



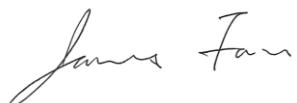
FCC Test Report

Equipment : 1X1 802.11b/g/n-BT4.0 Combo PCIe MoB Module
Brand Name : LITE-ON
Model No. : SS335
FCC ID : PPQ-SS335
Standard : 47 CFR FCC Part 15.247
Operating Band : 2400 MHz – 2483.5 MHz
FCC Classification : DTS
Applicant : Lite-On Technology Corp.
4F, 90, Chien 1 Road, Chung Ho, New Taipei City 23585,
Taiwan, R.O.C.

The product sample received on Jul. 24, 2014 and completely tested on Aug. 04, 2014. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2009 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:



James Fan / Assistant Manager





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Summary of Test Result

Conformance Test Specifications					
Report Clause	Ref. Std. Clause	Description	Measured	Limit	Result
1.1.2	15.203	Antenna Requirement	Antenna connector mechanism complied	FCC 15.203	Complied
3.1	15.207	AC Power-line Conducted Emissions	[dBuV]:0.155MHz 42.50 (Margin 13.24dB) - AV 50.35 (Margin 15.39dB) - QP	FCC 15.207	Complied
3.2	15.247(a)	6dB Bandwidth	LE:656.52 kHz	\geq 500kHz	Complied
3.3	15.247(b)	RF Output Power (Maximum Peak Conducted Output Power)	Power [dBm] LE:4.43	Power [dBm] LE:30	Complied
3.4	15.247(d)	Power Spectral Density	PSD [dBm/3kHz] LE: -5.83	PSD [dBm/3kHz]: 8	Complied
3.5	15.247(c)	Emissions in non-restricted frequency bands	Out-of -band emissions are 20dB below the highest power	Non-Restricted Bands: > 20 dBc Restricted Bands: FCC 15.209	Complied
3.6	15.247(c)	Transmitter Unwanted Emissions	Restricted Bands [dBuV/m at 3m]: 298.69MHz 44.89 (Margin 1.11dB) - QP	Non-Restricted Bands: > 20 dBc Restricted Bands: FCC 15.209	Complied



Revision History



1 General Description

1.1 Information

1.1.1 RF General Information

RF General Information				
Frequency Range (MHz)	Bluetooth Version	Ch. Frequency (MHz)	Channel Number	RF Output Power (dBm)
2400-2483.5	v4.0 LE	2402-2480	0-39 [40]	4.43
Note 1: Bluetooth LE (Low Energy) using GFSK modulation for DTS digital modulation.				
Note 2: RF output power specifies that Maximum Peak Conducted Output Power.				
Note 3: TX diversity function is not supported. Bluetooth signal is always transmitted through AUX path.				

1.1.2 Antenna Information

Antenna Category	
<input type="checkbox"/>	Integral antenna (antenna permanently attached)
<input type="checkbox"/>	<input type="checkbox"/> Temporary RF connector provided
<input type="checkbox"/>	<input type="checkbox"/> No temporary RF connector provided Transmit chains bypass antenna and soldered temporary RF connector provided for connected measurement. In case of conducted measurements the transmitter shall be connected to the measuring equipment via a suitable attenuator and correct for all losses in the RF path.
<input checked="" type="checkbox"/>	External antenna (dedicated antennas)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> RF connector provided
	<input checked="" type="checkbox"/> Unique antenna connector. (e.g., MMCX, U.FL, IPX, and RP-SMA, RP-N type...)
	<input type="checkbox"/> Standard antenna connector. (e.g., SMA, N, BNC, and TNC type...)

Antenna General Information					
No.	Model	Ant. Cat.	Ant. Type	Connector	Gain (dBi)
1	Aux	External	PIFA	U.FL	3.62

Note: an extended coax cable was supplied for this antenna with below info.:

- ◊ Cable loss: 1dB
- ◊ Connector type: U.FL



1.1.3 Type of EUT

Identify EUT	
EUT Serial Number	N/A
Presentation of Equipment	<input type="checkbox"/> Production ; <input checked="" type="checkbox"/> Pre-Production ; <input type="checkbox"/> Prototype
Type of EUT	
<input type="checkbox"/> Stand-alone	
<input type="checkbox"/> Combined (EUT where the radio part is fully integrated within another device) Combined Equipment - Brand Name / Model No.: ...	
<input checked="" type="checkbox"/> Plug-in radio (EUT intended for a variety of host systems)	
<input type="checkbox"/> Other:	

1.1.4 Test Signal Duty Cycle

Operated Mode for Worst Duty Cycle	
<input type="checkbox"/> Operated normally hopping mode for worst duty cycle	
<input checked="" type="checkbox"/> Operated test mode for worst duty cycle	
Test Signal Duty Cycle (x)	Power Duty Factor [dB] – (10 log 1/x)
<input checked="" type="checkbox"/> 71.76% - test mode single channel - LE	1.44

1.1.5 EUT Operational Condition

Power Supply Type	3.3Vdc from host.
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1.2 Accessories and Support Equipment

N/A



1.3 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15
- ANSI C63.10-2009
- FCC KDB 558074 v03r02
- FCC KDB 412172 v01

1.4 Testing Location Information

Testing Location				
	Sporton Lab	ADD : No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.	TEL : 886-3-327-3456	FAX : 886-3-327-0973
	ICC Lab	ADD : No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Hsiang, Tao Yuan Hsein 333, Taiwan (R.O.C.)	TEL : 886-3-271-8666	FAX : 886-3-318-0155
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-HY	Mark Liao	22°C / 62%	Aug. 04, 2014
AC Conduction*	CO01-WS	Peter Lin	22°C / 57%	Aug. 01, 2014
Radiated Emission*	03CH01-WS	Haru Yang Anderson Hong	23°C / 68%	Jul. 31, 2014

Note: * Sporton Lab subcontracts this test item to ICC lab (TAF:2732).

ICC lab is a TAF accreditation test firm and also is an approved provider of Sporton Lab.

➤ FCC site registration No.: 657002

➤ IC site registration No.: 10807A-1



1.5 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Measurement Uncertainty		
Test Item	Uncertainty	Limit
AC power-line conducted emissions	±2.26 dB	N/A
Emission bandwidth, 6dB bandwidth	±1.42 %	N/A
RF output power, conducted	±0.63 dB	N/A
Power density, conducted	±0.81 dB	N/A
All emissions, radiated	30 – 1000 MHz	±3.90 dB
	1 – 25 GHz	±4.20 dB
Temperature	±0.8 °C	N/A
Humidity	±3 %	N/A
DC and low frequency voltages	±3 %	N/A
Time	±1.42 %	N/A
Duty Cycle	±1.42 %	N/A



2 Test Configuration of EUT

2.1 The Worst Case Modulation Configuration

Worst Modulation Used for Conformance Testing			
Bluetooth Version	Transmit Chains (N_{TX})	Data Rate	Modulation Mode
v4.0 LE	1	1 Mbps	LE-1Mbps

2.2 The Worst Case Power Setting Parameter

The Worst Case Power Setting Parameter			
Test Software Version	BtUSB_V18.12.8		
Modulation Mode	2402 MHz	2440 MHz	2480 MHz
LE,1Mbps	Default	Default	Default



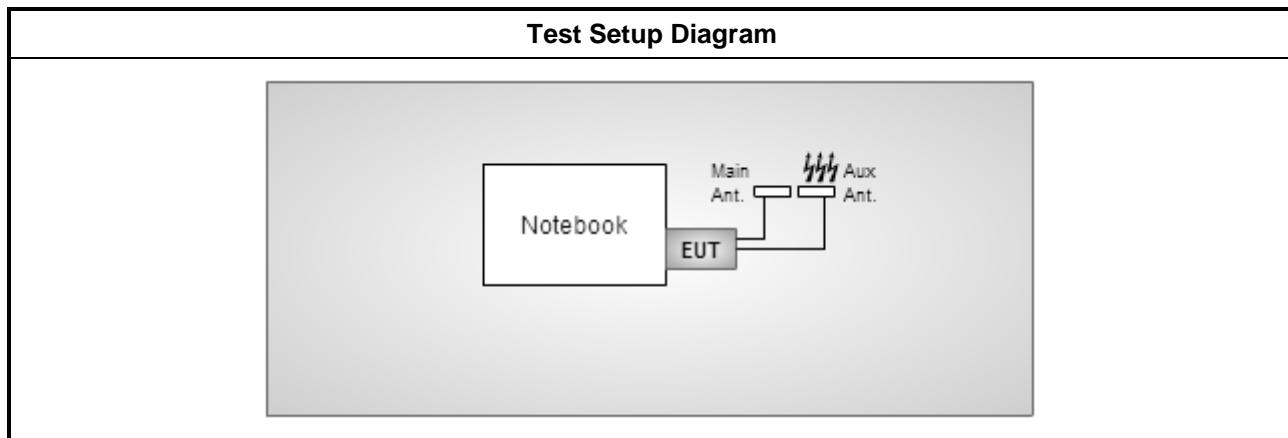
2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	Operating Mode Description
1	Radio link (BT)

The Worst Case Mode for Following Conformance Tests	
Tests Item	RF Output Power, Power Spectral Density, 6 dB Bandwidth
Test Condition	Conducted measurement at transmit chains
Modulation Mode	LE-1Mbps

The Worst Case Mode for Following Conformance Tests	
Tests Item	Transmitter Radiated Unwanted Emissions Transmitter Radiated Bandedge Emissions
Test Condition	Radiated measurement
Operating Mode	<input checked="" type="checkbox"/> 1. Radio link (BT)
Modulation Mode	LE-1Mbps

2.4 Test Setup Diagram



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

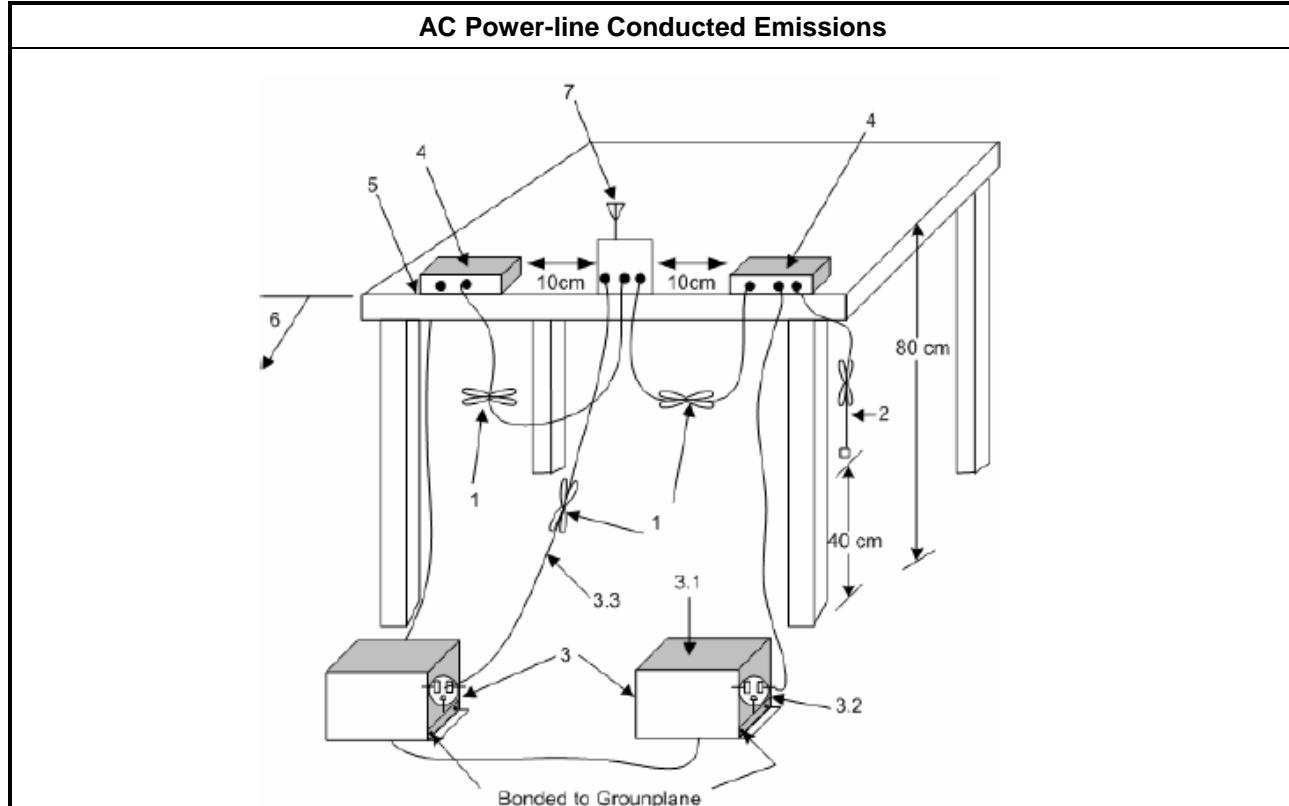
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

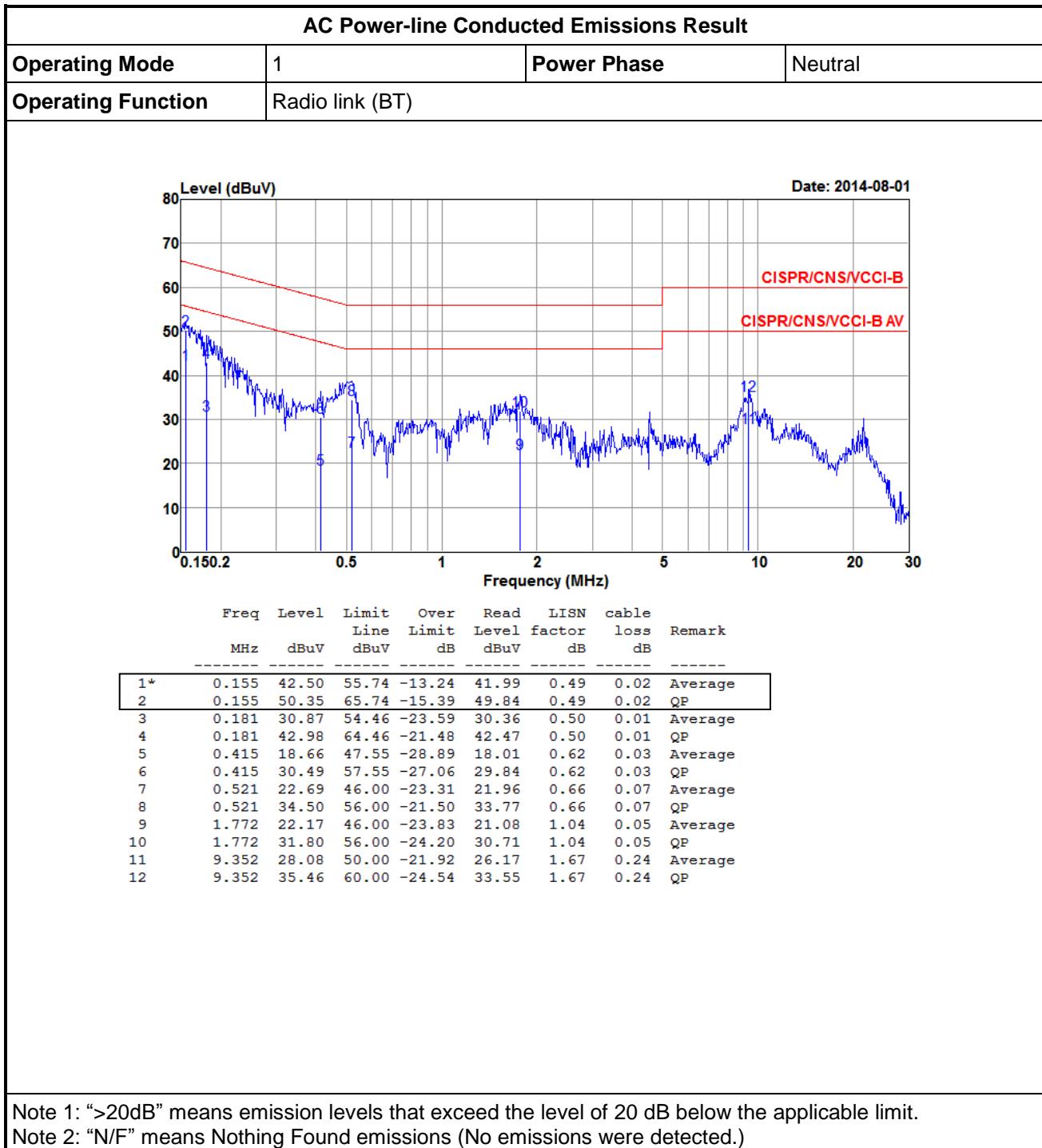
Test Method
<input checked="" type="checkbox"/> Refer as ANSI C63.10-2009, clause 6.2 for AC power-line conducted emissions.

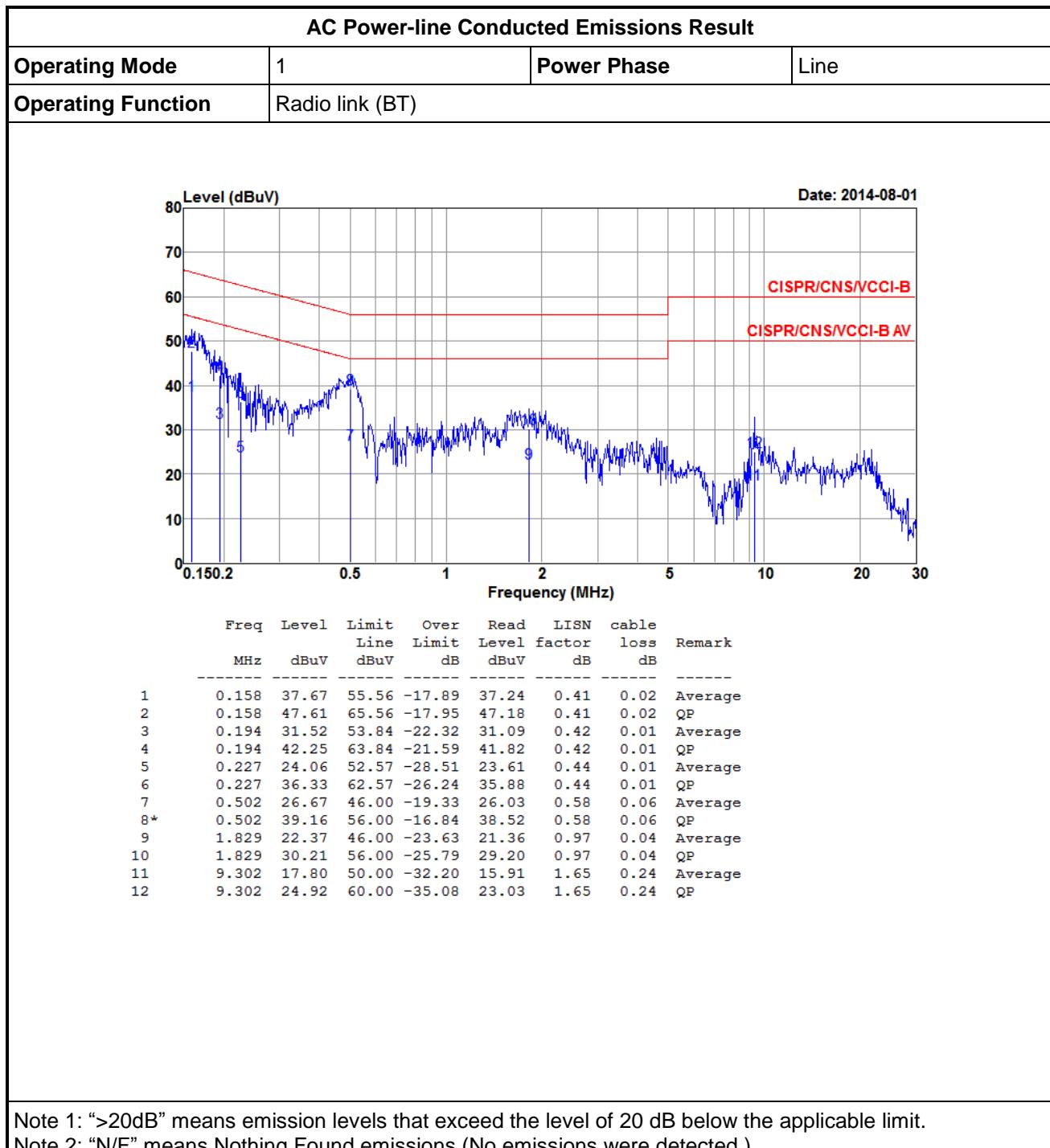
3.1.4 Test Setup





3.1.5 Test Result of AC Power-line Conducted Emissions





3.2 6dB Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
<input checked="" type="checkbox"/> 6 dB bandwidth \geq 500 kHz.

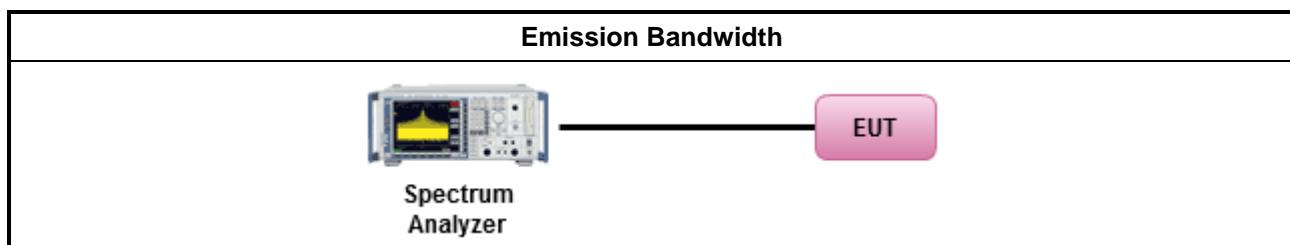
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> For the emission bandwidth shall be measured using one of the options below:
<input checked="" type="checkbox"/> Refer as FCC KDB 558074 v03r02, clause 8.1 Option 1 for 6 dB bandwidth measurement.
<input type="checkbox"/> Refer as FCC KDB 558074 v03r02, clause 8.2 Option 2 for 6 dB bandwidth measurement.
<input type="checkbox"/> Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
<input checked="" type="checkbox"/> For conducted measurement.
<input checked="" type="checkbox"/> The EUT supports single transmit chain and measurements performed on this transmit chain.
<input type="checkbox"/> The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.

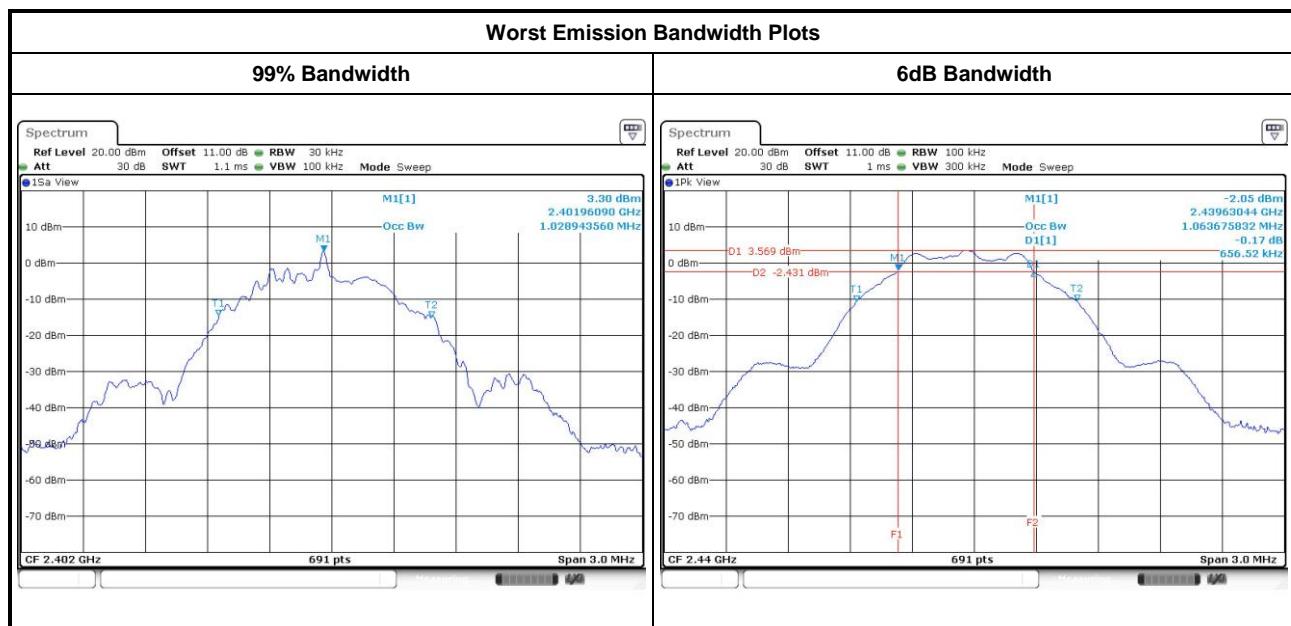
3.2.4 Test Setup





3.2.5 Test Result of Emission Bandwidth

Emission Bandwidth Result			
Modulation Mode	Freq. (MHz)	99% Bandwidth (kHz)	6dB Bandwidth (kHz)
LE-1Mbps	2402	1.0289	660.8700
LE-1Mbps	2440	1.0289	656.5200
LE-1Mbps	2480	1.0289	660.8700
Limit		N/A	≥ 500 kHz
Result		Complied	





3.3 RF Output Power

3.3.1 RF Output Power Limit

RF Output Power Limit for Digital Modulation Systems	
Maximum Peak Conducted Output Power or Maximum Conducted Output Power Limit	
<input checked="" type="checkbox"/> 2400-2483.5 MHz Band:	
	<input checked="" type="checkbox"/> If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	<input type="checkbox"/> Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
e.i.r.p. Power Limit:	
<input checked="" type="checkbox"/> 2400-2483.5 MHz Band	
	<input checked="" type="checkbox"/> Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi. P_{eirp} = e.i.r.p. Power in dBm.	

RF Output Power Limit for Digital Modulation Systems - IC	
Maximum Peak Conducted Output Power or Maximum Conducted Output Power Limit and e.i.r.p.	
<input checked="" type="checkbox"/> 2400-2483.5 MHz Band:	
	<input checked="" type="checkbox"/> Point-to-multipoint systems (P2M): $P_{Out} \leq 30$ dBm (1 W); $P_{eirp} \leq 36$ dBm (4 W)
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi. P_{eirp} = e.i.r.p. Power in dBm.	

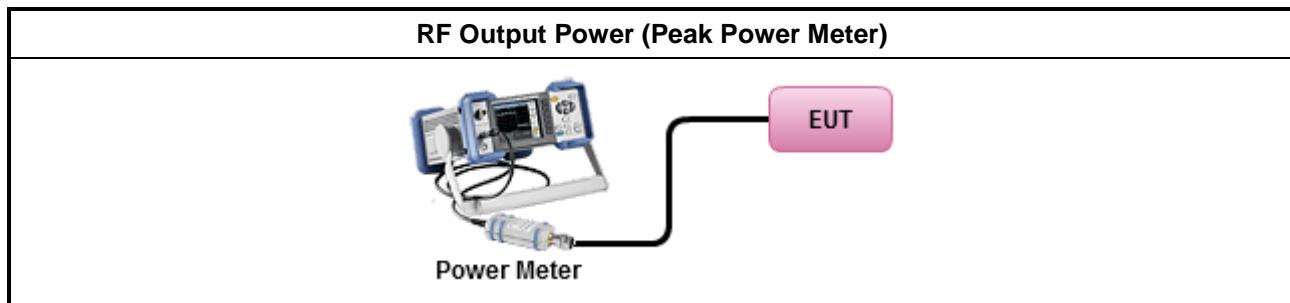
3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method	
<input checked="" type="checkbox"/> Maximum Peak Conducted Output Power	
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.10.2.1 a) for peak power meter.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.10.2.1 a) for spectrum analyzer - (RBW \geq EBW).
<input checked="" type="checkbox"/> For conducted measurement.	
<input checked="" type="checkbox"/>	The EUT supports single transmit chain and measurements performed on this transmit chain.
<input type="checkbox"/>	The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.

3.3.4 Test Setup



3.3.5 Test Result of Maximum Peak Conducted Output Power

Maximum Peak Conducted Output Power Result						
Condition		RF Output Power (dBm)				
Modulation Mode	Freq. (MHz)	RF Output Power	Power Limit	Antenna Gain (dBi)	EIRP Power	EIRP Limit
LE-1Mbps	2402	4.19	30	3.62	7.81	36
LE-1Mbps	2440	4.31	30	3.62	7.93	36
LE-1Mbps	2480	4.43	30	3.62	8.05	36
Result		Complied				

Maximum Average Conducted Output Power Result						
Condition		RF Output Power (dBm)				
Modulation Mode	Freq. (MHz)	RF Output Power	Power Limit	Antenna Gain (dBi)	EIRP Power	EIRP Limit
LE-1Mbps	2402	4.13	30	3.62	7.75	36
LE-1Mbps	2440	4.24	30	3.62	7.86	36
LE-1Mbps	2480	4.35	30	3.62	7.97	36
Result		Complied				

Note: Average power is for reference only.



3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
<input checked="" type="checkbox"/> Power Spectral Density (PSD) \leq 8 dBm/3kHz

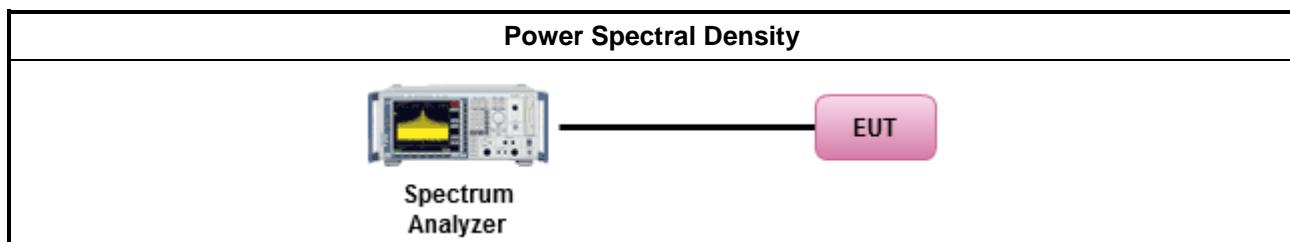
3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).
<input checked="" type="checkbox"/> Refer as FCC KDB 558074 v03r02, clause 10.2 Method PKPSD (RBW=3-100kHz;detector=peak).. [duty cycle \geq 98% or external video / power trigger]
<input type="checkbox"/> Refer as FCC KDB 558074 v03r02, clause 10.3 Method AVGPSD-1 (spectral trace averaging).
<input type="checkbox"/> Refer as FCC KDB 558074 v03r02, clause 10.4 Method AVGPSD-1 Alt. (slow sweep speed) duty cycle $<$ 98% and average over on/off periods with duty factor
<input type="checkbox"/> Refer as FCC KDB 558074 v03r02, clause 10.5 Method AVGPSD-2 (spectral trace averaging).
<input type="checkbox"/> Refer as FCC KDB 558074 v03r02, clause 10.6 Method AVGPSD-2 Alt. (slow sweep speed)
<input checked="" type="checkbox"/> For conducted measurement.
<input checked="" type="checkbox"/> The EUT supports single transmit chain and measurements performed on this transmit chain.
<input type="checkbox"/> The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.

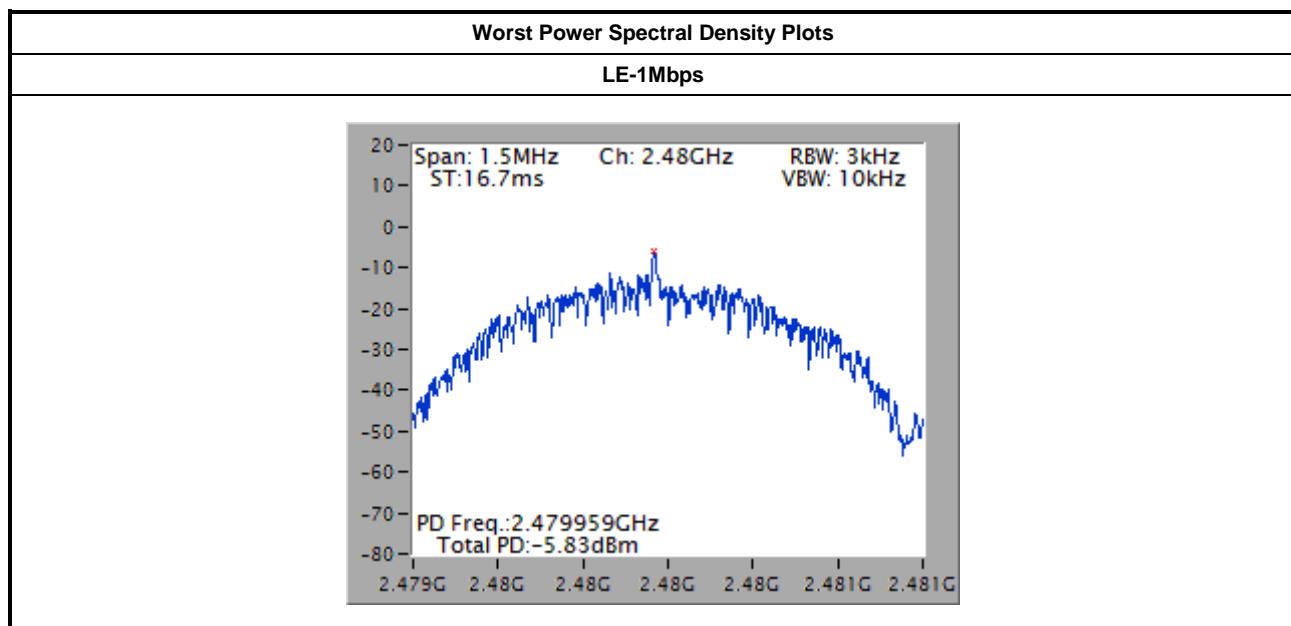
3.4.4 Test Setup





3.4.5 Test Result of Power Spectral Density

Power Spectral Density Result (dBm/3kHz)			
Modulation Mode	Freq. (MHz)	PSD	PSD Limit
LE-1Mbps	2402	-6.41	8
LE-1Mbps	2440	-6.18	8
LE-1Mbps	2480	-5.83	8
Result		Complied	



3.5 Emissions in non-restricted frequency bands

3.5.1 Emissions in non-restricted frequency bands limit

Peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz

3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

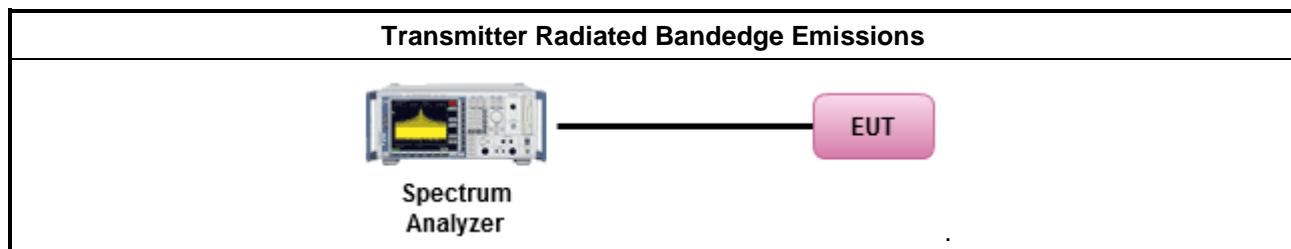
Reference level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Use the peak marker function to determine the maximum PSD level

Emission level measurement

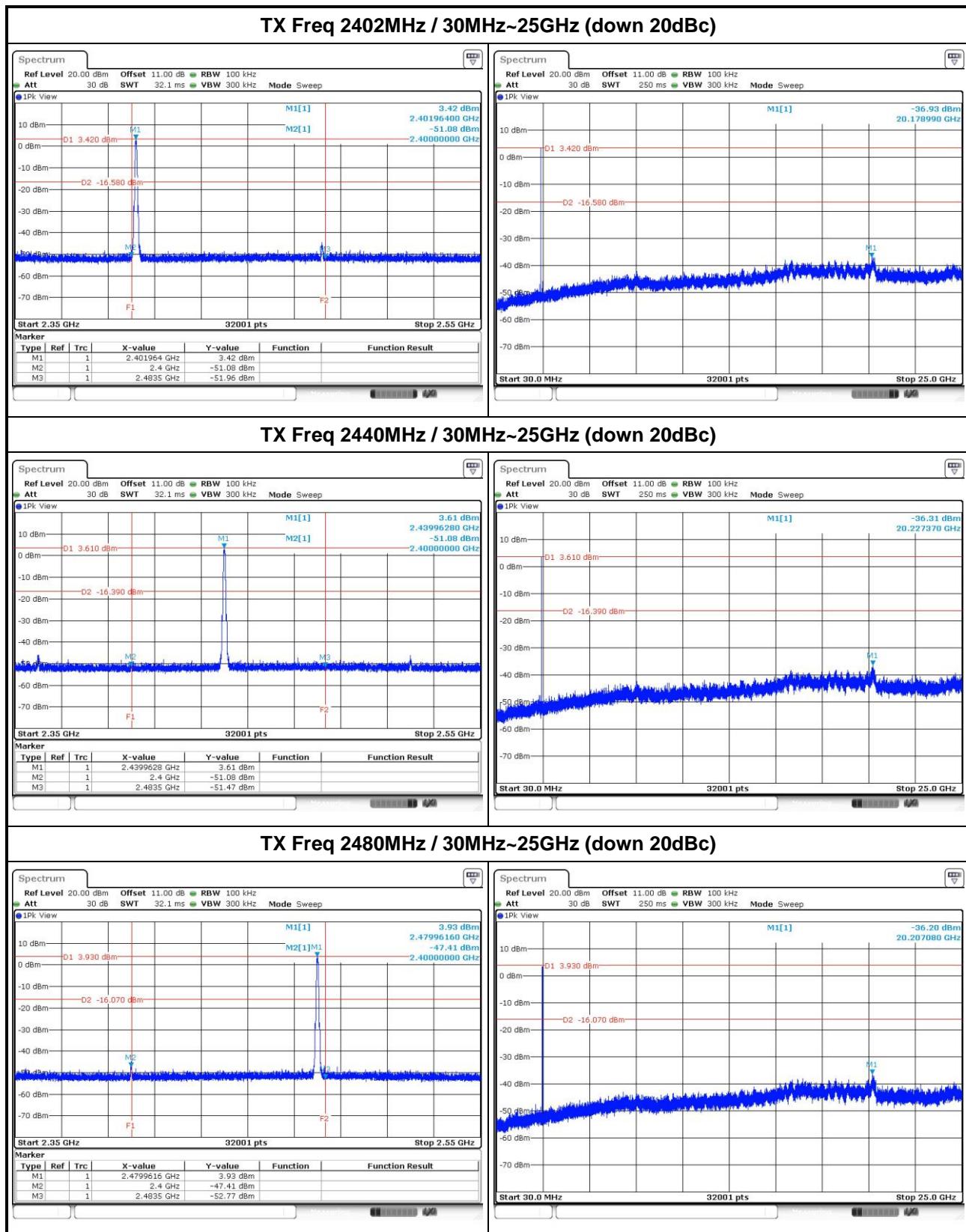
1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Scan Frequency range is up to 25GHz
4. Use the peak marker function to determine the maximum amplitude level

3.5.4 Test Setup





3.5.5 Test Result of Emissions in non-restricted frequency bands





3.6 Transmitter Radiated Unwanted Emissions

3.6.1 Transmitter Radiated Unwanted Emissions Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dB)
Peak output power procedure	20
Average output power procedure	30

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

3.6.2 Measuring Instruments

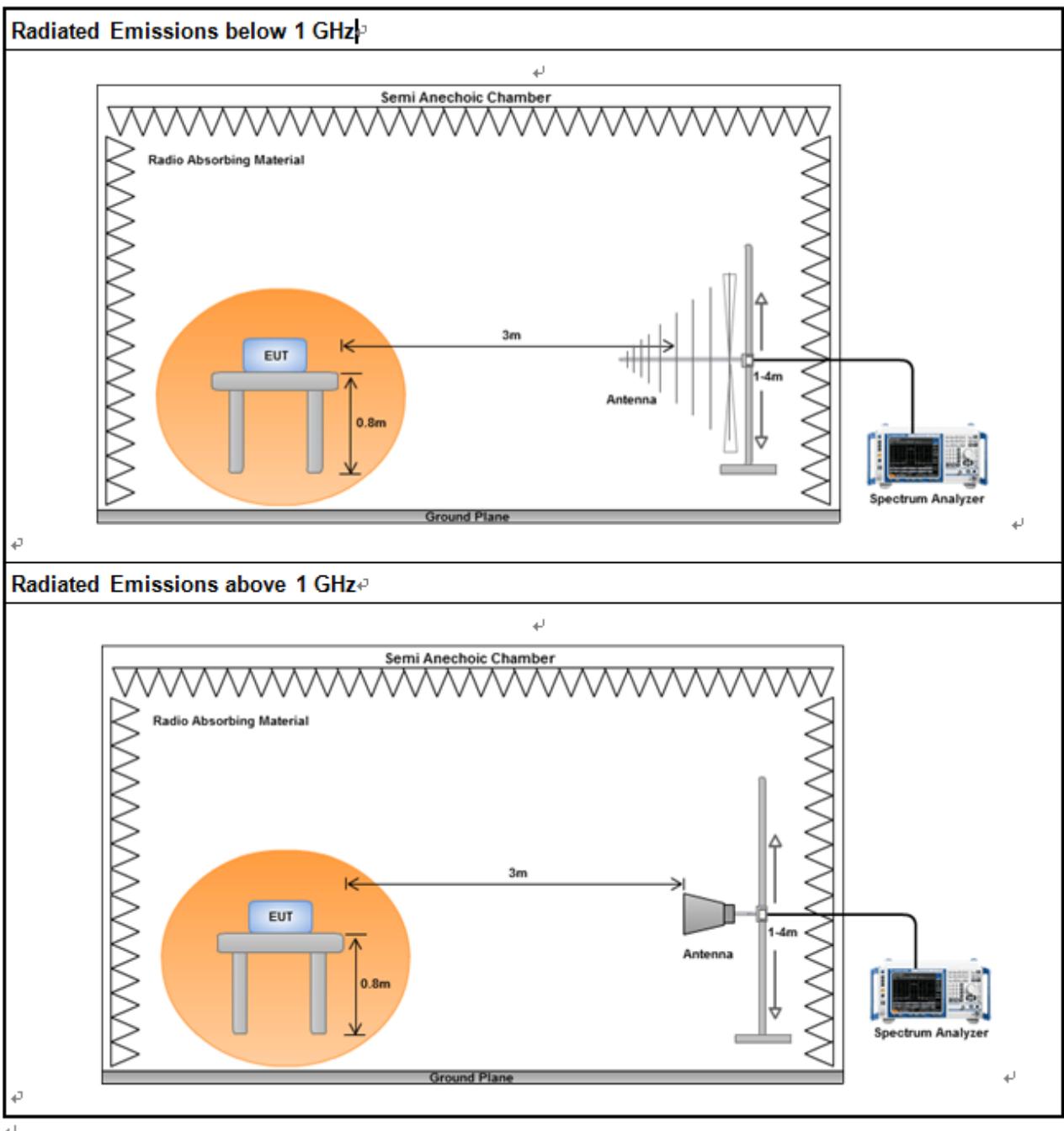
Refer a test equipment and calibration data table in this test report.



3.6.3 Test Procedures

Test Method	
<input checked="" type="checkbox"/>	Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).
<input checked="" type="checkbox"/>	For the transmitter unwanted emissions shall be measured using following options below:
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074 v03r02, clause 11 for unwanted emissions into non-restricted bands.
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074 v03r02, clause 12 for unwanted emissions into restricted bands.
	<input type="checkbox"/> Refer as FCC KDB 558074 v03r02, clause 12.2.5.1 Option 1 (trace averaging for duty cycle $\geq 98\%$)
	<input type="checkbox"/> Refer as FCC KDB 558074 v03r02, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074 v03r02, clause 12.2.5.3 Option 3 (Reduced $VBW \geq 1/T$).
	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). $VBW \geq 1/T$, where T is pulse time
	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074 v03r02, clause 11.3 and 12.2.4 measurement procedure peak limit.
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074 v03r02, clause 12.2.3 measurement procedure Quasi-Peak limit.
<input checked="" type="checkbox"/>	For radiated measurement, refer as FCC KDB 558074 v03r02, clause 12.2.7.
	<input checked="" type="checkbox"/> Refer as ANSI C63.10, clause 6.4 for radiated emissions from below 30 MHz.
	<input checked="" type="checkbox"/> Refer as ANSI C63.10, clause 6.5 for radiated emissions from 30 MHz to 1000 MHz.
	<input checked="" type="checkbox"/> Refer as ANSI C63.10, clause 6.6 for radiated emissions from above 1 GHz.
<input type="checkbox"/>	For conducted and cabinet radiation measurement, refer as FCC KDB 558074 v03r02, clause 12.2.2.
	<input type="checkbox"/> For conducted unwanted emissions into non-restricted bands (relative emission limits). Devices with multiple transmit chains: Refer as FCC KDB 662911, when testing out-of-band and spurious emissions against relative emission limits, tests may be performed on each output individually without summing or adding $10 \log(N)$ if the measurements are made relative to the in-band emissions on the individual outputs.
	<input type="checkbox"/> For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add $10 \log(N)$ dB

3.6.4 Test Setup

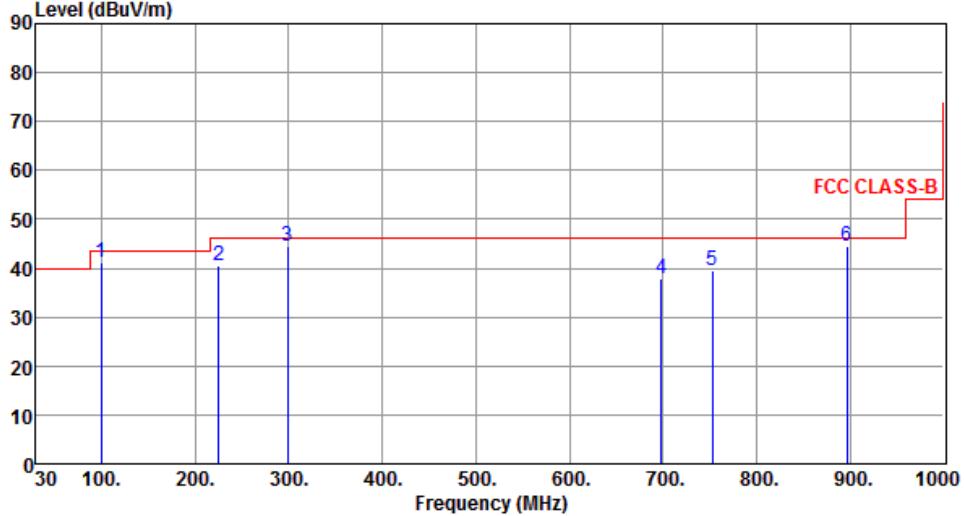


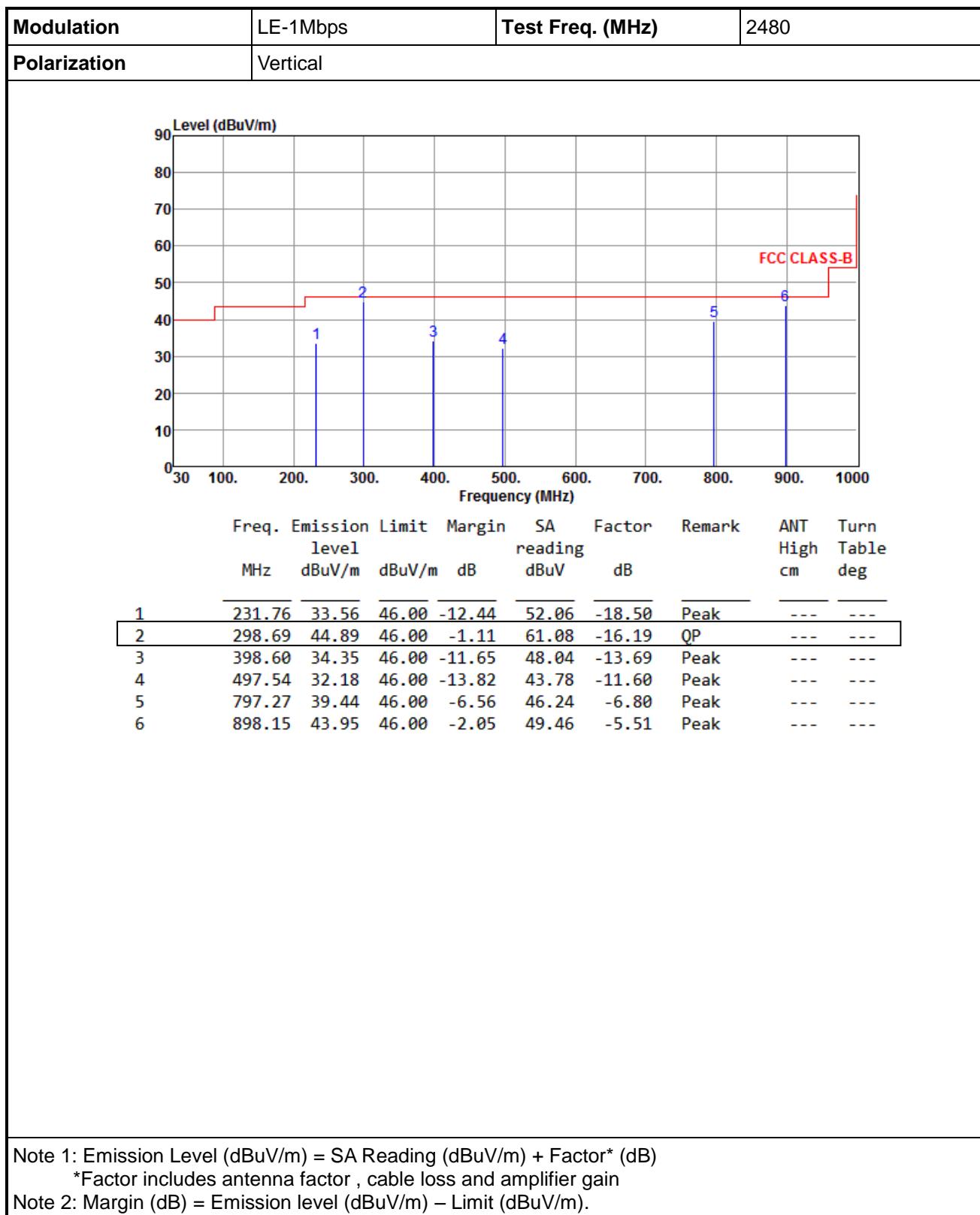
3.6.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.



3.6.6 Transmitter Radiated Unwanted Emissions (Below 1GHz)

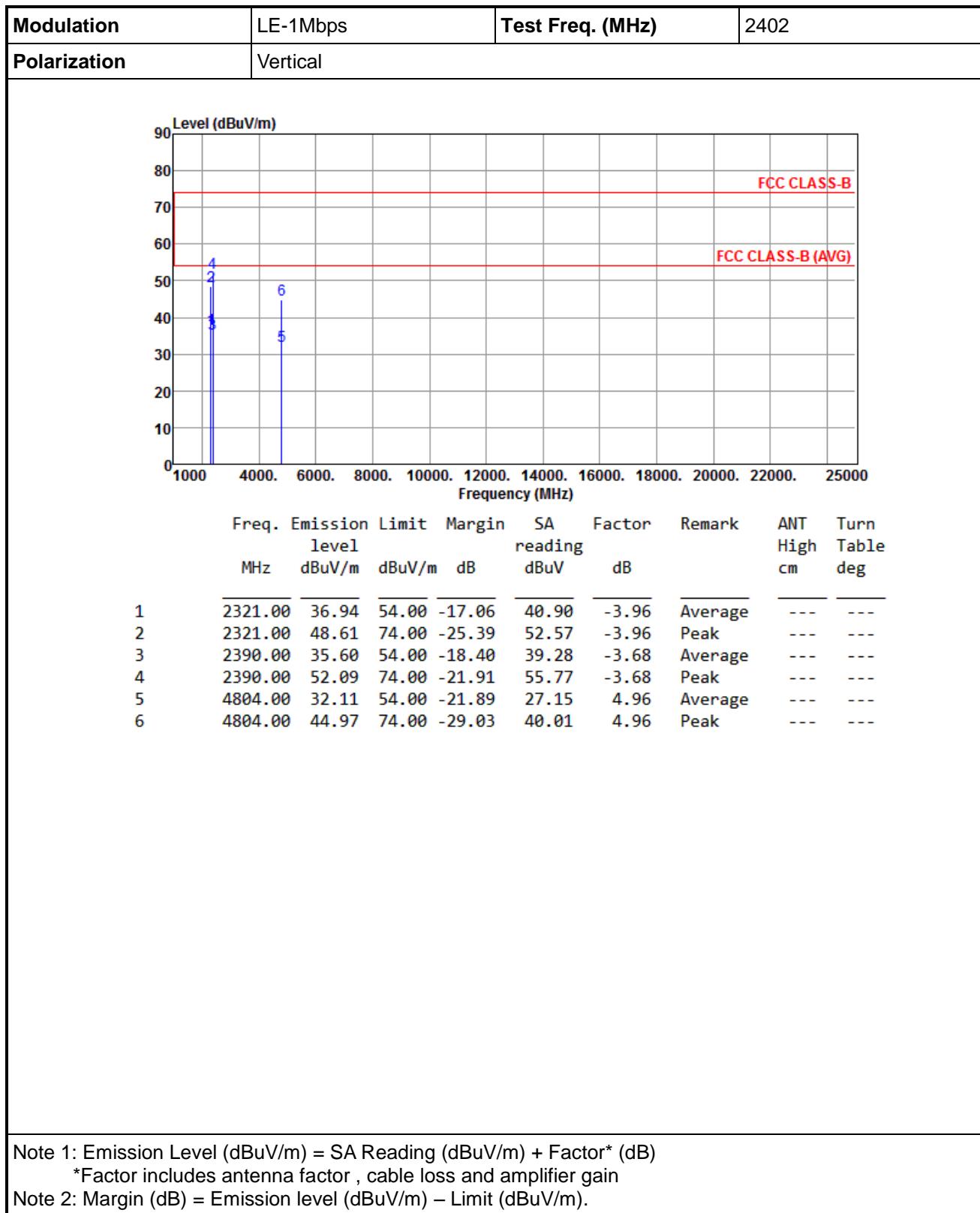
Modulation	LE-1Mbps	Test Freq. (MHz)	2480																																																																																	
Polarization	Horizontal																																																																																			
																																																																																				
<table><thead><tr><th></th><th>Freq.</th><th>Emission Limit</th><th>Margin</th><th>SA</th><th>Factor</th><th>Remark</th><th>ANT</th><th>Turn</th></tr><tr><th></th><th>level</th><th>level</th><th></th><th>reading</th><th></th><th></th><th>High</th><th>Table</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB</th><th>cm</th><th>deg</th></tr></thead><tbody><tr><td>1</td><td>99.84</td><td>41.04</td><td>43.50</td><td>-2.46</td><td>62.89</td><td>-21.85</td><td>Peak</td><td>---</td></tr><tr><td>2</td><td>224.97</td><td>40.51</td><td>46.00</td><td>-5.49</td><td>59.36</td><td>-18.85</td><td>Peak</td><td>---</td></tr><tr><td>3</td><td>298.69</td><td>44.41</td><td>46.00</td><td>-1.59</td><td>60.60</td><td>-16.19</td><td>Peak</td><td>---</td></tr><tr><td>4</td><td>698.33</td><td>37.94</td><td>46.00</td><td>-8.06</td><td>46.20</td><td>-8.26</td><td>Peak</td><td>---</td></tr><tr><td>5</td><td>752.65</td><td>39.61</td><td>46.00</td><td>-6.39</td><td>46.83</td><td>-7.22</td><td>Peak</td><td>---</td></tr><tr><td>6</td><td>896.20</td><td>44.43</td><td>46.00</td><td>-1.57</td><td>49.98</td><td>-5.55</td><td>QP</td><td>---</td></tr></tbody></table>					Freq.	Emission Limit	Margin	SA	Factor	Remark	ANT	Turn		level	level		reading			High	Table		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	cm	deg	1	99.84	41.04	43.50	-2.46	62.89	-21.85	Peak	---	2	224.97	40.51	46.00	-5.49	59.36	-18.85	Peak	---	3	298.69	44.41	46.00	-1.59	60.60	-16.19	Peak	---	4	698.33	37.94	46.00	-8.06	46.20	-8.26	Peak	---	5	752.65	39.61	46.00	-6.39	46.83	-7.22	Peak	---	6	896.20	44.43	46.00	-1.57	49.98	-5.55	QP	---
	Freq.	Emission Limit	Margin	SA	Factor	Remark	ANT	Turn																																																																												
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<p>Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).</p>																																																																																				

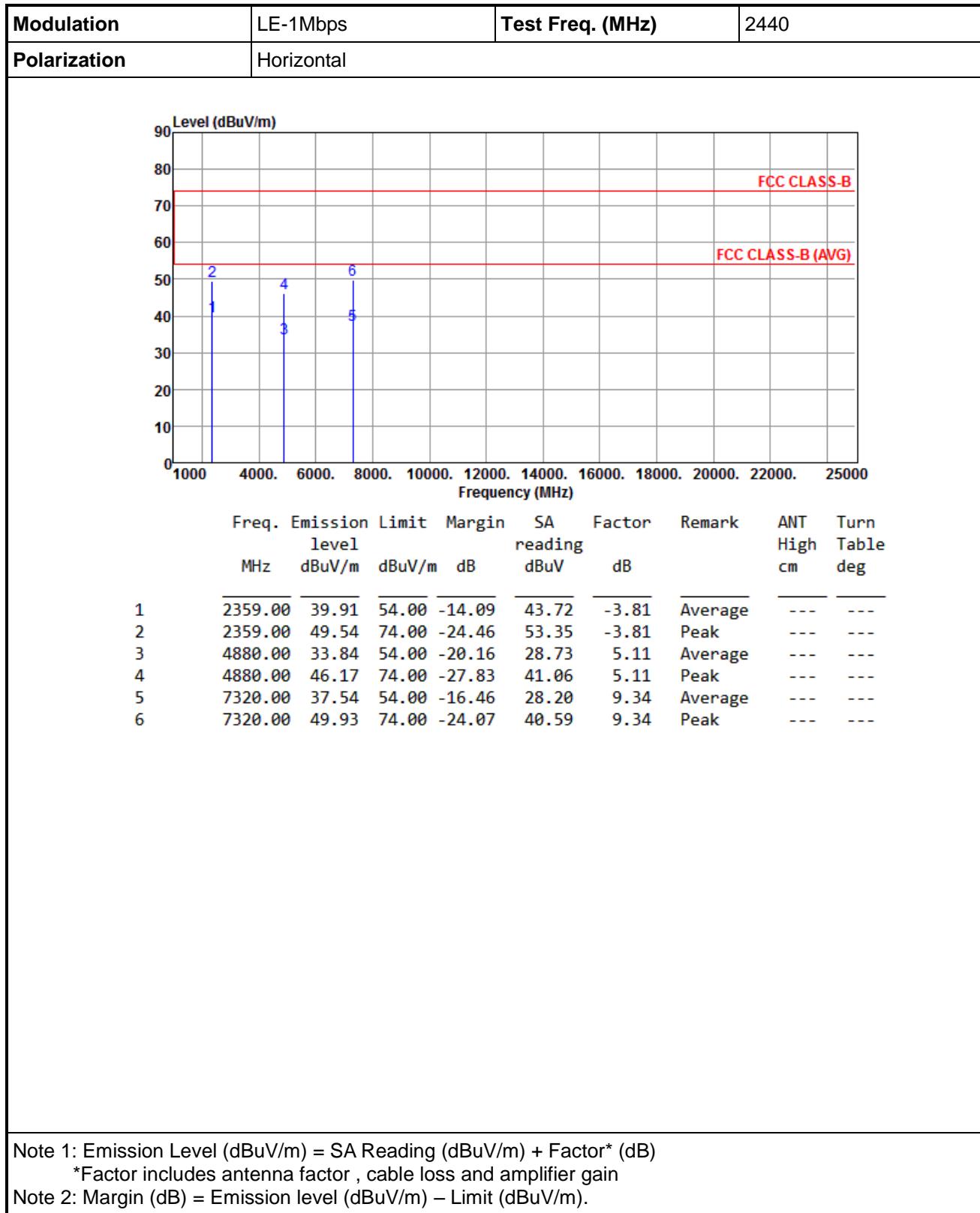


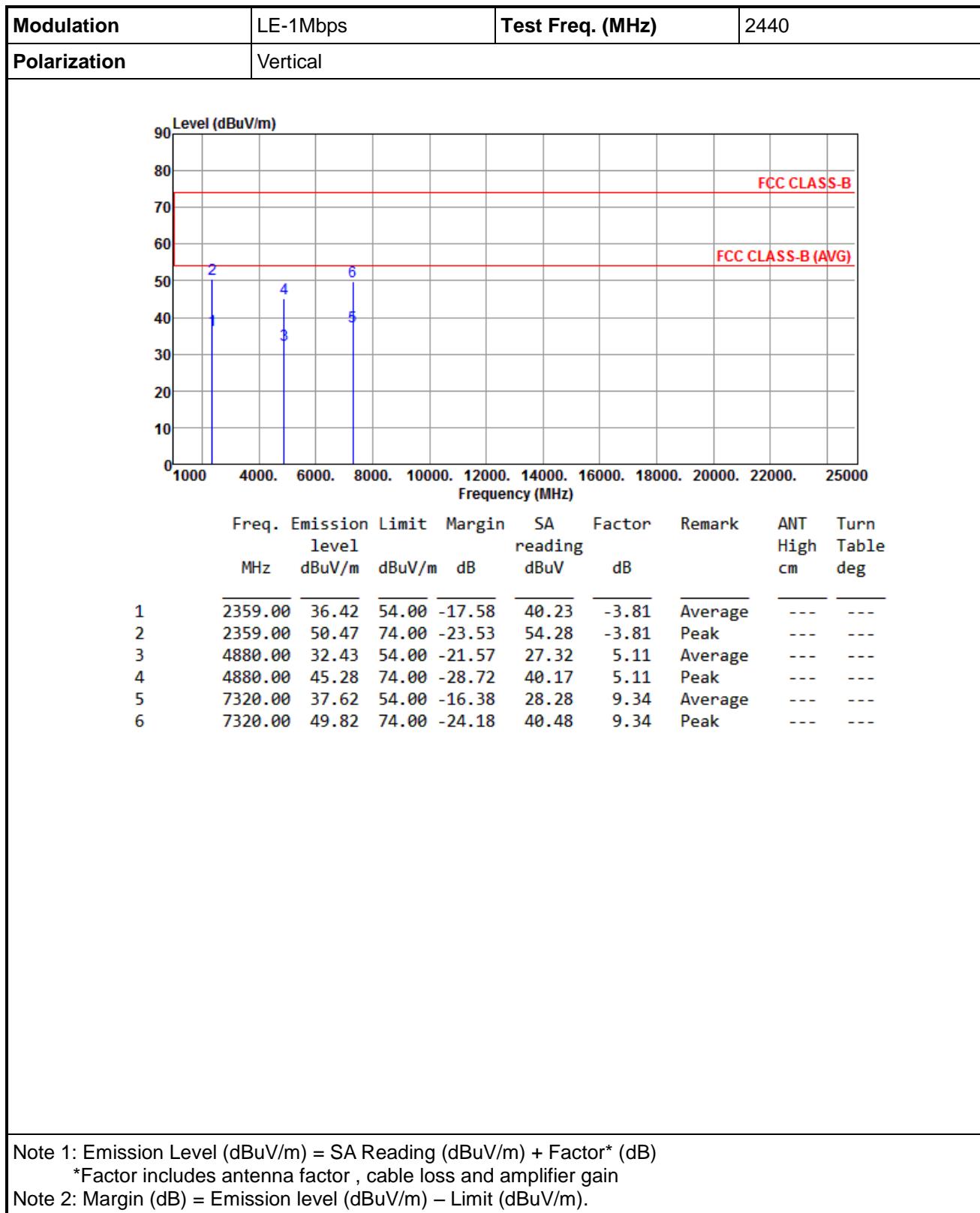


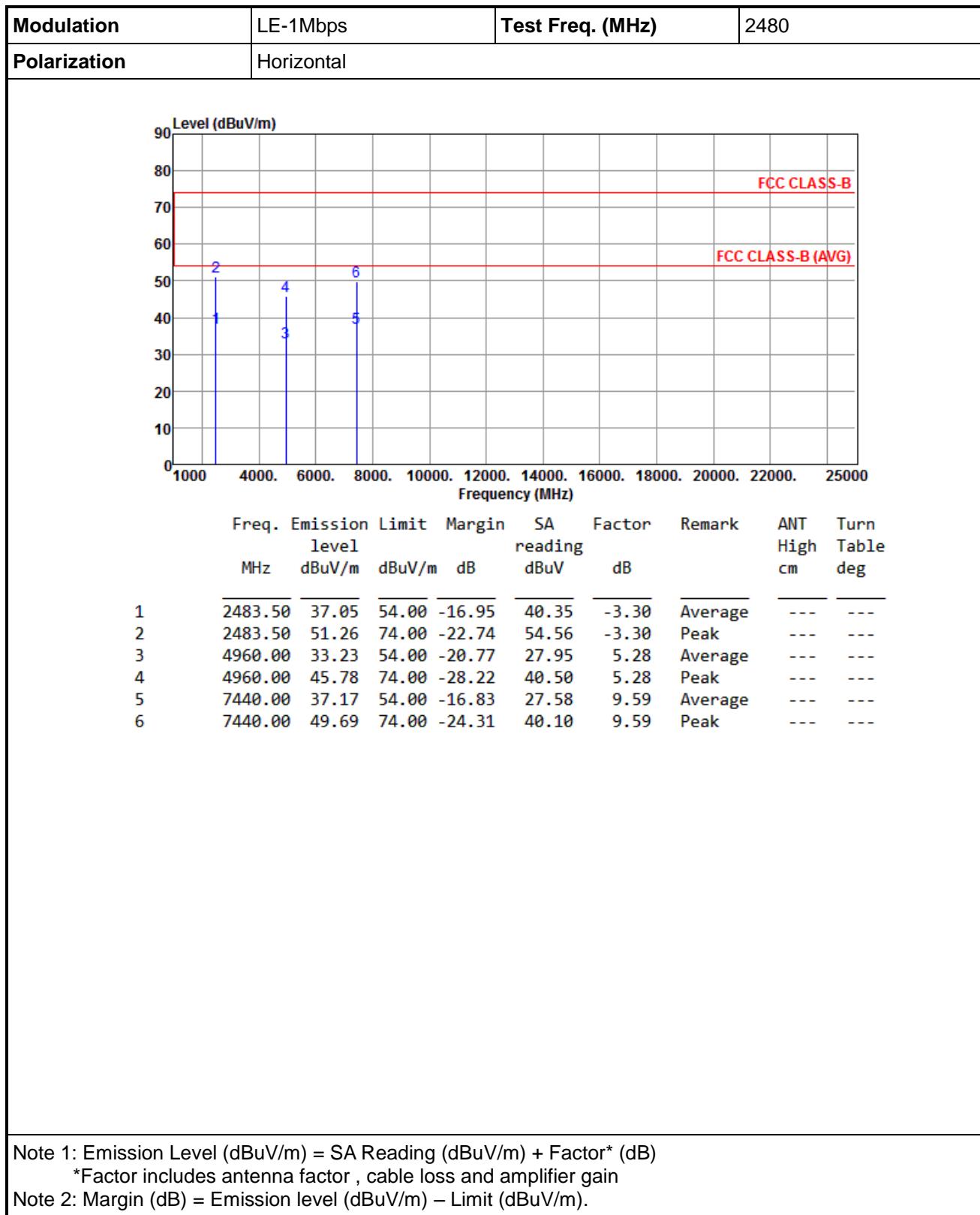
3.6.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for GFSK

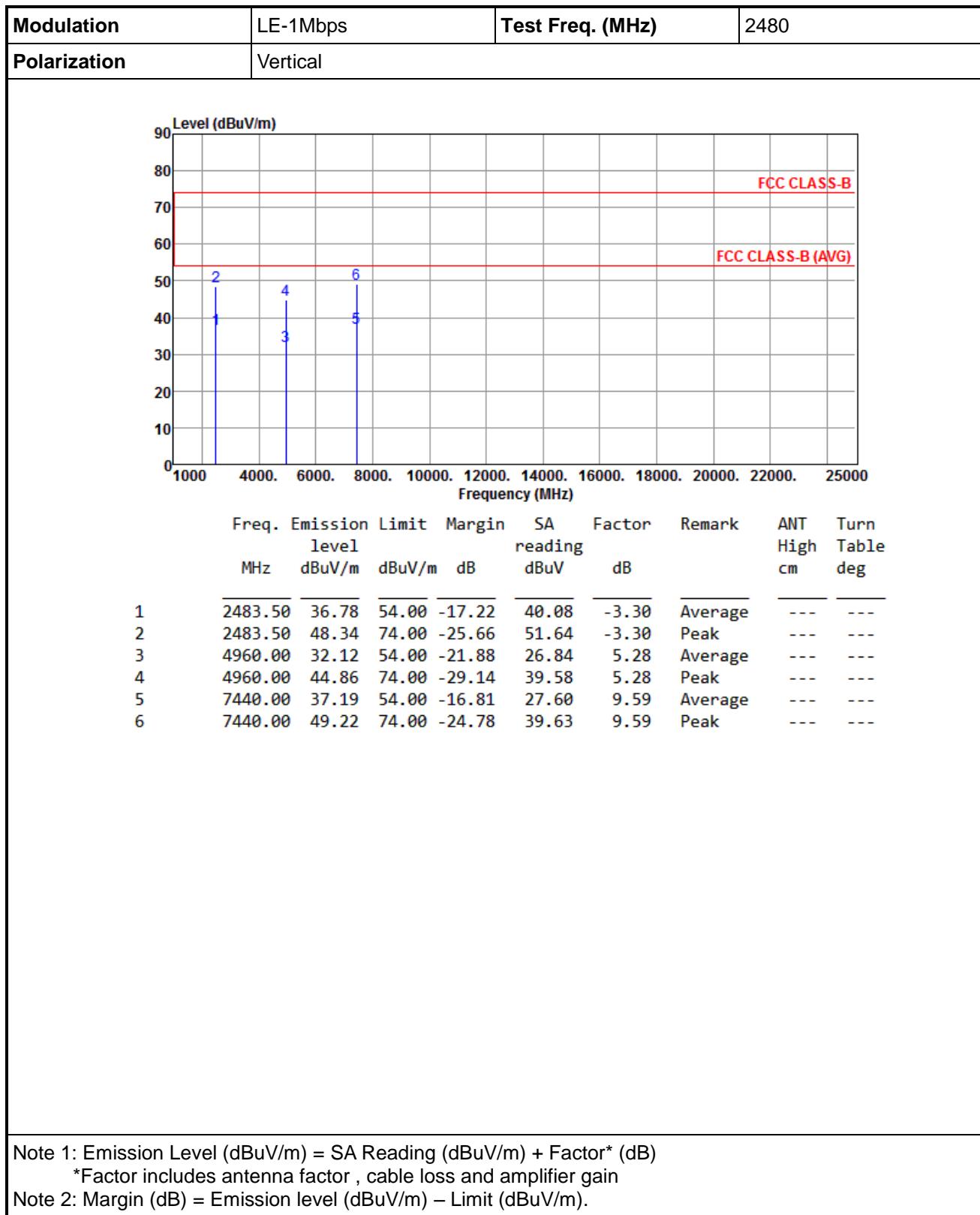
Modulation	LE-1Mbps	Test Freq. (MHz)	2402																																																															
Polarization	Horizontal																																																																	
<table><thead><tr><th>Freq.</th><th>Emission level MHz</th><th>Limit dBuV/m</th><th>Margin dB</th><th>SA reading dBuV</th><th>Factor dB</th><th>Remark</th><th>ANT High cm</th><th>Turn Table deg</th></tr></thead><tbody><tr><td>1</td><td>2321.00</td><td>41.54</td><td>54.00</td><td>-12.46</td><td>45.50</td><td>-3.96</td><td>Average</td><td>---</td></tr><tr><td>2</td><td>2321.00</td><td>50.65</td><td>74.00</td><td>-23.35</td><td>54.61</td><td>-3.96</td><td>Peak</td><td>---</td></tr><tr><td>3</td><td>2390.00</td><td>35.61</td><td>54.00</td><td>-18.39</td><td>39.29</td><td>-3.68</td><td>Average</td><td>---</td></tr><tr><td>4</td><td>2390.00</td><td>48.21</td><td>74.00</td><td>-25.79</td><td>51.89</td><td>-3.68</td><td>Peak</td><td>---</td></tr><tr><td>5</td><td>4804.00</td><td>33.52</td><td>54.00</td><td>-20.48</td><td>28.56</td><td>4.96</td><td>Average</td><td>---</td></tr><tr><td>6</td><td>4804.00</td><td>45.88</td><td>74.00</td><td>-28.12</td><td>40.92</td><td>4.96</td><td>Peak</td><td>---</td></tr></tbody></table>				Freq.	Emission level MHz	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg	1	2321.00	41.54	54.00	-12.46	45.50	-3.96	Average	---	2	2321.00	50.65	74.00	-23.35	54.61	-3.96	Peak	---	3	2390.00	35.61	54.00	-18.39	39.29	-3.68	Average	---	4	2390.00	48.21	74.00	-25.79	51.89	-3.68	Peak	---	5	4804.00	33.52	54.00	-20.48	28.56	4.96	Average	---	6	4804.00	45.88	74.00	-28.12	40.92	4.96	Peak	---
Freq.	Emission level MHz	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg																																																										
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4 Test Equipment and Calibration Data

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
EMC Receiver	R&S	ESCS 30	100169	Oct. 15, 2013	Oct. 14, 2014
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 23, 2013	Nov. 22, 2014
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127-666	Dec. 04, 2013	Dec. 03, 2014
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Apr. 23, 2014	Apr. 22, 2015
50 ohm terminal (Support Unit)	NA	50	04	Apr. 18, 2014	Apr. 17, 2015

Note: Calibration Interval of instruments listed above is one year.

Test Item	RF Conducted				
Test Site	(TH01-HY)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV 40	101013	Jan. 25, 2014	Jan. 24, 2015
Power Sensor	Anritsu	MA2411B	0917017	Jan. 28, 2014	Jan. 27, 2015
Power Meter	Anritsu	ML2495A	0949003	Jan. 28, 2014	Jan. 27, 2015
RF Cable-2m	HUBER+SUHNER	SUCOFLEX_104	SN 345675/4	Dec. 02, 2013	Dec. 01, 2014
DC Power Source	G.W.	GPC-6030D	C671845	Jul. 26, 2014	Jul. 25, 2015

Note: Calibration Interval of instruments listed above is one year.

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101498	Jan. 25, 2014	Jan. 24, 2015
Receiver	R&S	ESR3	101658	Jan. 10, 2014	Jan. 09, 2015
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jan. 02, 2014	Jan. 01, 2015
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Feb. 13, 2014	Feb. 12, 2015
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Dec. 27, 2013	Dec. 26, 2014
Preamplifier	Burgeon	BPA-530	SN:100219	Nov. 28, 2013	Nov. 27, 2014
Preamplifier	Agilent	83017A	MY39501308	Dec. 16, 2013	Dec. 15, 2014
Preamplifier	WM	TF-130N-R1	923365	Oct. 23, 2013	Oct. 22, 2014
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Dec. 16, 2013	Dec. 15, 2014
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Dec. 16, 2013	Dec. 15, 2014
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Dec. 16, 2013	Dec. 15, 2014
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Dec. 16, 2013	Dec. 15, 2014

Note: Calibration Interval of instruments listed above is one year.

Loop Antenna	R&S	HFH2-Z2	100330	Nov. 15, 2012	Nov. 14, 2014
Note: Calibration Interval of instruments listed above is two year.					