

# SPURIOUS RADIATED EMISSIONS



PSA-ESCI 2019.11.08.1

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

## MODES OF OPERATION

Transmitting Wi-Fi on Low channel (2412/2422 MHz), Mid channel (2437 MHz), and High channel (2462/2452 MHz); various data rates; 20 MHz and 40 MHz bandwidths; 100% duty cycle; Dome antenna

Transmitting Wi-Fi on Low channel (2412/2422 MHz), Mid channel (2437 MHz), and High channel (2462/2452 MHz); various data rates; 20 MHz and 40 MHz bandwidths; 100% duty cycle; Monopole antenna

## POWER SETTINGS INVESTIGATED

24 VDC

## CONFIGURATIONS INVESTIGATED

KOYO0001 - 3

KOYO0001 - 2

## FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26500 MHz
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## SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Antenna - Standard Gain	ETS Lindgren	3160-09	AHG	NCR	0 mo
Amplifier - Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	2019-09-11	12 mo
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNP	2019-09-11	12 mo
Analyzer - Spectrum Analyzer	Keysight	N9010A (EXA)	AFQ	2019-12-21	12 mo
Antenna - Biconilog	ETS Lindgren	3142D	AXO	2019-09-03	24 mo
Cable	ESM Cable Corp.	Bilog Cables	MNH	2019-10-18	12 mo
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AVO	2019-10-18	12 mo
Antenna - Double Ridge	ETS-Lindgren	3115	AJQ	2019-01-16	24 mo
Cable	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	2019-09-17	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVT	2020-01-17	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-07	AXP	NCR	0 mo
Cable	ESM Cable Corp.	Standard Gain Horn Cables	MNJ	2019-03-08	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVV	2020-01-17	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-08	AIQ	NCR	0 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVW	2020-01-17	12 mo
Antenna - Double Ridge	ETS Lindgren	3115	AIP	2018-07-12	24 mo

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## TEST DESCRIPTION

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.

For each configuration, the spectrum was scanned throughout the specified range as part of the exploratory investigation of the emissions. These “pre-scans” are not included in the report. Final measurements on individual emissions were then made and included in this test report.

The individual 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 axis if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

QP = Quasi-Peak Detector  
PK = Peak Detector  
AV = RMS Detector

Measurements were made to satisfy the specific requirements of the test specification for out of band emissions as well as the restricted band requirements.

If there are no detectable emissions above the noise floor, the data included may show noise floor measurements for reference only.

Measurements at the edges of the allowable band may be presented in an alternative method as provided for in the ANSI C63.10 Marker-Delta method. This method involves performing an in-band fundamental measurement followed by a screen capture of the fundamental and out-of-band emission using reduced measurement instrumentation bandwidths. The amplitude delta measured on this screen capture is applied to the fundamental emission value to show the out-of-band emission level as applied to the limit.

Where the radio test software does not provide for a duty cycle at continuous transmit conditions (> 98%) and the RMS (power average) measurements were made across the on and off times of the EUT transmissions, a duty cycle correction is added to the measurements using the formula of  $10 \cdot \text{LOG}(dc)$ .

# SPURIOUS RADIATED EMISSIONS

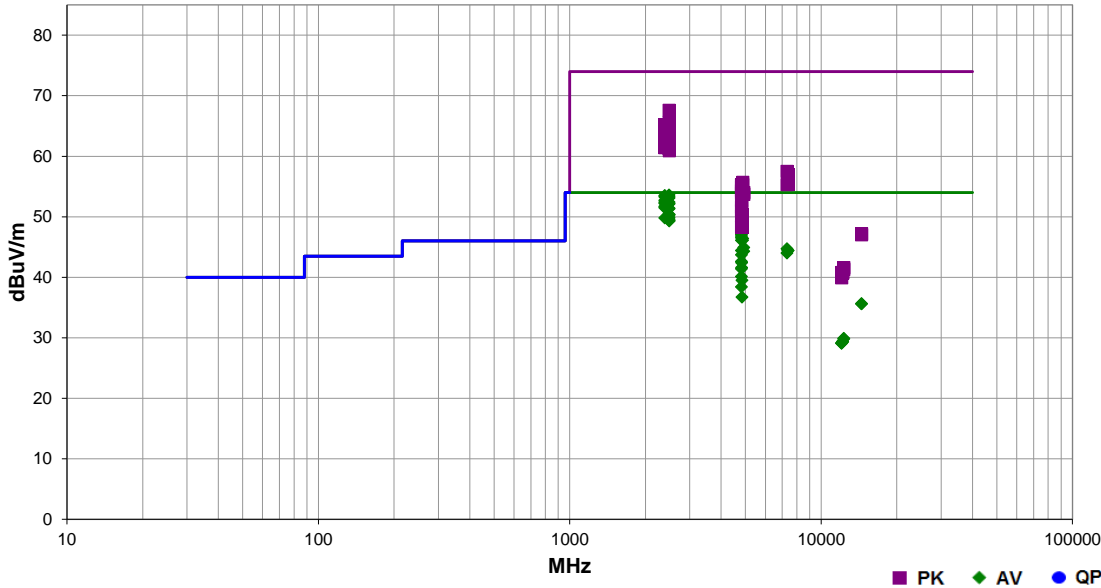


EmiR5 2019.08.15.1 PSA-ESCI 2019.11.08.1

<b>Work Order:</b>	KOYO0001	<b>Date:</b>	2020-01-31	
<b>Project:</b>	None	<b>Temperature:</b>	22.7 °C	
<b>Job Site:</b>	MN05	<b>Humidity:</b>	25% RH	
<b>Serial Number:</b>	N/A	<b>Barometric Pres.:</b>	1019 mbar	
<b>EUT:</b>	C2-03CPU	<b>Tested by:</b> Andrew Rogstad, Dan Haas		
<b>Configuration:</b>	2			
<b>Customer:</b>	Koyo Electronics Industries Co., LTD			
<b>Attendees:</b>	Kuramoto Hiroyuki, Robert Thornton, Hayashi Tatsutoshi			
<b>EUT Power:</b>	24 VDC			
<b>Operating Mode:</b>	Transmitting Wi-Fi on Low channel (2412/2422 MHz), Mid channel (2437 MHz), and High channel (2462/2452 MHz); various data rates; 20 MHz and 40 MHz bandwidths; 100% duty cycle; Monopole antenna			
<b>Deviations:</b>	None			
<b>Comments:</b>	See comments for EUT orientation, transmit frequency, data rate, and bandwidth.			

<b>Test Specifications</b>	FCC 15.247:2020	<b>Test Method</b>	ANSI C63.10:2013
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<b>Run #</b>	104	<b>Test Distance (m)</b>	3	<b>Antenna Height(s)</b>	1 to 4(m)	<b>Results</b>	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	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
2483.500	37.4	-3.8	1.5	156.0	3.0	20.0	Horz	AV	0.0	53.6	54.0	-0.4	EUT-Horiz, High-2462 MHz, 36Mbps, 20 MHz BW
2389.947	37.2	-3.7	1.5	153.0	3.0	20.0	Horz	AV	0.0	53.5	54.0	-0.5	EUT-Horiz, Low-2422 MHz, MCS0, 40 MHz BW
2483.520	37.1	-3.8	1.5	233.0	3.0	20.0	Horz	AV	0.0	53.3	54.0	-0.7	EUT-Horiz, High-2452 MHz, MCS0, 40 MHz BW
2389.927	37.0	-3.7	2.2	152.0	3.0	20.0	Horz	AV	0.0	53.3	54.0	-0.7	EUT-Horiz, Low-2412 MHz, MCS0, 20 MHz BW
2483.520	36.9	-3.8	1.6	160.1	3.0	20.0	Horz	AV	0.0	53.1	54.0	-0.9	EUT-Horiz, High-2462 MHz, 6 Mbps, 20 MHz BW
2389.940	36.4	-3.7	1.5	153.0	3.0	20.0	Horz	AV	0.0	52.7	54.0	-1.3	EUT-Horiz, Low-2412 MHz, 6 Mbps, 20 MHz BW
2483.567	36.2	-3.8	1.5	239.9	3.0	20.0	Horz	AV	0.0	52.4	54.0	-1.6	EUT-on side, High-2462 MHz, 6 Mbps, 20 MHz BW
2389.847	36.1	-3.7	1.5	146.0	3.0	20.0	Horz	AV	0.0	52.4	54.0	-1.6	EUT-Horiz, Low-2422 MHz, MCS0, 40 MHz BW
2483.773	36.0	-3.8	1.8	355.9	3.0	20.0	Vert	AV	0.0	52.2	54.0	-1.8	EUT-Horiz, High-2452 MHz, MCS0, 40 MHz BW
2389.993	35.9	-3.7	3.1	176.0	3.0	20.0	Vert	AV	0.0	52.2	54.0	-1.8	EUT-Horiz, Low-2412 MHz, 6 Mbps, 20 MHz BW
2483.500	35.9	-3.8	1.5	26.0	3.0	20.0	Horz	AV	0.0	52.1	54.0	-1.9	EUT-Horiz, High-2462 MHz, MCS0, 20 MHz BW
2389.987	35.4	-3.7	1.5	235.1	3.0	20.0	Vert	AV	0.0	51.7	54.0	-2.3	EUT-Horiz, Low-2422 MHz, MCS0, 40 MHz BW
2389.653	35.2	-3.7	3.2	117.0	3.0	20.0	Vert	AV	0.0	51.5	54.0	-2.5	EUT-Horiz, Low-2422 MHz, MCS0, 40 MHz BW
2483.620	35.2	-3.8	1.5	0.0	3.0	20.0	Vert	AV	0.0	51.4	54.0	-2.6	EUT-Vert, High-2462 MHz, 6 Mbps, 20 MHz BW
2484.060	35.1	-3.8	1.5	241.0	3.0	20.0	Vert	AV	0.0	51.3	54.0	-2.7	EUT-Horiz, High-2452 MHz, MCS0, 40 MHz BW
2483.647	34.2	-3.8	1.5	73.0	3.0	20.0	Vert	AV	0.0	50.4	54.0	-3.6	EUT-on side, High-2462 MHz, 6 Mbps, 20 MHz BW
2483.680	34.1	-3.8	1.5	155.0	3.0	20.0	Horz	AV	0.0	50.3	54.0	-3.7	EUT-Horiz, High-2462 MHz, 11Mbps, 20 MHz BW
2483.507	34.1	-3.8	1.5	319.0	3.0	20.0	Horz	AV	0.0	50.3	54.0	-3.7	EUT-Vert, High-2462 MHz, 6 Mbps, 20 MHz BW
2483.540	33.7	-3.8	1.2	234.0	3.0	20.0	Vert	AV	0.0	49.9	54.0	-4.1	EUT-Horiz, High-2462 MHz, 6 Mbps, 20 MHz BW
2390.000	33.5	-3.7	1.5	238.1	3.0	20.0	Vert	AV	0.0	49.8	54.0	-4.2	EUT-Horiz, Low-2422 MHz, MCS0, 40 MHz BW
2483.560	33.4	-3.8	1.2	149.0	3.0	20.0	Horz	AV	0.0	49.6	54.0	-4.4	EUT-Horiz, High-2462 MHz, 54Mbps, 20 MHz BW
2483.913	33.2	-3.8	1.5	34.0	3.0	20.0	Horz	AV	0.0	49.4	54.0	-4.6	EUT-Horiz, High-2462 MHz, MCS7, 20 MHz BW
2486.647	33.0	-3.7	1.5	311.0	3.0	20.0	Horz	AV	0.0	49.3	54.0	-4.7	EUT-Horiz, High-2462 MHz, 1Mbps, 20 MHz BW
2483.527	51.4	-3.8	1.5	156.0	3.0	20.0	Horz	PK	0.0	67.6	74.0	-6.4	EUT-Horiz, High-2462 MHz, 36Mbps, 20 MHz BW
4824.542	42.7	4.5	1.9	322.9	3.0	0.0	Horz	AV	0.0	47.2	54.0	-6.8	EUT-on side, Low-2412 MHz, 1 Mbps, 20 MHz BW
4824.625	42.6	4.5	2.1	249.0	3.0	0.0	Horz	AV	0.0	47.1	54.0	-6.9	EUT-on side, Low-2412 MHz, 1 Mbps, 20 MHz BW
4824.708	42.3	4.5	2.6	261.0	3.0	0.0	Vert	AV	0.0	46.8	54.0	-7.2	EUT-Horiz, Low-2412 MHz, 1 Mbps, 20 MHz BW
4824.583	42.0	4.5	1.5	160.0	3.0	0.0	Horz	AV	0.0	46.5	54.0	-7.5	EUT-Vert, Low-2412 MHz, 1 Mbps, 20 MHz BW

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	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
4874.467	41.8	4.6	2.1	257.0	3.0	0.0	Vert	AV	0.0	46.4	54.0	-7.6	EUT-Horiz, Mid-2437 MHz, 1 Mbps, 20 MHz BW
4823.292	41.6	4.5	3.1	87.9	3.0	0.0	Vert	AV	0.0	46.1	54.0	-7.9	EUT-on side, Low-2412 MHz, 1 Mbps, 20 MHz BW
4873.287	41.5	4.6	2.2	336.0	3.0	0.0	Horz	AV	0.0	46.1	54.0	-7.9	EUT-on side, Mid-2437 MHz, 1 Mbps, 20 MHz BW
2485.280	49.3	-3.7	1.5	233.0	3.0	20.0	Horz	PK	0.0	65.6	74.0	-8.4	EUT-Horiz, High-2452 MHz, MCS0, 40 MHz BW
2389.813	48.9	-3.7	2.2	152.0	3.0	20.0	Horz	PK	0.0	65.2	74.0	-8.8	EUT-Horiz, Low-2412 MHz, MCS0, 20 MHz BW
2387.087	48.7	-3.7	1.5	153.0	3.0	20.0	Horz	PK	0.0	65.0	74.0	-9.0	EUT-Horiz, Low-2422 MHz, MCS0, 40 MHz BW
4923.367	40.4	4.5	2.2	258.9	3.0	0.0	Vert	AV	0.0	44.9	54.0	-9.1	EUT-Horiz, High-2462 MHz, 1 Mbps, 20 MHz BW
7312.340	31.3	13.4	1.8	145.0	3.0	0.0	Horz	AV	0.0	44.7	54.0	-9.3	EUT-on side, Mid-2437 MHz, 1 Mbps, 20 MHz BW
2484.293	48.3	-3.8	1.6	160.1	3.0	20.0	Horz	PK	0.0	64.5	74.0	-9.5	EUT-Horiz, High-2462 MHz, 6 Mbps, 20 MHz BW
2388.973	48.2	-3.7	1.5	146.0	3.0	20.0	Horz	PK	0.0	64.5	74.0	-9.5	EUT-Horiz, Low-2422 MHz, MCS0, 40 MHz BW
2389.113	48.1	-3.7	1.5	153.0	3.0	20.0	Horz	PK	0.0	64.4	74.0	-9.6	EUT-Horiz, Low-2412 MHz, 6 Mbps, 20 MHz BW
2388.907	48.1	-3.7	3.1	176.0	3.0	20.0	Vert	PK	0.0	64.4	74.0	-9.6	EUT-Horiz, Low-2412 MHz, 6 Mbps, 20 MHz BW
4824.750	39.9	4.5	2.6	250.9	3.0	0.0	Horz	AV	0.0	44.4	54.0	-9.6	EUT-Horiz, Low-2412 MHz, 1 Mbps, 20 MHz BW
7387.447	31.0	13.4	1.5	234.0	3.0	0.0	Vert	AV	0.0	44.4	54.0	-9.6	EUT-Horiz, High-2462 MHz, 1 Mbps, 20 MHz BW
7387.353	31.0	13.4	1.5	4.0	3.0	0.0	Horz	AV	0.0	44.4	54.0	-9.6	EUT-on side, High-2462 MHz, 1 Mbps, 20 MHz BW
4923.360	39.8	4.5	2.1	247.9	3.0	0.0	Horz	AV	0.0	44.3	54.0	-9.7	EUT-on side, High-2462 MHz, 1 Mbps, 20 MHz BW
2484.873	47.9	-3.8	1.5	26.0	3.0	20.0	Horz	PK	0.0	64.1	74.0	-9.9	EUT-Horiz, High-2462 MHz, MCS0, 20 MHz BW
7312.960	30.6	13.4	1.5	96.9	3.0	0.0	Vert	AV	0.0	44.0	54.0	-10.0	EUT-Horiz, Mid-2437 MHz, 1 Mbps, 20 MHz BW
2483.667	47.8	-3.8	1.8	355.9	3.0	20.0	Vert	PK	0.0	64.0	74.0	-10.0	EUT-Horiz, High-2452 MHz, MCS0, 40 MHz BW
2483.607	47.6	-3.8	1.5	239.9	3.0	20.0	Horz	PK	0.0	63.8	74.0	-10.2	EUT-on side, High-2462 MHz, 6 Mbps, 20 MHz BW
4824.708	39.2	4.5	1.5	268.0	3.0	0.0	Horz	AV	0.0	43.7	54.0	-10.3	EUT-on side, Low-2412 MHz, 1 Mbps, 20 MHz BW
2388.353	47.4	-3.7	1.5	235.1	3.0	20.0	Vert	PK	0.0	63.7	74.0	-10.3	EUT-Horiz, Low-2422 MHz, MCS0, 40 MHz BW
2483.707	46.6	-3.8	1.5	0.0	3.0	20.0	Vert	PK	0.0	62.8	74.0	-11.2	EUT-Vert, High-2462 MHz, 6 Mbps, 20 MHz BW
2485.760	46.4	-3.7	1.5	241.0	3.0	20.0	Vert	PK	0.0	62.7	74.0	-11.3	EUT-Horiz, High-2452 MHz, MCS0, 40 MHz BW
4824.625	38.1	4.5	1.5	183.9	3.0	0.0	Vert	AV	0.0	42.6	54.0	-11.4	EUT-Vert, Low-2412 MHz, 1 Mbps, 20 MHz BW
2389.153	46.2	-3.7	3.2	117.0	3.0	20.0	Vert	PK	0.0	62.5	74.0	-11.5	EUT-Horiz, Low-2422 MHz, MCS0, 40 MHz BW
4825.958	37.9	4.5	2.1	264.0	3.0	0.0	Horz	AV	0.0	42.4	54.0	-11.6	EUT-on side, Low-2412 MHz, 6 Mbps, 20 MHz BW
2483.700	46.0	-3.8	1.2	149.0	3.0	20.0	Horz	PK	0.0	62.2	74.0	-11.8	EUT-Horiz, High-2462 MHz, 54Mbps, 20 MHz BW
2484.040	46.0	-3.8	1.5	34.0	3.0	20.0	Horz	PK	0.0	62.2	74.0	-11.8	EUT-Horiz, High-2462 MHz, MCS7, 20 MHz BW
4827.500	37.0	4.6	2.0	326.9	3.0	0.0	Horz	AV	0.0	41.6	54.0	-12.4	EUT-on side, Low-2412 MHz, MCS0, 20 MHz BW
2483.947	45.3	-3.8	1.5	319.0	3.0	20.0	Horz	PK	0.0	61.5	74.0	-12.5	EUT-Vert, High-2462 MHz, 6 Mbps, 20 MHz BW
4825.250	36.9	4.5	2.0	322.0	3.0	0.0	Horz	AV	0.0	41.4	54.0	-12.6	EUT-on side, Low-2412 MHz, 36 Mbps, 20 MHz BW
2484.380	45.2	-3.8	1.2	234.0	3.0	20.0	Vert	PK	0.0	61.4	74.0	-12.6	EUT-Horiz, High-2462 MHz, 6 Mbps, 20 MHz BW
2389.560	45.1	-3.7	1.5	238.1	3.0	20.0	Vert	PK	0.0	61.4	74.0	-12.6	EUT-Horiz, Low-2422 MHz, MCS0, 40 MHz BW
2483.760	45.1	-3.8	1.5	155.0	3.0	20.0	Horz	PK	0.0	61.3	74.0	-12.7	EUT-Horiz, High-2462 MHz, 11Mbps, 20 MHz BW
2483.747	45.1	-3.8	1.5	73.0	3.0	20.0	Vert	PK	0.0	61.3	74.0	-12.7	EUT-on side, High-2462 MHz, 6 Mbps, 20 MHz BW
2487.280	44.6	-3.7	1.5	311.0	3.0	20.0	Horz	PK	0.0	60.9	74.0	-13.1	EUT-Horiz, High-2462 MHz, 1Mbps, 20 MHz BW
4825.708	35.6	4.5	2.0	322.0	3.0	0.0	Horz	AV	0.0	40.1	54.0	-13.9	EUT-on side, Low-2412 MHz, 54 Mbps, 20 MHz BW
4844.167	34.9	4.6	1.5	109.0	3.0	0.0	Horz	AV	0.0	39.5	54.0	-14.5	EUT-on side, Low-2422 MHz, MCS0, 40 MHz BW
4823.625	33.9	4.5	2.2	270.0	3.0	0.0	Horz	AV	0.0	38.4	54.0	-15.6	EUT-on side, Low-2412 MHz, MCS7, 20 MHz BW
7310.587	44.1	13.4	1.8	145.0	3.0	0.0	Horz	PK	0.0	57.5	74.0	-16.5	EUT-on side, Mid-2437 MHz, 1 Mbps, 20 MHz BW
7386.087	43.5	13.4	1.5	234.0	3.0	0.0	Vert	PK	0.0	56.9	74.0	-17.1	EUT-Horiz, High-2462 MHz, 1 Mbps, 20 MHz BW
4842.717	32.1	4.6	1.4	40.0	3.0	0.0	Horz	AV	0.0	36.7	54.0	-17.3	EUT-on side, Low-2422 MHz, MCS7, 40 MHz BW
4873.893	51.1	4.6	2.1	257.0	3.0	0.0	Vert	PK	0.0	55.7	74.0	-18.3	EUT-Horiz, Mid-2437 MHz, 1 Mbps, 20 MHz BW
14470.840	27.8	7.8	1.5	51.0	3.0	0.0	Vert	AV	0.0	35.6	54.0	-18.4	EUT-Horiz, Low-2412 MHz, 1 Mbps, 20 MHz BW
14471.850	27.8	7.8	1.5	286.8	3.0	0.0	Horz	AV	0.0	35.6	54.0	-18.4	EUT-on side, Low-2412 MHz, 1 Mbps, 20 MHz BW
7386.960	42.0	13.4	1.5	4.0	3.0	0.0	Horz	PK	0.0	55.4	74.0	-18.6	EUT-on side, High-2462 MHz, 1 Mbps, 20 MHz BW
4824.167	50.8	4.5	2.1	249.0	3.0	0.0	Horz	PK	0.0	55.3	74.0	-18.7	EUT-on side, Low-2412 MHz, 1 Mbps, 20 MHz BW
4873.947	50.7	4.6	2.2	336.0	3.0	0.0	Horz	PK	0.0	55.3	74.0	-18.7	EUT-on side, Mid-2437 MHz, 1 Mbps, 20 MHz BW
7312.940	41.9	13.4	1.5	96.9	3.0	0.0	Vert	PK	0.0	55.3	74.0	-18.7	EUT-Horiz, Mid-2437 MHz, 1 Mbps, 20 MHz BW
4824.083	50.8	4.5	1.9	322.9	3.0	0.0	Horz	PK	0.0	55.3	74.0	-18.7	EUT-on side, Low-2412 MHz, 1 Mbps, 20 MHz BW
4824.000	50.4	4.5	2.6	261.0	3.0	0.0	Vert	PK	0.0	54.9	74.0	-19.1	EUT-Horiz, Low-2412 MHz, 1 Mbps, 20 MHz BW
4823.792	49.9	4.5	1.5	160.0	3.0	0.0	Horz	PK	0.0	54.4	74.0	-19.6	EUT-Vert, Low-2412 MHz, 1 Mbps, 20 MHz BW
4823.958	49.7	4.5	1.5	268.0	3.0	0.0	Horz	PK	0.0	54.2	74.0	-19.8	EUT-on side, Low-2412 MHz, 1 Mbps, 20 MHz BW
4923.853	49.5	4.5	2.2	258.9	3.0	0.0	Vert	PK	0.0	54.0	74.0	-20.0	EUT-Horiz, High-2462 MHz, 1 Mbps, 20 MHz BW
4824.542	49.4	4.5	3.1	87.9	3.0	0.0	Vert	PK	0.0	53.9	74.0	-20.1	EUT-on side, Low-2412 MHz, 1 Mbps, 20 MHz BW
4924.053	49.2	4.5	2.1	247.9	3.0	0.0	Horz	PK	0.0	53.7	74.0	-20.3	EUT-on side, High-2462 MHz, 1 Mbps, 20 MHz BW
4824.208	48.2	4.5	2.6	250.9	3.0	0.0	Horz	PK	0.0	52.7	74.0	-21.3	EUT-Horiz, Low-2412 MHz, 1 Mbps, 20 MHz BW
4826.125	48.1	4.5	2.1	264.0	3.0	0.0	Horz	PK	0.0	52.6	74.0	-21.4	EUT-on side, Low-2412 MHz, 6 Mbps, 20 MHz BW
4827.833	47.8	4.6	2.0	326.9	3.0	0.0	Horz	PK	0.0	52.4	74.0	-21.6	EUT-on side, Low-2412 MHz, MCS0, 20 MHz BW
4823.750	47.1	4.5	1.5	183.9	3.0	0.0	Vert	PK	0.0	51.6	74.0	-22.4	EUT-Vert, Low-2412 MHz, 1 Mbps, 20 MHz BW
4822.125	46.5	4.5	2.0	322.0	3.0	0.0	Horz	PK	0.0	51.0	74.0	-23.0	EUT-on side, Low-2412 MHz, 36 Mbps, 20 MHz BW
4844.100	45.8	4.6	1.5	109.0	3.0	0.0	Horz	PK	0.0	50.4	74.0	-23.6	EUT-on side, Low-2422 MHz, MCS0, 40 MHz BW
4824.375	45.6	4.5	2.0	322.0	3.0	0.0	Horz	PK	0.0	50.1	74.0	-23.9	EUT-on side, Low-2412 MHz, 54 Mbps, 20 MHz BW
12311.820	29.7	0.2	1.5	80.0	3.0	0.0	Vert	AV	0.0	29.9	54.0	-24.1	EUT-Horiz, High-2462 MHz, 1 Mbps, 20 MHz BW
12310.060	29.7	0.1	1.5	318.1	3.0	0.0	Horz	AV	0.0	29.8	54.0	-24.2	EUT-on side, High-2462 MHz, 1 Mbps, 20 MHz BW
12185.890	30.1	-0.7	1.7	247.0	3.0	0.0	Horz	AV	0.0	29.4	54.0	-24.6	EUT-on side, Mid-2437 MHz, 1 Mbps, 20 MHz BW
12186.120	30.0	-0.7	1.5	6.0	3.0	0.0	Vert	AV	0.0	29.3	54.0	-24.7	EUT-Horiz, Mid-2437 MHz, 1 Mbps, 20 MHz BW
12058.750	29.8	-0.7	1.5	106.0	3.0	0.0	Horz	AV	0.0	29.1	54.0	-24.9	EUT-on side, Low-2412 MHz, 1 Mbps, 20 MHz BW
12060.660	29.8	-0.7	1.5	213.1	3.0	0.0	Vert	AV	0.0	29.1	54.0	-24.9	EUT-Horiz, Low-2412 MHz, 1 Mbps, 20 MHz BW
4818.583	43.8	4.5	2.2	270.0	3.0	0.0	Horz	PK	0.0	48.3	74.0	-25.7	EUT-on side, Low-2412 MHz, MCS7, 20 MHz BW
4845.158	43.8	4.5	1.4	40.0	3.0	0.0	Horz	PK	0.0	48.3	74.0	-25.7	EUT-on side, Low-2422 MHz, MCS7, 40 MHz BW
14470.730	39.4	7.8	1.5	51.0	3.0	0.0	Vert	PK	0.0	47.2	74.0	-26.8	EUT-Horiz, Low-2412 MHz, 1 Mbps, 20 MHz BW
14471.290	39.2	7.8	1.5	286.8	3.0	0.0	Horz	PK	0.0	47.0	74.0	-27.0	EUT-on side, Low-2412 MHz, 1 Mbps, 20 MHz BW
12311.620	41.4	0.2	1.5	318.1	3.0	0.0	Horz	PK	0.0	41.6	74.0	-32.4	EUT-on side, High-2462 MHz, 1 Mbps, 20 MHz BW
12309.090	41.2	0.1	1.5	80.0	3.0	0.0	Vert	PK	0.0	41.3	74.0	-32.7	EUT-Horiz, High-2462 MHz, 1 Mbps, 20 MHz BW
12185.990	41.5	-0.7	1.5	6.0	3.0	0.0	Vert	PK	0.0	40.8	74.0	-33.2	EUT-Horiz, Mid-2437 MHz, 1 Mbps, 20 MHz BW
12060.570	41.5	-0.7	1.5	213.1	3.0	0.0	Vert	PK	0.0	40.8	74.0	-33.2	EUT-Horiz, Low-2412 MHz, 1 Mbps, 20 MHz BW
12184.810	41.4	-0.7	1.7	247.0	3.0	0.0	Horz	PK	0.0	40.7	74.0	-33.3	EUT-on side, Mid-2437 MHz, 1 Mbps, 20 MHz BW
12060.200	40.6	-0.7	1.5	106.0	3.0	0.0	Horz	PK	0.0	39.9	74.0	-34.1	EUT-on side, Low-2412 MHz, 1 Mbps, 20 MHz BW

# SPURIOUS RADIATED EMISSIONS

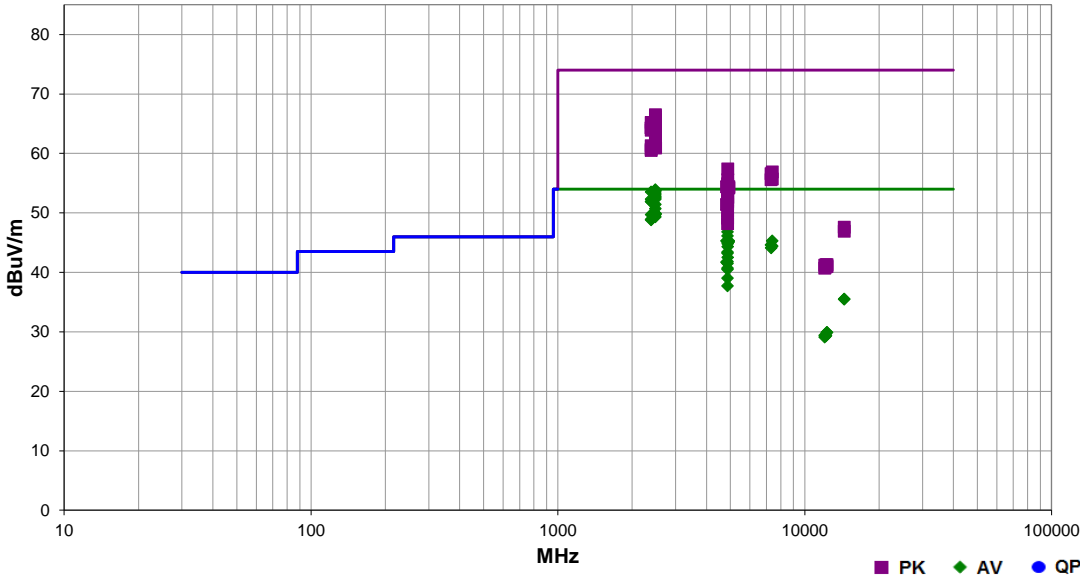


EmRS 2019.08.15.1 PSA-ESCI 2019.11.08.1

Work Order:	KOYO0001	Date:	2020-02-06	
Project:	None	Temperature:	22.2 °C	
Job Site:	MNO5	Humidity:	19.4% RH	
Serial Number:	N/A	Barometric Pres.:	1009 mbar	
EUT:	C2-03CPU			
Configuration:	3			
Customer:	Koyo Electronics Industries Co., LTD			
Attendees:	None			
EUT Power:	24 VDC			
Operating Mode:	Transmitting Wi-Fi on Low channel (2412/2422 MHz), Mid channel (2437 MHz), and High channel (2462/2452 MHz); various data rates; 20 MHz and 40 MHz bandwidths; 100% duty cycle; Dome antenna			
Deviations:	None			
Comments:	See comments for antenna orientation, transmit frequency, data rate, and bandwidth.			

Test Specifications	Test Method
FCC 15.247:2020	ANSI C63.10:2013

Run #	111	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	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
2483.953	37.7	-3.8	1.0	101.0	3.0	20.0	Horz	AV	0.0	53.9	54.0	-0.1	EUT-Vert, High-(2452 MHz), MCS0, 40 MHz BW
2483.527	37.5	-3.8	1.5	217.0	3.0	20.0	Vert	AV	0.0	53.7	54.0	-0.3	EUT-Horiz, High-(2452 MHz), MCS0, 40 MHz BW
2483.520	37.5	-3.8	1.0	101.0	3.0	20.0	Horz	AV	0.0	53.7	54.0	-0.3	EUT-Vert, High-(2462 MHz), MCS0, 20 MHz BW
2389.953	37.2	-3.7	1.0	101.1	3.0	20.0	Horz	AV	0.0	53.5	54.0	-0.5	EUT-Vert, Low-(2422 MHz), MCS0, 40 MHz BW
2483.560	37.1	-3.8	1.0	101.0	3.0	20.0	Horz	AV	0.0	53.3	54.0	-0.7	EUT-Vert, High-(2462 MHz), 6 Mbps, 20 MHz BW
2483.707	36.8	-3.8	1.5	153.9	3.0	20.0	Horz	AV	0.0	53.0	54.0	-1.0	EUT-Horiz, High-(2452 MHz), MCS0, 40 MHz BW
2483.547	36.5	-3.8	1.5	180.1	3.0	20.0	Vert	AV	0.0	52.7	54.0	-1.3	EUT-Vert, High-(2452 MHz), MCS0, 40 MHz BW
2483.500	36.3	-3.8	1.0	101.0	3.0	20.0	Horz	AV	0.0	52.5	54.0	-1.5	EUT-Vert, High-(2462 MHz), 36 Mbps, 20 MHz BW
2483.767	36.1	-3.8	1.5	117.9	3.0	20.0	Horz	AV	0.0	52.3	54.0	-1.7	EUT-On Side, High-(2452 MHz), MCS0, 40 MHz BW
2389.940	36.0	-3.7	1.4	157.0	3.0	20.0	Vert	AV	0.0	52.3	54.0	-1.7	EUT-Vert, Low-(2422 MHz), MCS0, 40 MHz BW
2389.947	35.6	-3.7	1.0	101.1	3.0	20.0	Horz	AV	0.0	51.9	54.0	-2.1	EUT-Vert, Low-(2412 MHz), MCS0, 20 MHz BW
2389.973	35.6	-3.7	1.0	101.2	3.0	20.0	Horz	AV	0.0	51.9	54.0	-2.1	EUT-Vert, Low-(2412 MHz), 6 Mbps, 20 MHz BW
2483.913	35.2	-3.8	1.2	95.9	3.0	20.0	Vert	AV	0.0	51.4	54.0	-2.6	EUT-On Side, High-(2452 MHz), MCS0, 40 MHz BW
2483.500	34.5	-3.8	1.0	101.0	3.0	20.0	Horz	AV	0.0	50.7	54.0	-3.3	EUT-Vert, High-(2462 MHz), MCS0, 20 MHz BW
2484.567	33.7	-3.8	1.0	101.0	3.0	20.0	Horz	AV	0.0	49.9	54.0	-4.1	EUT-Vert, High-(2462 MHz), MCS7, 40 MHz BW
2486.887	33.5	-3.7	1.0	100.9	3.0	20.0	Horz	AV	0.0	49.8	54.0	-4.2	EUT-Vert, High-(2462 MHz), 1 Mbps, 20 MHz BW
2483.707	33.6	-3.8	1.0	101.0	3.0	20.0	Horz	AV	0.0	49.8	54.0	-4.2	EUT-Vert, High-(2462 MHz), 11 Mbps, 20 MHz BW
2483.607	33.5	-3.8	1.0	101.0	3.0	20.0	Horz	AV	0.0	49.7	54.0	-4.3	EUT-Vert, High-(2462 MHz), 54 Mbps, 20 MHz BW
2389.727	33.4	-3.7	1.0	101.2	3.0	20.0	Horz	AV	0.0	49.7	54.0	-4.3	EUT-Vert, Low-(2412 MHz), 1 Mbps, 20 MHz BW
2483.520	33.1	-3.8	1.0	101.0	3.0	20.0	Horz	AV	0.0	49.3	54.0	-4.7	EUT-Vert, High-(2462 MHz), MCS7, 20 MHz BW
2389.967	32.6	-3.7	1.0	101.0	3.0	20.0	Horz	AV	0.0	48.9	54.0	-5.1	EUT-Vert, Low-(2422 MHz), MCS7, 40 MHz BW
2389.860	32.5	-3.7	1.0	101.1	3.0	20.0	Horz	AV	0.0	48.8	54.0	-5.2	EUT-Vert, Low-(2412 MHz), MCS7, 20 MHz BW
4873.173	42.2	4.6	2.3	102.0	3.0	0.0	Horz	AV	0.0	46.8	54.0	-7.2	EUT-Vert, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
2483.793	50.3	-3.8	1.0	101.0	3.0	20.0	Horz	PK	0.0	66.5	74.0	-7.5	EUT-Vert, High-(2462 MHz), MCS0, 20 MHz BW
2483.613	50.0	-3.8	1.0	101.0	3.0	20.0	Horz	PK	0.0	66.2	74.0	-7.8	EUT-Vert, High-(2462 MHz), 36 Mbps, 20 MHz BW
4873.207	41.5	4.6	2.0	95.9	3.0	0.0	Horz	AV	0.0	46.1	54.0	-7.9	EUT-Vert, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
2484.933	49.5	-3.8	1.0	101.0	3.0	20.0	Horz	PK	0.0	65.7	74.0	-8.3	EUT-Vert, High-(2452 MHz), MCS0, 40 MHz BW
4874.647	40.7	4.6	1.8	157.9	3.0	0.0	Vert	AV	0.0	45.3	54.0	-8.7	EUT-Horiz, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
4824.627	40.8	4.5	1.4	192.0	3.0	0.0	Vert	AV	0.0	45.3	54.0	-8.7	EUT-Horiz, Low-(2412 MHz), 1 Mbps, 20 MHz BW

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	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
4923.320	40.8	4.5	2.0	101.0	3.0	0.0	Horz	AV	0.0	45.3	54.0	-8.7	EUT-Vert, High-(2462 MHz), 1 Mbps, 20 MHz BW
7387.367	31.9	13.4	1.5	279.9	3.0	0.0	Vert	AV	0.0	45.3	54.0	-8.7	EUT-Horiz, High-(2462 MHz), 1 Mbps, 20 MHz BW
2483.793	49.0	-3.8	1.5	217.0	3.0	20.0	Vert	PK	0.0	65.2	74.0	-8.8	EUT-Horiz, High-(2452 MHz), MCS0, 40 MHz BW
2387.587	48.9	-3.7	1.0	101.1	3.0	20.0	Horz	PK	0.0	65.2	74.0	-8.8	EUT-Vert, Low-(2422 MHz), MCS0, 40 MHz BW
4873.387	40.5	4.6	2.4	304.0	3.0	0.0	Vert	AV	0.0	45.1	54.0	-8.9	EUT-On Side, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
4923.313	40.6	4.5	1.0	278.0	3.0	0.0	Vert	AV	0.0	45.1	54.0	-8.9	EUT-Horiz, High-(2462 MHz), 1 Mbps, 20 MHz BW
2483.667	48.7	-3.8	1.5	180.1	3.0	20.0	Vert	PK	0.0	64.9	74.0	-9.1	EUT-Vert, High-(2452 MHz), MCS0, 40 MHz BW
4874.600	40.2	4.6	1.6	282.8	3.0	0.0	Vert	AV	0.0	44.8	54.0	-9.2	EUT-Vert, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
2483.533	48.6	-3.8	1.0	101.0	3.0	20.0	Horz	PK	0.0	64.8	74.0	-9.2	EUT-Vert, High-(2462 MHz), 6 Mbps, 20 MHz BW
7310.560	31.2	13.4	2.5	196.9	3.0	0.0	Vert	AV	0.0	44.6	54.0	-9.4	EUT-Horiz, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
2484.893	48.2	-3.8	1.5	153.9	3.0	20.0	Horz	PK	0.0	64.4	74.0	-9.6	EUT-Horiz, High-(2452 MHz), MCS0, 40 MHz BW
7387.567	31.0	13.4	1.5	300.0	3.0	0.0	Horz	AV	0.0	44.4	54.0	-9.6	EUT-Vert, High-(2462 MHz), 1 Mbps, 20 MHz BW
4874.125	39.7	4.6	2.0	95.9	3.0	0.0	Horz	AV	0.0	44.3	54.0	-9.7	EUT-Vert, Mid-(2437 MHz), 11 Mbps, 20 MHz BW
2388.407	48.0	-3.7	1.4	157.0	3.0	20.0	Vert	PK	0.0	64.3	74.0	-9.7	EUT-Vert, Low-(2422 MHz), MCS0, 40 MHz BW
2389.853	48.0	-3.7	1.0	101.1	3.0	20.0	Horz	PK	0.0	64.3	74.0	-9.7	EUT-Vert, Low-(2412 MHz), MCS0, 20 MHz BW
7312.133	30.7	13.4	1.5	189.0	3.0	0.0	Horz	AV	0.0	44.1	54.0	-9.9	EUT-Vert, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
2388.900	47.6	-3.7	1.0	101.2	3.0	20.0	Horz	PK	0.0	63.9	74.0	-10.1	EUT-Vert, Low-(2412 MHz), 6 Mbps, 20 MHz BW
4873.273	38.8	4.6	1.5	32.9	3.0	0.0	Horz	AV	0.0	43.4	54.0	-10.6	EUT-On Side, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
2483.980	47.2	-3.8	1.5	117.9	3.0	20.0	Horz	PK	0.0	63.4	74.0	-10.6	EUT-On Side, High-(2452 MHz), MCS0, 40 MHz BW
4873.267	38.6	4.6	1.5	149.0	3.0	0.0	Horz	AV	0.0	43.2	54.0	-10.8	EUT-Horiz, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
2483.793	46.9	-3.8	1.0	101.0	3.0	20.0	Horz	PK	0.0	63.1	74.0	-10.9	EUT-Vert, High-(2462 MHz), MCS0, 20 MHz BW
2484.067	46.9	-3.8	1.0	101.0	3.0	20.0	Horz	PK	0.0	63.1	74.0	-10.9	EUT-Vert, High-(2462 MHz), 54 Mbps, 20 MHz BW
2483.747	46.9	-3.8	1.0	101.0	3.0	20.0	Horz	PK	0.0	63.1	74.0	-10.9	EUT-Vert, High-(2462 MHz), MCS7, 20 MHz BW
2483.880	46.6	-3.8	1.0	101.0	3.0	20.0	Horz	PK	0.0	62.8	74.0	-11.2	EUT-Vert, High-(2462 MHz), MCS7, 40 MHz BW
4874.333	37.9	4.6	2.0	95.9	3.0	0.0	Horz	AV	0.0	42.5	54.0	-11.5	EUT-Vert, Mid-(2437 MHz), 6 Mbps, 20 MHz BW
2484.127	46.3	-3.8	1.2	95.9	3.0	20.0	Vert	PK	0.0	62.5	74.0	-11.5	EUT-On Side, High-(2452 MHz), MCS0, 40 MHz BW
4871.833	37.2	4.6	2.0	95.9	3.0	0.0	Horz	AV	0.0	41.8	54.0	-12.2	EUT-Vert, Mid-(2437 MHz), 36 Mbps, 20 MHz BW
4824.687	37.2	4.5	1.5	146.9	3.0	0.0	Horz	AV	0.0	41.7	54.0	-12.3	EUT-Vert, Low-(2412 MHz), 1 Mbps, 20 MHz BW
2485.373	45.4	-3.7	1.0	101.0	3.0	20.0	Horz	PK	0.0	61.7	74.0	-12.3	EUT-Vert, High-(2462 MHz), 11 Mbps, 20 MHz BW
4872.625	36.9	4.6	2.0	95.9	3.0	0.0	Horz	AV	0.0	41.5	54.0	-12.5	EUT-Vert, Mid-(2437 MHz), MCS0, 20 MHz BW
2388.447	45.0	-3.7	1.0	101.0	3.0	20.0	Horz	PK	0.0	61.3	74.0	-12.7	EUT-Vert, Low-(2422 MHz), MCS7, 40 MHz BW
2487.020	44.6	-3.7	1.0	100.9	3.0	20.0	Horz	PK	0.0	60.9	74.0	-13.1	EUT-Vert, High-(2462 MHz), 1 Mbps, 20 MHz BW
4873.292	36.1	4.6	2.0	95.9	3.0	0.0	Horz	AV	0.0	40.7	54.0	-13.3	EUT-Vert, Mid-(2437 MHz), 54 Mbps, 20 MHz BW
2389.113	44.4	-3.7	1.0	101.2	3.0	20.0	Horz	PK	0.0	60.7	74.0	-13.3	EUT-Vert, Low-(2412 MHz), 1 Mbps, 20 MHz BW
4873.833	35.9	4.6	2.0	96.0	3.0	0.0	Horz	AV	0.0	40.5	54.0	-13.5	EUT-Vert, Mid-(2437 MHz), MCS0, 40 MHz BW
2388.913	44.2	-3.7	1.0	101.1	3.0	20.0	Horz	PK	0.0	60.5	74.0	-13.5	EUT-Vert, Low-(2412 MHz), MCS7, 20 MHz BW
4873.500	34.4	4.6	2.0	95.9	3.0	0.0	Horz	AV	0.0	39.0	54.0	-15.0	EUT-Vert, Mid-(2437 MHz), MCS7, 20 MHz BW
4873.042	33.1	4.6	2.0	96.0	3.0	0.0	Horz	AV	0.0	37.7	54.0	-16.3	EUT-Vert, Mid-(2437 MHz), MCS7, 40 MHz BW
4875.647	52.8	4.6	1.5	149.0	3.0	0.0	Horz	PK	0.0	57.4	74.0	-16.6	EUT-Horiz, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
7386.660	43.5	13.4	1.5	279.9	3.0	0.0	Vert	PK	0.0	56.9	74.0	-17.1	EUT-Horiz, High-(2462 MHz), 1 Mbps, 20 MHz BW
7309.800	43.2	13.4	2.5	196.9	3.0	0.0	Vert	PK	0.0	56.6	74.0	-17.4	EUT-Horiz, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
7386.767	42.3	13.4	1.5	300.0	3.0	0.0	Horz	PK	0.0	55.7	74.0	-18.3	EUT-Vert, High-(2462 MHz), 1 Mbps, 20 MHz BW
4874.073	51.0	4.6	2.3	102.0	3.0	0.0	Horz	PK	0.0	55.6	74.0	-18.4	EUT-Vert, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
7311.373	42.2	13.4	1.5	189.0	3.0	0.0	Horz	PK	0.0	55.6	74.0	-18.4	EUT-Vert, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
14473.200	27.7	7.8	1.5	238.0	3.0	0.0	Horz	AV	0.0	35.5	54.0	-18.5	EUT-Vert, Low-(2412 MHz), 1 Mbps, 20 MHz BW
14471.010	27.7	7.8	1.5	188.0	3.0	0.0	Vert	AV	0.0	35.5	54.0	-18.5	EUT-Horiz, Low-(2412 MHz), 1 Mbps, 20 MHz BW
4873.980	50.3	4.6	2.0	95.9	3.0	0.0	Horz	PK	0.0	54.9	74.0	-19.1	EUT-Vert, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
4873.820	49.8	4.6	1.8	157.9	3.0	0.0	Vert	PK	0.0	54.4	74.0	-19.6	EUT-Horiz, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
4823.980	49.9	4.5	1.4	192.0	3.0	0.0	Vert	PK	0.0	54.4	74.0	-19.6	EUT-Horiz, Low-(2412 MHz), 1 Mbps, 20 MHz BW
4923.820	49.9	4.5	2.0	101.0	3.0	0.0	Horz	PK	0.0	54.4	74.0	-19.6	EUT-Vert, High-(2462 MHz), 1 Mbps, 20 MHz BW
4874.167	49.8	4.6	2.0	95.9	3.0	0.0	Horz	PK	0.0	54.4	74.0	-19.6	EUT-Vert, Mid-(2437 MHz), 11 Mbps, 20 MHz BW
4874.020	49.6	4.6	2.4	304.0	3.0	0.0	Vert	PK	0.0	54.2	74.0	-19.8	EUT-On Side, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
4923.813	49.7	4.5	1.0	278.0	3.0	0.0	Vert	PK	0.0	54.2	74.0	-19.8	EUT-Horiz, High-(2462 MHz), 1 Mbps, 20 MHz BW
4873.967	49.2	4.6	1.6	282.8	3.0	0.0	Vert	PK	0.0	53.8	74.0	-20.2	EUT-Vert, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
4874.267	48.0	4.6	1.5	32.9	3.0	0.0	Horz	PK	0.0	52.6	74.0	-21.4	EUT-On Side, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
4870.792	47.6	4.6	2.0	95.9	3.0	0.0	Horz	PK	0.0	52.2	74.0	-21.8	EUT-Vert, Mid-(2437 MHz), 6 Mbps, 20 MHz BW
4873.417	47.3	4.6	2.0	95.9	3.0	0.0	Horz	PK	0.0	51.9	74.0	-22.1	EUT-Vert, Mid-(2437 MHz), 36 Mbps, 20 MHz BW
4873.583	47.3	4.6	2.0	96.0	3.0	0.0	Horz	PK	0.0	51.9	74.0	-22.1	EUT-Vert, Mid-(2437 MHz), MCS0, 40 MHz BW
4869.042	46.9	4.6	2.0	95.9	3.0	0.0	Horz	PK	0.0	51.5	74.0	-22.5	EUT-Vert, Mid-(2437 MHz), MCS0, 20 MHz BW
4823.420	46.9	4.5	1.5	146.9	3.0	0.0	Horz	PK	0.0	51.4	74.0	-22.6	EUT-Vert, Low-(2412 MHz), 1 Mbps, 20 MHz BW
4873.417	45.7	4.6	2.0	95.9	3.0	0.0	Horz	PK	0.0	50.3	74.0	-23.7	EUT-Vert, Mid-(2437 MHz), 54 Mbps, 20 MHz BW
12308.680	29.8	0.1	1.5	270.0	3.0	0.0	Vert	AV	0.0	29.9	54.0	-24.1	EUT-Horiz, High-(2462 MHz), 1 Mbps, 20 MHz BW
12309.970	29.8	0.1	1.5	124.0	3.0	0.0	Horz	AV	0.0	29.9	54.0	-24.1	EUT-Vert, High-(2462 MHz), 1 Mbps, 20 MHz BW
12186.700	30.1	-0.7	1.5	355.0	3.0	0.0	Vert	AV	0.0	29.4	54.0	-24.6	EUT-Horiz, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
12058.510	30.1	-0.7	1.5	246.0	3.0	0.0	Vert	AV	0.0	29.4	54.0	-24.6	EUT-Horiz, Low-(2412 MHz), 1 Mbps, 20 MHz BW
12186.430	30.0	-0.7	1.5	128.9	3.0	0.0	Horz	AV	0.0	29.3	54.0	-24.7	EUT-Vert, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
12058.730	29.8	-0.7	1.5	59.9	3.0	0.0	Horz	AV	0.0	29.1	54.0	-24.9	EUT-Vert, Low-(2412 MHz), 1 Mbps, 20 MHz BW
4871.875	44.5	4.6	2.0	95.9	3.0	0.0	Horz	PK	0.0	49.1	74.0	-24.9	EUT-Vert, Mid-(2437 MHz), MCS7, 20 MHz BW
4868.667	43.6	4.6	2.0	96.0	3.0	0.0	Horz	PK	0.0	48.2	74.0	-25.8	EUT-Vert, Mid-(2437 MHz), MCS7, 40 MHz BW
14473.950	39.8	7.8	1.5	188.0	3.0	0.0	Vert	PK	0.0	47.6	74.0	-26.4	EUT-Horiz, Low-(2412 MHz), 1 Mbps, 20 MHz BW
14471.410	39.1	7.8	1.5	238.0	3.0	0.0	Horz	PK	0.0	46.9	74.0	-27.1	EUT-Vert, Low-(2412 MHz), 1 Mbps, 20 MHz BW
12310.740	41.1	0.2	1.5	270.0	3.0	0.0	Vert	PK	0.0	41.3	74.0	-32.7	EUT-Horiz, High-(2462 MHz), 1 Mbps, 20 MHz BW
12184.210	42.0	-0.7	1.5	355.0	3.0	0.0	Vert	PK	0.0	41.3	74.0	-32.7	EUT-Horiz, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
12058.670	41.9	-0.7	1.5	246.0	3.0	0.0	Vert	PK	0.0	41.2	74.0	-32.8	EUT-Horiz, Low-(2412 MHz), 1 Mbps, 20 MHz BW
12311.360	40.8	0.2	1.5	124.0	3.0	0.0	Horz	PK	0.0	41.0	74.0	-33.0	EUT-Vert, High-(2462 MHz), 1 Mbps, 20 MHz BW
12186.130	41.6	-0.7	1.5	128.9	3.0	0.0	Horz	PK	0.0	40.9	74.0	-33.1	EUT-Vert, Mid-(2437 MHz), 1 Mbps, 20 MHz BW
12059.100	41.4	-0.7	1.5	59.9	3.0	0.0	Horz	PK	0.0	40.7	74.0	-33.3	EUT-Vert, Low-(2412 MHz), 1 Mbps, 20 MHz BW