



PERMISSIVE CHANGE II TEST REPORT
FOR THE
TRANSMITTER, MB1K
FCC PART 15 SUBPART C
COMPLIANCE

DATE OF ISSUE: APRIL 21, 1999

PREPARED FOR:

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P.O. No: C.O.D.
W.O. No: 71245

Report No: FC99-019

DOCUMENTATION CONTROL:

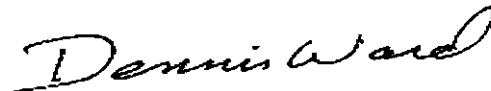
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Date of test: April 16, 1999

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ADMINISTRATIVE INFORMATION

DATE OF TEST: April 16, 1999

PURPOSE OF TEST: To demonstrate the compliance of the Transmitter, MB1K, with the FCC Part 15, Subpart C requirements.

MANUFACTURER: Kostal Mexicana, S.A. de C.V.
Acceso II #36, Zona Ind. Benito Juárez
Queretaro, Queretaro, Mex 76120

REPRESENTATIVE: Armando Escalante

TEST LOCATION: CKC Laboratories, Inc.
22105 Wilson River Hwy
Tillamook, OR 97141

TEST PERSONNEL: Mike Wilkinson

TEST METHOD: ANSI C63.4 1992

FREQUENCY RANGE TESTED: 2 MHz – 3.5 GHz

EQUIPMENT UNDER TEST: **TRANSMITTER**
Manuf: Kostal Mexicana S.A. de C.V.
Model: MB1K
Serial: N/A
FCC ID: NCZMB1K

SUMMARY OF RESULTS

The Kostal Mexicana, S.A. de C.V. Transmitter, MB1K, was tested in accordance with ANSI C63.4 1992 for compliance with the requirements of FCC Part 15, Subpart C.

As received, the above equipment was found to be fully compliant with the limits of FCC Part 15, Subpart C for radiated emissions. The results in this report apply only to the items tested, as identified herein.

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

Kostal Mexicana transmitter MB1K.

MEASUREMENT UNCERTAINTY

Associated with data in this report is a ± 4 dB measurement uncertainty.

EUT OPERATING FREQUENCY

The EUT was operating at 315 MHz.

TEMPERATURE AND HUMIDITY DURING TESTING

The temperature during testing was within $+15^{\circ}\text{C}$ and $+35^{\circ}\text{C}$.
The relative humidity was between 20% and 75%.

PERIPHERAL DEVICES

The EUT was not tested with any peripheral devices.

REPORT OF MEASUREMENTS

The following table reports the six highest worst case levels recorded during the tests performed on the Transmitter, MB1K. All readings taken are peak readings unless otherwise noted by a "Q" or "A". The data sheets from which these tables were compiled are contained in Appendix B.

Table 1: Six Highest Radiated Emission Levels

FREQUENCY MHz	METER READING dB μ V	CORRECTION FACTORS				CORRECTED READING dB μ V/m	SPEC LIMIT dB μ V/m	MARGIN dB	NOTES
		Ant dB	Amp-B dB	Cable dB	Dist dB				
314.986	76.8	21.2	-27.3	4.6		75.3	75.6	-0.3	VA
629.969	54.3	19.8	-28.4	6.8		52.5	55.6	-3.1	H
944.951	47.9	23.7	-27.8	8.5		52.3	55.6	-3.3	H
1574.915	57.9	25.2	-37.4	6.4		52.1	55.6	-3.5	VA
1889.892	54.5	27.5	-36.6	6.8		52.2	55.6	-3.4	VA
2519.854	50.2	28.7	-35.2	8.1		51.8	55.6	-3.8	HA

Test Method: ANSI C63.4 1992
Spec Limit : 15.231(3)(b)
Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization
N = No Polarization
D = Dipole Reading
Q = Quasi Peak Reading
A = Average Reading

COMMENTS: The EUT is tested and set up in accordance with CISPR-22 1993 amendment A-1/ ANSI C63.4 1992 test methods. EUT is operating on batteries and with the key opened. Unit is continuously transmitting a signal at 315 MHz. Fundamental spec limit is 75.6 dBuV and the spec limit of spurs outside the restricted band are 55.6 dBuV calculated from FCC pt 15.231 (3)(b). The frequency range investigated during the test was 2 MHz to 3.5 GHz. The test was performed with the EUT in all three orthogonal planes. This is noted on each reading as Flat, Side, or End. The temperature was 65°F and the humidity was 40%.

TABLE A
LIST OF TEST EQUIPMENT

1. EMC Analyzer, Hewlett Packard, Model No. 8593EM, S/N 3624A00159. Calibration date: October 12, 1998. Calibration due date: October 12, 1999.
2. Preamp, Hewlett Packard, Model No. 83017A, S/N 3123A00321. Calibration date: October 26, 1998. Calibration due date: October 26, 1999.
3. Cable, Andrew, Model No. 125' LDF2-50, CKC Asset No. 2086. Calibration date: February 24, 1999. Calibration due date: February 24, 2000.
4. Cable, Andrew, Model No. 10' F1-PNMNM, CKC Asset No. 1016. Calibration date: February 25, 1999. Calibration due date: February 25, 2000.
5. Biconical Antenna, Scharz., Model No. BBA9106, S/N D6901. Calibration date: January 25, 1999. Calibration due date: January 25, 2000.
6. Horn Antenna, EMCO, Model No. 3115, S/N 9006-3413. Calibration date: February 24, 1999. Calibration due date: February 24, 2000.
7. Log Periodic Antenna, A & H Systems, Model No. SAS200/510, S/N 463. Calibration date: August 28, 1998. Calibration due date: August 28, 1999.
8. Preamp, Hewlett Packard, Model No. 8447D, S/N 2727A05444. Calibration date: February 24, 1999. Calibration due date: February 24, 2000.
9. Rod Antenna, EMCO, Model No. 3301B, S/A 9101-3083. Calibration date: February 24, 1999. Calibration due date: February 24, 2000.
10. Tillamook site B calibration date: June 12, 1998. Tillamook site B calibration due date: June 12, 1999.
11. Test software, EMI Test 2.91.

EUT SETUP

The equipment under test (EUT) was set up in a manner that represented its normal use. Any special conditions required for the EUT to operate normally are identified in the comments that accompany Table 1 for radiated emissions. Additionally, a complete description of all the ports and I/O cables is included on the information sheets contained in Appendix A.

During radiated emissions testing, the EUT was mounted on a nonconductive, rotating table 80 cm above the conductive grid. The nonconductive table dimensions were 1 meter by 1.5 meters. This configuration is typical for radiated emissions testing of table top devices.

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed in Table A were used to collect the radiated emissions data for the Transmitter, MB1K. For radiated measurements below 300 MHz, the biconical antenna was used. For frequencies below 30 MHz the rod antenna was used. For frequencies from 300 to 1000 MHz, the log periodic antenna was used. Frequencies above 1 GHz were tested using the horn antenna. All antennas were located at a distance of 3 meters from the edge of the EUT.

The HP spectrum analyzer was used for all measurements. Table B shows the analyzer bandwidth settings that were used in designated frequency bands. During radiated testing, the measurements were made with 0 dB of attenuation, a reference level of 97 dB μ V, and a vertical scale of 10 dB per division.

TABLE B : ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	3.5 GHz	1 MHz

SPECTRUM ANALYZER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in Table 1 indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the six highest readings, this is indicated as a "Q" or an "A". The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data for the Transmitter, MB1K.

Peak

In this mode, the Spectrum Analyzer or test engineer recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the analyzer called "peak hold," the analyzer had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the analyzer made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the HP Quasi-Peak Adapter for the HP Spectrum Analyzer. The detailed procedure for making quasi peak measurements contained in the HP Quasi-Peak Adapter manual were followed.

Average

When the frequencies are below 30 MHz or exceed 1 GHz, average measurements may be made using the spectrum analyzer. To make these measurements, the test engineer reduces the video bandwidth on the analyzer until the modulation of the signal is filtered out. At this point the analyzer is set into the linear mode and the scan time is reduced.

TEST METHODS

The radiated emissions data of the Transmitter, MB1K, was taken with the HP Spectrum Analyzer. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the "Sample Calculations". The corrected data was then compared to the FCC Part 15, Subpart C emissions limits to determine compliance.

Preliminary and final measurements were taken in order to better ensure that all emissions from the EUT were found and maximized.

Radiated Emissions Testing

During the preliminary radiated scan, the EUT was powered up and operating in its defined FCC test mode. For frequencies below 30 MHz the rod antenna was used. The frequency range of 30 MHz - 88 MHz was then scanned with the biconical antenna located about 1.5 meter above the ground plane in the vertical configuration. During this scan, the turntable was rotated and all peaks which were at or near the limit were recorded. The frequency range of 100 - 300 MHz was scanned with the biconical antenna in the same manner, and the peaks recorded. Lastly, a scan of the FM band from 88 - 110 MHz was made, using a reduced resolution bandwidth and a reduced frequency span. The biconical antenna was changed to the horizontal polarity and the above steps were repeated. After changing to the log periodic antenna in the horizontal configuration, the frequency range of 300 - 1000 MHz was scanned. The log periodic antenna was changed to the vertical polarity and the frequency range of 300 - 1000 MHz was again scanned. The horn antenna was used to scan the frequency range of 1-3.5 GHz. Care was taken to ensure that no frequencies were missed within the FM and TV bands. An analysis was performed to determine if the signals that were at or near the limit were caused by an ambient transmission. If unable to determine by analysis, the equipment was powered down to make the final determination if the EUT was the source of the emission.

For the final radiated scan, a thorough scan of all frequencies was manually made using a small frequency span, rotating the turntable as needed. Comparison with the previously recorded measurements was then made.

Using the peak readings from both scans as a guide, the test engineer then maximized the readings with respect to the table rotation and antenna height. Photographs showing the final worst case configuration of the EUT are contained in Appendix A.

SAMPLE CALCULATIONS

The basic spectrum analyzer reading was converted using correction factors as shown in the emissions readings in Table 1. For radiated emissions in dB μ V/m, the spectrum analyzer reading in dB μ V was corrected by using the following formula:

$$\begin{aligned}
 &\text{Meter reading (dB}\mu\text{V)} \\
 &+ \text{Antenna Factor (dB)} \\
 &+ \text{Cable Loss (dB)} \\
 &- \text{Distance Correction (dB)} \\
 &- \text{Pre-amplifier Gain (dB)} \\
 &= \text{Corrected Reading (dB}\mu\text{V/m)}
 \end{aligned}$$

This reading was then compared to the applicable specification limit to determine compliance.

A typical data sheet will display the following in column format:

#	Freq MHz	Rdng dBuV	Cbl-2	Amp-B Or 26.5	Bicon	Ant	Dist	Corr dBuV/m	Spec	Margin	Polar
---	-------------	--------------	-------	---------------------	-------	-----	------	----------------	------	--------	-------

means reading number

Freq MHz is the frequency in MHz of the obtained reading.

Rdng dBuV is the reading obtained on the spectrum analyzer in dB μ V.

Amp-B or 26.5 is short for the preamplifier factor or gain in dB.

Ant is the biconical, log, rod, or horn antenna factors in dB.

Cbl-2 is the cable loss in dB of the coaxial cable on the OATS.

Dist is the distance factor (in dB). It is used when testing at a different test distance than the one stated in the spec.

Corr dB μ V/m is the corrected reading which is now in dB μ V/m (field strength).

Spec is the specification limit (dB) stated in the agency's regulations.

Margin is the closeness to the specified limit in dB; + is over and - is under the limit.

Polar is the Polarity of the antenna with respect to earth.

APPENDIX A
INFORMATION ABOUT THE EQUIPMENT UNDER TEST

INFORMATION ABOUT THE EQUIPMENT UNDER TEST	
Test Software/Firmware:	N/A
CRT was displaying:	N/A
Power Supply Manufacturer:	Battery Operated
Power Supply Part Number:	N/A
AC Line Filter Manufacturer:	N/A
AC Line Filter Part Number:	N/A
Line voltage used during testing:	N/A

I/O PORTS	
Type	#
N/A	

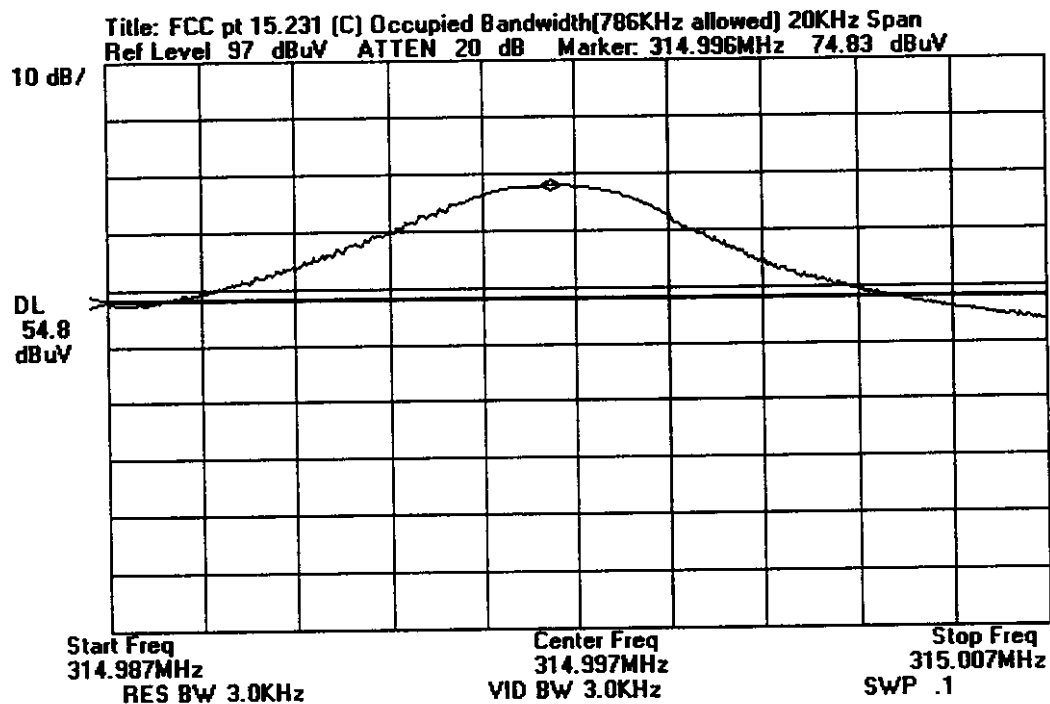
CRYSTAL OSCILLATORS	
Type	Freq In MHz
Crystal oscillator	4.0
SAW Resonator	315.0

PRINTED CIRCUIT BOARDS				
Function	Model & Rev	Clocks, MHz	Layers	Location
Main PCB	02	2 & 315	2	Plastic Cover

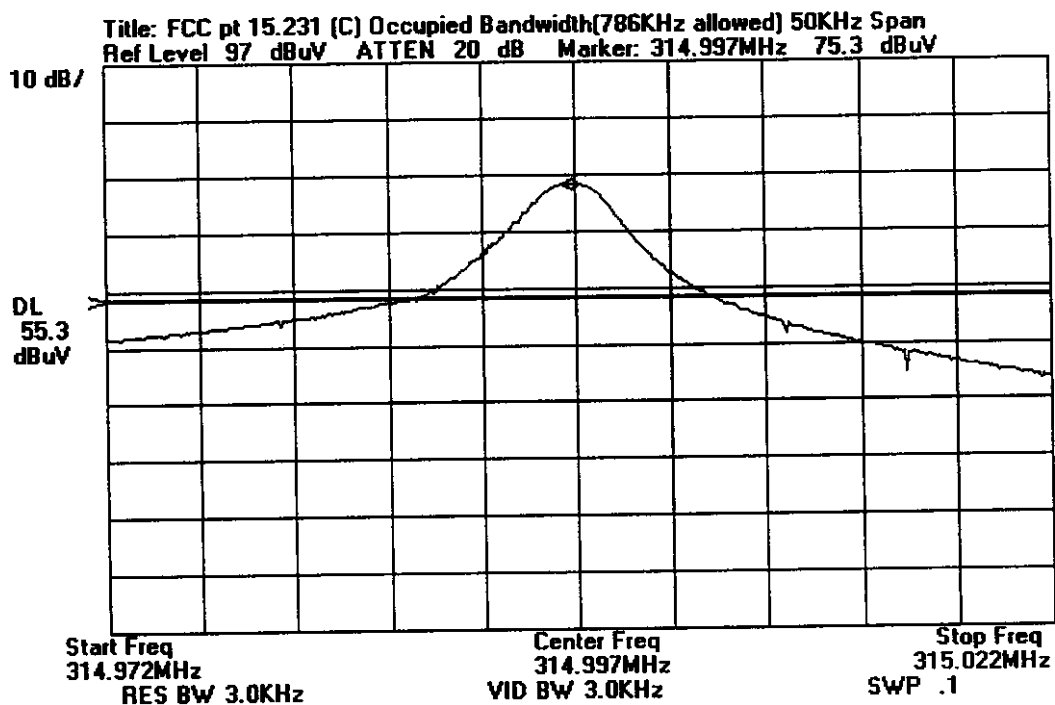
REQUIRED EUT CHANGES TO COMPLY:
None.

APPENDIX B
MEASUREMENT DATA SHEETS

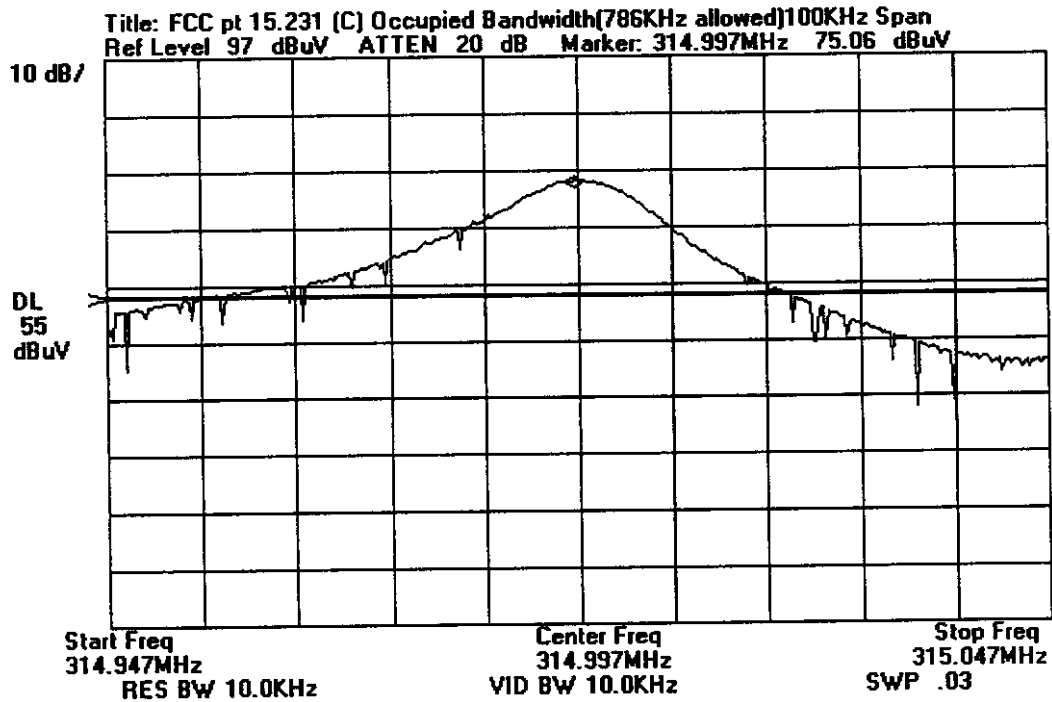
Occupied Bandwidth Plot



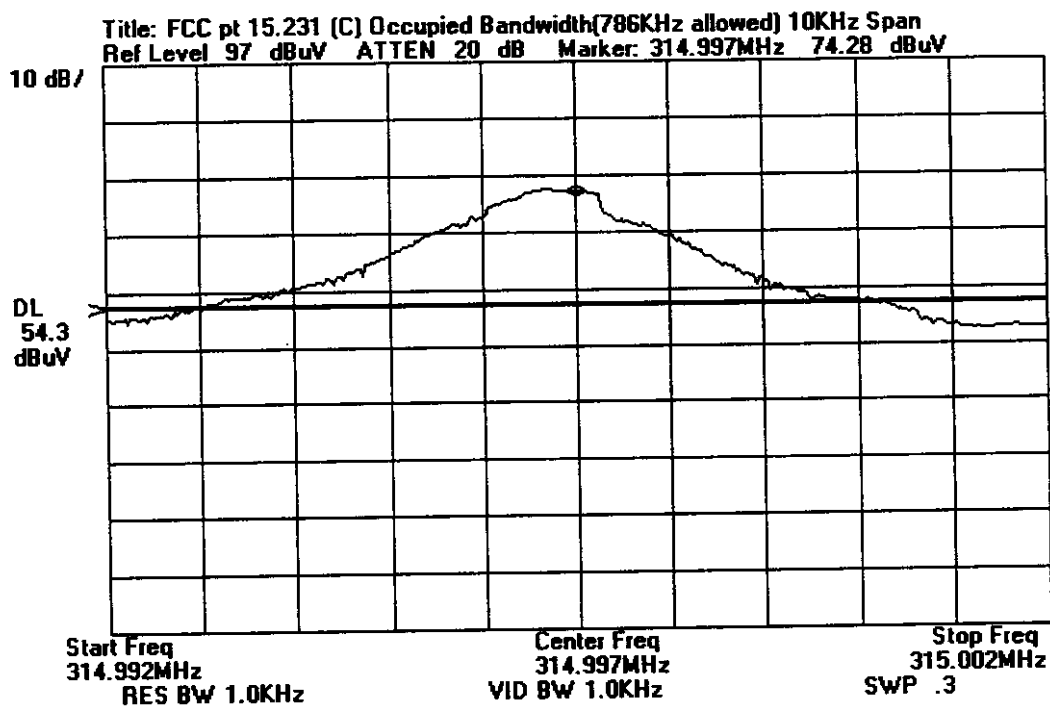
Occupied Bandwidth Plot



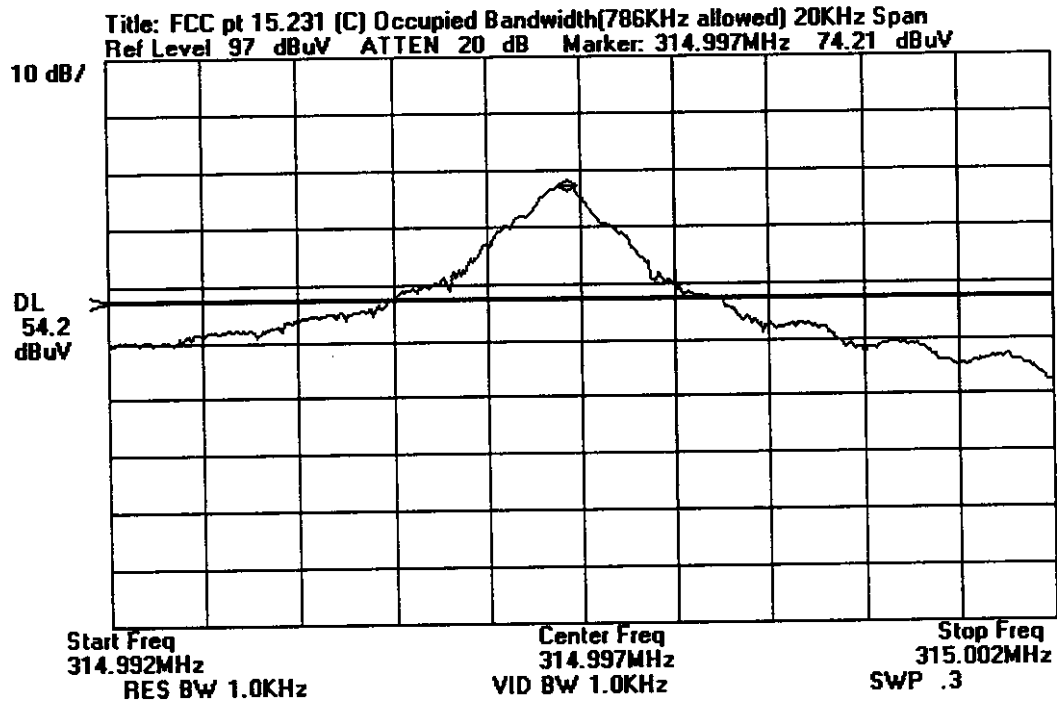
Occupied Bandwidth Plot



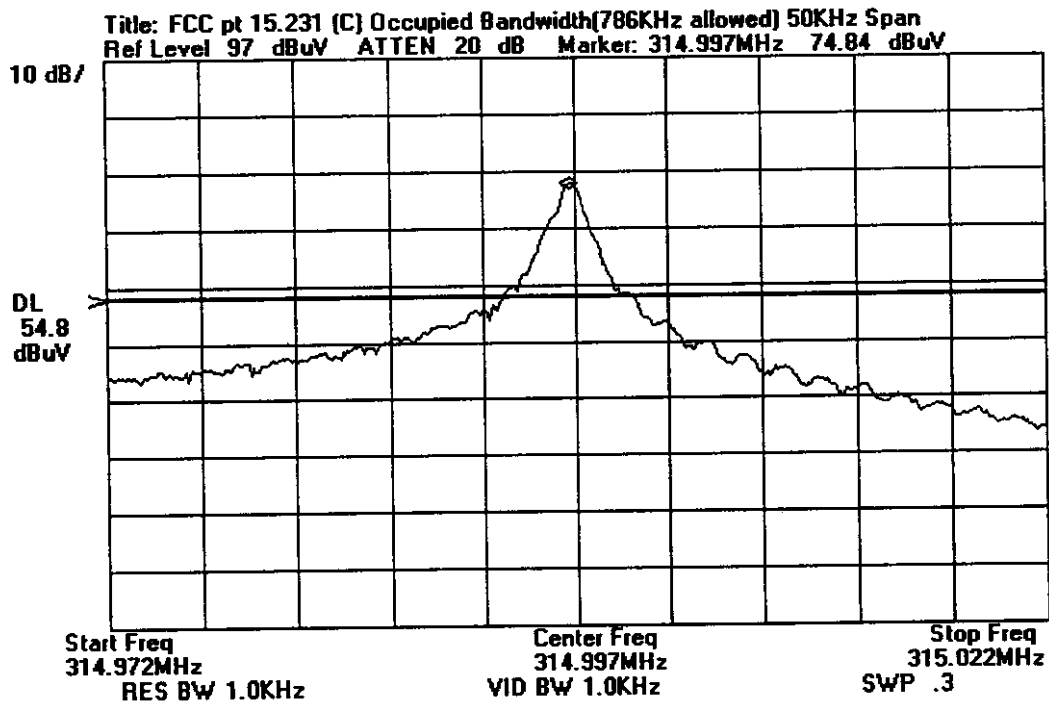
Occupied Bandwidth Plot



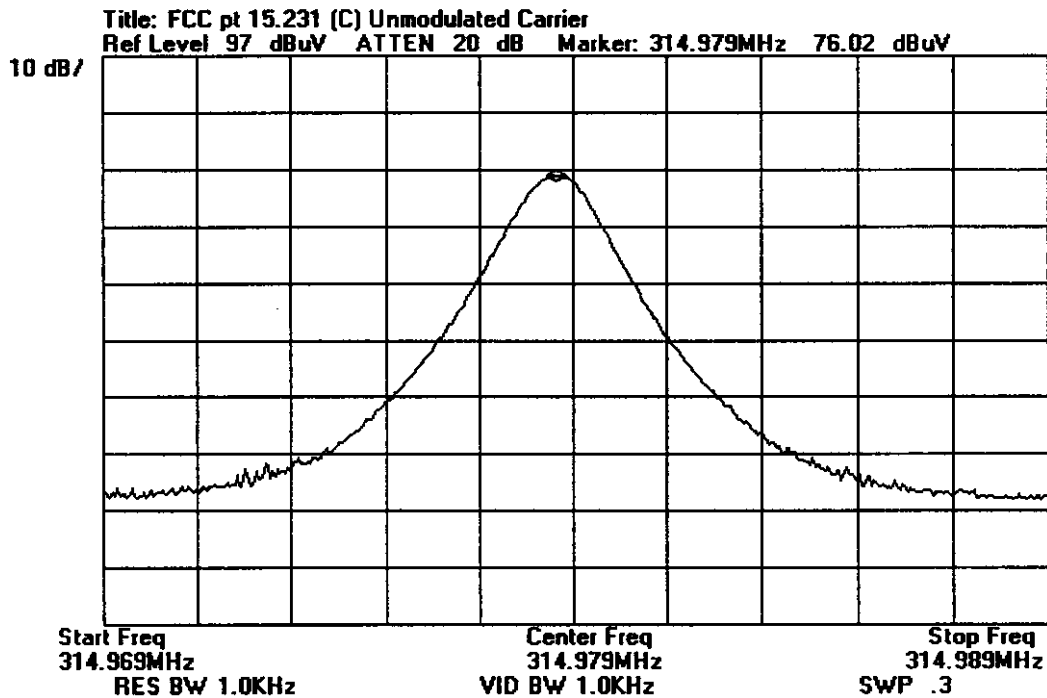
Occupied Bandwidth Plot



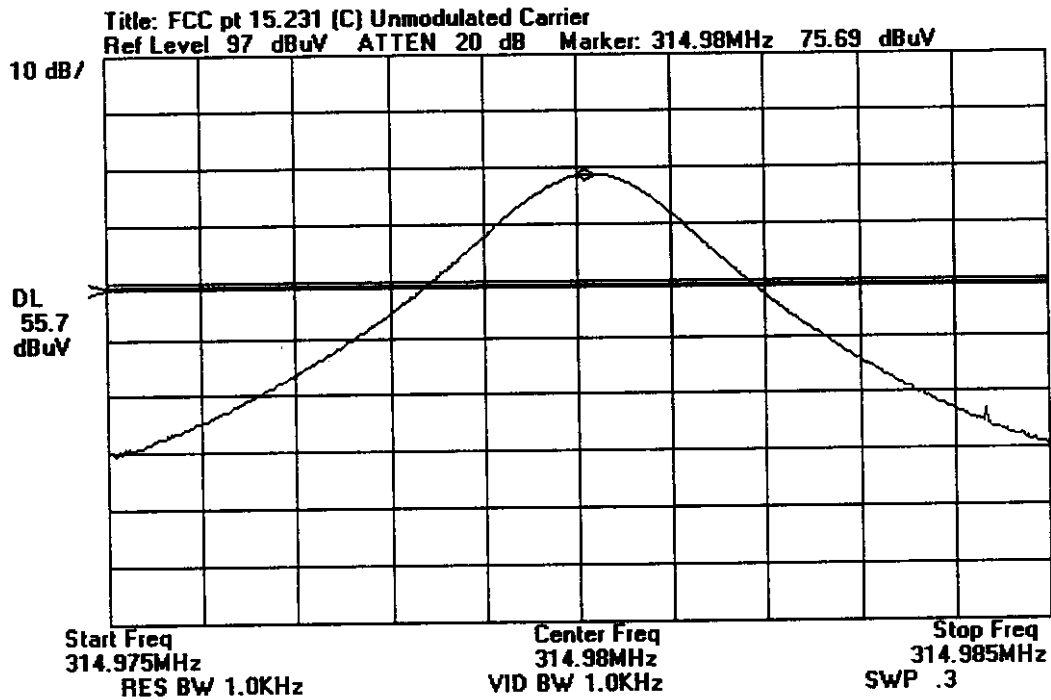
Occupied Bandwidth Plot



Unmodulated Carrier Plot



Unmodulated Carrier Plot



Test Location: CKC Laboratories, Inc. • 22105 Wilson River Hwy • Tillamook, Or. 97141 • (800) 500-4EMC

Customer: **Kostal** Date: Apr-16-99
 Specification: **15-231** Time: 16:48
 Test Type: **Radiated Scan** Sequence#: 1
 Equipment: **TRANSMITTER**
 Manufacturer: **Kostal Mexicana S.A. de C.V.** Tested By: **Mike Wilkinson**
 Model: **MB1K**
 S/N: **N/A**

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TRANSMITTER*	Kostal Mexicana S.A. de C.V.	MB1K	N/A

Support Devices:

Function	Manufacturer	Model #	S/N
None			

Test Conditions / Notes:

The EUT is tested and set up in accordance with CISPR-22 1993 amendment A-1/ ANSI C63.4 1992 test methods. EUT is operating on batteries and with the key opened. Unit is continuously transmitting a signal at 315 MHz. Fundamental spec limit is 75.6 dBuV and the spec limit of spurs outside the restricted band are 55.6 dBuV calculated from FCC pt 15.231 (3)(b). The frequency range investigated during the test was 2 MHz to 3.5 GHz. The test was performed with the EUT in all three orthogonal planes. This is noted on each reading as Flat, Side, or End. The temperature was 65° F and the humidity was 40%.

Measurement Data:

Sorted by Margin

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	Amp-B		26.5 dB	Ant		Dist dB	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar
			Cbl-2 dB	Cbl-2 dB		dB	dB					
1	314.986	76.8	-27.3		+4.6	+21.2		75.3	75.6	-0.3	Vert	
	Average Side		+0.0	+0.0	+0.0	+0.0	+0.0					
^	314.986	76.8	-27.3		+4.6	+21.2	+0.0	75.3	75.6	-0.3	Vert	
	Side		+0.0	+0.0	+0.0	+0.0						
^	314.986	71.3	-27.3		+4.6	+21.2	+0.0	69.8	75.6	-5.8	Vert	
	End		+0.0	+0.0	+0.0	+0.0						
^	314.987	61.3	-27.3		+4.6	+21.2	+0.0	59.8	75.6	-15.8	Vert	
	Flat		+0.0	+0.0	+0.0	+0.0						
5	314.976	76.1	-27.3		+4.6	+21.2	+0.0	74.6	75.6	-1.0	Horiz	
	Average Flat		+0.0	+0.0	+0.0	+0.0						

	314.945	76.8	-27.3		+4.6	+21.2	+0.0	75.3	75.6	-0.3	Horiz
			+0.0	+0.0	+0.0	+0.0					
	Flat										
	314.987	72.8	-27.3		+4.6	+21.2	+0.0	71.3	75.6	-4.3	Horiz
			+0.0	+0.0	+0.0	+0.0					
	End										
	314.991	65.0	-27.3		+4.6	+21.2	+0.0	63.5	75.6	-12.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
	Side										
9	629.969	54.3	-28.4		+6.8	+19.8	+0.0	52.5	55.6	-3.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
	Flat										
10	944.951	47.9	-27.8		+8.5	+23.7	+0.0	52.3	55.6	-3.3	Horiz
			+0.0	+0.0	+0.0	+0.0					
	Flat										
11	1889.892	54.5	+0.0		+0.0	+0.0	+0.0	52.2	55.6	-3.4	Vert
	Average		+0.8	+6.0	-36.6	+27.5					
	Side										
	1889.894	56.0	+0.0		+0.0	+0.0	+0.0	53.7	55.6	-1.9	Vert
			+0.8	+6.0	-36.6	+27.5					
	Side										
	1889.891	54.8	+0.0		+0.0	+0.0	+0.0	52.5	55.6	-3.1	Vert
			+0.8	+6.0	-36.6	+27.5					
	End										
	1889.906	52.0	+0.0		+0.0	+0.0	+0.0	49.7	55.6	-5.9	Vert
			+0.8	+6.0	-36.6	+27.5					
	15	1574.915	57.9	+0.0	+0.0	+0.0	+0.0	52.1	55.6	-3.5	Vert
	Average		+0.9	+5.5	-37.4	+25.2					
	End										
	1574.905	59.4	+0.0		+0.0	+0.0	+0.0	53.6	55.6	-2.0	Vert
			+0.9	+5.5	-37.4	+25.2					
	End										
	1574.914	57.1	+0.0		+0.0	+0.0	+0.0	51.3	55.6	-4.3	Vert
			+0.9	+5.5	-37.4	+25.2					
	Side										
	1574.903	55.2	+0.0		+0.0	+0.0	+0.0	49.4	55.6	-6.2	Vert
			+0.9	+5.5	-37.4	+25.2					
	19	2519.854	50.2	+0.0	+0.0	+0.0	+0.0	51.8	55.6	-3.8	Horiz
	Average		+0.9	+7.2	-35.2	+28.7					
	End										
	2519.852	52.8	+0.0		+0.0	+0.0	+0.0	54.4	55.6	-1.2	Horiz
			+0.9	+7.2	-35.2	+28.7					
	End										
	2519.861	48.8	+0.0		+0.0	+0.0	+0.0	50.4	55.6	-5.2	Horiz
			+0.9	+7.2	-35.2	+28.7					
	Side										
22	1889.898	54.0	+0.0		+0.0	+0.0	+0.0	51.7	55.6	-3.9	Horiz
			+0.8	+6.0	-36.6	+27.5					
	Side										

23	1259.922	59.5	+0.0		+0.0	+0.0	+0.0	51.3	55.6	-4.3	Vert
			+0.7	+4.8	-38.6	+24.9					
End											
24	314.989	72.8	-27.3		+4.6	+21.2	+0.0	71.3	75.6	-4.3	Horiz
			+0.0	+0.0	+0.0	+0.0					
Average											
End											
25	2204.874	52.3	+0.0		+0.0	+0.0	+0.0	51.2	55.6	-4.4	Vert
			+0.9	+6.5	-36.1	+27.6					
Side											
26	1574.918	56.5	+0.0		+0.0	+0.0	+0.0	50.7	55.6	-4.9	Horiz
			+0.9	+5.5	-37.4	+25.2					
Side											
27	2519.854	49.0	+0.0		+0.0	+0.0	+0.0	50.6	55.6	-5.0	Vert
			+0.9	+7.2	-35.2	+28.7					
Average											
^	2519.841	52.1	+0.0		+0.0	+0.0	+0.0	53.7	55.6	-1.9	Vert
			+0.9	+7.2	-35.2	+28.7					
^	2519.846	52.0	+0.0		+0.0	+0.0	+0.0	53.5	55.6	-2.1	Vert
			+0.9	+7.2	-35.2	+28.7					
End											
^	2519.854	50.8	+0.0		+0.0	+0.0	+0.0	52.4	55.6	-3.2	Vert
			+0.9	+7.2	-35.2	+28.7					
Side											
31	1574.911	56.3	+0.0		+0.0	+0.0	+0.0	50.5	55.6	-5.1	Horiz
			+0.9	+5.5	-37.4	+25.2					
32	1259.933	58.5	+0.0		+0.0	+0.0	+0.0	50.3	55.6	-5.3	Horiz
			+0.7	+4.8	-38.6	+24.9					
Side											
33	944.972	45.9	-27.8		+8.5	+23.7	+0.0	50.3	55.6	-5.3	Vert
			+0.0	+0.0	+0.0	+0.0					
End											
34	629.965	51.9	-28.4		+6.8	+19.8	+0.0	50.1	55.6	-5.5	Vert
			+0.0	+0.0	+0.0	+0.0					
End											
35	1259.947	58.2	+0.0		+0.0	+0.0	+0.0	50.0	55.6	-5.6	Horiz
			+0.7	+4.8	-38.6	+24.9					
36	2204.883	50.6	+0.0		+0.0	+0.0	+0.0	49.5	55.6	-6.1	Vert
			+0.9	+6.5	-36.1	+27.6					
37	2834.834	44.2	+0.0		+0.0	+0.0	+0.0	49.4	55.6	-6.2	Vert
			+1.2	+7.8	-33.4	+29.6					
Side											
38	1889.891	51.6	+0.0		+0.0	+0.0	+0.0	49.3	55.6	-6.3	Horiz
			+0.8	+6.0	-36.6	+27.5					
39	944.945	44.9	-27.8		+8.5	+23.7	+0.0	49.3	55.6	-6.3	Horiz
			+0.0	+0.0	+0.0	+0.0					
Side											
40	1889.892	51.5	+0.0		+0.0	+0.0	+0.0	49.2	55.6	-6.4	Horiz
			+0.8	+6.0	-36.6	+27.5					
End											

41	629.977	50.9	-28.4		+6.8	+19.8	+0.0	49.1	55.6	-6.5	Horiz
			+0.0	+0.0	+0.0	+0.0					
Side											
42	944.954	44.4	-27.8		+8.5	+23.7	+0.0	48.8	55.6	-6.8	Vert
			+0.0	+0.0	+0.0	+0.0					
Flat											
43	629.965	49.8	-28.4		+6.8	+19.8	+0.0	48.0	55.6	-7.6	Vert
			+0.0	+0.0	+0.0	+0.0					
Side											
44	944.918	43.5	-27.8		+8.5	+23.7	+0.0	47.9	55.6	-7.7	Horiz
			+0.0	+0.0	+0.0	+0.0					
End											
45	2204.868	48.5	+0.0		+0.0	+0.0	+0.0	47.4	55.6	-8.2	Horiz
			+0.9	+6.5	-36.1	+27.6					
End											
46	944.974	42.8	-27.8		+8.5	+23.7	+0.0	47.2	55.6	-8.4	Vert
			+0.0	+0.0	+0.0	+0.0					
Side											
47	1259.935	54.3	+0.0		+0.0	+0.0	+0.0	46.1	55.6	-9.5	Horiz
			+0.7	+4.8	-38.6	+24.9					
End											
48	2204.894	46.9	+0.0		+0.0	+0.0	+0.0	45.8	55.6	-9.8	Vert
			+0.9	+6.5	-36.1	+27.6					
End											
49	1259.933	54.0	+0.0		+0.0	+0.0	+0.0	45.8	55.6	-9.8	Vert
			+0.7	+4.8	-38.6	+24.9					
Side											
50	1259.921	53.7	+0.0		+0.0	+0.0	+0.0	45.5	55.6	-10.1	Vert
			+0.7	+4.8	-38.6	+24.9					
Side											
51	629.976	47.2	-28.4		+6.8	+19.8	+0.0	45.4	55.6	-10.2	Horiz
			+0.0	+0.0	+0.0	+0.0					
End											
52	2204.878	46.4	+0.0		+0.0	+0.0	+0.0	45.3	55.6	-10.3	Horiz
			+0.9	+6.5	-36.1	+27.6					
Side											
53	2204.881	45.6	+0.0		+0.0	+0.0	+0.0	44.5	55.6	-11.1	Horiz
			+0.9	+6.5	-36.1	+27.6					
Side											
54	629.988	45.1	-28.4		+6.8	+19.8	+0.0	43.3	55.6	-12.3	Vert
			+0.0	+0.0	+0.0	+0.0					
Flat											
55	1574.916	47.5	+0.0		+0.0	+0.0	+0.0	41.7	55.6	-13.9	Horiz
			+0.9	+5.5	-37.4	+25.2					
End											