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47CFR, PART 15C - Intentional Radiators
47CFR Paragraph 15.255 and Industry Canada RSS-210
Issue 11 (June 2024) and RSS-GEN Issue 5 + Amd. 2
(February 2021)

Application For Grant of Certification

VPR-60

FCC ID: OHRVPR-60

IC: 6775A-VPR-60

57.0-64.0 GHz

MS Sedco, Inc.

5706 W. 74th Street
Indianapolis, IN 46278

Test Report Number: 260309

Test Date: March 9, 2026 – April 9, 2026

Authorized Signatory: 

Patrick Powell

Rogers Labs, a division of The Compatibility Center LLC

FCC Designation Number: US5305

FCC Registration Number: 315994

ISED Company Number: 32275

ISED CAB Identifier: US0096

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Revision 2

Model/HVIN: VPR-60 FCC ID: OHRVPR-60

Test: 260309

Test to: 47CFR 15.255, RSS-GEN, RSS-210

File: MS Sedco VPR-60 15_255 FDS TstRpt 260309 r2

MS Sedco, Inc.

IC: 6775A-VPR-60

S/N: 649153

Date: July 11, 2026

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Revisions

Revision 1 Issued April 28, 2026: Initial Release

Revision 2 Issued July 9, 2026 – updated EIRP calculations for clarity.

Executive Summary

The following information is submitted for consideration in obtaining Grant of Certification for License Exempt Digital Transmission System Intentional Radiator operating under Code of Federal Regulations Title 47 (47CFR) Part 15C paragraph 15.255, Industry Canada RSS-210 Issue 11 (June 2024) and RSS-GEN Issue 5 + Amd. 2 (February 2021) operation in the 57 to 71 GHz band.

Name of Applicant: MS Sedco, Inc.
5706 W. 74th Street
Indianapolis, IN 46278

Model: VPR-60
FCC ID: FCC ID: OHRVPR-60 IC: 6775A-VPR-60
Operating Frequency Range: 57.0 – 64.0 GHz

VPR-60 was chosen for transmitter configuration testing and used for final measurements.

Opinion / Interpretation of Results

Item	Test Condition	Test Procedure	Ind. Canada Specifications	FCC Specification	Results
AC Line Conducted Emissions (150kHz - 30MHz)	AC LINE CONDUCTED	ANSI C63.10-2020 Subclause 6.2.	RSS-Gen, 8.8	15.207	Complies
99% Occupied Bandwidth	RADIATED	ANSI C63.10: 2020, 9.4	RSS-Gen, 6.7	15.215(c), 2.1049	Complies
-20dB Occupied Bandwidth	RADIATED	ANSI C63.10: 2020, 9.3	RSS-210, Annex J	15.215(c)	Complies
Equivalent Isotropic Radiated Power	RADIATED	ANSI C63.10: 2020, 9.8 & Annex L	RSS-210, Annex J	15.255(c)(2)(iii)(B)	Complies
Radiated Spurious Emissions (Above 40GHz)	RADIATED	ANSI C63.10: 2020, 4, 9 & Annex L	RSS-210, Annex J	15.255(d), 15.205	Complies
Radiated Spurious Emissions (1 - 40GHz)	RADIATED	ANSI C63.10: 2020, 9 & Annex L	RSS-Gen, 8.9	15.255(d), 15.205, 15.209	Complies
Radiated Spurious Emissions (Below 1GHz)	RADIATED	ANSI C63.10: 2020, 6.3, 6.4, 9.11.	RSS-Gen	15.205, 15.209	Complies
Frequency Stability	RADIATED	ANSI C63.10: 2020, 6.8, 9.5	RSS-210 Annex J	15.255(f)	Complies
Duty Cycle / OFF Time	RADIATED	ANSI C63.10: 2020, 9 & Annex L	RSS-210 Annex J	15.255(c)(2)(iii)(B)	Complies

Equipment Tested

Model: VPR-60

MS Sedco, Inc.
5706 W. 74th Street
Indianapolis, IN 46278

<u>Equipment</u>	<u>Model / PN</u>	<u>Serial Number</u>
Radiated EUT #1	VPR-60	649153
24V transformer	12024	N/A

Software Version: VPR60-v1225

Integral PCB Patch Antenna

The design transmits pulses at center frequency and receives backscatter to determine motion in the field.

Test results in this report relate only to the items tested. Worst-case configuration data recorded in this report.

Equipment Function and Configuration

The EUT is a fixed mounted field disturbance sensor. The design incorporates an authorized module (FCC ID: UXS-IDR-2050). The test sample was provided with an AC transformer to power the design for testing. The test system only required power to enable the transmitter function during testing. The test sample operated the transmitter at near 100% duty cycle while powered for testing purposes. The EUT was arranged as described by the manufacturer emulating typical use configuration for testing purposes. For testing purposes, the EUT received power from the provided external AC Transformer and was configured to operate in the manufacturer provided mode and duty cycle. As requested by the manufacturer and required by regulations, the equipment was evaluated for compliance using the available configurations with the worst-case data presented. This report documents the performed testing and results for the applicable configuration and product operation. Test results in this report relate only to the products described in this report.

Equipment Configuration



Equipment Operational Modes

Mode#	Transmitter Type	Transmit Frequency (GHz)
1	FDS	57.0 ~ 64.0

Antenna Requirements

Per CFR 15.203, “An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

- The antenna of this device is permanently attached / built-into the sensor module.
- There are no provisions for connecting to external antennae.

Conclusion: this product complies with the requirements of CFR paragraph 15.203.

Environmental Conditions

Ambient Temperature	22.7° C
Relative Humidity	51.0 %
Atmospheric Pressure	1016.7 mb

Application for Certification

- (1) Manufacturer: MS Sedco, Inc.
5706 W. 74th Street
Indianapolis, IN 46278
- (2) Identification: Model: VPR-60
FCC ID: OHRVPR-60 IC: 6775A-VPR-60
- (3) Instruction Book:
Refer to Exhibit for Instruction Manual.
- (4) Description of Circuit Functions:
Refer to Exhibit of Operational Description.
- (5) Block Diagram with Frequencies:
Refer to Exhibit of Operational Description.
- (6) Report of Measurements:
Report of measurements follows in this Report.
- (7) Photographs: Construction, Component Placement, etc.:
Refer to Exhibit for photographs of equipment.
- (8) List of Peripheral Equipment Necessary for operation. The equipment operates from external alternating current power input to a transformer which supplies 24V DC to the EUT. The EUT provides interface ports for power.
- (9) Transition Provisions of 47CFR 15.37 are not requested.
- (10) Not Applicable. The unit is not a scanning receiver.
- (11) Since this EUT operates in the 57-71 GHz range, this report details compliance with provisions of 47CFR 15.255.
- (12) The equipment is not software defined and this section is not applicable.
- (13) Not applicable as this unit is not a U-NII device.
- (14) Contain at least one drawing or photograph showing the test set-up for each of the required types of tests applicable to the device for which certification is requested. These drawings or photographs must show enough detail to confirm other information contained in the test report. Any photographs used must be focused originals without glare or dark spots and must clearly show the test configuration used. This information is provided in this report and Test Setup Exhibits provided with the application filing.

Applicable Standards

The following information is submitted in accordance with the eCFR (electronic Title 47 Code of Federal Regulations) (47CFR), dated March 6, 2025: Part 2, Subpart J, Part 15C Paragraph 15.255, Industry Canada RSS-210 Issue 11 (June 2024) and RSS-GEN Issue 5 + Amd. 2 (February 2021). Test procedures used are the established Methods of Measurement of Radio-Noise Emissions as described in ANSI C63.10-2020. This report documents compliance for the EUT operations.

Test Procedures

AC Line Conducted Emission Test Procedure

Testing for the AC line-conducted emissions were performed as required in 47CFR 15C, RSS-247 Issue 2, RSS-GEN and specified in ANSI C63.10-2020. The test setup, including the EUT, was arranged in the test configurations as presented during testing. The test configuration was placed on a 1 x 1.5-meter bench, 0.8 meters high located in a screen room. The power lines of the system were isolated from the power source using a standard LISN with a 50- μ Hy choke. EMI was coupled to the spectrum analyzer through a 0.1 μ F capacitor internal to the LISN. The LISN was positioned on the floor beneath the wooden bench supporting the EUT. The power lines and cables were draped over the back edge of the table. Refer to diagram one showing typical test arrangement and photographs in exhibits for EUT placement used during testing.

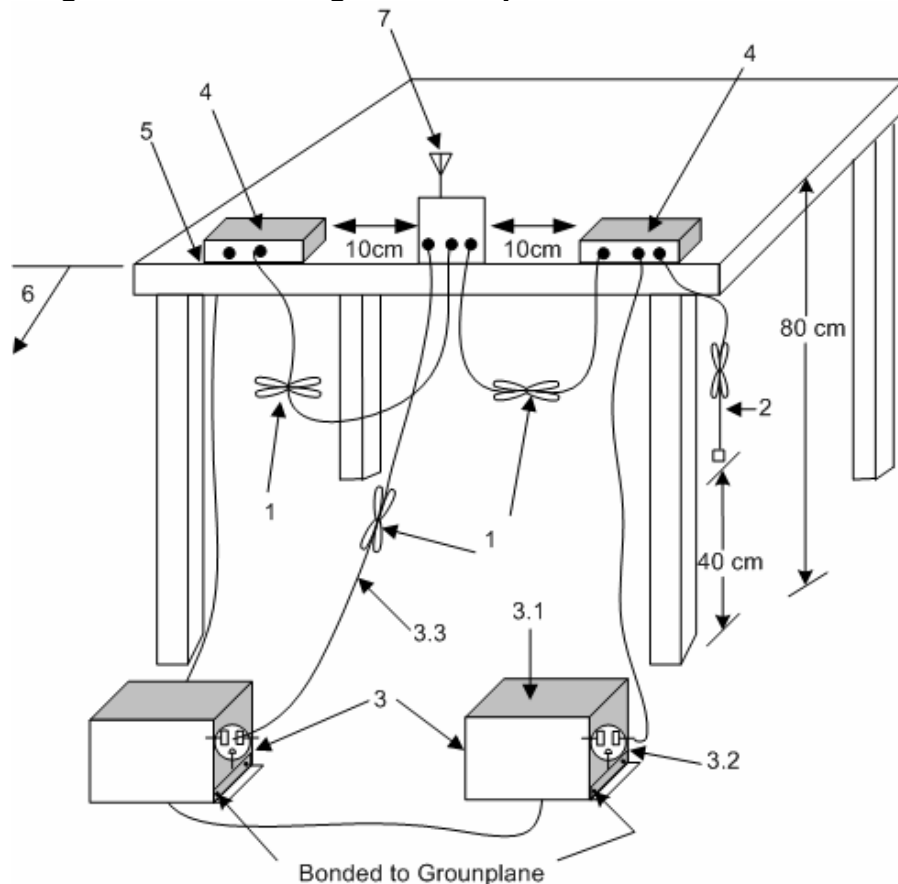
Radiated Emission Procedure

Radiated emissions testing was performed as required in 47CFR 15C and specified in ANSI C63.10-2020. The EUT was placed on a rotating 0.9 x 1.2-meter platform, elevated as required above the ground plane at a distance of 3 meters from the FSM antenna. For 57-71GHz radiated testing, adjustments were made for appropriate far field distance. EMI energy was maximized by equipment placement permitting orientation in three orthogonal axes, raising, and lowering the FSM antenna, changing the antenna polarization, and by rotating the turntable. Each emission was maximized before data was taken and recorded. The frequency spectrum from 9 kHz to 200 GHz was searched for emissions during preliminary investigation. Refer to diagrams two and three showing typical test setup. Refer to photographs in the test setup exhibits for specific EUT placement during testing.

Antenna Port Conducted Emission Test Procedure

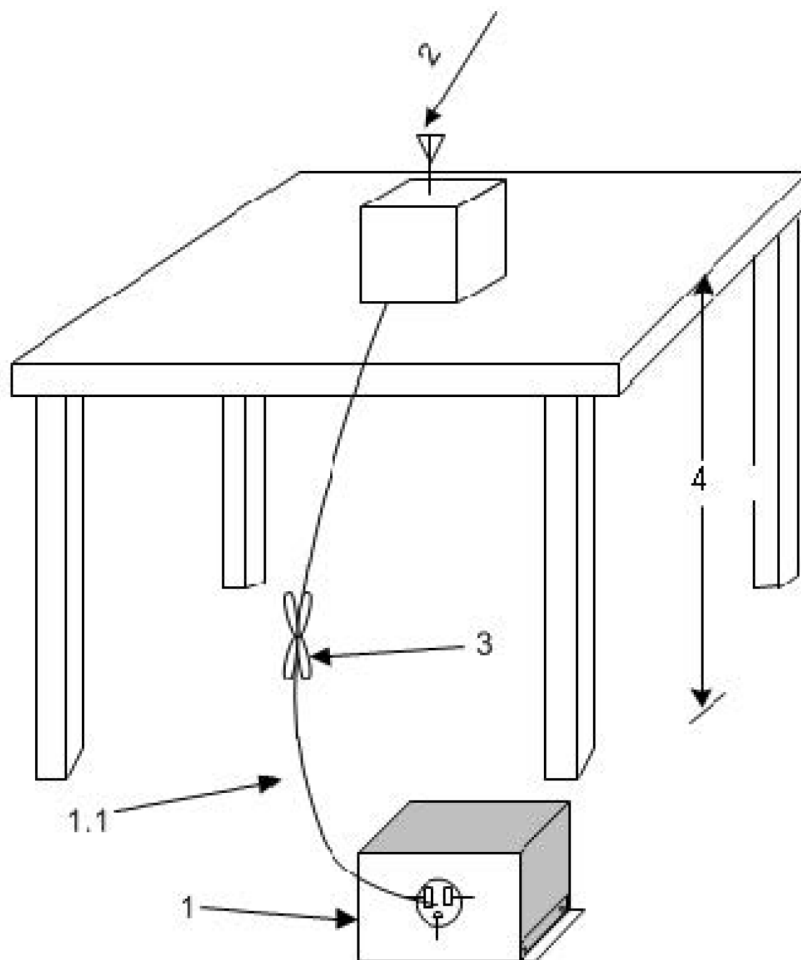
The EUT was not equipped with a conducted antenna port connection.

Diagram 1 Test arrangement for power-line conducted emissions



1. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long see (see 6.2.3.1).
2. I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m (see 6.2.2).
3. EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN can be placed on top of, or immediately beneath, reference ground plane (see 6.2.2 and 6.2.3).
 - 3.1 All other equipment powered from additional LISN(s).
 - 3.2 Multiple-outlet strip can be used for multiple power cords of non-EUT equipment.
 - 3.3 LISN at least 80 cm from nearest part of EUT chassis.
4. Non-EUT components of EUT system being tested.
5. Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop (see 6.2.3.1).
6. Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane (see 6.2.2 for options).
7. Antenna may be integral or detachable. If detachable, the antenna shall be attached for this test

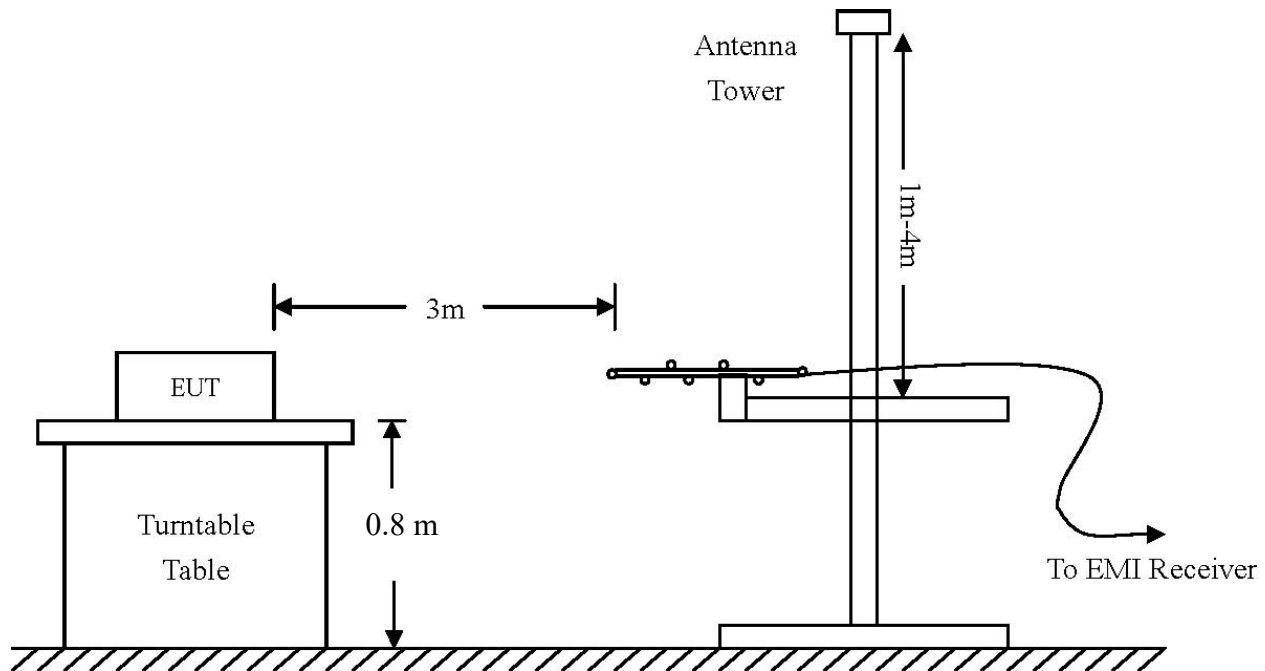
Diagram 2 Test arrangement for radiated emissions of tabletop equipment



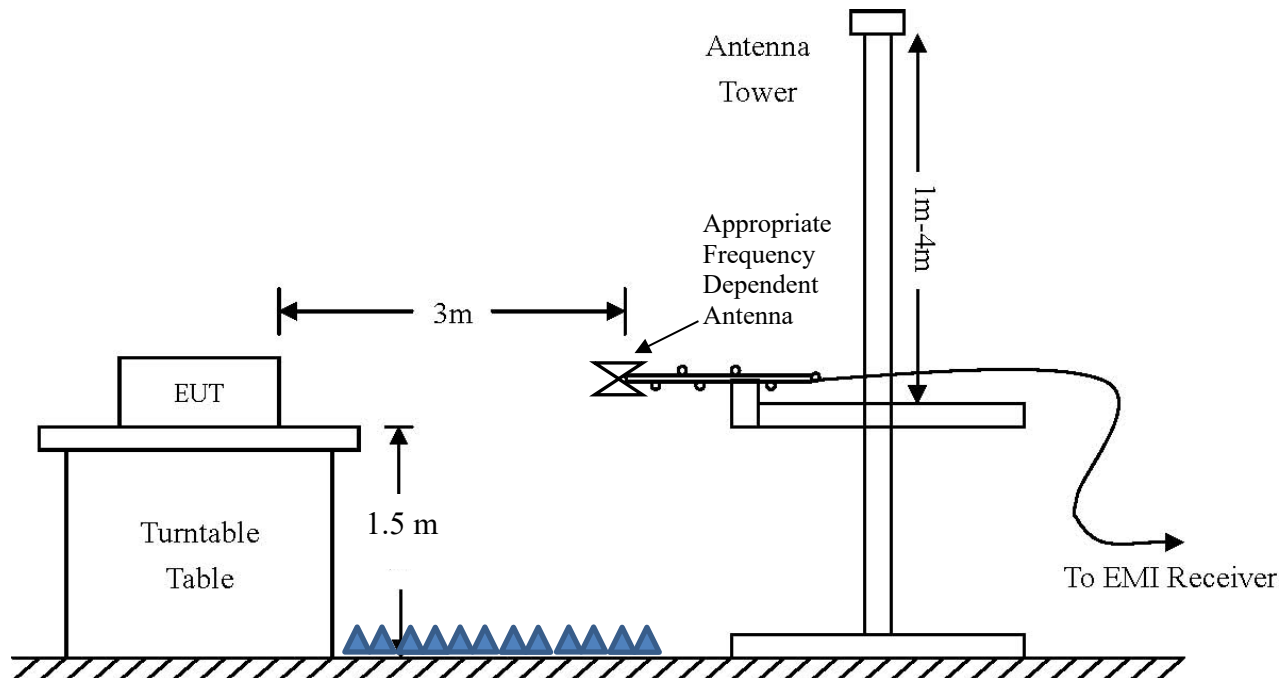
1. A LISN is optional for radiated measurements between 30 MHz and 1000 MHz but not allowed for measurements below 30 MHz and above 1000 MHz (see 6.3.1). If used, then connect EUT to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. The LISN may be placed on top of, or immediately beneath, the reference ground plane (see 6.2.2 and 6.2.3.2).
 - 1.1. LISN spaced at least 80 cm from the nearest part of the EUT chassis.
2. Antenna can be integral or detachable, depending on the EUT (see 6.3.1).
3. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long (see 6.3.1).
4. For emission measurements at or below 1 GHz, the table height shall be 80 cm. For emission measurements above 1 GHz, the table height shall be 1.5 m for measurements, except as otherwise specified (see 6.3.1 and 6.6.3.1).

Diagram 3 Test arrangement for radiated emissions tested in Semi-Anechoic Chamber (SAC) and Outdoor Area Test Site (OATS)

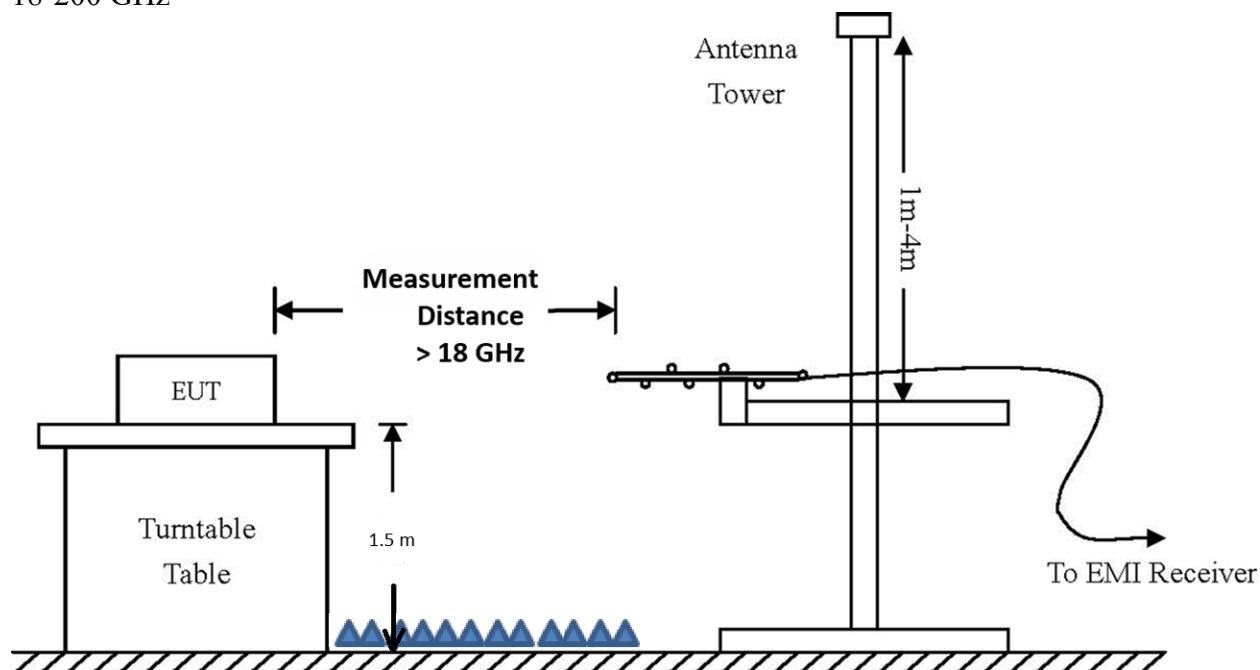
Below 1 GHz



1-18 GHz:



18-200 GHz



Radiated Emissions Measurement Distance

The measurement antenna is in the far field of the EUT per formula $2D^2/\lambda$, where D is the larger between the dimensions of the measurement antenna and the transmitting antenna of the EUT. In this case, “D” is the largest dimension of the measurement antenna. The EUT is manipulated through all orthogonal planes representative of its typical use and for both polarities of the measurement antenna to achieve the highest signal level. The worst-case position found was used for all radiated testing.

Table 1 Far-Field Distance & Measurement Distance per Frequency Range

Frequency Range [GHz]	Wavelength [centimeters]	Farfield Distance [meters]	Measurement Distance [meters]
18-40	0.750	0.650	1.00
40-60	0.526	0.740	1.00
60-83	0.500	0.498	0.50
61.64	0.486	0.371	0.50
71-90	0.333	0.426	0.50
90-140	0.214	0.374	0.50
123.28	0.243	0.329	0.50
140-220	0.136	0.320	0.50

Test Site Locations

Conducted EMI AC line conducted emissions testing performed in a shielded screen room located at Rogers Labs, a division of The Compatibility Center LLC, 7915 Nieman Rd., Lenexa, KS.

Antenna port Antenna port conducted emissions testing was performed in a shielded screen room located at Rogers Labs, a division of The Compatibility Center LLC, 7915 Nieman Rd., Lenexa, KS.

Radiated EMI The radiated emissions tests were performed at the 3 meters Semi-Anechoic Chamber (SAC) located at Rogers Labs, a division of The Compatibility Center LLC, 7915 Nieman Rd., Lenexa, KS

Registered Site information: FCC Site: US5305, FCC Registration # 315994, ISED: 32275, CAB Identifier: US0096

NVLAP Accreditation Lab code 200087-0

Units of Measurements & Calculations

AC Line Conducted EMI Data presented in dB μ V; dB referenced to one microvolt
Antenna port Conducted Data presented in dBm; dB referenced to one milliwatt
Radiated EMI Data presented in dB μ V/m; dB referenced to one microvolt per meter

Radiated Sample Calculations:

RFS = Radiated Field Strength, FSM = Field Strength Measured

A.F. = Receive antenna factor, *Losses* = misc. losses in system, *G_R* = amplification gains

RFS dB μ V/m = FSM (dB μ V) + A.F. (dB/m) + Losses (dB) - G_R (dB)

Note: measurement distance may vary depending on regulation or test standard.

Antenna Port Conducted Sample Calculations:

EIRP = equivalent isotropically radiated power (in same units as P_R)

P_{meas} = measured conducted power level (dBW or dBm)

P_R = Antenna Port Conducted power level (dBW or dBm)

L_C = cable losses (dB), *L_{atten}* = Attenuator losses (dB)

G_{ANT} = declared EUT antenna gain (dBi)

P_R = P_{meas} - L_C - L_{atten}

EIRP = P_R + G_{ANT}

AC Line Conducted Sample Calculations:

L_{LISN} = LISN loss (dB)

AC = AC Line Emission (dB μ V)

P_{AC} = P_{meas} - L_{LISN} - L_C - L_{atten}

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Revision 2

Model/HVIN: VPR-60 FCC ID: OHRVPR-60

Test: 260309

Test to: 47CFR 15.255, RSS-GEN, RSS-210

File: MS Sedco VPR-60 15_255 FDS TstRpt 260309 r2

MS Sedco, Inc.

IC: 6775A-VPR-60

S/N: 649153

Date: July 11, 2026

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Note: These *correction factors* are already included in the measurements reported by our spectrum analyzer / receivers so above are only samples of how the results are calculated.

Frequency: 9 kHz-30 MHz	Frequency: 30 MHz- 1 GHZ	Frequency: Above 1 GHz
Loop Antenna	Broadband Biconilog	Horn
RBW = 9 kHz	RBW = 120 kHz	RBW = 1 MHz
VBW = 30 kHz	VBW = 500 kHz	VBW = 3 MHz
Sweep time = Auto	Sweep time = Auto	Sweep time = Auto
Detector = PK, QP	Detector = PK, QP	Detector = PK, AV
Antenna Height 1m	Antenna Height 1-4m	Antenna Height 1-4m

Note: for frequency range above 18GHz, ANSI C63.10:2020 and FCC KDB 364244 D01 v01r02 were followed.

Statement of Modifications and Deviations

No modifications to the EUT were required for the equipment to demonstrate compliance with the 47CFR Part 15C, RSS-247, Issue 4 (July 2025), and RSS-Gen, Issue 5 + Amendment 2 (February 2021) emission requirements. There were no deviations to the specifications.

Test Software

Test Software List			
Description	Manufacturer	Model	Version
Automated EMC testing software system	ETS Lindgren	Tile!	7.9.1.1

Note: Above software is used to collect some of the data we report.

Test Results

The following information is submitted supporting compliance with the requirements of 47CFR, Subpart C, paragraph 15.255 and other sections of Part 15, Industry Canada RSS-210 and RSS-GEN Issue 5.

Summary

Item	Test Condition	Test Procedure	Ind. Canada Specifications	FCC Specification	Results
AC Line Conducted Emissions (150kHz - 30MHz)	AC LINE CONDUCTED	ANSI C63.10-2020 Subclause 6.2.	RSS-Gen, 8.8	15.207	Complies
99% Occupied Bandwidth	RADIATED	ANSI C63.10: 2020, 9.4	RSS-Gen, 6.7	15.215(c), 2.1049	Complies
-20dB Occupied Bandwidth	RADIATED	ANSI C63.10: 2020, 9.3	RSS-210, Annex J	15.215(c)	Complies
Equivalent Isotropic Radiated Power	RADIATED	ANSI C63.10: 2020, 9.8 & Annex L	RSS-210, Annex J	15.255(c)(2)(iii)(B)	Complies
Radiated Spurious Emissions (Above 40GHz)	RADIATED	ANSI C63.10: 2020, 4, 9 & Annex L	RSS-210, Annex J	15.255(d), 15.205	Complies
Radiated Spurious Emissions (1 - 40GHz)	RADIATED	ANSI C63.10: 2020, 9 & Annex L	RSS-Gen, 8.9	15.255(d), 15.205, 15.209	Complies
Radiated Spurious Emissions (Below 1GHz)	RADIATED	ANSI C63.10: 2020, 6.3, 6.4, 9.11.	RSS-Gen	15.205, 15.209	Complies
Frequency Stability	RADIATED	ANSI C63.10: 2020, 6.8, 9.5	RSS-210 Annex J	15.255(f)	Complies
Duty Cycle / OFF Time	RADIATED	ANSI C63.10: 2020, 9 & Annex L	RSS-210 Annex J	15.255(c)(2)(iii)(B)	Complies

20dB Emission Bandwidth

47 CFR §15.255(c)(2)(iii)(B), §15.215(c) and RSS-210

Test Overview

The emission bandwidth is defined as the instantaneous frequency range occupied by a steady state radiated signal with modulation, outside which the radiated power spectral density never exceeds 20 dB below the maximum radiated power spectral density in the band, as measured with a 10 MHz resolution bandwidth spectrum analyzer.

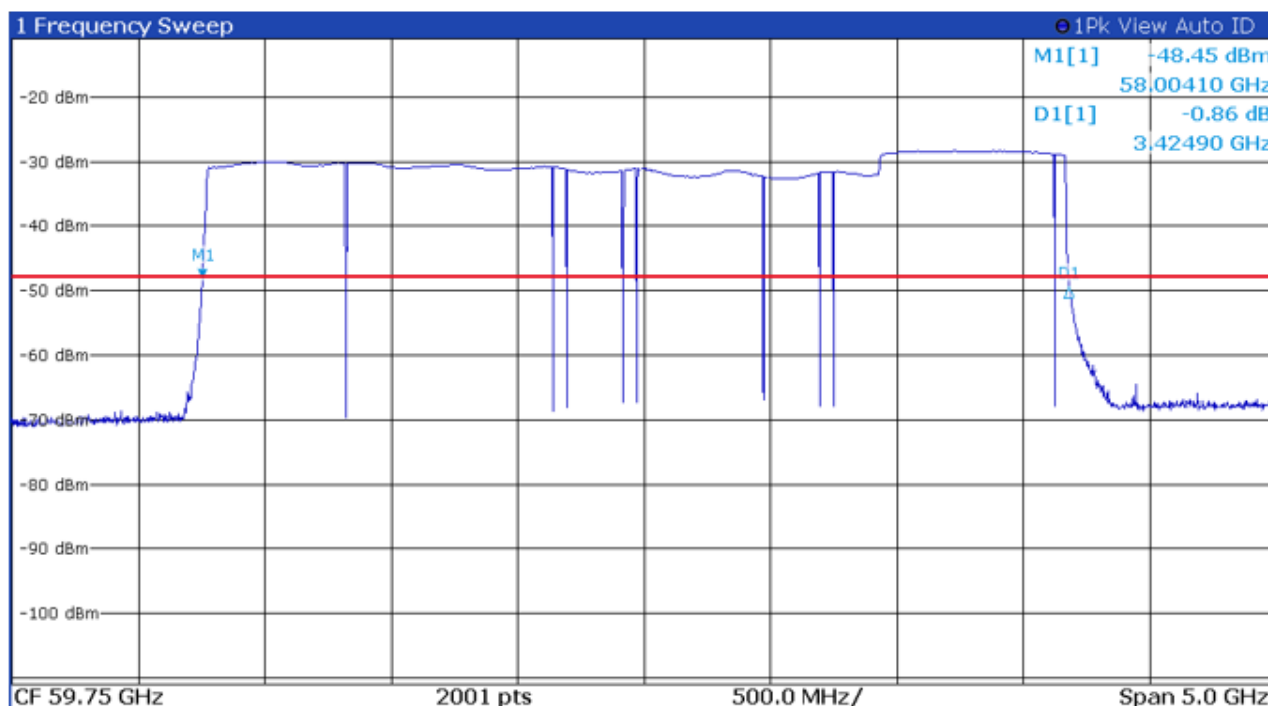
Test Procedure

ANSI C63.10-2020 Subclause 9.3

Test Setup

1. See Diagram 3 (18-200 GHz) for setup. Radiated measurements were taken in the far field.
2. All modes of operation were tried with the worst case configuration results being reported here.

Figure 1 20dB Emissions Bandwidth



Settings:

Center Freq: 59.75 GHz	Freq Offset: 0 Hz	Start: 57.25 GHz	Stop: 62.25 GHz
Span: 5 GHz	RBW: 10 MHz	Filter Type: Normal(3dB)	VBW: 10 MHz
SWT: 901 ms	Ref Level: -11 dBm	Level Offset: 0 dB	Rf Att: 10 dB
Input: 1 AC	Preamplifier: OFF	Preselector: Off	

Test Results

Measured 20 dB Bandwidth = 3.425 GHz

Summary of Results for 20dB Emission Bandwidth

The EUT demonstrated compliance with the emissions requirements of 47 CFR §15.255(c)(2)(iii)(B) and §15.215(c) and RSS-210.

99% Occupied Bandwidth

47 CFR §15.255(c)(2)(iii)(B), §15.215(c) and RSS-210

Test Overview

The occupied bandwidth (99% emission bandwidth) is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

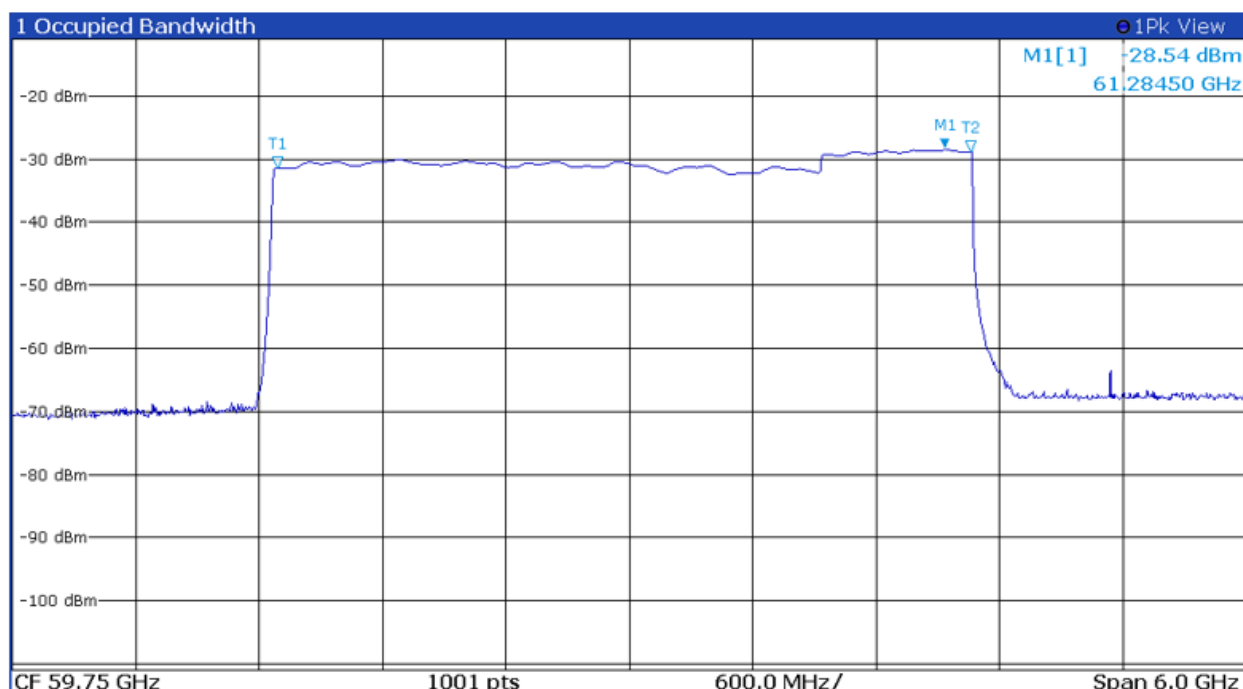
Test Procedure

ANSI C63.10-2020 Subclause 9.4

Test Setup

1. See Diagram 3 (18-200 GHz) for setup. Radiated measurements were taken in the far field.
2. All modes of operation were tried with the worst case configuration results being reported here.

Figure 2 99% Occupied Bandwidth



Marker Table:

Type	Ref	Trace	X-Value	Y-Value	Function	Func Result
M1		1	61.28 GHz	-28.5 dBm	Occ Bw	3.371 GHz
T1		1	58.04 GHz	-31.4 dBm	Occ Bw Centroid	59.72 GHz
T2		1	61.41 GHz	-28.9 dBm	Occ Bw Freq Offset	-26.94 MHz

Test Results

Measured 99% Occupied Bandwidth = 3.371 GHz

Summary of Results for 99% Occupied Bandwidth

The EUT demonstrated compliance with the requirements of 47 CFR §15.255(c)(2)(iii)(B), §15.215(c) and RSS-210

Equivalent Isotropic Radiated Power

47 CFR §15.255(c)(2)(iii)(B) and RSS-210 Issue 11 Annex J

Test Overview

Within the 57.0-64.0 GHz band the peak EIRP shall not exceed 20 dBm, and the sum of continuous transmitter off-times of at least two milliseconds shall equal at least 16.5 milliseconds within any contiguous interval of 33 milliseconds when operated outdoors:

(I) As part of a temporary or permanently fixed application

Test Procedure

ANSI C63.10-2020 Subclause 9.8 & Annex L; FCC KDB 364244 D01 v01r01

Test Setup

1. See Diagram 3 (18-200 GHz) for setup. Radiated measurements were taken in the far field.
2. All modes of operation were tried with the worst case configuration results being reported here.
3. The measurement equipment included a horn antenna and mixer to convert the 57-71 GHz fundamentals down to a frequency in the range of our ESW 44 receiver with maximum frequency capability of 44 GHz.
4. Per guidance in KDB 364244 D01 v01r01, to capture the peak EIRP with the spectrum analyzer, we implemented a minimum 1 MHz RBW in conjunction with the peak hold function while sweeping in free run mode until the maximum amplitude was captured. The numbers presented were acquired in this manner.

Sample Calculations

Calculating Field Strength:

$$\text{EIRP} = 21.98 - 20 \log(\lambda) + 20 \log(d_{\text{MEAS}}) + P - G + \text{DCF}$$

Where:

EIRP is the equivalent isotropic radiated power, in dBm

λ is the wavelength of the emission under investigation $[300/f(\text{MHz})]$, in m

d_{MEAS} is the measurement distance, in m

P is the power measured at the output of the measurement antenna, in dBm

G is the gain of the measurement antenna, in dBi

DCF is the FMCW desensitization correction factor defined by following equation:

$$\alpha = \frac{1}{\sqrt{1 + \left(\frac{2 \ln(2)}{\pi} \right)^2 \left(\frac{BW_{\text{Chirp}}}{T_{\text{Chirp}} B^2} \right)^2}}$$

Where:

α is the reduction in amplitude(dB)

BW_{Chirp} is the FMCW Chirp Bandwidth

T_{Chirp} is the FMCW Chirp Time

B is the 3 dB IF Bandwidth = RBW

Chirp Bandwidth = 3.390 GHz, Chirp time = 1171 us, RBW = 10 MHz

Reduction in amplitude = 0.9999

DCF = -0.0004 dBm

Results (measured -28.54 dBm @ 61.2845 GHz):

$$\text{EIRP} = 21.98 - 20 \log(\lambda) + 20 \log(d_{\text{MEAS}}) + P - G + \text{DCF}$$

P = -28.54dBm (peak measured output power)

$\Lambda = 0.00490$ (for frequency of 61.2845 GHz)

$d_{\text{MEAS}} = 1.0$ m

G = 24 dBi (FS-Z90 conversion loss at 60GHz)

DCF = -0.0004

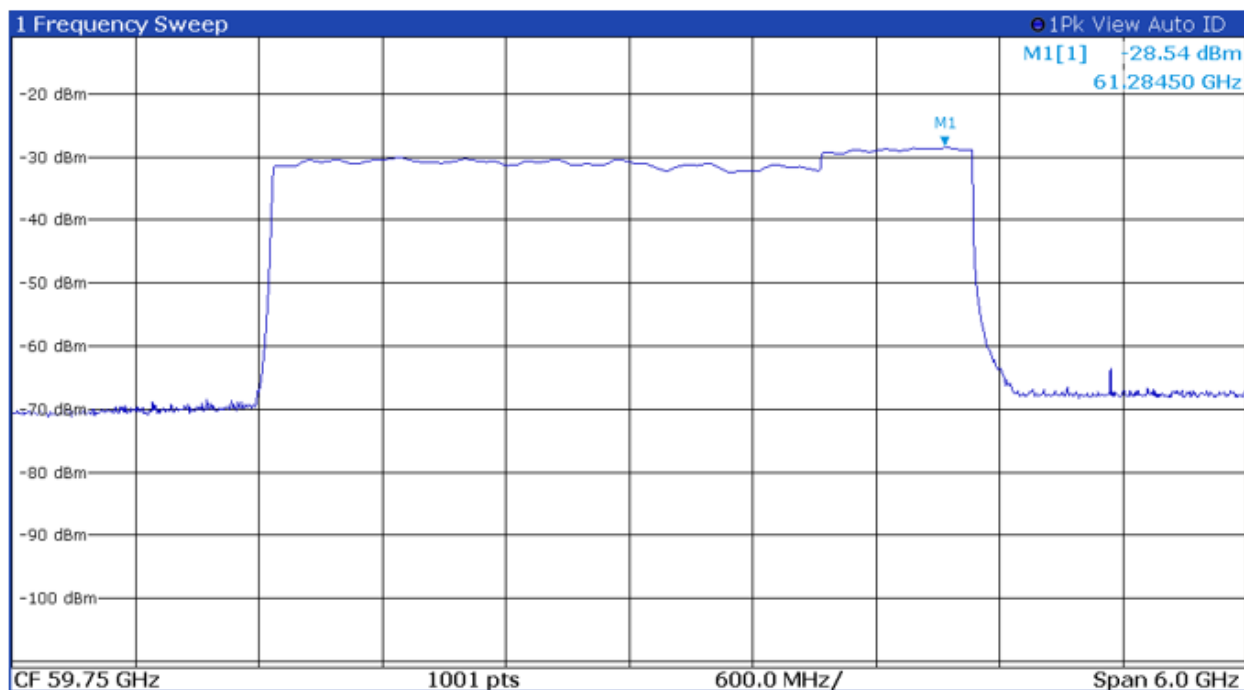
$$\text{EIRP} = 21.98 - 20 \log(\lambda) + 20 \log(d_{\text{MEAS}}) + P - G + \text{DCF}$$

$$\text{EIRP} = 21.98 - 20 \log(0.00490) + 20 \log(1.0) + (-28.54) - 24 + (-0.00490)$$

$$\text{EIRP} = 21.98 + 46.20 + 0 - 28.54 - 24 - 0.0004$$

EIRP = 15.64 dBm

Figure 3 EIRP Power



Center Freq: 59.75 GHz	Freq Offset: 0 Hz	Start: 56.75 GHz	Stop: 62.75 GHz
Span: 6 GHz	RBW: 10 MHz	Filter Type: Normal(3dB)	VBW: 10 MHz
SWT: 982 ms	Ref Level: -11 dBm	Level Offset: 0 dB	Rf Att: 10 dB
Input: 1 AC	Preamplifier: OFF	Preselector: Off	

Test Results

Table 1 EIRP Power

Frequency (GHz)	λ (m)	Test distance (m)	P - Peak Measured Power (dBm)	DCF (dB)	G (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
61.28	0.00490	1.0	-28.54	-0.0004	24	15.64	20.00	-4.36

Summary of Results for E.I.R.P. Power

The EUT demonstrated compliance with the Peak EIRP requirements of 47 CFR §15.255(c)(2)(iii)(B) and RSS-210 Issue 11 Annex J with a worst case margin of -4.36 dB.

Duty Cycle, Off Time Requirement

47 CFR §15.255(c)(2)(iii)(B) and RSS-210 Issue 11 Annex J

Test Overview

Within the 57.0-64.0 GHz band, the sum of continuous transmitter off-times of at least two milliseconds shall equal at least 16.5 milliseconds within any contiguous interval of 33 milliseconds when operated outdoors:

- (1) As part of a temporary or permanently fixed application;

Test Procedure

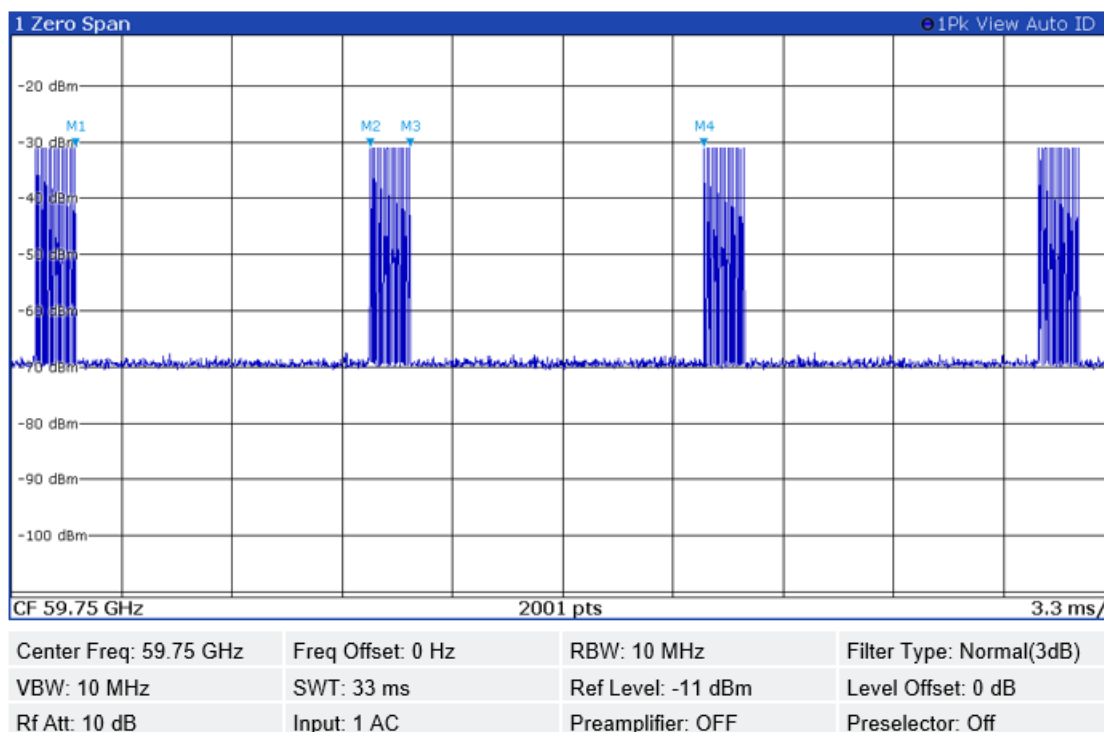
47 CFR §15.255(c)(2)(iii)(B) and RSS-210 Issue 11 Annex J and ANSI C63.10-2020 Annex L

Test Setup

1. See Diagram 3 (18-200 GHz) for setup. Radiated measurements were taken in the far field.
2. All modes of operation were tried with the worst case configuration results being reported here.
3. The measurement equipment included a horn antenna and mixer to convert the 57-71 GHz fundamentals down to a frequency in the range of our ESW 44 receiver with maximum frequency capability of 44 GHz.

Test Results

Figure 4 Duty Cycle / Off Time Calculation Plot



Marker Table:

Type	Ref	Trace	X-Value	Y-Value
M1	1	1	1.909 ms	-31.15 dBm
M2	1	1	10.74 ms	-31.11 dBm
M3	1	1	11.94 ms	-31.16 dBm
M4	1	1	20.74 ms	-31.15 dBm

Transmission times:

Tx off time (M4-M3) = 8.8 ms

Number of Tx off in 33ms = 3

Total Tx off time in 33 ms = 26.4 ms

Limit (ms) $\geq$ 16.5 ms

Results = Complies

Summary of Results for Duty Cycle / Off Time

This demonstrates compliance with the OFF Time requirements of 47 CFR §15.255(c)(2)(iii)(B) and RSS-210 Issue 11 Annex J

Radiated Spurious Emissions (Above 40GHz)

§15.255(d), §15.205, RSS-210 Annex J

Test Overview

The power density of any emissions outside the 57-71 GHz band shall consist solely of spurious emissions. Between 40 GHz and 200 GHz, the level of these emissions shall not exceed 90 pW/cm² at a distance of 3 meters. The levels of the spurious emissions shall not exceed the level of the fundamental emission.

Test Procedure

ANSI C63.10-2020 Subclauses 9.10, 4.1.5.2.8 & Annex L.

Test Setup

1. The emissions are measured in a radiated test setup while the EUT is operating at its maximum duty cycle, at maximum power and at the appropriate frequencies.
2. Scan the spectrum from 40 GHz to 200 GHz
3. Receiver setup:
 - a. RBW = 1 MHz
 - b. VBW = 3 MHz
 - c. Detector = Peak
 - d. Trace Mode = Max Hold
 - e. Sweep Time = auto couple
 - f. Number of Sweep points $\geq 2 \times \text{Span/RBW}$
4. Compare results to the limit.

Note: See Diagram 3 (18-200 GHz) for setup. Radiated measurements were taken in the far field at 3m, per regulation.

Test Notes

1. Once again, all modes of operation were evaluated and the worst case configurations were used for this report.
2. Emissions above 40 GHz were made using horn antennas, harmonic mixers and our ESW 44 spectrum analyzer receiver supporting these configurations.
3. Measurements were made in the far field and in our 3m semi-anechoic chamber. Refer to table 1-1 for distance vs frequency calculations.
4. Note that all plots below were with antenna in Horizontal polarization as that was the clear worst case.

Sample Calculations

- Field Strength Level [dBuV/m] = Analyzer Level [dBm] + 107 + AFCL [dBm]
- AFCL [dBm] = Antenna Factor [dBm] + Cable Loss [dB] – Preamplifier Gain [dB]
 - Please note that all AFCL factors are already included in our measurements
- RSE EIRP [dBm] = E_{measured} [dBuV/m] + 20 log₁₀ (distance measured) – 104.7
- PD (Power Density in pW/cm²) = EIRP [pW] / (4πD²)
 - D = the distance at which the power density limit is specified, in m

Test Results

Figure 5 Radiated Spurious Emissions 60 - 90 GHz

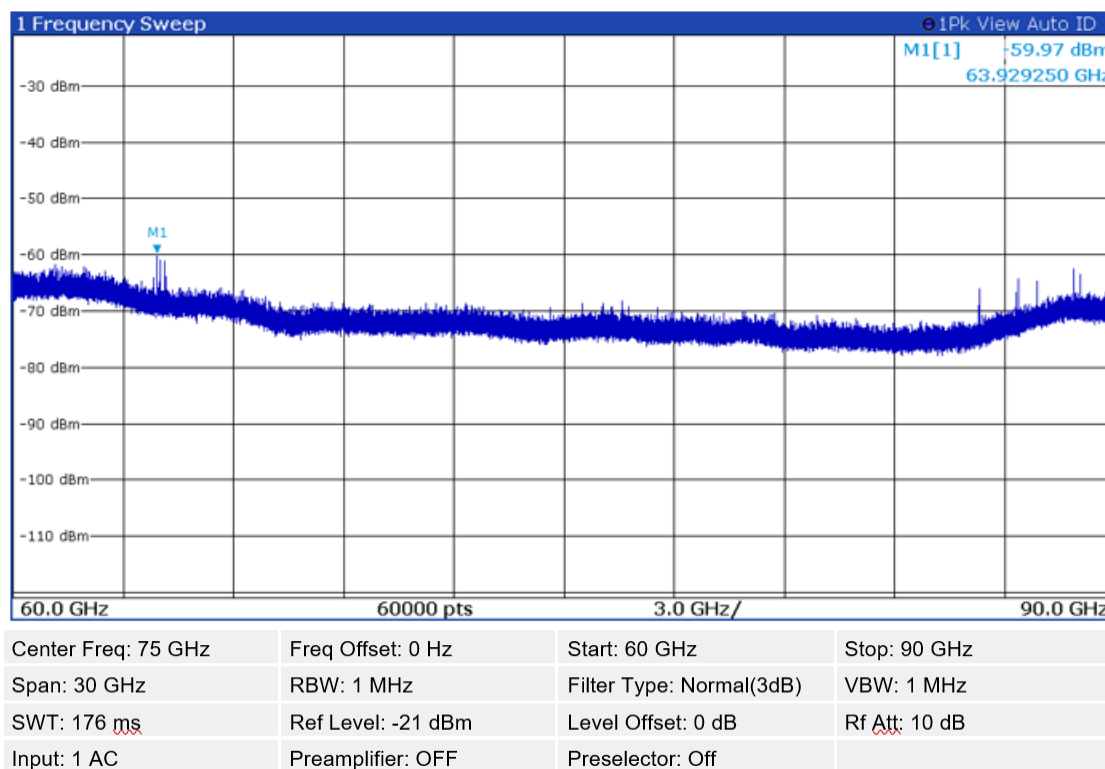


Figure 6 Radiated Spurious Emissions 90 - 140 GHz

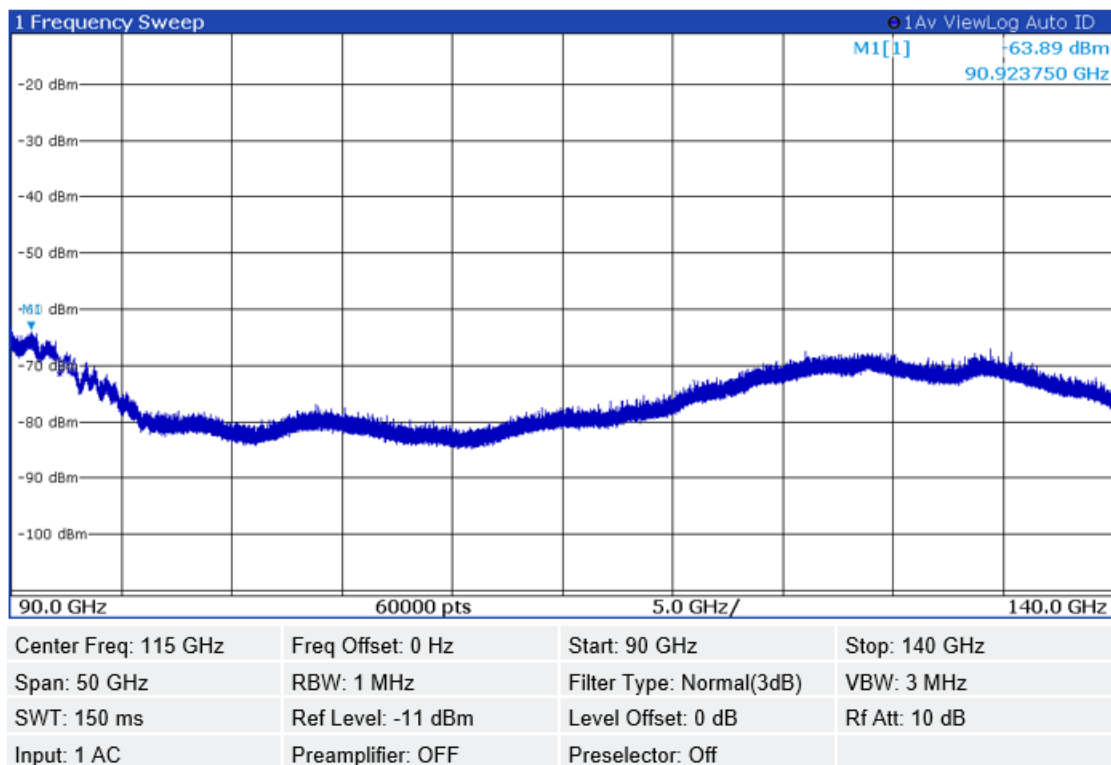
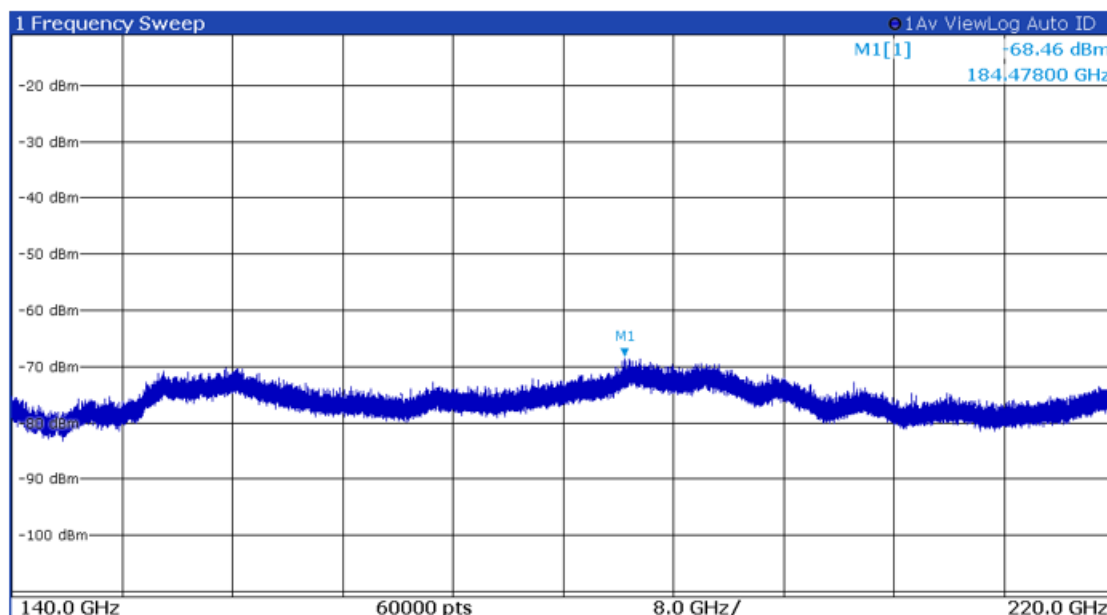


Figure 7 Radiated Spurious Emissions 140 - 220 GHz



Center Freq: 180 GHz	Freq Offset: 0 Hz	Start: 140 GHz	Stop: 220 GHz
Span: 80 GHz	RBW: 1 MHz	Filter Type: Normal(3dB)	VBW: 3 MHz
SWT: 240 ms	Ref Level: -11 dBm	Level Offset: 0 dB	Rf Att: 10 dB
Input: 1 AC	Preamplifier: OFF	Preselector: Off	

Table 2 Radiated Spurious Emissions above 40 GHz

Frequency (GHz)	Test Distance (m)	Antenna Polarization	Measured Peak EIRP (dBm)*	E (dBuV/m)	Peak EIRP (dBm)	Peak Power (pW)	Power Density @ 3m (pW/cm ²)	Power Density Limit@ 3 meters (pW/cm ²)	Pass/Fail
63.93	1.0	H	-59.97	47.03	-57.67	1710.0	15.1	90	PASS
90.92	1.0	H	-63.89	43.11	-61.59	693.4	6.1	90	PASS
184.48	1.0	H	-68.46	38.54	-66.16	242.1	2.1	90	PASS

* Measurement already includes all factors (antennas, cables, attenuation, etc)

Summary of Results for Radiated Emissions (Above 40 GHz)

The EUT demonstrated compliance with the spurious emissions requirements of §15.255(d) and RSS-210 Annex J by a minimum margin of -74.9 pW/cm².

Radiated Spurious Emissions (1 - 40GHz)

§15.255(d); §15.205; §15.209, RSS-Gen 8.9

Test Overview

The power density of any emissions outside the 57-71 GHz band shall consist solely of spurious emissions. Radiated emissions below 40 GHz shall not exceed the general limits in § 15.209. The levels of the spurious emissions shall not exceed the level of the fundamental emission.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table below per Section 15.209.

Frequency (MHz)	Field Strength (uV/m)	Measured Distance (meters)
960 - 40,000	500.000	3

Test Procedure

ANSI C63.10-2020 Subclause 6.3-6.6 & 9.11.

Test Setup

1. The emissions are measured in a radiated test setup while the EUT is operating at its maximum duty cycle, at maximum power and at the appropriate frequencies.
2. Scan the spectrum from 1 GHz to 40 GHz
3. Receiver setup (Average Field Strength):
 - a. Analyzer center frequency set to that of radiated emission of interest
 - b. RBW = 1 MHz
 - c. VBW = 3 MHz
 - d. Detector = power average (RMS)
 - e. Trace (RMS) averaging performed over at least 100 traces
 - f. Sweep Time = auto
 - g. Number of Sweep points $\geq 2 \times \text{Span/RBW}$
4. Receiver setup (Peak Field Strength):
 - a. Analyzer center frequency set to that of radiated emission of interest
 - b. RBW = 1 MHz
 - c. VBW = 3 MHz
 - d. Detector = Peak
 - e. Trace mode = max hold
 - f. Trace was stabilized over at least 100 traces
 - g. Sweep Time = auto
 - h. Number of Sweep points $\geq 2 \times \text{Span/RBW}$

Note: See Diagram 3 (1 - 40 GHz) for setup. Radiated measurements were taken in the far field at 3m, per regulation.

Test Notes

1. Once again, all modes of operation were evaluated and the worst case configurations were used for this report.
2. Emissions 1 – 18 GHz were measured at 3m test distance while emissions from 18 – 40 GHz were measured at 1m with the application of a distance correction factor.
3. The plots that follow were used for the purpose of emission identification. Any emissions within 20dB of the limit are fully investigated and the results are shown in this section.
4. Note that all plots below were with antenna in Horizontal polarization as that was the clear worst case.

Sample Calculations

- Field Strength Level [dBuV/m] = Analyzer Level [dBm] + 107 + AFCL [dBm]
- AFCL [dBm] = Antenna Factor [dBm] + Cable Loss [dB] – Preamplifier Gain [dB]
- Margin [dB] = Field Strength Level [dBuV/m] – Limit [dBuV/m]
- RSE EIRP [dBm] = $E_{\text{measured}} [\text{dBuV/m}] + 20 \log_{10} (\text{distance measured}) - 104.7$
- PD (Power Density in pW/cm²) = $\text{EIRP} [\text{pW}] / (4\pi D^2)$

Test Results

Figure 8 Radiated Spurious Emissions 200 MHz – 1.2 GHz (Horizontal)

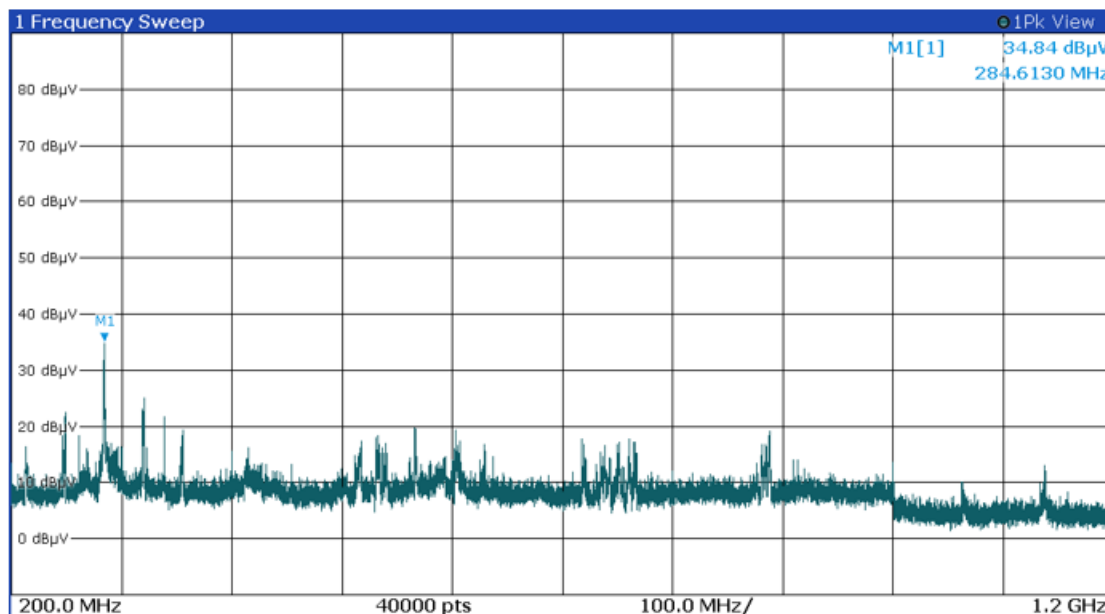


Figure 9 Radiated Spurious Emissions 1 - 18 GHz (Horizontal)

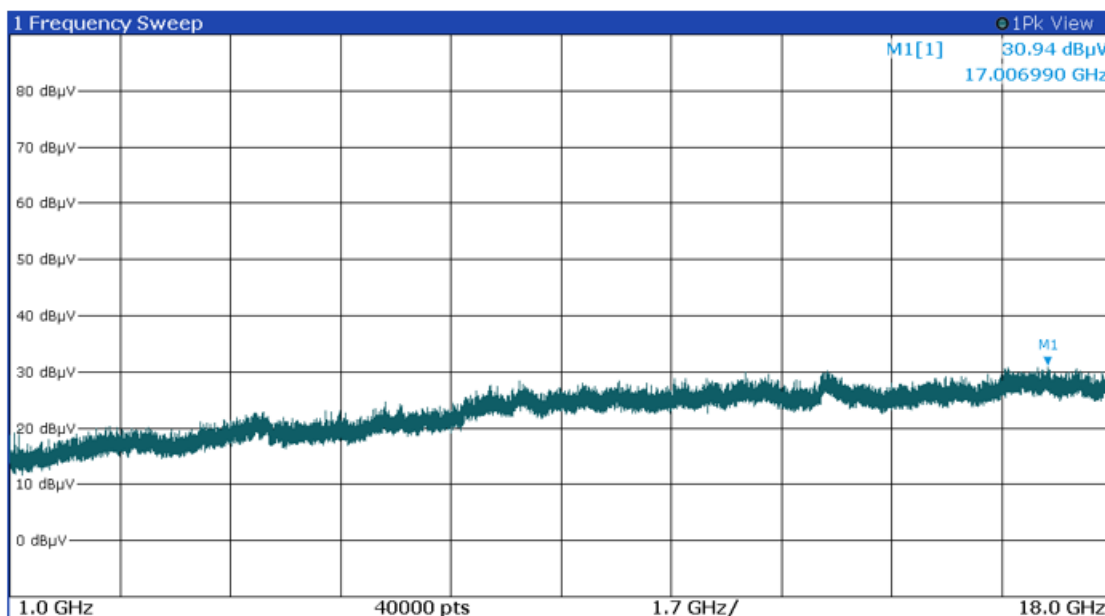


Figure 10 Radiated Spurious Emissions 18 - 40 GHz (Horizontal)

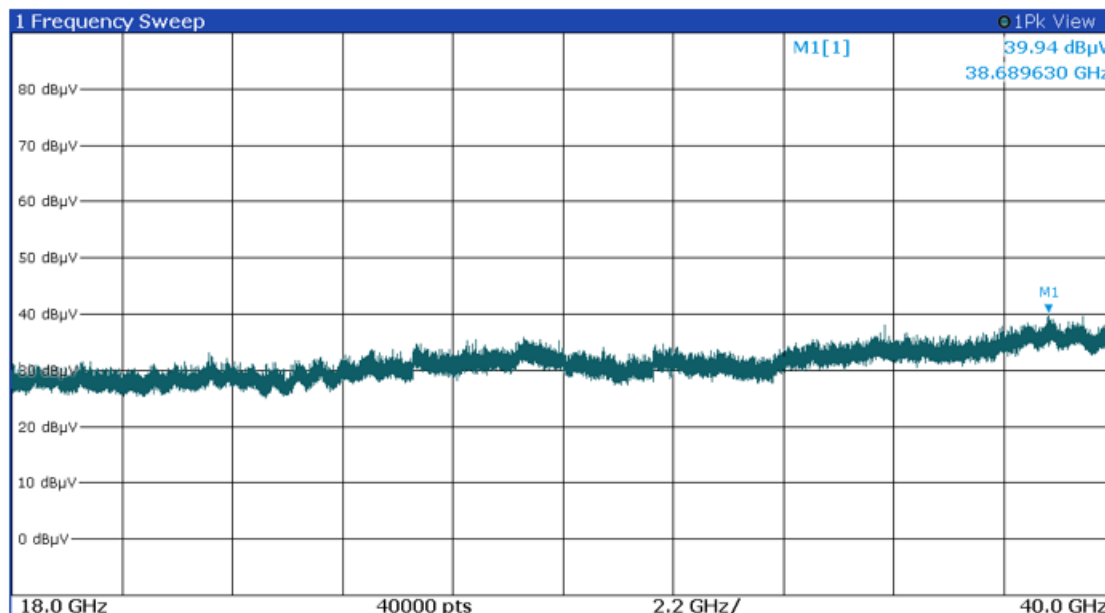


Table 3 Radiated Spurious Emissions 1 – 18 GHz

Frequency (GHz)	Antenna Polarization	Detector	Field Strength @ 3 meters (dBuV/m)	Field Strength Limit @ 3 meters (dBuV/m)	Margin (dB)	Pass/Fail
.285	H	Peak	34.84	73.98	-39.14	PASS
17.00	H	Peak	30.94	73.98	-43.04	PASS
38.69	H	Peak	39.94	73.98	-34.04	PASS

Summary of Results for Radiated Emissions (1 – 40 GHz)

The EUT demonstrated compliance with the spurious emissions requirements of §15.255(d), §15.205 and §15.209, RSS-Gen 8.9 with a worst case margin of -34.04 dB.

Radiated Spurious Emissions (below 1 GHz)

§15.205, 15.209, RSS-Gen

Test Overview

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for radiated spurious emissions. Only the radiated emissions of the configuration that produced the worst case emission are reported in this section.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table below per Section 15.209.

Frequency (MHz)	Field Strength (uV/m)	Measured Distance (meters)
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30.00	30	30
30.00 - 88.00	100	3
88.00 - 216.00	150	3
216.00 - 960.00	200	3
960 - 40,000	500	3

Test Procedure

ANSI C63.10-2020 Subclauses 6.4 & 6.5.

Test Setup

1. Receiver setup (Quasi-Peak Field Strength):
 - a. Analyzer center frequency set to that of radiated emission of interest
 - b. RBW = 120 kHz (from 30MHz – 1GHz)
 - c. VBW = 300 kHz
 - d. Detector = Quasi-Peak
 - e. Sweep Time = auto
 - f. Trace mode = max hold
 - g. Trace was stabilized over at least 100 traces
2. Receiver setup (Peak Field Strength):
 - a. Analyzer center frequency set to that of radiated emission of interest
 - b. RBW = 120 kHz
 - c. VBW = 300 kHz
 - d. Detector = Peak
 - e. Sweep Time = auto
 - f. Trace mode = max hold

Rogers Labs, a division of The Compatibility Center LLC

7915 Nieman Road

Lenexa, KS 66214

Phone/Fax: (913) 660-0666

Revision 2

Model/HVIN: VPR-60 FCC ID: OHRVPR-60

Test: 260309

Test to: 47CFR 15.255, RSS-GEN, RSS-210

File: MS Sedco VPR-60 15_255 FDS TstRpt 260309 r2

MS Sedco, Inc.

IC: 6775A-VPR-60

S/N: 649153

Date: July 11, 2026

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Note: See Diagram 3 (< 1 GHz) for setup. Radiated measurements were taken in the far field at 3m, per regulation.

Test Notes

1. Once again, all modes of operation were evaluated and the worst case configurations were used for this report.
2. All transmitters (60 GHz and 2.4 GHz pre-certified wifi module) were on.
3. All emissions lying in the restricted bands specified in §15.205 are below the limit shown in above table at beginning of this section.
4. Emissions were measured at 3 meter distance.
5. No spurious emissions were detected within 20dB of the limit below 30MHz.
6. The plots that follow were used for the purpose of emission identification. Any emissions within 20dB of the limit are fully investigated and the results are shown in this section.

Test Results

Figure 11 Radiated Spurious Emissions 30 MHz – 1 GHz (Horizontal / All Tx On)

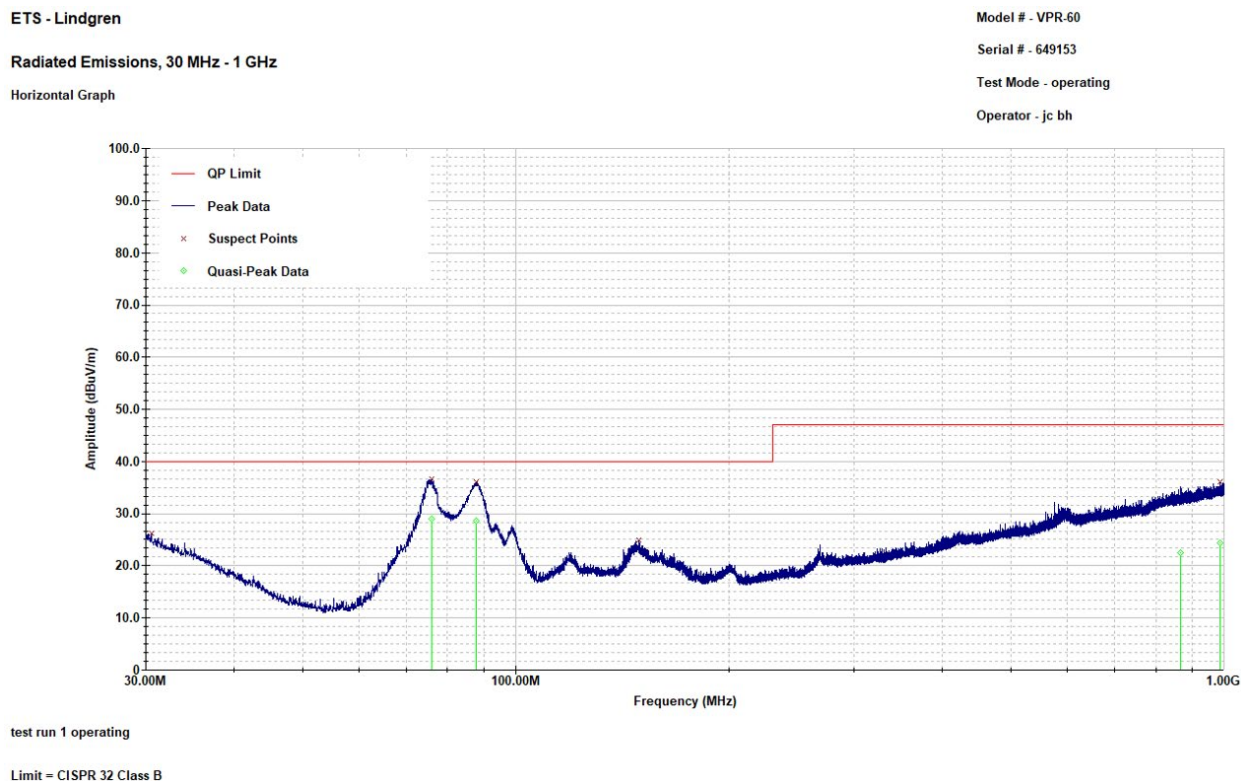


Figure 12 Radiated Spurious Emissions 30 MHz – 1 GHz (Vertical / All Tx On)

ETS - Lindgren

Radiated Emissions, 30 MHz- 1 GHz

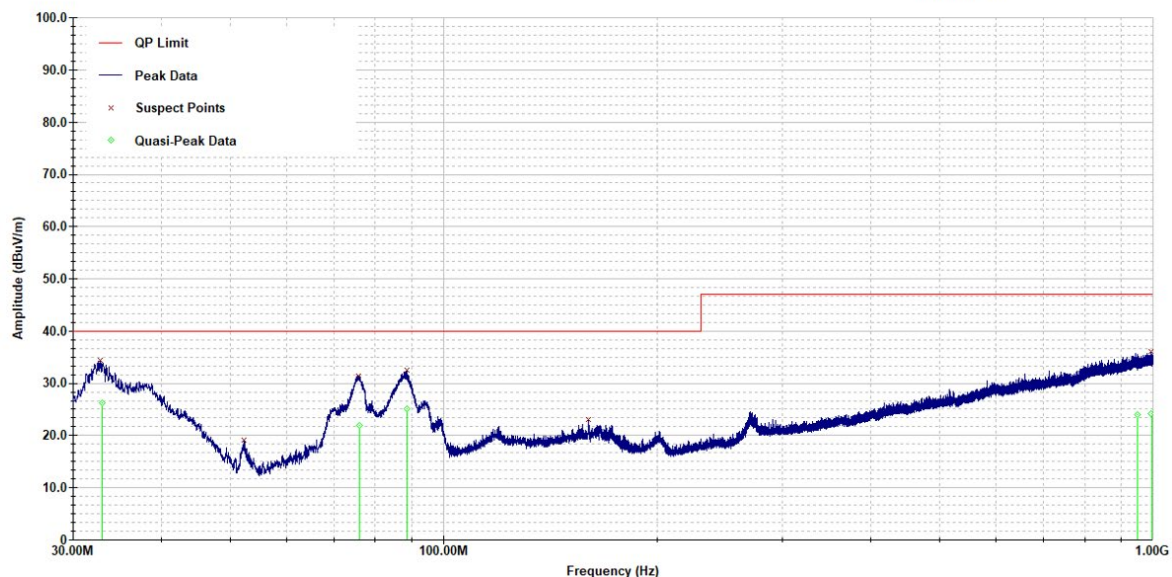
Vertical Graph

Model # - VPR-60

Serial # - 649153

Test Mode - operating

Operator - jc bh



test run 1 operating

Limit = CISPR 32 Class B

Table 4 Radiated Spurious Emissions 30 MHz – 1 GHz (Horizontal Polarization)

Frequency (MHz)	Peak (dBuV/m)	Quasi-Peak (dBuV/m)	Limit @ 3m (dBuV/m)	Margin (dB)	Pass/Fail
76.0	35.6	29.0	40.0	-11.0	PASS
87.7	26.2	28.6	40.0	-11.5	PASS
866.1	30.4	22.5	47.0	-24.5	PASS
986.6	33.8	24.4	47.0	-22.6	PASS

Other emissions present had amplitudes at least 20 dB below the limit. Peak and Quasi-Peak amplitude emissions are recorded for frequency range below 1000 MHz.

Table 5 Radiated Spurious Emissions 30 MHz – 1 GHz (Vertical Polarization)

Frequency (MHz)	Peak (dBuV/m)	Quasi-Peak (dBuV/m)	Limit @ 3m (dBuV/m)	Margin (dB)	Pass/Fail
33.0	33.6	26.2	40.0	-13.8	PASS
76.0	26.1	21.9	40.0	-18.1	PASS
88.6	27.0	25.1	40.0	-14.9	PASS
950.0	32.4	23.9	47.0	-23.1	PASS
994.0	33.0	24.2	47.0	-22.8	PASS

Other emissions present had amplitudes at least 20 dB below the limit. Peak and Quasi-Peak amplitude emissions are recorded for frequency range below 1000 MHz.

Summary of Results for Radiated Emissions (below 1 GHz)

The EUT demonstrated compliance with the spurious emissions requirements of §15.255(d), §15.205 and §15.209 and RSS-Gen.. The EUT demonstrated a minimum margin of -11.0 dB below the requirement. Other emissions were present with amplitudes at least 20 dB below the limit and worst-case amplitudes recorded.

AC Line Conducted EMI

§15.207, RSS-Gen. 8.8

Test Overview

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for AC Line conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are being reported.

All conducted emissions must not exceed the limits shown in the table below (refer to CFR section 15.207 and RSS-Gen. 8.8).

Class B 15.107 AC Mains	dBuV Quasi- Peak	dBuV Average
0.15 - 0.5	66 to 56*	56 to 46*
0.5 - 5	56.00	46.00
5 to 30	60.00	50.00

* Decreases with the logarithm of the frequency.

Test Procedure

ANSI C63.10-2020 Subclause 6.2.

Test Setup

1. Receiver setup (Quasi-Peak Field Strength):
 - a. Analyzer center frequency set to that of radiated emission of interest
 - b. RBW = 9 kHz (from 150kHz - 30MHz)
 - c. Detector = Quasi-Peak
 - d. Sweep Time = auto
 - e. Trace mode = max hold
 - f. Trace was allowed to stabilize
2. Receiver setup (Average Field Strength):
 - a. Analyzer center frequency set to that of radiated emission of interest
 - b. RBW = 9 kHz (from 150kHz - 30MHz)
 - c. Detector = RMS
 - d. Sweep Time = auto

- e. Trace mode = max hold
- f. Trace was allowed to stabilize

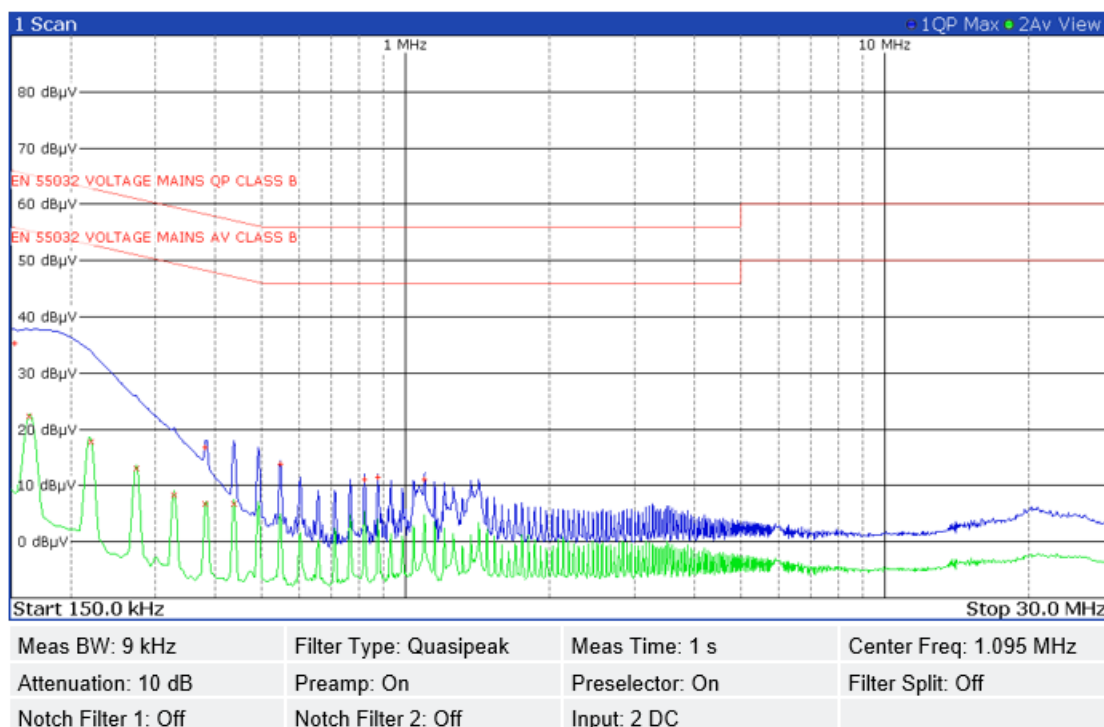
Note: See Diagram 1 for setup.

Test Notes

1. Once again, all modes of operation were evaluated and the worst case configurations were used for this report.
2. All transmitters (60 GHz and 2.4 GHz pre-certified wifi module) were on.
3. The limits from 150kHz to 30MHz are specified in CFR Part 15.207 and RSS-Gen. 8.8.
4. No spurious emissions were detected within 20dB of the limit below 150kHz.
5. Traces shown in plots below were made using quasi-peak and average detectors.
6. The following configuration was used for testing: EUT powered by AC~DC adapter via AC power from public utility.

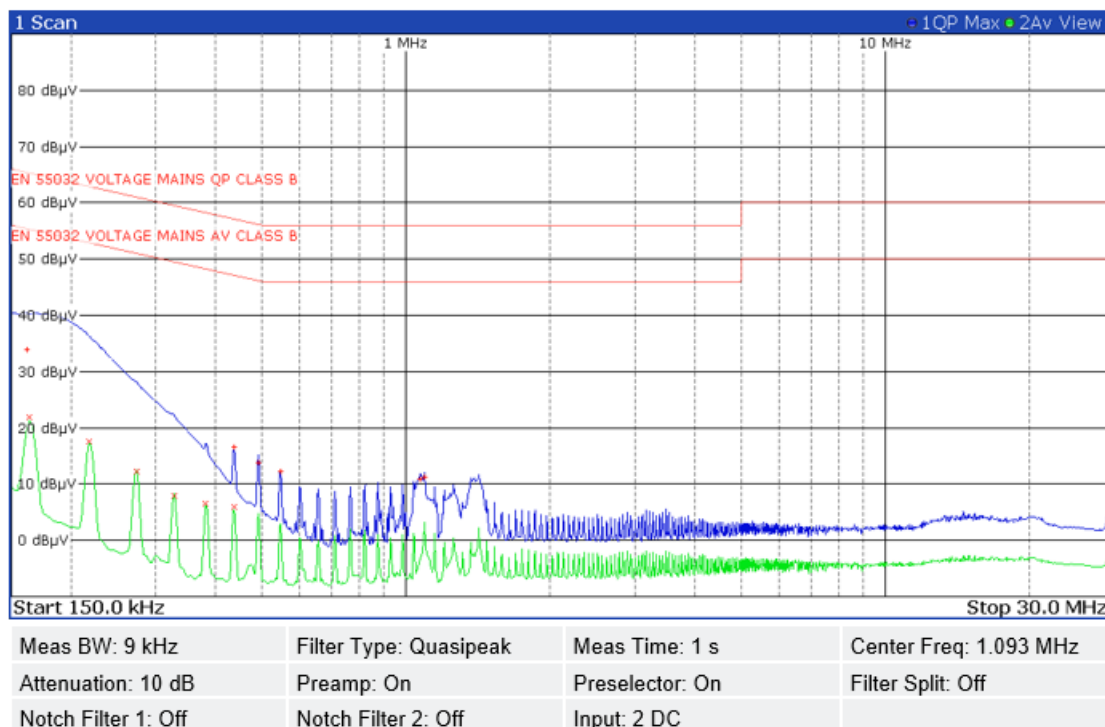
Test Results

Figure 13 AC Line Conducted Emissions Data L1 (All Tx On)



Other emissions present had amplitudes at least 20 dB below the limit.

Figure 14 AC Line Conducted Emissions Data L2 (All Tx On)



Other emissions present had amplitudes at least 20 dB below the limit.

Table 6 AC Line Conducted Emissions Data L1 (All Tx On)

Trace 1 Final: Trace 2 Final:

MAX HOLD VIEW

QUASI PEAK AVERAGE

Meas Time: 1 s

Margin: 20 dB

Peak Values: 12

Trace	Frequency	Level	Delta Limit	LISN Phase	C
1	152.3 kHz	35.24 dBμV	-30.64 dBμV		
2	163.5 kHz	22.31 dBμV	-32.97 dBμV		
2	219.8 kHz	17.73 dBμV	-35.1 dBμV		
2	273.8 kHz	12.98 dBμV	-38.02 dBμV		
2	327.8 kHz	8.35 dBμV	-41.16 dBμV		
1	381.8 kHz	16.69 dBμV	-41.55 dBμV		
2	381.8 kHz	6.7 dBμV	-41.54 dBμV		
2	438 kHz	6.77 dBμV	-40.33 dBμV		
1	546 kHz	13.75 dBμV	-42.25 dBμV		
1	820.5 kHz	10.99 dBμV	-45.01 dBμV		
1	874.5 kHz	11.37 dBμV	-44.63 dBμV		
1	1.095 MHz	11.16 dBμV	-44.84 dBμV		

Other emissions present had amplitudes at least 20 dB below the limit.

Table 7 AC Line Conducted Emissions Data L2 (All Tx On)

Trace 1 Final: Trace 2 Final:

MAX HOLD VIEW

QUASI PEAK AVERAGE

Meas Time: 1 s

Margin: 20 dB

Peak Values: 12

Trace	Frequency	Level	Delta Limit	LISN Phase	C
1	161.3 kHz	33.96 dBμV	-31.44 dBμV		
2	163.5 kHz	21.83 dBμV	-33.45 dBμV		
2	217.5 kHz	17.57 dBμV	-35.34 dBμV		
2	273.8 kHz	12.32 dBμV	-38.68 dBμV		
2	327.8 kHz	7.96 dBμV	-41.55 dBμV		
2	381.8 kHz	6.46 dBμV	-41.78 dBμV		
1	438 kHz	16.49 dBμV	-40.61 dBμV		
2	438 kHz	6.02 dBμV	-41.08 dBμV		
1	492 kHz	13.82 dBμV	-42.31 dBμV		
1	546 kHz	12.24 dBμV	-43.76 dBμV		
1	1.073 MHz	10.89 dBμV	-45.11 dBμV		
1	1.093 MHz	11.18 dBμV	-44.82 dBμV		

Other emissions present had amplitudes at least 20 dB below the limit.

Summary of Results for AC Line Conducted Emissions

The EUT demonstrated compliance with the AC Line Conducted Emissions requirements of 47CFR §15.207 and RSS-Gen. 8.8. The EUT demonstrated a minimum margin of -30.64 dB below the requirement. Other emissions were present with amplitudes at least 20 dB below the limit and worst-case amplitudes recorded.

Frequency Stability

§15.255(f), RSS-210 Annex J

Test Overview

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.10-2020 Subclause 9.14. The frequency stability of the transmitter is measured while varying the following operating conditions:

1. Temperature: varied from -20C to +50C in 10C increments.
2. Primary supply voltage: The primary supply voltage is varied from 85% to 115% of rated input.

Fundamental emissions must be contained within the frequency bands specified in the according rule pars (57 – 71 GHz) during all conditions of operation.

Test Procedure

ANSI C63.10-2020 Subclause 6.8 & 9.5.

Test Setup

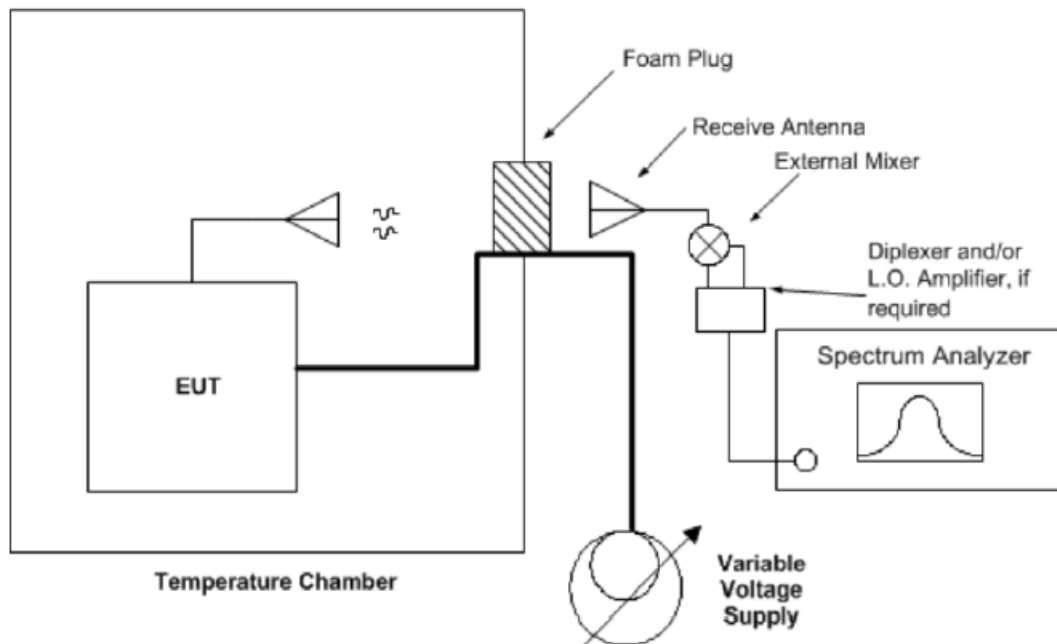
1. The spectral mask of the EUT emissions is measured at ambient room temp and nominal operating voltage for reference.
2. EUT primary supply voltage is varied between 85% and 115% of nominal (at room temp) and frequency variation is recorded.
3. With primary supply voltage set to nominal, the EUT operating temperature is varied from -20C to +50C. Frequency variation is then recorded.

Note: see diagram 4 for the test setup.

Test Notes

1. The spectrum mask of the EUT emission (notably F_{low} and F_{high}) is measured at ambient room temperature and nominal operating voltage to provide a reference.
2. EUT primary supply voltage is varied between 85% and 115% of the nominal supply voltage (at room temperature). Frequency excursion of the EUT emission mask is recorded at each of these conditions.
3. With EUT primary supply voltage at nominal level, frequency excursion of the EUT emission mask is recorded while varying the temperature between -20 and +50C.

Diagram 4 Frequency Stability Test Setup



Test Results

Table 8 Frequency Stability Measurements

Test Conditions	Transmitter Frequency Range (GHz)		Pass/Fail
	f_{low}	f_{high}	
-20 deg C / V_{nom}	58.0110	61.4223	Pass
-10 deg C / V_{nom}	58.0140	61.4223	Pass
0 deg C / V_{nom}	58.0140	61.4223	Pass
+10 deg C / V_{nom}	58.0088	61.4223	Pass
+20 deg C / V_{nom}	58.0072	61.4223	Pass
+30 deg C / V_{nom}	58.0104	61.4223	Pass
+40 deg C / V_{nom}	58.0145	61.4223	Pass
+50 deg C / V_{nom}	58.0123	61.4223	Pass
+20 deg C / 85% Voltage	58.0126	61.4223	Pass
+20 deg C / 115% Voltage	58.0142	61.4223	Pass

Summary of Results for Frequency Stability

The EUT demonstrated compliance with the spurious emissions requirements of §15.255(f) and RSS-210 Annex J.

Annex

- Annex A Measurement Uncertainty Calculations
- Annex B Test Equipment
- Annex C Laboratory Certificate of Accreditation

Annex A Measurement Uncertainty Calculations

The measurement uncertainty was calculated for all measurements listed in this test report according To CISPR 16–4. Result of measurement uncertainty calculations are recorded below. Component and process variability of production devices similar to those tested may result in additional deviations. The manufacturer has the sole responsibility of continued compliance.

Measurement	Expanded Measurement Uncertainty $U_{(lab)}$
3 Meter Horizontal 0.009-1000 MHz Measurements	4.16
3 Meter Vertical 0.009-1000 MHz Measurements	4.33
3 Meter Measurements 1-18 GHz	5.46
3 Meter Measurements 18-40 GHz	5.16
10 Meter Horizontal Measurements 0.009-1000 MHz	4.15
10 Meter Vertical Measurements 0.009-1000 MHz	4.32
AC Line Conducted	1.75
Antenna Port Conducted power	1.17
Frequency Stability	1.00E-11
Temperature	1.6°C
Humidity	3%

Annex B Test Equipment

Equipment	Manufacturer	Model (SN)	Band	Cal Date(m/d/y)	Due
☒ LISN	FCC	FCC-LISN-50-25-10(1PA) (160611)	.15-30MHz	3/20/2026	3/20/2027
☐ Cable	Huber & Suhner Inc.	Sucoflex102ea(L10M)(303073)	9kHz-40 GHz	9/9/2025	9/9/2026
☒ Cable	Huber & Suhner Inc.	Sucoflex102ea(1.5M)(303069)	9kHz-40 GHz	9/9/2025	9/9/2026
☒ Cable	Belden	RG-58 (L1-CAT3-11509)	9kHz-30 MHz	9/9/2025	9/9/2026
☒ Antenna	Com Power	AL-130 (121055)	.001-30 MHz	9/2/2025	9/2/2026
☐ Antenna:	EMCO	6509	.001-30 MHz	9/16/2024	9/16/2026
☒ Antenna	ARA	BCD-235-B (169)	20-350MHz	9/2/2025	9/2/2026
☒ Antenna	Sunol	JB-6 (A100709)	30-1000 MHz	9/2/2025	9/2/2026
☐ Antenna	ETS-Lindgren	3147 (40582)	200-1000MHz	9/16/2024	9/16/2026
☒ Antenna	ETS-Lindgren	3117 (200389)	1-18 GHz	3/17/2025	3/17/2027
☒ Antenna	Com Power	AH-118 (10110)	1-18 GHz	9/16/2024	9/16/2026
☒ Antenna	Com Power	AH-1840 (101046)	18-40 GHz	3/17/2025	3/17/2027
☒ Analyzer	Rohde & Schwarz	ESU40 (100108)	20Hz-40GHz	7/9/2025	7/9/2026
☒ Analyzer	Rohde & Schwarz	ESW44 (101534)	20Hz-44GHz	1/20/2026	1/20/2027
☒ Analyzer	Rohde & Schwarz	FS-Z60, 90, 140, and 220	40GHz-220GHz	12/22/2017	12/22/2027
☐ Amplifier	Com-Power	PA-010 (171003)	100Hz-30MHz	9/9/2025	9/9/2026
☐ Amplifier	Com-Power	CPPA-102 (01254)	1-1000 MHz	9/9/2025	9/9/2026
☒ Amplifier	Com-Power	PAM-118A (551014)	0.5-18 GHz	9/9/2025	9/9/2026
☒ Amplifier	Com-Power	PAM-840A (461328)	18-40 GHz	9/9/2025	9/9/2026
☒ Pwr Sensor	Rohde & Schwarz	NRP33T	0.05-33 GHz	9/9/2025	9/9/2026
☒ Generator	Rohde & Schwarz	SMBV100A6 (260771)	20Hz-6 GHz	3/20/2026	3/20/2027
☐ RF Filter	Micro-Tronics	BRC50722 (009).9G notch	30-18000 MHz	3/20/2026	3/20/2027
☐ RF Filter	Micro-Tronics	HPM50117 (063) 3G HPF	30-18000 MHz	3/20/2026	3/20/2027
☒ RF Filter	Micro-Tronics	BRM50702 (172) 2G notch	30-18000 MHz	3/20/2026	3/20/2027
☒ RF Filter	Micro-Tronics	BRC50703 (G102) 5G notch	30-18000 MHz	3/20/2026	3/20/2027
☒ RF Filter	Micro-Tronics	BRC50705 (024) 5G notch	30-18000 MHz	3/20/2026	3/20/2027
☐ Attenuator	Fairview	SA6NFN100W-40 (1625)	30-18000 MHz	3/20/2026	3/20/2027
☒ Attenuator	Mini-Circuits	VAT-3W2+ (1445)	30-6000 MHz	3/20/2026	3/20/2027
☒ Attenuator	Mini-Circuits	VAT-3W2+ (1735)	30-6000 MHz	3/20/2026	3/20/2027
☒ Attenuator	Mini-Circuits	VAT-6W2+ (1438)	30-6000 MHz	3/20/2026	3/20/2027
☒ Weather station	Davis	6152 (A70927D44N)		1/23/2026	1/23/2027

<u>Equipment</u>	<u>Manufacturer</u>	<u>Model (SN)</u>	<u>Band</u>	<u>Cal Date(m/d/y)</u>	<u>Due</u>
☒ Frequency Counter: Leader		LDC-825 (8060153)		3/20/2026	3/20/2027
☐ ISN	Com-Power	Model ISN T-8 (600111)		3/20/2026	3/20/2027
☒ LISN:	Com-Power	Model LI-220A		9/16/2024	9/16/2026
☐ LISN:	Com-Power	Model LI-550C		9/16/2024	9/16/2026
☒ Cable	Huber & Suhner Inc.	Sucoflex102ea(1.5M)(303072)	9kHz-40 GHz	9/9/2025	9/9/2026
☒ Cable	Huber & Suhner Inc.	Sucoflex102ea(L1M)(281183)	9kHz-40 GHz	9/9/2025	9/9/2026
☒ Cable	Huber & Suhner Inc.	Sucoflex102ea(4M)(281184)	9kHz-40 GHz	9/9/2025	9/9/2026
☒ Cable	Huber & Suhner Inc.	Sucoflex102ea(L10M)(317546)	9kHz-40 GHz	9/9/2025	9/9/2026
☒ Cable	Time Microwave	4M-750HF290-750 (L4M)	9kHz-24 GHz	9/9/2025	9/9/2026
☒ Cable	Mini-Circuits	KBL-2M-LOW+ (23090329)	9kHz-40 GHz	3/20/2026	3/20/2027
☒ Analyzer	HP	8562A (3051A05950)	9kHz-125GHz	3/20/2026	3/20/2027
☐ Antenna:	Solar	9229-1 & 9230-1		2/5/2026	2/5/2028
☐ CDN:	Com-Power	Model CDN M325E		9/16/2024	9/16/2026
☐ EMC Transient Generator HVT	TR 3000			2/5/2026	2/5/2027
☐ AC Power Source (Ametech, California Instruments)				2/5/2026	2/5/2027
☒ Field Intensity Meter: EFM-018				2/5/2026	2/5/2027
☒ ESD Simulator: MZ-15				3/20/2026	3/20/2027
☐ Injection Clamp Luthi Model EM101				not required	
☐ R.F. Power Amp ACS 230-50W				not required	
☐ R.F. Power Amp EIN Model: A301				not required	
☐ R.F. Power Amp A.R. Model: 10W 1010M7				not required	
☐ R.F. Power Amp A.R. Model: 50U1000				not required	
☒ Temperature Chamber				not required	
☒ Shielded Room				not required	

Annex C Laboratory Certificate of Accreditation

United States Department of Commerce National Institute of Standards and Technology	
NVLAP[®] ilac-MRA	
Certificate of Accreditation to ISO/IEC 17025:2017	
NVLAP LAB CODE: 200087-0	
Rogers Labs, a division of The Compatibility Center LLC Lenexa, KS	
<i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i>	
Electromagnetic Compatibility & Telecommunications	
<i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué on ISO/IEC 17025).</i>	
2026-03-17 through 2027-03-31 Effective Dates	DEPARTMENT OF COMMERCE UNITED STATES OF AMERICA  For the National Voluntary Laboratory Accreditation Program

Rogers Labs, a division of The Compatibility Center LLC
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Revision 2

Model/HVIN: VPR-60 FCC ID: OHRVPR-60
Test: 260309
Test to: 47CFR 15.255, RSS-GEN, RSS-210
File: MS Sedco VPR-60 15_255 FDS TstRpt 260309 r2

MS Sedco, Inc.
IC: 6775A-VPR-60
S/N: 649153
Date: July 11, 2026
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