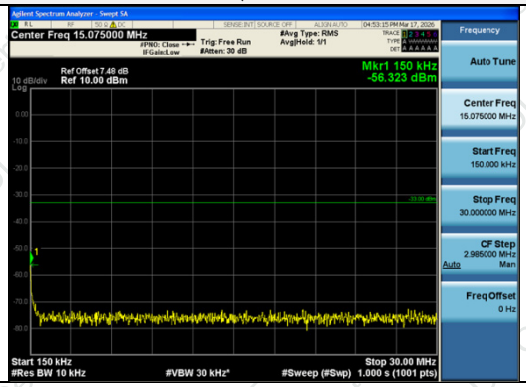
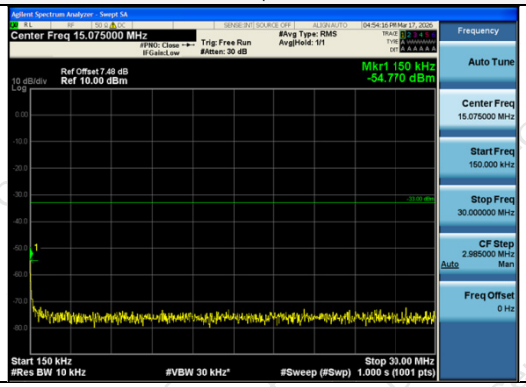
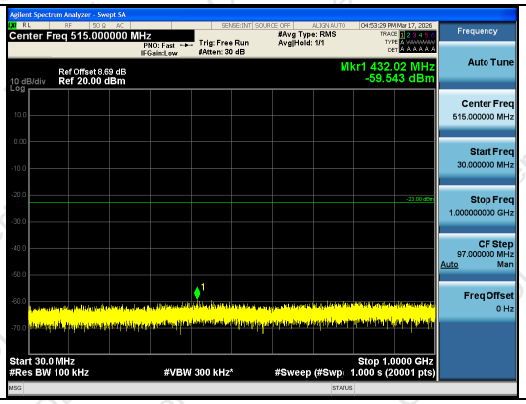
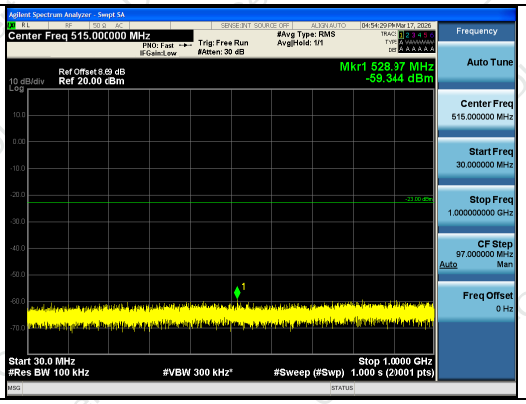
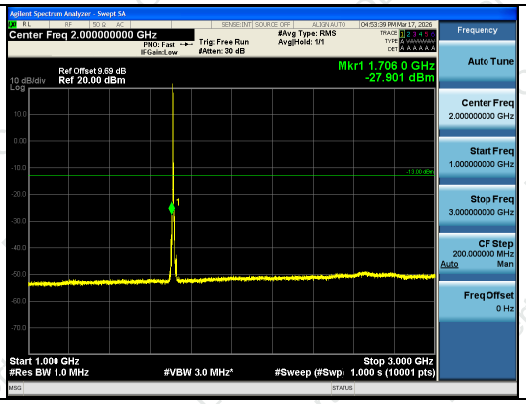
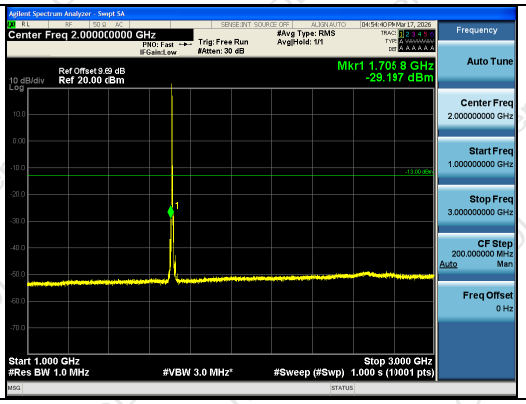
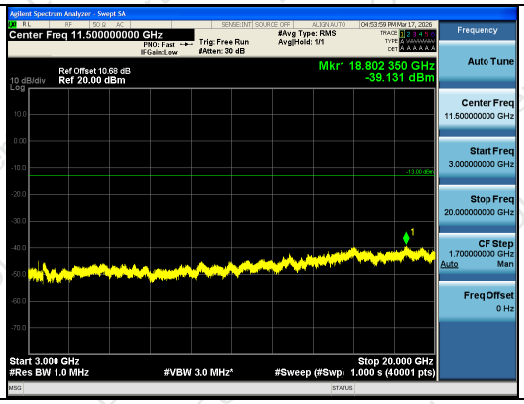
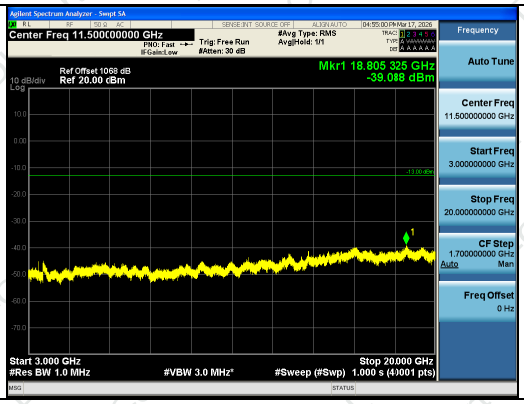
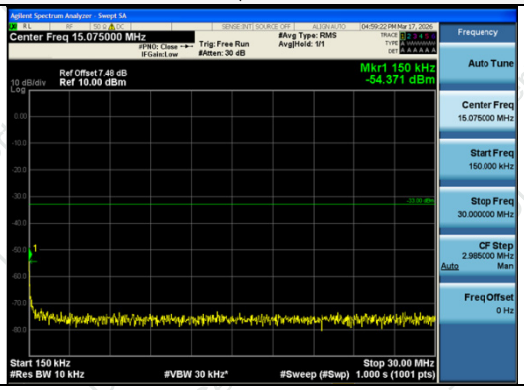
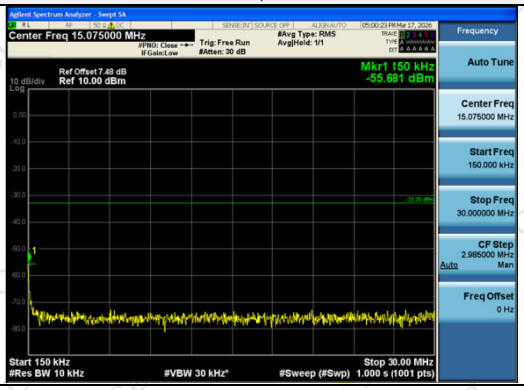
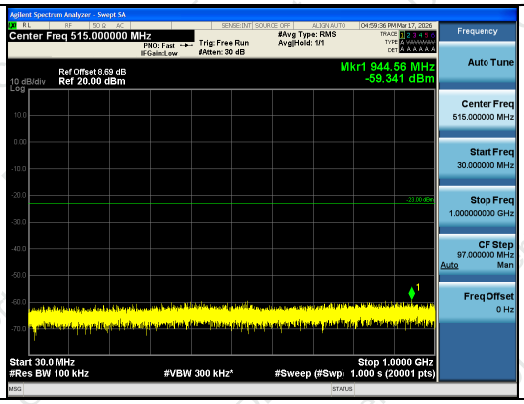
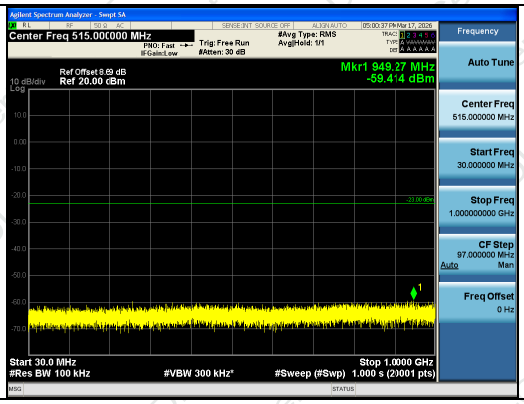
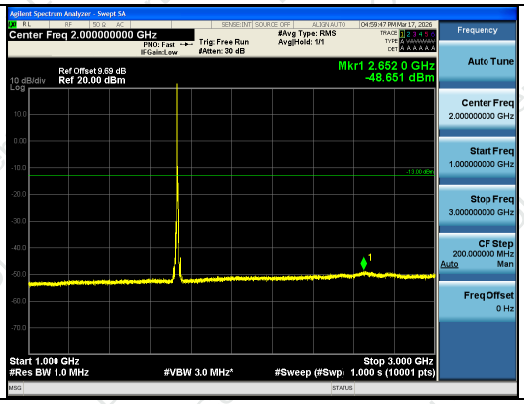
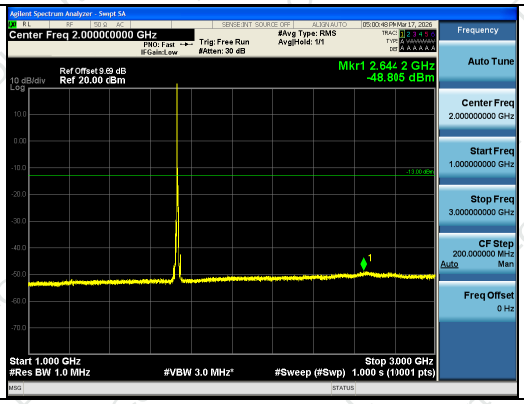
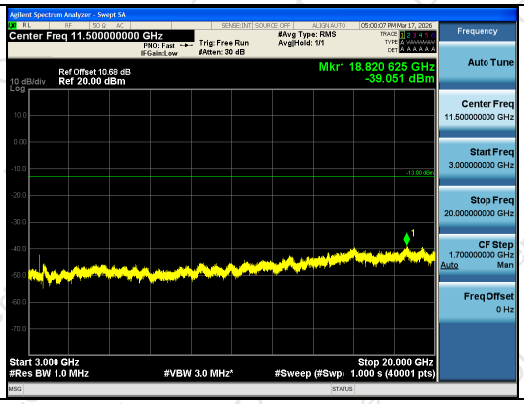
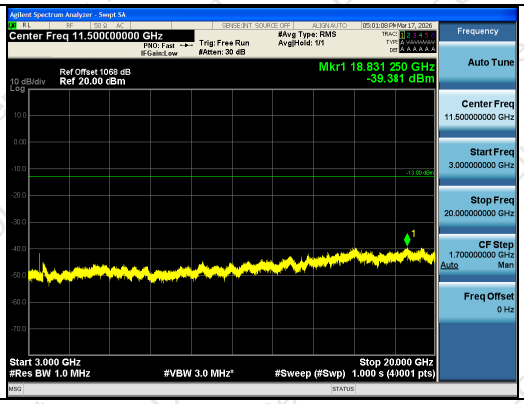
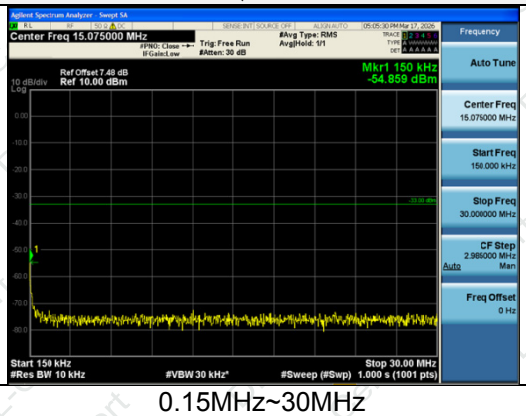
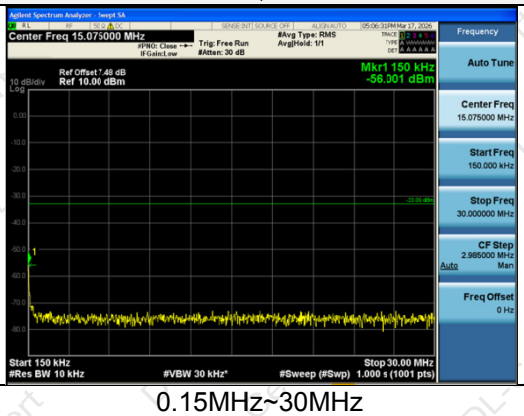
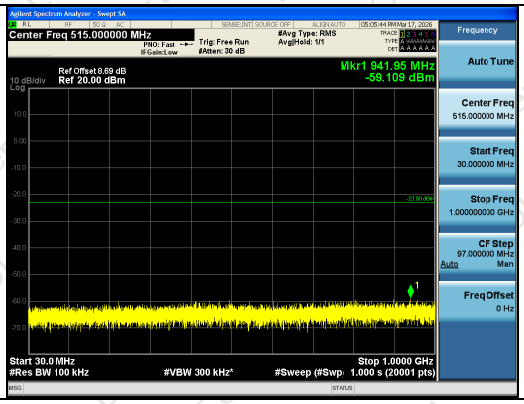
FDD Band 4-5MHz Channel Bandwidth	
Low Channel	
QPSK	*16QAM*
	
0.15MHz~30MHz	0.15MHz~30MHz
	
30MHz~1GHz	30MHz~1GHz
	
1GHz~3GHz	1GHz~3GHz

	
3GHz~20GHz	3GHz~20GHz
1RB#0	*1RB#0*

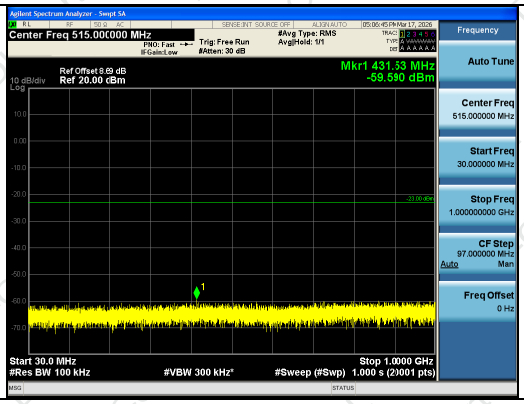
FDD Band 4-5MHz Channel Bandwidth	
Middle Channel	
QPSK	*16QAM*
	
0.15MHz~30MHz	0.15MHz~30MHz
	
30MHz~1GHz	30MHz~1GHz

	
1GHz~3GHz	1GHz~3GHz
	
3GHz~20GHz	3GHz~20GHz
1RB#0	1RB#0

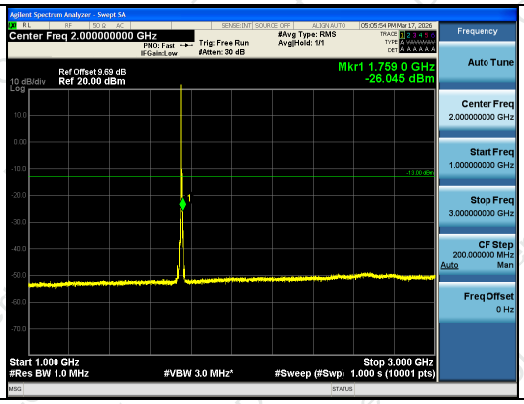
FDD Band 4-5MHz Channel Bandwidth	
High Channel	
QPSK	*16QAM*
	
0.15MHz~30MHz	0.15MHz~30MHz



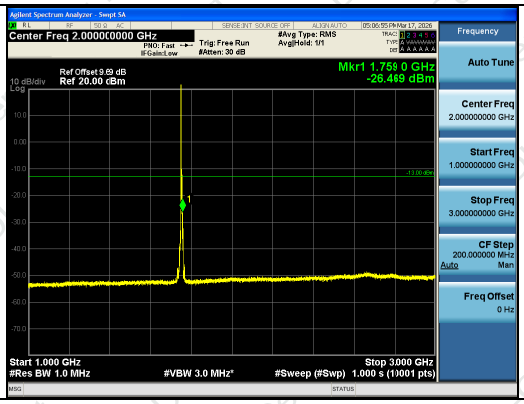
30MHz~1GHz



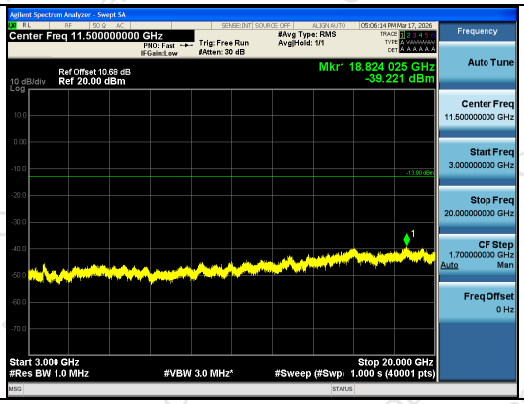
30MHz~1GHz



1GHz~3GHz

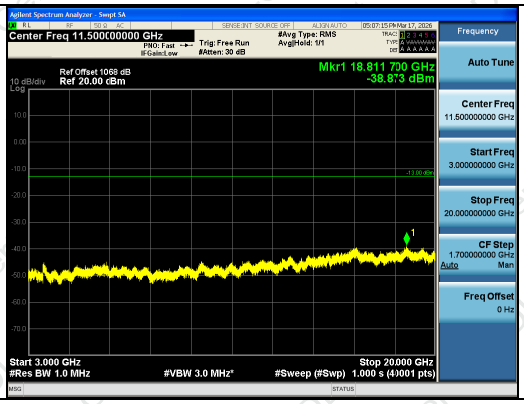


1GHz~3GHz



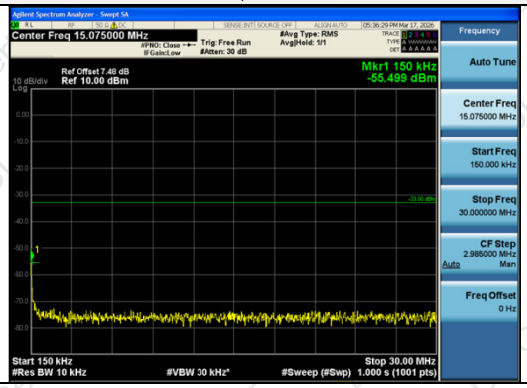
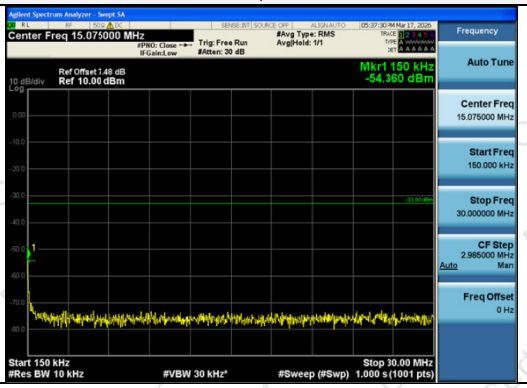
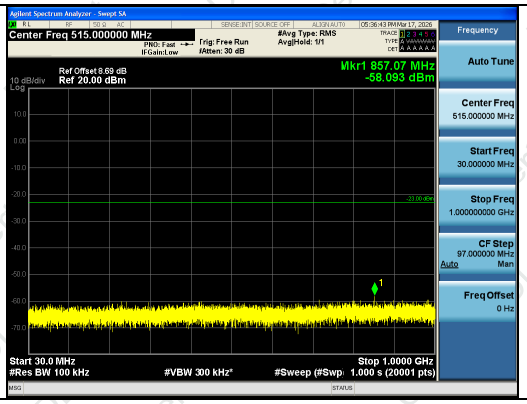
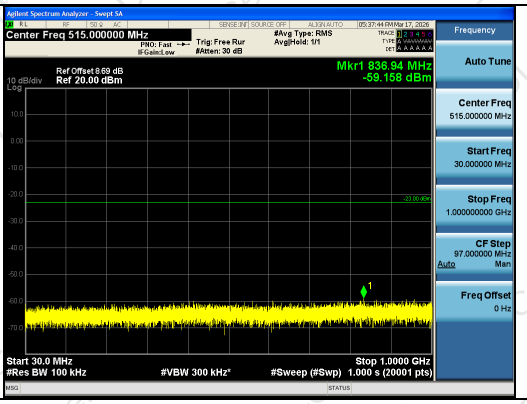
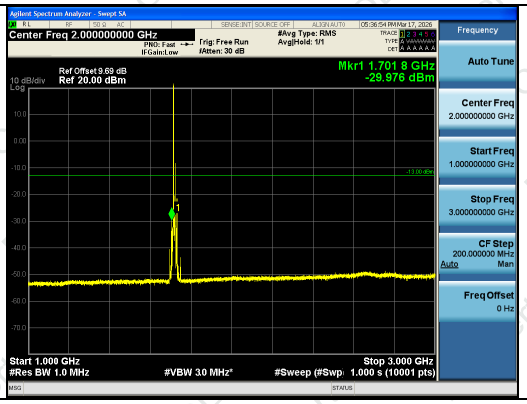
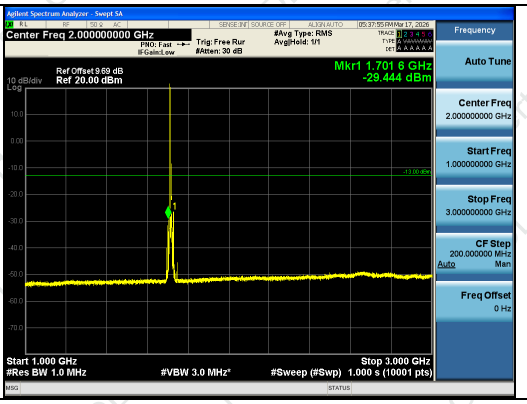
3GHz~20GHz

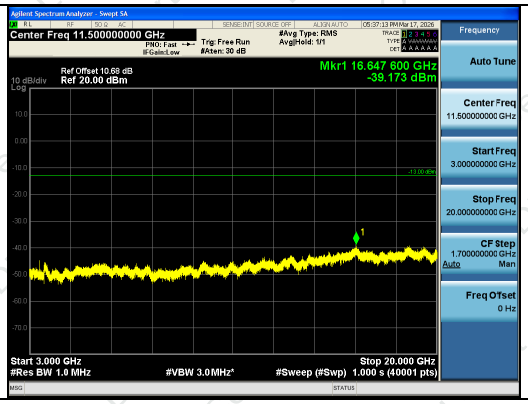
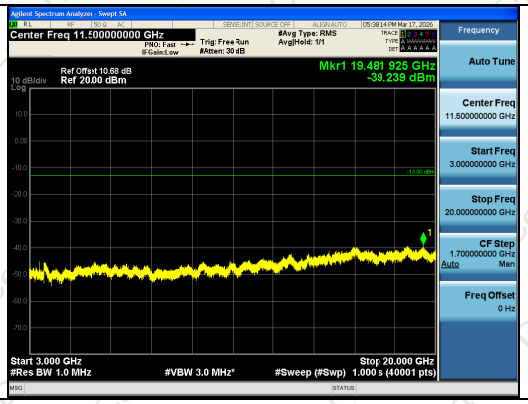
1RB#0

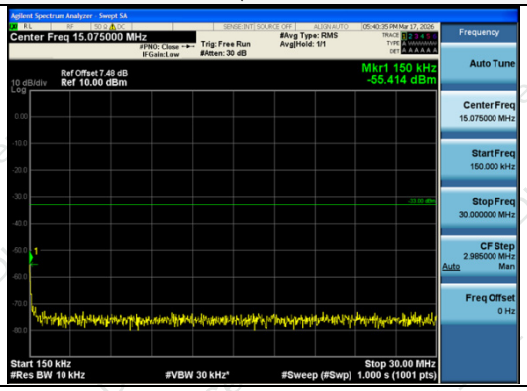
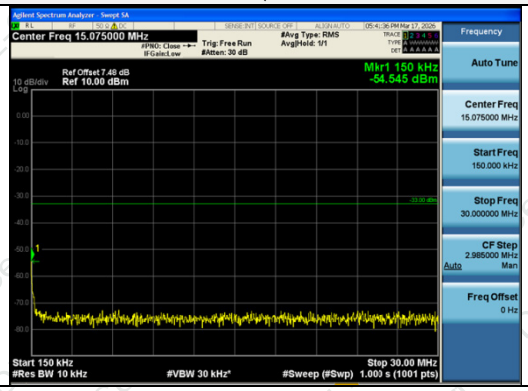
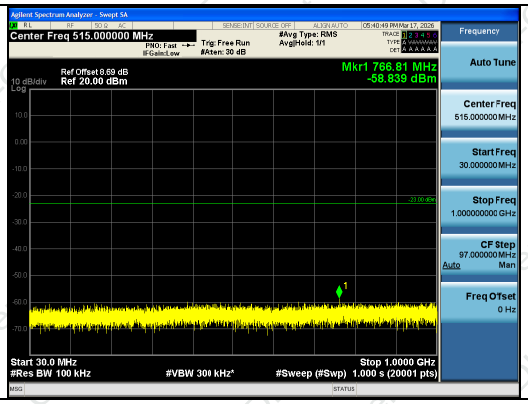
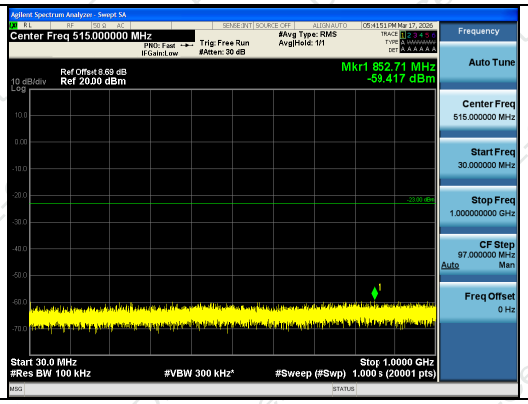


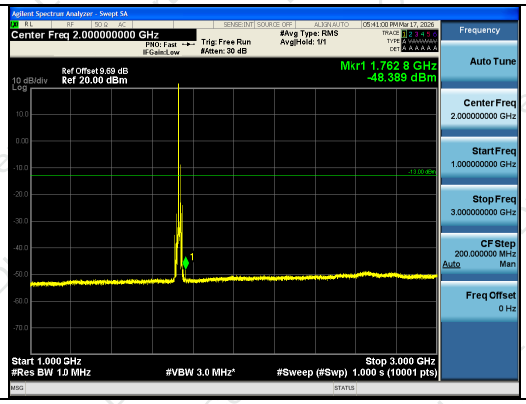
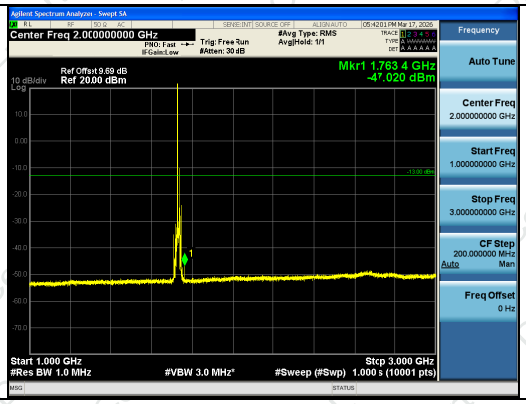
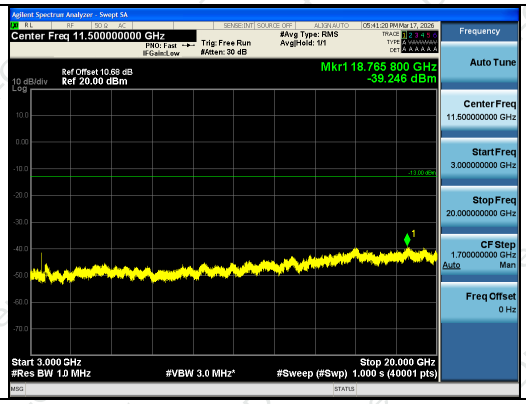
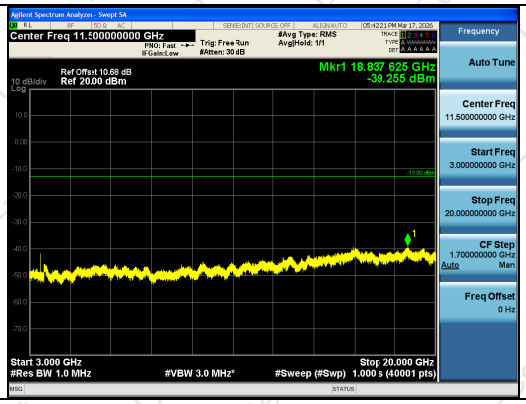
3GHz~20GHz

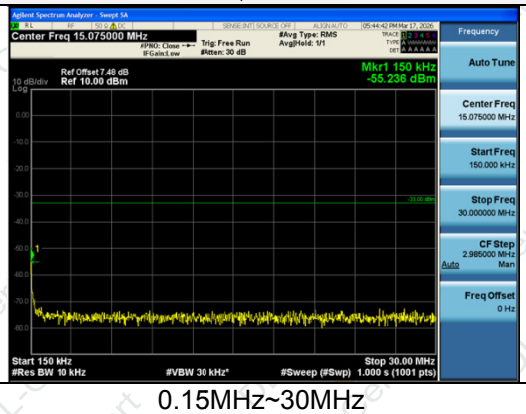
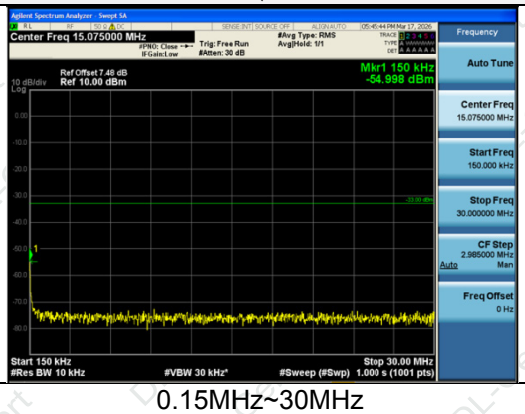
1RB#0

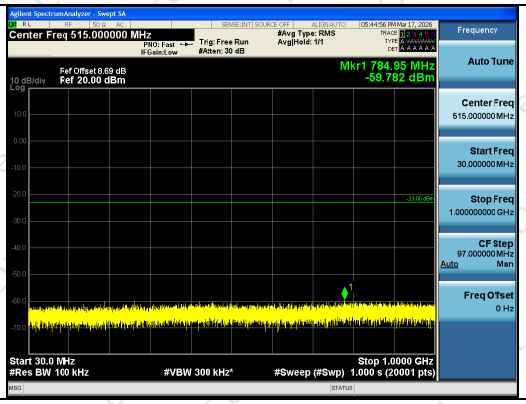
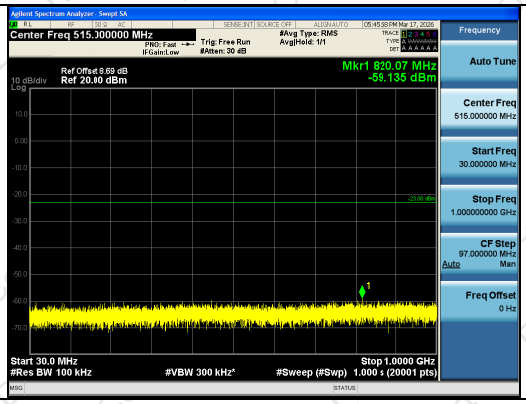
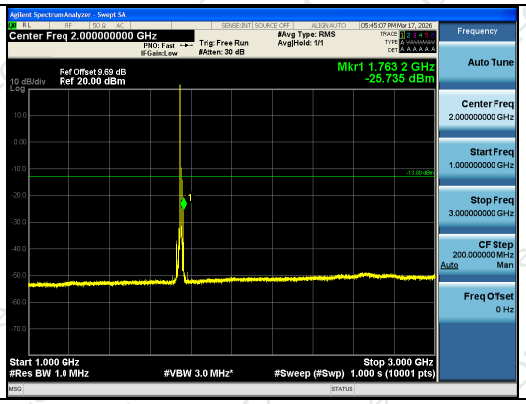
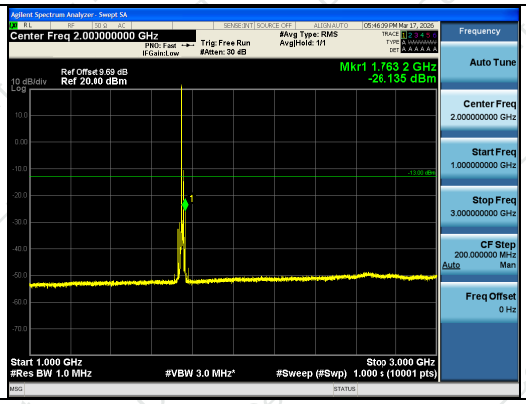
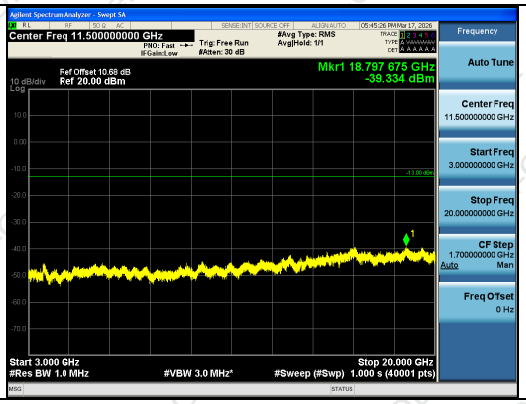
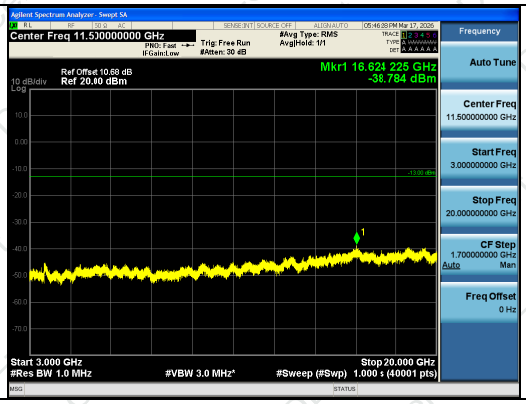
FDD Band 4-10MHz Channel Bandwidth	
Low Channel	
QPSK	*16QAM*
	
0.15MHz~30MHz	0.15MHz~30MHz
	
30MHz~1GHz	30MHz~1GHz
	
1GHz~3GHz	1GHz~3GHz

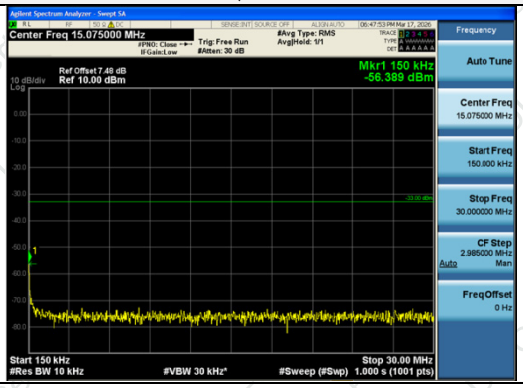
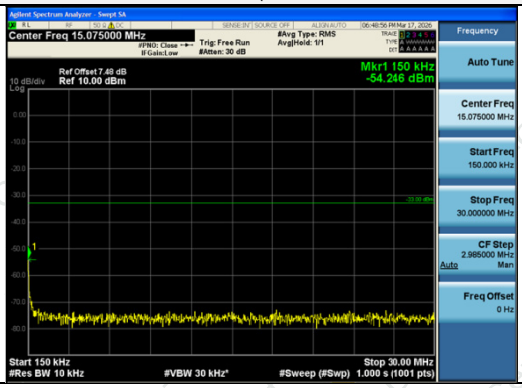
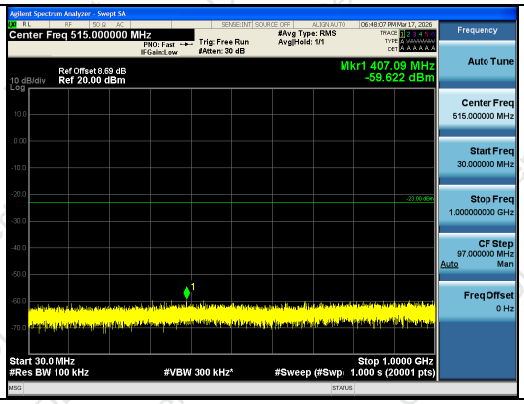
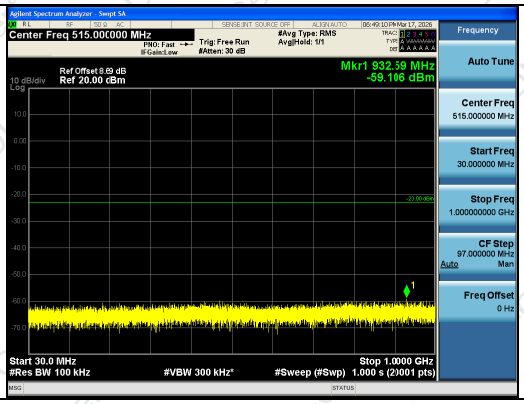
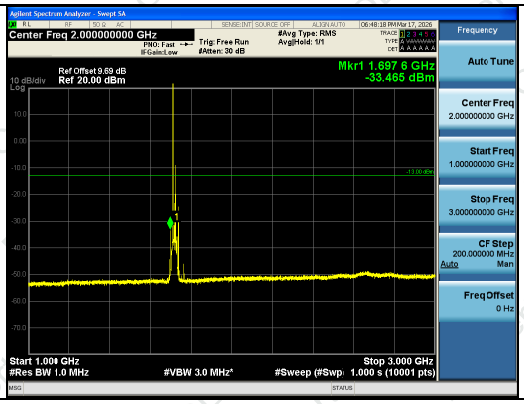
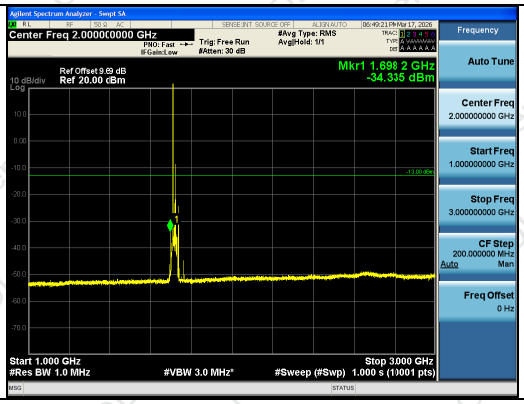
	
3GHz~20GHz	3GHz~20GHz
1RB#0	1RB#0

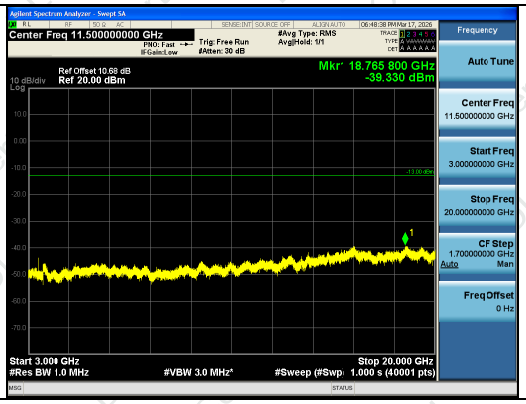
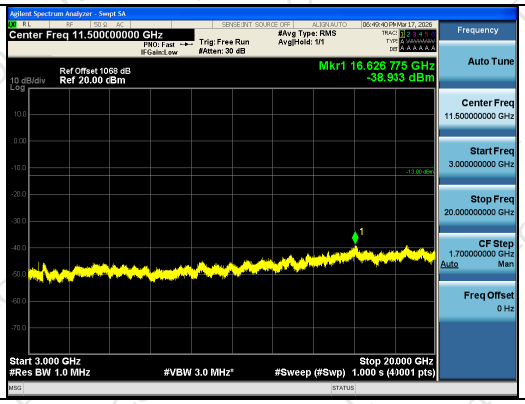
FDD Band 4-10MHz Channel Bandwidth	
Middle Channel	
QPSK	*16QAM*
	
0.15MHz~30MHz	0.15MHz~30MHz
	
30MHz~1GHz	30MHz~1GHz

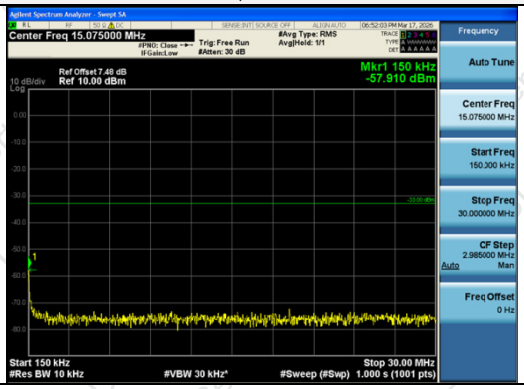
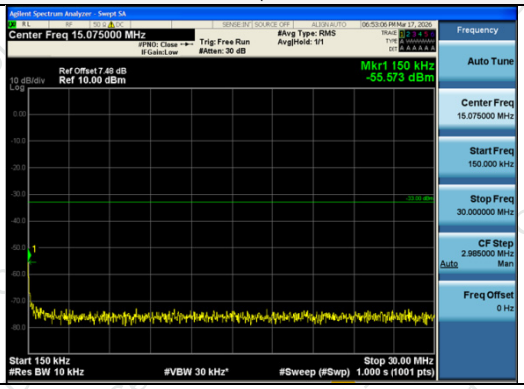
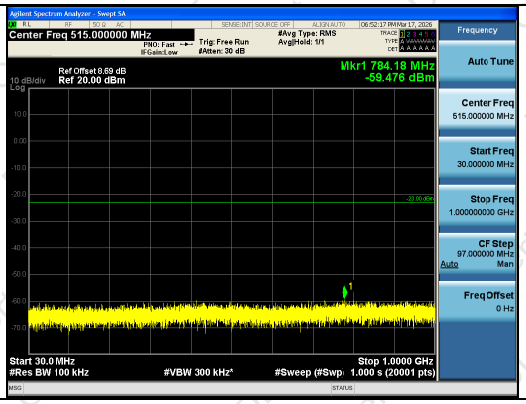
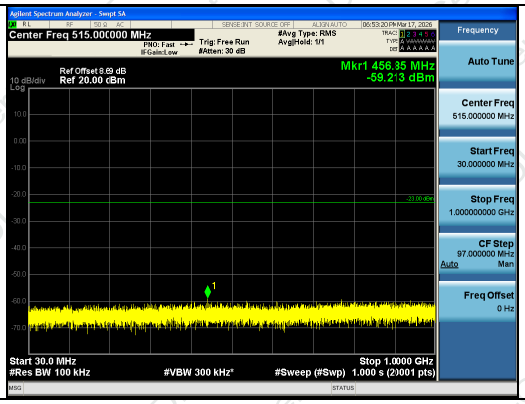
	
1GHz~3GHz	1GHz~3GHz
	
3GHz~20GHz	3GHz~20GHz
1RB#0	1RB#0

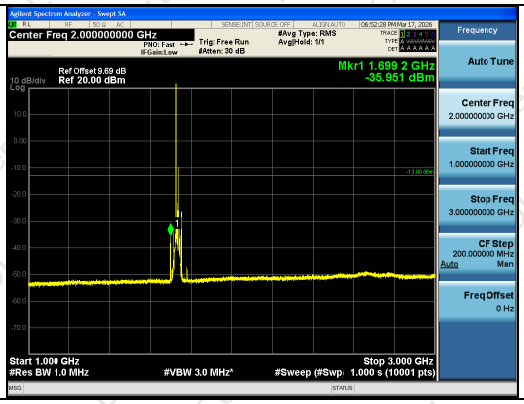
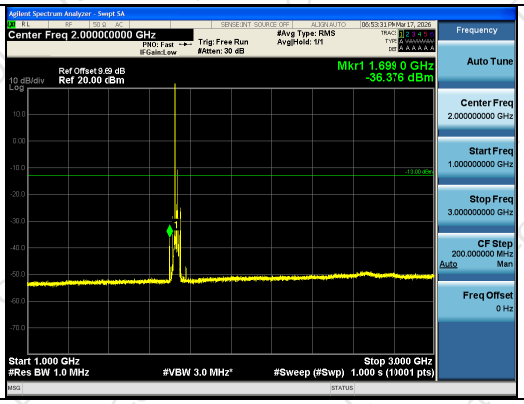
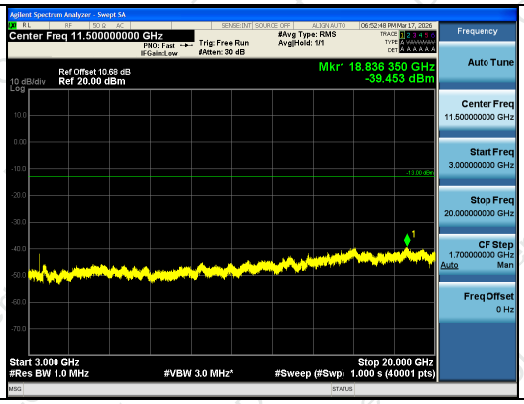
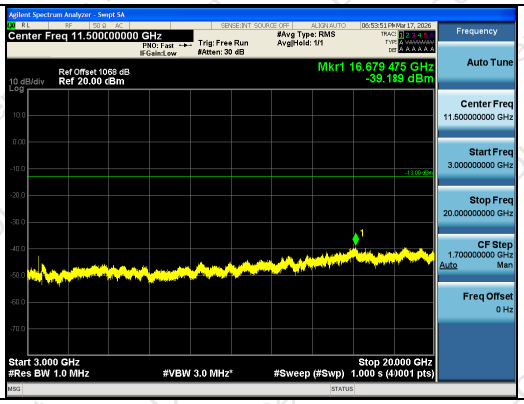
FDD Band 4-10MHz Channel Bandwidth	
High Channel	
QPSK	*16QAM*
	
0.15MHz~30MHz	0.15MHz~30MHz

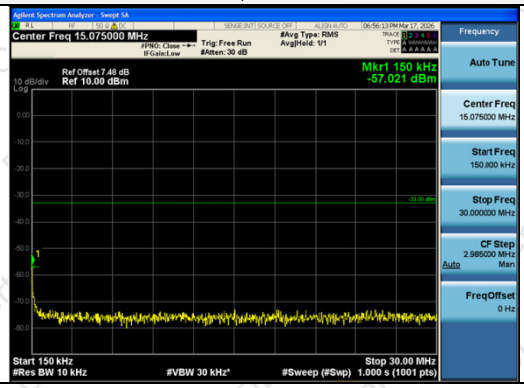
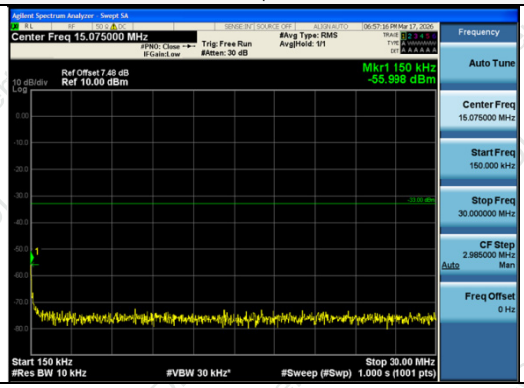
	
30MHz~1GHz	30MHz~1GHz
	
1GHz~3GHz	1GHz~3GHz
	
3GHz~20GHz	3GHz~20GHz
1RB#0	1RB#0

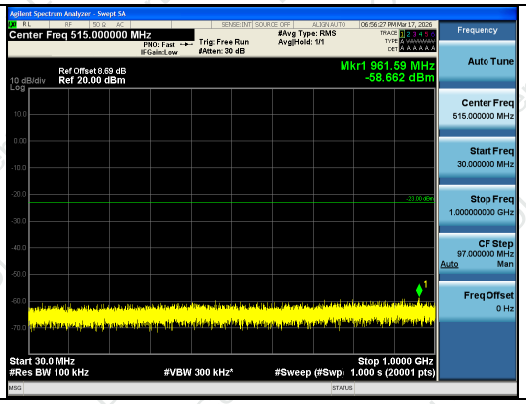
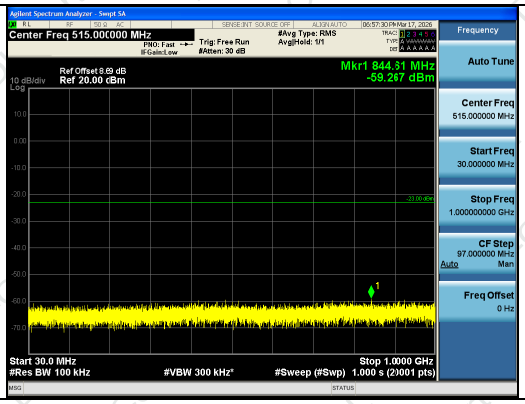
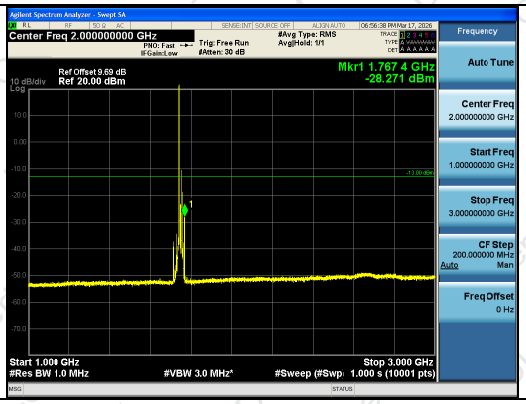
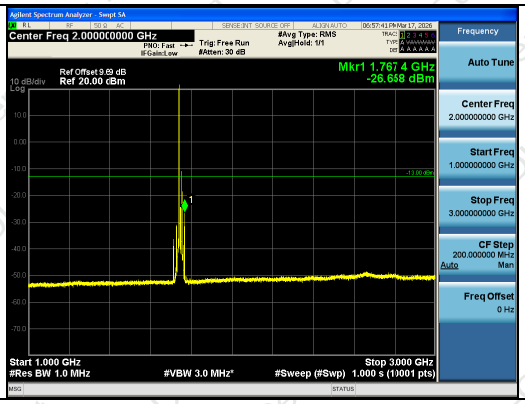
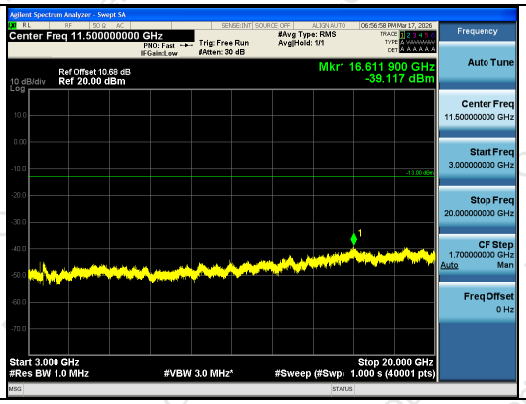
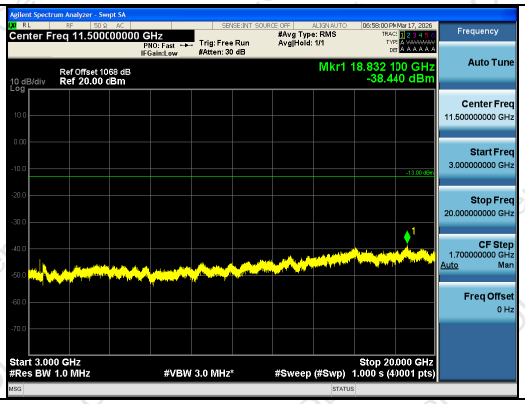
FDD Band 4-15MHz Channel Bandwidth	
Low Channel	
QPSK	*16QAM*
	
0.15MHz~30MHz	0.15MHz~30MHz
	
30MHz~1GHz	30MHz~1GHz
	
1GHz~3GHz	1GHz~3GHz

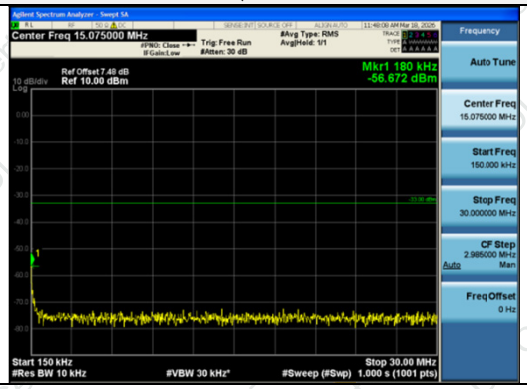
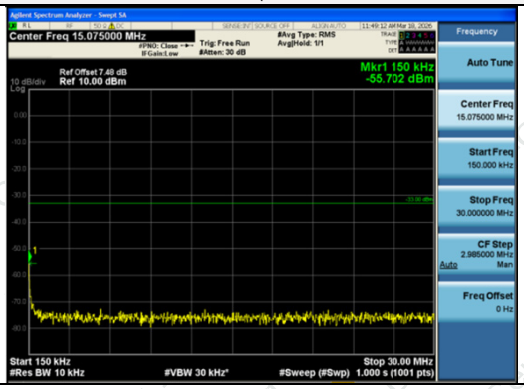
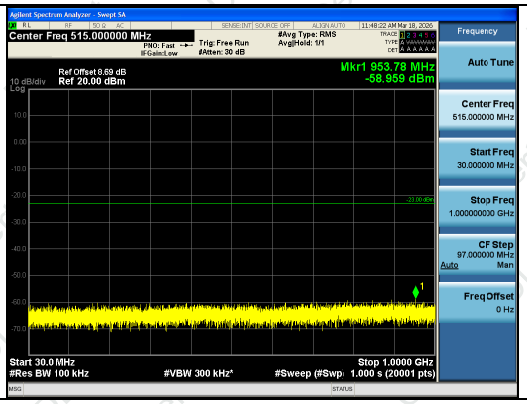
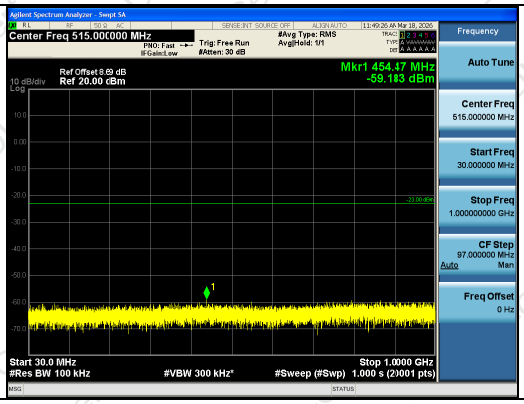
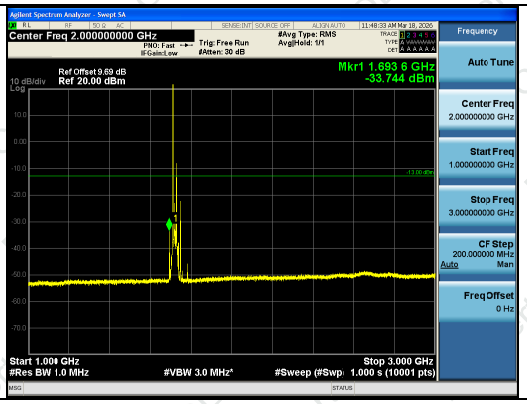
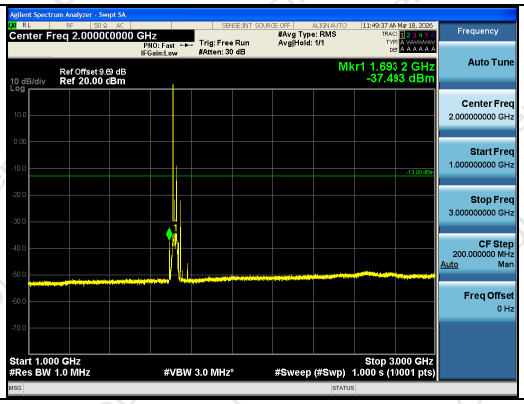
	
3GHz~20GHz	3GHz~20GHz
1RB#0	1RB#0

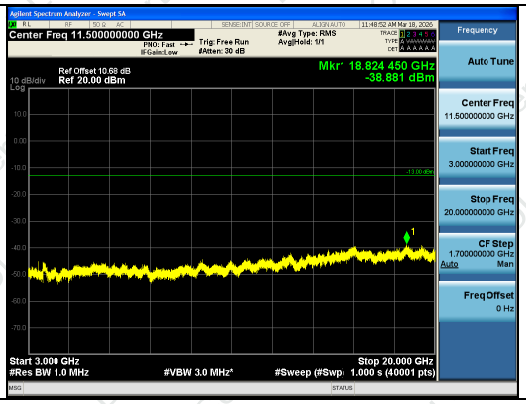
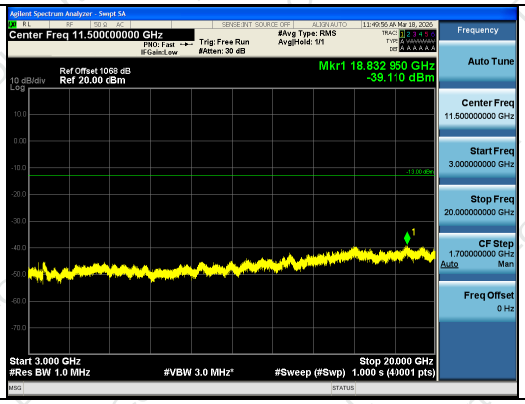
FDD Band 4-15MHz Channel Bandwidth	
Middle Channel	
QPSK	*16QAM*
	
0.15MHz~30MHz	0.15MHz~30MHz
	
30MHz~1GHz	30MHz~1GHz

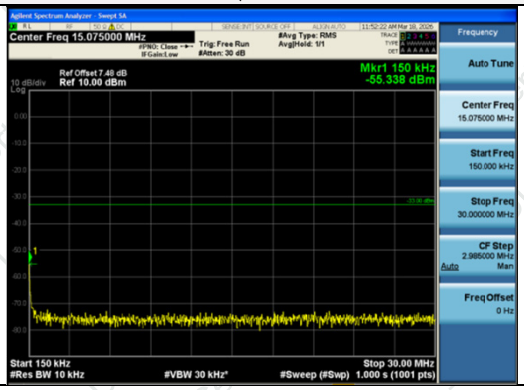
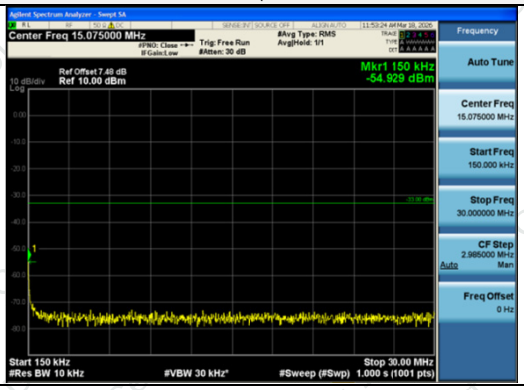
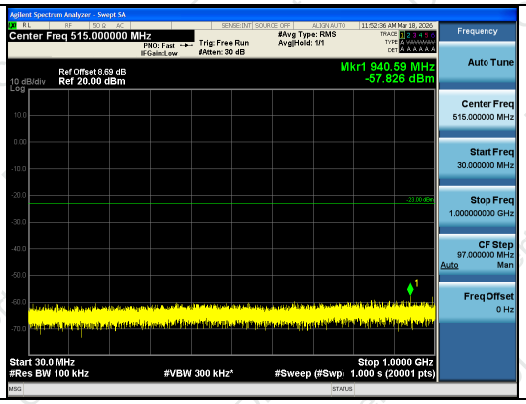
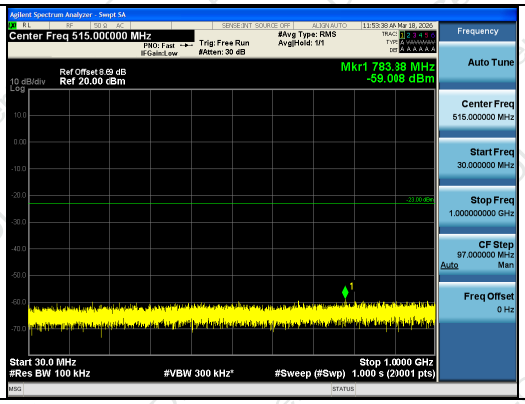
	
1GHz~3GHz	1GHz~3GHz
	
3GHz~20GHz	3GHz~20GHz
1RB#0	1RB#0

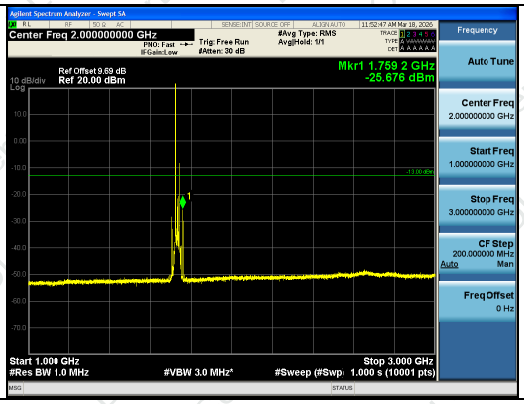
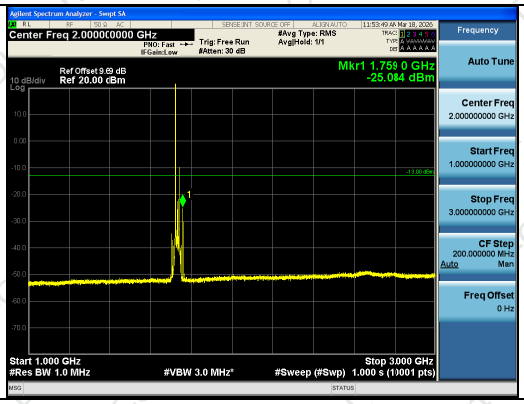
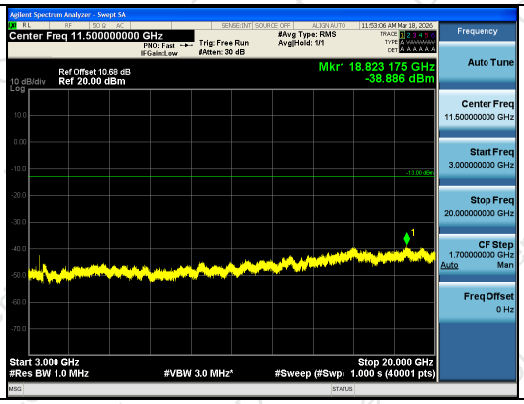
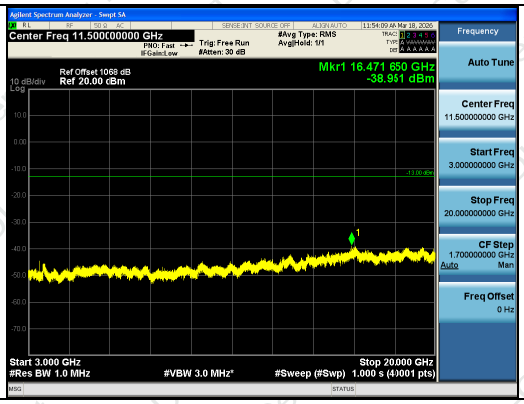
FDD Band 4-15MHz Channel Bandwidth	
High Channel	
QPSK	*16QAM*
	
0.15MHz~30MHz	0.15MHz~30MHz

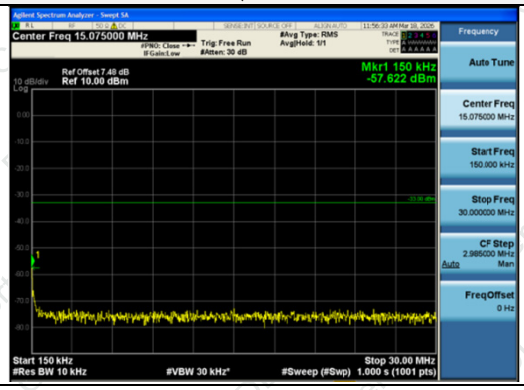
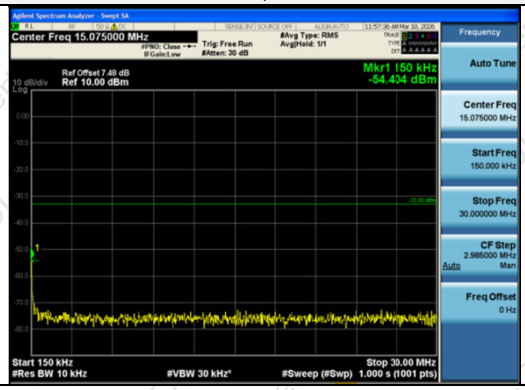
	
30MHz~1GHz	30MHz~1GHz
	
1GHz~3GHz	1GHz~3GHz
	
3GHz~20GHz	3GHz~20GHz
1RB#0	1RB#0

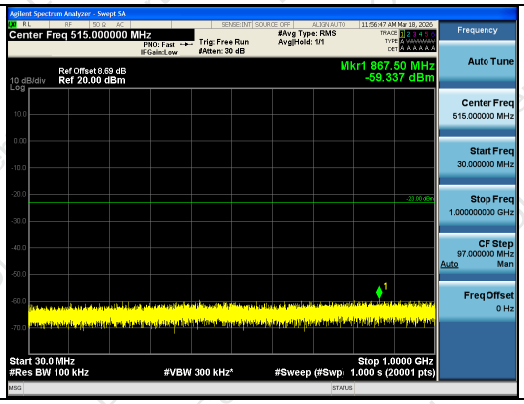
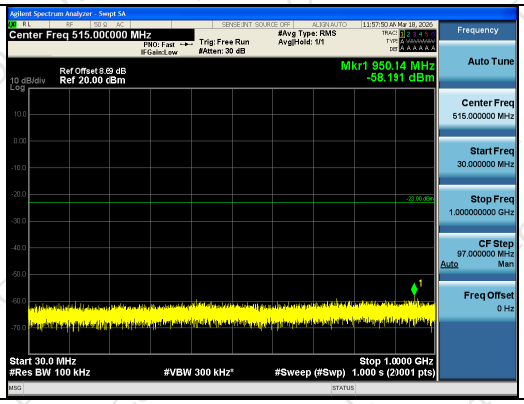
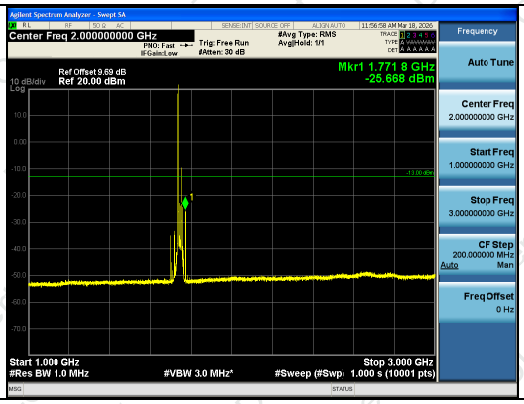
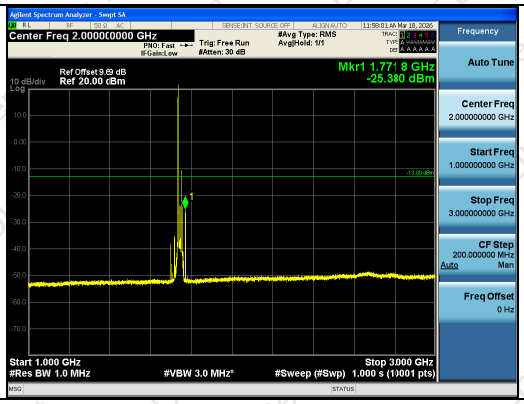
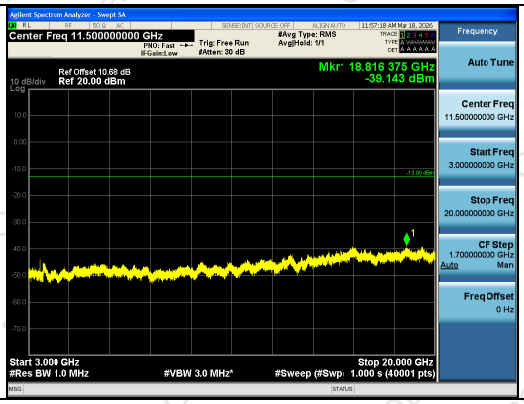
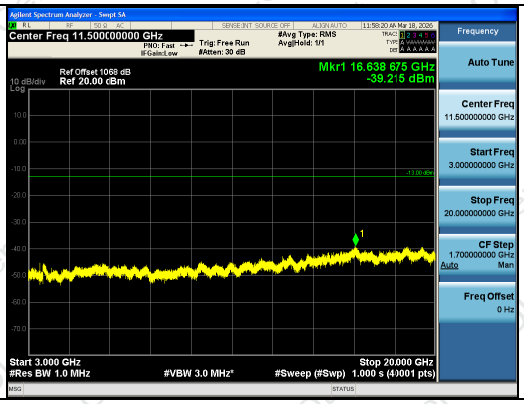
FDD Band 4-20MHz Channel Bandwidth	
Low Channel	
QPSK	*16QAM*
	
0.15MHz~30MHz	0.15MHz~30MHz
	
30MHz~1GHz	30MHz~1GHz
	
1GHz~3GHz	1GHz~3GHz

	
3GHz~20GHz	3GHz~20GHz
1RB#0	*1RB#0*

FDD Band 4-20MHz Channel Bandwidth	
Middle Channel	
QPSK	*16QAM*
	
0.15MHz~30MHz	0.15MHz~30MHz
	
30MHz~1GHz	30MHz~1GHz

	
1GHz~3GHz	1GHz~3GHz
	
3GHz~20GHz	3GHz~20GHz
1RB#0	*1RB#0*

FDD Band 4-20MHz Channel Bandwidth	
High Channel	
QPSK	*16QAM*
	
0.15MHz~30MHz	0.15MHz~30MHz

	
30MHz~1GHz	30MHz~1GHz
	
1GHz~3GHz	1GHz~3GHz
	
3GHz~20GHz	3GHz~20GHz
1RB#0	1RB#0

Radiated Measurement:

Remark:
1. *We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of FDD Band 4; recorded worst case for each Channel Bandwidth of FDD Band 4.*
2. *EIRP=P_{Mea}(dBm)-P_{cl}(dB) +G_a(dBi)*
3. *We were not recorded other points as values lower than limits.*
4. *Margin = Limit – EIRP*

FDD Band 4_Channel Bandwidth 1.4MHz_QPSK_ Low Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3421.4	-47.55	4.02	3.00	12.50	-39.07	-13.00	26.07	H
5132.1	-52.09	5.11	3.00	13.38	-43.82	-13.00	30.82	H
3421.4	-54.15	4.02	3.00	12.50	-45.67	-13.00	32.67	V
5132.1	-53.84	5.11	3.00	13.38	-45.57	-13.00	32.57	V

FDD Band 4_Channel Bandwidth 1.4MHz_QPSK_ Middle Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.0	-44.53	4.02	3.00	12.45	-36.10	-13.00	23.10	H
5197.5	-49.53	5.11	3.00	13.38	-41.26	-13.00	28.26	H
3465.0	-55.08	4.02	3.00	12.45	-46.65	-13.00	33.65	V
5197.5	-51.32	5.11	3.00	13.38	-43.05	-13.00	30.05	V

FDD Band 4_Channel Bandwidth 1.4MHz_QPSK_ High Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3508.6	-44.71	4.02	3.00	12.21	-36.52	-13.00	23.52	H
5262.9	-50.02	5.11	3.00	13.26	-41.87	-13.00	28.87	H
3508.6	-54.01	4.02	3.00	12.21	-45.82	-13.00	32.82	V
5262.9	-50.78	5.11	3.00	13.26	-42.63	-13.00	29.63	V

FDD Band 4_Channel Bandwidth 3MHz_QPSK_ Low Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3423.0	-47.04	4.02	3.00	12.50	-38.56	-13.00	25.56	H
5134.5	-52.27	5.11	3.00	13.38	-44.00	-13.00	31.00	H
3423.0	-54.32	4.02	3.00	12.50	-45.84	-13.00	32.84	V
5134.5	-54.49	5.11	3.00	13.38	-46.22	-13.00	33.22	V

FDD Band 4_Channel Bandwidth 3MHz_QPSK_ Middle Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.0	-44.70	4.02	3.00	12.45	-36.27	-13.00	23.27	H
5197.5	-48.93	5.11	3.00	13.38	-40.66	-13.00	27.66	H
3465.0	-54.65	4.02	3.00	12.45	-46.22	-13.00	33.22	V
5197.5	-51.60	5.11	3.00	13.38	-43.33	-13.00	30.33	V

FDD Band 4_Channel Bandwidth 3MHz_QPSK_ High Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3507.0	-45.03	4.02	3.00	12.21	-36.84	-13.00	23.84	H
5260.5	-49.81	5.11	3.00	13.26	-41.66	-13.00	28.66	H
3507.0	-53.64	4.02	3.00	12.21	-45.45	-13.00	32.45	V
5260.5	-51.32	5.11	3.00	13.26	-43.17	-13.00	30.17	V

FDD Band 4_Channel Bandwidth 5MHz_QPSK_ Low Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3425.0	-47.41	4.02	3.00	12.50	-38.93	-13.00	25.93	H
5137.5	-52.38	5.11	3.00	13.38	-44.11	-13.00	31.11	H
3425.0	-54.40	4.02	3.00	12.50	-45.92	-13.00	32.92	V
5137.5	-54.53	5.11	3.00	13.38	-46.26	-13.00	33.26	V

FDD Band 4_Channel Bandwidth 5MHz_QPSK_ Middle Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.0	-44.60	4.02	3.00	12.45	-36.17	-13.00	23.17	H
5197.5	-49.36	5.11	3.00	13.38	-41.09	-13.00	28.09	H
3465.0	-54.74	4.02	3.00	12.45	-46.31	-13.00	33.31	V
5197.5	-51.34	5.11	3.00	13.38	-43.07	-13.00	30.07	V

FDD Band 4_Channel Bandwidth 5MHz_QPSK_ High Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3505.0	-44.87	4.02	3.00	12.21	-36.68	-13.00	23.68	H
5257.5	-50.41	5.11	3.00	13.26	-42.26	-13.00	29.26	H
3505.0	-53.76	4.02	3.00	12.21	-45.57	-13.00	32.57	V
5257.5	-50.74	5.11	3.00	13.26	-42.59	-13.00	29.59	V

FDD Band 4_Channel Bandwidth 10MHz_QPSK_ Low Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3430.0	-47.02	4.02	3.00	12.50	-38.54	-13.00	25.54	H
5145.0	-52.52	5.11	3.00	13.38	-44.25	-13.00	31.25	H
3430.0	-54.80	4.02	3.00	12.50	-46.32	-13.00	33.32	V
5145.0	-53.89	5.11	3.00	13.38	-45.62	-13.00	32.62	V

FDD Band 4_Channel Bandwidth 10MHz_QPSK_ Middle Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.0	-44.52	4.02	3.00	12.45	-36.09	-13.00	23.09	H
5197.5	-48.85	5.11	3.00	13.38	-40.58	-13.00	27.58	H
3465.0	-54.82	4.02	3.00	12.45	-46.39	-13.00	33.39	V
5197.5	-51.12	5.11	3.00	13.38	-42.85	-13.00	29.85	V

FDD Band 4_Channel Bandwidth 10MHz_QPSK_ High Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3500.0	-44.48	4.02	3.00	12.21	-36.29	-13.00	23.29	H
5250.0	-50.00	5.11	3.00	13.26	-41.85	-13.00	28.85	H
3500.0	-53.37	4.02	3.00	12.21	-45.18	-13.00	32.18	V
5250.0	-50.50	5.11	3.00	13.26	-42.35	-13.00	29.35	V

FDD Band 4_Channel Bandwidth 15MHz_QPSK_ Low Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3435.0	-47.12	4.02	3.00	12.50	-38.64	-13.00	25.64	H
5152.5	-51.79	5.11	3.00	13.38	-43.52	-13.00	30.52	H
3435.0	-54.43	4.02	3.00	12.50	-45.95	-13.00	32.95	V
5152.5	-54.27	5.11	3.00	13.38	-46.00	-13.00	33.00	V

FDD Band 4_Channel Bandwidth 15MHz_QPSK_ Middle Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.0	-44.11	4.02	3.00	12.45	-35.68	-13.00	22.68	H
5197.5	-49.07	5.11	3.00	13.38	-40.80	-13.00	27.80	H
3465.0	-54.61	4.02	3.00	12.45	-46.18	-13.00	33.18	V
5197.5	-51.15	5.11	3.00	13.38	-42.88	-13.00	29.88	V

FDD Band 4_Channel Bandwidth 15MHz_QPSK_ High Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3495.0	-44.87	4.02	3.00	12.21	-36.68	-13.00	23.68	H
5242.5	-49.93	5.11	3.00	13.26	-41.78	-13.00	28.78	H
3495.0	-53.44	4.02	3.00	12.21	-45.25	-13.00	32.25	V
5242.5	-50.87	5.11	3.00	13.26	-42.72	-13.00	29.72	V

FDD Band 4_Channel Bandwidth 20MHz_QPSK_ Low Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3440.0	-46.76	4.02	3.00	12.50	-38.28	-13.00	25.28	H
5160.0	-52.05	5.11	3.00	13.38	-43.78	-13.00	30.78	H
3440.0	-54.73	4.02	3.00	12.50	-46.25	-13.00	33.25	V
5160.0	-54.12	5.11	3.00	13.38	-45.85	-13.00	32.85	V

FDD Band 4_Channel Bandwidth 20MHz_QPSK_ Middle Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.0	-44.49	4.02	3.00	12.45	-36.06	-13.00	23.06	H
5197.5	-49.38	5.11	3.00	13.38	-41.11	-13.00	28.11	H
3465.0	-55.37	4.02	3.00	12.45	-46.94	-13.00	33.94	V
5197.5	-51.23	5.11	3.00	13.38	-42.96	-13.00	29.96	V

FDD Band 4_Channel Bandwidth 20MHz_QPSK_ High Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3490.0	-45.28	4.02	3.00	12.21	-37.09	-13.00	24.09	H
5235.0	-50.38	5.11	3.00	13.26	-42.23	-13.00	29.23	H
3490.0	-53.57	4.02	3.00	12.21	-45.38	-13.00	32.38	V
5235.0	-50.82	5.11	3.00	13.26	-42.67	-13.00	29.67	V

FDD Band 4_Channel Bandwidth 1.4MHz_16QAM _ Low Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3421.4	-46.68	4.02	3.00	12.50	-38.20	-13.00	25.20	H
5132.1	-52.27	5.11	3.00	13.38	-44.00	-13.00	31.00	H
3421.4	-54.85	4.02	3.00	12.50	-46.37	-13.00	33.37	V
5132.1	-53.92	5.11	3.00	13.38	-45.65	-13.00	32.65	V

FDD Band 4_Channel Bandwidth 1.4MHz_16QAM _ Middle Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.0	-44.59	4.02	3.00	12.45	-36.16	-13.00	23.16	H
5197.5	-49.25	5.11	3.00	13.38	-40.98	-13.00	27.98	H
3465.0	-54.45	4.02	3.00	12.45	-46.02	-13.00	33.02	V
5197.5	-51.03	5.11	3.00	13.38	-42.76	-13.00	29.76	V

FDD Band 4_Channel Bandwidth 1.4MHz_16QAM _ High Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3508.6	-45.10	4.02	3.00	12.21	-36.91	-13.00	23.91	H
5262.9	-49.72	5.11	3.00	13.26	-41.57	-13.00	28.57	H
3508.6	-54.08	4.02	3.00	12.21	-45.89	-13.00	32.89	V
5262.9	-51.30	5.11	3.00	13.26	-43.15	-13.00	30.15	V

FDD Band 4_Channel Bandwidth 3MHz_16QAM _ Low Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3423.0	-47.19	4.02	3.00	12.50	-38.71	-13.00	25.71	H
5134.5	-51.71	5.11	3.00	13.38	-43.44	-13.00	30.44	H
3423.0	-54.53	4.02	3.00	12.50	-46.05	-13.00	33.05	V
5134.5	-54.17	5.11	3.00	13.38	-45.90	-13.00	32.90	V

FDD Band 4_Channel Bandwidth 3MHz_16QAM _ Middle Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.0	-44.93	4.02	3.00	12.45	-36.50	-13.00	23.50	H
5197.5	-48.79	5.11	3.00	13.38	-40.52	-13.00	27.52	H
3465.0	-55.12	4.02	3.00	12.45	-46.69	-13.00	33.69	V
5197.5	-50.82	5.11	3.00	13.38	-42.55	-13.00	29.55	V

FDD Band 4_Channel Bandwidth 3MHz_16QAM _ High Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3507.0	-44.46	4.02	3.00	12.21	-36.27	-13.00	23.27	H
5260.5	-49.86	5.11	3.00	13.26	-41.71	-13.00	28.71	H
3507.0	-53.74	4.02	3.00	12.21	-45.55	-13.00	32.55	V
5260.5	-51.05	5.11	3.00	13.26	-42.90	-13.00	29.90	V

FDD Band 4_Channel Bandwidth 5MHz_16QAM _ Low Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3425.0	-47.55	4.02	3.00	12.50	-39.07	-13.00	26.07	H
5137.5	-52.20	5.11	3.00	13.38	-43.93	-13.00	30.93	H
3425.0	-54.58	4.02	3.00	12.50	-46.10	-13.00	33.10	V
5137.5	-54.49	5.11	3.00	13.38	-46.22	-13.00	33.22	V

FDD Band 4_Channel Bandwidth 5MHz_16QAM _ Middle Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.0	-44.26	4.02	3.00	12.45	-35.83	-13.00	22.83	H
5197.5	-49.22	5.11	3.00	13.38	-40.95	-13.00	27.95	H
3465.0	-54.86	4.02	3.00	12.45	-46.43	-13.00	33.43	V
5197.5	-50.95	5.11	3.00	13.38	-42.68	-13.00	29.68	V

FDD Band 4_Channel Bandwidth 5MHz_16QAM _ High Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3505.0	-44.59	4.02	3.00	12.21	-36.40	-13.00	23.40	H
5257.5	-49.91	5.11	3.00	13.26	-41.76	-13.00	28.76	H
3505.0	-53.93	4.02	3.00	12.21	-45.74	-13.00	32.74	V
5257.5	-50.86	5.11	3.00	13.26	-42.71	-13.00	29.71	V

FDD Band 4_Channel Bandwidth 10MHz_16QAM _ Low Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3430.0	-47.24	4.02	3.00	12.50	-38.76	-13.00	25.76	H
5145.0	-51.82	5.11	3.00	13.38	-43.55	-13.00	30.55	H
3430.0	-54.71	4.02	3.00	12.50	-46.23	-13.00	33.23	V
5145.0	-53.65	5.11	3.00	13.38	-45.38	-13.00	32.38	V

FDD Band 4_Channel Bandwidth 10MHz_16QAM _ Middle Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.0	-44.77	4.02	3.00	12.45	-36.34	-13.00	23.34	H
5197.5	-49.42	5.11	3.00	13.38	-41.15	-13.00	28.15	H
3465.0	-54.93	4.02	3.00	12.45	-46.50	-13.00	33.50	V
5197.5	-51.44	5.11	3.00	13.38	-43.17	-13.00	30.17	V

FDD Band 4_Channel Bandwidth 10MHz_16QAM _ High Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3500.0	-45.18	4.02	3.00	12.21	-36.99	-13.00	23.99	H
5250.0	-50.21	5.11	3.00	13.26	-42.06	-13.00	29.06	H
3500.0	-53.66	4.02	3.00	12.21	-45.47	-13.00	32.47	V
5250.0	-50.88	5.11	3.00	13.26	-42.73	-13.00	29.73	V

FDD Band 4_Channel Bandwidth 15MHz_16QAM _ Low Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3435.0	-47.55	4.02	3.00	12.50	-39.07	-13.00	26.07	H
5152.5	-52.19	5.11	3.00	13.38	-43.92	-13.00	30.92	H
3435.0	-54.38	4.02	3.00	12.50	-45.90	-13.00	32.90	V
5152.5	-54.41	5.11	3.00	13.38	-46.14	-13.00	33.14	V

FDD Band 4_Channel Bandwidth 15MHz_16QAM _ Middle Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.0	-44.56	4.02	3.00	12.45	-36.13	-13.00	23.13	H
5197.5	-49.17	5.11	3.00	13.38	-40.90	-13.00	27.90	H
3465.0	-55.01	4.02	3.00	12.45	-46.58	-13.00	33.58	V
5197.5	-51.56	5.11	3.00	13.38	-43.29	-13.00	30.29	V

FDD Band 4_Channel Bandwidth 15MHz_16QAM _ High Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3495.0	-45.14	4.02	3.00	12.21	-36.95	-13.00	23.95	H
5242.5	-49.70	5.11	3.00	13.26	-41.55	-13.00	28.55	H
3495.0	-53.82	4.02	3.00	12.21	-45.63	-13.00	32.63	V
5242.5	-51.32	5.11	3.00	13.26	-43.17	-13.00	30.17	V

FDD Band 4_Channel Bandwidth 20MHz_16QAM _ Low Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3440.0	-47.49	4.02	3.00	12.50	-39.01	-13.00	26.01	H
5160.0	-51.92	5.11	3.00	13.38	-43.65	-13.00	30.65	H
3440.0	-54.24	4.02	3.00	12.50	-45.76	-13.00	32.76	V
5160.0	-54.19	5.11	3.00	13.38	-45.92	-13.00	32.92	V

FDD Band 4_Channel Bandwidth 20MHz_16QAM _ Middle Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.0	-44.72	4.02	3.00	12.45	-36.29	-13.00	23.29	H
5197.5	-49.49	5.11	3.00	13.38	-41.22	-13.00	28.22	H
3465.0	-55.33	4.02	3.00	12.45	-46.90	-13.00	33.90	V
5197.5	-50.90	5.11	3.00	13.38	-42.63	-13.00	29.63	V

FDD Band 4_Channel Bandwidth 20MHz_16QAM _ High Channel

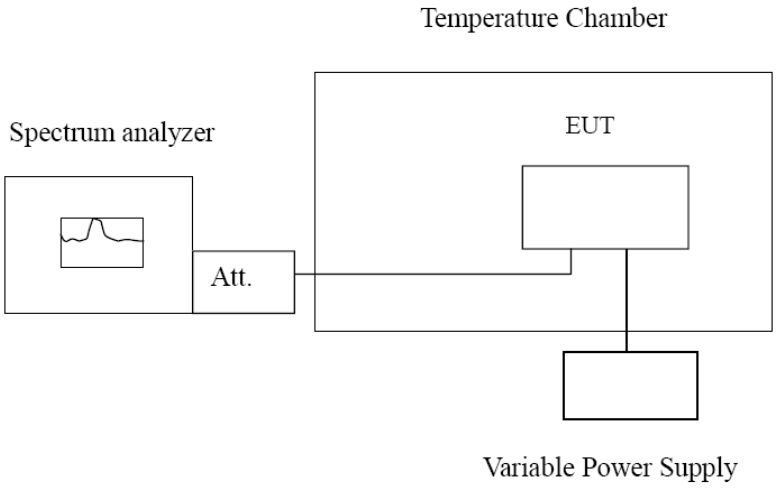
Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3490.0	-44.97	4.02	3.00	12.21	-36.78	-13.00	23.78	H
5235.0	-50.39	5.11	3.00	13.26	-42.24	-13.00	29.24	H
3490.0	-54.04	4.02	3.00	12.21	-45.85	-13.00	32.85	V
5235.0	-50.45	5.11	3.00	13.26	-42.30	-13.00	29.30	V

3.6 Frequency Stability Under Temperature & Voltage Variations

LIMIT

According to §27.54, §2.1055 requirement, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation and should not exceed 2.5ppm.

TEST CONFIGURATION



TEST PROCEDURE

The EUT was setup according to ANSI/TIA-603-E.

Frequency Stability Under Temperature Variations:
In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a “call mode”. This is accomplished with the use of R&S CMW500 DIGITAL RADIO COMMUNICATION TESTER.
1. Measure the carrier frequency at room temperature.
2. Subject the EUT to overnight soak at -30℃.
3. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on middle channel for FDD band 4, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
4. Repeat the above measurements at 10℃ increments from -30℃ to +50℃. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
5. Re-measure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments re-measuring carrier frequency at each voltage. Pause at nominal voltage for 1.5 hours unpowered, to allow any self-heating to stabilize, before continuing.
6. Subject the EUT to overnight soak at +50℃.
7. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on the centre channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
8. Repeat the above measurements at 10 ℃ increments from +50℃ to -30℃. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
9. At all temperature levels hold the temperature to +/- 0.5℃ during the measurement procedure.

Frequency Stability Under Voltage Variations:
Set chamber temperature to 20℃. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.
Reduce the input voltage to specify extreme voltage variation (±15%) and endpoint, record the maximum frequency change.

TEST RESULTS

Remark:
1. We tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of FDD Band 4; recorded worst case.

FDD Band 4, 1.4MHz bandwidth, QPSK (worst case of all bandwidths).

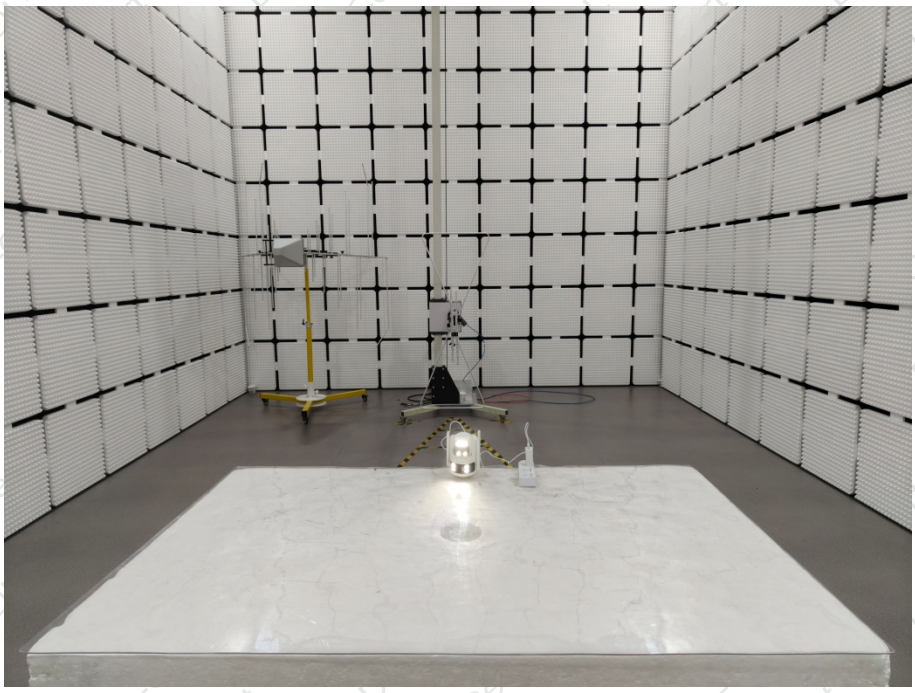
FDD Band 4				
DC Power(V)	**Temperature (℃)**	**Frequency error(Hz)**	**Frequency error(ppm)**	**Verdict**
4.25	20	21.68	0.012673	PASS
5.00	20	20.12	0.011761	PASS
5.75	20	12.55	0.007336	PASS
5.00	-30	11.63	0.006798	PASS
5.00	-20	15.97	0.009335	PASS
5.00	-10	20.64	0.012065	PASS
5.00	0	22.18	0.012965	PASS
5.00	10	21.90	0.012802	PASS
5.00	20	25.21	0.014737	PASS
5.00	30	-10.45	-0.006109	PASS
5.00	40	-13.67	-0.007991	PASS
5.00	50	-20.87	-0.012200	PASS

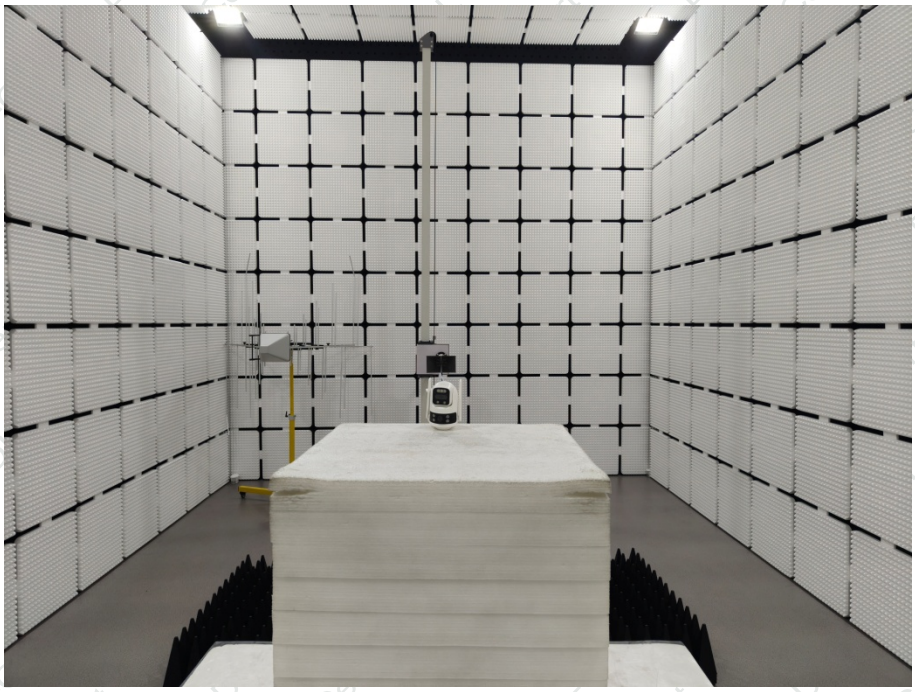
FDD Band 4, 1.4MHz bandwidth, 16QAM (worst case of all bandwidths)

FDD Band 4				
DC Power(V)	**Temperature (℃)**	**Frequency error(Hz)**	**Frequency error(ppm)**	**Verdict**
4.25	20	24.28	0.014186	PASS
5.00	20	21.37	0.012486	PASS
5.75	20	20.55	0.012007	PASS
5.00	-30	18.32	0.010704	PASS
5.00	-20	22.64	0.013228	PASS
5.00	-10	11.37	0.006643	PASS
5.00	0	17.32	0.010120	PASS
5.00	10	19.95	0.011656	PASS
5.00	20	11.89	0.006947	PASS
5.00	30	-17.54	-0.010248	PASS
5.00	40	-24.26	-0.014175	PASS
5.00	50	-28.14	-0.016442	PASS

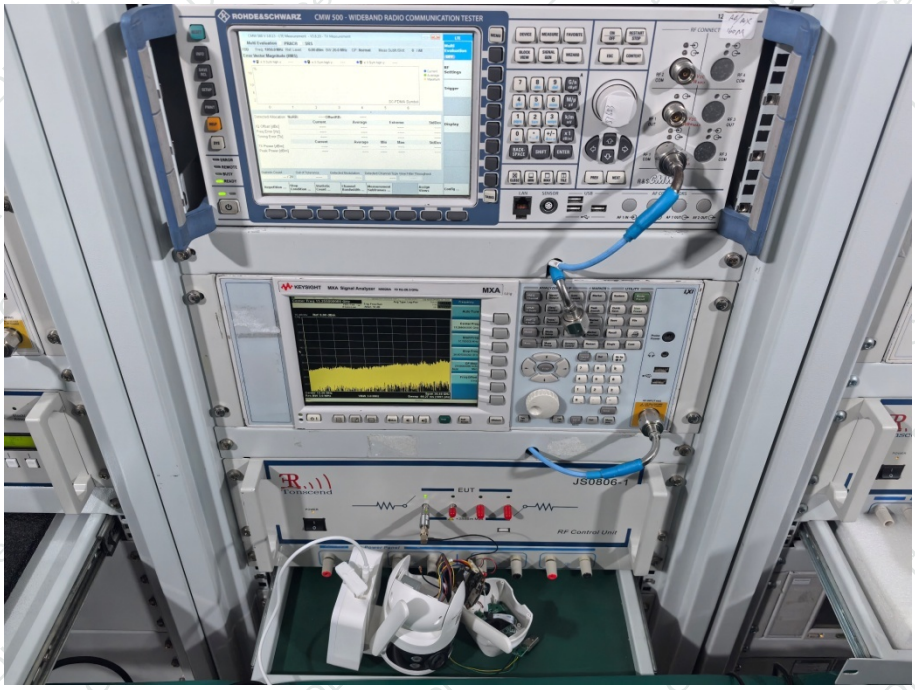
4 Test Setup Photos of the EUT

Radiated Emissions





RF Conducted Emission



5 Photos of the EUT

Reference to the report: ANNEX A of external photos and ANNEX B of internal photos.

.....End of Report.....