



FCC RADIO TEST REPORT

Applicant : ADESSO INC.

Address : 160 Commerce Way Walnut, CA 91789, U.S.A.

Equipment : Dongle

Model No. : RCV-121R, RCV-122R, RCV-123R, RCV-124R, RCV-125R,
RCV-126R, RCV-127R, RCV-128R, RCV-129R, 53231

Trade Name : **ADESSO**

FCC ID : 2ACFQ121R

I HEREBY CERTIFY THAT :

The sample was received on Jun. 30, 2018 and the testing was carried out on Jul. 02, 2018 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Tested by:

Mark Liao / Assistant Manager

Amos / Engineer

Laboratory Accreditation:



CerpPASS Technology Corporation Test Laboratory

TAF LAB Code:

1439



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History of this test report

■ ORIGINAL

☐ Additional attachment as following record:

Attachment No.	Issue Date	Description



1. Summary of Test Procedure and Test Results

1.1 Applicable Standards

ANSI C63.4: 2014

FCC Rules and Regulations Part 15 Subpart C §15.249

FCC Rule	. Description of Test	Result
15.203	. Antenna Requirement	Pass
15.207	. Conducted Emission	Pass
15.209	. Radiated Emission	Pass
15.215	. 20dB Bandwidth Measurement	Pass
15.249	. Band Edges Measurement Data	Pass



2. Test Configuration of Equipment under Test

2.1 Feature of Equipment under Test

Equipment	Dongle
Model No.	RCV-121R, RCV-122R, RCV-123R, RCV-124R, RCV-125R, RCV-126R, RCV-127R, RCV-128R, RCV-129R, 53231
Model Discrepancy	All the models are the same circuit and RF module except for model name and appearance color for the marketing purpose. The model RCV-121R was chosen for the final testing.
Modulation Type	FSK
Frequency Range	2408MHz -2474MHz
Channel Number	34 Channels
Antenna Type/ gain	PCB Antenna /-1.05dBi
Power Rating	DC 5V

2.2 Carrier Frequency of Channels

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*01	2408	18	2442
02	2410	19	2444
03	2412	20	2446
04	2414	21	2448
05	2416	22	2450
06	2418	23	2452
07	2420	24	2454
08	2422	25	2456
09	2424	26	2458
10	2426	27	2460
11	2428	28	2462
12	2430	29	2464
13	2432	30	2466
14	2434	31	2468
15	2436	32	2470
16	2438	33	2472
*17	2440	*34	2474

Note: Channels remarked * are selected to perform test.

2.3 Test Mode and Test Software

- During testing, the interface cables and equipment positions were varied according to ANSI C63.4.
- The complete test system included Notebook, Mouse and EUT for the RF test.
- An executive program, "RF TEST & EMI MODE_AP.exe" which transmits and receives data through Wireless.
- The EUT had been tested under operating condition
EUT staying in continuous transmitting mode was programmed.
Channel Low (2408MHz), Channel Mid (2440MHz) and Channel High (2474MHz) were chosen for full testing.

**2.4 Description of Test System**

Device	Manufacturer	Model No.	Description
Notebook	SONY	PCG-71811P	R33021

Cable:

No.	Cable	Quantity	Description
A	DC Cable	1	1.7m Non Shielding



2.5 General Information of Test

☒	Test Site	Cerpass Technology Corporation Test Laboratory Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel:+886-3-3226-888 Fax:+886-3-3226-881 Address: No.68-1, Shihbachongsi, Shihding Township, New Taipei City 223, Taiwan, R.O.C. Tel: +886-2-2663-8582
	FCC	TW1079, TW1061, TW1439
	IC	4934E-1, 4934E-2
	VCCI	T-2205 for Telecommunication Test C-4663 for Conducted emission test R-3428, R-4218 for Radiated emission test G-812, G-813 for radiated disturbance above 1GHz
Frequency Range Investigated:		Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 25000MHz
Test Distance:		The test distance of radiated emission from antenna to EUT is 3 M.



3. Test Equipment and Ancillaries Used for Tests

Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
EMI Receiver	R&S	ESCI3	100821	2017/09/08	2018/09/07
LISN	Schwarzbeck	NSLK 8127	8127-568	2018/02/26	2019/02/25
Pulse Limiter	R&S	ESH3-Z2	101934	2018/02/22	2019/02/21
Bilog Antenna	Schwarzbeck	VULB9168	275	2017/08/31	2018/08/30
Active Loop Antenna	EMCO	6507	40855	2018/05/15	2019/05/14
Horn Antenna	EMCO	3115	31601	2017/09/11	2018/09/10
Horn Antenna	EMCO	3116	31970	2018/03/23	2019/03/22
Preamplifier	EM	EM330	60658	2017/09/08	2018/09/07
Preamplifier	EMC INSTRUMENTS	EMC051845SE	980333	2017/09/20	2018/09/19
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2017/11/10	2018/11/09
MXG MW Analog Signal Generator	KEYSIGHT	N5183A	MY50142931	2018/03/23	2019/03/22
Spectrum Analyzer	R&S	FSP40	100219	2018/06/28	2019/06/27
BLUETOOTH TESTER	R&S	CBT	101133	2018/04/02	2019/04/01
Attenuator	KEYSIGHT	8491B	MY39250705	2017/09/04	2018/09/03
Rotary Attenuator	Agilent	8495B	MY42146680	2018/03/29	2019/03/28
Temp & Humi chamber	T-MACHINE	TMJ-9712	T-12-040111	2017/09/04	2018/09/03
Series Power Meter	Anritsu	ML2495A	1224005	2018/03/23	2019/03/22
Power Sensor	Anritsu	MA2411B	1207295	2018/03/23	2019/03/22
Software	Farad	Ez-EMC	ver.ct3a1	N/A	N/A
Software	AUDIX	E3	V8.2014-8-6	N/A	N/A
Software	Keysight	N7607B Signal Studio	V3.0.0.0	N/A	N/A
Software	Keysight	Inservice MonitorUtility	N/A	N/A	N/A



4. Antenna Requirements

4.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

4.2 Antenna Construction and Directional Gain

No.	Antenna Type	Antenna Gain
1	PCB Antenna	-1.05dBi



5. Test of AC Power Line Conducted Emission

5.1 Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2014. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

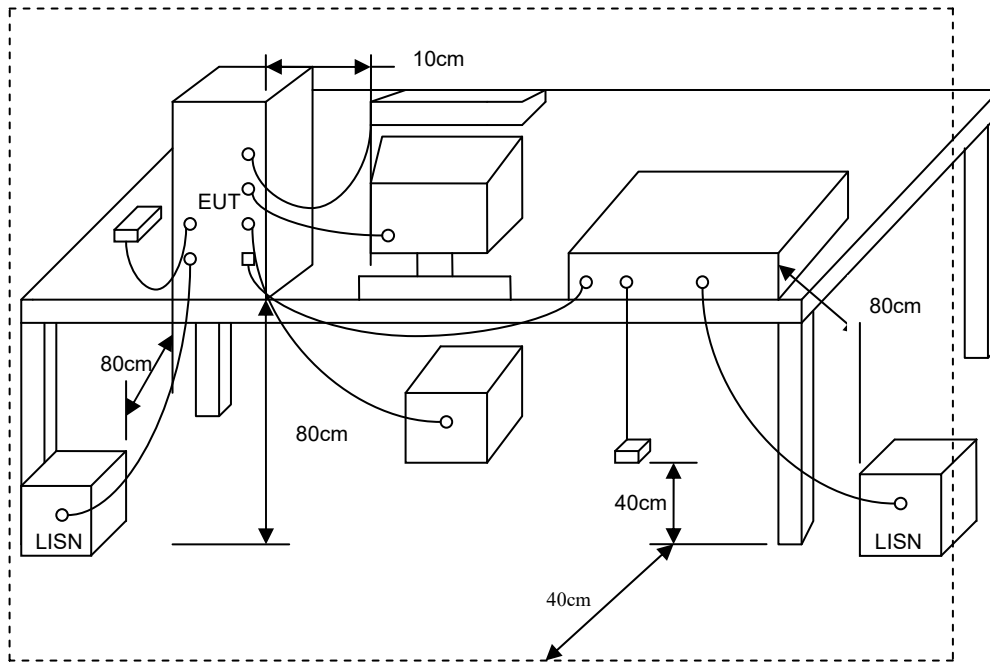
*Decreases with the logarithm of the frequency.

5.2 Test Procedures

- The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- Connect EUT to the power mains through a line impedance stabilization network (LISN).
- All the support units are connecting to the other LISN.
- The LISN provides 50 ohm coupling impedance for the measuring instrument.
- The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- Both sides of AC line were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.



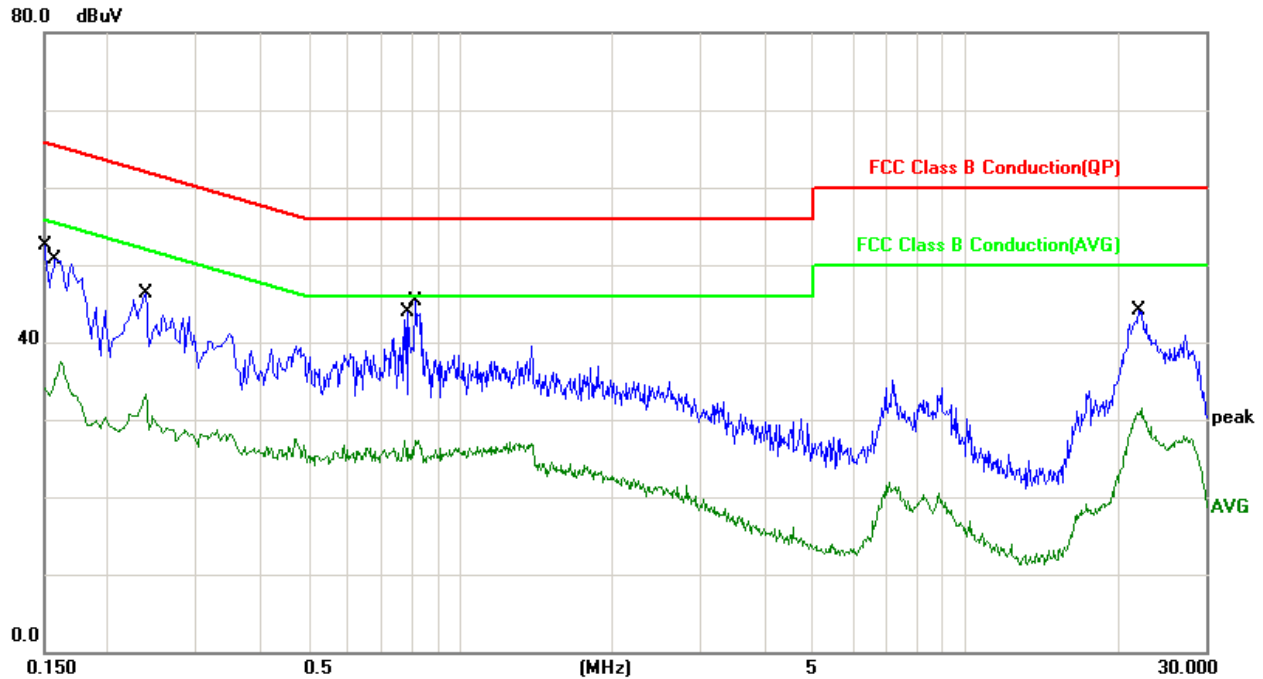
5.3 Typical Test Setup





5.4 Test Result and Data

Test Mode :	Normal Link	Phase :	Line
Temperature :	26°C	Humidity:	51%
Pressur(mbar) :	1009	Date:	Jul. 01, 2018

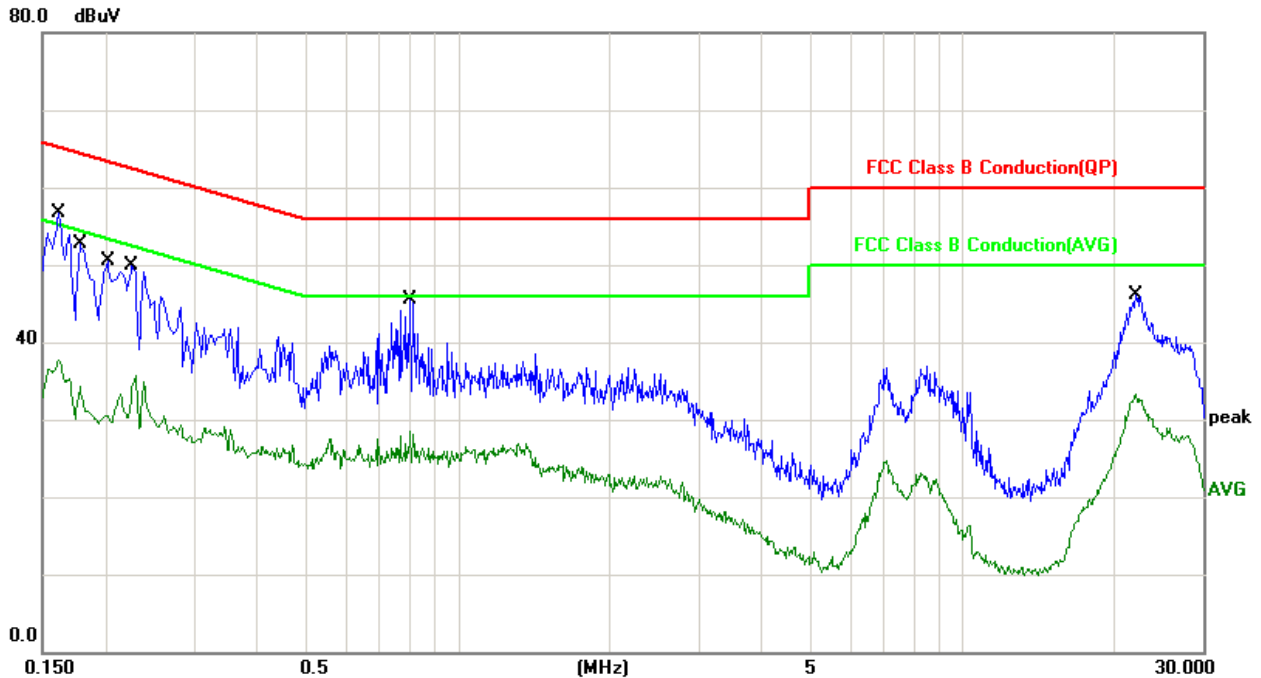


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	10.06	35.54	45.60	65.99	-20.39	QP
2	0.1500	10.06	22.33	32.39	55.99	-23.60	AVG
3	0.1580	10.06	38.01	48.07	65.56	-17.49	QP
4	0.1580	10.06	24.86	34.92	55.56	-20.64	AVG
5	0.2380	10.04	32.30	42.34	62.16	-19.82	QP
6	0.2380	10.04	21.43	31.47	52.16	-20.69	AVG
7	0.7900	10.09	26.40	36.49	56.00	-19.51	QP
8	0.7900	10.09	15.59	25.68	46.00	-20.32	AVG
9	0.8139	10.09	26.40	36.49	56.00	-19.51	QP
10	0.8139	10.09	15.92	26.01	46.00	-19.99	AVG
11	22.1220	10.58	26.98	37.56	60.00	-22.44	QP
12	22.1220	10.58	19.13	29.71	50.00	-20.29	AVG

Note: Measurement Level = Reading Level + Correct Factor+ Attenuator



Test Mode :	Normal Link	Phase :	Neutral
Temperature :	26°C	Humidity:	51%
Pressur(mbar) :	1009	Date:	Jul. 01, 2018



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1620	10.06	41.70	51.76	65.36	-13.60	QP
2	0.1620	10.06	25.45	35.51	55.36	-19.85	AVG
3	0.1780	10.06	37.57	47.63	64.57	-16.94	QP
4	0.1780	10.06	21.75	31.81	54.57	-22.76	AVG
5	0.2020	10.06	33.38	43.44	63.52	-20.08	QP
6	0.2020	10.06	20.12	30.18	53.52	-23.34	AVG
7	0.2260	10.05	35.11	45.16	62.59	-17.43	QP
8	0.2260	10.05	22.36	32.41	52.59	-20.18	AVG
9	0.8059	10.09	25.86	35.95	56.00	-20.05	QP
10	0.8059	10.09	15.35	25.44	46.00	-20.56	AVG
11	22.0820	10.58	28.39	38.97	60.00	-21.03	QP
12	22.0820	10.58	20.93	31.51	50.00	-18.49	AVG

Note: Measurement Level = Reading Level + Correct Factor+ Attenuator



6. Test of Spurious Emission (Radiated)

6.1 Test Limit

Radiated emissions from 30 MHz to 25 GHz were measured according to the methods defines in ANSI C63.4-2014. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions for unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Distance Meters	Radiated (μ V / M)	Radiated (dB μ V/ M)
30-88	3	100	40.0
88-216	3	150	43.5
216-960	3	200	46.0
Above 960	3	500	54.0

For unintentional device, according to CISPR PUB.22, for Class B digital devices, the general requirement of field strength of radiated emissions from intentional radiators at a distance of 10 meters shall not exceed the below table.

Frequency (MHz)	Distance Meters	Radiated (dB μ V/ M)
30-230	10	30
230-1000	10	37

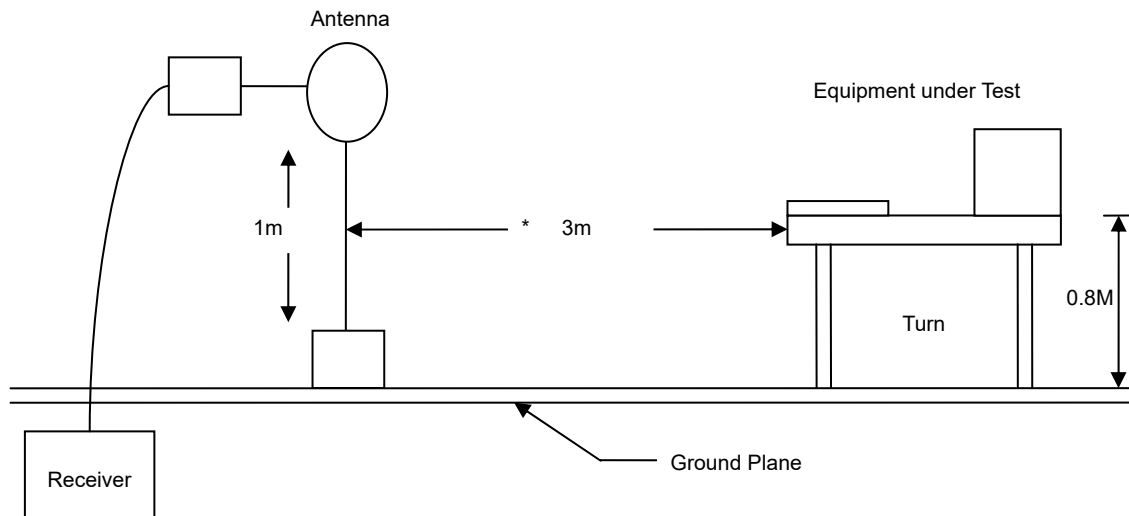
6.2 Test Procedures

- The EUT was placed on a rotatable table top 0.8 meter above ground.
- The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- The table was rotated 360 degrees to determine the position of the highest radiation.
- The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- “Cone of radiation” has been considered to be 3dB bandwidth of the measurement antenna.

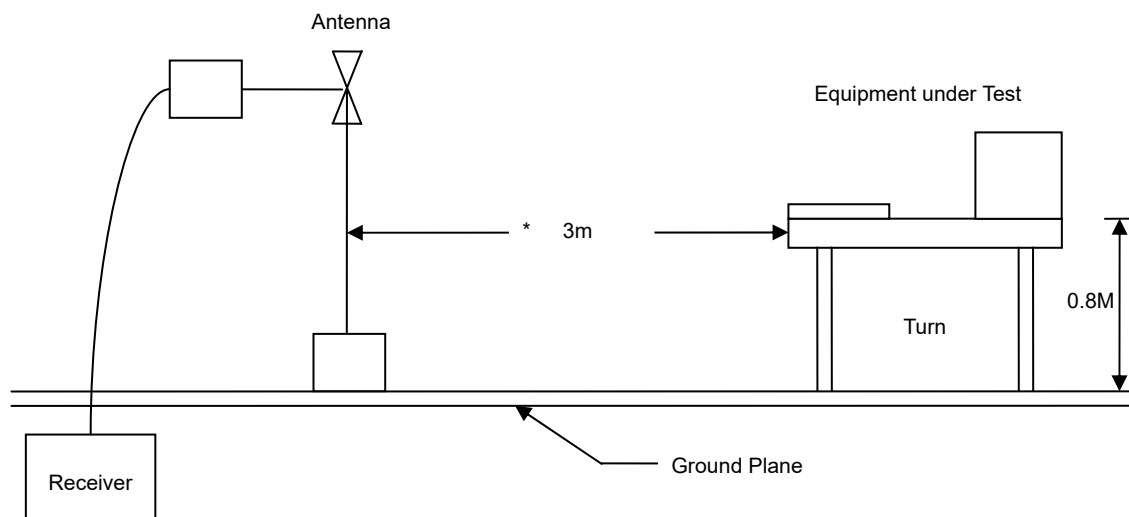


6.3 Typical Test Setup

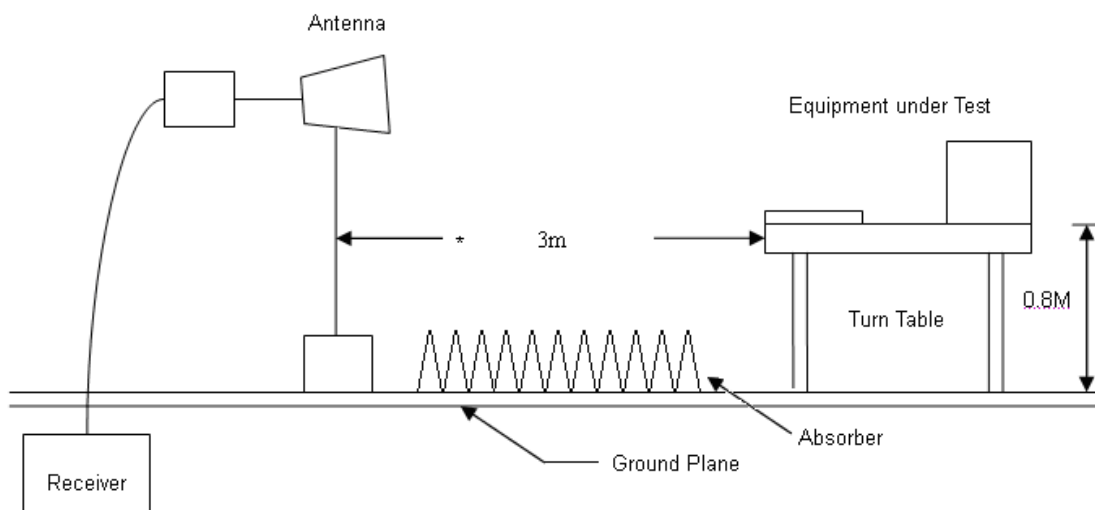
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup





6.4 Test Result and Data (9kHz ~ 30MHz)

The 9kHz-30MHz spurious emission is under limit 20dB more.

6.5 Test Result and Data (30MHz ~ 1GHz)

Power	:	DC 5V	Temperature	:	24 °C
Test Mode	:	TX Mode	Humidity	:	54 %
Test date	:	Jul. 01, 2018	Atmospheric Pressure	:	1010 hpa

Frequency (MHz)	AntPol. H/V	Correct Factor (dB)	Reading level (dBuV)	Measure Level (dBuV/m)	Limit 3m (dBuV/m)	Safe Margin (dB)	Detector mode (PK/QP)
112.4500	H	-8.37	41.78	33.41	43.50	-10.09	peak
122.1500	H	-8.25	39.11	30.86	43.50	-12.64	peak
145.4299	H	-10.89	41.27	30.38	43.50	-13.12	peak
228.8500	H	-9.55	44.47	34.92	46.00	-11.08	peak
237.5800	H	-9.19	43.60	34.41	46.00	-11.59	peak
277.3500	H	-8.71	40.09	31.38	46.00	-14.62	peak
33.8800	V	-5.41	34.03	28.62	40.00	-11.38	peak
112.4500	V	-8.37	40.36	31.99	43.50	-11.51	peak
232.7300	V	-9.44	45.14	35.70	46.00	-10.30	peak
256.9800	V	-8.11	36.98	28.87	46.00	-17.13	peak
281.2300	V	-8.29	37.35	29.06	46.00	-16.94	peak
692.5100	V	-1.21	31.93	30.72	46.00	-15.28	peak

Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor

**6.6 Test Result and Data (1GHz ~ 25GHz)**

Power	:	DC 5V	Temperature	:	24 °C
Test Mode	:	TX-2408MHz	Humidity	:	54 %
Test date	:	Jul. 01, 2018	Atmospheric Pressure	:	1010 hpa

Frequency (MHz)	AntPol. H/V	Correct Factor (dB)	Reading level (dBuV)	Measure Level (dBuV/m)	Limit 3m (dBuV/m)	Safe Margin (dB)	Detector mode (PK/QP)
3380.000	H	8.77	34.51	43.28	74.00	-30.72	peak
4258.333	H	12.43	31.99	44.42	74.00	-29.58	peak
4825.000	H	14.27	31.57	45.84	74.00	-28.16	peak
5703.333	H	15.52	31.35	46.87	74.00	-27.13	peak
6553.333	H	16.63	30.60	47.23	74.00	-26.77	peak
7148.333	H	18.66	30.72	49.38	74.00	-24.62	peak
3521.667	V	9.47	34.65	44.12	74.00	-29.88	peak
4400.000	V	13.15	31.62	44.77	74.00	-29.23	peak
5306.667	V	14.86	31.44	46.30	74.00	-27.70	peak
6071.667	V	16.29	32.05	48.34	74.00	-25.66	peak
7176.667	V	18.77	31.05	49.82	74.00	-24.18	peak
7601.667	V	20.08	29.89	49.97	74.00	-24.03	peak

Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	:	DC 5V	Temperature	:	24 °C
Test Mode	:	TX-2440MHz	Humidity	:	54 %
Test date	:	Jul. 01, 2018	Atmospheric Pressure	:	1010 hpa

Frequency (MHz)	AntPol. H/V	Correct Factor (dB)	Reading level (dBuV)	Measure Level (dBuV/m)	Limit 3m (dBuV/m)	Safe Margin (dB)	Detector mode (PK/QP)
3521.667	H	9.47	33.76	43.23	74.00	-30.77	peak
4881.667	H	14.38	32.63	47.01	74.00	-26.99	peak
5731.667	H	15.59	31.26	46.85	74.00	-27.15	peak
6100.000	H	16.30	31.60	47.90	74.00	-26.10	peak
6553.333	H	16.63	31.54	48.17	74.00	-25.83	peak
7091.667	H	18.44	31.15	49.59	74.00	-24.41	peak
3578.333	V	9.67	33.86	43.53	74.00	-30.47	peak
4655.000	V	13.95	29.85	43.80	74.00	-30.20	peak
4881.667	V	14.38	30.85	45.23	74.00	-28.77	peak
5363.333	V	14.91	31.67	46.58	74.00	-27.42	peak
6581.667	V	16.72	30.96	47.68	74.00	-26.32	peak
7488.333	V	19.98	30.20	50.18	74.00	-23.82	peak

Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



Power	:	DC 5V	Temperature	:	24 °C
Test Mode	:	TX-2474MHz	Humidity	:	54 %
Test date	:	Jul. 01, 2018	Atmospheric Pressure	:	1010 hpa

Frequency (MHz)	AntPol. H/V	Correct Factor (dB)	Reading level (dBuV)	Measure Level (dBuV/m)	Limit 3m (dBuV/m)	Safe Margin (dB)	Detector mode (PK/QP)
3578.333	H	9.67	33.62	43.29	74.00	-30.71	peak
4456.667	H	13.44	29.59	43.03	74.00	-30.97	peak
4938.333	H	14.48	32.47	46.95	74.00	-27.05	peak
5675.000	H	15.45	31.71	47.16	74.00	-26.84	peak
6100.000	H	16.30	31.79	48.09	74.00	-25.91	peak
7063.333	H	18.33	31.34	49.67	74.00	-24.33	peak
3351.667	V	8.62	33.07	41.69	74.00	-32.31	peak
4456.667	V	13.44	30.67	44.11	74.00	-29.89	peak
5845.000	V	15.88	31.53	47.41	74.00	-26.59	peak
6213.333	V	16.35	30.17	46.52	74.00	-27.48	peak
6751.667	V	17.28	30.09	47.37	74.00	-26.63	peak
7403.333	V	19.65	29.18	48.83	74.00	-25.17	peak

Note: Level = Reading + Factor

Margin = Level – Limit

Factor= Antenna Factor + Cable Loss - Amplifier Factor



7. 20dB Bandwidth Measurement Data

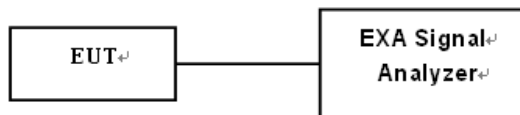
7.1 Test Limit

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

7.2 Test Procedure

- The transmitter output was connected to the spectrum analyzer.
- Set RBW of spectrum analyzer to 30 KHz and VBW to 100KHz.
- The 20 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

7.3 Test Setup Layout



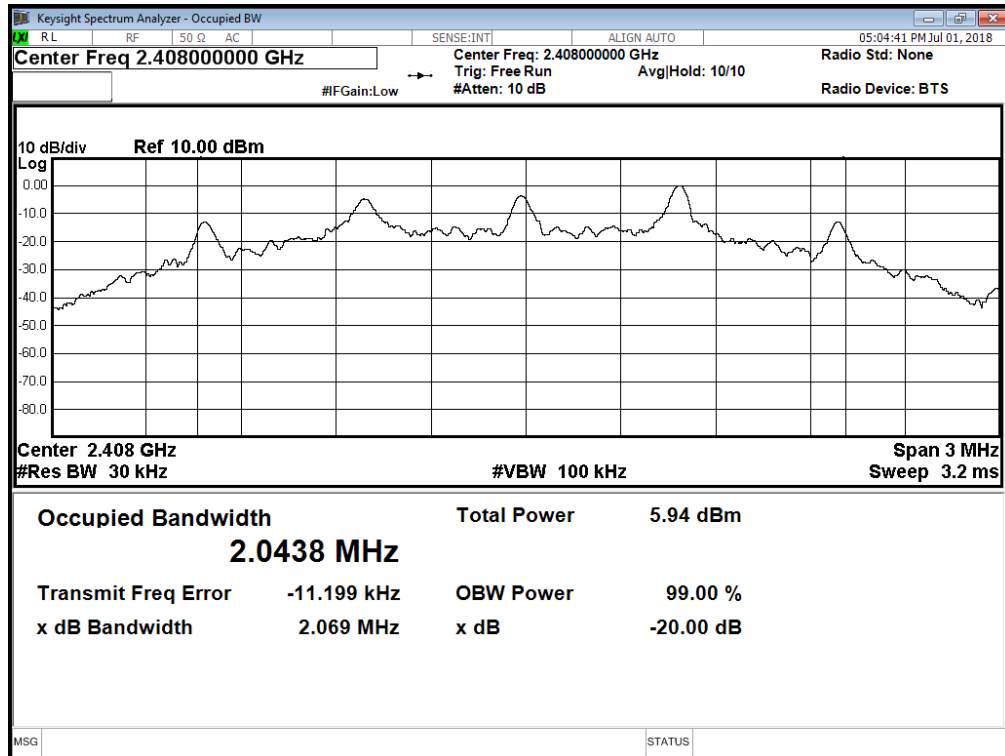
7.4 Test Result and Data

Power	: DC 5V	Temperature	: 24 °C
Test Mode	TX-Mode	Humidity	: 54 %
Test date	: Jul. 01, 2018	Atmospheric Pressure	: 1010 hpa

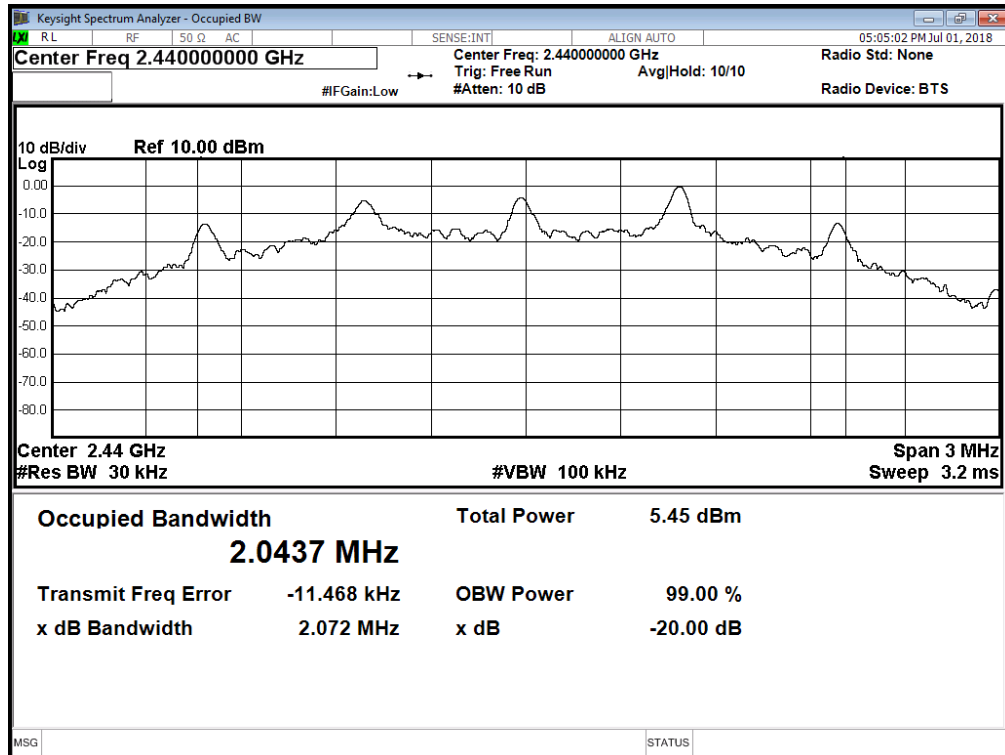
Channel	Frequency (MHz)	20dB Bandwidth (KHz)
Low	2408	2069.00
Mid	2440	2072.00
High	2474	2074.00



Channel: Low

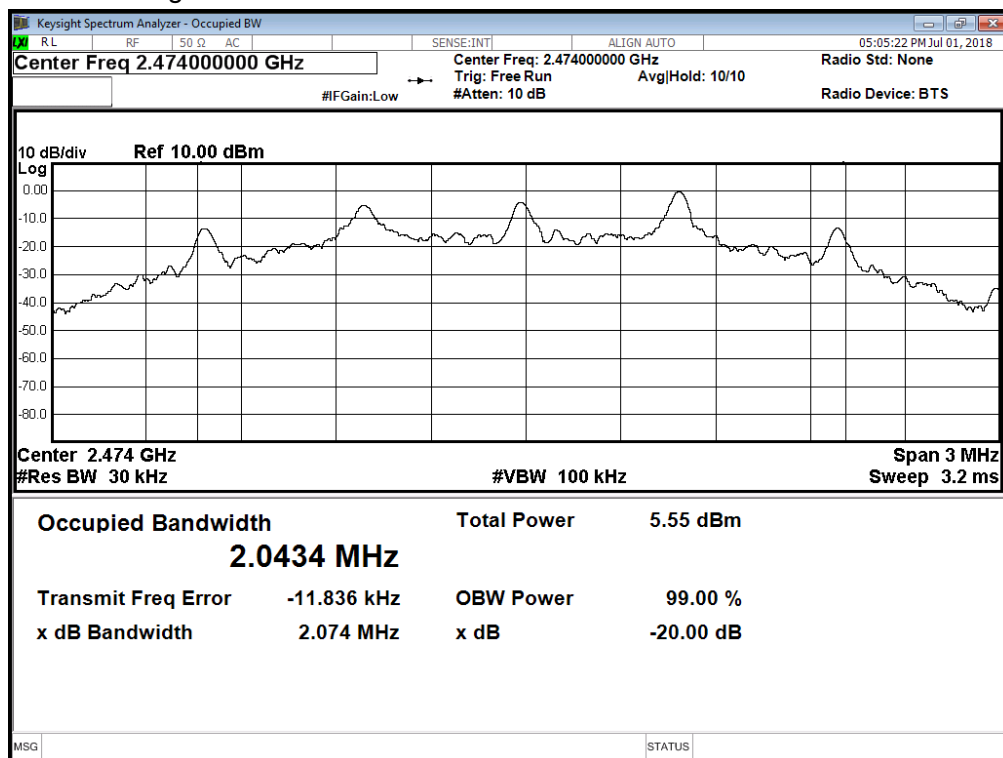


Channel: Mid





Channel: High





8. Band Edges Measurement

8.1 Test Limit

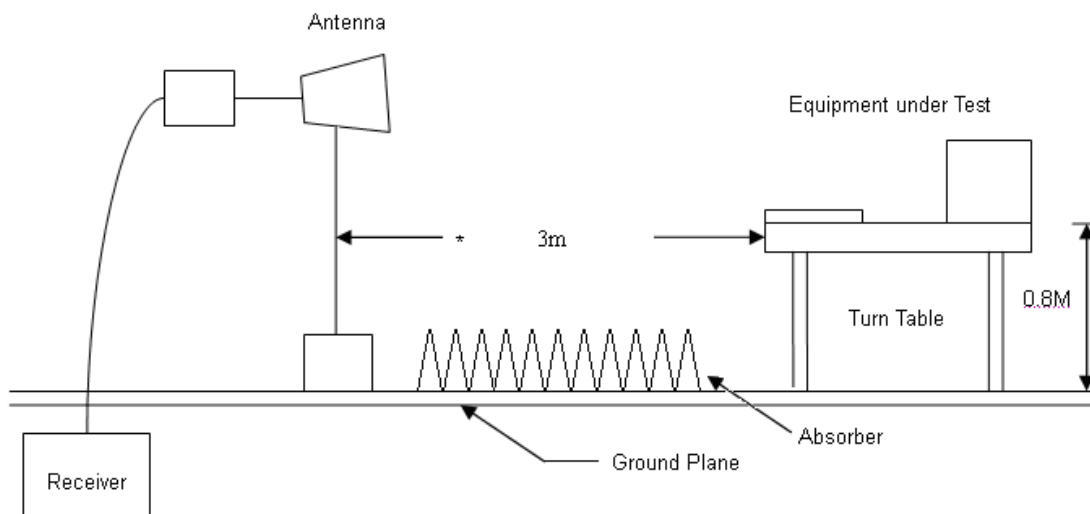
Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

8.2 Test Procedure

- The EUT was placed on a rotatable table top 0.8 meter above ground.
- The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- The table was rotated 360 degrees to determine the position of the highest radiation.
- The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- The band edges was measured and recorded.

8.3 Test Setup Layout

Above 1GHz Test Setup





8.4 Restrict band emission Measurement Data

Power	: DC 5V	Temperature	: 24 °C
Test Mode	: TX-2408MHz	Humidity	: 54 %
Test date	: Jul. 01, 2018	Atmospheric Pressure	: 1010 hpa

VERTICAL

No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
1	2382.500	2.91	55.40	58.31	74.00	-15.69	peak
2	2382.500	2.91	46.05	48.96	54.00	-5.04	AVG
3	2385.500	2.93	56.11	59.04	74.00	-14.96	peak
4	2385.500	2.93	44.00	46.93	54.00	-7.07	AVG
5	2390.000	2.95	42.89	45.84	74.00	-28.16	peak
6	2390.000	2.95	30.37	33.32	54.00	-20.68	AVG
7	2396.500	2.97	54.73	57.70	74.00	-16.30	peak
8	2396.500	2.97	45.63	48.60	54.00	-5.40	AVG
9	2400.000	2.99	46.81	49.80	74.00	-24.20	peak
10	2400.000	2.99	34.67	37.66	54.00	-16.34	AVG
11	*2407.500	3.02	85.07	88.09	114.00	-25.91	peak
12	*2407.500	3.02	81.98	85.00	94.00	-9.00	AVG

HORIZONTAL

No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
1	2382.500	2.91	56.21	59.12	74.00	-14.88	peak
2	2382.500	2.91	46.23	49.14	54.00	-4.86	AVG
3	2385.500	2.93	57.35	60.28	74.00	-13.72	peak
4	2385.500	2.93	45.28	48.21	54.00	-5.79	AVG
5	2390.000	2.95	43.24	46.19	74.00	-27.81	peak
6	2390.000	2.95	31.89	34.84	54.00	-19.16	AVG
7	2396.250	2.97	55.00	57.97	74.00	-16.03	peak
8	2396.250	2.97	45.69	48.66	54.00	-5.34	AVG
9	2400.000	2.99	47.92	50.91	74.00	-23.09	peak
10	2400.000	2.99	35.96	38.95	54.00	-15.05	AVG
11	*2407.500	3.02	86.75	89.77	114.00	-24.23	peak
12	*2407.500	3.02	82.74	85.76	94.00	-8.24	AVG

- Note:
1. Level = Reading + Factor
 2. Margin = Level – Limit
 3. Factor = Antenna Factor + Cable Loss – Amplifier Factor
 4. “*”: Fundamental frequency



Power	:	DC 5V	Temperature	:	24 °C
Test Mode	:	TX-2440MHz	Humidity	:	54 %
Test date	:	Jul. 01, 2018	Atmospheric Pressure	:	1010 hpa

VERTICAL

No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
1	*2440.483	3.16	83.79	86.95	114.00	-27.05	peak
2	*2440.483	3.16	80.95	84.11	94.00	-9.89	AVG

HORIZONTAL

No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
1	*2440.500	3.16	85.55	88.71	114.00	-25.29	peak
2	*2440.500	3.16	82.15	85.31	94.00	-8.69	AVG

- Note:
1. Level = Reading + Factor
 2. Margin = Level – Limit
 3. Factor = Antenna Factor + Cable Loss – Amplifier Factor
 4. “*”: Fundamental frequency



Power	: DC 5V	Temperature	: 24 °C
Test Mode	TX-2474MHz	Humidity	: 54 %
Test date	: Jul. 01, 2018	Atmospheric Pressure	: 1010 hpa

VERTICAL

No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
1	*2474.500	3.31	83.09	86.40	114.00	-27.60	PEAK
2	*2474.500	3.31	80.72	84.03	94.00	-9.97	AVG
3	2483.500	3.35	48.22	51.57	74.00	-22.43	peak
4	2483.500	3.35	37.00	40.35	54.00	-13.65	AVG
5	2484.750	3.35	51.69	55.04	74.00	-18.96	peak
6	2484.750	3.35	40.23	43.58	54.00	-10.42	AVG
7	2495.500	3.40	51.95	55.35	74.00	-18.65	peak
8	2495.500	3.40	39.87	43.27	54.00	-10.73	AVG
9	2500.500	3.42	51.07	54.49	74.00	-19.51	peak
10	2500.500	3.42	39.74	43.16	54.00	-10.84	AVG

HORIZONTAL

No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
1	*2474.500	3.31	83.53	86.84	114.00	-27.16	PEAK
2	*2474.500	3.31	80.81	84.12	94.00	-9.88	AVG
3	2483.500	3.35	48.50	51.85	74.00	-22.15	peak
4	2483.500	3.35	36.27	39.62	54.00	-14.38	AVG
5	2484.500	3.35	52.00	55.35	74.00	-18.65	peak
6	2484.750	3.35	39.90	43.25	54.00	-10.75	AVG
7	2495.500	3.40	51.80	55.20	74.00	-18.80	peak
8	2495.500	3.40	40.22	43.62	54.00	-10.38	AVG
9	2500.500	3.42	50.87	54.29	74.00	-19.71	peak
10	2500.500	3.42	39.42	42.84	54.00	-11.16	AVG

- Note:
1. Level = Reading + Factor
 2. Margin = Level – Limit
 3. Factor = Antenna Factor + Cable Loss – Amplifier Factor
 4. “*”: Fundamental frequency



9. Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 – 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 – 5.250
0.49500 – 0.505**	16.69475 – 16.69525	608.0 – 614.0	5.350 – 5.460
2.17350 – 2.19050	16.80425 – 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 – 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 – 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 – 9.500
6.21500 – 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 – 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 – 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 – 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 – 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 – 8.38675	156.70000 – 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 – 8.41475	162.01250 – 167.17000	3260.0 – 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 – 173.20000	3332.0 – 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 – 3358.0	36.430 – 36.500
12.57675 – 12.57725	322.00000 – 335.40000	3600.0 – 4400.0	Above 38.6
13.36000 – 13.41000			

** : Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

9.1 Labeling Requirement

The device shall bear the following statement in a conspicuous location on the device:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.