

Test report

REP011703-1R2TRFWL

Date of issue: April 12, 2024

Applicant:

SOLiD

Product:

C Band Radio

Model:

SOLiD O-RAN C-band Radio Unit

Model variant:

None

FCC ID:

W6UOLRUCBANDM4

Specifications:

◆ **FCC 47 CFR Part 27**

Miscellaneous Wireless Communications Services

Lab and test locations

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Tested by	Chenhao Ma, Wireless test technician
Reviewed by	James Cunningham, EMC/WL Manager
Review date	April 12, 2024
Reviewer signature	

Limits of responsibility

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025. All results contain in this report are within Nemko USA's ISO/IEC 17025 accreditation.

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Section 1. Report summary

1.1 Applicant and manufacturer

Company name	SOLiD
Address	800 Klein Road Suite 200
City	Plano
Province/State	TX
Postal/Zip code	75074
Country	United States of America

1.2 Test specifications

FCC 47 CFR Part 27	Miscellaneous Wireless Communications Services
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1.3 Statement of compliance

In the configuration tested, the EUT was found compliant.

Testing was performed against all relevant requirements of the test standard. Results obtained indicate that the product under test complies in full with the requirements tested. The test results relate only to the items tested.

See "Summary of test results" for full details.

1.4 Exclusions

None

1.5 Test report revision history

Revision #	Details of changes made to test report
REP011703-1TRFWL	Original report issued
REP011703-1R1TRFWL	Corrections following TCB feedback
REP011703-1R2TRFWL	Updated EUT rated power

Section 2. Summary of test results

2.1 FCC Part 27 test results

Part	Test description	Verdict
§2.1033(c)(4)	Modulation type	Pass
§2.1049(h)	99% Occupied bandwidth	Pass
§27.53(l)	26 dB Occupied bandwidth	Pass
§27.50(j)	Output power at RF antenna connector	Pass
§27.50(j)(4)	Peak to average power ratio	Pass
§27.53(l)	Conducted spurious emissions	Pass
§27.53(l)	Radiated spurious emissions	Pass
§27.54	Frequency stability	Pass

Note: None.

Section 3. Equipment under test (EUT) details

3.1 Sample information

Receipt date	May 31, 2023
Nemko sample ID number	PRJ0036472

3.2 EUT information

Product name	C Band Radio
Model	SOLID O-RAN C-band Radio Unit
Part Number	None
Serial number	None

3.3 Technical information

Frequency band	3700-3980 MHz
RF power Max (W)	Rated power: +24dBm max. per path
Supported bandwidths:	40, 80, 100 MHz
Type of modulation	QPSK; 16QAM; 64QAM; 256QAM;
Power requirements	AC/DC adaptor (120 VAC to 48 VDC)
Antenna information	The EUT is professionally installed.
Antenna gain	5.5 dBi
Number of antennae	4 (correlated)

3.4 Product description and theory of operation

The radio unit (RU) is one of the components to configure the O-RAN C-Band mobile communication system. Four antenna ports are shared across the frequency band.

3.5 EUT exercise details

A laptop computer was used to send test commands to EUT to force it to transmit the appropriate signal. Unit transmit the selected signal at full power. The unit was tested using a conducted port. Radiated emissions were tested with the antenna ports terminated in suitable 50 Ω loads.

3.6 EUT setup diagram

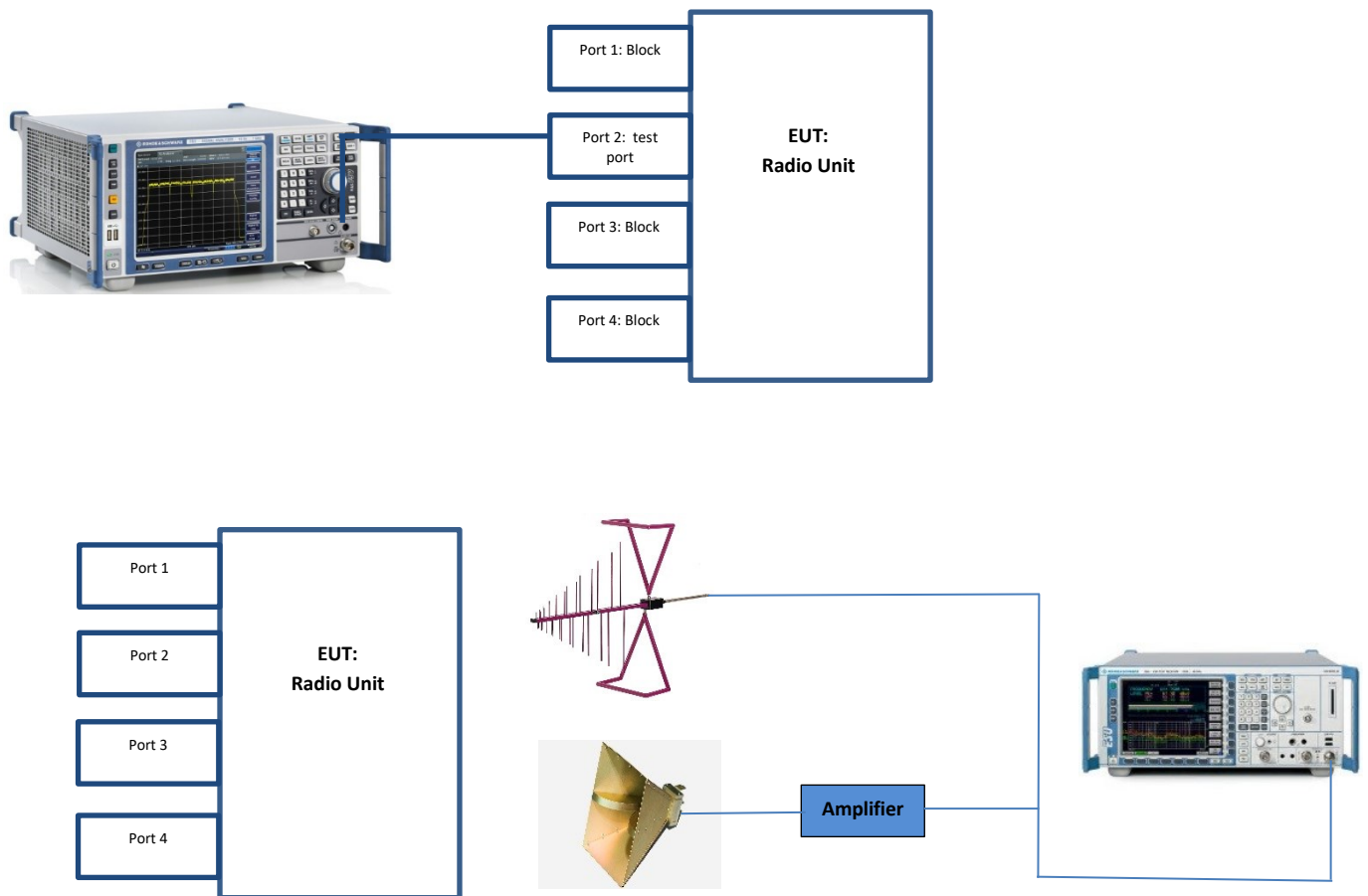


Figure 3.6-1: Setup diagram

Section 4. Engineering considerations

4.1 Modifications incorporated in the EUT

There were no modifications performed to the EUT during this assessment.

4.2 Technical judgment

None

4.3 Deviations from laboratory tests procedures

No deviations were made from laboratory procedures.

Section 5. Test conditions

5.1 Atmospheric conditions

Temperature	15–30 °C
Relative humidity	20–75 %
Air pressure	860–1060 mbar

When it is impracticable to carry out tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests shall be recorded and stated.

5.2 Power supply range

The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages $\pm 5\%$, for which the equipment was designed.

Section 6. Measurement uncertainty

6.1 Uncertainty of measurement

Measurement uncertainty budgets for the tests are detailed below. Measurement uncertainty calculations assume a coverage factor of $K = 2$ with 95% certainty.

Table 6.1-1: *Measurement uncertainty.*

Test name	Measurement uncertainty, dB
All antenna port measurements/ including OBW	0.55
Conducted spurious emissions	1.13
Radiated spurious emissions	3.78
AC power line conducted emissions	1.38
Supply Voltages	0.05%
Time	2.09%

Section 7. Test equipment

7.1 Test equipment list

Table 7.1-1: Equipment list

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
EMC Test Receiver	Rohde & Schwarz	ESU 40	E1121	1 year	24-Aug-2024
System Controller	Sunol Sciences	SC104V	E1191	NCR	NCR
Antenna, Bilog	Schaffner-Chase	CBL 6111D	1763	2 years	01-Apr-2024
Antenna, DRG Horn	ETS-Lindgren	3117-PA	E1139	VOU	VOU
Signal & Spectrum Analyzer	Rohde & Schwarz	FSW43	E1302	1 year	23-Oct-2023
Signal & Spectrum Analyzer	Rohde & Schwarz	FSV3030	E1321	1 year	26-Sep-2024
Environmental Chamber	Thermotron	WP-605	S1033	1 year	27-Jan-2024

Notes: N/A – not applicable
NCR – no calibration required
VOU – verify on use

Section 8. Testing data

8.1 FCC §2.1033(c)(4) Modulation type

8.1.1 Definitions and limits

(c) Applications for equipment other than that operating under parts 15, 11 and 18 of this chapter shall be accompanied by a technical report containing the following information:

(4) Type or types of emission

8.1.2 Test summary

Test date	June 8, 2024	Temperature	22 °C
Test engineer	Chenhao Ma, Wireless Test Engineer	Air pressure	1001 mbar
Verdict	Pass	Relative humidity	62 %

8.1.3 Observations, settings and special notes

None

8.1.4 Test data

Bandwidth (MHz)	Emission type
40	QPSK; 16QAM; 64QAM; 256QAM
80	QPSK; 16QAM; 64QAM; 256QAM
100	QPSK; 16QAM; 64QAM; 256QAM

Table 8.1-1: FCC §2.1033(c)(4) Modulation type results

8.2 FCC §2.1049(h) 99% Occupied Bandwidth and frequency ranges

8.2.1 Definitions and limits

§2.1049 (h) Transmitters employing digital modulation techniques—when modulated by an input signal such that its amplitude and symbol rate represent the maximum rated conditions under which the equipment will be operated. The signal shall be applied through any filter networks, pseudo-random generators or other devices required in normal service. Additionally, the occupied bandwidth shall be shown for operation with any devices used for modifying the spectrum when such devices are optional at the discretion of the use.

8.2.2 Test summary

Test date	June 1, 2023	Temperature	22 °C
Test engineer	Chenhao Ma, Wireless Test Technician	Air pressure	1001 mbar
Verdict	Pass	Relative humidity	62%

8.2.3 Observations, settings and special notes

Selection of Port 2 was according to section 8.2.4 of this document.

Test method: ANSI C63.26 Section 5.4.4.

Spectrum analyzer settings:

Resolution bandwidth	1% - 5% OBW
Video bandwidth	3*RBW
Frequency span	2*OBW
Detector mode	Peak
Trace mode	Max Hold

8.2.4 Test data

OBW Declared	Channel (MHz)	Modulation	99% OBW (MHz)
40 MHz	3720	QPSK	38.013
40 MHz	3840	QPSK	37.935
40 MHz	3960	QPSK	37.939
40 MHz	3720	16QAM	38.020
40 MHz	3840	16QAM	38.000
40 MHz	3960	16QAM	37.994
40 MHz	3720	64QAM	37.968
40 MHz	3840	64QAM	37.954
40 MHz	3960	64QAM	37.918
40 MHz	3720	256QAM	37.850
40 MHz	3840	256QAM	37.979
40 MHz	3960	256QAM	37.902
80 MHz	3740	QPSK	77.613
80 MHz	3840	QPSK	77.631
80 MHz	3940	QPSK	77.593
80 MHz	3740	16QAM	77.675
80 MHz	3840	16QAM	77.774
80 MHz	3940	16QAM	77.758
80 MHz	3740	64QAM	77.501
80 MHz	3840	64QAM	77.478
80 MHz	3940	64QAM	77.497
80 MHz	3740	256QAM	77.481
80 MHz	3840	256QAM	77.621
80 MHz	3940	256QAM	77.558
100 MHz	3750	QPSK	97.789
100 MHz	3840	QPSK	97.708
100 MHz	3930	QPSK	97.771
100 MHz	3750	16QAM	97.496
100 MHz	3840	16QAM	97.730
100 MHz	3930	16QAM	97.577
100 MHz	3750	64QAM	97.659
100 MHz	3840	64QAM	97.776
100 MHz	3930	64QAM	97.620
100 MHz	3750	256QAM	97.843
100 MHz	3840	256QAM	97.704
100 MHz	3930	256QAM	97.935

Table 8.2-1: FCC §2.1049(h) 99% Occupied Bandwidth and frequency ranges results

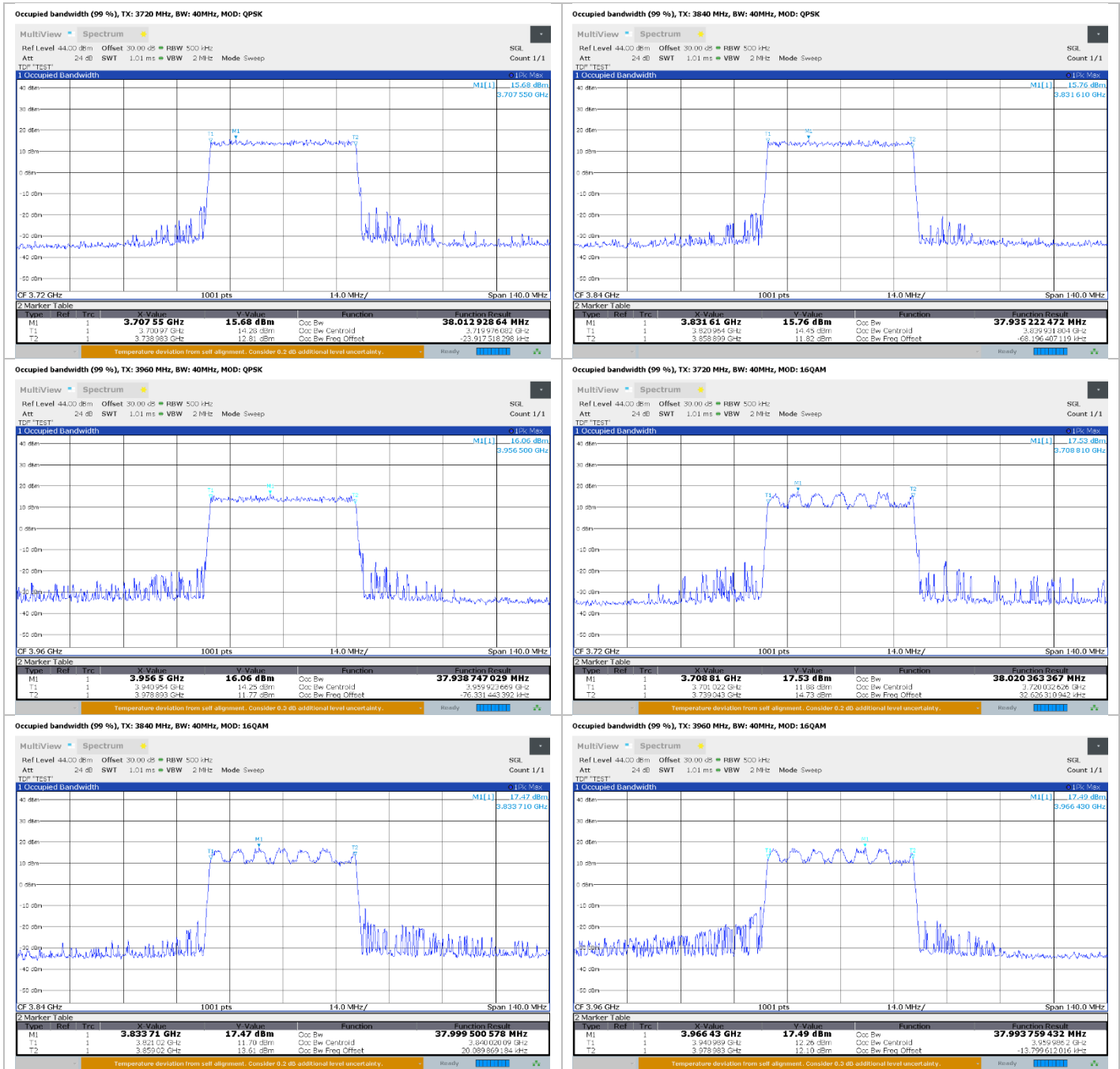
Section 8
Test name
Specification

Testing data
FCC §2.1049(h) 99% Occupied Bandwidth
FCC Part 27



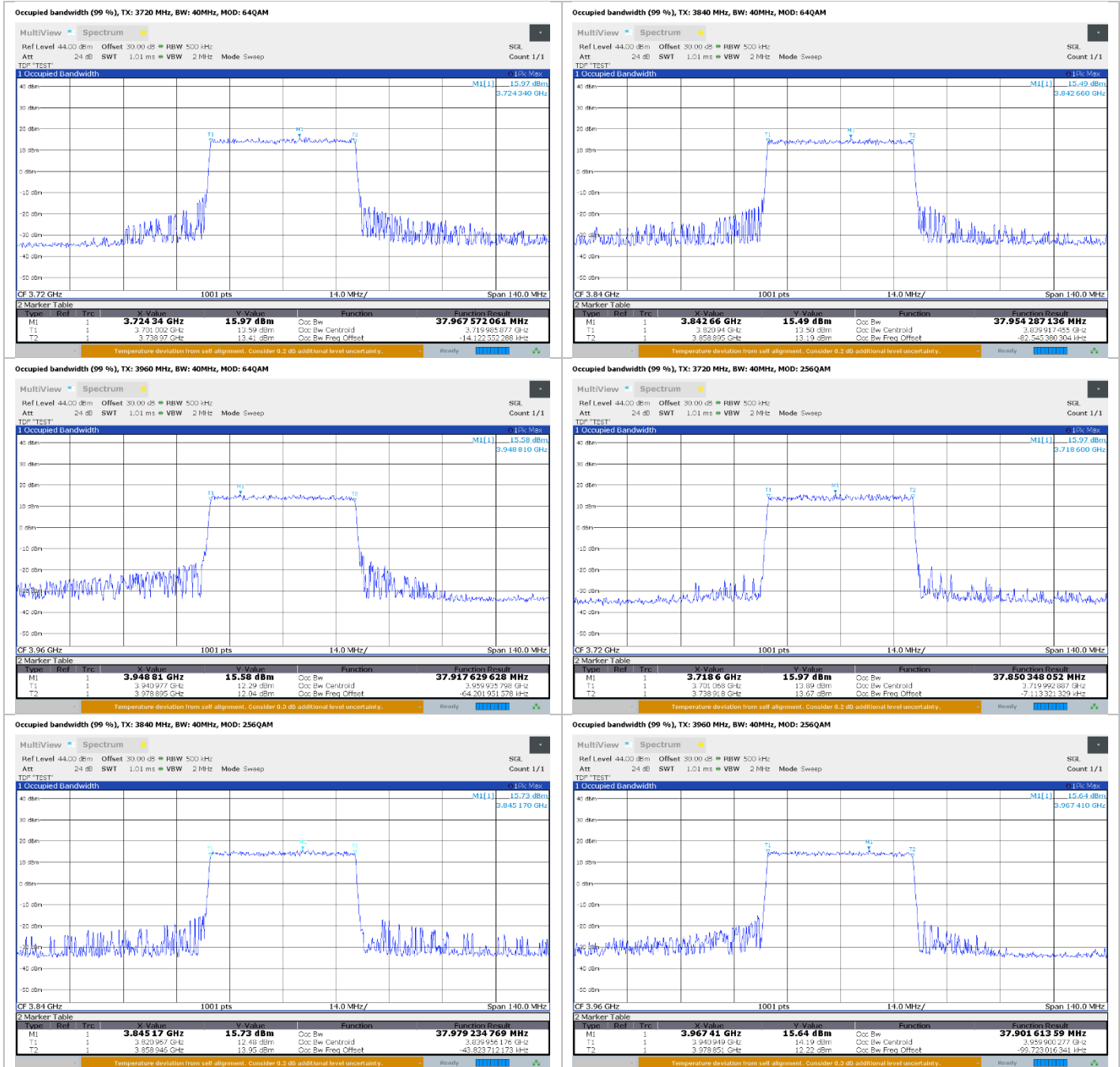
Band n77

Bandwidth: 40 MHz



Section 8
Test name
Specification

Testing data
FCC §2.1049(h) 99% Occupied Bandwidth
FCC Part 27



Section 8
Test name
Specification

Testing data
FCC §2.1049(h) 99% Occupied Bandwidth
FCC Part 27



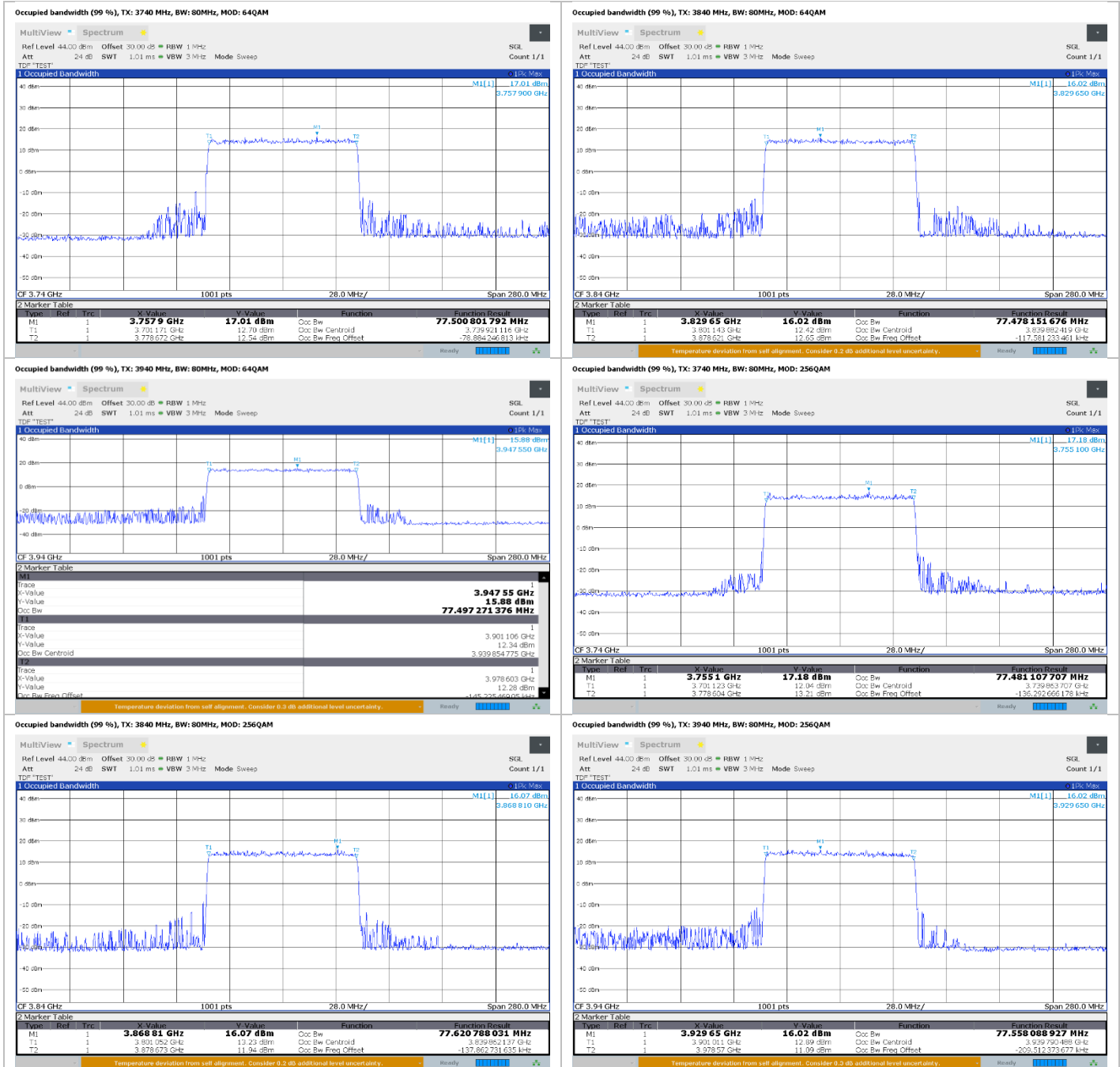
Band n77

Bandwidth: 80 MHz



Section 8
Test name
Specification

Testing data
FCC §2.1049(h) 99% Occupied Bandwidth
FCC Part 27



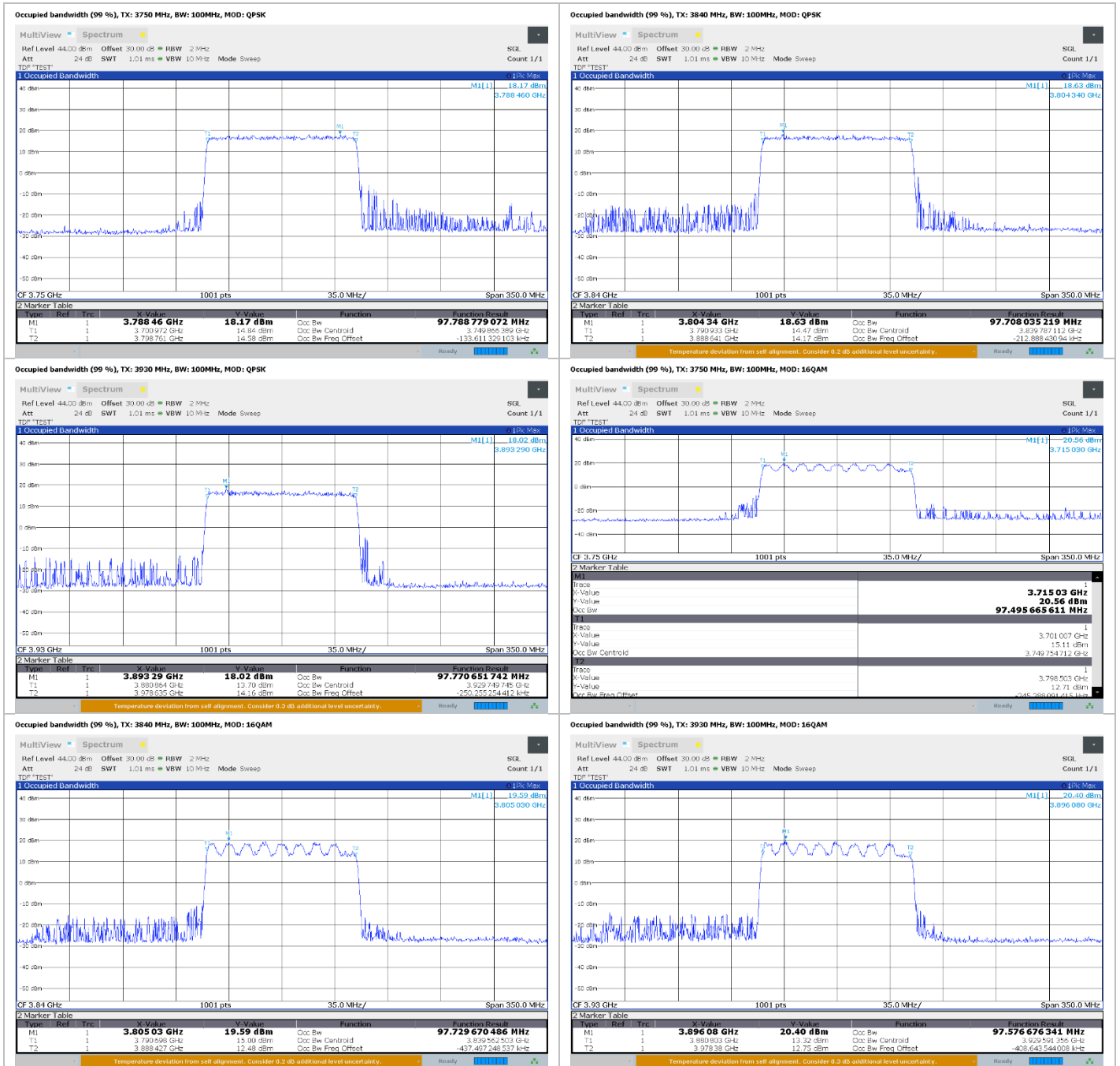
Section 8
Test name
Specification

Testing data
FCC §2.1049(h) 99% Occupied Bandwidth
FCC Part 27



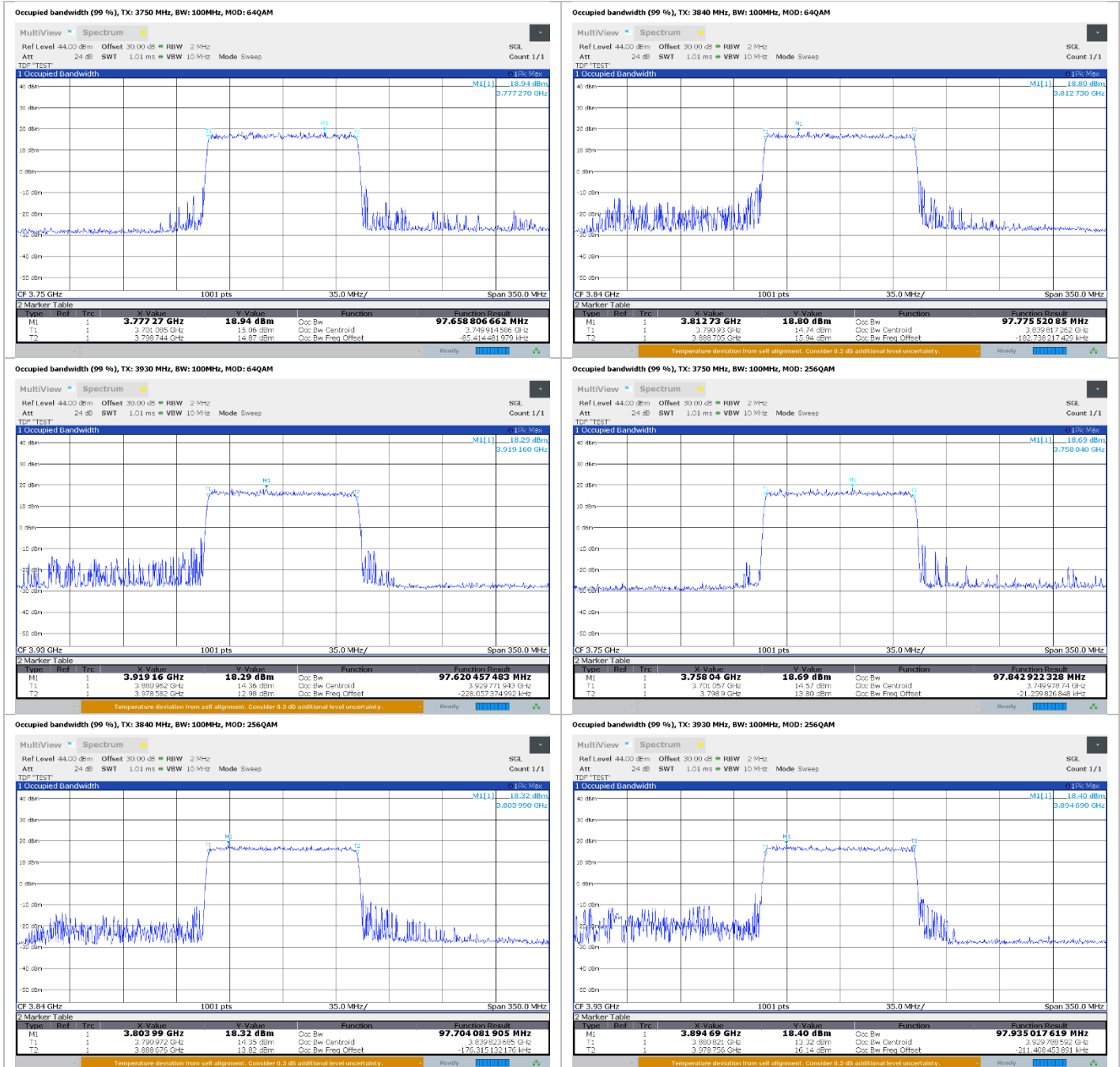
Band n77

Bandwidth: 100 MHz



Section 8
Test name
Specification

Testing data
FCC §2.1049(h) 99% Occupied Bandwidth
FCC Part 27



8.3 FCC §27.53 (I) 26 dB Occupied Bandwidth

8.3.1 Definitions and limits

((1) For base station operations in the 3700–3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed –13 dBm/MHz. Compliance with this paragraph (I)(1) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

8.3.2 Test summary

Test date	June 1, 2023	Temperature	22 °C
Test engineer	Chenhao Ma, Wireless test technician	Air pressure	1001 mbar
Verdict	Pass	Relative humidity	62%

8.3.3 Observations, settings and special notes

Test method: ANSI C63.26 Section 5.4.3.

Measured data for information only. 26 dB bandwidth is required to facilitate spurious emissions testing. Included spectrum analyzer plots show the worst case (highest) measured OBW for each channel bandwidth.

Spectrum analyzer settings:

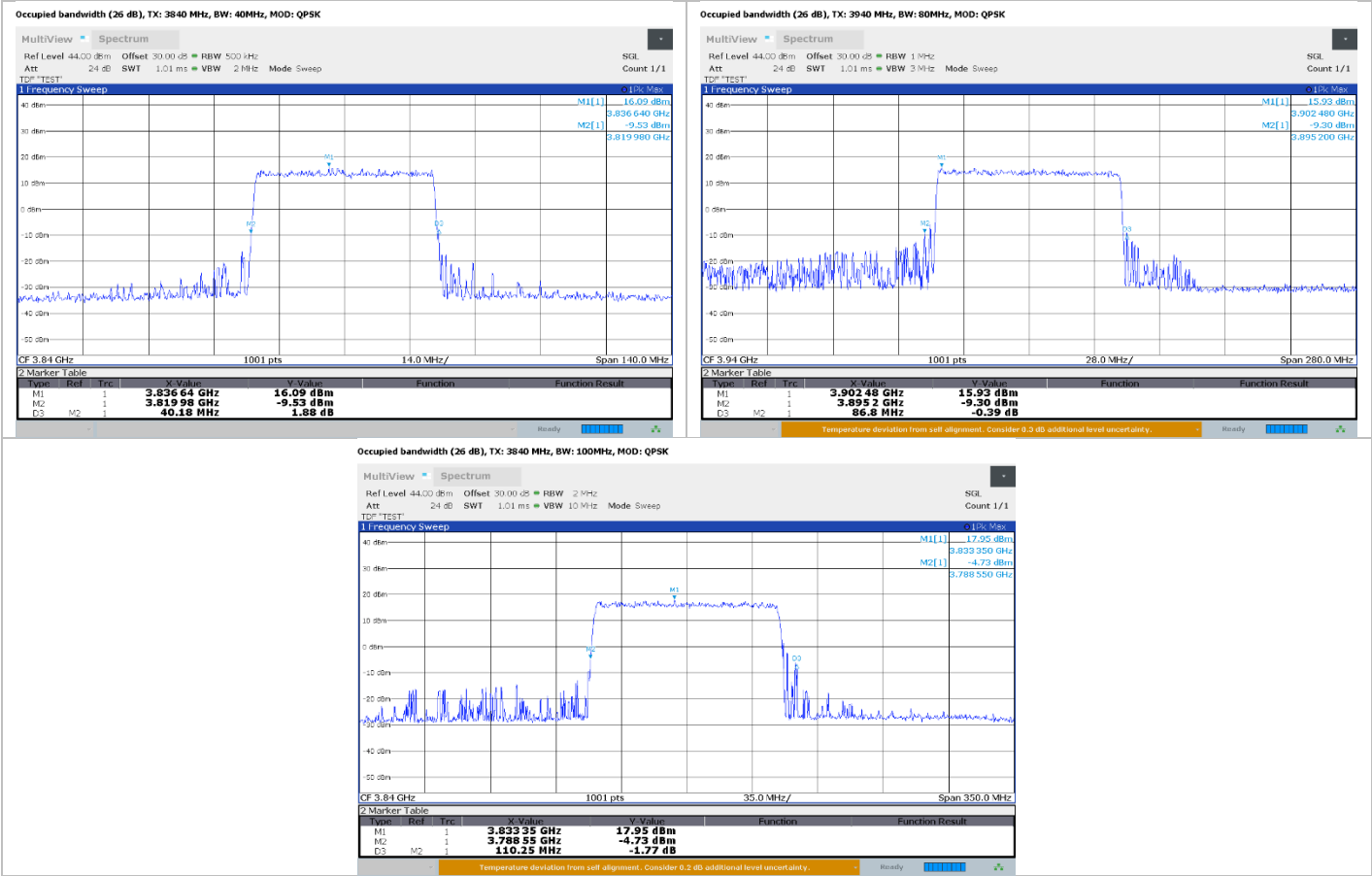
Resolution bandwidth	1% - 5% OBW
Video bandwidth	3*RBW
Frequency span	2*OBW
Detector mode	Peak
Trace mode	Max Hold

8.3.4 Test data

OBW Declared	Channel (MHz)	Modulation	26dB OBW (MHz)
40 MHz	3720	QPSK	39.900
40 MHz	3840	QPSK	40.180
40 MHz	3960	QPSK	40.040
40 MHz	3720	16QAM	39.900
40 MHz	3840	16QAM	39.900
40 MHz	3960	16QAM	39.760
40 MHz	3720	64QAM	40.040
40 MHz	3840	64QAM	40.040
40 MHz	3960	64QAM	40.040
40 MHz	3720	256QAM	39.900
40 MHz	3840	256QAM	39.900
40 MHz	3960	256QAM	39.900
80 MHz	3740	QPSK	86.520
80 MHz	3840	QPSK	84.840
80 MHz	3940	QPSK	86.800
80 MHz	3740	16QAM	80.640
80 MHz	3840	16QAM	81.760
80 MHz	3940	16QAM	80.360
80 MHz	3740	64QAM	85.960
80 MHz	3840	64QAM	80.640
80 MHz	3940	64QAM	80.360
80 MHz	3740	256QAM	80.360
80 MHz	3840	256QAM	80.360
80 MHz	3940	256QAM	81.200
100 MHz	3750	QPSK	102.550
100 MHz	3840	QPSK	110.250
100 MHz	3930	QPSK	106.400
100 MHz	3750	16QAM	102.200
100 MHz	3840	16QAM	102.550
100 MHz	3930	16QAM	102.550
100 MHz	3750	64QAM	102.550
100 MHz	3840	64QAM	103.600
100 MHz	3930	64QAM	107.450
100 MHz	3750	256QAM	102.900
100 MHz	3840	256QAM	107.450
100 MHz	3930	256QAM	114.450

Table 8.3-1: FCC §27.53 (l) 26 dB Occupied Bandwidth results

Band n77



8.4 FCC 27.50(j) Output power

8.4.1 Definitions and limits

(j) The following power requirements apply to stations transmitting in the 3700–3980 MHz band:

- (1) The power of each fixed or base station transmitting in the 3700–3980 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to an equivalent isotropically radiated power (EIRP) of 3280 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.
- (2) The power of each fixed or base station transmitting in the 3700–3980 MHz band and situated in any geographic location other than that described in paragraph (j)(1) of this section is limited to an EIRP of 1640 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

8.4.2 Test summary

Test date	June 1, 2023	Temperature	22 °C
Test engineer	Chenhao Ma, Wireless Test Technician	Air pressure	1001 mbar
Verdict	Pass	Relative humidity	62%

8.4.3 Observations, settings and special notes

Test method: ANSI C63.26 Section 5.2.4.5.

Spectrum analyzer settings:

Resolution bandwidth	1 MHz
Video bandwidth	3 MHz
Frequency span	$\geq 1.5 \times \text{OBW}$
Detector mode	Peak
Trace mode	Max Hold

This test was made across the conducted port and using a sensor power. An offset of 30 dB was added to the measurement to compensate the loss of the external 30 dB attenuator. Interconnecting cable losses were included as a transducer factor in the spectrum analyzer.

The EUT has four ports which can transmit at the same time in a correlated way. Measurements on one antenna port are corrected for MIMO operation according to the following equation:

$$\text{Correlation factor} = 10 \log(N)$$

Where N is the number of ports. In this specific case, $N = 4$,

$$\text{Correlation factor} = 10 \log(4) = 6.02 \text{ dB}$$

To select the measurement port, a quick power test was done. The four ports are similar, however, the port with maximum power was chosen to make all the remaining tests.

Band	Modulation	OBW	Channel	Power Port 1 (dBm/MHz)	Power Port 2 (dBm/MHz)	Power Port 3 (dBm/MHz)	Power Port 4 (dBm/MHz)
N77	QPSK	40 MHz	3840	6.98	8.98	8.87	6.89
N77	QPSK	80 MHz	3840	6.62	4.23	5.95	5.61
N77	QPSK	100 MHz	3840	3.54	4.54	3.2	3.63

Note: Port 2 was selected in the band, and it will be used to evaluate all the tests of this document.

The requirement is in terms of EIRP density in dBm/MHz. For informational purposes, total EIRP figures are included below based on the PAPR measurements of section 8.5.

8.4.4 Test data

Modulation	OBW (MHz)	Frequency (MHz)	Measured Power Density (dBm/1 MHz)	MIMO Correction Factor	Antenna Gain (dBi)	EIRP Power Density (dBm/1 MHz)	EIRP (dBm) (For information only)
QPSK	40	3720	7.36	6.02	5.5	18.88	34.14
16QAM	40	3720	9.16	6.02	5.5	20.68	34.09
64QAM	40	3720	7.27	6.02	5.5	18.79	34.30
256QAM	40	3720	7.84	6.02	5.5	19.36	34.24
QPSK	80	3740	7.05	6.02	5.5	18.57	33.83
16QAM	80	3740	6.48	6.02	5.5	18.00	33.86
64QAM	80	3740	4.55	6.02	5.5	16.07	33.65
256QAM	80	3740	5.42	6.02	5.5	16.94	34.17
QPSK	100	3750	3.44	6.02	5.5	14.96	33.88
16QAM	100	3750	5.63	6.02	5.5	17.15	33.90
64QAM	100	3750	3.90	6.02	5.5	15.42	33.72
256QAM	100	3750	4.08	6.02	5.5	15.60	33.83
QPSK	40	3840	7.86	6.02	5.5	19.38	33.95
16QAM	40	3840	9.06	6.02	5.5	20.58	33.90
64QAM	40	3840	7.40	6.02	5.5	18.92	33.99
256QAM	40	3840	8.12	6.02	5.5	19.64	33.93
QPSK	80	3840	3.99	6.02	5.5	15.51	33.62
16QAM	80	3840	6.62	6.02	5.5	18.14	34.03
64QAM	80	3840	4.26	6.02	5.5	15.78	34.07
256QAM	80	3840	4.75	6.02	5.5	16.27	33.60
QPSK	100	3840	4.71	6.02	5.5	16.23	33.50
16QAM	100	3840	5.76	6.02	5.5	17.28	33.90
64QAM	100	3840	3.54	6.02	5.5	15.06	33.49
256QAM	100	3840	3.49	6.02	5.5	15.01	33.60
QPSK	40	3960	9.15	6.02	5.5	20.67	33.46
16QAM	40	3960	10.28	6.02	5.5	21.80	33.58
64QAM	40	3960	8.65	6.02	5.5	20.17	33.47
256QAM	40	3960	8.97	6.02	5.5	20.49	33.70
QPSK	80	3940	6.28	6.02	5.5	17.80	33.53
16QAM	80	3940	7.90	6.02	5.5	19.42	33.62
64QAM	80	3940	6.07	6.02	5.5	17.59	33.62
256QAM	80	3940	6.04	6.02	5.5	17.56	33.59
QPSK	100	3930	5.67	6.02	5.5	17.19	34.33
16QAM	100	3930	7.31	6.02	5.5	18.83	34.32
64QAM	100	3930	6.26	6.02	5.5	17.78	34.18
256QAM	100	3930	6.26	6.02	5.5	17.78	34.01

Table 8.4-1: FCC 27.50(j) Output power results

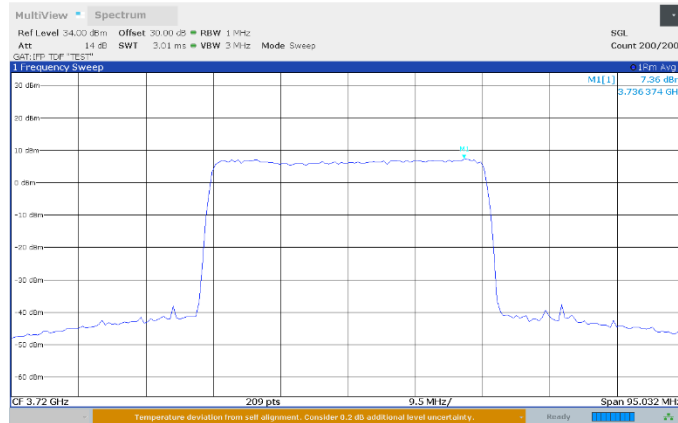
Note: EIRP power density (dBm/MHz) = Measured power density (dBm/MHz) + MIMO Correction (dB) + Antenna Gain (dB)
EIRP = average conducted power (dBm, measured in section 8.5) + antenna gain (dBi) + MIMO correction (dB)

Section 8
Test name
Specification

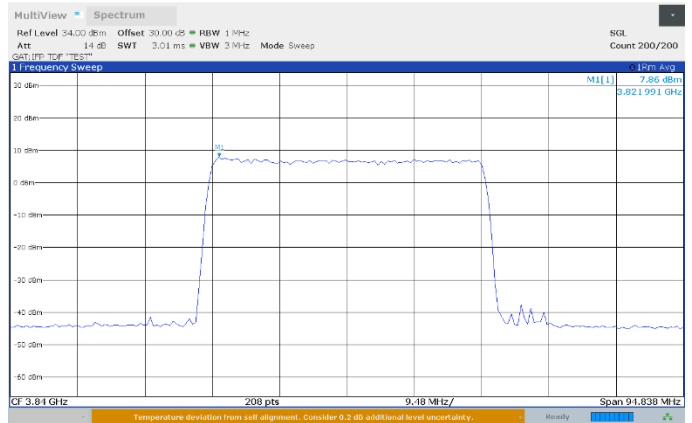
Testing
FCC 27.50(j) Output power
FCC Part 27



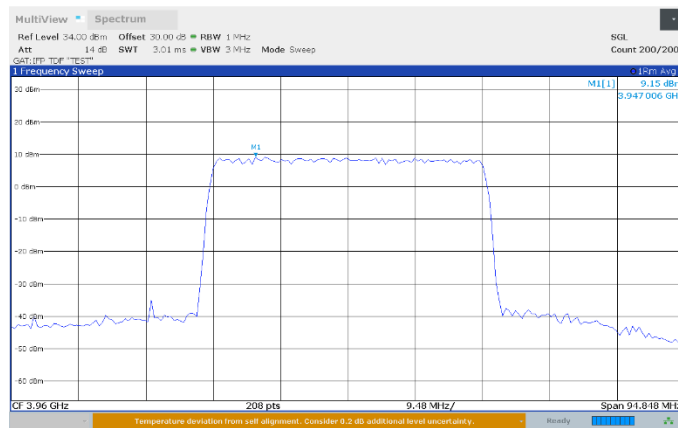
Average PSD, TX: 3720 MHz, BW: 40MHz, MOD: QPSK



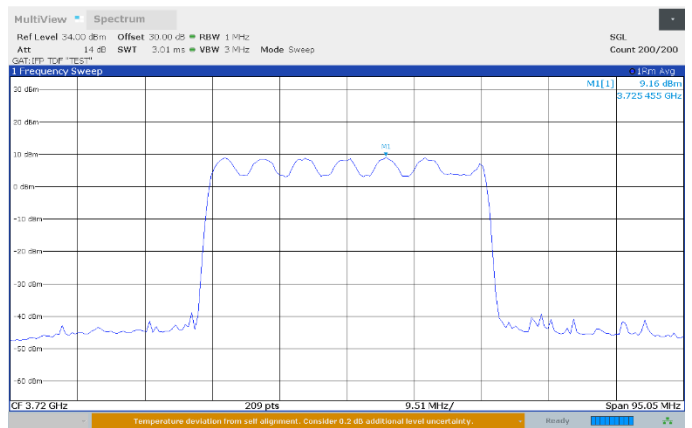
Average PSD, TX: 3840 MHz, BW: 40MHz, MOD: QPSK



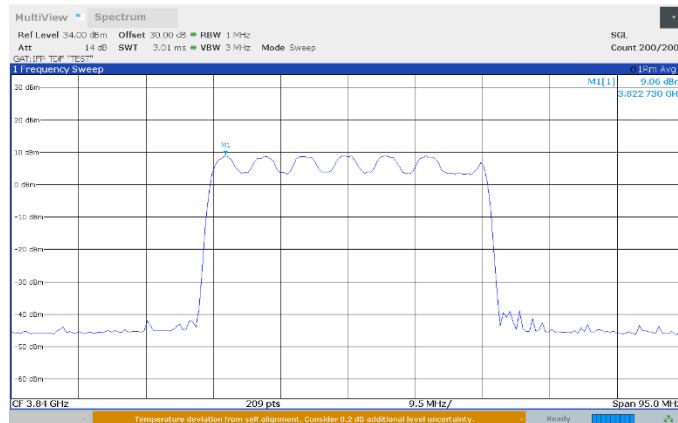
Average PSD, TX: 3960 MHz, BW: 40MHz, MOD: QPSK



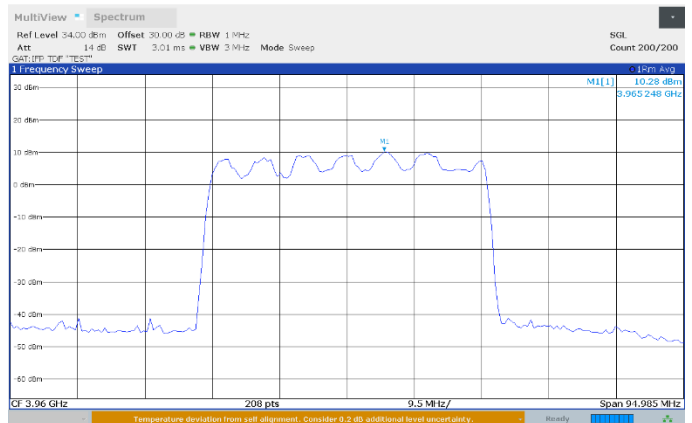
Average PSD, TX: 3720 MHz, BW: 40MHz, MOD: 16QAM



Average PSD, TX: 3840 MHz, BW: 40MHz, MOD: 16QAM



Average PSD, TX: 3960 MHz, BW: 40MHz, MOD: 16QAM

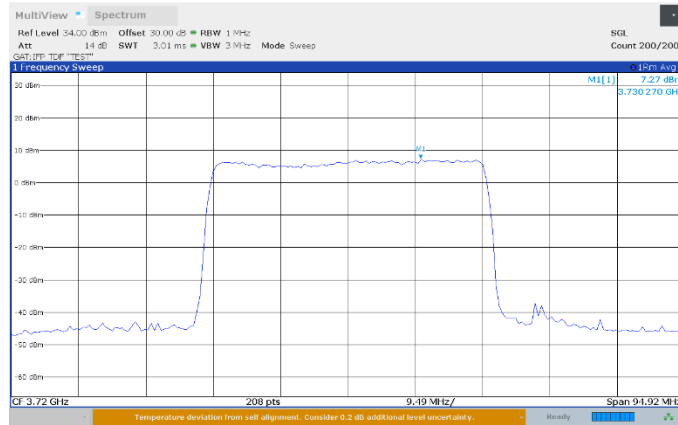


Section 8
Test name
Specification

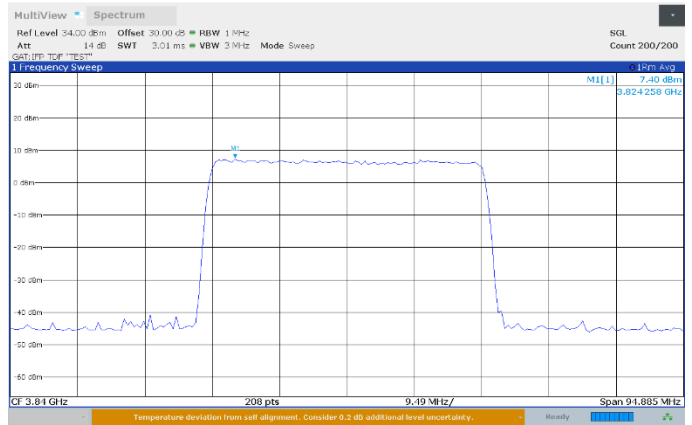
Testing
FCC 27.50(j) Output power
FCC Part 27



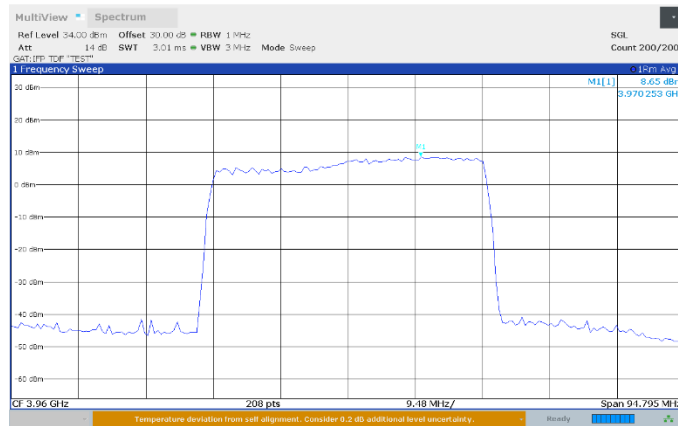
Average PSD, TX: 3720 MHz, BW: 40MHz, MOD: 64QAM



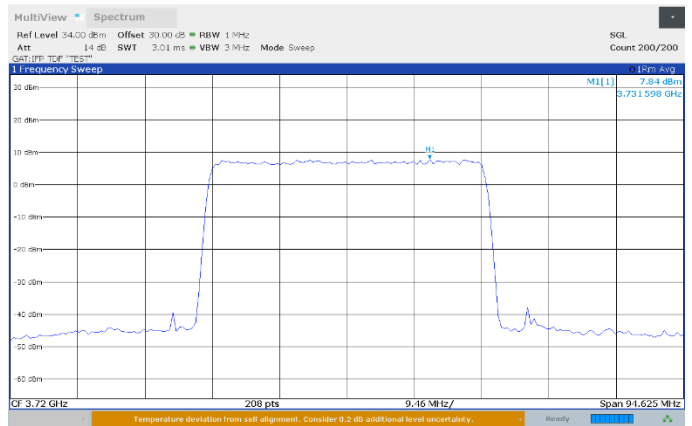
Average PSD, TX: 3840 MHz, BW: 40MHz, MOD: 64QAM



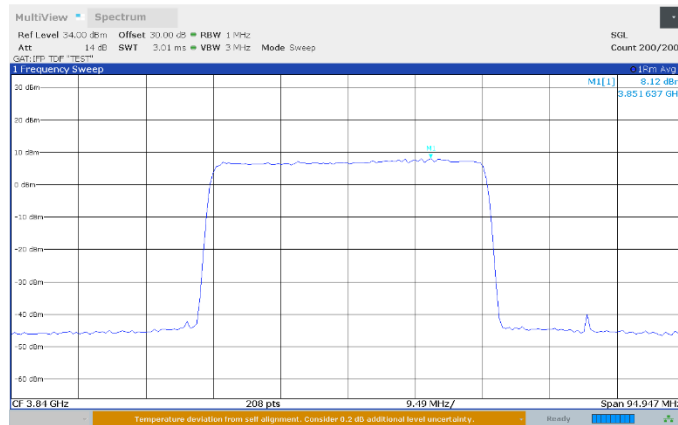
Average PSD, TX: 3960 MHz, BW: 40MHz, MOD: 64QAM



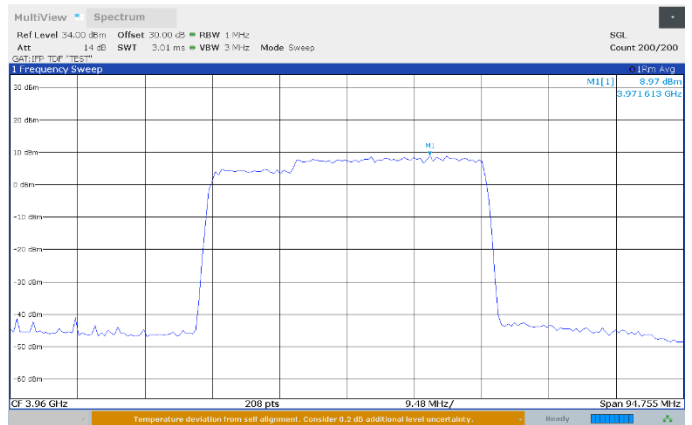
Average PSD, TX: 3720 MHz, BW: 40MHz, MOD: 256QAM



Average PSD, TX: 3840 MHz, BW: 40MHz, MOD: 256QAM



Average PSD, TX: 3960 MHz, BW: 40MHz, MOD: 256QAM

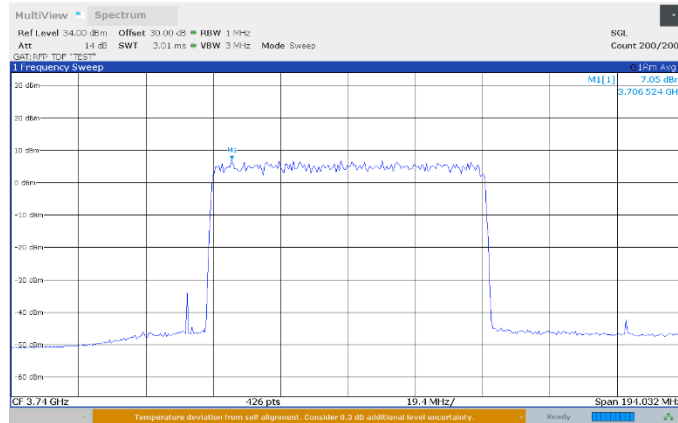


Section 8
Test name
Specification

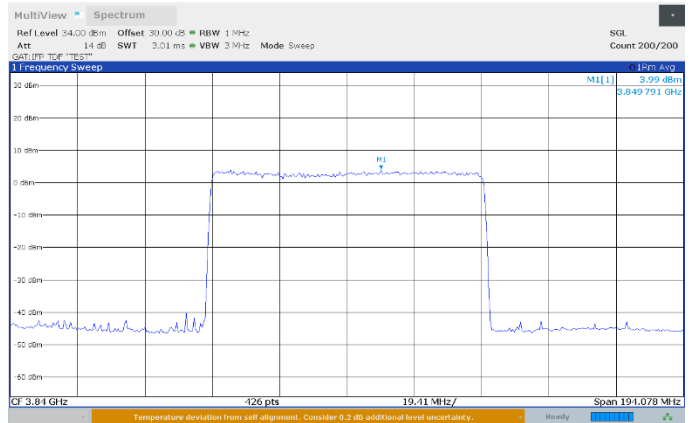
Testing
FCC 27.50(j) Output power
FCC Part 27



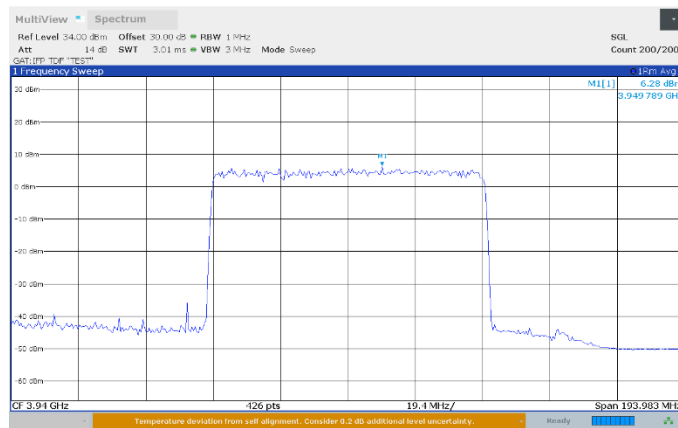
Average PSD, TX: 3740 MHz, BW: 80MHz, MOD: QPSK



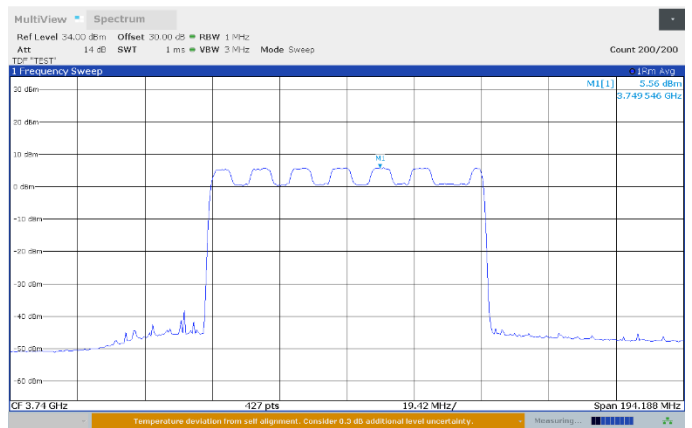
Average PSD, TX: 3840 MHz, BW: 80MHz, MOD: QPSK



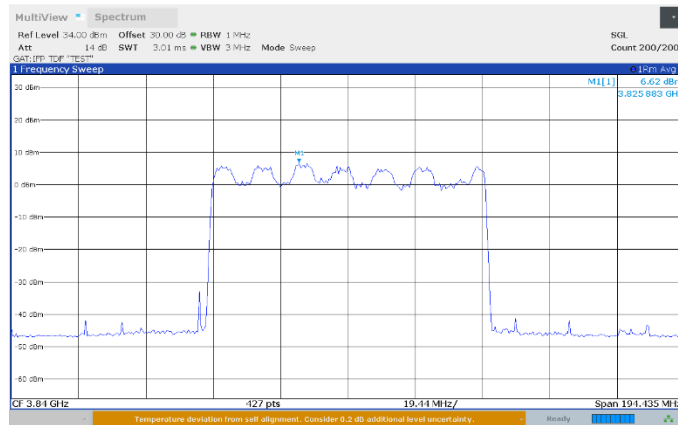
Average PSD, TX: 3940 MHz, BW: 80MHz, MOD: QPSK



Average PSD, TX: 3740 MHz, BW: 80MHz, MOD: 16QAM



Average PSD, TX: 3840 MHz, BW: 80MHz, MOD: 16QAM



Average PSD, TX: 3940 MHz, BW: 80MHz, MOD: 16QAM

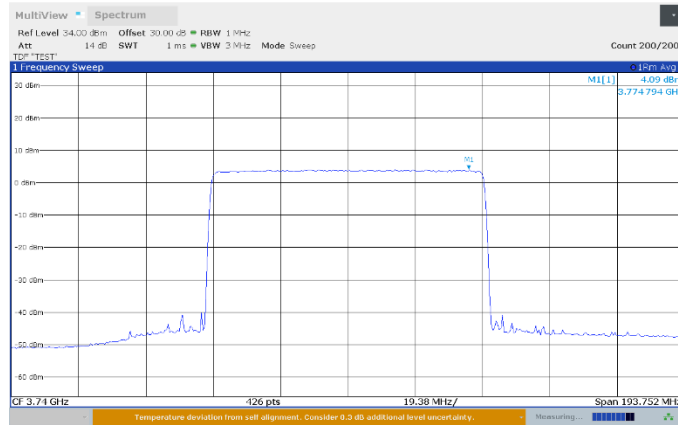


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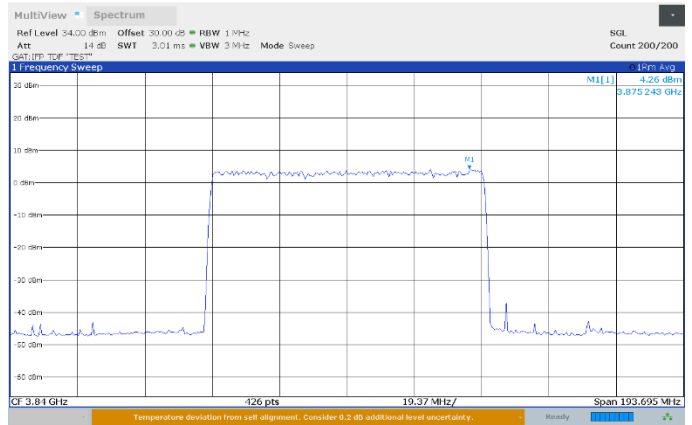
Testing
FCC 27.50(j) Output power
FCC Part 27



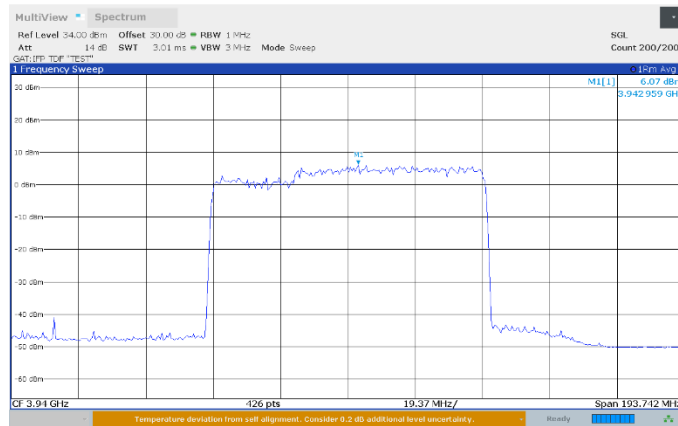
Average PSD, TX: 3740 MHz, BW: 80MHz, MOD: 64QAM



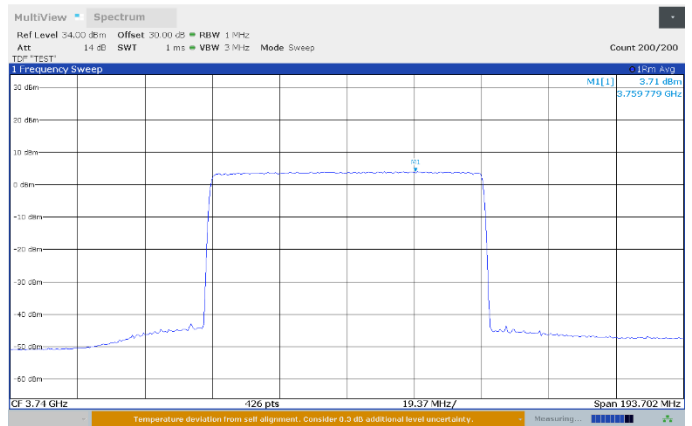
Average PSD, TX: 3840 MHz, BW: 80MHz, MOD: 64QAM



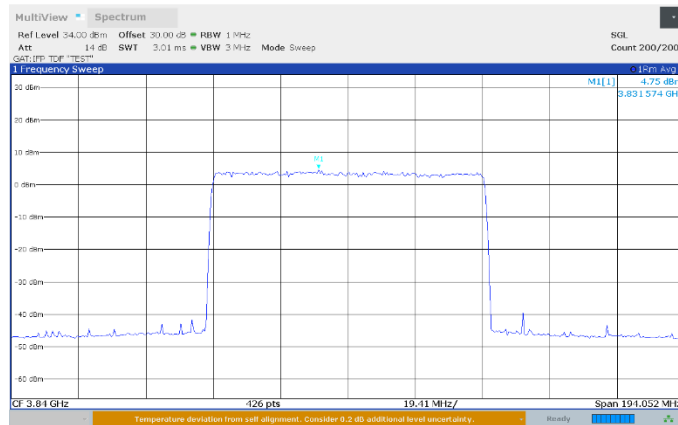
Average PSD, TX: 3940 MHz, BW: 80MHz, MOD: 64QAM



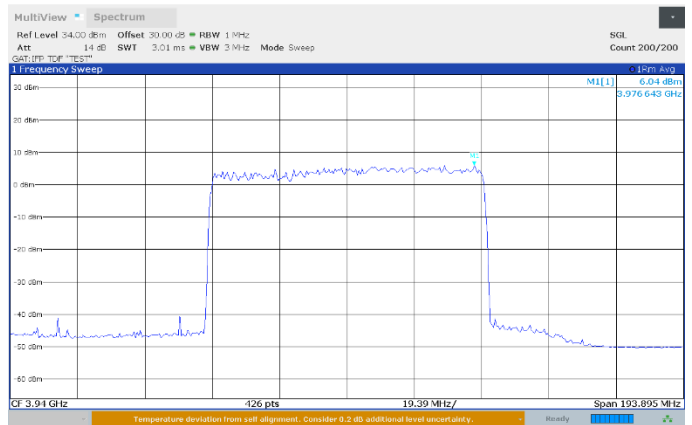
Average PSD, TX: 3740 MHz, BW: 80MHz, MOD: 256QAM



Average PSD, TX: 3840 MHz, BW: 80MHz, MOD: 256QAM



Average PSD, TX: 3940 MHz, BW: 80MHz, MOD: 256QAM

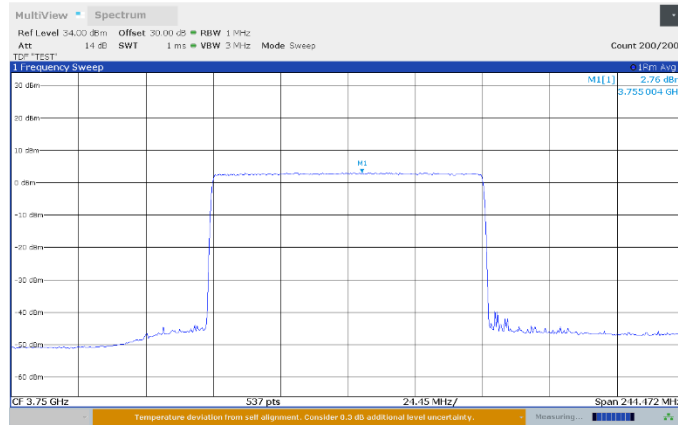


Section 8
Test name
Specification

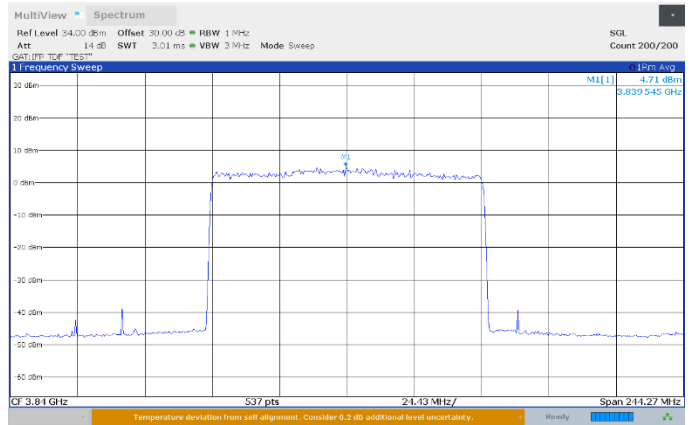
Testing
FCC 27.50(j) Output power
FCC Part 27



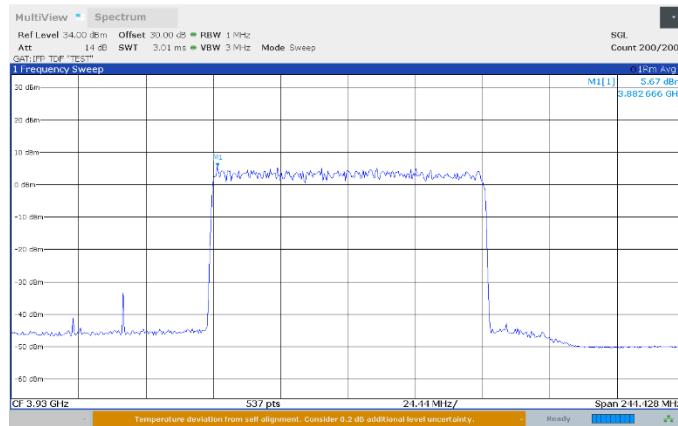
Average PSD, TX: 3750 MHz, BW: 100MHz, MOD: QPSK



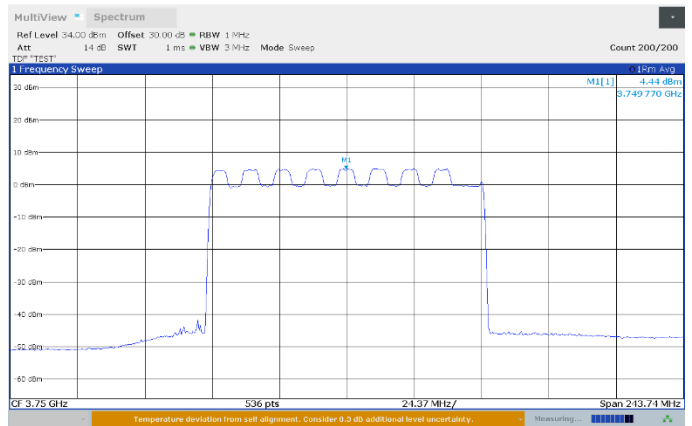
Average PSD, TX: 3840 MHz, BW: 100MHz, MOD: QPSK



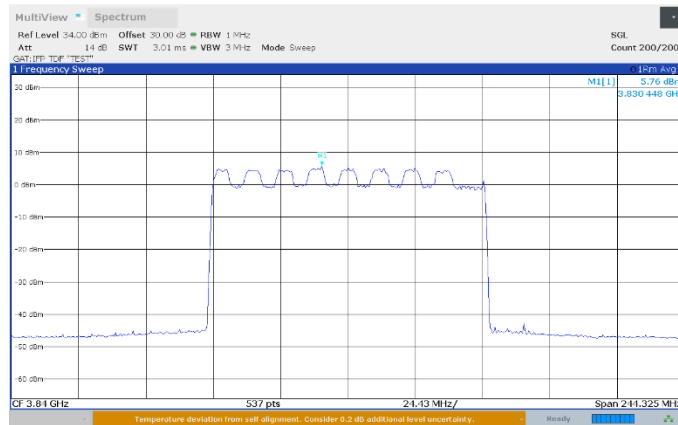
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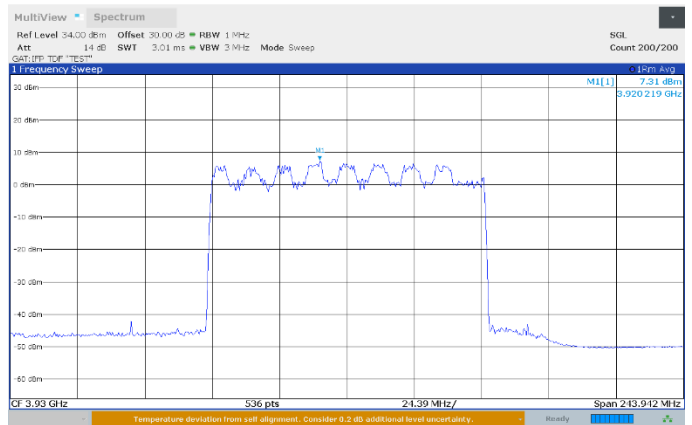
Average PSD, TX: 3750 MHz, BW: 100MHz, MOD: 16QAM



Average PSD, TX: 3840 MHz, BW: 100MHz, MOD: 16QAM



Average PSD, TX: 3930 MHz, BW: 100MHz, MOD: 16QAM

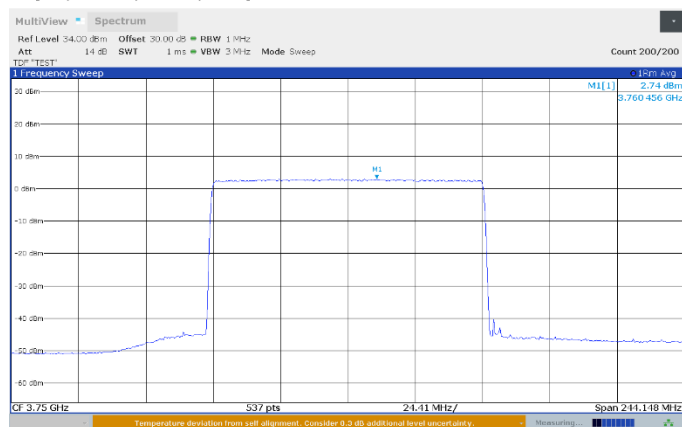


Section 8
Test name
Specification

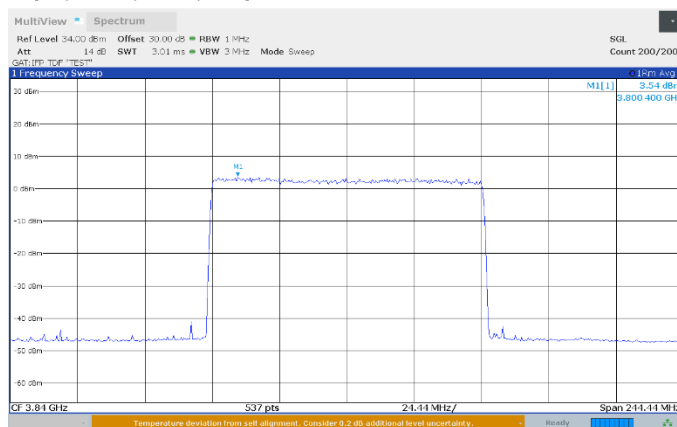
Testing
FCC 27.50(j) Output power
FCC Part 27



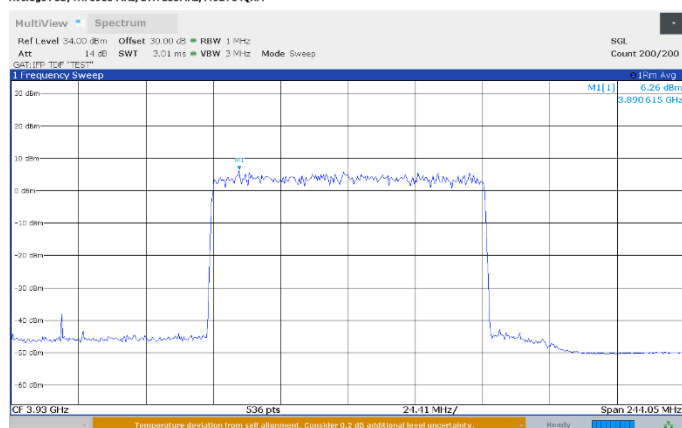
Average PSD, TX: 3750 MHz, BW: 100MHz, MOD: 64QAM



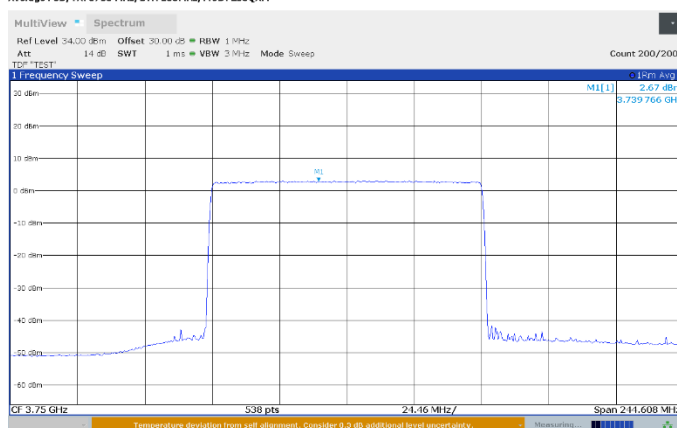
Average PSD, TX: 3840 MHz, BW: 100MHz, MOD: 64QAM



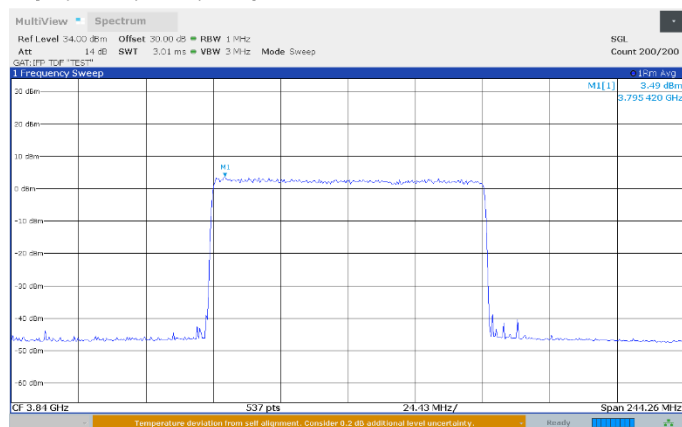
Average PSD, TX: 3930 MHz, BW: 100MHz, MOD: 64QAM



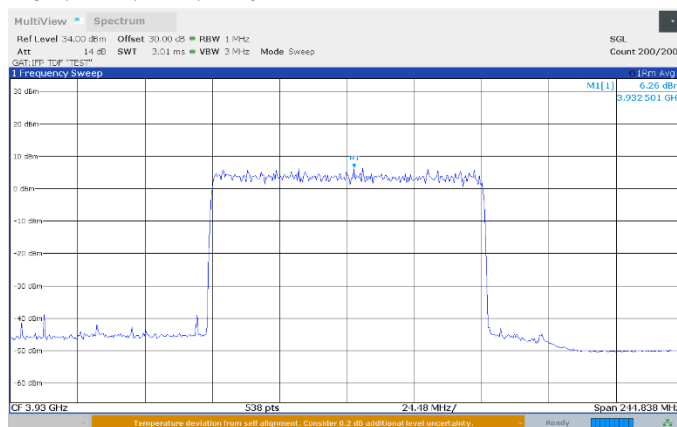
Average PSD, TX: 3750 MHz, BW: 100MHz, MOD: 256QAM



Average PSD, TX: 3840 MHz, BW: 100MHz, MOD: 256QAM



Average PSD, TX: 3930 MHz, BW: 100MHz, MOD: 256QAM



8.5 FCC 27.50(j)(4) Peak to Average Power Ratio

8.5.1 Definitions and limits

Equipment employed must be authorized in accordance with the provisions of § 27.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (j)(5) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

8.5.2 Test summary

Test date	June 1, 2023	Temperature	22 °C
Test engineer	Chenhao Ma, Wireless Test Technician	Air pressure	1001 mbar
Verdict	Pass	Relative humidity	62%

8.5.3 Observations, settings and special notes

Selection of Port 2 (Band n77)

Test method: ANSI C63.26 Section 5.2.3.4.

Spectrum analyzer settings:

Resolution bandwidth	≥ OBW
Number of counts	The necessary number up to stabilizes the measured
Trace mode	Clear/Write

Where the channel bandwidth exceeds the largest supported bandwidth of the spectrum analyzer, discrete peak and average total channel measurements were performed. In other cases, the PAPR is measured using the CCDF function of the spectrum analyzer.

8.5.4 Test data

OBW Declared	Channel (MHz)	Modulation	PAPR (dB)
40 MHz	3720	QPSK	9.71
40 MHz	3840	QPSK	9.68
40 MHz	3960	QPSK	9.47
40 MHz	3720	16QAM	9.66
40 MHz	3840	16QAM	9.71
40 MHz	3960	16QAM	9.31
40 MHz	3720	64QAM	9.67
40 MHz	3840	64QAM	9.72
40 MHz	3960	64QAM	9.67
40 MHz	3720	256QAM	9.82
40 MHz	3840	256QAM	9.95
40 MHz	3960	256QAM	9.84
80 MHz	3740	QPSK	10.21
80 MHz	3840	QPSK	10.23
80 MHz	3940	QPSK	10.19
80 MHz	3740	16QAM	10.21
80 MHz	3840	16QAM	10.01
80 MHz	3940	16QAM	10.36
80 MHz	3740	64QAM	10.49
80 MHz	3840	64QAM	9.85
80 MHz	3940	64QAM	10.41
80 MHz	3740	256QAM	10.07
80 MHz	3840	256QAM	10.39
80 MHz	3940	256QAM	10.38
100 MHz	3750	QPSK	9.92
100 MHz	3840	QPSK	10.11
100 MHz	3930	QPSK	10.28
100 MHz	3750	16QAM	9.95
100 MHz	3840	16QAM	9.81
100 MHz	3930	16QAM	10.10
100 MHz	3750	64QAM	10.21
100 MHz	3840	64QAM	10.20
100 MHz	3930	64QAM	10.27
100 MHz	3750	256QAM	10.04
100 MHz	3840	256QAM	10.14
100 MHz	3930	256QAM	10.03

Table 8.5-1: FCC 27.50(j)(4) Peak to Average Power Ratio results

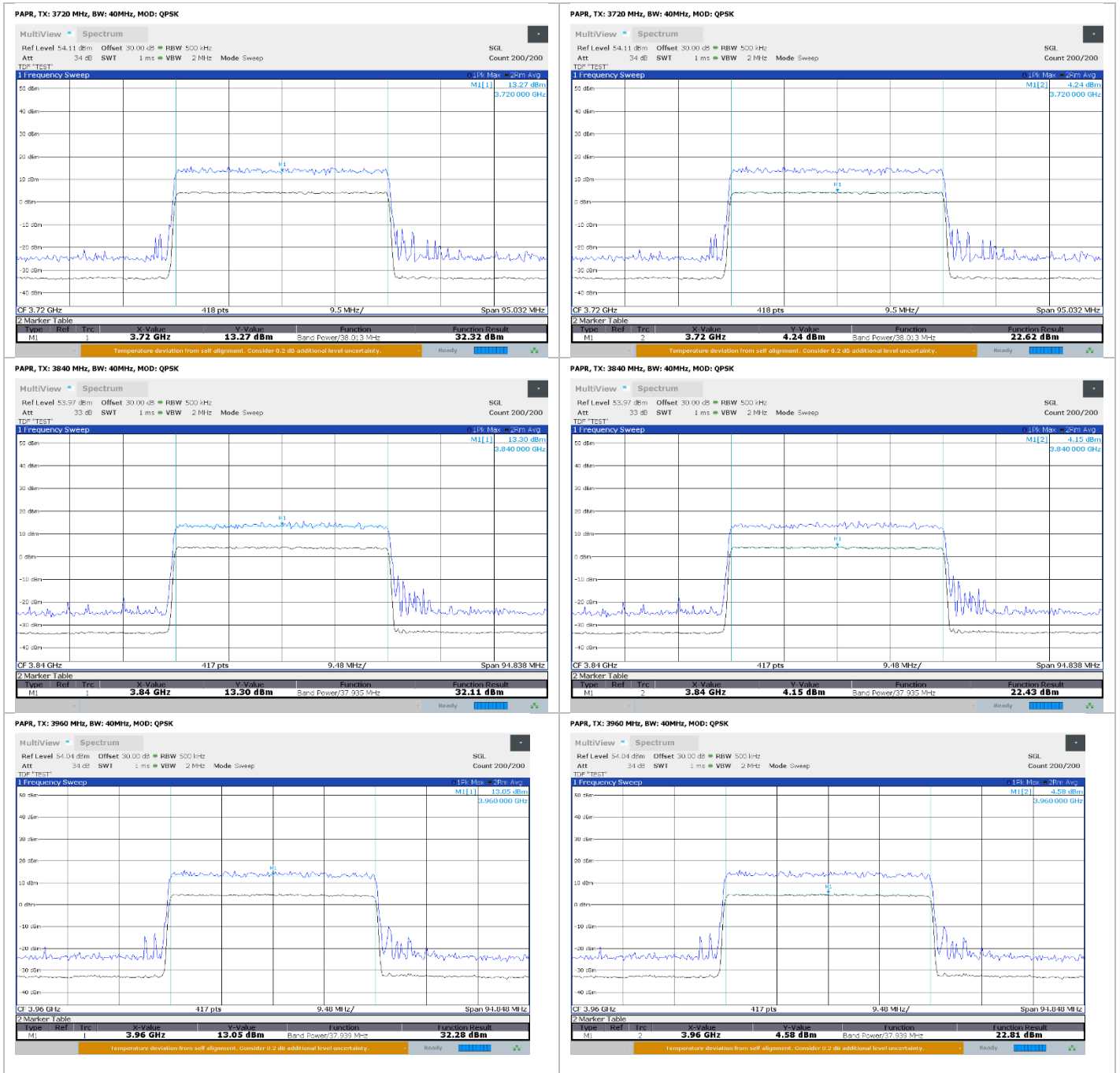
Section 8
Test name
Specification

Testing
FCC 27.50(j)(4) Peak to Average Power Ratio
FCC Part 27



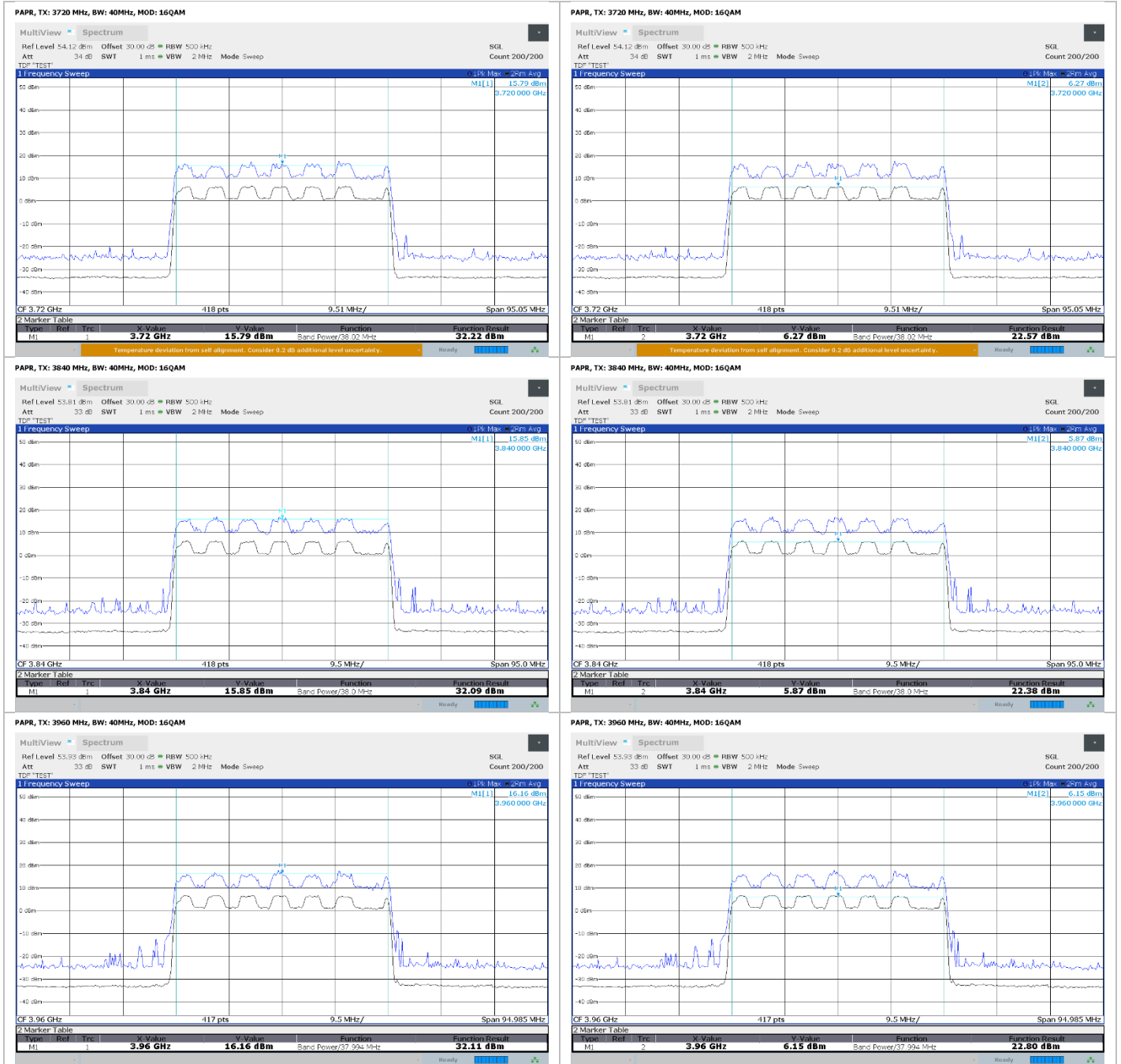
Band n77

Bandwidth 40 MHz



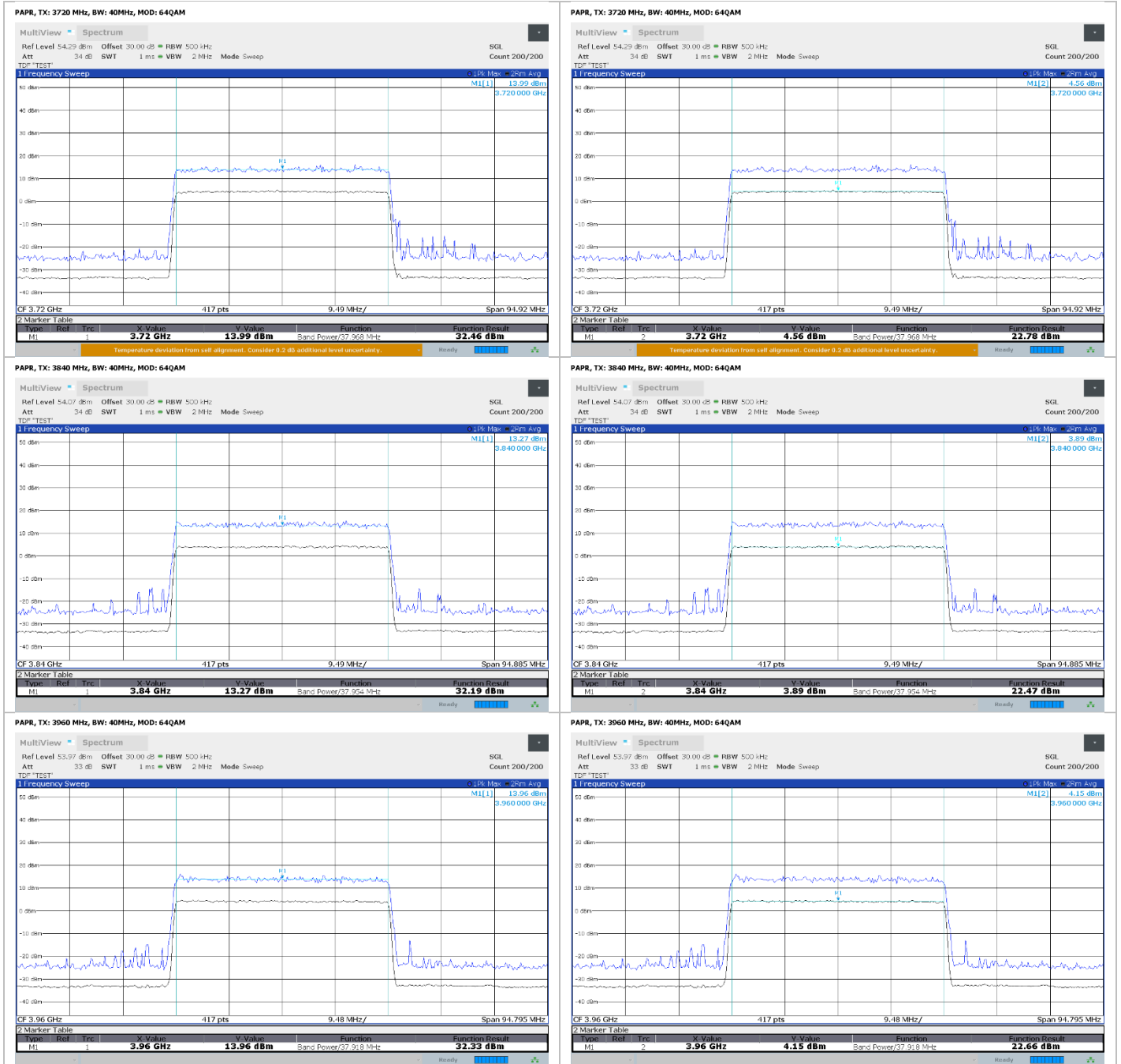
Section 8
Test name
Specification

Testing
FCC 27.50(j)(4) Peak to Average Power Ratio
FCC Part 27



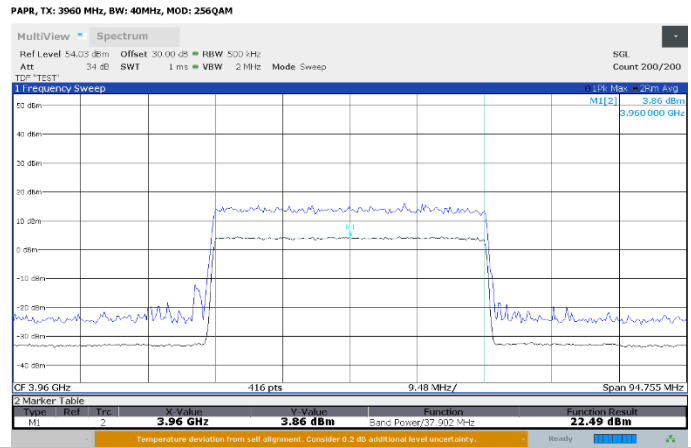
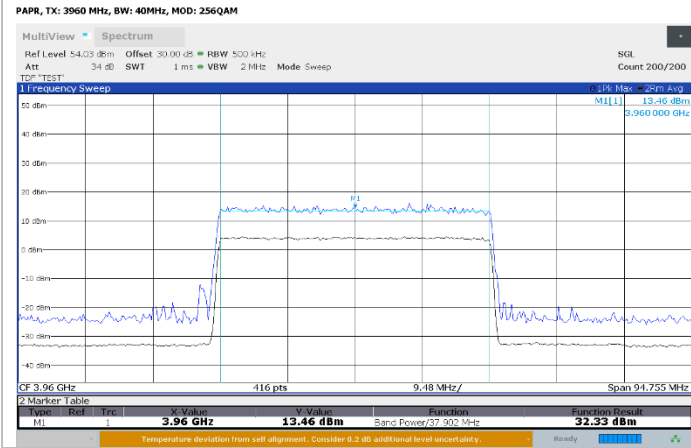
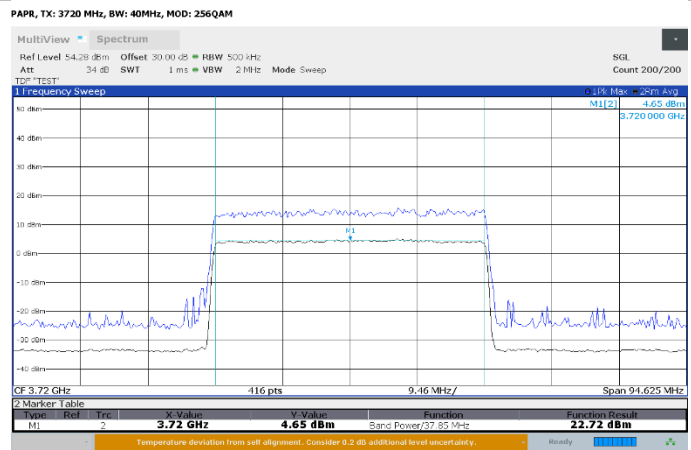
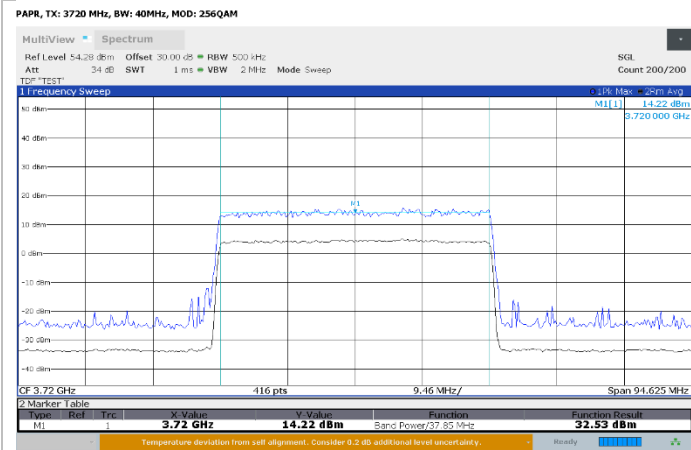
Section 8
Test name
Specification

Testing
FCC 27.50(j)(4) Peak to Average Power Ratio
FCC Part 27



Section 8
Test name
Specification

Testing
FCC 27.50(j)(4) Peak to Average Power Ratio
FCC Part 27



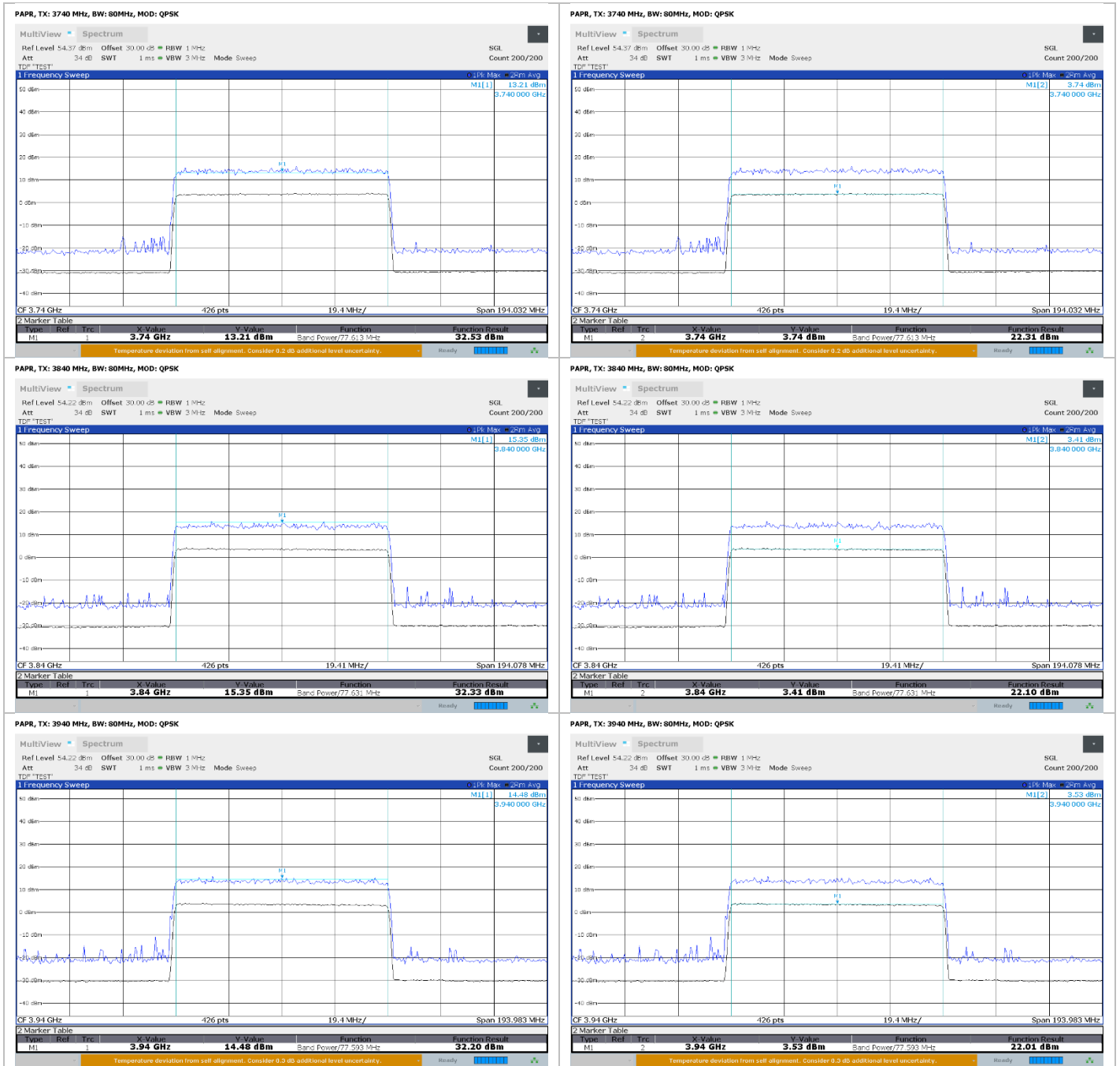
Section 8
Test name
Specification

Testing
FCC 27.50(j)(4) Peak to Average Power Ratio
FCC Part 27



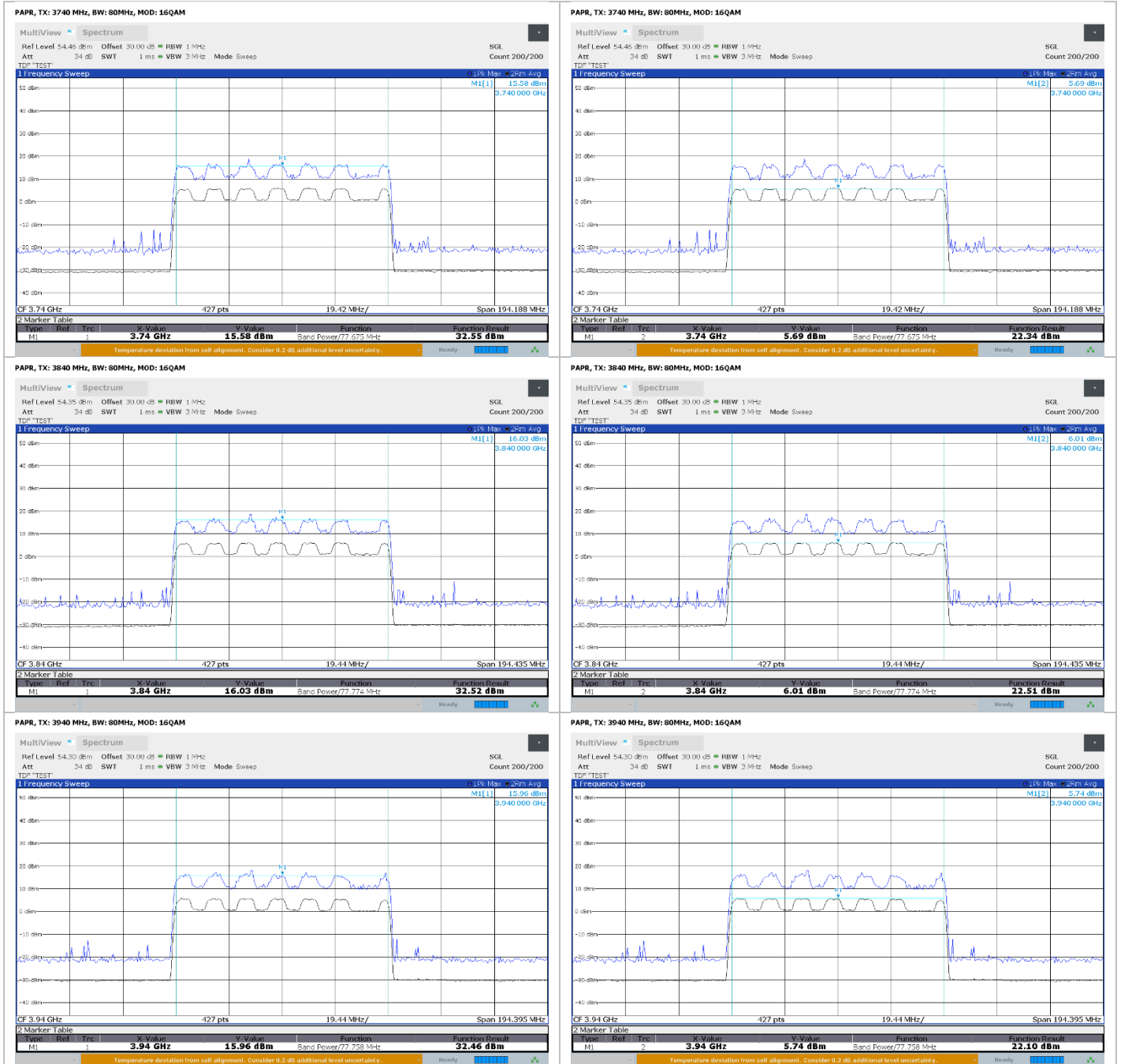
Band n77

Bandwidth 80 MHz



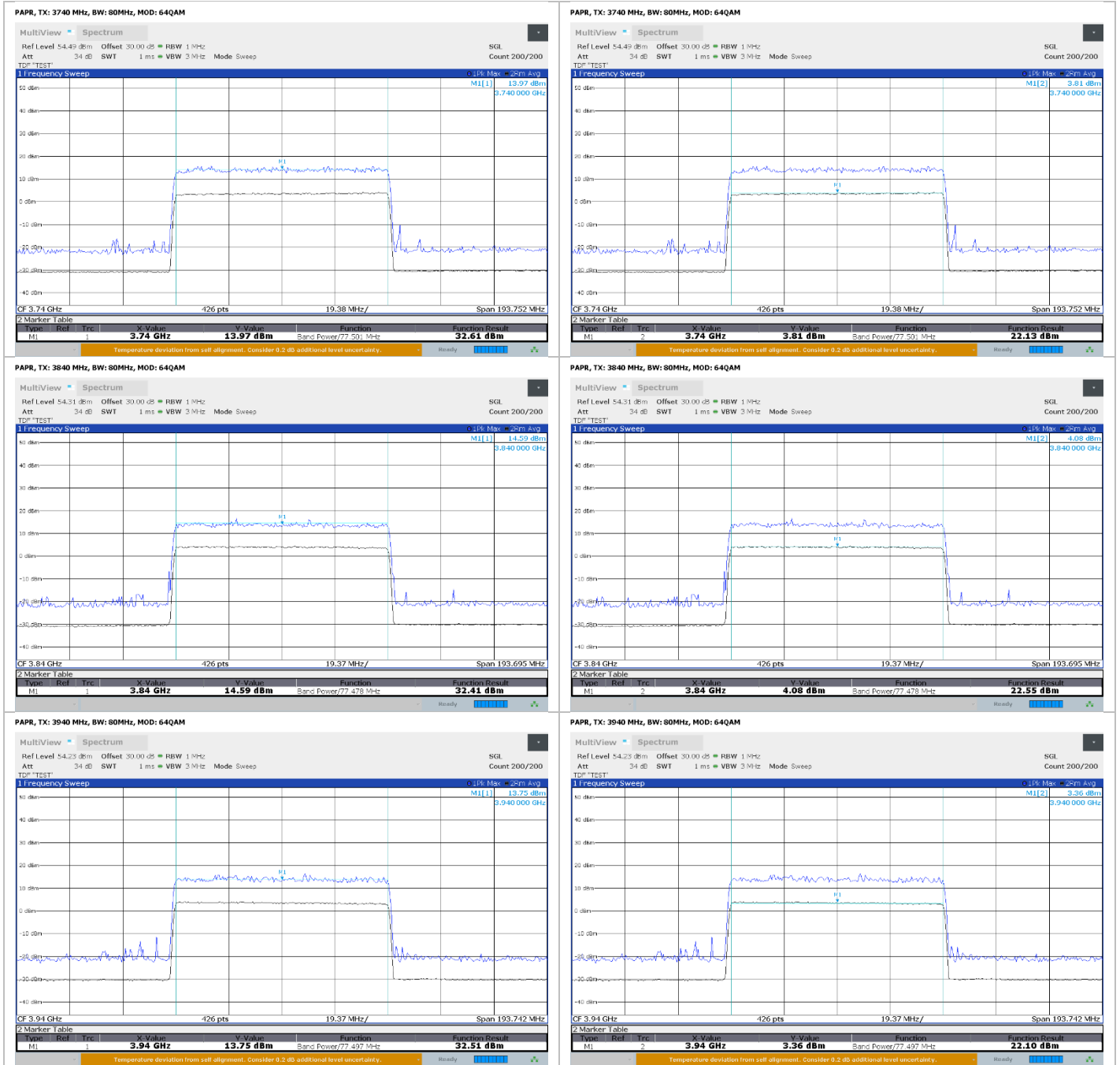
Section 8
Test name
Specification

Testing
FCC 27.50(j)(4) Peak to Average Power Ratio
FCC Part 27



Section 8
Test name
Specification

Testing
FCC 27.50(j)(4) Peak to Average Power Ratio
FCC Part 27



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FCC 27.50(j)(4) Peak to Average Power Ratio
FCC Part 27

