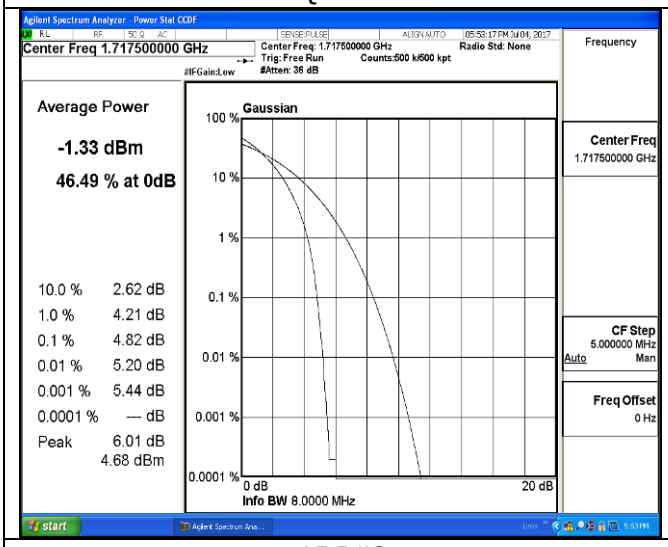
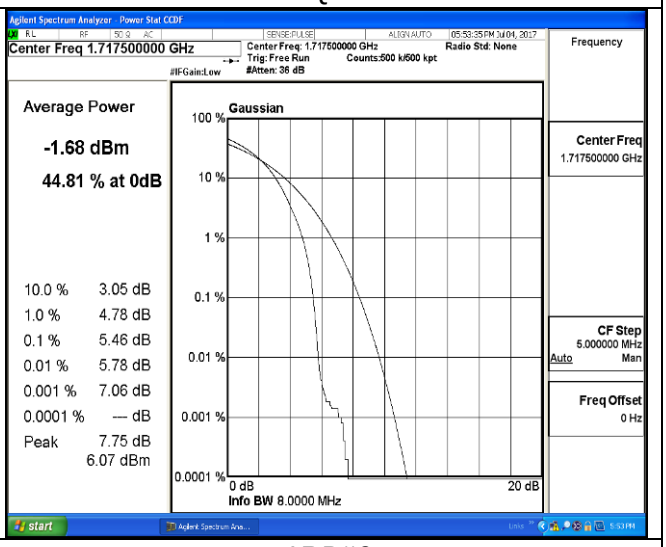
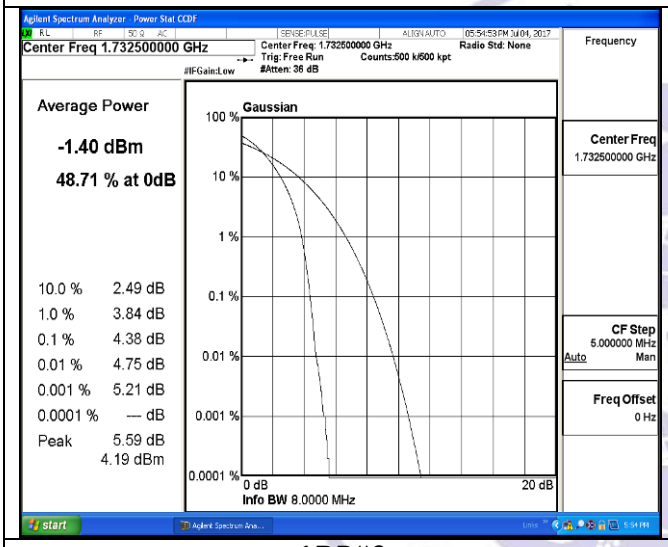
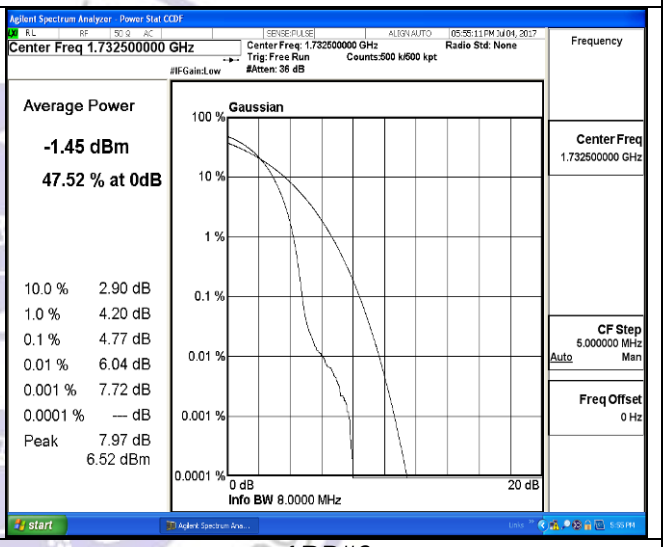
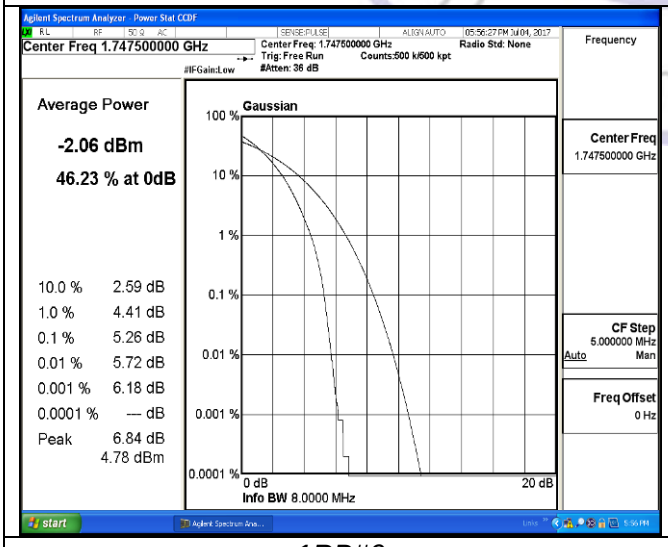
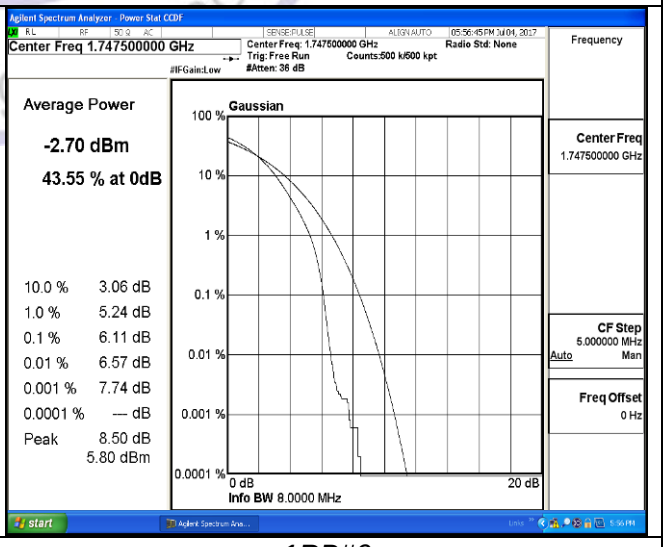
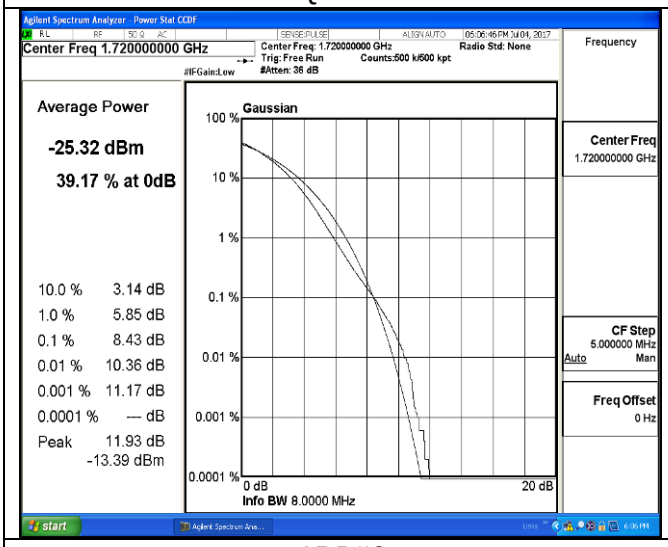
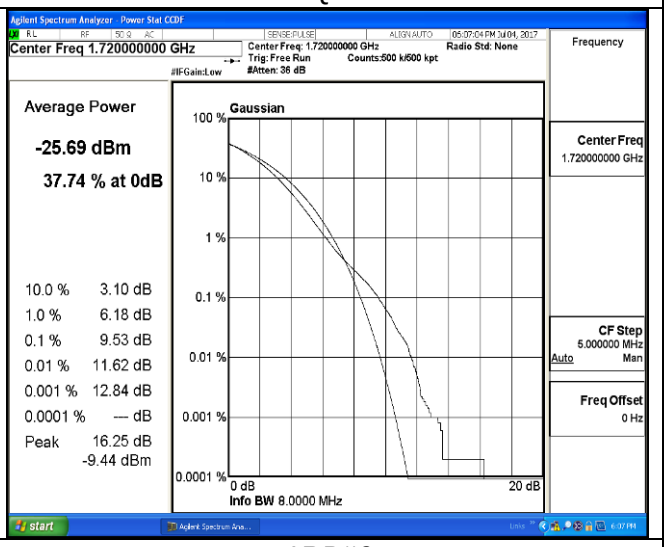
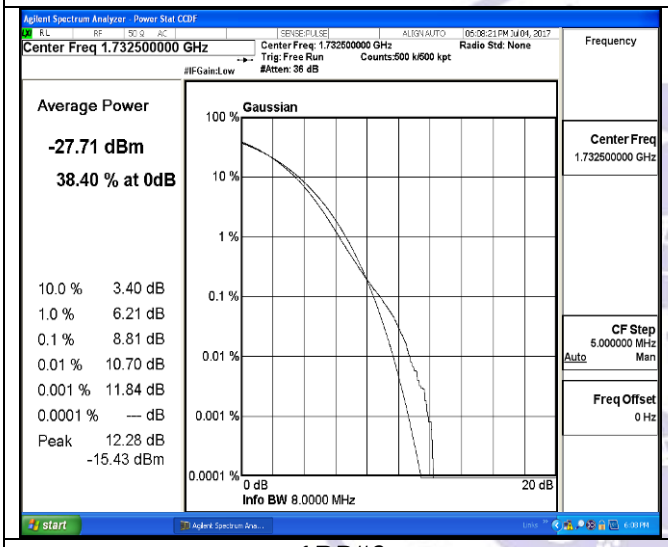
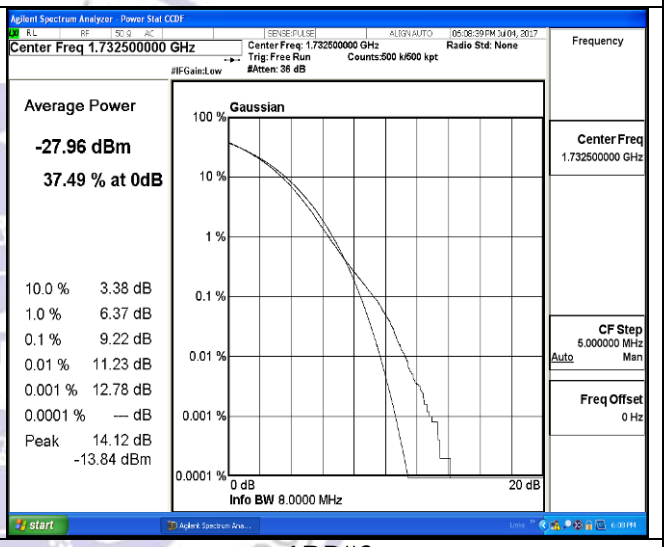
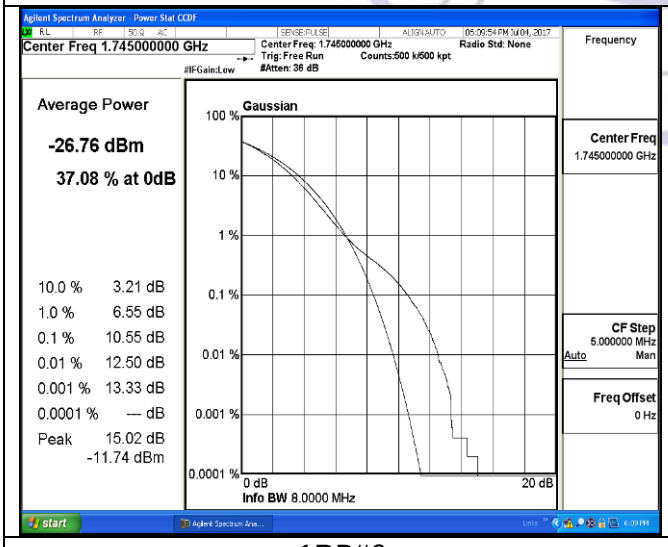
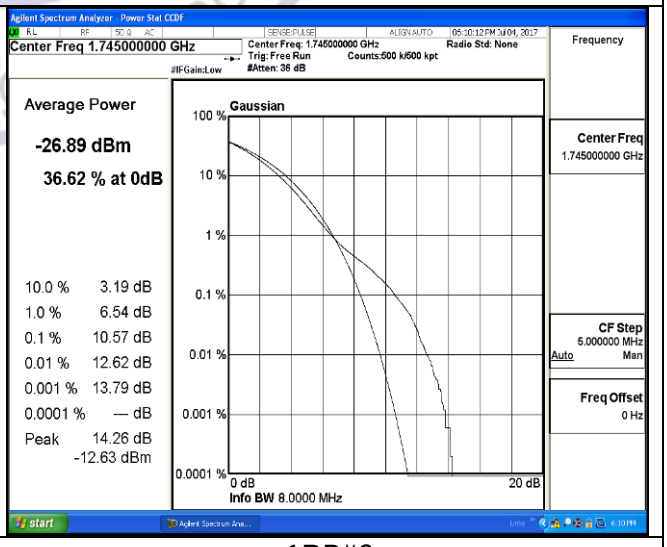
LTE FDD Band 4-15MHz Channel Bandwidth PAPR	
QPSK	16QAM
	
1RB#0	1RB#0
Low Channel	
	
1RB#0	1RB#0
Middle Channel	
	
1RB#0	1RB#0
High Channel	

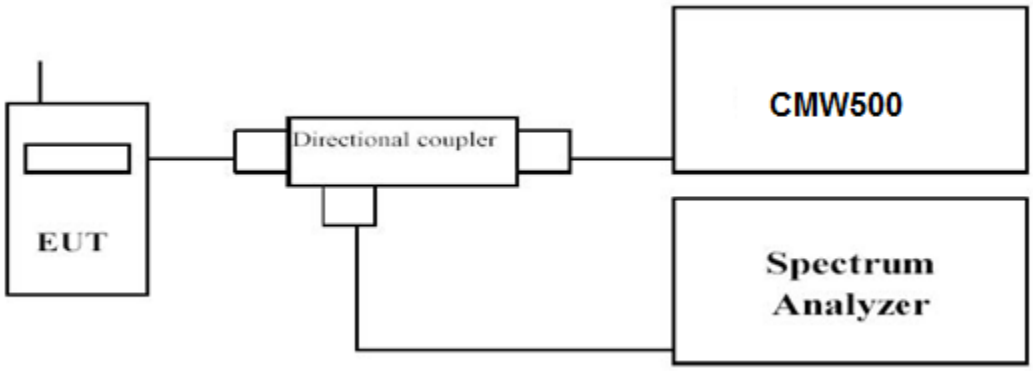
LTE FDD Band 4-20MHz Channel Bandwidth PAPR	
QPSK	16QAM
	
1RB#0	1RB#0
Low Channel	
	
1RB#0	1RB#0
Middle Channel	
	
1RB#0	1RB#0
High Channel	

3.3. Occupied Bandwidth and Emission Bandwidth

LIMIT

N/A

TEST CONFIGURATION



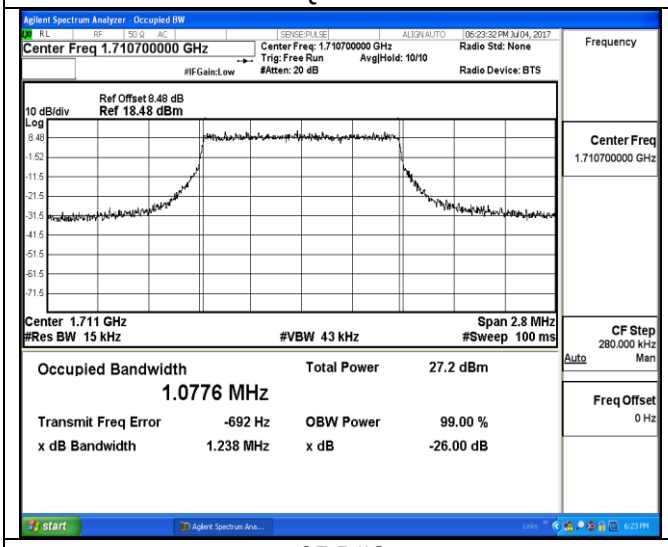
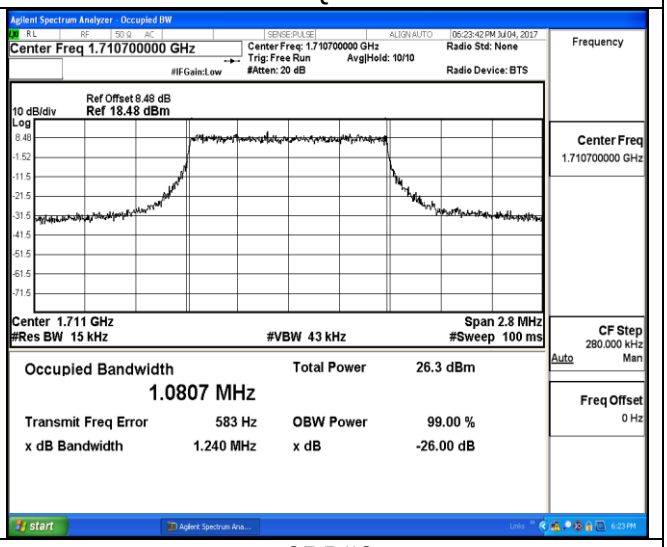
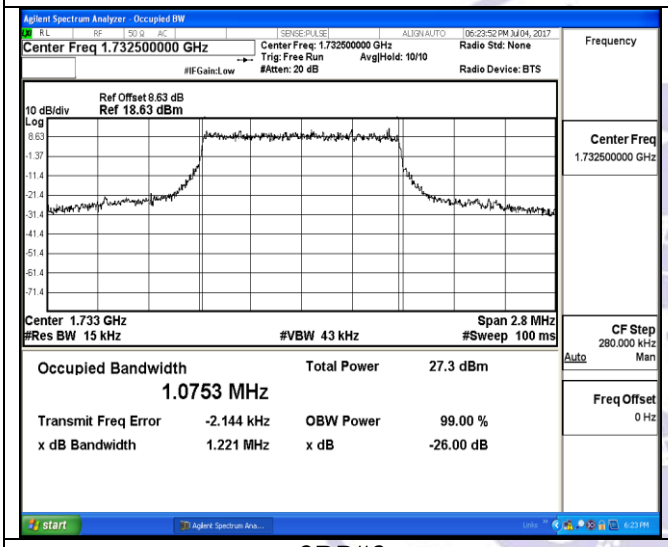
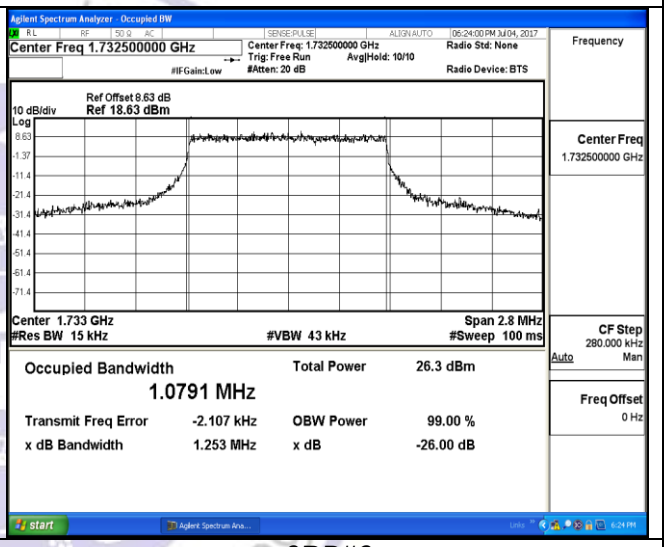
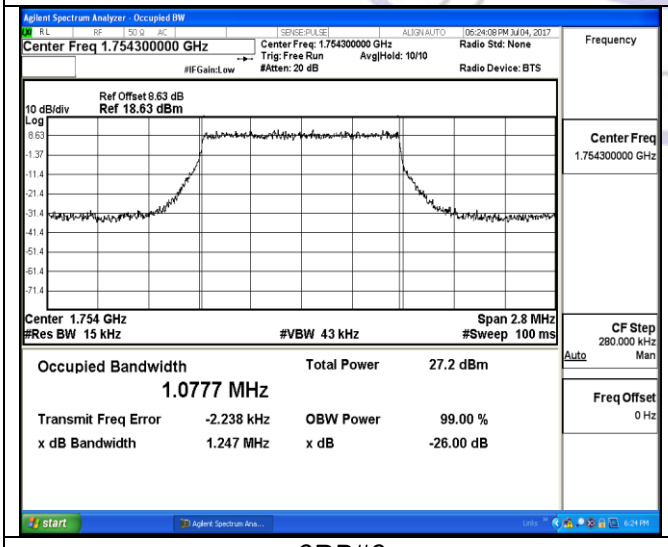
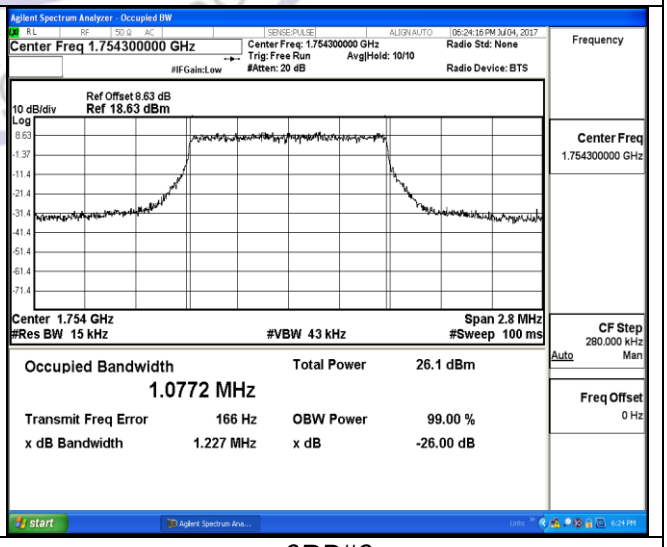
TEST PROCEDURE

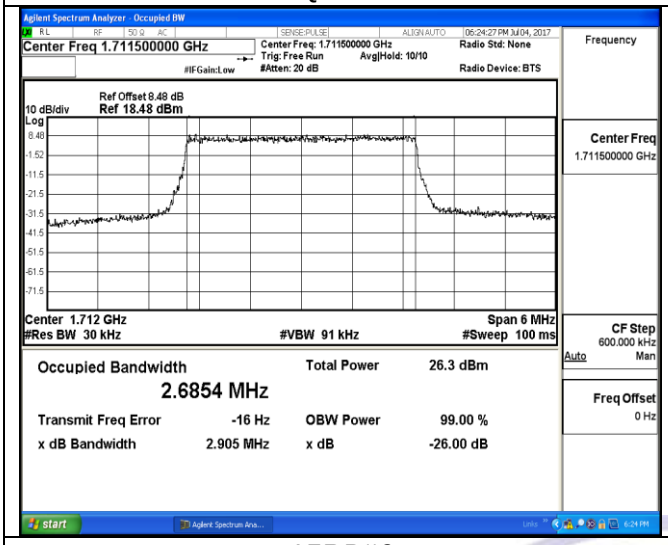
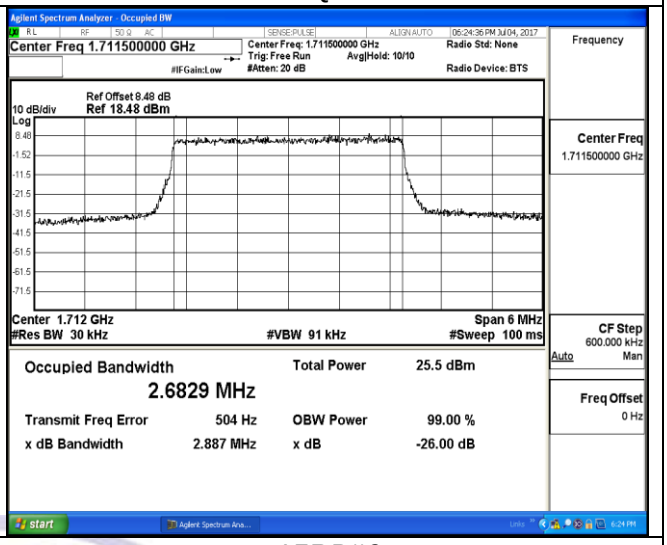
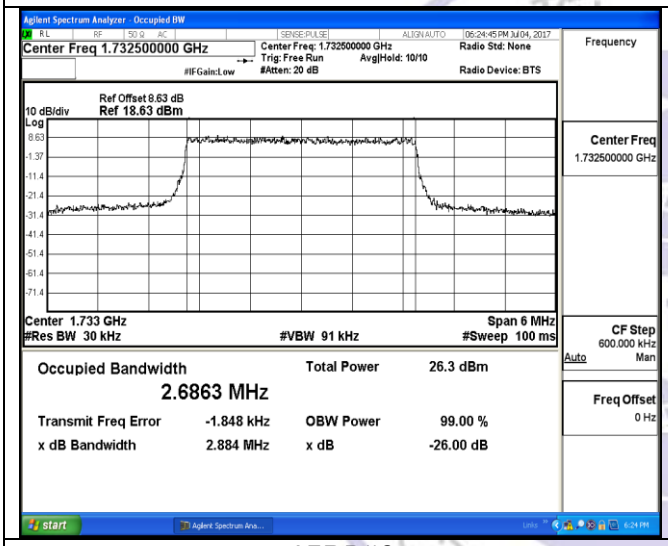
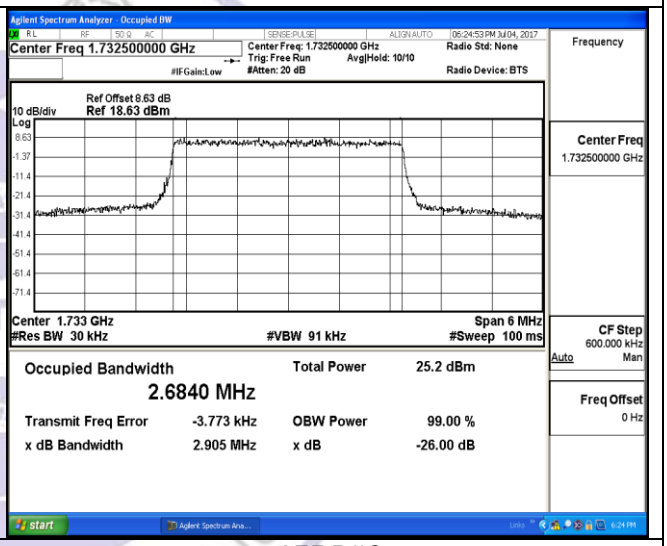
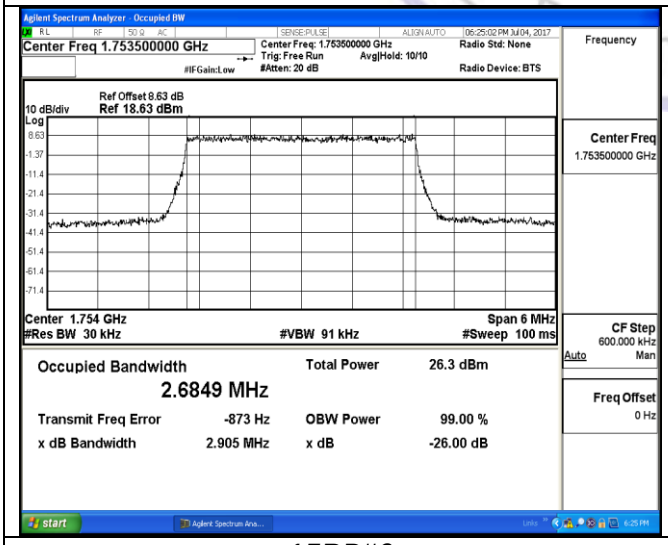
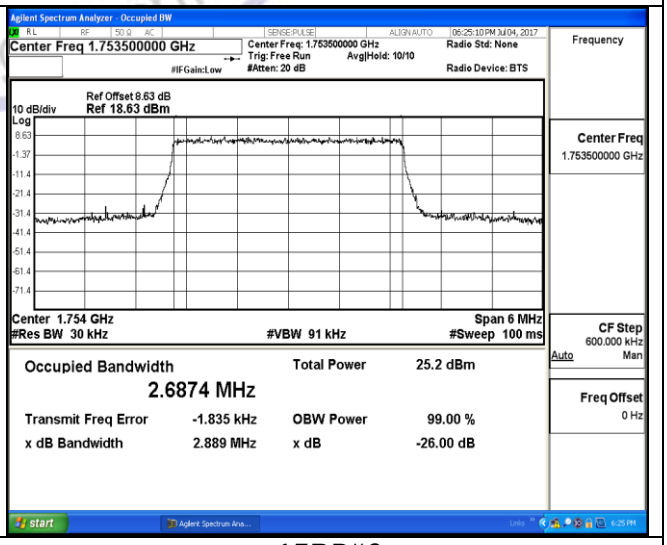
The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at low, middle and high channel in each band. The -26dBc Emission bandwidth was also measured and recorded.
Set RBW was set to about 1% of emission BW, VBW≥3 times RBW.
-26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

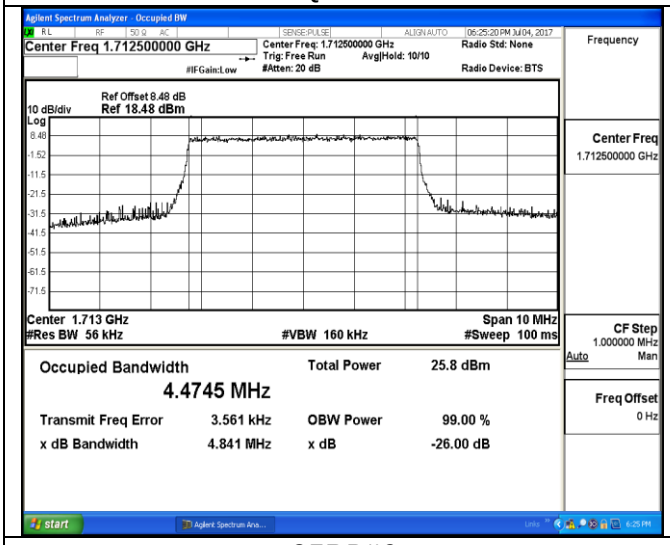
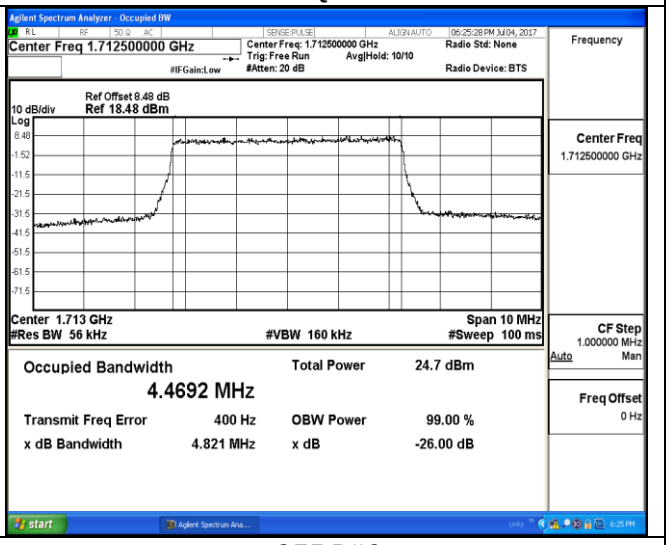
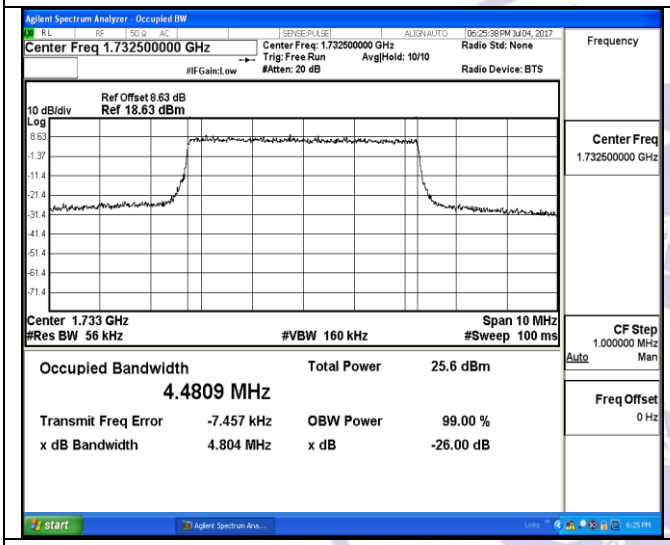
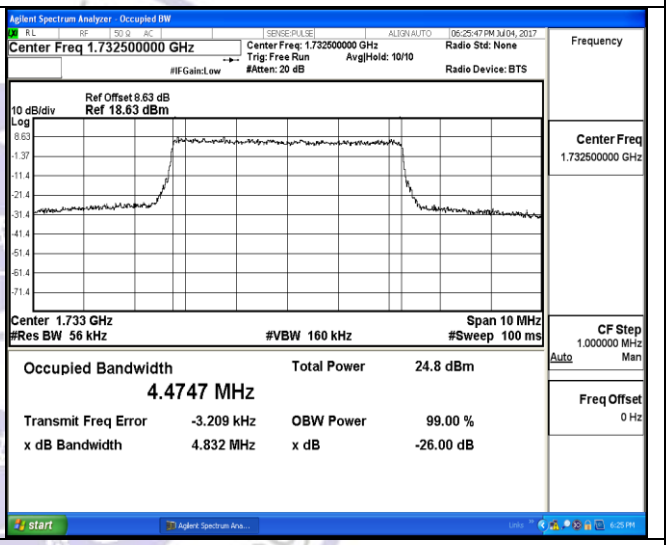
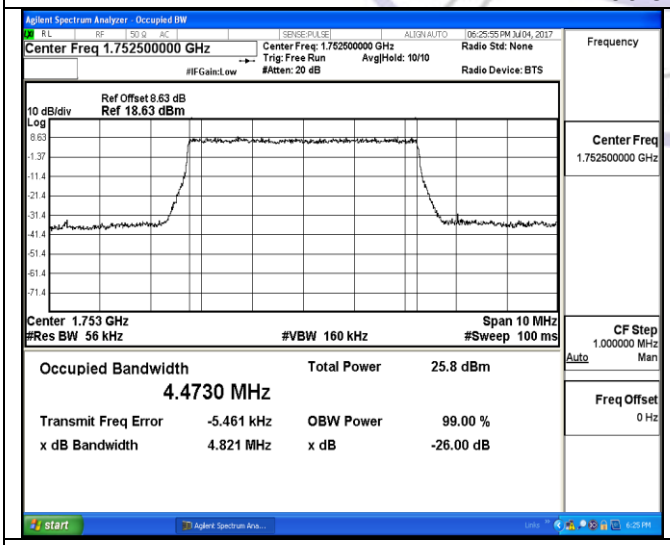
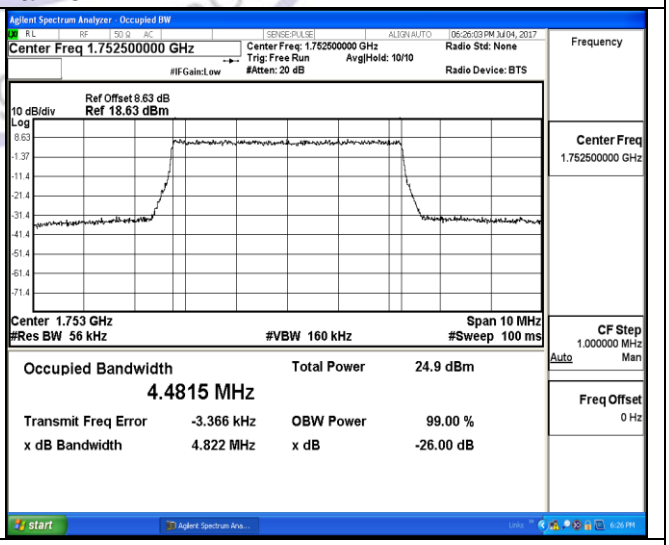
TEST RESULTS

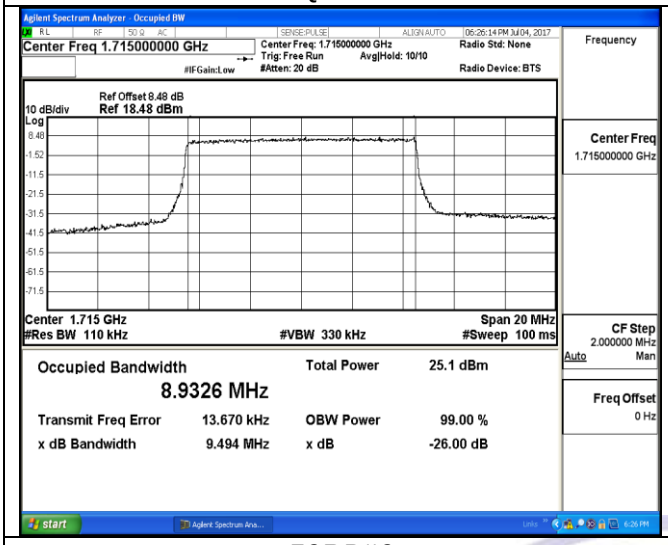
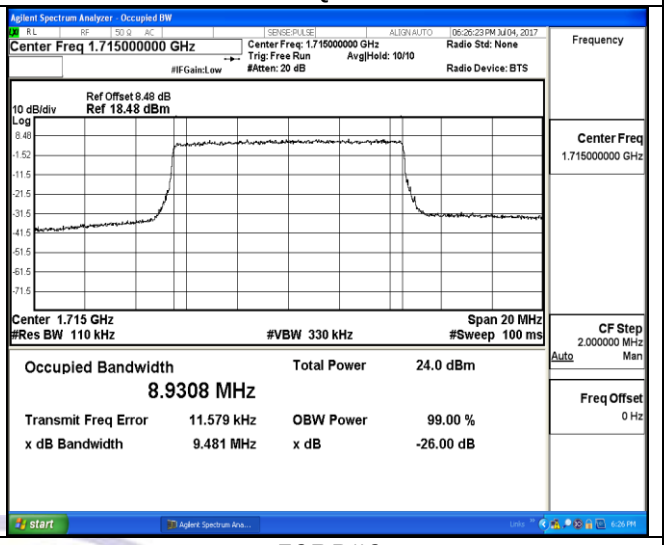
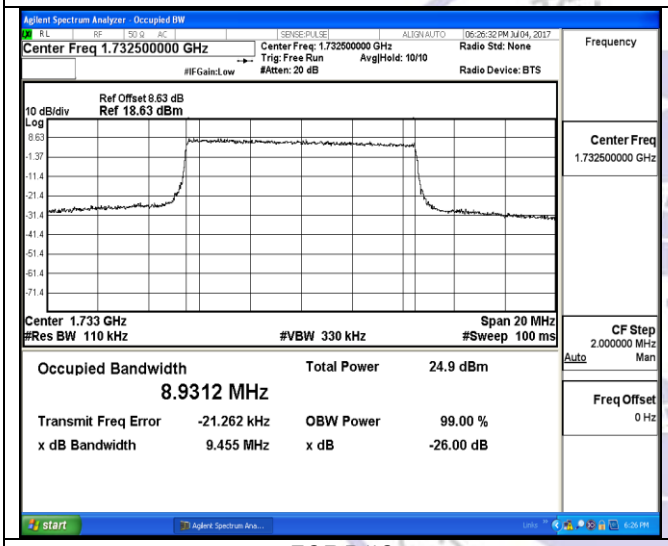
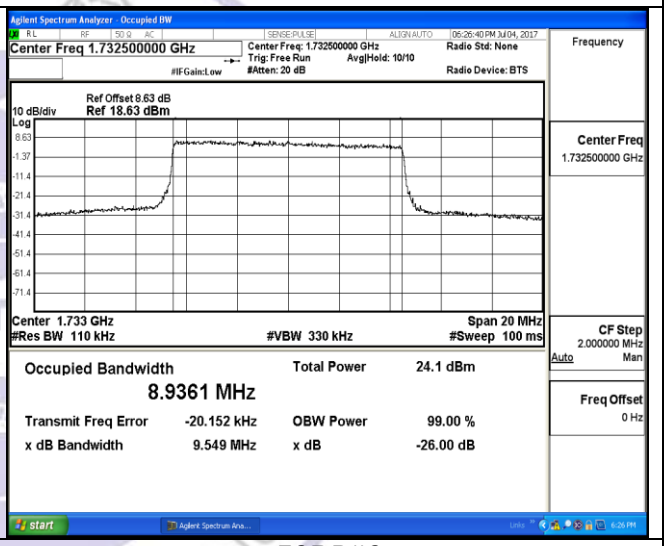
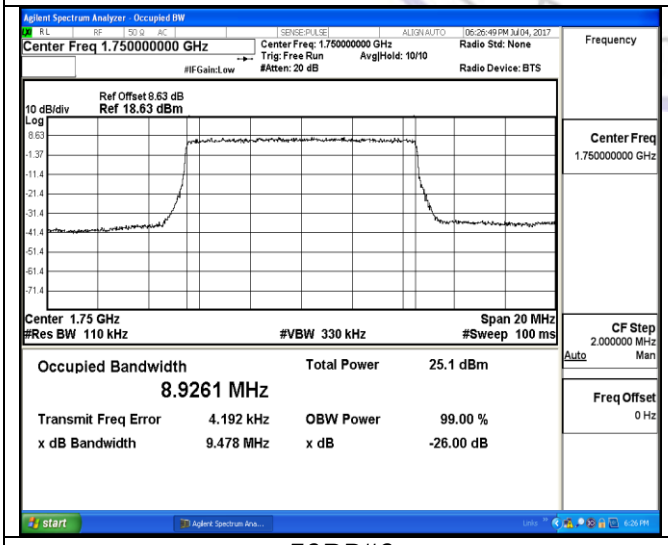
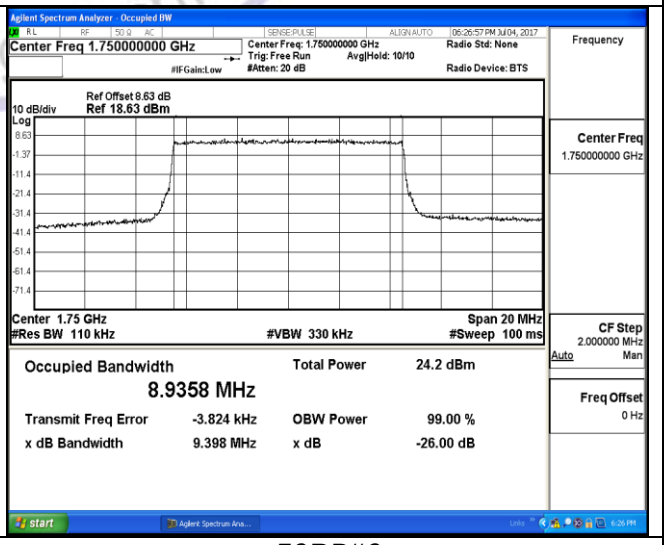
Remark:
1. *We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE FDD Band 4; recorded worst case for each Channel Bandwidth of LTE FDD Band 4.*

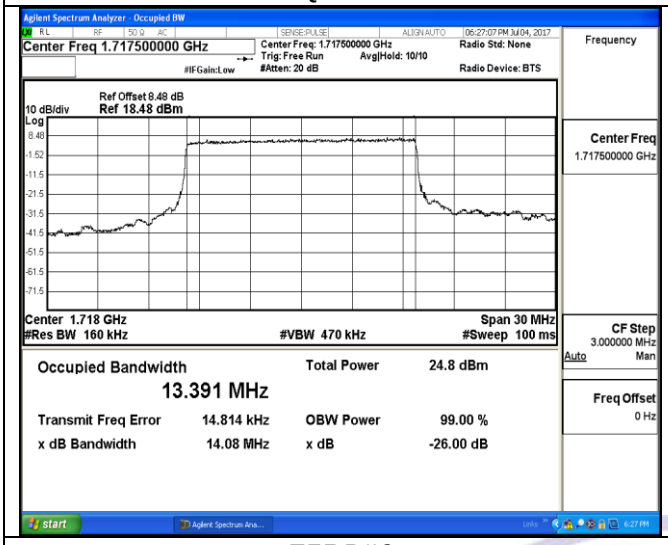
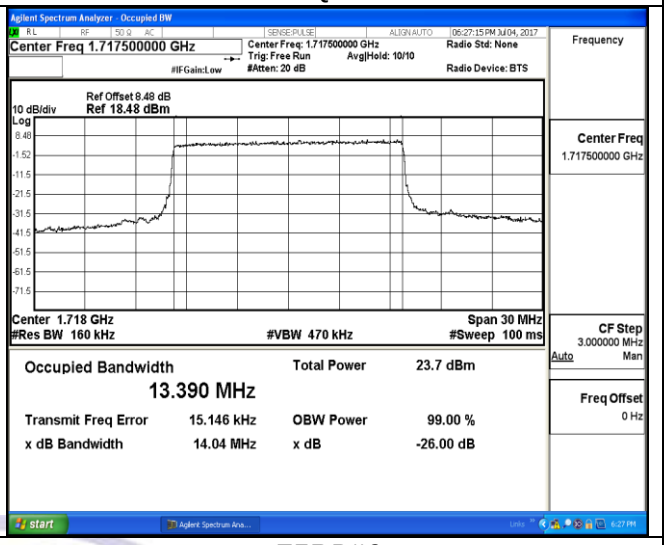
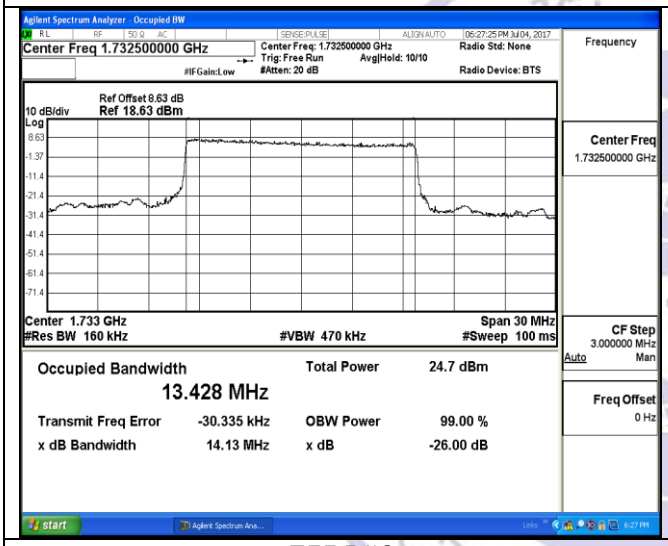
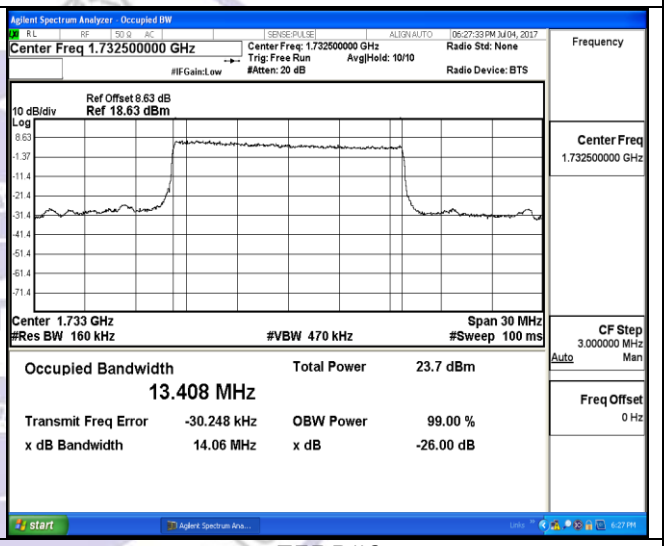
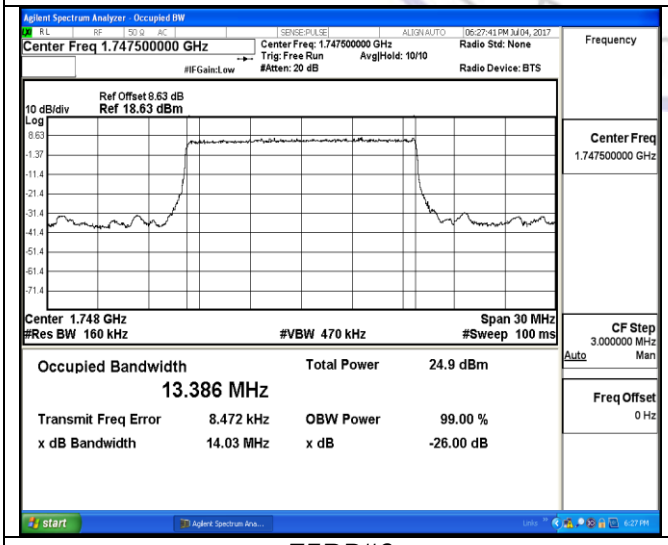
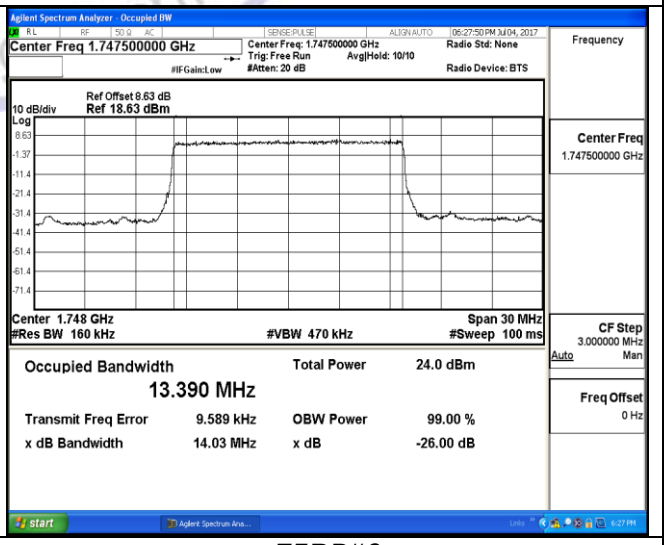
LTE FDD Band 4						
TX Channel Bandwidth	RB Size/Offset	Frequency (MHz)	-26dBc Emission bandwidth (MHz)		99% Occupied bandwidth (MHz)	
			QPSK	16QAM	QPSK	16QAM
1.4 MHz	*6RB#0*	1710.7	1.238	1.240	1.0776	1.0807
		1732.5	1.221	1.253	1.0753	1.0791
		1754.3	1.247	1.227	1.0777	1.0772
3 MHz	*15RB#0*	1711.5	2.905	2.887	2.6854	2.6829
		1732.5	2.884	2.905	2.6863	2.6829
		1753.5	2.905	2.889	2.6849	2.6874
5 MHz	*25RB#0*	1712.5	4.841	4.821	4.4745	4.4692
		1732.5	4.804	4.832	4.4809	4.4347
		1752.5	4.821	4.822	4.4730	4.4815
10 MHz	*50RB#0*	1715.0	9.494	9.481	8.9326	8.9308
		1732.5	9.454	9.549	8.9312	8.9361
		1750.0	9.478	9.398	8.9261	8.9358
15 MHz	*75RB#0*	1717.5	14.08	14.04	13.391	13.390
		1732.5	14.13	14.06	13.428	13.408
		1747.5	14.03	14.03	13.386	13.390
20 MHz	*100RB#0*	1720.0	18.06	18.55	17.793	17.805
		1732.5	18.60	18.58	17.869	17.871
		1745.0	18.64	18.59	17.858	17.848

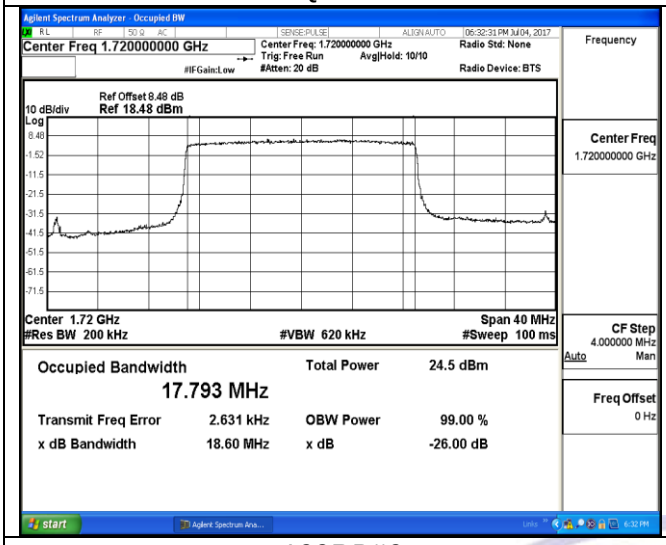
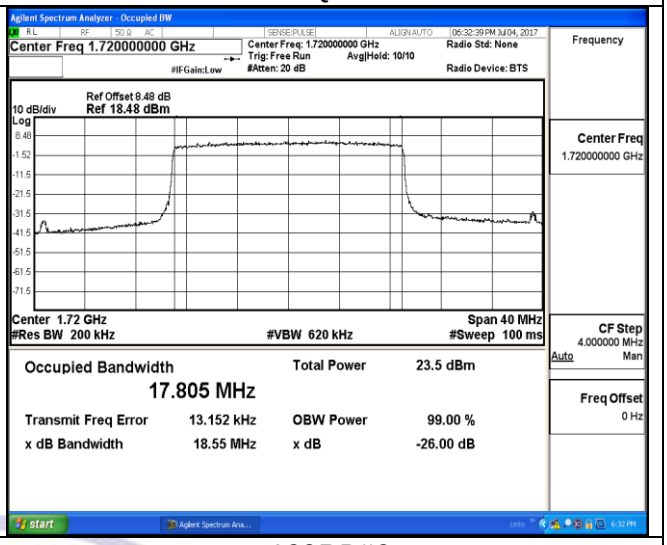
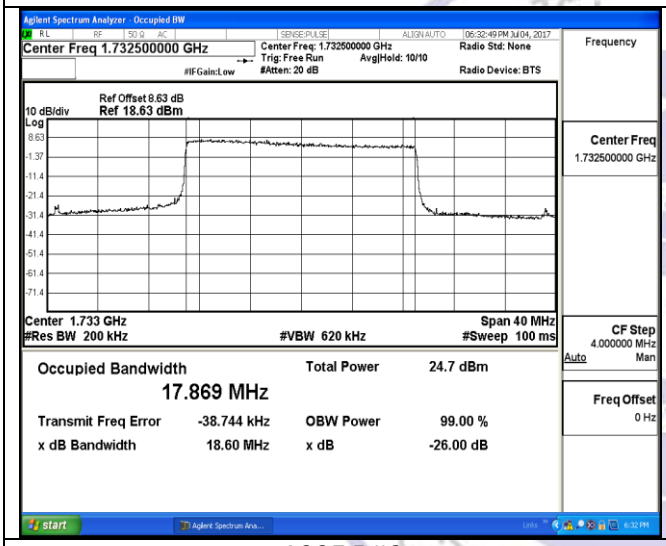
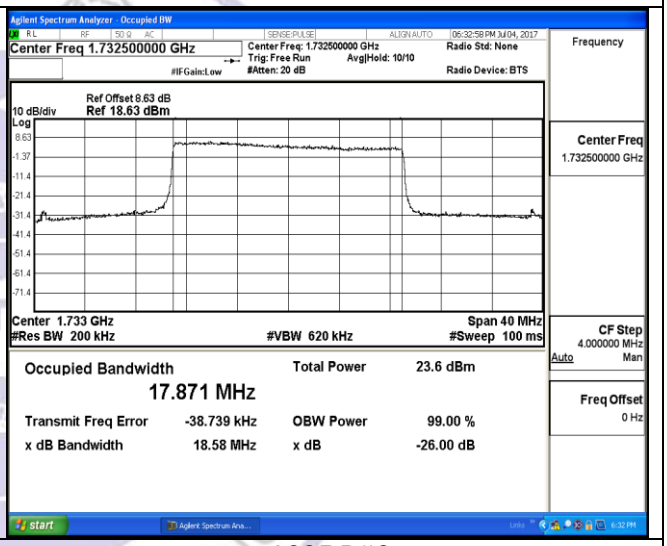
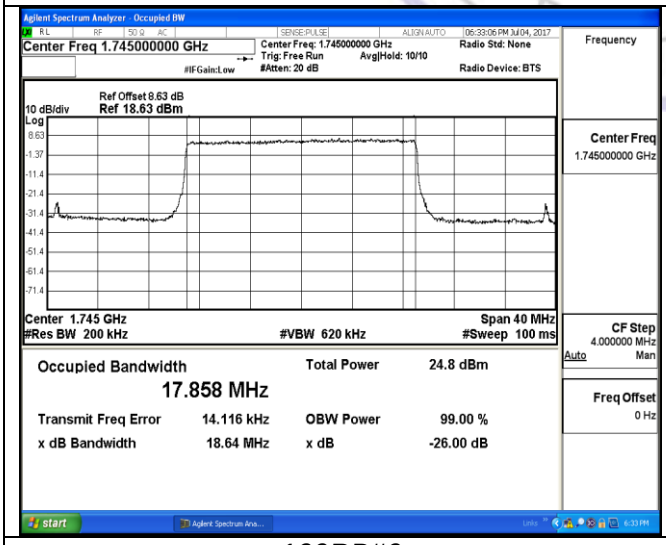
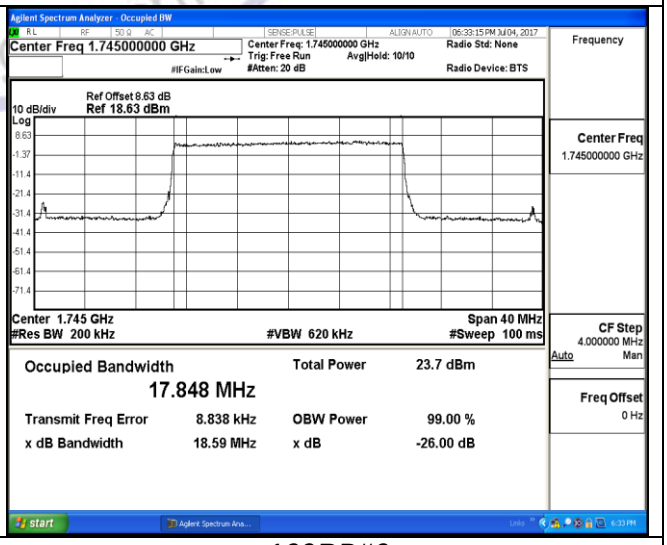
LTE FDD Band 4-1.4MHz Channel Bandwidth	
QPSK	16QAM
	
6RB#0	6RB#0
Low Channel	
	
6RB#0	6RB#0
Middle Channel	
	
6RB#0	6RB#0
High Channel	

LTE FDD Band 4-3MHz Channel Bandwidth	
QPSK	16QAM
	
15RB#0	15RB#0
Low Channel	
	
15RB#0	15RB#0
Middle Channel	
	
15RB#0	15RB#0
High Channel	

LTE FDD Band 4-5MHz Channel Bandwidth	
QPSK	16QAM
	
25RB#0	25RB#0
Low Channel	
	
25RB#0	25RB#0
Middle Channel	
	
25RB#0	25RB#0
High Channel	

LTE FDD Band 4-10MHz Channel Bandwidth	
QPSK	16QAM
	
50RB#0	50RB#0
Low Channel	
	
50RB#0	50RB#0
Middle Channel	
	
50RB#0	50RB#0
High Channel	

LTE FDD Band 4-15MHz Channel Bandwidth	
QPSK	16QAM
	
75RB#0	75RB#0
Low Channel	
	
75RB#0	75RB#0
Middle Channel	
	
75RB#0	75RB#0
High Channel	

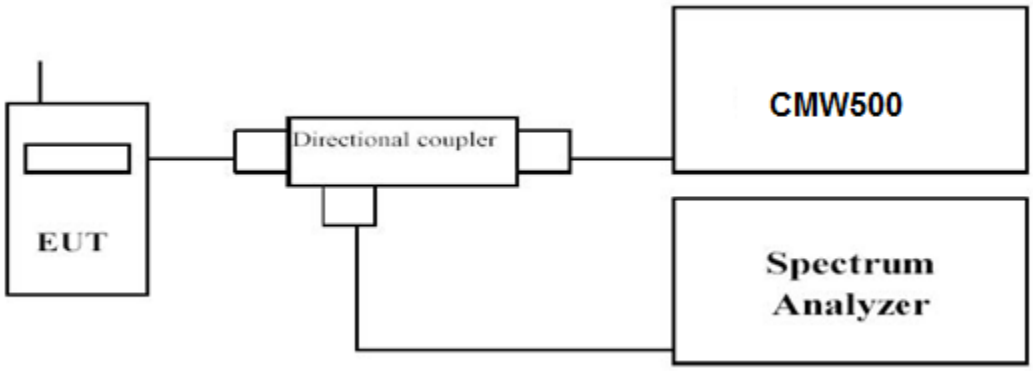
LTE FDD Band 4-20MHz Channel Bandwidth	
QPSK	16QAM
	
100RB#0	100RB#0
Low Channel	
	
100RB#0	100RB#0
Middle Channel	
	
100RB#0	100RB#0
High Channel	

3.4. Band Edge compliance

LIMIT

According to §27.53 (h): For operations in the 1710–1755 MHz and 2110–2155 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 + 10 log10(P) dB.

TEST CONFIGURATION



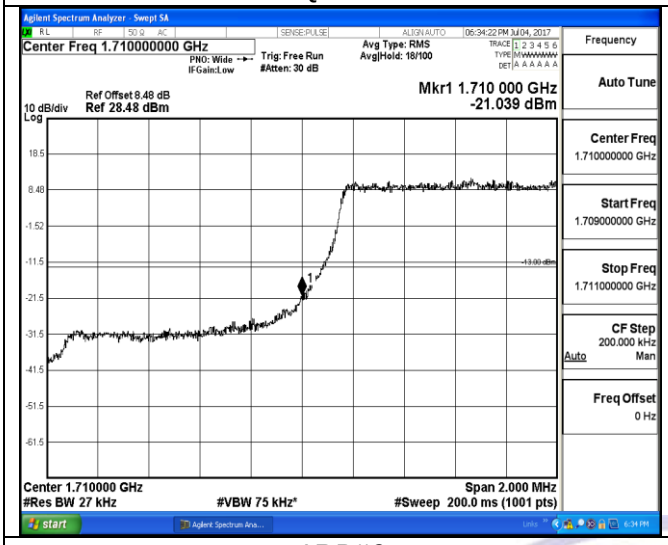
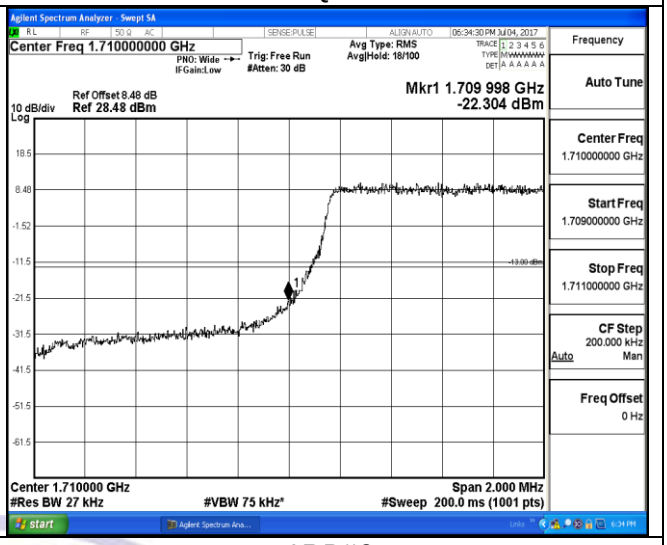
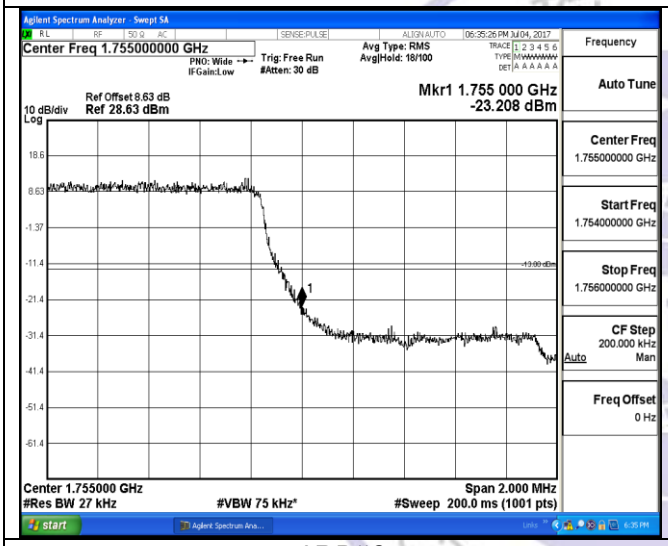
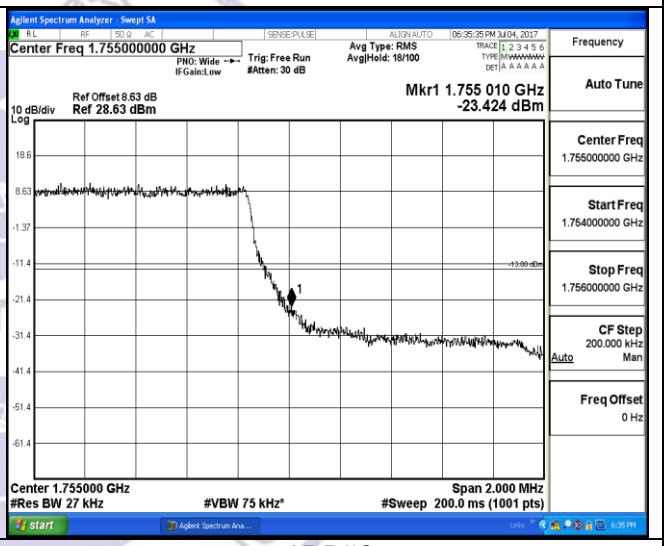
TEST PROCEDURE

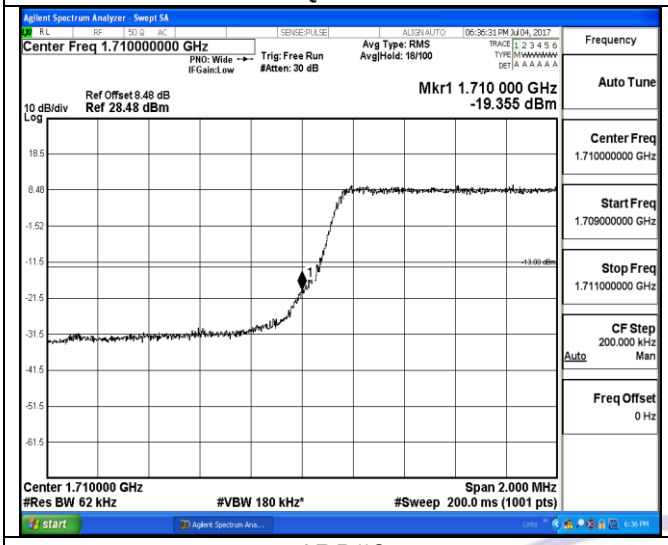
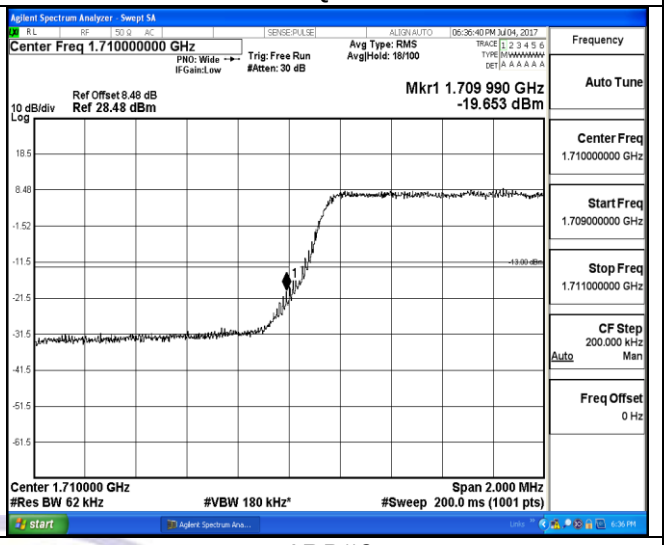
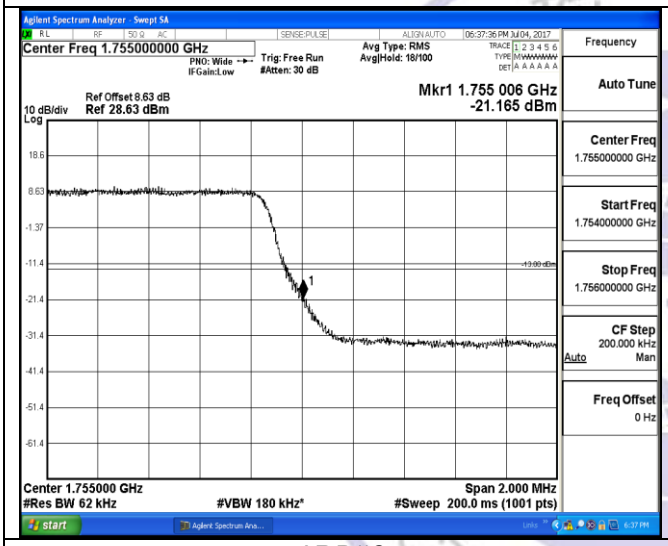
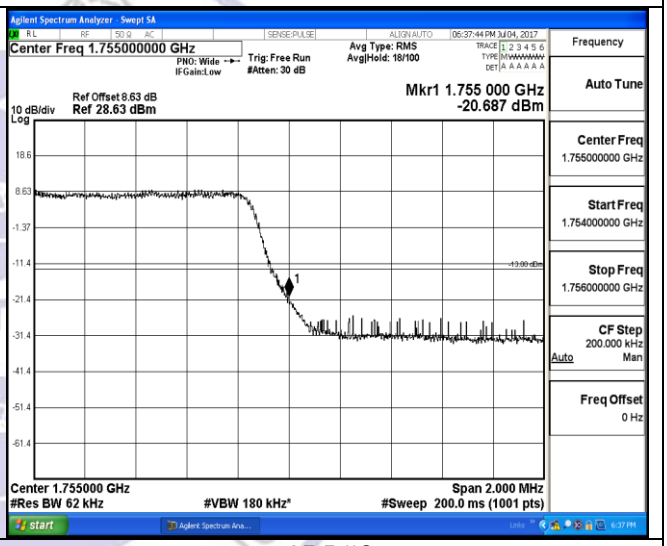
1. The transmitter output port was connected to base station.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator, the path loss was compensated to the results for each measurement.
3. Set EUT at maximum power through base station.
4. Select lowest and highest channels for each band and different modulation.
5. Measure Band edge using RMS (Average) detector by spectrum

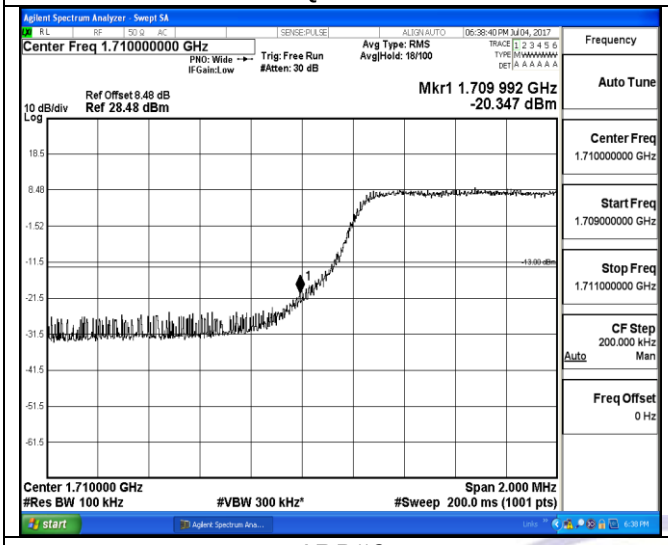
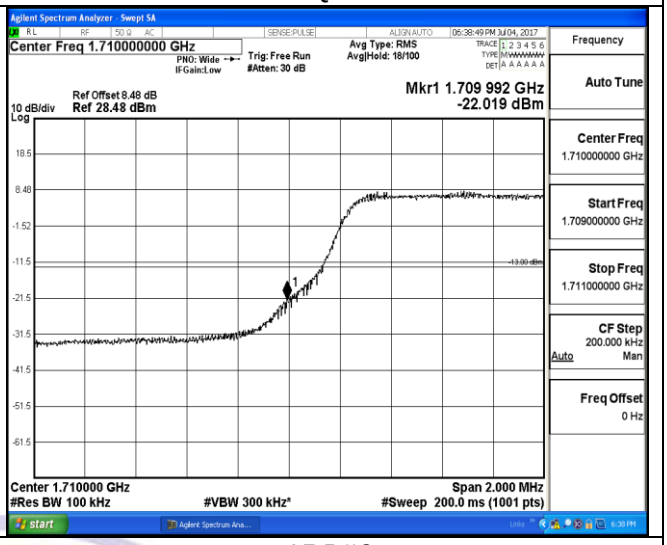
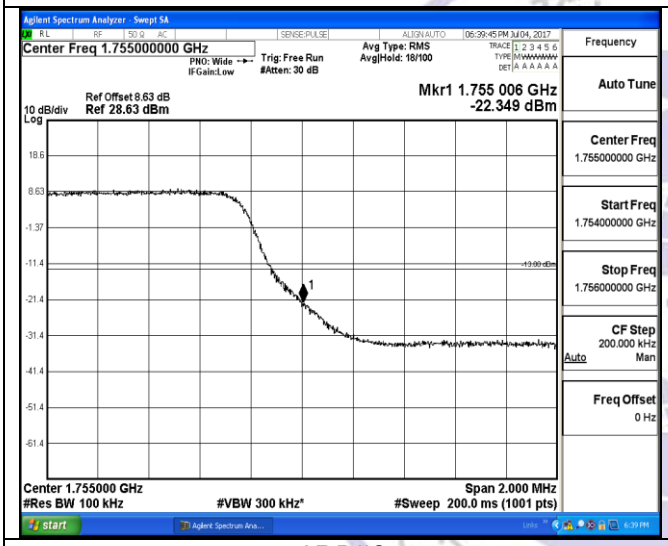
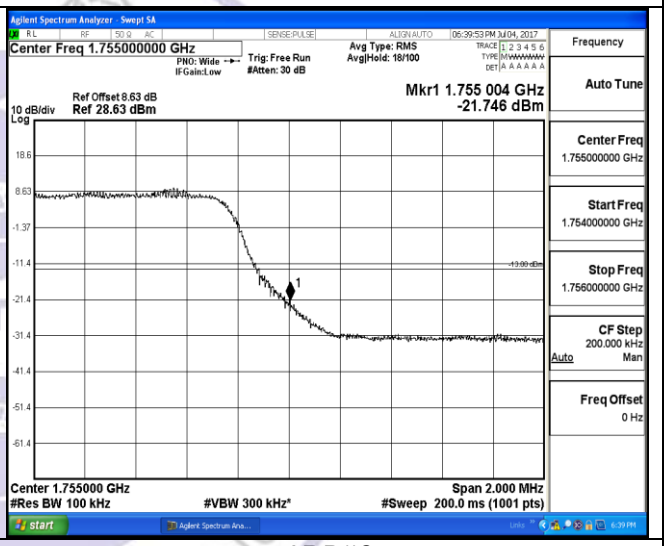
TEST RESULTS

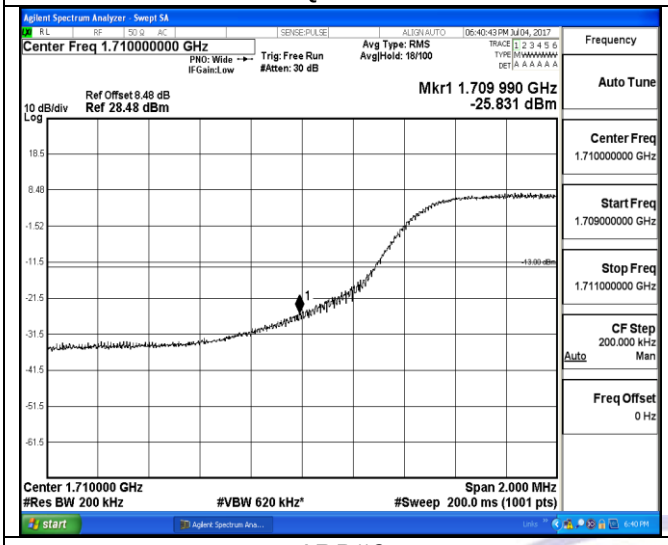
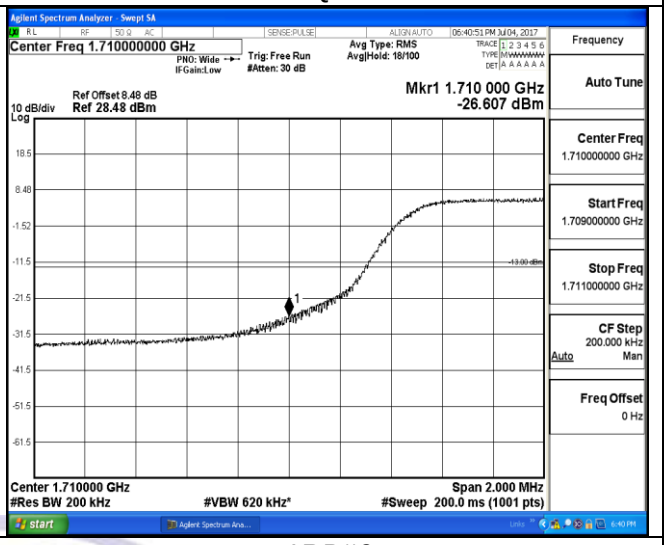
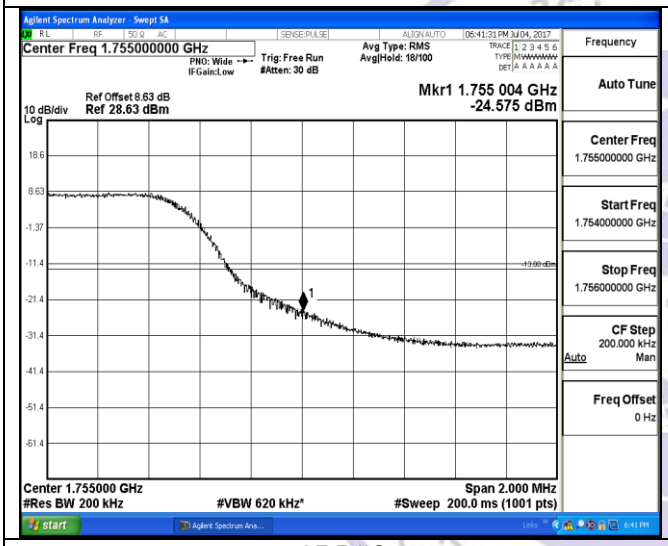
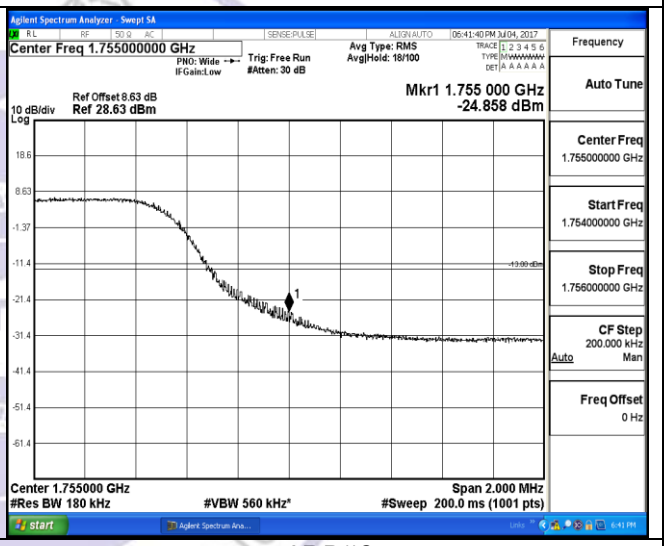
Remark:

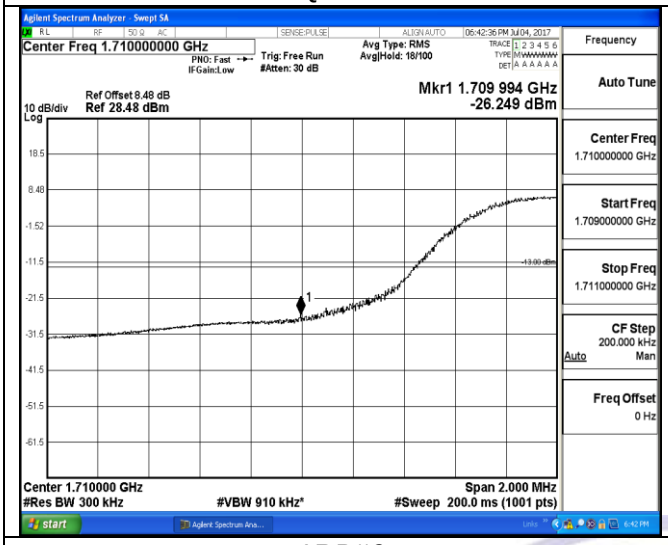
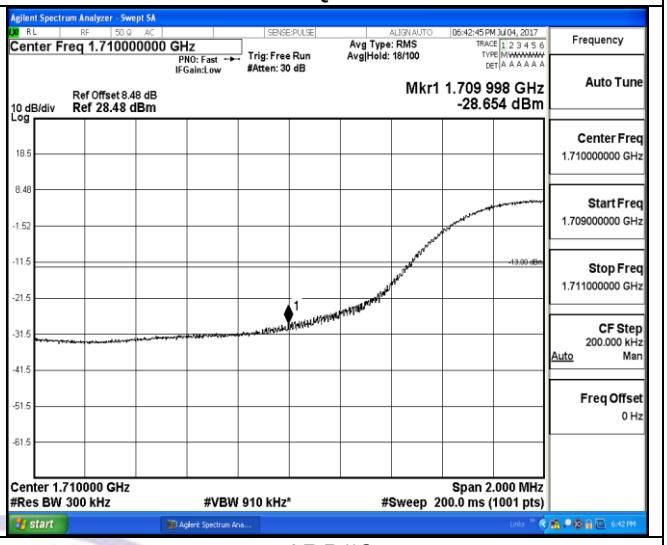
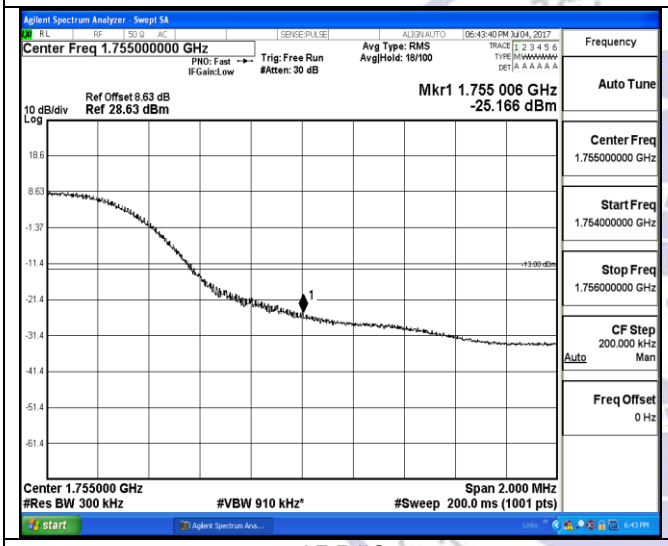
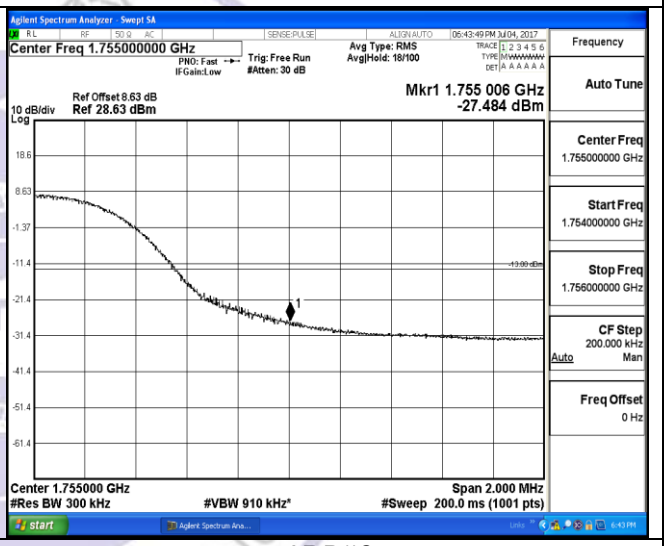
1. *We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE FDD Band 4; recorded worst case for each Channel Bandwidth of LTE FDD Band 4.*

LTE FDD Band 4-1.4MHz Channel Bandwidth Band Edge Compliance	
QPSK	16QAM
	
1RB#0	1RB#0
Low Channel	
	
1RB#0	1RB#0
High Channel	

LTE FDD Band 4-3MHz Channel Bandwidth Band Edge Compliance	
QPSK	16QAM
	
1RB#0	1RB#0
Low Channel	
	
1RB#0	1RB#0
High Channel	

LTE FDD Band 4-5MHz Channel Bandwidth Band Edge Compliance	
QPSK	16QAM
	
1RB#0	1RB#0
Low Channel	
	
1RB#0	1RB#0
High Channel	

LTE FDD Band 4-10MHz Channel Bandwidth Band Edge Compliance	
QPSK	16QAM
	
1RB#0	1RB#0
Low Channel	
	
1RB#0	1RB#0
High Channel	

LTE FDD Band 4-15MHz Channel Bandwidth Band Edge Compliance	
QPSK	16QAM
	
1RB#0	1RB#0
Low Channel	
	
1RB#0	1RB#0
High Channel	