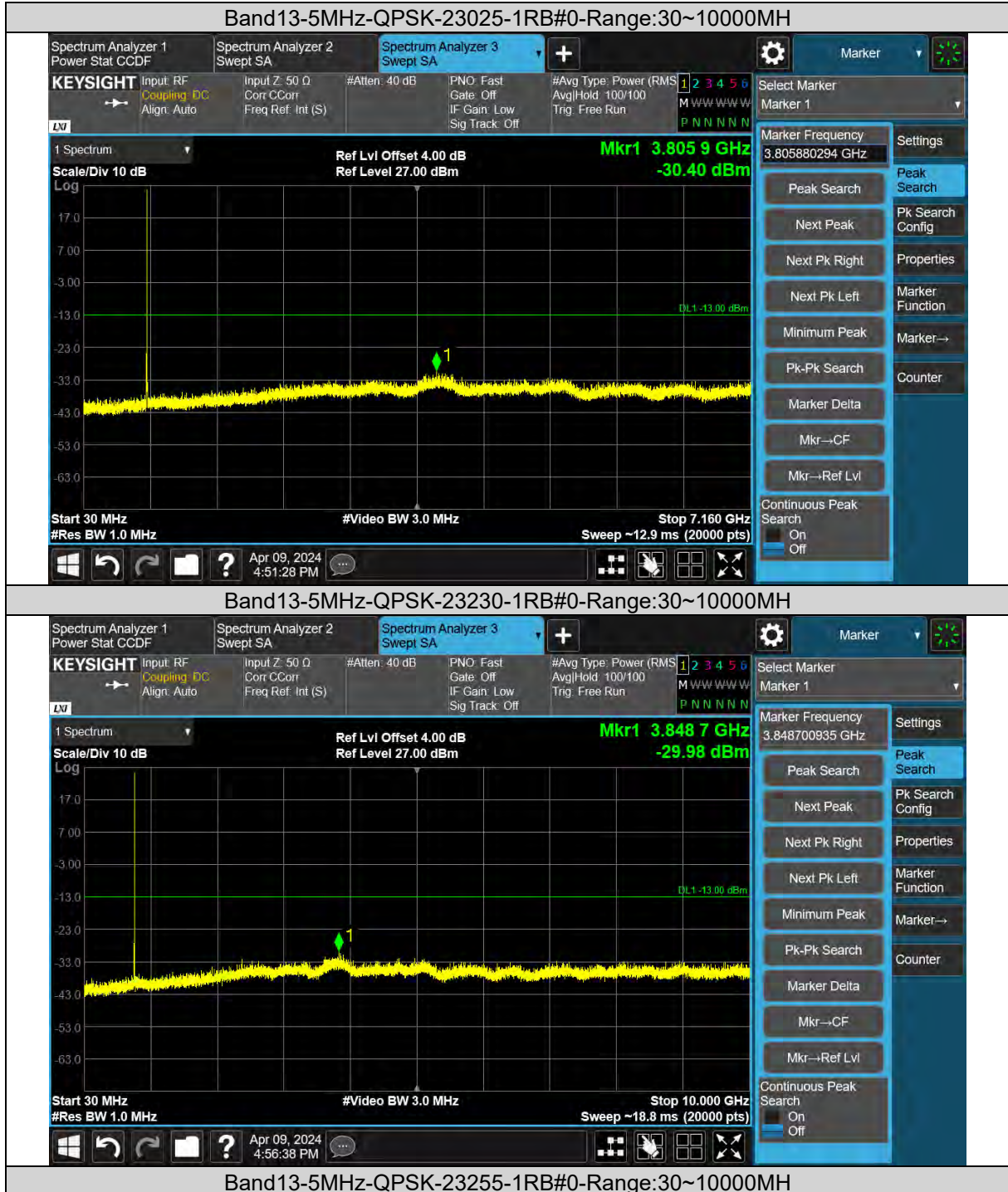




Test Report No.: W7L-240204W001RF03

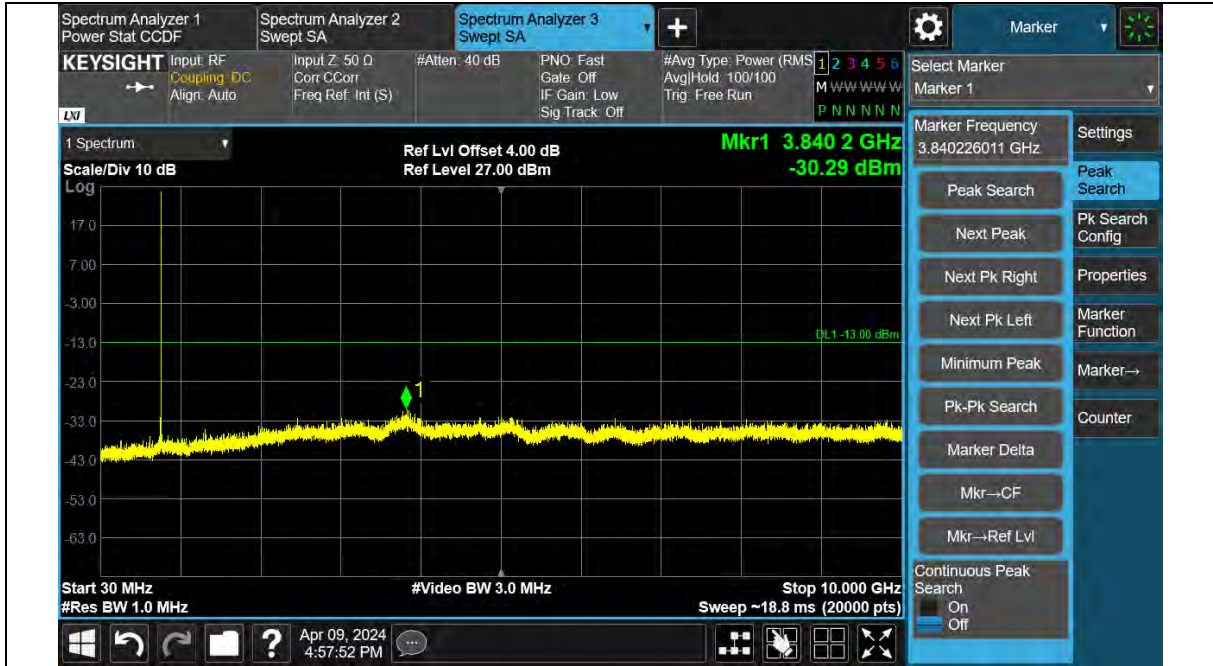
Test Graphs



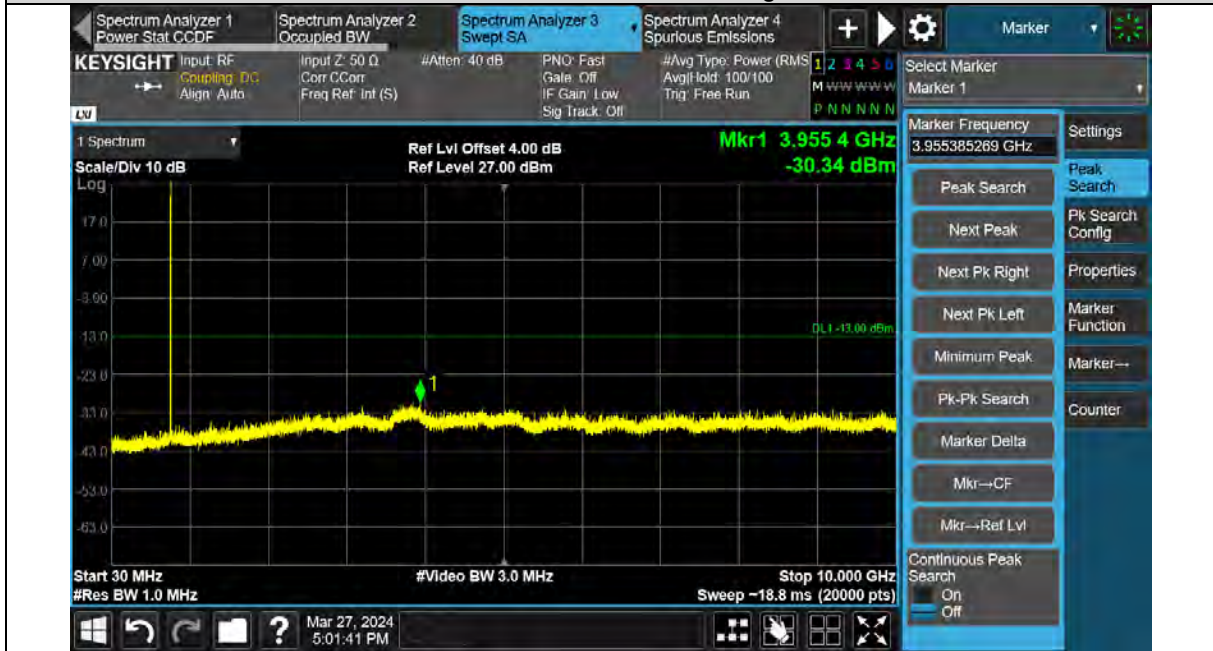


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-5MHz-16QAM-23025-1RB#0-Range:30~10000MH

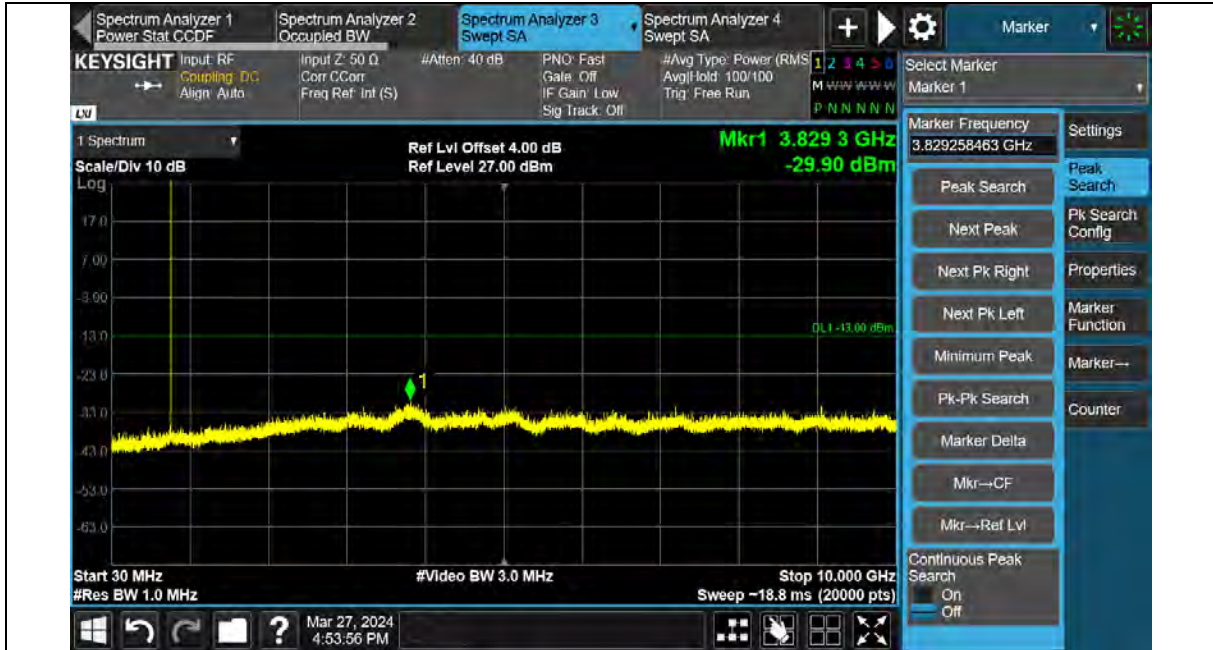


Band13-5MHz-16QAM-23230-1RB#0-Range:30~10000MH

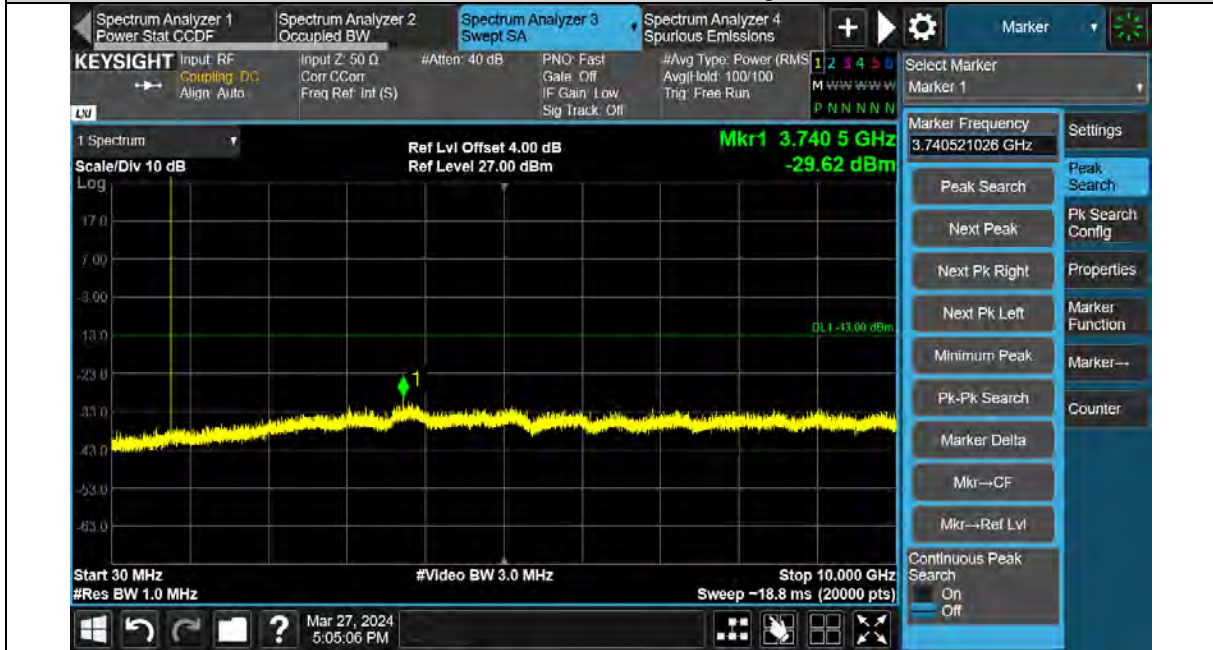


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-5MHz-16QAM-23255-1RB#0-Range:30~10000MH



Band13-10MHz-QPSK-23230-1RB#0-Range:30~10000MH

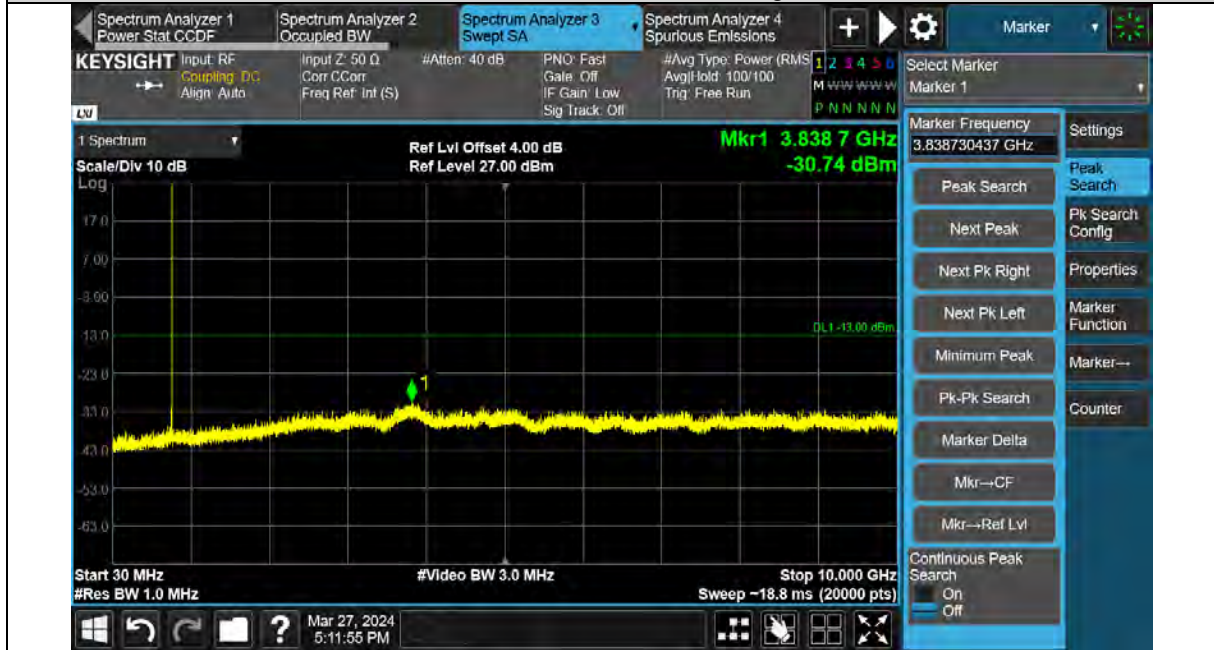


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-10MHz-16QAM-23230-1RB#0-Range:30~10000MH



FREQUENCY STABILITY

Test Result

Voltage										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band13	10MHz	QPSK	23230	6RB#0	VL	NT	0.2	0.000256	±2.5	PASS
Band13	10MHz	QPSK	23230	6RB#0	VN	NT	8	0.010230	±2.5	PASS
Band13	10MHz	QPSK	23230	6RB#0	VH	NT	20.7	0.026471	±2.5	PASS
Band13	16QAM	QPSK	23230	6RB#0	VL	NT	27	0.034527	±2.5	PASS
Band13	16QAM	QPSK	23230	6RB#0	VN	NT	-11.9	-0.015217	±2.5	PASS
Band13	16QAM	QPSK	23230	6RB#0	VH	NT	16.2	0.020716	±2.5	PASS

Temperature										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band13	10MHz	QPSK	23230	6RB#0	NV	-30	21.6	0.027621	±2.5	PASS
Band13	10MHz	QPSK	23230	6RB#0	NV	-20	1.3	0.001662	±2.5	PASS
Band13	10MHz	QPSK	23230	6RB#0	NV	-10	-10.3	-0.013171	±2.5	PASS
Band13	10MHz	QPSK	23230	6RB#0	NV	0	14.9	0.019054	±2.5	PASS
Band13	10MHz	QPSK	23230	6RB#0	NV	10	-12	-0.015345	±2.5	PASS
Band13	10MHz	QPSK	23230	6RB#0	NV	20	2.3	0.002941	±2.5	PASS
Band13	10MHz	QPSK	23230	6RB#0	NV	30	8.5	0.010870	±2.5	PASS
Band13	10MHz	QPSK	23230	6RB#0	NV	40	-20	-0.025575	±2.5	PASS
Band13	10MHz	QPSK	23230	6RB#0	NV	50	-3.3	-0.004220	±2.5	PASS
Band13	16QAM	QPSK	23230	6RB#0	NV	-30	12.5	0.015985	±2.5	PASS
Band13	16QAM	QPSK	23230	6RB#0	NV	-20	19.7	0.025192	±2.5	PASS
Band13	16QAM	QPSK	23230	6RB#0	NV	-10	-24	-0.030691	±2.5	PASS
Band13	16QAM	QPSK	23230	6RB#0	NV	0	15.2	0.019437	±2.5	PASS
Band13	16QAM	QPSK	23230	6RB#0	NV	10	-17.3	-0.022123	±2.5	PASS
Band13	16QAM	QPSK	23230	6RB#0	NV	20	20.7	0.026471	±2.5	PASS
Band13	16QAM	QPSK	23230	6RB#0	NV	30	11.4	0.014578	±2.5	PASS
Band13	16QAM	QPSK	23230	6RB#0	NV	40	-11.2	-0.014322	±2.5	PASS
Band13	16QAM	QPSK	23230	6RB#0	NV	50	7.5	0.009591	±2.5	PASS



Test Report No.: W7L-240204W001RF03

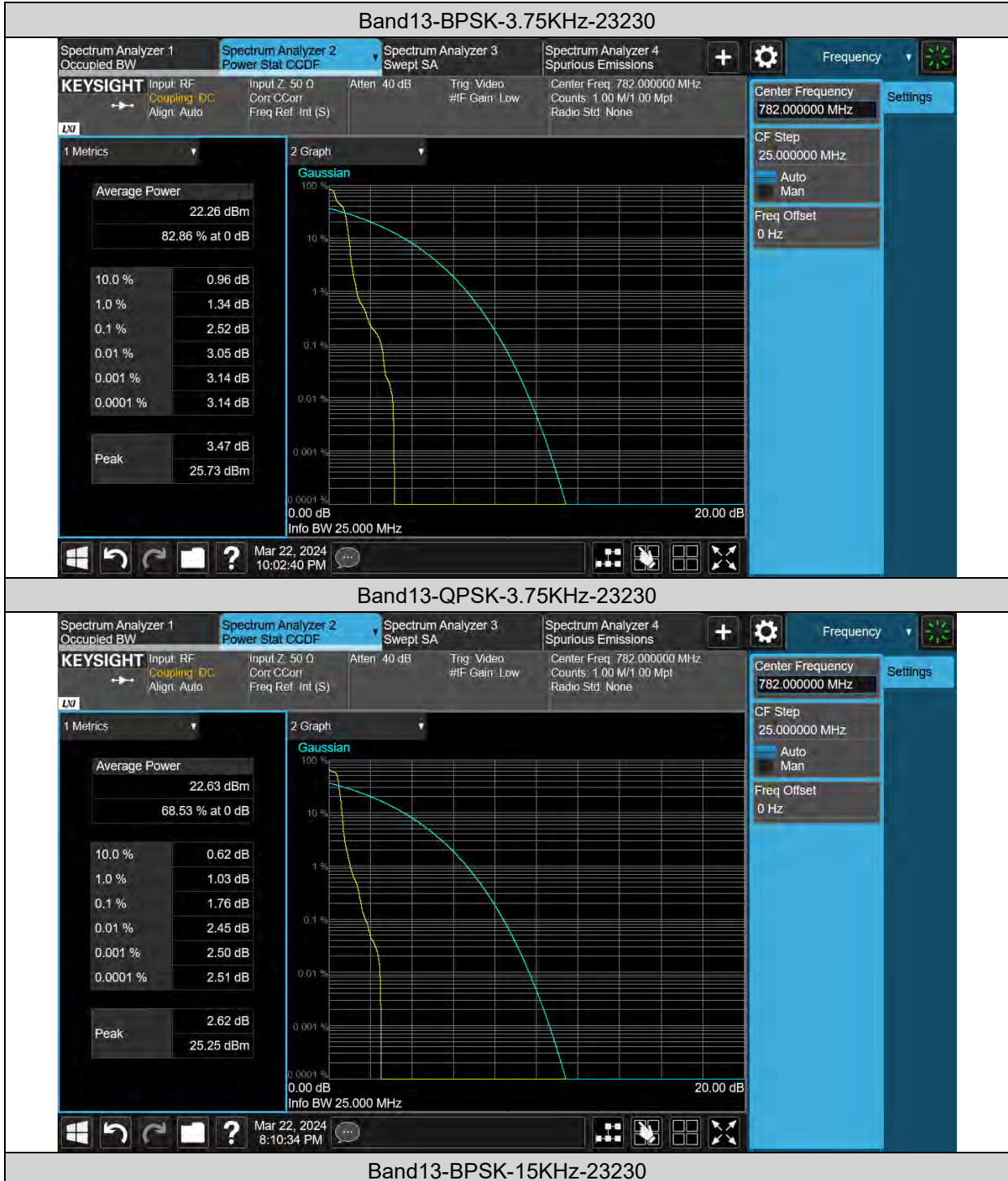
NB-IOT: LTE BAND13

PEAK-TO-AVERAGE RATIO(CCDF)

Test Result

Band	Modulation	Sub-carrier spacing(KHz)	Channe	Result(dB)	Limit(dB)	Verdict
Band13	BPSK	3.75	23230	2.52	13	PASS
	QPSK	3.75	23230	1.76	13	PASS
	BPSK	15	23230	2.06	13	PASS
	QPSK	15	23230	2.07	13	PASS

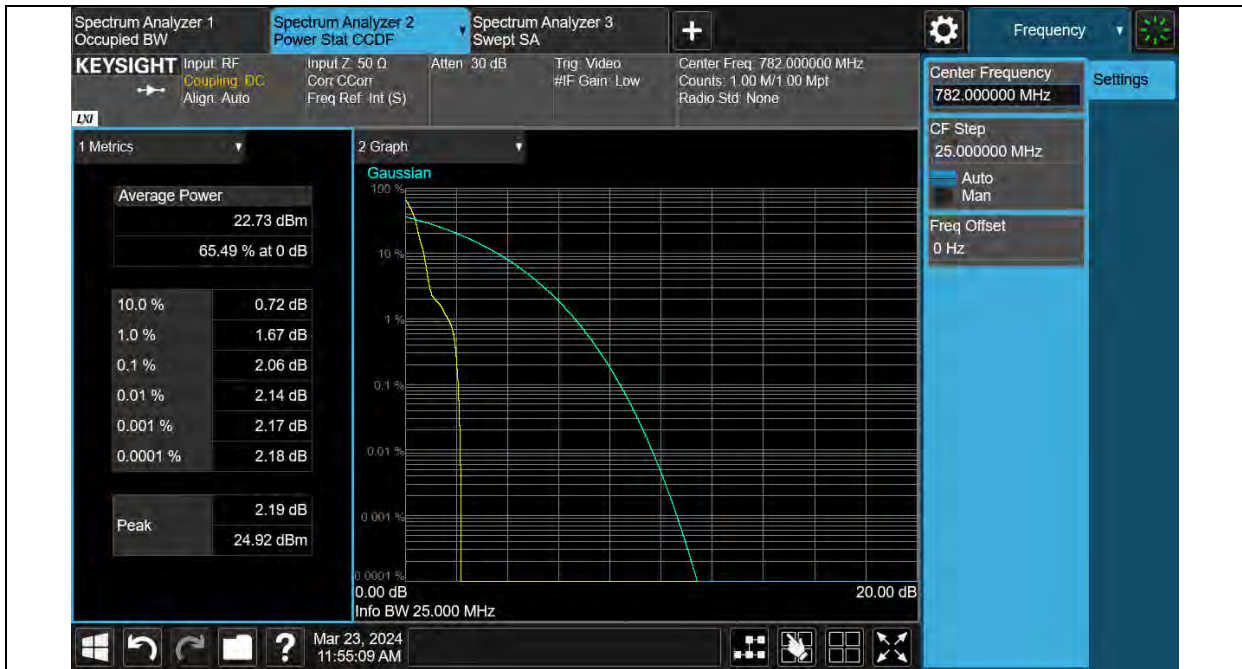
Test Graphs



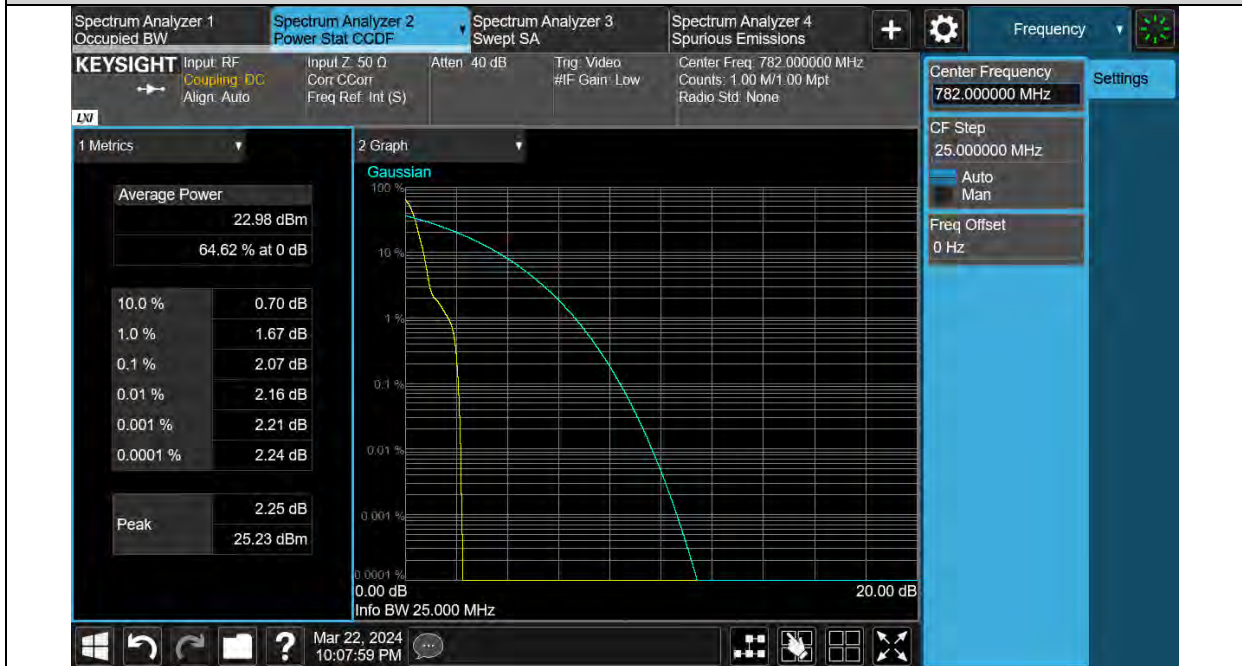


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-QPSK-15KHz-23230





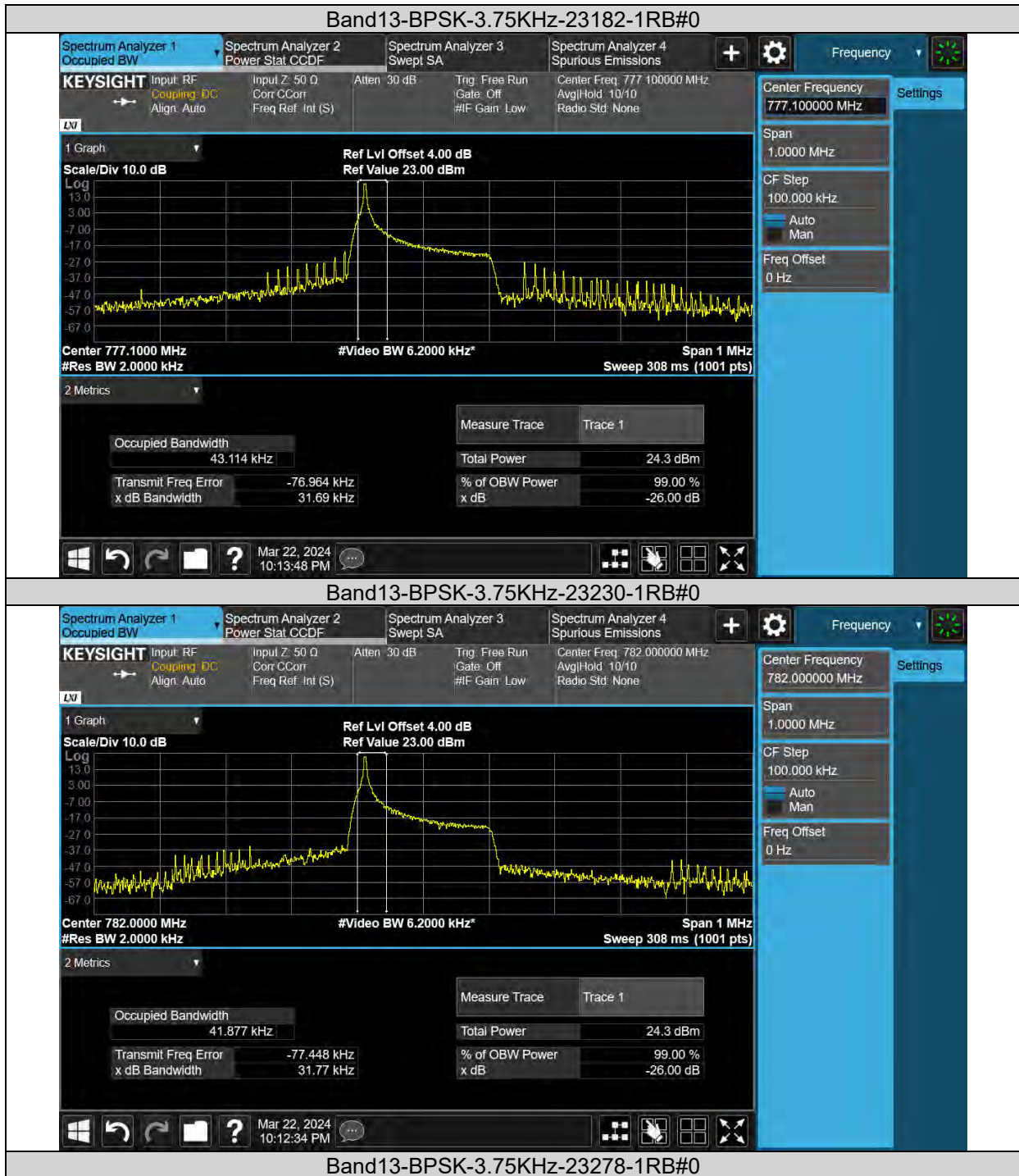
Test Report No.: W7L-240204W001RF03

26DB BANDWIDTH AND OCCUPIED BANDWIDTH

Test Result

Band	Modulation	Sub-carrier spacing(KHz)	Channel	Ntones	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Verdict
Band13	BPSK	3.75	23182	1RB#0	43.114	31.69	PASS
Band13	BPSK	3.75	23230	1RB#0	41.877	31.77	PASS
Band13	BPSK	3.75	23278	1RB#0	40.681	31.82	PASS
Band13	QPSK	3.75	23182	1RB#0	46.237	35.29	PASS
Band13	QPSK	3.75	23230	1RB#0	47.971	35.00	PASS
Band13	QPSK	3.75	23278	1RB#0	46.268	31.95	PASS
Band13	BPSK	15	23182	1RB#0	107.26	87.64	PASS
Band13	BPSK	15	23230	1RB#0	127.18	114.6	PASS
Band13	BPSK	15	23278	1RB#0	99.937	99.64	PASS
Band13	QPSK	15	23182	1RB#0	102.09	114.8	PASS
Band13	QPSK	15	23230	1RB#0	96.188	88.75	PASS
Band13	QPSK	15	23278	1RB#0	108.97	102.4	PASS
Band13	QPSK	15	23182	12RB#0	190.14	202.6	PASS
Band13	QPSK	15	23230	12RB#0	191.53	209.4	PASS
Band13	QPSK	15	23278	12RB#0	190.84	207.4	PASS

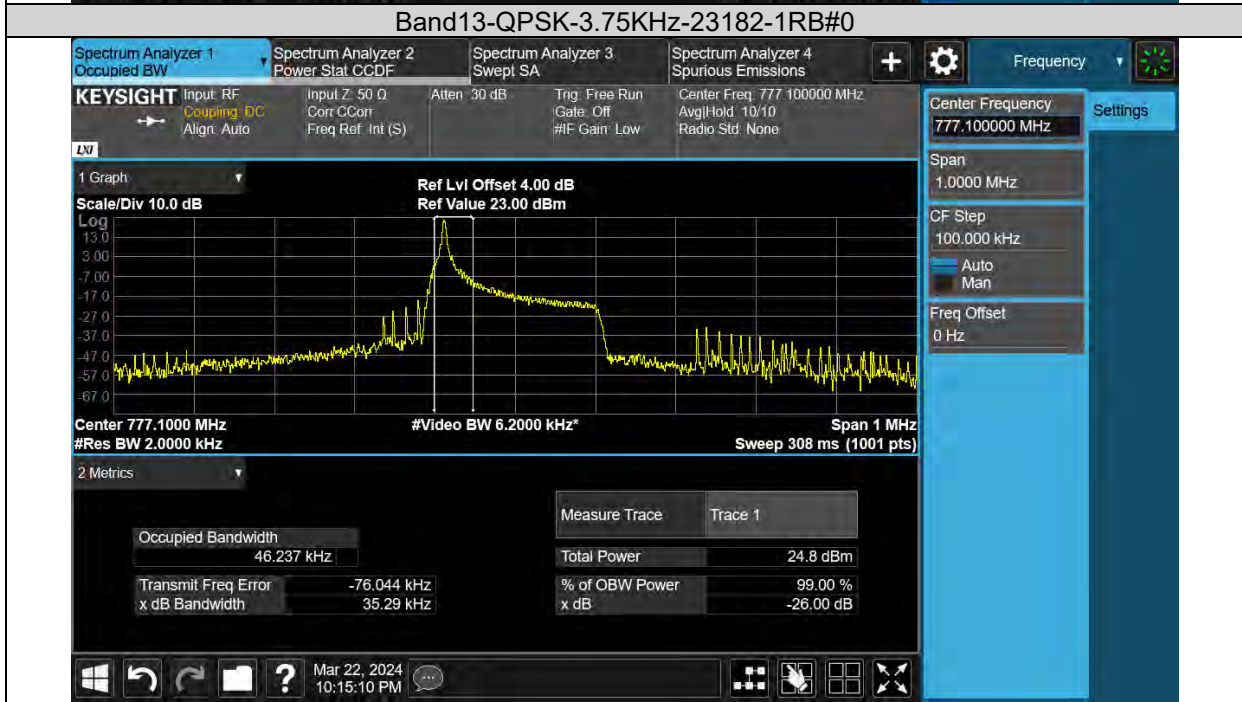
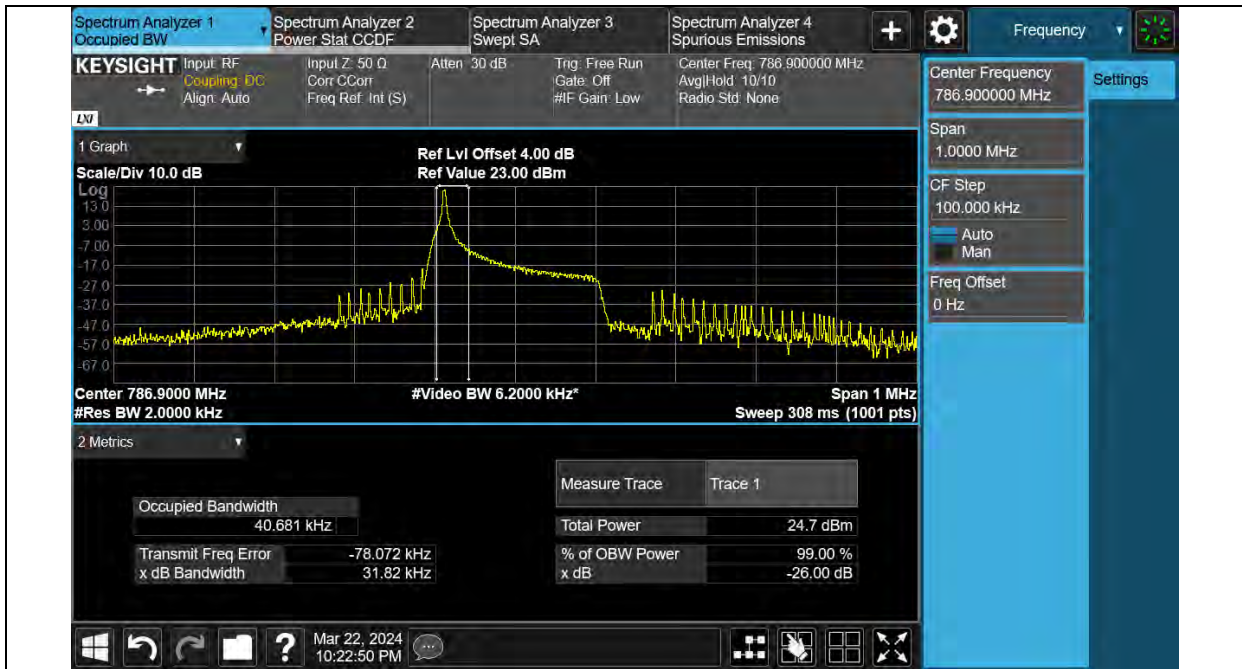
Test Graphs





BUREAU VERITAS

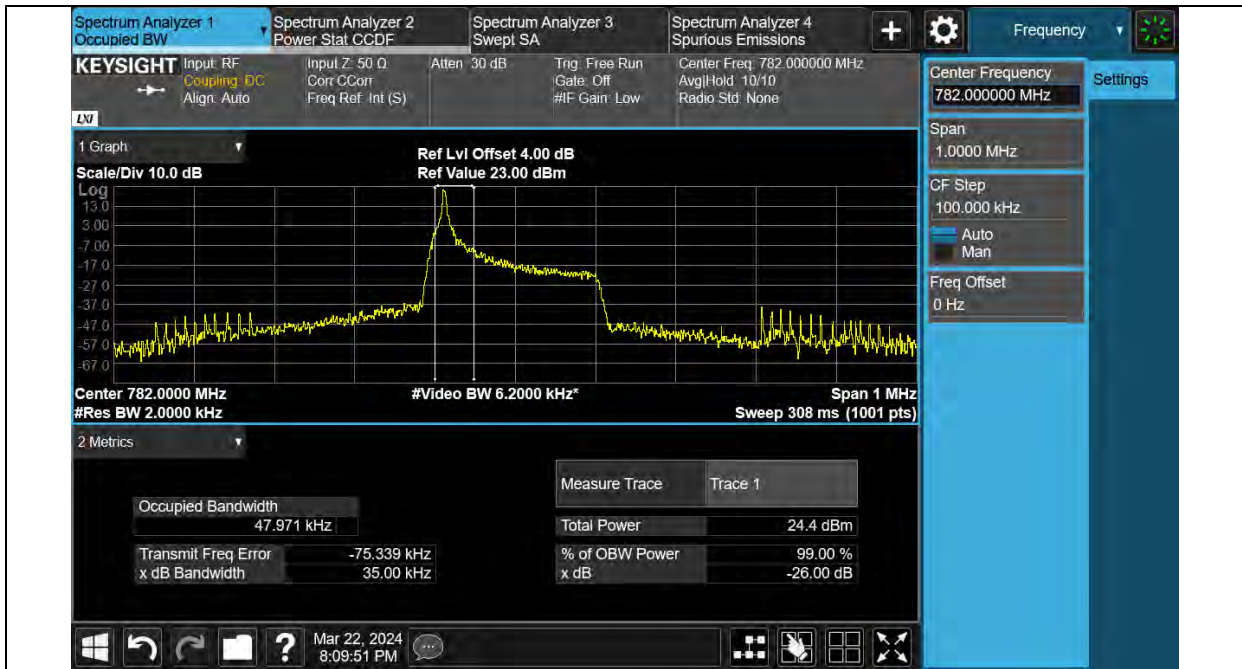
Test Report No.: W7L-240204W001RF03



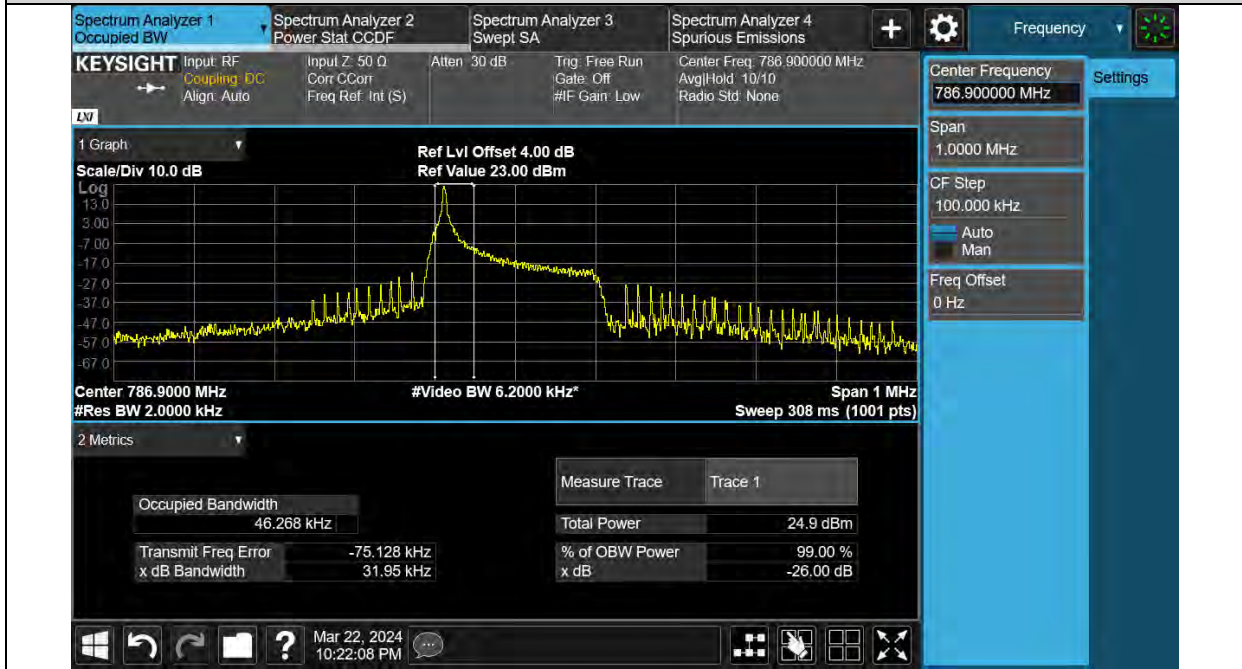


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-QPSK-3.75KHz-23278-1RB#0



Band13-BPSK-15KHz-23182-1RB#0

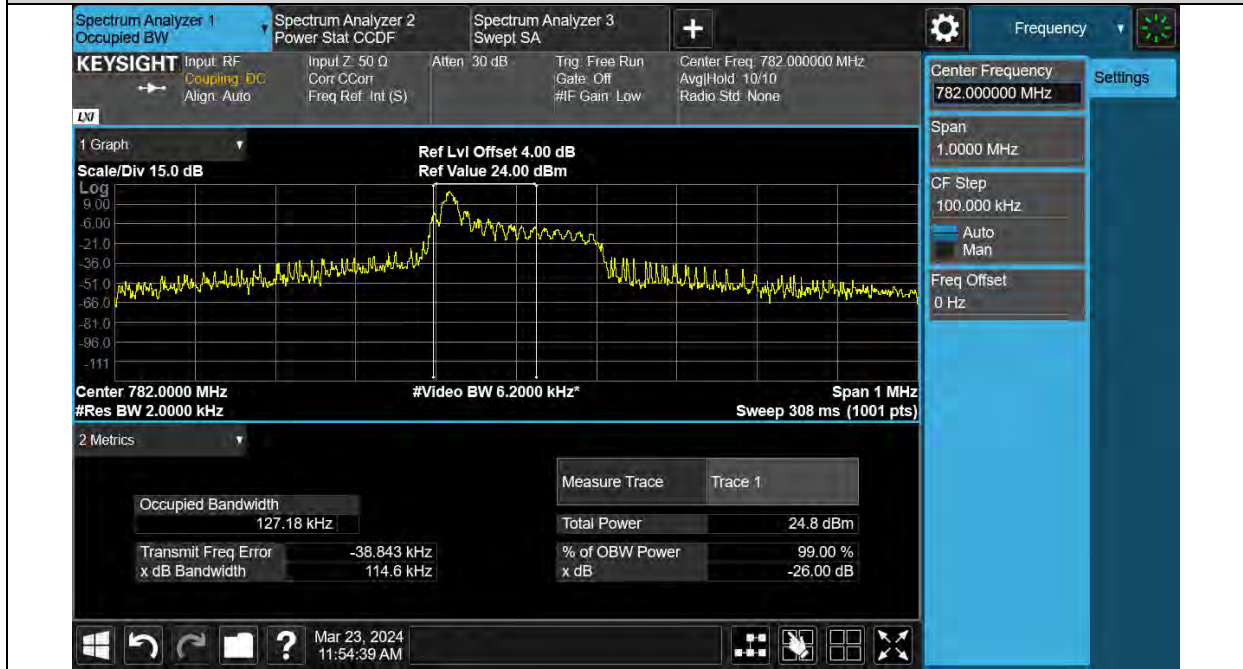


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-BPSK-15KHz-23230-1RB#0

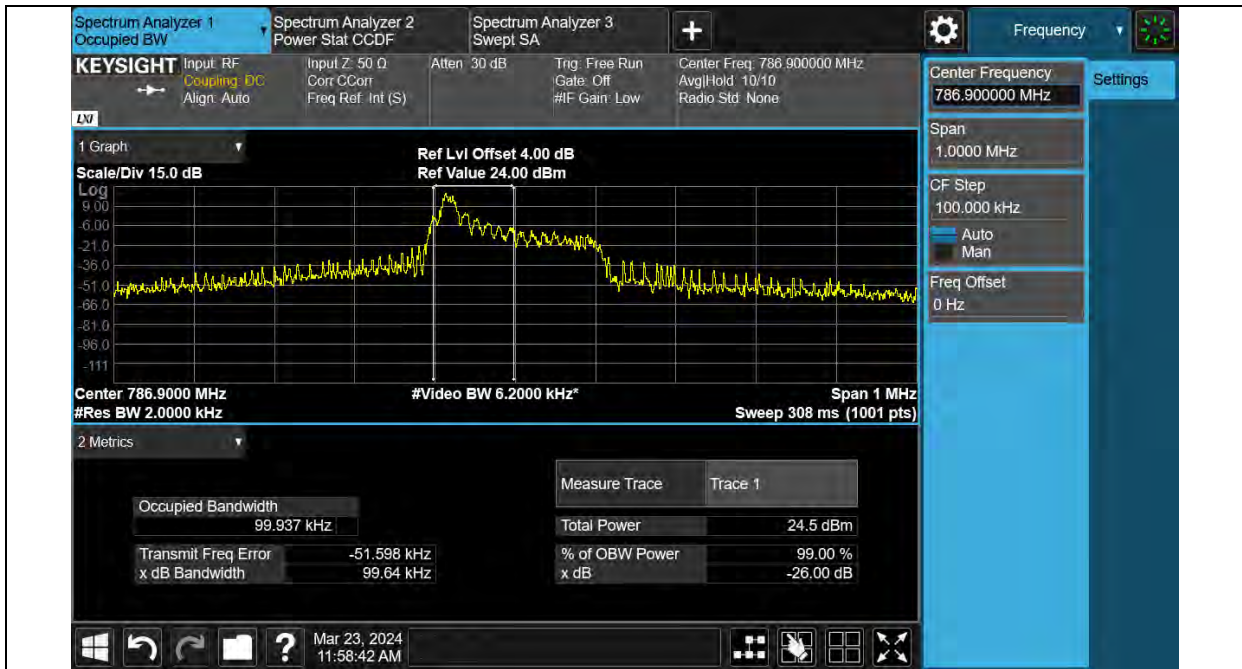


Band13-BPSK-15KHz-23278-1RB#0

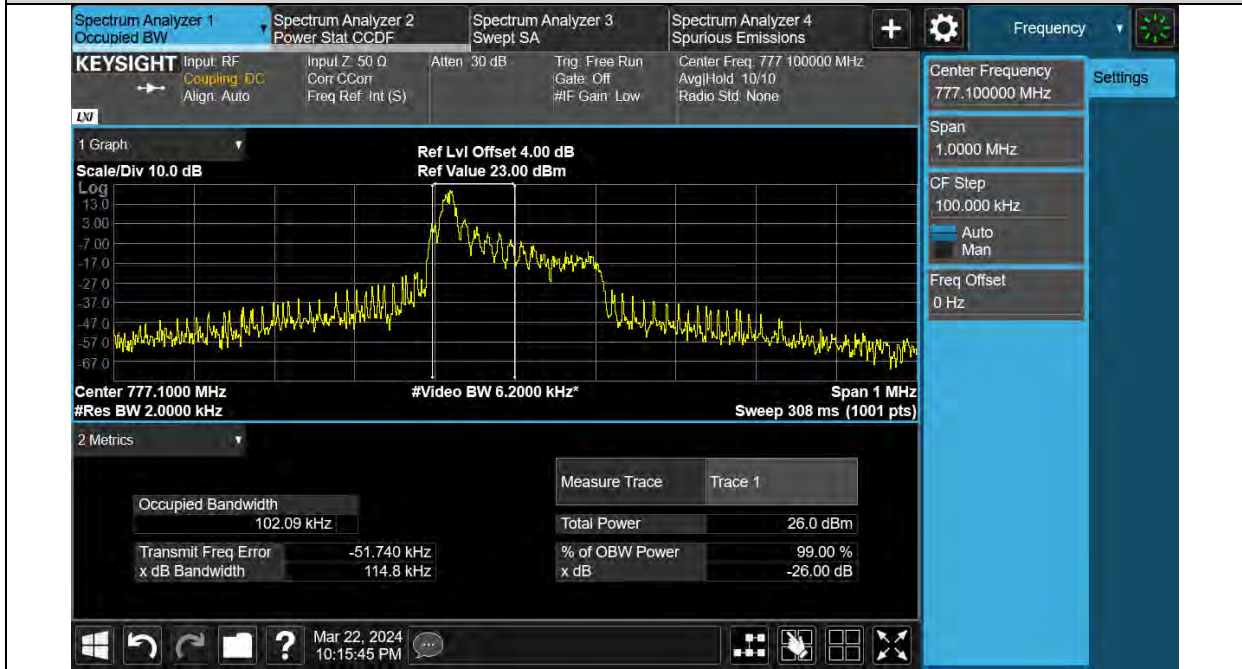


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-QPSK-15KHz-23182-1RB#0

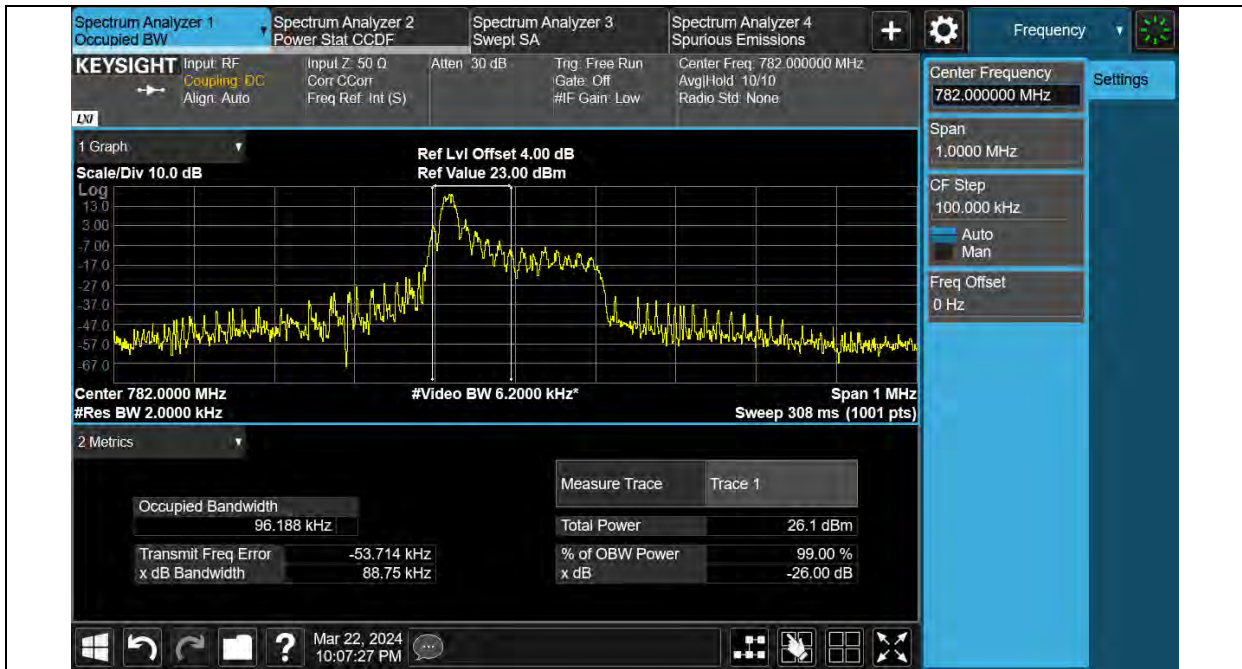


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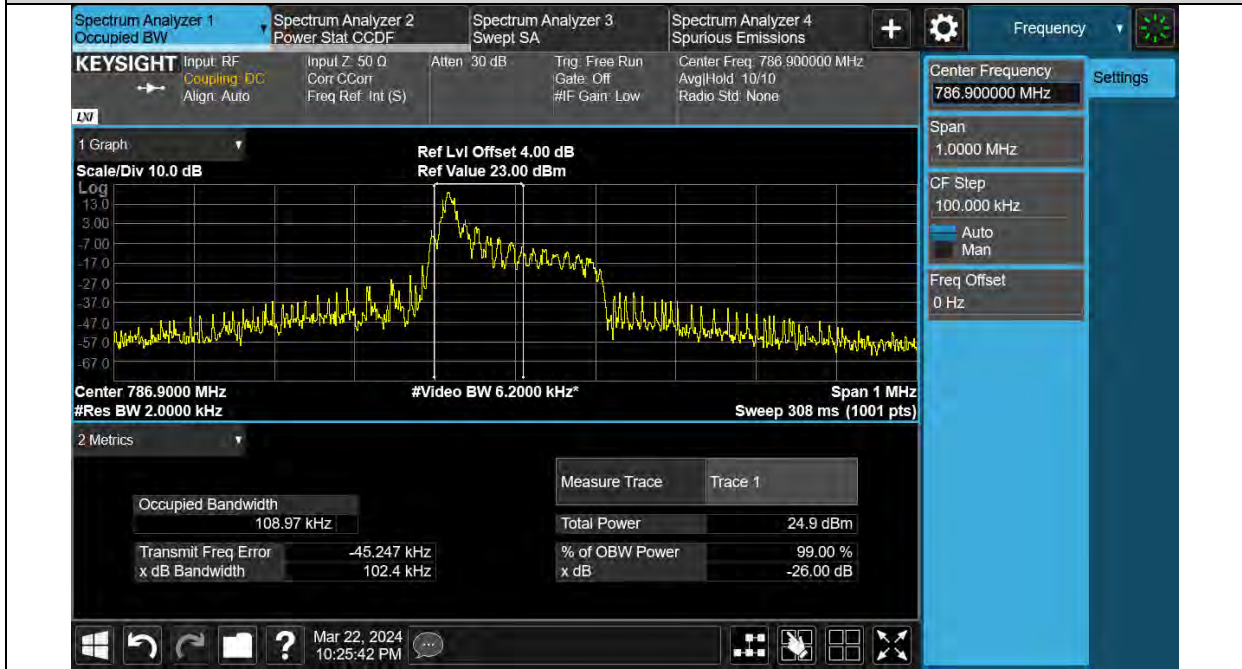


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-QPSK-15KHz-23278-1RB#0



Band13-QPSK-15KHz-23182-12RB#0



BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-QPSK-15KHz-23230-12RB#0



Band13-QPSK-15KHz-23278-12RB#0



BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



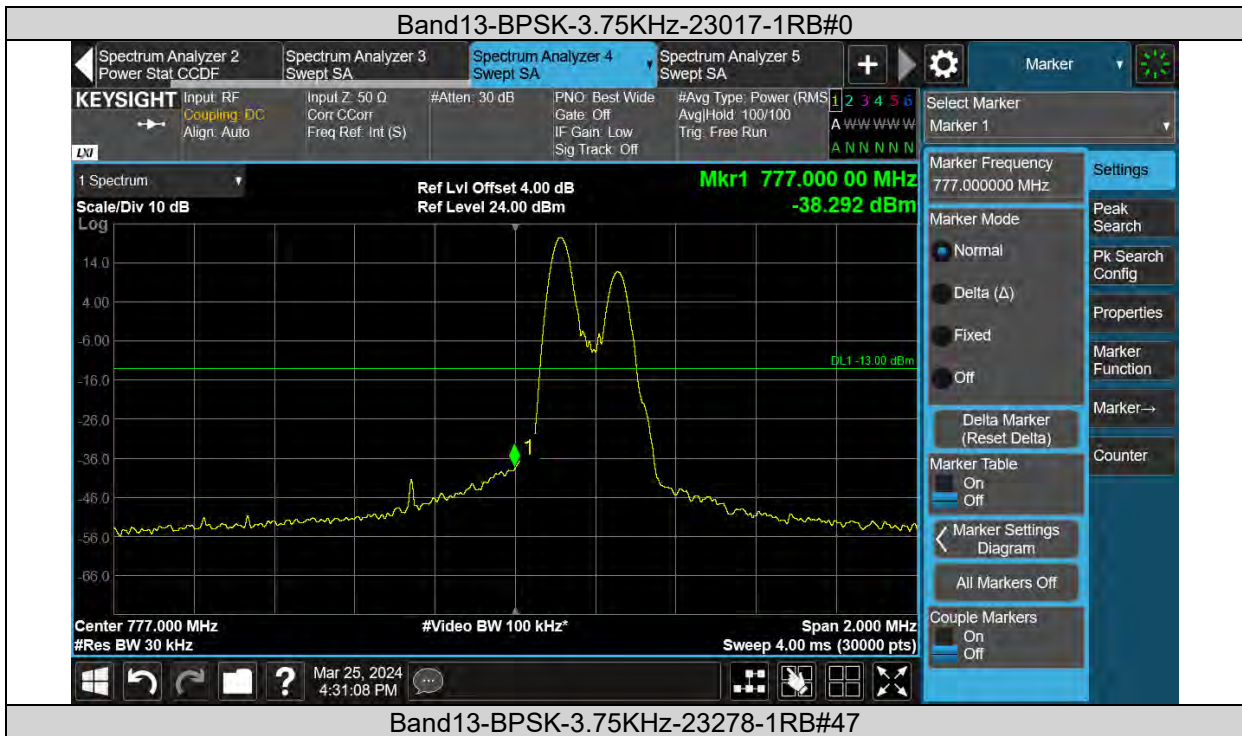


BAND EDGE

Test Result

Band	Modulation	Sub-carrier spacing(KHz)	Channel	Ntones	Result(dBm)	Verdict
Band13	BPSK	3.75	23182	1RB#0	See Graph	PASS
Band13	BPSK	3.75	23278	1RB#47	See Graph	PASS
Band13	QPSK	3.75	23182	1RB#0	See Graph	PASS
Band13	QPSK	3.75	23278	1RB#47	See Graph	PASS
Band13	BPSK	15	23182	1RB#0	See Graph	PASS
Band13	BPSK	15	23278	1RB#11	See Graph	PASS
Band13	QPSK	15	23182	1RB#0	See Graph	PASS
Band13	QPSK	15	23278	1RB#11	See Graph	PASS
Band13	QPSK	15	23182	12RB#0	See Graph	PASS
Band13	QPSK	15	23278	12RB#0	See Graph	PASS

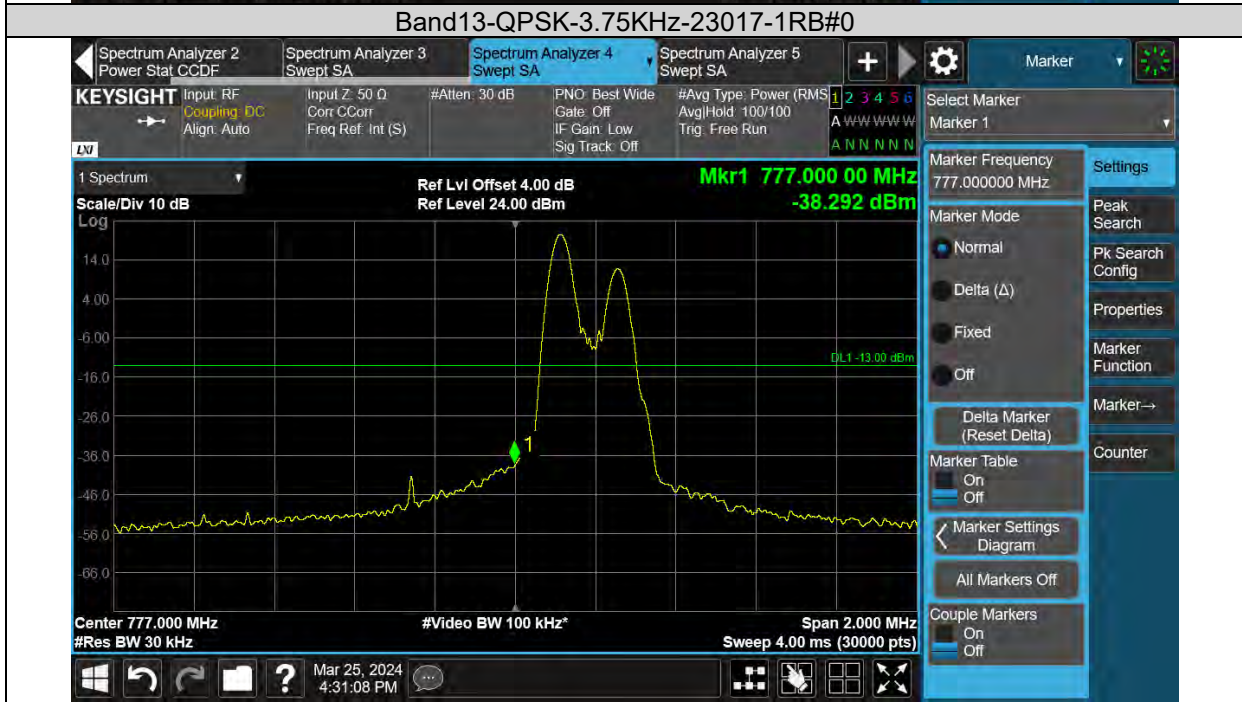
Test Graphs





BUREAU VERITAS

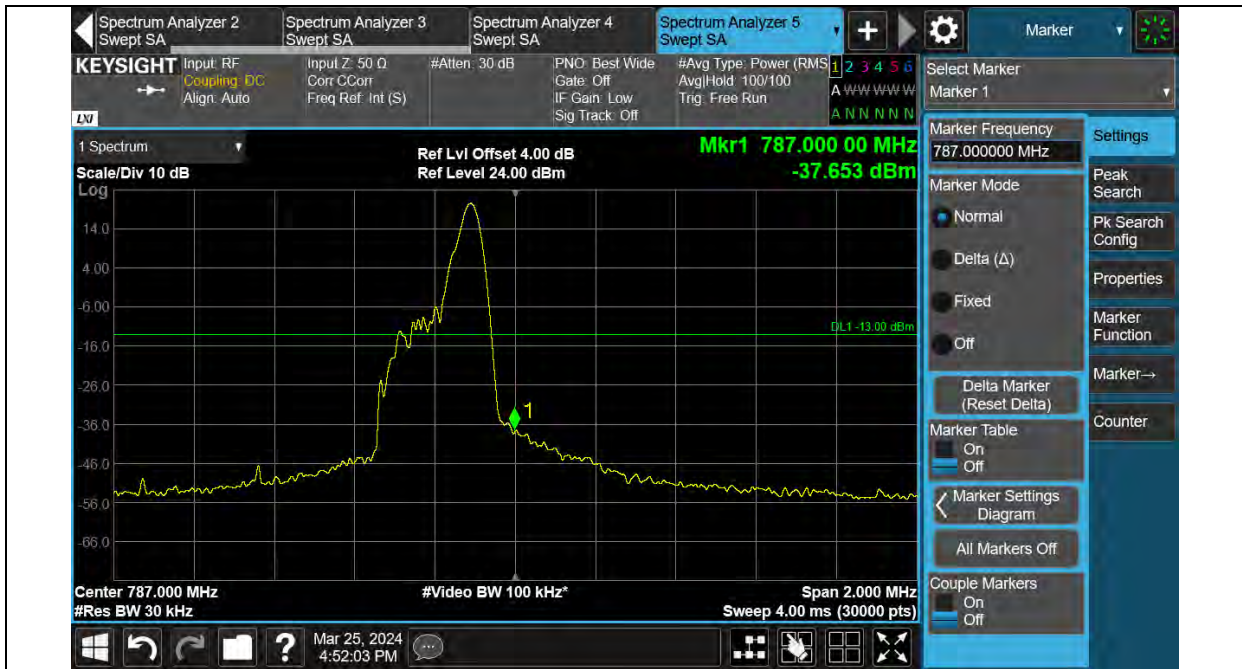
Test Report No.: W7L-240204W001RF03



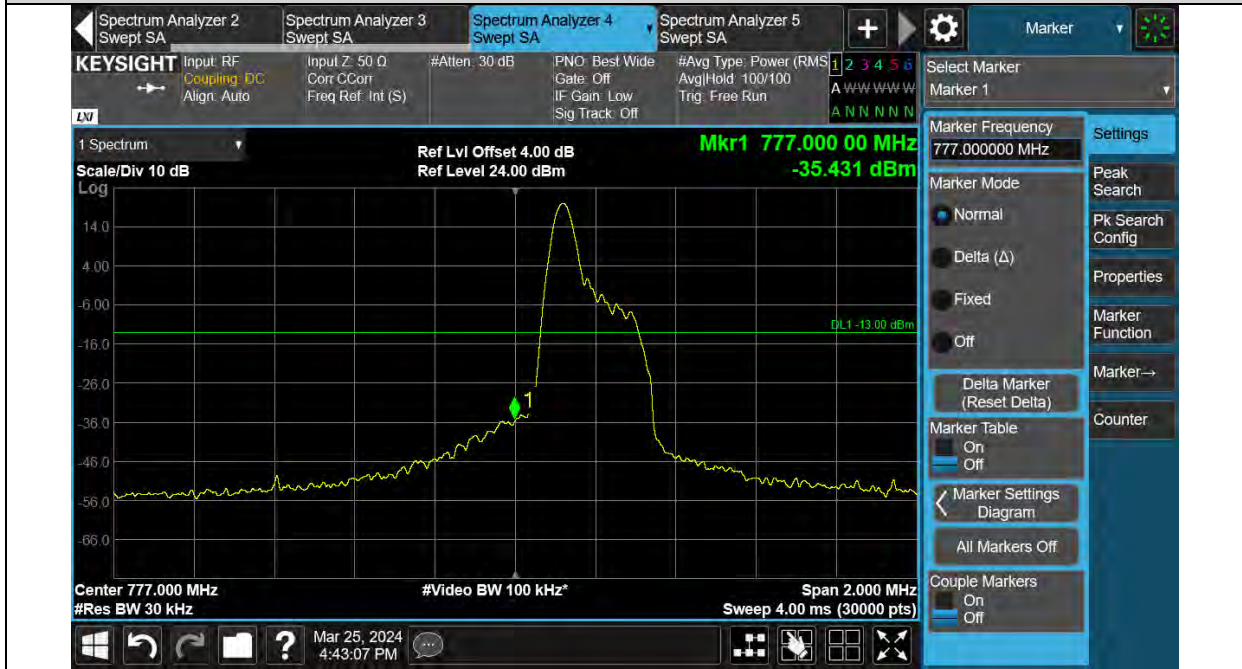


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-BPSK-15KHz-23017-1RB#0

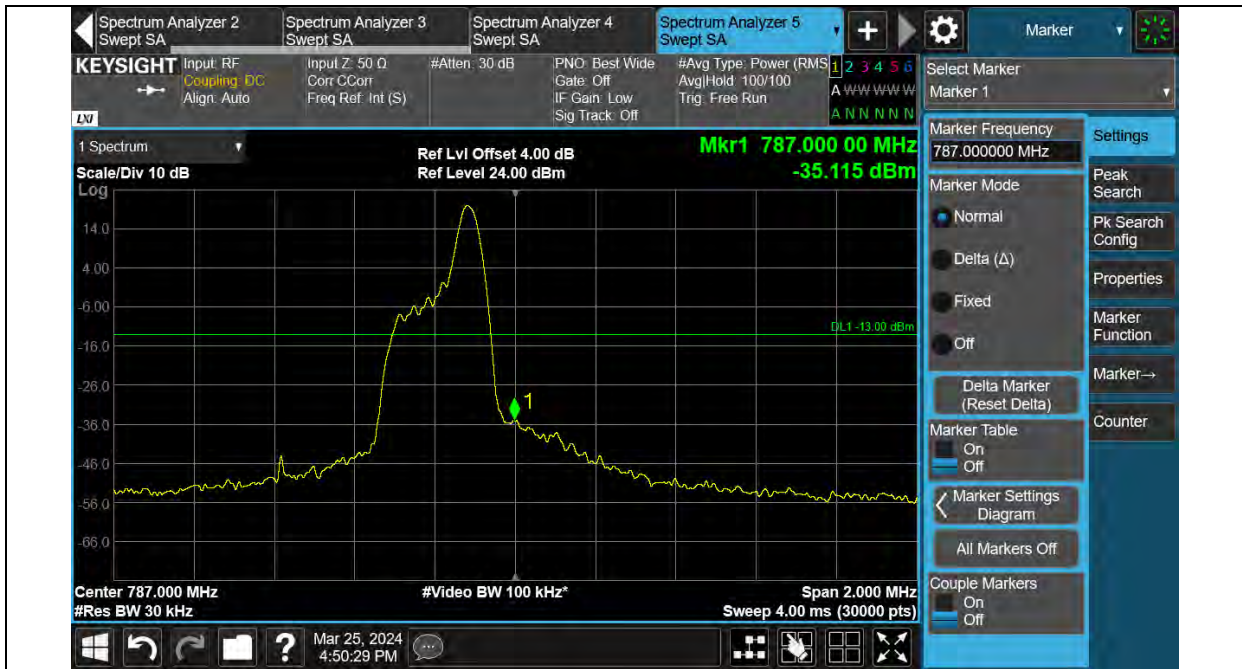


Band13-BPSK-15KHz-23278-1RB#11

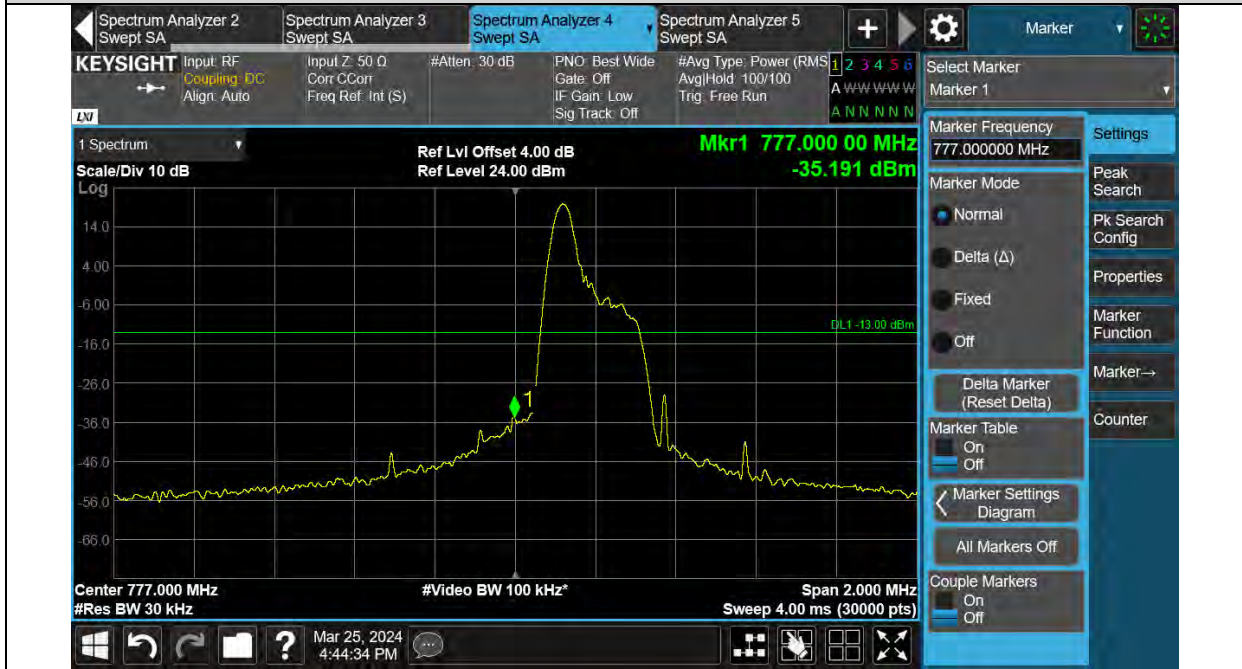


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-QPSK-15KHz-23017-1RB#0



Band13-QPSK-15KHz-23278-1RB#11



BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band 13-QPSK-15KHz-23017-12RB#0



Band 13-QPSK-15KHz-23278-12RB#0



BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-BPSK-3.75KHz-23017-1RB#0-763M~775M

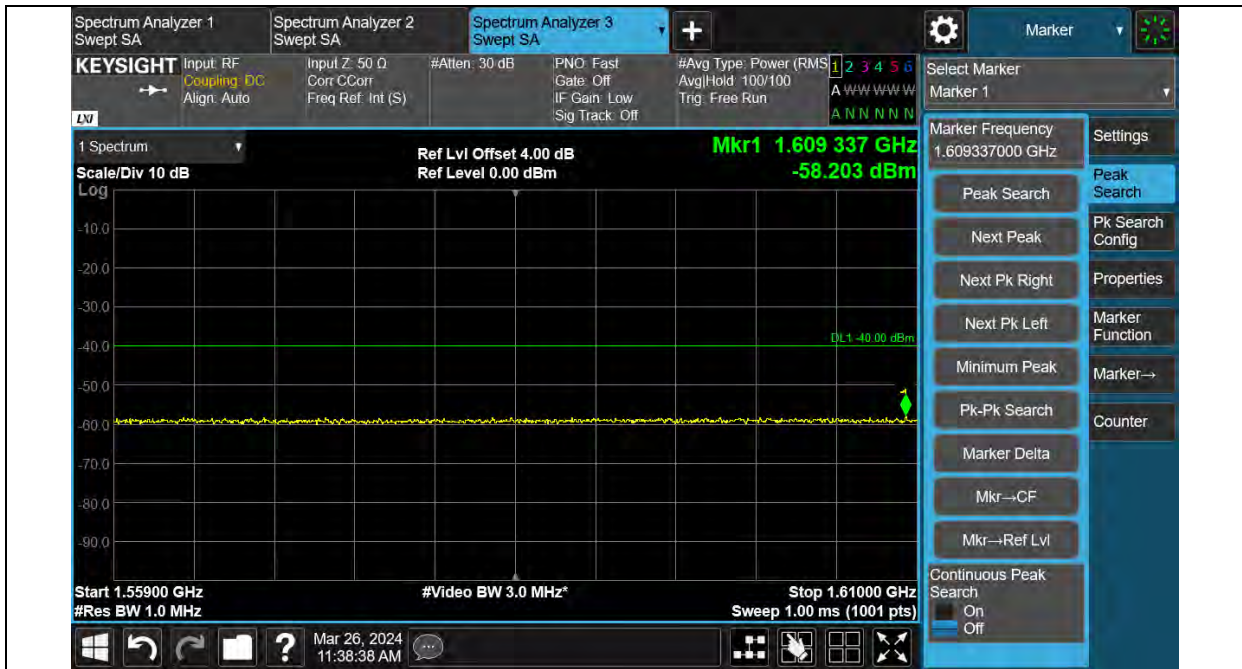


Band13-BPSK-3.75KHz-23017-1RB#0-1559M~1610M

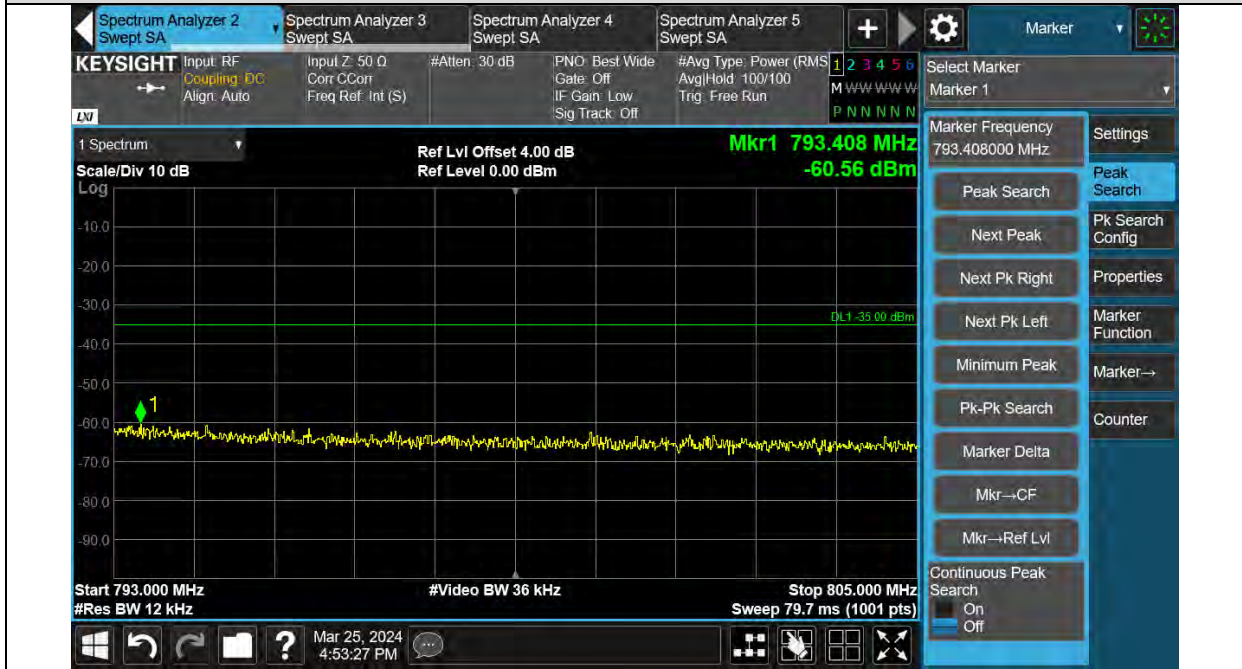


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-BPSK-3.75KHz-23278-1RB#47-793M~805M

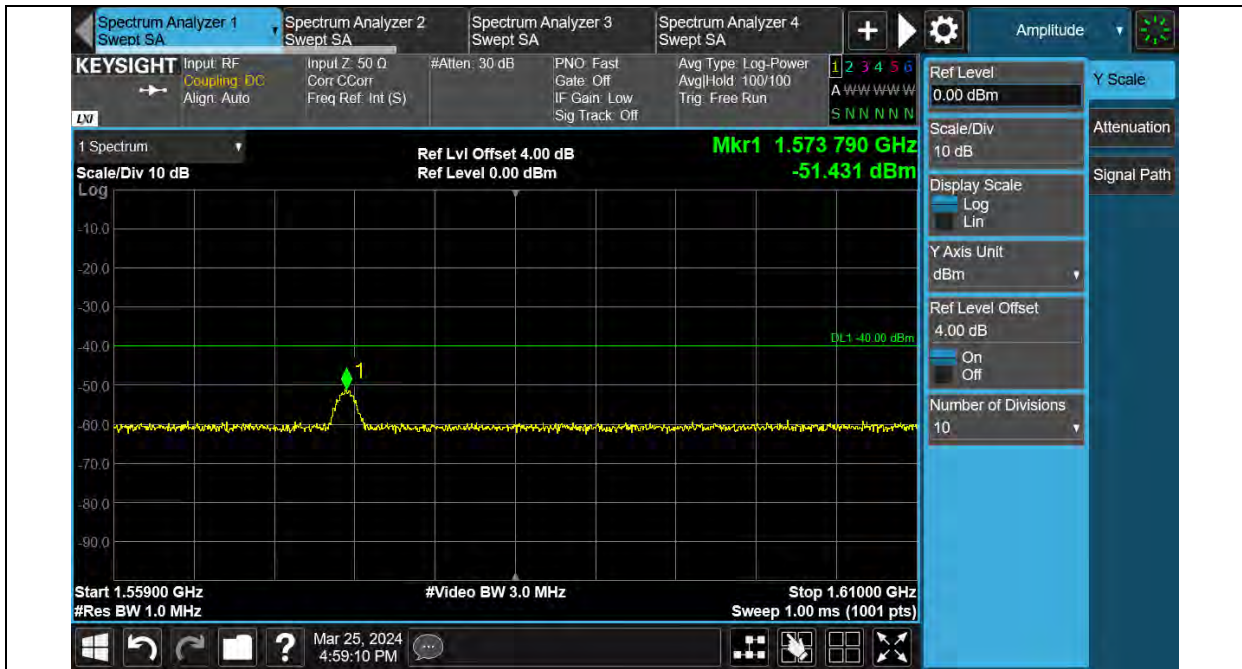


Band13-BPSK-3.75KHz-23278-1RB#47-1559M~1610M

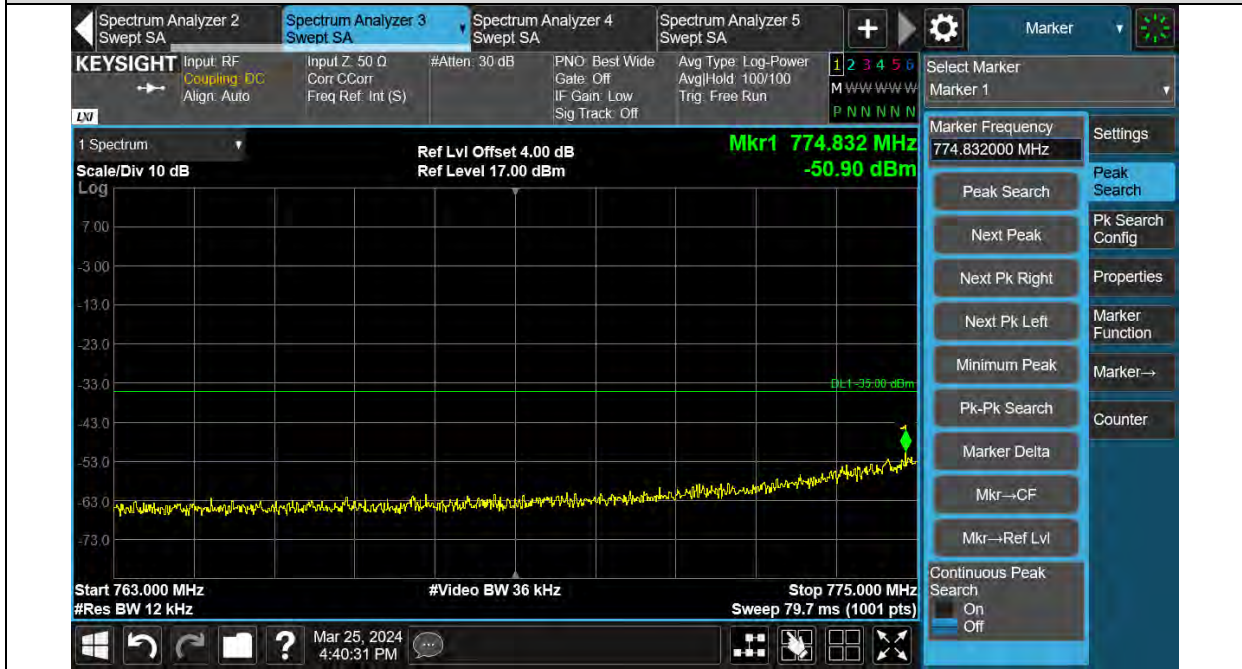


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-QPSK-3.75KHz-23017-1RB#0-763M~775M

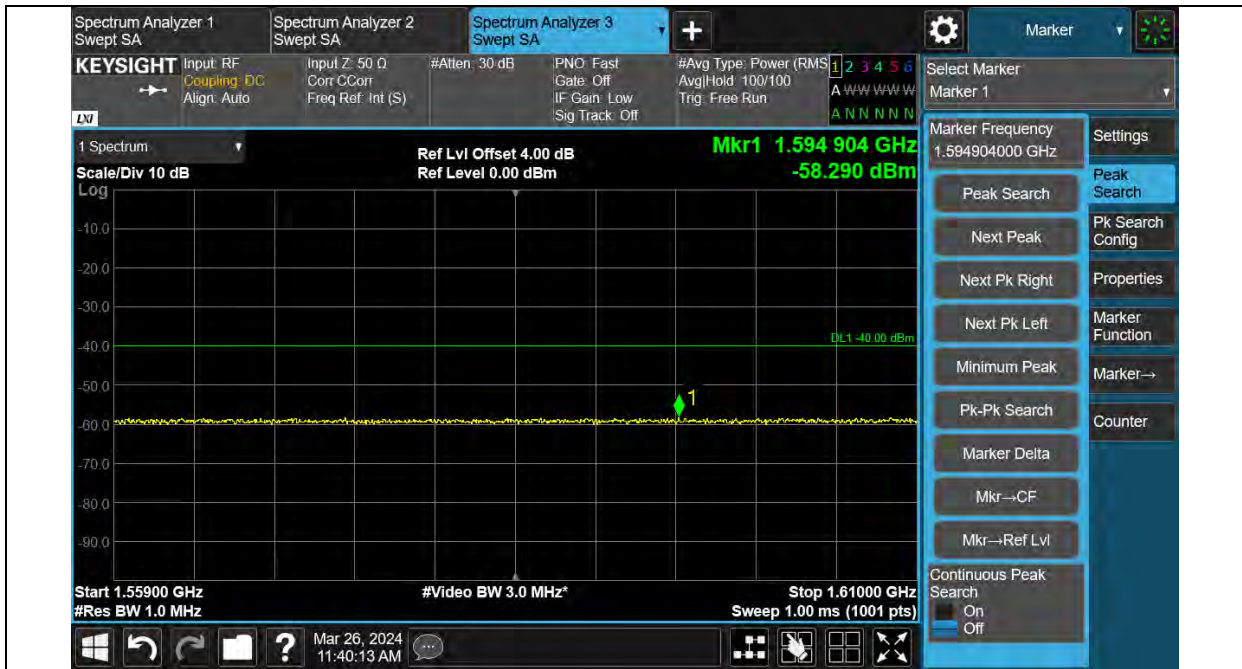


Band13-QPSK-3.75KHz-23017-1RB#0-1559M~1610M

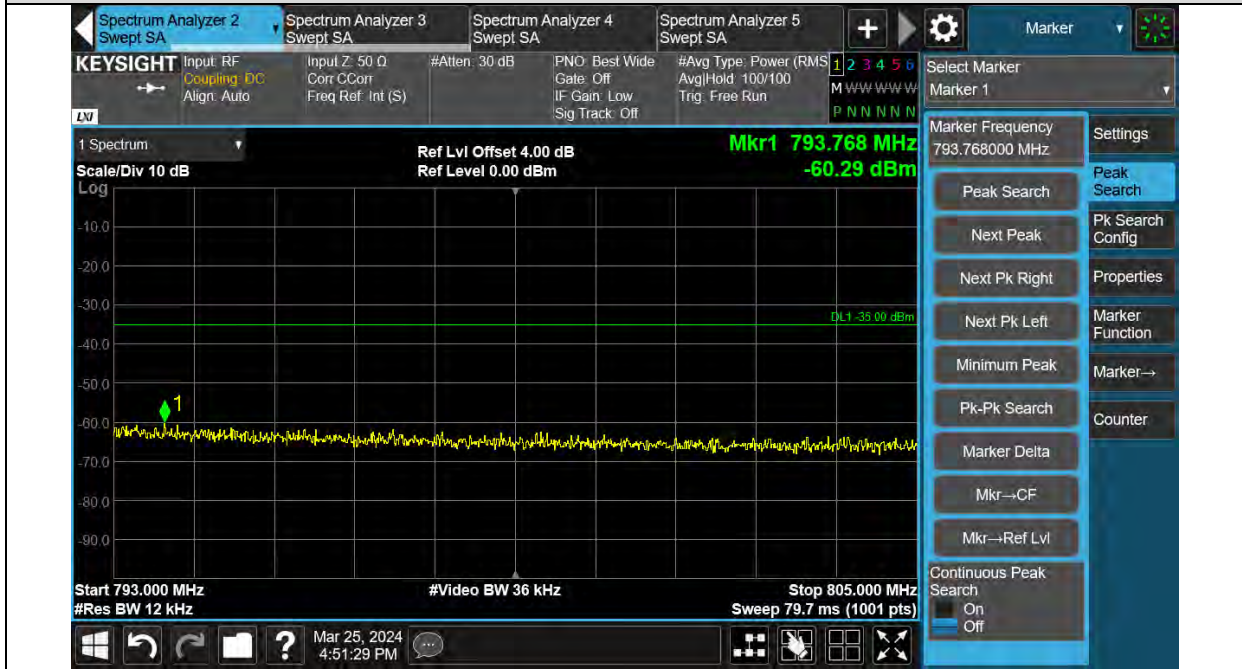


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-QPSK-3.75KHz-23278-1RB#47-793M~805M

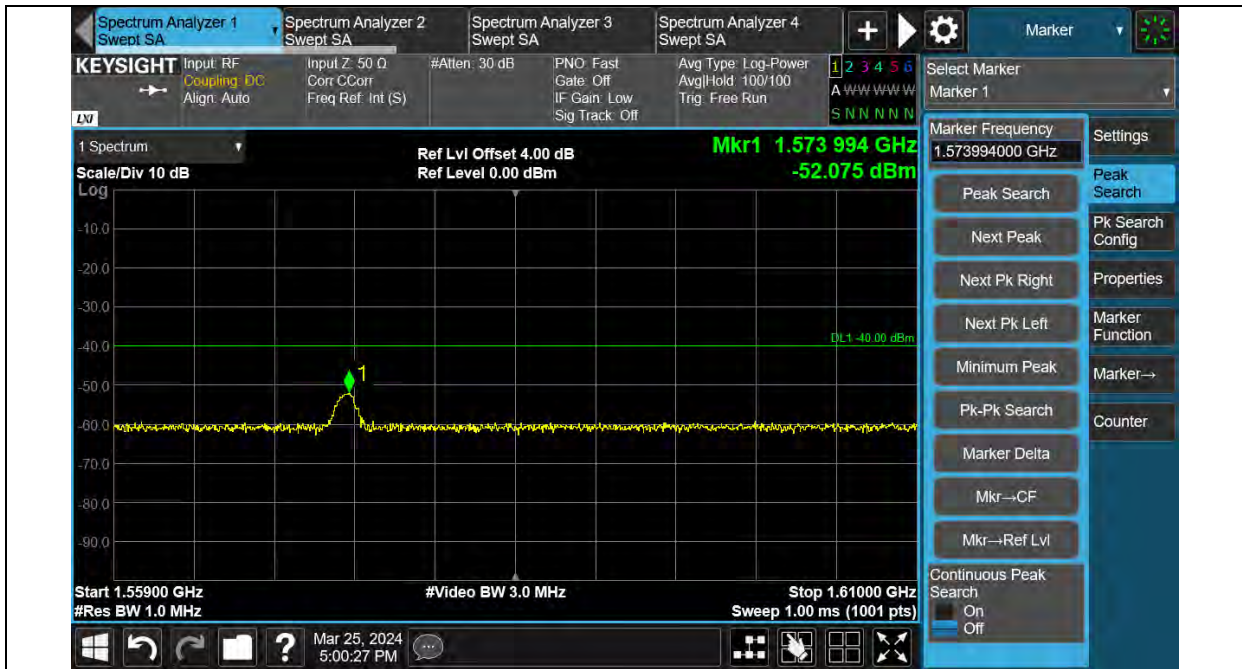


Band13-QPSK-3.75KHz-23278-1RB#47-1559M~1610M

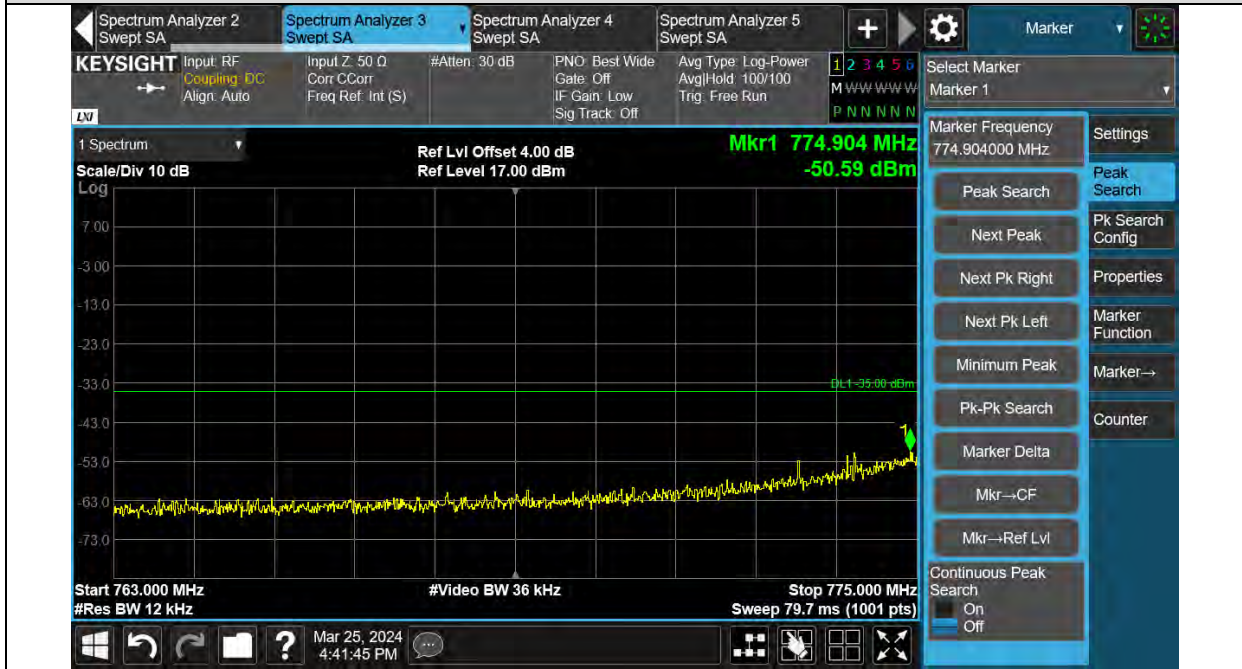


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-BPSK-15KHz-23017-1RB#0-763M~775M

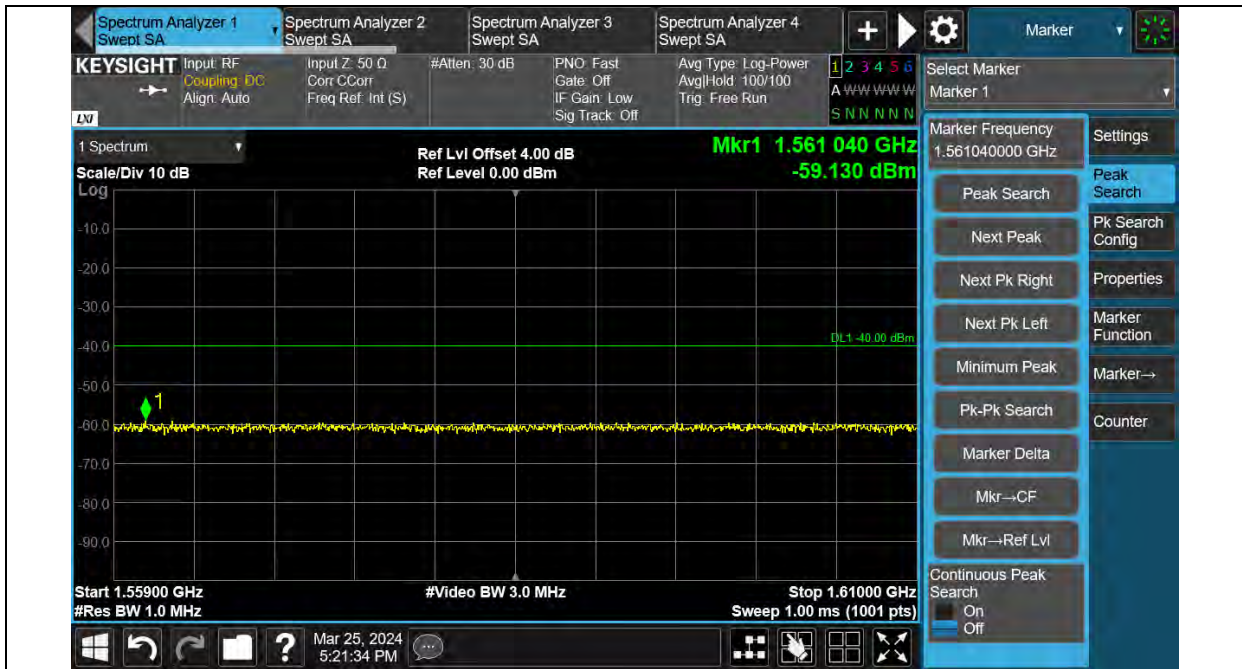


Band13-BPSK-15KHz-23017-1RB#0-1559M~1610M

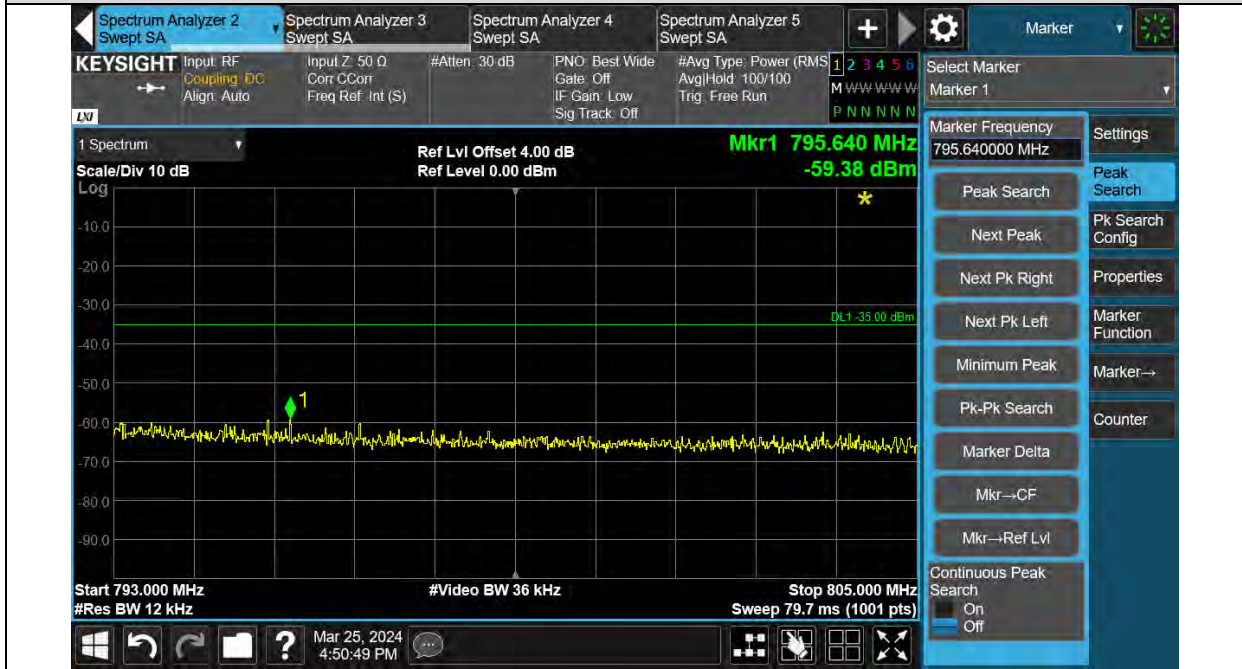


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-BPSK-15KHz-23278-1RB#11-793M~805M

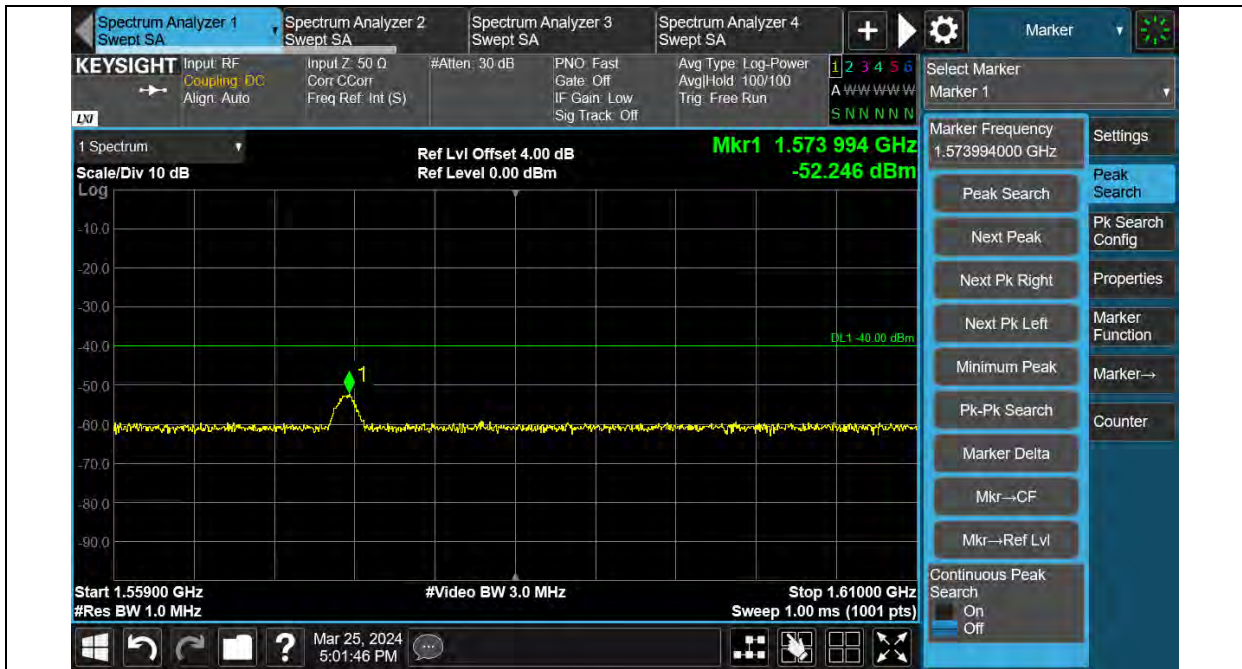


Band13-BPSK-15KHz-23278-1RB#11-1559M~1610M

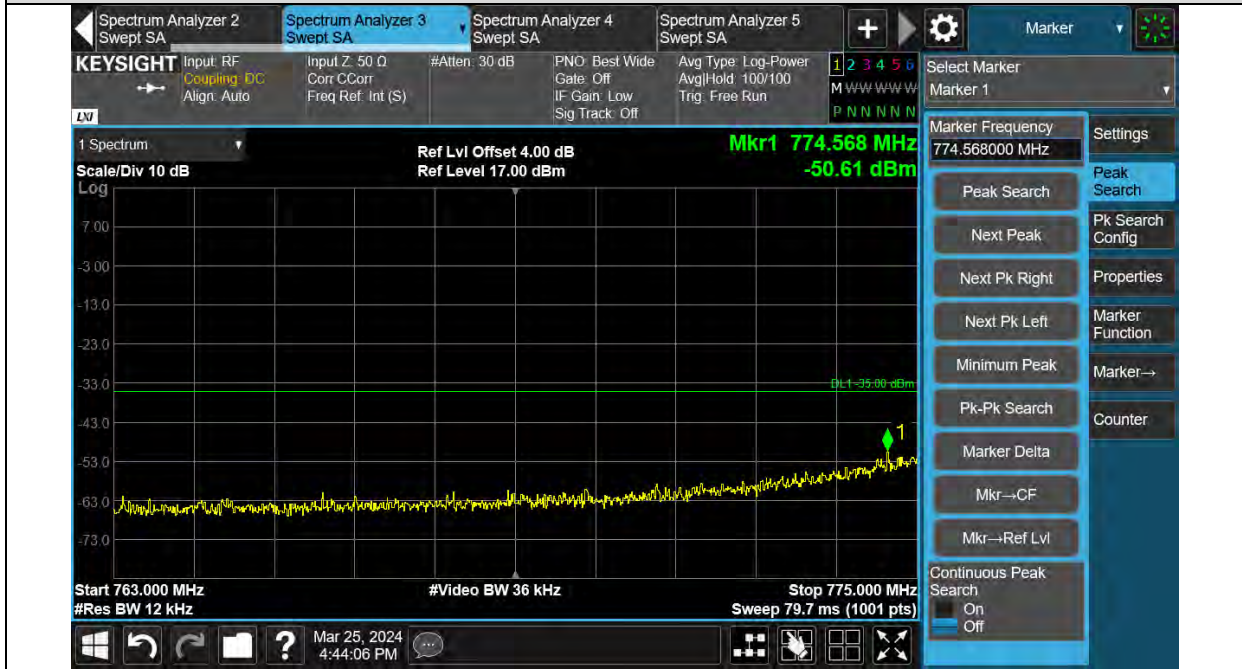


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-QPSK-15KHz-23017-1RB#0-763M~775M

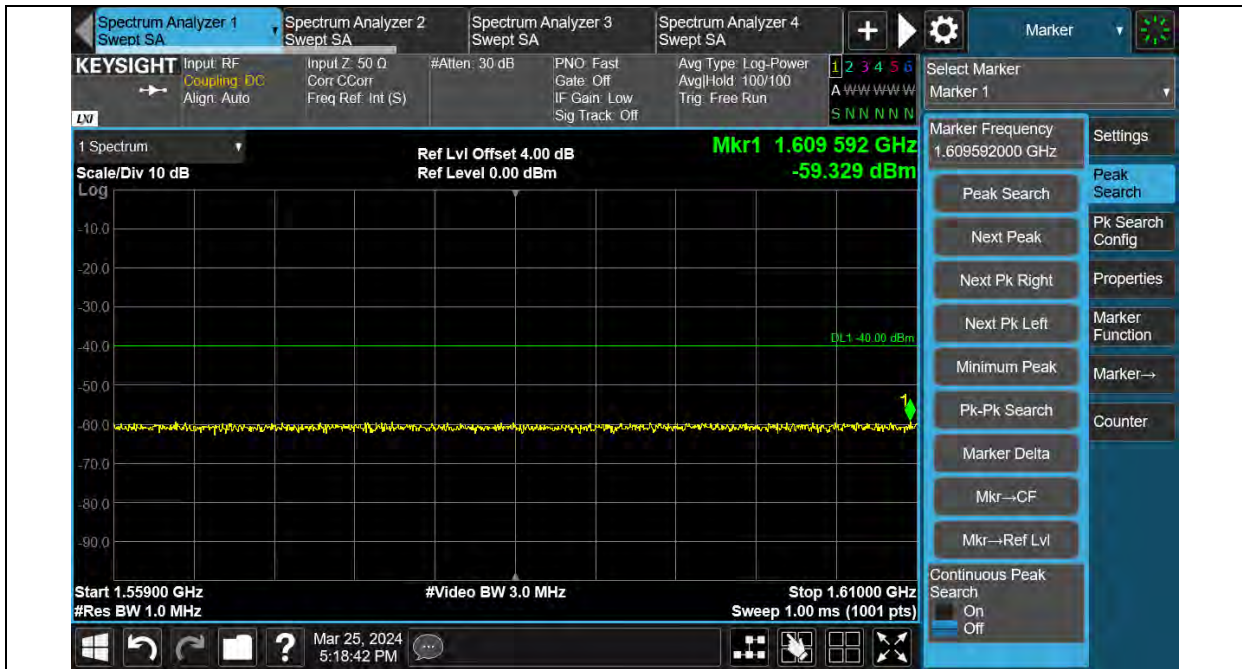


Band13-QPSK-15KHz-23017-1RB#0-1559M~1610M

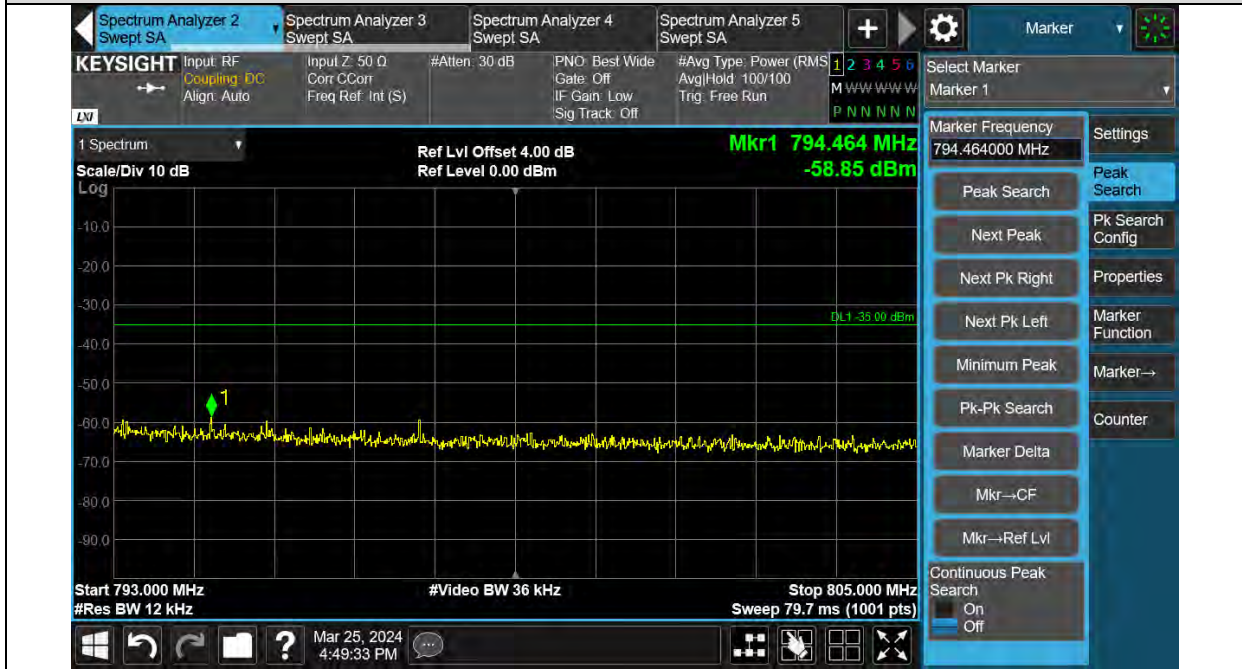


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-QPSK-15KHz-23278-1RB#11-793M~805M

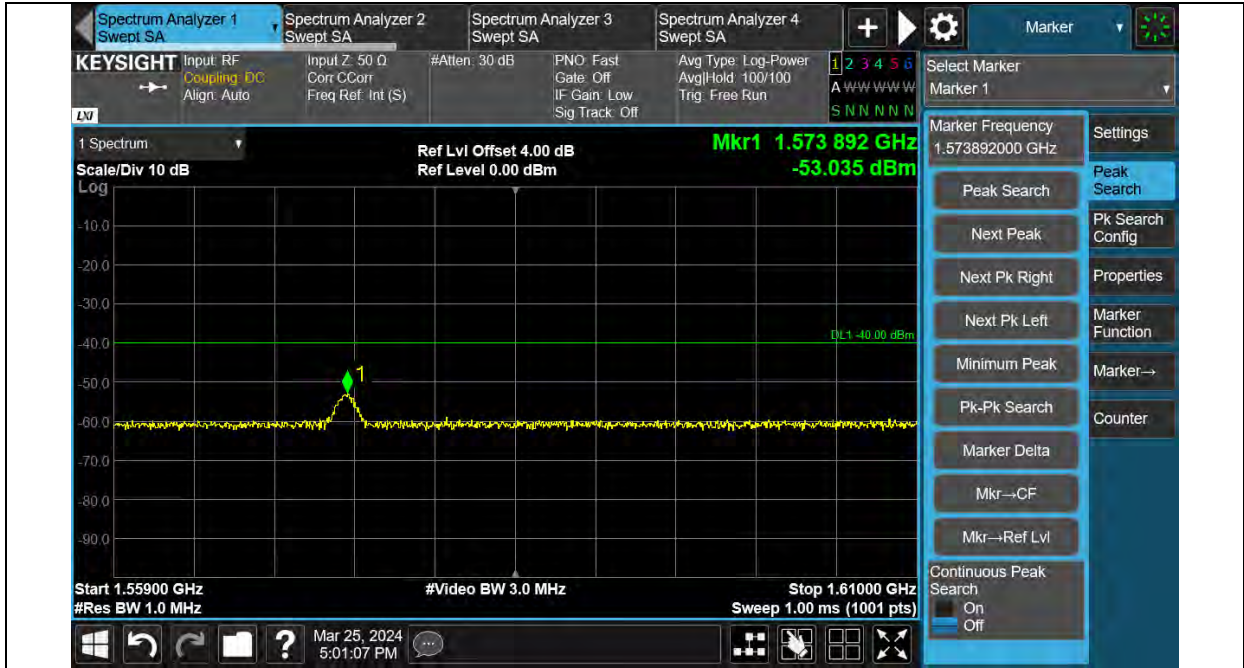


Band13-QPSK-15KHz-23278-1RB#11-1559M~1610M

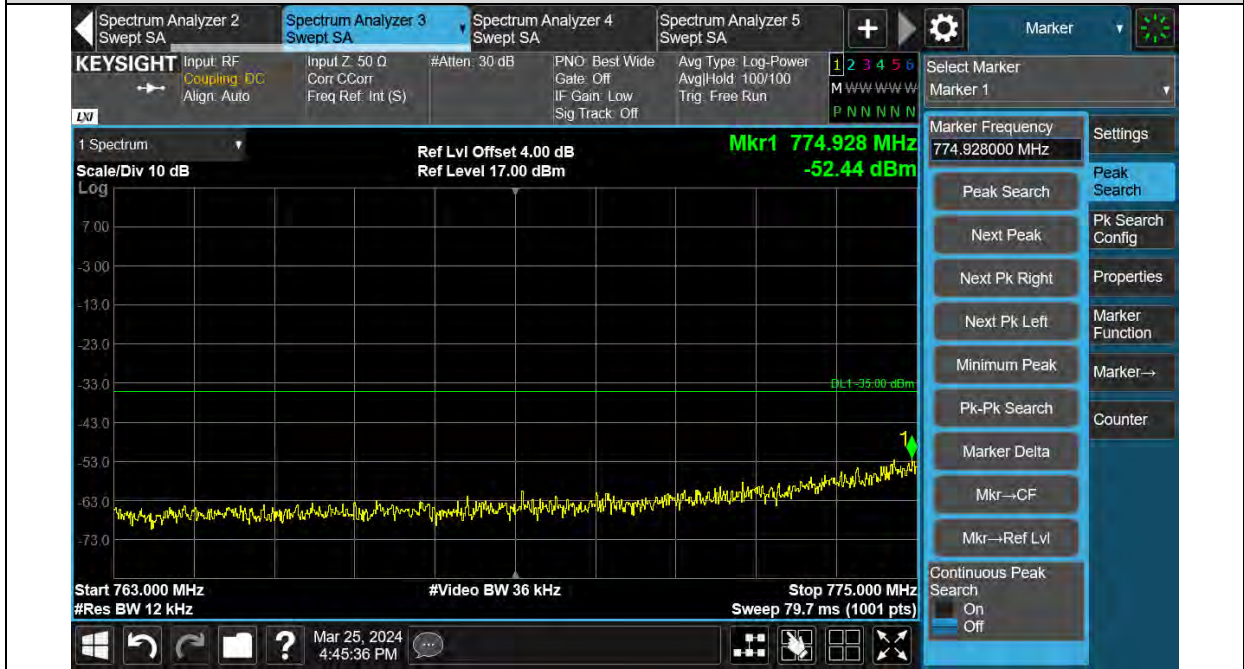


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-QPSK-15KHz-23017-12RB#0-763M~775M

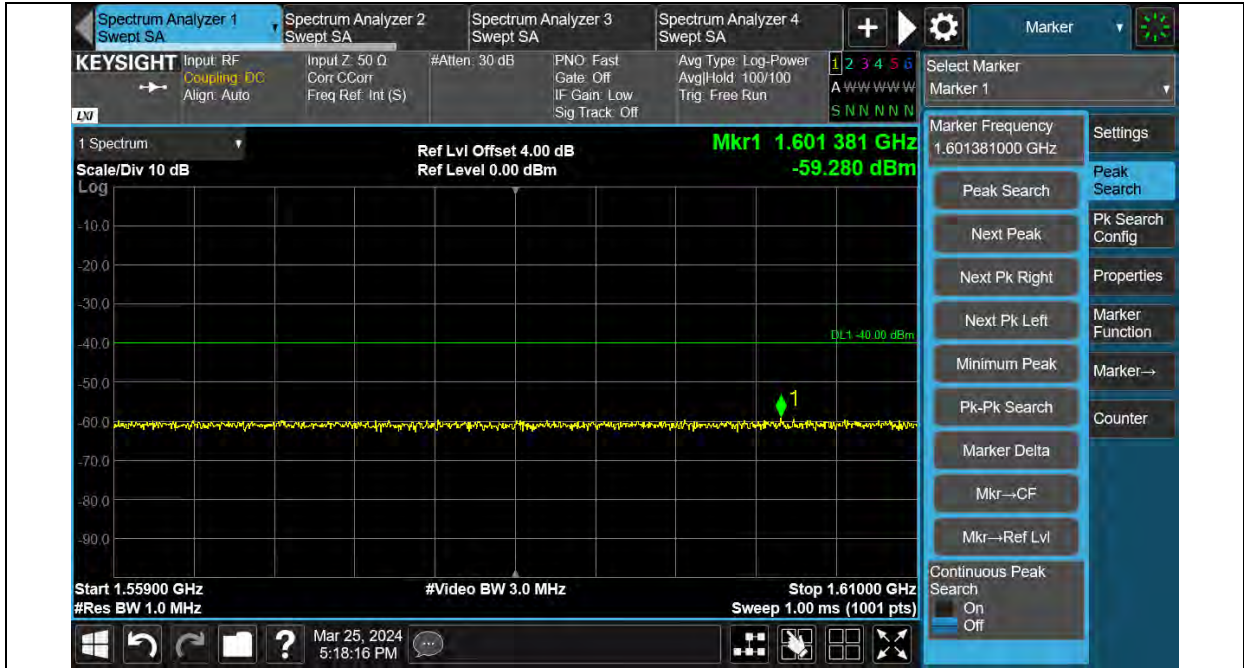


Band13-QPSK-15KHz-23017-12RB#0-1559M~1610M

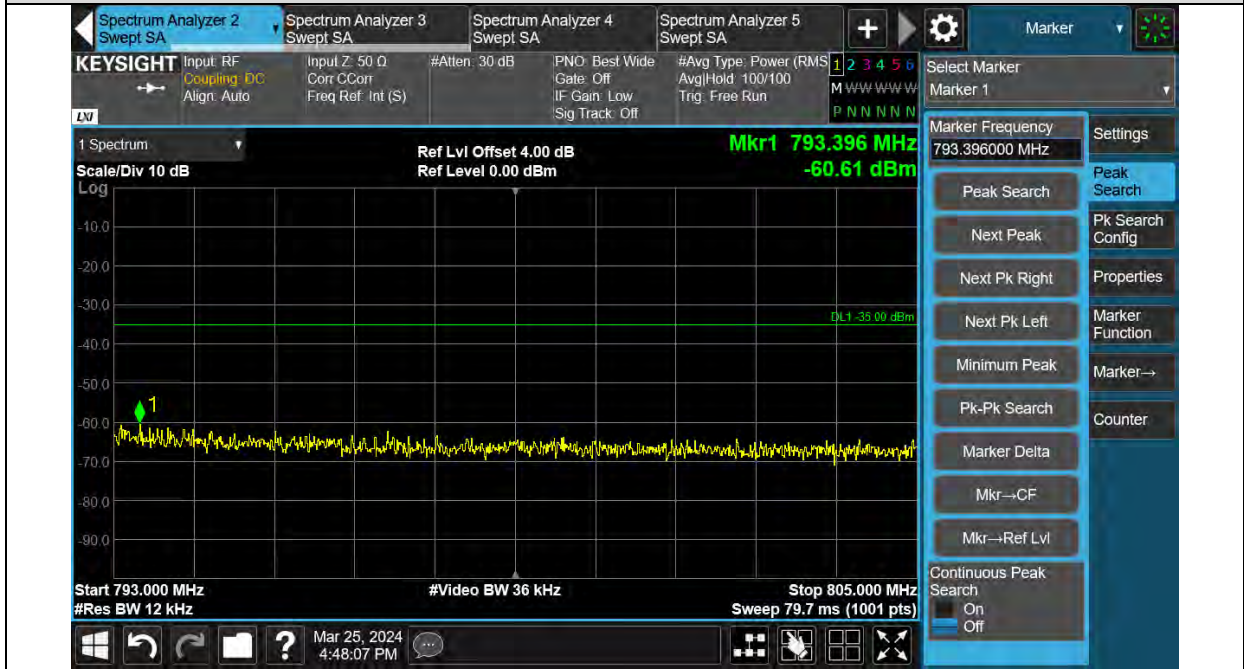


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-QPSK-15KHz-23278-12RB#0-793M~805M

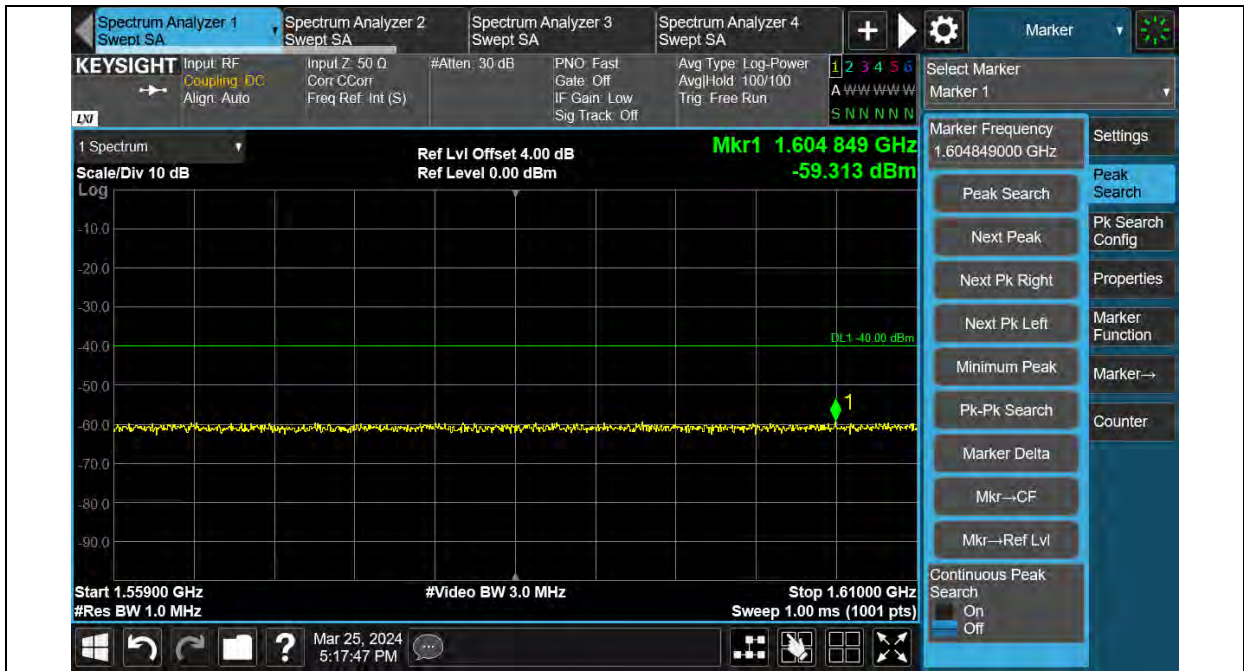


Band13-QPSK-15KHz-23278-12RB#0-1559M~1610M



BUREAU VERITAS

Test Report No.: W7L-240204W001RF03





CONDUCTED SPURIOUS EMISSION

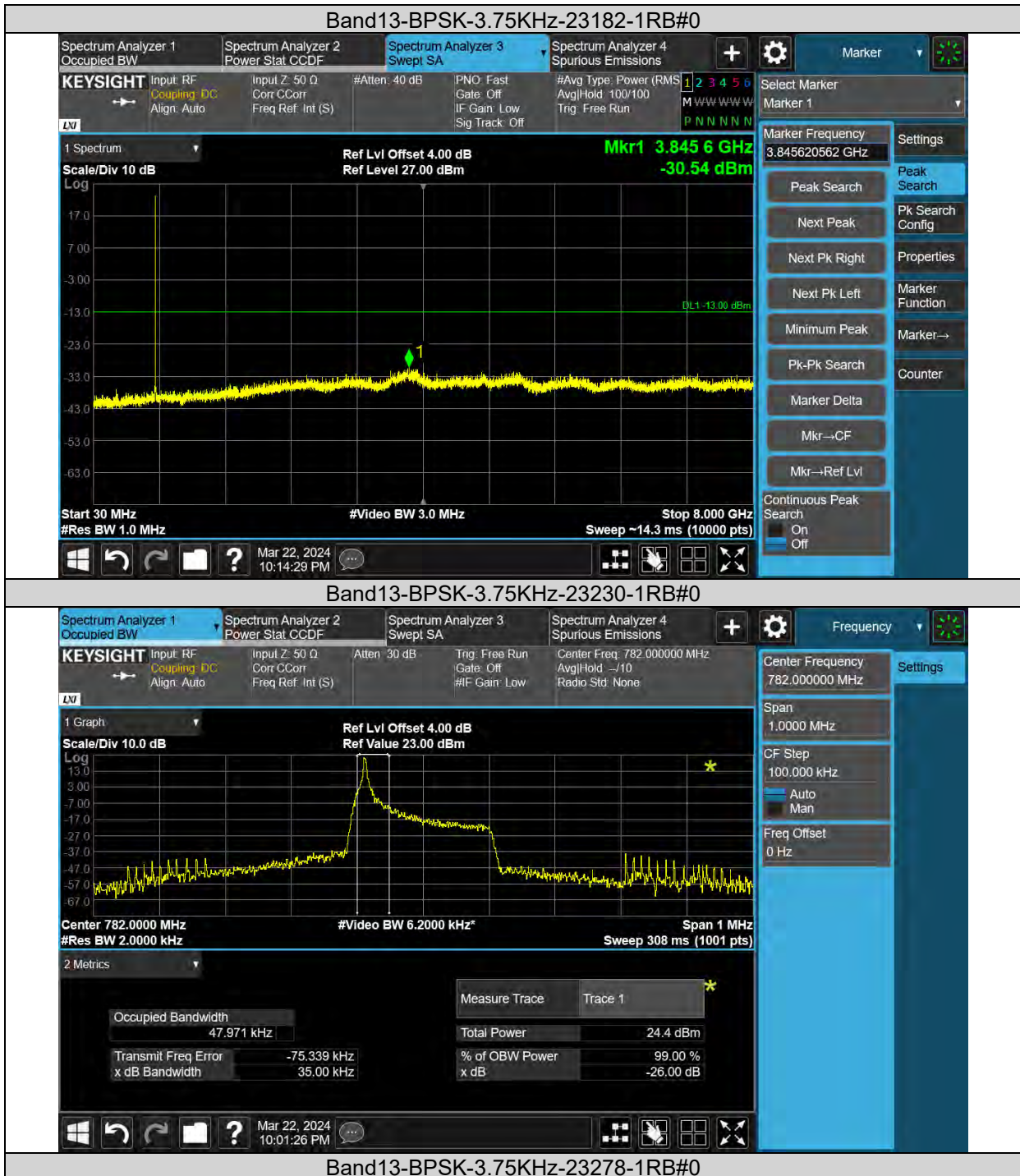
Test Result

Band	Modulation	Sub-carrier spacing(KHz)	Channel	Ntones	Frequency Range	Result (dBm)	Verdict
Band13	BPSK	3.75	23182	1RB#0	Range:30M~8000M	See Graph	PASS
Band13	BPSK	3.75	23230	1RB#0	Range:30M~8000M	See Graph	PASS
Band13	BPSK	3.75	23278	1RB#0	Range:30M~8000M	See Graph	PASS
Band13	QPSK	3.75	23182	1RB#0	Range:30M~8000M	See Graph	PASS
Band13	QPSK	3.75	23230	1RB#0	Range:30M~8000M	See Graph	PASS
Band13	QPSK	3.75	23278	1RB#0	Range:30M~8000M	See Graph	PASS
Band13	BPSK	15	23182	1RB#0	Range:30M~8000M	See Graph	PASS
Band13	BPSK	15	23230	1RB#0	Range:30M~8000M	See Graph	PASS
Band13	BPSK	15	23278	1RB#0	Range:30M~8000M	See Graph	PASS
Band13	QPSK	15	23182	1RB#0	Range:30M~8000M	See Graph	PASS
Band13	QPSK	15	23230	1RB#0	Range:30M~8000M	See Graph	PASS
Band13	QPSK	15	23278	1RB#0	Range:30M~8000M	See Graph	PASS
Band13	QPSK	15	23182	12RB#0	Range:30M~8000M	See Graph	PASS
Band13	QPSK	15	23230	12RB#0	Range:30M~8000M	See Graph	PASS
Band13	QPSK	15	23278	12RB#0	Range:30M~8000M	See Graph	PASS



Test Report No.: W7L-240204W001RF03

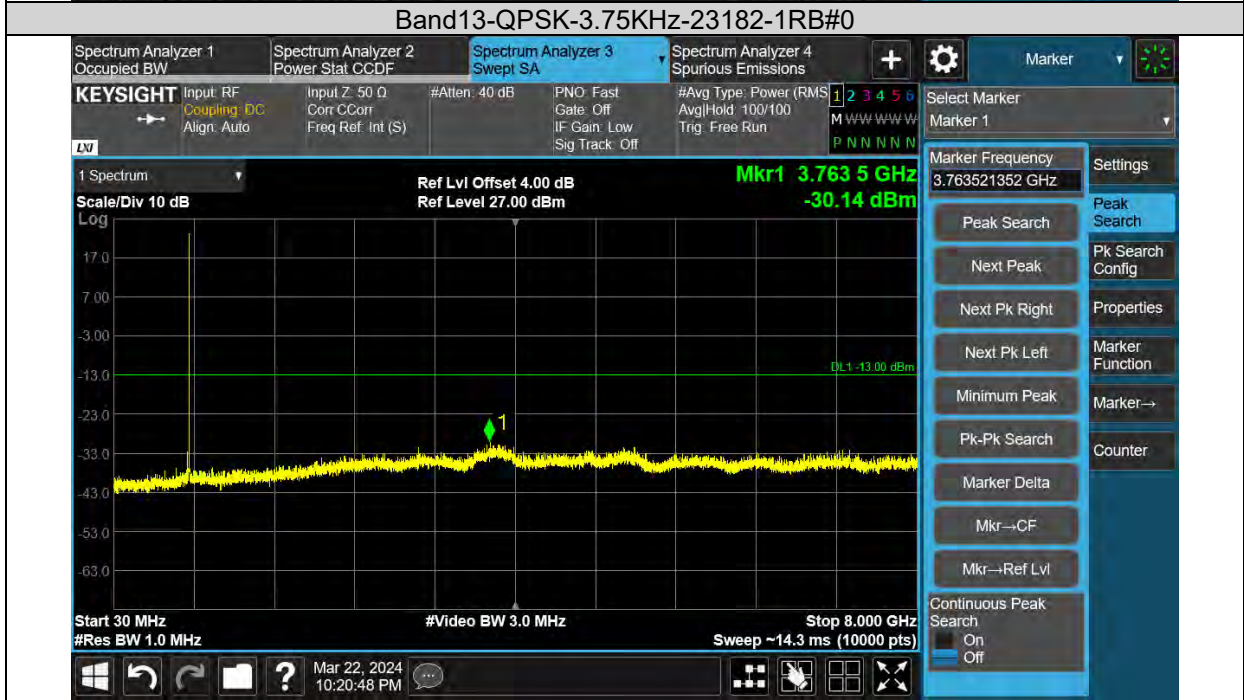
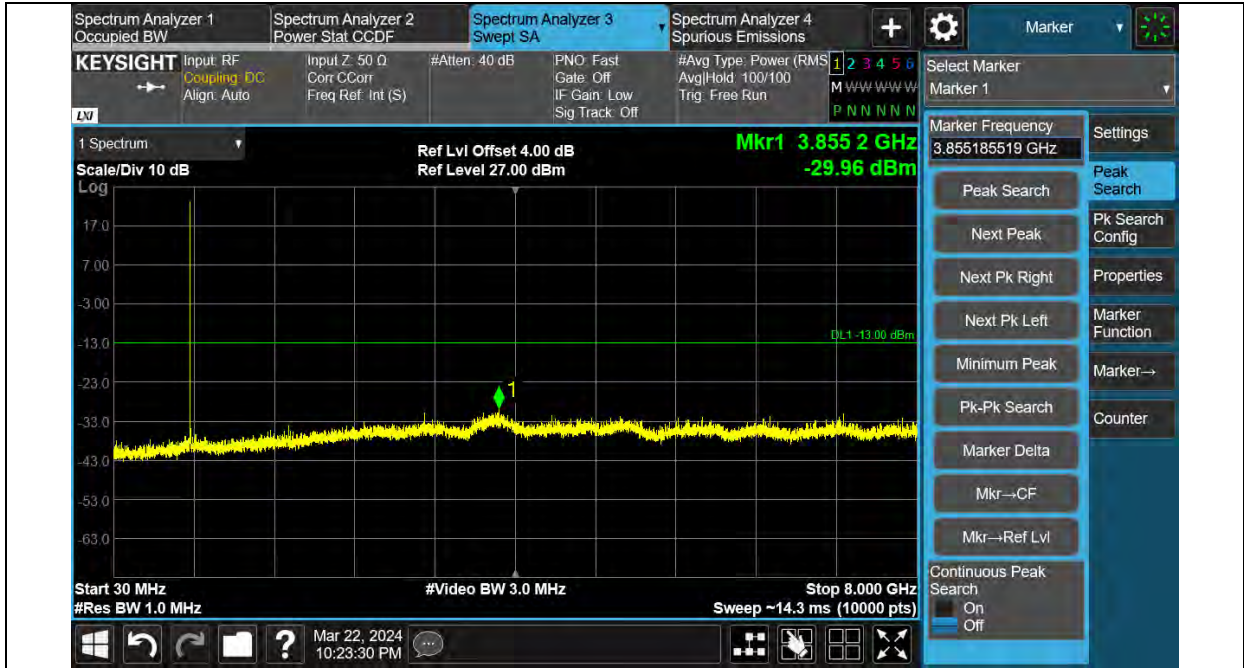
Test Graphs





BUREAU VERITAS

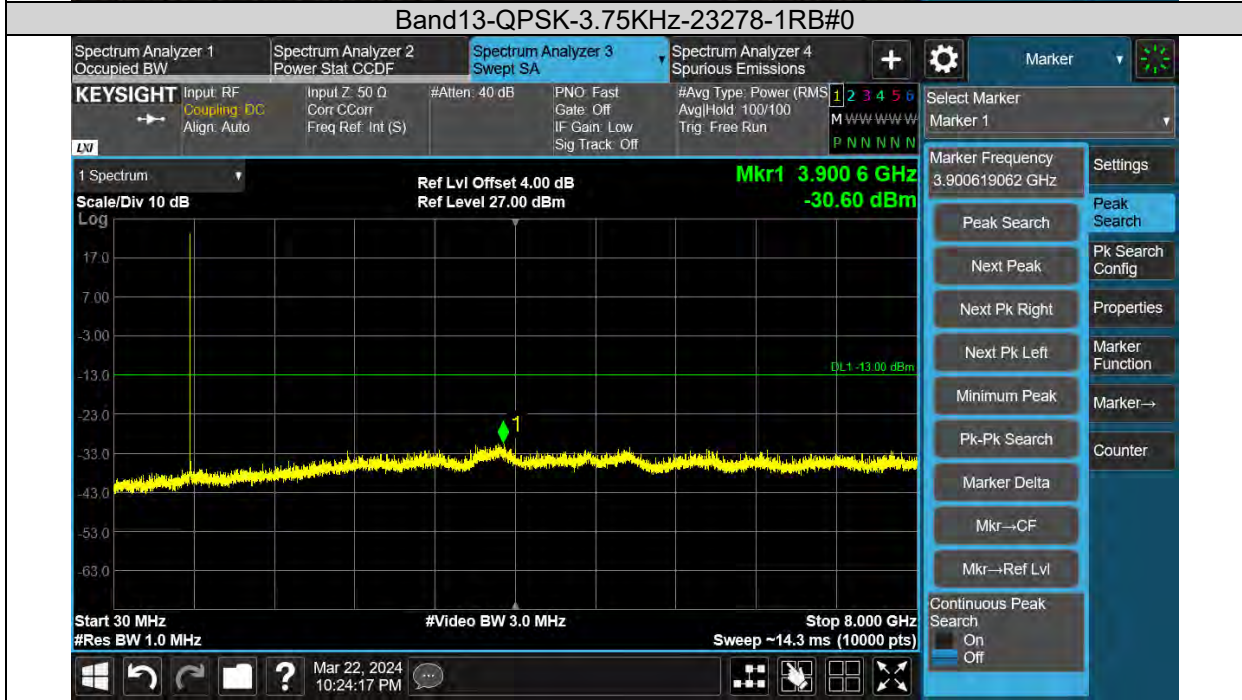
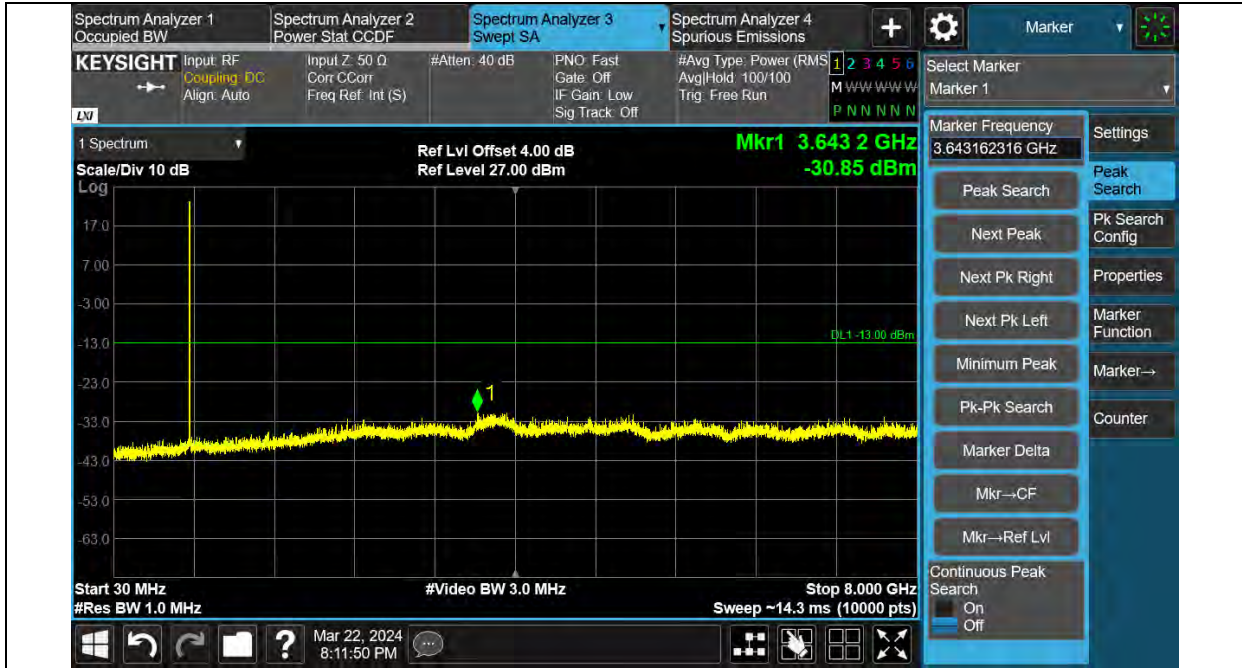
Test Report No.: W7L-240204W001RF03





BUREAU VERITAS

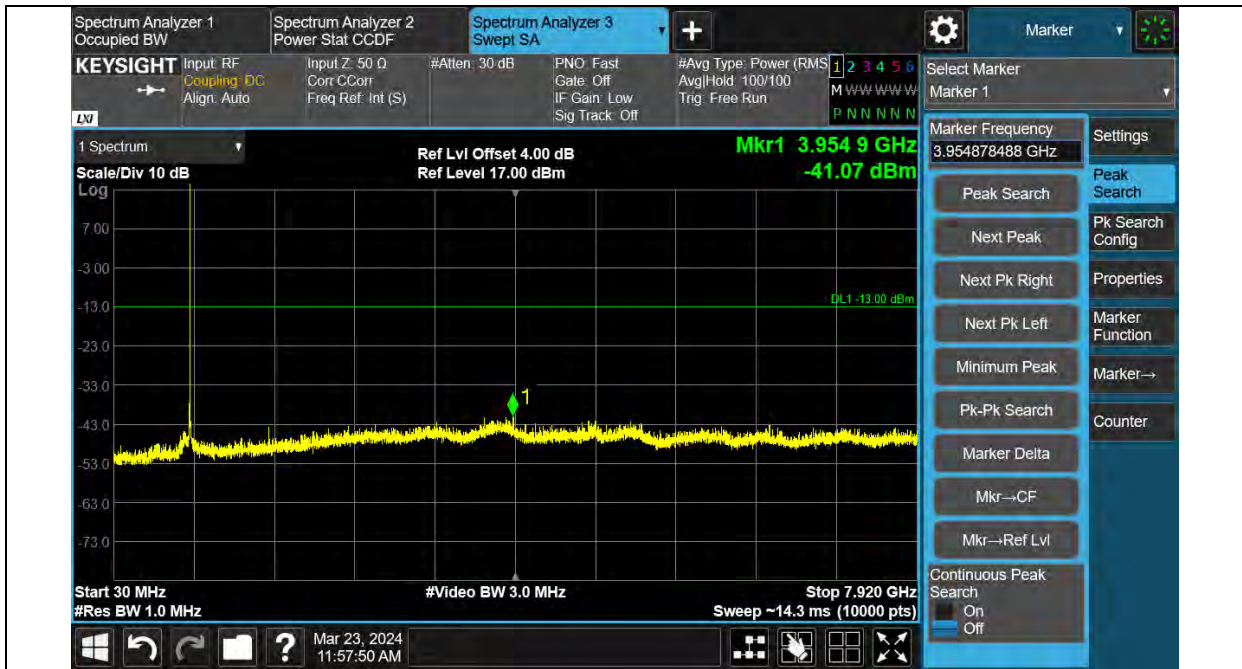
Test Report No.: W7L-240204W001RF03



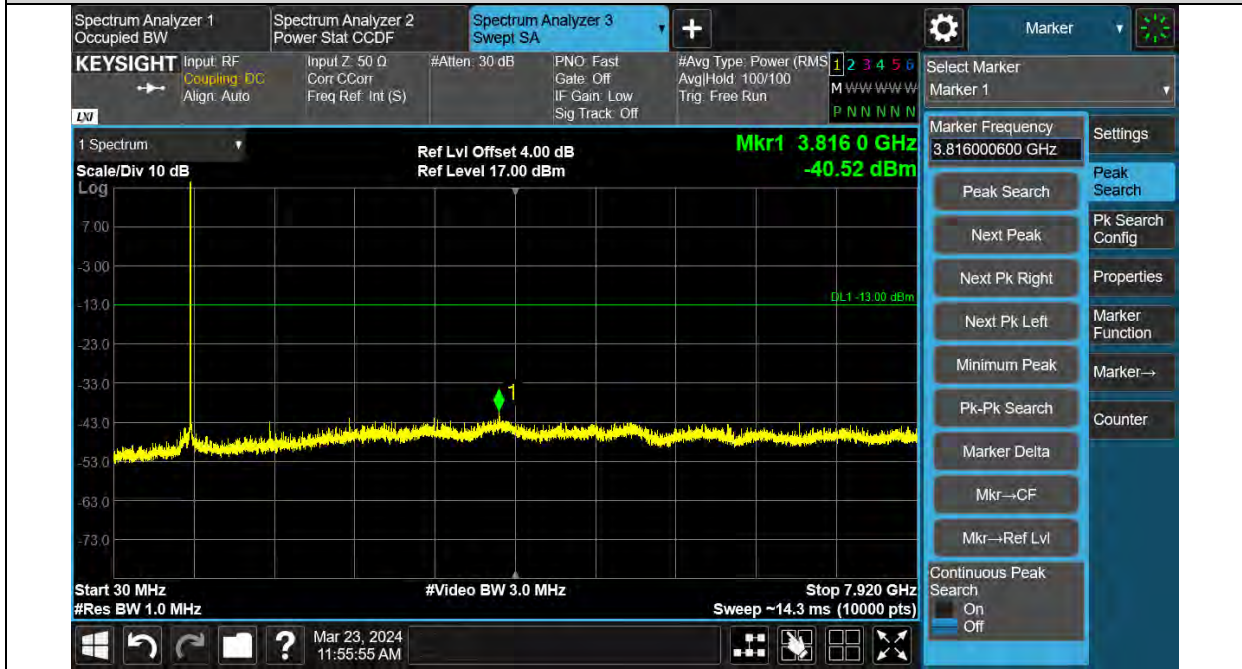


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-BPSK-15KHz-23230-1RB#0

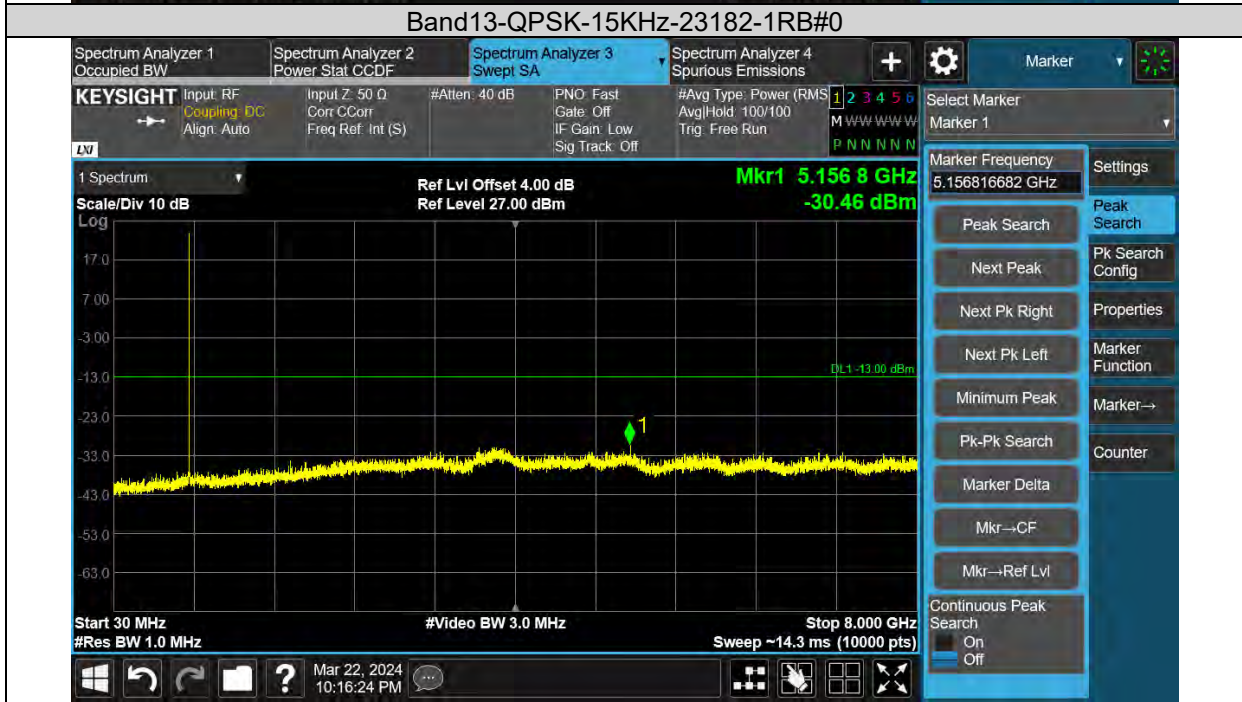
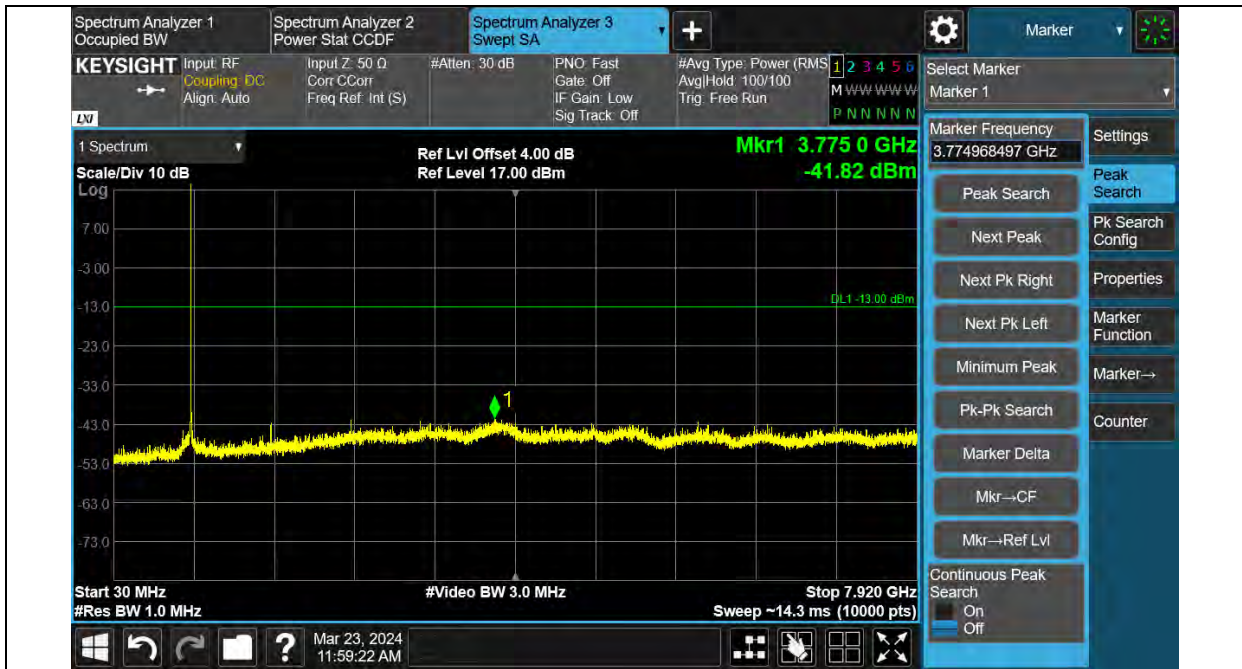


Band13-BPSK-15KHz-23278-1RB#0



BUREAU VERITAS

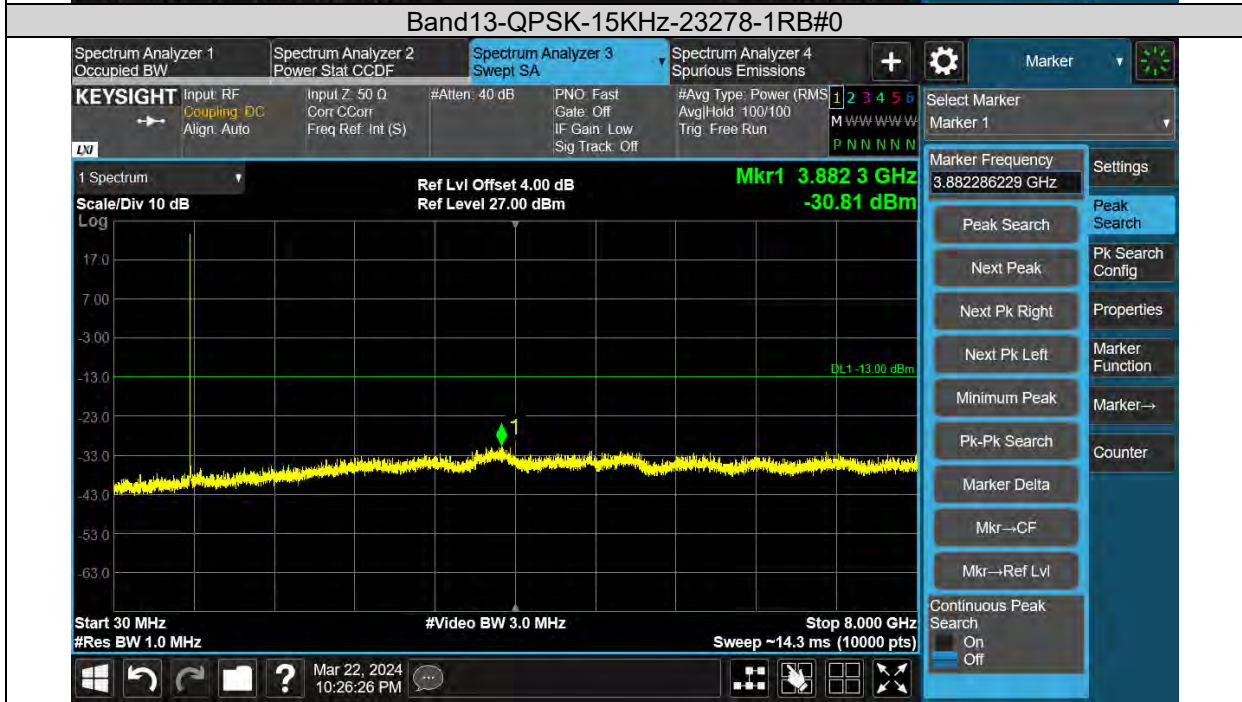
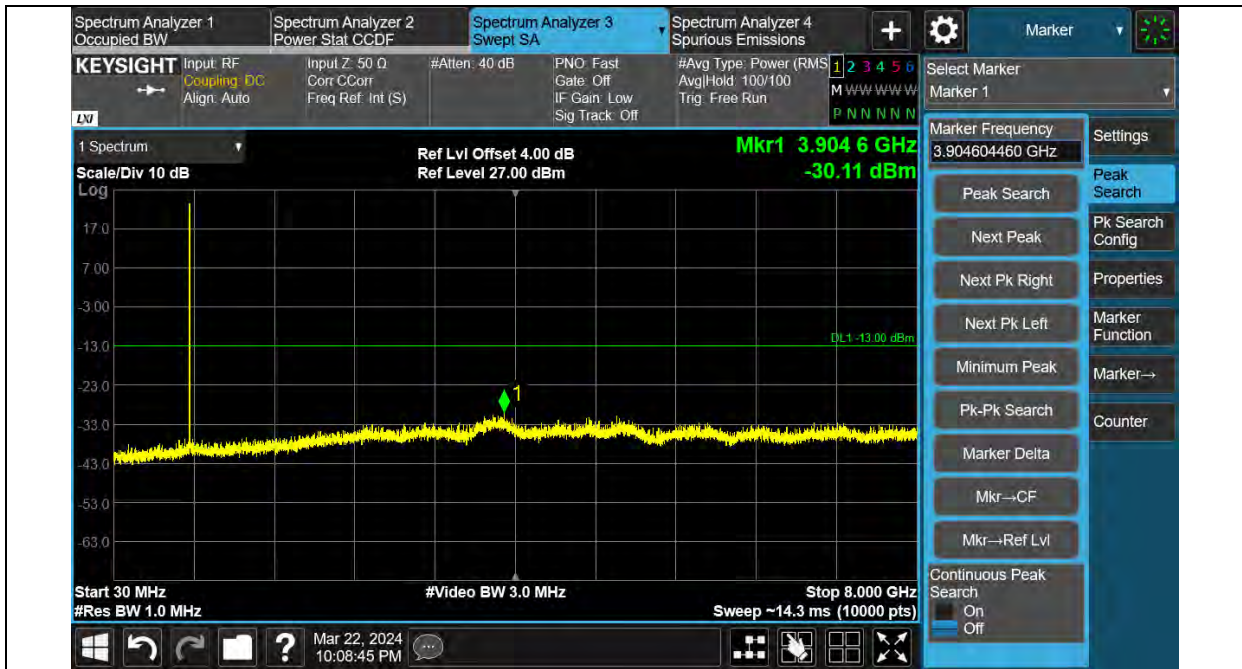
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BUREAU VERITAS

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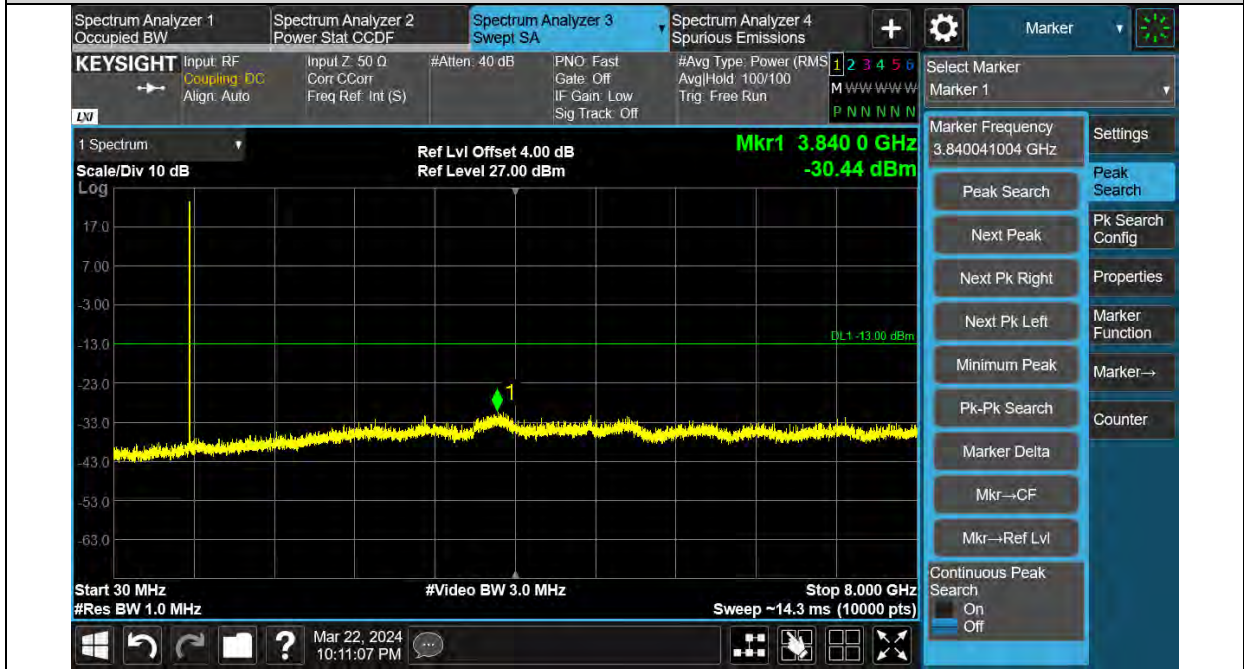


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band13-QPSK-15KHz-23230-12RB#0

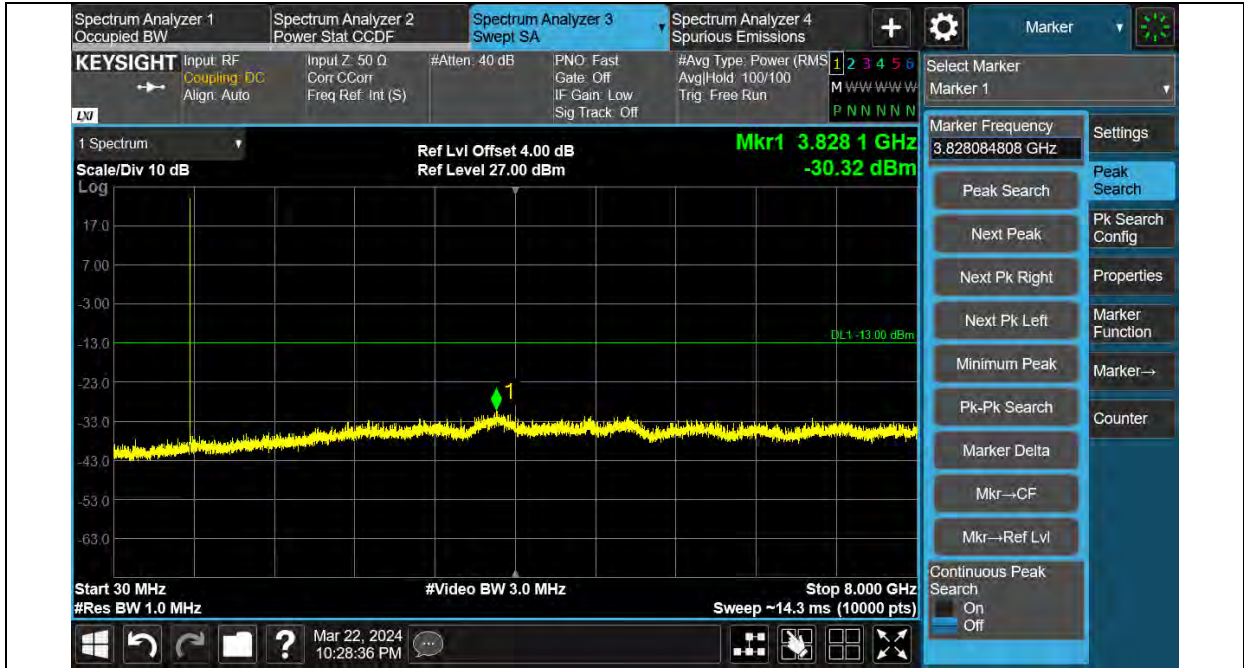


Band13-QPSK-15KHz-23278-12RB#0



BUREAU VERITAS

Test Report No.: W7L-240204W001RF03





Test Report No.: W7L-240204W001RF03

FREQUENCY STABILITY

Test Result

Voltage								
Band	Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band13	QPSK	23230	VL	NT	5.64	0.031828	±2.5	PASS
Band13	QPSK	23230	VN	NT	24.35	0.031238	±2.5	PASS
Band13	QPSK	23230	VH	NT	25.69	0.032957	±2.5	PASS
Band13	BPSK	23230	VL	NT	33.93	0.043389	±2.5	PASS
Band13	BPSK	23230	VN	NT	13.76	0.017596	±2.5	PASS
Band13	BPSK	23230	VH	NT	21.76	0.027826	±2.5	PASS

Temperature								
Band	Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band13	QPSK	23230	NV	-30	2.53	0.003235	±2.5	PASS
Band13	QPSK	23230	NV	-20	12.4	0.015857	±2.5	PASS
Band13	QPSK	23230	NV	-10	23	0.029412	±2.5	PASS
Band13	QPSK	23230	NV	0	2.6	0.003325	±2.5	PASS
Band13	QPSK	23230	NV	10	23.8	0.030435	±2.5	PASS
Band13	QPSK	23230	NV	20	5.2	0.006650	±2.5	PASS
Band13	QPSK	23230	NV	30	-17.5	-0.022379	±2.5	PASS
Band13	QPSK	23230	NV	40	21.3	0.027238	±2.5	PASS
Band13	QPSK	23230	NV	50	-16.8	-0.021483	±2.5	PASS
Band13	BPSK	23230	NV	-30	18.9	0.024169	±2.5	PASS
Band13	BPSK	23230	NV	-20	14.2	0.018159	±2.5	PASS
Band13	BPSK	23230	NV	-10	11.5	0.014706	±2.5	PASS
Band13	BPSK	23230	NV	0	13.3	0.017008	±2.5	PASS
Band13	BPSK	23230	NV	10	-0.3	-0.000384	±2.5	PASS
Band13	BPSK	23230	NV	20	21.5	0.027494	±2.5	PASS
Band13	BPSK	23230	NV	30	13.6	0.017391	±2.5	PASS
Band13	BPSK	23230	NV	40	7.6	0.009719	±2.5	PASS
Band13	BPSK	23230	NV	50	24.8	0.031714	±2.5	PASS



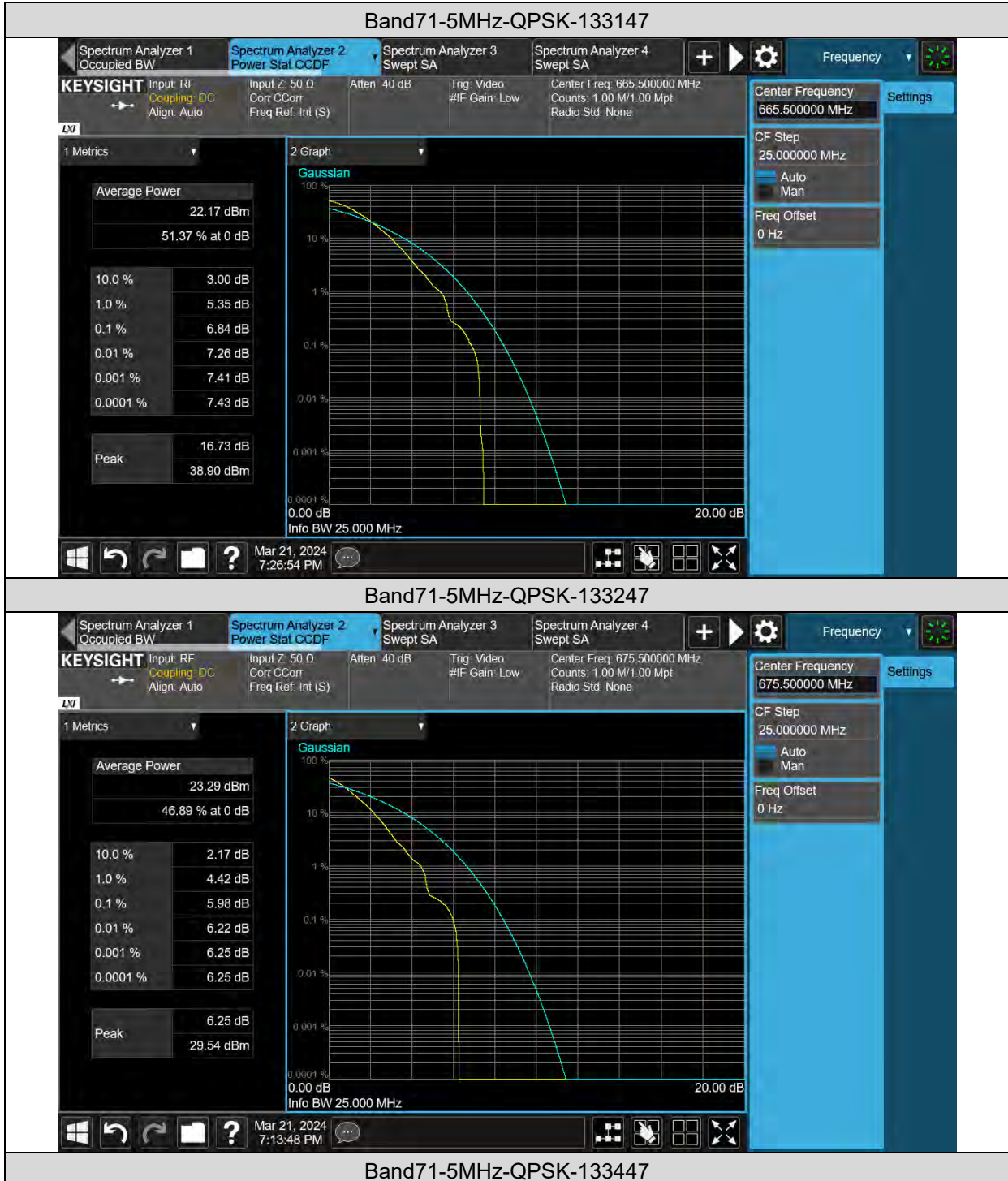
CAT-M: LTE BAND71

PEAK-TO-AVERAGE RATIO(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	Result(dB)	Limit(dB)	Verdict
Band71	5MHz	QPSK	133147	6.84	13	PASS
Band71	5MHz	QPSK	133247	5.98	13	PASS
Band71	5MHz	QPSK	133447	7.24	13	PASS
Band71	5MHz	16QAM	133147	7.49	13	PASS
Band71	5MHz	16QAM	133247	6.78	13	PASS
Band71	5MHz	16QAM	133447	6.95	13	PASS
Band71	10MHz	QPSK	133172	6.77	13	PASS
Band71	10MHz	QPSK	133272	6.14	13	PASS
Band71	10MHz	QPSK	133422	6.95	13	PASS
Band71	10MHz	16QAM	133172	7.78	13	PASS
Band71	10MHz	16QAM	133272	6.96	13	PASS
Band71	10MHz	16QAM	133422	7.59	13	PASS
Band71	15MHz	QPSK	133197	5.92	13	PASS
Band71	15MHz	QPSK	133297	5.96	13	PASS
Band71	15MHz	QPSK	133397	6.56	13	PASS
Band71	15MHz	16QAM	133197	6.79	13	PASS
Band71	15MHz	16QAM	133297	6.77	13	PASS
Band71	15MHz	16QAM	133397	6.86	13	PASS
Band71	20MHz	QPSK	133222	6.21	13	PASS
Band71	20MHz	QPSK	133322	6.11	13	PASS
Band71	20MHz	QPSK	133372	6.05	13	PASS
Band71	20MHz	16QAM	133222	6.95	13	PASS
Band71	20MHz	16QAM	133322	6.89	13	PASS
Band71	20MHz	16QAM	133372	6.83	13	PASS

Test Graphs



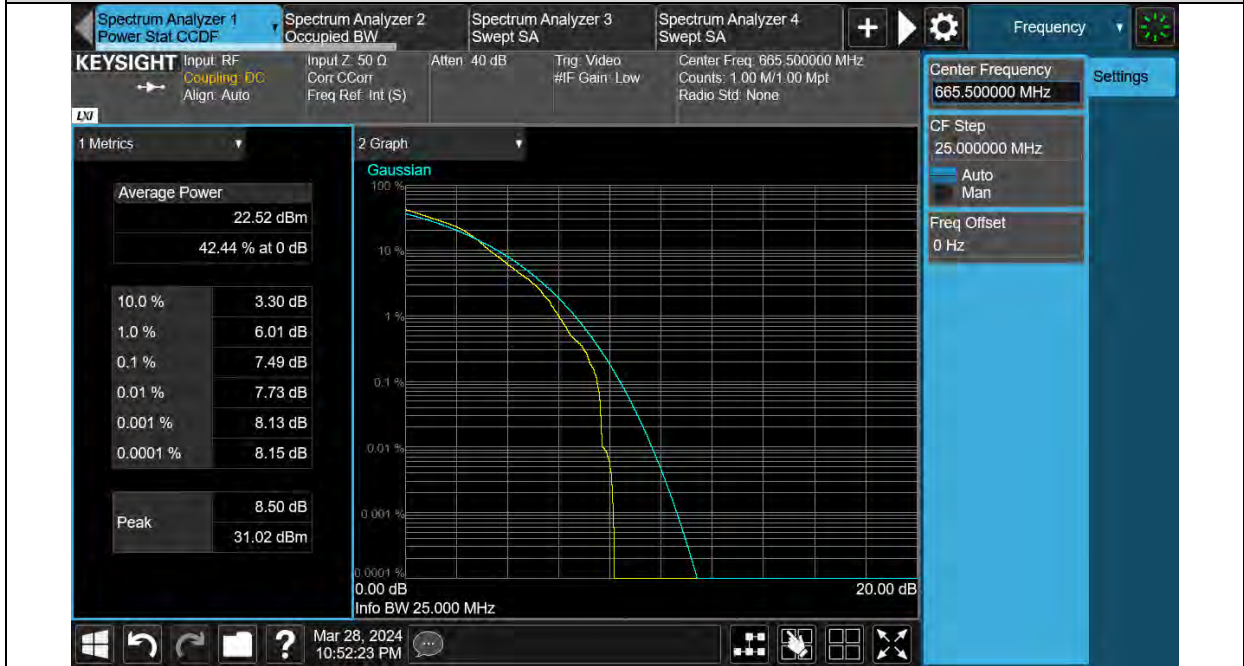


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band71-5MHz-16QAM-133147

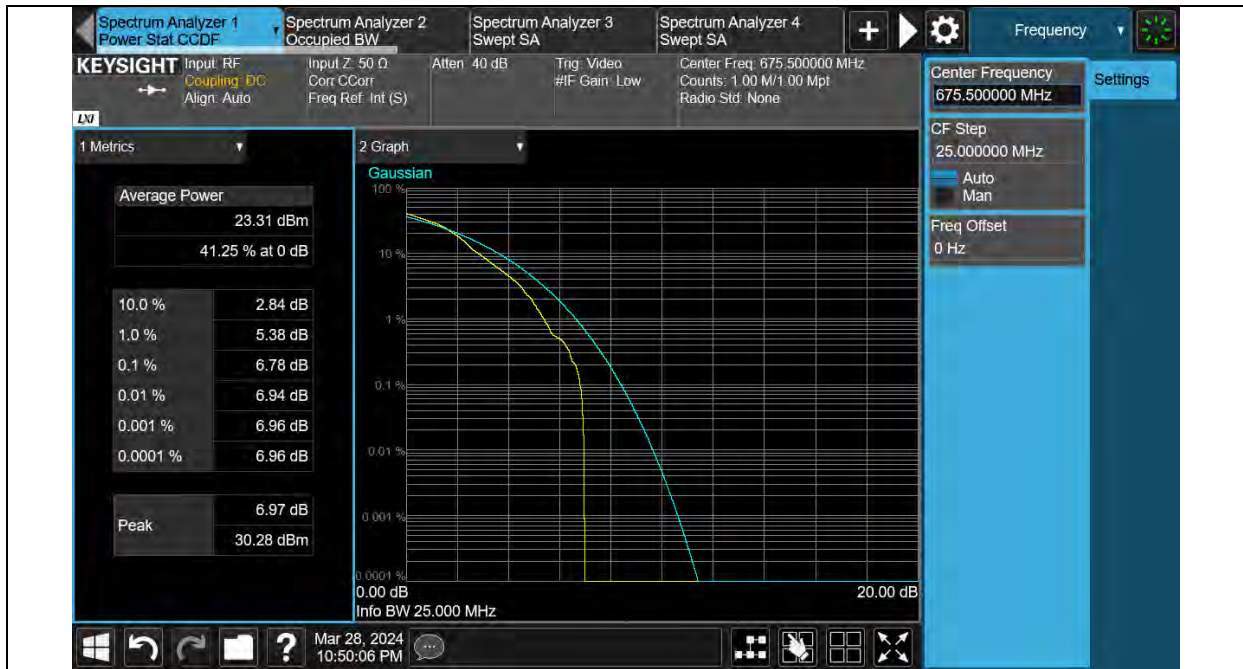


Band71-5MHz-16QAM-133247

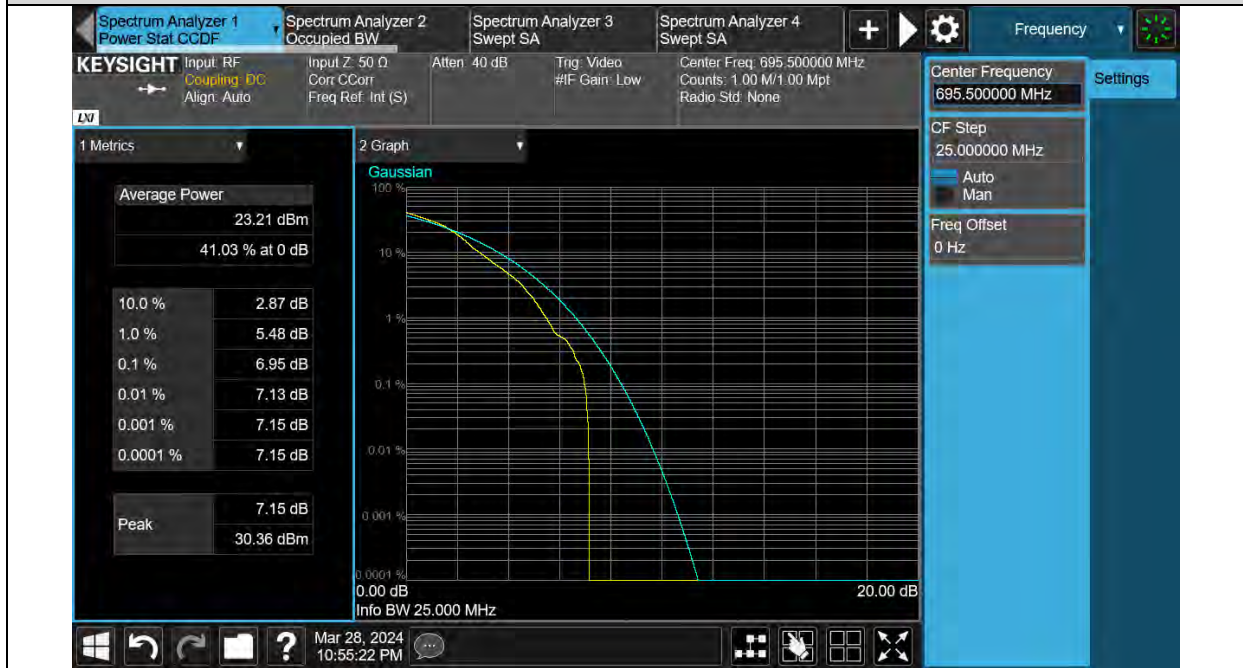


BUREAU
VERITAS

Test Report No.: W7L-240204W001RF03



Band71-5MHz-16QAM-133447

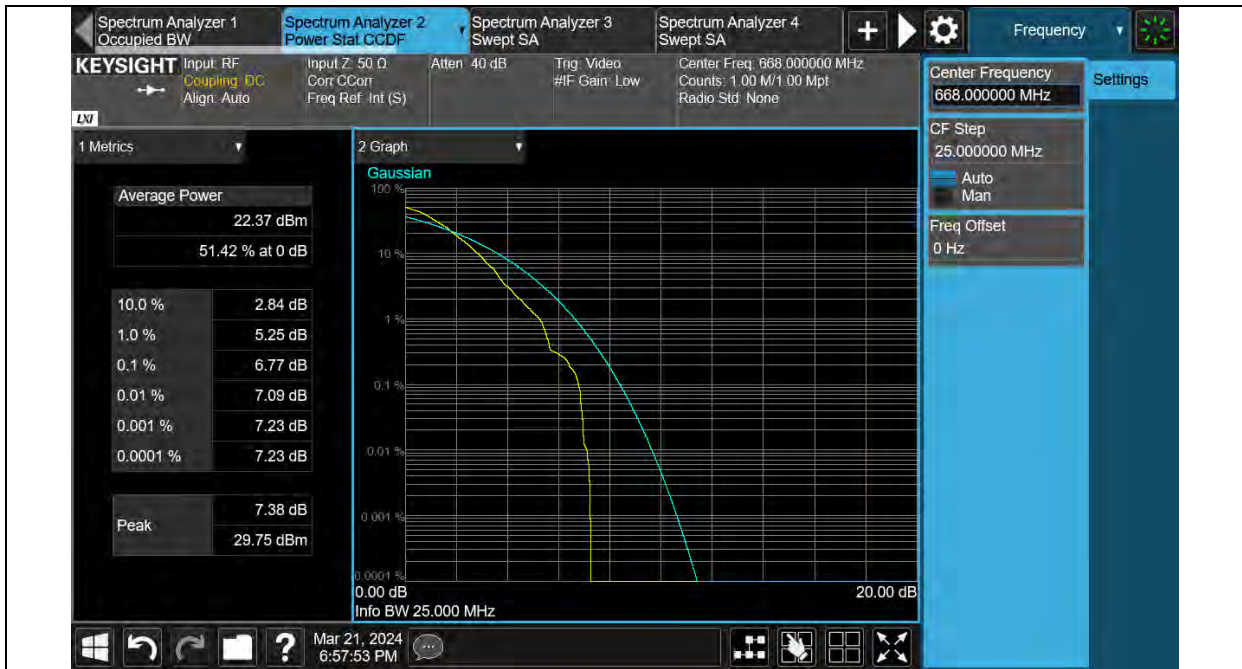


Band71-10MHz-QPSK-133172

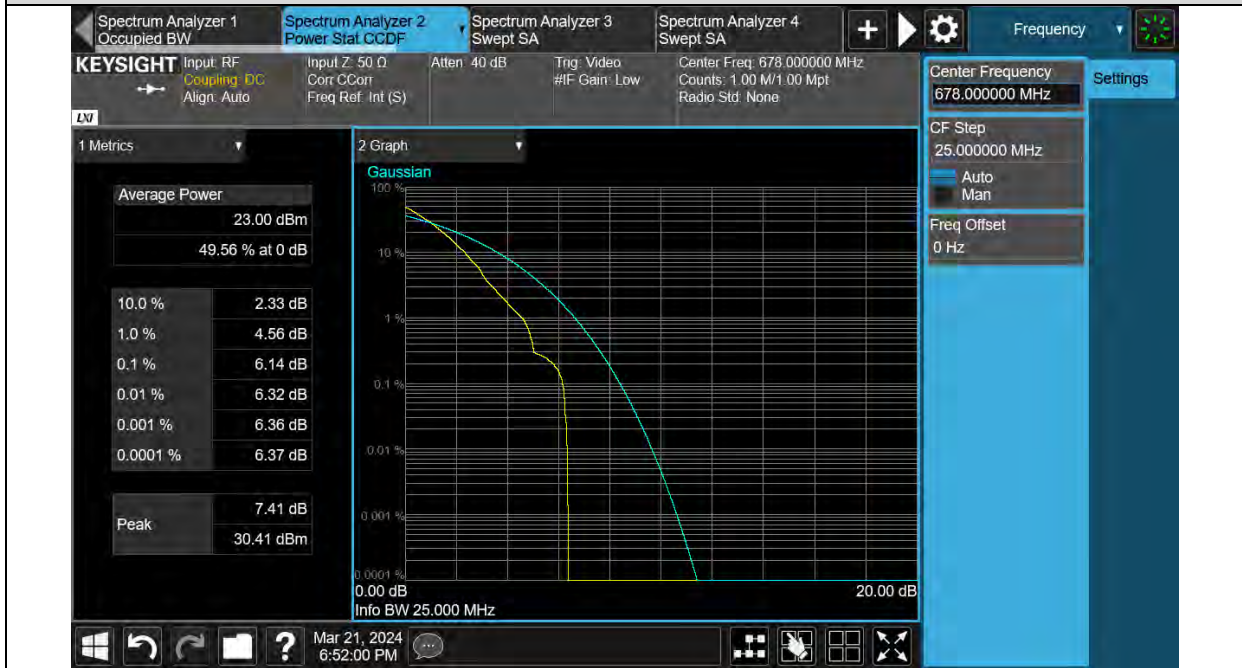


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band71-10MHz-QPSK-133272



Band71-10MHz-QPSK-133422

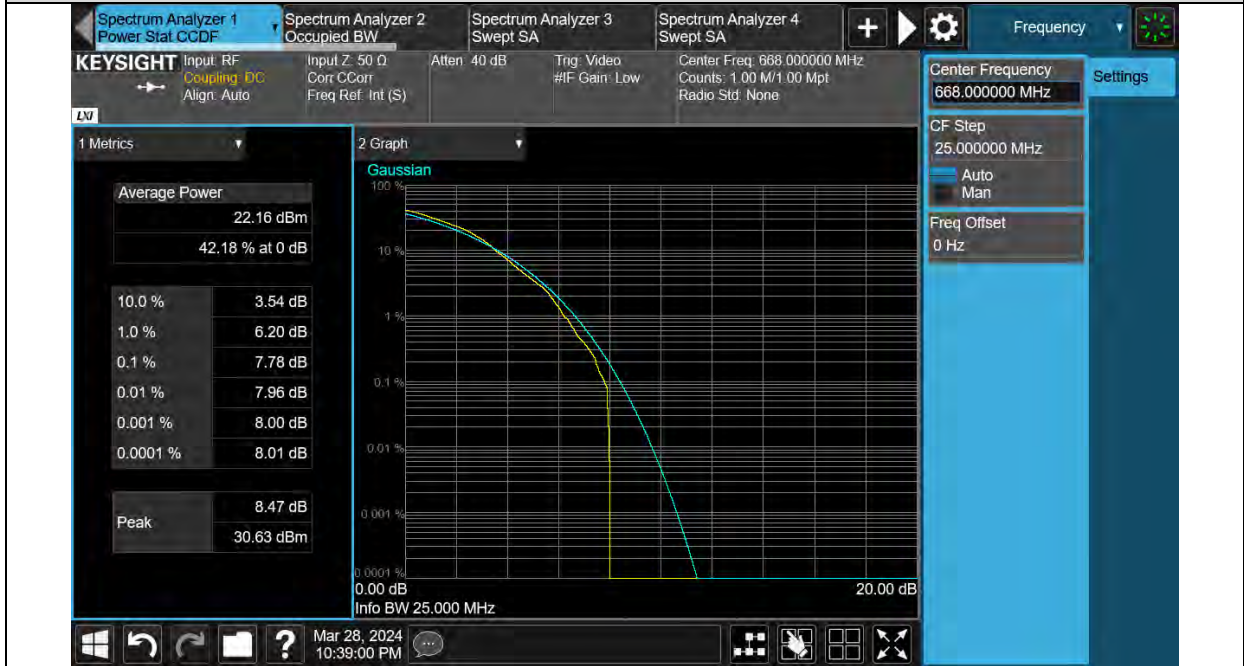


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band71-10MHz-16QAM-133172

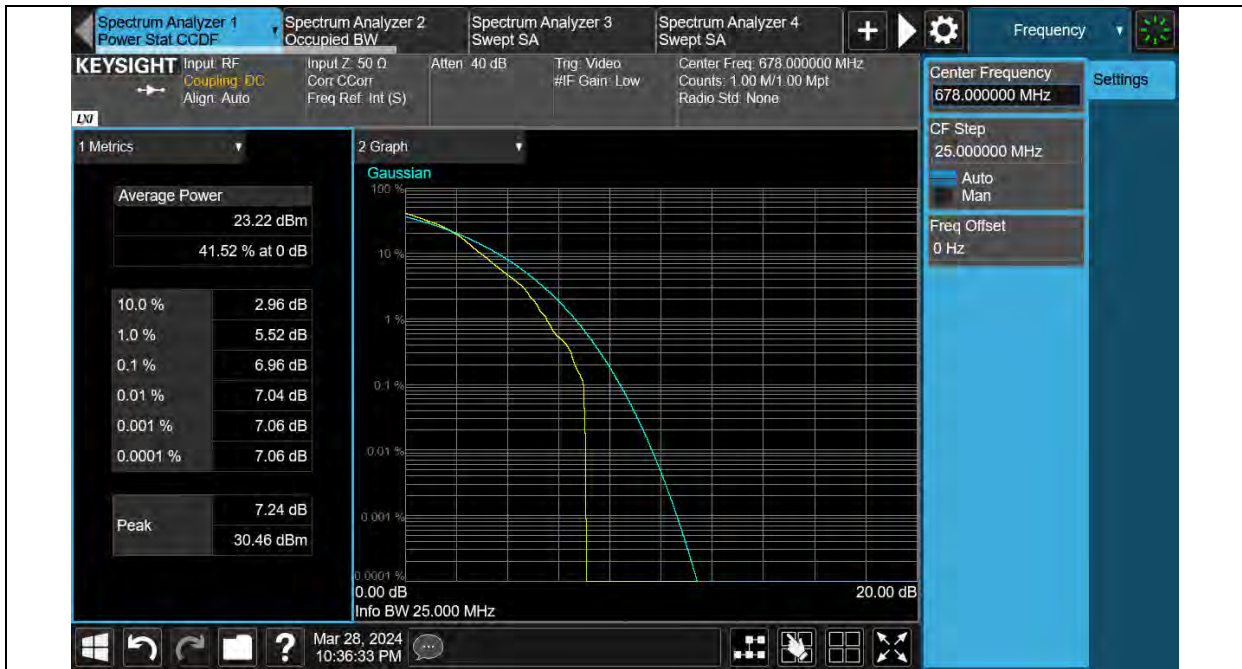


Band71-10MHz-16QAM-133272

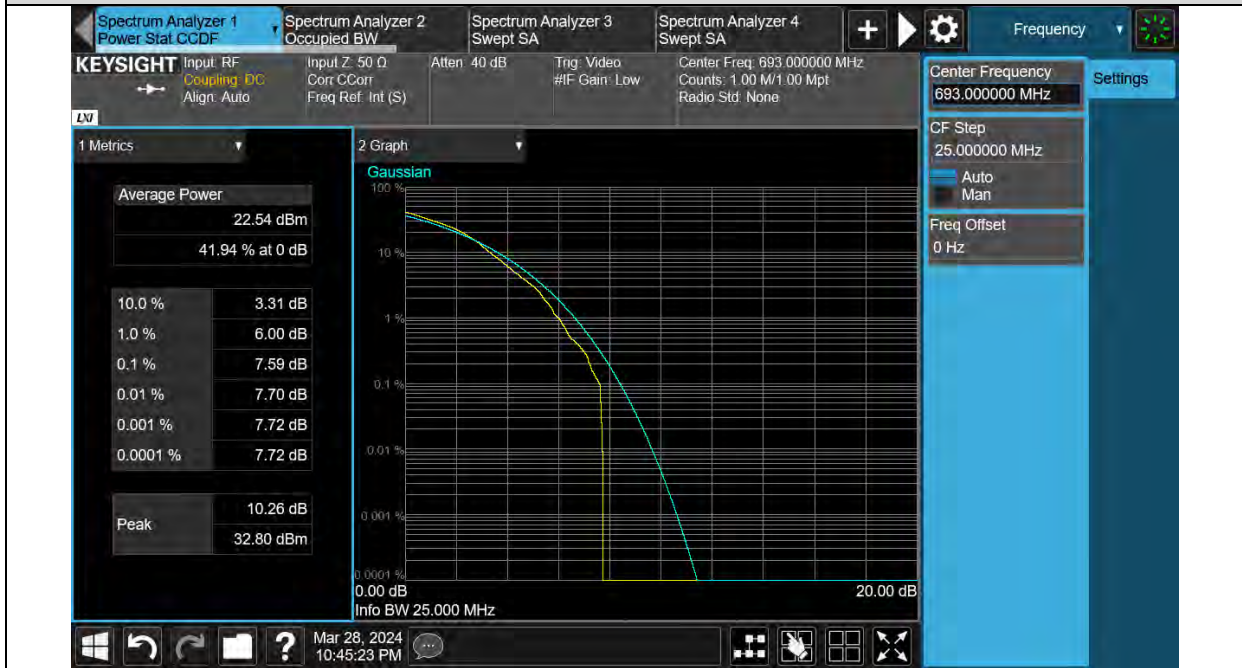


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band71-10MHz-16QAM-133422

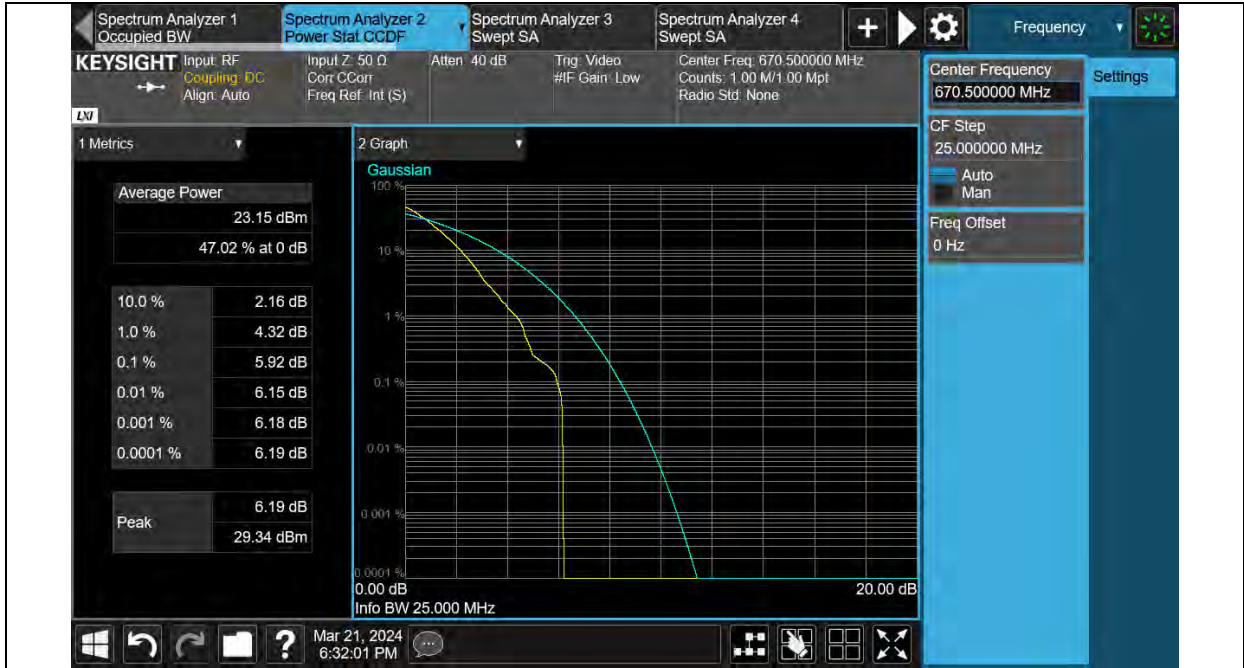


Band71-15MHz-QPSK-133197



BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band71-15MHz-QPSK-133297



Band71-15MHz-QPSK-133397

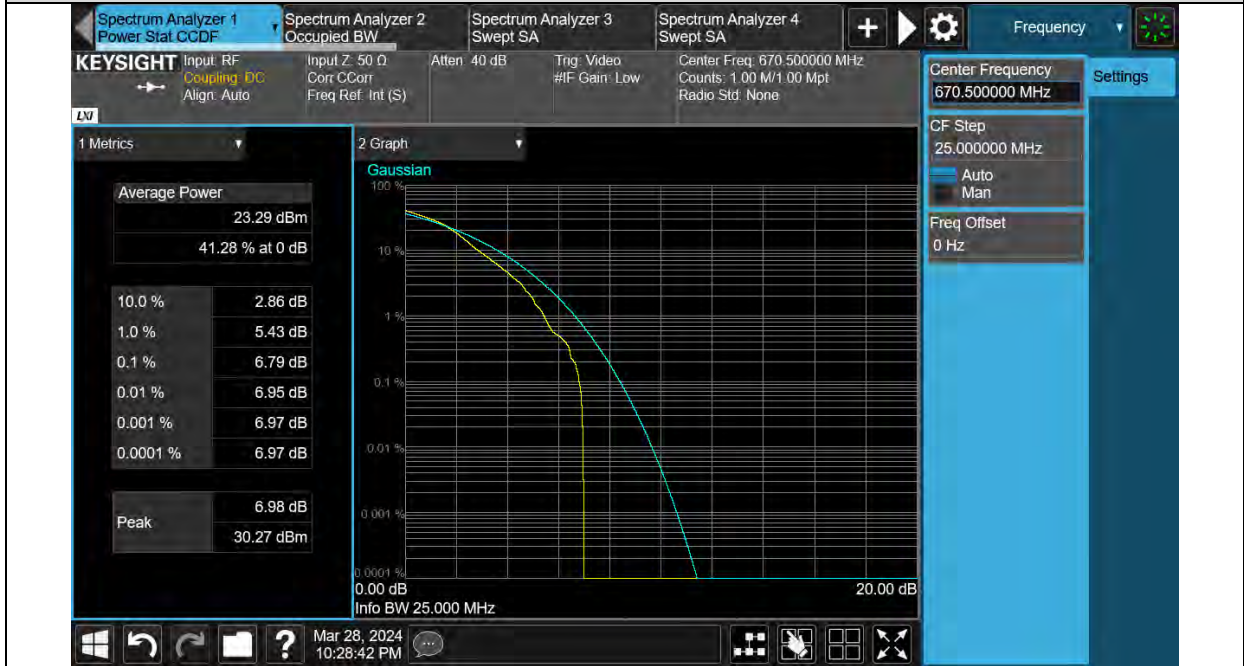


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band71-15MHz-16QAM-133197

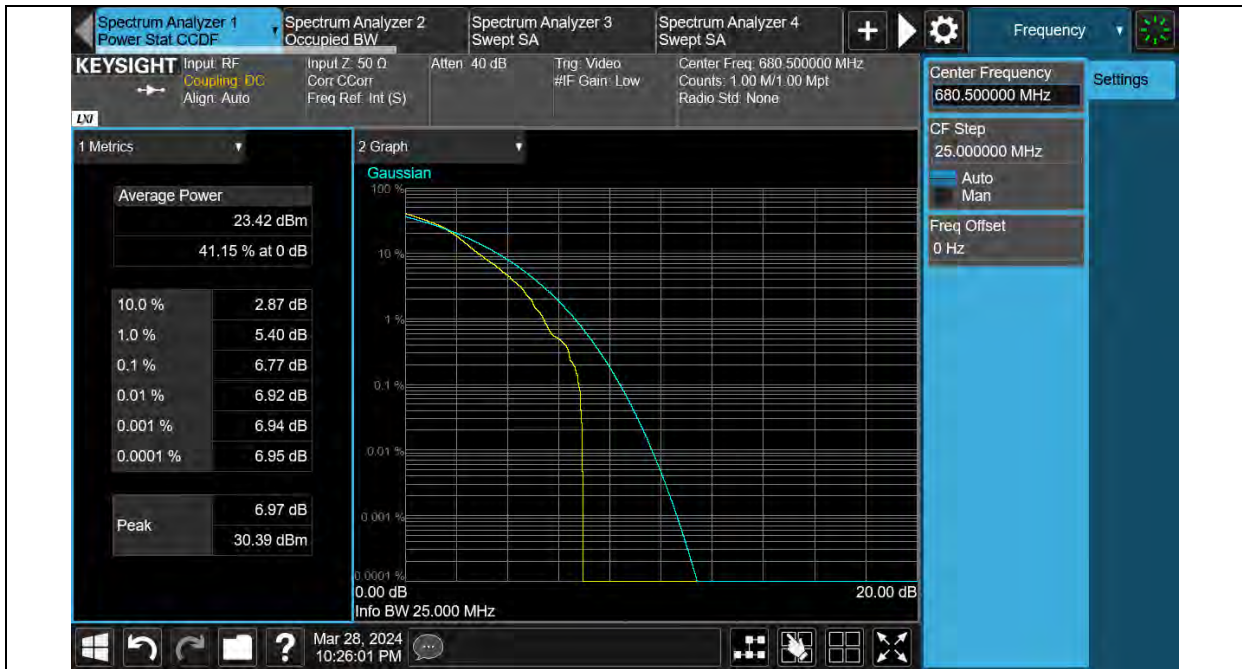


Band71-15MHz-16QAM-133297

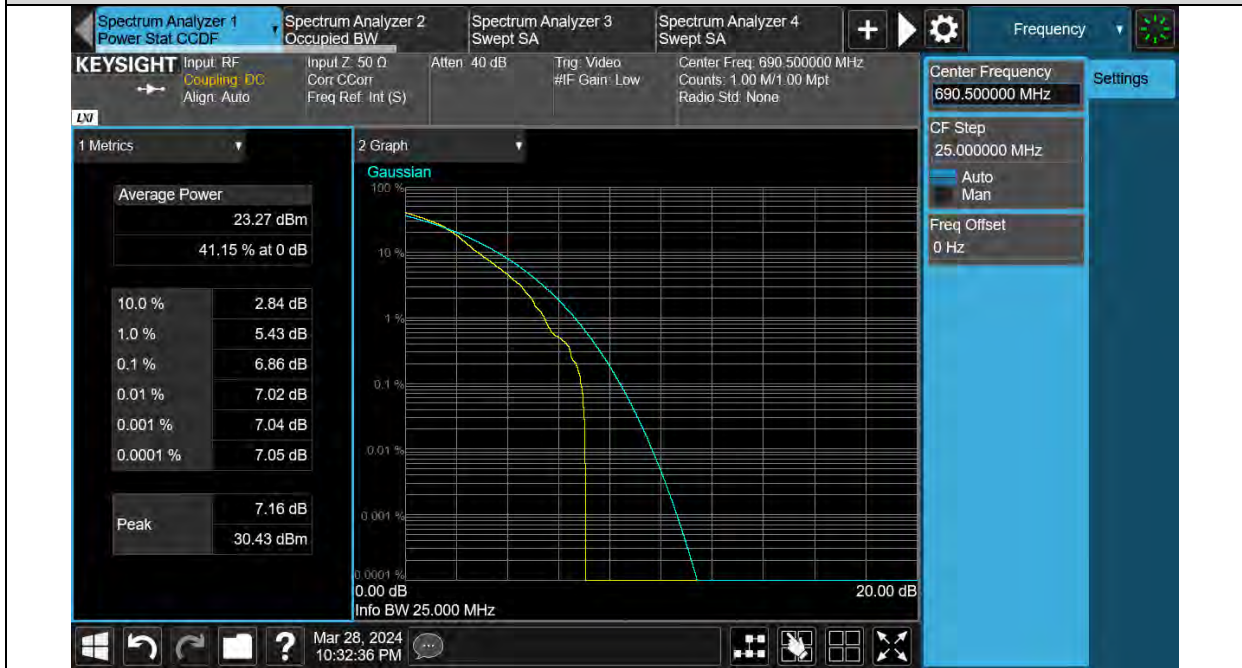


BUREAU VERITAS

Test Report No.: W7L-240204W001RF03



Band71-15MHz-16QAM-133397



Band71-20MHz-QPSK-133222