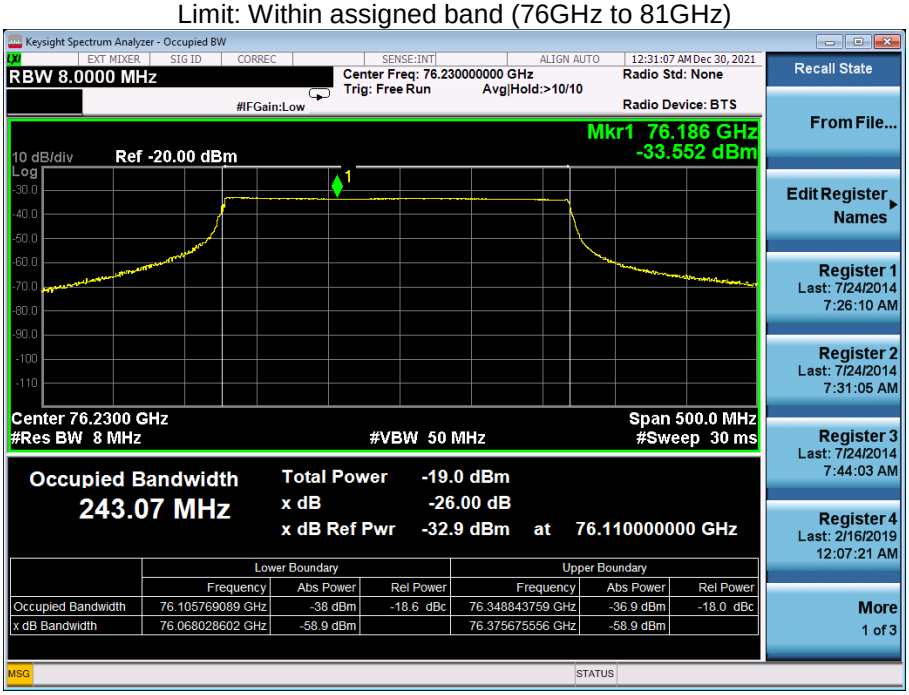
Appendix B: Test Results

Appendix B.1: Occupied Bandwidth

FL: 76.106GHz, FH: 76.349GHz
Limit: Within assigned band (76GHz to 81GHz)



	Lower Boundary			Upper Boundary		
	Frequency	Abs Power	Rel Power	Frequency	Abs Power	Rel Power
Occupied Bandwidth	76.105769089 GHz	-38 dBm	-18.6 dBc	76.348843759 GHz	-36.9 dBm	-18.0 dBc
x dB Bandwidth	76.068028602 GHz	-58.9 dBm		76.375675556 GHz	-58.9 dBm	

Appendix B.2: Radiated E.I.R.P. Power

Horizontal:

Frequency (GHz)	Measurement Distance (m)	EIRP (dBm)	EIRP Limit (dBm)
76.23	1	18.13	55 (Peak)
76.23	1	2.84	50(Average)

Vertical:

Frequency (GHz)	Measurement Distance (m)	EIRP (dBm)	EIRP Limit (dBm)
76.23	1	31.27	55 (Peak)
76.23	1	15.60	50(Average)

Appendix B.3: Unwanted emissions

9kHz-30MHz

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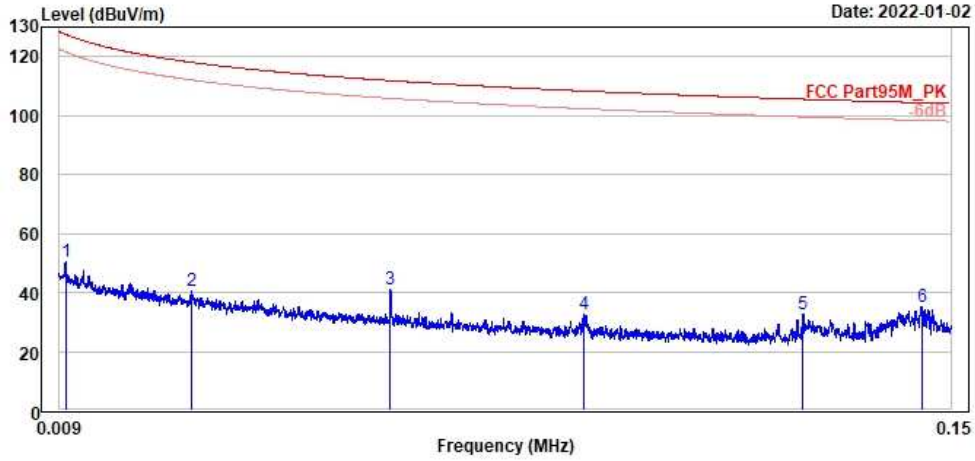

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.01	50.19	32.45	17.74	127.58	-77.39	100	187	QP	Open	
2	0.03	40.78	21.23	19.55	118.05	-77.27	100	63	QP	Open	
3	0.06	40.93	21.83	19.10	111.83	-70.90	100	44	QP	Open	
4	0.09	32.48	14.04	18.44	108.33	-75.85	100	145	QP	Open	
5	0.13	32.70	14.35	18.35	105.55	-72.85	100	141	QP	Open	
6	0.15	35.17	16.75	18.42	104.35	-69.18	100	141	QP	Open	

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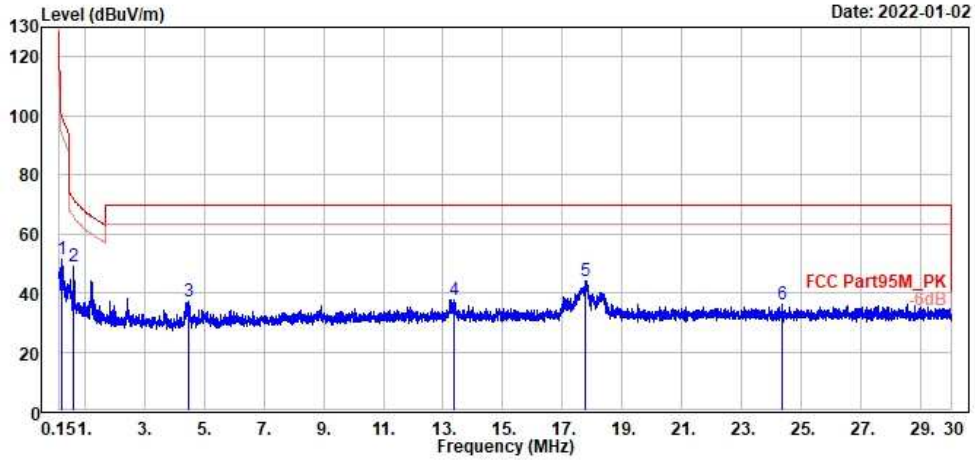

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.25	51.26	32.46	18.80	99.59	-48.33	100	137	QP	Open	
2	0.62	48.73	29.67	19.06	71.78	-23.05	100	99	QP	Open	
3	4.48	36.83	17.44	19.39	69.50	-32.67	100	169	QP	Open	
4	13.35	37.79	16.19	21.60	69.50	-31.71	100	124	QP	Open	
5	17.78	43.91	22.00	21.91	69.50	-25.59	100	329	QP	Open	
6	24.33	35.89	13.68	22.21	69.50	-33.61	100	146	QP	Open	

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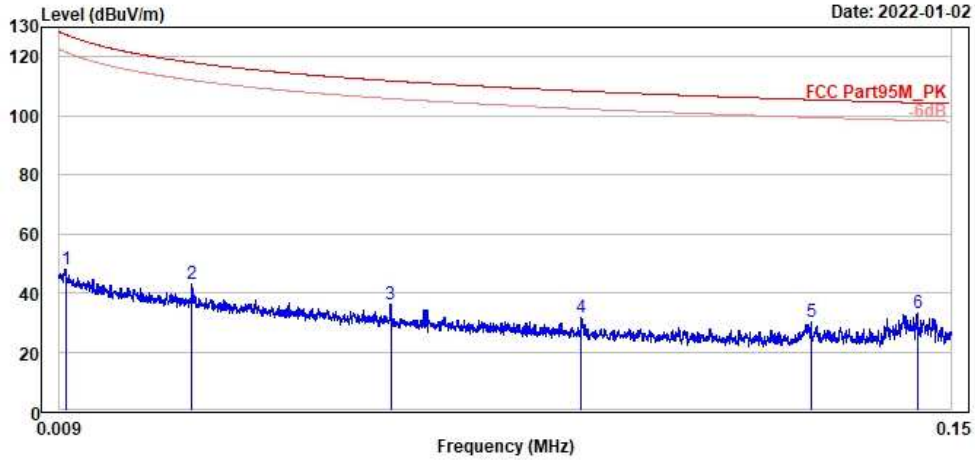

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.01	48.12	30.38	17.74	127.57	-79.45	100	328	QP	Close	
2	0.03	42.83	23.28	19.55	118.05	-75.22	100	96	QP	Close	
3	0.06	36.22	17.12	19.10	111.83	-75.61	100	227	QP	Close	
4	0.09	31.71	13.26	18.45	108.36	-76.65	100	189	QP	Close	
5	0.13	29.92	11.56	18.36	105.46	-75.54	100	176	QP	Close	
6	0.14	32.88	14.46	18.42	104.39	-71.51	100	172	QP	Close	

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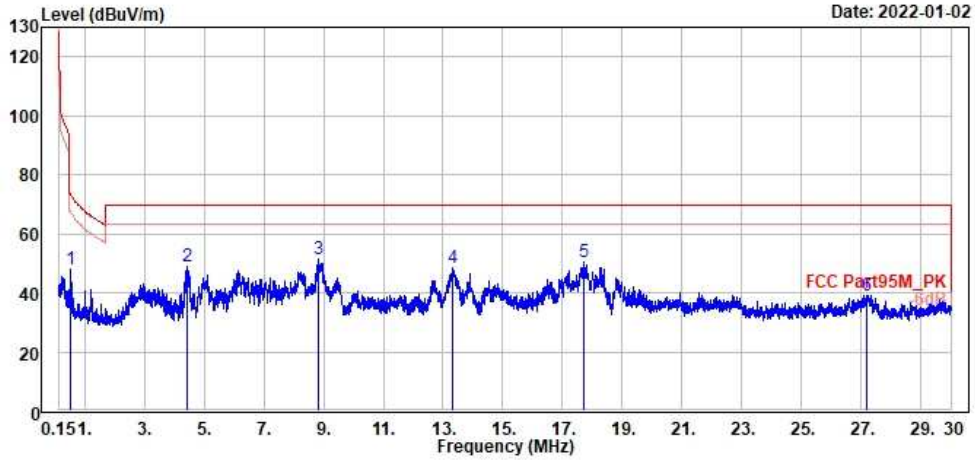

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.51	47.92	28.92	19.00	73.38	-25.46	100	170	QP	Close	
2	4.45	48.82	29.43	19.39	69.50	-20.68	100	360	QP	Close	
3	8.84	51.58	30.68	20.90	69.50	-17.92	100	183	QP	Close	
4	13.33	48.22	26.62	21.60	69.50	-21.28	100	138	QP	Close	
5	17.70	50.19	28.29	21.90	69.50	-19.31	100	303	QP	Close	
6	27.20	39.25	16.93	22.32	69.50	-30.25	100	325	QP	Close	

30MHz to 1GHz

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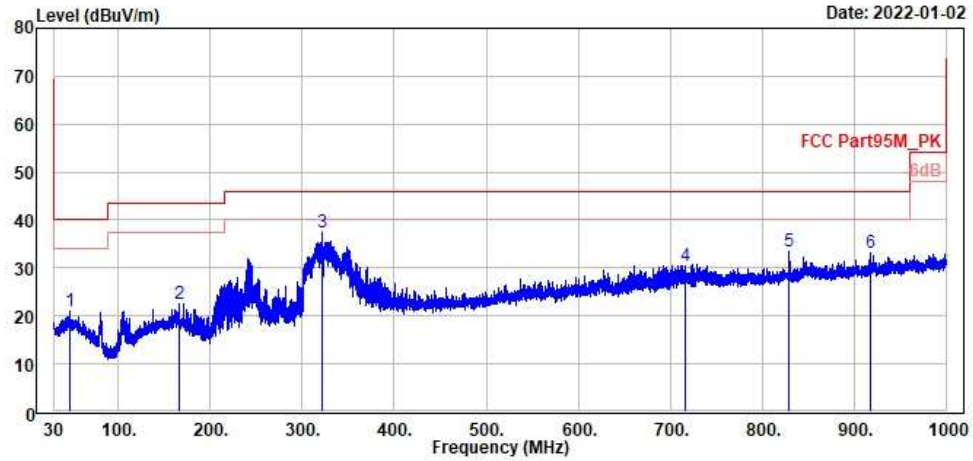

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	46.49	21.13	28.84	-7.71	40.00	-18.87	200	297	QP	Horizontal	
2	165.41	22.53	29.48	-6.95	43.50	-20.97	200	93	QP	Horizontal	
3	321.39	37.34	43.33	-5.99	46.00	-8.66	300	41	QP	Horizontal	
4	716.37	30.52	30.06	0.46	46.00	-15.48	100	287	QP	Horizontal	
5	829.57	33.44	31.09	2.35	46.00	-12.56	200	282	QP	Horizontal	
6	918.04	33.11	29.30	3.81	46.00	-12.89	200	8	QP	Horizontal	

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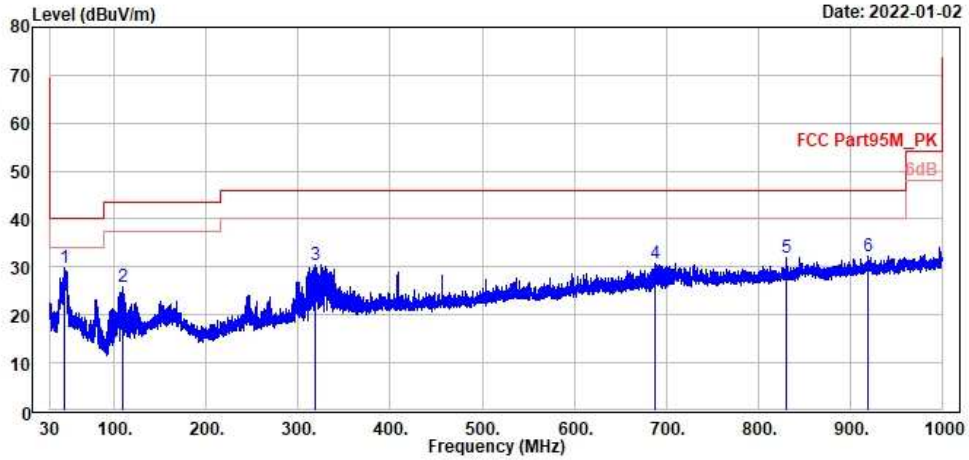

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	46.01	29.72	37.68	-7.96	40.00	-10.28	100	360	QP	Vertical	
2	109.64	25.83	36.59	-10.76	43.50	-17.67	100	147	QP	Vertical	
3	317.99	30.53	36.61	-6.08	46.00	-15.47	100	137	QP	Vertical	
4	688.24	30.79	30.61	0.18	46.00	-15.21	200	358	QP	Vertical	
5	830.74	31.90	29.52	2.38	46.00	-14.10	100	360	QP	Vertical	
6	918.81	32.35	28.52	3.83	46.00	-13.65	200	360	QP	Vertical	

1GHz to 40GHz

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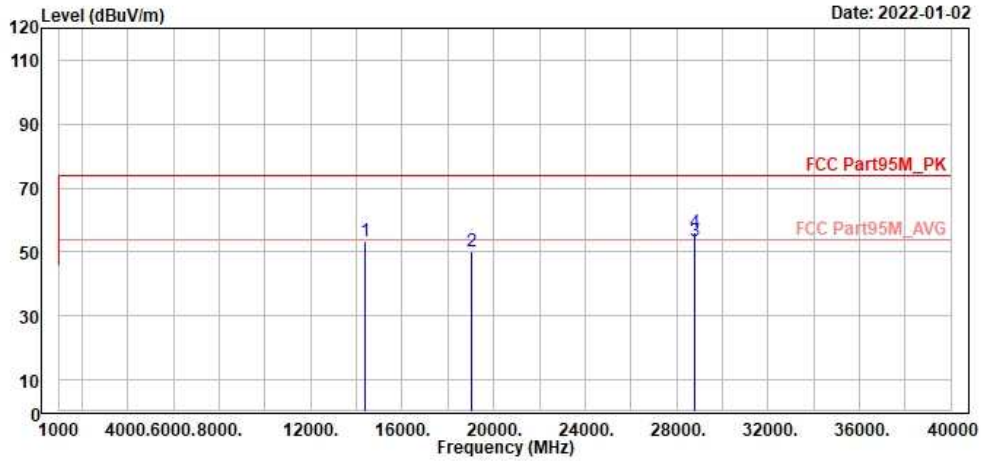

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	14400.00	53.46	51.02	2.44	74.00	-20.54	200	280	Peak	Horizontal	
2	19026.00	50.19	52.05	-1.86	74.00	-23.81	200	267	Peak	Horizontal	
3	28800.00	53.28	47.34	5.94	54.00	-0.72	300	288	Average	Horizontal	
4	28800.00	56.27	50.33	5.94	74.00	-17.73	300	288	Peak	Horizontal	

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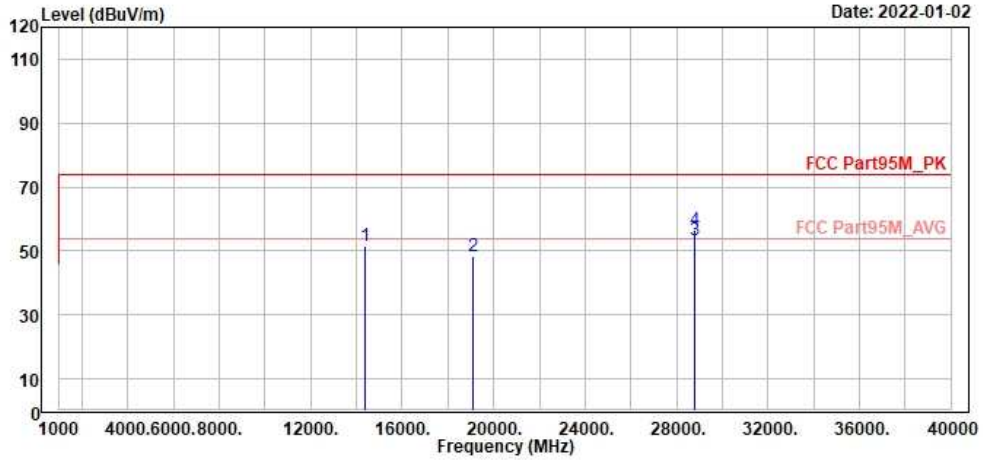

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	14400.00	51.52	49.08	2.44	74.00	-22.48	400	360	Peak	Vertical	
2	19071.00	48.14	50.02	-1.88	74.00	-25.86	396	360	Peak	Vertical	
3	28800.00	53.59	47.65	5.94	54.00	-0.41	400	327	Average	Vertical	
4	28800.00	56.63	50.69	5.94	74.00	-17.37	400	327	Peak	Vertical	

Above 40GHz

TX_40G~50G_H				
Frequency (GHz)	Measurement Distance (m)	Cal. Measurement Distance (1m to 3m) Level Power Density (W/cm^2)	Power Density (pW/cm^2)	Limit@3m (pW/cm^2)
45	1	0.000000002	0.16	600
TX_40G~50G_V				
Frequency (GHz)	Measurement Distance (m)	Cal. Measurement Distance (1m to 3m) Level Power Density (W/cm^2)	Power Density (pW/cm^2)	Limit@3m (pW/cm^2)
45.59	1	0.000000002	0.18	600

TX_50G~75G_H				
Frequency (GHz)	Measurement Distance (m)	Cal. Measurement Distance (1m to 3m) Level Power Density (W/cm^2)	Power Density (pW/cm^2)	Limit@3m (pW/cm^2)
50.95	1	0.000000001	0.12	600
TX_50G~75G_V				
Frequency (GHz)	Measurement Distance (m)	Cal. Measurement Distance (1m to 3m) Level Power Density (W/cm^2)	Power Density (pW/cm^2)	Limit@3m (pW/cm^2)
65.3	1	0.000000242	24.25	600

TX_75G~110G_H				
Frequency (GHz)	Measurement Distance (m)	Cal. Measurement Distance (1m to 3m) Level Power Density (W/cm^2)	Power Density (pW/cm^2)	Limit@3m (pW/cm^2)
83.225	1	0.000000004	0.35	600
TX_75G~110G_V				
Frequency (GHz)	Measurement Distance (m)	Cal. Measurement Distance (1m to 3m) Level Power Density (W/cm^2)	Power Density (pW/cm^2)	Limit@3m (pW/cm^2)
83.26	1	0.000000100	10.01	600

TX_110G~140G_H				
Frequency (GHz)	Measurement Distance (m)	Cal. Measurement Distance (1m to 3m) Level Power Density (W/cm^2)	Power Density (pW/cm^2)	Limit@3m (pW/cm^2)
131.36	1	0.000000001	0.12	600
TX_110G~140G_V				
Frequency (GHz)	Measurement Distance (m)	Cal. Measurement Distance (1m to 3m) Level Power Density (W/cm^2)	Power Density (pW/cm^2)	Limit@3m (pW/cm^2)
114.2	1	0.000000001	0.11	600

TX_140G~231G_H				
Frequency (GHz)	Measurement Distance (m)	Cal. Measurement Distance (1m to 3m) Level Power Density (W/cm^2)	Power Density (pW/cm^2)	Limit@3m (pW/cm^2)
152.46	1	0.000000001	0.12	600
TX_140G~231G_V				
Frequency (GHz)	Measurement Distance (m)	Cal. Measurement Distance (1m to 3m) Level Power Density (W/cm^2)	Power Density (pW/cm^2)	Limit@3m (pW/cm^2)
152.46	1	0.000000002	0.17	600

Appendix B.4: Frequency stability

Test Temperature (℃)	Test Voltage (Vdc)	Measured Frequency (GHz)	Delta Frequency (kHz)	Limit (Within 76GHz to 81GHz)
50	12	76.2280	-1500.00	Within assigned band
40	12	76.2265	-3000.00	
30	12	76.2283	-1250.00	
20	12	76.2295	0.00	
10	12	76.2303	750.00	
0	12	76.2305	1000.00	
-10	12	76.2318	2250.00	
-20	12	76.2308	1250.00	
Test Temperature (℃)	Test Voltage (Vdc)	Measured Frequency (GHz)	Delta Frequency (kHz)	Limit (Within 76GHz to 81GHz)
20	13.8	76.2293	-250.00	Within assigned band
20	12	76.2295	0.00	
20	10.2	76.2280	-1500.00	