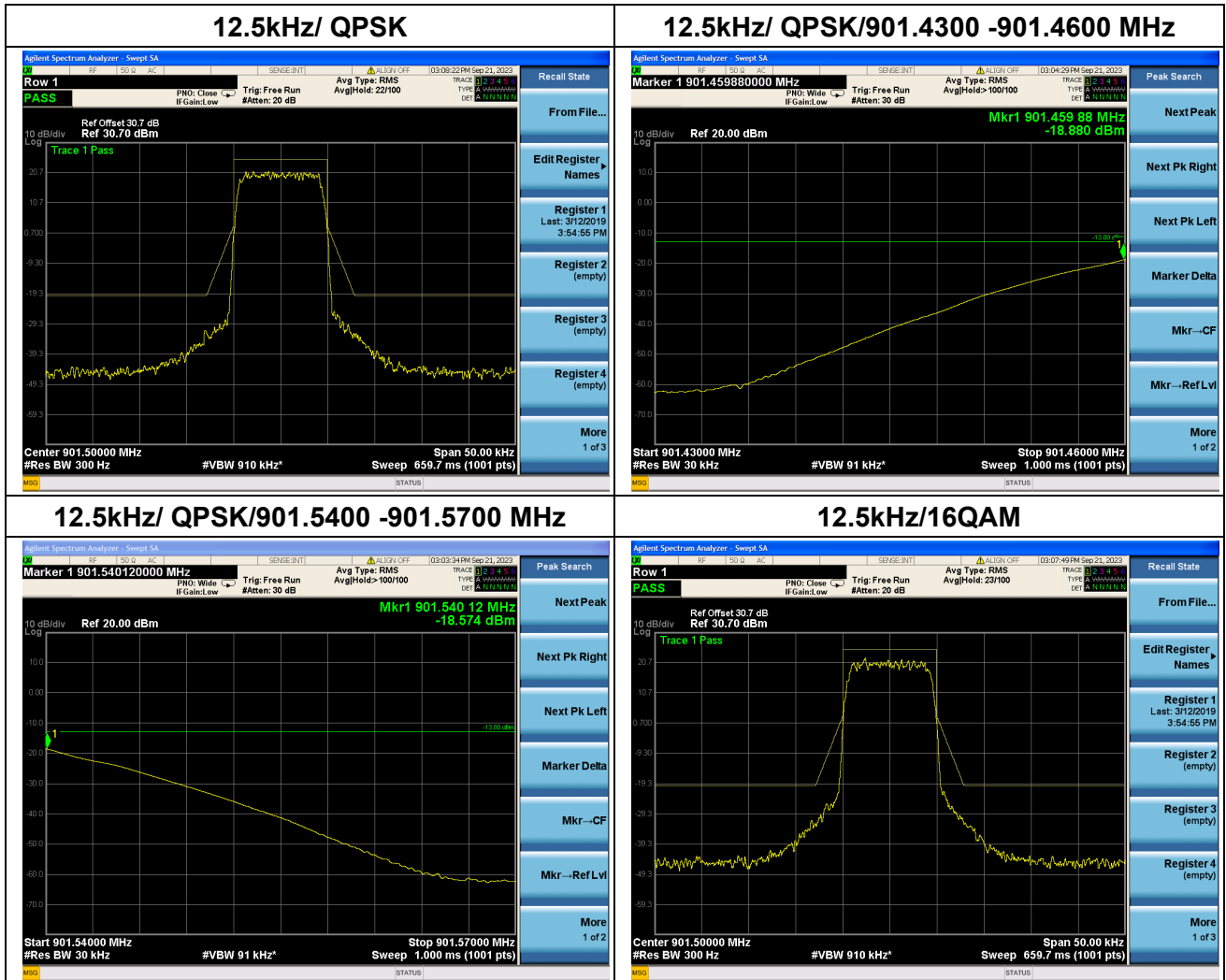
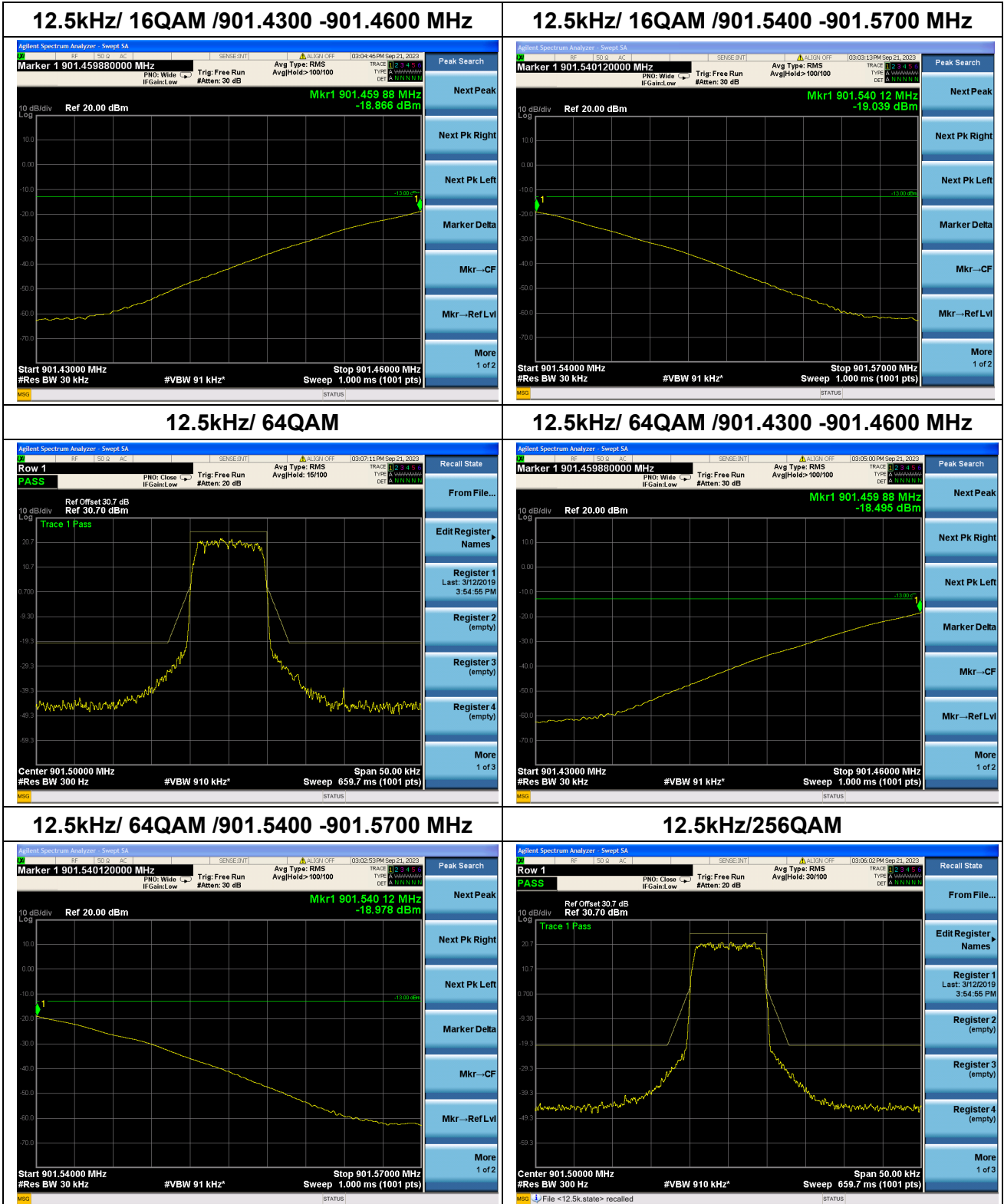
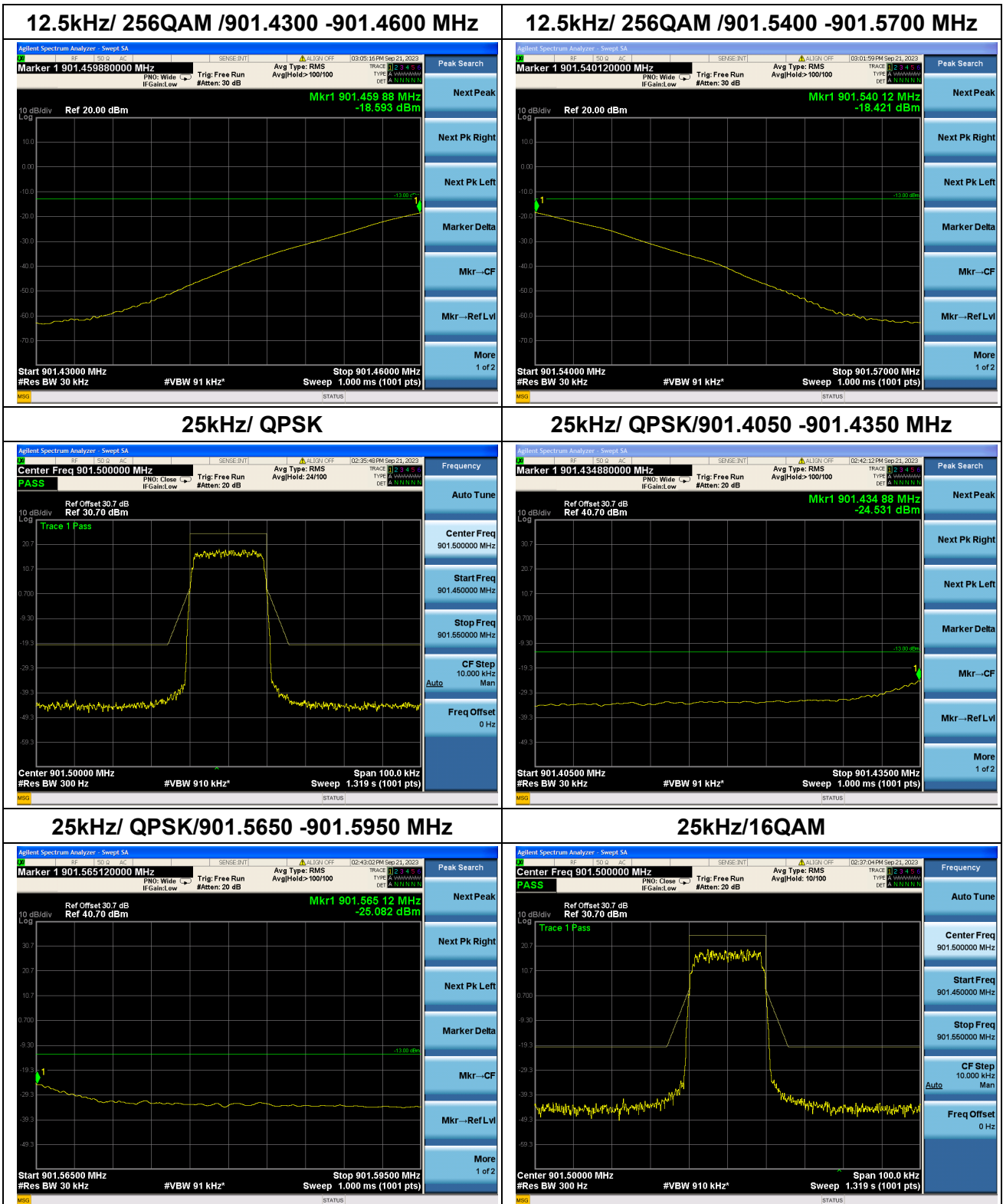
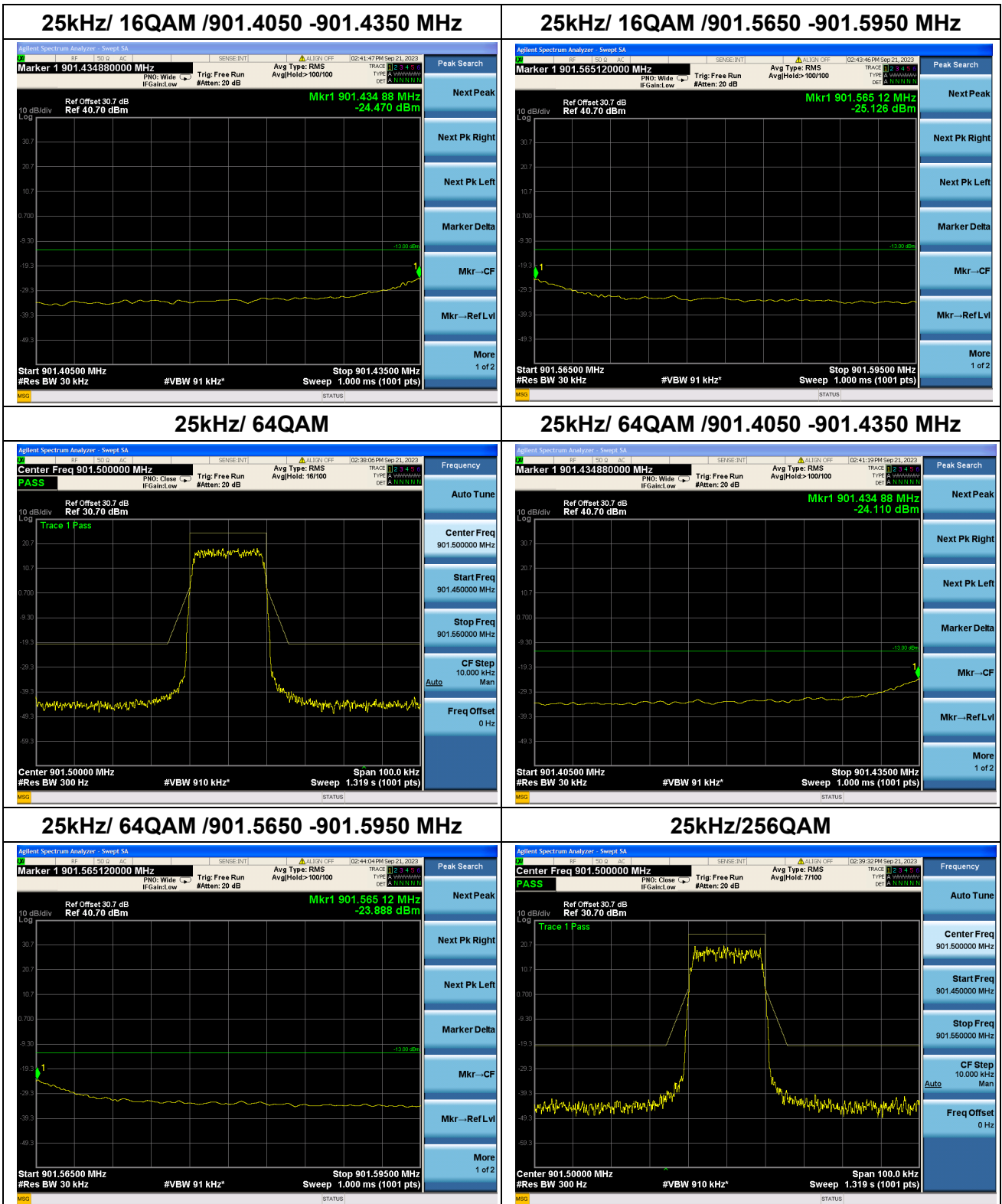


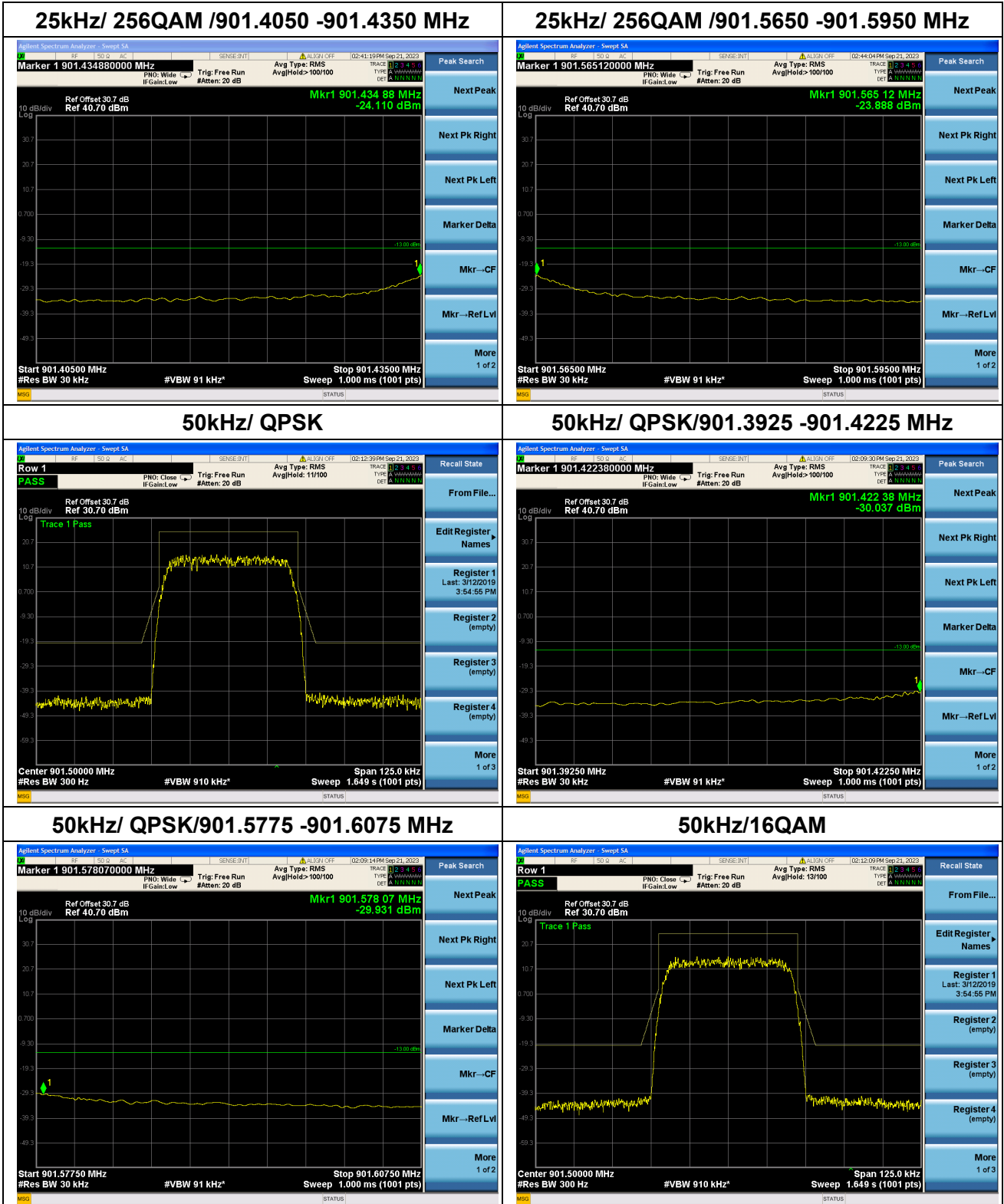
Nominal Frequency: 901.50 MHz Tx Port: Channel V

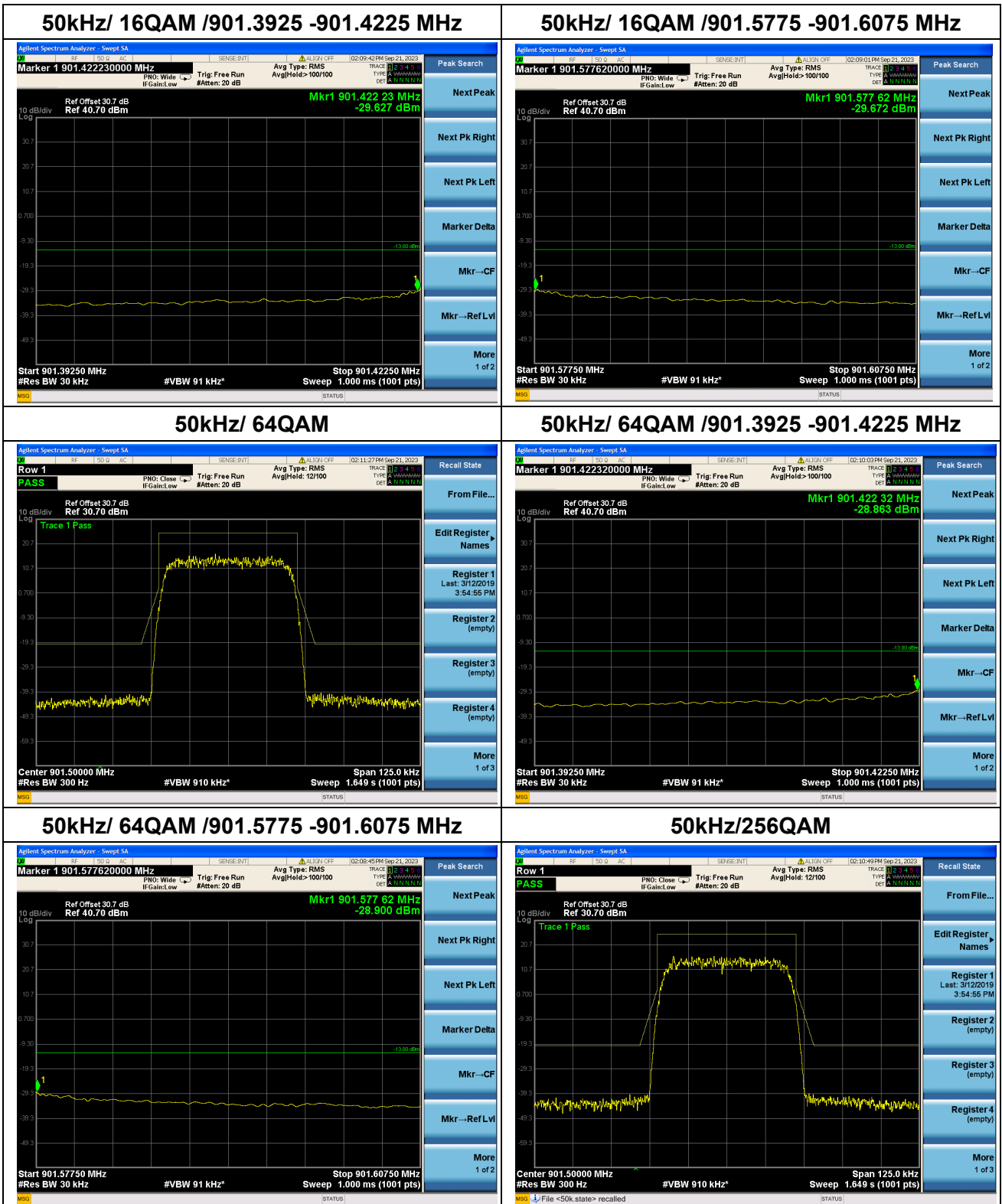


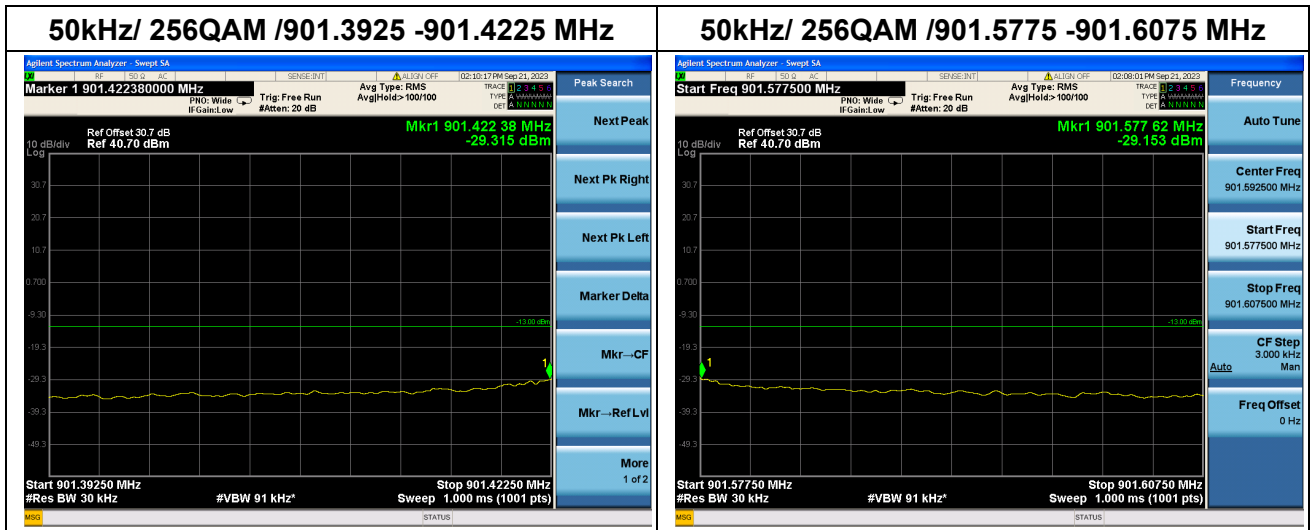












2.4. Radiated Spurious Emissions

2.4.1. Requirement

According to FCC section 2.1053 and section 24.133(a). For operations in the 901-902 MHz band , the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 901-902 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

2.4.2. Test Result

Note 1: No discrete emissions were detected.

Note 2: The power of the EUT transmitting frequency should be ignored.

Note 3: N/A means the frequency is the basic frequency; they are no need to verdict.

Note 4: For measurements below 1GHz the resolution bandwidth is set to 100kHz for peak detection measurements. For measurements above 1GHz the resolution bandwidth is set to 1MHz for peak measurements.

Note 5: All bandwidth and modulation were considered and evaluated respectively by performing full test, only the worst cases were recorded in this test report.

Note 6: The received power level is the measured power adjusted for measurement antenna gain, connecting cable loss, and any external signal amplification or attenuation used in the test configuration. Mathematically, as in Equation:

$$P_R = P_{\text{meas}} - G_R + L_C - G_{\text{amp}}$$

where

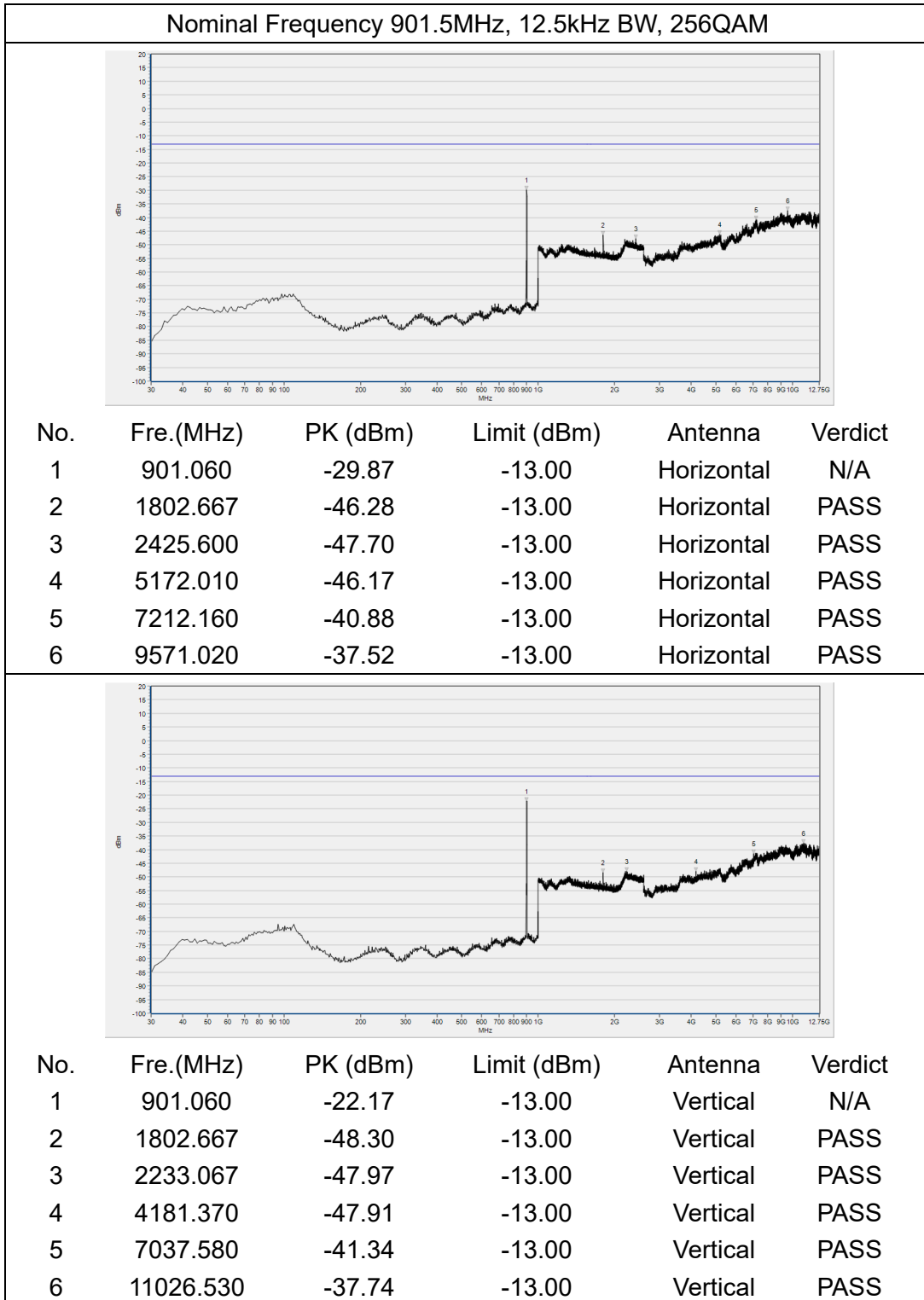
P_{meas} measured power level, in dBm;

G_R gain of the receive (measurement) antenna, in dBi;

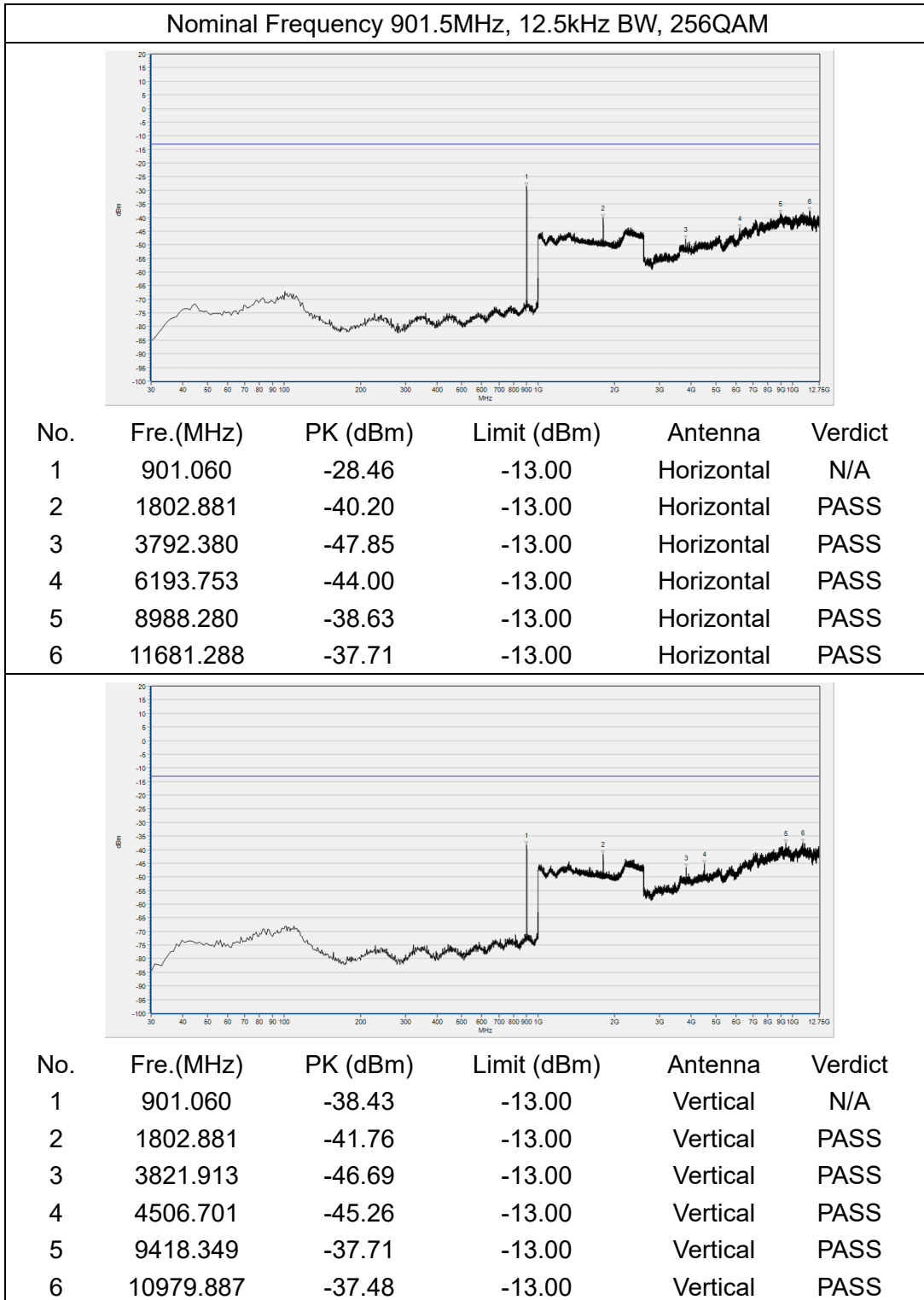
L_C signal loss in the measurement cable, in dB;

G_{amp} value of external amplification, in dB.

Type 1:



Type 2:





2.5. Frequency Stability

2.5.1. Requirement

According to FCC section 2.1055 and FCC section 24.135.e frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 24.135, the test conditions are:

The frequency stability of the transmitter shall be maintained within ± 0.0001 percent (± 1 ppm) of the center frequency over a temperature variation of -30 °Celsius to $+ 50$ °Celsius at normal supply voltage, and over a variation in the primary supply voltage of 85 percent to 115 percent of the rated supply voltage at a temperature of 20 °Celsius..

2.5.2. Test Results

Type 1:

901.5MHz QPSK 12.5kHz Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	24.0	+20(Ref)	13	0.014	PASS
100		-40	37	0.041	
100		-30	-19	-0.021	
100		-20	13	0.014	
100		-10	38	0.042	
100		0	13	0.014	
100		+10	41	0.045	
100		+20	-18	-0.020	
100		+30	17	0.019	
100		+40	17	0.019	
100		+50	48	0.053	
100		+60	23	0.026	
100		+70	34	0.038	
115		27.6	+20	15	
85	20.4	+20	-19	-0.021	



901.5MHz QPSK 25.0kHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	24.0	+20(Ref)	51	0.057	PASS
100		-40	28	0.031	
100		-30	-23	-0.026	
100		-20	-21	-0.023	
100		-10	48	0.053	
100		0	13	0.014	
100		+10	44	0.049	
100		+20	-17	-0.019	
100		+30	23	0.026	
100		+40	17	0.019	
100		+50	-17	-0.019	
100		+60	14	0.016	
100		+70	20	0.022	
115		27.6	+20	-22	
85	20.4	+20	13	0.014	

901.5MHz QPSK 50.0kHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	24.0	+20(Ref)	-13	-0.014	PASS
100		-40	34	0.038	
100		-30	46	0.051	
100		-20	-14	-0.016	
100		-10	49	0.054	
100		0	13	0.014	
100		+10	38	0.042	
100		+20	-15	-0.017	
100		+30	16	0.018	
100		+40	42	0.047	
100		+50	-19	-0.021	
100		+60	36	0.040	



100		+70	34	0.038	
115	27.6	+20	25	0.028	
85	20.4	+20	-13	-0.014	

Type 2:

901.5MHz QPSK 12.5kHz Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	24.0	+20(Ref)	17	0.019	PASS
100		-40	13	0.014	
100		-30	-6	-0.007	
100		-20	17	0.019	
100		-10	14	0.016	
100		0	-21	-0.023	
100		+10	5	0.006	
100		+20	16	0.018	
100		+30	13	0.014	
100		+40	18	0.020	
100		+50	20	0.022	
100		+60	16	0.018	
100		+70	-4	-0.004	
115		27.6	+20	19	
85	20.4	+20	-13	-0.014	

901.5MHz QPSK 25.0kHz Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	24.0	+20(Ref)	15	0.017	PASS
100		-40	0	0.000	
100		-30	15	0.017	
100		-20	18	0.020	
100		-10	18	0.020	
100		0	23	0.026	
100		+10	-22	-0.024	
100		+20	-8	-0.009	
100		+30	13	0.014	



100		+40	18	0.020	
100		+50	-5	-0.006	
100		+60	20	0.022	
100		+70	23	0.026	
115	27.6	+20	-10	-0.011	
85	20.4	+20	13	0.014	

901.5MHz QPSK 50.0kHz Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	24.0	+20(Ref)	-9	-0.010	PASS
100		-40	13	0.014	
100		-30	16	0.018	
100		-20	21	0.023	
100		-10	14	0.016	
100		0	1	0.001	
100		+10	16	0.018	
100		+20	17	0.019	
100		+30	-11	-0.012	
100		+40	20	0.022	
100		+50	-14	-0.016	
100		+60	-18	-0.020	
100		+70	6	0.007	
115		27.6	+20	16	
85	20.4	+20	12	0.013	



Annex A Test Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

Test items	Uncertainty
Output Power	± 2.22 dB
Bandwidth	$\pm 5\%$
Conducted Spurious Emission	± 2.77 dB
Band Edge	± 2.77 dB
Equivalent Isotropic Radiated Power	± 2.22 dB
Radiated Spurious Emissions	± 6 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.



Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10-2013 and CISPR Publication 22; the FCC designation number is CN1192, the test firm registration number is 226174.





4. Test Equipment Utilized

4.1 Conducted Test Equipment

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Cal. Due
Power Splitter	NW521	1506A	Weinschel	N/A	N/A
Attenuator 1	(N/A.)	30.0dB	Resnet	N/A	N/A
Attenuator 2	(N/A.)	30.0dB	Resnet	N/A	N/A
EXA Signal Analyzer	MY51511149	N9020A	Agilent	2023.06.21	2024.06.20
RF Cable (30MHz-26GHz)	CB01	RF01	Morlab	N/A	N/A
Coaxial Cable	CB02	RF02	Morlab	N/A	N/A
SMA Connector	CN01	RF03	HUBER-SUHNER	N/A	N/A
Temperature Chamber	S022177101 00089002	KMT-36LF 1A0	KOMEG	2023.09.19	2024.09.18



**4.2 Radiated Test Equipment**

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Cal. Due
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-N N-5	Qualwave	2023.07.04	2024.07.03
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-K KF-2	Qualwave	2023.07.04	2024.07.03
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-K K-0.5	Qualwave	2023.07.04	2024.07.03
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2023.06.27	2024.06.26
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2023.06.27	2024.06.26
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2023.06.27	2024.06.26
Preamplifier (18GHz-40GH)	DS77209	DCLNA0118- 40C-S	Decentest	2023.07.04	2024.07.03
Preamplifier (10MHz-6GHz)	46732	S10M100L38 02	LUCIX CORP.	2023.06.27	2024.06.26
Preamplifier (2GHz-18GHz)	61171/061172	S020180L32 03	LUCIX CORP.	2023.06.27	2024.06.26
Receiver	MY54130016	N9038A	Agilent	2023.06.21	2024.06.20
Horn Antenna	9120D-963	BBHA 9120D	SCHWARZBE CK	2023.06.27	2024.06.26
Bi-Log Antenna	9163-274	VULB 9163	SCHWARZBE CK	2023.06.27	2024.06.26
Test system	N/A	MORLAB EMCR V1.2	MORLAB	N/A	N/A

————— END OF REPORT —————

