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

Report on Test Measurements

RF Power Output Data

The RF power output was measured with the indicated voltage applied to the RF Site. The DC current indicated is the total for the site with 1 channel transmitting at the noted power at the top of rack. Max Power requested is 90W, Lower Power is 2W.

C4FM Modulation

Temperature	25˚C				
Voltage (V)	48V				
Frequency (MHz)	Low Power (W)	Current (A)	Max Power (W)	Current (A)	Remarks
768	2.05	39.02	92.56	50.17	
772	1.97	39.01	88.74	50.07	
776	2.01	39.04	90.82	50.96	

LSM Modulation

Temperature	25˚C				
Voltage (V)	48V				
Frequency (MHz)	Low Power (W)	Current (A)	Max Power (W)	Current (A)	Remarks
768	2.06	39.05	97.90	50.46	
772	2.01	39.05	90.69	50.07	
776	2.04	39.05	92.19	50.84	

H-DQPSK Modulation

Temperature	25˚C				
Voltage (V)	48V				
Frequency (MHz)	Low Power (W)	Current (A)	Max Power (W)	Current (A)	Remarks
768	2.07	39.05	92.97	50.11	
772	2.00	39.04	90.65	50.01	
776	2.03	39.08	92.02	50.98	

Report on Test Measurements

Adjacent Channel Power (ACP) Requirements

The transmitter can utilize various modulation modes as determined by customer requirements, channel usage, and system configuration as described in Exhibit B. These modulations are: linear modulations which operate at 90 Watts (average) in 12.5 kHz channels, and Compatible 4-Level Frequency Modulation (C4FM) which is a non linear modulation and operates in 12.k kHz channels at 90 Watts. The two types of linear modulations are similar, Linear Simulcast Modulation (LSM) is for FDMA applications, and H-DQPSK is for TDMA applications. For purposes of the ACP performance present in this exhibit, both of these linear modulations perform similarly and data from only one of them is presented. All of the following charts reference the following setup and specification requirements for the modes summarized as follows:

Modulation Type:	LSM / H-DQPSK	C4FM
Channelization:	12.5 kHz	12.5 kHz
Power Setting:	Average 90 Watts	Average 90 Watts

Specification Requirement Limits: FCC §90.543, §27.53 and IC RSS-119 section 5.8.9

§ 90.543	Emission limits: For operation in the 769-775 MHz Band
§ 27.53	Emission limits: For operation in the 775-776 MHz Band
119-5.8.9	Emission limits: For operation in the 768-776 MHz Band

ACCP Tables per 90.543(a), 27.53(e)(6), RSS-119 Sec 5.8.9 Table 13 & 14: For base transmitters designed to operate with a 12.5 kHz channel bandwidth, the ACCP shall be in accordance to the following table.

Offset from Center Frequency (kHz)	Measurement Bandwidth (kHz)	Maximum ACCP (dBc)
9.375	6.25	-40
15.625	6.25	-60
21.875	6.25	-60
37.50	25	-60
62.50	25	-65
87.50	25	-65
150.00	100	-65
250.00	100	-65
350.00	100	-65
≥ 400 kHz to 12 MHz 30 (swept)	30 (swept)	-80
12 MHz to paired receive band	30 (swept)	-80
In the paired receive band	30 (swept)	-100

Report on Test Measurements

Adjacent Channel Coupled Power (ACCP) Requirements

ACP measurement procedure: For all measurements modulate the transmitter as it would be modulated in normal operating conditions. The ACP measurements may be made with a spectrum analyzer capable of making direct ACP measurements. “Measurement bandwidth”, as used for non-swept measurements, implies an instrument that measures the power in many narrow bandwidths equal to the nominal resolution bandwidth and integrates these powers to determine the total power in the specified measurement bandwidth.

(1) *Setting reference level.* Set transmitter to maximum output power. Using a spectrum analyzer capable of ACP measurements, set the measurement bandwidth to the channel size. Set the frequency offset of the measurement bandwidth to zero and adjust the center frequency of the instrument to the assigned center frequency to measure the average power level of the transmitter. Record this power level in dBm as the “reference power level”.

(2) *Non-swept power measurement.* Using a spectrum analyzer capable of ACP measurements, set the measurement bandwidth and frequency offset from the assigned center frequency as shown in the tables above. Any value of resolution bandwidth may be used as long as it does not exceed 2 percent of the specified measurement bandwidth. Measure the power level in dBm. These measurements should be made at maximum power. Calculate ACP by subtracting the reference power level measured in (1) from the measurements made in this step. The absolute value of the calculated ACP must be greater than or equal to the absolute value of the ACP given in the table for each condition above.

(3) *Swept power measurement.* Set a spectrum analyzer to 30 kHz resolution bandwidth, 1 MHz video bandwidth and average, sample, or RMS detection. Set the reference level of the spectrum analyzer to the RMS value of the transmitter power. Sweep above and below the carrier frequency to the limits defined in the tables. Calculate ACP by subtracting the reference power level measured in (1) from the measurements made in this step. The absolute value of the calculated ACP must be greater than or equal to the absolute value of the ACP given in the table for each condition above.

Measurement results:
For measurements less than or equal to 400 kHz offset from the center frequency, the ACCP results are shown in Tabular format. For measurements great than 400 kHz offset from the center frequency, the ACCP results are shown in Graphical format. The results shown are from testing performed at the base radio level without the use of any external transmit filtering.

All results show sufficient margin to the specified requirements.

EXHIBIT	DESCRIPTION
E1-2.1	ACP Tabular Results – Offsets < 400 kHz H-DQPSK , LSM, and C4FM Modes
E1-2.2, 3, 4	ACP Results >400 kHz for H-DQPSK Low End / Middle / High End of band
E1-2.5, 6, 7	ACP Results >400 kHz for LSM, Low End / Middle / High End of band
E1-2.8, 9, 10	ACP Results >400 kHz for C4FM, Low End / Middle / High End of band

Report on Test Measurements

ACP Test Results for offset frequencies < 400 kHz

ACP Test Results: H-DQPSK, Pout = 90 Watts (avg), Channel Spacking = 12.5 kHz

FCC/IC Requirements			Measurement Results					
			768 MHz		772 MHz		776 MHz	
Offset from Center Freq (kHz)	Measurement BW (kHz)	Maximum ACP (dBc)	Max ACP at low side offset freq (dBc)	Max ACP at high side offset freq (dBc)	Max ACP at low side offset freq (dBc)	Max ACP at high side offset freq (dBc)	Max ACP at low side offset freq (dBc)	Max ACP at high side offset freq (dBc)
± 9.375	6.25	-40	42.555	40.9627	42.2878	41.0044	42.4888	40.942
± 15.625	6.25	-60	83.0666	83.5198	80.9937	81.8439	78.334	79.4798
± 21.875	6.25	-60	85.5883	85.6886	84.3105	84.1868	79.2511	81.6362
± 37.5	25	-60	82.0888	82.2698	81.3113	81.2844	79.0021	78.5773
± 62.5	25	-65	83.466	83.5037	82.6115	82.583	81.767	81.7965
± 87.5	25	-65	83.8339	83.7751	83.0672	83.0399	82.3567	82.3548
± 150	100	-65	77.8342	77.7648	77.4486	77.5127	77.4402	77.4023
± 250	100	-65	80.256	80.3251	80.0527	80.0459	80.0519	80.0831
± 350	100	-65	81.1482	81.1872	81.0197	80.9828	80.9897	80.9967

ACP Test Results: LSM, Pout = 90 Watts (avg), Channel Spacking = 12.5 kHz

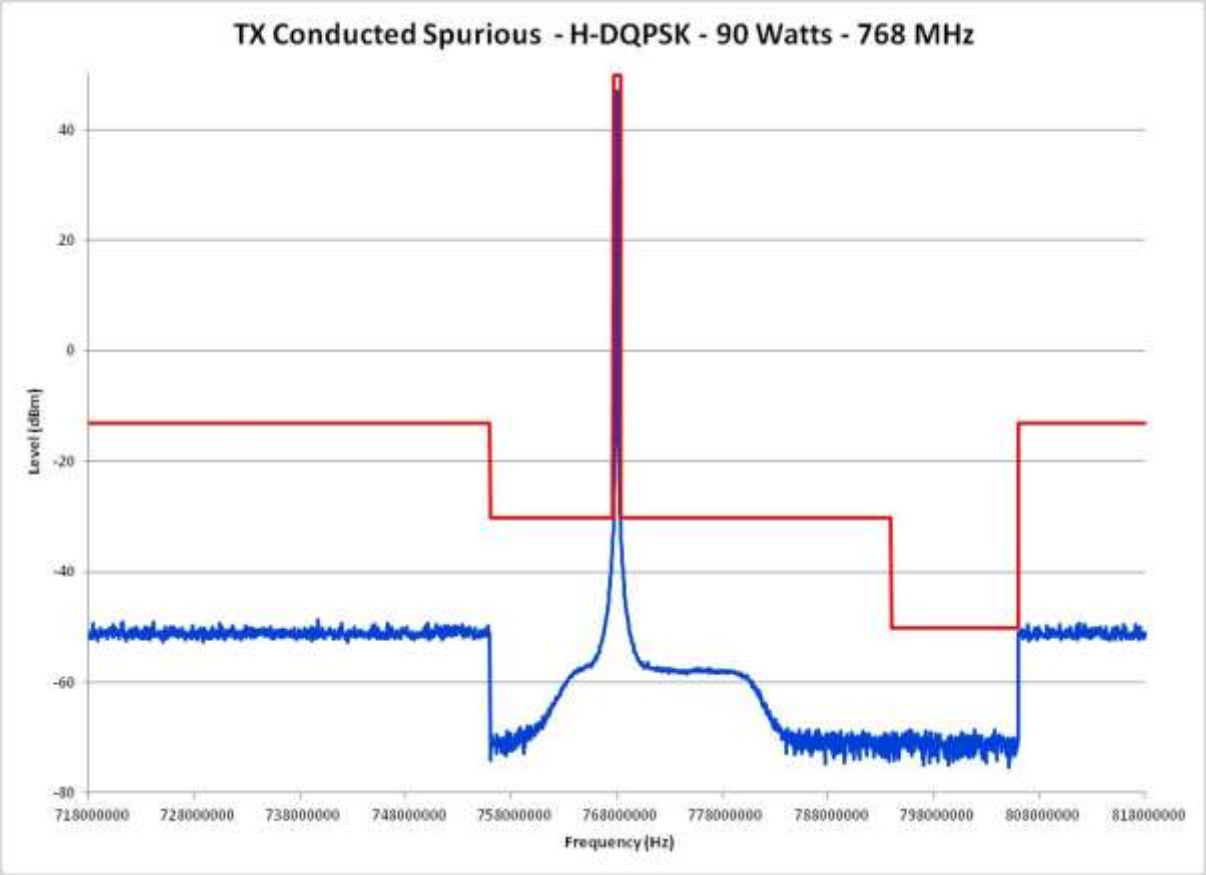
FCC/IC Requirements			Measurement Results					
			768 MHz		772 MHz		776 MHz	
Offset from Center Freq (kHz)	Measurement BW (kHz)	Maximum ACP (dBc)	Max ACP at low side offset freq (dBc)	Max ACP at high side offset freq (dBc)	Max ACP at low side offset freq (dBc)	Max ACP at high side offset freq (dBc)	Max ACP at low side offset freq (dBc)	Max ACP at high side offset freq (dBc)
± 9.375	6.25	-40	43.3532	42.788	43.3567	42.7243	43.3541	42.877
± 15.625	6.25	-60	82.9993	82.9062	80.5981	81.215	77.9683	80.4503
± 21.875	6.25	-60	86.0441	86.1621	83.7721	83.6459	81.4667	80.4538
± 37.5	25	-60	82.3793	82.4998	80.9207	80.8516	79.9507	79.7287
± 62.5	25	-65	83.4398	83.4401	82.6886	82.7	81.8086	81.8754
± 87.5	25	-65	83.688	83.7356	83.1662	83.1264	82.2391	82.3277
± 150	100	-65	77.7423	77.7691	77.34	77.3224	77.4736	77.4587
± 250	100	-65	80.4483	80.4273	79.9472	80.025	80.0084	80.0943
± 350	100	-65	81.4291	81.45	80.9954	80.8927	81.0191	81.007

ACP Test Results: C4FM, Pout = 90 Watts, Channel Spacking = 12.5 kHz

FCC/IC Requirements			Measurement Results					
			768 MHz		772 MHz		776 MHz	
Offset from Center Freq (kHz)	Measurement BW (kHz)	Maximum ACP (dBc)	Max ACP at low side offset freq (dBc)	Max ACP at high side offset freq (dBc)	Max ACP at low side offset freq (dBc)	Max ACP at high side offset freq (dBc)	Max ACP at low side offset freq (dBc)	Max ACP at high side offset freq (dBc)
± 9.375	6.25	-40	41.3238	41.8327	41.3196	41.7924	41.2505	41.8689
± 15.625	6.25	-60	83.8595	84.1091	83.9275	83.9817	82.4032	82.3122
± 21.875	6.25	-60	86.5214	86.6026	86.4398	86.3616	84.3831	84.4279
± 37.5	25	-60	82.8671	82.9067	82.8965	82.8259	81.2084	81.3064
± 62.5	25	-65	84.044	84.1217	84.0382	84.0577	82.3283	82.6707
± 87.5	25	-65	84.3742	84.3486	84.3641	84.3423	83.0331	82.8148
± 150	100	-65	78.3201	78.3413	78.3286	78.2773	77.9566	77.9171
± 250	100	-65	81.4892	81.426	81.3462	81.3483	80.9131	81.0133
± 350	100	-65	82.639	82.6599	82.5354	82.5288	82.25	82.2075

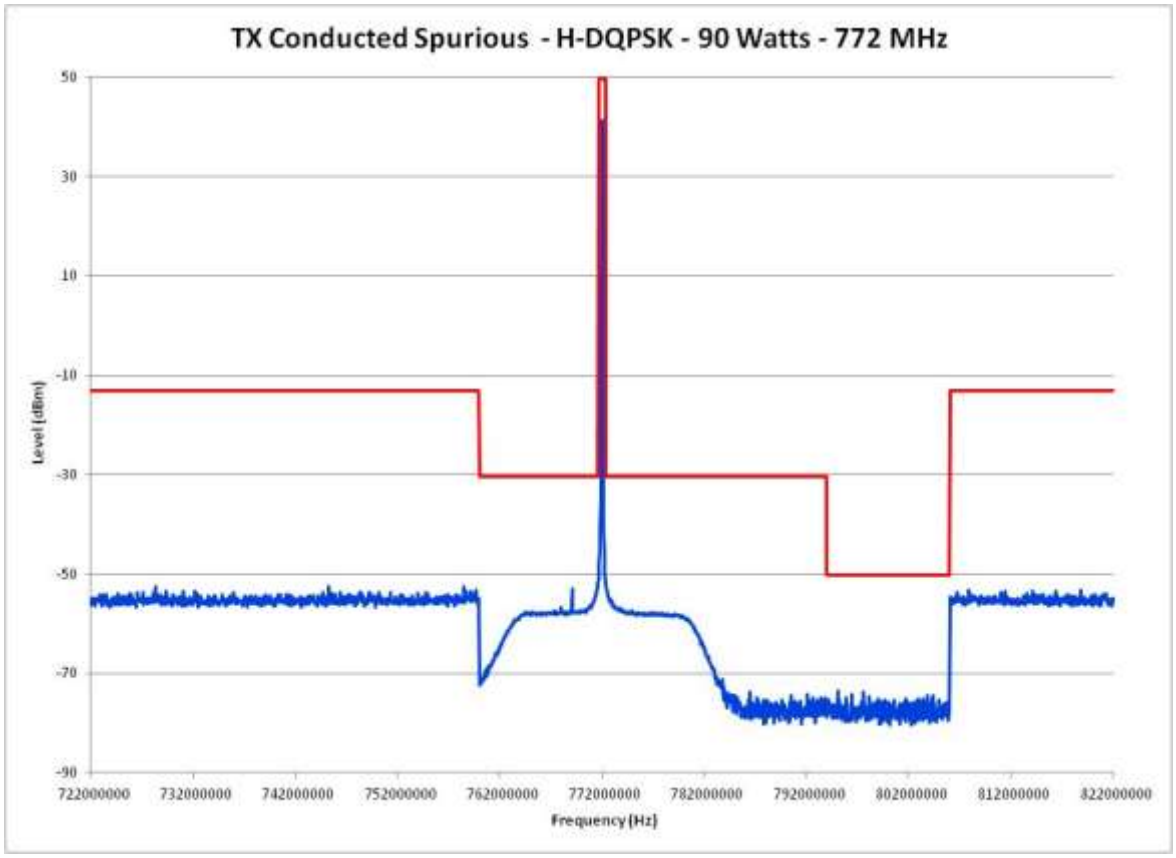
Report on Test Measurements

Swept ACCP – H-DQPSK, P25 Two Slot TDMA Digital Modulation – Emission Designator: 9K80D7E, 9K80D7D, 9K80D7W, Low End of Band



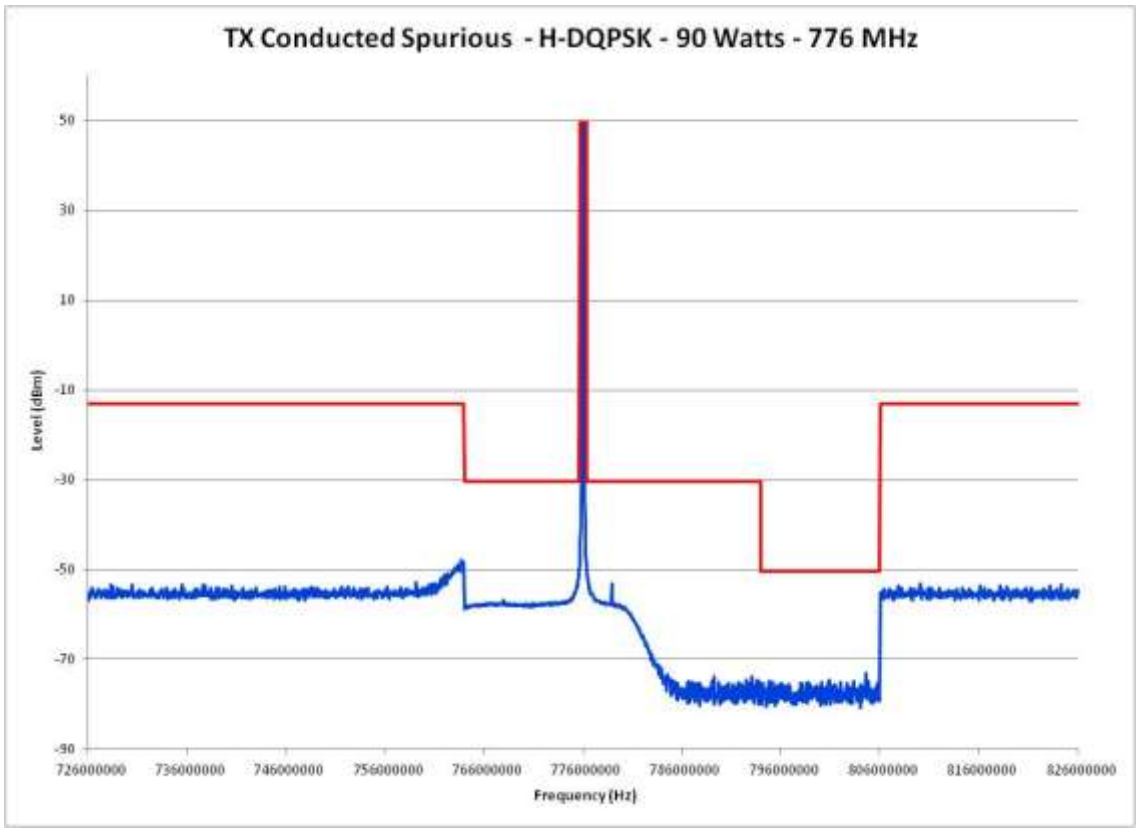
Report on Test Measurements

Swept ACCP – H-DQPSK, P25 Two Slot TDMA Digital Modulation – Emission Designator: 9K80D7E, 9K80D7D, 9K80D7W, Mid Band



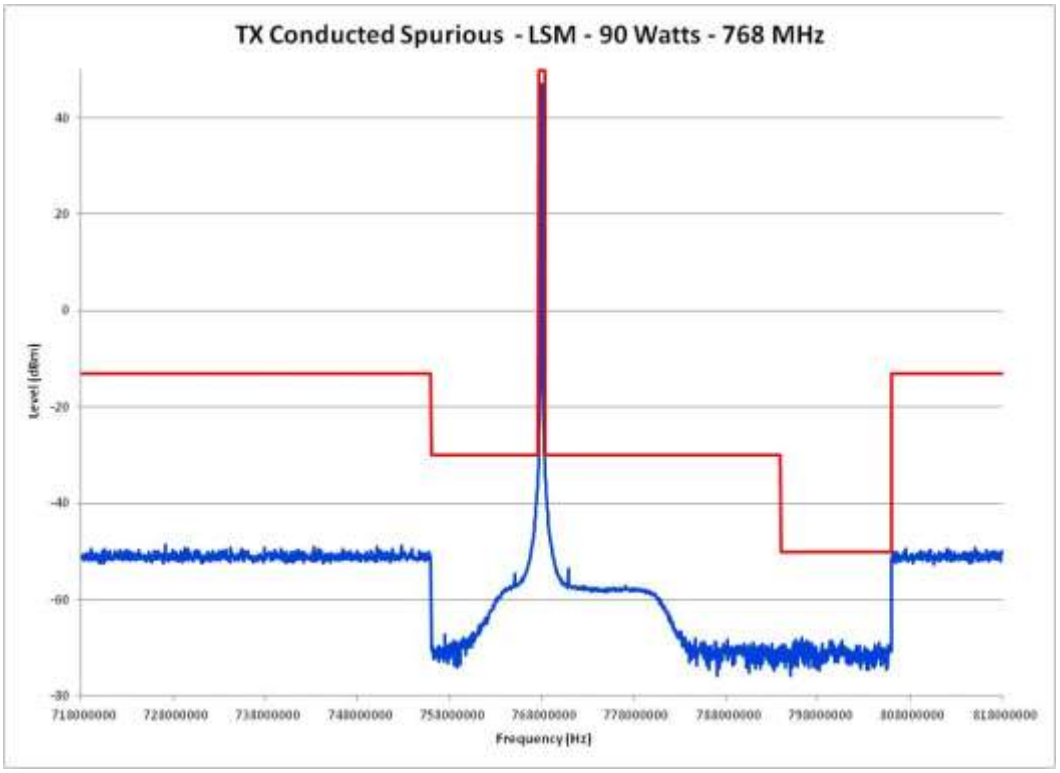
Report on Test Measurements

Swept ACCP – H-DQPSK, P25 Two Slot TDMA Digital Modulation – Emission Designator: 9K80D7E, 9K80D7D, 9K80D7W, High End of Band



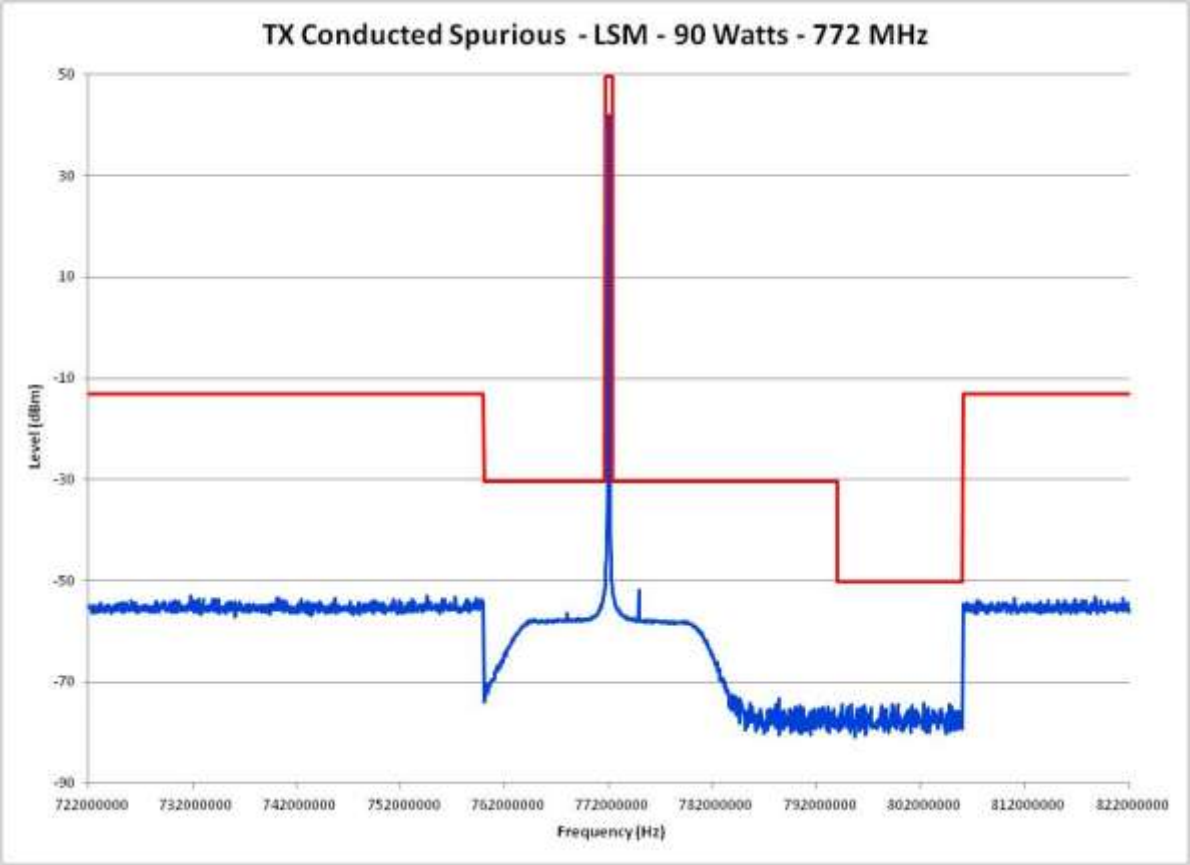
Report on Test Measurements

Swept ACCP – Linear Simulcast Modulation (LSM) – Emission Designator: 8K70D1E, 8K70D1D, 8K70D1W – Low End of Band

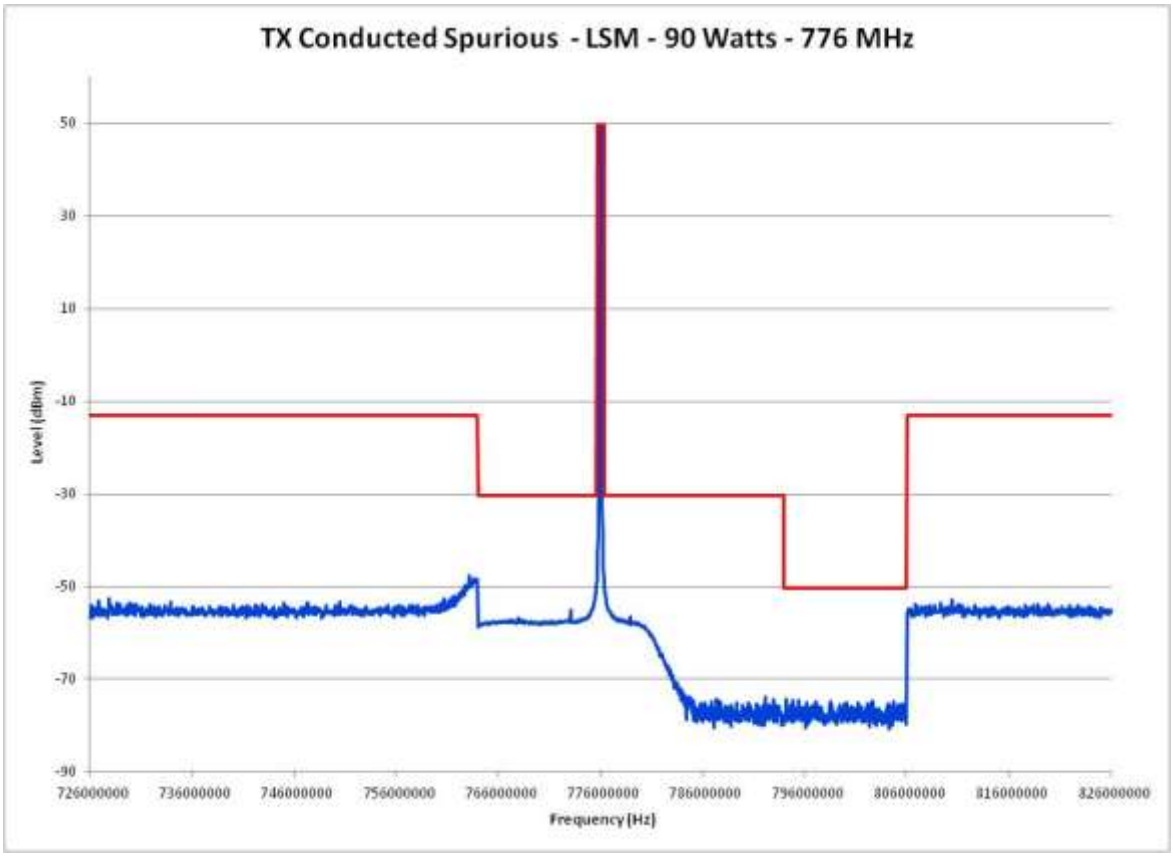


Report on Test Measurements

Swept ACCP – Linear Simulcast Modulation (LSM) – Emission Designator: 8K70D1E, 8K70D1D, 8K70D1W – Middle of Band

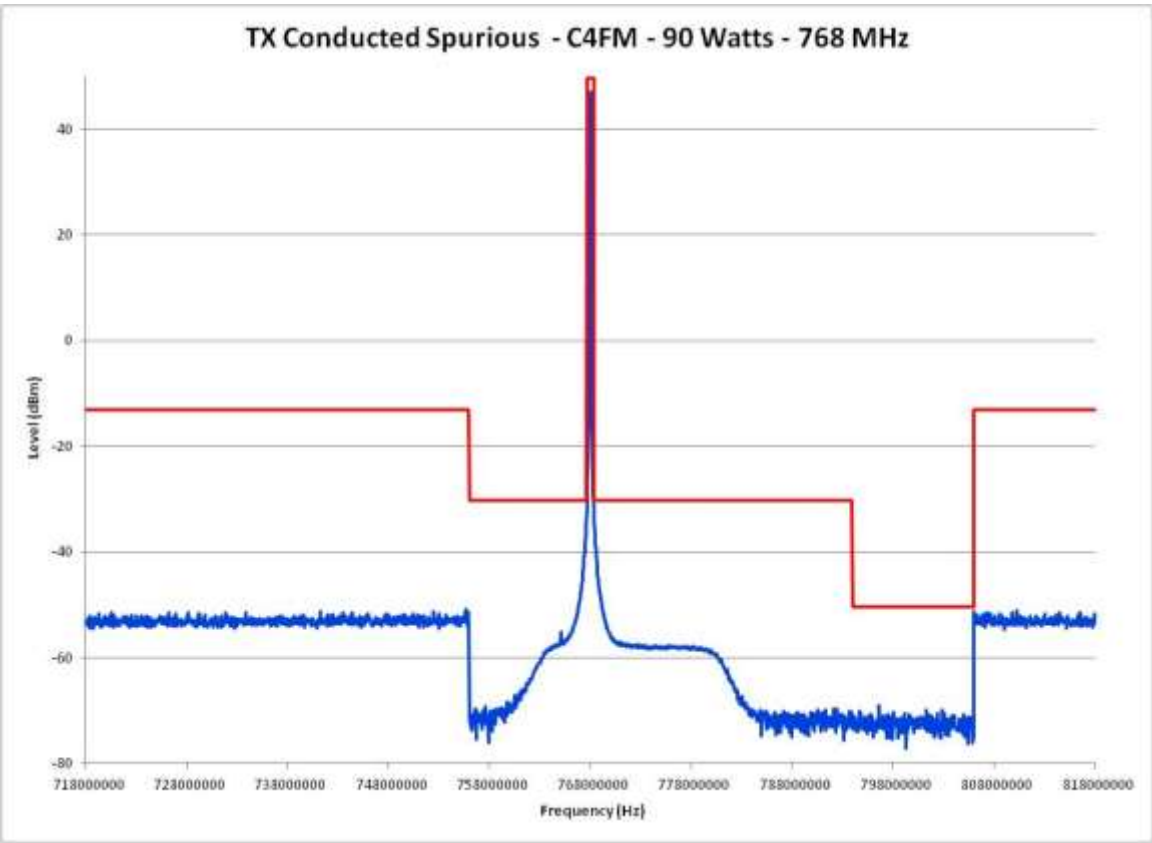


Swept ACCP – Linear Simulcast Modulation (LSM) – Emission Designator: 8K70D1E, 8K70D1D, 8K70D1W – High End of Band



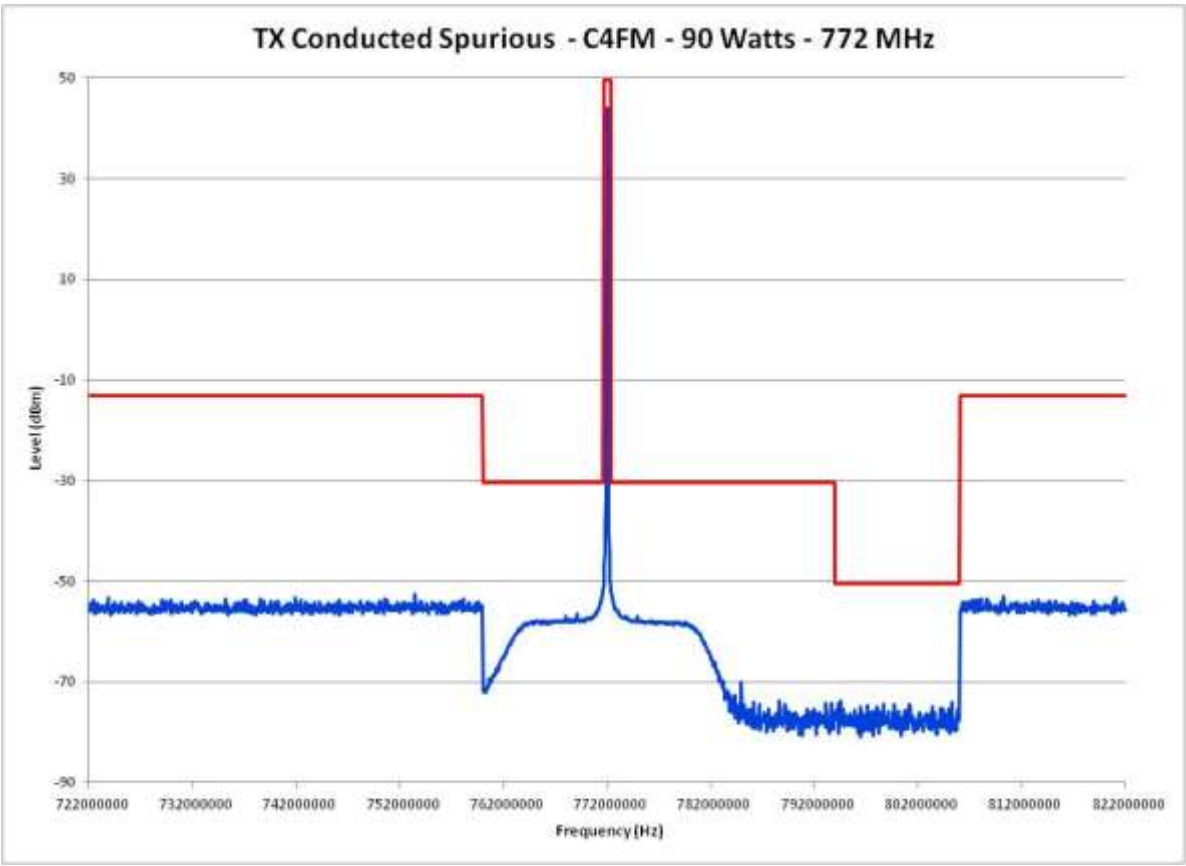
Report on Test Measurements

Swept ACCP – Compatible 4-Level Frequency Modulation (C4FM) – Emission Designator: 8K10D1E, 8K10D1D, 8K10D1W, Low End of Band

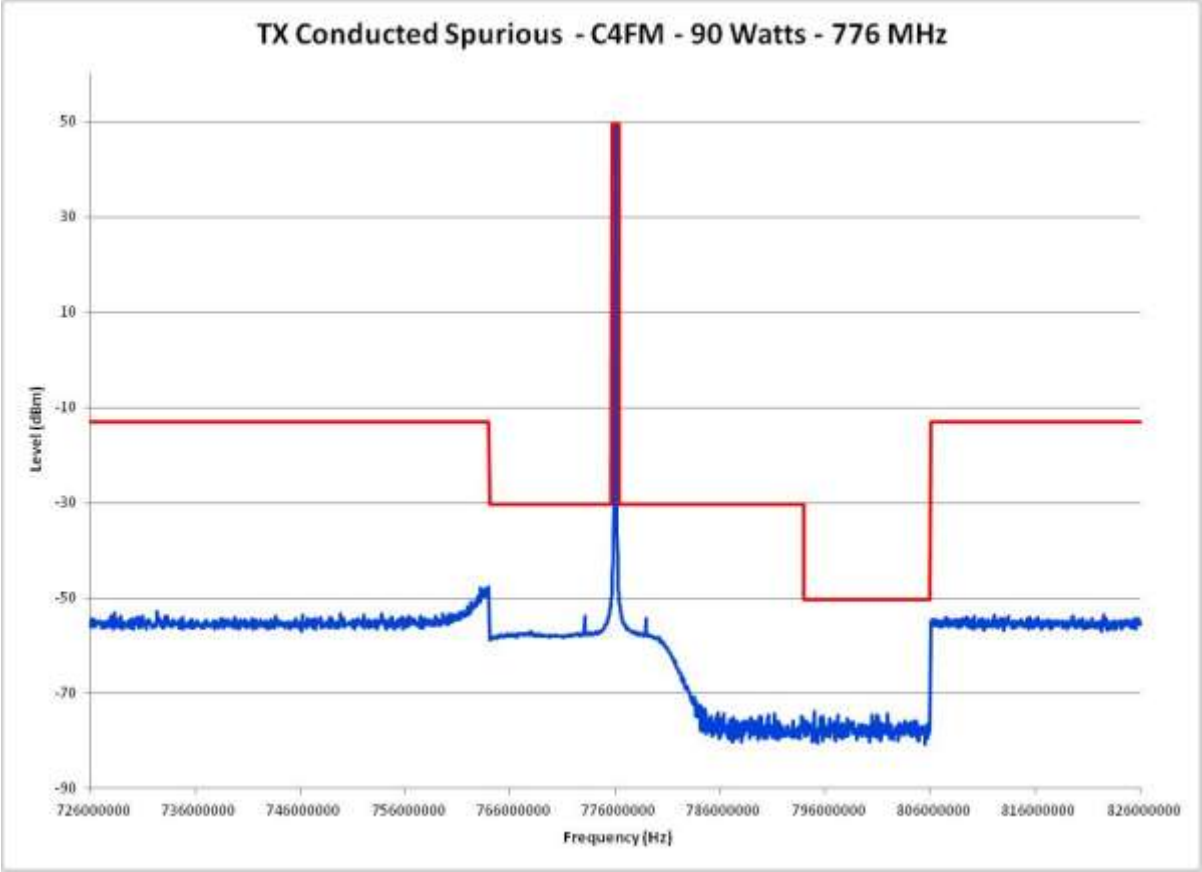


Report on Test Measurements

Swept ACCP – Compatible 4-Level Frequency Modulation (C4FM) – Emission Designator: 8K10D1E, 8K10D1D, 8K10D1W, Middle of Band



Swept ACCP – Compatible 4-Level Frequency Modulation (C4FM) – Emission Designator: 8K10D1E, 8K10D1D, 8K10D1W, High End of Band



Report on Test Measurements

Conducted Spurious Emissions – Harmonics and Emission Spectrum

Specification Requirement RSS-119 section 5.8.9.2, FCC § 90.543(c), and 27.53(d)(3) Emission Limits:
Out-of-band emission limit: On any frequency outside of the frequency ranges covered by the ACP tables in this section, the power of any emission must be reduced below the mean output power (P): *At least 43 plus 10 log_{10}(P) dB* measured in a 100 kHz bandwidth for frequencies less than 1 GHz, and in a 1 MHz bandwidth for frequencies greater than 1 GHz.

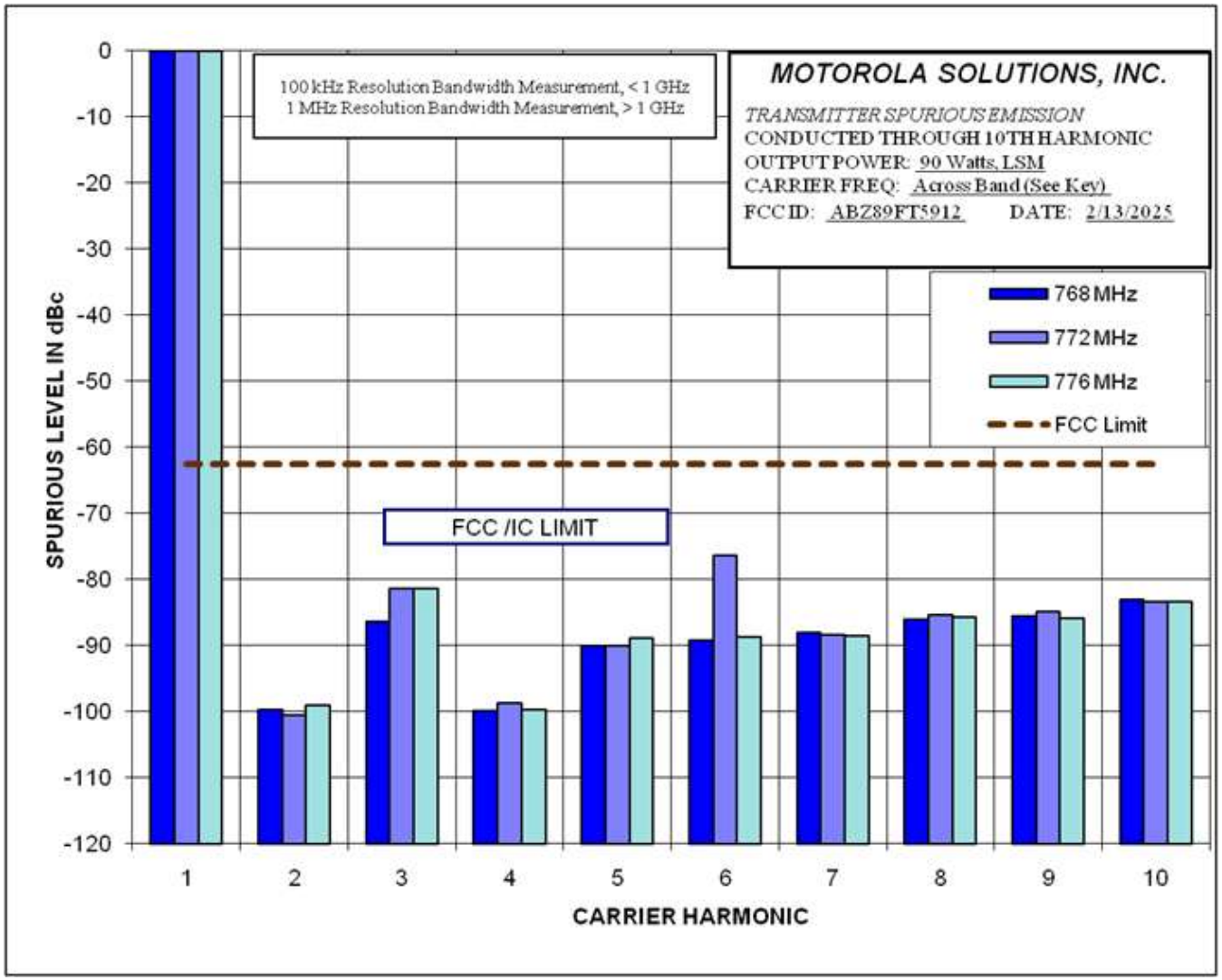
Modulation: Linear Simulcast Modulation (LSM), Compatible 4-Level Frequency Modulation (C4FM) or P25 Two Slot TDMA Digital Modulation (H-DQPSK) as indicated

Carrier Frequencies: Carrier frequencies of 768, 772, and 776 MHz were measured for conducted carrier harmonics and conducted emission. These frequencies represent the low end, center, and high end of the 768-776 MHz band, and are representative of the full operating band.

EXHIBIT	DESCRIPTION
E1-3.1	Conducted Spurious Harmonic Emissions, Power Output 90 Watts (Average), LSM The specification limit is -69.5 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 90 Watts, C4FM The specification limit is -69.5 dBc (-20dBm)
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 90 Watts, H-DQPSK The specification limit is -69.5 dBc (-20dBm)
E1-3.6	Conducted Spurious Harmonic Emissions, Power Output 2 Watts, H-DQPSK The specification limit is -53.0 dBc (-20dBm)

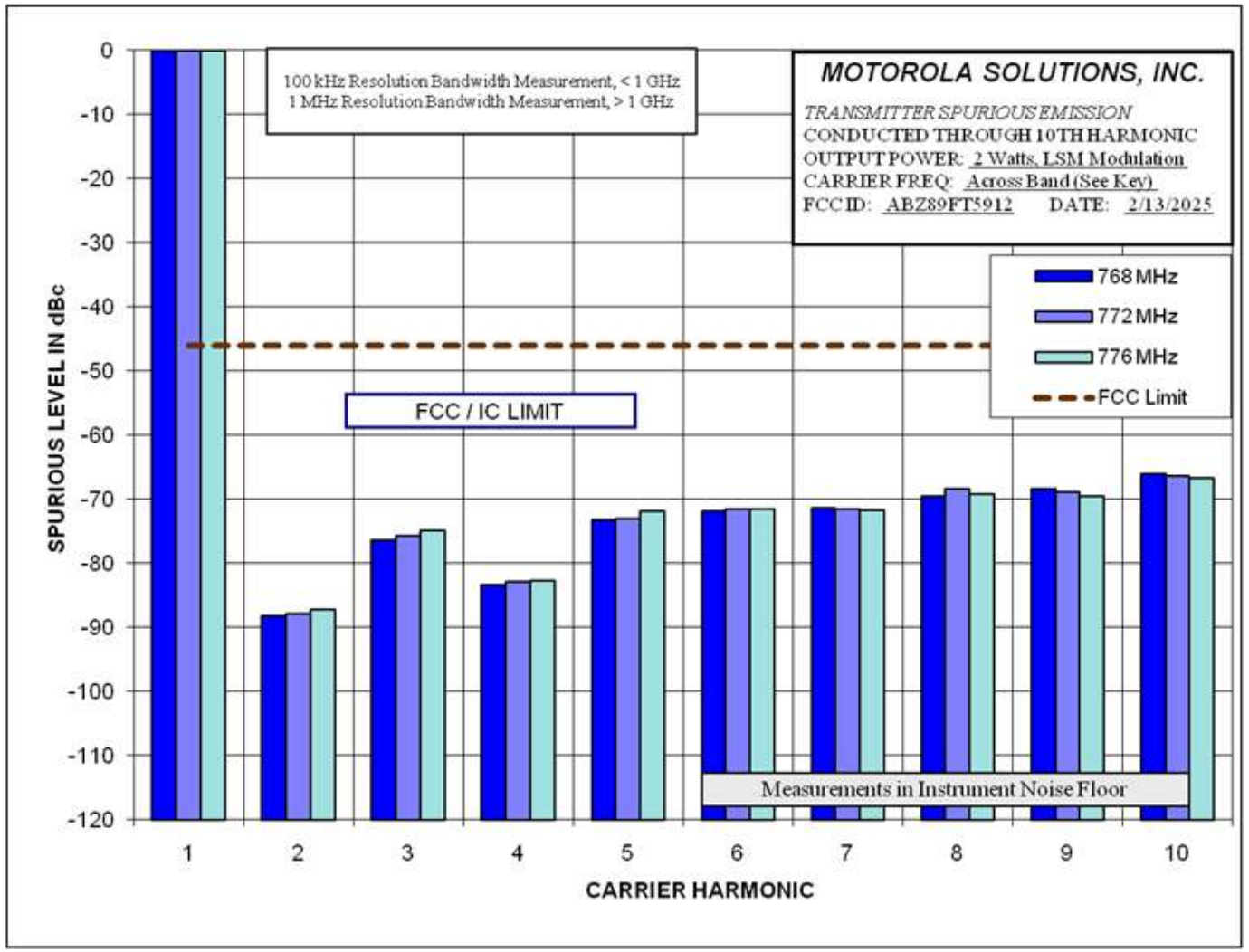
Report on Test Measurements

Conducted Spurious Harmonic Emissions – 90 Watts (Average) LSM



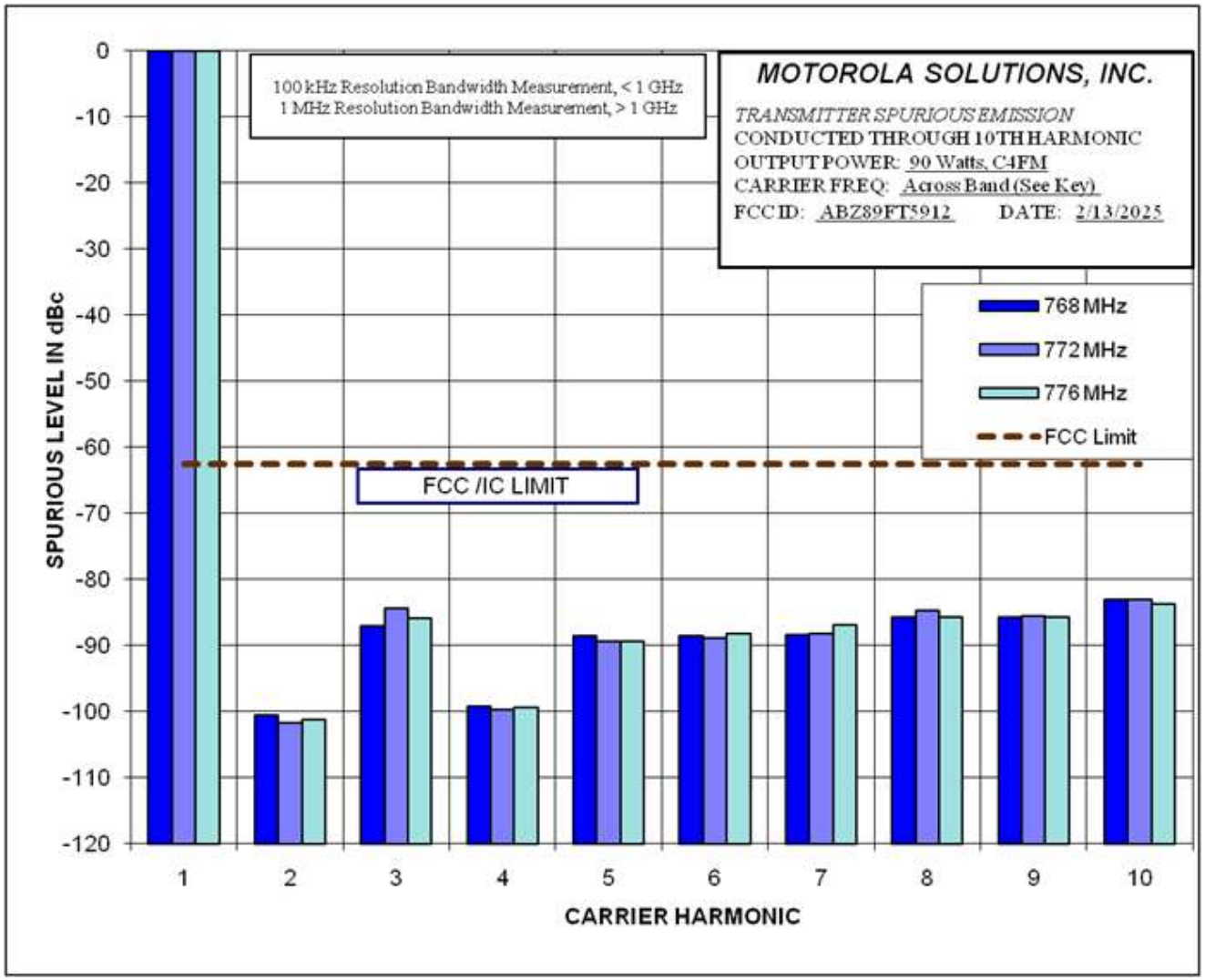
Report on Test Measurements

Conducted Spurious Harmonic Emissions – 2 Watts (Average) LSM



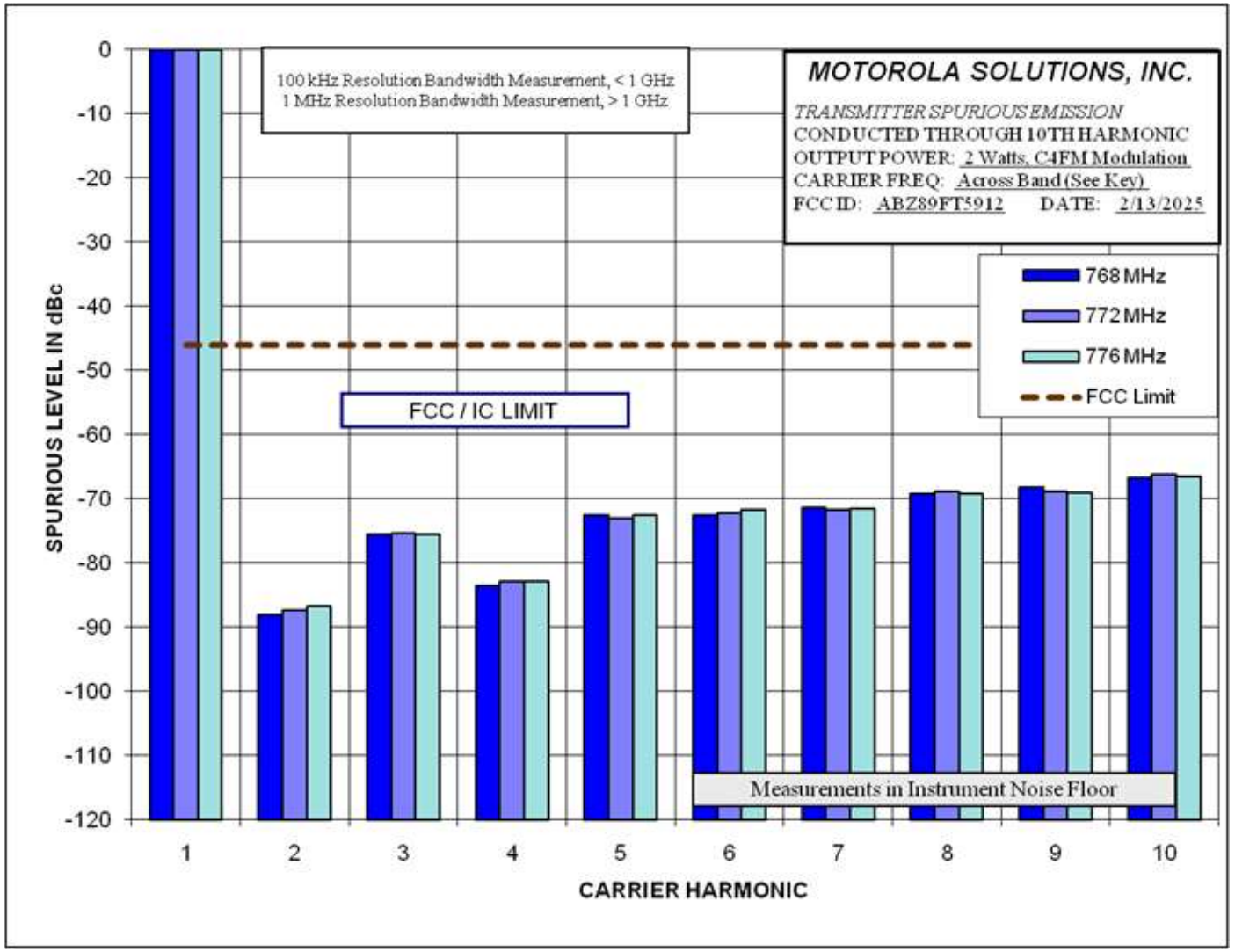
Report on Test Measurements

Conducted Spurious Harmonic Emissions – 90 Watts C4FM



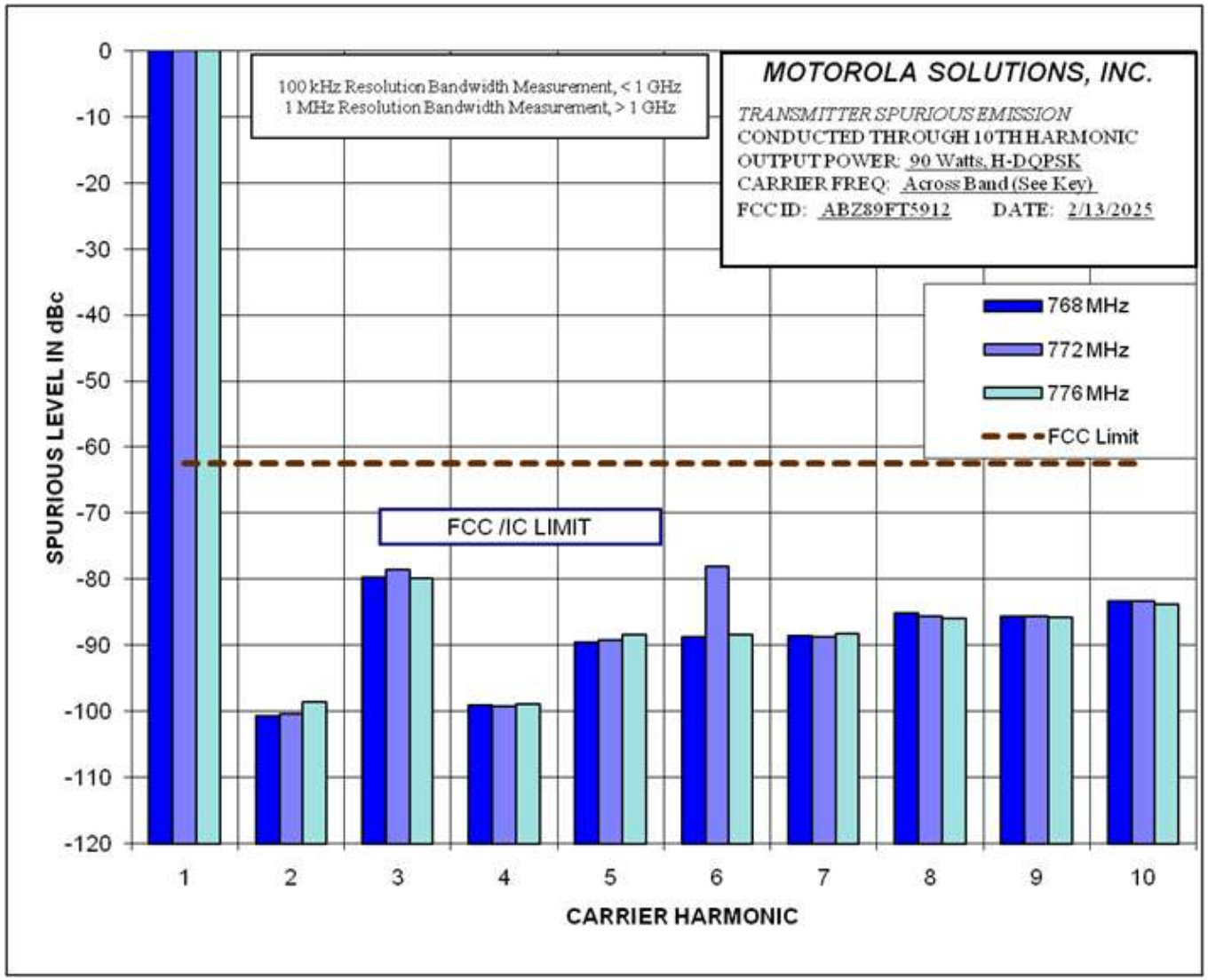
Report on Test Measurements

Conducted Spurious Harmonic Emissions – 2 Watts C4FM



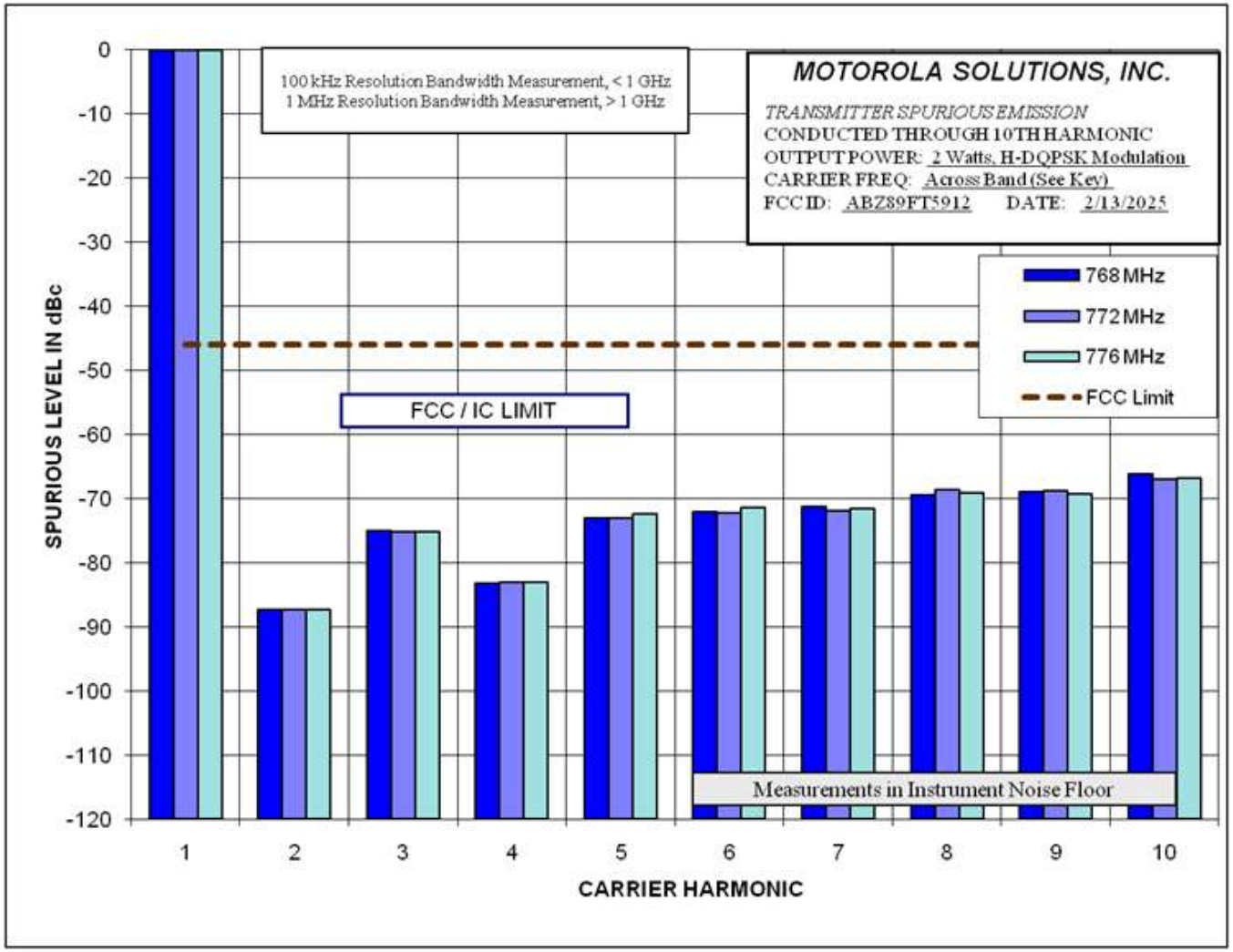
Report on Test Measurements

Conducted Spurious Harmonic Emissions – 90 Watts H-DQPSK



Report on Test Measurements

Conducted Spurious Harmonic Emissions – 2 Watts H-DQPSK



Report on Test Measurements

Radiated Spurious Emissions, Harmonics

Specification Requirement RSS-119 section 5.8.9.2, FCC § 90.543(c), and 27.53(d)(3) Emission Limits:
Out-of-band emission limit: On any frequency outside of the frequency ranges covered by the ACP tables in this section, the power of any emission must be reduced below the mean output power (P): *At least 43 plus 10 log_{10}(P) dB,* measured in a 100 kHz bandwidth for frequencies less than 1 GHz, and in a 1 MHz bandwidth for frequencies greater than 1 GHz.

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 6 carriers transmitting at 90W and 2W per carrier. Frequencies tested were 768 (C4FM), 769 (LSM), 771.5 (C4FM), 772.5 (H-DQPSK), 775 (C4FM), 776 (LSM). These frequencies represent the low end, center, and high end of the 768-776 MHz band, and are representative of the full operating band.

EXHIBIT	DESCRIPTION
E1-4.1	Radiated Spurious Harmonic Emissions, Power Output 90 Watts (Average), 768 MHz, C4FM
E1-4.2	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 768 MHz, C4FM
E1-4.3	Radiated Spurious Harmonic Emissions, Power Output 90 Watts (Average), 769 MHz, LSM
E1-4.4	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 769 MHz, LSM
E1-4.5	Radiated Spurious Harmonic Emissions, Power Output 90 Watts (Average), 771.5 MHz, C4FM
E1-4.6	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 771.5 MHz, C4FM
E1-4.7	Radiated Spurious Harmonic Emissions, Power Output 90 Watts (Average),772.5 MHz, H-DQPSK
E1-4.8	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 772.5 MHz, H-DQPSK
E1-4.9	Radiated Spurious Harmonic Emissions, Power Output 90 Watts (Average), 775MHz, C4FM
E1-4.10	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 775 MHz, C4FM
E1-4.11	Radiated Spurious Harmonic Emissions, Power Output 90 Watts (Average),776 MHz, LSM
E1-4.12	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 776 MHz, LSM
E1-4.13	Radiated Spurious Harmonic Emissions, Power Output 90 Watts (Average),1559-1610 MHz
E1-4.14	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average), 1559-1610 MHz
E1-4.15	Radiated Spurious Harmonic Emissions, Power Output 90 Watts (Average) RSS119, 768 MHz, C4FM
E1-4.16	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average) RSS119, 768 MHz, C4FM
E1-4.17	Radiated Spurious Harmonic Emissions, Power Output 90 Watts (Average RSS119), 769 MHz, LSM
E1-4.18	Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average) RSS119, 769 MHz, LSM
E1-4.19	Radiated Spurious Harmonic Emissions, Power Output 90 Watts (Average RSS119), 771.5 MHz, C4FM

E1-4.20 Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average) RSS119, 771.5 MHz, C4FM

E1-4.21 Radiated Spurious Harmonic Emissions, Power Output 90 Watts (Average) RSS119,772.5 MHz, H-DQPSK

E1-4.22 Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average) RSS119, 772.5 MHz, H-DQPSK

E1-4.23 Radiated Spurious Harmonic Emissions, Power Output 90 Watts (Average) RSS119, 775MHz, C4FM

E1-4.24 Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average) RSS119, 775 MHz, C4FM

E1-4.25 Radiated Spurious Harmonic Emissions, Power Output 90 Watts (Average) RSS119,776 MHz, LSM

E1-4.26 Radiated Spurious Harmonic Emissions, Power Output 2 Watts (Average) RSS119, 776 MHz, LSM

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 90 Watts (Average), 768MHz, C4FM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	768MHz
Notes	90W Power
Date Tested	1/31/2025 through 2/3/2024

Freq. (MHz)	Ant Pol	Meter Reading (dBuV)	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Total dBuV/m at 3m	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dBm)
1536.0	H	26.2	3.6	28.5	0.0	58.3	-39.1	88.6	69.5
1536.0	V	26.4	3.6	28.5	0.0	58.4	-39.0	88.5	69.5
2304.0	H	69.8	4.2	32.4	-39.6	66.8	-30.6	80.2	69.5
2304.0	V	71.3	4.2	32.4	-39.6	68.3	-29.1	78.6	69.5
3072.0	H	52.8	5.0	33.0	-39.3	51.5	-45.9	95.4	69.5
3072.0	V	52.3	5.0	33.0	-39.3	51.1	-46.3	95.8	69.5
3840.0	H	52.2	5.5	33.5	-38.9	52.2	-45.2	94.7	69.5
3840.0	V	51.3	5.5	33.5	-38.9	51.4	-46.0	95.5	69.5
4608.0	H	52.3	5.6	34.3	-38.9	53.3	-44.1	93.6	69.5
4608.0	V	52.1	5.6	34.3	-38.9	53.1	-44.3	93.8	69.5
5376.0	H	51.7	5.9	34.7	-39.0	53.3	-44.1	93.6	69.5
5376.0	V	51.5	5.9	34.7	-39.0	53.1	-44.3	93.9	69.5
6144.0	H	52.0	6.3	36.1	-39.0	55.3	-42.1	91.7	69.5
6144.0	V	51.5	6.3	36.1	-39.0	54.8	-42.6	92.1	69.5
6912.0	H	51.5	6.6	36.3	-39.0	55.4	-42.0	91.6	69.5
6912.0	V	52.4	6.6	36.3	-39.0	56.3	-41.1	90.6	69.5
7680.0	H	51.7	7.0	36.5	-39.0	56.1	-41.3	90.8	69.5
7680.0	V	51.2	7.0	36.5	-39.0	55.6	-41.8	91.3	69.5

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), 768 MHz, C4FM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	768MHz
Notes	2W Power
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1536.00	H	26.27	*	-40.84	3.79	2.17	-39.22	72.23	53.01
1536.00	V	26.00	*	-40.78	3.79	2.17	-39.16	72.17	53.01
2304.00	H	50.44	*	-51.47	3.32	2.68	-50.83	83.85	53.01
2304.00	V	50.80	*	-50.81	3.32	2.68	-50.17	83.19	53.01
3072.00	H	51.13	*	-49.56	4.84	3.15	-47.86	80.87	53.01
3072.00	V	51.25	*	-49.20	4.84	3.15	-47.50	80.51	53.01
3840.00	H	49.50	*	-52.70	6.39	3.51	-49.82	82.83	53.01
3840.00	V	49.84	*	-49.71	6.39	3.51	-46.83	79.84	53.01
4608.00	H	49.75	*	-48.55	6.80	3.80	-45.56	78.57	53.01
4608.00	V	49.70	*	-48.57	6.80	3.80	-45.58	78.59	53.01
5376.00	H	49.46	*	-47.62	7.85	4.10	-43.87	76.88	53.01
5376.00	V	49.58	*	-47.50	7.85	4.10	-43.75	76.76	53.01
6144.00	H	49.29	*	-47.24	8.39	4.42	-43.26	76.27	53.01
6144.00	V	49.25	*	-47.77	8.39	4.42	-43.80	76.81	53.01
6912.00	H	49.17	*	-47.43	8.99	4.76	-43.20	76.21	53.01
6912.00	V	49.54	*	-47.49	8.99	4.76	-43.27	76.28	53.01
7680.00	H	49.68	*	-47.19	10.08	5.08	-42.18	75.19	53.01
7680.00	V	49.79	*	-47.49	10.08	5.08	-42.48	75.49	53.01

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 90 Watts (Average), 769 MHz, LSM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	769MHz
Notes	90W Power
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1538.00	H	31.79	*	-35.34	3.81	2.17	-33.71	83.25	69.54
1538.00	V	25.77	*	-41.03	3.81	2.17	-39.39	88.93	69.54
2307.00	H	62.27		-39.63	3.31	2.68	-39.01	88.55	69.54
2307.00	V	61.22		-40.38	3.31	2.68	-39.76	89.30	69.54
3076.00	H	54.30		-46.36	4.85	3.15	-44.66	94.21	69.54
3076.00	V	58.80		-41.62	4.85	3.15	-39.92	89.47	69.54
3845.00	H	49.95	*	-52.15	6.39	3.51	-49.27	98.82	69.54
3845.00	V	49.93	*	-49.61	6.39	3.51	-46.73	96.27	69.54
4614.00	H	50.57	*	-47.72	6.79	3.81	-44.74	94.28	69.54
4614.00	V	50.68	*	-47.58	6.79	3.81	-44.59	94.13	69.54
5383.00	H	49.68	*	-47.38	7.85	4.10	-43.63	93.18	69.54
5383.00	V	49.87	*	-47.19	7.85	4.10	-43.44	92.99	69.54
6152.00	H	49.49	*	-47.00	8.40	4.42	-43.02	92.56	69.54
6152.00	V	49.50	*	-47.52	8.40	4.42	-43.54	93.09	69.54
6921.00	H	50.25	*	-46.38	9.00	4.77	-42.15	91.69	69.54
6921.00	V	50.06	*	-47.00	9.00	4.77	-42.77	92.31	69.54
7690.00	H	49.33	*	-47.55	10.09	5.08	-42.55	92.09	69.54
7690.00	V	49.16	*	-48.12	10.09	5.08	-43.11	92.65	69.54

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), 769 MHz, LSM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	769MHz
Notes	2W Power
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1538.00	H	25.49	*	-41.64	3.81	2.17	-40.01	73.02	53.01
1538.00	V	25.43	*	-41.37	3.81	2.17	-39.73	72.74	53.01
2307.00	H	56.91		-44.99	3.31	2.68	-44.37	77.38	53.01
2307.00	V	60.35		-41.25	3.31	2.68	-40.63	73.64	53.01
3076.00	H	53.54		-47.12	4.85	3.15	-45.42	78.43	53.01
3076.00	V	58.10		-42.32	4.85	3.15	-40.62	73.63	53.01
3845.00	H	50.06	*	-52.04	6.39	3.51	-49.16	82.17	53.01
3845.00	V	49.66	*	-49.88	6.39	3.51	-47.00	80.01	53.01
4614.00	H	50.28	*	-48.01	6.79	3.81	-45.03	78.04	53.01
4614.00	V	49.90	*	-48.36	6.79	3.81	-45.37	78.38	53.01
5383.00	H	49.26	*	-47.80	7.85	4.10	-44.05	77.06	53.01
5383.00	V	49.72	*	-47.34	7.85	4.10	-43.59	76.60	53.01
6152.00	H	49.64	*	-46.85	8.40	4.42	-42.87	75.88	53.01
6152.00	V	49.17	*	-47.85	8.40	4.42	-43.87	76.88	53.01
6921.00	H	49.13	*	-47.50	9.00	4.77	-43.27	76.28	53.01
6921.00	V	49.11	*	-47.95	9.00	4.77	-43.72	76.73	53.01
7690.00	H	48.87	*	-48.01	10.09	5.08	-43.01	76.02	53.01
7690.00	V	49.59	*	-47.69	10.09	5.08	-42.68	75.69	53.01

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 90 Watts (Average), 771.5 MHz, C4FM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	771.5MHz
Notes	90W Power
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1543.00	H	26.37	*	-40.82	3.85	2.18	-39.15	88.69	69.54
1543.00	V	28.50	*	-38.34	3.85	2.18	-36.66	86.21	69.54
2314.50	H	66.06		-35.82	3.29	2.69	-35.22	84.76	69.54
2314.50	V	66.52		-35.06	3.29	2.69	-34.46	84.00	69.54
3086.00	H	50.90	*	-49.70	4.86	3.15	-48.00	97.54	69.54
3086.00	V	50.36	*	-50.00	4.86	3.15	-48.29	97.84	69.54
3857.50	H	51.04	*	-50.82	6.40	3.52	-47.94	97.48	69.54
3857.50	V	51.64	*	-47.86	6.40	3.52	-44.98	94.52	69.54
4629.00	H	50.25	*	-48.02	6.78	3.81	-45.05	94.59	69.54
4629.00	V	50.42	*	-47.79	6.78	3.81	-44.82	94.36	69.54
5400.50	H	49.40	*	-47.63	7.87	4.11	-43.87	93.42	69.54
5400.50	V	49.69	*	-47.34	7.87	4.11	-43.58	93.13	69.54
6172.00	H	49.61	*	-46.78	8.42	4.43	-42.79	92.34	69.54
6172.00	V	49.68	*	-47.34	8.42	4.43	-43.35	92.90	69.54
6943.50	H	49.35	*	-47.36	9.04	4.78	-43.10	92.64	69.54
6943.50	V	48.78	*	-48.35	9.04	4.78	-44.09	93.63	69.54
7715.00	H	49.87	*	-47.06	10.11	5.09	-42.04	91.58	69.54
7715.00	V	49.19	*	-48.10	10.11	5.09	-43.08	92.62	69.54

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), 771.5 MHz, C4FM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	771.5MHz
Notes	2W
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1543.00	H	26.47	*	-40.72	3.85	2.18	-39.05	72.06	53.01
1543.00	V	26.84	*	-40.00	3.85	2.18	-38.32	71.33	53.01
2314.50	H	50.17	*	-51.71	3.29	2.69	-51.11	84.12	53.01
2314.50	V	51.38	*	-50.20	3.29	2.69	-49.60	82.61	53.01
3086.00	H	51.45	*	-49.15	4.86	3.15	-47.45	80.46	53.01
3086.00	V	51.00	*	-49.36	4.86	3.15	-47.65	80.66	53.01
3857.50	H	50.11	*	-51.75	6.40	3.52	-48.87	81.88	53.01
3857.50	V	50.44	*	-49.06	6.40	3.52	-46.18	79.19	53.01
4629.00	H	49.91	*	-48.36	6.78	3.81	-45.39	78.40	53.01
4629.00	V	50.46	*	-47.75	6.78	3.81	-44.78	77.79	53.01
5400.50	H	48.90	*	-48.13	7.87	4.11	-44.37	77.38	53.01
5400.50	V	49.77	*	-47.26	7.87	4.11	-43.50	76.51	53.01
6172.00	H	49.18	*	-47.21	8.42	4.43	-43.22	76.23	53.01
6172.00	V	49.56	*	-47.46	8.42	4.43	-43.47	76.48	53.01
6943.50	H	49.74	*	-46.97	9.04	4.78	-42.71	75.72	53.01
6943.50	V	49.26	*	-47.87	9.04	4.78	-43.61	76.62	53.01
7715.00	H	49.08	*	-47.85	10.11	5.09	-42.83	75.84	53.01
7715.00	V	49.34	*	-47.95	10.11	5.09	-42.93	75.94	53.01

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 90 Watts (Average), 772.5 MHz, H-DQPSK

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	772.5MHz
Notes	90W Power
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1545.00	H	26.49	*	-40.73	3.87	2.18	-39.04	88.58	69.54
1545.00	V	25.86	*	-40.99	3.87	2.18	-39.31	88.85	69.54
2317.50	H	66.21		-35.66	3.29	2.69	-35.07	84.61	69.54
2317.50	V	70.52		-31.05	3.29	2.69	-30.46	80.00	69.54
3090.00	H	51.39	*	-49.19	4.86	3.16	-47.48	97.02	69.54
3090.00	V	51.82	*	-48.51	4.86	3.16	-46.81	96.35	69.54
3862.50	H	50.56	*	-51.21	6.40	3.52	-48.33	97.87	69.54
3862.50	V	49.97	*	-49.52	6.40	3.52	-46.63	96.18	69.54
4635.00	H	50.59	*	-47.67	6.78	3.81	-44.70	94.24	69.54
4635.00	V	50.96	*	-47.23	6.78	3.81	-44.27	93.81	69.54
5407.50	H	51.41	*	-45.61	7.88	4.11	-41.84	91.38	69.54
5407.50	V	49.23	*	-47.79	7.88	4.11	-44.02	93.56	69.54
6180.00	H	49.54	*	-46.81	8.43	4.43	-42.82	92.36	69.54
6180.00	V	49.45	*	-47.57	8.43	4.43	-43.58	93.12	69.54
6952.50	H	49.41	*	-47.33	9.05	4.78	-43.06	92.60	69.54
6952.50	V	49.55	*	-47.61	9.05	4.78	-43.34	92.88	69.54
7725.00	H	49.84	*	-47.11	10.12	5.10	-42.09	91.63	69.54
7725.00	V	49.65	*	-47.64	10.12	5.10	-42.62	92.16	69.54

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), 772.5 MHz, H-DQPSK

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	772.5MHz
Notes	2W Power
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1545.00	H	25.81	*	-41.41	3.87	2.18	-39.72	72.73	53.01
1545.00	V	26.24	*	-40.61	3.87	2.18	-38.93	71.94	53.01
2317.50	H	67.08		-34.79	3.29	2.69	-34.20	67.21	53.01
2317.50	V	57.93		-43.64	3.29	2.69	-43.05	76.06	53.01
3090.00	H	51.35	*	-49.23	4.86	3.16	-47.52	80.53	53.01
3090.00	V	50.97	*	-49.36	4.86	3.16	-47.66	80.67	53.01
3862.50	H	50.17	*	-51.60	6.40	3.52	-48.72	81.73	53.01
3862.50	V	49.94	*	-49.55	6.40	3.52	-46.66	79.67	53.01
4635.00	H	49.85	*	-48.41	6.78	3.81	-45.44	78.45	53.01
4635.00	V	50.33	*	-47.86	6.78	3.81	-44.90	77.91	53.01
5407.50	H	49.40	*	-47.62	7.88	4.11	-43.85	76.86	53.01
5407.50	V	50.50	*	-46.52	7.88	4.11	-42.75	75.76	53.01
6180.00	H	49.29	*	-47.06	8.43	4.43	-43.07	76.08	53.01
6180.00	V	49.19	*	-47.83	8.43	4.43	-43.84	76.85	53.01
6952.50	H	49.36	*	-47.38	9.05	4.78	-43.11	76.12	53.01
6952.50	V	49.49	*	-47.67	9.05	4.78	-43.40	76.41	53.01
7725.00	H	49.66	*	-47.29	10.12	5.10	-42.27	75.28	53.01
7725.00	V	49.47	*	-47.82	10.12	5.10	-42.80	75.81	53.01

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 90 Watts (Average), 775 MHz, C4FM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	775MHz
Notes	90W Power
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1550.00	H	26.06	*	-41.22	3.91	2.18	-39.49	89.04	62.54
1550.00	V	26.00	*	-40.90	3.91	2.18	-39.17	88.71	62.54
2325.00	H	69.56		-32.29	3.27	2.70	-31.72	81.26	62.54
2325.00	V	75.00		-26.55	3.27	2.70	-25.98	75.52	62.54
3100.00	H	51.45	*	-49.07	4.87	3.16	-47.36	96.90	62.54
3100.00	V	51.91	*	-48.36	4.87	3.16	-46.65	96.19	62.54
3875.00	H	49.99	*	-51.54	6.41	3.52	-48.66	98.20	62.54
3875.00	V	49.91	*	-49.54	6.41	3.52	-46.65	96.20	62.54
4650.00	H	49.68	*	-48.55	6.77	3.82	-45.60	95.14	62.54
4650.00	V	49.96	*	-48.19	6.77	3.82	-45.24	94.78	62.54
5425.00	H	49.70	*	-47.28	7.90	4.12	-43.50	93.04	62.54
5425.00	V	49.95	*	-47.03	7.90	4.12	-43.25	92.79	62.54
6200.00	H	49.41	*	-46.85	8.44	4.44	-42.85	92.39	62.54
6200.00	V	49.75	*	-47.27	8.44	4.44	-43.27	92.81	62.54
6975.00	H	49.46	*	-47.36	9.09	4.79	-43.06	92.60	62.54
6975.00	V	50.00	*	-47.23	9.09	4.79	-42.93	92.47	62.54
7750.00	H	49.69	*	-47.31	10.14	5.10	-42.27	91.82	62.54
7750.00	V	49.72	*	-47.58	10.14	5.10	-42.54	92.09	62.54

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), 775 MHz, C4FM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	775MHz
Notes	2W Power
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1550.00	H	25.80	*	-41.48	3.91	2.18	-39.75	72.77	46.01
1550.00	V	26.00	*	-40.90	3.91	2.18	-39.17	72.18	46.01
2325.00	H	51.33	*	-50.52	3.27	2.70	-49.95	82.96	46.01
2325.00	V	50.85	*	-50.70	3.27	2.70	-50.13	83.14	46.01
3100.00	H	50.90	*	-49.62	4.87	3.16	-47.91	80.92	46.01
3100.00	V	51.07	*	-49.20	4.87	3.16	-47.49	80.50	46.01
3875.00	H	50.29	*	-51.24	6.41	3.52	-48.36	81.37	46.01
3875.00	V	49.71	*	-49.74	6.41	3.52	-46.85	79.86	46.01
4650.00	H	50.31	*	-47.92	6.77	3.82	-44.97	77.98	46.01
4650.00	V	50.13	*	-48.02	6.77	3.82	-45.07	78.08	46.01
5425.00	H	50.18	*	-46.80	7.90	4.12	-43.02	76.03	46.01
5425.00	V	49.63	*	-47.35	7.90	4.12	-43.57	76.58	46.01
6200.00	H	49.22	*	-47.04	8.44	4.44	-43.04	76.05	46.01
6200.00	V	49.50	*	-47.52	8.44	4.44	-43.52	76.53	46.01
6975.00	H	49.60	*	-47.22	9.09	4.79	-42.92	75.93	46.01
6975.00	V	49.30	*	-47.93	9.09	4.79	-43.63	76.64	46.01
7750.00	H	49.37	*	-47.63	10.14	5.10	-42.59	75.60	46.01
7750.00	V	49.31	*	-47.99	10.14	5.10	-42.95	75.96	46.01

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 90 Watts (Average), 776 MHz, LSM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	776MHz
Notes	90W Power
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1552.00	H	26.12	*	-41.19	3.92	2.18	-39.44	88.99	62.54
1552.00	V	26.56	*	-40.35	3.92	2.18	-38.61	88.15	62.54
2328.00	H	72.06		-29.78	3.26	2.70	-29.22	78.76	62.54
2328.00	V	73.31		-28.23	3.26	2.70	-27.67	77.21	62.54
3104.00	H	51.73	*	-48.76	4.88	3.16	-47.05	96.59	62.54
3104.00	V	52.32	*	-47.92	4.88	3.16	-46.20	95.74	62.54
3880.00	H	50.18	*	-51.26	6.41	3.53	-48.37	97.91	62.54
3880.00	V	49.95	*	-49.48	6.41	3.53	-46.60	96.14	62.54
4656.00	H	50.66	*	-47.56	6.77	3.82	-44.62	94.16	62.54
4656.00	V	50.18	*	-47.95	6.77	3.82	-45.01	94.55	62.54
5432.00	H	51.12	*	-45.85	7.91	4.12	-42.06	91.60	62.54
5432.00	V	50.48	*	-46.49	7.91	4.12	-42.70	92.24	62.54
6208.00	H	50.66	*	-45.56	8.45	4.45	-41.55	91.10	62.54
6208.00	V	50.17	*	-46.85	8.45	4.45	-42.85	92.39	62.54
6984.00	H	50.43	*	-46.42	9.11	4.79	-42.11	91.65	62.54
6984.00	V	50.37	*	-46.89	9.11	4.79	-42.58	92.12	62.54
7760.00	H	50.50	*	-46.50	10.15	5.11	-41.46	91.00	62.54
7760.00	V	50.24	*	-47.05	10.15	5.11	-42.01	91.55	62.54

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), 776 MHz, LSM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	776MHz
Notes	2W Power
Date Tested	1/31/2025 through 2/3/2024

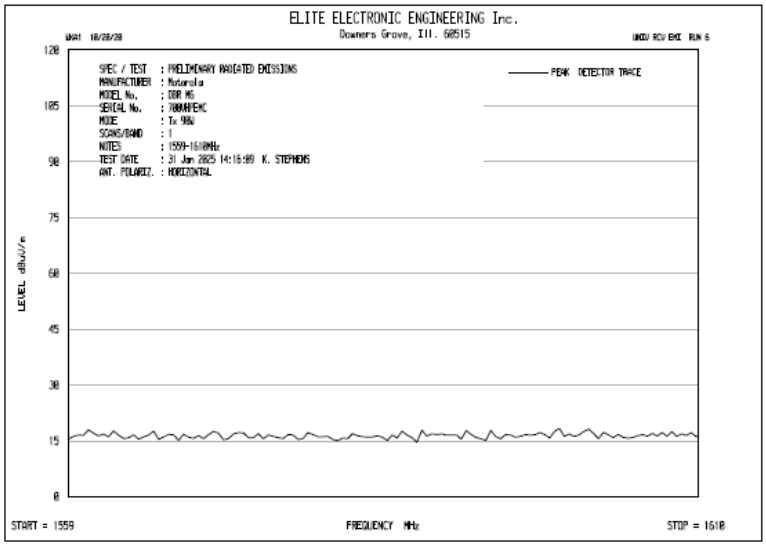
Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1552.00	H	25.52	*	-41.79	3.92	2.18	-40.04	73.06	46.01
1552.00	V	26.12	*	-40.79	3.92	2.18	-39.05	72.06	46.01
2328.00	H	50.70	*	-51.14	3.26	2.70	-50.58	83.59	46.01
2328.00	V	51.17	*	-50.37	3.26	2.70	-49.81	82.82	46.01
3104.00	H	51.91	*	-48.58	4.88	3.16	-46.87	79.88	46.01
3104.00	V	51.21	*	-49.03	4.88	3.16	-47.31	80.32	46.01
3880.00	H	49.97	*	-51.47	6.41	3.53	-48.58	81.59	46.01
3880.00	V	50.31	*	-49.12	6.41	3.53	-46.24	79.25	46.01
4656.00	H	50.13	*	-48.09	6.77	3.82	-45.15	78.16	46.01
4656.00	V	50.39	*	-47.74	6.77	3.82	-44.80	77.81	46.01
5432.00	H	49.52	*	-47.45	7.91	4.12	-43.66	76.67	46.01
5432.00	V	49.12	*	-47.85	7.91	4.12	-44.06	77.07	46.01
6208.00	H	49.25	*	-46.97	8.45	4.45	-42.96	75.97	46.01
6208.00	V	49.03	*	-47.99	8.45	4.45	-43.99	77.00	46.01
6984.00	H	49.46	*	-47.39	9.11	4.79	-43.08	76.09	46.01
6984.00	V	49.21	*	-48.05	9.11	4.79	-43.74	76.75	46.01
7760.00	H	49.94	*	-47.06	10.15	5.11	-42.02	75.03	46.01
7760.00	V	49.46	*	-47.83	10.15	5.11	-42.79	75.80	46.01

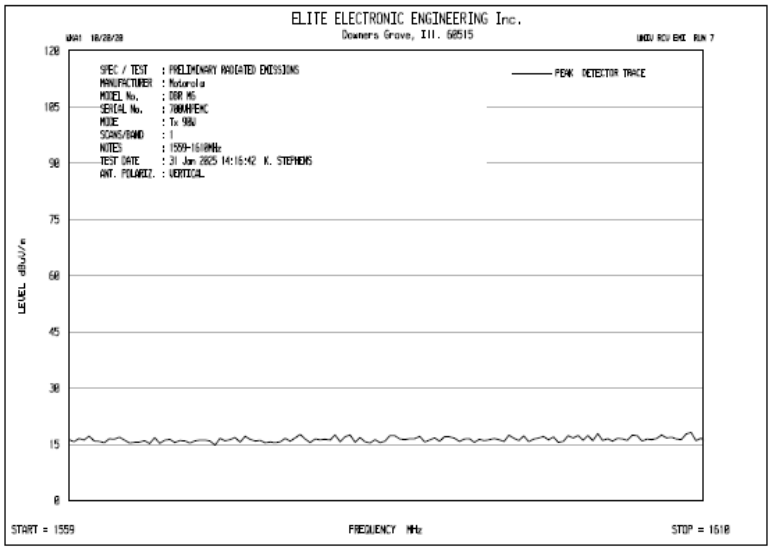
Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 90 Watts (Average), 1559-1610 MHz

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	1559-1610MHz
Notes	90W Power (FCC 27.53(f) and RSS-119 Section 5.8.9.2)
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV/MHz)	Ambient	Calculated Sig. Gen. Reading (dBm/MHz)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	EIRP (dBW/MHz)	Limit (dBW/MHz)	Margin dB
1584.50	H	30.9		-76.8	6.3	2.2	-102.7	-70.0	-2.7
1584.50	V	30.9		-76.3	6.3	2.2	-102.1	-70.0	-2.1



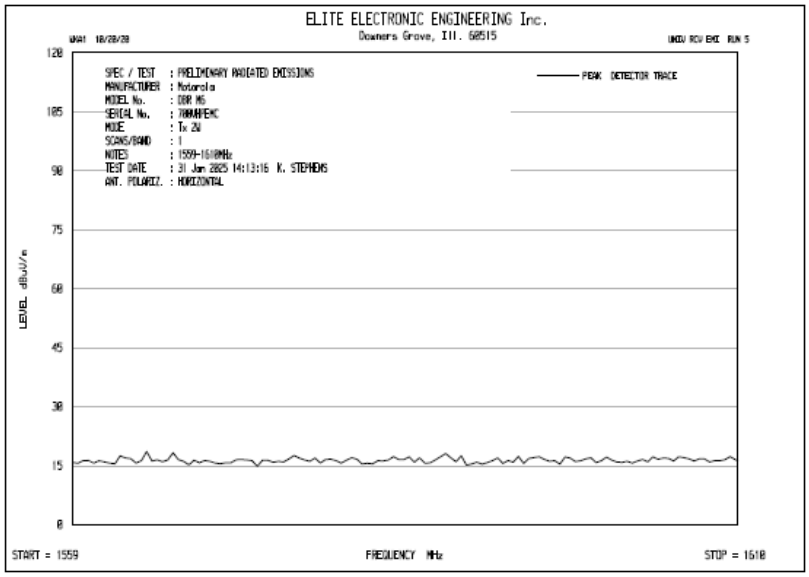


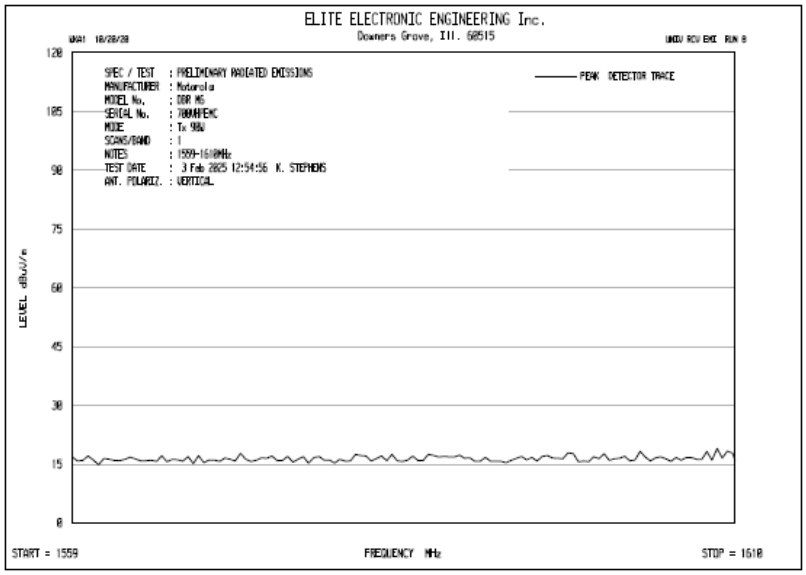
Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average), 768-776 MHz

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	1559-1610MHz
Notes	2W Power (FCC 27.53(f) and RSS-119 Section 5.8.9.2)
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV/MHz)	Ambient	Calculated Sig. Gen. Reading (dBm/MHz)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	EIRP (dBW/MHz)	Limit (dBW/MHz)	Margin dB
1584.50	H	20.1		-87.6	6.3	2.2	-113.5	-70.0	-13.5
1584.50	V	19.9		-87.3	6.3	2.2	-113.2	-70.0	-13.2





Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 90 Watts (Average) RSS119, 768MHz, C4FM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	768MHz
Notes	90W Power (RSS119)
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1536.00	H	26.23	*	-40.88	3.79	2.17	-39.26	88.80	62.54
1536.00	V	26.35	*	-40.43	3.79	2.17	-38.81	88.35	62.54
2304.00	H	69.75		-32.16	3.32	2.68	-31.52	81.07	62.54
2304.00	V	71.31		-30.30	3.32	2.68	-29.66	79.21	62.54
3072.00	H	52.75	*	-47.94	4.84	3.15	-46.24	95.78	62.54
3072.00	V	52.32	*	-48.13	4.84	3.15	-46.43	95.98	62.54
3840.00	H	52.18	*	-50.02	6.39	3.51	-47.14	96.68	62.54
3840.00	V	51.34	*	-48.21	6.39	3.51	-45.33	94.88	62.54
4608.00	H	52.30	*	-46.00	6.80	3.80	-43.01	92.55	62.54
4608.00	V	52.10	*	-46.17	6.80	3.80	-43.18	92.72	62.54
5376.00	H	51.74	*	-45.34	7.85	4.10	-41.59	91.13	62.54
5376.00	V	51.49	*	-45.59	7.85	4.10	-41.84	91.38	62.54
6144.00	H	51.95	*	-44.58	8.39	4.42	-40.60	90.14	62.54
6144.00	V	51.48	*	-45.54	8.39	4.42	-41.57	91.11	62.54
6912.00	H	51.47	*	-45.13	8.99	4.76	-40.90	90.45	62.54
6912.00	V	52.42	*	-44.61	8.99	4.76	-40.39	89.93	62.54
7680.00	H	51.72	*	-45.15	10.08	5.08	-40.14	89.69	62.54
7680.00	V	51.17	*	-46.11	10.08	5.08	-41.10	90.65	62.54

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average) RSS119, 768MHz, C4FM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	768MHz
Notes	2W Power
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1536.00	H	26.27	*	-40.84	3.79	2.17	-39.22	72.23	53.01
1536.00	V	26.00	*	-40.78	3.79	2.17	-39.16	72.17	53.01
2304.00	H	50.44	*	-51.47	3.32	2.68	-50.83	83.85	53.01
2304.00	V	50.80	*	-50.81	3.32	2.68	-50.17	83.19	53.01
3072.00	H	51.13	*	-49.56	4.84	3.15	-47.86	80.87	53.01
3072.00	V	51.25	*	-49.20	4.84	3.15	-47.50	80.51	53.01
3840.00	H	49.50	*	-52.70	6.39	3.51	-49.82	82.83	53.01
3840.00	V	49.84	*	-49.71	6.39	3.51	-46.83	79.84	53.01
4608.00	H	49.75	*	-48.55	6.80	3.80	-45.56	78.57	53.01
4608.00	V	49.70	*	-48.57	6.80	3.80	-45.58	78.59	53.01
5376.00	H	49.46	*	-47.62	7.85	4.10	-43.87	76.88	53.01
5376.00	V	49.58	*	-47.50	7.85	4.10	-43.75	76.76	53.01
6144.00	H	49.29	*	-47.24	8.39	4.42	-43.26	76.27	53.01
6144.00	V	49.25	*	-47.77	8.39	4.42	-43.80	76.81	53.01
6912.00	H	49.17	*	-47.43	8.99	4.76	-43.20	76.21	53.01
6912.00	V	49.54	*	-47.49	8.99	4.76	-43.27	76.28	53.01
7680.00	H	49.68	*	-47.19	10.08	5.08	-42.18	75.19	53.01
7680.00	V	49.79	*	-47.49	10.08	5.08	-42.48	75.49	53.01

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 90 Watts (Average) RSS119, 769 MHz, LSM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	769MHz
Notes	90W Power (RSS119)
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1538.00	H	31.79	*	-35.34	3.81	2.17	-33.71	83.25	69.54
1538.00	V	25.77	*	-41.03	3.81	2.17	-39.39	88.93	69.54
2307.00	H	62.27		-39.63	3.31	2.68	-39.01	88.55	69.54
2307.00	V	61.22		-40.38	3.31	2.68	-39.76	89.30	69.54
3076.00	H	54.30		-46.36	4.85	3.15	-44.66	94.21	69.54
3076.00	V	58.80		-41.62	4.85	3.15	-39.92	89.47	69.54
3845.00	H	49.95	*	-52.15	6.39	3.51	-49.27	98.82	69.54
3845.00	V	49.93	*	-49.61	6.39	3.51	-46.73	96.27	69.54
4614.00	H	50.57	*	-47.72	6.79	3.81	-44.74	94.28	69.54
4614.00	V	50.68	*	-47.58	6.79	3.81	-44.59	94.13	69.54
5383.00	H	49.68	*	-47.38	7.85	4.10	-43.63	93.18	69.54
5383.00	V	49.87	*	-47.19	7.85	4.10	-43.44	92.99	69.54
6152.00	H	49.49	*	-47.00	8.40	4.42	-43.02	92.56	69.54
6152.00	V	49.50	*	-47.52	8.40	4.42	-43.54	93.09	69.54
6921.00	H	50.25	*	-46.38	9.00	4.77	-42.15	91.69	69.54
6921.00	V	50.06	*	-47.00	9.00	4.77	-42.77	92.31	69.54
7690.00	H	49.33	*	-47.55	10.09	5.08	-42.55	92.09	69.54
7690.00	V	49.16	*	-48.12	10.09	5.08	-43.11	92.65	69.54

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average) RSS119, 769 MHz, LSM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	769MHz
Notes	2W Power (RSS119)
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1538.00	H	25.49	*	-41.64	3.81	2.17	-40.01	73.02	53.01
1538.00	V	25.43	*	-41.37	3.81	2.17	-39.73	72.74	53.01
2307.00	H	56.91		-44.99	3.31	2.68	-44.37	77.38	53.01
2307.00	V	60.35		-41.25	3.31	2.68	-40.63	73.64	53.01
3076.00	H	53.54		-47.12	4.85	3.15	-45.42	78.43	53.01
3076.00	V	58.10		-42.32	4.85	3.15	-40.62	73.63	53.01
3845.00	H	50.06	*	-52.04	6.39	3.51	-49.16	82.17	53.01
3845.00	V	49.66	*	-49.88	6.39	3.51	-47.00	80.01	53.01
4614.00	H	50.28	*	-48.01	6.79	3.81	-45.03	78.04	53.01
4614.00	V	49.90	*	-48.36	6.79	3.81	-45.37	78.38	53.01
5383.00	H	49.26	*	-47.80	7.85	4.10	-44.05	77.06	53.01
5383.00	V	49.72	*	-47.34	7.85	4.10	-43.59	76.60	53.01
6152.00	H	49.64	*	-46.85	8.40	4.42	-42.87	75.88	53.01
6152.00	V	49.17	*	-47.85	8.40	4.42	-43.87	76.88	53.01
6921.00	H	49.13	*	-47.50	9.00	4.77	-43.27	76.28	53.01
6921.00	V	49.11	*	-47.95	9.00	4.77	-43.72	76.73	53.01
7690.00	H	48.87	*	-48.01	10.09	5.08	-43.01	76.02	53.01
7690.00	V	49.59	*	-47.69	10.09	5.08	-42.68	75.69	53.01

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 90 Watts (Average) RSS119, 771.5 MHz, C4FM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	771.5MHz
Notes	90W Power (RSS119)
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1543.00	H	26.37	*	-40.82	3.85	2.18	-39.15	88.69	62.54
1543.00	V	28.50	*	-38.34	3.85	2.18	-36.66	86.21	62.54
2314.50	H	66.06		-35.82	3.29	2.69	-35.22	84.76	62.54
2314.50	V	66.52		-35.06	3.29	2.69	-34.46	84.00	62.54
3086.00	H	50.90	*	-49.70	4.86	3.15	-48.00	97.54	62.54
3086.00	V	50.36	*	-50.00	4.86	3.15	-48.29	97.84	62.54
3857.50	H	51.04	*	-50.82	6.40	3.52	-47.94	97.48	62.54
3857.50	V	51.64	*	-47.86	6.40	3.52	-44.98	94.52	62.54
4629.00	H	50.25	*	-48.02	6.78	3.81	-45.05	94.59	62.54
4629.00	V	50.42	*	-47.79	6.78	3.81	-44.82	94.36	62.54
5400.50	H	49.40	*	-47.63	7.87	4.11	-43.87	93.42	62.54
5400.50	V	49.69	*	-47.34	7.87	4.11	-43.58	93.13	62.54
6172.00	H	49.61	*	-46.78	8.42	4.43	-42.79	92.34	62.54
6172.00	V	49.68	*	-47.34	8.42	4.43	-43.35	92.90	62.54
6943.50	H	49.35	*	-47.36	9.04	4.78	-43.10	92.64	62.54
6943.50	V	48.78	*	-48.35	9.04	4.78	-44.09	93.63	62.54
7715.00	H	49.87	*	-47.06	10.11	5.09	-42.04	91.58	62.54
7715.00	V	49.19	*	-48.10	10.11	5.09	-43.08	92.62	62.54

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average) RSS119, 771.5 MHz, C4FM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	771.5MHz
Notes	2W
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1543.00	H	26.47	*	-40.72	3.85	2.18	-39.05	72.06	53.01
1543.00	V	26.84	*	-40.00	3.85	2.18	-38.32	71.33	53.01
2314.50	H	50.17	*	-51.71	3.29	2.69	-51.11	84.12	53.01
2314.50	V	51.38	*	-50.20	3.29	2.69	-49.60	82.61	53.01
3086.00	H	51.45	*	-49.15	4.86	3.15	-47.45	80.46	53.01
3086.00	V	51.00	*	-49.36	4.86	3.15	-47.65	80.66	53.01
3857.50	H	50.11	*	-51.75	6.40	3.52	-48.87	81.88	53.01
3857.50	V	50.44	*	-49.06	6.40	3.52	-46.18	79.19	53.01
4629.00	H	49.91	*	-48.36	6.78	3.81	-45.39	78.40	53.01
4629.00	V	50.46	*	-47.75	6.78	3.81	-44.78	77.79	53.01
5400.50	H	48.90	*	-48.13	7.87	4.11	-44.37	77.38	53.01
5400.50	V	49.77	*	-47.26	7.87	4.11	-43.50	76.51	53.01
6172.00	H	49.18	*	-47.21	8.42	4.43	-43.22	76.23	53.01
6172.00	V	49.56	*	-47.46	8.42	4.43	-43.47	76.48	53.01
6943.50	H	49.74	*	-46.97	9.04	4.78	-42.71	75.72	53.01
6943.50	V	49.26	*	-47.87	9.04	4.78	-43.61	76.62	53.01
7715.00	H	49.08	*	-47.85	10.11	5.09	-42.83	75.84	53.01
7715.00	V	49.34	*	-47.95	10.11	5.09	-42.93	75.94	53.01

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 90 Watts (Average) RSS119, 772.5 MHz, H-DQPSK

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	772.5MHz
Notes	90W Power (RSS119)
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1545.00	H	26.49	*	-40.73	3.87	2.18	-39.04	88.58	62.54
1545.00	V	25.86	*	-40.99	3.87	2.18	-39.31	88.85	62.54
2317.50	H	66.21		-35.66	3.29	2.69	-35.07	84.61	62.54
2317.50	V	70.52		-31.05	3.29	2.69	-30.46	80.00	62.54
3090.00	H	51.39	*	-49.19	4.86	3.16	-47.48	97.02	62.54
3090.00	V	51.82	*	-48.51	4.86	3.16	-46.81	96.35	62.54
3862.50	H	50.56	*	-51.21	6.40	3.52	-48.33	97.87	62.54
3862.50	V	49.97	*	-49.52	6.40	3.52	-46.63	96.18	62.54
4635.00	H	50.59	*	-47.67	6.78	3.81	-44.70	94.24	62.54
4635.00	V	50.96	*	-47.23	6.78	3.81	-44.27	93.81	62.54
5407.50	H	51.41	*	-45.61	7.88	4.11	-41.84	91.38	62.54
5407.50	V	49.23	*	-47.79	7.88	4.11	-44.02	93.56	62.54
6180.00	H	49.54	*	-46.81	8.43	4.43	-42.82	92.36	62.54
6180.00	V	49.45	*	-47.57	8.43	4.43	-43.58	93.12	62.54
6952.50	H	49.41	*	-47.33	9.05	4.78	-43.06	92.60	62.54
6952.50	V	49.55	*	-47.61	9.05	4.78	-43.34	92.88	62.54
7725.00	H	49.84	*	-47.11	10.12	5.10	-42.09	91.63	62.54
7725.00	V	49.65	*	-47.64	10.12	5.10	-42.62	92.16	62.54

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average) RSS119, 772.5 MHz, H-DQPSK

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	772.5MHz
Notes	2W Power
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1545.00	H	25.81	*	-41.41	3.87	2.18	-39.72	72.73	53.01
1545.00	V	26.24	*	-40.61	3.87	2.18	-38.93	71.94	53.01
2317.50	H	67.08		-34.79	3.29	2.69	-34.20	67.21	53.01
2317.50	V	57.93		-43.64	3.29	2.69	-43.05	76.06	53.01
3090.00	H	51.35	*	-49.23	4.86	3.16	-47.52	80.53	53.01
3090.00	V	50.97	*	-49.36	4.86	3.16	-47.66	80.67	53.01
3862.50	H	50.17	*	-51.60	6.40	3.52	-48.72	81.73	53.01
3862.50	V	49.94	*	-49.55	6.40	3.52	-46.66	79.67	53.01
4635.00	H	49.85	*	-48.41	6.78	3.81	-45.44	78.45	53.01
4635.00	V	50.33	*	-47.86	6.78	3.81	-44.90	77.91	53.01
5407.50	H	49.40	*	-47.62	7.88	4.11	-43.85	76.86	53.01
5407.50	V	50.50	*	-46.52	7.88	4.11	-42.75	75.76	53.01
6180.00	H	49.29	*	-47.06	8.43	4.43	-43.07	76.08	53.01
6180.00	V	49.19	*	-47.83	8.43	4.43	-43.84	76.85	53.01
6952.50	H	49.36	*	-47.38	9.05	4.78	-43.11	76.12	53.01
6952.50	V	49.49	*	-47.67	9.05	4.78	-43.40	76.41	53.01
7725.00	H	49.66	*	-47.29	10.12	5.10	-42.27	75.28	53.01
7725.00	V	49.47	*	-47.82	10.12	5.10	-42.80	75.81	53.01

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 90 Watts (Average) RSS119, 775 MHz, C4FM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	775MHz
Notes	90W Power (RSS119)
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1550.00	H	26.06	*	-41.22	3.91	2.18	-39.49	89.04	62.54
1550.00	V	26.00	*	-40.90	3.91	2.18	-39.17	88.71	62.54
2325.00	H	69.56		-32.29	3.27	2.70	-31.72	81.26	62.54
2325.00	V	75.00		-26.55	3.27	2.70	-25.98	75.52	62.54
3100.00	H	51.45	*	-49.07	4.87	3.16	-47.36	96.90	62.54
3100.00	V	51.91	*	-48.36	4.87	3.16	-46.65	96.19	62.54
3875.00	H	49.99	*	-51.54	6.41	3.52	-48.66	98.20	62.54
3875.00	V	49.91	*	-49.54	6.41	3.52	-46.65	96.20	62.54
4650.00	H	49.68	*	-48.55	6.77	3.82	-45.60	95.14	62.54
4650.00	V	49.96	*	-48.19	6.77	3.82	-45.24	94.78	62.54
5425.00	H	49.70	*	-47.28	7.90	4.12	-43.50	93.04	62.54
5425.00	V	49.95	*	-47.03	7.90	4.12	-43.25	92.79	62.54
6200.00	H	49.41	*	-46.85	8.44	4.44	-42.85	92.39	62.54
6200.00	V	49.75	*	-47.27	8.44	4.44	-43.27	92.81	62.54
6975.00	H	49.46	*	-47.36	9.09	4.79	-43.06	92.60	62.54
6975.00	V	50.00	*	-47.23	9.09	4.79	-42.93	92.47	62.54
7750.00	H	49.69	*	-47.31	10.14	5.10	-42.27	91.82	62.54
7750.00	V	49.72	*	-47.58	10.14	5.10	-42.54	92.09	62.54

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average) RSS119, 775 MHz, C4FM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	775MHz
Notes	2W Power
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1550.00	H	25.80	*	-41.48	3.91	2.18	-39.75	72.77	46.01
1550.00	V	26.00	*	-40.90	3.91	2.18	-39.17	72.18	46.01
2325.00	H	51.33	*	-50.52	3.27	2.70	-49.95	82.96	46.01
2325.00	V	50.85	*	-50.70	3.27	2.70	-50.13	83.14	46.01
3100.00	H	50.90	*	-49.62	4.87	3.16	-47.91	80.92	46.01
3100.00	V	51.07	*	-49.20	4.87	3.16	-47.49	80.50	46.01
3875.00	H	50.29	*	-51.24	6.41	3.52	-48.36	81.37	46.01
3875.00	V	49.71	*	-49.74	6.41	3.52	-46.85	79.86	46.01
4650.00	H	50.31	*	-47.92	6.77	3.82	-44.97	77.98	46.01
4650.00	V	50.13	*	-48.02	6.77	3.82	-45.07	78.08	46.01
5425.00	H	50.18	*	-46.80	7.90	4.12	-43.02	76.03	46.01
5425.00	V	49.63	*	-47.35	7.90	4.12	-43.57	76.58	46.01
6200.00	H	49.22	*	-47.04	8.44	4.44	-43.04	76.05	46.01
6200.00	V	49.50	*	-47.52	8.44	4.44	-43.52	76.53	46.01
6975.00	H	49.60	*	-47.22	9.09	4.79	-42.92	75.93	46.01
6975.00	V	49.30	*	-47.93	9.09	4.79	-43.63	76.64	46.01
7750.00	H	49.37	*	-47.63	10.14	5.10	-42.59	75.60	46.01
7750.00	V	49.31	*	-47.99	10.14	5.10	-42.95	75.96	46.01

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 90 Watts (Average) RSS119, 769 MHz, LSM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	776MHz
Notes	90W Power (RSS119)
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1552.00	H	26.12	*	-41.19	3.92	2.18	-39.44	88.99	62.54
1552.00	V	26.56	*	-40.35	3.92	2.18	-38.61	88.15	62.54
2328.00	H	72.06		-29.78	3.26	2.70	-29.22	78.76	62.54
2328.00	V	73.31		-28.23	3.26	2.70	-27.67	77.21	62.54
3104.00	H	51.73	*	-48.76	4.88	3.16	-47.05	96.59	62.54
3104.00	V	52.32	*	-47.92	4.88	3.16	-46.20	95.74	62.54
3880.00	H	50.18	*	-51.26	6.41	3.53	-48.37	97.91	62.54
3880.00	V	49.95	*	-49.48	6.41	3.53	-46.60	96.14	62.54
4656.00	H	50.66	*	-47.56	6.77	3.82	-44.62	94.16	62.54
4656.00	V	50.18	*	-47.95	6.77	3.82	-45.01	94.55	62.54
5432.00	H	51.12	*	-45.85	7.91	4.12	-42.06	91.60	62.54
5432.00	V	50.48	*	-46.49	7.91	4.12	-42.70	92.24	62.54
6208.00	H	50.66	*	-45.56	8.45	4.45	-41.55	91.10	62.54
6208.00	V	50.17	*	-46.85	8.45	4.45	-42.85	92.39	62.54
6984.00	H	50.43	*	-46.42	9.11	4.79	-42.11	91.65	62.54
6984.00	V	50.37	*	-46.89	9.11	4.79	-42.58	92.12	62.54
7760.00	H	50.50	*	-46.50	10.15	5.11	-41.46	91.00	62.54
7760.00	V	50.24	*	-47.05	10.15	5.11	-42.01	91.55	62.54

Report on Test Measurements

Radiated Spurious Harmonic Emissions — Power Output 2 Watts (Average) RSS119, 769 MHz, LSM

Test Details	
Manufacturer	Motorola Solutions Inc.
EUT	UHF Radio
Model No.	D-Series Multicarrier Radio Site
Serial No.	700VHPEMC
Mode	Tx
Frequency Tested	776MHz
Notes	2W Power
Date Tested	1/31/2025 through 2/3/2024

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	Calculated Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	ERP (dBm)	Attenuation Below Output Power (dB)	Minimum Attenuation (dB)
1552.00	H	25.52	*	-41.79	3.92	2.18	-40.04	73.06	46.01
1552.00	V	26.12	*	-40.79	3.92	2.18	-39.05	72.06	46.01
2328.00	H	50.70	*	-51.14	3.26	2.70	-50.58	83.59	46.01
2328.00	V	51.17	*	-50.37	3.26	2.70	-49.81	82.82	46.01
3104.00	H	51.91	*	-48.58	4.88	3.16	-46.87	79.88	46.01
3104.00	V	51.21	*	-49.03	4.88	3.16	-47.31	80.32	46.01
3880.00	H	49.97	*	-51.47	6.41	3.53	-48.58	81.59	46.01
3880.00	V	50.31	*	-49.12	6.41	3.53	-46.24	79.25	46.01
4656.00	H	50.13	*	-48.09	6.77	3.82	-45.15	78.16	46.01
4656.00	V	50.39	*	-47.74	6.77	3.82	-44.80	77.81	46.01
5432.00	H	49.52	*	-47.45	7.91	4.12	-43.66	76.67	46.01
5432.00	V	49.12	*	-47.85	7.91	4.12	-44.06	77.07	46.01
6208.00	H	49.25	*	-46.97	8.45	4.45	-42.96	75.97	46.01
6208.00	V	49.03	*	-47.99	8.45	4.45	-43.99	77.00	46.01
6984.00	H	49.46	*	-47.39	9.11	4.79	-43.08	76.09	46.01
6984.00	V	49.21	*	-48.05	9.11	4.79	-43.74	76.75	46.01
7760.00	H	49.94	*	-47.06	10.15	5.11	-42.02	75.03	46.01
7760.00	V	49.46	*	-47.83	10.15	5.11	-42.79	75.80	46.01

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 764-776 MHz and 794-806 MHz must have a frequency stability of better than +/- 0.1 PPM for 6.25 kHz and 12.5 kHz.

Specification Requirement: Reference FCC Part 90.539(b)
Transmitters designed to operate in 769-775 MHz and 799-805 MHz frequency bands must meet the frequency stability requirements in this section:

(b) The frequency stability of base transmitters operating in the narrowband segment must be 100 parts per billion or better.

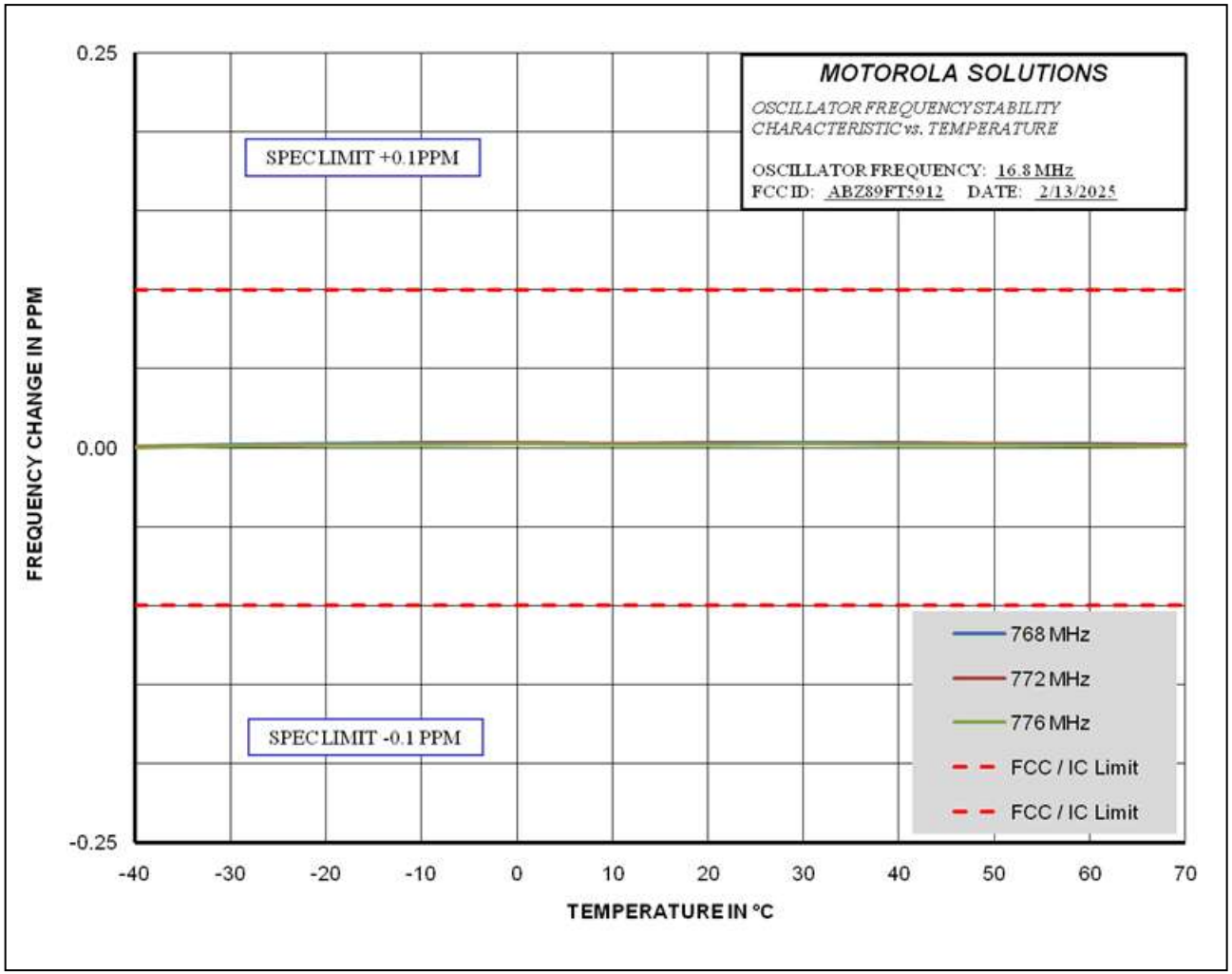
Specification Requirement: Reference FCC Part 27.54
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

The specification limits for IC and FCC are identical, 0.1 part per million. This specification limit is shown on the following charts. Performance was measured at carrier frequencies at the low end, middle, and high end of the operating band.

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

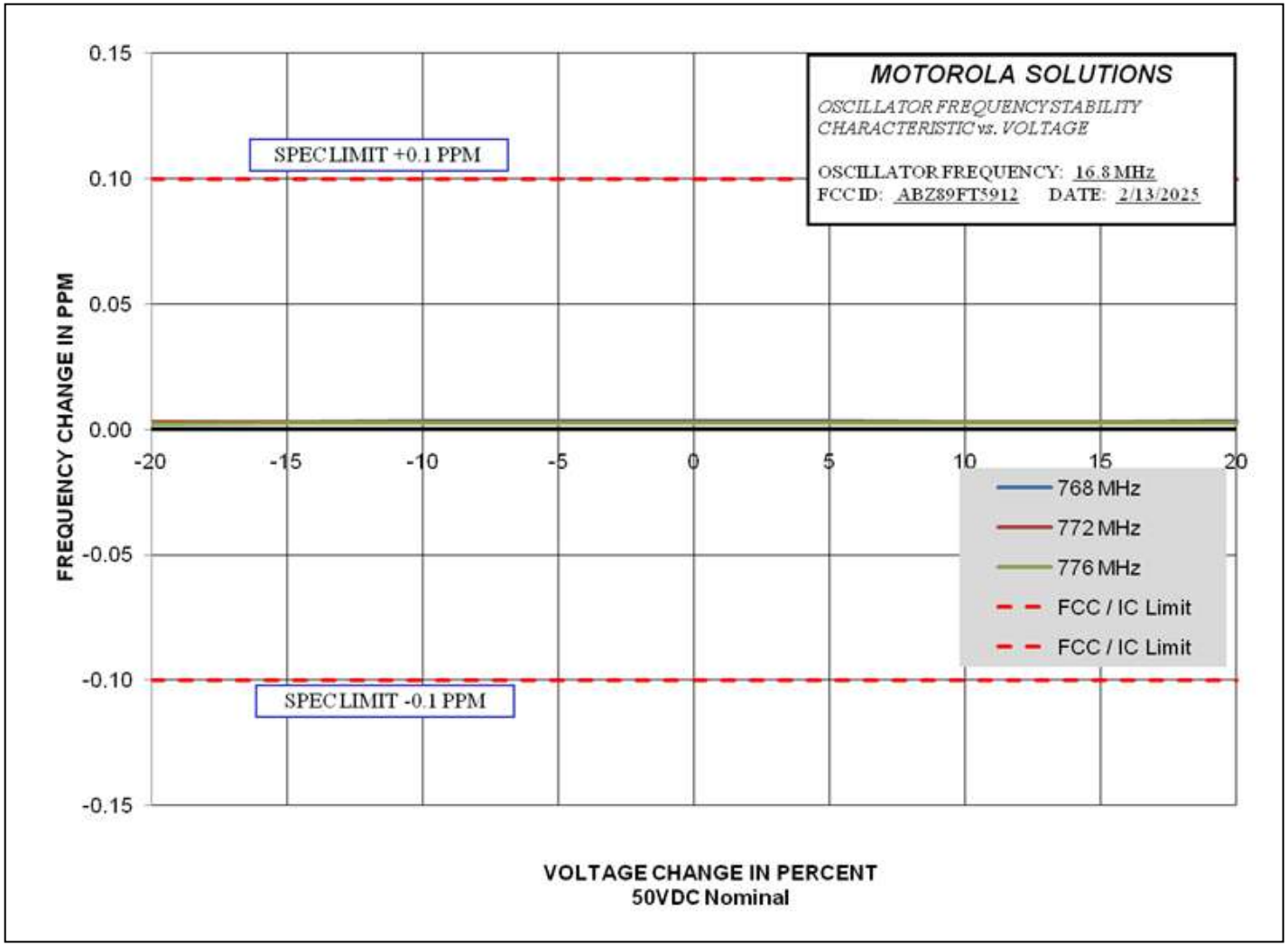
Report on Test Measurements

Frequency Stability Vs Temperature



Report on Test Measurements

Frequency Stability Vs Voltage



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 Kelsey Johnson

(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 Kam Stephens

Test Equipment List (Motorola)

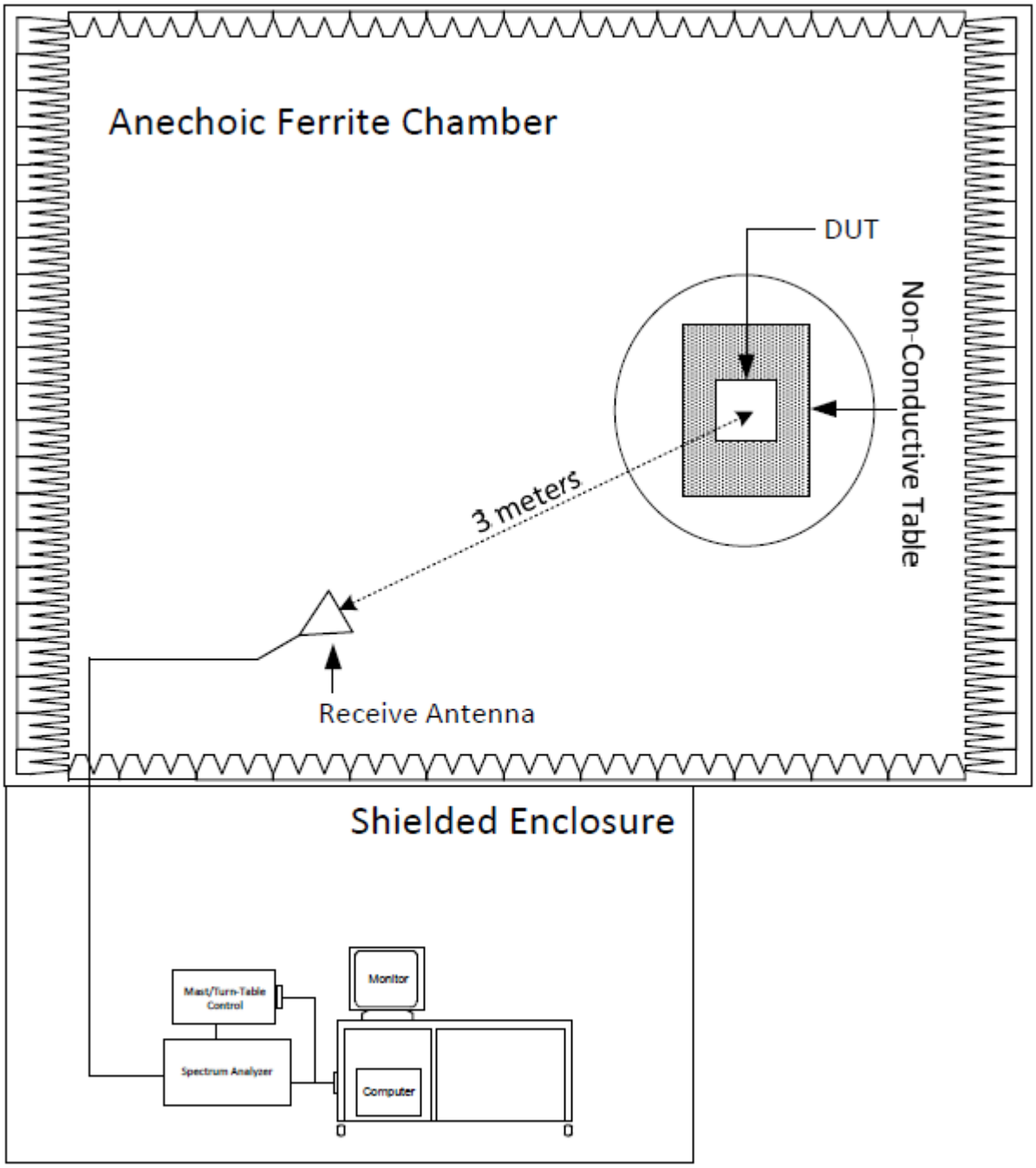
Manufacturer	Model	Description	Serial Number	Last Cal	Interval
Keysight	N9030A	PXA Signal Analyzer, 3 Hz to 50 GHz	MY53310751	08-21-2024	08-21-2025
Keysight	U8903A	Audio Analyzer, 10 Hz to 100 kHz	MY50500002	10-14-2024	10-14-2025
Rohde & Schwarz	NRP-Z11	Power Sensor	101590	08-21-2024	8-21-2026
Rohde & Schwarz	SMU200A	Signal Generator / Power Meter	101350	08-20-2024	08-20-2027
Keysight	34401A	Digital Multimeter	3146A59752	08-29-2022	08-29-2026
Keysight	8482a	Power Sensor	2652A15873	08-22-2024	08-22-2025
Keysight	E5071C	ENA Series Network analyzer	MY46316134	08-20-2024	08-20-2025
Thermotron	WS-120-CHM-15-15	Temperature Chamber	52516	11-28-2023	11-28-2025
Keysight	E4440A	PSA Spectrum Analyzer 3 Hz - 26.5 GHz	MY46185813	08-22-2024	08-22-2026
Keysight	8753es	S-parameter Network Analyzer	US39175306	08-21-2024	08-21-2025

Test Equipment List (Elite)

Eq ID	Equipment Description	Manufacturer	Model No.	Serial No.	Frequency Range	Cal Date	Due Date
APW3	PREAMPLIFIER	PLANAR ELECTRONICS	PE2-35-120-5R0-10-12	PL2924	1GHZ-20GHZ	3/20/2024	3/20/2025
CDZ4	LAB WORKSTATION	ELITE	LWS-10		WINDOWS 10	CNR	
MDCF	MULTIMETER (K. STEPHENS)	FLUKE	179	15950848	I;VDC;VAC;R	8/13/2024	8/13/2025
MRK20	HYGRO-THERMOMETER	EXTECH	445703	0622	---	1/9/2025	1/9/2027
MRK23	HYGRO-THERMOMETER (ESD LAB)	EXTECH	445703	0423	---	2/6/2025	2/6/2027
NSDS1	UNIVERSAL SPHERICAL DIPOLE SOURCE	AET	USDS-H	AET-1116		NOTE 1	
NTA3	BILOG ANTENNA	TESEQ	6112D	32853	25-2000MHz	10/3/2024	10/3/2026
NWQ2	DOUBLE RIDGED WAVEGUIDE ANTENNA	ETS LINDGREN	3117	66659	1GHZ-18GHZ	4/26/2024	4/26/2026
R21F	3M ANECHOIC CHAMBER NSA	EMC TEST SYSTEMS	3M ANECHOIC		30MHZ-18GHZ	3/1/2024	3/1/2025
RBG3	EMI ANALYZER	ROHDE & SCHWARZ	ESW44	101592	2HZ-44GHZ	3/7/2024	3/7/2025
SCB1	PROGRAMABLE POWER SUPPLY	CALIFORNIA INSTRUMENTS	CSW5550-208/156-321-ELF	1513A01938		NOTE 1	
SCB2	PROGRAMABLE POWER SUPPLY	CALIFORNIA INSTRUMENTS	CSW5550-208/156-321-ELF	1513A02092		NOTE 1	
SHC2	Power Supplies	HENGFU	HF60W-SL-24	A11372702	24V	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	9/14/2023	9/14/2025

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.

Test Setup (Elite)



Radiated Measurements Test Setup

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

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: BSECE, Michigan State University, East Lansing, MI, USA

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

NAME: Kelsey Johnson

SIGNATURE: 

DATE: February 24, 2025

POSITION: Senior RF 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: February 26, 2025

POSITION: Engineering Manager