

EMISSIONS TEST REPORT

Report Number: 3155317BOX-001b

Project Number: 3155317

Testing performed on the

Watch

Model: M844

То

FCC Part 15 Subpart C Section 15.249

For

Timex Corporation

Test Performed by: Intertek – ETL SEMKO 70 Codman Hill Road Boxborough, MA 01719 Test Authorized by: Timex Corporation 555 Christian Road P.O. Box 310 Middlebury, CT 06762

Prepared by:

Kouma Sinn

Reviewed by:

Date: 08/19/08

Date: 08/18/08

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1.0 Job Description

1.1 Client Information

This EUT has been tested at the request of:

Company:	Timex Corporation
	555 Christian Road
	P.O. Box 310
	Middlebury, CT 06762
Contact:	Mr. Ron DeRosa
Telephone:	203-346-4333
Fax:	203-346-7107
Email:	RDeRosa@timex.com

1.2 Equipment Under Test	
Equipment Type:	Watch
Model Number(s):	M844
Serial number(s):	M844FCC1
Manufacturer:	Timex Corporation
EUT receive date:	July 8, 2008
EUT received condition:	Production unit was received with no visible damage.
Test start date:	July 8, 2008
Test end date:	July 11, 2008

1.3 Test Plan Reference: FCC Part 15 Subpart C Section 15.249

1.4 Test Configuration:

1.4.1 EUT Voltage Range:

3Volts Battery

1.4.2 Block Diagram:

EUT	
	Turntabla
	rumable



1.4.3 Cables:

None

1.4.4 Support Equipment:

None

1.5 Mode(s) of Operation:

The EUT was programmed to transmit continuously.

1.5a EUT Cycle Time:

Continuous



2.0 Test Summary

TEST STANDARD	RESULTS	
FCC Part 15 Subpart C Section 15.249		
SUB-TEST	TEST PARAMETER	COMMENT
15.249(a) – Fundamental Field Strength	2400–2483.5 MHz: The field strength of emission within this band shall not exceed 50 (millivolts/meter) or 94 (dBuV/m) at a distance of 3 meters	Pass
15.249(a) – Harmonics Field Strength	The field strength of harmonics shall not exceed 500 (microvolts/meter) or 54 (dBuV/m) at a distance of 3 meters	Pass
15.249(d) – Spurious Field Strength	Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in 15.209, whichever is the lesser attenuation.	Pass
15.207 – AC Line-Conducted Emissions	Not Applicable – Battery powe	r
20 dB Bandwidth	No limit	

REVISION SUMMARY – The following changes have been made to this Report:

<u>Date</u>	<u>Project</u> <u>No.</u>	<u>Project</u> <u>Handler</u>	Page(s)	<u>ltem</u>	Description of Change
08/18/08	3155317	Kouma Sinn	10, 11	Average Factor	Average factor includes in the report



3.0 Sample Calculations

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

 $\begin{array}{ll} FS = RA + AF + CF - AG \\ Where & FS = Field Strength in dB\mu V/m \\ RA = Receiver Amplitude (including preamplifier) in dB\mu V \\ CF = Cable Attenuation Factor in dB \\ AF = Antenna Factor in dB \\ AG = Amplifier Gain in dB \end{array}$

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

 $RA = 52.0 dB\mu V$ AF = 7.4 dB/m CF = 1.6 dB AG = 29.0 dB $FS = 32 dB\mu V/m$

Level in μ V/m = [10(32 dB μ V/m)/20] = 39.8 μ V/m

The following is how net line-conducted readings were determined:

$$\begin{split} NF &= RF + LF + CF + AF \\ Where NF &= Net Reading in dB\mu V \\ RF &= Reading from receiver in dB\mu V \\ LF &= LISN Correction Factor in dB \\ CF &= Cable Correction Factor in dB \\ AF &= Attenuator Loss Factor in dB \end{split}$$

To convert from $dB\mu V$ to μV or mV the following was used:

UF = $10^{(NF/20)}$ where UF = Net Reading in μV

Example:

$$\label{eq:NF} \begin{split} NF &= RF + LF + CF + AF = 28.5 + 0.2 + 0.4 + 20.0 = 49.1 \ dB\mu V \\ UF &= 10^{(48.1 \ dB\mu V \,/ \, 20)} = 254 \ \mu V/m \end{split}$$



3.1 Measurement Uncertainty

Compliance of the product is based on the measured value. However, the measurement uncertainty is included for informational purposes.

The expanded uncertainty (k = 2) for radiated emissions from 30 to 1000 MHz has been determined to be:

±3.5 dB at 10m, ±3.8 dB at 3m

The expanded uncertainty (k = 2) for mains conducted emissions from 150 kHz to 30 MHz has been determined to be:

±2.6 dB

The expanded uncertainty (k = 2) for telecom port conducted emissions from 150 kHz to 30 MHz has been determined to be:

±3.2 for ISN and voltage probe measurements

±3.1 for current probe measurements



3.2 Site Description

Test Site(s): 2

Our OATS are 3m and 10m sheltered emissions measurement ranges located in a light commercial environment in Boxborough, Massachusetts. They meet the technical requirements of ANSI C63.4-2003 and CISPR 22:1993/EN 55022:1994 for radiated and conducted emission measurements. The shelter structure is entirely fiberglass and plastic, with outside dimensions of 33 ft x 57 ft. The structure resembles a quonset hut with a center ceiling height of 16.5 ft.

The testing floor is covered by a galvanized sheet metal groundplane that is earth-grounded via copper rods around the perimeter of the site. The joints between individual metal sheets are bridged with a 2 inch wide metal strips to provide low RF impedance contact throughout. The sheets are screwed in place with stainless steel, round-head screws every three inches. Site illumination and HVAC are provided from beneath the ground reference plane through flush entry ports, the port covers are electrically bonded to the ground plane.

A flush metal turntable with 12 ft. diameter and 5000 lb. load capacity (12,000 lb. in Site 3) is provided for floor-standing equipment. A wooden table 80 cm high is used for table-top equipment. The turntable is electrically connected to the ground plane with three copper straps. The straps are connected to the turntable at the center of it with ground braid. The copper strap is directly connected to the groundplane at the edges of the turntable. The turntable is located on the south end of the structure and the antennas are mounted 3 and 10 meters away to the north. The antenna mast is a non-conductive with remote control of antenna height and polarization. The antenna height is adjustable from 1 to 4 meters.

All final radiated emission measurements are performed with the testing personnel and measurement equipment located below the ground reference plane. The site has a full basement underneath the turntable where support equipment may be remotely located. Operation of the antenna, turntable and equipment under test is controlled by remote controls that manipulate the antenna height and polarization and with a turntable control. Test personnel are located below the ellipse when measurements are performed, however the site maintains the ability of having personnel manipulate cables while monitoring test equipment. Ambient radiated emissions are 6 dB or more below the relevant FCC emission limits.

AC mains power is brought to the equipment under test through a power line filter, to remove ambient conducted noise. 50 Hz (240 VAC single phase), 60 Hz power (120 VAC single phase, 208 VAC three phase), and 60 Hz (480 VAC three phase) are available. Conducted emission measurements are performed with a Line Impedance Stabilization Network (LISN) or Artificial Mains Network (AMN) bonded to the ground reference plane. A removable vertical groundplane (2 meter X 2 meter area) is used for line-conducted measurements for table top equipment. The vertical groundplane is electrically connected to the reference groundplane.



Test Results: Pass

Test Standard: FCC Part 15 Subpart C Section 15.249

Test: Fundamental Field Strength

Performance Criterion: Not Applicable

Test Environment:

Environmental Conditions During Testing:		Ambient (°C):	22	Humidity (%): 70		Pressure (hPa):	1009
Pretest Verification Performed		Yes		Equipment under Test:		M844	
Test Engineer(s): Vathana Ven			EUT Serial Number:		M844FCC1		

Maximum Test Disturbance Parameters: Emissions below 15.249(a)

Test Equipment Used:

TEST EQUIPMENT LIST									
ltem	Equipment Type	Make	Model No.	Serial No.	Next Cal. Due				
1	9kHz to 3GHz EMI Test Receiver	Rohde & Schwartz	ESCI 1166.5950K03	100067	01/25/2009				
2	HORN ANTENNA	EMCO	3115	9610-4980	03/03/2009				
3	Cable, SMA - SMA, < 18GHz	Sucoflex (Huber Suhn	104PE	CBLSHF103	Verified				
4	40 GHz Cable	Megaphase	TM40-K1K1-80	7030802 002	06/05/2009				
5	4 Line Digital Barometer *	Mannix	0ABA116	SAF291	01/30/2009				

Software Utilized:

Name	Manufacturer	Version		
EXCEL 2000	Microsoft Corporation	9.0.6926 SP-3		
EMI BOXBOROUGH	Intertek	3/07/07 Revision		

Test Details:

Test Point	Standard Limit (as published)	Compliance Level	Pass/Fail	Comment
Around the EUT	Specified limits	Below specified limits	Pass	None



Test Results:

Fundamental Field Strength

Company:	Timex Corp	р					Antenna	a & Cables:	HF	Bands: N, I	_F, HF, SHF		
Model #:	M844						Antenna:	HORN3 V1n	n 6-18-08.txt	HORN3 H1r	n 6-18-08.txt		
Serial #:	M844FCC1	1					Cable(s):	CBLSHF103	07-10-09.txt	MEG004.tx	ĸt	REA003	REA004
Engineers:	Vathana Ve	en			Location:	Site 2	Barometer:	SAF291					
Project #:	3155317		Date(s):	07/11/08									
Standard:	FCC Part 1	5 Subpart C	15.249				Temp/Humic	lity/Pressure:	22 deg C	70%	1009 mB		
Receiver:	R&S ESCI	(ROS002)		Limit Dis	stance (m):	3							
PreAmp:	PRE9 03-2	7-09.txt		Test Dis	stance (m):	3							
_		10.04			_	- 1 01		_	_				
Р	reAmp Use	d? (Y or N):	N	Voltage/I	-requency:	Fresh 3	V battery	Freque	ncy Range:	2474	1MHz		
Р	reAmp Use Net = Read	d? (Y or N): ling (dBuV/m	N i) + Antenna	Voltage/I a Factor (dE	-requency: 81/m) + Cat	Fresh 3 le Loss (dE	V battery 3) - Preamp	Freque Factor (dB)	ncy Range: - Distance	2474 Factor (dB)	1MHz)		
Peak: P	reAmp Use Net = Reac K Quasi-Pe	d? (Y or N): ling (dBuV/m eak: QP Ave	N i) + Antenna rage: AVG	Voltage/I a Factor (dE RMS: RMS	-requency: 81/m) + Cab 5; NF = Nois	Fresh 3 le Loss (dE e Floor, RE	V battery 8) - Preamp 8 = Restricte	Freque Factor (dB) d Band; Ba	ncy Range: - Distance ndwidth der	2474 Factor (dB) noted as RE	4MHz) 3W/VBW		
Peak: P	reAmp Use Net = Reac K Quasi-Pe Ant.	d? (Y or N): ling (dBuV/m eak: QP_Ave	N i) + Antenna rage: AVG	Voltage/I a Factor (dE <u>RMS: RMS</u> Antenna	requency: 31/m) + Cab ; NF = Nois Cable	Fresh 3 ble Loss (dE <u>e Floor, RE</u> Pre-amp	V battery 3) - Preamp 3 = Restricte AVERAGE	Freque Factor (dB) ed Band; Ba	ncy Range: - Distance ndwidth der	2474 Factor (dB) noted as RE	4MHz 9 3W/VBW		
Peak: P Detector	reAmp Use Net = Reac K Quasi-Pe Ant. Pol.	d? (Y or N): ling (dBuV/m eak: QP Ave Frequency	N i) + Antenna rage: AVG Reading	Voltage/I a Factor (dE RMS: RMS Antenna Factor	-requency: 31/m) + Cab ; NF = Nois Cable Loss	Fresh 3 le Loss (de <u>e Floor, Re</u> Pre-amp Factor	V battery 3) - Preamp 3 = Restricte AVERAGE Factor	Freque Factor (dB) d Band; Ba Net	ncy Range: - Distance ndwidth der Limit	2474 Factor (dB) noted as RE Margin	4MHz 3W/VBW Bandwidth		
Peak: P Detector Type	reAmp Use Net = Reac K Quasi-Pe Ant. Pol. (V/H)	d? (Y or N): ling (dBuV/m eak: QP Ave Frequency MHz	N i) + Antenna rage: AVG Reading dB(uV)	Voltage/I a Factor (dE <u>RMS: RMS</u> Antenna Factor dB(1/m)	Frequency: 31/m) + Cab ; NF = Nois Cable Loss dB	Fresh 3 le Loss (de <u>e Floor, Re</u> Pre-amp Factor dB	V battery 3) - Preamp 3 = Restricte AVERAGE Factor dB	Freque Factor (dB) ed Band; Ba Net dB(uV/m)	ncy Range: - Distance ndwidth der Limit dB(uV/m)	2474 Factor (dB) noted as RE Margin dB	4MHz 3W/VBW Bandwidth	FCC	IC
Peak: P Detector Type PK	reAmp Use Net = Reac K Quasi-Pe Ant. Pol. (V/H) H	d? (Y or N): ling (dBuV/m eak: QP Ave Frequency MHz 2473.953	N i) + Antenna rage: AVG Reading dB(uV) 53.2	Voltage/I a Factor (dE RMS: RMS Antenna Factor dB(1/m) 29.2	Frequency: 81/m) + Cab 3; NF = Nois Cable Loss dB 4.4	Fresh 3 ble Loss (dE e Floor, RE Pre-amp Factor dB 0.0	V battery 3) - Preamp 3 = Restricte AVERAGE Factor dB 0.0	Freque Factor (dB) ed Band; Ba Net dB(uV/m) 86.8	ncy Range: - Distance ndwidth der Limit dB(uV/m) 114.0	Factor (dB) noted as RE Margin dB -27.2	4MHz 3W/VBW Bandwidth 1/3 MHz	FCC	IC

Notes: A maximum average factor of 20 dB was applied to Maxh PK readings to get AVG readings.



Average Factor Calculation:

Average Factor = 20*Log(3*240uS/100ms) Average Factor = 20*Log(3*0.240/100) Average Factor = -42.9dB Maximum average factor used = -20dB



Date: 11.AUG.2008 17:46:57



Date: 11.AUG.2008 18:06:09



Average Factor Calculation Continued:



Date: 11.AUG.2008 18:01:06



Test Results: Pass

Test Standard: FCC Part 15 Subpart C Section 15.249

Test: Harmonics/Spurious Field Strength

Performance Criterion: Not Applicable

Test Environment:

Environmental Conditions During Testing:		Ambient (°C)	22	Humidity (%):	59	Pressure	1001
		Ambient (°C):	22		70	(hPa):	1009
Pretest Verification Performed		Yes		Equipment under Test:		M844	
Test Engineer(s): Vathana Ven				EUT Serial Numb	er:	M844FCC1	

Maximum Test Disturbance Parameters: Emissions below 15.249(a) and 15.249(d)

Test Equipment Used:

TEST EQUIPMENT LIST								
ltem	Equipment Type	Make	Model No.	Serial No.	Next Cal. Due			
1	ANTENNA	EMCO	3142	9711-1223	02/22/2009			
2	4 Line Digital Barometer *	Mannix	0ABA116	SAF291	01/30/2009			
3	HORN ANTENNA	EMCO	3115	9610-4980	03/03/2009			
4	Cable, SMA - SMA, < 18GHz	Sucoflex (Huber Suhn	104PE	CBLSHF103	Verified			
5	40 GHz Cable	Megaphase	TM40-K1K1-80	7030802 002	06/05/2009			
6	9kHz to 3GHz EMI Test Receiver	Rohde & Schwartz	ESCI 1166.5950K03	100067	01/25/2009			
7	3GHz High Pass Filter	Reactel, Inc	7HSX-3G/18G- S11	06-1	09/18/2008			
8	ANTENNA, RIDGED GUIDE, 18-40 GHZ	EMCO	3116	2090	12/26/2008			
9	High Frequency Cable 40GHz	Megaphase	TM40 K1K1 80	CBL029	12/06/2008			
10	100MHz-40GHz Preamp	MITEQ	NSP4000-NFG	1260417	03/27/2009			
11	3 Meter In floor cable for site 2	ITS	RG214B/U	S2 3M FLR	09/17/2008			



Software Utilized:

Name	Manufacturer	Version		
EXCEL 2000	Microsoft Corporation	9.0.6926 SP-3		
EMI BOXBOROUGH	Intertek	3/07/07 Revision		

Test Details:

Test Point	Standard Limit (as published)	Compliance Level	Pass/Fail	Comment
Around the EUT	Specified limits	Below specified limits	Pass	None



Test Results:

QP V

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Radiated Emissions From 30-1000MHz

0.0 0.0 25.7 46.0 -20.3 120/300 kHz

Company:	Timex Cor	р					Antenna	a & Cables:	Ν	Bands: N, I	F, HF, SHF	
Model #:	M844						Antenna:	LOG2 2-22-	-09 V3m.txt	LOG2 2-22	-09 H3m.txt	
Serial #:	M844FCC	1					Cable(s):	S2 3M FLR	9-17-08.txt	NONE.		
Engineers:	Vathana V	en			Location:	Site 2	Barometer:	SAF291				
Project #:	3155317		Date(s):	07/08/08								
Standard:	FCC Part 1	15 Subpart C	; 15.249				Temp/Humic	lity/Pressure:	22 deg C	59%	1001 mB	
Receiver:	R&S ESCI	(ROS002)		Limit Di	stance (m):	3						
PreAmp:	PRE9 03-2	27-09.txt		Test Di	stance (m):	3						
P	reAmp Use	d? (Y or N):	N	Voltage/	Frequency:	Fresh 3	V battery	Freque	ncy Range:	30-100	00 MHz	
	Net = Read	ding (dBuV/m	n) + Antenn	a Factor (dB	31/m) + Cal	ole Loss (dE	3) - Preamp	Factor (dB)	- Distance	Factor (dB))	
Peak: Pl	K Quasi-Pe	eak: QP Ave	arage: AVG	RMS: RMS	s; NF = Nois	se Floor, RE	B = Restricte	d Band; Ba	ndwidth der	noted as RE	BW/VBW	
	Ant.			Antenna	Cable	Pre-amp	Distance					1
Detector	Pol.	Frequency	Reading	Factor	Loss	Factor	Factor	Net	Limit	Margin	Bandwidth	
Туре	(V/H)	MHz	dB(uV)	dB(1/m)	dB	dB	dB	dB(uV/m)	dB(uV/m)	dB		FCC
QP	V	40.000	0.5	12.9	0.7	0.0	0.0	14.1	40.0	-25.9	120/300 kHz	
QP	V	150.000	0.8	11.6	1.5	0.0	0.0	13.9	43.5	-29.6	120/300 kHz	RB
QP	V	250.000	3.4	14.1	2.0	0.0	0.0	19.5	46.0	-26.5	120/300 kHz	RB
QP	V	350.000	-3.3	16.8	2.5	0.0	0.0	16.0	46.0	-30.0	120/300 kHz	
	N/	E00 000	20	10.9	31	0.0	0.0	25.8	46.0	-20.2	120/200 kHz	1

700.000 -1.0 22.8 3.9

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Test Results Continued:

Radiated Emissions From 1-18GHz

Company:	Timex Cor	c					Antenna	a & Cables:	HF	Bands: N, I	F, HF, SHF			
Model #:	M844						Antenna:	HORN3 V1n	n 6-18-08.txt	HORN3 H1r	n 6-18-08.txt			
Serial #:	M844FCC1	1					Cable(s):	CBLSHF103	07-10-09.txt	MEG004.tb	<t st<="" td=""><td>REA003</td><td>REA004</td><td></td></t>	REA003	REA004	
Engineers:	Vathana Ve	en			Location:	Site 2	Barometer:	SAF291						
Project #:	3155317		Date(s):	07/11/08										
Standard:	FCC Part 1	5 Subpart C	15.249				Temp/Humic	dity/Pressure:	22 deg C	70%	1009 mB			
Receiver:	R&S ESCI	(ROS002)		Limit Di	stance (m):	3								
PreAmp:	PRE9 03-2	7-09.txt		Test Di	stance (m):	3								
P	reAmp Use	d? (Y or N):	Y	Voltage/	Frequency:	Fresh 3	V battery	Freque	ncy Range:	1 - 18	3 GHz			
	Net = Read	ling (dBuV/m	n) + Antenn	a Factor (dE	31/m) + Cat	ole Loss (dE	3) - Preamp	Factor (dB)	- Distance	Factor (dB))			
Peak: Pl	K Quasi-Pe	ak: QP Ave	rage: AVG	RMS: RMS	S; NF = Nois	se Floor, RE	3 = Restricte	ed Band; Ba	ndwidth der	noted as RE	3W/VBW			
	Ant.		0	Antenna	Cable	Pre-amp	AVERAGE					1		
Detector	Pol.	Frequency	Reading	Factor	Loss	Factor	Factor	Net	Limit	Margin	Bandwidth			
Туре	(V/H)	MHz	dB(uV)	dB(1/m)	dB	dB	dB	dB(uV/m)	dB(uV/m)	dB		FCC	IC	
PK	Н	4947.875	48.1	34.8	7.1	29.3	0.0	60.7	74.0	-13.3	1/3 MHz	RB	RB	
AVG	Н	4947.875	28.1	34.8	7.1	29.3	0.0	40.7	54.0	-13.3	1/3 MHz	RB	RB	
PK	Н	7421.859	37.0	37.7	8.6	28.3	0.0	55.0	74.0	-19.0	1/3 MHz	RB	RB	
AVG	Н	7421.859	17.0	37.7	8.6	28.3	0.0	35.0	54.0	-19.0	1/3 MHz	RB	RB	
PK	V	9895.718	35.4	40.3	10.2	27.3	0.0	58.6	74.0	-15.4	1/3 MHz			
AVG	V	9895.718	15.4	40.3	10.2	27.3	0.0	38.6	54.0	-15.4	1/3 MHz			
PK	Н	12370.000	35.8	39.4	11.2	27.4	0.0	59.0	74.0	-15.0	1/3 MHz	RB	RB	Noise Floor
EMI AVG	Н	12370.000	25.0	39.4	11.2	27.4	0.0	48.2	54.0	-5.8	1/3 MHz	RB	RB	Noise Floor
PK	Н	14844.000	33.7	42.1	12.7	27.6	0.0	60.9	74.0	-13.1	1/3 MHz	1		Noise Floor
EMI AVG	Н	14844.000	23.7	42.1	12.7	27.6	0.0	50.9	54.0	-3.1	1/3 MHz]		Noise Floor

Notes: A maximum average factor of 20 dB was applied to Maxh PK readings to get AVG readings.



Test Results Continued:

Radiated Emissions From 18-24.570GHz

Company:	Timex Cor	c					Antenna	a & Cables:	SHF	Bands: N, I	LF, HF, SHF	
Model #:	iodel #: M844 Antenna: EMC04 V 1m 12-26-2008.txt EMC04 H 1m 12-26-2008.txt											
Serial #:	M844FCC1	1					Cable(s):	MEG004.tx	t	CBL029 12-06-08.txt		
Engineers:	Vathana Ve	en			Location:	Site 2	Barometer:	SAF291				
Project #:	3155317		Date(s):	07/11/08								
Standard:	FCC Part 1	5 Subpart C	15.249				Temp/Humic	lity/Pressure:	22 deg C	70%	1009 mB	
Receiver:	R&S ESCI	(ROS002)		Limit Dis	stance (m):	3						
PreAmp:	PRE9 03-2	7-09.txt		Test Dis	stance (m):	3						
	PreAmp Us	ed? (Y or N):	Y	Voltage/	Frequency:	Fresh 3	V battery	Freque	ncy Range:	18 - 24	.74 GHz	
	Net = Rea	ding (dBuV/m) + Antenna	Factor (dB	1/m) + Cab	le Loss (dB) - Preamp	Factor (dB)	- Distance I	Factor (dB)		
Peak: P	K Quasi-P	eak: QP Ave	rage: AVG	RMS: RMS	; NF = Nois	e Floor, RB	= Restricte	d Band; Bar	ndwidth den	oted as RB	W/VBW	
	Ant.			Antenna	Cable	Pre-amp	Distance					
Detector	Pol.	Frequency	Reading	Factor	Loss	Factor	Factor	Net	Limit	Margin	Bandwidth	
Туре	(V/H)	MHz	dB(uV)	dB(1/m)	dB	dB	dB	dB(uV/m)	dB(uV/m)	dB		FCC
PK	Н	19792.000	35.0	45.0	9.6	28.8	0.0	60.7	74.0	-13.3	120/300 kHz	RB
EMI AVG	Н	19792.000	23.0	45.0	9.6	28.8	0.0	48.7	54.0	-5.3	120/300 kHz	RB
PK	Н	22266.000	32.0	45.2	9.8	27.7	0.0	59.3	74.0	-14.7	120/300 kHz	RB
EMI AVG	Н	22266.000	23.2	45.2	9.8	27.7	0.0	50.5	54.0	-3.5	120/300 kHz	RB
PK	Н	24740.000	32.7	45.9	10.4	26.4	0.0	62.6	74.0	-11.4	120/300 kHz	
EMI AVG	Н	24740.000	22.0	45.9	10.4	26.4	0.0	51.9	54.0	-2.1	120/300 kHz	

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Report Number: 3155317BOX-001b



Radiated Emissions Setup Photo 1





Radiated Emissions Setup Photo 2





Radiated Emissions Setup Photo 3





Test Results: No limit

Test Standard: FCC Part 15 Subpart C Section 15.249

Test: 20 dB Bandwidth

Performance Criterion: Not Applicable

Test Environment:

Environmental Conditi	ons During Testing:	Ambient (°C):	22	Humidity (%):	59	Pressure (hPa):	1001	
Pretest Verification Pe	erformed	Yes		Equipment under Test:		M844		
Test Engineer(s):	Vathana Ven			EUT Serial Number:		M844FCC1		

Maximum Test Disturbance Parameters: No limit

Test Equipment Used:

TEST EQUIPMENT LIST										
ltem	Equipment Type	Make	Model No.	Serial No.	Next Cal. Due					
1	HORN ANTENNA	EMCO	3115	9610-4980	03/03/2009					
2	40 GHz Cable	Megaphase	TM40-K1K1-197	7030801 002	06/05/2009					
3	4 Line Digital Barometer *	Mannix	0ABA116	SAF291	01/30/2009					
4	Spectrum Analyzer 20Hz - 40 GHz	Rohde & Schwartz	FSEK-30	100225	11/26/2008					

Test Details:

Test Point	Standard Limit (as published)	Compliance Level	Pass/Fail	Comment
Fundamental	No limit	No limit	No limit	None
Frequency				

Intertek ETL SEMKO



Date: 8.JUL.2008 19:35:19