



Operation Within The Bands (2.4GHz-2.4835GHz)15.247(2)(b)(c)(d)

6.4.1 <u>6dB Bandwidth 15.247(2)</u>

The minimum 6dB bandwidth must be greater than 500KHz. Data Sheets 6.4.1-1 through 6.4.1-6 show the measured 6dB points to give bandwidths between 10.14 and 11.57MHz at the MIN, MID and MAX frequency tested. Data plots were made for the MIN and MAX data rates. The system exceeds the 500KHz minimum bandwidth.

Photo 3 is representative of the 6dB bandwidth setup.



PHOTO 3



: 00470005 .HT/POL: .POSITION: TER:	write B_blar	A MARKER 10.14 MHz -0.02 dB		Ę	7			
S/N ANT EUT TES	N			5				
II USB	B	7	-				-	
PRISM 1 (2) 1 (11Mb 1	TT 30				1			
36342U .247 (a ER TEST E: ROOM	A	×						
UT: ISL PEC: 15 INE UND EST SIT				3	_			
IDTH E			-	2		-		
BANDW NNEL	B	Z			3			
ST: FCC 6dB EQ: LOW CHA TECT: PEAK TE: 1-14	REF 20.0	Vanot X dB DOV	6.0 dB	a		RBW	VBW VBW	SWP



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ECT: PEAK		LINE UN TEST SI	5.247 (a) DER TEST: TE: ROOM	(11Mbps)		ANT.H EUT P TESTE	T/POL: OSITION:
EF 20.0 df	B		A	TT 30 d	в	A_ML	ite B_blan
/gpo							MARKER
X dB DOWN			×	~	N	F	0.20 MHZ
6.0 dB					-		
Į.		m	5			3	
							-
	>						3
RBW							
VBW							
SWP		-					

DATA SHEET 6.4.1-4

S/N: 0047000 ANT.HT/POL: EUT POSITION TESTER:	A_write B_p	10.04			1		
ISL 36342U PRISM II US : 15.247 (a) (2) UNDER TEST: (1Mbps) SITE: ROOM 1	ATT 30 dB	×		n n			
: FCC 6dB BANDWIDTH BUT: : HIGH CHANNEL SPEC: CT: PEAK LINE : //0-0/ TEST	F 20.0 dBm	(dB DOWN	0.0 08		>	RBW 1 MHz VBW	1 MHz SWP



6.4.2 Peak Output Power 15.247(2)(b)

The peak output power to the antenna shall not exceed 1 watt.

The unit under test (UUT) was configured to continuously transmit. The highest emission level within the authorized band was measured. The peak power level is recorded below. The carrier frequency of the UUT was 2412MHz, 2437MHz and 2462MHz. The MID, MIN and MAX data rates were used.

The data is presented below for each frequency. All levels were below the 1 watt peak power limit.

MIN TX FREQ. 2412GHz	DATA RATE
	MIN - 14.7dBm
	MID - 14.7dBm
	MAX - 14.6dBm
MID TX FREQ. 2437GHz	DATA RATE
	MIN - 15.3dBm
	MID - 15.3dBm
	MAX - 15.2dBm
MAX TX FREQ. 2462GHz	DATA RATE
	MIN - 14.2dBm
	MID - 14.3dBm
	MAX - 14.3dBm

6.4.3 Out of Band Emission 15.247(2)(c)

Out of band measurements were made on the antenna port of the RF unit. The measurement was made over the 2-25GHz range using the 100KHz RBW. Data Sheets 6.4.3-1 through 6.4.3-6 present the scan across the entire range at the MIN, MID and MAX frequency. The plot demonstrates that there is greater than 20dB separation between the intended signal and any other signals in the range.

Data Sheets 6.4.3-7 is included to show the spectrum analyzer setup for restricted band testing where the start frequency and marker number "1" represented one restricted band (2.310-2.390GHz). Marker number "2" is the beginning of the 2.4835-2.5GHz restricted band. All signals falling into the restricted band were below the display line which represents the peak or average limit. These measurements were radiated measurements therefore are measured in both horizontal and vertical polarities.

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Data Sheets 6.4.3-8 through 6.4.3-15 present the peak and average measurements for the low channel at the MIN and MAX data rates. Data Sheets 6.4.3-16 through 6.4.3-23 present the same data for the highest channel.

All signals that fall into the restricted bands are below the requirement of 15.209(a).



DATA SHEET 6.4.3-1





























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Þ 800 25.00 B_blank 2.5000 GHz EUT: ISL 36342U PRISM II USB S/N: 00470005 SPEC: 15.247 LINE UNDER TEST: HIGH CH.(11Mbps) EUT POSITION: TEST SITE: 3-METER 2 Write | -STOP ŧ 믭 0 ATT ł START 2.3100 GHz A North TEST: RESTRICTED BANDS FRE0: 2.31G-2.50GHz DETECT: PEAK DATE: 1-10 - 01 .0 dB///m RBW 1 MHz VBW 1 MHz SWP 50 s G HEF 9 10dB/ 2 ROC



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⊳ 180% 5. B blank 2.5000 GHz . EUT: ISL 36342U PRISM II USB S/N: 00470005 SPEC: 15.247 LINE UNDER TEST: HIGH CH.(11Mbps) EUT POSITION: TEST SITE: 3-METER A write Ł STOP đ 믱 0 ATTA START 2.3100 GHz TEST: RESTRICTED BANDS FREQ: 2.31G-2.50GHz DETECT: AVERAGE DATE: /-10-0/ 7.0 dB///m LI MHZ VBW VBW SWP 50 s REF 97 ÷

6.4.4 Power Spectral Density 15.247(2)(d)

The transmitted power density averaged over a 1 second interval shall not be greater than +8dBm in any 3KHz bandwidth within the band.

The peak point was selected after a max hold was performed and the spectrum analyzer peak marker was positioned. The peak frequency was used as the center frequency. The RBW was set to 3KHz and the span width of 1.5MHz and sweep time of 500 seconds selected. Data Sheets 6.4.4-1 through 6.4.4-12 present the data plots for the three channels at the MIN and MAX data rates.

The results show the spectral density to be greater than 20dB below the +8dBm requirement.

Photo 4 is representative of this setup.



PHOTO 4

PENSITY EUTI ISL 36342U PR HANNEL SPECI 15.247 (d) K LINE UNDER TESTI L /c - C/ TEST SITE: ROOM 1	0 dBm ATT	57 BHz	June		2 ¹
OW CH. (INbps)	30 dB				-
ANT.HT/POL: EUT POSITION: TESTER:	A_write B_bla	2.41257 6H2 10.34 dBm	E		



DATA SHEET 6.4.4-2

XII E	EUT: ISL 36342U SPEC: 15.247 (d) LINE UNDER TEST: TEST SITE: ROOM	PRISM II USB LOW CH.(11Mbps)	S/N: 0047000 ANT.HT/POL: EUT POSITION TESTER:
		-	MAR
	1		2.41324 9.88
	/	/	
	m	_	<
~			/
3			£
	Ĕ.	TEST SITE: BOOM	TTA EUT: ISL 36342U PRISM II USB LINE UNDER TEST: LOW CH.(11Mbps) TEST SITE: ROOM J ATT 30 dB ATT 30 dB

20005 DL1 FION1	B_blank	ARKER 09 dB	1 Mar Gal	-	-	
/N: 004 NT.HT/POSI' STER:	A_write	- 100 - 100 - 100		+	+	
S BI		evi -		++	+	+
IdNIL).	昭				-	\square
LOW CH	T 30		1.1		-	
942U PF (d) CEST: I	AT		- VIV			
SL 363 15.247 NDER 1			hi.l.	+		\square
EUT: I SPEC: LINE U TEST S					-	\square
х	_		ITY.		-	\square
DENSI7 ANNEL	0 dB	 	5	-	Z	H o
POWER LOW CH	20.	b, LI	0.0	8.0 dB	MBM MAKH MBM	A CHAR
EST: REQ: ETECT ATE:	田			H	4	0,

6F 20.0 dBm 0dB/ MKR 2.43796 BHz	ATT 30 dB	
MKR 2.43796 BHz	-	A_write B_bla
MKR 2.43796 BHz		MARKEF
2.43/9b BHZ	7	10.30 dBn
nur .		E
		_
>		3
RBM		
VBW VBW	-	
SWP 500 S		

(sudmi).

10-01-1 10	SPEC: 15. LINE UNDE TEST SITE	247 (d) 247 (d) ER TEST: MID C E: ROOM 1	H.(11Mbps)	ANT.HT/F EUT POSI TESTER:	TION
EF 20.0 dBm		ATT 30	dB	A_write	B_blan
/gnn				M Redex 6	ARKER
MKR 2 A3R23A	11			-67.	52 GB
L. 10001.1	70				
	All Adams Alle	and distant	And Maria	In the A	MAN NA
			WIN H.M.		In h
-			-	-	
- 8.0 dBm					
HBW					
VBW VBW					
SWD KHZ					

E UNDER TEST: HIGH CH. (1M) T SITE: ROOM 1 ATT 30 dB



MKR 2.46324 BHz	TT 30 dB A_write B_b1
MKR 2.46324 BHz	
2.46324 BHz	2.45324 GH
RBW	
VBW	
SWP	

EST: POWER DENS EGO: HIGH CHANN TECT: PEAK MTE: /-/0-4	SITY EUT: ISL 36342U PRISM II USB S/N: (EL SPEC: 15.247 (d) ANT.H LINE UNDER TEST: HIGH CH.(11Mbps) EUT P C/ TEST SITE: ROOM 1 TEST	00470005 TT/POLi POSITION:
REF_20.0 d	Bm ATT 30 dB A_M	rite 8_bla
1005/		MARKER
DSP LINE 8.0 dBm		25.26 dB
	AND A MANANA MALL AND	Alanda
		-
DL 8.0 dBm		
HBW		
VBW VBW		
SWP KITZ		

APPENDIX A

COMPLIANCE LETTER

FEDERAL COMMUNICATIONS COMMISSION Laboratory Division 7435 Oakland Mills Road Columbia, MD. 21046

December 16, 1999

Rubicom Systems, Inc. 284 West Drive, Suite B Melbourne, FL 32904 Registration Number: 90911

Attention:

Joseph Barbee

Re: Measurement facility located at Melbourne 3 meter site Date of Listing: December 16, 1999

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for Certification under Parts 15 or 18 of the Commission's Rules. Please note that this filing must be updated for any changes made to the facility, and at least every three years from the date of listing the data on file must be certified as current.

If requested, the above mentioned facility has been added to our list of those who perform these measurement services for the public on a fee basis. An up-to-date list of such public test facilities is available on the Internet on the FCC Website at WWW.FCC.GOV, E-Filing, OET Equipment Authorization Electronic Filing.

Sincerely,

There & Chillye

Thomas W Phillips Electronics Engineer