

OUT OF BAND EMISSIONS – LTE BAND 5

TEST DESCRIPTION

At an approved test site, the transmitter was placed on a remotely controlled turntable, and the measurement antenna was placed 3 meters from the transmitter. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axes. The turntable azimuth was varied to maximize the level of spurious emissions. The height of the measurement antenna was also varied from 1 to 4 meters. A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity. The amplitude and frequency of the highest emissions was noted.

The transmitter was then replaced with a $\frac{1}{2}$ wave dipole that was successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator was connected to the dipole (horn antenna for frequencies above 1 GHz), and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the cable loss to the antenna and its gain, the power (dBm) was determined for each radiated spurious emission.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Receiver	Rohde & Schwarz	ESR26	ARQ	2022-05-02	2023-05-02
Antenna - Double Ridge	ETS Lindgren	3115	AJL	2022-10-21	2024-10-21
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAJ	2022-04-19	2023-04-19
Cable	Northwest EMC	1-8.2 GHz	TXC	2022-04-19	2023-04-19
Antenna - Standard Gain	ETS Lindgren	3160-07	AJF	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	PAK	2022-09-09	2023-09-09
Cable	Northwest EMC	8-18GHz	TXD	2022-04-12	2023-04-12
Antenna - Standard Gain	ETS Lindgren	3160-08	AJG	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	PAL	2022-09-09	2023-09-09

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.1 dB	-5.1 dB

FREQUENCY RANGE INVESTIGATED

1 GHz TO 18 GHz

POWER INVESTIGATED

4.2VDC via Battery

CONFIGURATIONS INVESTIGATED

WTV0085-2

MODES INVESTIGATED

Transmitting LTE, +23 dBm, Band 5, 16QAM, 1.4 MHz Channel Bandwidth, Low Ch, 824.7 MHz
Transmitting LTE, +23 dBm, Band 5, QPSK, 1.4 MHz Channel Bandwidth, Low Ch, 824.7 MHz
Transmitting LTE, +23 dBm, Band 5, QPSK, 1.4 MHz Channel Bandwidth, Mid Ch, 836.5 MHz
Transmitting LTE, +23 dBm, Band 5, QPSK, 1.4 MHz Channel Bandwidth, High Ch, 848.3 MHz
Transmitting LTE, +23 dBm, Band 5, QPSK, 10 MHz Channel Bandwidth, Low Ch, 829 MHz
Transmitting LTE, +23 dBm, Band 5, QPSK, 3 MHz Channel Bandwidth, Low Ch, 825.5 MHz
Transmitting LTE, +23 dBm, Band 5, QPSK, 5 MHz Channel Bandwidth, Low Ch, 826.5 MHz

OUT OF BAND EMISSIONS – LTE BAND 5

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-17
Customer:	Motorola Solutions, Inc.	Temperature:	22.8°C
Attendees:	Navaid Karimi	Relative Humidity:	37.1%
Customer Project:	None	Bar. Pressure (PMSL):	998 mb
Tested By:	Jarrold Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 22.917:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	164	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

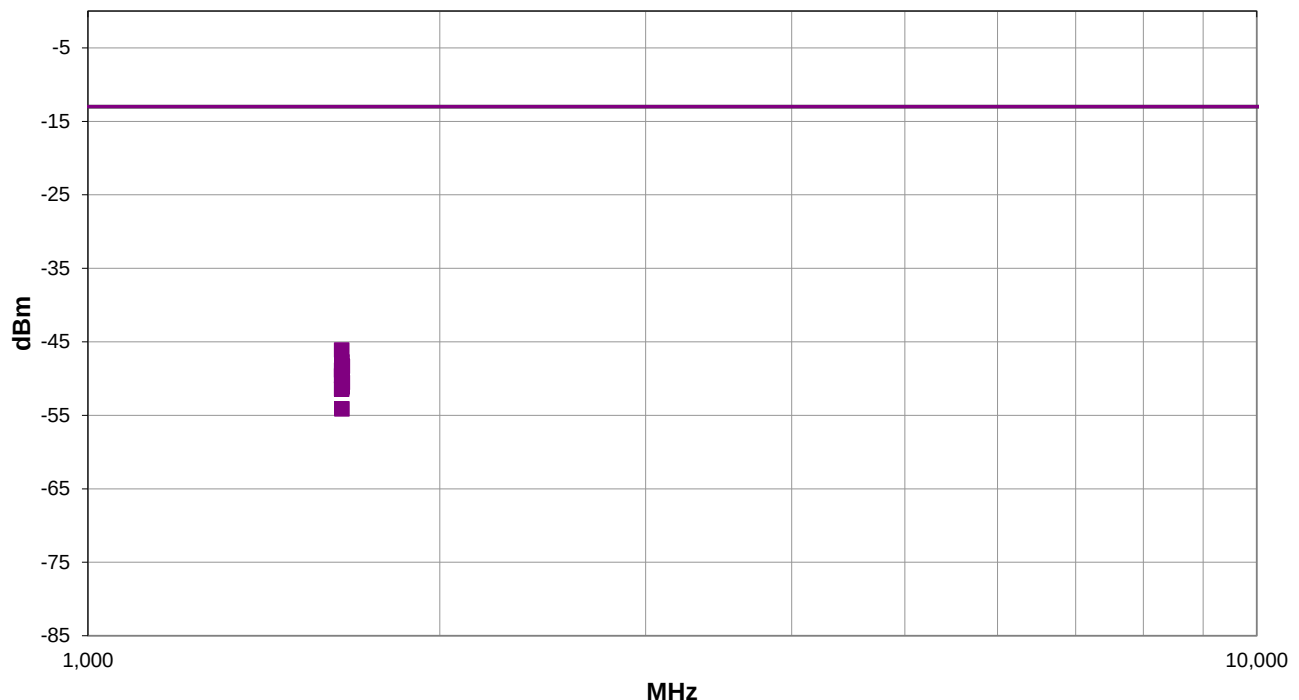
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 5, QPSK, 1.4 MHz Channel Bandwidth, Low Ch, 824.7 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 164

■ PK ◆ AV ● QP

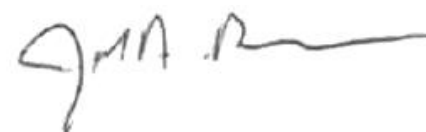
OUT OF BAND EMISSIONS – LTE BAND 5

RESULTS - Run #164

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1648.609	3.8	326.0	Horz	PK	24.4E-9	-46.1	-13.0	-33.1	EUT Horz, 1RB/0, Low Ch
1648.975	3.78	328.9	Horz	PK	16.9E-9	-47.7	-13.0	-34.7	EUT Horz, 3RB/0, Low Ch
1649.374	3.83	331.0	Horz	PK	15.0E-9	-48.2	-13.0	-35.2	EUT Horz, 6RB/0, Low ch
1650.200	3.76	330.0	Horz	PK	14.7E-9	-48.3	-13.0	-35.3	EUT Horz, 1RB/5, Low Ch
1649.008	1.01	327.9	Vert	PK	14.4E-9	-48.4	-13.0	-35.4	EUT Vert, 3RB/0, Low Ch
1649.208	3.81	328.9	Horz	PK	14.0E-9	-48.5	-13.0	-35.5	EUT Horz, 3RB/1, Low Ch
1650.108	3.76	321.0	Horz	PK	13.4E-9	-48.7	-13.0	-35.7	EUT Horz, 3RB3, Low Ch
1648.509	3.58	28.9	Horz	PK	13.1E-9	-48.8	-13.0	-35.8	EUT on Side, 1RB/0, Low Ch
1649.200	3.75	333.0	Horz	PK	12.2E-9	-49.1	-13.0	-36.1	EUT Horz, 1RB/2, Low Ch
1648.708	1.5	3.0	Vert	PK	10.9E-9	-49.6	-13.0	-36.6	EUT Vert, 1RB/0, Low Ch
1650.017	1.0	338.0	Vert	PK	10.9E-9	-49.6	-13.0	-36.6	EUT Vert, 3RB/3, Low Ch
1649.258	1.0	333.9	Vert	PK	9.9E-9	-50.0	-13.0	-37.0	EUT Vert, 1RB/2, Low Ch
1648.808	3.73	326.0	Vert	PK	9.3E-9	-50.3	-13.0	-37.3	EUT on Side, 1RB/0, Low Ch
1650.275	1.0	338.0	Vert	PK	8.9E-9	-50.5	-13.0	-37.5	EUT Vert, 1RB/5, Low Ch
1648.983	1.5	2.0	Vert	PK	8.5E-9	-50.7	-13.0	-37.7	EUT Vert, 3RB1, Low Ch
1649.541	1.5	6.0	Vert	PK	7.7E-9	-51.1	-13.0	-38.1	EUT Vert, 6RB/0, Low Ch
1648.426	4.0	31.0	Vert	PK	7.2E-9	-51.4	-13.0	-38.4	EUT Horz, 1RB/0, Low Ch
1648.783	1.16	343.0	Horz	PK	3.9E-9	-54.1	-13.0	-41.1	EUT Vert, 1RB/0, Low Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 5

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-20
Customer:	Motorola Solutions, Inc.	Temperature:	22.8°C
Attendees:	Navaid Karimi	Relative Humidity:	13%
Customer Project:	None	Bar. Pressure (PMSL):	1002.9 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 22.917:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	185	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

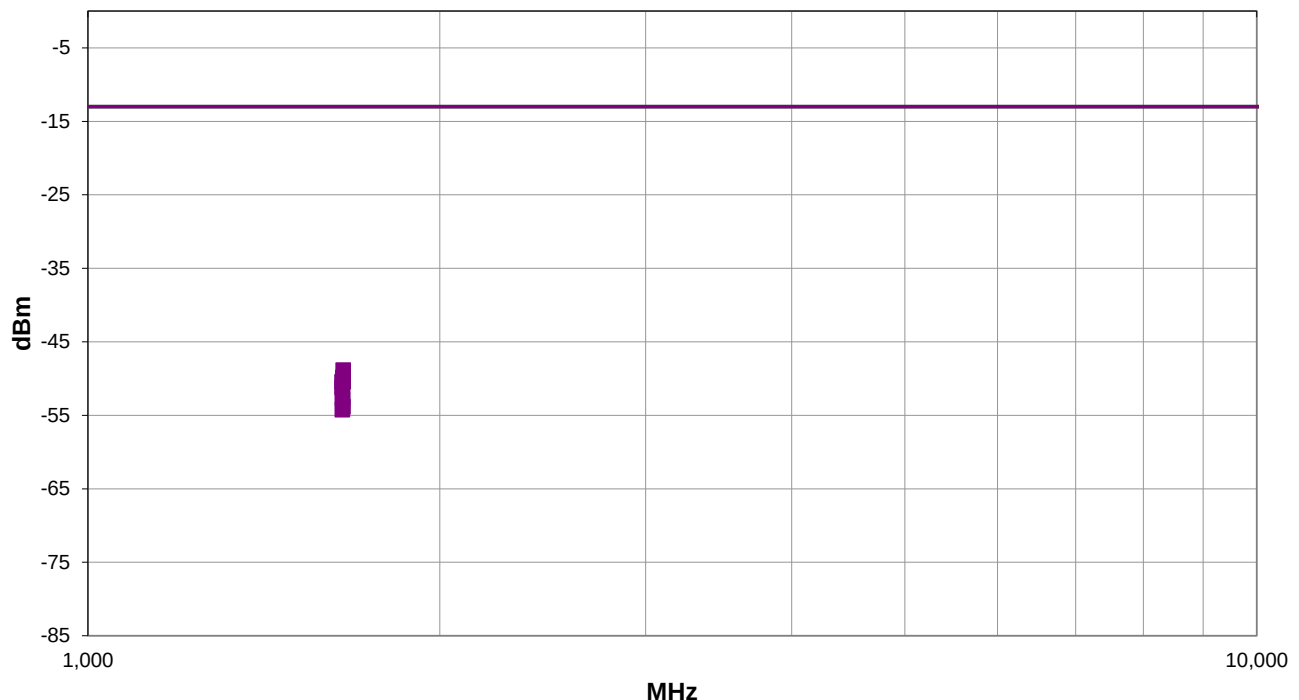
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 5, QPSK, 3 MHz Channel Bandwidth, Low Ch, 825.5 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 185

■ PK ◆ AV ● QP

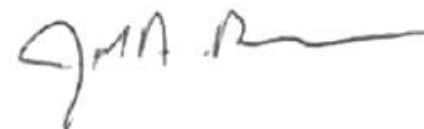
OUT OF BAND EMISSIONS – LTE BAND 5

RESULTS - Run #185

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1653.509	3.82	334.9	Horz	PK	13.1E-9	-48.8	-13.0	-35.8	EUT Horz, 1RB/14, Low Ch
1652.325	3.86	328.9	Horz	PK	10.4E-9	-49.8	-13.0	-36.8	EUT Horz, 8RB/7, Low Ch
1653.550	1.0	31.0	Vert	PK	9.1E-9	-50.4	-13.0	-37.4	EUT Vert, 1RB/14, Low Ch
1649.766	3.9	330.0	Horz	PK	9.1E-9	-50.4	-13.0	-37.4	EUT Horz, 8RB/0, Low Ch
1651.433	3.83	339.0	Horz	PK	9.1E-9	-50.4	-13.0	-37.4	EUT Horz, 8RB/4, Low Ch
1649.700	1.09	13.0	Vert	PK	7.5E-9	-51.2	-13.0	-38.2	EUT Vert, 8RB/0, Low Ch
1651.216	3.82	334.9	Horz	PK	5.8E-9	-52.3	-13.0	-39.3	EUT Horz, 15RB/0, Low Ch
1651.441	1.5	21.0	Vert	PK	5.3E-9	-52.7	-13.0	-39.7	EUT Vert, 8RB/4, Low Ch
1652.233	1.5	357.9	Vert	PK	4.1E-9	-53.8	-13.0	-40.8	EUT Vert, 8RB/7, Low Ch
1650.717	1.02	22.9	Vert	PK	3.8E-9	-54.2	-13.0	-41.2	EUT Vert, 15RB/0, Low Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 5

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-20
Customer:	Motorola Solutions, Inc.	Temperature:	19.2°C
Attendees:	Navaid Karimi	Relative Humidity:	19%
Customer Project:	None	Bar. Pressure (PMSL):	1003 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 22.917:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	194	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

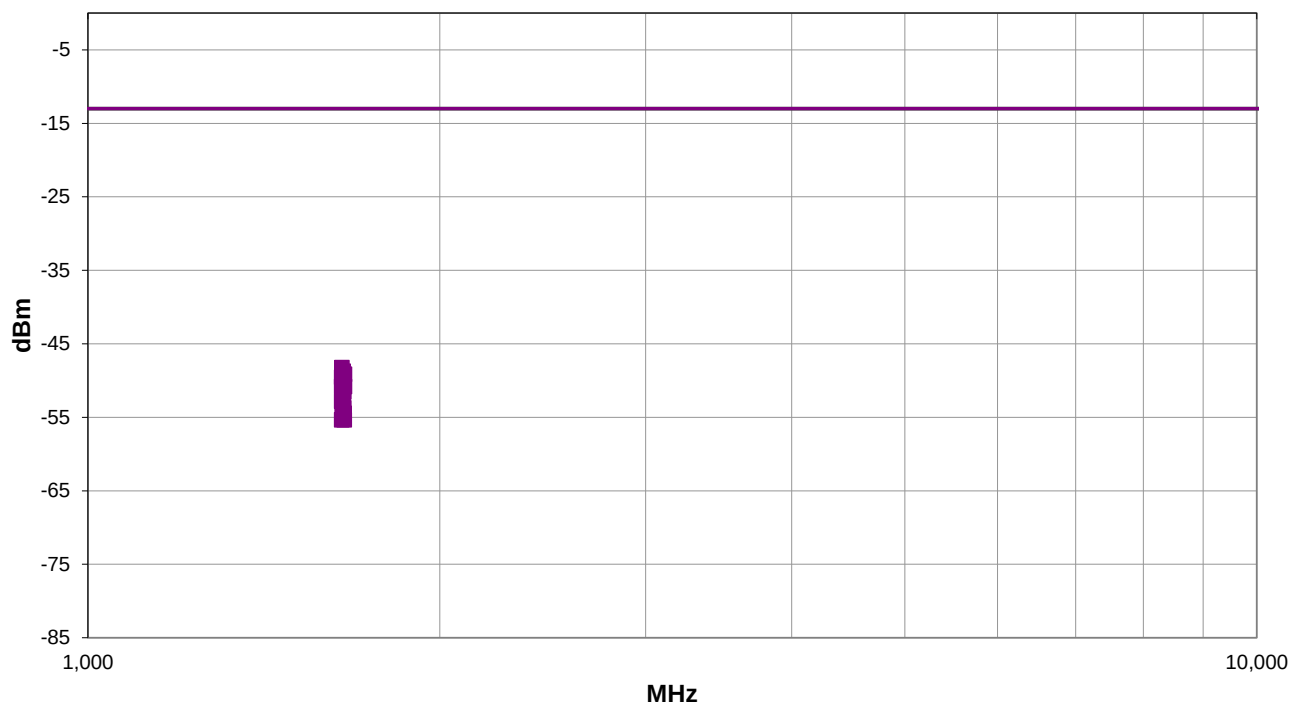
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 5, QPSK, 5 MHz Channel Bandwidth, Low Ch, 826.5 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 194

■ PK ◆ AV ● QP

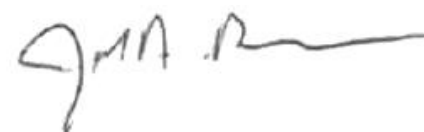
OUT OF BAND EMISSIONS – LTE BAND 5

RESULTS - Run #194

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1648.940	3.84	328.9	Horz	PK	15.0E-9	-48.2	-13.0	-35.2	EUT Horz, 1RB/0, Low Ch
1653.050	3.8	333.9	Horz	PK	13.4E-9	-48.7	-13.0	-35.7	EUT Horz, 1RB/12, Low Ch
1657.308	3.73	342.0	Horz	PK	12.2E-9	-49.1	-13.0	-36.1	EUT Horz, 1RB/24, Low Ch
1648.740	1.08	333.0	Vert	PK	11.1E-9	-49.5	-13.0	-36.5	EUT Vert, 1RB/0, Low Ch
1652.875	1.0	9.0	Vert	PK	9.3E-9	-50.3	-13.0	-37.3	EUT Vert, 1RB/12, Low Ch
1648.632	3.68	26.0	Horz	PK	8.3E-9	-50.8	-13.0	-37.8	EUT on Side, 1RB/0, Low Ch
1657.292	1.03	328.9	Vert	PK	8.3E-9	-50.8	-13.0	-37.8	EUT Vert, 1RB/24, Low Ch
1655.582	3.8	327.0	Horz	PK	7.0E-9	-51.5	-13.0	-38.5	EUT Horz, 12RB/13, Low Ch
1648.865	3.91	326.0	Vert	PK	5.8E-9	-52.3	-13.0	-39.3	EUT on Side, 1RB/0, Low Ch
1652.998	3.77	330.0	Horz	PK	5.8E-9	-52.3	-13.0	-39.3	EUT Horz, 12RB/6, Low Ch
1648.574	3.98	33.0	Vert	PK	5.2E-9	-52.8	-13.0	-39.8	EUT Horz, 1RB/0, Low Ch
1650.761	1.14	343.0	Horz	PK	4.6E-9	-53.3	-13.0	-40.3	EUT Horz, 12RB/0, Low Ch
1650.994	1.5	7.0	Vert	PK	4.2E-9	-53.7	-13.0	-40.7	EUT Vert, 12RB/0, Low Ch
1655.232	1.04	326.0	Vert	PK	4.2E-9	-53.7	-13.0	-40.7	EUT Vert, 12RB/13, Low Ch
1656.261	3.78	345.9	Horz	PK	3.6E-9	-54.4	-13.0	-41.4	EUT Horz, 25RB/0, Low Ch
1653.138	1.5	31.0	Vert	PK	3.0E-9	-55.2	-13.0	-42.2	EUT Vert, 12RB/6, Low Ch
1648.582	1.19	342.0	Horz	PK	2.9E-9	-55.3	-13.0	-42.3	EUT Vert, 1RB/0, Low Ch
1656.611	1.0	339.0	Vert	PK	2.9E-9	-55.3	-13.0	-42.3	EUT Vert, 25RB/0, Low Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 5

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-20
Customer:	Motorola Solutions, Inc.	Temperature:	19.2°C
Attendees:	Navaid Karimi	Relative Humidity:	19%
Customer Project:	None	Bar. Pressure (PMSL):	1003 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 22.917:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	203	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

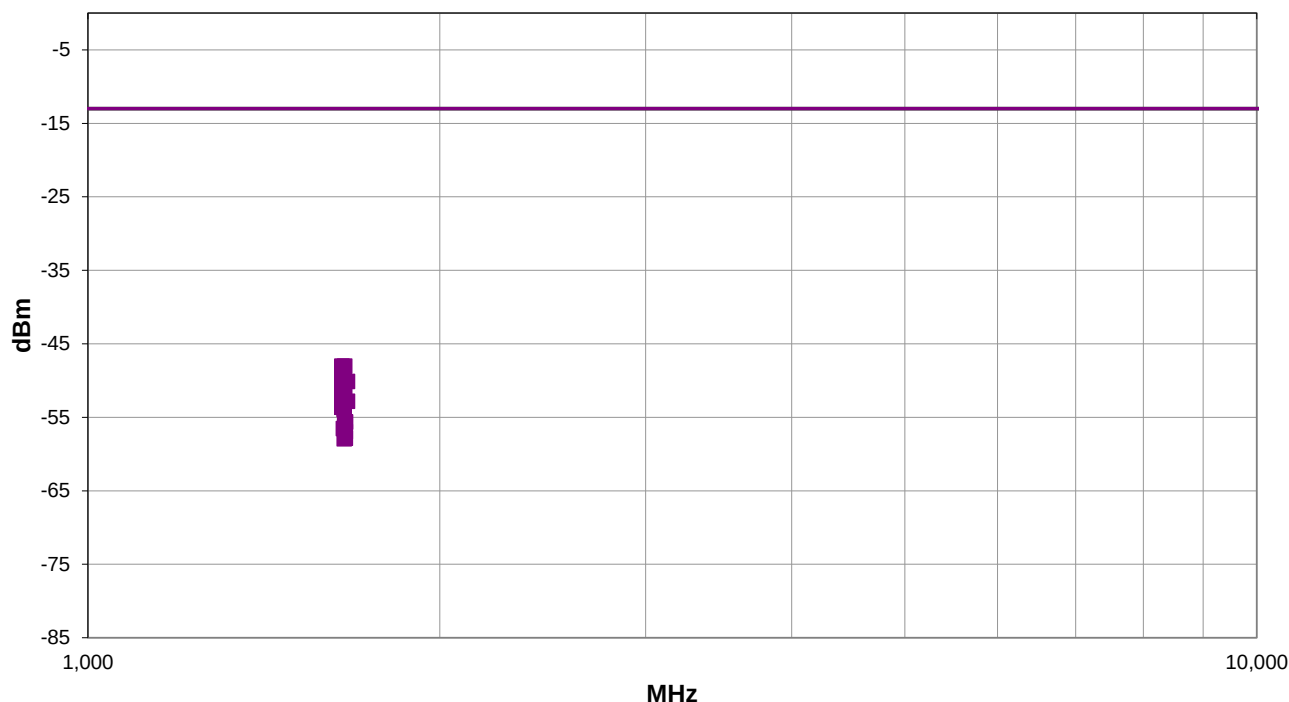
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 5, QPSK, 10 MHz Channel Bandwidth, Low Ch, 829.0 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 203

PK AV QP

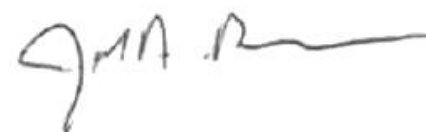
OUT OF BAND EMISSIONS – LTE BAND 5

RESULTS - Run #203

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1649.168	3.84	333.9	Horz	PK	15.7E-9	-48.0	-13.0	-35.0	EUT Horz, 1RB/0, Low Ch
1657.834	3.72	332.0	Horz	PK	15.7E-9	-48.0	-13.0	-35.0	EUT Horz, 1RB/24, Low Ch
1649.192	1.0	337.0	Vert	PK	12.8E-9	-48.9	-13.0	-35.9	EUT Vert, 1RB/0, Low Ch
1649.267	3.71	24.0	Horz	PK	9.9E-9	-50.0	-13.0	-37.0	EUT on Side, 1RB/0, Low Ch
1666.917	3.71	334.9	Horz	PK	9.7E-9	-50.1	-13.0	-37.1	EUT Horz, 1RB/49, Low Ch
1657.975	1.0	333.0	Vert	PK	8.1E-9	-50.9	-13.0	-37.9	EUT Vert, 1RB/24, Low Ch
1649.151	3.8	316.9	Vert	PK	7.2E-9	-51.4	-13.0	-38.4	EUT on Side, 1RB/0, Low Ch
1666.925	1.07	327.0	Vert	PK	5.2E-9	-52.8	-13.0	-39.8	EUT Vert, 1RB/49, Low Ch
1648.876	1.13	340.9	Horz	PK	4.4E-9	-53.5	-13.0	-40.5	EUT Vert, 1RB/0, Low Ch
1649.301	3.63	273.9	Vert	PK	4.3E-9	-53.6	-13.0	-40.6	EUT Horz, 1RB/0, Low Ch
1656.345	3.79	328.9	Horz	PK	4.0E-9	-53.9	-13.0	-40.9	EUT Horz, 25RB/0, Low Ch
1660.845	3.71	345.0	Horz	PK	2.7E-9	-55.6	-13.0	-42.6	EUT Horz, 25RB/12, Low Ch
1658.073	3.79	332.0	Horz	PK	2.6E-9	-55.9	-13.0	-42.9	EUT Horz, 50RB/0, Low Ch
1653.816	1.01	321.9	Vert	PK	2.2E-9	-56.5	-13.0	-43.5	EUT Vert, 25RB/0, Low Ch
1660.035	1.5	1.0	Vert	PK	2.0E-9	-56.9	-13.0	-43.9	EUT Vert, 25RB/25, Low Ch
1659.602	3.2	351.0	Horz	PK	2.0E-9	-56.9	-13.0	-43.9	EUT Horz, 25RB/25, Low Ch
1660.070	1.5	22.9	Vert	PK	1.6E-9	-57.8	-13.0	-44.8	EUT Vert, 50RB/0, Low Ch
1657.068	1.5	297.0	Vert	PK	1.6E-9	-57.9	-13.0	-44.9	EUT Vert, 25RB/12, Low Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 5

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-20
Customer:	Motorola Solutions, Inc.	Temperature:	19.2°C
Attendees:	Navaid Karimi	Relative Humidity:	19%
Customer Project:	None	Bar. Pressure (PMSL):	1003 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 22.917:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	204	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

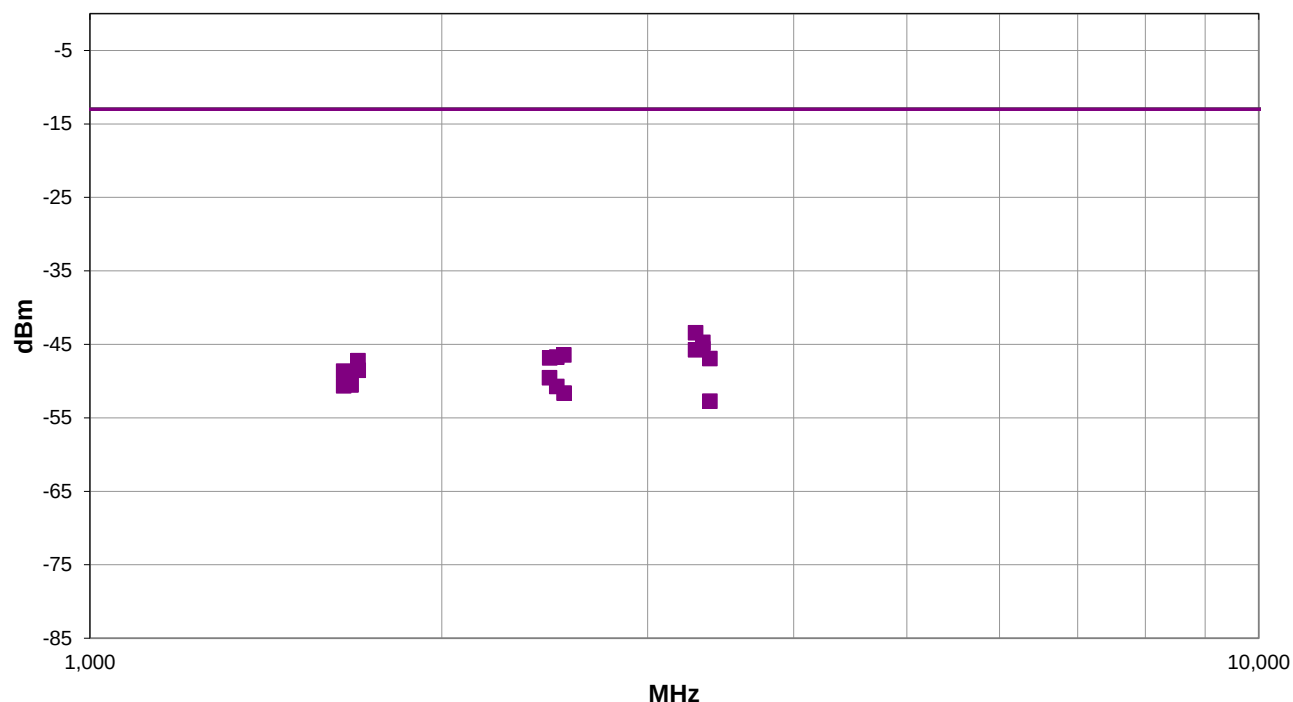
Harmonics measurements based on worst case observed emissions by receive polarity by channel bandwidths and modulations. See line comments for EUT orientation, channel bandwidth, modulation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 5

DEVIATIONS FROM TEST STANDARD

None



Run #: 204

■ PK ◆ AV ● QP

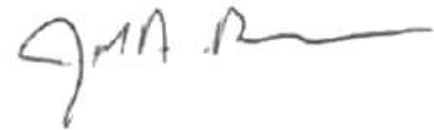
OUT OF BAND EMISSIONS – LTE BAND 5

RESULTS - Run #204

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3297.082	2.85	181.0	Horz	PK	45.4E-9	-43.4	-13.0	-30.4	EUT Horz, 1.4 MHz BW, QPSK, 1RB/0, Low Ch
3344.210	2.76	183.0	Horz	PK	33.7E-9	-44.7	-13.0	-31.7	EUT Horz, 1.4 MHz BW, QPSK, 1RB/0, Mid Ch
3344.841	4.0	124.9	Vert	PK	27.4E-9	-45.6	-13.0	-32.6	EUT Vert, 1.4 MHz BW, QPSK, 3RB/0, Mid Ch
3297.832	3.47	147.0	Vert	PK	26.7E-9	-45.7	-13.0	-32.7	EUT Vert, 1.4 MHz BW, QPSK, 3RB/0, Low Ch
2543.641	3.35	333.9	Horz	PK	22.8E-9	-46.4	-13.0	-33.4	EUT Horz, 1.4 MHz BW, QPSK, 1RB/0, High Ch
2508.156	3.34	193.0	Horz	PK	21.2E-9	-46.7	-13.0	-33.7	EUT Horz, 1.4 MHz BW, QPSK, 1RB/0, Mid Ch
2473.408	3.26	242.0	Vert	PK	20.8E-9	-46.8	-13.0	-33.8	EUT Vert, 1.4 MHz BW, QPSK, 3RB/0, Low Ch
3391.491	1.55	297.0	Horz	PK	20.3E-9	-46.9	-13.0	-33.9	EUT Horz, 1.4 MHz BW, QPSK, 1RB/0, High Ch
1695.581	3.52	327.9	Horz	PK	18.9E-9	-47.2	-13.0	-34.2	EUT Horz, 1.4 MHz BW, QPSK, 1RB/0, High Ch
1695.950	1.02	339.0	Vert	PK	14.0E-9	-48.5	-13.0	-35.5	EUT Vert, 1.4 MHz BW, QPSK, 3RB/0, High Ch
1648.492	3.81	332.0	Horz	PK	13.7E-9	-48.6	-13.0	-35.6	EUT Horz, 1.4 MHz BW, 16QAM, 1RB/0, Low Ch
2472.549	3.8	208.9	Horz	PK	11.1E-9	-49.5	-13.0	-36.5	EUT Horz, 1.4 MHz BW, QPSK, 1RB/0, Low Ch
1672.131	3.72	336.0	Horz	PK	9.1E-9	-50.4	-13.0	-37.4	EUT Horz, 1.4 MHz BW, QPSK, 1RB/0, Mid Ch
1672.458	1.05	345.0	Vert	PK	8.9E-9	-50.5	-13.0	-37.5	EUT Vert, 1.4 MHz BW, QPSK, 3RB/0, Mid Ch
1648.517	1.5	4.9	Vert	PK	8.7E-9	-50.6	-13.0	-37.6	EUT Vert, 1.4 MHz BW, 16QAM, 1RB/0, Low Ch
2508.542	1.46	96.0	Vert	PK	8.5E-9	-50.7	-13.0	-37.7	EUT Vert, 1.4 MHz BW, QPSK, 3RB/0, Mid Ch
2544.076	1.0	338.0	Vert	PK	6.9E-9	-51.6	-13.0	-38.6	EUT Vert, 1.4 MHz BW, QPSK, 3RB/0, High Ch
3391.742	1.5	264.0	Vert	PK	5.3E-9	-52.7	-13.0	-39.7	EUT Vert, 1.4 MHz BW, QPSK, 3RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 12

TEST DESCRIPTION

At an approved test site, the transmitter was placed on a remotely controlled turntable, and the measurement antenna was placed 3 meters from the transmitter. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axes. The turntable azimuth was varied to maximize the level of spurious emissions. The height of the measurement antenna was also varied from 1 to 4 meters. A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity. The amplitude and frequency of the highest emissions was noted.

The transmitter was then replaced with a $\frac{1}{2}$ wave dipole that was successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator was connected to the dipole (horn antenna for frequencies above 1 GHz), and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the cable loss to the antenna and its gain, the power (dBm) was determined for each radiated spurious emission.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Receiver	Rohde & Schwarz	ESR26	ARQ	2022-05-02	2023-05-02
Antenna - Double Ridge	ETS Lindgren	3115	AJL	2022-10-21	2024-10-21
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAJ	2022-04-19	2023-04-19
Cable	Northwest EMC	1-8.2 GHz	TXC	2022-04-19	2023-04-19
Antenna - Standard Gain	ETS Lindgren	3160-07	AJF	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	PAK	2022-09-09	2023-09-09
Cable	Northwest EMC	8-18GHz	TXD	2022-04-12	2023-04-12
Antenna - Standard Gain	ETS Lindgren	3160-08	AJG	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	PAL	2022-09-09	2023-09-09

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.1 dB	-5.1 dB

FREQUENCY RANGE INVESTIGATED

1 GHz TO 18 GHz

POWER INVESTIGATED

4.2VDC via Battery

CONFIGURATIONS INVESTIGATED

WTVD0085-2

MODES INVESTIGATED

Transmitting LTE, +23 dBm, Band 12, 16QAM, 10 MHz Channel Bandwidth, Low Ch, 704.0 MHz
Transmitting LTE, +23 dBm, Band 12, QPSK, 1.4 MHz Channel Bandwidth, Low Ch, 699.7 MHz
Transmitting LTE, +23 dBm, Band 12, QPSK, 10 MHz Channel Bandwidth, Low Ch, 704.0 MHz
Transmitting LTE, +23 dBm, Band 12, QPSK, 10 MHz Channel Bandwidth, Mid Ch, 707.5 MHz
Transmitting LTE, +23 dBm, Band 12, QPSK, 10 MHz Channel Bandwidth, High Ch, 711.0 MHz
Transmitting LTE, +23 dBm, Band 12, QPSK, 3 MHz Channel Bandwidth, Low Ch, 700.5 MHz
Transmitting LTE, +23 dBm, Band 12, QPSK, 5 MHz Channel Bandwidth, Low Ch, 701.5 MHz

OUT OF BAND EMISSIONS – LTE BAND 12

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-22
Customer:	Motorola Solutions, Inc.	Temperature:	22.3°C
Attendees:	Navaid Karimi	Relative Humidity:	55%
Customer Project:	None	Bar. Pressure (PMSL):	992.4 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	213	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

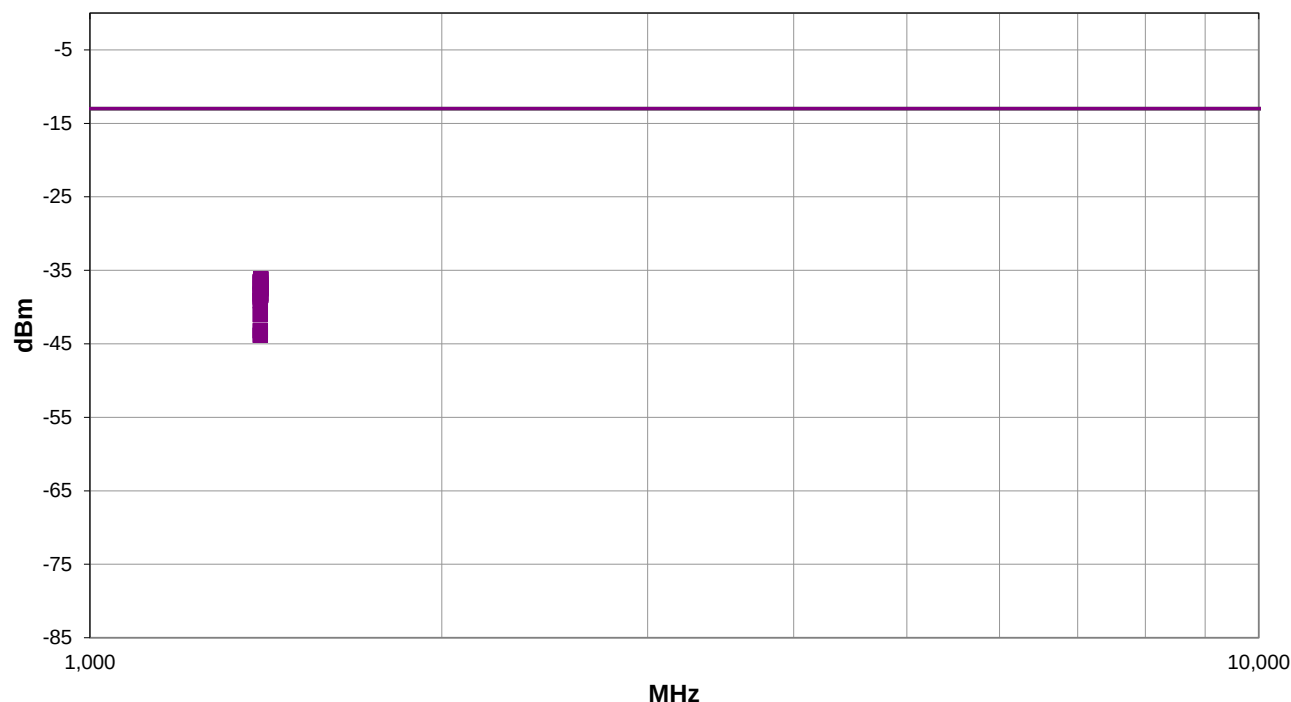
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 12, QPSK, 1.4 MHz Channel Bandwidth, Low Ch, 699.7 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 213

PK AV QP

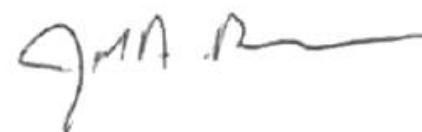
OUT OF BAND EMISSIONS – LTE BAND 12

RESULTS - Run #213

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1400.325	1.04	333.0	Vert	PK	243.8E-9	-36.1	-13.0	-23.1	EUT Vert, 1RB/5, Low Ch
1399.992	1.05	331.0	Vert	PK	238.3E-9	-36.2	-13.0	-23.2	EUT Vert, 3RB/3, Low Ch
1398.517	1.5	332.0	Vert	PK	222.4E-9	-36.5	-13.0	-23.5	EUT Vert, 1RB/0, Low Ch
1398.908	1.5	340.9	Vert	PK	217.3E-9	-36.6	-13.0	-23.6	EUT Vert, 3RB/0, Low Ch
1399.233	1.5	333.9	Vert	PK	212.4E-9	-36.7	-13.0	-23.7	EUT Vert, 3RB/1, Low Ch
1399.300	1.5	336.0	Vert	PK	202.8E-9	-36.9	-13.0	-23.9	EUT Vert, 1RB/2, Low Ch
1399.884	3.59	325.0	Horz	PK	185.0E-9	-37.3	-13.0	-24.3	EUT Horz, 3RB/3, Low Ch
1399.441	1.5	336.0	Vert	PK	180.8E-9	-37.4	-13.0	-24.4	EUT Vert, 6RB/0, Low Ch
1400.383	3.58	327.9	Horz	PK	176.7E-9	-37.5	-13.0	-24.5	EUT Horz, 1RB/5, Low Ch
1399.283	3.58	332.0	Horz	PK	153.9E-9	-38.1	-13.0	-25.1	EUT Horz, 3RB/1, Low Ch
1398.892	3.58	327.9	Horz	PK	150.4E-9	-38.2	-13.0	-25.2	EUT Horz, 3RB/0, Low ch
1399.333	3.55	325.0	Horz	PK	146.9E-9	-38.3	-13.0	-25.3	EUT Horz, 1RB/2, Low Ch
1399.508	3.6	324.0	Horz	PK	143.6E-9	-38.4	-13.0	-25.4	EUT Horz, 6RB/0, Low Ch
1398.525	3.56	326.0	Horz	PK	137.1E-9	-38.6	-13.0	-25.6	EUT Horz, 1RB/0, Low Ch
1398.542	3.49	30.0	Horz	PK	122.2E-9	-39.1	-13.0	-26.1	EUT on Side, 1RB/0, Low Ch
1398.483	3.5	327.0	Vert	PK	78.9E-9	-41.0	-13.0	-28.0	EUT on Side, 1RB/0, Low Ch
1398.475	4.0	45.0	Horz	PK	47.5E-9	-43.2	-13.0	-30.2	EUT Vert, 1RB/0, Low Ch
1398.517	3.08	39.9	Vert	PK	41.4E-9	-43.8	-13.0	-30.8	EUT Horz, 1RB/0, Low Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 12

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-22
Customer:	Motorola Solutions, Inc.	Temperature:	22.3°C
Attendees:	Navaid Karimi	Relative Humidity:	55%
Customer Project:	None	Bar. Pressure (PMSL):	992.4 mb
Tested By:	Jarrold Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	222	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

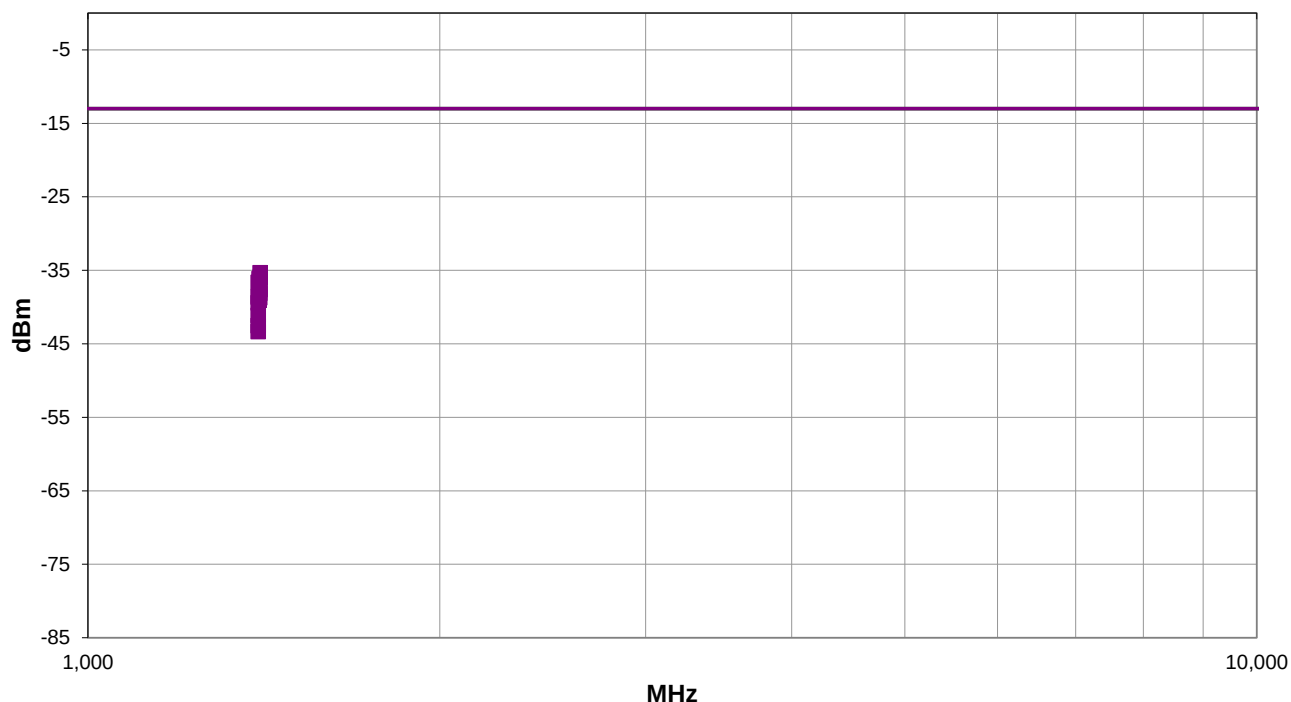
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 12, QPSK, 3 MHz Channel Bandwidth, Low Ch, 700.5 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 222

■ PK ◆ AV ● QP

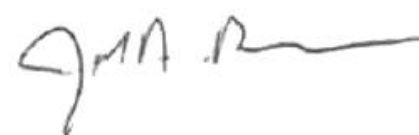
OUT OF BAND EMISSIONS – LTE BAND 12

RESULTS - Run #222

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1403.525	1.5	339.9	Vert	PK	293.2E-9	-35.3	-13.0	-22.3	EUT Vert, 1RB/14, Low ch
1403.533	3.58	325.0	Horz	PK	255.3E-9	-35.9	-13.0	-22.9	EUT Horz, 1RB/14, Low Ch
1401.008	1.07	333.0	Vert	PK	243.8E-9	-36.1	-13.0	-23.1	EUT Vert, 1RB/7, Low Ch
1398.466	1.06	333.9	Vert	PK	217.3E-9	-36.6	-13.0	-23.6	EUT Vert, 1RB/0, Low Ch
1401.000	3.6	328.9	Horz	PK	198.2E-9	-37.0	-13.0	-24.0	EUT Horz, 1RB/7, Low Ch
1401.990	1.07	330.0	Vert	PK	180.8E-9	-37.4	-13.0	-24.4	EUT Vert, 8RB/4, Low Ch
1402.358	1.5	336.0	Vert	PK	172.6E-9	-37.6	-13.0	-24.6	EUT Vert, 8RB/7, Low Ch
1403.107	3.58	327.0	Horz	PK	172.6E-9	-37.6	-13.0	-24.6	EUT Horz, 8RB/7, Low Ch
1402.015	3.58	325.0	Horz	PK	157.4E-9	-38.0	-13.0	-25.0	EUT Horz, 8RB/4, Low Ch
1402.712	1.5	339.0	Vert	PK	153.9E-9	-38.1	-13.0	-25.1	EUT Vert, 15RB/0, Low Ch
1399.708	1.5	336.0	Vert	PK	140.3E-9	-38.5	-13.0	-25.5	EUT Vert, 8RB/0, Low Ch
1398.533	3.56	324.0	Horz	PK	137.1E-9	-38.6	-13.0	-25.6	EUT Horz, 1RB/0, Low Ch
1402.700	3.55	325.0	Horz	PK	134.0E-9	-38.7	-13.0	-25.7	EUT Horz, 15RB/0, Low Ch
1400.532	3.59	324.0	Horz	PK	125.1E-9	-39.0	-13.0	-26.0	EUT Horz, 8RB/0, Low Ch
1398.417	3.47	9.0	Horz	PK	114.1E-9	-39.4	-13.0	-26.4	EUT on Side, 1RB/0, Low Ch
1398.450	3.56	325.0	Vert	PK	77.1E-9	-41.1	-13.0	-28.1	EUT on Side, 1RB/0, Low Ch
1398.433	3.7	34.9	Vert	PK	55.9E-9	-42.5	-13.0	-29.5	EUT Horz, 1RB/0, Low Ch
1398.417	4.0	44.0	Horz	PK	46.5E-9	-43.3	-13.0	-30.3	EUT Vert, 1RB/0, Low Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 12

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-22
Customer:	Motorola Solutions, Inc.	Temperature:	22.3°C
Attendees:	Navaid Karimi	Relative Humidity:	55%
Customer Project:	None	Bar. Pressure (PMSL):	992.4 mb
Tested By:	Jarrold Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	231	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

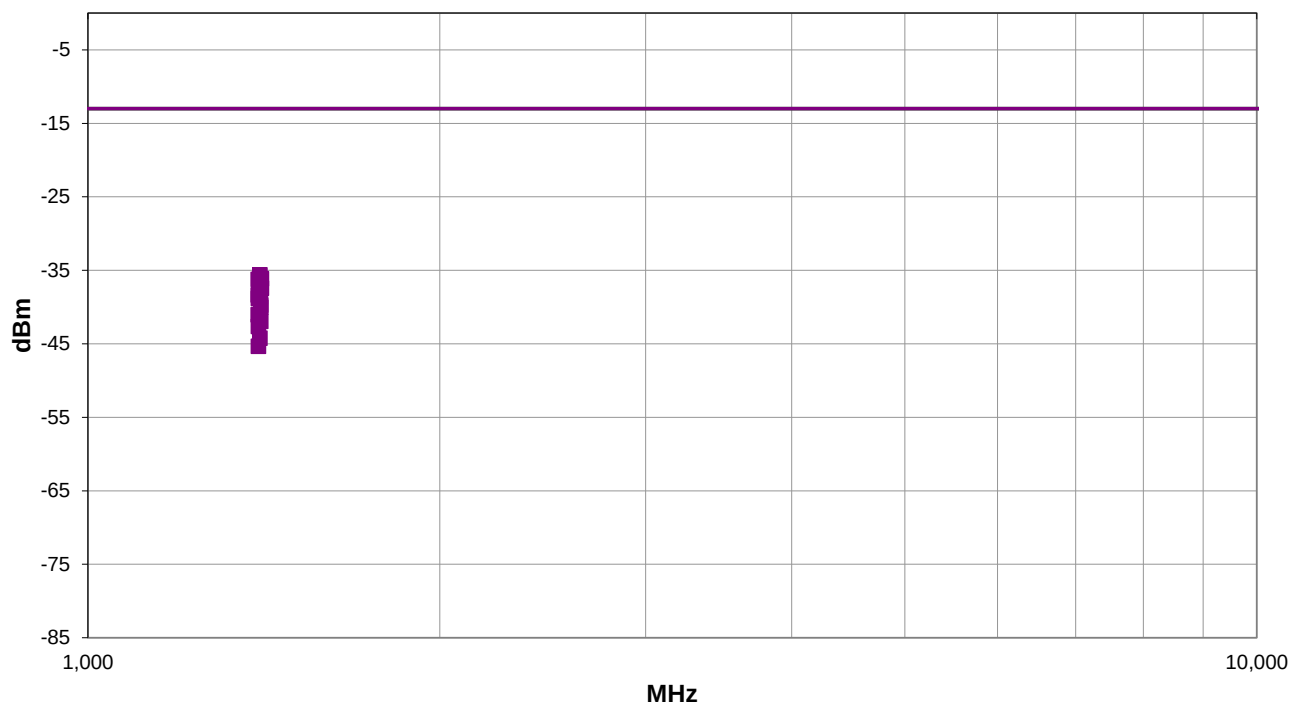
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 12, QPSK, 5 MHz Channel Bandwidth, Low Ch, 701.5 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 231

■ PK ◆ AV ● QP

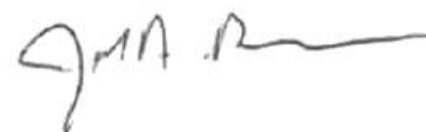
OUT OF BAND EMISSIONS – LTE BAND 12

RESULTS - Run #231

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1402.992	1.5	339.0	Vert	PK	273.6E-9	-35.6	-13.0	-22.6	EUT Vert, 1RB/12, Low Ch
1407.300	3.56	326.0	Horz	PK	243.8E-9	-36.1	-13.0	-23.1	EUT Horz, 1RB/24, Low Ch
1398.643	1.07	333.0	Vert	PK	238.3E-9	-36.2	-13.0	-23.2	EUT Vert, 1RB/0, Low Ch
1404.270	1.5	332.0	Vert	PK	185.0E-9	-37.3	-13.0	-24.3	EUT Vert, 12RB/6, Low Ch
1407.300	1.5	336.0	Vert	PK	180.8E-9	-37.4	-13.0	-24.4	EUT Vert, 1RB/24, Low Ch
1404.409	3.55	327.0	Horz	PK	168.7E-9	-37.7	-13.0	-24.7	EUT Horz, 12RB/6, Low Ch
1402.051	1.03	331.0	Vert	PK	157.4E-9	-38.0	-13.0	-25.0	EUT Vert, 12RB/0, Low Ch
1398.666	3.58	325.0	Horz	PK	146.9E-9	-38.3	-13.0	-25.3	EUT Horz, 1RB/0, Low Ch
1401.981	3.58	331.0	Horz	PK	146.9E-9	-38.3	-13.0	-25.3	EUT Horz, 12RB/0, Low Ch
1404.045	1.5	333.0	Vert	PK	137.1E-9	-38.6	-13.0	-25.6	EUT Vert, 12RB/13, Low Ch
1398.771	3.51	31.0	Horz	PK	131.0E-9	-38.8	-13.0	-25.8	EUT on Side, 1RB/0, Low Ch
1405.379	1.5	343.0	Horz	PK	106.4E-9	-39.7	-13.0	-26.7	EUT Horz, 25RB/0, Low Ch
1405.453	1.08	332.0	Vert	PK	99.3E-9	-40.0	-13.0	-27.0	EUT Vert, 25RB/0, Low Ch
1398.584	3.52	327.0	Vert	PK	78.9E-9	-41.0	-13.0	-28.0	EUT on Side, 1RB/0, Low Ch
1405.524	1.15	349.0	Horz	PK	64.1E-9	-41.9	-13.0	-28.9	EUT Horz, 12RB/13, Low Ch
1398.724	3.72	33.9	Vert	PK	54.6E-9	-42.6	-13.0	-29.6	EUT Horz, 1RB/0, Low Ch
1402.958	2.62	32.0	Horz	PK	37.8E-9	-44.2	-13.0	-31.2	EUT Horz, 1RB/12, Low Ch
1398.747	3.14	360.0	Horz	PK	29.3E-9	-45.3	-13.0	-32.3	EUT Vert, 1RB/0, Low Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 12

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-22
Customer:	Motorola Solutions, Inc.	Temperature:	22.3°C
Attendees:	Navaid Karimi	Relative Humidity:	55%
Customer Project:	None	Bar. Pressure (PMSL):	992.4 mb
Tested By:	Jarrold Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	240	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

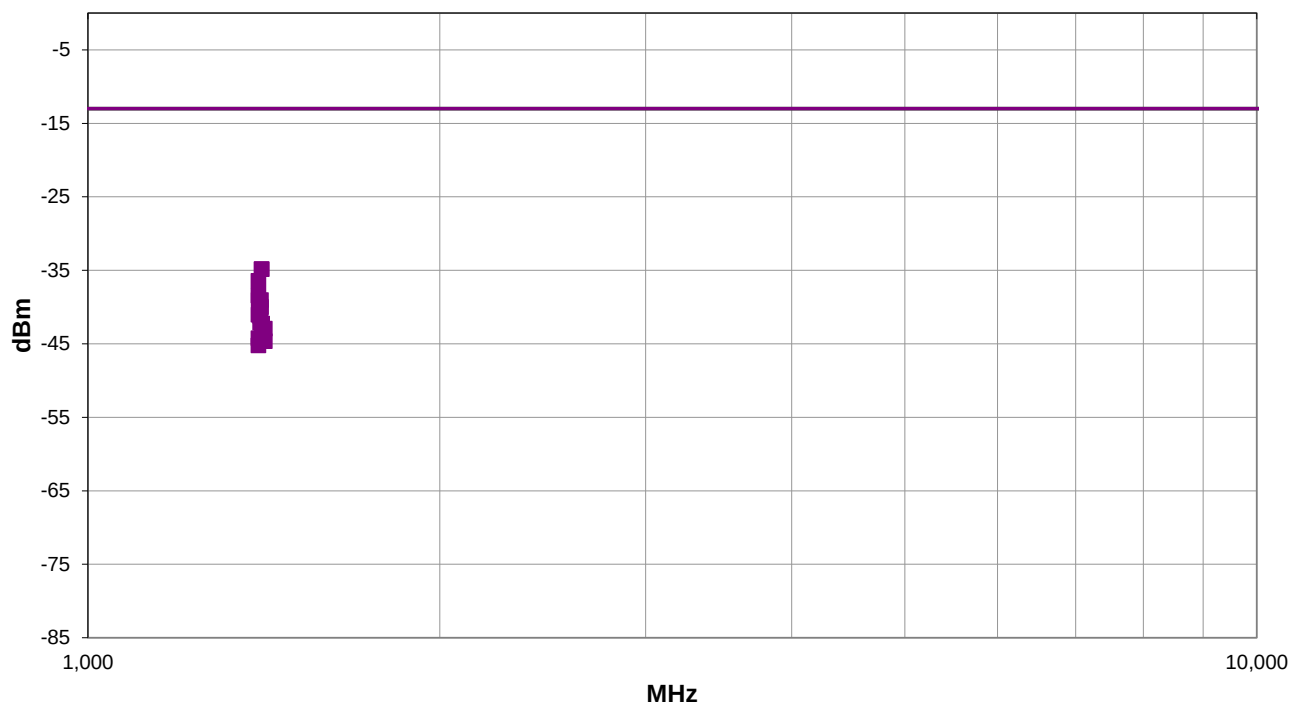
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 12, QPSK, 10 MHz Channel Bandwidth, Low Ch, 704.0 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 240

PK AV QP

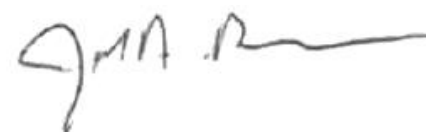
OUT OF BAND EMISSIONS – LTE BAND 12

RESULTS - Run #240

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1407.717	1.5	334.9	Vert	PK	328.9E-9	-34.8	-13.0	-21.8	EUT vert, 1RB/24, Low Ch
1407.717	3.52	328.9	Horz	PK	328.9E-9	-34.8	-13.0	-21.8	EUT Horz, 1RB/24, Low Ch
1399.208	1.07	333.0	Vert	PK	227.6E-9	-36.4	-13.0	-23.4	EUT Vert, 1RB/0, Low Ch
1399.125	3.56	326.0	Horz	PK	143.6E-9	-38.4	-13.0	-25.4	EUT Horz, 1RB/0, Low Ch
1399.275	3.52	33.0	Horz	PK	125.1E-9	-39.0	-13.0	-26.0	EUT on Side, 1RB/0, Low Ch
1406.002	3.57	322.9	Horz	PK	125.1E-9	-39.0	-13.0	-26.0	EUT Horz, 25RB/0, Low Ch
1405.727	1.5	337.0	Vert	PK	101.7E-9	-39.9	-13.0	-26.9	EUT Vert, 25RB/0, Low Ch
1405.536	3.56	331.0	Horz	PK	99.3E-9	-40.0	-13.0	-27.0	EUT Horz, 25RB/12, Low Ch
1405.499	1.5	342.0	Vert	PK	97.1E-9	-40.1	-13.0	-27.1	EUT vert, 25RB/12, Low Ch
1399.166	3.55	327.9	Vert	PK	78.9E-9	-41.0	-13.0	-28.0	EUT on Side, 1RB/0, Low Ch
1403.574	1.5	339.9	Vert	PK	75.4E-9	-41.2	-13.0	-28.2	EUT Vert, 50RB/0, Low Ch
1403.507	3.5	338.0	Horz	PK	61.3E-9	-42.1	-13.0	-29.1	EUT Horz, 50RB/0, Low Ch
1409.077	3.57	327.0	Horz	PK	59.9E-9	-42.2	-13.0	-29.2	EUT Horz, 25RB/25, Low Ch
1416.883	1.43	333.9	Vert	PK	50.9E-9	-42.9	-13.0	-29.9	EUT Vert, 1RB49, Low Ch
1409.187	1.5	333.0	Vert	PK	41.4E-9	-43.8	-13.0	-30.8	EUT Vert, 25RB/25, Low Ch
1399.075	3.06	39.0	Vert	PK	37.8E-9	-44.2	-13.0	-31.2	EUT Horz, 1RB/0, Low Ch
1416.941	3.5	325.0	Horz	PK	34.4E-9	-44.6	-13.0	-31.6	EUT Horz, 1RB/49, Low Ch
1399.150	2.81	205.0	Horz	PK	30.0E-9	-45.2	-13.0	-32.2	EUT Vert, 1RB/0, Low Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 12

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-22
Customer:	Motorola Solutions, Inc.	Temperature:	22.3°C
Attendees:	Navaid Karimi	Relative Humidity:	55%
Customer Project:	None	Bar. Pressure (PMSL):	992.4 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	241	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

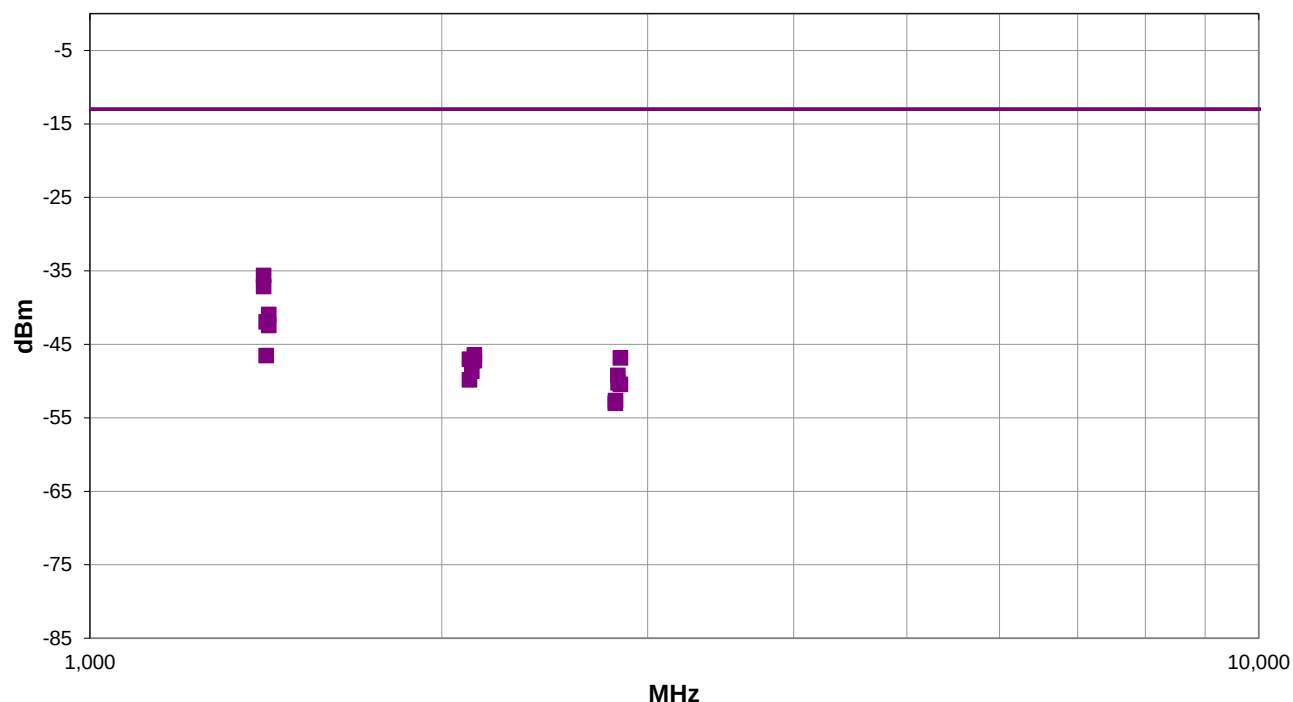
Harmonics measurements based on worst case observed emissions by receive polarity by channel bandwidths and modulations. See line comments for EUT orientation, channel bandwidth, modulation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 12

DEVIATIONS FROM TEST STANDARD

None



Run #: 241

■ PK ◆ AV ● QP

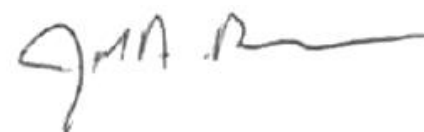
OUT OF BAND EMISSIONS – LTE BAND 12

RESULTS - Run #241

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1407.792	3.52	330.0	Horz	PK	273.6E-9	-35.6	-13.0	-22.6	EUT Horz 10 MHz BW, 16QAM, 1RB/24, Low Ch
1407.858	1.45	339.0	Vert	PK	193.7E-9	-37.1	-13.0	-24.1	EUT Vert, 10 MHz BW, 16QAM, 1RB/24, Low Ch
1421.875	1.5	334.9	Vert	PK	80.7E-9	-40.9	-13.0	-27.9	EUT Vert, 10 MHz, BW, QPSK, 1RB/24, High Ch
1414.809	1.5	331.0	Vert	PK	64.1E-9	-41.9	-13.0	-28.9	EUT Vert, 10 MHz, BW, QPSK, 1RB/24, Mid Ch
1421.875	3.48	330.0	Horz	PK	57.2E-9	-42.4	-13.0	-29.4	EUT Horz, 20 MHz BW, QPSK, 1RB/24, High Ch
2132.701	3.63	153.9	Vert	PK	22.8E-9	-46.4	-13.0	-33.4	EUT Vert, 10 MHz, BW, QPSK, 1RB/24, High Ch
1414.850	1.5	339.0	Horz	PK	22.2E-9	-46.5	-13.0	-33.5	EUT Horz, 20 MHz BW, QPSK, 1RB/24, Mid Ch
2843.676	3.08	326.0	Horz	PK	20.8E-9	-46.8	-13.0	-33.8	EUT Horz, 20 MHz BW, QPSK, 1RB/24, High Ch
2111.734	3.79	200.0	Horz	PK	19.8E-9	-47.0	-13.0	-34.0	EUT Horz, 20 MHz BW, QPSK, 1RB/24, Low Ch
2132.717	3.25	114.0	Horz	PK	18.9E-9	-47.2	-13.0	-34.2	EUT Horz, 20 MHz BW, QPSK, 1RB/24, High Ch
2122.042	1.47	164.0	Vert	PK	18.5E-9	-47.3	-13.0	-34.3	EUT Vert, 10 MHz, BW, QPSK, 1RB/24, Mid Ch
2122.126	1.11	54.0	Horz	PK	13.7E-9	-48.6	-13.0	-35.6	EUT Horz, 20 MHz BW, QPSK, 1RB/24, Mid Ch
2829.501	3.07	325.0	Horz	PK	11.9E-9	-49.2	-13.0	-36.2	EUT Horz, 20 MHz BW, QPSK, 1RB/24, Mid Ch
2111.676	1.5	156.0	Vert	PK	10.4E-9	-49.8	-13.0	-36.8	EUT Vert, 10 MHz BW, QPSK, 1RB/24, Low Ch
2829.809	3.55	0.0	Vert	PK	9.5E-9	-50.2	-13.0	-37.2	EUT Vert, 10 MHz, BW, QPSK, 1RB/24, Mid Ch
2843.368	3.12	99.0	Vert	PK	9.1E-9	-50.4	-13.0	-37.4	EUT Vert, 10 MHz, BW, QPSK, 1RB/24, High Ch
2815.684	3.08	318.0	Horz	PK	5.5E-9	-52.6	-13.0	-39.6	EUT Horz, 20 MHz BW, QPSK, 1RB/24, Low Ch
2815.285	3.54	337.0	Vert	PK	5.0E-9	-53.0	-13.0	-40.0	EUT Vert, 10 MHz BW, QPSK, 1RB/24, Low Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 13

TEST DESCRIPTION

At an approved test site, the transmitter was placed on a remotely controlled turntable, and the measurement antenna was placed 3 meters from the transmitter. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axes. The turntable azimuth was varied to maximize the level of spurious emissions. The height of the measurement antenna was also varied from 1 to 4 meters. A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity. The amplitude and frequency of the highest emissions were noted.

The transmitter was then replaced with a $\frac{1}{2}$ wave dipole that was successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator was connected to the dipole (horn antenna for frequencies above 1 GHz), and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the cable loss to the antenna and its gain, the power (dBm) was determined for each radiated spurious emission.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Receiver	Rohde & Schwarz	ESR26	ARQ	2022-05-02	2023-05-02
Antenna - Double Ridge	ETS Lindgren	3115	AJL	2022-10-21	2024-10-21
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAJ	2022-04-19	2023-04-19
Cable	Northwest EMC	1-8.2 GHz	TXC	2022-04-19	2023-04-19
Antenna - Standard Gain	ETS Lindgren	3160-07	AJF	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	PAK	2022-09-09	2023-09-09
Cable	Northwest EMC	8-18GHz	TXD	2022-04-12	2023-04-12
Antenna - Standard Gain	ETS Lindgren	3160-08	AJG	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	PAL	2022-09-09	2023-09-09

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.1 dB	-5.1 dB

FREQUENCY RANGE INVESTIGATED

1 GHz TO 18 GHz

POWER INVESTIGATED

4.2VDC via Battery

CONFIGURATIONS INVESTIGATED

WTV0085-2

MODES INVESTIGATED

Transmitting LTE, +23 dBm, Band 13, 16QAM, 5 MHz Channel Bandwidth, Mid Ch, 782.0 MHz
Transmitting LTE, +23 dBm, Band 13, QPSK, 10 MHz Channel Bandwidth, Mid Ch, 782.0 MHz
Transmitting LTE, +23 dBm, Band 13, QPSK, 5 MHz Channel Bandwidth, Low Ch, 779.5 MHz
Transmitting LTE, +23 dBm, Band 13, QPSK, 5 MHz Channel Bandwidth, Mid Ch, 782.0 MHz
Transmitting LTE, +23 dBm, Band 13, QPSK, 5 MHz Channel Bandwidth, High Ch, 784.5 MHz

OUT OF BAND EMISSIONS – LTE BAND 13

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-24
Customer:	Motorola Solutions, Inc.	Temperature:	22.4°C
Attendees:	Navaid Karimi	Relative Humidity:	54.1%
Customer Project:	None	Bar. Pressure (PMSL):	1007 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	250	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

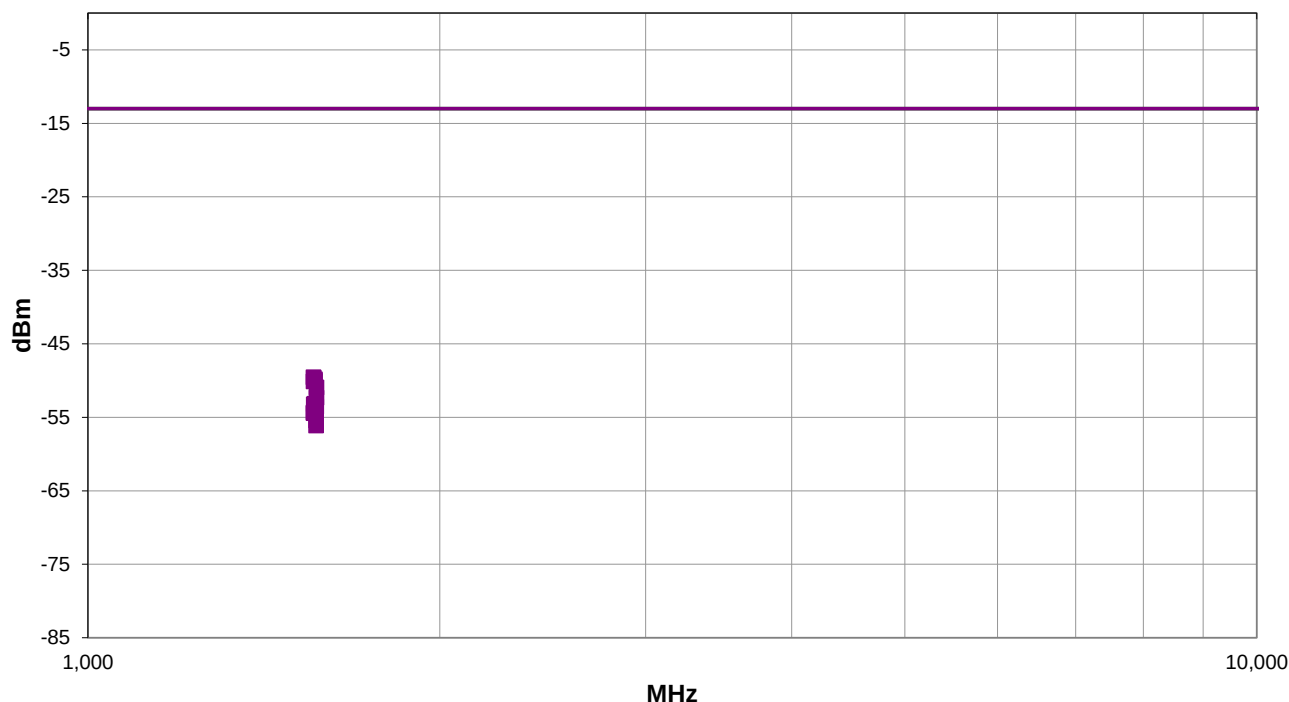
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 13, QPSK, 5 MHz Channel Bandwidth, Mid Ch, 782.0 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 250

■ PK ◆ AV ● QP

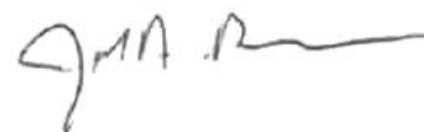
OUT OF BAND EMISSIONS – LTE BAND 13

RESULTS - Run #250

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1559.418	1.04	196.9	Vert	PK	11.1E-9	-49.5	-13.0	-36.5	EUT Vert, 1RB/0, Mid Ch
1559.709	3.58	247.0	Horz	PK	10.9E-9	-49.6	-13.0	-36.6	EUT on Side, 1 RB/0, Mid Ch
1564.008	3.65	232.9	Horz	PK	10.4E-9	-49.8	-13.0	-36.8	EUT on Side, 1RB/12, Mid Ch
1564.033	1.0	195.9	Vert	PK	9.9E-9	-50.0	-13.0	-37.0	EUT Vert, 1RB/12, Mid Ch
1559.684	1.0	337.0	Horz	PK	9.7E-9	-50.1	-13.0	-37.1	EUT Horz, 1RB/0, Mid Ch
1568.300	1.02	237.0	Horz	PK	8.1E-9	-50.9	-13.0	-37.9	EUT on Side, 1RB/24, Mid Ch
1568.533	1.01	193.0	Vert	PK	5.8E-9	-52.3	-13.0	-39.3	EUT Vert, 1RB/24, Mid Ch
1563.172	3.64	243.9	Horz	PK	4.9E-9	-53.1	-13.0	-40.1	EUT on Side, 12RB/0, Mid Ch
1559.834	3.57	226.9	Vert	PK	4.8E-9	-53.2	-13.0	-40.2	EUT Horz, 1RB/0, Mid Ch
1564.012	1.03	226.9	Horz	PK	4.5E-9	-53.4	-13.0	-40.4	EUT on Side, 12RB/6, Mid Ch
1567.721	3.56	240.0	Horz	PK	4.4E-9	-53.5	-13.0	-40.5	EUT on Side, 12RB/13, Mid Ch
1561.914	1.01	202.9	Vert	PK	4.0E-9	-53.9	-13.0	-40.9	EUT Vert, 12RB/0, Mid Ch
1566.230	1.23	198.0	Vert	PK	3.9E-9	-54.1	-13.0	-41.1	EUT Vert, 12RB/13, Mid Ch
1559.235	1.5	123.9	Vert	PK	3.7E-9	-54.3	-13.0	-41.3	EUT on Side, 1 RB/0, Mid Ch
1563.779	1.35	201.0	Vert	PK	3.7E-9	-54.3	-13.0	-41.3	EUT Vert, 12RB/6, Mid Ch
1559.659	3.8	358.9	Horz	PK	3.6E-9	-54.4	-13.0	-41.4	EUT Vert, 1RB/0, Mid Ch
1567.334	1.04	250.9	Horz	PK	2.9E-9	-55.4	-13.0	-42.4	EUT on Side, 25RB/0, Mid Ch
1567.334	1.4	219.0	Vert	PK	2.4E-9	-56.1	-13.0	-43.1	EUT Vert, 25RB/0, Mid Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 13

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-24
Customer:	Motorola Solutions, Inc.	Temperature:	22.4°C
Attendees:	Navaid Karimi	Relative Humidity:	54.1%
Customer Project:	None	Bar. Pressure (PMSL):	1007 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	253	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

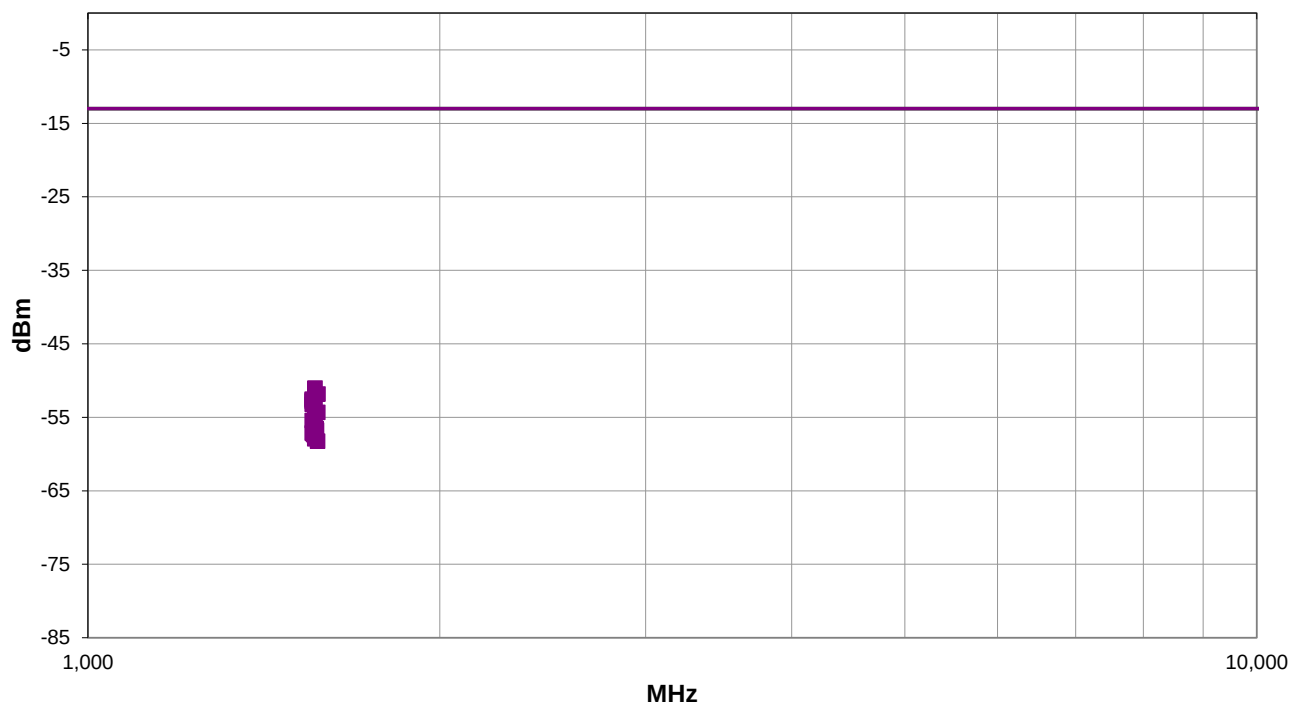
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 13, QPSK, 10 MHz Channel Bandwidth, Mid Ch, 782.0 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 253

■ PK ◆ AV ● QP

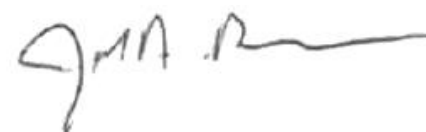
OUT OF BAND EMISSIONS – LTE BAND 13

RESULTS - Run #253

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1563.758	1.0	229.0	Horz	PK	7.9E-9	-51.0	-13.0	-38.0	EUT on Side, 1RB/24, Mid Ch
1572.883	1.0	228.0	Horz	PK	6.6E-9	-51.8	-13.0	-38.8	EUT on Side, 1RB/49, Mid Ch
1555.349	3.7	229.0	Horz	PK	5.6E-9	-52.5	-13.0	-39.5	EUT on Side, 1RB/0, Mid Ch
1555.108	1.0	343.0	Horz	PK	5.5E-9	-52.6	-13.0	-39.6	EUT Horz, 1RB/0, Mid Ch
1555.333	1.7	219.9	Vert	PK	5.2E-9	-52.8	-13.0	-39.8	EUT Vert, 1RB/0, Mid Ch
1555.283	3.8	279.0	Vert	PK	4.8E-9	-53.2	-13.0	-40.2	EUT on Side, 1RB/0, Mid Ch
1563.908	1.3	206.0	Vert	PK	4.4E-9	-53.5	-13.0	-40.5	EUT Vert, 1RB/24, Mid Ch
1572.692	1.3	196.9	Vert	PK	3.7E-9	-54.3	-13.0	-41.3	EUT Vert, 1RB/49, Mid Ch
1562.475	3.6	246.0	Horz	PK	2.9E-9	-55.3	-13.0	-42.3	EUT on Side, 25RB/0, Mid Ch
1555.208	3.5	219.0	Vert	PK	2.9E-9	-55.4	-13.0	-42.4	EUT Horz, 1RB/0, Mid Ch
1564.019	3.6	244.9	Horz	PK	2.3E-9	-56.3	-13.0	-43.3	EUT on Side, 25RB/12, Mid Ch
1567.254	1.0	188.0	Vert	PK	2.2E-9	-56.5	-13.0	-43.5	EUT Vert, 25RB/12, Mid Ch
1565.704	1.1	238.9	Horz	PK	2.2E-9	-56.6	-13.0	-43.6	EUT on Side, 25RB/25, Mid Ch
1568.499	1.1	190.9	Vert	PK	2.1E-9	-56.7	-13.0	-43.7	EUT Vert, 25RB/25, Mid Ch
1555.308	3.8	360.0	Horz	PK	1.9E-9	-57.1	-13.0	-44.1	EUT Vert, 1RB/0, Mid Ch
1559.161	1.0	170.0	Vert	PK	1.8E-9	-57.3	-13.0	-44.3	EUT Vert, 25RB/0, Mid Ch
1563.435	1.7	202.9	Vert	PK	1.6E-9	-57.9	-13.0	-44.9	EUT Vert, 50RB/0, Mid Ch
1571.555	1.5	236.0	Horz	PK	1.5E-9	-58.2	-13.0	-45.2	EUT on Side, 50RB/0, Mid Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 13

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-24
Customer:	Motorola Solutions, Inc.	Temperature:	22.4°C
Attendees:	Navaid Karimi	Relative Humidity:	54.1%
Customer Project:	None	Bar. Pressure (PMSL):	1007 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	255	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

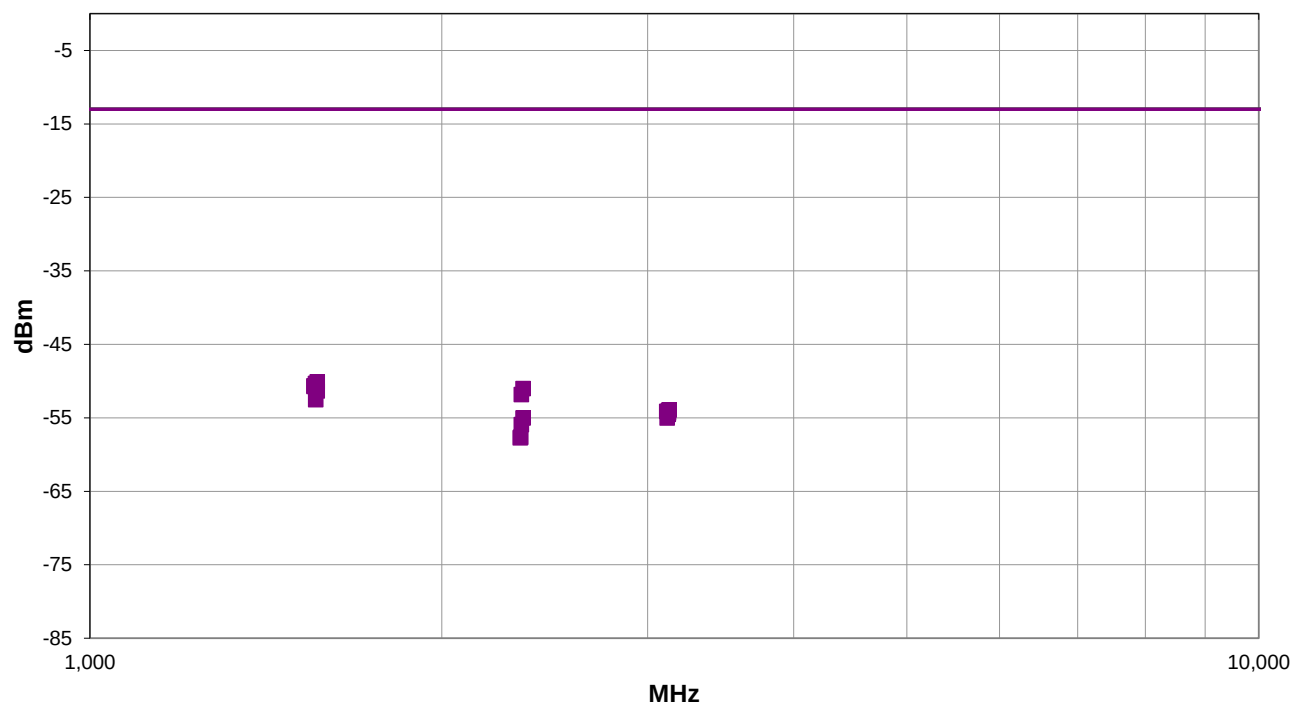
Harmonics measurements based on worst case observed emissions by receive polarity by channel bandwidths and modulations. See line comments for EUT orientation, channel bandwidth, modulation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 13

DEVIATIONS FROM TEST STANDARD

None



Run #: 255

■ PK ◆ AV ● QP

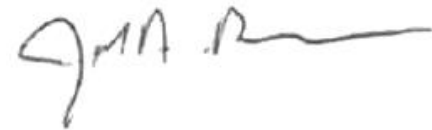
OUT OF BAND EMISSIONS – LTE BAND 13

RESULTS - Run #255

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1564.782	1.0	232.9	Horz	PK	9.7E-9	-50.1	-13.0	-37.1	EUT on Side, 5 MHz BW, QPSK, 1RB/0, High Ch
1559.666	3.6	226.9	Horz	PK	9.3E-9	-50.3	-13.0	-37.3	EUT on Side, 5 MHz BW, 16QAM, 1RB/0, Mid Ch
1554.609	1.33	201.0	Vert	PK	8.7E-9	-50.6	-13.0	-37.6	EUT Vert, 5 MHz BW, QPSK, 1RB/0, Low Ch
1554.758	3.62	237.9	Horz	PK	8.5E-9	-50.7	-13.0	-37.7	EUT on Side, 5 MHz BW, QPSK, 1RB/0, Low Ch
2347.215	3.39	2.0	Horz	PK	7.9E-9	-51.0	-13.0	-38.0	EUT on Side, 5 MHz BW, QPSK, 1RB/0, High Ch
1564.574	1.31	201.9	Vert	PK	7.4E-9	-51.3	-13.0	-38.3	EUT Vert, 5 MHz BW, QPSK, 1RB/0, High Ch
2339.404	3.42	338.0	Horz	PK	6.6E-9	-51.8	-13.0	-38.8	EUT on Side, 5 MHz BW, QPSK, 1RB/0, Mid Ch
1559.716	1.71	204.0	Vert	PK	5.6E-9	-52.5	-13.0	-39.5	EUT Vert, 5 MHz BW, 16QAM, 1RB/0, Mid Ch
3129.148	1.5	0.0	Horz	PK	4.0E-9	-53.9	-13.0	-40.9	EUT on Side, 5 MHz BW, QPSK, 1RB/0, High Ch
3126.003	1.5	338.0	Vert	PK	4.0E-9	-54.0	-13.0	-41.0	EUT Vert, 5 MHz BW, QPSK, 1RB/0, High Ch
3114.686	1.5	229.0	Vert	PK	3.9E-9	-54.1	-13.0	-41.1	EUT Vert, 5 MHz BW, QPSK, 1RB/0, Low Ch
3125.905	1.5	4.9	Vert	PK	3.7E-9	-54.3	-13.0	-41.3	EUT Vert, 5 MHz BW, QPSK, 1RB/0, Mid Ch
3124.549	1.5	231.0	Horz	PK	3.5E-9	-54.5	-13.0	-41.5	EUT on Side, 5 MHz BW, QPSK, 1RB/0, Mid Ch
3117.780	1.5	246.0	Horz	PK	3.1E-9	-55.0	-13.0	-42.0	EUT on Side, 5 MHz BW, QPSK, 1RB/0, Low Ch
2346.682	1.03	4.9	Vert	PK	3.1E-9	-55.0	-13.0	-42.0	EUT Vert, 5 MHz BW, QPSK, 1RB/0, High Ch
2339.529	1.45	42.0	Vert	PK	2.6E-9	-55.9	-13.0	-42.9	EUT Vert, 5 MHz BW, QPSK, 1RB/0, Mid Ch
2336.592	1.5	70.9	Vert	PK	1.7E-9	-57.6	-13.0	-44.6	EUT Vert, 5 MHz BW, QPSK, 1RB/0, Low Ch
2334.395	1.5	354.0	Horz	PK	1.7E-9	-57.7	-13.0	-44.7	EUT on Side, 5 MHz BW, QPSK, 1RB/0, Low Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 14

TEST DESCRIPTION

At an approved test site, the transmitter is placed on a remotely controlled turntable, and the measurement antenna is placed 3 meters from the transmitter. The turntable azimuth is varied to maximize the level of spurious emissions. The height of the measurement antenna is also varied from 1 to 4 meters. The amplitude and frequency of the highest emissions are noted. The transmitter is then replaced with a $\frac{1}{2}$ wave dipole that is successively tuned to each of the highest spurious emissions. A signal generator is connected to the dipole (horn antenna for frequencies above 1 GHz), and its output is adjusted to match the level previously noted for each frequency. The output of the signal generator is recorded, and by factoring in the cable loss to the dipole antenna and its gain; the power (dBm) into an ideal $\frac{1}{2}$ wave dipole antenna is determined for each radiated spurious emission.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Receiver	Rohde & Schwarz	ESR26	ARQ	2022-05-02	2023-05-02
Antenna - Double Ridge	ETS Lindgren	3115	AJL	2022-10-21	2024-10-21
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAJ	2022-04-19	2023-04-19
Cable	Northwest EMC	1-8.2 GHz	TXC	2022-04-19	2023-04-19
Antenna - Standard Gain	ETS Lindgren	3160-07	AJF	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	PAK	2022-09-09	2023-09-09
Cable	Northwest EMC	8-18GHz	TXD	2022-04-12	2023-04-12
Antenna - Standard Gain	ETS Lindgren	3160-08	AJG	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	PAL	2022-09-09	2023-09-09

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.1 dB	-5.1 dB

FREQUENCY RANGE INVESTIGATED

1 GHz TO 18 GHz

POWER INVESTIGATED

4.2VDC via Battery

CONFIGURATIONS INVESTIGATED

WTVDD0085-2

MODES INVESTIGATED

Transmitting LTE, +23 dBm, Band 14, 16QAM, 5 MHz Channel Bandwidth, Mid Ch, 793 MHz
Transmitting LTE, +23 dBm, Band 14, QPSK, 10 MHz Channel Bandwidth, Mid Ch, 793 MHz
Transmitting LTE, +23 dBm, Band 14, QPSK, 5 MHz Channel Bandwidth, Low Ch, 790.5 MHz
Transmitting LTE, +23 dBm, Band 14, QPSK, 5 MHz Channel Bandwidth, Mid Ch, 793 MHz
Transmitting LTE, +23 dBm, Band 14, QPSK, 5 MHz Channel Bandwidth, High Ch, 795.5 MHz

OUT OF BAND EMISSIONS – LTE BAND 14

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-24
Customer:	Motorola Solutions, Inc.	Temperature:	22.4°C
Attendees:	Navaid Karimi	Relative Humidity:	49.9%
Customer Project:	None	Bar. Pressure (PMSL):	1006 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 90.210(g):2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	264	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

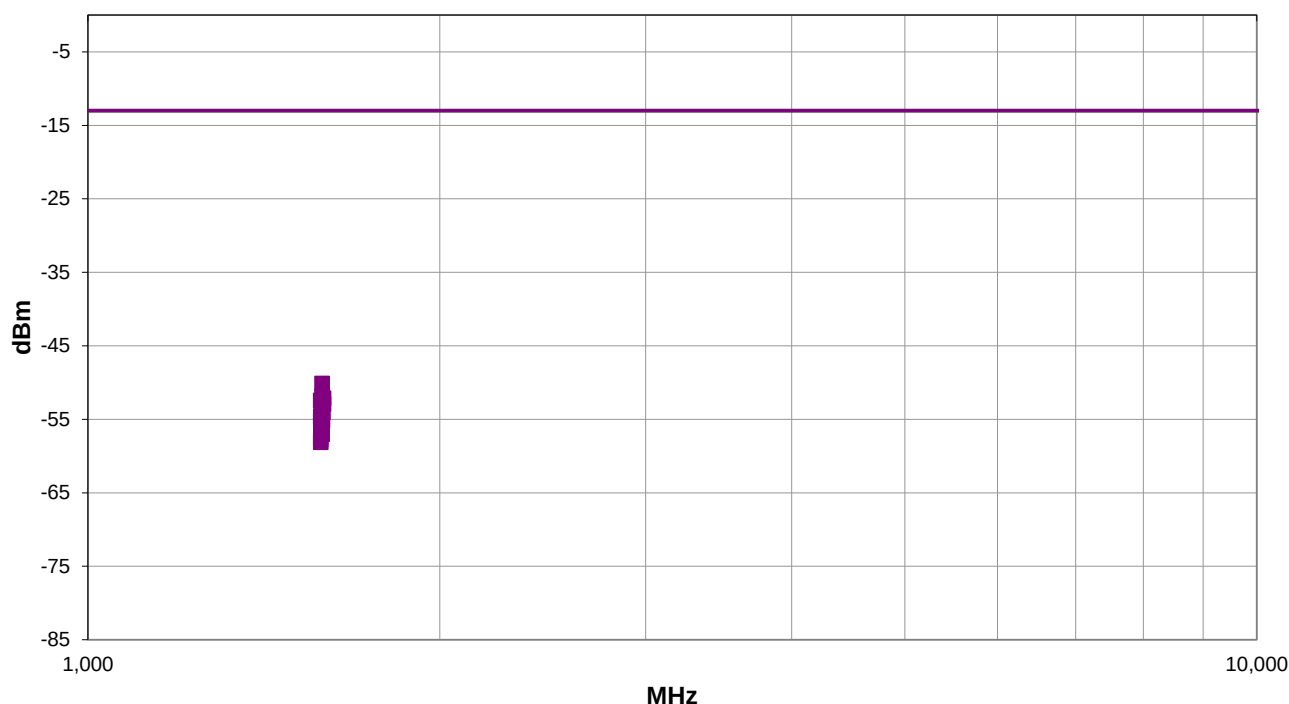
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 14, QPSK, 5 MHz Channel Bandwidth, Mid Ch, 793.0 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 264

■ PK ◆ AV ● QP

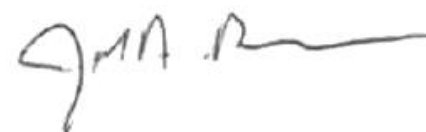
OUT OF BAND EMISSIONS – LTE BAND 14

RESULTS - Run #264

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1585.925	3.9	340.9	Horz	PK	9.7E-9	-50.1	-13.0	-37.1	EUT Horz, 1RB/12, Mid Ch
1586.050	1.2	196.9	Vert	PK	6.6E-9	-51.8	-13.0	-38.8	EUT Vert, 1RB/12, Mid Ch
1590.233	1.1	333.9	Horz	PK	6.1E-9	-52.1	-13.0	-39.1	EUT Horz, 1RB/24, Mid Ch
1581.690	1.0	195.9	Vert	PK	5.7E-9	-52.4	-13.0	-39.4	EUT Vert, 1RB/0, Mid Ch
1581.692	1.5	138.0	Vert	PK	5.7E-9	-52.4	-13.0	-39.4	EUT on Side, 1RB/0, Mid Ch
1590.475	1.5	228.0	Vert	PK	5.1E-9	-52.9	-13.0	-39.9	EUT Vert, 1RB/24, Mid Ch
1583.910	3.9	346.9	Horz	PK	4.4E-9	-53.5	-13.0	-40.5	EUT Horz, 12RB/0, Mid Ch
1588.349	4.0	349.0	Horz	PK	4.0E-9	-54.0	-13.0	-41.0	EUT Horz, 12RB/13, Mid Ch
1584.184	3.9	344.0	Horz	PK	3.9E-9	-54.1	-13.0	-41.1	EUT Horz, 12RB/6, Mid Ch
1581.710	4.0	345.0	Horz	PK	3.4E-9	-54.6	-13.0	-41.6	EUT Horz, 1RB/0, Mid Ch
1584.061	1.5	200.0	Vert	PK	3.4E-9	-54.6	-13.0	-41.6	EUT Vert, 12RB/0, Mid Ch
1581.874	4.0	228.0	Horz	PK	3.1E-9	-55.1	-13.0	-42.1	EUT on Side, 1RB/0, Mid Ch
1586.928	1.5	225.9	Vert	PK	3.1E-9	-55.1	-13.0	-42.1	EUT Vert, 12RB/13, Mid Ch
1582.504	4.0	322.9	Horz	PK	2.7E-9	-55.7	-13.0	-42.7	EUT Horz, 25RB/0, Mid Ch
1585.477	1.5	200.0	Vert	PK	2.3E-9	-56.3	-13.0	-43.3	EUT vert, 12RB/6, Mid Ch
1585.666	1.5	193.0	Vert	PK	2.0E-9	-57.0	-13.0	-44.0	EUT vert, 25RB/0, Mid Ch
1581.740	1.0	195.9	Horz	PK	1.7E-9	-57.7	-13.0	-44.7	EUT Vert, 1RB/0, Mid Ch
1581.735	4.0	228.0	Vert	PK	1.5E-9	-58.1	-13.0	-45.1	EUT Horz, 1RB/0, Mid Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 14

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-27
Customer:	Motorola Solutions, Inc.	Temperature:	22.5°C
Attendees:	Navaid Karimi	Relative Humidity:	34.3%
Customer Project:	None	Bar. Pressure (PMSL):	1018 mb
Tested By:	Jarrold Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 90.210(g):2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	268	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

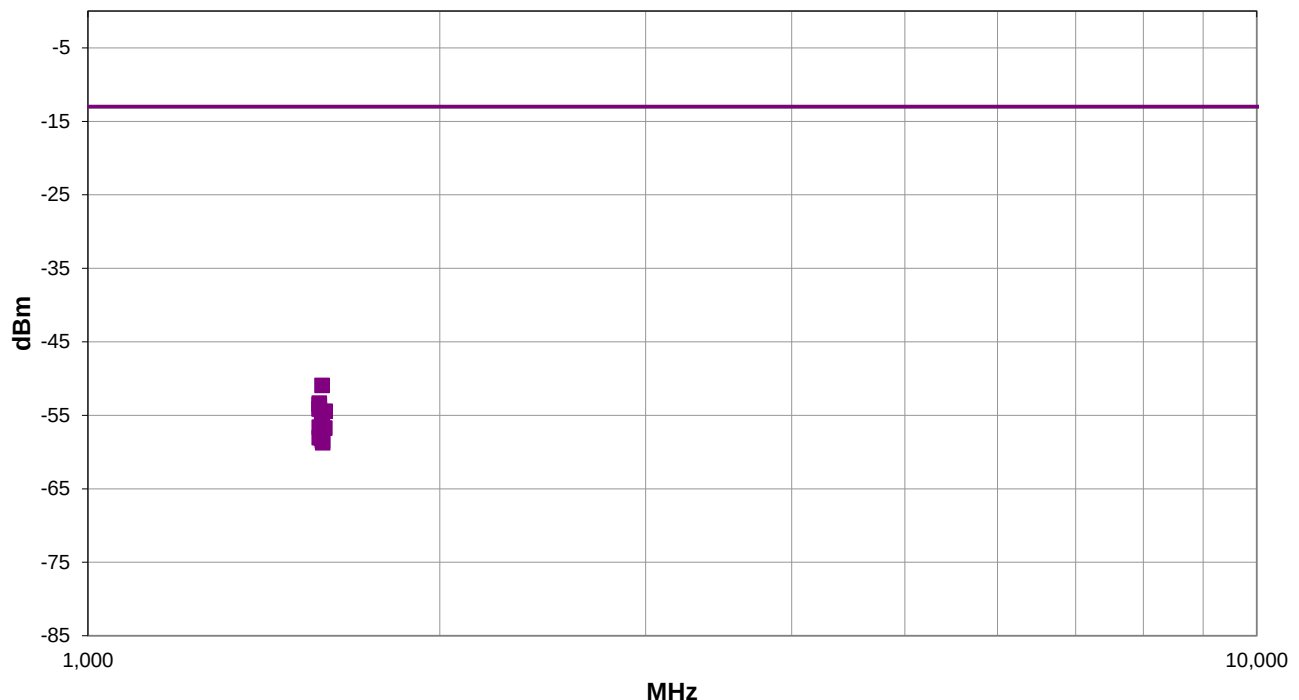
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 14, QPSK, 10 MHz Channel Bandwidth, Mid Ch, 793.0 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 268

PK AV QP

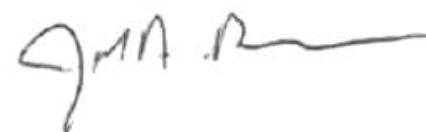
OUT OF BAND EMISSIONS – LTE BAND 14

RESULTS - Run #268

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1585.858	3.9	231.0	Horz	PK	8.1E-9	-50.9	-13.0	-37.9	EUT on Side, 1RB/12, Mid Ch
1577.266	4.0	235.0	Horz	PK	4.6E-9	-53.3	-13.0	-40.3	EUT on Side, 1RB/0, Mid Ch
1577.250	1.12	206.0	Vert	PK	4.4E-9	-53.5	-13.0	-40.5	EUT Vert, 1RB/0, Mid Ch
1577.141	3.96	337.0	Horz	PK	3.9E-9	-54.1	-13.0	-41.1	EUT Horz, 1RB/0, Mid Ch
1577.216	3.57	280.9	Vert	PK	3.9E-9	-54.1	-13.0	-41.1	EUT on Side, 1RB/0, Mid Ch
1594.900	3.93	235.0	Horz	PK	3.6E-9	-54.4	-13.0	-41.4	EUT on Side, 1RB/49, Mid Ch
1585.983	1.07	201.0	Vert	PK	3.3E-9	-54.8	-13.0	-41.8	EUT Vert, 1RB/24, Mid Ch
1587.343	3.87	222.0	Horz	PK	2.9E-9	-55.4	-13.0	-42.4	EUT on Side, 25RB,25, Mid Ch
1584.429	3.89	232.9	Horz	PK	2.7E-9	-55.7	-13.0	-42.7	EUT on Side, 25RB/0, Mid Ch
1585.800	3.25	259.0	Horz	PK	2.4E-9	-56.2	-13.0	-43.2	EUT on Side, 25RB/12, Mid Ch
1577.258	3.84	200.0	Vert	PK	2.2E-9	-56.6	-13.0	-43.6	EUT Horz, 1RB/0, Mid Ch
1586.260	4.0	238.9	Horz	PK	2.2E-9	-56.6	-13.0	-43.6	EUT on Side, 50RB/0, Mid Ch
1594.509	1.5	230.0	Vert	PK	2.1E-9	-56.7	-13.0	-43.7	EUT Vert, 1RB/49, Mid Ch
1582.885	1.5	217.0	Vert	PK	1.6E-9	-57.8	-13.0	-44.8	EUT Vert, 25RB/12, Mid Ch
1577.141	1.2	195.9	Horz	PK	1.6E-9	-58.0	-13.0	-45.0	EUT Vert, 1RB/0, Mid Ch
1583.963	1.5	207.0	Vert	PK	1.5E-9	-58.1	-13.0	-45.1	EUT Vert, 25RB/0, Mid Ch
1586.824	1.5	216.0	Vert	PK	1.4E-9	-58.4	-13.0	-45.4	EUT Vert, 25RB/25, Mid Ch
1587.608	1.5	214.9	Vert	PK	1.3E-9	-58.7	-13.0	-45.7	EUT Vert, 50RB/0, Mid Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 14

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-27
Customer:	Motorola Solutions, Inc.	Temperature:	22.5°C
Attendees:	Navaid Karimi	Relative Humidity:	34.3%
Customer Project:	None	Bar. Pressure (PMSL):	1018 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 90.210(g):2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	269	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

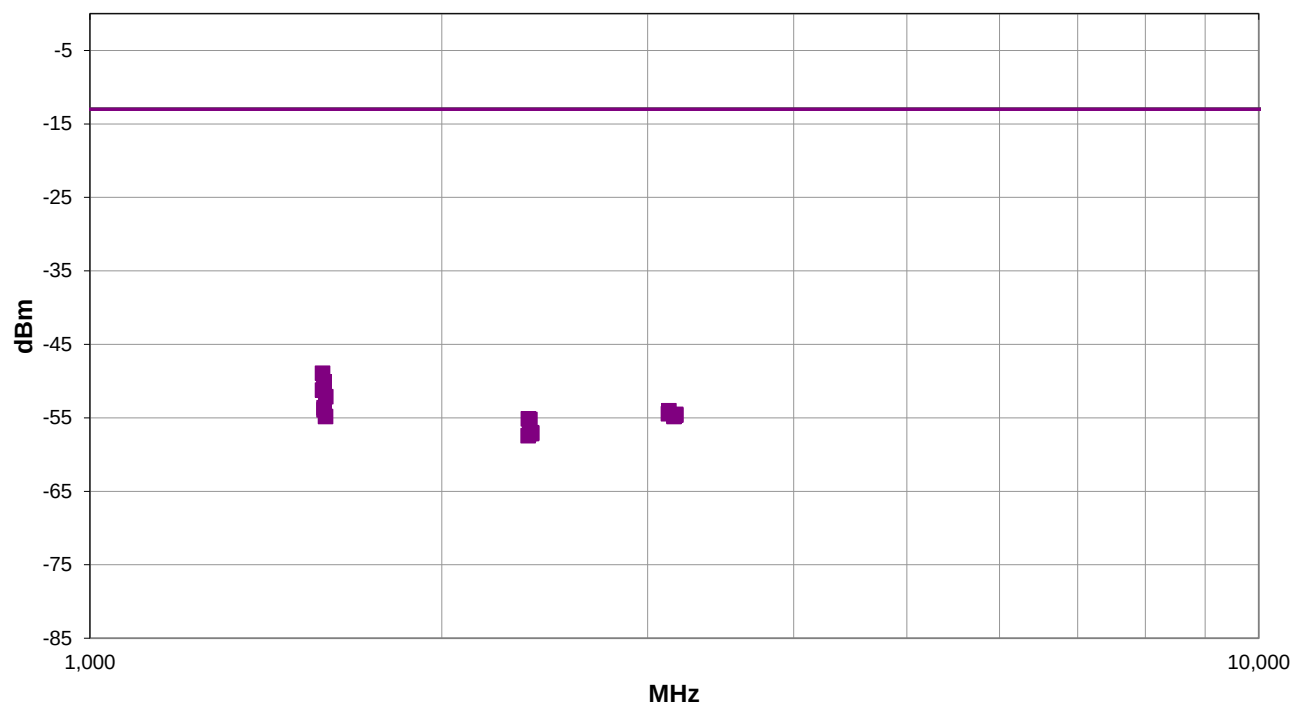
Harmonics measurements based on worst case observed emissions by receive polarity by channel bandwidths and modulations. See line comments for EUT orientation, channel bandwidth, modulation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 14

DEVIATIONS FROM TEST STANDARD

None



Run #: 269

■ PK ◆ AV ● QP

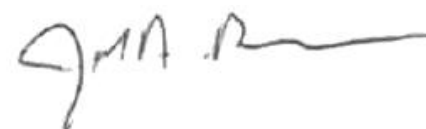
OUT OF BAND EMISSIONS – LTE BAND 14

RESULTS - Run #269

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1581.141	3.92	237.9	Horz	PK	12.8E-9	-48.9	-13.0	-35.9	EUT on Side, 5 MHz BW, QPSK, 1RB/12, Low Ch
1586.083	3.86	241.0	Horz	PK	9.7E-9	-50.1	-13.0	-37.1	EUT on Side, 5 MHz BW, 16QAM, 1RB/12, Mid Ch
1586.042	3.92	237.9	Horz	PK	9.5E-9	-50.2	-13.0	-37.2	EUT on Side, 5 MHz BW, QPSK, 1RB/12, Mid Ch
1580.992	1.14	194.0	Vert	PK	7.5E-9	-51.2	-13.0	-38.2	EUT Vert, 5 MHz BW, QPSK, 1RB/12, Low Ch
1590.975	3.88	237.9	Horz	PK	6.1E-9	-52.1	-13.0	-39.1	EUT on Side, 5 MHz BW, QPSK, 1RB/12, High Ch
1586.000	1.55	195.9	Vert	PK	4.3E-9	-53.6	-13.0	-40.6	EUT Vert, 5 MHz BW, 16QAM, 1RB/12, Mid Ch
1586.058	1.5	201.9	Vert	PK	4.0E-9	-53.9	-13.0	-40.9	EUT Vert, 5 MHz BW, QPSK, 1RB/12, Mid Ch
3128.599	1.5	327.9	Horz	PK	4.0E-9	-54.0	-13.0	-41.0	EUT on Side, 5 MHz BW, QPSK, 1RB/12, High Ch
3125.554	3.15	32.0	Vert	PK	3.6E-9	-54.4	-13.0	-41.4	EUT Vert, 5 MHz BW, QPSK, 1RB/12, High Ch
3170.220	1.5	243.9	Vert	PK	3.5E-9	-54.5	-13.0	-41.5	EUT Vert, 5 MHz BW, QPSK, 1RB/12, Mid Ch
3170.927	1.5	354.0	Horz	PK	3.4E-9	-54.6	-13.0	-41.6	EUT on Side, 5 MHz BW, QPSK, 1RB/12, Mid Ch
3160.136	1.5	90.0	Vert	PK	3.4E-9	-54.7	-13.0	-41.7	EUT Vert, 5 MHz BW, QPSK, 1RB/12, Low Ch
3159.754	1.49	343.0	Horz	PK	3.3E-9	-54.8	-13.0	-41.8	EUT on Side, 5 MHz BW, QPSK, 1RB/12, Low Ch
1590.676	1.5	195.0	Vert	PK	3.3E-9	-54.8	-13.0	-41.8	EUT Vert, 5 MHz BW, QPSK, 1RB/12, High Ch
2371.441	3.67	21.9	Horz	PK	3.1E-9	-55.1	-13.0	-42.1	EUT on Side, 5 MHz BW, QPSK, 1RB/12, Low Ch
2379.166	3.56	21.0	Horz	PK	3.0E-9	-55.2	-13.0	-42.2	EUT on Side, 5 MHz BW, QPSK, 1RB/12, Mid Ch
2386.666	1.5	195.0	Vert	PK	2.0E-9	-57.0	-13.0	-44.0	EUT Vert, 5 MHz BW, QPSK, 1RB/12, High Ch
2378.027	1.5	69.9	Vert	PK	1.9E-9	-57.1	-13.0	-44.1	EUT Vert, 5 MHz BW, QPSK, 1RB/12, Mid Ch
2386.750	2.36	199.0	Horz	PK	1.9E-9	-57.1	-13.0	-44.1	EUT on Side, 5 MHz BW, QPSK, 1RB/12, High Ch
2371.191	1.5	360.0	Vert	PK	1.8E-9	-57.4	-13.0	-44.4	EUT Vert, 5 MHz BW, QPSK, 1RB/12, Low Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 25

TEST DESCRIPTION

At an approved test site, the transmitter was placed on a remotely controlled turntable, and the measurement antenna was placed 3 meters from the transmitter. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axes. The turntable azimuth was varied to maximize the level of spurious emissions. The height of the measurement antenna was also varied from 1 to 4 meters. A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity. The amplitude and frequency of the highest emissions was noted.

The transmitter was then replaced with a $\frac{1}{2}$ wave dipole that was successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator was connected to the dipole (horn antenna for frequencies above 1 GHz), and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the cable loss to the antenna and its gain, the power (dBm) was determined for each radiated spurious emission.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Receiver	Rohde & Schwarz	ESR26	ARQ	2022-05-02	2023-05-02
Antenna - Double Ridge	ETS Lindgren	3115	AJL	2022-10-21	2024-10-21
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAJ	2022-04-19	2023-04-19
Cable	Northwest EMC	1-8.2 GHz	TXC	2022-04-19	2023-04-19
Antenna - Standard Gain	ETS Lindgren	3160-07	AJF	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	PAK	2022-09-09	2023-09-09
Cable	Northwest EMC	8-18GHz	TXD	2022-04-12	2023-04-12
Antenna - Standard Gain	ETS Lindgren	3160-08	AJG	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	PAL	2022-09-09	2023-09-09
Antenna - Double Ridge	A.H. Systems, Inc.	SAS-574	AXW	2022-09-09	2024-09-09
Amplifier - Pre-Amplifier	Miteq	JSDWK42-18004000-60-5P	PAM	2022-09-14	2023-09-14
Cable	Northwest EMC	18-40GHz	TXE	2022-09-09	2023-09-09
Antenna - Biconilog	ETS Lindgren	3143B	AYF	2022-09-02	2024-09-02
Cable	Northwest EMC	RE 9kHz - 1GHz	TXB	2022-06-10	2023-06-10
Amplifier - Pre-Amplifier	Fairview Microwave	FMAM63001	PAS	2022-04-19	2023-04-19
Filter - Low Pass	Micro-Tronics	LPM50004	HHV	2022-07-22	2023-07-22

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.1 dB	-5.1 dB

FREQUENCY RANGE INVESTIGATED

30 MHz TO 26 GHz

POWER INVESTIGATED

4.2VDC via Battery

CONFIGURATIONS INVESTIGATED

WTVD0085-2

MODES INVESTIGATED

Transmitting LTE, +23 dBm, Band 25, 16QAM, 3 MHz Channel Bandwidth, High Ch, 1913.5 MHz
Transmitting LTE, +23 dBm, Band 25, QPSK, 1.4 MHz Channel Bandwidth, High Ch, 1914.3 MHz
Transmitting LTE, +23 dBm, Band 25, QPSK, 10 MHz Channel Bandwidth, High Ch, 1910.0 MHz
Transmitting LTE, +23 dBm, Band 25, QPSK, 15 MHz Channel Bandwidth, High Ch, 1907.5 MHz
Transmitting LTE, +23 dBm, Band 25, QPSK, 20 MHz Channel Bandwidth, High Ch, 1905.0 MHz
Transmitting LTE, +23 dBm, Band 25, QPSK, 3 MHz Channel Bandwidth, High Ch, 1913.5 MHz
Transmitting LTE, +23 dBm, Band 25, QPSK, 5 MHz Channel Bandwidth, High Ch, 1912.5 MHz

OUT OF BAND EMISSIONS – LTE BAND 25

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-27
Customer:	Motorola Solutions, Inc.	Temperature:	22.8°C
Attendees:	Navaid Karimi	Relative Humidity:	33.3%
Customer Project:	None	Bar. Pressure (PMSL):	1018 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 24.238:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	273	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

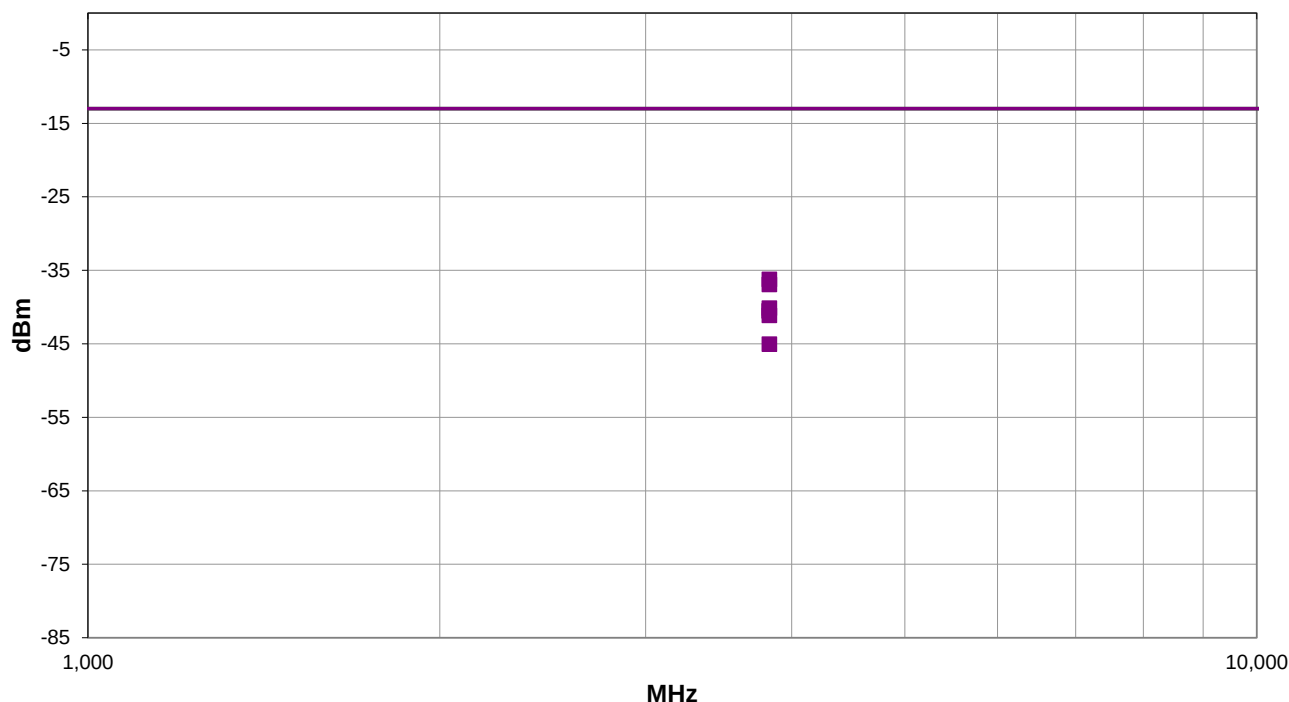
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 25, QPSK, 1.4 MHz Channel Bandwidth, High Ch, 1914.3 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 273

■ PK ◆ AV ● QP

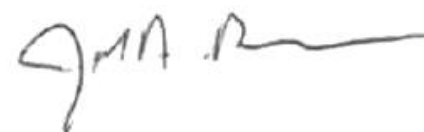
OUT OF BAND EMISSIONS – LTE BAND 25

RESULTS - Run #273

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3827.924	2.52	223.0	Horz	PK	238.3E-9	-36.2	-13.0	-23.2	EUT Horz, 1RB/0, High Ch
3827.790	2.76	92.0	Vert	PK	202.8E-9	-36.9	-13.0	-23.9	EUT on Side, 1RB/0, High Ch
3827.724	3.21	246.0	Horz	PK	97.1E-9	-40.1	-13.0	-27.1	EUT Vert, 1RB/0, High Ch
3827.491	3.16	25.0	Horz	PK	88.5E-9	-40.5	-13.0	-27.5	EUT on Side, 1RB/0, High Ch
3827.616	1.0	354.0	Vert	PK	77.1E-9	-41.1	-13.0	-28.1	EUT Vert, 1RB/0, High Ch
3827.616	1.5	38.0	Vert	PK	31.4E-9	-45.0	-13.0	-32.0	EUT Horz, 1RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 25

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-27
Customer:	Motorola Solutions, Inc.	Temperature:	22.8°C
Attendees:	Navaid Karimi	Relative Humidity:	33.3%
Customer Project:	None	Bar. Pressure (PMSL):	1018 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 24.238:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	277	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

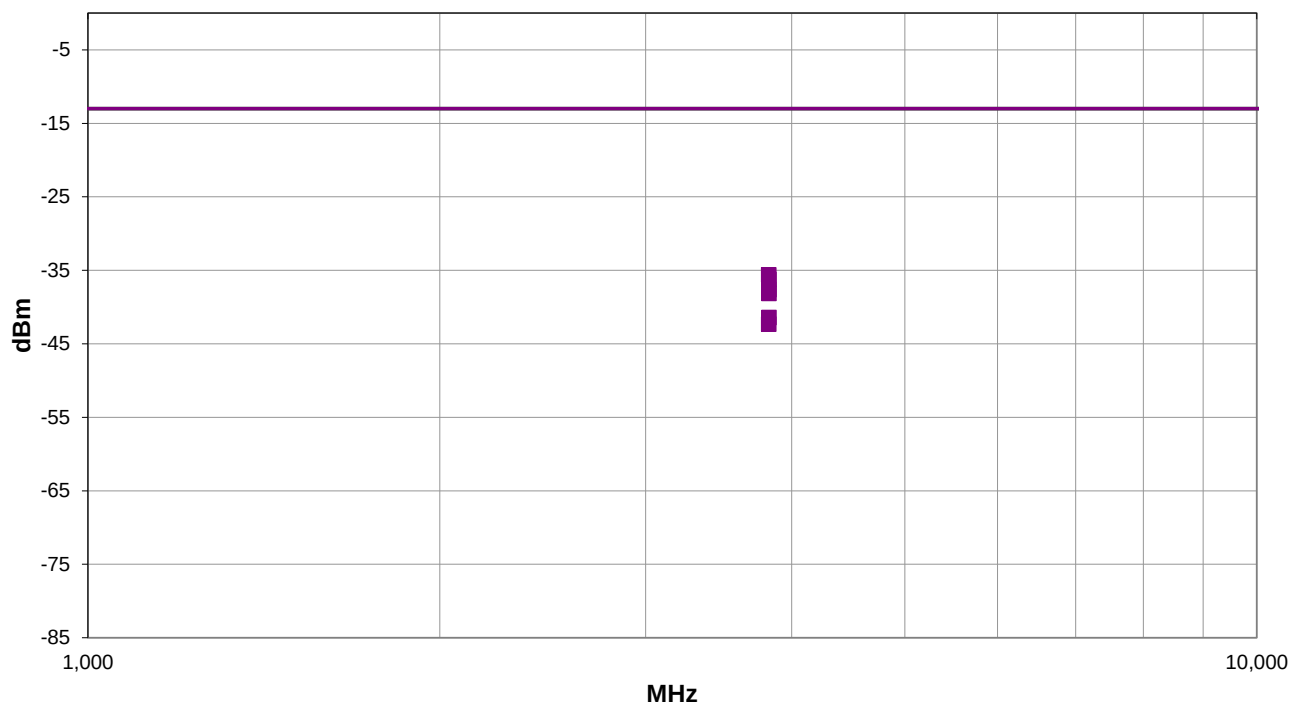
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 25, QPSK, 3 MHz Channel Bandwidth, High Ch, 1913.5 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 277

PK AV QP

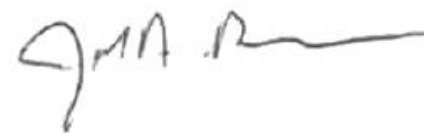
OUT OF BAND EMISSIONS – LTE BAND 25

RESULTS - Run #277

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3824.275	2.71	90.0	Vert	PK	273.6E-9	-35.6	-13.0	-22.6	EUT on Side, 1RB/0, High Ch
3824.699	2.42	28.9	Horz	PK	238.3E-9	-36.2	-13.0	-23.2	EUT on Side, 1RB/0, High Ch
3824.691	3.53	258.0	Horz	PK	172.6E-9	-37.6	-13.0	-24.6	EUT Horz, 1RB/0, High Ch
3824.441	2.42	111.9	Vert	PK	153.9E-9	-38.1	-13.0	-25.1	EUT Horz, 1RB/0, High Ch
3824.524	3.02	150.0	Horz	PK	72.0E-9	-41.4	-13.0	-28.4	EUT Vert, 1RB/0, High Ch
3824.308	1.01	354.0	Vert	PK	58.5E-9	-42.3	-13.0	-29.3	EUT Vert, 1RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 25

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-27
Customer:	Motorola Solutions, Inc.	Temperature:	22.8°C
Attendees:	Navaid Karimi	Relative Humidity:	33.3%
Customer Project:	None	Bar. Pressure (PMSL):	1018 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 24.238:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	281	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

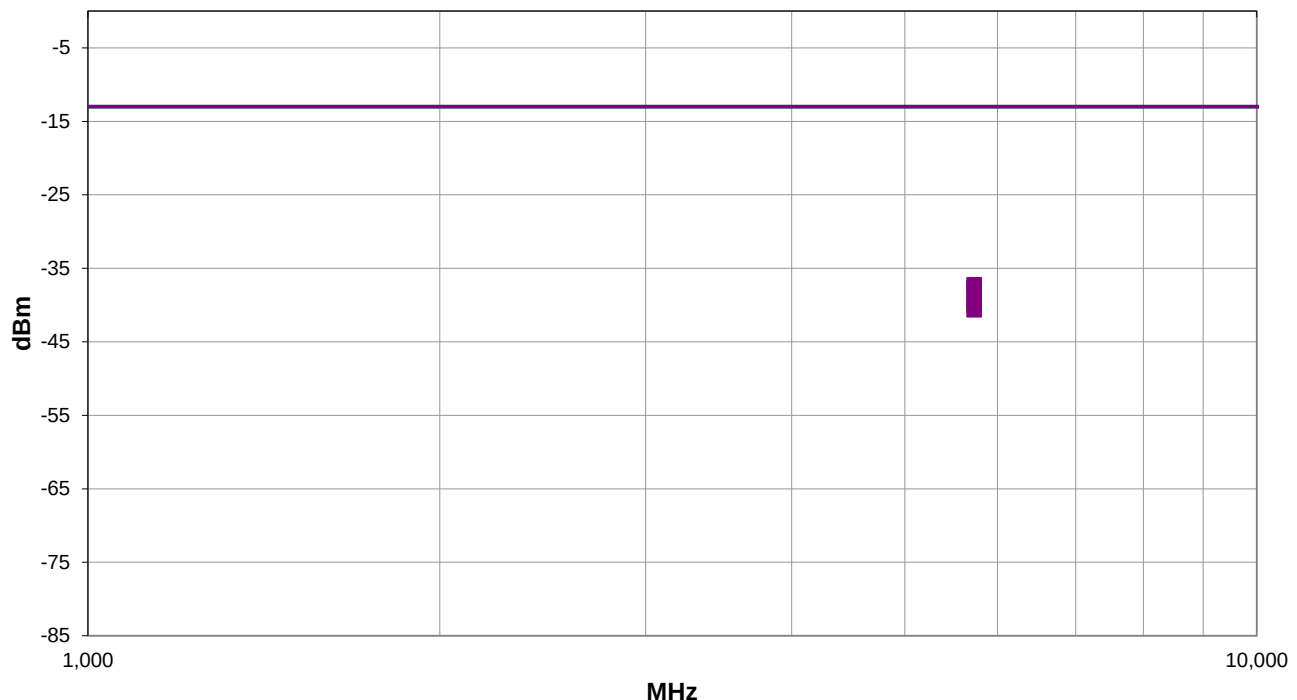
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 25, QPSK, 5 MHz Channel Bandwidth, High Ch, 1912.5 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 281

■ PK ◆ AV ● QP

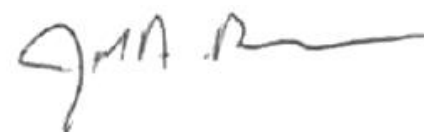
OUT OF BAND EMISSIONS – LTE BAND 25

RESULTS - Run #281

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5730.983	1.92	182.0	Horz	PK	189.3E-9	-37.2	-13.0	-24.2	EUT Horz, 1RB/0, High Ch
5730.909	3.08	126.0	Vert	PK	172.6E-9	-37.6	-13.0	-24.6	EUT Horz, 1RB/0, High Ch
5730.983	1.62	159.0	Horz	PK	161.1E-9	-37.9	-13.0	-24.9	EUT on Side, 1RB/0, High Ch
5731.100	1.5	128.0	Horz	PK	108.9E-9	-39.6	-13.0	-26.6	EUT Vert, 1RB/0, High Ch
5731.191	1.74	146.0	Vert	PK	101.7E-9	-39.9	-13.0	-26.9	EUT Vert, 1RB/0, High Ch
5730.925	1.66	30.0	Vert	PK	86.5E-9	-40.6	-13.0	-27.6	EUT on Side, 1RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 25

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-27
Customer:	Motorola Solutions, Inc.	Temperature:	22.8°C
Attendees:	Navaid Karimi	Relative Humidity:	33.3%
Customer Project:	None	Bar. Pressure (PMSL):	1018 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 24.238:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	285	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

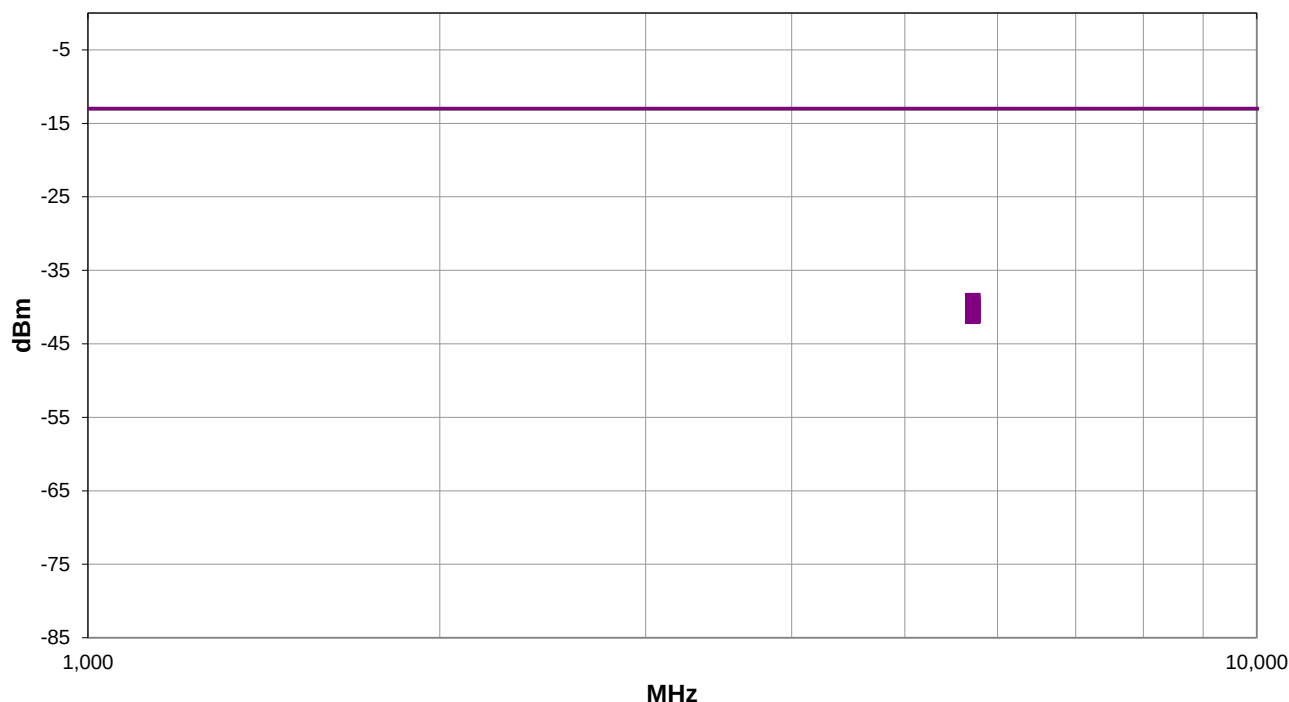
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 25, QPSK, 10 MHz Channel Bandwidth, High Ch, 1910.0 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 285

■ PK ◆ AV ● QP

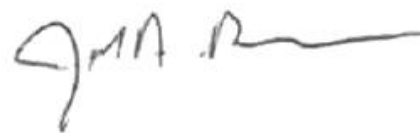
OUT OF BAND EMISSIONS – LTE BAND 25

RESULTS - Run #285

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5716.842	1.5	160.9	Horz	PK	122.2E-9	-39.1	-13.0	-26.1	EUT on Side, 1RB/0, High Ch
5716.676	1.91	182.0	Horz	PK	108.9E-9	-39.6	-13.0	-26.6	EUT Horz, 1RB/0, High Ch
5716.859	1.5	123.0	Horz	PK	97.1E-9	-40.1	-13.0	-27.1	EUT Vert, 1RB/0, High Ch
5716.867	1.69	337.0	Vert	PK	80.7E-9	-40.9	-13.0	-27.9	EUT on Side, 1RB/0, High Ch
5716.559	1.98	38.0	Vert	PK	77.1E-9	-41.1	-13.0	-28.1	EUT Vert, 1RB/0, High Ch
5716.567	1.85	126.0	Vert	PK	75.4E-9	-41.2	-13.0	-28.2	EUT Horz, 1RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 25

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-28
Customer:	Motorola Solutions, Inc.	Temperature:	22.1°C
Attendees:	Navaid Karimi	Relative Humidity:	35.6%
Customer Project:	None	Bar. Pressure (PMSL):	1026 mb
Tested By:	Jarrold Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 24.238:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	289	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

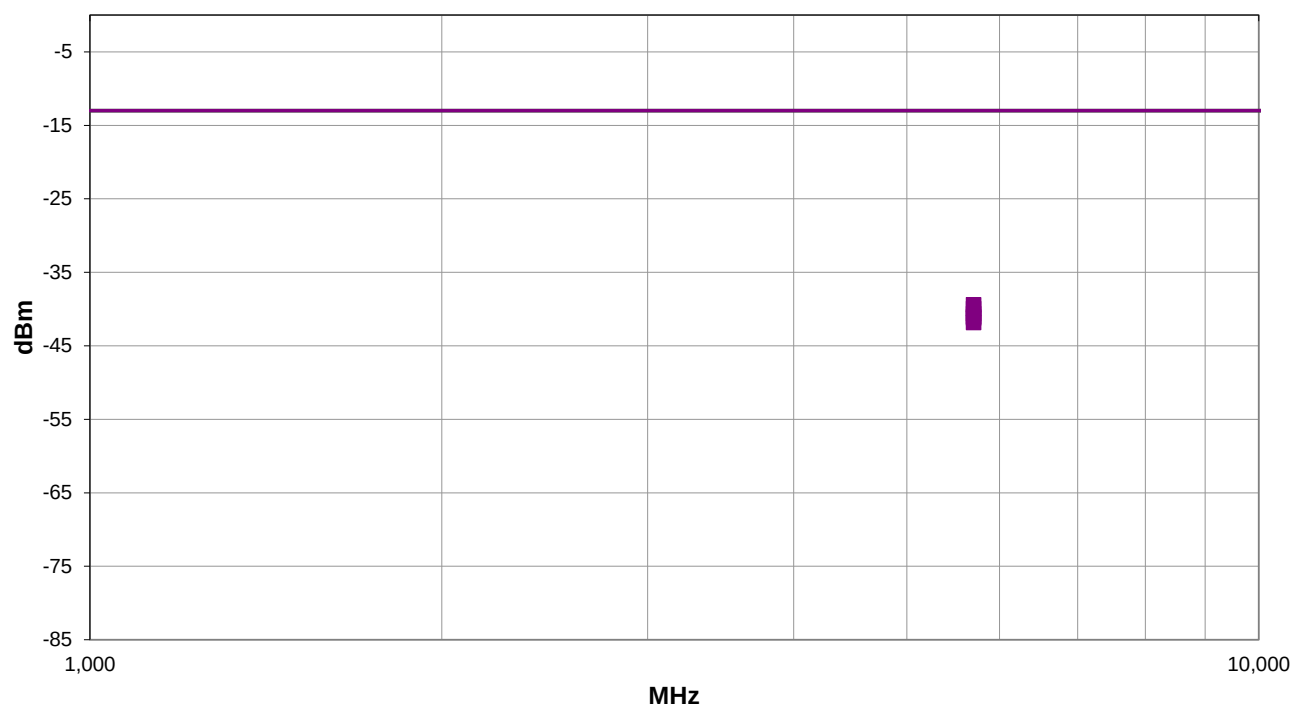
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 25, QPSK, 15 MHz Channel Bandwidth, High Ch, 1907.5 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 289

■ PK ◆ AV ● QP

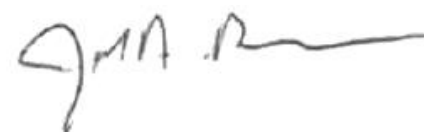
OUT OF BAND EMISSIONS – LTE BAND 25

RESULTS - Run #289

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5702.483	1.5	165.9	Horz	PK	114.1E-9	-39.4	-13.0	-26.4	EUT on Side, 1RB/0, High Ch
5702.433	1.77	75.9	Horz	PK	101.7E-9	-39.9	-13.0	-26.9	EUT Horz, 1RB/0, High Ch
5702.483	1.5	114.0	Horz	PK	86.5E-9	-40.6	-13.0	-27.6	EUT Vert, 1RB/0, High Ch
5702.392	1.6	76.9	Vert	PK	78.9E-9	-41.0	-13.0	-28.0	EUT Horz, 1RB/0, High Ch
5702.608	1.5	273.9	Vert	PK	75.4E-9	-41.2	-13.0	-28.2	EUT on Side, 1RB/0, High Ch
5702.708	1.77	151.0	Vert	PK	65.6E-9	-41.8	-13.0	-28.8	EUT Vert, 1RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 25

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-28
Customer:	Motorola Solutions, Inc.	Temperature:	22.1°C
Attendees:	Navaid Karimi	Relative Humidity:	35.6%
Customer Project:	None	Bar. Pressure (PMSL):	1026 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 24.238:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	293	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

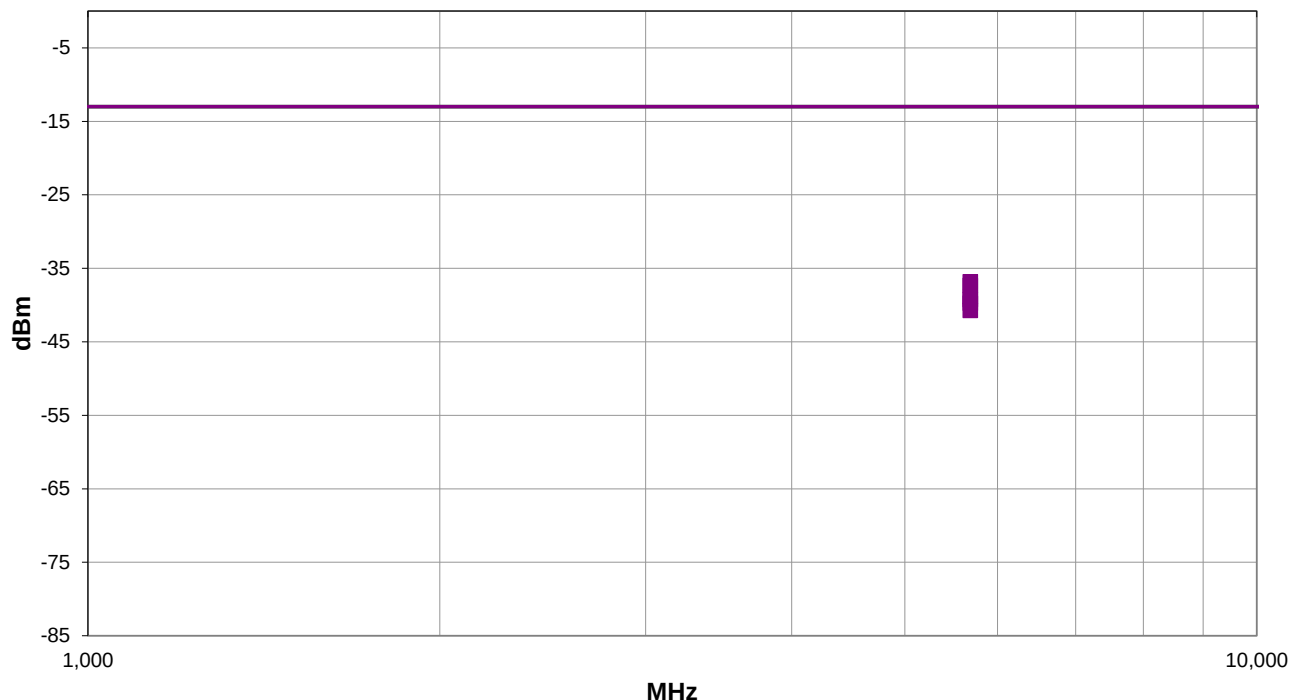
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 25, QPSK, 20 MHz Channel Bandwidth, High Ch, 1905.0 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 293

■ PK ◆ AV ● QP

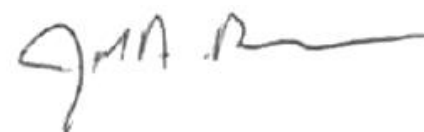
OUT OF BAND EMISSIONS – LTE BAND 25

RESULTS - Run #293

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5688.425	1.83	180.0	Horz	PK	207.5E-9	-36.8	-13.0	-23.8	EUT Horz, 1RB/0, High Ch
5688.259	1.81	266.0	Horz	PK	185.0E-9	-37.3	-13.0	-24.3	EUT on Side, 1RB/0, High Ch
5688.101	1.81	85.0	Vert	PK	131.0E-9	-38.8	-13.0	-25.8	EUT Horz, 1RB/0, High Ch
5688.201	2.59	351.0	Vert	PK	119.4E-9	-39.2	-13.0	-26.2	EUT on Side, 1RB/0, High Ch
5688.151	1.67	141.0	Horz	PK	106.4E-9	-39.7	-13.0	-26.7	EUT Vert, 1RB/0, High Ch
5688.334	1.83	150.0	Vert	PK	84.6E-9	-40.7	-13.0	-27.7	EUT Vert, 1RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 25

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-28
Customer:	Motorola Solutions, Inc.	Temperature:	22.1°C
Attendees:	Navaid Karimi	Relative Humidity:	35.6%
Customer Project:	None	Bar. Pressure (PMSL):	1026 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 24.238:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	294	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

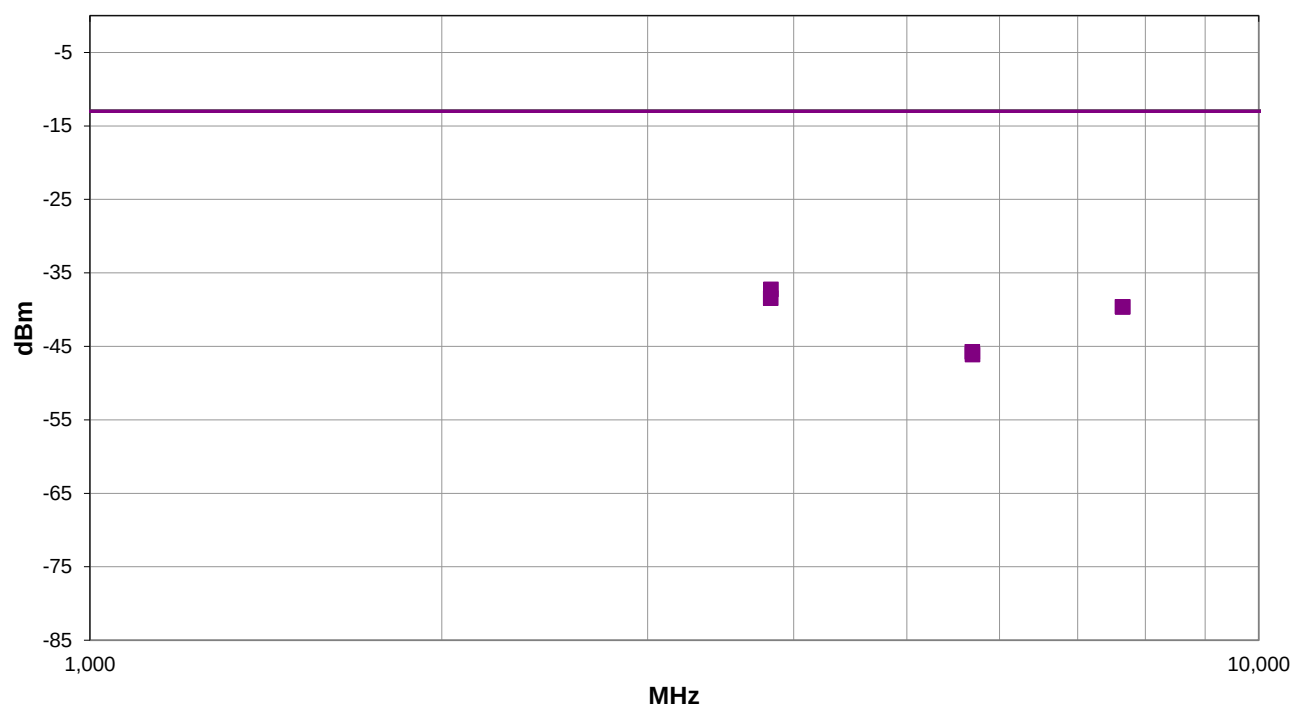
Harmonics measurements based on worst case observed emissions by receive polarity by channel bandwidths and modulations. See line comments for EUT orientation, channel bandwidth, modulation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 25

DEVIATIONS FROM TEST STANDARD

None



Run #: 294

■ PK ◆ AV ● QP

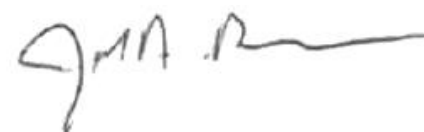
OUT OF BAND EMISSIONS – LTE BAND 25

RESULTS - Run #294

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3824.583	3.19	327.9	Horz	PK	189.3E-9	-37.2	-13.0	-24.2	EUT on Side, 3 MHz BW, QPSK 1RB/0, High Ch
3824.367	2.76	81.9	Vert	PK	143.6E-9	-38.4	-13.0	-25.4	EUT on Side, 3 MHz BW, QPSK 1RB/0, High Ch
7648.784	1.42	99.0	Horz	PK	108.9E-9	-39.6	-13.0	-26.6	EUT on Side, 3 MHz BW, QPSK 1RB/0, High Ch
7648.992	1.32	9.9	Vert	PK	108.9E-9	-39.6	-13.0	-26.6	EUT on Side, 3 MHz BW, QPSK 1RB/0, High Ch
5687.760	1.5	231.0	Horz	PK	26.7E-9	-45.7	-13.0	-32.7	EUT on Side, 3 MHz BW, 16QAM, 1RB/0, High Ch
5690.330	1.5	319.0	Vert	PK	24.4E-9	-46.1	-13.0	-33.1	EUT on Side, 3 MHz BW, 16QAM, 1RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 66

TEST DESCRIPTION

At an approved test site, the transmitter was placed on a remotely controlled turntable, and the measurement antenna was placed 3 meters from the transmitter. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axes. The turntable azimuth was varied to maximize the level of spurious emissions. The height of the measurement antenna was also varied from 1 to 4 meters. A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity. The amplitude and frequency of the highest emissions was noted.

The transmitter was then replaced with a $\frac{1}{2}$ wave dipole that was successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator was connected to the dipole (horn antenna for frequencies above 1 GHz), and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the cable loss to the antenna and its gain, the power (dBm) was determined for each radiated spurious emission.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Receiver	Rohde & Schwarz	ESR26	ARQ	2022-05-02	2023-05-02
Antenna - Double Ridge	ETS Lindgren	3115	AJL	2022-10-21	2024-10-21
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAJ	2022-04-19	2023-04-19
Cable	Northwest EMC	1-8.2 GHz	TXC	2022-04-19	2023-04-19
Antenna - Standard Gain	ETS Lindgren	3160-07	AJF	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	PAK	2022-09-09	2023-09-09
Cable	Northwest EMC	8-18GHz	TXD	2022-04-12	2023-04-12
Antenna - Standard Gain	ETS Lindgren	3160-08	AJG	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	PAL	2022-09-09	2023-09-09
Antenna - Double Ridge	A.H. Systems, Inc.	SAS-574	AXW	2022-09-09	2024-09-09
Amplifier - Pre-Amplifier	Miteq	JSDWK42-18004000-60-5P	PAM	2022-09-14	2023-09-14
Cable	Northwest EMC	18-40GHz	TXE	2022-09-09	2023-09-09
Antenna - Biconilog	ETS Lindgren	3143B	AYF	2022-09-02	2024-09-02
Cable	Northwest EMC	RE 9kHz - 1GHz	TXB	2022-06-10	2023-06-10
Amplifier - Pre-Amplifier	Fairview Microwave	FMAM63001	PAS	2022-04-19	2023-04-19
Filter - Low Pass	Micro-Tronics	LPM50004	HHV	2022-07-22	2023-07-22

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.1 dB	-5.1 dB

FREQUENCY RANGE INVESTIGATED

30 MHz TO 26 GHz

POWER INVESTIGATED

4.2VDC via Battery

CONFIGURATIONS INVESTIGATED

WTVD0085-2

MODES INVESTIGATED

Transmitting LTE, +23 dBm, Band 66, 16QAM, 5 MHz Channel Bandwidth, High Ch, 1777.5 MHz
Transmitting LTE, +23 dBm, Band 66, QPSK, 1.4 MHz Channel Bandwidth, High Ch, 1779.3 MHz
Transmitting LTE, +23 dBm, Band 66, QPSK, 10 MHz Channel Bandwidth, High Ch, 1775.0 MHz
Transmitting LTE, +23 dBm, Band 66, QPSK, 15 MHz Channel Bandwidth, High Ch, 1772.5 MHz
Transmitting LTE, +23 dBm, Band 66, QPSK, 20 MHz Channel Bandwidth, High Ch, 1770.0 MHz
Transmitting LTE, +23 dBm, Band 66, QPSK, 3 MHz Channel Bandwidth, High Ch, 1778.5 MHz
Transmitting LTE, +23 dBm, Band 66, QPSK, 5 MHz Channel Bandwidth, High Ch, 1777.5 MHz

OUT OF BAND EMISSIONS – LTE BAND 66

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-28
Customer:	Motorola Solutions, Inc.	Temperature:	22.1°C
Attendees:	Navaid Karimi	Relative Humidity:	35.3%
Customer Project:	None	Bar. Pressure (PMSL):	1028 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	298	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

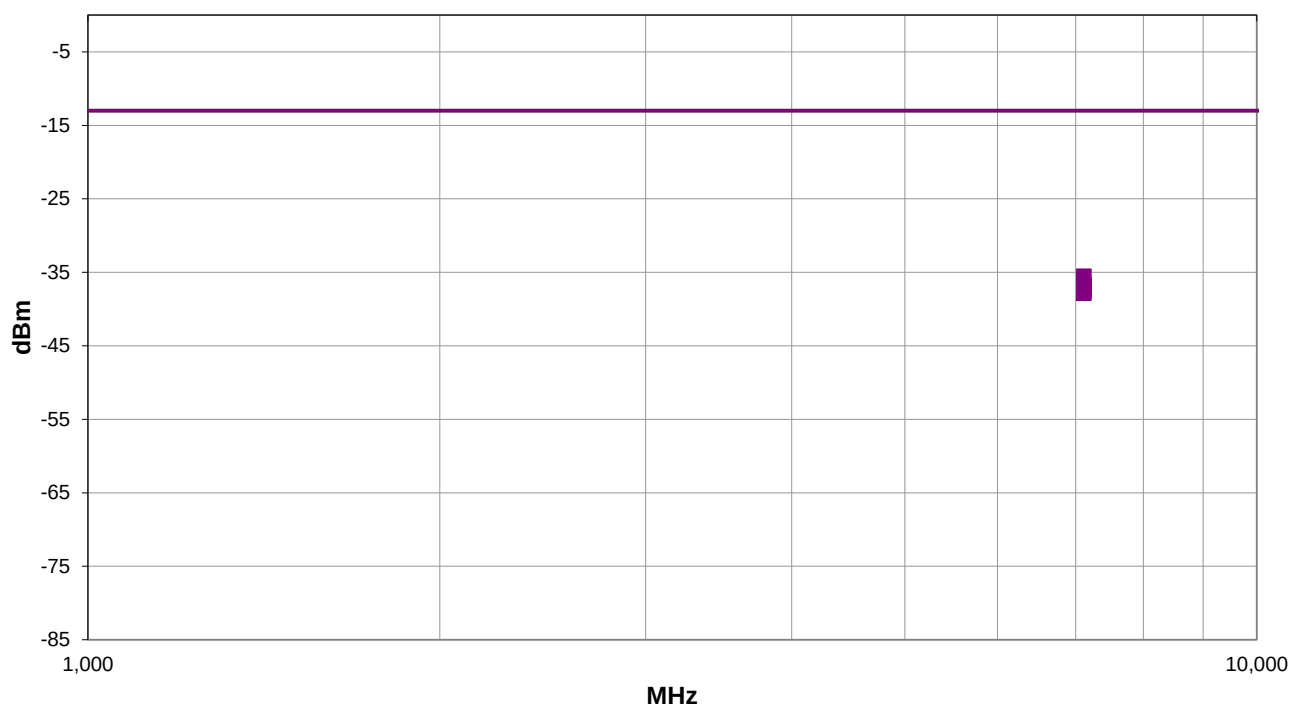
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 66, QPSK, 1.4 MHz Channel Bandwidth, High Ch, 1779.3 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 298

■ PK ◆ AV ● QP

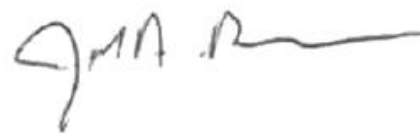
OUT OF BAND EMISSIONS – LTE BAND 66

RESULTS - Run #298

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
7115.525	1.87	324.0	Vert	PK	280.0E-9	-35.5	-13.0	-22.5	EUT Horz, 1RB/0, High Ch
7115.426	1.5	207.0	Horz	PK	212.4E-9	-36.7	-13.0	-23.7	EUT on Side, 1RB/0, High Ch
7115.542	3.37	21.0	Vert	PK	207.5E-9	-36.8	-13.0	-23.8	EUT Vert, 1RB/0, High Ch
7115.534	1.5	128.0	Horz	PK	180.8E-9	-37.4	-13.0	-24.4	EUT Vert, 1RB/0, High Ch
7115.450	3.47	157.0	Horz	PK	180.8E-9	-37.4	-13.0	-24.4	EUT Horz, 1RB/0, High Ch
7115.242	1.57	7.0	Vert	PK	164.9E-9	-37.8	-13.0	-24.8	EUT on Side, 1RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 66

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-28
Customer:	Motorola Solutions, Inc.	Temperature:	22.1°C
Attendees:	Navaid Karimi	Relative Humidity:	35.3%
Customer Project:	None	Bar. Pressure (PMSL):	1028 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	302	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

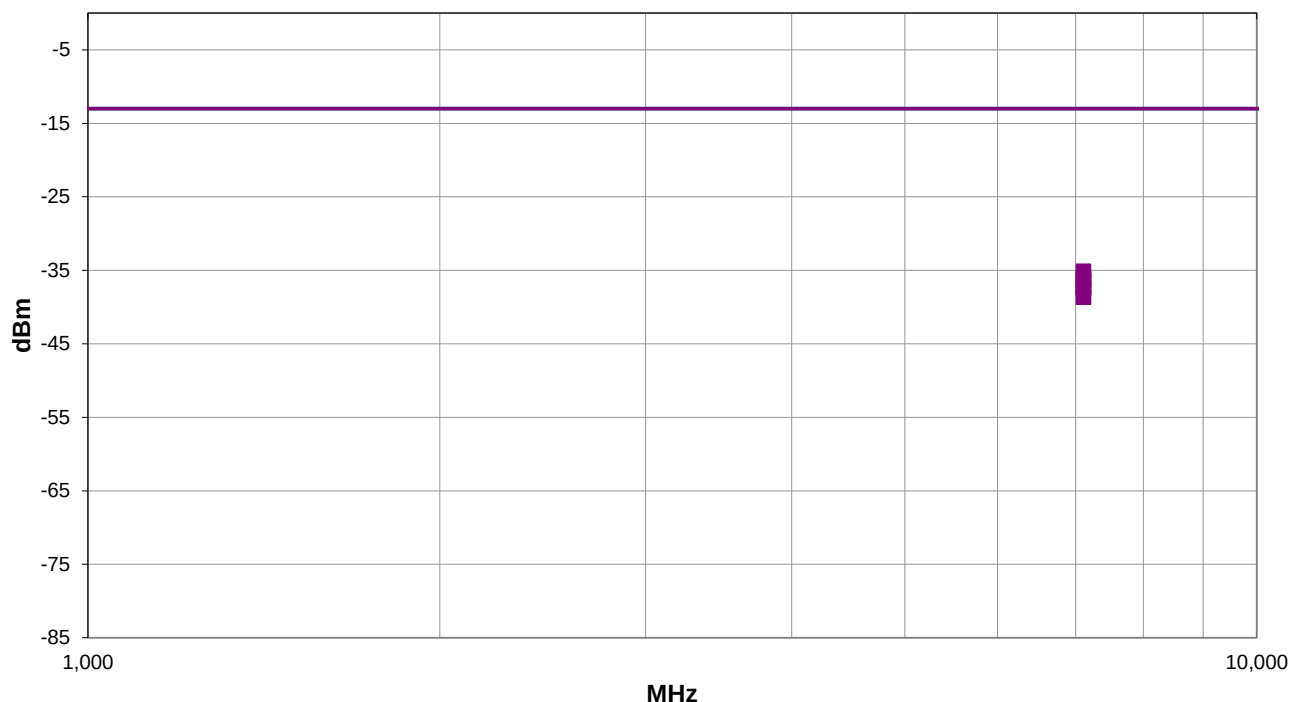
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 66, QPSK, 3 MHz Channel Bandwidth, High Ch, 1778.5 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 302

■ PK ◆ AV ● QP

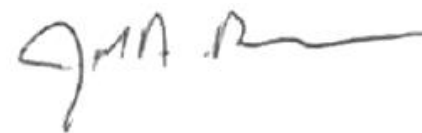
OUT OF BAND EMISSIONS – LTE BAND 66

RESULTS - Run #302

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
7108.867	2.8	313.0	Horz	PK	307.0E-9	-35.1	-13.0	-22.1	EUT on Side, 1RB/0, High Ch
7108.826	2.92	40.9	Vert	PK	255.3E-9	-35.9	-13.0	-22.9	EUT on Side, 1RB/0, High Ch
7109.034	1.5	360.0	Horz	PK	232.9E-9	-36.3	-13.0	-23.3	EUT Vert, 1RB/0, High Ch
7108.759	2.75	230.0	Vert	PK	185.0E-9	-37.3	-13.0	-24.3	EUT Horz, 1RB/0, High Ch
7109.001	1.6	158.0	Horz	PK	180.8E-9	-37.4	-13.0	-24.4	EUT Horz, 1RB/0, High Ch
7108.867	1.68	135.0	Vert	PK	137.1E-9	-38.6	-13.0	-25.6	EUT Vert, 1RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 66

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-28
Customer:	Motorola Solutions, Inc.	Temperature:	22.1°C
Attendees:	Navaid Karimi	Relative Humidity:	35.3%
Customer Project:	None	Bar. Pressure (PMSL):	1028 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	306	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

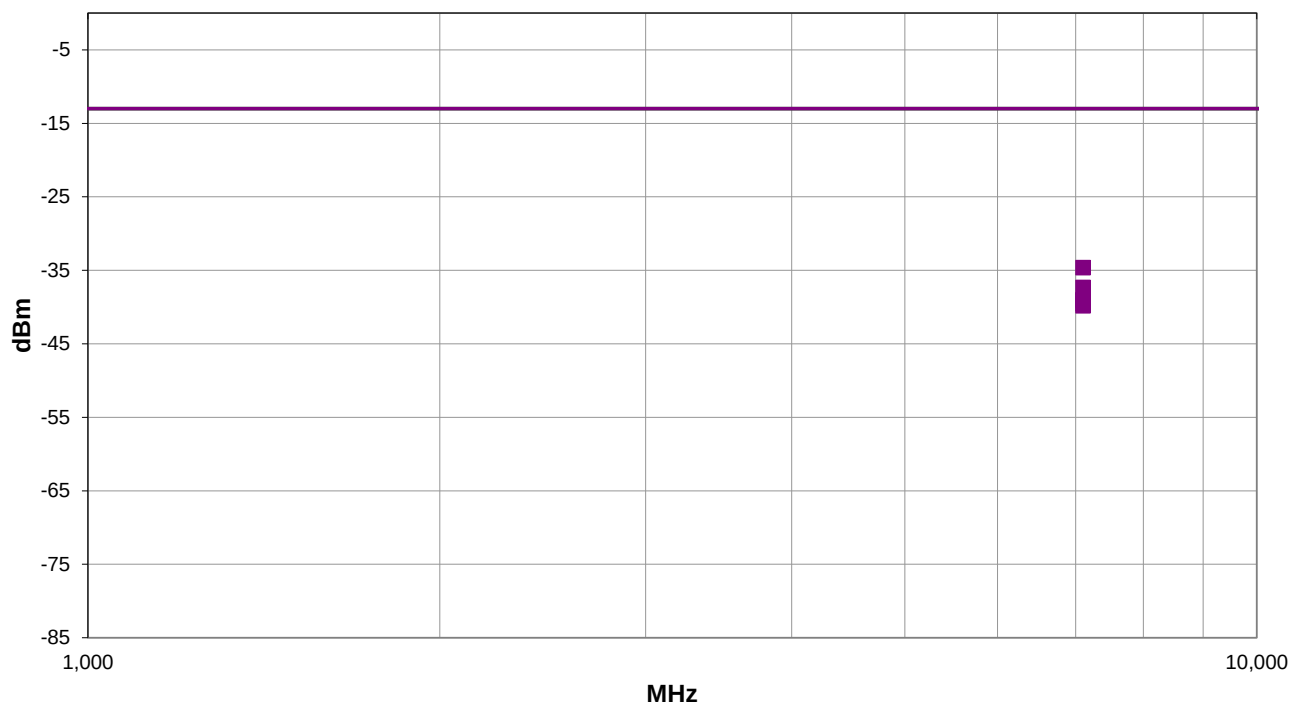
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 66, QPSK, 5 MHz Channel Bandwidth, High Ch, 1777.5 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 306

■ PK ◆ AV ● QP

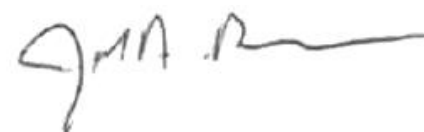
OUT OF BAND EMISSIONS – LTE BAND 66

RESULTS - Run #306

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
7101.525	3.41	46.9	Vert	PK	344.4E-9	-34.6	-13.0	-21.6	EUT on Side, 1 RB/0, High Ch
7101.401	1.5	360.0	Horz	PK	185.0E-9	-37.3	-13.0	-24.3	EUT Vert, 1RB/0, High Ch
7101.251	3.6	249.9	Vert	PK	125.1E-9	-39.0	-13.0	-26.0	EUT Vert, 1RB/0, High Ch
7101.226	1.5	240.0	Horz	PK	125.1E-9	-39.0	-13.0	-26.0	EUT on Side, 1 RB/0, High Ch
7101.251	1.62	154.9	Horz	PK	111.5E-9	-39.5	-13.0	-26.5	EUT Horz, 1RB/0, High Ch
7101.484	1.5	200.0	Vert	PK	104.0E-9	-39.8	-13.0	-26.8	EUT Horz, 1RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 66

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-28
Customer:	Motorola Solutions, Inc.	Temperature:	22.1°C
Attendees:	Navaid Karimi	Relative Humidity:	35.3%
Customer Project:	None	Bar. Pressure (PMSL):	1028 mb
Tested By:	Jarrold Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	310	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

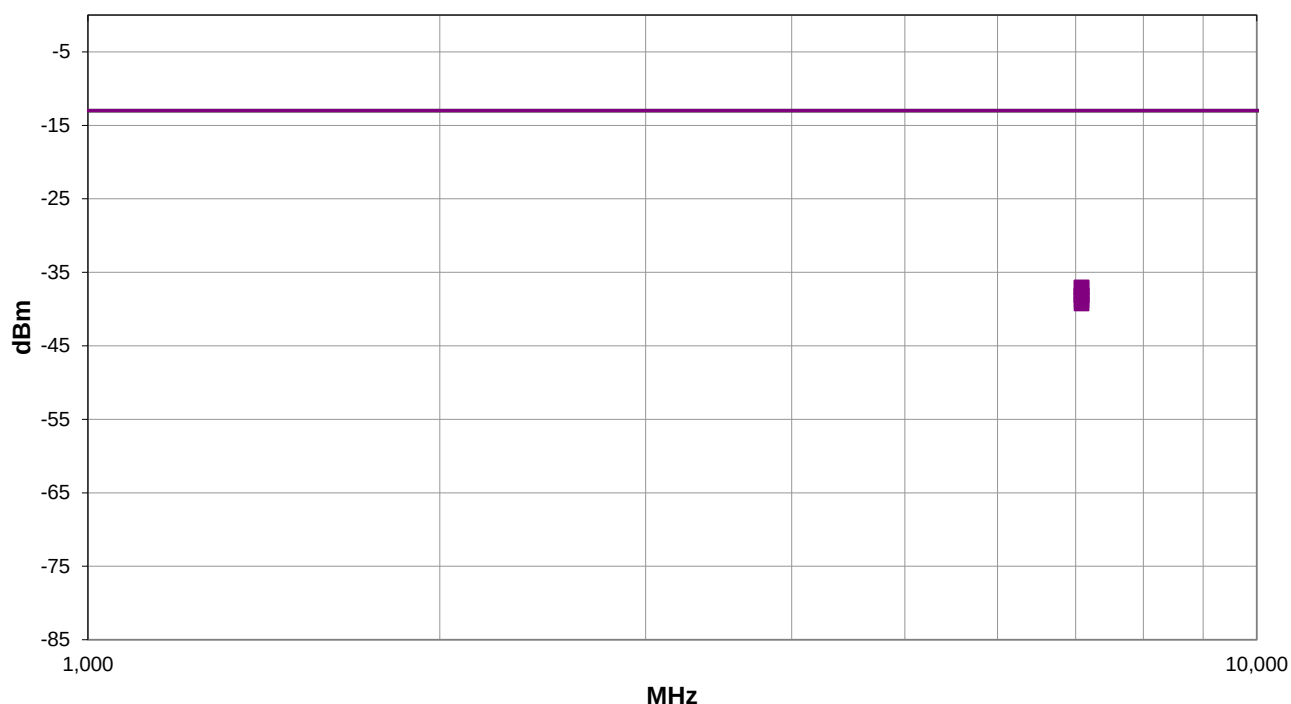
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 66, QPSK, 10 MHz Channel Bandwidth, High Ch, 1775.0 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 310

■ PK ◆ AV ● QP

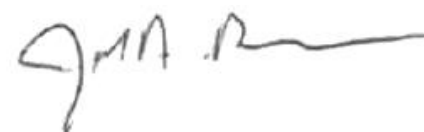
OUT OF BAND EMISSIONS – LTE BAND 66

RESULTS - Run #310

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
7082.334	2.08	66.0	Vert	PK	198.2E-9	-37.0	-13.0	-24.0	EUT on Side, 1RB/0, High Ch
7082.475	2.99	292.9	Horz	PK	193.7E-9	-37.1	-13.0	-24.1	EUT on Side, 1RB/0, High Ch
7082.542	1.5	135.9	Horz	PK	153.9E-9	-38.1	-13.0	-25.1	EUT Vert, 1RB/0, High Ch
7082.043	1.94	38.0	Vert	PK	153.9E-9	-38.1	-13.0	-25.1	EUT Horz, 1RB/0, High Ch
7082.051	3.37	154.9	Horz	PK	131.0E-9	-38.8	-13.0	-25.8	EUT Horz, 1RB/0, High Ch
7082.467	1.93	210.0	Vert	PK	119.4E-9	-39.2	-13.0	-26.2	EUT Vert, 1RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 66

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-28
Customer:	Motorola Solutions, Inc.	Temperature:	22.1°C
Attendees:	Navaid Karimi	Relative Humidity:	35.3%
Customer Project:	None	Bar. Pressure (PMSL):	1028 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	314	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 66, QPSK, 15 MHz Channel Bandwidth, High Ch, 1772.5 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 314

■ PK ◆ AV ● QP

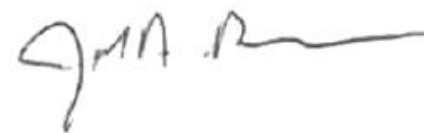
OUT OF BAND EMISSIONS – LTE BAND 66

RESULTS - Run #314

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
7063.400	1.5	141.0	Horz	PK	217.3E-9	-36.6	-13.0	-23.6	EUT Vert, 1RB/0, High Ch
7062.968	1.78	30.0	Vert	PK	198.2E-9	-37.0	-13.0	-24.0	EUT Horz, 1RB/0, High Ch
7063.192	1.5	112.9	Horz	PK	161.1E-9	-37.9	-13.0	-24.9	EUT on Side, 1RB/0, High Ch
7063.592	3.44	162.0	Horz	PK	150.4E-9	-38.2	-13.0	-25.2	EUT Horz, 1RB/0, High Ch
7063.201	1.3	7.0	Vert	PK	140.3E-9	-38.5	-13.0	-25.5	EUT on Side, 1RB/0, High Ch
7063.525	1.67	135.9	Vert	PK	99.3E-9	-40.0	-13.0	-27.0	EUT Vert, 1RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 66

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-28
Customer:	Motorola Solutions, Inc.	Temperature:	22.1°C
Attendees:	Navaid Karimi	Relative Humidity:	35.3%
Customer Project:	None	Bar. Pressure (PMSL):	1028 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	318	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

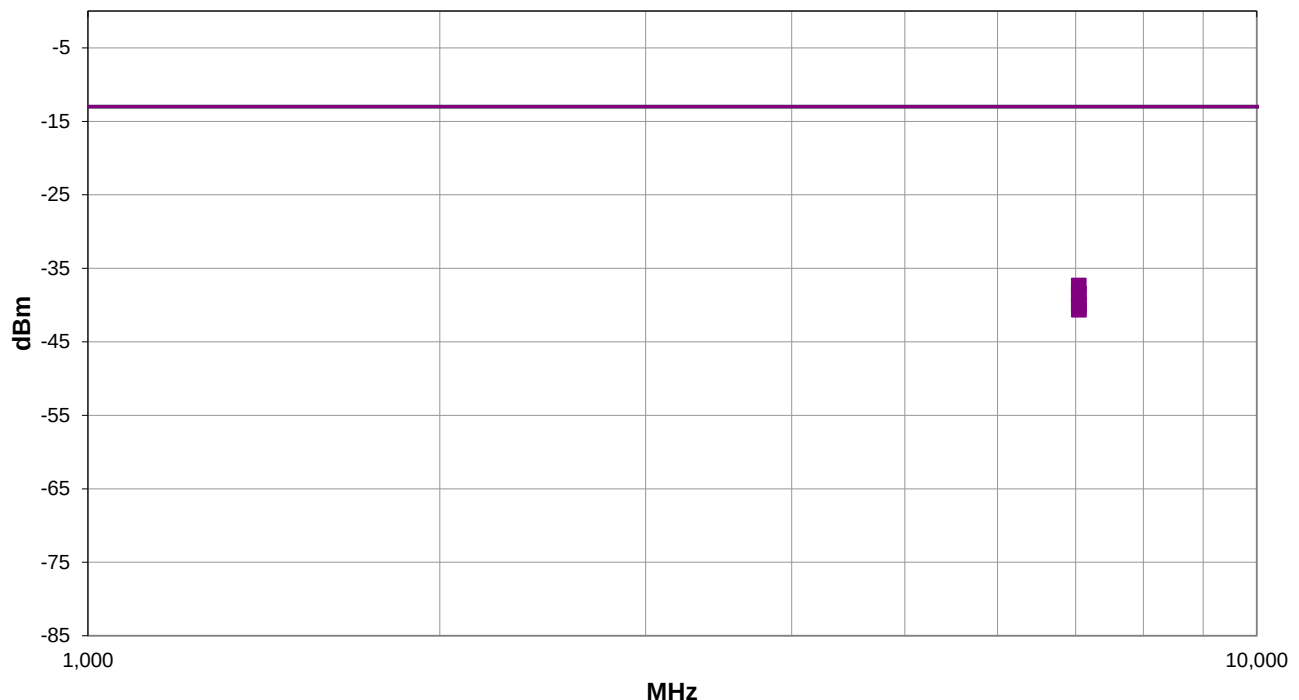
See line comments for EUT orientation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 66, QPSK, 20 MHz Channel Bandwidth, High Ch, 1770.0 MHz

DEVIATIONS FROM TEST STANDARD

None



Run #: 318

■ PK ◆ AV ● QP

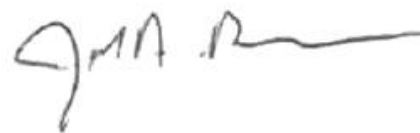
OUT OF BAND EMISSIONS – LTE BAND 66

RESULTS - Run #318

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
7044.109	2.89	307.0	Horz	PK	185.0E-9	-37.3	-13.0	-24.3	EUT on Side, 1RB/0, High Ch
7043.868	1.5	75.0	Horz	PK	143.6E-9	-38.4	-13.0	-25.4	EUT Vert, 1RB/0, High Ch
7044.234	1.52	12.0	Vert	PK	143.6E-9	-38.4	-13.0	-25.4	EUT Horz, 1RB/0, High Ch
7044.425	1.5	97.0	Horz	PK	101.7E-9	-39.9	-13.0	-26.9	EUT Horz, 1RB/0, High Ch
7044.151	1.5	148.9	Vert	PK	97.1E-9	-40.1	-13.0	-27.1	EUT Vert, 1RB/0, High Ch
7044.517	1.5	3.9	Vert	PK	86.5E-9	-40.6	-13.0	-27.6	EUT on Side, 1RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS – LTE BAND 66

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-28
Customer:	Motorola Solutions, Inc.	Temperature:	22.1°C
Attendees:	Navaid Karimi	Relative Humidity:	35.3%
Customer Project:	None	Bar. Pressure (PMSL):	1028 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	319	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

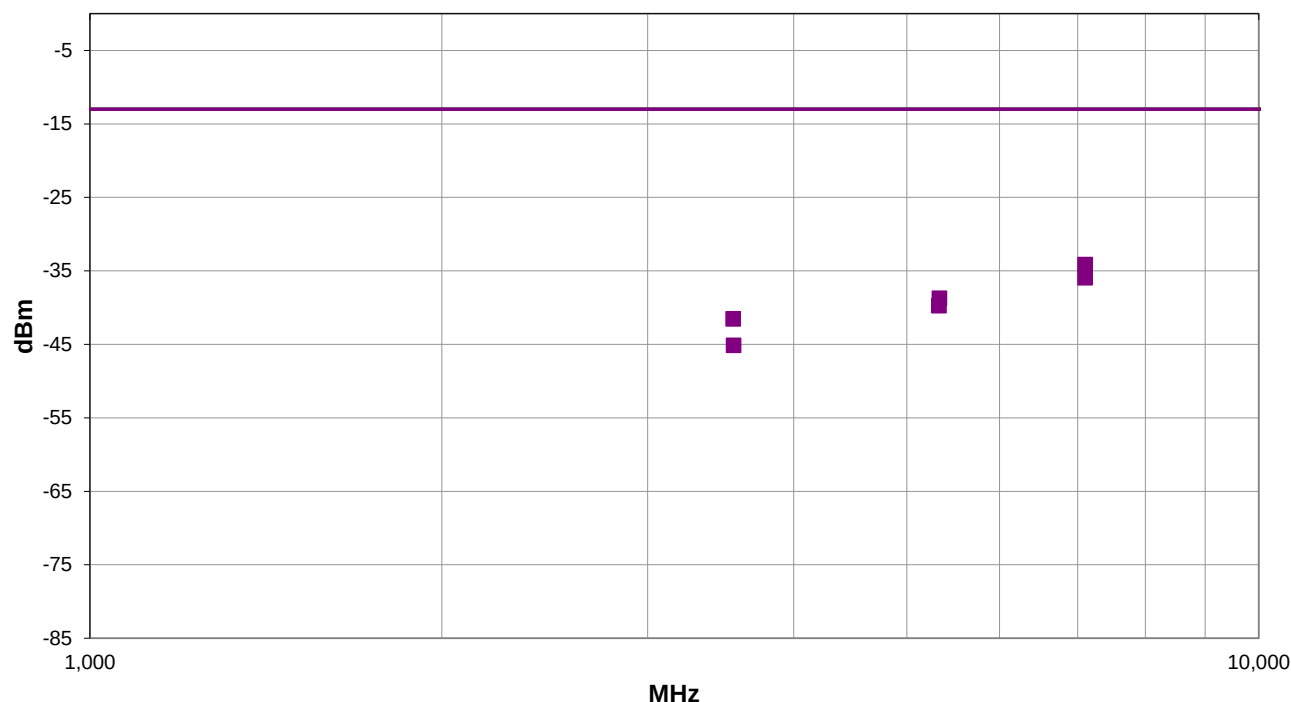
Harmonics measurements based on worst case observed emissions by receive polarity by channel bandwidths and modulations. See line comments for EUT orientation, channel bandwidth, modulation, configuration, and channel.

EUT OPERATING MODES

Transmitting LTE, +23 dBm, Band 66

DEVIATIONS FROM TEST STANDARD

None



Run #: 319

■ PK ◆ AV ● QP

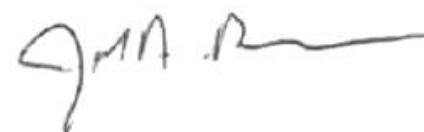
OUT OF BAND EMISSIONS – LTE BAND 66

RESULTS - Run #319

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
7101.342	2.26	57.9	Vert	PK	386.5E-9	-34.1	-13.0	-21.1	EUT on Side, 5 MHz BW, 16QAM, 1RB/0, High Ch
7101.176	2.78	304.9	Horz	PK	255.3E-9	-35.9	-13.0	-22.9	EUT on Side, 5 MHz BW, 16QAM, 1RB/0, High Ch
5331.659	1.82	291.9	Horz	PK	134.0E-9	-38.7	-13.0	-25.7	EUT on Side, 3 MHz BW, QPSK, 1RB/0, High Ch
5326.050	2.36	44.0	Vert	PK	106.4E-9	-39.7	-13.0	-26.7	EUT on Side, 5 MHz BW, 16QAM, 1RB/0, High Ch
3550.691	3.22	8.0	Vert	PK	70.3E-9	-41.5	-13.0	-28.5	EUT on Side, 5 MHz BW, 16QAM, 1RB/0, High Ch
3554.341	4.0	52.9	Horz	PK	30.7E-9	-45.1	-13.0	-32.1	EUT on Side, 3 MHz BW, QPSK, 1RB/0, High Ch

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS SIMULTANEOUS TRANSMISSIONS

TEST DESCRIPTION

The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization. A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

The device contains WiFi and Cellular radio modules. They can transmit simultaneously through the same antenna. After the spurious emissions from the WiFi radio were measured, both radios were set to transmit simultaneously and radiated scans were performed to identify any new or higher emissions due to the simultaneous transmission. No new or higher emissions were detected.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Receiver	Rohde & Schwarz	ESR26	ARQ	2022-05-02	2023-05-02
Antenna - Double Ridge	ETS Lindgren	3115	AJL	2022-10-21	2024-10-21
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAJ	2022-04-19	2023-04-19
Cable	Northwest EMC	1-8.2 GHz	TXC	2022-04-19	2023-04-19
Antenna - Standard Gain	ETS Lindgren	3160-07	AJF	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	PAK	2022-09-09	2023-09-09
Cable	Northwest EMC	8-18GHz	TXD	2022-04-12	2023-04-12
Antenna - Standard Gain	ETS Lindgren	3160-08	AJG	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	PAL	2022-09-09	2023-09-09
Antenna - Biconilog	ETS Lindgren	3143B	AYF	2022-09-02	2024-09-02
Cable	Northwest EMC	RE 9kHz - 1GHz	TXB	2022-06-10	2023-06-10
Amplifier - Pre-Amplifier	Fairview Microwave	FMAM63001	PAS	2022-04-19	2023-04-19
Filter - Low Pass	Micro-Tronics	LPM50004	HHV	2022-07-22	2023-07-22

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.1 dB	-5.1 dB

FREQUENCY RANGE INVESTIGATED

30 MHz TO 18 GHz

POWER INVESTIGATED

4.2VDC via Battery

CONFIGURATIONS INVESTIGATED

WTV0085-2

MODES INVESTIGATED

Simultaneous Transmitting LTE (+23 dBm, Band 14) and BT (+14 dBm)

Simultaneous Transmitting LTE (+23 dBm, Band 14) and Wi-Fi (+17 dBm, 802.11b SISO)

OUT OF BAND EMISSIONS SIMULTANEOUS TRANSMISSIONS

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-29
Customer:	Motorola Solutions, Inc.	Temperature:	21.8°C
Attendees:	Navaid Karimi	Relative Humidity:	32.3%
Customer Project:	None	Bar. Pressure (PMSL):	1024 mb
Tested By:	Jarrold Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	335	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

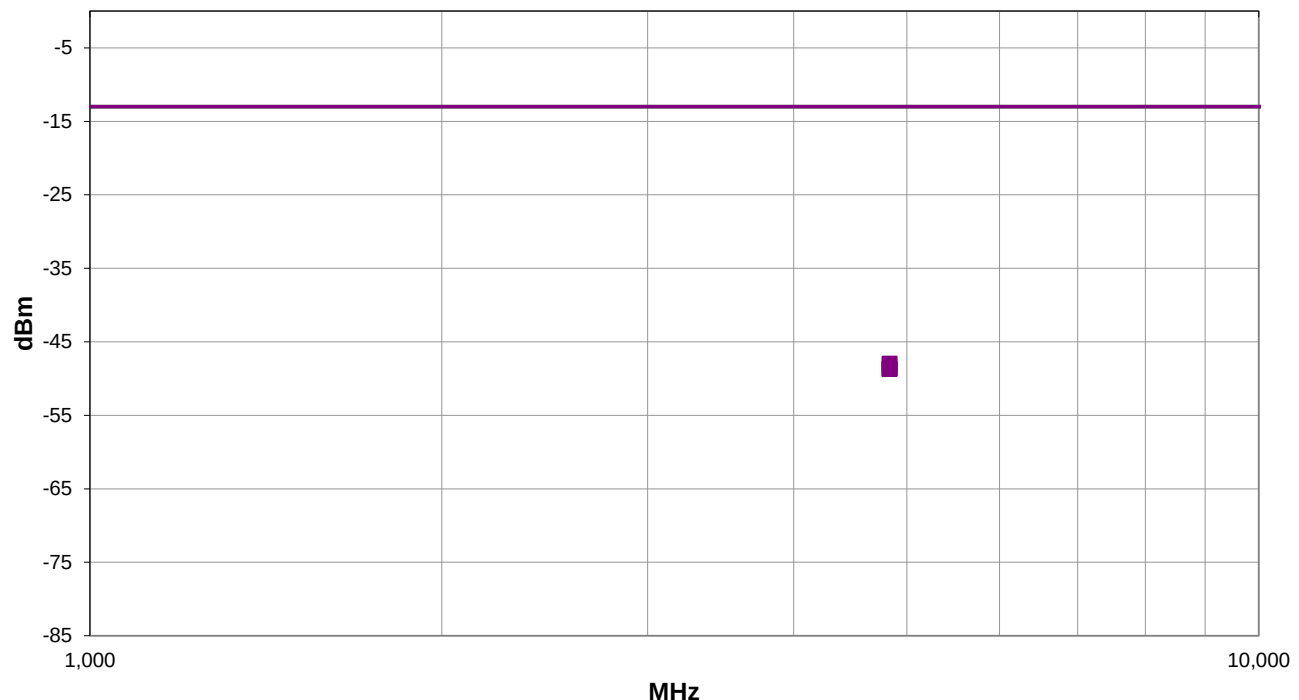
LTE mode: 5 MHz, 1RB/0, High Channel (795.5 MHz) -- Wi-Fi mode: 1 Mbps, Low Channel (2412 MHz).

EUT OPERATING MODES

Simultaneous Transmitting LTE (+23 dBm, Band 14) and Wi-Fi (+17 dBm, 802.11b SISO)
--

DEVIATIONS FROM TEST STANDARD

None



Run #: 335

■ PK ◆ AV ● QP

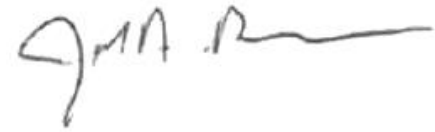
OUT OF BAND EMISSIONS SIMULTANEOUS TRANSMISSIONS

RESULTS - Run #335

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
4832.233	1.02	79.0	Vert	PK	16.1E-9	-47.9	-13.0	-34.9	EUT Horz
4831.409	1.5	194.0	Horz	PK	15.7E-9	-48.0	-13.0	-35.0	EUT on Side
4832.641	1.5	351.9	Horz	PK	13.7E-9	-48.6	-13.0	-35.6	EUT Vert
4832.150	1.5	309.0	Horz	PK	13.7E-9	-48.6	-13.0	-35.6	EUT Horz
4832.541	1.5	312.0	Vert	PK	13.7E-9	-48.6	-13.0	-35.6	EUT on Side
4830.694	1.5	219.0	Vert	PK	13.4E-9	-48.7	-13.0	-35.7	EUT Vert

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS SIMULTANEOUS TRANSMISSIONS

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-29
Customer:	Motorola Solutions, Inc.	Temperature:	21.8°C
Attendees:	Navid Karimi	Relative Humidity:	32.3%
Customer Project:	None	Bar. Pressure (PMSL):	1024 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2023	ANSI C63.10:2013

TEST PARAMETERS

Run #:	335	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

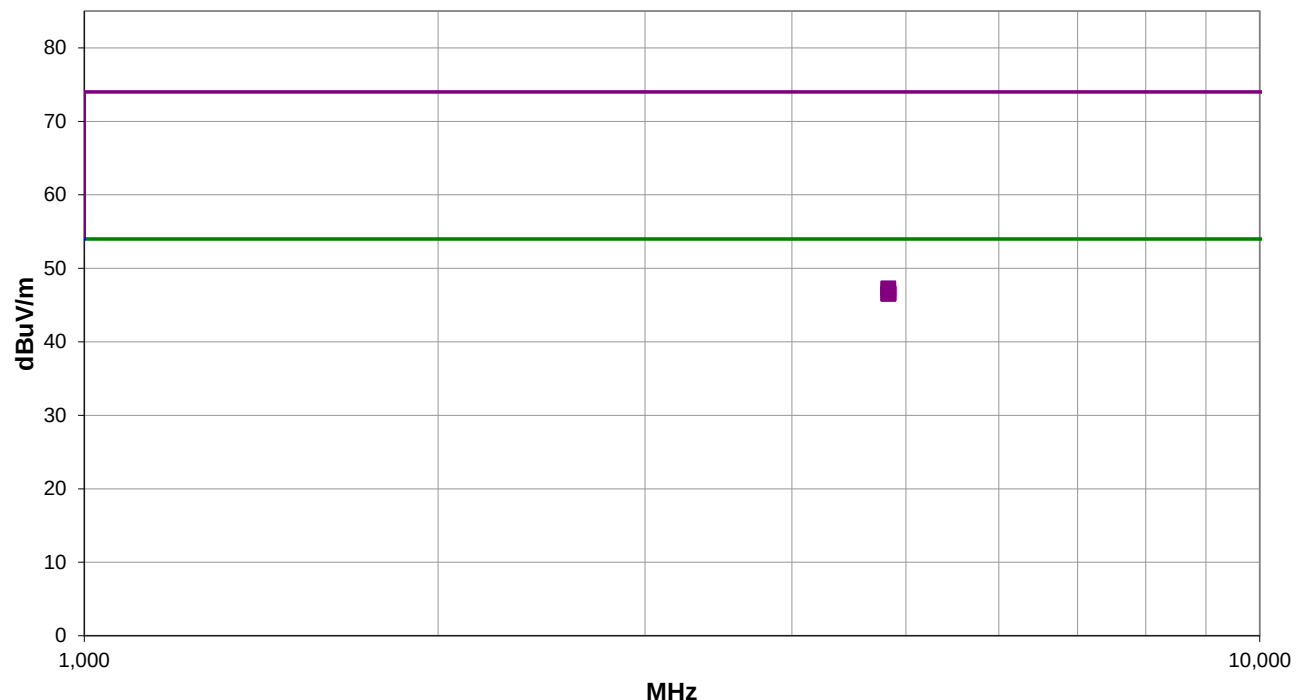
LTE mode: 5 MHz, 1RB/0, High Channel (795.5 MHz) -- Wi-Fi mode: 1 Mbps, Low Channel (2412 MHz).

EUT OPERATING MODES

Simultaneous Transmitting LTE (+23 dBm, Band 14) and Wi-Fi (+17 dBm, 802.11b SISO)
--

DEVIATIONS FROM TEST STANDARD

None



Run #: 335

■ PK ◆ AV ● QP

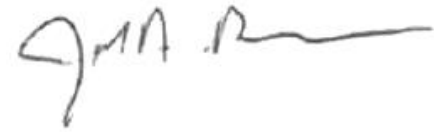
OUT OF BAND EMISSIONS SIMULTANEOUS TRANSMISSIONS

RESULTS - Run #335

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4832.233	42.3	5.0	1.02	79.0	3.0	0.0	Vert	PK	0.0	47.3	74.0	-26.7	EUT Horz
4831.409	42.2	5.0	1.5	194.0	3.0	0.0	Horz	PK	0.0	47.2	74.0	-26.8	EUT on Side
4832.641	41.6	5.0	1.5	351.9	3.0	0.0	Horz	PK	0.0	46.6	74.0	-27.4	EUT Vert
4832.150	41.6	5.0	1.5	309.0	3.0	0.0	Horz	PK	0.0	46.6	74.0	-27.4	EUT Horz
4832.541	41.6	5.0	1.5	312.0	3.0	0.0	Vert	PK	0.0	46.6	74.0	-27.4	EUT on Side
4830.694	41.5	5.0	1.5	219.0	3.0	0.0	Vert	PK	0.0	46.5	74.0	-27.5	EUT Vert

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS SIMULTANEOUS TRANSMISSIONS

EUT:	V700	Work Order:	WTVD0085
Serial Number:	BWL7-000995	Date:	2023-03-29
Customer:	Motorola Solutions, Inc.	Temperature:	21.8°C
Attendees:	Navaid Karimi	Relative Humidity:	32.3%
Customer Project:	None	Bar. Pressure (PMSL):	1024 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27.53:2023	ANSI C63.26:2015

TEST PARAMETERS

Run #:	339	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

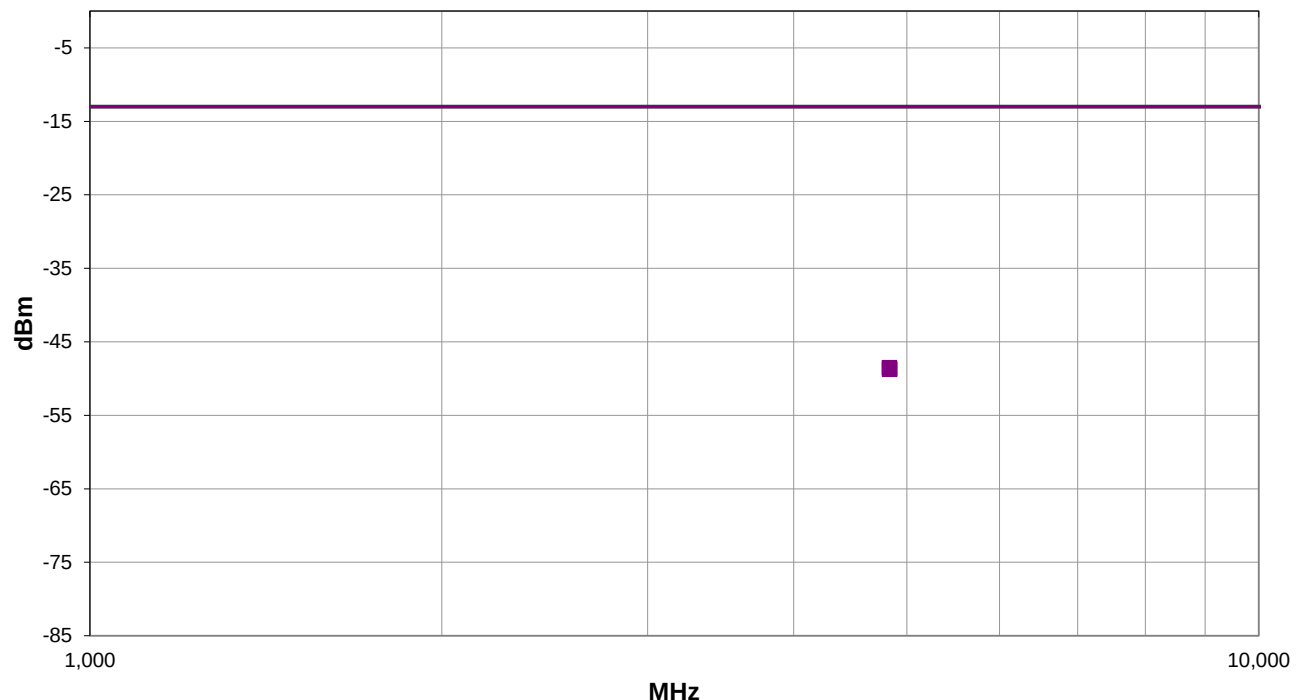
LTE mode: 5 MHz Ch, 1RB/0, High Channel (795.5 MHz) -- BT mode: DH5, Low Channel (2400 MHz)

EUT OPERATING MODES

Simultaneous Transmitting LTE (+23 dBm, Band 14) and BT (+14 dBm)

DEVIATIONS FROM TEST STANDARD

None



Run #: 339

■ PK ◆ AV ● QP

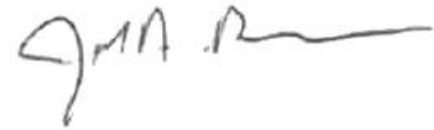
OUT OF BAND EMISSIONS SIMULTANEOUS TRANSMISSIONS

RESULTS - Run #339

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
4831.451	1.5	338.0	Vert	PK	14.0E-9	-48.5	-13.0	-35.5	EUT Horz
4834.221	1.85	40.9	Horz	PK	13.4E-9	-48.7	-13.0	-35.7	EUT on Side

CONCLUSION

Pass



Tested By

OUT OF BAND EMISSIONS SIMULTANEOUS TRANSMISSIONS

EUT:	V700	Work Order:	WTVDD0085
Serial Number:	BWL7-000995	Date:	2023-03-29
Customer:	Motorola Solutions, Inc.	Temperature:	21.8°C
Attendees:	Navid Karimi	Relative Humidity:	32.3%
Customer Project:	None	Bar. Pressure (PMSL):	1024 mb
Tested By:	Jarrod Brenden	Job Site:	TX02
Power:	4.2VDC via Battery	Configuration:	WTVDD0085-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2023	ANSI C63.10:2013

TEST PARAMETERS

Run #:	339	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

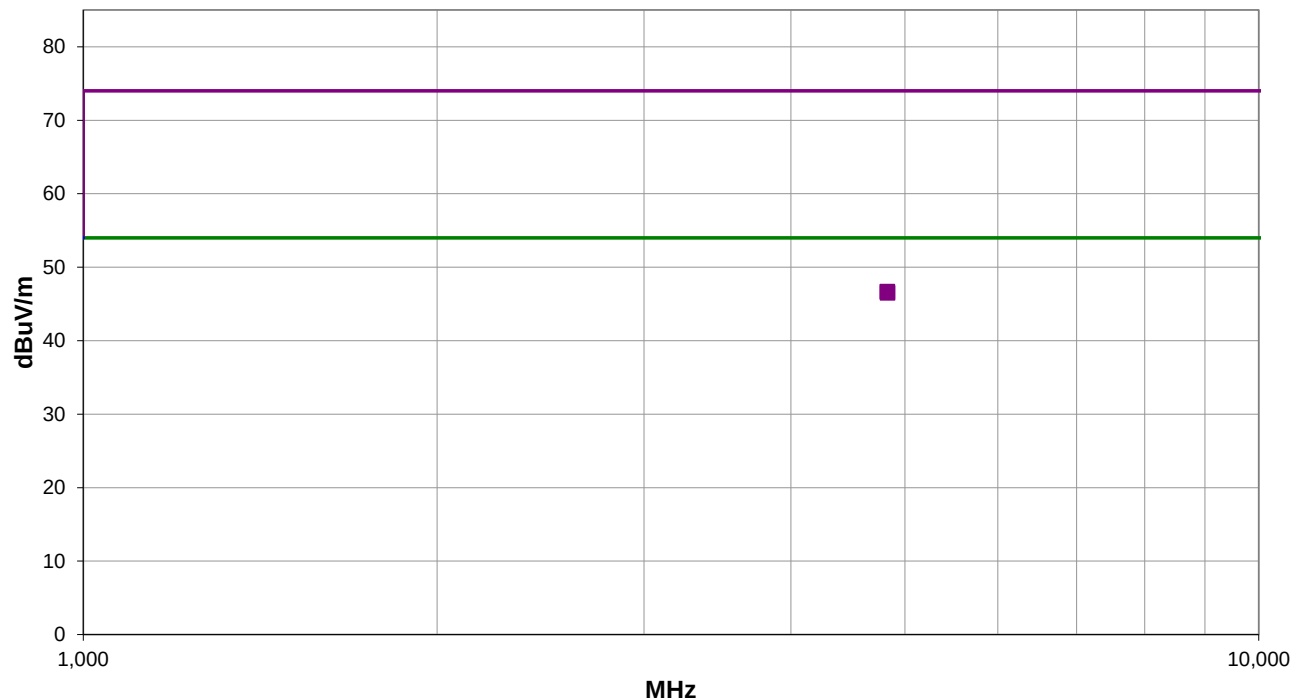
LTE mode: 5 MHz Ch, 1RB/0, High Channel (795.5 MHz) -- BT mode: DH5, Low Channel (2400 MHz)

EUT OPERATING MODES

Simultaneous Transmitting LTE (+23 dBm, Band 14) and BT (+14 dBm)

DEVIATIONS FROM TEST STANDARD

None



Run #: 339

■ PK ◆ AV ● QP

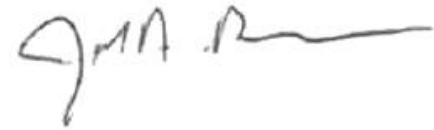
OUT OF BAND EMISSIONS SIMULTANEOUS TRANSMISSIONS

RESULTS - Run #339

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4831.451	41.7	5.0	1.5	338.0	3.0	0.0	Vert	PK	0.0	46.7	74.0	-27.3	EUT Horz
4834.221	41.5	5.0	1.85	40.9	3.0	0.0	Horz	PK	0.0	46.5	74.0	-27.5	EUT on Side

CONCLUSION

Pass



Tested By

End of Test Report