

APPLICANT: TELLUMAT(PTY) LIMITED.
FCC ID: ONJMDR2400-THD

CIRCUIT DESCRIPTION:

The ONJMDR2400-THD is a combination of the indoor unit the custom cable that connects the indoor unit to the outdoor unit, the outdoor unit and the antenna.

- A. Assembly #1 is with a Yagi Antenna(Long White). 17dBi Gain
- B. Assembly #2 is with a Parabolic Dish Antenna. 24dBi Gain

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NAME OF TEST: 6.0dB BANDWIDTH

RULES PART NUMBER: 15.247(a)(2)

REQUIREMENTS: The 6.0dB bandwidth must be greater than 500KHz.

MEASUREMENT: The 6.0dB bandwidth measured 9.25MHz @ 2414.0MHz and 9.85MHz @ 2428.4MHz and 9.10MHz@2.456GHz

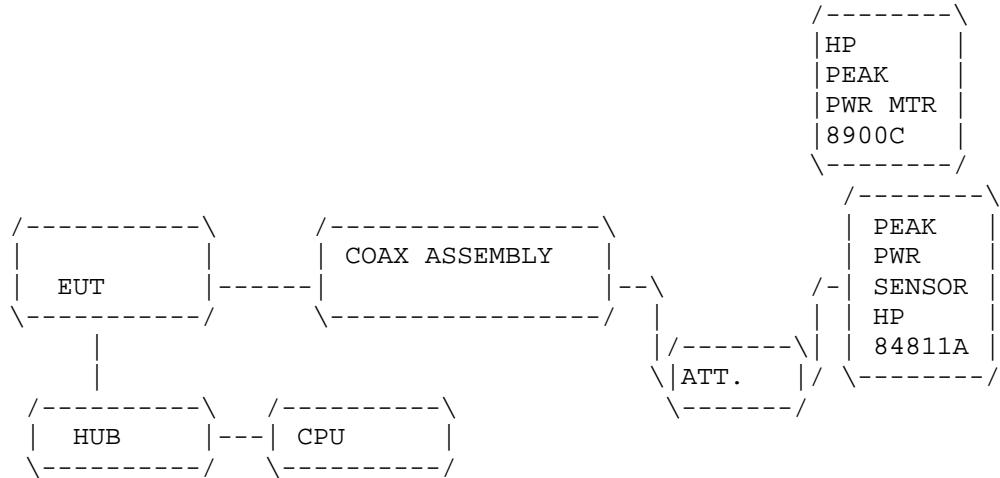
MEASUREMENT DATA: See plot on the next page.

NAME OF TEST: POWER OUTPUT

RULES PART NUMBER: 15.247(b)1.0W or 30dBm
0.40W or 26dBm for an 17dBi Gain Antenna
0.250W or 24dBm for an 24dBi Gain Antenna

MEASUREMENT: 380 mWatts for the Yagi Antenna
220 mWATTS for the Parabolic Antenna

15.247(c) Method of Measuring RF Power output:
The Peak power Sensor was connected in place of the antenna.



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15.247(c) &15.109(b) Field_strength_of_spurious_emissions:

REQUIREMENTS: Emissions that fall in the restricted bands (15.205) must be less than 54dBuV/m otherwise the spurious and harmonics must be attenuated by at least 20dB.

TEST DATA:

EMISSION FREQUENCY MHz	METER READING @ 3m dBuV	COAX LOSS dB	FIELD STRENGTH dBuV/m	ATT. LEVEL dB	MARGIN dB	ANT.
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YAGI ANTENNA-200mW

2410.50	93.40	1.09	29.03	123.52		V	
4824.00R	8.40	1.45	33.93	43.78	43.78	10.89	V
7237.00	2.00	1.82	36.64	40.46	40.46	14.21	V
2428.40	93.20	1.09	29.07	123.37		V	
2483.50R	12.50	1.10	29.21	42.81	42.81	11.86	V
4856.80R	9.10	1.46	33.96	44.52	44.52	10.15	V
2455.80	95.10	1.10	29.14	125.34		V	
2483.50R	12.80	1.10	29.21	43.11	43.11	11.56	V
4910.00R	8.60	1.47	34.02	44.09	44.09	10.58	V

PARABOLIC ANTENNA-400mW

2414.00	102.00	1.09	29.03	132.13		V	
4824.00R	15.90	1.45	33.93	51.28	54.00	2.72	V
2432.10	102.70	1.09	29.08	132.88		V	
2483.50R	15.70	1.10	29.21	46.01	54.00	7.99	V
4858.00R	15.80	1.46	33.97	51.22	54.00	2.78	V
2456.00	95.20	1.10	29.14	125.44		V	
2483.50R	16.50	1.10	29.21	46.81	54.00	7.19	V
4910.00R	10.60	1.47	34.02	46.09	54.00	7.91	V

METHOD OF MEASUREMENT: The procedure used was ANSI STANDARD C63.4-1992 except the spread spectrum portion was connected to its custom antenna at a height of 1.5 meters. The spectrum was scanned from 30MHz to at least the tenth harmonic of the fundamental. Above 1.0GHz the RBW was 1.0MHz and the VBW was 10Hz. The case was opened and the power removed from the radio in order to determine which emissions were digital. Measurements were made at the open field test site of TIMCO ENGINEERING INC. located at 6051 N.W. 19th LANE, GAINESVILLE, FL 32605.

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NAME OF TEST: POWER SPECTRAL DENSITY

RULES PART NUMBER: 15.247(d)

REQUIREMENTS: The peak level measured must be no greater than +8.0dBm.

DATA: THE PLOT ON THE FOLLOWING PAGE SHOWS A PEAK LEVEL
OF -64.1 dBm @ 2410.28MHz PLUS THE ATTENUATOR OF 70dB GIVES A LEVEL OF +5.9dBm, and -64.0dBm @ 2428.60MHz PLUS THE ATTENUATOR OF 70dB GIVES A LEVEL OF +6.0dBm, and -64.2 dBm @ 2455.68MHz PLUS THE ATTENUATOR OF 70dB GIVES A LEVEL OF +5.8dBm.

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