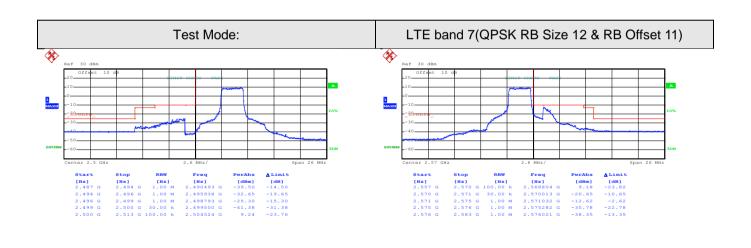


Date: 22.APR.2017 22:58:34

Date: 22.APR.2017 23:03:27

#### Lowest channel

Highest channel



Date: 22.APR.2017 22:59:09

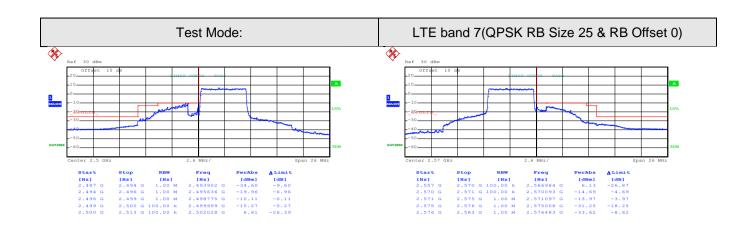
Date: 22.APR.2017 23:04:33

Lowest channel

Highest channel





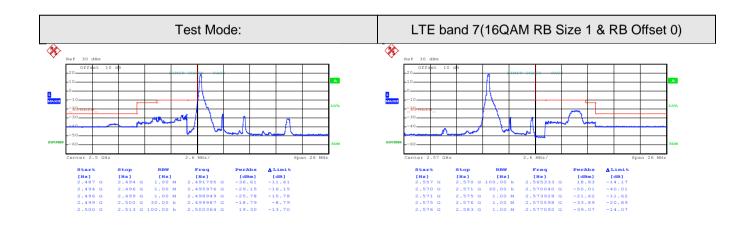


Date: 22.APR.2017 23:00:02

Date: 22.APR.2017 23:05:16

Lowest channel

Highest channel



Date: 22.APR.2017 22:56:19

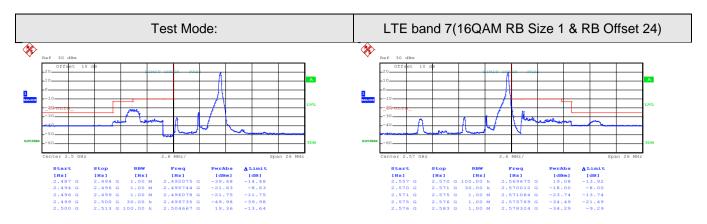
Date: 22.APR.2017 23:02:02

Lowest channel

Highest channel





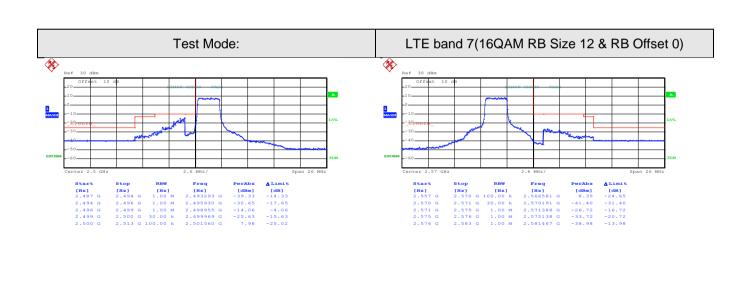


Date: 22.APR.2017 22:56:58

Date: 22.APR.2017 23:03:09

#### Lowest channel

Highest channel



Date: 22.APR.2017 22:58:50

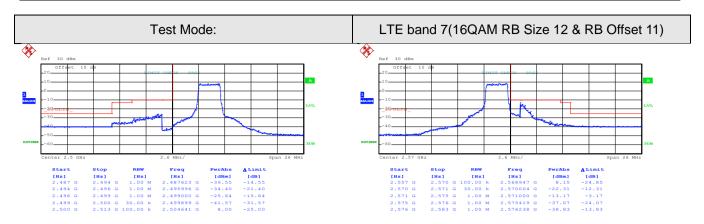
Date: 22.APR.2017 23:03:37

Lowest channel

Highest channel





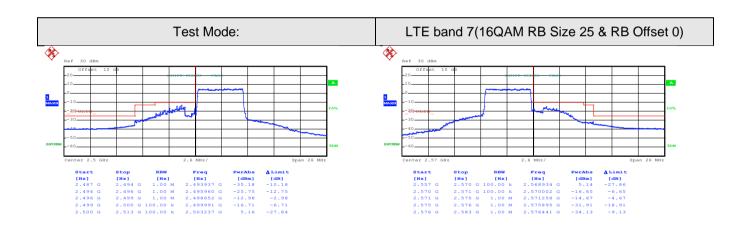


Date: 22.APR.2017 22:59:20

Date: 22.APR.2017 23:04:46

Lowest channel

Highest channel



Date: 22.APR.2017 23:01:02

Date: 22.APR.2017 23:05:25

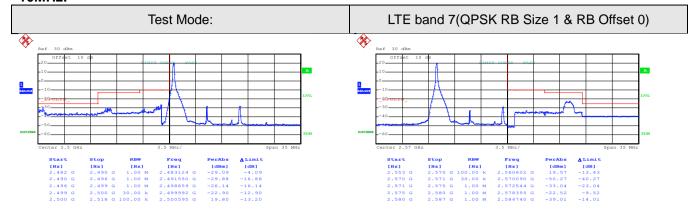
Lowest channel

Highest channel





## 10MHz:

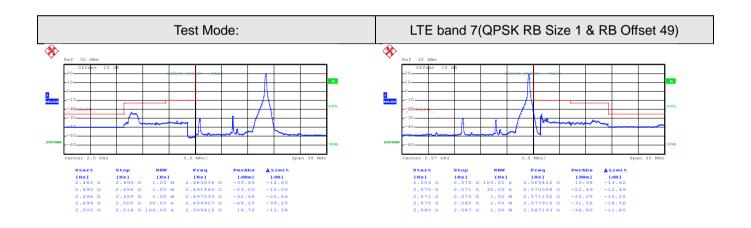


Date: 22.APR.2017 23:09:41

Date: 22.APR.2017 23:20:46

Lowest channel

Highest channel



Date: 22.APR.2017 23:10:30

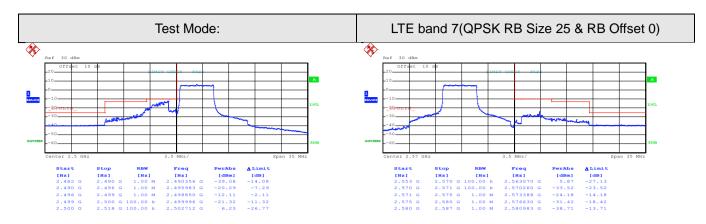
Date: 22.APR.2017 23:21:14

Lowest channel

Highest channel





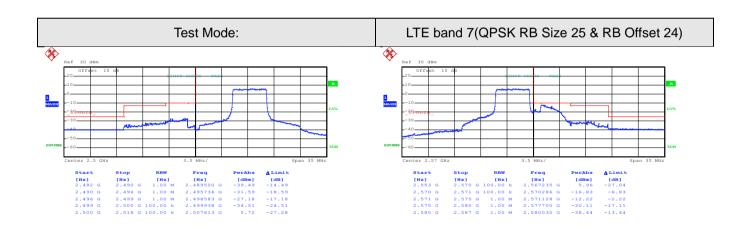


Date: 22.APR.2017 23:11:12

Date: 22.APR.2017 23:22:01

#### Lowest channel

Highest channel



Date: 22.APR.2017 23:11:43

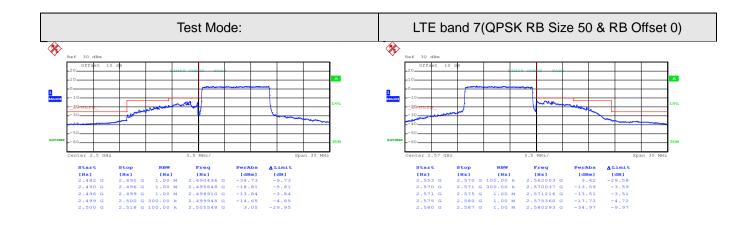
Date: 22.APR.2017 23:23:04

Lowest channel

Highest channel





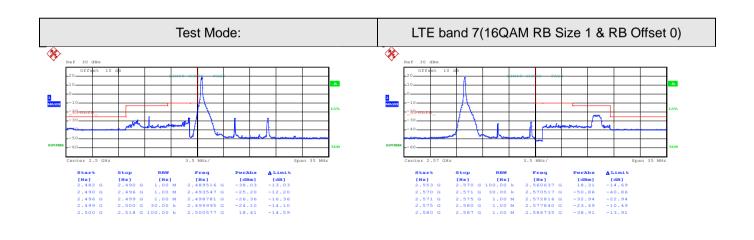


Date: 22.APR.2017 23:12:22

Date: 22.APR.2017 23:23:44

Lowest channel

Highest channel



Date: 22.APR.2017 23:10:10

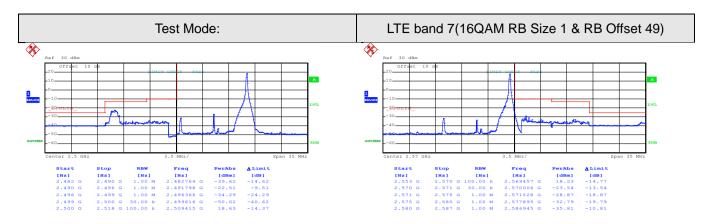
Date: 22.APR.2017 23:20:55

Lowest channel

Highest channel





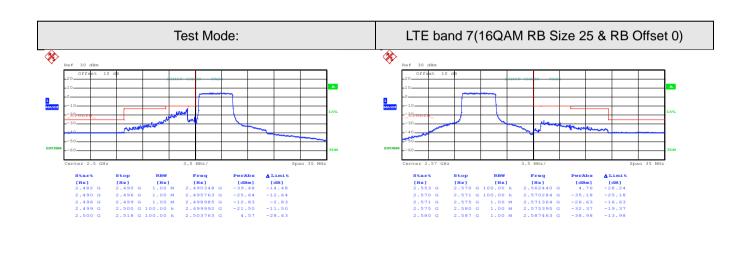


Date: 22.APR.2017 23:10:40

Date: 22.APR.2017 23:21:25

#### Lowest channel

Highest channel



Date: 22.APR.2017 23:11:23

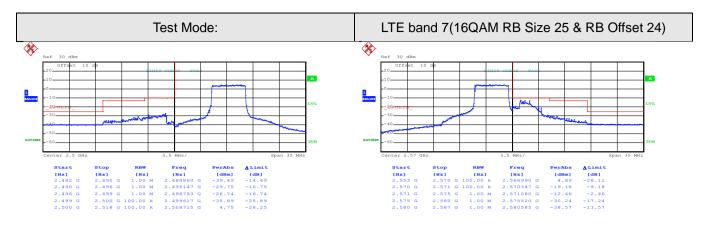
Date: 22.APR.2017 23:22:10

Lowest channel

Highest channel





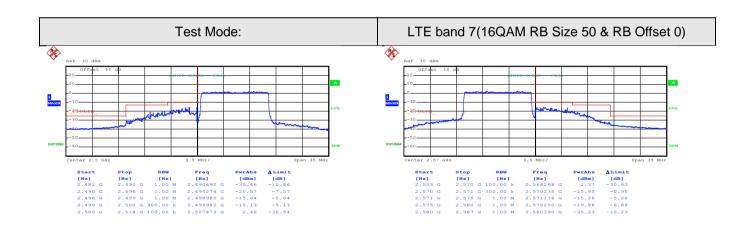


Date: 22.APR.2017 23:11:51

Date: 22.APR.2017 23:23:20

Lowest channel

Highest channel



Date: 22.APR.2017 23:12:29

Date: 22.APR.2017 23:23:52

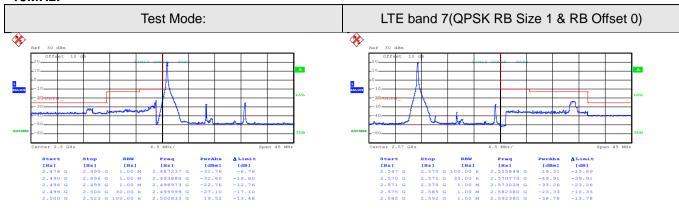
Lowest channel

Highest channel





## 15MHz:

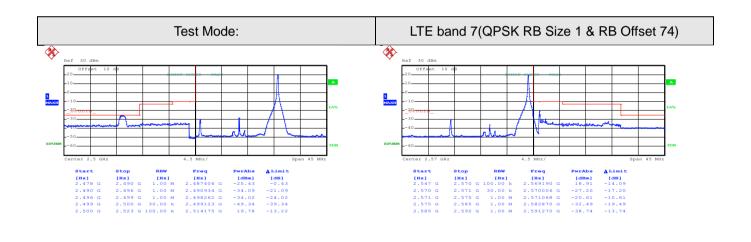


Date: 22.APR.2017 23:25:32

Date: 22.APR.2017 23:28:52

Lowest channel

Highest channel



Date: 22.APR.2017 23:26:01

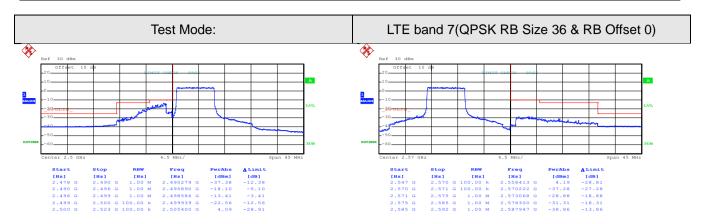
Date: 22.APR.2017 23:29:15

Lowest channel

Highest channel





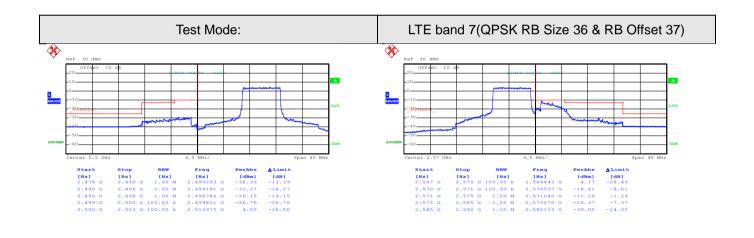


Date: 22.APR.2017 23:27:01

Date: 22.APR.2017 23:29:59

Lowest channel

Highest channel



Date: 22.APR.2017 23:27:28

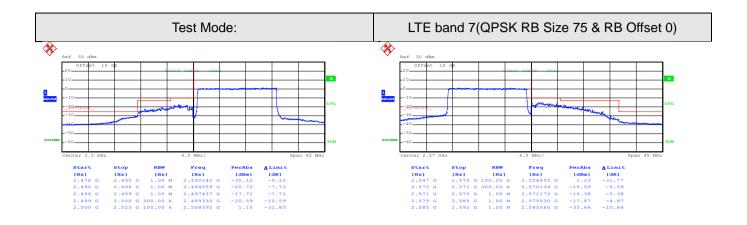
Date: 22.APR.2017 23:30:25

Lowest channel

Highest channel





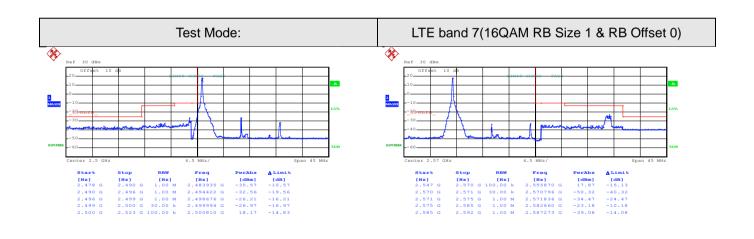


Date: 22.APR.2017 23:28:04

Date: 22.APR.2017 23:31:08

Lowest channel

Highest channel



Date: 22.APR.2017 23:25:41

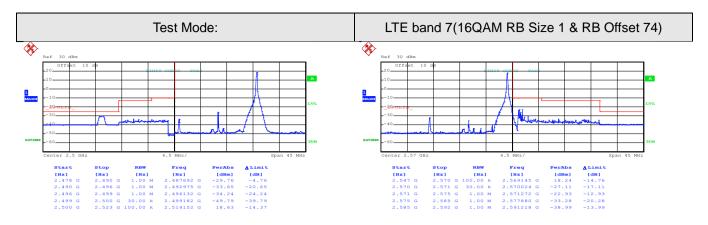
Date: 22.APR.2017 23:29:00

Lowest channel

Highest channel





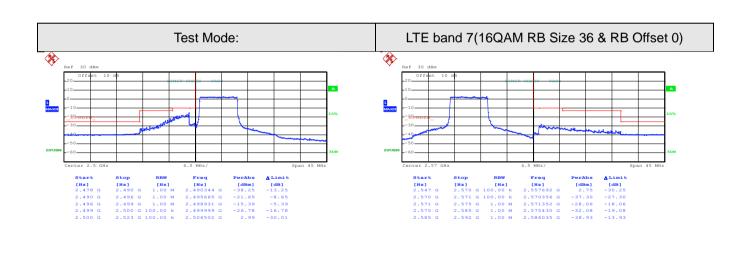


Date: 22.APR.2017 23:26:29

Date: 22.APR.2017 23:29:25

#### Lowest channel

Highest channel



Date: 22.APR.2017 23:27:10

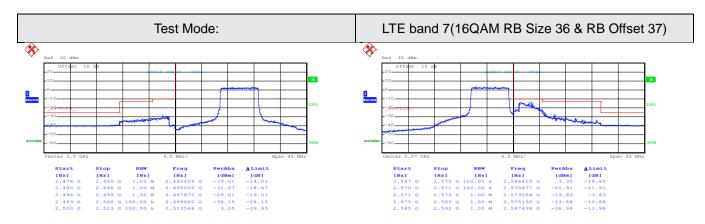
Date: 22.APR.2017 23:30:08

Lowest channel

Highest channel





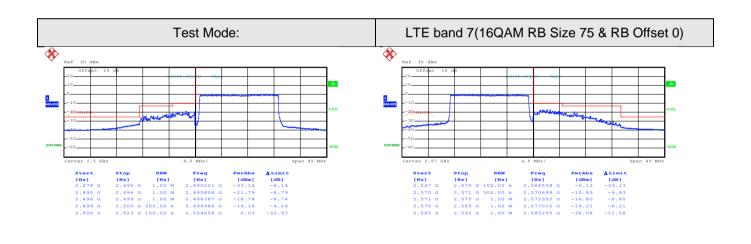


Date: 22.APR.2017 23:27:38

Date: 22.APR.2017 23:30:36

#### Lowest channel

Highest channel



Date: 22.APR.2017 23:28:17

Date: 22.APR.2017 23:31:16

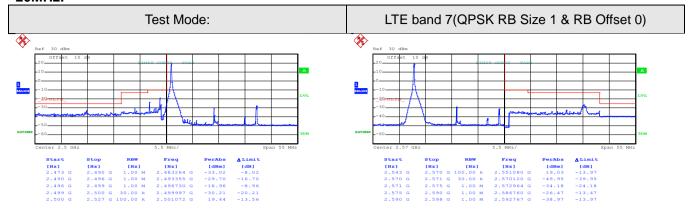
Lowest channel

Highest channel





## 20MHz:

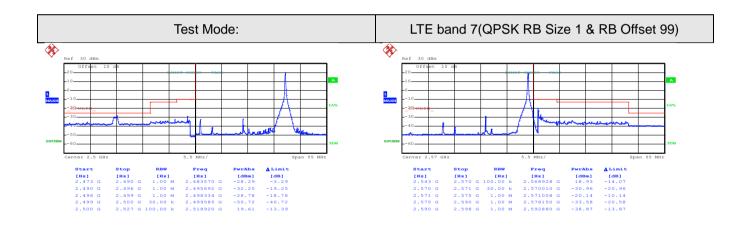


Date: 22.APR.2017 23:32:58

Date: 22.APR.2017 23:35:33

Lowest channel

Highest channel



Date: 22.APR.2017 23:33:21

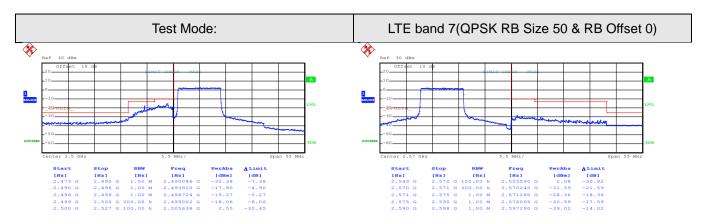
Date: 22.APR.2017 23:35:55

Lowest channel

Highest channel





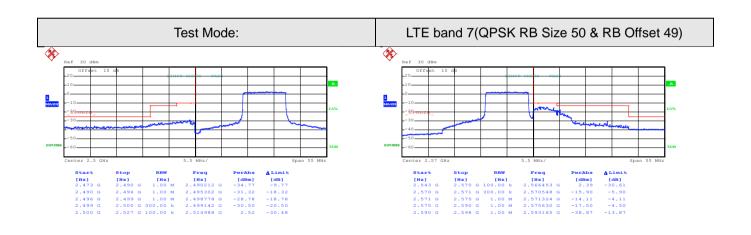


Date: 22.APR.2017 23:34:01

Date: 22.APR.2017 23:36:27

#### Lowest channel

Highest channel



Date: 22.APR.2017 23:34:27

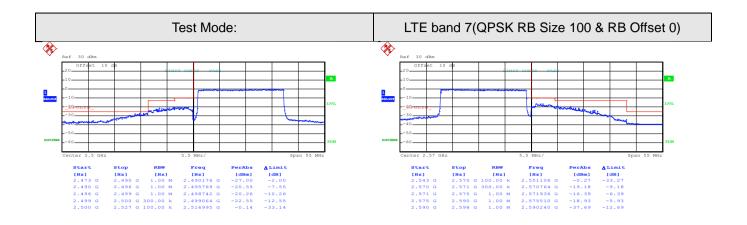
Date: 22.APR.2017 23:36:50

Lowest channel

Highest channel





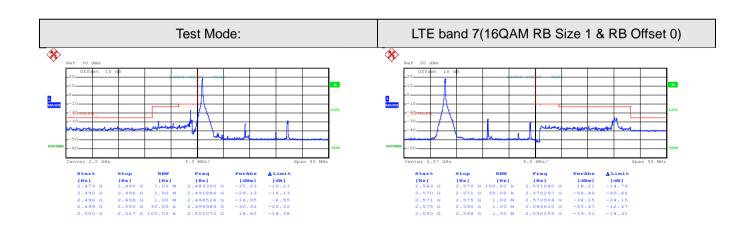


Date: 22.APR.2017 23:34:53

Date: 22.APR.2017 23:37:18

Lowest channel

Highest channel



Date: 22.APR.2017 23:33:07

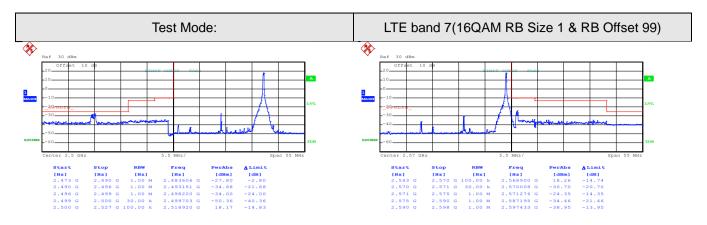
Date: 22.APR.2017 23:35:42

Lowest channel

Highest channel





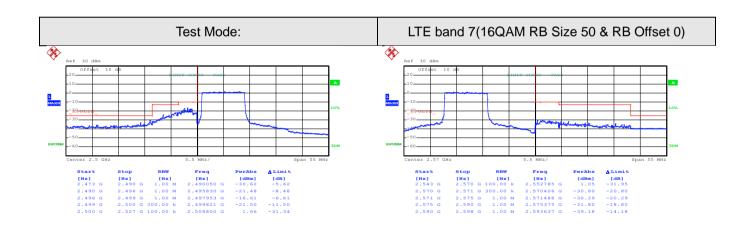


Date: 22.APR.2017 23:33:31

Date: 22.APR.2017 23:36:03

Lowest channel

Highest channel



Date: 22.APR.2017 23:34:13

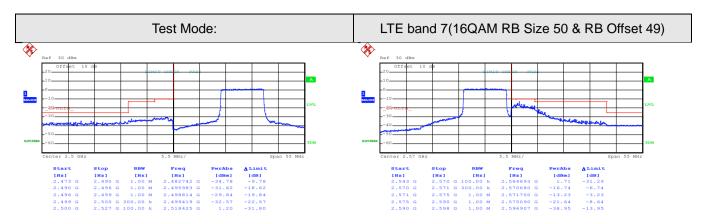
Date: 22.APR.2017 23:36:35

Lowest channel

Highest channel





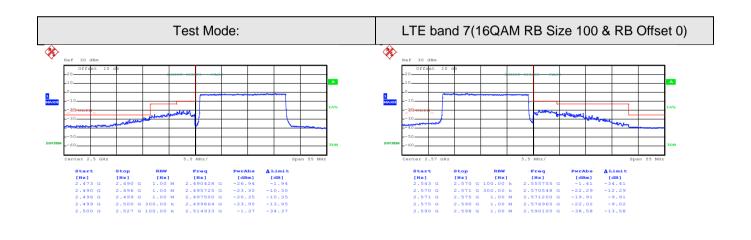


Date: 22.APR.2017 23:34:37

Date: 22.APR.2017 23:37:01

#### Lowest channel

Highest channel



Date: 22.APR.2017 23:35:04

Date: 22.APR.2017 23:37:26

Lowest channel

Highest channel





# 6.10 ERP, EIRP Measurement

Test Requirement:	24.232 (c), part 27.50(d), part 27.50 (h)
Test Method:	FCC part2.1046
Limit:	LTE Band 2: 2W EIRP LTE Band 4: 1W EIRP LTE Band 7: 2W EIRP
Test setup:	Below 1GHz  Antenna Tower  Search Antenna  RF Test Receiver  Ground Plane  Above 1GHz
	Asterna Tower  Horn Automa  Spectrum  Amplifier  Amplifier
	Substituted method:  Antenna mast  d: distance in meters d:3 meter  Spa  Substituted Dipole or Horn Antenna  Bi-Log Antenna or Horn Antenna





Test Procedure:	1. The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.
	2. During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated.
	3. ERP in frequency band below 1GHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated as follows:
	<ul> <li>ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)</li> <li>4. EIRP in frequency band above 1GHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:</li> </ul>
	EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB)  5. The worse case was relating to the conducted output power.
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed





# Measurement Data (worst case):

# LTE band 2 part

## Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result		
		1.	4MHz(RB s	ize 1 & RB	offset 0)					
1850.70	18607	QPSK	1.4	Н	V	24.57				
1650.70	10007	QPSK	1.4	П	Н	19.62	33.00	Pass		
1950.70	10607	16OAM	1.1	Н	V	22.10	33.00	Pass		
1850.70	18607	16QAM	1.4	П	Н	16.45				
	1.4MHz(RB size 3 & RB offset 0)									
1050.70	10607	ODSK	1.4	Н	V	22.07				
1850.70	18607	QPSK	1.4		Н	14.07	33.00	Door		
1850.70	18607	16QAM	1.4	Н	V	21.59	33.00	Pass		
1650.70	10007	TOQAW	1.4	П	Н	14.25				
		1.	4MHz(RB s	size 6 & RB	offset 0)					
4050.70	40007	ODCK	4.4		V	20.71				
1850.70	18607	QPSK	1.4	Н	Н	12.59	22.00	Door		
1950.70	10607	160AM	1.4	Н	V	20.96	33.00	Pass		
1850.70	18607	16QAM	1.4	"	Н	13.03				

## Middle channel

	Middle channel											
Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result				
		1.4	4MHz(RB	size 1 & RE	3 offset 0)							
1880.00	18900	QPSK	1.4	Н	V	24.56						
1000.00	16900	QFSN	1.4	П	Н	19.72	33.00	Pass				
1880.00	18900	16QAM	1.4	Н	V	22.08	33.00	rass				
1000.00	10900	IOQAW	1.4	11	Н	16.52						
	1.4MHz(RB size 3 & RB offset 0)											
1880.00	18900	QPSK	1.4	Н	V	22.03						
1660.00	16900	QFSK	1.4	11	Н	14.12	33.00	Pass				
1880.00	18900	16QAM	1.4	Н	V	21.63	33.00	F 455				
1000.00	10900	TOQAM	1.4	11	Н	14.35						
		1.4	4MHz(RB	size 6 & RE	3 offset 0)							
1880.00	18900	QPSK	1.40	Н	V	20.74						
1000.00	10900	QFSK	1.40	11	Н	12.68	33.00	Pass				
1880.00	1880.00 18900 160	16QAM	16QAM 1.40	Н	V	20.95	33.00	Pass				
1000.00	10900	ΙΟΘΛΙΝΙ	1.40	11	Н	13.05						





**Highest channel** 

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result		
			1.4MHz(RE	3 size 1 & F	RB offset 0)					
1000 20	10102	QPSK	1.4	Н	V	24.49				
1909.30	19193	QFSK	1.4	П	Н	19.68	22.00	Pass		
1000 20	10102	16QAM	1.4	Н	V	22.11	33.00	Fa55		
1909.30	19193	IOQAW	1.4	П	Н	16.54				
	1.4MHz(RB size 3 & RB offset 0)									
1000 20	10102	ODSK	,	4.4	V	22.00		Door		
1909.30	19193	QPSK	1.4	Н	Н	14.09	33.00			
1909.30	19193	16QAM	1.4	Н	V	21.62		Pass		
1909.50	19193	IOQAW	1.4	П	Н	14.35				
			1.4MHz(RE	3 size 6 & F	RB offset 0)					
1000 20	10102	ODSK	4.4	ы	V	20.76				
1909.30	19193	QPSK	1.4 H		Н	12.39	33.00	Pass		
1909.30	19193	16QAM	1.4 H	V	20.97					
1909.30	נפופו	IOQAW	1.4	П	Н	13.09				

#### Lowest channel

	Lowest Channel										
Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result			
	20MHz(RB size 1 & RB offset 0)										
1960.00	10700	ODCK	20	Н	V	20.96					
1860.00	18700	QPSK	20	П	Н	12.85	33.00	Pass			
1860.00	18700	16QAM	20	Н	V	20.87	33.00	Fa55			
1000.00	10700	TOQAM	20 H H 12.89								
		2	0MHz(RB si	ze 50 & R	B offset 0)						
1860.00	18700	QPSK	20	Н	V	18.31					
1000.00	16700	QFSK	20	П	Н	11.21	33.00	Pass			
1860.00	18700	16QAM	20	Н	V	18.70	33.00	Fa55			
1000.00	16700	TOQAM	20	П	Н	11.46					
		20	MHz(RB siz	e 100 & R	RB offset 0)						
1860.00	18700	QPSK	20	Н	V	16.92					
1000.00	16700	QFSK	20	П	Н	10.63	33.00	Door			
1860.00	18700 16QAM	20	Н	V	17.10	33.00	Pass				
1000.00	18700	IOQAM	20	П	Н	10.68					





Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result				
	20MHz(RB size 1 & RB offset 0)											
1880.00	18900	QPSK	20	Н	V	21.02						
1000.00	10900	QFSK	20	П	Н	12.89	33.00	Pass				
1880.00	18900	16QAM	20	Н	V	21.03	33.00	Fa55				
1000.00	10900	IOQAW	20	П	Н	12.86						
	20MHz(RB size 50 & RB offset 0)											
1000.00	10000	ODSK	20	Н	V	18.34						
1880.00	18900	QPSK	20	П	Н	11.26	33.00	Pass				
1880.00	18900	16QAM	20	Н	V	18.76	33.00	Fa55				
1000.00	10900	IOQAW	20	П	Н	11.39						
		20	MHz(RB siz	ze 100 & R	B offset 0)							
1000.00	40000	ODCK	20	11	V	16.97						
1880.00	18900	QPSK	20	Н	Н	10.38	22.00	Door				
1880.00	18900	16QAM	20	Н	V	17.12	33.00	Pass				
1000.00	10900	IOQAW	20	17	Н	10.73						

**Highest channel** 

	Highest channel										
Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result			
20MHz(RB size 1 & RB offset 0)											
1900.00	19100	QPSK	20	Н	V	21.07					
1900.00	19100	QFSK	20		Н	13.02	33.00	Pass			
1900.00	19100	16QAM	20		<b>V</b>	21.06	33.00	F 455			
1900.00	19100	TOQAM	20	20 H		12.89					
		2	20MHz(RB s	size 50 &	RB offset 0	)					
1900.00	19100	QPSK	,	Н	V	18.39					
1900.00	19100	QFSK	20		Н	11.35	33.00	Pass			
1900.00	19100	16QAM	20	Н	<b>V</b>	18.74	33.00	F 455			
1900.00	19100	TOQAM	20	[1]	Н	11.46					
		2	0MHz(RB s	ize 100 8	RB offset (	0)					
1900.00	19100	QPSK	20	Н	V	16.99					
1900.00	19100	QFSK	20		Н	10.52	33.00	Pass			
1900.00	19100	9100 16QAM 20	20	Η	V	17.16	33.00	F 455			
1300.00	13100	IOQAM	20	11	Н	10.82					





# LTE band 4 part

### Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result			
		•	I.4MHz(RE	3 size 1 &	RB offset 0)						
1710.70	19957	QPSK	1.4	Н	V	18.99					
1710.70	19937	QFSK	1.4	1.4	Н	18.34	20.00	Door			
1710.70	19957	16QAM	1.4 H V 18.83	30.00	Pass						
1710.70	19937	IOQAW	1.4		Н	18.01					
	1.4MHz(RB size 3 & RB offset 0)										
1710.70	19957	QPSK	1.4	Н	V	18.37	30.00	Pass			
1710.70	19937	QFSK	1.4		Н	19.02					
1710.70	19957	16QAM	1.4	4.4	H V 18.75	30.00	Fa55				
1710.70	19937	IOQAW	1.4		Н	18.33					
		•	1.4MHz(RE	3 size 6 &	RB offset 0)						
1710 70	10057	ODSK	4.4	Н	V	17.65					
1710.70	19957	QPSK	1.4		Н	17.37	30.00	Pass			
1710.70	19957	16QAM 1.4	1.1		V	17.65					
1710.70	19907	IOQAW	1.4	Н	Н	17.78					

### Middle channel

-	Middle Channel											
Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result				
	1.4MHz(RB size 1 & RB offset 0)											
1732.50	20175	QPSK	1.4	Н	V	19.02						
1732.50	20175	QPSK	1.4	П	Н	18.36	30.00	Door				
1732.50	20175	16QAM	1.4 H	V	18.84	30.00	Pass					
1732.50	20173	IOQAW	1.4	Н	Н	18.00						
	1.4MHz(RB size 3 & RB offset 0)											
1732.50	20175	QPSK	,	1.4 H	V	18.34	30.00	Pass				
1732.50	20175	QPSK	1.4		Н	19.06						
1732.50	20175	16QAM	1.4	Н	V	18.76	30.00	F 455				
1732.50	20175	TOQAM	1.4	- 11	Н	18.74						
		1	.4MHz(RE	3 size 6 &	RB offset 0)							
1732.50	20175	QPSK	1.4	Н	V	17.64						
1732.50	20175	QPSK	1.4	П	Н	17.39	20.00	Door				
1732.50	20175	16QAM	1.4	1.4 H	V	17.64	30.00	Pass				
1732.50	20175	TOQAM	1.4	17	Н	17.83						





**Highest channel** 

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
			1.4MHz(RE	size 1 & F	RB offset 0)			
1754.30	20393	QPSK	1.4	Н	V	19.03		
1754.50	20393	QFSK	1.4	П	Н	18.34	30.00	Pass
1754 20	20393	16QAM	1.4	Н	V	18.86	30.00	Fa55
1754.30	20393	IOQAW	1.4	П	Н	18.00		
		•	1.4MHz(RE	3 size 3 & F	RB offset 0)			
1754 20	20202	ODCK	1.1	Ш	V	18.36		Pass
1754.30	20393	QPSK	1.4	Н	Н	19.04	30.00	
1754.30	20393	16QAM	1.4	Н	V	18.77	30.00	Pass
1754.50	20393	IOQAW	1.4	П	Н	18.75		
		,	1.4MHz(RE	3 size 6 & F	RB offset 0)			
4754.00	20202	ODCK	4.4	- 11	V	17.62		
1754.30	20393	QPSK	1.4	Н	Н	17.43	00.00	Pass
1754 20	20202	160014	1.4	Н	V	17.67	30.00	
1754.30	20393	16QAM	1.4	П	Н	17.82		

## Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result			
	20MHz(RB size 1 & RB offset 0)										
1720.00	20050	ODSK	20	Ш	V	19.12					
1720.00	20050	QPSK	20	Н	Н	18.56	20.00	Doos			
1720.00	20050	16O A M	20	Ш	V	19.14	30.00	Pass			
1720.00	20050	16QAM	20	Н	Н	18.62					
	20MHz(RB size 50 & RB offset 0)										
1720.00	20050	ODSK	20	Н	V	16.70					
1720.00	20050	QPSK	20	П	Н	16.17	30.00	Doos			
1720.00	20050	16QAM	20	Н	V	17.39	30.00	Pass			
1720.00	20030	TOQAM	20		Н	16.94					
		20MHz(	RB size 100	& RB offs	et 0)						
1720.00	20050	QPSK	20	Н	V	15.27					
1720.00	20050	QFSK	20	П	Н	15.42	20.00	Doos			
1720.00	20050	16QAM	20	Н	V	15.92	30.00	Pass			
1720.00	20000	TOQAM	20	17	Н	16.03					



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Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result		
	20MHz(RB size 1 & RB offset 0)									
1732.50	20175	QPSK	QPSK 20 H		V	19.16				
1732.50	20175	QFSK	20	П	Н	18.54	30.00	Pass		
1732.50	20175	16QAM	20	Н	V	19.12	30.00	F 455		
1732.50	20175	TOQAW	20	П	Н	18.64				
	20MHz(RB size 50 & RB offset 0)									
1732.50	20175	QPSK	20	Н	V	16.72				
1732.50	20173	QFSK	20	П	Н	16.14	30.00	Pass		
1732.50	20175	16QAM	20	Н	V	17.42	30.00	Pass		
1732.30	20173	TOQAIVI	20	!!	Н	16.92				
		20	MHz(RB siz	e 100 & R	B offset 0)					
1732.50	20175	QPSK	20	Н	V	15.34				
1732.50	20175	QFSK	20	П	Н	15.46	30.00	Pass		
1732.50	20175	16QAM	20	Н	V	15.93	30.00	газэ		
1732.30	20173	ΙΟΘΑΙΝΙ	20	11	Н	16.05				

High channel

	High channel										
Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result			
20MHz(RB size 1 & RB offset 0)											
1745.00	20300	QPSK	20	Н	V	16.14					
1745.00	20300	QFSK	20	П	Н	18.59	30.00	Page			
1745.00	20300	16QAM	20	Н	V	19.13	30.00	Pass			
1745.00	20300	TOQAM	20	П	Н	18.72					
20MHz(RB size 50 & RB offset 0)											
1745.00	20300	QPSK 20	ODSK 20	Н	V	16.74					
1745.00	20300	QFSK	20	П	Н	16.19	30.00	Pass			
1745.00	20300	16O A M	20	20	20	20	Н	V	17.43	30.00	Fa55
1745.00	20300	16QAM	20	П	Н	16.64					
		2	20MHz(RB siz	e 100 & RI	3 offset 0)						
1745.00	20300	QPSK	20	Н	V	15.39					
1745.00	20300	QFSN	20	П	Н	15.42	30.00	Pass			
1745.00	20300 16QAM 20 H	160011	20	20	1604M	V	15.96	30.00	Fa55		
1745.00	20300	IOQAM	20	П	Н	16.03					





# LTE band 7 part

## Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result		
	5MHz(RB size 1 & RB offset 0)									
2502.50	20775	QPSK	5	Н	V	13.54				
2502.50	20773	QFSK	5	П	Н	10.26	33.00	Door		
2502.50	20775	16QAM	5	Н	V	13.54	33.00	Pass		
2502.50	20773	IOQAW	5	П	Н	10.23				
	5MHz(RB size 12& RB offset 0)									
2502.50	20775	QPSK	5 H	V	13.16					
2502.50	20773	QFSK	5	П	Н	10.19	33.00	Door		
2502.50	20775	16QAM	5	Н	V	13.50	33.00	Pass		
2502.50	20773	IOQAW	5	П	Н	9.77				
			5MHz(RB	size 25&	RB offset 0)					
2502.50	20775	ODSK	E	Н	V	13.12				
2502.50	20775	QPSK	5	П	Н	8.54	22.00	Door		
2502.50	20775	16QAM	5	Н	V	13.01	33.00	Pass		
2502.50	20773	IOQAW	ິວ	П	Н	9.41				

#### Middle channel

	Middle Chairner										
Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result			
5MHz(RB size 1 & RB offset 0)											
2525.00	21100	OBSK	5	Н	V	13.59					
2535.00	21100	QPSK	5	Г	Н	10.32	33.00	Door			
2535.00	21100	16QAM	5	Н	V	13.53	33.00	Pass			
2555.00	21100	IOQAW		Н	10.26						
	5MHz(RB size 12& RB offset 0)										
2535.00	21100	QPSK		5	Н	V	13.18				
2555.00	21100	QFSK	5	П	Н	10.21	33.00	Pass			
2535.00	21100	16QAM	-	E	E	5	Н	V	13.48	33.00	Fa55
2555.00	21100	TOQAM	5		Н	9.86					
		5	MHz(RB	size 25&	RB offset 0)						
2525.00	21100	ODSK	5	Н	V	13.14					
2535.00	21100	QPSK	5	П	Н	8.56	22.00	Door			
2525.00	21100	16O A M	V	5 H	V	13.06	33.00	Pass			
2535.00	21100	16QAM	3	п	Н	9.42					





**Highest channel** 

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result		
	5MHz(RB size 1 & RB offset 0)									
2567.50	21425	QPSK	5	Н	V	13.62				
2567.50	21423	QFSK	5	П	Н	10.31	33.00	Door		
2567.50	21425	16QAM	5	Н	V	13.52	33.00	Pass		
2567.50	21423	IOQAW	5	П	Н	10.22				
			5MHz(RB	size 12& R	RB offset 0)					
2567.50	21425	QPSK		5 H	V	13.14		Pass		
2567.50	21425	QPSK	5	П	Н	10.23	33.00			
2567.50	21425	16QAM	F	E	5	Н	V	13.52	33.00	Fa55
2567.50	21423	IOQAW	5	П	Н	9.76				
			5MHz(RB	size 25& R	RB offset 0)					
2567.50	24.425	ODSK	E	Н	V	13.12				
2567.50	21425	QPSK	5	П	Н	8.57	22.00	Door		
2567.50	21425	16O A M	5	Н	V	13.08	33.00	Pass		
2567.50	21423	16QAM	ິ	П	Н	9.43				

## Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result	
20MHz(RB size 1 & RB offset 0)									
2510.00	20050	ODSK	20	Ш	V	13.74			
2510.00	20850	QPSK	20	Н	Н	10.48	22.00	Doos	
2510.00	20050	16O A M	20	Ш	V	13.99	33.00	Pass	
2510.00	20850	16QAM	20	Н	Н	10.45			
20MHz(RB size 50 & RB offset 0)									
2510.00	20050	00014	20	1.1	V	12.81			
2510.00	20850	QPSK	20	Н	Н	9.46	22.00	D	
2510.00	20050	16QAM	00	16OAM 20	Н	V	13.05	33.00	Pass
2510.00	20850	IOQAW	20	П	Н	9.63			
		20MHz(	RB size 100	& RB offs	et 0)				
2510.00	20050	OBSK	20	Ш	V	12.80			
2510.00	20850	QPSK	20	Н	Н	8.56	22.00	Doos	
2510.00	20050	16QAM	20	20	Н	V	12.44	33.00	Pass
2510.00	20850	IOQAW	20	П	Н	8.47			



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Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result		
	20MHz(RB size 1 & RB offset 0)									
2535.00	21100	QPSK	20	Н	V	13.76				
2555.00	21100	QFSN	20	П	Н	10.52	33.00	Page		
2535.00	21100	16QAM	20	Н	V	13.98	33.00	Pass		
2555.00	21100	TOQAW	20	П	Н	10.44				
	20MHz(RB size 50 & RB offset 0)									
2535.00	21100	QPSK	20	Н	V	12.83				
2555.00	21100	QFSK	20	П	Н	9.47	33 00	Pass		
2535.00	21100	16QAM	20	Н	V	13.02	33.00	F 455		
2555.00	21100	TOQAW	20	П	Н	9.64				
		20	MHz(RB siz	e 100 & R	B offset 0)					
2535.00	21100	QPSK	20	Н	V	12.79				
2555.00	21100	QFSN	20	П	Н	8.54	33.00	Pass		
2535.00	21100	16QAM	20	Н	V	12.36	33.00	Fa55		
2000.00	21100	IUQAW	20	11	Н	8.42				

High channel

	High channel								
Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result	
20MHz(RB size 1 & RB offset 0)									
2560.00	21350	QPSK	20	Н	V	13.74			
2500.00	21330	QFSK	20	П	Н	10.48	33.00	Pass	
2560.00	21350	16QAM	20	Н	V	13.87	33.00	F 455	
2300.00	21330	TOQAM	20	!!	Н	10.32			
	20MHz(RB size 50 & RB offset 0)								
2560.00	21350	QPSK	20	Н	V	12.86			
2300.00	21330	QFSK	20	11	Н	9.52	33.00	Pass	
2560.00	21350	160 AM	16QAM	20	Н	V	13.06	33.00	Fass
2300.00	21330	TOQAM	20	11	Н	9.57			
		2	20MHz(RB s	ize 100 8	RB offset (	))			
2560.00	21350	QPSK	20	Ι	V	12.89			
2500.00	21350	QFSN	20	П	Н	8.67	33.00	Pass	
2560.00	21350	16QAM	20	Η	V	12.35	33.00	Fass	
2300.00	21330	TOQAM	20		Н	8.46			





# 6.11 Field strength of spurious radiation measurement

o. 11 Field strength of sp	urious radiation measurement
Test Requirement:	Part 24.238 (a), Part 27.53(m), Part 27.53(h)
Test Method:	FCC part2.1053
Limit:	LTE Band 2, LTE Band 4: -13dBm, LTE Band 7: -25dBm
Test setup:	Below 1GHz  Antenna Tower Search Aotenna RF Test Receiver  Ground Plane  Above 1GHz
	Antenna  FLIT  Jen  O, Sex  Irm  Table  Amplifier
	Substituted method:  Antenna mast  Ground plane  d: distance in meters  d:3 meter  SPA  Substituted Dipole or Horn Antenna  Bi-Log Antenna or Horn Antenna
Test Procedure:	<ol> <li>The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.</li> <li>During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.</li> <li>The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission</li> </ol>



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	<ul> <li>was determined using the substitution method.</li> <li>4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.</li> <li>ERP / EIRP = S.G. output (dBm) + Antenna Gain(dB/dBi) – Cable Loss (dB)</li> </ul>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details.
Test results:	Passed

## Measurement Data (worst case):

### **Below 1GHz:**

The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.

### **Above 1GHz**

For above 1 GHz, all test modes were performed, and just the worst case shown in the report.



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LTE band 2 part:

		ze 1 & RB offset 0) for	or QPSK		
Frequency (MHz)	Spurious I	Emission	Limit (dBm)	Result	
Frequency (IVIF12)	Polarization	Level (dBm)	Limit (ubin)	Kesuit	
		Lowest			
3701.40	Vertical	-34.27			
5552.10	V	-38.00			
7402.00	V	-39.46	42.00	Door	
3701.40	Horizontal	-39.62	-13.00	Pass	
5552.10	Н	-35.99			
7402.00	Н	-38.98			
<u> </u>		Middle			
3760.00	Vertical	-36.35			
5640.00	V	-43.24			
7520.00	V	-42.00	40.00	Dana	
3760.00	Horizontal	-44.16	-13.00	Pass	
5640.00	Н	-44.66			
7520.00	Н	-41.82			
		Highest			
3816.60	Vertical	-38.91			
5724.90	V	-36.58			
7633.20	V	-40.87	40.00	Date	
3816.60	Horizontal	-46.18	-13.00	Pass	
5724.90	Н	-39.83			
7633.20	Н	-39.87			





	3MHz(RB siz	ze 1 & RB offset 0)	for QPSK						
Fraguera (MIII-)	•	Emission		Desult					
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result					
Lowest									
3703.00	Vertical	-35.87							
5554.50	V	-45.71							
7406.00	V	-41.09	-13.00	Pass					
3703.00	Horizontal	-40.46	-13.00	Pass					
5554.50	Н	-39.37							
7406.00	Н	-39.32							
		Middle							
3760.00	Vertical	-38.52		Pass					
5640.00	V	-44.21							
7520.00	V	-41.33	-13.00						
3760.00	Horizontal	-43.92	-13.00						
5640.00	Н	-39.35							
7520.00	Н	-40.27							
·		Highest							
3817.00	Vertical	-38.99							
5725.50	V	-44.06							
7634.00	V	-40.51	-13.00	Pass					
3817.00	Horizontal	-45.44		Pass					
5725.50	Н	-37.81							
7634.00	Н	-38.29							





	5MHz(RB siz	ze 1 & RB offset 0) fo	or QPSK	
Frequency (MHz)	Spurious Emission			Decult
	Polarization	Level (dBm)	Limit (dBm)	Result
		Lowest		
3705.00	Vertical	-34.29	-13.00	Pass
5557.50	V	-38.02		
7410.00	V	-39.54		
3705.00	Horizontal	-39.51		
5557.50	Н	-35.56		
7410.00	Н	-38.99		
<u>_</u>		Middle		
3760.00	Vertical	-36.52	-13.00	
5640.00	V	-43.21		Pass
7520.00	V	-42.07		
3760.00	Horizontal	-44.18		
5640.00	Н	-44.64		
7520.00	Н	-41.83		
<u>.</u>		Highest		
3815.00	Vertical	-38.96	-13.00	Pass
5722.50	V	-36.62		
7630.00	V	-40.89		
3815.00	Horizontal	-46.21		
5722.50	Н	-39.84		
7630.00	Н	-39.88		





	10MHz(RB si	ze 1 & RB offset 0) f	or QPSK	
Frequency (MHz)	Spurious Emission			
	Polarization	Level (dBm)	Limit (dBm)	Result
		Lowest		
3710.00	Vertical	-35.82	-13.00	Pass
5565.00	V	-45.46		
7420.00	V	-41.06		
3710.00	Horizontal	-40.44		
5565.00	Н	-39.42		
7420.00	Н	-39.35		
		Middle		
3760.00	Vertical	-38.46	-13.00	Pass
5640.00	V	-44.45		
7520.00	V	-41.37		
3760.00	Horizontal	-43.89		
5640.00	Н	-39.31		
7520.00	Н	-40.26		
		Highest		
3810.00	Vertical	-38.96	-13.00	Pass
5715.00	V	-44.09		
7620.00	V	-40.57		
3810.00	Horizontal	-45.49		
5715.00	Н	-37.86		
7620.00	Н	-38.32		





	15MU-/DR	size 1 & RB offset 0	) for OPSK	
		s Emission		
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
		Lowest		
3715.00	Vertical	-34.25		
5572.50	V	-38.06	-	
7430.00	V	-39.51	42.00	Desa
3715.00	Horizontal	-39.46	-13.00	Pass
5572.50	Н	-35.52		
7430.00	Н	-38.87		
		Middle		
3760.00	Vertical	-36.42		
5640.00	V	-43.26		Pass
7520.00	V	-42.00	-13.00	
3760.00	Horizontal	-44.21	-13.00	
5640.00	Н	-44.53		
7520.00	Н	-41.85		
		Highest		
3805.00	Vertical	-38.98		
5707.50	V	-36.61		
7610.00	V	-40.87	-13.00	Pass
3805.00	Horizontal	-46.23		Pass
5707.50	Н	-39.82		
7610.00	Н	-39.84		





	20MHz(RB s	size 1 & RB offset 0	) for QPSK	
	Spurious	Emission		
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
		Lowest		
3720.00	Vertical	-35.74		
5580.00	V	-45.44		
7440.00	V	-41.01	-13.00	Pass
3720.00	Horizontal	-40.47	-13.00	Pass
5580.00	Н	-39.40		
7440.00	Н	-39.40		
		Middle		
3760.00	Vertical	-38.48		
5640.00	V	-44.39		
7520.00	V	-41.43	12.00	Door
3760.00	Horizontal	-43.85	-13.00	Pass
5640.00	Н	-39.34		
7520.00	Н	-40.22		
		Highest		
3800.00	Vertical	-38.95		
5700.00	V	-44.12		
7600.00	V	-40.62	-13.00	Door
3800.00	Horizontal	-45.42		Pass
5700.00	Н	-37.82		
7600.00	Н	-38.28		





#### LTE Band 4 Part:

		ze 1 & RB offset 0)	for QPSK	
Frequency (MHz)	Spurious	Emission	Limit (dBm)	Result
Frequency (Miriz)	Polarization	Level (dBm)	Lilliit (ubili)	Result
		Lowest		
3421.40	Vertical	-51.11		
5132.10	V	-46.62	-	
6842.80	V	-40.32	-13.00	Pass
3421.40	Horizontal	-51.21	-13.00	F455
5132.10	Н	-46.61		
6842.80	Н	-40.79		
		Middle		
3465.00	Vertical	-49.35		
5197.50	V	-44.88		
6930.00	V	-39.25	-13.00	Pass
3465.00	Horizontal	-50.55	-13.00	Pass
5197.50	Н	-45.18		
6930.00	Н	-40.45		
		Highest		
3508.60	Vertical	-46.17		
5262.90	V	-44.80		
7017.20	V	-40.02	-13.00	Pass
3508.60	Horizontal	-48.52		Pass
5262.90	Н	-43.99		
7017.20	Н	-39.86		





	3MHz(RB siz	ze 1 & RB offset 0) fo	or QPSK	
Fig. (Add )	<u> </u>	Emission		D II
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
		Lowest		
3423.00	Vertical	-48.77		
5134.50	V	-44.58		
6846.00	V	-40.21	-13.00	Pass
3423.00	Horizontal	-50.06	-13.00	Pass
5134.50	Н	-43.95		
6846.00	Н	-40.53		
		Middle		
3465.00	Vertical	-51.36		Pass
5197.50	V	-46.08		
6930.00	V	-39.76	-13.00	
3465.00	Horizontal	-48.82	-13.00	Pass
5197.50	Н	-45.12		
6930.00	Н	-38.86		
		Highest		
3507.00	Vertical	-49.58		
5260.50	V	-46.82		
7014.00	V	-39.75	-13.00	Pass
3507.00	Horizontal	-50.81		Pass
5260.50	Н	-46.89		
7014.00	Н	-38.84		





	5MHz(RB siz	e 1 & RB offset 0) fo	or QPSK	
Francisco (MIII-)	Spurious			Decult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
		Lowest		
3425.00	Vertical	-51.16		
5137.50	V	-46.64		
6850.00	V	-40.39	42.00	Dana
3425.00	Horizontal	-51.23	-13.00	Pass
5137.50	Н	-46.63		
6850.00	Н	-40.77		
<u>.</u>		Middle		•
3465.00	Vertical	-49.38		
5197.50	V	-44.89		
6930.00	V	-39.26	42.00	Daga
3465.00	Horizontal	-50.58	-13.00	Pass
5197.50	Н	-45.21		
6930.00	Н	-40.59		
<u>.</u>		Highest		•
3505.00	Vertical	-46.18		
5257.50	V	-44.82		
7010.00	V	-40.05	-13.00	Pass
3505.00	Horizontal	-48.62		Pass
5257.50	Н	-43.86		
7010.00	Н	-39.87		





	10MHz(RB si	ze 1 & RB offset 0)	for QPSK	
Frequency (MHz)	Spurious	Emission	Limit (dBm)	Result
Frequency (Miriz)	Polarization	Level (dBm)	Limit (ubin)	Kesuit
		Lowest		
3430.00	Vertical	-48.76		
5145.00	V	-44.51		
6860.00	V	-40.15	-13.00	Pass
3430.00	Horizontal	-50.02	-13.00	Pass
5145.00	Н	-43.97		
6860.00	Н	-40.61		
<u>.</u>		Middle		
3465.00	Vertical	-51.34		
5197.50	V	-46.05		
6930.00	V	-39.72	-13.00	Pass
3465.00	Horizontal	-48.86	-13.00	Pass
5197.50	Н	-45.07		
6930.00	Н	-38.82		
		Highest		
3500.00	Vertical	-49.62		
5250.00	V	-46.87		
7000.00	V	-39.71	-13.00	Door
3500.00	Horizontal	-50.76		Pass
5250.00	Н	-46.85		
7000.00	Н	-38.81		





	•	ize 1 & RB offset 0)	for QPSK	
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
1 requeries (Willie)	Polarization	Level (dBm)	Limit (abin)	Result
		Lowest		
3435.00	Vertical	-51.26		
5152.50	V	-46.67		
6870.00	V	-40.31	12.00	Pass
3435.00	Horizontal	-51.26	-13.00	Pass
5152.50	Н	-46.65		
6870.00	Н	-40.79		
		Middle		
3465.00	Vertical	-49.34		
5197.50	V	-44.87		
6930.00	V	-39.25	40.00	D
3465.00	Horizontal	-50.52	-13.00	Pass
5197.50	Н	-45.17		
6930.00	Н	-40.53		
		Highest		
3495.00	Vertical	-46.14		
5242.50	V	-44.86		
6990.00	V	-40.02	-13.00	Door
3495.00	Horizontal	-48.62		Pass
5242.50	Н	-43.89		
6990.00	Н	-39.85		





	20MHz/RR s	ize 1 & RB offset 0	)) for OPSK	
	<u>.                                      </u>	Emission		
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
		Lowest		
3440.00	Vertical	-48.73		
5160.00	V	-44.56		
6880.00	V	-40.13	40.00	Dana
3440.00	Horizontal	-50.04	-13.00	Pass
5160.00	Н	-43.95		
6880.00	Н	-40.62		
		Middle		
3465.00	Vertical	-51.36		
5197.50	V	-46.01		
6930.00	V	-39.68	12.00	Door
3465.00	Horizontal	-48.86	-13.00	Pass
5197.50	Н	-45.08		
6930.00	Н	-38.88		
		Highest		
3490.00	Vertical	-49.59		
5235.00	V	-46.84		
6980.00	V	-39.77	-13.00	Door
3490.00	Horizontal	-50.73		Pass
5235.00	Н	-46.83		
6980.00	Н	-38.82		





### LTE Band 7 Part:

	5MHz(RB siz	LTE Band 7 Part: ze 1 & RB offset 0) fo	or QPSK	
		Emission		Decult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
		Lowest		
5005.00	Vertical	-47.14		
7507.50	V	-40.69		
10010.00	V	-40.01	25.00	Dese
5005.00	Horizontal	-46.51	-25.00	Pass
7507.50	Н	-39.11		
10010.00	Н	-39.07		
		Middle		
5070.00	Vertical	-45.19		
7605.00	V	-39.22		
10140.00	V	-37.66	25.00	Door
5070.00	Horizontal	-46.99	-25.00	Pass
7605.00	Н	-39.40		
10140.00	Н	-36.87		
		Highest		
5135.00	Vertical	-46.22		
7702.50	V	-39.74		
10270.00	V	-38.46	-25.00	Dana
5135.00	Horizontal	-46.81		Pass
7702.50	Н	-39.73		
10270.00	Н	-38.84		
10270.00	Н	-38.84		





	10MHz(RB si	ze 1 & RB offset 0) f	for QPSK	
Frequency (MHz)	Spurious	Emission	Limit (dBm)	Result
Frequency (MHZ)	Polarization	Level (dBm)	Limit (ubin)	Result
		Lowest		
5010.00	Vertical	-46.29		
7515.00	V	-41.06		
10020.00	V	-42.15	-25.00	Pass
5010.00	Horizontal	-45.37	-25.00	Pass
7515.00	Н	-40.35		
10020.00	Н	-39.06		
<u>.</u>		Middle		
5070.00	Vertical	-46.92		
7605.00	V	-38.78		
10140.00	V	-36.83	-25.00	Pass
5070.00	Horizontal	-46.85	-25.00	Pass
7605.00	Н	-40.27		
10140.00	Н	-37.49		
<u>.</u>		Highest		
5130.00	Vertical	-46.23		
7695.00	V	-40.15		
10260.00	V	-38.58	-25.00	Door
5130.00	Horizontal	-44.79		Pass
7695.00	Н	-39.68		
10260.00	Н	-37.79		





	15MHz(RB s	size 1 & RB offset 0	) for QPSK	
Fraguesia (MIII-)		s Emission		Descrit
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
		Lowest		
5015.00	Vertical	-47.11		
7522.50	V	-40.64		
10030.00	V	-40.05	05.00	D
5015.00	Horizontal	-46.48	-25.00	Pass
7522.50	Н	-39.16		
10030.00	Н	-39.11		
		Middle		
5070.00	Vertical	-45.23		
7605.00	V	-38.26		Pass
10140.00	V	-37.61	05.00	
5070.00	Horizontal	-46.97	-25.00	
7605.00	Н	-39.42		
10140.00	Н	-36.85		
		Highest		
5125.00	Vertical	-46.27		
7687.50	V	-39.76		
10250.00	V	-38.52	-25.00	Desa
5125.00	Horizontal	-46.83		Pass
7687.50	Н	-39.76		
10250.00	Н	-38.81		





	20MHz(RB si	ze 1 & RB offset 0)	for QPSK	
Fraguenov (MUz)	Spurious	Emission	Limit (dBm)	Result
Frequency (MHz)	Polarization	Level (dBm)	Lillill (ubili)	Result
		Lowest		
5020.00	Vertical	-46.24		
7530.00	V	-41.05		
10040.00	V	-42.08	-25.00	Dana
5020.00	Horizontal	-45.38	-25.00	Pass
7530.00	Н	-40.36		
10040.00	Н	-39.00		
		Middle		
5070.00	Vertical	-46.99		
7605.00	V	-39.77		
10140.00	V	-36.90	-25.00	Pass
5070.00	Horizontal	-46.88	-25.00	Pass
7605.00	Н	-40.36		
10140.00	Н	-37.51		
		Highest		
5120.00	Vertical	-46.18		
7680.00	V	-40.11		
10240.00	V	-38.61	-25.00	Door
5120.00	Horizontal	-44.81		Pass
7680.00	Н	-39.72		
10240.00	Н	-37.76	]	



## 6.12 Frequency stability V.S. Temperature measurement

Test Requirement:	Part 24.235, Part 27.54, Part 2.1055(a)(1)(b)
Test Method:	FCC Part2.1055(a)(1)(b)
Limit:	±2.5ppm
Test setup:	Spectrum analyzer  EUT  Att.  Variable Power Supply
Test procedure:	<ol> <li>Note: Measurement setup for testing on Antenna connector</li> <li>The equipment under test was connected to an external DC power supply and input rated voltage.</li> <li>RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.</li> <li>The EUT was placed inside the temperature chamber.</li> <li>Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.</li> <li>Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.</li> <li>Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached</li> </ol>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	All three channels of all modulations have been tested, but only the worst channel and the worst modulation show in this test item.

Measurement Data (the worst channel):





LTE Band 2(QPSK):

		LTE Band			
Reference Fr	requency: LTE Band	2(1.4MHz) N	Middle channel=18900	channel=1880.00	OMHz
Power supplied	Temperature (°C)	Fr	equency error	Limit (ppm)	Result
(Vdc)	remperature (C)	Hz	ppm	Limit (ppm)	Resuit
	-30	175	0.093085		
	-20	160	0.085106		
	-10	144	0.076596		
	0	102	0.054255		
3.80	10	163	0.086702	±2.5	Pass
0.00	20	151	0.080319		1 400
	30	142	0.075532		
	40	130	0.069149		
	50	125	0.066489		
Deference F			iddle channel=18900 d		N/I⊔→
	requency. LTE band	· · ·			IVII IZ
Power supplied	Temperature (°C)		equency error	Limit (ppm)	Result
(Vdc)		Hz	ppm	- (1.1. /	
	-30	174	0.092553		
	-20	166	0.088298		
	-10	125	0.066489		
	0	130	0.069149		
3.80	10	141	0.075000	±2.5	Pass
	20	105	0.055851		
	30	128	0.068085		
	40	136	0.072340	]	
	50	159	0.084574		
Reference F	requency: LTE Band	2(5MHz) M	iddle channel=18900 d	channel=1880.00	MHz
Dance and all (V/da)	Tomor or at the (°C)	Frequency error		1	Danielt
Power supplied (Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	170	0.090426		
	-20	163	0.086702		
	-10	145	0.077128		
	0	128	0.068085		_
3.80	10	162	0.086170	±2.5	Pass
	20	128	0.068085	_	
	30	135	0.071809		
	40	149	0.079255		
	50	158	0.084043		





Reference F	requency: LTE Band	2(10MHz) M	liddle channel=18900	) channel=1880.00	MHz
Davis a supplied () (da)	Tamanaratura (°C)	Fre	equency error	Line it (none)	D
Power supplied (Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	136	0.072340		
	-20	152	0.080851		
	-10	142	0.075532		
	0	105	0.055851		
3.80	10	126	0.067021	±2.5	Pass
	20	138	0.073404		
	30	146	0.077660		
	40	125	0.066489		
	50	109	0.057979		
Reference F	requency: LTE Band	, ,	liddle channel=18900	channel=1880.00	MHz
Power supplied (Vdc)	Temperature (°C)		equency error	Limit (ppm)	Result
		Hz	ppm	(pp)	Resuit
	-30	174	0.092553		Pass
	-20	163	0.086702		
	-10	125	0.066489		
	0	142	0.075532		
3.80	10	105	0.055851	±2.5	
	20	138	0.073404		
	30	147	0.078191		
	40	156	0.082979		
	50	138	0.073404		
Reference F	requency: LTE Band	2(20MHz) M	liddle channel=18900	) channel=1880.00	MHz
D	T(°O)	Fre	equency error	12-21/2-2-2	
Power supplied (Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	185	0.098404		
	-20	125	0.066489		
	-10	163	0.086702		
	0	142	0.075532		
3.80	10	155	0.082447	±2.5	Pass
	20	167	0.088830		га55
	30	135	0.071809		
	40	148	0.078723	<b>-</b>	
	50	159		<del>- </del>	
	30	108	0.084574		





LTE Band 2(16QAM):

LTE Band 2(16QAM):					
Reference F	requency: LTE Band	2(1.4MHz)	Middle channel=18900	channel=1880.0	0MHz
	Temperature (°C)	F	requency error	Limit (ppm)	_
Power supplied (Vdc)	remperature ( c)	Hz	ppm	сини (ррии)	Result
	-30	168	0.089362		
	-20	170	0.090426		
	-10	152	0.080851		
	0	136	0.072340		
3.80	10	146	0.077660	±2.5	Pass
0.00	20	156	0.082979		1 400
	30	146	0.077660		
	40	149	0.079255		
	50	128	0.068085	-	
Reference F			iddle channel=18900 c	hannel-1880 00	MHz
Reference i	requericy. LTL band	, ,		1000.00	IVII IZ
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
Power supplied (vdc)	· • · · · · · · · · · · · · · · · · · ·	Hz	ppm	(  -  -  -  -  -  -  -  -  -  -  -  -  -	Result
	-30	171	0.090957		
	-20	129	0.068617		
	-10	163	0.086702		
	0	142	0.075532	±2.5	
3.80	10	158	0.084043		Pass
	20	138	0.073404		
	30	174	0.092553		
	40	125	0.066489		
	50	156	0.082979		
Reference F	requency: LTE Band	2(5MHz) M	iddle channel=18900 c	hannel=1880.00	MHz
Dower oundied (\/-l-\	Tomporeture (°C)	Frequency error		12-26	Doguit
Power supplied (Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	162	0.086170		
	-20	142	0.075532	]	
	-10	135	0.071809	]	
	0	105	0.055851		5
3.80	10	126	0.067021	±2.5	Pass
	20	142	0.075532	-	
	30 40	190 156	0.101064 0.082979	-	
	50	174	0.082979	-	
	50	1/4	0.032333	<u> </u>	





D	Tomanaustinia (°C)	Frequency error		Limit (	D 11
Power supplied (Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	156	0.082979		
	-20	174	0.092553		
	-10	135	0.071809		
	0	146	0.077660		
3.80	10	185	0.098404	±2.5	Pass
	20	158	0.084043		
	30	162	0.086170		
	40	155	0.082447		
	50	136	0.072340		
	requency: LTE Band			0 channel=1880.00	MHz
Power supplied	Temperature (°C)		equency error	Limit (ppm)	Result
(Vdc)	, , ,	Hz	ppm	-····· (PP···)	
	-30	174	0.092553		
	-20	125	0.066489		Pass
	-10	163	0.086702		
	0	108	0.057447		
3.80	10	142	0.075532	±2.5	
	20	135	0.071809		
	30	126	0.067021		
	40	145	0.077128		
	50	140	0.074468		
Reference F	requency: LTE Band			0 channel=1880.00	MHz
Power supplied	Temperature (°ℂ)	Fre	equency error		
(Vdc)		Hz	ppm	Limit (ppm)	Result
	-30	177	0.094149		
	-20	162	0.086170		
	-10	148	0.078723		
	0	152	0.080851		
3.80	10	143	0.076064	±2.5	Pass
3.80		. ,	0.07 000 1	<b>─</b>	Pass
3.80		125	0 066489	l l	
3.80	20	125 156	0.066489	_	
3.80		125 156 185	0.066489 0.082979 0.098404		





LTE Band 4(QPSK):

		LTE Band			
Reference Fr	equency: LTE Band	4(1.4MHz) N	Middle channel=20175	channel=1732.50	)MHz
Power supplied	Temperature (°C)	, Frequency error		Limit (ppm)	Result
(Vdc)	remperature (C)	Hz	ppm	Limit (ppm)	Result
	-30	166	0.095815		
	-20	125	0.072150		
	-10	136	0.078499		
	0	155	0.089466		
3.80	10	142	0.081962	±2.5	Pass
0.00	20	112	0.064646		1 400
	30	106	0.061183		
	40	147	0.084848		
	50	125	0.072150	7	
Doforonco F			iddle channel=20175 o	shannal_1722	\ <b>/</b>     →
	requency. LTE band	` '			VII 1Z
Power supplied	Temperature (°ℂ)		equency error	Limit (ppm)	Result
(Vdc)	. , ,	Hz	ppm		
	-30	142	0.081962	_	Pass
	-20	136	0.078499		
	-10	152	0.087734		
	0	158	0.091198		
3.80	10	140	0.080808	±2.5	
	20	136	0.078499		
	30	145	0.083694		
	40	122	0.070418		
	50	108	0.062338		
Reference F	requency: LTE Band	4(5MHz) M	iddle channel=20175 d	channel=1732.50	MHz
D " 10/11	T(°C)	Frequency error			D 1
Power supplied (Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	177	0.102165		
	-20	156	0.090043		
	-10	143	0.082540		
	0	135	0.077922		
3.80	10	142	0.081962	±2.5	Pass
	20	162	0.093506	_	
	30	141	0.081385	_	
	40	125	0.072150	_	
	50	136	0.078499		





110101010011	equency. LTE band	4(10101112) IV	liddle channel=2017	5 channel=1732.50	JIVIHZ
Power supplied (Vdc)	Temperature (°C)		Frequency error		Result
1 ower supplied (vdo)	romporataro ( e)	Hz	ppm	Limit (ppm)	resuit
	-30	175	0.101010		
	-20	163	0.094084		
	-10	152	0.087734		
	0	145	0.083694		_
3.80	10	129	0.074459	±2.5	Pass
	20	187	0.107937		
	30	176	0.101587		
	40	135	0.077922		
	50	125	0.072150		
Reference Fi	equency: LTE Band	4(15MHz) M	liddle channel=2017	5 channel=1732.50	MHz
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Danill
1 ower supplied (vae)	romporatoro ( e)	Hz	ppm	Еши (ррш)	Result
	-30	163	0.094084		Pass
	-20	181	0.104473		
	-10	149	0.086003		
	0	128	0.073882		
3.80	10	163	0.094084	±2.5	
	20	155	0.089466		
	30	170	0.098124		
	40	129	0.074459		
	50	142	0.081962		
Reference Fi	equency: LTE Band	4(20MHz) M	liddle channel=2017	5 channel=1732.50	MHz
Davier eventied (\/de\	Tomporeture (°C)	Frequency error		Limit (none)	
Power supplied (Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	185	0.106782		
	-20	136	0.078499		
	-10	142	0.081962		
	0	162	0.093506		
3.80	10	174	0.100433	±2.5	Pass
	20	158	0.091198		1 400
	30	143	0.082540		
	40	105	0.060606		





LTE Band 4(16QAM):

LTE Band 4(16QAM):					
Reference F	requency: LTE Band	4(1.4MHz)	Middle channel=20175	channel=1732.5	0MHz
	Temperature (°C)	F	requency error	Limit (ppm)	_
Power supplied (Vdc)	remperature (C)	Hz	ppm	Limit (ppm)	Result
	-30	136	0.078499		
	-20	125	0.072150		
	-10	140	0.080808		
	0	121	0.069841		
3.80	10	142	0.081962	±2.5	Pass
0.00	20	144	0.083117		. 455
	30	153	0.088312		
	40	163	0.094084		
	50	147	0.084848		
Reference F	requency: LTF Band	4(3MHz) M	iddle channel=20175 c	hannel=1732 50l	MHz
110.01011001					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
Tower supplied (vas)		Hz	ppm	" " "	rtodat
	-30	162	0.093506	-	
	-20	108	0.062338	±2.5	
	-10	122	0.070418		
	0	136	0.078499		
3.80	10	162	0.093506		Pass
	20	141	0.081385		
	30	144	0.083117		
	40	136	0.078499		
	50	150	0.086580		
Reference F	requency: LTE Band	4(5MHz) M	iddle channel=20175 c	hannel=1732.50	MHz
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (	Result
Power supplied (vac)	remperature (C)	Hz	ppm	Limit (ppm)	Result
	-30	174	0.100433		
	-20	162	0.093506	_	
	-10	135	0.077922	-	
	0	140	0.080808	.2.5	Door
3.80	10 20	162 108	0.093506 0.062338	±2.5	Pass
	30	135	0.062336	1	
	40	142	0.081962	1	
	50	181	0.104473	1	
	- · ·		· · · · · · · · · ·	1	





D	Tamanaugtura (°C)	Fre	equency error	Limett (	D "
Power supplied (Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	174	0.100433		
	-20	136	0.078499		
	-10	125	0.072150		
	0	136	0.078499		
3.80	10	142	0.081962	±2.5	Pass
	20	152	0.087734		
	30	146	0.084271		
	40	155	0.089466		
	50	126	0.072727		
	requency: LTE Band			5 channel=1732.50	MHz
Power supplied	Temperature (°C)		equency error	Limit (ppm)	Result
(Vdc)	` ` `	Hz	ppm	(F F · · · )	
	-30	167	0.096392		
3.80	-20	152	0.087734		
	-10	134	0.077345		
	0	105	0.060606		
	10	126	0.072727	±2.5	Pass
	20	114	0.065801		
	30	158	0.091198		
	40	160	0.092352		
	50	129	0.074459		
Reference F	requency: LTE Band	<u> </u>		5 channel=1732.50	MHz
Power supplied	Temperature (°ℂ)	Fre	equency error		
(Vdc)	remperature (C)	Hz	ppm	Limit (ppm)	Result
	-30	147	0.084848		
	-20	103	0.059452		
	-10	126	0.072727		
	0	153	0.088312		
3.80	10	101	0.058297	±2.5	Pass
3.60	20	123	0.070996	±2.0	F855
		0	0.07 0000	<b>→</b>	
	30	152	በ በጸ773/		
	30 40	152 106	0.087734 0.061183		





LTE Band 7(QPSK):

LTE Band 7(QPSK):					
	requency: LTE Band		ddle channel=21100Fre	equency=2535.00	)MHz
Power supplied	Temperature (°C)		equency error	Lineit (none)	Result
(Vdc)	· · · · · · · · · · · · · · · · · · ·	Hz	ppm	Limit (ppm)	Result
	-30	168	0.066272		
	-20	102	0.040237		
	-10	122	0.048126		
	0	136	0.053649		
3.80	10	163	0.064300	±2.5	Pass
	20	152	0.059961	<u> </u>	1 433
	30	142	0.056016	=	
	40	108	0.042604	=	
	50	162	0.063905	-	
Reference Fro			ddle channel=21100 Fr		OMH <sub>7</sub>
Power supplied		· · · · · ·	equency error		OIVII IZ
(Vdc)	Temperature (°C)	Hz	, , , , , , , , , , , , , , , , , , ,	Limit (ppm)	Result
( v do)	-30	142	ppm 0.056016	,	
	-20	103			
			0.040631	-	
	-10	125	0.049310	-	
	0	136	0.053649	-	
3.80	10	141	0.055621	±2.5	Pass
	20	133	0.052465		
	30	105	0.041420		
	40	126	0.049704		
	50	126	0.049704		
Reference From	equency: LTE Band 7	(15MHz) Mi	ddle channel=21100 Fr	equency=2535.0	0MHz
Power supplied	Temperature (°C)		Frequency error		Result
(Vdc)		Hz	ppm	Limit (ppm)	result
	-30	141	0.055621		
	-20	105	0.041420	=	
	-10	126	0.049704		
0.00	0	138	0.054438		D
3.80	10	152	0.059961	±2.5	Pass
	20 30	116 124	0.045759 0.048915	-	
	40	108	0.048913	-	
	50	162	0.063905		
Reference Fro	<u> </u>		ddle channel=21100 Fr	requency=2535 0	0MHz
Power supplied	T i	<u> </u>	equency error		OWN IZ
(Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
(140)	-30	174	0.068639		
	-20	125	0.049310	1	
	-10	136	0.053649	1	
	0	169	0.066667	]	
3.80	10	152	0.059961	±2.5	Pass
	20	142	0.056016	]	
	30	152	0.059961	]	
	40	160	0.063116		
	50	135	0.053254		





LTE Band 7(16QAM):

LTE Band 7(16QAM):  Reference Frequency: LTE Band 7(5MHz) Middle channel=21100Frequency=2535.00MHz					
	requency: LTE Band	7(5MHz) Mid	dale channel=21100Fr	equency=2535.00	IIVIHZ
Power supplied	Temperature (°C)	Fr	equency error	Limit (nnm)	Result
(Vdc)	7 7 337 3 (3)	Hz	ppm	Limit (ppm)	Result
	-30	142	0.056016		
	-20	102	0.040237		
	-10	136	0.053649		
	0	152	0.059961		
3.80	10	141	0.055621	±2.5	Pass
	20	102	0.040237		
	30	125	0.049310		
	40	160	0.063116		
	50	141	0.055621		
Reference Fro	1		ddle channel=21100 F	requency=2535.0	0MHz
Power supplied			equency error		<u> </u>
(Vdc)	Temperature (°C)		· · ·	Limit (ppm)	Result
(100)	20	Hz	ppm		
	-30	152	0.059961		
	-20	123	0.048521		
	-10	141	0.055621	±2.5	
	0	105	0.041420		
3.80	10	122	0.048126		Pass
	20	135	0.053254		
	30	142	0.056016		
	40	102	0.040237		
	50	162	0.063905		
	equency: LTE Band 7	·	ddle channel=21100 F	requency=2535.0	0MHz
Power supplied	Temperature (°C)		equency error	Limit (ppm)	Result
(Vdc)	. , ,	Hz	ppm	([-[)	
	-30	142	0.056016		
	-20 -10	125 136	0.049310		
	0	125	0.053649 0.049310		
3.80	10	150	0.059172	2.5	Pass
0.00	20	141	0.055621		1 400
1	30	102	0.040237		
	40	132	0.052071		
	50	152	0.059961		
Reference Fr	equency: LTE Band 7	(20MHz) Mi	ddle channel=21100 F	requency=2535.0	0MHz
Power supplied	Temperature (°C)		equency error	Limit (ppm)	Result
(Vdc)	, , ,	Hz	ppm	Ешти (ррии)	Nesuit
	-30	145	0.057199		
	-20	126	0.049704	_	
	-10	150	0.059172	4	
2.00	0	125	0.049310	- O.E	Door
3.80	10 20	145 126	0.057199	2.5	Pass
	30	142	0.049704 0.056016	-	
	40	125	0.049310	-	
	50	132	0.052071	-	
		102	0.002071		



# 6.13 Frequency stability V.S. Voltage measurement

Test Requirement:	Part 24.235, Part 27.54, Part 2.1055(d)(2)			
Test Method:	FCC Part2.1055(d)(1)(2)			
Limit:	2.5ppm			
Test setup:	Spectrum analyzer  EUT  Variable Power Supply  Note: Measurement setup for testing on Antenna connector			
Test procedure:	<ol> <li>Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage.</li> <li>Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.</li> <li>Reduce the input voltage to specify extreme voltage variation (+/-15%) and endpoint, record the maximum frequency change.</li> </ol>			
Test Instruments:	Refer to section 5.8 for details			
Test mode:	Refer to section 5.3 for details, and all channels have been tested, only shows the worst channel data in this report.			
Test results:	Passed			





## **Measurement Data (the worst channel):**

### LTE Band 2(QPSK):

		LTE Band 2(Q	P3N):			
Reference Fi	requency: LTE Band	2(1.4MHz) Middle	e channel=18900	channel=1880.00	)MHz	
Temperature $(^{\circ}\mathbb{C})$	Power supplied	Frequer	ncy error	Limit (ppm)	Decult	
	(Vdc)	Hz	ppm	Limit (ppm)	Result	
	4.35	96	0.051064			
25	3.80	87	0.046277	±2.5	Pass	
	3.55	69	0.036702			
Reference Frequency: LTE Band 2(3MHz) Middle channel=18900 channel=1880.00MHz						
- (20)	Power supplied	Frequer	ency error			
Temperature (℃)	(Vdc)	Hz	ppm	Limit (ppm)	Result	
	4.35	75	0.039894			
25	3.80	85	0.045213	±2.5	Pass	
	3.55	64	0.034043			
Reference F	requency: LTE Band	d 2(5MHz) Middle	channel=18900 c	channel=1880.00I	ИНz	
	Power supplied	Frequency error				
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result	
	4.35	74	0.039362			
25	3.80	62	0.032979	±2.5	Pass	
	3.55	50	0.026596			
Reference F	requency: LTE Band	2(10MHz) Middle	channel=18900	channel=1880.00	MHz	
	Power supplied	Frequer	ncy error			
Temperature (℃)	(Vdc)	Hz	ppm	Limit (ppm)	Result	
	4.35	74	0.039362	±2.5		
25	3.80	52	0.027660		Pass	
	3.55	36	0.019149			
Reference F	requency: LTE Band	2(15MHz) Middle	channel=18900	channel=1880.00	MHz	
	Power supplied	· · · · · · · · · · · · · · · · · · ·	ncy error			
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result	
	4.35	74	0.039362			
25	3.80	85	0.045213	±2.5	Pass	
20	3.55	65	0.034574		. 0.00	
Reference Frequency: LTE Band 2(20MHz) Middle channel=20175 channel=1880.00MHz						
Temperature $(^{\circ}\mathbb{C})$	Power supplied (Vdc)	Hz	ncy error ppm	Limit (ppm)	Result	
	4.35	74	0.039362			
25	3.80	88	0.046809	±2.5	Pass	
25	3.55	69	0.036702	1 -2.5	1 433	
			0.000702	1		





LTE Band 2(16QAM):

		LTE Band 2(16	QAM):		
Reference F	requency: LTE Band	2(1.4MHz) Middle	e channel=18900	channel=1880.00	MHz
Temperature (°C)	Power supplied	Power supplied Frequency error			5 "
	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	74	0.039362		
25	3.80	85	0.045213	±2.5	Pass
	3.55	88	0.046809		
Reference I	Frequency: LTE Band	d 2(3MHz) Middle	channel=18900 d	channel=1880.00M	1Hz
	Power supplied	Freque	ncy error		
Temperature (℃)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	74	0.039362		
25	3.80	96	0.051064	±2.5	Pass
	3.55	85	0.045213		
Reference I	requency: LTE Band	2(5MHz) Middle	channel=18900 d	channel=1880.00M	1Hz
	Power supplied	,	ncy error		
Temperature (℃)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	77	0.040957		
25	3.80	68	0.036170	±2.5	Pass
	3.55	96	0.051064		
Reference F	requency: LTE Band	2(10MHz) Middle		channel=1880.00I	ИНz
	Power supplied	Frequency error			
Temperature (℃)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	71	0.037766		
25	3.80	85	0.045213	±2.5	Pass
	3.55	67	0.035638		
Reference F	requency: LTE Band	2(15MHz) Middle	channel=18900	channel=1880.00I	ИНz
	Power supplied	Freque	ncy error		
Temperature (℃)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	75	0.039894		
25	3.80	88	0.046809	±2.5	Pass
	3.55	89	0.047340		
Reference F	requency: LTE Band			channel=1880.00l	ИНz
	Power supplied	, ,	ncy error		
Temperature (℃)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	75	0.039894		
				±2.5	Pass
25	3.80	65	0.034574	±2.5	Pass





LTE Band 4(QPSK):

LTE Band 4(QPSK):						
Reference Fi	requency: LTE Band	4(1.4MHz) Middle	e channel=20175	channel=1732.50	)MHz	
Temperature (℃)	Power supplied	Frequency error		Limit (nnm)	Danish	
remperature (C)	(Vdc)	Hz	ppm	Limit (ppm)	Result	
	4.35	88	0.050794			
25	3.80	76	0.043867	±2.5	Pass	
	3.55	96	0.055411			
Reference F	Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 c					
- (00)	Power supplied	Frequer	ncy error		_	
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result	
	4.35	78	0.045022			
25	3.80	85	0.049062	±2.5	Pass	
	3.55	68	0.039250	7		
Reference F	requency: LTE Band	d 4(5MHz) Middle	channel=20175 c	hannel=1732.50	ИНz	
	Power supplied	Frequer	uency error			
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result	
	4.35	74	0.042713			
25	3.80	88	0.050794	±2.5	Pass	
	3.55	87	0.050216			
Reference F	requency: LTE Band	4(10MHz) Middle	channel=20175	channel=1732.50	MHz	
	Power supplied	Frequer	ncy error			
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result	
	4.35	86	0.049639	±2.5		
25	3.80	95	0.054834		Pass	
	3.55	85	0.049062			
Reference F	requency: LTE Band	4(15MHz) Middle	channel=20175	channel=1732.50	MHz	
	Power supplied	Frequer	ncy error			
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result	
	4.35	74	0.042713			
25	3.80	85	0.049062	±2.5	Pass	
	3.55	74	0.042713			
Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz						
Temperature ( $^{\circ}$ C)	Power supplied (Vdc)	Hz	ncy error ppm	Limit (ppm)	Result	
	4.35	77	0.044444			
25	3.80	85	0.049062	±2.5	Pass	
20	3.55	91	0.052525		1 400	
		· · ·	0.002020			





LTE Band 4(16QAM):

Reference Frequency: LTE Band 4(1.4MHz) Middle channel=20175 channel=1732.50MHz	LTE Band 4(16QAM):						
Comperature (C)	Reference F	requency: LTE Band	4(1.4MHz) Middle	channel=20175	channel=1732.50	MHz	
(Vdc)	Temperature (°C)	Power supplied	Frequer	Frequency error		D !!	
25   3.80   80   0.046176   ±2.5   Pass		(Vdc)	Hz	ppm	Limit (ppm)	Result	
Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz   Power supplied (Vdc)		4.35	74	0.042713			
Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz	25	3.80	80	0.046176	±2.5	Pass	
Temperature (°C)		3.55	68	0.039250			
Temperature (°C)	Reference F	requency: LTE Band	d 4(3MHz) Middle	channel=20175 c	hannel=1732.50N	ИHz	
Columbia   Columbia	- (00)	Power supplied	Frequer	ncy error		_	
25   3.80   82   0.047330   ±2.5   Pass	Temperature (℃)		Hz	ppm	Limit (ppm)	Result	
3.55         78         0.045022           Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz           Temperature (℃)         Power supplied (Vdc)         Frequency error         Limit (ppm)         Result           25         3.80         78         0.045022         ±2.5         Pass           3.55         70         0.040404         ±2.5         Pass           Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz           Temperature (℃)         Power supplied (Vdc)         Hz         ppm         Limit (ppm)         Result           Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz           Temperature (℃)         Power supplied (Vdc)         Frequency error Hz         Limit (ppm)         Result           Temperature (℃)         Power supplied (Vdc)         Frequency error         Limit (ppm)         Result           Temperature (℃)         Power supplied (Vdc)         Frequency error         Limit (ppm)         Result           Temperature (℃)         Power supplied (Vdc)         Frequency error         Limit (ppm)         Result           Temperature (℃)         Power supplied (Vdc)		4.35	74	0.042713			
Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz	25	3.80	82		±2.5	Pass	
Temperature (°C)		3.55	78	0.045022	1		
Temperature (°C)	Reference F	requency: LTE Band	4(5MHz) Middle	channel=20175 c	hannel=1732.50N	ЛHz	
Temperature (°C)		Power supplied	Frequer	ncy error			
A.35   90   0.051948   3.80   78   0.045022   ±2.5   Pass   3.55   70   0.040404	Temperature (°C)		Hz	ppm	Limit (ppm)	Result	
3.55   70   0.040404		\ /	90	0.051948			
Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz   Temperature (°C)	25	3.80	78	0.045022	±2.5	Pass	
Temperature (°C)         Power supplied (Vdc)         Frequency error Hz         Limit (ppm)         Result           25         4.35         68         0.039250         ±2.5         Pass           3.55         88         0.050794         ±2.5         Pass           Temperature (°C)         Power supplied (Vdc)         Frequency error Hz         Limit (ppm)         Result           25         3.80         65         0.042713         ±2.5         Pass           25         3.80         65         0.037518         ±2.5         Pass           25         3.80         65         0.037518         ±2.5         Pass           3.55         85         0.049062         Temperature (°C)         Power supplied (Vdc)         Frequency error         Limit (ppm)         Result           Temperature (°C)         Power supplied (Vdc)         Frequency error         Limit (ppm)         Result		3.55	70	0.040404			
Temperature (℃)         (Vdc)         Hz         ppm         Limit (ppm)         Result           25         4.35         68         0.039250         ±2.5         Pass           3.55         88         0.050794         ±2.5         Pass           Temperature (℃)         Power supplied (Vdc)         Frequency error         Limit (ppm)         Result           4.35         74         0.042713         ±2.5         Pass           3.80         65         0.037518         ±2.5         Pass           3.55         85         0.049062         ±2.5         Pass           Temperature (℃)         Power supplied (Vdc)         Frequency error         Limit (ppm)         Result           Temperature (℃)         Power supplied (Vdc)         Frequency error         Limit (ppm)         Result	Reference F	requency: LTE Band	4(10MHz) Middle	channel=20175	channel=1732.50	MHz	
Temperature (C)		Power supplied	Frequer	ncy error			
A.35	Temperature (℃)		Hz	ppm	Limit (ppm)	Result	
25       3.80       74       0.042713       ±2.5       Pass         3.55       88       0.050794       ±2.5       Pass         Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz         Temperature (°C)       Power supplied (Vdc)       Frequency error (Pmpm)       Limit (ppm)       Result         25       3.80       65       0.037518       ±2.5       Pass         3.55       85       0.049062       +2.5       Pass         Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz         Temperature (°C)       Power supplied (Vdc)       Frequency error (Vdc)       Limit (ppm)       Result         4.35       74       0.042713       Limit (ppm)       Result		` '	68	0.039250	±2.5		
Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz   Temperature (°C)	25	3.80				Pass	
Temperature (°C)         Power supplied (Vdc)         Frequency error         Limit (ppm)         Result           4.35         74         0.042713         4.35         74         0.037518         4.2.5         Pass           3.55         85         0.049062         0.049062         Pass         1.0049062		3.55	88				
Temperature (℃)         (Vdc)         Hz         ppm         Limit (ppm)         Result           4.35         74         0.042713         25         3.80         65         0.037518         ±2.5         Pass           3.55         85         0.049062         0.049062         1.0049062         1	Reference F	requency: LTE Band	4(15MHz) Middle	channel=20175	channel=1732.50	MHz	
Temperature (°C)							
25       3.80       65       0.037518       ±2.5       Pass         3.55       85       0.049062         Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz         Temperature (℃)       Power supplied (Vdc)       Frequency error Hz       Limit (ppm)       Result         4.35       74       0.042713       Contact the contact th	Temperature (℃)	• •	Hz	ppm	Limit (ppm)	Result	
25       3.80       65       0.037518       ±2.5       Pass         3.55       85       0.049062         Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz         Temperature (°C)       Power supplied (Vdc)       Frequency error (Vdc)       Limit (ppm)       Result         4.35       74       0.042713       Colspan="6">Colspan		` '	74	0.042713	±2.5		
3.55 85 0.049062  Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz  Temperature (°C) Power supplied (Vdc) Hz ppm Limit (ppm) Result  4.35 74 0.042713	25	3.80				Pass	
Temperature (°C)  Power supplied (Vdc)  Hz ppm  Limit (ppm)  Result  4.35  74  0.042713		3.55	85				
Temperature (°C)         (Vdc)         Hz         ppm         Limit (ppm)         Result           4.35         74         0.042713	30 1000						
Comperature (C)	- (00)	Power supplied	Frequer	ncy error			
4.35 74 0.042713	Temperature (°C)	• •	Hz	ppm	Limit (ppm)	Result	
		` '	74	0.042713			
	25	3.80	96		±2.5	Pass	
3.55 85 0.049062		3.55					





LTE Band 7(QPSK):

			. •			
Reference Fr	equency: LTE Band	7(5MHz) Middle c	hannel=21100 Fre	equency=2535.0	0MHz	
Temperature (°ℂ)	Power supplied	Frequency error		1 ''( ()	Danielt	
remperature (C)	(Vdc)	Hz	ppm	Limit (ppm)	Result	
	4.35	87	0.034320			
25	3.80	90	0.035503	±2.5	Pass	
	3.55	85	0.033531			
Reference Fre	equency: LTE Band 7	(10MHz) Middle	channel=21100 Fr	equency=2535.0	00MHz	
Temperature (°ℂ)	Power supplied	Frequency error		Limit (nnrs)	Result	
remperature ( C)	(Vdc)	Hz	ppm	Limit (ppm)	Result	
	4.35	67	0.026430	±2.5	Pass	
25	3.80	80	0.031558			
	3.55	74	0.029191			
Reference Fre	equency: LTE Band 7	(15MHz) Middle	channel=21100 Fr	equency=2535.0	00MHz	
Temperature (°ℂ)	Power supplied	Freque	ncy error	Limit (nnm)	Dogult	
remperature (C)	(Vdc)	Hz	ppm	Limit (ppm)	Result	
	4.35	88	0.034714	±2.5		
25	3.80	65	0.025641		Pass	
	3.55	85	0.033531			
Reference Frequency: LTE Band 7(20MHz) Middle channel=21100 Frequency=2535.00MHz						
Temperature (°C)	Power supplied	Freque	ncy error	Limit (ppm) Result		
	(Vdc)	Hz	ppm	Limit (ppm)	Kesuit	
	4.35	78	0.030769			
25	3.80	75	0.029586	±2.5	Pass	
	3.55	90	0.035503	]		





LTE Band 7(16QAM):

Reference Fr	equency: LTE Band	7(5MHz) Middle c	hannel=21100 Fre	equency=2535.0	OMHz
Temperature (°ℂ)	Power supplied	Frequency error		Limit (mma)	Decult
remperature (C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	85	0.033531		Pass
25	3.80	75	0.029586	±2.5	
	3.55	63	0.024852		
Reference Fre	equency: LTE Band 7	(10MHz) Middle	channel=21100 Fr	equency=2535.0	0MHz
Temperature (°C)	Power supplied	Frequency error		Limit (nnm)	Popult
remperature (C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	84	0.033136	±2.5	Pass
25	3.80	95	0.037475		
	3.55	74	0.029191		
Reference Fre	equency: LTE Band 7	(15MHz) Middle	channel=21100 Fr	equency=2535.0	0MHz
Temperature (°C)	Power supplied	Frequency error		Limit (nnn)	Danult
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	85	0.033531	±2.5	Pass
25	3.80	76	0.029980		
	3.55	90	0.035503		
Reference Fre	equency: LTE Band 7	(20MHz) Middle	channel=21100 Fr	equency=2535.0	0MHz
Temperature (°ℂ)	Power supplied	Freque	ncy error	Limit (nnm) Door	
	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	85	0.033531	±2.5	
25	3.80	74	0.029191		Pass
	3.55	85	0.033531		