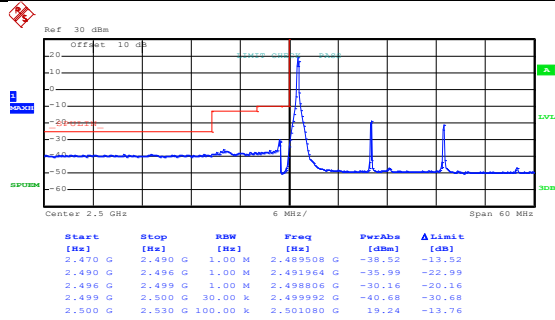


20MHz:

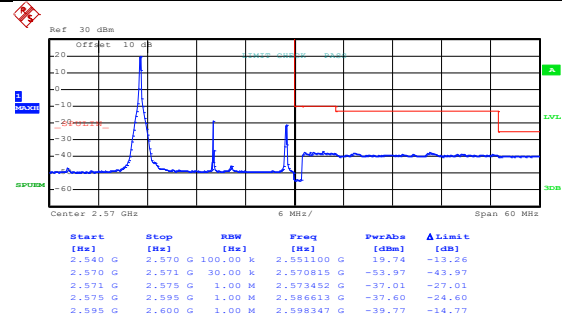
Test Mode:

LTE band 7(QPSK RB Size 1& RB Offset 0)



Date: 23.JUN.2016 23:13:11

Lowest channel

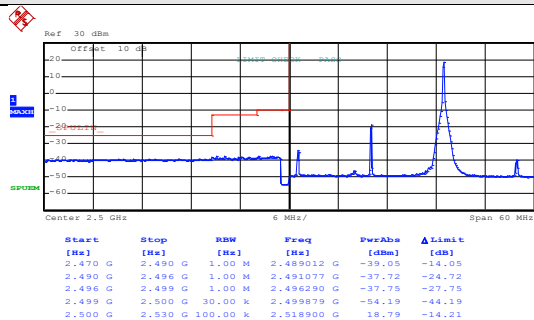


Date: 23.JUN.2016 23:15:16

Highest channel

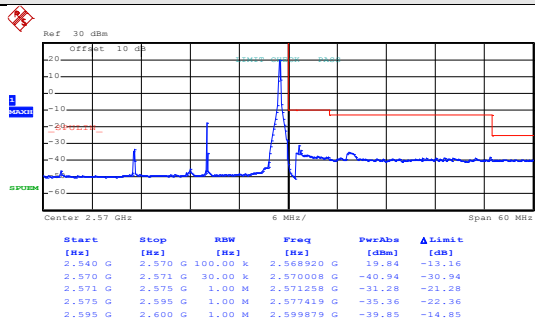
Test Mode:

LTE band 7(QPSK RB Size 1& RB Offset 99)



Date: 23.JUN.2016 23:13:26

Lowest channel

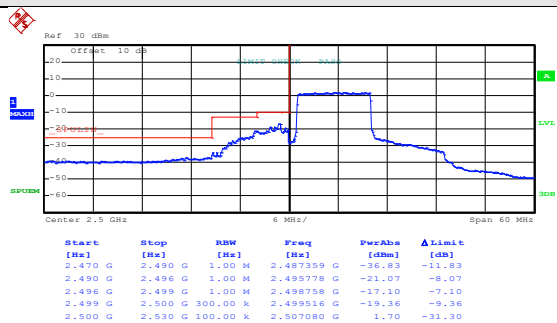


Date: 23.JUN.2016 23:15:30

Highest channel

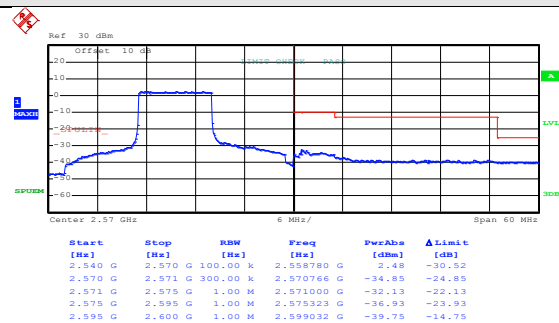
Test Mode:

LTE band 7(QPSK RB Size 50& RB Offset 0)



Date: 23.JUN.2016 23:13:50

Lowest channel

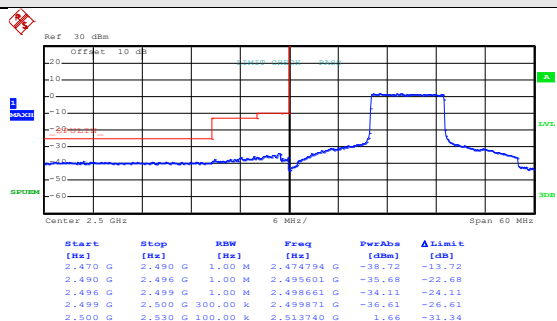


Date: 23.JUN.2016 23:15:51

Highest channel

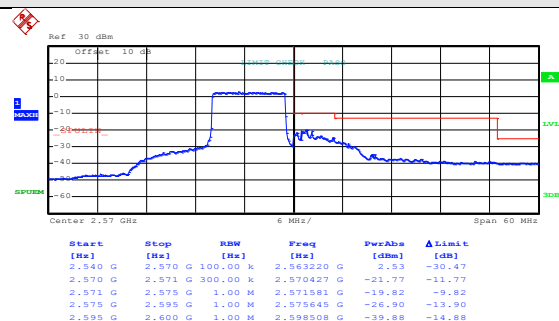
Test Mode:

LTE band 7(QPSK RB Size 50& RB Offset 49)



Date: 23.JUN.2016 23:14:09

Lowest channel

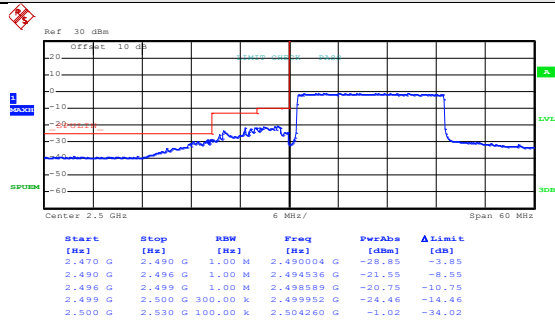


Date: 23.JUN.2016 23:16:08

Highest channel

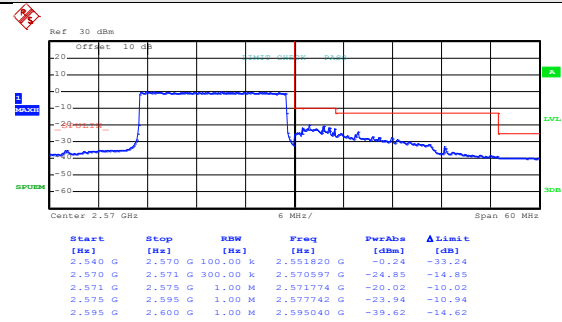
Test Mode:

LTE band 7(QPSK RB Size 100& RB Offset 0)



Date: 23.JUN.2016 23:14:32

Lowest channel

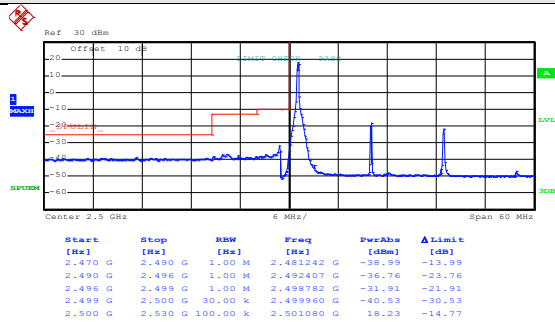


Date: 23.JUN.2016 23:16:25

Highest channel

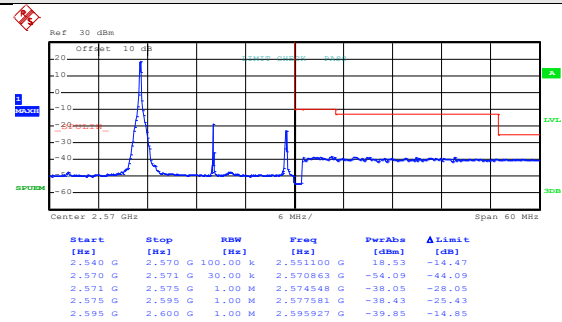
Test Mode:

LTE band 7(16QAM RB Size 1& RB Offset 0)



Date: 23.JUN.2016 23:13:17

Lowest channel

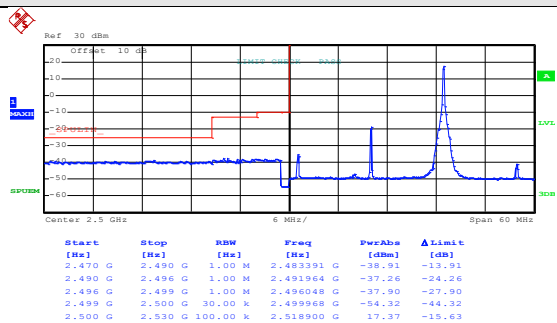


Date: 23.JUN.2016 23:15:22

Highest channel

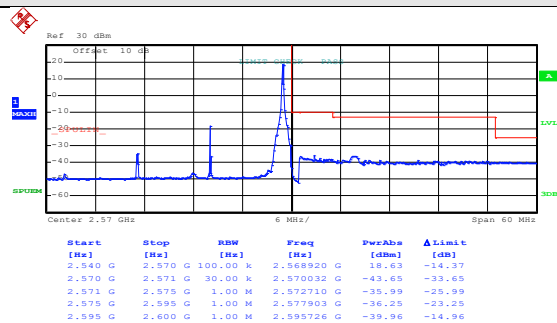
Test Mode:

LTE band 7(16QAM RB Size 1& RB Offset 99)



Date: 23.JUN.2016 23:13:34

Lowest channel

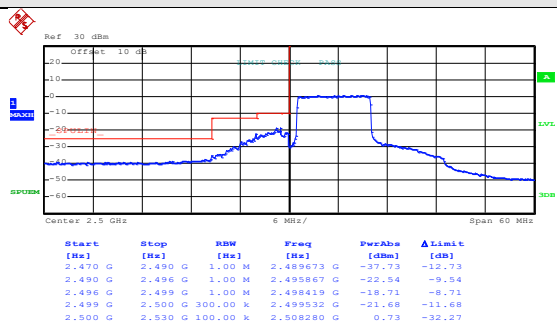


Date: 23.JUN.2016 23:15:37

Highest channel

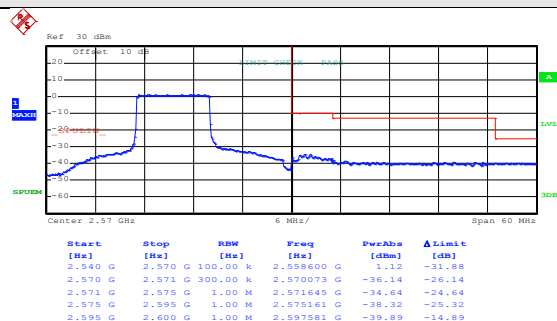
Test Mode:

LTE band 7(16QAM RB Size 50& RB Offset 0)



Date: 23.JUN.2016 23:13:58

Lowest channel

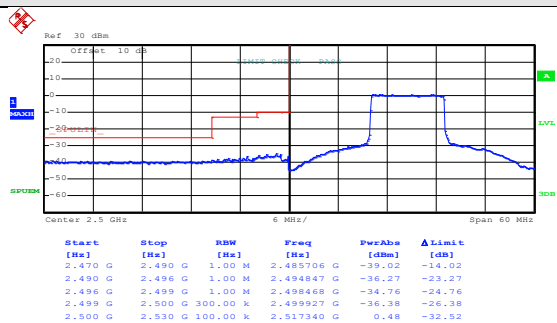


Date: 23.JUN.2016 23:15:58

Highest channel

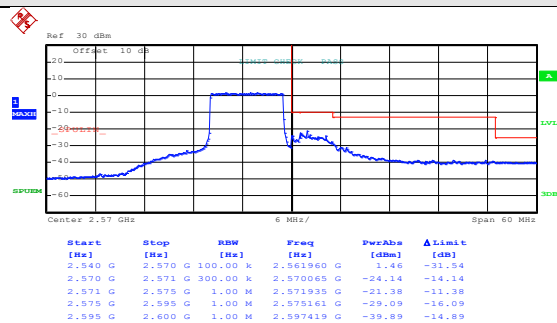
Test Mode:

LTE band 7(16QAM RB Size 50& RB Offset 49)



Date: 23.JUN.2016 23:14:18

Lowest channel

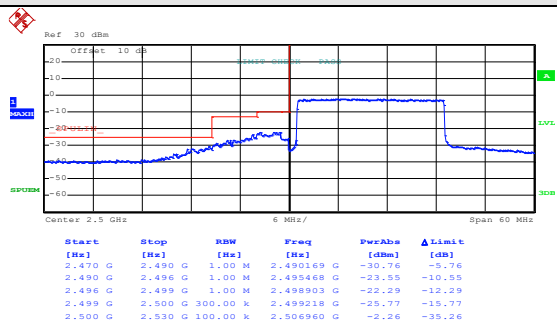


Date: 23.JUN.2016 23:16:15

Highest channel

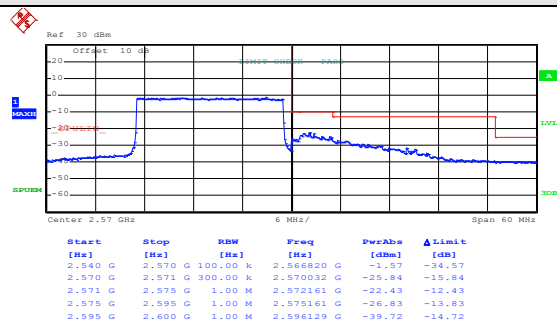
Test Mode:

LTE band 7(16QAM RB Size 100& RB Offset 0)



Date: 23.JUN.2016 23:14:40

Lowest channel



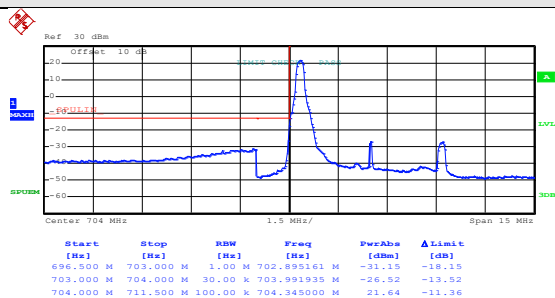
Date: 23.JUN.2016 23:16:31

Highest channel

LTE band 17 part: 5MHz:

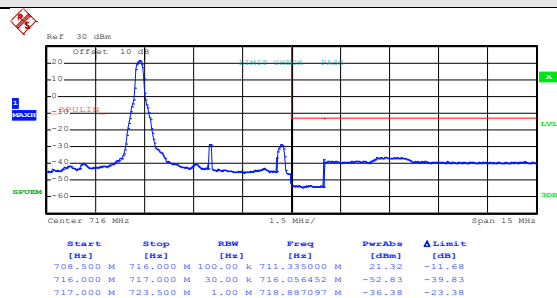
Test Mode:

LTE band 17(QPSK RB Size 1& RB Offset 0)



Date: 23.JUN.2016 21:29:45

Lowest channel

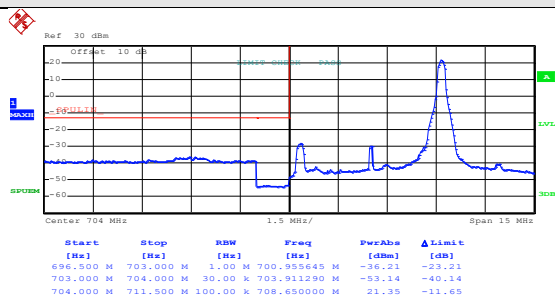


Date: 23.JUN.2016 21:31:27

Highest channel

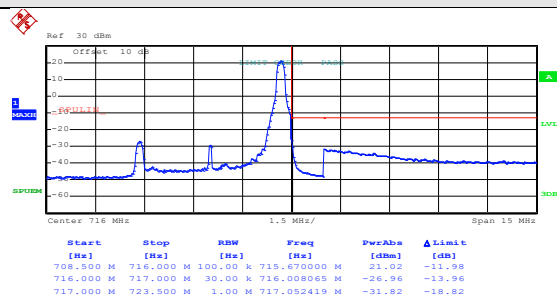
Test Mode:

LTE band 17(QPSK RB Size 1& RB Offset 24)



Date: 23.JUN.2016 21:30:01

Lowest channel

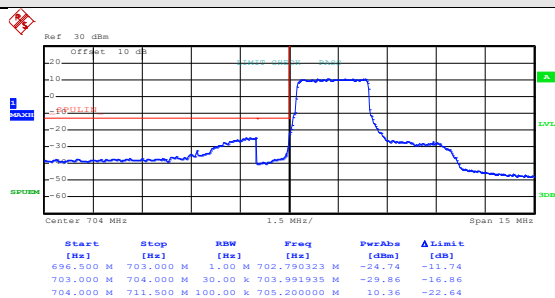


Date: 23.JUN.2016 21:31:41

Highest channel

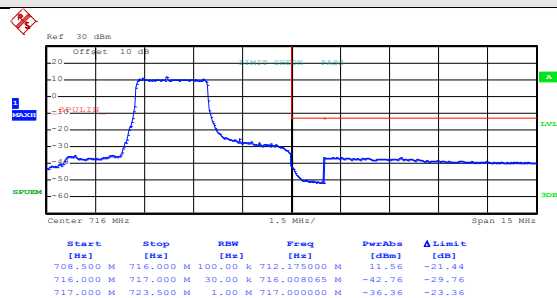
Test Mode:

LTE band 17(QPSK RB Size 12& RB Offset 0)



Date: 23.JUN.2016 21:30:18

Lowest channel

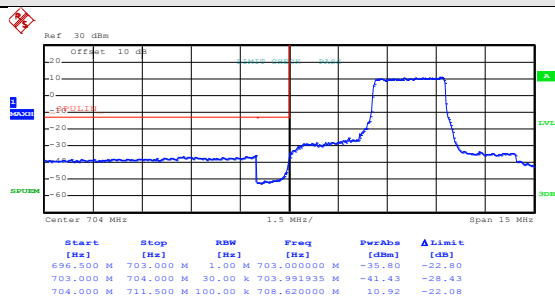


Date: 23.JUN.2016 21:32:00

Highest channel

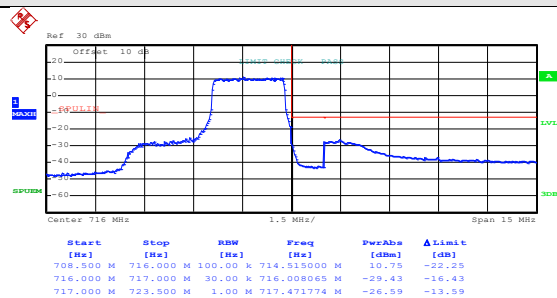
Test Mode:

LTE band 17(QPSK RB Size 12& RB Offset 11)



Date: 23.JUN.2016 21:30:34

Lowest channel

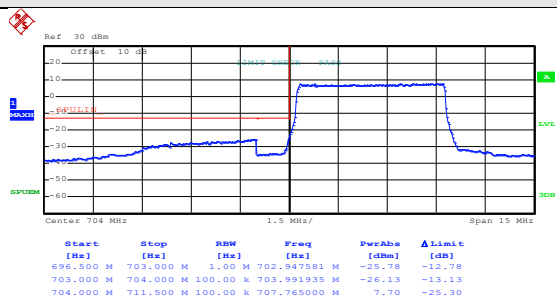


Date: 23.JUN.2016 21:32:16

Highest channel

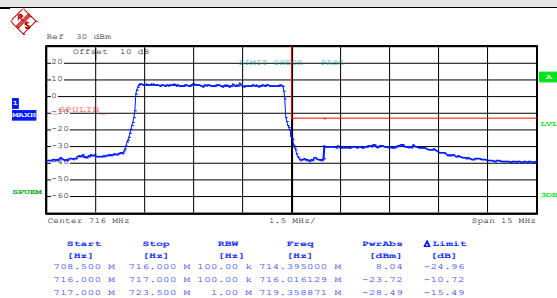
Test Mode:

LTE band 17(QPSK RB Size 25& RB Offset 0)



Date: 23.JUN.2016 21:30:57

Lowest channel

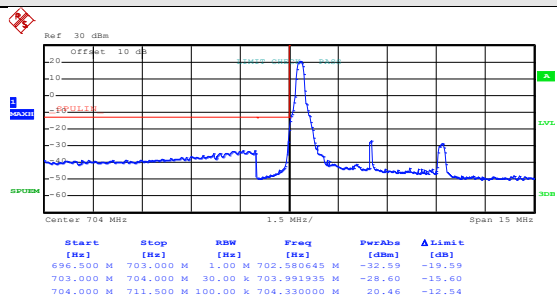


Date: 23.JUN.2016 21:32:39

Highest channel

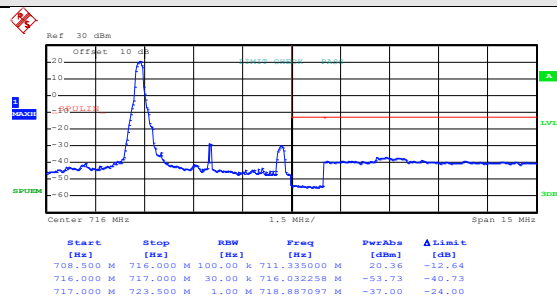
Test Mode:

LTE band 17(16QAM RB Size 1& RB Offset 0)



Date: 23.JUN.2016 21:29:51

Lowest channel

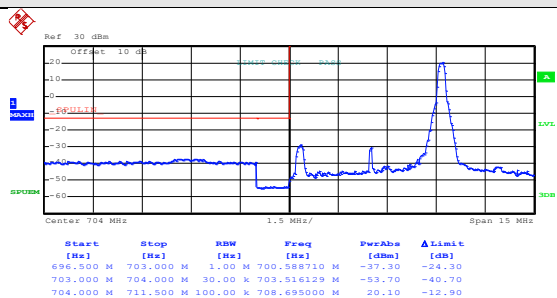


Date: 23.JUN.2016 21:31:32

Highest channel

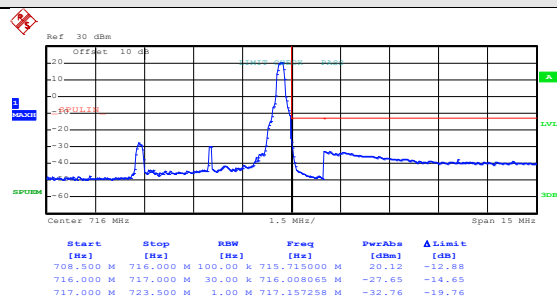
Test Mode:

LTE band 17(16QAM RB Size 1& RB Offset 24)



Date: 23.JUN.2016 21:30:07

Lowest channel

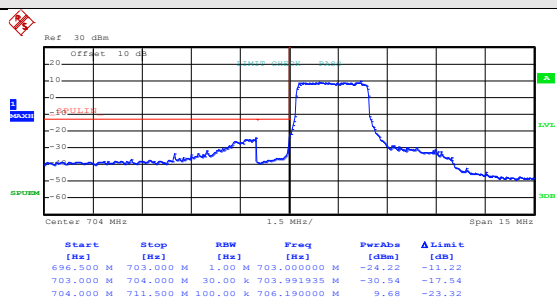


Date: 23.JUN.2016 21:31:48

Highest channel

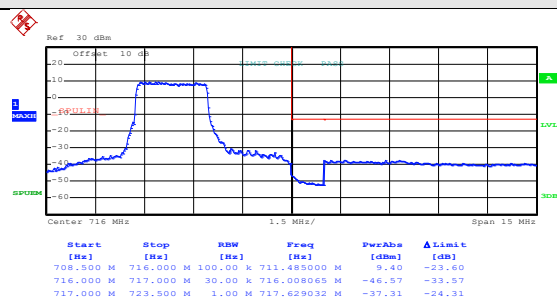
Test Mode:

LTE band 17(16QAM RB Size 12& RB Offset 0)



Date: 23.JUN.2016 21:30:24

Lowest channel

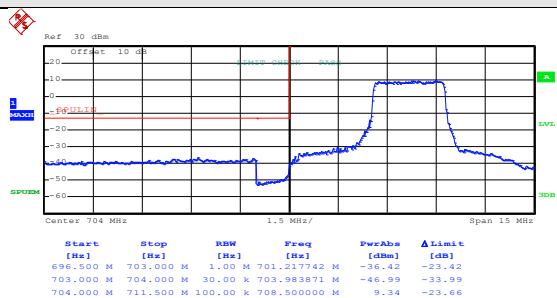


Date: 23.JUN.2016 21:32:06

Highest channel

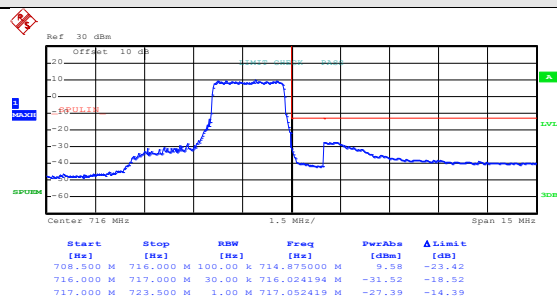
Test Mode:

LTE band 17(16QAM RB Size 12& RB Offset 11)



Date: 23.JUN.2016 21:30:41

Lowest channel

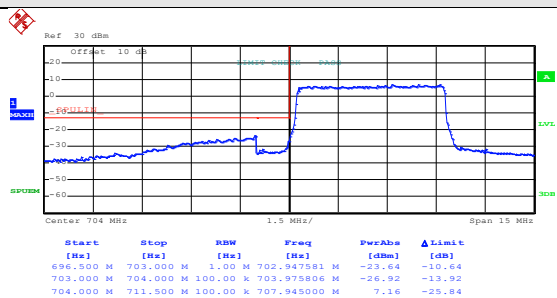


Date: 23.JUN.2016 21:32:22

Highest channel

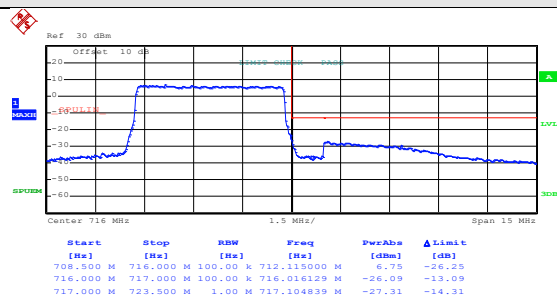
Test Mode:

LTE band 17(16QAM RB Size 25& RB Offset 0)



Date: 23.JUN.2016 21:31:02

Lowest channel



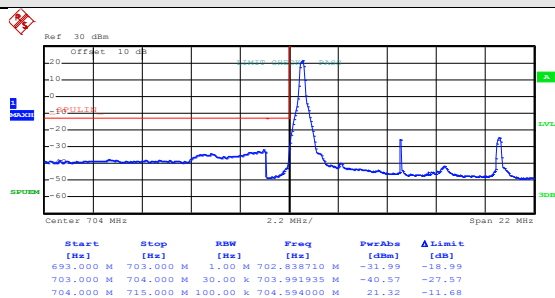
Date: 23.JUN.2016 21:32:44

Highest channel

10MHz:

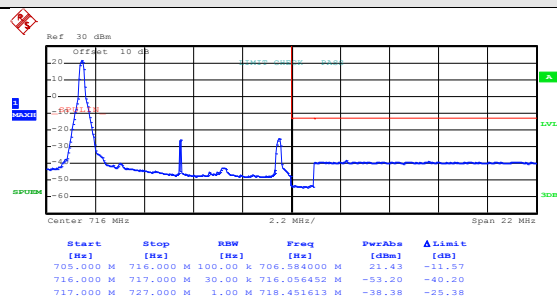
Test Mode:

LTE band 17(QPSK RB Size 1& RB Offset 0)



Date: 23.JUN.2016 21:33:28

Lowest channel

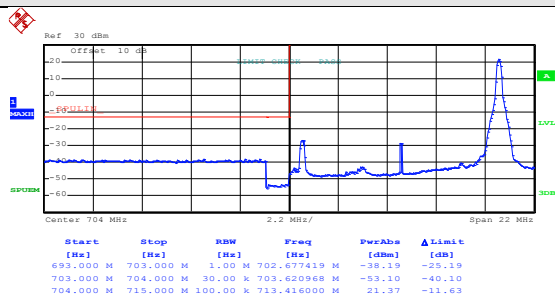


Date: 23.JUN.2016 21:35:34

Highest channel

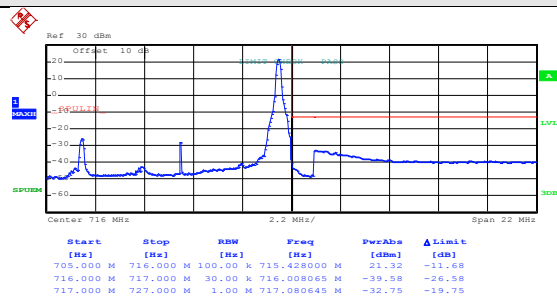
Test Mode:

LTE band 17(QPSK RB Size 1& RB Offset 49)



Date: 23.JUN.2016 21:33:43

Lowest channel

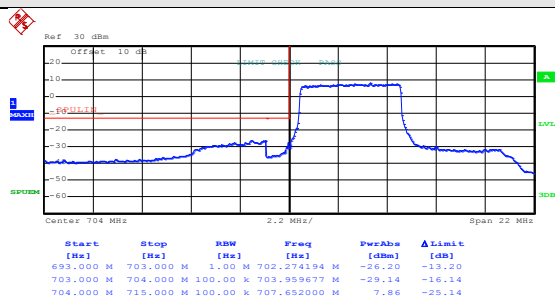


Date: 23.JUN.2016 21:35:52

Highest channel

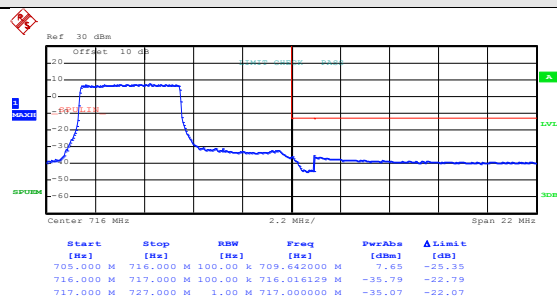
Test Mode:

LTE band 17(QPSK RB Size 25& RB Offset 0)



Date: 23.JUN.2016 21:34:04

Lowest channel

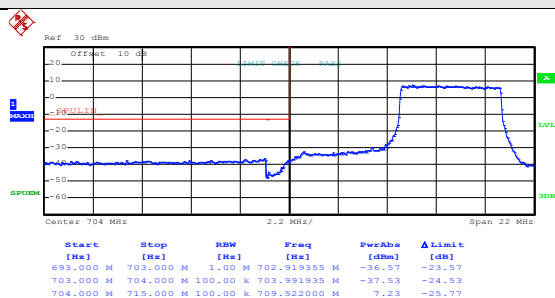


Date: 23.JUN.2016 21:36:16

Highest channel

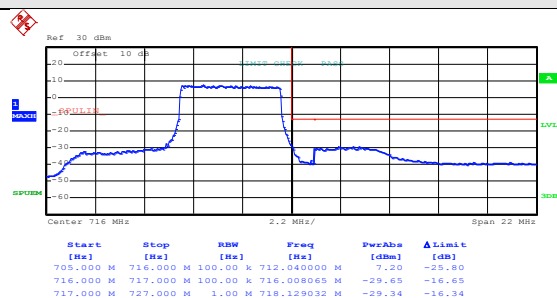
Test Mode:

LTE band 17(QPSK RB Size 25& RB Offset 24)



Date: 23.JUN.2016 21:34:37

Lowest channel

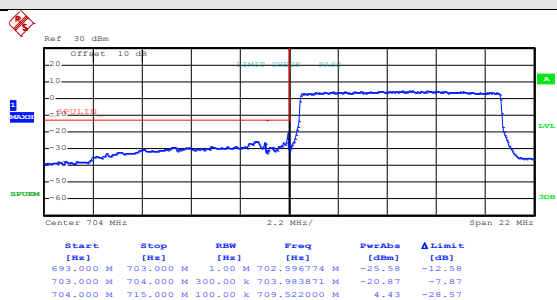


Date: 23.JUN.2016 21:36:33

Highest channel

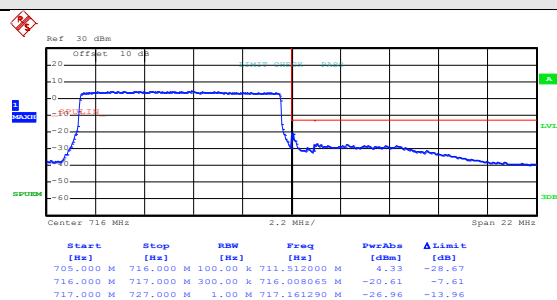
Test Mode:

LTE band 17(QPSK RB Size 50& RB Offset 0)



Date: 23.JUN.2016 21:34:58

Lowest channel

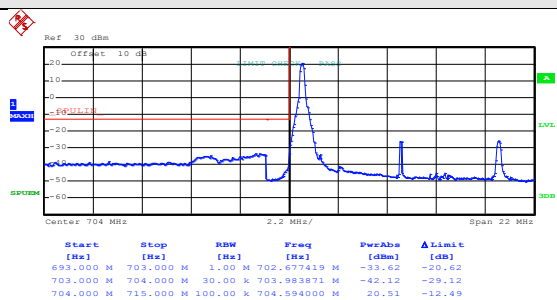


Date: 23.JUN.2016 21:36:55

Highest channel

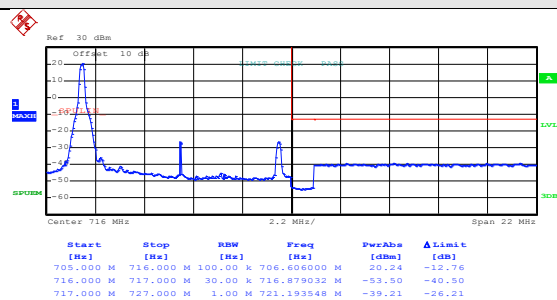
Test Mode:

LTE band 17(16QAM RB Size 1& RB Offset 0)



Date: 23.JUN.2016 21:33:34

Lowest channel

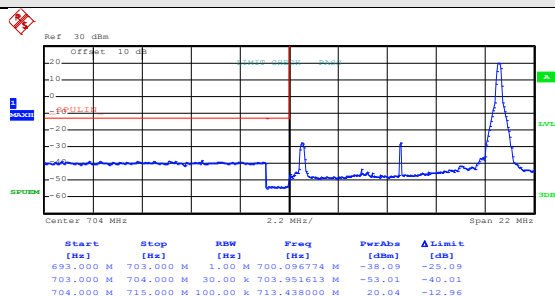


Date: 23.JUN.2016 21:35:40

Highest channel

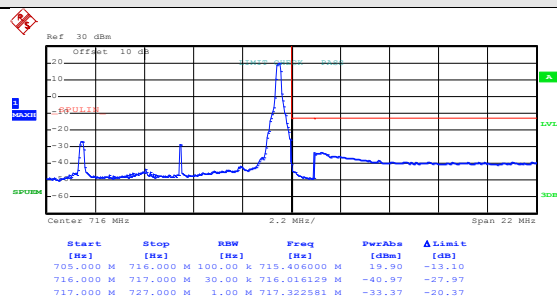
Test Mode:

LTE band 17(16QAM RB Size 1& RB Offset 49)



Date: 23.JUN.2016 21:33:50

Lowest channel

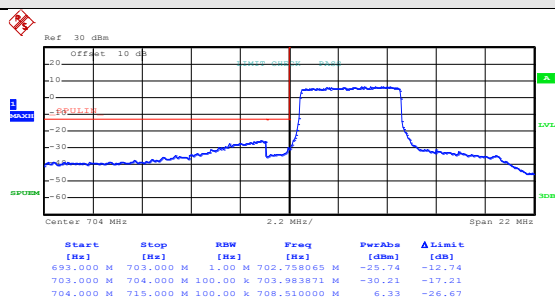


Date: 23.JUN.2016 21:35:59

Highest channel

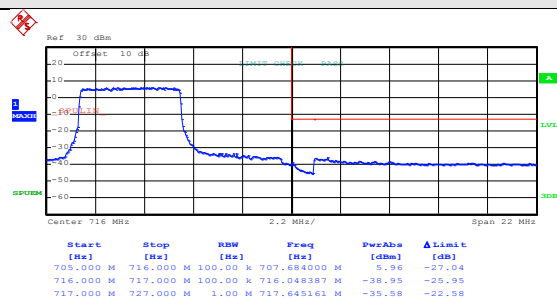
Test Mode:

LTE band 17(16QAM RB Size 25& RB Offset 0)



Date: 23.JUN.2016 21:34:11

Lowest channel

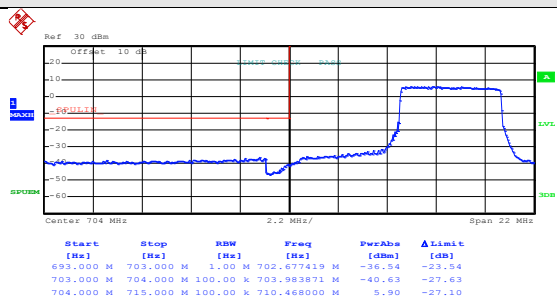


Date: 23.JUN.2016 21:36:23

Highest channel

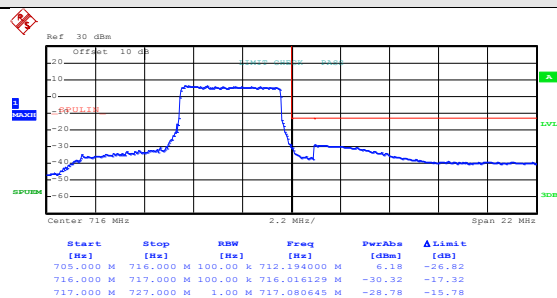
Test Mode:

LTE band 17(16QAM RB Size 25& RB Offset 24)



Date: 23.JUN.2016 21:34:45

Lowest channel

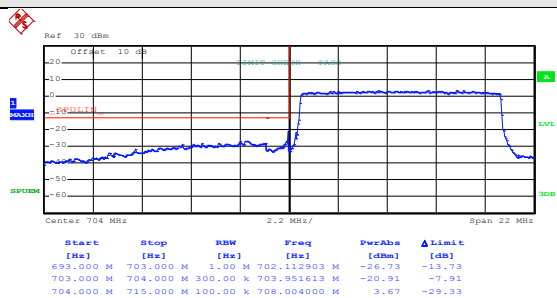


Date: 23.JUN.2016 21:36:41

Highest channel

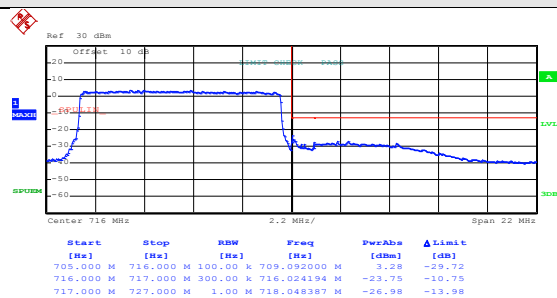
Test Mode:

LTE band 17(16QAM RB Size 50& RB Offset 0)



Date: 23.JUN.2016 21:35:04

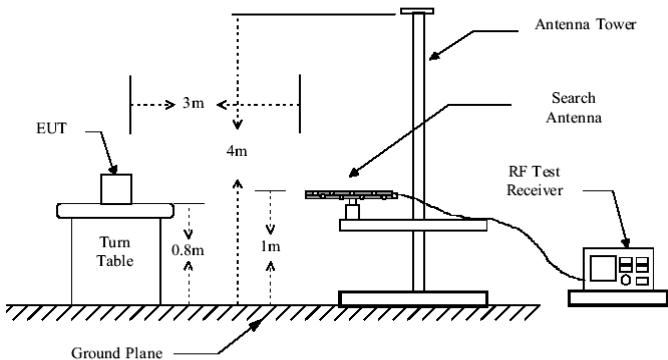
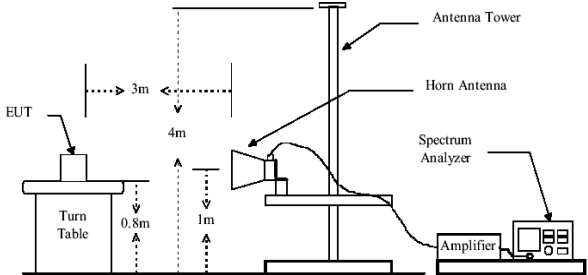
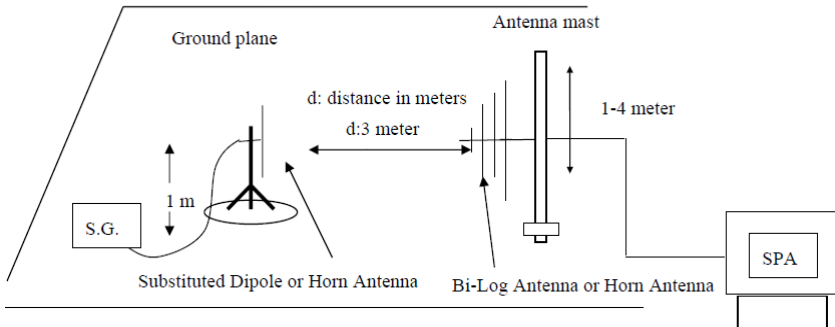
Lowest channel



Date: 23.JUN.2016 21:37:01

Highest channel

6.10 ERP, EIRP Measurement

Test Requirement:	FCC part 22.913 (a), 24.232 (c), part 27.50(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 5: 7W ERP LTE Band 7: 2W EIRP LTE Band 17: 3W ERP
Test setup:	<p>Below 1GHz</p>  <p>Above 1GHz</p>  <p>Substituted method:</p> 

Test Procedure:	<ol style="list-style-type: none"> 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: $\text{ERP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBd)} - \text{Cable Loss (dB)}$ 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: $\text{EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable Loss (dB)}$ 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

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	H	V	19.49	33.00	Pass
					H	17.00		
1850.70	18607	16QAM	1.4	H	V	19.08		
					H	16.27		
1.4MHz(RB size 3 & RB offset 0)								
1850.70	18607	QPSK	1.4	H	V	19.68	33.00	Pass
					H	16.13		
1850.70	18607	16QAM	1.4	H	V	19.30		
					H	16.19		
1.4MHz(RB size 6 & RB offset 0)								
1850.70	18607	QPSK	1.4	H	V	18.70	33.00	Pass
					H	15.15		
1850.70	18607	16QAM	1.4	H	V	18.67		
					H	15.59		

Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz(RB size 1 & RB offset 0)								
1880.00	18900	QPSK	1.4	H	V	19.18	33.00	Pass
					H	17.85		
1880.00	18900	16QAM	1.4	H	V	19.06		
					H	16.69		
1.4MHz(RB size 3 & RB offset 0)								
1880.00	18900	QPSK	1.4	H	V	19.05	33.00	Pass
					H	16.91		
1880.00	18900	16QAM	1.4	H	V	19.12		
					H	16.24		
1.4MHz(RB size 6 & RB offset 0)								
1880.00	18900	QPSK	1.40	H	V	18.42	33.00	Pass
					H	15.28		
1880.00	18900	16QAM	1.40	H	V	18.83		
					H	15.74		

Highest 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)								
1909.30	19193	QPSK	1.4	H	V	19.45	33.00	Pass
					H	17.55		
1909.30	19193	16QAM	1.4	H	V	19.05		
					H	16.18		
1.4MHz(RB size 3 & RB offset 0)								
1909.30	19193	QPSK	1.4	H	V	19.01	33.00	Pass
					H	16.86		
1909.30	19193	16QAM	1.4	H	V	19.67		
					H	16.73		
1.4MHz(RB size 6 & RB offset 0)								
1909.30	19193	QPSK	1.4	H	V	18.39	33.00	Pass
					H	15.30		
1909.30	19193	16QAM	1.4	H	V	18.01		
					H	15.13		

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)								
1860.00	18700	QPSK	20	H	V	19.50	33.00	Pass
					H	16.11		
1860.00	18700	16QAM	20	H	V	19.29		
					H	16.43		
20MHz(RB size 50 & RB offset 0)								
1860.00	18700	QPSK	20	H	V	19.06	33.00	Pass
					H	15.85		
1860.00	18700	16QAM	20	H	V	18.84		
					H	16.18		
20MHz(RB size 100 & RB offset 0)								
1860.00	18700	QPSK	20	H	V	18.13	33.00	Pass
					H	14.98		
1860.00	18700	16QAM	20	H	V	18.41		
					H	15.83		

Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
20MHz(RB size 1 & RB offset 0)								
1880.00	18900	QPSK	20	H	V	19.18	33.00	Pass
					H	16.86		
1880.00	18900	16QAM	20	H	V	19.65		
					H	16.53		
20MHz(RB size 50 & RB offset 0)								
1880.00	18900	QPSK	20	H	V	19.34	33.00	Pass
					H	15.40		
1880.00	18900	16QAM	20	H	V	18.02		
					H	16.24		
20MHz(RB size 100 & RB offset 0)								
1880.00	18900	QPSK	20	H	V	18.45	33.00	Pass
					H	14.56		
1880.00	18900	16QAM	20	H	V	18.63		
					H	15.37		

Highest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
20MHz(RB size 1 & RB offset 0)								
1900.00	19100	QPSK	20	H	V	19.74	33.00	Pass
					H	16.45		
1900.00	19100	16QAM	20	H	V	19.55		
					H	16.52		
20MHz(RB size 50 & RB offset 0)								
1900.00	19100	QPSK	20	H	V	19.02	33.00	Pass
					H	15.01		
1900.00	19100	16QAM	20	H	V	18.18		
					H	16.84		
20MHz(RB size 100 & RB offset 0)								
1900.00	19100	QPSK	20	H	V	18.41	33.00	Pass
					H	14.13		
1900.00	19100	16QAM	20	H	V	18.69		
					H	15.74		

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	H	V	21.28	30.00	Pass
					H	14.88		
1710.70	19957	16QAM	1.4	H	V	20.31		
					H	14.86		
1.4MHz(RB size 3 & RB offset 0)								
1710.70	19957	QPSK	1.4	H	V	20.68	30.00	Pass
					H	14.70		
1710.70	19957	16QAM	1.4	H	V	19.94		
					H	14.66		
1.4MHz(RB size 6 & RB offset 0)								
1710.70	19957	QPSK	1.4	H	V	19.70	30.00	Pass
					H	13.60		
1710.70	19957	16QAM	1.4	H	V	19.00		
					H	13.90		

Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
1.4MHz(RB size 1 & RB offset 0)								
1732.50	20175	QPSK	1.4	H	V	21.17	30.00	Pass
					H	14.71		
1732.50	20175	16QAM	1.4	H	V	20.08		
					H	14.86		
1.4MHz(RB size 3 & RB offset 0)								
1732.50	20175	QPSK	1.4	H	V	20.63	30.00	Pass
					H	14.32		
1732.50	20175	16QAM	1.4	H	V	19.23		
					H	14.36		
1.4MHz(RB size 6 & RB offset 0)								
1732.50	20175	QPSK	1.4	H	V	19.61	30.00	Pass
					H	13.13		
1732.50	20175	16QAM	1.4	H	V	19.37		
					H	13.73		

Highest 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)								
1754.30	20393	QPSK	1.4	H	V	21.37	30.00	Pass
					H	14.73		
1754.30	20393	16QAM	1.4	H	V	20.34		
					H	14.45		
1.4MHz(RB size 3 & RB offset 0)								
1754.30	20393	QPSK	1.4	H	V	20.52	30.00	Pass
					H	14.27		
1754.30	20393	16QAM	1.4	H	V	19.70		
					H	14.01		
1.4MHz(RB size 6 & RB offset 0)								
1754.30	20393	QPSK	1.4	H	V	19.93	30.00	Pass
					H	13.30		
1754.30	20393	16QAM	1.4	H	V	19.13		
					H	13.37		

Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
20MHz(RB size 1 & RB offset 0)								
1720.00	20050	QPSK	20	H	V	21.16	30.00	Pass
					H	14.34		
1720.00	20050	16QAM	20	H	V	20.77		
					H	14.82		
20MHz(RB size 50 & RB offset 0)								
1720.00	20050	QPSK	20	H	V	21.69	30.00	Pass
					H	12.85		
1720.00	20050	16QAM	20	H	V	21.41		
					H	13.59		
20MHz(RB size 100 & RB offset 0)								
1720.00	20050	QPSK	20	H	V	21.41	30.00	Pass
					H	12.77		
1720.00	20050	16QAM	20	H	V	21.16		
					H	13.27		

Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
20MHz(RB size 1 & RB offset 0)								
1732.50	20175	QPSK	20	H	V	21.17	30.00	Pass
					H	14.72		
1732.50	20175	16QAM	20	H	V	20.24		
					H	14.46		
20MHz(RB size 50 & RB offset 0)								
1732.50	20175	QPSK	20	H	V	21.69	30.00	Pass
					H	12.90		
1732.50	20175	16QAM	20	H	V	21.02		
					H	13.21		
20MHz(RB size 100 & RB offset 0)								
1732.50	20175	QPSK	20	H	V	21.15	30.00	Pass
					H	12.50		
1732.50	20175	16QAM	20	H	V	21.03		
					H	13.37		

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	H	V	21.73	30.00	Pass
					H	14.36		
1745.00	20300	16QAM	20	H	V	20.65		
					H	14.53		
20MHz(RB size 50 & RB offset 0)								
1745.00	20300	QPSK	20	H	V	21.30	30.00	Pass
					H	12.02		
1745.00	20300	16QAM	20	H	V	21.21		
					H	13.11		
20MHz(RB size 100 & RB offset 0)								
1745.00	20300	QPSK	20	H	V	21.16	30.00	Pass
					H	12.63		
1745.00	20300	16QAM	20	H	V	21.39		
					H	13.93		

LTE band 5 part

Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
1.4MHz(RB size 1 & RB offset 0)								
824.70	20407	QPSK	1.4	H	V	28.59	38.45	Pass
					H	19.73		
824.70	20407	16QAM	1.4	H	V	28.51		
					H	19.72		
1.4MHz(RB size 3& RB offset 0)								
824.70	20407	QPSK	1.4	H	V	28.25	38.45	Pass
					H	19.30		
824.70	20407	16QAM	1.4	H	V	27.73		
					H	19.44		
1.4MHz(RB size 6& RB offset 0)								
824.70	20407	QPSK	1.4	H	V	25.67	38.45	Pass
					H	17.45		
824.70	20407	16QAM	1.4	H	V	26.32		
					H	17.64		

Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
1.4MHz(RB size 1 & RB offset 0)								
836.50	20525	QPSK	1.4	H	V	28.84	38.45	Pass
					H	19.24		
836.50	20525	16QAM	1.4	H	V	28.45		
					H	19.54		
1.4MHz(RB size 3& RB offset 0)								
836.50	20525	QPSK	1.4	H	V	28.46	38.45	Pass
					H	19.68		
836.50	20525	16QAM	1.4	H	V	27.87		
					H	19.70		
1.4MHz(RB size 6& RB offset 0)								
836.50	20525	QPSK	1.4	H	V	25.37	38.45	Pass
					H	17.08		
836.50	20525	16QAM	1.4	H	V	26.34		
					H	17.42		

Highest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
1.4MHz(RB size 1 & RB offset 0)								
848.30	20643	QPSK	1.4	H	V	28.27	38.45	Pass
					H	19.26		
848.30	20643	16QAM	1.4	H	V	28.63		
					H	19.23		
1.4MHz(RB size 3& RB offset 0)								
848.30	20643	QPSK	1.4	H	V	28.39	38.45	Pass
					H	19.30		
848.30	20643	16QAM	1.4	H	V	27.01		
					H	19.13		
1.4MHz(RB size 6& RB offset 0)								
848.30	20643	QPSK	1.4	H	V	25.36	38.45	Pass
					H	17.66		
848.30	20643	16QAM	1.4	H	V	26.69		
					H	17.23		

Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
10MHz(RB size 1 & RB offset 0)								
829.00	20450	QPSK	10	H	V	27.56	38.45	Pass
					H	19.06		
829.00	20450	16QAM	10	H	V	27.56		
					H	19.07		
10MHz(RB size 25& RB offset 0)								
829.00	20450	QPSK	10	H	V	26.94	38.45	Pass
					H	18.44		
829.00	20450	16QAM	10	H	V	26.92		
					H	18.37		
10MHz(RB size 50& RB offset 0)								
829.00	20450	QPSK	10	H	V	26.79	38.45	Pass
					H	18.57		
829.00	20450	16QAM	10	H	V	27.15		
					H	18.54		

Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
10MHz(RB size 1 & RB offset 0)								
836.50	20525	QPSK	10	H	V	27.82	38.45	Pass
					H	19.27		
836.50	20525	16QAM	10	H	V	27.70		
					H	19.08		
10MHz(RB size 25& RB offset 0)								
836.50	20525	QPSK	10	H	V	26.81	38.45	Pass
					H	18.18		
836.50	20525	16QAM	10	H	V	26.02		
					H	18.23		
10MHz(RB size 50 & RB offset 0)								
836.50	20525	QPSK	10	H	V	26.30	38.45	Pass
					H	18.09		
836.50	20525	16QAM	10	H	V	27.91		
					H	18.14		

High channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
10MHz(RB size 1 & RB offset 0)								
844.00	20600	QPSK	10	H	V	27.42	38.45	Pass
					H	19.26		
844.00	20600	16QAM	10	H	V	27.27		
					H	19.71		
10MHz(RB size 25& RB offset 0)								
844.00	20600	QPSK	10	H	V	26.15	38.45	Pass
					H	18.53		
844.00	20600	16QAM	10	H	V	26.39		
					H	18.31		
10MHz(RB size 50 & RB offset 0)								
844.00	20600	QPSK	10	H	V	26.13	38.45	Pass
					H	18.36		
844.00	20600	16QAM	10	H	V	27.65		
					H	18.86		

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	H	V	13.31	33.00	Pass
					H	14.81		
2502.50	20775	16QAM	5	H	V	12.32		
					H	14.88		
5MHz(RB size 12 & RB offset 0)								
2502.50	20775	QPSK	5	H	V	12.39	33.00	Pass
					H	13.89		
2502.50	20775	16QAM	5	H	V	12.60		
					H	14.40		
5MHz(RB size 25 & RB offset 0)								
2502.50	20775	QPSK	5	H	V	12.50	33.00	Pass
					H	14.51		
2502.50	20775	16QAM	5	H	V	12.46		
					H	15.07		

Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
5MHz(RB size 1 & RB offset 0)								
2535.00	21100	QPSK	5	H	V	13.25	33.00	Pass
					H	14.50		
2535.00	21100	16QAM	5	H	V	12.02		
					H	14.26		
5MHz(RB size 12 & RB offset 0)								
2535.00	21100	QPSK	5	H	V	12.62	33.00	Pass
					H	13.20		
2535.00	21100	16QAM	5	H	V	12.03		
					H	14.34		
5MHz(RB size 25 & RB offset 0)								
2535.00	21100	QPSK	5	H	V	12.42	33.00	Pass
					H	14.25		
2535.00	21100	16QAM	5	H	V	12.53		
					H	15.39		

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	H	V	13.98	33.00	Pass
					H	14.83		
2567.50	21425	16QAM	5	H	V	12.36		
					H	14.68		
5MHz(RB size 12 & RB offset 0)								
2567.50	21425	QPSK	5	H	V	12.88	33.00	Pass
					H	13.80		
2567.50	21425	16QAM	5	H	V	12.01		
					H	14.12		
5MHz(RB size 25 & RB offset 0)								
2567.50	21425	QPSK	5	H	V	12.24	33.00	Pass
					H	14.46		
2567.50	21425	16QAM	5	H	V	12.63		
					H	15.31		

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	H	V	12.88	33.00	Pass
					H	15.13		
2510.00	20850	16QAM	20	H	V	13.09		
					H	15.50		
20MHz(RB size 50 & RB offset 0)								
2510.00	20850	QPSK	20	H	V	12.21	33.00	Pass
					H	14.03		
2510.00	20850	16QAM	20	H	V	12.06		
					H	14.64		
20MHz(RB size 100 & RB offset 0)								
2510.00	20850	QPSK	20	H	V	11.52	33.00	Pass
					H	12.66		
2510.00	20850	16QAM	20	H	V	11.27		
					H	14.14		

Middle channel

UL Channel								
Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
20MHz(RB size 1 & RB offset 0)								
2535.00	21100	QPSK	20	H	V	12.25	33.00	Pass
					H	15.50		
2535.00	21100	16QAM	20	H	V	13.04		
					H	15.42		
20MHz(RB size 50 & RB offset 0)								
2535.00	21100	QPSK	20	H	V	12.24	33.00	Pass
					H	14.47		
2535.00	21100	16QAM	20	H	V	12.73		
					H	14.35		
20MHz(RB size 100 & RB offset 0)								
2535.00	21100	QPSK	20	H	V	11.54	33.00	Pass
					H	12.45		
2535.00	21100	16QAM	20	H	V	11.53		
					H	14.39		

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	H	V	12.98	33.00	Pass
					H	15.83		
2560.00	21350	16QAM	20	H	V	13.36		
					H	15.89		
20MHz(RB size 50 & RB offset 0)								
2560.00	21350	QPSK	20	H	V	12.80	33.00	Pass
					H	14.11		
2560.00	21350	16QAM	20	H	V	12.12		
					H	14.27		
20MHz(RB size 100 & RB offset 0)								
2560.00	21350	QPSK	20	H	V	11.73	33.00	Pass
					H	12.39		
2560.00	21350	16QAM	20	H	V	11.93		
					H	14.38		

LTE band 17 part Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
5MHz(RB size 1 & RB offset 0)								
706.50	23755	QPSK	5	H	V	23.94	34.77	Pass
					H	16.84		
706.50	23755	16QAM	5	H	V	23.35		
					H	16.36		
5MHz(RB size 12 & RB offset 0)								
706.50	23755	QPSK	5	H	V	23.14	34.77	Pass
					H	16.16		
706.50	23755	16QAM	5	H	V	23.13		
					H	16.11		
5MHz(RB size 25 & RB offset 0)								
706.50	23755	QPSK	5	H	V	23.17	34.77	Pass
					H	16.26		
706.50	23755	16QAM	5	H	V	23.66		
					H	16.52		

Middle channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
5MHz(RB size 1 & RB offset 0)								
710.00	23790	QPSK	5	H	V	23.70	34.77	Pass
					H	16.07		
710.00	23790	16QAM	5	H	V	23.75		
					H	16.59		
5MHz(RB size 12 & RB offset 0)								
710.00	23790	QPSK	5	H	V	23.01	34.77	Pass
					H	16.10		
710.00	23790	16QAM	5	H	V	23.04		
					H	16.46		
5MHz(RB size 25 & RB offset 0)								
710.00	23790	QPSK	5	H	V	23.62	34.77	Pass
					H	16.29		
710.00	23790	16QAM	5	H	V	23.99		
					H	16.91		

Highest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
5MHz(RB size 1 & RB offset 0)								
713.50	23825	QPSK	5	H	V	23.14	34.77	Pass
					H	16.42		
713.50	23825	16QAM	5	H	V	23.10		
					H	16.23		
5MHz(RB size 12 & RB offset 0)								
713.50	23825	QPSK	5	H	V	23.02	34.77	Pass
					H	16.36		
713.50	23825	16QAM	5	H	V	23.66		
					H	16.63		
5MHz(RB size 25 & RB offset 0)								
713.50	23825	QPSK	5	H	V	23.39	34.77	Pass
					H	16.03		
713.50	23825	16QAM	5	H	V	23.01		
					H	16.36		

Lowest channel

Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
10MHz(RB size 1 & RB offset 0)								
709.00	23780	QPSK	10	H	V	23.70	34.77	Pass
					H	16.41		
709.00	23780	16QAM	10	H	V	23.55		
					H	16.24		
10MHz(RB size 25& RB offset 0)								
709.00	23780	QPSK	10	H	V	23.53	34.77	Pass
					H	16.39		
709.00	23780	16QAM	10	H	V	23.73		
					H	16.23		
10MHz(RB size 50& RB offset 0)								
709.00	23780	QPSK	10	H	V	22.72	34.77	Pass
					H	15.14		
709.00	23780	16QAM	10	H	V	22.96		
					H	15.31		

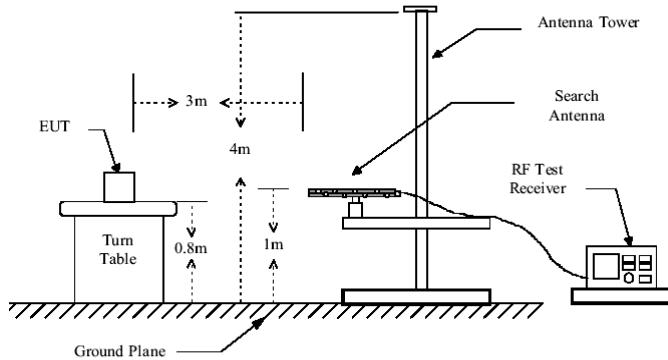
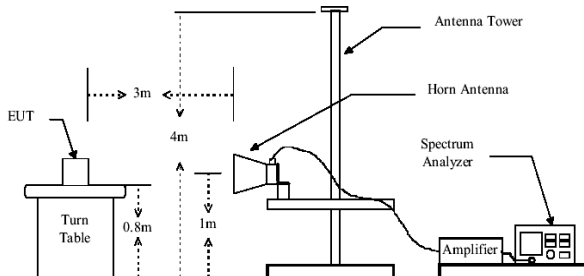
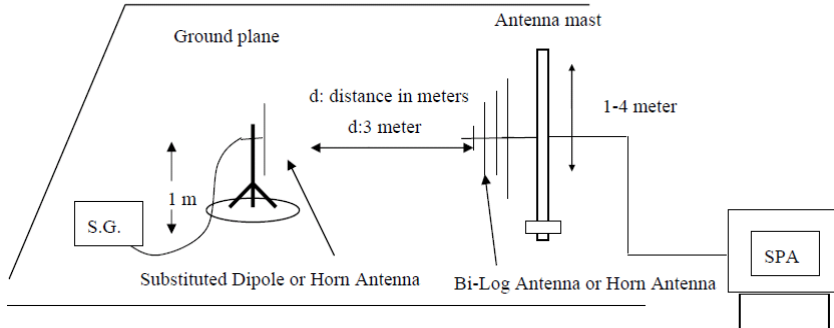
Middle channel

Middle Channel								
Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
10MHz(RB size 1 & RB offset 0)								
710.00	23790	QPSK	10	H	V	23.71	34.77	Pass
					H	16.10		
710.00	23790	16QAM	10	H	V	23.01		
					H	16.18		
10MHz(RB size 25& RB offset 0)								
710.00	23790	QPSK	10	H	V	23.87	34.77	Pass
					H	16.71		
710.00	23790	16QAM	10	H	V	23.11		
					H	16.12		
10MHz(RB size 50& RB offset 0)								
710.00	23790	QPSK	10	H	V	22.73	34.77	Pass
					H	15.30		
710.00	23790	16QAM	10	H	V	22.01		
					H	15.14		

Highest channel

Highest Channel								
Frequency (MHz)	UL Channel	Modulation	BW (MHz)	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
10MHz(RB size 1 & RB offset 0)								
711.00	23800	QPSK	10	H	V	23.42	34.77	Pass
					H	16.22		
711.00	23800	16QAM	10	H	V	23.02		
					H	16.22		
10MHz(RB size 25& RB offset 0)								
711.00	23800	QPSK	10	H	V	23.29	34.77	Pass
					H	16.96		
711.00	23800	16QAM	10	H	V	23.63		
					H	16.39		
10MHz(RB size 50& RB offset 0)								
711.00	23800	QPSK	10	H	V	22.30	34.77	Pass
					H	15.01		
711.00	23800	16QAM	10	H	V	22.13		
					H	15.37		

6.11 Field strength of spurious radiation measurement

Test Requirement:	FCC Part 22.917(a), Part 24.238 (a), Part 27.53(g), Part 27.53(m), Part 27.53(h)
Test Method:	FCC part2.1053
Limit:	LTE Band 2, LTE Band 4, LTE Band 5 and LTE Band 17: -13dBm, LTE Band 7: -25dBm
Test setup:	<p>Below 1GHz</p>  <p>Above 1GHz</p>  <p>Substituted method:</p> 
Test Procedure:	<ol style="list-style-type: none"> 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 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. 3. 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

	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. $\text{ERP / EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}$
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:

1.4MHz(RB size 1 & RB offset 0) for QPSK

1.4MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3701.40	Vertical	-46.69	-13.00	Pass
5552.10	V	-34.65		
7402.00	V	-37.05		
3701.40	Horizontal	-46.17		
5552.10	H	-33.58		
7402.00	H	-40.70		
Middle				
3760.00	Vertical	-44.94	-13.00	Pass
5640.00	V	-39.40		
7520.00	V	-41.25		
3760.00	Horizontal	-47.26		
5640.00	H	-40.16		
7520.00	H	-42.46		
Highest				
3816.60	Vertical	-46.97	-13.00	Pass
5724.90	V	-35.15		
7633.20	V	-41.86		
3816.60	Horizontal	-46.52		
5724.90	H	-36.00		
7633.20	H	-37.13		

3MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3703.00	Vertical	-49.89	-13.00	Pass
5554.50	V	-26.42		
7406.00	V	-37.40		
3703.00	Horizontal	-49.14		
5554.50	H	-17.45		
7406.00	H	-38.33		
Middle				
3760.00	Vertical	-44.57	-13.00	Pass
5640.00	V	-36.62		
7520.00	V	-39.11		
3760.00	Horizontal	-46.47		
5640.00	H	-36.12		
7520.00	H	-40.86		
Highest				
3817.00	Vertical	-46.48	-13.00	Pass
5725.50	V	-37.56		
7634.00	V	-41.54		
3817.00	Horizontal	-47.42		
5725.50	H	-34.40		
7634.00	H	-41.12		

5MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3705.00	Vertical	-46.38	-13.00	Pass
5557.50	V	-34.81		
7410.00	V	-37.57		
3705.00	Horizontal	-46.76		
5557.50	H	-33.81		
7410.00	H	-40.73		
Middle				
3760.00	Vertical	-44.64	-13.00	Pass
5640.00	V	-39.15		
7520.00	V	-41.32		
3760.00	Horizontal	-47.43		
5640.00	H	-40.03		
7520.00	H	-42.97		
Highest				
3815.00	Vertical	-46.42	-13.00	Pass
5722.50	V	-35.40		
7630.00	V	-41.63		
3815.00	Horizontal	-46.52		
5722.50	H	-36.73		
7630.00	H	-37.12		

10MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3710.00	Vertical	-49.38	-13.00	Pass
5565.00	V	-26.56		
7420.00	V	-37.15		
3710.00	Horizontal	-49.33		
5565.00	H	-17.62		
7420.00	H	-38.47		
Middle				
3760.00	Vertical	-44.15	-13.00	Pass
5640.00	V	-36.67		
7520.00	V	-39.60		
3760.00	Horizontal	-46.62		
5640.00	H	-36.82		
7520.00	H	-40.46		
Highest				
3810.00	Vertical	-46.63	-13.00	Pass
5715.00	V	-37.12		
7620.00	V	-41.49		
3810.00	Horizontal	-47.47		
5715.00	H	-34.83		
7620.00	H	-41.04		

15MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3715.00	Vertical	-46.25	-13.00	Pass
5572.50	V	-34.53		
7430.00	V	-37.24		
3715.00	Horizontal	-46.14		
5572.50	H	-33.99		
7430.00	H	-40.36		
Middle				
3760.00	Vertical	-44.47	-13.00	Pass
5640.00	V	-39.11		
7520.00	V	-41.41		
3760.00	Horizontal	-47.45		
5640.00	H	-40.59		
7520.00	H	-42.13		
Highest				
3805.00	Vertical	-46.43	-13.00	Pass
5707.50	V	-35.68		
7610.00	V	-41.35		
3805.00	Horizontal	-46.47		
5707.50	H	-36.50		
7610.00	H	-37.31		

20MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3720.00	Vertical	-49.48	-13.00	Pass
5580.00	V	-26.15		
7440.00	V	-37.84		
3720.00	Horizontal	-49.09		
5580.00	H	-17.71		
7440.00	H	-38.35		
Middle				
3760.00	Vertical	-44.44	-13.00	Pass
5640.00	V	-36.98		
7520.00	V	-39.83		
3760.00	Horizontal	-46.84		
5640.00	H	-36.40		
7520.00	H	-40.67		
Highest				
3800.00	Vertical	-46.71	-13.00	Pass
5700.00	V	-37.94		
7600.00	V	-41.05		
3800.00	Horizontal	-47.99		
5700.00	H	-34.57		
7600.00	H	-41.97		

LTE Band 4 Part:

1.4MHz(RB size 1 & RB offset 0) for QPSK

1.4MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3421.40	Vertical	-45.69	-13.00	Pass
5132.10	V	-23.59		
6842.80	V	-40.73		
3421.40	Horizontal	-46.59		
5132.10	H	-37.90		
6842.80	H	-43.29		
Middle				
3465.00	Vertical	-45.28	-13.00	Pass
5197.50	V	-30.96		
6930.00	V	-40.85		
3465.00	Horizontal	-46.35		
5197.50	H	-22.79		
6930.00	H	-39.78		
Highest				
3508.60	Vertical	-46.84	-13.00	Pass
5262.90	V	-36.62		
7017.20	V	-41.27		
3508.60	Horizontal	-47.60		
5262.90	H	-33.60		
7017.20	H	-40.91		

3MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3423.00	Vertical	-46.84	-13.00	Pass
5134.50	V	-24.42		
6846.00	V	-39.60		
3423.00	Horizontal	-46.58		
5134.50	H	-22.42		
6846.00	H	-40.01		
Middle				
3465.00	Vertical	-46.45	-13.00	Pass
5197.50	V	-28.31		
6930.00	V	-39.18		
3465.00	Horizontal	-48.42		
5197.50	H	-23.46		
6930.00	H	-40.50		
Highest				
3507.00	Vertical	-47.88	-13.00	Pass
5260.50	V	-32.11		
7014.00	V	-41.12		
3507.00	Horizontal	-46.39		
5260.50	H	-24.33		
7014.00	H	-39.43		

5MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3425.00	Vertical	-45.35	-13.00	Pass
5137.50	V	-23.70		
6850.00	V	-40.65		
3425.00	Horizontal	-46.58		
5137.50	H	-37.84		
6850.00	H	-43.41		
Middle				
3465.00	Vertical	-45.42	-13.00	Pass
5197.50	V	-30.49		
6930.00	V	40.87		
3465.00	Horizontal	-46.79		
5197.50	H	-22.71		
6930.00	H	-39.84		
Highest				
3505.00	Vertical	-46.12	-13.00	Pass
5257.50	V	-36.99		
7010.00	V	-41.23		
3505.00	Horizontal	-47.85		
5257.50	H	-33.28		
7010.00	H	-40.36		

10MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3430.00	Vertical	-46.35	-13.00	Pass
5145.00	V	-24.52		
6860.00	V	-39.69		
3430.00	Horizontal	-46.51		
5145.00	H	-22.20		
6860.00	H	-40.95		
Middle				
3465.00	Vertical	-46.16	-13.00	Pass
5197.50	V	-28.04		
6930.00	V	-39.56		
3465.00	Horizontal	-48.65		
5197.50	H	-23.43		
6930.00	H	-40.66		
Highest				
3500.00	Vertical	-47.59	-13.00	Pass
5250.00	V	-32.39		
7000.00	V	-41.62		
3500.00	Horizontal	-46.92		
5250.00	H	-24.99		
7000.00	H	-39.27		

15MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3435.00	Vertical	-45.52	-13.00	Pass
5152.50	V	-23.27		
6870.00	V	-40.10		
3435.00	Horizontal	-46.54		
5152.50	H	-37.42		
6870.00	H	-43.49		
Middle				
3465.00	Vertical	-45.87	-13.00	Pass
5197.50	V	-30.11		
6930.00	V	-40.77		
3465.00	Horizontal	-46.61		
5197.50	H	-22.87		
6930.00	H	-39.59		
Highest				
3495.00	Vertical	-46.69	-13.00	Pass
5242.50	V	-36.21		
6990.00	V	-41.92		
3495.00	Horizontal	-47.31		
5242.50	H	-33.61		
6990.00	H	-40.49		

20MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
3440.00	Vertical	-46.83	-13.00	Pass
5160.00	V	-24.68		
6880.00	V	-39.31		
3440.00	Horizontal	-46.32		
5160.00	H	-22.89		
6880.00	H	-40.18		
Middle				
3465.00	Vertical	-46.62	-13.00	Pass
5197.50	V	-28.16		
6930.00	V	-39.57		
3465.00	Horizontal	-48.31		
5197.50	H	-23.55		
6930.00	H	-40.45		
Highest				
3490.00	Vertical	-47.24	-13.00	Pass
5235.00	V	-32.97		
6980.00	V	-41.89		
3490.00	Horizontal	-46.82		
5235.00	H	-24.53		
6980.00	H	-39.42		

LTE Band 5 Part:

1.4MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1649.40	Vertical	-41.70	-13	Pass
2474.10	V	-52.16		
3298.80	V	-43.78		
1649.40	Horizontal	-48.86		
2474.10	H	-49.15		
3298.80	H	-43.20		
Middle				
1673.00	Vertical	-59.23	-13	Pass
2509.50	V	-52.70		
3346.00	V	-44.78		
1673.00	Horizontal	-62.18		
2509.50	H	-50.07		
3346.00	H	-47.95		
Highest				
1696.60	Vertical	-46.40	-13	Pass
2544.90	V	-49.73		
3393.20	V	-43.66		
1696.60	Horizontal	-53.48		
2544.90	H	-49.17		
3393.20	H	-42.32		

3MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1651.00	Vertical	-39.25	-13	Pass
2476.50	V	-47.38		
3302.00	V	-46.95		
1651.00	Horizontal	-52.95		
2476.50	H	-50.39		
3302.00	H	-49.42		
Middle				
1673.00	Vertical	-49.95	-13	Pass
2509.50	V	-51.33		
3346.00	V	-48.16		
1673.00	Horizontal	-57.73		
2509.50	H	-51.65		
3346.00	H	-48.39		
Highest				
1695.00	Vertical	-42.69	-13	Pass
2542.50	V	-53.84		
3390.00	V	-45.95		
1695.00	Horizontal	-47.07		
2542.50	H	-50.45		
3390.00	H	-48.53		

5MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1653.00	Vertical	-41.16	-13	Pass
2479.50	V	-52.25		
3306.00	V	-43.71		
1653.00	Horizontal	-48.48		
2479.50	H	-49.37		
3306.00	H	-43.23		
Middle				
1673.00	Vertical	-59.25	-13	Pass
2509.50	V	-52.52		
3346.00	V	-44.68		
1673.00	Horizontal	-62.37		
2509.50	H	-50.24		
3346.00	H	-47.55		
Highest				
1693.00	Vertical	-46.47	-13	Pass
2539.50	V	-49.93		
3386.00	V	-43.52		
1693.00	Horizontal	-53.40		
2539.50	H	-49.46		
3386.00	H	-42.49		

10MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1658.00	Vertical	-39.17	-13	Pass
2487.00	V	-47.16		
3316.00	V	-46.11		
1658.00	Horizontal	-52.70		
2487.00	H	-50.25		
3316.00	H	-49.19		
Middle				
1673.00	Vertical	-49.73	-13	Pass
2509.50	V	-51.93		
3346.00	V	-48.10		
1673.00	Horizontal	-57.95		
2509.50	H	-51.04		
3346.00	H	-48.40		
Highest				
1688.00	Vertical	-42.33	-13	Pass
2532.00	V	-53.10		
3376.00	V	-45.47		
1688.00	Horizontal	-57.94		
2532.00	H	-50.97		
3376.00	H	-48.39		

LTE Band 7 Part:

5MHz(RB size 1 & RB offset 0) for QPSK

5MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
5005.00	Vertical	-35.05	-25.00	Pass
7507.50	V	-39.25		
10010.00	V	-38.12		
5005.00	Horizontal	-39.68		
7507.50	H	-36.37		
10010.00	H	-42.15		
Middle				
5070.00	Vertical	-44.01	-25.00	Pass
7605.00	V	-40.74		
10140.00	V	-40.73		
5070.00	Horizontal	-44.78		
7605.00	H	-40.90		
10140.00	H	-39.34		
Highest				
5135.00	Vertical	-39.31	-25.00	Pass
7702.50	V	-39.64		
10270.00	V	-39.42		
5135.00	Horizontal	-43.50		
7702.50	H	-39.93		
10270.00	H	-38.77		

10MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
5010.00	Vertical	-35.46	-25.00	Pass
7515.00	V	-39.16		
10020.00	V	-39.15		
5010.00	Horizontal	-37.12		
7515.00	H	-39.38		
10020.00	H	-39.49		
Middle				
5070.00	Vertical	-40.42	-25.00	Pass
7605.00	V	-39.43		
10140.00	V	-39.86		
5070.00	Horizontal	-44.39		
7605.00	H	-40.15		
10140.00	H	-39.64		
Highest				
5130.00	Vertical	-43.61	-25.00	Pass
7695.00	V	-40.38		
10260.00	V	-39.49		
5130.00	Horizontal	-44.64		
7695.00	H	-39.97		
10260.00	H	-39.65		

15MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
5015.00	Vertical	-35.51	-25.00	Pass
7522.50	V	-39.77		
10030.00	V	-38.10		
5015.00	Horizontal	-39.13		
7522.50	H	-36.77		
10030.00	H	-42.02		
Middle				
5070.00	Vertical	-44.38	-25.00	Pass
7605.00	V	-40.02		
10140.00	V	-40.24		
5070.00	Horizontal	-44.85		
7605.00	H	-40.22		
10140.00	H	-39.43		
Highest				
5125.00	Vertical	-39.57	-25.00	Pass
7687.50	V	-39.55		
10250.00	V	-39.64		
5125.00	Horizontal	-43.61		
7687.50	H	-39.64		
10250.00	H	-38.52		

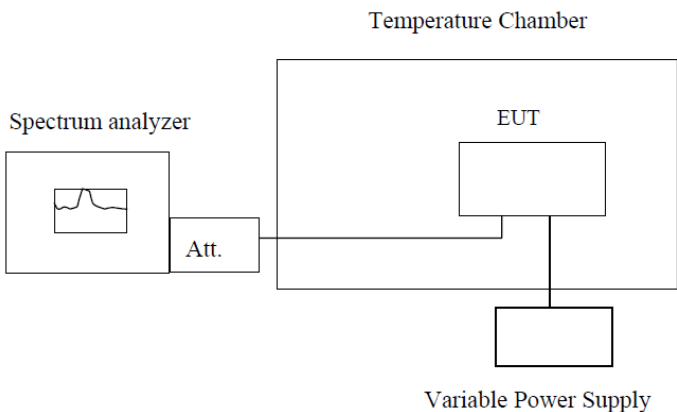
20MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
5020.00	Vertical	-35.63	-25.00	Pass
7530.00	V	-39.75		
10040.00	V	-39.83		
5020.00	Horizontal	-37.49		
7530.00	H	-39.67		
10040.00	H	-39.66		
Middle				
5070.00	Vertical	-40.59	-25.00	Pass
7605.00	V	-39.59		
10140.00	V	-39.29		
5070.00	Horizontal	-44.15		
7605.00	H	-40.58		
10140.00	H	-39.94		
Highest				
5120.00	Vertical	-43.90	-25.00	Pass
7680.00	V	-40.95		
10240.00	V	-39.04		
5120.00	Horizontal	-44.28		
7680.00	H	-39.85		
10240.00	H	-39.42		

LTE Band 17 Part:

5MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1413.00	Vertical	-60.03	-13.00	Pass
2119.50	V	-56.18		
2826.00	V	-48.21		
1413.00	Horizontal	-60.57		
2119.50	H	-51.07		
2826.00	H	-48.24		
Middle				
1420.00	Vertical	-55.36	-13.00	Pass
2130.00	V	-57.39		
2840.00	V	-50.54		
1420.00	Horizontal	-60.14		
2130.00	H	-56.39		
2840.00	H	-36.96		
Highest				
1427.00	Vertical	-50.37	-13.00	Pass
2140.50	V	-53.79		
2854.00	V	-49.76		
1427.00	Horizontal	-55.78		
2140.50	H	-54.15		
2854.00	H	-48.68		

10MHz(RB size 1 & RB offset 0) for QPSK				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest				
1418.00	Vertical	-47.66	-13.00	Pass
2127.00	V	-50.81		
2836.00	V	-48.69		
1418.00	Horizontal	-57.73		
2127.00	H	-53.97		
2836.00	H	-51.24		
Middle				
1420.00	Vertical	-48.64	-13.00	Pass
2130.00	V	-53.24		
2840.00	V	-49.34		
1420.00	Horizontal	-53.69		
2130.00	H	-50.73		
2840.00	H	-48.87		
Highest				
1422.00	Vertical	-48.35	-13.00	Pass
2133.00	V	-50.32		
2844.00	V	-49.32		
1422.00	Horizontal	-54.31		
2133.00	H	-51.80		
2844.00	H	-50.06		

6.12 Frequency stability V.S. Temperature measurement

Test Requirement:	FCC Part2.1055(a)(1)(b)
Test Method:	FCC Part2.1055(a)(1)(b)
Limit:	$\pm 2.5\text{ppm}$
Test setup:	 <p>Note : Measurement setup for testing on Antenna connector</p>
Test procedure:	<ol style="list-style-type: none"> 1. The equipment under test was connected to an external DC power supply and input rated voltage. 2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. 3. The EUT was placed inside the temperature chamber. 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. 5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. 6. 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):

Reference Frequency: LTE Band 2(1.4MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	195	0.103723	±2.5	Pass
	-20	123	0.065426		
	-10	149	0.079255		
	0	145	0.077128		
	10	152	0.080851		
	20	118	0.062766		
	30	105	0.055851		
	40	139	0.073936		
	50	127	0.067553		
Reference Frequency: LTE Band 2(3MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	155	0.082447	±2.5	Pass
	-20	142	0.075532		
	-10	126	0.067021		
	0	185	0.098404		
	10	174	0.092553		
	20	113	0.060106		
	30	126	0.067021		
	40	158	0.084043		
	50	108	0.057447		
Reference Frequency: LTE Band 2(5MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	163	0.086702	±2.5	Pass
	-20	147	0.078191		
	-10	152	0.080851		
	0	146	0.077660		
	10	171	0.090957		
	20	163	0.086702		
	30	145	0.077128		
	40	133	0.070745		
	50	128	0.068085		

Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	163	0.086702	±2.5	Pass
	-20	169	0.089894		
	-10	145	0.077128		
	0	141	0.075000		
	10	136	0.072340		
	20	145	0.077128		
	30	152	0.080851		
	40	122	0.064894		
	50	107	0.056915		
Reference Frequency: LTE Band 2(15MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	166	0.088298	±2.5	Pass
	-20	152	0.080851		
	-10	145	0.077128		
	0	122	0.064894		
	10	155	0.082447		
	20	136	0.072340		
	30	147	0.078191		
	40	159	0.084574		
	50	148	0.078723		
Reference Frequency: LTE Band 2(20MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	177	0.094149	±2.5	Pass
	-20	133	0.070745		
	-10	126	0.067021		
	0	142	0.075532		
	10	125	0.066489		
	20	109	0.057979		
	30	123	0.065426		
	40	141	0.075000		
	50	155	0.082447		

LTE Band 2(16QAM):

Reference Frequency: LTE Band 2(1.4MHz) Middle channel=18900 channel=1880.00MHz

Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	166	0.088298	±2.5	Pass
	-20	147	0.078191		
	-10	126	0.067021		
	0	133	0.070745		
	10	152	0.080851		
	20	108	0.057447		
	30	136	0.072340		
	40	147	0.078191		
	50	160	0.085106		

Reference Frequency: LTE Band 2(3MHz) Middle channel=18900 channel=1880.00MHz

Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	174	0.092553	±2.5	Pass
	-20	153	0.081383		
	-10	155	0.082447		
	0	142	0.075532		
	10	128	0.068085		
	20	163	0.086702		
	30	147	0.078191		
	40	152	0.080851		
	50	129	0.068617		

Reference Frequency: LTE Band 2(5MHz) Middle channel=18900 channel=1880.00MHz

Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	174	0.092553	±2.5	Pass
	-20	126	0.067021		
	-10	147	0.078191		
	0	152	0.080851		
	10	136	0.072340		
	20	158	0.084043		
	30	174	0.092553		
	40	126	0.067021		
	50	141	0.075000		

Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	174	0.092553	±2.5	Pass
	-20	163	0.086702		
	-10	157	0.083511		
	0	125	0.066489		
	10	160	0.085106		
	20	141	0.075000		
	30	126	0.067021		
	40	135	0.071809		
	50	128	0.068085		
Reference Frequency: LTE Band 2(15MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	163	0.086702	±2.5	Pass
	-20	147	0.078191		
	-10	125	0.066489		
	0	133	0.070745		
	10	149	0.079255		
	20	128	0.068085		
	30	147	0.078191		
	40	162	0.086170		
	50	125	0.066489		
Reference Frequency: LTE Band 2(20MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	174	0.092553	±2.5	Pass
	-20	152	0.080851		
	-10	163	0.086702		
	0	185	0.098404		
	10	174	0.092553		
	20	102	0.054255		
	30	163	0.086702		
	40	147	0.078191		
	50	125	0.066489		

LTE Band 4(QPSK):

Reference Frequency: LTE Band 4(1.4MHz) Middle channel=20175 channel=1732.50MHz

Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	177	0.102165	±2.5	Pass
	-20	163	0.094084		
	-10	152	0.087734		
	0	147	0.084848		
	10	128	0.073882		
	20	136	0.078499		
	30	128	0.073882		
	40	149	0.086003		
	50	107	0.061760		

Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz

Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	166	0.095815	±2.5	Pass
	-20	158	0.091198		
	-10	127	0.073304		
	0	108	0.062338		
	10	147	0.084848		
	20	136	0.078499		
	30	125	0.072150		
	40	141	0.081385		
	50	136	0.078499		

Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz

Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	147	0.084848	±2.5	Pass
	-20	136	0.078499		
	-10	152	0.087734		
	0	128	0.073882		
	10	130	0.075036		
	20	115	0.066378		
	30	124	0.071573		
	40	108	0.062338		
	50	126	0.072727		

Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	174	0.100433	±2.5	Pass
	-20	163	0.094084		
	-10	141	0.081385		
	0	152	0.087734		
	10	108	0.062338		
	20	133	0.076768		
	30	141	0.081385		
	40	126	0.072727		
	50	174	0.100433		
Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	141	0.081385	±2.5	Pass
	-20	152	0.087734		
	-10	136	0.078499		
	0	171	0.098701		
	10	132	0.076190		
	20	128	0.073882		
	30	107	0.061760		
	40	124	0.071573		
	50	126	0.072727		
Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	145	0.083694	±2.5	Pass
	-20	136	0.078499		
	-10	174	0.100433		
	0	158	0.091198		
	10	180	0.103896		
	20	174	0.100433		
	30	126	0.072727		
	40	133	0.076768		
	50	141	0.081385		

LTE Band 4(16QAM):

Reference Frequency: LTE Band 4(1.4MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	136	0.078499	±2.5	Pass
	-20	145	0.083694		
	-10	125	0.072150		
	0	117	0.067532		
	10	108	0.062338		
	20	136	0.078499		
	30	125	0.072150		
	40	134	0.077345		
	50	128	0.073882		
Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	147	0.084848	±2.5	Pass
	-20	106	0.061183		
	-10	181	0.104473		
	0	132	0.076190		
	10	140	0.080808		
	20	125	0.072150		
	30	139	0.080231		
	40	140	0.080808		
	50	128	0.073882		
Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	160	0.092352	±2.5	Pass
	-20	152	0.087734		
	-10	102	0.058874		
	0	114	0.065801		
	10	123	0.070996		
	20	108	0.062338		
	30	120	0.069264		
	40	126	0.072727		
	50	134	0.077345		

Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	162	0.093506	±2.5	Pass
	-20	135	0.077922		
	-10	127	0.073304		
	0	145	0.083694		
	10	136	0.078499		
	20	108	0.062338		
	30	126	0.072727		
	40	141	0.081385		
	50	135	0.077922		
Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	174	0.100433	±2.5	Pass
	-20	145	0.083694		
	-10	136	0.078499		
	0	141	0.081385		
	10	128	0.073882		
	20	128	0.073882		
	30	136	0.078499		
	40	108	0.062338		
	50	127	0.073304		
Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	152	0.087734	±2.5	Pass
	-20	136	0.078499		
	-10	141	0.081385		
	0	125	0.072150		
	10	136	0.078499		
	20	108	0.062338		
	30	127	0.073304		
	40	136	0.078499		
	50	141	0.081385		

LTE Band 5(QPSK):

Reference Frequency: LTE Band 5(1.4MHz) Middle channel=20525Frequency=836.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	165	0.197250	±2.5	Pass
	-20	127	0.151823		
	-10	141	0.168559		
	0	109	0.130305		
	10	136	0.162582		
	20	147	0.175732		
	30	128	0.153019		
	40	109	0.130305		
	50	127	0.151823		
Reference Frequency: LTE Band 5(3MHz) Middle channel=20525Frequency=836.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	136	0.162582	±2.5	Pass
	-20	158	0.188882		
	-10	174	0.208010		
	0	163	0.194860		
	10	155	0.185296		
	20	128	0.153019		
	30	141	0.168559		
	40	126	0.150628		
	50	148	0.176928		
Reference Frequency: LTE Band 5(5MHz) Middle channel=20525Frequency=836.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	133	0.158996	±2.5	Pass
	-20	125	0.149432		
	-10	130	0.155409		
	0	124	0.148237		
	10	108	0.129109		
	20	136	0.162582		
	30	158	0.188882		
	40	145	0.173341		
	50	122	0.145846		
Reference Frequency: LTE Band 5(10MHz) Middle channel=20525Frequency=836.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	126	0.150628	±2.5	Pass
	-20	157	0.187687		
	-10	136	0.162582		
	0	141	0.168559		
	10	125	0.149432		
	20	152	0.181710		
	30	136	0.162582		
	40	141	0.168559		
	50	152	0.181710		

LTE Band 5(16QAM):

Reference Frequency: LTE Band 5(1.4MHz) Middle channel=20525Frequency=836.50MHz

Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	136	0.162582	±2.5	Pass
	-20	145	0.173341		
	-10	147	0.175732		
	0	108	0.129109		
	10	122	0.145846		
	20	136	0.162582		
	30	127	0.151823		
	40	136	0.162582		
	50	139	0.166169		

Reference Frequency: LTE Band 5(3MHz) Middle channel=20525Frequency=836.50MHz

Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	146	0.174537	±2.5	Pass
	-20	152	0.181710		
	-10	185	0.221160		
	0	147	0.175732		
	10	136	0.162582		
	20	148	0.176928		
	30	125	0.149432		
	40	109	0.130305		
	50	136	0.162582		

Reference Frequency: LTE Band 5(5MHz) Middle channel=20525Frequency=836.50MHz

Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	174	0.208010	2.5	Pass
	-20	156	0.186491		
	-10	136	0.162582		
	0	128	0.153019		
	10	145	0.173341		
	20	155	0.185296		
	30	136	0.162582		
	40	147	0.175732		
	50	128	0.153019		

Reference Frequency: LTE Band 5(10MHz) Middle channel=20525Frequency=836.50MHz

Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	107	0.127914	2.5	Pass
	-20	126	0.150628		
	-10	148	0.176928		
	0	163	0.194860		
	10	128	0.153019		
	20	145	0.173341		
	30	108	0.129109		
	40	136	0.162582		
	50	147	0.175732		

LTE Band 7(QPSK):

Reference Frequency: LTE Band 7(5MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	147	0.057988	±2.5	Pass
	-20	160	0.063116		
	-10	102	0.040237		
	0	130	0.051282		
	10	141	0.055621		
	20	152	0.059961		
	30	162	0.063905		
	40	108	0.042604		
	50	129	0.050888		
Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	136	0.053649	±2.5	Pass
	-20	145	0.057199		
	-10	174	0.068639		
	0	162	0.063905		
	10	108	0.042604		
	20	128	0.050493		
	30	152	0.059961		
	40	127	0.050099		
	50	136	0.053649		
Reference Frequency: LTE Band 7(15MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	162	0.063905	±2.5	Pass
	-20	141	0.055621		
	-10	108	0.042604		
	0	152	0.059961		
	10	143	0.056410		
	20	106	0.041815		
	30	157	0.061933		
	40	128	0.050493		
	50	136	0.053649		
Reference Frequency: LTE Band 7(20MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	163	0.064300	±2.5	Pass
	-20	142	0.056016		
	-10	174	0.068639		
	0	125	0.049310		
	10	114	0.044970		
	20	163	0.064300		
	30	184	0.072584		
	40	126	0.049704		
	50	147	0.057988		

LTE Band 7(16QAM):

Reference Frequency: LTE Band 7(5MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	166	0.065483	±2.5	Pass
	-20	125	0.049310		
	-10	107	0.042209		
	0	136	0.053649		
	10	147	0.057988		
	20	174	0.068639		
	30	158	0.062327		
	40	116	0.045759		
	50	127	0.050099		
Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	133	0.052465	±2.5	Pass
	-20	126	0.049704		
	-10	157	0.061933		
	0	149	0.058777		
	10	108	0.042604		
	20	125	0.049310		
	30	148	0.058383		
	40	129	0.050888		
	50	136	0.053649		
Reference Frequency: LTE Band 7(15MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	157	0.061933	2.5	Pass
	-20	163	0.064300		
	-10	149	0.058777		
	0	178	0.070217		
	10	125	0.049310		
	20	163	0.064300		
	30	180	0.071006		
	40	126	0.049704		
	50	147	0.057988		
Reference Frequency: LTE Band 7(20MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	129	0.050888	2.5	Pass
	-20	102	0.040237		
	-10	114	0.044970		
	0	125	0.049310		
	10	173	0.068245		
	20	136	0.053649		
	30	128	0.050493		
	40	157	0.061933		
	50	112	0.044181		

LTE Band 17(QPSK):

Reference Frequency: LTE Band 17(5MHz) Middle channel=23790 channel=710.00MHz

Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	147	0.207042	±2.5	Pass
	-20	156	0.219718		
	-10	169	0.238028		
	0	183	0.257746		
	10	146	0.205634		
	20	145	0.204225		
	30	170	0.239437		
	40	157	0.221127		
	50	106	0.149296		

Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 channel=710.00MHz

Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	169	0.238028	±2.5	Pass
	-20	138	0.194366		
	-10	108	0.152113		
	0	128	0.180282		
	10	136	0.191549		
	20	147	0.207042		
	30	152	0.214085		
	40	146	0.205634		
	50	158	0.222535		

LTE Band 17(16QAM):

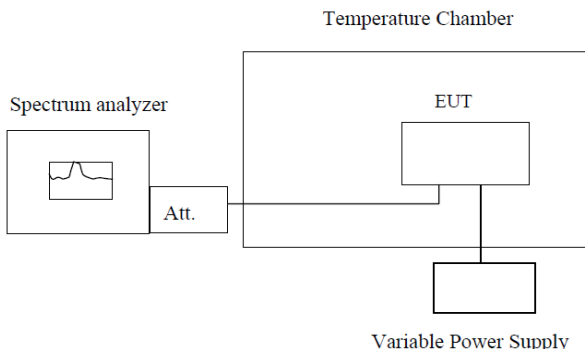
Reference Frequency: LTE Band 17(5MHz) Middle channel=23790 channel=710.00MHz

Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	139	0.195775	±2.5	Pass
	-20	147	0.207042		
	-10	158	0.222535		
	0	190	0.267606		
	10	163	0.229577		
	20	141	0.198592		
	30	125	0.176056		
	40	107	0.150704		
	50	136	0.191549		

Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 channel=710.00MHz

Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.80	-30	163	0.229577	±2.5	Pass
	-20	148	0.208451		
	-10	150	0.211268		
	0	125	0.176056		
	10	174	0.245070		
	20	116	0.163380		
	30	136	0.191549		
	40	108	0.152113		
	50	124	0.174648		

6.13 Frequency stability V.S. Voltage measurement

Test Requirement:	FCC Part2.1055(d)(1)(2)
Test Method:	FCC Part2.1055(d)(1)(2)
Limit:	2.5ppm
Test setup:	 <p>Note : Measurement setup for testing on Antenna connector</p>
Test procedure:	<ol style="list-style-type: none"> 1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage. 2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. 3. 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):

Reference Frequency: LTE Band 2(1.4MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	52	0.027660	±2.5	Pass
	3.80	67	0.035638		
	3.23	58	0.030851		
Reference Frequency: LTE Band 2(3MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	79	0.042021	±2.5	Pass
	3.80	88	0.046809		
	3.23	59	0.031383		
Reference Frequency: LTE Band 2(5MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	69	0.036702	±2.5	Pass
	3.80	78	0.041489		
	3.23	85	0.045213		
Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	85	0.045213	±2.5	Pass
	3.80	96	0.051064		
	3.23	74	0.039362		
Reference Frequency: LTE Band 2(15MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	85	0.045213	±2.5	Pass
	3.80	63	0.033511		
	3.23	78	0.041489		
Reference Frequency: LTE Band 2(20MHz) Middle channel=20175 channel=1880.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	69	0.036702	±2.5	Pass
	3.80	78	0.041489		
	3.23	85	0.045213		

LTE Band 2(16QAM):

Reference Frequency: LTE Band 2(1.4MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	96	0.051064	±2.5	Pass
	3.80	85	0.045213		
	3.23	74	0.039362		
Reference Frequency: LTE Band 2(3MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	85	0.045213	±2.5	Pass
	3.80	74	0.039362		
	3.23	69	0.036702		
Reference Frequency: LTE Band 2(5MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	85	0.045213	±2.5	Pass
	3.80	74	0.039362		
	3.23	69	0.036702		
Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	88	0.046809	±2.5	Pass
	3.80	63	0.033511		
	3.23	85	0.045213		
Reference Frequency: LTE Band 2(15MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	78	0.041489	±2.5	Pass
	3.80	96	0.051064		
	3.23	58	0.030851		
Reference Frequency: LTE Band 2(20MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	57	0.030319	±2.5	Pass
	3.80	85	0.045213		
	3.23	66	0.035106		

LTE Band 4(QPSK):

Reference Frequency: LTE Band 4(1.4MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	78	0.045022	±2.5	Pass
	3.80	63	0.036364		
	3.23	95	0.054834		
Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	74	0.042713	±2.5	Pass
	3.80	85	0.049062		
	3.23	69	0.039827		
Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	87	0.050216	±2.5	Pass
	3.80	96	0.055411		
	3.23	74	0.042713		
Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	85	0.049062	±2.5	Pass
	3.80	69	0.039827		
	3.23	77	0.044444		
Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	85	0.049062	±2.5	Pass
	3.80	74	0.042713		
	3.23	69	0.039827		
Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	85	0.049062	±2.5	Pass
	3.80	67	0.038672		
	3.23	85	0.049062		

LTE Band 4(16QAM):

Reference Frequency: LTE Band 4(1.4MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	96	0.055411	±2.5	Pass
	3.80	87	0.050216		
	3.23	85	0.049062		
Reference Frequency: LTE Band 4(3MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	78	0.045022	±2.5	Pass
	3.80	68	0.039250		
	3.23	38	0.021934		
Reference Frequency: LTE Band 4(5MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	75	0.043290	±2.5	Pass
	3.80	89	0.051371		
	3.23	67	0.038672		
Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	88	0.050794	±2.5	Pass
	3.80	67	0.038672		
	3.23	49	0.028283		
Reference Frequency: LTE Band 4(15MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	85	0.049062	±2.5	Pass
	3.80	74	0.042713		
	3.23	63	0.036364		
Reference Frequency: LTE Band 4(20MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	85	0.049062	±2.5	Pass
	3.80	47	0.027128		
	3.23	96	0.055411		

LTE Band 5(QPSK):

Reference Frequency: LTE Band 5(1.4MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	67	0.080096	±2.5	Pass
	3.80	85	0.101614		
	3.23	96	0.114764		
Reference Frequency: LTE Band 5(3MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	47	0.056186	±2.5	Pass
	3.80	85	0.101614		
	3.23	63	0.075314		
Reference Frequency: LTE Band 5(5MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	96	0.114764	±2.5	Pass
	3.80	87	0.104005		
	3.23	57	0.068141		
Reference Frequency: LTE Band5(10MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	69	0.082487	±2.5	Pass
	3.80	85	0.101614		
	3.23	74	0.088464		

LTE Band 5(16QAM):

Reference Frequency: LTE Band 5(1.4MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	88	0.105200	±2.5	Pass
	3.80	74	0.088464		
	3.23	63	0.075314		
Reference Frequency: LTE Band 5(3MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	57	0.068141	±2.5	Pass
	3.80	58	0.069337		
	3.23	90	0.107591		
Reference Frequency: LTE Band 5(5MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	57	0.068141	±2.5	Pass
	3.80	65	0.077705		
	3.23	87	0.104005		
Reference Frequency: LTE Band 5(10MHz) Middle channel=20525Frequency=836.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	47	0.056186	±2.5	Pass
	3.80	63	0.075314		
	3.23	85	0.101614		

LTE Band 7(QPSK):

Reference Frequency: LTE Band 7(5MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	88	0.034714	±2.5	Pass
	3.80	63	0.024852		
	3.23	95	0.037475		
Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	74	0.029191	±2.5	Pass
	3.80	58	0.022880		
	3.23	96	0.037870		
Reference Frequency: LTE Band 7(15MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	74	0.029191	±2.5	Pass
	3.80	85	0.033531		
	3.23	63	0.024852		
Reference Frequency: LTE Band 7(20MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	78	0.030769	±2.5	Pass
	3.80	63	0.024852		
	3.23	52	0.020513		

LTE Band 7(16QAM):

Reference Frequency: LTE Band 7(5MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	85	0.033531	±2.5	Pass
	3.80	74	0.029191		
	3.23	96	0.037870		
Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	88	0.034714	±2.5	Pass
	3.80	78	0.030769		
	3.23	69	0.027219		
Reference Frequency: LTE Band 7(15MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	87	0.034320	±2.5	Pass
	3.80	56	0.022091		
	3.23	74	0.029191		
Reference Frequency: LTE Band 7(20MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	68	0.026824	±2.5	Pass
	3.80	77	0.030375		
	3.23	48	0.018935		

LTE Band 17(QPSK):

Reference Frequency: LTE Band 17(5MHz) Middle channel=23790 channel=710.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	79	0.111268	±2.5	Pass
	3.80	58	0.081690		
	3.23	96	0.135211		
Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 channel=710.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	87	0.122535	±2.5	Pass
	3.80	79	0.111268		
	3.23	68	0.095775		

LTE Band 17(16QAM):

Reference Frequency: LTE Band 17(5MHz) Middle channel=23790 channel=710.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	48	0.067606	±2.5	Pass
	3.80	95	0.133803		
	3.23	74	0.104225		
Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 channel=710.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.37	66	0.092958	±2.5	Pass
	3.80	90	0.126761		
	3.23	87	0.122535		