

## RF Test Data for LTE (Conducted Measurement)

**Product Name: FastHelp Home Emergency Alert Device – V4-4G**

**Trade Mark: FastHelp**

**Test Model: FH-V4-4G**

**Sample ID: TZ210702403-1#**

**FCC ID: 2AJG4-FH-V4-4G**

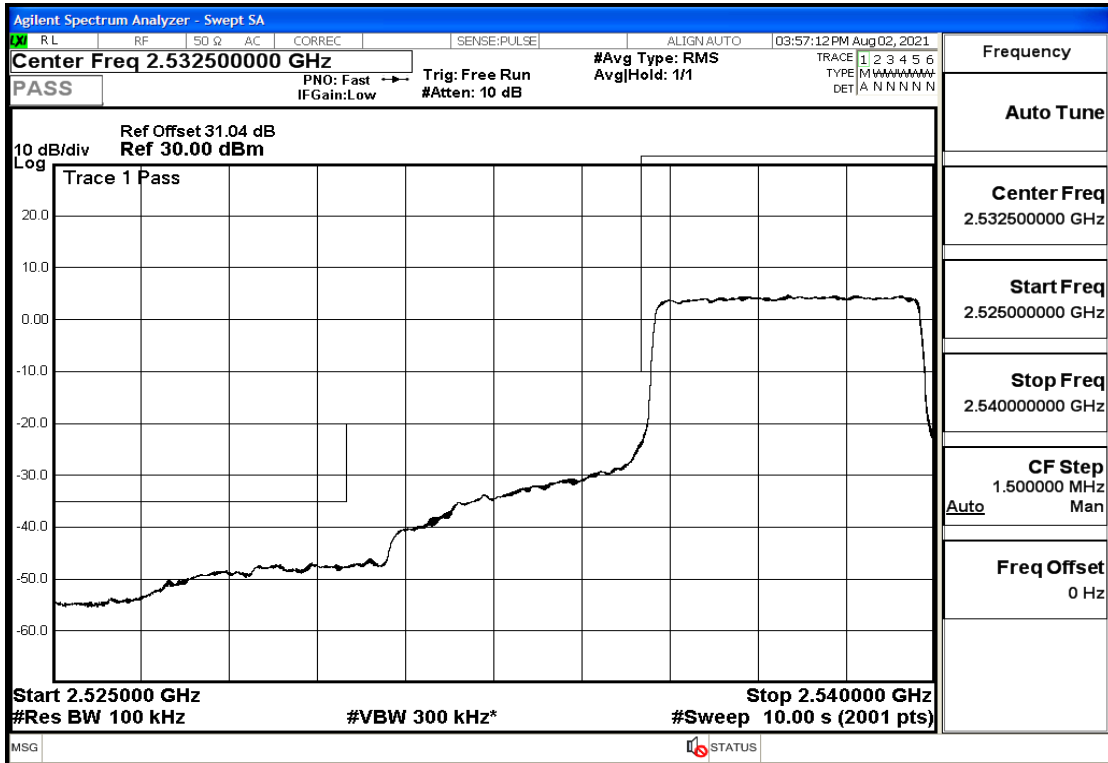
### Environmental Conditions

Temperature:	23.8℃
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
Remark:	For LTE Band41

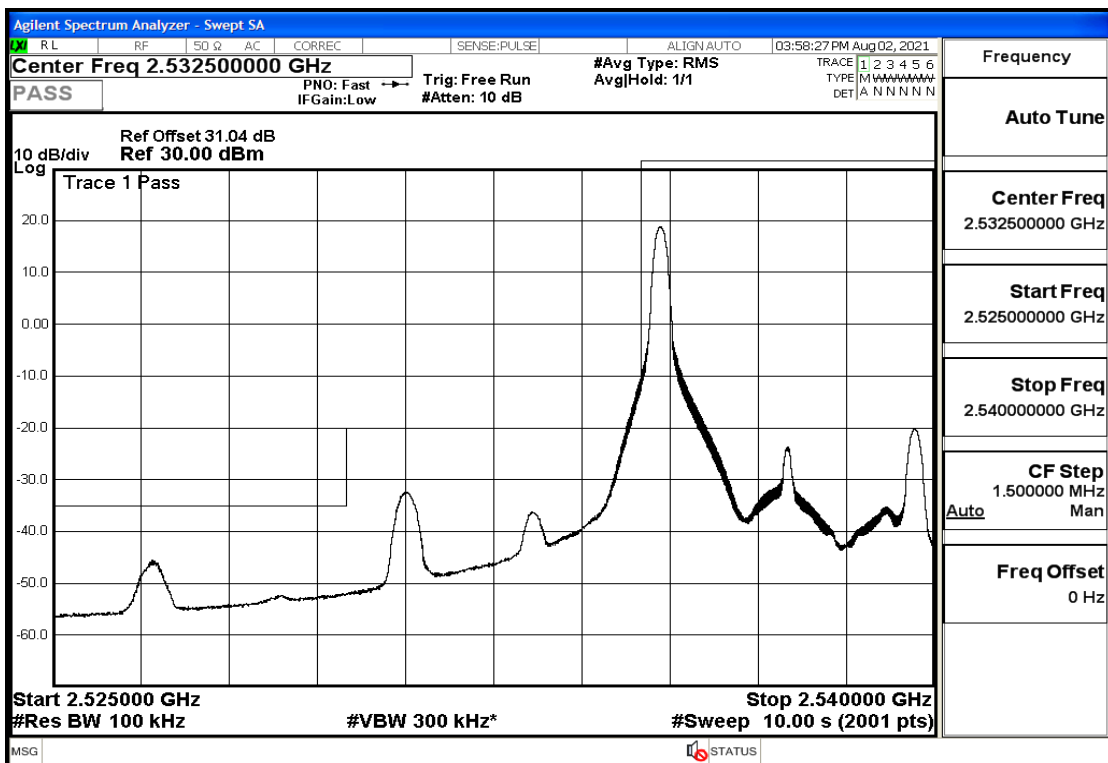
## Band Edge and Emission Mask

Band	Bandwidth(MHz)	UL Frequency(MHz)	Modulation	RB Size	RB Offset	Conclusion
Band41	5	2537.5	QPSK	25	LOW	Pass
Band41	5	2537.5	QPSK	1	LOW	Pass
Band41	5	2537.5	16QAM	25	LOW	Pass
Band41	5	2537.5	16QAM	1	LOW	Pass
Band41	5	2652.5	QPSK	25	LOW	Pass
Band41	5	2652.5	QPSK	1	HIGH	Pass
Band41	5	2652.5	16QAM	25	LOW	Pass
Band41	5	2652.5	16QAM	1	HIGH	Pass

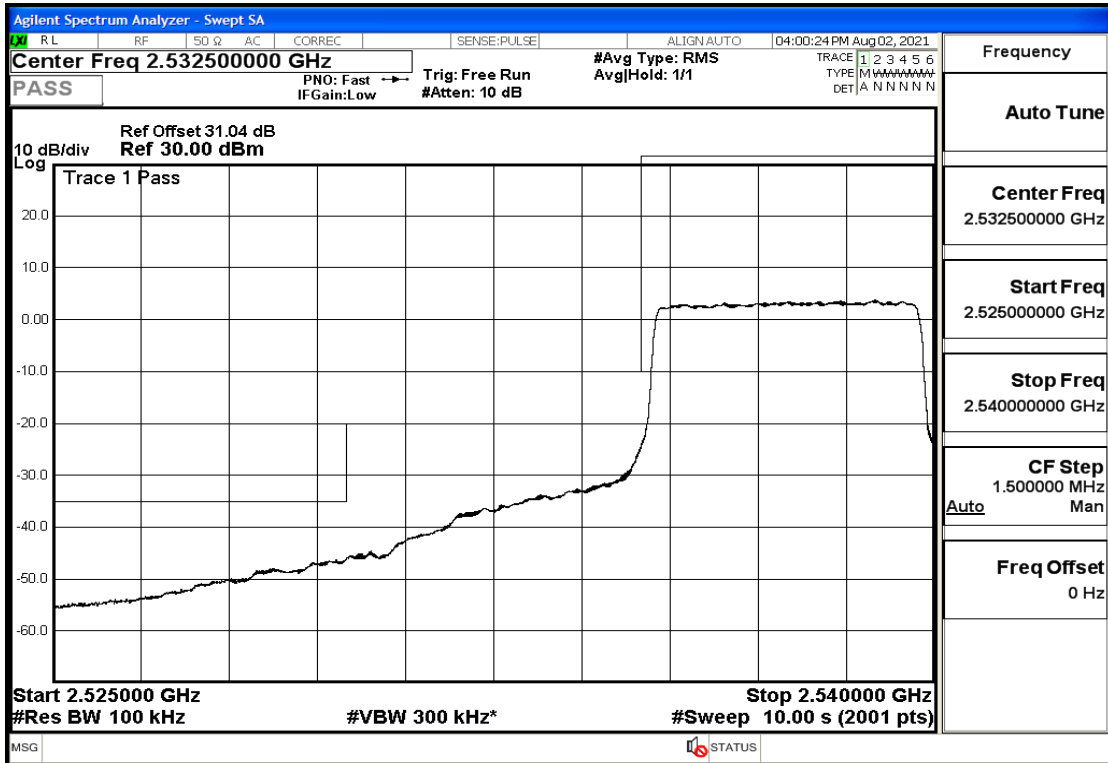
Band41-5-2537.5-QPSK-25#LOW@Pass



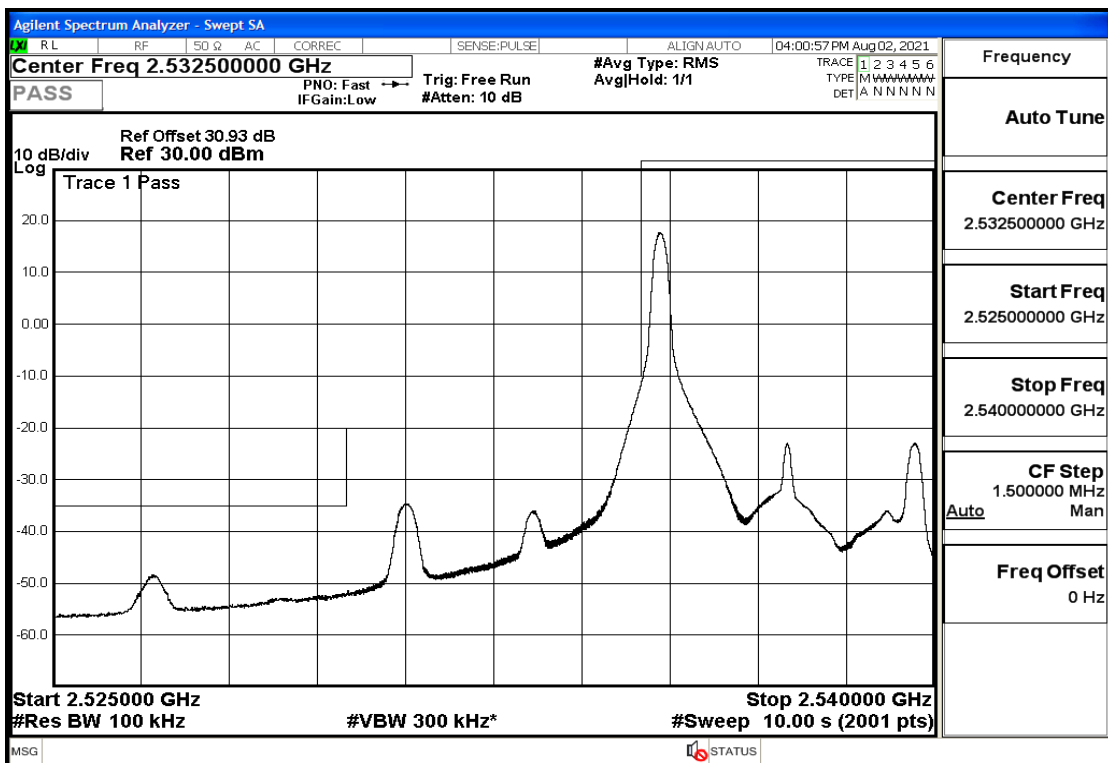
Band41-5-2537.5-QPSK-1#LOW@Pass



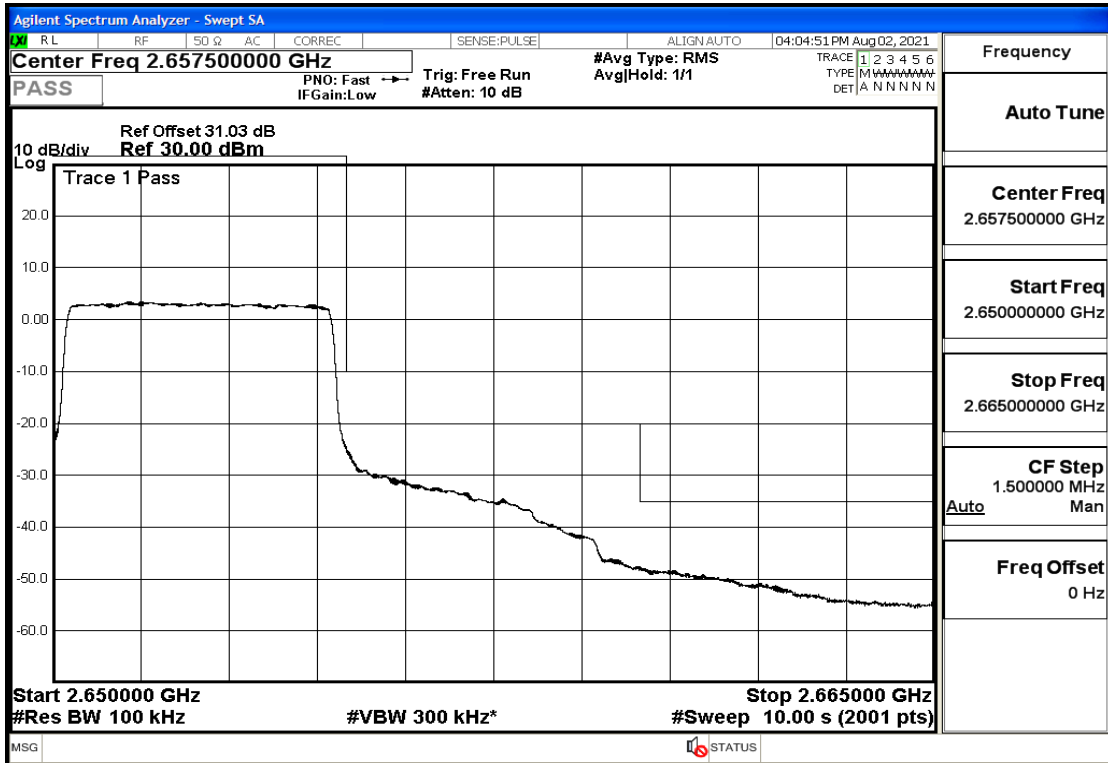
Band41-5-2537.5-16QAM-25#LOW@Pass



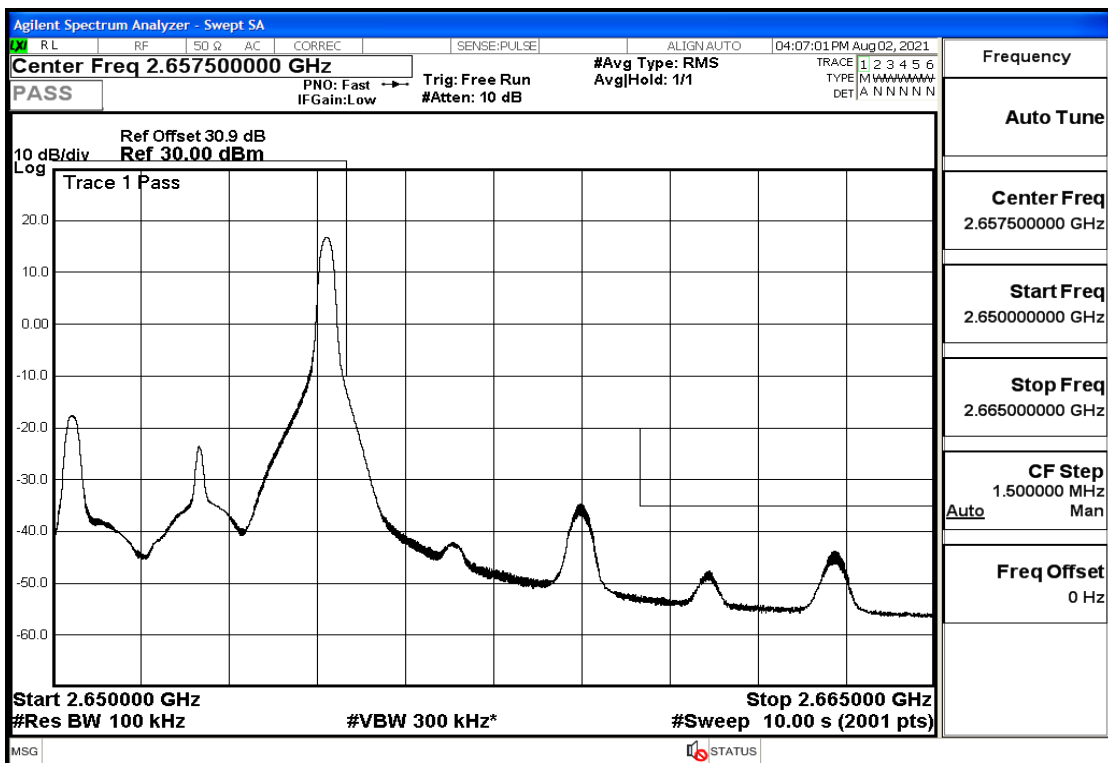
Band41-5-2537.5-16QAM-1#LOW@Pass



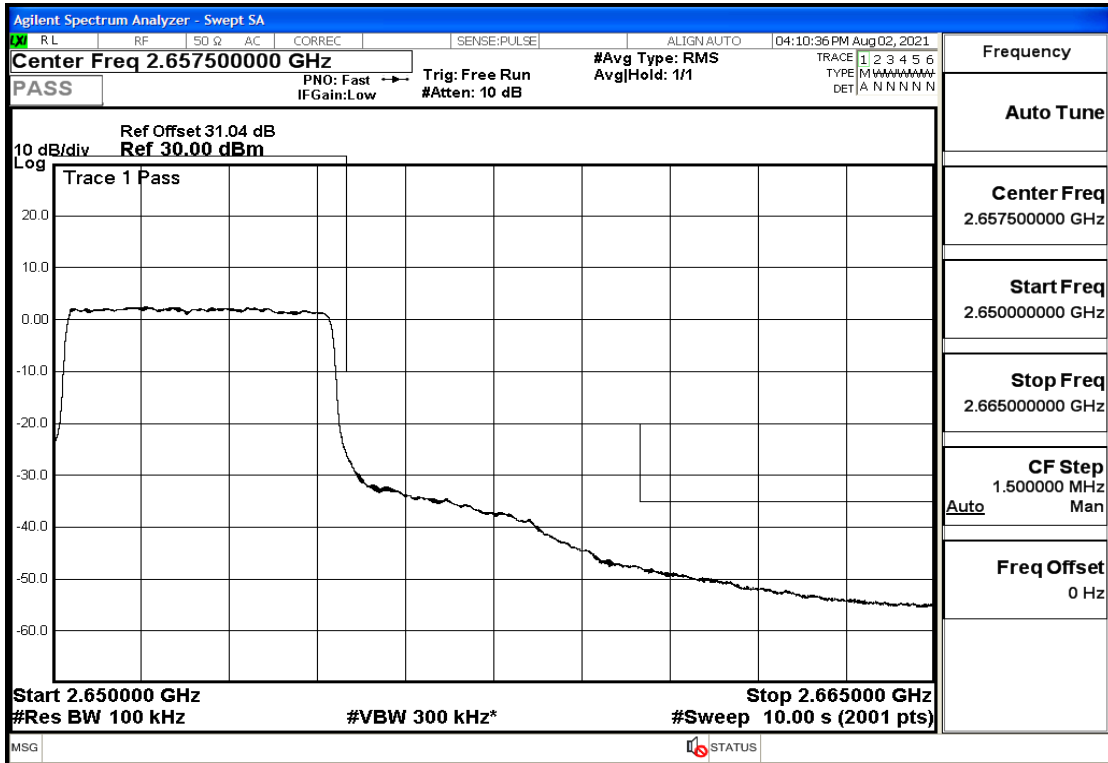
Band41-5-2652.5-QPSK-25#LOW@Pass



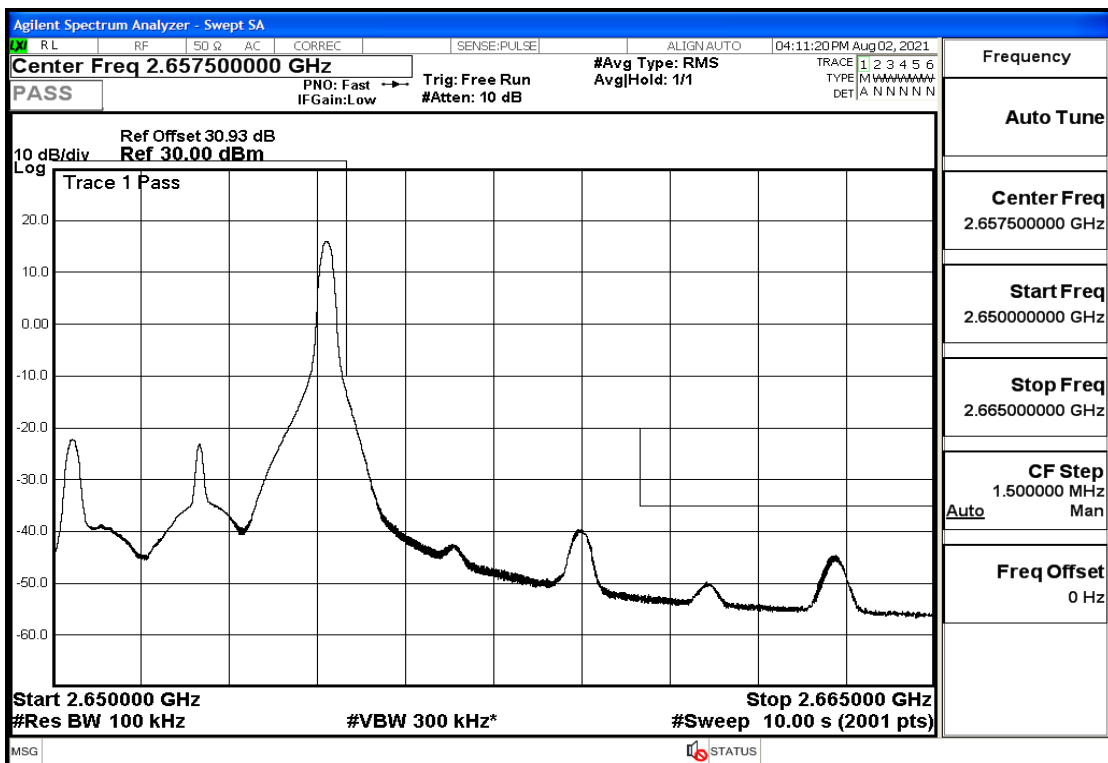
Band41-5-2652.5-QPSK-1#HIGH@Pass



Band41-5-2652.5-16QAM-25#LOW@Pass



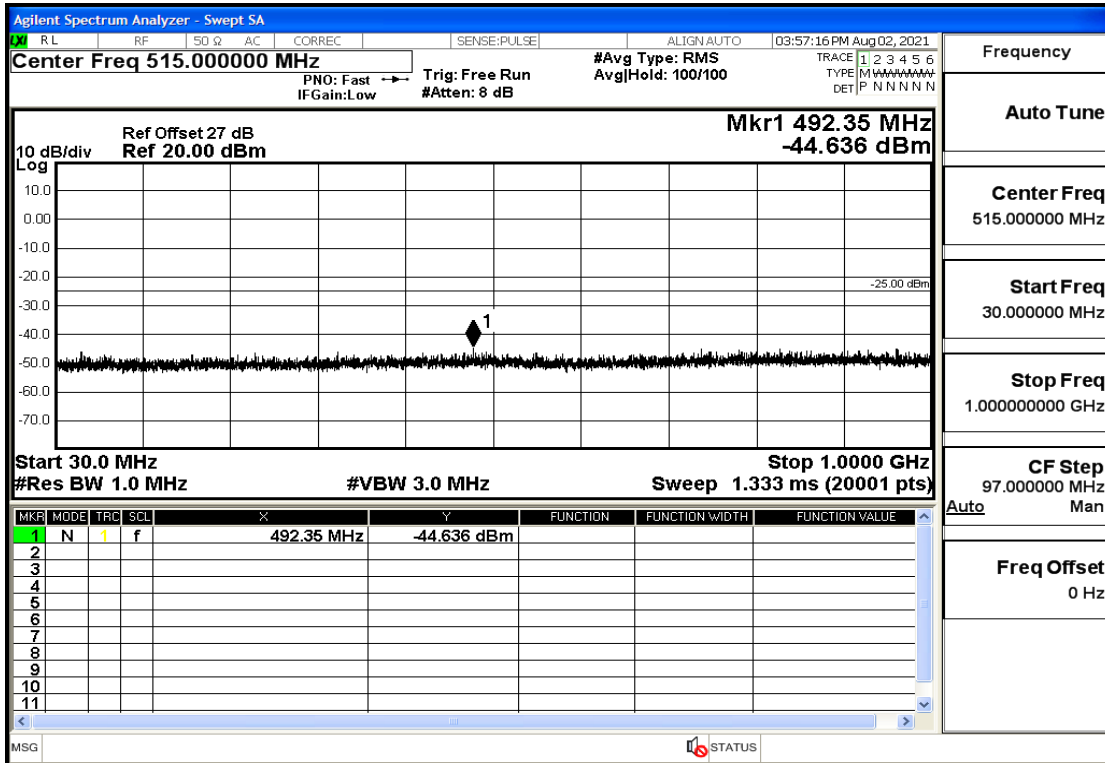
Band41-5-2652.5-16QAM-1#HIGH@Pass



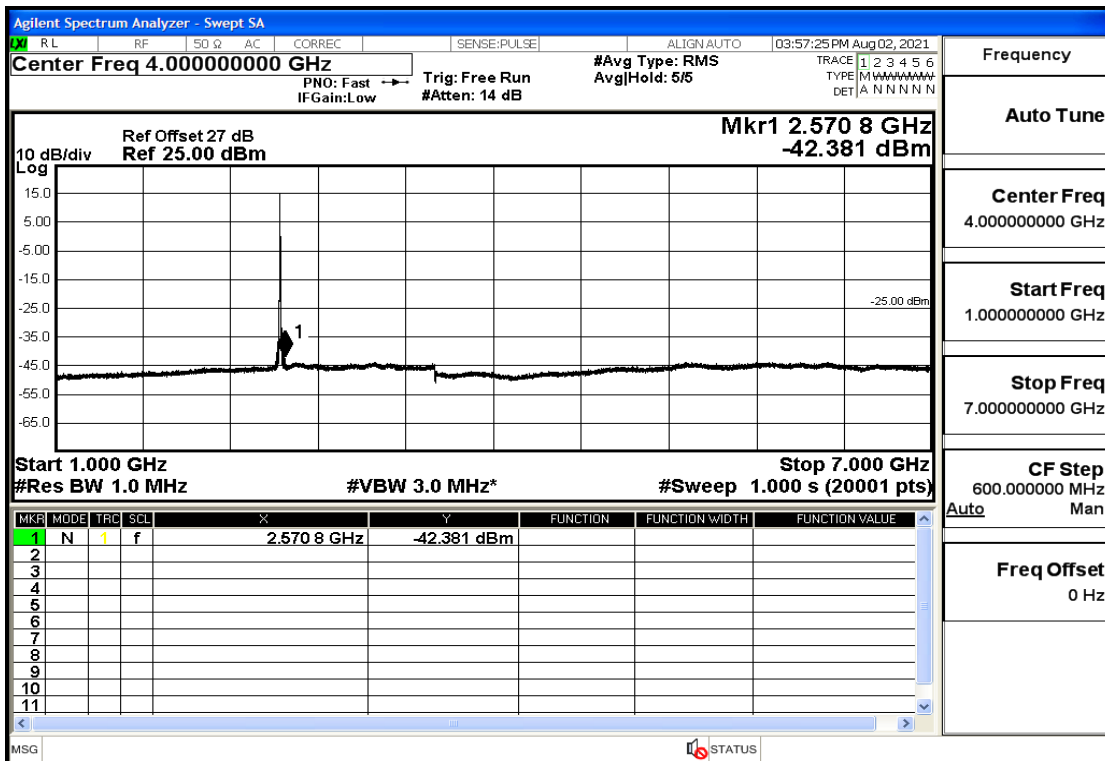
## Conducted Spurious Emission

Band	Bandwidth(MHz)	UL Frequency(MHz)	Modulation	RB Size	RB Offset	Test Condition	Transmitter Spurious Emission(Pass/Fail)
OB41	5	2537.5	QPSK	25	LOW	30mHz-1GHz	Pass
OB41	5	2537.5	QPSK	25	LOW	1GHz-7GHz	Pass
OB41	5	2537.5	QPSK	25	LOW	7GHz-13.6GHz	Pass
OB41	5	2537.5	QPSK	25	LOW	13.6GHz-26.5GHz	Pass
OB41	5	2537.5	QPSK	1	LOW	30mHz-1GHz	Pass
OB41	5	2537.5	QPSK	1	LOW	1GHz-7GHz	Pass
OB41	5	2537.5	QPSK	1	LOW	7GHz-13.6GHz	Pass
OB41	5	2537.5	QPSK	1	LOW	13.6GHz-26.5GHz	Pass
OB41	5	2537.5	QPSK	1	HIGH	30mHz-1GHz	Pass
OB41	5	2537.5	QPSK	1	HIGH	1GHz-7GHz	Pass
OB41	5	2537.5	QPSK	1	HIGH	7GHz-13.6GHz	Pass
OB41	5	2537.5	QPSK	1	HIGH	13.6GHz-26.5GHz	Pass
OB41	5	2593	QPSK	25	LOW	30mHz-1GHz	Pass
OB41	5	2593	QPSK	25	LOW	1GHz-7GHz	Pass
OB41	5	2593	QPSK	25	LOW	7GHz-13.6GHz	Pass
OB41	5	2593	QPSK	25	LOW	13.6GHz-26.5GHz	Pass
OB41	5	2593	QPSK	1	LOW	30mHz-1GHz	Pass
OB41	5	2593	QPSK	1	LOW	1GHz-7GHz	Pass
OB41	5	2593	QPSK	1	LOW	7GHz-13.6GHz	Pass
OB41	5	2593	QPSK	1	LOW	13.6GHz-26.5GHz	Pass
OB41	5	2593	QPSK	1	HIGH	30mHz-1GHz	Pass
OB41	5	2593	QPSK	1	HIGH	1GHz-7GHz	Pass
OB41	5	2593	QPSK	1	HIGH	7GHz-13.6GHz	Pass
OB41	5	2593	QPSK	1	HIGH	13.6GHz-26.5GHz	Pass
OB41	5	2652.5	QPSK	25	LOW	30mHz-1GHz	Pass
OB41	5	2652.5	QPSK	25	LOW	1GHz-7GHz	Pass
OB41	5	2652.5	QPSK	25	LOW	7GHz-13.6GHz	Pass
OB41	5	2652.5	QPSK	25	LOW	13.6GHz-26.5GHz	Pass
OB41	5	2652.5	QPSK	1	LOW	30mHz-1GHz	Pass
OB41	5	2652.5	QPSK	1	LOW	1GHz-7GHz	Pass
OB41	5	2652.5	QPSK	1	LOW	7GHz-13.6GHz	Pass
OB41	5	2652.5	QPSK	1	LOW	13.6GHz-26.5GHz	Pass
OB41	5	2652.5	QPSK	1	HIGH	30mHz-1GHz	Pass
OB41	5	2652.5	QPSK	1	HIGH	1GHz-7GHz	Pass
OB41	5	2652.5	QPSK	1	HIGH	7GHz-13.6GHz	Pass
OB41	5	2652.5	QPSK	1	HIGH	13.6GHz-26.5GHz	Pass

OB41-5-2537.5-QPSK-25#LOW@30mHz-1GHz@Pass

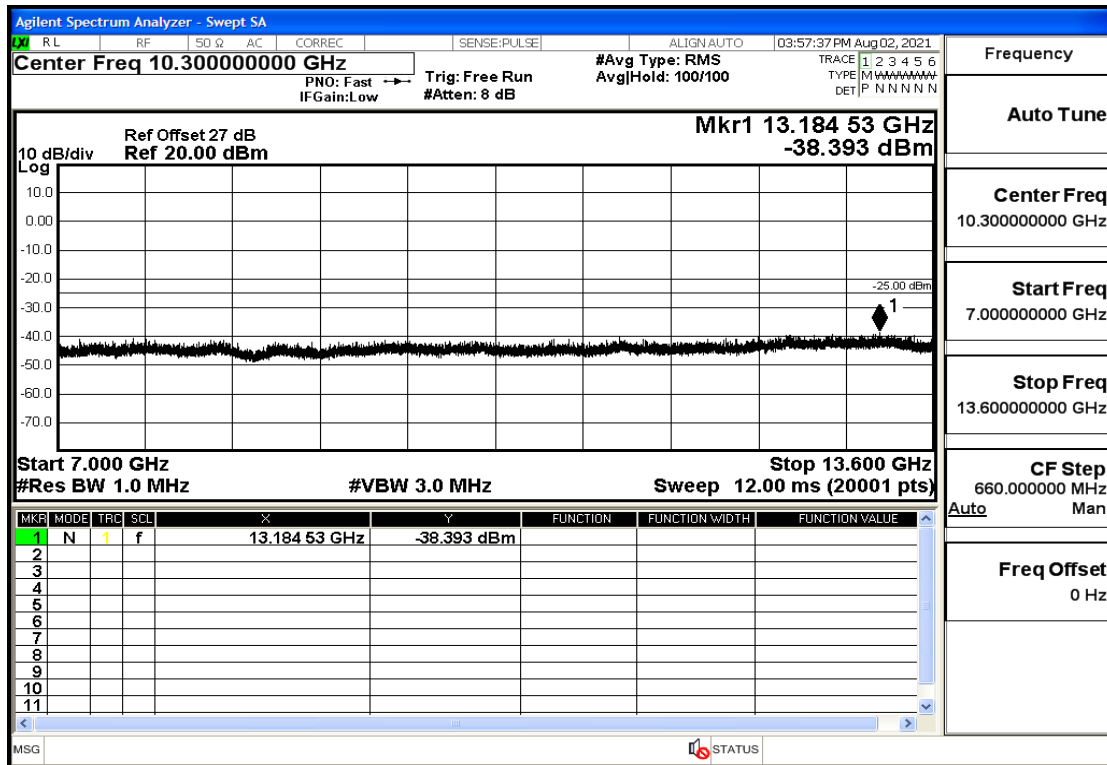


OB41-5-2537.5-QPSK-25#LOW@1GHz-7GHz@Pass

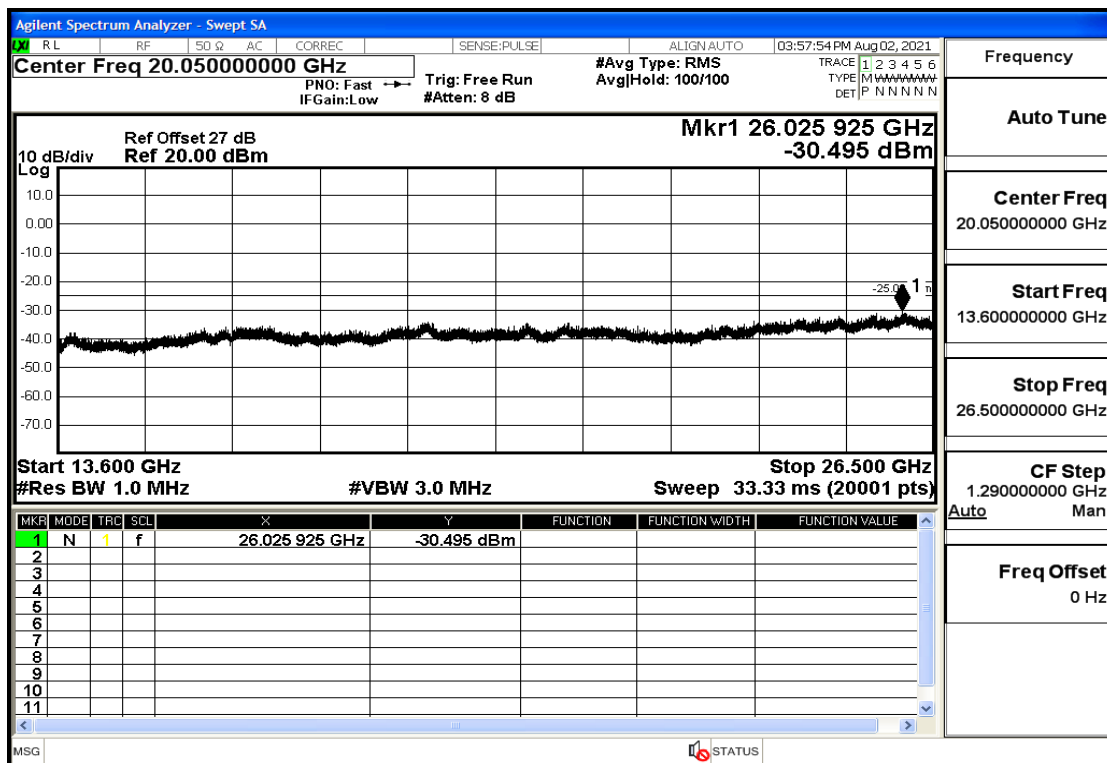




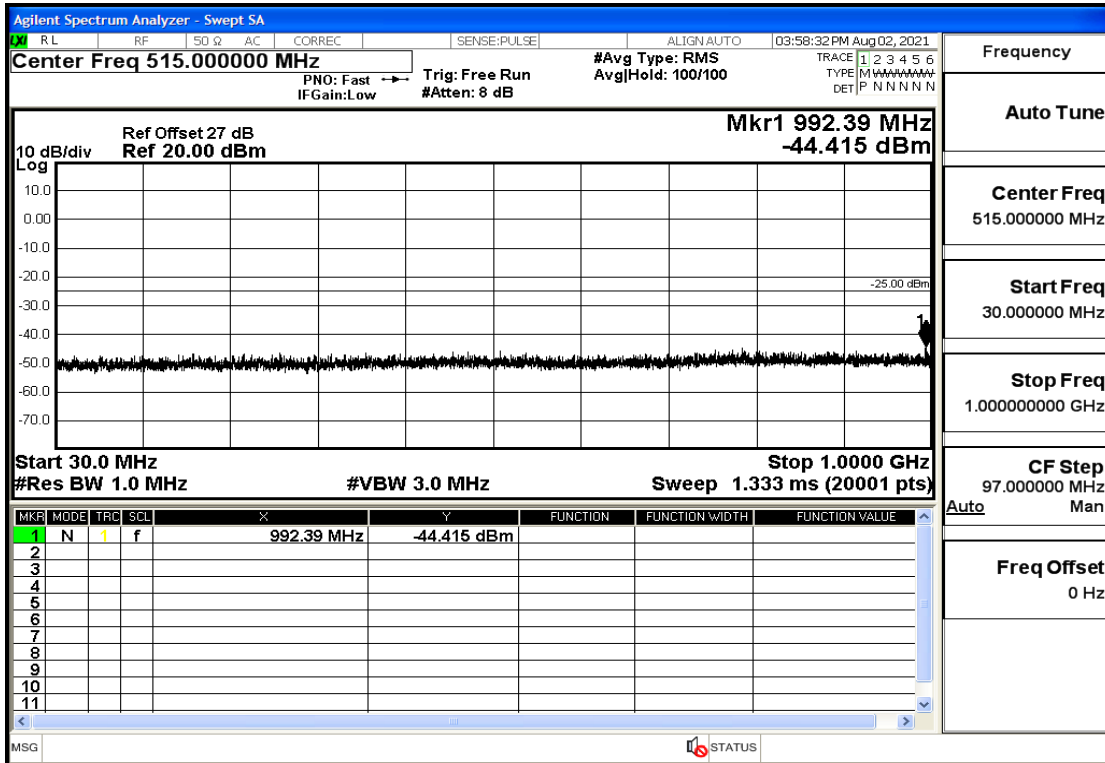
OB41-5-2537.5-QPSK-25#LOW@7GHz-13.6GHz@Pass



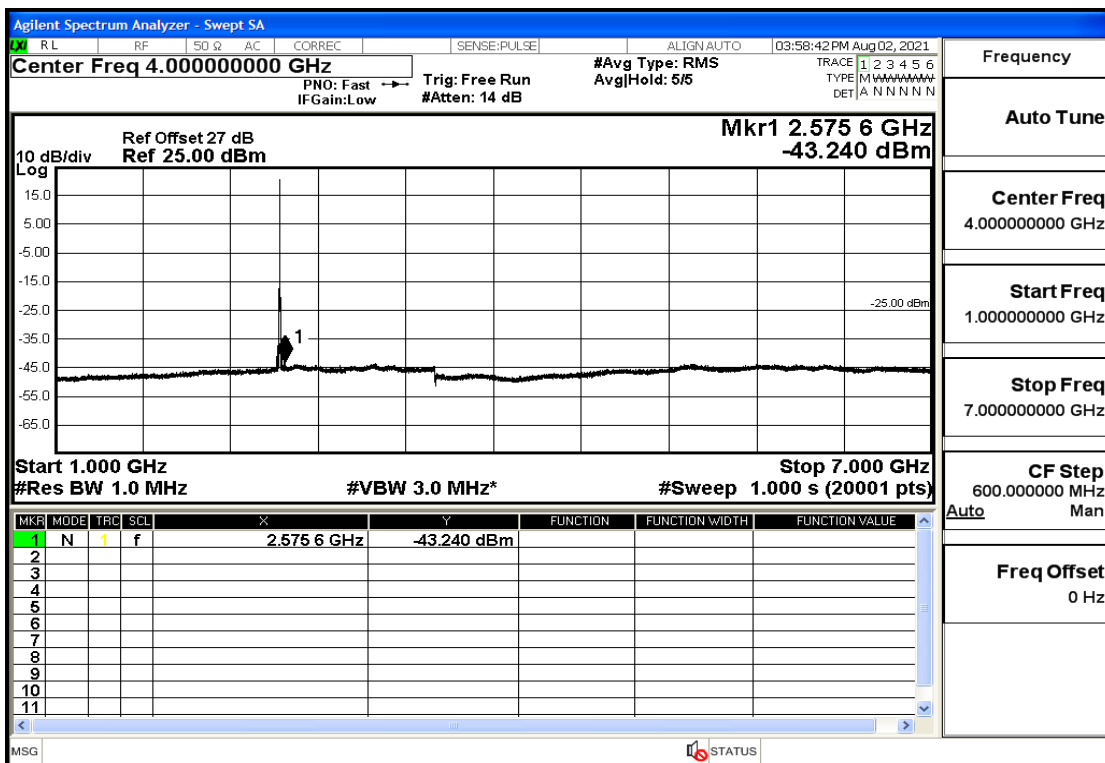
OB41-5-2537.5-QPSK-25#LOW@13.6GHz-26.5GHz@Pass



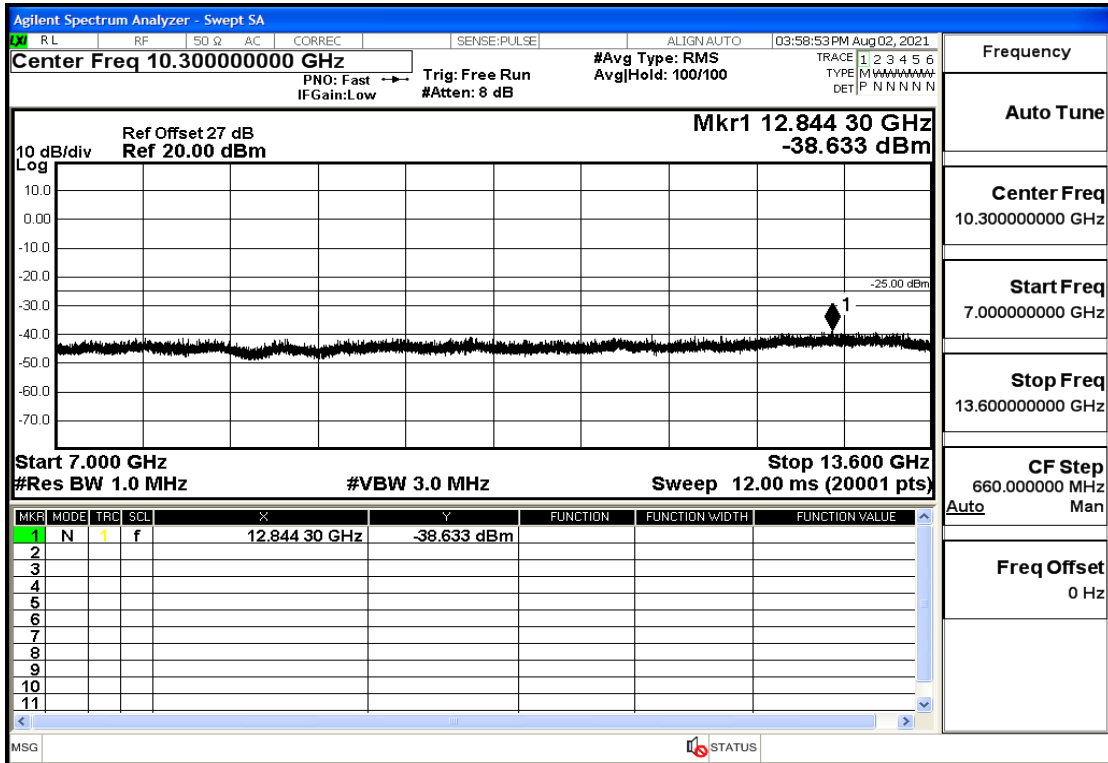
OB41-5-2537.5-QPSK-1#LOW@30mHz-1GHz@Pass



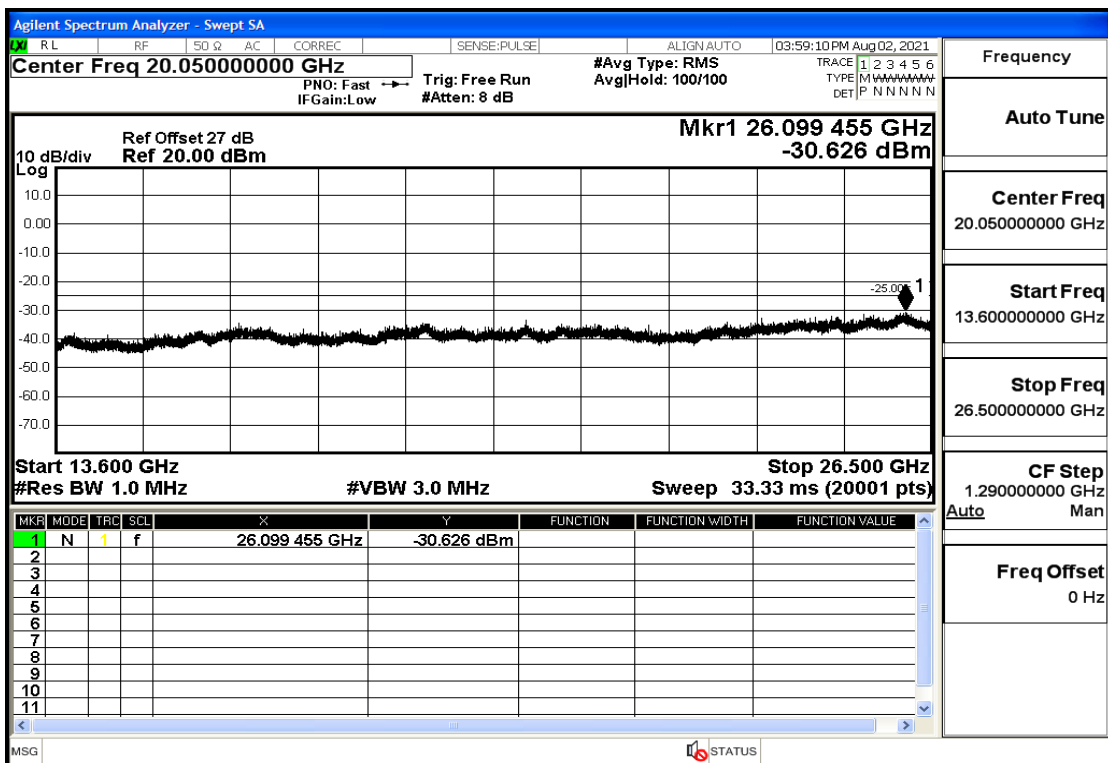
OB41-5-2537.5-QPSK-1#LOW@1GHz-7GHz@Pass



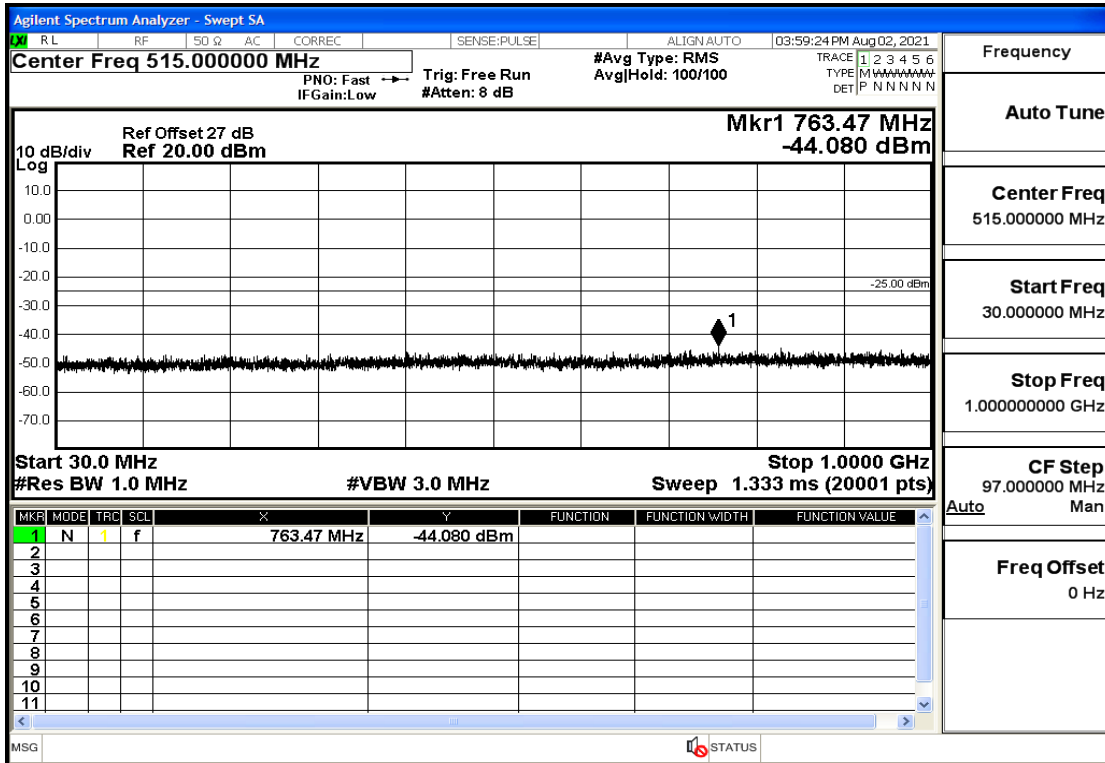
OB41-5-2537.5-QPSK-1#LOW@7GHz-13.6GHz@Pass



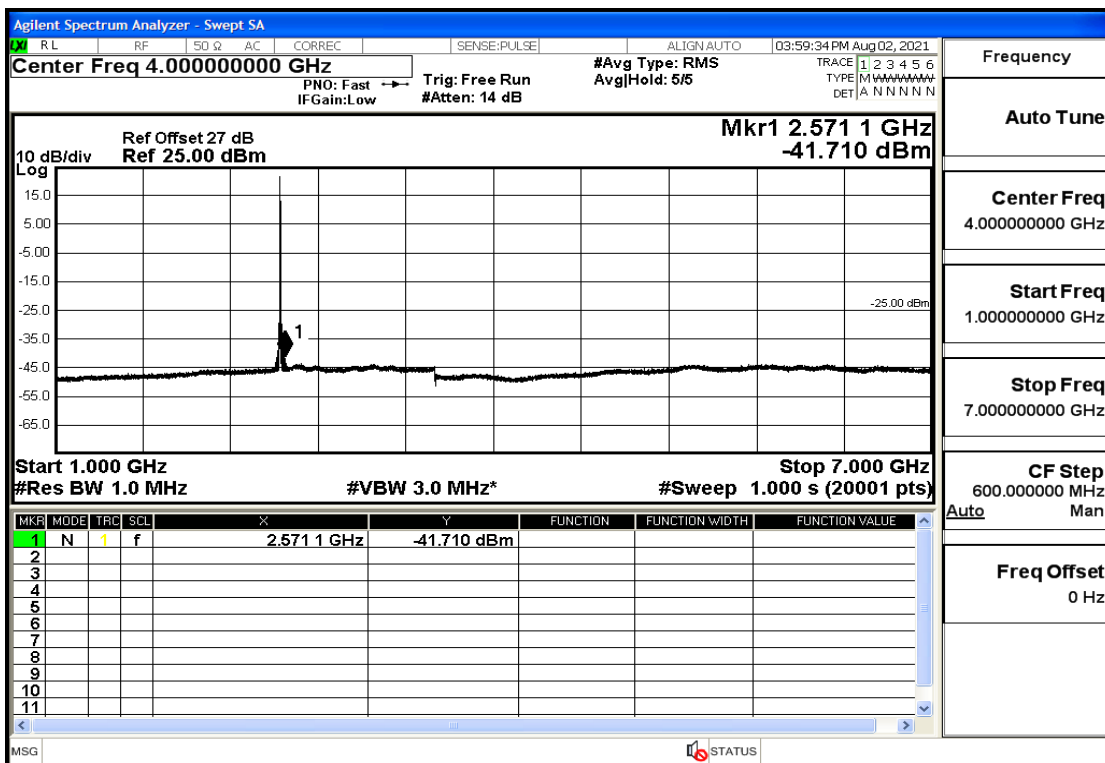
OB41-5-2537.5-QPSK-1#LOW@13.6GHz-26.5GHz@Pass



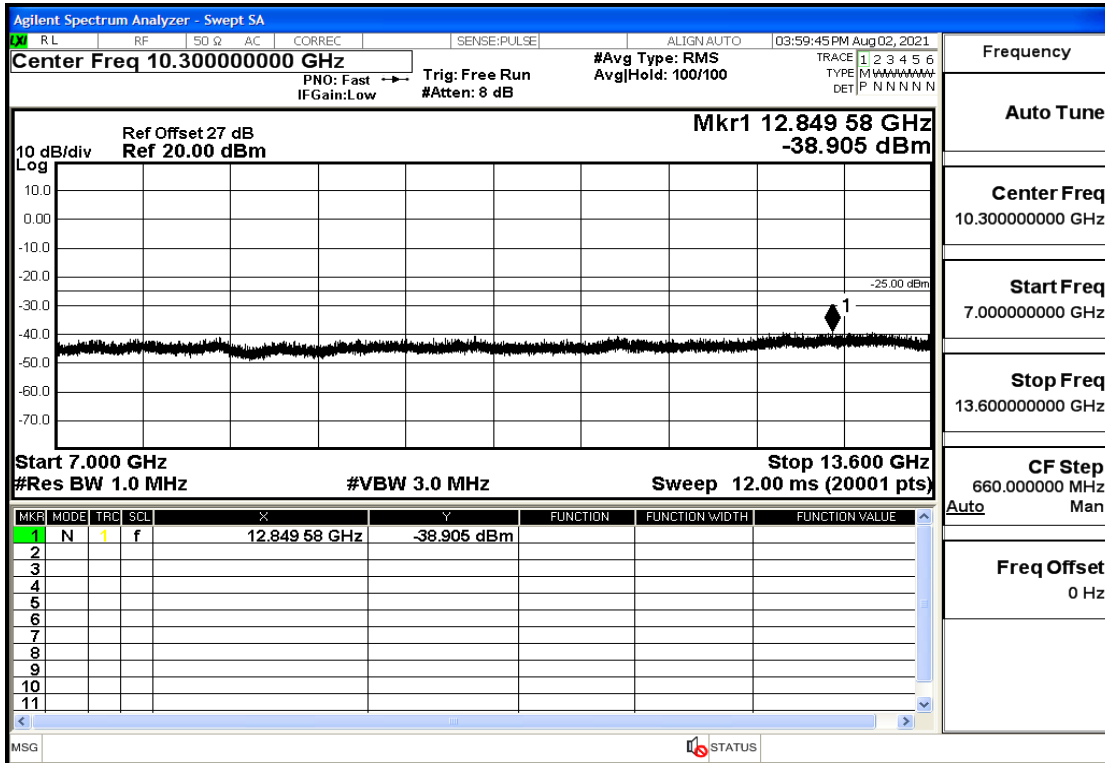
OB41-5-2537.5-QPSK-1#HIGH@30mHz-1GHz@Pass



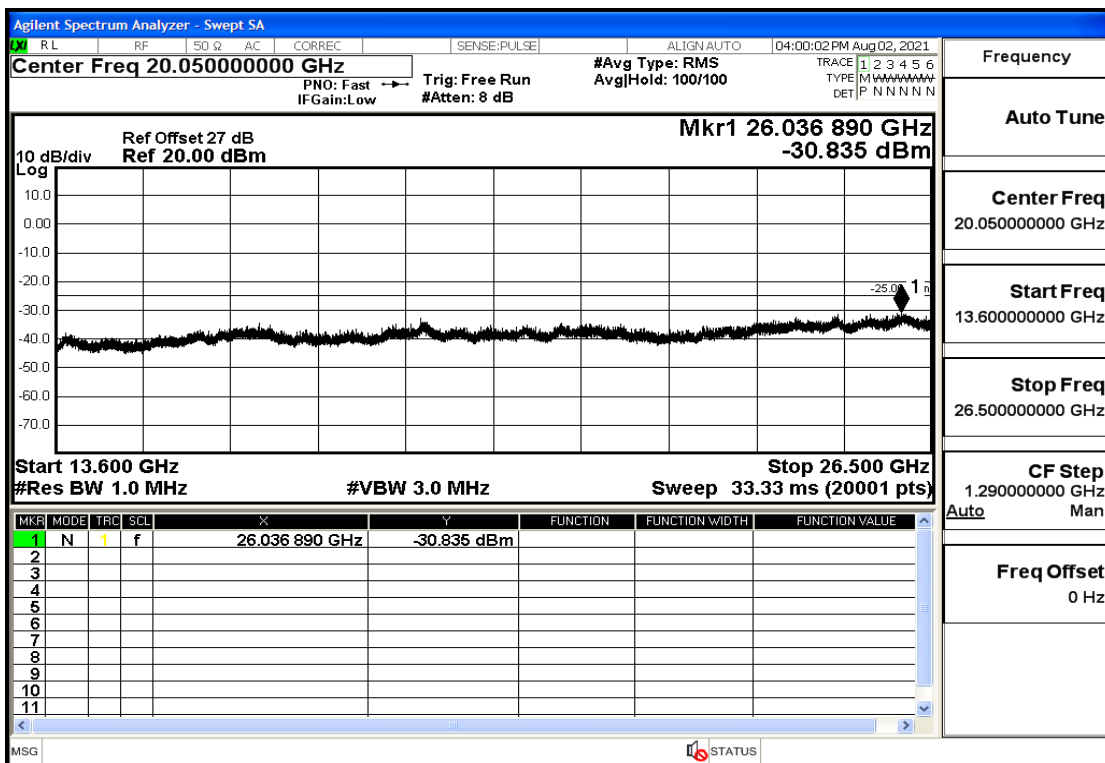
OB41-5-2537.5-QPSK-1#HIGH@1GHz-7GHz@Pass



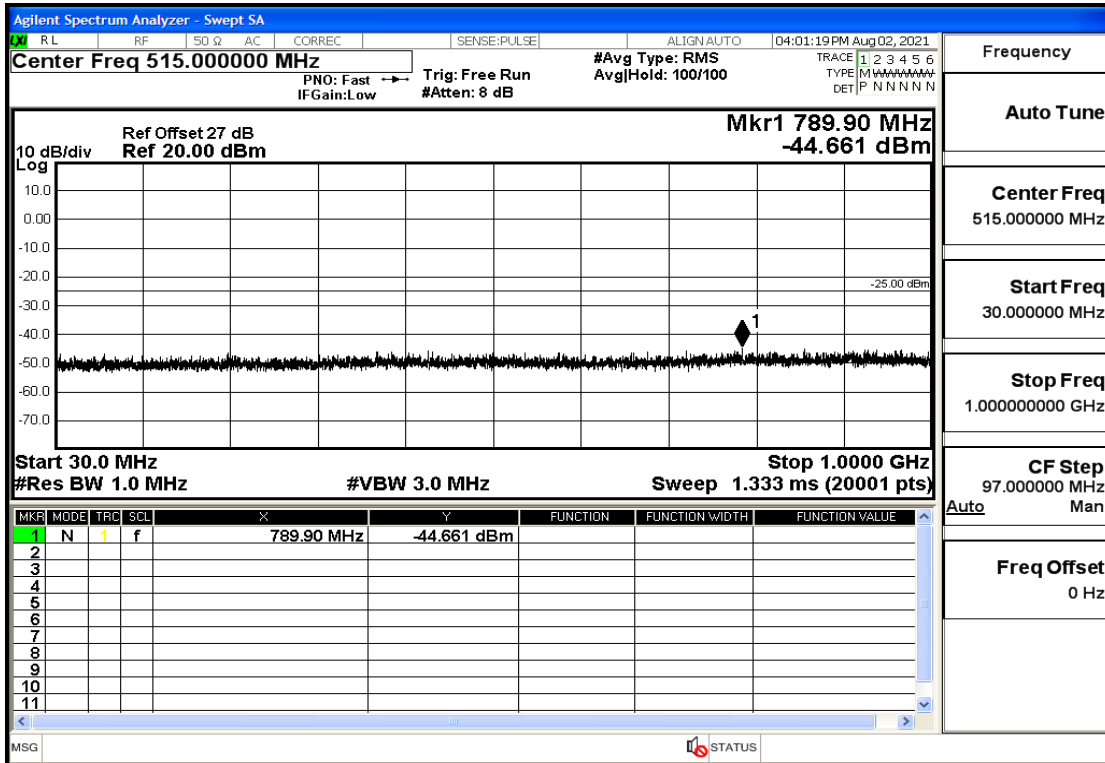
OB41-5-2537.5-QPSK-1#HIGH@7GHz-13.6GHz@Pass



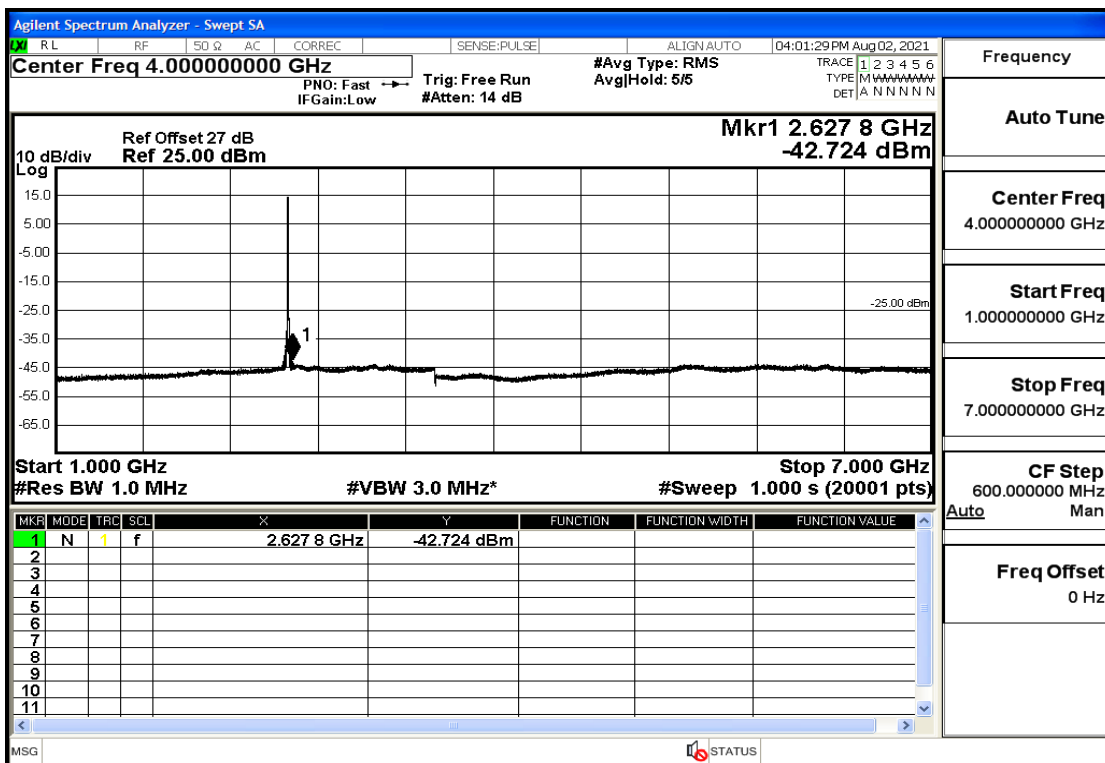
OB41-5-2537.5-QPSK-1#HIGH@13.6GHz-26.5GHz@Pass



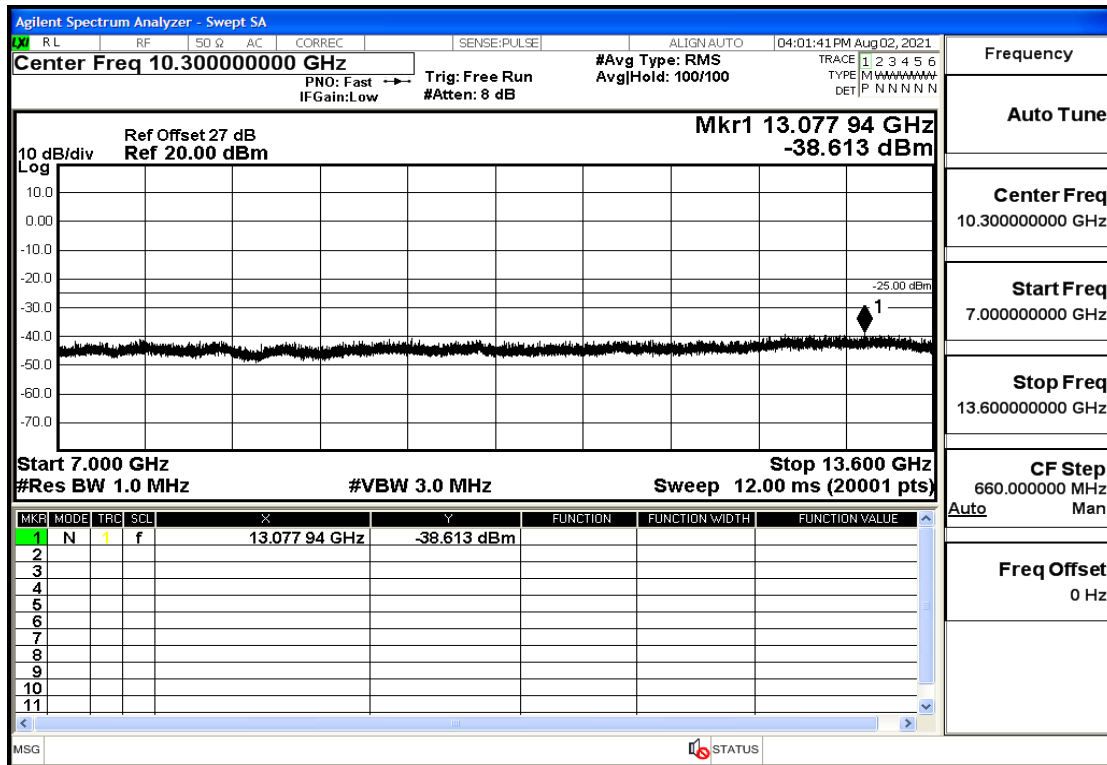
OB41-5-2593-QPSK-25#LOW@30mHz-1GHz@Pass



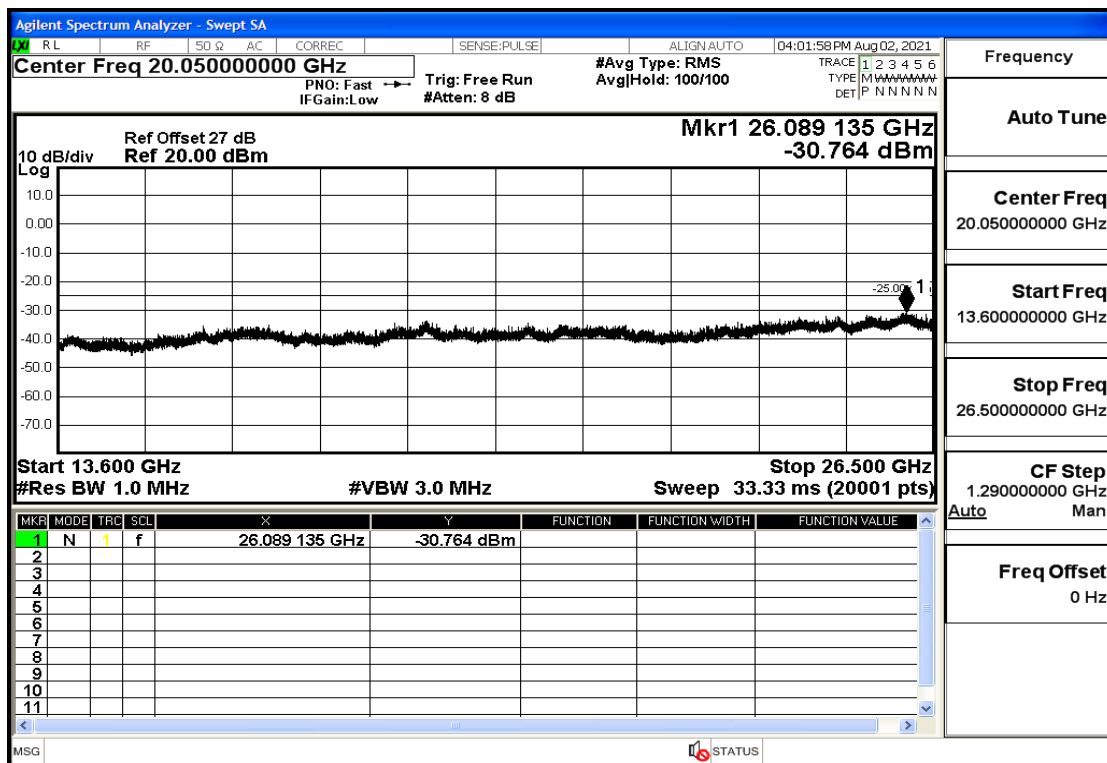
OB41-5-2593-QPSK-25#LOW@1GHz-7GHz@Pass



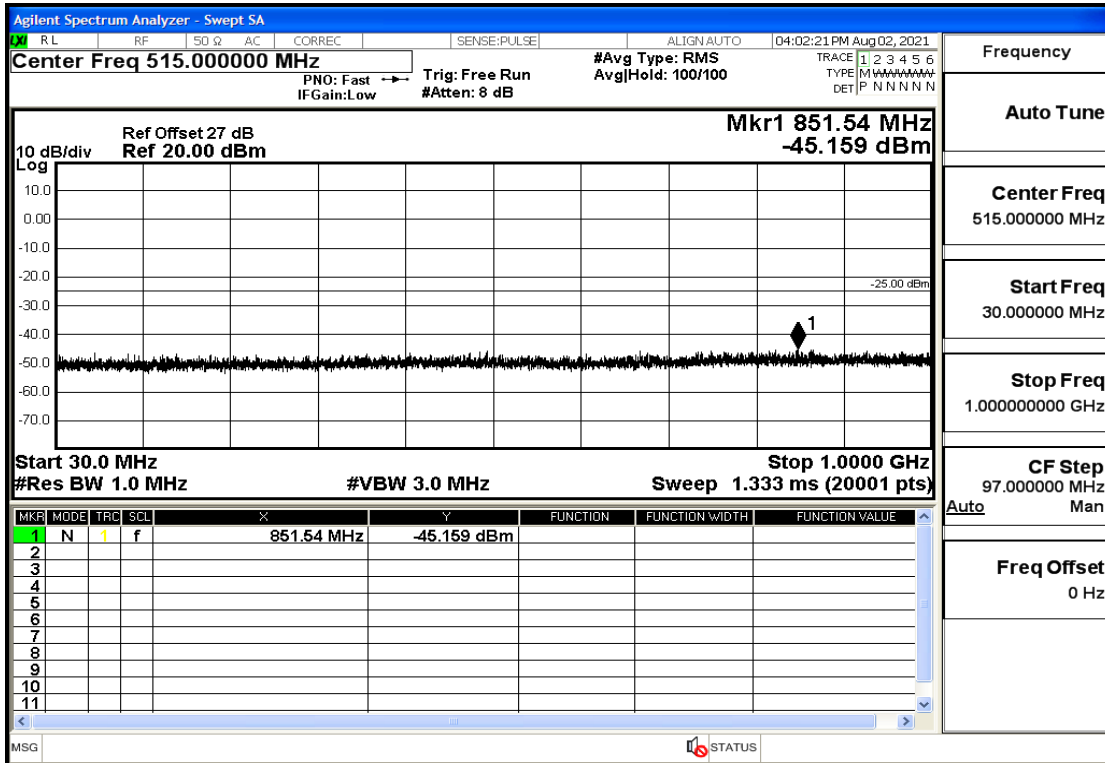
OB41-5-2593-QPSK-25#LOW@7GHz-13.6GHz@Pass



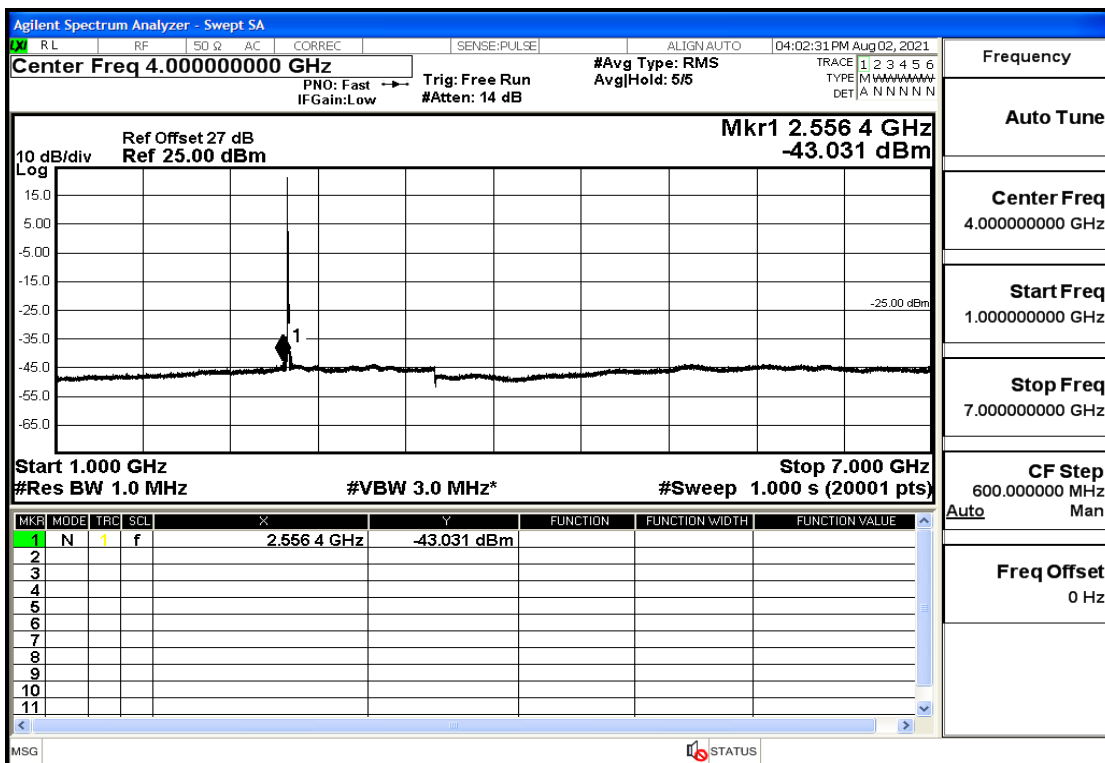
OB41-5-2593-QPSK-25#LOW@13.6GHz-26.5GHz@Pass



OB41-5-2593-QPSK-1#LOW@30mHz-1GHz@Pass

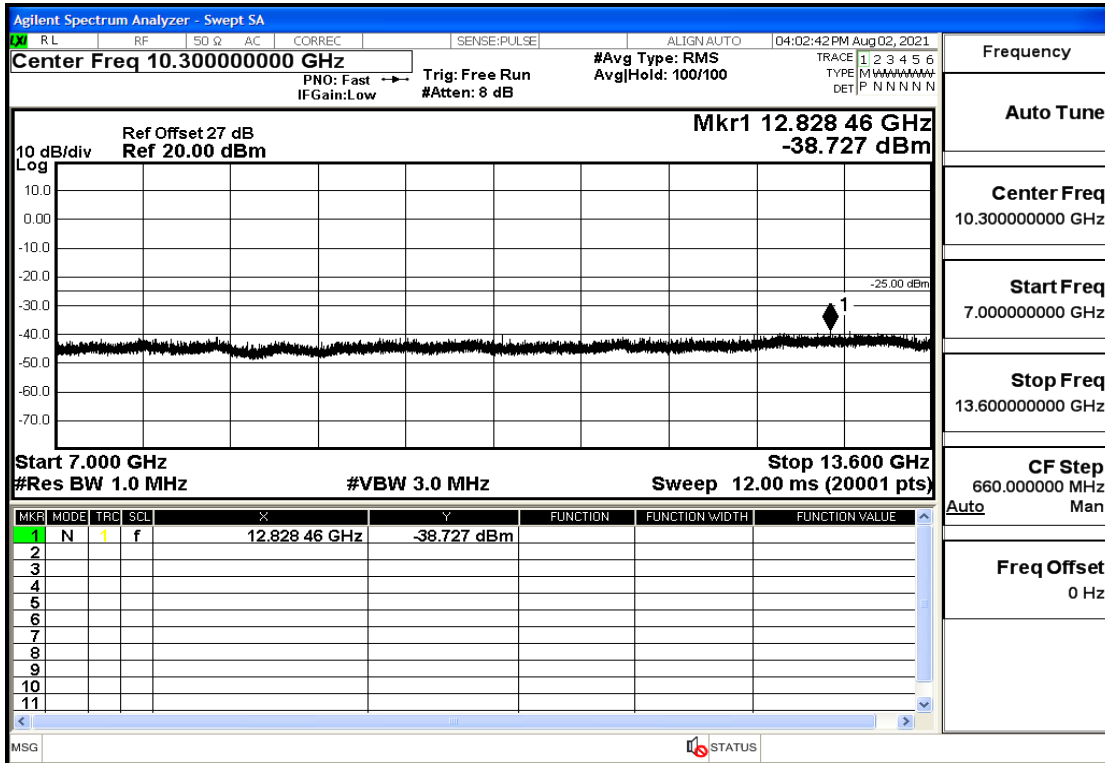


OB41-5-2593-QPSK-1#LOW@1GHz-7GHz@Pass

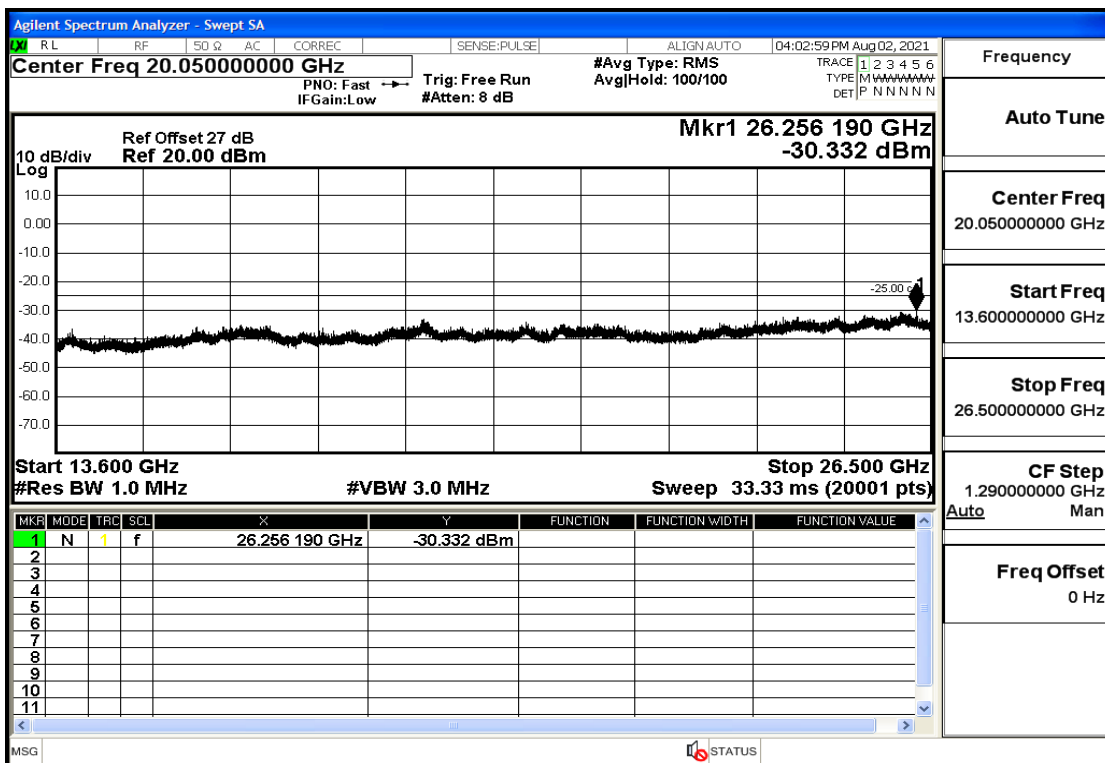




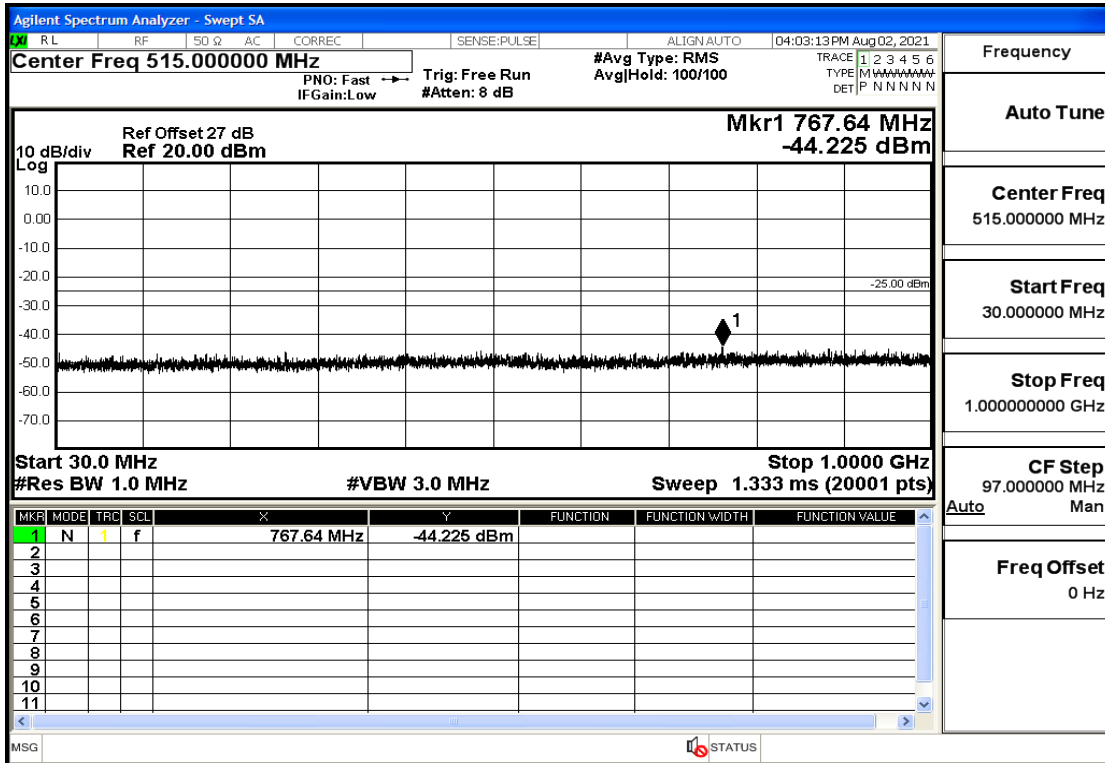
OB41-5-2593-QPSK-1#LOW@7GHz-13.6GHz@Pass



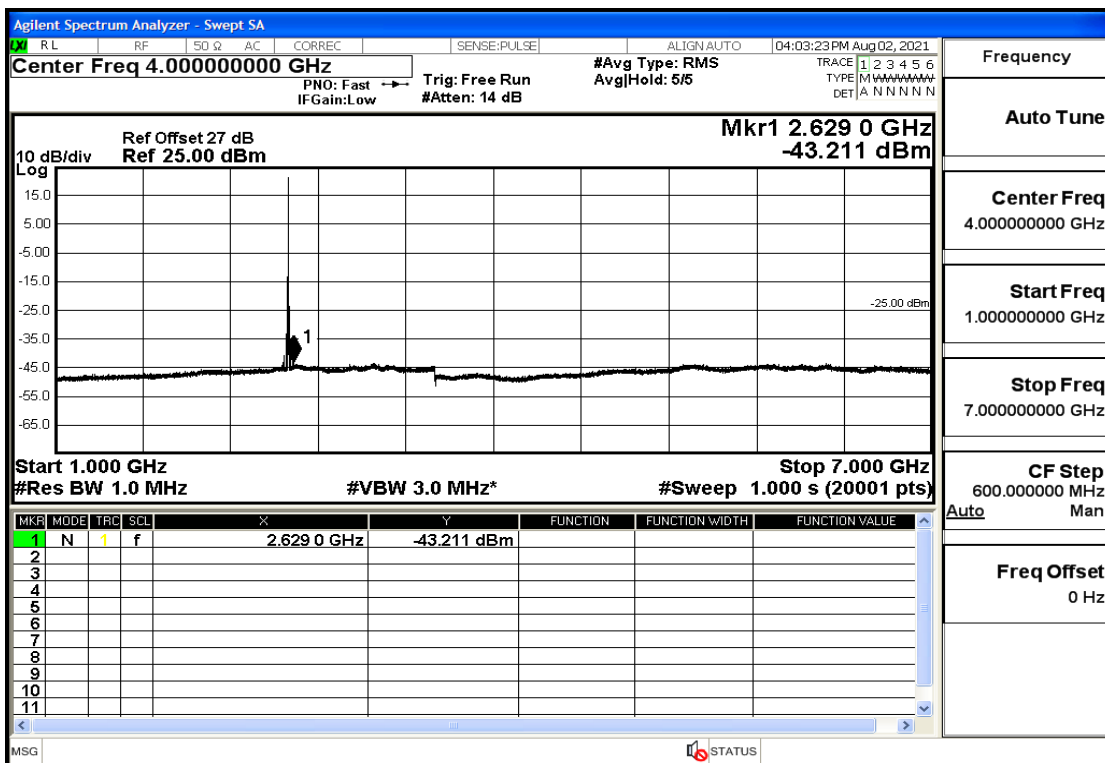
OB41-5-2593-QPSK-1#LOW@13.6GHz-26.5GHz@Pass



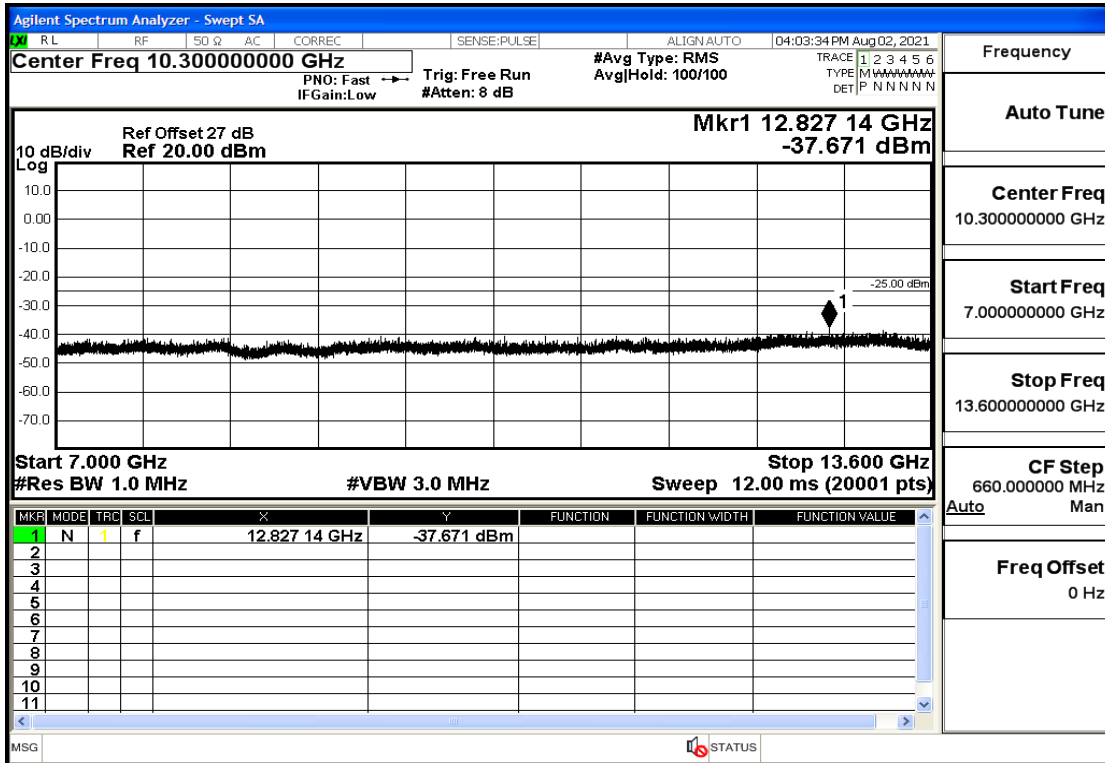
OB41-5-2593-QPSK-1#HIGH@30mHz-1GHz@Pass



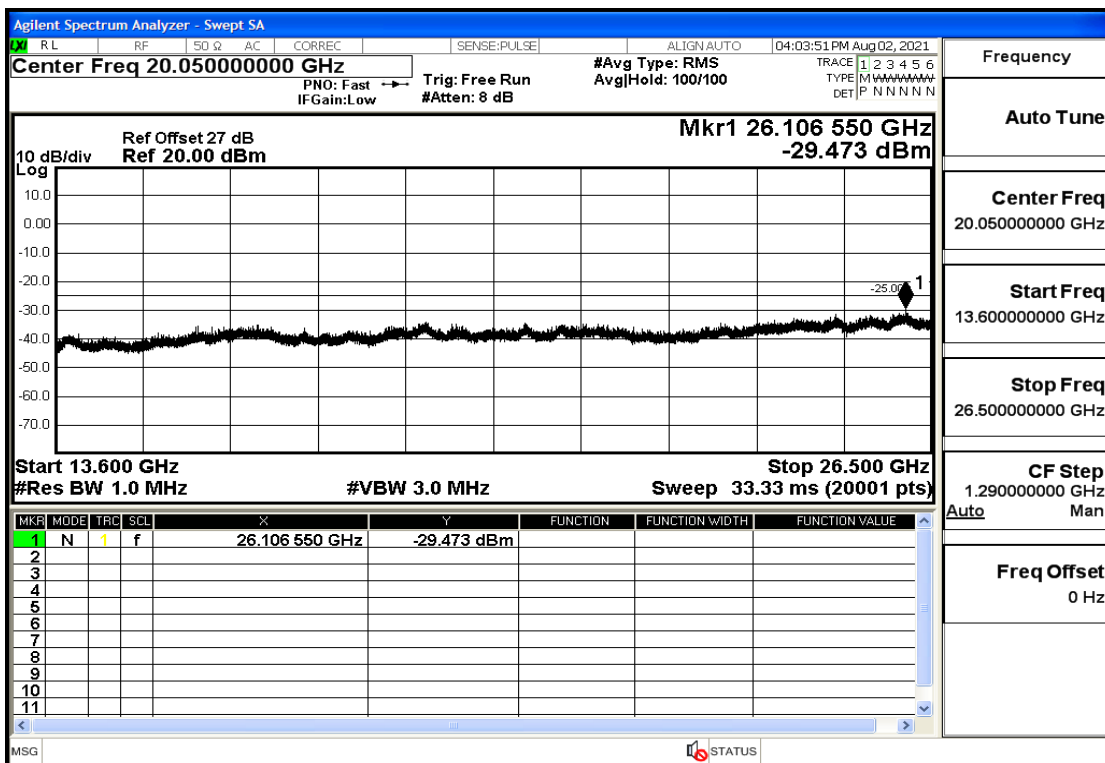
OB41-5-2593-QPSK-1#HIGH@1GHz-7GHz@Pass



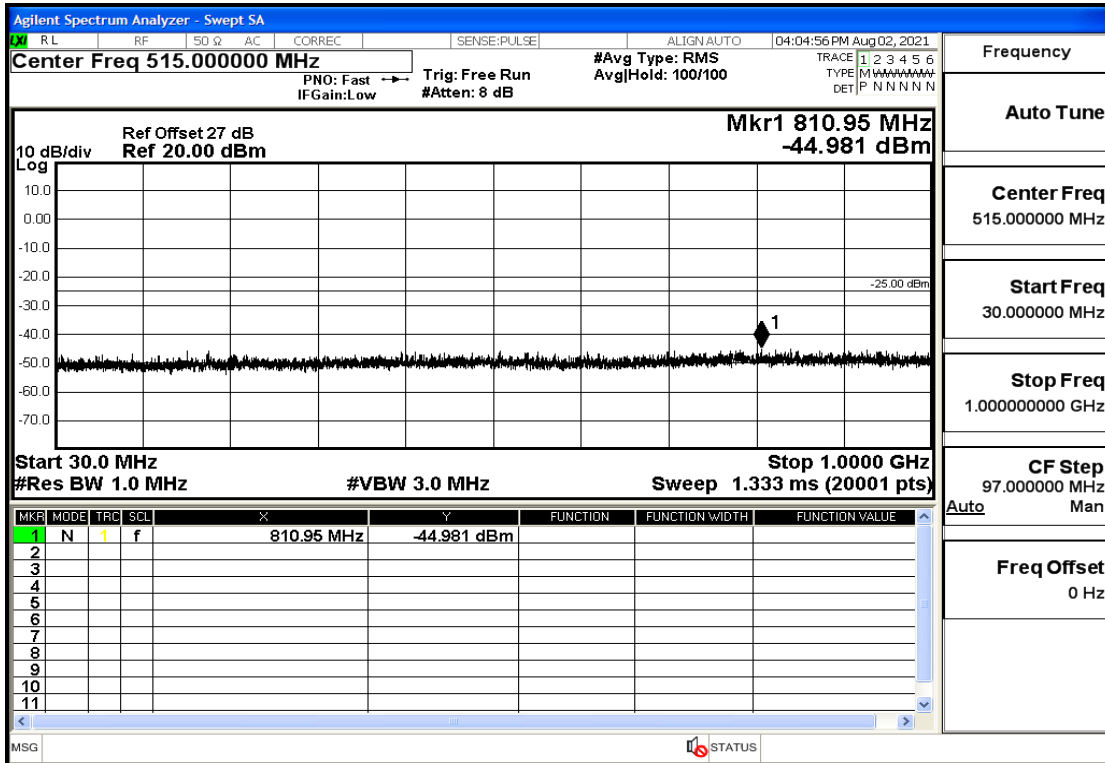
OB41-5-2593-QPSK-1#HIGH@7GHz-13.6GHz@Pass



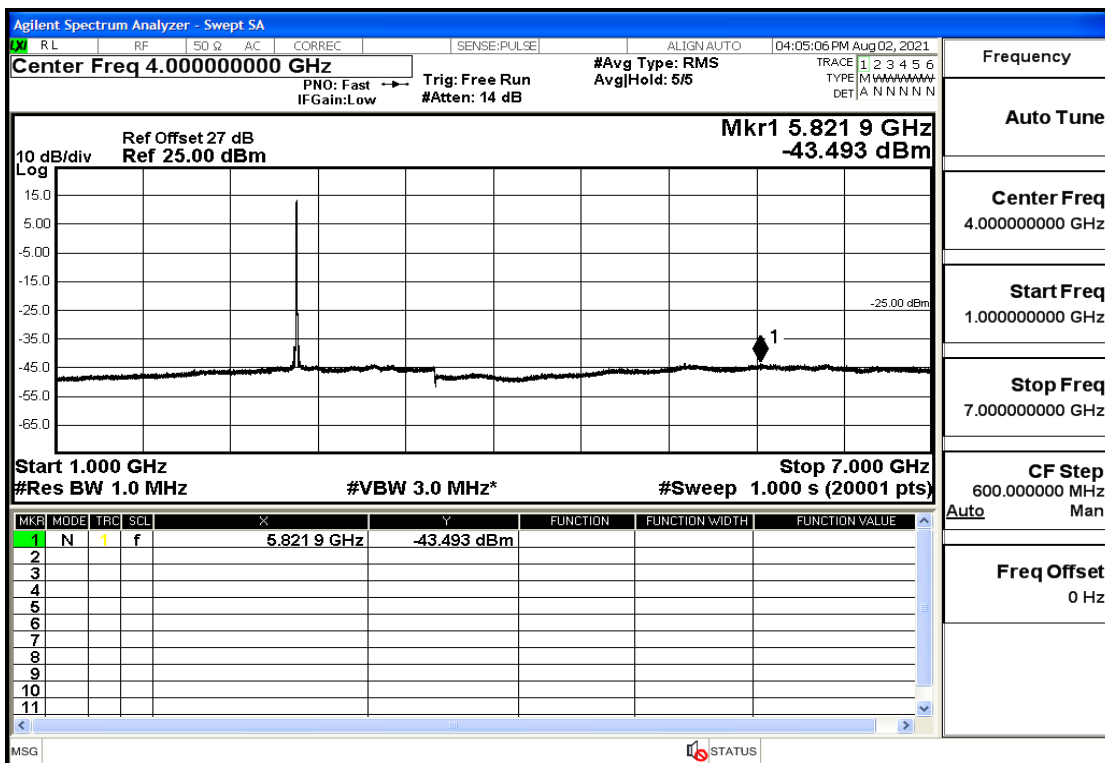
OB41-5-2593-QPSK-1#HIGH@13.6GHz-26.5GHz@Pass



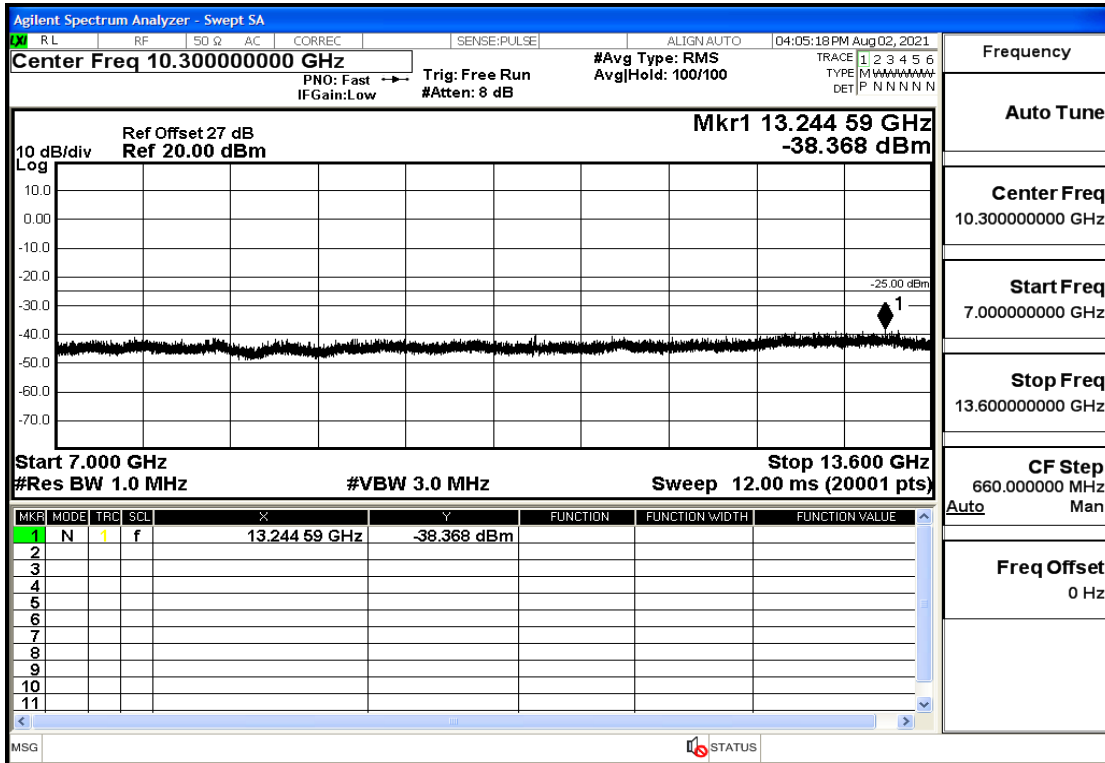
OB41-5-2652.5-QPSK-25#LOW@30mHz-1GHz@Pass



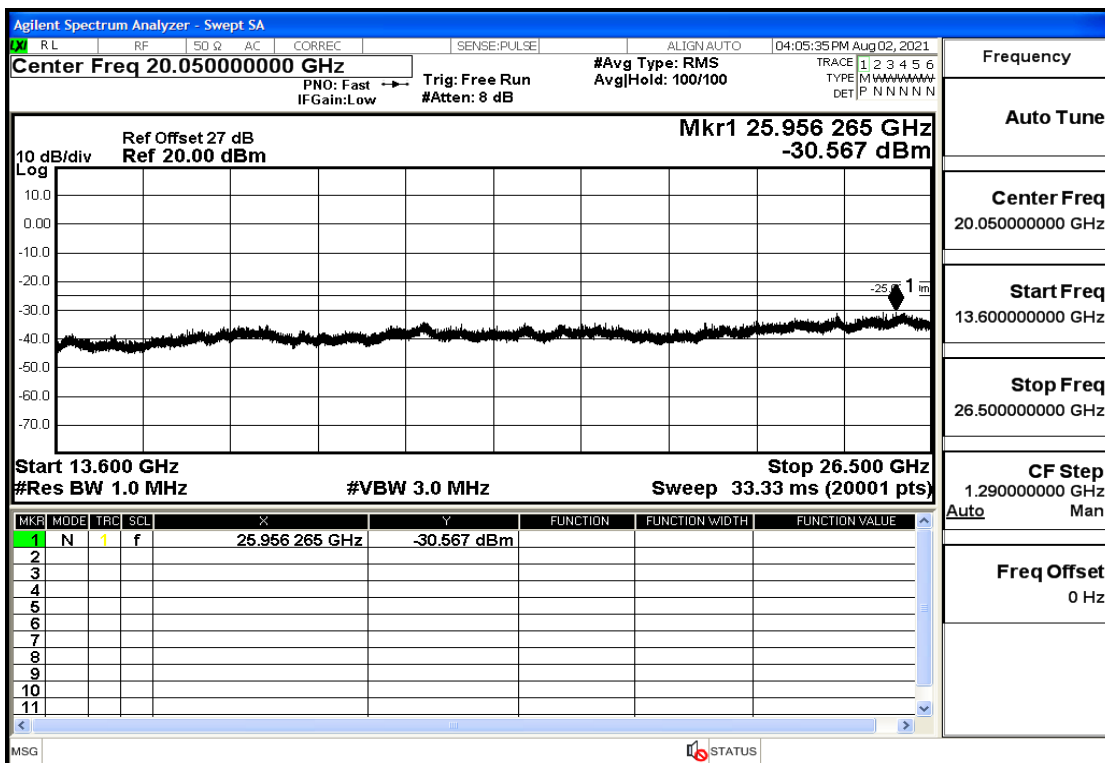
OB41-5-2652.5-QPSK-25#LOW@1GHz-7GHz@Pass



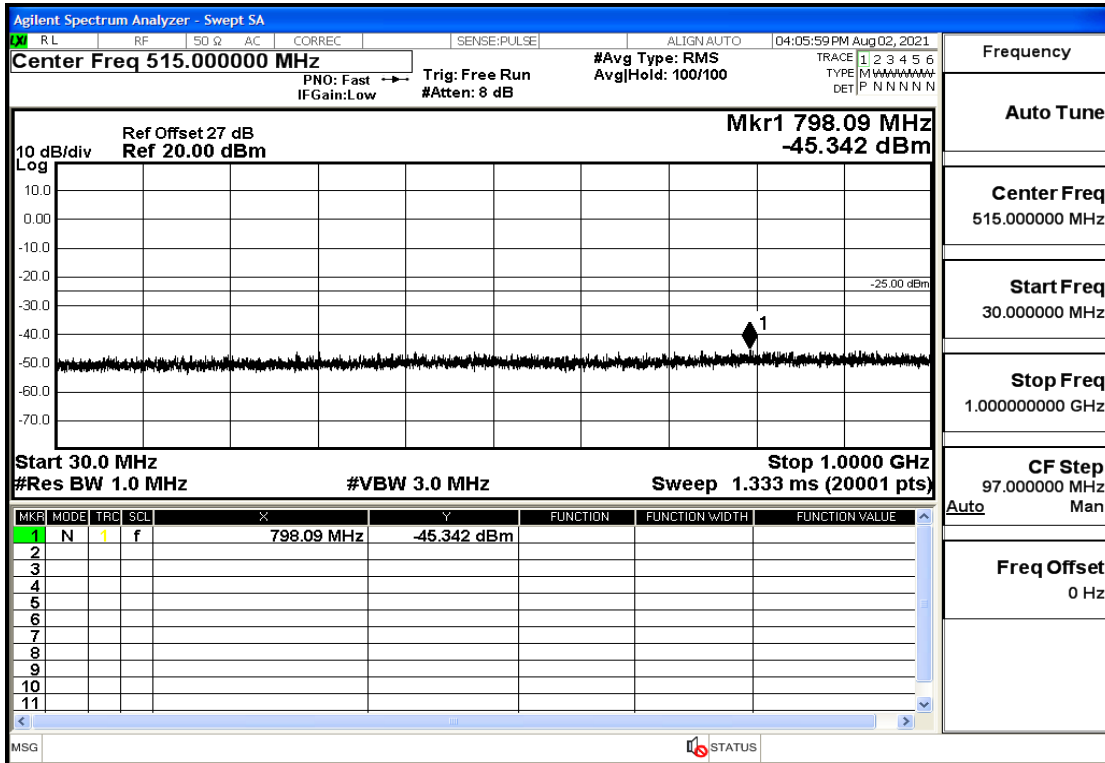
OB41-5-2652.5-QPSK-25#LOW@7GHz-13.6GHz@Pass



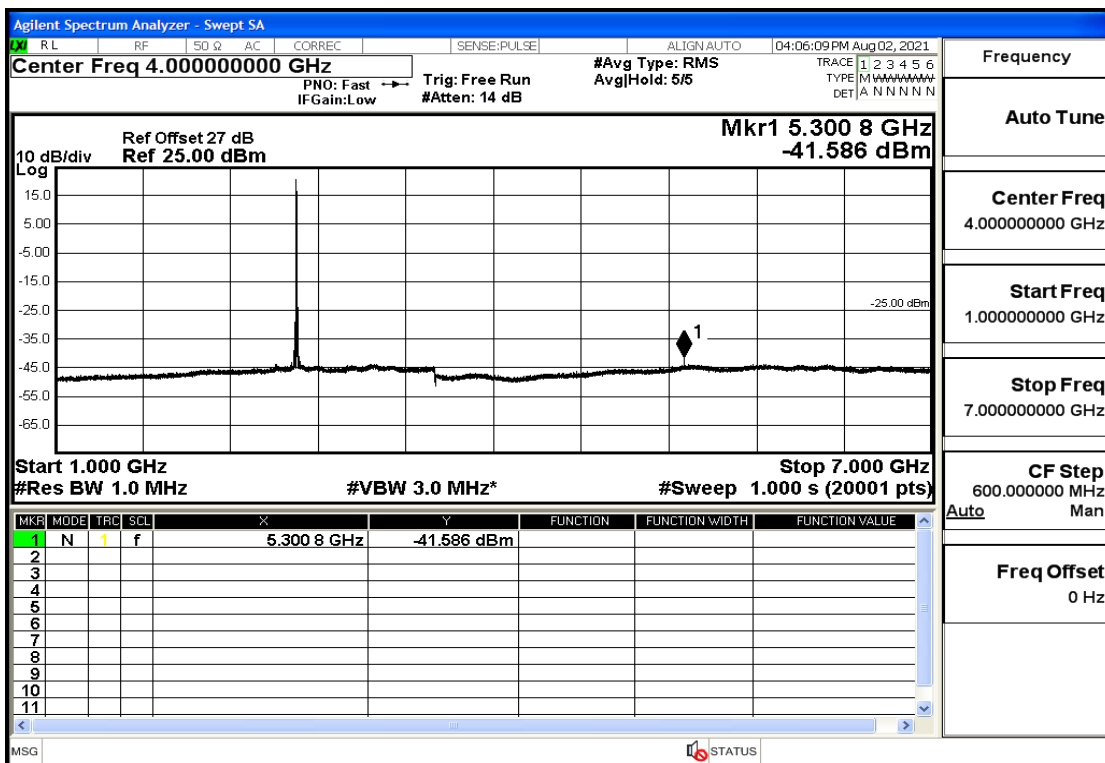
OB41-5-2652.5-QPSK-25#LOW@13.6GHz-26.5GHz@Pass



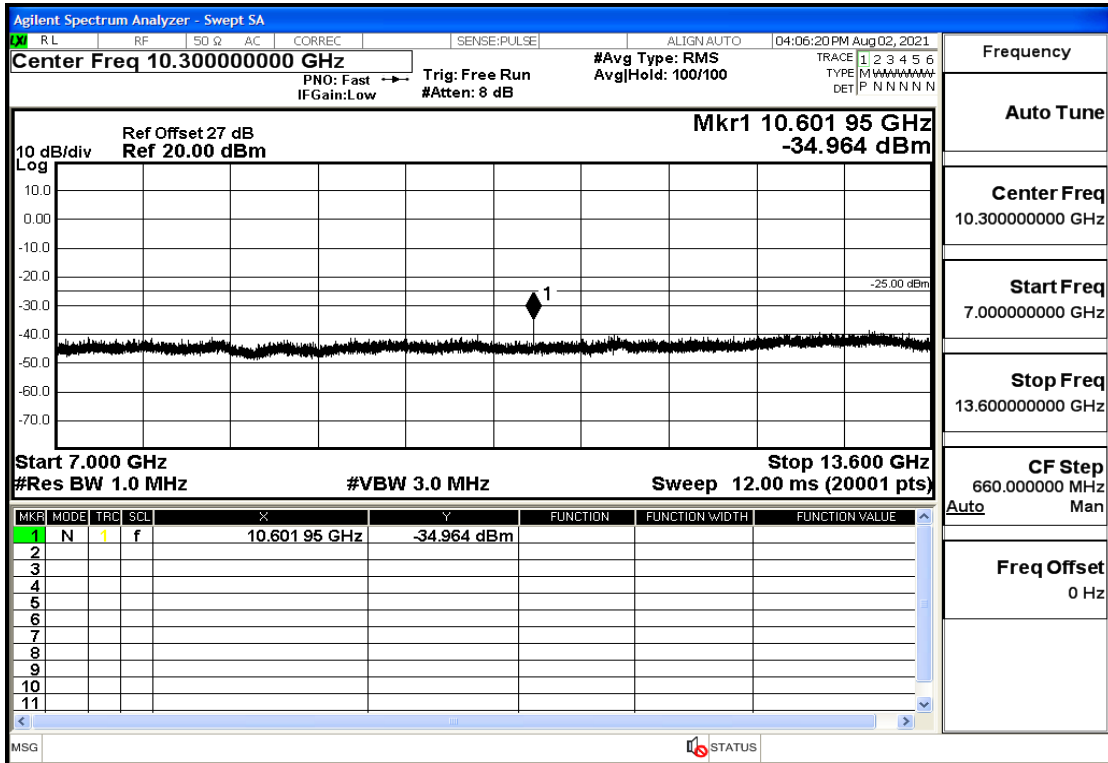
OB41-5-2652.5-QPSK-1#LOW@30mHz-1GHz@Pass



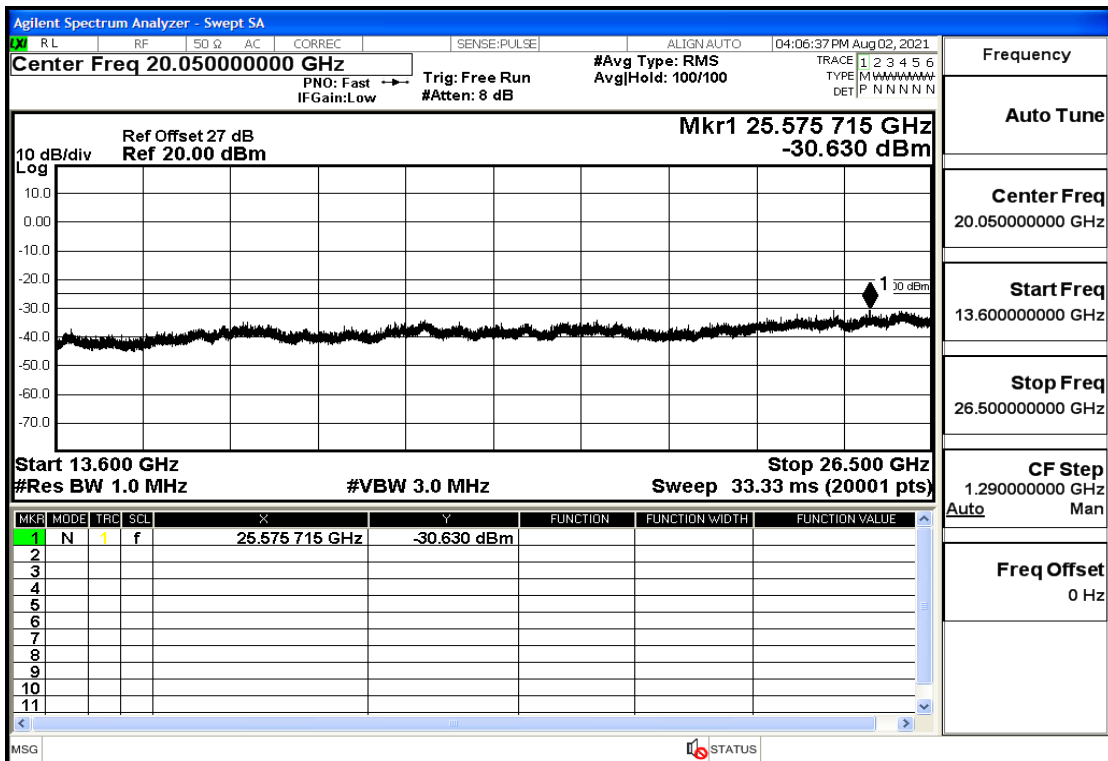
OB41-5-2652.5-QPSK-1#LOW@1GHz-7GHz@Pass



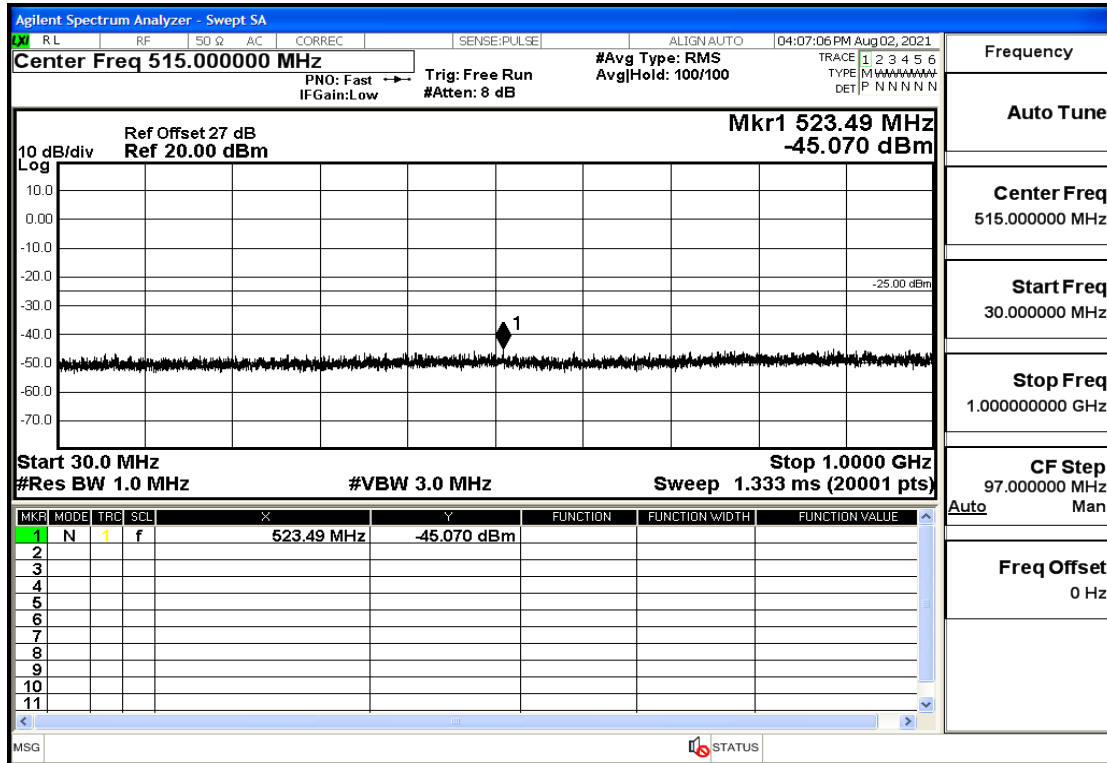
OB41-5-2652.5-QPSK-1#LOW@7GHz-13.6GHz@Pass



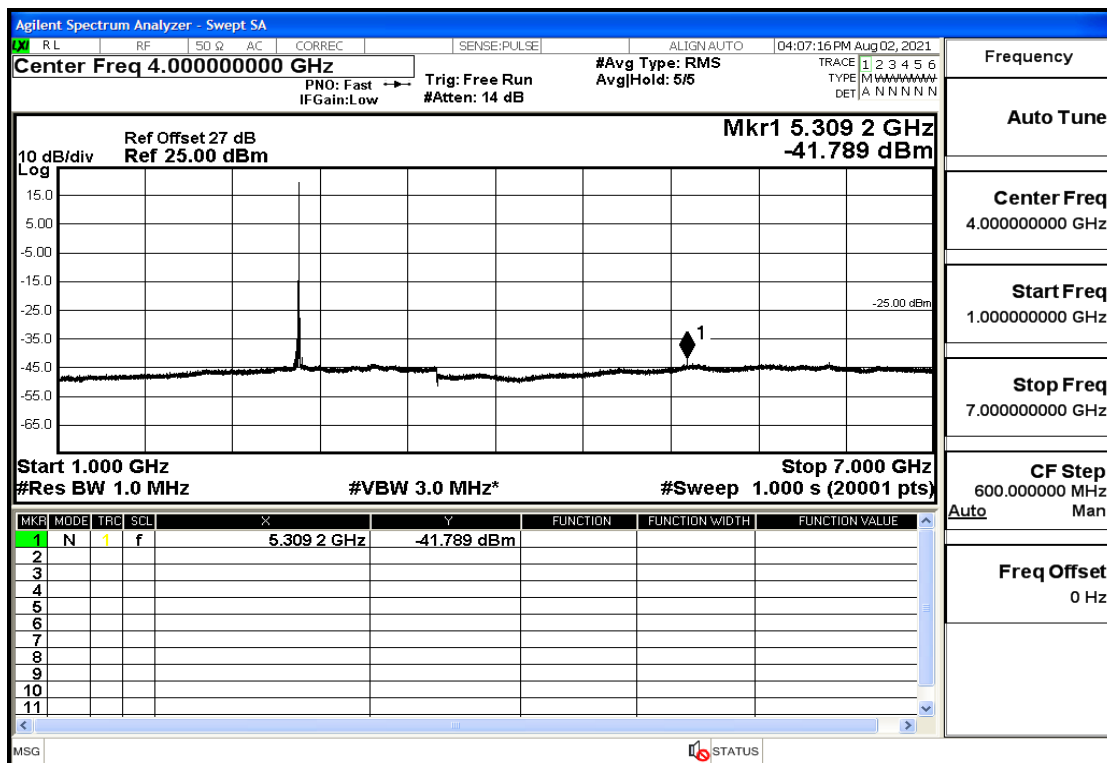
OB41-5-2652.5-QPSK-1#LOW@13.6GHz-26.5GHz@Pass



OB41-5-2652.5-QPSK-1#HIGH@30mHz-1GHz@Pass

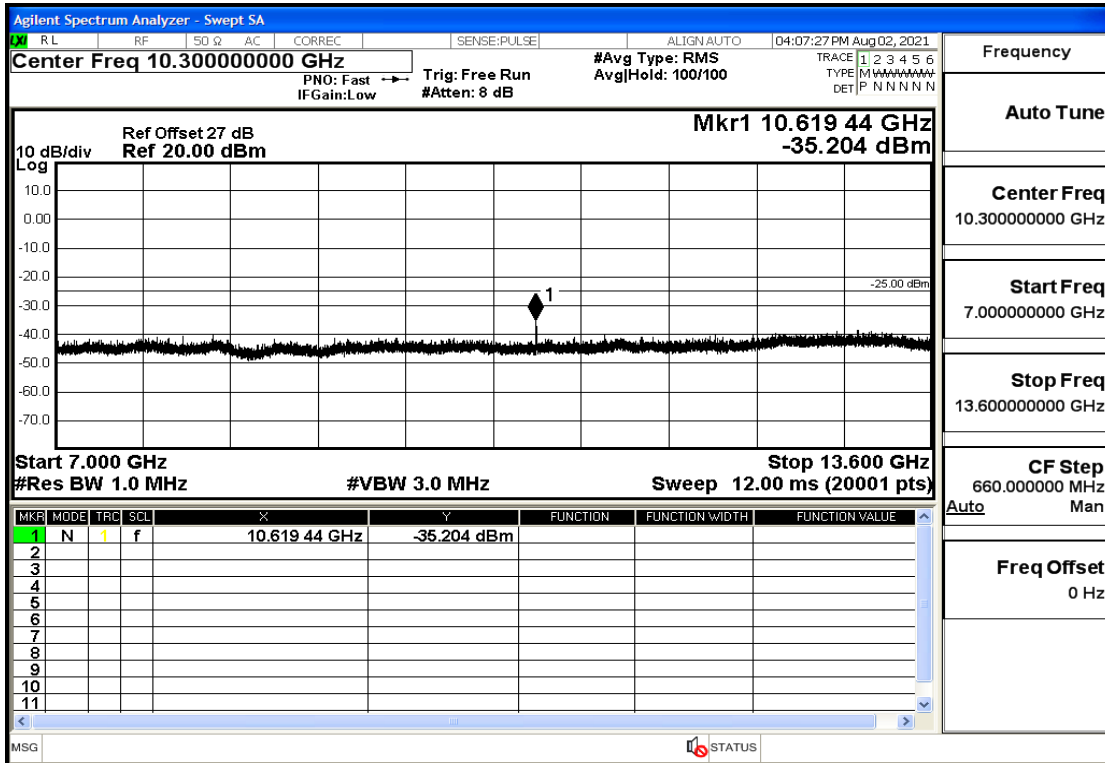


OB41-5-2652.5-QPSK-1#HIGH@1GHz-7GHz@Pass

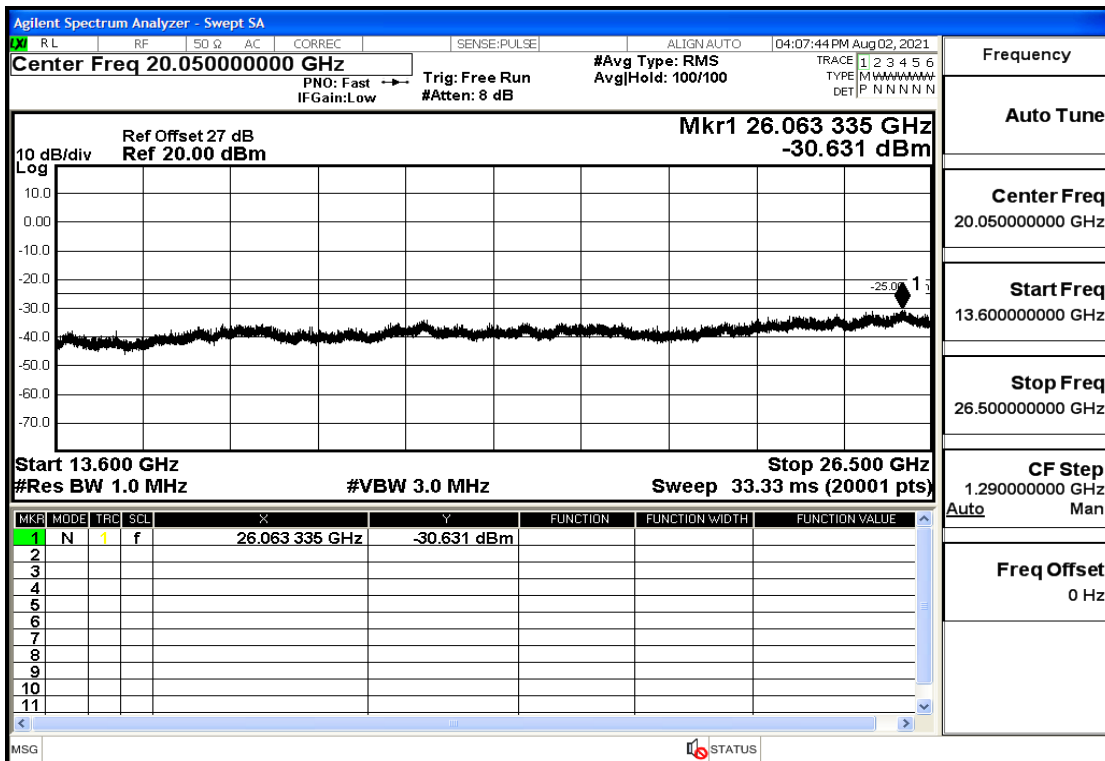




OB41-5-2652.5-QPSK-1#HIGH@7GHz-13.6GHz@Pass



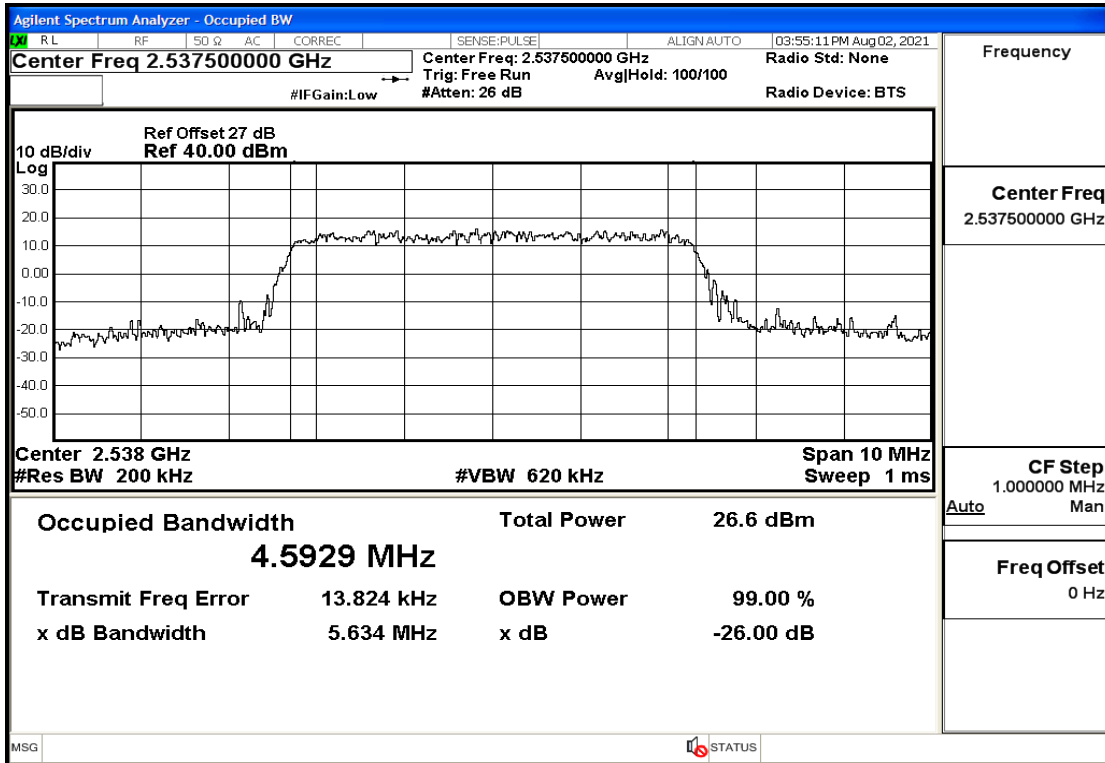
OB41-5-2652.5-QPSK-1#HIGH@13.6GHz-26.5GHz@Pass



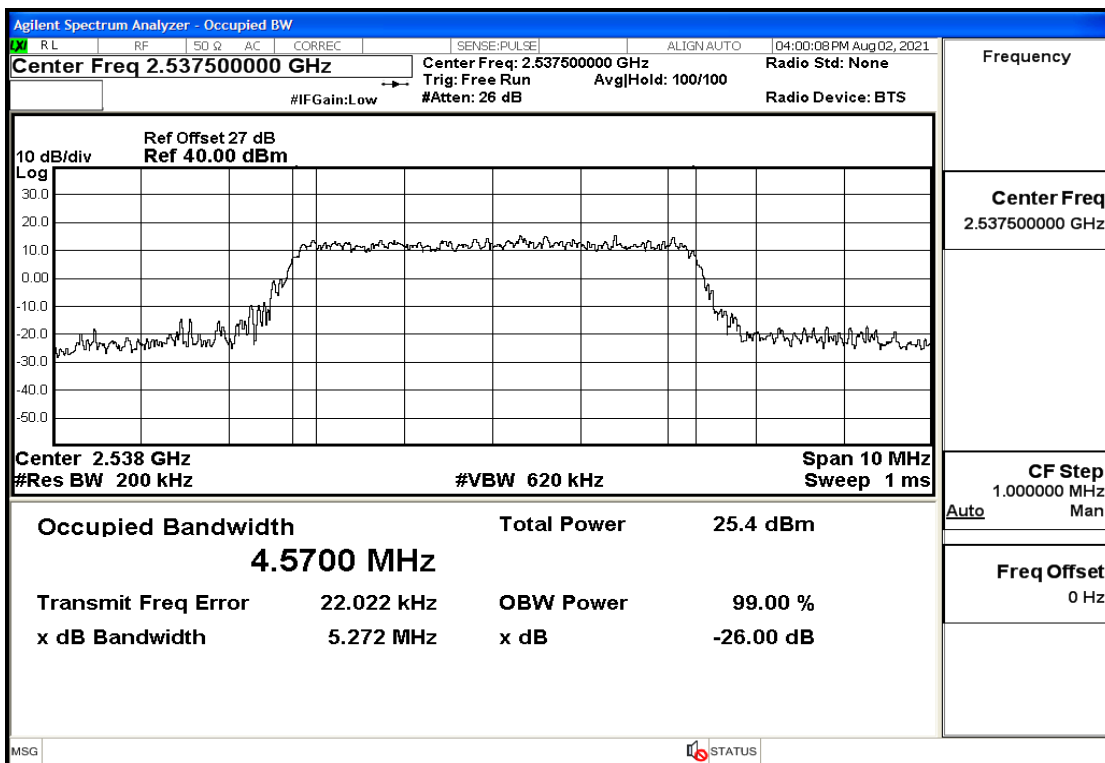
### Emission bandwidth and OBW

Band	Bandwidth(MHz)	UL Frequency(MHz)	Modulation	RB Size	RB Offset	Occupied Bandwidth(KHz)	Emission Bandwidth(KHz)	Limit
Band41	5	2537.5	QPSK	25	LOW	4592.9	5634	No limit
Band41	5	2537.5	16QAM	25	LOW	4570	5272	No limit
Band41	5	2593	QPSK	25	LOW	4579.1	5205	No limit
Band41	5	2593	16QAM	25	LOW	4583.5	5202	No limit
Band41	5	2652.5	QPSK	25	LOW	4595.1	5080	No limit
Band41	5	2652.5	16QAM	25	LOW	4595.6	5223	No limit

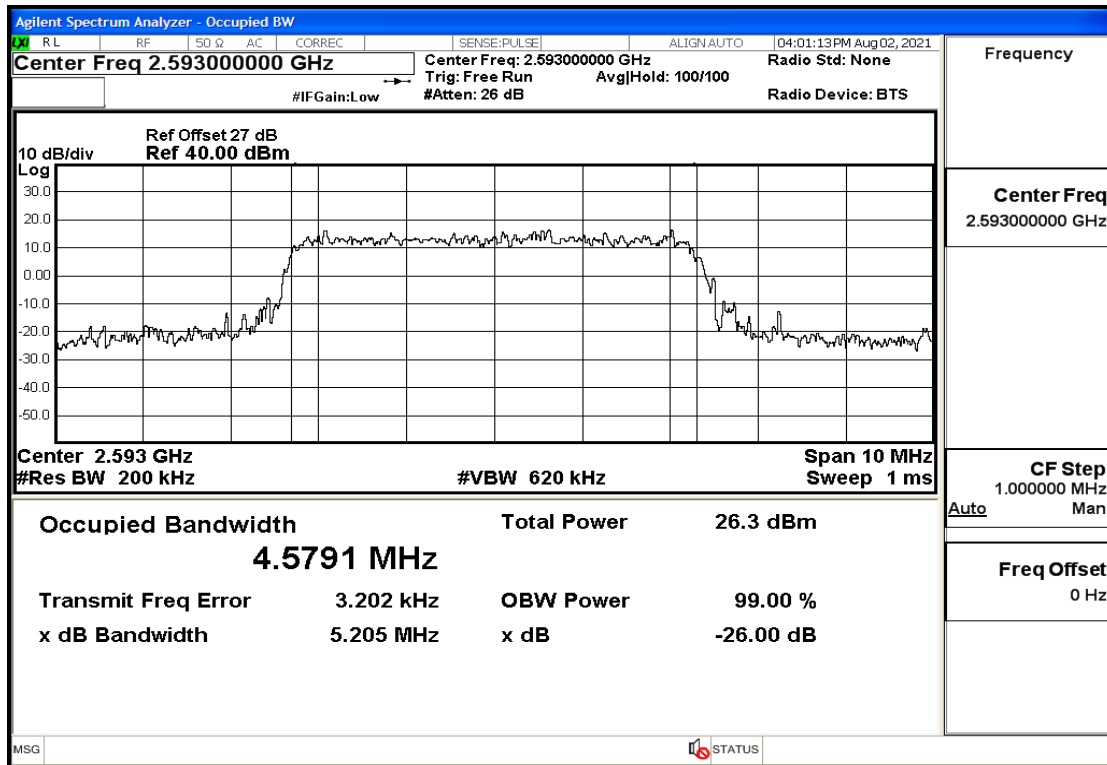
Band41-5-2537.5-QPSK-25#LOW@26dB and 99PCT Bandwidth



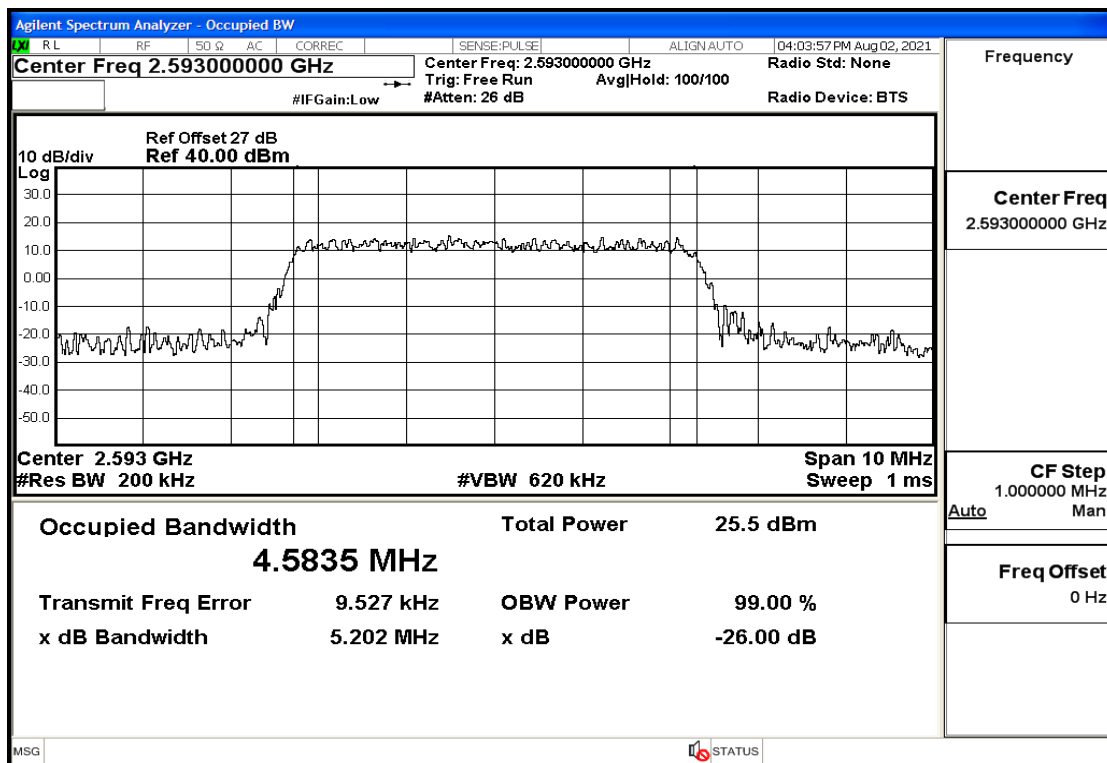
Band41-5-2537.5-16QAM-25#LOW@26dB and 99PCT Bandwidth



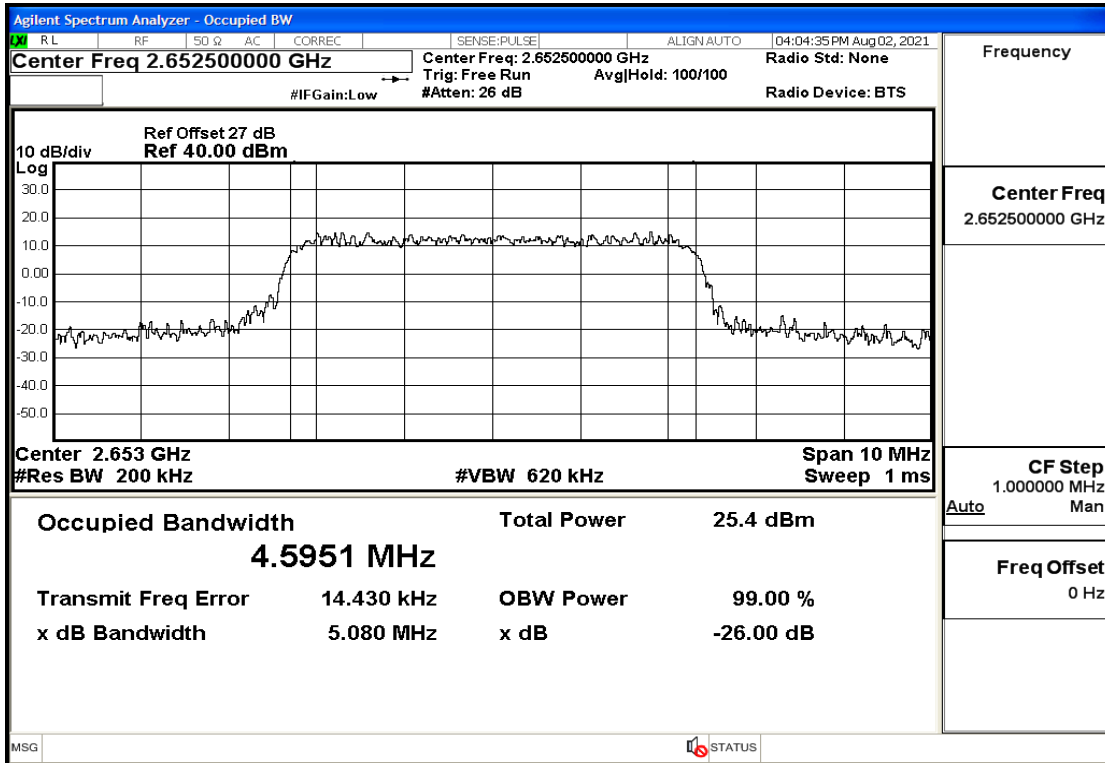
Band41-5-2593-QPSK-25#LOW@26dB and 99PCT Bandwidth



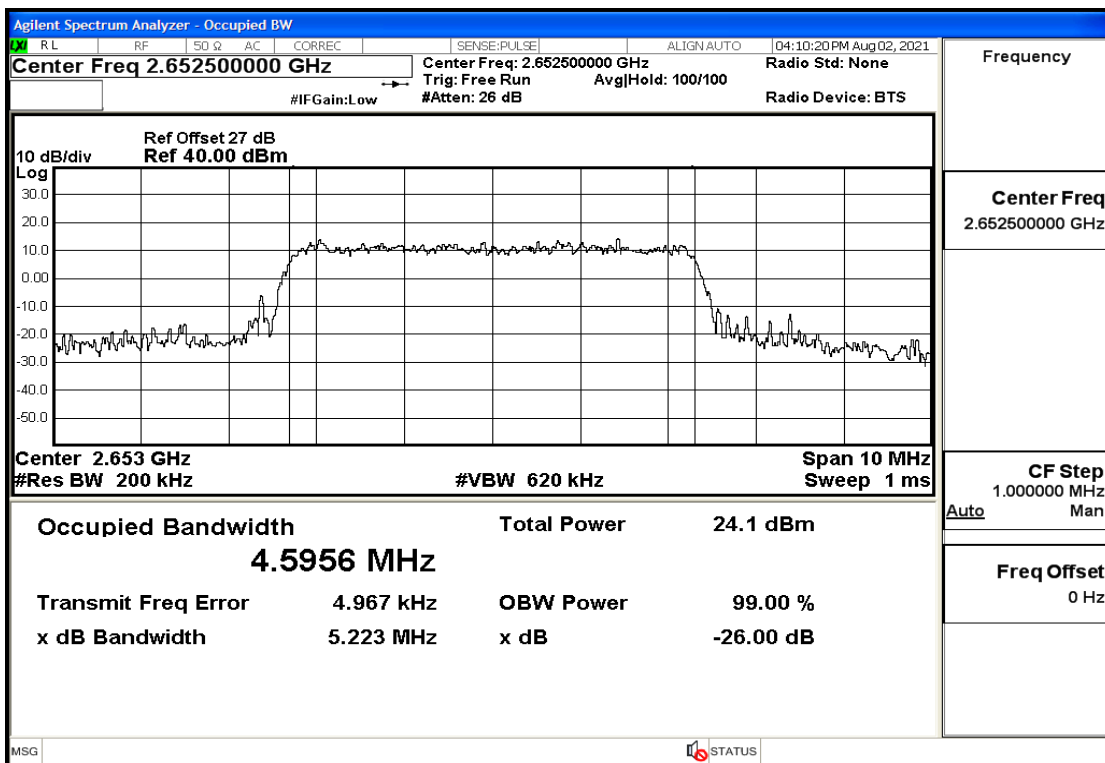
Band41-5-2593-16QAM-25#LOW@26dB and 99PCT Bandwidth



Band41-5-2652.5-QPSK-25#LOW@26dB and 99PCT Bandwidth



Band41-5-2652.5-16QAM-25#LOW@26dB and 99PCT Bandwidth



## Frequency Stability

Test Conditions		LTE Band 41(QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 5MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0656	PASS
40	Normal Voltage	0.0381	
30	Normal Voltage	0.0186	
20(Ref.)	Normal Voltage	0.0243	
10	Normal Voltage	0.0663	
0	Normal Voltage	0.0166	
-10	Normal Voltage	0.0494	
-20	Normal Voltage	0.0390	
-30	Normal Voltage	0.0189	
20	Maximum Voltage	0.0195	
20	Normal Voltage	0.0291	
20	Battery End Point	0.0584	

## Peak and Average Power

Band	Bandwidth(MHz)	UL Frequency(MHz)	Modulation	RB Size	RB Offset	Average Power	Peak Power	Peak to Average(dB)	limit(dB)	AntGain(dBi)	ERP/EIRP(dBm)	Limit(dBm)	Conclusion
Band41	5	2537.5	QPSK	25	LOW	19.83	25.66	5.83	13	0.94	20.77	33	Pass
Band41	5	2537.5	QPSK	12	LOW	19.65	25.23	5.58	13	0.94	20.59	33	Pass
Band41	5	2537.5	QPSK	12	MID	19.65	25.24	5.59	13	0.94	20.59	33	Pass
Band41	5	2537.5	QPSK	12	HIGH	19.81	25.6	5.79	13	0.94	20.75	33	Pass
Band41	5	2537.5	QPSK	1	LOW	20.64	24.92	4.28	13	0.94	21.58	33	Pass
Band41	5	2537.5	QPSK	1	MID	20.99	25.1	4.11	13	0.94	21.93	33	Pass
Band41	5	2537.5	QPSK	1	HIGH	20.95	25.35	4.4	13	0.94	21.89	33	Pass
Band41	5	2537.5	16QAM	25	LOW	18.65	24.66	6.01	13	0.94	19.59	33	Pass
Band41	5	2537.5	16QAM	12	LOW	18.68	25.32	6.64	13	0.94	19.62	33	Pass
Band41	5	2537.5	16QAM	12	MID	18.69	25.25	6.56	13	0.94	19.63	33	Pass
Band41	5	2537.5	16QAM	12	HIGH	18.95	25.39	6.44	13	0.94	19.89	33	Pass
Band41	5	2537.5	16QAM	1	LOW	19.81	24.59	4.78	13	0.94	20.75	33	Pass
Band41	5	2537.5	16QAM	1	MID	20.21	24.92	4.71	13	0.94	21.15	33	Pass
Band41	5	2537.5	16QAM	1	HIGH	20.07	24.91	4.84	13	0.94	21.01	33	Pass
Band41	5	2593	QPSK	25	LOW	19.63	25.59	5.96	13	0.94	20.57	33	Pass
Band41	5	2593	QPSK	12	LOW	19.95	25.3	5.35	13	0.94	20.89	33	Pass
Band41	5	2593	QPSK	12	MID	19.96	25.27	5.31	13	0.94	20.9	33	Pass
Band41	5	2593	QPSK	12	HIGH	19.84	25.32	5.48	13	0.94	20.78	33	Pass
Band41	5	2593	QPSK	1	LOW	21.16	24.81	3.65	13	0.94	22.1	33	Pass
Band41	5	2593	QPSK	1	MID	21.27	24.89	3.62	13	0.94	22.21	33	Pass
Band41	5	2593	QPSK	1	HIGH	20.95	24.97	4.02	13	0.94	21.89	33	Pass
Band41	5	2593	16QAM	25	LOW	18.81	25.22	6.41	13	0.94	19.75	33	Pass
Band41	5	2593	16QAM	12	LOW	18.78	24.79	6.01	13	0.94	19.72	33	Pass
Band41	5	2593	16QAM	12	MID	18.79	24.87	6.08	13	0.94	19.73	33	Pass
Band41	5	2593	16QAM	12	HIGH	18.66	24.75	6.09	13	0.94	19.6	33	Pass
Band41	5	2593	16QAM	1	LOW	19.87	24.61	4.74	13	0.94	20.81	33	Pass
Band41	5	2593	16QAM	1	MID	20.05	24.61	4.56	13	0.94	20.99	33	Pass
Band41	5	2593	16QAM	1	HIGH	19.7	24.63	4.93	13	0.94	20.64	33	Pass
Band41	5	2652.5	QPSK	25	LOW	18.56	24.36	5.8	13	0.94	19.5	33	Pass
Band41	5	2652.5	QPSK	12	LOW	18.48	24.19	5.71	13	0.94	19.42	33	Pass
Band41	5	2652.5	QPSK	12	MID	18.52	24.27	5.75	13	0.94	19.46	33	Pass
Band41	5	2652.5	QPSK	12	HIGH	18.28	24.01	5.73	13	0.94	19.22	33	Pass
Band41	5	2652.5	QPSK	1	LOW	19.62	24.03	4.41	13	0.94	20.56	33	Pass
Band41	5	2652.5	QPSK	1	MID	19.58	23.93	4.35	13	0.94	20.52	33	Pass
Band41	5	2652.5	QPSK	1	HIGH	19.1	23.84	4.74	13	0.94	20.04	33	Pass
Band41	5	2652.5	16QAM	25	LOW	17.58	24.83	7.25	13	0.94	18.52	33	Pass
Band41	5	2652.5	16QAM	12	LOW	17.63	24.36	6.73	13	0.94	18.57	33	Pass
Band41	5	2652.5	16QAM	12	MID	17.66	24.2	6.54	13	0.94	18.6	33	Pass
Band41	5	2652.5	16QAM	12	HIGH	17.45	23.96	6.51	13	0.94	18.39	33	Pass
Band41	5	2652.5	16QAM	1	LOW	18.55	24.05	5.5	13	0.94	19.49	33	Pass

Band41	5	2652.5	16QAM	1	MID	18.51	23.86	5.35	13	0.94	19.45	33	Pass
Band41	5	2652.5	16QAM	1	HIGH	17.89	23.63	5.74	13	0.94	18.83	33	Pass