

Compliance Certification Services										Date:11/5/99		
Fcc 27.53(a3); ref: 2.1051										Juan Martínez		
										A-site (1 or 3 meters)		
Company:	Metricom											
Model:	4 Rack amplifier w/ radios, Power supply, filters.											
F(MHz)	PK	AV	AF	CL	AMP	DIST	OTHER	TOTAL		LIMIT	MARGIN	
	dBuv	dBuv	(dB)	(dB)	(dB)	(dB)	(dB)	(dBuV/m)		(dBuV/m)	(dBuV/m)	
								PK	AV		PK	AV
fo= 2315												
4630		50.4	34.1	4.71	-35	0	0		54.21	55.23		-1.02
6945(N.F.)		31.8	35.6	5.25	0	-20	0		52.65	55.23		-2.58
9262(N.F.)		36.1	37	6	-35	-15.5	0		28.6	55.23		-26.63
11577(N.F.)		35.7	39.5	7.5	-35	-15.5	0		32.2	55.23		-23.03
13893(N.F.)		39.8	40.8	8.25	-35	-15.5	0		38.35	55.23		-16.88
16208(N.F.)		39.7	39	9.3	-35	-15.5	0		37.5	55.23		-17.73
fo= 2319												
4638		50.6	34.1	4.71	-35	0	0		54.41	55.23		-0.82
6957(N.F.)		30.8	35.6	5.25	0	-20	0		51.65	55.23		-3.58
9276(N.F.)		36.2	37	6	-35	-15.5	0		28.7	55.23		-26.53
11595(N.F.)		36.7	39.5	7.5	-35	-15.5	0		33.2	55.23		-22.03
13914(N.F.)		38.9	40.8	8.25	-35	-15.5	0		37.45	55.23		-17.78
16233(N.F.)		40.1	39	9.3	-35	-15.5	0		37.9	55.23		-17.33
fo= 2345												
4690		50.8	34.1	4.71	-35	0	0		54.61	55.23		-0.62
7035		31.2	35.6	5.25	0	-20	0		52.05	55.23		-3.18
9380		36.4	37	6	-35	-15.5	0		28.9	55.23		-26.33
11725		37.2	39.5	7.5	-35	-15.5	0		33.7	55.23		-21.53
14070		39.2	40.8	8.25	-35	-15.5	0		37.75	55.23		-17.48
16415		39.8	39	9.3	-35	-15.5	0		37.6	55.23		-17.63
fo= 2350												
4700		50.5	34.1	4.71	-35	0	0		54.31	55.23		-0.92
7050		32.1	35.6	5.25	0	-20	0		52.95	55.23		-2.28
9400		37.8	37	6	-35	-15.5	0		30.3	55.23		-24.93
11750		38.1	39.5	7.5	-35	-15.5	0		34.6	55.23		-20.63
14100		38.4	40.8	8.25	-35	-15.5	0		36.95	55.23		-18.28
16450		39.4	39	9.3	-35	-15.5	0		37.2	55.23		-18.03

DIST: Distance correction factor (.5METERS; -15.5dB)

OTHER: High pass filter insertion loss (4GHz)

AF: Antenna Factor

AMP: Pre-amp gain

N.F.: NOISE FLOOR MEASUREMENTS

ANALYZER BANDWIDTH SETTINGS

Res Bw: Video Bw:

Peak(Pk): 1MHz 1MHz

Avg(AV): 1MHz 10Hz

Additional notes:
Section 27.53(a)(a3) states: The power of any emission outside the lincesees frequency band(s) of operation shall be attenuated below the transmit power (p), by a factor no less than **70 + 10 log (P)** dB on all frequencies below 2300 MHz and **on all frequencies above 2370 MHz.**

Using the relationship between field strength and RF power into an isotropic transmit antenna:
E(V/m) = (30 * P * G)^1/2
D(meters) D = Distance
 G= Gain Numeric of antenna, assume 1
 P= Power in Watts

E(V/m) = (30 * 63 * 1)^1/2 = 14.49 V/m
3 meters

20 * log (14.49 * 1,000,000) = 143.22 dBuV/m @ 3 meters

Part 27.53(a3): 70 + 10 log(63) = 87.99 dB

143.22 dBuV/m - 87.99 dB = **55.23 dBuV/m @ 3 meters**