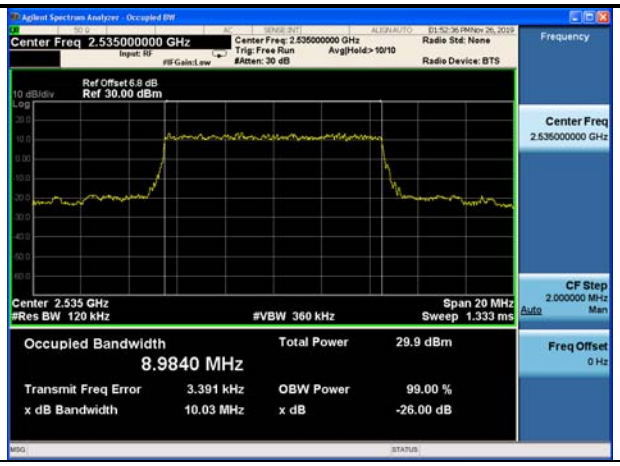

Fig.15

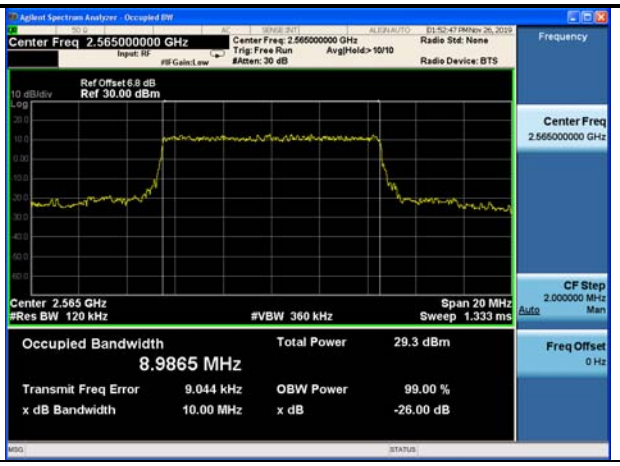

Fig.16

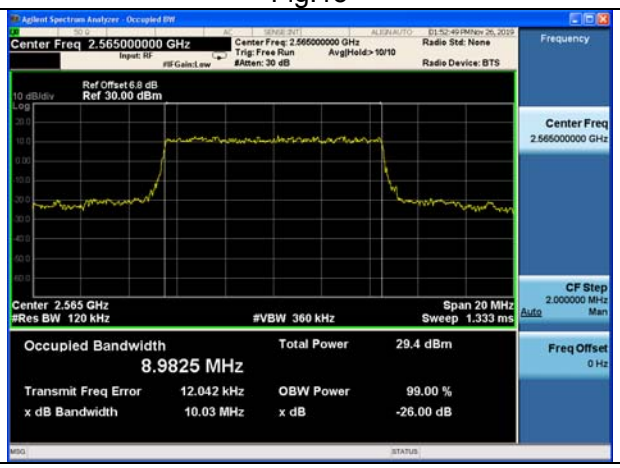

Fig.17

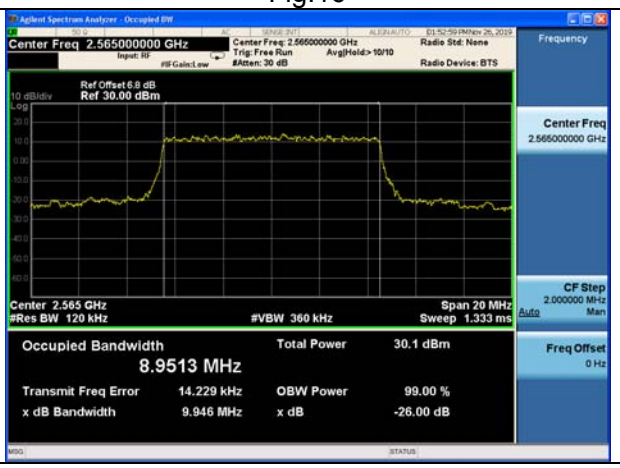

Fig.18

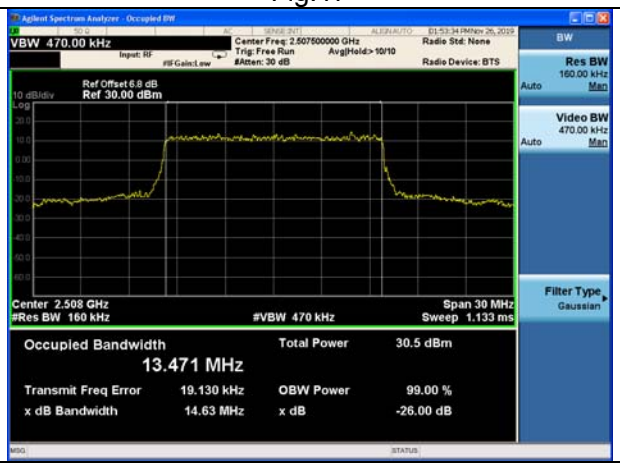

Fig.19

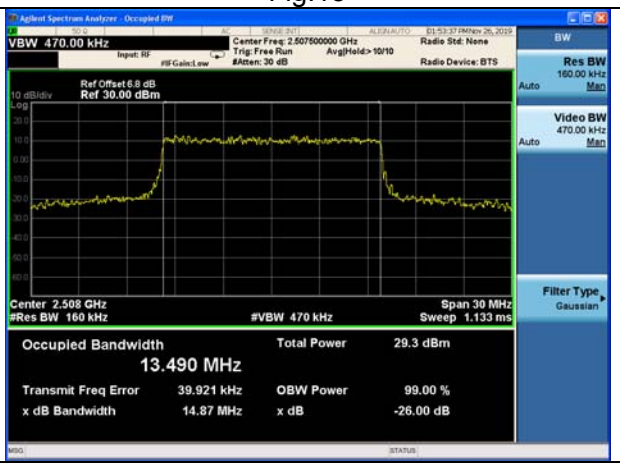

Fig.20

Fig.21

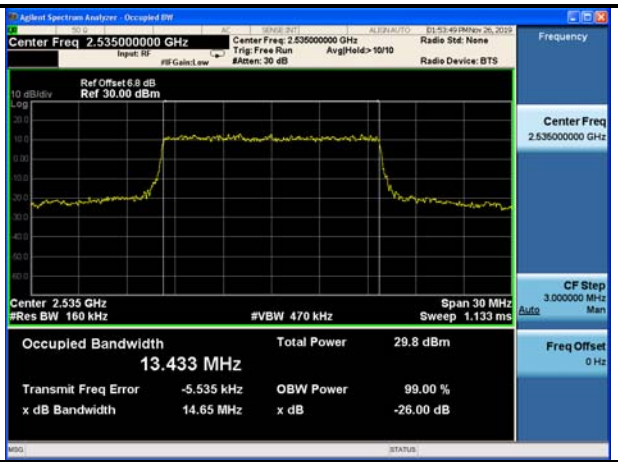

Fig.22

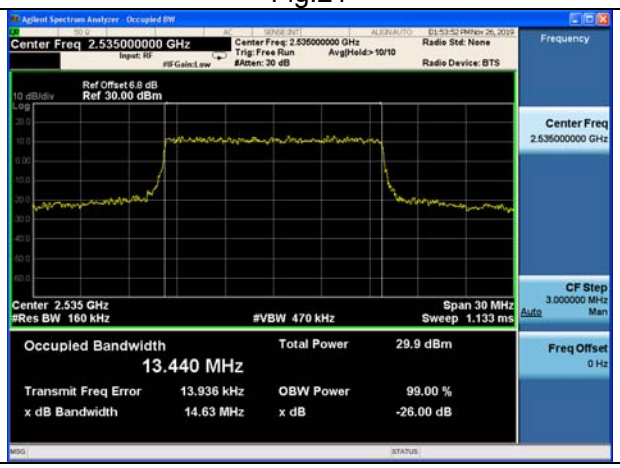

Fig.23

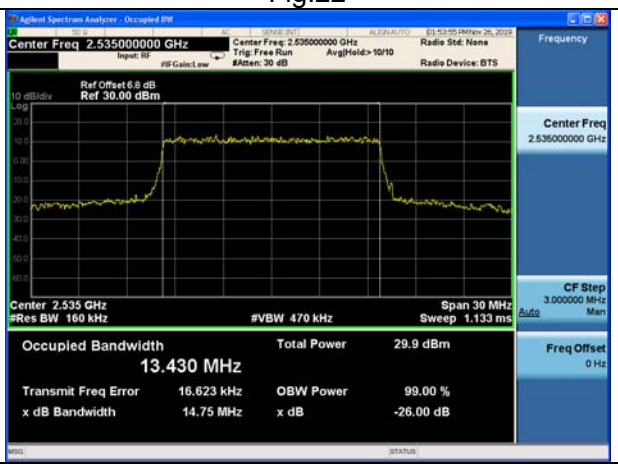

Fig.24

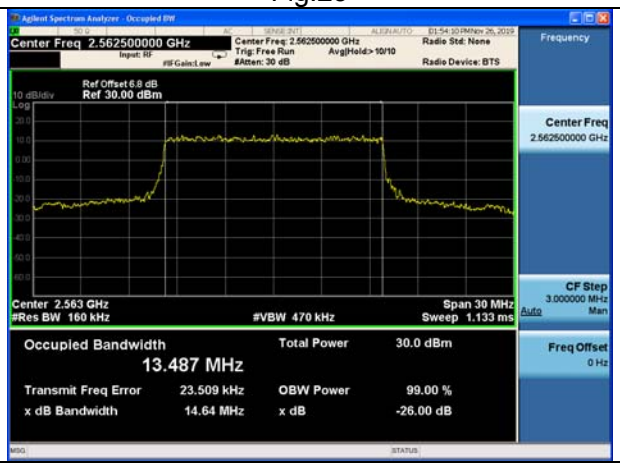

Fig.25

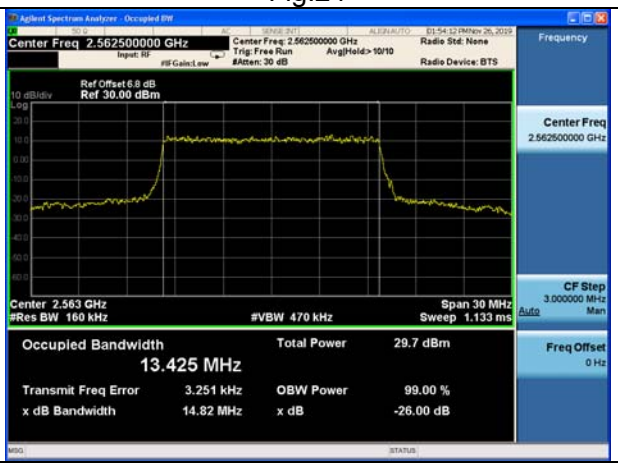

Fig.26

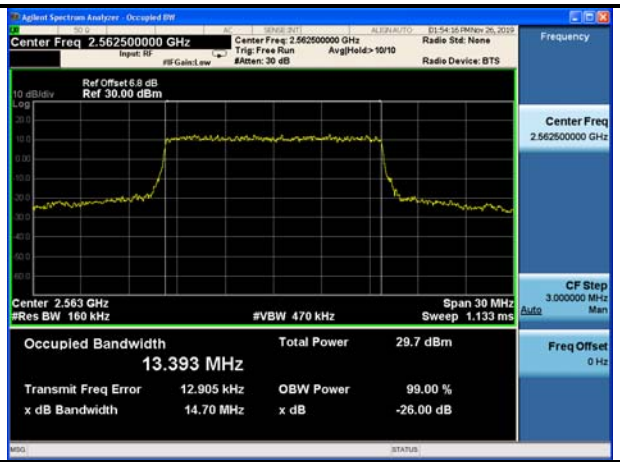

Fig.27

Fig.28

Fig.29

Fig.30

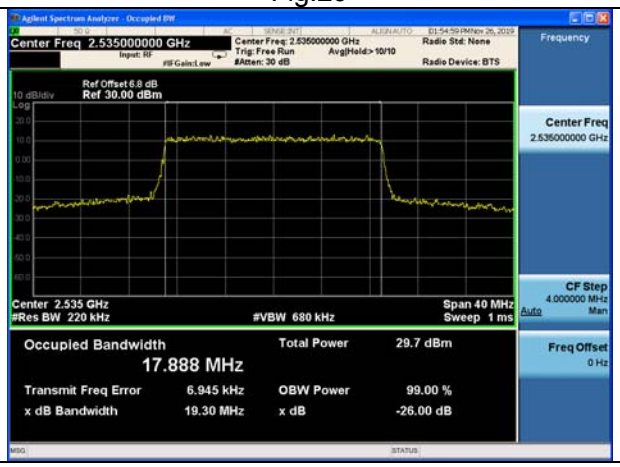

Fig.31

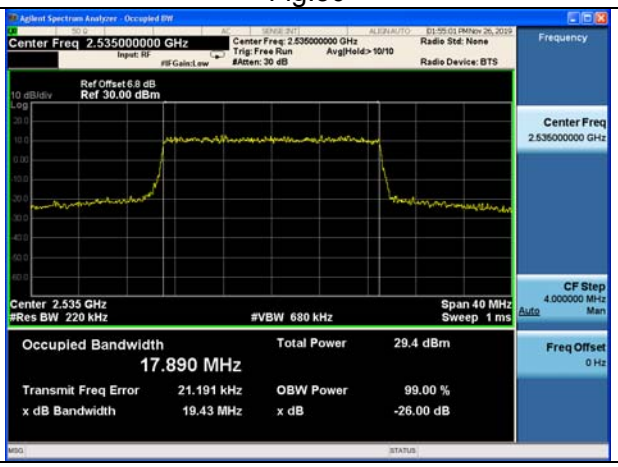

Fig.32

Fig.33

Fig.34

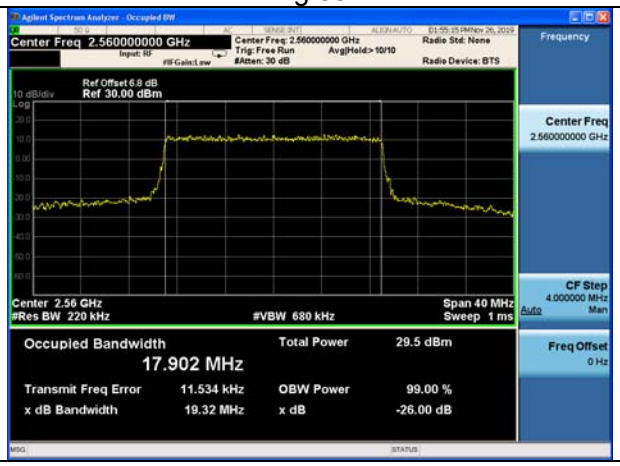

Fig.35

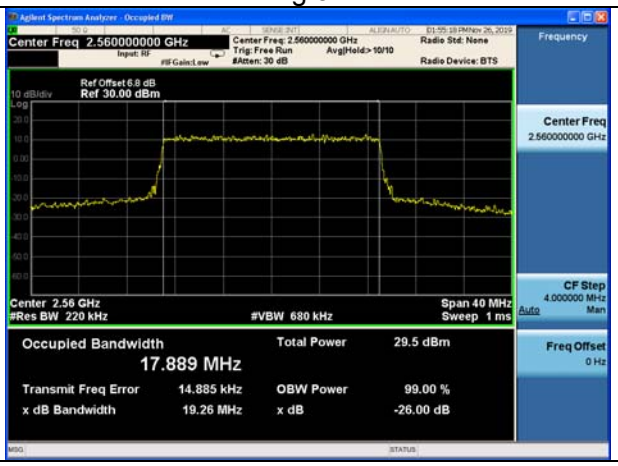

Fig.36

3 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM	64-QAM
7	2535	21100	5	1	0	Fig.1	Fig.2	Fig.3
			10	1	0	Fig.4	Fig.5	Fig.6
			15	1	0	Fig.7	Fig.8	Fig.9
			20	1	0	Fig.10	Fig.11	Fig.12

Fig.1

Fig.2

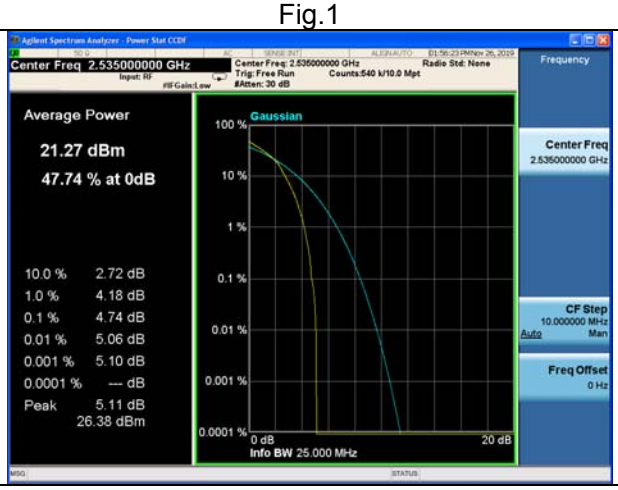

Fig.3

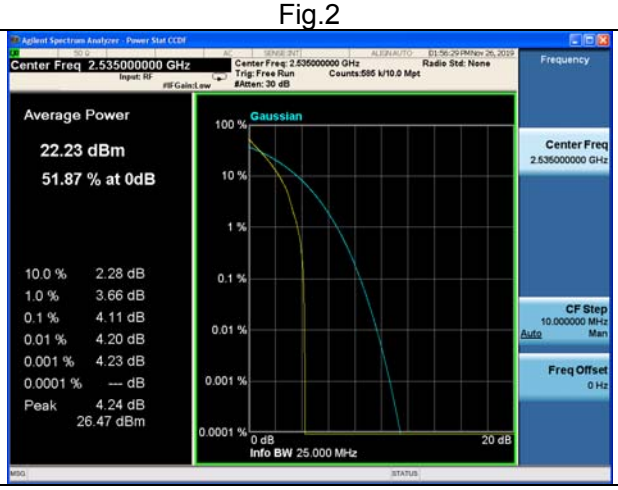

Fig.4

Fig.5

Fig.6

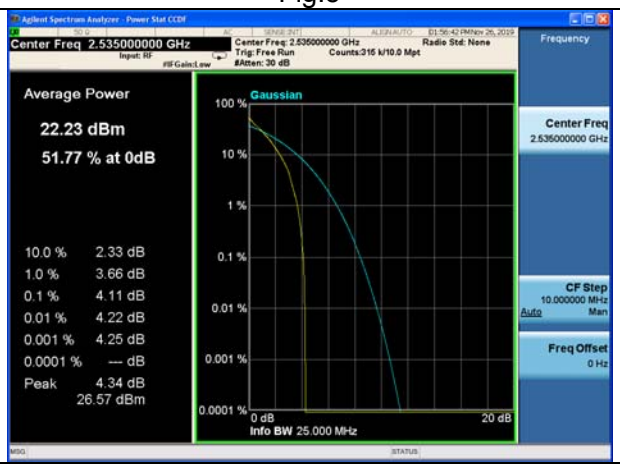

Fig.7

Fig.8

Fig.9

Fig.10

Agilent Spectrum Analyzer - Power Stat CCDF
Center Freq 2.535000000 GHz
Center Freq: 2.535000000 GHz
Trig: Free Run
Counts:270 k/10.0 Mpt
#Atten: 30 dB
Radio Std: None
Frequency
Average Power
21.53 dBm
46.87 % at 0dB
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
10.0 % 2.57 dB
1.0 % 4.03 dB
0.1 % 4.68 dB
0.01 % 5.10 dB
0.001 % 5.24 dB
0.0001 % --- dB
Peak 5.24 dB
26.77 dBm
0 dB
20 dB
Info BW 25.000 MHz
Center Freq
2.535000000 GHz
CF Step
10.000000 MHz
Auto Man
Freq Offset
0 Hz

Fig.11

Agilent Spectrum Analyzer - Power Stat CCDF
Center Freq 2.535000000 GHz
Center Freq: 2.535000000 GHz
Trig: Free Run
Counts:315 k/10.0 Mpt
#Atten: 30 dB
Radio Std: None
Frequency
Average Power
21.54 dBm
47.48 % at 0dB
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
10.0 % 2.67 dB
1.0 % 4.01 dB
0.1 % 4.70 dB
0.01 % 4.82 dB
0.001 % 4.85 dB
0.0001 % --- dB
Peak 4.87 dB
26.41 dBm
0 dB
20 dB
Info BW 25.000 MHz
Center Freq
2.535000000 GHz
CF Step
10.000000 MHz
Auto Man
Freq Offset
0 Hz

Fig.12

4 Spurious Emissions at antenna terminal

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
7	2510	20850	20	1	0	Fig.1-2
	2535	21100	20	1	0	Fig.3-4
	2560	21350	20	1	0	Fig.5-6

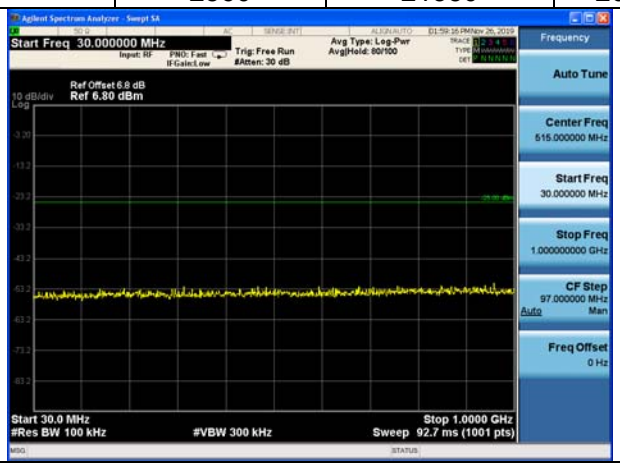

Fig.1

Fig.2

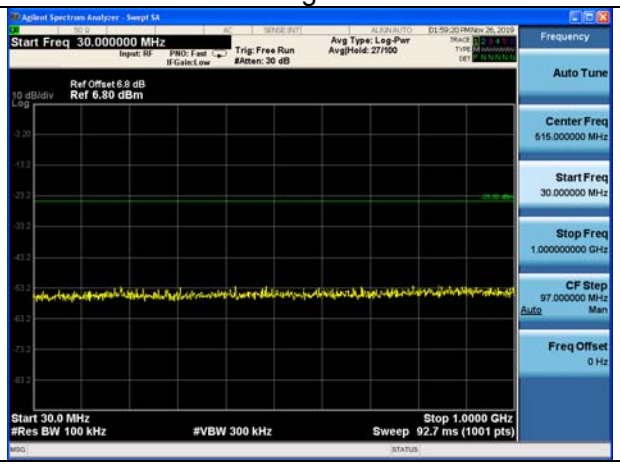

Fig3

Fig4

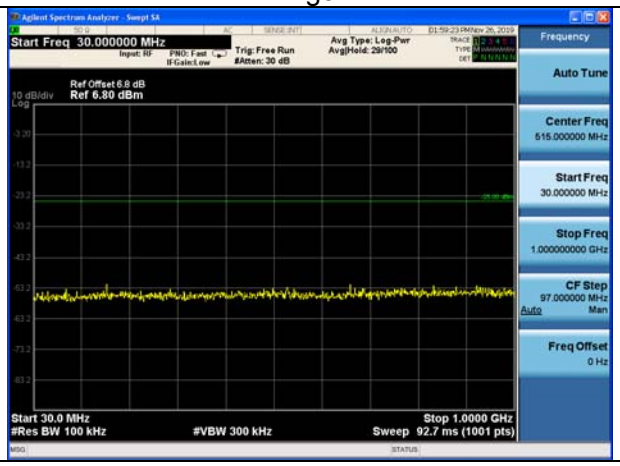

Fig5

Fig6

5 Band Edges Compliance

Test result

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Band Edges Plot
						QPSK
7	2502.5	20775	5	1	0	Fig.1
				25	0	Fig.2
	2567.5	21425		1	24	Fig.9
				25	0	Fig.10
	2505	20800	10	1	0	Fig.3
				50	0	Fig.4
	2565	21400		1	49	Fig.11
				50	0	Fig.12
	2507.5	20825	15	1	0	Fig.5
				75	0	Fig.6
	2562.5	21375		1	74	Fig.13
				75	0	Fig.14
	2510	20850	20	1	0	Fig.7
				100	0	Fig.8
	2560	21350		1	99	Fig.15
				100	0	Fig.16

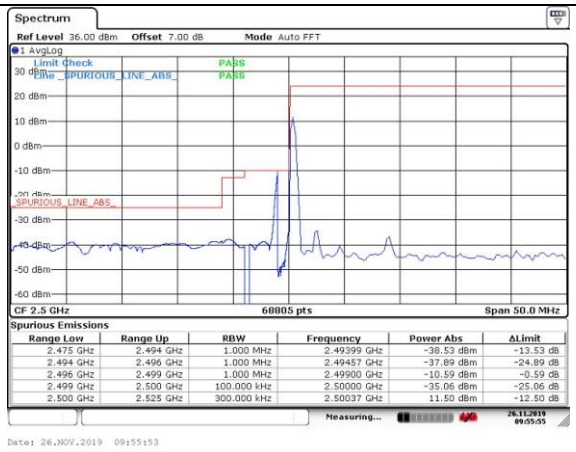

Fig.1

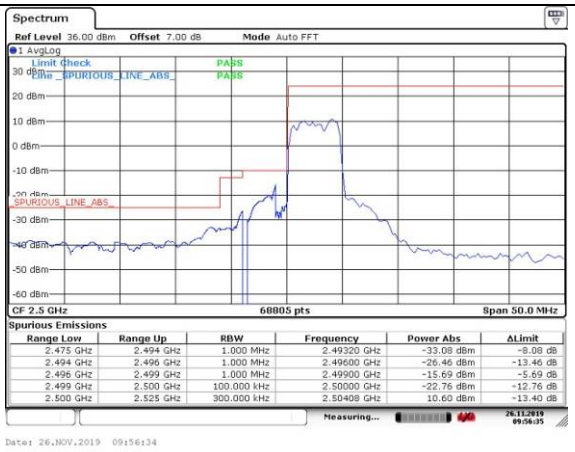

Fig.2

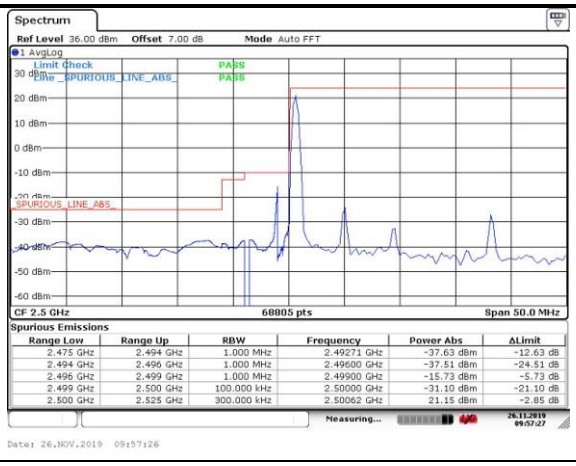

Fig.3

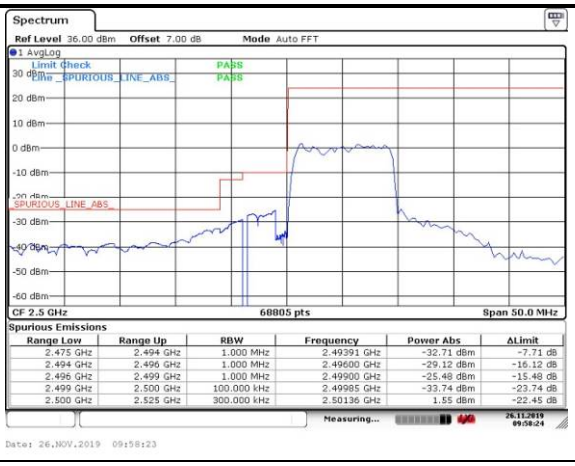

Fig.4

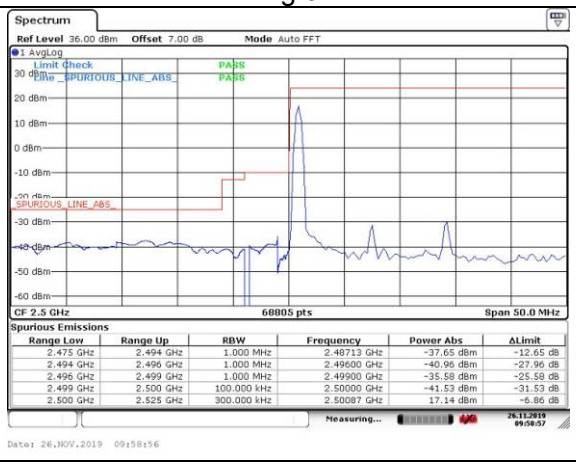

Fig.5

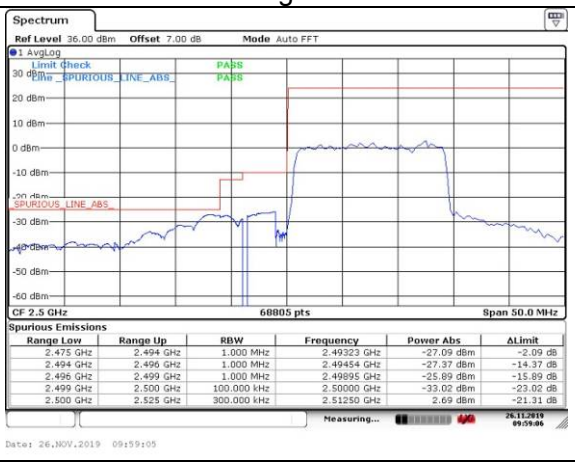

Fig.6

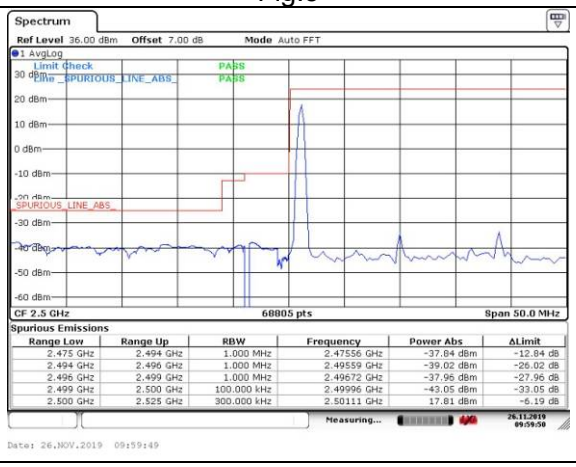

Fig.7

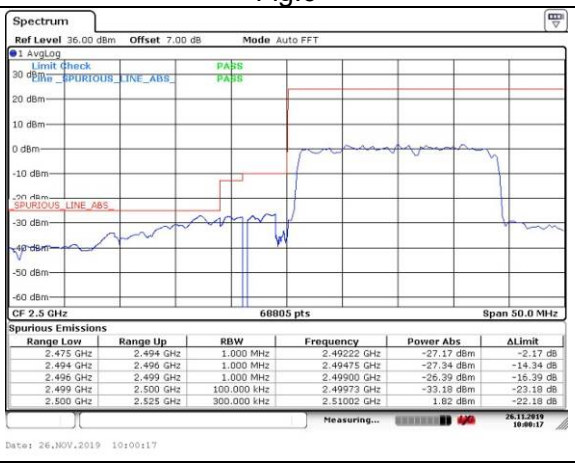

Fig.8

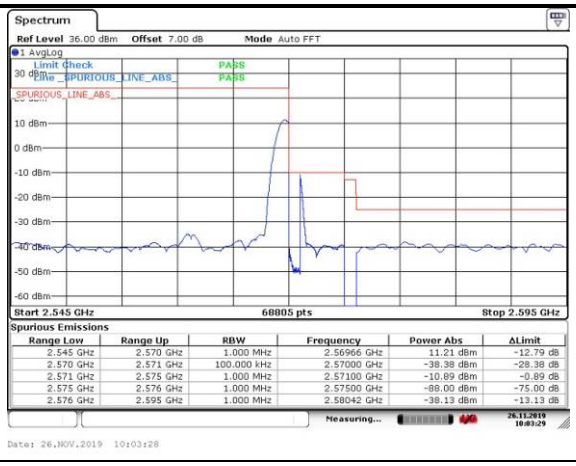

Fig.9

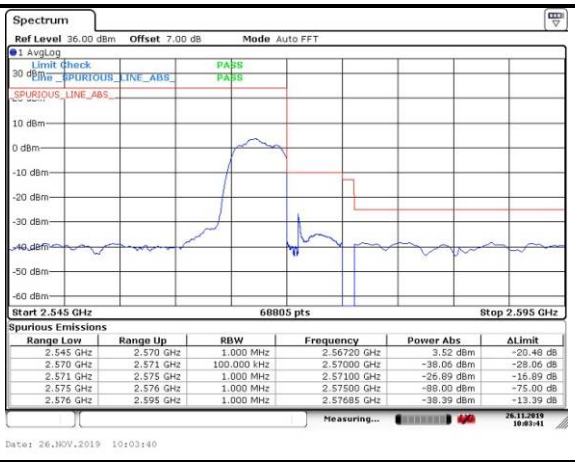

Fig.10

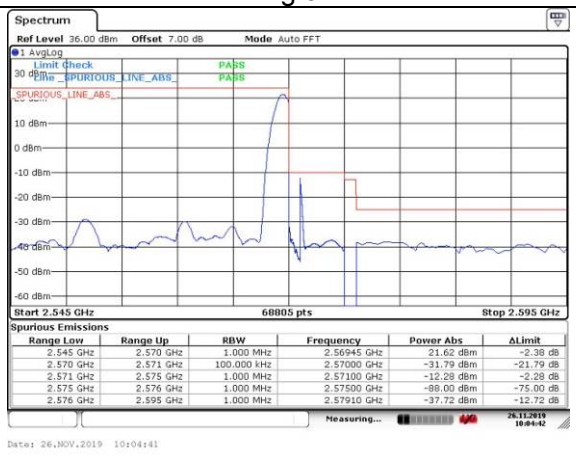

Fig.11

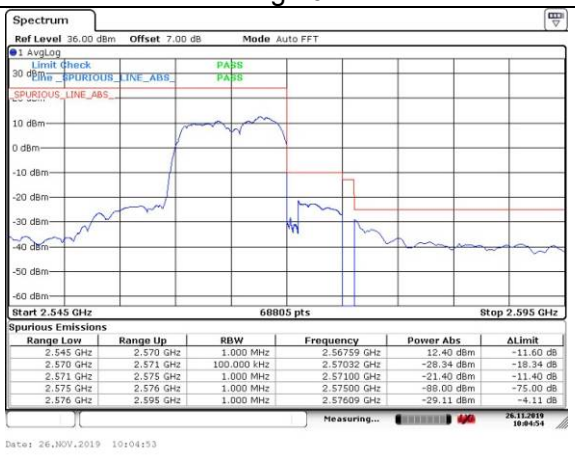

Fig.12

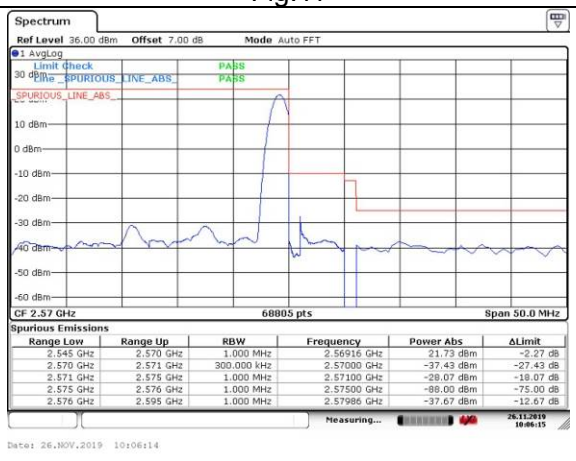

Fig.13

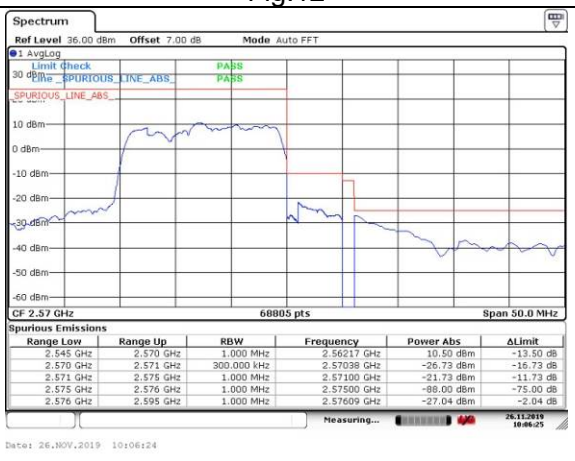

Fig.14

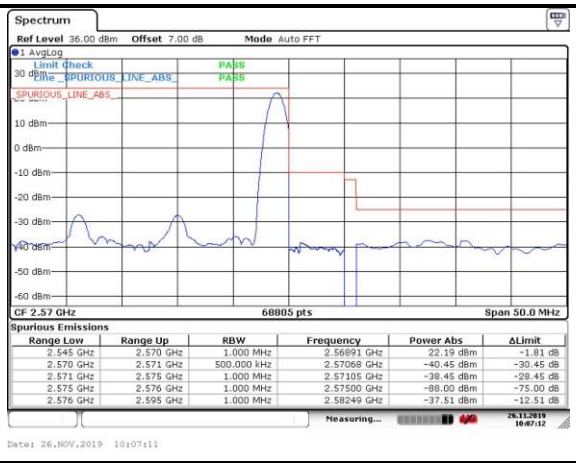
Spectrum
Ref Level 36.00 dBm Offset 7.00 dB Mode Auto FFT
1 AvgLog
Limit Check PASS
Line _SPURIOUS_LINE_ABS_ PASS
SPURIOUS_LINE_ABS_
30 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
CF 2.57 GHz
68805 pts
Span 50.0 MHz
Spurious Emissions
Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit
2.545 GHz | 2.570 GHz | 1.000 MHz | 2.56891 GHz | 22.19 dBm | -1.81 dB
2.570 GHz | 2.571 GHz | 500.000 kHz | 2.57068 GHz | -40.45 dBm | -30.45 dB
2.571 GHz | 2.575 GHz | 1.000 MHz | 2.57105 GHz | -38.45 dBm | -28.45 dB
2.575 GHz | 2.576 GHz | 1.000 MHz | 2.57500 GHz | -88.00 dBm | -75.00 dB
2.576 GHz | 2.595 GHz | 1.000 MHz | 2.58249 GHz | -37.51 dBm | -12.51 dB
Measuring...
26.11.2019 10:07:12
Date: 26.NOV.2019 10:07:11

Fig.15

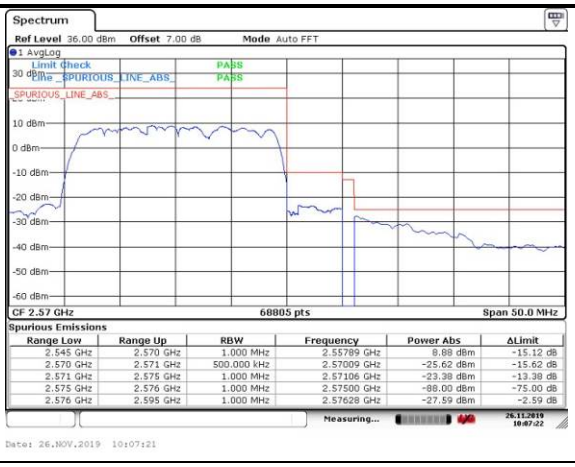
Spectrum
Ref Level 36.00 dBm Offset 7.00 dB Mode Auto FFT
1 AvgLog
Limit Check PASS
Line _SPURIOUS_LINE_ABS_ PASS
SPURIOUS_LINE_ABS_
30 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
CF 2.57 GHz
68805 pts
Span 50.0 MHz
Spurious Emissions
Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit
2.545 GHz | 2.570 GHz | 1.000 MHz | 2.55789 GHz | 8.88 dBm | -15.12 dB
2.570 GHz | 2.571 GHz | 500.000 kHz | 2.57009 GHz | -25.62 dBm | -15.62 dB
2.571 GHz | 2.575 GHz | 1.000 MHz | 2.57106 GHz | -23.38 dBm | -13.38 dB
2.575 GHz | 2.576 GHz | 1.000 MHz | 2.57500 GHz | -88.00 dBm | -75.00 dB
2.576 GHz | 2.595 GHz | 1.000 MHz | 2.57628 GHz | -27.59 dBm | -2.59 dB
Measuring...
26.11.2019 10:07:22
Date: 26.NOV.2019 10:07:21

Fig.16

6 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band7 Low Channel			
		5M	10M	15M	20M
-10	NV	0.090	-0.024	0.071	0.057
0	NV	-0.095	0.049	0.000	-0.006
+10	NV	0.094	-0.019	0.060	-0.026
+20	NV	0.000	0.000	0.000	0.000
+30	NV	0.010	0.065	0.096	-0.021
+40	NV	-0.090	-0.059	0.079	-0.067
+50	NV	-0.081	0.069	-0.062	-0.072
+55	NV	-0.092	0.058	0.040	-0.019
+20	LV	-0.039	0.013	0.028	-0.066
+20	HV	0.083	0.033	0.014	-0.009

Temperature(°C)	Voltage	Test Result (ppm) Band7 High Channel			
		5M	10M	15M	20M
-10	NV	-0.060	-0.097	0.077	0.037
0	NV	0.054	-0.034	0.055	0.053
+10	NV	0.060	-0.063	0.082	0.081
+20	NV	0.000	0.000	0.000	0.000
+30	NV	0.006	0.053	-0.056	-0.043
+40	NV	-0.063	0.088	-0.029	-0.059
+50	NV	-0.018	0.008	-0.032	0.008
+55	NV	0.065	0.086	-0.004	0.045
+20	LV	0.032	-0.069	-0.078	0.055
+20	HV	0.037	0.018	-0.023	-0.017

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 12

1 RF Power Output up Antenna

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	699.7	23017	1.4	1	0	22.88
				1	5	22.95
				3	2	21.89
				6	0	21.90
	707.5	23095		1	0	22.82
				1	5	22.75
				3	2	22.05
				6	0	22.12
	715.3	23173		1	0	22.77
				1	5	22.89
				3	2	22.20
				6	0	22.22
16QAM	699.7	23017	1.4	1	0	22.12
				1	5	22.20
				3	2	20.71
				6	0	20.93
	707.5	23095		1	0	22.14
				1	5	22.02
				3	2	21.08
				6	0	21.04
	715.3	23173		1	0	22.08
				1	5	22.08
				3	2	21.15
				6	0	21.19
64QAM	699.7	23017	1.4	1	0	22.14
				1	5	22.10
				3	2	20.76
				6	0	20.99
	707.5	23095		1	0	21.98
				1	5	21.95
				3	2	21.05
				6	0	20.99
	715.3	23173		1	0	21.97
				1	5	22.05
				3	2	21.05
				6	0	21.14

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	700.5	23025	3	1	0	22.83
				1	14	22.91
				8	4	21.83
				15	0	21.95
	707.5	23095		1	0	22.89
				1	14	22.79
				8	4	22.11
				15	0	22.05
	714.5	23165		1	0	22.88
				1	14	22.90
				8	4	22.19
				15	0	22.18
16QAM	700.5	23025	3	1	0	22.23
				1	14	22.21
				8	4	20.73
				15	0	20.89
	707.5	23095		1	0	22.05
				1	14	22.02
				8	4	21.01
				15	0	21.14
	714.5	23165		1	0	22.10
				1	14	22.22
				8	4	21.18
				15	0	21.16
64QAM	700.5	23025	3	1	0	22.16
				1	14	22.16
				8	4	20.71
				15	0	20.99
	707.5	23095		1	0	22.02
				1	14	22.04
				8	4	20.98
				15	0	21.00
	714.5	23165		1	0	22.07
				1	14	22.01
				8	4	21.07
				15	0	21.06

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	701.5	23035	5	1	0	22.91
				1	24	22.88
				12	6	21.89
				25	0	21.99
	707.5	23095		1	0	22.84
				1	24	22.85
				12	6	22.13
				25	0	22.08
	713.5	23155		1	0	22.78
				1	24	22.84
				12	6	22.12
				25	0	22.20
16QAM	701.5	23035	5	1	0	22.12
				1	24	22.17
				12	6	20.80
				25	0	20.98
	707.5	23095		1	0	22.05
				1	24	22.16
				12	6	20.98
				25	0	21.16
	713.5	23155		1	0	22.18
				1	24	22.08
				12	6	21.11
				25	0	21.12
64QAM	701.5	23035	5	1	0	22.07
				1	24	22.04
				12	6	20.71
				25	0	20.87
	707.5	23095		1	0	22.04
				1	24	21.96
				12	6	21.01
				25	0	21.04
	713.5	23155		1	0	22.03
				1	24	22.00
				12	6	21.10
				25	0	21.12

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	704	23060	10	1	0	22.95
				1	49	22.95
				24	12	21.89
				50	0	22.03
	707.5	23095		1	0	22.89
				1	49	22.89
				24	12	22.17
				50	0	22.18
	711	23130		1	0	22.92
				1	49	22.92
				24	12	22.21
				50	0	22.22
16QAM	704	23060	10	1	0	22.26
				1	49	22.26
				24	12	20.84
				50	0	21.01
	707.5	23095		1	0	22.16
				1	49	22.16
				24	12	21.10
				50	0	21.16
	711	23130		1	0	22.22
				1	49	22.22
				24	12	21.19
				50	0	21.21
64QAM	704	23060	10	1	0	22.17
				1	49	22.17
				24	12	20.82
				50	0	20.99
	707.5	23095		1	0	22.09
				1	49	22.09
				24	12	21.09
				50	0	21.14
	711	23130		1	0	22.11
				1	49	22.11
				24	12	21.17
				50	0	21.20

1 RF Power Output down Antenna

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	699.7	23017	1.4	1	0	22.95
				1	5	22.94
				3	2	21.92
				6	0	22.11
	707.5	23095		1	0	22.88
				1	5	22.86
				3	2	22.14
				6	0	22.23
	715.3	23173		1	0	22.97
				1	5	22.97
				3	2	22.25
				6	0	22.32
16QAM	699.7	23017	1.4	1	0	22.21
				1	5	22.31
				3	2	20.88
				6	0	21.02
	707.5	23095		1	0	22.13
				1	5	22.19
				3	2	21.11
				6	0	21.17
	715.3	23173		1	0	22.22
				1	5	22.26
				3	2	21.12
				6	0	21.25
64QAM	699.7	23017	1.4	1	0	22.19
				1	5	22.16
				3	2	20.82
				6	0	21.05
	707.5	23095		1	0	22.03
				1	5	22.05
				3	2	21.04
				6	0	21.07
	715.3	23173		1	0	22.09
				1	5	22.12
				3	2	21.14
				6	0	21.18

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	700.5	23025	3	1	0	22.94
				1	14	23.04
				8	4	21.85
				15	0	22.11
	707.5	23095		1	0	22.83
				1	14	22.90
				8	4	22.09
				15	0	22.23
	714.5	23165		1	0	22.98
				1	14	22.92
				8	4	22.25
				15	0	22.29
16QAM	700.5	23025	3	1	0	22.26
				1	14	22.24
				8	4	20.81
				15	0	20.99
	707.5	23095		1	0	22.19
				1	14	22.12
				8	4	21.21
				15	0	21.15
	714.5	23165		1	0	22.27
				1	14	22.18
				8	4	21.18
				15	0	21.18
64QAM	700.5	23025	3	1	0	22.16
				1	14	22.22
				8	4	20.88
				15	0	20.94
	707.5	23095		1	0	22.16
				1	14	22.06
				8	4	21.17
				15	0	21.10
	714.5	23165		1	0	22.07
				1	14	22.20
				8	4	21.12
				15	0	21.19

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	701.5	23035	5	1	0	22.92
				1	24	22.96
				12	6	21.92
				25	0	22.01
	707.5	23095		1	0	22.94
				1	24	22.84
				12	6	22.09
				25	0	22.27
	713.5	23155		1	0	22.90
				1	24	22.92
				12	6	22.25
				25	0	22.24
16QAM	701.5	23035	5	1	0	22.30
				1	24	22.21
				12	6	20.90
				25	0	21.06
	707.5	23095		1	0	22.16
				1	24	22.12
				12	6	21.08
				25	0	21.12
	713.5	23155		1	0	22.28
				1	24	22.23
				12	6	21.26
				25	0	21.30
64QAM	701.5	23035	5	1	0	22.16
				1	24	22.24
				12	6	20.86
				25	0	21.01
	707.5	23095		1	0	22.03
				1	24	22.07
				12	6	21.04
				25	0	21.16
	713.5	23155		1	0	22.21
				1	24	22.19
				12	6	21.25
				25	0	21.27

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	704	23060	10	1	0	23.05
				1	49	23.05
				24	12	21.97
				50	0	22.12
	707.5	23095		1	0	22.97
				1	49	22.97
				24	12	22.24
				50	0	22.27
	711	23130		1	0	23.01
				1	49	23.01
				24	12	22.31
				50	0	22.32
16QAM	704	23060	10	1	0	22.35
				1	49	22.35
				24	12	20.92
				50	0	21.08
	707.5	23095		1	0	22.26
				1	49	22.26
				24	12	21.21
				50	0	21.25
	711	23130		1	0	22.31
				1	49	22.31
				24	12	21.27
				50	0	21.32
64QAM	704	23060	10	1	0	22.24
				1	49	22.24
				24	12	20.92
				50	0	21.08
	707.5	23095		1	0	22.16
				1	49	22.16
				24	12	21.18
				50	0	21.22
	711	23130		1	0	22.21
				1	49	22.21
				24	12	21.25
				50	0	21.30

2 Occupied Bandwidth

Test result

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of 99% Power (MHz)					
						QPSK		16-QAM		64-QAM	
12	699.7	23017	1.4	6	0	1.0769	Fig.1	1.0786	Fig.2	1.0781	Fig.3
	707.5	23095		6	0	1.0802	Fig.4	1.0800	Fig.5	1.0775	Fig.6
	715.3	23173		6	0	1.0785	Fig.7	1.0778	Fig.8	1.0783	Fig.9
	700.5	23025	3	15	0	2.6774	Fig.10	2.6751	Fig.11	2.6803	Fig.12
	707.5	23095		15	0	2.6853	Fig.13	2.6814	Fig.14	2.6815	Fig.15
	714.5	23165		15	0	2.6807	Fig.16	2.6807	Fig.17	2.6749	Fig.18
	701.5	23035	5	25	0	4.4786	Fig.19	4.4810	Fig.20	4.4648	Fig.21
	707.5	23095		25	0	4.4827	Fig.22	4.4857	Fig.23	4.4874	Fig.24
	713.5	23155		25	0	4.4761	Fig.25	4.4758	Fig.26	4.4724	Fig.27
	704	23060	10	50	0	8.9379	Fig.28	8.9122	Fig.29	8.9323	Fig.30
	707.5	23095		50	0	8.9660	Fig.31	8.9503	Fig.32	8.9633	Fig.33
	711	23130		50	0	8.9564	Fig.34	8.9457	Fig.35	8.9595	Fig.36

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
12	699.7	23017	1.4	6	0	1.231	Fig.1	1.249	Fig.2	1.230	Fig.3
	707.5	23095		6	0	1.232	Fig.4	1.221	Fig.5	1.232	Fig.6
	715.3	23173		6	0	1.247	Fig.7	1.229	Fig.8	1.229	Fig.9
	700.5	23025	3	15	0	2.863	Fig.10	2.888	Fig.11	2.902	Fig.12
	707.5	23095		15	0	2.889	Fig.13	2.884	Fig.14	2.897	Fig.15
	714.5	23165		15	0	2.868	Fig.16	2.865	Fig.17	2.884	Fig.18
	701.5	23035	5	25	0	5.000	Fig.19	4.959	Fig.20	5.026	Fig.21
	707.5	23095		25	0	5.080	Fig.22	5.031	Fig.23	5.084	Fig.24
	713.5	23155		25	0	5.014	Fig.25	4.994	Fig.26	5.046	Fig.27
	704	23060	10	50	0	9.637	Fig.28	9.657	Fig.29	9.675	Fig.30
	707.5	23095		50	0	9.853	Fig.31	9.870	Fig.32	9.829	Fig.33
	711	23130		50	0	9.809	Fig.34	9.795	Fig.35	9.841	Fig.36

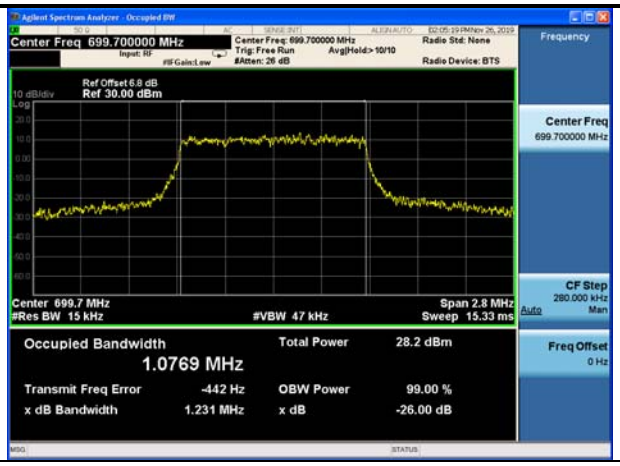

Fig.1

Fig.2

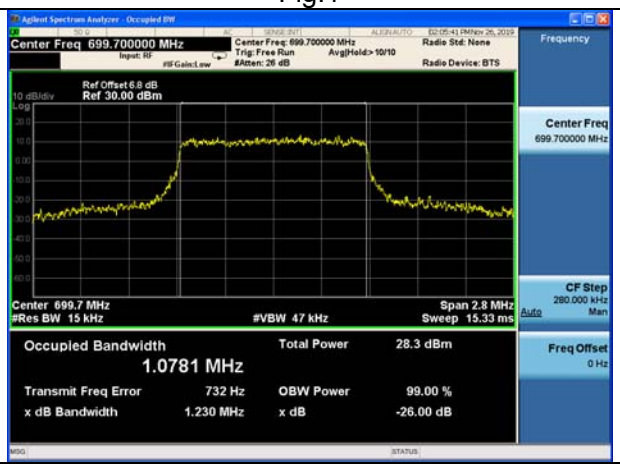

Fig.3

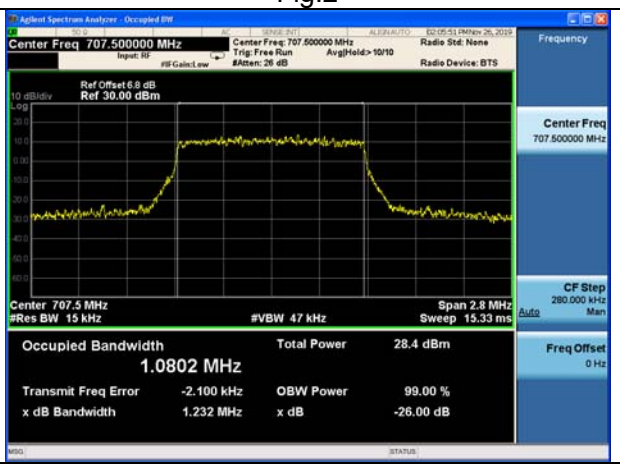

Fig.4

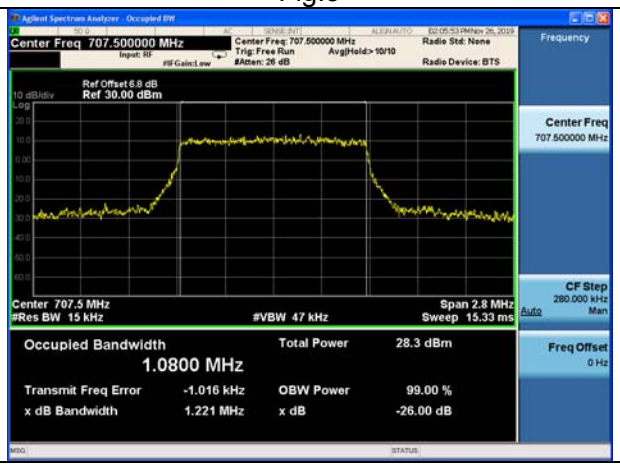

Fig.5

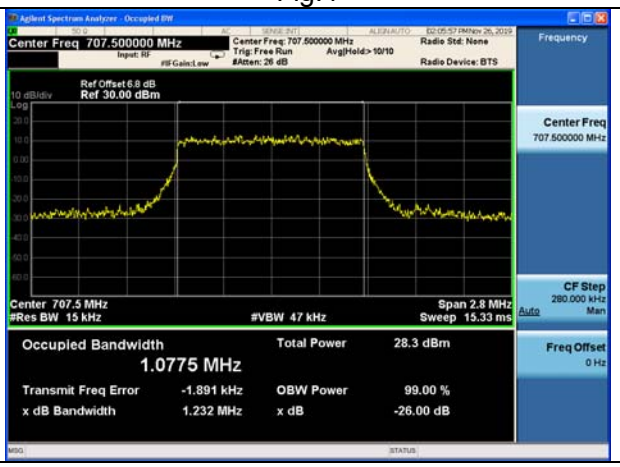

Fig.6

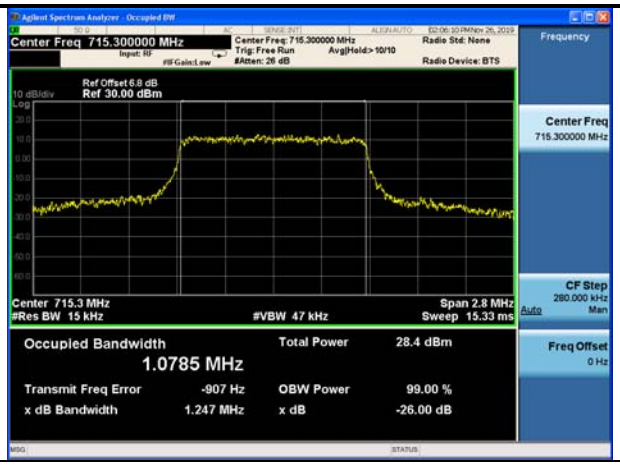

Fig.7

Fig.8

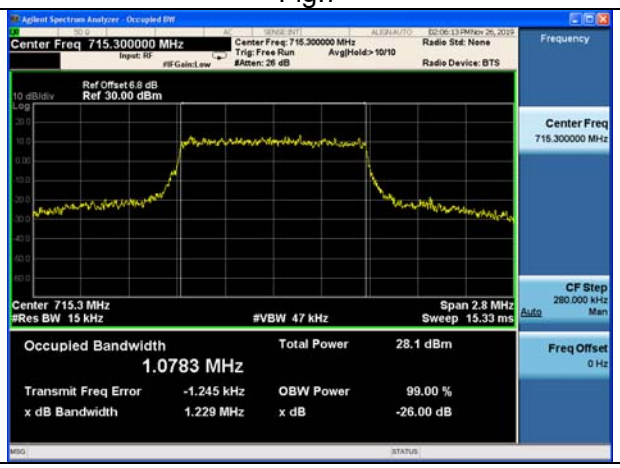

Fig.9

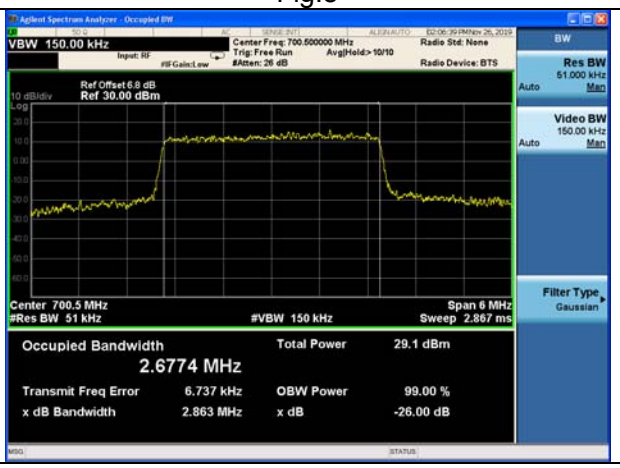

Fig.10

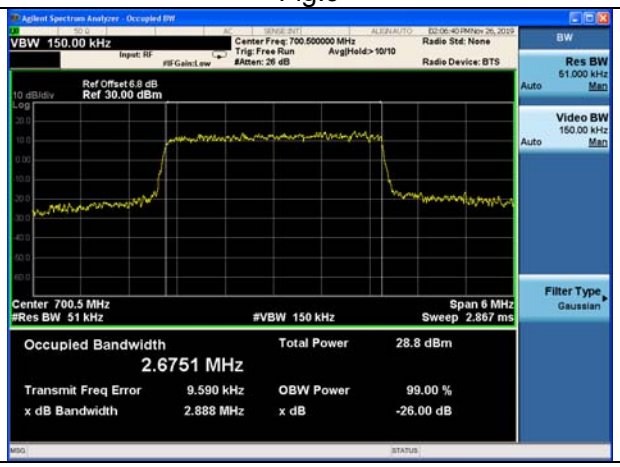

Fig.11

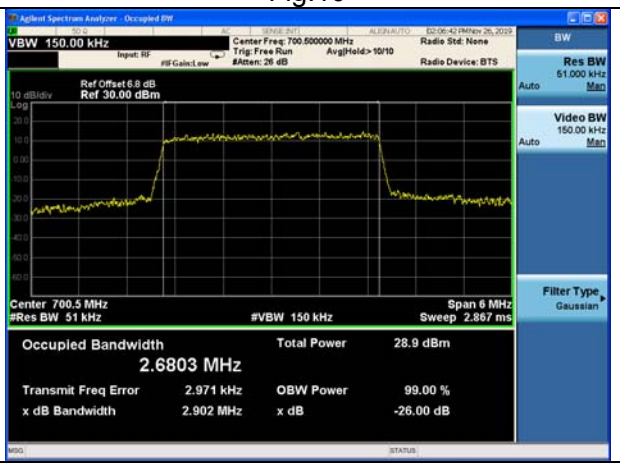

Fig.12

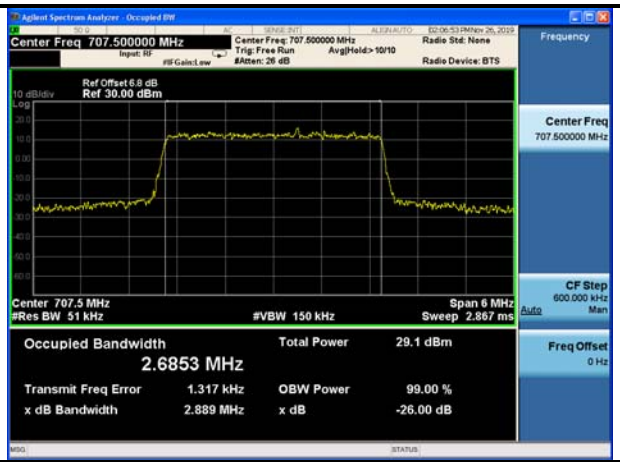

Fig.13

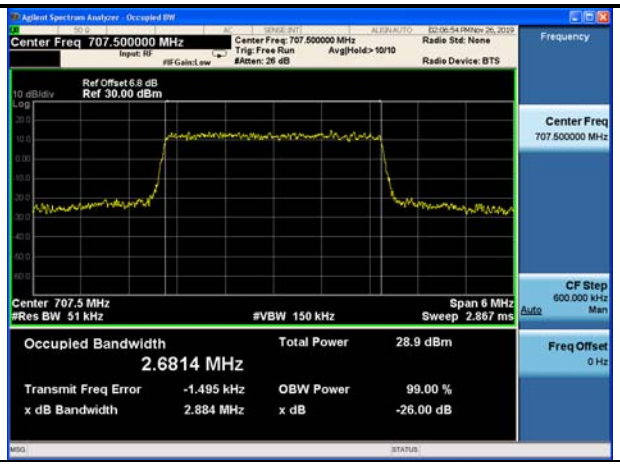

Fig.14

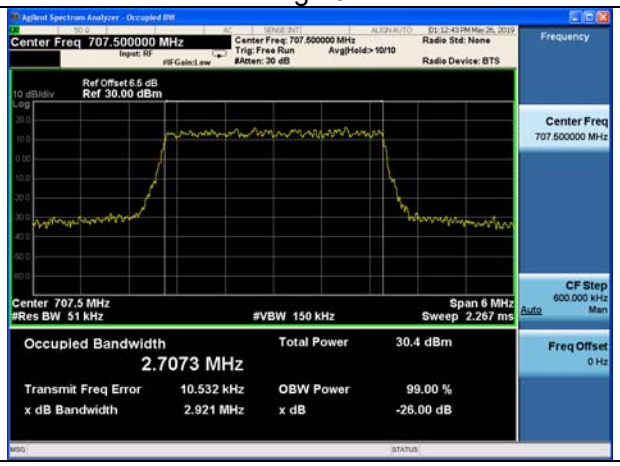

Fig.15

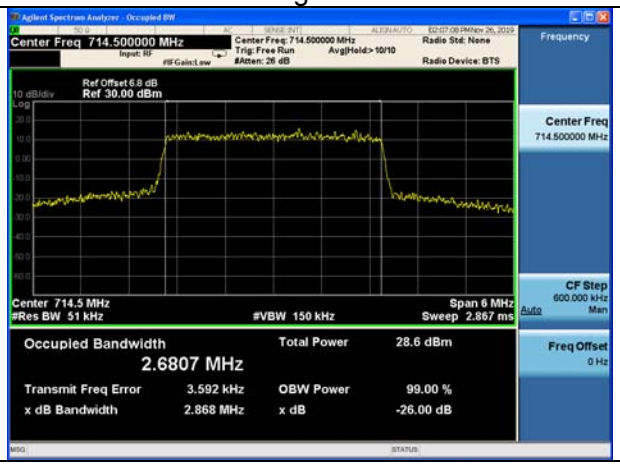

Fig.16

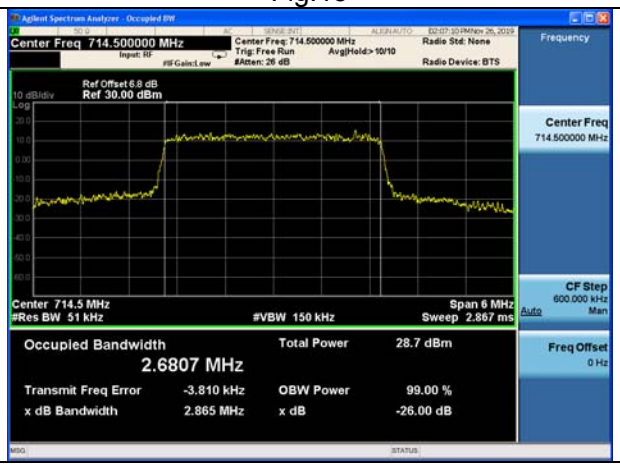

Fig.17

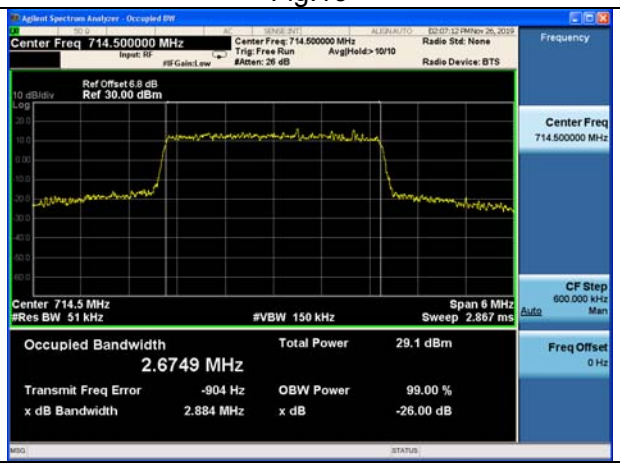

Fig.18

Fig.19

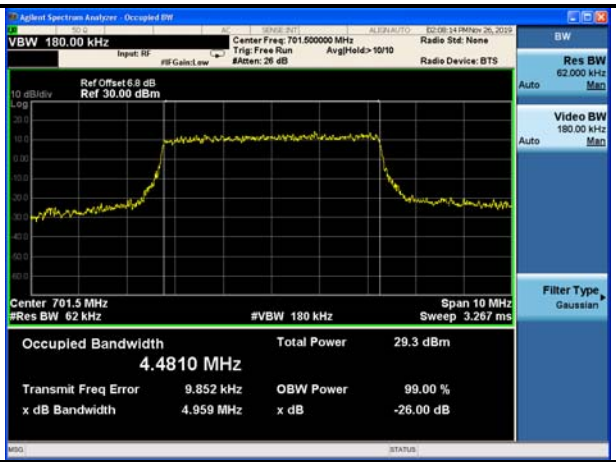

Fig.20

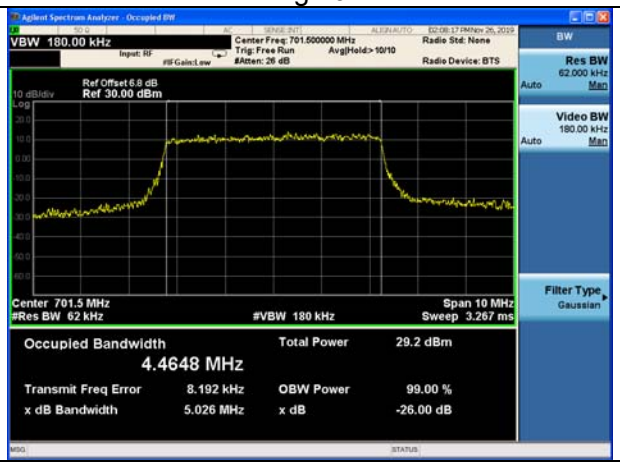

Fig.21

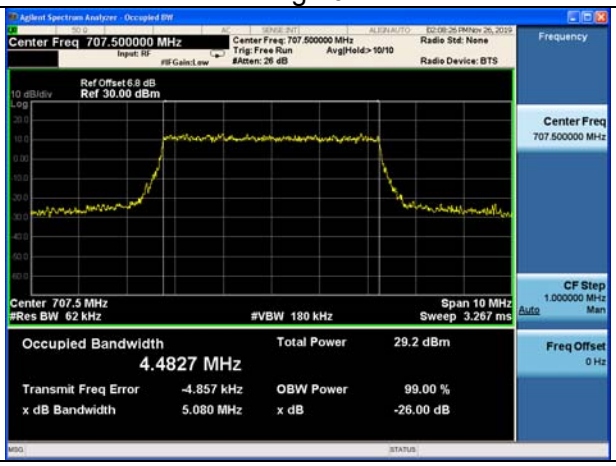

Fig.22

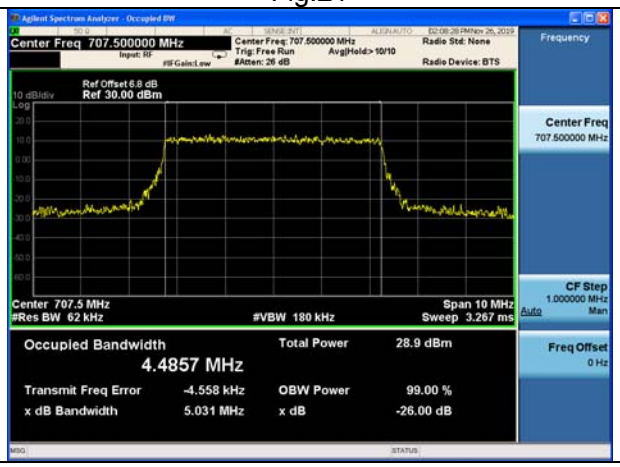

Fig.23

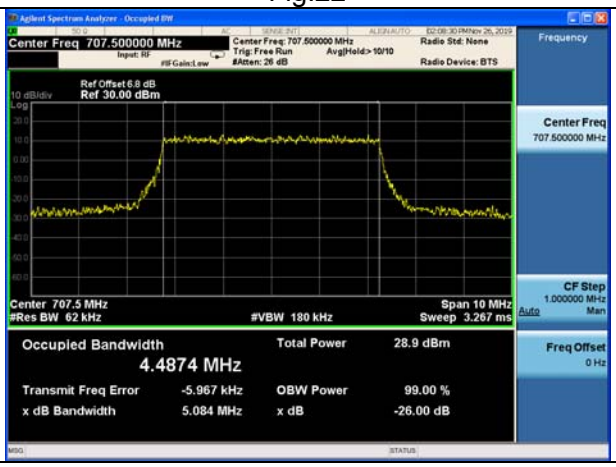

Fig.24

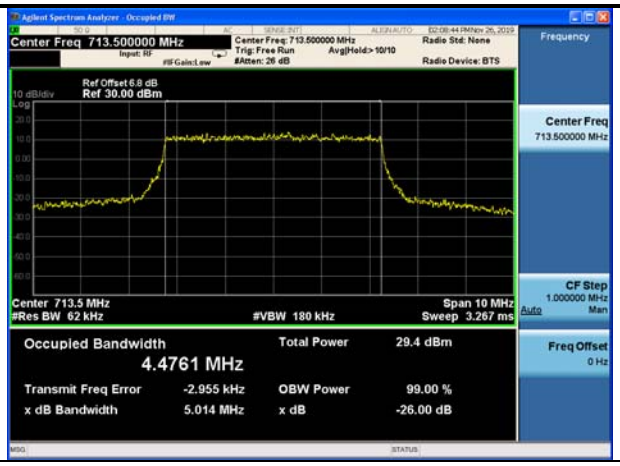

Fig.25

Fig.26

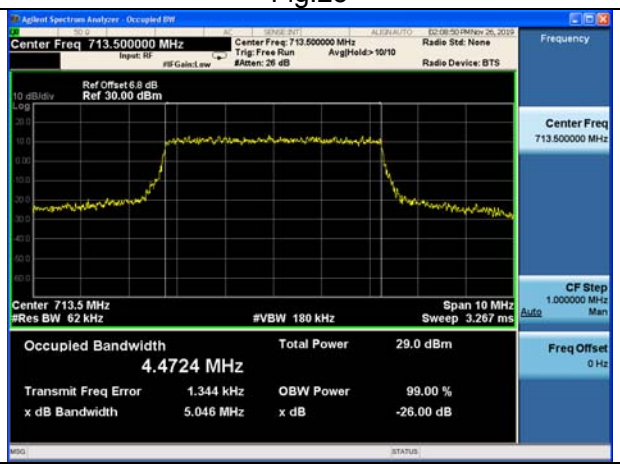

Fig.27

Fig.28

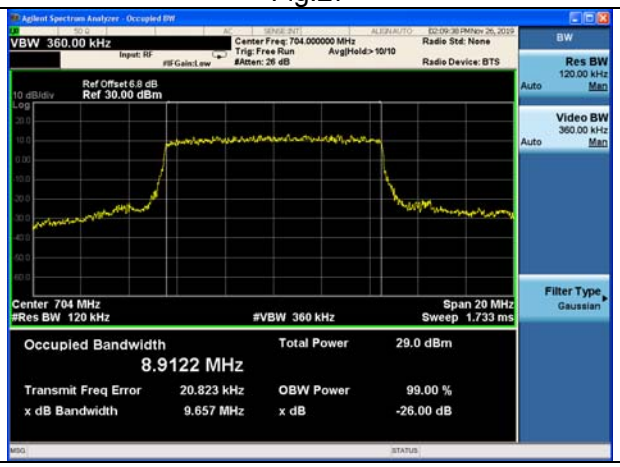

Fig.29

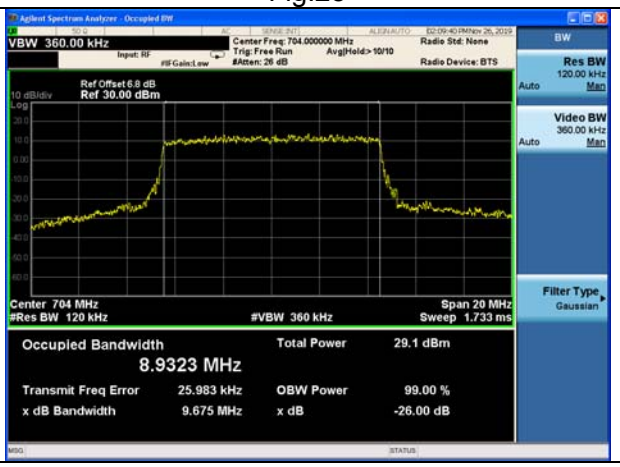

Fig.30

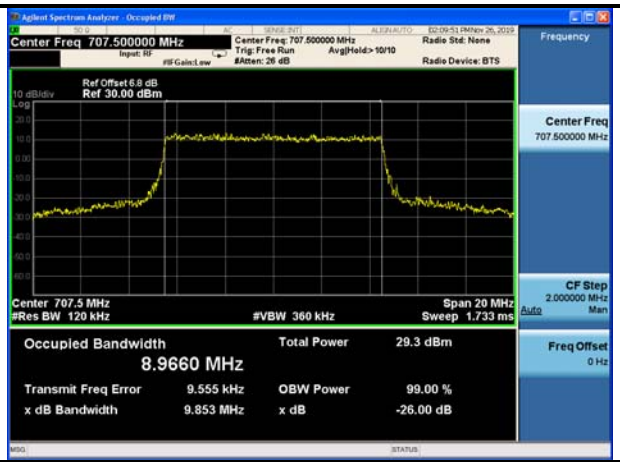

Fig.31

Fig.32

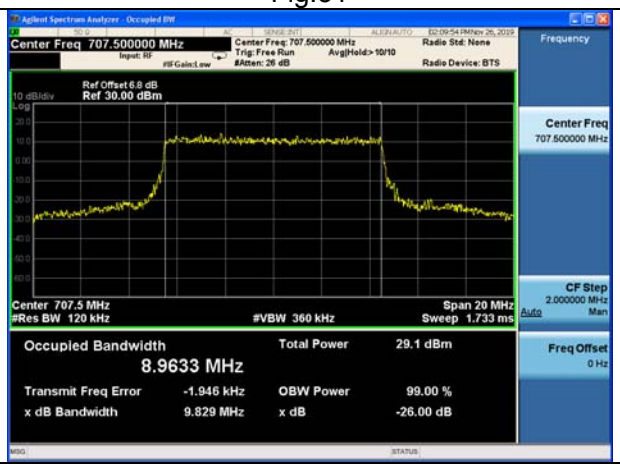

Fig.33

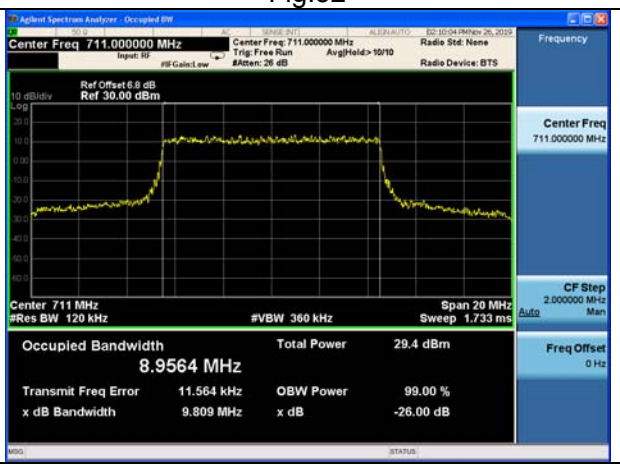

Fig.34

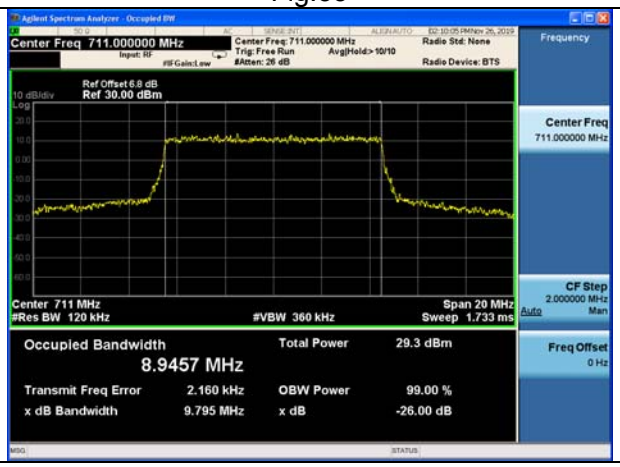

Fig.35

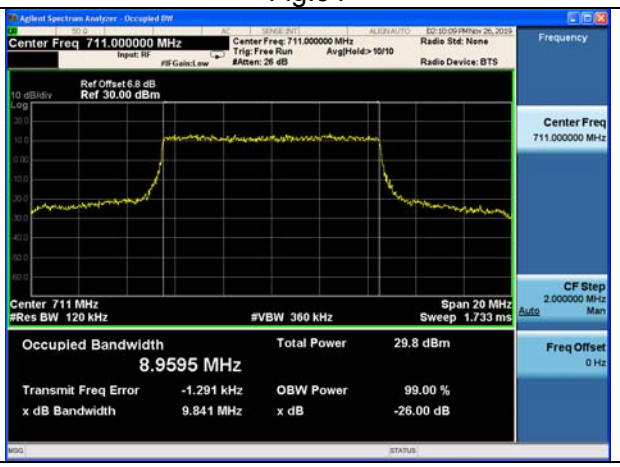

Fig.36

3 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM	64-QAM
12	707.5	23095	1.4	1	0	Fig.1	Fig.2	Fig.3
			3	1	0	Fig.4	Fig.5	Fig.6
			5	1	0	Fig.7	Fig.8	Fig.9
			10	1	0	Fig.10	Fig.11	Fig.12

Fig.1

Fig.2

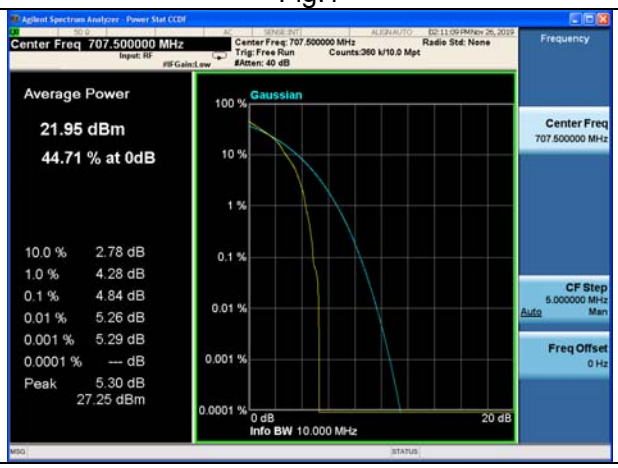

Fig.3

Fig.4

Fig.5

Fig.6

Fig.7

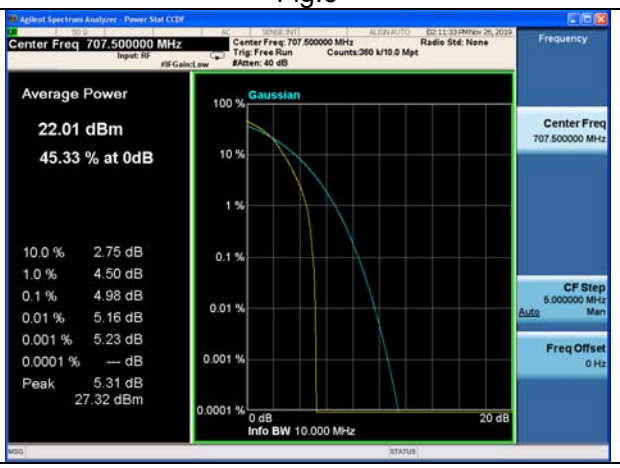

Fig.8

Fig.9

Fig.10

Agilent Spectrum Analyzer - Power Stat CCDF
Center Freq 707.500000 MHz
Center Freq: 707.500000 MHz
Trig: Free Run
Counts:255 k/10.0 Mpt
#Atten: 40 dB
Radio Std: None
Frequency
Average Power
21.82 dBm
45.62 % at 0dB
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
10.0 % 2.85 dB
1.0 % 4.34 dB
0.1 % 4.84 dB
0.01 % 5.29 dB
0.001 % 5.40 dB
0.0001 % --- dB
Peak 5.49 dB
27.31 dBm
0 dB
20 dB
Info BW 10.000 MHz
Center Freq
707.500000 MHz
CF Step
5.000000 MHz
Auto Man
Freq Offset
0 Hz

Fig.11

Agilent Spectrum Analyzer - Power Stat CCDF
Center Freq 707.500000 MHz
Center Freq: 707.500000 MHz
Trig: Free Run
Counts:315 k/10.0 Mpt
#Atten: 40 dB
Radio Std: None
Frequency
Average Power
21.91 dBm
44.92 % at 0dB
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
10.0 % 2.80 dB
1.0 % 4.29 dB
0.1 % 4.82 dB
0.01 % 5.25 dB
0.001 % 5.31 dB
0.0001 % --- dB
Peak 5.33 dB
27.24 dBm
0 dB
20 dB
Info BW 10.000 MHz
Center Freq
707.500000 MHz
CF Step
5.000000 MHz
Auto Man
Freq Offset
0 Hz

Fig.12

4 Spurious Emissions at antenna terminal

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
12	704	23060	10	1	0	Fig.1-2
	707.5	23095	10	1	0	Fig.3-4
	711	23130	10	1	0	Fig.5-6

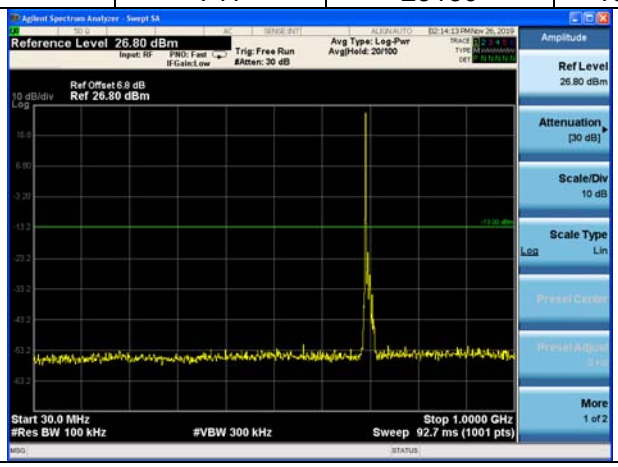

Fig.1

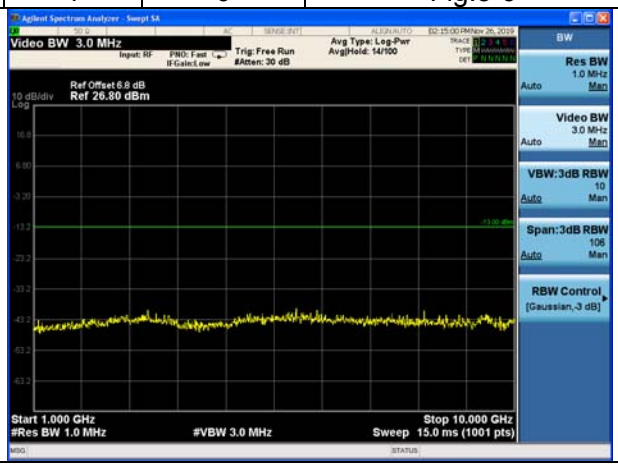

Fig.2

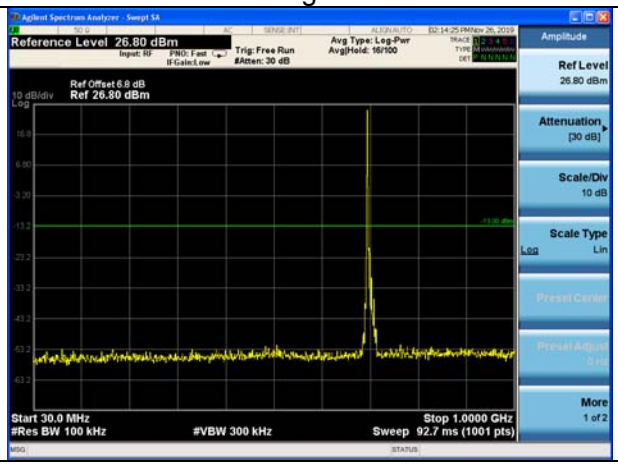

Fig3

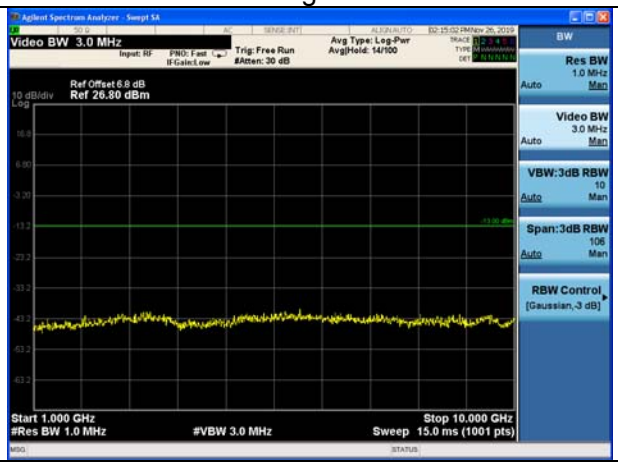

Fig4

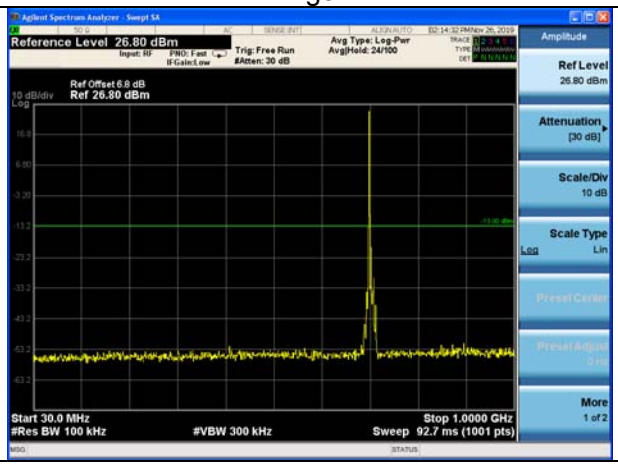

Fig5

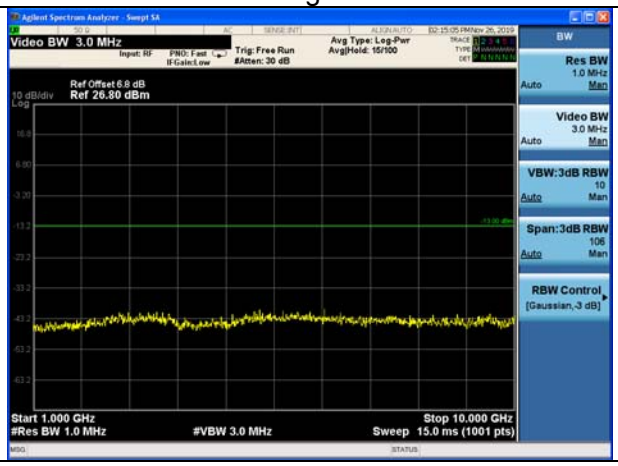

Fig6

5 Band Edges Compliance

Test result

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Band Edges Plot
						QPSK
12	699.7	23017	1.4	1	0	Fig.1
				6	0	Fig.2
	715.3	23173		1	5	Fig.3
				6	0	Fig.4
	700.5	23025	3	1	0	Fig.5
				15	0	Fig.6
	714.5	23165		1	14	Fig.7
				15	0	Fig.8
	701.5	23035	5	1	0	Fig.9
				25	0	Fig.10
	713.5	23155		1	24	Fig.11
				25	0	Fig.12
	704	23060	10	1	0	Fig.13
				50	0	Fig.14
	711	23130		1	49	Fig.15
				50	0	Fig.16

Fig.1

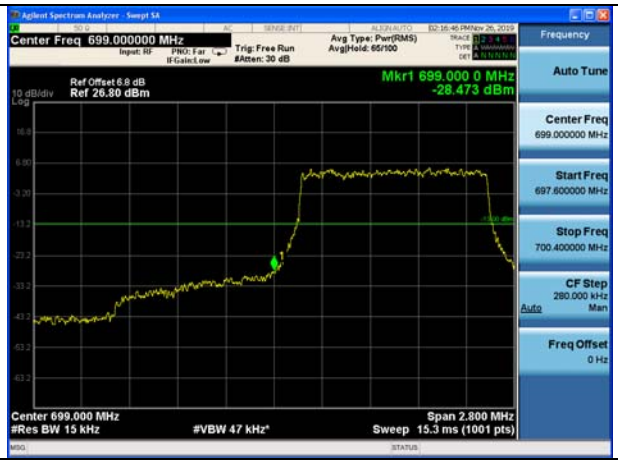

Fig.2

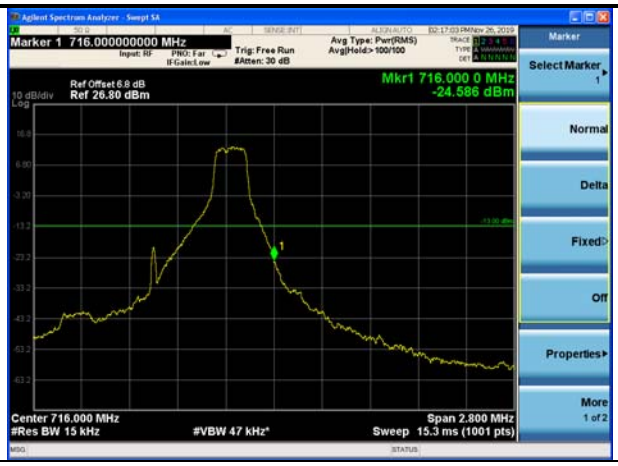

Fig.3

Fig.4

Fig.5

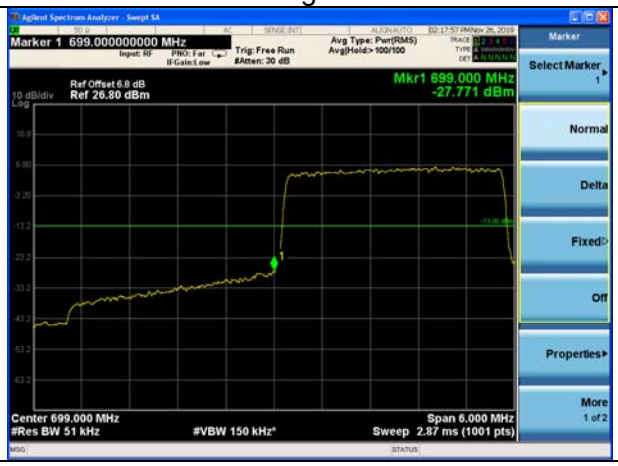

Fig.6

Fig.7

Fig.8

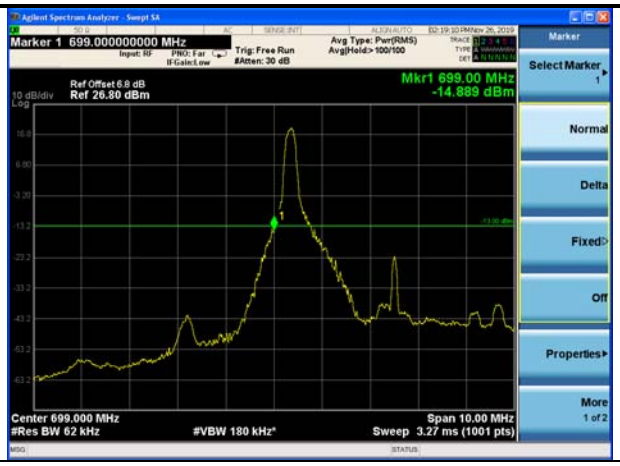

Fig.9

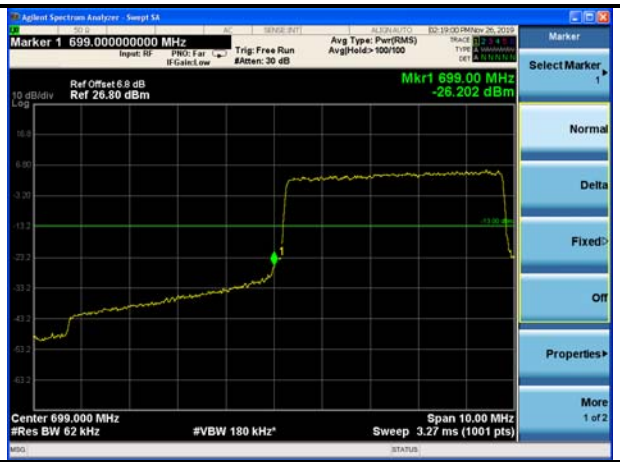

Fig.10

Fig.11

Fig.12

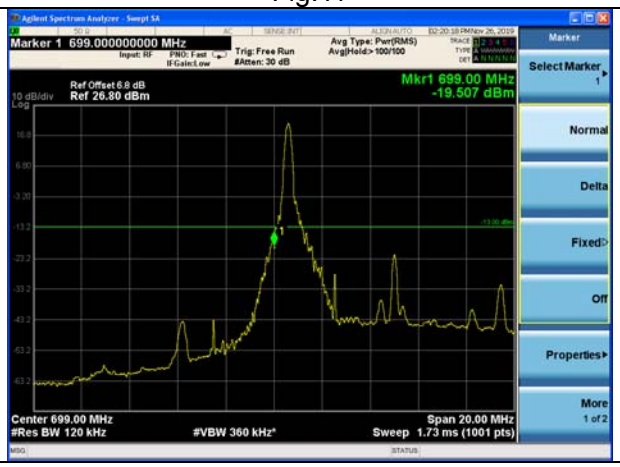

Fig.13

Fig.14

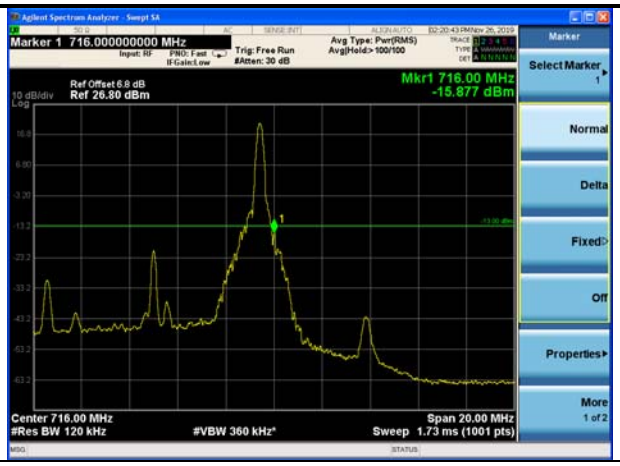
Agilent Spectrum Analyzer - Swept SA
Marker 1 716.000000000 MHz
Trig: Free Run
#Atten: 30 dB
Avg Type: Pwr(RMS)
Avg|Hold:>100/100
Ref Offset 6.8 dB
10 dB/div Ref 26.80 dBm
Mkr1 716.00 MHz
-15.877 dBm
Center 716.00 MHz
#Res BW 120 kHz
#VBW 360 kHz*
Span 20.00 MHz
Sweep 1.73 ms (1001 pts)
Marker
Select Marker
Normal
Delta
Fixed
Off
Properties
More
1 of 2

Fig.15

Agilent Spectrum Analyzer - Swept SA
Marker 1 716.000000000 MHz
Trig: Free Run
#Atten: 30 dB
Avg Type: Pwr(RMS)
Avg|Hold:>100/100
Ref Offset 6.8 dB
10 dB/div Ref 26.80 dBm
Mkr1 716.00 MHz
-27.057 dBm
Center 716.00 MHz
#Res BW 120 kHz
#VBW 360 kHz*
Span 20.00 MHz
Sweep 1.73 ms (1001 pts)
Marker
Select Marker
Normal
Delta
Fixed
Off
Properties
More
1 of 2

Fig.16

6 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band12 Low Channel			
		1.4M	3M	5M	10M
-10	NV	-0.091	-0.073	0.002	0.048
0	NV	0.038	-0.097	-0.066	0.001
+10	NV	0.034	0.050	-0.008	0.067
+20	NV	0.000	0.000	0.000	0.000
+30	NV	-0.073	0.087	-0.063	-0.022
+40	NV	0.065	-0.082	0.027	0.057
+50	NV	-0.066	0.024	0.064	0.019
+55	NV	0.095	-0.082	-0.002	0.050
+20	LV	0.055	0.033	-0.032	0.012
+20	HV	-0.051	-0.090	-0.064	0.051

Temperature(°C)	Voltage	Test Result (ppm) Band12 High Channel			
		1.4M	3M	5M	10M
-10	NV	0.039	0.078	0.074	-0.098
0	NV	0.023	-0.072	0.068	0.037
+10	NV	-0.005	0.070	0.018	-0.065
+20	NV	0.000	0.000	0.000	0.000
+30	NV	-0.073	0.076	0.038	-0.019
+40	NV	-0.010	0.078	-0.005	0.092
+50	NV	0.075	-0.013	-0.078	0.063
+55	NV	0.073	0.015	-0.081	-0.007
+20	LV	0.014	0.071	0.049	-0.096
+20	HV	-0.061	-0.068	-0.069	-0.092

APPENDIX B – TEST DATA OF RADIATED EMISSION

The measurement results are obtained as described below:
Peak EIRP = Pmea + Pca Cable loss+ Ga Antenna Gain
Sample calculation: (24.05 dBm) = (19.25 dBm) + (-3.8 dB) + (8.6 dB), the corresponding frequency is 1851.5MHz.

Frequency (MHz)	Peak EIRP(dBm)	Pca Cable loss(dB)	Ga Antenna Gain (dB)	Pmea (dBm)	Polarization
1851.5	24.05	-3.8	8.6	19.25	Vertical

LTE band 2
Test result:
Up Antenna

band	Modulation	BW (MHz)	Channel	RB/ RB offset	EIRP/ERP (dBm)	EIRP/ERP (W)
Band2	QPSK	1.4	18607	1#0	23.78	0.19
Band2	QPSK	1.4	18900	1#0	23.67	0.18
Band2	QPSK	1.4	19193	1#0	23.72	0.19
Band2	16QAM	1.4	18607	1#0	22.97	0.16
Band2	16QAM	1.4	18900	1#0	22.91	0.16
Band2	16QAM	1.4	19193	1#0	23.01	0.16
Band2	64QAM	1.4	18607	1#0	22.79	0.15
Band2	64QAM	1.4	18900	1#0	22.77	0.15
Band2	64QAM	1.4	19193	1#0	22.86	0.15
Band2	QPSK	3	18615	1#0	23.71	0.19
Band2	QPSK	3	18900	1#0	23.75	0.19
Band2	QPSK	3	19185	1#0	23.67	0.18
Band2	16QAM	3	18615	1#0	22.99	0.16
Band2	16QAM	3	18900	1#0	22.89	0.15
Band2	16QAM	3	19185	1#0	22.94	0.16
Band2	64QAM	3	18615	1#0	22.92	0.16
Band2	64QAM	3	18900	1#0	22.82	0.15
Band2	64QAM	3	19185	1#0	22.78	0.15
Band2	QPSK	5	18625	1#0	23.79	0.19
Band2	QPSK	5	18900	1#0	23.76	0.19
Band2	QPSK	5	19175	1#0	23.69	0.19
Band2	16QAM	5	18625	1#0	23.00	0.16
Band2	16QAM	5	18900	1#0	22.85	0.15
Band2	16QAM	5	19175	1#0	22.95	0.16
Band2	64QAM	5	18625	1#0	22.79	0.15
Band2	64QAM	5	18900	1#0	22.81	0.15
Band2	64QAM	5	19175	1#0	22.80	0.15
Band2	QPSK	10	18650	1#0	23.83	0.19
Band2	QPSK	10	18900	1#0	23.77	0.19
Band2	QPSK	10	19150	1#0	23.75	0.19
Band2	16QAM	10	18650	1#0	22.98	0.16
Band2	16QAM	10	18900	1#0	22.89	0.15

Band2	16QAM	10	19150	1#0	22.95	0.16
Band2	64QAM	10	18650	1#0	22.83	0.15
Band2	64QAM	10	18900	1#0	22.74	0.15
Band2	64QAM	10	19150	1#0	22.85	0.15
Band2	QPSK	15	18675	1#0	23.70	0.19
Band2	QPSK	15	18900	1#0	23.70	0.19
Band2	QPSK	15	19125	1#0	23.72	0.19
Band2	16QAM	15	18675	1#0	22.95	0.16
Band2	16QAM	15	18900	1#0	22.87	0.15
Band2	16QAM	15	19125	1#0	22.88	0.15
Band2	64QAM	15	18675	1#0	22.92	0.16
Band2	64QAM	15	18900	1#0	22.83	0.15
Band2	64QAM	15	19125	1#0	22.79	0.15
Band2	QPSK	20	18700	1#0	23.83	0.19
Band2	QPSK	20	18900	1#0	23.79	0.19
Band2	QPSK	20	19100	1#0	23.75	0.19
Band2	16QAM	20	18700	1#0	23.10	0.16
Band2	16QAM	20	18900	1#0	22.97	0.16
Band2	16QAM	20	19100	1#0	23.03	0.16
Band2	64QAM	20	18700	1#0	22.93	0.16
Band2	64QAM	20	18900	1#0	22.87	0.15
Band2	64QAM	20	19100	1#0	22.88	0.15

Frequency (MHz)	Peak EIRP(dBm)	Pca Cable loss	Ga Antenna Gain (dB)	Pmea (dBm)	Polarization
1851.5	24.05	-3.8	8.6	19.25	Vertical
1880.0	23.98	-3.8	8.6	19.18	Vertical
1907.5	23.89	-3.8	8.6	19.09	Vertical

Test result:
Channel 18615

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2461.39	-48.69	-13	Vertical
2781.51	-47.13	-13	Vertical
3726.68	-40.83	-13	Vertical
6677.30	-39.94	-13	Vertical
9962.52	-37.40	-13	Horizontal
17821.12	-33.84	-13	Vertical

Channel 18900

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2457.93	-48.56	-13	Vertical
2779.72	-47.83	-13	Horizontal
3725.18	-40.86	-13	Vertical
6676.44	-39.17	-13	Vertical
9961.51	-37.53	-13	Vertical
17819.79	-34.10	-13	Vertical

Channel 19175

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2459.40	-48.61	-13	Vertical
2778.34	-47.50	-13	Vertical
3728.27	-41.28	-13	Horizontal
6678.77	-40.11	-13	Vertical
9960.36	-37.72	-13	Vertical
17822.11	-33.90	-13	Vertical

Down Antenna

band	Modulation	BW (MHz)	Channel	RB/ RB offset	EIRP/ERP (dBm)	EIRP/ERP (W)
Band2	QPSK	1.4	18607	1#0	24.08	0.20
Band2	QPSK	1.4	18900	1#0	23.94	0.20
Band2	QPSK	1.4	19193	1#0	23.82	0.19
Band2	16QAM	1.4	18607	1#0	23.29	0.17
Band2	16QAM	1.4	18900	1#0	23.19	0.17
Band2	16QAM	1.4	19193	1#0	23.18	0.17
Band2	64QAM	1.4	18607	1#0	23.23	0.17
Band2	64QAM	1.4	18900	1#0	23.01	0.16
Band2	64QAM	1.4	19193	1#0	23.05	0.16
Band2	QPSK	3	18615	1#0	24.00	0.20
Band2	QPSK	3	18900	1#0	23.84	0.19
Band2	QPSK	3	19185	1#0	23.92	0.20
Band2	16QAM	3	18615	1#0	23.34	0.17
Band2	16QAM	3	18900	1#0	23.19	0.17
Band2	16QAM	3	19185	1#0	23.10	0.16
Band2	64QAM	3	18615	1#0	23.27	0.17
Band2	64QAM	3	18900	1#0	23.11	0.16
Band2	64QAM	3	19185	1#0	23.07	0.16
Band2	QPSK	5	18625	1#0	24.07	0.20
Band2	QPSK	5	18900	1#0	23.96	0.20
Band2	QPSK	5	19175	1#0	23.95	0.20
Band2	16QAM	5	18625	1#0	23.41	0.17
Band2	16QAM	5	18900	1#0	23.15	0.16

Band2	16QAM	5	19175	1#0	23.13	0.16
Band2	64QAM	5	18625	1#0	23.17	0.16
Band2	64QAM	5	18900	1#0	23.11	0.16
Band2	64QAM	5	19175	1#0	23.08	0.16
Band2	QPSK	10	18650	1#0	24.02	0.20
Band2	QPSK	10	18900	1#0	23.88	0.19
Band2	QPSK	10	19150	1#0	23.88	0.19
Band2	16QAM	10	18650	1#0	23.39	0.17
Band2	16QAM	10	18900	1#0	23.15	0.16
Band2	16QAM	10	19150	1#0	23.17	0.16
Band2	64QAM	10	18650	1#0	23.21	0.17
Band2	64QAM	10	18900	1#0	23.10	0.16
Band2	64QAM	10	19150	1#0	23.03	0.16
Band2	QPSK	15	18675	1#0	24.01	0.20
Band2	QPSK	15	18900	1#0	23.91	0.20
Band2	QPSK	15	19125	1#0	23.91	0.20
Band2	16QAM	15	18675	1#0	23.42	0.17
Band2	16QAM	15	18900	1#0	23.16	0.16
Band2	16QAM	15	19125	1#0	23.20	0.17
Band2	64QAM	15	18675	1#0	23.23	0.17
Band2	64QAM	15	18900	1#0	23.05	0.16
Band2	64QAM	15	19125	1#0	23.07	0.16
Band2	QPSK	20	18700	1#0	24.12	0.21
Band2	QPSK	20	18900	1#0	23.97	0.20
Band2	QPSK	20	19100	1#0	23.96	0.20
Band2	16QAM	20	18700	1#0	23.42	0.17
Band2	16QAM	20	18900	1#0	23.26	0.17
Band2	16QAM	20	19100	1#0	23.21	0.17
Band2	64QAM	20	18700	1#0	23.28	0.17
Band2	64QAM	20	18900	1#0	23.11	0.16
Band2	64QAM	20	19100	1#0	23.10	0.16

Frequency (MHz)	Peak EIRP(dBm)	Pca Cable loss	Ga Antenna Gain (dB)	Pmea (dBm)	Polarization
1851.5	23.73	-3.8	8.6	18.93	Vertical
1880.0	23.45	-3.8	8.6	18.65	Vertical
1907.5	23.64	-3.8	8.6	18.84	Vertical

Test result:
Channel 18615

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2458.19	-48.97	-13	Vertical
2779.71	-47.13	-13	Vertical
3725.74	-41.02	-13	Vertical
6675.79	-39.73	-13	Vertical
9960.33	-37.66	-13	Horizontal
17821.65	-33.90	-13	Vertical

Channel 18900

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2459.68	-48.73	-13	Vertical
2778.42	-47.10	-13	Horizontal
3725.07	-40.44	-13	Vertical
6675.44	-39.58	-13	Vertical
9962.75	-37.28	-13	Vertical
17821.29	-33.99	-13	Vertical

Channel 19175

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2459.75	-49.27	-13	Vertical
2780.78	-46.96	-13	Vertical
3724.97	-40.74	-13	Horizontal
6676.74	-39.77	-13	Vertical
9960.40	-37.63	-13	Vertical
17819.54	-33.64	-13	Vertical

LTE band 4
Test result:
Up Antenna

band	Modulation	BW (MHz)	Channel	RB/ RB offset	EIRP/ERP (dBm)	EIRP/ERP (W)
Band4	QPSK	1.4	19957	1#0	23.44	0.18
Band4	QPSK	1.4	20175	1#0	23.42	0.17
Band4	QPSK	1.4	20393	1#0	23.38	0.17
Band4	16QAM	1.4	19957	1#0	22.84	0.15
Band4	16QAM	1.4	20175	1#0	22.87	0.15
Band4	16QAM	1.4	20393	1#0	22.89	0.15
Band4	64QAM	1.4	19957	1#0	22.74	0.15
Band4	64QAM	1.4	20175	1#0	22.66	0.15
Band4	64QAM	1.4	20393	1#0	22.64	0.15

Band4	QPSK	3	19965	1#0	23.53	0.18
Band4	QPSK	3	20175	1#0	23.50	0.18
Band4	QPSK	3	20385	1#0	23.49	0.18
Band4	16QAM	3	19965	1#0	22.78	0.15
Band4	16QAM	3	20175	1#0	22.86	0.15
Band4	16QAM	3	20385	1#0	22.87	0.15
Band4	64QAM	3	19965	1#0	22.70	0.15
Band4	64QAM	3	20175	1#0	22.61	0.14
Band4	64QAM	3	20385	1#0	22.61	0.14
Band4	QPSK	5	19975	1#0	23.48	0.18
Band4	QPSK	5	20175	1#0	23.53	0.18
Band4	QPSK	5	20375	1#0	23.46	0.18
Band4	16QAM	5	19975	1#0	22.83	0.15
Band4	16QAM	5	20175	1#0	22.85	0.15
Band4	16QAM	5	20375	1#0	22.75	0.15
Band4	64QAM	5	19975	1#0	22.71	0.15
Band4	64QAM	5	20175	1#0	22.75	0.15
Band4	64QAM	5	20375	1#0	22.65	0.15
Band4	QPSK	10	20000	1#0	23.45	0.18
Band4	QPSK	10	20175	1#0	23.42	0.17
Band4	QPSK	10	20350	1#0	23.51	0.18
Band4	16QAM	10	20000	1#0	22.83	0.15
Band4	16QAM	10	20175	1#0	22.81	0.15
Band4	16QAM	10	20350	1#0	22.76	0.15
Band4	64QAM	10	20000	1#0	22.72	0.15
Band4	64QAM	10	20175	1#0	22.68	0.15
Band4	64QAM	10	20350	1#0	22.63	0.15
Band4	QPSK	15	20025	1#0	23.52	0.18
Band4	QPSK	15	20175	1#0	23.53	0.18
Band4	QPSK	15	20325	1#0	23.37	0.17
Band4	16QAM	15	20025	1#0	22.88	0.15
Band4	16QAM	15	20175	1#0	22.74	0.15
Band4	16QAM	15	20325	1#0	22.74	0.15
Band4	64QAM	15	20025	1#0	22.63	0.15
Band4	64QAM	15	20175	1#0	22.73	0.15
Band4	64QAM	15	20325	1#0	22.61	0.14
Band4	QPSK	20	20050	1#0	23.54	0.18
Band4	QPSK	20	20175	1#0	23.55	0.18
Band4	QPSK	20	20300	1#0	23.52	0.18
Band4	16QAM	20	20050	1#0	22.88	0.15
Band4	16QAM	20	20175	1#0	22.88	0.15
Band4	16QAM	20	20300	1#0	22.89	0.15
Band4	64QAM	20	20050	1#0	22.76	0.15
Band4	64QAM	20	20175	1#0	22.75	0.15
Band4	64QAM	20	20300	1#0	22.70	0.15

Frequency (MHz)	Peak EIRP(dBm)	Pca Cable loss	Ga Antenna Gain (dB)	Pmea (dBm)	Polarization
1710.7	22.55	-3.8	8.6	17.75	Vertical
1732.5	22.86	-3.8	8.6	18.06	Vertical
1754.3	22.81	-3.8	8.6	18.01	Vertical

Test result:
Channel 19957

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2458.54	-49.09	-13	Vertical
2779.98	-47.75	-13	Vertical
3725.85	-40.97	-13	Vertical
6676.70	-39.42	-13	Vertical
9961.11	-37.65	-13	Horizontal
17819.19	-34.01	-13	Vertical

Channel 20175

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2461.43	-48.98	-13	Vertical
2778.49	-47.60	-13	Vertical
3725.66	-40.80	-13	Vertical
6677.98	-39.97	-13	Horizontal
9960.72	-37.55	-13	Vertical
17819.71	-34.19	-13	Vertical

Channel 20393

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2459.54	-49.11	-13	Vertical
2780.75	-47.84	-13	Vertical
3725.61	-41.32	-13	Horizontal
6676.23	-39.71	-13	Vertical
9962.61	-36.81	-13	Vertical
17818.56	-33.56	-13	Vertical

Down Antenna

band	Modulation	BW (MHz)	Channel	RB/ RB offset	EIRP/ERP (dBm)	EIRP/ERP (W)
Band4	QPSK	1.4	19957	1#0	23.84	0.19
Band4	QPSK	1.4	20175	1#0	23.80	0.19
Band4	QPSK	1.4	20393	1#0	23.85	0.19
Band4	16QAM	1.4	19957	1#0	23.16	0.16
Band4	16QAM	1.4	20175	1#0	23.22	0.17
Band4	16QAM	1.4	20393	1#0	23.16	0.16
Band4	64QAM	1.4	19957	1#0	23.07	0.16
Band4	64QAM	1.4	20175	1#0	23.09	0.16
Band4	64QAM	1.4	20393	1#0	23.09	0.16
Band4	QPSK	3	19965	1#0	23.88	0.19
Band4	QPSK	3	20175	1#0	23.79	0.19
Band4	QPSK	3	20385	1#0	23.76	0.19
Band4	16QAM	3	19965	1#0	23.20	0.17
Band4	16QAM	3	20175	1#0	23.21	0.17
Band4	16QAM	3	20385	1#0	23.15	0.16
Band4	64QAM	3	19965	1#0	23.06	0.16
Band4	64QAM	3	20175	1#0	23.01	0.16
Band4	64QAM	3	20385	1#0	23.01	0.16
Band4	QPSK	5	19975	1#0	23.86	0.19
Band4	QPSK	5	20175	1#0	23.82	0.19
Band4	QPSK	5	20375	1#0	23.90	0.19
Band4	16QAM	5	19975	1#0	23.16	0.16
Band4	16QAM	5	20175	1#0	23.18	0.17
Band4	16QAM	5	20375	1#0	23.09	0.16
Band4	64QAM	5	19975	1#0	22.98	0.16
Band4	64QAM	5	20175	1#0	22.98	0.16
Band4	64QAM	5	20375	1#0	23.05	0.16
Band4	QPSK	10	20000	1#0	23.84	0.19
Band4	QPSK	10	20175	1#0	23.88	0.19
Band4	QPSK	10	20350	1#0	23.86	0.19
Band4	16QAM	10	20000	1#0	23.16	0.16
Band4	16QAM	10	20175	1#0	23.12	0.16
Band4	16QAM	10	20350	1#0	23.18	0.17
Band4	64QAM	10	20000	1#0	22.99	0.16
Band4	64QAM	10	20175	1#0	23.04	0.16
Band4	64QAM	10	20350	1#0	23.10	0.16
Band4	QPSK	15	20025	1#0	23.87	0.19
Band4	QPSK	15	20175	1#0	23.84	0.19
Band4	QPSK	15	20325	1#0	23.89	0.19
Band4	16QAM	15	20025	1#0	23.11	0.16
Band4	16QAM	15	20175	1#0	23.10	0.16
Band4	16QAM	15	20325	1#0	23.23	0.17

Band4	64QAM	15	20025	1#0	22.99	0.16
Band4	64QAM	15	20175	1#0	22.97	0.16
Band4	64QAM	15	20325	1#0	23.09	0.16
Band4	QPSK	20	20050	1#0	23.92	0.20
Band4	QPSK	20	20175	1#0	23.91	0.20
Band4	QPSK	20	20300	1#0	23.90	0.19
Band4	16QAM	20	20050	1#0	23.24	0.17
Band4	16QAM	20	20175	1#0	23.24	0.17
Band4	16QAM	20	20300	1#0	23.24	0.17
Band4	64QAM	20	20050	1#0	23.11	0.16
Band4	64QAM	20	20175	1#0	23.11	0.16
Band4	64QAM	20	20300	1#0	23.11	0.16

Frequency (MHz)	Peak EIRP(dBm)	Pca Cable loss	Ga Antenna Gain (dB)	Pmea (dBm)	Polarization
1710.7	22.84	-3.8	8.6	18.04	Vertical
1732.5	22.85	-3.8	8.6	18.05	Vertical
1754.3	22.73	-3.8	8.6	17.93	Vertical

Test result:
Channel 19957

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2458.15	-48.98	-13	Vertical
2781.46	-46.91	-13	Vertical
3727.97	-40.99	-13	Vertical
6676.89	-39.22	-13	Vertical
9962.78	-37.08	-13	Horizontal
17818.90	-33.57	-13	Vertical

Channel 20175

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2458.13	-48.86	-13	Vertical
2780.20	-47.29	-13	Vertical
3728.22	-40.60	-13	Vertical
6676.18	-39.61	-13	Horizontal
9963.34	-36.83	-13	Vertical
17821.72	-34.41	-13	Vertical

Channel 20393

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2459.33	-49.35	-13	Vertical
2780.82	-47.87	-13	Vertical
3727.96	-40.80	-13	Horizontal
6676.12	-39.82	-13	Vertical
9962.07	-37.70	-13	Vertical
17818.45	-33.98	-13	Vertical

LTE band 5
Test result:
Up Antenna

band	Modulation	BW (MHz)	Channel	RB/ RB offset	EIRP/ERP (dBm)	EIRP/ERP (W)
Band5	QPSK	1.4	20407	1#0	23.25	0.19
Band5	QPSK	1.4	20525	1#0	23.30	0.19
Band5	QPSK	1.4	20643	1#0	23.24	0.19
Band5	16QAM	1.4	20407	1#0	22.57	0.16
Band5	16QAM	1.4	20525	1#0	22.49	0.16
Band5	16QAM	1.4	20643	1#0	22.61	0.16
Band5	64QAM	1.4	20407	1#0	22.40	0.15
Band5	64QAM	1.4	20525	1#0	22.32	0.15
Band5	64QAM	1.4	20643	1#0	22.43	0.16
Band5	QPSK	3	20415	1#0	23.23	0.19
Band5	QPSK	3	20525	1#0	23.17	0.18
Band5	QPSK	3	20635	1#0	23.19	0.19
Band5	16QAM	3	20415	1#0	22.51	0.16
Band5	16QAM	3	20525	1#0	22.51	0.16
Band5	16QAM	3	20635	1#0	22.57	0.16
Band5	64QAM	3	20415	1#0	22.45	0.16
Band5	64QAM	3	20525	1#0	22.36	0.15
Band5	64QAM	3	20635	1#0	22.48	0.16
Band5	QPSK	5	20425	1#0	23.23	0.19
Band5	QPSK	5	20525	1#0	23.22	0.19
Band5	QPSK	5	20625	1#0	23.33	0.19
Band5	16QAM	5	20425	1#0	22.61	0.16
Band5	16QAM	5	20525	1#0	22.46	0.16
Band5	16QAM	5	20625	1#0	22.59	0.16
Band5	64QAM	5	20425	1#0	22.41	0.16
Band5	64QAM	5	20525	1#0	22.35	0.15
Band5	64QAM	5	20625	1#0	22.50	0.16
Band5	QPSK	10	20450	1#0	23.29	0.19
Band5	QPSK	10	20525	1#0	23.31	0.19

Band5	QPSK	10	20600	1#0	23.33	0.19
Band5	16QAM	10	20450	1#0	22.65	0.16
Band5	16QAM	10	20525	1#0	22.60	0.16
Band5	16QAM	10	20600	1#0	22.66	0.16
Band5	64QAM	10	20450	1#0	22.49	0.16
Band5	64QAM	10	20525	1#0	22.45	0.16
Band5	64QAM	10	20600	1#0	22.55	0.16

Frequency (MHz)	Peak ERP (dBm)	PcaCable loss(dB)	Ga Antenna Gain (dB)	Correction (dB)	Pmea (dBm)	Polarization
824.0	21.66	-3.4	8.3	2.15	18.91	Vertical
836.5	22.19	-3.4	8.3	2.15	19.44	Vertical
848.9	21.72	-3.4	8.3	2.15	18.97	Vertical

Test result:
Channel 20400

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1647.05	-52.63	-13	Vertical
1665.71	-50.96	-13	Horizontal
2535.67	-43.86	-13	Vertical
2577.76	-44.41	-13	Vertical
8963.26	-39.94	-13	Vertical
9972.89	-36.67	-13	Vertical

Channel 20525

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1646.90	-53.26	-13	Vertical
1668.70	-51.18	-13	Vertical
2534.31	-44.62	-13	Vertical
2575.64	-43.96	-13	Vertical
8963.73	-39.41	-13	Vertical
9970.58	-35.91	-13	Horizontal

Channel 20649

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1650.28	-53.30	-13	Horizontal
1667.10	-50.85	-13	Vertical
2535.94	-44.49	-13	Vertical
2576.66	-44.08	-13	Vertical
8962.06	-39.63	-13	Vertical
9973.23	-36.01	-13	Vertical

Down Antenna

band	Modulation	BW (MHz)	Channel	RB/ RB offset	EIRP/ERP (dBm)	EIRP/ERP (W)
Band5	QPSK	1.4	20407	1#0	23.15	0.18
Band5	QPSK	1.4	20525	1#0	23.18	0.19
Band5	QPSK	1.4	20643	1#0	23.28	0.19
Band5	16QAM	1.4	20407	1#0	22.49	0.16
Band5	16QAM	1.4	20525	1#0	22.49	0.16
Band5	16QAM	1.4	20643	1#0	22.52	0.16
Band5	64QAM	1.4	20407	1#0	22.41	0.16
Band5	64QAM	1.4	20525	1#0	22.42	0.16
Band5	64QAM	1.4	20643	1#0	22.40	0.15
Band5	QPSK	3	20415	1#0	23.10	0.18
Band5	QPSK	3	20525	1#0	23.23	0.19
Band5	QPSK	3	20635	1#0	23.24	0.19
Band5	16QAM	3	20415	1#0	22.54	0.16
Band5	16QAM	3	20525	1#0	22.43	0.16
Band5	16QAM	3	20635	1#0	22.54	0.16
Band5	64QAM	3	20415	1#0	22.39	0.15
Band5	64QAM	3	20525	1#0	22.45	0.16
Band5	64QAM	3	20635	1#0	22.38	0.15
Band5	QPSK	5	20425	1#0	23.10	0.18
Band5	QPSK	5	20525	1#0	23.18	0.19
Band5	QPSK	5	20625	1#0	23.20	0.19
Band5	16QAM	5	20425	1#0	22.56	0.16
Band5	16QAM	5	20525	1#0	22.40	0.15
Band5	16QAM	5	20625	1#0	22.57	0.16
Band5	64QAM	5	20425	1#0	22.43	0.16
Band5	64QAM	5	20525	1#0	22.35	0.15
Band5	64QAM	5	20625	1#0	22.42	0.16
Band5	QPSK	10	20450	1#0	23.24	0.19
Band5	QPSK	10	20525	1#0	23.25	0.19
Band5	QPSK	10	20600	1#0	23.28	0.19
Band5	16QAM	10	20450	1#0	22.61	0.16
Band5	16QAM	10	20525	1#0	22.53	0.16
Band5	16QAM	10	20600	1#0	22.63	0.16
Band5	64QAM	10	20450	1#0	22.48	0.16
Band5	64QAM	10	20525	1#0	22.45	0.16
Band5	64QAM	10	20600	1#0	22.52	0.16

Frequency (MHz)	Peak ERP (dBm)	PcaCable loss(dB)	Ga Antenna Gain (dB)	Correction (dB)	Pmea (dBm)	Polarization
824.0	21.29	-3.4	8.3	2.15	18.54	Vertical
836.5	21.26	-3.4	8.3	2.15	18.51	Vertical
848.9	22.00	-3.4	8.3	2.15	19.25	Vertical

Test result:
Channel 20400

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1650.44	-53.15	-13	Vertical
1668.07	-51.00	-13	Horizontal
2535.85	-44.82	-13	Vertical
2577.96	-43.90	-13	Vertical
8961.75	-39.71	-13	Vertical
9972.10	-36.32	-13	Vertical

Channel 20525

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1648.16	-52.53	-13	Vertical
1666.29	-51.22	-13	Vertical
2533.64	-44.60	-13	Vertical
2577.81	-44.05	-13	Vertical
8964.11	-40.01	-13	Vertical
9972.34	-35.89	-13	Horizontal

Channel 20649

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1648.70	-53.34	-13	Horizontal
1667.22	-51.73	-13	Vertical
2533.63	-44.62	-13	Vertical
2575.30	-44.01	-13	Vertical
8961.28	-39.90	-13	Vertical
9972.10	-35.97	-13	Vertical

LTE band 7
Test result:
Up Antenna

band	Modulation	BW (MHz)	Channel	RB/ RB offset	EIRP/ERP (dBm)	EIRP/ERP (W)
Band7	QPSK	5	20775	1#0	24.73	0.21
Band7	QPSK	5	21100	1#0	24.70	0.21
Band7	QPSK	5	21425	1#0	24.68	0.21
Band7	16QAM	5	20775	1#0	24.03	0.18
Band7	16QAM	5	21100	1#0	23.95	0.18
Band7	16QAM	5	21425	1#0	23.92	0.17
Band7	64QAM	5	20775	1#0	23.98	0.18
Band7	64QAM	5	21100	1#0	23.82	0.17
Band7	64QAM	5	21425	1#0	23.81	0.17
Band7	QPSK	10	20800	1#0	24.76	0.21
Band7	QPSK	10	21100	1#0	24.69	0.21
Band7	QPSK	10	21400	1#0	24.69	0.21
Band7	16QAM	10	20800	1#0	24.00	0.18
Band7	16QAM	10	21100	1#0	23.90	0.17
Band7	16QAM	10	21400	1#0	23.80	0.17
Band7	64QAM	10	20800	1#0	23.90	0.17
Band7	64QAM	10	21100	1#0	23.85	0.17
Band7	64QAM	10	21400	1#0	23.72	0.17
Band7	QPSK	15	20825	1#0	24.81	0.21
Band7	QPSK	15	21100	1#0	24.80	0.21
Band7	QPSK	15	21375	1#0	24.61	0.20
Band7	16QAM	15	20825	1#0	23.98	0.18
Band7	16QAM	15	21100	1#0	24.02	0.18
Band7	16QAM	15	21375	1#0	23.84	0.17
Band7	64QAM	15	20825	1#0	23.97	0.18
Band7	64QAM	15	21100	1#0	23.89	0.17
Band7	64QAM	15	21375	1#0	23.80	0.17
Band7	QPSK	20	20850	1#0	24.87	0.22
Band7	QPSK	20	21100	1#0	24.83	0.22
Band7	QPSK	20	21350	1#0	24.72	0.21
Band7	16QAM	20	20850	1#0	24.06	0.18
Band7	16QAM	20	21100	1#0	24.04	0.18
Band7	16QAM	20	21350	1#0	23.92	0.17
Band7	64QAM	20	20850	1#0	23.99	0.18
Band7	64QAM	20	21100	1#0	23.97	0.18
Band7	64QAM	20	21350	1#0	23.84	0.17

Frequency (MHz)	Peak EIRP(dBm)	Pca Cable loss	Ga Antenna Gain (dB)	Pmea (dBm)	Polarization
2502.5	23.39	-2.6	7.5	18.49	Vertical
2535	23.45	-2.6	7.5	18.55	Vertical
2560	23.65	-2.6	7.5	18.75	Vertical

Test result:

Channel 20775

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2460.94	-49.15	-25	Vertical
2778.22	-47.43	-25	Vertical
3726.56	-40.72	-25	Horizontal
6675.84	-39.88	-25	Vertical
9960.96	-37.75	-25	Vertical
17820.75	-33.77	-25	Vertical

Channel 21100

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2459.25	-49.37	-25	Vertical
2779.98	-47.59	-25	Vertical
3725.19	-40.89	-25	Vertical
6678.79	-39.54	-25	Horizontal
9960.92	-37.75	-25	Vertical
17821.55	-33.55	-25	Vertical

Channel 21350

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2460.70	-48.90	-25	Vertical
2778.52	-47.65	-25	Vertical
3728.18	-41.17	-25	Vertical
6676.67	-39.73	-25	Horizontal
9962.55	-37.47	-25	Vertical
17819.98	-33.88	-25	Vertical

Down Antenna

band	Modulation	BW (MHz)	Channel	RB/ RB offset	EIRP/ERP (dBm)	EIRP/ERP (W)
Band7	QPSK	5	20775	1#0	24.58	0.20
Band7	QPSK	5	21100	1#0	24.51	0.20
Band7	QPSK	5	21425	1#0	24.61	0.20
Band7	16QAM	5	20775	1#0	23.72	0.17
Band7	16QAM	5	21100	1#0	23.65	0.16
Band7	16QAM	5	21425	1#0	23.85	0.17
Band7	64QAM	5	20775	1#0	23.71	0.17
Band7	64QAM	5	21100	1#0	23.64	0.16
Band7	64QAM	5	21425	1#0	23.68	0.17
Band7	QPSK	10	20800	1#0	24.53	0.20
Band7	QPSK	10	21100	1#0	24.41	0.20
Band7	QPSK	10	21400	1#0	24.64	0.21
Band7	16QAM	10	20800	1#0	23.73	0.17
Band7	16QAM	10	21100	1#0	23.72	0.17
Band7	16QAM	10	21400	1#0	23.77	0.17
Band7	64QAM	10	20800	1#0	23.71	0.17
Band7	64QAM	10	21100	1#0	23.64	0.16
Band7	64QAM	10	21400	1#0	23.73	0.17
Band7	QPSK	15	20825	1#0	24.56	0.20
Band7	QPSK	15	21100	1#0	24.40	0.19
Band7	QPSK	15	21375	1#0	24.60	0.20
Band7	16QAM	15	20825	1#0	23.75	0.17
Band7	16QAM	15	21100	1#0	23.63	0.16
Band7	16QAM	15	21375	1#0	23.77	0.17
Band7	64QAM	15	20825	1#0	23.66	0.16
Band7	64QAM	15	21100	1#0	23.59	0.16
Band7	64QAM	15	21375	1#0	23.78	0.17
Band7	QPSK	20	20850	1#0	24.60	0.20
Band7	QPSK	20	21100	1#0	24.52	0.20
Band7	QPSK	20	21350	1#0	24.66	0.21
Band7	16QAM	20	20850	1#0	23.79	0.17
Band7	16QAM	20	21100	1#0	23.77	0.17
Band7	16QAM	20	21350	1#0	23.88	0.17
Band7	64QAM	20	20850	1#0	23.72	0.17
Band7	64QAM	20	21100	1#0	23.67	0.16
Band7	64QAM	20	21350	1#0	23.79	0.17

Frequency (MHz)	Peak EIRP(dBm)	Pca Cable loss	Ga Antenna Gain (dB)	Pmea (dBm)	Polarization
2502.5	23.17	-2.6	7.5	18.27	Vertical
2535	23.12	-2.6	7.5	18.22	Vertical
2560	23.88	-2.6	7.5	18.98	Vertical

Test result:
Channel 20775

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2458.44	-48.74	-25	Vertical
2780.45	-47.16	-25	Vertical
3727.03	-41.32	-25	Horizontal
6678.31	-39.71	-25	Vertical
9963.27	-37.70	-25	Vertical
17821.89	-33.96	-25	Vertical

Channel 21100

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2458.30	-48.86	-25	Vertical
2781.33	-47.45	-25	Vertical
3727.55	-41.24	-25	Vertical
6678.34	-39.65	-25	Horizontal
9963.07	-37.43	-25	Vertical
17821.96	-34.12	-25	Vertical

Channel 21350

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2458.25	-48.53	-25	Vertical
2779.40	-46.94	-25	Vertical
3728.28	-41.28	-25	Vertical
6676.12	-39.20	-25	Horizontal
9959.95	-36.82	-25	Vertical
17820.33	-34.44	-25	Vertical

LTE band 12
Test result:
Up Antenna

band	Modulation	BW (MHz)	Channel	RB/ RB offset	EIRP/ERP (dBm)	EIRP/ERP (W)
Band12	QPSK	1.4	23017	1#0	23.38	0.19
Band12	QPSK	1.4	23095	1#0	23.32	0.19
Band12	QPSK	1.4	23173	1#0	23.27	0.19
Band12	16QAM	1.4	23017	1#0	22.62	0.16
Band12	16QAM	1.4	23095	1#0	22.64	0.16
Band12	16QAM	1.4	23173	1#0	22.58	0.16
Band12	64QAM	1.4	23017	1#0	22.64	0.16
Band12	64QAM	1.4	23095	1#0	22.48	0.16
Band12	64QAM	1.4	23173	1#0	22.47	0.16
Band12	QPSK	3	23025	1#0	23.33	0.19
Band12	QPSK	3	23095	1#0	23.39	0.19
Band12	QPSK	3	23165	1#0	23.38	0.19
Band12	16QAM	3	23025	1#0	22.73	0.17
Band12	16QAM	3	23095	1#0	22.55	0.16
Band12	16QAM	3	23165	1#0	22.60	0.16
Band12	64QAM	3	23025	1#0	22.66	0.16
Band12	64QAM	3	23095	1#0	22.52	0.16
Band12	64QAM	3	23165	1#0	22.57	0.16
Band12	QPSK	5	23035	1#0	23.41	0.20
Band12	QPSK	5	23095	1#0	23.34	0.19
Band12	QPSK	5	23155	1#0	23.28	0.19
Band12	16QAM	5	23035	1#0	22.62	0.16
Band12	16QAM	5	23095	1#0	22.55	0.16
Band12	16QAM	5	23155	1#0	22.68	0.17
Band12	64QAM	5	23035	1#0	22.57	0.16
Band12	64QAM	5	23095	1#0	22.54	0.16
Band12	64QAM	5	23155	1#0	22.53	0.16
Band12	QPSK	10	23060	1#0	23.45	0.20
Band12	QPSK	10	23095	1#0	23.39	0.19
Band12	QPSK	10	23130	1#0	23.42	0.20
Band12	16QAM	10	23060	1#0	22.76	0.17
Band12	16QAM	10	23095	1#0	22.66	0.16
Band12	16QAM	10	23130	1#0	22.72	0.17
Band12	64QAM	10	23060	1#0	22.67	0.16
Band12	64QAM	10	23095	1#0	22.59	0.16
Band12	64QAM	10	23130	1#0	22.61	0.16

Frequency (MHz)	Peak ERP (dBm)	PcaCable loss(dB)	Ga Antenna Gain (dB)	Correction (dB)	Pmea (dBm)	Polarization
698.0	23.65	-3.4	8.3	2.15	20.90	Vertical
707.0	23.54	-3.4	8.3	2.15	20.79	Vertical
715.9	23.41	-3.4	8.3	2.15	20.66	Vertical

Test result:
Channel 23000

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1646.58	-53.01	-13	Vertical
1667.90	-51.20	-13	Horizontal
2533.58	-43.93	-13	Vertical
2578.49	-43.89	-13	Vertical
8964.49	-39.41	-13	Vertical
9970.10	-36.48	-13	Vertical

Channel 23090

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1649.87	-53.06	-13	Vertical
1666.37	-50.83	-13	Vertical
2534.63	-44.65	-13	Vertical
2575.95	-43.88	-13	Vertical
8961.07	-39.38	-13	Horizontal
9973.56	-36.61	-13	Vertical

Channel 23179

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1648.27	-53.05	-13	Horizontal
1666.43	-51.33	-13	Vertical
2535.24	-44.10	-13	Vertical
2576.11	-43.92	-13	Vertical
8962.49	-39.78	-13	Vertical
9973.50	-36.14	-13	Vertical

Down Antenna

band	Modulation	BW (MHz)	Channel	RB/ RB offset	EIRP/ERP (dBm)	EIRP/ERP (W)
Band12	QPSK	1.4	23017	1#0	23.45	0.20
Band12	QPSK	1.4	23095	1#0	23.38	0.19
Band12	QPSK	1.4	23173	1#0	23.47	0.20
Band12	16QAM	1.4	23017	1#0	22.71	0.17
Band12	16QAM	1.4	23095	1#0	22.63	0.16
Band12	16QAM	1.4	23173	1#0	22.72	0.17
Band12	64QAM	1.4	23017	1#0	22.69	0.17
Band12	64QAM	1.4	23095	1#0	22.53	0.16
Band12	64QAM	1.4	23173	1#0	22.59	0.16
Band12	QPSK	3	23025	1#0	23.44	0.20
Band12	QPSK	3	23095	1#0	23.33	0.19
Band12	QPSK	3	23165	1#0	23.48	0.20
Band12	16QAM	3	23025	1#0	22.76	0.17
Band12	16QAM	3	23095	1#0	22.69	0.17
Band12	16QAM	3	23165	1#0	22.77	0.17
Band12	64QAM	3	23025	1#0	22.66	0.16
Band12	64QAM	3	23095	1#0	22.66	0.16
Band12	64QAM	3	23165	1#0	22.57	0.16
Band12	QPSK	5	23035	1#0	23.42	0.20
Band12	QPSK	5	23095	1#0	23.44	0.20
Band12	QPSK	5	23155	1#0	23.40	0.19
Band12	16QAM	5	23035	1#0	22.80	0.17
Band12	16QAM	5	23095	1#0	22.66	0.16
Band12	16QAM	5	23155	1#0	22.78	0.17
Band12	64QAM	5	23035	1#0	22.66	0.16
Band12	64QAM	5	23095	1#0	22.53	0.16
Band12	64QAM	5	23155	1#0	22.71	0.17
Band12	QPSK	10	23060	1#0	23.55	0.20
Band12	QPSK	10	23095	1#0	23.47	0.20
Band12	QPSK	10	23130	1#0	23.51	0.20
Band12	16QAM	10	23060	1#0	22.85	0.17
Band12	16QAM	10	23095	1#0	22.76	0.17
Band12	16QAM	10	23130	1#0	22.81	0.17
Band12	64QAM	10	23060	1#0	22.74	0.17
Band12	64QAM	10	23095	1#0	22.66	0.16
Band12	64QAM	10	23130	1#0	22.71	0.17

Frequency (MHz)	Peak ERP (dBm)	PcaCable loss(dB)	Ga Antenna Gain (dB)	Correction (dB)	Pmea (dBm)	Polarization
698.0	23.41	-3.4	8.3	2.15	20.66	Vertical
707.0	23.72	-3.4	8.3	2.15	20.97	Vertical
715.9	22.81	-3.4	8.3	2.15	20.06	Vertical

Test result:

Channel 23000

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1647.05	-52.72	-13	Vertical
1665.71	-50.78	-13	Horizontal
2533.44	-44.71	-13	Vertical
2576.09	-44.52	-13	Vertical
8963.50	-39.80	-13	Vertical
9972.84	-36.34	-13	Vertical

Channel 23090

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1649.95	-52.96	-13	Vertical
1666.54	-51.22	-13	Vertical
2532.86	-44.70	-13	Vertical
2576.91	-44.22	-13	Vertical
8964.42	-39.46	-13	Horizontal
9969.67	-36.18	-13	Vertical

Channel 23179

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1647.73	-52.91	-13	Horizontal
1668.04	-51.35	-13	Vertical
2532.84	-44.06	-13	Vertical
2577.42	-44.59	-13	Vertical
8963.43	-39.91	-13	Vertical
9971.99	-36.47	-13	Vertical

Test with secondary supply：

LTE band 2 Up Antenna Channel 18615 is selected as the worst point for RSE.

LTE band 2 Up Antenna Channel 18615

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2458.66	-49.23	-13	Vertical
2779.15	-47.51	-13	Vertical
3724.61	-41.14	-13	Vertical
6678.07	-39.16	-13	Vertical
9962.89	-36.77	-13	Horizontal
17820.94	-34.17	-13	Vertical

---The end of the test report---