10081- CAB	CDMA2000 (1xRTT, RC3)	X	0.41	60.41	6.86	0.00	150.0	± 9.6 %
		Y	0.64	64.39	10.26		150.0	
	······	Z	0.51	61.51	8.28		150.0	
10082- CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4- DQPSK, Fullrate)	X	6.37	60.67	1.90	4.77	80.0	± 9.6 %
		Y	0.58	60.00	3.05		80.0	
		Z	0.60	60.00	3.10		80.0	1
10090- DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	X	100.00	103.19	20.57	6.56	60.0	± 9.6 %
		Y	100.00	106.40	21.88		60.0	
		Z	100.00	108.67	23.14		60.0	
10097- CAB	UMTS-FDD (HSDPA)	X	1.61	66.98	14.45	0.00	150.0	± 9.6 %
		Y	1.83	68.94	15.87		150.0	
		Z	1.61	66.33	14.36		150.0	
10098- CAB	UMTS-FDD (HSUPA, Subtest 2)	X	1.57	66.91	14.41	0.00	150.0	± 9.6 %
		Y	1.80	68.88	15.85		150.0	
		Z	1.57	66.26	14.32		150.0	
10099- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	X	5.11	79.85	27.95	9.56	60.0	± 9.6 %
		Y	6.18	86.42	31.49		60.0	
		Z	5.66	82.29	29,29		60.0	
10100- CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	2.72	68.86	15.96	0.00	150.0	± 9.6 %
		Y	2.98	70.42	16.85		150.0	
		Z	2.77	68.66	15.78		150.0	
10101- CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	2.94	66.71	15.42	0.00	150.0	±9.6 %
		Y	3.09	67.54	15.94		150.0	
		Z	3.00	66.60	15.35		150.0	
10102- CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	Х	3.05	66.78	15.55	0.00	150.0	± 9.6 %
		Y	3.19	67.54	16.04		150.0	
		Z	3.11	66.65	15.49		150.0	
10103- CAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	Х	4.63	72,33	19.10	3.98	65.0	± 9.6 %
		Y	5.31	74.95	20.40		65.0	
		Z	5.01	73.33	19.72		65.0	
10104- CAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	Х	4.71	70.15	18.78	3.98	65.0	± 9.6 %
		Y	5.12	71.87	19.74		65.0	
		Z	4.99	70.84	19.32		65.0	
10105- CAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	4.62	69.52	18.79	3.98	65.0	± 9.6 %
		Y	4.98	71.08	19.67		65.0	
40400		Z	4.89	70.18	19.31		65.0	
10108- CAF	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	2.32	68.23	15.74	0.00	150.0	± 9.6 %
		Υ	2.56	69.77	16.68		150.0	
40400		Z	2.39	67.99	15.57		150.0	
10109- CAF	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	2.57	66.62	15.17	0.00	150.0	± 9.6 %
		Y	2.73	67.56	15.82		150.0	
40440		Z	2.64	66.42	15.13		· 150.0	
10110- CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	1.82	67.31	15.00	0.00	150.0	±9.6 %
·,		Y	2.06	69.08	16.19	·	150.0	
40444		Z	1.89	67.03	14.94		150.0	
10111- CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	2.27	67.56	15.11	0.00	150.0	± 9.6 %
		Y	2.50	68.95	16.11		150.0	
		Z	2.32	67.14	15.12		150.0	

10112- CAF	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	2.70	66.75	15.29	0.00	150.0	± 9.6 %
		Y	2.86	67.62	15.89		150.0	Lana
		z	2.77	66.52	15.24		150.0	
10113- CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	2.41	67.80	15.29	0.00	150.0	± 9.6 %
		Y	2.64	69.12	16.24		150.0	
		Z	2.47	67.38	15.32		150.0	
10114- CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	X	4.85	66.91	16.28	0.00	150.0	± 9.6 %
		Y	4.92	67.20	16.42		150.0	
		Z	4.93	66.80	16.23		150.0	
10115- CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	X	5.08	66.97	16.31	0.00	150.0	± 9.6 %
		Y	5.16	67.24	16.44		150.0	
		Z	5.19	66.91	16.30		150.0	
10116- CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	X	4.91	67.06	16.28	0.00	150.0	± 9.6 %
		Y	5.00	67.37	16.44		150.0	
		Z	5.02	67.01	16.26		150.0	
10117- CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	X	4.82	66.80	16.24	0.00	150.0	± 9.6 %
		Y	4.91	67.14	16.41		150.0	
		Z	4.92	66.75	16.22		150.0	
10118- CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16- QAM)	X	5.15	67.18	16.42	0.00	150.0	± 9.6 %
		Y	5.23	67.42	16.54		150.0	
		Z	5.28	67.15	16.43		150.0	
10119- CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64- QAM)	X	4.92	67.09	16.30	0.00	150.0	± 9.6 %
		Y	5.00	67.37	16.45		150.0	
		Z	5.02	67.00	16.27		150.0	
10140- CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	3.06	66.79	15.45	0.00	150.0	± 9.6 %
		Y	3.21	67.57	15.95		150.0	
		Z	3.13	66.66	15.40		150.0	
10141- CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	3.19	67.01	15.68	0.00	150.0	± 9.6 %
		Y	3.34	67.73	16.14		150.0	
		Z	3.26	66.83	15.61		150.0	
10142- CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	1.53	66.71	13.85	0.00	150.0	± 9.6 %
		Y	1.82	69.13	15.54		150.0	
		Z	1.62	66.60	14.09		150.0	
10143- CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	1.93	66.97	13.55	0.00	150.0	± 9.6 %
		Y	2.31	69.49	15.29		150.0	
		Z	2.06	67.05	14.07		150.0	
10144- CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	1.68	64.38	11.67	0.00	150.0	± 9.6 %
		Y	1.94	66.13	13.09		150.0	
		Z	1.85	64.82	12.42		150.0	
10145- CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	0.61	60.00	6.25	0.00	150.0	± 9.6 %
		Y	0.75	61.41	7.98		150.0	
		Z	0.75	60.75	7.63		150.0	
10146- CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	0.82	60.00	5.83	0.00	150.0	± 9.6 %
	· · · · · · · · · · · · · · · · · · ·	Y	0.92	60.25	6.35		150.0	
		Z	1.12	61.59	7.98		150.0	
10147- CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	0.84	60.00	5.89	0.00	150.0	± 9.6 %
		Y	0.96	60.55	6.61		150.0	
		Ż	1.20	62.21	8.43	1	150.0	

10149-	LTE-FDD (SC-FDMA, 50% RB, 20 MHz,	X	2.58	66.69	15.22	0.00	150.0	± 9.6 %
CAE	16-QAM)		2.00	00.03	13.22	0.00	100,0	1 9.0 %
		Y	2.74	67.63	15.87	1	150.0	
		Z	2.65	66.49	15.18		150.0	
10150- CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	2.71	66.82	15.33	0.00	150.0	±9.6 %
		Y	2.87	67.69	15.94		150.0	
		Z	2.78	66.58	15.28		150.0	
10151- CAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	4.58	74.10	19.83	3.98	65,0	± 9.6 %
	·····	Y	5.45	77.40	21.46		65.0	
10150		Z	5.00	75.19	20.56		65.0	
10152- CAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	4.21	69.89	18.16	3.98	65.0	± 9.6 %
		Y	4.65	71.84	19.30		65.0	
10153-	LTE-TDD (SC-FDMA, 50% RB, 20 MHz,	Z	4.51	70.68	18.85		65.0	
CAF	64-QAM)		4.55	71.06	19.09	3.98	65.0	± 9.6 %
		Y	5.01	72.96	20.18		65.0	
10154-	LTE-FDD (SC-FDMA, 50% RB, 10 MHz,	Z	4.85	71.76	19.74	0.00	65.0	
CAF	QPSK)	X	1.85	67.65	15.22	0.00	150.0	± 9.6 %
		Y	2.10	69.48	16.44		150.0	
10155-	LTE-FDD (SC-FDMA, 50% RB, 10 MHz,	Z	1.92	67.37	15.16		150.0	
CAF	16-QAM)	X	2.27	67.61	15.14	0.00	150.0	± 9.6 %
		Y	2.50	69.00	16.15		150.0	
10156-		Z	2.33	67.17	15.15		150.0	
CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	Х	1.31	65.90	12.85	0.00	150.0	± 9.6 %
·····		Y	1.64	68.88	14.94		150.0	
40457		Z	1.43	66.11	13.38		150.0	
10157- CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	1.43	63.96	10.91	0.00	150,0	±9.6 %
		Y	1.74	66.31	12.74		150.0	
40450		Z	1.63	64.73	11.94		150.0	
10158- CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	2.42	67.89	15.35	0.00	150.0	± 9.6 %
		Y	2.65	69.22	16.31		150.0	
		Z	2.48	67.46	15.37		150.0	
10159- CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	1.49	64.13	11.04	0.00	150.0	± 9.6 %
		Y	1.82	66.66	12.95		150.0	
10160-		Z	1.70	65.00	12.13		150.0	
CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	2.41	67.89	15.65	0.00	150.0	± 9.6 %
		Y	2.60	69.05	16.44		150.0	
10161-	TE EDD (SC EDMA FOR DD AC MIL	Z	2.48	67.64	15.56		150.0	
CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	2.59	66.74	15.14	0.00	150.0	± 9.6 %
		Y	2.76	67.68	15.82		150.0	
10162-		Z	2.66	66.50	15.14		150.0	
CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	2.70	67.00	15.31	0.00	150.0	±9.6 %
		Y	2.87	67.91	15.97		150.0	
10166-		Z	2.77	66.73	15.29		150.0	
CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	2.91	67.87	18.41	3.01	150.0	± 9.6 %
		Y	3.09	68.81	18.75		150.0	
10167-	I TE EDD (SO EDMA FOR DE 4 419)	Z	3.17	68.75	19.02		150.0	
CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	3.24	69.92	18.52	3.01	150.0	±9.6 %
		Y	3.65	71.74	19.22		150.0	
		Z	3.63	71.08	19.26		150.0	

10168- CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	3.66	72.66	20.22	3.01	150.0	± 9.6 %
		Y	4.14	74.51	20.83		150.0	
		z					150.0	
10169-	LTE-FDD (SC-FDMA, 1 RB, 20 MHz,	X	4.11 2.32	73.91 65.83	20.95 17.44	3.01	150.0	± 9.6 %
CAE	QPSK)	Y	2.49	67.28	18.07		150.0	
		ż	2.46	66.70	18.14		150.0	
10170-	LTE-FDD (SC-FDMA, 1 RB, 20 MHz,	X	2,74	70.01	19.35	3.01	150.0	± 9.6 %
CAE	16-QAM)	Y	3.21	72.95	20.48		150.0	
		z	3.00	71.51	20.32		150.0	
10171- AAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	2.31	66.53	16.58	3.01	150.0	± 9.6 %
/ 1/ 16-4		Y	2.63	68.93	17.60		150.0	
		z	2.50	67.67	17.42		150.0	
10172- CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	2.90	74,23	22.35	6.02	65.0	±9.6 %
0/11		Y	3.68	79.90	24.98		65.0	
		Ż	3.91	80.19	25.56		65.0	
10173- CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	3.92	78.79	22.40	6.02	65.0	± 9.6 %
1	man	Y	6.85	89.50	26.38		65.0	
		Z	6.70	89.11	27.06		65.0	
10174- CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	2.90	73.28	19.67	6.02	65.0	± 9.6 %
		Y	5.51	84.77	24.11		65.0	
		Z	4.93	82.66	24.17		65.0	
10175- CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	2.30	65.58	17.20	3.01	150.0	± 9.6 %
0/ 11		Y	2.47	67.02	17.83		150.0	
		Z	2.44	66.43	17.89		150.0	
10176- CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	2.74	70.03	19.36	3.01	150.0	± 9.6 %
		Y	3.21	72.97	20.49		150.0	
		Z	3.00	71.53	20.33		150.0	
10177- CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	2.31	65.68	17.27	3.01	150.0	± 9.6 %
		Y	2.48	67.13	17.91		150.0	
		Z	2.45	66.56	17.98		150.0	
10178- CAF	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16- QAM)	X	2.73	69.91	19.28	3.01	150.0	± 9.6 9
		Y	3.19	72.83	20.41		150.0	
		Z	2.98	71.36	20.23		150.0	
10179- CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	2.50	68.14	17.82	3.01	150.0	± 9.6 9
		Y	2.89	70.84	18.91		150.0	
		Z	2.72	69.48	18.74		150.0	
10180- CAF	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64- QAM)	X	2.31	66.50	16.56	3.01	150.0	± 9.6 9
		Y	2.63	68.90	17.57		150.0	
		Z	2.50	67.63	17.39		150.0	
10181- CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	2.31	65.67	17.27	3.01	150.0	± 9.6 9
		Y	2.48	67.11	17.90		150.0	
		Z	2.45	66.54	17.97		150.0	
10182- CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	2.73	69.88	19.27	3.01	150.0	± 9.6 %
		Y	3.19	72.81	20.40		150.0	
		Z	2.98	71.34	20.21		150.0	
10183- AAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	Х	2.31	66.48	16.55	3.01	150.0	± 9.6 9
		Y	2.63	68.87	17.56		150.0	
		Ż	2.49	67.61	17.37	1	150.0	1

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10184-	LTE-FDD (SC-FDMA, 1 RB, 3 MHz,	TX	2.32	65.70	17.29	3.01	150.0	± 9.6 %
CAE	QPSK)		2.02	00.10	11.20	0.01	100.0	1 3.0 /0
		Y	2.49	67.15	17.92		150.0	
	·····	Z	2.46	66.58	17.99		150.0	
10185- CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16- QAM)	X	2.74	69.95	19.31	3.01	150.0	± 9.6 %
		Y	3.20	72.88	20.43		150.0	
		Z	2,99	71.41	20.26		150.0	
10186- AAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64- QAM)	×	2.32	66.53	16.58	3.01	150.0	± 9.6 %
		Y	2.64	68.94	17.60	<u> </u>	150.0	
10187-	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz,	Z	2.51	67.67	17.41		150.0	
CAF	QPSK)	X Y	2.33	65.78	17.37	3.01	150.0	± 9.6 %
		Z	2.50 2.47	67.22 66.64	18.00		150.0	
10188-	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz,	X	2.47	70.47	18.07 19.65	3.01	150.0	
CAF	16-QAM)	Ŷ	3.29	73.46	20.79	3.01	150.0	± 9.6 %
		Z					150.0	
10189-	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz,	X	3.07 2.35	72.01 66.85	20.64 16.82	3.01	150.0	
AAF	64-QAM)					3.01	150.0	±9.6 %
		Y Z	2.69 2.55	69.31	17.86		150.0	
10193-	IEEE 802.11n (HT Greenfield, 6.5 Mbps,	X	4.23	68.03 66.54	17.68 15.90	0.00	150.0	
CAC	BPSK)	Y				0.00	150.0	± 9.6 %
		Z	4.33 4.32	66.90	16.14		150.0	
10194-	IEEE 802.11n (HT Greenfield, 39 Mbps,	X	4.32	66.32 66.75	15.87	0.00	150.0	
CAC	16-QAM)				16.04	0.00	150.0	± 9.6 %
		Y	4.47	67.12	16.27		150.0	
10195- CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	Z X	<u>4.47</u> 4.39	66.58 66.76	16.01 16.05	0.00	150.0 150.0	± 9,6 %
		Y	4.50	67.13	16.28	······	450.0	
	······································	Z	4.50	66.61	16.28		150.0	
10196-	IEEE 802.11n (HT Mixed, 6.5 Mbps,	X	4.21	66.52	15.87	0.00	150.0 150.0	
CAC	BPSK)	Y	4.32	66.89				± 9.6 %
		Z	4.32	66.33	16.12 15.87		150.0	
10197-	IEEE 802.11n (HT Mixed, 39 Mbps, 16-	X	4.37	66.75	16.04	0.00	150.0	1000
CAC	QAM)	Y	4.48	67.12	16.28	0.00	150.0	± 9.6 %
	······································	Z	1.10	*			150.0	
10198- CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64- QAM)	X	<u>4.48</u> 4.38	66.59 66.75	16.02 16.05	0.00	150.0 150.0	± 9.6 %
		Y	4.50	67.13	16.28		150.0	
100/-		Z	4.50	66.62	16.04		150.0	
10219- CAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	X	4.16	66.56	15.85	0.00	150.0	± 9.6 %
		Y	4.27	66.93	16.10		150.0	
40000		Ζ	4.26	66.35	15.83		150.0	
10220- CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16- QAM)	X	4.36	66.72	16.03	0.00	150.0	±9.6 %
		Y	4.47	67.08	16.26		150.0	
10221-	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-	Z	4.47	66.56	16.01		150.0	
CAC	QAM)	X	4.40	66.71	16.04	0.00	150.0	±9.6 %
		Y	4.51	67.07	16.27		150.0	
10222-	IFEE 802 41p (UT Mixed 45 Mixed	Z	4.51	66.56	16.03		150.0	
CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	X	4.80	66.80	16.23	0.00	150.0	±9.6 %
		Y	4.88	67.12	16.39		150.0	
		Ζ	4.89	66.72	16.20		150.0	

10223- CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16- QAM)	X	5.04	66.95	16.32	0.00	150.0	± 9.6 %
		Y	5.14	67.29	16.49		150.0	
		Z	5.18	66.99	16.36		150.0	
10224- CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64- QAM)	X	4.84	66.92	16.22	0.00	150.0	± 9.6 %
		Y	4.92	67.24	16.38		150.0	
		Z	4.93	66.82	16.18		150.0	
10225- CAB	UMTS-FDD (HSPA+)	X	2.46	65.56	14.20	0.00	150.0	± 9.6 %
		Y	2.62	66.44	14.96		150.0	
		Z	2.55	65.41	14.45		150.0	
10226- <u>CAA</u>	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	4.12	79.74	22.87	6.02	65.0	± 9.6 %
		Y	7.38	90.96	26.97		65.0	
		Z	7.19	90.56	27.66		65.0	
10227- CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	4.10	78.95	21.90	6.02	65.0	± 9.6 %
		Y	7.43	89.71	25.78		65.0	
		Z	7.75	90.70	26,99		65.0	
10228- CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	3.12	75.94	23.15	6.02	65.0	± 9.6 %
		Y	4.06	82.01	25.85		65.0	
		Z	4.25	82.24	26.47		65.0	
10229- CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16- QAM)	X	3.94	78,88	22.44	6.02	65.0	± 9.6 %
		Y	6.91	89.62	26.42		65.0	
•••••		Z	6.76	89.24	27.11		65.0	
10230- CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64- QAM)	X	3.89	78.03	21.47	6.02	65.0	± 9.6 %
		Y	6.86	88.27	25.23		65.0	
		Z	7.16	89.19	26.40		65.0	
10231- CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	3.03	75.32	22.81	6.02	65.0	± 9.6 %
		Y	3.92	81.25	25.48		65.0	
		Z	4.10	81.44	26.07		65.0	
10232- CAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16- QAM)	X	3.94	78.86	22.44	6.02	65.0	± 9.6 %
		Y	6.89	89.60	26.42		65.0	
		Z	6.74	89.21	27,10		65.0	
10233- CAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64- QAM)	X	3.88	77.99	21.46	6.02	65.0	± 9.6 %
		Y	6.83	88.22	25.21		65.0	
		Z	7.13	89.13	26.38		65.0	
10234- CAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	2.96	74.84	22.48	6.02	65.0	± 9.6 %
		Y	3.82	80.66	25.12		65.0	
		Z	4.00	80.82	25.70		65.0	
10235- CAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	3.94	78.87	22.44	6.02	65.0	± 9.6 %
		Y	6.90	89.63	26.43		65.0	
		Z	6.75	89.23	27.11		65.0	
10236- CAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	Х	3.92	78.11	21.50	6.02	65.0	± 9.6 %
		Y	6.93	88.43	25.27		65.0	
		Z	7.23	89.34	26.44		65.0	
10237- CAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	3.03	75.32	22.81	6.02	65.0	± 9.6 %
		Y	3.92	81.27	25.49		65.0	-
		Z	4.10	81.45	26.08		65.0	
10238- CAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	3.93	78.83	22.43	6.02	65.0	± 9.6 %
		Y	6.87	89.57	26.41		65.0	
		Z	6.72	89.17	27.08		65.0	1

10239- CAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	3.87	77.95	21.45	6.02	65.0	± 9,6 %
		Y	6.80	88.17	25.20		65.0	
		Z	7.10	89.08	26.37		65.0	
10240- CAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	Х	3.02	75.30	22.81	6.02	65.0	± 9.6 %
		Y	3.91	81.25	25.48		65.0	
		Z	4.09	81.42	26.07		65.0	
10241- CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	5.47	76.60	23.52	6.98	65.0	± 9.6 %
		Y	6.28	79.70	24.95		65.0	
		Z	6.08	77.98	24.56		65.0	
10242- CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	5.17	75.55	22.99	6.98	65.0	±9.6 %
~~~~		Y	5.96	78.71	24.47		65.0	
10010		Ζ	5.82	77.10	24.09		65.0	
10243- CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	4.47	72.66	22.57	6.98	65.0	± 9.6 %
	-	Y	4.85	74.66	23.64		65.0	
40044		Z	4.89	73.70	23.43		65.0	
10244- CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	2.59	65.60	11.95	3.98	65.0	± 9.6 %
		Y	3.16	68.30	13.59		65.0	
100/5		Z	3.94	71.58	16.14		65.0	
10245- CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	2.56	65.23	11.69	3.98	65.0	± 9,6 %
		Y	3.08	67.71	13.25		65.0	
10010		Z	3.80	70.75	15.70		65.0	
10246- CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	Х	2.30	67.33	13.29	3.98	65.0	± 9.6 %
		Y	3.40	73.14	16.55		65.0	
		Z	3.20	71.92	16.41		65.0	
10247- CAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	х	2,93	67.28	14.07	3.98	65.0	± 9.6 %
		Y	3.57	70.51	16.14		65.0	
		Z	3.50	69.72	16.15		65.0	
10248- CAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	Х	2.93	66.83	13.84	3.98	65.0	± 9.6 %
		Y	3.51	69.74	15,76		65.0	
		Z	3.49	69.17	15.87		65.0	
10249- CAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	3.40	72.89	17.31	3.98	65.0	± 9.6 %
	·	Y	5.05	79.62	20.60		65.0	
		Ζ	4.35	76.73	19.72		65.0	
10250- CAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	4.07	71.77	18.68	3.98	65.0	± 9.6 %
		Y	4.65	74.35	20.17		65.0	
		Ζ	4,43	72.91	19.73		65.0	
10251- CAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	3.86	69.66	17.25	3.98	65.0	± 9.6 %
		Υ	4.37	71.98	18.68		65.0	
		Ζ	4.24	70.85	18.35		65.0	
10252- CAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	Х	4.28	75.56	20.13	3.98	65.0	±9.6 %
		Y	5.50	80.28	22.41		65.0	
10050		Ζ	4.84	77.34	21.32		65.0	
10253- CAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	x	4.17	69.62	17.88	3.98	65.0	±9.6 %
		Y	4.59	71.50	19.03		65.0	
10051		Z	4.46	70.34	18.61		65.0	
10254- CAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	Х	4.46	70.60	18.66	3.98	65.0	± 9.6 %
		Y	4.90	72.45	19.77		65.0	
		Z	4.75	71.28	19.37		65.0	

10255- CAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	4.40	73.51	19.69	3.98	65.0	± 9.6 %
		Y	5.16	76.59	21.27		65.0	
		Ż	4.77	74.49	20.43		65.0	
10256- CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	1.88	62.21	8.80	3.98	65.0	± 9.6 %
		Y	2.16	63.72	9.95		65.0	
		Z	2.68	66.18	12.27		65.0	
10257- CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	1.87	61.92	8.53	3.98	65.0	± 9.6 %
		Y	2.13	63.28	9.61		65.0	
		Z	2.60	65.47	11.78		65.0	
10258- CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	1.63	62.98	9.76	3.98	65.0	± 9.6 %
		Y	2.11	66.24	12.11		65.0	
		Z	2.20	66.42	12.68		65.0	
10259- CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	3.37	69.09	15.81	3.98	65.0	± 9.6 %
		Y	4.03	72.21	17.73		65.0	
		Z	3.88	71.08	17.53		65.0	
10260- CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	3.41	68.89	15.70	3.98	65.0	± 9.6 %
		Y	4.05	71.86	17.55		65.0	
		Z	3.92	70.83	17.40		65.0	
10261- CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	3.65	73.54	18.24	3.98	65.0	± 9.6 %
		Y	4.99	79.08	21.01		65.0	
		Z	4.36	76.25	20.08		65.0	
10262- CAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	4.05	71.68	18.62	3.98	65.0	± 9.6 %
• ••••	1	Y	4.63	74.27	20.11		65.0	
		Z	4.42	72.84	19.67		65.0	
10263- CAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	3.85	69.65	17.25	3.98	65.0	± 9.6 %
		Y	4.36	71.96	18.67		65.0	
		Z	4.23	70.83	18.35		65.0	
10264- CAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	4.23	75.35	20.01	3.98	65.0	± 9.6 %
		Y	5.43	80.04	22.29		65.0	
		Z	4.79	77.13	21.21		65.0	
10265- CAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	4.21	69.90	18.16	3.98	65.0	± 9.6 %
		Y	4.65	71.84	19.30		65.0	
		Z	4.51	70.68	18.86		65.0	
10266- CAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	4.55	71.05	19.08	3.98	65.0	± 9.6 %
		Y	5.00	72.95	20.16		65.0	
		Z	4.85	71.75	19.72		65.0	
10267- CAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	4.57	74.06	19.81	3.98	65.0	± 9.6 %
		Y	5.43	77.35	21.43		65.0	
		Z	4.99	75.14	20.54		65.0	
10268- CAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	4.89	70.28	18.92	3.98	65.0	± 9.6 %
		Y	5.29	71.90	19.82		65.0	
		Z	5.16	70.86	19.41		65.0	
10269- CAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	Х	4.93	70.03	18.82	3.98	65.0	± 9.6 %
		Y	5.31	71.54	19.69		65.0	
		Z	5.18	70.53	19.29	]	65.0	
10270- CAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	4.82	72.26	19.25	3.98	65.0	± 9.6 %
		Ý	5.40	74.50	20.39		65.0	
		Z	5.12	72.93	19.74	T	65.0	1

10274- CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	X	2.30	66.08	14.21	0.00	150.0	± 9.6 %
		Y	2.48	67.13	15.07		150.0	1
	······	Z	2.37	65.78	14.35		150.0	
10275- CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	X	1.33	66.42	14.09	0.00	150.0	± 9.6 %
		Y	1.55	68.66	15.67		150.0	
		Z	1.35	65.99	13.99		150.0	
10277- CAA	PHS (QPSK)	X	1.44	58.96	4.35	9.03	50.0	± 9.6 %
		Y	1.29	58.94	4.16		50.0	
		Z	1.60	59.77	5.29		50.0	
10278- CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	X	2.42	63.55	9.32	9.03	50.0	± 9.6 %
		Y	2.50	65.00	10.23		50.0	
		Z	3.00	66.61	11.73		50.0	
10279- CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	X	2.47	63.72	9.48	9.03	50.0	± 9.6 %
		Y	2.58	65.28	10.45		50.0	
		Z	3.09	66.89	11.94		50.0	
10290- AAB	CDMA2000, RC1, SO55, Full Rate	Х	0.64	61.56	7.87	0.00	150.0	± 9.6 %
		Y	0.98	65.79	11.09		150.0	
		Z	0.84	63.19	9.57		150.0	
10291- AAB	CDMA2000, RC3, SO55, Full Rate	X	0.41	60.33	6.79	0.00	150.0	± 9.6 %
		Y	0.62	64.18	10.12		150.0	
		Z	0.50	61.40	8.20		150.0	
10292- AAB	CDMA2000, RC3, SO32, Full Rate	X	0.46	61.89	7.99	0.00	150.0	± 9.6 %
		Y	1.01	70.37	13.40		150.0	
		Z	0.57	63.19	9.51		150.0	
10293- AAB	CDMA2000, RC3, SO3, Full Rate	Х	0.64	65.03	10.07	0.00	150.0	± 9.6 %
		Y	4.97	89.66	20.54		150.0	
		Z	0.76	66.38	11.57		150.0	
10295- AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	Х	14.73	88.54	22.30	9.03	50.0	± 9.6 %
		Y	21.95	97.75	26.07		50.0	1
		Z	14.97	91.80	24.79		50.0	[
10297- AAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	Х	2.34	68.34	15.82	0.00	150.0	± 9.6 %
		Y	2.58	69.89	16.76		150.0	
	· · · · · · · · · · · · · · · · · · ·	Z	2.40	68.08	15.64		150.0	· · · · · · · · · · · · · · · · · · ·
10298- AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	0.86	62.29	9.16	0.00	150.0	± 9.6 %
		Y	1.16	65.45	11.69		150.0	
100		Z	1.05	63.56	10.60		150.0	
10299- AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	1.14	61.76	8.21	0.00	150.0	± 9.6 %
		Y	1.41	63.51	9.50		150.0	
1 +		Z	1.73	65.72	11.49		150.0	
10300- AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	0.97	60.07	6.55	0.00	150.0	±9.6 %
		Y	1.14	61.11	7.49		150.0	
10001		Ζ	1.33	62.21	8.89		150.0	
10301- AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	X	4.13	64.55	16.56	4.17	50.0	±9.6 %
		Y	4.26	65.00	16.97		50.0	
		Z	4.39	64,86	16.90		50.0	
10302- AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	X	4.66	65.38	17.39	4.96	50.0	±9.6 %
		Y	4.76	65.70	17.72		50.0	
		Z		65.46	17.59			

10303- AAA	IEEE 802.16e WIMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	X	4.45	65.36	17.40	4.96	50.0	± 9.6 %
		Y	4.51	65.30	17.48		50.0	
		Z	4.62	65.06	17.37		50.0	
10304- AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	Х	4.25	64.98	16.73	4.17	50.0	± 9.6 %
***		Y	4.36	65.33	17.07		50.0	
		Z	4.45	64.98	16.90		50.0	
10305- AAA	IEEE 802.16e WIMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	X	3.81	66.28	17.81	6.02	35.0	± 9.6 %
		Y	3.76	65.91	18.03		35.0	
40000		Z	4.04	66.66	18.48		35.0	
10306- AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	X	4.18	65.73	17.92	6.02	35.0	± 9.6 %
		Y	4.17	65.55	18.11		35.0	
10207		Z	4.39	65.94	18.38	0.00	35.0	
10307- AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	X	4.05	65.69	17.78	6.02	35.0	±9.6 %
		Y	4.04	65.48	17.96		35.0	
10200	LEEE 902 160 WIMAY (20-40 - 40	Z	4.27	65.96	18.27	0.00	35.0	
10308- AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	X	4.03	65.87	17.91	6.02	35.0	± 9.6 %
		Y	4.01	65.64	18.09		35.0	
10309-	1555 902 46- WIMAY (20:48 40-	Z	4.25	66.15	18.40	0.00	35.0	100%
AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	X	4.18	65.77	18.00	6.02	35.0	± 9.6 %
		Y	4.19	65.61	18.20		35.0	
10310- AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	Z X	<u>4.42</u> 4.13	66.06 65.78	18.49 17.90	6.02	35.0 35.0	± 9.6 %
	Towinz, Qr SR, Awe 2x3, 18 symbols)	Y	4.12	65.57	18.08		35.0	
		Z	4.12	65.98	18.35		35.0	
10311- AAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	2.69	67.62	15.56	0.00	150.0	± 9.6 %
		Y	2.94	69.08	16.39		150.0	
		Ż	2.75	67.40	15.38		150.0	
10313- AAA	IDEN 1:3	X	1.80	67.21	13.40	6.99	70.0	±9.6 %
		Y	2.78	73.35	16.36		70.0	
		Z	2.09	69.09	14.51		70.0	
10314- AAA	IDEN 1:6	X	3.26	75.39	19.57	10.00	30.0	± 9.6 %
		Y	5.56	85.97	24.05		30.0	
		Z	4.04	79.23	21.39		30.0	
10315- AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	X	0.96	62.72	14.16	0.17	150.0	± 9.6 %
		Y	1.05	63.94	15.22	l	150.0	
		Z	0.96	62.45	14.04		150.0	
10316- AAB	IEEE 802.11g WiFi 2.4 GHz (ERP- OFDM, 6 Mbps, 96pc duty cycle)	X	4.24	66.42	15.96	0.17	150.0	± 9.6 %
		Y	4.35	66.80	16.22		150.0	
		Z	4.36	66.32	16.01		150.0	
10317- AAC	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	X	4.24	66.42	15.96	0.17	150.0	± 9.6 %
		Y Z	4.35 4.36	66.80 66.32	16.22 16.01		150.0 150.0	
10400- AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	Х	4.31	66.71	15.99	0.00	150.0	± 9.6 %
		Y	4.43	67.11	16.24		150.0	
		Z	4.43	66.60	15.99		150.0	
10401- AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	X	4.98	66.52	16.05	0.00	150.0	± 9.6 %
		Y	5.08	66.87	16.24		150.0	
	· · · · · · · · · · · · · · · ·	Z	5.16	66.70	16.18		150.0	

10402- AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	X	5.36	67.14	16.28	0.00	150.0	± 9.6 %
		Y	5.44	67.45	16.42		150.0	
		Z	5.45	67.07	16.25		150.0	
10403- AAB	CDMA2000 (1xEV-DO, Rev. 0)	X	0.64	61.56	7.87	0.00	115.0	± 9.6 %
		Y	0.98	65.79	11.09		115.0	
		Z	0.84	63.19	9.57	·····	115.0	
10404- AAB	CDMA2000 (1xEV-DO, Rev. A)	X	0.64	61.56	7.87	0.00	115.0	± 9.6 %
		Y	0.98	65.79	11.09		115.0	
		Z	0.84	63.19	9.57		115.0	
10406- AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	X	100.00	119.53	28.08	0.00	100.0	±9.6 %
		Y	100.00	115.68	26.57		100.0	
		Z	100.00	126.19	31.47		100.0	
10410- AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	×	2.86	79.80	18.70	3.23	80.0	± 9.6 %
		Y	25.09	107.33	26.44		80.0	
		Z	100.00	133.23	34.42		80.0	
10415- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	X	0.92	62.32	13.80	0.00	150.0	± 9.6 %
		Y	1.00	63.42	14.80		150.0	
		Z	0.91	61.96	13.60		150.0	
10416- AAA	IEEE 802.11g WiFi 2.4 GHz (ERP- OFDM, 6 Mbps, 99pc duty cycle)	×	4.22	66.50	15.96	0.00	150.0	± 9.6 %
		Y	4.32	66.87	16.21		150.0	
		Z	4.32	66.33	15.95		150.0	
10417- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	X	4.22	66.50	15.96	0.00	150.0	± 9.6 %
		Υ	4.32	66.87	16.21		150.0	
		Z	4.32	66.33	15.95		150.0	1
10418- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 6 Mbps, 99pc duty cycle, Long preambule)	×	4.21	66.71	16.02	0.00	150.0	± 9.6 %
		Υ	4.32	67.09	16.27		150.0	
		Z	4.31	66.51	15.99		150.0	
10419- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 6 Mbps, 99pc duty cycle, Short preambule)	X	4.23	66.64	16.01	0.00	150.0	± 9.6 %
		Y	4.34	67.01	16.25		150.0	
		Z	4.33	66.45	15.98	******	150.0	
10422- AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	X	4.33	66.62	16.03	0.00	150.0	± 9.6 %
		Y	4.44	66.98	16.26		150.0	
		Z	4.44	66.45	16.00		150.0	
10423- AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	X	4.45	66.86	16.11	0.00	150.0	± 9.6 %
		Y	4.56	67.23	16.34		150.0	
		Z	4.57	66.72	16.10		150.0	
10424- AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	X	4.38	66.81	16.08	0.00	150.0	± 9.6 %
		Y	4.50	67.18	16.32		150.0	
40405		Z	4.50	66.66	16.07		150.0	
10425- AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	X	5.03	67.03	16.34	0.00	150.0	± 9.6 %
	·	Y	5.11	67.32	16.49		150.0	
40400		Z	5.14	66.98	16.33		150.0	
10426- AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	X	5.06	67.16	16.40	0.00	150.0	±9.6 %
		Y	5.13	67.40	16.52		150.0	
		Z	5.17	67.10	16.39		150.0	

10427- AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	X	5.01	66.91	16.27	0.00	150.0	± 9.6 %
		Y	5.09	67.19	16.41		150.0	
		Ζ	5.13	66.90	16.28		150.0	
10430- AAC	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	X	4.07	72.07	17.91	0.00	150.0	± 9.6 %
		Y	4.24	72.56	18.40		150.0	
		Z	4.04	71.02	17.78		150.0	
10431- AAC	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	X	3.79	66.99	15.69	0.00	150.0	± 9.6 %
		Y	3.94	67.49	16.09		150.0	
		Z	3.92	66.79	15.76		150.0	
10432- AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	×	4.13	66.89	15.96	0.00	150.0	± 9.6 %
		Y	4.26	67.30	16.25		150.0	
		Z	4.25	66.71	15.96		150.0	
10433- AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	X	4.40	66.85	16.11	0.00	150.0	± 9.6 %
		Y	4.51	67.22	16.34		150.0	
10101		Z	4.51	66.70	16.09		150.0	
10434- AAA	W-CDMA (BS Test Model 1, 64 DPCH)	X	4.05	72.38	17.35	0.00	150.0	± 9.6 %
		Y	4.37	73.48	18.19		150.0	
		Ζ	4.07	71.60	17.46		150.0	
10435- AAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.72	79.05	18.38	3.23	80.0	± 9.6 %
		Y	21.44	105.07	25.81		80.0	
	v	Z	100.00	132.91	34.27		80.0	
10447- AAC	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	2.96	66.34	14.12	0.00	150.0	± 9.6 %
		Y	3.18	67.31	14.92		150.0	
		Z	3.13	66.39	14.53		150.0	
10448- AAC	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	X	3.67	66.79	15.57	0.00	150.0	± 9.6 %
		Y	3.81	67.30	15.97		150.0	
		Z	3.78	66.58	15.62		150.0	
10449- AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	X	3.98	66.71	15.86	0.00	150.0	± 9.6 %
		Y	4.10	67.14	16.16		150.0	
		Z	4.09	66.52	15.85		150.0	
10450- AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	4.21	66.62	15.96	0.00	150.0	± 9.6 %
		Y	4.32	67.01	16.21		150.0	
		Z	4.30	66.46	15.93		150.0	
10451- AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	X	2.70	65.75	13.11	0.00	150.0	± 9.6 %
		Y	2.96	67.00	14.12		150.0	
40450		Z	2.94	66.14	13.79		150.0	
10456- AAB	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	X	5.99	67.61	16.55	0,00	150.0	± 9.6 %
		Y	6.02	67.80	16.61		150.0	
		Z	6.11	67.72	16.61		150.0	
10457- AAA	UMTS-FDD (DC-HSDPA)	X	3.61	65.32	15.70	0.00	150.0	± 9.6 %
		Y	3.69	65.64	15.94		150.0	[
		Z	3.65	65.04	15.66		150.0	
10458- AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	X	3.19	69.07	15.08	0.00	150.0	± 9.6 %
		Y	3.69	71.30	16.62	L	150.0	
		Z	3.53	69.92	16.16		150.0	
10459- AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	×	4.69	69.03	17.48	0.00	150.0	± 9.6 %
		Y	4.79	69.11	17.75		150.0	
		Z	4.84	68.73	17.83		150.0	

10460- AAA	UMTS-FDD (WCDMA, AMR)	X	0.72	66.02	14.12	0.00	150.0	± 9.6 %
	······································	Y	0.91	69.57	16.66	1	150.0	
		Z	0.71	65.26	13.72		150.0	
10461- AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.93	75.92	18.31	3.29	80.0	± 9.6 %
		Y	6.83	93.43	24.06		80.0	
		Z	100.00	137.66	36.58		80.0	
10462- AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.63	60.00	7.27	3.23	80.0	± 9.6 %
		Y	0.63	60.00	7.19		80.0	
40.400		Z	1.15	65.31	10.99		80.0	
10463- AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.65	60.00	6.55	3.23	80.0	± 9.6 %
~~		Y	0.66	60.00	6.45		80.0	
10464-		Z	0.67	60.00	7.76		80.0	
AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.38	71.32	15.83	3.23	80.0	± 9.6 %
		Y	4.54	86.66	21.20		80.0	
10465-		Z	100.00	134.26	34.80		80.0	
10465- AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	X	0.63	60.00	7.20	3.23	80.0	± 9.6 %
		Y	0.63	60.00	7.11		80.0	L
10466-	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-	Z	0.94	63.37	10.05		80.0	
AAB	QAM, UL Subframe=2,3,4,7,8,9)	X	0.65	60.00	6.50	3.23	80.0	± 9.6 %
		Y	0.66	60.00	6.41	l	80.0	
10467-		Z	0.68	60.00	7.70		80.0	
AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.47	72.19	16.22	3.23	80.0	± 9.6 %
		Y	5.30	88.83	21.91		80.0	
10468-		Z	100.00	134.76	35.02		80.0	
AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	X	0.63	60.00	7.22	3.23	80.0	±9.6 %
		Y	0.63	60.00	7.14		80.0	
10469-		Z	0.99	63.90	10.32		80.0	
AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	X	0.65	60.00	6.51	3.23	80.0	±9.6 %
		Y	0.66	60.00	6.41		80.0	
40470		Z	0.68	60.00	7.70		80.0	
10470- AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.46	72.21	16.22	3.23	80.0	± 9.6 %
		Y	5.35	88.98	21.94		80.0	
10471-		Z	100.00	134.82	35.03		80.0	
AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	X	0.63	60.00	7.21	3.23	80.0	±9.6 %
		Y	0.63	60.00	7.12		80.0	
10472- AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	Z X	0.98 0.65	63.79 60.00	10.26 6.49	3.23	80.0 80.0	± 9.6 %
- M 164		Y	0.66	60.00	6.00		00.0	
		Z	0.66	60.00 60.00	6.39		80.0	
10473-	LTE-TDD (SC-FDMA, 1 RB, 15 MHz,	X	1.46	72.15	7.68	2.00	80.0	1000
AAD	QPSK, UL Subframe=2,3,4,7,8,9)	^ Y	5.31		16.20	3.23	80.0	± 9.6 %
		Υ Ζ	100.00	88.87	21.90		80.0	
10474- AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	X	0.63	134.77 60.00	35.01 7.20	3.23	80.0 80.0	± 9.6 %
		Y	0.63	60.00	7.12		000	
		Z	0.03	63.74	10.23	······	80.0	
10475- AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	X	0.65	60.00	6.49	3.23	80.0 80.0	± 9.6 %
_		Y	0.66	60.00	6.39			,
		Z	0.67	60.00	0.39 7.69		80.0	
	····	<u> </u>	0.07	00.00	1.09		80.0	

10477-	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-	X	0.63	60.00	7.17	3.23	80.0	± 9.6 %
AAE	QAM, UL Subframe=2,3,4,7,8,9)	Y	0.00	00.00	7.00		00.0	
		Z	0.63	60.00 63.31	7.08		80.0 80.0	
10478-	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-	X	0.93	60.00	6.47	3.23	80.0	± 9.6 %
AAE	QAM, UL Subframe=2,3,4,7,8,9)					J.2J		19.0 %
		Y	0.66	60.00	6.37		80.0	
40470		Z	0.67	60,00	7.67		80.0	
10479- AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Х	4.26	80.69	20.19	3.23	80.0	± 9.6 %
		Y	7.01	87.70	22.71		80.0	
40400		Z	21.27	105.57	28.88		80.0	
10480- AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.88	66.39	12,32	3.23	80.0	± 9.6 %
		Y	3.13	71.95	14.74		80.0	1
40404		Z	13.52	90.52	21.87		80.0	
10481- AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.43	63.16	10.40	3.23	80.0	± 9.6 %
		Y	2.06	66.80	12.23		80.0	
40.000		Z	6.11	79.62	18.02		80.0	
10482- AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.06	61.11	9.78	2.23	80.0	± 9.6 %
		Y	1.73	66.89	13.39		80.0	
10.15-		Z	1.53	64.78	12.61		80.0	
10483- AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.23	60.00	8.50	2.23	80.0	± 9.6 %
		Y	1.57	62.45	10.22		80.0	
		Z	2.78	68.98	14.19		80.0	
10484- AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.26	60.00	8.49	2.23	80.0	±9.6 %
		Y	1.54	61.98	9.97		80.0	
		Z	2.53	67.57	13.58		80.0	
10485- AAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Х	1.66	65.74	13.74	2.23	80.0	±9.6 %
		Y	2.52	71.78	17.06		80.0	
		Z	2.10	68.47	15.70		80.0	
10486- AAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.66	62.56	11.27	2.23	80.0	± 9.6 %
		Y	2.26	66.58	13.85		80.0	
		Z	2.12	65.12	13.38		80.0	1
10487- AAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.67	62.33	11.12	2.23	80.0	± 9.6 %
		Y	2.24	66.10	13.59		80.0	
		Z	2.14	64.83	13.21		80.0	
10488- AAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.26	67.65	16.13	2.23	80.0	± 9.6 %
		Y	2.82	71.24	18.12		80.0	
		Z	2.57	69.00	17.08		80.0	
10489- AAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.49	65.85	15.07	2.23	80.0	± 9.6 %
		Y	2.90	68.21	16.54		80.0	
		Z	2.74	66.70	15.91		80.0	
10490- AAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.57	65.79	15.03	2.23	80.0	± 9.6 %
		Y	2.97	68.04	16.46		80.0	
		Z	2.83	66.63	15.88		80.0	
10491- AAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.64	67.24	16.30	2.23	80.0	± 9.6 %
		Y	3.09	69.79	17.74		80.0	
		Z	2.92	68.21	16.96		80.0	
10492- AAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.93	65.80	15.66	2.23	80.0	± 9.6 %
		İΥ	3.24	67.45	16.69	<u> </u>	80.0	
		Z	3.14	66.35	16.22		80.0	

10493- AAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.99	65.74	15.62	2.23	80.0	± 9.6 %
	04-QAM, OL SUBILATIE-2,3,4,7,0,9)	Y	3.29	67.32	16.63		00.0	
		Z	3.21	66.28	16.18		80.0 80.0	
10494- AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.77	68.16	16.65	2.23	80.0	± 9.6 %
	· · · · · · · · · · · · · · · · · · ·	Y	3.31	71.10	18.21		80.0	
		Z	3.09	69.31	17.33		80.0	
10495- AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	Х	2.95	66.01	15.89	2.23	80.0	± 9.6 %
-	······	Y	3.25	67.67	16.91		80.0	
		Z	3.16	66.59	16.41		80.0	
10496- AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.04	65.92	15.89	2.23	80.0	± 9.6 %
		Y	3.34	67.48	16.84		80.0	
10407		Z	3.25	66.45	16.38		80.0	
10497- AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	0.90	60.00	7.56	2.23	80.0	± 9.6 %
	······································	Y	0.94	60.22	8.59		80.0	
10498-		Z	0.98	60.00	8.77		80.0	
AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.09	60.00	6.33	2.23	80.0	± 9.6 %
		Y	1.09	60.00	7.12		80.0	
		Z	1.16	60.00	7.58		80.0	
10499- AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.11	60.00	6.17	2.23	80.0	± 9.6 %
		Y	1.11	60.00	6.94		80.0	
		Z	1.17	60.00	7.42		80.0	
10500- AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.91	66.68	14.78	2.23	80.0	± 9.6 %
		Y	2.64	71.54	17.49		80.0	
		Z	2.29	68.68	16.26		80.0	
10501- AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.02	64.23	12.91	2.23	80.0	± 9.6 %
		Y	2.60	67.75	15.11		80.0	
40500		Z	2.42	66.09	14.51		80.0	
10502- AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.05	64.07	12.75	2.23	80.0	± 9.6 %
	· · · · · · · · · · · · · · · · · · ·	Y	2.63	67.51	14.92		80.0	
10503-		Z	2.46	65.95	14.37		80.0	
AAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.23	67.47	16.03	2.23	80.0	± 9.6 %
		Y	2.79	71.03	18.01		80.0	
10504-	LTE-TDD (SC-FDMA, 100% RB, 5 MHz,	Z	2.54	68.82	16.98	0.00	80.0	
AAD	16-QAM, UL Subframe=2,3,4,7,8,9)	X Y	2.48	65.75	15.00	2.23	80.0	± 9.6 %
		r Z	2.88 2.73	68.10 66.60	16.48		80.0	
10505- AAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.55	65.70	15.85 14.97	2.23	80.0 80.0	± 9.6 %
		Y	2.95	67.94	16.40		80.0	
		Z	2.81	66.54	15.82		80.0	
10506- AAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Х	2.76	68.04	16.58	2.23	80.0	± 9.6 %
		Y	3.29	70.96	18.14		80.0	
40505		Ζ	3.07	69.18	17.26		80.0	
10507- AAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	х	2.93	65.95	15.85	2.23	80.0	±9.6 %
		Y	3.24	67.61	16.87		80.0	

10508- AAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.03	65.86	15.84	2.23	80.0	± 9.6 %
		Y	3.33	67.40	16.79		80.0	
		Z	3.24	66.38	16.33		80.0	
10509- AAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.24	67.72	16.53	2.23	80.0	± 9.6 %
		Υ	3.69	69.96	17.72		80.0	
		Z	3.51	68.56	17.03		80.0	
10510- AAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	x	3.43	65.97	16.12	2.23	80.0	± 9.6 %
· · · · · · · · · · · · · · · · · · ·		Y	3.71	67.32	16.91		80.0	
		Z	3.64	66.47	16.52		80.0	
10511- AAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.52	65.89	16.12	2.23	80.0	± 9.6 %
		Y	3.78	67.15	16.86		80.0	
		Z	3.71	66.32	16.49		80.0	
10512- AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.22	68.47	16.72	2.23	80.0	± 9.6 %
		Y	3.79	71.22	18.12		80.0	
		Z	3.54	69.57	17.32		80.0	
10513- AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.32	66.00	16.15	2.23	80.0	± 9.6 %
		Y	3.60	67.43	16.98		80.0	
		Z	3.52	66.56	16.56		80.0	
10514- AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.39	65.79	16.10	2.23	80.0	± 9.6 %
		Y	3.64	67.11	16.88		80.0	
		Z	3.57	66.28	16.49		80.0	
10515- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	X	0.88	62.44	13.81	0.00	150.0	± 9.6 %
		Y	0.96	63.62	14.88		150.0	
40540		Z	0.87	62.07	13.59	0.00	150.0	100%
10516- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	X Y	0.45	66.98 72.72	14.48	0.00	150.0	± 9.6 %
		T Z	0.65	65.95	18.47 13.66		150.0 150.0	
10517-	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11	X	0.42	63.68	13.66	0.00	150.0	± 9.6 %
AAA	Mbps, 99pc duty cycle)	Ŷ	0.70	65.65	15.62	0.00	150.0	1 3.0 %
		z	0.69	63.23	13.65		150.0	
10518- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	X	4.21	66.61	15.96	0.00	150.0	± 9.6 %
		Y	4.32	66.98	16.20		150.0	
		Z	4.31	66.42	15.93		150.0	
10519- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	X	4.34	66.77	16.04	0.00	150.0	± 9.6 %
		Y	4.46	67.14	16.28		150.0	
10863		Z	4.46	66.61	16.03		150.0	
10520- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	X	4.20	66.68	15.95	0.00	150.0	± 9.6 %
		Y Z	4.32	67.07	16.20	1	150.0	
10521- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	X	<u>4.31</u> 4.13	66.53 66.63	15.94 15.92	0.00	150.0 150.0	± 9.6 %
		Y	4.25	67.04	16.18		150.0	
		Z	4.24	66.49	15.91		150.0	
10522- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	X	4.17	66.72	15.99	0.00	150.0	±9.6%
*******		Y	4.29	67.14	16.26		150.0	
		Z	4.30	66.63	16.02	1	150.0	, <b></b>

10523- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	X	4.12	66.80	15.96	0.00	150.0	± 9.6 %
		Y	4.24	67.19	16.22	·	150.0	
		Ż	4.21	66.57	15.90		150.0	
10524- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	X	4.13	66.73	16.01	0.00	150.0	± 9.6 %
		Y	4.25	67.13	16.27		150.0	
		Z	4.25	66.57	15.99		150.0	
10525- AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	X	4.18	65.86	15.65	0.00	150.0	± 9.6 %
		Y	4.29	66.26	15.91		150.0	
		Z	4.27	65.65	15.61		150.0	
10526- AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	X	4.28	66.10	15.76	0.00	150.0	± 9.6 %
		Y	4.41	66.52	16.01		150.0	
10507		Z	4.40	65.94	15.73		150.0	
10527- AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	X	4.22	66.07	15.69	0.00	150.0	± 9.6 %
		Y	4.34	66.49	15.96		150.0	
40505		Z	4.33	65.90	15.66		150.0	
10528- AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	X	4.23	66.08	15.73	0.00	150.0	± 9.6 %
		Y	4.36	66.51	15.99		150.0	
10500		Z	4.34	65.91	15.70		150.0	
10529- AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	X	4.23	66.08	15.73	0.00	150.0	± 9.6 %
		Y	4.36	66.51	15.99		150.0	
40504		Z	4.34	65.91	15.70		150.0	
10531- AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	X	4.19	66.07	15.68	0.00	150.0	± 9.6 %
		Y	4.32	66.52	15.96		150.0	1
		Z	4.31	65.94	15.68		150.0	
10532- AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)	Х	4.08	65.93	15.61	0.00	150.0	± 9.6 %
		Y	4.20	66.39	15.90		150.0	
		Z	4.19	65.79	15.60		150.0	
10533- AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	Х	4.23	66.16	15.73	0.00	150.0	±9.6 %
		Y	4.36	66.60	16.00	·	150.0	
		Z	4.35	65.98	15.69		150.0	
10534- AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	X	4.82	66.10	15.85	0.00	150.0	± 9.6 %
		Y	4.91	66.46	16.04		150.0	
		Z	4.91	66.02	15.83		150.0	
10535- AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	X	4.85	66.20	15.91	0.00	150.0	± 9.6 %
		Y	4.94	66.56	16.09		150.0	
40500		Z	4.97	66.17	15.90		150.0	
10536- AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	X	4.74	66.19	15.87	0.00	150.0	±9.6 %
·		Y	4.84	66.58	16.08		150.0	
		Z	4.85	66.14	15.86		150.0	
10537- AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	X	4.82	66.26	15.91	0.00	150.0	±9.6 %
		Y	4.91	66.59	16.08		150.0	
10500		Z	4.91	66.13	15.86		150.0	
10538- AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	X	4.87	66.17	15.91	0.00	150.0	±9.6 %
		Y	4.97	66.52	16.09		150.0	
10515		Z	4.98	66.12	15.90		150.0	
10540- AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	X	4.80	66.12	15.90	0.00	150.0	± 9.6 %
		Y	4.90	66.49	16.09		150.0	
	1	Z						

10541-	IEEE 802.11ac WiFi (40MHz, MCS7,	X	4.79	66,06	15.85	0,00	150.0	± 9.6 %
AAB	99pc duty cycle)							
		Y	4.89	66.43	16.04		150.0	
10510		Z	4.89	65.96	15.82		150.0	
10542- AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	X	4.94	66.17	15.92	0.00	150.0	±9.6 %
		Y	5.04	66.51	16.10		150.0	
40540		Z	5.05	66.09	15.90	~ ~ ~ ~	150.0	
10543- AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	X	5.03	66.31	16.03	0.00	150.0	±9.6 %
		Y	5.11	66.60	16.17		150.0	
10544- AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	Z X	<u>5.12</u> 5.18	66.17 66.16	15.97 15.86	0.00	150.0 150.0	±9.6 %
		Y	5.26	66.52	16.02		150.0	
		Z	5,26	66.12	15.84		150.0	
10545- AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	X	5.36	66.65	16.06	0.00	150.0	±9.6 %
		Y	5.42	66.93	16.19		150.0	
		Z	5.45	66.61	16.04		150.0	
10546- AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	X	5.20	66.27	15.88	0.00	150.0	±9.6 %
		Y	5.29	66.63	16.05		150.0	
405.17		Z	5.29	66.25	15.87		150.0	'
10547- AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	X	5.31	66.50	15.99	0.00	150.0	±9.6 %
	1	Y	5.37	66.75	16.11		150.0	
10548-	IEEE 802.11ac WiFi (80MHz, MCS4,	Z X	5.38 5.41	66.37 66.98	15.93 16.21	0.00	150.0 150.0	± 9.6 %
AAB	99pc duty cycle)	Y	5.49	67.30	16.36		150.0	
		Z	5.57	67.13	16.28		150.0	
10550- AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	X	5.30	66.60	16.06	0.00	150.0	± 9.6 %
7 4 449		Y	5.35	66.83	16.16		150.0	
		Z	5.37	66.46	15.99		150.0	
10551- AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	X	5.19	66.21	15.83	0.00	150.0	± 9.6 %
		Y	5.28	66.60	16.01		150.0	
		Z	5.30	66.24	15.84		150.0	
10552- AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	X	5.18	66.29	15.86	0.00	150.0	± 9.6 %
		Y	5.27	66.65	16.04		150.0	
	·····	Z	5.26	66.20	15.82		150.0	
10553- AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	X	5.23	66.22	15.86	0.00	150.0	± 9.6 %
		Y	5.32	66.58	16.03	ļ	150.0	
10554-	IEEE 802.11ac WiFi (160MHz, MCS0,	Z X	5.32 5.62	66.18 66.51	15.85 15.95	0.00	150.0 150.0	± 9.6 %
AAC	99pc duty cycle)	Y	5.68	66.84	16.09		150.0	
****		Z	5.69	66.48	15.94		150.0	
10555- AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	X	5.69	66.71	16.04	0.00	150.0	±9.6 %
		Y	5.76	67.04	16.18		150.0	
		Z	5.79	66.75	16.05		150.0	
10556- AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	X	5.75	66.88	16.11	0.00	150.0	± 9.6 %
		Y	5,80	67.16	16.23		150.0	<u> </u>
		Z	5.83	66.85	16.10		150.0	
10557- AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	X	5.69	66.70	16.04	0.00	150.0	± 9.6 %
		Y	5,76	67.04	16.19	ļ	150.0	<b>_</b>
		Z	5.77	66.69	16.03		150.0	<u></u>

10558- AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	X	5.67	66.68	16.05	0.00	150.0	± 9.6 %
		Y	5.76	67.07	16.22		150.0	
		Z	5.80	66.79	16.10		150.0	
10560- AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	X	5.71	66.66	16.07	0.00	150.0	±9.6 %
		Y	5.79	67.02	16.23		150.0	
		Z	5.81	66.69	16.09		150.0	1
10561- AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)	Х	5.65	66.65	16.10	0.00	150.0	± 9.6 %
		Y	5.72	67.00	16.25		150.0	
		Z	5.75	66.69	16.12		150.0	
10562- AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	X	5.68	66.77	16.16	0.00	150.0	± 9.6 %
		Y	5.77	67.15	16.33		150.0	
		Z	5.80	66.87	16.21		150.0	
10563- AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	X	5.80	66.82	16.15	0.00	150.0	± 9.6 %
		Y	5.88	67.15	16.29		150.0	
		Z	5.91	66.85	16.17		150.0	
10564- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 9 Mbps, 99pc duty cycle)	X	4.52	66.62	16.09	0.46	150.0	± 9.6 %
		Y	4.63	66.97	16.32		150.0	
		Z	4.63	66.48	16.09		150.0	
10565- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 12 Mbps, 99pc duty cycle)	Х	4.71	67.05	16.42	0.46	150.0	± 9.6 %
		Y	4.82	67.38	16.63		150.0	1
		Z	4.83	66.91	16.42		150.0	
10566- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 18 Mbps, 99pc duty cycle)	X	4.54	66.82	16.20	0.46	150.0	± 9.6 %
		Y	4.65	67.19	16.43		150.0	
		Z	4.66	66.71	16.22		150.0	[
10567- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 24 Mbps, 99pc duty cycle)	Х	4.58	67.25	16.61	0.46	150.0	± 9.6 %
		Y	4.69	67.60	16.82		150.0	······
		Z	4.69	67.12	16.60		150.0	
10568- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 36 Mbps, 99pc duty cycle)	X	4.42	66.46	15.88	0.46	150.0	± 9.6 %
		Y	4.54	66.88	16.15		150.0	
		Z	4.56	66.45	15.95		150.0	
10569- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 48 Mbps, 99pc duty cycle)	X	4.58	67.53	16.78	0.46	150.0	± 9.6 %
		Y	4.68	67.86	16.97		150.0	
		Z	4.68	67.31	16.72		150.0	
10570- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 54 Mbps, 99pc duty cycle)	Х	4.57	67.27	16.64	0.46	150.0	± 9.6 %
		Y	4.68	67.61	16.85		150.0	
		Z	4.69	67.12	16.62		150.0	
10571- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	Х	0.99	62.81	14.23	0.46	130.0	± 9.6 %
	· · · · · · · · · · · · · · · · · · ·	Υ	1.09	64.12	15.35		130.0	
		Z	1.00	62.69	14.25		130.0	
10572- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	X	1.00	63.25	14.53	0.46	130.0	± 9.6 %
		Y	1.10	64.66	15.71		130.0	
40570		Z	1.00	63.12	14.54		130.0	
10573- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	X	0.77	71.94	17.18	0.46	130.0	± 9.6 %
		Y	1.53	83.79	23.08		130.0	
		Z	0.78	71.84	17.05		130.0	
10574- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	X	0.97	67.27	16.73	0.46	130.0	± 9.6 %
		Y	1.16	70.12	18.67		130.0	· · · · · · · · · · · · · · · · · · ·

10575- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 6 Mbps, 90pc duty cycle)	X	4.29	66.33	16.06	0.46	130.0	± 9.6 %
		Y	4.40	66.70	16.31		130.0	
		Z	4.41	66.24	16.12		130.0	
10576- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 9 Mbps, 90pc duty cycle)	X	4.32	66.56	16.16	0.46	130.0	± 9.6 %
		Y	4,43	66.92	16.41		130.0	
		Z	4.43	66.43	16.20		130.0	
10577- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 12 Mbps, 90pc duty cycle)	X	4.47	66.78	<b>1</b> 6.31	0.46	130.0	± 9.6 %
		Y	4.58	67.14	16.55		130.0	
		Z	4.60	66.69	16.36		130.0	
10578- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 18 Mbps, 90pc duty cycle)	X	4.38	66.93	16.42	0.46	130.0	± 9.6 %
		Y	4.49	67.29	16.66		130.0	
4.0.0000		Z	4.50	66.83	16.46		130.0	
10579- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 24 Mbps, 90pc duty cycle)	X	4.12	66.01	15.59	0.46	130.0	± 9.6 %
		Y	4.24	66.44	15.89		130.0	
40500		Z	4.26	65.99	15.69		130.0	
10580- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 36 Mbps, 90pc duty cycle)	X	4.14	66.03	15.59	0.46	130.0	±9.6 %
		Y	4.27	66.48	15.90		130.0	
40507		Z	4.30	66.06	15.72		130.0	
10581- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 48 Mbps, 90pc duty cycle)	X	4.29	67.01	16.39	0.46	130.0	± 9.6 %
		Y	4.41	67.39	16.65		130.0	
10500		Z	4.41	66.87	16.41		130.0	
10582- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 54 Mbps, 90pc duty cycle)	X	4.04	65.76	15.35	0.46	130.0	±9.6 %
		Y	4.17	66.20	15.67		130.0	
		Z	4.19	65.76	15.46	L	130.0	
10583- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	X	4.29	66.33	16.06	0.46	130.0	± 9.6 %
		Y	4.40	66.70	16.31		130.0	
		Z	4.41	66.24	16.12		130.0	
10584- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	X	4.32	66.56	16.16	0.46	130.0	±9.6 %
		Y	4.43	66.92	16.41		130.0	
		Z	4.43	66.43	16.20		130.0	
10585- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	X	4.47	66.78	16.31	0.46	130.0	±9.6 %
		Y	4.58	67.14	16.55		130.0	
		Z	4.60	66.69	16.36		130.0	
10586- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	X	4.38	66.93	16.42	0.46	130.0	± 9.6 %
		Y	4.49	67.29	16.66		130.0	
		Z	4.50	66.83	16.46		130.0	
10587- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	X	4.12	66.01	15.59	0.46	130.0	± 9.6 %
	autoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautoreautorea	Y	4.24	66.44	15.89		130.0	
		Z	4.26	65.99	15.69		130.0	
10588- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	X	4.14	66.03	15.59	0.46	130.0	± 9.6 %
		Y	4.27	66.48	15.90		130.0	
10500		Z	4.30	66.06	15.72		130.0	
10589- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	X	4.29	67.01	16.39	0.46	130.0	± 9.6 %
		Y	4.41	67.39	16.65		130.0	
40500		Z	4.41	66.87	16.41		130.0	
10590- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	X	4.04	65.76	15.35	0.46	130.0	±9.6 %
		Y	4.17	66.20	15.67		130.0	
		Z	4.19	65.76	15.46		130.0	

10591-	IEEE 802.11n (HT Mixed, 20MHz,	X	4.45	66.46	16.22	0.46	130.0	± 9.6 %
AAB	MCS0, 90pc duty cycle)		4.50	00.00	10.11		100.0	
		Y	4.56	66.80	16.44	<u> </u>	130.0	
10592- AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	Z X	4.57 4.56	<u>66.34</u> 66.73	16.25 16.33	0.46	130.0 130.0	± 9.6 %
	Meet, sope duty cycley	Y	4.67	67.08	16.56		130.0	
		Z	4.69	66.64	16.38		130.0	
10593- AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	X	4.47	66.59	16.17	0.46	130.0	± 9.6 %
,		Y	4.59	66.95	16.42		130.0	
		Z	4.60	66.51	16.23		130.0	
10594- AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	X	4.53	66.78	16.36	0.46	130.0	±9.6 %
		Y	4.64	67.13	16.59		130.0	
40505		Z	4.66	66.69	16.40		130.0	
10595- AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)	X	4.49	66.75	16.26	0.46	130.0	± 9.6 %
		Y	4.61	67.12	16.50		130.0	
10596-	IEEE 802.11n (HT Mixed, 20MHz,	Z	4.62	66.66	16.30	0.40	130.0	
AAB	MCS5, 90pc duty cycle)	X	4.42	66.68	16.23	0.46	130.0	± 9.6 %
		Y Z	<u>4.53</u> 4.55	67.07 66.62	16.49 16.29		130.0	
10597-	IEEE 802.11n (HT Mixed, 20MHz,	X	4.35	66.54	16.29	0.46	130.0 130.0	+06%
AAB	MCS6, 90pc duty cycle)	Y	4.49	66.93	16.34	0.40	130.0	± 9.6 %
		Z	4.49	66.49	16.34		130.0	
10598- AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	X	4.38	66.81	16.37	0.46	130.0	± 9.6 %
		Y	4.49	67.18	16.61		130.0	
		Z	4.50	66.72	16.41		130.0	
10599- AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)	X	5.17	67.00	16.56	0.46	130.0	± 9.6 %
		Y	5.23	67.23	16.68		130.0	
	· · · · · · · · · · · · · · · · · · ·	Z	5.27	66.93	16.57		130.0	
10600- AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	X	5.26	67.35	16.71	0.46	130,0	±9.6 %
		Y	5.31	67.52	16.80		130.0	
40004		Z	5.40	67.37	16.76		130.0	
10601- AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	×	5.19	67.20	16.65	0.46	130.0	± 9.6 %
		Y	5.24	67.37	16.74		130.0	
10602- AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	Z	<u>5.28</u> 5.24	67.08 67.11	16.63 16.52	0.46	130.0 130.0	± 9.6 %
		Y	5.31	67.34	16.64		130.0	
		Z	5.41	67.24	16.63		130.0	
10603- AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	X	5.29	67.35	16.79	0.46	130.0	± 9.6 %
		Y	5.38	67.63	16.93		130.0	
40001		Z	5.49	67.59	16.94		130.0	
10604- AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	X	5.15	66.85	16.51	0.46	130.0	± 9.6 %
		<u> </u>	5.25	67.21	16.70		130.0	
10605-		Z	5.37	67.21	16.74		130.0	
AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	X	5.23	67.14	16.65	0.46	130.0	± 9.6 %
		Y	5.30	67.39	16.79		130.0	·
10606-	IEEE 802.11n (HT Mixed, 40MHz,	Z X	5.38 5.05	67.23	16.74	0.40	130.0	
AAB	MCS7, 90pc duty cycle)			66.67	16.26	0.46	130.0	± 9.6 %
		Y	5.11	66.89	16.39		130.0	
		Z	5.14	66.57	16.26		130.0	

10607- AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	X	4.30	65.79	15.85	0.46	130.0	± 9.6 %
		Y	4.41	66.18	16.11		130.0	
	<u></u>	z	4.41	65.65	15.87		130.0	
10608- AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	X	4.42	66.08	15.98	0.46	130.0	± 9.6 %
		Y	4.54	66.48	16.24		130.0	
		Z	4.55	65.99	16.03		130.0	
10609- AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	X	4.32	65.89	15.79	0.46	130.0	± 9.6 %
		Y	4.44	66.32	16.07		130.0	
		Z	4.44	65.81	15.84		130.0	
10610- AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	X	4.37	66.08	15.98	0.46	130.0	± 9.6 %
		Y	4.49	66.49	16.24		130.0	
		Z	4.49	65.99	16.01		130.0	
10611- AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	X	4.28	65.85	15.80	0.46	130.0	± 9.6 %
		Y	4.40	66.28	16.08		130.0	
		Z	4.41	65.78	15.85		130.0	
10612- AAB	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	X	4.26	65.94	15.82	0.46	130.0	± 9.6 %
	· · · · · · · · · · · · · · · · · · ·	Y	4.39	66.39	16.11		130.0	
		Z	4.40	65.90	15.88		130.0	
10613- AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	x	4.25	65.75	15.65	0.46	130.0	± 9.6 %
		Y	4.38	66.20	15.95		130.0	
		Z	4.40	65.73	15.73		130.0	
10614- AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	X	4.24	66.02	15.94	0.46	130.0	± 9.6 %
		Y	4.36	66.46	16.22		130.0	
		Z	4.36	65.95	15.99		130.0	
10615- AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	X	4.26	65.66	15.54	0.46	130.0	± 9.6 %
		Y	4.39	66.11	15.84		130.0	
		Z	4.40	65.60	15.61		130.0	·····
10616- AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	X	4.95	66.09	16.09	0.46	130.0	± 9.6 %
		Y	5.04	66.42	16.27		130.0	
		Z	5.06	66.06	16.12		130.0	
10617- AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	X	4.98	66.18	16.11	0.46	130.0	± 9.6 %
		Y	5.07	66.52	16.29		130.0	
*****		Z	5.13	66.25	16.19		130.0	
10618- AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	×	4.89	66.22	16.14	0.46	130.0	± 9.6 %
		Y	4.99	66.61	16.35		130.0	
		Z	5.02	66.28	16.21		130.0	
10619- AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	Х	4.94	66.16	16.04	0.46	130.0	± 9.6 %
		Y	5.01	66.45	16.21		130.0	
		Z	5.04	66.09	16.05		130.0	
10620- AAB	IEEE 802.11ac WIFI (40MHz, MCS4, 90pc duty cycle)	X	4.98	66.07	16.05	0.46	130.0	± 9.6 %
		Y	5.08	66.42	16.24		130.0	
		Z	5.12	66.10	16.11		130.0	
10621- AAB	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	X	5.00	66.21	16.25	0.46	130.0	± 9.6 %
		Y	5.09	66.55	16.43		130.0	
		Z	5.12	66.22	16.29		130.0	
10622- AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	X	4. <del>9</del> 8	66.29	16.29	0.46	130.0	± 9.6 %
		Y	5.08	66.63	16.46		130.0	
		Z	5.11	66.32	16.34		130.0	1

10623- AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	X	4.88	65.86	15.92	0.46	130.0	± 9.6 %
·····		Y	4.97	66.20	16.11		130.0	
		Z	4.99	65.82	15.95		130.0	
10624- AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	X	5.07	66.13	16.12	0.46	130.0	±9.6 %
		Y	5.16	66.45	16.30		130.0	
		Z	5.20	66.12	16.17		130.0	
10625- AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	X	5.18	66.36	16.31	0.46	130.0	± 9.6 %
		Y	5.24	66.57	16.42		130.0	
10626- AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	Z X	5.32 5.30	66.38 66.10	16.36 16.05	0.46	130.0 130.0	± 9.6 %
		Y	5.38	66.44	16.22		130.0	
		Z	5.40	66.12	16.09		130.0	
10627- AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	X	5.53	66.77	16.36	0.46	130.0	± 9.6 %
		Y	5.59	67.01	16.48		130.0	
		Z	5.65	66.81	16.41		130.0	
10628- AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	X	5.29	66.06	15.93	0.46	130.0	± 9.6 %
		Y	5.37	66.41	16.10		130.0	
		Z	5.40	66.11	15.98		130.0	
10629- AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	X	5.43	66.42	16.11	0.46	130.0	± 9.6 %
		Y	5.47	66.61	16.20		130.0	
		Z	5.50	66.31	16.08		130.0	
10630- AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	X	5.59	67.09	16.45	0.46	130.0	± 9.6 %
		Y	5.66	67.38	16.59		130.0	
		Z	5.82	67.46	16.66		130.0	
10631- AAB	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	X	5.58	67.18	16.70	0.46	130.0	± 9.6 %
		Y	5.66	67.50	16.84		130.0	
40000		Z	5.74	67.33	16.79		130.0	
10632- AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	X	5.57	67.09	16.67	0.46	130.0	±9.6 %
		Y	5.60	67.22	16.72		130.0	
40000		Z	5.64	66.96	16.63		130.0	[
10633- AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	X	5.30	66.12	16.00	0.46	130.0	± 9.6 %
		Y	5.39	66.49	16.18	ļ	130.0	
10634- AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	X	<u>5.45</u> 5.34	<u>66.28</u> 66.35	<u>16.11</u> 16.17	0.46	130.0 130.0	±9.6 %
		Y	5.43	66.70	16.34		130.0	
		Z	5.44	66.35	16.20	1	130.0	
10635- AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	X	5.19	65.54	15.47	0.46	130.0	± 9.6 %
		Y	5.28	65.93	15.68		130.0	
		Z	5.31	65.62	15.55		130.0	
10636- AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	X	5.75	66.48	16.16	0.46	130.0	± 9.6 %
		Y	5.81	66.78	16.30		130.0	
40007		Z	5.84	66.50	16.20		130.0	
10637- AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	X	5.86	66.76	16.29	0.46	130.0	± 9.6 %
		Y	5.91	67.05	16.42		130.0	
40000		Z	5.98	66.87	16.37	L	130.0	
10638- AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	Х	5.90	66.89	16.33	0.46	130.0	± 9.6 %
		Y	5.95	67.16	16.45		130.0	
		Z	5.98	66.88	16.35		130.0	1

10639-	IEEE 802.11ac WiFI (160MHz, MCS3,	X	5.83	66.70	16.28	0.46	130.0	±9.6 %
AAC	90pc duty cycle)				10.10			
		Y Z	5.90 5.94	67.02	16.42		130.0	
10640-	IEEE 802.11ac WiFi (160MHz, MCS4,	$\frac{2}{x}$	<u> </u>	66.76 66.49	16.33 16.12	0.46	130.0 130.0	± 9.6 %
AAC	90pc duty cycle)					0,40		I9.0 %
		Y	5.85	66.88	16.30		130.0	
10014		Z	5.92	66.69	16.24	<u> </u>	130.0	
10641- AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	X	5.90	66.70	16.24	0.46	130.0	± 9.6 %
		Y	5.96	66.97	16.37		130.0	
10642-		ZX	6.02	66.77	16.30	0.40	130.0	
AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)		5.91	66.85	16.49	0.46	130.0	± 9.6 %
	······································	Y	5.98	67.18	16.64		130.0	
40040		Z	6.03	66.94	16.56		130.0	
10643- AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	X	5.75	66.52	16.20	0.46	130.0	± 9.6 %
		Y	5.83	66.86	16.37		130.0	
		Z	5.88	66.65	16.30		130.0	
10644- AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	X	5.80	66.66	16.30	0.46	130.0	±9.6 %
		Y	5.88	67.03	16.47		130.0	
		Z	5.94	66.85	16.42		130.0	
10645- AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	X	5.94	66.78	16.33	0.46	130.0	± 9.6 %
		Y	6.00	67.06	16.46		130.0	
		Z	6.15	67.15	16.54		130.0	
10646- AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	X	5.05	83.78	28.65	9.30	60.0	± 9.6 %
		Y	6.98	93.27	32,89		60.0	
		Z	7.15	91.85	32.42		60.0	
10647- AAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	X	4.54	81.82	27.99	9.30	60.0	±9.6 %
		Y	5.99	90.07	31.84		60.0	
		Z	6.33	89.46	31.67		60.0	
10648- AAA	CDMA2000 (1x Advanced)	X	0.37	60.00	6,05	0.00	150.0	± 9.6 %
		Y	0.48	61.63	8.16		150.0	
		Z	0.43	60.11	6.90		150.0	
10652- AAC	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	2.93	65.21	15.11	2.23	80.0	± 9.6 %
		Y	3.20	66.58	16.05		80.0	
		Z	3.10	65.44	15.57		80.0	
10653- AAC	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	X	3.55	64.93	15.73	2.23	80.0	± 9.6 %
		Y	3.74	65.80	16.31		80.0	
		Ż	3.68	65.02	15.99		80.0	
10654- AAC	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	X	3.60	64.60	15.83	2.23	80.0	± 9.6 %
	······································	Y	3.76	65.39	16.34		80.0	
		Z	3.70	64.69	16.04		80.0	
10655- AAD	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	3.69	64.52	15.89	2.23	80.0	± 9.6 %
		Y	3.83	65.30	16.38		80.0	
		Z	3.78	64.64	16.09		80.0	<u> </u>
10658- AAA	Pulse Waveform (200Hz, 10%)	X	3.48	68.63	11.85	10.00	50.0	± 9.6 %
		Y	5.65	74.45	13.80		50,0	
		Z	7.21	77.53	15.77		50.0	1
10659-	Pulse Waveform (200Hz, 20%)	X	2.03	66.95	10.03	6.99	60.0	± 9.6 %
		1 1		ŧ		1		1
AAA		Y	100.00	101.12	19.79		60.0	

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10660- AAA	Pulse Waveform (200Hz, 40%)	X	0.68	62.61	6.79	3.98	80.0	± 9.6 %
		Y	100.00	101.16	18.64		80.0	
		Z	100.00	99.78	18.10		80.0	
10661- AAA	Pulse Waveform (200Hz, 60%)	X	0.25	60.00	4.25	2.22	100.0	± 9.6 %
		Y	100.00	102.31	18.13		100.0	
		Z	0.28	60.39	4.93		100.0	
10662- AAA	Pulse Waveform (200Hz, 80%)	X	6.06	60.21	1.38	0.97	120.0	± 9.6 %
		Y	100.00	96.37	14.68		120.0	
		Z	9.95	60.38	1.42		120.0	

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

# APPENDIX D: SAR TISSUE SPECIFICATIONS

Measurement Procedure for Tissue verification:

- 1) The network analyzer and probe system was configured and calibrated.
- 2) The probe was immersed in the tissue. The tissue was placed in a nonmetallic container.
- Trapped air bubbles beneath the flange were minimized by placing the probe at a slight angle. 3) The complex admittance with respect to the probe aperture was measured
- The complex relative permittivity ε' can be calculated from the below equation (Pournaropoulos and Misra):

$$Y = \frac{j2\omega\varepsilon_{r}\varepsilon_{0}}{\left[\ln(b/a)\right]^{2}} \int_{a}^{b} \int_{a}^{b} \int_{0}^{\pi} \cos\phi' \frac{\exp\left[-j\omega r(\mu_{0}\varepsilon_{r}'\varepsilon_{0})^{1/2}\right]}{r} d\phi' d\rho' d\rho$$

where Y is the admittance of the probe in contact with the sample, the primed and unprimed coordinates refer to source and observation points, respectively,  $r^2 = \rho^2 + \rho'^2 - 2\rho\rho' \cos \phi'$ ,  $\omega$  is the angular frequency, and  $j = \sqrt{-1}$ .

		Com	ipositio	n ot the	e lissue	e Equiva	alent Ma	atter				
Frequency (MHz)	750	750	835	835	1750	1750	1900	1900	2450	2450	5200 - 5800	5200 - 5800
Tissue	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Ingredients (% by weight)												
Bactericide			0.1	0.1								
DGBE			47 31 44.92 29.44	29.44		26.7						
HEC	S		1	1							See page 5 Se	
NaCl	See page 2-3	See page 2	1.45	0.94	0.4	0.2	0.18	0.39	See page 4	0.1		See page 6
Sucrose			57	44.9								
Polysorbate (Tween) 80												
Water			40.45	53.06	52.6	68.8	54.9	70.17		73.2		

Table D-I Composition of the Tissue Equivalent Matter

	FCC ID: ZNFQ850QM		SAR EVALUATION REPORT	LG	Approved by: Quality Manager
	Test Dates:	DUT Type:			APPENDIX D:
	12/07/18 - 01/21/19	Portable Handset			Page 1 of 6
© 201	9 PCTEST Engineering Laboratory,	Inc.			REV 21.2 M 12/05/2018

#### 2 Composition / Information on ingredients

The Item is composed of	the following ingredients:
H <sub>2</sub> O	Water, 35 – 58%
Sucrose	Sugar, white, refined, 40 - 60%
NaCl	Sodium Chloride, 0 – 6%
Hydroxyethyl-cellulose	Medium Viscosity (CAS# 9004-62-0), <0.3%
Preventol-D7	Preservative: aqueous preparation, (CAS# 55965-84-9), containing
	5-chloro-2-methyl-3(2H)-isothiazolone and 2-methyyl-3(2H)-isothiazolone
	0.1 - 0.7%
	Relevant for safety; Refer to the respective Safety Data Sheet*.

### Figure D-1 Composition of 750 MHz Head and Body Tissue Equivalent Matter

**Note:** 750MHz liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

Zeughau Phone + Info@sp	41 44	245 97	00, Fax	< +41 ·	44 245											
Meas	urem	ent C	ertif	icate	/ Ma	terial	Test									
Item Na	ame							SL750V2)								
Produc	t No.				5 AA (I	Batch:	170608-1)									
Manufa	acturer		SPEA	G												
Measu																_
TSL die	electric	parar	neters	meas	sured u	using ca	alibrated D/	AK probe.	_			_				
Setup	Valida	tion														
			ere wi	thin ±	2.5%	lowards	the target	values of M	ethan	ol.						_
Target	Para	neters	E										_	_		_
Target	param	neters	as def	ined in	n the II	EEE 15	28 and IEC	C 62209 com	pliand	e stan	dards.		_			_
Test C		on												_		_
Ambier				onmer	nt temp	peratur	(22 ± 3)°C	and humidit	y < 70	%.						
TSL Te	empera	atura	22°C													
		aturo														
Test D		ature	20-Ju	n-17												
	ate	ature		n-17										_		
Test D	ate		20-Ju	n-17												_
Test D	ate tor		20-Ju CL	n-17												_
Test D Operat	tor onal Ir		20-Ju CL		3											
Test D Operat	tor onal Ir ensity	nforma	20-Ju CL ation 1.212	g/cm												_
Test D Operat	tor onal Ir ensity	nforma	20-Ju CL 1.212 3.006	g/cm kJ/(k	g*K)											
Test D Operat Addition TSL D TSL H	onal Ir ensity eat-ca	pacity	20-Ju CL 1.212 3.006	g/cm kJ/(k	g*K) t		farget [%]	10.0 -								
Test D Operat Additi TSL D TSL H	onal Ir ensity eat-ca Measu	nforma pacity red e"	20-Ju CL 1.212 3.006	g/cm kJ/(k Targe eps	g*K) t sigma	∆-eps	∆-sigma	10.0								
Test D Operat Additi TSL D TSL H f(MHz) 600	ate tor onal Ir ensity eat-ca Measu e' 57.3	nforma pacity red e" 25.02	20-Ju CL 1.212 3.006 sigma 0.84	g/cm kJ/(k Targe eps 56.1	g*K) t sigma 0.95	∆-eps 2.2	∆-sigma -12.2	8 7.5 -								
Test D Operat Additi TSL D TSL H	onal Ir ensity eat-ca Measu	nforma pacity red e" 25.02 24.67	20-Ju CL 1.212 3.006 sigma 0.84 0.86	g/cm kJ/(k Targe eps 56.1 56.0	g*K) t sigma 0.95 0.95	Δ-eps 2.2 1.9	Δ-sigma -12.2 -10.1	8 7.5 -								
Test D Operat Additi TSL D TSL H f(MHz) 600	ate tor onal Ir ensity eat-ca Measu e' 57.3	nforma pacity red e" 25.02	20-Ju CL 1.212 3.006 sigma 0.84	g/cm kJ/(k Targe eps 56.1 56.0 55.9	g*K) t sigma 0.95 0.95 0.96	<u>Δ-eps</u> 2.2 1.9 1.6	Δ-sigma -12.2 -10.1 -8.0	% 7.5 - Åin 5.0 - 2.5 - 0.0 -								
Test D Operat Additi TSL D TSL H f(MHz) 600 625	onal Ir ensity eat-ca Measu e' 57.3 57.1	red e" 25.02 24.67 24.32 24.02	20-Ju CL 1.212 3.006 sigma 0.84 0.86 0.88 0.90	g/cm kJ/(k Targe eps 56.1 56.0 55.9 55.8	g*K) t sigma 0.95 0.95 0.96 0.96	<u>Δ-eps</u> 2.2 1.9 1.6 1.3	Δ-sigma -12.2 -10.1 -8.0 -5.8	% 7.5 - Ajn 11 2.5 - 0.0 -			•					
Test D Operat Additi TSL D TSL H f [MHz] 600 625 650	ate tor onal lr ensity eat-ca Measu e' 57.3 57.1 56.8	red 25.02 24.67 24.32 24.02 23.71	20-Ju CL 1.212 3.006 sigma 0.84 0.86 0.88 0.90 0.92	g/cm kJ/(k eps 56.1 56.0 55.9 55.8 55.7	g*K) sigma 0.95 0.95 0.96 0.96	<u>Δ-eps</u> 2.2 1.9 1.6 1.3 1.1	Δ-sigma -12.2 -10.1 -8.0 -5.8 -3.8	* 7.5 - Åintitute 2.5 - d2.5 - -39 -5.0								
Test D Operat Additi TSL D TSL H ([MH2] 600 625 650 675 700 725	ate tor ensity eat-ca <u>e</u> * 57.3 57.1 56.8 56.6 56.3 56.1	nforma pacity rred 26.02 24.67 24.32 24.02 23.71 23.48	20-Ju CL 1.212 3.006 sigma 0.84 0.86 0.88 0.90 0.92 0.95	g/cm kJ/(k Targe eps 56.1 56.0 55.9 55.8 55.7 55.6	g*K) sigma 0.95 0.96 0.96 0.96 0.96	Δ-eps 2.2 1.9 1.6 1.3 1.1 0.8	Δ-sigma -12.2 -10.1 -8.0 -5.8 -3.8 -1.5	× 7.5 - Artitution 2.5 - 0.0 - - 2.5 - 								
Test D Operat Additi TSL D TSL H (MHz) 600 625 650 675 700	ate tor ensity eat-ca <u>e</u> 57.3 57.1 56.8 56.6 56.3	red 25.02 24.67 24.32 24.02 23.71	20-Ju CL 1.212 3.006 sigma 0.84 0.86 0.88 0.90 0.92	g/cm kJ/(k 56.1 56.0 55.9 55.8 55.7 55.6 <b>55.5</b>	g*K) t sigma 0.95 0.96 0.96 0.96 0.96 0.96	Δ-eps 2.2 1.9 1.6 1.3 1.1 0.8 0.6	Δ-sigma -12.2 -10.1 -8.0 -5.8 -3.8 -1.5 0.7	* 7.5 - Åintitute 2.5 - d2.5 - -39 -5.0	0 65	0 700	750	800	850	900	950	100
Test D Operat Additi TSL D TSL H ([MH2] 600 625 650 675 700 725	ate tor ensity eat-ca <u>e</u> * 57.3 57.1 56.8 56.6 56.3 56.1	nforma pacity rred 26.02 24.67 24.32 24.02 23.71 23.48	20-Ju CL 1.212 3.006 sigma 0.84 0.86 0.88 0.90 0.92 0.95	g/cm kJ/(k Targe eps 56.1 56.0 55.9 55.8 55.7 55.6 <b>55.5</b> 55.4	g*K) t sigma 0.95 0.95 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.97	Δ-eps 2.2 1.9 1.6 1.3 1.1 0.8 0.6 0.3	∆-sigma -12.2 -10.1 -8.0 -5.8 -3.8 -1.5 0.7 2.9	% 7.5 41,00 4,00 4,00 -2.5 -00 -7.5 -10.0	0 65	0 700		800 guency l		900	950	100
Test D Operat Additi TSL D TSL H ([MH2] 600 625 650 675 700 725 750	ate tor ensity eat-ca 6' 57.3 57.1 56.8 56.6 56.3 56.1 55.9	red e" 26.02 24.67 24.32 24.02 23.71 23.48 23.25	20-Ju CL 1.212 3.006 sigma 0.84 0.86 0.88 0.90 0.92 0.95 0.97	g/cm kJ/(k 56.1 56.0 55.9 55.8 55.7 55.6 <b>55.5</b>	g*K) t sigma 0.95 0.96 0.96 0.96 0.96 0.96	Δ-eps 2.2 1.9 1.6 1.3 1.1 0.8 0.6	Δ-sigma -12.2 -10.1 -8.0 -5.8 -3.8 -1.5 0.7	% 7.5 41,00 4,00 4,00 -2.5 -00 -7.5 -10.0	0 65	0 700				900	950	100
Test D Operat Additi TSL D TSL H ([MHz] 600 625 650 625 650 675 700 725 <b>750</b>	ate tor onal lr ensity eat-ca 67.3 57.1 56.8 56.6 56.3 56.1 55.9 55.6	red 26.02 24.67 24.32 24.02 23.71 23.48 23.25 23.04	20-Ju CL 1.212 3.006 sigma 0.84 0.86 0.88 0.90 0.92 0.95 0.97 0.99	g/cm kJ/(k Targe eps 56.1 56.0 55.9 55.8 55.7 55.6 <b>55.5</b> 55.4	g*K) t sigma 0.95 0.95 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.97	Δ-eps 2.2 1.9 1.6 1.3 1.1 0.8 0.6 0.3	∆-sigma -12.2 -10.1 -8.0 -5.8 -3.8 -1.5 0.7 2.9	% 7.5 41,00 4,00 4,00 -2.5 -00 -7.5 -10.0	0 65	0 700				900	950	100
Test D Operat Additi TSL D TSL H ((MH2) 600 625 650 675 700 725 750 775 800	ate tor onal lr ensity eat-ca 6 57.3 57.1 56.8 56.6 56.3 56.1 55.9 55.6 55.4	red 26.02 24.67 24.32 24.02 23.71 23.48 23.25 23.04 22.82	20-Ju CL 1.212 3.006 sigma 0.84 0.86 0.88 0.90 0.92 0.95 0.97 0.99 1.02	g/cm kJ/(k eps 56.1 56.0 55.9 55.8 55.7 55.6 <b>55.5</b> 55.4 55.4 55.3	g*K) sigma 0.95 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.97 0.97	Δ-eps 2.2 1.9 1.6 1.3 1.1 0.8 0.6 0.3 0.1	∆-sigma   -12.2   -10.1   -8.0   -5.8   -3.8   -1.5   0.7   2.9   5.0	2,5 2,5 4,2,5 4,2,5 -2,5 -5,0 -7,5 -10,0 60	0 65	0 700				900	950	100
Test D Operat TSL D TSL H (MH2) 600 625 650 675 700 725 750 775 800 825	ate tor ensity eat-ca for for for for for for for for for for	red e" 26.02 24.67 24.32 24.02 23.71 23.48 23.25 23.04 22.82 22.65	20-Ju CL 1.212 3.006 sigma 0.84 0.86 0.88 0.90 0.92 0.95 0.97 0.99 1.02 1.04	g/cm kJ/(k Targe eps 56.1 55.9 55.8 55.7 55.6 55.7 55.6 55.4 55.3 55.2	g*K) sigma 0.95 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.97 0.97 0.98	Δ-eps 2.2 1.9 1.6 1.3 1.1 0.8 0.6 0.3 0.1 -0.1	∆-sigma   -12.2   -10.1   -8.0   -5.8   -3.8   -1.5   0.7   2.9   5.0   6.3	₹ 7.5 5.0 10.0 ₹ 5.0 5.0 10.0 10.0	0 65	0 700				900	950	100
Test D Operat Additi TSL D TSL H (MHz) 600 625 650 675 700 725 750 775 800 825 838	Measure   ensity   eat-ca   Measure   e*   57.3   57.1   56.8   56.6   56.3   56.1   55.9   55.4   55.2   55.1	nforma pacity red 26.02 24.67 24.32 24.02 23.71 23.48 23.25 23.04 22.25 22.56	20-Ju CL 3.006 sigma 0.84 0.86 0.90 0.92 0.95 0.97 0.99 1.02 1.04 1.05	g/cm kJ/(k Targe eps 56.1 55.9 55.8 55.7 55.6 55.7 55.6 55.4 55.3 55.2 55.2	g*K) sigma 0.95 0.96 0.96 0.96 0.96 0.96 0.96 0.97 0.97 0.98 0.98	Δ-eps 2.2 1.9 1.6 1.3 1.1 0.8 0.6 0.3 0.1 -0.1 -0.3	∆-sigma   -12.2   -10.1   -8.0   -5.8   -3.8   -1.5   0.7   2.9   5.0   6.3   6.9	* 7.5 * 7.5 * 5.0 * 2.5 * 0.0 * 2.5 * 0.0 * 7.5 * 10.0 * 7.5 * 10.0 * 7.5	0 65	0 700				900	950	100
Test D Operat Addition TSL D TSL H (MHz) 600 625 650 675 700 725 800 825 838 8350 875	ate tor onal li ensity eat-ca e' 57.3 57.1 56.8 56.4 56.3 56.1 55.9 55.6 55.4 55.2 55.1 54.9 54.9	red 26.02 24.67 24.32 23.71 23.48 23.04 22.82 22.82 22.82 22.85 22.56 22.247 22.34	20-Ju CL 3.006 sigma 0.84 0.86 0.88 0.90 0.92 0.95 0.97 0.99 1.02 1.02 1.04 1.05 1.06 1.09	g/cm kJ/(k eps 56.1 55.9 55.8 55.7 55.8 55.7 55.5 55.4 55.3 55.4 55.3 55.2 55.2 55.2	g*K) sigma 0.95 0.96 0.96 0.96 0.96 0.96 0.96 0.97 0.97 0.98 0.98 0.99	Δ-eps 2.2 1.9 1.6 1.3 1.1 0.8 0.6 0.3 0.1 -0.1 -0.3 -0.4	Δ-sigma   -12.2   -10.1   -8.0   -5.8   -3.8   -1.5   0.7   2.9   5.0   6.3   6.9   7.5	* 7.5 * 7.5 * 5.0 * 2.5 * 0.0 * 2.5 * 0.0 * 7.5 * 10.0 * 7.5 * 10.0 * 7.5	0 65	0 700				900	950	100
Test D Operat Additit TSL D TSL H (MHz) 600 625 650 675 700 725 750 800 825 838 850 825 838 850 900	ate tor ensity eat-ca e' 57.3 57.1 56.8 56.6 56.3 56.1 55.9 55.6 55.4 55.9 55.1 54.9 54.7 54.9	red e" 26.02 24.67 24.32 24.02 24.32 23.71 23.71 23.48 23.25 23.04 22.82 22.56 22.56 22.47 22.21	20-Ju cL 1.212 3.006 sigma 0.84 0.86 0.90 0.92 0.95 0.97 0.99 1.02 1.04 1.05 1.06 1.09 1.11	g/cm kJ/(k 56.1 55.9 55.9 55.8 55.7 55.6 55.4 55.2 55.2 55.2 55.2 55.2 55.2 55.2	g*K) sigma 0.95 0.96 0.96 0.96 0.96 0.96 0.96 0.97 0.97 0.98 0.98 0.98 0.99 1.02 1.05	∆-eps   2.2   1.9   1.6   1.3   1.1   0.8   0.6   0.3   0.1   -0.1   -0.3   -0.4   -0.7   -0.9	∆-sigma   -12.2   -10.1   -8.0   -5.8   -3.8   -1.5   0.7   2.9   5.0   6.3   6.9   7.5   6.7   5.9	* 7.5 * 7.5 * 5.0 * 2.5 * 0.0 * 2.5 * 0.0 * 7.5 * 10.0 * 7.5 * 10.0 * 7.5	0 65	0 700				900	950	100
Test D Operat Additi, TSL D TSL H (IMHz) 600 625 650 625 650 625 650 770 725 775 800 825 838 850 825 838	ate tor onal li ensity eat-ca e <sup>e</sup> 57.3 56.8 56.6 56.3 56.6 55.4 55.9 55.4 55.2 55.4 55.2 55.4 55.2 55.4 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 55.5 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.7 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.7 55.6 55.6 55.6 55.7 55.6 55.6 55.6 55.6 55.7 55.6 55.7 55.6 55.7 55.6 55.7 55.6 55.7 55.7 55.6 55.7 55.7 55.7 55.7 55.7 55.7 55.7 55.7 55.7 55.7 55.7 55.7 55.7 55.7 54.7 54.5 54.7 54.5 54.3 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 55.6 55.6 55.7 54.5 55.7 54.5 55.7 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5	nforma pacity 26.02 24.67 24.32 24.32 24.32 23.25 23.25 22.65 22.65 22.47 22.34 22.21 22.24 22.21 22.28	20-Ju cL 1.212 3.006 sigma 0.84 0.86 0.90 0.92 0.95 0.97 0.99 1.02 1.04 1.05 1.06 1.09 1.11 1.14	g/cm kJ/(k 56.0 55.9 55.8 55.7 55.6 55.5 55.4 55.2 55.2 55.2 55.2 55.2 55.2	g*K) sigma 0.95 0.96 0.96 0.96 0.96 0.96 0.96 0.97 0.97 0.98 0.98 0.99 1.02 1.05 1.06	∆-eps   2.2   1.9   1.6   1.3   1.1   0.8   0.6   0.3   0.1   -0.1   -0.3   -0.4   -0.7   -0.9   -1.3	<u>A-sigma</u> -12.2 -10.1 -8.0 -5.8 -3.8 -1.5 0.7 2.9 6.3 6.3 6.9 7.5 6.7 5.9 6.9 6.9	* 7.5 * 7.5 * 5.0 * 2.5 * 0.0 * 2.5 * 0.0 * 7.5 * 10.0 * 7.5 * 10.0 * 7.5	0 65	0 700				900	950	100
Test D Operat Additii TSL D TSL H (MHz) 605 655 650 675 725 725 725 725 725 725 725 725 725 7	ate tor onal li ensity eat-ca fr.a fr.a fr.a fr.a fr.a fr.a fr.a fr.	red 26.02 24.67 24.32 24.32 24.32 24.32 23.34 23.34 23.34 22.82 22.85 22.56 22.27 22.34 22.28 22.28 22.29 22.28 22.29 22.29 22.20 22.20 22.20 22.20 22.09 21.95	20-Ju ation 1.212 3.006 sigma 0.84 0.86 0.90 0.92 0.95 0.97 0.99 0.99 1.02 1.04 1.05 1.06 1.09 1.11 1.14 1.16	g/cm/ kJ/(k/ 56.0 55.9 55.8 55.7 55.6 55.5 55.2 55.2 55.2 55.2 55.2 55.2	g*K) sigma 0.95 0.96 0.96 0.96 0.96 0.96 0.96 0.97 0.97 0.97 0.98 0.99 1.02 1.05 1.06 1.08	∆-eps   2.2   1.9   1.6   1.3   1.1   0.8   0.6   0.3   0.1   -0.3   -0.4   -0.7   -0.9   -1.3   -1.6	A-sigma -12.2 -10.1 -8.0 -5.8 -3.8 -1.5 0.7 2.9 5.0 6.3 6.9 7.5 6.7 5.9 6.9 7.9	* 7.5 * 7.5 * 0.0 -	0 65	0 700				900	950	100
Test D Operat Additi, TSL D TSL H (IMHz) 600 625 650 625 650 625 650 770 725 775 800 825 838 850 825 838	ate tor onal li ensity eat-ca e <sup>e</sup> 57.3 56.8 56.6 56.3 56.6 55.4 55.9 55.4 55.2 55.4 55.2 55.4 55.2 55.4 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 55.5 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.7 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.6 55.7 55.6 55.6 55.6 55.7 55.6 55.6 55.6 55.6 55.7 55.6 55.7 55.6 55.7 55.6 55.7 55.6 55.7 55.7 55.6 55.7 55.7 55.7 55.7 55.7 55.7 55.7 55.7 55.7 55.7 55.7 55.7 55.7 55.7 54.7 54.5 54.7 54.5 54.3 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 55.6 55.6 55.7 54.5 55.7 54.5 55.7 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5 54.5	nforma pacity 26.02 24.67 24.32 24.32 24.32 23.25 23.25 22.65 22.65 22.47 22.34 22.21 22.24 22.21 22.28	20-Ju cL 1.212 3.006 sigma 0.84 0.86 0.90 0.92 0.95 0.97 0.99 1.02 1.04 1.05 1.06 1.09 1.11 1.14	g/cm kJ/(k 56.0 55.9 55.8 55.7 55.6 55.5 55.4 55.2 55.2 55.2 55.2 55.2 55.2	g*K) sigma 0.95 0.96 0.96 0.96 0.96 0.96 0.96 0.97 0.97 0.98 0.98 0.99 1.02 1.05 1.06	∆-eps   2.2   1.9   1.6   1.3   1.1   0.8   0.6   0.3   0.1   -0.1   -0.3   -0.4   -0.7   -0.9   -1.3	<u>A-sigma</u> -12.2 -10.1 -8.0 -5.8 -3.8 -1.5 0.7 2.9 6.3 6.3 6.9 7.5 6.7 5.9 6.9 6.9	* 7.5 * 7.5 * 5.0 * 2.5 * 0.0 * 2.5 * 0.0 * 7.5 * 10.0 * 7.5 * 10.0 * 7.5	0 65	0 700				900	950	100

Figure D-2 750MHz Body Tissue Equivalent Matter

	FCC ID: ZNFQ850QM		SAR EVALUATION REPORT	🕒 LG	Approved by: Quality Manager
	Test Dates:	DUT Type:			APPENDIX D:
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Schmid & Partner Engineering AG	S	p	e	a	q
0.1. 110 D	2 C	10000	Charles Const.	ALC: NOT THE REPORT OF	

Zeughausstrasse 43, 8004 Zurich, Switzerland Phone +41 44 245 9700, Fax +41 44 245 9779 info@speag.com, http://www.speag.com

#### Measurement Certificate / Material Test

Item Name	Head Tissue Simulating Liquid (HSL750V2)	
Product No.	SL AAH 075 AA (Batch: 170612-4)	
Manufacturer	SPEAG	

Measurement Method TSL dielectric parameters measured using calibrated DAK probe.

-

Target Parameters Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards.

#### **Test Condition**

Ambient	Environment temperatur (22 ± 3)°C and humidity < 70%.
TSL Temperature	22°C
Test Date	20-Jun-17
Operator	CL

#### Additional Information

TSL Density 1.284 g/cm<sup>3</sup> TSL Heat-capacity 2.701 kJ/(kg\*K)

	Measu	ured		Targe	t	Diff.to T	arget [%]
f [MHz]	e'	e"	sigma	eps	sigma	∆-eps	∆-sigma
600	45.6	22.97	0.77	42.7	0.88	6.7	-13.1
625	45.2	22.73	0.79	42.6	0.88	6.2	-10.6
650	44.9	22.49	0.81	42.5	0.89	5.6	-8.2
675	44.5	22.27	0.84	42.3	0.89	5.1	-5.8
700	44.2	22.05	0.86	42.2	0.89	4.6	-3.5
725	43.8	21.88	0.88	42.1	0.89	4.2	-1.0
750	43.5	21.72	0.91	41.9	0.89	3.8	1.4
775	43.2	21.55	0.93	41.8	0.90	3.4	3.7
800	42.9	21.38	0.95	41.7	0.90	2.9	6.0
825	42.6	21.24	0.97	41.6	0.91	2.4	7.5
838	42.5	21.17	0.99	41.5	0.91	2.2	8.2
850	42.3	21.09	1.00	41.5	0.92	2.0	8.9
875	42.0	20.98	1.02	41.5	0.94	1.2	8.3
900	41.7	20.87	1.05	41.5	0.97	0.5	7.7
925	41.5	20.76	1.07	41.5	0.98	0.0	8.7
950	41.2	20.64	1.09	41.4	0.99	-0.6	9.7
975	40.9	20.55	1.11	41.4	1.00	-1.1	10.9
1000	40.6	20.46	1.14	41.3	1.01	-1.7	12.1

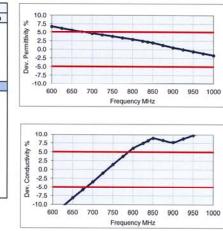


Figure D-3 750MHz Head Tissue Equivalent Matter

	FCC ID: ZNFQ850QM		SAR EVALUATION REPORT	🕒 LG	Approved by: Quality Manager
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3 Composition / Infor The Item is composed of the		
Water	50 - 73 %	
Non-ionic detergents	25 - 50 %	polyoxyethylenesorbitan monolaurate
NaCl	0 - 2%	
Preservative	0.05 - 0.1%	6 Preventol-D7
Safety relevant ingredients:		
CAS-No. 55965-84-9	< 0.1 %	aqueous preparation, containing 5-chloro-2-methyl-3(2H)- isothiazolone and 2-methyyl-3(2H)-isothiazolone
CAS-No. 9005-64-5	<50 %	polyoxyethylenesorbitan monolaurate
According to international gumarked by symbols.	uidelines, the pr	oduct is not a dangerous mixture and therefore not required to be

## Figure D-4 Composition of 2.4 GHz Head Tissue Equivalent Matter

**Note:** 2.4 GHz head liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

Phone	+41 44	245 9	8004 2 700, Fa p://ww	ix +41	44 245	59779		<u>speag</u>
Meas	urem	nent (	Certif	ficate	e / Ma	aterial	Test	
tem N Produc Manufi				AH 19			Liquid (H 170619-1)	IBBL 1900-3800V3)
	remer							
			meters	s meas	sured	using ci	alibrated D	AK probe.
	Validation res		vere wi	ithin ±	2.5%	towards	the target	t values of Methanol.
	Para							
				lined in	n the I	EEE 15	28 and IEC	C 62209 compliance standards.
Test C	onditi	on						
Ambie			Envin 22°C	onmer	nt temp	peratur	(22 ± 3)°C	and humidity < 70%.
Test D	ate	ature	20-Ju	in-17				
Opera	or	_	CL					
	onal Ir	nform				_		
TSL D		pacity	1.054	g/cm kJ/(kg	2"K)			
(MHz)	Measu e'			Target			arget [%]	10.0
1900	e 41.8	12.2	sigma 1.3	eps 40.0	sigma 1.4	Δ-ерв 4.5	∆-sigma -8.2	gt 7.5
1950	41.6	12.3	1.3	40.0	1.4	4.0	-4.6	
2000 2050	41.4	12.4	1.4	40.0	1.4	3.6	-1.3	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0
2100	41.1	12.7	1.5	39.8	1,5	3.1	-0.6	G
2150	40.9	12.8	1.5	39.7 39.6	1.5	2.9	-0.2	5.0
2250	40.6	13.0	1.6	39.6	1.6	2.5	0.5	-7.5
2300 2350	40.4	13.2	1.7	39.5 39.4	1.7	2.3	1.1	1900 2100 2300 2500 2700 2900 3100 3300 3500 3700 3900
2400	40.0	13.4	1.8	39.3	1.8	1.8	2.1	Frequency MHz
2450	39.8	13.5	1.8	39.2	1.8	1.6	2.6	
2500 2550	39.7 39.5	13.7 13.7	1.9	39.1 39.1	1.9 1.9	1.3	2.6 2.2	
2600	39.3	13.9	2.0	39.0	2.0	0.8	2.5	10.0
2650 2700	39.1 39.0	14.0 14.2	2.1	38.9 38.9	2.0	0.5	2.6 2.7	2
2750	38.7	14,3	22	38.8	2.1	-0.2	2.6	5.0 2.5 0.0 2.5 2.5
2800 2850	38.6 38.4	14.4 14.5	22	38.8 38.7	22	-0.4	2.5 2.6	S -25
2900	38.2	14.6	23	38.6	23	-1.0	2.6	š -5.0
2950 3000	38.1 37.9	14.7	24	38.6	23	-1.3	2.6	-7.5
3000	37.9	14.8	2.5	38.5	2.5	-1.7	2.6	1900 2100 2300 2500 2700 2900 3100 3300 3500 3700 3900
3100 3150	37.5	14.9	2.6	38.4	25	-2.3	2.8	Frequency MHz
3150 3200	37.3	15.0	2.6	38.3	2.6	-2.6	2.9	
3250	37.0	15.1	2.7	38.2	2.7	-3.3	3.0	
3300	36.8	15.2	2.8	38.2	2.7	-3.6	3.1	
3400	36.4	15.3	2.9	38.0	2.8	-4.2	3.3	
3450	36.3	15.4	3.0	38.0	2.9	-4.5	3.4	
3500	36.0	15.5	3.0	37.9	2.9	-4.8	3.5	
3600	35.8	15.6	3.1	37.8	3.0	-5.3	3.8	
3650	35.7	15.7	3.2	37.8	3.1	-5.6	3.7	
	35.6	15.7	32	37.7	9.4	.5.8	20	
3700 3750	35.5 35.4	15.7 15.8	3.2	37.7	3.1 3.2	-5.8 -6.1	3.9	

Figure D-5 2.4 GHz Head Tissue Equivalent Matter

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#### 2 Composition / Information on ingredients

The Item is composed of the following ingredients: Water 50 - 65%Mineral oil 10 - 30%Emulsifiers 8 - 25%Sodium salt 0 - 1.5%Figure D-6

### Composition of 5 GHz Head Tissue Equivalent Matter

**Note:** 5 GHz head liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

Schmig	t & Par	tner Er	nginee	ring AC	3			5	5	p	е	а	g	
Zeugha Phone info@s	+41 44	4 245 9	700, F	ax +41	44 24	5 9779								
Meas	suren	nent	Certi	ificat	e/M	aterial	Test							
Item N Produc							Liquid (	HBBL3500-	800	V5)				
Manuf		r	SPE		E AU	(Daten.	170013-1	9						
Measu														
				s mea	sured	using c	alibrated [	DAK probe.						
Setup	Valid	ation												
			vere w	rithin ±	2.5%	towards	s the targe	et values of M	letha	anol.		_		
Target Target				fined i	n the l	EEE 15	28 and IE	C 62209 cor	nplia	nce star	dards.			
Test C Ambie		ion	Envir	ronme	nt tem	peratur	(22 ± 3)°C	C and humidi	V < 7	0%.				
TSL T		ature	22°C				(			0.00				
Test D Operat			20-Ji CL	un-17										
						_								
Additi		nform		T alac	3	_								
TSL D		pacity		5 g/cm 3 kJ/(k										
		-												
(MHz)	Measu e'	e"	sigma	Targe eps	t sigma		arget [%] ∆-sigma	10.0	_	-	_			
3400	38.6	15.03	2.84	38.0	2.81	1.5	1.1	\$ 7.5						
3500 3600	38.5	15.00	2.92	37.9	2.91 3.02	1.5	0.3 -0.5	Ajuliju 2.5 -						
3700	38.2	14.96	3.08	37.8	3.12	1.3	-1.2	E 0.0	****	******			*******	
3800	38.1	14.96	3.16	37.6	3.22	1.4	-1.9	à -2.5 -						
3900 4000	38.0 37.9	14.95	3.24	37.5	3.32 3.43	1.4	-2.5	-5.0 -						
4100	37.8	14.96	3.41	37.2	3.53	1.5	-3.3	-10.0 -		_			_	
4200 4300	37.6 37.5	15.00	3.50	37.1	3.63	1.3	-3.6 -3.5	34	00	3900	4400 Erequ	4900 ency MHz	5400	5900
4400	37.4	15.11	3.70	36.9	3.84	1.4	-3.5				Trada	andy man		
4500	37.2	15.18	3.80	36.8	3.94	1.1	-3.5							
4000	37.0	15.24	4.00	36.6	4.04	1.2	-3.5 -3.4	10.0						
4800	36.8	15.35	4.10	36.4	4.25	1.0	-3.4	7.5					-	
4850 4900	36.8 36.7	15.35	4.14	36.4	4.30 4.35	1.1	-3.6 -3.6							
4950	36.6	15.39	4.24	36.3	4.40	0.9	-3.6	Conductivity Conductivity	~	-				110.15
5000 5050	36.5	15.42	4.29	36.2	4.45	0.8	-3.6 -3.6				********	******	*****	
5100	36.4	15.46	4.39	36.1	4.55	0.8	-3.6	å ·7.5 ·						
5150	36.3	15.48	4.43	36.0	4.60	0.7	-3.8	-10.0 - 34	00	3900	4400	4900	5400	5900
5200 5250	36.2	15.50 15.53	4,48	36.0 35.9	4.66	0.6	-3.8 -3.5				Frequ	ency MHz		
5300	36.1	15.55	4.58	35.9	4.76	0.6	-3.7							
5350 5400	36.0 35.9	15.56 15.57	4.63	35.8 35.8	4.81 4.86	0.5	-3.7 -3.7							
5450	35.9	15.59	4.73	35.7	4.91	0.6	-3.7							
5500 5550	35.8	15.61 15.65	4.78	35.6 35.6	4.96	0.4	-3.7 -3.7							
5600	35.6	15.66	4.83	35.5	5.01	0.3	-3.7							
5650	35.6	15.70	4.93	35.5	5.12	0.4	-3.6							
5700 5750	35.5 35.4	15.72 15.76	4.98	35.4	5.17 5.22	0.2	-3.6 -3.4							
5800	35.4	15.78	5.09	35.3	5.27	0.3	-3.4	1						
5850	35.3	15.81	5.14	35.3	5.34	0.0	-3.7							
5900	35.3	15.82	5.19	35.3	5.40	0.0	-3.9							

Figure D-7 5 GHz Head Tissue Equivalent Matter

	FCC ID: ZNFQ850QM		SAR EVALUATION REPORT	🕒 LG	Approved by: Quality Manager
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## 3 Composition / Information on ingredients

The Item is composed of the fo	llowing ingredients:
Water	60 - 80%
Esters, Emulsifiers, Inhibitors	20 - 40%
Sodium salt	0 – 1.5%

#### Figure D-8 Composition of 5 GHz Body Tissue Equivalent Matter

**Note:** 5 GHz Body liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

nfo@s	ausstra +41 44 peag.c	12459	700, Fr	ax +41	44 24	5 9779				,	p	e	a	g	-
Meas	suren	nent	Certi	ficat	e / M	aterial	Test								
tem N Produ Manuf		r	Body SL A	AM 50	ue Sin 1 EA	nulating (Batch:	Liquid (1 180423-2	(IBBL	3500-5	800	V5)	_			
	ielectri			s mea	sured	using ca	alibrated D	AK pr	obe.						
Setup	Valida	ation					the targe			etha	inol.				
arget	t Para	meters	5				5664 comp								
est C	ondit														
SL To est D perat	emper ate	ature	Envin 22°C 25-Ap WM		nt term	peratur (	22 ± 3)°C	and h	iumidity	<7	0%.				
dditi SL D	onal li ensity eat-ca		ation 0.996	g/cm											
OL H	Measu		3.765	Targe		Diff.to Ti	arget [%]	F		_	-				
(MHz)	e'	e"	sigma	eps	sigma	∆-eps	∆-sigma		10.0 T					-	
3400	50.7	16.46	3,11	51.5	3.20	-1.5	-2.7	% Al	7.5	11	A. 1867			1	
3500	50.5	16.50	3.21	51.3 51.2	3.31	-1.6	-3.1	Permittivity	2.5		201101-1				1.11
3700	50.3	16.63	3.42	51.1	3.43	-1.5	-3.2	Detm	0.0						
3800	50.2	16.72	3.53	50.9	3.66	-1.4	-3.7	Dev.	-2.5						
3900	50.1	16.81	3.65	50.8	3.78	-1.3	-3.5	D	-5.0	-	-				
4000	49.9	16.93 17.05	3.77 3.89	50.6 50.5	3.90 4.01	-1.5 -1.4	-3.3	1 8	-10.0 1					1	
4200	49.6	17.18	4.01	50.4	4.13	-1.5	-2.9	1	340	0	3900	4400	4900	5400	590
4300	49.5	17.32	4.14	50.2	4.25	-1.5	-2.5					Freque	ncy MHz		
4400	49.3	17.46	4.27	50.1	4.37	-1.6	-2.2	_	_						
	49.2	17.59 17.73	4,40	50.0 49.8	4.48	-1.5	-1.8	10.2							
4500									10.0						
4500 4600	49.0	17.86	4.54	49.0	4.72	-1.8	-1.0		7,5 -						
4500 4600 4700			1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		4.72 4.83	-1.8 -1.9		% AU	7.5						
4500 4600 4700 4800 4850	48.8 48.6 48.5	17.86 17.99 18.05	4.67 4.80 4.87	49.7 49.6 49.5	4.83 4.89	+1.9 -2.0	-1.0 -0.7 -0.4		7.5 5.0 2.5						-
4500 4600 4700 4800 4850 4900	48.8 48.6 48.5 48.4	17.86 17.99 18.05 18.11	4.67 4.80 4.87 4.94	49.7 49.6 49.5 49.4	4.83 4.89 4.95	-1.9 -2.0 -2.1	-1.0 -0.7 -0.4 -0.2		7.5 5.0 2.5 0.0						-
4500 4600 4700 4800 4850 4900 4950	48.8 48.6 48.5	17.86 17.99 18.05 18.11 18.17	4.67 4.80 4.87 4.94 5.00	49.7 49.6 49.5 49.4 49.4	4.83 4.89 4.95 5.01	+1.9 +2.0 +2.1 +2.1	-1.0 -0.7 -0.4 -0.2 -0.1	Conductivity	7.5 5.0 2.5						-
4500 4600 4700 4800 4850 4900 4950 5000	48.8 48.6 48.5 48.4 48.3	17.86 17.99 18.05 18.11	4.67 4.80 4.87 4.94	49.7 49.6 49.5 49.4	4.83 4.89 4.95	-1.9 -2.0 -2.1	-1.0 -0.7 -0.4 -0.2 -0.1 0.1		7.5 5.0 2.5 0.0 -2.5					****	-
4500 4600 4700 4800 4850 4900 4950 5000 5050 5100	48.8 48.6 48.5 48.4 48.3 48.2 48.1 48.0	17.86 17.99 18.05 18.11 18.17 18.23 18.29 18.34	4.67 4.80 4.87 4.94 5.00 5.07 5.14 5.20	49.7 49.6 49.5 49.4 49.4 49.3 49.2 49.2	4.83 4.89 4.95 5.01 5.07 5.12 5.18	-1.9 -2.0 -2.1 -2.1 -2.2 -2.3 -2.3	-1.0 -0.7 -0.4 -0.2 -0.1	Dev. Conductivity	7.5 5.0 2.5 0.0 -2.5 -5.0 -7.5				****	****	-
4500 4600 4700 4800 4850 4900 4950 5000 5050 5100 5150	48.8 48.6 48.5 48.4 48.3 48.2 48.1 48.0 47.9	17.86 17.99 18.05 18.11 18.17 18.23 18.29 18.34 18.39	4.67 4.80 4.87 4.94 5.00 5.07 5.14 5.20 5.27	49.7 49.6 49.5 49.4 49.4 49.3 49.2 49.2 49.2 49.1	4.83 4.89 4.95 5.01 5.07 5.12 5.18 5.24	-1.9 -2.0 -2.1 -2.1 -2.2 -2.3 -2.3 -2.4	-1.0 -0.7 -0.4 -0.2 -0.1 0.1 0.3 0.3 0.6	Dev. Conductivity	7.5 5.0 2.5 0.0 -2.5 -5.0 -7.5		3900	4400 Freque	4900	5400	590
4500 4600 4700 4800 4850 4900 4950 5000 5000 5100 5100 5100 5100	48.8 48.6 48.5 48.4 48.3 48.2 48.1 48.0 47.9 47.9	17.86 17.99 18.05 18.11 18.17 18.23 18.29 18.34 18.39 <b>18.45</b>	4.67 4.80 4.87 5.00 5.07 5.14 5.20 5.27 5.34	49.7 49.6 49.5 49.4 49.4 49.3 49.2 49.2 49.2 49.1 <b>49.0</b>	4.83 4.89 4.95 5.01 5.07 5.12 5.18 5.24 5.24	-1.9 -2.0 -2.1 -2.1 -2.2 -2.3 -2.3 -2.3 -2.4 -2.3	-1.0 -0.7 -0.4 -0.2 -0.1 0.1 0.3 0.3 0.6 0.8	Dev. Conductivity	7.5 5.0 2.5 0.0 -2.5 -5.0 -7.5		3900		4900 ncy MHz	5400	590
4500 4600 4700 4800 4850 4900 4950 5000 5050 5100 5150 5250	48.8 48.6 48.5 48.4 48.3 48.2 48.1 48.0 47.9 47.9 47.9	17.86 17.99 18.05 18.11 18.17 18.23 18.29 18.34 18.39	4.67 4.80 4.87 4.94 5.00 5.07 5.14 5.20 5.27	49.7 49.6 49.5 49.4 49.4 49.3 49.2 49.2 49.2 49.1	4.83 4.89 4.95 5.01 5.07 5.12 5.18 5.24	-1.9 -2.0 -2.1 -2.1 -2.2 -2.3 -2.3 -2.4	-1.0 -0.7 -0.4 -0.2 -0.1 0.1 0.3 0.3 0.6 0.8	Dev. Conductivity	7.5 5.0 2.5 0.0 -2.5 -5.0 -7.5	)	3900			5400	590
4500 4600 4700 4800 4850 4900 5000 5000 5050 5150 5150 5200 5250 5300	48.8 48.6 48.5 48.4 48.3 48.2 48.1 48.0 47.9 47.9	17.86 17.99 18.05 18.11 18.23 18.29 18.34 18.39 18.34 18.39 18.45	4.67 4.80 4.87 4.94 5.00 5.07 5.14 5.20 5.27 5.24 5.40	49.7 49.6 49.5 49.4 49.4 49.3 49.2 49.2 49.2 49.1 49.0 48.9	4.83 4.89 4.95 5.01 5.07 5.12 5.18 5.24 5.30 5.36	-1.9 -2.0 -2.1 -2.1 -2.2 -2.3 -2.3 -2.3 -2.3 -2.4 -2.3 -2.3	-1.0 -0.7 -0.4 -0.2 -0.1 0.1 0.3 0.3 0.6 0.8	Dev. Conductivity	7.5 5.0 2.5 0.0 -2.5 -5.0 -7.5	0	3900			5400	590
4500 4600 4700 4800 4850 4950 5050 5150 5150 5250 5350 5350 5350 5400	48.8 48.6 48.5 48.4 48.3 48.2 48.1 48.0 47.9 47.9 47.9 47.8 47.7 47.6 47.5	17.86 17.99 18.05 18.11 18.17 18.23 18.29 18.34 18.39 <b>18.45</b> 18.50 18.56 18.56 18.61 18.67	4.67 4.80 4.87 4.94 5.00 5.07 5.14 5.20 5.27 5.24 5.40 5.47 5.54 5.61	49.7 49.6 49.5 49.4 49.3 49.2 49.2 49.2 49.1 49.0 48.9 48.9 48.9 48.8 48.7	4.83 4.89 4.95 5.01 5.07 5.12 5.18 5.24 5.24 5.36 5.42 5.42 5.47 5.53	-1.9 -2.0 -2.1 -2.1 -2.2 -2.3 -2.3 -2.3 -2.3 -2.4 -2.3 -2.4 -2.5 -2.5	-1.0 -0.7 -0.4 -0.2 -0.1 0.1 0.3 0.3 0.3 0.6 0.8 1.0 1.2 1.4	Dev. Conductivity	7.5 5.0 2.5 0.0 -2.5 -5.0 -7.5		3900			5400	590
4500 4600 4700 4800 4850 5000 5050 5150 5150 5250 5350 5350 5350 5350 5400	48.8 48.6 48.5 48.4 48.3 48.2 48.1 48.0 47.9 47.9 47.9 47.8 47.7 47.6 47.5 47.5 47.4	17.86 17.99 18.05 18.11 18.17 18.23 18.29 18.34 18.39 <b>18.45</b> 18.50 18.56 18.51 18.67 18.72	4.67 4.80 4.94 5.00 5.07 5.14 5.20 5.27 5.24 5.40 5.47 5.54 5.61 5.68	49.7 49.6 49.5 49.4 49.4 49.3 49.2 49.2 49.2 49.1 <b>49.0</b> 48.9 48.9 48.8 48.7 48.7	4.83 4.89 4.95 5.01 5.07 5.12 5.18 5.24 5.36 5.42 5.42 5.53 5.59	-1.9 -2.0 -2.1 -2.1 -2.2 -2.3 -2.3 -2.3 -2.3 -2.4 -2.3 -2.4 -2.5 -2.5 -2.5 -2.6	-1.0 -0.7 -0.4 -0.2 -0.1 0.3 0.3 0.6 0.8 1.0 1.2 1.4 1.6	Dev. Conductivity	7.5 5.0 2.5 0.0 -2.5 -5.0 -7.5	0	3900			5400	590
4500 4600 4700 4800 4850 5000 5050 5100 5150 5250 5350 5350 5400 5450	48.8 48.6 48.5 48.4 48.3 48.2 48.1 48.0 47.9 47.9 47.9 47.8 47.7 47.6 47.5 47.5 47.4 47.3	17.86 17.99 18.05 18.11 18.17 18.23 18.29 18.34 18.39 18.45 18.50 18.56 18.61 18.67 18.72 18.77	4.67 4.80 4.87 4.94 5.00 5.07 5.14 5.20 5.27 5.24 5.40 5.47 5.54 5.61 5.68 5.61 5.68 5.74	49.7 49.6 49.5 49.4 49.3 49.2 49.2 49.2 49.1 <b>49.0</b> 48.9 48.9 48.9 48.8 48.7 <b>48.7</b> <b>48.6</b>	4.83 4.89 4.95 5.01 5.07 5.12 5.18 5.24 5.24 5.36 5.42 5.42 5.47 5.53 5.59 5.65	-1.9 -2.0 -2.1 -2.1 -2.2 -2.3 -2.3 -2.4 -2.5 -2.5 -2.5 -2.5 -2.5 -2.5 -2.5 -2.5	-1.0 -1.0 -0.7 -0.4 -0.2 -0.1 0.1 0.3 0.3 0.6 0.8 1.0 1.2 1.4 1.6 1.6 1.6	Dev. Conductivity	7.5 5.0 2.5 0.0 -2.5 -5.0 -7.5	)	3900			5400	590
4500 4600 4700 4800 4850 4850 5000 5050 5100 5150 5200 5350 5350 5400 5550	48.8 48.6 48.5 48.4 48.3 48.2 48.1 48.0 47.9 47.9 47.8 47.7 47.6 47.5 47.4 47.3 47.2	17.86 17.99 18.05 18.11 18.17 18.23 18.29 18.34 18.39 18.34 18.50 18.56 18.50 18.56 18.61 18.67 18.72 18.77 18.83	4.67 4.80 4.87 5.00 5.07 5.14 5.20 5.27 5.24 5.40 5.47 5.54 5.61 5.68 5.61 5.68 5.74 5.81	49.7 49.6 49.5 49.4 49.3 49.2 49.2 49.2 49.1 <b>49.0</b> 48.9 48.9 48.9 48.8 48.7 48.7 <b>48.5</b>	4.83 4.89 5.01 5.07 5.12 5.18 5.24 5.30 5.36 5.42 5.47 5.53 5.59 5.65 5.71	-1.9 -2.0 -2.1 -2.1 -2.2 -2.3 -2.3 -2.3 -2.3 -2.3 -2.3 -2.3	-1.0 -1.0 -0.7 -0.4 -0.2 -0.1 0.3 0.3 0.6 0.8 1.0 1.2 1.4 1.6 1.6 1.8	Dev. Conductivity	7.5 5.0 2.5 0.0 -2.5 -5.0 -7.5		3900			5400	590
4500 4600 4700 4800 4850 4900 5000 5000 5000 5100 5100 5200 5300 5300 5400 5550 5550 5550 5500	48.8 48.6 48.5 48.4 48.3 48.2 48.1 48.0 47.9 47.9 47.9 47.8 47.7 47.6 47.5 47.5 47.4 47.3	17.86 17.99 18.05 18.11 18.17 18.23 18.29 18.34 18.39 18.45 18.50 18.56 18.61 18.67 18.72 18.77	4.67 4.80 4.87 4.94 5.00 5.07 5.14 5.20 5.27 5.24 5.40 5.47 5.54 5.61 5.68 5.61 5.68 5.74	49.7 49.6 49.5 49.4 49.3 49.2 49.2 49.2 49.1 <b>49.0</b> 48.9 48.9 48.9 48.8 48.7 <b>48.7</b> <b>48.6</b>	4.83 4.89 4.95 5.01 5.07 5.12 5.18 5.24 5.24 5.36 5.42 5.42 5.47 5.53 5.59 5.65	-1.9 -2.0 -2.1 -2.1 -2.2 -2.3 -2.3 -2.4 -2.5 -2.5 -2.5 -2.5 -2.5 -2.5 -2.5 -2.5	-1.0 -1.0 -0.7 -0.4 -0.2 -0.1 0.1 0.3 0.3 0.6 0.8 1.0 1.2 1.4 1.6 1.6 1.6	Dev. Conductivity	7.5 5.0 2.5 0.0 -2.5 -5.0 -7.5	0	3900			5400	590
4500 4600 4700 4800 4850 4900 5500 5500 5500 5250 5350 5450 5550 5600 5650	48.8 48.6 48.5 48.4 48.3 48.2 48.1 48.0 47.9 47.9 47.9 47.8 47.7 47.6 47.5 47.5 47.4 47.3 47.2 47.1	17.86 17.99 18.05 18.11 18.17 18.23 18.29 18.34 18.39 18.45 18.50 18.56 18.67 18.67 18.72 18.77 18.83 18.88	4.67 4.80 4.87 5.00 5.07 5.14 5.20 5.27 5.34 5.40 5.47 5.54 5.61 5.68 5.61 5.68 5.74 5.81 5.88	49.7 49.6 49.5 49.4 49.3 49.2 49.2 49.2 49.1 49.0 48.9 48.9 48.9 48.8 48.7 48.7 48.7 48.5 48.5	4.83 4.89 5.01 5.07 5.12 5.18 5.24 5.24 5.36 5.42 5.47 5.53 5.59 5.65 5.71 5.77	-1.9 -2.0 -2.1 -2.1 -2.2 -2.3 -2.3 -2.4 -2.3 -2.4 -2.3 -2.4 -2.5 -2.5 -2.6 -2.8 -2.8	-1.0 -1.0 -0.7 -0.4 -0.2 -0.1 0.1 0.3 0.3 0.6 0.8 1.0 1.2 1.4 1.6 1.6 1.6 1.8 2.0	Dev. Conductivity	7.5 5.0 2.5 0.0 -2.5 -5.0 -7.5	0	3900			5400	5900
4500 4600 4700 4800 4850 4900 5000 5050 5100 5150 5350 5350 5350 5450 5550 5550 5550 55	48.8 48.6 48.5 48.4 48.3 48.2 48.1 48.0 47.9 47.9 47.9 47.9 47.5 47.5 47.5 47.5 47.4 47.2 47.2 47.2 47.2 47.2 47.2 47.2	17.86 17.99 18.05 18.11 18.17 18.23 18.39 18.34 18.39 18.45 18.50 18.56 18.61 18.67 18.72 18.72 18.73 18.88 18.89 19.04	4.67 4.80 4.87 4.94 5.00 5.07 5.14 5.20 5.27 5.27 5.27 5.24 5.40 5.40 5.40 5.40 5.45 5.45 5.61 5.68 5.61 5.68 5.81 5.88 5.95	49.7 49.5 49.4 49.4 49.4 49.3 49.2 49.2 49.2 49.1 48.9 48.9 48.8 48.7 48.6 48.5 48.5 48.5 48.4 48.3	4.83 4.89 5.01 5.07 5.12 5.18 5.24 5.30 5.36 5.42 5.47 5.53 5.59 5.65 5.71 5.77 5.82	-1.9 -2.0 -2.1 -2.1 -2.2 -2.3 -2.3 -2.3 -2.4 -2.3 -2.4 -2.5 -2.6 -2.6 -2.8 -2.8 -2.7	-1.0 -0.7 -0.4 -0.2 -0.1 0.1 0.3 0.3 0.6 0.8 1.0 1.2 1.4 1.6 1.6 1.6 2.0 2.1	Dev. Conductivity	7.5 5.0 2.5 0.0 -2.5 -5.0 -7.5	0	3900			5400	5900
4500 4600 4700 4800 4850 4900 5500 5500 5500 5250 5350 5450 5550 5500 5550 5500 5550	48.8 48.6 48.5 48.4 48.3 48.2 48.1 48.0 47.9 47.9 47.9 47.8 47.7 47.6 47.5 47.5 47.5 47.5 47.3 47.2 47.1 47.1 47.0	17.86 17.99 18.05 18.11 18.17 18.23 18.29 18.34 18.39 <b>18.45</b> 18.50 18.56 18.61 18.67 18.72 <b>18.77</b> 18.88 18.93 18.99	4,67 4,80 4,87 5,00 5,07 5,14 5,20 5,27 5,54 5,54 5,54 5,54 5,56 5,56 5,56 5,58 5,58 5,58 5,56 5,59 5,602	49.7 49.5 49.4 49.4 49.4 49.2 49.2 49.2 49.2 49.2	4.83 4.89 5.01 5.07 5.12 5.18 5.24 5.24 5.24 5.36 5.42 5.42 5.42 5.45 5.59 5.65 5.71 5.77 5.82 5.88	-1.9 -2.0 -2.1 -2.1 -2.2 -2.3 -2.3 -2.3 -2.4 -2.3 -2.4 -2.5 -2.5 -2.5 -2.5 -2.5 -2.5 -2.5 -2.5	-1.0 -0.7 -0.4 -0.2 -0.1 0.1 0.3 0.3 0.6 0.8 0.8 1.0 1.2 1.4 1.6 1.6 1.8 2.0 2.1 2.3	Dev. Conductivity	7.5 5.0 2.5 0.0 -2.5 -5.0 -7.5		3900			5400	5900

Figure D-9 5 GHz Body Tissue Equivalent Matter

	FCC ID: ZNFQ850QM		SAR EVALUATION REPORT	🕒 LG	Approved by: Quality Manager
	Test Dates:	DUT Type:			APPENDIX D:
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# APPENDIX E: SAR SYSTEM VALIDATION

Per FCC KDB Publication 865664 D02v01r02, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

		SAN System Valuation Summary – Ig											
SAR	5050		DDODE			COND.	PERM.	C'	W VALIDATION	N	MOD.	VALIDATIC	N
SYSTEM #	FREQ. [MHz]	DATE	PROBE SN	PROBE C	AL. POINT	(σ)	(ɛr)	SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
М	750	11/2/2018	3287	750	Head	0.908	42.190	PASS	PASS	PASS	N/A	N/A	N/A
G	835	8/9/2018	7410	835	Head	0.889	40.915	PASS	PASS	PASS	GMSK	PASS	N/A
М	1750	11/5/2018	3287	1750	Head	1.342	39.217	PASS	PASS	PASS	N/A	N/A	N/A
М	1900	11/5/2018	3287	1900	Head	1.430	39.014	PASS	PASS	PASS	GMSK	PASS	N/A
G	2450	8/7/2018	7410	2450	Head	1.865	39.618	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
I	2450	12/24/2018	7406	2450	Head	1.797	38.399	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
1	2600	12/24/2018	7406	2600	Head	1.961	37.812	PASS	PASS	PASS	TDD	PASS	N/A
Н	5250	7/5/2018	7409	5250	Head	4.492	34.994	PASS	PASS	PASS	OFDM	N/A	PASS
Н	5600	7/5/2018	7409	5600	Head	4.839	34.496	PASS	PASS	PASS	OFDM	N/A	PASS
Н	5750	7/5/2018	7409	5750	Head	4.995	34.288	PASS	PASS	PASS	OFDM	N/A	PASS
1	750	7/19/2018	7406	750	Body	0.969	53.451	PASS	PASS	PASS	N/A	N/A	N/A
J	835	9/11/2018	3347	835	Body	0.984	54.197	PASS	PASS	PASS	GMSK	PASS	N/A
Н	835	11/1/2018	7409	835	Body	0.955	53.843	PASS	PASS	PASS	GMSK	PASS	N/A
D	1750	8/15/2018	7357	1750	Body	1.475	51.784	PASS	PASS	PASS	N/A	N/A	N/A
E	1900	12/3/2018	3332	1900	Body	1.518	51.796	PASS	PASS	PASS	GMSK	PASS	N/A
J	2450	10/15/2018	3347	2450	Body	2.025	51.090	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
J	2600	10/15/2018	3347	2600	Body	2.159	50.830	PASS	PASS	PASS	TDD	PASS	N/A
K	2450	4/3/2018	3319	2450	Body	2.043	51.13	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
L	5250	10/29/2018	7308	5250	Body	5.511	48.770	PASS	PASS	PASS	OFDM	N/A	PASS
L	5600	10/29/2018	7308	5600	Body	5.994	48.200	PASS	PASS	PASS	OFDM	N/A	PASS
L	5750	10/29/2018	7308	5750	Body	6.219	47.960	PASS	PASS	PASS	OFDM	N/A	PASS

Table E-1 SAR System Validation Summary – 1g

Table E-2 SAR System Validation Summary – 10g

-				-									
SAR	FREQ.		PROBE			COND.	PERM.	CW	VALIDATIO	N	MO	d. validat	ION
SYSTEM #	[MHz]	DATE	SN	PROBE C	ROBE CAL. POINT		(ɛr)	SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
L	5250	10/29/2018	7308	5250	Body	5.511	48.770	PASS	PASS	PASS	OFDM	N/A	PASS
L	5600	10/29/2018	7308	5600	Body	5.994	48.200	PASS	PASS	PASS	OFDM	N/A	PASS
L	5750	10/29/2018	7308	5750	Body	6.219	47.960	PASS	PASS	PASS	OFDM	N/A	PASS

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to FCC KDB Publication 865664 D01v01r04.

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# APPENDIX G: DOWNLINK LTE CA RF CONDUCTED POWERS

#### 1.1 LTE Downlink Only Carrier Aggregation Test Reduction Methodology

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number of component carriers (CCs) supported by the product implementation. Per April 2018 TCBC Workshop Notes, the following test reduction methodology was applied to determine the combinations required for conducted power measurements.

LTE DLCA Test Reduction Methodology:

- The supported combinations were arranged by the number of component carriers in columns. •
- Any limitations on the PCC or SCC for each combination were identified alongside the combination (e.g. CA 2A-2A-4A-12A, but B12 can only be configured as a SCC).
- Power measurements were performed for "supersets" (LTE CA combinations with multiple components . carriers) and any "subsets" (LTE CA combinations with fewer component carriers) that were not completely covered by the supersets.
- Only subsets that have the exact same components as a superset were excluded for measurement.
- When there were certain restrictions on component carriers that existed in the superset that were not applied for the subset, the subset configuration was additionally evaluated.
- Both inter-band and intra-band downlink carrier aggregation scenarios were considered.



#### Table 1 – Example of Exclusion Table for SISO Configurations

#### 1.2 LTE Downlink Only Carrier Aggregation Test Selection and Setup

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number component carriers (CCs) supported by the product implementation. For those configurations required by April 2018 TCBC Workshop Notes, conducted power measurements with LTE Carrier Aggregation (CA) (downlink only) active are made in accordance to KDB Publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. Additional conducted output powers are measured with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the maximum average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive. All bands required for SAR testing per FCC KDB procedures were considered. Based on the measured maximum powers below, no additional SAR tests were required for DLCA SAR configurations.

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General PCC and SCC configuration selection procedure

- PCC uplink channel, channel bandwidth, modulation and RB configurations were selected based on section C)3)b)ii) of KBD 941225 D05 V01r02. The downlink PCC channel was paired with the selected PCC uplink channel according to normal configurations without carrier aggregation.
- To maximize aggregated bandwidth, highest channel bandwidth available for that CA combination was selected for SCC. For inter-band CA, the SCC downlink channels were selected near the middle of their transmission bands. For contiguous intra-band CA, the downlink channel spacing between the component carriers was set to multiple of 300 kHz less than the nominal channel spacing defined in section 5.4.1A of 3GPP TS 36.521. For non-contiguous intra-band CA, the downlink channel spacing between the component carriers was set to be larger than the nominal channel spacing and provided maximum separation between the component carriers.
- All selected PCC and SCC(s) remained fully within the uplink/downlink transmission band of the respective component carrier.

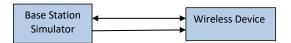


Figure 1 **DL CA Power Measurement Setup** 

#### 1.3 **Downlink Carrier Aggregation RF Conducted Powers**

#### 1.3.1 LTE Band 13 as PCC

								-											
							Maxi	mum	Outpu	it Pow	ers								
	PCC									SCC 1						SCC 2		Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_13A-66A-66A	LTE B13	10	23230	782	QPSK	1	25	5230	751	LTE B66	20	66786	2145	LTE B66	20	67236	2190	25.16	25.10
CA_13A-66C	LTE B13	10	23230	782	QPSK	1	25	5230	751	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	25.19	25.10
CA_2A-13A-66A	LTE B13	10	23230	782	QPSK	1	25	5230	751	LTE B2	20	900	1960	LTE B66	20	66786	2145	25.09	25.10
CA_2A-2A-13A	LTE B13	10	23230	782	QPSK	1	25	5230	751	LTE B2	20	900	1960	LTE B2	20	700	1940	25.18	25.10
CA_2A-4A-13A	LTE B13	10	23230	782	QPSK	1	25	5230	751	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	25.03	25.10
CA_4A-4A-13A	LTE B13	10	23230	782	QPSK	1	25	5230	751	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	25.13	25.10

Table 1

#### 1.3.2 LTE Band 26 as PCC

#### Table 2 Maximum Output Powers

		PCC								SCC 1				SCC 2				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_25A-26A	LTE B26	10	26865	831.5	QPSK	1	0	8865	876.5	LTE B25	20	8365	1962.5	-	-	-	-	25.43	25.49
CA_26A-41A	LTE B26	10	26865	831.5	QPSK	1	0	8865	876.5	LTE B41	20	40620	2593		-	-	-	25.35	25.49
CA_26A-41C	LTE B26	10	26865	831.5	QPSK	1	0	8865	876.5	LTE B41	20	40620	2593	LTE B41	20	40422	2573.2	25.43	25.49

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# 1.3.3 LTE Band 66 as PCC

								-											
	Maximum Output Powers																		
	PCC							SCC 1				SCC 2				Power			
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_2A-66A	LTE B66	15	132597	1772.5	QPSK	1	36	67061	2172.5	LTE B2	20	900	1960	-	-	-	-	24.49	24.48
CA_66B	LTE B66	15	132597	1772.5	QPSK	1	36	67061	2172.5	LTE B66	5	66968	2163.2			-		24.49	24.48
CA_13A-66A-66A	LTE B66	15	132597	1772.5	QPSK	1	36	67061	2172.5	LTE B66	20	66536	2120	LTE B13	10	5230	751	24.30	24.48
CA_13A-66C	LTE B66	15	132597	1772.5	QPSK	1	36	67061	2172.5	LTE B66	20	66890	2155.4	LTE B13	10	5230	751	24.46	24.48
CA_2A-13A-66A	LTE B66	15	132597	1772.5	QPSK	1	36	67061	2172.5	LTE B2	20	900	1960	LTE B13	10	5230	751	24.50	24.48
CA_2A-5A-66A	LTE B66	15	132597	1772.5	QPSK	1	36	67061	2172.5	LTE B2	20	900	1960	LTE B5	10	2525	881.5	24.50	24.48
CA_2A-66C	LTE B66	15	132597	1772.5	QPSK	1	36	67061	2172.5	LTE B66	20	66890	2155.4	LTE B2	20	900	1960	24.48	24.48
CA_5A-66A-66A	LTE B66	15	132597	1772.5	QPSK	1	36	67061	2172.5	LTE B66	20	66536	2120	LTE B5	10	2525	881.5	24.48	24.48
CA_5A-66C	LTE B66	15	132597	1772.5	QPSK	1	36	67061	2172.5	LTE B66	20	66890	2155.4	LTE B5	10	2525	881.5	24.41	24.48
CA_66A-66C	LTE B66	15	132597	1772.5	QPSK	1	36	67061	2172.5	LTE B66	20	66734	2139.8	LTE B66	20	66536	2120	24.42	24.48
CA_66C-66A	LTE B66	15	132597	1772.5	QPSK	1	36	67061	2172.5	LTE B66	20	66890	2155.4	LTE B66	20	66536	2120	24.41	24.48

Table 3

# 1.3.4 LTE Band 25 as PCC

Table 4 **Maximum Output Powers** 

		PCC									SCC 1					Power			
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_25A-25A (1)	LTE B25	5	26365	1882.5	QPSK	1	0	8365	1962.5	LTE B25	20	8140	1940	-	-	-	-	24.41	24.48
CA_25A-26A	LTE B25	5	26365	1882.5	QPSK	1	0	8365	1962.5	LTE B26	15	8865	876.5	-	-	-	-	24.45	24.48
CA_25A-41A	LTE B25	5	26365	1882.5	QPSK	1	0	8365	1962.5	LTE B41	20	40620	2593		-		-	24.43	24.48
CA_25A-41C	LTE B25	5	26365	1882.5	QPSK	1	0	8365	1962.5	LTE B41	20	40620	2593	LTE B41	20	40422	2573.2	24.35	24.48

# 1.3.5 LTE Band 41 as PCC

Table 5 **Maximum Output Powers** 

		PCC								SCC 1						Power			
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]		PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41A-41A (1)	LTE B41	15	39750	2506	256QAM	1	36	39750	2506	LTE B41	20	41490	2680		-	-		25.20	25.20
CA_41A-41C	LTE B41	15	39750	2506	256QAM	1	36	39750	2506	LTE B41	20	41292	2660.2	LTE B41	20	41490	2680	25.19	25.20
CA_41D	LTE B41	15	39750	2506	256QAM	1	36	39750	2506	LTE B41	20	39921	2523.1	LTE B41	20	40119	2542.9	25.17	25.20
CA_41C-41A	LTE B41	15	39750	2506	256QAM	1	36	39750	2506	LTE B41	20	39921	2523.1	LTE B41	20	41490	2680	25.19	25.20

# 1.3.6 LTE Band 41 PC2 as PCC

Table 6 Maximum Output Powers

	PCC									SCC 1					S	Power			
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41A-41A (1)	LTE B41 PC2	20	41055	2636.5	QPSK	1	0	41055	2636.5	LTE B41 PC2	20	39750	2506	-		-		27.19	27.20
CA_41A-41C	LTE B41 PC2	20	41055	2636.5	QPSK	1	0	41055	2636.5	LTE B41 PC2	20	39948	2525.8	LTE B41 PC2	20	39750	2506	27.18	27.20
CA_41D	LTE B41 PC2	20	41055	2636.5	QPSK	1	0	41055	2636.5	LTE B41 PC2	20	40857	2616.7	LTE B41 PC2	20	40659	2596.9	27.16	27.20
CA_41C-41A	LTE B41 PC2	20	41055	2636.5	QPSK	1	0	41055	2636.5	LTE B41 PC2	20	40857	2616.7	LTE B41 PC2	20	39750	2506	27.18	27.20

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