Appendix H: Test Data for E-UTRA Band 13

Product Name: MOBILE PHONE
Test Model: PADUA

Environmental Conditions

Temperature:	23.9 ° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan

H.1 Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	22.68	PASS
Band13	5MHz	QPSK	23205	1RB#12	22.84	PASS
Band13	5MHz	QPSK	23205	1RB#24	22.65	PASS
Band13	5MHz	QPSK	23205	12RB#0	21.81	PASS
Band13	5MHz	QPSK	23205	12RB#6	21.78	PASS
Band13	5MHz	QPSK	23205	12RB#13	21.69	PASS
Band13	5MHz	QPSK	23205	25RB#0	21.77	PASS
Band13	5MHz	QPSK	23230	1RB#0	22.77	PASS
Band13	5MHz	QPSK	23230	1RB#12	22.91	PASS
Band13	5MHz	QPSK	23230	1RB#24	22.71	PASS
Band13	5MHz	QPSK	23230	12RB#0	21.72	PASS
Band13	5MHz	QPSK	23230	12RB#6	21.74	PASS
Band13	5MHz	QPSK	23230	12RB#13	21.87	PASS
Band13	5MHz	QPSK	23230	25RB#0	21.83	PASS
Band13	5MHz	QPSK	23255	1RB#0	22.82	PASS
Band13	5MHz	QPSK	23255	1RB#12	22.92	PASS
Band13	5MHz	QPSK	23255	1RB#24	22.72	PASS
Band13	5MHz	QPSK	23255	12RB#0	21.68	PASS
Band13	5MHz	QPSK	23255	12RB#6	21.63	PASS
Band13	5MHz	QPSK	23255	12RB#13	21.73	PASS
Band13	5MHz	QPSK	23255	25RB#0	21.68	PASS
Band13	5MHz	16QAM	23205	1RB#0	21.61	PASS
Band13	5MHz	16QAM	23205	1RB#12	21.69	PASS
Band13	5MHz	16QAM	23205	1RB#24	21.49	PASS
Band13	5MHz	16QAM	23205	12RB#0	20.79	PASS
Band13	5MHz	16QAM	23205	12RB#6	20.71	PASS
Band13	5MHz	16QAM	23205	12RB#13	20.67	PASS
Band13	5MHz	16QAM	23205	25RB#0	20.66	PASS
Band13	5MHz	16QAM	23230	1RB#0	21.77	PASS
Band13	5MHz	16QAM	23230	1RB#12	21.75	PASS
Band13	5MHz	16QAM	23230	1RB#24	21.57	PASS
Band13	5MHz	16QAM	23230	12RB#0	20.74	PASS
Band13	5MHz	16QAM	23230	12RB#6	20.67	PASS

Band13	5MHz	16QAM	23230	12RB#13	20.82	PASS
Band13	5MHz	16QAM	23230	25RB#0	20.71	PASS
Band13	5MHz	16QAM	23255	1RB#0	21.76	PASS
Band13	5MHz	16QAM	23255	1RB#12	21.70	PASS
Band13	5MHz	16QAM	23255	1RB#24	21.61	PASS
Band13	5MHz	16QAM	23255	12RB#0	20.57	PASS
Band13	5MHz	16QAM	23255	12RB#6	20.62	PASS
Band13	5MHz	16QAM	23255	12RB#13	20.76	PASS
Band13	5MHz	16QAM	23255	25RB#0	20.64	PASS
Band13	10MHz	QPSK	23230	1RB#0	22.83	PASS
Band13	10MHz	QPSK	23230	1RB#24	22.98	PASS
Band13	10MHz	QPSK	23230	1RB#49	22.74	PASS
Band13	10MHz	QPSK	23230	25RB#0	21.95	PASS
Band13	10MHz	QPSK	23230	25RB#12	21.93	PASS
Band13	10MHz	QPSK	23230	25RB#25	21.95	PASS
Band13	10MHz	QPSK	23230	50RB#0	21.89	PASS
Band13	10MHz	16QAM	23230	1RB#0	21.74	PASS
Band13	10MHz	16QAM	23230	1RB#24	21.69	PASS
Band13	10MHz	16QAM	23230	1RB#49	21.46	PASS
Band13	10MHz	16QAM	23230	25RB#0	20.87	PASS
Band13	10MHz	16QAM	23230	25RB#12	20.91	PASS
Band13	10MHz	16QAM	23230	25RB#25	20.90	PASS
Band13	10MHz	16QAM	23230	50RB#0	20.89	PASS

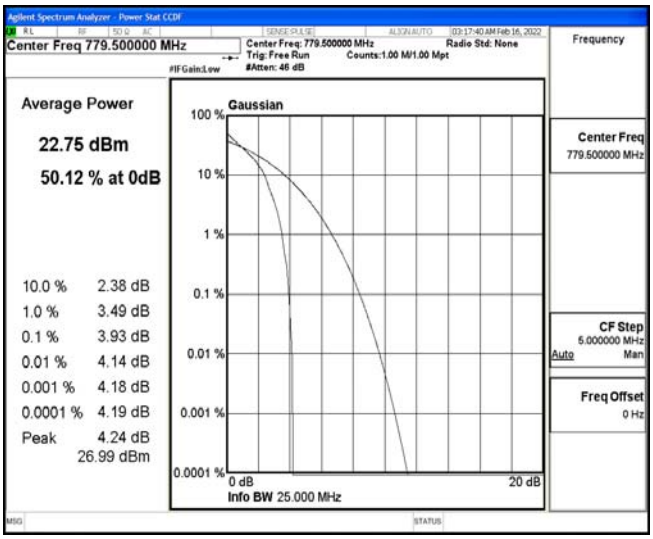
H.2 Peak-to-Average Ratio(CCDF)

Test Result

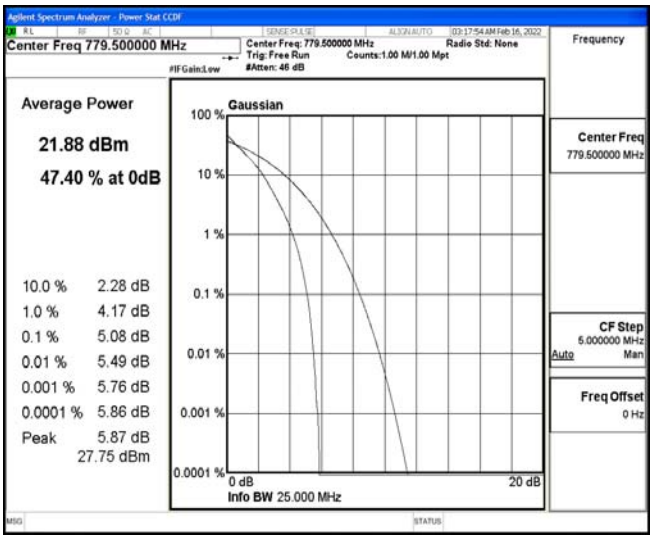
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	3.93	13	PASS
Band13	5MHz	QPSK	23205	25RB#0	5.08	13	PASS
Band13	5MHz	QPSK	23230	1RB#0	4.96	13	PASS
Band13	5MHz	QPSK	23230	25RB#0	5.00	13	PASS
Band13	5MHz	QPSK	23255	1RB#0	4.49	13	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.57	13	PASS
Band13	5MHz	16QAM	23205	1RB#0	4.33	13	PASS
Band13	5MHz	16QAM	23205	25RB#0	5.71	13	PASS
Band13	5MHz	16QAM	23230	1RB#0	5.29	13	PASS
Band13	5MHz	16QAM	23230	25RB#0	5.78	13	PASS
Band13	5MHz	16QAM	23255	1RB#0	5.35	13	PASS
Band13	5MHz	16QAM	23255	25RB#0	5.44	13	PASS
Band13	10MHz	QPSK	23230	1RB#0	3.93	13	PASS
Band13	10MHz	QPSK	23230	50RB#0	4.79	13	PASS
Band13	10MHz	16QAM	23230	1RB#0	4.62	13	PASS
Band13	10MHz	16QAM	23230	50RB#0	5.55	13	PASS

Test Graphs

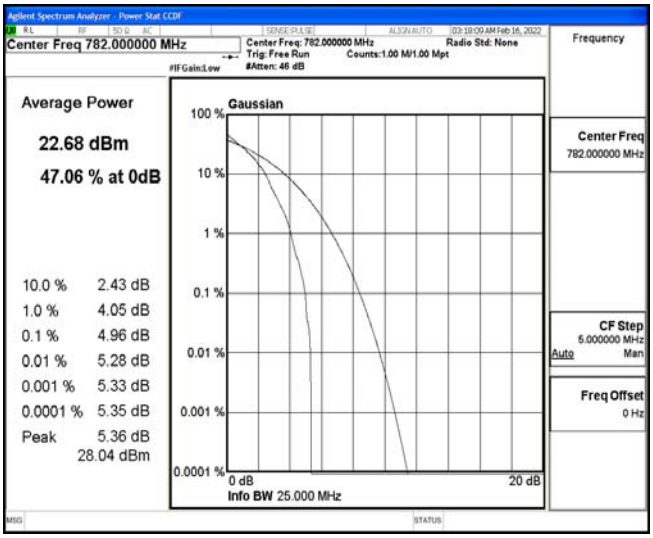
Band13-5MHz-QPSK-23205-1RB#0



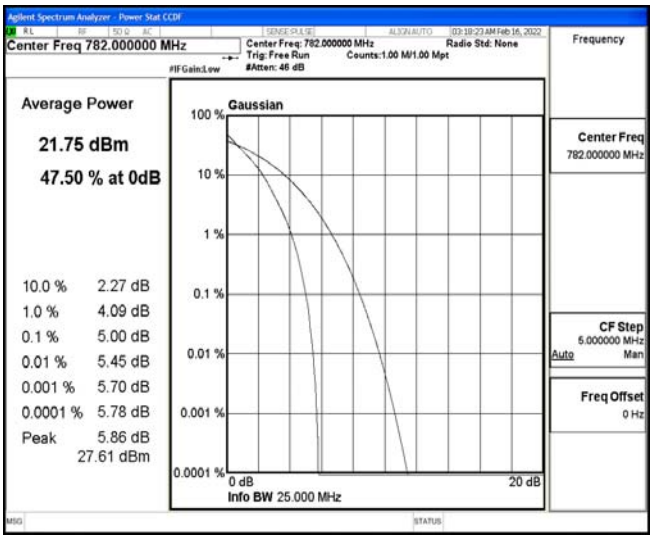
Band13-5MHz-QPSK-23205-25RB#0



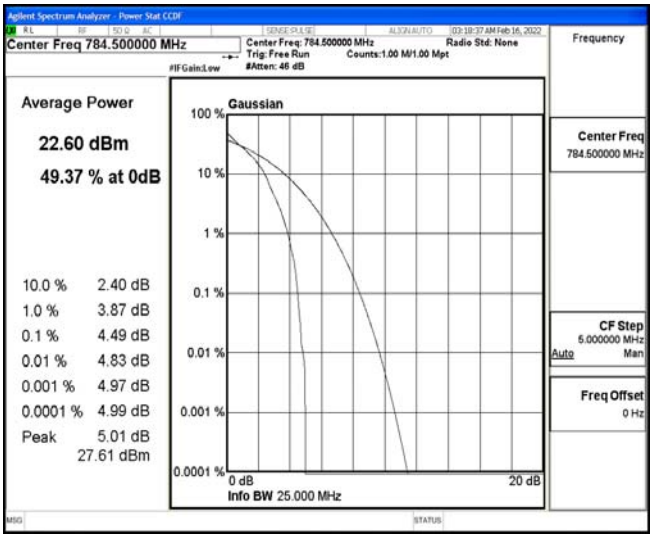
Band13-5MHz-QPSK-23230-1RB#0



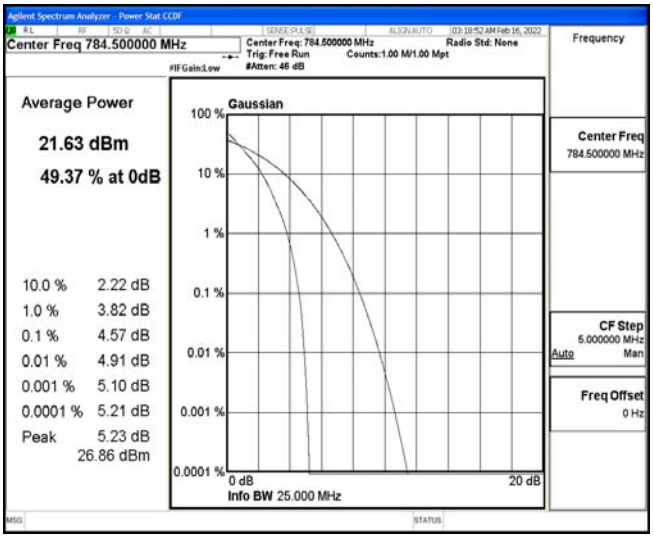
Band13-5MHz-QPSK-23230-25RB#0



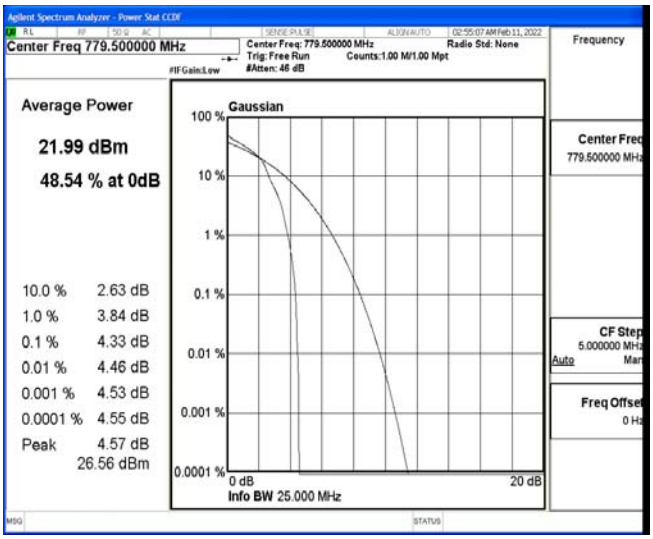
Band13-5MHz-QPSK-23255-1RB#0



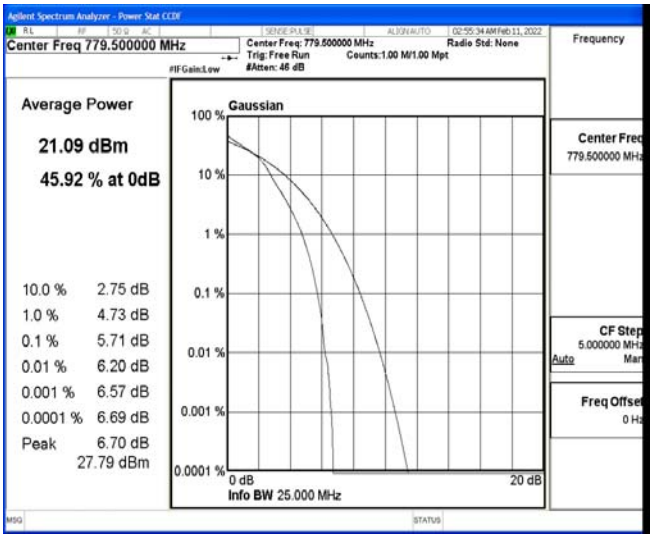
Band13-5MHz-QPSK-23255-25RB#0



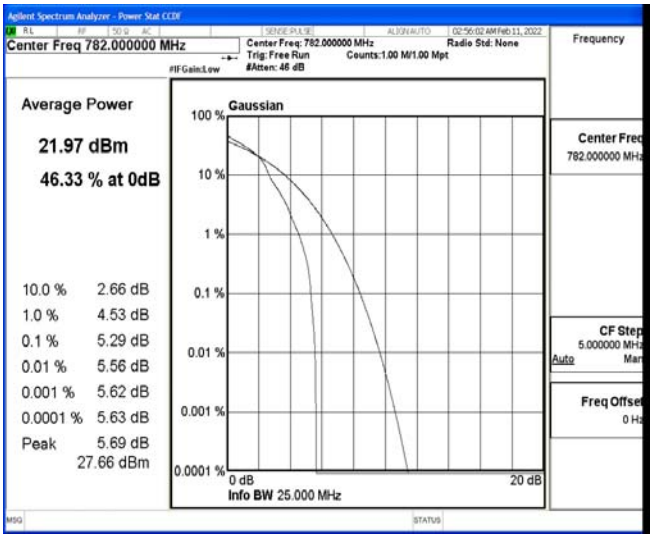
Band13-5MHz-16QAM-23205-1RB#0



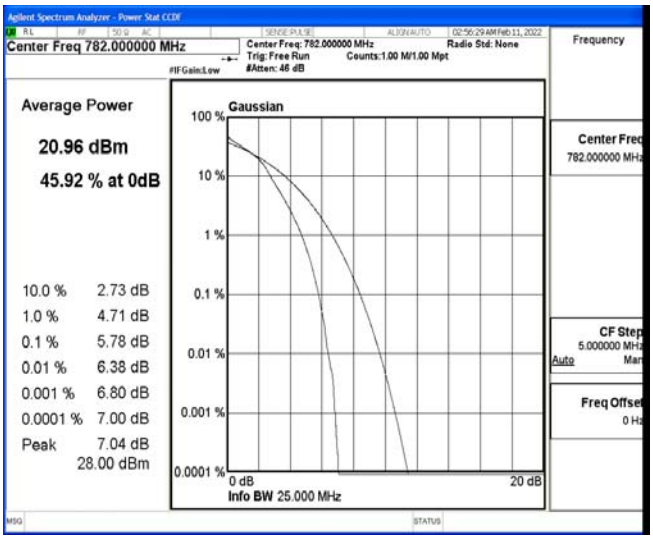
Band13-5MHz-16QAM-23205-25RB#0



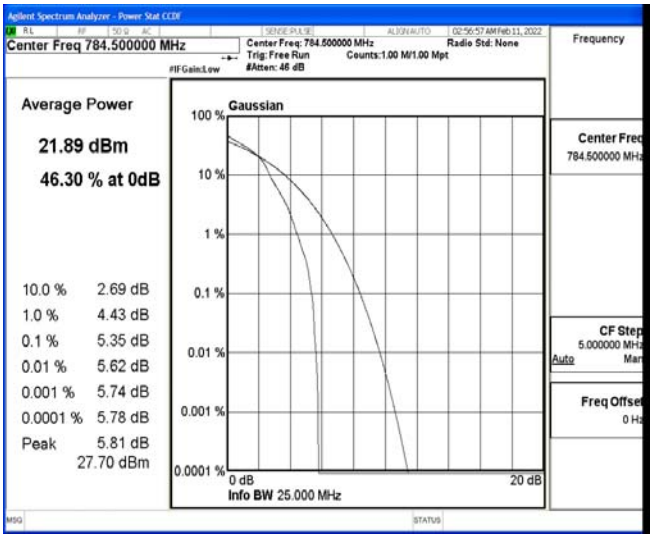
Band13-5MHz-16QAM-23230-1RB#0



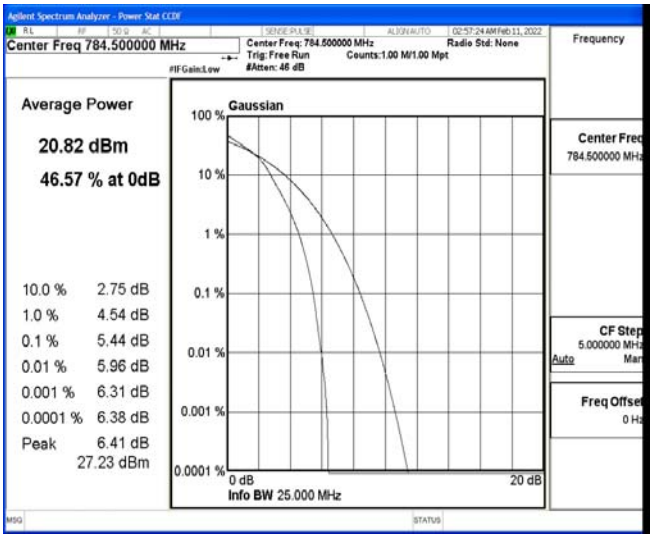
Band13-5MHz-16QAM-23230-25RB#0



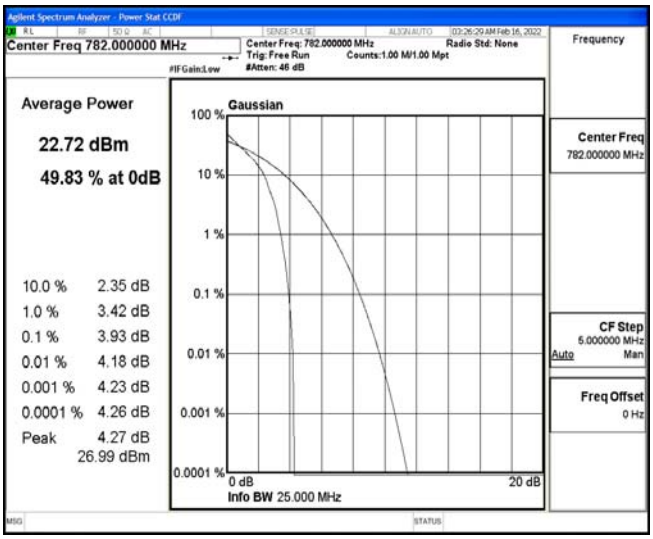
Band13-5MHz-16QAM-23255-1RB#0



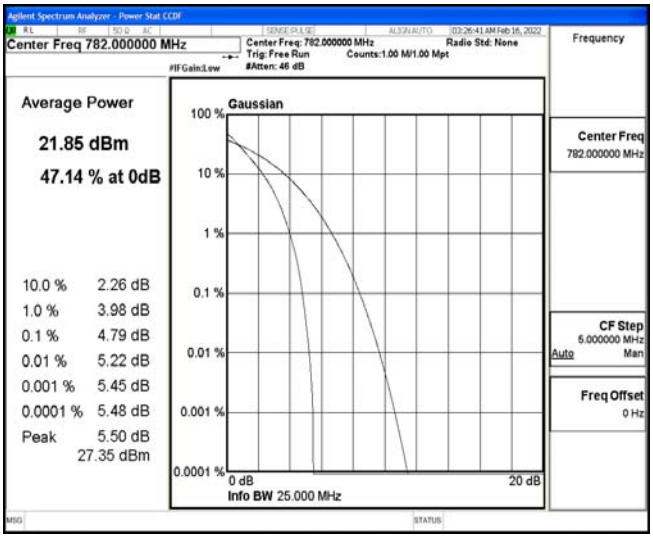
Band13-5MHz-16QAM-23255-25RB#0



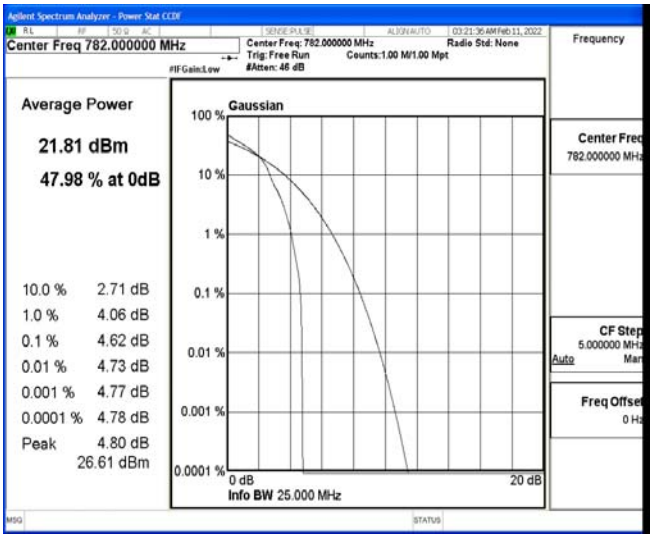
Band13-10MHz-QPSK-23230-1RB#0



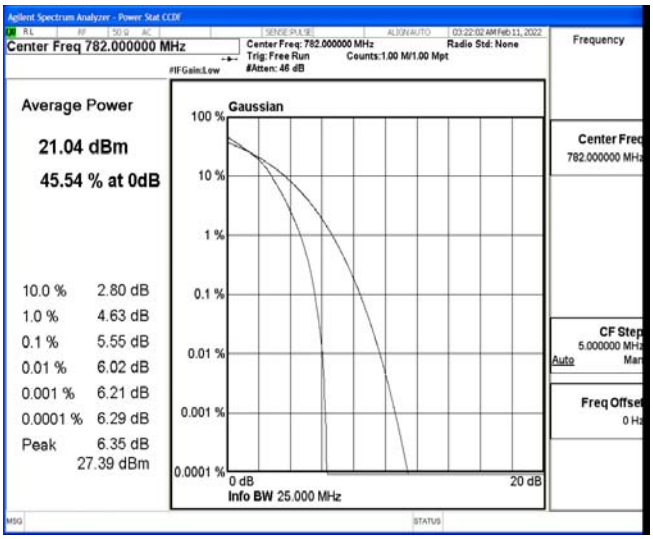
Band13-10MHz-QPSK-23230-50RB#0



Band13-10MHz-16QAM-23230-1RB#0



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

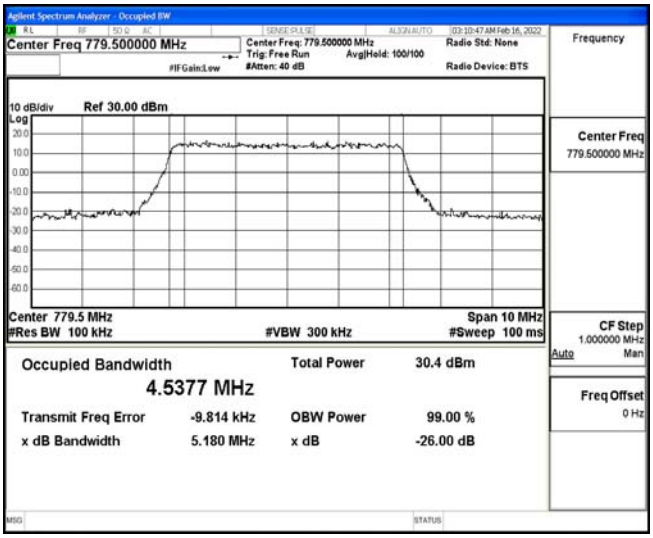


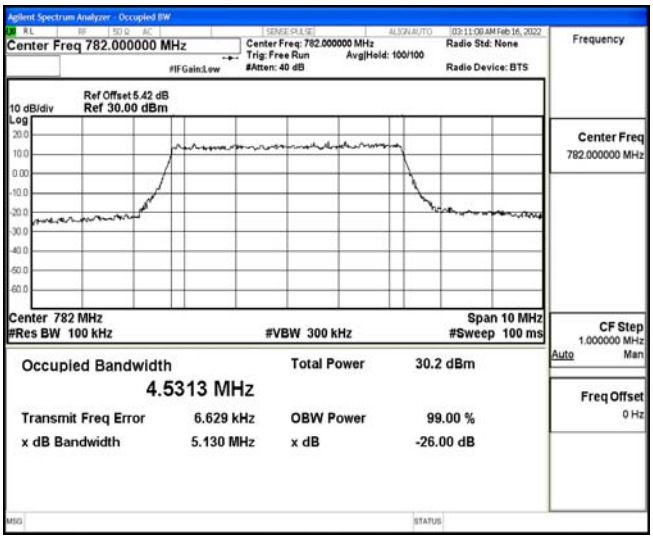
H.3 26dB Bandwidth and Occupied Bandwidth

Test Result

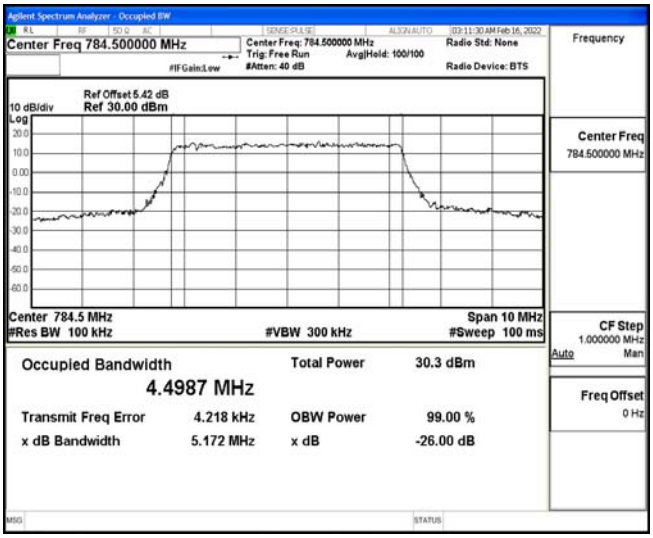
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.5377	5.180	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.5313	5.130	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.4987	5.172	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.5253	5.215	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.5383	5.240	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.5122	5.199	PASS
Band13	10MHz	QPSK	23230	50RB#0	9.0359	10.22	PASS
Band13	10MHz	16QAM	23230	50RB#0	9.0241	10.04	PASS

Test Graphs

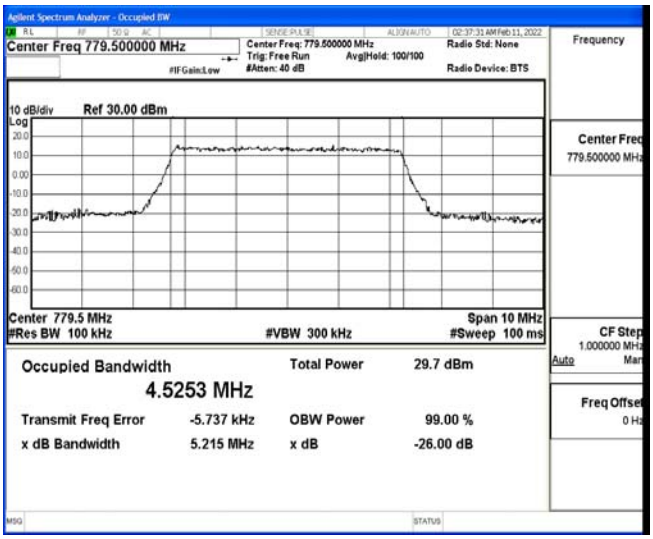
Band13-5MHz-QPSK-23205-25RB#0


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


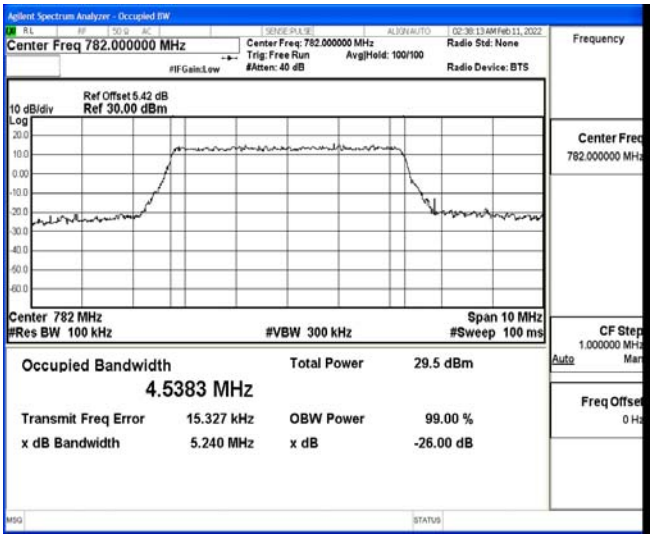
Band13-5MHz-QPSK-23255-25RB#0



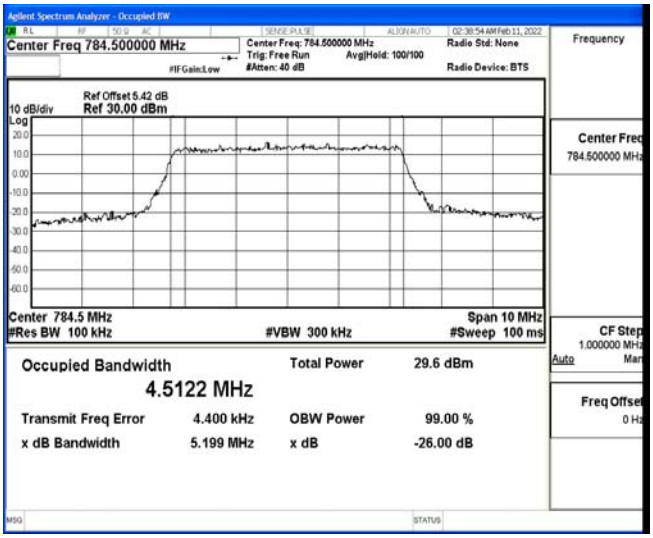
Band13-5MHz-16QAM-23205-25RB#0



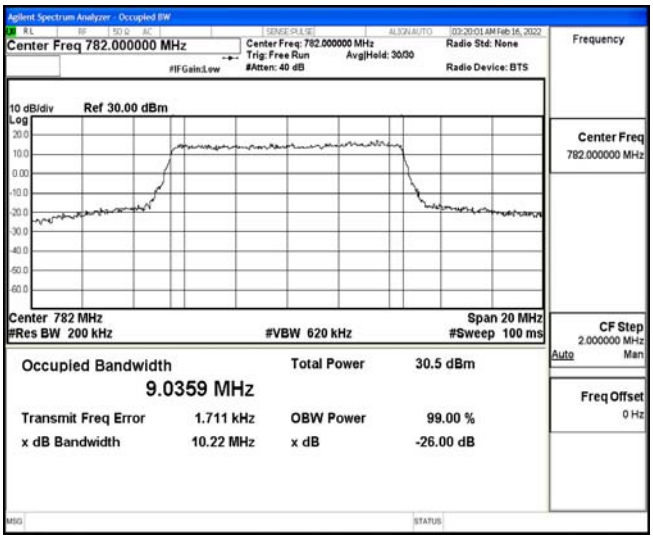
Band13-5MHz-16QAM-23230-25RB#0



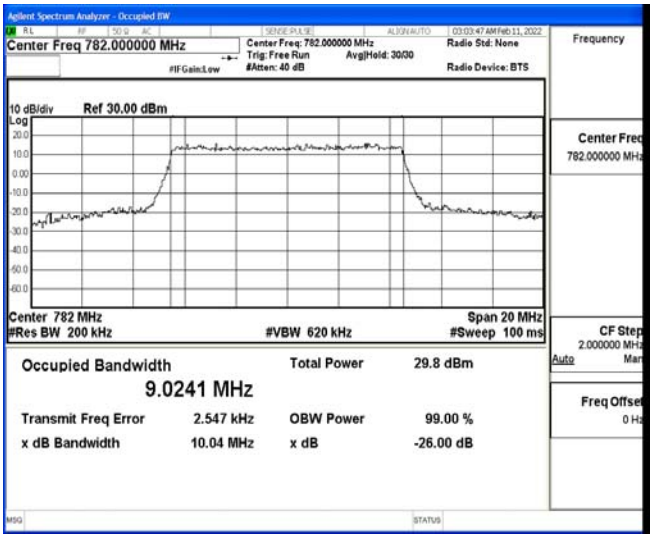
Band13-5MHz-16QAM-23255-25RB#0



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



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



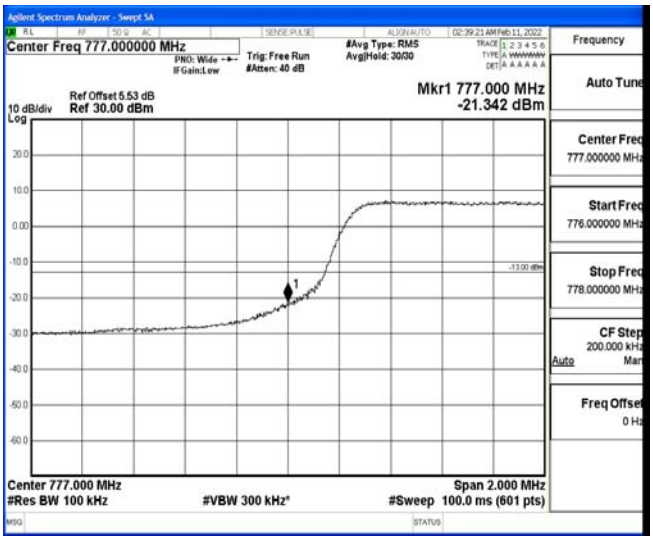
H.4 Band Edge

Test Result

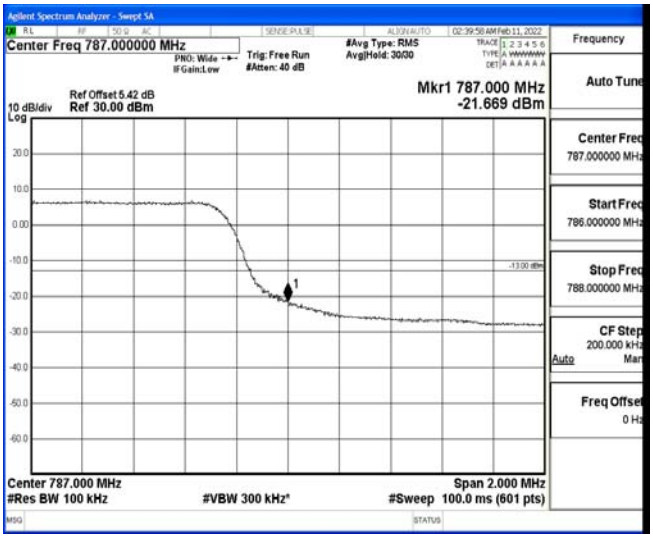
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	-21.34	PASS
Band13	5MHz	QPSK	23255	25RB#0	-21.67	PASS
Band13	5MHz	16QAM	23205	25RB#0	-21.92	PASS
Band13	5MHz	16QAM	23255	25RB#0	-22.22	PASS
Band13	10MHz	QPSK	23230	50RB#0	-24.14,-23.87	PASS
Band13	10MHz	16QAM	23230	50RB#0	-29.25,-29.66	PASS

Test Graphs

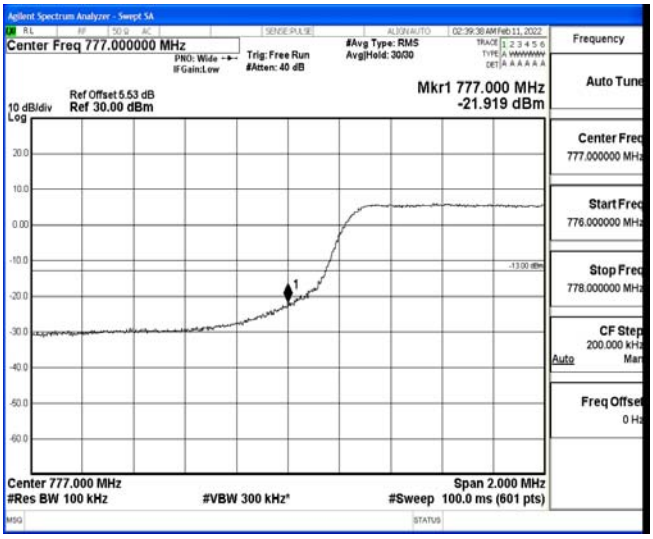
Band13-5MHz-QPSK-23205-25RB#0



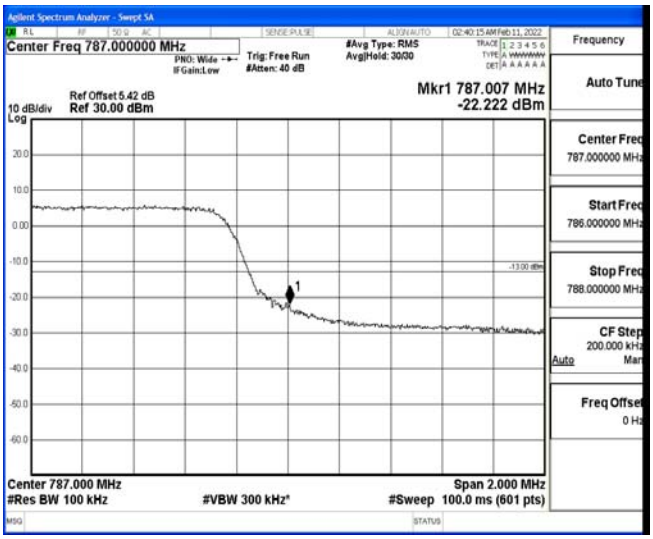
Band13-5MHz-QPSK-23255-25RB#0



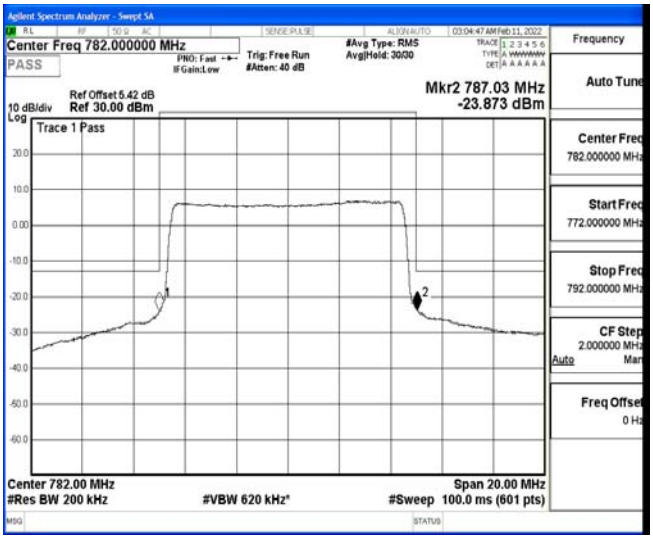
Band13-5MHz-16QAM-23205-25RB#0



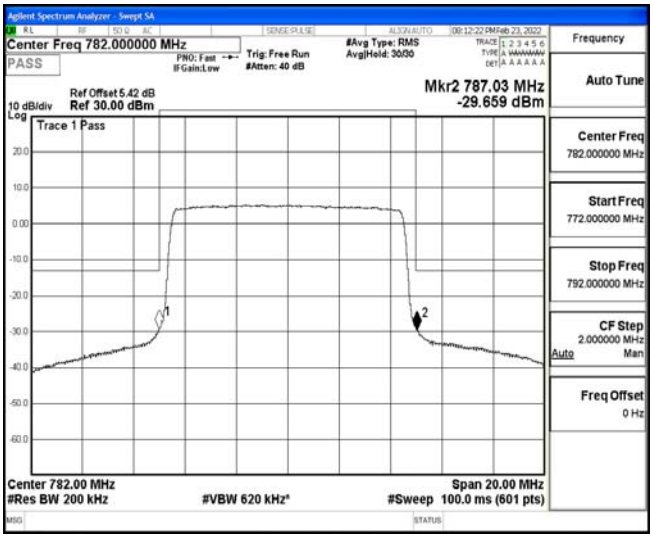
Band13-5MHz-16QAM-23255-25RB#0



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



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


Agilent Spectrum Analyzer - Swept SA
Center Freq 782.000000 MHz
PASS
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
#Avg Type: RMS
Avg|Hold: 30/50
Frequency
Auto Tune
Ref Offset 5.42 dB
10 dB/div Ref 30.00 dBm
Log
Mkr2 787.03 MHz
-29.659 dBm
Trace 1 Pass
Center Freq
782.000000 MHz
Start Freq
772.000000 MHz
Stop Freq
792.000000 MHz
CF Step
2.000000 MHz
Auto Man
Freq Offset
0 Hz
Center 782.00 MHz
#Res BW 200 kHz
#VBW 620 kHz*
Span 20.00 MHz
#Sweep 100.0 ms (601 pts)

H.5 Conducted Spurious Emission

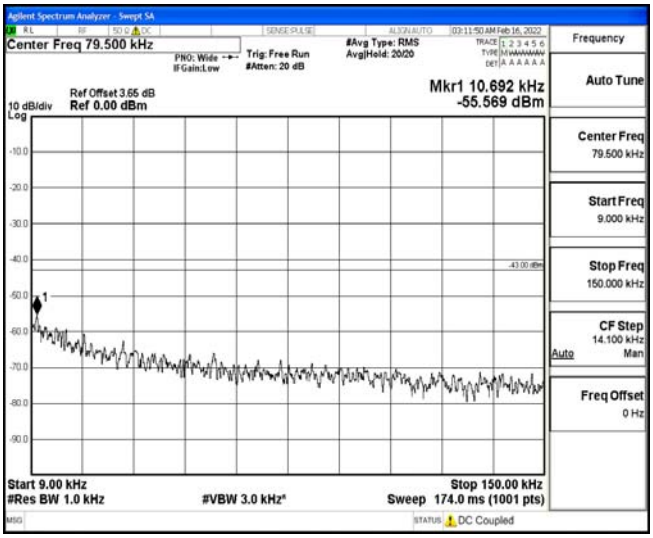
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	Range1:0.009~0.15MHz	-55.57	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range2:0.15~30MHz	-51.97	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range3:30~1000MHz	-40.9	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range5:763~775MHz	-53	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range6:793~805MHz	-60.53	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range4:1000~10000MHz	-45.43	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range7:1559~1610MHz	-63	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range1:0.009~0.15MHz	-54.82	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range2:0.15~30MHz	-52.8	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range3:30~1000MHz	-41.23	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range5:763~775MHz	-60.99	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range6:793~805MHz	-61.17	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range4:1000~10000MHz	-45.27	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range7:1559~1610MHz	-64.54	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range1:0.009~0.15MHz	-56.04	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range2:0.15~30MHz	-50.9	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range3:30~1000MHz	-41.41	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range5:763~775MHz	-61.07	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range6:793~805MHz	-60.17	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range4:1000~10000MHz	-45.4	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range7:1559~1610MHz	-64.5	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range1:0.009~0.15MHz	-55.38	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range2:0.15~30MHz	-51.15	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range3:30~1000MHz	-41.81	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range5:763~775MHz	-56.47	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range6:793~805MHz	-61.49	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range4:1000~10000MHz	-45.4	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range7:1559~1610MHz	-63.17	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range1:0.009~0.15MHz	-56.15	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range2:0.15~30MHz	-51.98	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range3:30~1000MHz	-40.69	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range5:763~775MHz	-61.05	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range6:793~805MHz	-60.76	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range4:1000~10000MHz	-45.42	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range7:1559~1610MHz	-64.63	PASS

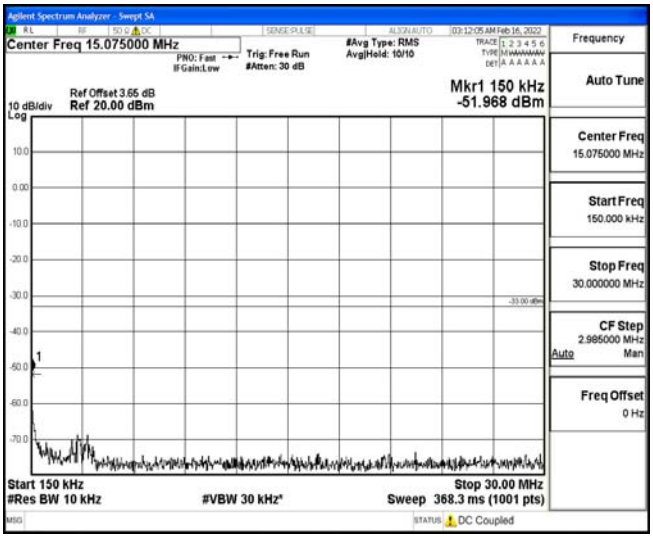
Band13	5MHz	16QAM	23255	1RB#0	Range1:0.009~0.15MHz	-56.56	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range2:0.15~30MHz	-51.79	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range3:30~1000MHz	-41.1	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range5:763~775MHz	-60.03	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range6:793~805MHz	-60.89	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range4:1000~10000MHz	-45.38	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range7:1559~1610MHz	-64.29	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range1:0.009~0.15MHz	-56.98	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range2:0.15~30MHz	-52.22	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range3:30~1000MHz	-41.61	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range5:763~775MHz	-49.62	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range6:793~805MHz	-55.8	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range4:1000~10000MHz	-45.52	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range7:1559~1610MHz	-62.79	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range1:0.009~0.15MHz	-56.52	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range2:0.15~30MHz	-53.24	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range3:30~1000MHz	-40.88	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range5:763~775MHz	-50.55	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range6:793~805MHz	-55.68	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range4:1000~10000MHz	-45.34	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range7:1559~1610MHz	-62.95	PASS

Test Graphs

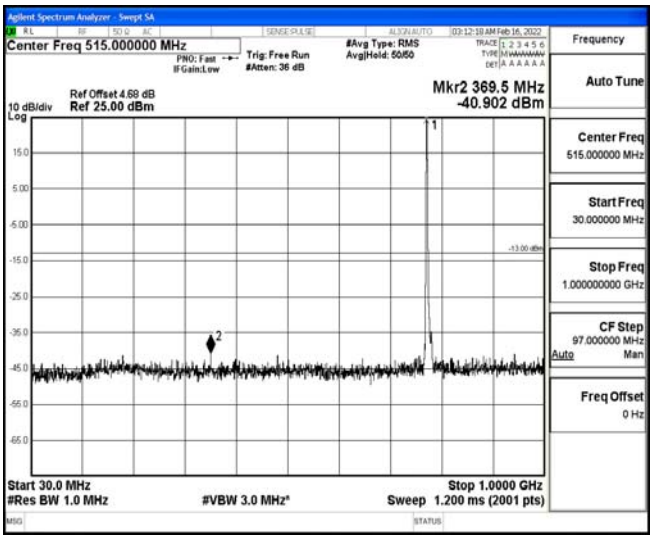
Band13-5MHz-QPSK-23205-1RB#0-Range1:0.009~0.15MHz



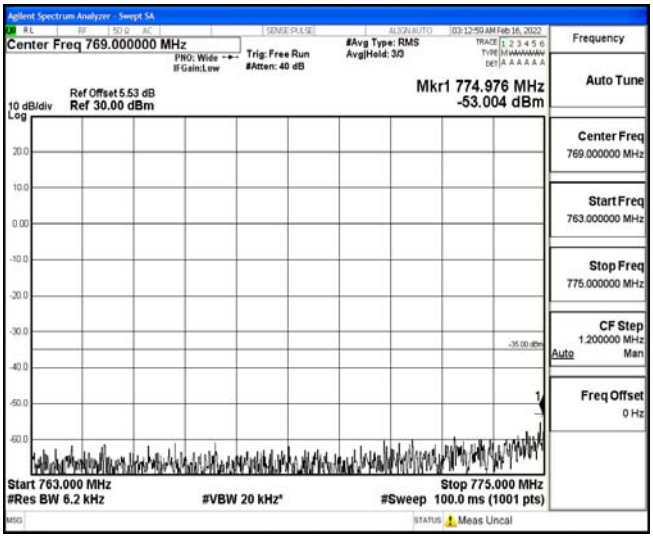
Band13-5MHz-QPSK-23205-1RB#0-Range2:0.15~30MHz



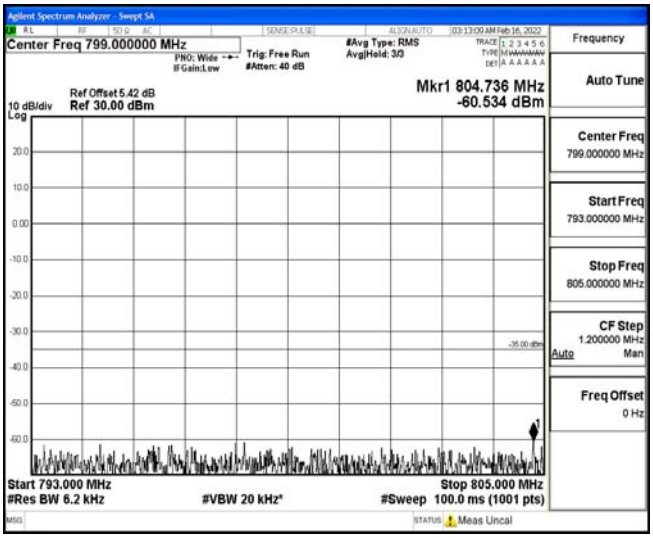
Band13-5MHz-QPSK-23205-1RB#0-Range3:30~1000MHz



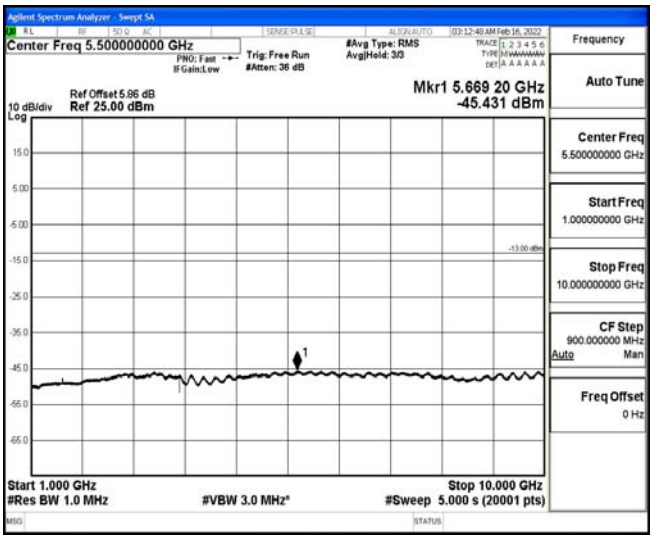
Band13-5MHz-QPSK-23205-1RB#0-Range5:763~775MHz



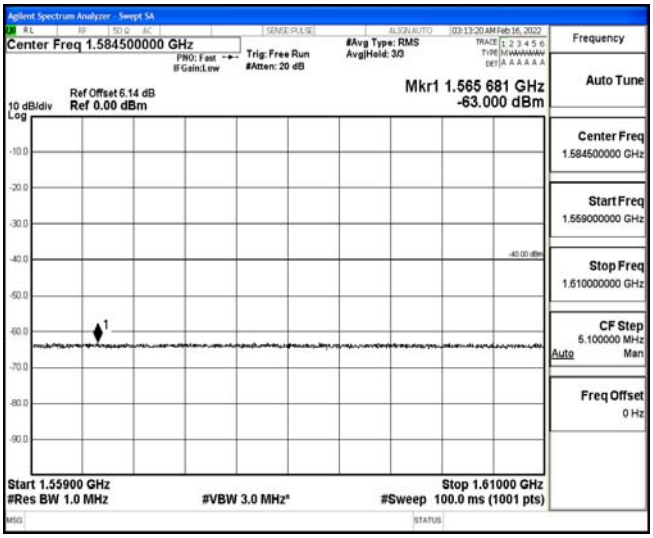
Band13-5MHz-QPSK-23205-1RB#0-Range6:793~805MHz



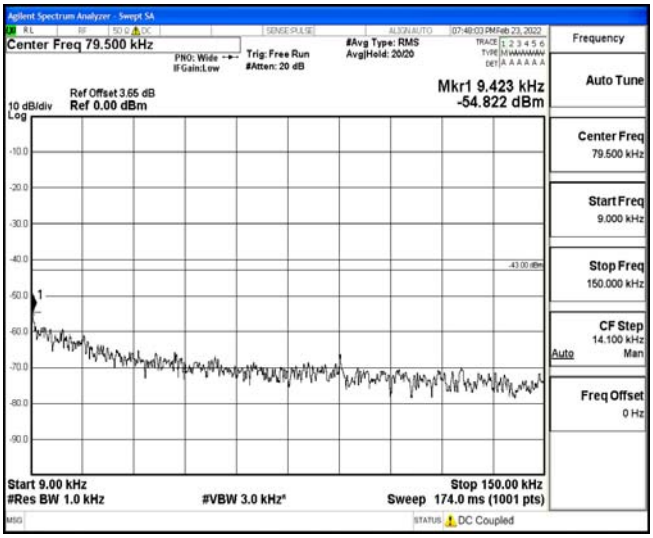
Band13-5MHz-QPSK-23205-1RB#0-Range4:1000~10000MHz



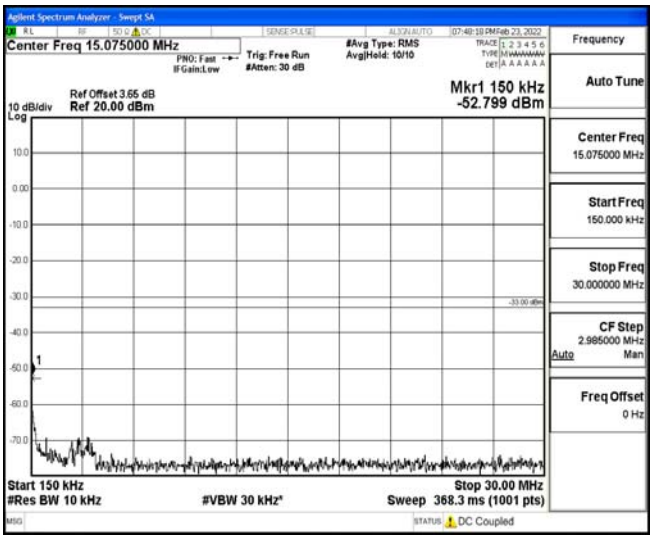
Band13-5MHz-QPSK-23205-1RB#0-Range7:1559~1610MHz



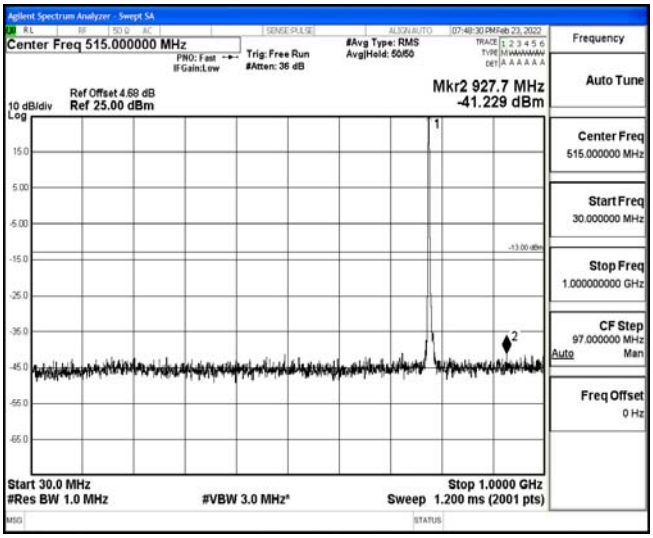
Band13-5MHz-QPSK-23230-1RB#0-Range1:0.009~0.15MHz



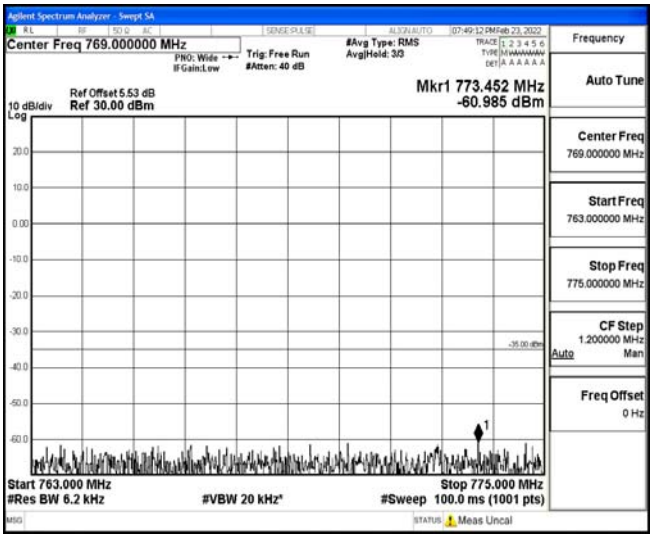
Band13-5MHz-QPSK-23230-1RB#0-Range2:0.15~30MHz



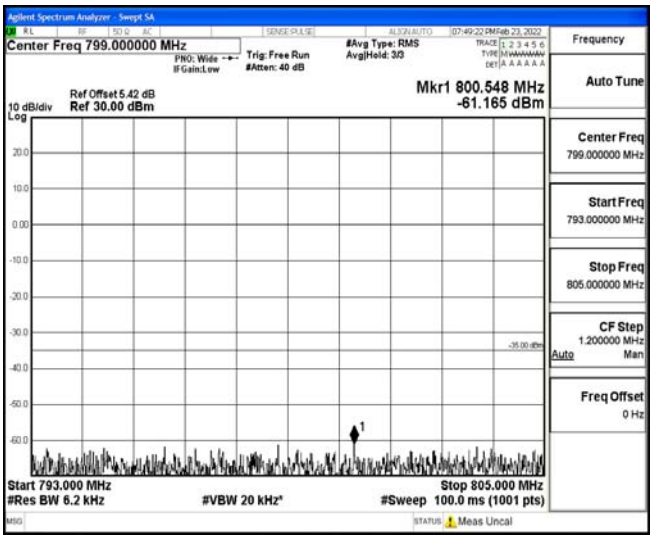
Band13-5MHz-QPSK-23230-1RB#0-Range3:30~1000MHz



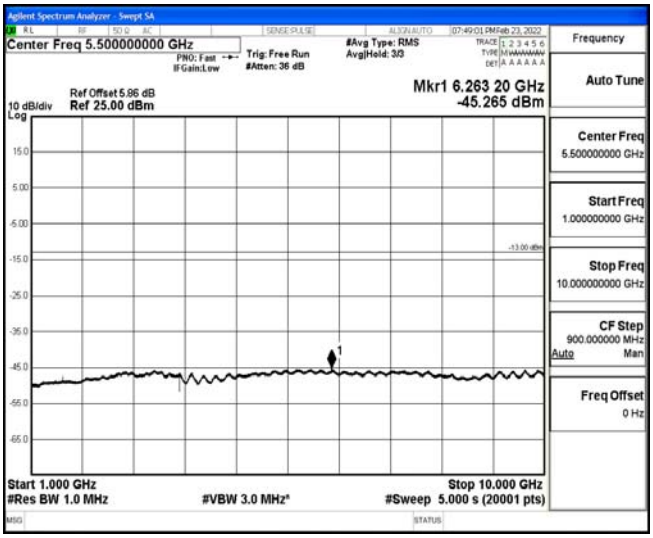
Band13-5MHz-QPSK-23230-1RB#0-Range5:763~775MHz



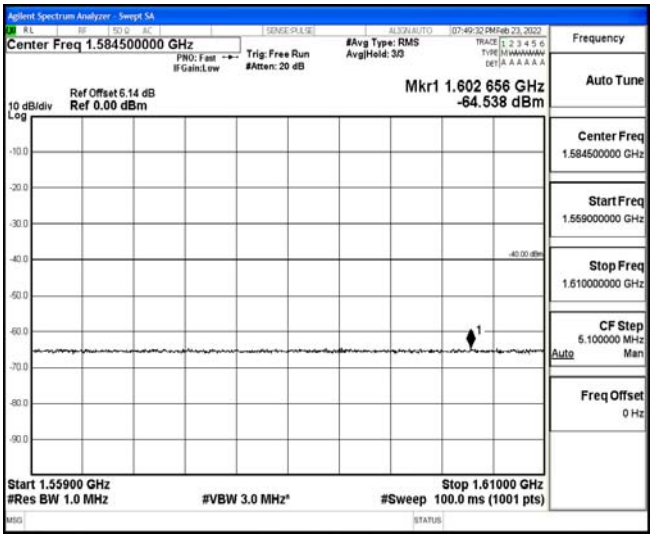
Band13-5MHz-QPSK-23230-1RB#0-Range6:793~805MHz



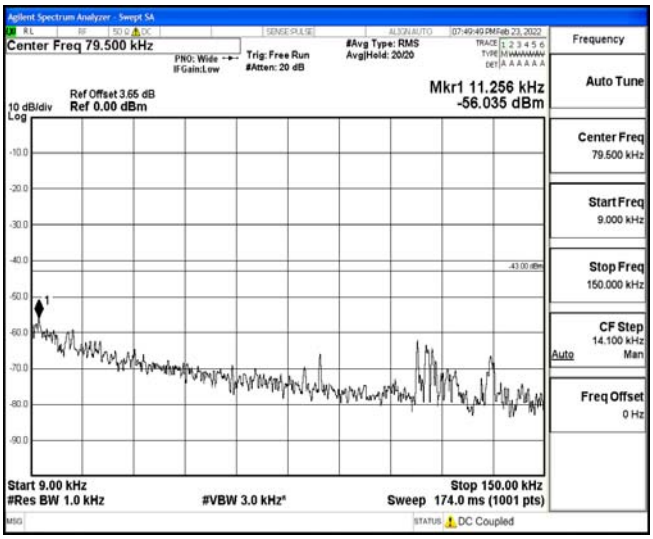
Band13-5MHz-QPSK-23230-1RB#0-Range4:1000~10000MHz



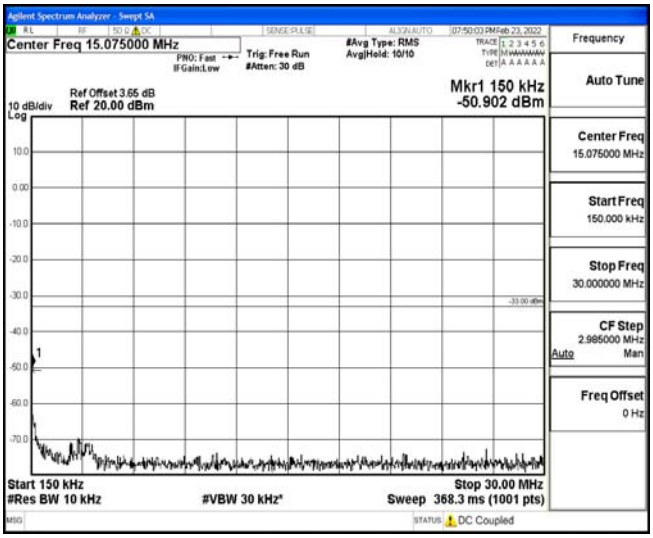
Band13-5MHz-QPSK-23230-1RB#0-Range7:1559~1610MHz



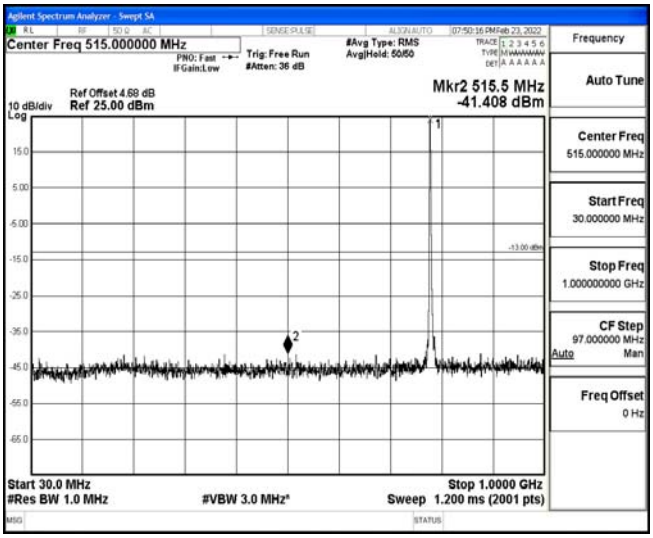
Band13-5MHz-QPSK-23255-1RB#0-Range1:0.009~0.15MHz



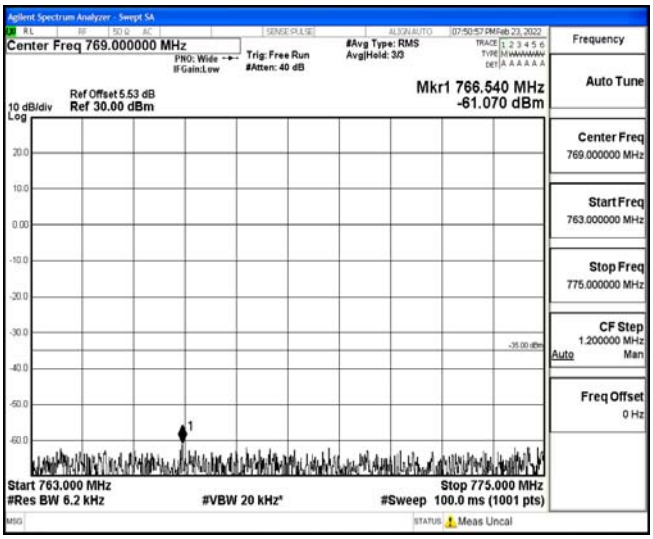
Band13-5MHz-QPSK-23255-1RB#0-Range2:0.15~30MHz



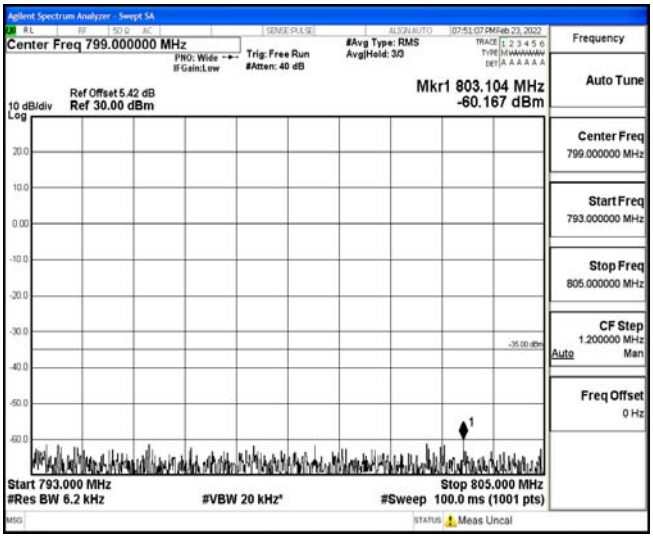
Band13-5MHz-QPSK-23255-1RB#0-Range3:30~1000MHz



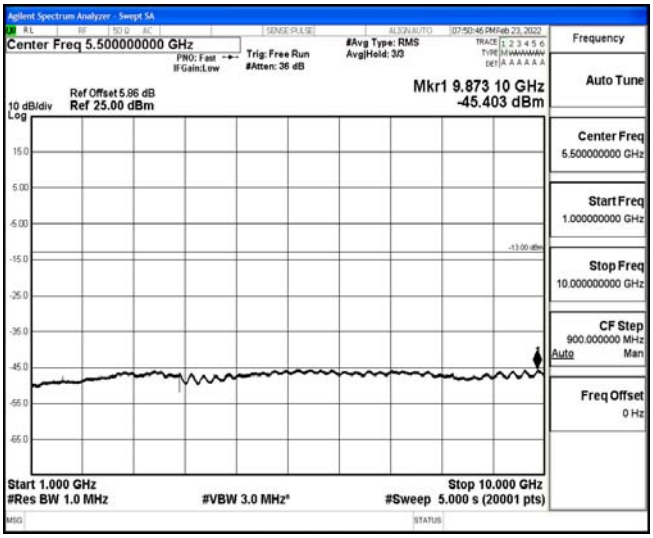
Band13-5MHz-QPSK-23255-1RB#0-Range5:763~775MHz



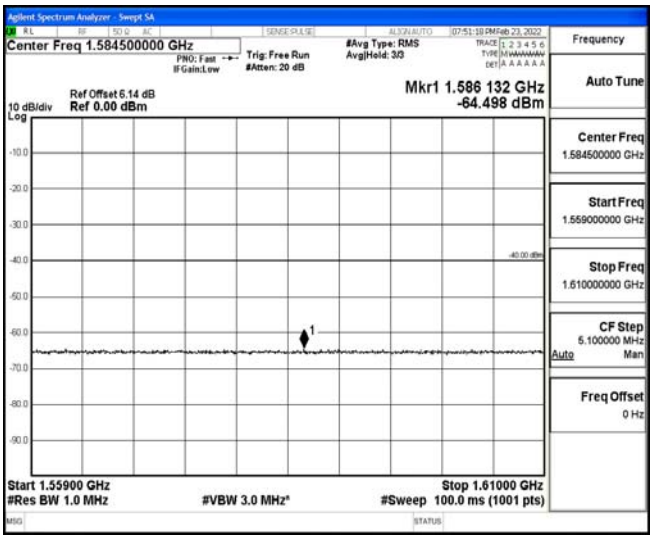
Band13-5MHz-QPSK-23255-1RB#0-Range6:793~805MHz



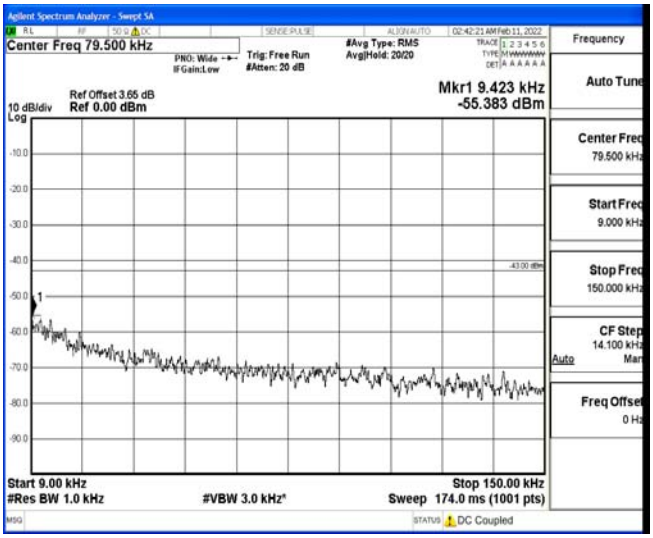
Band13-5MHz-QPSK-23255-1RB#0-Range4:1000~10000MHz



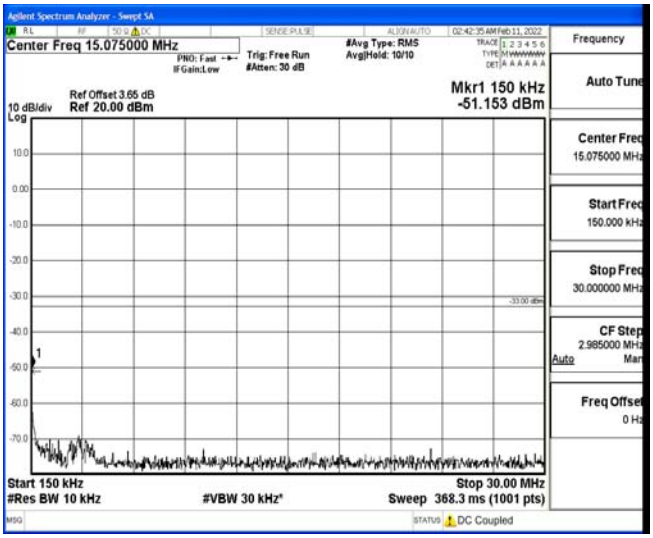
Band13-5MHz-QPSK-23255-1RB#0-Range7:1559~1610MHz



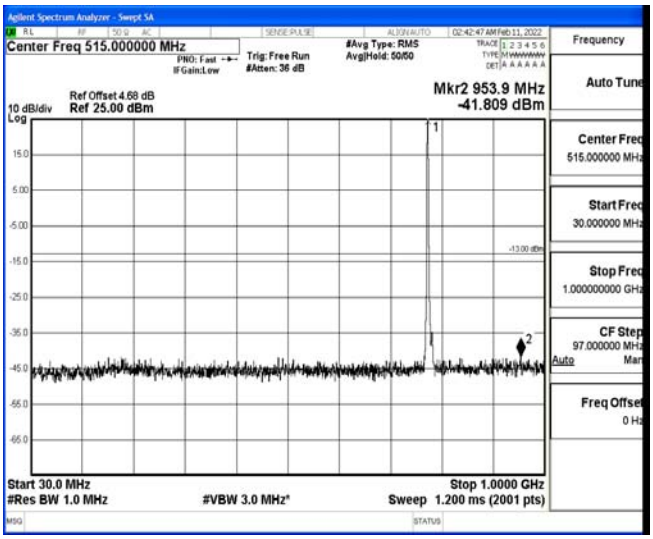
Band13-5MHz-16QAM-23205-1RB#0-Range1:0.009~0.15MHz



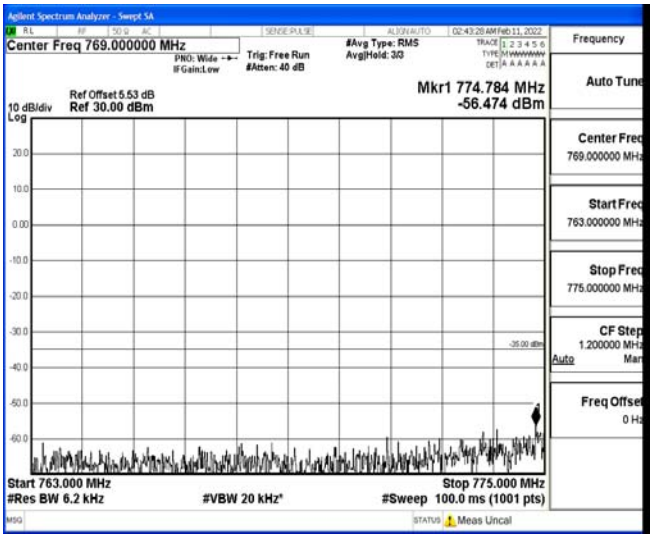
Band13-5MHz-16QAM-23205-1RB#0-Range2:0.15~30MHz



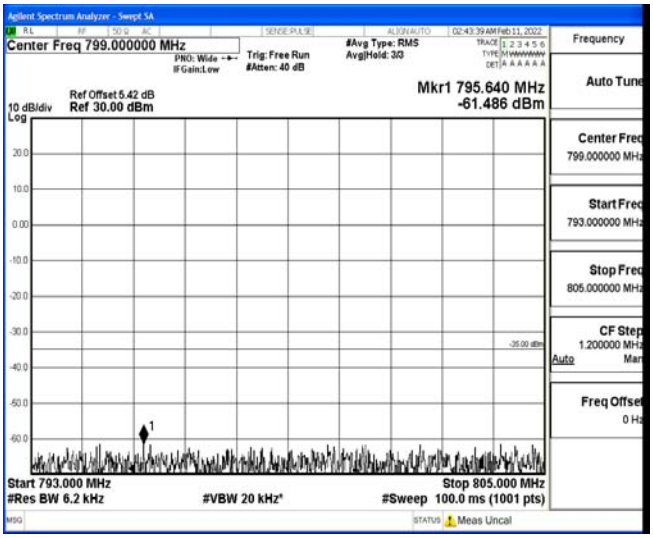
Band13-5MHz-16QAM-23205-1RB#0-Range3:30~1000MHz



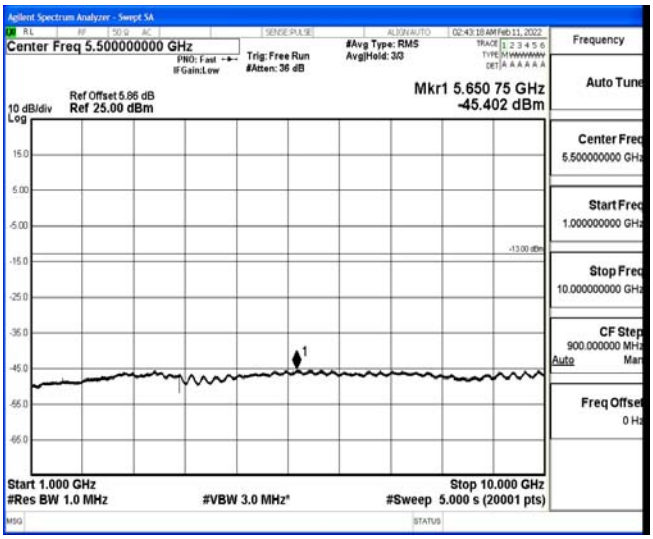
Band13-5MHz-16QAM-23205-1RB#0-Range5:763~775MHz



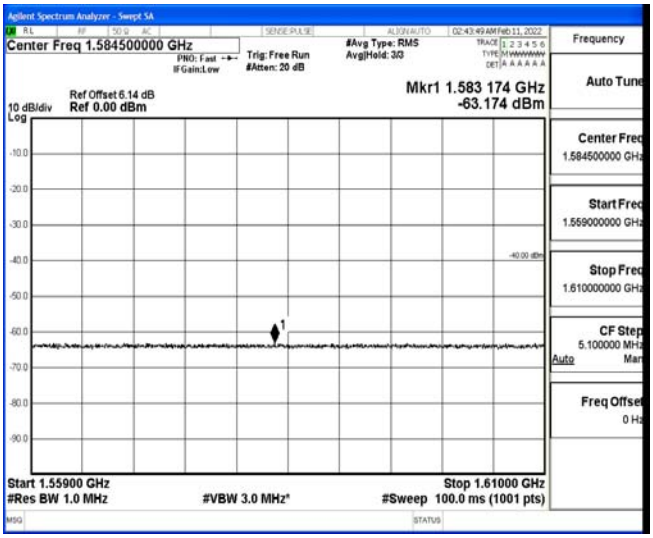
Band13-5MHz-16QAM-23205-1RB#0-Range6:793~805MHz



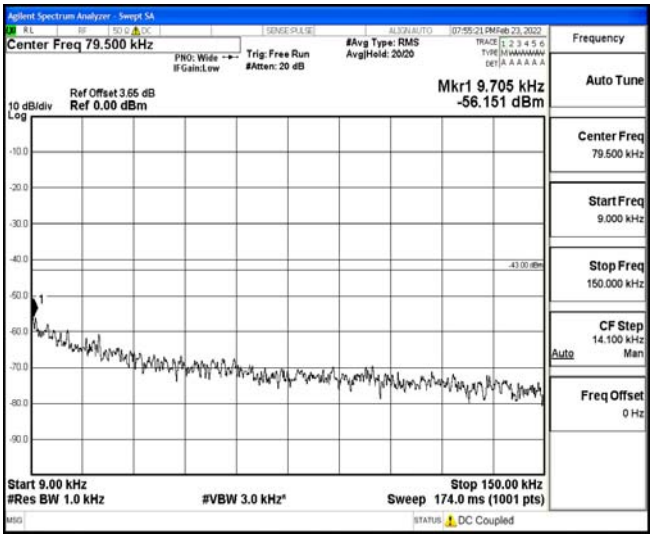
Band13-5MHz-16QAM-23205-1RB#0-Range4:1000~10000MHz



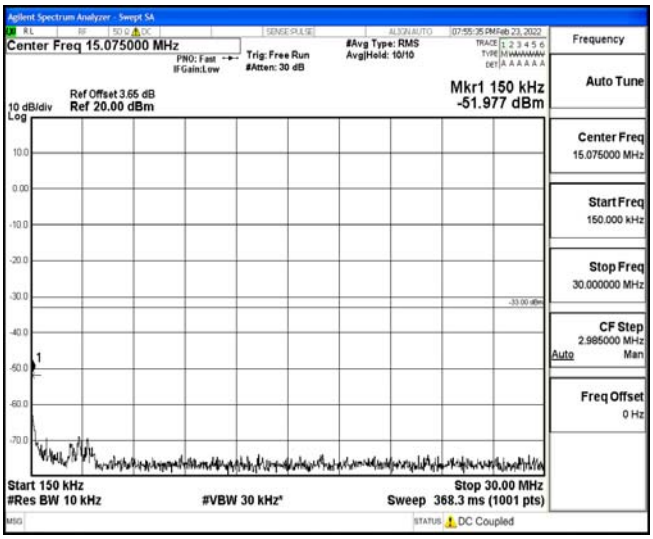
Band13-5MHz-16QAM-23205-1RB#0-Range7:1559~1610MHz



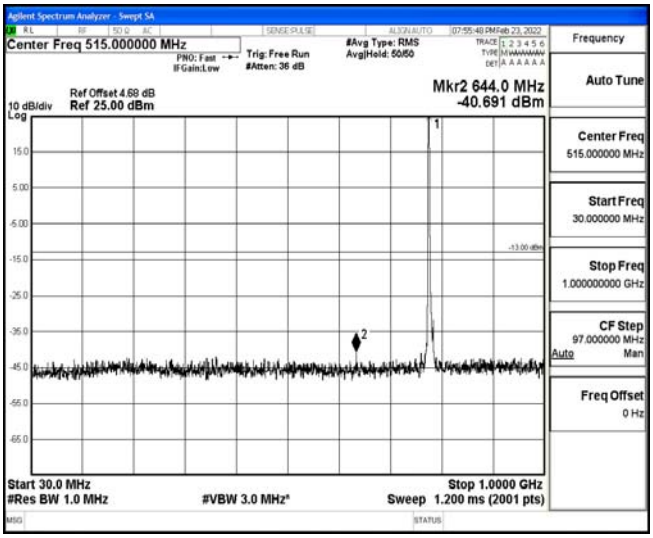
Band13-5MHz-16QAM-23230-1RB#0-Range1:0.009~0.15MHz



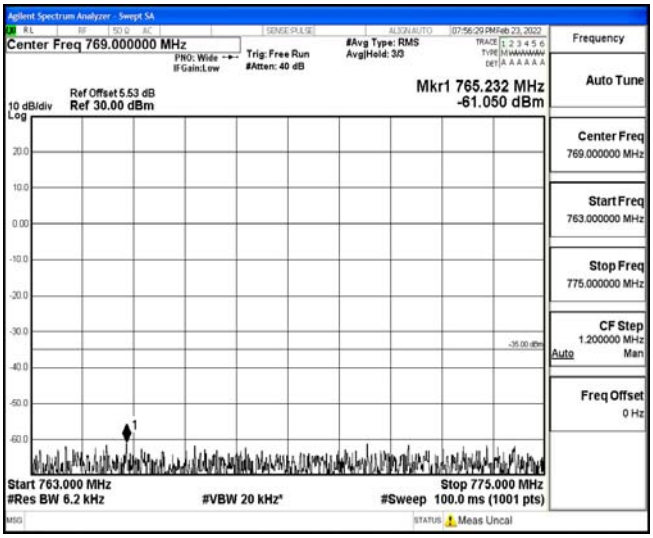
Band13-5MHz-16QAM-23230-1RB#0-Range2:0.15~30MHz



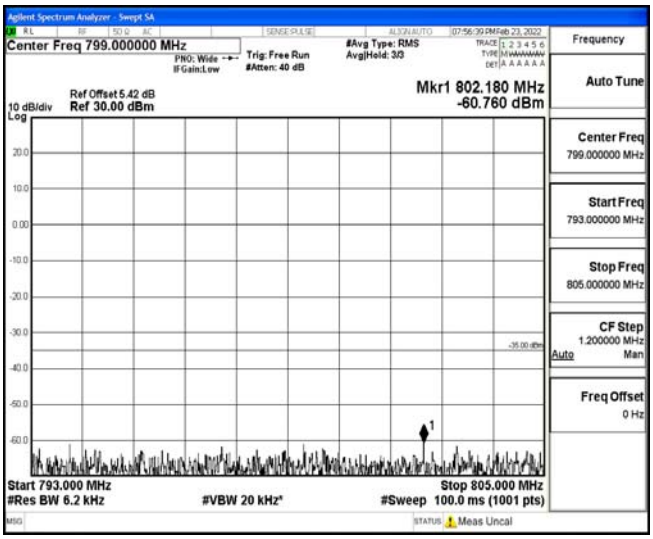
Band13-5MHz-16QAM-23230-1RB#0-Range3:30~1000MHz



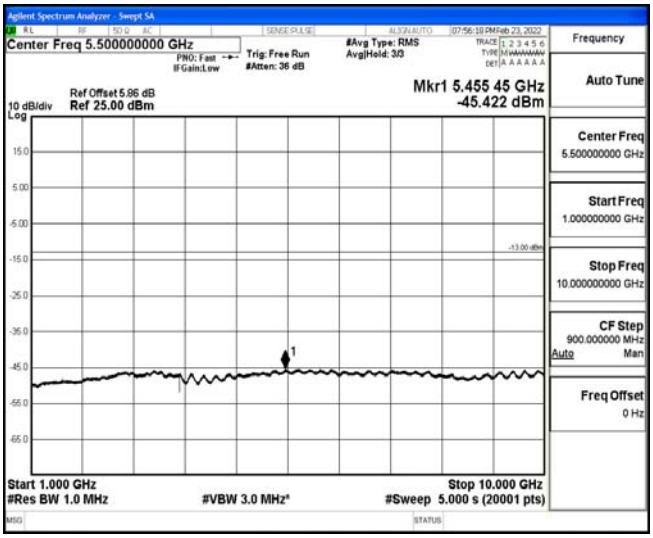
Band13-5MHz-16QAM-23230-1RB#0-Range5:763~775MHz



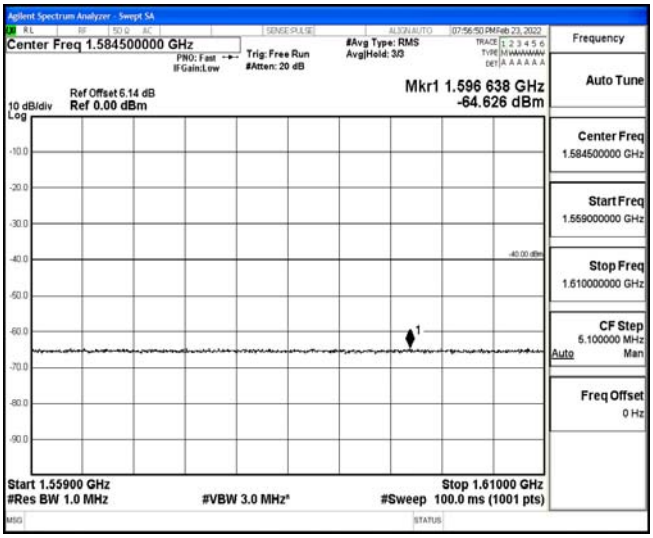
Band13-5MHz-16QAM-23230-1RB#0-Range6:793~805MHz



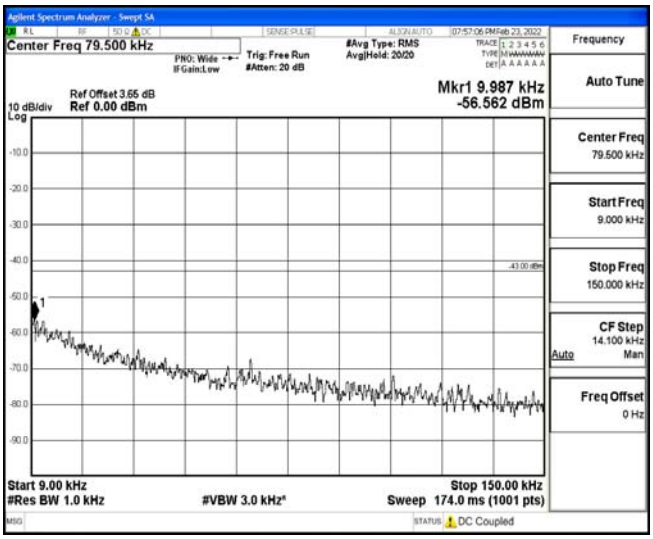
Band13-5MHz-16QAM-23230-1RB#0-Range4:1000~10000MHz



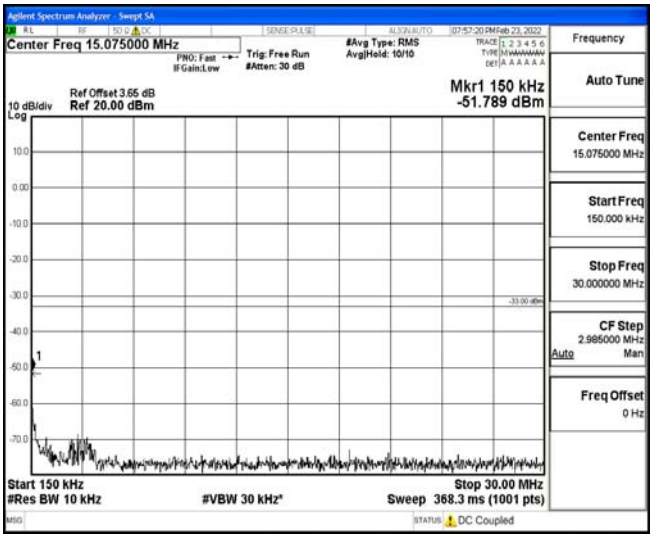
Band13-5MHz-16QAM-23230-1RB#0-Range7:1559~1610MHz



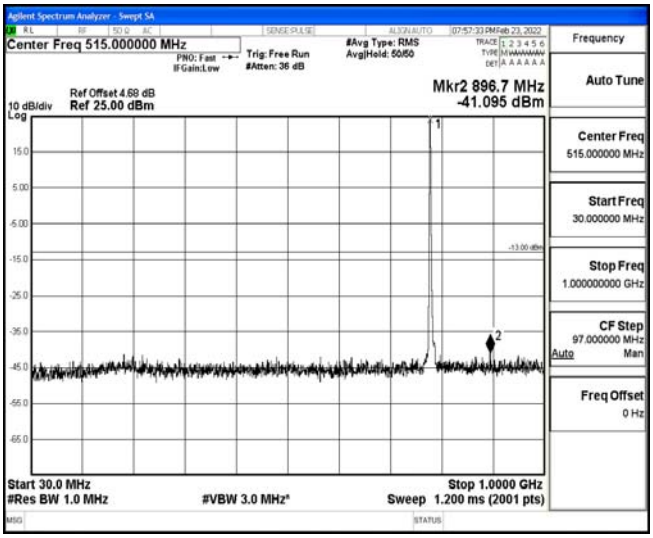
Band13-5MHz-16QAM-23255-1RB#0-Range1:0.009~0.15MHz



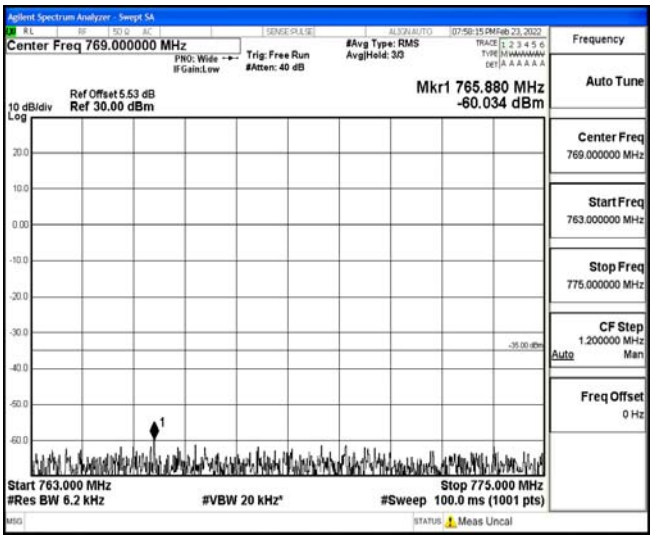
Band13-5MHz-16QAM-23255-1RB#0-Range2:0.15~30MHz



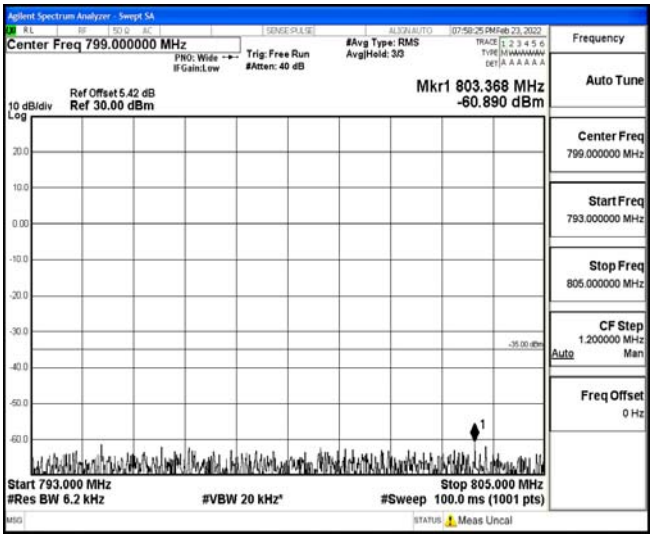
Band13-5MHz-16QAM-23255-1RB#0-Range3:30~1000MHz



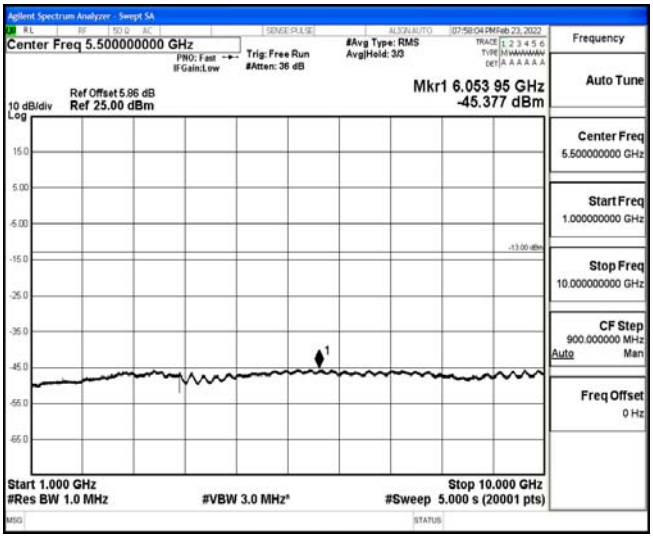
Band13-5MHz-16QAM-23255-1RB#0-Range5:763~775MHz



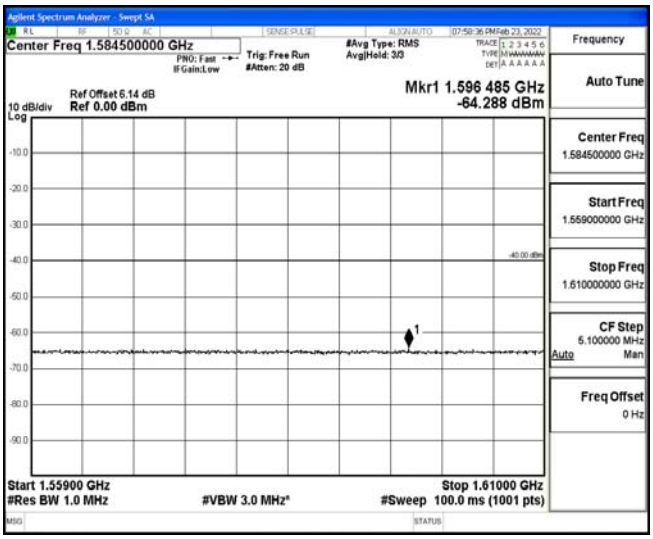
Band13-5MHz-16QAM-23255-1RB#0-Range6:793~805MHz



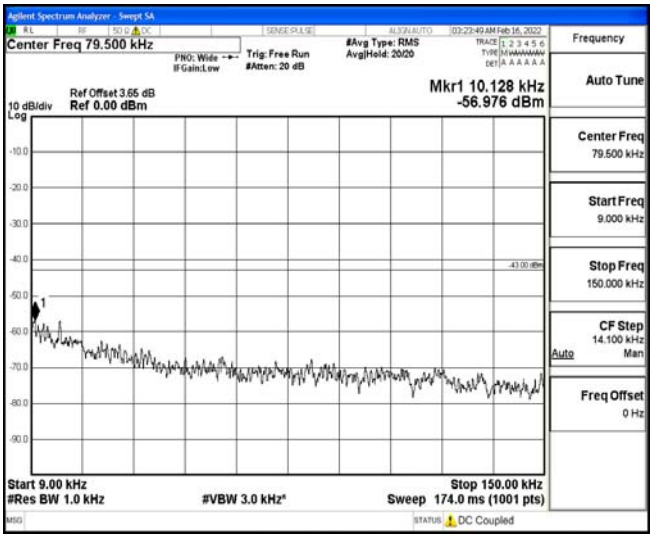
Band13-5MHz-16QAM-23255-1RB#0-Range4:1000~10000MHz



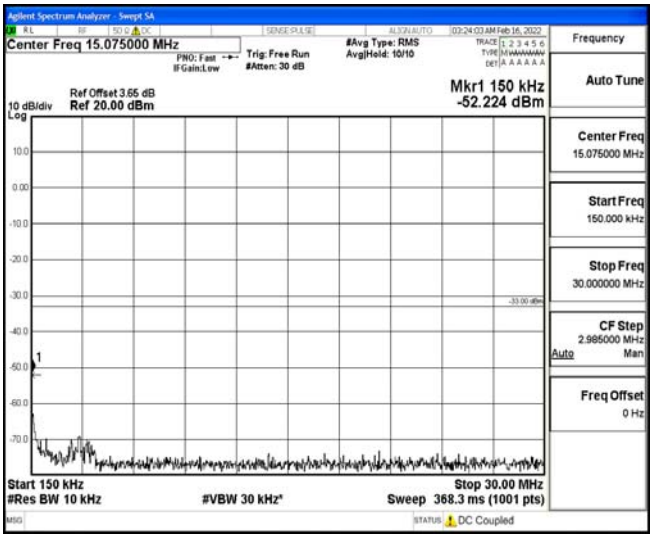
Band13-5MHz-16QAM-23255-1RB#0-Range7:1559~1610MHz



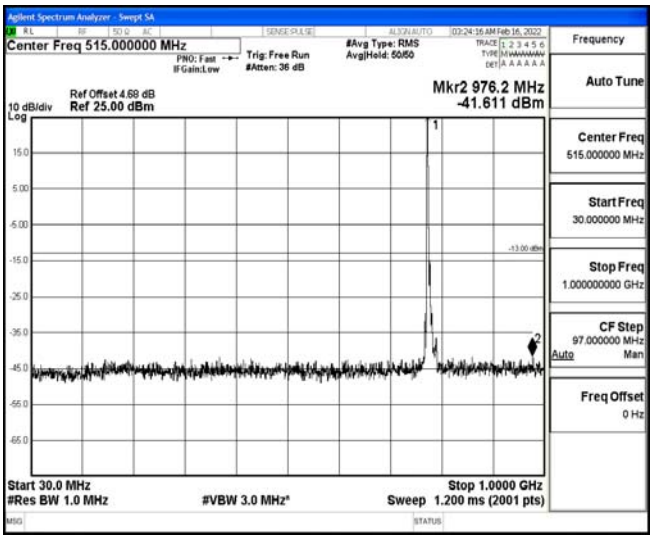
Band13-10MHz-QPSK-23230-1RB#0-Range1:0.009~0.15MHz



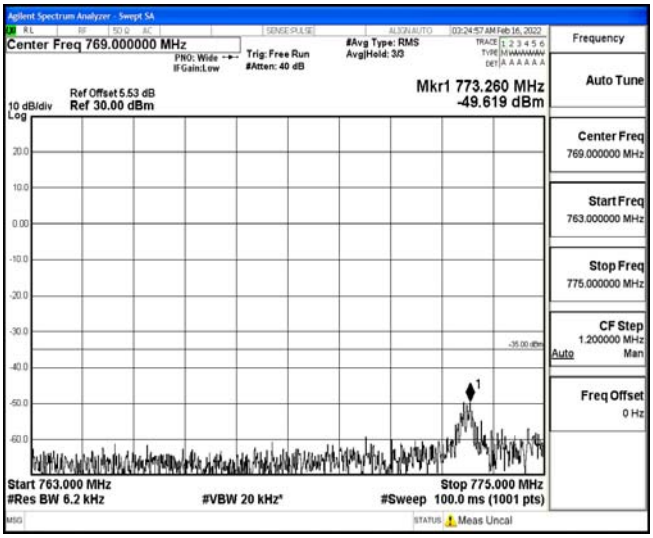
Band13-10MHz-QPSK-23230-1RB#0-Range2:0.15~30MHz



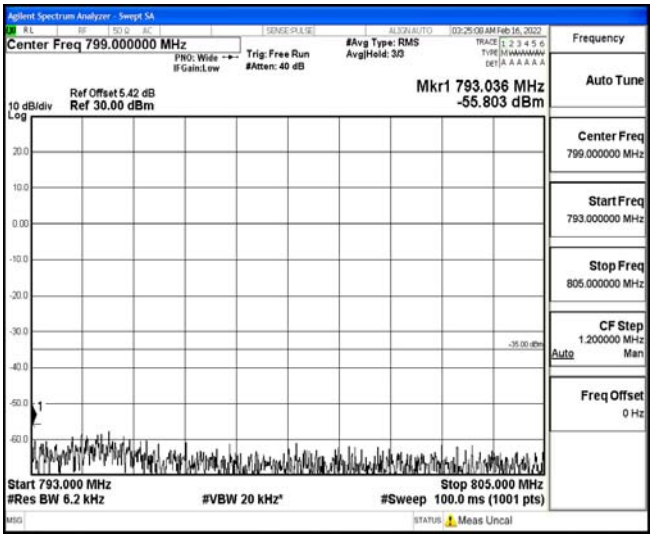
Band13-10MHz-QPSK-23230-1RB#0-Range3:30~1000MHz



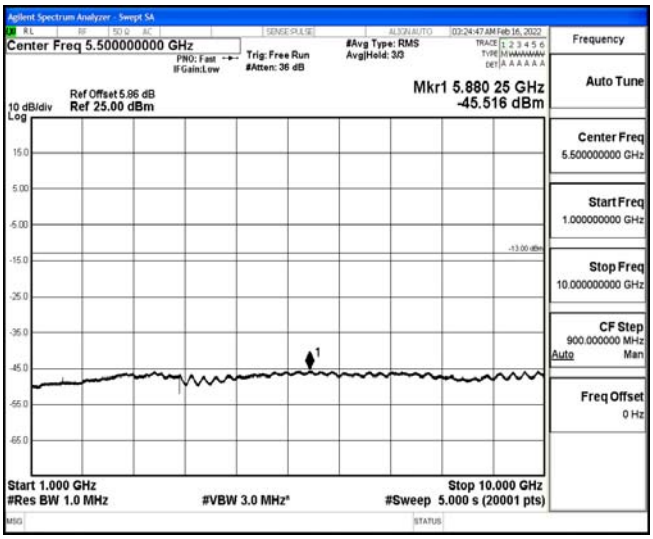
Band13-10MHz-QPSK-23230-1RB#0-Range5:763~775MHz



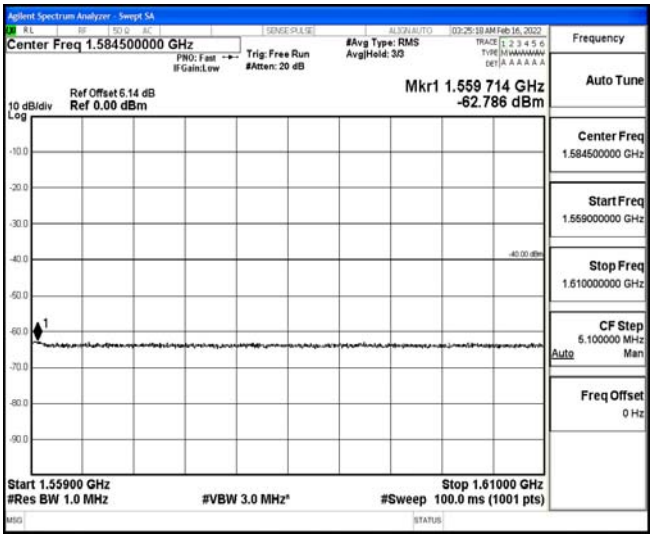
Band13-10MHz-QPSK-23230-1RB#0-Range6:793~805MHz



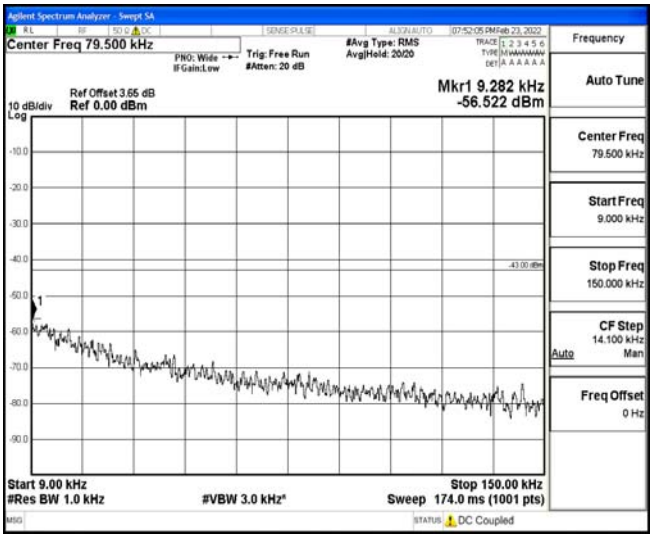
Band13-10MHz-QPSK-23230-1RB#0-Range4:1000~10000MHz



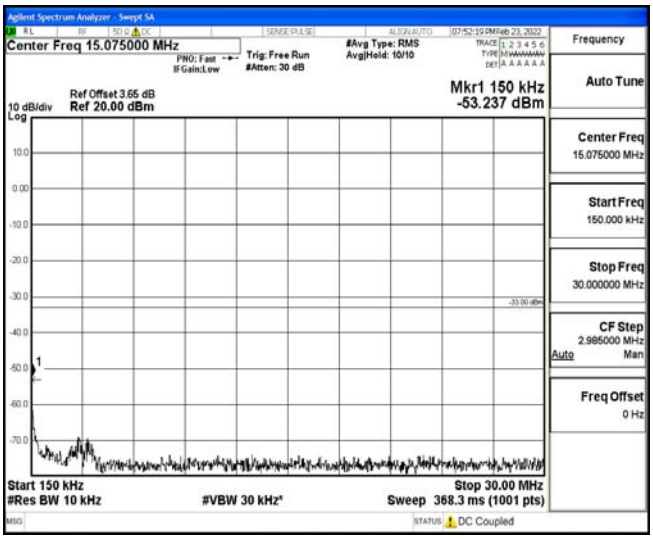
Band13-10MHz-QPSK-23230-1RB#0-Range7:1559~1610MHz



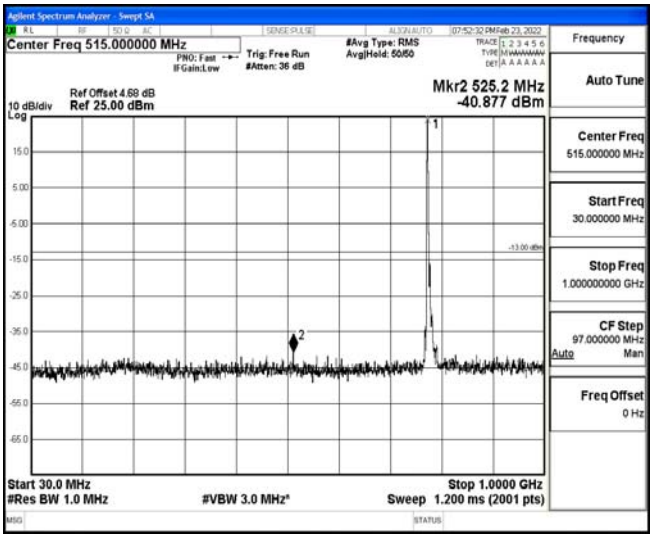
Band13-10MHz-16QAM-23230-1RB#0-Range1:0.009~0.15MHz



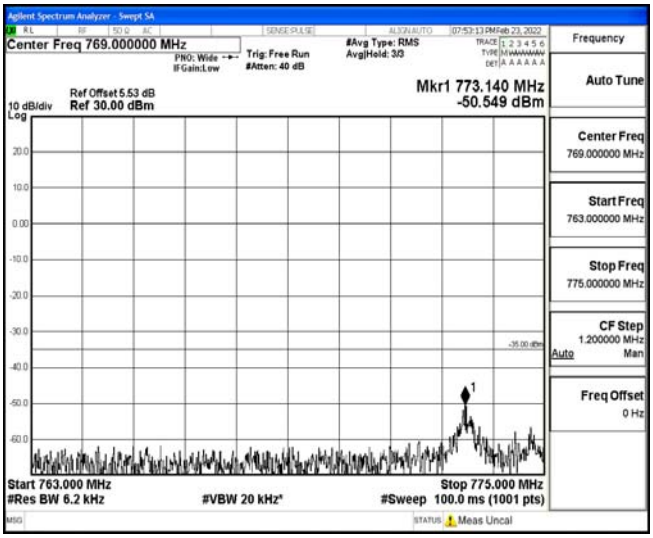
Band13-10MHz-16QAM-23230-1RB#0-Range2:0.15~30MHz



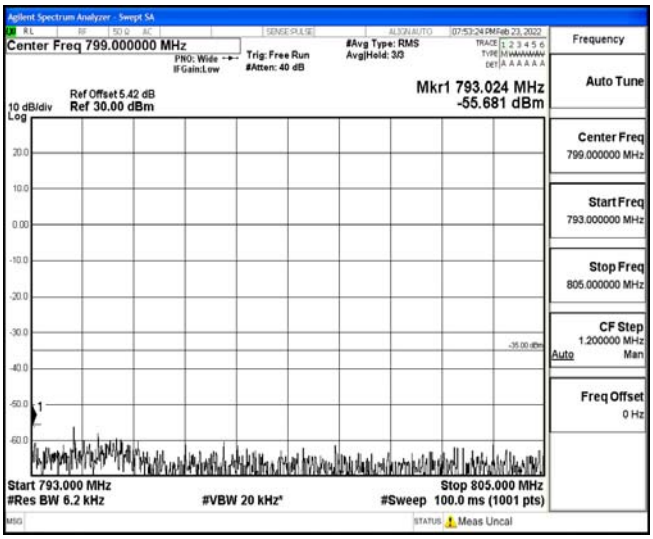
Band13-10MHz-16QAM-23230-1RB#0-Range3:30~1000MHz



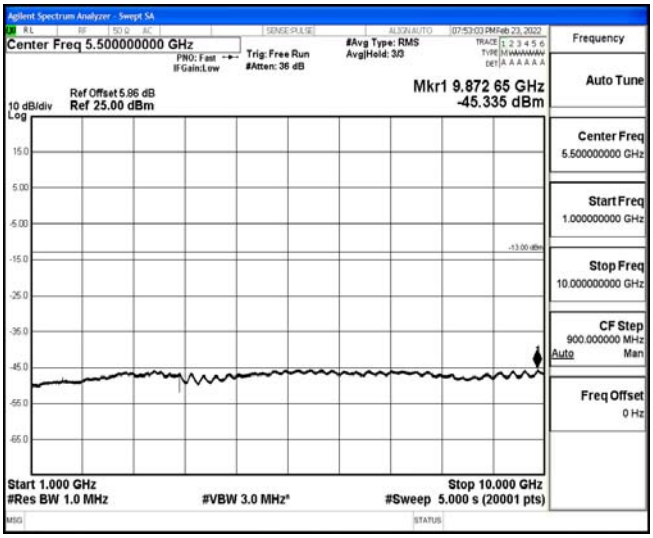
Band13-10MHz-16QAM-23230-1RB#0-Range5:763~775MHz



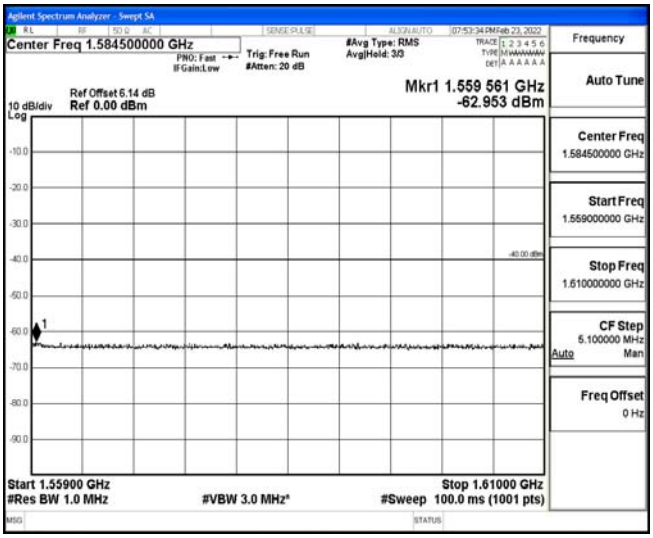
Band13-10MHz-16QAM-23230-1RB#0-Range6:793~805MHz



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



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


Agilent Spectrum Analyzer - Swept SA
Center Freq 1.584500000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 3/3
07:53:34 PM Feb 23, 2022
Frequency
Auto Tune
Mkr1 1.559 561 GHz
-62.953 dBm
Ref Offset 6.14 dB
10 dB/div
Ref 0.00 dBm
Log
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-40.00 dBm
Center Freq
1.584500000 GHz
Start Freq
1.559000000 GHz
Stop Freq
1.610000000 GHz
CF Step
5.100000 MHz
Auto
Man
Freq Offset
0 Hz
Start 1.55900 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 1.61000 GHz
#Sweep 100.0 ms (1001 pts)
MSG
STATUS