



# EMC TEST REPORT

**Report No. : EME-021043**  
**Model No. : XI-325**  
**Issued Date : Oct. 3, 2002**

**Applicant : Z-COM, Inc.**  
**7F-2, No. 9, Prosperity 1<sup>St</sup> RD., Science-Based**  
**Industrial Park, Hsinchu, Taiwan, R.O.C.**

**Test By : Intertek Testing Services Taiwan Ltd.**  
**No. 11, Ko-Tze-Nan Chia-Tung Li, Shiang-Shan District,**  
**Hsinchu, Taiwan, R.O.C.**

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Project Engineer

Jerry Liu

Reviewed By

Elton Chen



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### Summary of Tests

#### Wireless LAN Card-Model: XI-325

#### FCC ID: M4Y-03251

Test	Reference	Results
Radiated Spurious Emission test	15.205, 15.209	Complies



## 1. General information

### 1.1 Identification of the EUT

Manufacturer	: Z-COM, Inc.
Product	: Wireless LAN Card
Model No.	: XI-325
FCC ID.	: M4Y-03251
Frequency Range	: 2412~2462 MHz
Channel Number	: 11 Channels
Frequency of Each Channel	: 2412MHz, 2417MHz, 2422MHz, 2427MHz, 2432MHz, 2437MHz, 2442MHz, 2447MHz, 2452MHz, 2457MHz, 2462MHz
Type of Modulation	: CCK (11Mbps, 5.5Mbps), DQPSK (2Mbps), DBPSK (1Mbps)
Power Supply	: 3.3Vdc from notebook
Power Cord	: N/A
Sample Received	: Sep. 3, 2002
Test Date(s)	: Sep. 3, 2002 to Sep. 5, 2002

A FCC DoC report has been generated for the client.

### 1.2 Additional information about the EUT

The EUT is an IEEE802.11/802.11b-compliant PCMCIA Type II DSSS wireless LAN PC card. It fully supports wireless networking under Windows 95/98, and NT 4.0. The EUT can be operated in Ad-Hoc and Infrastructure network configurations. Ad-Hoc mode allows EUT users to join an Basic Service Set (i.e., peer-to-peer mode, without access point). Infrastructure mode allows EUT users to join a Extended Basic Service Set (i.e., connect to access point).

The EUT has two antennas. The antenna gain for one antenna is 2dBi, and the other is 5dBi. We conducted the Band-edge test and Radio Spurious Emission test for each antenna, defined model numbers as XI-325 (with antenna gain 2dBi) and XI-325 (with antenna gain 5dBi), and recorded the test results in this report individually.

For more detail features, please refer to User's manual as file name "Installation guide.pdf"



### 1.3 Antenna description

The antenna is affixed to the EUT using a unique connector, which allows for replacement of a broken antenna, but DOES NOT use a standard antenna jack or electrical connector.

Antenna Gain : 5dBi, 2dBi

Antenna Type : Monopole antenna

Connector Type : MMCX-Reverse

### 1.4 Peripherals equipment

Peripherals	Manufacturer	Product No.	Serial No.	FCC ID
Notebook	Twinhead	P79T	H0905483	FCC DoC Approved
Printer	HP	C2642A	TH86K1N2ZB	FCC DoC Approved
Modem	Dynalink	V1456VQE	00V230A00051494	FCC DoC Approved



## **2. Test specifications**

### **2.1 Test standard**

The EUT was performed according to the procedures in FCC Part 15 Subpart C Section §15.205 、 §15.209 、 §15.247 and ANSI C63.4/1992.

Radiated emissions were investigated cover the frequency range from 30MHz to 1000MHz using a receiver RBW of 120kHz record QP reading, and the frequency over 1GHz using a spectrum analyzer RBW of 1MHz and 10Hz VBW record Average reading. (15.209 paragraph), the Peak reading recorded also on the report.

The test of radiated measurements according to FCC Part15 Section 15.33(a) had been conducted and the field strength of this frequency band were all meet limit requirement, thus we evaluate the EUT pass the specified test.

The EUT setup configurations please refer to the photo of test configuration in item.

### **2.2 Operation mode**

Plug the EUT into notebook, turn on the Notebook power run the test program “ RF.exe” which provide by manufacturer.

The EUT was continuously transmit during the test.



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### 2.4 Test equipment

Equipment	Brand	Frequency range	Model No.	Series No.	Cal.Date
EMI Test Receiver	Rohde & Schwarz	9kHz~2.75GHz	ESCS 30	825788/014	May 24, 2002
EMI Test Receiver	Rohde & Schwarz	20Hz~26.5GHz	ESMI	825428/005	June 10, 2002
Spectrum Analyzer	Rohde & Schwarz	9kHz~30GHz	FSP 30	100137	July 10, 2002
Horn Antenna	EMCO	1GHz~18GHz	3115	9906-5822	Sep. 15, 2001
Horn Antenna	SCHWARZBECK	14GHz~40GHz	BBHA 9170	159	June 20, 2002
Bilog Antenna	SCHWARZBECK	25MHz~1.7GHz	VULB 9160	3111	June 20, 2002
Turn Table	HDGmbH	N/A	DS 420S	420/669/01	N/A
Antenna Tower	HDGmbH	N/A	MA 240	240/573	N/A
Microwave Amplifier	Agilent	2GHz~26.5GHz	8348A	3111A00567	Dec. 20, 2001

Note:

1. The calibration interval of the above instruments is 12 months.



### **3. Minimum 6dB Bandwidth test**

#### **3.1 Operating environment**

Temperature: 30 °C  
Relative Humidity: 55 %

#### **3.2 Test setup & procedure**

The minimum 6dB bandwidth per FCC §15.247(a)(2) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at 1MHz, the video bandwidth set at 3MHz, and the SPAN>>RBW. The test was performed at 3 channels (lowest, middle and highest channel). The minimum 6-dB modulation bandwidth is in the following Table.

See Minimum 6dB Bandwidth plot as file name “Minimum 6dB Bandwidth plot.pdf”

#### **3.3 Measured data of Minimum 6dB Bandwidth test results**

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit
Low	2412.30	8.90	> 500kHz
Middle	2437.30	8.9	> 500kHz
High	2462.30	8.0	> 500kHz



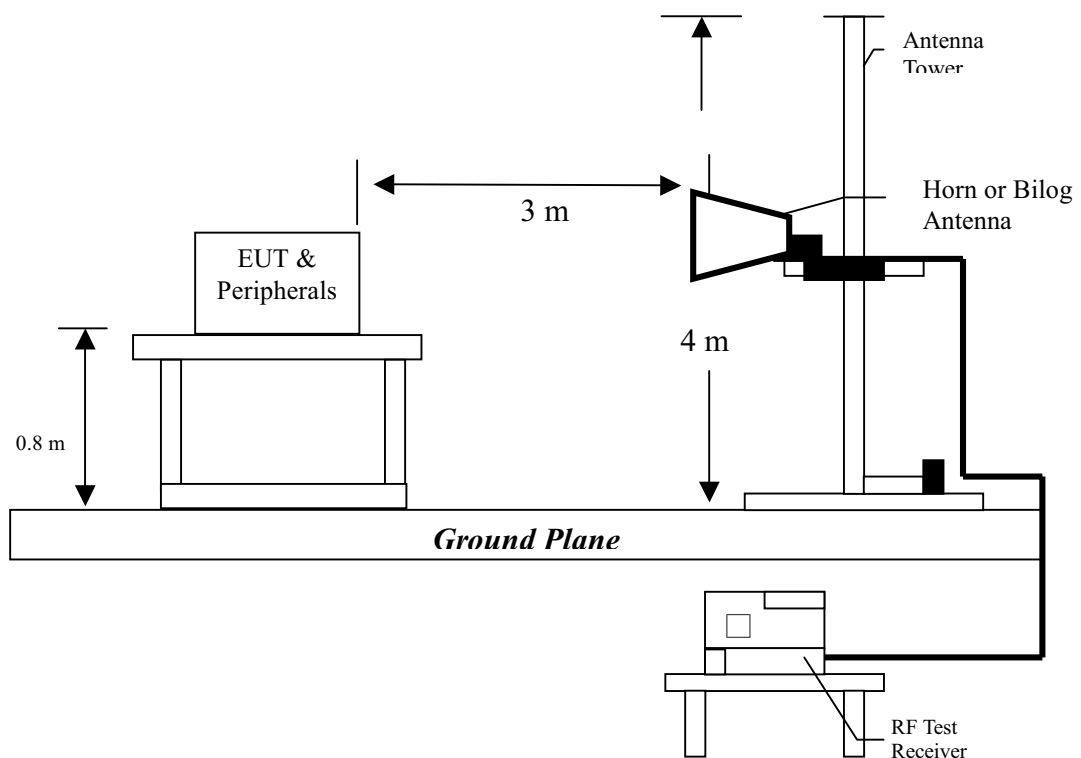
## 4. Radiated Emission test

### 4.1 Operating environment

Temperature: 30 °C  
Relative Humidity: 55 %

### 4.2 Test setup & procedure

The Diagram below shows the test setup, which is utilized to make these measurements.



The signal is maximized through rotation and placement in the three orthogonal axes. Radiated emission measurements were performed from 30MHz to 25GHz. Spectrum Analyzer Resolution Bandwidth is 100kHz or greater for frequencies 30MHz to 1GHz, 1MHz – for frequencies above 1GHz.

The EUT for testing is arranged on a wooden turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to produce worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meters and down to 1 meter.

The measurement for radiated emission will be done at the distance of three meters unless the signal level is too low to measure at that distance. In the case of the reading under noise floor, a pre-amplifier is used and/or the test is conducted at a closer distance. And then all readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance.



### 4.3 Emission limits

The spurious Emission shall test through the 10th harmonic. 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).

Frequency (MHz)	Limits (dB $\mu$ V/m@3m)
30-88	40
88-216	43.5
216-960	46
Above 960	54

Remark:

1. In the above table, the tighter limit applies at the band edges.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

Uncertainty was calculated in accordance with NAMAS NIS 81.

Expanded uncertainty (k=2) of radiated emission measurement is  $\pm 3.078$  dB.



**4.4 Radiated spurious emission test data**

**4.4.2 Measurement results: frequency above 1GHz**

EUT : XI-325 (with antenna gain 2dBi)

Test Condition : Tx at low channel

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
2038	PK	V	0	29.16	21.93	51.09	74	-22.91
2038	AV	V	0	29.16	19.68	48.84	54	-5.16
4076	PK	V	28.02	34.39	38.46	44.83	74	-29.17
4076	AV	V	28.02	34.39	32.03	38.4	54	-15.6
6114	PK	V	28.02	38.64	37.5	48.12	74	-25.88
6114	AV	V	28.02	38.64	28.55	39.17	54	-14.83
8152	PK	V	28.02	40.35	38.44	50.77	74	-23.23
8152	AV	V	28.02	40.35	29.16	41.49	54	-12.51
10190	PK	V	28.02	41.89	-	-	74	-
10190	AV	V	28.02	41.89	-	-	54	-
4824	PK	V	28.02	35.07	36.09	43.14	74	-30.86
4824	AV	V	28.02	35.07	26.97	34.02	54	-19.98
7236	PK	V	28.02	38.82	41.55	52.35	74	-21.65
7236	AV	V	28.02	38.82	30.69	41.49	54	-12.51
9648	PK	V	28.02	41.75	-	-	74	-
9648	AV	V	28.02	41.75	-	-	54	-

Remark:

1. Corrected Level = Reading Level + Correction Factor – Preamp
2. Correction Factor = Antenna Factor + Cable Loss
3. “-“ means the emission is below the noise floor.



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EUT : XI-325 (with antenna gain 2dBi)

Test Condition : Tx at low channel

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
2038	PK	H	0	29.16	21.28	50.44	74	-23.56
2038	AV	H	0	29.16	17.98	47.14	54	-6.86
4076	PK	H	28.02	34.39	38.61	44.98	74	-29.02
4076	AV	H	28.02	34.39	30.65	37.02	54	-16.98
6114	PK	H	28.02	38.64	36.19	46.81	74	-27.19
6114	AV	H	28.02	38.64	25.96	36.58	54	-17.42
8152	PK	H	28.02	40.35	40.24	52.57	74	-21.43
8152	AV	H	28.02	40.35	30.49	42.82	54	-11.18
10190	PK	H	28.02	41.89	-	-	74	-
10190	AV	H	28.02	41.89	-	-	54	-
4824	PK	H	28.02	35.07	37.21	44.26	74	-29.74
4824	AV	H	28.02	35.07	27.54	34.59	54	-19.41
7236	PK	H	28.02	38.82	37.43	48.23	74	-25.77
7236	AV	H	28.02	38.82	25.66	36.46	54	-17.54
9648	PK	H	28.02	41.75	-	-	74	-
9648	AV	H	28.02	41.75	-	-	54	-

**Remark:**

1. Corrected Level = Reading Level + Correction Factor – Preamp
2. Correction Factor = Antenna Factor + Cable Loss
3. “-“ means the emission is below the noise floor.



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EUT : XI-325 (with antenna gain 2dBi)

Test Condition : Tx at middle channel

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
2063	PK	V	0	29.16	21.67	50.83	74	-23.17
2063	AV	V	0	29.16	17.81	46.97	54	-7.03
4126	PK	V	28.02	34.39	39.91	46.28	74	-27.72
4126	AV	V	28.02	34.39	34.18	40.55	54	-13.45
6189	PK	V	28.02	38.64	38.53	49.15	74	-24.85
6189	AV	V	28.02	38.64	29.28	39.9	54	-14.1
8252	PK	V	28.02	40.27	38.97	51.22	74	-22.78
8252	AV	V	28.02	40.27	30.83	43.08	54	-10.92
10315	PK	V	28.02	41.96	-	-	74	-
10315	AV	V	28.02	41.96	-	-	54	-
4874	PK	V	28.02	35.07	34.37	41.42	74	-32.58
4874	AV	V	28.02	35.07	23.75	30.8	54	-23.2
7311	PK	V	28.02	38.82	46.47	57.27	74	-16.73
7311	AV	V	28.02	38.82	35.09	45.89	54	-8.11
9748	PK	V	28.02	41.75	-	-	74	-
9748	AV	V	28.02	41.75	-	-	54	-

**Remark:**

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Test Condition : Tx at middle channel

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
2063	PK	H	0	29.16	21.43	50.59	74	-23.41
2063	AV	H	0	29.16	18.16	47.32	54	-6.68
4126	PK	H	28.02	34.39	40.72	47.09	74	-26.91
4126	AV	H	28.02	34.39	34.16	40.53	54	-13.47
6189	PK	H	28.02	38.64	35.91	46.53	74	-27.47
6189	AV	H	28.02	38.64	26.54	37.16	54	-16.84
8252	PK	H	28.02	40.27	38.36	50.61	74	-23.39
8252	AV	H	28.02	40.27	29.08	41.33	54	-12.67
10315	PK	H	28.02	41.96	-	-	74	-
10315	AV	H	28.02	41.96	-	-	54	-
4874	PK	H	28.02	35.07	35.15	42.2	74	-31.8
4874	AV	H	28.02	35.07	23.67	30.72	54	-23.28
7311	PK	H	28.02	38.82	38.28	49.08	74	-24.92
7311	AV	H	28.02	38.82	27.14	37.94	54	-16.06
9748	PK	H	28.02	41.75	-	-	74	-
9748	AV	H	28.02	41.75	-	-	54	-

**Remark:**

1. Corrected Level = Reading Level + Correction Factor – Preamp
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Test Condition : Tx at high channel

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
2088	PK	V	0	29.16	22.75	51.91	74	-22.09
2088	AV	V	0	29.16	19.76	48.92	54	-5.08
4176	PK	V	28.02	34.39	40.34	46.71	74	-27.29
4176	AV	V	28.02	34.39	34.4	40.77	54	-13.23
6264	PK	V	28.02	38.64	39.74	50.36	74	-23.64
6264	AV	V	28.02	38.64	31.49	42.11	54	-11.89
8352	PK	V	28.02	40.27	41.61	53.86	74	-20.14
8352	AV	V	28.02	40.27	33.43	45.68	54	-8.32
10440	PK	V	28.02	42.11	-	-	74	-
10440	AV	V	28.02	42.11	-	-	54	-
4924	PK	V	28.02	35.07	36.89	43.94	74	-30.06
4924	AV	V	28.02	35.07	25.91	32.96	54	-21.04
7386	PK	V	28.02	38.82	38.2	49	74	-25
7386	AV	V	28.02	38.82	26.93	37.73	54	-16.27
9848	PK	V	28.02	41.95	-	-	74	-
9848	AV	V	28.02	41.95	-	-	54	-

**Remark:**

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Test Condition : Tx at high channel

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
2088	PK	H	0	29.16	22.69	51.85	74	-22.15
2088	AV	H	0	29.16	19.25	48.41	54	-5.59
4176	PK	H	28.02	34.39	41.6	47.97	74	-26.03
4176	AV	H	28.02	34.39	35.76	42.13	54	-11.87
6264	PK	H	28.02	38.64	37.04	47.66	74	-26.34
6264	AV	H	28.02	38.64	27.43	38.05	54	-15.95
8352	PK	H	28.02	40.27	41.47	53.72	74	-20.28
8352	AV	H	28.02	40.27	32.58	44.83	54	-9.17
10440	PK	H	28.02	42.11	-	-	74	-
10440	AV	H	28.02	42.11	-	-	54	-
4924	PK	H	28.02	35.07	36.04	43.09	74	-30.91
4924	AV	H	28.02	35.07	26.08	33.13	54	-20.87
7386	PK	H	28.02	38.82	37.7	48.5	74	-25.5
7386	AV	H	28.02	38.82	26.43	37.23	54	-16.77
9848	PK	H	28.02	41.95	-	-	74	-
9848	AV	H	28.02	41.95	-	-	54	-

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Test Condition : Tx at low channel

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
2038	PK	V	0	29.16	20.28	49.44	74	-24.56
2038	AV	V	0	29.16	17.66	46.82	54	-7.18
4076	PK	V	28.02	34.39	38.8	45.17	74	-28.83
4076	AV	V	28.02	34.39	32.96	39.33	54	-14.67
6114	PK	V	28.02	38.64	34.32	44.94	74	-29.06
6114	AV	V	28.02	38.64	26.9	37.52	54	-16.48
8152	PK	V	28.02	40.35	39.55	51.88	74	-22.12
8152	AV	V	28.02	40.35	30.4	42.73	54	-11.27
10190	PK	V	28.02	41.89	-	-	74	-
10190	AV	V	28.02	41.89	-	-	54	-
4824	PK	V	28.02	35.07	38.38	45.43	74	-28.57
4824	AV	V	28.02	35.07	27.32	34.37	54	-19.63
7236	PK	V	28.02	38.82	37.65	48.45	74	-25.55
7236	AV	V	28.02	38.82	26.83	37.63	54	-16.37
9648	PK	V	28.02	41.75	-	-	74	-
9648	AV	V	28.02	41.75	-	-	54	-

**Remark:**

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Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
2038	PK	H	0	29.16	22.93	52.09	74	-21.91
2038	AV	H	0	29.16	18.73	47.89	54	-6.11
4076	PK	H	28.02	34.39	39.12	45.49	74	-28.51
4076	AV	H	28.02	34.39	30.45	36.82	54	-17.18
6114	PK	H	28.02	38.64	33.97	44.59	74	-29.41
6114	AV	H	28.02	38.64	26.12	36.74	54	-17.26
8152	PK	H	28.02	40.35	39.91	52.24	74	-21.76
8152	AV	H	28.02	40.35	28.94	41.27	54	-12.73
10190	PK	H	28.02	41.89	-	-	74	-
10190	AV	H	28.02	41.89	-	-	54	-
4824	PK	H	28.02	35.07	37.11	44.16	74	-29.84
4824	AV	H	28.02	35.07	27.64	34.69	54	-19.31
7236	PK	H	28.02	38.82	36.03	46.83	74	-27.17
7236	AV	H	28.02	38.82	26.04	36.84	54	-17.16
9648	PK	H	28.02	41.75	-	-	74	-
9648	AV	H	28.02	41.75	-	-	54	-

**Remark:**

1. Corrected Level = Reading Level + Correction Factor – Preamp
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Test Condition : Tx at middle channel

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
2063	PK	V	0	29.16	23.12	52.28	74	-21.72
2063	AV	V	0	29.16	19.63	48.79	54	-5.21
4126	PK	V	28.02	34.39	41.71	48.08	74	-25.92
4126	AV	V	28.02	34.39	37.57	43.94	54	-10.06
6189	PK	V	28.02	38.64	35.62	46.24	74	-27.76
6189	AV	V	28.02	38.64	27.72	38.34	54	-15.66
8252	PK	V	28.02	40.27	39.69	51.94	74	-22.06
8252	AV	V	28.02	40.27	32.15	44.4	54	-9.6
10315	PK	V	28.02	41.96	-	-	74	-
10315	AV	V	28.02	41.96	-	-	54	-
4874	PK	V	28.02	35.07	34.78	41.83	74	-32.17
4874	AV	V	28.02	35.07	25.51	32.56	54	-21.44
7311	PK	V	28.02	38.82	38.74	49.54	74	-24.46
7311	AV	V	28.02	38.82	28.01	38.81	54	-15.19
9748	PK	V	28.02	41.75	-	-	74	-
9748	AV	V	28.02	41.75	-	-	54	-

**Remark:**

1. Corrected Level = Reading Level + Correction Factor – Preamp
2. Correction Factor = Antenna Factor + Cable Loss
3. “-“ means the emission is below the noise floor.



# Intertek Testing Services

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EUT : XI-325 (with antenna gain 5dBi)

Test Condition : Tx at middle channel

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
2063	PK	H	0	29.16	23.31	52.47	74	-21.53
2063	AV	H	0	29.16	19.89	49.05	54	-4.95
4126	PK	H	28.02	34.39	41.93	48.3	74	-25.7
4126	AV	H	28.02	34.39	37.16	43.53	54	-10.47
6189	PK	H	28.02	38.64	38.07	48.69	74	-25.31
6189	AV	H	28.02	38.64	27.96	38.58	54	-15.42
8252	PK	H	28.02	40.27	37.84	50.09	74	-23.91
8252	AV	H	28.02	40.27	29.77	42.02	54	-11.98
10315	PK	H	28.02	41.96	-	-	74	-
10315	AV	H	28.02	41.96	-	-	54	-
4874	PK	H	28.02	35.07	35.01	42.06	74	-31.94
4874	AV	H	28.02	35.07	24.86	31.91	54	-22.09
7311	PK	H	28.02	38.82	39.13	49.93	74	-24.07
7311	AV	H	28.02	38.82	28.07	38.87	54	-15.13
9748	PK	H	28.02	41.75	-	-	74	-
9748	AV	H	28.02	41.75	-	-	54	-

Remark:

1. Corrected Level = Reading Level + Correction Factor – Preamp
2. Correction Factor = Antenna Factor + Cable Loss
3. “-“ means the emission is below the noise floor.



# Intertek Testing Services

## ETL SEMKO

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EUT : XI-325 (with antenna gain 5dBi)

Test Condition : Tx at high channel

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
2088	PK	V	0	29.16	20.85	50.01	74	-23.99
2088	AV	V	0	29.16	14.76	43.92	54	-10.08
4176	PK	V	28.02	34.39	40.5	46.87	74	-27.13
4176	AV	V	28.02	34.39	34.48	40.85	54	-13.15
6264	PK	V	28.02	38.64	37.59	48.21	74	-25.79
6264	AV	V	28.02	38.64	28.56	39.18	54	-14.82
8352	PK	V	28.02	40.27	40.93	53.18	74	-20.82
8352	AV	V	28.02	40.27	33.84	46.09	54	-7.91
10440	PK	V	28.02	42.11	-	-	74	-
10440	AV	V	28.02	42.11	-	-	54	-
4924	PK	V	28.02	35.07	37.78	44.83	74	-29.17
4924	AV	V	28.02	35.07	26.26	33.31	54	-20.69
7386	PK	V	28.02	38.82	40.83	51.63	74	-22.37
7386	AV	V	28.02	38.82	27.81	38.61	54	-15.39
9848	PK	V	28.02	41.95	-	-	74	-
9848	AV	V	28.02	41.95	-	-	54	-

**Remark:**

1. Corrected Level = Reading Level + Correction Factor – Preamp
2. Correction Factor = Antenna Factor + Cable Loss
3. “-“ means the emission is below the noise floor.



# Intertek Testing Services

## ETL SEMKO

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EUT : XI-325 (with antenna gain 5dBi)

Test Condition : Tx at high channel

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Reading (dBuV)	Limit @ 3 m (dBuV)	Margin (dB)
2088	PK	H	0	29.16	22.01	51.17	74	-22.83
2088	AV	H	0	29.16	17.92	47.08	54	-6.92
4176	PK	H	28.02	34.39	41.13	47.5	74	-26.5
4176	AV	H	28.02	34.39	36.03	42.4	54	-11.6
6264	PK	H	28.02	38.64	39.34	49.96	74	-24.04
6264	AV	H	28.02	38.64	29.81	40.43	54	-13.57
8352	PK	H	28.02	40.27	39.52	51.77	74	-22.23
8352	AV	H	28.02	40.27	30.84	43.09	54	-10.91
10440	PK	H	28.02	42.11	-	-	74	-
10440	AV	H	28.02	42.11	-	-	54	-
4924	PK	H	28.02	35.07	38.15	45.2	74	-28.8
4924	AV	H	28.02	35.07	26.24	33.29	54	-20.71
7386	PK	H	28.02	38.82	38.44	49.24	74	-24.76
7386	AV	H	28.02	38.82	26.71	37.51	54	-16.49
9848	PK	H	28.02	41.95	-	-	74	-
9848	AV	H	28.02	41.95	-	-	54	-

**Remark:**

1. Corrected Level = Reading Level + Correction Factor – Preamp
2. Correction Factor = Antenna Factor + Cable Loss
3. “-“ means the emission is below the noise floor.



**5. Emission on the band edge §FCC 15.247(C)**

In any 100kHz bandwidth outside the frequency band in which the spread spectrum 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.

See band-edge plot as file name “Band-edge plot (antenna gain 2dBi).pdf and Band-edge plot (antenna gain 5dBi).pdf”.