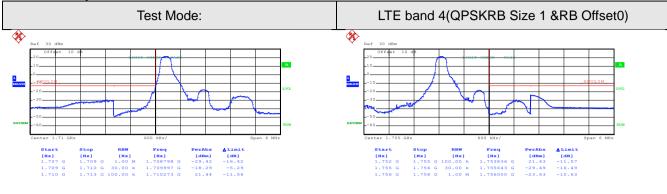




LTE band 4 part:1.4MHz:

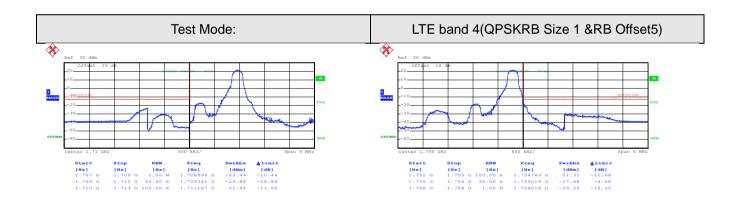


Date: 20.JUN.2017 22:37:55

Date: 20.JUN.2017 22:40:56

Lowest channel

Highest channel



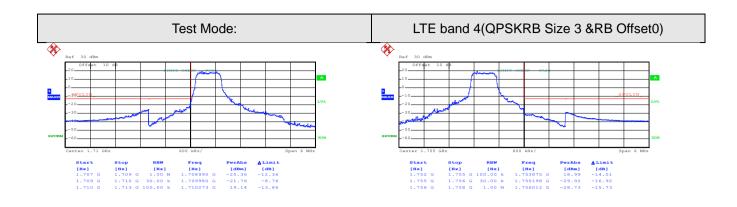
Date: 20.JUN.2017 22:38:27

Date: 20.JUN.2017 22:41:26

Lowest channel





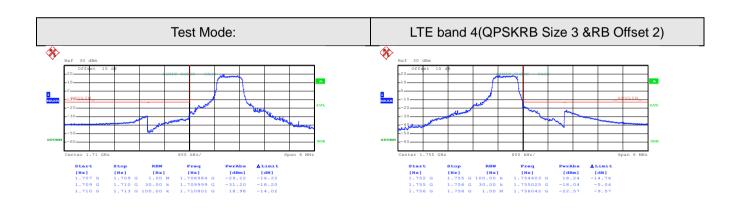


Date: 20.JUN.2017 22:38:50

Date: 20.JUN.2017 22:41:49

Lowest channel

Highest channel



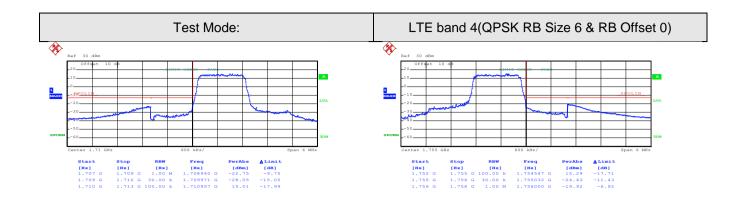
Date: 20.JUN.2017 22:39:18

Date: 20.JUN.2017 22:42:19

Lowest channel





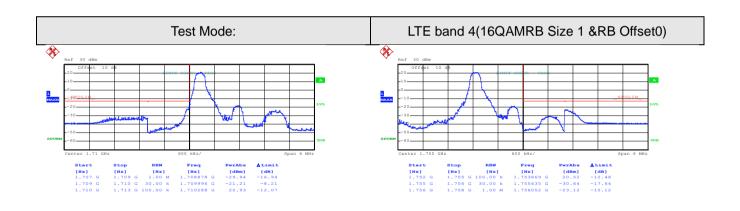


Date: 20.JUN.2017 22:39:43

Date: 20.JUN.2017 22:42:42

Lowest channel

Highest channel



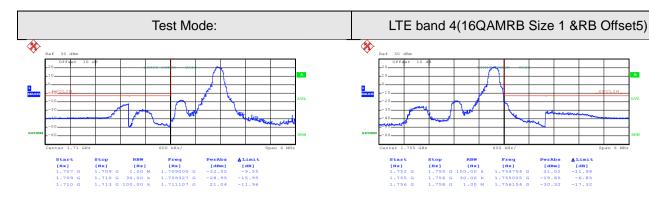
Date: 20.JUN.2017 22:38:12

Date: 20.JUN.2017 22:41:11

Lowest channel





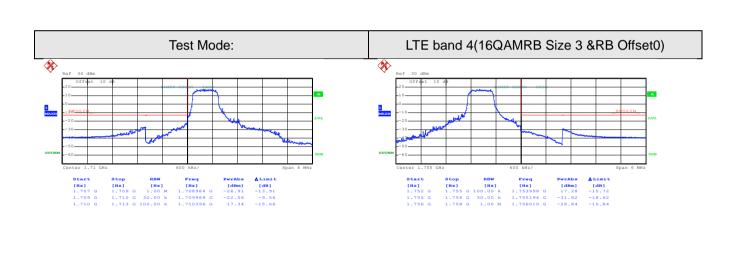


Date: 20.JUN.2017 22:38:36

Date: 20.JUN.2017 22:41:36

Lowest channel

Highest channel



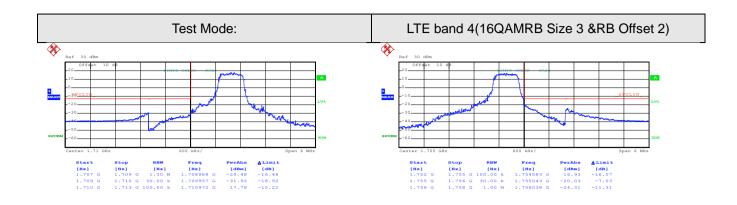
Date: 20.JUN.2017 22:39:01

Date: 20.JUN.2017 22:42:01

Lowest channel





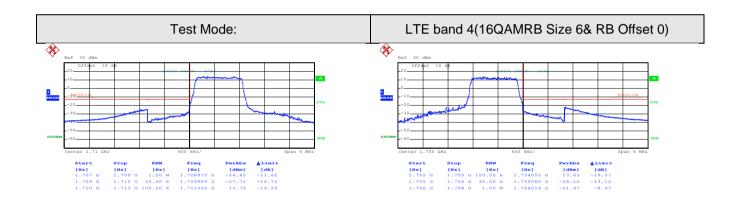


Date: 20.JUN.2017 22:39:27

Date: 20.JUN.2017 22:42:29

Lowest channel

Highest channel



Date: 20.JUN.2017 22:40:07

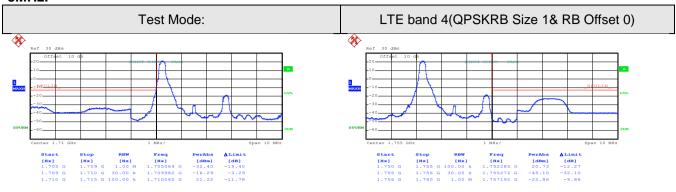
Date: 20.JUN.2017 22:42:50

Lowest channel





3MHz:

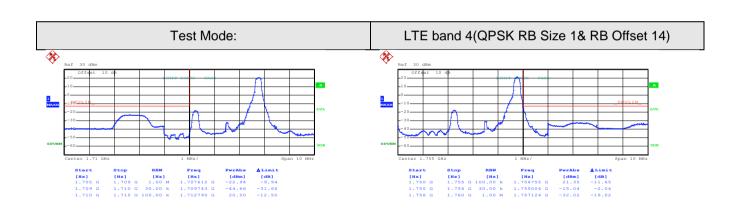


Date: 20.JUN.2017 22:44:34

Date: 20.JUN.2017 22:47:23

Lowest channel

Highest channel



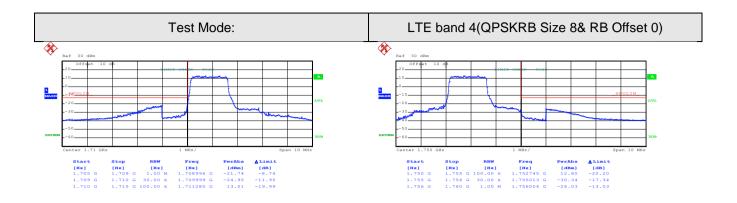
Date: 20.JUN.2017 22:45:09

Date: 20.JUN.2017 22:47:49

Lowest channel





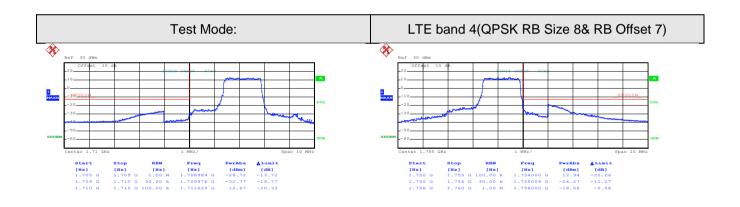


Date: 20.JUN.2017 22:45:35

Date: 20.JUN.2017 22:48:10

Lowest channel

Highest channel



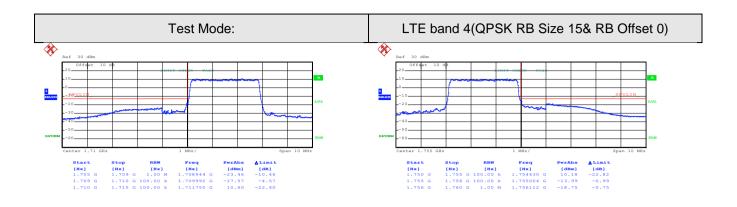
Date: 20.JUN.2017 22:45:57

Date: 20.JUN.2017 22:48:31

Lowest channel





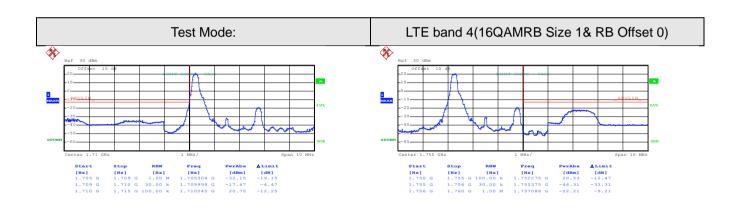


Date: 20.JUN.2017 22:46:36

Date: 20.JUN.2017 22:49:04

Lowest channel

Highest channel



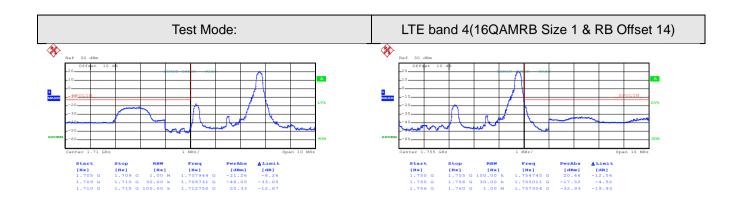
Date: 20.JUN.2017 22:44:54

Date: 20.JUN.2017 22:47:32

Lowest channel





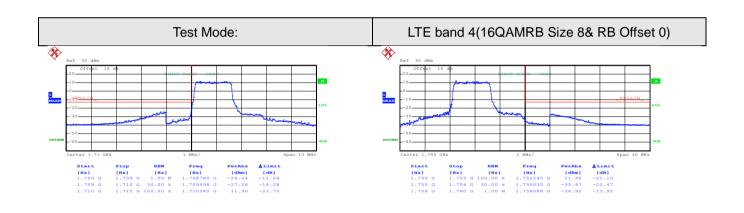


Date: 20.JUN.2017 22:45:19

Date: 20.JUN.2017 22:47:57

Lowest channel

Highest channel



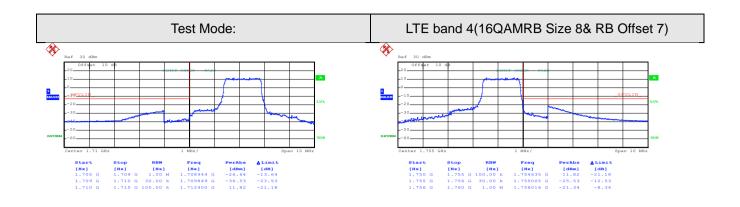
Date: 20.JUN.2017 22:45:42

Date: 20.JUN.2017 22:48:17

Lowest channel





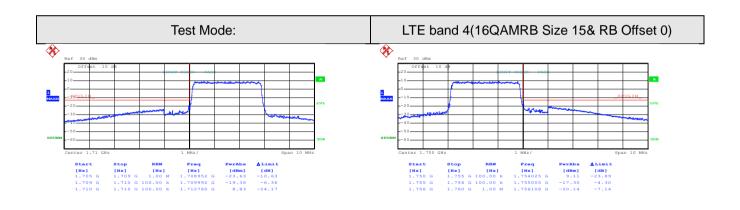


Date: 20.JUN.2017 22:46:09

Date: 20.JUN.2017 22:48:41

Lowest channel

Highest channel



Date: 20.JUN.2017 22:46:45

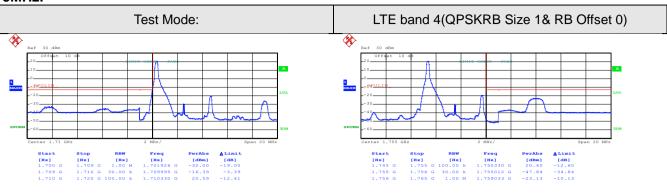
Date: 20.JUN.2017 22:49:11

Lowest channel





5MHz:

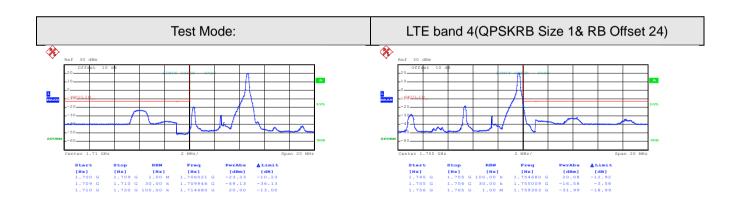


Date: 20.JUN.2017 22:50:24

Date: 20.JUN.2017 22:54:14

Lowest channel

Highest channel



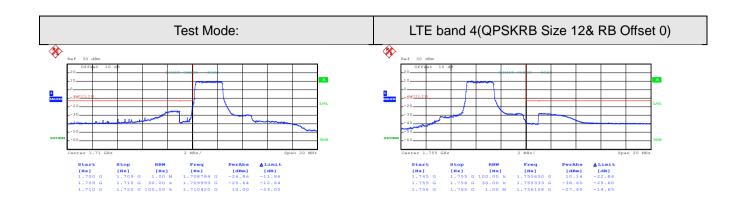
Date: 20.JUN.2017 22:50:48

Date: 20.JUN.2017 22:54:34

Lowest channel





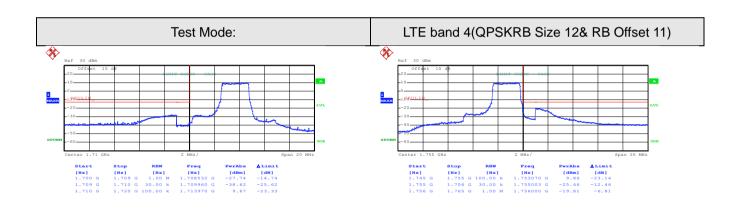


Date: 20.JUN.2017 22:51:37

Date: 20.JUN.2017 22:54:56

Lowest channel

Highest channel



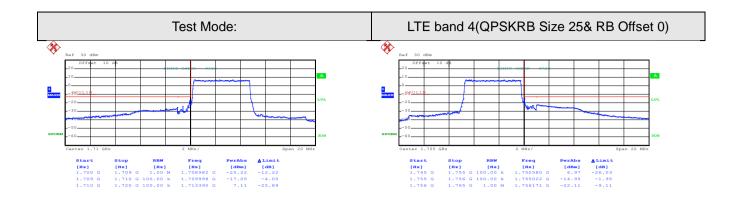
Date: 20.JUN.2017 22:52:02

Date: 20.JUN.2017 22:55:20

Lowest channel





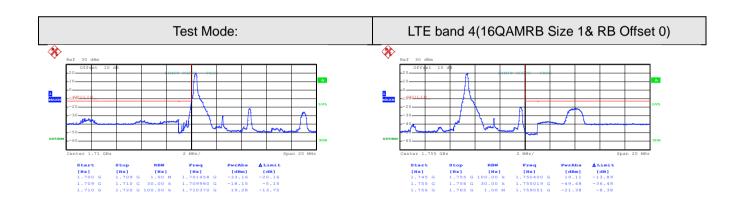


Date: 20.JUN.2017 22:53:22

Date: 20.JUN.2017 22:55:50

Lowest channel

Highest channel



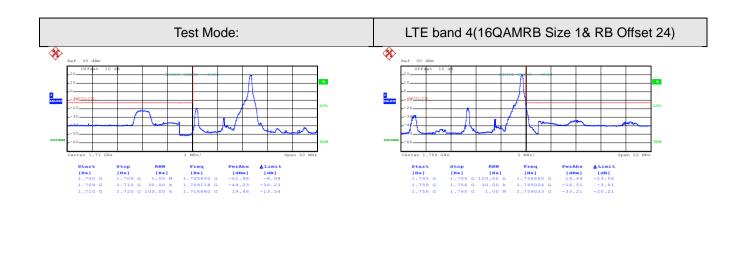
Date: 20.JUN.2017 22:50:34

Date: 20.JUN.2017 22:54:21

Lowest channel





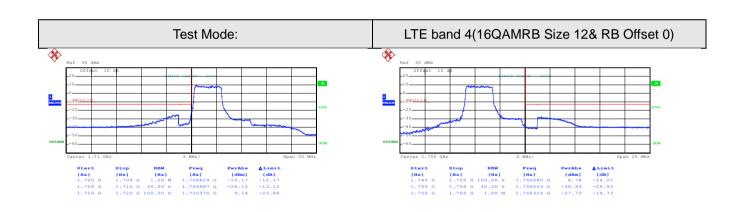


Date: 20.JUN.2017 22:51:09

Date: 20.JUN.2017 22:54:43

Lowest channel

Highest channel



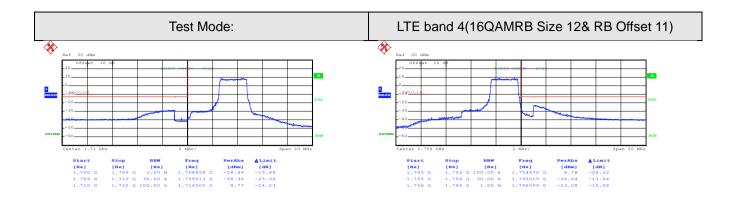
Date: 20.JUN.2017 22:51:46

Date: 20.JUN.2017 22:55:06

Lowest channel





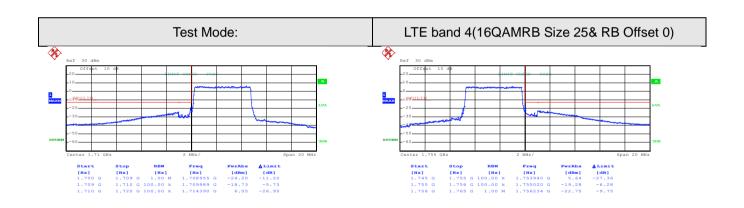


Date: 20.JUN.2017 22:52:11

Date: 20.JUN.2017 22:55:29

Lowest channel

Highest channel



Date: 20.JUN.2017 22:53:37

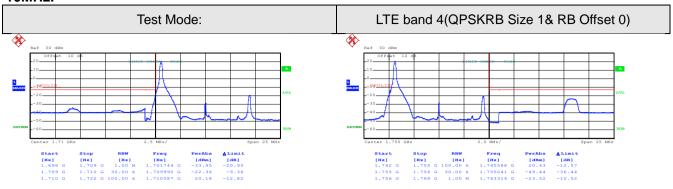
Date: 20.JUN.2017 22:55:57

Lowest channel





10MHz:

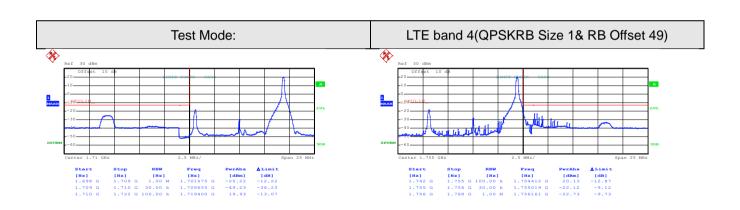


Date: 20.JUN.2017 22:57:08

Date: 20.JUN.2017 23:01:06

Lowest channel

Highest channel



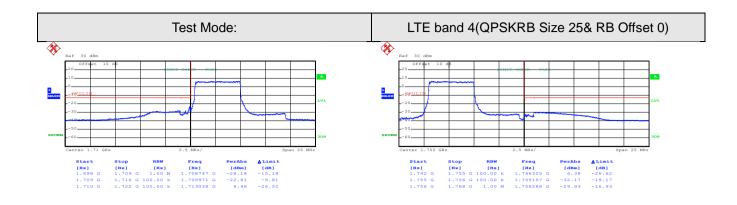
Date: 20.JUN.2017 22:57:34

Date: 20.JUN.2017 23:01:27

Lowest channel





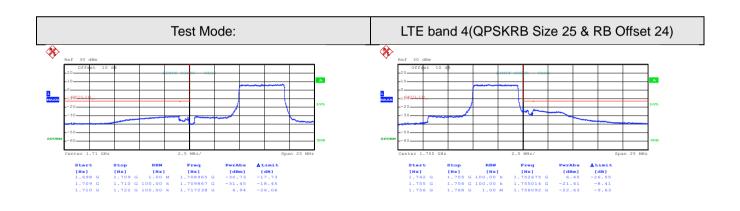


Date: 20.JUN.2017 22:58:31

Date: 20.JUN.2017 23:02:17

Lowest channel

Highest channel



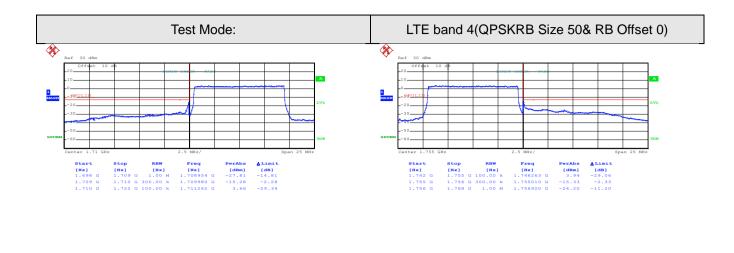
Date: 20.JUN.2017 22:59:03

Date: 20.JUN.2017 23:02:42

Lowest channel





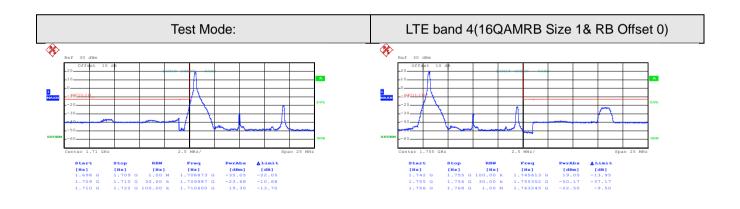


Date: 20.JUN.2017 23:00:24

Date: 20.JUN.2017 23:03:41

Lowest channel

Highest channel



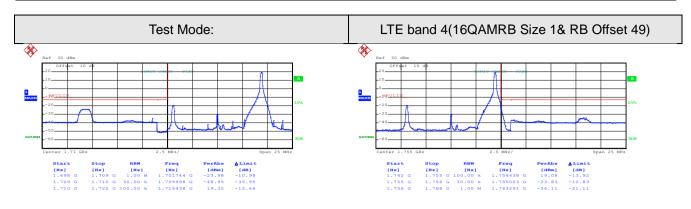
Date: 20.JUN.2017 22:57:18

Date: 20.JUN.2017 23:01:15

Lowest channel





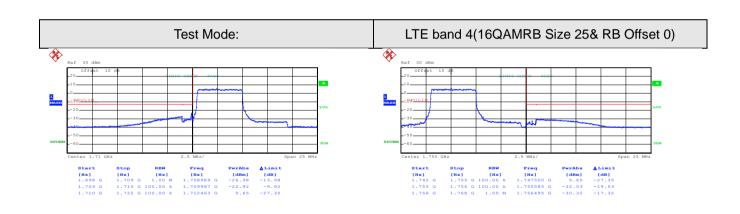


Date: 20.JUN.2017 22:58:06

Date: 20.JUN.2017 23:01:38

Lowest channel

Highest channel



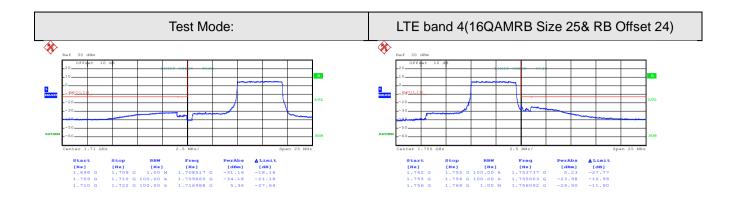
Date: 20.JUN.2017 22:58:39

Date: 20.JUN.2017 23:02:25

Lowest channel





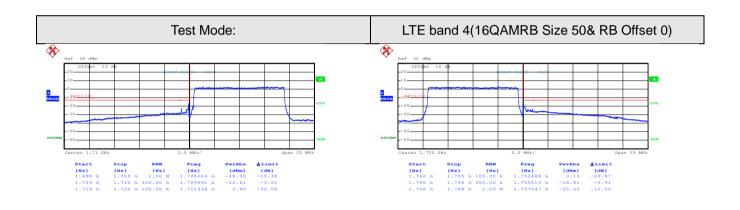


Date: 20.JUN.2017 23:00:05

Date: 20.JUN.2017 23:03:00

Lowest channel

Highest channel



Date: 20.JUN.2017 23:00:32

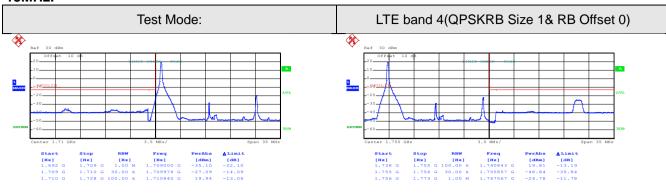
Date: 20.JUN.2017 23:03:51

Lowest channel





15MHz:

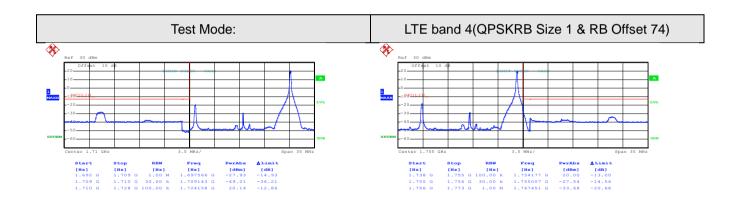


Date: 20.JUN.2017 23:05:23

Date: 20.JUN.2017 23:08:00

Lowest channel

Highest channel



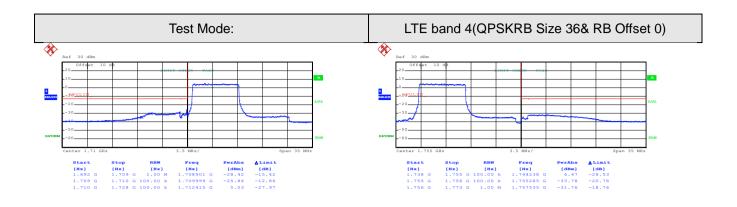
Date: 20.JUN.2017 23:05:57

Date: 20.JUN.2017 23:08:22

Lowest channel





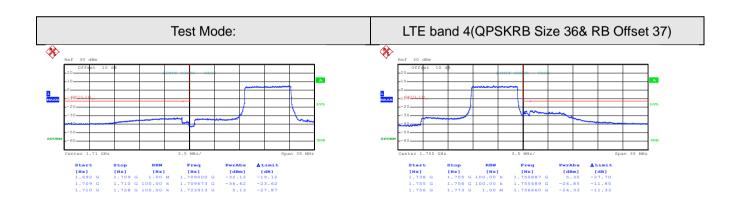


Date: 20.JUN.2017 23:06:33

Date: 20.JUN.2017 23:08:53

Lowest channel

Highest channel



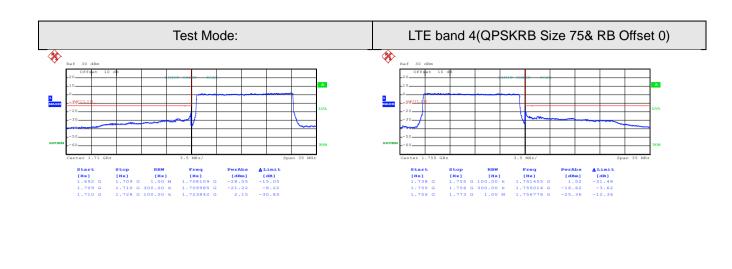
Date: 20.JUN.2017 23:06:56

Date: 20.JUN.2017 23:09:16

Lowest channel



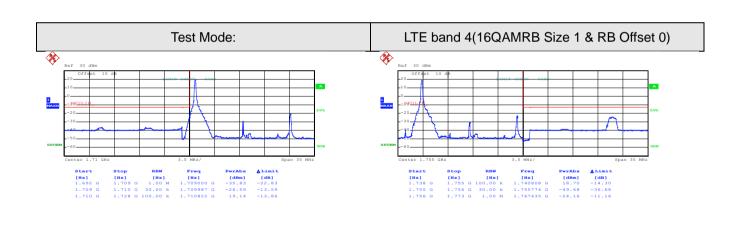




Date: 20.JUN.2017 23:07:26

Lowest channel

Highest channel



Date: 20.JUN.2017 23:05:38

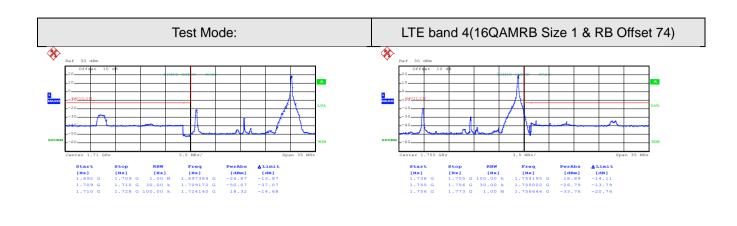
Date: 20.JUN.2017 23:08:08

Date: 20.JUN.2017 23:09:49

Lowest channel





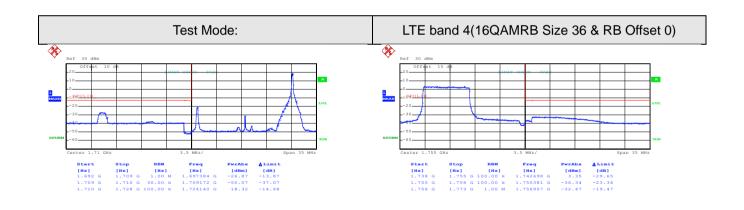


Date: 20.JUN.2017 23:06:05

Date: 20.JUN.2017 23:08:31

Lowest channel

Highest channel



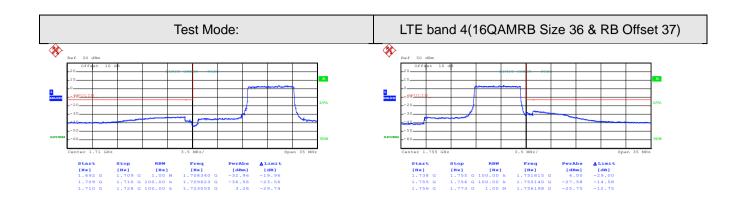
Date: 20.JUN.2017 23:06:05

Date: 20.JUN.2017 23:09:01

Lowest channel





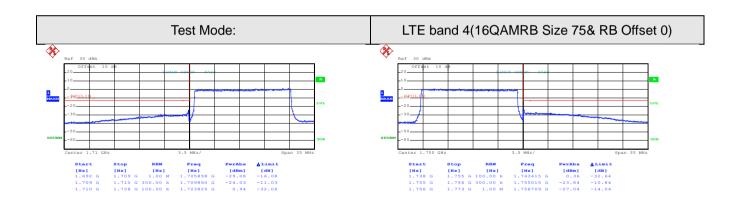


Date: 20.JUN.2017 23:07:05

Date: 20.JUN.2017 23:09:25

Lowest channel

Highest channel



Date: 20.JUN.2017 23:07:33

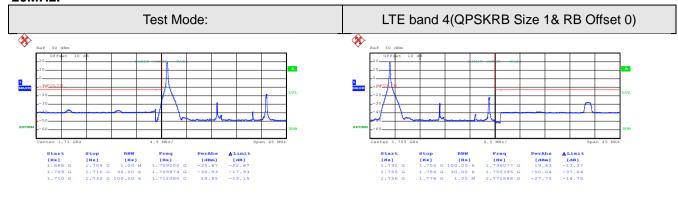
Date: 20.JUN.2017 23:09:57

Lowest channel





20MHz:

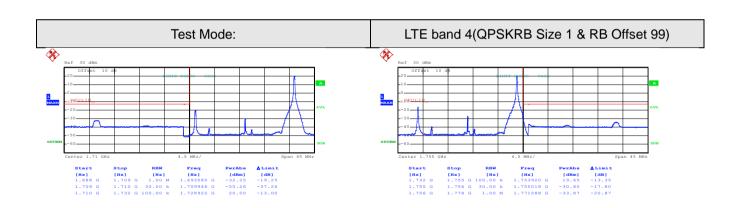


Date: 20.JUN.2017 23:10:57

Date: 20.JUN.2017 23:13:50

Lowest channel

Highest channel



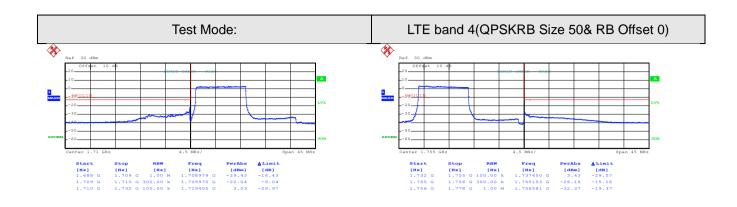
Date: 20.JUN.2017 23:11:35

Date: 20.JUN.2017 23:14:13

Lowest channel





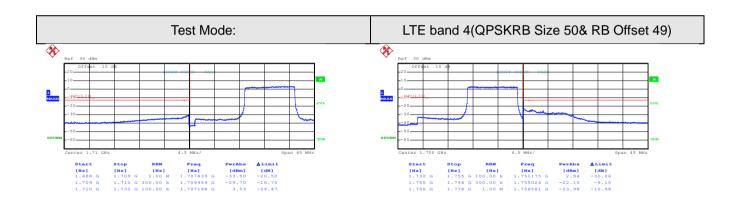


Date: 20.JUN.2017 23:12:09

Date: 20.JUN.2017 23:15:08

Lowest channel

Highest channel



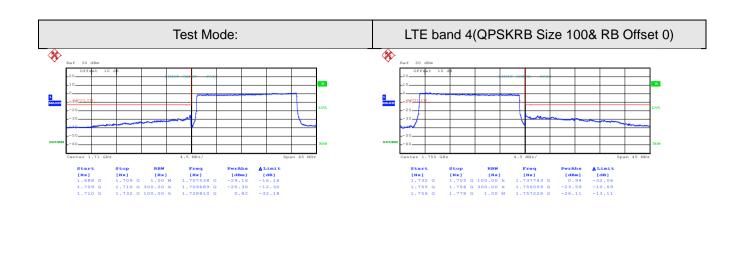
Date: 20.JUN.2017 23:12:35

Date: 20.JUN.2017 23:15:34

Lowest channel





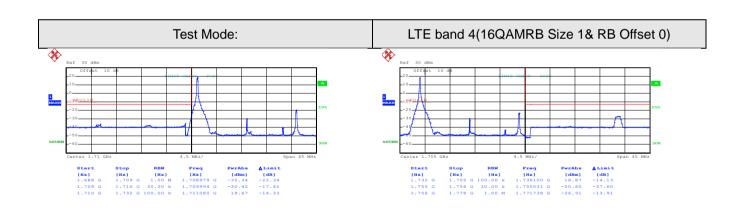


Lowest channel

Date: 20.JUN.2017 23:13:02

Highest channel

Date: 20.JUN.2017 23:16:03



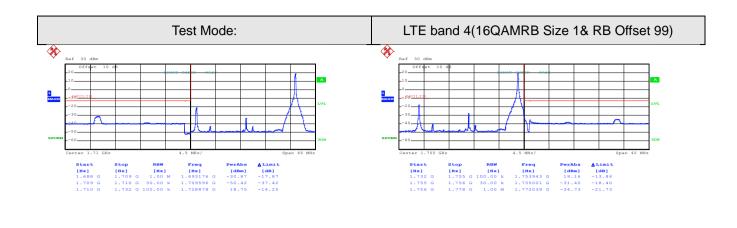
Date: 20.JUN.2017 23:11:05

Date: 20.JUN.2017 23:14:01

Lowest channel





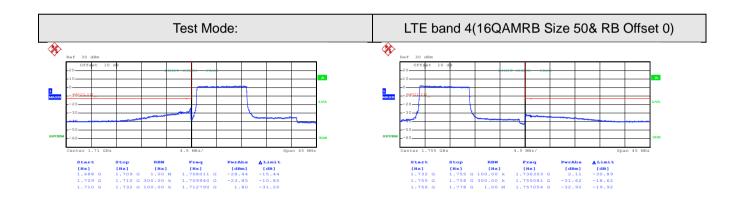


Date: 20.JUN.2017 23:11:45

Date: 20.JUN.2017 23:14:33

Lowest channel

Highest channel



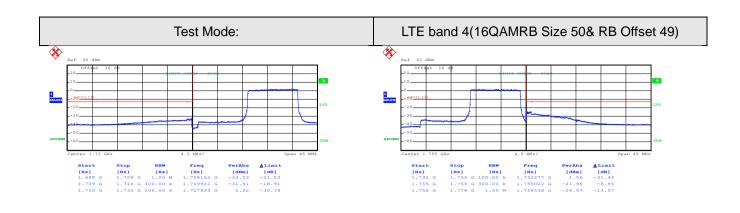
Date: 20.JUN.2017 23:12:19

Date: 20.JUN.2017 23:15:17

Lowest channel





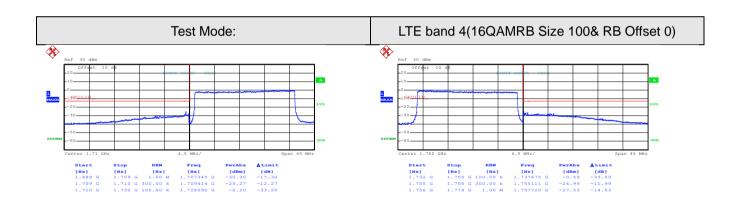


Date: 20.JUN.2017 23:12:44

Date: 20.JUN.2017 23:15:43

Lowest channel

Highest channel



Date: 20.JUN.2017 23:13:18

Date: 20.JUN.2017 23:16:10

Lowest channel

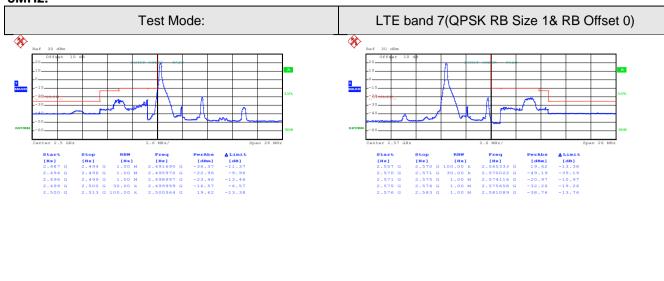




LTE band 7 part:

Date: 20.JUN.2017 23:24:02

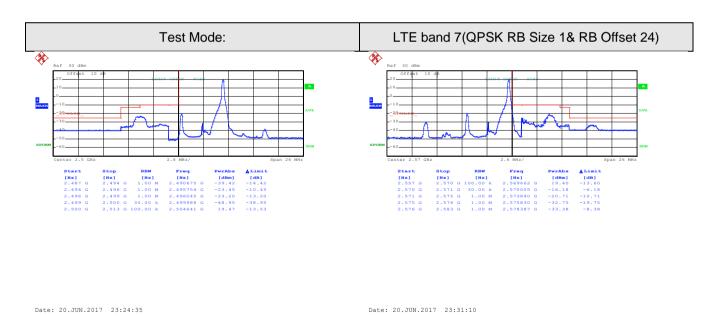
5MHz:



Date: 20.JUN.2017 23:30:45

Lowest channel

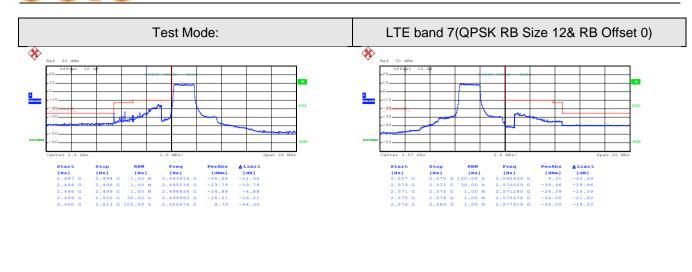
Highest channel



Lowest channel





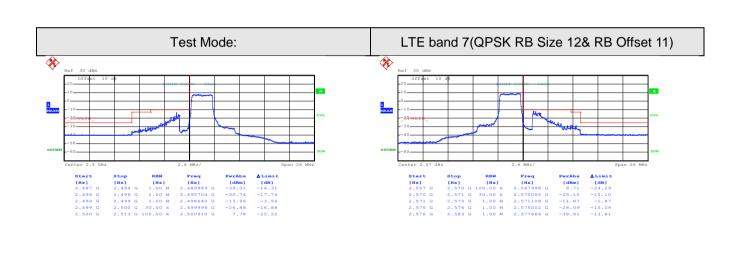


Lowest channel

Date: 20.JUN.2017 23:28:45

Highest channel

Date: 20.JUN.2017 23:31:44



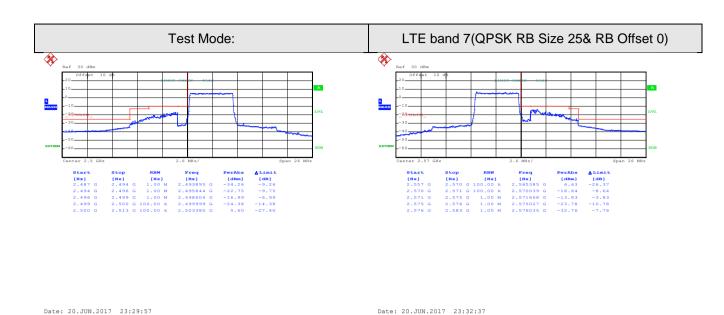
Date: 20.JUN.2017 23:28:59

Date: 20.JUN.2017 23:32:05

Lowest channel

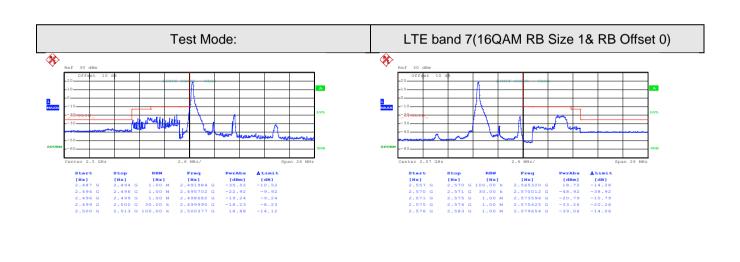






Lowest channel

Highest channel



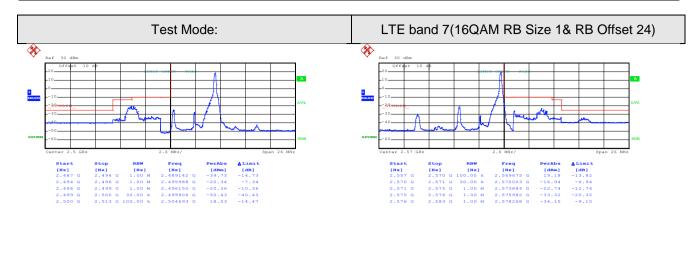
Date: 20.JUN.2017 23:24:17

Date: 20.JUN.2017 23:30:54

Lowest channel





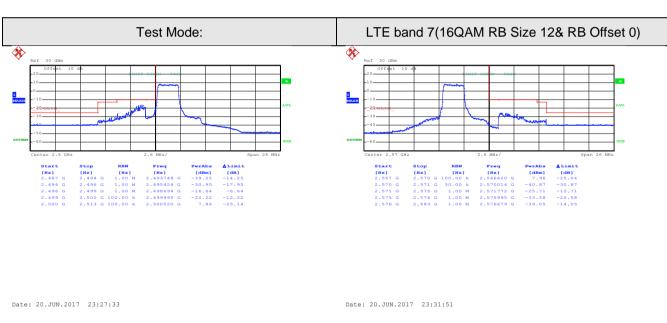


Date: 20.JUN.2017 23:24:44

Date: 20.JUN.2017 23:31:21

Lowest channel

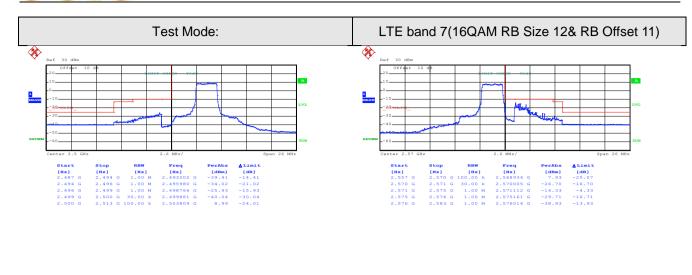
Highest channel



Lowest channel





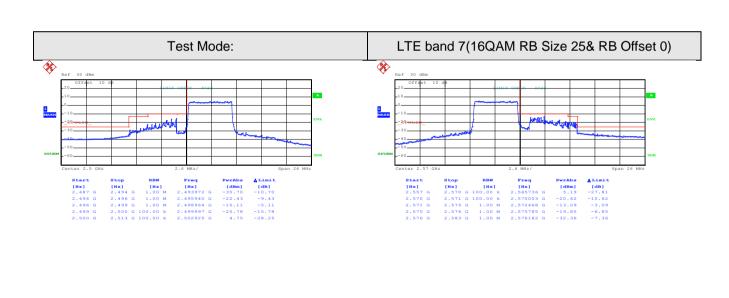


Date: 20.JUN.2017 23:29:28

Date: 20.JUN.2017 23:32:15

Lowest channel

Highest channel



Date: 20.JUN.2017 23:30:05

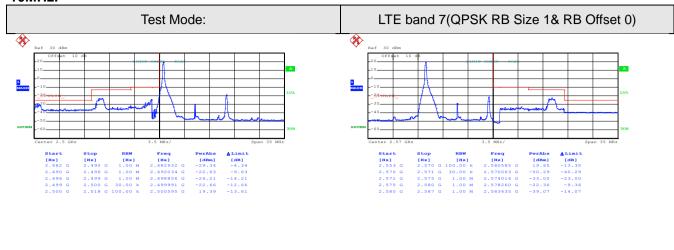
Date: 20.JUN.2017 23:32:48

Lowest channel





10MHz:

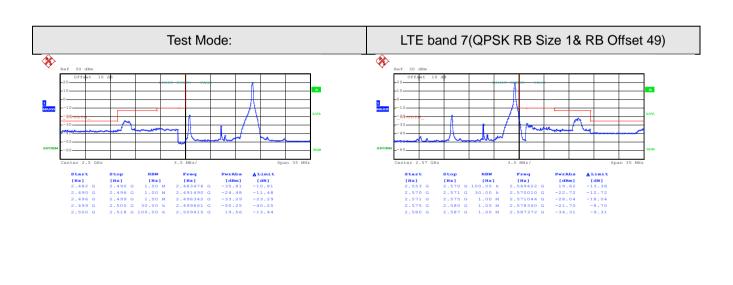


Date: 20.JUN.2017 23:34:04

Date: 20.JUN.2017 23:36:48

Lowest channel

Highest channel



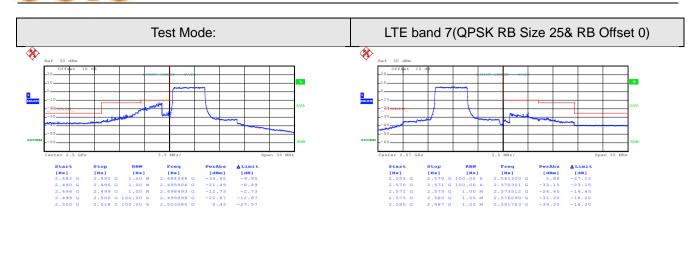
Date: 20.JUN.2017 23:34:30

Date: 20.JUN.2017 23:37:11

Lowest channel



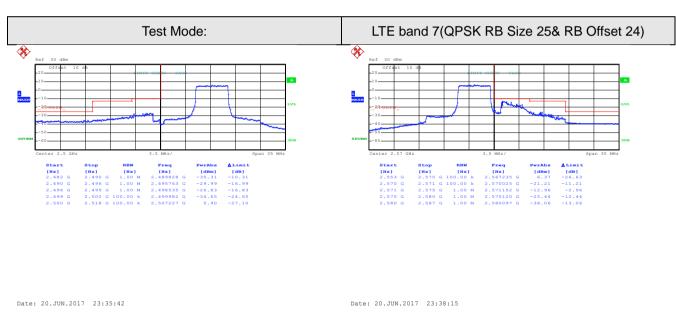




Date: 20.JUN.2017 23:35:14

Date: 20.JUN.2017 23:37:44

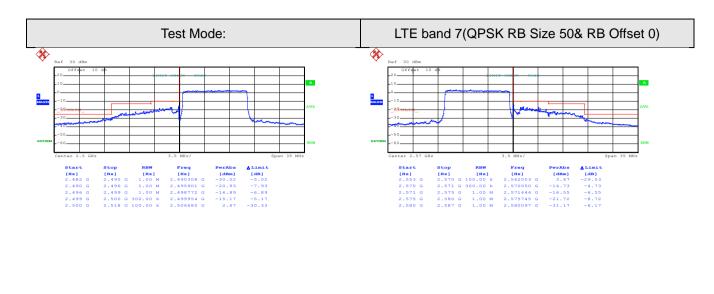
Lowest channel Highest channel



Lowest channel





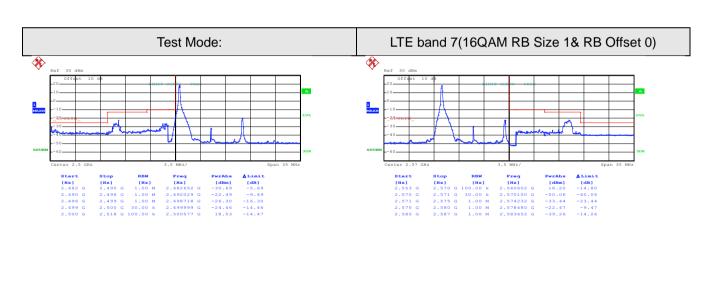


Date: 20.JUN.2017 23:36:13

Date: 20.JUN.2017 23:38:51

Lowest channel

Highest channel



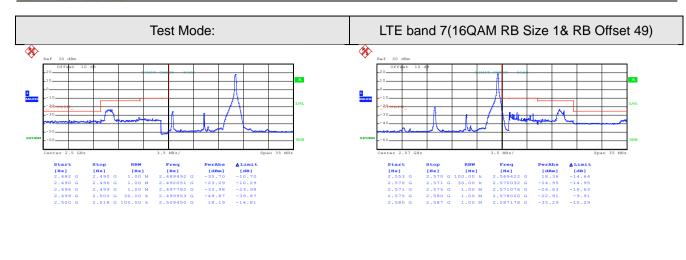
Date: 20.JUN.2017 23:34:14

Date: 20.JUN.2017 23:36:56

Lowest channel





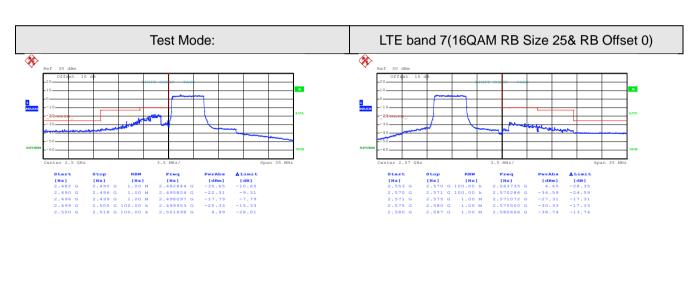


Date: 20.JUN.2017 23:34:39

Date: 20.JUN.2017 23:37:20

Lowest channel

Highest channel



Date: 20.JUN.2017 23:35:22

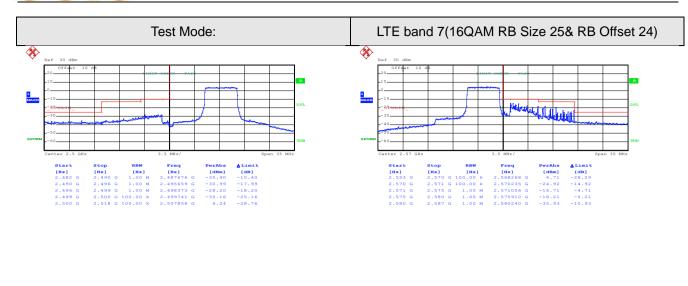
Date: 20.JUN.2017 23:37:52

Lowest channel



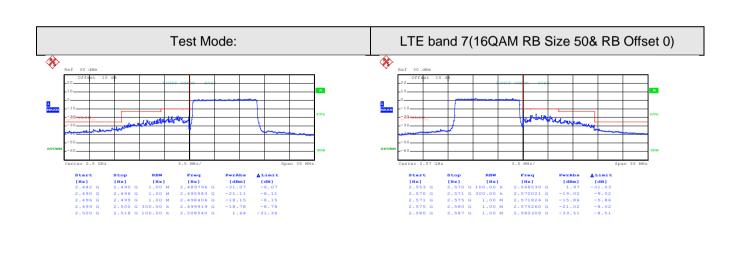


Date: 20.JUN.2017 23:35:51



Lowest channel

Highest channel



Date: 20.JUN.2017 23:36:20

Date: 20.JUN.2017 23:39:01

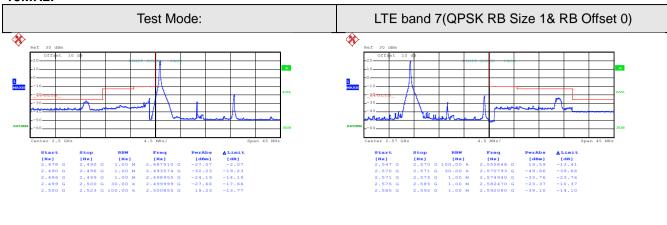
Date: 20.JUN.2017 23:38:25

Lowest channel





15MHz:

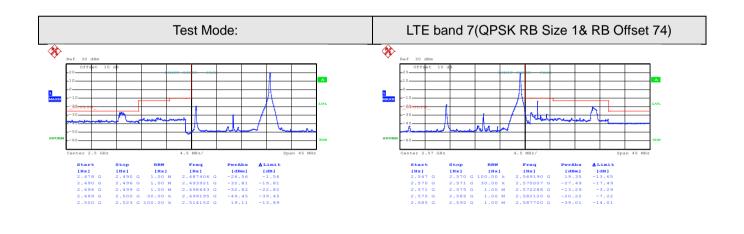


Date: 20.JUN.2017 23:40:21

Date: 20.JUN.2017 23:42:52

Lowest channel

Highest channel



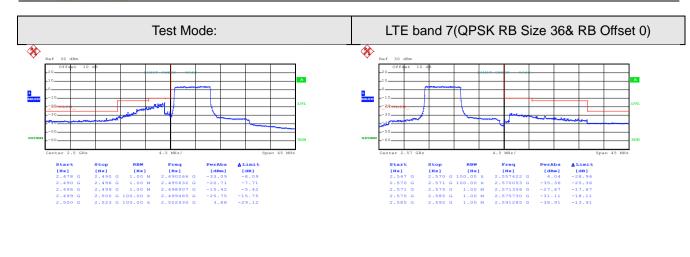
Date: 20.JUN.2017 23:40:47

Date: 20.JUN.2017 23:43:16

Lowest channel





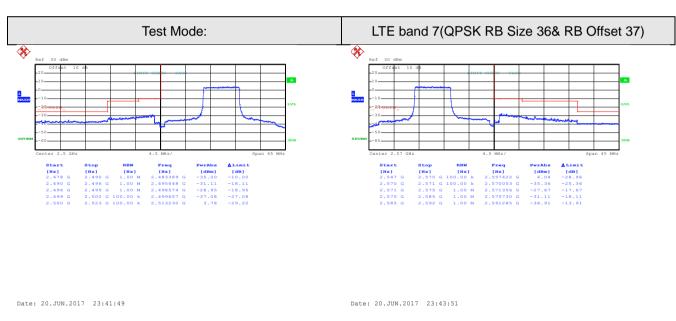


Date: 20.JUN.2017 23:41:25

Date: 20.JUN.2017 23:43:51

Lowest channel

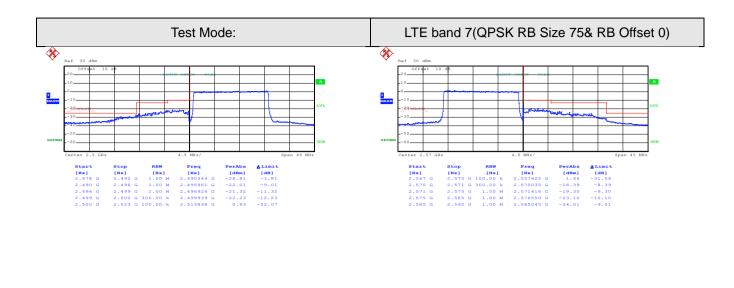
Highest channel



Lowest channel





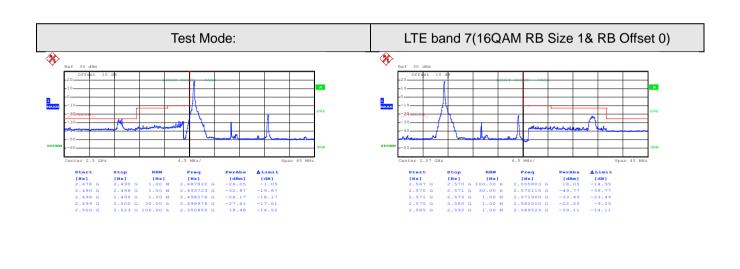


Lowest channel

Date: 20.JUN.2017 23:42:20

Date: 20.JUN.2017 23:44:53

Highest channel



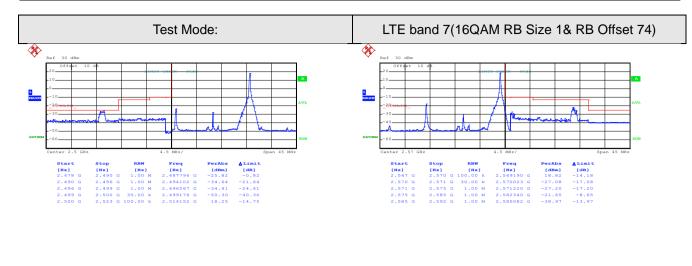
Date: 20.JUN.2017 23:40:31

Date: 20.JUN.2017 23:43:00

Lowest channel





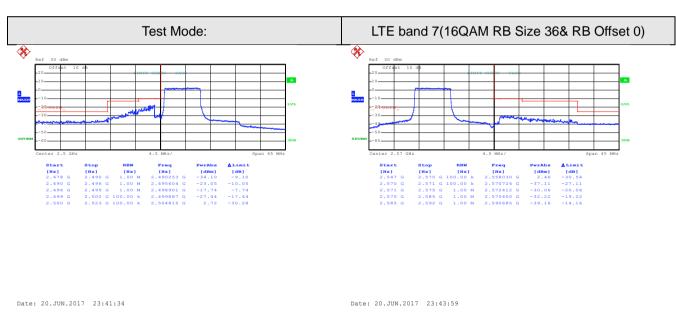


Date: 20.JUN.2017 23:40:56

Date: 20.JUN.2017 23:43:26

Lowest channel

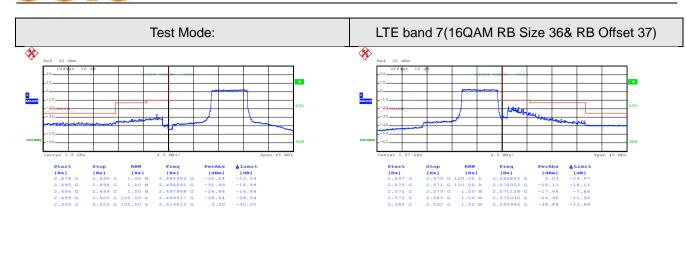
Highest channel



Lowest channel



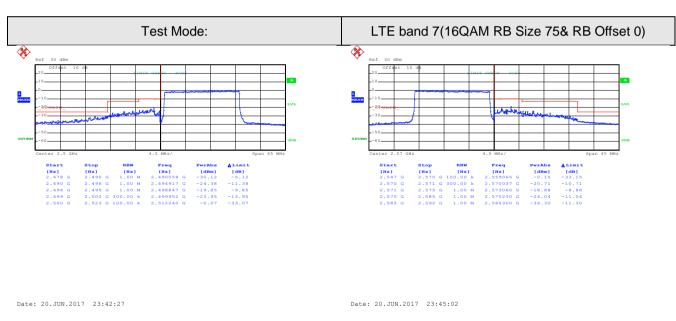




Date: 20.JUN.2017 23:41:59

Date: 20.JUN.2017 23:44:25

Lowest channel Highest channel

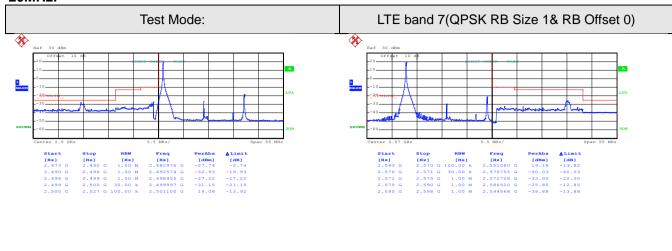


Lowest channel





20MHz:

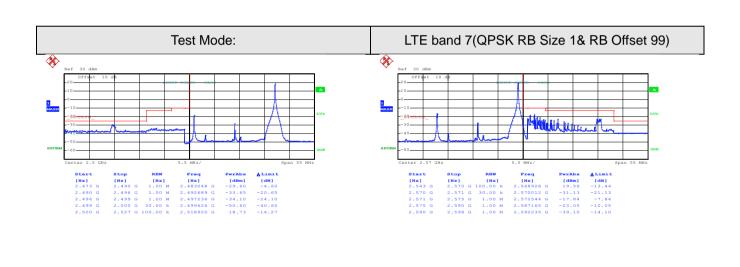


Date: 20.JUN.2017 23:46:06

Date: 20.JUN.2017 23:48:36

Lowest channel

Highest channel



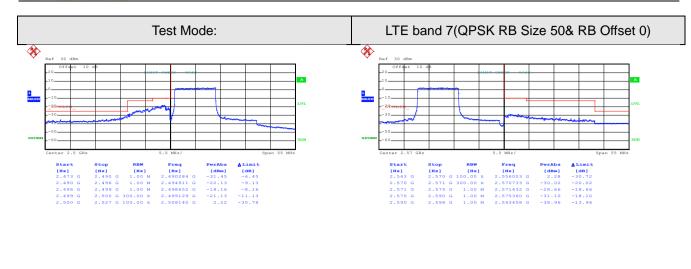
Date: 20.JUN.2017 23:46:28

Date: 20.JUN.2017 23:49:06

Lowest channel





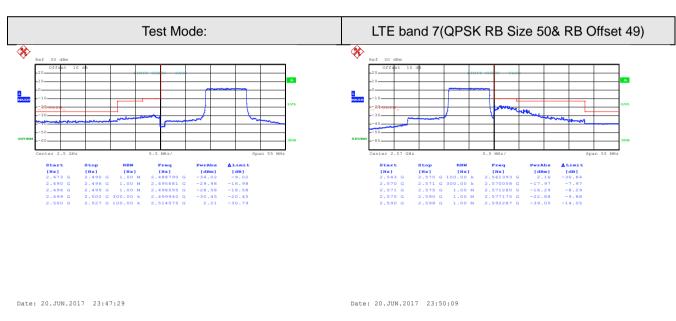


Date: 20.JUN.2017 23:46:58

Date: 20.JUN.2017 23:49:42

Lowest channel

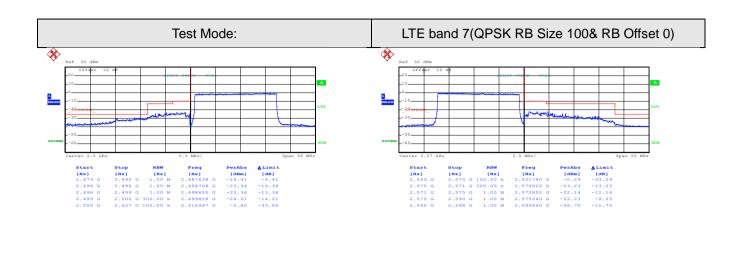
Highest channel



Lowest channel





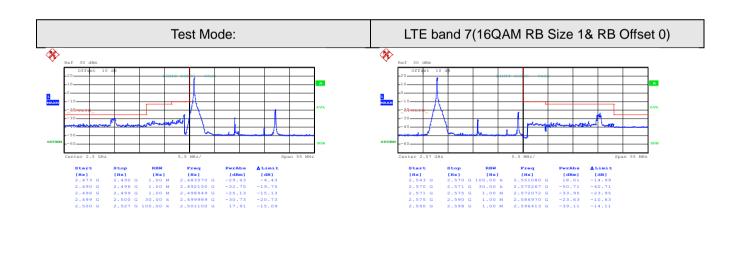


Date: 20.JUN.2017 23:47:59

Date: 20.JUN.2017 23:50:39

Lowest channel

Highest channel



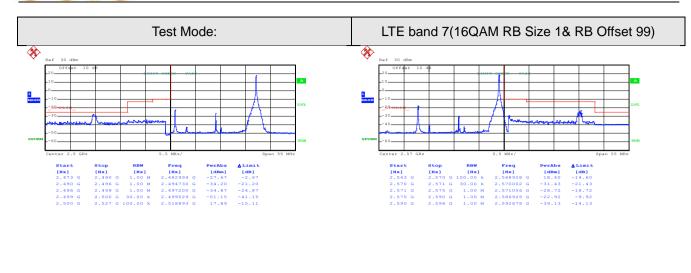
Date: 20.JUN.2017 23:46:15

Date: 20.JUN.2017 23:48:45

Lowest channel



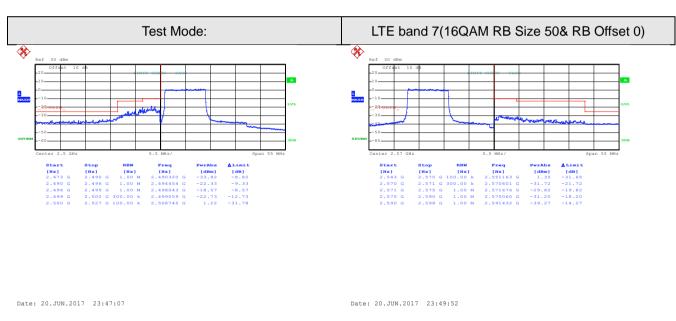




Date: 20.JUN.2017 23:46:37

Date: 20.JUN.2017 23:49:17

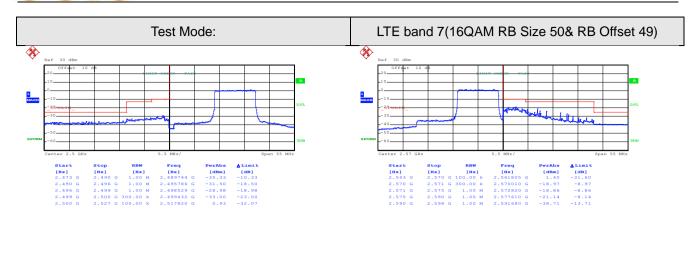
Lowest channel Highest channel



Lowest channel



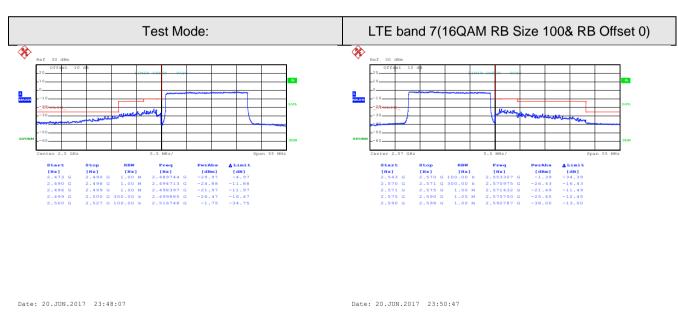




Date: 20.JUN.2017 23:47:39

Date: 20.JUN.2017 23:50:25

Lowest channel Highest channel



Lowest 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
	Asterna Tower Asterna Tower Item Anglifier Anglifier
	Substituted method: Antenna mast d: distance in meters d: 3 meter Substituted Dipole or Horn Antenna Bi-Log Antenna or Horn Antenna





	T
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:
	ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)
	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:
	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 size 1 & RB offset 0)											
1850.70	18607	QPSK	1.4	Н	V	18.31						
1000.70	10007	QI OIL	17		Н	18.20	33.00	Pass				
1850.70	18607	16QAM	1.4	Н	V	18.14	33.00	1 433				
1030.70	10007	TOQAM	1.4		Н	18.36						
		1.	4MHz(RB s	ize 3 & RB	offset 0)							
1850.70	18607	QPSK	1.4	Н	V	18.43						
1000.70	10007	QI OIX	1.4		Н	17.91	33.00	Pass				
1850.70	18607	16QAM	1.4	Н	V	18.54	33.00	1 433				
1000.70	10007	TOQAWI	1.4		Н	18.38						
		1.	4MHz(RB s	ize 6 & RB	offset 0)							
1850.70	18607	QPSK	1.4	Н	V	17.45						
1030.70	10007	QI OIX	1.4	11	Н	17.61	33.00	Pass				
1850.70	18607	16QAM	1.4	Н	V	17.56	33.00	1 033				
1030.70	10007	IOQAWI	1.4	11	Н	17.82						

Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	lle channe 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	18.32		
1000.00	10300	Qi Si	1.4		Н	18.14	33.00	Pass
1880.00	18900	16QAM	1.4	Н	V	18.11	33.00	1 433
1000.00	10900	TOQAW	1.4	11	Н	18.34		
		1.4	4MHz(RB	size 3 & RE	3 offset 0)			
1880.00	18900	QPSK	1.4	Н	V	18.46	33.00	Pass
1000.00	10300	QI SIX	1.4	11	Н	17.92		
1880.00	18900	16QAM	1.4	Н	V	18.62	33.00	
1000.00	10900	TOQAM	1.4	11	Н	18.43		
		1.4	4MHz(RB	size 6 & RE	3 offset 0)			
1880.00	18900	QPSK	1.40	Н	V	17.62		
1000.00	10900	QF UN	1.40	11	Н	17.66	33.00	Pass
1880.00	18900	16QAM	1.40	Н	V	17.54	33.00	F d55
1000.00	10900	TOQAM	1.40	11	Н	17.86		





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)			
1909.30	19193	QPSK	1.4	Н	V	18.34		
1909.50	19195	QI SIX	1.4	11	Н	18.16	33.00	Pass
1909.30	19193	16QAM	1.4	Н	V	18.09	33.00	1 433
1909.50	19193	TOQAIN	1.4	11	Н	18.34		
			1.4MHz(RE	3 size 3 & F	RB offset 0)			
1909.30	19193	QPSK	1.4	Н	V	18.49		
1909.50	19193	QF 5K	1.4	11	Н	17.93	33.00	Pass
1909.30	19193	16QAM	1.4	Н	V	18.64	33.00	rass
1909.30	19193	TOQAM	1.4		Н	18.43		
			1.4MHz(RE	3 size 6 & F	RB offset 0)			
1909.30	19193	QPSK	1.4	Н	V	17.64		
1909.30	19193	QF SN	1.4	11	Η	17.72	33.00	Pass
1909.30	19193	16QAM	1.4	Н	V	17.51	33.00	Fa55
1909.30	19193	IDUAIN	1.4	П	Н	17.85		

Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result		
		2	20MHz(RB s	ize 1 & RE	3 offset 0)					
1860.00	18700	QPSK	20	I	V	18.40				
1000.00	10700	QI SIX	20		Н	18.28	33.00	Pass		
1860.00	18700	16QAM	20	Н	V	18.71	33.00	1 433		
1000.00	10700	100/11/1	20	.,	Н	18.52				
	20MHz(RB size 50 & RB offset 0)									
1860.00	00 18700 QPSK	QPSK	20	Н	V	16.07				
1000.00	10700	QI OIX	20		Н	15.12	33.00	Pass		
1860.00	18700	16QAM	20	Н	V	16.25	33.00	1 833		
1000.00	10700	TOQAM	20	11	Н	15.42				
		20	MHz(RB siz	e 100 & R	B offset 0)					
1860.00	18700	QPSK	20	Н	V	16.26				
1000.00	10700	QI SIX	20	11	Н	14.13	33.00	Pass		
1860.00	0.00 18700 16QAM	20	Н	V	15.93	55.00	1 433			
1000.00	10700	TOQAW	20	11	Н	13.61				





Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
		2	20MHz(RB s	ize 1 & RE	3 offset 0)			
1880.00	18900	QPSK	20	Н	V	18.38		
1000.00	10900	QF 5K	20	11	Н	18.32	33.00	Pass
1880.00	18900	16QAM	20	Н	V	18.81	33.00	1 833
1000.00	10300	TOQAM	20	11	Н	18.64		
		2	0MHz(RB si	ze 50 & RI	B offset 0)			
1880.00	18900	QPSK	20	Н	V	16.08		
1000.00	16900	QF 5K	20	11	Н	15.23	33.00	Pass
1880.00	18900	16QAM	20	Н	V	16.29	33.00	1 833
1000.00	10900	TOQAM	20	11	Н	15.44		
		20)MHz(RB siz	e 100 & R	B offset 0)			
1880.00	18900	QPSK	20	Н	V	16.29		
1000.00	10900	UFON	20	П	Н	14.21	33.00	Pass
1880.00	18900	16QAM	20	Н	V	16.03	33.00	F 055
1000.00	10900	IOQAW	20	11	Н	13.67		

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	18.39					
1000.00	10100	QI OIL			Н	18.29	33.00	Pass			
1900.00	19100	16QAM			V	18.79	33.00	F 033			
1900.00	19100	TOQAM	20	11	Н	18.67					
		2	20MHz(RB s	size 50 &	RB offset 0)					
1900.00	19100	QPSK	20	Н	V	16.09					
1900.00	19100	QFSR	20	11	Н	15.27	33.00	Pass			
1900.00	19100	16QAM	20	Н	V	16.24	33.00	F 033			
1900.00	19100	TOQAM	20	11	Н	15.46					
		2	0MHz(RB s	ize 100 8	& RB offset ())					
1900.00	19100	QPSK	20	Н	V	16.32					
1300.00	19100	Q1 51X	20	11	Н	14.29	33.00	Pass			
1900.00	19100	16QAM	20	Н	V	16.39	33.00	1 033			
1300.00	13100	TOQAW	20	11	Н	13.72					





LTE band 4 part

Lowest 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)											
1710.70	19957	QPSK	1.4	н	V	13.57						
17 10.70	10001	QI OIT		• •	Н	14.70	30.00	Pass				
1710.70	19957	16QAM	1.4	Н	V	13.69	30.00	F 033				
1710.70	19957	TOQCIVI	1.4		Н	14.16						
	1.4MHz(RB size 3 & RB offset 0)											
1710.70	19957	QPSK	1 /	н	V	13.63		Pass				
1710.70	19957	Qi Si	1.4		Н	14.17	30.00					
1710.70	19957	16QAM	1.4	Н	V	15.35	30.00	F 033				
1710.70	19957	TOQAM	1.4		Н	14.24						
		1	I.4MHz(RE	3 size 6 &	RB offset 0)							
1710.70	19957	QPSK	1.4	н	V	12.34						
1710.70	19937	QI SK	1.4	11	Н	12.72	30.00	Pass				
1710.70	19957	16QAM	1.4	Н	V	12.57	30.00	1 433				
1710.70	19901	IUQAW	1.4	11	Н	13.23						

Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
		1	.4MHz(RE	3 size 1 &	RB offset 0)			
1732.50	20175	QPSK	1.4	Н	V	13.59		
1732.30	20170	QIOI	1	.,	Н	14.73	30.00	Pass
1732.50	20175	16QAM	1.4 H		V	13.72	30.00	1 433
1732.30	20173	TOQAIVI	1.4		Н	14.36		
		1	.4MHz(RE	3 size 3 &	RB offset 0)			
1732.50	20175	QPSK	1.4	Н	V	13.64		
1732.30	20173	QIOI	1.4		Н	14.21	30.00	Pass
1732.50	20175	16QAM	1.4	Н	V	15.39	30.00	rass
1732.30	20173	TOQAIVI	1.4		Н	14.26		
		1	.4MHz(RE	3 size 6 &	RB offset 0)			
1732.50	20175	QPSK	1.4	Н	V	12.39		
1732.30	20173	QI SIX	1.4	11	Н	12.81	30.00	Pass
1732.50	20175	16QAM	1.4	Н	V	12.64	30.00	1 433
1732.30	20173	IOQAM	1.4	11	Н	13.26		

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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)			
1754.30	20393	QPSK	1.4	Н	V	13.54		
1754.50	20000	QI OIX	17		Н	14.82	30.00	Pass
1754.30	20393	16QAM	1.4	Н	V	13.64	00.00	1 455
1704.00	20000	1007(11)	17	11	Н	14.39		
			1.4MHz(RE	3 size 3 & F	RB offset 0)			
1754.30	20393	QPSK	1.4	Н	V	13.67		
1734.30	20090	QI SIX	1.4	11	Н	14.26	30.00	Pass
1754.30	20393	16QAM	1.4	Н	V	15.42	30.00	1 833
1754.50	20000	TOGANI	1.4	11	Н	14.28		
			1.4MHz(RE	3 size 6 & F	RB offset 0)			
1754.30	20393	QPSK	1.4	Н	V	12.37		
1734.30	20090	Q1 51X	1.4	11	Н	12.86	30.00	Pass
1754.30	20393	16QAM	1.4	Н	V	12.67	30.00	1 033
1734.30	20090	IOQAIVI	1.4	11	Н	13.29		

Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
		2	0MHz(RB si	ze 1 & RB	offset 0)			
1720.00	20050	QPSK	20	Н	V	13.79		
1720.00	20000	QI OIV	20		Н	14.10	30.00	Pass
1720.00	20050	16QAM	20	Н	V	13.64	30.00	
1720.00	20000	TOGAWI	20		Н	14.13		
		20MHz	(RB size 50	& RB offse	et 0)			
1720.00	20050	QPSK	20	Н	V	10.33		
1720.00	20050	Qi Si	20		Н	10.60	30.00	Pass
1720.00	20050	16QAM	20	Н	V	10.60	30.00	1 033
1720.00	20030	TOGKINI	20	- 11	Н	11.15		
		20MHz(RB size 100	& RB offs	et 0)			
1720.00	20050	QPSK	20	Н	V	8.87		
1720.00	20000	GI SK	20	11	Н	9.08	30.00	Pass
1720.00	20050	16QAM	20	Н	V	9.30	30.00	1 000
1720.00	20030	IUQAW	20	11	Н	9.63		



CCIS

Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
		2	0MHz(RB si	ze 1 & RB	offset 0)			
1732.50	20175	QPSK	20	Н	V	13.89		
1702.00	20170	QI OIL	20	'''	Н	14.23	30.00	Pass
1732.50	20175	16QAM	20	20 H		13.72	30.00	Pass
1702.00	20170	100/11/1	20	'''	Н	14.21		
20MHz(RB size 50 & RB offset 0)								
1732.50	20175	QPSK	20	Н	V	10.39		
1732.30	20170	QI OIX	20	'''	Н	10.65	30.00	Pass
1732.50	20175	16QAM	20	Н	V	10.59	30.00	1 833
1732.30	20173	TOQAM	20	11	Н	11.21		
		20	MHz(RB siz	e 100 & R	B offset 0)			
1732.50	20175	QPSK	20	Н	V	9.21		
1732.30	20173	QF JN	20	11	Н	9.32	30.00	Pass
1732.50	20175	16QAM	20	Н	V	9.33	30.00	1 033
1732.30	20173	IUQAW	20	11	Н	9.64		

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	13.92				
1740.00	20000	QI OIL	20		Н	14.24	30.00	Page		
1745.00	20300	16QAM	20	Н	V	13.92	30.00	Pass		
1743.00	20300	TOQAM	20	11	Н	14.26				
	20MHz(RB size 50 & RB offset 0)									
1745.00	20300	QPSK	20	Н	V	10.62				
1745.00	20300	QIOI	20	11	Н	10.72	30.00	Pass		
1745.00	20300	16QAM	20	Н	V	10.54	30.00	1 433		
1740.00	20000	TOQAW	20	'''	Н	11.36				
			20MHz(RB siz	e 100 & RI	B offset 0)					
1745.00	20300	QPSK	20	Н	V	9.64				
1743.00	20300	QI SIN	20	11	Н	9.32	30.00	Pass		
1745.00	20300	16QAM	20	Н	V	9.37	30.00	Fass		
1745.00	20300	IUQAW	20	11	Н	9.72				





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	I	V	10.63				
2302.30	20110	QI OIX	J		Н	14.04	33.00	Pass		
2502.50	20775	16QAM	5	Н	V	10.63	33.00	1 833		
2302.30	20113	TOQAM	5	Н	12.98					
5MHz(RB size 12& RB offset 0)										
2502.50	20775	QPSK	5	Н	V	10.66				
2302.30	20110	QI OIX	3	.,	Н	14.08	33.00	Pass		
2502.50	20775	16QAM	5	Н	V	10.51	33.00	1 833		
2302.30	20113	TOQAW	3		Н	13.99				
			5MHz(RB	size 25&	RB offset 0)					
2502.50	20775	QPSK	5	I	V	9.82				
2002.00	20113	Qi Oil	J	11	Н	13.09	33.00	Pass		
2502.50	20775	16QAM	5	Н	V	9.69	33.00	1 433		
2302.30	20113	IUQAM	3	11	Н	11.71				

Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
		,	5MHz(RB	size 1 & I	RB offset 0)			
2535.00	21100	QPSK	5	Н	V	11.03		
2000.00	21100	QIOI	3	11	Н	14.23	33.00	Pass
2535.00	21100	16QAM	5 H —	Н	V	11.23	33.00	1 433
2000.00	21100			Н	12.99			
5MHz(RB size 12& RB offset 0)								
2535.00	21100	QPSK	5	Н	V	10.98		
2000.00	21100	QI OIX	3		Н	14.12	33.00	Pass
2535.00	21100	16QAM	5	Н	V	10.59	33.00	1 833
2000.00	21100	TOQAW	3		Н	14.31		
		Į	MHz(RB	size 25&	RB offset 0)			
2535.00	21100	QPSK	5	Н	V	10.06		
2000.00	21100	QF UN	J	11	Н	13.12	33.00	Pass
2535.00	21100	16QAM	5	Н	V	9.76	33.00	1 033
2000.00	21100	ΙΟΨΑΙΝΙ	3	11	Н	11.74		





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	11.12				
2007.00	21420	QI OIL	Ŭ		Н	14.38	33.00	Pass		
2567.50	21425	16QAM	5	Н	V	11.36	00.00	1 433		
2007.00	21420	1007(11)			Н	12.37				
5MHz(RB size 12& RB offset 0)										
2567.50	21425	QPSK	5	Н	V	11.26				
2007.00	21420	QI OIX	J		Н	14.24	33.00	Pass		
2567.50	21425	16QAM	5	Н	V	10.59	33.00	1 033		
2007.00	21420	TOGANI	J		Н	14.36				
			5MHz(RB	size 25& R	B offset 0)					
2567.50	21425	QPSK	5	Н	V	10.12				
2007.00	21420	Qi Oil	J	11	Н	13.19	33.00	Pass		
2567.50	21425	16QAM	5	Н	V	10.84	33.00	газэ		
2007.00	21423	IOQAIVI	, J	11	Н	11.86				

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	20850	QPSK	20	Н	V	10.39			
2010.00	20000	QI OIX	20		Н	13.93	33.00	Pass	
2510.00	20850	16QAM	20	Н	V	10.30	33.00	1 033	
2310.00	20030	TOQAM	20		Н	13.07			
20MHz(RB size 50 & RB offset 0)									
2510.00	20850	QPSK	20	Н	V	9.52			
2510.00	20030	QFSK	20		Н	11.04	33.00	Pass	
2510.00	20850	16QAM	20	Н	V	9.61	33.00	rass	
2310.00	20030	TOQAIN	20	- 11	Н	11.40			
		20MHz(RB size 100	& RB offs	et 0)				
2510.00	20850	QPSK	20	Н	V	8.58			
2310.00	20000	QF JN	20	11	Н	10.15	33.00	Pass	
2510.00	20850	16QAM	20	Н	V	8.44	33.00	1 855	
2310.00	20000	IOQAM	20	11	Н	10.15			



Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
		2	0MHz(RB si	ze 1 & RB	offset 0)			
2535.00	21100	QPSK	20	Н	V	10.46		
2000.00	21100	QI OIT	20		Н	14.06	33.00	Page
2535.00	21100	16QAM	20	20 H		10.38	33.00	Pass
2000.00	21100	TOGAWI	20	11	Н	13.62		
20MHz(RB size 50 & RB offset 0)								
2535.00	21100	QPSK	20	Н	V	10.24		
2000.00	21100	QIOI	20	11	Н	11.25	33.00	Page
2535.00	21100	16QAM	20	Н	V	10.64	33.00	Pass
2333.00	21100	TOQAM	20	11	Н	11.98		
		20	MHz(RB siz	e 100 & RI	B offset 0)			
2535.00	21100	QPSK	20	Н	V	9.36		
2000.00	21100	QI OIX	20	11	Н	10.26	33.00	Pass
2535.00	21100	16QAM	20	Н	V	9.84	55.00	1 033
2333.00	21100	IUQAW	20	11	Н	11.29		

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	10.58		
2000.00	21000	QI OIL	20	• • •	Н	14.36	33.00) Pass
2560.00	21350	16QAM	20	Н	V	10.42	33.00) Fass
2300.00	21330	ΙΟΦΑΙΝΙ	20	- 11	Н	13.64		
20MHz(RB size 50 & RB offset 0)								
2560.00	21350	QPSK	20	Н	V	10.29		
2300.00	21330	QIOI	20	- 11	Н	11.36	33.00) Pass
2560.00	21350	16QAM	20	Н	V	10.68		1 433
2300.00	21330	ΙΟΦΑΙΝΙ	20	11	Н	12.06		
		2	20MHz(RB s	ize 100 8	RB offset C)		
2560.00	21350	QPSK	20	Н	V	9.37		
2300.00	21330	QF UN	20	11	Н	10.61	33.00) Pass
2560.00	21350	16QAM	20	Н	V	9.87	33.00	1 433
2300.00	21330	TOQAM	20	11	Н	11.36		





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 Actionna RF Test Receiver Antenna Tower Antenna Tower Antenna Tower Actionna Antenna Tower Actionna Antenna Tower Actionna Antenna Tower Actionna Acti
	ELIT Tiern 0, See Irm Table 0, See Irm Amulyster
	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:	 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. 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. 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



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	was determined using the substitution method. 4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency. ERP / EIRP = S.G. output (dBm) + Antenna Gain(dB/dBi) – Cable Loss (dB)
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.





LTE band 2 part:

		ize 1 & RB offset 0)	for QPSK		
Frequency (MHz)	Spurious Polarization	Emission Level (dBm)	Limit (dBm)	Result	
		Lowest			
3701.40	Vertical	-30.42			
5552.10	V	-39.34			
7402.00	V	-38.63	42.00	Dana	
3701.40	Horizontal	-26.83	-13.00	Pass	
5552.10	Н	-40.96			
7402.00	Н	-40.24			
		Middle			
3760.00	Vertical	-28.89			
5640.00	V	-43.04			
7520.00	V	-37.70	-13.00	Pass	
3760.00	Horizontal	-26.44	-13.00	Fass	
5640.00	Н	-41.50			
7520.00	Н	-39.57			
		Highest			
3816.60	Vertical	-27.13			
5724.90	V	-43.26			
7633.20	V	-38.64	-13.00	Pass	
3816.60	Horizontal	-24.97	-13.00	Pass	
5724.90	Н	-43.22			
7633.20	Н	-39.00			





		e 1 & RB offset 0) for	or QPSK		
Frequency (MHz)	Spurious		Limit (dBm)	Result	
1 requeries (Wil 12)	Polarization	Level (dBm)	Limit (dDin)	resuit	
		Lowest		1	
3703.00	Vertical	-30.02			
5554.50	V	-39.42			
7406.00	V	-39.65	-13.00	Pass	
3703.00	Horizontal	-29.08	-13.00	F 455	
5554.50	Н	-37.86			
7406.00	Н	-38.21			
		Middle			
3760.00	Vertical	-25.34		Pass	
5640.00	V	-41.29			
7520.00	V	-39.72	-13.00		
3760.00	Horizontal	-32.81	-13.00		
5640.00	Н	-41.26			
7520.00	Н	-39.37			
		Highest			
3817.00	Vertical	-26.64			
5725.50	V	-41.98			
7634.00	V	-39.54	-13.00	Pass	
3817.00	Horizontal	-24.39	-13.00	F d 5 S	
5725.50	Н	-42.51			
7634.00	Н	-38.83			





		e 1 & RB offset 0) for	or QPSK	
Frequency (MHz)	Spurious	Emission	Limit (dBm)	Result
	Polarization	Level (dBm)		Nesuit
		Lowest		
3705.00	Vertical	-30.48		Pass
5557.50	V	-39.68		
7410.00	V	-38.61	-13.00	
3705.00	Horizontal	-26.84	-13.00	rass
5557.50	Н	-40.97		
7410.00	Н	-40.36		
		Middle		
3760.00	Vertical	-28.94		Pass
5640.00	V	-43.12	-13.00	
7520.00	V	-37.74		
3760.00	Horizontal	-26.85		
5640.00	Н	-41.59		
7520.00	Н	-39.64		
		Highest		
3815.00	Vertical	-27.19		Pass
5722.50	V	-43.32		
7630.00	V	-38.69	-13.00	
3815.00	Horizontal	-24.98		
5722.50	Н	-43.29		
7630.00	Н	-39.21		

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	10MHz(RB si	ze 1 & RB offset 0)	for QPSK	
	Spurious Emission			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
		Lowest		
3710.00	Vertical	-29.98		
5565.00	V	-39.45		
7420.00	V	-39.64	42.00	Pass
3710.00	Horizontal	-29.12	-13.00	Pass
5565.00	Н	-37.81		
7420.00	Н	-38.16		
		Middle		
3760.00	Vertical	-25.48		
5640.00	V	-41.21		Pass
7520.00	V	-39.68	-13.00	
3760.00	Horizontal	-32.67		
5640.00	Н	-41.19		
7520.00	Н	-39.34		
		Highest		
3810.00	Vertical	-26.60	-13.00	Pass
5715.00	V	-42.43		
7620.00	V	-39.52		
3810.00	Horizontal	-24.34		
5715.00	Н	-42.68		
7620.00	Н	-38.78		

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		size 1 & RB offset 0) for QPSK	
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)	Limit (dbin)	Nesuit
		Lowest		T
3715.00	Vertical	-29.87		Pass
5572.50	V	-38.97		
7430.00	V	-38.61	13.00	
3715.00	Horizontal	-26.81	-13.00	
5572.50	Н	-40.78		
7430.00	Н	-40.32		
		Middle		
3760.00	Vertical	-28.36		Pass
5640.00	V	-43.29		
7520.00	V	-37.89	-13.00	
3760.00	Horizontal	-26.84		
5640.00	Н	-41.69		
7520.00	Н	-39.67		
		Highest		
3805.00	Vertical	-27.32		
5707.50	V	-43.36		
7610.00	V	-38.67	-13.00	Pass
3805.00	Horizontal	-24.99		
5707.50	Н	-43.36		
7610.00	Н	-39.29		





	20MHz(RB	size 1 & RB offset 0) for QPSK	
	Spurious Emission			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
		Lowest		
3720.00	Vertical	-30.12		
5580.00	V	-39.48		
7440.00	V	-39.61	-13.00	Pass
3720.00	Horizontal	-26.07	-13.00	Pass
5580.00	Н	-37.71		
7440.00	Н	-38.00		
		Middle		
3760.00	Vertical	-29.51		
5640.00	V	-41.19		Pass
7520.00	V	-39.64	-13.00	
3760.00	Horizontal	-32.64	-13.00	
5640.00	Н	-41.15		
7520.00	Н	-39.39		
		Highest		
3800.00	Vertical	-26.59		Pass
5700.00	V	-42.39		
7600.00	V	-39.48	-13.00	
3800.00	Horizontal	-24.30		
5700.00	Н	-42.64		
7600.00	Н	-38.79		





LTE Band 4 Part:

		ze 1 & RB offset 0) f	or QPSK	
Frequency (MHz)	Spurious Polarization	Emission Level (dBm)	Limit (dBm)	Result
·		Lowest		
3421.40	Vertical	-24.82		
5132.10	V	-34.15		
6842.80	V	-36.71	-13.00	Pass
3421.40	Horizontal	-30.20	-13.00	Pass
5132.10	Н	-42.46		
6842.80	Н	-36.99		
·		Middle		
3465.00	Vertical	-27.47		Pass
5197.50	V	-41.67		
6930.00	V	-38.03	-13.00	
3465.00	Horizontal	-31.66	-13.00	
5197.50	Н	-41.20		
6930.00	Н	-38.09		
		Highest		
3508.60	Vertical	-32.57	-13.00	Pass
5262.90	V	-36.72		
7017.20	V	-37.77		
3508.60	Horizontal	-37.35		
5262.90	Н	-39.44		
7017.20	Н	-37.75		





	-	e 1 & RB offset 0) fo	r QPSK	
Frequency (MHz)	Spurious		Limit (dBm)	Result
	Polarization	Level (dBm)		Result
		Lowest		
3423.00	Vertical	-24.89		Pass
5134.50	V	-42.32		
6846.00	V	-37.26	-13.00	
3423.00	Horizontal	-32.98	-13.00	
5134.50	Н	-45.12		
6846.00	Н	-40.87		
		Middle		
3465.00	Vertical	-26.72		
5197.50	V	-36.08		
6930.00	V	-36.34	-13.00	Pass
3465.00	Horizontal	-30.16	-13.00	Pass
5197.50	Н	-40.78		
6930.00	Н	-35.29		
		Highest		
3507.00	Vertical	-24.58		
5260.50	V	-38.97		
7014.00	V	-36.36	12.00	Door
3507.00	Horizontal	-32.24	-13.00	Pass
5260.50	Н	-40.82		
7014.00	Н	-38.02		





		ze 1 & RB offset 0) fo	r QPSK	T
Frequency (MHz)	Spurious Polarization	Emission Level (dBm)	Limit (dBm)	Result
	Polatization	Lowest		
3425.00	Vertical	-24.98		
5137.50	V	-34.16		Pass
6850.00	V	-36.72	-13.00	
3425.00	Horizontal	-30.26	-13.00	
5137.50	Н	-42.52		
6850.00	Н	-39.72		
		Middle		
3465.00	Vertical	-27.52		
5197.50	V	-41.68		
6930.00	V	-39.12	-13.00	Pass
3465.00	Horizontal	-41.26		
5197.50	Н	-38.02		
6930.00	Н	-38.10		
		Highest		
3505.00	Vertical	-32.59		
5257.50	V	-36.74		
7010.00	V	-37.78	-13.00	Pass
3505.00	Horizontal	-37.64	-10.00	1 033
5257.50	Н	-39.59		
7010.00	Н	-37.64		





		ze 1 & RB offset 0) for	or QPSK		
Frequency (MHz)	Spurious		Limit (dBm)	Result	
,	Polarization	Level (dBm)	(/		
		Lowest			
3430.00	Vertical	-24.83			
5145.00	V	-42.16			
6860.00	V	-37.12	-13.00	Pass	
3430.00	Horizontal	-32.96	-13.00	Fass	
5145.00	Н	-45.06			
6860.00	Н	-40.86			
		Middle			
3465.00	Vertical	-26.69			
5197.50	V	-36.06			
6930.00	V	-36.32	-13.00	Pass	
3465.00	Horizontal	-30.14	-13.00		
5197.50	Н	-40.68			
6930.00	Н	-35.12			
		Highest			
3500.00	Vertical	-25.49			
5250.00	V	-38.94			
7000.00	V	-36.29	-13.00	Pass	
3500.00	Horizontal	-32.12	-13.00	F d 3 3	
5250.00	Н	-40.79			
7000.00	Н	-37.19			





		ze 1 & RB offset 0) t	or QPSK		
Frequency (MHz)		Emission	Limit (dBm)	Result	
1 requeries (Wil 12)	Polarization	Level (dBm)	Limit (dDin)	rtosuit	
		Lowest			
3435.00	Vertical	-24.95			
5152.50	V	-34.29			
6870.00	V	-36.76	-13.00	Pass	
3435.00	Horizontal	-30.32	-13.00	Fd55	
5152.50	Н	-42.55			
6870.00	Н	-39.74			
		Middle			
3465.00	Vertical	-27.59			
5197.50	V	-41.64			
6930.00	V	-39.14	-13.00	Pass	
3465.00	Horizontal	-41.28	-13.00	Pass	
5197.50	Н	-38.06			
6930.00	Н	-38.16			
		Highest			
3495.00	Vertical	-32.54			
5242.50	V	-36.72			
6990.00	V	-37.82	-13.00	Pass	
3495.00	Horizontal	-37.69	-13.00	Pass	
5242.50	Н	-39.54			
6990.00	Н	-37.62			





		ize 1 & RB offset 0)	for QPSK		
Frequency (MHz)		Emission	Limit (dBm)	Result	
1 requestion (Wil 12)	Polarization	Level (dBm)	Zimit (dDin)	rtoodit	
		Lowest			
3440.00	Vertical	-24.83			
5160.00	V	-42.10			
6880.00	V	-37.10	-13.00	Pass	
3440.00	Horizontal	-32.92	-13.00	F d 5 5	
5160.00	Н	-45.05			
6880.00	Н	-40.82			
		Middle			
3465.00	Vertical	-26.68			
5197.50	V	-36.02			
6930.00	V	-36.27	-13.00	Pass	
3465.00	Horizontal	-30.12	- 13.00	газэ	
5197.50	Н	-40.62			
6930.00	Н	-35.09			
		Highest			
3490.00	Vertical	-25.48			
5235.00	V	-38.93			
6980.00	V	-36.24	-13.00	Pass	
3490.00	Horizontal	-32.10	-13.00	F455	
5235.00	Н	-40.73			
6980.00	Н	-37.14			

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LTE Band 7 Part:

	5MHz(RB siz	ze 1 & RB offset 0) f	or QPSK	
Frequency (MHz)	Spurious Polarization	Emission Level (dBm)	Limit (dBm)	Result
	1 Glanzation	Lowest		
5005.00	Vertical	-45.29		
7507.50	V	-38.85		
10010.00	V	-35.61	05.00	D
5005.00	Horizontal	-44.23	-25.00	Pass
7507.50	Н	-37.72		
10010.00	Н	-36.11		
		Middle		
5070.00	Vertical	-43.81		
7605.00	V	-38.05		
10140.00	V	-34.84	-25.00	Pass
5070.00	Horizontal	-43.58	-23.00	Fass
7605.00	Н	-37.91		
10140.00	Н	-35.16		
		Highest		
5135.00	Vertical	-42.44		
7702.50	V	-38.31		
10270.00	V	-35.37	-25.00	Pass
5135.00	Horizontal	-41.62	-20.00	Газэ
7702.50	Н	-38.21		
10270.00	Н	-34.94		





		ze 1 & RB offset 0) fo	or QPSK		
Frequency (MHz)		Spurious Emission		Result	
1 requeries (IVII 12)	Polarization	Level (dBm)	Limit (dBm)	Result	
		Lowest		1	
5010.00	Vertical	-45.36			
7515.00	V	-39.12			
10020.00	V	-37.74	-25.00	Pass	
5010.00	Horizontal	-44.76	-25.00	Pa55	
7515.00	Н	-38.16			
10020.00	Н	-37.79			
		Middle			
5070.00	Vertical	-43.98			
7605.00	V	-38.89			
10140.00	V	-35.09	-25.00	Pass	
5070.00	Horizontal	-44.46	-25.00	Pa55	
7605.00	Н	-38.06			
10140.00	Н	-35.72			
		Highest			
5130.00	Vertical	-43.79			
7695.00	V	-37.51			
10260.00	V	-34.95	-25.00	Pass	
5130.00	Horizontal	-44.21	-25.00	Pass	
7695.00	Н	-37.46			
10260.00	Н	-34.62			





		size 1 & RB offset 0)	for QPSK		
Frequency (MHz)		Spurious Emission		Result	
1 requeries (Willie)	Polarization	Level (dBm)	Limit (dBm)	Kesuit	
		Lowest			
5015.00	Vertical	-45.32			
7522.50	V	-38.89			
10030.00	V	-35.64	-25.00	Pass	
5015.00	Horizontal	-44.29	-23.00	F a 5 5	
7522.50	Н	-37.78			
10030.00	Н	-36.16			
		Middle			
5070.00	Vertical	-43.82			
7605.00	V	-38.19			
10140.00	V	-34.98	-25.00	Pass	
5070.00	Horizontal	-43.62	-23.00	F 033	
7605.00	Н	-37.96			
10140.00	Н	-35.21			
		Highest			
5125.00	Vertical	42.29			
7687.50	V	-38.37			
10250.00	V	-35.69	-25.00	Pass	
5125.00	Horizontal	-41.68	-25.00	rass	
7687.50	Н	-38.26			
10250.00	Н	-34.97			





		ze 1 & RB offset 0)	for QPSK		
Frequency (MHz)	Spurious	Emission	Limit (dBm)	Result	
	Polarization	Level (dBm)	(==)		
		Lowest			
5020.00	Vertical	-45.39			
7530.00	V	-39.00			
10040.00	V	-37.74	-25.00	Pass	
5020.00	Horizontal	-44.71	-25.00	r ass	
7530.00	Н	-38.14			
10040.00	Н	-37.76			
		Middle			
5070.00	Vertical	-43.97			
7605.00	V	-38.85			
10140.00	V	-35.04	-25.00	Pass	
5070.00	Horizontal	-44.41	-23.00	1 033	
7605.00	Н	-38.03			
10140.00	Н	-35.71			
		Highest			
5120.00	Vertical	-43.76			
7680.00	V	-37.54			
10240.00	V	-34.96	-25.00	Pass	
5120.00	Horizontal	-44.34	-25.00	Fa55	
7680.00	Н	-37.98			
10240.00	Н	-34.59			



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 Variable Power Supply Note: Measurement setup for testing on Antenna connector
Test procedure:	 The equipment under test was connected to an external DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached
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	2(QPSK):		
Reference Fr	equency: LTE Band	2(1.4MHz) N	Middle channel=18900	channel=1880.00)MHz
Power supplied	Temperature (°C)	Fr	equency error	Limit (ppm)	Result
(Vdc)	remperature (C)	Hz	ppm	Limit (ppin)	Result
	-30	175	0.094785		
	-20	160	0.086806		
	-10	144	0.078296		
	0	102	0.055955		
3.80	10	163	0.088402	±2.5	Pass
	20	151	0.082019		
	30	142	0.077232		
	40	130	0.070849		
	50	125	0.068189		
Reference F	requency: LTE Band	l 2(3MHz) M	iddle channel=18900 c	hannel=1880.00	MHz
Power supplied	Temperature (°ℂ)	Fr	equency error	Limit (ppm)	Result
(Vdc)	remperatore (C)	Hz	ppm	Еши (ррш)	Nesuit
	-30	174	0.094153		
	-20	166	0.089898		
	-10	125	0.068089		
	0	130	0.070749		
3.80	10	141	0.0766	±2.5	Pass
	20	105	0.057451		
	30	128	0.069685		
	40	136	0.07394		
	50	159	0.086174		
Reference F	requency: LTE Band	l 2(5MHz) M	iddle channel=18900 c	hannel=1880.00	MHz
Power supplied (Vdc)	Temperature (°C)		equency error	Limit (ppm)	Result
1 ower supplied (vdc)	remperature (c)	Hz	ppm	Еши (ррш)	rtesuit
	-30	170	0.092326		
	-20	163	0.088602		
	-10	145	0.079028		
	0	128	0.069985		
3.80	10	162	0.08807	±2.5	Pass
	20	128	0.069985		
	30	135	0.073709		
	40	149	0.081155		
	50	158	0.085943		





	- (%)	Fre	Frequency error		
Power supplied (Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	136	0.07444		
	-20	152	0.082951		
	-10	142	0.077632		
	0	105	0.057951		
3.80	10	126	0.069121	±2.5	Pass
	20	138	0.075504		
	30	146	0.07976		
	40	125	0.068589		
	50	109	0.060079		
Reference Fr	equency: LTE Band	` '	liddle channel=18900	channel=1880.00	MHz
Power supplied (Vdc)	Temperature (°C)		equency error	Limit (ppm)	Result
. опогоарриоа (тао)		Hz	ppm	(PP)	Result
	-30	174	0.094853		
	-20	163	0.089002		
	-10	125	0.068789		
	0	142	0.077832		
3.80	10	105	0.058151	±2.5	Pass
	20	138	0.075704		
	30	147	0.080491		
	40	156	0.085279		
	50	138	0.075704		
Reference Fr	equency: LTE Band		liddle channel=18900	channel=1880.00	MHz
Danisa diadina	Tomorous (°C)	Fre	equency error	Limit (mmm)	
Power supplied (Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	185	0.101004		
	-20	125	0.069089		
	-10	163	0.089302		
	0	142	0.078132		
3.80	10	155	0.085047		Door
0.50	20	167	0.09143		Pass
	30	135	0.074409		
			0.01 7700		
-	40	148	0.081323		





LTE Band 2(16QAM):

	LTE Band 2	2(16QAM):		
requency: LTE Band	2(1.4MHz)	Middle channel=18900	channel=1880.0	0MHz
Temperature (°C)	Fı	requency error	Limit (ppm)	
remperature (C)	Hz	ppm	Limit (ppm)	Result
-30	168	0.091962		
-20	170	0.093026		
-10	152	0.083451		
0	136	0.07494		
10	146	0.08026	±2.5	Pass
20	156	0.085579		. 400
30	146	0.08026		
40	149	0.081855		
50	128	0.070685	1	
requency: LTE Band			channel=1880.00I	MHz
	,			
Temperature (°C)			Limit (ppm)	Result
20				
			-	
			-	
			-	
_				
			±2.5	Pass
			_	
			_	
40			_	
50	156	0.085039		
requency: LTE Band	2(5MHz) M	iddle channel=18900 d	channel=1880.00I	ИHz
Temperature (°C)		Frequency error		Result
		ppm	Еппи (ррпп)	resuit
			_	
			4	
			-	
			12.5	Pass
			±2.0	F d 5 5
			╡	
			┥	
			╡	
	requency: LTE Band Temperature (°C) -30 -20 -10 0 10 20 30 40 50 requency: LTE Band Temperature (°C) -30 -20 -10 0 10 20 30 40 50 50	requency: LTE Band 2(1.4MHz) Temperature (°C)	Temperature (°C)	Temperature (°C)





			liddle channel=18900 equency error		
Power supplied (Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	156	0.113079		
	-20	174	0.122653		
	-10	135	0.101909		
	0	146	0.10776		
3.80	10	185	0.128504	±2.5	Pass
0.00	20	158	0.114143		
	30	162	0.11627		
	40	155	0.112547		
	50	136	0.10244		
Reference Fi	requency: LTE Band	2(15MHz) M	liddle channel=18900	channel=1880.00	MHz
Power supplied	Temperature (°C)		equency error	Limit (ppm)	Result
(Vdc)	, , ,	Hz	ppm	Еппт (ррпт)	rtosuit
	-30	174	0.113253		
	-20	125	0.087189		Pass
	-10	163	0.107402		
	0	108	0.078147		
3.80	10	142	0.096232	±2.5	
	20	135	0.092509		
	30	126	0.087721		
	40	145	0.097828		
	50	140	0.095168		
Reference Fi			liddle channel=18900) channel=1880.00	MHz
Power supplied	Temperature (°C)	, ,	equency error		
(Vdc)	remperature (C)	Hz	ppm	Limit (ppm)	Result
	-30	177	0.096209		
	-20	162	0.08823		
	-10	148	0.080783		
3.80	0	152	0.082911	7	
	10	143	0.078124	±2.5	Pass
	20	125	0.068549		
	30	156	() ()85039		
	30 40	156 185	0.085039 0.100464	_	





LTE Band 4(QPSK):

		LTE Band	4(QPSK):		
Reference Fr	requency: LTE Band	4(1.4MHz) N	Middle channel=20175	channel=1732.50)MHz
Power supplied	Temperature (°C)	Fr	equency error	Limit (ppm)	Result
(Vdc)	remperature (C)	Hz	ppm	Limit (ppm)	Result
	-30	166	0.125915		
	-20	125	0.10225		
	-10	136	0.108599		
	0	155	0.119566		
3.80	10	142	0.112062	±2.5	Pass
0.00	20	112	0.094746	12.5	1 433
	30	106	0.091283	7	
	40	147	0.114948		
	50	125	0.10225	1	
Deference F				hannal 1700 501	N 41 1—
	requency: LIE Band	` '	iddle channel=20175 d	cnannel=1732.50	VIHZ
Power supplied	Temperature (°C)		equency error	Limit (ppm)	Result
(Vdc)	. , ,	Hz	ppm	Ziiiii (ppiii)	
	-30	142	0.084022		Pass
	-20	136	0.080559		
	-10	152	0.089794		
	0	158	0.093258		
3.80	10	140	0.082868	±2.5	
0.00	20	136	0.080559		
	30	145	0.085754		
	40	122	0.072478		
	50	108	0.064398	7	
Reference F			iddle channel=20175 d	channel=1732.50	MHz
5	T (00)	Fr	equency error		
Power supplied (Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	177	0.122865		
	-20	156	0.110743		
	-10	143	0.10324	<u> </u>	
	0	135	0.098622	_[
3.80	10	142	0.102662	±2.5	Pass
	20	162	0.114206		
	30	141	0.102085	_	
	40	125	0.09285		
	50	136	0.099199		





Reference Fr	equency: LTE Band	4(10MHz) M	liddle channel=20175	channel=1732.50	MHz
Power supplied (Vdc)	Temperature (°C)		equency error	Limit (ppm)	Result
1 Ower Supplied (Vdc)	remperature (c)	Hz	ppm	Еппі (рріп)	resuit
	-30	175	0.10307		
	-20	163	0.096144		
	-10	152	0.089794		
	0	145	0.085754	_	_
3.80	10	129	0.076519	±2.5	Pass
	20	187	0.109997		
	30	176	0.103647	_	
	40	135	0.079982	_	
	50	125	0.07421		
Reference F	requency: LTE Band		Middle channel=2017	5 channel=1732.5	0MHz
Power supplied (Vdc)	Temperature (°C)		requency error	Limit (ppm)	Result
,		Hz	ppm	,	result
	-30	163	0.124184		Pass
	-20	181	0.134573	<u> </u>	
	-10	149	0.116103		
	0	128	0.103982		
3.80	10	163	0.124184	±2.5	
	20	155	0.119566		
	30	170	0.128224		
	40	129	0.104559		
	50	142	0.112062		
Reference F	requency: LTE Band	4(20MHz) N	Middle channel=2017	channel=1732.5	0MHz
Dower cumplied (\/da)	Temperature (°C)	Fı	requency error	Limit (nnm)	_
Power supplied (Vdc)	remperature (C)	Hz	ppm	Limit (ppm)	Result
	-30	185	0.127482		
3.80	-20	136	0.099199		
	-10	142	0.102662		
	0	162	0.114206		
	10	174	0.121133	±2.5	Pass
	20	158	0.111898		. 400
	30	143	0.10324		
l					
	40	105	0.081306		





LTE Band 4(16QAM):

		LTE Band 4	#(16QAW):		
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	Еши (ррш)	Result
	-30	136	0.102493		
	-20	125	0.095566		
	-10	140	0.079982		
	0	121	0.082868		
3.80	10	142	0.095566	±2.5	Pass
0.00	20	144	0.064398		1 433
	30	153	0.079982		
	40	163	0.084022		
	50	147	0.106533		
Poforonco I			/liddle channel=20175 o	hannal_1722 F.0	MU>
Reference	requency. LTE band	1 4(SIVITZ) IV	illudie chamilei=20175 C		IVITIZ
Daa. aa.lia d () (da)	Temperature (°C)	Frequency error		Limit (ppm)	Danill
Power supplied (Vdc)	remperature (C)	Hz	ppm	Limit (ppin)	Result
	-30	162	0.123606		
	-20	108	0.092438		Pass
	-10	122	0.100518		
	0	136	0.108599		
3.80	10	162	0.123606	±2.5	
3.00	20	141	0.111485		1 433
	30	144	0.113217		
	40	136	0.108599	•	
	50	150	0.11668		
Reference I			/liddle channel=20175 o	channel=1732.50	MHz
			requency error		
Power supplied (Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	174	0.099199		
	-20	162	0.09285		
	-10	135	0.101508]	
	0	140	0.090541]	
3.80	10	162	0.102662	±2.5	Pass
	20	108	0.103817		
	30	135	0.109012		
	40	142	0.114784		
	50	181	0.105548		

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D !! ! (\(\ \ \ \ \ \ \ \ \ \ \ \ \ \ \	T(°C)	Fre	equency error		5 4
Power supplied (Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	174	0.126492		
	-20	136	0.117834		
	-10	125	0.107445		
	0	136	0.090706		
3.80	10	142	0.102827	±2.5	Pass
	20	152	0.095901		
	30	146	0.121298		
	40	155	0.122452		
	50	126	0.104559		
	requency: LTE Band			5 channel=1732.50	MHz
Power supplied	Temperature (°C)		equency error	Limit (ppm)	Result
(Vdc)	` ` `	Hz	ppm	(-)	
	-30	167	0.105548		Pass
	-20	152	0.080152		
	-10	134	0.093427		
	0	105	0.109012		
3.80	10	126	0.078997	±2.5	
	20	114	0.091696		
	30	158	0.108434		
	40	160	0.081883		
	50	129	0.092273		
Reference F	requency: LTE Band	4(20MHz) M	liddle channel=2017	5 channel=1732.50	MHz
Power supplied	Temperature (°ℂ)	Fre	equency error		5 "
(Vdc)	Tomporataro (©)	Hz	ppm	Limit (ppm)	Result
	-30	147	0.102493		
	-20	103	0.080559		
	-10	126	0.07421		
3.80	0	153	0.080559		
	10	101	0.084022	±2.5	Pass
	20	123	0.089794	<u>-</u> 2.0	1 433
		-		—	ı
	30	152	0.086331		
	30 40	152 106	0.086331 0.091526		





LTE Band 7(QPSK):

_		LTE Band			
	requency: LTE Band		ddle channel=21100Fre	equency=2535.00)MHz
Power supplied	Temperature (°C)		equency error	Lineit (mmas)	Doordt
(Vdc)	10poratao (0)	Hz	ppm	Limit (ppm)	Result
	-30	168	0.076716		
	-20	102	0.061331		
	-10	122	0.07001		
	0	136	0.074349		
3.80	10	163	0.076321	±2.5	Pass
	20	152	0.073165	12.0	1 433
	30	142	0.06212		
	40	108	0.070404	1	
	50	162	0.070404	-	
Poforonco Er			ddle channel=21100 Fr		
Power supplied	equency. LTE band <i>T</i>	'	equency error	equency=2555.0	UIVITZ
(Vdc)	Temperature (°C)	Hz	· · · · · · · · · · · · · · · · · · ·	Limit (ppm)	Result
(Vuc)	-30	142	ppm 0.096372	(11 /	
				-	
	-20	103	0.070337	-	
	-10	125	0.078226	_	
	0	136	0.083749	_	
3.80	10	141	0.0944	±2.5	Pass
	20	133	0.090061		
	30	105	0.086116		
	40	126	0.072704		
	50	126	0.094005		
Reference Fr	equency: LTE Band 7	(15MHz) Mi	ddle channel=21100 Fr	equency=2535.0	0MHz
Power supplied	Temperature (°C)	Fr	equency error	Limit (ppm)	Result
(Vdc)	` ` `	Hz	ppm	Еппи (ррпп)	Nesuit
	-30	141	0.057681		
	-20	105	0.04348		
	-10	126	0.051764	_	
	0	138	0.056498		_
3.80	10	152	0.062021	±2.5	Pass
	20	116	0.047819	-	
	30 40	124 108	0.050975 0.044664	-	
	50	162	0.044004	-	
Poforonco Er			ddle channel=21100 Fr		
Power supplied	T	` ,	equency error		OIVII IZ
(Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
(v d c)	-30	174	0.098739		
	-20	125	0.07941	1	
	-10	136	0.083749	1	
	0	169	0.096767	1	
3.80	10	152	0.090061	±2.5	Pass
	20	142	0.086116	1	
	30	152	0.090061]	
	40	160	0.093216		
	50	135	0.083354		





LTE Band 7(16QAM):

Treference I	requency: LTE Band	LTE Band 7		reguency-2535 00	MHz
D				requericy=2000.00	IVII IZ
Power supplied (Vdc)	Temperature (°C)	Hz	equency error ppm	Limit (ppm)	Result
	-30	142	0.057291		
	-20	102	0.04348		
	-10	136	0.051764		
	0	152	0.056498		
3.80	10	141	0.062021	±2.5	Pass
0.00	20	102	0.047819		1 400
	30	125	0.050975		
	40	160	0.044664		
	50	141	0.065965		
Reference Fr	requency: LTE Band 7			=reguency=2535.0(N/Hz
	Tequency. LTL band 1			requericy=2000.00	JIVII IZ
Power supplied (Vdc)	Temperature (°C)		equency error	Limit (ppm)	Result
(vuc)		Hz	ppm		
	-30	152	0.078739		
	-20	123	0.05941		
	-10	141	0.063749		
	0	105	0.076767		Pass
3.80	10	122	0.070061	±2.5	
	20	135	0.066116		
	30	142	0.070061		
	40	102	0.073216		
	50	162	0.063354		
Reference Fr	requency: LTE Band 7	(15MHz) Mid	ddle channel=21100 I	requency=2535.00	OMHz
Power supplied		Fre	equency error		
	I Temperature (°C)	1 1	equency entor	Limit (nnm)	Result
(Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
(Vdc)	-30	Hz 142	ppm 0.071416	Limit (ppm)	Result
(Vdc)	-30 -20	Hz 142 125	ppm 0.071416 0.056031	Limit (ppm)	Result
(Vdc)	-30 -20 -10	Hz 142 125 136	ppm 0.071416 0.056031 0.06471	Limit (ppm)	Result
	-30 -20 -10 0	Hz 142 125 136 125	ppm 0.071416 0.056031 0.06471 0.069049		
(Vdc)	-30 -20 -10 0 10	Hz 142 125 136 125 150	ppm 0.071416 0.056031 0.06471 0.069049 0.071021	Limit (ppm)	Result
· ·	-30 -20 -10 0 10 20	Hz 142 125 136 125 150 141	ppm 0.071416 0.056031 0.06471 0.069049 0.071021 0.067865		
· ·	-30 -20 -10 0 10 20 30	Hz 142 125 136 125 150 141 102	ppm 0.071416 0.056031 0.06471 0.069049 0.071021 0.067865 0.05682		
· ·	-30 -20 -10 0 10 20	Hz 142 125 136 125 150 141	ppm 0.071416 0.056031 0.06471 0.069049 0.071021 0.067865 0.05682 0.065104		
3.80	-30 -20 -10 0 10 20 30 40	Hz 142 125 136 125 150 141 102 132 152	ppm 0.071416 0.056031 0.06471 0.069049 0.071021 0.067865 0.05682 0.065104	2.5	Pass
3.80	-30 -20 -10 0 10 20 30 40 50 requency: LTE Band 7	Hz 142 125 136 125 150 141 102 132 152 (20MHz) Mice	ppm 0.071416 0.056031 0.06471 0.069049 0.071021 0.067865 0.05682 0.065104	2.5 ————————————————————————————————————	Pass OMHz
3.80 Reference Fr	-30 -20 -10 0 10 20 30 40 50	Hz 142 125 136 125 150 141 102 132 152 (20MHz) Mice	ppm 0.071416 0.056031 0.06471 0.069049 0.071021 0.067865 0.05682 0.065104 0.065104 ddle channel=21100 I	2.5	Pass
3.80 Reference Fr	-30 -20 -10 0 10 20 30 40 50 requency: LTE Band 7	Hz 142 125 136 125 150 141 102 132 152 (20MHz) Mic	ppm 0.071416 0.056031 0.06471 0.069049 0.071021 0.067865 0.05682 0.065104 0.065104 ddle channel=21100 I equency error ppm 0.067299	2.5 ————————————————————————————————————	Pass OMHz
3.80 Reference Fr	-30 -20 -10 0 10 20 30 40 50 requency: LTE Band 7 Temperature (°C)	Hz 142 125 136 125 150 141 102 132 152 (20MHz) Mid Fre Hz 145 126	ppm 0.071416 0.056031 0.06471 0.069049 0.071021 0.067865 0.05682 0.065104 0.065104 ddle channel=21100 lequency error ppm 0.067299 0.059804	2.5 ————————————————————————————————————	Pass OMHz
3.80 Reference Fr	-30 -20 -10 0 10 20 30 40 50 requency: LTE Band 7 Temperature (°C) -30 -20 -10	Hz 142 125 136 125 150 141 102 132 152 (20MHz) Mid Fre Hz 145 126 150	ppm 0.071416 0.056031 0.06471 0.069049 0.071021 0.067865 0.05682 0.065104 0.065104 ddle channel=21100 I equency error ppm 0.067299 0.059804 0.069272	2.5 ————————————————————————————————————	Pass OMHz
3.80 Reference Fr Power supplied (Vdc)	-30 -20 -10 0 10 20 30 40 50 requency: LTE Band 7 Temperature (°C) -30 -20 -10 0	Hz 142 125 136 125 150 141 102 132 152 (20MHz) Mid Fre Hz 145 126 150 125	ppm 0.071416 0.056031 0.06471 0.069049 0.071021 0.067865 0.05682 0.065104 0.065104 ddle channel=21100 I equency error ppm 0.067299 0.059804 0.069272 0.05941	2.5 Frequency=2535.00 Limit (ppm)	Pass OMHz Result
3.80 Reference Fr	-30 -20 -10 0 10 20 30 40 50 requency: LTE Band 7 Temperature (°C) -30 -20 -10 0 10	Hz 142 125 136 125 150 141 102 132 152 (20MHz) Mid Fre Hz 145 126 150 125 145	ppm 0.071416 0.056031 0.06471 0.069049 0.071021 0.067865 0.05682 0.065104 0.065104 ddle channel=21100 I equency error ppm 0.067299 0.059804 0.069272 0.05941 0.067299	2.5 ————————————————————————————————————	Pass OMHz
3.80 Reference Fr Power supplied (Vdc)	-30 -20 -10 0 10 20 30 40 50 requency: LTE Band 7 Temperature (°C) -30 -20 -10 0 10 20	Hz 142 125 136 125 150 141 102 132 152 (20MHz) Mic Fre Hz 145 126 150 125 145 126	ppm 0.071416 0.056031 0.06471 0.069049 0.071021 0.067865 0.05682 0.065104 0.065104 ddle channel=21100 lequency error ppm 0.067299 0.059804 0.067299 0.059811 0.067299 0.059804	2.5 Frequency=2535.00 Limit (ppm)	Pass OMHz Result
3.80 Reference Fr Power supplied (Vdc)	-30 -20 -10 0 10 20 30 40 50 requency: LTE Band 7 Temperature (°C) -30 -20 -10 0 10	Hz 142 125 136 125 150 141 102 132 152 (20MHz) Mid Fre Hz 145 126 150 125 145	ppm 0.071416 0.056031 0.06471 0.069049 0.071021 0.067865 0.05682 0.065104 0.065104 ddle channel=21100 I equency error ppm 0.067299 0.059804 0.069272 0.05941 0.067299	2.5 Frequency=2535.00 Limit (ppm)	Pass OMHz Result



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:	 Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. Reduce the input voltage to specify extreme voltage variation (+/-15%) and endpoint, record the maximum frequency change.
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	PSK):		
Reference Fi	requency: LTE Band	2(1.4MHz) Middle	e channel=18900	channel=1880.00)MHz
Tomporoture (°C)	Power supplied	Frequency error		l ::t ()	Danish
Temperature (℃)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	96	0.052734		
25	3.80	87	0.048337	±2.5	Pass
	3.55	69	0.038762		
Reference F	requency: LTE Band	d 2(3MHz) Middle	channel=18900 c	channel=1880.00l	ИНz
- (25)	Power supplied	Freque	ncy error		_
Temperature (℃)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	75	0.041954		
25	3.80	85	0.047273	±2.5	Pass
	3.55	64	0.036103		
Reference F	requency: LTE Band	2(5MHz) Middle	channel=18900 d	channel=1880.00l	MHz
	Power supplied		ncy error		
Temperature (℃)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	74	0.041422		
25	3.80	62	0.035039	±2.5	Pass
20	3.55	50	0.028656		1 466
Reference F	requency: LTE Band			channel=1880.00	MHz
	Power supplied	<u> </u>	ncy error		
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	74	0.049462		
25	3.80	52	0.03776	±2.5	Pass
	3.55	36	0.029249		. 4.00
Reference F	requency: LTE Band			channel=1880.00	MHz
	Power supplied	<u> </u>	ncy error		
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	74	0.049462		
25	3.80	85	0.055313	+2.5	Pass
23	3.55	65	0.044674		1 433
Reference F	requency: LTE Band			channel=1880.00	MHz
	Power supplied	,	ncy error		
Temperature $(^{\circ}C)$	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	74	0.049462		
25	3.80	88	0.056909	±2.5	Pass
	3.55	69	0.046802	<u> </u>	2.33
			0.0.0002		





LTE Band 2(16QAM):

Reference Frequency: LTE Band 2(1.4MHz) Middle channel=18900 channel=1880.00MHz			LTE Band 2(16	QAM):		
Competature (C)	Reference Fr	requency: LTE Band	2(1.4MHz) Middle	channel=18900	channel=1880.00)MHz
(Vdc)	Tomporatura (°C)	Power supplied	Frequer	ncy error	Limit (numa)	Danult
Section Sect	remperature (C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
Reference Frequency: LTE Band 2(3MHz) Middle channel=18900 channel=1880.00MHz		4.35	74	0.054762		
Reference Frequency: LTE Band 2(3MHz) Middle channel=18900 channel=1880.00MHz	25	3.80	85	0.060613	±2.5	Pass
Temperature (℃) Power supplied (Vdc) Frequency error Limit (ppm) Result 25 3.80 96 0.054762 ±2.5 Pass 3.55 85 0.060613 ±2.5 Pass Reference Frequency: LTE Band 2(5MHz) Middle channel=18900 channel=1880.00MHz Temperature (℃) Power supplied (Vdc) Frequency error Limit (ppm) Result 25 3.80 68 0.05157 ±2.5 Pass 3.55 96 0.066464 ±2.5 Pass Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz Temperature (℃) Power supplied (Vdc) Frequency error Limit (ppm) Result 25 3.80 85 0.055313 ±2.5 Pass 3.55 67 0.045738 ±2.5 Pass Reference Frequency: LTE Band 2(15MHz) Middle channel=18900 channel=1880.00MHz Temperature (℃) Power supplied (Vdc) Frequency error Limit (ppm) Result 4.35 75 0.049994		3.55	88	0.062209		
Comparature (C)	Reference F	requency: LTE Band	I 2(3MHz) Middle	channel=18900 c	hannel=1880.00l	MHz
Comparature (C)	T (%C)	Power supplied	Frequer	ncy error		
A.35	Temperature (C)				Limit (ppm)	Result
3.55 85 0.060613		4.35	74			
Reference Frequency: LTE Band 2(5MHz) Middle channel=18900 channel=1880.00MHz Temperature (°C) Power supplied (Vdc) Frequency error Limit (ppm) Result 25 3.80 68 0.05157 ±2.5 Pass 3.55 96 0.066464 ±2.5 Pass Temperature (°C) Power supplied (Vdc) Frequency error Limit (ppm) Result 25 3.80 85 0.055313 ±2.5 Pass 25 3.80 85 0.055313 ±2.5 Pass 25 3.80 85 0.055313 ±2.5 Pass Temperature (°C) Power supplied (Vdc) Frequency error Limit (ppm) Result 25 3.80 85 0.055313 ±2.5 Pass 3.55 67 0.045738 ±2.5 Pass 4.35 75 0.049994 ±2.5 Pass 25 3.80 88 0.056909 ±2.5 Pass	25	3.80	96	0.066464	±2.5	Pass
Temperature (℃) Power supplied (Vdc) Frequency error (Vdc) Limit (ppm) Result 25 3.80 68 0.05157 (0.066464) ±2.5 Pass 3.55 96 0.066464 ±2.5 Pass Temperature (℃) Power supplied (Vdc) Frequency error (Vdc) Limit (ppm) Result 25 3.80 85 0.047866 25 Pass 3.55 67 0.047866 ±2.5 Pass Reference Frequency: LTE Band 2(15MHz) Middle channel=18900 channel=1880.00MHz Temperature (℃) Power supplied (Vdc) Frequency error (Vdc) Limit (ppm) Result 25 3.80 88 0.049994 ±2.5 Pass 25 3.80 88 0.056909 ±2.5 Pass 25 3.80 88 0.059994 ±2.5 Pass 25 3.80 88 0.056909 ±2.5 Pass 3.55 89 0.05744 Emperature (™) Power supplied (Vdc) Frequency error Limit (ppm)		3.55	85	0.060613	1	
Temperature (C)	Reference F	requency: LTE Band	l 2(5MHz) Middle	channel=18900 c	hannel=1880.00l	ИНz
Temperature (C)		Power supplied	Frequer	ncy error		
A.35	Temperature (℃)			•	Limit (ppm)	Result
25 3.80 68 0.05157 ±2.5 Pass		, ,				
Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz Temperature (°C)	25	3.80	68		±2.5	Pass
Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz Temperature (°C) Power supplied (Vdc) Frequency error Hz ppm Limit (ppm) Result 25 3.80 85 0.055313 ±2.5 Pass 3.55 67 0.045738 ±2.5 Pass Reference Frequency: LTE Band 2(15MHz) Middle channel=18900 channel=1880.00MHz Temperature (°C) Power supplied (Vdc) Hz ppm Limit (ppm) Result 25 3.80 88 0.056909 ±2.5 Pass 3.55 89 0.05744 Pass Pass Reference Frequency: LTE Band 2(20MHz) Middle channel=18900 channel=1880.00MHz Temperature (°C) Power supplied (Vdc) Frequency error Limit (ppm) Limit (ppm) Result Temperature (°C) Power supplied (Vdc) Frequency error Deputed (Vdc) Limit (ppm) Result	-	3.55				
Columberature Columberatur	Reference F	requency: LTE Band	2(10MHz) Middle	channel=18900	channel=1880.00	MHz
Columberature Columberatur		Power supplied	Frequer	ncv error		
A.35	Temperature (℃)	• •			Limit (ppm)	Result
25 3.80 85 0.055313 ±2.5 Pass Reference Frequency: LTE Band 2(15MHz) Middle channel=18900 channel=1880.00MHz Temperature (℃) Power supplied (Vdc) Frequency error Hz Limit (ppm) Result 25 3.80 88 0.056909 ±2.5 Pass 3.55 89 0.05744 ±2.5 Pass Reference Frequency: LTE Band 2(20MHz) Middle channel=18900 channel=1880.00MHz Temperature (℃) Power supplied (Vdc) Frequency error Hz ppm Limit (ppm) Result 4.35 75 0.049994 Limit (ppm) Result		, ,				
Reference Frequency: LTE Band 2(15MHz) Middle channel=18900 channel=1880.00MHz Temperature (°C)	25	3.80			±2.5	Pass
Reference Frequency: LTE Band 2(15MHz) Middle channel=18900 channel=1880.00MHz Temperature (°C) Power supplied (Vdc) Frequency error Limit (ppm) Result 25 3.80 88 0.056909 ±2.5 Pass 3.55 89 0.05744 1.000000000000000000000000000000000000		3.55				
Temperature (°C) Power supplied (Vdc) Frequency error Hz Limit (ppm) Result 25 4.35 75 0.049994 25	Reference F	requency: LTE Band			channel=1880.00	MHz
Column C						
25 3.80 88 0.056909 ±2.5 Pass 3.55 89 0.05744 Reference Frequency: LTE Band 2(20MHz) Middle channel=18900 channel=1880.00MHz Temperature (°C) Power supplied (Vdc) Frequency error (Vdc) Limit (ppm) Result 4.35 75 0.049994 Limit (ppm) Result	Temperature (°C)	• •	•		Limit (ppm)	Result
25 3.80 88 0.056909 ±2.5 Pass 3.55 89 0.05744 Reference Frequency: LTE Band 2(20MHz) Middle channel=18900 channel=1880.00MHz Temperature (°C) Power supplied (Vdc) Frequency error Limit (ppm) Result 4.35 75 0.049994 Climit (ppm)			75			
3.55 89 0.05744	25	3.80			±2.5	Pass
Reference Frequency: LTE Band 2(20MHz) Middle channel=18900 channel=1880.00MHz Temperature (°C) Power supplied (Vdc) Frequency error Limit (ppm) Result 4.35 75 0.049994	20	3.55				
Temperature (°C) Power supplied (Vdc) Frequency error Hz Limit (ppm) Result 4.35 75 0.049994	Reference F	requency: LTE Band			channel=1880.00	MHz
Comperature (C)	- (00)	Power supplied	Frequer	ncy error		
4.35 75 0.049994	remperature (*C)	• •		•	Limit (ppm)	Result
		4.35				
25 3.80 65 0.044674 ±2.5 Pass	25	3.80	65	0.044674	±2.5	Pass
3.55 71 0.047866		3.55]	





LTE Band 4(QPSK):

Reference Frequency: LTE Band 4(1.4MHz) Middle channel=20175 channel=1732.50MHz			LTE Band 4(Q	PSK):		
Comperature (C)	Reference F	requency: LTE Band	4(1.4MHz) Middle	e channel=20175	channel=1732.50	MHz
A.35	Tamparatura (°C)	Power supplied	Frequency error		1:: (()	D !!
25 3.80 76 0.045927 ±2.5 Pass	remperature (C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
Substitute Sub		4.35	88	0.052464		
Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz	25	3.80	76	0.045927	±2.5	Pass
Temperature (°C)		3.55	96	0.057471		
Power supplied (Ydc)	Reference F	requency: LTE Band	d 4(3MHz) Middle	channel=20175 c	channel=1732.50N	ИHz
Power supplied (Color Hz ppm Limit (ppm) Result	T (%C)	Power supplied	Freque	ncy error		
25 3.80 85 0.047082 ±2.5 Pass 3.55 68 0.04131 ±2.5 Pass Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz Temperature (°C) Power supplied (Vdc) Frequency error Limit (ppm) Result 25 3.80 88 0.052854 ±2.5 Pass 3.55 87 0.052276 Pass Pass Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz Temperature (°C) Power supplied (Vdc) Frequency error Limit (ppm) Result 25 3.80 95 0.064462 ±2.5 Pass 3.55 85 0.067925 Limit (ppm) Result Temperature (°C) Power supplied (Vdc) Hz ppm Limit (ppm) Result Temperature (°C) Power supplied (Vdc) Hz ppm Limit (ppm) Result Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz Temperature (°C) Power supplied (Vdc) Frequenc	Temperature (℃)	• •			Limit (ppm)	Result
Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz Temperature (°C)		4.35	78			
Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz Temperature (°C)	25	3.80	85	0.051122	±2.5	Pass
Temperature (℃) Power supplied (Vdc) Frequency error Hz Limit (ppm) Result 25 4.35 74 0.044773 25 Pass 3.80 88 0.052854 ±2.5 Pass 3.55 87 0.052276 ±2.5 Pass Temperature (℃) Power supplied (Vdc) Frequency error Hz Limit (ppm) Result 25 3.80 95 0.064462 ±2.5 Pass 3.55 85 0.067925 ±2.5 Pass Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz Temperature (℃) Power supplied (Vdc) Frequency error Limit (ppm) Result 25 3.80 85 0.064462 ±2.5 Pass 3.55 74 0.058113 ±2.5 Pass 3.55 74 0.058113 Exception (Vdc) Frequency error Limit (ppm) Result Temperature (℃) Power supplied (Vdc) Frequency error Limit (ppm) Limit (ppm) Result		3.55	68	0.04131		
Result Pass Pass	Reference F	requency: LTE Band	4(5MHz) Middle	channel=20175 c	channel=1732.50N	ЛНz
Color Hz	- (00)	Power supplied	Freque	ncy error		
A.35	Temperature (℃)	• •			Limit (ppm)	Result
Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz Temperature (°C)		4.35	74			
Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz Temperature (°C)	25	3.80	88	0.052854	±2.5	Pass
Temperature (°C) Power supplied (Vdc) Frequency error ppm Limit (ppm) Result 25 3.80 95 0.059844 ±2.5 Pass 3.55 85 0.067925 Down supplied (Vdc) Frequency error ppm Limit (ppm) Result Temperature (°C) Power supplied (Vdc) Frequency error ppm Limit (ppm) Result 25 3.80 85 0.058113 Pass 25 3.80 85 0.064462 ±2.5 Pass 3.55 74 0.058113 Exception ppm Exception ppm Exception ppm Exception ppm Result Temperature (°C) Power supplied (Vdc) Frequency error ppm Limit (ppm) Result Temperature (°C) Power supplied (Vdc) Frequency error ppm Limit (ppm) Result		3.55	87			
Temperature (°C)	Reference F	requency: LTE Band	4(10MHz) Middle	channel=20175	channel=1732.50	MHz
Temperature (°C)		Power supplied	Freque	ncy error		
25 3.80 95 0.064462 ±2.5 Pass 3.55 85 0.067925 Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz Temperature (°C) Power supplied (Vdc) Frequency error (Hz) Limit (ppm) Result 4.35 74 0.058113 ±2.5 Pass 3.80 85 0.064462 ±2.5 Pass 3.55 74 0.058113 ±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	Temperature (℃)	• •			Limit (ppm)	Result
3.55 85 0.067925		4.35	86			
Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz Temperature (°C) Power supplied (Vdc) Frequency error Limit (ppm) Result 25 3.80 85 0.064462 ±2.5 Pass 3.55 74 0.058113 ±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	25	3.80	95	0.064462	±2.5	Pass
Temperature (℃) Power supplied (Vdc) Frequency error Hz Limit (ppm) Result 4.35 74 0.058113 74 0.05811		3.55	85	0.067925		
Temperature (℃) Power supplied (Vdc) Frequency error Hz Limit (ppm) Result 4.35 74 0.058113 74 0.05811	Reference F	requency: LTE Band	4(15MHz) Middle	channel=20175	channel=1732.50	MHz
1.35 74 0.058113 25 3.80 85 0.064462 ±2.5 Pass 3.55 74 0.058113	T (°C)	Power supplied	Freque	ncy error		5 ''
25 3.80 85 0.064462 ±2.5 Pass 3.55 74 0.058113 ±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	remperature (C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
3.55 74 0.058113		4.35	74			
3.55 74 0.058113	25	3.80	85	0.064462	±2.5	Pass
Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz Temperature (°C) Power supplied Frequency error Limit (ppm) Result		3.55				
Temperature (°C) Power supplied Frequency error Limit (ppm) Result	Reference F	requency: LTE Band			channel=1732.50	MHz
Temperature (°C) (Vdc) Hz ppm Limit (ppm) Result		<u> </u>	· · · · · · · · · · · · · · · · · · ·			
```	Temperature (℃)	• •	•		Limit (ppm)	Result
		\				
25 3.80 85 0.070234 ±2.5 Pass	25	3.80			±2.5	Pass
3.55 91 0.064462		3.55				. 400





LTE Band 4(16QAM):

		LTE Band 4(16	QAM):		
Reference F	requency: LTE Band	4(1.4MHz) Middle	channel=20175	channel=1732.50	)MHz
Tomporoture (°C)	Power supplied	Frequer	ncy error	Limait (numa)	Decult
Temperature (℃)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	74	0.044383		
25	3.80	80	0.048236	±2.5	Pass
	3.55	68	0.04131		
Reference F	requency: LTE Band	d 4(3MHz) Middle	channel=20175 c	hannel=1732.50N	ИНz
T (%C)	Power supplied	Frequer	ncy error		_
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	74	0.044773		
25	3.80	82	0.04939	±2.5	Pass
	3.55	78	0.047082	1	
Reference F	requency: LTE Band	4(5MHz) Middle	channel=20175 c	hannel=1732.50N	ИНz
	Power supplied	Frequer	ncy error		
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	90	0.054008		
25	3.80	78	0.047082	±2.5	Pass
	3.55	70	0.042464		
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	68	0.04935		
25	3.80	74	0.052813	±2.5	Pass
	3.55	88	0.060894	1	
Reference F	requency: LTE Band			channel=1732.50	MHz
	Power supplied		ncy error		
Temperature (℃)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	74	0.052813		
25	3.80	65	0.047618	±2.5	Pass
_0	3.55	85	0.059162	1	
Reference F	requency: LTE Band			channel=1732.50	MHz
	Power supplied	,	ncy error		
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	74	0.052813		
25	3.80	96	0.065511	±2.5	Pass
	3.55	85	0.059162	]	





LTE Band 7(QPSK):

		= = = = = = = = = = = = = = = = = = = =	•		
Reference Fre	equency: LTE Band	7(5MHz) Middle c	hannel=21100 Fre	equency=2535.0	0MHz
Temperature (°ℂ)	Power supplied	Freque	ncy error	Limit (nnm)	Dogult
remperature ( C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	87	0.033450		
25	3.80	90	0.034503	±2.5	Pass
	3.55	85	0.034561		
Reference Fre	quency: LTE Band 7	(10MHz) Middle	channel=21100 Fr	equency=2535.0	00MHz
Temperature (°ℂ)	Power supplied	Freque	ncy error	Limit (nnm)	Result
remperature (C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	67	0.024530		
25	3.80	80	0.033258	±2.5	Pass
	3.55	74	0.026391		
Reference Fre	quency: LTE Band 7	(15MHz) Middle	channel=21100 Fr	equency=2535.0	00MHz
Temperature (°C)	Power supplied	Frequency error		Limit (nnm)	Dogult
remperature (C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	4.35	88	0.036314		
25	3.80	65	0.024541	±2.5	Pass
	3.55	85	0.038631		
Reference Fre	quency: LTE Band 7	(20MHz) Middle	channel=21100 Fr	equency=2535.0	00MHz
Temperature (°ℂ)	Power supplied	Freque	ncy error	Limit (nnm)	Result
remperature ( C)	(Vdc)	Hz	ppm	Limit (ppm)	Veznir
	4.35	78	0.030719		
25	3.80	75	0.037586	±2.5	Pass
-	3.55	90	0.035203	1	





LTE Band 7(16QAM):

Reference Fr	equency: LTE Band	7(5MHz) Middle c	hannel=21100 Fre	equency=2535.0	0MHz
Temperature (°C)	Power supplied	Power supplied Frequency error		Limit (nnm)	Dogult
	(Vdc)	Hz	ppm	Limit (ppm)	Result
25	4.35	85	0.032731	±2.5	Pass
	3.80	75	0.023486		
	3.55	63	0.024552		
Reference Fre	equency: LTE Band 7	(10MHz) Middle	channel=21100 Fr	equency=2535.0	00MHz
Temperature (°C)	Power supplied	Frequer	ncy error	Limit (ppm) Result	
	(Vdc)	Hz	ppm	Limit (ppm)	Result
25	4.35	84	0.033736	±2.5	Pass
	3.80	95	0.032775		
	3.55	74	0.021191		
Reference Fre	equency: LTE Band 7	(15MHz) Middle	channel=21100 Fr	equency=2535.0	00MHz
Temperature (°ℂ)	Power supplied	Frequency error		Lineit (none)	Decult
	(Vdc)	Hz	ppm	Limit (ppm)	Result
25	4.35	85	0.036531	±2.5	Pass
	3.80	76	0.028780		
	3.55	90	0.035103		
Reference Fre	equency: LTE Band 7	(20MHz) Middle	channel=21100 Fr	equency=2535.0	00MHz
Temperature (°C)	Power supplied	Freque	ncy error	Limit (nnm)	Result
	(Vdc)	Hz	ppm	Limit (ppm)	Result
25	4.35	85	0.034531	±2.5	Pass
	3.80	74	0.029371		
	3.55	85	0.034231		