



Plot 8-53. Occupied Bandwidth Plot (LTE B5_3C_5M+10M+10M_QPSK – Mid Channel_4T, Port 1)



(DSS B(n)5_1C_10M_QPSK - Mid Channel_4T, Port 2)







Plot 8-54. Occupied Bandwidth Plot (LTE B5_3C_5M+10M+10M_16QAM – Mid Channel_4T, Port 1)



Plot 8-56. Occupied Bandwidth Plot (DSS B(n)5_1C_10M_64QAM - Low Channel_4T, Port 0)



Plot 8-58. Occupied Bandwidth Plot (DSS B(n)5_2C_10M+10M_16QAM - High Channel_4T, Port 1)

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		(CERTIFICATION)	Technical Manager
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Plot 8-59. Occupied Bandwidth Plot (NR n5_1C_5M_QPSK - Low Channel_4T, Port 0)



(NR n5_1C_10M_QPSK - Low Channel_4T, Port 0)







Plot 8-60. Occupied Bandwidth Plot (NR n5_1C_5M_16QAM - Low Channel_4T, Port 2)



Plot 8-62. Occupied Bandwidth Plot (NR n5_1C_10M_64QAM - Low Channel_4T, Port 1)



Plot 8-64. Occupied Bandwidth Plot (NR n5_1C_15M_16QAM - Low Channel_4T, Port 0)

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Plot 8-65. Occupied Bandwidth Plot (NR n5_2C_5M+5M_QPSK - Low Channel_4T, Port 1)



(NR n5_2C_10M+15M_QPSK - Mid Channel_4T, Port 2)







Plot 8-66. Occupied Bandwidth Plot (NR n5_2C_5M+5M_16QAM - Low Channel_4T, Port 1)



Plot 8-68. Occupied Bandwidth Plot (NR n5_2C_10M+15M_16QAM - Mid Channel_4T, Port 3)



Plot 8-70. Occupied Bandwidth Plot (MSR 2C_DSS B(n)5_1C_10M+LTE B5_1C_5M_16QAM - High Channel_4T, Port 1)

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(MSR 2C_NR n5_1C_5M+LTE B5_1C_5M_QPSK - Mid Channel_4T, Port 3)







Plot 8-72. Occupied Bandwidth Plot (MSR 3C_DSS B(n)5_2C_10M+10M+LTE B5_1C_5M_16QAM - Mid

Channel_4T, Port 2)



Plot 8-74. Occupied Bandwidth Plot (MSR 2C_NR n5_1C_5M+LTE B5_1C_5M_16QAM - Low Channel_4T, Port 0)



Plot 8-76. Occupied Bandwidth Plot (MSR 3C_NR n5_2C_10M+10M+LTE B5_1C_5M_16QAM - Mid Channel_4T, Port 1)

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Plot 8-77. Occupied Bandwidth Plot (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_5M_QPSK - Mid Channel_4T, Port



(MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_15M_QPSK - Mid Channel_4T, Port 1)



Plot 8-81. Occupied Bandwidth Plot (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_5M+LTE B5_1C_5M_QPSK -Low Channel_4T, Port 1)

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Plot 8-78. Occupied Bandwidth Plot





Plot 8-80. Occupied Bandwidth Plot (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_15M_16QAM - Mid Channel_4T, Port 1)



Plot 8-82. Occupied Bandwidth Plot (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_5M+LTE B5_1C_5M_16QAM - Low Channel _4T, Port 0)

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Plot 8-85. Occupied Bandwidth Plot (LTE B13_1C_5M_QPSK - Low Channel_4T, Port 3)







Plot 8-84. Occupied Bandwidth Plot





Plot 8-86. Occupied Bandwidth Plot (LTE B13_1C_5M_64QAM - High Channel_4T, Port 3)



(LTE B13_1C_10M_64QAM - Mid Channel_4T, Port 0)

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Plot 8-89. Occupied Bandwidth Plot (LTE B13_2C_5M+5M_QPSK - Mid Channel_4T, Port 1)



Plot 8-90. Occupied Bandwidth Plot (LTE B13_2C_5M+5M_16QAM - Mid Channel_4T, Port 3)



(LTE B13_1C_5M+NB-IoT(1IB)_QPSK – Low Channel_4T, Port 1)



Plot 8-92. Occupied Bandwidth Plot (LTE B13_1C_10M+NB-IoT(2GB)_QPSK - Mid Channel_4T, Port 2)

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8.3 Equivalent Radiated Power

Test Overview

A transmitter port of EUT is connected to the input of a signal analyzer. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Description

KDB 971168 D01 v03r01 – Section 5 KDB 662911 D01 v02r01 – Section E)1) In-Band Power Measurements ANSI C63.26-2015 – Section 5.2.4.4.1

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The spectrum analyzer settings were as follows:

- 1. Conducted power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
- 2. RBW = $1 \sim 5\%$ of the expected OBW
- 3. VBW \geq 3 x RBW
- 4. Span = $2 \sim 3 \times OBW$
- 5. No. of sweep points $\geq 2 \times \text{span} / \text{RBW}$
- 6. Detector = RMS
- 7. Trigger = Free-run
- 8. Trace mode = Trace-Averaging (RMS) set to average over 100 sweeps
- 9. The trace was allowed to stabilize
- 10. The relevant equation for determining the maximum ERP from the measured RF output power is given in Equation as follows:

 $ERP = P_{Meas} + G_T - 2.15 dBi$ where GT: gain of the transmitting antenna, in dBi (ERP).

Test Setup



Figure 8-2. Test Instrument & Measurement Setup

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<u>Limit</u>

N/A

Note: The maximum antenna gain and ERP limit are determined at the time of licensing depending on the geographical location of the base station.

Test Notes

- 1. For test results, an estimated calculated maximum permissible EIRP reported. And the required reduction measurements will be performed when after the installation.
- Consider the following factors for MIMO: The output power per each port is measured as dBm/MHz or dBm, the output powers are summed up in linear using the measure-and-sum technique defined in KDB 971168 D01 v03r01 - Section E) 2).
- 3. The output power per port (dBm/MHz or dBm) is converted to a linear value (mW). A summation of linear powers for all ports gives us the total MIMO Conducted Power (mW). We convert this back to logarithmic scale for further output power calculations.

4. Sample Calculation:

Let us assume the following numbers:

a) Total MIMO Conducted Power as 61886.33 milliWatts

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n	1

Factors		Value	Unit
Summed MIMO Conducted Power (linear sum)		61886.33	mW/
Summed MIMO Conducted Power (dBm)	= 10 * log (61886.33) =	47.92	dBm

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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	44.83	44.84	44.89	44.84
Power (dBm)	1	44.98	45.00	45.04	45.03
Total MIMO Conduct (mW)	ed Power	61886.33	62101.73	62747.26	62320.93
Total MIMO Conduct (dBm)	ed Power	47.92	47.93	47.98	47.95
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	44.80	44.80	44.80	44.78
Power (dBm)	1	44.91	44.90	44.88	44.87
Total MIMO Conducted Power (mW)		61173.71	61102.47	60960.49	60750.98
Total MIMO Conducted Power (dBm)		47.87	47.86	47.85	47.84
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	44.68	44.69	44.71	44.69
Power (dBm)	1	44.84	44.85	44.89	44.89
Total MIMO Conducte (mW)	d Power	59855.45	59993.43	60412.00	60276.10
Total MIMO Conducte (dBm)	d Power	47.77	47.78	47.81	47.80

 Table 8-49. Conducted Average Output Power Table (LTE B5_1C_5M_2T)

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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	47.96	48.01	47.93	47.90
Power (dBm)	1	48.04	48.00	47.98	47.91
Total MIMO Conducte (mW)	d Power	126196.82	126336.92	124892.74	123461.14
Total MIMO Conducte (dBm)	d Power	51.01	51.02	50.97	50.92
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	47.89	47.88	47.90	47.88
	1	47.90	47.92	47.97	47.90
Total MIMO Conducted Power (mW)		123177.19	123320.31	124320.89	123035.70
Total MIMO Conducted Power (dBm)		50.91	50.91	50.95	50.90
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	47.85	47.85	47.84	47.82
Power (dBm)	1	47.93	47.88	47.93	47.89
Total MIMO Conducte (mW)	d Power	123040.59	122329.89	122900.40	122051.77
Total MIMO Conducte (dBm)	d Power	50.90	50.88	50.90	50.87

 Table 8-50. Conducted Average Output Power Table (LTE B5_1C_10M_2T)

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Low Channel	Port	QPSK 16QAM	
Conducted Average	0	47.94	47.86
Power (dBm)	1	48.02	47.91
Total MIMO Conducte (mW)	d Power	125617.00	122895.84
Total MIMO Conducte (dBm)	ed Power	50.99	50.90
Middle Channel	Port	QPSK	16QAM
Conducted Average	0	47.75	47.82
Power (dBm)	1	47.84	47.81
Total MIMO Conducte (mW)	ed Power	120379.71	120928.95
Total MIMO Conducte (dBm)	ed Power	50.81	50.83
High Channel	Port	QPSK	16QAM
Conducted Average	0	47.63	47.65
Power (dBm)	1	47.78	47.80
Total MIMO Conducte (mW)	ed Power	117921.98	118466.28
Total MIMO Conducte (dBm)	ed Power	50.72	50.74

Table 8-51. Conducted Average Output Power Table (LTE B5_2C_5M+5M_2T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Middle Channel	Port	QPSK	16QAM
Conducted Average	0	48.11	48.15
Power (dBm)	1	47.89	48.00
Total MIMO Conducte (mW)	ed Power	126233.95	128410.79
Total MIMO Conducte (dBm)	ed Power	51.01	51.09

Table 8-52. Conducted Average Output Power Table (LTE B5_3C_5M+10M+10M_2T)

DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
		0	48.01	48.00	47.43	47.95
		1	48.21	48.14	47.71	48.13
	LOW	Total MIMO Conducted Power (mW)	129462.84	128258.57	114355.12	127386.45
		Total MIMO Conducted Power(dBm)	51.12	51.08	50.58	51.05
		0	48.01	47.97	47.61	47.99
LTE 9 : Mid NR 1	Mid	1	48.10	48.13	47.75	48.17
	IVIIO	Total MIMO Conducted Power (mW)	127806.61	127674.36	117242.86	128565.14
		Total MIMO Conducted Power(dBm)	51.07	51.06	50.69	51.09
		0	47.88	47.82	47.36	47.83
	Lliab	1	48.13	48.04	47.66	48.07
	High	Total MIMO Conducted Power (mW)	126389.17	124213.64	112794.78	124794.59
		Total MIMO Conducted Power(dBm)	51.02	50.94	50.52	50.96

Table 8-53. Conducted Average Output Power Table (DSS B(n)5_1C_10M(9:1 Ratio)_2T)

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DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
Low		0	47.92	47.96	47.93	47.94
	1	1	48.05	48.09	48.08	48.09
	Total MIMO Conducted Power (mW)	125770.46	126934.20	126355.68	126646.96	
		Total MIMO Conducted Power(dBm)	51.00	51.04	51.02	51.03
LTE 8 : NR 2 Mid	0	47.98	47.96	48.02	47.91	
	NA: al	1	48.13	48.11	48.11	48.10
	IVIIQ	Total MIMO Conducted Power (mW)	127818.80	127231.53	128101.23	126367.06
		Total MIMO Conducted Power(dBm)	51.07	51.05	51.08	51.02
		0	47.80	47.84	47.82	47.85
Higi	Lliab	1	48.07	48.07	48.09	48.02
	підп	Total MIMO Conducted Power (mW)	124376.92	124934.46	124951.01	124340.66
		Total MIMO Conducted Power(dBm)	50.95	50.97	50.97	50.95

Table 8-54. Conducted Average Output Power Table (DSS B(n)5_1C_10M(8:2 Ratio)_2T)

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DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
Low		0	47.96	47.89	47.88	47.90
	1	1	48.00	48.11	48.09	48.12
	Total MIMO Conducted Power (mW)	125613.00	126231.95	125793.13	126522.94	
		Total MIMO Conducted Power(dBm)	50.99	51.01	51.00	51.02
		0	47.96	47.95	48.01	47.99
LTE 7 : NR 3 Mid	NA: al	1	48.09	48.07	48.09	48.10
	IVIIQ	Total MIMO Conducted Power (mW)	126934.20	126494.44	127658.11	127516.04
		Total MIMO Conducted Power(dBm)	51.04	51.02	51.06	51.06
		0	47.81	47.82	47.80	47.76
	Lliab	1	48.08	48.03	48.07	48.03
	підп	Total MIMO Conducted Power (mW)	124663.63	124067.18	124376.92	123236.62
		Total MIMO Conducted Power(dBm)	50.96	50.94	50.95	50.91

Table 8-55. Conducted Average Output Power Table (DSS B(n)5_1C_10M(7:3 Ratio)_2T)

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DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
	Low	0	47.88	47.86	47.91	47.91
		1	48.09	48.06	48.06	48.05
		Total MIMO Conducted Power (mW)	125793.13	125067.69	125775.12	125627.99
		Total MIMO Conducted Power(dBm)	51.00	50.97	51.00	50.99
	Mid	0	47.96	47.89	47.94	47.90
LTE 6 :		1	48.07	48.07	48.07	48.04
NR 4		Total MIMO Conducted Power (mW)	126638.23	125638.64	126350.99	125339.05
		Total MIMO Conducted Power(dBm)	51.03	50.99	51.02	50.98
		0	47.76	47.81	47.78	47.80
		1	48.02	48.08	48.05	47.98
	підп	Total MIMO Conducted Power (mW)	123090.50	124663.63	123805.46	123061.79
		Total MIMO Conducted Power(dBm)	50.90	50.96	50.93	50.90

Table 8-56. Conducted Average Output Power Table (DSS B(n)5_1C_10M(6:4 Ratio)_2T)

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DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
	Low	0	47.88	47.86	47.93	47.87
		1	48.15	48.09	48.09	48.14
		Total MIMO Conducted Power (mW)	126689.26	125511.13	126503.83	126397.88
		Total MIMO Conducted Power(dBm)	51.03	50.99	51.02	51.02
	Mid	0	47.92	47.94	47.89	47.86
LTE 5 :		1	48.05	48.06	48.05	48.07
NR 5		Total MIMO Conducted Power (mW)	125770.46	126203.51	125344.04	125215.16
		Total MIMO Conducted Power(dBm)	51.00	51.01	50.98	50.98
		0	47.77	47.82	47.76	47.74
		1	47.98	48.02	48.00	47.96
	підп	Total MIMO Conducted Power (mW)	122647.00	123921.06	122799.26	121946.49
		Total MIMO Conducted Power(dBm)	50.89	50.93	50.89	50.86

Table 8-57. Conducted Average Output Power Table (DSS B(n)5_1C_10M(5:5 Ratio)_2T)

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DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
	Low	0	47.88	47.86	47.98	47.91
		1	48.12	48.10	48.19	48.12
		Total MIMO Conducted Power (mW)	126239.64	125659.63	128723.23	126665.08
		Total MIMO Conducted Power(dBm)	51.01	50.99	51.10	51.03
	Mid	0	47.92	47.85	47.95	47.86
LTE 4 :		1	48.04	48.06	48.11	48.06
NR 6		Total MIMO Conducted Power (mW)	125623.66	124927.17	127087.75	125067.69
		Total MIMO Conducted Power(dBm)	50.99	50.97	51.04	50.97
		0	47.74	47.81	47.82	47.72
		1	48.06	48.01	48.03	48.04
	підп	Total MIMO Conducted Power (mW)	123402.70	123636.05	124067.18	122835.72
		Total MIMO Conducted Power(dBm)	50.91	50.92	50.94	50.89

Table 8-58. Conducted Average Output Power Table (DSS B(n)5_1C_10M(4:6 Ratio)_2T)

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DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
	Low	0	47.86	47.88	47.99	47.89
		1	48.12	48.09	48.11	48.15
		Total MIMO Conducted Power (mW)	125957.65	125793.13	127664.88	126830.74
		Total MIMO Conducted Power(dBm)	51.00	51.00	51.06	51.03
	Mid	0	47.92	47.90	47.96	47.91
LTE 3 :		1	48.03	48.07	48.10	48.09
NR 7		Total MIMO Conducted Power (mW)	125477.20	125780.46	127082.69	126218.57
		Total MIMO Conducted Power(dBm)	50.99	51.00	51.04	51.01
		0	47.79	47.81	47.81	47.81
		1	48.01	47.99	48.08	48.03
	підп	Total MIMO Conducted Power (mW)	123358.56	123345.48	124663.63	123927.96
		Total MIMO Conducted Power(dBm)	50.91	50.91	50.96	50.93

Table 8-59. Conducted Average Output Power Table (DSS B(n)5_1C_10M(3:7 Ratio)_2T)

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DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
		0	47.91	47.90	47.93	47.90
		1	48.17	48.15	48.13	48.17
	LOW	Total MIMO Conducted Power (mW)	127416.17	126972.56	127099.87	127274.03
		Total MIMO Conducted Power(dBm)	51.05	51.04	51.04	51.05
	Mid	0	47.90	47.86	47.91	47.88
LTE 2 :		1	48.08	48.07	48.10	48.06
NR 8		Total MIMO Conducted Power (mW)	125928.27	125215.16	126367.06	125349.68
		Total MIMO Conducted Power(dBm)	51.00	50.98	51.02	50.98
		0	47.73	47.83	47.91	47.87
	Lliab	1	48.06	48.10	48.05	48.06
	підп	Total MIMO Conducted Power (mW)	123266.02	125239.06	125627.99	125208.52
		Total MIMO Conducted Power(dBm)	50.91	50.98	50.99	50.98

Table 8-60. Conducted Average Output Power Table (DSS B(n)5_1C_10M(2:8 Ratio)_2T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 65 of 204
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DSS Ratio	Channel	Port	QPSK	16QAM	
		0	47.98	47.83	
		1	48.13	48.02	
	Low	Total MIMO Conducted Power (mW)	127818.80	124060.60	
		Total MIMO Conducted Power(dBm)	51.07	50.94	
		0	47.96	47.92	
	Mid	1	48.13	48.06	
NR 1		Mid	Total MIMO Conducted Power (mW)	127530.24	125917.59
			Total MIMO Conducted Power(dBm)	51.06	51.00
		0	47.82	48.02	
		1	48.03	48.16	
	High	Total MIMO Conducted Power (mW)	124067.18	128850.59	
			Total MIMO Conducted Power(dBm)	50.94	51.10

Table 8-61. Conducted Average Output Power Table (DSS B(n)5_2C_10M+10M(9:1 Ratio)_2T)

FCC ID: A3LRF4461D-13A	element 🤤	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	44.94	44.89	44.83	44.85
Power (dBm)	1	45.02	45.05	44.99	45.00
Total MIMO Conduct (mW)	ed Power	62957.64	62820.83	61958.90	62171.99
Total MIMO Conduct (dBm)	ed Power	47.99	47.98	47.92	47.94
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	44.90	44.85	44.81	44.88
Power (dBm)	1	45.00	45.00	44.97	44.92
Total MIMO Conducted Power (mW)		62525.73	62171.99	61674.22	61806.56
Total MIMO Conducte (dBm)	d Power	47.96	47.94	47.90	47.91
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	44.75	44.79	44.74	44.75
Power (dBm)	1	44.91	44.96	44.88	44.90
Total MIMO Conducte (mW)	d Power	60828.02	61462.92	60546.13	60756.78
Total MIMO Conducte (dBm)	d Power	47.84	47.89	47.82	47.84

 Table 8-62. Conducted Average Output Power Table (NR n5_1C_5M_2T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	47.92	47.89	47.89	47.86
Power (dBm)	1	48.03	47.99	47.95	48.00
Total MIMO Conduct (mW)	ed Power	125477.20	124468.31	123891.17	124189.94
Total MIMO Conduct (dBm)	ed Power	50.99	50.95	50.93	50.94
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	47.89	47.91	47.85	47.93
	1	47.98	48.03	48.01	47.97
Total MIMO Conducted Power (mW)		124323.52	125334.73	124194.87	124748.29
Total MIMO Conducted Power (dBm)		50.95	50.98	50.94	50.96
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	47.86	47.85	47.85	47.73
Power (dBm)	1	47.98	47.99	47.90	47.87
Total MIMO Conducte (mW)	d Power	123900.04	123904.31	122613.19	120527.57
Total MIMO Conducte (dBm)	d Power	50.93	50.93	50.89	50.81

Table 8-63. Conducted Average Output Power Table (NR n5_1C_10M_2T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	47.92	47.90	47.87	47.83
Power (dBm)	1	48.10	48.08	48.07	48.01
Total MIMO Conduct (mW)	ed Power	126509.53	125928.27	125356.00	123914.82
Total MIMO Conduct (dBm)	ed Power	51.02	51.00	50.98	50.93
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	47.83	47.80	47.84	47.82
Power (dBm)	1	47.96	47.98	47.98	47.99
Total MIMO Conducted Power (mW)		123190.90	123061.79	123619.34	123484.71
Total MIMO Conducted Power (dBm)		50.91	50.90	50.92	50.92
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	47.78	47.81	47.80	47.79
Power (dBm)	1	47.98	48.00	48.03	47.96
Total MIMO Conducte (mW)	d Power	122784.94	123490.60	123789.05	122634.64
Total MIMO Conducte (dBm)	d Power	50.89	50.92	50.93	50.89

 Table 8-64. Conducted Average Output Power Table (NR n5_1C_15M_2T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Low Channel	Port	QPSK	16QAM
Conducted Average	0	47.91	47.87
Power (dBm)	1	48.10	48.13
Total MIMO Conducte (mW)	d Power	126367.06	126248.01
Total MIMO Conducte (dBm)	ed Power	51.02	51.01
Middle Channel	Port	QPSK	16QAM
Conducted Average	0	47.96	47.90
Power (dBm)	1	48.04	48.04
Total MIMO Conducte (mW)	d Power	126196.82	125339.05
Total MIMO Conducte (dBm)	ed Power	51.01	50.98
High Channel	Port	QPSK	16QAM
Conducted Average	0	47.80	47.84
Power (dBm)	1	47.98	48.06
Total MIMO Conducte (mW)	d Power	123061.79	124786.98
Total MIMO Conducte (dBm)	ed Power	50.90	50.96

Table 8-65. Conducted Average Output Power Table (NR n5_2C_5M+5M_2T)

Middle Channel	Port	QPSK	16QAM
Conducted Average Power (dBm)	0	47.88	47.82
	1	48.09	48.09
Total MIMO Conducte (mW)	ed Power	125793.13	124951.01
Total MIMO Conducte (dBm)	ed Power	51.00	50.97

 Table 8-66. Conducted Average Output Power Table (NR n5_2C_10M+15M_2T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Channel	Port	QPSK	16QAM
	0	47.92	48.03
	1	48.00	48.04
LOW	Total MIMO Conducted Power (mW)	125039.84	127212.65
	Total MIMO Conducted Power(dBm)	50.97	51.05
Mid	0	47.88	47.88
	1	47.96	47.97
	Total MIMO Conducted Power (mW)	123893.47	124037.59
	Total MIMO Conducted Power(dBm)	50.93	50.94
	0	47.63	47.66
High	1	47.75	47.84
	Total MIMO Conducted Power (mW)	117509.08	119158.01
	Total MIMO Conducted Power(dBm)	50.70	50.76

Table 8-67. Conducted Average Output Power Table (MSR 2C_DSS B(n)5_2C_10M+LTE B5_5M_2T)

Channel	Port	QPSK	16QAM
	0	47.92	47.91
Mid	1	47.75	47.80
IVIIG	Total MIMO Conducted Power (mW)	121512.32	122059.60
	Total MIMO Conducted Power(dBm)	50.85	50.87

Table 8-68. Conducted Average Output Power Table (MSR 3C_DSS B(n)5_2C_10M+10M+LTE B5_1C_5M_2T)

FCC ID: A3LRF4461D-13A	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Low Channel	Port	QPSK	16QAM
Conducted Average	0	47.92	47.89
Power (dBm)	1	48.02	48.02
Total MIMO Conducte (mW)	d Power	125331.08	124904.66
Total MIMO Conducte (dBm)	d Power	50.98	50.97
Middle Channel	Port	QPSK	16QAM
Conducted Average	0	47.88	47.82
Power (dBm)	1	48.01 47.92	
Total MIMO Conducted Power (mW)		124617.39	122478.19
Total MIMO Conducted Power (dBm)		50.96	50.88
High Channel	Port	QPSK	16QAM
Conducted Average	0	47.76	47.81
Power (dBm)	1	47.92	47.95
Total MIMO Conducte (mW)	d Power	121647.64	122768.35
Total MIMO Conducte (dBm)	d Power	50.85	50.89

 Table 8-69. Conducted Average Output Power Table (MSR 2C_NR n5_1C_5M+LTE B5_1C_5M_2T)

Middle Channel	Port	QPSK	16QAM
Conducted Average Power (dBm)	0	47.69	47.61
	1	47.87	47.78
Total MIMO Conducted Power (mW)		119983.97	117655.75
Total MIMO Conducted Power (dBm)		50.79	50.71

Table 8-70. Conducted Average Output Power Table (MSR 3C_NR n5_2C_10M+10M+LTE B5_1C_5M_2T)

FCC ID: A3LRF4461D-13A	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Channel	Port	QPSK	16QAM
Low –	0	48.21	48.21
	1	48.26	48.26
	Total MIMO Conducted Power (mW)	133210.11	133210.11
	Total MIMO Conducted Power(dBm)	51.25	51.25
Mid	0	48.02	48.08
	1	48.12	48.19
	Total MIMO Conducted Power (mW)	128250.41	130186.16
	Total MIMO Conducted Power(dBm)	51.08	51.15
	0	47.81	47.84
Lliab	1	47.89	47.97
підп	Total MIMO Conducted Power (mW)	121912.55	123474.89
	Total MIMO Conducted Power(dBm)	50.86	50.92

Table 8-71. Conducted Average Output Power Table (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_5M_2T)

Channel	Port	QPSK	16QAM
Mid	0	47.82	47.81
	1	48.07	48.00
	Total MIMO Conducted Power (mW)	124655.05	123490.60
	Total MIMO Conducted Power(dBm)	50.96	50.92

Table 8-72. Conducted Average Output Power Table (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_15M_2T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Channel	Port	QPSK	16QAM
	0	48.06	48.07
	1	48.14	48.21
LOW	Total MIMO Conducted Power (mW)	129136.32	130342.61
	Total MIMO Conducted Power(dBm)	51.11	51.15
Mid	0	48.02	48.07
	1	48.14	48.15
	Total MIMO Conducted Power (mW)	128549.81	129434.01
	Total MIMO Conducted Power(dBm)	51.09	51.12
	0	47.76	47.94
	1	47.89	48.06
пıgn	Total MIMO Conducted Power (mW)	121221.22	126203.51
	Total MIMO Conducted Power(dBm)	50.84	51.01

Table 8-73. Conducted Average Output Power Table (MSR 3C_DSS B(n)5_1C_10M+NR n5_1C_5M+LTE B5_1C_5M_2T)

Channel	Port	QPSK 16QAM	
Mid -	0	47.99	47.87
	1	48.05	48.05
	Total MIMO Conducted Power (mW)	126776.97	125061.39
	Total MIMO Conducted Power(dBm)	51.03	50.97

Table 8-74. Conducted Average Output Power Table (MSR 3C_DSS B(n)5_1C_10M+NR n5_1C_10M+LTE B5_1C_5M_2T)

FCC ID: A3LRF4461D-13A	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	43.31	43.18	43.20	43.18
Conducted Average	1	43.15	43.13	43.10	43.15
Power (dBm)	2	43.19	43.14	43.08	43.12
	3	43.06	43.04	43.03	43.07
Total MIMO Conduct (mW)	ed Power	83157.81	82099.41	81724.84	82239.22
Total MIMO Conduct (dBm)	ed Power	49.20	49.14	49.12	49.15
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	43.21	43.23	43.27	43.30
Conducted Average	1	43.09	43.12	43.15	43.15
Power (dBm)	2	43.09	43.11	43.11	43.14
	3	43.09	43.06	43.09	43.14
Total MIMO Conducte (mW)	d Power	82052.39	82244.04	82721.11	83246.02
Total MIMO Conducte (dBm)	d Power	49.14	49.15	49.18	49.20
High Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	43.23	43.19	43.22	43.21
Conducted Average	1	43.06	43.08	43.06	43.07
Power (dBm)	2	43.09	43.09	43.05	43.07
	3	43.16	43.11	43.14	43.13
Total MIMO Conducte (mW)	d Power	82339.81	82003.35	82009.55	82053.68
Total MIMO Conducte (dBm)	d Power	49.16	49.14	49.14	49.14

Table 8-75. Conducted Average Output Power Table (LTE B5_1C_5M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	46.43	46.72	46.77	46.82
Conducted Average	1	46.23	46.30	46.27	46.27
Power (dBm)	2	46.24	46.32	46.30	46.36
	3	46.25	46.31	46.30	46.33
Total MIMO Conduct (mW)	ed Power	170172.37	175258.50	175213.72	176653.26
Total MIMO Conduct (dBm)	ed Power	52.31	52.44	52.44	52.47
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	46.73	46.73	46.85	46.88
Conducted Average	1	46.26	46.22	46.20	46.19
Power (dBm)	2	46.36	46.28	46.28	46.29
	3	46.31	46.25	46.29	46.30
Total MIMO Conducte (mW)	d Power	175372.27	173608.70	175125.97	175561.70
Total MIMO Conducte (dBm)	d Power	52.44	52.40	52.43	52.44
High Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	46.82	46.72	46.76	46.87
Conducted Average	1	46.15	46.21	46.21	46.30
Power (dBm)	2	46.29	46.22	46.27	46.38
	3	46.34	46.33	46.37	46.43
Total MIMO Conducte (mW)	d Power	174906.19	173605.45	174922.62	178703.86
Total MIMO Conducte (dBm)	d Power	52.43	52.40	52.43	52.52

 Table 8-76. Conducted Average Output Power Table (LTE B5_1C_10M_4T)

FCC ID: A3LRF4461D-13A	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Low Channel	Port	QPSK	16QAM
	0	46.22	46.41
Conducted Average	1	46.11	46.16
Power (dBm)	2	46.18	46.22
	3	46.14	46.18
Total MIMO Conducte (mW)	d Power	165321.67	168431.72
Total MIMO Conducte (dBm)	d Power	52.18	52.26
Middle Channel	Port	QPSK	16QAM
	0	46.36	46.23
Conducted Average	1	46.09	46.21
Power (dBm)	2	46.16	46.21
	3	46.24	46.30
Total MIMO Conducte (mW)	d Power	167273.13	168199.92
Total MIMO Conducte (dBm)	d Power	52.23	52.26
High Channel	Port	QPSK	16QAM
	0	46.33	46.39
Conducted Average	1	46.23	46.26
Power (dBm)	2	46.27	46.24
	3	46.35	46.34
Total MIMO Conducte (mW)	d Power	170445.75	170943.37
Total MIMO Conducte (dBm)	d Power	52.32	52.33

Table 8-77. Conducted Average Output Power Table (LTE B5_2C_5M+5M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Middle Channel	Port	QPSK	16QAM
Conducted Average Power (dBm)	0	46.66	46.71
	1	46.19	46.09
	2	46.24	46.26
	3	46.37	46.40
Total MIMO Conducted Power (mW)		173359.50	173444.12
Total MIMO Conducted Power		52.39	52.39

Table 8-78. Conducted Average Output Power Table (LTE B5_3C_5M+10M+10M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
		0	46.80	46.51	46.19	46.82
		1	46.24	46.26	45.88	46.30
		2	46.32	46.30	45.91	46.34
	Low	3	46.40	46.29	45.93	46.36
		Total MIMO Conducted Power (mW)	176442.11	172255.99	158485.21	177045.93
		Total MIMO Conducted Power(dBm)	52.47	52.36	52.00	52.48
		0	46.68	46.71	46.40	46.72
		1	46.16	46.26	45.87	46.25
		2	46.34	46.32	45.85	46.33
NR 1	Mid	3	46.44	46.43	46.07	46.41
		Total MIMO Conducted Power (mW)	174971.51	175957.21	161205.05	175864.91
		Total MIMO Conducted Power(dBm)	52.43	52.45	52.07	52.45
		0	46.79	47.04	46.55	46.89
		1	46.24	46.32	45.82	46.26
		2	46.34	46.34	45.92	46.32
	High	3	46.50	46.50	46.18	46.42
		Total MIMO Conducted Power (mW)	177546.61	181158.34	163959.52	177840.02
		Fotal MIMO Conducted Power(dBm)	52.49	52.58	52.15	52.50

Table 8-79. Conducted Average Output Power Table (DSS B(n)5_1C_10M(9:1 Ratio)_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
		0	46.91	46.95	46.79	46.79
		1	46.34	46.33	46.30	46.34
		2	46.32	46.34	46.35	46.40
	Low	3	46.45	46.41	46.41	46.42
		Total MIMO Conducted Power (mW)	179155.35	179303.53	177315.00	178310.24
		Total MIMO Conducted Power(dBm)	52.53	52.54	52.49	52.51
		0	46.73	46.77	46.80	46.86
		1	46.23	46.21	46.25	46.28
		2	46.28	46.29	46.33	46.32
NR 2	Mid	3	46.35	46.41	46.38	46.41
		Total MIMO Conducted Power (mW)	174687.50	175628.61	176437.32	177597.87
		Total MIMO Conducted Power(dBm)	52.42	52.45	52.47	52.49
		0	46.95	46.94	47.01	46.96
		1	46.33	46.27	46.30	46.30
		2	46.29	46.28	46.28	46.28
	High	3	46.41	46.46	46.48	46.48
		Total MIMO Conducted Power (mW)	178810.71	178516.16	179817.29	179242.27
		Total MIMO Conducted Power(dBm)	52.52	52.52	52.55	52.53

Table 8-80. Conducted Average Output Power Table (DSS B(n)5_1C_10M(8:2 Ratio)_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
		0	46.84	46.80	46.86	46.84
		1	46.30	46.36	46.29	46.28
		2	46.35	46.39	46.36	46.39
	Low	3	46.47	46.44	46.40	46.44
		Total MIMO Conducted Power (mW)	178476.60	178721.07	177991.66	178374.51
		Total MIMO Conducted Power(dBm)	52.52	52.52	52.50	52.51
		0	46.70	46.79	46.77	46.88
		1	46.25	46.18	46.22	46.22
		2	46.25	46.27	46.37	46.36
NR 6	Mid	3	46.32	46.36	46.41	46.41
		Total MIMO Conducted Power (mW)	173967.67	174864.01	176516.18	177635.80
		Total MIMO Conducted Power(dBm)	52.40	52.43	52.47	52.50
		0	46.99	47.01	46.95	46.95
		1	46.25	46.30	46.28	46.30
		2	46.29	46.30	46.24	46.30
	High	3	46.47	46.44	46.45	46.46
		Total MIMO Conducted Power (mW)	179093.81	179605.65	178236.68	179119.76
		Total MIMO Conducted Power(dBm)	52.53	52.54	52.51	52.53

Table 8-81. Conducted Average Output Power Table (DSS B(n)5_1C_10M(4:6 Ratio)_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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DSS Ratio	Channel	Port	QPSK	16QAM
		0	46.82	46.84
	1	46.40	46.39	
	2	46.50	46.16	
	Low	3	46.51	46.09
		Total MIMO Conducted Power (mW)	181175.21	173806.15
		Total MIMO Conducted Power(dBm)	52.58	52.40
		0	46.87	46.85
		1	46.45	46.43
		2	46.49	46.57
NR 1	NR 1 Mid	3	46.51	46.67
		Total MIMO Conducted Power (mW)	182134.72	184217.09
		Total MIMO Conducted Power(dBm)	52.60	52.65
		0	46.88	46.85
		1	46.42	46.38
		2	46.56	46.51
	High	3	46.64	46.54
		Total MIMO Conducted Power (mW)	184027.43	181721.26
		Total MIMO Conducted Power(dBm)	52.65	52.59

Table 8-82. Conducted Average Output Power Table (DSS B(n)_2C_10M+10M(9:1 Ratio)_4T)

FCC ID: A3LRF4461D-13A	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 82 of 204
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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	43.32	43.35	43.37	43.39
Conducted Average	1	43.25	43.22	43.25	43.30
Power (dBm)	2	43.18	43.23	43.25	43.32
	3	43.23	43.23	43.26	43.29
Total MIMO Conduct (mW)	ed Power	84447.95	84692.15	85180.40	86015.67
Total MIMO Conduct (dBm)	ed Power	49.27	49.28	49.30	49.35
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	43.39	43.38	43.43	43.44
Conducted Average Power (dBm)	1	43.26	43.23	43.29	43.28
	2	43.27	43.24	43.27	43.25
	3	43.29	43.27	43.28	43.34
Total MIMO Conducte (mW)	d Power	85573.80	85133.61	85873.55	86073.77
Total MIMO Conducte (dBm)	d Power	49.32	49.30	49.34	49.35
High Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	43.31	43.30	43.31	43.35
Conducted Average	1	43.25	43.26	43.27	43.29
Power (dBm)	2	43.23	43.21	43.22	43.24
	3	43.34	43.36	43.33	43.40
Total MIMO Conducte (mW)	d Power	85179.02	85181.40	85178.57	85921.53
Total MIMO Conducte (dBm)	d Power	49.30	49.30	49.30	49.34

Table 8-83. Conducted Average Output Power Table (NR n5_1C_5M_4T)

FCC ID: A3LRF4461D-13A	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	46.56	46.84	46.80	46.85
Conducted Average	1	46.18	46.26	46.29	46.29
Power (dBm)	2	46.24	46.35	46.30	46.32
	3	46.26	46.31	46.31	46.32
Total MIMO Conduct (mW)	ed Power	171124.69	176480.94	175837.09	176686.78
Total MIMO Conduct (dBm)	ed Power	52.33	52.47	52.45	52.47
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	46.82	46.78	46.76	46.78
Conducted Average Power (dBm)	1	46.23	46.32	46.31	46.29
	2	46.23	46.32	46.35	46.38
	3	46.31	46.40	46.35	46.42
Total MIMO Conducte (mW)	d Power	174792.02	177004.39	176484.30	177507.03
Total MIMO Conducte (dBm)	d Power	52.43	52.48	52.47	52.49
High Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	46.72	46.77	46.66	46.65
Conducted Average	1	46.24	46.29	46.22	46.23
Power (dBm)	2	46.39	46.40	46.32	46.42
	3	46.53	46.54	46.42	46.54
Total MIMO Conducte (mW)	d Power	177591.25	178826.62	174931.97	177148.74
Total MIMO Conducte (dBm)	d Power	52.49	52.52	52.43	52.48

Table 8-84. Conducted Average Output Power Table (NR n5_1C_10M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	46.57	46.75	46.74	46.73
Conducted Average	1	46.18	46.21	46.24	46.25
Power (dBm)	2	46.20	46.35	46.33	46.35
	3	46.37	46.40	46.33	46.36
Total MIMO Conduct (mW)	ed Power	171927.59	175901.65	175186.25	175670.67
Total MIMO Conduct (dBm)	ed Power	52.35	52.45	52.44	52.45
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	46.69	46.72	46.69	46.66
Conducted Average Power (dBm)	1	46.18	46.26	46.21	46.15
	2	46.33	46.34	46.39	46.30
	3	46.40	46.38	46.39	46.40
Total MIMO Conducte (mW)	d Power	174766.57	175759.96	175551.35	173863.98
Total MIMO Conducte (dBm)	d Power	52.42	52.45	52.44	52.40
High Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	46.71	46.67	46.70	46.75
Conducted Average	1	46.19	46.17	46.16	46.11
Power (dBm)	2	46.38	46.30	46.27	46.26
	3	46.51	46.39	46.32	46.36
Total MIMO Conducte (mW)	d Power	176694.75	174060.63	173297.41	173665.31
Total MIMO Conducte (dBm)	d Power	52.47	52.41	52.39	52.40

Table 8-85. Conducted Average Output Power Table (NR n5_1C_15M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Low Channel	Port	QPSK	16QAM
	0	46.71	46.71
Conducted Average	1	46.17	46.22
Power (dBm)	2	46.26	46.28
	3	46.31	46.29
Total MIMO Conducte (mW)	d Power	173304.46	173782.49
Total MIMO Conducte (dBm)	d Power	52.39	52.40
Middle Channel	Port	QPSK	16QAM
	0	46.67	46.68
Conducted Average	1	46.18	46.16
Power (dBm)	2	46.24	46.24
	3	46.31	46.30
Total MIMO Conducte (mW)	d Power	172775.88	172593.97
Total MIMO Conducte (dBm)	d Power	52.37	52.37
High Channel	Port	QPSK	16QAM
	0	46.60	46.64
Conducted Average	1	46.17	46.15
Power (dBm)	2	46.27	46.30
	3	46.33	46.41
Total MIMO Conducte (mW)	d Power	172426.73	173751.67
Total MIMO Conducte (dBm)	d Power	52.37	52.40

Table 8-86. Conducted Average Output Power Table (NR n5_2C_5M+5M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 96 of 204
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Middle Channel	Port	QPSK	16QAM
Conducted Average Power (dBm)	0	46.70	46.66
	1	46.25	46.16
	2	46.31	46.31
	3	46.39	46.38
Total MIMO Conducted Power (mW)		175250.64	173856.75
Total MIMO Conducted Power (dBm)		52.44	52.40

 Table 8-87. Conducted Average Output Power Table (NR n5_2C_10M+15M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 97 of 204
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Channel	Port	QPSK	16QAM
	0	46.44	46.76
	1	46.39	46.38
Low	2	46.41	46.51
LOW	3	46.51	46.56
	Total MIMO Conducted Power (mW)	176130.21	180936.31
	Total MIMO Conducted Power(dBm)	52.46	52.58
_	0	46.77	46.69
	1	46.30	46.26
Mid	2	46.49	46.53
IVIIG	3	46.57	46.59
	Total MIMO Conducted Power (mW)	180151.26	179514.48
	Total MIMO Conducted Power(dBm)	52.56	52.54
	0	46.62	46.60
	1	46.11	46.14
Lliab	2	46.39	46.43
підп	3	46.42	46.40
	Total MIMO Conducted Power (mW)	174156.00	174429.54
-	Total MIMO Conducted Power(dBm)	52.41	52.42

Table 8-88. Conducted Average Output Power Table (MSR 2C_DSS B(n)5_2C_10M+LTE B5_5M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 99 of 204
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Channel	Port	QPSK	16QAM
	0	46.24	46.45
	1	45.82	45.92
Mid	2	45.94	46.02
	3	46.05	46.02
	Total MIMO Conducted Power (mW)	159803.29	163230.08
	Total MIMO Conducted Power(dBm)	52.04	52.13

Table 8-89. Conducted Average Output Power Table (MSR 3C_DSS B(n)5_2C_10M+10M+LTE B5_1C_5M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 90 of 204
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Low Channel	Port	QPSK	16QAM
Conducted Average	0	46.57	46.69
	1	46.27	46.32
Power (dBm)	2	46.31	46.41
	3	46.44	46.44
Total MIMO Conducte (mW)	d Power	174570.23	177328.49
Total MIMO Conducte (dBm)	ed Power	52.42	52.49
Middle Channel	Port	QPSK	16QAM
	0	46.76	46.74
Conducted Average Power (dBm)	1	46.39	46.36
	2	46.42	46.39
	3	46.46	46.45
Total MIMO Conducte (mW)	d Power	179087.29	178165.92
Total MIMO Conducted Power (dBm)		52.53	52.51
High Channel	Port	QPSK	16QAM
	0	46.64	46.65
Conducted Average	1	46.23	46.28
Power (dBm)	2	46.38	46.41
	3	46.43	46.44
Total MIMO Conducte (mW)	d Power	175512.84	176507.76
Total MIMO Conducted Power (dBm)		52.44	52.47

Table 8-90. Conducted Average Output Power Table (MSR 2C_NR n5_1C_5M+LTE B5_1C_5M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Middle Channel	Port	QPSK	16QAM
Conducted Average Power (dBm)	0	46.23	46.43
	1	45.96	46.13
	2	46.08	46.15
	3	46.22	46.25
Total MIMO Conducted Power (mW)		163851.84	168353.97
Total MIMO Conducted Power (dBm)		52.14	52.26

Table 8-91. Conducted Average Output Power Table (MSR 3C_NR n5_2C_10M+10M+LTE B5_1C_5M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 01 of 204
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Channel	Port	QPSK	16QAM
	0	46.66	46.60
	1	46.11	46.07
Low	2	46.26	46.16
LOW	3	46.18	46.23
	Total MIMO Conducted Power (mW)	170938.90	169447.06
	Total MIMO Conducted Power(dBm)	52.33	52.29
	0	46.56	46.55
	1	46.00	45.91
Mid	2	46.18	46.13
IVIIO	3	46.18	46.06
	Total MIMO Conducted Power (mW)	168091.28	165564.74
	Total MIMO Conducted Power(dBm)	52.26	52.19
	0	46.41	46.45
	1	45.79	45.82
Lligh	2	46.04	45.97
nign	3	46.03	46.09
	Total MIMO Conducted Power (mW)	161949.46	162532.47
	Total MIMO Conducted Power(dBm)	52.09	52.11

Table 8-92. Conducted Average Output Power Table (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_5M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 02 of 204
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Channel	Port	QPSK	16QAM
	0	46.55	46.61
	1	46.01	46.14
Mid -	2	46.04	46.19
	3	46.20	46.25
	Total MIMO Conducted Power (mW)	166954.10	170689.87
	Total MIMO Conducted Power(dBm)	52.23	52.32

Table 8-93. Conducted Average Output Power Table (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_15M_4T)

FCC ID: A3LRF4461D-13A	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 02 of 204
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Channel	Port	QPSK	16QAM
	0	46.65	46.47
	1	46.05	45.92
Low	2	46.14	46.02
LOW	3	46.20	46.09
	Total MIMO Conducted Power (mW)	169311.72	164083.76
	Total MIMO Conducted Power(dBm)	52.29	52.15
	0	46.55	46.62
	1	46.03	46.04
Mid	2	46.08	46.21
IVIIO	3	46.16	46.26
	Total MIMO Conducted Power (mW)	167127.87	170148.78
	Total MIMO Conducted Power(dBm)	52.23	52.31
	0	46.47	46.53
	1	45.93	45.86
Lligh	2	46.09	46.05
nign	3	46.19	46.16
	Total MIMO Conducted Power (mW)	165770.45	165102.27
	Total MIMO Conducted Power(dBm)	52.20	52.18

Table 8-94. Conducted Average Output Power Table (MSR 3C_DSS B(n)5_1C_10M+NR n5_1C_5M+LTE B5_1C_5M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 04 of 204
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Channel	Port	QPSK	16QAM
	0	46.44	46.40
	1	46.00	45.89
Mid Total MIM Pow Total MIM Pow	2	46.04	45.96
	3	46.17	46.06
	Total MIMO Conducted Power (mW)	165445.25	162276.89
	Total MIMO Conducted Power(dBm)	52.19	52.10

 Table 8-95. Conducted Average Output Power Table (MSR 3C_DSS B(n)5_1C_10M+NR n5_1C_10M+LTE

 B5_1C_5M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dago 05 of 204
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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	44.71	44.64	44.57	44.57
Power (dBm)	1	44.81	44.77	44.81	44.83
Total MIMO Conduct (mW)	ed Power	59851.26	59100.80	58912.91	59052.63
Total MIMO Conduct (dBm)	ed Power	47.77	47.72	47.70	47.71
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	44.55	44.56	44.58	44.63
Power (dBm)	1	44.81	44.83	44.85	44.84
Total MIMO Conducted Power (mW)		58781.32	58986.76	59259.02	59521.18
Total MIMO Conducted Power (dBm)		47.69	47.71	47.73	47.75
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average	0	44.57	44.50	44.61	44.58
Power (dBm)	1	44.83	44.78	44.80	44.83
Total MIMO Conducted Power (mW)		59052.63	58246.59	59108.32	59118.66
Total MIMO Conducte (dBm)	d Power	47.71	47.65	47.72	47.72

 Table 8-96. Conducted Average Output Power Table (LTE B13_1C_5M_2T)

Mid Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	47.55	47.34	47.39	47.41
	1	47.82	47.84	47.83	47.82
Total MIMO Conducted Power (mW)		117421.38	115015.59	115503.33	115616.86
Total MIMO Conducted Power (dBm)		50.70	50.61	50.63	50.63

 Table 8-97. Conducted Average Output Power Table (LTE B13_1C_10M_2T)

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Mid Channel	Port	QPSK	16QAM
Conducted Average Power (dBm)	0	47.50	47.41
	1	47.85	47.78
Total MIMO Conducted Power (mW)		117189.82	115061.88
Total MIMO Conducted Power (dBm)		50.69	50.61

 Table 8-98. Conducted Average Output Power Table (LTE B13_2C_5M+5M_2T)

Low Channel	Port	QPSK
Conducted Average	0	45.09
Power (dBm)	1	45.03
Total MIMO Conducte (mW)	ed Power	64126.92
Total MIMO Conducte (dBm)	ed Power	48.07
Mid Channel	Port	QPSK
Conducted Average Power (dBm)	0	45.06
	1	44.98
Total MIMO Conducted Power (mW)		63540.18
Total MIMO Conducted Power (dBm)		48.03
High Channel	Port	QPSK
Conducted Average Power (dBm)	0	45.11
	1	45.01
Total MIMO Conducted Power (mW)		64129.64
Total MIMO Conducte (dBm)	ed Power	48.07

 Table 8-99. Conducted Average Output Power Table (LTE B13_1C_5M+NB-IoT(1IB)_2T)

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Mid Channel	Port	LTE10M+NB-IoT (2GB)	LTE10M+NB-IoT (1GB+1IB)	LTE10M+NB-IoT (1IB+1GB)	LTE10M+NB-IoT (2IB)
Conducted Average Power (dBm)	0	47.92	47.87	47.82	48.15
	1	47.69	47.50	47.57	48.05
Total MIMO Conducted Power (mW)		120693.04	117471.17	117683.95	129139.40
Total MIMO Conducted Power (dBm)		50.82	50.70	50.71	51.11

Table 8-100. Conducted Average Output Power Table (LTE B13_1C_10M+NB-IoT_2T)

Mid Channel	Port	QPSK
Conducted Average Power (dBm)	0	50.57
	1	50.50
Total MIMO Conducted Power (mW)		226228.82
Total MIMO Conducted Power (dBm)		53.55

Table 8-101. Conducted Average Output Power Table (Multi-Band_LTE B13_1C_10M+B5_1C_10M+NBloT_2T)

Mid Channel	Port	QPSK
Conducted Average Power (dBm)	0	51.07
	1	50.80
Total MIMO Conducted Power (mW)		248166.57
Total MIMO Conducted Power (dBm)		53.95

Table 8-102. Conducted Average Output Power Table (Multi-Band_LTE B13_2C_5M+5M+MSR 3C_DSS B(n)5_1C_10M+NR N5_1C_10M+LTE B5_1C_5M_2T)

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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	43.33	43.29	43.41	43.43
Conducted Average	1	43.03	42.99	43.01	43.02
Power (dBm)	2	43.03	43.03	43.05	43.06
	3	43.24	43.24	43.22	43.27
Total MIMO Conduct (mW)	ed Power	82795.96	82414.39	83099.73	83536.62
Total MIMO Conduct (dBm)	ed Power	49.18	49.16	49.20	49.22
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	43.43	43.44	43.48	43.54
	1	42.99	43.00	43.00	43.03
	2	43.08	43.03	43.00	43.10
	3	43.25	43.29	43.24	43.31
Total MIMO Conducted Power (mW)		83394.46	83454.05	83275.88	84531.57
Total MIMO Conducted Power (dBm)		49.21	49.21	49.21	49.27
High Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	43.47	43.48	43.42	43.47
Conducted Average	1	42.96	42.96	43.02	43.03
Power (dBm)	2	43.08	43.11	43.00	43.07
	3	43.22	43.20	43.24	43.25
Total MIMO Conducte (mW)	d Power	83315.76	83411.46	83062.22	83735.74
Total MIMO Conducte (dBm)	d Power	49.21	49.21	49.19	49.23

Table 8-103. Conducted Average Output Power Table (LTE B13_1C_5M_4T)

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Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	46.47	46.30	46.39	46.31
	1	46.06	45.95	46.05	46.04
	2	46.16	45.97	46.04	46.03
	3	46.23	46.19	46.22	46.18
Total MIMO Conducte (mW)	d Power	168006.05	163140.68	165881.33	164517.45
Total MIMO Conducte (dBm)	ed Power	52.25	52.13	52.20	52.16

Table 8-104. Conducted Average Output Power Table (LTE B13_1C_10M_4T)

Middle Channel	Port	QPSK	16QAM
Conducted Average Power (dBm)	0	46.33	46.48
	1	46.05	45.99
	2	46.03	46.00
	3	46.19	46.21
Total MIMO Conducte (mW)	ed Power	164903.08	165776.04
Total MIMO Conducte (dBm)	ed Power	52.17	52.20

Table 8-105. Conducted Average Output Power Table (LTE B13_2C_5M+5M_4T)

FCC ID: A3LRF4461D-13A	element	MEASUREMENT REPORT (CERTIFICATION)	MSUNG	Approved by: Technical Manager
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Low Channel	Port	QPSK	
	0	43.33	
Conducted Average	1	43.21	
Power (dBm)	2	43.06	
	3	43.49	
Total MIMO Conducte (mW)	d Power	85034.86	
Total MIMO Conducte (dBm)	ed Power	49.30	
Mid Channel	Port	QPSK	
	0	43.37	
Conducted Average Power (dBm)	1	43.31	
	2	43.14	
	3	43.56	
Total MIMO Conducted Power (mW)		86460.87	
Total MIMO Conducte (dBm)	ed Power	49.37	
High Channel	Port	QPSK	
	0	43.30	
Conducted Average	1	43.30	
Power (dBm)	2	43.19	
	3	43.55	
Total MIMO Conducte (mW)	d Power	86250.59	
Total MIMO Conducte (dBm)	ed Power	49.36	

Table 8-106. Conducted Average Output Power Table (LTE B13_1C_5M+NB-IoT(1IB)_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Mid Channel	Port	LTE10M+NB-IoT (2GB)	LTE10M+NB-IoT (1GB+1IB)	LTE10M+NB-IoT (1IB+1GB)	LTE10M+NB-IoT (2IB)
Conducted Average Power (dBm)	0	46.34	46.27	46.18	46.55
	1	45.95	45.81	45.79	46.45
	2	45.83	45.75	45.72	46.29
	3	45.99	45.90	45.87	46.70
Total MIMO Conducte (mW)	d Power	160409.30	156959.13	155388.62	178675.99
Total MIMO Conducte (dBm)	ed Power	52.05	51.96	51.91	52.52

Table 8-107. Conducted Average Output Power Table (LTE B13_1C_10M+NB-IoT_4T)

Mid Channel	Port	QPSK
Conducted Average Power (dBm)	0	48.94
	1	48.97
	2	48.96
	3	49.10
Total MIMO Conducte (mW)	ed Power	317216.61
Total MIMO Conducte (dBm)	ed Power	55.01

 Table 8-108. Conducted Average Output Power Table (Multi-Band_LTE B13_1C_10M+B5_1C_10M+NB-IoT __4T)

Mid Channel	Port	QPSK
Conducted Average Power (dBm)	0	48.77
	1	48.77
	2	48.92
	3	49.03
Total MIMO Conducte (mW)	d Power	308637.55
Total MIMO Conducte (dBm)	ed Power	54.89

Table 8-109. Conducted Average Output Power Table (Multi-Band_LTE B13_2C_5M+5M+MSR 3C_DSS B(n)5_1C_10M+NR N5_1C_10M+LTE B5_1C_5M _4T)

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(LTE B5_2C_5M+5M_2T_16QAM - Low Channel, Port 1)

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(LTE B5_2C_5M+5M_2T_QPSK - Low Channel, Port 1)





Plot 8-103. Conducted Average Output Power Plot (DSS B(n)_2C_10M+10M_2T_QPSK - Low Channel, Port 1) Plot 8-104. Conducted Average Output Power Plot (DSS B(n)_2C_10M+10M_2T_QPSK - High Channel, Port 1)

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(NR n5_1C_15M_2T_16QAM - Low Channel, Port 1)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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(NR n5_1C_15M_2T_QPSK - Low Channel, Port 1)





(MSR 2C_DSS B(n)5_1C_10M+LTE B5_5M_2T_16QAM - Low Channel, Port 1)

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Port 1)