

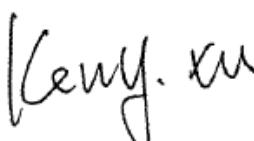
Report No.: SZEM201001052202  
Page: 1 of 25

## **TEST REPORT**

**Application No.:** SZEM2010010522CR  
**Applicant:** Leax Arkivator Telecom USA Inc.  
**Address of Applicant:** 833 E Arapaho Rd, Suite 203, Richardson, TX, 75081  
**Manufacturer:** Leax Arkivator Telecom USA Inc.  
**Address of Manufacturer:** 833 E Arapaho Rd, Suite 203, Richardson, TX, 75081  
**Equipment Under Test (EUT):**  
**EUT Name:** Distributed Band41 Macro Base Station/Band41  
**Model No.:** LAU9560  
**Trade Mark:** LEAX ARKIVATOR TELECOM  
**FCC ID:** 2AVFNLAU9560  
**Standard(s) :** 47 CFR Part 2  
47 CFR Part 27  
**Date of Receipt:** 2020-10-26  
**Date of Test:** 2020-10-29 to 2020-12-29  
**Date of Issue:** 2021-02-19

<b>Test Result:</b>	<b>Pass</b>
---------------------	-------------

\* In the configuration tested, the EUT complied with the standards specified above.



Keny. Xu  
EMC Laboratory Manager



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<b>Revision Record</b>				
<b>Version</b>	<b>Chapter</b>	<b>Date</b>	<b>Modifier</b>	<b>Remark</b>
01		2021-02-19		Original

<b>Authorized for issue by:</b>			
		 _____ <b>Leo Lai/Project Engineer</b>	
		 _____ <b>Eric Fu /Reviewer</b>	

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## 2 Test Summary

Test Item	FCC Rule No.	Requirements	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §27.50(h)	$33 \text{ dBW} + 10 \log(X/Y) \text{ dBW} + 10 \log(360/\text{beamwidth}) \text{ dBW}$	PASS
Peak-Average Ratio	§27.50(h)	$\leq 13 \text{ dB}$	PASS
Modulation Characteristics	§2.1047	Digital modulation	PASS
Bandwidth	§2.1049(h)	OBW: No limit EBW: No limit	PASS
Band Edge Compliance	§2.1051, §27.53(m)	$\leq -13 \text{ dBm}$	PASS
Spurious emissions at antenna terminals	§2.1051, §27.53(m)	$\leq -13 \text{ dBm}$	PASS
Field strength of spurious radiation	§2.1051, §27.53(m)	$\leq -13 \text{ dBm}$	PASS
Frequency stability	§2.1055, §27.54	$\leq \pm 2.5 \text{ ppm}$	PASS

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## 4 General Information

### 4.1 Details of E.U.T.

Power supply:	-57VDC to -40VDC (nominal: -48.0VDC)
Test Voltage:	DC -48V
Cable:	RJ45 Cable: 100cm DC cable: 150cm unshielded
Sample Type:	Fixed production
LTE Operation Frequency Band:	41
Frequency range:	2496-2690 MHz
Number of antenna ports:	64 Tx / Rx ports
Maximum Number of supported carriers per port:	1
Modulation Type:	QPSK, 16QAM, 64QAM
Working Bandwidth:	10M, 15M, 20M
Antenna Gain:	17 dBi (per antenna port, max.)
Hardware:	LAU9560
Software:	LEAX_AAU_V1.00
Extreme temp. Tolerance:	-30°C to +50°C

### 4.2 Test Frequency

Test mode:	Nominal Bandwidth (MHz)	RF Channel		
		Low (L)	Middle (M)	High (H)
		MHz	MHz	MHz
LTE TDD Band 41	10	2501.0	2593.0	2685.0
	15	2503.5	2593.0	2682.5
	20	2506.0	2593.0	2680.0

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**4.3 Test Environment**

Environment Parameter	Selected Values During Tests	
Relative Humidity	51%	
Atmospheric Pressure:	1015 mbar	
Temperature:	TN	20 °C
Voltage:	VL	-55 V
	VN	-48 V
	VH	-42 V

NOTE: VL= lower extreme test voltage

VN= nominal voltage

VH= upper extreme test voltage

TN= normal temperature

**4.4 Description of Support Units**

Description	Manufacturer	Model No.	Serial No.
BBU	LEAX	LBU9001	N/A
Laptop	Lenovo	L480	PF-1N6C3V
Mouse	Lenovo	M-U0025-O	REF. No.:SEA2400
Router	NETGEAR	DGN2200	REF. No.:SEA2200
U-disk	Sandisk	SDCZ60	REF. No.:SEA0100
Power Supply of LBU9001	DCTEC	W1500-26848M	AD1415
Power Supply of LAU9560	Chroma	62012P-80-60	SEM011-11

**4.5 Measurement Uncertainty**

No.	Item	Measurement Uncertainty
1	Radio Frequency	± 7.25 x 10 <sup>-8</sup>
2	Duty cycle	± 0.37%
3	Occupied Bandwidth	± 3%
4	RF conducted power	± 0.75dB
5	RF power density	± 2.84dB
6	Conducted Spurious emissions	± 0.75dB
7	RF Radiated power	± 4.5dB (below 1GHz)
		± 4.8dB (above 1GHz)
8	Radiated Spurious emission test	± 4.5dB (Below 1GHz)
		± 4.8dB (Above 1GHz)
9	Temperature test	± 1°C
10	Humidity test	± 3%

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11	Supply voltages	± 1.5%
12	Time	± 3%

#### 4.6 Test Location

All tests were performed at:

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518057.

Tel: +86 755 2601 2053      Fax: +86 755 2671 0594

No tests were sub-contracted.

#### 4.7 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

#### 4.8 Deviation from Standards

None

#### 4.9 Abnormalities from Standard Conditions

None

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## 5 Equipment List

RF test system					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date	Cal. Due date
Shielding Room	SAEMC	MSR733	SEM001-09	2019-06-13	2022-06-12
MXA Signal Analyzer (10Hz-26.5GHz)	KEYSIGHT	N9020A	SEM004-17	2020-05-21	2021-05-20
Signal Generator (9kHz-40GHz)	KEYSIGHT	N5173B	SEM006-05	2020-09-23	2021-09-22
MXG Vector Signal Generator	KEYSIGHT	N5182A	SEM006-14	2020-03-23	2021-03-22
ESG Vector Signal Generator	KEYSIGHT	N5182A	SEM006-14	2020-03-23	2021-03-22
DC Power Supply	Rohde & Schwarz	NGSM 32/10	SEM011-04	2020-03-24	2021-03-23
Manual Step Attenuator	KEYSIGHT	8494B	SEM021-05	2020-04-09	2021-04-08
Manual Step Attenuator	KEYSIGHT	8496B	SEM021-06	2020-04-09	2021-04-08
Power Sensor	KEYSIGHT	U2021XA	SEM009-20	2020-05-21	2021-05-20
Power Sensor	KEYSIGHT	U2021XA	SEM009-21	2020-05-21	2021-05-20
MXA Signal Analyzer	KEYSIGHT	N9020B	SEM004-18	2020-05-21	2021-05-20
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2020-03-25	2021-03-24
Universal Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-03	2020-04-01	2021-03-31
Measurement Software	TST	TST PASS V1.0.5	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-03	2020-07-10	2021-07-09

Radiated Spurious Emissions (30MHz-1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2020-07-19	2023-07-18
MXE EMI Receiver	Agilent Technologies	N9038A	SEM004-15	2019-12-16	2021-12-15
BiConiLog Antenna	ETS-LINDGREN	3142C	SEM003-02	2019-05-24	2022-05-23
BiConiLog Antenna (30MHz-3GHz)	Schwarzbeck	VULB9163	SEM003-05	2018-09-14	2021-09-13
Pre-Amplifier	Agilent Technologies	8447D	SEM005-01	2020-04-01	2021-03-31

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Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2020-07-10	2021-07-09

**Radiated Spurious Emissions**

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018-03-13	2021-03-12
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2020-07-10	2021-07-09
EXA Spectrum Analyzer	AgilentTechnologies Inc	N9010A	SEM004-12	2020-04-09	2021-04-08
Horn Antenna	Rohde & Schwarz	HF907	SEM003-07	2018-04-13	2021-04-12
Horn Antenna	Schwarzbeck	BBHA 9170	SEM003-15	2017-10-17	2021-10-16
Pre-Amplifier	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2019-09-24	2021-09-22
Pre-amplifier	Rohde & Schwarz	CH14-H052	SEM005-17	2020-04-01	2021-03-31
Pre-amplifier	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2020-04-01	2021-03-31
DC Power Supply	Zhao Xin	KXN-6020D	SEM011-08	2019-09-24	2021-09-22
Active Loop Antenna	ETS-Lindgren	6502	SEM003-08	2020-08-14	2023-08-13

**General used equipment**

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-03	2019-09-26	2021-09-14
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2019-09-26	2021-09-14
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2019-09-26	2021-09-14
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2020-04-07	2021-04-06

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## 6 Radio Spectrum Matter Test Results

### 6.1 Effective (Isotropic) Radiated Power Output Data

Test Requirement: §2.1046, §27.50(h)

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: 33 dBW+10 log(X/Y)dBW+10 log(360/beamwidth)dBW

EIRP  $\leq$  33 dBW + 10log(X/Y) dBW + 10 log(360/Beamwidth) dBW = 76 dBm

X = 20MHz channel bandwidth

Y = 5.5 or 6 MHz

Beamwidth = 60°

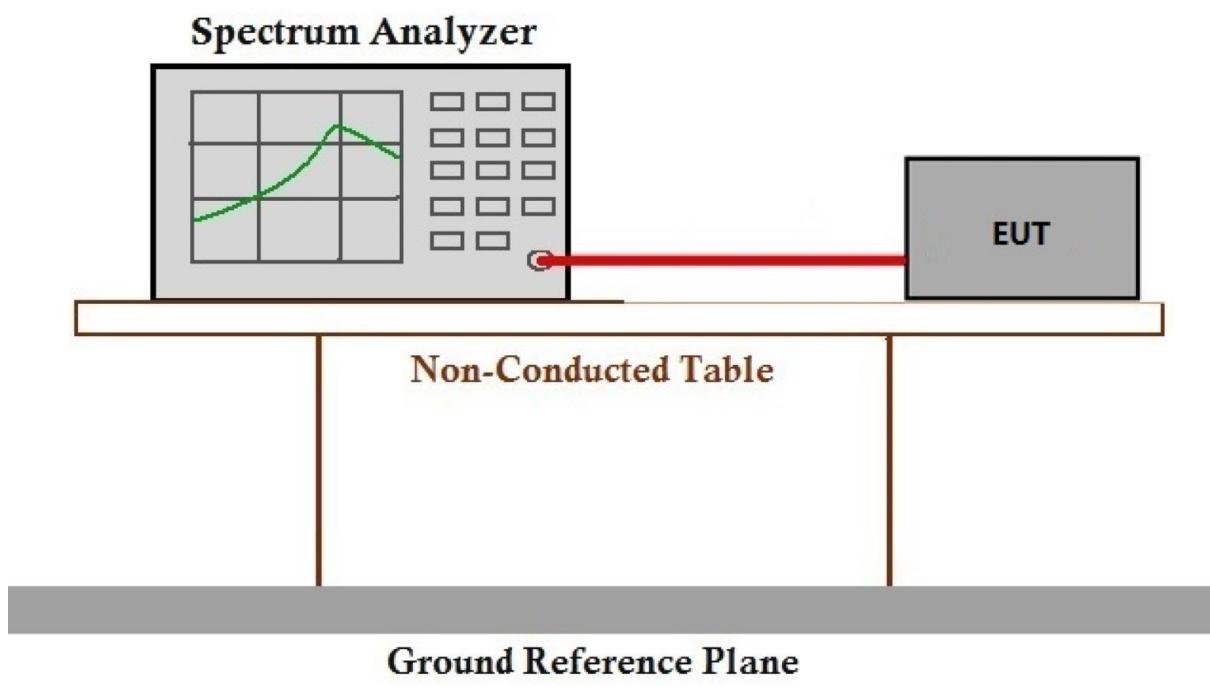
#### 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 25.2 °C Humidity: 54 % RH Atmospheric Pressure: 1015 mbar

Test mode: 00: Tx mode, Keep the EUT in transmitting mode.

#### 6.1.2 Test Setup Diagram



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**6.1.3 Measurement Data**

During the process of testing, the EUT was configured to transmit on maximum power and proper modulation. The transmitter power shall be measured in terms of a root-mean-square (RMS) average value. In case of the EUT was configured to MIMO mode, since the EUT transmits on all antennas simultaneously in the same frequency range, and the output power of each ports are equivalence, so the total output power were the measure add  $[10 \log (N_{out})]$  dB (Nout is the number of outputs in the EUT) in log power units according to ANSI C63.26.

The antenna gain is declared as 24.5 dBi, therefore the EIRP for each polarization is calculated as the sum of the power over 64 ports plus the antenna gain. This calculation is summed to calculate the overall EIRP.

Please refer to Appendix A

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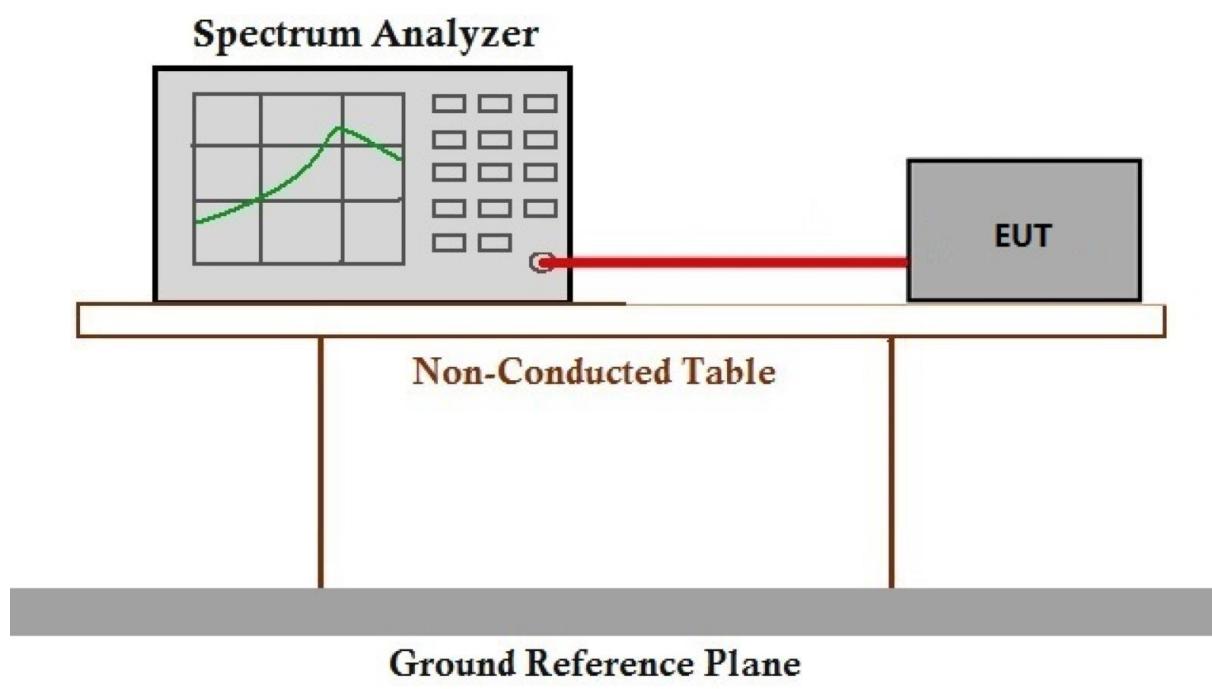
## 6.2 Peak-Average Ratio

Test Requirement: §27.50(h)  
Test Method: ANSI C63.26, KDB 971168 D01 v03  
Limit: ≤13dB

### 6.2.1 E.U.T. Operation

Operating Environment:  
Temperature: 25.2 °C      Humidity: 54 % RH      Atmospheric Pressure: 1015 mbar  
Test mode: 00: Tx mode, Keep the EUT in transmitting mode.

### 6.2.2 Test Setup Diagram



### 6.2.3 Measurement Data

Please refer to Appendix B

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### 6.3 Bandwidth

Test Requirement: §2.1049(h), §27

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: OBW: No limit

EBW: No limit

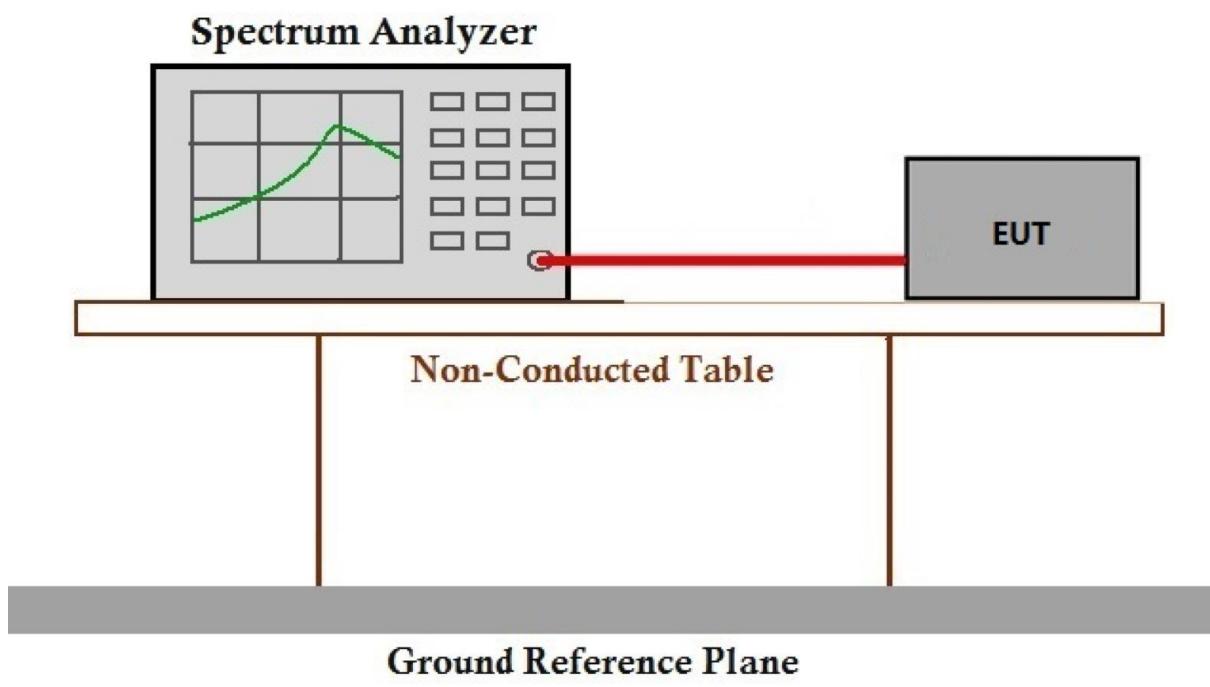
#### 6.3.1 E.U.T. Operation

Operating Environment:

Temperature: 25.2 °C Humidity: 54 % RH Atmospheric Pressure: 1015 mbar

Test mode: 00: Tx mode, Keep the EUT in transmitting mode.

#### 6.3.2 Test Setup Diagram



#### 6.3.3 Measurement Data

Please refer to Appendix C

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## 6.4 Band Edge Compliance

Test Requirement: §2.1051, §27.53(m)

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: (m) For BRS and EBS stations, the power of any emissions outside the licensee's frequency bands of operation shall be attenuated below the transmitter power (P) measured in watts in accordance with the standards below. If a licensee has multiple contiguous channels, out-of-band emissions shall be measured from the upper and lower edges of the contiguous channels.

(2) For digital base stations, the attenuation shall be not less than  $43 + 10 \log (P)$  dB, unless a documented interference complaint is received from an adjacent channel licensee with an overlapping Geographic Service Area. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS No. 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. Provided that a documented interference complaint cannot be mutually resolved between the parties prior to the applicable deadline, then the following additional attenuation requirements shall apply:

### 6.4.1 E.U.T. Operation

Operating Environment:

Temperature: 25.2 °C      Humidity: 54 % RH      Atmospheric Pressure: 1015 mbar

Test mode: 00: Tx mode, Keep the EUT in transmitting mode.

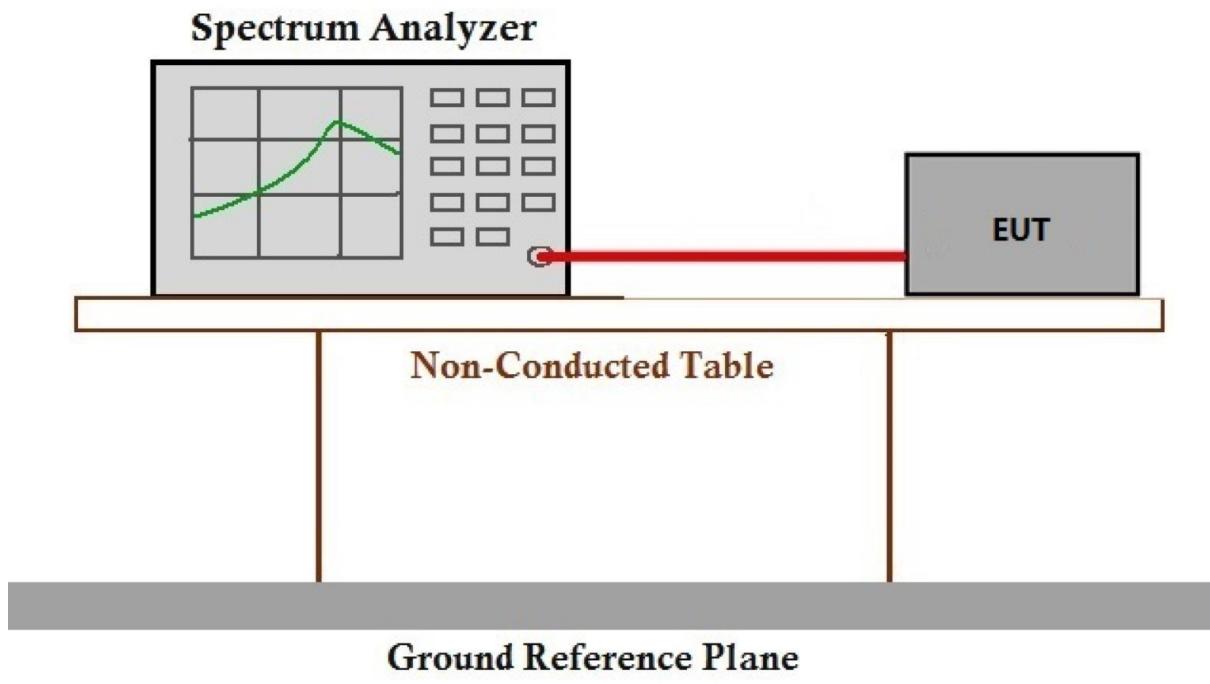
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**6.4.2 Test Setup Diagram****6.4.3 Measurement Data**

Notes: Due to MIMO operation, the test data was offset 18dBm (10\*log(64)) per FCC KDB 662911D01v02r01.

Please refer to Appendix D

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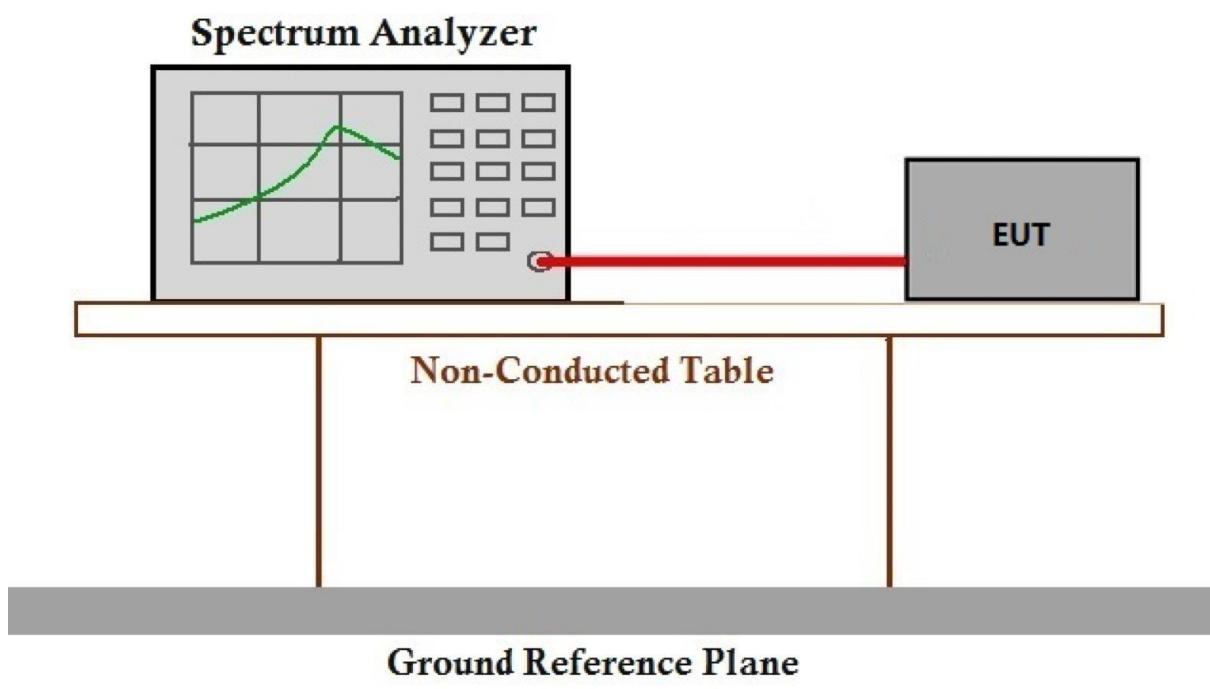
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**6.5 Spurious emissions at antenna terminals**

Test Requirement: §2.1051, §27.53(m)  
Test Method: ANSI C63.26, KDB 971168 D01 v03  
Limit: ≤ -13dBm

**6.5.1 E.U.T. Operation**

Operating Environment:  
Temperature: 25.2 °C      Humidity: 54 % RH      Atmospheric Pressure: 1015 mbar  
Test mode: 00: Tx mode, Keep the EUT in transmitting mode.

**6.5.2 Test Setup Diagram****6.5.3 Measurement Data**

Notes: Due to MIMO operation, the test data was offset 18dBm (10\*log(64)) per FCC KDB 662911D01v02r01. Above 3 GHz, in order to reduce the measurement instrumentation noise floor a high pass filter has been used to block the fundamental.

Please refer to Appendix D

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## 6.6 Field strength of spurious radiation

Test Requirement: §2.1051, §27.53(m)

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit:  $\leq -13\text{dBm}$

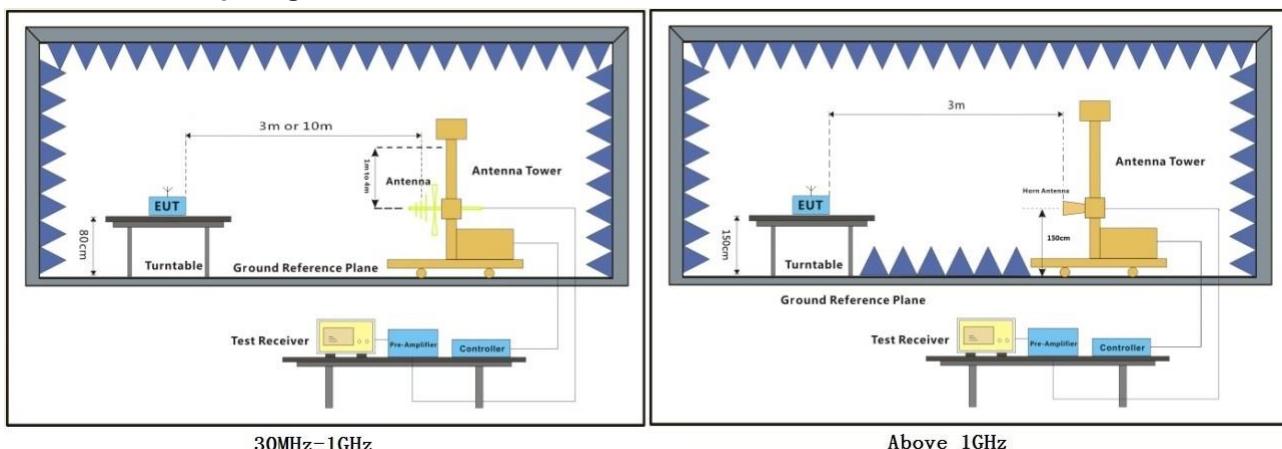
### 6.6.1 E.U.T. Operation

Operating Environment:

Temperature: 26.1 °C      Humidity: 55 % RH      Atmospheric Pressure: 1015 mbar

Test mode: 00: Tx mode, Keep the EUT in transmitting mode.

### 6.6.2 Test Setup Diagram



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**6.6.3 Measurement Procedure and Data****Test Procedure:**

- (1)On a test site, the EUT shall be placed on a turntable and in the position closest to the normal use as declared by the user.
- (2)The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the transmitter.
- (3)The output of the antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.
- (4)The transmitter shall be switched on; if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
- (5)The test antenna shall be raised and lowered through the specified range of height until the measuring receiver detects a maximum signal level.
- (6)The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
- (7)The test antenna shall be raised and lowered again through the specified range of height until the measuring receiver detects a maximum signal level.
- (8)The maximum signal level detected by the measuring receiver shall be noted.
- (9)The measurement shall be repeated with the test antenna set to horizontal polarization.
- (10) Replace the antenna with a proper Antenna (substitution antenna).
- (11)The substitution antenna shall be oriented for vertical polarization and, if necessary, the length of the substitution antenna shall be adjusted to correspond to the frequency of transmitting.
- (12)The substitution antenna shall be connected to a calibrated signal generator.
- (13)If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
- (14)The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.
- (15)The input signal to substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
- (16)The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
- (17)The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.

Notes: Due to MIMO operation, the test data was offset 18dBm (10\*log(64)) per FCC KDB 662911D01v02r01. Above 3 GHz, in order to reduce the measurement instrumentation noise floor a high pass filter has been used to block the fundamental.

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Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5002	-58.06	0.82	9.6	-49.28	-13	-36.28	Horizontal	Pass
7503	-58.73	0.99	13.2	-46.52	-13	-33.52	Horizontal	Pass
10004	-57.13	1.26	12.7	-45.69	-13	-32.69	Horizontal	Pass
5002	-57.87	0.82	9.6	-49.09	-13	-36.09	Vertical	Pass
7503	-59.07	0.99	13.2	-46.86	-13	-33.86	Vertical	Pass
10004	-56.72	1.26	12.7	-45.28	-13	-32.28	Vertical	Pass

LTE Band 41_QPSK_10MHz_Middle Channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5186	-57.55	0.82	9.6	-48.77	-13	-35.77	Horizontal	Pass
7779	-58.43	0.99	13.2	-46.22	-13	-33.22	Horizontal	Pass
10372	-57.62	1.26	12.7	-46.18	-13	-33.18	Horizontal	Pass
5186	-57.37	0.82	9.6	-48.59	-13	-35.59	Vertical	Pass
7779	-58.02	0.99	13.2	-45.81	-13	-32.81	Vertical	Pass
10372	-57.05	1.26	12.7	-45.61	-13	-32.61	Vertical	Pass

LTE Band 41_QPSK_10MHz_High Channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5370	-57.28	0.82	9.6	-48.5	-13	-35.5	Horizontal	Pass
8055	-58.07	1.01	12.9	-46.18	-13	-33.18	Horizontal	Pass
10740	-56.48	1.49	13.5	-44.47	-13	-31.47	Horizontal	Pass
5370	-57.26	0.82	9.6	-48.48	-13	-35.48	Vertical	Pass
8055	-57.14	1.01	12.9	-45.25	-13	-32.25	Vertical	Pass
10740	-56.61	1.49	13.5	-44.6	-13	-31.6	Vertical	Pass

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LTE Band 41_QPSK_15MHz_Low Channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5007	-57.56	0.82	9.6	-48.78	-13	-35.78	Horizontal	Pass
7510.5	-59.06	0.99	13.2	-46.85	-13	-33.85	Horizontal	Pass
10014	-57.31	1.26	12.7	-45.87	-13	-32.87	Horizontal	Pass
5007	-58.27	0.82	9.6	-49.49	-13	-36.49	Vertical	Pass
7510.5	-58.62	0.99	13.2	-46.41	-13	-33.41	Vertical	Pass
10014	-57.07	1.26	12.7	-45.63	-13	-32.63	Vertical	Pass

LTE Band 41_QPSK_15MHz_Middle Channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5186	-56.96	0.82	9.6	-48.18	-13	-35.18	Horizontal	Pass
7779	-58.42	0.99	13.2	-46.21	-13	-33.21	Horizontal	Pass
10372	-57.35	1.26	12.7	-45.91	-13	-32.91	Horizontal	Pass
5186	-57.21	0.82	9.6	-48.43	-13	-35.43	Vertical	Pass
7779	-58.88	0.99	13.2	-46.67	-13	-33.67	Vertical	Pass
10372	-57.06	1.26	12.7	-45.62	-13	-32.62	Vertical	Pass

LTE Band 41_QPSK_15MHz_High Channel								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5365	-56.34	0.82	9.6	-47.56	-13	-34.56	Horizontal	Pass
8047.5	-56.24	1.01	12.9	-44.35	-13	-31.35	Horizontal	Pass
10730	-57.39	1.49	13.5	-45.38	-13	-32.38	Horizontal	Pass
5365	-56.9	0.82	9.6	-48.12	-13	-35.12	Vertical	Pass
8047.5	-56.99	1.01	12.9	-45.1	-13	-32.1	Vertical	Pass
10730	-57.65	1.49	13.5	-45.64	-13	-32.64	Vertical	Pass

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## LTE Band 41\_QPSK\_20MHz\_Low Channel

Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5012	-56.5	0.82	9.6	-47.72	-13	-34.72	Horizontal	Pass
7518	-59.58	0.99	13.2	-47.37	-13	-34.37	Horizontal	Pass
10024	-56.65	1.26	12.7	-45.21	-13	-32.21	Horizontal	Pass
5012	-58.01	0.82	9.6	-49.23	-13	-36.23	Vertical	Pass
7518	-58.87	0.99	13.2	-46.66	-13	-33.66	Vertical	Pass
10024	-56.39	1.26	12.7	-44.95	-13	-31.95	Vertical	Pass

## LTE Band 41\_QPSK\_20MHz\_Middle Channel

Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5186	-51.26	0.82	9.6	-42.48	-13	-29.48	Horizontal	Pass
7779	-58.39	0.99	13.2	-46.18	-13	-33.18	Horizontal	Pass
10372	-57.28	1.26	12.7	-45.84	-13	-32.84	Horizontal	Pass
5186	-57.64	0.82	9.6	-48.86	-13	-35.86	Vertical	Pass
7779	-58.61	0.99	13.2	-46.4	-13	-33.4	Vertical	Pass
10372	-55.64	1.26	12.7	-44.2	-13	-31.2	Vertical	Pass

## LTE Band 41\_QPSK\_20MHz\_High Channel

Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5360	-56.77	0.82	9.6	-47.99	-13	-34.99	Horizontal	Pass
8040	-57	1.01	12.9	-45.11	-13	-32.11	Horizontal	Pass
10720	-58.07	1.49	13.5	-46.06	-13	-33.06	Horizontal	Pass
5360	-56.56	0.82	9.6	-47.78	-13	-34.78	Vertical	Pass
8040	-57.18	1.01	12.9	-45.29	-13	-32.29	Vertical	Pass
10720	-57.25	1.49	13.5	-45.24	-13	-32.24	Vertical	Pass

## Remark:

- 1) Pretest with normal and extreme conditions, only the worst-case data was showed in the test report.
- 2) We have tested all mode, modulation and all Channel, but only the worst-case data displayed in this report.

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## 6.7 Frequency stability

Test Requirement: §2.1055, §27.54

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit:  $\leq \pm 2.5\text{ppm}$ .

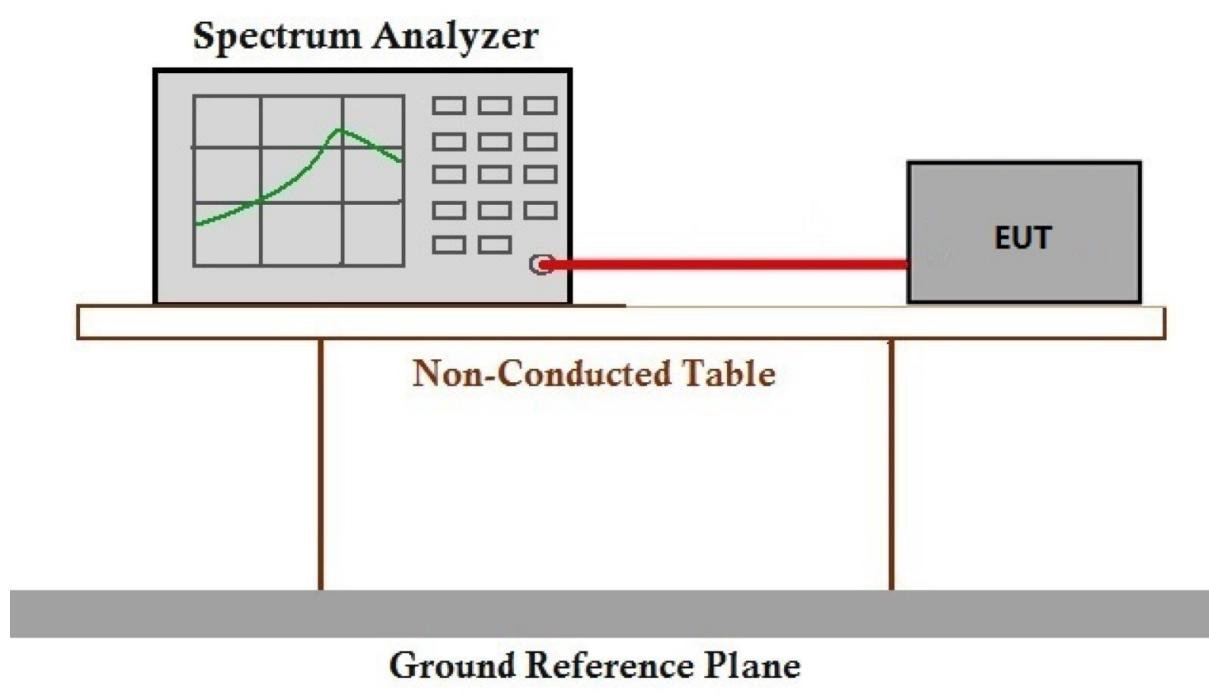
### 6.7.1 E.U.T. Operation

Operating Environment:

Temperature: 22.7 °C      Humidity: 68.2 % RH      Atmospheric Pressure: 1030 mbar

Test mode: 00: Tx mode, Keep the EUT in transmitting mode.

### 6.7.2 Test Setup Diagram



### 6.7.3 Measurement Data

Please refer to Appendix E

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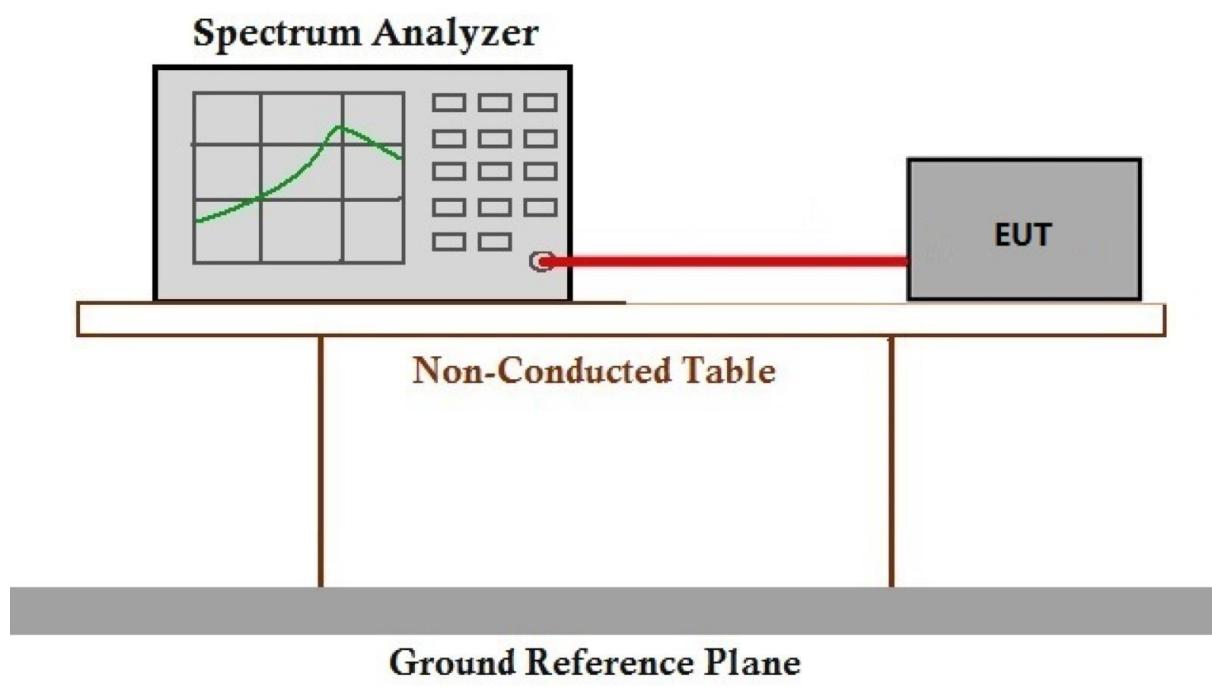
## 6.8 Modulation Characteristics

Test Requirement: §2.1047  
Test Method: ANSI C63.26, KDB 971168 D01 v03  
Limit: Digital modulation

### 6.8.1 E.U.T. Operation

Operating Environment:  
Temperature: 22.7 °C      Humidity: 68.2 % RH      Atmospheric Pressure: 1030 mbar  
Test mode: 00: Tx mode, Keep the EUT in transmitting mode.

### 6.8.2 Test Setup Diagram



### 6.8.3 Measurement Data

Please refer to Appendix F



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## 7 Photographs

### 7.1 Setup photo

Please refer to setup photos.

### 7.2 EUT Constructional Details (EUT Photos)

Please Refer to external and internal photos for details.

- End of the Report -



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