

RF TEST REPORT



Report No.: **SL13070201-EQU-002-BT-FCC**

Supersede Report No.: **None**

Applicant	:	Equinox Payments LLC
Product Name	:	Electronic POS Terminal
Model No.	:	AIO / CFD
Test Standard	:	FCC 15.247: 2013 RSS 210 Issue8: 2010
Test Method	:	ANSI C63.4:2009 FCC Public Notice DA 00-705 558074 D01 DTS Meas Guidance v03r01
FCC ID	:	NVA00008
IC ID	:	N/A
Dates of test	:	February 28th - March 3th , 2014
Issue Date	:	3/11/2014
Test Result	:	☒ Pass ☐ Fail
Equipment complied with the specification [X]		
Equipment did not comply with the specification []		

This Test Report is Issued Under the Authority of:

	
Nima Molaei	David Zhang
Test Engineer	Engineer Reviewer

Issued By:

SIEMIC Laboratories
775 Montague Expressway, Milpitas, 95035 CA



TESTING CERT # 2742-01

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Test result presented in this test report is applicable to the representative sample only.

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Laboratory Introduction

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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	Safety, EMC , RF/Wireless, Telecom
Europe	A2LA, 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

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1. Report Revision History

Report No.	Report Version	Description	Issue Date
SL13070201-EQU-002-BT-FCC	Original	-	3/11/2014

2. Executive Summary

The purpose of this test program was to demonstrate compliance with the FCC, IC certified radio module, Electronic POS Terminal (FCC ID: NVA00008, IC ID: N/A), from Equinox Payments LLC, and Model: AIO / CFD, which has limited hardware changes on original design to improve EMC performance. The specified model product stated above with the hardware changes has demonstrated compliance with the Stipulated Standard listed on 1st page.

3. Customer information

Applicant Name	:	Equinox Payments LLC
Applicant Address	:	8901 E Raintree Dr., Suit 400, Scottsdale, AZ 85260
Manufacturer Name	:	Equinox Payments LLC
Manufacturer Address	:	8901 E Raintree Dr., Suit 400, Scottsdale, AZ 85260

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	:	Electronic POS Terminal
Model No.	:	AIO / CFD
Trade Name	:	Equinox
Serial No.	:	B0213480028, B02133100003
Input Power	:	9VDC
Power Adapter Manu/Model	:	Equinox/MC28-09V 3.0A
Power Adapter SN	:	870082-101E
Hardware version	:	-
Software version	:	-
Date of EUT received	:	February 28th, 2014
Equipment Class/ Category	:	DSS
Clock Frequencies	:	26 MHz
Port/Connectors	:	-
Remark	:	None
Difference Between two models	:	- Slightly different dimensions for AIO to accommodate integral printer - AIO has printing capability and CFD does not have printing capability

6.2 Radio Description

Spec for Radio -

Radio Type	Normal Mode	EDR Mode
Operating Frequency	2402-2480 MHz	2402-2480 MHz
Modulation	GFSK	8-DPSK
Channel Spacing	1MHz	1MHz
Number of Channels	79 Ch.	79 Ch.
Antenna Type	Embedded antenna- Ethertronics	
Antenna Gain	Embedded antenna: 1.39 dBi (2.4GHz)	
Antenna Connector Type	Surface Mount	

Bluetooth Channel list

Type		Channel No.	Frequency (MHz)	Available (Y/N)
Bluetooth	2402-2480MHz	0	2402	Y
		.	.	Y
		.	.	Y
		.	.	Y
		.	.	Y
		39	2441	Y
		.	.	Y
		.	.	Y
		.	.	Y
		.	.	Y
		78	2480	Y

6.3 EUT test modes/configuration Description

Mode	Note
Normal	1 Mbps, PN9
EDR	3 Mbps, PN9
Note:	

Test Item	Operating mode	Tested antenna port	Test frequencies (MHz)
Band Edge and Radiated Spurious Emissions	Normal and EDR Mode	-	2402-2480

6.4 EUT Photos – External



Top



Bottom



Front



Rear

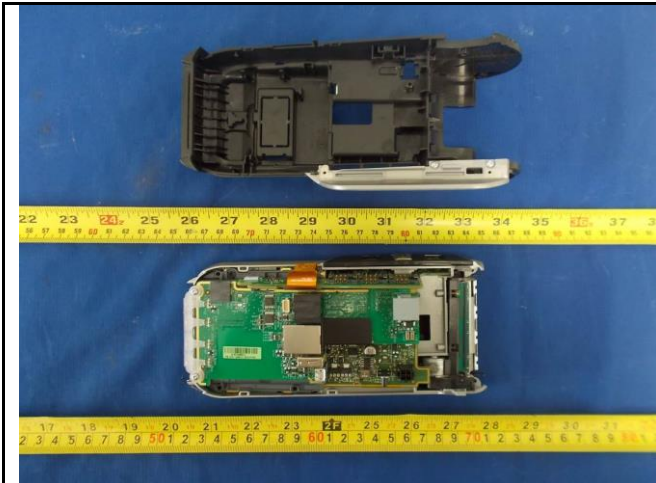


Left Side

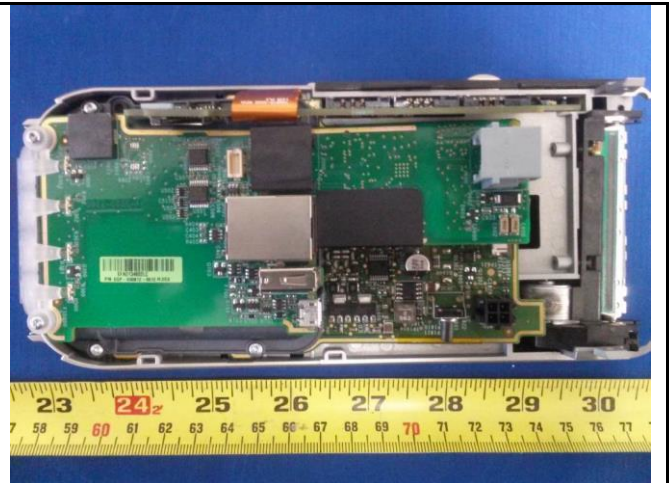


Right Side

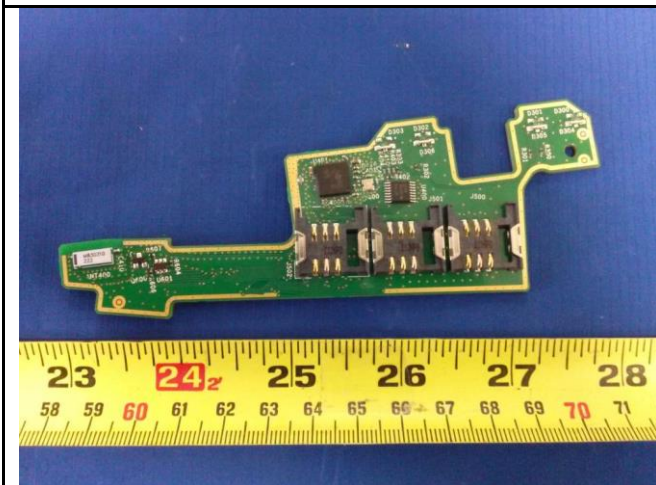
6.5 EUT Photos – Internal



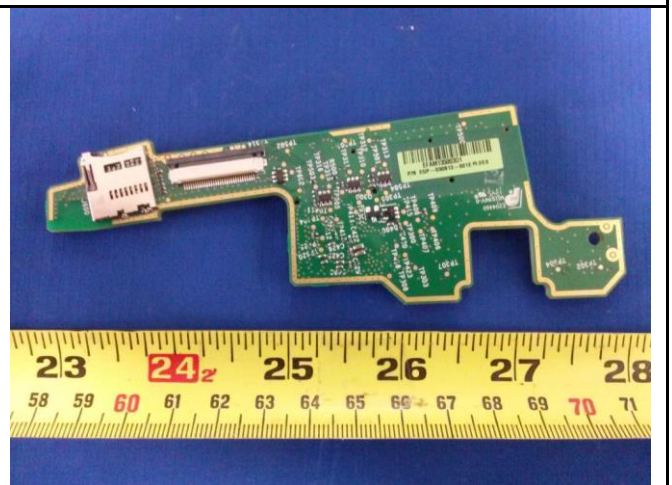
EUT - Cover off



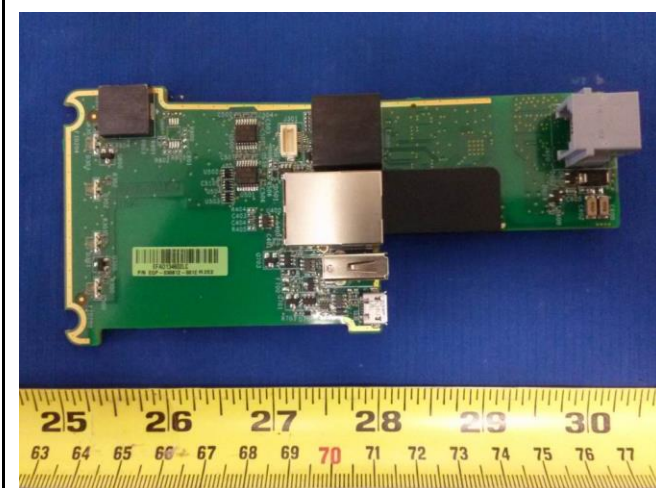
EUT- Mainboard without Cover



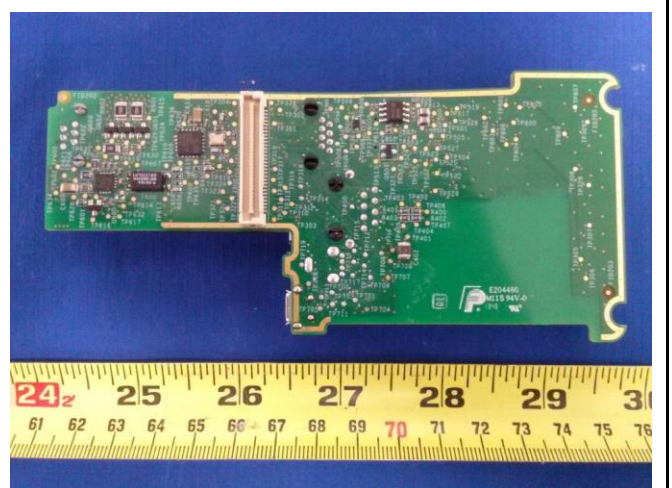
Radio Module – top view



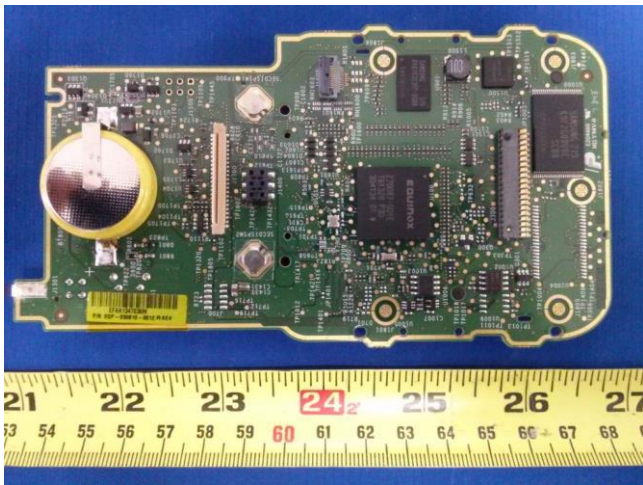
Radio Module – Bottom view



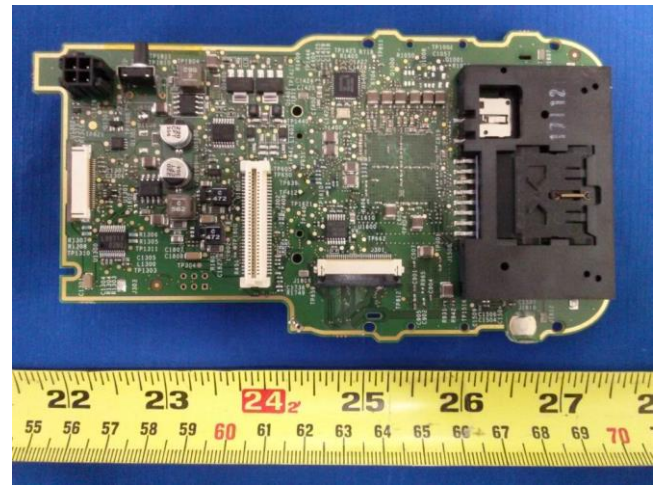
PCB 1 – Top view



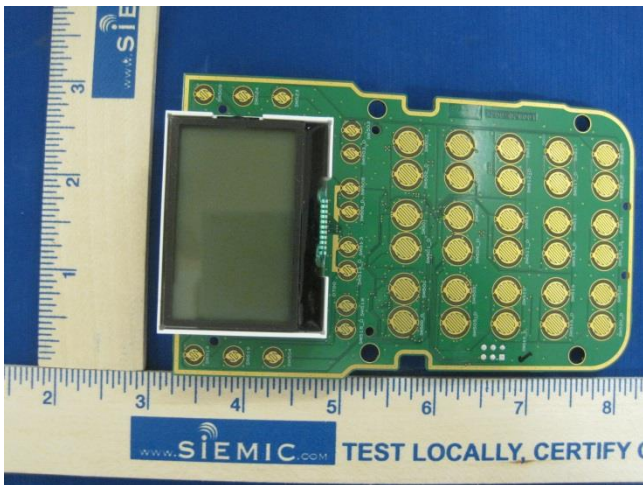
PCB 1 – Bottom view



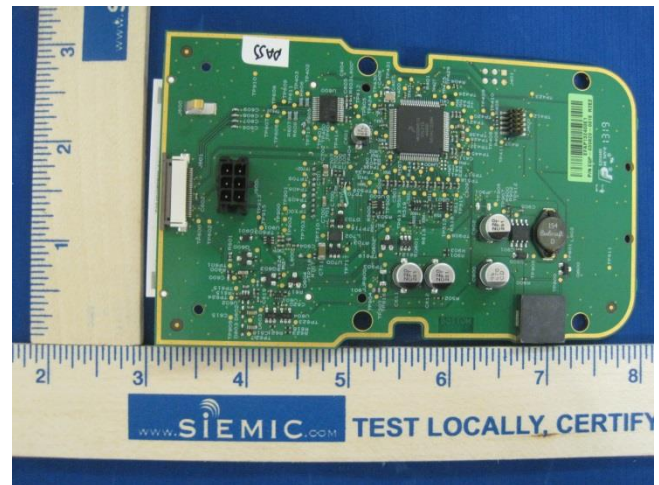
PCB 2 – Top view



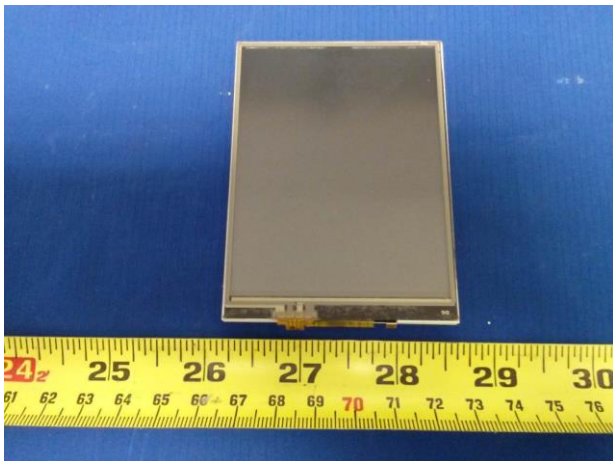
PCB 2 – Bottom view



Keypad Board- Top view



Keypad Board- Bottom View

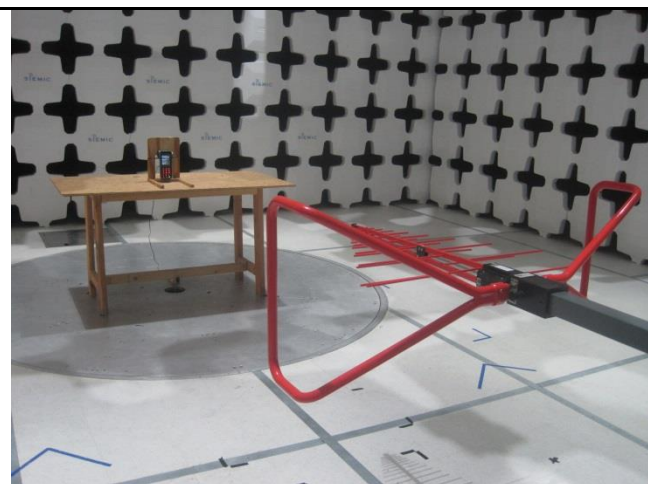


LCD - Top view

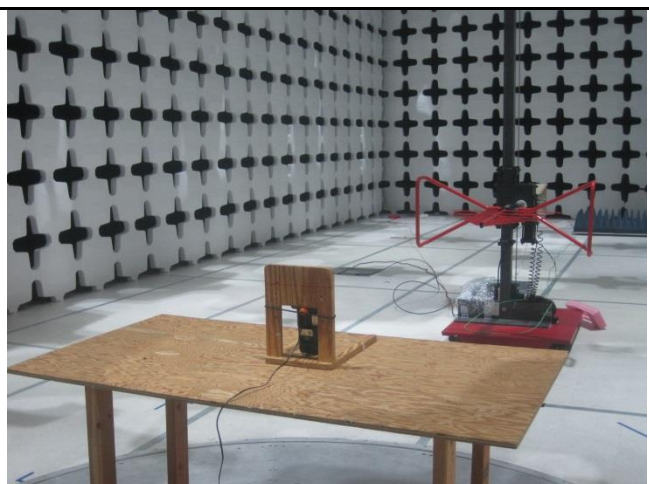


LCD- Bottom View

6.6 EUT Test Setup Photos



Test setup at 3 meter distance (<1 GHz) - Front



Test setup at 3 meter distance (<1 GHz) - Rear



Test setup at 3 meter distance (>1 GHz) - Front



Test setup at 3 meter distance (>1 GHz) - Rear



Test setup at 3 meter distance (>18 GHz) - Front



Test setup at 3 meter distance (>18 GHz) - Rear

7. Supporting Equipment/Software and cabling Description

Supporting Equipment

Index	Supporting Equipment Description	Model	Serial No.	Manu	Note
1	AC/DC Adaptor	MC28	870082-001E	EQUINOX	-

Cabling Description

Name	Connection Start		Connection Stop		Length / shielding Info		Note
	From	I/O Port	To	I/O Port	Length (m)	Shielding	
Cable	EUT	AC/DC	Supply	AC/DC	1.2	Unshielded	-

Test Software Description

Test Item	Software	Description
Radiated Testing	TTE test software	Set the EUT to different modulation and channel

8. Test Summary

Spurious Emissions			
Test Item	Test standard	Test Method/Procedure	Pass / Fail
Radiated Spurious Emissions<1GHz	FCC-15.247	ANSI C63.4: 2009 Public Notice DA 00-705	☒ Pass ☐ Fail
Radiated Spurious Emissions<1GHz	IC-RSS 210	RSS-Gen Issue 3: 2010	☒ Pass ☐ Fail
Band Edge and Radiated Spurious Emissions>1GHz	FCC-15.247	ANSI C63.4: 2009 Public Notice DA 00-705	☒ Pass ☐ Fail
Band Edge and Radiated Spurious Emissions>1GHz	IC-RSS 210	RSS-Gen Issue 3: 2010	☒ Pass ☐ Fail

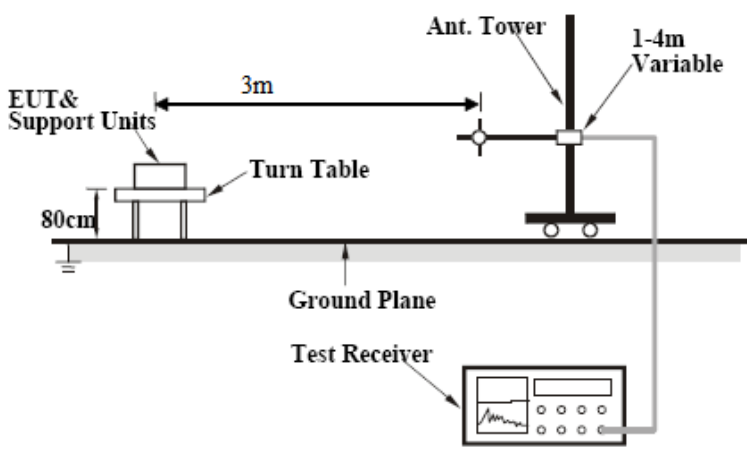
9. Measurement Uncertainty

Test Item	Frequency Range	Description	Uncertainty
Band Edge and Radiated Spurious Emissions	30MHz – 1GHz	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	+5.6dB/-4.5dB
Band Edge and Radiated Spurious Emissions	1GHz – 40GHz	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	+4.3dB/-4.1dB

10. Measurements, examination and derived results

10.1 Radiated Measurement below 1GHz

Requirement(s):

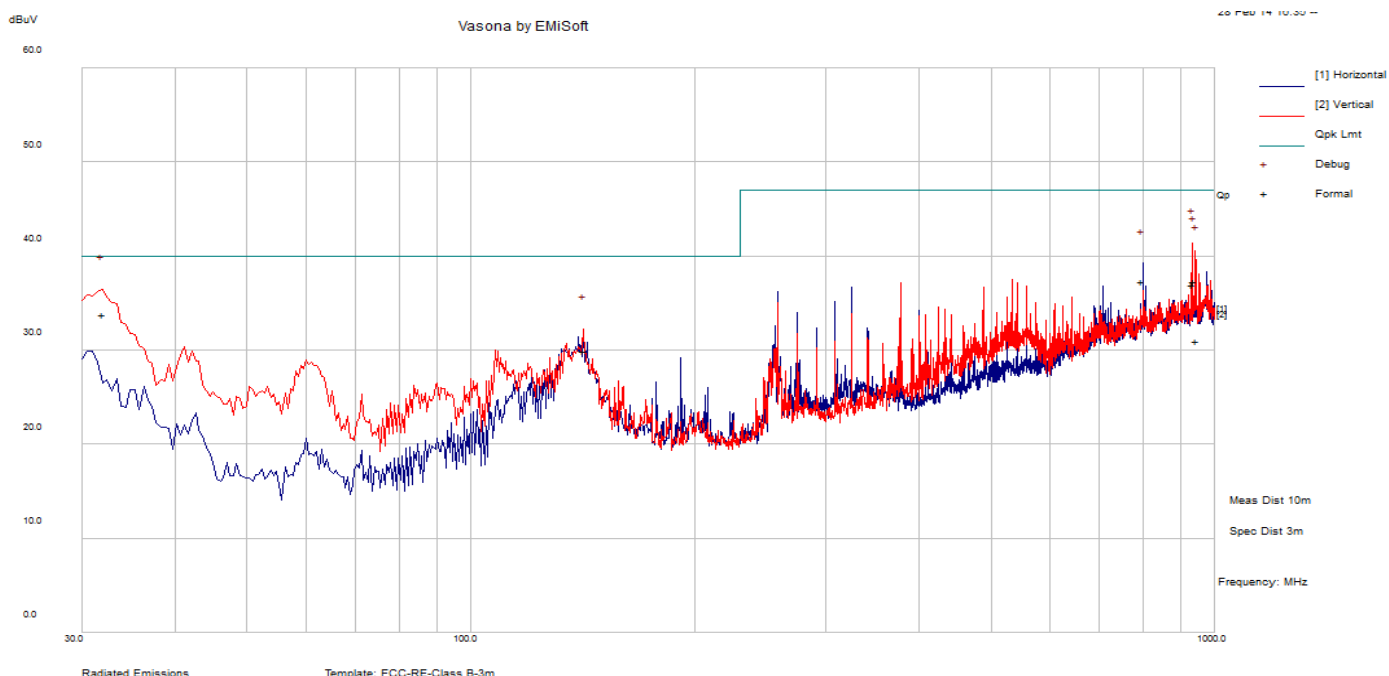
Spec	Item	Requirement	Applicable										
47CFR§15.247(d), RSS210(A8.5)	a)	Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges	☒										
		<table><tr><th>Frequency range (MHz)</th><th>Field Strength (uV/m)</th></tr><tr><td>30 – 88</td><td>100</td></tr><tr><td>88 – 216</td><td>150</td></tr><tr><td>216 960</td><td>200</td></tr><tr><td>Above 960</td><td>500</td></tr></table>		Frequency range (MHz)	Field Strength (uV/m)	30 – 88	100	88 – 216	150	216 960	200	Above 960	500
		Frequency range (MHz)		Field Strength (uV/m)									
		30 – 88		100									
		88 – 216		150									
		216 960		200									
Above 960	500												
Test Setup													
Procedure	1. The EUT was switched on and allowed to warm up to its normal operating condition. 2. The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: a. Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen. b. The EUT was then rotated to the direction that gave the maximum emission. c. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. A Quasi-peak measurement was then made for that frequency point. 4. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.												
Remark	NONE												
Result	☒ Pass ☐ Fail												

Test Data ☒ Yes (See below) ☐ N/A

Test Plot ☒ Yes (See below) ☐ N/A

Radiated Emission Test Results (Below 1GHz)-BDR Mode

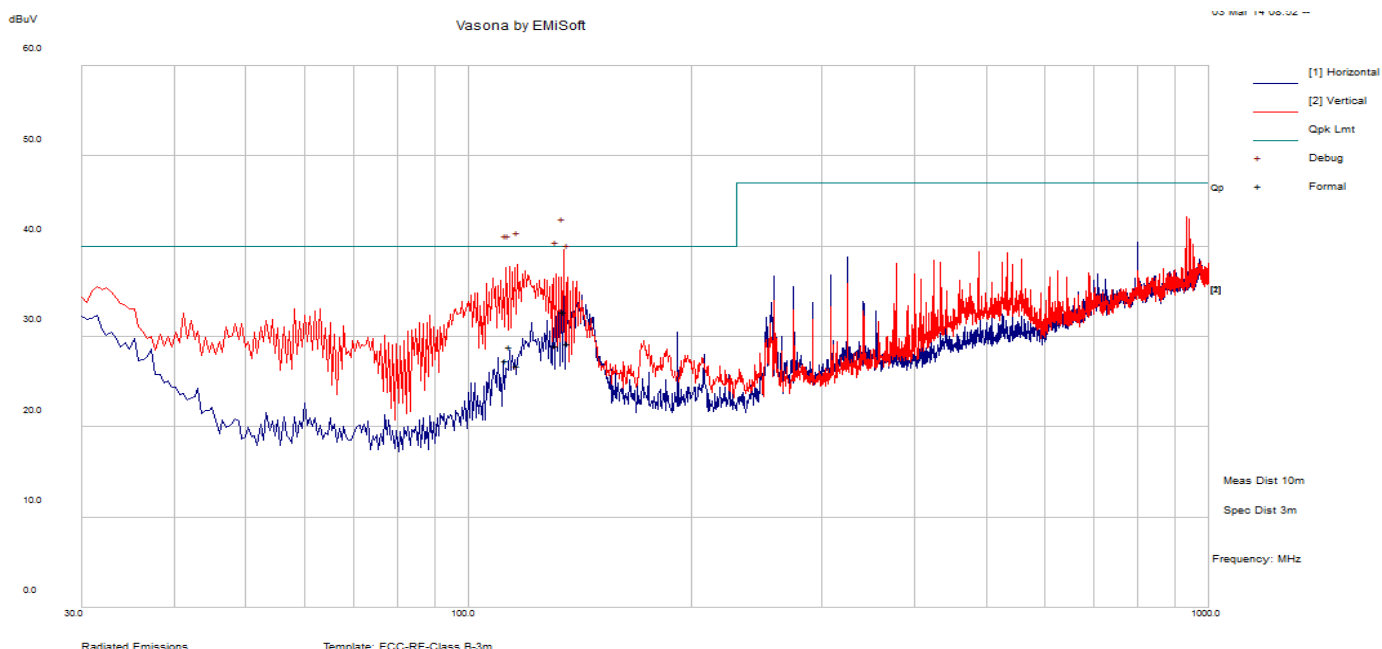
Test specification	Below 1GHz		Result	Pass
Environmental Conditions:	Temp (°C):	22		
	Humidity (%)	45		
	Atmospheric (mbar):	1008		
Mains Power:	110VAC,60Hz			
Tested by:	Teody Manansala			
Test Date:	28-Feb-2014			
Remarks:	BDR Mode			



Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit (dBuV/m)	Margin (dB)	Pass /Fail
32.0397	39.87	1.16	-7.24	33.79	Quasi Max	V	102	220	40	-6.21	Pass
933.391	39.17	5.06	-7.22	37.02	Quasi Max	V	101	249	47	-9.98	Pass
939.128	39.36	5.07	-7.09	37.34	Quasi Max	V	107	199	47	-9.66	Pass
945.211	32.8	5.08	-6.88	31	Quasi Max	V	156	246	47	-16	Pass
141.679	44.6	2.17	-16.81	29.96	Quasi Max	V	101	5	40	-10.04	Pass
799.994	40.64	4.84	-8.1	37.38	Quasi Max	H	101	41	47	-9.62	Pass

Radiated Emission Test Results (Below 1GHz)-EDR Mode

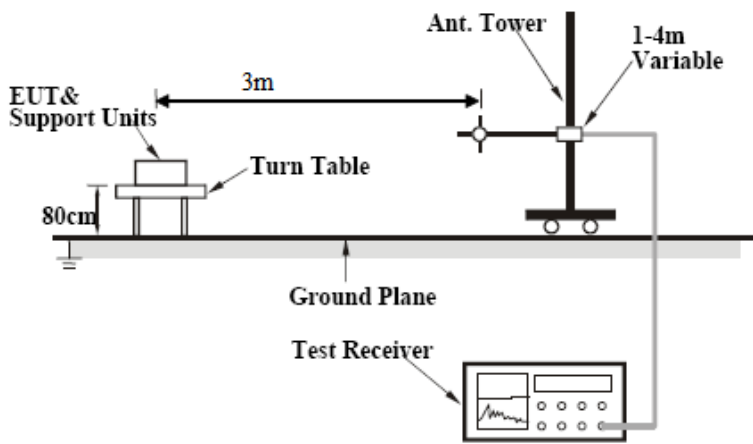
Test specification	Below 1GHz		Result	Pass
Environmental Conditions:	Temp (°C):	22		
	Humidity (%)	45		
	Atmospheric (mbar):	1008		
Mains Power:	110VAC,60Hz			
Tested by:	Teody Manansala			
Test Date:	28-Feb-2014			
Remarks:	EDR Mode			



Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit (dBuV/m)	Margin (dB)	Pass /Fail
134.468	46.54	2.12	-15.93	32.73	Quasi Max	V	109	254	40	-7.27	Pass
116.567	40.77	1.98	-15.96	26.79	Quasi Max	V	188	259	40	-13.21	Pass
113.533	43.24	1.95	-16.35	28.85	Quasi Max	V	125	223	40	-11.15	Pass
112.557	41.86	1.94	-16.44	27.37	Quasi Max	V	169	321	40	-12.63	Pass
131.604	42.59	2.1	-15.73	28.95	Quasi Max	V	135	348	40	-11.05	Pass
136.353	43.37	2.13	-16.23	29.28	Quasi Max	V	101	245	40	-10.72	Pass

10.2 Radiated Spurious Emissions > 1GHz & Band Edge

Requirement(s):

Spec	Item	Requirement	Applicable
§ 15.247(d), RSS210(A8.5)	a)	For non-restricted band, In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB or 30dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, determined by the measurement method on output power to be used. Attenuation below the general limits specified in § 15.209(a) is not required ☐ 20 dB down ☐ 30 dB down	☒
	b)	or restricted band, emission must also comply with the radiated emission limits specified in § 15.209(a)	☒
Test Setup			
Procedure	- The EUT was switched on and allowed to warm up to its normal operating condition. - The test was carried out at the selected frequency points obtained from the EUT characterization. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: - Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen. - The EUT was then rotated to the direction that gave the maximum emission. - Finally, the antenna height was adjusted to the height that gave the maximum emission. - A Quasi-peak measurement was then made for that frequency point. - Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.		
Test Date	2/28/2014	Environmental condition	Temperature 24oC Relative Humidity 48% Atmospheric Pressure 1019mbar
Remark	-		
Result	☒ Pass ☐ Fail		

Test Data ☒ Yes (See below) ☐ N/A

Test Plot ☐ Yes (See below) ☒ N/A

Normal Mode - Radiated Emission Test Results (Above 1GHz)

Low Channel @ 2402MHz @ 3 Meter

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17940.5	40.36	7.01	14.27	61.63	Peak Max	V	144	17	74	-12.37	Pass
15584.7	41.85	6.88	9.46	58.2	Peak Max	V	161	348	74	-15.8	Pass
4803.8	55.71	3.17	0.11	58.99	Peak Max	H	146	99	74	-15.01	Pass
1547.36	43.41	1.48	-6.09	38.8	Peak Max	V	182	205	74	-35.2	Pass
12017.2	41.7	5.35	6.53	53.58	Peak Max	V	175	261	74	-20.42	Pass
17940.5	27.42	7.01	14.27	48.69	Average Max	V	144	17	54	-5.31	Pass
15584.7	28.8	6.88	9.46	45.15	Average Max	V	161	348	54	-8.85	Pass
4803.8	45.68	3.17	0.11	48.96	Average Max	H	146	99	54	-5.04	Pass
1547.36	30.23	1.48	-6.09	25.61	Average Max	V	182	205	54	-28.39	Pass
12017.2	28.25	5.35	6.53	40.13	Average Max	V	175	261	54	-13.87	Pass

Mid Channel @ 2441MHz @ 3 Meter

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
7322.633	53.96	4.4	3.31	61.67	Peak Max	V	100	26	74	-12.33	Pass
17938.89	41.04	7.01	14.26	62.31	Peak Max	V	140	24	74	-11.69	Pass
4882.361	51.39	3.2	0.21	54.79	Peak Max	H	125	88	74	-19.21	Pass
15475.63	41.17	6.88	10.15	58.21	Peak Max	H	147	163	74	-15.79	Pass
1221.094	44.91	1.17	-6.74	39.34	Peak Max	V	139	344	74	-34.66	Pass
7322.633	45.11	4.4	3.31	52.82	Average Max	V	100	26	54	-1.18	Pass
17938.89	27.49	7.01	14.26	48.76	Average Max	V	140	24	54	-5.24	Pass
4882.361	46.75	3.2	0.21	50.15	Average Max	H	125	88	54	-3.85	Pass
15475.63	28.73	6.88	10.15	45.76	Average Max	H	147	163	54	-8.24	Pass
1221.094	31.81	1.17	-6.74	26.24	Average Max	V	139	344	54	-27.76	Pass

High Channel @ 2480MHz @ 3 Meter

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
7432.357	52.43	4.33	3.51	60.27	Peak Max	V	189	84	74	-13.73	Pass
17932.27	40.09	7.01	14.24	61.34	Peak Max	H	100	177	74	-12.66	Pass
15565.43	41.81	6.88	9.64	58.33	Peak Max	V	121	261	74	-15.67	Pass
4964.685	51.28	3.23	0.31	54.82	Peak Max	H	135	100	74	-19.18	Pass
9441.311	42.22	4.31	6.48	53	Peak Max	V	100	225	74	-21	Pass
7432.357	39.69	4.33	3.51	47.53	Average Max	V	189	84	54	-6.47	Pass
17932.27	27.49	7.01	14.24	48.73	Average Max	H	100	177	54	-5.27	Pass
15565.43	28.67	6.88	9.64	45.19	Average Max	V	121	261	54	-8.81	Pass
4964.685	40.71	3.23	0.31	44.24	Average Max	H	135	100	54	-9.76	Pass
9441.311	29.06	4.31	6.48	39.85	Average Max	V	100	225	54	-14.15	Pass

EDR Mode - Radiated Emission Test Results (Above 1GHz)

Low Channel @ 2402MHz @ 3 Meter

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
17910.8	40.77	7	14.17	61.94	Peak Max	V	193	326	74	-12.06	Pass
15596	41.73	6.88	9.36	57.98	Peak Max	V	164	125	74	-16.02	Pass
4804.75	56.07	3.18	0.11	59.35	Peak Max	H	136	115	74	-14.65	Pass
1134.59	43.58	1.08	-6.91	37.75	Peak Max	V	115	130	74	-36.25	Pass
17910.8	27.34	7	14.17	48.51	Average Max	V	193	326	54	-5.49	Pass
15596	28.8	6.88	9.36	45.05	Average Max	V	164	125	54	-8.95	Pass
4804.75	45.62	3.18	0.11	48.9	Average Max	H	136	115	54	-5.1	Pass
1134.59	30.52	1.08	-6.91	24.69	Average Max	V	115	130	54	-29.31	Pass

Mid Channel @ 2441MHz @ 3 Meter

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
7322.505	52.89	4.4	3.31	60.59	Peak Max	V	180	34	74	-13.41	Pass
17899.59	40.1	7	14.13	61.23	Peak Max	V	181	80	74	-12.77	Pass
15510.19	41.36	6.88	10.13	58.37	Peak Max	H	174	176	74	-15.63	Pass
4881.992	60.46	3.2	0.2	63.87	Peak Max	H	99	99	74	-10.13	Pass
1211.884	42.74	1.16	-6.76	37.14	Peak Max	V	133	148	74	-36.86	Pass
7322.505	43.52	4.4	3.31	51.22	Average Max	V	180	34	54	-2.78	Pass
17899.59	27.28	7	14.13	48.41	Average Max	V	181	80	54	-5.59	Pass
15510.19	28.37	6.88	10.13	45.38	Average Max	H	174	176	54	-8.62	Pass
4881.992	45.29	3.2	0.2	48.69	Average Max	H	99	99	54	-5.31	Pass
1211.884	29.97	1.16	-6.76	24.37	Average Max	V	133	148	54	-29.63	Pass

High Channel @ 2480MHz @ 3 Meter

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
7433.743	52.56	4.33	3.51	60.4	Peak Max	V	186	345	74	-13.6	Pass
17934.47	40.36	7.01	14.24	61.61	Peak Max	H	134	146	74	-12.39	Pass
15409.86	42.79	6.88	9.97	59.64	Peak Max	H	137	69	74	-14.36	Pass
4962.385	51.42	3.23	0.3	54.95	Peak Max	H	132	351	74	-19.05	Pass
1329.415	42.8	1.28	-6.55	37.52	Peak Max	H	113	130	74	-36.48	Pass
1089.134	45.39	1.03	-7	39.43	Peak Max	V	186	236	74	-34.57	Pass
7433.743	39.65	4.33	3.51	47.49	Average Max	V	186	345	54	-6.51	Pass
17934.47	27.41	7.01	14.24	48.67	Average Max	H	134	146	54	-5.33	Pass
15409.86	28.83	6.88	9.97	45.68	Average Max	H	137	69	54	-8.32	Pass
4962.385	38.82	3.23	0.3	42.35	Average Max	H	132	351	54	-11.65	Pass
1329.415	30.26	1.28	-6.55	24.98	Average Max	H	113	130	54	-29.02	Pass
1089.134	31.46	1.03	-7	25.49	Average Max	V	186	236	54	-28.51	Pass

Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Cycle	Cal Due	In use
Conducted Emissions						
R & S Receiver	ESIB 40	100179	04/20/2013	1 Year	04/20/2014	☐
R&S LISN	ESH2-Z5	861741/013	05/18/2013	1 Year	05/18/2014	☐
CHASE LISN	MN2050B	1018	07/24/2013	1 Year	07/24/2014	☐
Sekonic Hygro Hermograph	ST-50	HE01-000092	05/25/2013	1 Year	05/25/2014	☐
Radiated Emissions						
R & S Receiver	ESL6	100178	03/01/2013	1 Year	03/01/2014	☒
R & S Receiver	ESIB 40	100179	04/20/2013	1 Year	04/20/2014	☒
ETS-Lingren Loop Antenna	6512	00049120	05/13/2013	1 Year	05/13/2014	☐
Bi-Log antenna (30MHz~2GHz)	JB1	A030702	07/03/2013	1 Year	07/03/2014	☒
Horn Antenna (1-26.5GHz)	3115	10SL0059	04/26/2013	1 Year	04/26/2014	☒
Horn Antenna (18-40 GHz)	AH-840	101013	04/23/2013	1 Year	04/23/2014	☒
Pre-Amplifier (1-26.5GHz)	8449B	3008A00715	05/30/2013	1 Year	05/30/2014	☒
Microwave Preamplifier (18-40 GHz)	PA-840	181251	05/30/2013	1 Year	05/30/2014	☒
3 Meters SAC	3M	N/A	10/13/2013	1 Year	10/13/2014	☒
10 Meters SAC	10M	N/A	06/05/2013	1 Year	06/05/2014	☒
Sekonic Hygro Hermograph	ST-50	HE01-000092	05/25/2013	1 Year	05/25/2014	☒
RF Conducted Measurement						
Spectrum Analyzer	N9010A	MY50210206	05/30/2013	1 Year	05/30/2014	☐
Spectrum Analyzer	E4407B	US88441016	05/31/2013	1 Year	05/31/2014	☐
R & S Receiver	ESIB 40	100179	04/20/2013	1 Year	04/20/2014	☐

Annex B. USER MANUAL, BLOCK & CIRCUIT DIAGRAM

Please see attachment

Annex C. 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
HongKong 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		Radio : A1. Terminal equipment for purpose of calling Telecom : B1. Specified radio equipment specified in Article 38-2, Paragraph 1, Item 1 of the Radio Law
Korea CAB Accreditation		EMI : KCC Notice 2008-39, RRL Notice 2008-3: CA Procedures for EMI KN22: Test Method for EMI 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 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 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
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		EMC : AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR22, AS/NZS 61000.6.3, AS/NZS 61000.6.4 Radiocommunications : 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 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
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

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