APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 13

1 RF Power Output

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	779.5	23205	5	1	0	23.11
				1	24	23.07
				12	6	22.33
				25	0	22.30
	782	23230		1	0	23.09
				1	24	23.02
				12	6	22.26
				25	0	22.21
	784.5	23255		1	0	23.17
				1	24	23.12
				12	6	22.38
				25	0	22.37
16QAM	779.5	23205	5	1	0	22.22
				1	24	22.13
				12	6	21.40
				25	0	21.41
	782	23230		1	0	22.14
				1	24	22.09
				12	6	21.34
				25	0	21.27
	784.5	23255		1	0	22.28
				1	24	22.20
				12	6	21.40
				25	0	21.44
64QAM	779.5	23205	5	1	0	22.18
				1	24	22.15
				12	6	21.43
				25	0	21.40
	782	23230		1	0	22.16
				1	24	22.10
				12	6	21.28
				25	0	21.27
	784.5	23255		1	0	22.28
				1	24	22.21
				12	6	21.48
				25	0	21.40

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	782	23230	10	1	0	23.22
				1	49	23.18
				24	12	22.36
				50	0	22.33
16QAM	782	23230	10	1	0	22.38
				1	49	22.26
				24	12	21.44
				50	0	21.42
64QAM	782	23230	10	1	0	22.24
				1	49	22.18
				24	12	21.41
				50	0	21.40

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	
13	779.5	23205	5	25	0	4.4716	Fig.1	4.4718	Fig.2	4.4734	Fig.3
	782	23230		25	0	4.4709	Fig.4	4.4677	Fig.5	4.4777	Fig.6
	784.5	23255		25	0	4.4752	Fig.7	4.4753	Fig.8	4.4718	Fig.9
	782	23230	10	50	0	8.9313	Fig.10	8.9068	Fig.11	8.9248	Fig.12

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
13	779.5	23205	5	25	0	4.941	Fig.1	4.901	Fig.2	4.919	Fig.3
	782	23230		25	0	4.940	Fig.4	4.887	Fig.5	4.882	Fig.6
	784.5	23255		25	0	4.951	Fig.7	4.939	Fig.8	4.920	Fig.9
	782	23230	10	50	0	9.640	Fig.10	9.582	Fig.11	9.566	Fig.12

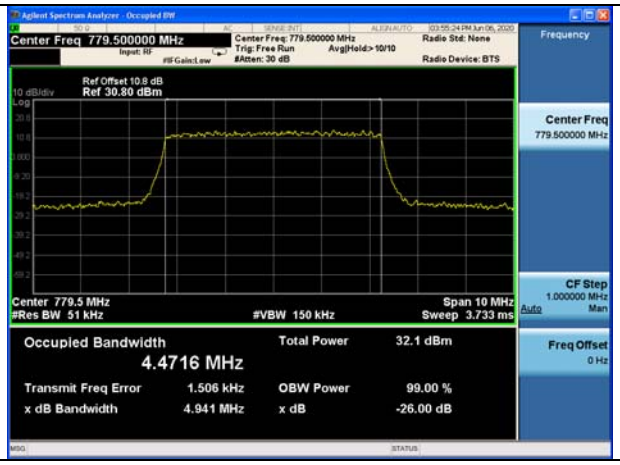

Fig.1

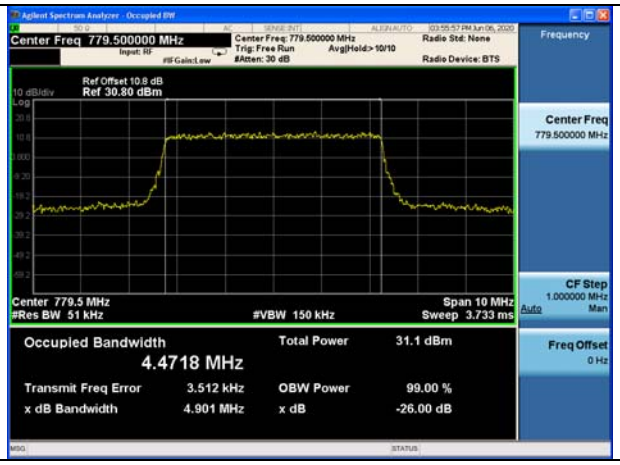

Fig.2

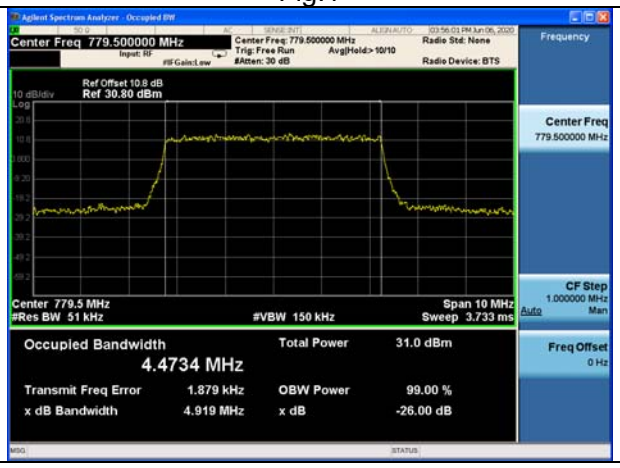

Fig.3

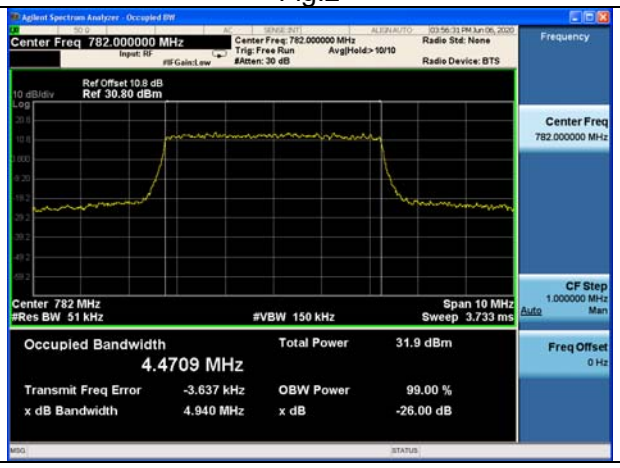

Fig.4

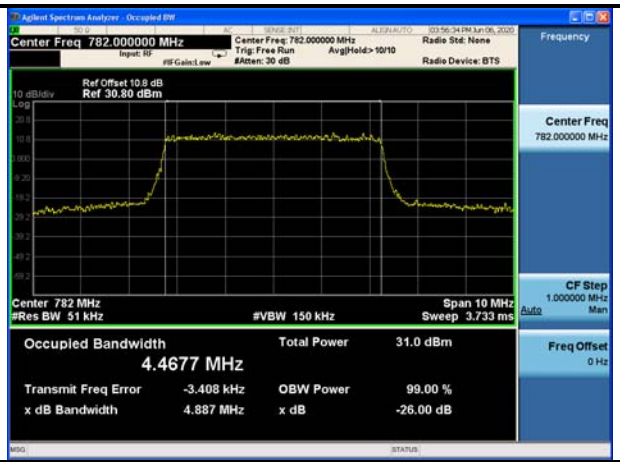

Fig.5

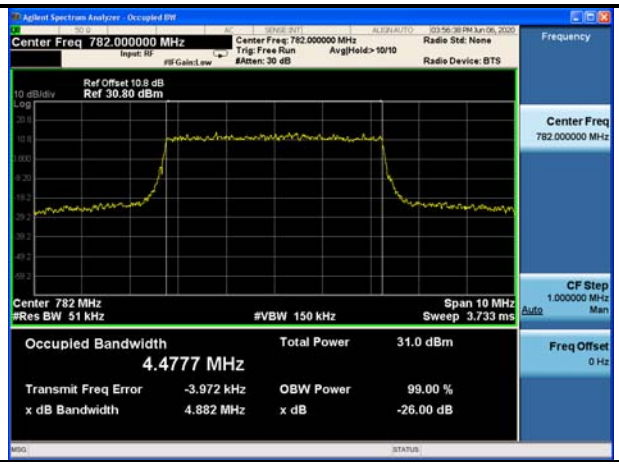

Fig.6

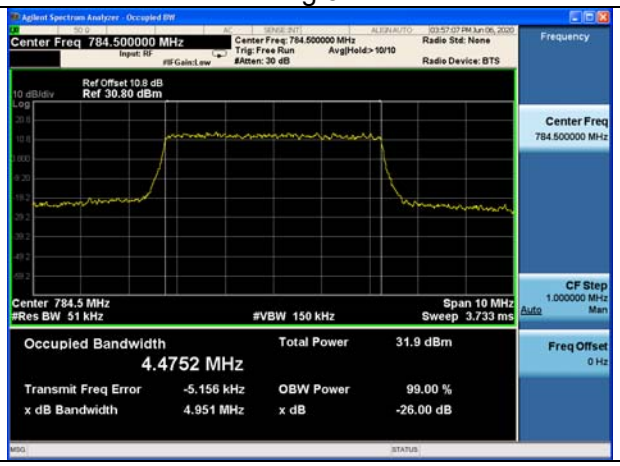

Fig.7

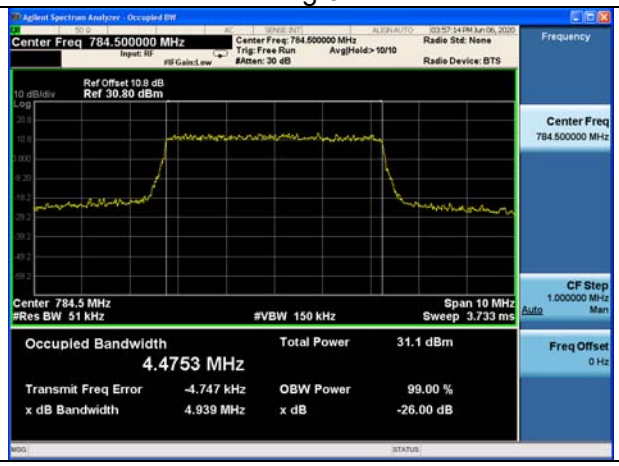

Fig.8

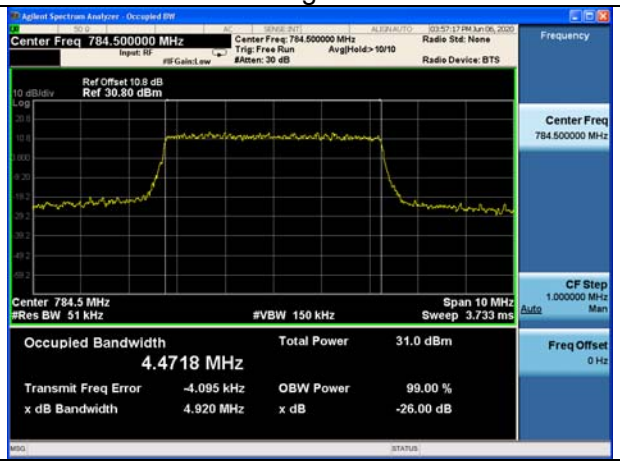

Fig.9

Fig.10

Agilent Spectrum Analyzer - Occupied BW
Span 20.000 MHz
Center Freq: 782.000000 MHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Span
20.000 MHz
Full Span
Last Span
Ref Offset 10.8 dB
10 dB/div
Ref 30.80 dBm
Center 782 MHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 1.933 ms
Occupied Bandwidth
8.9068 MHz
Total Power
31.5 dBm
Transmit Freq Error
13.091 kHz
OBW Power
99.00 %
x dB Bandwidth
9.582 MHz
x dB
-26.00 dB

Fig.11

Agilent Spectrum Analyzer - Occupied BW
Span 20.000 MHz
Center Freq: 782.000000 MHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Span
20.000 MHz
Full Span
Last Span
Ref Offset 10.8 dB
10 dB/div
Ref 30.80 dBm
Center 782 MHz
#Res BW 100 kHz
#VBW 300 kHz
Span 20 MHz
Sweep 1.933 ms
Occupied Bandwidth
8.9248 MHz
Total Power
31.3 dBm
Transmit Freq Error
16.107 kHz
OBW Power
99.00 %
x dB Bandwidth
9.566 MHz
x dB
-26.00 dB

Fig.12

3 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM	64-QAM
13	782	23230	5	1	0	Fig.1	Fig.2	Fig.3
			10	1	0	Fig.4	Fig.5	Fig.6

Fig.1

Fig.2

Fig.3

Fig.4

Fig.5

Fig.6

4 Spurious Emissions at antenna terminal

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
13	782	23230	10	1	0	Fig.1

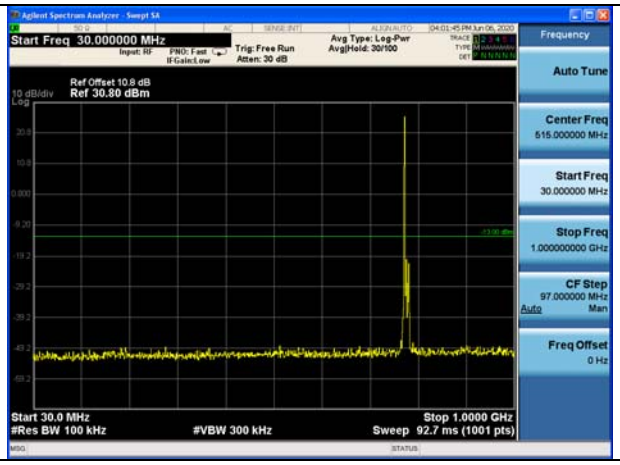

Fig.1

Fig.2

5 Band Edges Compliance

Test result

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Band Edges Plot
						QPSK
13	779.5	23205	5	1	0	Fig.1
				25	0	Fig.2
	784.5	23255		1	24	Fig.3
				25	0	Fig.4
	782	23230	10	1	0	Fig.5
				50	0	Fig.6
	782	23230		1	49	Fig.7
				50	0	Fig.8

Emission Mask Edge

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Band Edges Plot
						QPSK
13	779.5	23205	5	1	0	Fig.9
				25	0	Fig.10
	784.5	23255		1	24	Fig.11
				25	0	Fig.12
	782	23230	10	1	0	Fig.13
				50	0	Fig.14
	782	23230		1	49	Fig.15
				50	0	Fig.16

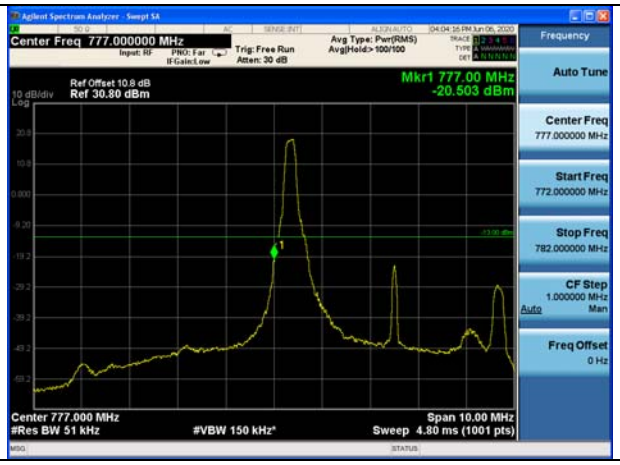

Fig.1

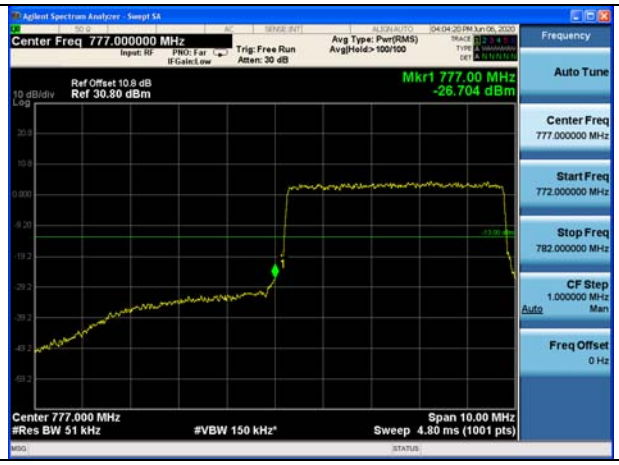

Fig.2

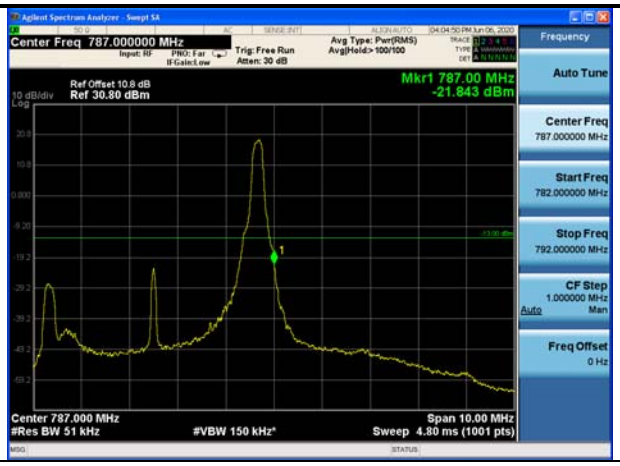

Fig.3

Fig.4

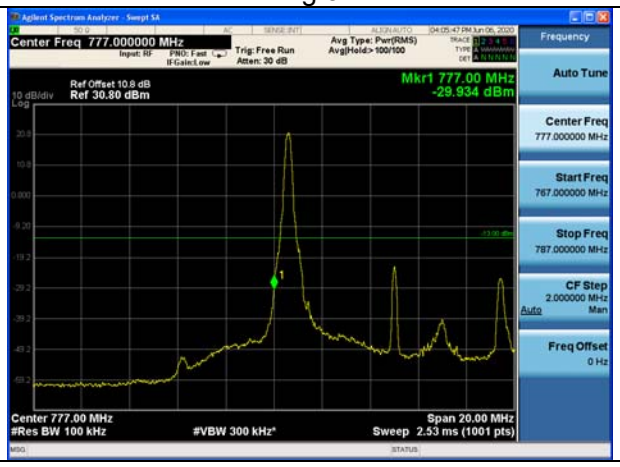

Fig.5

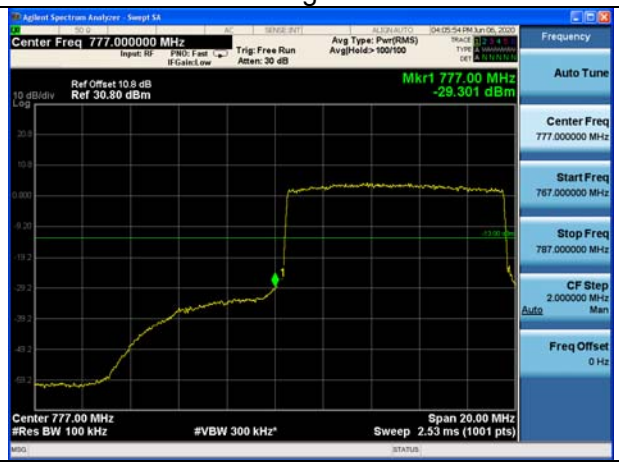

Fig.6

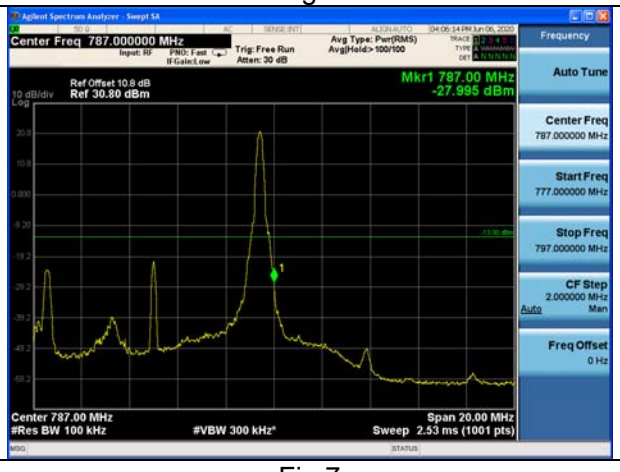

Fig.7

Fig.8

Fig.9

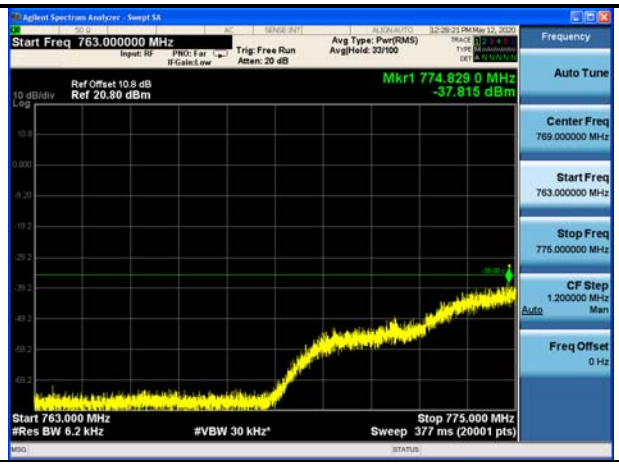

Fig.10

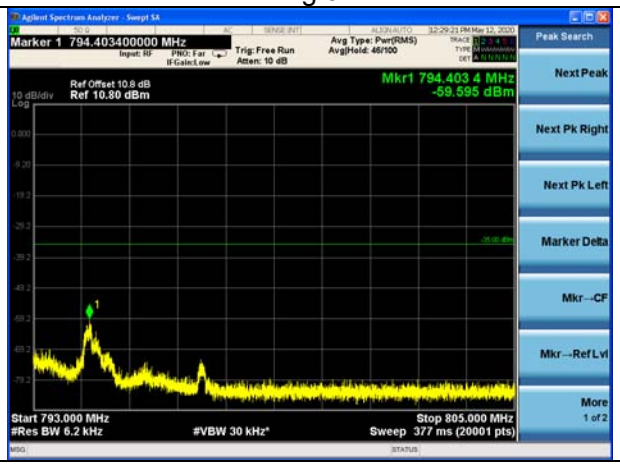

Fig.11

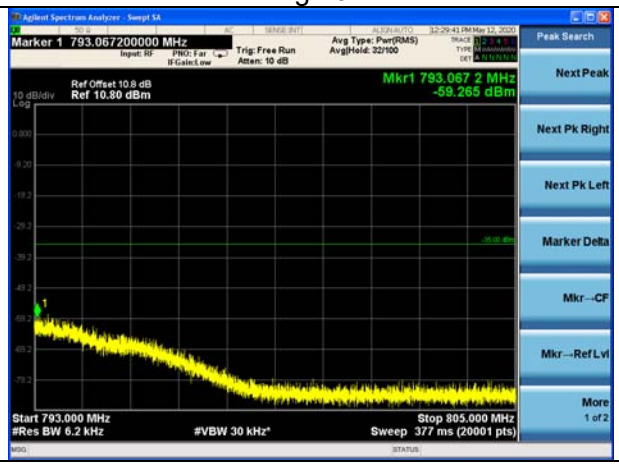

Fig.12

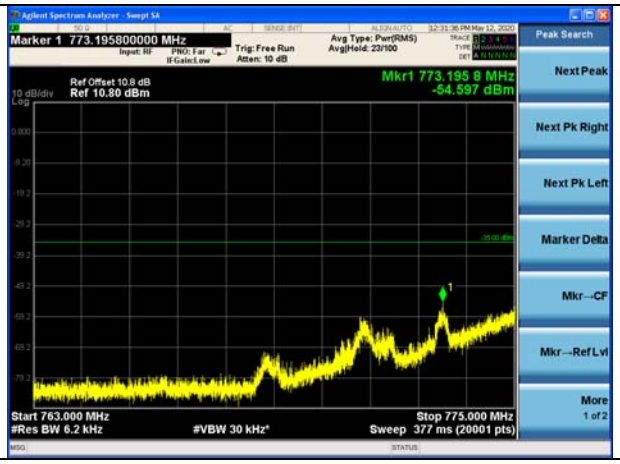

Fig.13

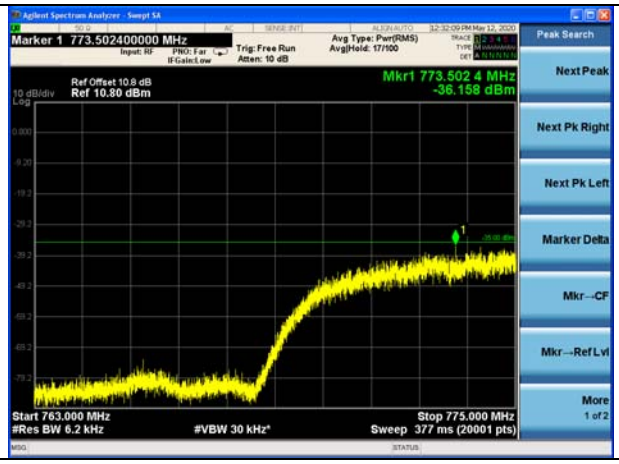

Fig.14

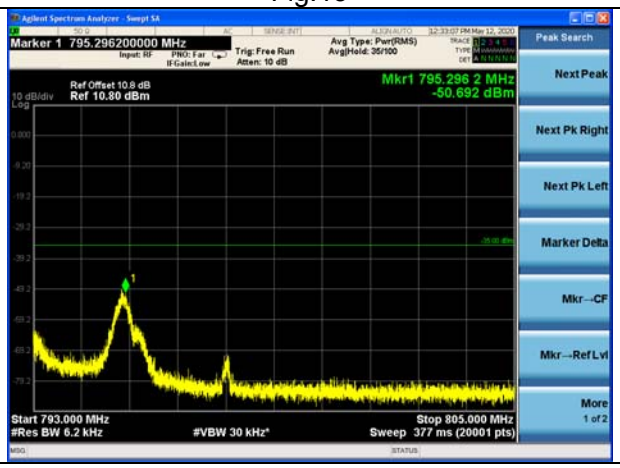

Fig.15

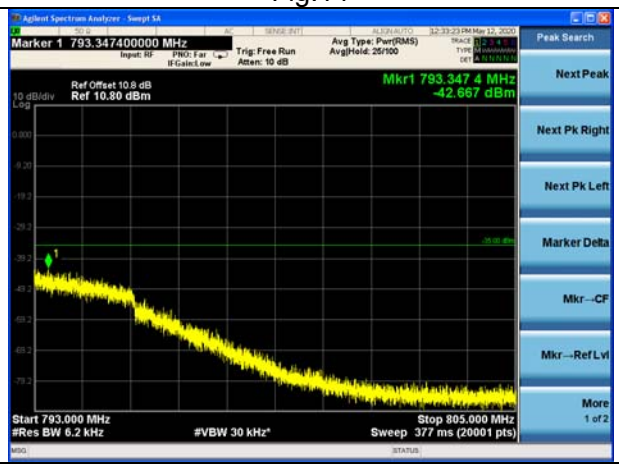

Fig.16

6 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band13 Low Channel	
		5M	10M
-10	NV	0.008	-0.002
0	NV	0.001	-0.013
+10	NV	0.008	-0.002
+20	NV	0.000	-0.016
+30	NV	0.004	0.011
+40	NV	0.009	0.007
+50	NV	0.012	-0.007
+55	NV	0.010	-0.022
+20	LV	0.004	-0.005
+20	HV	0.012	0.015

Temperature(°C)	Voltage	Test Result (ppm) Band13 High Channel	
		5M	10M
-10	NV	0.001	-0.019
0	NV	-0.011	-0.016
+10	NV	-0.011	-0.006
+20	NV	0.002	-0.018
+30	NV	-0.017	-0.011
+40	NV	0.006	-0.016
+50	NV	0.012	-0.018
+55	NV	-0.002	-0.020
+20	LV	-0.003	0.025
+20	HV	0.012	0.002