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Page: 1 of 140 FCC ID: OJFDLRU1719235

Appendix B

Test Data and Result Details of GZEM2011016737CR



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Application No.: GZEM2011016737CR

Page: 2 of 140 FCC ID: OJFDLRU1719235

1 AWS-1 (1710-1755MHz paired with 2110-2155MHz)

1.1 AGC threshold level

Test Conf.	AGC Threshold level		
DL_1S_M_AWGN	-0.23dBm		
DL_1S_M_GSM	-0.13dBm		



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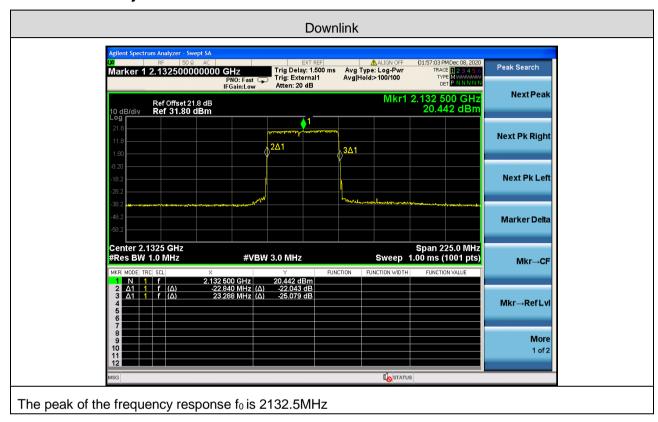
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Application No.: GZEM2011016737CR

Page: 3 of 140 FCC ID: OJFDLRU1719235

1.2 Out-of-band rejection





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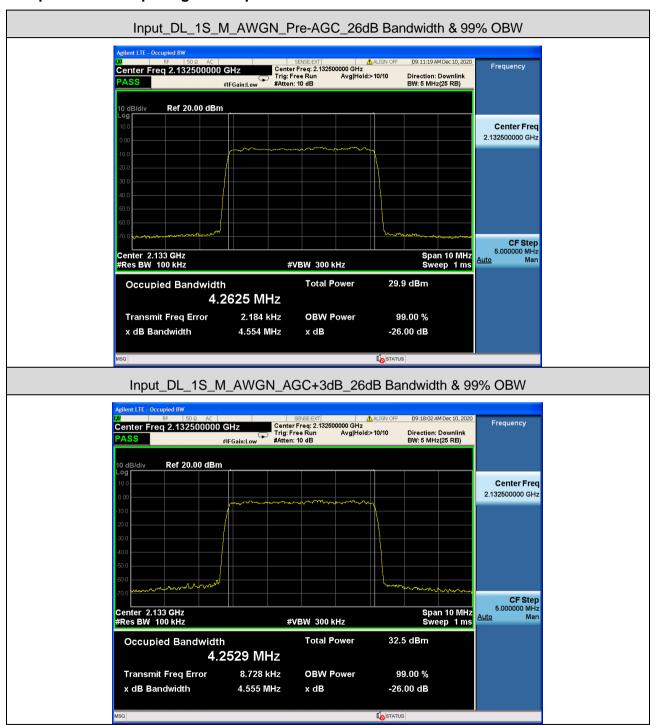
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Application No.: GZEM2011016737CR

Page: 4 of 140 FCC ID: OJFDLRU1719235

1.3 Input-versus-output signal comparison





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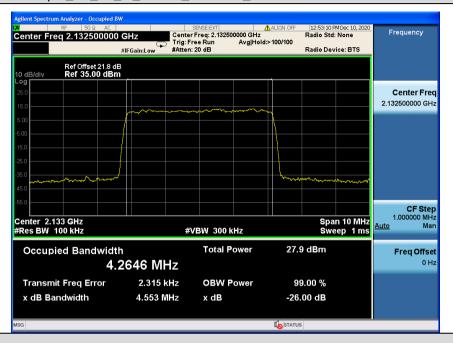
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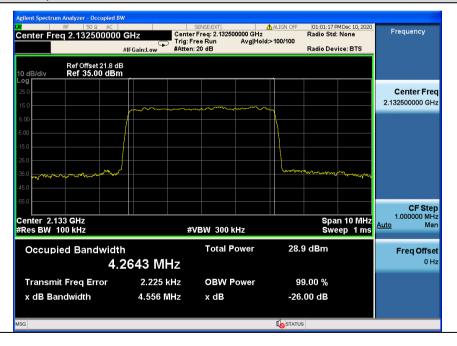
Application No.: GZEM2011016737CR

Page: 5 of 140 FCC ID: OJFDLRU1719235

Output DL 1S M AWGN Pre-AGC 26dB Bandwidth & 99% OBW



Output DL 1S M AWGN AGC+3dB 26dB Bandwidth & 99% OBW





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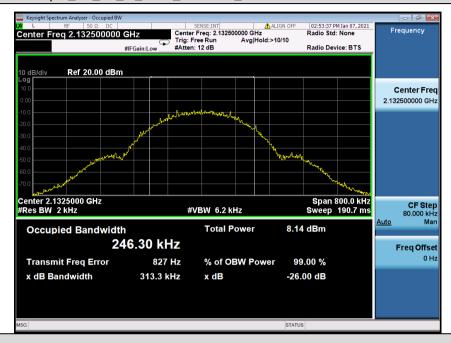
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Application No.: GZEM2011016737CR

6 of 140 Page: FCC ID: OJFDLRU1719235

Input DL 1S M GSM Pre-AGC 26dB Bandwidth & 99% OBW



Input_DL_1S_M_GSM_AGC+3dB_26dB Bandwidth & 99% OBW





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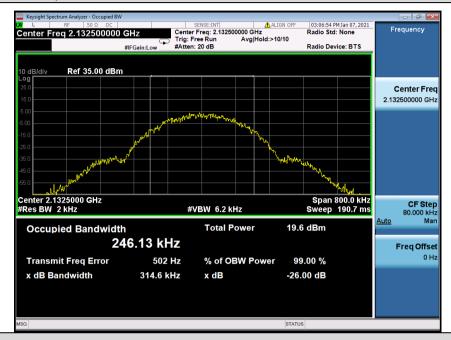
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Application No.: GZEM2011016737CR

Page: 7 of 140 FCC ID: OJFDLRU1719235

Output_DL_1S_M_GSM_Pre-AGC_26dB Bandwidth & 99% OBW



Output_DL_1S_M_GSM_AGC+3dB_26dB Bandwidth & 99% OBW





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Application No.: GZEM2011016737CR

Page: 8 of 140 FCC ID: OJFDLRU1719235

Remark:

Compare the spectral plot of the input signal to the output signal affirm that they are similar (in passband and roll off characteristic features and relative spectral locations). The test result complies with the requirement.



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Application No.: GZEM2011016737CR

Page: 9 of 140 FCC ID: OJFDLRU1719235

1.4 Mean output power and amplifier/booster gain

Test Conf.	Test Freq. f ₀ (MHz)	Signal Level	Input Power (dBm)	Output Power (dBm)	Gain (dB)	Verdict
		Pre-AGC	-0.26	20.21	20.47	PASS
DL_1S_AWGN	2132.5	AGC+3dB	2.74	20.12	/	PASS
		Pre-AGC	-0.26	20.09	20.35	PASS
DL_1S_GSM	2132.5	AGC+3dB	2.74	20.14	/	PASS

Remark:

According to the declaration from the applicant, the antenna gain should not exceed 12.5dBi, the Directional gain = $G(ANT) + 10 \log (NANT) dBi = 12.5dBi + 10 \log (2) dBi = 15.5dBi$.

The total maximum EIRP for the EUT is (20.21dBm+20.21dBm) +15.5dBi=38.72dBm (7.447W) which don't exceed the required EIRP limit (1640W/MHz)



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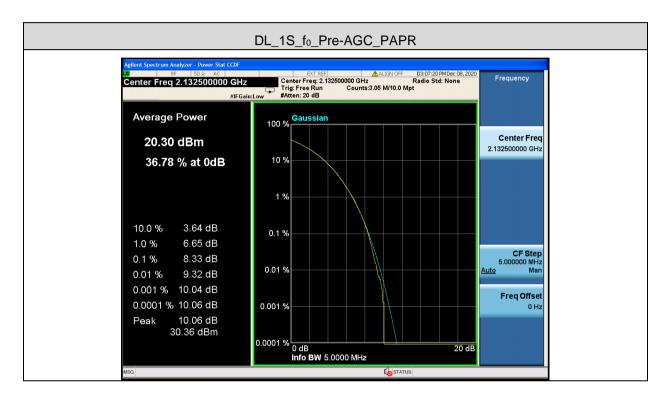
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Application No.: GZEM2011016737CR

Page: 10 of 140 FCC ID: OJFDLRU1719235

Test Conf.	Test Freq. f ₀ (MHz)	Signal Level	PAPR (dB)	Limit (dB)	Verdict
DL_1S_AWGN	2132.5	Pre-AGC	8.3	13	PASS





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Application No.: GZEM2011016737CR

Page: 11 of 140 FCC ID: OJFDLRU1719235

1.5 Out-of-band/out-of-block (including intermodulation) emissions and spurious emissions

Note:

1. The tested max conducted power for single antenna port is 20.21dBm, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB

Here,

P=20.21dBm= 0.1050W.

So the limit =

P(dBm)- [43 + 10 log (0.1050W)] = -13dBm

The EUT supports 2x2 MIMO and the emissions were measured at one of output port, so the limit line was set to -16.01dBm in following test plots in order to determine the test result conveniently.

2. Out-of-band/out-of-block (including intermodulation) emissions and spurious emissions have been tested using an AWGN test signal and a GSM-TDMA test signal, only the worst-case was recorded in this report.



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Application No.: GZEM2011016737CR

Page: 12 of 140 FCC ID: OJFDLRU1719235

DL 1S B AWGN Pre-AGC Out-of-band emission



DL 1S B AWGN AGC+3 Out-of-band emission





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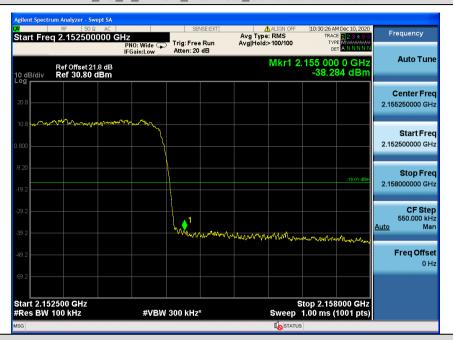
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Application No.: GZEM2011016737CR

Page: 13 of 140 FCC ID: OJFDLRU1719235

DL 1S T AWGN Pre-AGC Out-of-band emission



DL 1S T AWGN AGC+3 Out-of-band emission





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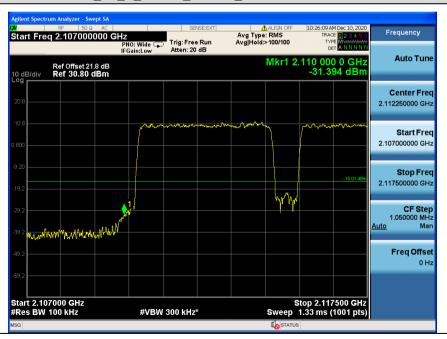
Application No.: GZEM2011016737CR

Page: 14 of 140 FCC ID: OJFDLRU1719235

DL 2S B AWGN Pre-AGC Out-of-band emission



DL 2S B AWGN AGC+3 Out-of-band emission





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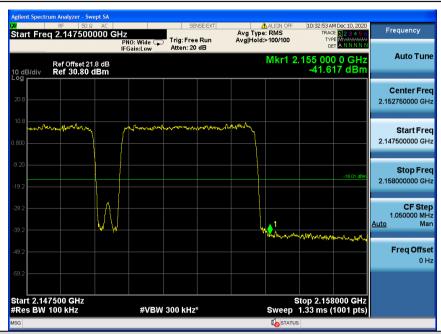
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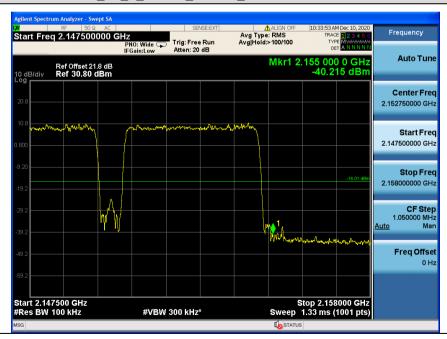
Application No.: GZEM2011016737CR

Page: 15 of 140 FCC ID: OJFDLRU1719235

DL 2S T AWGN Pre-AGC Out-of-band emission



DL 2S T AWGN AGC+3 Out-of-band emission





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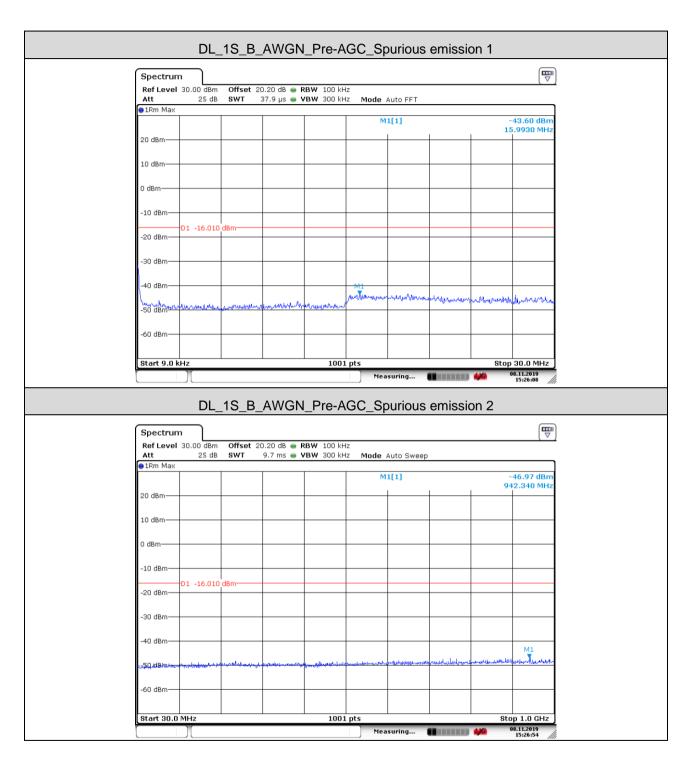
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Application No.: GZEM2011016737CR

Page: 16 of 140 FCC ID: OJFDLRU1719235



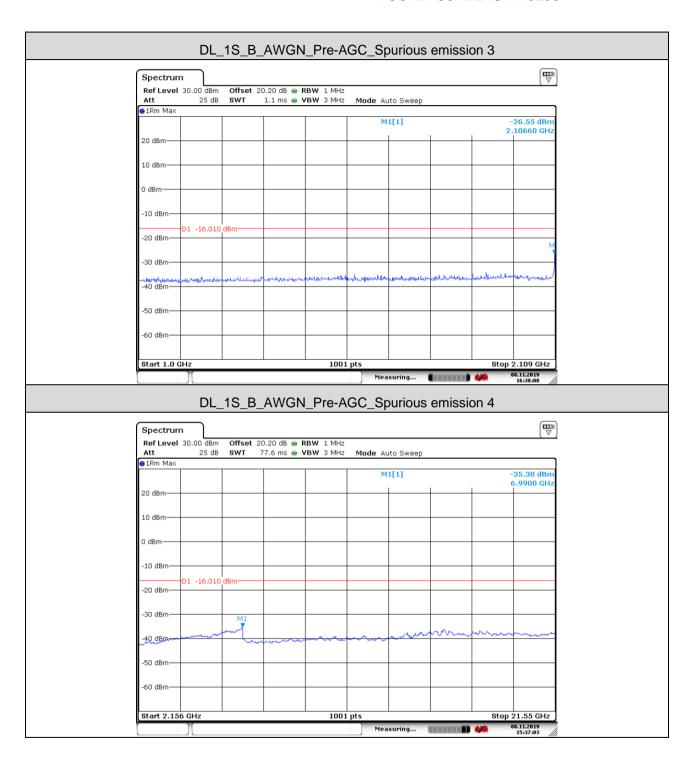


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Page: 17 of 140 FCC ID: OJFDLRU1719235





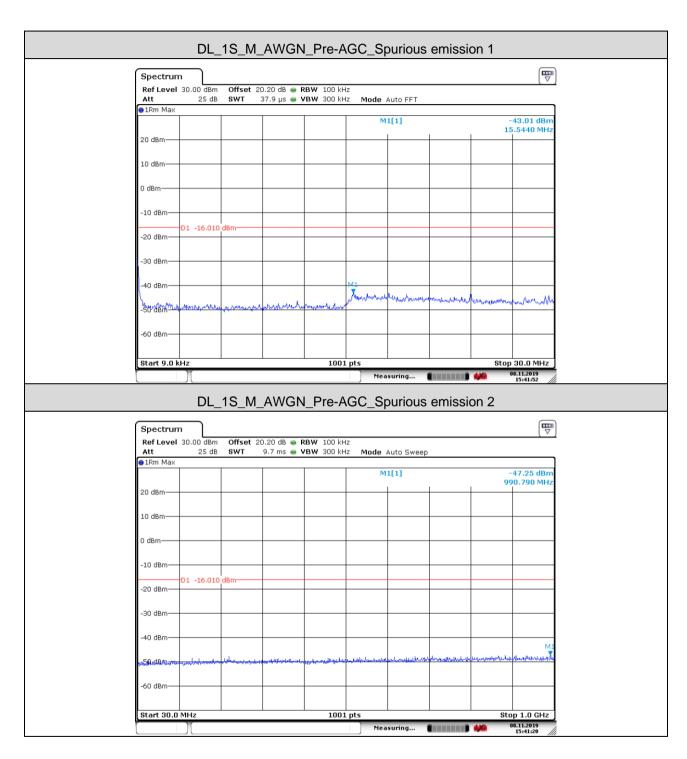
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Application No.: GZEM2011016737CR

Page: 18 of 140 FCC ID: OJFDLRU1719235





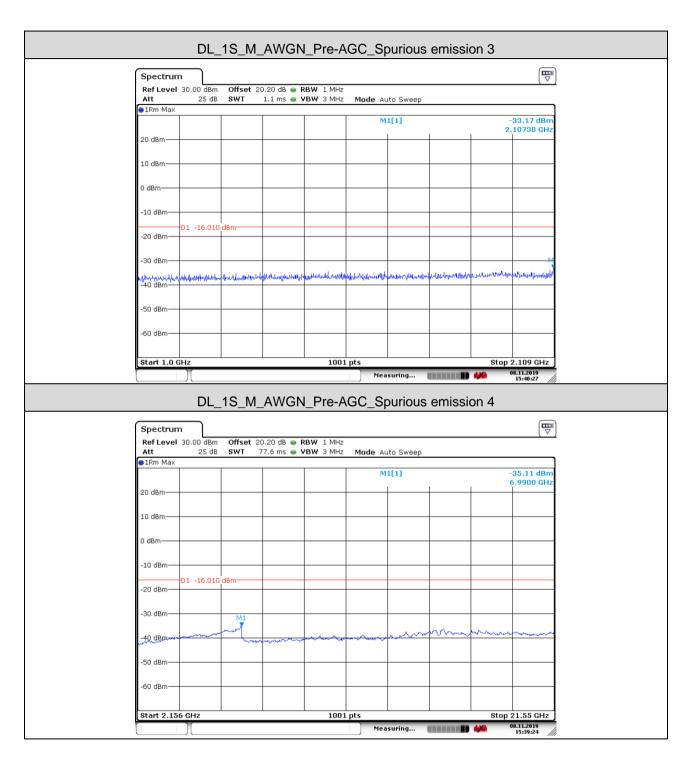
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Application No.: GZEM2011016737CR

Page: 19 of 140 FCC ID: OJFDLRU1719235



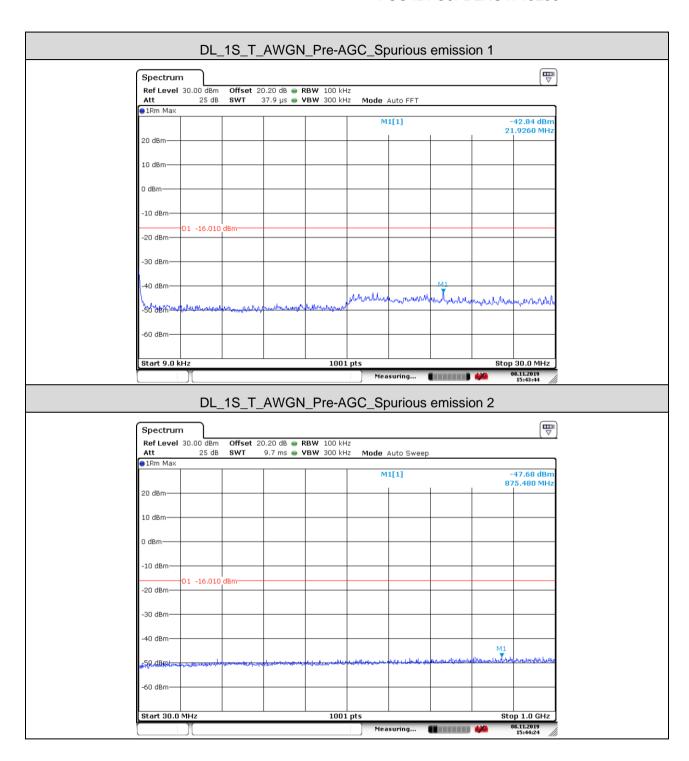


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Page: 20 of 140 FCC ID: OJFDLRU1719235



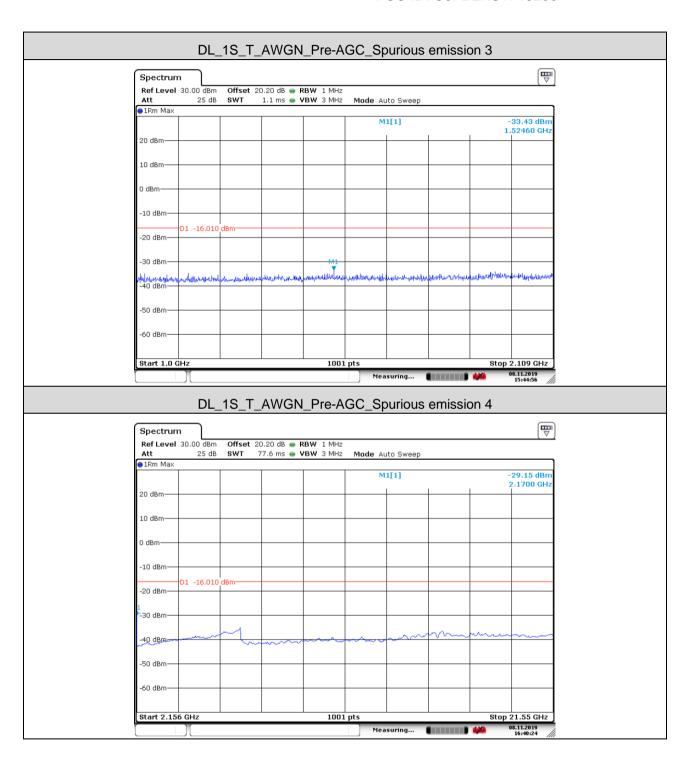


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Application No.: GZEM2011016737CR

Page: 21 of 140 FCC ID: OJFDLRU1719235





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Application No.: GZEM2011016737CR

Page: 22 of 140 FCC ID: OJFDLRU1719235

1.6 Frequency Stability

Note:

- 1. At 10 °C intervals of temperatures between −30 °C and +50 °C at the manufacturer's rated supply voltage, here the rated supply voltage is DC 48V.
- 2. At +20 °C temperature and ±15% supply voltage variations. If a product is specified to operate over a range of input voltage, then the −15% variation is applied to the lowermost voltage and the +15% is applied to the uppermost voltage.
- 3. The frequency stabilities can be maintained within the authorized bands of operation. Meet the requirement.
- 4. Frequency stability has been tested using an AWGN test signal and a GSM-TDMA test signal, only the worst-case was recorded in this report.



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Application No.: GZEM2011016737CR

Page: 23 of 140 FCC ID: OJFDLRU1719235

Frequency stability vs temperature					
Temperature (℃)	Test Conf.	Test data (MHz)	Tolerance (ppm)	Verdict	
50		2132.523564	-0.03	PASS	
40		2132.523529	-0.04	PASS	
30		2132.523567	-0.03	PASS	
20		2132.523622	Reference	PASS	
10	DL_1S_M_AWGN	2132.523538	-0.04	PASS	
0		2132.523435	-0.09	PASS	
-10		2132.523647	0.01	PASS	
-20		2132.523745	0.06	PASS	
-30		2132.523572	-0.02	PASS	

Frequency stability vs voltage					
Voltage (V)	Test Conf.	Test data (MHz)	Tolerance (ppm)	Verdict	
DC 40.8		2132.523567	0.05	PASS	
DC 48	DL_1S_M_AWGN	2132.523456	Reference	PASS	
DC 55.2		2132.523678	0.11	PASS	



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Application No.: GZEM2011016737CR

Page: 24 of 140 FCC ID: OJFDLRU1719235

1.7 Radiated spurious emissions

Note:

1. The tested max conducted power for single antenna port is 20.21dBm. the 2x2 MIMO total power is 20.21dBm+20.21dBm= 0.2100W.

the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB

Here,

P=0.2100W,

So the limit =

P(dBm)- [43 + 10 log (0.2100W)] = -13dBm

- 2. The radiated test performed at bottom / middle / top channel, the data with more than 20db margin, therefore, only the worst-case middle channel test data was recorded in the report.
- 3. The disturbance 9kHz to 30MHz was very low and 20dB below the limit, therefore, the data was not recorded in the report.



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Application No.: GZEM2011016737CR

Page: 25 of 140 FCC ID: OJFDLRU1719235

DL 1S M AWGN Horizontal 30MHz~1GHz 40 Level (dBm) 30 10 **13DBM** -10 -30 -50 6 -70 -90 -120₃₀ 100 200 500 1000 50 Freq. Level Limit Over Limit Polarization Verdict (dB) (MHz) (dBm) (dBm) 37.812 **PASS** -68.65 -13 Horizontal -55.65 51.301 -72.56Horizontal **PASS** -13 -59.56 71.832 -68.17 -13 Horizontal **PASS** -55.17 94.098 -64.68 Horizontal **PASS** -13 -51.68 115.321 -72.60 -13 Horizontal **PASS** -59.6 189.074 -67.80 -13 Horizontal **PASS** -54.8



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Application No.: GZEM2011016737CR

Page: 26 of 140 FCC ID: OJFDLRU1719235

DL 1S M AWGN Horizontal above 1GHz 40 Level (dBm) 30 10 **13DBM** -10 -30 6 5 -50 -70 -90 -120 1000 1500 2000 5000 10000 18000 Freq. Level Limit Over Limit Polarization Verdict (MHz) (dBm) (dBm) (dB) Horizontal **PASS** 1648.778 -51.65 -13 -38.65 **PASS** 2126.308 -41.97 Horizontal -13 -28.97 2292.257 -50.37 -13 Horizontal **PASS** -37.37 5797.032 -42.89 -13 Horizontal **PASS** -29.89 6621.375 -42.43-13 Horizontal **PASS** -29.43 10484.230 -39.00 -13 Horizontal **PASS** -26



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Application No.: GZEM2011016737CR

Page: 27 of 140 FCC ID: OJFDLRU1719235

DL 1S M AWGN Vertical 30MHz~1GHz 40 Level (dBm) 30 10 **13DBM** -10 -30 -50 3 2 6 -70 -90 -110 -120¹30 50 200 500 1000 100 Limit Over Limit Freq. Level Polarization Verdict (MHz) (dBm) (dBm) (dB) 32.812 **PASS** -68.88 -13 -55.88 Vertical 64.887 -71.70 -13 Vertical **PASS** -58.7 71.832 -69.26 -13 Vertical **PASS** -56.26 94.098 -63.18 -13 Vertical **PASS** -50.18 121.123 -67.86 -13 Vertical **PASS** -54.86 **PASS** 285.978 -71.92 -13 Vertical -58.92



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Application No.: GZEM2011016737CR

Page: 28 of 140 FCC ID: OJFDLRU1719235

DL 1S M AWGN Vertical above 1GHz 40 Level (dBm) 10 **13DBM** -10 -30 6 5 2 -50 -70 -90 -120 1000 1500 2000 5000 10000 18000 Freq. Level Limit Over Limit Polarization Verdict (MHz) (dBm) (dBm) (dB) 1498.781 Vertical **PASS** -54.20 -13 -41.2 2126.308 Vertical **PASS** -44.76 -13 -31.76 6036.421 -43.65 -13 Vertical **PASS** -30.65 6698.373 -42.06 -13 Vertical **PASS** -29.06 7305.122 -44.37 Vertical **PASS** -13 -31.37 **PASS** 10484.245 -38.04 -13 Vertical -25.04



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Application No.: GZEM2011016737CR

Page: 29 of 140 FCC ID: OJFDLRU1719235

2 AWS-3 (1755-1780MHz paired with 2155-2180MHz)

2.1 AGC threshold level

Test Conf.	AGC Threshold level		
DL_1S_M_AWGN	-0.11dBm		
DL_1S_M_GSM	-0.20dBm		



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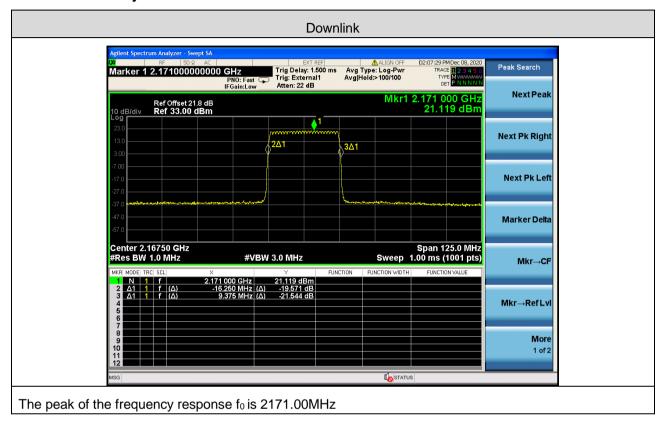
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Application No.: GZEM2011016737CR

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2.2 Out-of-band rejection





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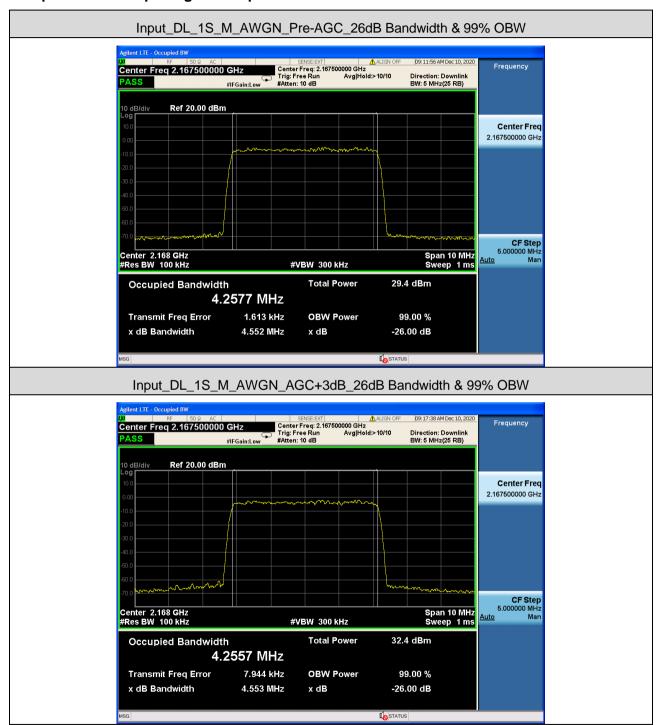
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Application No.: GZEM2011016737CR

Page: 31 of 140 FCC ID: OJFDLRU1719235

2.3 Input-versus-output signal comparison





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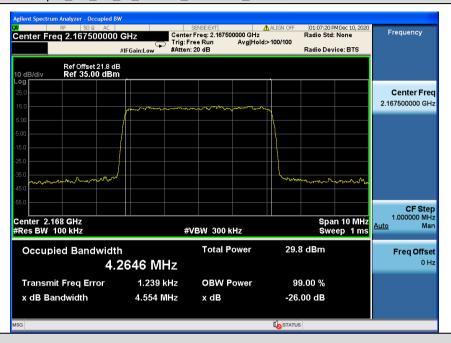
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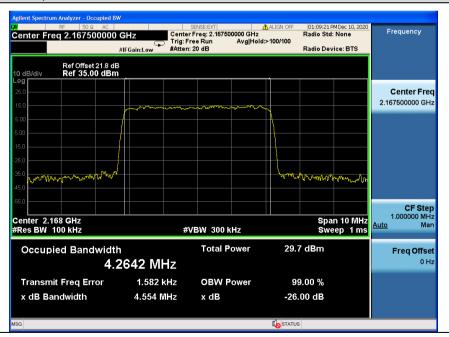
Application No.: GZEM2011016737CR

Page: 32 of 140 FCC ID: OJFDLRU1719235

Output DL 1S M AWGN Pre-AGC 26dB Bandwidth & 99% OBW



Output DL 1S M AWGN AGC+3dB 26dB Bandwidth & 99% OBW





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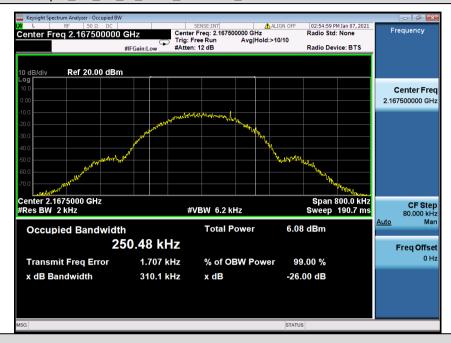
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Application No.: GZEM2011016737CR

33 of 140 Page: FCC ID: OJFDLRU1719235

Input DL 1S M GSM Pre-AGC 26dB Bandwidth & 99% OBW



Input_DL_1S_M_GSM_AGC+3dB_26dB Bandwidth & 99% OBW





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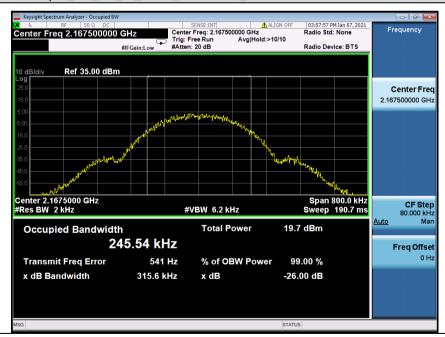
Application No.: GZEM2011016737CR

Page: 34 of 140 FCC ID: OJFDLRU1719235

Output_DL_1S_M_GSM_Pre-AGC_26dB Bandwidth & 99% OBW



Output_DL_1S_M_GSM_AGC+3dB_26dB Bandwidth & 99% OBW





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Application No.: GZEM2011016737CR

Page: 35 of 140 FCC ID: OJFDLRU1719235

Remark:

Compare the spectral plot of the input signal to the output signal affirm that they are similar (in passband and roll off characteristic features and relative spectral locations). The test result complies with the requirement.



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Application No.: GZEM2011016737CR

Page: 36 of 140 FCC ID: OJFDLRU1719235

2.4 Mean output power and amplifier/booster gain

Test Conf.	Test Freq. f ₀ (MHz)	Signal Level	Input Power (dBm)	Output Power (dBm)	Gain (dB)	Verdict
DL_1S_AWGN	2171.0	Pre-AGC	-0.15	20.36	20.51	PASS
		AGC+3dB	2.85	20.24	/	PASS
		Pre-AGC	-0.15	20.24	20.39	PASS
DL_1S_GSM	2171.0	AGC+3dB	2.85	20.15	/	PASS

Remark:

According to the declaration from the applicant, the antenna gain should not exceed 12.5dBi, the Directional gain = $G(ANT) + 10 \log (NANT) dBi = 12.5dBi + 10 \log (2) dBi = 15.5dBi$.

The total maximum EIRP for the EUT is (20.36dBm+20.36dBm) +15.5dBi=38.87dBm (7.709W) which don't exceed the required EIRP limit (1640W/MHz)



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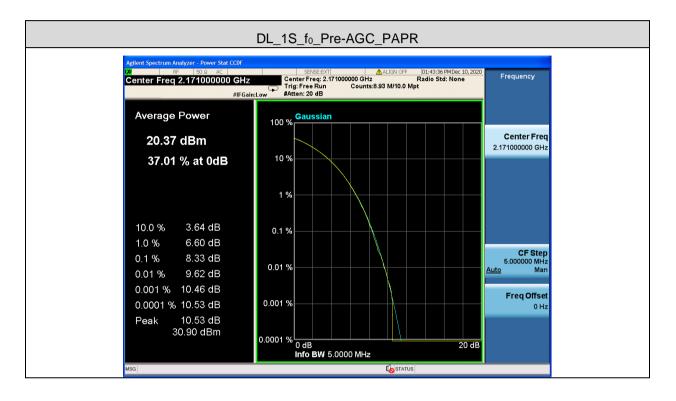
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Application No.: GZEM2011016737CR

Page: 37 of 140 FCC ID: OJFDLRU1719235

Test Conf.	Test Freq. f ₀ (MHz)	Signal Level	PAPR (dB)	Limit (dB)	Verdict
DL_1S_AWGN	2171.0	Pre-AGC	8.3	13	PASS





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Application No.: GZEM2011016737CR

Page: 38 of 140 FCC ID: OJFDLRU1719235

2.5 Out-of-band/out-of-block (including intermodulation) emissions and spurious emissions

Note:

1. The tested max conducted power for single antenna port is 20.36dBm, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB

Here,

P=20.36dBm= 0.1086W.

So the limit =

P(dBm)- [43 + 10 log (0.1050W)] = -13dBm

The EUT supports 2x2 MIMO and the emissions were measured at one of output port, so the limit line was set to -16.01dBm in following test plots in order to determine the test result conveniently.

2. Out-of-band/out-of-block (including intermodulation) emissions and spurious emissions have been tested using an AWGN test signal and a GSM-TDMA test signal, only the worst-case was recorded in this report.



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Application No.: GZEM2011016737CR

Page: 39 of 140 FCC ID: OJFDLRU1719235

DL 1S B AWGN Pre-AGC Out-of-band emission



DL 1S B AWGN AGC+3 Out-of-band emission





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Application No.: GZEM2011016737CR

Page: 40 of 140 FCC ID: OJFDLRU1719235

DL 1S T AWGN Pre-AGC Out-of-band emission



DL 1S T AWGN AGC+3 Out-of-band emission





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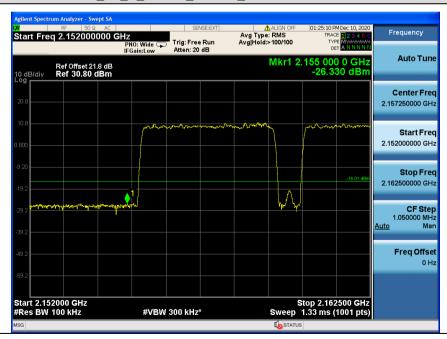
Application No.: GZEM2011016737CR

Page: 41 of 140 FCC ID: OJFDLRU1719235

DL 2S B AWGN Pre-AGC Out-of-band emission



DL 2S B AWGN AGC+3 Out-of-band emission





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Application No.: GZEM2011016737CR

Page: 42 of 140 FCC ID: OJFDLRU1719235

DL 2S T AWGN Pre-AGC Out-of-band emission



DL 2S T AWGN AGC+3 Out-of-band emission





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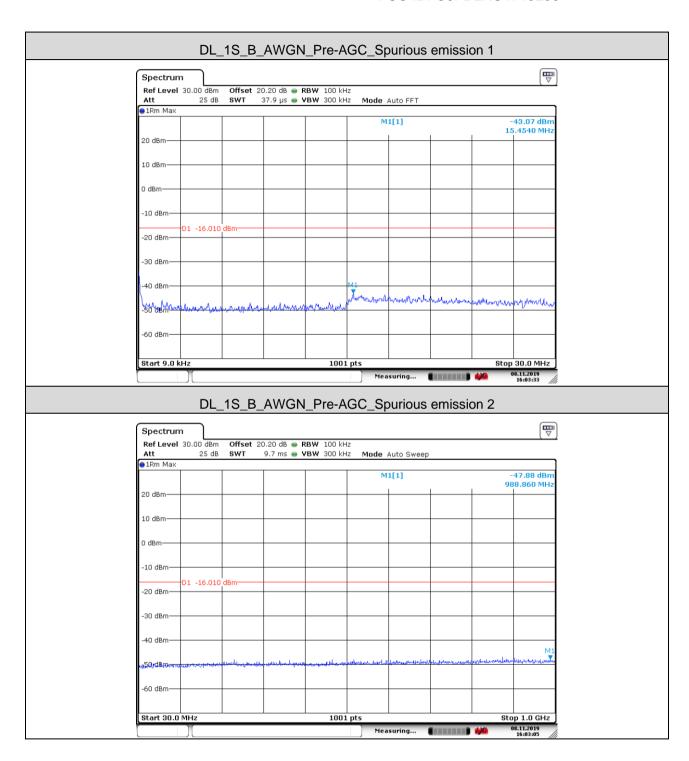
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Application No.: GZEM2011016737CR

Page: 43 of 140 FCC ID: OJFDLRU1719235





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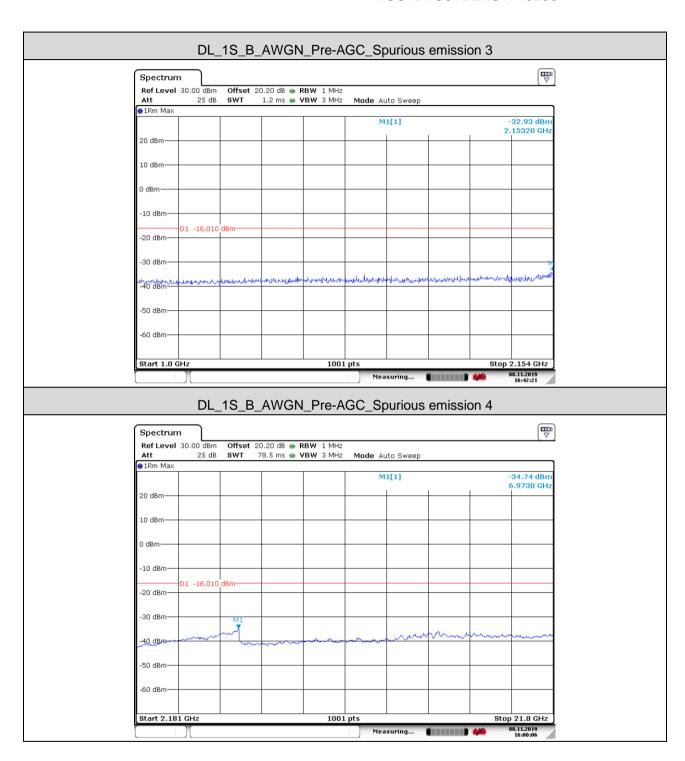
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Application No.: GZEM2011016737CR

Page: 44 of 140 FCC ID: OJFDLRU1719235





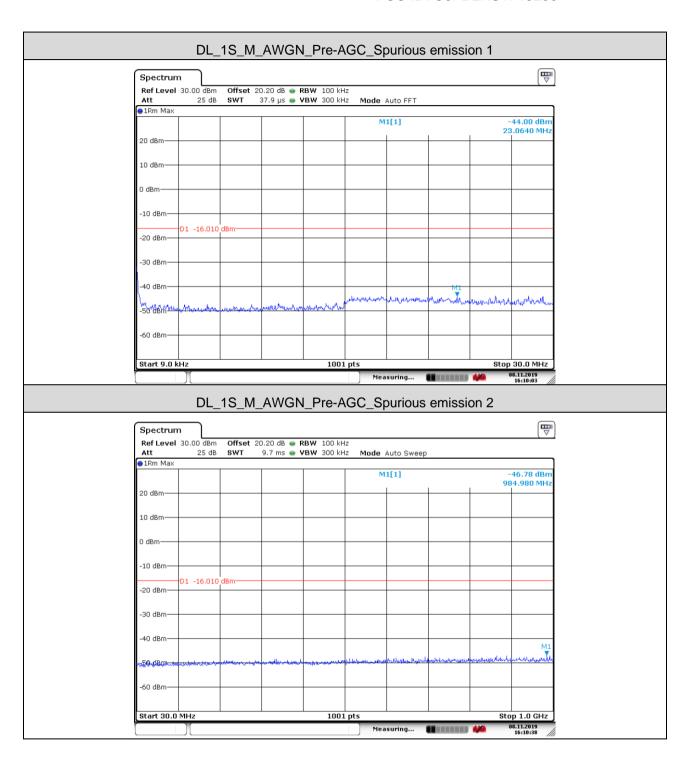
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Application No.: GZEM2011016737CR

Page: 45 of 140 FCC ID: OJFDLRU1719235





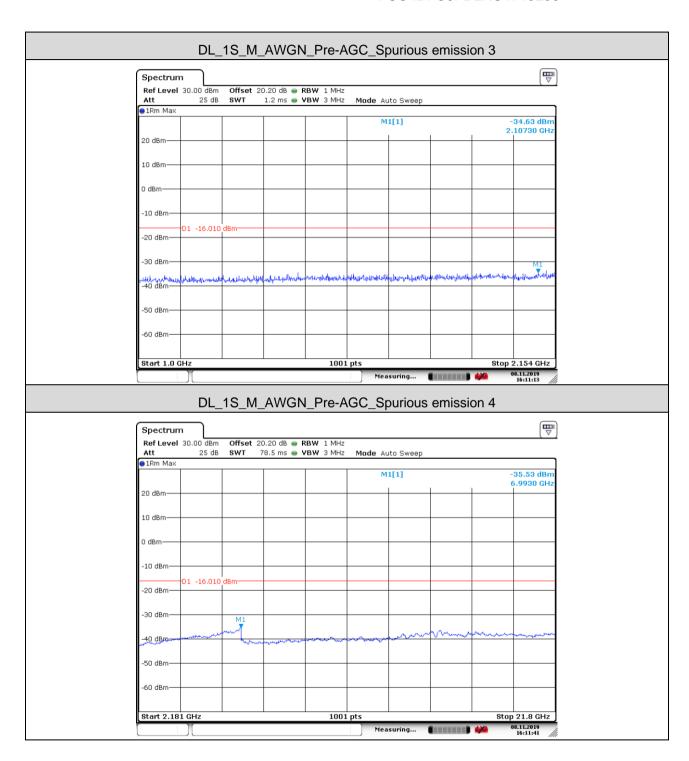
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Application No.: GZEM2011016737CR

Page: 46 of 140 FCC ID: OJFDLRU1719235





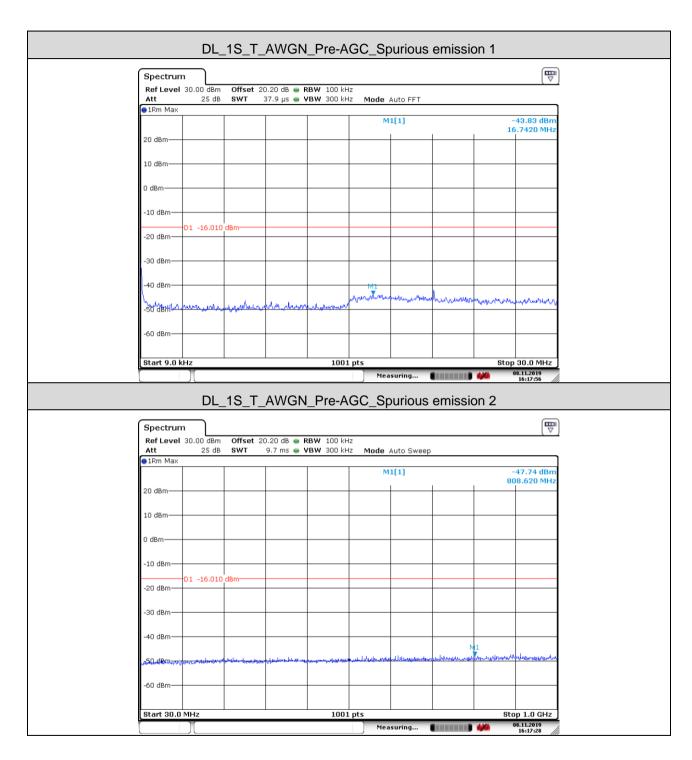
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Application No.: GZEM2011016737CR

Page: 47 of 140 FCC ID: OJFDLRU1719235





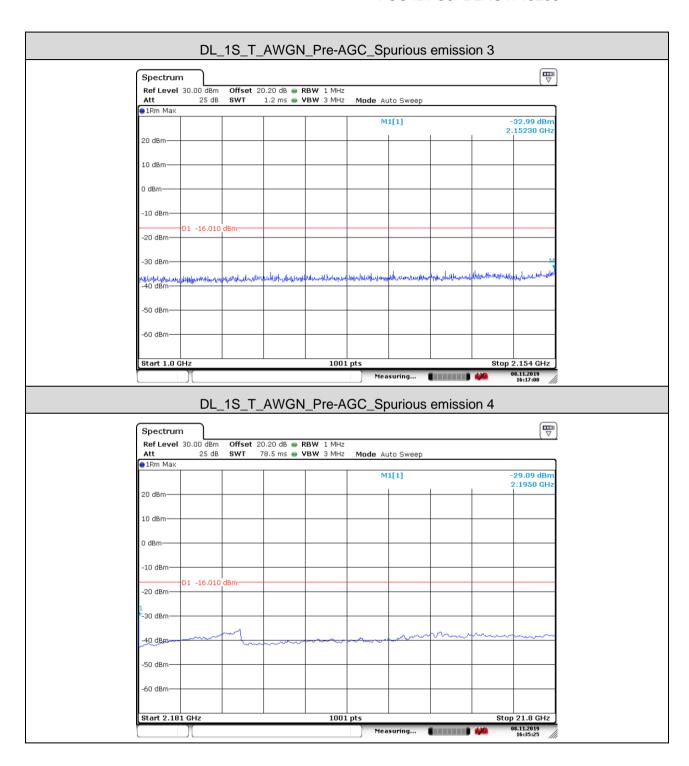
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Application No.: GZEM2011016737CR

Page: 49 of 140 FCC ID: OJFDLRU1719235

2.6 Frequency Stability

Note:

- 1. At 10 °C intervals of temperatures between -30 °C and +50 °C at the manufacturer's rated supply voltage, here the rated supply voltage is DC 48V.
- 2. At +20 °C temperature and ±15% supply voltage variations. If a product is specified to operate over a range of input voltage, then the −15% variation is applied to the lowermost voltage and the +15% is applied to the uppermost voltage.
- 3. The frequency stabilities can be maintained within the authorized bands of operation. Meet the requirement.
- 4. Frequency stability has been tested using an AWGN test signal and a GSM-TDMA test signal, only the worst-case was recorded in this report.



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Application No.: GZEM2011016737CR

Page: 50 of 140 FCC ID: OJFDLRU1719235

Frequency stability vs temperature						
Temperature (°C)	Test Conf.	Test data (MHz)	Tolerance (ppm)	Verdict		
50		2167.500764	0.07	PASS		
40		2167.500345	-0.13	PASS		
30		2167.500543	-0.4	PASS		
20		2167.500623	Reference	PASS		
10	DL_1S_M_AWGN	2167.500564	-0.3	PASS		
0		2167.500466	-0.7	PASS		
-10		2167.500643	0.01	PASS		
-20		2167.500577	-0.03	PASS		
-30		2167.500345	-0.13	PASS		

Frequency stability vs voltage						
Voltage (V)	Test Conf.	Test data (MHz)	Tolerance (ppm)	Verdict		
DC 40.8		2167.500463	-0.13	PASS		
DC 48	DL_1S_M_AWGN	2167.500753	Reference	PASS		
DC 55.2		2167.500864	0.05	PASS		



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Application No.: GZEM2011016737CR

Page: 51 of 140 FCC ID: OJFDLRU1719235

2.7 Radiated spurious emissions

Note:

1. The tested max conducted power for single antenna port is 20.36dBm. the 2x2 MIMO total power is 20.36dBm+20.36dBm= 0.2173W.

the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB

Here,

P=0.2173W,

So the limit =

P(dBm)- [43 + 10 log (0.2173W)] = -13dBm

- 2. The radiated test performed at bottom / middle / top channel, the data with more than 20db margin, therefore, only the worst-case middle channel test data was recorded in the report.
- 3. The disturbance 9kHz to 30MHz was very low and 20dB below the limit, therefore, the data was not recorded in the report.



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Application No.: GZEM2011016737CR

Page: 52 of 140 FCC ID: OJFDLRU1719235

DL 1S M AWGN Horizontal 30MHz~1GHz 40 Level (dBm) 30 10 **13DBM** -10 -30 -50 6 3 -70 -90 -120₃₀ 100 200 500 1000 50 Freq. Level Limit Over Limit Polarization Verdict (dB) (MHz) (dBm) (dBm) 37.812 -62.84 Horizontal **PASS** -75.84 -13 51.032 -75.37 -13 -62.37 Horizontal **PASS** -55.65 **PASS** 71.832 -68.65 -13 Horizontal 94.098 -66.04 -13 -53.04 Horizontal **PASS** 114.098 -73.29 -13 -60.29 Horizontal **PASS** 189.074 -68.54 -13 -55.54 Horizontal **PASS**



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Application No.: GZEM2011016737CR

Page: 53 of 140 FCC ID: OJFDLRU1719235

DL 1S M AWGN Horizontal above 1GHz 40 Level (dBm) 30 10 **13DBM** -10 -30 6 5 2 -50 -70 -90 -120 1000 1500 2000 5000 10000 18000 Freq. Level Limit Over Limit Polarization Verdict (MHz) (dBm) (dBm) (dB) Horizontal **PASS** 1339.006 -54.70 -13 -41.7 2157.260 -45.61 Horizontal **PASS** -13 -32.61**PASS** 2464.024 -52.38 -13 Horizontal -39.38 5797.032 -44.09 -13 Horizontal **PASS** -31.09 6698.373 -13 Horizontal **PASS** -43.11 -30.11 10484.230 **PASS** -40.64-13 -27.64 Horizontal



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Application No.: GZEM2011016737CR

Page: 54 of 140 FCC ID: OJFDLRU1719235

DL 1S M AWGN Vertical 30MHz~1GHz 40 Level (dBm) 30 10 **13DBM** -10 -30 -50 5 2 6 -70 -90 -120₃₀ 50 200 500 1000 100 Freq. Level Limit Over Limit Polarization Verdict (MHz) (dBm) (dBm) (dB) 37.812 -67.00 Vertical **PASS** -13 -54 64.887 -70.50 Vertical **PASS** -13 -57.5 71.832 -67.84 -13 Vertical **PASS** -54.84 94.098 -57.99 -13 Vertical **PASS** -44.99 121.123 Vertical **PASS** -65.46-13 -52.46 285.978 -70.76 **PASS** -13 Vertical -57.76



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Application No.: GZEM2011016737CR

Page: 55 of 140 FCC ID: OJFDLRU1719235

DL 1S M AWGN Vertical above 1GHz 40 Level (dBm) 10 **13DBM** -10 -30 6 2 4 5 3 -50 -70 -90 -120 1000 1500 2000 5000 10000 18000 Freq. Level Limit Over Limit Polarization Verdict (MHz) (dBm) (dBm) (dB) 1648.778 Vertical **PASS** -45.48 -13 -32.48 2126.308 Vertical **PASS** -38.78 -13 -25.782325.624 --45.47 -13 Vertical **PASS** 58.47 5797.032 -40.74 -13 Vertical **PASS** -27.74 6659.763 Vertical **PASS** -41.31 -13 -28.31 **PASS** 10484,421 -38.39 -13 Vertical -25.39



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Application No.: GZEM2011016737CR

Page: 56 of 140 FCC ID: OJFDLRU1719235

3 Broadband PCS (1850-1915MHz paired with 1930-1995MHz)

3.1 AGC threshold level

Test Conf.	AGC Threshold level		
DL_1S_M_AWGN	0.15dBm		
DL_1S_M_GSM	0.04dBm		



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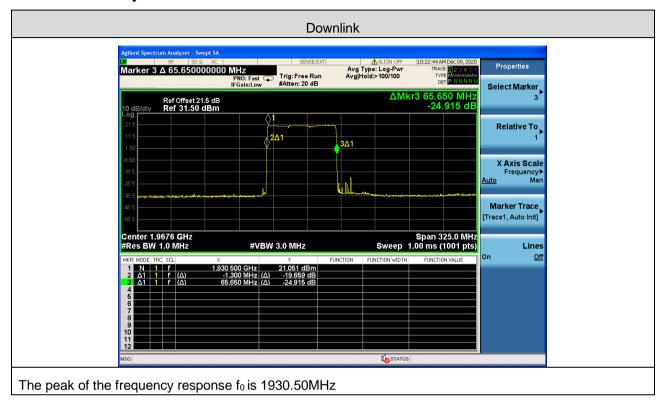
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Application No.: GZEM2011016737CR

Page: 57 of 140 FCC ID: OJFDLRU1719235

3.2 Out-of-band rejection





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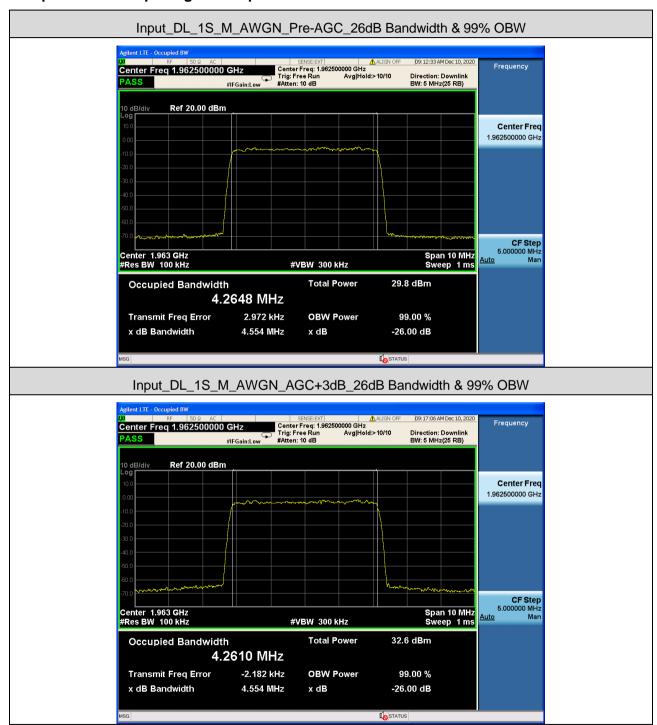
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Application No.: GZEM2011016737CR

Page: 58 of 140 FCC ID: OJFDLRU1719235

3.3 Input-versus-output signal comparison





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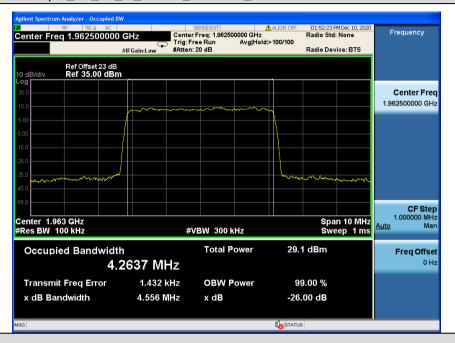
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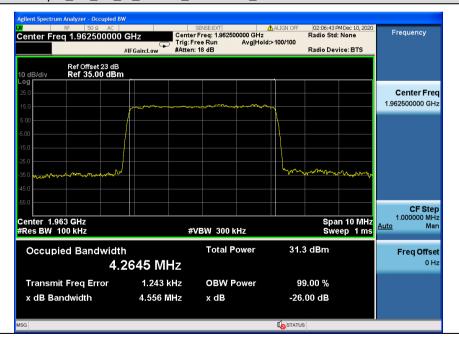
Application No.: GZEM2011016737CR

59 of 140 Page: FCC ID: OJFDLRU1719235

Output DL 1S M AWGN Pre-AGC 26dB Bandwidth & 99% OBW



Output DL 1S M AWGN AGC+3dB 26dB Bandwidth & 99% OBW





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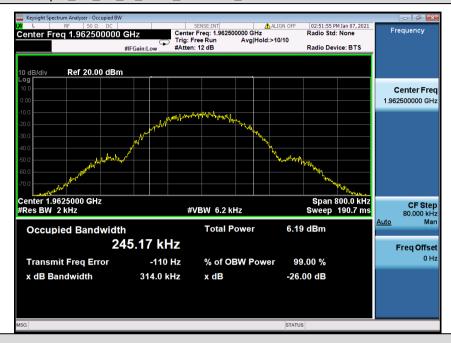
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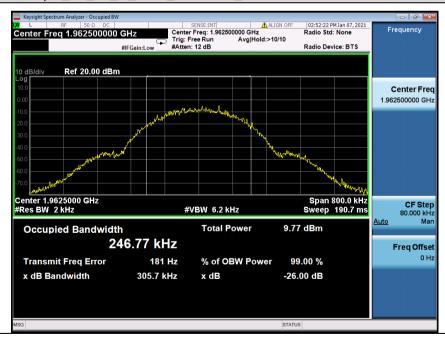
Application No.: GZEM2011016737CR

60 of 140 Page: FCC ID: OJFDLRU1719235

Input DL 1S M GSM Pre-AGC 26dB Bandwidth & 99% OBW



Input_DL_1S_M_GSM_AGC+3dB_26dB Bandwidth & 99% OBW





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Application No.: GZEM2011016737CR

Page: 61 of 140 FCC ID: OJFDLRU1719235

Output_DL_1S_M_GSM_Pre-AGC_26dB Bandwidth & 99% OBW



Output_DL_1S_M_GSM_AGC+3dB_26dB Bandwidth & 99% OBW





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Application No.: GZEM2011016737CR

Page: 62 of 140 FCC ID: OJFDLRU1719235

Remark:

Compare the spectral plot of the input signal to the output signal affirm that they are similar (in passband and roll off characteristic features and relative spectral locations). The test result complies with the requirement.



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Application No.: GZEM2011016737CR

Page: 63 of 140 FCC ID: OJFDLRU1719235

3.4 Mean output power and amplifier/booster gain

Test Conf.	Test Freq. f ₀ (MHz)	Signal Level	Input Power (dBm)	Output Power (dBm)	Gain (dB)	Verdict
		Pre-AGC	0.00	20.32	20.35	PASS
DL_1S_AWGN	1930.50	AGC+3dB	3.00	20.35	/	PASS
		Pre-AGC	0.00	20.18	20.21	PASS
DL_1S_GSM	1930.50	AGC+3dB	3.00	20.20	/	PASS

Remark:

According to the declaration from the applicant, the antenna gain should not exceed 12.5dBi, the Directional gain = $G(ANT) + 10 \log (NANT) dBi = 12.5dBi + 10 \log (2) dBi = 15.5dBi$.

The total maximum EIRP for the EUT is (20.35dBm+20.35dBm) +15.5dBi=38.86dBm (7.691W) which don't exceed the required EIRP limit (1640W/MHz)



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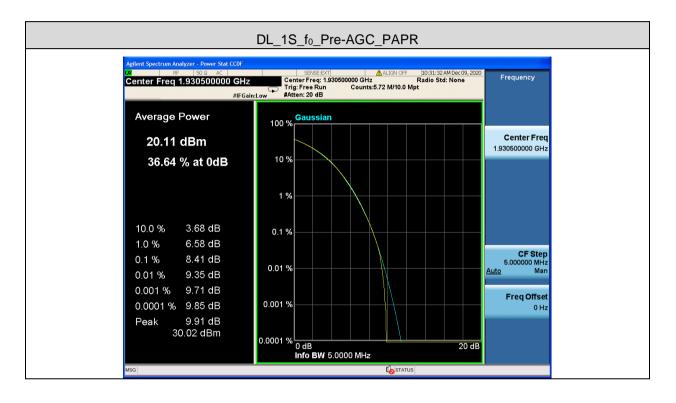
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Application No.: GZEM2011016737CR

Page: 64 of 140 FCC ID: OJFDLRU1719235

Test Conf.	Test Freq. f ₀ (MHz)	Signal Level	PAPR (dB)	Limit (dB)	Verdict
DL_1S_AWGN	1930.5	Pre-AGC	8.4	13	PASS





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Application No.: GZEM2011016737CR

Page: 65 of 140 FCC ID: OJFDLRU1719235

3.5 Out-of-band/out-of-block (including intermodulation) emissions and spurious emissions

Note:

1. The tested max conducted power for single antenna port is 20.35dBm, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB

Here,

P=20.35dBm= 0.1084W.

So the limit =

P(dBm)- [43 + 10 log (0.1084W)] = -13dBm

The EUT supports 2x2 MIMO and the emissions were measured at one of output port, so the limit line was set to -16.01dBm in following test plots in order to determine the test result conveniently.

2. Out-of-band/out-of-block (including intermodulation) emissions and spurious emissions have been tested using an AWGN test signal and a GSM-TDMA test signal, only the worst-case was recorded in this report.



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Application No.: GZEM2011016737CR

Page: 66 of 140 FCC ID: OJFDLRU1719235

DL 1S B AWGN Pre-AGC Out-of-band emission



DL 1S B AWGN AGC+3 Out-of-band emission





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Application No.: GZEM2011016737CR

Page: 67 of 140 FCC ID: OJFDLRU1719235

DL 1S T AWGN Pre-AGC Out-of-band emission



DL 1S T AWGN AGC+3 Out-of-band emission





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Application No.: GZEM2011016737CR

Page: 68 of 140 FCC ID: OJFDLRU1719235

DL 2S B AWGN Pre-AGC Out-of-band emission



DL 2S B AWGN AGC+3 Out-of-band emission





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Application No.: GZEM2011016737CR

Page: 69 of 140 FCC ID: OJFDLRU1719235

DL_2S_T_AWGN_Pre-AGC_Out-of-band emission



DL 2S T AWGN AGC+3 Out-of-band emission





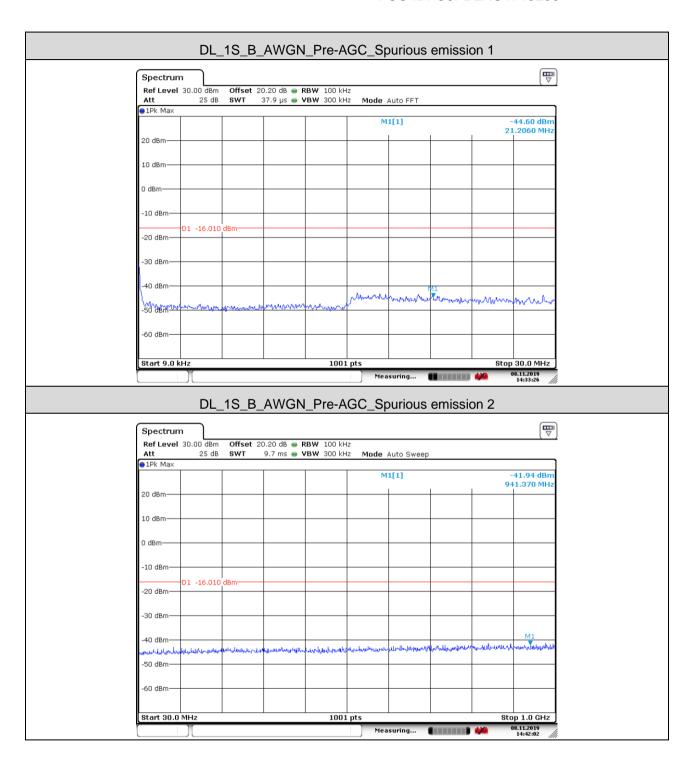
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Application No.: GZEM2011016737CR

Page: 70 of 140 FCC ID: OJFDLRU1719235



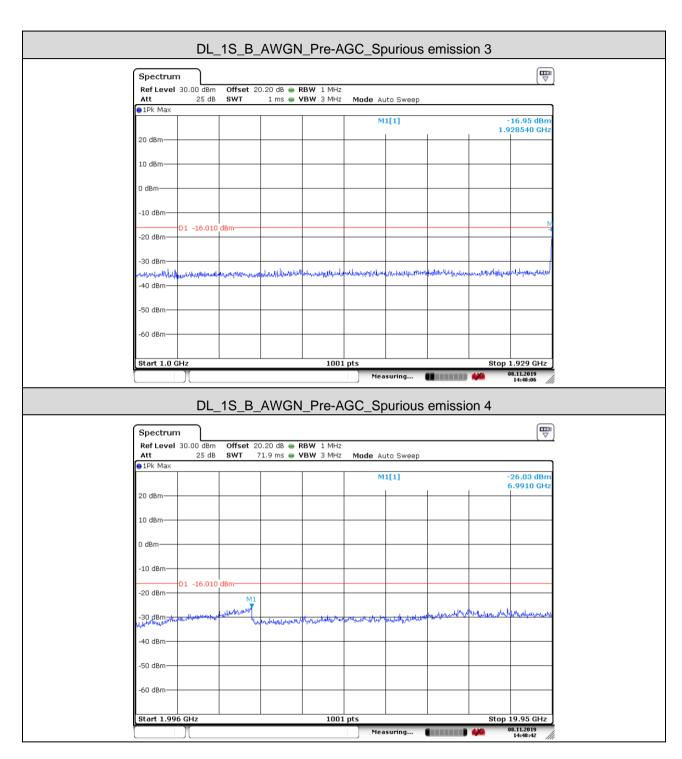


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Application No.: GZEM2011016737CR

Page: 71 of 140 FCC ID: OJFDLRU1719235



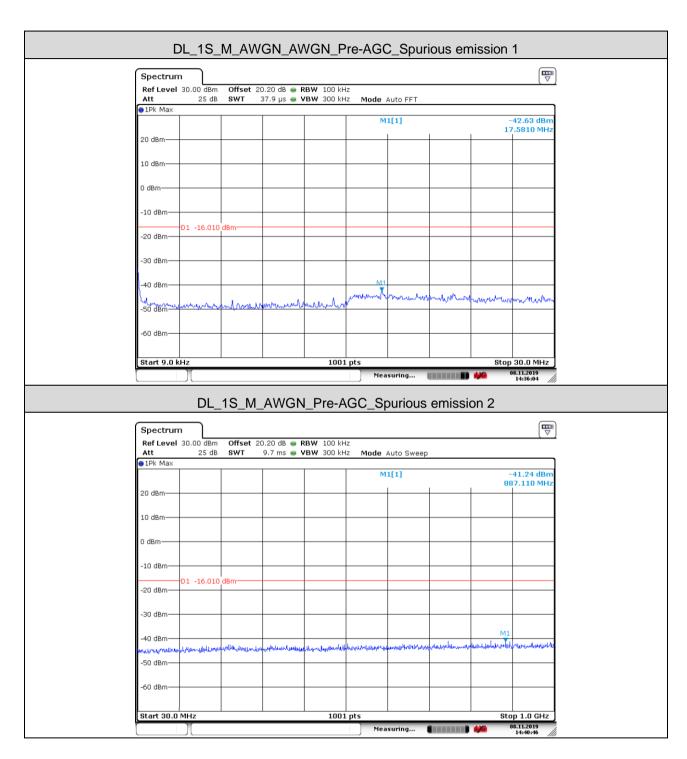


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Application No.: GZEM2011016737CR

Page: 72 of 140 FCC ID: OJFDLRU1719235



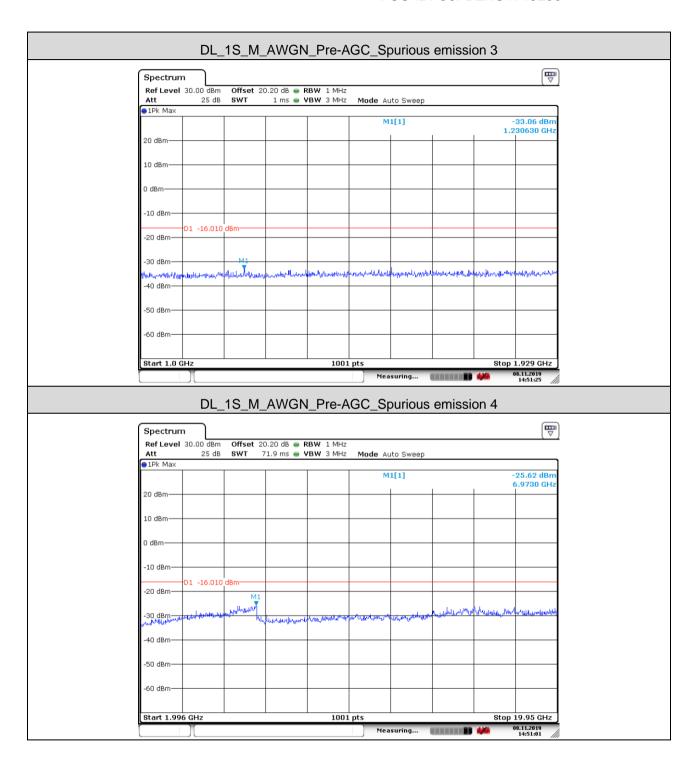


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Application No.: GZEM2011016737CR

Page: 73 of 140 FCC ID: OJFDLRU1719235





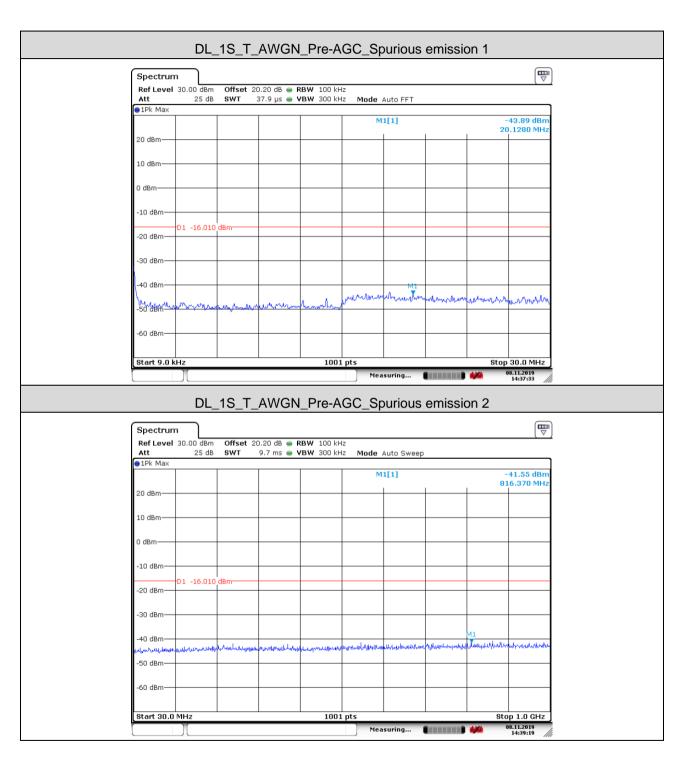
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Application No.: GZEM2011016737CR

Page: 74 of 140 FCC ID: OJFDLRU1719235





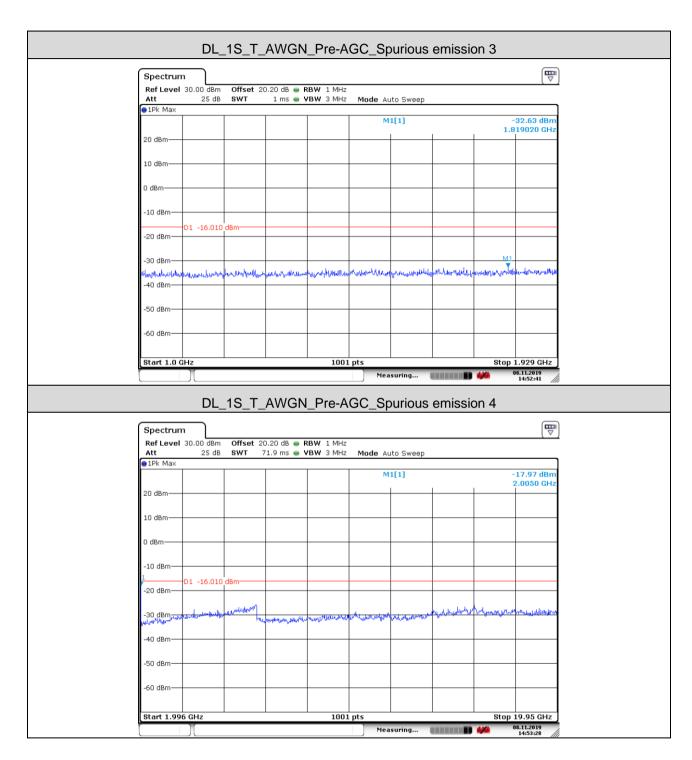
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Application No.: GZEM2011016737CR

Page: 75 of 140 FCC ID: OJFDLRU1719235





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Application No.: GZEM2011016737CR

Page: 76 of 140 FCC ID: OJFDLRU1719235

3.6 Frequency Stability

Note:

- 1. At 10 °C intervals of temperatures between −30 °C and +50 °C at the manufacturer's rated supply voltage, here the rated supply voltage is DC 48V.
- 2. At +20 °C temperature and $\pm15\%$ supply voltage variations. If a product is specified to operate over a range of input voltage, then the -15% variation is applied to the lowermost voltage and the +15% is applied to the uppermost voltage.
- 3. The frequency stabilities can be maintained within the authorized bands of operation. Meet the requirement.
- 4. Frequency stability has been tested using an AWGN test signal and a GSM-TDMA test signal, only the worst-case was recorded in this report.



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Application No.: GZEM2011016737CR

Page: 77 of 140 FCC ID: OJFDLRU1719235

Frequency stability vs temperature					
Temperature (℃)	Test Conf.	Test data (MHz)	Tolerance (ppm)	Verdict	
50		1962.500463	-0.05	PASS	
40		1962.500674	0.06	PASS	
30		1962.500372	-0.09	PASS	
20		1962.500563	Reference	PASS	
10	DL_1S_M_AWGN	1962.500472	-0.05	PASS	
0		1962.500372	-0.1	PASS	
-10		1962.500384	-0.09	PASS	
-20		1962.500472	-0.05	PASS	
-30		1962.500785	0.13	PASS	

Frequency stability vs voltage						
Voltage (V)	Test Conf.	Test data (MHz)	Tolerance (ppm)	Verdict		
DC 40.8		1962.500853	0.16	PASS		
DC 48	DL_1S_M_AWGN	1962.500543	Reference	PASS		
DC 55.2		1962.500462	-0.04	PASS		



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Application No.: GZEM2011016737CR

Page: 78 of 140 FCC ID: OJFDLRU1719235

3.7 Radiated spurious emissions

Note:

1. The tested max conducted power for single antenna port is 20.35dBm. the 2x2 MIMO total power is 20.35dBm+20.35dBm= 0.2168W.

the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB

Here,

P=0.2168W,

So the limit =

P(dBm)- [43 + 10 log (0.2168W)] = -13dBm

- 2. The radiated test performed at bottom / middle / top channel, the data with more than 20db margin, therefore, only the worst-case middle channel test data was recorded in the report.
- 3. The disturbance 9kHz to 30MHz was very low and 20dB below the limit, therefore, the data was not recorded in the report.



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Application No.: GZEM2011016737CR

Page: 79 of 140 FCC ID: OJFDLRU1719235

DL 1S M AWGN Horizontal 30MHz~1GHz 40 Level (dBm) 30 10 13DBM -10 -30 -50 3 6 -70 -90 -120₃₀ 100 200 500 1000 50 Freq. Level Limit Over Limit Polarization Verdict (dB) (MHz) (dBm) (dBm) 37.812 -57.46 Horizontal **PASS** -70.46 -13 51.301 -69.98 Horizontal **PASS** -13 -56.98 71.832 -62.34-13 Horizontal **PASS** -49.34 94.098 -64.51 -13 Horizontal **PASS** -51.51 121.432 -67.73 Horizontal **PASS** -13 -54.73189.074 -67.84 **PASS** -13 Horizontal -54.84



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Application No.: GZEM2011016737CR

Page: 80 of 140 FCC ID: OJFDLRU1719235

DL 1S M AWGN Horizontal above 1GHz 40 Level (dBm) 30 10 -13DBM -10 -30 2 2 -50 -70 -90 1000 1500 5000 10000 18000 2000 Freq. Level Limit Over Limit Polarization Verdict (MHz) (dBm) (dBm) (dB) 1751.955 Horizontal **PASS** -34.43 -13 -21.43 1955.344 -45.59 -13 Horizontal **PASS** -32.592259.367 -50.07 -13 Horizontal **PASS** -37.07 5763.617 -43.82 -13 Horizontal **PASS** -30.82 6698.373 Horizontal **PASS** -42.09-13 -29.09 10423.659 -39.41 -13 Horizontal **PASS** -26.41



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Application No.: GZEM2011016737CR

Page: 81 of 140 FCC ID: OJFDLRU1719235

DL 1S M AWGN Vertical 30MHz~1GHz 40 Level (dBm) 30 10 13DBM -10 -30 -50 3 -70 -90 -110 -120¹30 50 200 500 1000 100 Limit Over Limit Freq. Level Polarization Verdict (MHz) (dBm) (dBm) (dB) 37.812 **PASS** -67.15-13 -54.15 Vertical Vertical 71.832 -61.31 -13 **PASS** -48.31 94.098 -57.50 -13 Vertical **PASS** -44.5 121.342 -64.27 -13 Vertical **PASS** -51.27 286.978 -71.74 -13 Vertical **PASS** -58.74 **PASS** 492.476 -71.22 -13 Vertical -58.22



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Application No.: GZEM2011016737CR

Page: 82 of 140 FCC ID: OJFDLRU1719235

DL 1S M AWGN Vertical above 1GHz 40 Level (dBm) 30 10 **13DBM** -10 -30 6 5 3 -50 -70 -90 -120 1000 1500 5000 10000 18000 2000 Freq. Level Limit Over Limit Polarization Verdict (MHz) (dBm) (dBm) (dB) 1611.091 Vertical **PASS** -46.26 -13 -33.26 1716.864 -35.96 Vertical **PASS** -13 -22.96**PASS** 1955.344 -44.89 -13 Vertical -31.89 2325.624 -35.41 -13 Vertical **PASS** -22.41 **PASS** 5797.032 -40.27 -13 Vertical -27.27 Vertical **PASS** 10484.320 -37.30-13 -24.3



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Application No.: GZEM2011016737CR

Page: 83 of 140 FCC ID: OJFDLRU1719235

4 WCS (2305-2315MHz paired with 2350-2360MHz)

4.1 AGC threshold level

Test Conf.	AGC Threshold level	
DL_1S_M_AWGN	-0.32dBm	
DL_1S_M_GSM	-0.30dBm	



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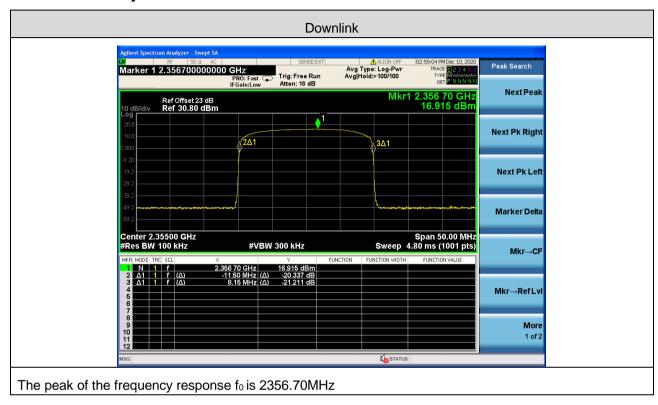
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Application No.: GZEM2011016737CR

Page: 84 of 140 FCC ID: OJFDLRU1719235

4.2 Out-of-band rejection





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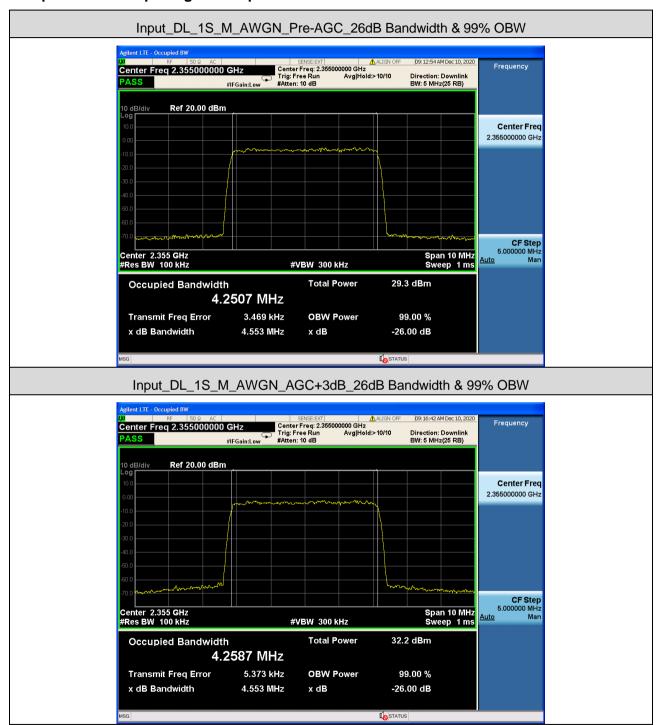
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Application No.: GZEM2011016737CR

Page: 85 of 140 FCC ID: OJFDLRU1719235

4.3 Input-versus-output signal comparison





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