



FCC RF TEST REPORT

Report Number : **RP20170313033_01** Date of Issue: **05 Mar 2016**

FCC ID : **Q78-R8862AS7100**

Model / Serial No. : **ZXSDR R8862A S7100**

Product Type : **Macro Remote Radio Unit**

Applicant : **ZTE Corporation**

Address : **ZTE Plaza, Keji Road South, Hi-Tech Industrial Park,
Nanshan District, Shenzhen, Guangdong, P.R. China**

Production Facility : **ZTE Corporation**

Address : **ZTE Plaza, Keji Road South, Hi-Tech Industrial Park,
Nanshan District, Shenzhen, Guangdong, P.R. China**

Test Result : **Positive** **Negative**

Total pages including Appendices : **51**

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1 General Information

1.1 Notes

It is the test results from all the tests which are performed in the RF Laboratory of Shenzhen Zoom Rel Testing Technology Co., Ltd. The RF Lab was certificated by CNAS and the registration number was L0611.

Test site has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on May 10, 2016.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 373926. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

This report is the confidential property of the client. As a mutual protection to our clients, the public and ourselves, extracts from the test report shall not be reproduced except in full without our written approval.

Prepared By
RF Test Engineer

2017-03-12
Date

Qi Luxing
Name


Signature

Reviewed By
Laboratory Manager

2017-03-12
Date

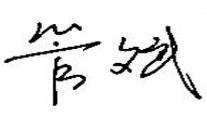
Wu Shuzhong
Name


Signature

Approved by
EMC/RF Project Manager

2017-03-12
Date

Guan Bin
Name


Signature



1.2 Testing Laboratory

Shenzhen Zoom Rel Testing Technology Co., Ltd.

Address: 1/F, B2 Wing, ZTE plaza, Keji Road South, Hi-Tech industrial park, Shenzhen, Guangdong, 518057

Country: China

Phone: +86 755 26770349

FAX: +86 755 26770347

1.3 Details of Manufacture

Manufacture : ZTE Corporation

ADDRESS: ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R. China

PRODUCT DESCRIPTION: Macro Remote Radio Unit

MANUFACTURERS MODEL/SERIAL NUMBER: ZXSDR R8862A S7100(LTE)

FCC ID : Q78-R8862AS7100

SAMPLE NUMBER: S20170313033

1.4 Application Details

Date of receipt of order: 2017-01-04

Date of receipt of test item: 2017-01-04

Date of test: 2017-01-04~2017-03-05

1.5 Test Item

Refer to Chapter 2.

1.6 Applied Standard

APPLIED PRODUCT STANDARD	TIA/EIA 603-C:2004
TEST METHODS	FCC 47 CFR Part2: 2016 FCC 47 CFR Part27:2016



2 Summary of Results

FCC RULES	DESCRIPTION OF TEST	RESULT
§ 2.1046 , §27.50	Transmitter output Power	Compliant
§ 2.1091 ,§1.1037	RF Exposure	Compliant
§ 2.1047	Modulation Characteristic	Compliant
§ 2.1053, §27.53	Spurious Radiated Emissions	Compliant
§ 2.1051, §27.53	Spurious Emissions AT Antenna Terminals	Compliant
§ 2.1049,§27.53	Occupied Bandwidth	Compliant
§ 2.1051,§27.53	Band Edge	Compliant
§ 2.1055	Frequency stability	

3 Equipment Specification

3.1 Technical specification

Size: 422mm * 218mm * 165mm (H x W x D)

Input voltage: -48VDC

Frequency range: TX:746MHz~756 MHz

Max RF output power: 46dBm

Gain of the antenna: 15dBi,

Appearance of EUT:



fig 1. APPEARANCE OF ZXSDR R8862A S7100



4 Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of federal Regulations Title 47 Part 2. as well as the following parts:

Part 22 Wireless Communication Services

Applicable Standards: TIA EIA 137-A, TIA EIA 97-D, TIA/EIA 603-C, Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

All radiated and conducted measurement was performed at ZTE Corporation Reliability Testing Center. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.



5 Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of federal Regulations Title 47 Part 2 as well as the following parts:

Part 27 MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

Applicable Standards: TIA EIA 137-A, TIA EIA 97-D, TIA/EIA 603-C, Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

All radiated and conducted measurement was performed at ZTE Corporation Reliability Testing Center. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

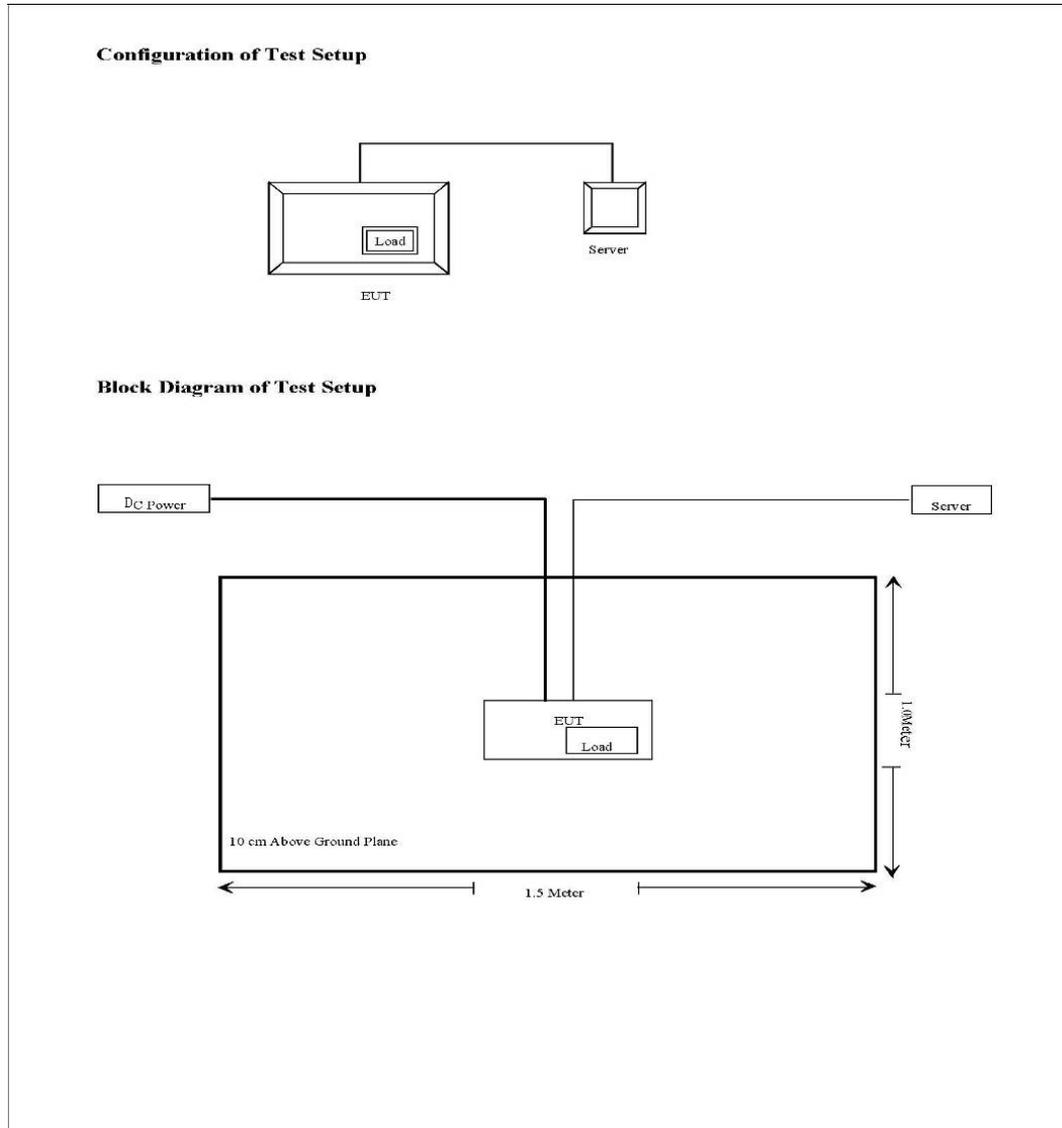
6 Test configuration

The EUT was configured for testing according to TIA/EIA-603C.

The final qualification test was performed with EUT operating at normal mode.

Equipment Modifications

ZTE Corporation has not done any modification on the EUT.



7 TRANSMITTER OUTPUT POWER

7.1 Applicable Standard: FCC §2.1046, §27.50

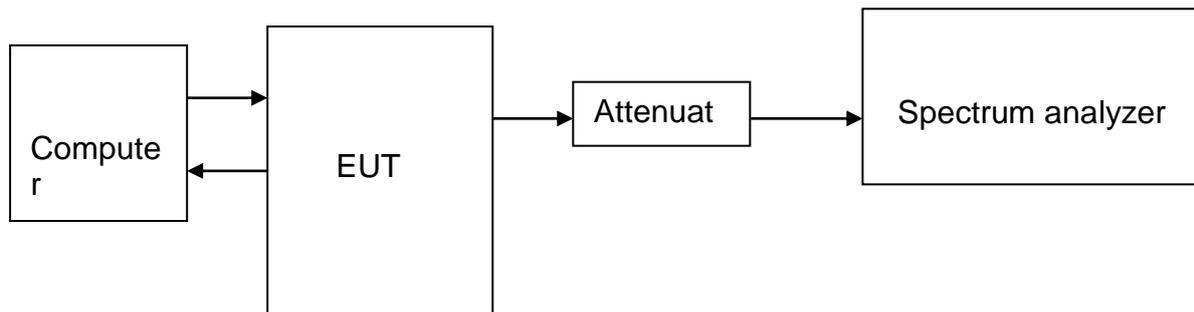
According to FCC §2.1046 & 27.50, the ERP (equivalent radiated power) must not exceed 1000 Watts.

7.2 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	MXA Series Spectrum Analyzer	N9030A	MY49431143	2016.06.18	2017.06.18
DTS	DTS 40dB Attenuator	DTS100-40-3-1	09112005	2016.07.19	2017.07.19
Silverline	Silverline RF Cable	SLA18-NMN1T	100311-04-0001	N/A	N/A

***statement of traceability:** ZTE Corporation Reliability Testing Center attests that all calibration has been performed per the NVLAP requirements, traceable to NIST.

7.3 Test Procedure



The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation. External attenuation Loss is 40dB, Cable Loss is about 1.5dB

7.4 Environmental Conditions

Temperature:	20 °C
Relative Humidity:	53 %
ATM Pressure:	1009 mbar

7.5 Test Result: Pass

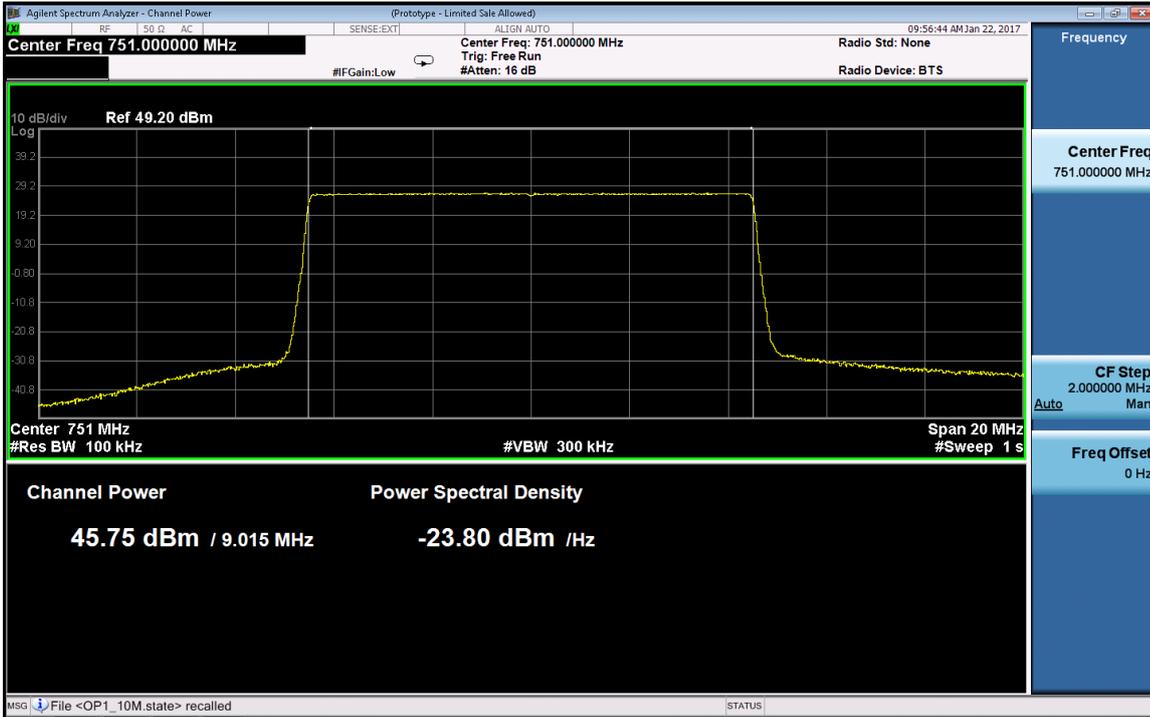
7.6 Test Mode: Transmitting LTE

7.7 Test Data

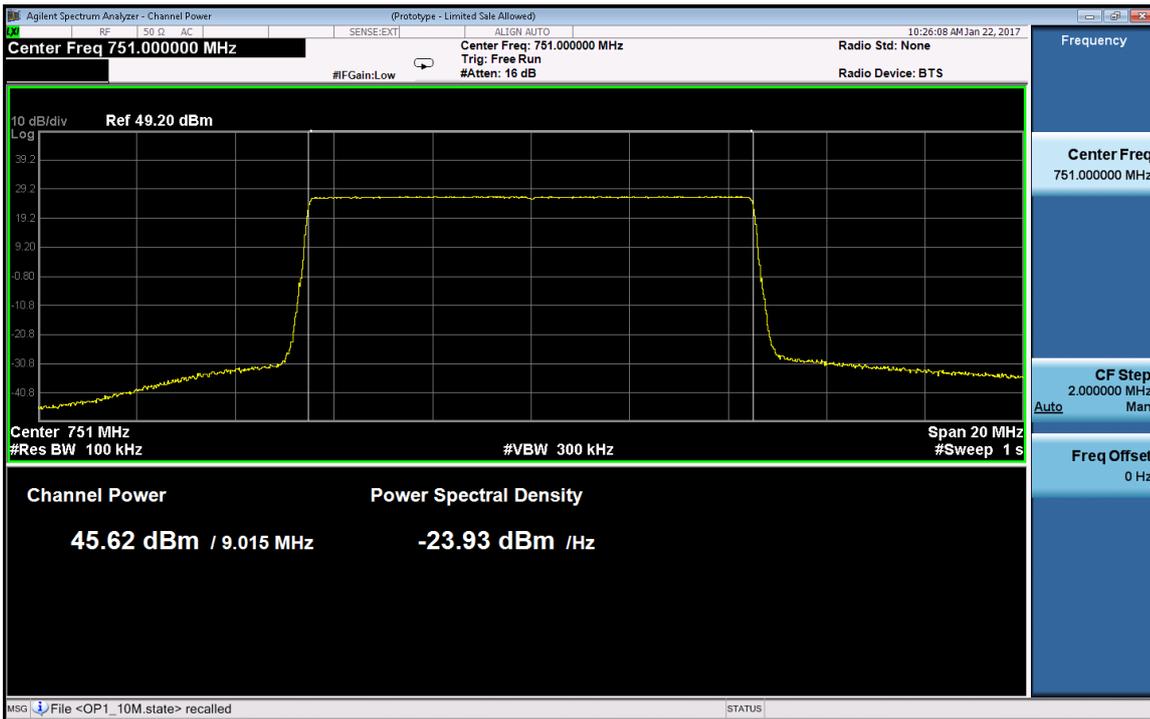
Channel Bandwidth :10M

Port	Center Freq. (MHz)	Max output Power in dBm
1	751	45.75
4	751	45.62

10M -Port 1 -751MHz



10M -Port 4 -751MHz





8 6 RF EXPOSURE

8.1 Applicable standard: FCC §2.1091 §1.1037

8.2 Limit

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated. Limits for Maximum Permissible Exposure (MPE)

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

8.3 Test Data

Predication of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \text{EIRP} / 4\pi R^2$$

Where: S = power density

EIRP= equivalent isotropically radiated power=ERP+2.15dB

R = distance to the center of radiation of the antenna= [(ERP+2.15dB)/4πS]^{1/2}

According to §27.50 , the effective radiated power (ERP) of base transmitters and cellular repeaters must not exceed 1000 Watts.

Frequency 746MHz is between 300MHz and 1500MHz, and the Maximum

$$S=746/1500\text{mw/cm}^2$$

$$\Rightarrow R=5.12\text{m.}$$

This equipment should be installed and operated with minimum distance 5.12m between the radiator& your body.

8.4 Test Result: pass

**9 7 MODULATION CHARACTERISTIC****9.1 Applicable Standard: FCC §2.1047****9.2 Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	MXA Series Spectrum Analyzer	N9030A	MY49431143	2016.06.18	2017.06.18
DTS	DTS 40dB Attenuator	DTS100-40-3-1	09112005	2016.07.19	2017.07.19
Silverline	Silverline RF Cable	SLA18-NMN1T	100311-04-0001	N/A	N/A

***statement of traceability:** ZTE Corporation Reliability Testing Center attest that all calibration have been performed per the NVLAP requirements , traceable to NIST.

9.3 Test Procedure

LTE digital mode is used by EUT.

9.4 Test Data Environmental Conditions

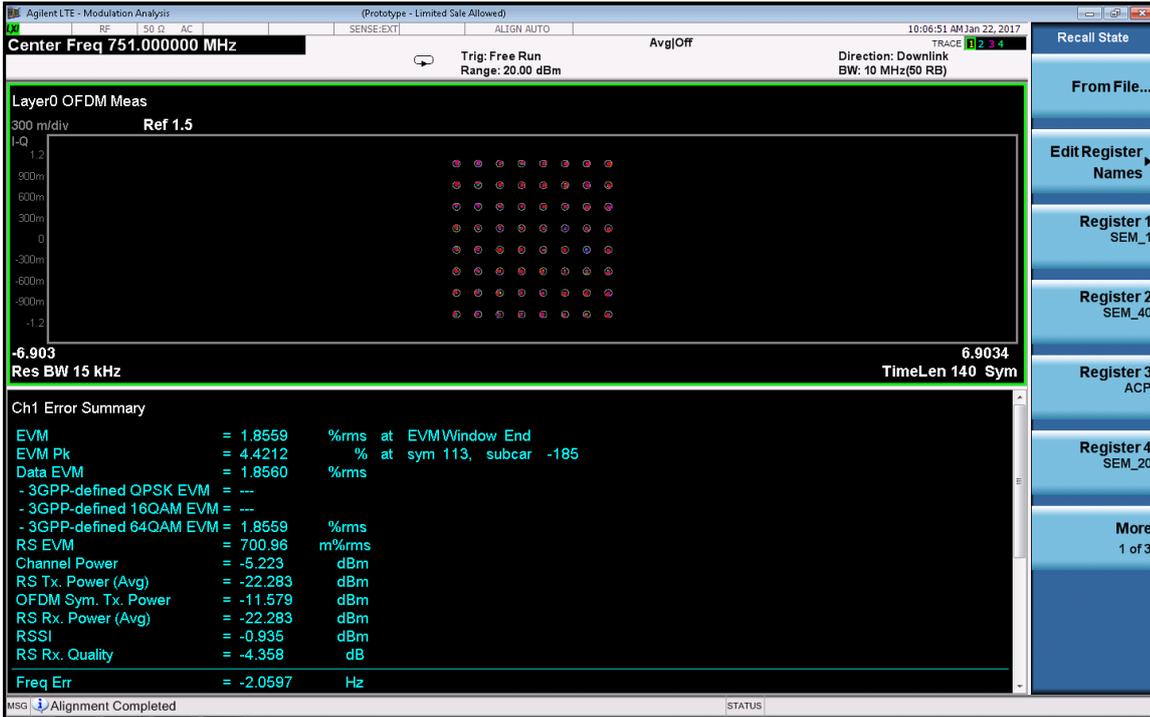
Temperature:	20 °C
Relative Humidity:	53 %
ATM Pressure:	1009 mbar

9.5 Test Result: Pass**9.6 Test Mode: Transmitting LTE****9.7 Test Data**

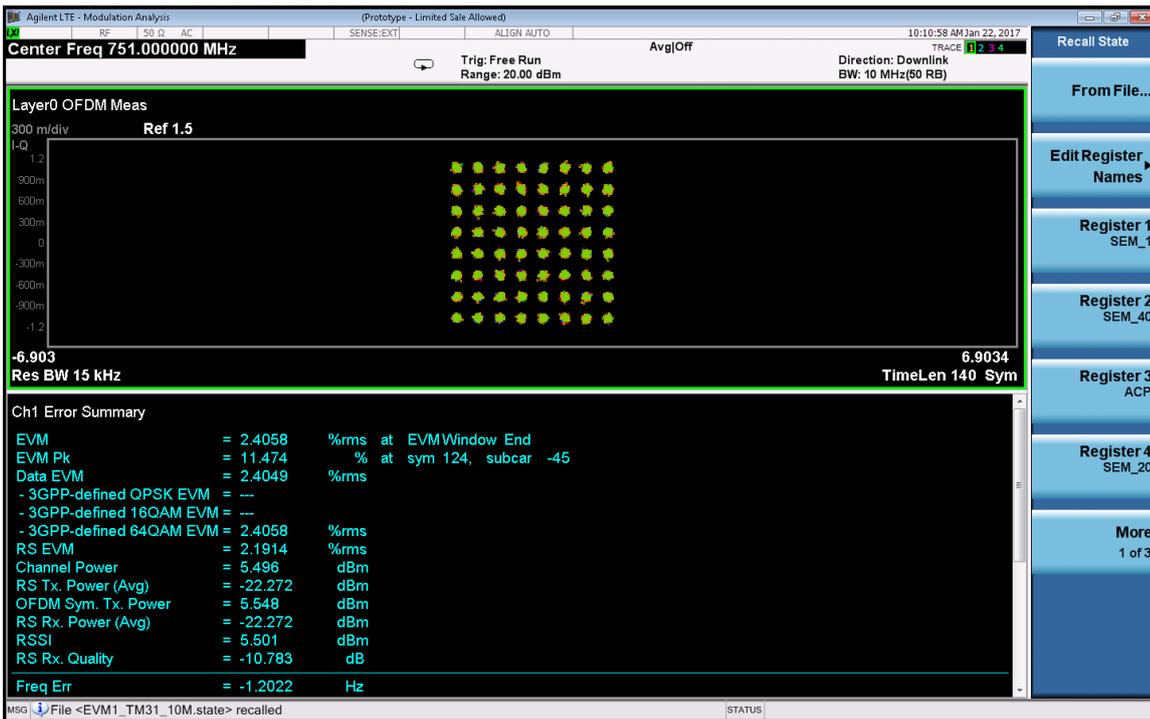
Channel Bandwidth :10M

Port	Frequency (MHz)	Test mode	EVM(%)
1	751	TM2.0	1.66
		TM3.1	2.41
		TM3.2	3.04
		TM3.3	4.11
4	751	TM2.0	1.72
		TM3.1	2.39
		TM3.2	3.02
		TM3.3	4.14

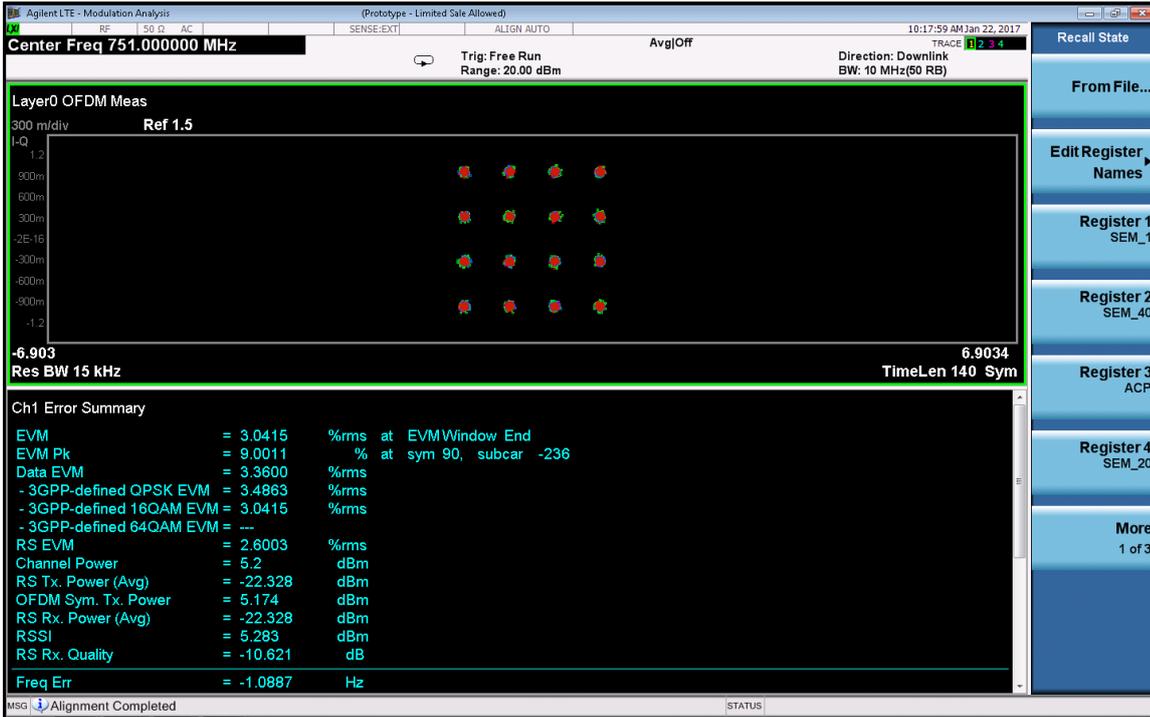
10M -Port 1 -751MHz-TM2.0



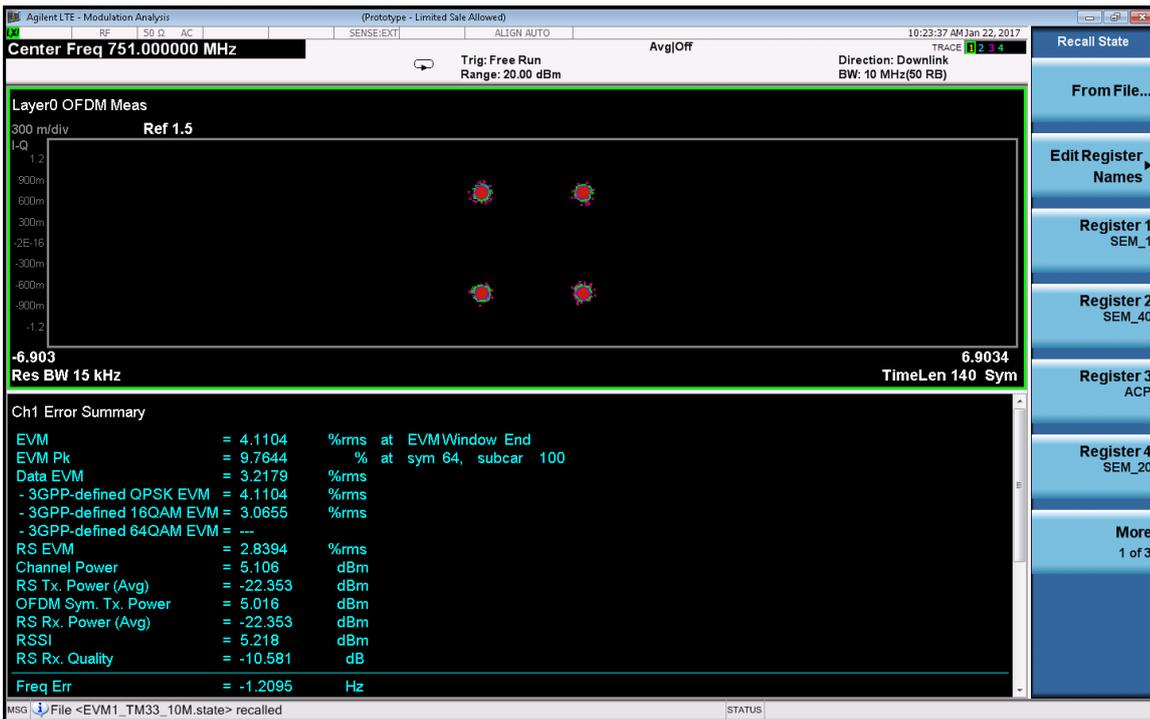
10M -Port 1 -751MHz-TM3.1



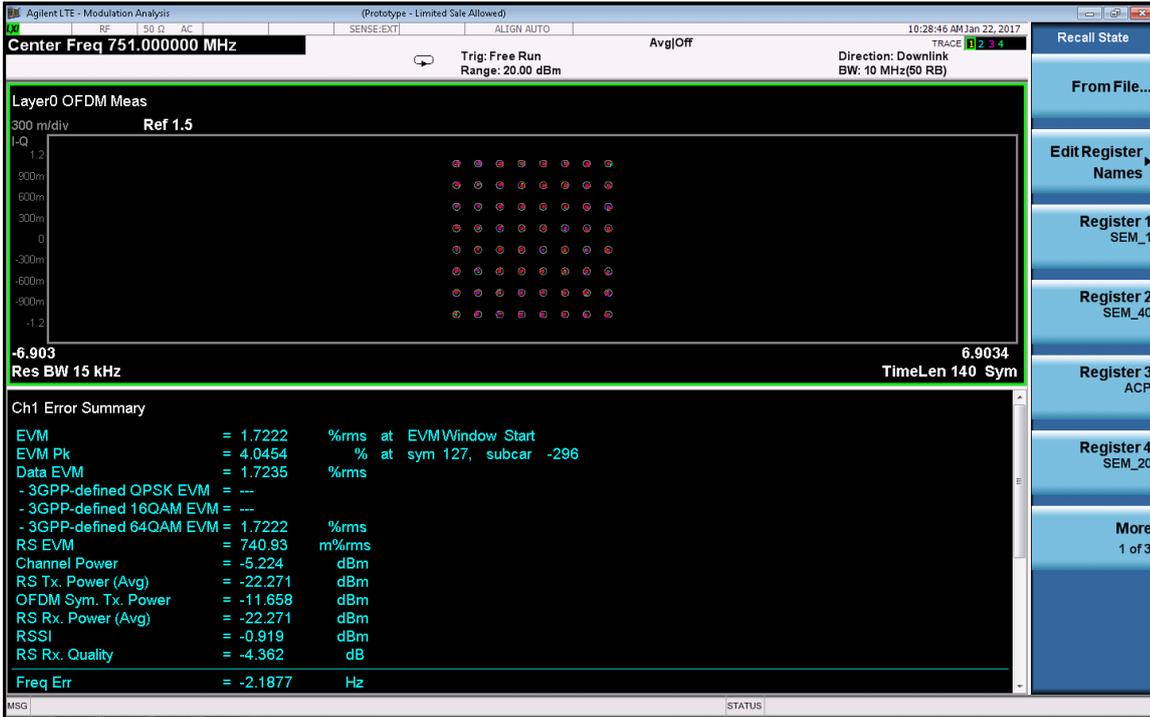
10M -Port 1 -751MHz-TM3.2



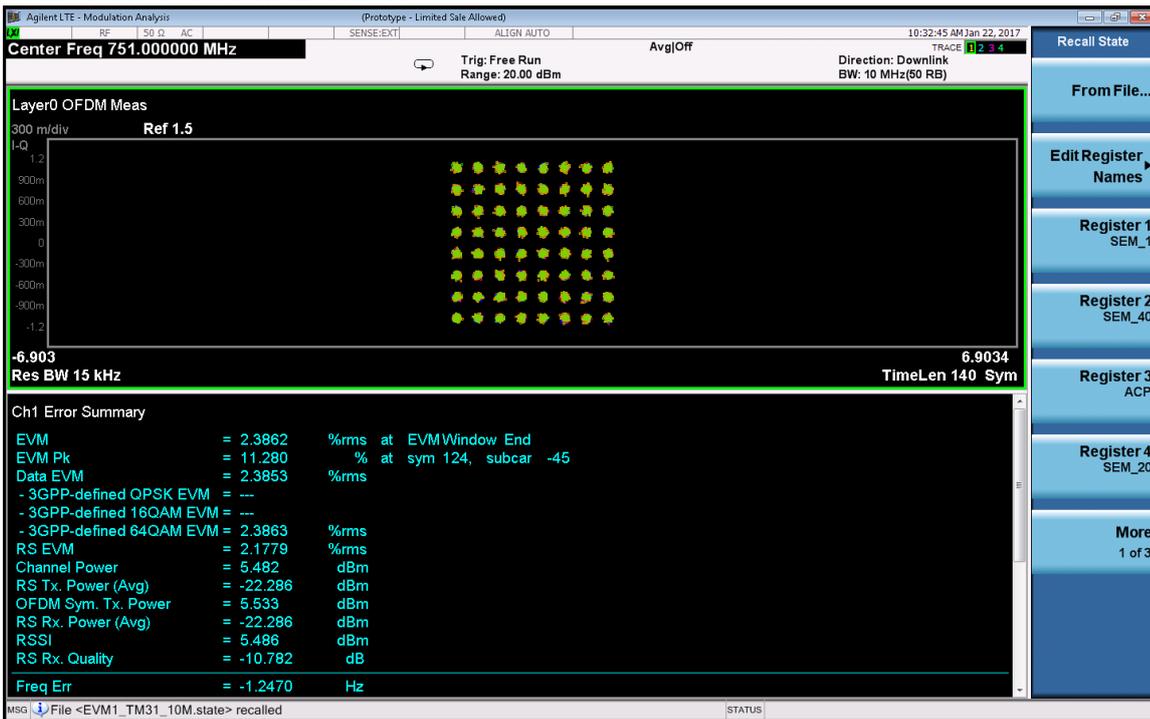
10M -Port 1 -751MHz-TM3.3



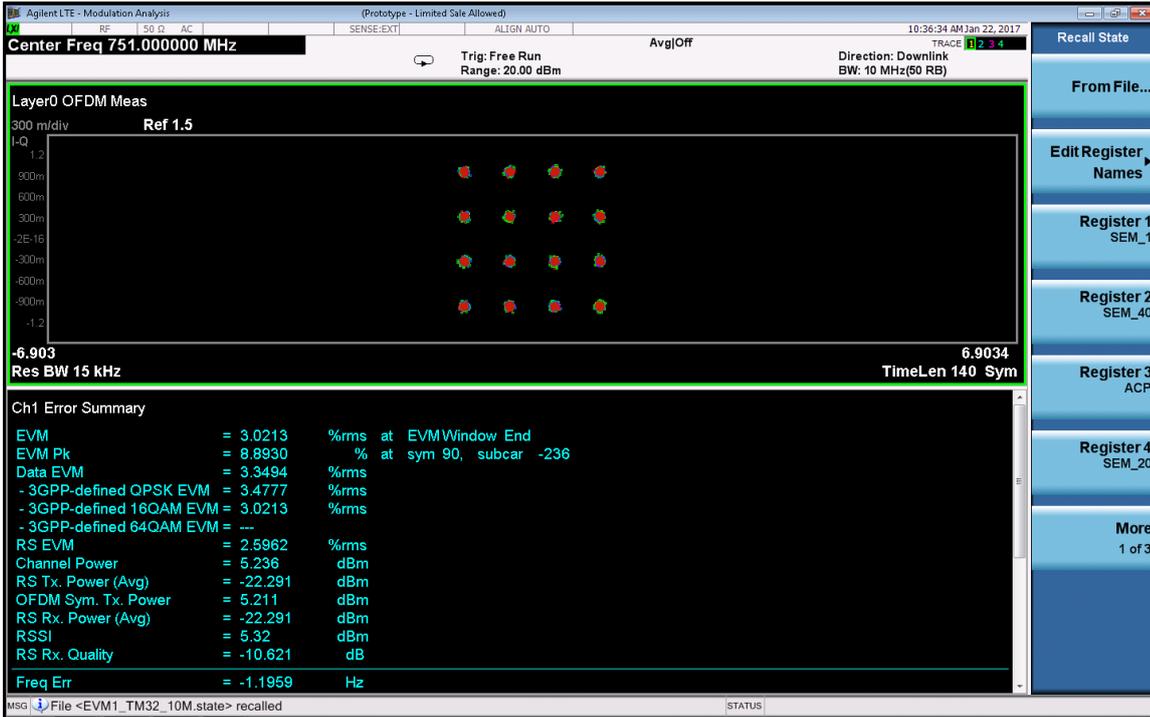
10M -Port 4-751MHz-TM2.0



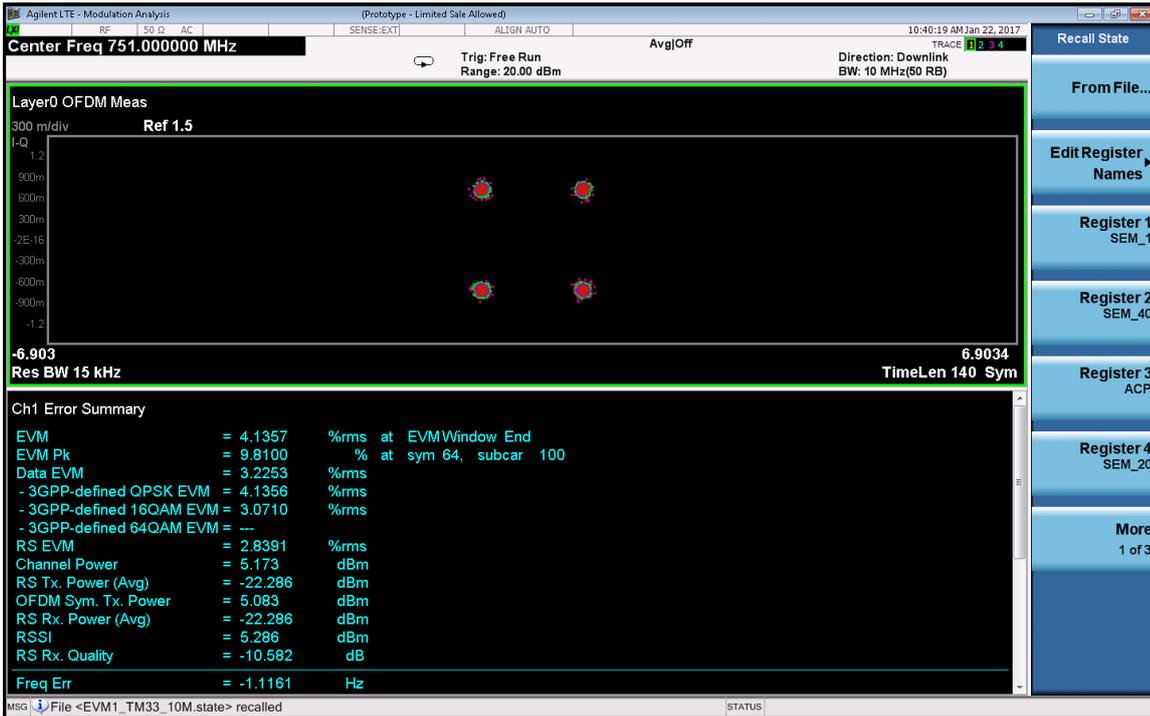
10M -Port 4 -751MHz-TM3.1



10M -Port 4 -751MHz-TM3.2



10M -Port 4 -751MHz-TM3.3



10 8 SPURIOUS RADIATED EMISSIONS

10.1 Applicable Standard: FCC CFR 47 §2.1053

10.2 Test Equipment List and Details

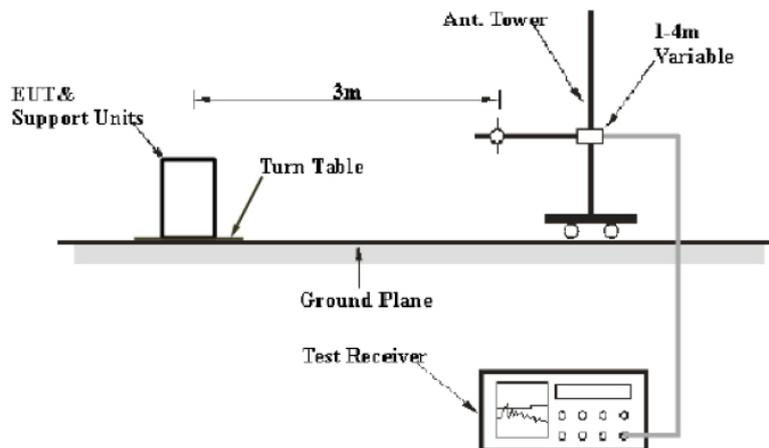
Manufacturer	10.2.1.1 Equipment	Model	Serial Number	Last Cal.	Cal. Interval
R&S	SIGNAL GENERATOR	SMR20	A00017351	2016-10-29	1 year
Albatross	Anechoic Chamber	3m Site	A00017354	2016-6-30	1 year
R&S	EMI Test Receiver	ESIB26	100058	2016-10-29	1 year
R&S	Ultra Breitband Antennas	HL562	100022	2016-8-5	1 year
R&S	Double-Ridged Waveguide Horn Antenna	HF906	100032	2016-8-5	1 year
R&S	Double-Ridged Waveguide Horn Antenna	HF906	100446	2016-8-5	1 year
SCHWARZ-BECK	Biconical Antenna	VUBA9117	9117-122	2016-8-5	1 year

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiated emissions measurement at the EMC lab. is 3.6dB.

EUT Setup



The radiated emission tests were performed in the 3-meter Chamber, using the setup accordance with the FCC part 2.1053. The specification used was the FCC 2.1053 limits.

10.3 Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load, which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to teeth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in dB = 10 lg (TX pwr in Watts/0.001)-the absolute level

Spurious attenuation limit in dB = 43+10 Lg P (power out in Watts)

The resolution bandwidth of the spectrum analyzer was set at 1 percent as specified for 30MHz to 1GHz scanning, set at 1MHz for 1GHz to 20GHz scanning.

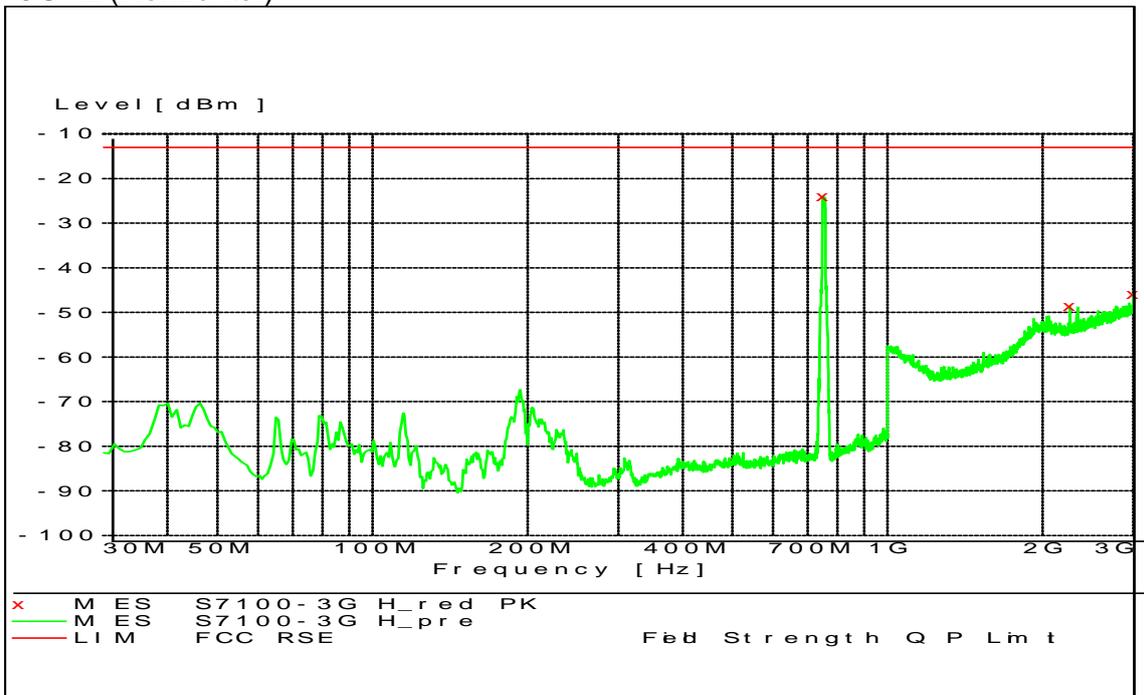
10.4 Test Results Summary: PASS

10.5 Environmental Conditions

Temperature:	26°C
Relative Humidity:	60 %
ATM Pressure:	1009 mbar

10.6 Test data

30M-3GHz (Horizontal)

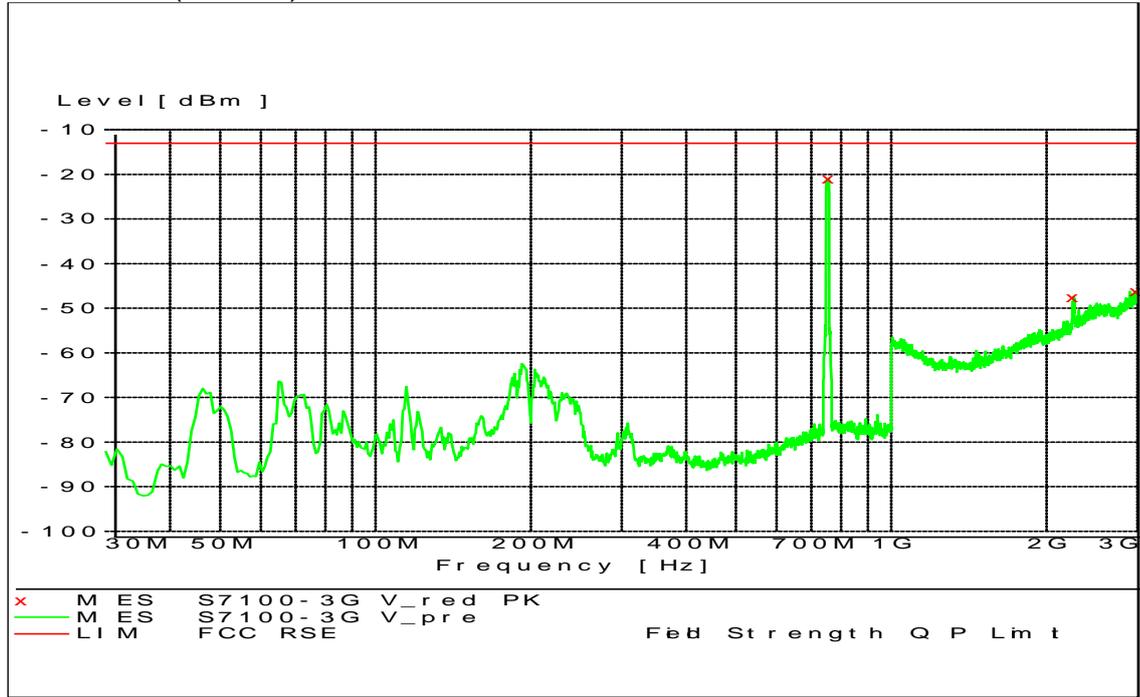


Frequency	Level	Azimuth	Height	Polarisation	Transd	Limit	Margin
-----------	-------	---------	--------	--------------	--------	-------	--------



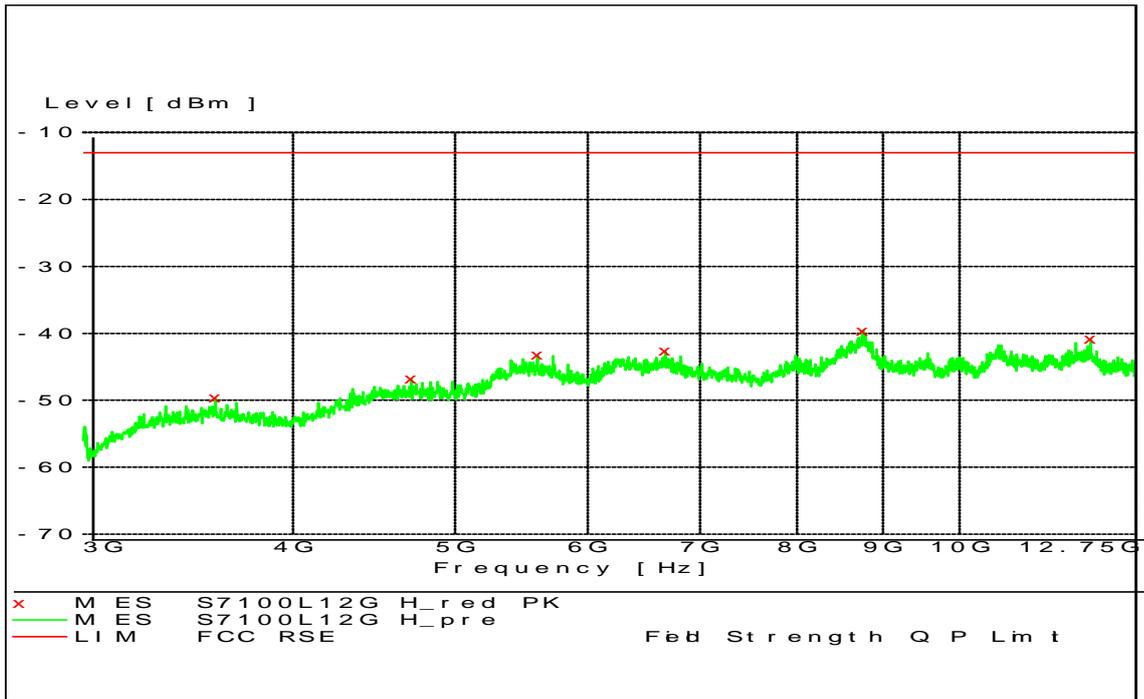
MHz	dBm	deg	cm		dBm	dBm	dB
750.128000	-23.98	236.40	100.0	HOR	-124.6	-13	11.0
2257.600000	-48.56	258.30	100.0	HOR	-103.9	-13	35.6
2998.400000	-45.79	346.40	100.0	HOR	-98.5	-13	32.8

30M-3GHz (Vertical)



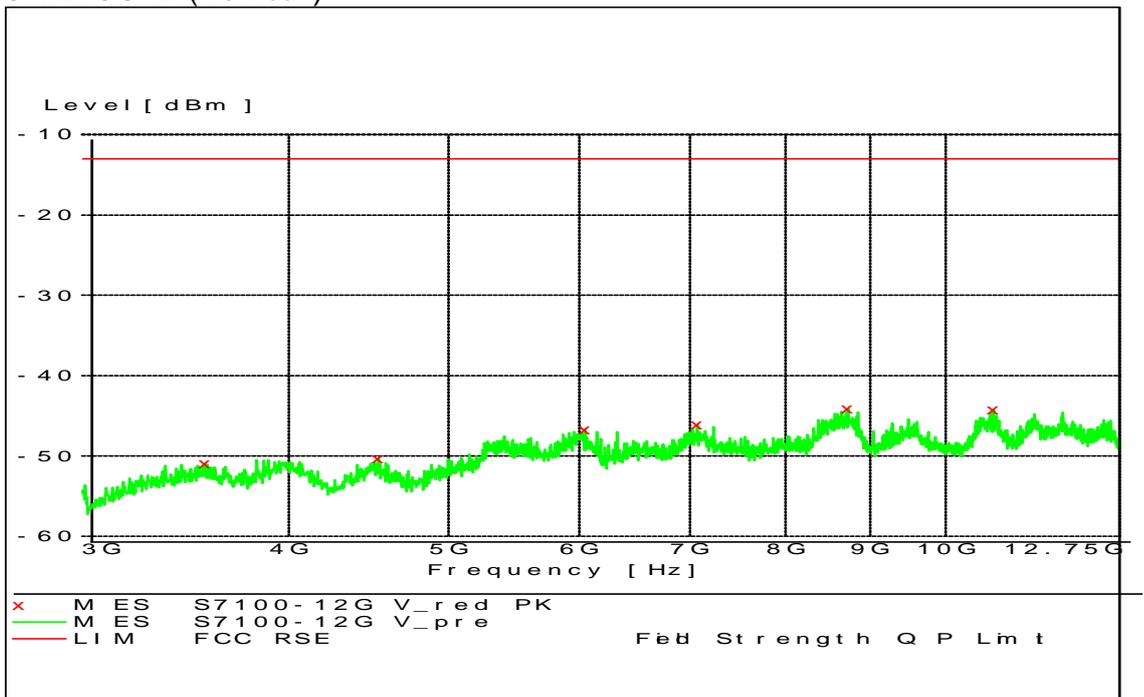
Frequency	Level	Azimuth	Height	Polarisation	Transd	Limit	Margin
MHz	dBm	deg	cm		dBm	dBm	dB
755.560000	-20.92	360.00	200.0	VER	-120.2	-13	7.9
2252.800000	-47.42	273.60	100.0	VER	-103.6	-13	34.4
2982.400000	-46.10	143.10	200.0	VER	-97.2	-13	33.1

3-12.75GHz (Horizontal)



Frequency MHz	Level dBm	Azimuth deg	Height cm	Polarisation	Transd dBm	Limit dBm	Margin dB
3595.200000	-49.61	85.90	200.0	HOR	-89.3	-13	36.6
4708.800000	-46.76	355.10	100.0	HOR	-84.6	-13	33.8
5598.400000	-43.26	92.80	200.0	HOR	-79.6	-13	30.3
6676.800000	-42.65	259.20	200.0	HOR	-77.5	-13	29.6
8761.800000	-39.53	44.00	100.0	HOR	-72.5	-13	26.5
11981.800000	-40.80	258.50	100.0	HOR	-72.8	-13	27.8

3-12.75GHz (Vertical)





Frequency MHz	Level dBm	Azimuth deg	Height cm	Polarisation	Transd dBm	Limit dBm	Margin dB
3560.000000	-50.95	114.10	200.0	VER	-89.5	-13	37.9
4532.800000	-50.25	218.00	100.0	VER	-87.8	-13	37.3
6049.600000	-46.62	45.60	100.0	VER	-81.9	-13	33.6
7073.600000	-46.08	121.00	200.0	VER	-80.2	-13	33.1
8729.600000	-44.12	156.30	200.0	VER	-76.5	-13	31.1
10693.800000	-44.21	231.10	100.0	VER	-76.4	-13	31.2

11 9 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

11.1 Applicable Standard: FCC§2.1051, §27.53

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified.

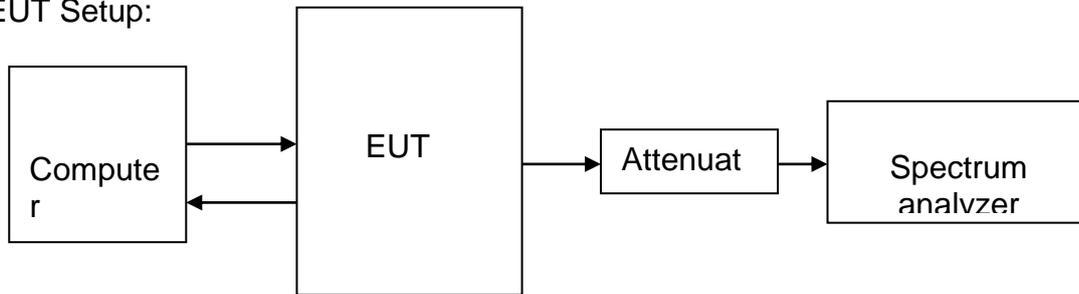
11.2 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	MXA Series Spectrum Analyzer	N9030A	MY49431143	2016.06.18	2017.06.18
DTS	DTS 40dB Attenuator	DTS100-40-3-1	09112005	2016.07.19	2017.07.19

***statement of traceability:** ZTE Corporation Reliability Testing Center attest that all calibration have been performed per the NVLAP requirements, traceable to NIST.

11.3 Test Procedure

EUT Setup:



REMARKS: Attenuator loss (dB)=40dB, Cable Loss (dB)=1.5dB.

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee’s frequency block, a resolution bandwidth of at least 30 kHz may be employed. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.

11.4 Test Data Environmental Conditions

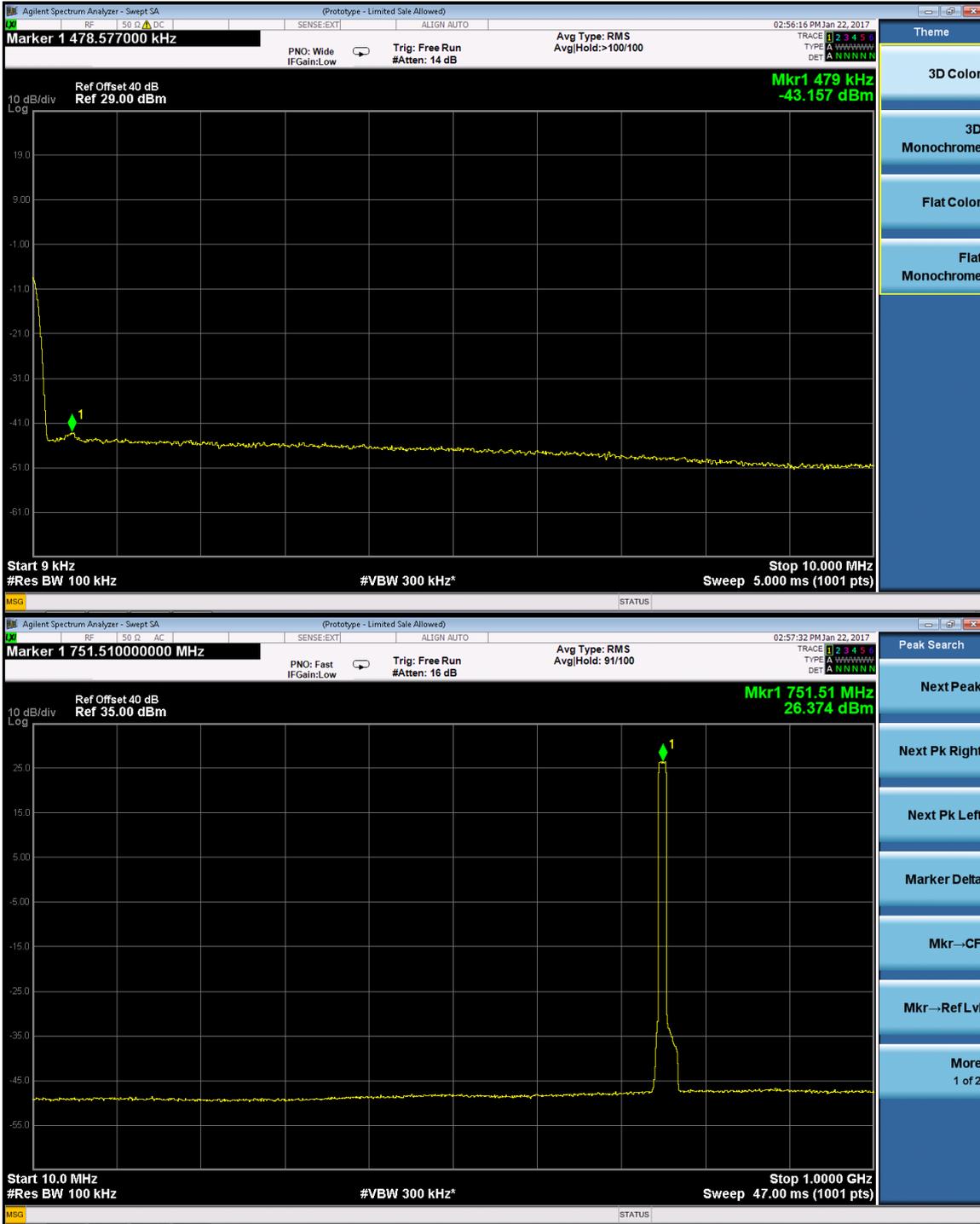
Temperature:	20 °C
Relative Humidity:	53 %
ATM Pressure:	1009 mbar

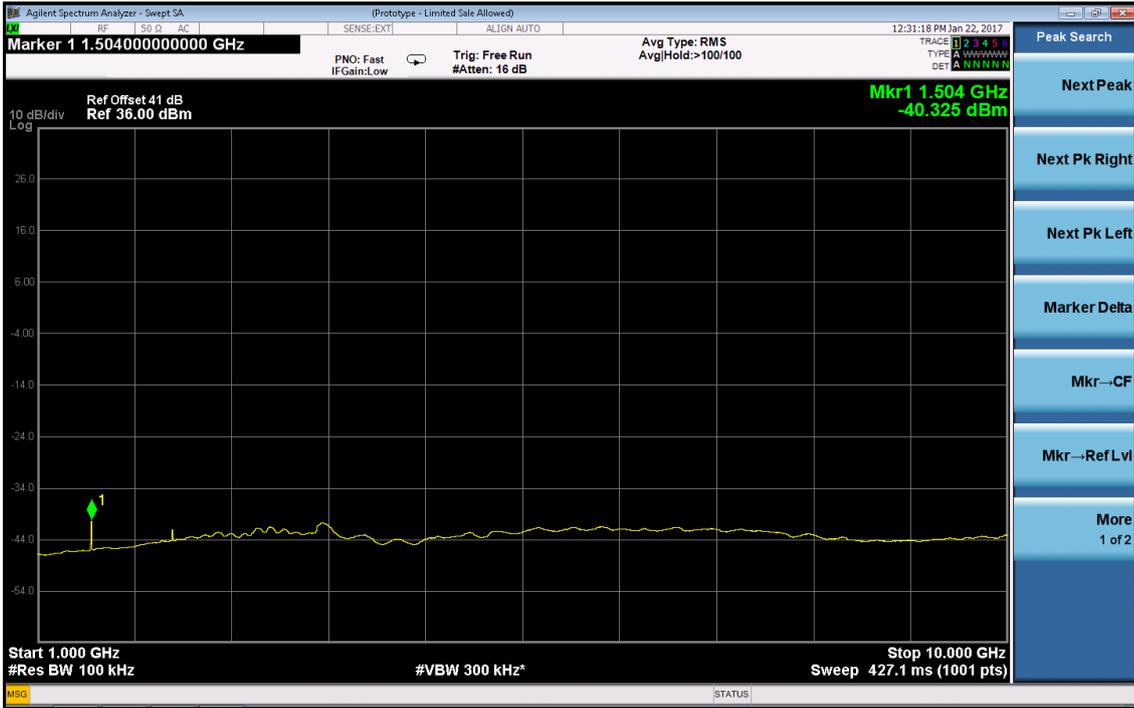
11.5 Test Result: Pass

11.6 Test Mode: Transmitting LTE

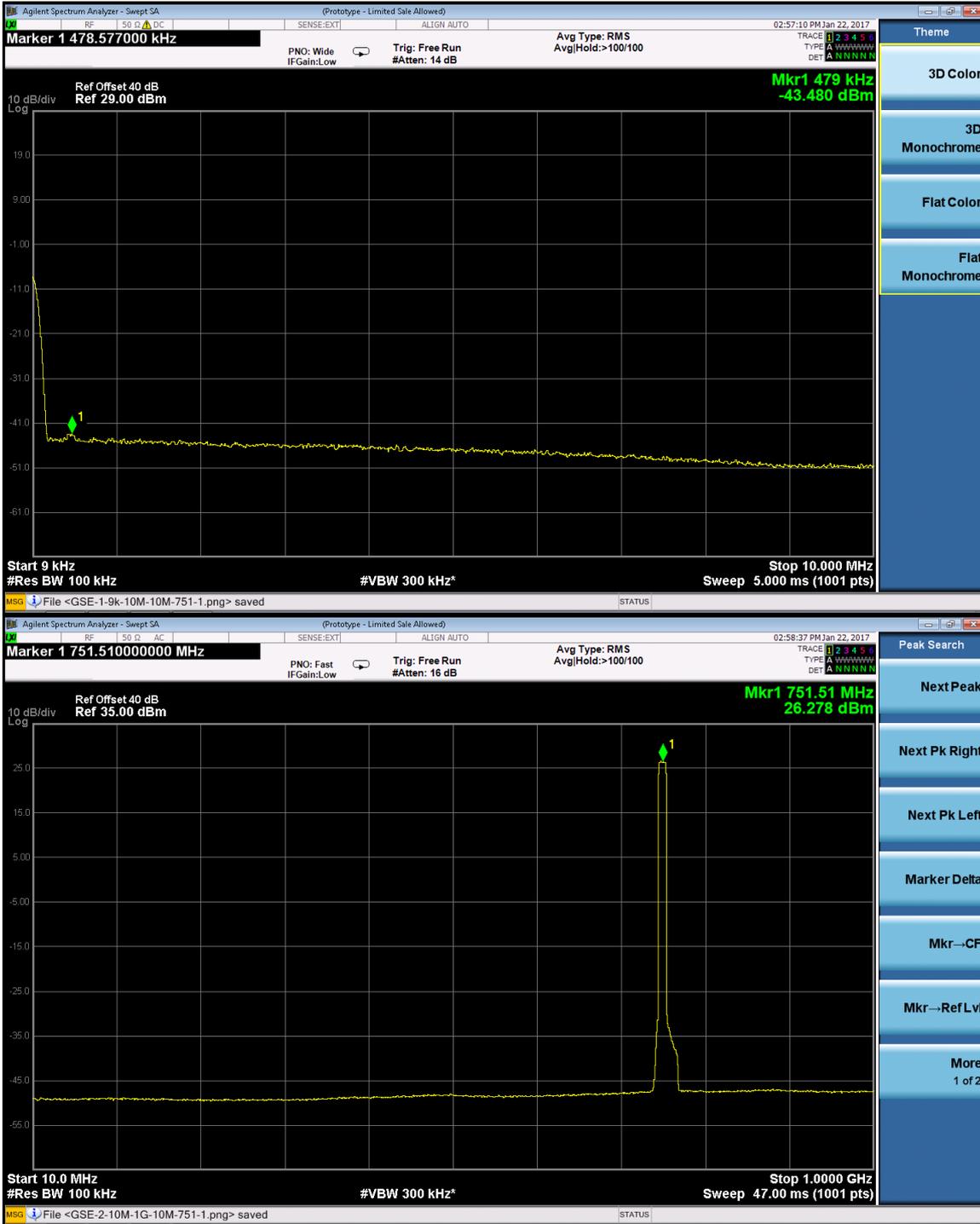
11.7 Test Data

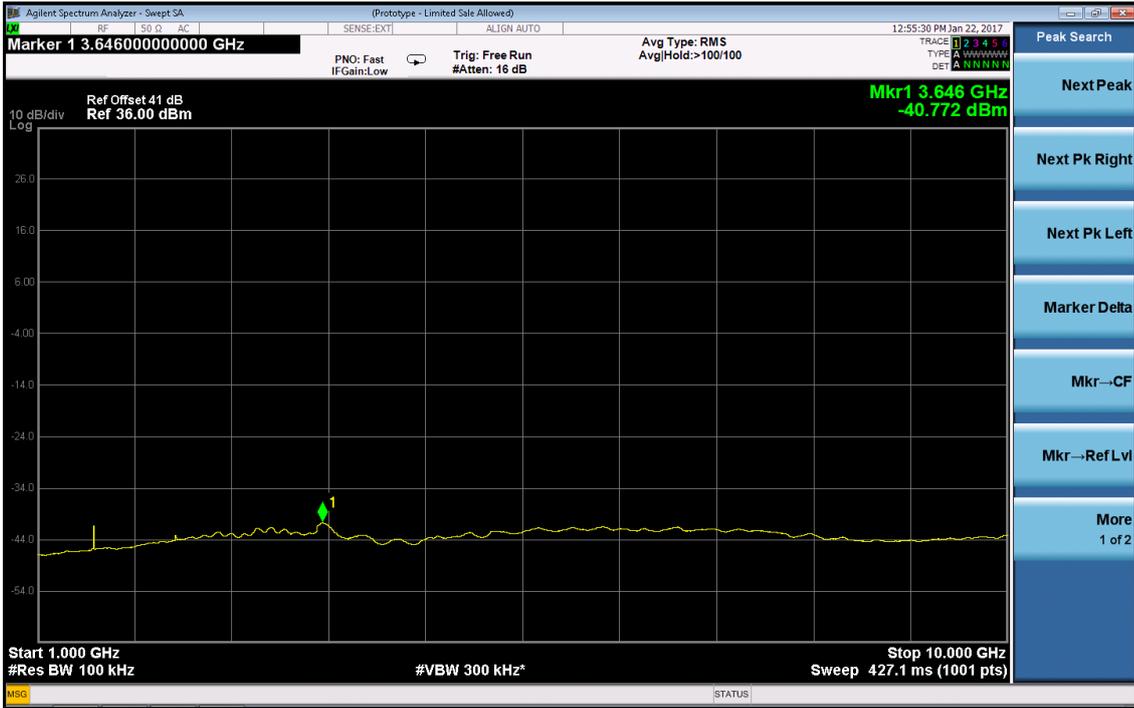
10M -Port 1 -751MHz





10M -Port 4 -751MHz





**12 10 OCCUPIED BANDWIDTH****12.1 Applicable Standard: FCC §2.1049****12.2 Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	MXA Series Spectrum Analyzer	N9030A	MY49431143	2016.06.18	2017.06.18
DTS	DTS 40dB Attenuator	DTS100-40-3-1	09112005	2016.07.19	2017.07.19

***statement of traceability:** ZTE Corporation Reliability Testing Center attest that all calibration have been performed per the NVLAP requirements, traceable to NIST.

12.3 Test Procedure

The RF out of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation. 99%Power bandwidth was recorded.

12.4 Environmental Conditions

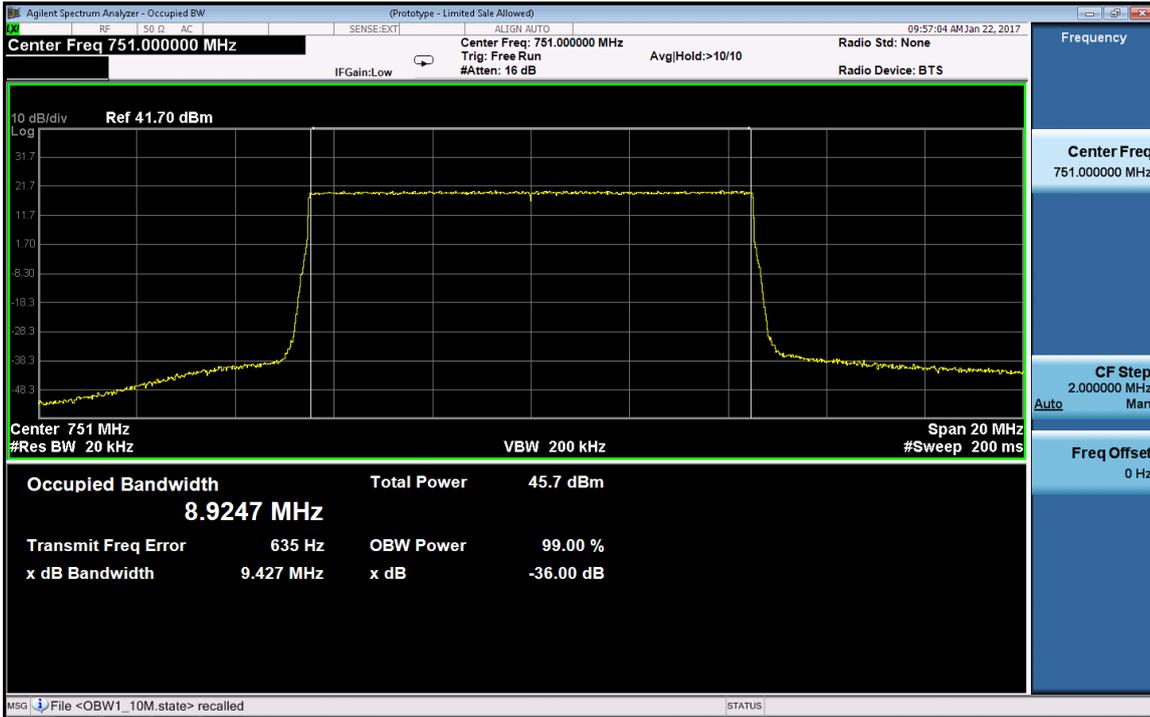
Temperature:	20 ° C
Relative Humidity:	53%
ATM Pressure:	1009mbar

12.5 Test Result: Pass**12.6 Test Mode: Transmitting LTE****12.7 Test Data**

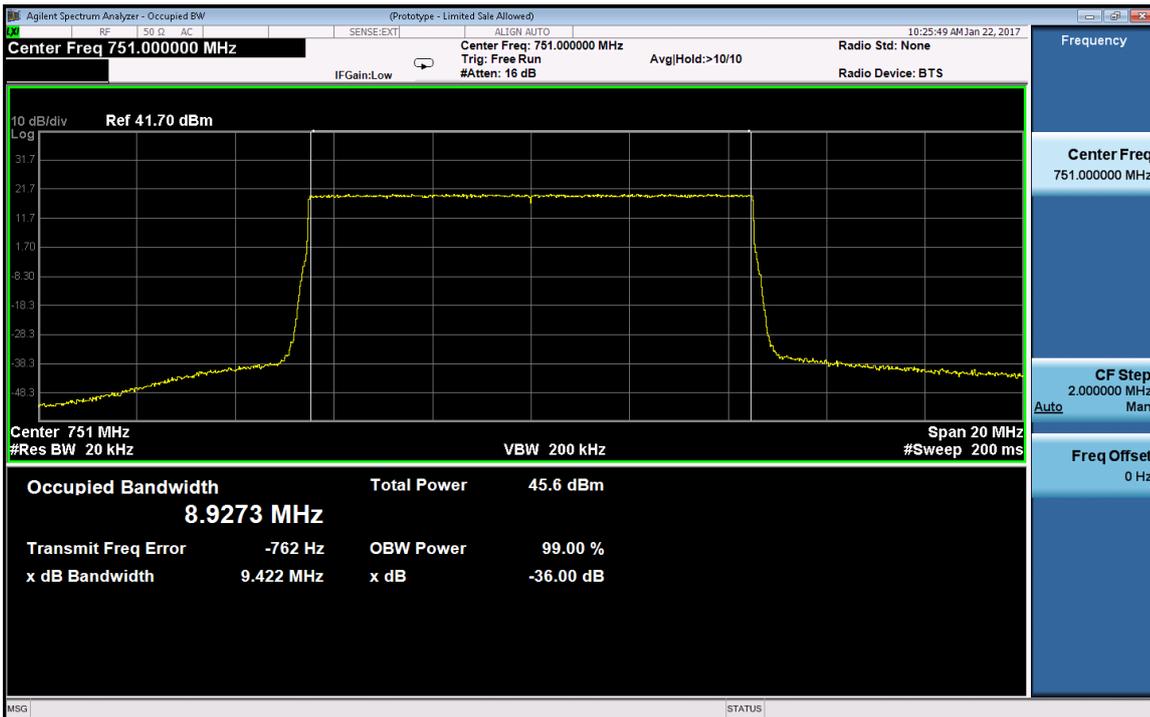
Channel Bandwidth :10M

Port	Center Freq. (MHz)	99% Power Bandwidth (MHz)	Limit (MHz)
1	751	8.9247	10M
4	751	8.9273	10M

10M -Port 1 -751MHz



10M -Port 4 -751MHz



**13 11 BAND EDGES****13.1 Applicable Standard: FCC §2.1051, §27.53**

According to §2.1051, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (p) by a factor of at least $43 + 10 \log(p)$ dB. The limit (dBm) should $< P - (43 + 10 \log(P)) = -13 \text{dBm}$.

13.2 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	MXA Series Spectrum Analyzer	N9030A	MY49431143	2016.06.18	2017.06.18
DTS	DTS 40dB Attenuator	DTS100-40-3-1	09112005	2016.07.19	2017.07.19

***statement of traceability:** ZTE Corporation Reliability Testing Center attest that all calibration have been performed per the NVLAP requirements , traceable to NIST.

13.3 Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency.

13.4 Test Data Environmental Conditions

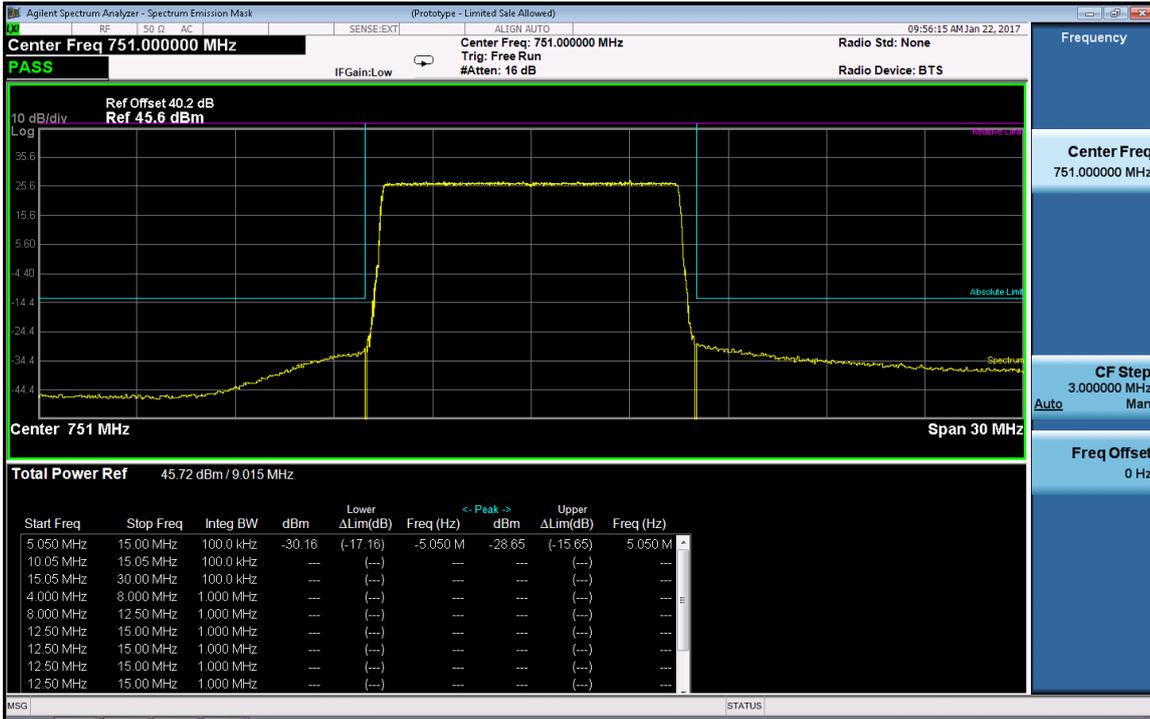
Temperature:	20 °C
Relative Humidity:	53%
ATM Pressure:	1009mbar

13.5 Test Result: Pass**13.6 Test Mode: Transmitting LTE****13.7 Test Data**

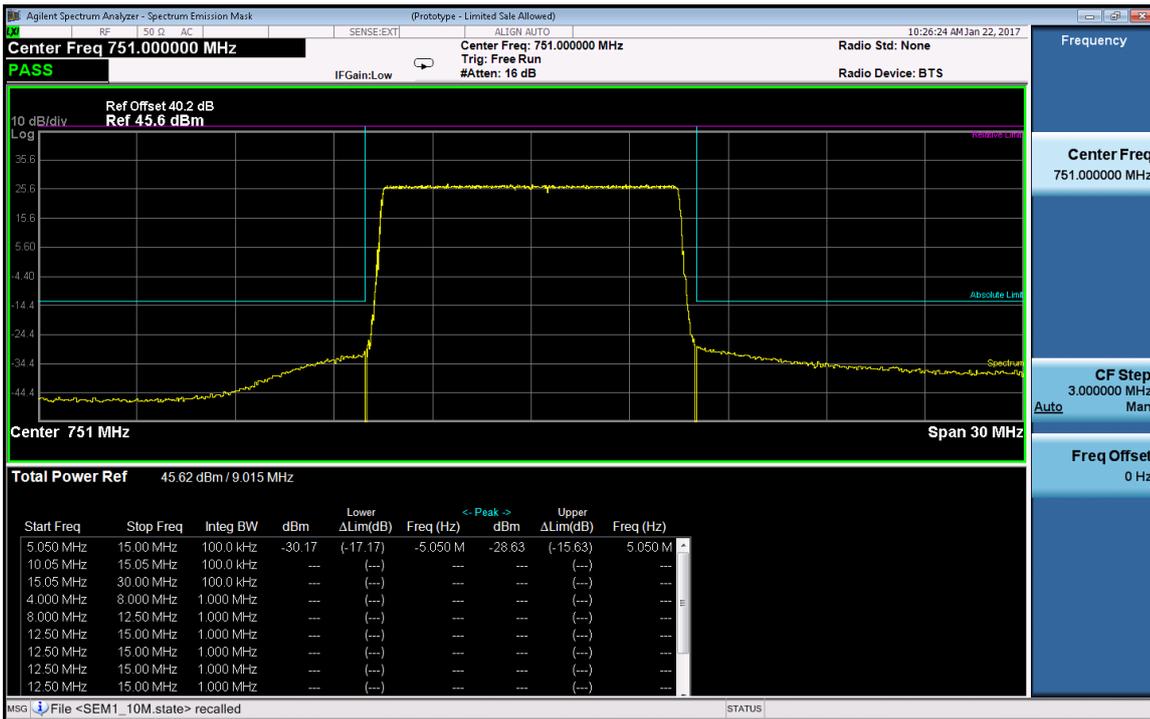
Channel Bandwidth :10M

Port	Center Freq. (MHz)	Max bandedge Emission (dBm)	Limit (dBm)
1	751	-28.65	-13
4	751	-28.63	-13

10M -Port 1 -751MHz



10M -Port 4 -751MHz





14 12 FREQUENCY STABILITY

14.1 Applicable Standard: FCC § 2.1055

Requirements: FCC § 2.1055 (a)(d), The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

14.2 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
GZ-ESPEC	Temperature Chamber	EW0470	06113028	2016.12.06	2017.12.06
Agilent	MXA Series Spectrum Analyzer	N9030A	MY49431143	2016.06.18	2017.06.18
DTS	DTS 40dB Attenuator	DTS100-40-3-1	09112005	2016.07.19	2017.07.19

***statement of traceability:** ZTE Corporation Reliability Testing Center attest that all calibration have been performed per the NVLAP requirements, traceable to NIST.

14.3 Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to a Spectrum Analyzer via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose. After the temperature stabilized for approximately 150 minutes, the frequency output was recorded from the counter.

Frequency Stability vs. Voltage: An external variable DC power supply Source. The voltage was set to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the end point. The output frequency was recorded for each voltage.

14.4 Environmental Conditions

Normal condition:	25° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

14.5 Test Result: Pass

14.6 Test Mode: Transmitting LTE

14.7 Test Data

14.8 Frequency Stability Versus Temperature

Frequency Stability vs Temperature (Channel Bandwidth:10M Frequency :751MHz)



Temperature (°C)	Power Supplied (V _{DC})	Port	Frequency Measure Error (Hz)	E-TM	Limit (ppm)	Limit (Hz)	Result
-40	-48	1	-2.5987	TM2.0	0.05	37.55	PASS
			-1.2026	TM3.1	0.05	37.55	PASS
			-1.2993	TM3.2	0.05	37.55	PASS
			-1.3265	TM3.3	0.05	37.55	PASS
		4	-3.2028	TM2.0	0.05	37.55	PASS
			-1.1375	TM3.1	0.05	37.55	PASS
			-1.2042	TM3.2	0.05	37.55	PASS
			-1.2227	TM3.3	0.05	37.55	PASS
-30	-48	1	-2.9379	TM2.0	0.05	37.55	PASS
			-1.3351	TM3.1	0.05	37.55	PASS
			-1.2189	TM3.2	0.05	37.55	PASS
			-1.2826	TM3.3	0.05	37.55	PASS
		4	-2.9655	TM2.0	0.05	37.55	PASS
			-1.2641	TM3.1	0.05	37.55	PASS
			-1.1767	TM3.2	0.05	37.55	PASS
			-1.2829	TM3.3	0.05	37.55	PASS
-20	-48	1	-2.6712	TM2.0	0.05	37.55	PASS
			-1.2816	TM3.1	0.05	37.55	PASS
			-1.1440	TM3.2	0.05	37.55	PASS
			-1.3331	TM3.3	0.05	37.55	PASS
		4	-2.9351	TM2.0	0.05	37.55	PASS
			-1.3375	TM3.1	0.05	37.55	PASS
			-1.3476	TM3.2	0.05	37.55	PASS
			-1.3307	TM3.3	0.05	37.55	PASS
-10	-48	1	-2.6714	TM2.0	0.05	37.55	PASS
			-1.1846	TM3.1	0.05	37.55	PASS
			-1.2141	TM3.2	0.05	37.55	PASS
			-1.2749	TM3.3	0.05	37.55	PASS
		4	-2.3913	TM2.0	0.05	37.55	PASS
			-1.2035	TM3.1	0.05	37.55	PASS
			-1.1932	TM3.2	0.05	37.55	PASS
			-1.2967	TM3.3	0.05	37.55	PASS
0	-48	1	-2.8120	TM2.0	0.05	37.55	PASS
			-1.1484	TM3.1	0.05	37.55	PASS
			-1.1494	TM3.2	0.05	37.55	PASS
			-1.3972	TM3.3	0.05	37.55	PASS
		4	-2.9372	TM2.0	0.05	37.55	PASS
			-1.2551	TM3.1	0.05	37.55	PASS



10		-1.2192	TM3.2	0.05	37.55	PASS	
		-1.2527	TM3.3	0.05	37.55	PASS	
	1	-3.0101	TM2.0	0.05	37.55	PASS	
		-1.2256	TM3.1	0.05	37.55	PASS	
		-1.0074	TM3.2	0.05	37.55	PASS	
		-1.2490	TM3.3	0.05	37.55	PASS	
		-2.9809	TM2.0	0.05	37.55	PASS	
	4	-1.1883	TM3.1	0.05	37.55	PASS	
		1.2446	TM3.2	0.05	37.55	PASS	
		-1.3940	TM3.3	0.05	37.55	PASS	
-2.0597		TM2.0	0.05	37.55	PASS		
20	1	-1.2022	TM3.1	0.05	37.55	PASS	
		-1.0887	TM3.2	0.05	37.55	PASS	
		-1.2095	TM3.3	0.05	37.55	PASS	
		-2.1877	TM2.0	0.05	37.55	PASS	
	4	-1.2470	TM3.1	0.05	37.55	PASS	
		-1.1959	TM3.2	0.05	37.55	PASS	
		-1.1161	TM3.3	0.05	37.55	PASS	
		-2.4759	TM2.0	0.05	37.55	PASS	
	30	1	-1.2008	TM3.1	0.05	37.55	PASS
			-1.3405	TM3.2	0.05	37.55	PASS
-1.3042			TM3.3	0.05	37.55	PASS	
-2.4173			TM2.0	0.05	37.55	PASS	
4		-1.2544	TM3.1	0.05	37.55	PASS	
		-1.0240	TM3.2	0.05	37.55	PASS	
		-1.3296	TM3.3	0.05	37.55	PASS	
		-2.5986	TM2.0	0.05	37.55	PASS	
40		1	-1.2031	TM3.1	0.05	37.55	PASS
			-1.2923	TM3.2	0.05	37.55	PASS
	-1.3244		TM3.3	0.05	37.55	PASS	
	-3.2044		TM2.0	0.05	37.55	PASS	
	4	-1.1365	TM3.1	0.05	37.55	PASS	
		-1.2000	TM3.2	0.05	37.55	PASS	
		-1.2258	TM3.3	0.05	37.55	PASS	
		-2.7379	TM2.0	0.05	37.55	PASS	
	50	1	-1.3451	TM3.1	0.05	37.55	PASS
			-1.2189	TM3.2	0.05	37.55	PASS
-1.2826			TM3.3	0.05	37.55	PASS	
-2.6455			TM2.0	0.05	37.55	PASS	
4		-1.2647	TM3.1	0.05	37.55	PASS	
		-1.1767	TM3.2	0.05	37.55	PASS	



55	1	-1.2829	TM3.3	0.05	37.55	PASS
		-2.5762	TM2.0	0.05	37.55	PASS
		-1.2856	TM3.1	0.05	37.55	PASS
		-1.2441	TM3.2	0.05	37.55	PASS
		-1.2331	TM3.3	0.05	37.55	PASS
	4	-2.5351	TM2.0	0.05	37.55	PASS
		-1.3253	TM3.1	0.05	37.55	PASS
		-1.3584	TM3.2	0.05	37.55	PASS
		-1.3452	TM3.3	0.05	37.55	PASS

14.8.1 Frequency Stability Versus Voltage

Frequency Stability vs Voltage (Channel Bandwidth:10M Frequency :751MHz)							
Power Supplied (V _{DC})	Temperature (°C)	Port	Frequency Measure Error (Hz)	E-TM	Limit (ppm)	Limit (Hz)	Result
-40	20	1	-2.7714	TM2.0	0.05	37.55	PASS
			-1.1846	TM3.1	0.05	37.55	PASS
			-1.2541	TM3.2	0.05	37.55	PASS
			-1.2749	TM3.3	0.05	37.55	PASS
		4	-2.3913	TM2.0	0.05	37.55	PASS
			-1.2035	TM3.1	0.05	37.55	PASS
			-1.1832	TM3.2	0.05	37.55	PASS
			-1.2967	TM3.3	0.05	37.55	PASS
-44	20	1	-2.8320	TM2.0	0.05	37.55	PASS
			-1.1584	TM3.1	0.05	37.55	PASS
			-1.1494	TM3.2	0.05	37.55	PASS
			-1.3972	TM3.3	0.05	37.55	PASS
		4	-2.9372	TM2.0	0.05	37.55	PASS
			-1.2551	TM3.1	0.05	37.55	PASS
			-1.2192	TM3.2	0.05	37.55	PASS
			-1.2527	TM3.3	0.05	37.55	PASS
-48	20	1	-3.0105	TM2.0	0.05	37.55	PASS
			-1.2358	TM3.1	0.05	37.55	PASS
			-1.0173	TM3.2	0.05	37.55	PASS
			-1.2591	TM3.3	0.05	37.55	PASS
		4	-2.9809	TM2.0	0.05	37.55	PASS
			-1.1873	TM3.1	0.05	37.55	PASS
			1.2456	TM3.2	0.05	37.55	PASS
			-1.3940	TM3.3	0.05	37.55	PASS
-52	20	1	-2.0597	TM2.0	0.05	37.55	PASS



-57			-1.2022	TM3.1	0.05	37.55	PASS	
			-1.0887	TM3.2	0.05	37.55	PASS	
			-1.2095	TM3.3	0.05	37.55	PASS	
		4		-2.1877	TM2.0	0.05	37.55	PASS
				-1.2470	TM3.1	0.05	37.55	PASS
				-1.1758	TM3.2	0.05	37.55	PASS
				-1.1261	TM3.3	0.05	37.55	PASS
		1		-2.5754	TM2.0	0.05	37.55	PASS
				-1.2065	TM3.1	0.05	37.55	PASS
				-1.3608	TM3.2	0.05	37.55	PASS
				-1.3035	TM3.3	0.05	37.55	PASS
		4		-2.4278	TM2.0	0.05	37.55	PASS
				-1.3024	TM3.1	0.05	37.55	PASS
				-1.1204	TM3.2	0.05	37.55	PASS
				-1.2450	TM3.3	0.05	37.55	PASS

---End of Report---