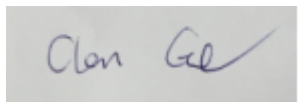


RF TEST REPORT



Report No.: FCC_RF_SL16102701-AWID-001 (MPR-8018QN)
Supersede Report No.:

Applicant	AWID Inc.		
Product Name	Smart Network Reader/Encoder		
Model No.	MPR-8018QN		
Test Standard	FCC Part 90		
Test Method	TIA-603-D -2010		
FCC ID	2AKNFRDR8018		
Date of test	11/07/2016 to 02/22/2017		
Issue Date	02/22/2017		
Test Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		
Equipment complied with the specification	[x]		
Equipment did not comply with the specification	[]		
This Test Report is Issued Under the Authority of:			
Shuo Zhang			
Shuo Zhang		Chen Ge	
Test Engineer		Engineer Reviewer	
This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only			

Issued By:
SIEMIC Laboratories
775 Montague Expressway, Milpitas, CA 95035



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Laboratory Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Accreditation Body	Scope
USA	FCC, A2LA	EMC, RF/Wireless, Telecom
Canada	IC, A2LA, NIST	EMC, RF/Wireless, Telecom
Taiwan	BSMI, NCC, NIST	EMC, RF, Telecom, Safety
Hong Kong	OFTA, NIST	RF/Wireless, Telecom
Australia	NATA, NIST	EMC, RF, Telecom, Safety
Korea	KCC/RRA, NIST	EMI, EMS, RF, Telecom, Safety
Japan	VCCI, JATE, TELEC, RFT	EMI, RF/Wireless, Telecom
Mexico	NOM, COFETEL, Caniety	EMC, RF/Wireless, Telecom, Safety
Europe	A2LA, NIST	EMC, RF, Telecom, Safety
Israel	Moc, NIST	EMC, RF, Telecom, Safety

Accreditations for Product Certifications

Country	Accreditation Body	Scope
USA	FCC TCB, NIST	EMC, RF, Telecom
Canada	IC FCB, NIST	EMC, RF, Telecom
Singapore	iDA, NIST	EMC, RF, Telecom
EU	NB	EMC & R&TTE Directive
Japan	MIC (RCB 208)	RF, Telecom
Hong Kong	OFTA (US002)	RF, Telecom

CONTENTS

1 REPORT REVISION HISTORY4

2 EXECUTIVE SUMMARY5

3 CUSTOMER INFORMATION5

4 TEST SITE INFORMATION5

5 MODIFICATION5

6 EUT INFORMATION6

6.1 EUT Description6

6.2 Radio Description6

6.3 EUT test modes/configuration Description.....6

6.4 EUT Photos – External7

6.5 EUT Photos – Internal.....8

6.6 EUT Test Setup Photos9

7 SUPPORTING EQUIPMENT/SOFTWARE AND CABLING DESCRIPTION.....10

7.1 Supporting Equipment10

7.2 Cabling Description10

7.3 Test Software Description10

8 TEST SUMMARY11

9 MEASUREMENT UNCERTAINTY12

9.1 Conducted Emissions12

9.2 Radiated Emissions (30MHz to 1GHz).....12

9.3 Radiated Emissions (1GHz to 40GHz).....13

9.4 RF conducted measurement.....13

10 MEASUREMENTS, EXAMINATION AND DERIVED RESULTS14

10.1 Frequency Error.....14

10.2 Output Power16

10.3 Occupied Bandwidth19

10.4 Band Edge22

10.5 Radiated Spurious Emissions.....24

ANNEX A. TEST INSTRUMENT27

ANNEX B. SIEMIC ACCREDITATION28

1 Report Revision History

Report No.	Report Version	Description	Issue Date
FCC_RF_SL16102701-AWID-001 (MPR-8018QN)	None	Original	02/22/2017

2 Executive Summary

The purpose of this test program was to demonstrate compliance of following product

Company: AWID Inc.
Product: Smart Network Reader/Encoder
Model: MPR-8018QN

against the current Stipulated Standards. The specified model product stated above has demonstrated compliance with the Stipulated Standard listed on 1st page.

3 Customer information

Applicant Name	:	AWID Inc.
Applicant Address	:	18300 Sutter Blvd. Morgan Hill, CA, 95037, USA
Manufacturer Name	:	AWID Inc.
Manufacturer Address	:	18300 Sutter Blvd. Morgan Hill, CA, 95037, USA

4 Test site information

Lab performing tests	:	SIEMIC Laboratories
Lab Address	:	775 Montague Expressway, Milpitas, CA 95035
FCC Test Site No.	:	881796
IC Test Site No.	:	4842D-2
VCCI Test Site No.	:	A0133

5 Modification

Index	Item	Description	Note
-	-	-	-

6 EUT Information

6.1 EUT Description

Product Name	:	Smart Network Reader/Encoder
Model No.	:	MPR-8018QN
Trade Name	:	AWID
Serial No.	:	N/A
Input Power	:	DC12V
Date of EUT received	:	11/07/2016
Equipment Class/ Category	:	LMS
Working Frequencies	:	910.4-921MHz
Port/Connectors	:	Power, I/O, Ethernet
Remarks	:	N/A

6.2 Radio Description

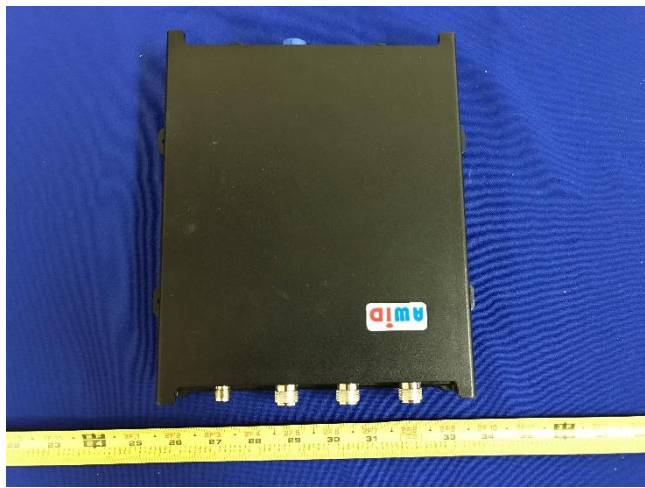
Specifications for Radio:

Radio Type	RFID
Operating Frequency	902.6MHz-903.4MHz and 910.4-921MHz
Number of Channels	59
Antenna Type	External
Antenna Gain	12.43 dBi
Antenna Connector Type	Reversed TNC

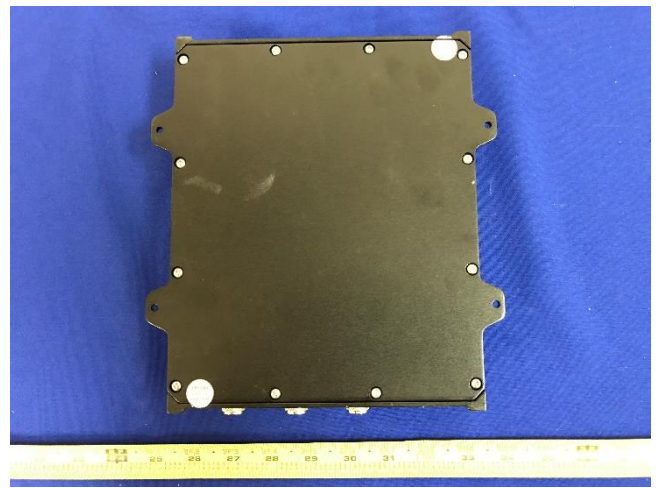
6.3 EUT test modes/configuration Description

Mode		Note
Pre_test_mode_1	RF test	EUT is set to continuously transmit
Pre_test_mode_2		
Pre_test_mode_3		

6.4 EUT Photos – External



Top View



Bottom View



Front View



Rear View

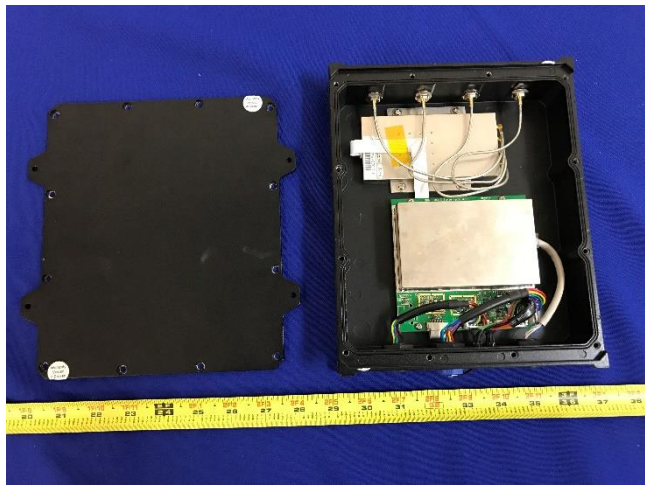


Left Side View

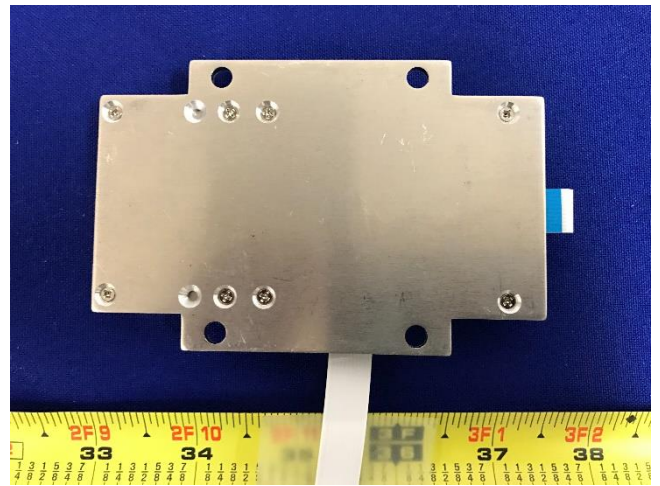


Right Side View

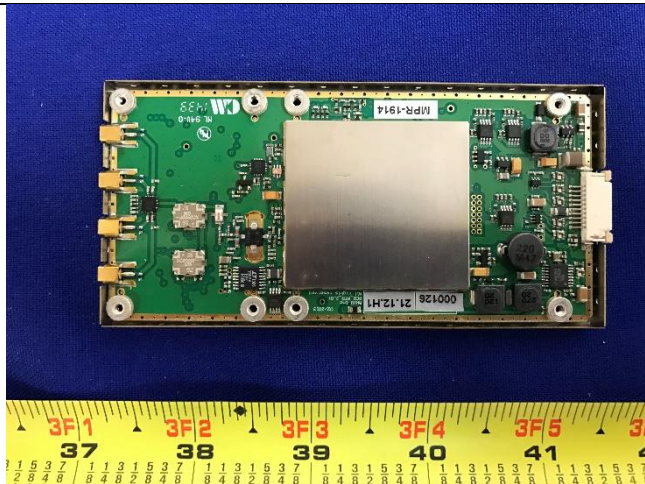
6.5 EUT Photos – Internal



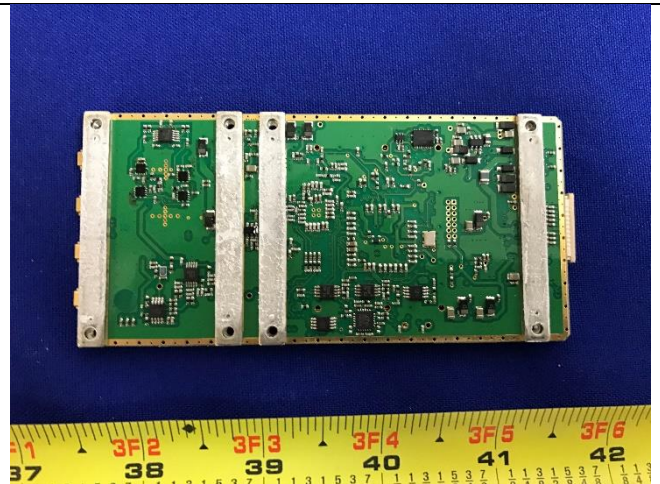
Open Case View



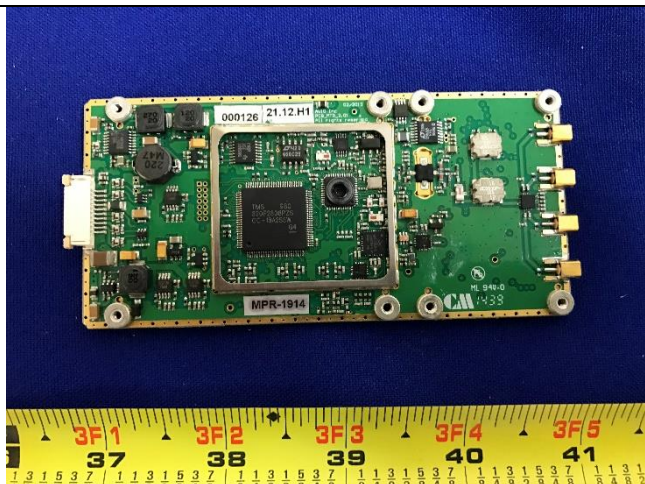
PCB with shielding View



Module with shielding Top View



Module with shielding Bottom View

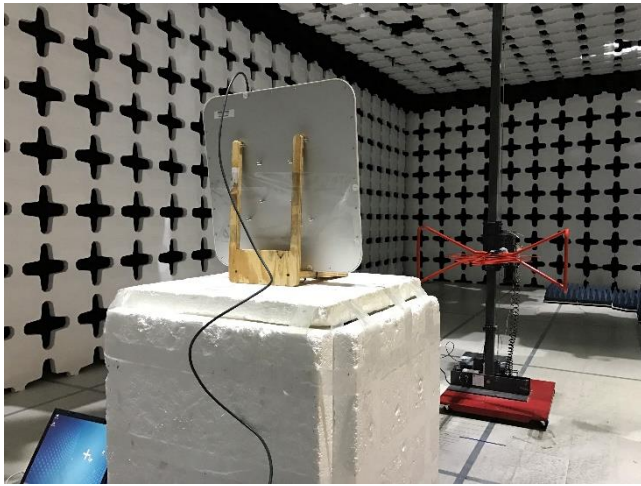


Module without shielding Top View



Antenna View

6.6 EUT Test Setup Photos



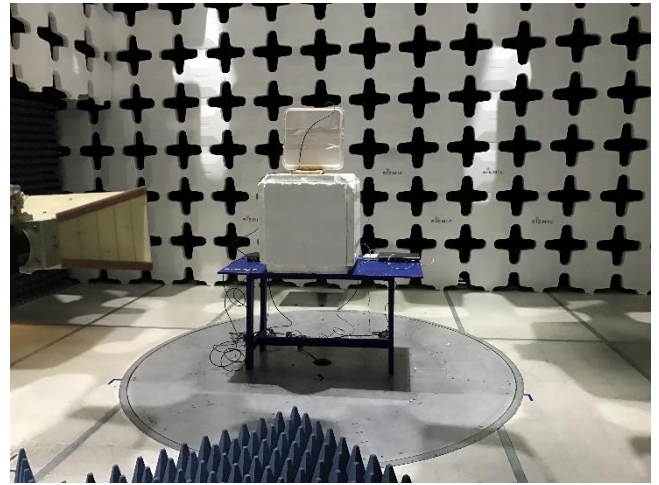
Radiated Emissions (<1GHz) – Front View



Radiated Emissions (<1GHz) – Rear View



Radiated Emissions (>1GHz) – Front View



Radiated Emissions (>1GHz) – Rear View

7 Supporting Equipment/Software and cabling Description

7.1 Supporting Equipment

Index	Supporting Equipment Description	Model	Serial No	Manu	Note
1	Laptop	HSTNN-I05C	N/A	HP	-

7.2 Cabling Description

Name	Connection Start		Connection Stop		Length / shielding Info		Note
	From	I/O Port	To	I/O Port	Length (m)	Shielding	
USB	EUT	USB	Laptop	USB	1M	N/A	-

7.3 Test Software Description

Test Item	Software	Description
RF Testing	CertTest4MPR	Set the EUT to continuous transmit

8 Test Summary

Test Item	Test standard	Test Method/Procedure	Pass / Fail
Frequency Stability	FCC 2.1046, 90.213	ANSI/TIA-603-D-2010	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> N/A
Occupied Bandwidth	FCC 90.209	ANSI/TIA-603-D-2010	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> N/A
Band Edge	FCC 90.210	ANSI/TIA-603-D-2010	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> N/A
Output Power	FCC 90.205	ANSI/TIA-603-D-2010	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> N/A
Radiated Spurious emissions	FCC 90.210	ANSI/TIA-603-D-2010	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> N/A
Remark	1. All measurement uncertainties do not take into consideration for all presented test results. 2. The applicant shall ensure frequency stability by showing that an emission is maintained within the band of operation under all normal operating conditions as specified in the user's manual.		

9 Measurement Uncertainty

9.1 Conducted Emissions

The test is to measure the conducted emissions to the mains port of the EUT.

Some error sources that can contribute to the total uncertainty:

- Uncertainty of the receiver
- Uncertainty of the LISN
- Uncertainty of cables
- Uncertainty due to the mismatches
- Etc, see the below table for details

Source of Uncertainty	Value (dB)	Probability Distribution	Division	Sensitivity Coefficient	Expanded Uncertainty
Receiver Reading	0.12	Rectangular	1.732	1	0.069284
Cable Insertion Loss	0.21	Normal	2	1	0.105
Filter Insertion Loss	0.25	Normal	2	1	0.125
LISN Insertion Loss	0.40	Normal	2	1	0.20
Receiver CW accuracy	0.5	Rectangular	1.732	1	0.2886836
Pulse Amplitude Response	1.5	Rectangular	1.732	1	0.86605081
PRF Response	1.5	Rectangular	1.732	1	0.86605081
Mismatch LISN - Receiver	0.25	U-Shape	1.414	1	0.1768033
LISN Impedance	2.5	Triangular	2.449	1	1.0208248
Combined Standard Uncertainty					1.928133
Expanded Uncertainty (K=2)					3.856266

The total derived measurement uncertainty is +/- 3.86 dB.

9.2 Radiated Emissions (30MHz to 1GHz)

The test is to measure the radiated emissions of the EUT.

Some error sources that can contribute to the total uncertainty:

- Uncertainty of the receiver
- Uncertainty of the antenna
- Uncertainty of cables
- Uncertainty due to the mismatches
- NSA Calibration
- Etc., details see the below table

Source of Uncertainty	Value (dB)	Probability Distribution	Division	Sensitivity Coefficient	Expanded Uncertainty
Receiver Reading	0.12	Rectangular	1.732	1	0.069284
Cable Insertion Loss	0.21	Normal	2	1	0.105
Filter Insertion Loss	0.25	Normal	2	1	0.125
Antenna Factor	0.65	Normal	2	1	0.325
Receiver CW accuracy	0.5	Rectangular	1.732	1	0.2886836
Pulse Amplitude Response	1.5	Rectangular	1.732	1	0.86605081
PRF Response	1.5	Rectangular	1.732	1	0.86605081
Mismatch Filter - Receiver	0.25	U-Shape	1.414	1	0.1768033
NSA Calibration	4.0	U-Shape	1.414	1	2.8288543
Combined Standard Uncertainty					3.0059131
Expanded Uncertainty (K=2)					6.0118262

The total derived measurement uncertainty is +/- 6.00 dB.

9.3 Radiated Emissions (1GHz to 40GHz)

The test is to measure the radiated emissions of the EUT.

Some error sources that can contribute to the total uncertainty:

- Uncertainty of the receiver
- Uncertainty of the antenna
- Uncertainty of cables
- Uncertainty due to the mismatches
- VSWR Calibration
- Etc., details see the below table

Source of Uncertainty	Value (dB)	Probability Distribution	Division	Sensitivity Coefficient	Expanded Uncertainty
Receiver Reading	0.12	Rectangular	1.732	1	0.0692840
Cable Insertion Loss	0.21	Normal	2	1	0.1050000
Filter Insertion Loss	0.25	Normal	2	1	0.1250000
Antenna Factor	0.65	Normal	2	1	0.3250000
Receiver CW accuracy	0.5	Rectangular	1.732	1	0.2886836
Pulse Amplitude Response	1.5	Rectangular	1.732	1	0.8660508
PRF Response	1.5	Rectangular	1.732	1	0.8660508
Mismatch Filter - Receiver	0.25	U-Shape	1.414	1	0.1768033
VSWR Calibration	2.0	U-Shape	1.414	1	1.4144272
Combined Standard Uncertainty					4.2363
Expanded Uncertainty (K=2)					8.4726

The total derived measurement uncertainty is +/- 8.47 dB.

9.4 RF conducted measurement

The test is to measure the RF output power from the EUT.

Some error sources that can contribute to the total uncertainty:

- Uncertainty of the Reference Level Uncertainty
- Uncertainty of variable attenuators
- Uncertainty of cables
- Uncertainty due to the mismatches

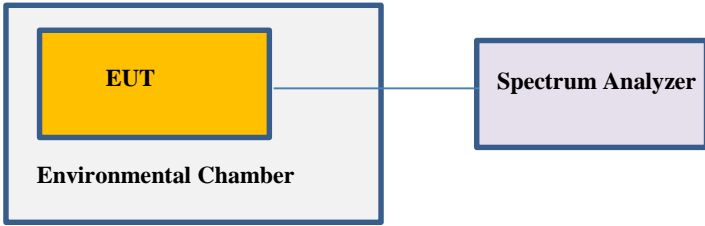
Source of Uncertainty	Value (dB)	Probability Distribution	Division	Sensitivity Coefficient	Expanded Uncertainty
Reference Level	0.12	Rectangular	1.732	1	0.069284
Cable Insertion Loss	0.21	Normal	2	1	0.105
Attenuator	0.25	Normal	2	1	0.125
Mismatch	0.25	U-Shape	1.414	1	0.1768033
Combined Standard Uncertainty					0.476087
Expanded Uncertainty (K=2)					0.952174

The total derived measurement uncertainty is +/- 0.95 dB.

10 Measurements, Examination and Derived Results

10.1 Frequency Error

Requirement(s):

Spec	Requirement	Applicable
Frequency Stability	The frequency error under extreme test conditions shall be within 2.5ppm.	<input checked="" type="checkbox"/>
Test Setup		
Procedure	1. CW Tx 2. Set the center and span enough to clearly see the transmitting frequency 3. Record the value	
Remark	-	
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	

Test Data Yes (See below) N/A

Test Plot Yes (See below) N/A


Test was done by Chen Ge at RF Test Site.

Test Result:

Type	Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	ppm	Limit
Center frequency	25°C	915.8	915.8006	0.66	2.5
	-20°C	915.8	915.8012	1.31	2.5
	-10°C	915.8	915.8012	1.31	2.5
	0°C	915.8	915.8008	0.87	2.5
	10°C	915.8	915.8010	1.09	2.5
	20°C	915.8	915.8006	0.66	2.5
	30°C	915.8	915.8008	0.87	2.5
	40°C	915.8	915.8012	1.31	2.5
	50°C	915.8	915.8012	1.31	2.5

10.2 Output Power

Requirement(s):

Spec	Requirement	Applicable									
FCC 90.205	902-928 MHz. LMS systems operating pursuant to subpart M of this part in the 902-927.25 MHz band will be authorized a maximum of 30 watts ERP. LMS equipment operating in the 927.25-928 MHz band will be authorized a maximum of 300 watts ERP. ERP must be measured as peak envelope power. Antenna heights will be as specified in §90.353(h).	<input checked="" type="checkbox"/>									
Test Setup	 <pre> graph LR SA[Spectrum Analyzer] --- EUT[EUT] </pre>										
Procedure	The transmitter shall be connected to an artificial antenna and the power delivered to this artificial antenna shall be measured.										
Test Date	11/07/2016 to 02/22/2017	<table border="1"> <tr> <td>Environmental condition</td> <td>Temperature</td> <td>24°C</td> </tr> <tr> <td></td> <td>Relative Humidity</td> <td>52%</td> </tr> <tr> <td></td> <td>Atmospheric Pressure</td> <td>1009mbar</td> </tr> </table>	Environmental condition	Temperature	24°C		Relative Humidity	52%		Atmospheric Pressure	1009mbar
Environmental condition	Temperature	24°C									
	Relative Humidity	52%									
	Atmospheric Pressure	1009mbar									
Remark	-										
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail										

Test Data Yes N/A

Test Plot Yes (See below) N/A

Test was done by **Chen Ge** at RF Test Site.

Test Results

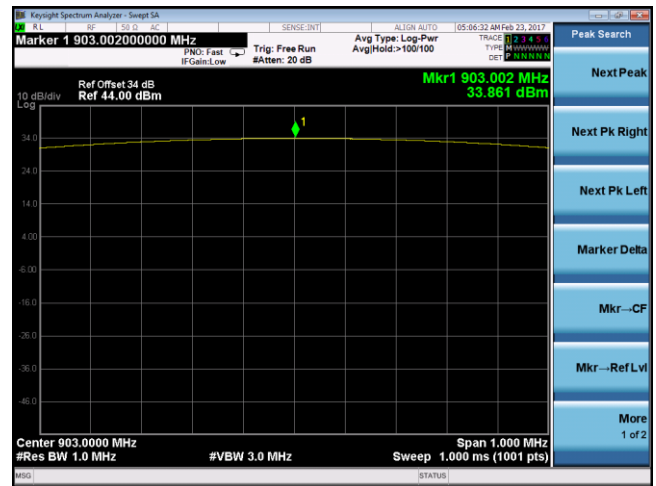
Type	Frequency (MHz)	Power (dBm)	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)
Center frequency	902.6	33.81	12.43	44.09	44.77
	903.0	33.86	12.43	44.14	44.77
	903.4	33.76	12.43	44.04	44.77

Type	Frequency (MHz)	Power (dBm)	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)
Center frequency	910.4	32.78	12.43	43.06	44.77
	915.8	33.13	12.43	43.41	44.77
	921.0	32.14	12.43	42.42	44.77

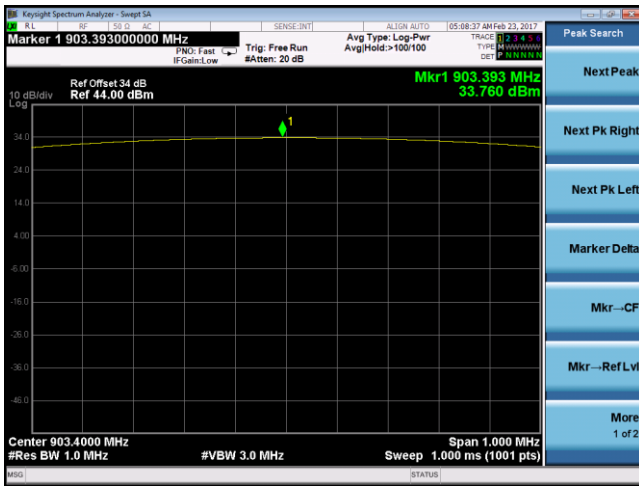
Test Plots



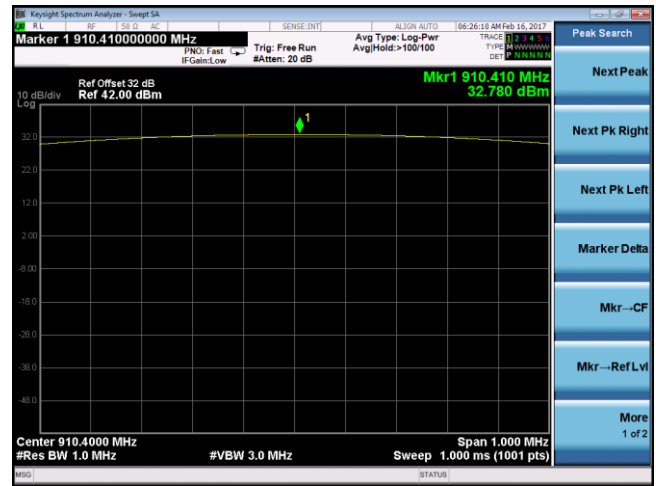
902.6 MHz



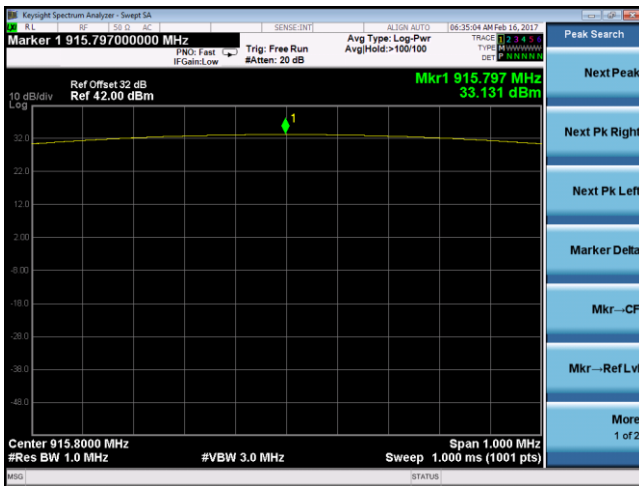
903.0 MHz



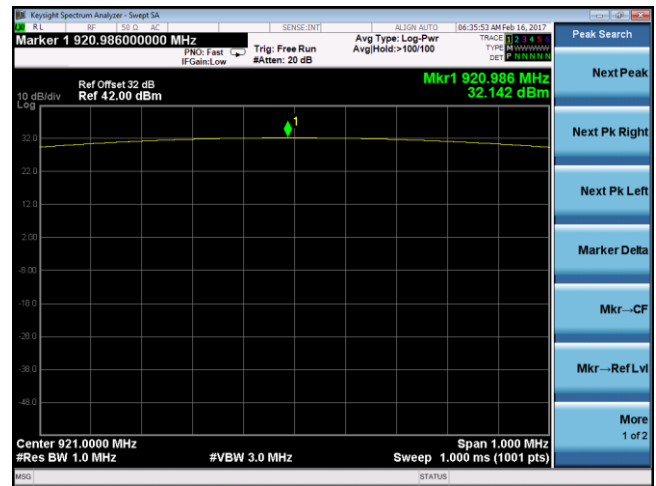
903.4 MHz



910.4 MHz




915.8 MHz



921.0 MHz

10.3 Occupied Bandwidth

Requirement(s):

Spec	Requirement	Applicable
FCC 90.209	The maximum authorized bandwidth shall be 12 MHz for non-multilateration LMS operations in the band 909.75-921.75 MHz and 2 MHz in the band 902.00-904.00 MHz. The maximum authorized bandwidth for multilateration LMS operations shall be 5.75 MHz in the 904.00-909.75 MHz band; 2 MHz in the 919.75-921.75 MHz band; 5.75 MHz in the 921.75-927.25 MHz band and its associated 927.25-927.50 MHz narrowband forward link; and 8.00 MHz if the 919.75-921.75 MHz and 921.75-927.25 MHz bands and their associated 927.25-927.50 MHz and 927.50-927.75 MHz narrowband forward links are aggregated.	<input checked="" type="checkbox"/>
Test Setup	 <pre> graph LR SA[Spectrum Analyzer] --- EUT[EUT] </pre>	
Procedure	The occupied bandwidth, that is the frequency bandwidth such that below its lower and above its upper frequency limits, the mean powers radiated are equal to 0.5 percent of the total mean power radiated by a given emission. Refer to figures nine through fourteen displaying plot of the occupied bandwidth measurements.	
Test Date	11/07/2016 to 02/22/2017	Environmental condition Temperature 24°C Relative Humidity 52% Atmospheric Pressure 1009mbar
Remark	-	
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	

Test Data Yes N/A

Test Plot Yes (See below) N/A

Test was done by **Chen Ge** at RF Test Site.

Test Result

Type	Frequency (MHz)	Bandwidth (kHz)
Center frequency	902.6	175.34
	903.0	175.57
	903.4	180.28

Type	Frequency (MHz)	Bandwidth (kHz)
Center frequency	910.4	178.65
	915.8	183.17
	921.0	176.74

Test Plots



902.6 MHz



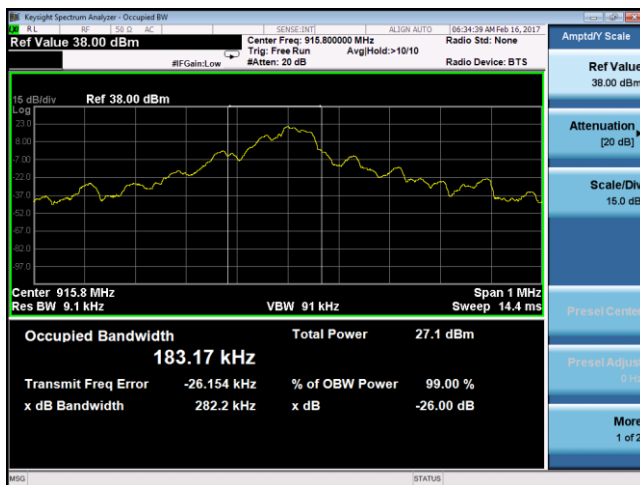
903.0 MHz



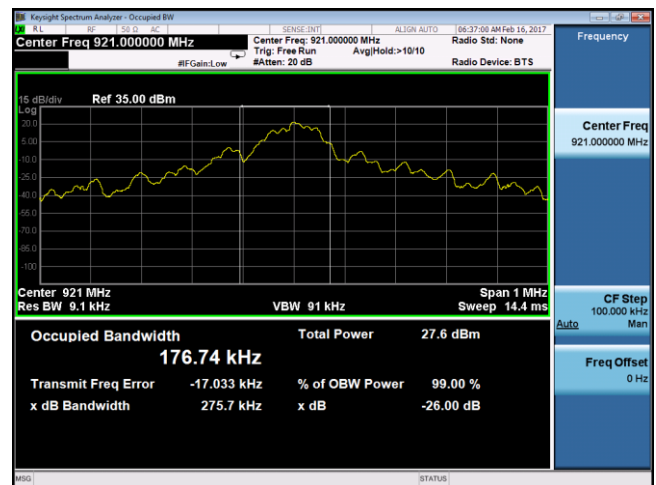
903.4 MHz



910.4 MHz




915.8 MHz



921.0 MHz

10.4 Band Edge

Requirement(s):

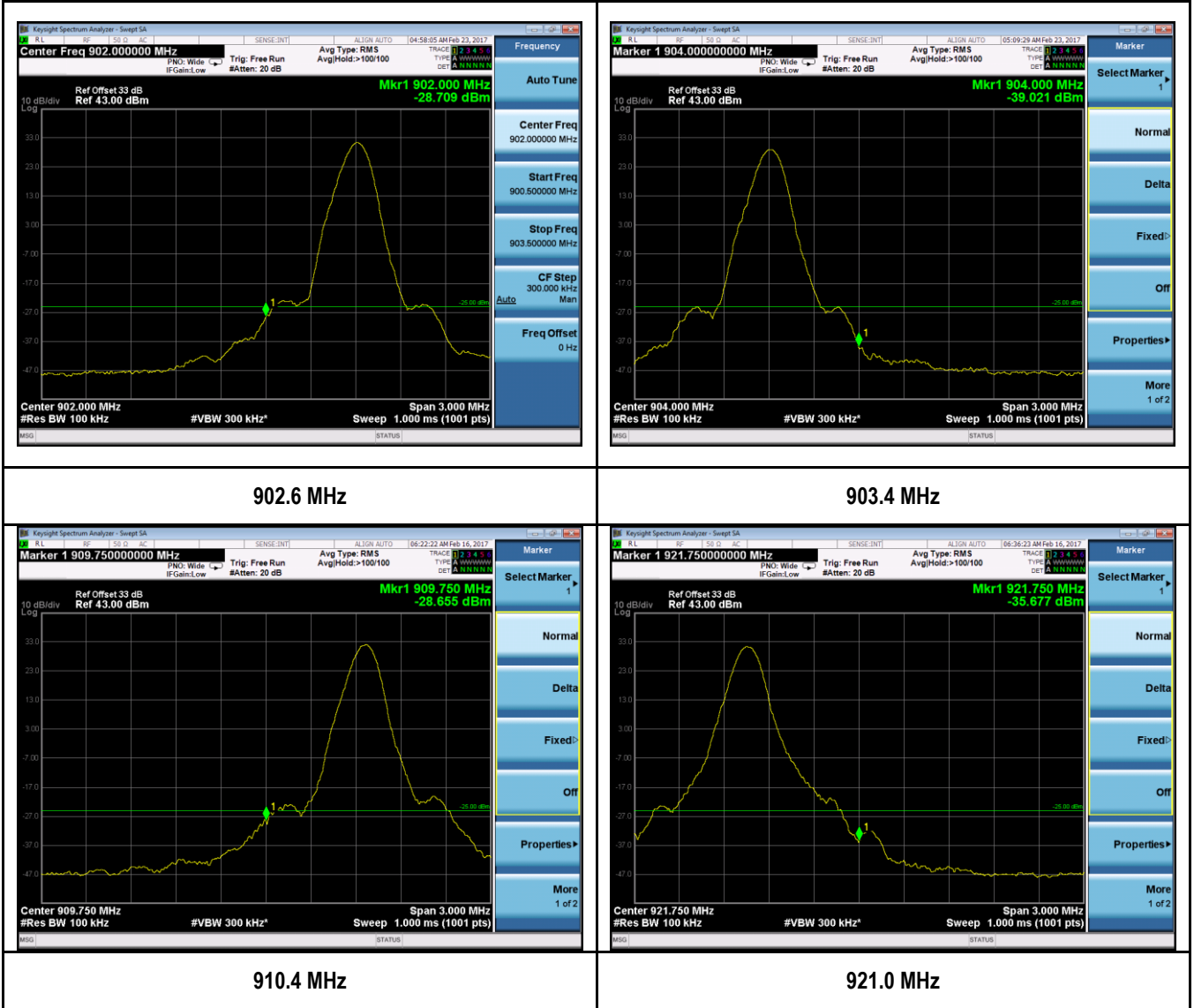
Spec	Requirement	Applicable									
FCC 90.210	On any frequency outside the licensee's sub-band edges: $55 + 10 \log(P)$ dB, where (P) is the highest emission (watts) of the transmitter inside the licensee's sub-band.	<input checked="" type="checkbox"/>									
Test Setup											
Procedure	<ol style="list-style-type: none"> EUT was set for low, mid, high channel with modulated mode and highest RF output power. The spectrum analyzer was connected to the antenna terminal. A RBW of 1% greater than the 26 dB emission bandwidth should be used for band edge measurement or if narrower RBW is used, a correct factor calculated with formula $10 \cdot \log(EBW/BW_{meas})$ will be added to the result. 										
Test Date	11/07/2016 to 02/22/2017	<table border="0"> <tr> <td>Environmental condition</td> <td>Temperature</td> <td>24°C</td> </tr> <tr> <td></td> <td>Relative Humidity</td> <td>46%</td> </tr> <tr> <td></td> <td>Atmospheric Pressure</td> <td>1008mbar</td> </tr> </table>	Environmental condition	Temperature	24°C		Relative Humidity	46%		Atmospheric Pressure	1008mbar
Environmental condition	Temperature	24°C									
	Relative Humidity	46%									
	Atmospheric Pressure	1008mbar									
Remark	-										
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail										

Test Data Yes N/A

Test Plot Yes N/A

Test was done by Chen Ge at RF test site.

Test Plot



10.5 Radiated Spurious Emissions

Spec	Requirement	Applicable
FCC 90.210	On any frequency outside the licensee's sub-band edges: $55 + 10 \log(P)$ dB, where (P) is the highest emission (watts) of the transmitter inside the licensee's sub-band.	<input checked="" type="checkbox"/>
Test Setup Below 1GHz		
Test Setup Above 1GHz		
Procedure	Refer to TIA-603-D.	
Remark	Measurement was performed up to 10GHz and only worst case was presented.	
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	

Test Data Yes (See below) N/A

Test Plot Yes (See below) N/A

Test was done by Chen Ge at 10m chamber.

Radiated Emission Test Results (Below 1GHz)

Middle Channel:

Frequency (MHz)	Degree	Height (cm)	Polarity	Frequency (MHz)	Level (dBm)	Ant Gain (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
39.46	125	150	V	39.46	-45.48	0	0.10	-45.58	-25	-20.58
39.46	69	156	H	39.46	-50.25	0	0.10	-50.35	-25	-25.35
249.90	202	152	V	249.90	-48.59	0	0.31	-48.90	-25	-23.90
249.90	48	151	H	249.90	-41.69	0	0.31	-42.00	-25	-17.00
198.47	155	150	V	198.47	-52.41	0	0.22	-52.63	-25	-27.63
198.47	213	150	H	198.47	-47.58	0	0.22	-47.80	-25	-22.80

Radiated Emission Test Results (Above 1GHz)

Low:

Indicated			Test Antenna		Substituted					
Frequency (MHz)	Raw (dBm)	Degree	Height (cm)	Polarity	Frequency (MHz)	Ant Gain (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
1805.25	-57.21	120	150	V	1805.25	10.10	1.09	-48.20	-25	-23.20
1805.25	-56.99	156	153	H	1805.25	10.10	1.09	-47.98	-25	-22.98
2707.81	-63.45	220	155	V	2707.81	9.09	1.52	-55.88	-25	-30.88
2707.81	-63.72	117	154	H	2707.81	9.09	1.52	-56.15	-25	-31.15

Middle:

Indicated			Test Antenna		Substituted					
Frequency (MHz)	Raw (dBm)	Degree	Height (cm)	Polarity	Frequency (MHz)	Ant Gain (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
1830.12	-52.62	147	152	V	1830.12	10.10	1.09	-42.82	-25	-17.82
1830.12	-51.39	168	153	H	1830.12	10.10	1.09	-41.59	-25	-16.59
2745.08	-61.18	231	152	V	2745.08	9.09	1.52	-53.61	-25	-28.61
2745.08	-63.66	108	160	H	2745.08	9.09	1.52	-56.09	-25	-31.09

















High:








Indicated			Test Antenna		Substituted					
Frequency (MHz)	Raw (dBm)	Degree	Height (cm)	Polarity	Frequency (MHz)	Ant Gain (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
1854.28	-53.74	154	160	V	1854.28	10.10	1.09	-43.94	-25	-18.94
1854.28	-52.59	88	157	H	1854.28	10.10	1.09	-42.79	-25	-17.79
2782.25	-62.28	105	144	V	2782.25	9.09	1.52	-54.71	-25	-29.71
2782.25	-62.81	220	146	H	2782.25	9.09	1.52	-55.24	-25	-30.24

Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Cycle	Cal Due	In use
R & S Receiver	ESL6	100178	05/27/2016	1 Year	05/27/2017	<input checked="" type="checkbox"/>
Agilent Spectrum Analyzer	N9010A	10SL0219	08/20/2016	1 Year	08/20/2017	<input checked="" type="checkbox"/>
Preamplifier (100KHz-7GHz)	LPA-6-30	11140711	03/10/2016	1 Year	03/10/2017	<input checked="" type="checkbox"/>
USB RF Power Sensor	7002-006	10SL0190	09/03/2016	1 Year	09/03/2017	<input checked="" type="checkbox"/>
ETS-Lingren Loop Antenna	6512	00049120	08/20/2016	1 Year	08/20/2017	<input checked="" type="checkbox"/>
Bi-Log antenna (30MHz~2GHz)	JB1	A030702	08/15/2016	1 Year	08/15/2017	<input checked="" type="checkbox"/>
Agilent Signal Generator	MXG N5182A	MY47071065	04/12/2016	1 Year	04/12/2017	<input checked="" type="checkbox"/>
Tuned Dipole Antenna 30 - 1000 MHz (4pcs set)	AD-100	40133	10/02/2016	1 Year	10/02/2017	<input checked="" type="checkbox"/>
Test Equity Environment Chamber	1007H	61201	07/31/2016	1 Year	07/31/2017	<input checked="" type="checkbox"/>
10 Meters SAC	10M	N/A	09/05/2016	1 Year	09/05/2017	<input checked="" type="checkbox"/>

Annex B. SIEMIC Accreditation

Accreditations	Document	Scope / Remark
ISO 17025 (A2LA)		Please see the documents for the detailed scope
ISO Guide 65 (A2LA)		Please see the documents for the detailed scope
TCB Designation		A1, A2, A3, A4, B1, B2, B3, B4, C
FCC DoC Accreditation		FCC Declaration of Conformity Accreditation
FCC Site Registration		3 meter site
FCC Site Registration		10 meter site
IC Site Registration		3 meter site
IC Site Registration		10 meter site
EU NB		Radio & Telecommunications Terminal Equipment: EN45001 – EN ISO/IEC 17025
		Electromagnetic Compatibility: EN45001 – EN ISO/IEC 17025
Singapore iDA CB(Certification Body)	 	Phase I, Phase II
Vietnam MIC CAB Accreditation		Please see the document for the detailed scope
Hong Kong OFCA		(Phase II) OFCA Foreign Certification Body for Radio and Telecom
		(Phase I) Conformity Assessment Body for Radio and Telecom
Industry Canada CAB		Radio: Scope A – All Radio Standard Specification in Category I
		Telecom: CS-03 Part I, II, V, VI, VII, VIII

Japan Recognized Certification Body Designation		<p>Radio: A1. Terminal equipment for purpose of calling</p> <p>Telecom: B1. Specified radio equipment specified in Article 38-2, Paragraph 1, Item 1 of the Radio Law</p>
Korea CAB Accreditation		<p>EMI: KCC Notice 2008-39, RRL Notice 2008-3: CA Procedures for EMI KN22: Test Method for EMI</p> <p>EMS: KCC Notice 2008-38, RRL Notice 2008-4: CA Procedures for EMS KN24, KN61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11: Test Method for EMS</p>
		<p>Radio: RRL Notice 2008-26, RRL Notice 2008-2, RRL Notice 2008-10, RRL Notice 2007-49, RRL Notice 2007-20, RRL Notice 2007-21, RRL Notice 2007-80, RRL Notice 2004-68</p>
		<p>Telecom: President Notice 20664, RRL Notice 2007-30, RRL Notice 2008-7 with attachments 1, 3, 5, 6; President Notice 20664, RRL Notice 2008-7 with attachment 4</p>
Taiwan NCC CAB Recognition		LP0002, PSTN01, ADSL01, ID0002, IS6100, CNS14336, PLMN07, PLMN01, PLMN08
Taiwan BSMI CAB Recognition		CNS 13438
Japan VCCI		R-3083: Radiation 3 meter site
		C-3421: Main Ports Conducted Interference Measurement
		T-1597: Telecommunication Ports Conducted Interference Measurement
Australia CAB Recognition		<p>EMC: AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR22, AS/NZS 61000.6.3, AS/NZS 61000.6.4</p>
		<p>Radio communications: AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS 4769.2, AS/NZS 4770, AS/NZS 4771</p>
		<p>Telecommunications: AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06 AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/ACIF S60950.1</p>
Australia NATA Recognition		AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S040, AS/ACIF S041, AS/ACIF S043.2