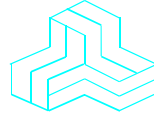


# ENGINEERING TEST REPORT



## Mobile Collaboration Device 1000 Model Number: MCD1000

**FCC ID: T78-MCD1000**  
**(Contains FCC ID: NKRDRCM)**

*Applicant:* **Librestream Technologies Inc.**  
Unit 200, 55 Rothwell Road  
Winnipeg, MB  
Canada, R3P 2M5

*In Accordance With*

**FEDERAL COMMUNICATIONS COMMISSION (FCC)**  
**PART 15, SUBPART C, SEC. 15.247**  
**Digital Modulation Transmitters operating in the frequency**  
**band 2400 - 2483.5 MHz**

**UltraTech's File No.: LIBT-010-15.247C**

This Test report is Issued under the Authority of  
Tri M. Luu, Professional Engineer,  
Vice President of Engineering  
UltraTech Group of Labs



Date: July 06, 2007

Report Prepared by: JaeWook Choi

Tested by: Hung Trinh, RFI Technologist

Issued Date: July 06, 2007

Test Dates: June 14, 2007

- *The results in this Test Report apply only to the sample(s) tested, and the sample tested is randomly selected.*
- *This report must not be used by the client to claim product endorsement by NVLAP or any agency of the US Government.*

## UltraTech

3000 Bristol Circle, Oakville, Ontario, Canada, L6H 6G4

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SL2-IN-E-1119R

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## EXHIBIT 1. INTRODUCTION

### 1.1. SCOPE

<b>Reference:</b>	FCC Part 15, Subpart C, Section 15.247
<b>Title</b>	Telecommunication - Code of Federal Regulations, CFR 47, Part 15
<b>Purpose of Test:</b>	To gain FCC Certification Authorization for Digital Modulation Transmitters operating in the Frequency Band 2400 - 2483.5 MHz .
<b>Test Procedures</b>	Both conducted and radiated emissions measurements were conducted in accordance with American National Standards Institute ANSI C63.4 - American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.
<b>Environmental Classification:</b>	<ul style="list-style-type: none"> <li>• Residential</li> <li>• Light-industry, Commercial</li> <li>• Industry</li> </ul>

### 1.2. RELATED SUBMITAL(S)/GRANT(S)

None

### 1.3. NORMATIVE REFERENCES

Publication	YEAR	Title
FCC CFR Parts 0-19	2006	Code of Federal Regulations – Telecommunication
ANSI C63.4	2004	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
CISPR 22 +A1 EN 55022	2003-04-10 2004-10-14 2003	Limits and Methods of Measurements of Radio Disturbance Characteristics of Information Technology Equipment
CISPR 16-1-1	2003	Specification for radio disturbance and immunity measuring apparatus and methods. Part 1-1: Measuring Apparatus
CISPR 16-2-1	2003	Specification for radio disturbance and immunity measuring apparatus and methods. Part 2-1: Conducted disturbance measurement
CISPR 16-2-3	2003	Specification for radio disturbance and immunity measuring apparatus and methods. Part 2-3: Radiated disturbance measurement
FCC Test Procedures	Mar. 23, 2005	Measurement of Digital Transmission Systems. Operating under Section 15.247
FCC Public Notice DA 00-1407	2000	Part 15 Unlicensed Modular Transmitter Approval

## EXHIBIT 2. PERFORMANCE ASSESSMENT

### 2.1. CLIENT INFORMATION

<b>APPLICANT:</b>	
<b>Name:</b>	Librestream Technologies Inc.
<b>Address:</b>	Unit 200, 55 Rothwell Road Winnipeg, MB Canada, R3P 2M5
<b>Contact Person:</b>	Bill Gillanders Phone #: (204) 487-0612 Fax #: (204) 487-0914 Email Address: <a href="mailto:bill.gillanders@librestream.com">bill.gillanders@librestream.com</a>

<b>MANUFACTURER:</b>	
<b>Name:</b>	Librestream Technologies Inc.
<b>Address:</b>	Unit 200, 55 Rothwell Road Winnipeg, MB Canada, R3P 2M5
<b>Contact Person:</b>	Bill Gillanders Phone #: (204) 487-0612 Fax #: (204) 487-0914 Email Address: <a href="mailto:bill.gillanders@librestream.com">bill.gillanders@librestream.com</a>

### 2.2. EQUIPMENT UNDER TEST (EUT) INFORMATION

The following information (with the exception of the Date of Receipt) has been supplied by the applicant.

<b>Brand Name</b>	Librestream Technologies Inc.
<b>Product Name</b>	Mobile Collaboration Device 1000
<b>Model Number:</b>	MCD1000
<b>Serial Number</b>	10008
<b>Type of Equipment</b>	Digital Modulation Transmitters
<b>Input Power Supply Type</b>	3 Vdc rechargeable battery (CUI Battery Charger, Model 3A-181WP12)
<b>Primary User Functions of EUT:</b>	Provide data communication link through air

### 2.3. EUT'S TECHNICAL SPECIFICATIONS

<b>TRANSMITTER</b>	
<b>Equipment Type:</b>	<ul style="list-style-type: none"> <li>▪ Portable (body worn)</li> </ul>
<b>Intended Operating Environment:</b>	<ul style="list-style-type: none"> <li>▪ Residential</li> <li>▪ Commercial, light industry &amp; heavy industry</li> </ul>
<b>Power Supply Requirement:</b>	3 Vdc Rechargeable Battery (CUI Battery Charger, Model 3A-181WP12)
<b>RF Output Power Rating: (Conducted)</b>	<ul style="list-style-type: none"> <li>• 14.29 dBm (26.9 mWatts) for 802.11b</li> <li>• 17.39 dBm (54.8 mWatts) for 802.11g</li> </ul>
<b>Operating Frequency Range:</b>	2412 - 2462 MHz
<b>RF Output Impedance:</b>	50 Ohms
<b>Number of Channels:</b>	11
<b>Duty Cycle:</b>	100%
<b>6 dB Bandwidth:</b>	10.08 MHz
<b>Modulation Type:</b>	802.11b: DBPSK(1Mbps), DQPSK(2Mbps), CCK(5.5/11Mbps) 802.11g: OFDM (6M - 54Mbps)
<b>Emission Designation:</b>	10M1GXX
<b>Antenna Connector Type:</b>	Integral antenna, couple to the radio using MCXX connector inside the EUT.
<b>Antenna Description:</b>	Manufacturer: Laird Technologies Type: Printed Dipole Model: NanoBlue Frequency Range: 2.4 ~ 2.5 GHz In/Out Impedance: 50 Ohms Gain: 2 dBi

<b>RECEIVER</b>	
<b>Operating Frequency Range:</b>	2412 - 2462 MHz
<b>RF Input Impedance:</b>	50 Ohms

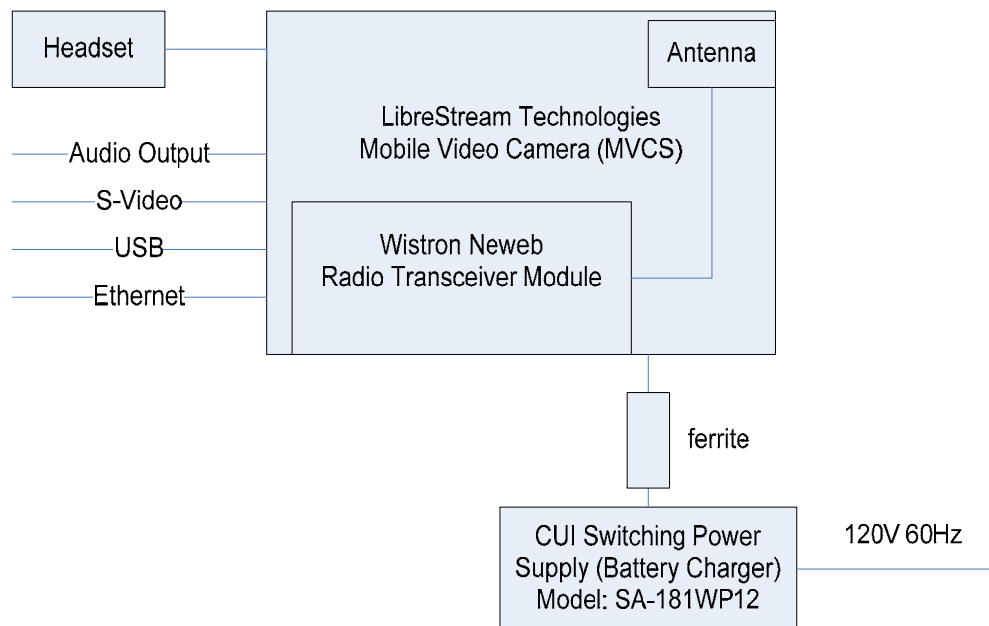
## 2.4. LIST OF EUT'S PORTS

Port Number	EUT's Port Description	Number of Identical Ports	Connector Type	Cable Type (Shielded/Non-shielded)
1	Ethernet	1	RJ-45	Non-shielded
2	S-Video	1	S-Video	Non-shielded
3	Subject Audio	1	1.8mm Stereo	Non-shielded
4	USB	1	USB	Non-shielded
5	Headset	1	2.5 mm	Non-shielded

## 2.5. ANCILLARY EQUIPMENT

N/A

## 2.6. TEST SETUP BLOCK DIAGRAM



## EXHIBIT 3. EUT OPERATING CONDITIONS AND CONFIGURATIONS DURING TESTS

### 3.1. CLIMATE TEST CONDITIONS

The climate conditions of the test environment are as follows:

Temperature:	21°C
Humidity:	51%
Pressure:	102 kPa
Power input source:	3 Vdc Rechargeable Battery (CUI Battery Charger, Model 3A-181WP12)

### 3.2. OPERATIONAL TEST CONDITIONS & ARRANGEMENT FOR TESTS

<b>Operating Modes:</b>	<ul style="list-style-type: none"> <li>▪ Each of lowest, middle and highest channel frequencies transmits continuously for emissions measurements.</li> <li>▪ The EUT operates in normal Direct Sequence mode for occupancy duration, and frequency separation.</li> </ul>
<b>Special Test Software:</b>	<ul style="list-style-type: none"> <li>▪ Special software is provided by the Applicant to select and operate the EUT at each channel frequency continuously. For example, the transmitter will be operated at each of lowest, middle and highest frequencies individually continuously during testing.</li> </ul>
<b>Special Hardware Used:</b>	N/A
<b>Transmitter Test Antenna:</b>	The EUT is tested with the antenna fitted in a manner typical of normal intended use as integral antenna equipment.
<b>Transmitter Test Signals:</b>	
<b>Frequencies:</b> <ul style="list-style-type: none"> <li>▪ 2412 - 2462 MHz band:</li> </ul>	Lowest, middle and highest channel frequencies tested: 2412, 2437 and 2462 MHz
<b>Transmitter Wanted Output Test Signals:</b> <ul style="list-style-type: none"> <li>▪ RF Power Output (measured maximum output power):</li> <li>▪ Normal Test Modulation</li> <li>▪ Modulating signal source:</li> </ul>	<ul style="list-style-type: none"> <li>▪ 14.29 dBm for 802.11b and 17.39 dBm for 802.11g</li> <li>▪ As provided for IEEE 802.11b and 802.11g</li> <li>▪ Internal</li> </ul>

## EXHIBIT 4. SUMMARY OF TEST RESULTS

### 4.1. LOCATION OF TESTS

All of the measurements described in this report were performed at Ultratech Group of Labs located in the city of Oakville, Province of Ontario, Canada.

AC Powerline Conducted Emissions were performed in UltraTech's shielded room, 16'(L) by 12'(W) by 12'(H).

Radiated Emissions were performed at the Ultratech's 3-10 TDK Semi-Anechoic Chamber situated in the Town of Oakville, province of Ontario. This test site been calibrated in accordance with ANSI C63.4, and found to be in compliance with the requirements of Sec. 2.948 of the FCC Rules. The descriptions and site measurement data of the Oakville 3-10 TDK Semi-Anechoic Chamber has been filed with FCC office (FCC File No.: 31040/SIT 1300B3) and Industry Canada office (Industry Canada File No.: IC2049A-2). Last Date of Site Calibration: June 20, 2006.

### 4.2. APPLICABILITY & SUMMARY OF EMC EMISSION TEST RESULTS

FCC PARAGRAPH.	TEST REQUIREMENTS	COMPLIANCE (YES/NO)
15.247(a)(2)	6dB Bandwidth of a Digital Modulation System	Yes - See Note (1)
15.247(b) & (c)	Maximum Peak Power (Conducted)	Yes - See Note (1)
15.247(i) & 1.1307, 1.1310, 2.1091 & 2.1093	RF Exposure Limit	Yes - See Note (2)
15.247(d)	RF Conducted Spurious Emissions at the Transmitter Antenna Terminal	Yes - See Note (1)
15.247(e)	Transmitted Power Density of a Digital Modulation System	Yes - See Note (1)
15.247(d), 15.209 & 15.205	Transmitter Radiated Emissions	Yes
15.107(a) & 15.207(a)	Class B - AC Power Conducted Emissions on Tx, Rx and standby modes	Yes - See Note (3)
FCC Part 15, Sub. B, Sec. 15.109(b)	Class A Radiated Emissions	Yes - See Note (3)

#### Notes:

- (1) Please refer to the original RFI/EMC test report.
- (2) Please refer to the enclosed SAR test report.
- (3) A separate engineering test report for compliance with FCC Part 15, Subpart B - Class A Unintentional Radiators will be provided upon request.

### 4.3. MODIFICATIONS INCORPORATED IN THE EUT FOR COMPLIANCE PURPOSES

N/A

#### ULTRATECH GROUP OF LABS

3000 Bristol Circle, Oakville, Ontario, Canada L6H 6G4  
Tel. #: 905-829-1570, Fax. #: 905-829-8050, Email: [vic@ultratech-labs.com](mailto:vic@ultratech-labs.com), Website: <http://www.ultratech-labs.com>

File #: July 06, 2007  
LIBT-010-15.247C

- All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)



## **EXHIBIT 5. MEASUREMENTS, EXAMINATIONS & TEST DATA FOR EMC EMISSIONS**

### **5.1. TEST PROCEDURES**

This section contains test results only. Details of test methods and procedures can be found in ANSI C63.4, "FCC Measurement of Digital Transmission Systems Operating under Section 15.247 - March 23, 2005", ULTR-P001-2004, ULTR-P002-2004 and ULTR-P003-2004.

### **5.2. MEASUREMENT UNCERTAINTIES**

The measurement uncertainties stated were calculated in accordance with requirements of UKAS Document LAB 34 with a confidence level of 95%. Please refer to Exhibit 6 for Measurement Uncertainties.

### **5.3. MEASUREMENT EQUIPMENT USED:**

The measurement equipment used complied with the requirements of the Standards referenced in the Methods & Procedures ANSI C63.4 and CISPR 16-1.

### **5.4. ESSENTIAL/PRIMARY FUNCTIONS AS DECLARED BY THE MANUFACTURER:**

The essential function of the EUT is to correctly communicate data to and from radios over RF link.

## 5.5. COMPLIANCE WITH FCC PART 15 – GENERAL TECHNICAL REQUIREMENTS

FCC Section	FCC Rules	
15.203	<p>Described how the EUT complies with the requirement that either its antenna is permanently attached, or that it employs a unique antenna connector, for every antenna proposed for use with the EUT.</p> <p>The exception is in those cases where EUT must be professionally installed. In order to demonstrate that professional installation is required, the following 3 points must be addressed:</p> <ul style="list-style-type: none"><li>• The application (or intended use) of the EUT</li><li>• The installation requirements of the EUT</li><li>• The method by which the EUT will be marketed</li></ul>	Integral antenna located inside the MCD1000 Unit
15.204	<p>Provided the information for every antenna proposed for use with the EUT:</p> <p>(a) type (e.g. Yagi, patch, grid, dish, etc...), (b) manufacturer and model number (c) gain with reference to an isotropic radiator</p>	N/A

---

## 5.6. RF EXPOSURE REQUIRMENTS @ FCC 15.247(I), 1.1307(B)(1)

Conforms. Refer to the enclosed test report for SAR tests

- *All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)*

## 5.7. TRANSMITTER SPURIOUS EMISSIONS (RADIATED @ 3 METERS), FCC CFR 47, PARA. 15.247(D), 15.209 & 15.205

### 5.7.1. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

#### Remarks:

- Applies to harmonics/spurious emissions that fall in the restricted bands listed in Section 15.205. The maximum permitted average field strength is listed in Section 15.209.
- @ FCC CFR 47, Para. 15.237(c) - The emission limits as specified above are based on measurement instrument employing an average detector. The provisions in @15.35 for limiting peak emissions apply.

FCC CFR 47, Part 15, Subpart C, Para. 15.205(a) - Restricted Frequency Bands

MHz	MHz	MHz	GHz
0.090 - 0.110	162.0125 - 167.17	2310 - 2390	9.3 - 9.5
0.49 - 0.51	167.72 - 173.2	2483.5 - 2500	10.6 - 12.7
2.1735 - 2.1905	240 - 285	2655 - 2900	13.25 - 13.4
8.362 - 8.366	322 - 335.4	3260 - 3267	14.47 - 14.5
13.36 - 13.41	399.9 - 410	3332 - 3339	14.35 - 16.2
25.5 - 25.67	608 - 614	3345.8 - 3358	17.7 - 21.4
37.5 - 38.25	960 - 1240	3600 - 4400	22.01 - 23.12
73 - 75.4	1300 - 1427	4500 - 5250	23.6 - 24.0
108 - 121.94	1435 - 1626.5	5350 - 5460	31.2 - 31.8
123 - 138	1660 - 1710	7250 - 7750	36.43 - 36.5
149.9 - 150.05	1718.8 - 1722.2	8025 - 8500	Above 38.6
156.7 - 156.9	2200 - 2300	9000 - 9200	

FCC CFR 47, Part 15, Subpart C, Para. 15.209(a)

-- Field Strength Limits within Restricted Frequency Bands --

FREQUENCY (MHz)	FIELD STRENGTH LIMITS (microvolts/m)	DISTANCE (Meters)
0.009 - 0.490	2,400 / F (KHz)	300
0.490 - 1.705	24,000 / F (KHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

### 5.7.2. Method of Measurements

Refer to “FCC Measurement of Digital Transmission Systems Operating under Section 15.247 - March 23, 2005” and Ultratech Test Procedures, File # ULTR P003-2004 and ANSI C63.4 for measurement methods

**Radiated emission test:** Applies to harmonics/spurs that fall in the restricted bands listed in Section 15.205. The maximum permitted average field strength is listed in Section 15.209. A pre-amp (and possibly a high-pass filter) is necessary for this measurement. For measurements above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation. See Section 15.35(b) and (c).

### 5.7.3. Test Equipment List

Test Instruments	Manufacturer	Model No.	Serial No.	Frequency Range
Spectrum Analyzer/ EMI Receiver	Rohde & Schawrz	FSEK20/B4/B21	834157/005	9 kHz – 40 GHz with external mixer
Microwave Amplifier	Hewlett Packard	HP 83017A		1 GHz to 26.5 GHz
Biconilog Antenna	EMCO	3143	1029	20 MHz to 2 GHz
Horn Antenna	EMCO	3155	9701-5061	1 GHz – 18 GHz
Horn Antenna	EMCO	3160-09	..	18 GHz – 26.5 GHz

### 5.7.4. Photographs of Test Setup

Refer to the Photographs in Annex 1 for setup and arrangement of equipment under tests and its ancillary equipment.

## 5.7.5. Test Data

### 5.7.5.1. Transmitter Radiated Spurious Emissions

**Remark:** The transmitter with modulation of IEEE 802.11g (64QAM @ 54 Mb/s) and maximum allowable conducted RF output power settings of 14 dBm were set for testing of the worst case.

#### Lowest Frequency (2412 MHz), Modulation: IEEE 802.11g (64QAM @ 54 Mb/s)

Frequency (MHz)	RF Peak Level (dB $\mu$ V/m)	RF AVG Level (dB $\mu$ V/m)	Antenna Plane (H/V)	Limit 15.209 (dB $\mu$ V/m)	Limit 15.247 (dB $\mu$ V/m)	Margin (dB)	Pass/Fail
2412	116.25	N/A	V	N/A	N/A	N/A	Pass
2412	115.14	N/A	H	N/A	N/A	N/A	Pass
4824	55.16	42.97	V	54.0	N/A	-11.03	Pass
4824	56.41	43.84	H	54.0	N/A	-10.16	Pass
30 – 25,000	**	**	V & H	FCC 15.209	FCC 15.247	**	Pass

The emissions were scanned from 30 MHz to 25 GHz. All emissions less than 20 dB below the FCC Limits are recorded.

#### Middle Frequency (2437 MHz), Modulation: IEEE 802.11g (64QAM @ 54 Mb/s)

Frequency (MHz)	RF Peak Level (dB $\mu$ V/m)	RF AVG Level (dB $\mu$ V/m)	Antenna Plane (H/V)	Limit 15.209 (dB $\mu$ V/m)	Limit 15.247 (dB $\mu$ V/m)	Margin (dB)	Pass/Fail
2437	114.67	N/A	V	N/A	N/A	N/A	Pass
2437	112.60	N/A	H	N/A	N/A	N/A	Pass
4874	54.94	41.88	V	54.0	N/A	-12.12	Pass
4874	56.74	43.91	H	54.0	N/A	-10.09	Pass
30 – 25,000	**	**	V & H	FCC 15.209	FCC 15.247	**	Pass

The emissions were scanned from 30 MHz to 25 GHz. All emissions less than 20 dB below the FCC Limits are recorded.

#### Highest Frequency (2462 MHz), Modulation: IEEE 802.11g (64QAM @ 54 Mb/s)

Frequency (MHz)	RF Peak Level (dB $\mu$ V/m)	RF AVG Level (dB $\mu$ V/m)	Antenna Plane (H/V)	Limit 15.209 (dB $\mu$ V/m)	Limit 15.247 (dB $\mu$ V/m)	Margin (dB)	Pass/Fail
2462	112.36	N/A	V	N/A	N/A	N/A	Pass
2462	113.60	N/A	H	N/A	N/A	N/A	Pass
4924	52.41	40.42	V	54.0	N/A	-13.58	Pass
4924	52.78	39.99	H	54.0	N/A	-14.01	Pass
30 – 25,000	**	**	V & H	FCC 15.209	FCC 15.247	**	Pass

The emissions were scanned from 30 MHz to 25 GHz. All emissions less than 20 dB below the FCC Limits are recorded.

## EXHIBIT 6. MEASUREMENT UNCERTAINTY

The measurement uncertainties stated were calculated in accordance with the requirements of NIST Technical Note 1297 and LAB 34

### 6.1. LINE CONDUCTED EMISSION MEASUREMENT UNCERTAINTY

CONTRIBUTION (Line Conducted)	PROBABILITY DISTRIBUTION	UNCERTAINTY (dB)	
		9-150 kHz	0.15-30 MHz
EMI Receiver specification	Rectangular	±1.5	±1.5
LISN coupling specification	Rectangular	±1.5	±1.5
Cable and Input Transient Limiter calibration	Normal (k=2)	±0.3	±0.5
Mismatch: Receiver VRC $\Gamma_1 = 0.03$ LISN VRC $\Gamma_R = 0.8(9 \text{ kHz}) 0.2 (30 \text{ MHz})$ Uncertainty limits $20\text{Log}(1+\Gamma_1\Gamma_R)$	U-Shaped	±0.2	±0.3
System repeatability	Std. deviation	±0.2	±0.05
Repeatability of EUT	--	--	--
Combined standard uncertainty	Normal	±1.25	±1.30
Expanded uncertainty U	Normal (k=2)	±2.50	±2.60

Sample Calculation for Measurement Accuracy in 450 kHz to 30 MHz Band:

$$u_c(y) = \sqrt{\sum_{i=1}^m u_i^2(y)} = \pm \sqrt{(1.5^2 + 1.5^2)/3 + (0.5/2)^2 + (0.05/2)^2 + 0.35^2} = \pm 1.30 \text{ dB}$$

$$U = 2u_c(y) = \pm 2.6 \text{ dB}$$

## 6.2. RADIATED EMISSION MEASUREMENT UNCERTAINTY

CONTRIBUTION (Radiated Emissions)	PROBABILITY DISTRIBUTION	UNCERTAINTY ( $\pm$ dB)	
		3 m	10 m
Antenna Factor Calibration	Normal (k=2)	$\pm 1.0$	$\pm 1.0$
Cable Loss Calibration	Normal (k=2)	$\pm 0.3$	$\pm 0.5$
EMI Receiver specification	Rectangular	$\pm 1.5$	$\pm 1.5$
Antenna Directivity	Rectangular	+0.5	+0.5
Antenna factor variation with height	Rectangular	$\pm 2.0$	$\pm 0.5$
Antenna phase center variation	Rectangular	0.0	$\pm 0.2$
Antenna factor frequency interpolation	Rectangular	$\pm 0.25$	$\pm 0.25$
Measurement distance variation	Rectangular	$\pm 0.6$	$\pm 0.4$
Site imperfections	Rectangular	$\pm 2.0$	$\pm 2.0$
Mismatch: Receiver VRC $\Gamma_1 = 0.2$ Antenna VRC $\Gamma_R = 0.67(\text{Bi}) 0.3 (\text{Lp})$ Uncertainty limits $20\text{Log}(1 \pm \Gamma_1 \Gamma_R)$	U-Shaped	+1.1 -1.25	$\pm 0.5$
System repeatability	Std. Deviation	$\pm 0.5$	$\pm 0.5$
Repeatability of EUT		-	-
Combined standard uncertainty	Normal	+2.19 / -2.21	+1.74 / -1.72
Expanded uncertainty U	Normal (k=2)	+4.38 / -4.42	+3.48 / -3.44

Calculation for maximum uncertainty when 3m biconical antenna including a factor of k=2 is used:

$$U = 2u_c(y) = 2x(+2.19) = +4.38 \text{ dB} \quad \text{And} \quad U = 2u_c(y) = 2x(-2.21) = -4.42 \text{ dB}$$