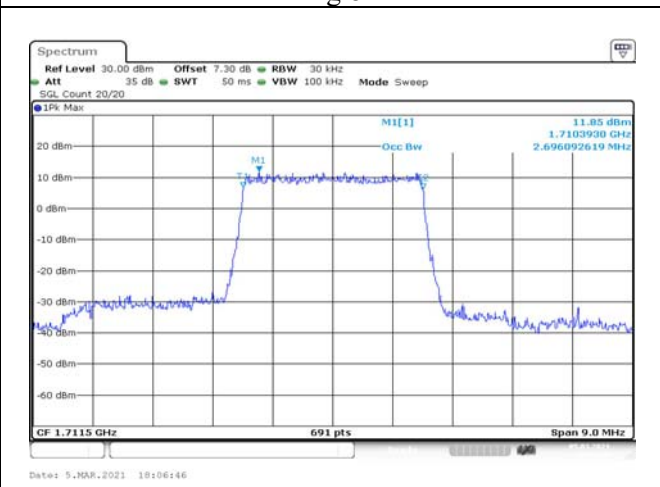


Fig.10

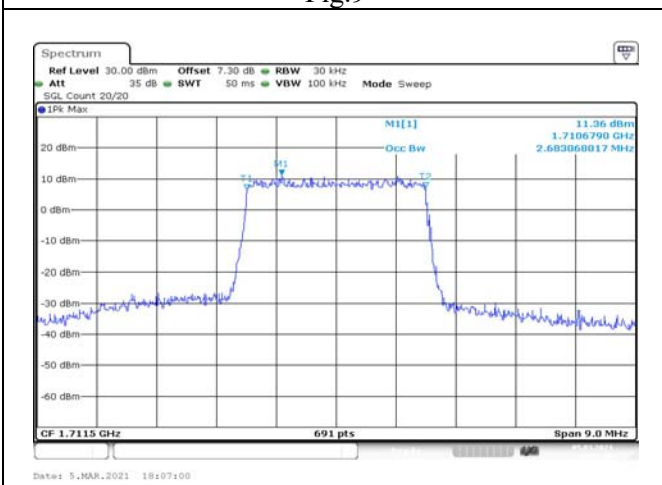


Fig.11

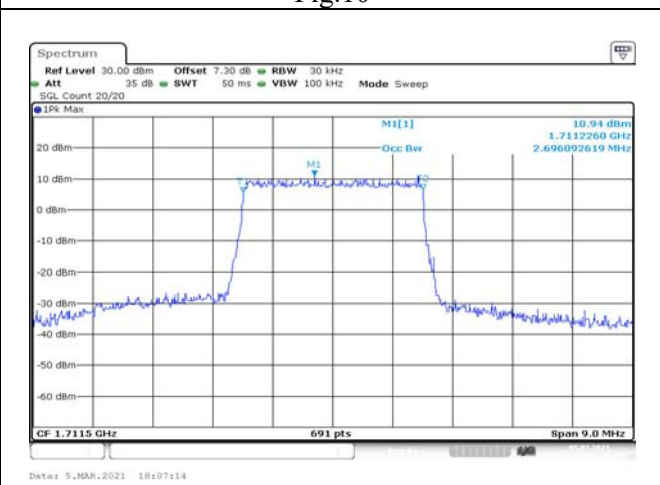


Fig.12

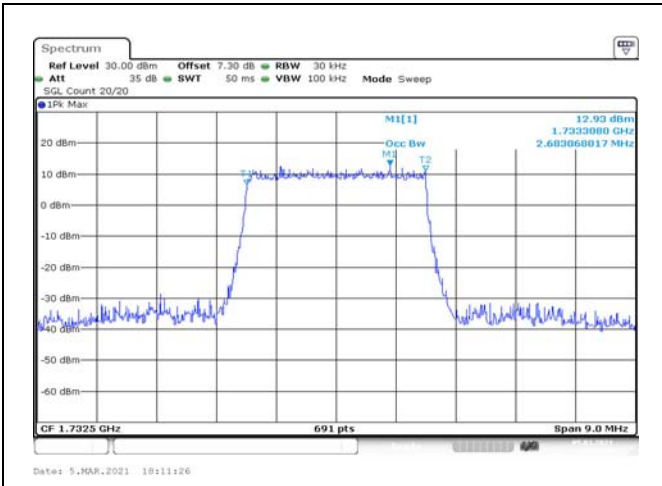


Fig.13

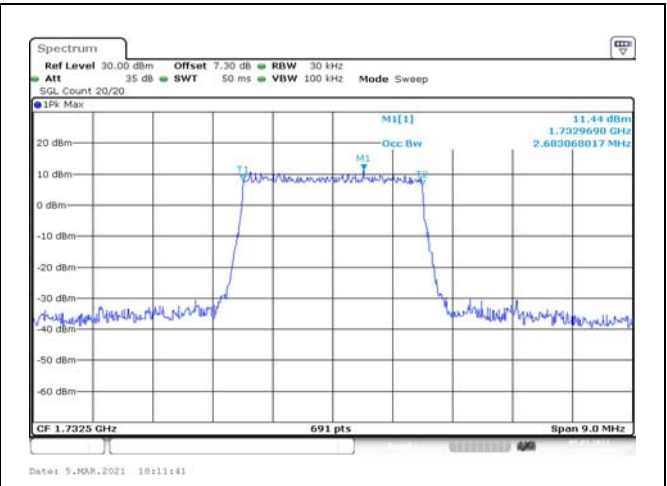


Fig.14

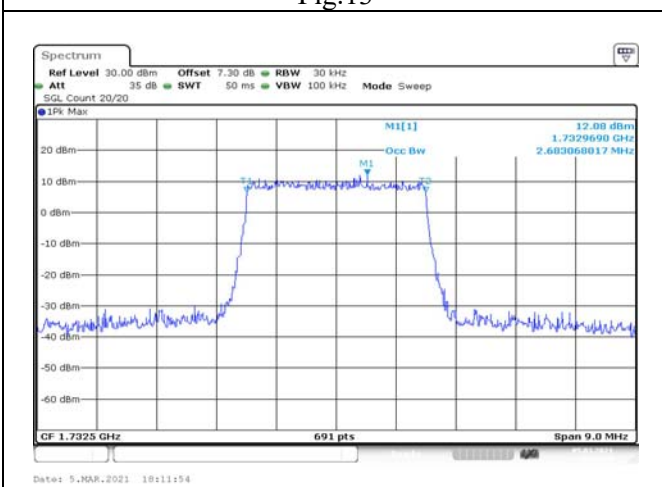


Fig.15

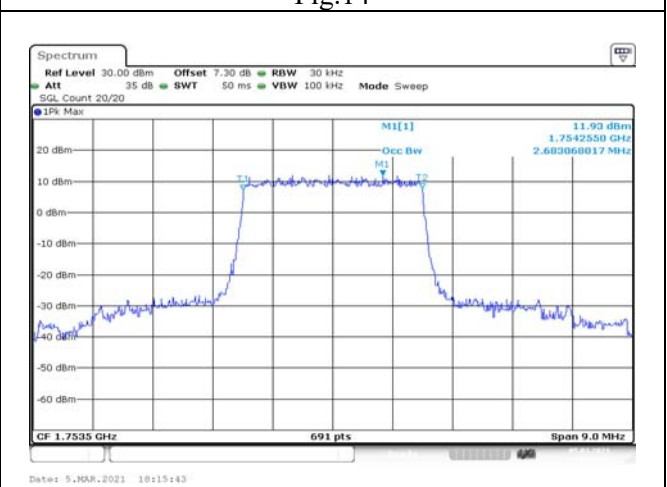


Fig.16

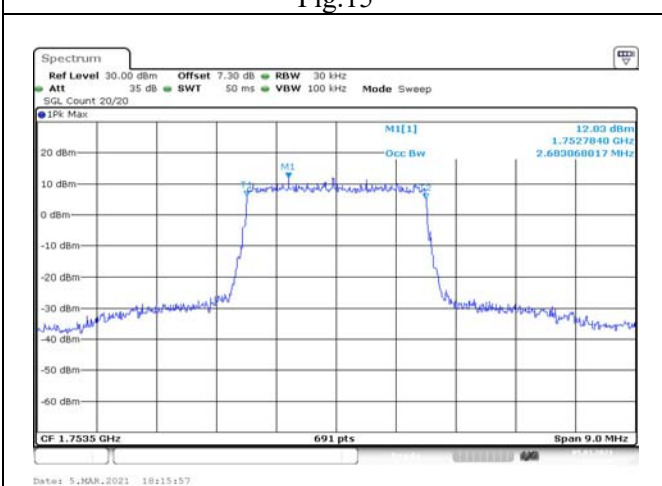


Fig.17

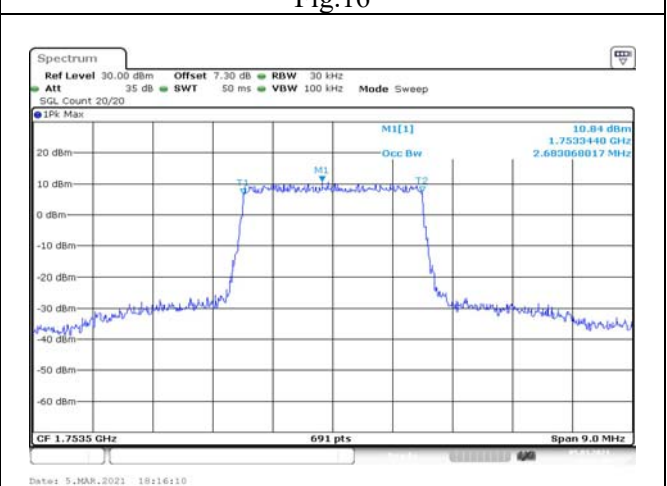


Fig.18

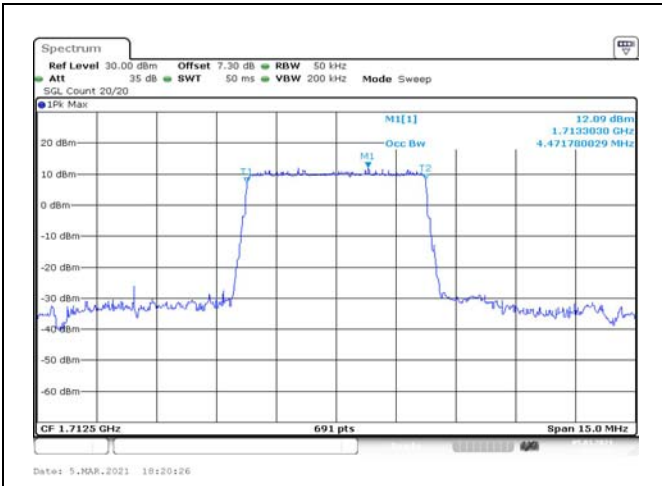


Fig.19

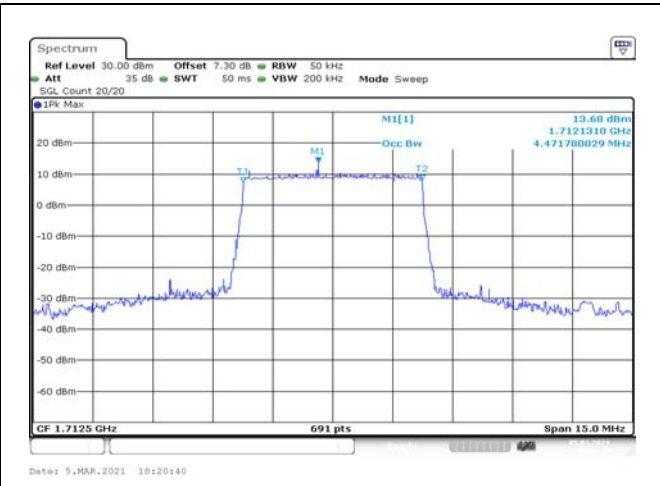


Fig.20

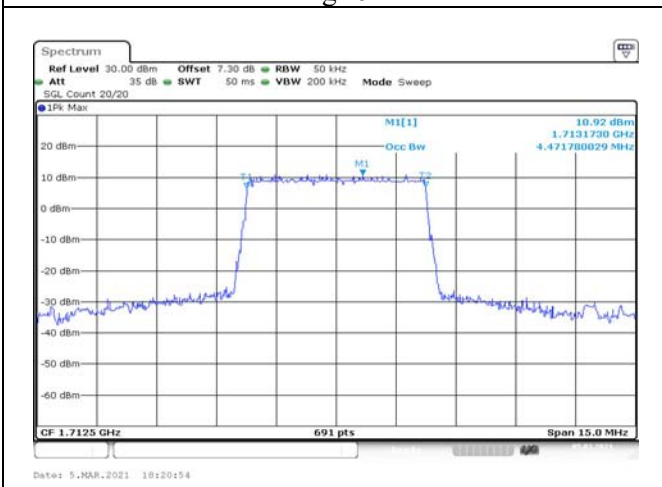


Fig.21

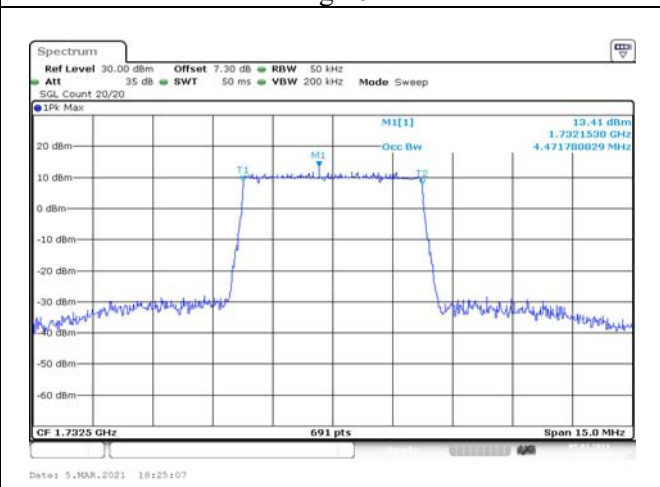


Fig.22

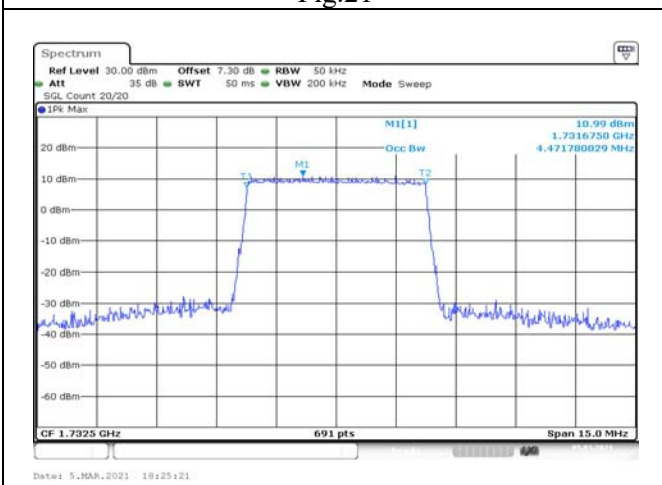


Fig.23

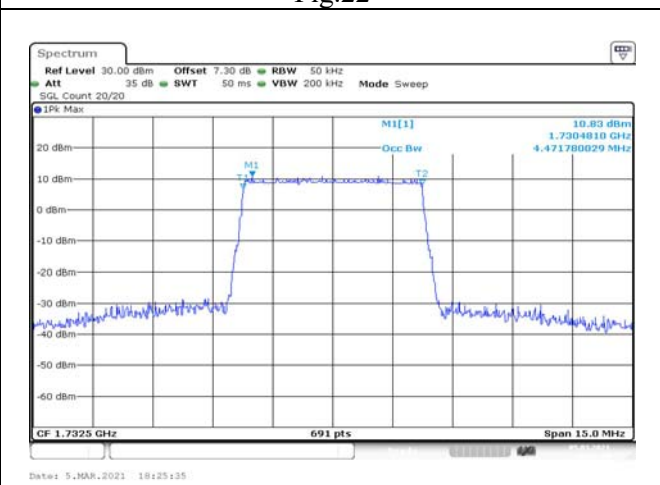


Fig.24

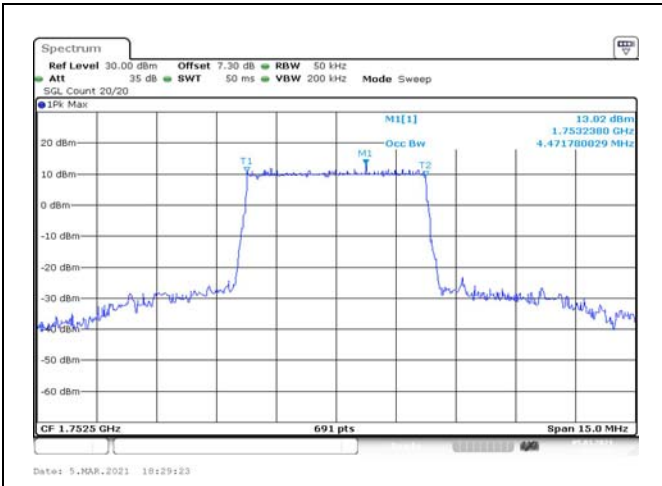


Fig.25

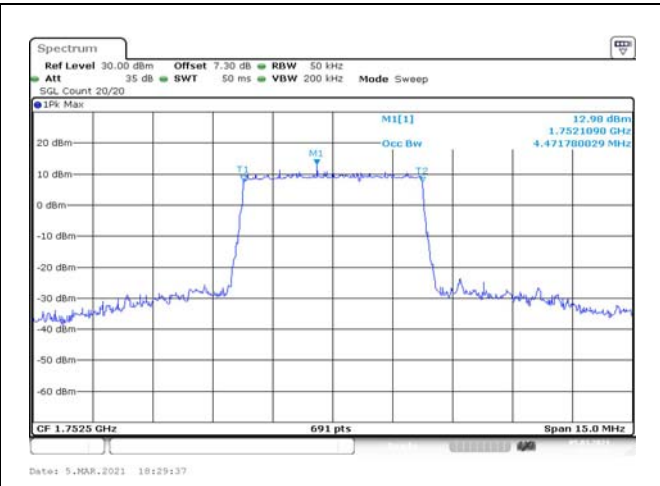


Fig.26

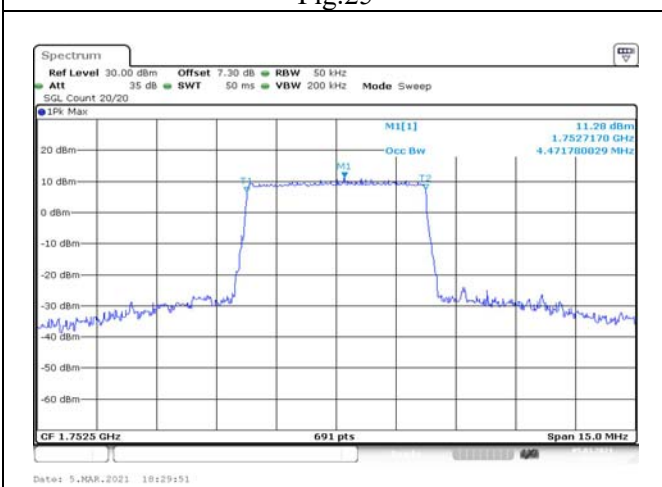


Fig.27

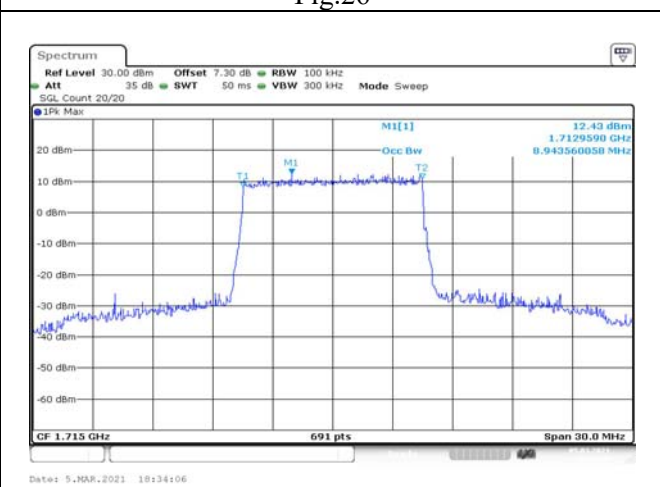


Fig.28

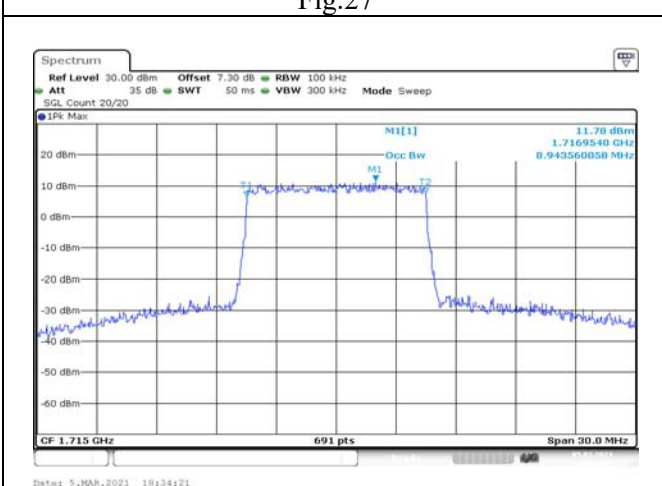


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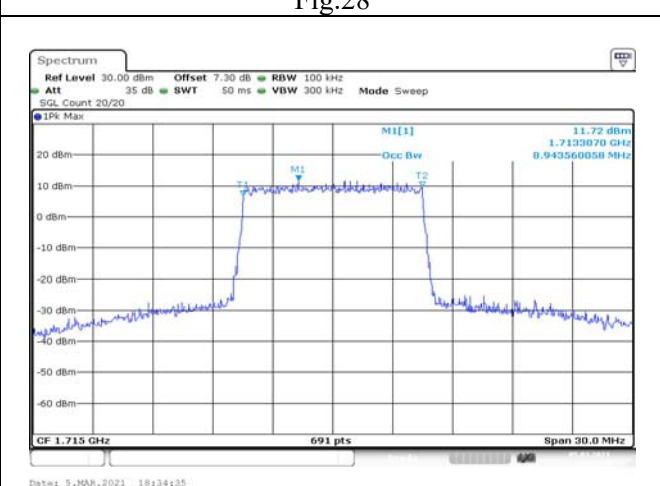


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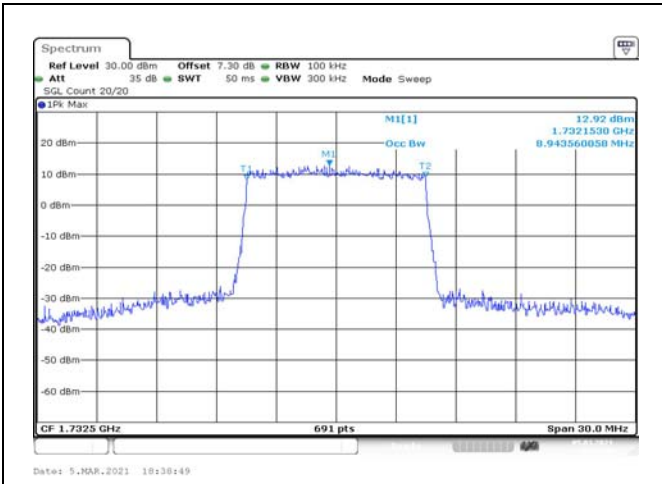


Fig.31

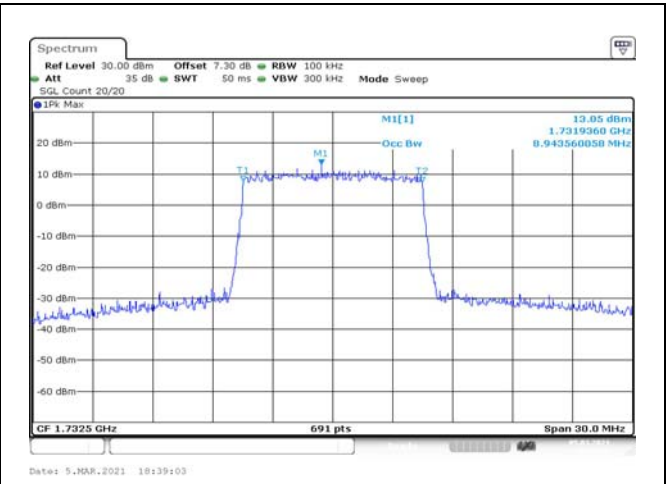


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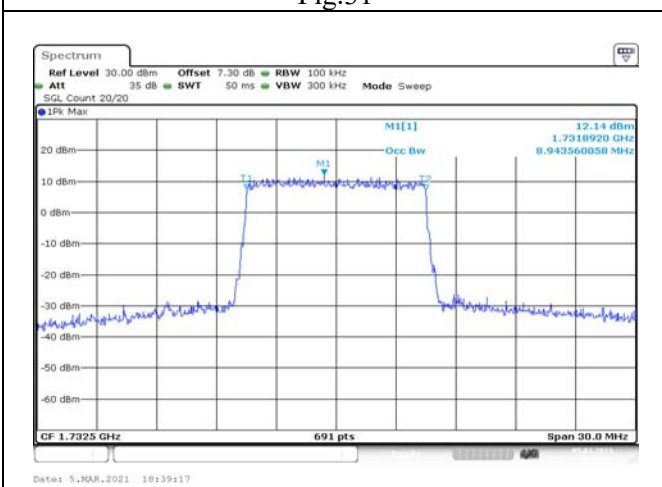


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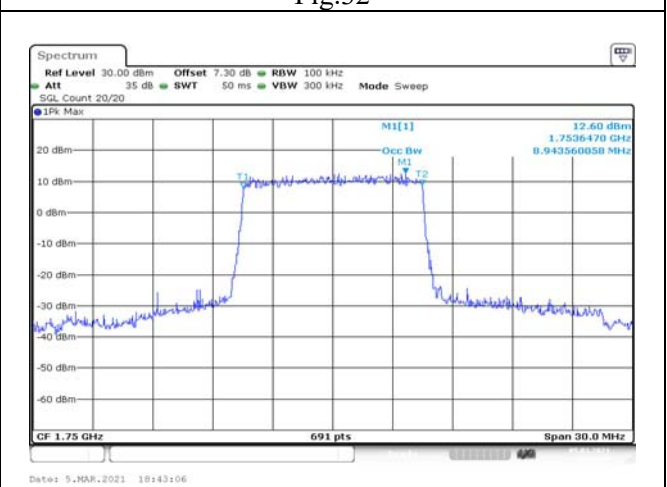


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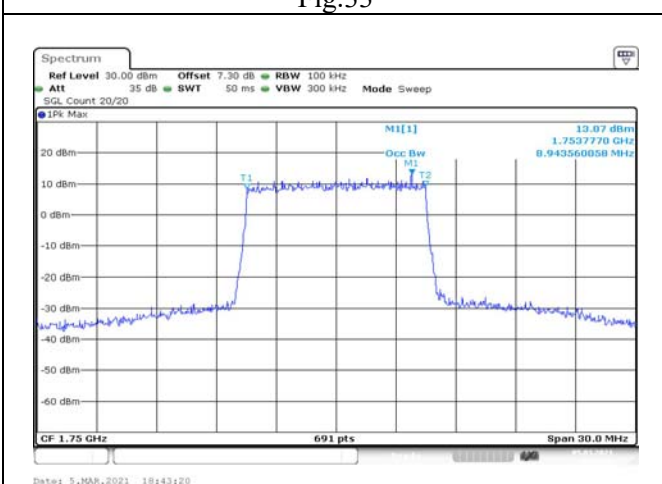


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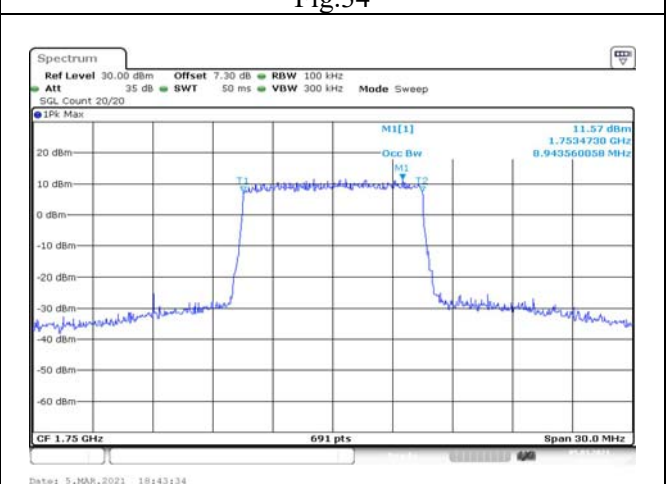


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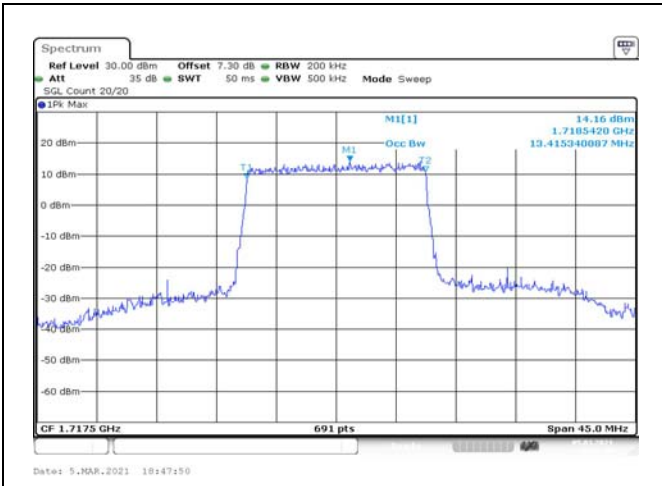


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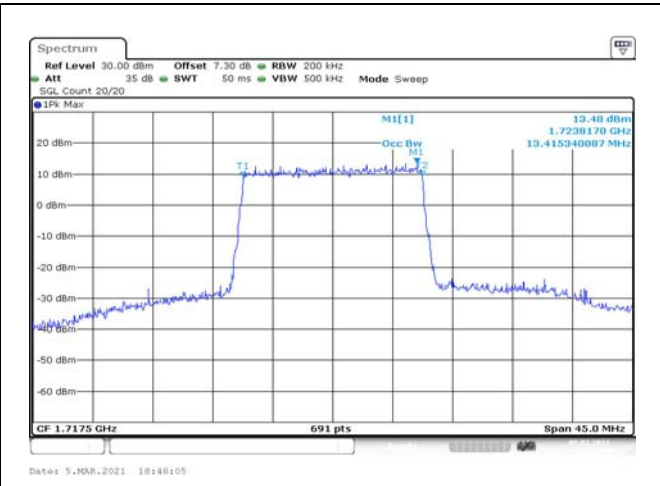


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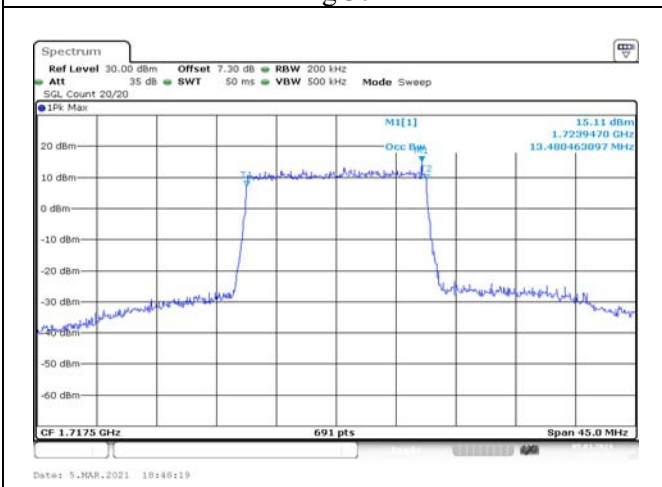


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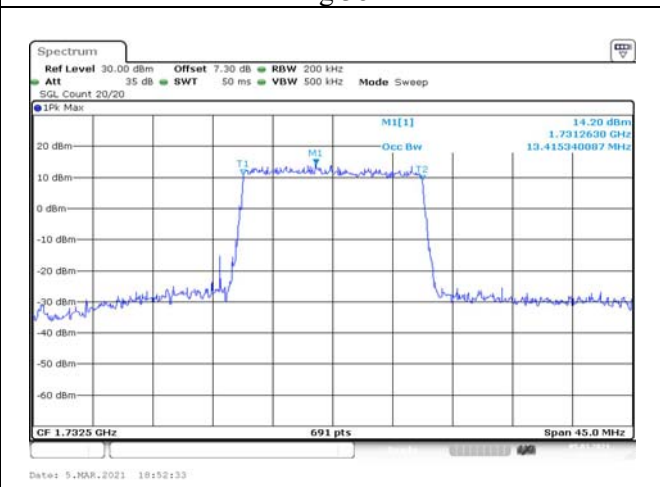


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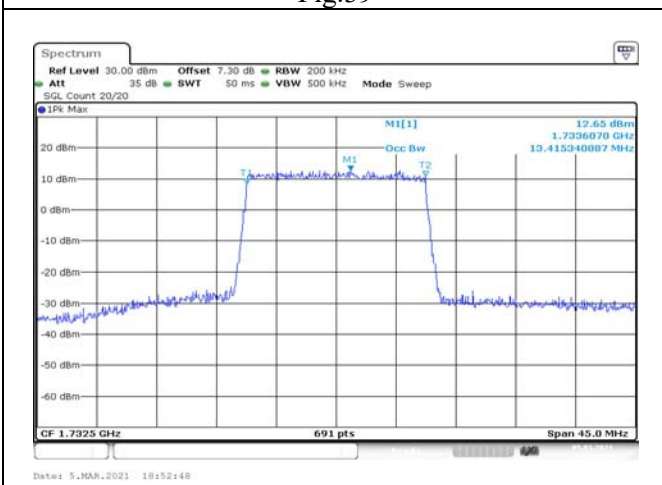


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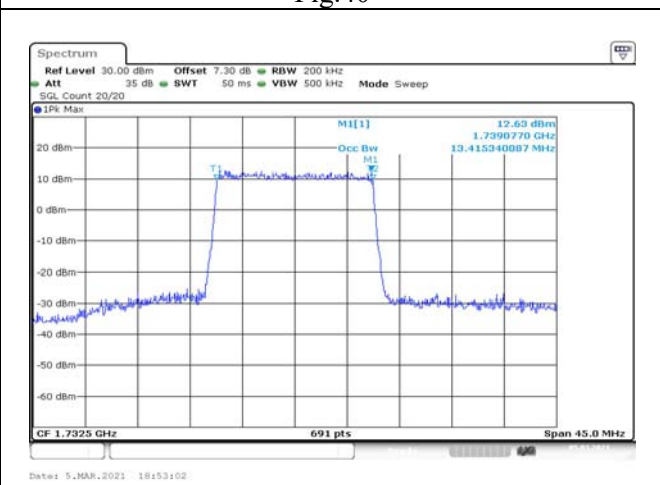


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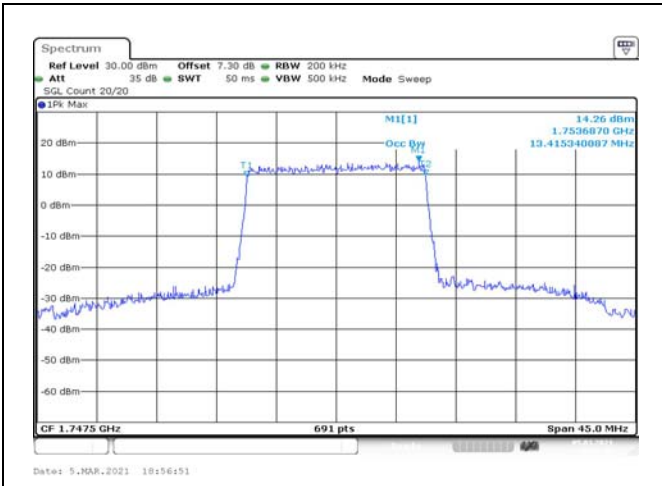


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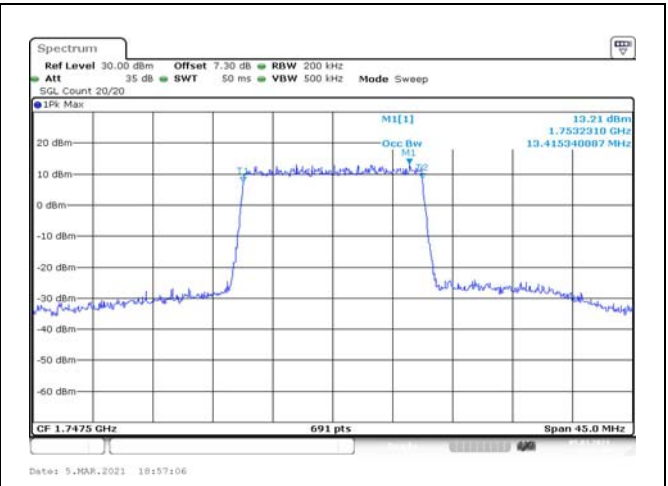


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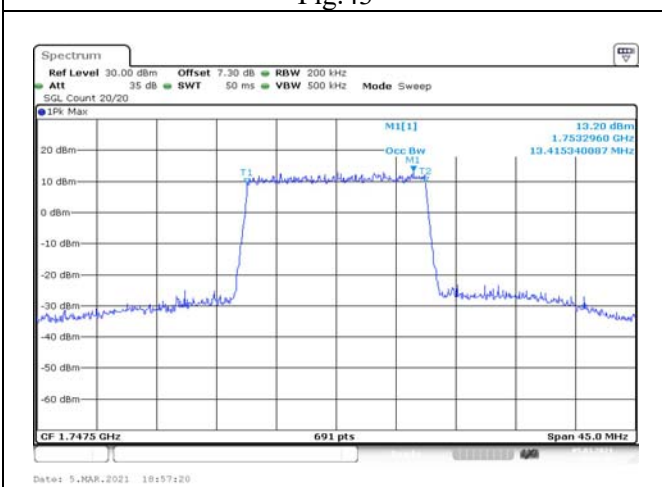


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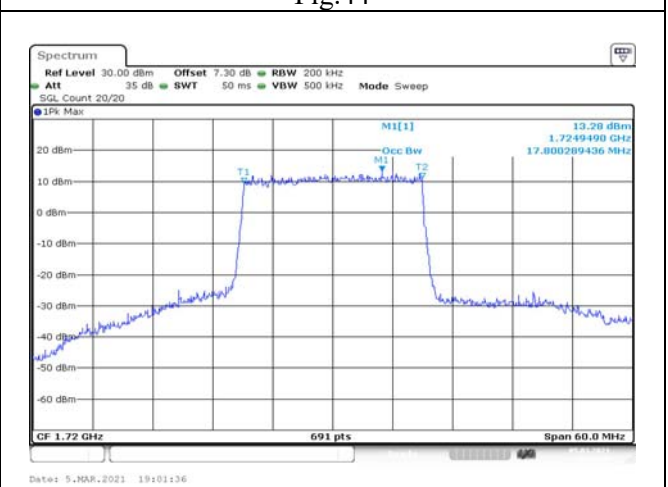


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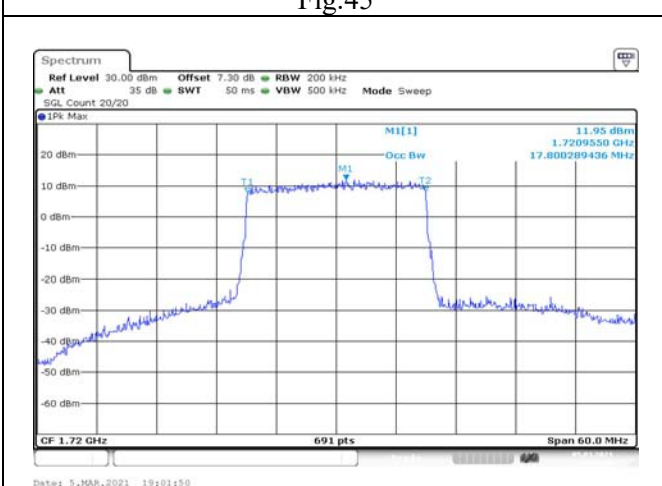


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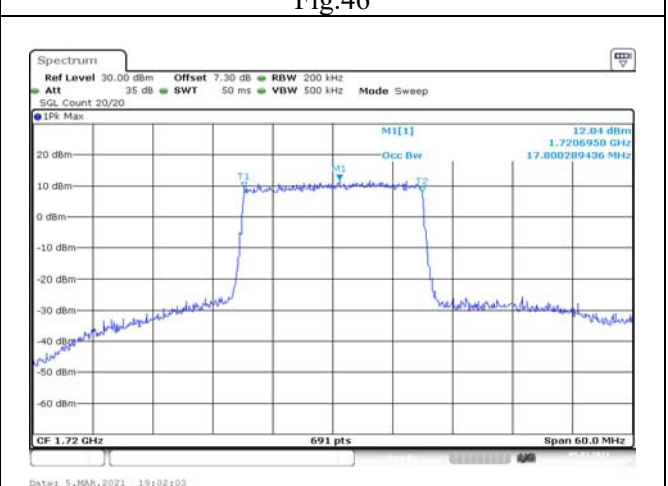


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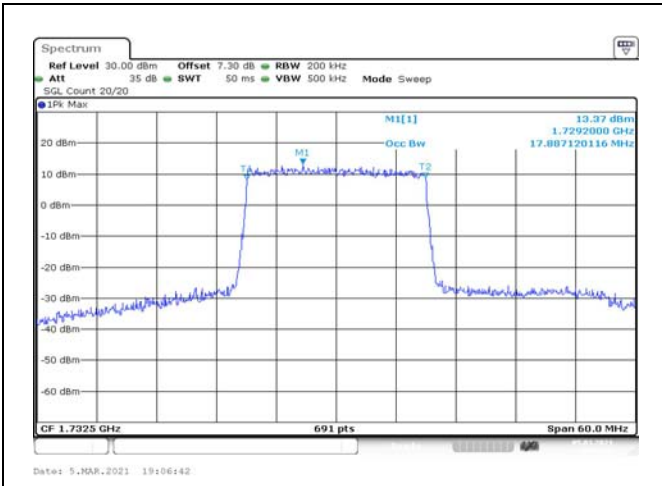


Fig.49

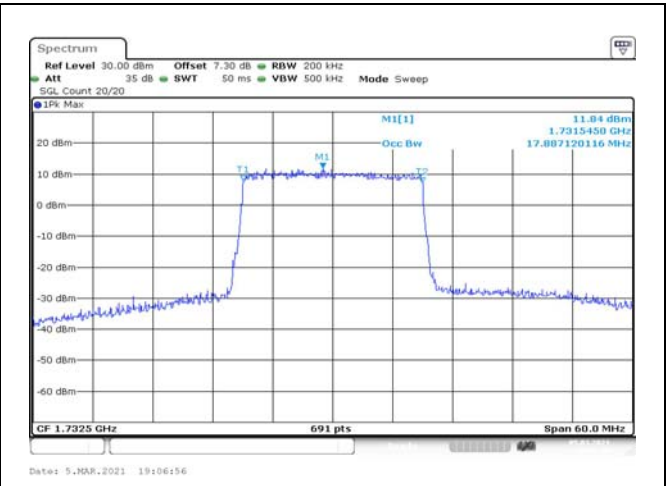


Fig.50

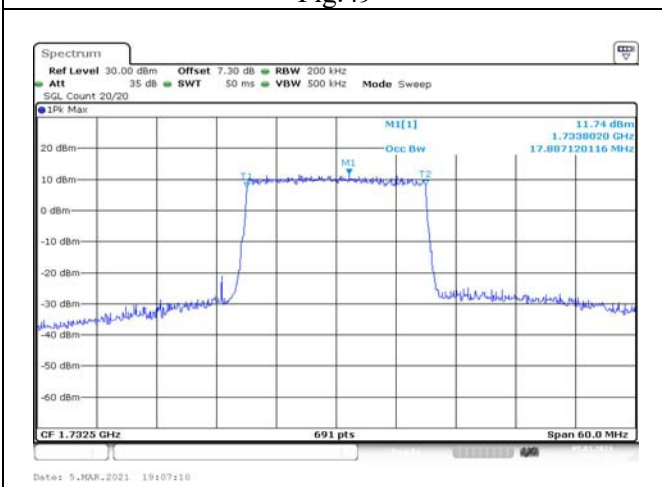


Fig.51

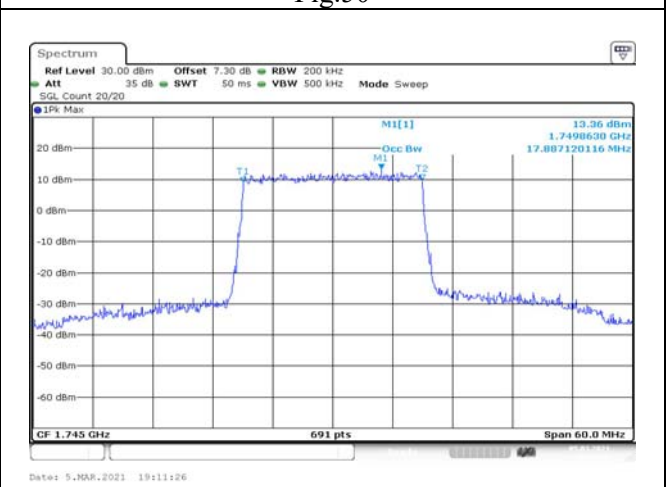


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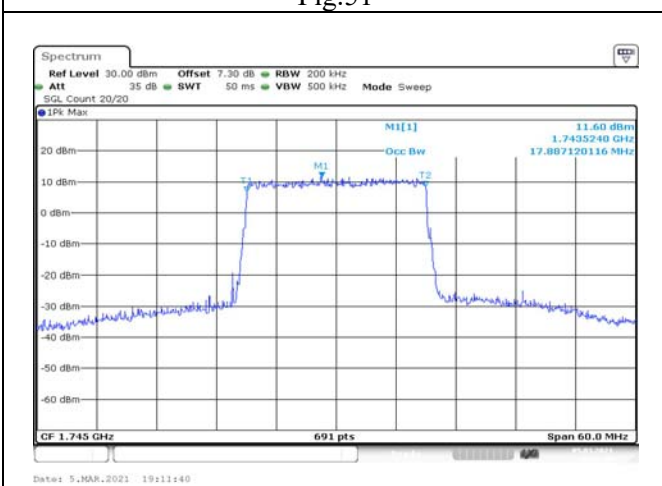


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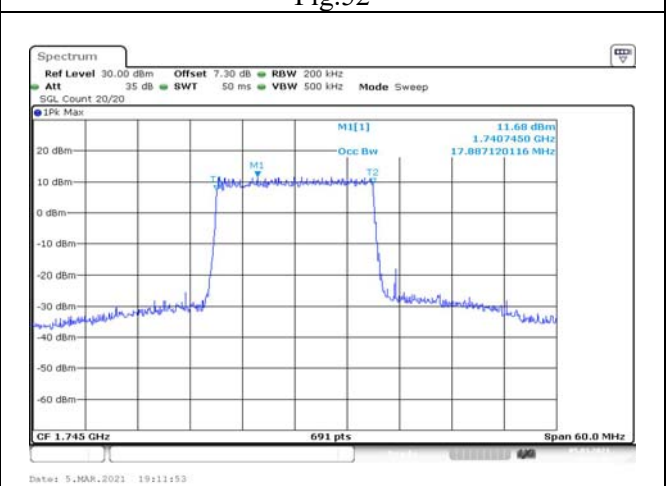


Fig.54

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	
4	1710.7	19957	1.4	6	0	1.216	Fig.1	1.210	Fig.2	1.216	Fig.3
	1732.5	20175		6	0	1.216	Fig.4	1.204	Fig.5	1.204	Fig.6
	1754.3	20393		6	0	1.210	Fig.7	1.222	Fig.8	1.210	Fig.9
	1711.5	19965	3	15	0	2.918	Fig.10	2.891	Fig.11	2.931	Fig.12
	1732.5	20175		15	0	2.904	Fig.13	2.957	Fig.14	2.904	Fig.15
	1753.5	20385		15	0	2.931	Fig.16	2.970	Fig.17	2.904	Fig.18
	1712.5	19975	5	25	0	4.884	Fig.19	4.732	Fig.20	4.863	Fig.21
	1732.5	20175		25	0	4.819	Fig.22	4.906	Fig.23	4.906	Fig.24
	1752.5	20375		25	0	4.884	Fig.25	4.819	Fig.26	4.819	Fig.27
	1715	20000	10	50	0	9.595	Fig.28	9.595	Fig.29	9.595	Fig.30
	1732.5	20175		50	0	9.508	Fig.31	9.551	Fig.32	9.508	Fig.33
	1750	20350		50	0	9.638	Fig.34	9.682	Fig.35	9.465	Fig.36
	1717.5	20025	15	75	0	14.588	Fig.37	14.522	Fig.38	14.457	Fig.39
	1732.5	20175		75	0	14.522	Fig.40	14.457	Fig.41	14.457	Fig.42
	1747.5	20325		75	0	14.457	Fig.43	14.457	Fig.44	14.457	Fig.45
	1720	20050	20	100	0	19.016	Fig.46	19.016	Fig.47	19.103	Fig.48
1732.5	20175	100		0	19.103	Fig.49	18.929	Fig.50	19.103	Fig.51	
1745	20300	100		0	19.190	Fig.52	19.190	Fig.53	19.103	Fig.54	

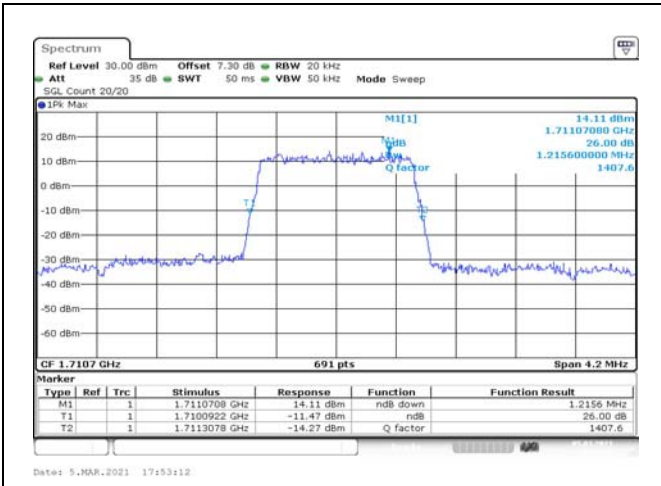


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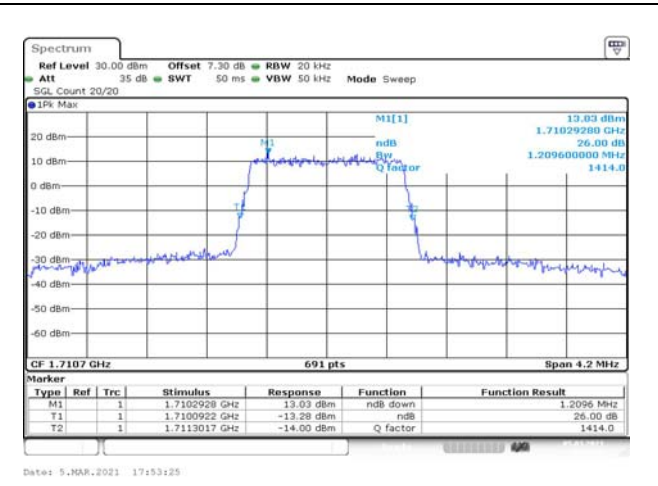


Fig.2

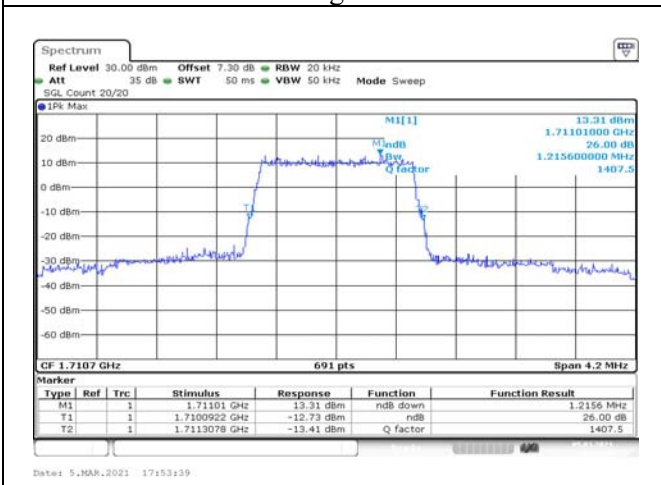


Fig.3

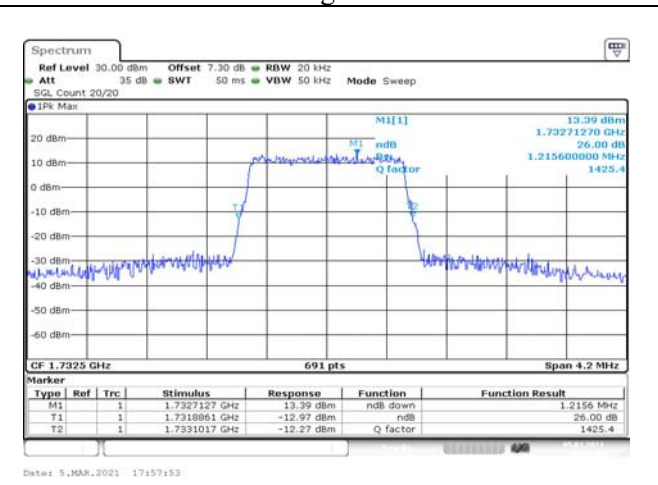


Fig.4

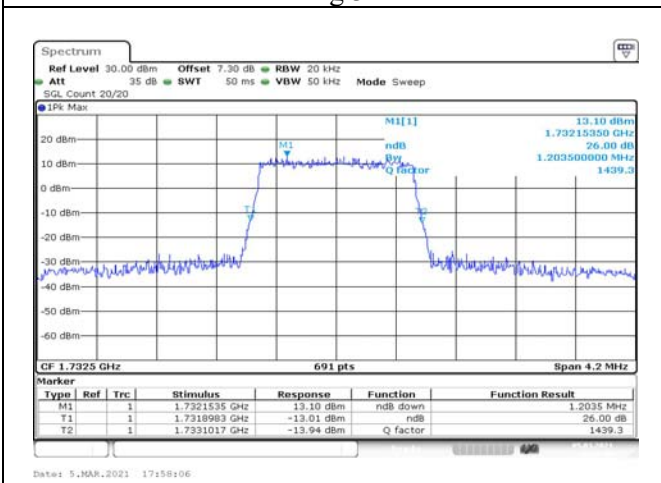


Fig.5

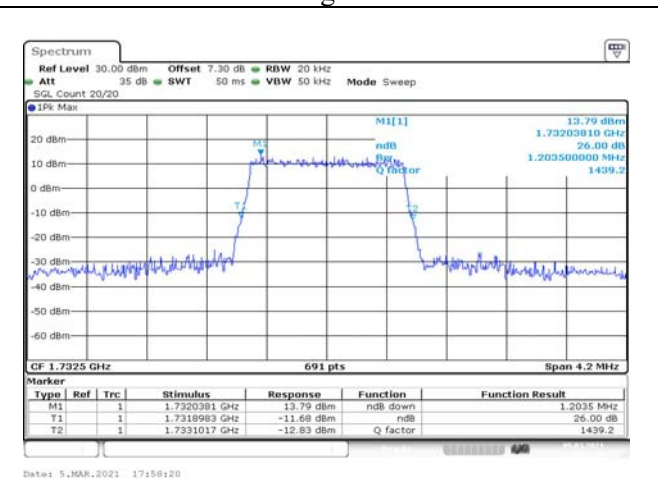


Fig.6

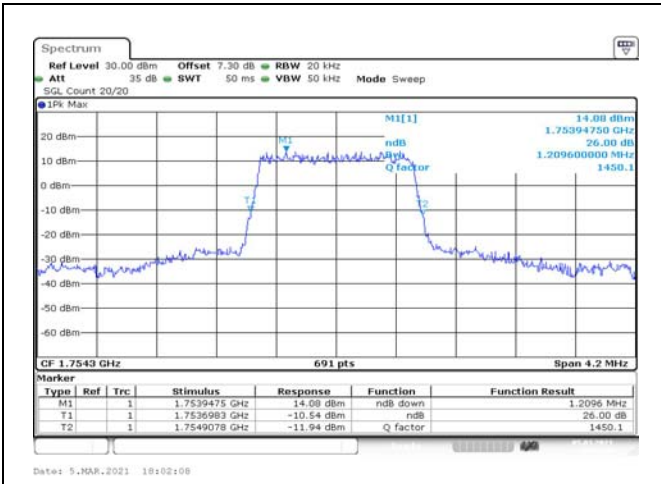


Fig.7

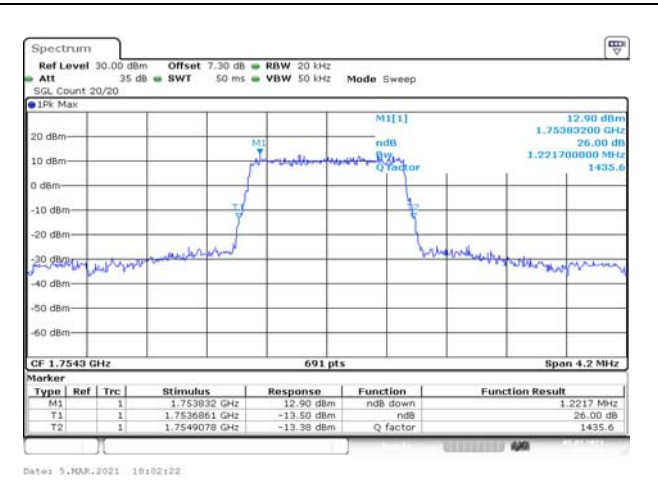


Fig.8

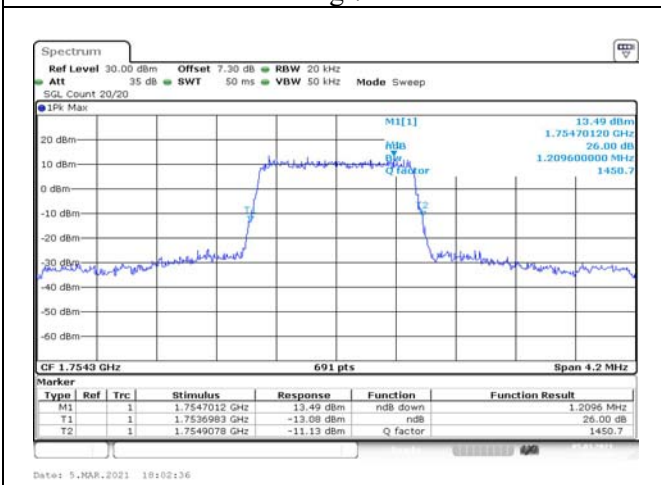


Fig.9

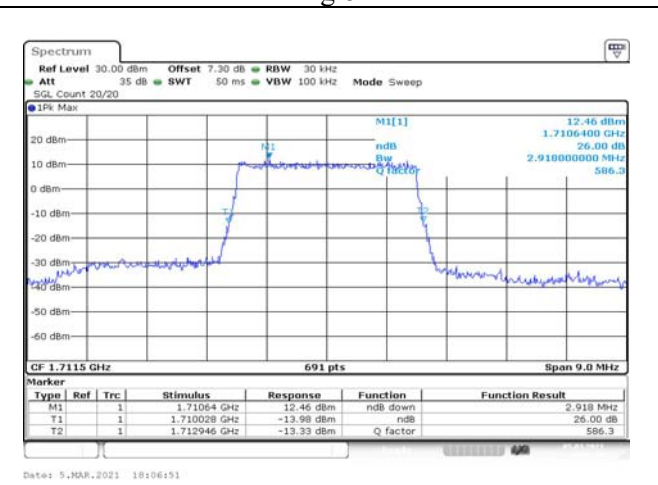


Fig.10



Fig.11

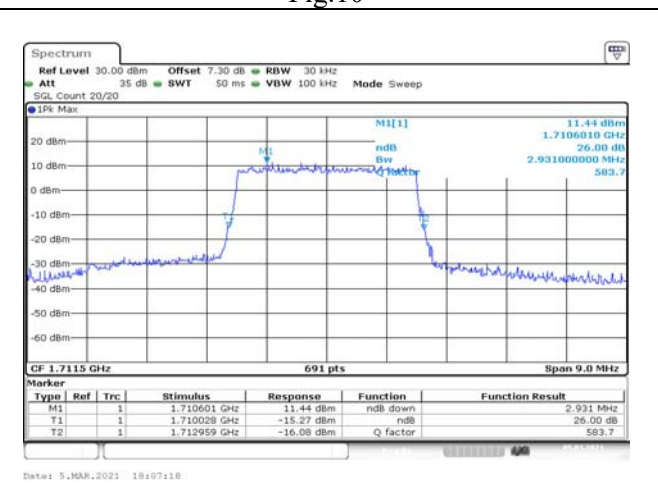


Fig.12

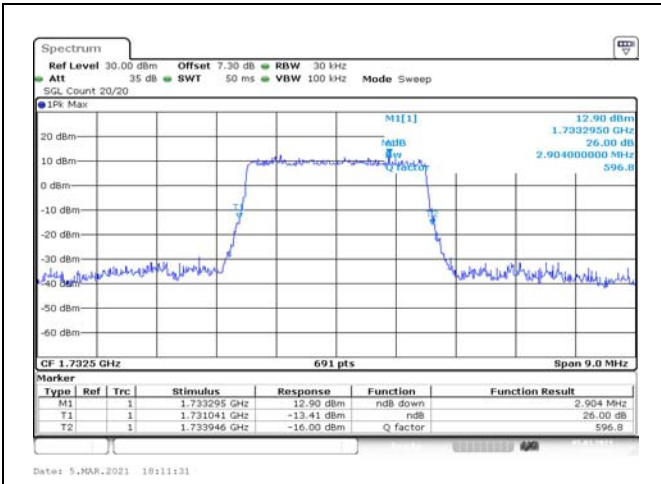


Fig.13

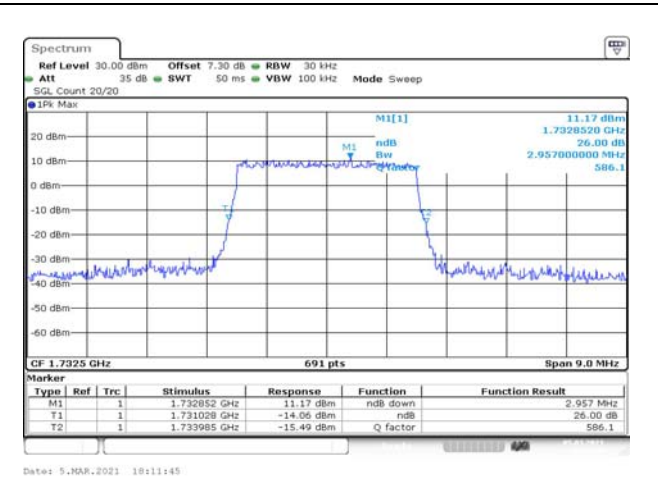


Fig.14

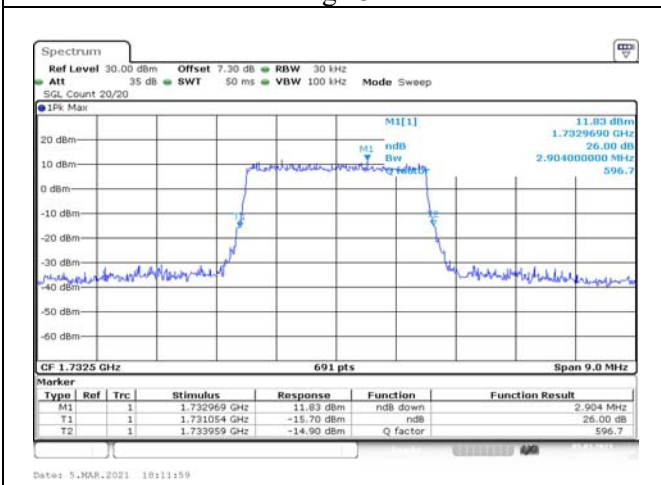


Fig.15

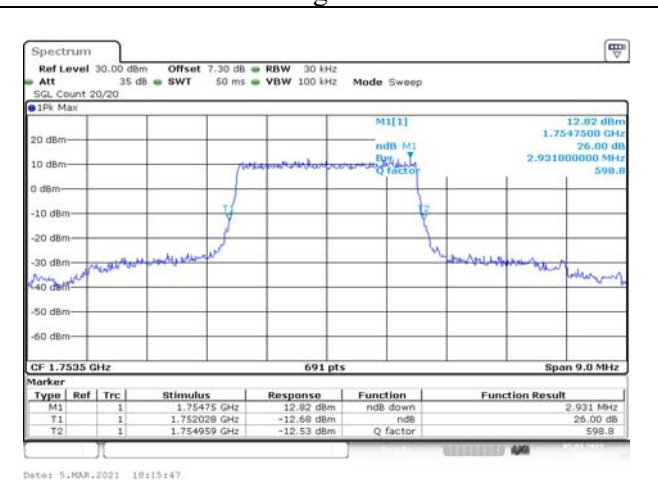


Fig.16

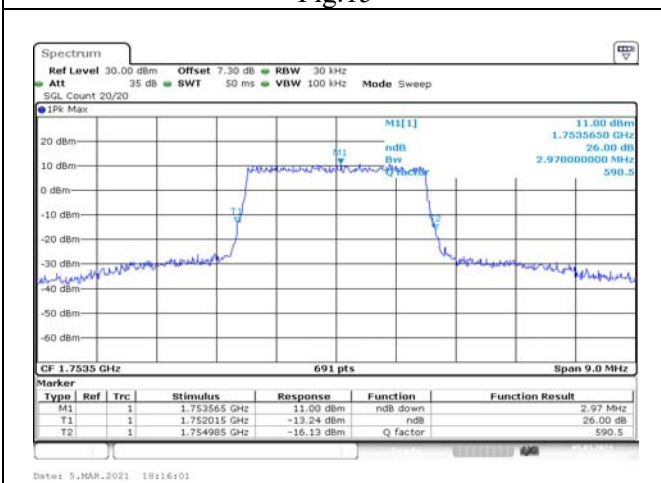


Fig.17

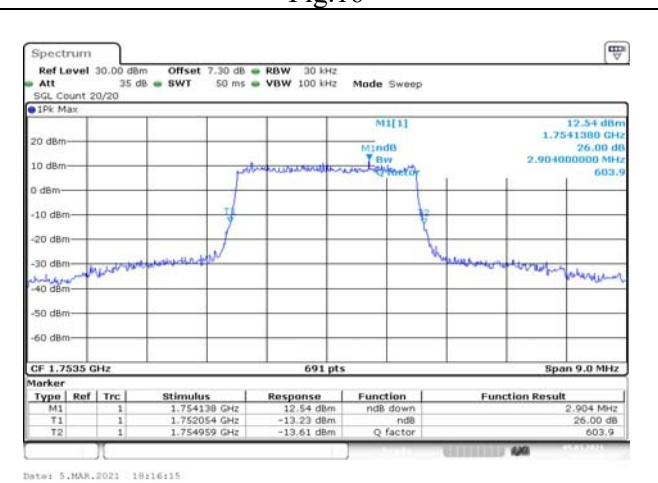


Fig.18

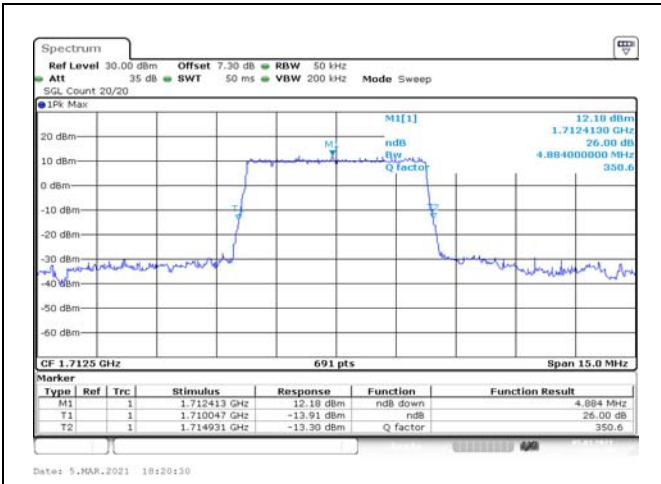


Fig.19

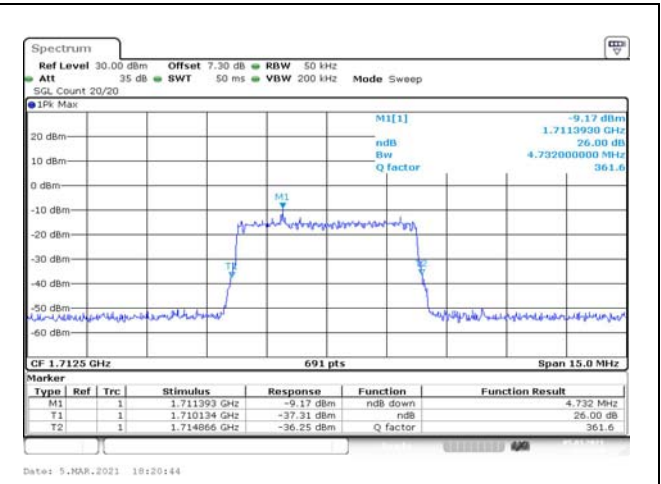


Fig.20

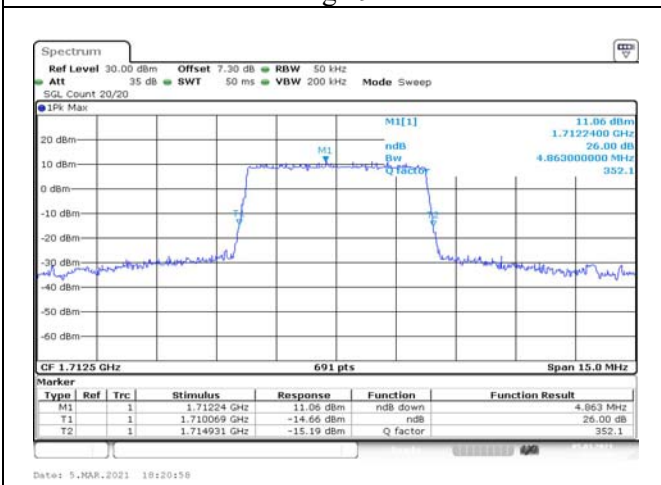


Fig.21

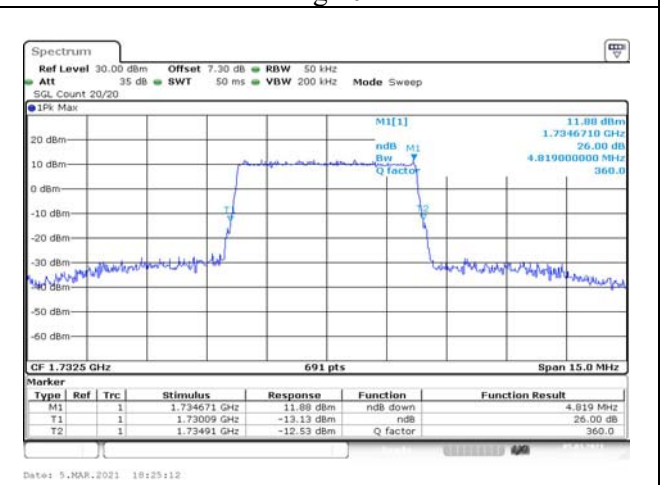


Fig.22

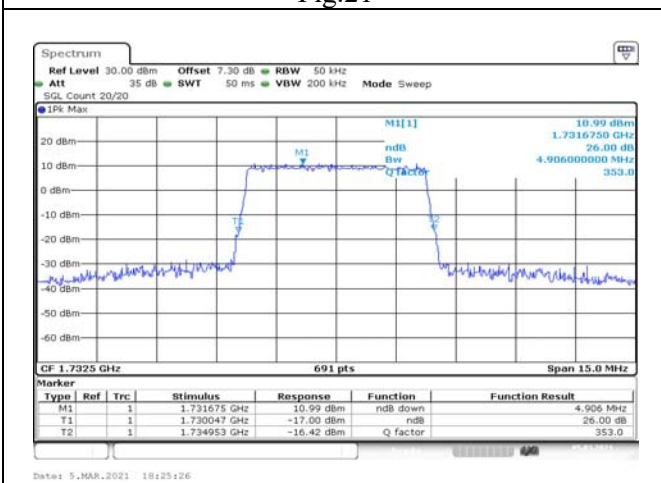


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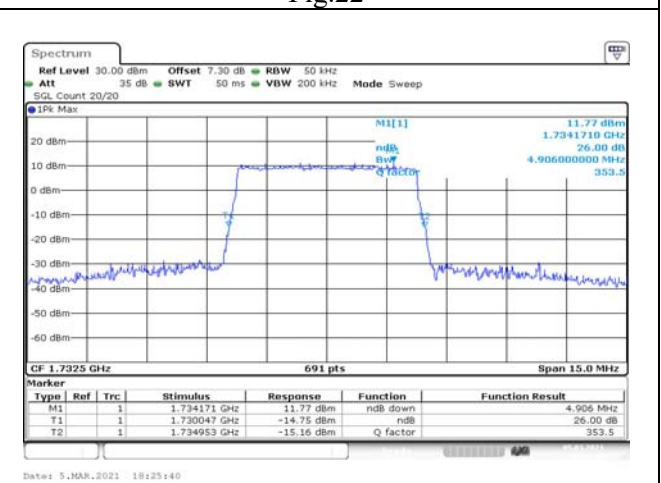


Fig.24

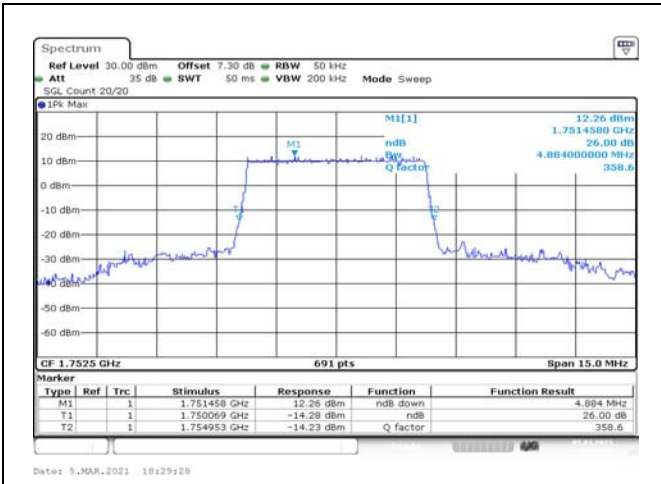


Fig.25

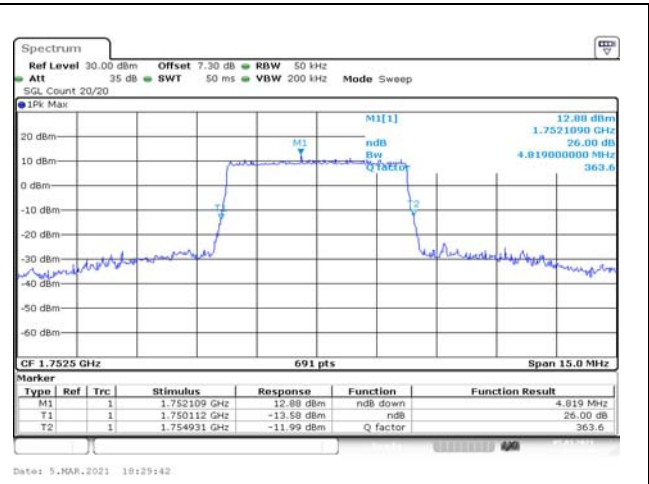


Fig.26

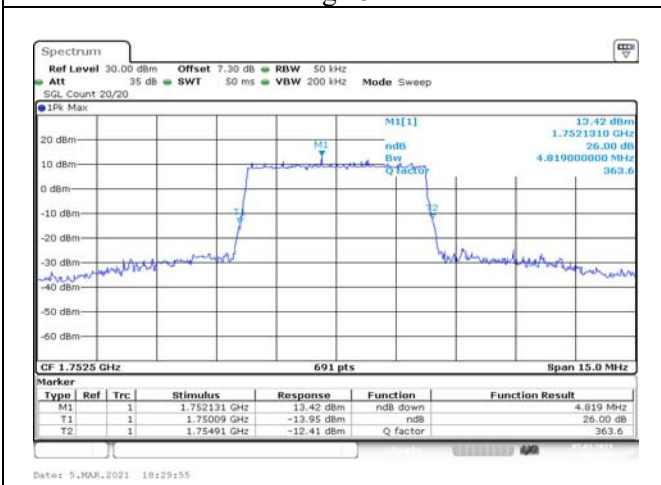


Fig.27

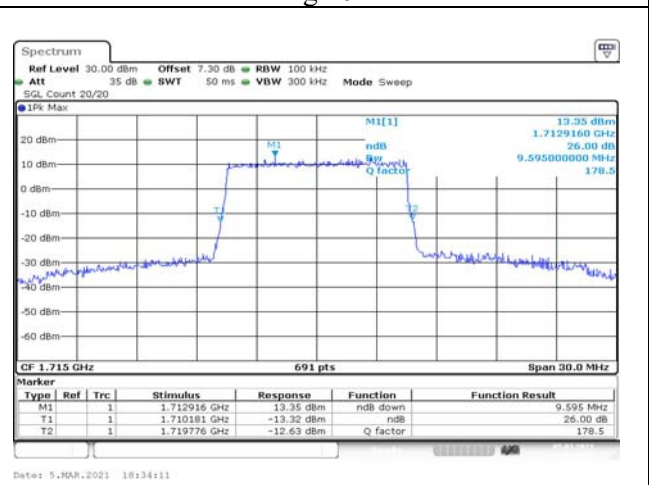


Fig.28

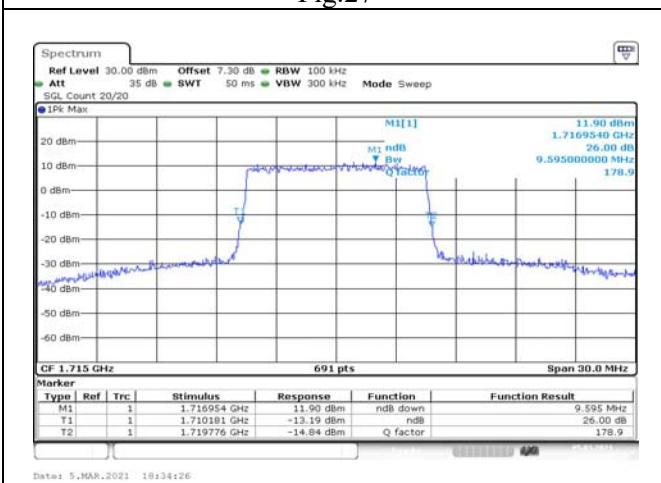


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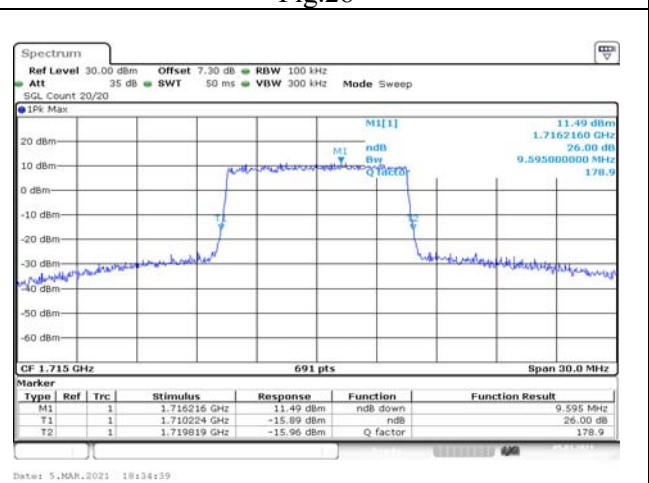


Fig.30

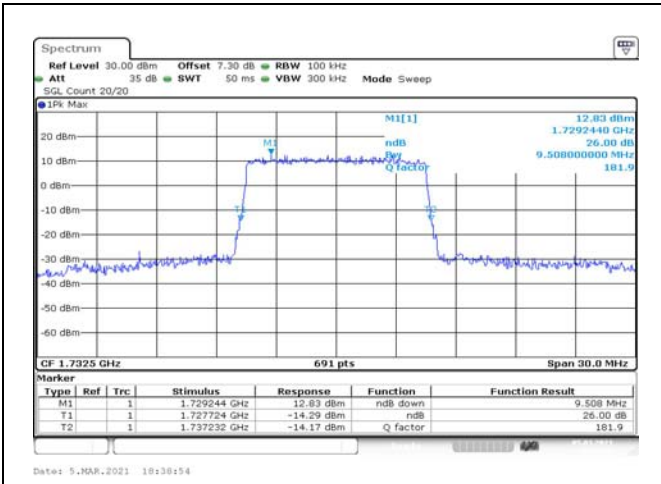


Fig.31

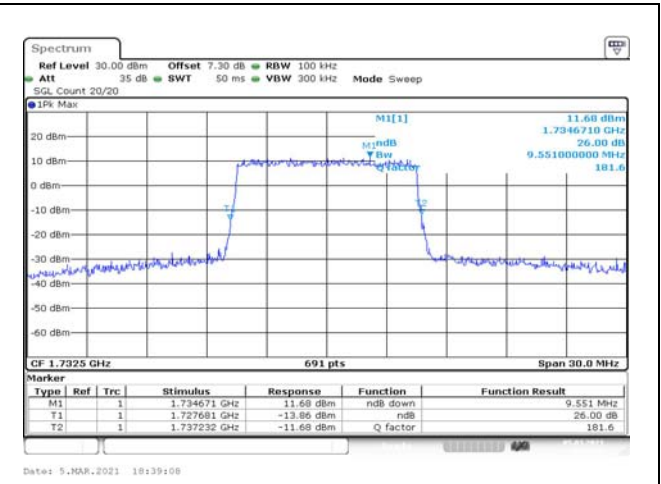


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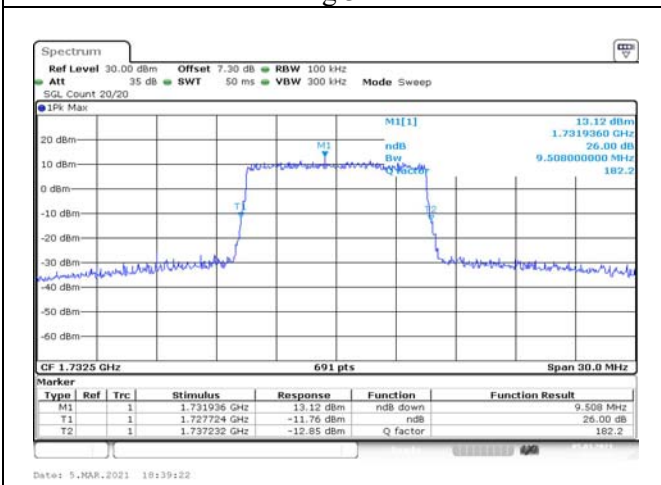


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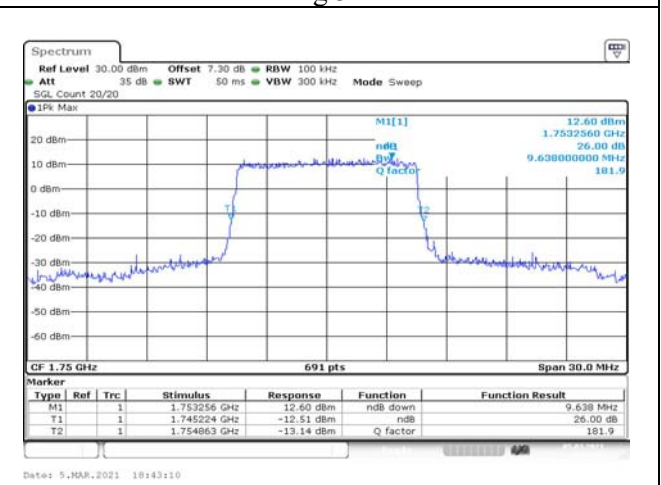


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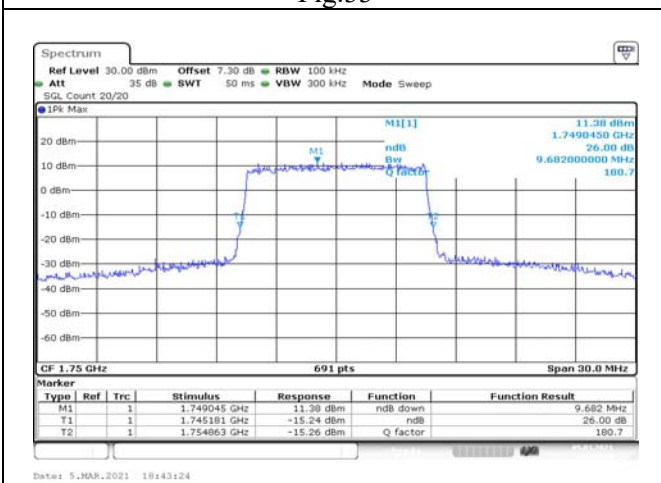


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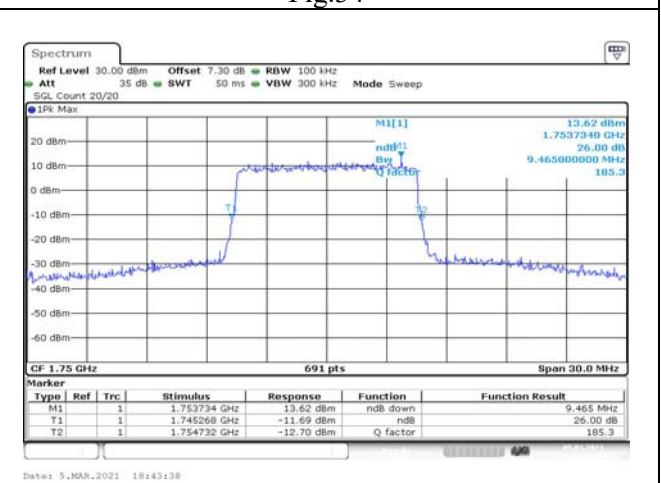


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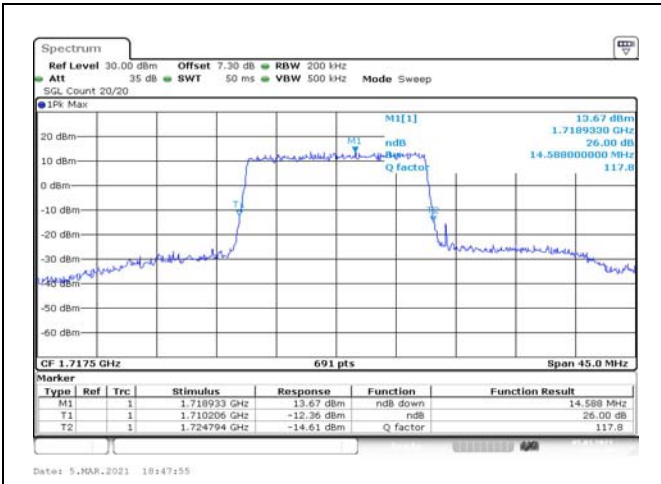


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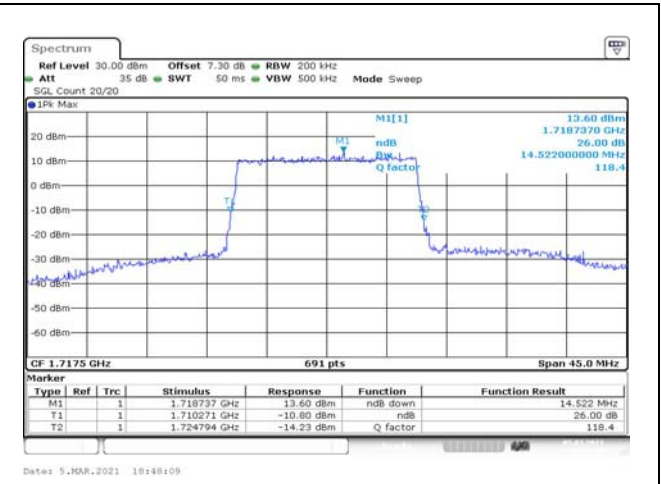


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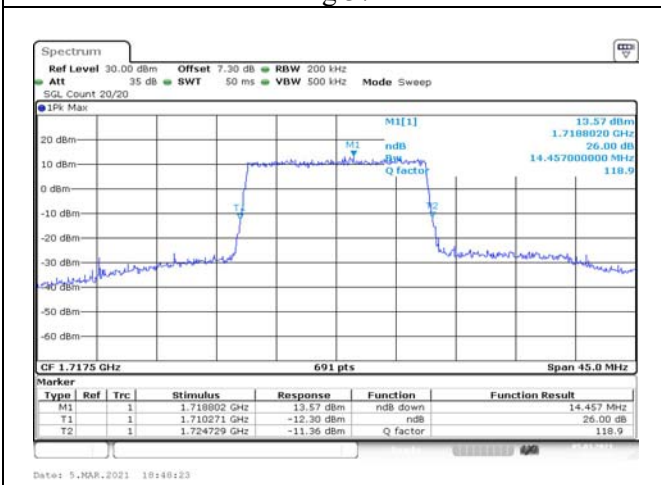


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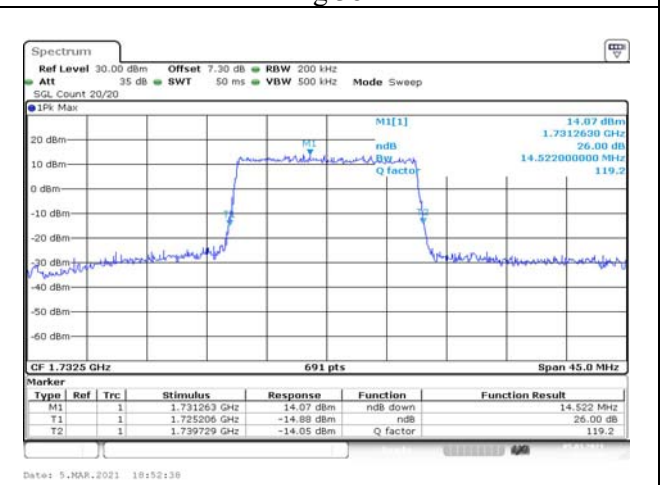


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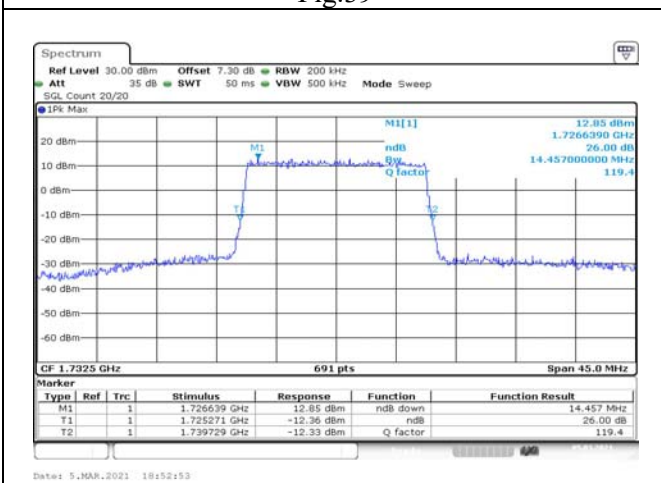


Fig.41

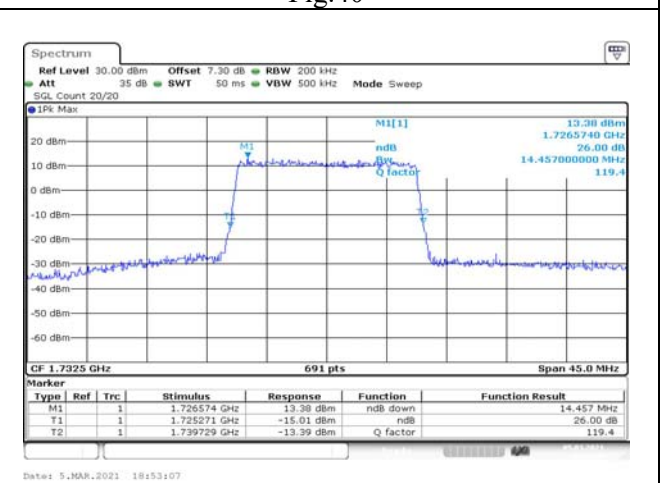


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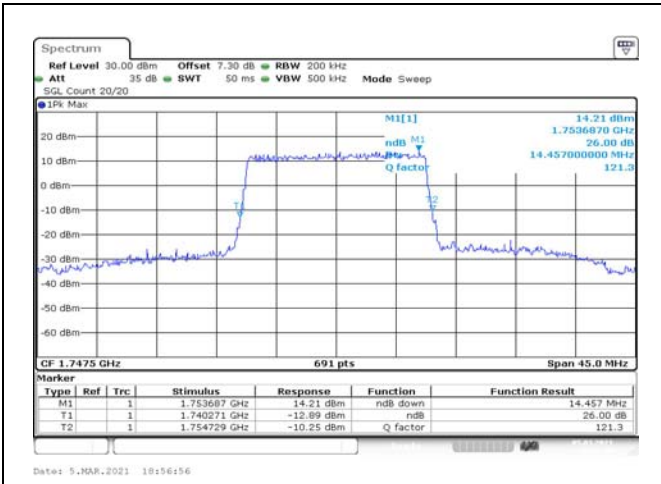


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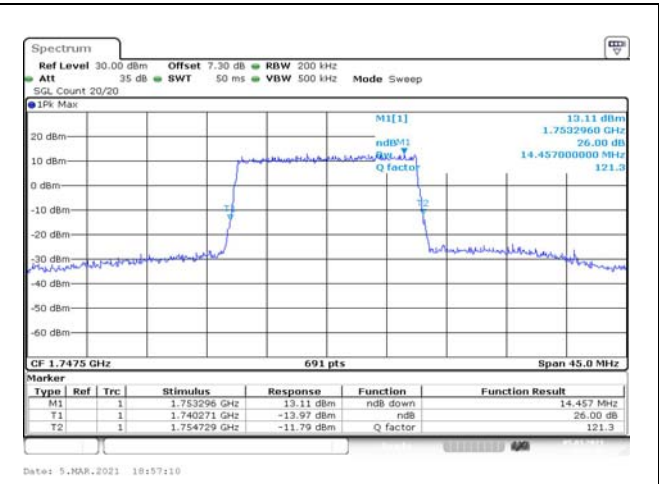


Fig.44

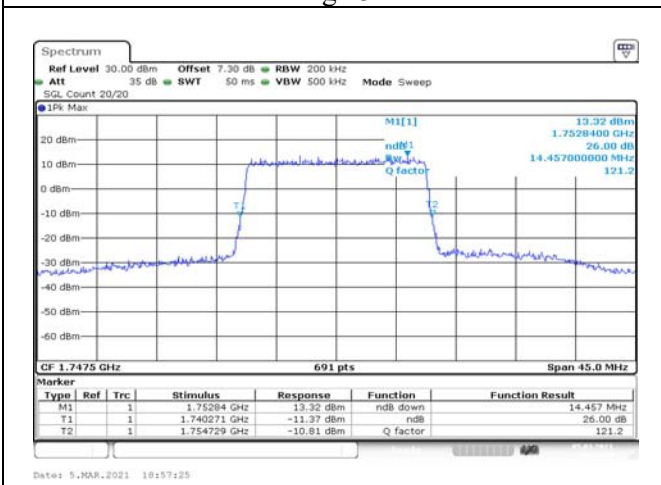


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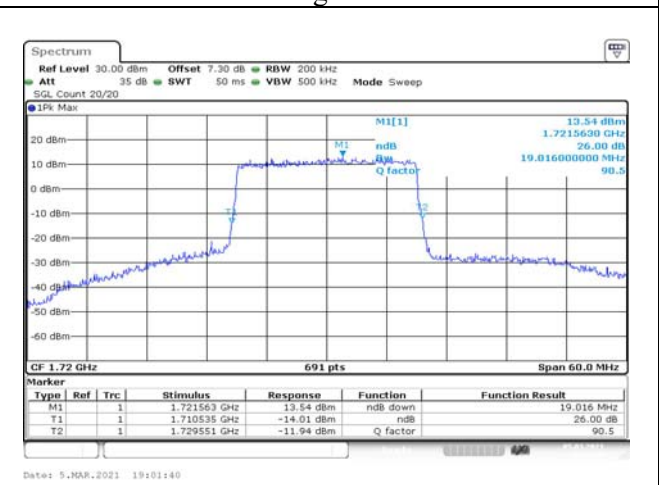


Fig.46



Fig.47

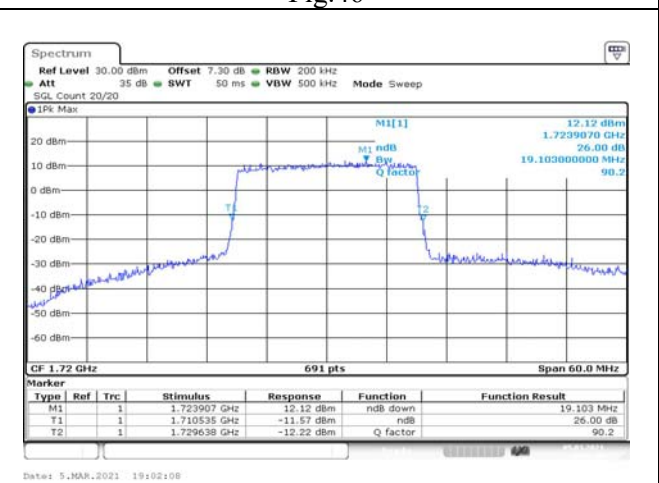


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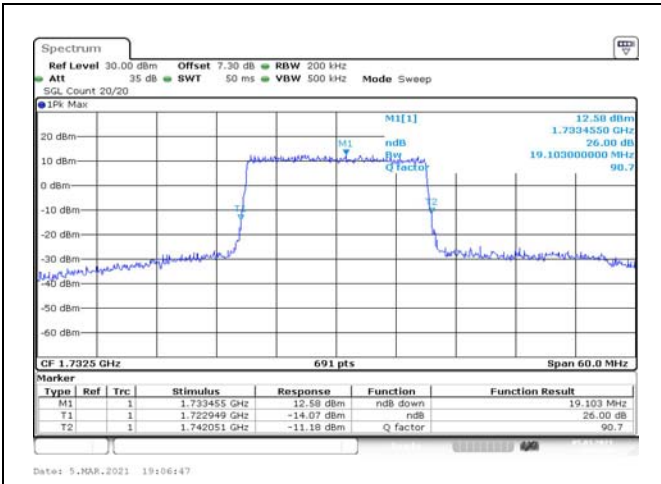


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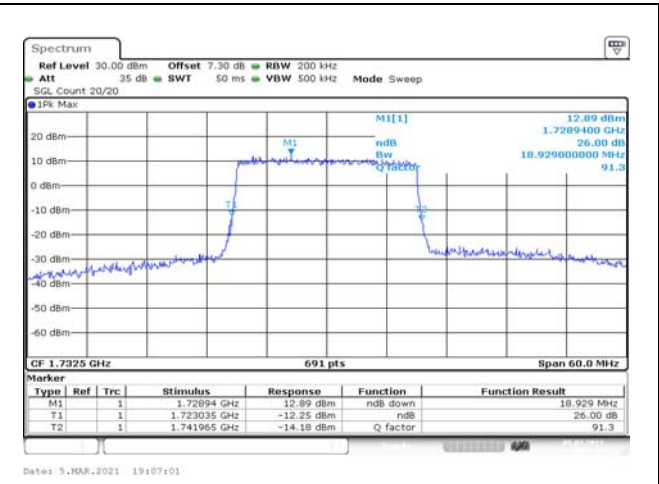


Fig.50

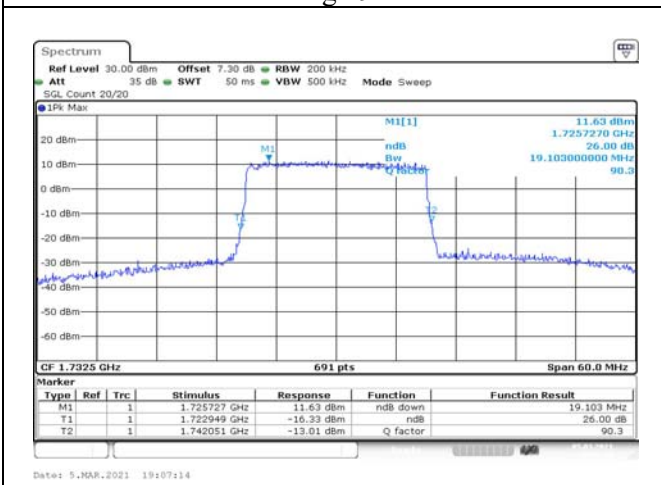


Fig.51

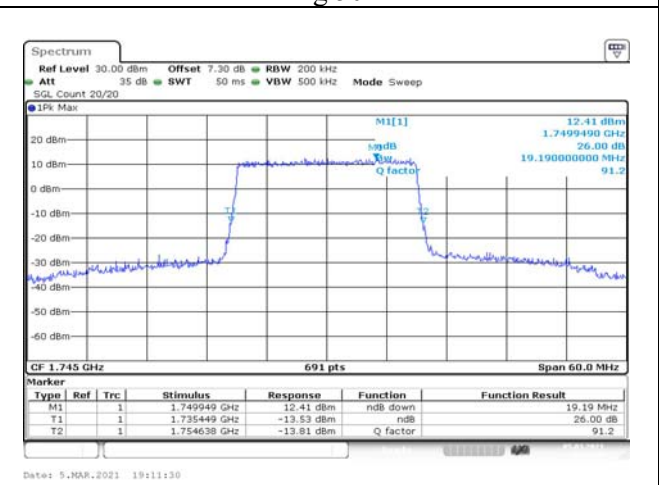


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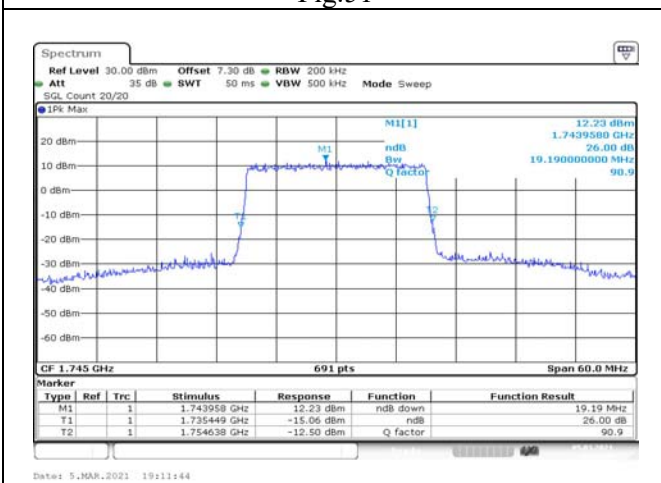


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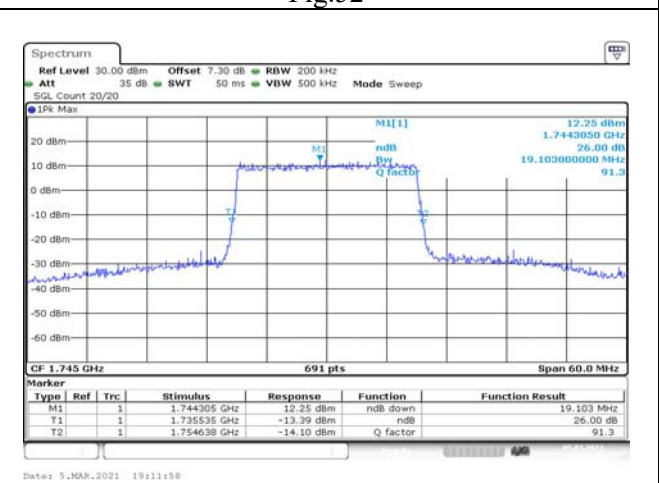


Fig.54

4 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM	64-QAM
4	1710.7	19957	1.4	1	5	Fig.1	Fig.2	Fig.3
	1710.7	19957		6	0	Fig.4	Fig.5	Fig.6
	1732.5	20175		1	5	Fig.7	Fig.8	Fig.9
	1732.5	20175		6	0	Fig.10	Fig.11	Fig.12
	1754.3	20393		1	5	Fig.13	Fig.14	Fig.15
	1754.3	20393		6	0	Fig.16	Fig.17	Fig.18
	1711.5	19965	3	1	14	Fig.19	Fig.20	Fig.21
	1711.5	19965		15	0	Fig.22	Fig.23	Fig.24
	1732.5	20175		1	14	Fig.25	Fig.26	Fig.27
	1732.5	20175		15	0	Fig.28	Fig.29	Fig.30
	1753.5	20385		1	14	Fig.31	Fig.32	Fig.33
	1753.5	20385		15	0	Fig.34	Fig.35	Fig.36
	1712.5	19975	5	1	24	Fig.37	Fig.38	Fig.39
	1712.5	19975		25	0	Fig.40	Fig.41	Fig.42
	1732.5	20175		1	24	Fig.43	Fig.44	Fig.45
	1732.5	20175		25	0	Fig.46	Fig.47	Fig.48
	1752.5	20375		1	24	Fig.49	Fig.50	Fig.51
	1752.5	20375		25	0	Fig.52	Fig.53	Fig.54
	1715	20000	10	1	49	Fig.55	Fig.56	Fig.57
	1715	20000		50	0	Fig.58	Fig.59	Fig.60
	1732.5	20175		1	49	Fig.61	Fig.62	Fig.63
	1732.5	20175		50	0	Fig.64	Fig.65	Fig.66
	1750	20350		1	49	Fig.67	Fig.68	Fig.69
	1750	20350		50	0	Fig.70	Fig.71	Fig.72
	1717.5	20025	15	1	74	Fig.73	Fig.74	Fig.75
	1717.5	20025		75	0	Fig.76	Fig.77	Fig.78
	1732.5	20175		1	74	Fig.79	Fig.80	Fig.81
	1732.5	20175		75	0	Fig.82	Fig.83	Fig.84
	1747.5	20325		1	74	Fig.85	Fig.86	Fig.87
	1747.5	20325		75	0	Fig.88	Fig.89	Fig.90
1720	20050	20	1	99	Fig.91	Fig.92	Fig.93	
1720	20050		100	0	Fig.94	Fig.95	Fig.96	
1732.5	20175		1	99	Fig.97	Fig.98	Fig.99	
1732.5	20175		100	0	Fig.100	Fig.101	Fig.102	
1745	20300		1	99	Fig.103	Fig.104	Fig.105	
1745	20300		100	0	Fig.106	Fig.107	Fig.108	

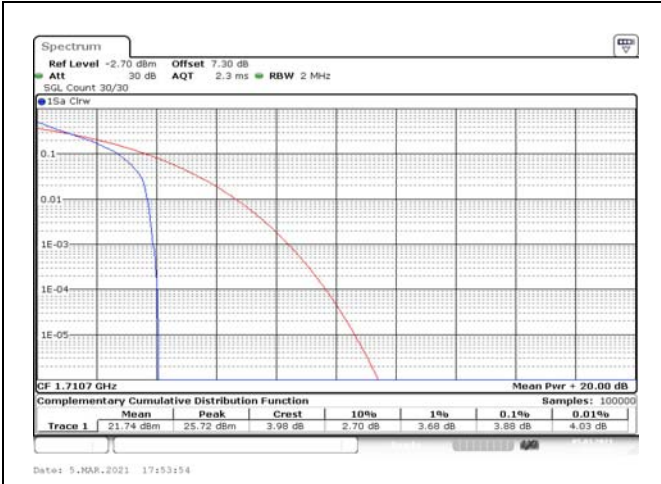


Fig.1

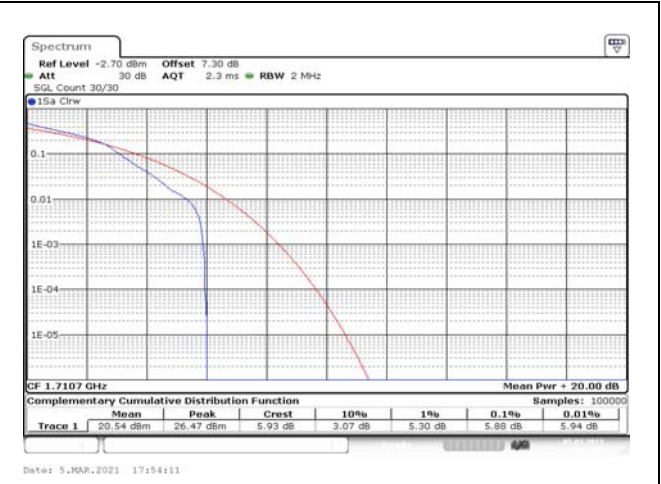


Fig.2

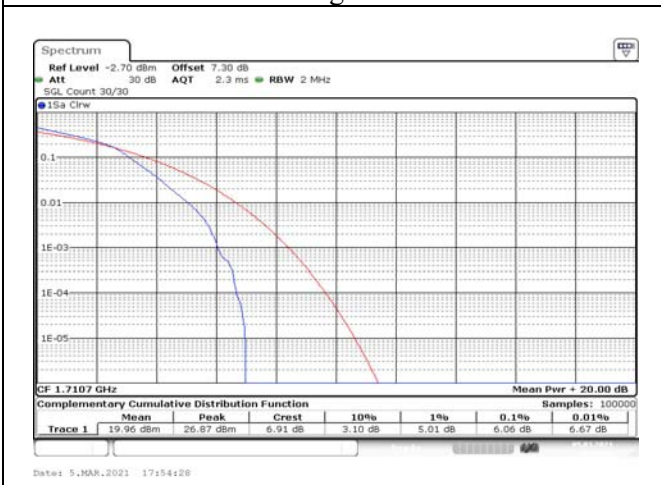


Fig.3

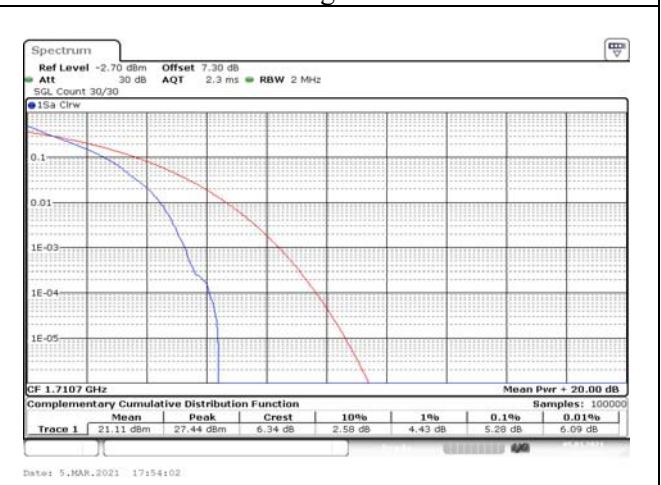


Fig.4

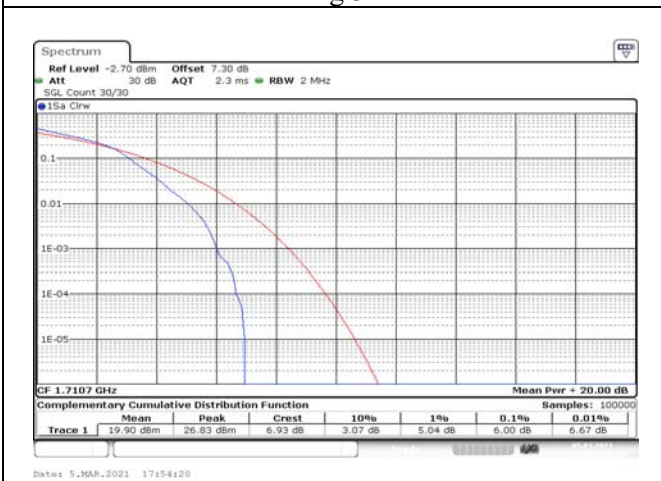


Fig.5

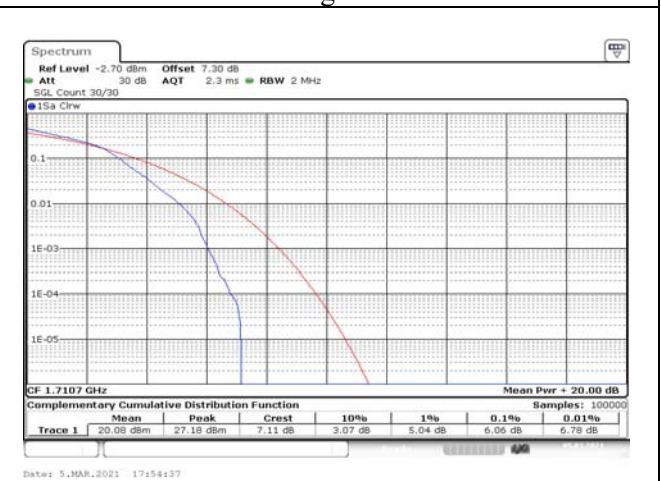


Fig.6

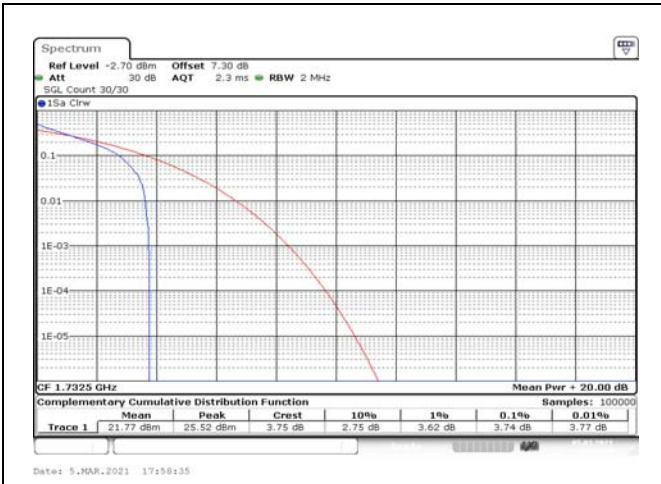


Fig.7

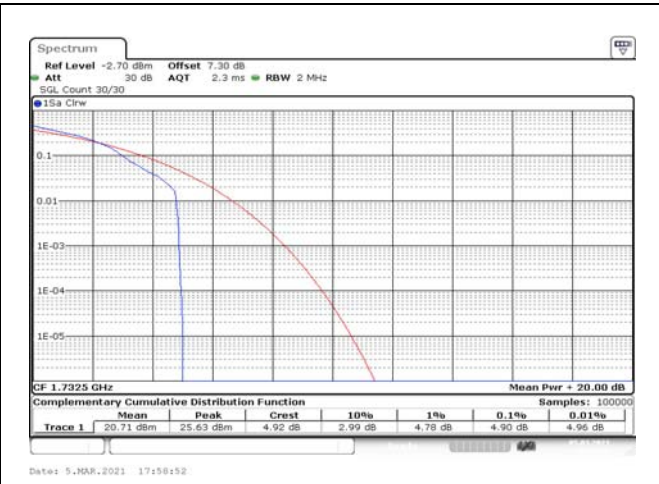


Fig.8

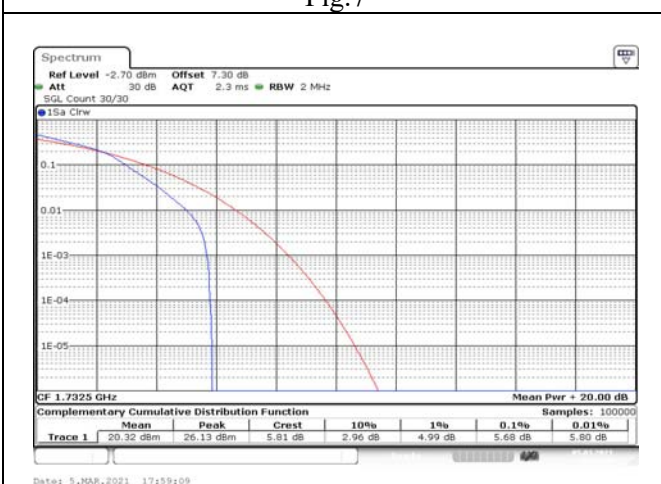


Fig.9

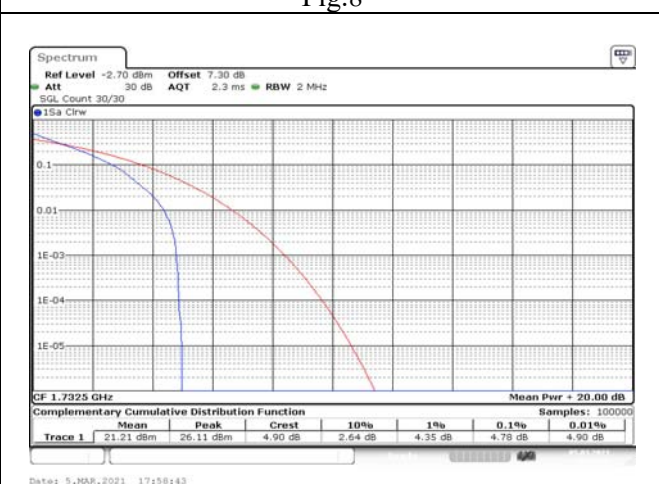


Fig.10

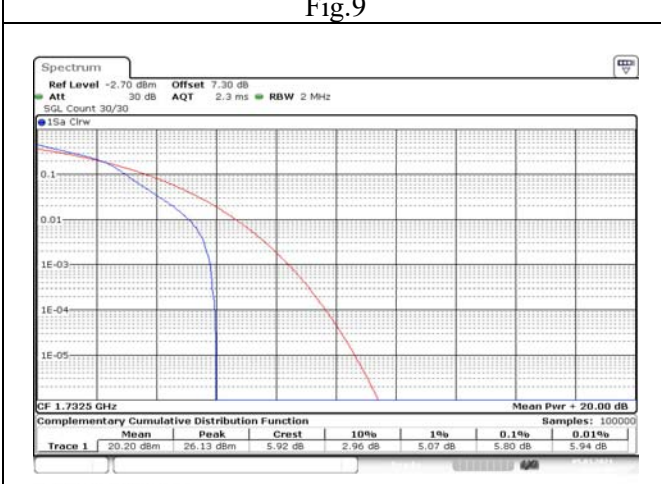


Fig.11

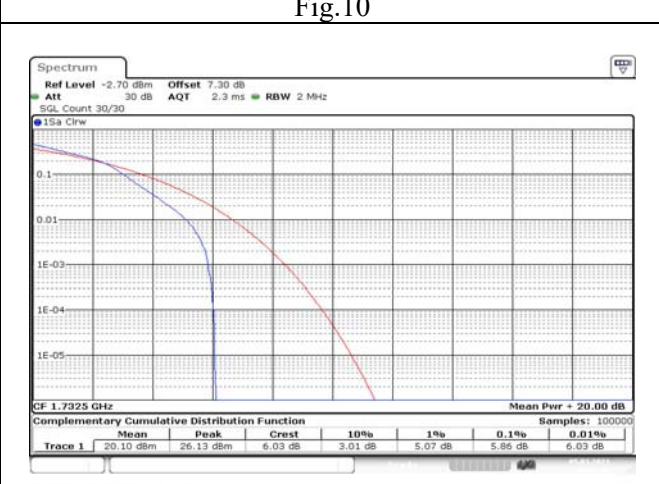


Fig.12

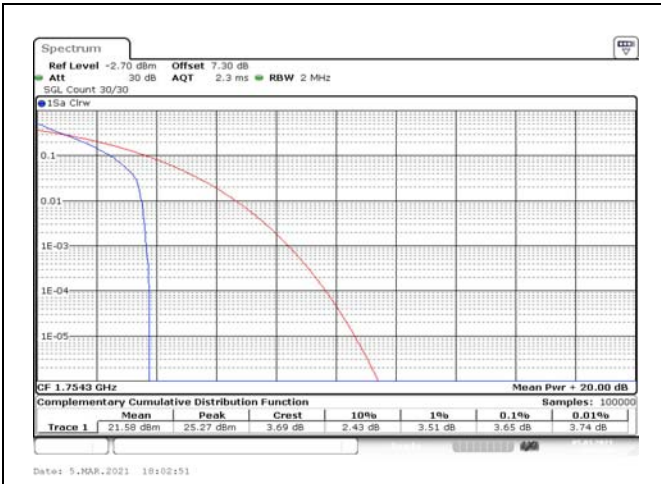


Fig.13

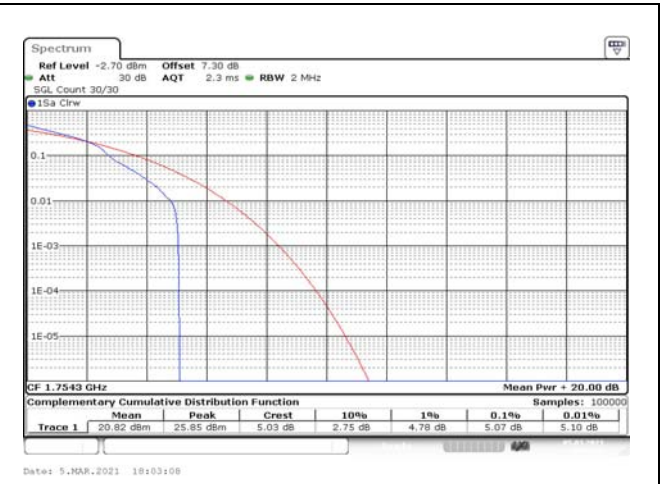


Fig.14

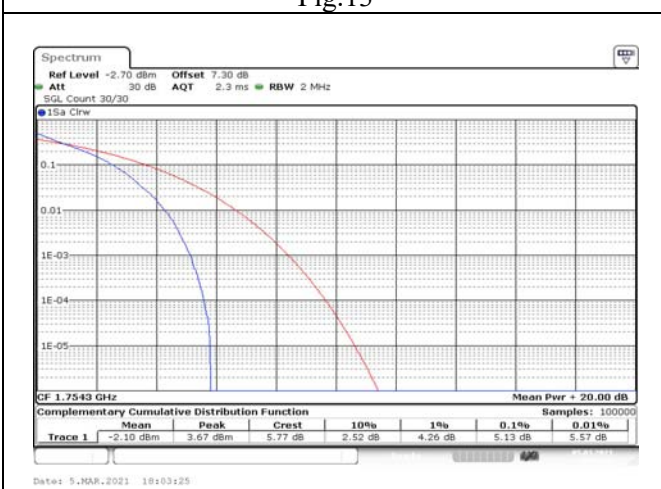


Fig.15

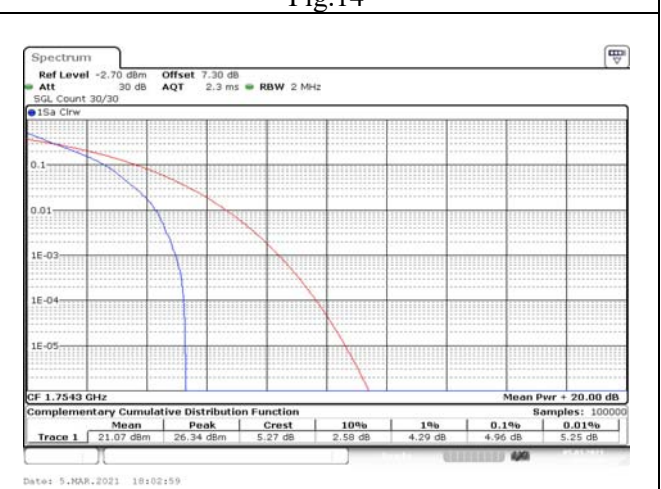


Fig.16

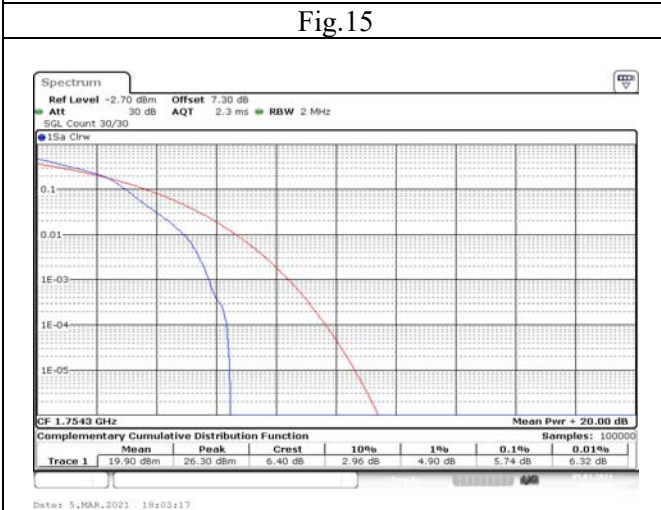


Fig.17

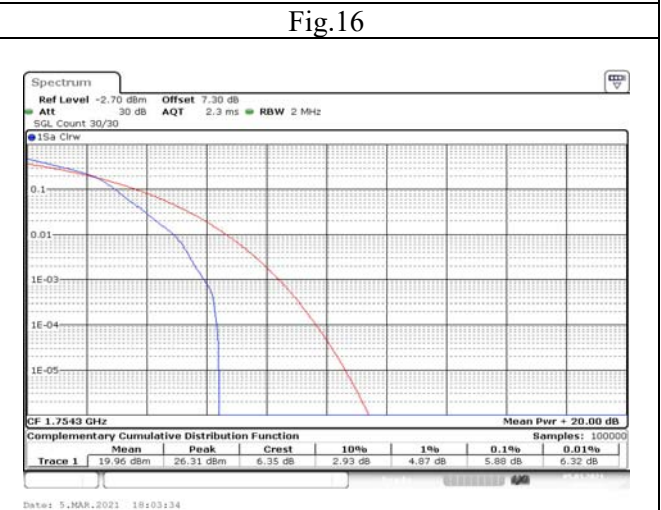


Fig.18

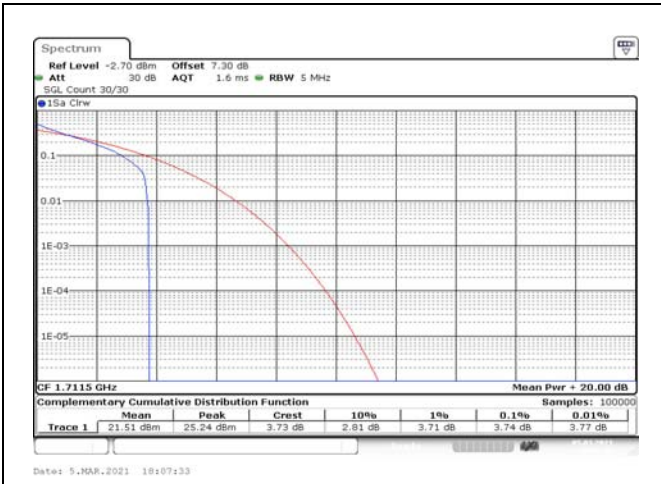


Fig.19

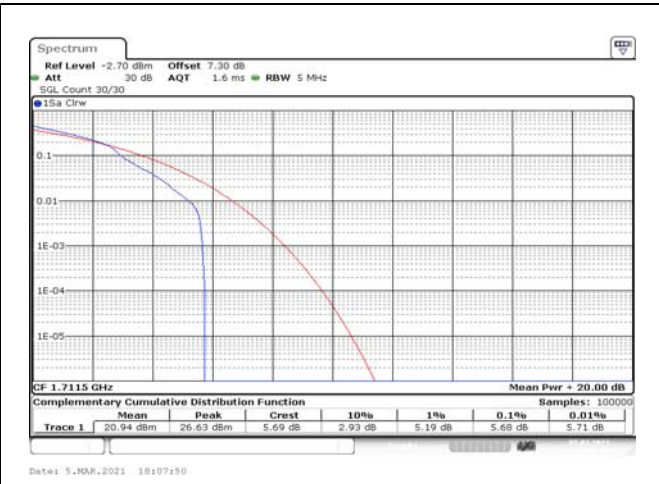


Fig.20

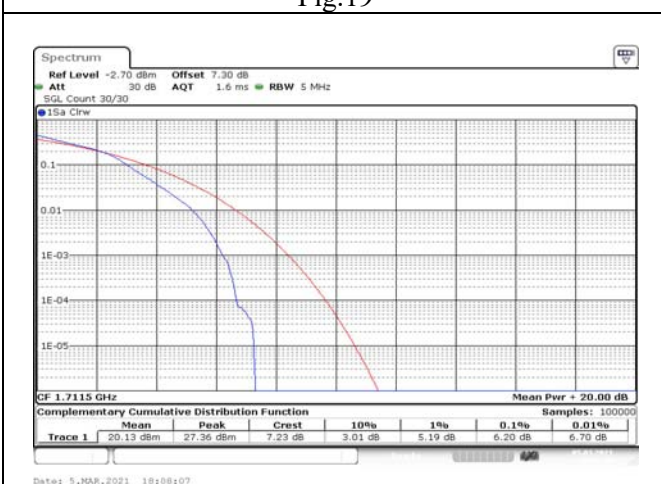


Fig.21

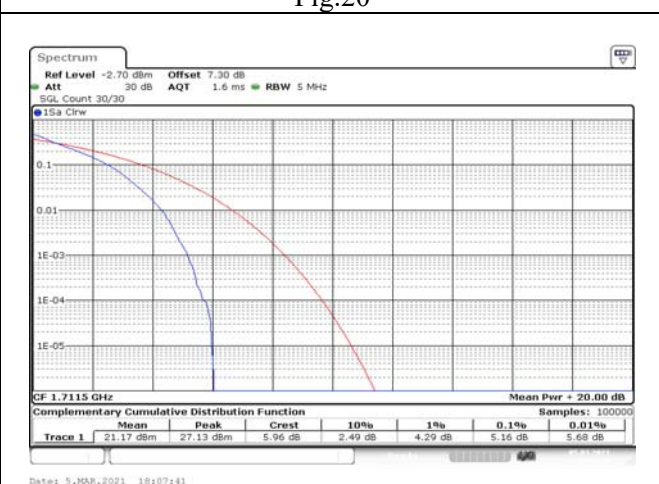


Fig.22

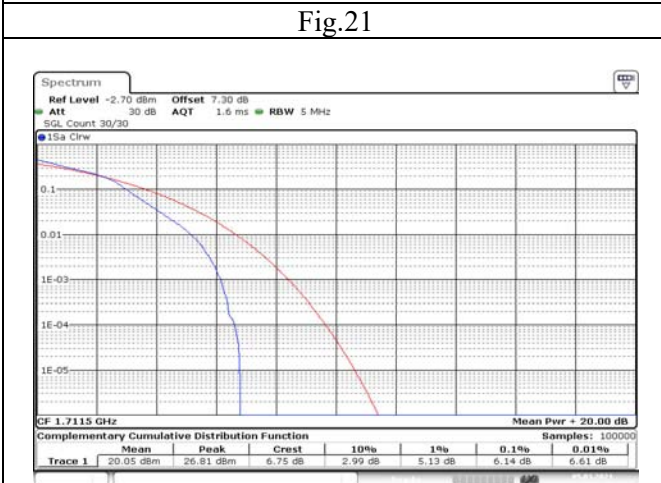


Fig.23

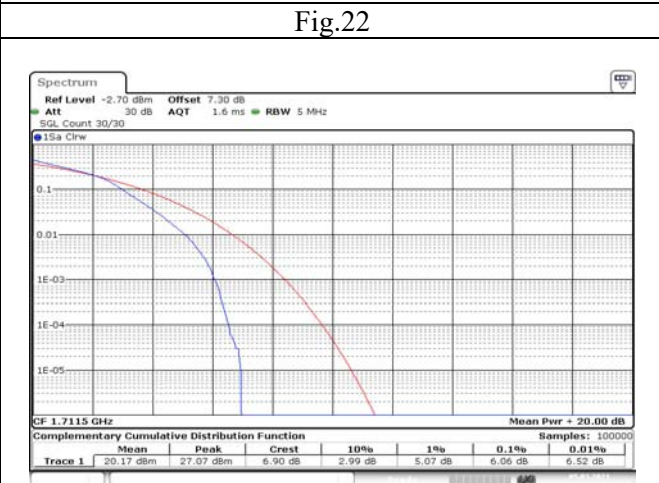


Fig.24

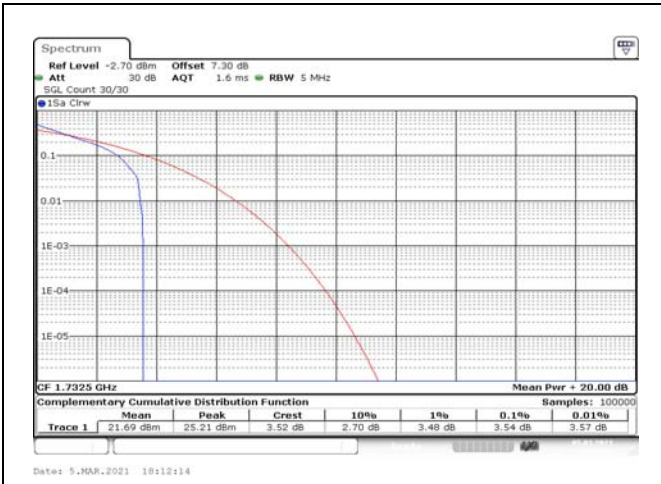


Fig.25

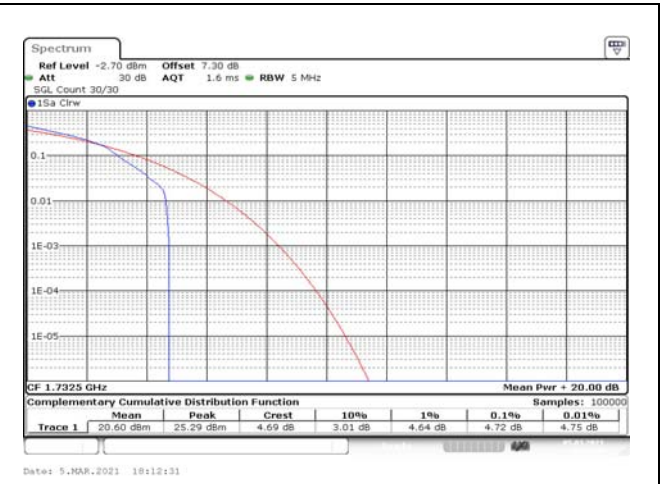


Fig.26

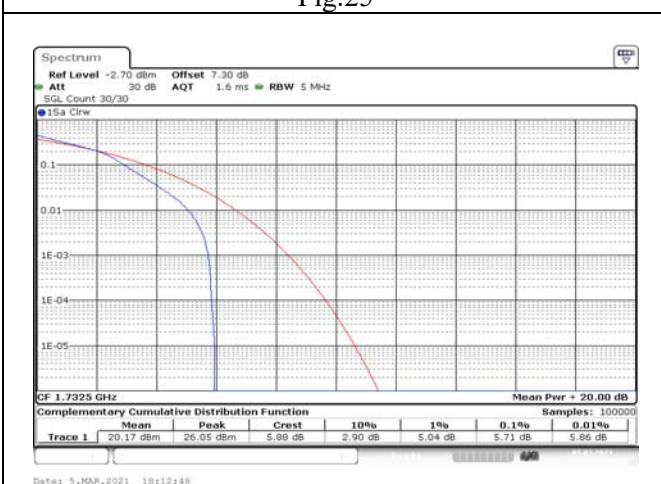


Fig.27

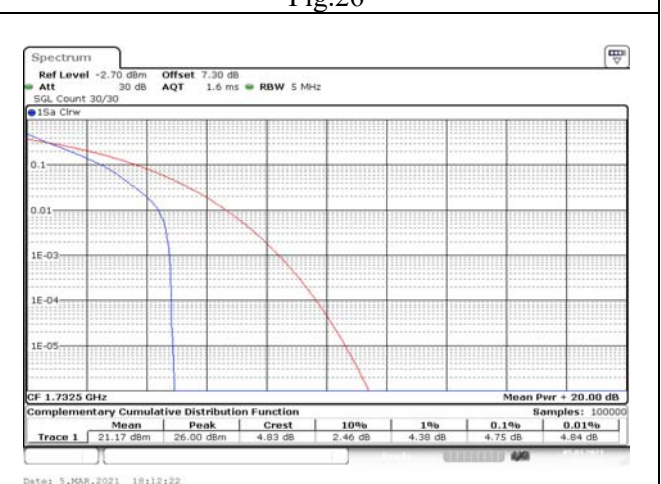


Fig.28

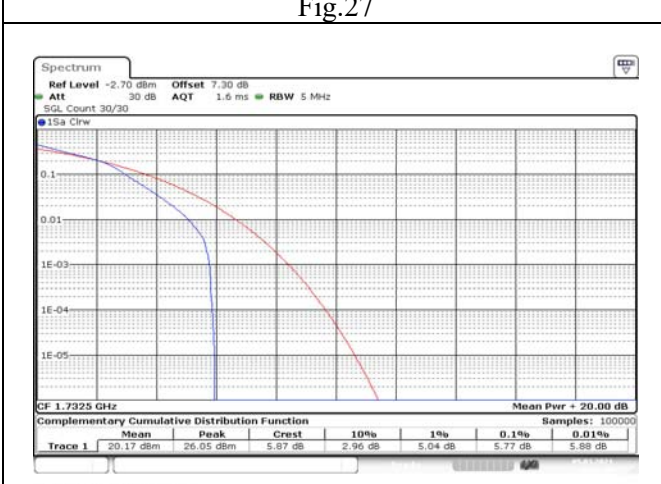


Fig.29

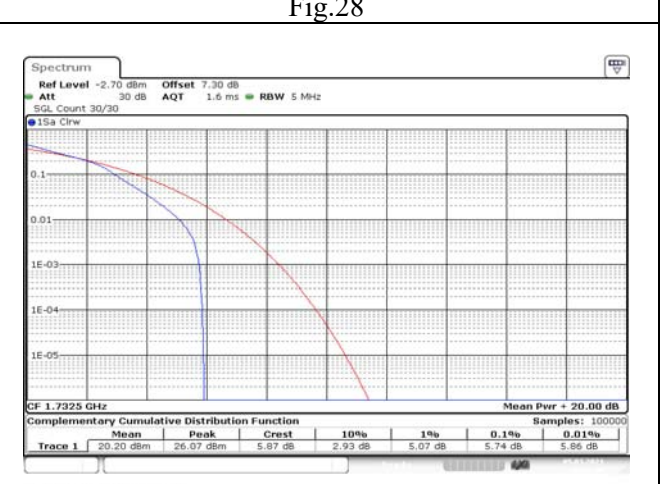


Fig.30

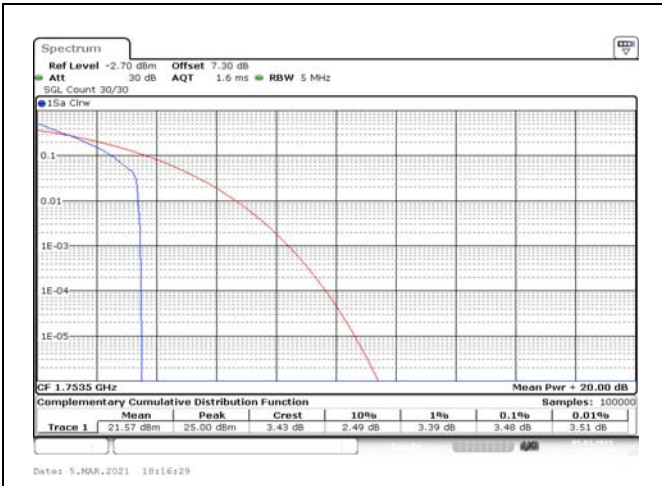


Fig.31

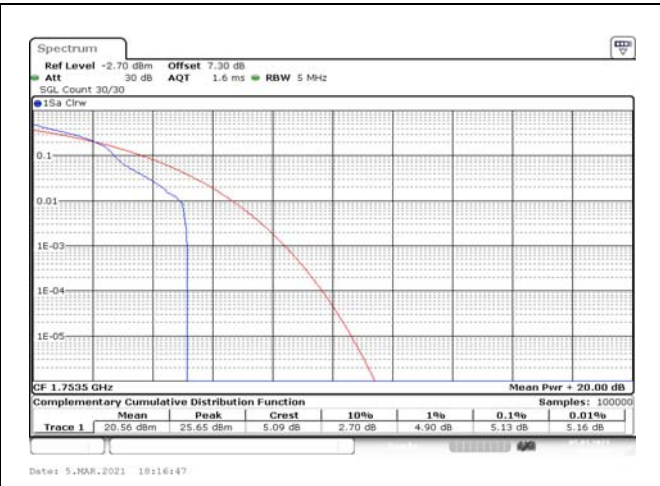


Fig.32



Fig.33

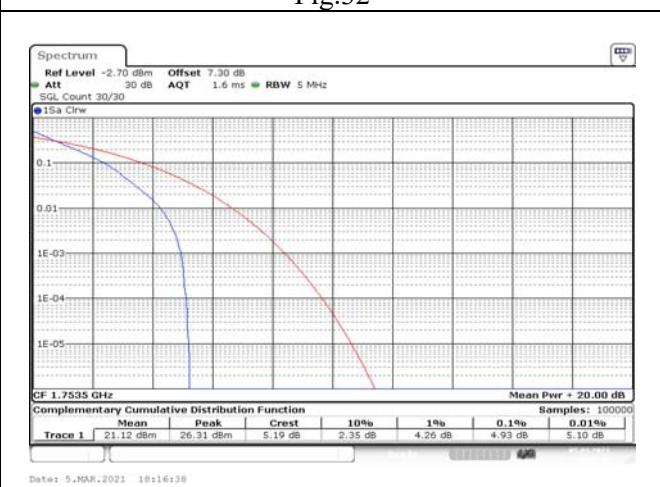


Fig.34

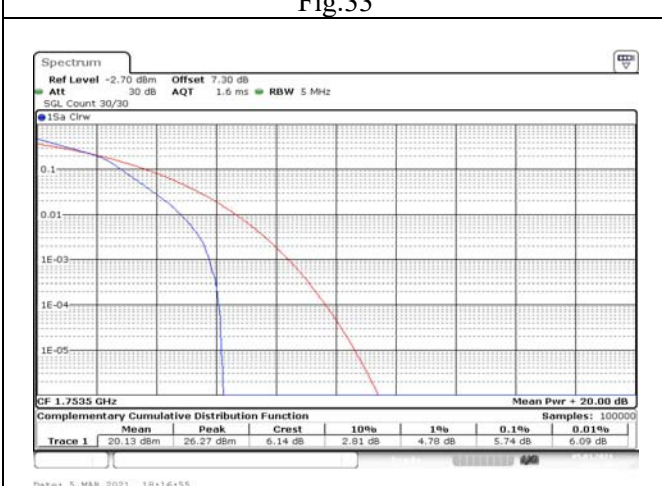


Fig.35



Fig.36

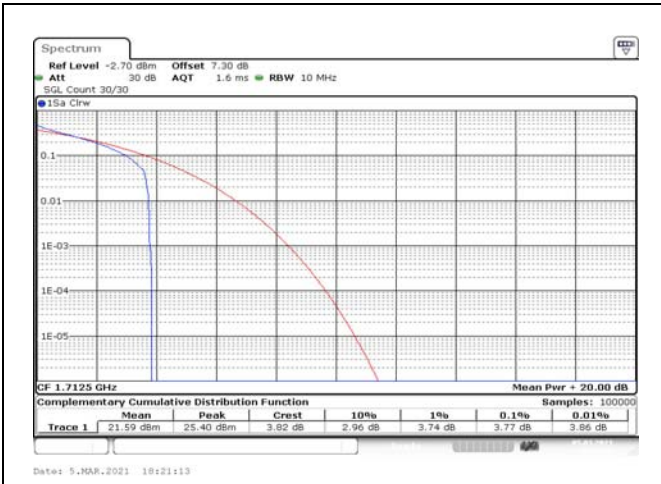


Fig.37

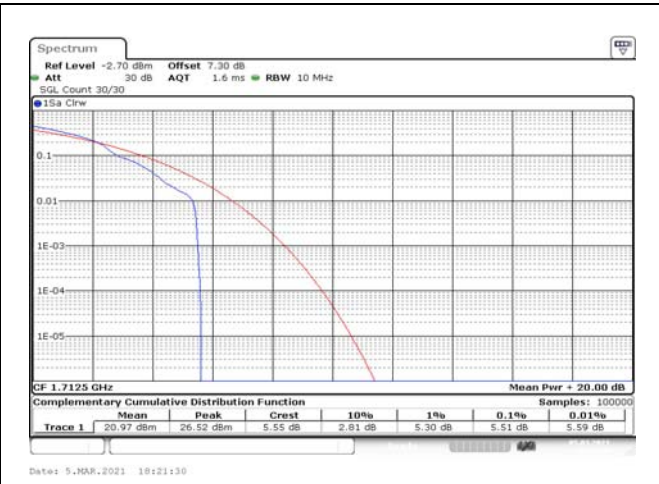


Fig.38

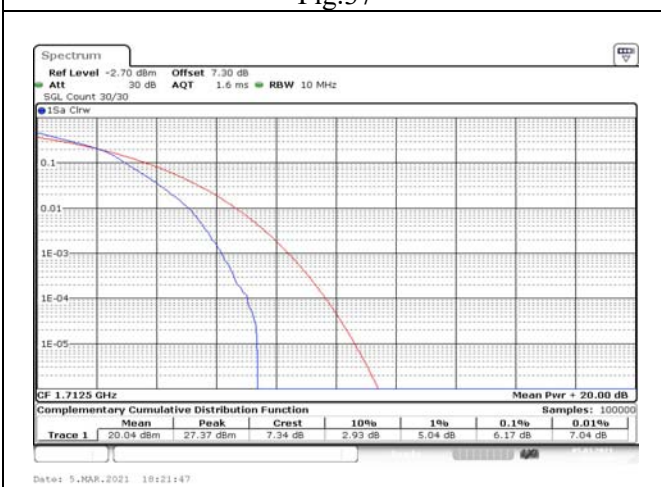


Fig.39

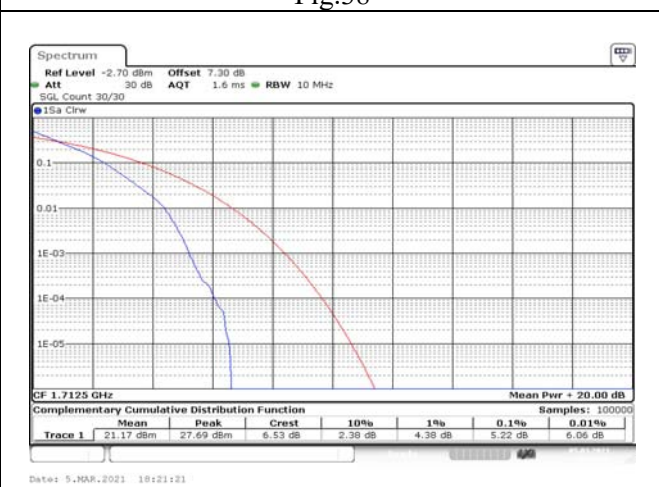


Fig.40

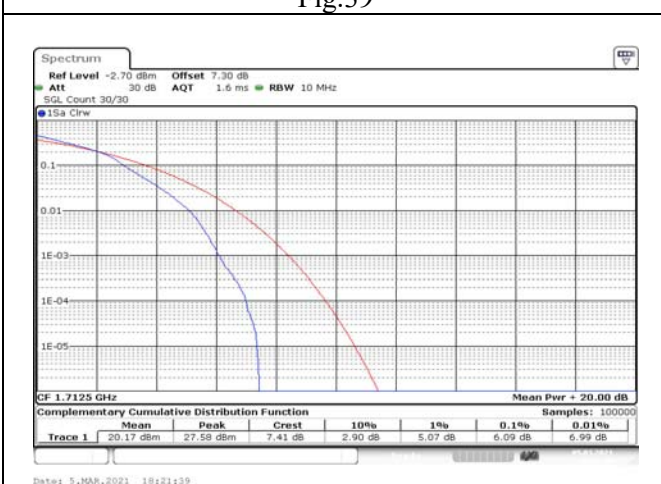


Fig.41

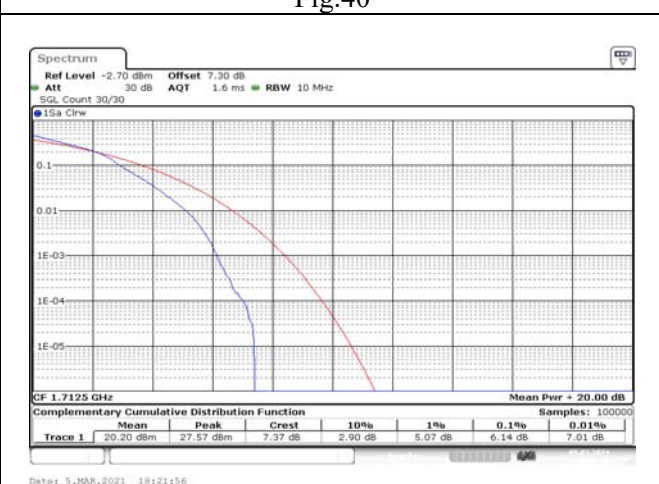


Fig.42

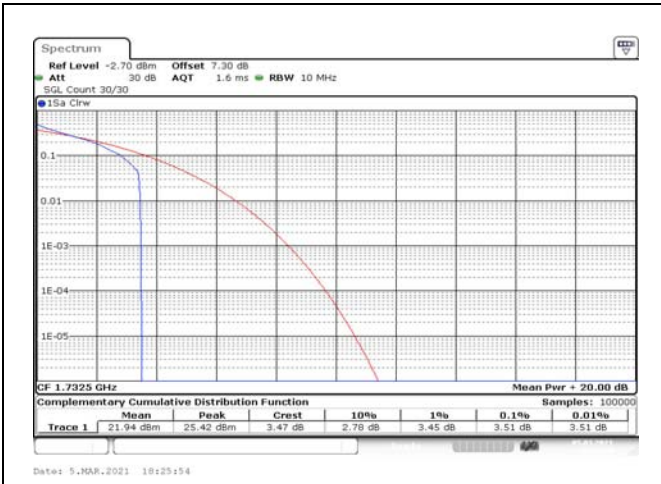


Fig.43

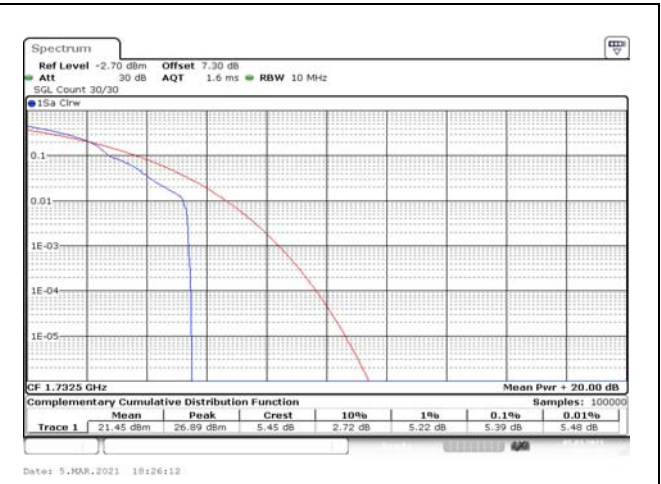


Fig.44

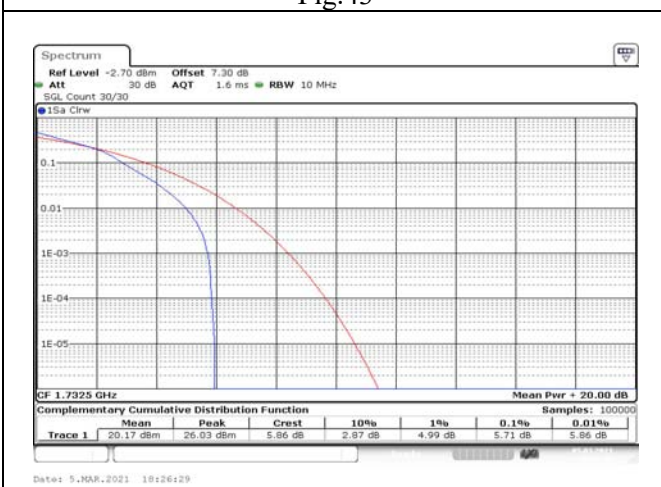


Fig.45

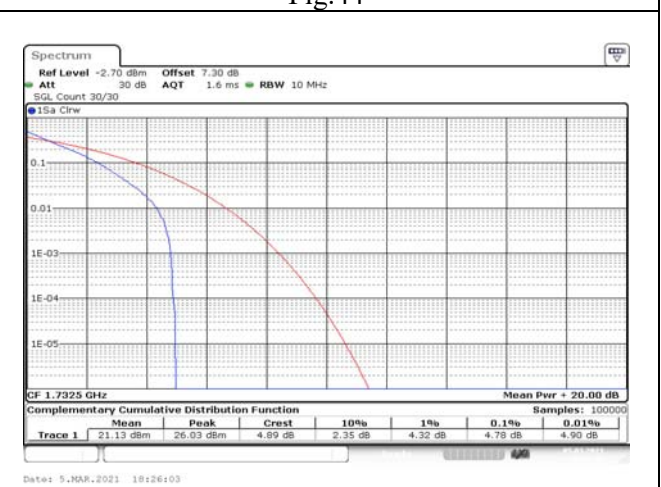


Fig.46

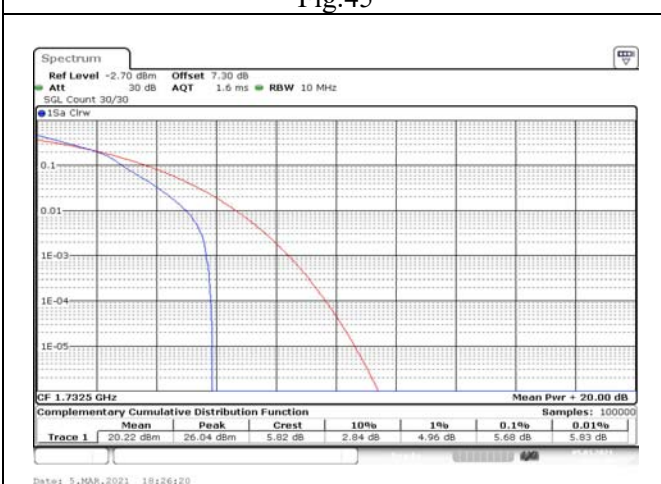


Fig.47

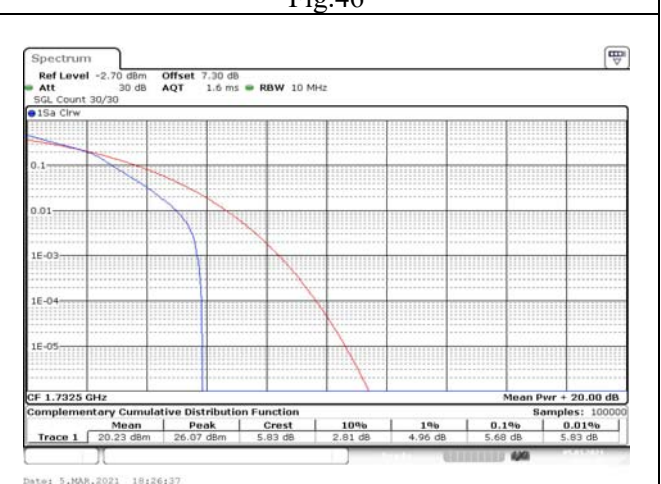


Fig.48

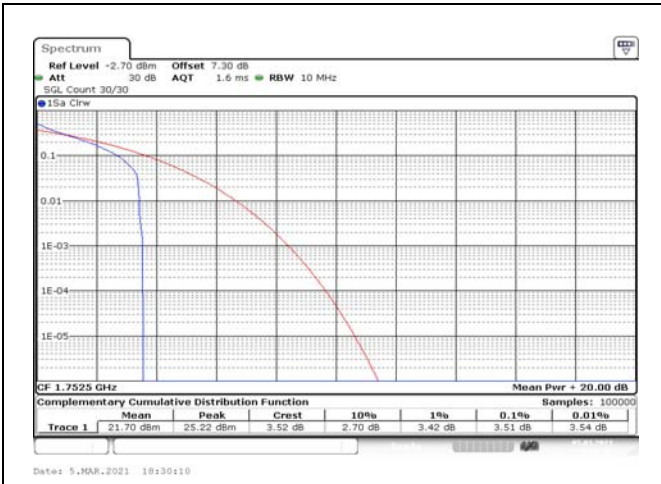


Fig.49

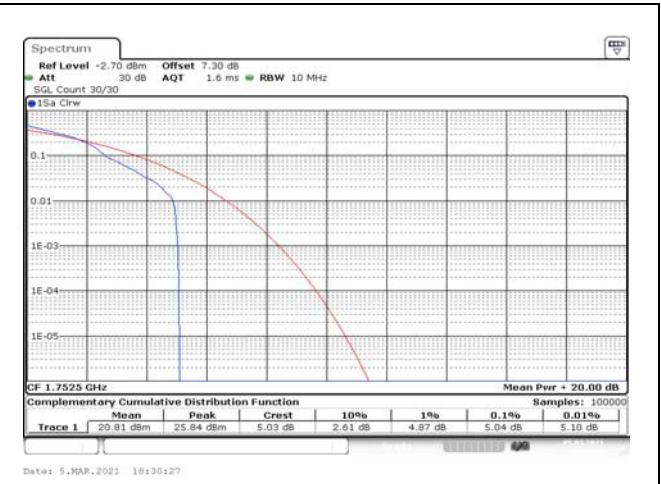


Fig.50

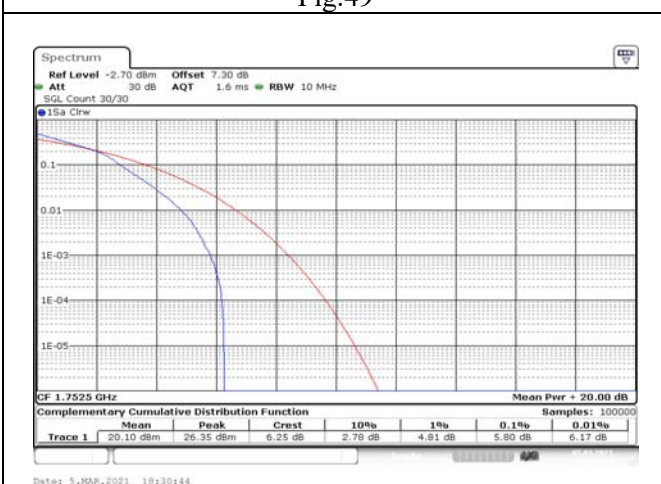


Fig.51



Fig.52

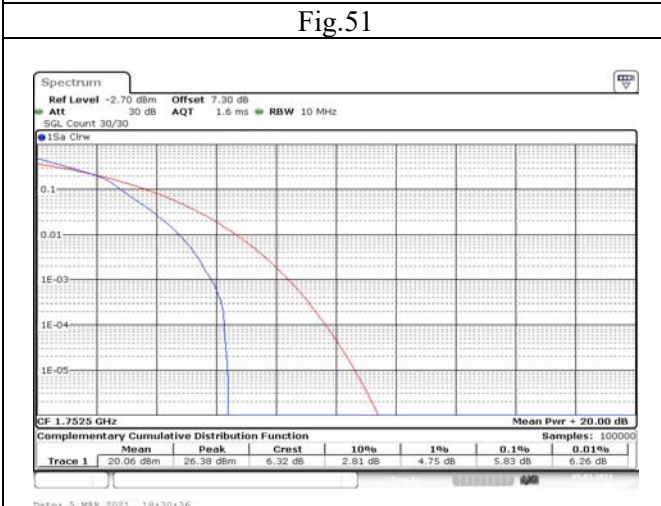


Fig.53

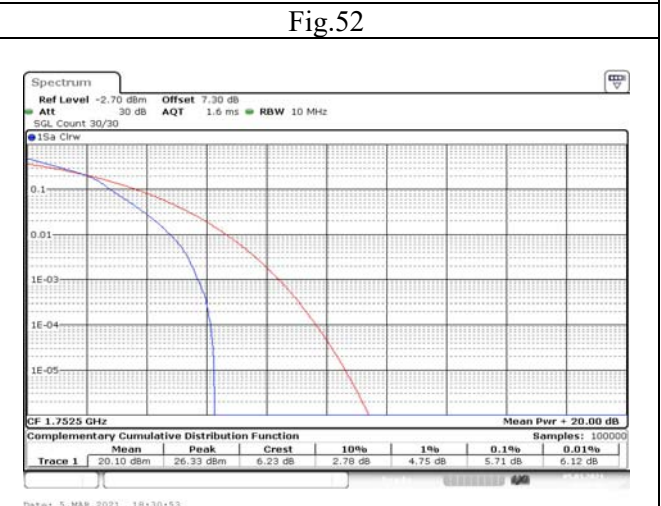


Fig.54

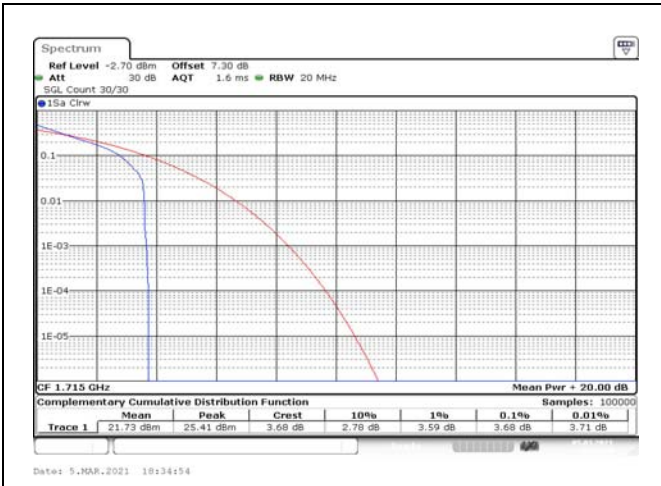


Fig.55

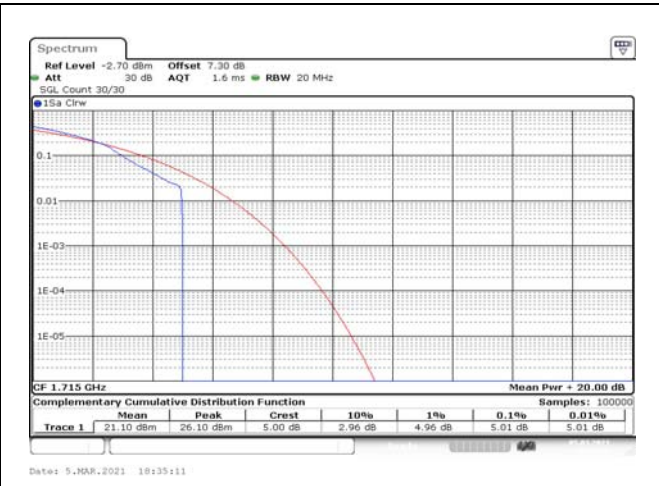


Fig.56

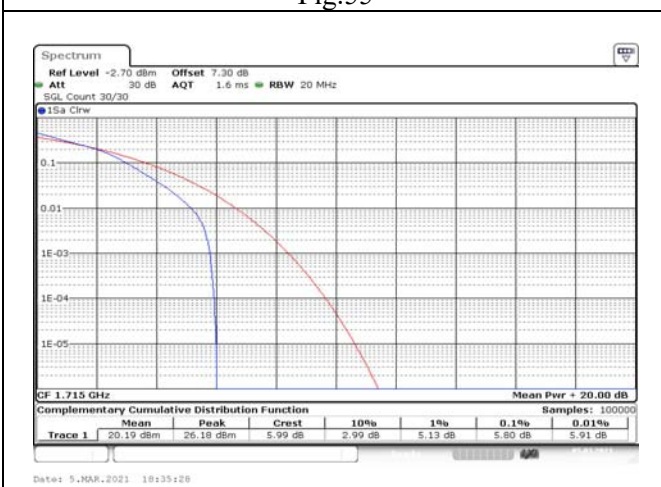


Fig.57

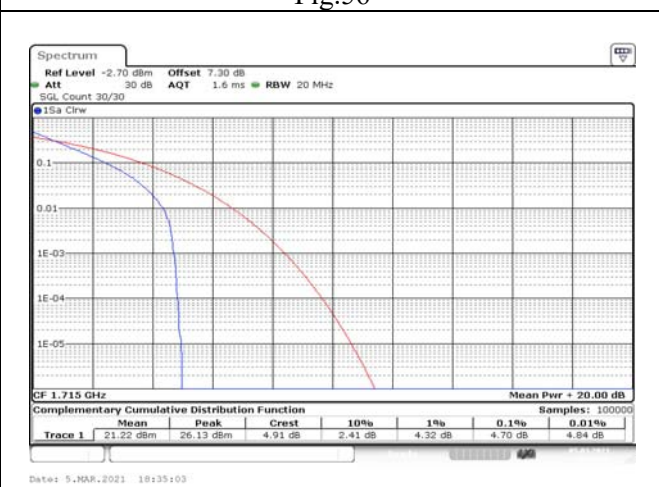


Fig.58



Fig.59

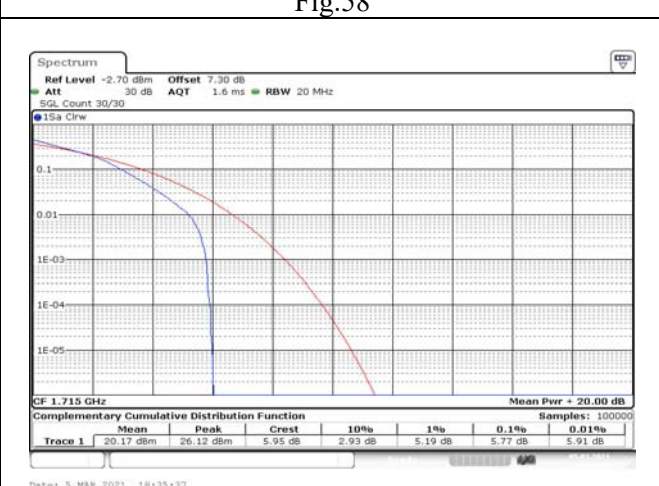


Fig.60