Appendix G Test Data for E-UTRA Band 13

Product Name: GNSS Receiver

Test Model: Z30

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
Supervised by:	Ling Zhu

G.1 Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	21.80	PASS
Band13	5MHz	QPSK	23205	1RB#12	22.54	PASS
Band13	5MHz	QPSK	23205	1RB#24	22.50	PASS
Band13	5MHz	QPSK	23205	12RB#0	21.72	PASS
Band13	5MHz	QPSK	23205	12RB#6	21.73	PASS
Band13	5MHz	QPSK	23205	12RB#13	21.73	PASS
Band13	5MHz	QPSK	23205	25RB#0	21.80	PASS
Band13	5MHz	QPSK	23230	1RB#0	22.72	PASS
Band13	5MHz	QPSK	23230	1RB#12	22.75	PASS
Band13	5MHz	QPSK	23230	1RB#24	22.62	PASS
Band13	5MHz	QPSK	23230	12RB#0	21.84	PASS
Band13	5MHz	QPSK	23230	12RB#6	21.73	PASS
Band13	5MHz	QPSK	23230	12RB#13	21.89	PASS
Band13	5MHz	QPSK	23230	25RB#0	21.83	PASS
Band13	5MHz	QPSK	23255	1RB#0	22.54	PASS
Band13	5MHz	QPSK	23255	1RB#12	22.49	PASS
Band13	5MHz	QPSK	23255	1RB#24	22.05	PASS
Band13	5MHz	QPSK	23255	12RB#0	21.89	PASS
Band13	5MHz	QPSK	23255	12RB#6	21.89	PASS
Band13	5MHz	QPSK	23255	12RB#13	21.66	PASS
Band13	5MHz	QPSK	23255	25RB#0	21.68	PASS
Band13	5MHz	16QAM	23205	1RB#0	22.35	PASS
Band13	5MHz	16QAM	23205	1RB#12	22.34	PASS
Band13	5MHz	16QAM	23205	1RB#24	22.29	PASS
Band13	5MHz	16QAM	23205	12RB#0	21.16	PASS
Band13	5MHz	16QAM	23205	12RB#6	21.28	PASS
Band13	5MHz	16QAM	23205	12RB#13	21.31	PASS
Band13	5MHz	16QAM	23205	25RB#0	21.18	PASS
Band13	5MHz	16QAM	23230	1RB#0	21.54	PASS

Band13	5MHz	16QAM	23230	1RB#12	21.46	PASS
Band13	5MHz	16QAM	23230	1RB#24	21.34	PASS
Band13	5MHz	16QAM	23230	12RB#0	21.24	PASS
Band13	5MHz	16QAM	23230	12RB#6	21.24	PASS
Band13	5MHz	16QAM	23230	12RB#13	21.13	PASS
Band13	5MHz	16QAM	23230	25RB#0	21.24	PASS
Band13	5MHz	16QAM	23255	1RB#0	22.42	PASS
Band13	5MHz	16QAM	23255	1RB#12	22.32	PASS
Band13	5MHz	16QAM	23255	1RB#24	21.79	PASS
Band13	5MHz	16QAM	23255	12RB#0	21.12	PASS
Band13	5MHz	16QAM	23255	12RB#6	21.07	PASS
Band13	5MHz	16QAM	23255	12RB#13	20.90	PASS
Band13	5MHz	16QAM	23255	25RB#0	20.88	PASS
Band13	10MHz	QPSK	23230	1RB#0	22.69	PASS
Band13	10MHz	QPSK	23230	1RB#24	22.64	PASS
Band13	10MHz	QPSK	23230	1RB#49	22.29	PASS
Band13	10MHz	QPSK	23230	25RB#0	21.71	PASS
Band13	10MHz	QPSK	23230	25RB#12	21.71	PASS
Band13	10MHz	QPSK	23230	25RB#25	21.59	PASS
Band13	10MHz	QPSK	23230	50RB#0	21.78	PASS
Band13	10MHz	16QAM	23230	1RB#0	22.22	PASS
Band13	10MHz	16QAM	23230	1RB#24	22.13	PASS
Band13	10MHz	16QAM	23230	1RB#49	21.83	PASS
Band13	10MHz	16QAM	23230	25RB#0	21.17	PASS
Band13	10MHz	16QAM	23230	25RB#12	21.18	PASS
Band13	10MHz	16QAM	23230	25RB#25	20.96	PASS
Band13	10MHz	16QAM	23230	50RB#0	21.36	PASS

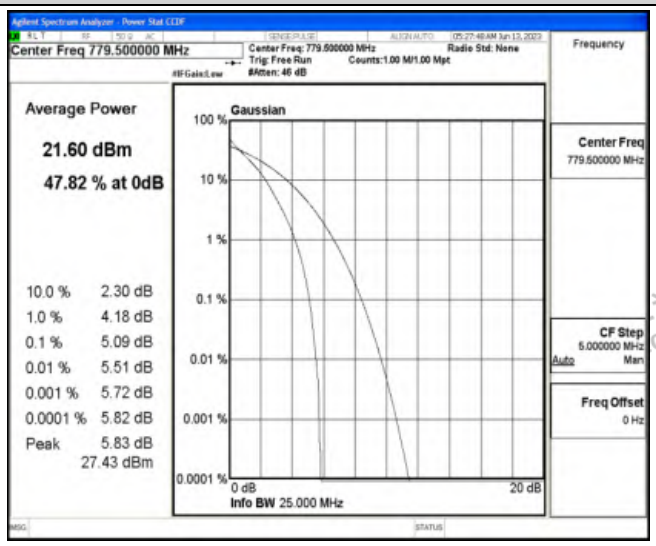
G.2 Peak-to-Average Ratio（CCDF）

Test Result

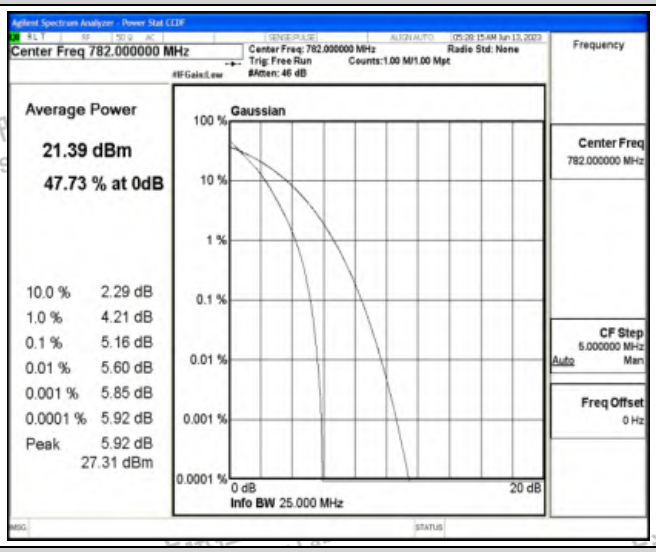
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	5.09	13	PASS
Band13	5MHz	QPSK	23230	25RB#0	5.16	13	PASS
Band13	5MHz	QPSK	23255	25RB#0	5.03	13	PASS
Band13	5MHz	16QAM	23205	25RB#0	5.67	13	PASS
Band13	5MHz	16QAM	23230	25RB#0	5.76	13	PASS
Band13	5MHz	16QAM	23255	25RB#0	5.71	13	PASS
Band13	10MHz	QPSK	23230	50RB#0	5.12	13	PASS
Band13	10MHz	16QAM	23230	50RB#0	5.80	13	PASS

Test Graphs

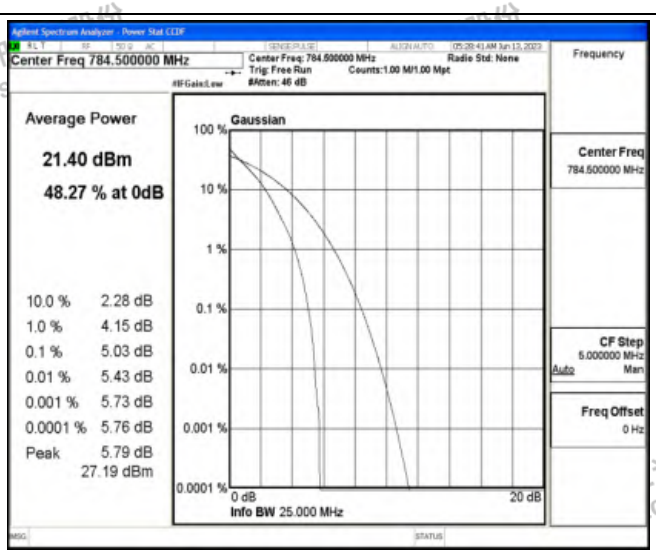
Band13-5MHz-QPSK-23205-25RB#0



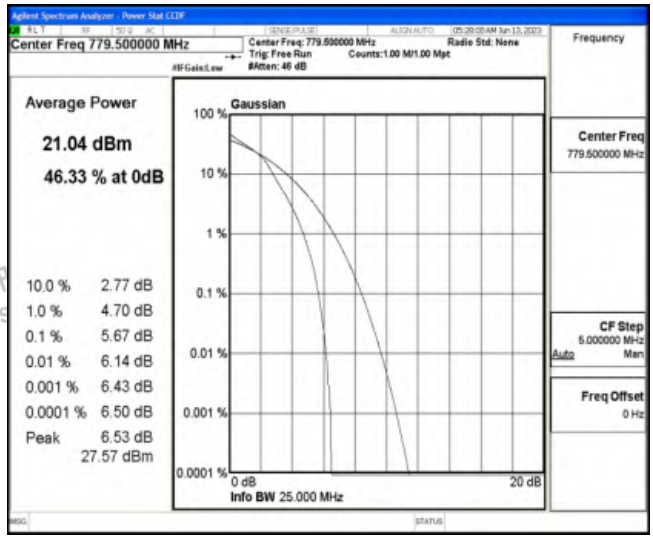
Band13-5MHz-QPSK-23230-25RB#0



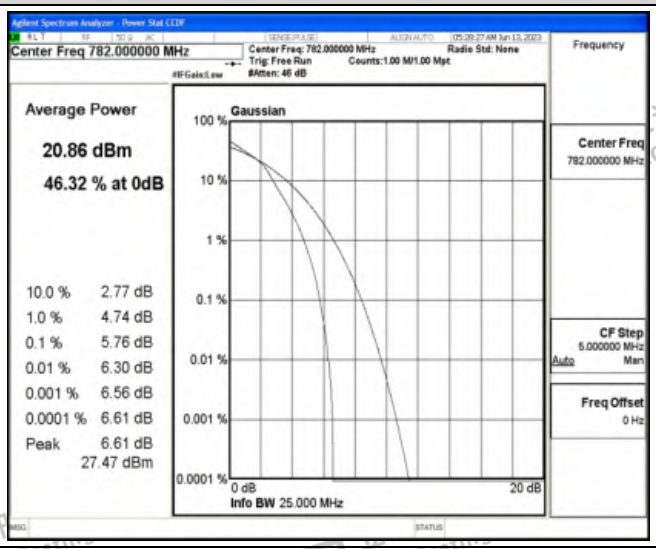
Band13-5MHz-QPSK-23255-25RB#0



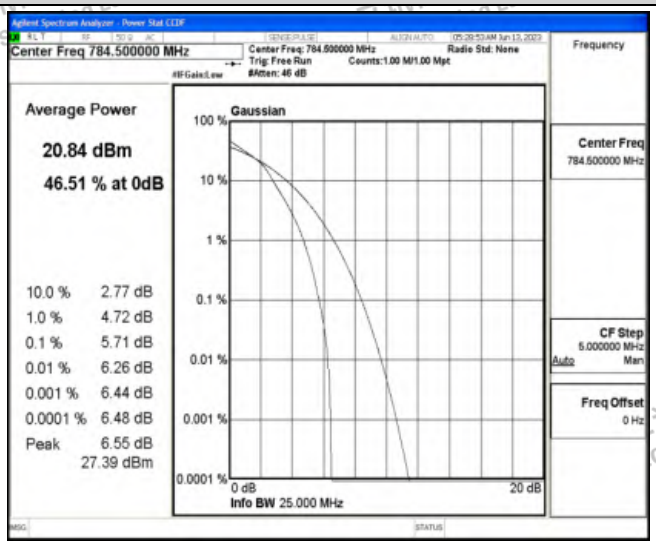
Band13-5MHz-16QAM-23205-25RB#0



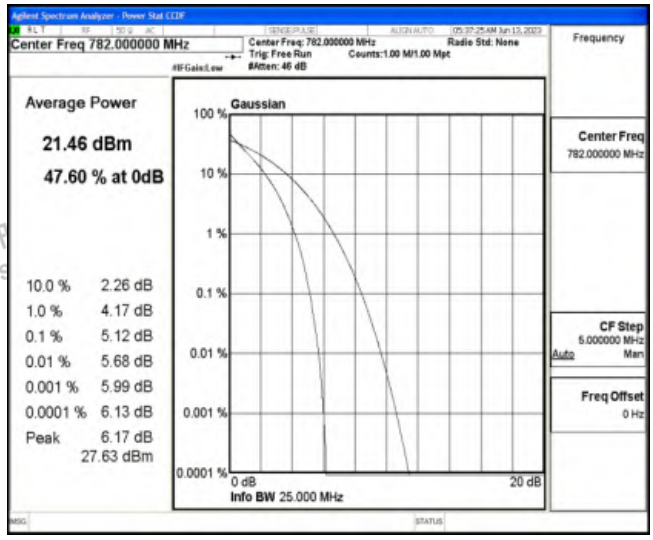
Band13-5MHz-16QAM-23230-25RB#0



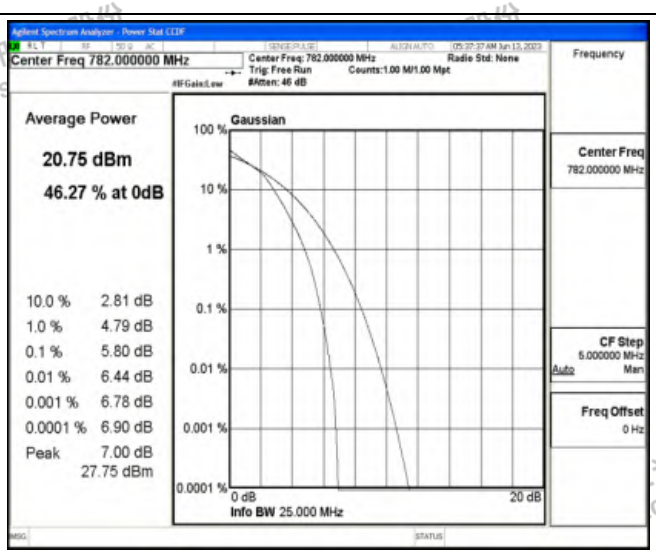
Band13-5MHz-16QAM-23255-25RB#0



Band13-10MHz-QPSK-23230-50RB#0



Band13-10MHz-16QAM-23230-50RB#0


Agilent Spectrum Analyzer - Power Stat CCDF
Center Freq 782.000000 MHz
Center Freq: 782.000000 MHz
Trig: Free Run
#Atten: 46 dB
Counts:1.00 M/1.00 Mpt
Radio Std: None
Frequency
Average Power
20.75 dBm
46.27 % at 0dB
10.0 % 2.81 dB
1.0 % 4.79 dB
0.1 % 5.80 dB
0.01 % 6.44 dB
0.001 % 6.78 dB
0.0001 % 6.90 dB
Peak 7.00 dB
27.75 dBm
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
0 dB
20 dB
Info BW 25.000 MHz
Center Freq
782.000000 MHz
CF Step
5.000000 MHz
Auto
Man
Freq Offset
0 Hz

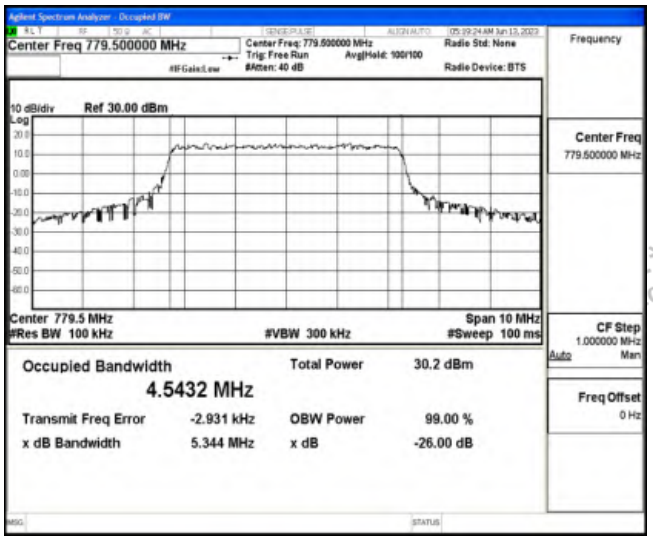
G.3 26dB Bandwidth and Occupied Bandwidth

Test Result

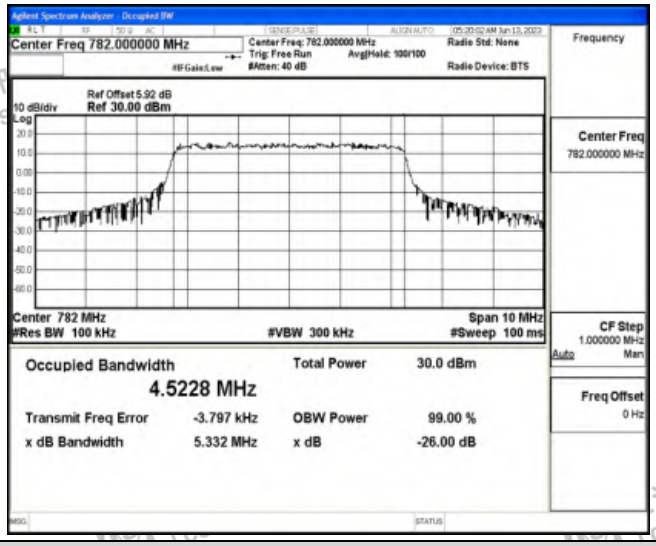
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.5432	5.344	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.5228	5.332	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.5121	5.395	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.5308	5.229	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.5290	5.263	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.5325	5.269	PASS
Band13	10MHz	QPSK	23230	50RB#0	9.0016	10.11	PASS
Band13	10MHz	16QAM	23230	50RB#0	9.0014	10.03	PASS

Test Graphs

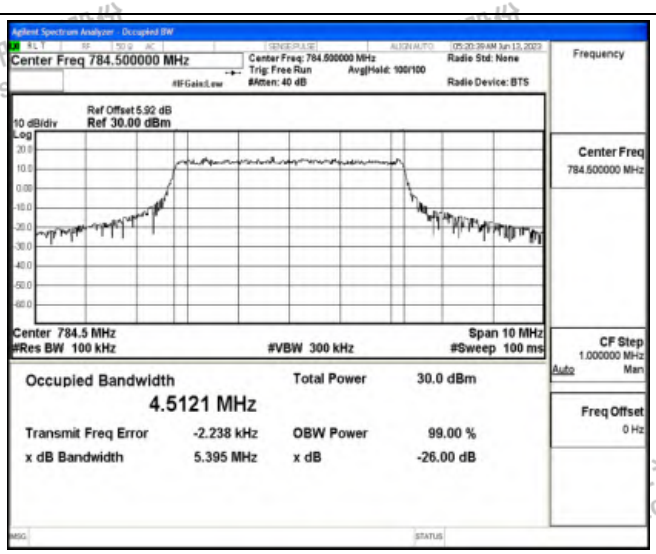
Band13-5MHz-QPSK-23205-25RB#0



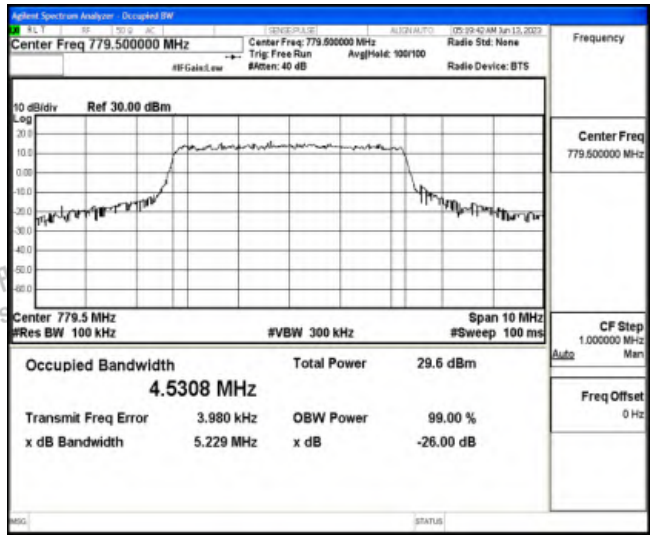
Band13-5MHz-QPSK-23230-25RB#0



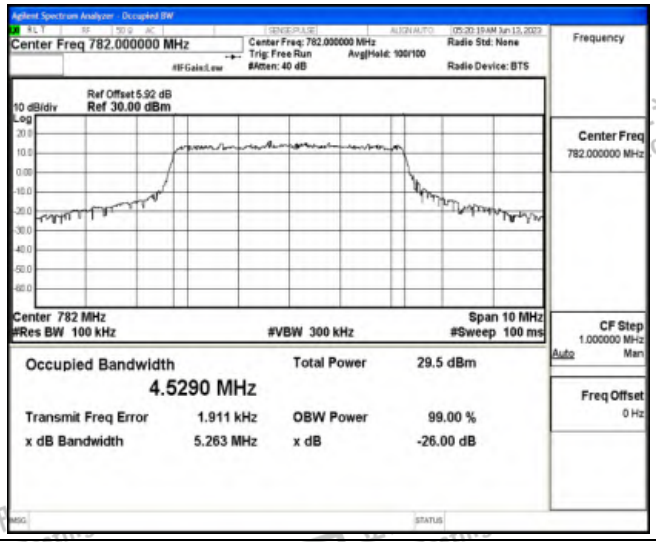
Band13-5MHz-QPSK-23255-25RB#0



Band13-5MHz-16QAM-23205-25RB#0

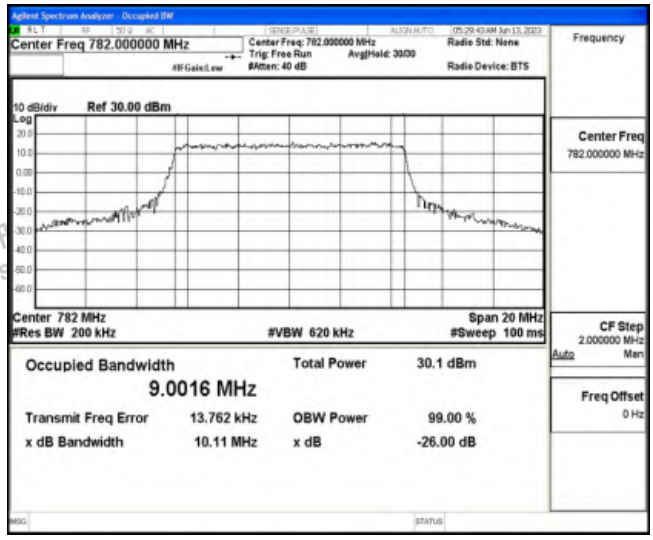


Band13-5MHz-16QAM-23230-25RB#0

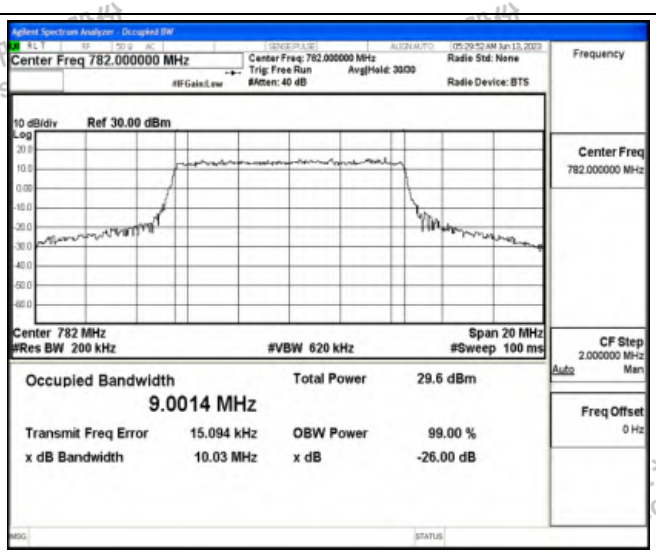


Band13-5MHz-16QAM-23255-25RB#0

Band13-10MHz-QPSK-23230-50RB#0



Band13-10MHz-16QAM-23230-50RB#0


Agilent Spectrum Analyzer - Occupied BW
Center Freq 782.000000 MHz
Center Freq: 782.000000 MHz
Trig: Free Run
Avg|Hold: 30/30
#Atten: 40 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Ref 30.00 dBm
Log
Center Freq
782.000000 MHz
Center 782 MHz
#Res BW 200 kHz
#VBW 620 kHz
Span 20 MHz
#Sweep 100 ms
CF Step
2.000000 MHz
Auto
Man
Occupied Bandwidth
9.0014 MHz
Total Power
29.6 dBm
Transmit Freq Error
15.094 kHz
OBW Power
99.00 %
x dB Bandwidth
10.03 MHz
x dB
-26.00 dB
Freq Offset
0 Hz
MSG
STATUS

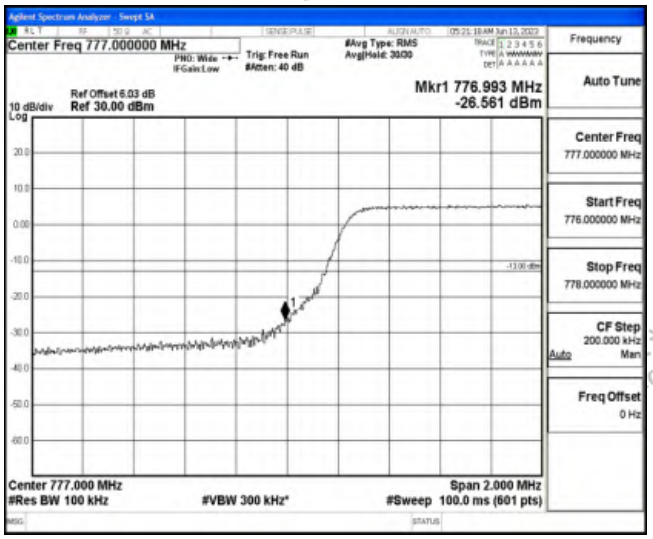
G.4 Band Edge

Test Result

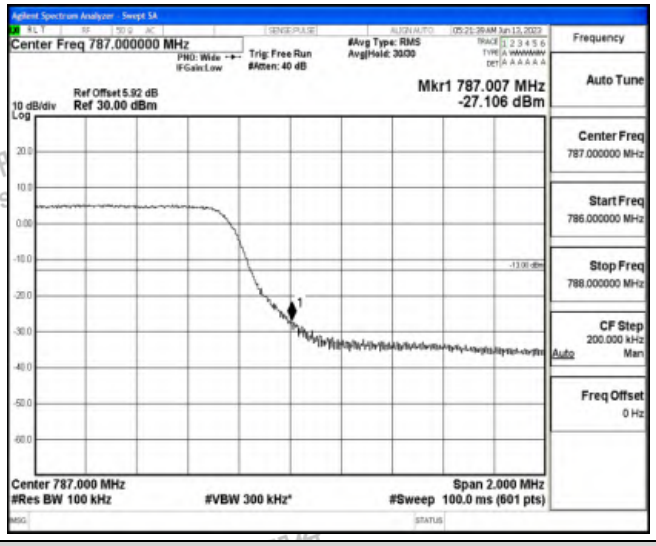
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	-26.56	PASS
Band13	5MHz	QPSK	23255	25RB#0	-27.11	PASS
Band13	5MHz	16QAM	23205	25RB#0	-26.55	PASS
Band13	5MHz	16QAM	23255	25RB#0	-27.37	PASS
Band13	10MHz	QPSK	23230	50RB#0	-29.91,-31.36	PASS
Band13	10MHz	16QAM	23230	50RB#0	-30.32,-31.39	PASS

Test Graphs

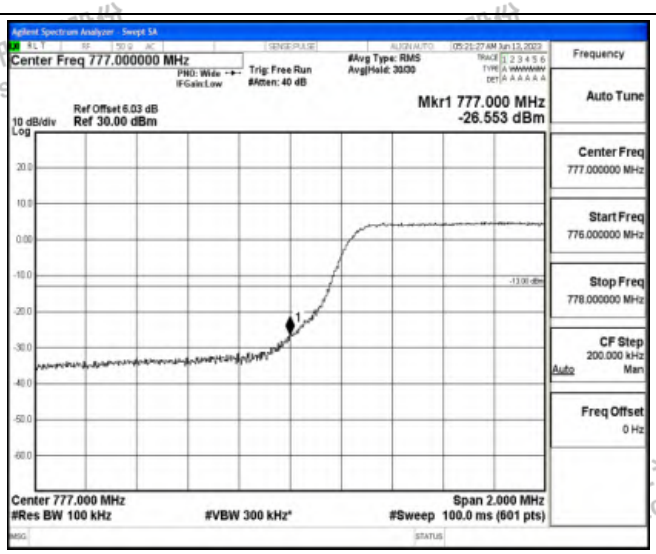
Band13-5MHz-QPSK-23205-25RB#0



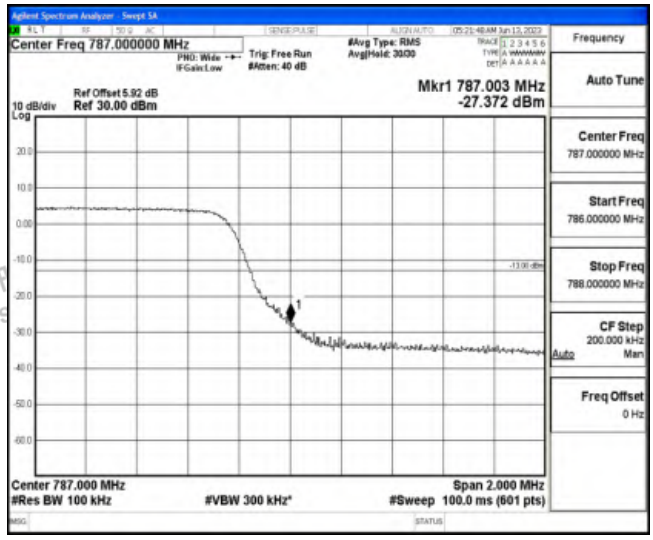
Band13-5MHz-QPSK-23255-25RB#0



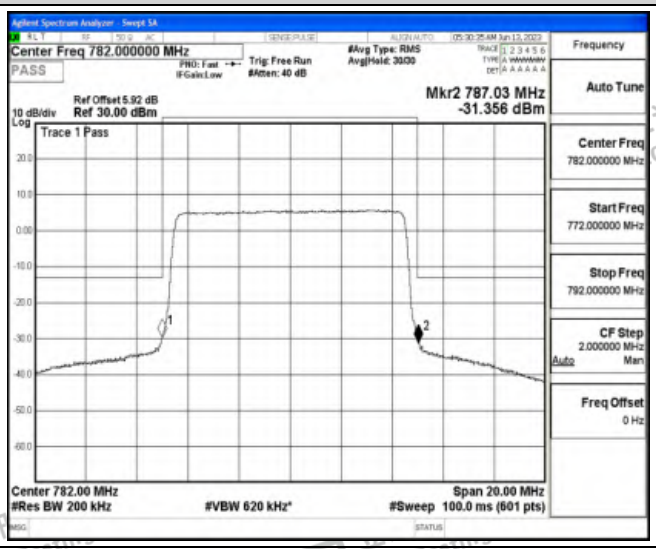
Band13-5MHz-16QAM-23205-25RB#0

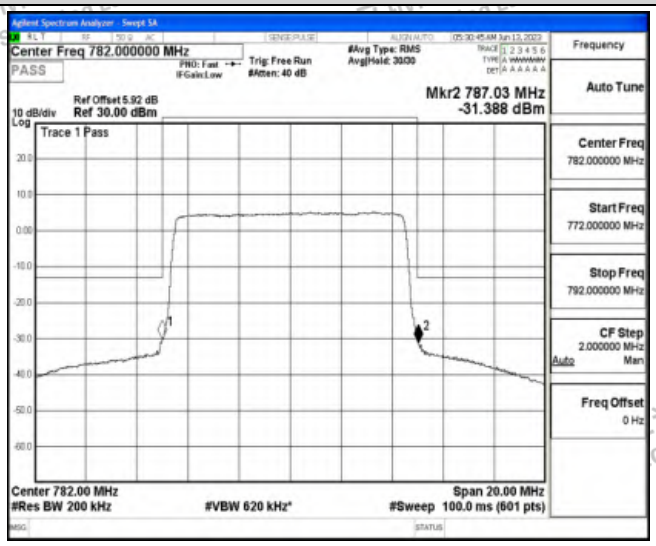


Band13-5MHz-16QAM-23255-25RB#0



Band13-10MHz-QPSK-23230-50RB#0



Band13-10MHz-16QAM-23230-50RB#0


G.5 Conducted Spurious Emission

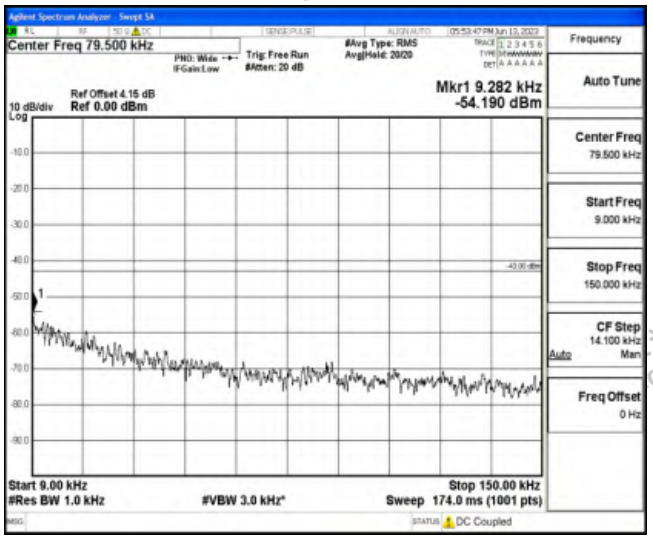
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	Range1:0.009~0.15MHz	-54.19	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range2:0.15~30MHz	-52.82	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range3:30~1000MHz	-40.62	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range5:763~775MHz	-59.66	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range6:793~805MHz	-60.78	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range4:1000~10000MHz	-45.33	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range7:1559~1610MHz	-64.29	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range1:0.009~0.15MHz	-55.12	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range2:0.15~30MHz	-49.96	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range3:30~1000MHz	-41.32	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range5:763~775MHz	-61.14	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range6:793~805MHz	-60.77	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range4:1000~10000MHz	-45.28	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range7:1559~1610MHz	-64.27	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range1:0.009~0.15MHz	-54.71	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range2:0.15~30MHz	-50.06	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range3:30~1000MHz	-42.06	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range5:763~775MHz	-61.47	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range6:793~805MHz	-61.39	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range4:1000~10000MHz	-45.2	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range7:1559~1610MHz	-64.28	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range1:0.009~0.15MHz	-55.55	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range2:0.15~30MHz	-52.11	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range3:30~1000MHz	-41.19	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range5:763~775MHz	-60.22	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range6:793~805MHz	-61.08	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range4:1000~10000MHz	-45.15	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range7:1559~1610MHz	-64.23	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range1:0.009~0.15MHz	-55.67	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range2:0.15~30MHz	-52.57	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range3:30~1000MHz	-41.34	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range5:763~775MHz	-61.44	PASS

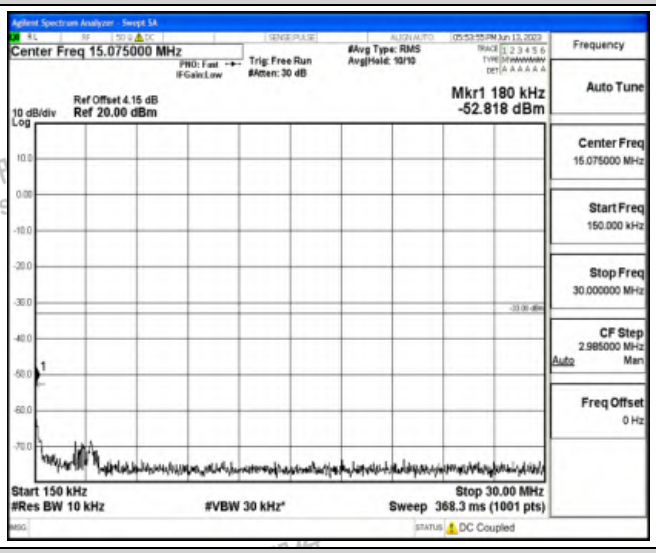
Band13	5MHz	16QAM	23230	1RB#0	Range6:793~805MHz	-60.14	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range4:1000~10000MHz	-45.23	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range7:1559~1610MHz	-64.19	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range1:0.009~0.15MHz	-54.18	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range2:0.15~30MHz	-50.85	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range3:30~1000MHz	-41.93	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range5:763~775MHz	-61.43	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range6:793~805MHz	-60.82	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range4:1000~10000MHz	-45.28	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range7:1559~1610MHz	-64.39	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range1:0.009~0.15MHz	-55.65	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range2:0.15~30MHz	-51.24	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range3:30~1000MHz	-40.14	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range5:763~775MHz	-46.53	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range6:793~805MHz	-55.58	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range4:1000~10000MHz	-45	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range7:1559~1610MHz	-62.21	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range1:0.009~0.15MHz	-54.63	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range2:0.15~30MHz	-52.06	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range3:30~1000MHz	-40.97	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range5:763~775MHz	-47.09	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range6:793~805MHz	-55.93	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range4:1000~10000MHz	-44.84	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range7:1559~1610MHz	-62.59	PASS

Test Graphs

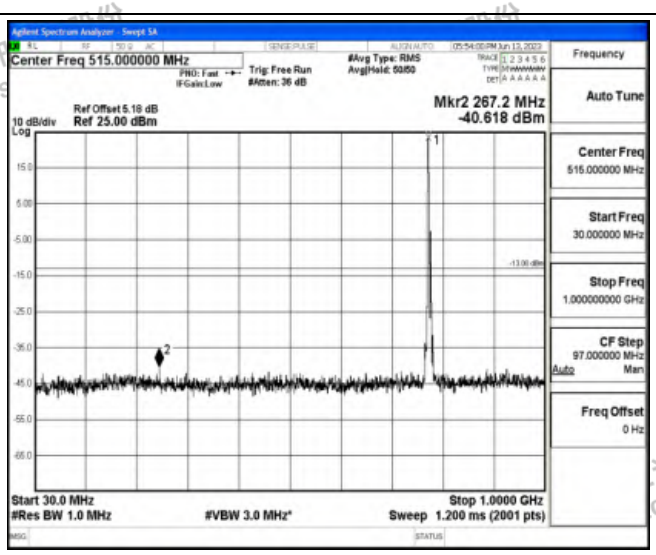
Band13-5MHz-QPSK-23205-1RB#0-Range1:0.009~0.15MHz



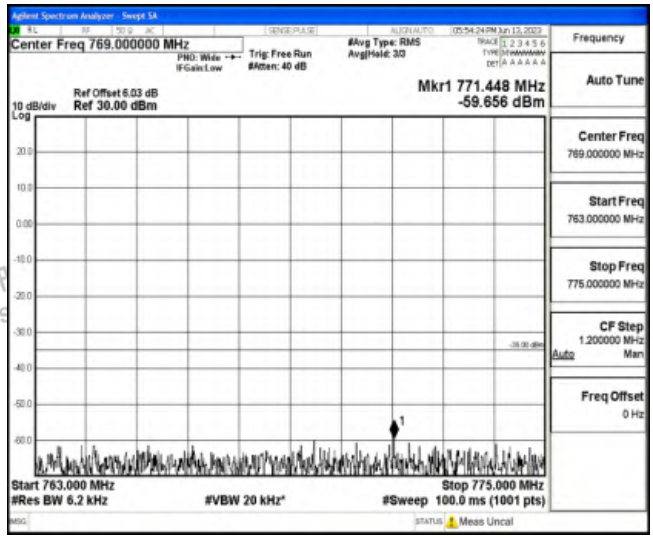
Band13-5MHz-QPSK-23205-1RB#0-Range2:0.15~30MHz



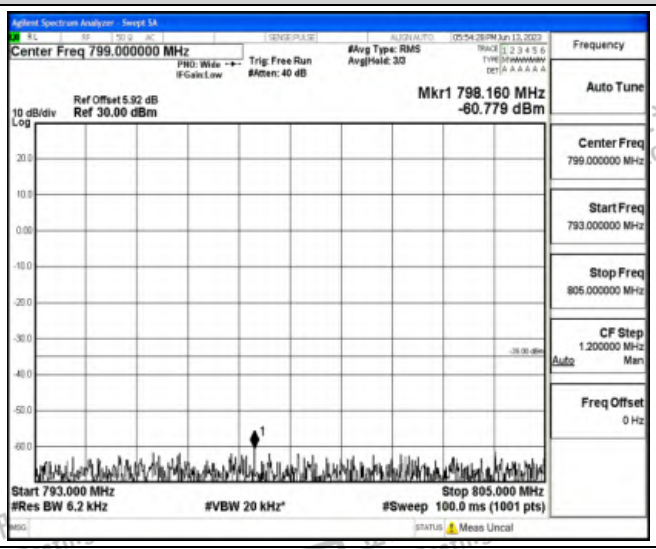
Band13-5MHz-QPSK-23205-1RB#0-Range3:30~1000MHz



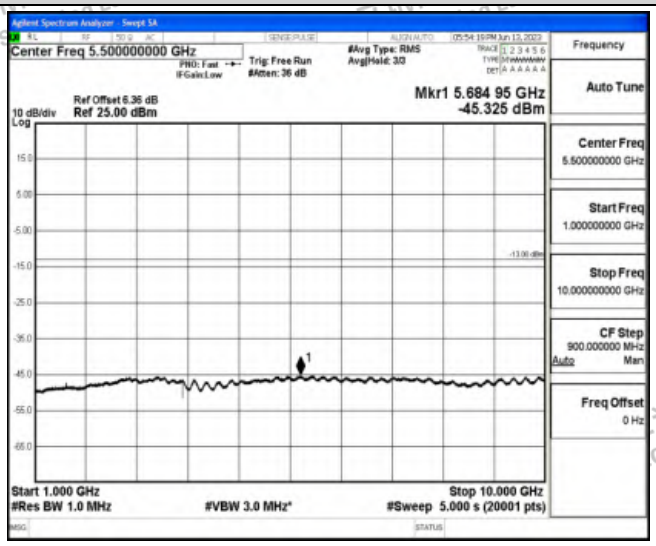
Band13-5MHz-QPSK-23205-1RB#0-Range5:763~775MHz



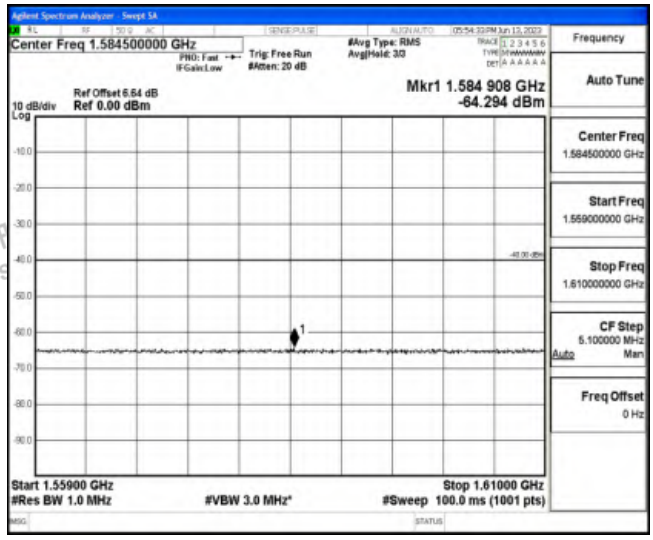
Band13-5MHz-QPSK-23205-1RB#0-Range6:793~805MHz



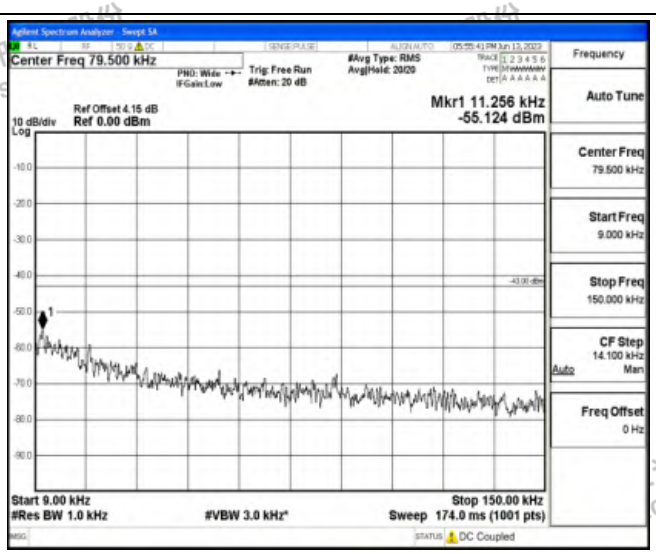
Band13-5MHz-QPSK-23205-1RB#0-Range4:1000~10000MHz



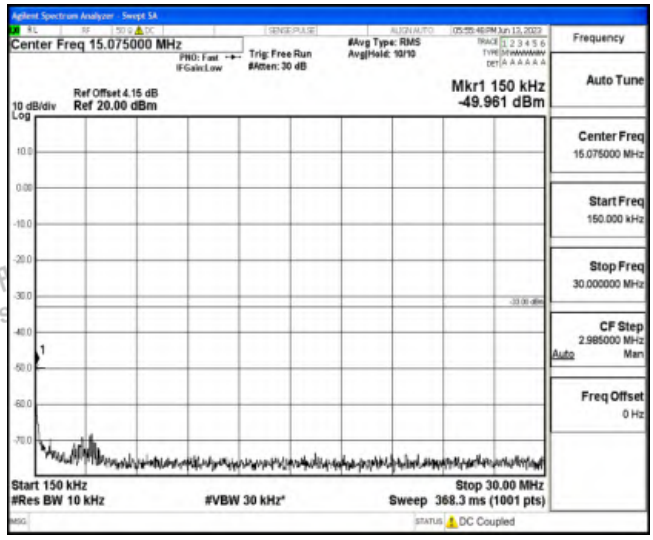
Band13-5MHz-QPSK-23205-1RB#0-Range7:1559~1610MHz



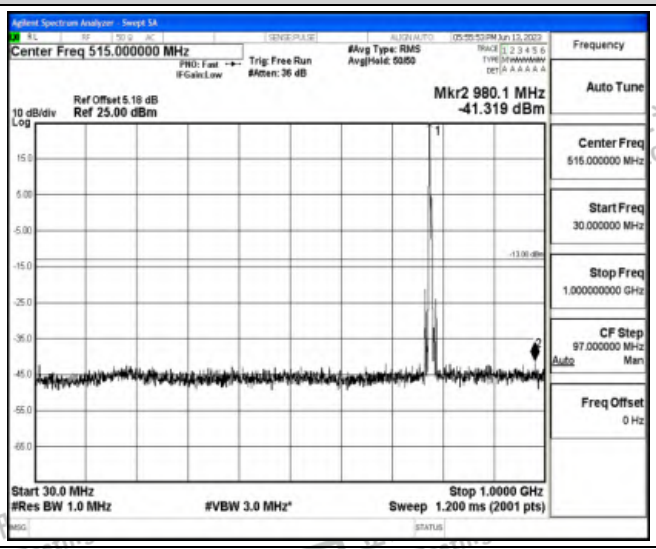
Band13-5MHz-QPSK-23230-1RB#0-Range1:0.009~0.15MHz



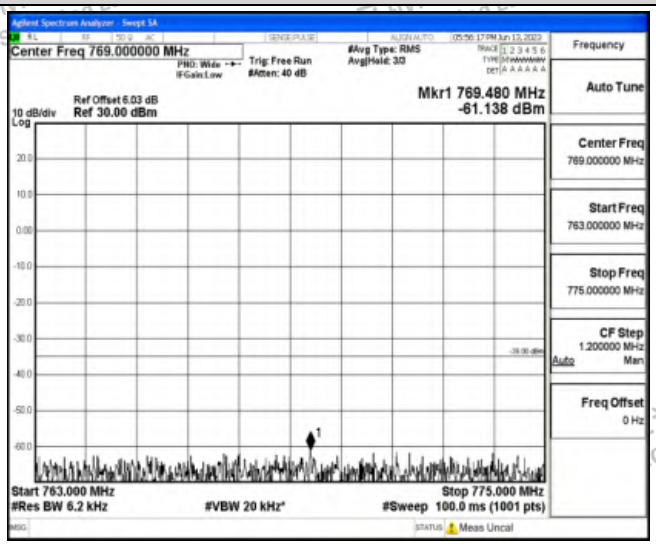
Band13-5MHz-QPSK-23230-1RB#0-Range2:0.15~30MHz



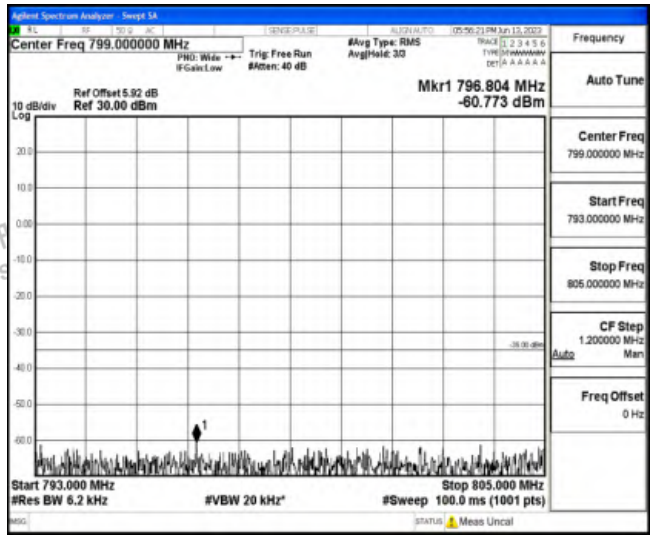
Band13-5MHz-QPSK-23230-1RB#0-Range3:30~1000MHz



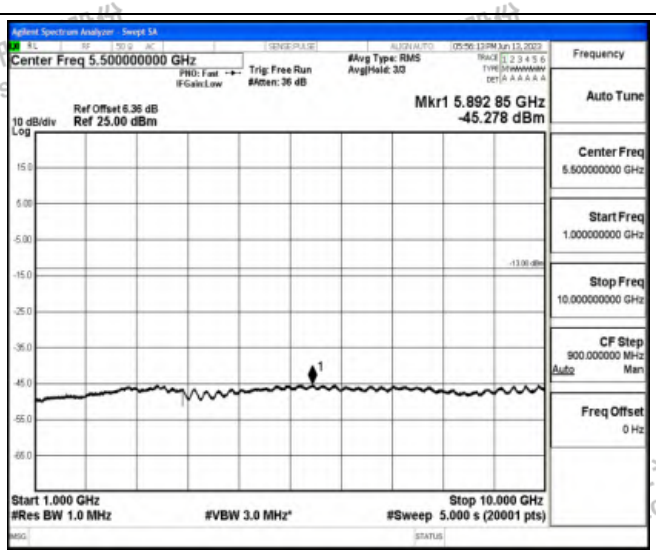
Band13-5MHz-QPSK-23230-1RB#0-Range5:763~775MHz



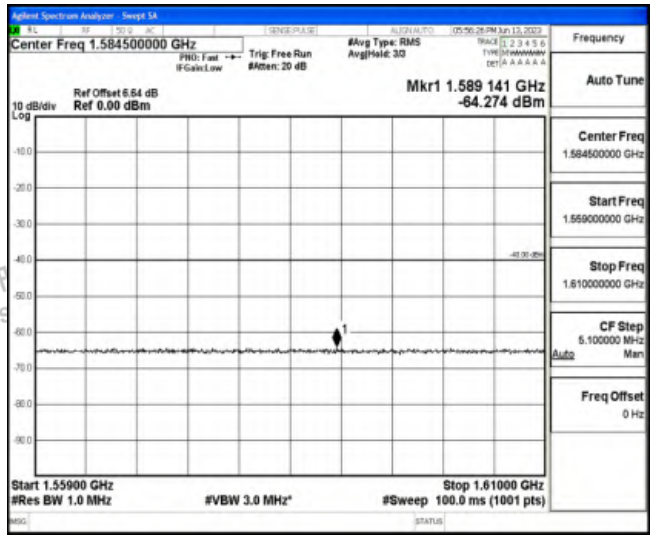
Band13-5MHz-QPSK-23230-1RB#0-Range6:793~805MHz



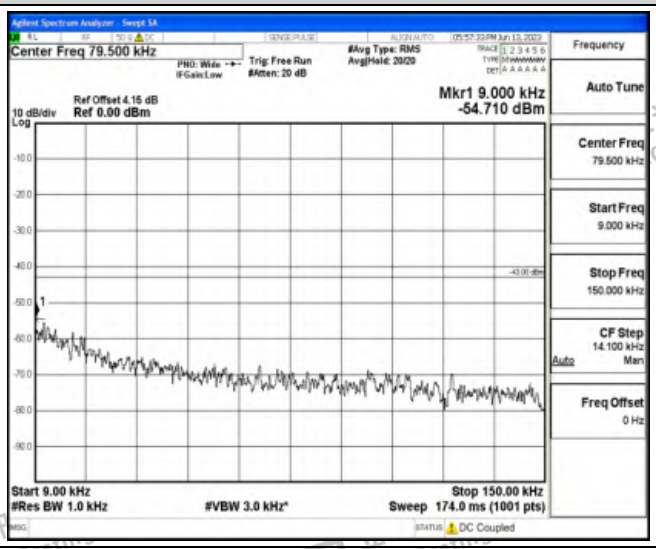
Band13-5MHz-QPSK-23230-1RB#0-Range4:1000~10000MHz



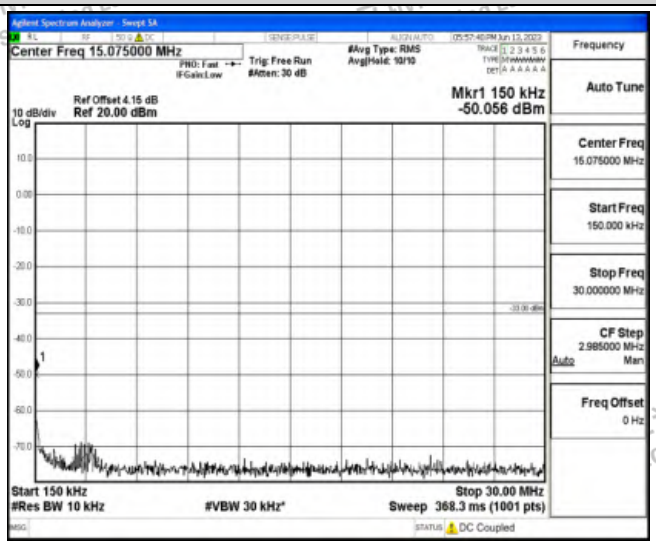
Band13-5MHz-QPSK-23230-1RB#0-Range7:1559~1610MHz



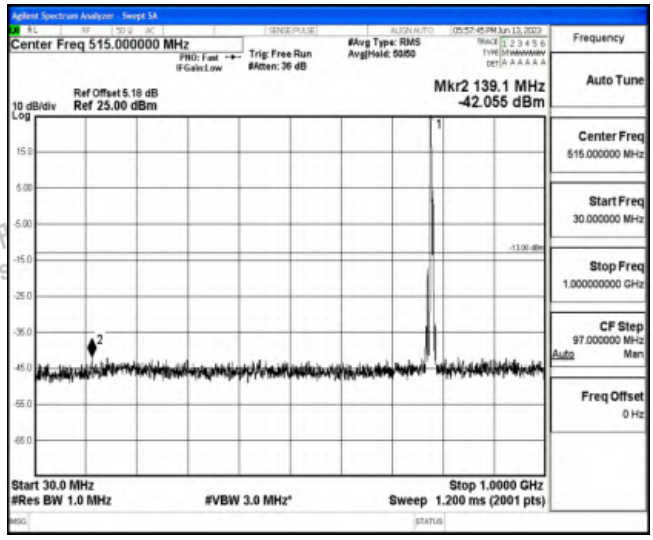
Band13-5MHz-QPSK-23255-1RB#0-Range1:0.009~0.15MHz



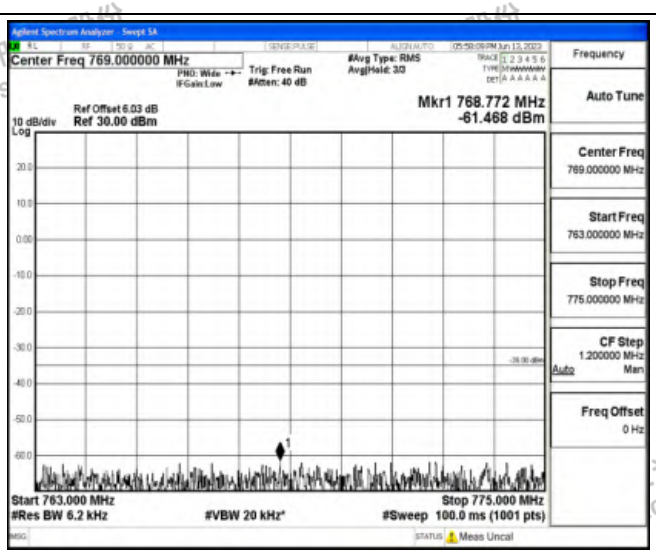
Band13-5MHz-QPSK-23255-1RB#0-Range2:0.15~30MHz



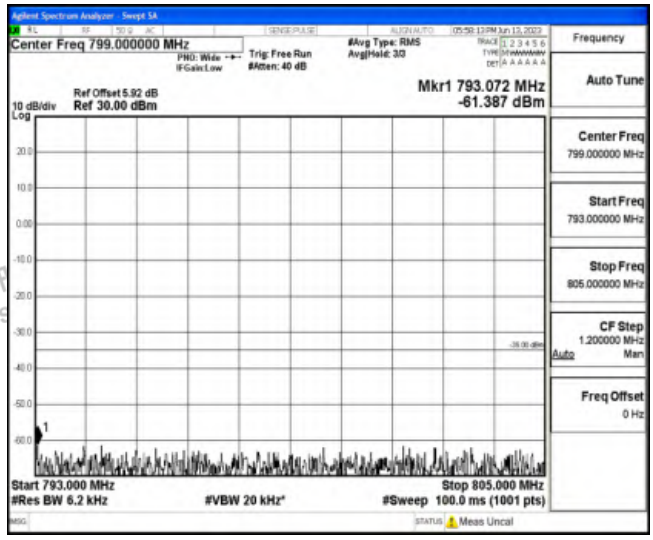
Band13-5MHz-QPSK-23255-1RB#0-Range3:30~1000MHz



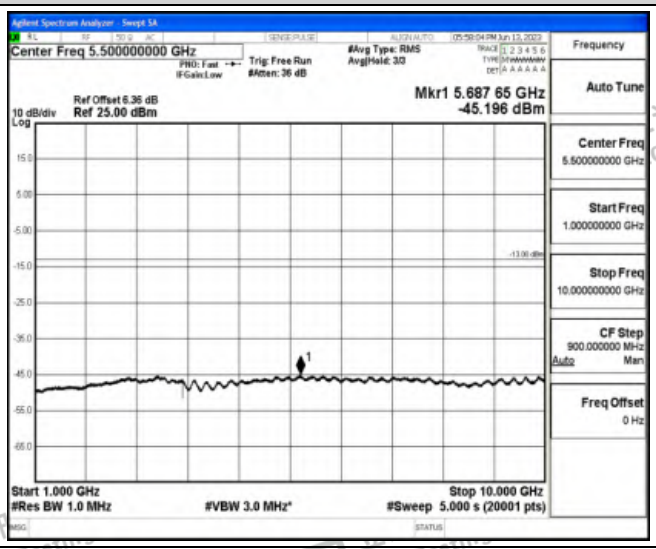
Band13-5MHz-QPSK-23255-1RB#0-Range5:763~775MHz



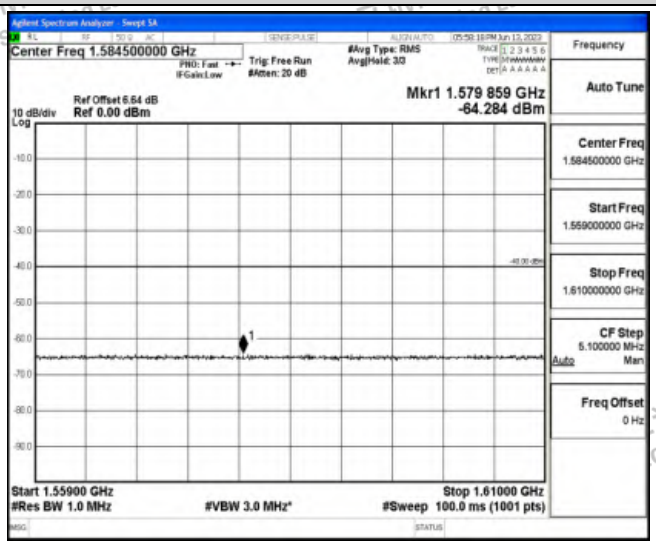
Band13-5MHz-QPSK-23255-1RB#0-Range6:793~805MHz



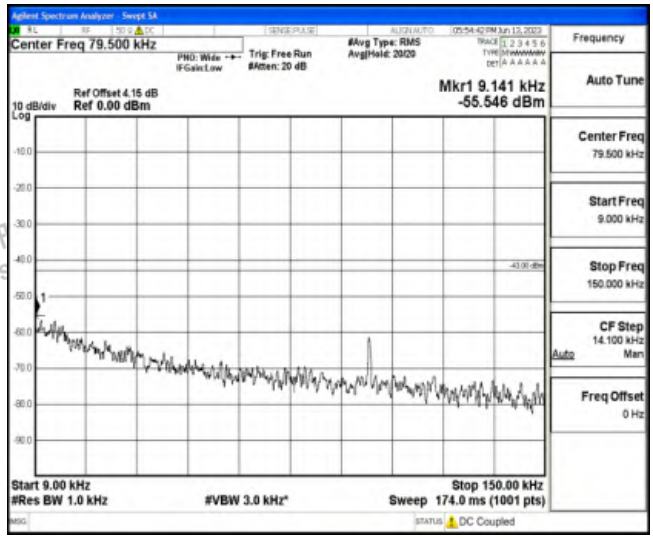
Band13-5MHz-QPSK-23255-1RB#0-Range4:1000~10000MHz



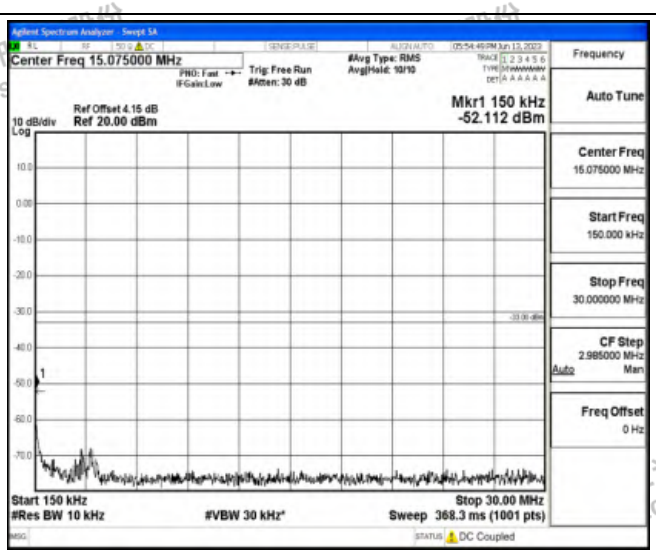
Band13-5MHz-QPSK-23255-1RB#0-Range7:1559~1610MHz



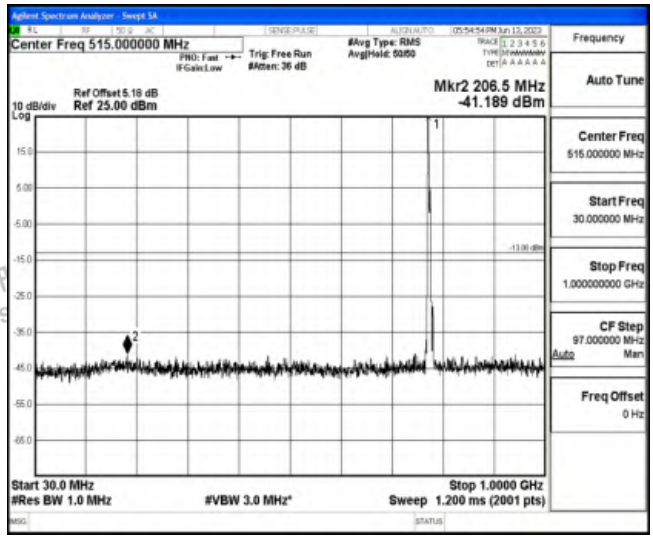
Band13-5MHz-16QAM-23205-1RB#0-Range1:0.009~0.15MHz



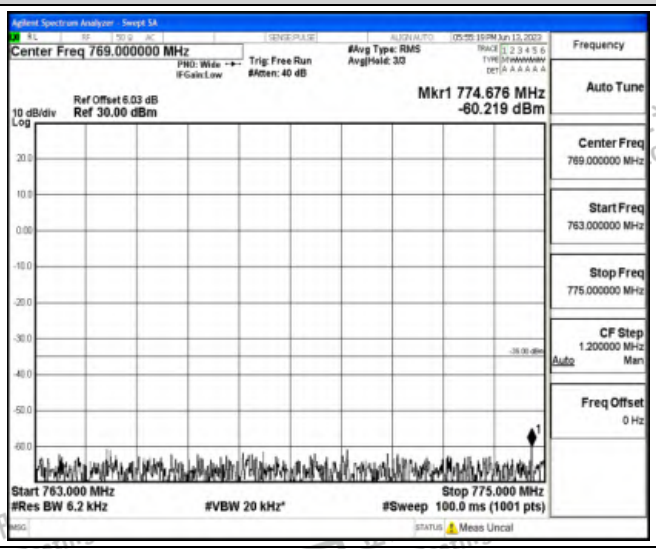
Band13-5MHz-16QAM-23205-1RB#0-Range2:0.15~30MHz



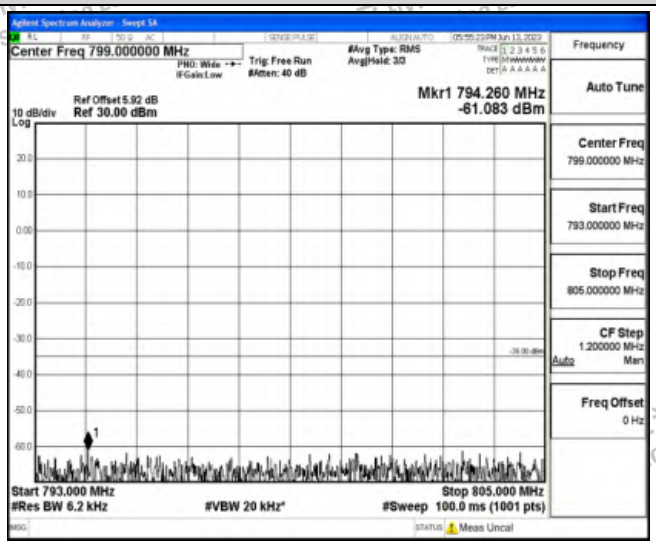
Band13-5MHz-16QAM-23205-1RB#0-Range3:30~1000MHz



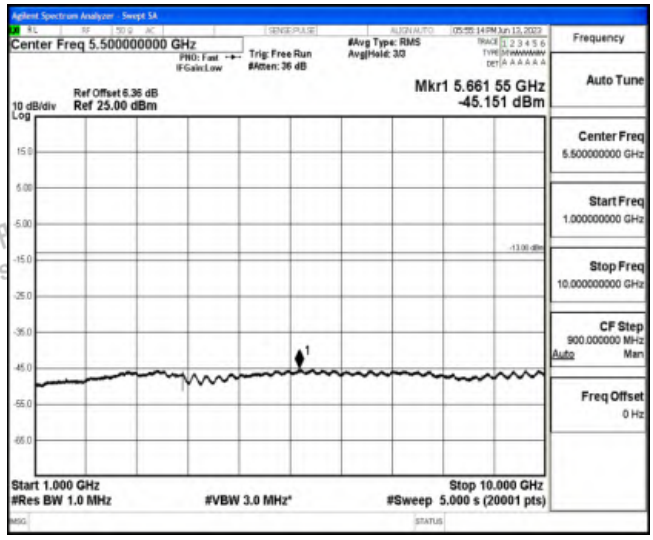
Band13-5MHz-16QAM-23205-1RB#0-Range5:763~775MHz



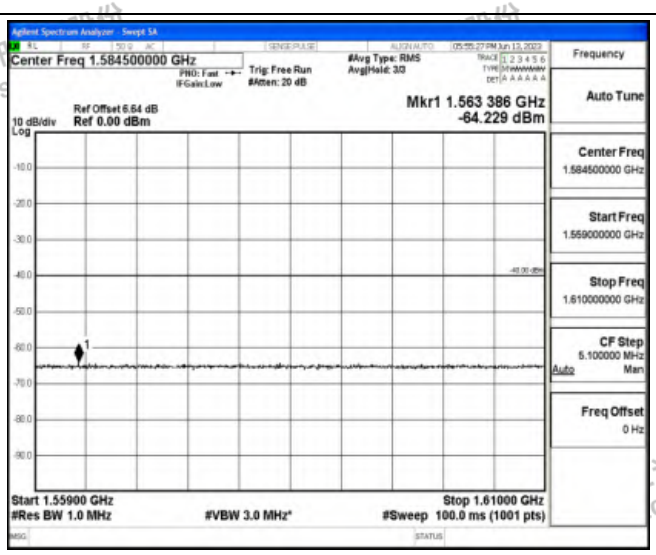
Band13-5MHz-16QAM-23205-1RB#0-Range6:793~805MHz



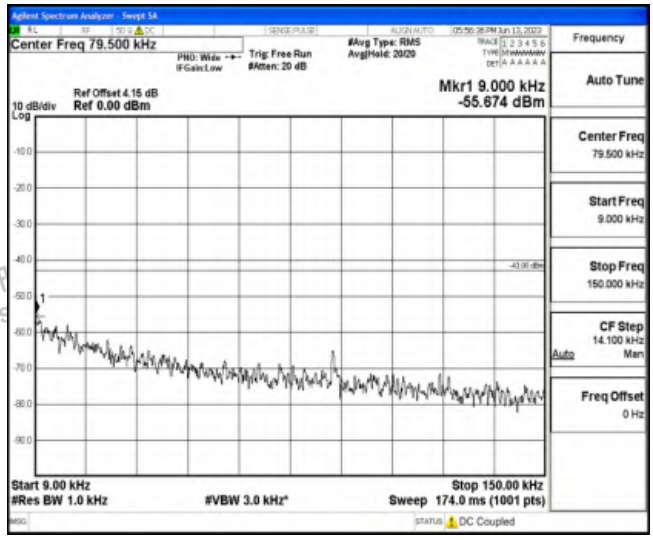
Band13-5MHz-16QAM-23205-1RB#0-Range4:1000~10000MHz



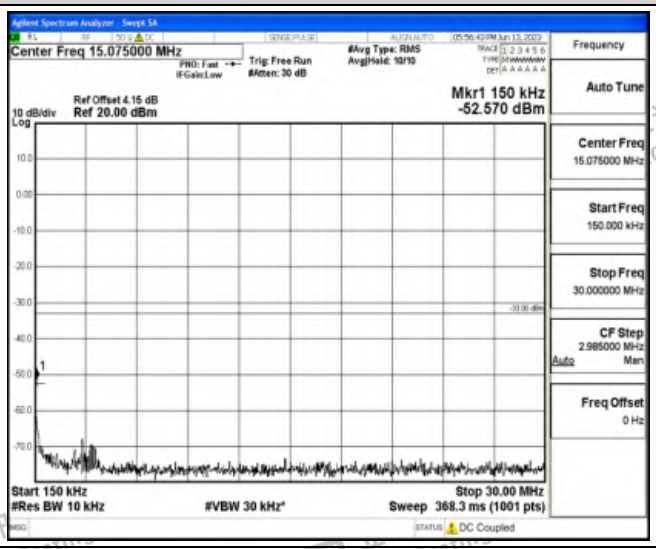
Band13-5MHz-16QAM-23205-1RB#0-Range7:1559~1610MHz



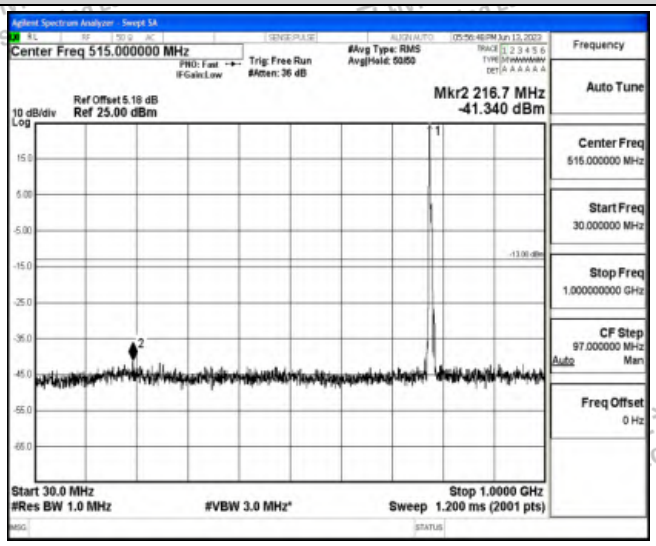
Band13-5MHz-16QAM-23230-1RB#0-Range1:0.009~0.15MHz



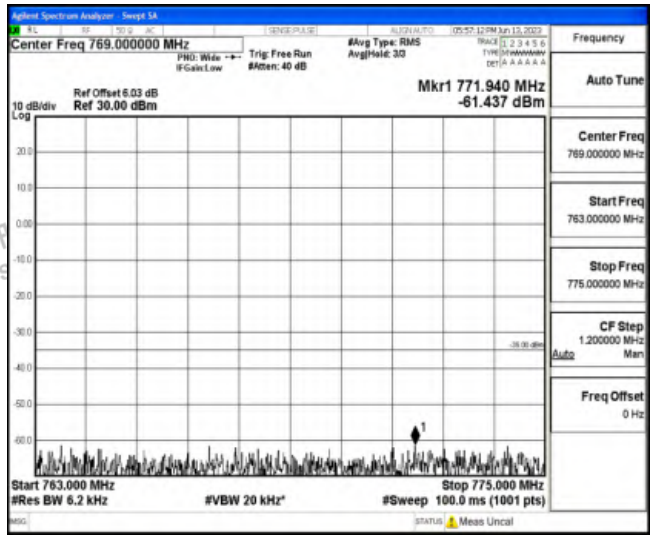
Band13-5MHz-16QAM-23230-1RB#0-Range2:0.15~30MHz



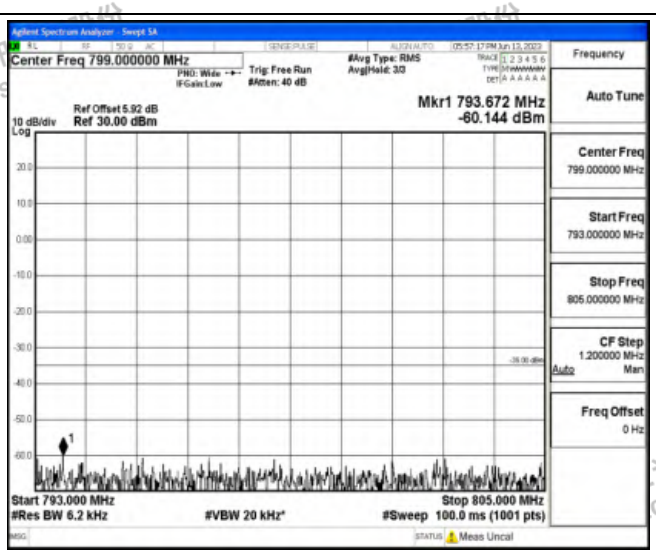
Band13-5MHz-16QAM-23230-1RB#0-Range3:30~1000MHz



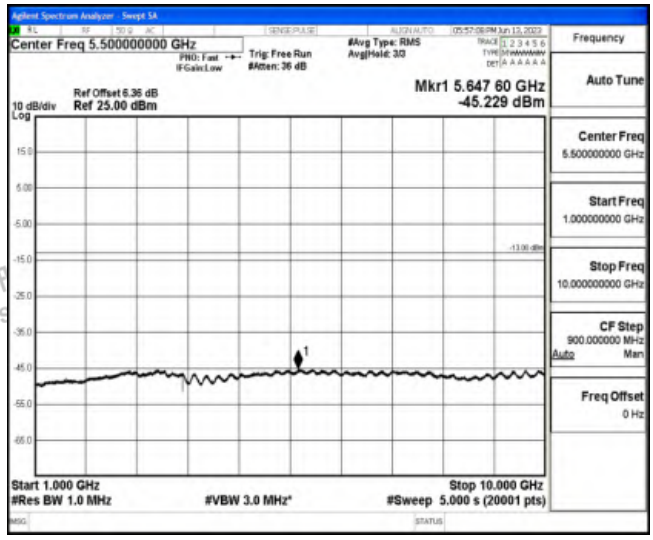
Band13-5MHz-16QAM-23230-1RB#0-Range5:763~775MHz



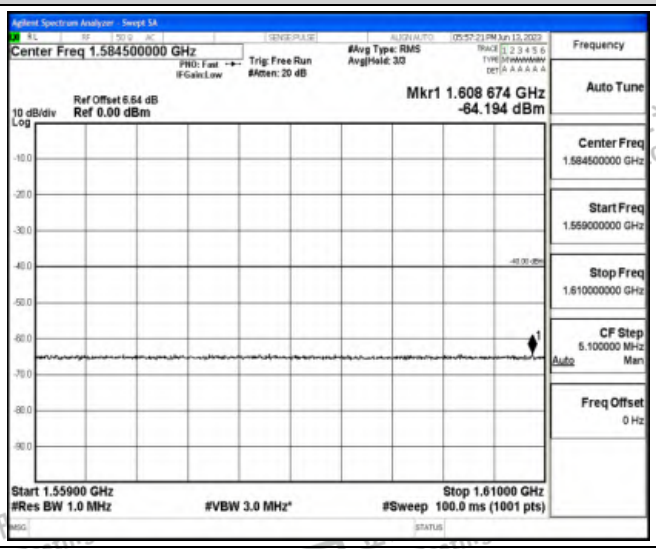
Band13-5MHz-16QAM-23230-1RB#0-Range6:793~805MHz



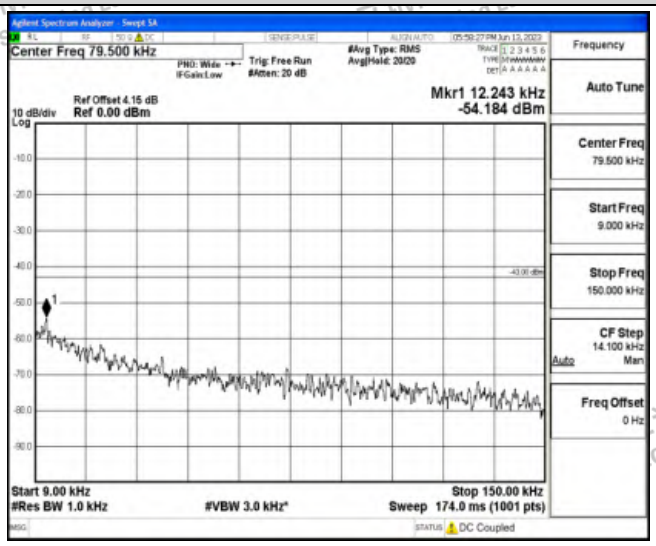
Band13-5MHz-16QAM-23230-1RB#0-Range4:1000~10000MHz



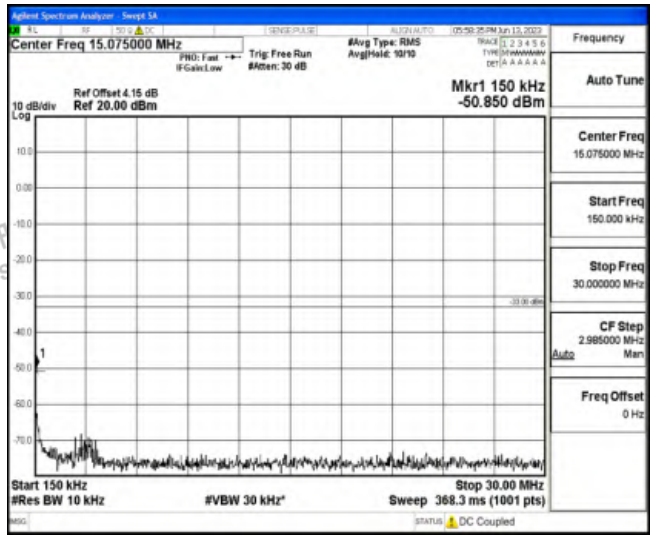
Band13-5MHz-16QAM-23230-1RB#0-Range7:1559~1610MHz



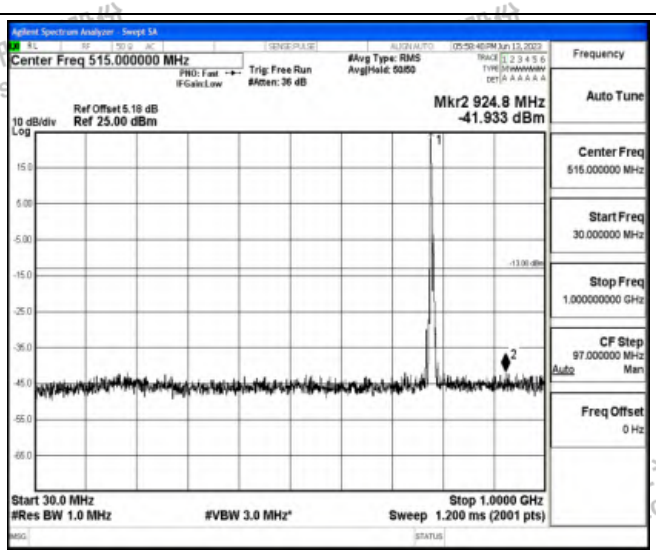
Band13-5MHz-16QAM-23255-1RB#0-Range1:0.009~0.15MHz



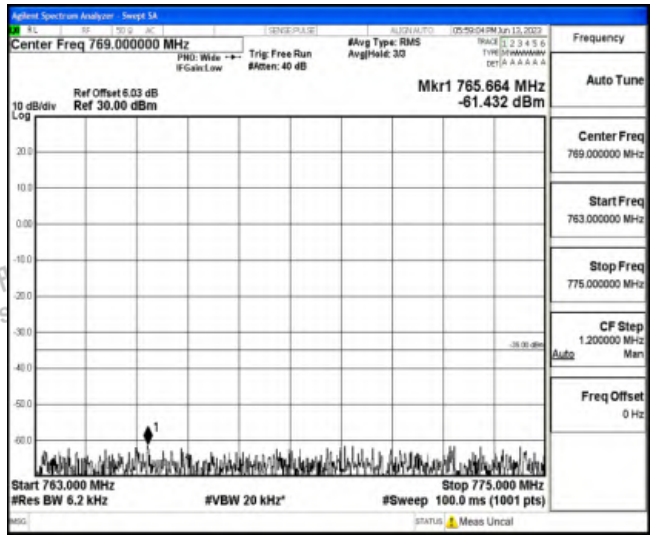
Band13-5MHz-16QAM-23255-1RB#0-Range2:0.15~30MHz



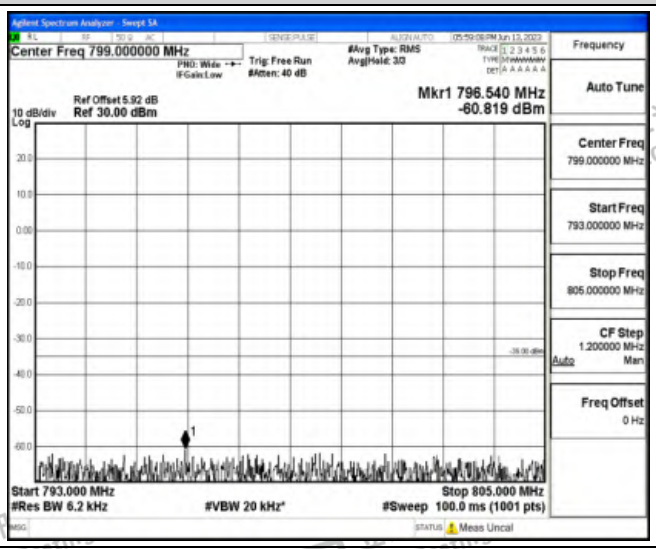
Band13-5MHz-16QAM-23255-1RB#0-Range3:30~1000MHz



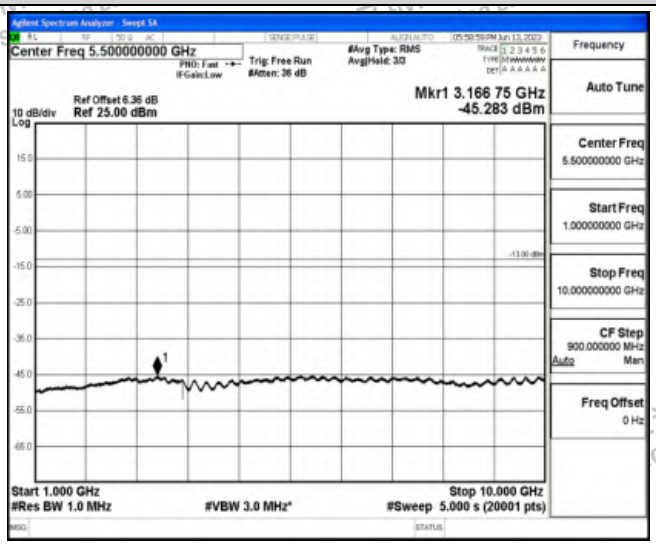
Band13-5MHz-16QAM-23255-1RB#0-Range5:763~775MHz



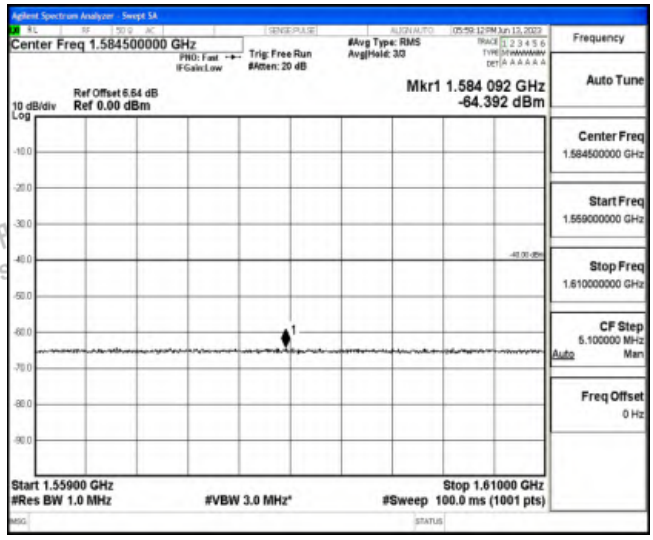
Band13-5MHz-16QAM-23255-1RB#0-Range6:793~805MHz



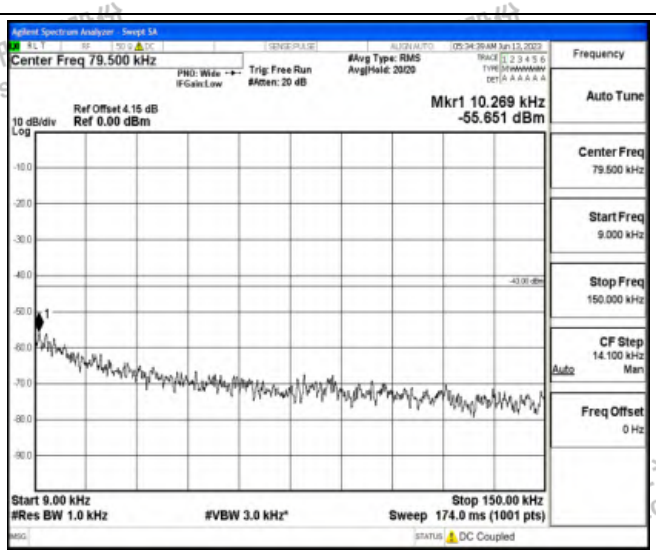
Band13-5MHz-16QAM-23255-1RB#0-Range4:1000~10000MHz



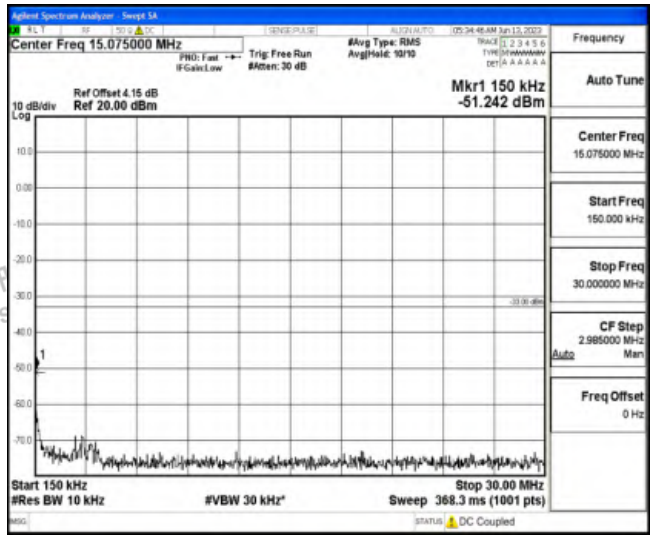
Band13-5MHz-16QAM-23255-1RB#0-Range7:1559~1610MHz



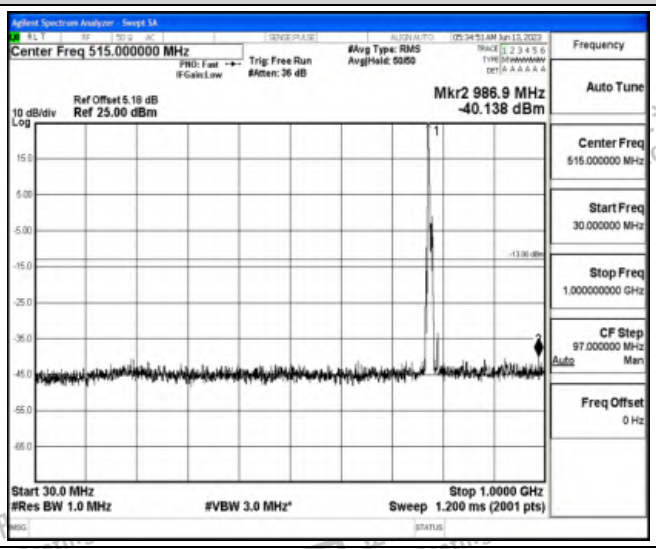
Band13-10MHz-QPSK-23230-1RB#0-Range1:0.009~0.15MHz



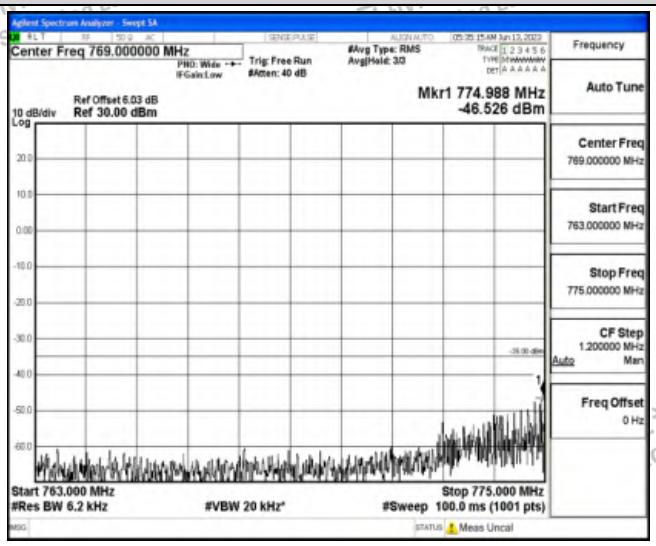
Band13-10MHz-QPSK-23230-1RB#0-Range2:0.15~30MHz



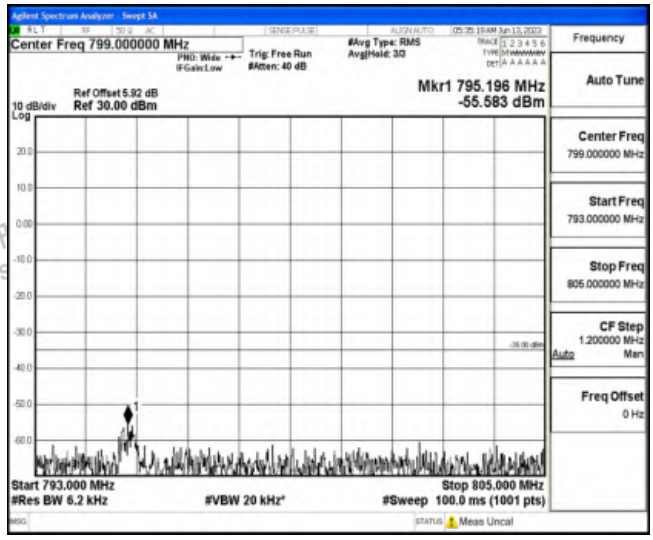
Band13-10MHz-QPSK-23230-1RB#0-Range3:30~1000MHz



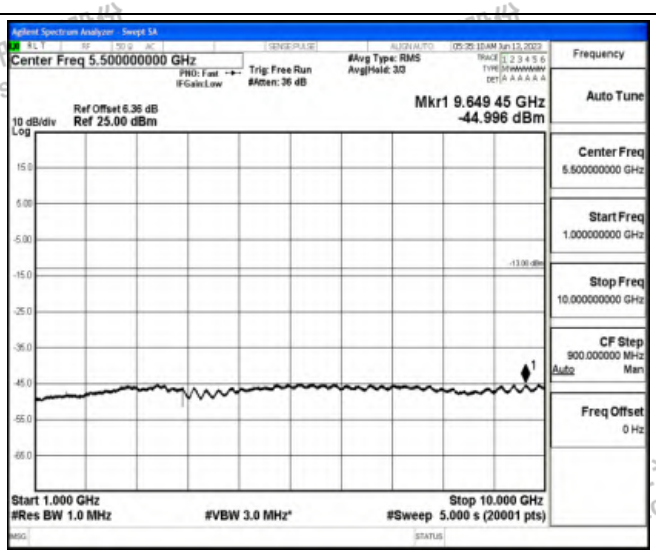
Band13-10MHz-QPSK-23230-1RB#0-Range5:763~775MHz



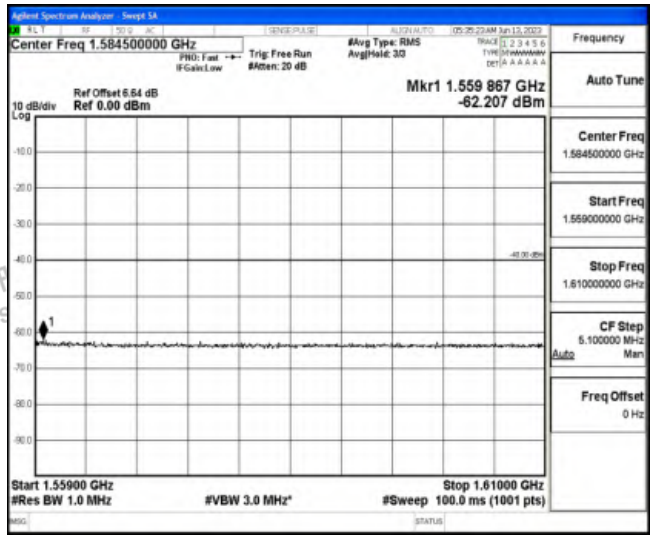
Band13-10MHz-QPSK-23230-1RB#0-Range6:793~805MHz



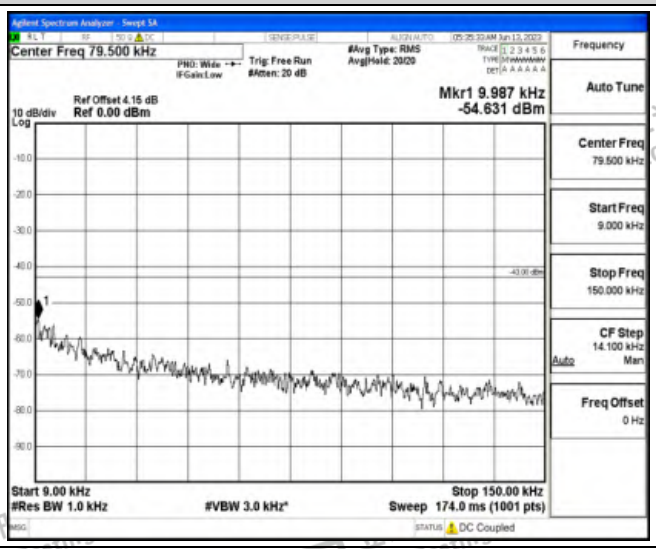
Band13-10MHz-QPSK-23230-1RB#0-Range4:1000~10000MHz



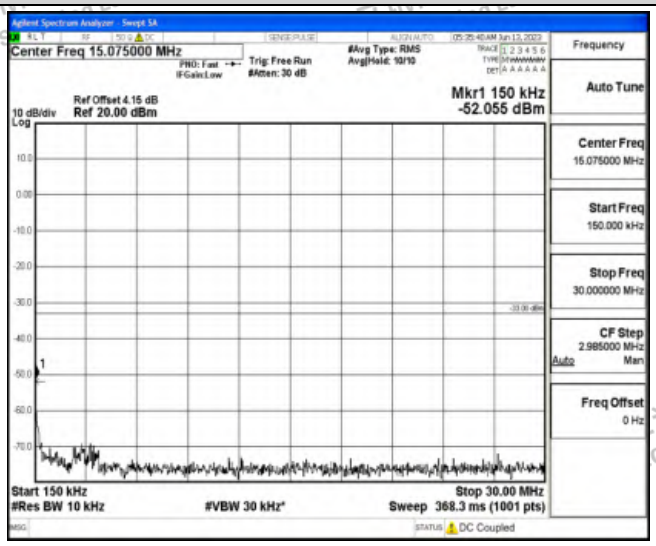
Band13-10MHz-QPSK-23230-1RB#0-Range7:1559~1610MHz



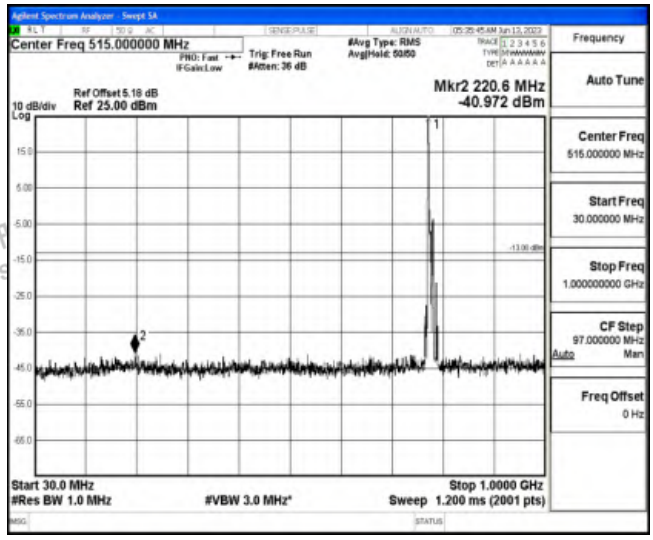
Band13-10MHz-16QAM-23230-1RB#0-Range1:0.009~0.15MHz



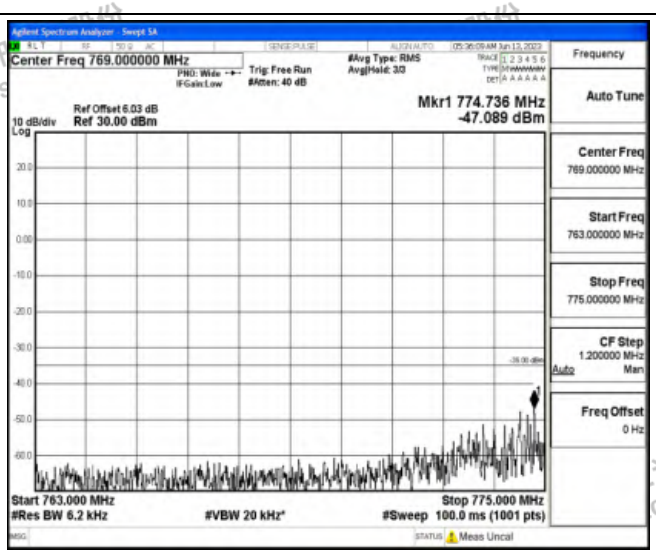
Band13-10MHz-16QAM-23230-1RB#0-Range2:0.15~30MHz



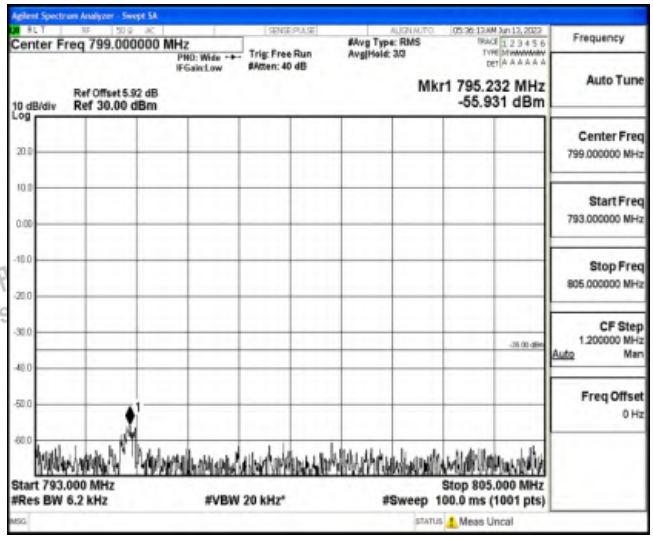
Band13-10MHz-16QAM-23230-1RB#0-Range3:30~1000MHz



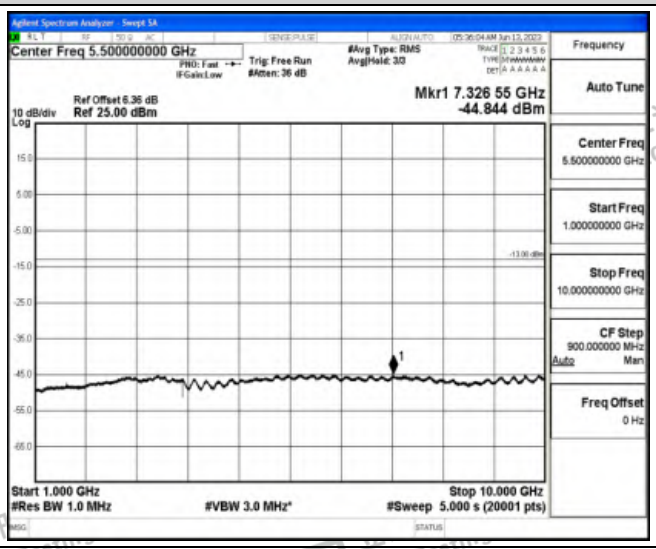
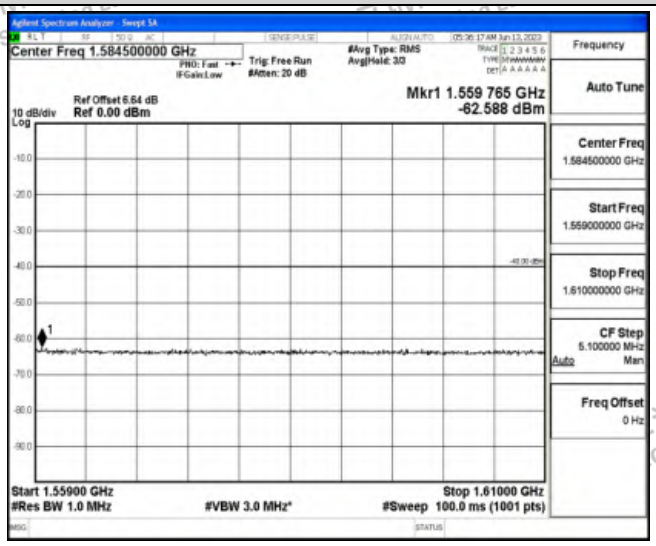
Band13-10MHz-16QAM-23230-1RB#0-Range5:763~775MHz



Band13-10MHz-16QAM-23230-1RB#0-Range6:793~805MHz



Band13-10MHz-16QAM-23230-1RB#0-Range4:1000~10000MHz



Band13-10MHz-16QAM-23230-1RB#0-Range7:1559~1610MHz