

Report on Test Measurements*Measurements Report*

The measurement report shows compliance information against the pertinent technical standards. Each parameter is measured generally at the low end, middle, and at the high end of the applicable frequency band. Each section of the report contains either verbiage or graphs which show compliance to applicable standards as required, explains testing method used, and indicates what the applicable specification is.

A list of test equipment for all sections, and certification signoff page are included at the end of the measurement report.

SUBMITTED MEASURED DATA -- INDEX

EXHIBIT DESCRIPTION

E1-1	RF Output-Data
E1-2	Occupied Bandwidth, Digital Emissions: Setup, Specifications, and Index
E1-2.1 – E1-2.5	Linear Simulcast Modulation (LSM)
E1-2.6 – E1-2.10	Compatible 4-Level Frequency Modulation (C4FM)
E1-2.11 – E1-2.15	H-DQPSK, P25 Two Slot TDMA Digital Modulation
E1-3	Conducted Spurious Emissions: Setup, Specifications, and Index
E1-3.1	LSM Conducted Spurious Harmonic Emissions, Power 100 Watts (Average)
E1-3.2	LSM Conducted Spurious Harmonic Emissions, Power 2 Watts (Average)
E1-3.3	C4FM Conducted Spurious Harmonic Emissions, Power 110 Watts
E1-3.4	C4FM Conducted Spurious Harmonic Emissions, Power 2 Watts
E1-3.5	H-DQPSK Conducted Spurious Harmonic Emissions, Power 100 Watts
E1-3.6	H-DQPSK Conducted Spurious Harmonic Emissions, Power 2 Watts
E1-3.7 – E1-3.11	Conducted Spurious Emission Spectrum, 200 MHz Span, Power Output at 100 Watts, LSM
E1-3.12 – E1-3.16	Conducted Spurious Emission Spectrum, 200 MHz Span, Power Output at 110 Watts, C4FM
E1-3.17 – E1-3.21	Conducted Spurious Emission Spectrum, 200 MHz Span, Power Output at 100 Watts, H-DQPSK
E1-4	Radiated Spurious Emissions: Setup, Specifications, and Index
E1-4.1 – E1-4.10	Radiated Spurious Harmonic Emissions, LSM
E1-4.11 – E1-4.20	Radiated Spurious Harmonic Emissions, C4FM
E1-4.21 – E1-4.30	Radiated Spurious Harmonic Emissions, H-DQPSK
E1-5	Frequency Stability: Setup, Specifications, and Index
E1-5.1	Frequency Stability Vs Temperature
E1-5.2	Frequency Stability Vs Voltage
E1-6	Frequency Transient Behavior: Setup, Specifications, Index
E1-6.1, 3, 5, 7	Frequency Transient Behavior, 12.5 kHz Channel Key-Up
E1-6.2, 4, 6, 8	Frequency Transient Behavior, 12.5 kHz Channel De-key
E1-7	Test Setup Details
E1-8	Statement of Certification

Report on Test Measurements

RF Power Output Data

The RF power output was measured with the indicated voltage applied to the Base Radio. The Power indicated is the measured power at the output of the base radio. C4FM Max Power requested is 110W. LSM/H-DQPSK Max Power requested is 100W. Low Power requested is 2W.

Power measurements do not include cable losses for the cable from the power amplifier to the back of the base radio. The Base Radio is not powering the DSC8500 site controller through the auxiliary output.

C4FM Modulation

Temperature	25°C				Remarks
Voltage (V)	48V				
Frequency (MHz)	Low Power (W)	Current (A)	Max Power (W)	Current (A)	
380.0125	1.9	2.44	100.8	6.06	
406.1125	1.9	2.46	101.6	6.41	
420.0125	1.8	2.49	100.5	6.55	
429.9875	1.8	2.48	100.7	6.50	
434.9875	1.8	2.48	101.1	6.51	

LSM Modulation

Temperature	25°C				Remarks
Voltage (V)	48V				
Frequency (MHz)	Low Power (W)	Current (A)	Max Power (W)	Current (A)	
380.0125	1.8	2.44	90.4	6.50	
406.1125	1.8	2.46	90.0	6.75	
420.0125	1.8	2.48	89.6	6.91	
429.9875	1.8	2.47	89.5	6.85	
434.9875	1.8	2.48	89.7	6.85	

H-DQPSK Modulation

Temperature	25°C				Remarks
Voltage (V)	48V				
Frequency (MHz)	Low Power (W)	Current (A)	Max Power (W)	Current (A)	
380.0125	1.9	2.44	92.5	6.51	
406.1125	1.8	2.47	91.7	6.76	
420.0125	1.8	2.48	91.6	6.94	
429.9875	1.8	2.48	92.4	6.89	
434.9875	1.8	2.48	90.7	6.84	

Report on Test Measurements

Occupied Bandwidth – Linear Simulcast Modulation (LSM), 12.5 kHz Channel Spacing

Linear Simulcast Modulation can be used in a system configuration based upon channel usage as described in Exhibit B. The 'D1E' emission designator provides usage for telephony, the 'D1D' provides usage for data / telecommand, and the 'D1W' provides for usage as a combination. All are spectrally identical. The occupied bandwidth charts reference the following setup and specification requirements.

Modulation Type: Linear Simulcast Modulation, LSM
Emission Designator: 8K70D1E, 8K70D1D, 8K70D1W
Channelization: 12.5 kHz
Power Setting: 100 Watts, Average

Specification Requirement 47 CFR §90.210(d) and IC RSS-119 section 5.8.3 - Emission Limits – “D-Mask”:

Emission Mask D. For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

- (1) On any frequency from the center of the authorized bandwidth (f_0) to 5.625 kHz removed from f_0 : *Zero dB*
- (2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5.625 kHz but no more than 12.5 kHz: *At least $7.27 * (f_d - 2.88 \text{ kHz}) \text{ dB}$*
- (3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5 kHz: *At least 50 plus $10 \log_{10}(P) \text{ dB}$ or 70 dB, whichever is the lesser attenuation.*
- (4) The reference level for showing compliance with the emission mask shall be established using a resolution bandwidth sufficiently wide to capture the true peak emission of the equipment under test. In order to show compliance with the emissions mask up to and including 50 kHz removed from the edge of the authorized bandwidth, adjust the resolution bandwidth to 100 Hz with the measuring instrument in a peak hold mode. A sufficient number of sweeps must be measured to ensure that the emission profile is developed.

Necessary Bandwidth Calculation: The necessary bandwidth of the modulation signal is not directly calculable per the composite modulation formulas defined in 47 CFR §2.202(g) / TRC-43 section 8. Quadrature Phase Shift Keying is used to modulate a carrier with a digital bit stream: Data Rate: $R = 9600 \text{ bps}$; Bits per Symbol: $S=4$; $B_n = 2B_k$; $B = R/\log_2(s) = 9600/\log_2(4) = 4800$; $K = 0.9$; $B_n = 2*4800*0.9$; $B_n = 8700 \text{ Hz}$. The necessary bandwidth of 8.70 kHz is based upon a 99% power measurement of the transmitter spectrum, per §2.202(a) / TRC-43 section 7(c).

Measurement Procedure and Instrument Settings:Emission Measurement Analyzer Settings

Horizontal:	12.5 kHz per Division	Resolution BW:	100 Hz
Vertical:	10 dB per Division	Video BW:	10 kHz
Sweep Time:	72 Seconds (<2 kHz/Sec)	Span:	125 kHz
Detector:	Peak		

Measured Occupied Bandwidth

Resolution BW:	150 Hz
Span:	15 kHz
Number of Points:	1601
Integration Time:	14.8 ms

Test Procedure:

- 1) Adjust the spectrum analyzer per the values specified in the Emission Measurement Analyzer Settings.
- 2) Modulate the transmitter with the appropriate signaling pattern, (pseudorandom data) and key the transmitter at the full power rating. Allow the analyzer to sweep fully and store the sweep.
- 3) Use the band power marker function of the spectrum analyzer to measure the power of the carrier.
- 4) Use the carrier power value from the previous step to generate the emission mask limit.
- 5) Plot the resulting analyzer trace and the emission mask limit, add text and labeling as appropriate.
- 6) Adjust the signal analyzer resolution BW and span as indicated above, use the Occupied Bandwidth function to record the value.

Report on Test Measurements

EXHIBIT	DESCRIPTION	Meas Occ BW
E1-2.1	Occupied Bandwidth - Linear Simulcast Modulation (LSM), 380.0125MHz	8.98 kHz
E1-2.2	Occupied Bandwidth - Linear Simulcast Modulation (LSM), 406.1125MHz	8.90 kHz
E1-2.3	Occupied Bandwidth - Linear Simulcast Modulation (LSM), 420.0125MHz	8.92 kHz
E1-2.4	Occupied Bandwidth - Linear Simulcast Modulation (LSM), 429.9875MHz	8.90 kHz
E1-2.5	Occupied Bandwidth - Linear Simulcast Modulation (LSM), 434.9875MHz	8.92 kHz

Report on Test Measurements

Occupied Bandwidth – Compatible 4-Level Frequency Modulation (C4FM), 12.5 kHz Channel Spacing

C4FM can be used in a system configuration based upon channel usage as described in Exhibit B. The 'F1E' emission designator provides usage for telephony, the 'F1D' provides usage for data / telecommand, and the 'F1W' provides for usage as a combination. All are spectrally identical. The occupied bandwidth charts reference the following setup and specification requirements.

Modulation Type: Compatible 4-Level Frequency Modulation, C4FM
Emission Designator: 8K10F1E, 8K10F1D, 8K10F1W
Channelization: 12.5 kHz
Power Setting: 110 Watts

Specification Requirement 47 CFR §90.210(d) and IC RSS-119 section 5.8.3 - Emission Limits – “D-Mask”:

Emission Mask D. For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

- (1) On any frequency from the center of the authorized bandwidth (f_0) to 5.625 kHz removed from f_0 : *Zero dB*
- (2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5.625 kHz but no more than 12.5 kHz: *At least $7.27 * (f_d - 2.88 \text{ kHz})$ dB*
- (3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5 kHz: *At least $50 \text{ plus } 10 \log_{10}(P)$ dB or 70 dB, whichever is the lesser attenuation.*

(4) The reference level for showing compliance with the emission mask shall be established using a resolution bandwidth sufficiently wide to capture the true peak emission of the equipment under test. In order to show compliance with the emissions mask up to and including 50 kHz removed from the edge of the authorized bandwidth, adjust the resolution bandwidth to 100 Hz with the measuring instrument in a peak hold mode. A sufficient number of sweeps must be measured to ensure that the emission profile is developed.

Necessary Bandwidth Calculation:

The necessary bandwidth of the modulation per the formulas defined in 47 CFR §2.202(g) / TRC-43 section 8 is as follows:

Max Mod Freq, $M = \frac{1}{2}B$	Max Deviation, D	$2M + 2DK$ ($K=1$)	Nec BW
1.2 kHz	2.85 kHz	8.10 kHz	8K10

Measurement Procedure and Instrument Settings:Emission Measurement Analyzer Settings

Horizontal: 12.5 kHz per Division	Resolution BW: 100 Hz
Vertical: 10 dB per Division	Video BW: 10 kHz
Sweep Time: 72 Seconds (<2 kHz/Sec)	Span: 125 kHz
Detector: Peak	

Measured Occupied Bandwidth

Resolution BW: 150 Hz
Span: 15 kHz
Number of Points: 1601
Integration Time: 14.8 ms

Test Procedure:

- 1) Adjust the spectrum analyzer per the values specified in the Emission Measurement Analyzer Settings.
- 2) Modulate the transmitter with the appropriate signaling pattern, (pseudorandom data) and key the transmitter at the full power rating. Allow the analyzer to sweep fully and store the sweep.
- 3) Use the band power marker function of the spectrum analyzer to measure the power of the carrier.
- 4) Use the carrier power value from the previous step to generate the emission mask limit.
- 5) Plot the resulting analyzer trace and the emission mask limit, add text and labeling as appropriate.
- 6) Adjust the signal analyzer resolution BW and span as indicated above, use the Occupied Bandwidth function to record the value.

Report on Test Measurements

EXHIBIT	DESCRIPTION	Meas Occ BW
E1-2.6	Occupied Bandwidth - Compatible 4-Level Frequency Mod (C4FM), 380.0125MHz	7.82 kHz
E1-2.7	Occupied Bandwidth - Compatible 4-Level Frequency Mod (C4FM), 406.1125MHz	7.83 kHz
E1-2.8	Occupied Bandwidth - Compatible 4-Level Frequency Mod (C4FM), 420.0125MHz	7.83 kHz
E1-2.9	Occupied Bandwidth - Compatible 4-Level Frequency Mod (C4FM), 429.9875MHz	7.86 kHz
E1-2.10	Occupied Bandwidth - Compatible 4-Level Frequency Mod (C4FM), 434.9875MHz	7.89 kHz

Report on Test Measurements

Occupied Bandwidth –H-DQPSK, P25 Two Slot TDMA Digital Modulation, 12.5 kHz Channel Spacing

H-DQPSK modulation can be used in a system configuration based upon channel usage as described in Exhibit B. The 'D7E' emission designator provides usage for telephony, the 'D7D' provides usage for data / telecommand, and the 'D7W' provides for usage as a combination. All are spectrally identical. The occupied bandwidth charts reference the following setup and specification requirements.

Modulation Type: H-DQPSK, P25 Two Slot TDMA Digital Modulation
Emission Designator: 9K80D7E, 9K80D7D, 9K80D7W
Channelization: 12.5 kHz
Power Setting: 100 Watts, Average

Specification Requirement 47 CFR §90.210(d) and IC RSS-119 section 5.8.3 - Emission Limits – “D-Mask”:

Emission Mask D. For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

- (1) On any frequency from the center of the authorized bandwidth (f_0) to 5.625 kHz removed from f_0 : *Zero dB*
- (2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5.625 kHz but no more than 12.5 kHz: *At least $7.27 * (f_d - 2.88 \text{ kHz})$ dB*
- (3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5 kHz: *At least 50 plus $10 \log_{10}(P)$ dB or 70 dB, whichever is the lesser attenuation.*

(4) The reference level for showing compliance with the emission mask shall be established using a resolution bandwidth sufficiently wide to capture the true peak emission of the equipment under test. In order to show compliance with the emissions mask up to and including 50 kHz removed from the edge of the authorized bandwidth, adjust the resolution bandwidth to 100 Hz with the measuring instrument in a peak hold mode. A sufficient number of sweeps must be measured to ensure that the emission profile is developed.

Necessary Bandwidth Calculation: The necessary bandwidth of the modulation signal is not directly calculable per the composite modulation formulas defined in 47 CFR §2.202(g) / TRC-43 section 8. Quadrature Phase Shift Keying is used to modulate a carrier with a digital bit stream: Data Rate: $R = 12000$ bps; Bits per Symbol: $S=4$; $B_n = 2BK$; $B = R/\log_2(s) = 12000/\log_2(4) = 6000$; $K = 0.81$; $B_n = 2*6000*0.81$; $B_n = 9800$ Hz. The necessary bandwidth of 9.80 kHz is based on a 99% power measurement of the transmitter spectrum, per §2.202(a) / TRC-43 section 7(c).

Measurement Procedure and Instrument Settings:Emission Measurement Analyzer Settings

Horizontal:	12.5 kHz per Division	Resolution BW:	100 Hz
Vertical:	10 dB per Division	Video BW:	10 kHz
Sweep Time:	72 Seconds (<2 kHz/Sec)	Span:	125 kHz
Detector:	Peak		

Measured Occupied Bandwidth

Resolution BW:	150 Hz
Span:	15 kHz
Number of Points:	1601
Integration Time:	14.8 ms

Test Procedure:

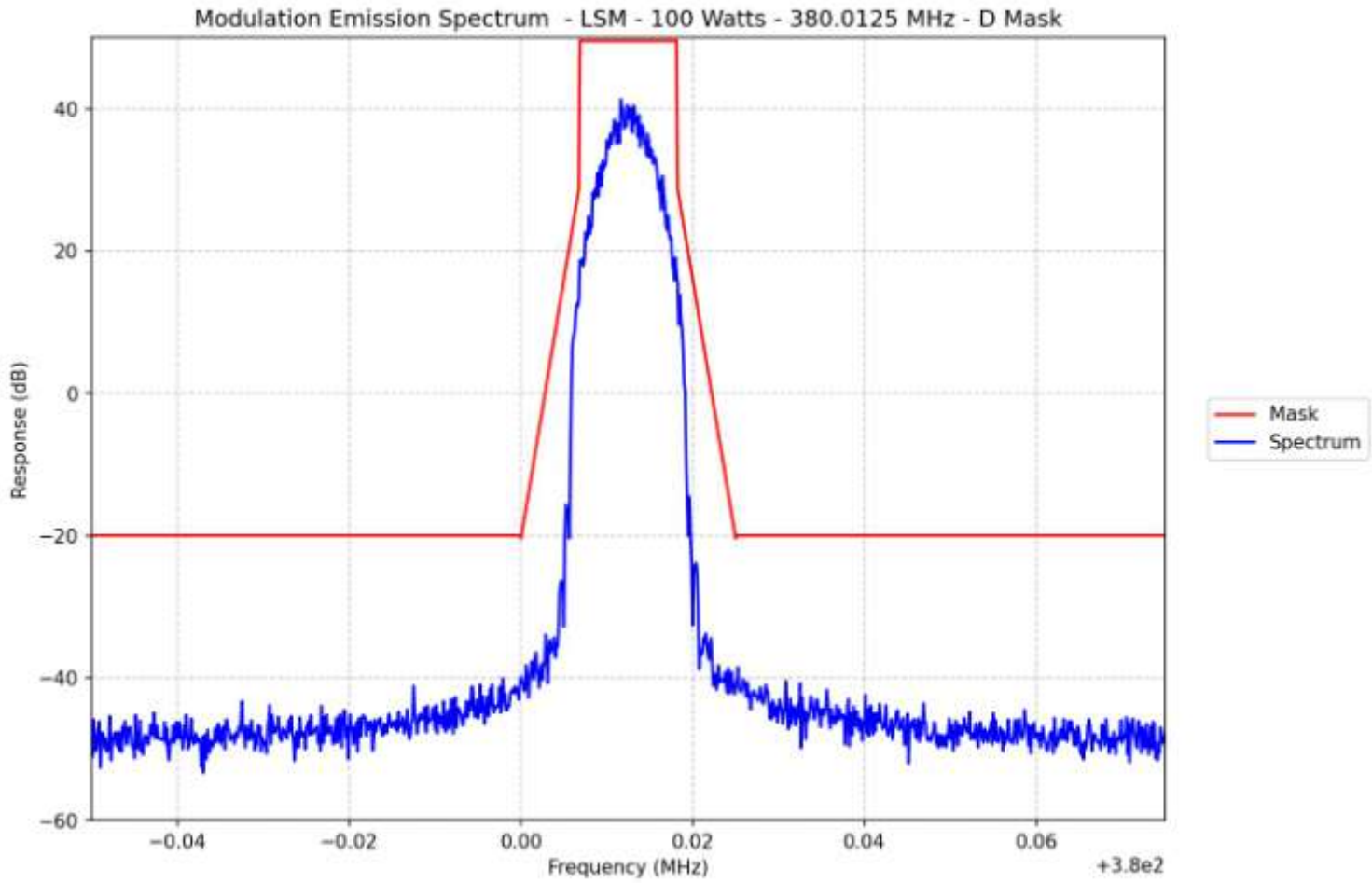
- 1) Adjust the spectrum analyzer per the values specified in the Emission Measurement Analyzer Settings.
- 2) Modulate the transmitter with the appropriate signaling pattern, (pseudorandom data) and key the transmitter at the full power rating. Allow the analyzer to sweep fully and store the sweep.
- 3) Use the band power marker function of the spectrum analyzer to measure the power of the carrier.
- 4) Use the carrier power value from the previous step to generate the emission mask limit.
- 5) Plot the resulting analyzer trace and the emission mask limit, add text and labeling as appropriate.
- 6) Adjust the signal analyzer resolution BW and span as indicated above, use the Occupied Bandwidth function to record the value.

Report on Test Measurements

EXHIBIT	DESCRIPTION	Meas Occ BW
E1-2.11	Occupied Bandwidth - H-DQPSK P25 Two Slot TDMA Digital Mod, 380.0125MHz	9.84 kHz
E1-2.12	Occupied Bandwidth - H-DQPSK P25 Two Slot TDMA Digital Mod, 406.1125MHz	9.78 kHz
E1-2.13	Occupied Bandwidth - H-DQPSK P25 Two Slot TDMA Digital Mod, 420.0125MHz	9.81 kHz
E1-2.14	Occupied Bandwidth - H-DQPSK P25 Two Slot TDMA Digital Mod, 429.9875MHz	9.83 kHz
E1-2.15	Occupied Bandwidth - H-DQPSK P25 Two Slot TDMA Digital Mod, 434.9875MHz	9.80 kHz

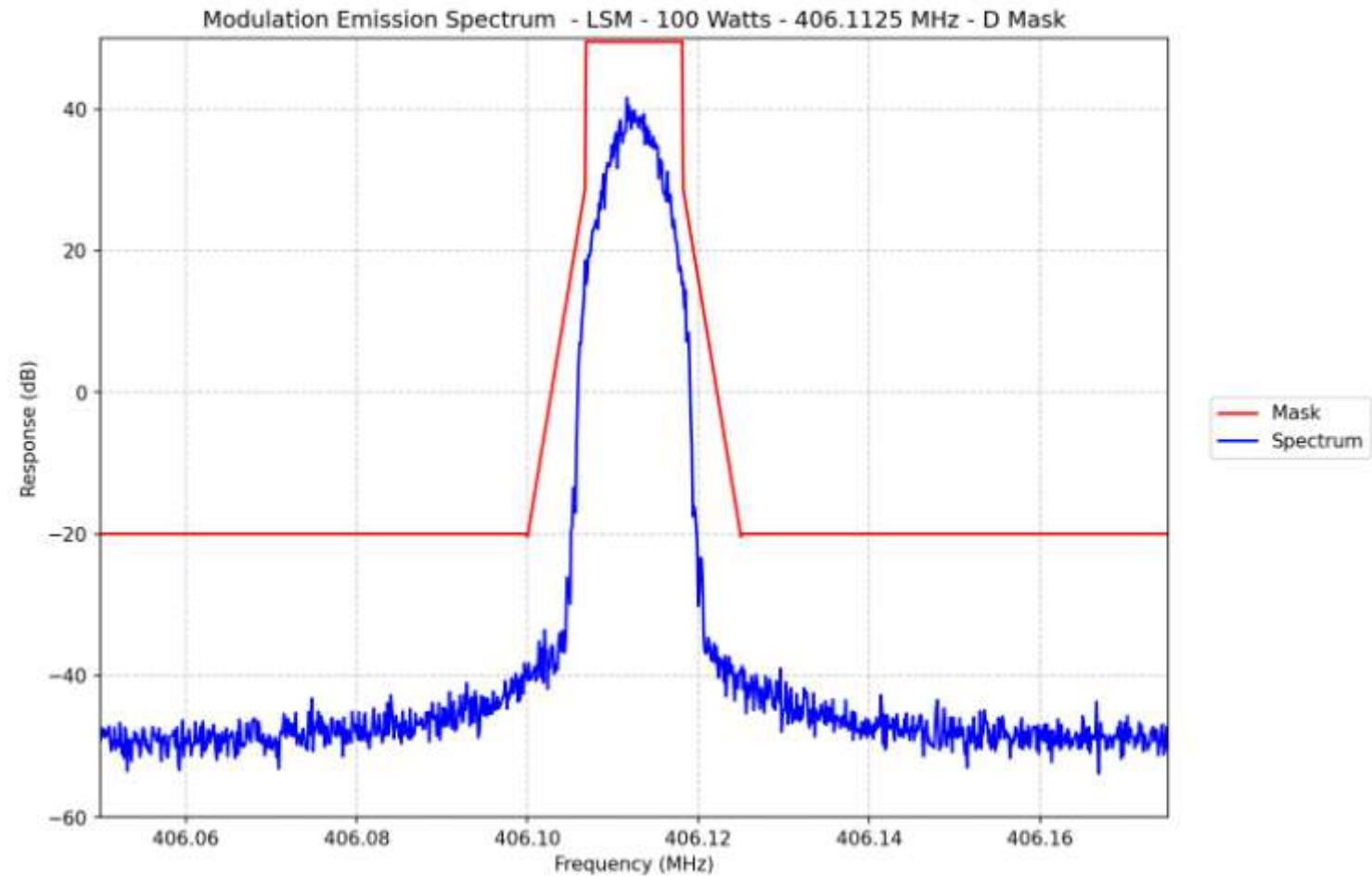
Report on Test Measurements

Occupied Bandwidth – Linear Simulcast Modulation (LSM) – Emission Designator: 8K70D1E, 8K70D1D, 8K70D1W



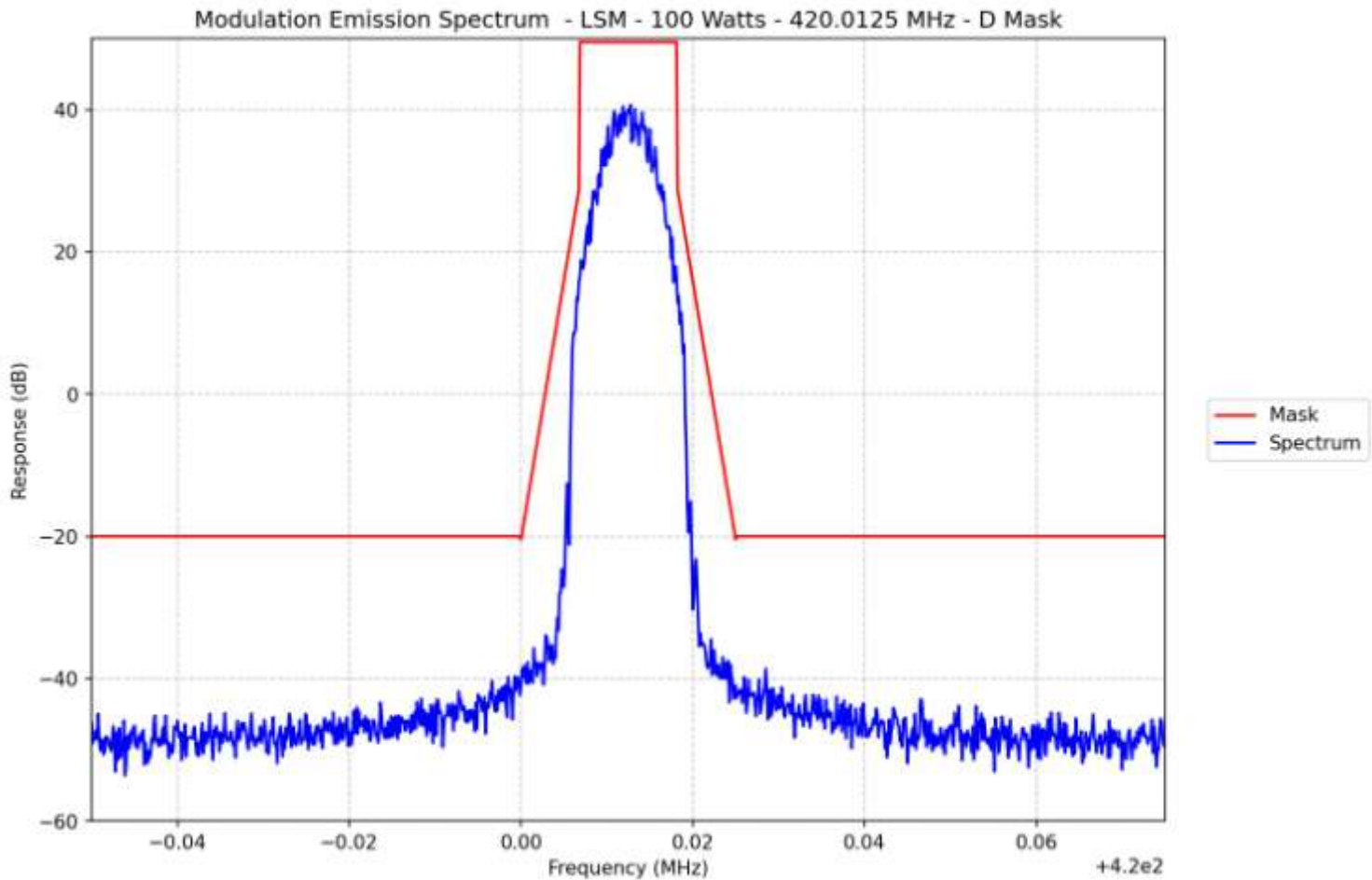
Report on Test Measurements

Occupied Bandwidth – Linear Simulcast Modulation (LSM) – Emission Designator: 8K70D1E, 8K70D1D, 8K70D1W



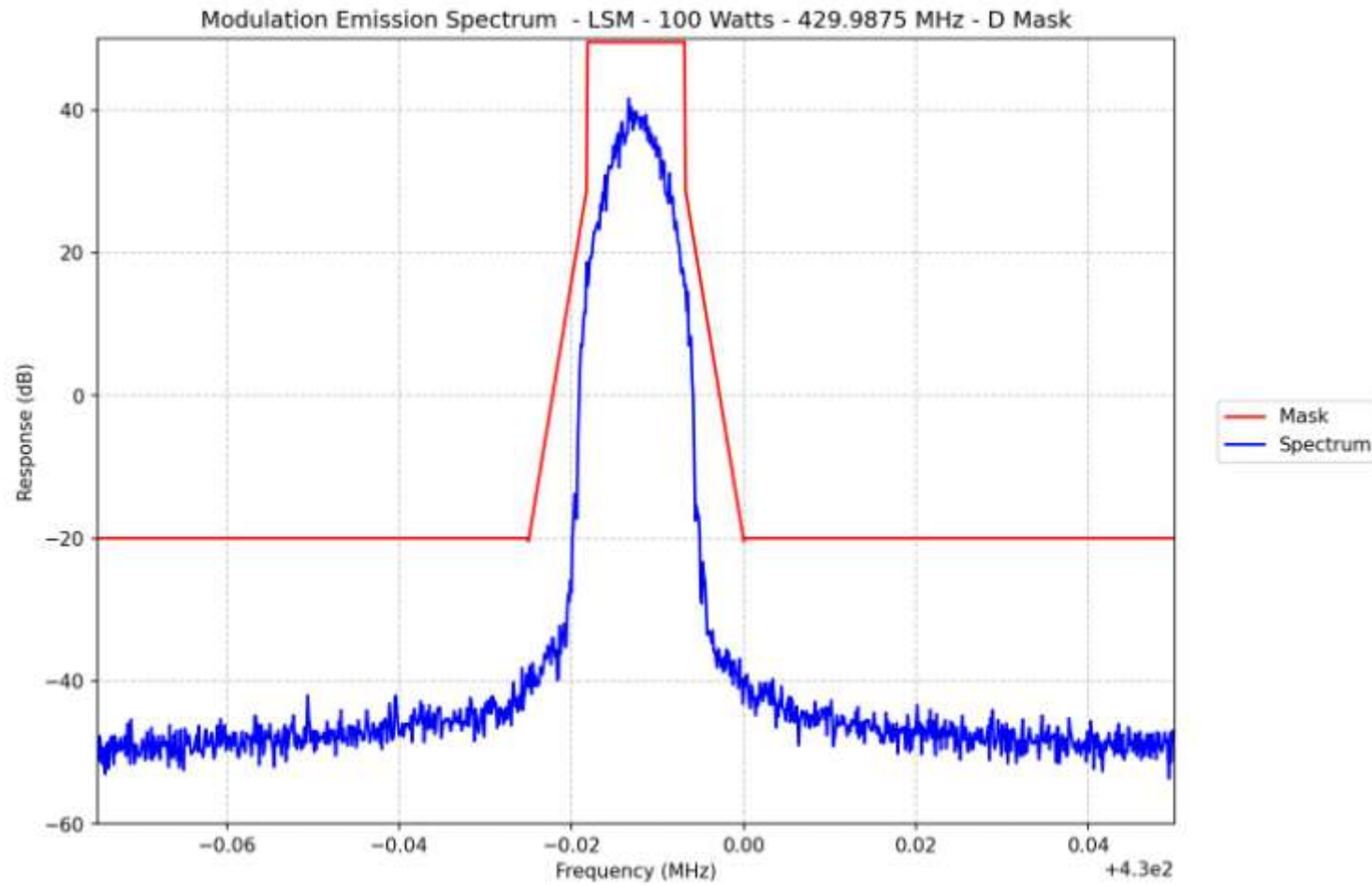
Report on Test Measurements

Occupied Bandwidth – Linear Simulcast Modulation (LSM) – Emission Designator: 8K70D1E, 8K70D1D, 8K70D1W



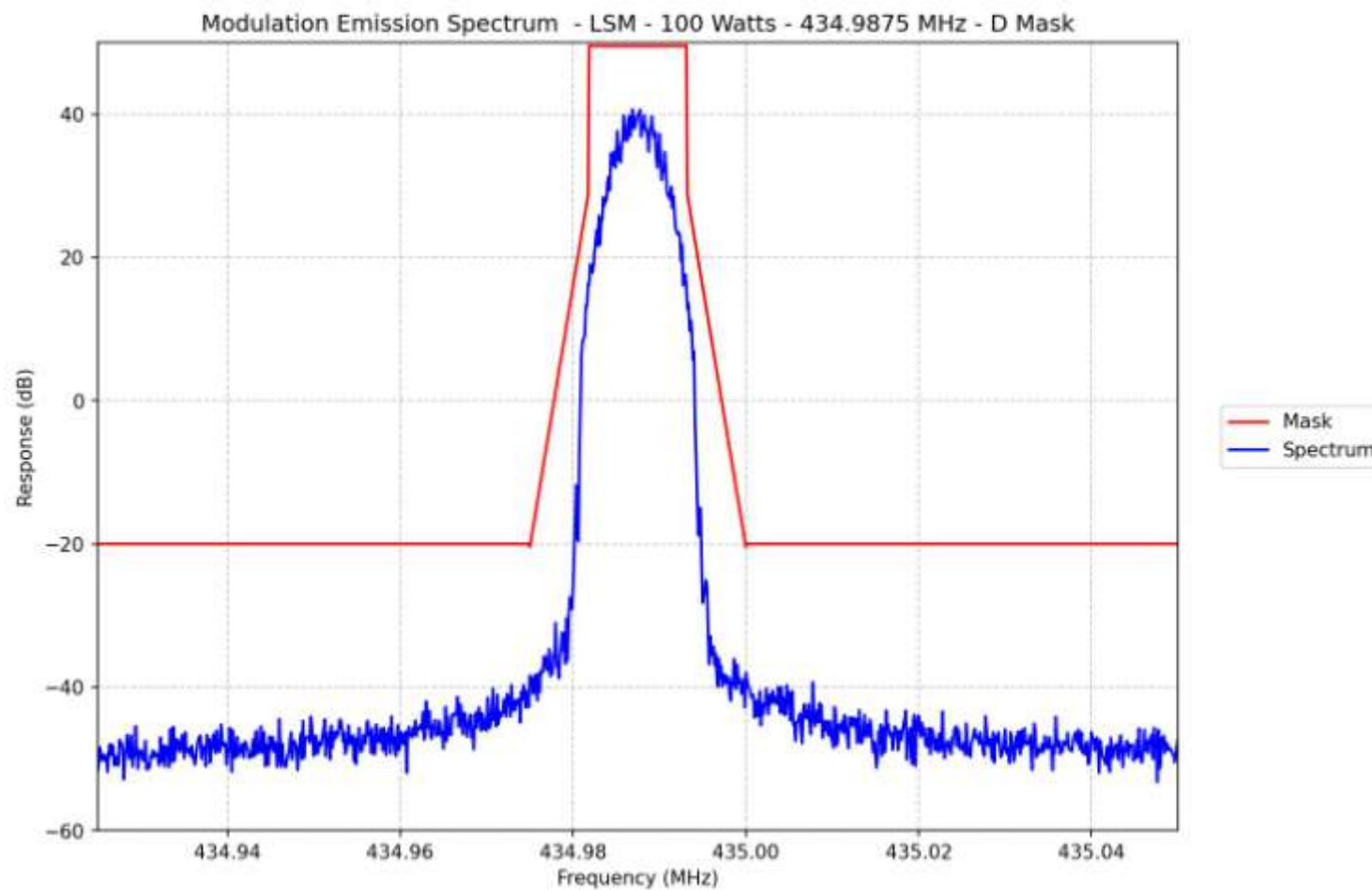
Report on Test Measurements

Occupied Bandwidth – Linear Simulcast Modulation (LSM) – Emission Designator: 8K70D1E, 8K70D1D, 8K70D1W



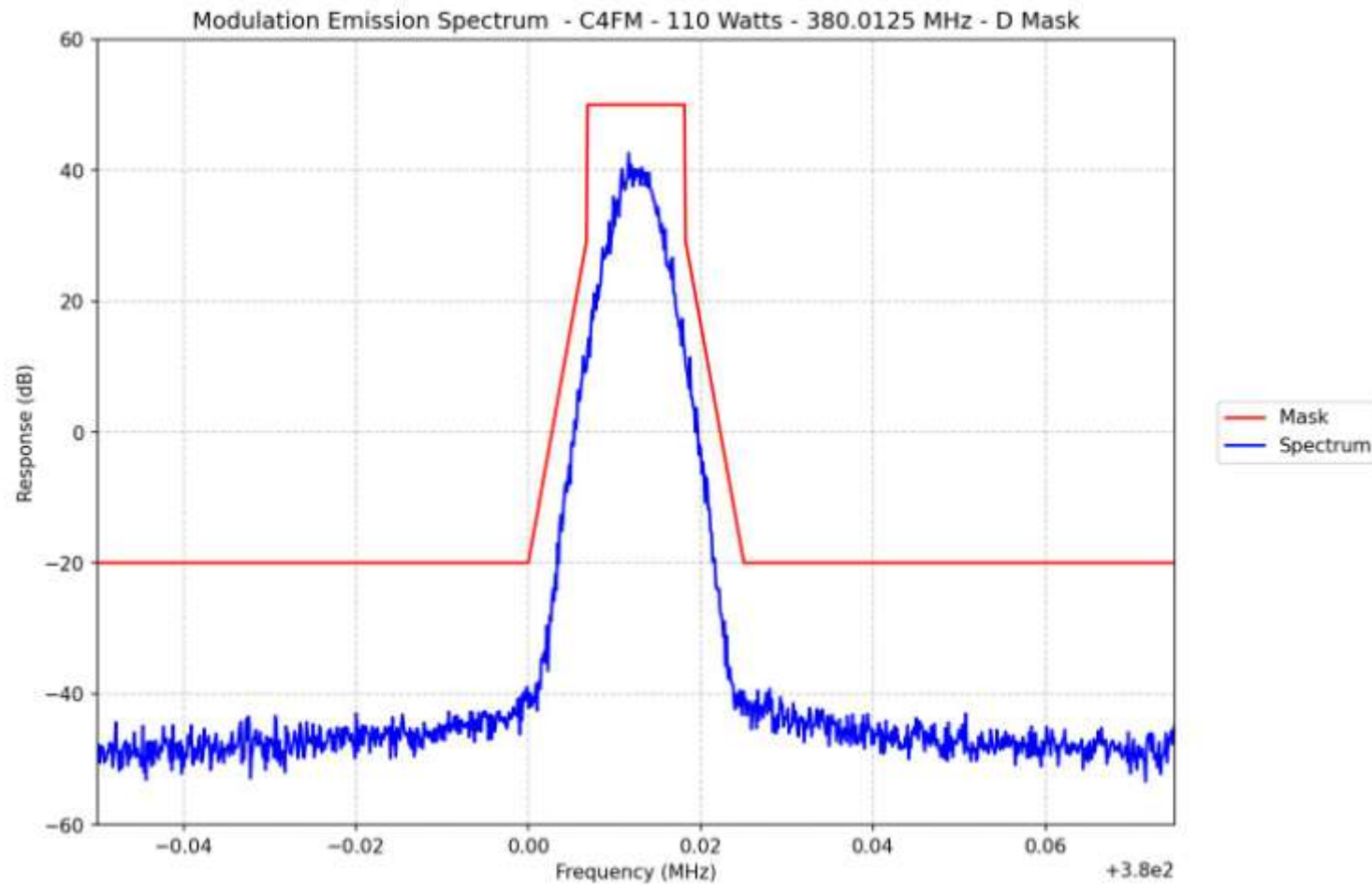
Report on Test Measurements

Occupied Bandwidth – Linear Simulcast Modulation (LSM) – Emission Designator: 8K70D1E, 8K70D1D, 8K70D1W



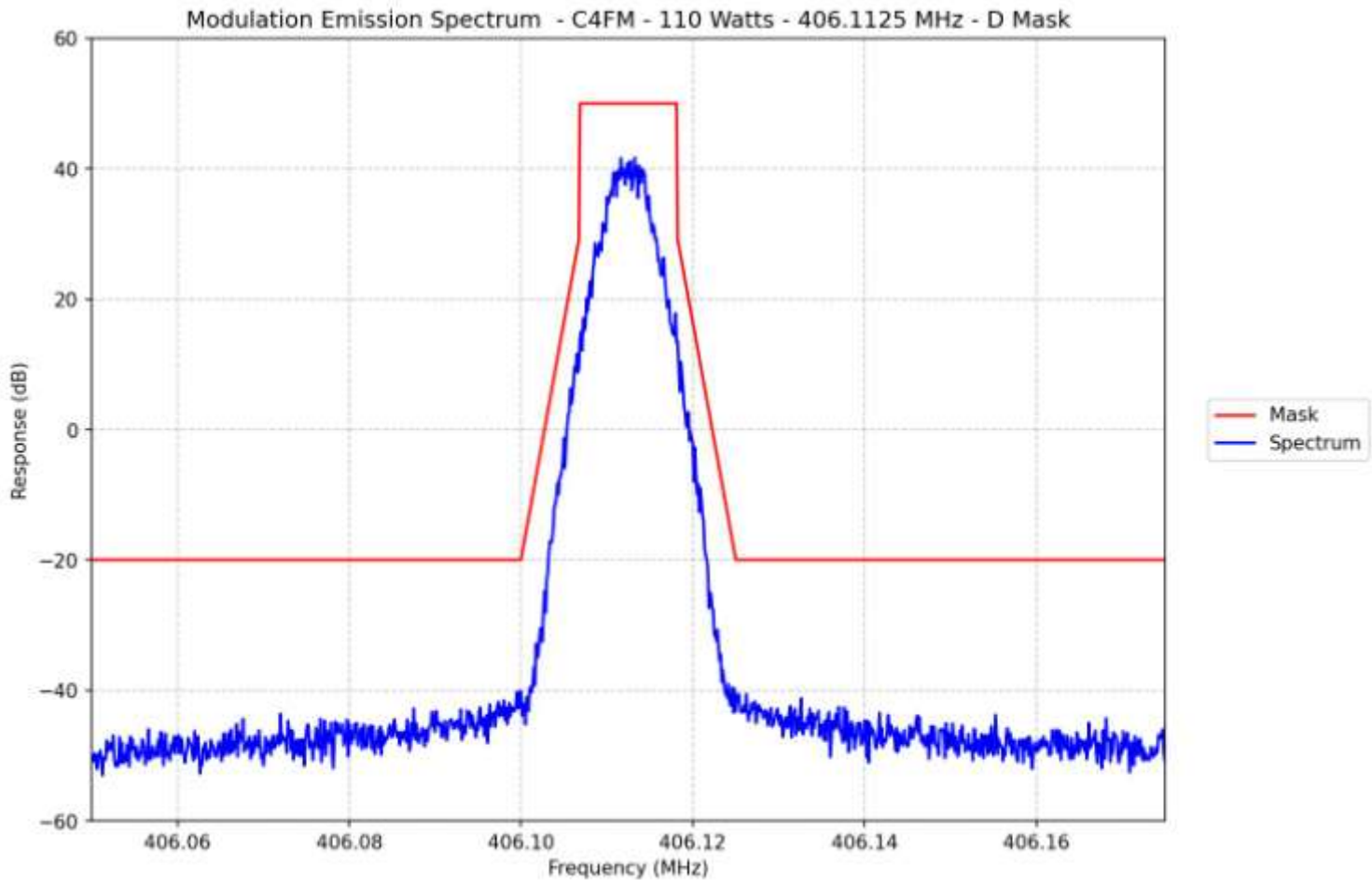
Report on Test Measurements

Occupied Bandwidth – Compatible 4-Level Frequency Modulation (C4FM) – Emission Designator: 8K10D1E, 8K10D1D, 8K10D1W



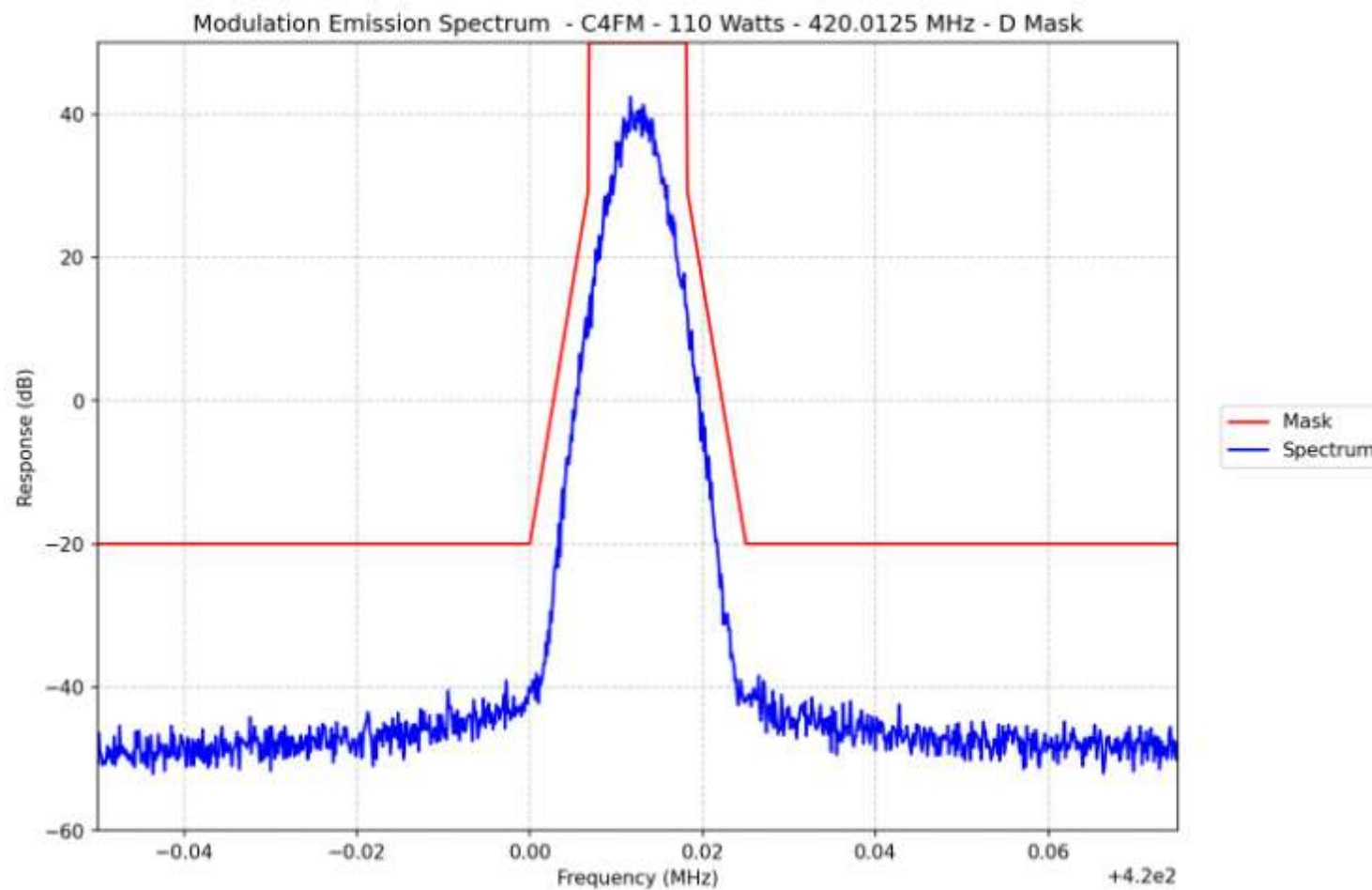
Report on Test Measurements

Occupied Bandwidth – Compatible 4-Level Frequency Modulation (C4FM) – Emission Designator: 8K10D1E, 8K10D1D, 8K10D1W



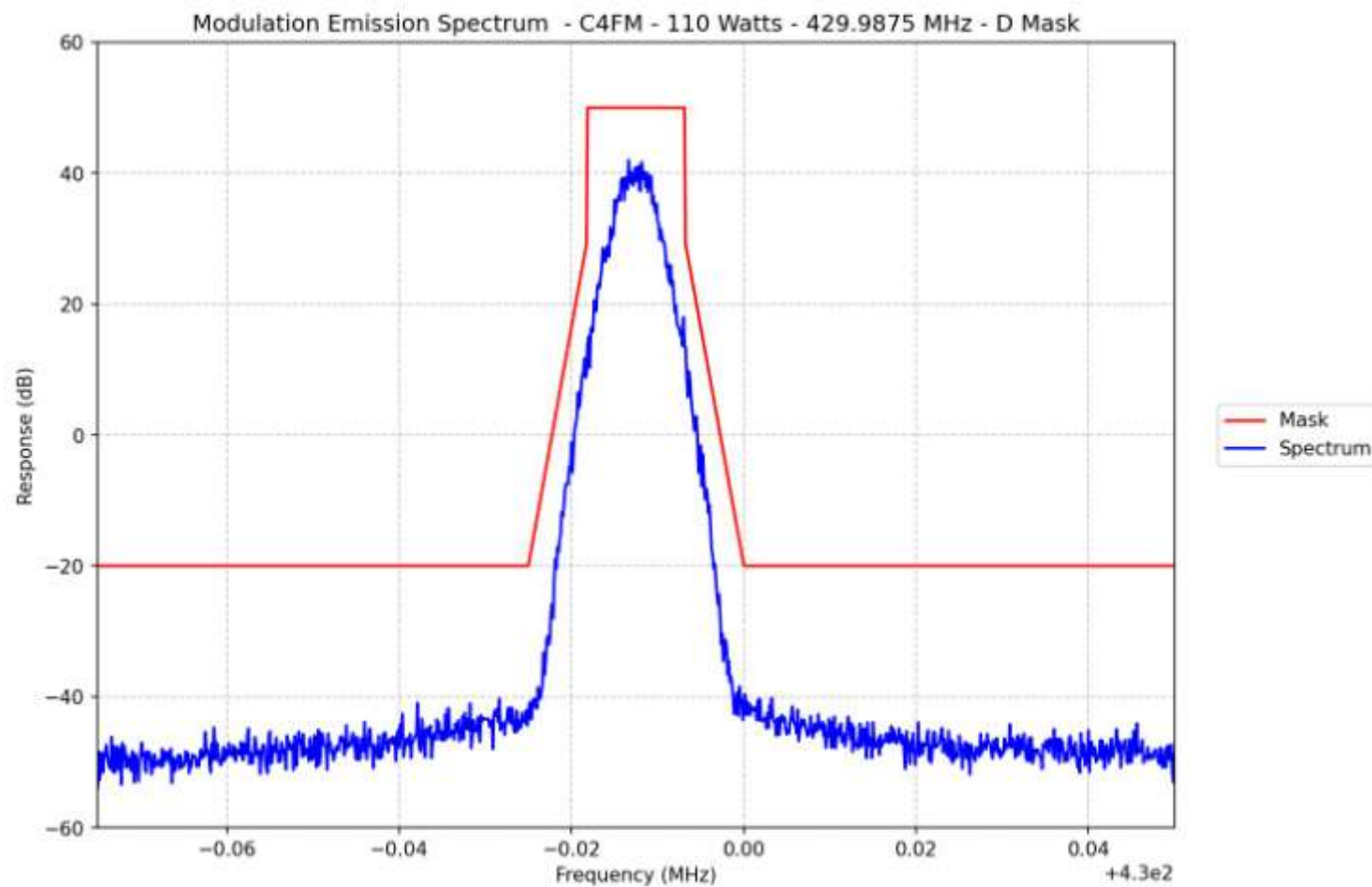
Report on Test Measurements

Occupied Bandwidth – Compatible 4-Level Frequency Modulation (C4FM) – Emission Designator: 8K10D1E, 8K10D1D, 8K10D1W



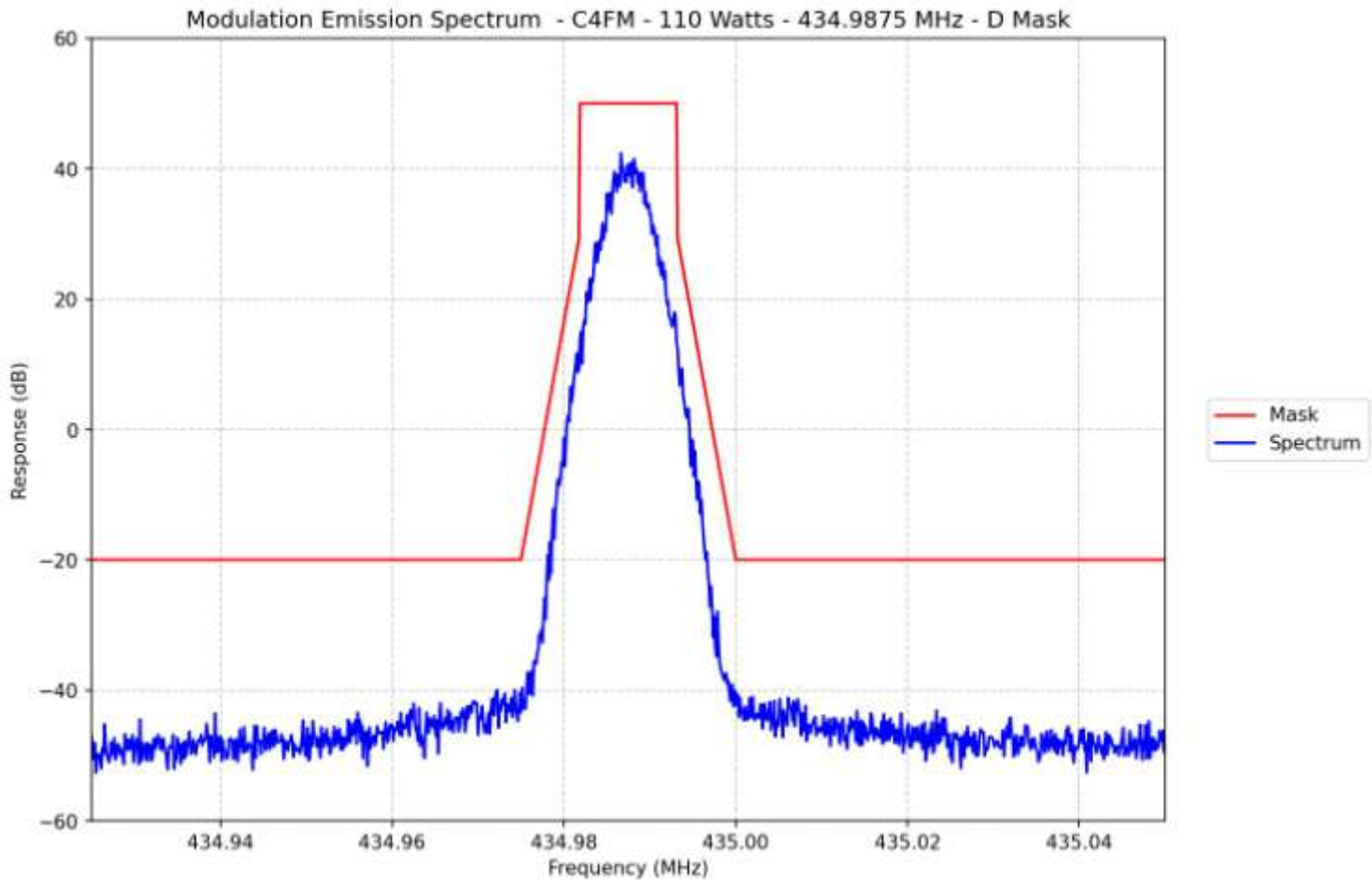
Report on Test Measurements

Occupied Bandwidth – Compatible 4-Level Frequency Modulation (C4FM) – Emission Designator: 8K10D1E, 8K10D1D, 8K10D1W



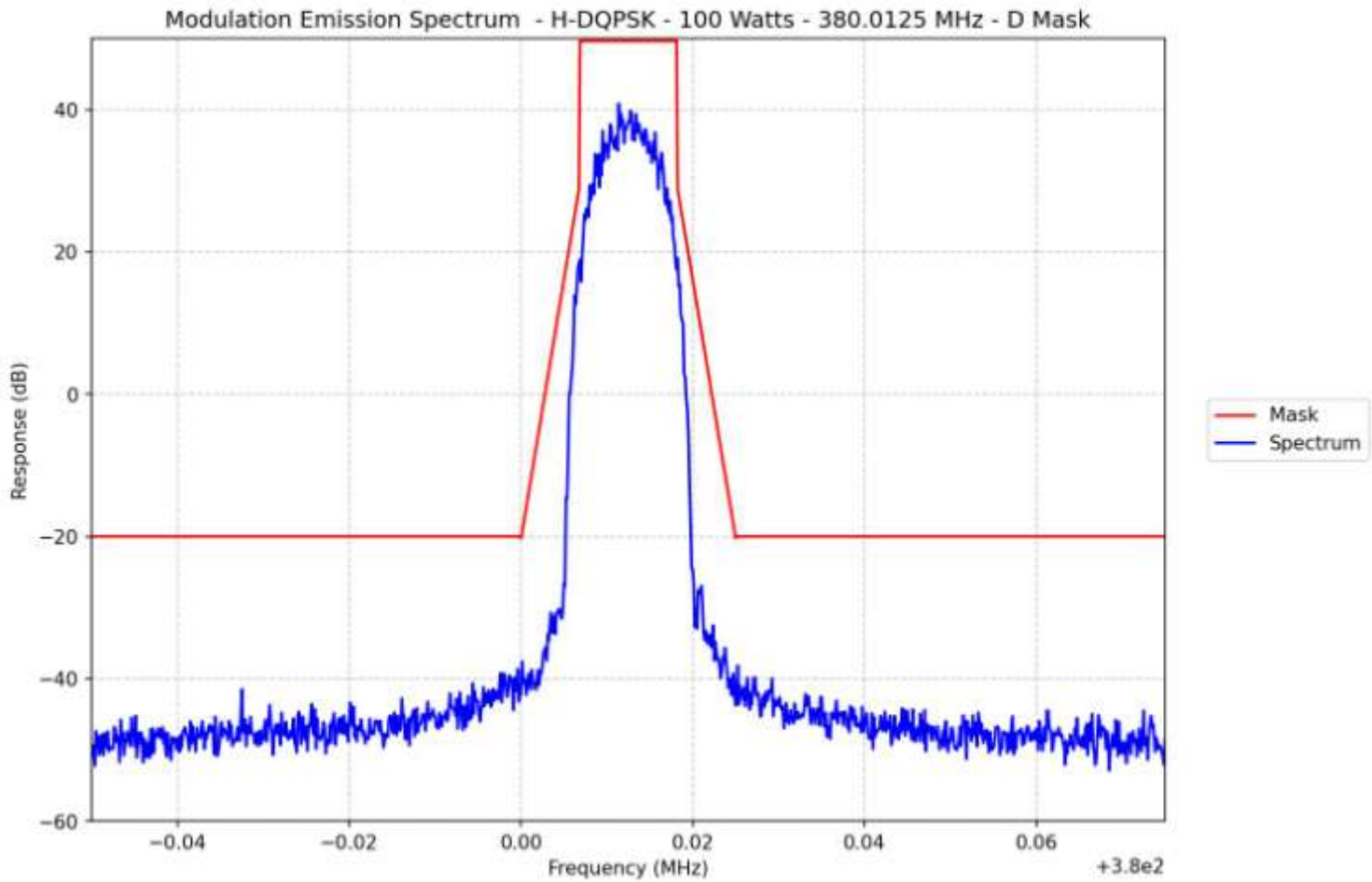
Report on Test Measurements

Occupied Bandwidth – Compatible 4-Level Frequency Modulation (C4FM) – Emission Designator: 8K10D1E, 8K10D1D, 8K10D1W



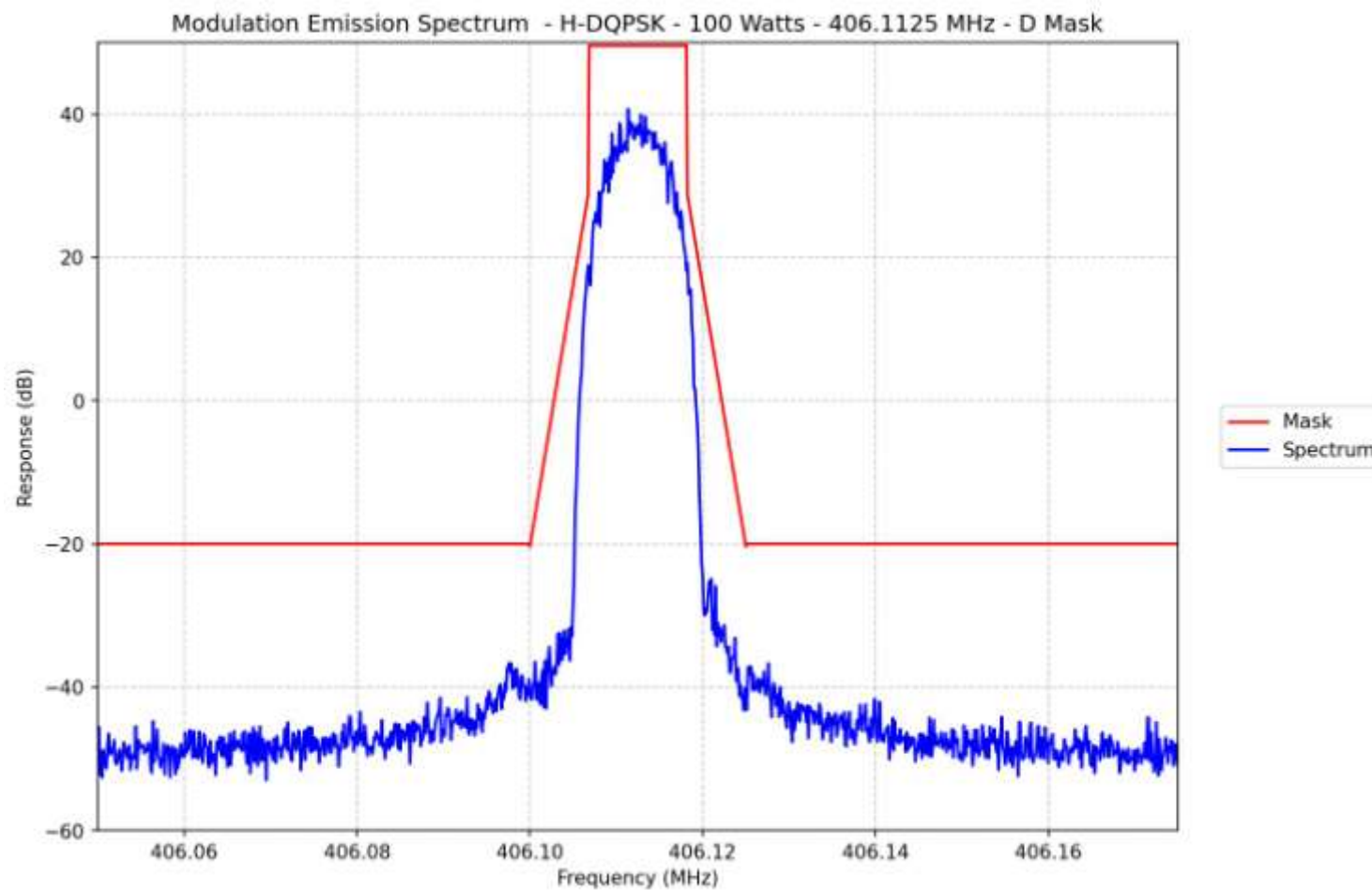
Report on Test Measurements

Occupied Bandwidth – H-DQPSK, P25 Two Slot TDMA Digital Modulation – Emission Designator: 9K80D7E, 9K80D7D, 9K80D7W



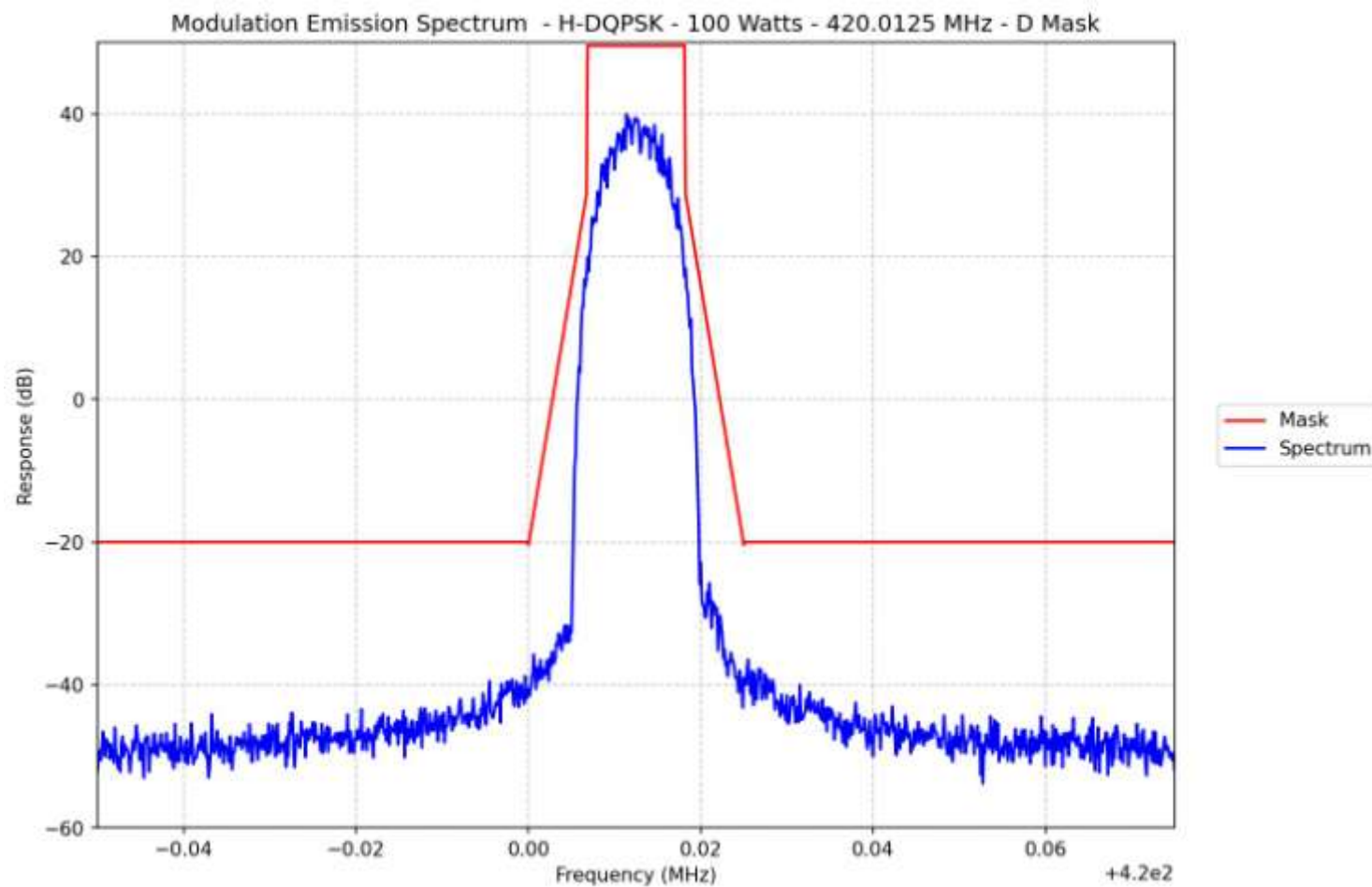
Report on Test Measurements

Occupied Bandwidth – H-DQPSK, P25 Two Slot TDMA Digital Modulation – Emission Designator: 9K80D7E, 9K80D7D, 9K80D7W



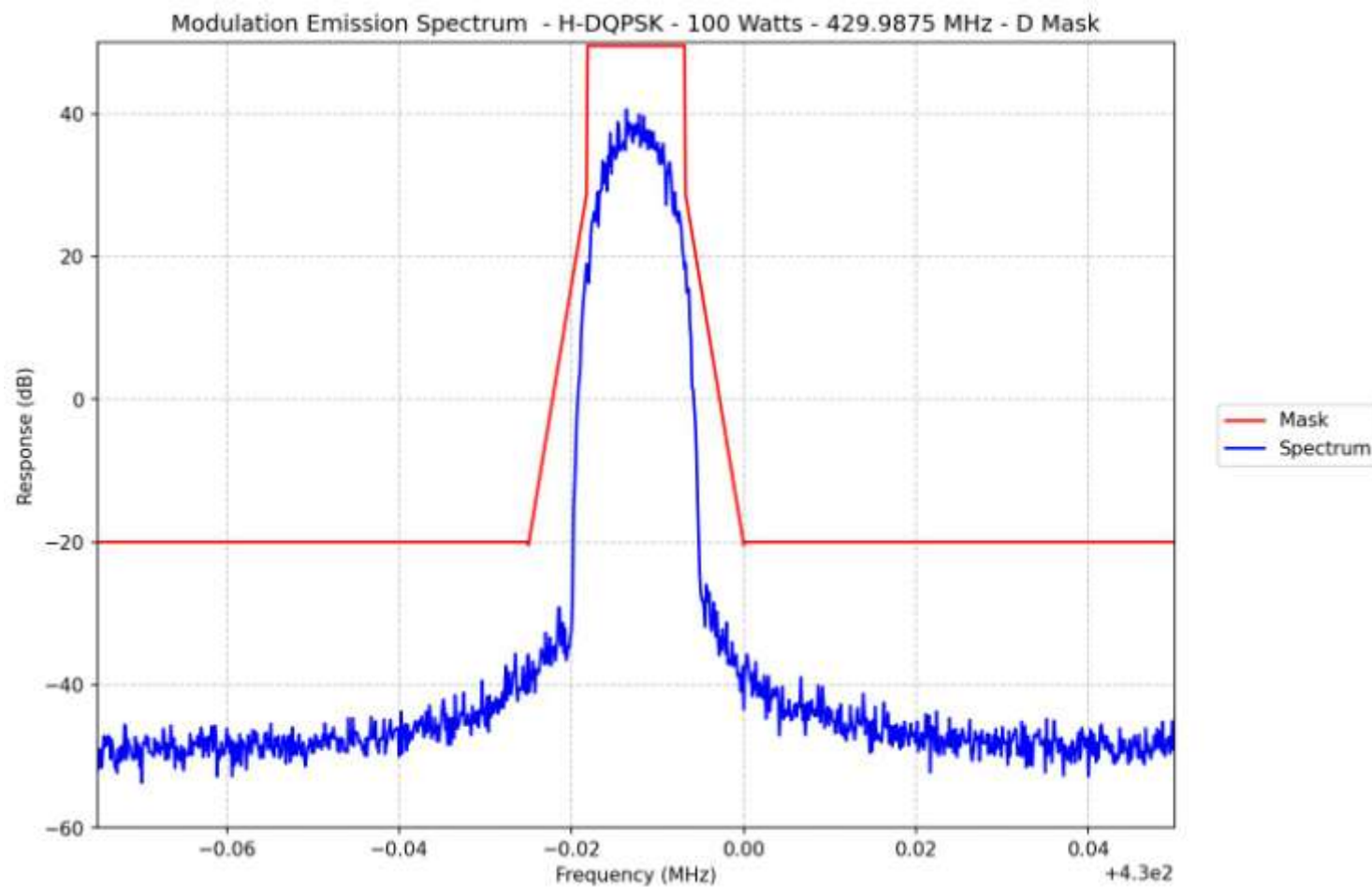
Report on Test Measurements

Occupied Bandwidth – H-DQPSK, P25 Two Slot TDMA Digital Modulation – Emission Designator: 9K80D7E, 9K80D7D, 9K80D7W



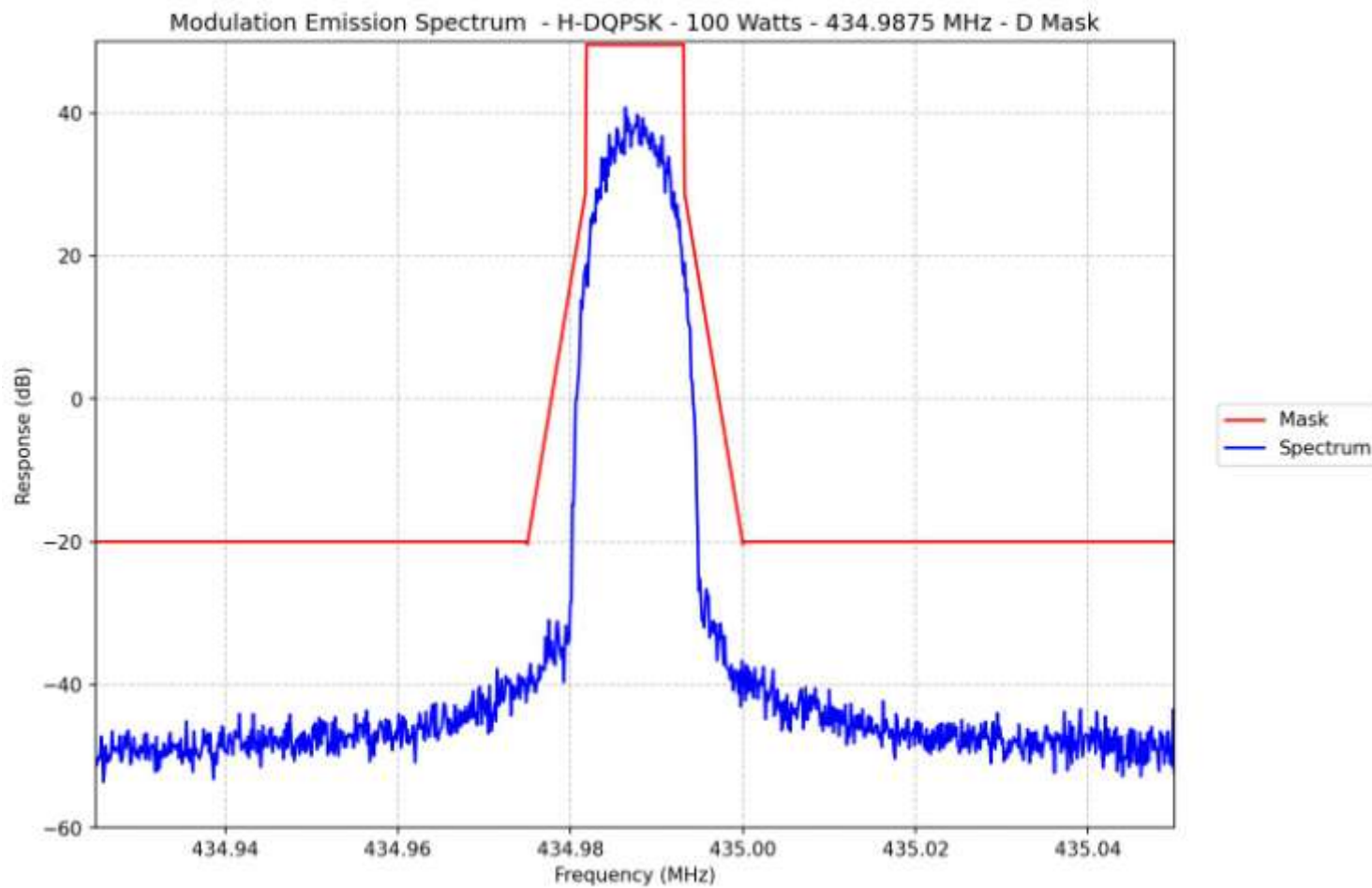
Report on Test Measurements

Occupied Bandwidth – H-DQPSK, P25 Two Slot TDMA Digital Modulation – Emission Designator: 9K80D7E, 9K80D7D, 9K80D7W



Report on Test Measurements

Occupied Bandwidth – H-DQPSK, P25 Two Slot TDMA Digital Modulation – Emission Designator: 9K80D7E, 9K80D7D, 9K80D7W



Report on Test Measurements

Conducted Spurious Emissions – Harmonics and Emission Spectrum

Specification Requirement 47 CFR §90.210(d) and IC RSS-119 section 5.8.3 - Emission Limits – “D-Mask”:

Emission Mask D: For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

- (1) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5 kHz:
- At least 50 plus $10 \log_{10}(P)$ dB or 70 dB, whichever is the lesser attenuation.*

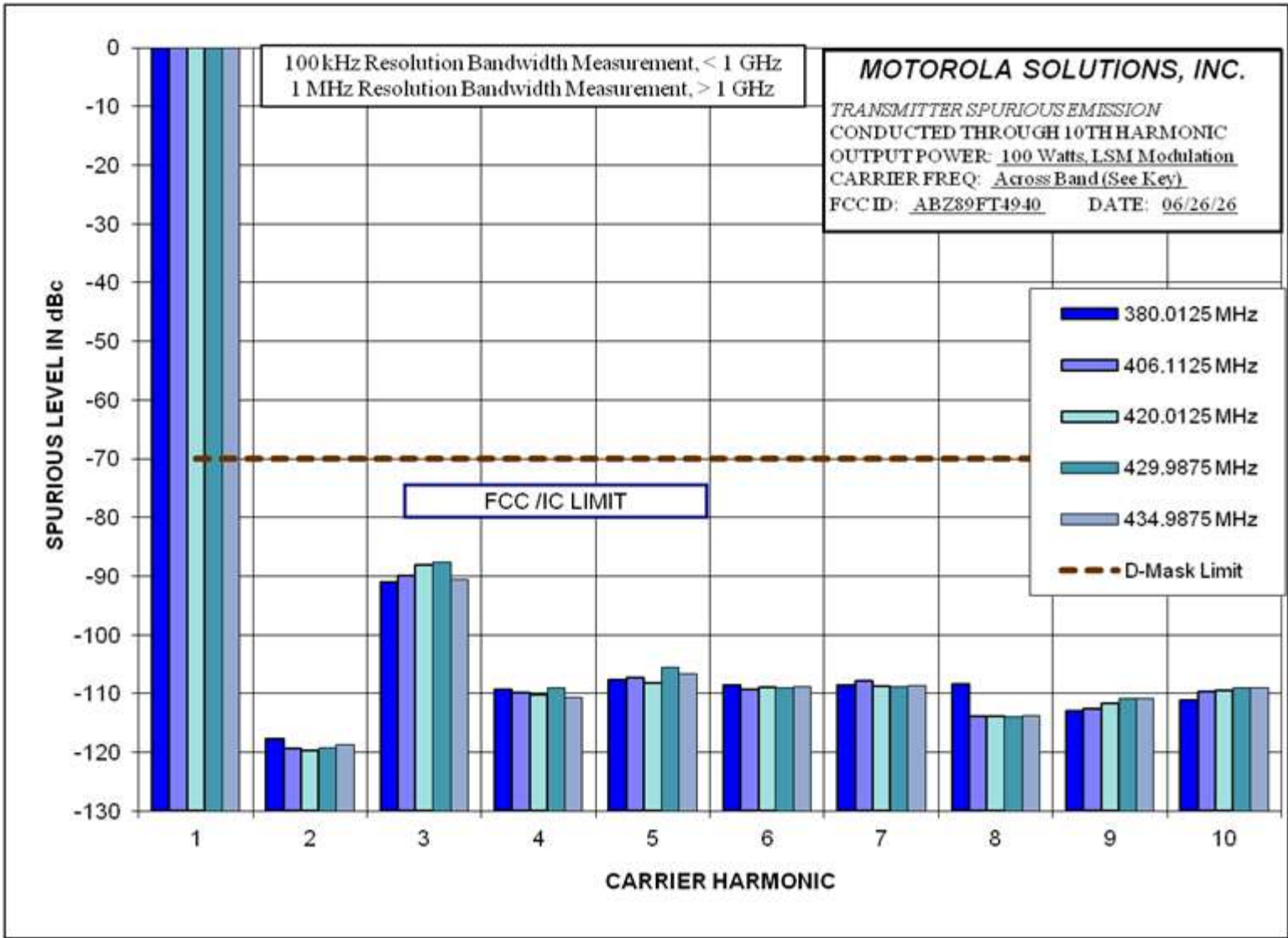
Modulation: Linear Simulcast Modulation (LSM), Compatible 4-Level Frequency Modulation (C4FM) or P25 Two Slot TDMA Digital Modulation (H-DQPSK) as indicated

Carrier Frequencies: Carrier frequencies of 380.0125, 406.1125, 420.0125, 429.9875, 434.9875 MHz were measured for conducted carrier harmonics and conducted emission. These frequencies represent the low end and high end of the 380-435 MHz band and the low and high end of the 406.1-430MHz band.

EXHIBIT	DESCRIPTION
E1-3.1	Conducted Spurious Harmonic Emissions, Power Output 100 Watts (Average), LSM The specification limit is -70 dBc (-20dBm)
E1-3.2	Conducted Spurious Harmonic Emissions, Power Output 2 Watts (Average), LSM The specification limit is -53.0 dBc (-20dBm)
E1-3.3	Conducted Spurious Harmonic Emissions, Power Output 110 Watts, C4FM The specification limit is -70 dBc (-19.59dBm)
E1-3.4	Conducted Spurious Harmonic Emissions, Power Output 2 Watts, C4FM The specification limit is -53.0 dBc (-20dBm)
E1-3.5	Conducted Spurious Harmonic Emissions, Power Output 100 Watts, H-DQPSK The specification limit is -70 dBc (-20dBm)
E1-3.6	Conducted Spurious Harmonic Emissions, Power Output 2 Watts, H-DQPSK The specification limit is -53.0 dBc (-20dBm)
E1-3.7, 8, 9	Conducted Spurious Emission Spectrum, 200 MHz Span, Power Output at 100 Watts, LSM The specification limit is -70 dBc (-20dBm)
E1-3.10, 11, 12	Conducted Spurious Emission Spectrum, 200 MHz Span, Power Output at 110 Watts, C4FM The specification limit is -70dBc (-19.59dBm)
E1-3.13,14, 15	Conducted Spurious Emission Spectrum, 200 MHz Span, Power Output at 100 Watts, H-DQPSK The specification limit is -70dBc (-20dBm)

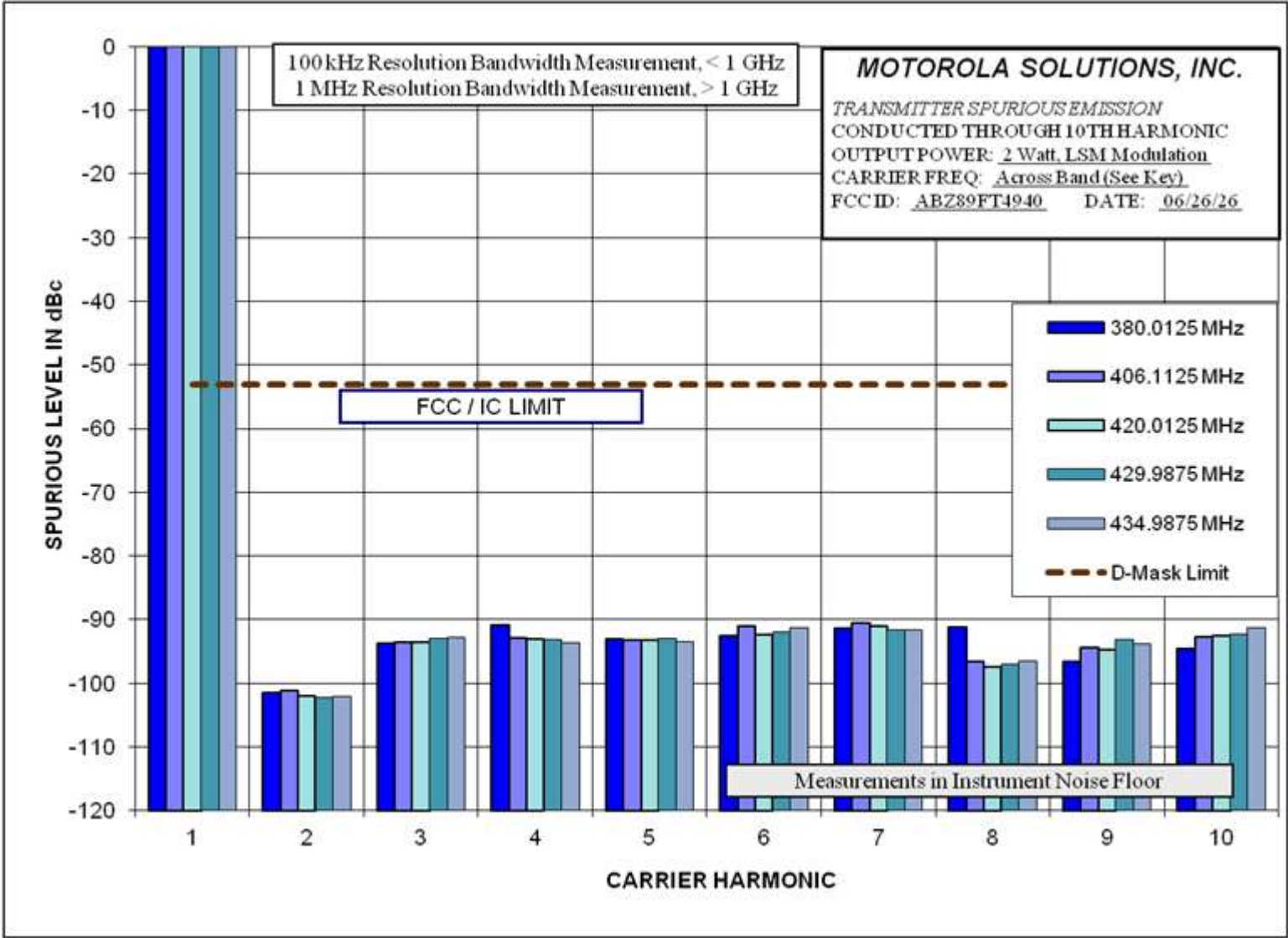
Report on Test Measurements

Conducted Spurious Harmonic Emissions – 100 Watts (Average) LSM



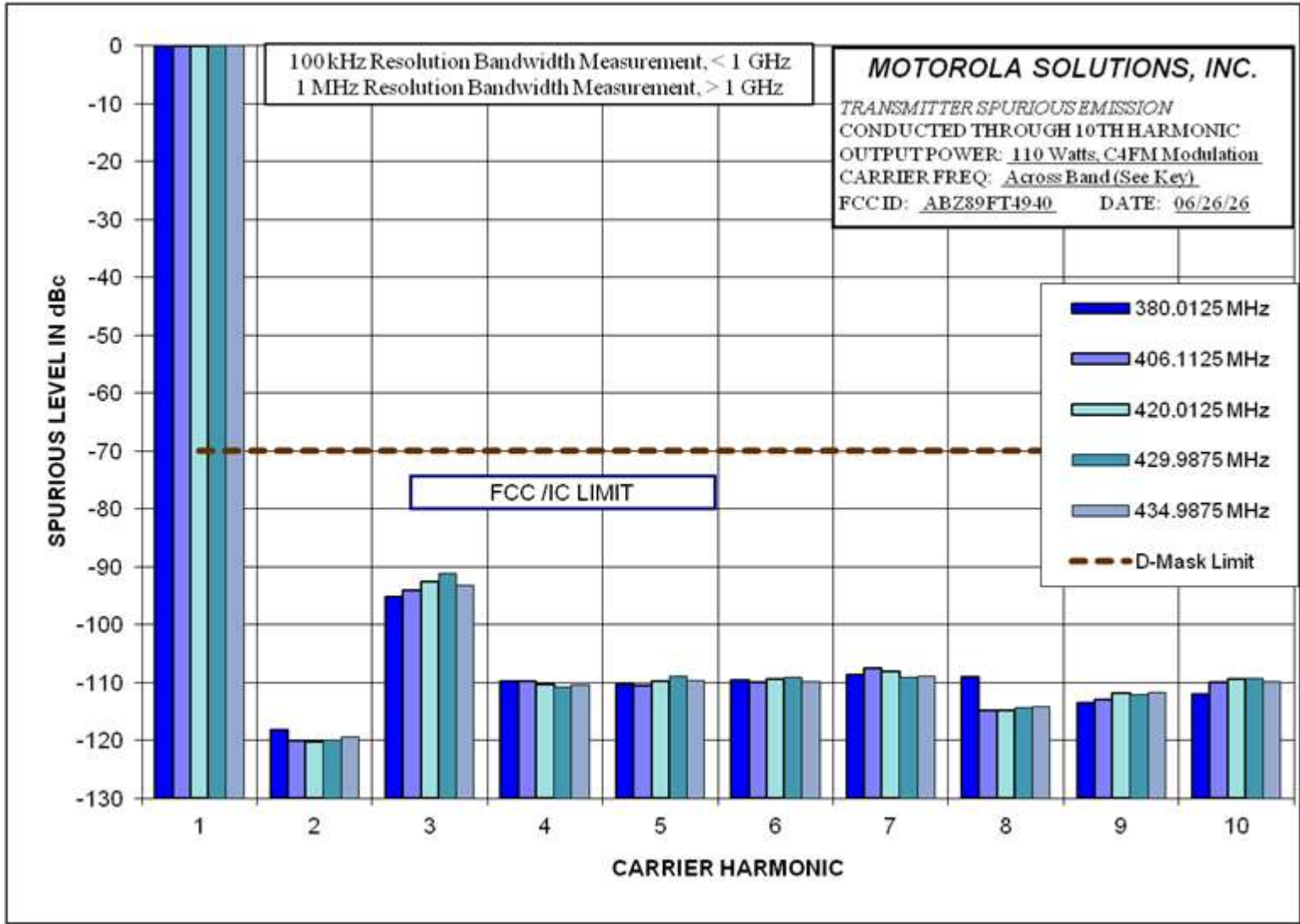
Report on Test Measurements

Conducted Spurious Harmonic Emissions – 2 Watts (Average) LSM



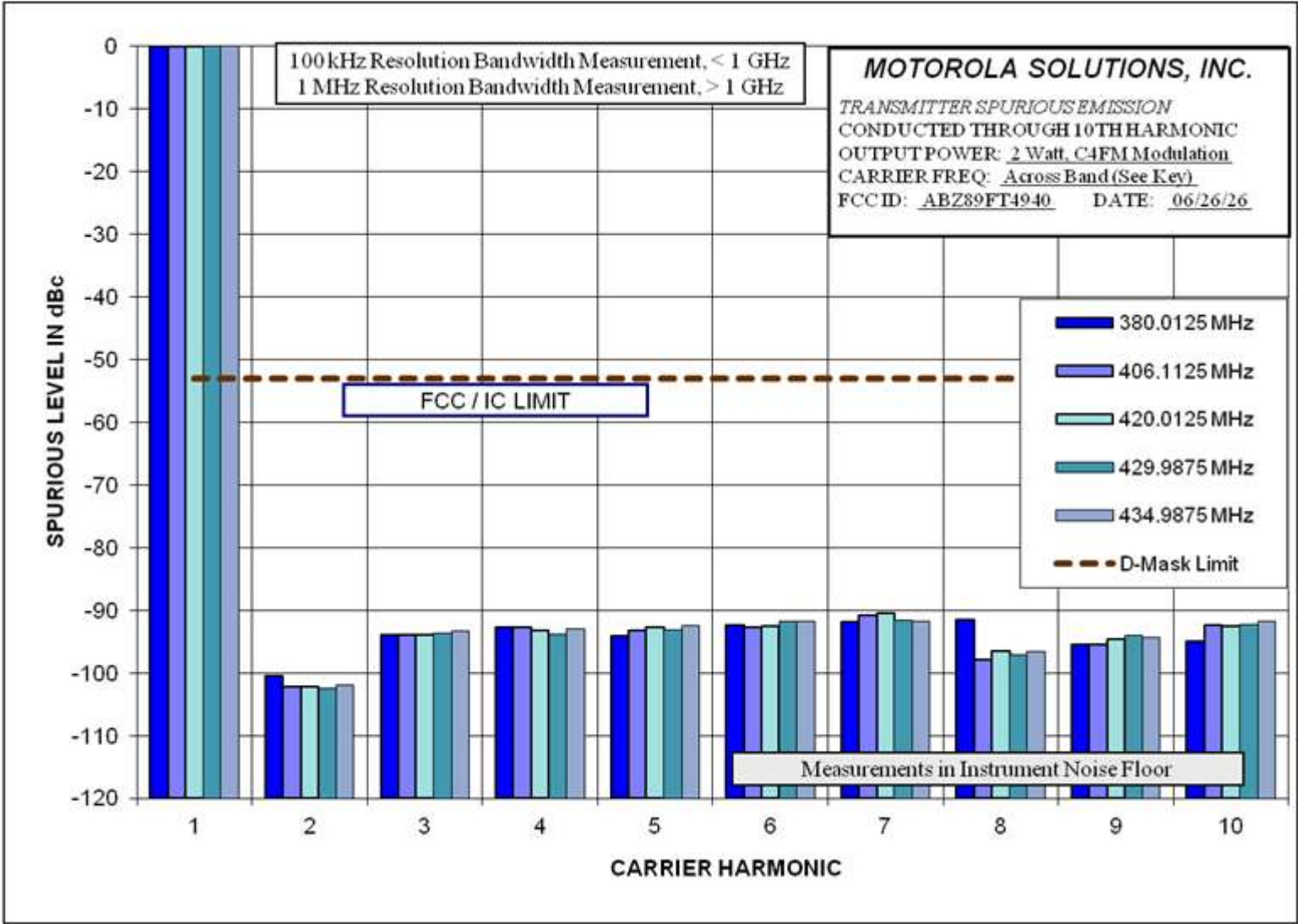
Report on Test Measurements

Conducted Spurious Harmonic Emissions – 110 Watts C4FM



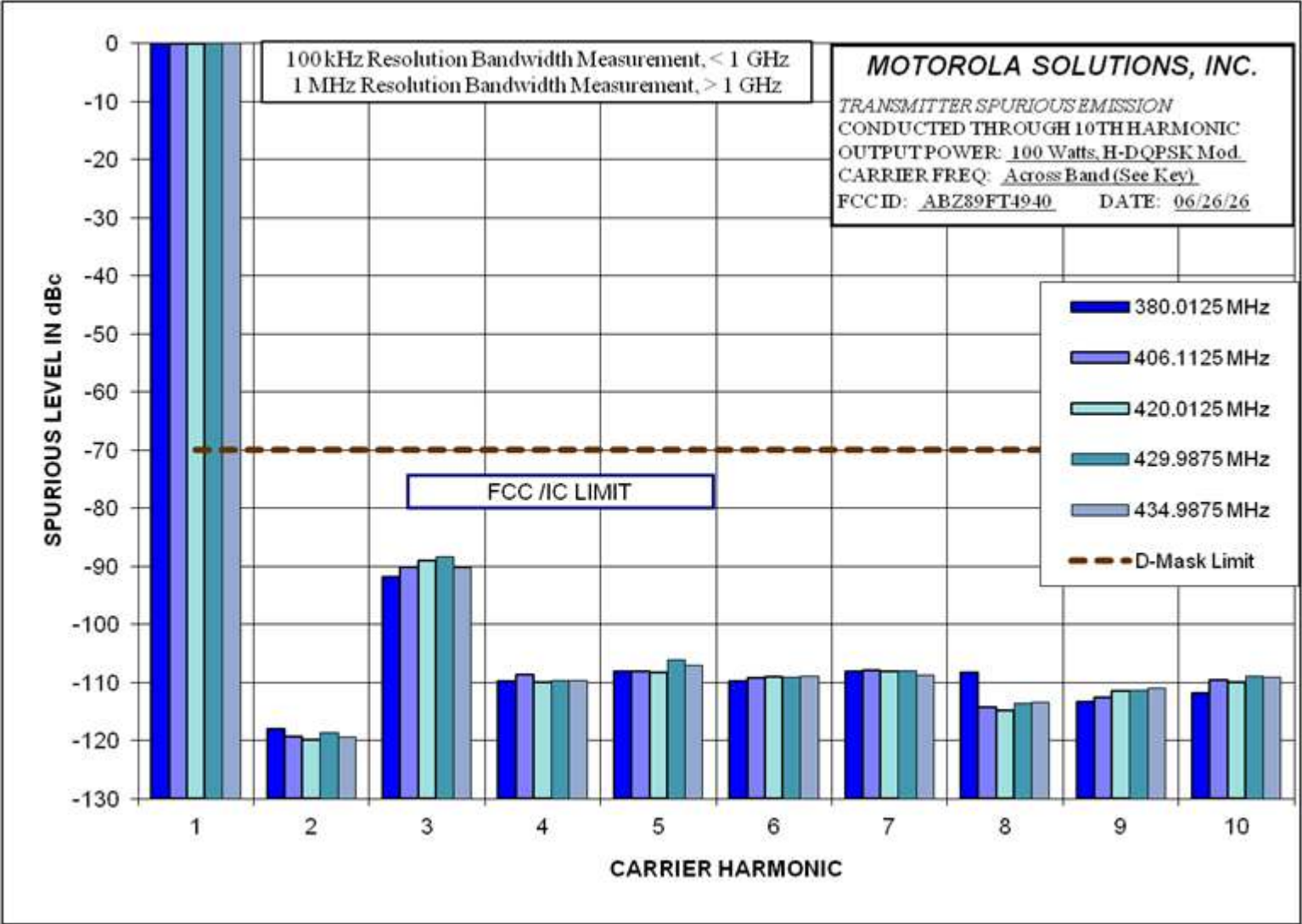
Report on Test Measurements

Conducted Spurious Harmonic Emissions – 2 Watts C4FM



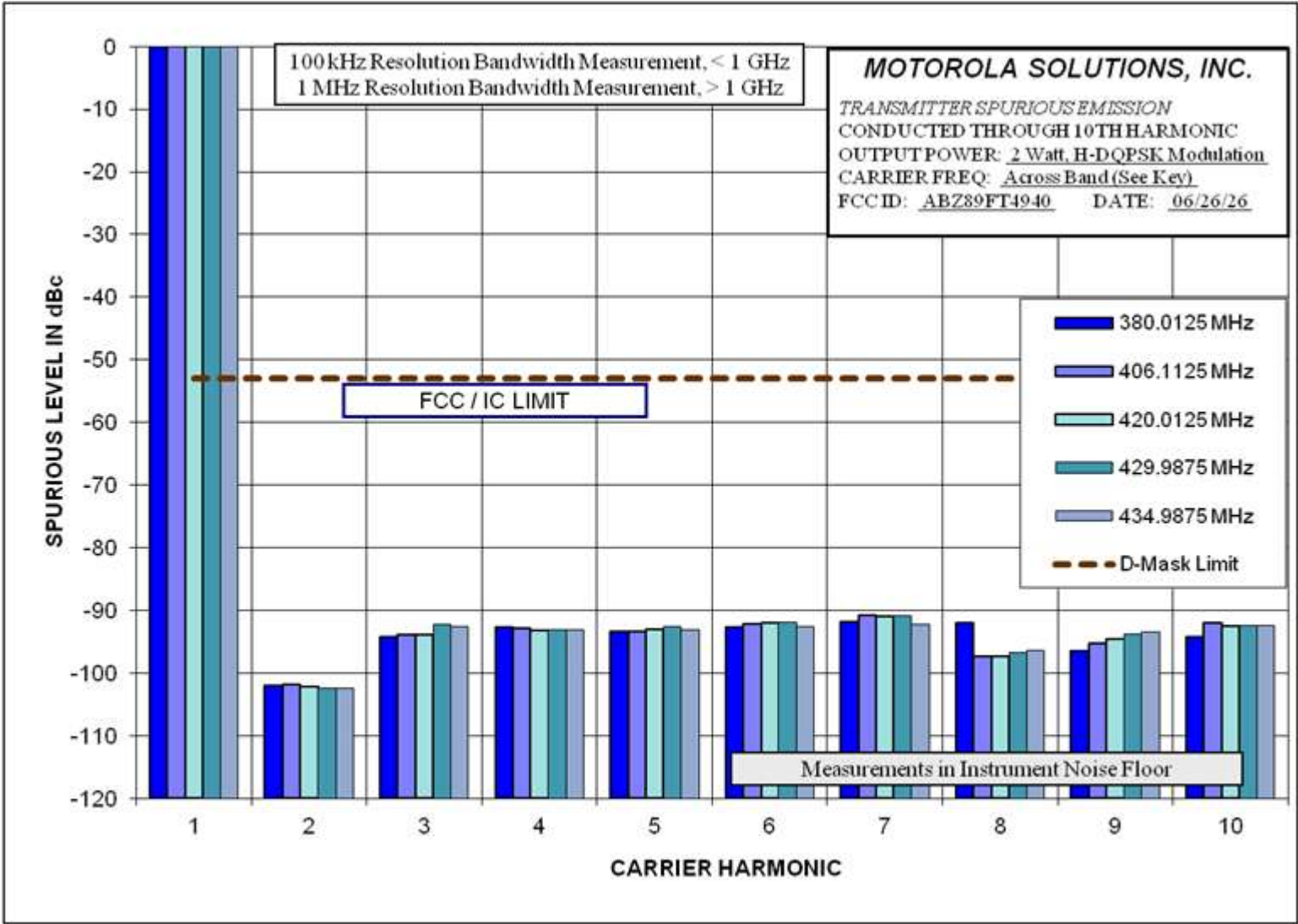
Report on Test Measurements

Conducted Spurious Harmonic Emissions – 100 Watts H-DQPSK



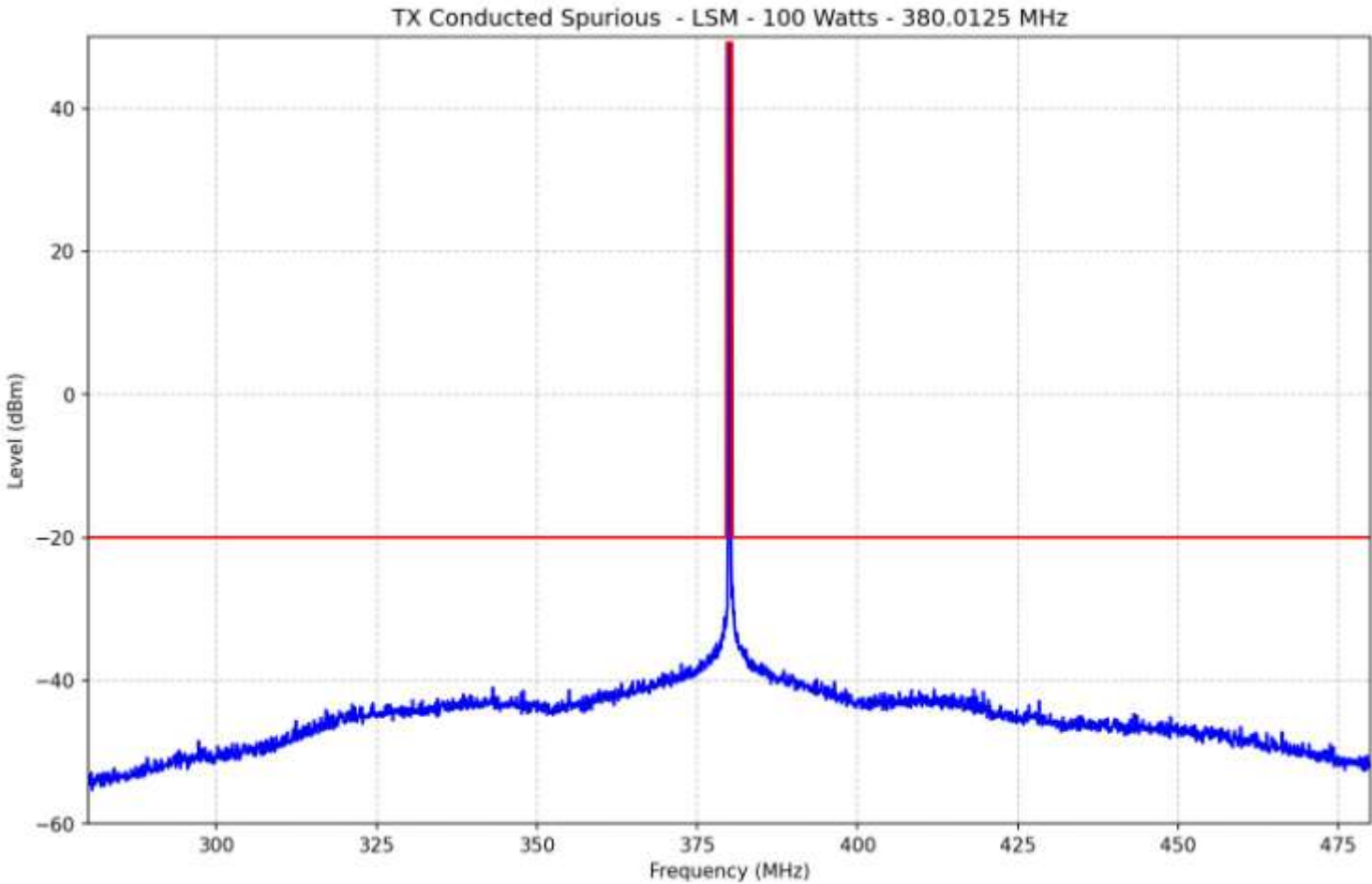
Report on Test Measurements

Conducted Spurious Harmonic Emissions – 2 Watts H-DQPSK



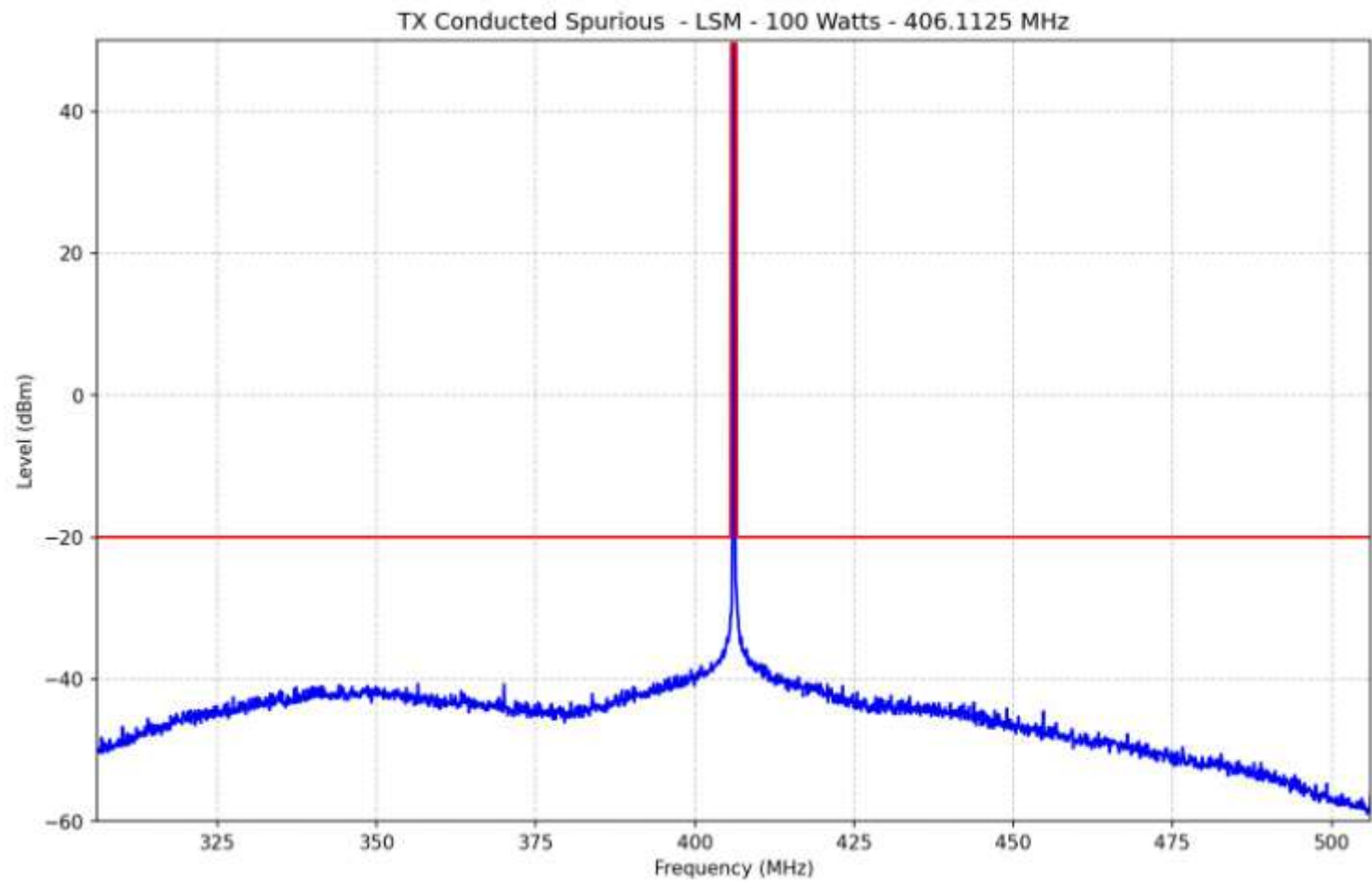
Report on Test Measurements

Conducted Spurious Emission Spectrum – 100Watts (Average) LSM – 200 MHz Span



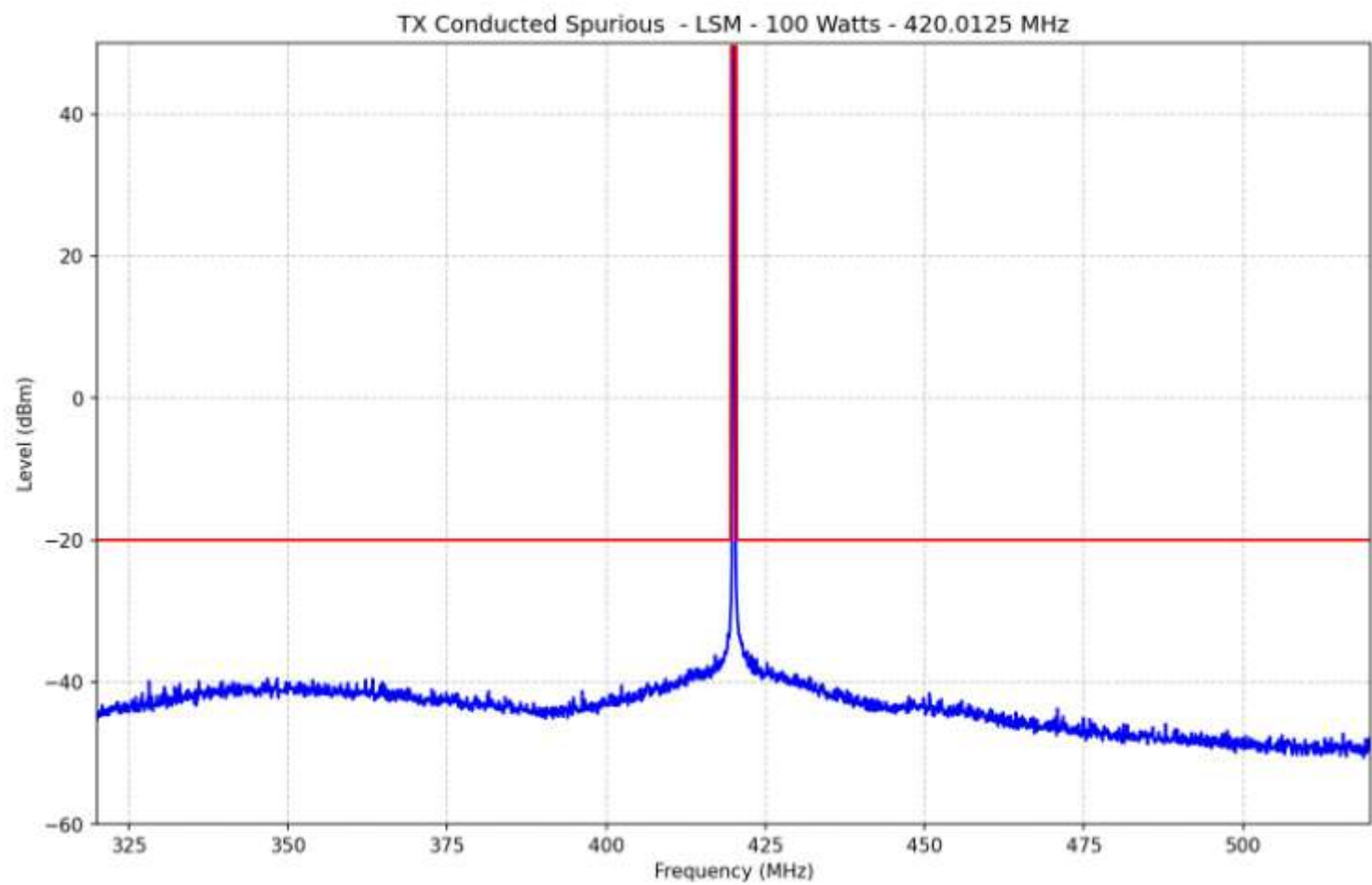
Report on Test Measurements

Conducted Spurious Emission Spectrum – 100 Watts (Average) LSM – 200 MHz Span



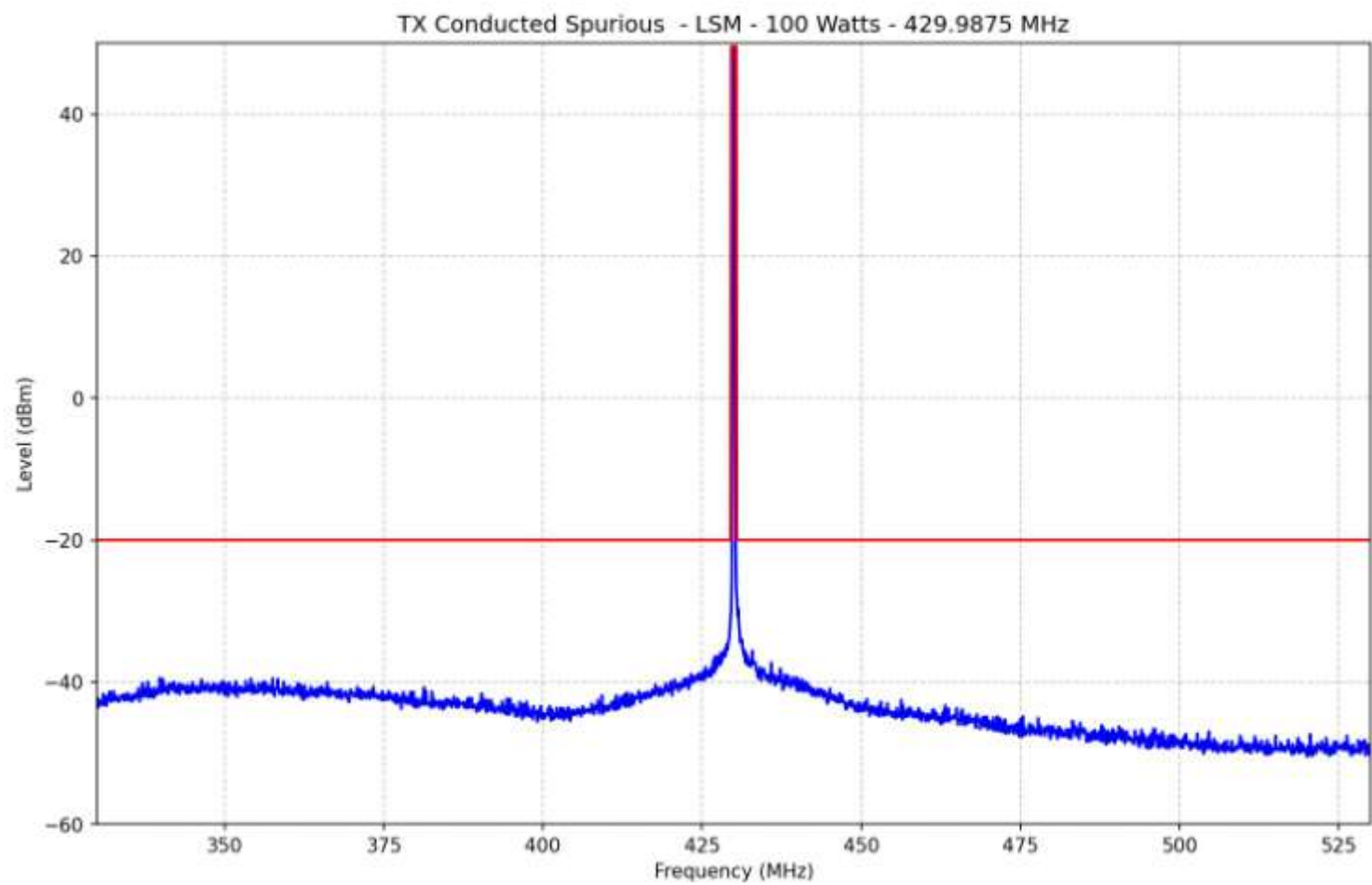
Report on Test Measurements

Conducted Spurious Emission Spectrum – 100Watts (Average) LSM – 200 MHz Span



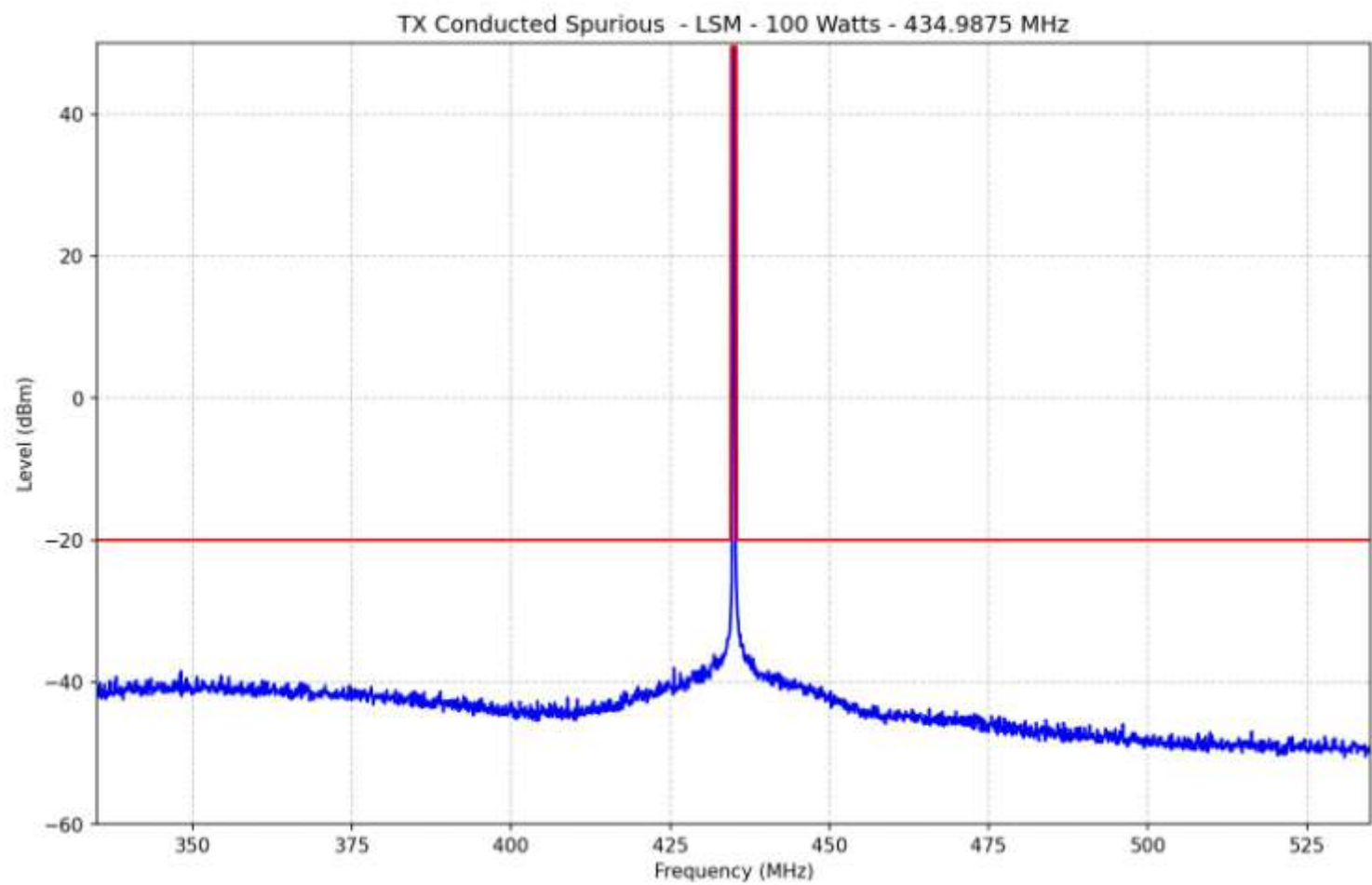
Report on Test Measurements

Conducted Spurious Emission Spectrum – 100Watts (Average) LSM – 200 MHz Span



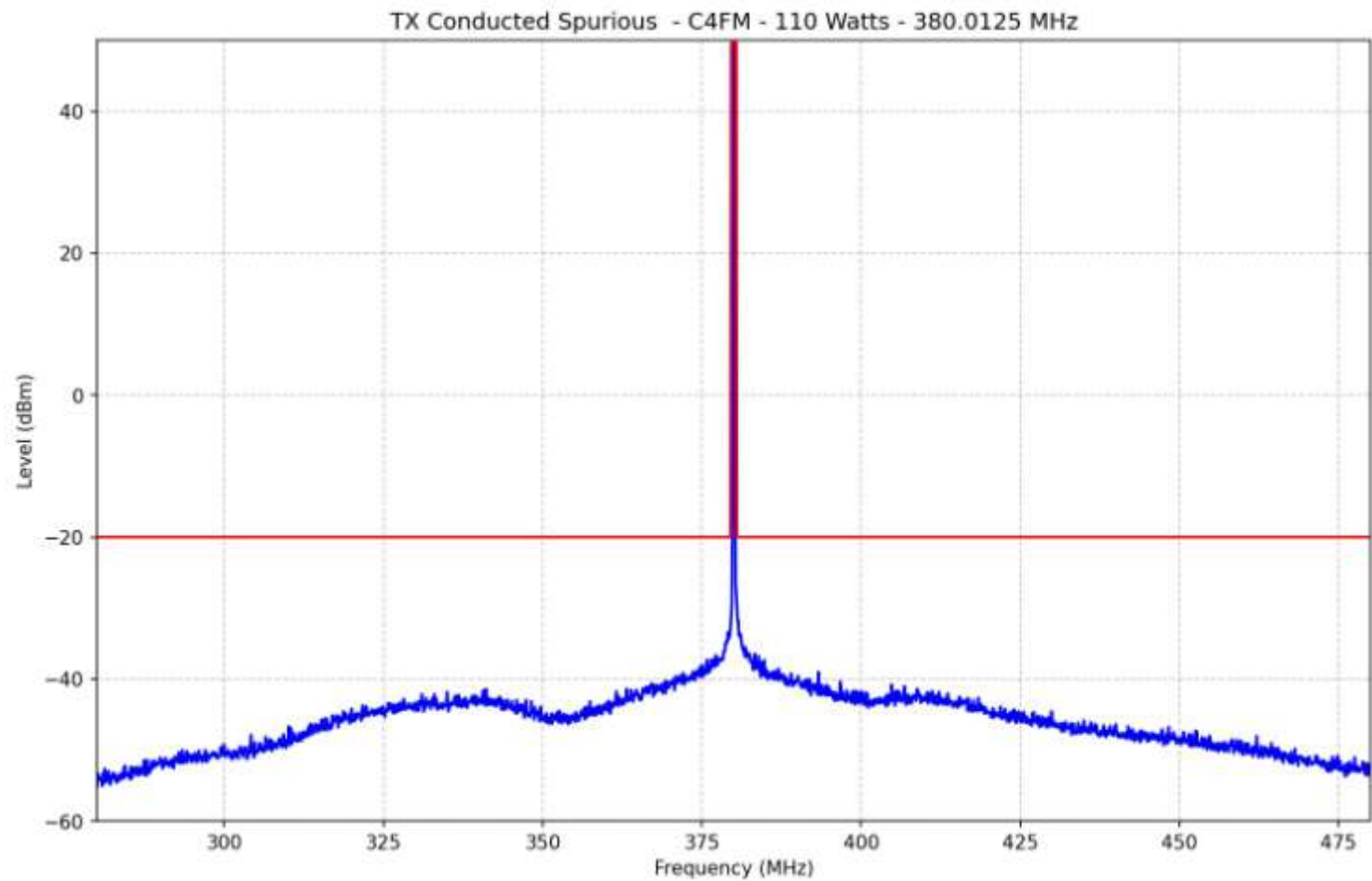
Report on Test Measurements

Conducted Spurious Emission Spectrum – 100Watts (Average) LSM – 200 MHz Span



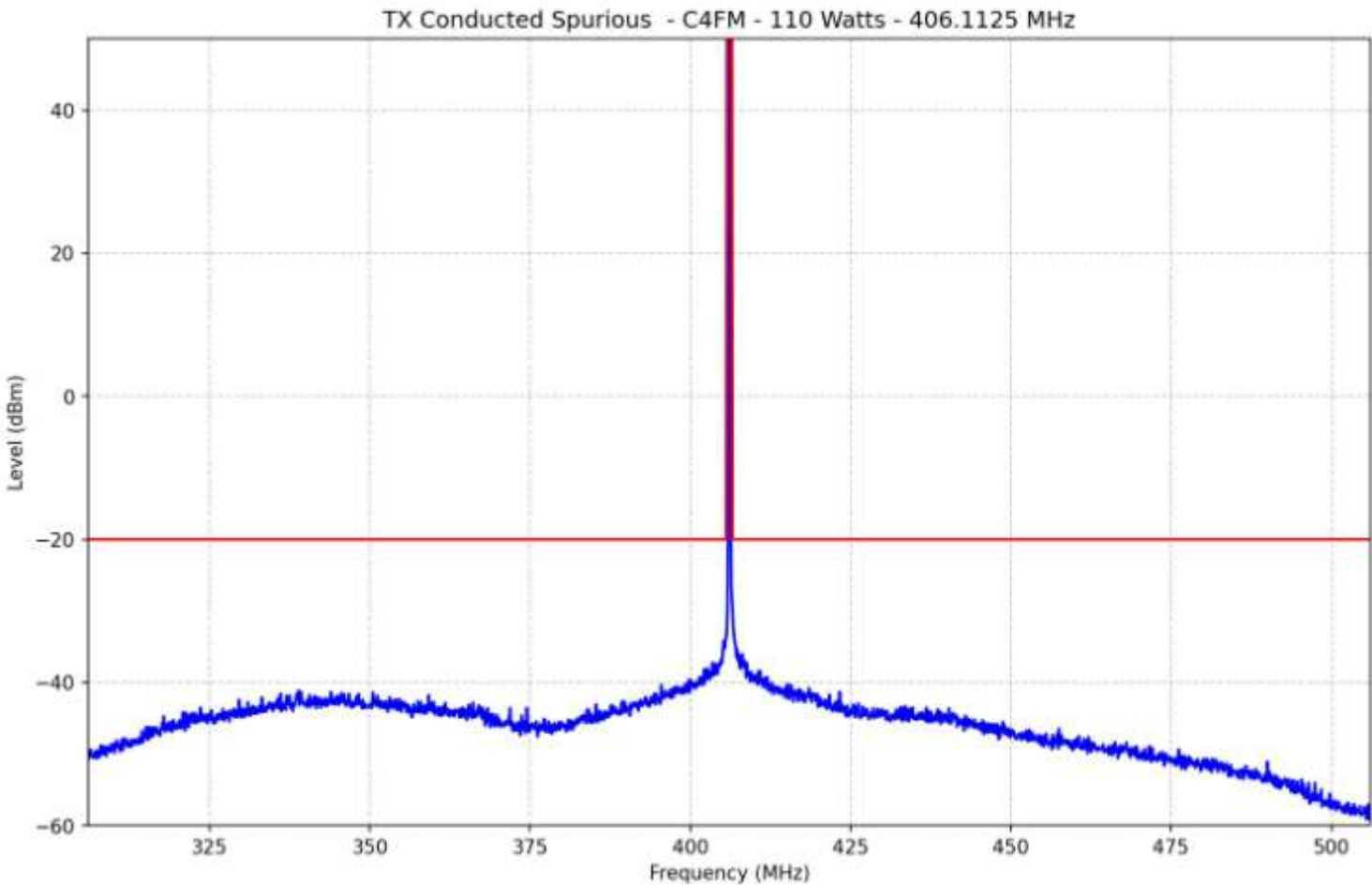
Report on Test Measurements

Conducted Spurious Emission Spectrum – 110 Watts C4FM – 200 MHz Span



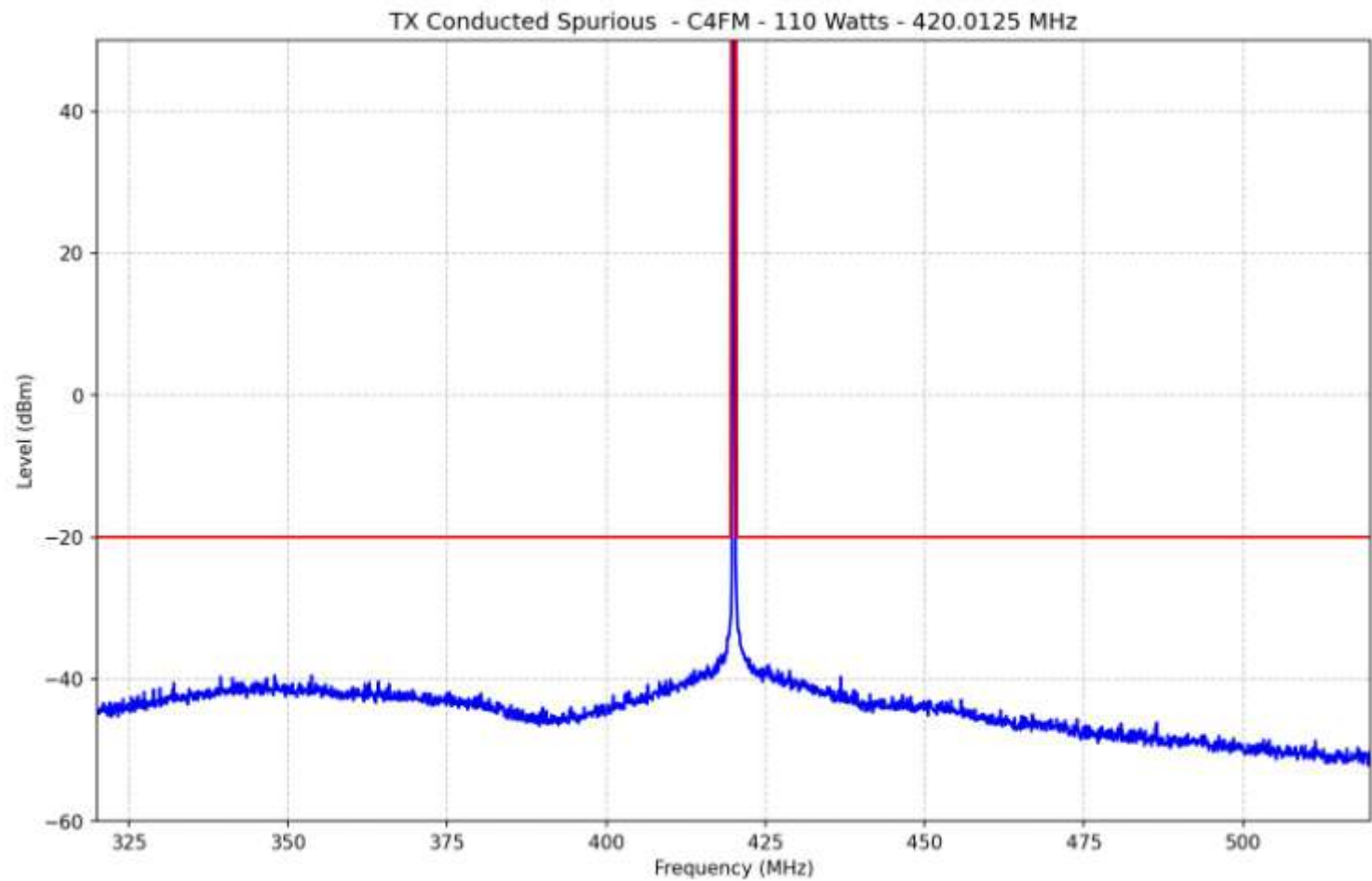
Report on Test Measurements

Conducted Spurious Emission Spectrum – 110 Watts C4FM – 200 MHz Span



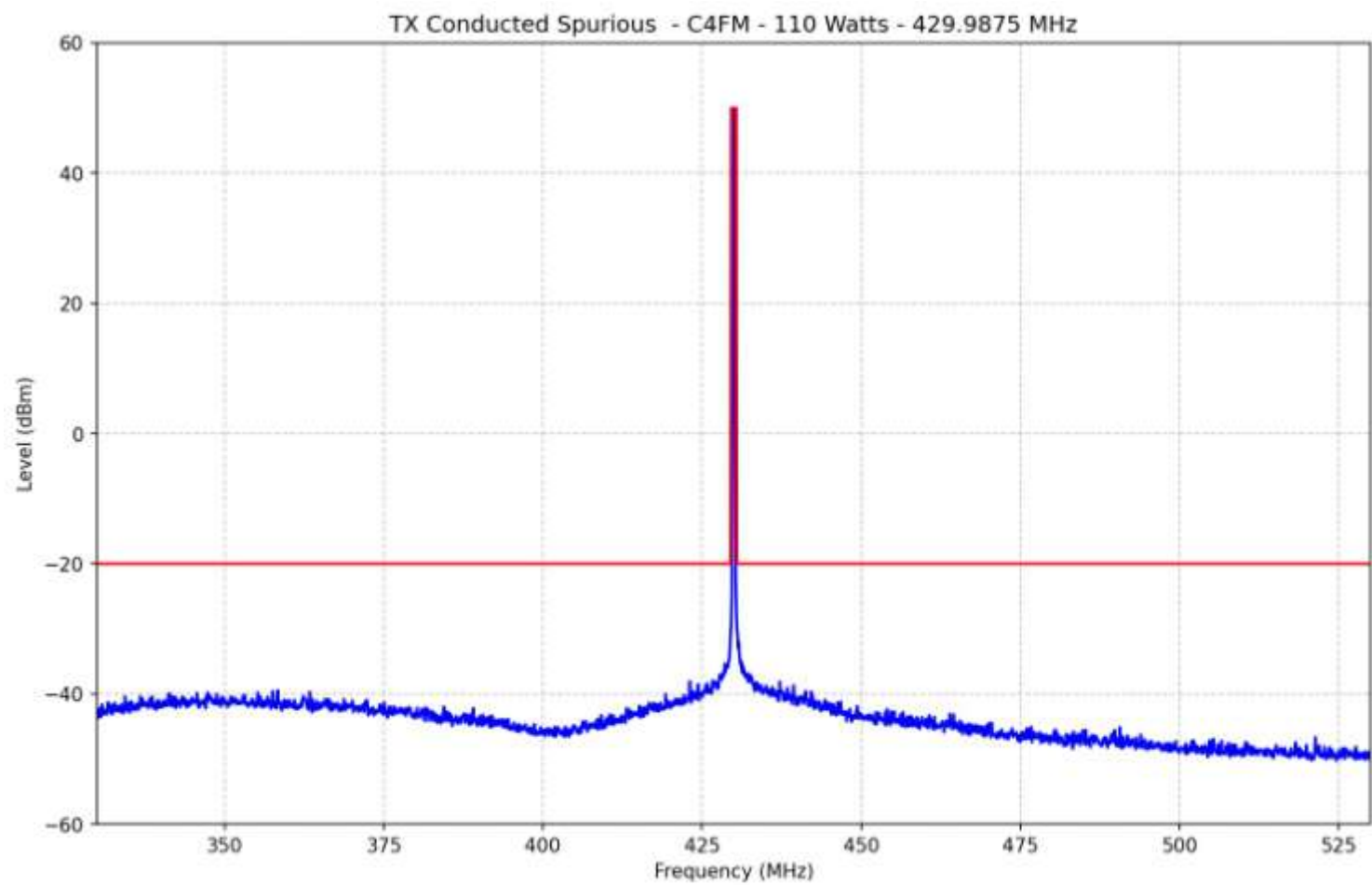
Report on Test Measurements

Conducted Spurious Emission Spectrum – 110 Watts C4FM – 200 MHz Span



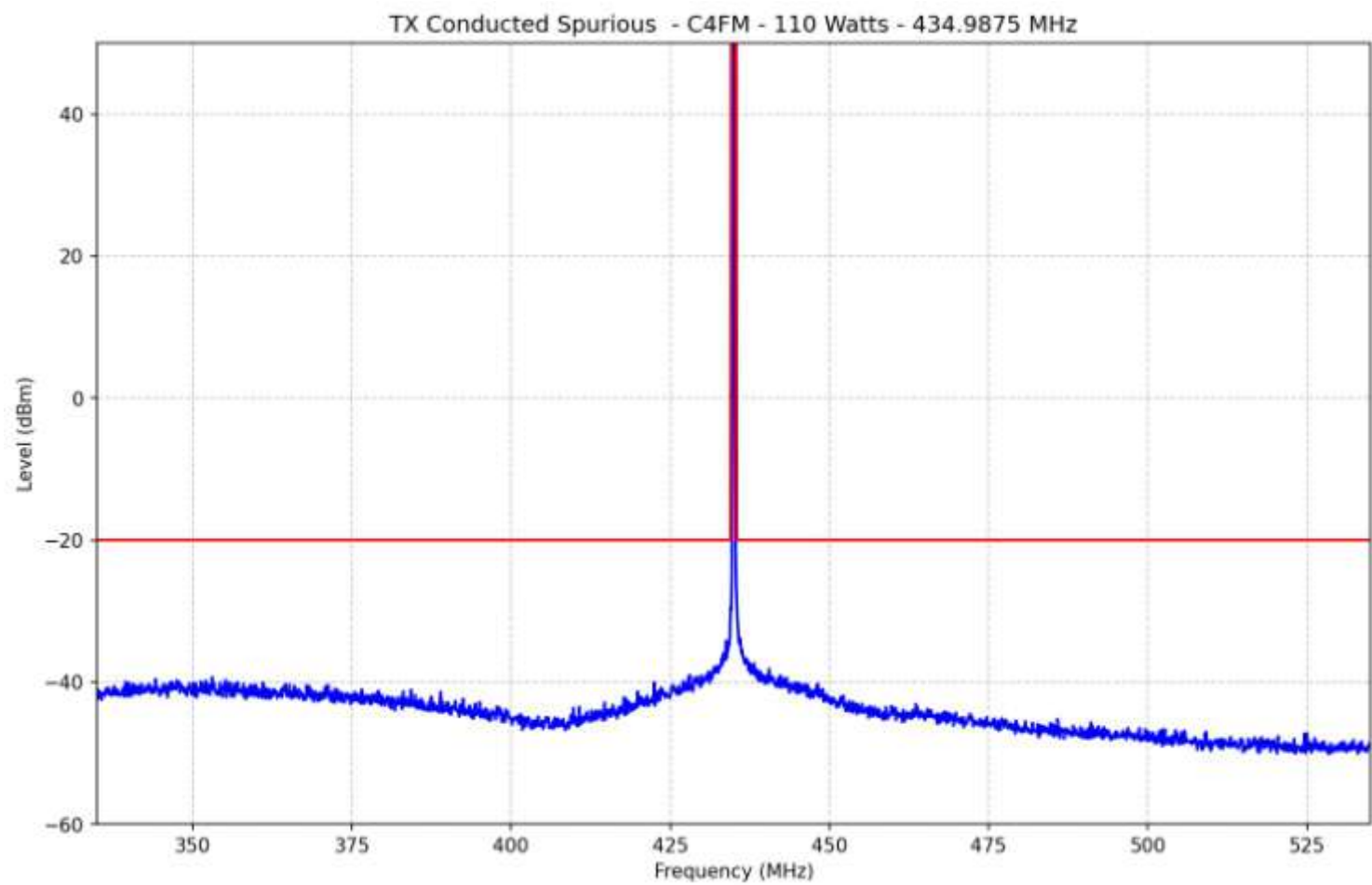
Report on Test Measurements

Conducted Spurious Emission Spectrum – 110 Watts C4FM – 200 MHz Span



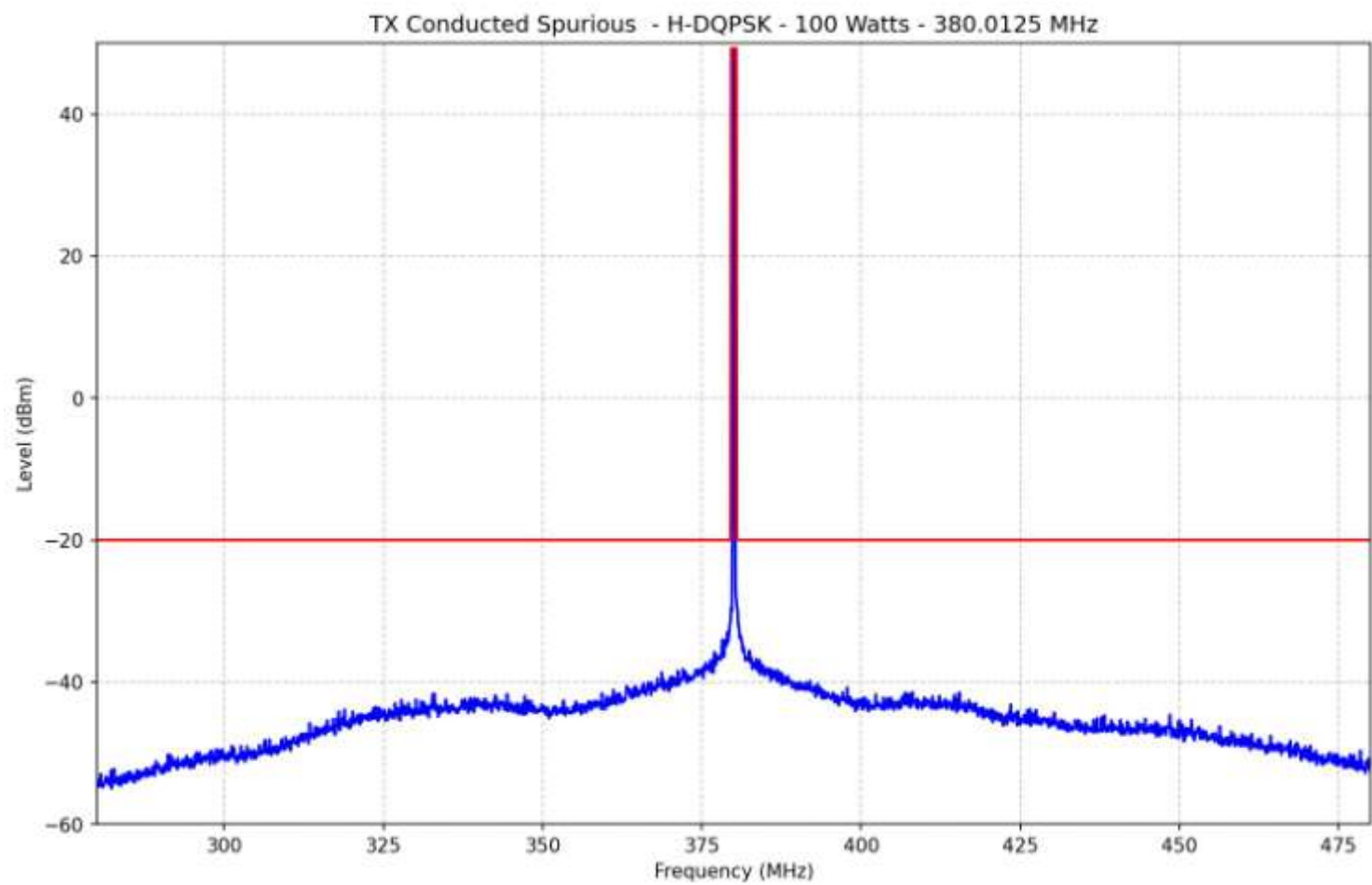
Report on Test Measurements

Conducted Spurious Emission Spectrum – 110 Watts C4FM – 200 MHz Span



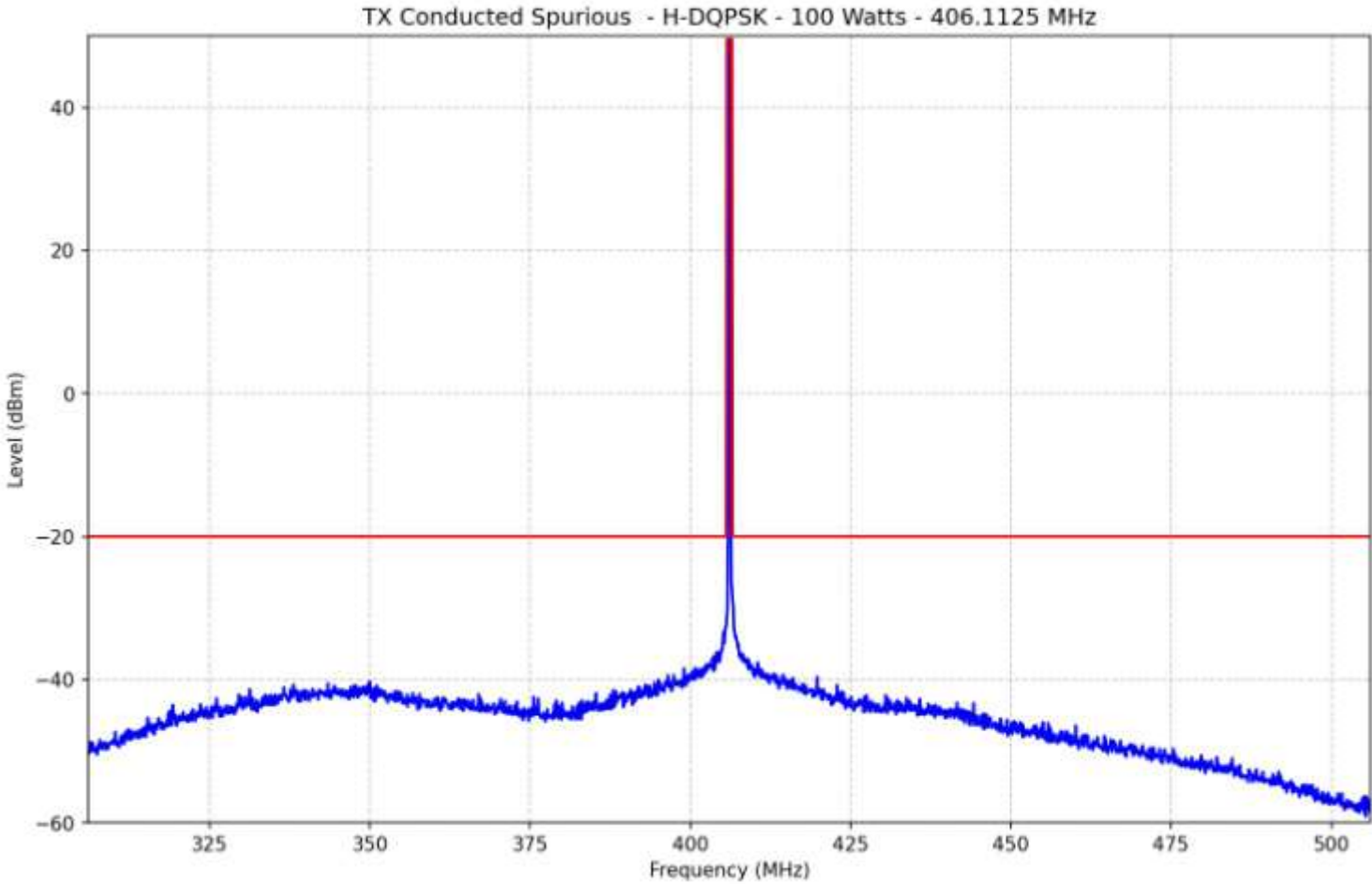
Report on Test Measurements

Conducted Spurious Emission Spectrum – 100 Watts H-DQPSK P25 Two Slot TDMA – 200 MHz Span



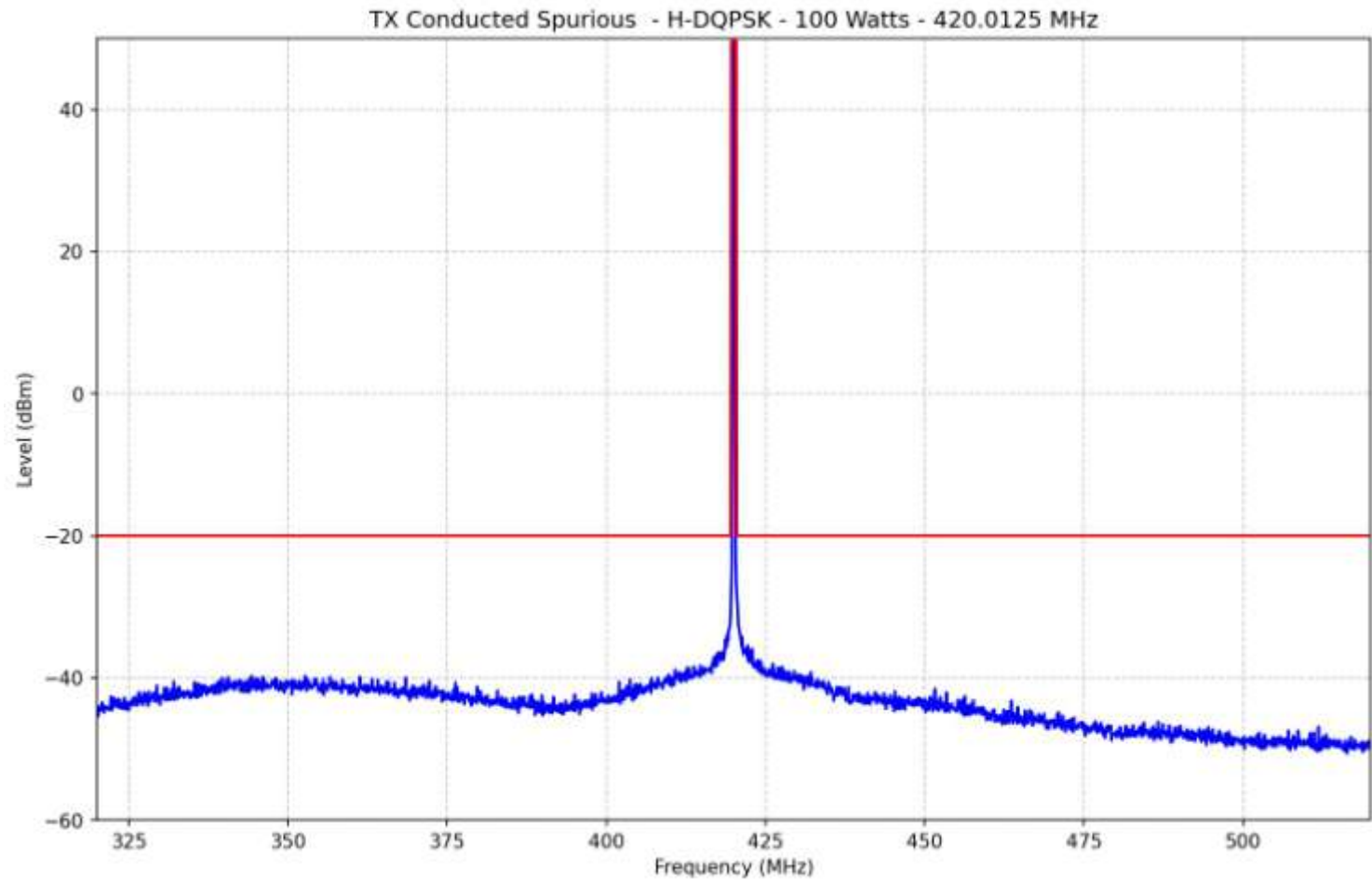
Report on Test Measurements

Conducted Spurious Emission Spectrum – 100 Watts H-DQPSK P25 Two Slot TDMA – 200 MHz Span



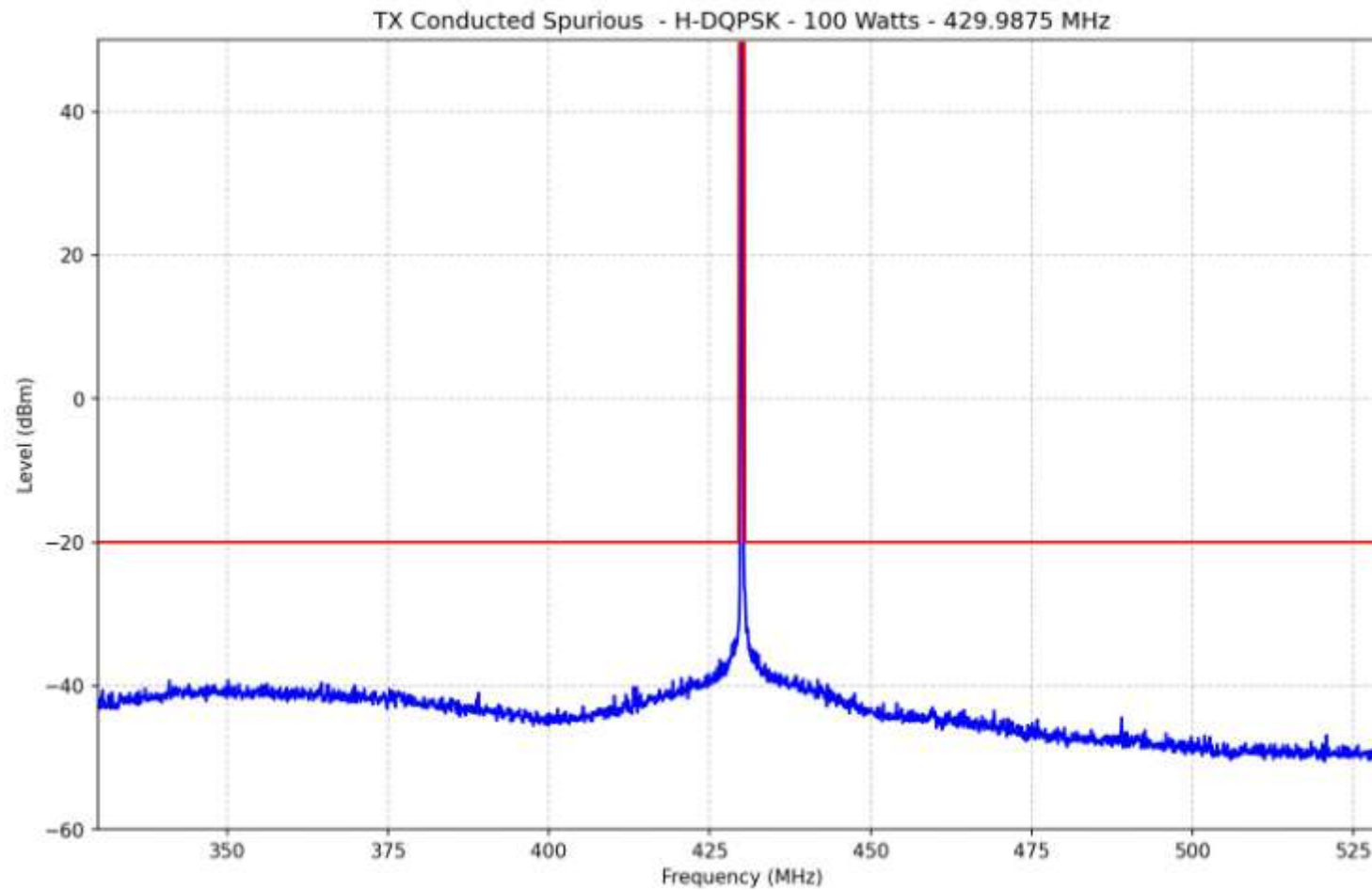
Report on Test Measurements

Conducted Spurious Emission Spectrum – 100 Watts H-DQPSK P25 Two Slot TDMA – 200 MHz Span



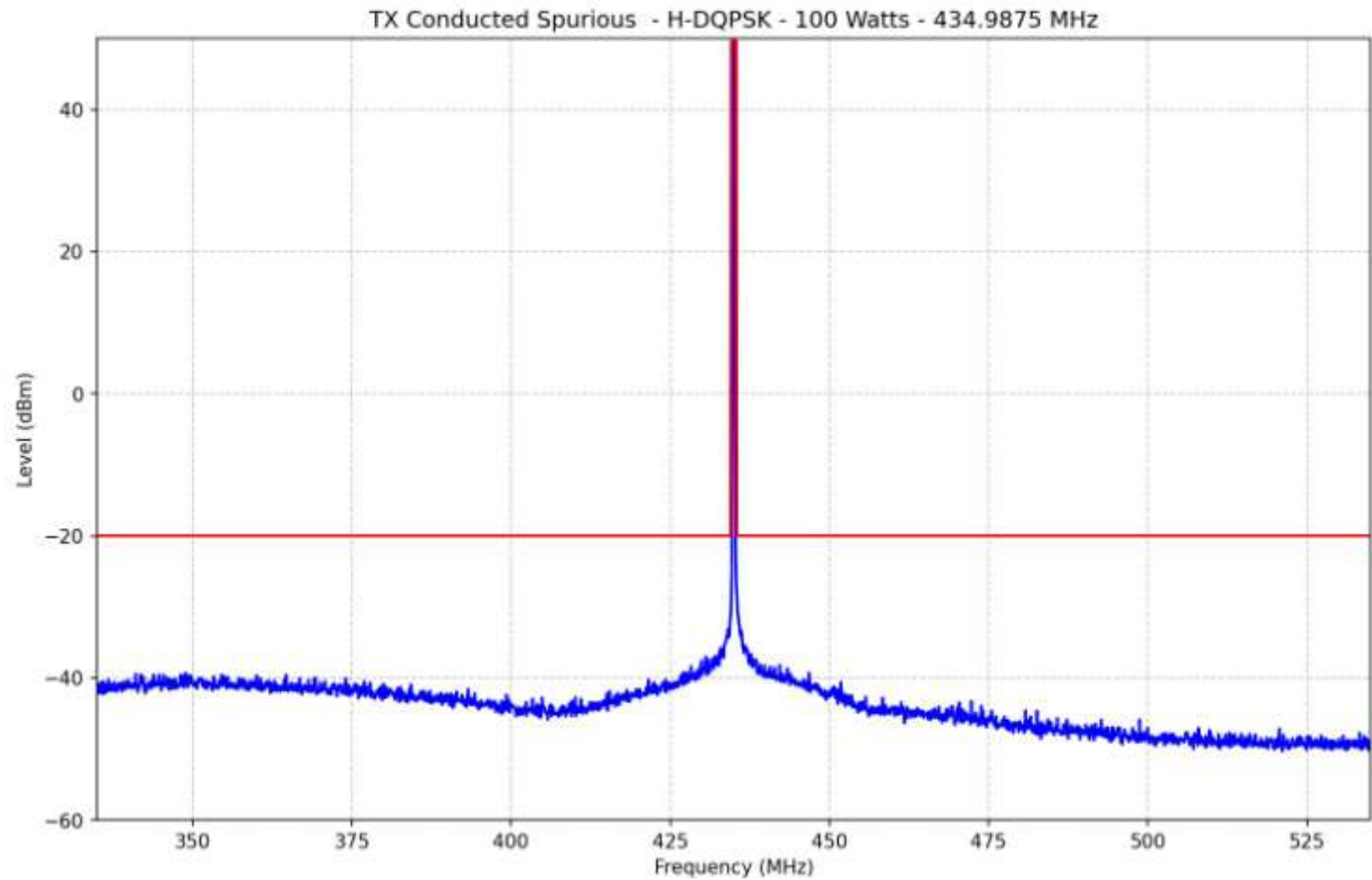
Report on Test Measurements

Conducted Spurious Emission Spectrum – 100 Watts H-DQPSK P25 Two Slot TDMA – 200 MHz Span



Report on Test Measurements

Conducted Spurious Emission Spectrum – 100 Watts H-DQPSK P25 Two Slot TDMA – 200 MHz Span



Report on Test Measurements

Radiated Spurious Emissions, Harmonics

Specification Requirement 47 CFR §90.210(d) and IC RSS-119 section 5.8.3 - Emission Limits – “D-Mask”:

Emission Mask D: For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

(2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5 kHz:
At least 50 plus $10 \log_{10}(P)$ dB or 70 dB, whichever is the lesser attenuation.

Modulation: Linear Simulcast Modulation (LSM), Compatible 4-Level Frequency Modulation (C4FM) or P25 Two Slot TDMA Digital Modulation (H-DQPSK) as indicated

Carrier Frequencies: Radiated Spurious Emissions was run with 1 carriers transmitting at full power and 2W. Carrier frequencies of 380.0125, 406.0125, 420.0125, 429.9875, 434.9875 MHz were measured for all three modulations. These frequencies represent the low end and high end of the 380-435 MHz band and the low and high end of the 406.1-430MHz band.

EXHIBIT	DESCRIPTION
E1-4.1	Radiated Spurious Harmonic Emissions, Power Output 100 Watts (Average), 380.0125 MHz, LSM
E1-4.2	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 380.0125 MHz, LSM
E1-4.3	Radiated Spurious Harmonic Emissions, Power Output 100 Watts (Average), 406.1125 MHz, LSM
E1-4.4	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 406.1125 MHz, LSM
E1-4.5	Radiated Spurious Harmonic Emissions, Power Output 100 Watts (Average), 420.0125 MHz, LSM
E1-4.6	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 420.0125 MHz, LSM
E1-4.7	Radiated Spurious Harmonic Emissions, Power Output 100 Watts (Average), 429.9875 MHz, LSM
E1-4.8	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 429.9875 MHz, LSM
E1-4.9	Radiated Spurious Harmonic Emissions, Power Output 100 Watts (Average), 434.9875 MHz, LSM
E1-4.10	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 434.9875 MHz, LSM
E1-4.11	Radiated Spurious Harmonic Emissions, Power Output 110 Watts (Average), 380.0125 MHz, C4FM
E1-4.12	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 380.0125 MHz, C4FM
E1-4.13	Radiated Spurious Harmonic Emissions, Power Output 110 Watts (Average), 406.1125 MHz, C4FM
E1-4.14	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 406.1125 MHz, C4FM
E1-4.15	Radiated Spurious Harmonic Emissions, Power Output 110 Watts (Average), 420.0125 MHz, C4FM
E1-4.16	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 420.0125 MHz, C4FM
E1-4.17	Radiated Spurious Harmonic Emissions, Power Output 110 Watts (Average), 429.9875 MHz, C4FM
E1-4.18	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 429.9875 MHz, C4FM
E1-4.19	Radiated Spurious Harmonic Emissions, Power Output 110 Watts (Average), 434.9875 MHz, C4FM
E1-4.20	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 434.9875 MHz, C4FM

Report on Test Measurements

E1-4.21	Radiated Spurious Harmonic Emissions, Power Output 100 Watts (Average), 380.0125 MHz, H-DQPSK
E1-4.22	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 380.0125 MHz, H-DQPSK
E1-4.23	Radiated Spurious Harmonic Emissions, Power Output 100 Watts (Average), 406.1125 MHz, H-DQPSK
E1-4.24	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 406.1125 MHz, H-DQPSK
E1-4.25	Radiated Spurious Harmonic Emissions, Power Output 100 Watts (Average), 420.0125 MHz, H-DQPSK
E1-4.26	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 420.0125 MHz, H-DQPSK
E1-4.27	Radiated Spurious Harmonic Emissions, Power Output 100 Watts (Average), 429.9875 MHz, H-DQPSK
E1-4.28	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 429.9875 MHz, H-DQPSK
E1-4.29	Radiated Spurious Harmonic Emissions, Power Output 100 Watts (Average), 434.9875 MHz, H-DQPSK
E1-4.30	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 434.9875 MHz, H-DQPSK

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 100 Watts (Average), LSM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – LSM
Frequency Tested	380.0125MHz
Notes	100W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
760.0250	H	14.96		-56.10	0.00	1.87	-57.97	107.97	70.00
760.0250	V	14.65		-54.27	0.00	1.87	-56.14	106.14	70.00
1140.0375	H	24.75		-43.66	0.18	2.32	-45.79	95.79	70.00
1140.0375	V	25.17		-41.50	0.18	2.32	-43.64	93.64	70.00
1520.0500	H	23.82		-45.44	2.36	2.70	-45.78	95.78	70.00
1520.0500	V	24.29		-42.48	2.36	2.70	-42.82	92.82	70.00
1900.0625	H	52.11	Ambient	-54.71	1.24	3.00	-56.47	106.47	70.00
1900.0625	V	52.54	Ambient	-51.67	1.24	3.00	-53.43	103.43	70.00
2280.0750	H	51.50	Ambient	-54.39	2.60	3.33	-55.13	105.13	70.00
2280.0750	V	51.76	Ambient	-52.82	2.60	3.33	-53.56	103.56	70.00
2660.0875	H	50.17	Ambient	-56.07	3.32	3.64	-56.39	106.39	70.00
2660.0875	V	50.88	Ambient	-54.25	3.32	3.64	-54.57	104.57	70.00
3040.1000	H	50.85	Ambient	-54.35	3.92	3.91	-54.35	104.35	70.00
3040.1000	V	51.33	Ambient	-52.13	3.92	3.91	-52.12	102.12	70.00
3420.1125	H	50.46	Ambient	-54.96	5.03	4.15	-54.07	104.07	70.00
3420.1125	V	50.38	Ambient	-53.13	5.03	4.15	-52.25	102.25	70.00
3800.1250	H	50.35	Ambient	-53.02	4.72	4.36	-52.66	102.66	70.00
3800.1250	V	50.58	Ambient	-51.59	4.72	4.36	-51.23	101.23	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), LSM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – LSM
Frequency Tested	380.0125MHz
Notes	2W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
760.0250	H	12.41	Ambient	-58.65	0.00	1.87	-60.52	93.53	53.00
760.0250	V	12.27	Ambient	-56.65	0.00	1.87	-58.52	91.53	53.00
1140.0375	H	23.43	Ambient	-44.98	0.18	2.32	-47.11	80.12	53.00
1140.0375	V	23.09	Ambient	-43.58	0.18	2.32	-45.72	78.73	53.00
1520.0500	H	23.90	Ambient	-45.36	2.36	2.70	-45.70	78.71	53.00
1520.0500	V	23.96	Ambient	-42.81	2.36	2.70	-43.15	76.16	53.00
1900.0625	H	52.03	Ambient	-54.79	1.24	3.00	-56.55	89.56	53.00
1900.0625	V	51.92	Ambient	-52.29	1.24	3.00	-54.05	87.06	53.00
2280.0750	H	51.83	Ambient	-54.06	2.60	3.33	-54.80	87.81	53.00
2280.0750	V	52.33	Ambient	-52.25	2.60	3.33	-52.99	86.00	53.00
2660.0875	H	51.46	Ambient	-54.78	3.32	3.64	-55.10	88.11	53.00
2660.0875	V	51.00	Ambient	-54.13	3.32	3.64	-54.45	87.46	53.00
3040.1000	H	50.64	Ambient	-54.56	3.92	3.91	-54.56	87.57	53.00
3040.1000	V	51.43	Ambient	-52.03	3.92	3.91	-52.02	85.03	53.00
3420.1125	H	50.60	Ambient	-54.82	5.03	4.15	-53.93	86.94	53.00
3420.1125	V	50.96	Ambient	-52.55	5.03	4.15	-51.67	84.68	53.00
3800.1250	H	49.80	Ambient	-53.57	4.72	4.36	-53.21	86.22	53.00
3800.1250	V	50.10	Ambient	-52.07	4.72	4.36	-51.71	84.72	53.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 100 Watts (Average), LSM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – LSM
Frequency Tested	406.1125MHz
Notes	100W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
812.2250	H	16.91		-53.80	0.00	1.93	-55.73	105.73	70.00
812.2250	V	16.51		-51.59	0.00	1.93	-53.52	103.52	70.00
1218.3375	H	26.73		-41.22	0.16	2.41	-43.46	93.46	70.00
1218.3375	V	26.90		-39.14	0.16	2.41	-41.38	91.38	70.00
1624.4500	H	24.48	Ambient	-44.99	2.59	2.79	-45.19	95.19	70.00
1624.4500	V	24.12	Ambient	-42.53	2.59	2.79	-42.73	92.73	70.00
2030.5625	H	53.05		-51.98	1.19	3.10	-53.89	103.89	70.00
2030.5625	V	51.53		-51.68	1.19	3.10	-53.58	103.58	70.00
2436.6750	H	50.19	Ambient	-56.13	2.84	3.46	-56.75	106.75	70.00
2436.6750	V	51.88	Ambient	-53.56	2.84	3.46	-54.18	104.18	70.00
2842.7875	H	50.18	Ambient	-56.26	3.95	3.78	-56.09	106.09	70.00
2842.7875	V	50.39	Ambient	-54.29	3.95	3.78	-54.12	104.12	70.00
3248.9000	H	51.91	Ambient	-52.91	4.52	4.05	-52.44	102.44	70.00
3248.9000	V	51.38	Ambient	-51.21	4.52	4.05	-50.74	100.74	70.00
3655.0125	H	49.86	Ambient	-53.78	4.68	4.29	-53.39	103.39	70.00
3655.0125	V	50.35	Ambient	-52.16	4.68	4.29	-51.77	101.77	70.00
4061.1250	H	49.61	Ambient	-53.68	5.55	4.50	-52.63	102.63	70.00
4061.1250	V	49.38	Ambient	-53.10	5.55	4.50	-52.05	102.05	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), LSM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – LSM
Frequency Tested	406.1125MHz
Notes	2W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
812.2250	H	13.10	Ambient	-57.61	0.00	1.93	-59.54	92.55	53.00
812.2250	V	12.66	Ambient	-55.44	0.00	1.93	-57.37	90.38	53.00
1218.3375	H	23.23	Ambient	-44.72	0.16	2.41	-46.96	79.97	53.00
1218.3375	V	23.59	Ambient	-42.45	0.16	2.41	-44.69	77.70	53.00
1624.4500	H	25.13	Ambient	-44.34	2.59	2.79	-44.54	77.55	53.00
1624.4500	V	24.15	Ambient	-42.50	2.59	2.79	-42.70	75.71	53.00
2030.5625	H	52.03	Ambient	-53.00	1.19	3.10	-54.91	87.92	53.00
2030.5625	V	52.49	Ambient	-50.72	1.19	3.10	-52.62	85.63	53.00
2436.6750	H	49.86	Ambient	-56.46	2.84	3.46	-57.08	90.09	53.00
2436.6750	V	51.02	Ambient	-54.42	2.84	3.46	-55.04	88.05	53.00
2842.7875	H	50.06	Ambient	-56.38	3.95	3.78	-56.21	89.22	53.00
2842.7875	V	50.09	Ambient	-54.59	3.95	3.78	-54.42	87.43	53.00
3248.9000	H	51.55	Ambient	-53.27	4.52	4.05	-52.80	85.81	53.00
3248.9000	V	51.80	Ambient	-50.79	4.52	4.05	-50.32	83.33	53.00
3655.0125	H	51.07	Ambient	-52.57	4.68	4.29	-52.18	85.19	53.00
3655.0125	V	49.90	Ambient	-52.61	4.68	4.29	-52.22	85.23	53.00
4061.1250	H	49.82	Ambient	-53.47	5.55	4.50	-52.42	85.43	53.00
4061.1250	V	49.92	Ambient	-52.56	5.55	4.50	-51.51	84.52	53.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 100 Watts (Average), LSM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – LSM
Frequency Tested	420.0125MHz
Notes	100W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
840.0250	H	14.61		-55.47	0.00	1.97	-57.43	107.43	70.00
840.0250	V	17.29		-50.21	0.00	1.97	-52.17	102.17	70.00
1260.0375	H	24.14	Ambient	-43.92	0.26	2.45	-46.11	96.11	70.00
1260.0375	V	23.93	Ambient	-42.20	0.26	2.45	-44.39	94.39	70.00
1680.0500	H	24.40	Ambient	-44.32	2.53	2.83	-44.62	94.62	70.00
1680.0500	V	24.99	Ambient	-40.89	2.53	2.83	-41.19	91.19	70.00
2100.0625	H	54.11		-50.11	1.30	3.16	-51.97	101.97	70.00
2100.0625	V	53.63		-49.90	1.30	3.16	-51.76	101.76	70.00
2520.0750	H	50.46	Ambient	-55.74	2.49	3.53	-56.78	106.78	70.00
2520.0750	V	50.49	Ambient	-54.88	2.49	3.53	-55.91	105.91	70.00
2940.0875	H	50.31	Ambient	-55.46	3.79	3.85	-55.52	105.52	70.00
2940.0875	V	50.28	Ambient	-53.84	3.79	3.85	-53.89	103.89	70.00
3360.1000	H	51.08	Ambient	-54.34	5.12	4.12	-53.34	103.34	70.00
3360.1000	V	51.22	Ambient	-52.14	5.12	4.12	-51.14	101.14	70.00
3780.1125	H	50.67	Ambient	-52.74	4.89	4.35	-52.19	102.19	70.00
3780.1125	V	50.39	Ambient	-51.82	4.89	4.35	-51.28	101.28	70.00
4200.1250	H	49.31	Ambient	-53.12	5.52	4.57	-52.17	102.17	70.00
4200.1250	V	50.14	Ambient	-51.45	5.52	4.57	-50.50	100.50	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), LSM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – LSM
Frequency Tested	420.0125MHz
Notes	2W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
840.0250	H	12.73	Ambient	-57.35	0.00	1.97	-59.31	92.32	53.00
840.0250	V	13.47	Ambient	-54.03	0.00	1.97	-55.99	89.00	53.00
1260.0375	H	23.62	Ambient	-44.44	0.26	2.45	-46.63	79.64	53.00
1260.0375	V	23.25	Ambient	-42.88	0.26	2.45	-45.07	78.08	53.00
1680.0500	H	24.11	Ambient	-44.61	2.53	2.83	-44.91	77.92	53.00
1680.0500	V	24.22	Ambient	-41.66	2.53	2.83	-41.96	74.97	53.00
2100.0625	H	51.36	Ambient	-52.86	1.30	3.16	-54.72	87.73	53.00
2100.0625	V	51.91	Ambient	-51.62	1.30	3.16	-53.48	86.49	53.00
2520.0750	H	50.78	Ambient	-55.42	2.49	3.53	-56.46	89.47	53.00
2520.0750	V	50.27	Ambient	-55.10	2.49	3.53	-56.13	89.14	53.00
2940.0875	H	49.79	Ambient	-55.98	3.79	3.85	-56.04	89.05	53.00
2940.0875	V	50.05	Ambient	-54.07	3.79	3.85	-54.12	87.13	53.00
3360.1000	H	50.85	Ambient	-54.57	5.12	4.12	-53.57	86.58	53.00
3360.1000	V	51.02	Ambient	-52.34	5.12	4.12	-51.34	84.35	53.00
3780.1125	H	50.15	Ambient	-53.26	4.89	4.35	-52.71	85.72	53.00
3780.1125	V	49.31	Ambient	-52.90	4.89	4.35	-52.36	85.37	53.00
4200.1250	H	49.74	Ambient	-52.69	5.52	4.57	-51.74	84.75	53.00
4200.1250	V	49.82	Ambient	-51.77	5.52	4.57	-50.82	83.83	53.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 100 Watts (Average), LSM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – LSM
Frequency Tested	429.9875MHz
Notes	100W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
859.9750	H	15.25		-54.63	0.00	1.99	-56.62	106.62	70.00
859.9750	V	15.81		-51.29	0.00	1.99	-53.28	103.28	70.00
1289.9625	H	24.13	Ambient	-44.00	0.70	2.48	-45.78	95.78	70.00
1289.9625	V	28.83		-37.36	0.70	2.48	-39.14	89.14	70.00
1719.9500	H	24.90	Ambient	-43.30	2.26	2.86	-43.91	93.91	70.00
1719.9500	V	24.63	Ambient	-40.71	2.26	2.86	-41.32	91.32	70.00
2149.9375	H	52.51		-52.39	2.20	3.21	-53.40	103.40	70.00
2149.9375	V	52.50		-51.25	2.20	3.21	-52.26	102.26	70.00
2579.9250	H	51.20	Ambient	-54.86	2.79	3.58	-55.65	105.65	70.00
2579.9250	V	52.82	Ambient	-52.43	2.79	3.58	-53.22	103.22	70.00
3009.9125	H	51.01	Ambient	-54.32	3.21	3.89	-55.01	105.01	70.00
3009.9125	V	50.61	Ambient	-53.09	3.21	3.89	-53.77	103.77	70.00
3439.9000	H	50.23	Ambient	-54.97	4.92	4.16	-54.22	104.22	70.00
3439.9000	V	51.06	Ambient	-52.33	4.92	4.16	-51.57	101.57	70.00
3869.8875	H	50.31	Ambient	-53.17	5.45	4.40	-52.12	102.12	70.00
3869.8875	V	50.81	Ambient	-51.61	5.45	4.40	-50.56	100.56	70.00
4299.8750	H	49.20	Ambient	-52.99	5.48	4.61	-52.13	102.13	70.00
4299.8750	V	49.66	Ambient	-51.68	5.48	4.61	-50.81	100.81	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), LSM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – LSM
Frequency Tested	429.9875MHz
Notes	2W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
859.9750	H	12.59	Ambient	-57.29	0.00	1.99	-59.28	92.29	53.00
859.9750	V	12.75	Ambient	-54.35	0.00	1.99	-56.34	89.35	53.00
1289.9625	H	23.28	Ambient	-44.85	0.70	2.48	-46.63	79.64	53.00
1289.9625	V	24.56	Ambient	-41.63	0.70	2.48	-43.41	76.42	53.00
1719.9500	H	24.11	Ambient	-44.09	2.26	2.86	-44.70	77.71	53.00
1719.9500	V	24.09	Ambient	-41.25	2.26	2.86	-41.86	74.87	53.00
2149.9375	H	52.34	Ambient	-52.56	2.20	3.21	-53.57	86.58	53.00
2149.9375	V	52.11	Ambient	-51.64	2.20	3.21	-52.65	85.66	53.00
2579.9250	H	51.24	Ambient	-54.82	2.79	3.58	-55.61	88.62	53.00
2579.9250	V	51.23	Ambient	-54.02	2.79	3.58	-54.81	87.82	53.00
3009.9125	H	50.84	Ambient	-54.49	3.21	3.89	-55.18	88.19	53.00
3009.9125	V	50.57	Ambient	-53.13	3.21	3.89	-53.81	86.82	53.00
3439.9000	H	50.29	Ambient	-54.91	4.92	4.16	-54.16	87.17	53.00
3439.9000	V	51.05	Ambient	-52.34	4.92	4.16	-51.58	84.59	53.00
3869.8875	H	50.08	Ambient	-53.40	5.45	4.40	-52.35	85.36	53.00
3869.8875	V	50.44	Ambient	-51.98	5.45	4.40	-50.93	83.94	53.00
4299.8750	H	49.03	Ambient	-53.16	5.48	4.61	-52.30	85.31	53.00
4299.8750	V	49.43	Ambient	-51.91	5.48	4.61	-51.04	84.05	53.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 100 Watts (Average), LSM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – LSM
Frequency Tested	434.9875MHz
Notes	100W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
869.9750	H	16.20		-53.56	0.00	2.00	-55.56	105.56	70.00
869.9750	V	17.32		-49.78	0.00	2.00	-51.78	101.78	70.00
1304.9625	H	23.97	Ambient	-44.20	0.89	2.50	-45.81	95.81	70.00
1304.9625	V	24.24	Ambient	-41.98	0.89	2.50	-43.59	93.59	70.00
1739.9500	H	24.96	Ambient	-42.99	2.00	2.88	-43.87	93.87	70.00
1739.9500	V	24.68	Ambient	-40.40	2.00	2.88	-41.28	91.28	70.00
2174.9375	H	52.18	Ambient	-53.06	2.29	3.23	-54.00	104.00	70.00
2174.9375	V	52.28	Ambient	-51.58	2.29	3.23	-52.53	102.53	70.00
2609.9250	H	51.26	Ambient	-54.79	3.16	3.60	-55.24	105.24	70.00
2609.9250	V	50.87	Ambient	-54.33	3.16	3.60	-54.77	104.77	70.00
3044.9125	H	51.32	Ambient	-53.86	4.03	3.92	-53.75	103.75	70.00
3044.9125	V	51.38	Ambient	-52.04	4.03	3.92	-51.92	101.92	70.00
3479.9000	H	50.72	Ambient	-54.06	4.82	4.19	-53.42	103.42	70.00
3479.9000	V	50.92	Ambient	-52.23	4.82	4.19	-51.59	101.59	70.00
3914.8875	H	50.21	Ambient	-53.34	5.48	4.42	-52.29	102.29	70.00
3914.8875	V	49.69	Ambient	-52.89	5.48	4.42	-51.84	101.84	70.00
4349.8750	H	50.02	Ambient	-52.12	5.46	4.64	-51.30	101.30	70.00
4349.8750	V	50.17	Ambient	-51.23	5.46	4.64	-50.41	100.41	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), LSM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – LSM
Frequency Tested	434.9875MHz
Notes	2W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
869.9750	H	12.30	Ambient	-57.46	0.00	2.00	-59.46	92.47	53.00
869.9750	V	12.69	Ambient	-54.41	0.00	2.00	-56.41	89.42	53.00
1304.9625	H	23.76	Ambient	-44.41	0.89	2.50	-46.02	79.03	53.00
1304.9625	V	24.16	Ambient	-42.06	0.89	2.50	-43.67	76.68	53.00
1739.9500	H	24.56	Ambient	-43.39	2.00	2.88	-44.27	77.28	53.00
1739.9500	V	23.93	Ambient	-41.15	2.00	2.88	-42.03	75.04	53.00
2174.9375	H	51.15	Ambient	-54.09	2.29	3.23	-55.03	88.04	53.00
2174.9375	V	51.45	Ambient	-52.41	2.29	3.23	-53.36	86.37	53.00
2609.9250	H	50.97	Ambient	-55.08	3.16	3.60	-55.53	88.54	53.00
2609.9250	V	51.00	Ambient	-54.20	3.16	3.60	-54.64	87.65	53.00
3044.9125	H	50.74	Ambient	-54.44	4.03	3.92	-54.33	87.34	53.00
3044.9125	V	50.71	Ambient	-52.71	4.03	3.92	-52.59	85.61	53.00
3479.9000	H	50.29	Ambient	-54.49	4.82	4.19	-53.85	86.86	53.00
3479.9000	V	50.09	Ambient	-53.06	4.82	4.19	-52.42	85.43	53.00
3914.8875	H	49.40	Ambient	-54.15	5.48	4.42	-53.10	86.11	53.00
3914.8875	V	49.33	Ambient	-53.25	5.48	4.42	-52.20	85.21	53.00
4349.8750	H	49.76	Ambient	-52.38	5.46	4.64	-51.56	84.57	53.00
4349.8750	V	49.93	Ambient	-51.47	5.46	4.64	-50.65	83.66	53.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 110Watts (Average), C4FM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – C4FM
Frequency Tested	380.0125MHz
Notes	110W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
760.0250	H	14.19		-56.87	0.00	1.87	-58.74	109.15	70.00
760.0250	V	12.91		-56.01	0.00	1.87	-57.88	108.30	70.00
1140.0375	H	24.79		-43.62	0.18	2.32	-45.75	96.16	70.00
1140.0375	V	24.42		-42.25	0.18	2.32	-44.39	94.80	70.00
1520.0500	H	24.70		-44.56	2.36	2.70	-44.90	95.31	70.00
1520.0500	V	24.58		-42.19	2.36	2.70	-42.53	92.94	70.00
1900.0625	H	51.84	Ambient	-54.98	1.24	3.00	-56.74	107.15	70.00
1900.0625	V	52.22	Ambient	-51.99	1.24	3.00	-53.75	104.16	70.00
2280.0750	H	52.21	Ambient	-53.68	2.60	3.33	-54.42	104.83	70.00
2280.0750	V	52.53	Ambient	-52.05	2.60	3.33	-52.79	103.20	70.00
2660.0875	H	50.91	Ambient	-55.33	3.32	3.64	-55.65	106.06	70.00
2660.0875	V	51.06	Ambient	-54.07	3.32	3.64	-54.39	104.80	70.00
3040.1000	H	50.78	Ambient	-54.42	3.92	3.91	-54.42	104.83	70.00
3040.1000	V	50.89	Ambient	-52.57	3.92	3.91	-52.56	102.98	70.00
3420.1125	H	50.69	Ambient	-54.73	5.03	4.15	-53.84	104.26	70.00
3420.1125	V	50.95	Ambient	-52.56	5.03	4.15	-51.68	102.09	70.00
3800.1250	H	50.01	Ambient	-53.36	4.72	4.36	-53.00	103.42	70.00
3800.1250	V	49.98	Ambient	-52.19	4.72	4.36	-51.83	102.25	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), C4FM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – C4FM
Frequency Tested	380.0125MHz
Notes	2W Power
Date Tested	May 20 – 27, 2026

Freq. MHz	Ant Pol	Meter Reading (dBµV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
760.0250	H	11.37	Ambient	-59.69	0.00	1.87	-61.56	94.57	53.00
760.0250	V	12.65	Ambient	-56.27	0.00	1.87	-58.14	91.15	53.00
1140.0375	H	23.96	Ambient	-44.45	0.18	2.32	-46.58	79.59	53.00
1140.0375	V	23.47	Ambient	-43.20	0.18	2.32	-45.34	78.35	53.00
1520.0500	H	24.14	Ambient	-45.12	2.36	2.70	-45.46	78.47	53.00
1520.0500	V	24.27	Ambient	-42.50	2.36	2.70	-42.84	75.85	53.00
1900.0625	H	51.98	Ambient	-54.84	1.24	3.00	-56.60	89.61	53.00
1900.0625	V	52.22	Ambient	-51.99	1.24	3.00	-53.75	86.76	53.00
2280.0750	H	52.53	Ambient	-53.36	2.60	3.33	-54.10	87.11	53.00
2280.0750	V	51.98	Ambient	-52.60	2.60	3.33	-53.34	86.35	53.00
2660.0875	H	50.96	Ambient	-55.28	3.32	3.64	-55.60	88.61	53.00
2660.0875	V	50.97	Ambient	-54.16	3.32	3.64	-54.48	87.49	53.00
3040.1000	H	50.91	Ambient	-54.29	3.92	3.91	-54.29	87.30	53.00
3040.1000	V	50.40	Ambient	-53.06	3.92	3.91	-53.05	86.06	53.00
3420.1125	H	50.47	Ambient	-54.95	5.03	4.15	-54.06	87.07	53.00
3420.1125	V	50.81	Ambient	-52.70	5.03	4.15	-51.82	84.83	53.00
3800.1250	H	49.89	Ambient	-53.48	4.72	4.36	-53.12	86.13	53.00
3800.1250	V	49.36	Ambient	-52.81	4.72	4.36	-52.45	85.46	53.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 110Watts (Average), C4FM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – C4FM
Frequency Tested	406.1125MHz
Notes	110W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
812.2250	H	14.78		-55.93	0.00	1.93	-57.86	108.27	70.00
812.2250	V	15.98		-52.12	0.00	1.93	-54.05	104.46	70.00
1218.3375	H	25.00		-42.95	0.16	2.41	-45.19	95.61	70.00
1218.3375	V	25.41		-40.63	0.16	2.41	-42.87	93.29	70.00
1624.4500	H	24.60	Ambient	-44.87	2.59	2.79	-45.07	95.48	70.00
1624.4500	V	24.62	Ambient	-42.03	2.59	2.79	-42.23	92.65	70.00
2030.5625	H	52.95		-52.08	1.19	3.10	-53.99	104.40	70.00
2030.5625	V	52.36		-50.85	1.19	3.10	-52.75	103.17	70.00
2436.6750	H	50.34	Ambient	-55.98	2.84	3.46	-56.60	107.02	70.00
2436.6750	V	50.45	Ambient	-54.99	2.84	3.46	-55.61	106.03	70.00
2842.7875	H	50.40	Ambient	-56.04	3.95	3.78	-55.87	106.28	70.00
2842.7875	V	50.60	Ambient	-54.08	3.95	3.78	-53.91	104.32	70.00
3248.9000	H	51.82	Ambient	-53.00	4.52	4.05	-52.53	102.94	70.00
3248.9000	V	51.37	Ambient	-51.22	4.52	4.05	-50.75	101.17	70.00
3655.0125	H	50.30	Ambient	-53.34	4.68	4.29	-52.95	103.36	70.00
3655.0125	V	50.31	Ambient	-52.20	4.68	4.29	-51.81	102.23	70.00
4061.1250	H	49.61	Ambient	-53.68	5.55	4.50	-52.63	103.04	70.00
4061.1250	V	49.46	Ambient	-53.02	5.55	4.50	-51.97	102.38	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), C4FM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – C4FM
Frequency Tested	406.1125MHz
Notes	2W Power
Date Tested	May 20 – 27, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
812.2250	H	12.32	Ambient	-58.39	0.00	1.93	-60.32	93.33	53.00
812.2250	V	12.33	Ambient	-55.77	0.00	1.93	-57.70	90.71	53.00
1218.3375	H	23.18	Ambient	-44.77	0.16	2.41	-47.01	80.02	53.00
1218.3375	V	23.23	Ambient	-42.81	0.16	2.41	-45.05	78.06	53.00
1624.4500	H	24.12	Ambient	-45.35	2.59	2.79	-45.55	78.56	53.00
1624.4500	V	24.28	Ambient	-42.37	2.59	2.79	-42.57	75.58	53.00
2030.5625	H	51.53	Ambient	-53.50	1.19	3.10	-55.41	88.42	53.00
2030.5625	V	53.05	Ambient	-50.16	1.19	3.10	-52.06	85.07	53.00
2436.6750	H	50.00	Ambient	-56.32	2.84	3.46	-56.94	89.95	53.00
2436.6750	V	49.75	Ambient	-55.69	2.84	3.46	-56.31	89.32	53.00
2842.7875	H	50.33	Ambient	-56.11	3.95	3.78	-55.94	88.95	53.00
2842.7875	V	50.24	Ambient	-54.44	3.95	3.78	-54.27	87.28	53.00
3248.9000	H	51.61	Ambient	-53.21	4.52	4.05	-52.74	85.75	53.00
3248.9000	V	51.42	Ambient	-51.17	4.52	4.05	-50.70	83.71	53.00
3655.0125	H	49.77	Ambient	-53.87	4.68	4.29	-53.48	86.49	53.00
3655.0125	V	49.64	Ambient	-52.87	4.68	4.29	-52.48	85.49	53.00
4061.1250	H	49.06	Ambient	-54.23	5.55	4.50	-53.18	86.19	53.00
4061.1250	V	49.76	Ambient	-52.72	5.55	4.50	-51.67	84.68	53.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 110Watts (Average), C4FM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – C4FM
Frequency Tested	420.0125MHz
Notes	110W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
840.0250	H	13.57		-56.51	0.00	1.97	-58.47	108.89	70.00
840.0250	V	15.30		-52.20	0.00	1.97	-54.16	104.57	70.00
1260.0375	H	24.15	Ambient	-43.91	0.26	2.45	-46.10	96.51	70.00
1260.0375	V	23.97	Ambient	-42.16	0.26	2.45	-44.35	94.76	70.00
1680.0500	H	25.07	Ambient	-43.65	2.53	2.83	-43.95	94.37	70.00
1680.0500	V	25.25	Ambient	-40.63	2.53	2.83	-40.93	91.34	70.00
2100.0625	H	53.43		-50.79	1.30	3.16	-52.65	103.07	70.00
2100.0625	V	52.91		-50.62	1.30	3.16	-52.48	102.90	70.00
2520.0750	H	50.76	Ambient	-55.44	2.49	3.53	-56.48	106.90	70.00
2520.0750	V	50.69	Ambient	-54.68	2.49	3.53	-55.71	106.13	70.00
2940.0875	H	50.36	Ambient	-55.41	3.79	3.85	-55.47	105.88	70.00
2940.0875	V	51.04	Ambient	-53.08	3.79	3.85	-53.13	103.54	70.00
3360.1000	H	51.09	Ambient	-54.33	5.12	4.12	-53.33	103.74	70.00
3360.1000	V	50.80	Ambient	-52.56	5.12	4.12	-51.56	101.97	70.00
3780.1125	H	49.95	Ambient	-53.46	4.89	4.35	-52.91	103.33	70.00
3780.1125	V	50.44	Ambient	-51.77	4.89	4.35	-51.23	101.65	70.00
4200.1250	H	49.92	Ambient	-52.51	5.52	4.57	-51.56	101.97	70.00
4200.1250	V	49.87	Ambient	-51.72	5.52	4.57	-50.77	101.18	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), C4FM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – C4FM
Frequency Tested	420.0125MHz
Notes	2W Power
Date Tested	May 20 – 27, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
840.0250	H	13.04	Ambient	-57.04	0.00	1.97	-59.00	92.01	53.00
840.0250	V	12.79	Ambient	-54.71	0.00	1.97	-56.67	89.68	53.00
1260.0375	H	23.21	Ambient	-44.85	0.26	2.45	-47.04	80.05	53.00
1260.0375	V	23.71	Ambient	-42.42	0.26	2.45	-44.61	77.62	53.00
1680.0500	H	24.35	Ambient	-44.37	2.53	2.83	-44.67	77.68	53.00
1680.0500	V	24.91	Ambient	-40.97	2.53	2.83	-41.27	74.28	53.00
2100.0625	H	51.10	Ambient	-53.12	1.30	3.16	-54.98	87.99	53.00
2100.0625	V	51.16	Ambient	-52.37	1.30	3.16	-54.23	87.24	53.00
2520.0750	H	50.92	Ambient	-55.28	2.49	3.53	-56.32	89.33	53.00
2520.0750	V	50.37	Ambient	-55.00	2.49	3.53	-56.03	89.04	53.00
2940.0875	H	50.42	Ambient	-55.35	3.79	3.85	-55.41	88.42	53.00
2940.0875	V	49.91	Ambient	-54.21	3.79	3.85	-54.26	87.27	53.00
3360.1000	H	50.73	Ambient	-54.69	5.12	4.12	-53.69	86.70	53.00
3360.1000	V	50.44	Ambient	-52.92	5.12	4.12	-51.92	84.93	53.00
3780.1125	H	50.18	Ambient	-53.23	4.89	4.35	-52.68	85.69	53.00
3780.1125	V	50.47	Ambient	-51.74	4.89	4.35	-51.20	84.21	53.00
4200.1250	H	49.68	Ambient	-52.75	5.52	4.57	-51.80	84.81	53.00
4200.1250	V	49.46	Ambient	-52.13	5.52	4.57	-51.18	84.19	53.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 110Watts (Average), C4FM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – C4FM
Frequency Tested	429.9875MHz
Notes	110W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
859.9750	H	13.14		-56.74	0.00	1.99	-58.73	109.14	70.00
859.9750	V	14.24		-52.86	0.00	1.99	-54.85	105.26	70.00
1289.9625	H	24.10	Ambient	-44.03	0.70	2.48	-45.81	96.23	70.00
1289.9625	V	25.88	Ambient	-40.31	0.70	2.48	-42.09	92.50	70.00
1719.9500	H	24.75	Ambient	-43.45	2.26	2.86	-44.06	94.47	70.00
1719.9500	V	24.81	Ambient	-40.53	2.26	2.86	-41.14	91.55	70.00
2149.9375	H	52.10	Ambient	-52.80	2.20	3.21	-53.81	104.22	70.00
2149.9375	V	52.29	Ambient	-51.46	2.20	3.21	-52.47	102.88	70.00
2579.9250	H	50.84	Ambient	-55.22	2.79	3.58	-56.01	106.43	70.00
2579.9250	V	51.49	Ambient	-53.76	2.79	3.58	-54.55	104.97	70.00
3009.9125	H	50.69	Ambient	-54.64	3.21	3.89	-55.33	105.74	70.00
3009.9125	V	50.94	Ambient	-52.76	3.21	3.89	-53.44	103.86	70.00
3439.9000	H	51.23	Ambient	-53.97	4.92	4.16	-53.22	103.63	70.00
3439.9000	V	51.10	Ambient	-52.29	4.92	4.16	-51.53	101.95	70.00
3869.8875	H	50.86	Ambient	-52.62	5.45	4.40	-51.57	101.98	70.00
3869.8875	V	50.33	Ambient	-52.09	5.45	4.40	-51.04	101.45	70.00
4299.8750	H	49.66	Ambient	-52.53	5.48	4.61	-51.67	102.08	70.00
4299.8750	V	49.68	Ambient	-51.66	5.48	4.61	-50.79	101.21	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), C4FM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – C4FM
Frequency Tested	429.9875MHz
Notes	2W Power
Date Tested	May 20 – 27, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
859.9750	H	12.98	Ambient	-56.90	0.00	1.99	-58.89	91.90	53.00
859.9750	V	13.71	Ambient	-53.39	0.00	1.99	-55.38	88.39	53.00
1289.9625	H	23.94	Ambient	-44.19	0.70	2.48	-45.97	78.98	53.00
1289.9625	V	23.44	Ambient	-42.75	0.70	2.48	-44.53	77.54	53.00
1719.9500	H	24.71	Ambient	-43.49	2.26	2.86	-44.10	77.11	53.00
1719.9500	V	24.63	Ambient	-40.71	2.26	2.86	-41.32	74.33	53.00
2149.9375	H	52.72	Ambient	-52.18	2.20	3.21	-53.19	86.20	53.00
2149.9375	V	51.52	Ambient	-52.23	2.20	3.21	-53.24	86.25	53.00
2579.9250	H	50.92	Ambient	-55.14	2.79	3.58	-55.93	88.94	53.00
2579.9250	V	51.41	Ambient	-53.84	2.79	3.58	-54.63	87.64	53.00
3009.9125	H	50.71	Ambient	-54.62	3.21	3.89	-55.31	88.32	53.00
3009.9125	V	51.15	Ambient	-52.55	3.21	3.89	-53.23	86.24	53.00
3439.9000	H	50.55	Ambient	-54.65	4.92	4.16	-53.90	86.91	53.00
3439.9000	V	50.46	Ambient	-52.93	4.92	4.16	-52.17	85.18	53.00
3869.8875	H	50.25	Ambient	-53.23	5.45	4.40	-52.18	85.19	53.00
3869.8875	V	49.74	Ambient	-52.68	5.45	4.40	-51.63	84.64	53.00
4299.8750	H	49.64	Ambient	-52.55	5.48	4.61	-51.69	84.70	53.00
4299.8750	V	49.37	Ambient	-51.97	5.48	4.61	-51.10	84.11	53.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 110Watts (Average), C4FM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – C4FM
Frequency Tested	434.9875MHz
Notes	110W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
869.9750	H	16.70		-53.06	0.00	2.00	-55.06	105.47	70.00
869.9750	V	17.61		-49.49	0.00	2.00	-51.49	101.91	70.00
1304.9625	H	23.87	Ambient	-44.30	0.89	2.50	-45.91	96.33	70.00
1304.9625	V	24.01	Ambient	-42.21	0.89	2.50	-43.82	94.23	70.00
1739.9500	H	24.60	Ambient	-43.35	2.00	2.88	-44.23	94.64	70.00
1739.9500	V	24.42	Ambient	-40.66	2.00	2.88	-41.54	91.95	70.00
2174.9375	H	51.78	Ambient	-53.46	2.29	3.23	-54.40	104.82	70.00
2174.9375	V	52.07	Ambient	-51.79	2.29	3.23	-52.74	103.15	70.00
2609.9250	H	51.09	Ambient	-54.96	3.16	3.60	-55.41	105.82	70.00
2609.9250	V	51.35	Ambient	-53.85	3.16	3.60	-54.29	104.71	70.00
3044.9125	H	51.28	Ambient	-53.90	4.03	3.92	-53.79	104.20	70.00
3044.9125	V	51.14	Ambient	-52.28	4.03	3.92	-52.16	102.58	70.00
3479.9000	H	51.13	Ambient	-53.65	4.82	4.19	-53.01	103.43	70.00
3479.9000	V	50.56	Ambient	-52.59	4.82	4.19	-51.95	102.36	70.00
3914.8875	H	50.90	Ambient	-52.65	5.48	4.42	-51.60	102.01	70.00
3914.8875	V	49.89	Ambient	-52.69	5.48	4.42	-51.64	102.05	70.00
4349.8750	H	50.14	Ambient	-52.00	5.46	4.64	-51.18	101.59	70.00
4349.8750	V	50.00	Ambient	-51.40	5.46	4.64	-50.58	100.99	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), C4FM

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – C4FM
Frequency Tested	434.9875MHz
Notes	2W Power
Date Tested	May 20 – 27, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
869.9750	H	12.36	Ambient	-57.40	0.00	2.00	-59.40	92.41	53.00
869.9750	V	12.91	Ambient	-54.19	0.00	2.00	-56.19	89.20	53.00
1304.9625	H	23.53	Ambient	-44.64	0.89	2.50	-46.25	79.26	53.00
1304.9625	V	24.56	Ambient	-41.66	0.89	2.50	-43.27	76.28	53.00
1739.9500	H	24.56	Ambient	-43.39	2.00	2.88	-44.27	77.28	53.00
1739.9500	V	24.02	Ambient	-41.06	2.00	2.88	-41.94	74.95	53.00
2174.9375	H	51.63	Ambient	-53.61	2.29	3.23	-54.55	87.56	53.00
2174.9375	V	51.50	Ambient	-52.36	2.29	3.23	-53.31	86.32	53.00
2609.9250	H	50.80	Ambient	-55.25	3.16	3.60	-55.70	88.71	53.00
2609.9250	V	50.99	Ambient	-54.21	3.16	3.60	-54.65	87.66	53.00
3044.9125	H	50.57	Ambient	-54.61	4.03	3.92	-54.50	87.51	53.00
3044.9125	V	50.72	Ambient	-52.70	4.03	3.92	-52.58	85.60	53.00
3479.9000	H	50.47	Ambient	-54.31	4.82	4.19	-53.67	86.68	53.00
3479.9000	V	50.75	Ambient	-52.40	4.82	4.19	-51.76	84.77	53.00
3914.8875	H	49.64	Ambient	-53.91	5.48	4.42	-52.86	85.87	53.00
3914.8875	V	49.63	Ambient	-52.95	5.48	4.42	-51.90	84.91	53.00
4349.8750	H	50.16	Ambient	-51.98	5.46	4.64	-51.16	84.17	53.00
4349.8750	V	49.53	Ambient	-51.87	5.46	4.64	-51.05	84.06	53.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 100 Watts (Average), H-DQPSK

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – H-DQPSK
Frequency Tested	380.0125MHz
Notes	100W Power
Date Tested	May 20 – 22, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
760.0250	H	15.09		-55.97	0.00	1.87	-57.84	107.84	70.00
760.0250	V	13.70		-55.22	0.00	1.87	-57.09	107.09	70.00
1140.0375	H	24.81		-43.60	0.18	2.32	-45.73	95.73	70.00
1140.0375	V	25.69		-40.98	0.18	2.32	-43.12	93.12	70.00
1520.0500	H	24.07	Ambient	-45.19	2.36	2.70	-45.53	95.53	70.00
1520.0500	V	24.15	Ambient	-42.62	2.36	2.70	-42.96	92.96	70.00
1900.0625	H	52.45		-54.37	1.24	3.00	-56.13	106.13	70.00
1900.0625	V	51.99		-52.22	1.24	3.00	-53.98	103.98	70.00
2280.0750	H	51.86	Ambient	-54.03	2.60	3.33	-54.77	104.77	70.00
2280.0750	V	51.56	Ambient	-53.02	2.60	3.33	-53.76	103.76	70.00
2660.0875	H	51.49	Ambient	-54.75	3.32	3.64	-55.07	105.07	70.00
2660.0875	V	51.05	Ambient	-54.08	3.32	3.64	-54.40	104.40	70.00
3040.1000	H	51.11	Ambient	-54.09	3.92	3.91	-54.09	104.09	70.00
3040.1000	V	50.76	Ambient	-52.70	3.92	3.91	-52.69	102.69	70.00
3420.1125	H	50.24	Ambient	-55.18	5.03	4.15	-54.29	104.29	70.00
3420.1125	V	50.55	Ambient	-52.96	5.03	4.15	-52.08	102.08	70.00
3800.1250	H	50.11	Ambient	-53.26	4.72	4.36	-52.90	102.90	70.00
3800.1250	V	49.90	Ambient	-52.27	4.72	4.36	-51.91	101.91	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), H-DQPSK

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – H-DQPSK
Frequency Tested	380.0125MHz
Notes	2W Power
Date Tested	May 20 – 27, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
760.0250	H	12.06	Ambient	-59.00	0.00	1.87	-60.87	93.88	53.00
760.0250	V	12.41	Ambient	-56.51	0.00	1.87	-58.38	91.39	53.00
1140.0375	H	23.26	Ambient	-45.15	0.18	2.32	-47.28	80.29	53.00
1140.0375	V	23.39	Ambient	-43.28	0.18	2.32	-45.42	78.43	53.00
1520.0500	H	23.78	Ambient	-45.48	2.36	2.70	-45.82	78.83	53.00
1520.0500	V	23.85	Ambient	-42.92	2.36	2.70	-43.26	76.27	53.00
1900.0625	H	51.97	Ambient	-54.85	1.24	3.00	-56.61	89.62	53.00
1900.0625	V	52.06	Ambient	-52.15	1.24	3.00	-53.91	86.92	53.00
2280.0750	H	51.70	Ambient	-54.19	2.60	3.33	-54.93	87.94	53.00
2280.0750	V	51.57	Ambient	-53.01	2.60	3.33	-53.75	86.76	53.00
2660.0875	H	50.41	Ambient	-55.83	3.32	3.64	-56.15	89.16	53.00
2660.0875	V	50.89	Ambient	-54.24	3.32	3.64	-54.56	87.57	53.00
3040.1000	H	50.73	Ambient	-54.47	3.92	3.91	-54.47	87.48	53.00
3040.1000	V	50.86	Ambient	-52.60	3.92	3.91	-52.59	85.60	53.00
3420.1125	H	50.95	Ambient	-54.47	5.03	4.15	-53.58	86.59	53.00
3420.1125	V	50.25	Ambient	-53.26	5.03	4.15	-52.38	85.39	53.00
3800.1250	H	49.88	Ambient	-53.49	4.72	4.36	-53.13	86.14	53.00
3800.1250	V	49.69	Ambient	-52.48	4.72	4.36	-52.12	85.13	53.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 100 Watts (Average), H-DQPSK

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – H-DQPSK
Frequency Tested	406.1125MHz
Notes	100W Power
Date Tested	May 20 – 26, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
812.2250	H	15.46		-55.25	0.00	1.93	-57.18	107.18	70.00
812.2250	V	16.44		-51.66	0.00	1.93	-53.59	103.59	70.00
1218.3375	H	25.28		-42.67	0.16	2.41	-44.91	94.91	70.00
1218.3375	V	26.32		-39.72	0.16	2.41	-41.96	91.96	70.00
1624.4500	H	24.73	Ambient	-44.74	2.59	2.79	-44.94	94.94	70.00
1624.4500	V	24.67	Ambient	-41.98	2.59	2.79	-42.18	92.18	70.00
2030.5625	H	52.04		-52.99	1.19	3.10	-54.90	104.90	70.00
2030.5625	V	53.06		-50.15	1.19	3.10	-52.05	102.05	70.00
2436.6750	H	50.28	Ambient	-56.04	2.84	3.46	-56.66	106.66	70.00
2436.6750	V	51.84	Ambient	-53.60	2.84	3.46	-54.22	104.22	70.00
2842.7875	H	50.22	Ambient	-56.22	3.95	3.78	-56.05	106.05	70.00
2842.7875	V	50.18	Ambient	-54.50	3.95	3.78	-54.33	104.33	70.00
3248.9000	H	51.07	Ambient	-53.75	4.52	4.05	-53.28	103.28	70.00
3248.9000	V	50.86	Ambient	-51.73	4.52	4.05	-51.26	101.26	70.00
3655.0125	H	49.40	Ambient	-54.24	4.68	4.29	-53.85	103.85	70.00
3655.0125	V	49.82	Ambient	-52.69	4.68	4.29	-52.30	102.30	70.00
4061.1250	H	50.02	Ambient	-53.27	5.55	4.50	-52.22	102.22	70.00
4061.1250	V	49.04	Ambient	-53.44	5.55	4.50	-52.39	102.39	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), H-DQPSK

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – H-DQPSK
Frequency Tested	406.1125MHz
Notes	2W Power
Date Tested	May 20 – 27, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
812.2250	H	13.46	Ambient	-57.25	0.00	1.93	-59.18	92.19	53.00
812.2250	V	13.12	Ambient	-54.98	0.00	1.93	-56.91	89.92	53.00
1218.3375	H	23.39	Ambient	-44.56	0.16	2.41	-46.80	79.81	53.00
1218.3375	V	23.27	Ambient	-42.77	0.16	2.41	-45.01	78.02	53.00
1624.4500	H	23.77	Ambient	-45.70	2.59	2.79	-45.90	78.91	53.00
1624.4500	V	24.56	Ambient	-42.09	2.59	2.79	-42.29	75.30	53.00
2030.5625	H	51.58	Ambient	-53.45	1.19	3.10	-55.36	88.37	53.00
2030.5625	V	51.93	Ambient	-51.28	1.19	3.10	-53.18	86.19	53.00
2436.6750	H	50.31	Ambient	-56.01	2.84	3.46	-56.63	89.64	53.00
2436.6750	V	49.41	Ambient	-56.03	2.84	3.46	-56.65	89.66	53.00
2842.7875	H	50.13	Ambient	-56.31	3.95	3.78	-56.14	89.15	53.00
2842.7875	V	50.77	Ambient	-53.91	3.95	3.78	-53.74	86.75	53.00
3248.9000	H	51.56	Ambient	-53.26	4.52	4.05	-52.79	85.80	53.00
3248.9000	V	51.58	Ambient	-51.01	4.52	4.05	-50.54	83.55	53.00
3655.0125	H	49.63	Ambient	-54.01	4.68	4.29	-53.62	86.63	53.00
3655.0125	V	50.16	Ambient	-52.35	4.68	4.29	-51.96	84.97	53.00
4061.1250	H	49.05	Ambient	-54.24	5.55	4.50	-53.19	86.20	53.00
4061.1250	V	49.22	Ambient	-53.26	5.55	4.50	-52.21	85.22	53.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 100 Watts (Average), H-DQPSK

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – H-DQPSK
Frequency Tested	420.0125MHz
Notes	100W Power
Date Tested	May 20 – 26, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
840.0250	H	13.39		-56.69	0.00	1.97	-58.65	108.65	70.00
840.0250	V	16.93		-50.57	0.00	1.97	-52.53	102.53	70.00
1260.0375	H	23.86	Ambient	-44.20	0.26	2.45	-46.39	96.39	70.00
1260.0375	V	24.46	Ambient	-41.67	0.26	2.45	-43.86	93.86	70.00
1680.0500	H	24.63	Ambient	-44.09	2.53	2.83	-44.39	94.39	70.00
1680.0500	V	24.61	Ambient	-41.27	2.53	2.83	-41.57	91.57	70.00
2100.0625	H	53.06		-51.16	1.30	3.16	-53.02	103.02	70.00
2100.0625	V	52.66		-50.87	1.30	3.16	-52.73	102.73	70.00
2520.0750	H	50.39	Ambient	-55.81	2.49	3.53	-56.85	106.85	70.00
2520.0750	V	50.53	Ambient	-54.84	2.49	3.53	-55.87	105.87	70.00
2940.0875	H	50.64	Ambient	-55.13	3.79	3.85	-55.19	105.19	70.00
2940.0875	V	50.41	Ambient	-53.71	3.79	3.85	-53.76	103.76	70.00
3360.1000	H	51.06	Ambient	-54.36	5.12	4.12	-53.36	103.36	70.00
3360.1000	V	51.39	Ambient	-51.97	5.12	4.12	-50.97	100.97	70.00
3780.1125	H	50.00	Ambient	-53.41	4.89	4.35	-52.86	102.86	70.00
3780.1125	V	50.43	Ambient	-51.78	4.89	4.35	-51.24	101.24	70.00
4200.1250	H	49.76	Ambient	-52.67	5.52	4.57	-51.72	101.72	70.00
4200.1250	V	49.30	Ambient	-52.29	5.52	4.57	-51.34	101.34	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), H-DQPSK

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – H-DQPSK
Frequency Tested	420.0125MHz
Notes	2W Power
Date Tested	May 20 – 27, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
840.0250	H	13.56	Ambient	-56.52	0.00	1.97	-58.48	91.49	53.00
840.0250	V	13.23	Ambient	-54.27	0.00	1.97	-56.23	89.24	53.00
1260.0375	H	23.51	Ambient	-44.55	0.26	2.45	-46.74	79.75	53.00
1260.0375	V	23.36	Ambient	-42.77	0.26	2.45	-44.96	77.97	53.00
1680.0500	H	24.63	Ambient	-44.09	2.53	2.83	-44.39	77.40	53.00
1680.0500	V	25.12	Ambient	-40.76	2.53	2.83	-41.06	74.07	53.00
2100.0625	H	51.00	Ambient	-53.22	1.30	3.16	-55.08	88.09	53.00
2100.0625	V	51.52	Ambient	-52.01	1.30	3.16	-53.87	86.88	53.00
2520.0750	H	50.65	Ambient	-55.55	2.49	3.53	-56.59	89.60	53.00
2520.0750	V	50.56	Ambient	-54.81	2.49	3.53	-55.84	88.85	53.00
2940.0875	H	50.56	Ambient	-55.21	3.79	3.85	-55.27	88.28	53.00
2940.0875	V	50.14	Ambient	-53.98	3.79	3.85	-54.03	87.04	53.00
3360.1000	H	51.15	Ambient	-54.27	5.12	4.12	-53.27	86.28	53.00
3360.1000	V	50.73	Ambient	-52.63	5.12	4.12	-51.63	84.64	53.00
3780.1125	H	51.53	Ambient	-51.88	4.89	4.35	-51.33	84.34	53.00
3780.1125	V	50.46	Ambient	-51.75	4.89	4.35	-51.21	84.22	53.00
4200.1250	H	49.67	Ambient	-52.76	5.52	4.57	-51.81	84.82	53.00
4200.1250	V	49.83	Ambient	-51.76	5.52	4.57	-50.81	83.82	53.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 100 Watts (Average), H-DQPSK

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – H-DQPSK
Frequency Tested	429.9875MHz
Notes	100W Power
Date Tested	May 20 – 26, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
859.9750	H	14.35		-55.53	0.00	1.99	-57.52	107.52	70.00
859.9750	V	15.59		-51.51	0.00	1.99	-53.50	103.50	70.00
1289.9625	H	24.10	Ambient	-44.03	0.70	2.48	-45.81	95.81	70.00
1289.9625	V	25.26		-40.93	0.70	2.48	-42.71	92.71	70.00
1719.9500	H	24.53	Ambient	-43.67	2.26	2.86	-44.28	94.28	70.00
1719.9500	V	24.05	Ambient	-41.29	2.26	2.86	-41.90	91.90	70.00
2149.9375	H	51.94	Ambient	-52.96	2.20	3.21	-53.97	103.97	70.00
2149.9375	V	52.04	Ambient	-51.71	2.20	3.21	-52.72	102.72	70.00
2579.9250	H	51.24	Ambient	-54.82	2.79	3.58	-55.61	105.61	70.00
2579.9250	V	51.55	Ambient	-53.70	2.79	3.58	-54.49	104.49	70.00
3009.9125	H	50.69	Ambient	-54.64	3.21	3.89	-55.33	105.33	70.00
3009.9125	V	50.77	Ambient	-52.93	3.21	3.89	-53.61	103.61	70.00
3439.9000	H	50.31	Ambient	-54.89	4.92	4.16	-54.14	104.14	70.00
3439.9000	V	50.71	Ambient	-52.68	4.92	4.16	-51.92	101.92	70.00
3869.8875	H	50.14	Ambient	-53.34	5.45	4.40	-52.29	102.29	70.00
3869.8875	V	50.21	Ambient	-52.21	5.45	4.40	-51.16	101.16	70.00
4299.8750	H	49.25	Ambient	-52.94	5.48	4.61	-52.08	102.08	70.00
4299.8750	V	49.64	Ambient	-51.70	5.48	4.61	-50.83	100.83	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), H-DQPSK

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – H-DQPSK
Frequency Tested	429.9875MHz
Notes	2W Power
Date Tested	May 20 – 27, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
859.9750	H	13.12	Ambient	-56.76	0.00	1.99	-58.75	91.76	53.00
859.9750	V	12.90	Ambient	-54.20	0.00	1.99	-56.19	89.20	53.00
1289.9625	H	23.25	Ambient	-44.88	0.70	2.48	-46.66	79.67	53.00
1289.9625	V	23.76	Ambient	-42.43	0.70	2.48	-44.21	77.22	53.00
1719.9500	H	24.18	Ambient	-44.02	2.26	2.86	-44.63	77.64	53.00
1719.9500	V	24.11	Ambient	-41.23	2.26	2.86	-41.84	74.85	53.00
2149.9375	H	52.04	Ambient	-52.86	2.20	3.21	-53.87	86.88	53.00
2149.9375	V	52.37	Ambient	-51.38	2.20	3.21	-52.39	85.40	53.00
2579.9250	H	51.40	Ambient	-54.66	2.79	3.58	-55.45	88.46	53.00
2579.9250	V	51.12	Ambient	-54.13	2.79	3.58	-54.92	87.93	53.00
3009.9125	H	50.73	Ambient	-54.60	3.21	3.89	-55.29	88.30	53.00
3009.9125	V	50.72	Ambient	-52.98	3.21	3.89	-53.66	86.67	53.00
3439.9000	H	50.38	Ambient	-54.82	4.92	4.16	-54.07	87.08	53.00
3439.9000	V	50.37	Ambient	-53.02	4.92	4.16	-52.26	85.27	53.00
3869.8875	H	50.49	Ambient	-52.99	5.45	4.40	-51.94	84.95	53.00
3869.8875	V	50.05	Ambient	-52.37	5.45	4.40	-51.32	84.33	53.00
4299.8750	H	49.54	Ambient	-52.65	5.48	4.61	-51.79	84.80	53.00
4299.8750	V	48.98	Ambient	-52.36	5.48	4.61	-51.49	84.50	53.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 100 Watts (Average), H-DQPSK

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – H-DQPSK
Frequency Tested	434.9875MHz
Notes	100W Power
Date Tested	May 20 – 26, 2026

Freq. MHz	Ant Pol	Meter Reading (dBμV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
869.9750	H	16.26		-53.50	0.00	2.00	-55.50	105.50	70.00
869.9750	V	17.20		-49.90	0.00	2.00	-51.90	101.90	70.00
1304.9625	H	23.83	Ambient	-44.34	0.89	2.50	-45.95	95.95	70.00
1304.9625	V	24.13	Ambient	-42.09	0.89	2.50	-43.70	93.70	70.00
1739.9500	H	24.64	Ambient	-43.31	2.00	2.88	-44.19	94.19	70.00
1739.9500	V	24.03	Ambient	-41.05	2.00	2.88	-41.93	91.93	70.00
2174.9375	H	52.04	Ambient	-53.20	2.29	3.23	-54.14	104.14	70.00
2174.9375	V	51.98	Ambient	-51.88	2.29	3.23	-52.83	102.83	70.00
2609.9250	H	51.16	Ambient	-54.89	3.16	3.60	-55.34	105.34	70.00
2609.9250	V	50.96	Ambient	-54.24	3.16	3.60	-54.68	104.68	70.00
3044.9125	H	50.72	Ambient	-54.46	4.03	3.92	-54.35	104.35	70.00
3044.9125	V	50.71	Ambient	-52.71	4.03	3.92	-52.59	102.59	70.00
3479.9000	H	50.64	Ambient	-54.14	4.82	4.19	-53.50	103.50	70.00
3479.9000	V	51.21	Ambient	-51.94	4.82	4.19	-51.30	101.30	70.00
3914.8875	H	50.40	Ambient	-53.15	5.48	4.42	-52.10	102.10	70.00
3914.8875	V	49.56	Ambient	-53.02	5.48	4.42	-51.97	101.97	70.00
4349.8750	H	50.28	Ambient	-51.86	5.46	4.64	-51.04	101.04	70.00
4349.8750	V	49.74	Ambient	-51.66	5.46	4.64	-50.84	100.84	70.00

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), H-DQPSK

Test Details	
Manufacturer	Motorola Solutions, Inc.
EUT	D-Series S1 UHF Range 1 Radio
Model No.	T8956A
Serial No.	CAH26SZ5PM
Mode	Tx – H-DQPSK
Frequency Tested	434.9875MHz
Notes	2W Power
Date Tested	May 20 – 27, 2026

Freq. MHz	Ant Pol	Meter Reading (dBµV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
869.9750	H	12.66	Ambient	-57.10	0.00	2.00	-59.10	92.11	53.00
869.9750	V	12.42	Ambient	-54.68	0.00	2.00	-56.68	89.69	53.00
1304.9625	H	23.29	Ambient	-44.88	0.89	2.50	-46.49	79.50	53.00
1304.9625	V	23.78	Ambient	-42.44	0.89	2.50	-44.05	77.06	53.00
1739.9500	H	24.54	Ambient	-43.41	2.00	2.88	-44.29	77.30	53.00
1739.9500	V	24.82	Ambient	-40.26	2.00	2.88	-41.14	74.15	53.00
2174.9375	H	51.56	Ambient	-53.68	2.29	3.23	-54.62	87.63	53.00
2174.9375	V	51.62	Ambient	-52.24	2.29	3.23	-53.19	86.20	53.00
2609.9250	H	50.38	Ambient	-55.67	3.16	3.60	-56.12	89.13	53.00
2609.9250	V	50.62	Ambient	-54.58	3.16	3.60	-55.02	88.03	53.00
3044.9125	H	50.70	Ambient	-54.48	4.03	3.92	-54.37	87.38	53.00
3044.9125	V	50.77	Ambient	-52.65	4.03	3.92	-52.53	85.55	53.00
3479.9000	H	50.92	Ambient	-53.86	4.82	4.19	-53.22	86.23	53.00
3479.9000	V	50.76	Ambient	-52.39	4.82	4.19	-51.75	84.76	53.00
3914.8875	H	49.00	Ambient	-54.55	5.48	4.42	-53.50	86.51	53.00
3914.8875	V	48.73	Ambient	-53.85	5.48	4.42	-52.80	85.81	53.00
4349.8750	H	49.88	Ambient	-52.26	5.46	4.64	-51.44	84.45	53.00
4349.8750	V	49.66	Ambient	-51.74	5.46	4.64	-50.92	83.93	53.00

Report on Test Measurements*Oscillator Frequency Stability*

Manufacturer data for the system site frequency standard was used in generation of the following frequency stability exhibits.

Specification Requirement: Reference RSS-119 Section 5.3

Fixed and Base stations operating at 406.1-430 MHz must have a frequency stability of better than +/- 1.5 PPM for 12.5 kHz channel spacing.

Specification Requirement: Reference Part 90.213

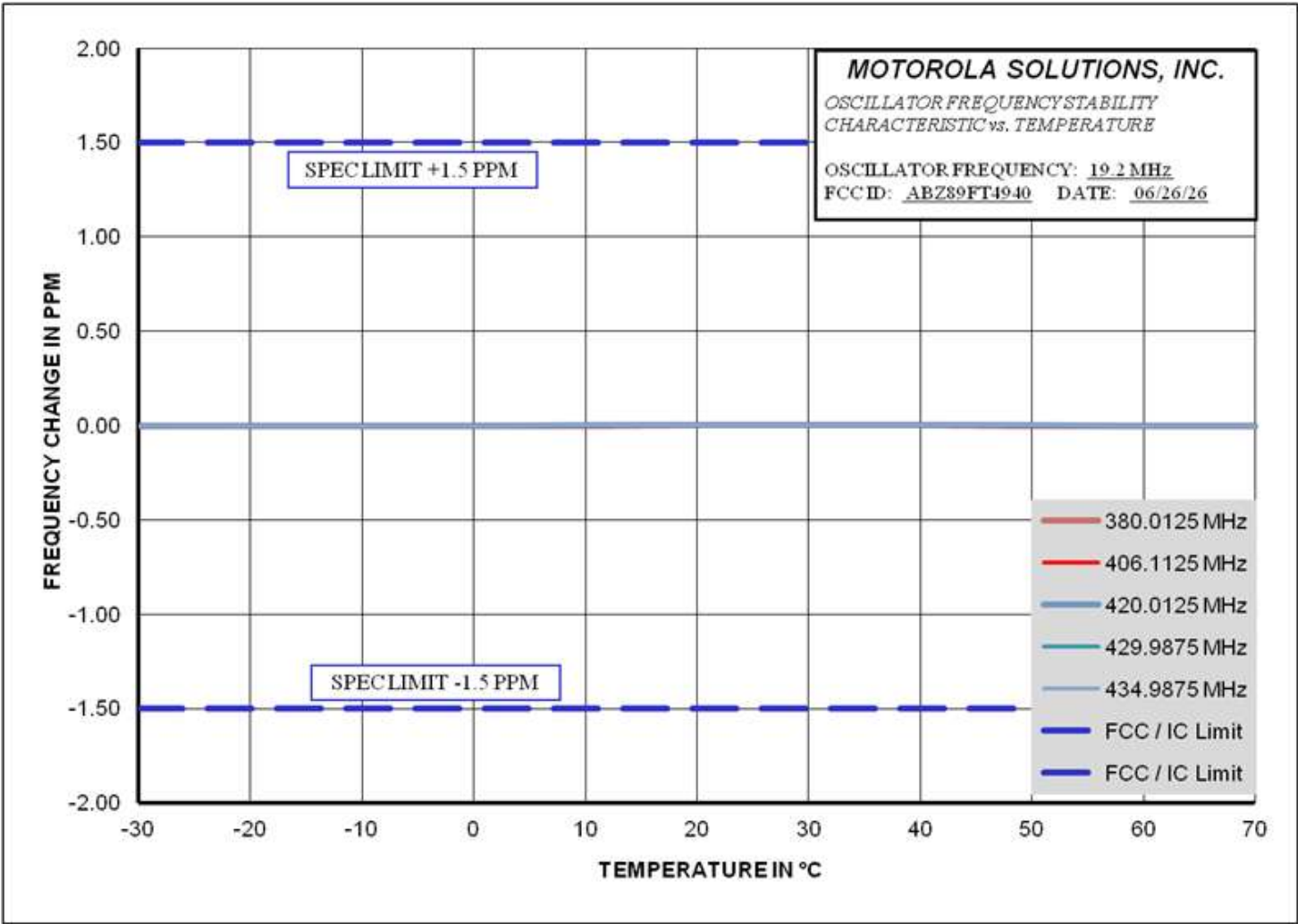
Fixed and Base stations operating at 421-512MHz must have a frequency stability of better than +/- 1.5 PPM for 12.5 kHz channel spacing.

Only the more stringent specification limit is shown on the frequency stability exhibits.

EXHIBIT	DESCRIPTION
E1-5.1	Frequency Stability Vs Temperature
E1-5.2	Frequency Stability Vs Voltage

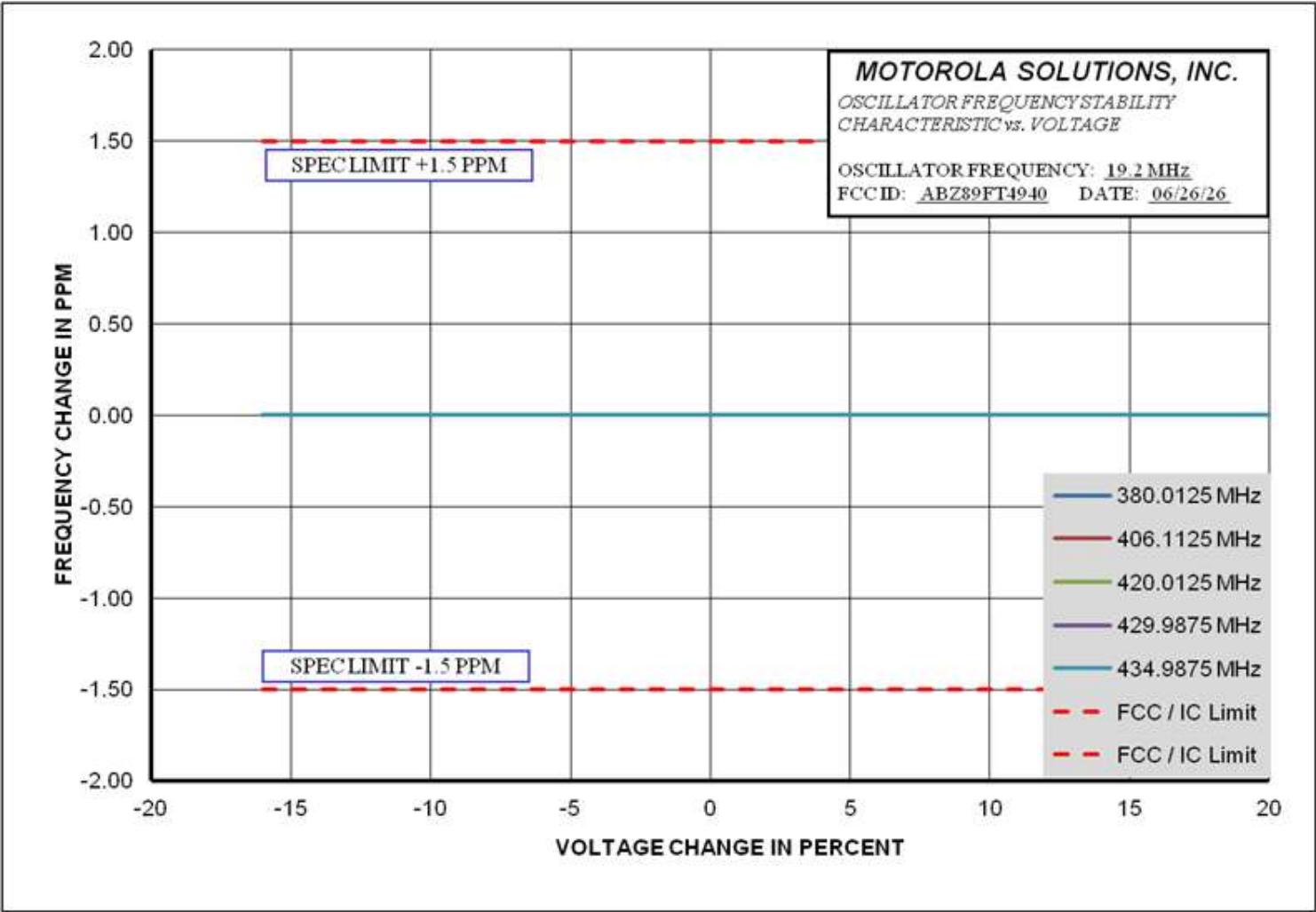
Report on Test Measurements

Frequency Stability Vs Temperature



Report on Test Measurements

Frequency Stability Vs Voltage



Report on Test Measurements

*Frequency Transient Behavior*Specification Requirement 47 CFR §90.214 and IC RSS-119 section 5.9:

Transmitters designed to operate in the 406.1-512 MHz (421-512 MHz for FCC) frequency band must maintain transient frequencies within the maximum frequency difference limits during the time intervals indicated below:

Transient Frequency Behavior 12.5 kHz Channels

For Time Intervals:

- a. t1=10 ms Maximum Frequency Difference ± 12.5 kHz
- b. t2=25 ms Maximum Frequency Difference ± 6.25 kHz
- c. t3=10 ms Maximum Frequency Difference ± 12.5 kHz

Where t1 and t2 are times immediately following when the transmitter is turned on, and t3 is the time from when the transmitter is turned off.

During the time from the end of t2 to the beginning of t3, the frequency difference must not exceed the limits specified in §90.213 / RSS-119 section 5.3.

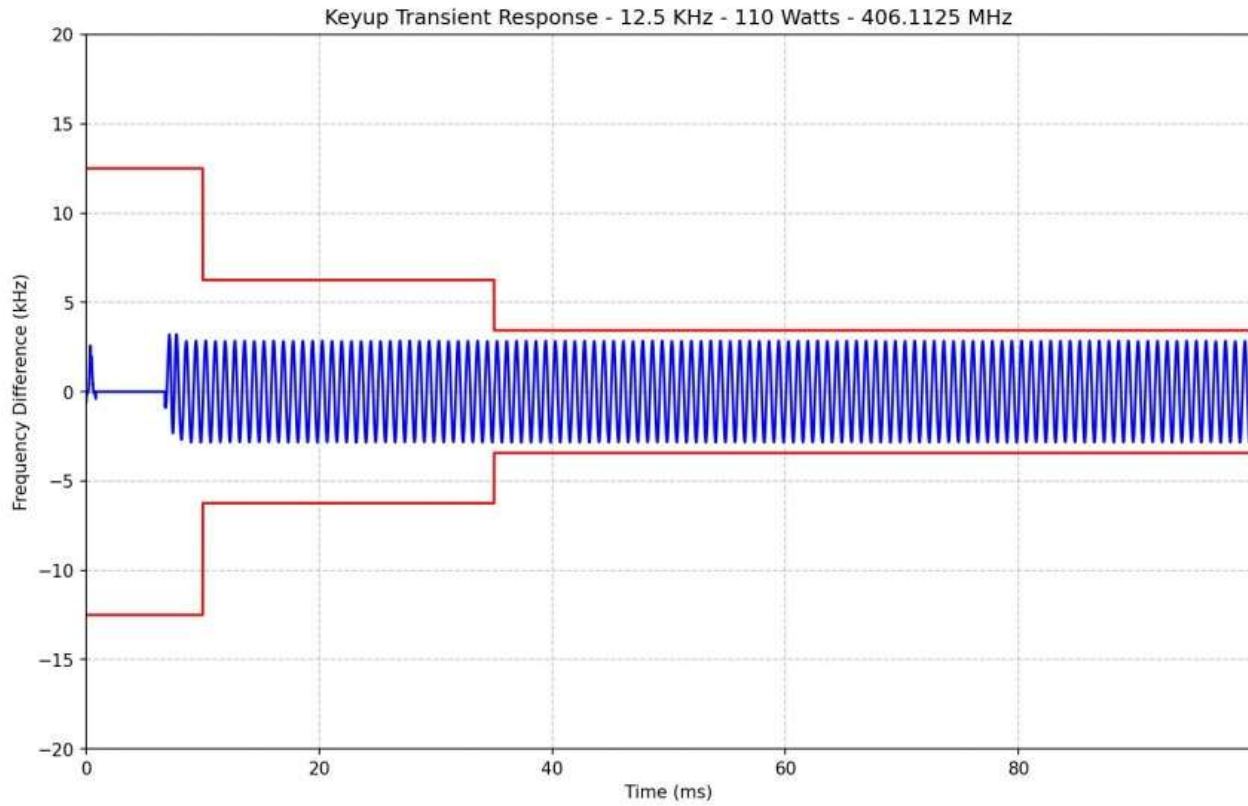
Modulation: Compatible 4-Level Frequency Modulation (C4FM)

Carrier Frequencies: Carrier frequencies of 406.1125, 420.0125, 429.9875, 434.9875 MHz were measured for key and dekey. These frequencies represent the low end and high end of the 406.1-430 MHz band and the high end of the operating range.

EXHIBIT	DESCRIPTION
E1-6.1	Transient Frequency Behavior, 12.5 kHz Channel Key-Up, 406.1125MHz
E1-6.2	Transient Frequency Behavior, 12.5 kHz Channel Dekey, 406.1125MHz
E1-6.3	Transient Frequency Behavior, 12.5 kHz Channel Key-Up, 420.0125MHz
E1-6.4	Transient Frequency Behavior, 12.5 kHz Channel Dekey, 420.0125MHz
E1-6.5	Transient Frequency Behavior, 12.5 kHz Channel Key-Up, 429.9875MHz
E1-6.6	Transient Frequency Behavior, 12.5 kHz Channel Dekey, 429.9875MHz
E1-6.7	Transient Frequency Behavior, 12.5 kHz Channel Key-Up, 434.9875MHz
E1-6.8	Transient Frequency Behavior, 12.5 kHz Channel Dekey, 434.9875MHz

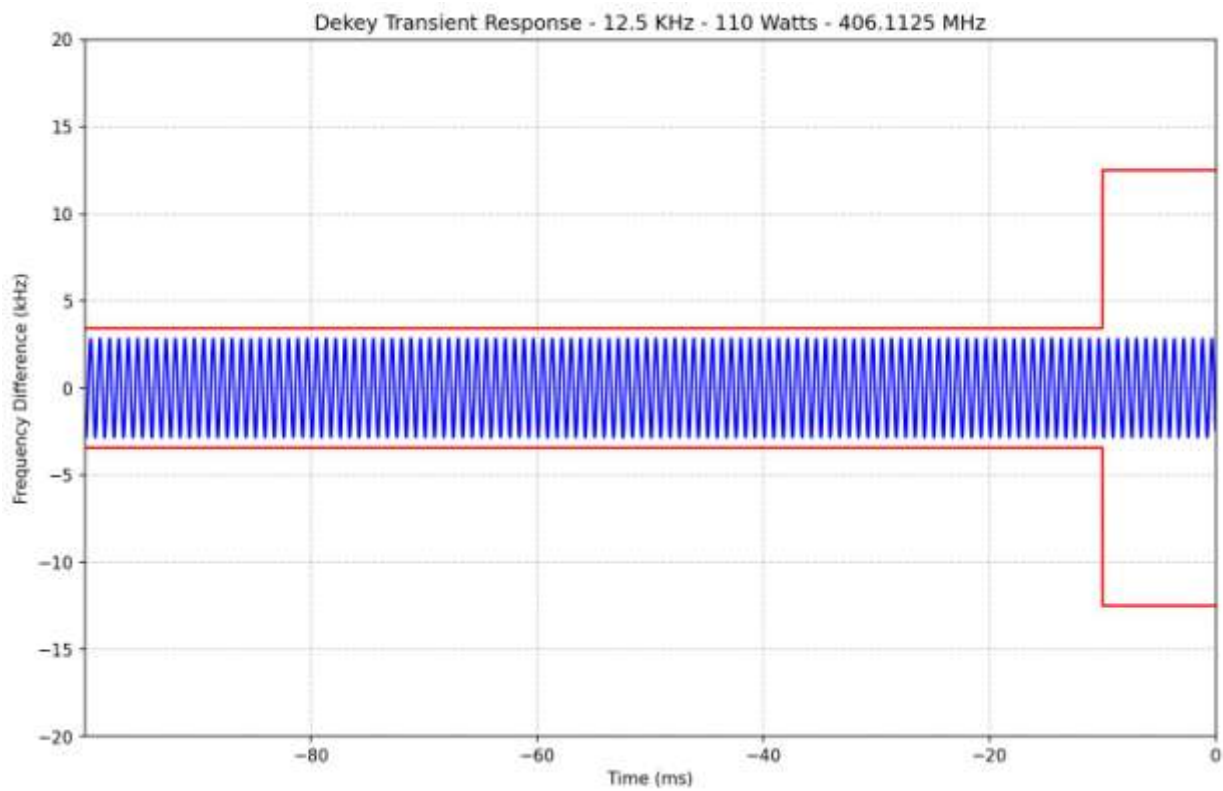
Report on Test Measurements

Transient Frequency Behavior— Key-Up, C4FM



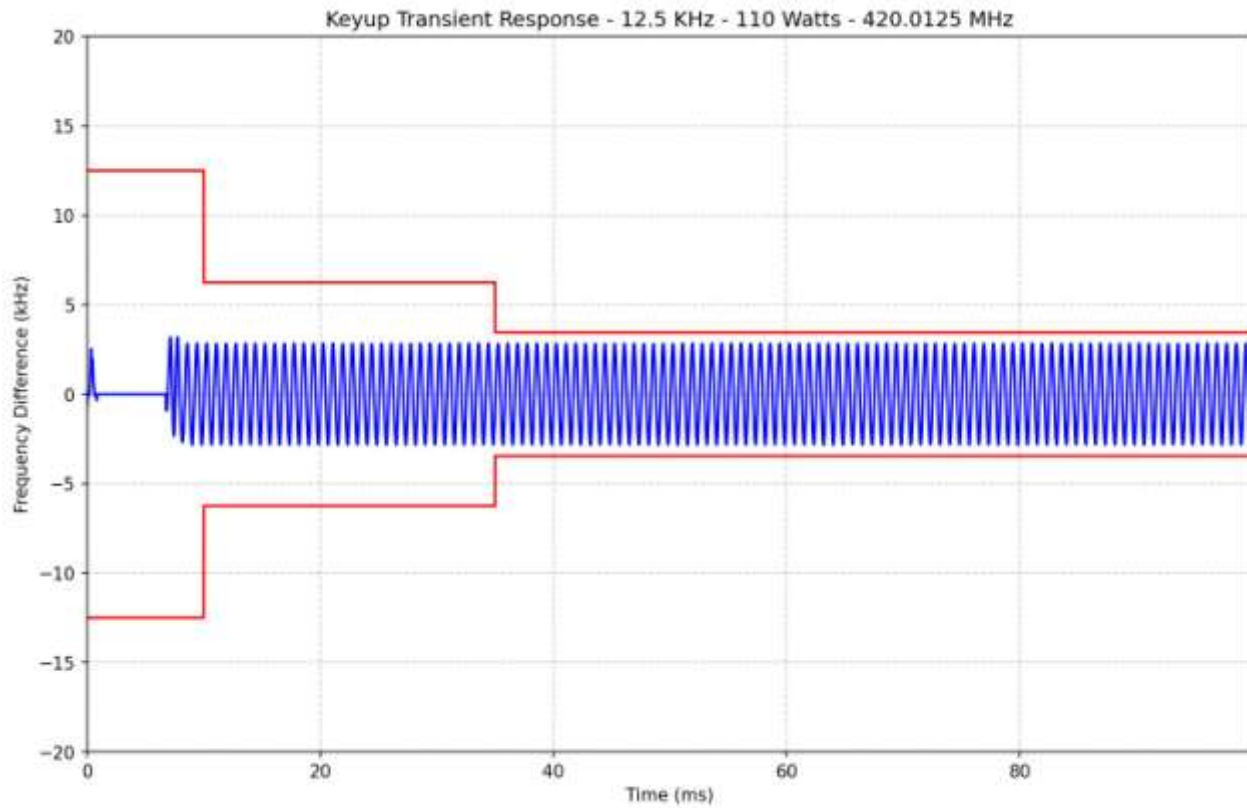
Report on Test Measurements

Transient Frequency Behavior— De-Key, C4FM



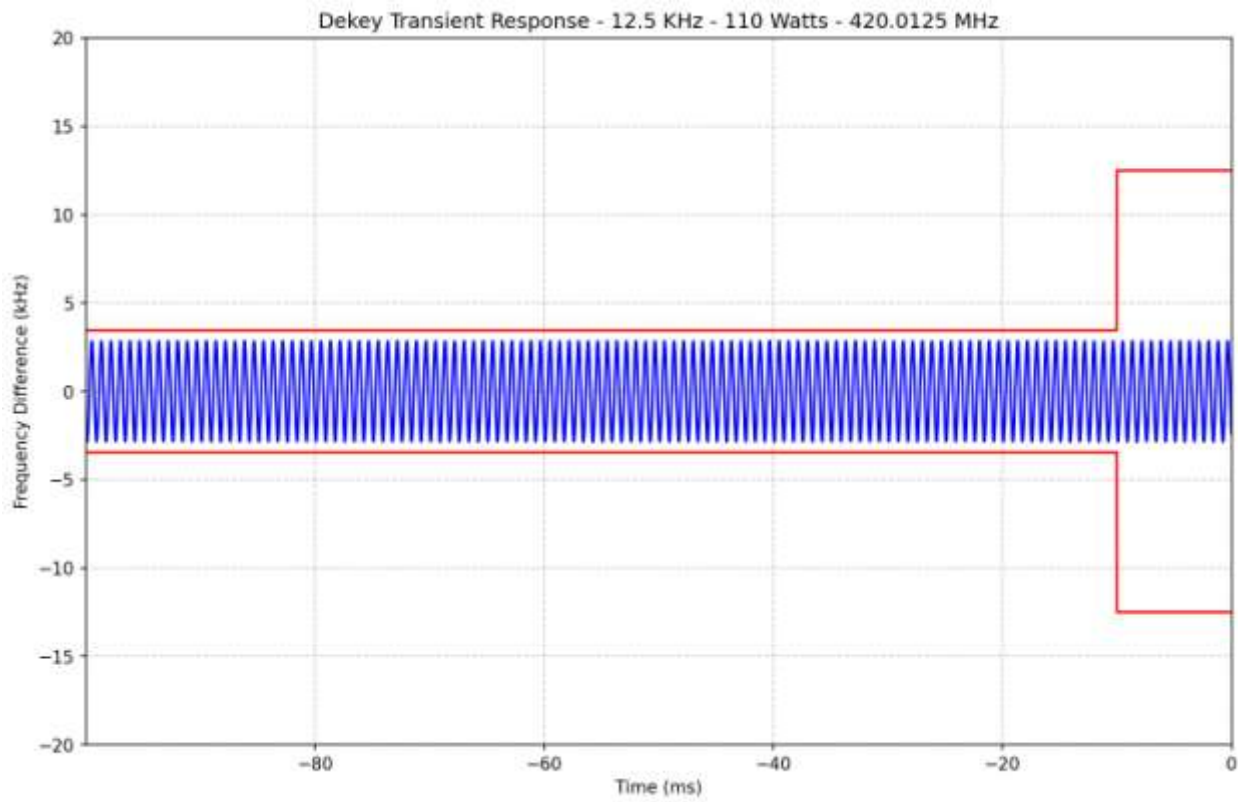
Report on Test Measurements

Transient Frequency Behavior— Key-Up, C4FM



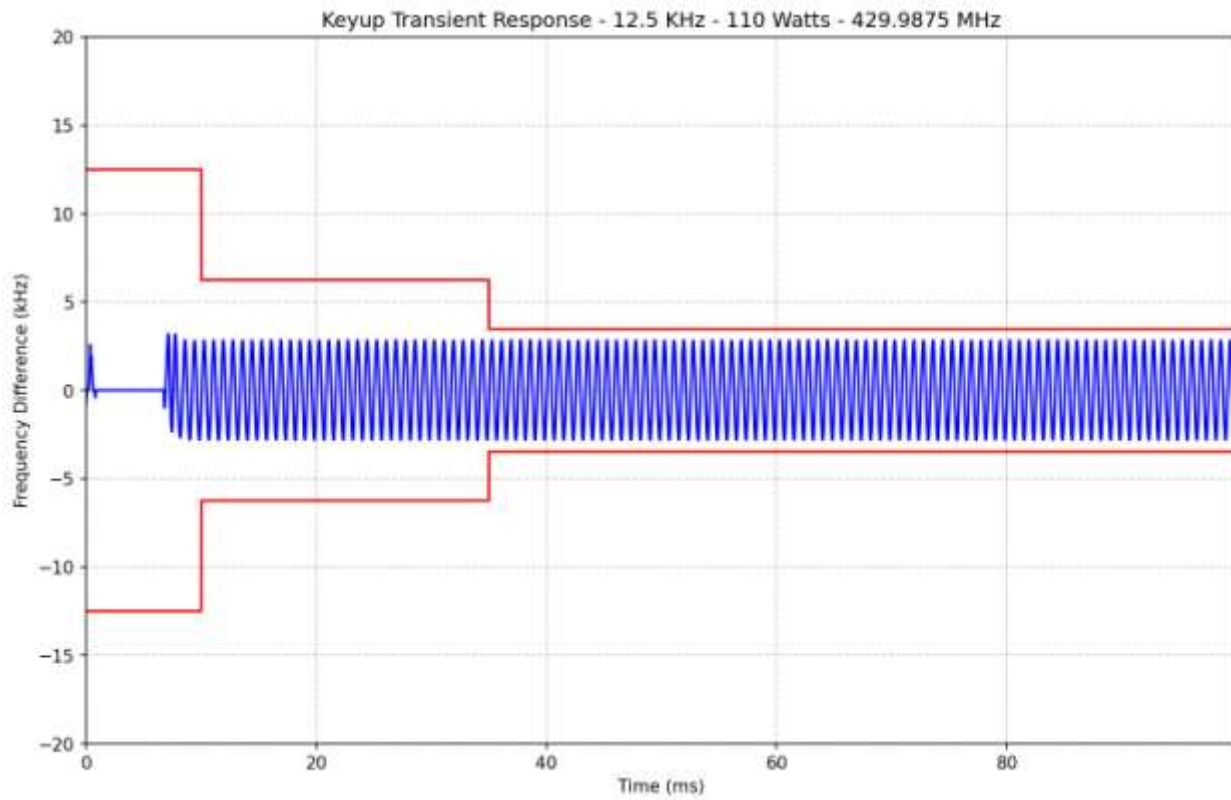
Report on Test Measurements

Transient Frequency Behavior— De-Key, C4FM



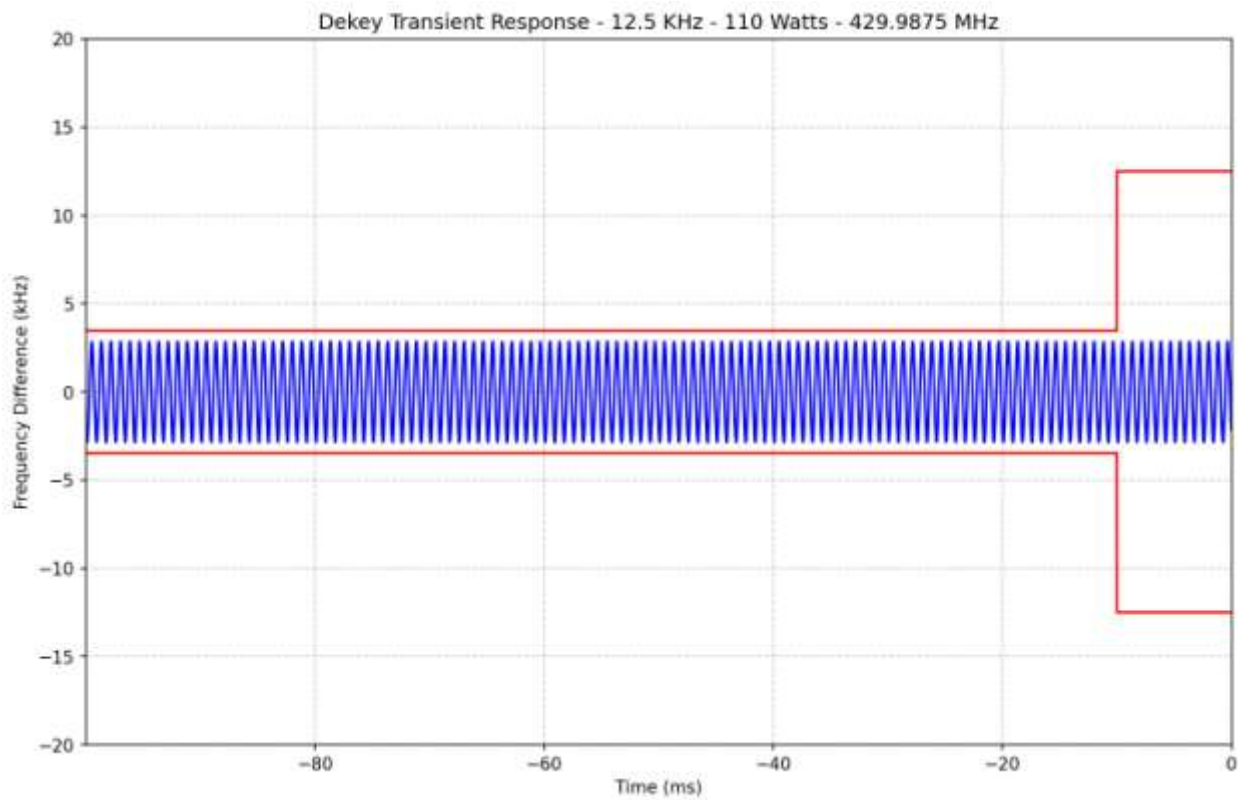
Report on Test Measurements

Transient Frequency Behavior— Key-Up, C4FM



Report on Test Measurements

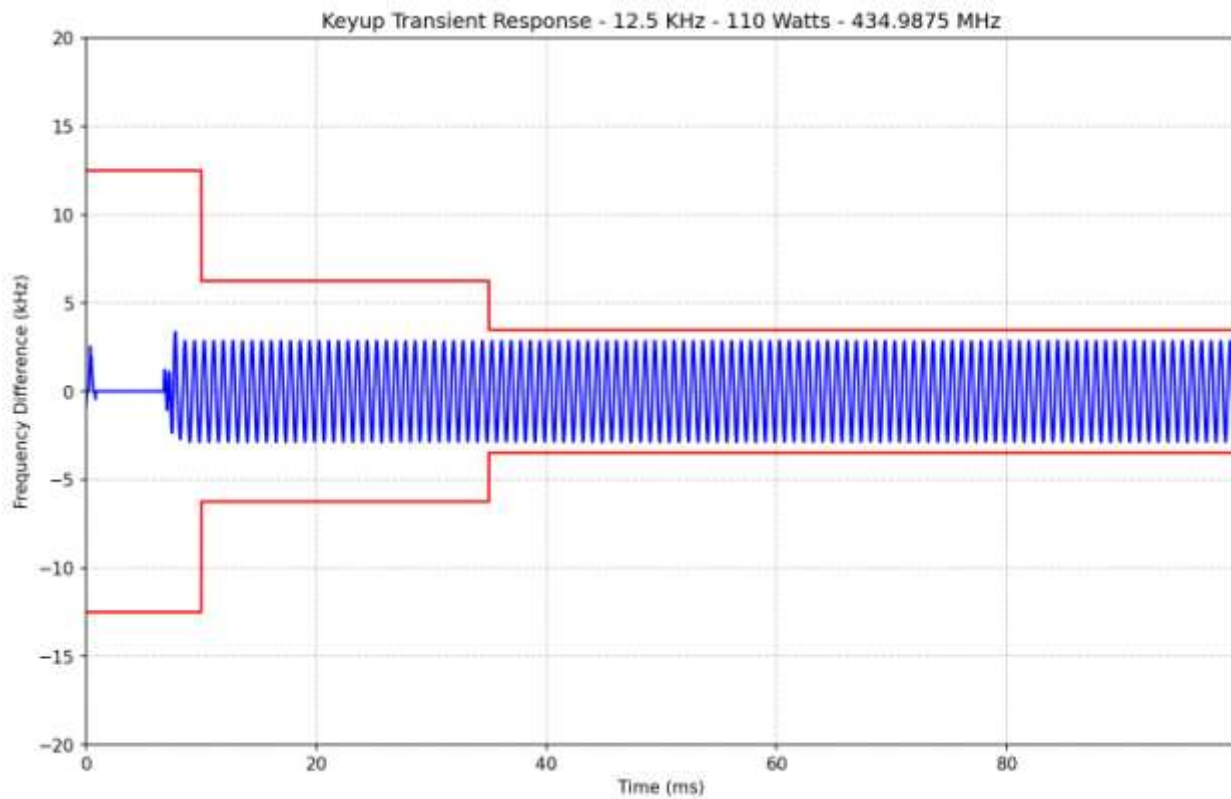
Transient Frequency Behavior— De-Key, C4FM



5

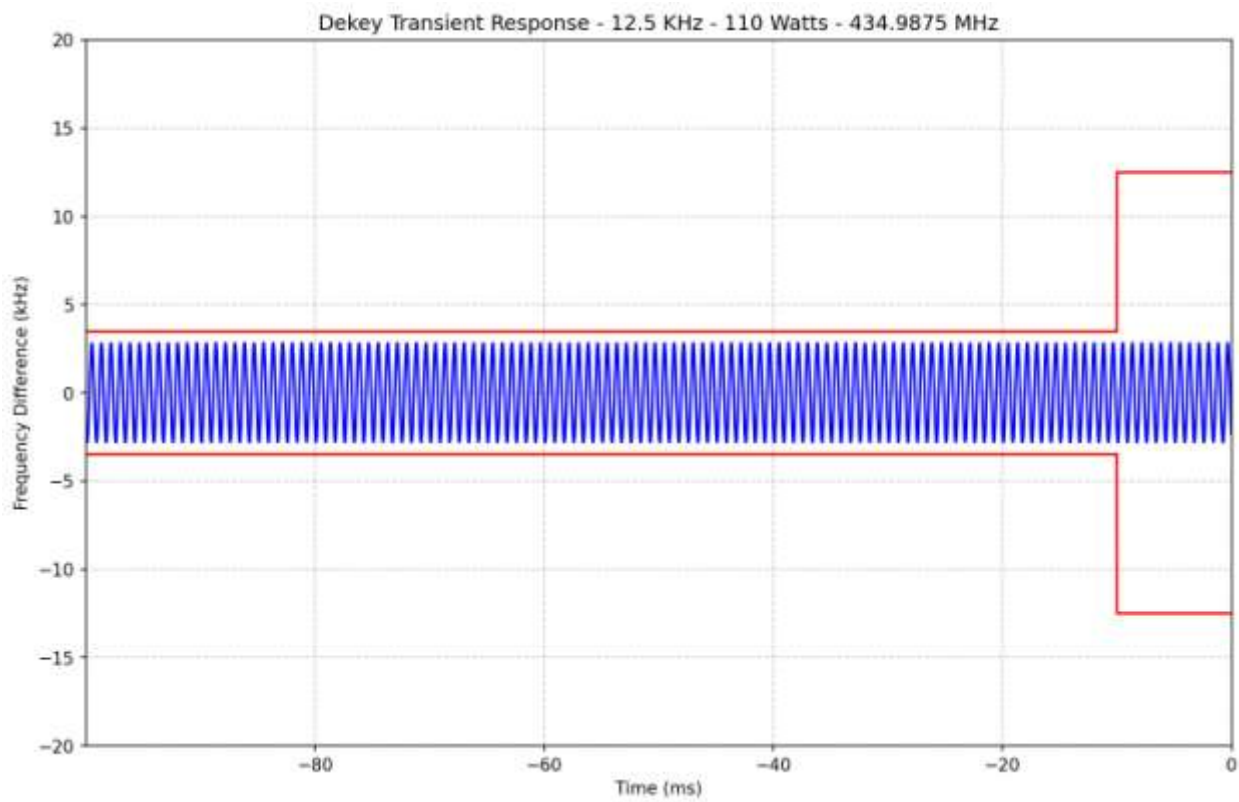
Report on Test Measurements

Transient Frequency Behavior— Key-Up, C4FM



Report on Test Measurements

Transient Frequency Behavior— De-Key, C4FM



Report on Test Measurements

Test Setup Details

Test Locations:

(for all tests except radiated emissions)

Motorola Solutions, Inc., Schaumburg Lab
2000 Progress Parkway, Schaumburg, IL 60196
FCC Registration Number 786245
IC CAB Identifier US0220
Test Engineer Ted Lietz

(for radiated emissions)

Elite Electronic Engineering Inc.
1516 Centre Circle Dr., Downers Grove, IL 60515
FCC Registration Number 269750
IC Registration Number 2987A
IC CAB Identifier US0107
Test Engineer Tylar Jozefczyk

Report on Test Measurements

Test Equipment List (Motorola)

Manufacturer	Model	Description	Serial Number	Last Cal	Interval
Keysight	N9030A	PXA Signal Analyzer, 3 Hz to 50 GHz	MY53310751	07-19-2025	07-19-2026
Rohde & Schwarz	NRP-Z11	Power Sensor	101590	08-21-2024	08-21-2026
Keysight	34401A	Digital Multimeter	3146A59752	08-29-2022	08-29-2026
Keysight	8482a	Power Sensor	2652A15873	07-22-2025	07-22-2026
Keysight	E5071C	ENA Series Network analyzer	MY46316134	07-23-2025	07-23-2026
Thermotron	WS-120- CHM-15-15	Temperature Chamber	52516	03-25-2026	03-25-2028
Keysight	E4440A	PSA Spectrum Analyzer 3 Hz - 26.5 GHz	MY46185813	08-22-2024	08-22-2026
Keysight	8753es	S-parameter Network Analyzer	US39175306	07-23-2025	07-23-2026

Report on Test Measurements

Test Equipment List (Elite)

Eq ID	Equipment Description	Manufacturer	Model No.	Serial No.	Frequency Range	Cal Date	Due Date
APW10	Preamplifier	Planar	PE2-35-120-5R0-10-12-SFF	PL11685/1241	1-18GHz	3/18/2026	3/18/2027
NSDS1	UNIVERSAL SPHERICAL DIPOLE SOURCE	AET	USDS-H	AET-1116		NOTE 1	
NTA2	BILOG ANTENNA	TESEQ	6112D	28040	25-2000MHz	6/21/2024	6/21/2026
NWQ1	Double Ridged Waveguide	ETS-Lindgren	3117	66655	1-18GHz	7/26/2024	7/26/2026
R29F	3M ANECHOIC CHAMBER NSA	EMC TEST SYSTEMS	3M ANECHOIC		30MHZ-18GHZ	6/1/2025	6/1/2027
RBG2	EMI Analyzer	Rohde & Schwarz	ESW44	101591	2HZ-44GHZ	12/12/2025	12/12/2026
SES0	24VDC POWER SUPPLY	P-TRANS	FS-32024-1M	001	18-27VDC	NOTE 1	
SMA45	POWER SUPPLY	VOLTEQ	HYE5050EX	210502186	50V/50A	NOTE 1	
VBV2	COMMERCIAL RADIATED EMISSIONS.EXE	ELITE		---	---	N/A	
WKA1	SOFTWARE, UNIVERSAL RCV EMI	ELITE	UNIV_RCV_EMI	1	---	I/O	
XPQ3	HIGH PASS FILTER	K&L MICROWAVE	4IH30-1804/T10000-0	4	1.8GHZ-10GHZ	9/16/2025	9/16/2027

N/A: Not Applicable

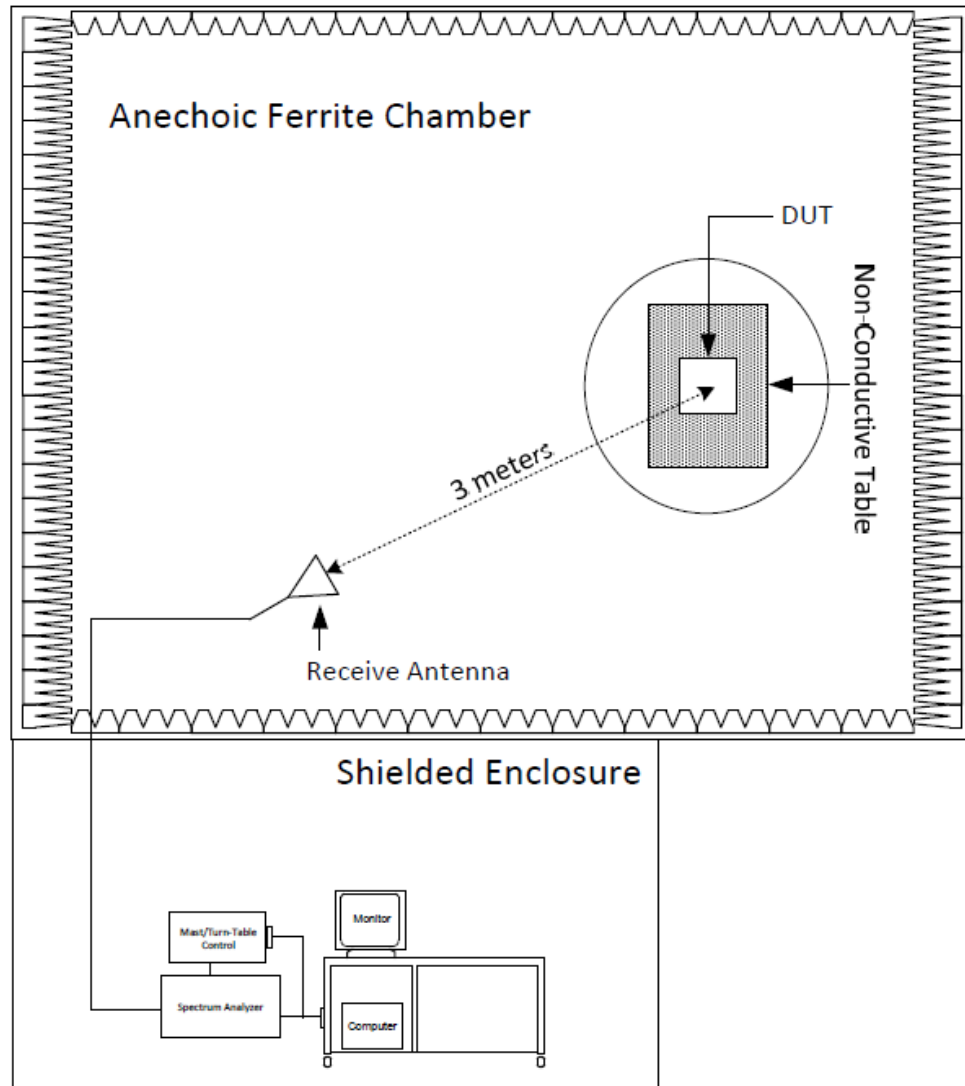
I/O: Initial Only

CNR: Calibration Not Required

NOTE 1: For the purpose of this test, the equipment was calibrated over the specified frequency range, pulse rate, or modulation prior to the test or monitored by a calibrated instrument.

Report on Test Measurements

Test Setup (Elite)



Radiated Measurements Test Setup

Report on Test Measurements

Test Setup (Elite)



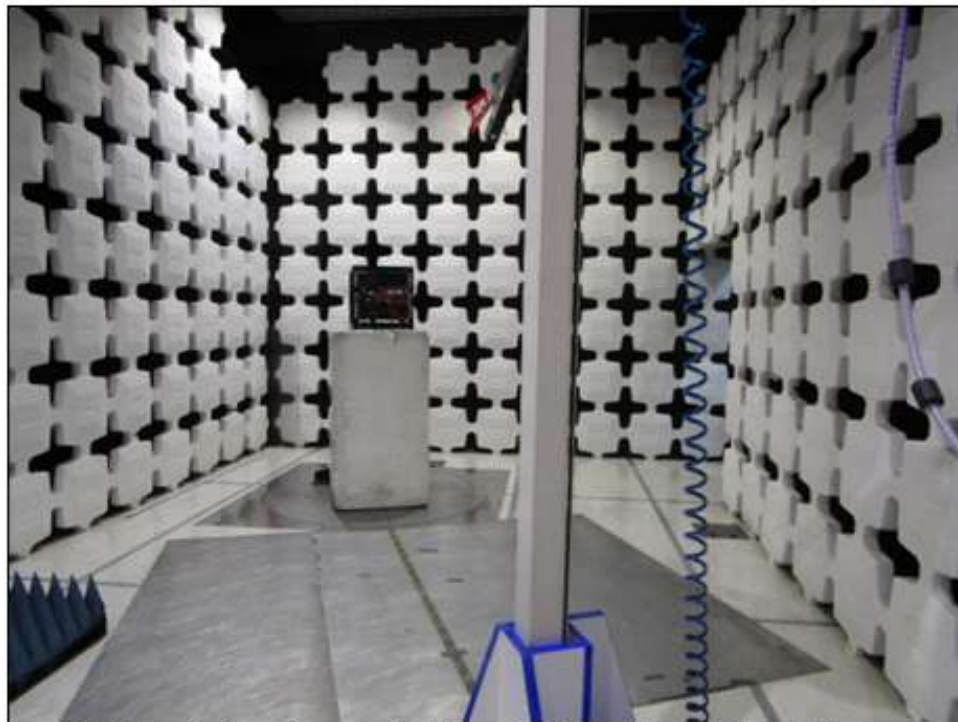
Test Setup for Case Spurious Radiated Emissions, 30MHz – 1GHz – Antenna
Polarization Horizontal



Test Setup for Case Spurious Radiated Emissions, 30MHz – 1GHz – Antenna
Polarization Vertical

Report on Test Measurements

Test Setup (Elite)



Test Setup for Case Spurious Radiated Emissions, Above 1GHz – Antenna
Polarization Horizontal



Test Setup for Case Spurious Radiated Emissions, Above 1GHz – Antenna
Polarization Vertical

Report on Test Measurements

Statement of Certification

The technical data supplied with this application, having been taken under my supervision is hereby duly certified. The following is a statement of my qualifications:

College Degree: BS Mathematics, Illinois State University, Normal, IL, USA

37 years of Design and Development experience in the field of two-way radio communication.

NAME: Ted Lietz

SIGNATURE:



DATE: June 26, 2026

POSITION: Principal Staff Engineer

I hereby certify that the above application was prepared under my direction and that to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct:

NAME: Matt Nawrocki

SIGNATURE:



DATE: June 26, 2026

POSITION: Engineering Manager