

AL250 Occupied Bandwidth and Emission Bandwidth Measurement

L. Yu

21-Sep-04

Modulation Input for both OBW and EBW:

Modulation input voltage required for 50% max modulation = 5.2mV (-43.5dBm) for 6kHz

16dB greater than 50% max modulation = -23.5dBm (51.8mV)

Modulation Frequency = 2500Hz

Noise level from unmodulated transmitter is 0.300 KHz (50Hz HPF, >99KHz LP)

Max Unmodulated Power on ch 367 was measured = 28.0dBm

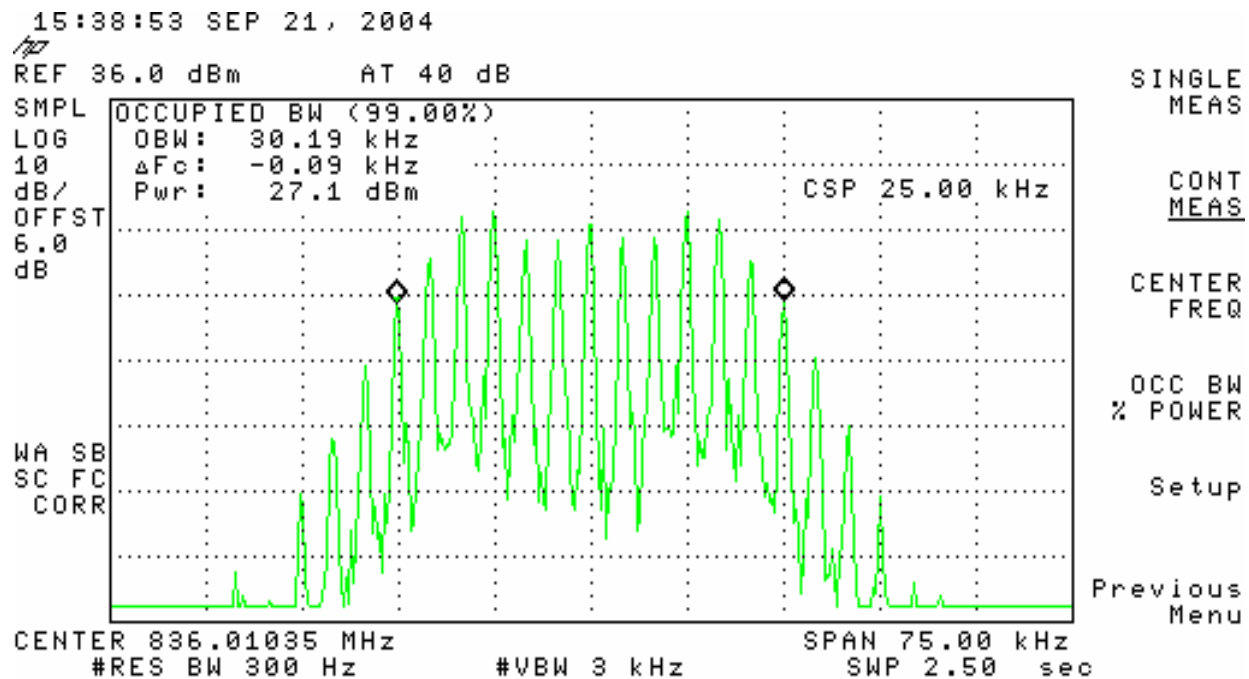
Limit line set at +2dBm

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power.

FCC part 2.1049 (c) (1)

Occupied Bandwidth - Channel 367

OBW = 30.19 KHz

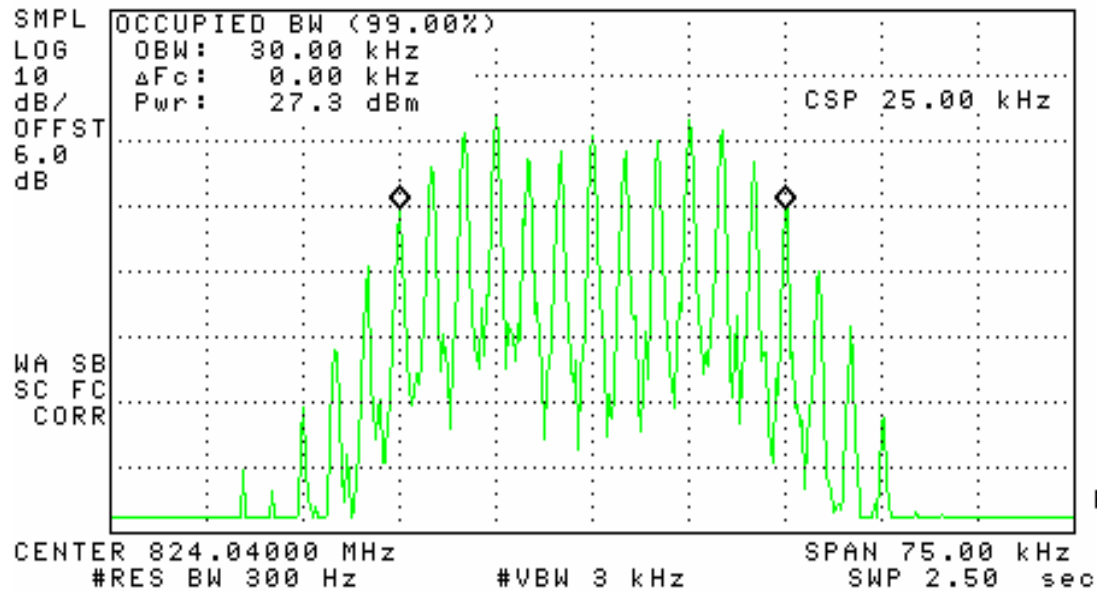


Occupied Bandwidth - Channel 991

OBW = 30.00 kHz

15:40:08 SEP 21, 2004

REF 36.0 dBm AT 40 dB



SINGLE
MEAS

CONT
MEAS

CENTER
FREQ

OCC BW
% POWER

Setup

Previous
Menu

Occupied Bandwidth - Channel 799

OBW = 30.19 kHz

15:41:20 SEP 21, 2004

REF 36.0 dBm AT 40 dB

SMPL OCCUPIED BW (99.00%)

LOG OBW: 30.19 kHz

10 ΔF_c : -0.09 kHz

dB/ Pwr: 26.7 dBm

OFFST

6.0

dB

WA SB

SC FC

CORR

CENTER 848.97000 MHz

#RES BW 300 Hz

#VBW 3 kHz

SPAN 75.00 kHz

SWP 2.50 sec

SINGLE
MEAS

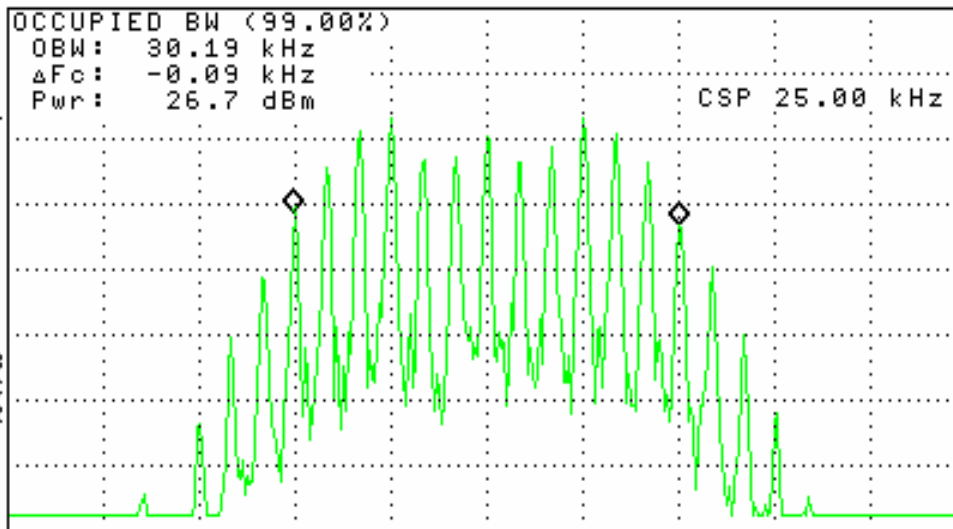
CONT
MEAS

CENTER
FREQ

OCC BW
% POWER

Setup

Previous
Menu

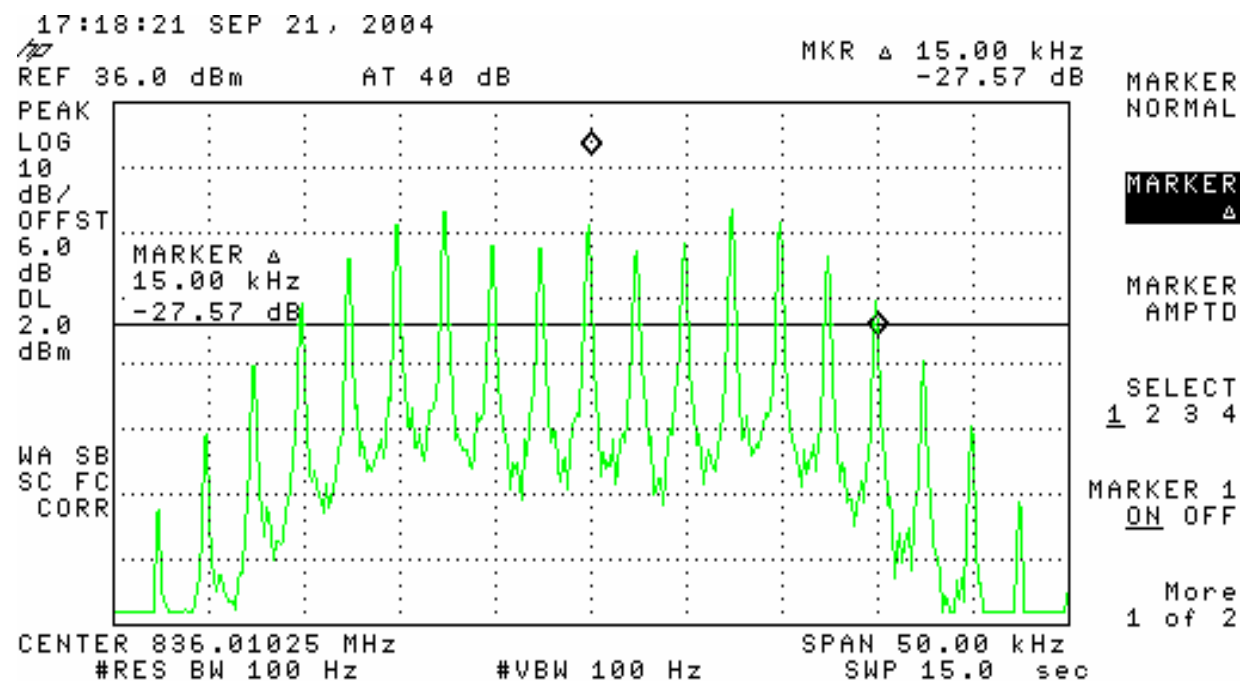


The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

FCC part 22.917 (b) (d)

Emission Bandwidth - Channel 367

EBW = 30.00 kHz



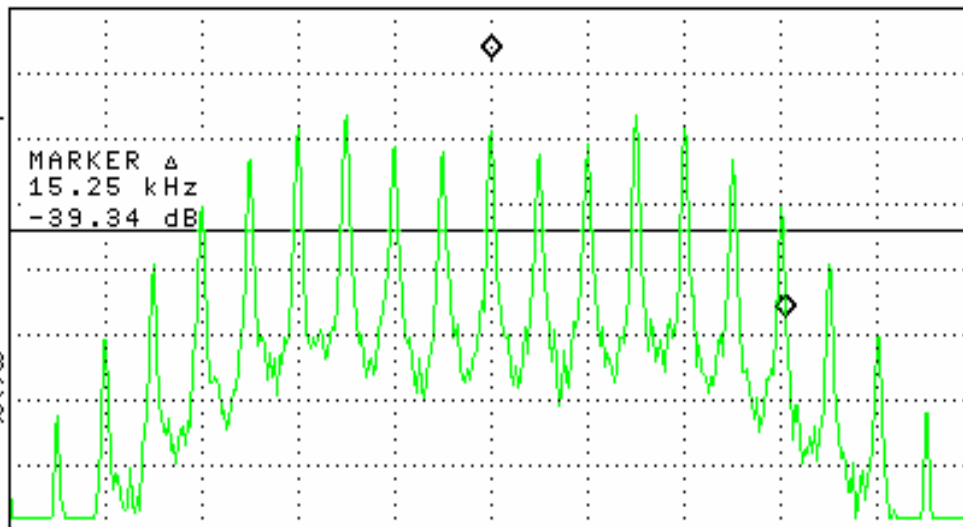
Emission Bandwidth - Channel 991

EBW = 30.50 kHz

17:22:39 SEP 21, 2004

REF 36.0 dBm AT 40 dB MKR Δ 15.25 kHz
-39.34 dB

PEAK
LOG
10
dB/
OFFST
6.0
dB
DL
2.0
dBm



MARKER
NORMAL

MARKER
Δ

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

More
1 of 2

CENTER 824.04012 MHz SPAN 50.00 kHz
#RES BW 100 Hz #VBW 100 Hz SWP 15.0 sec

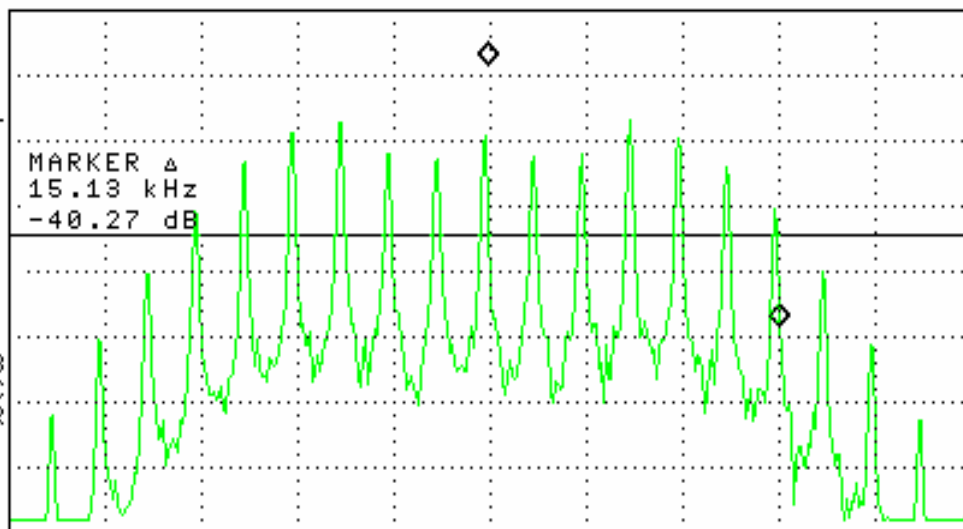
Emission Bandwidth - Channel 799

EBW = 30.26 kHz

17:33:09 SEP 21, 2004

REF 36.0 dBm AT 40 dB MKR Δ 15.13 kHz
-40.27 dB

PEAK
LOG
10
dB/
OFFST
6.0
dB
DL
1.6
dBm



MARKER
NORMAL

MARKER
Δ

MARKER
AMPTD

SELECT
1 2 3 4

MARKER 1
ON OFF

More
1 of 2

CENTER 848.97037 MHz SPAN 50.00 kHz
#RES BW 100 Hz VBW 100 Hz SWP 15.0 sec