

10493-AAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.62	67.64	16.82	2.23	80.0	± 9.6 %
		Y	3.82	68.40	17.14		80.0	
		Z	3.64	67.90	16.91		80.0	
10494-AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.79	71.83	18.26	2.23	80.0	± 9.6 %
		Y	4.13	73.06	18.79		80.0	
		Z	3.85	72.23	18.46		80.0	
10495-AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.59	68.11	17.06	2.23	80.0	± 9.6 %
		Y	3.79	68.91	17.40		80.0	
		Z	3.61	68.36	17.17		80.0	
10496-AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.67	67.87	17.00	2.23	80.0	± 9.6 %
		Y	3.86	68.62	17.31		80.0	
		Z	3.69	68.11	17.10		80.0	
10497-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.45	63.41	11.17	2.23	80.0	± 9.6 %
		Y	1.92	66.56	12.95		80.0	
		Z	1.35	62.71	10.54		80.0	
10498-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.28	60.00	8.33	2.23	80.0	± 9.6 %
		Y	1.38	60.59	8.91		80.0	
		Z	1.25	60.00	8.01		80.0	
10499-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.30	60.00	8.19	2.23	80.0	± 9.6 %
		Y	1.33	60.08	8.49		80.0	
		Z	1.27	60.00	7.87		80.0	
10500-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.04	71.93	17.72	2.23	80.0	± 9.6 %
		Y	3.46	73.67	18.54		80.0	
		Z	3.15	72.64	17.94		80.0	
10501-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.98	68.33	15.79	2.23	80.0	± 9.6 %
		Y	3.31	69.74	16.50		80.0	
		Z	3.01	68.63	15.79		80.0	
10502-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.03	68.16	15.65	2.23	80.0	± 9.6 %
		Y	3.36	69.55	16.35		80.0	
		Z	3.05	68.42	15.63		80.0	
10503-AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.23	71.65	18.12	2.23	80.0	± 9.6 %
		Y	3.56	73.00	18.74		80.0	
		Z	3.30	72.21	18.35		80.0	
10504-AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.19	68.33	16.71	2.23	80.0	± 9.6 %
		Y	3.43	69.33	17.17		80.0	
		Z	3.23	68.71	16.82		80.0	
10505-AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.27	68.19	16.66	2.23	80.0	± 9.6 %
		Y	3.51	69.14	17.10		80.0	
		Z	3.31	68.54	16.75		80.0	
10506-AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.76	71.67	18.18	2.23	80.0	± 9.6 %
		Y	4.10	72.90	18.71		80.0	
		Z	3.81	72.07	18.38		80.0	
10507-AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.57	68.04	17.02	2.23	80.0	± 9.6 %
		Y	3.78	68.84	17.36		80.0	
		Z	3.59	68.29	17.13		80.0	

10508-AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.65	67.79	16.95	2.23	80.0	± 9.6 %
		Y	3.85	68.55	17.26		80.0	
		Z	3.67	68.04	17.05		80.0	
10509-AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.11	70.47	17.71	2.23	80.0	± 9.6 %
		Y	4.41	71.52	18.16		80.0	
		Z	4.14	70.76	17.87		80.0	
10510-AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.05	67.79	17.05	2.23	80.0	± 9.6 %
		Y	4.24	68.50	17.33		80.0	
		Z	4.06	67.96	17.14		80.0	
10511-AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.11	67.57	17.00	2.23	80.0	± 9.6 %
		Y	4.30	68.25	17.26		80.0	
		Z	4.12	67.74	17.08		80.0	
10512-AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.27	71.92	18.15	2.23	80.0	± 9.6 %
		Y	4.64	73.17	18.68		80.0	
		Z	4.32	72.22	18.32		80.0	
10513-AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.94	68.01	17.14	2.23	80.0	± 9.6 %
		Y	4.13	68.75	17.43		80.0	
		Z	3.95	68.18	17.23		80.0	
10514-AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.97	67.63	17.03	2.23	80.0	± 9.6 %
		Y	4.15	68.33	17.30		80.0	
		Z	3.98	67.79	17.12		80.0	
10515-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	X	0.87	62.63	14.14	0.00	150.0	± 9.6 %
		Y	0.97	63.74	15.08		150.0	
		Z	0.87	62.85	14.30		150.0	
10516-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	X	0.49	69.66	15.70	0.00	150.0	± 9.6 %
		Y	0.68	73.95	19.23		150.0	
		Z	0.52	70.86	16.45		150.0	
10517-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	X	0.71	64.33	14.51	0.00	150.0	± 9.6 %
		Y	0.83	66.01	15.95		150.0	
		Z	0.72	64.67	14.76		150.0	
10518-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	X	4.38	66.55	16.05	0.00	150.0	± 9.6 %
		Y	4.46	66.94	16.23		150.0	
		Z	4.35	66.64	16.08		150.0	
10519-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	X	4.55	66.77	16.16	0.00	150.0	± 9.6 %
		Y	4.62	67.14	16.33		150.0	
		Z	4.51	66.84	16.19		150.0	
10520-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	X	4.40	66.71	16.07	0.00	150.0	± 9.6 %
		Y	4.48	67.10	16.26		150.0	
		Z	4.37	66.78	16.10		150.0	
10521-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	X	4.34	66.70	16.06	0.00	150.0	± 9.6 %
		Y	4.42	67.10	16.25		150.0	
		Z	4.30	66.76	16.08		150.0	
10522-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	X	4.40	66.82	16.16	0.00	150.0	± 9.6 %
		Y	4.48	67.21	16.34		150.0	
		Z	4.36	66.90	16.19		150.0	

10523-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	X	4.29	66.70	16.01	0.00	150.0	± 9.6 %
		Y	4.37	67.12	16.22		150.0	
		Z	4.26	66.81	16.06		150.0	
10524-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	X	4.34	66.74	16.12	0.00	150.0	± 9.6 %
		Y	4.42	67.13	16.31		150.0	
		Z	4.30	66.82	16.16		150.0	
10525-AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	X	4.34	65.80	15.73	0.00	150.0	± 9.6 %
		Y	4.43	66.22	15.92		150.0	
		Z	4.32	65.90	15.77		150.0	
10526-AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	X	4.50	66.14	15.86	0.00	150.0	± 9.6 %
		Y	4.58	66.55	16.05		150.0	
		Z	4.46	66.22	15.90		150.0	
10527-AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	X	4.42	66.09	15.80	0.00	150.0	± 9.6 %
		Y	4.50	66.52	16.00		150.0	
		Z	4.38	66.18	15.84		150.0	
10528-AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	X	4.44	66.11	15.83	0.00	150.0	± 9.6 %
		Y	4.52	66.53	16.03		150.0	
		Z	4.40	66.19	15.87		150.0	
10529-AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	X	4.44	66.11	15.83	0.00	150.0	± 9.6 %
		Y	4.52	66.53	16.03		150.0	
		Z	4.40	66.19	15.87		150.0	
10531-AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	X	4.42	66.18	15.83	0.00	150.0	± 9.6 %
		Y	4.50	66.61	16.03		150.0	
		Z	4.37	66.25	15.86		150.0	
10532-AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)	X	4.29	66.04	15.76	0.00	150.0	± 9.6 %
		Y	4.37	66.48	15.97		150.0	
		Z	4.25	66.11	15.79		150.0	
10533-AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	X	4.44	66.17	15.83	0.00	150.0	± 9.6 %
		Y	4.53	66.60	16.03		150.0	
		Z	4.41	66.26	15.87		150.0	
10534-AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	X	4.98	66.20	15.91	0.00	150.0	± 9.6 %
		Y	5.05	66.57	16.06		150.0	
		Z	4.95	66.26	15.95		150.0	
10535-AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	X	5.05	66.39	16.00	0.00	150.0	± 9.6 %
		Y	5.11	66.72	16.13		150.0	
		Z	5.01	66.43	16.03		150.0	
10536-AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	X	4.92	66.34	15.95	0.00	150.0	± 9.6 %
		Y	4.99	66.70	16.10		150.0	
		Z	4.89	66.40	15.99		150.0	
10537-AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	X	4.98	66.30	15.94	0.00	150.0	± 9.6 %
		Y	5.04	66.66	16.08		150.0	
		Z	4.95	66.35	15.97		150.0	
10538-AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	X	5.06	66.31	15.98	0.00	150.0	± 9.6 %
		Y	5.12	66.65	16.12		150.0	
		Z	5.02	66.35	16.01		150.0	
10540-AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	X	4.99	66.30	16.00	0.00	150.0	± 9.6 %
		Y	5.05	66.64	16.13		150.0	
		Z	4.95	66.33	16.02		150.0	

10541-AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)	X	4.97	66.19	15.93	0.00	150.0	± 9.6 %
		Y	5.03	66.55	16.07		150.0	
		Z	4.93	66.22	15.95		150.0	
10542-AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	X	5.12	66.28	15.99	0.00	150.0	± 9.6 %
		Y	5.19	66.62	16.12		150.0	
		Z	5.09	66.32	16.02		150.0	
10543-AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	X	5.19	66.29	16.02	0.00	150.0	± 9.6 %
		Y	5.25	66.63	16.15		150.0	
		Z	5.15	66.34	16.05		150.0	
10544-AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	X	5.31	66.31	15.91	0.00	150.0	± 9.6 %
		Y	5.37	66.66	16.05		150.0	
		Z	5.28	66.35	15.94		150.0	
10545-AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	X	5.50	66.75	16.09	0.00	150.0	± 9.6 %
		Y	5.54	67.02	16.18		150.0	
		Z	5.47	66.79	16.11		150.0	
10546-AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	X	5.36	66.48	15.97	0.00	150.0	± 9.6 %
		Y	5.42	66.83	16.10		150.0	
		Z	5.33	66.50	15.98		150.0	
10547-AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	X	5.43	66.54	15.99	0.00	150.0	± 9.6 %
		Y	5.49	66.87	16.11		150.0	
		Z	5.40	66.57	16.01		150.0	
10548-AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)	X	5.66	67.42	16.40	0.00	150.0	± 9.6 %
		Y	5.65	67.55	16.42		150.0	
		Z	5.60	67.37	16.38		150.0	
10550-AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	X	5.40	66.56	16.02	0.00	150.0	± 9.6 %
		Y	5.45	66.87	16.13		150.0	
		Z	5.37	66.62	16.05		150.0	
10551-AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	X	5.39	66.55	15.97	0.00	150.0	± 9.6 %
		Y	5.45	66.88	16.09		150.0	
		Z	5.35	66.53	15.97		150.0	
10552-AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	X	5.32	66.38	15.89	0.00	150.0	± 9.6 %
		Y	5.38	66.76	16.04		150.0	
		Z	5.29	66.43	15.92		150.0	
10553-AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	X	5.39	66.39	15.93	0.00	150.0	± 9.6 %
		Y	5.45	66.75	16.07		150.0	
		Z	5.36	66.42	15.95		150.0	
10554-AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	X	5.72	66.67	16.01	0.00	150.0	± 9.6 %
		Y	5.77	67.00	16.12		150.0	
		Z	5.70	66.69	16.02		150.0	
10555-AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	X	5.84	66.96	16.13	0.00	150.0	± 9.6 %
		Y	5.88	67.25	16.23		150.0	
		Z	5.81	66.97	16.14		150.0	
10556-AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	X	5.87	67.02	16.15	0.00	150.0	± 9.6 %
		Y	5.91	67.31	16.25		150.0	
		Z	5.84	67.04	16.17		150.0	
10557-AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	X	5.83	66.90	16.11	0.00	150.0	± 9.6 %
		Y	5.87	67.22	16.22		150.0	
		Z	5.80	66.91	16.13		150.0	

10558-AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	X	5.87	67.06	16.20	0.00	150.0	± 9.6 %
		Y	5.91	67.36	16.31		150.0	
		Z	5.83	67.06	16.21		150.0	
10560-AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	X	5.86	66.91	16.17	0.00	150.0	± 9.6 %
		Y	5.92	67.23	16.28		150.0	
		Z	5.83	66.92	16.18		150.0	
10561-AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)	X	5.80	66.89	16.20	0.00	150.0	± 9.6 %
		Y	5.84	67.19	16.30		150.0	
		Z	5.77	66.91	16.21		150.0	
10562-AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	X	5.89	67.20	16.35	0.00	150.0	± 9.6 %
		Y	5.93	67.48	16.44		150.0	
		Z	5.84	67.16	16.34		150.0	
10563-AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	X	6.00	67.15	16.29	0.00	150.0	± 9.6 %
		Y	6.02	67.38	16.35		150.0	
		Z	5.93	67.06	16.25		150.0	
10564-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	X	4.70	66.60	16.19	0.46	150.0	± 9.6 %
		Y	4.77	66.96	16.34		150.0	
		Z	4.67	66.68	16.22		150.0	
10565-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	X	4.92	67.06	16.53	0.46	150.0	± 9.6 %
		Y	4.99	67.39	16.67		150.0	
		Z	4.88	67.12	16.55		150.0	
10566-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	X	4.75	66.88	16.33	0.46	150.0	± 9.6 %
		Y	4.82	67.22	16.47		150.0	
		Z	4.71	66.94	16.35		150.0	
10567-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	X	4.79	67.31	16.72	0.46	150.0	± 9.6 %
		Y	4.86	67.67	16.87		150.0	
		Z	4.75	67.38	16.75		150.0	
10568-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	X	4.66	66.64	16.08	0.46	150.0	± 9.6 %
		Y	4.73	66.98	16.23		150.0	
		Z	4.62	66.69	16.09		150.0	
10569-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	X	4.76	67.45	16.81	0.46	150.0	± 9.6 %
		Y	4.83	67.82	16.96		150.0	
		Z	4.73	67.57	16.86		150.0	
10570-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	X	4.78	67.26	16.71	0.46	150.0	± 9.6 %
		Y	4.85	67.62	16.86		150.0	
		Z	4.74	67.35	16.75		150.0	
10571-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	X	1.05	63.78	14.98	0.46	130.0	± 9.6 %
		Y	1.16	64.84	15.77		130.0	
		Z	1.06	64.03	15.14		130.0	
10572-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	X	1.06	64.35	15.34	0.46	130.0	± 9.6 %
		Y	1.17	65.47	16.16		130.0	
		Z	1.07	64.63	15.52		130.0	
10573-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	X	1.81	84.33	21.65	0.46	130.0	± 9.6 %
		Y	2.93	92.85	25.80		130.0	
		Z	2.19	87.52	22.91		130.0	
10574-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	X	1.15	70.21	18.29	0.46	130.0	± 9.6 %
		Y	1.33	72.12	19.55		130.0	
		Z	1.19	70.90	18.68		130.0	

10575-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	X	4.49	66.39	16.24	0.46	130.0	± 9.6 %
		Y	4.55	66.72	16.36		130.0	
		Z	4.46	66.48	16.26		130.0	
10576-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	X	4.51	66.57	16.31	0.46	130.0	± 9.6 %
		Y	4.58	66.91	16.44		130.0	
		Z	4.48	66.67	16.34		130.0	
10577-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	X	4.70	66.85	16.48	0.46	130.0	± 9.6 %
		Y	4.77	67.17	16.60		130.0	
		Z	4.67	66.93	16.51		130.0	
10578-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	X	4.60	67.01	16.59	0.46	130.0	± 9.6 %
		Y	4.67	67.35	16.72		130.0	
		Z	4.57	67.10	16.62		130.0	
10579-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)	X	4.36	66.21	15.83	0.46	130.0	± 9.6 %
		Y	4.42	66.54	15.97		130.0	
		Z	4.32	66.26	15.84		130.0	
10580-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	X	4.40	66.27	15.86	0.46	130.0	± 9.6 %
		Y	4.46	66.59	16.00		130.0	
		Z	4.36	66.33	15.88		130.0	
10581-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	X	4.50	67.05	16.53	0.46	130.0	± 9.6 %
		Y	4.57	67.39	16.67		130.0	
		Z	4.47	67.15	16.57		130.0	
10582-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	X	4.29	65.96	15.60	0.46	130.0	± 9.6 %
		Y	4.35	66.28	15.74		130.0	
		Z	4.25	66.00	15.61		130.0	
10583-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	X	4.49	66.39	16.24	0.46	130.0	± 9.6 %
		Y	4.55	66.72	16.36		130.0	
		Z	4.46	66.48	16.26		130.0	
10584-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	X	4.51	66.57	16.31	0.46	130.0	± 9.6 %
		Y	4.58	66.91	16.44		130.0	
		Z	4.48	66.67	16.34		130.0	
10585-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	X	4.70	66.85	16.48	0.46	130.0	± 9.6 %
		Y	4.77	67.17	16.60		130.0	
		Z	4.67	66.93	16.51		130.0	
10586-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	X	4.60	67.01	16.59	0.46	130.0	± 9.6 %
		Y	4.67	67.35	16.72		130.0	
		Z	4.57	67.10	16.62		130.0	
10587-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	X	4.36	66.21	15.83	0.46	130.0	± 9.6 %
		Y	4.42	66.54	15.97		130.0	
		Z	4.32	66.26	15.84		130.0	
10588-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	X	4.40	66.27	15.86	0.46	130.0	± 9.6 %
		Y	4.46	66.59	16.00		130.0	
		Z	4.36	66.33	15.88		130.0	
10589-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	X	4.50	67.05	16.53	0.46	130.0	± 9.6 %
		Y	4.57	67.39	16.67		130.0	
		Z	4.47	67.15	16.57		130.0	
10590-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	X	4.29	65.96	15.60	0.46	130.0	± 9.6 %
		Y	4.35	66.28	15.74		130.0	
		Z	4.25	66.00	15.61		130.0	

10591-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)	X	4.64	66.47	16.35	0.46	130.0	± 9.6 %
		Y	4.70	66.79	16.47		130.0	
		Z	4.61	66.56	16.38		130.0	
10592-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	X	4.78	66.80	16.49	0.46	130.0	± 9.6 %
		Y	4.84	67.11	16.60		130.0	
		Z	4.75	66.87	16.51		130.0	
10593-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	X	4.70	66.68	16.35	0.46	130.0	± 9.6 %
		Y	4.76	67.00	16.47		130.0	
		Z	4.66	66.75	16.37		130.0	
10594-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	X	4.76	66.86	16.52	0.46	130.0	± 9.6 %
		Y	4.82	67.18	16.63		130.0	
		Z	4.72	66.94	16.54		130.0	
10595-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)	X	4.72	66.81	16.41	0.46	130.0	± 9.6 %
		Y	4.78	67.13	16.53		130.0	
		Z	4.68	66.89	16.44		130.0	
10596-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle)	X	4.66	66.80	16.40	0.46	130.0	± 9.6 %
		Y	4.72	67.12	16.53		130.0	
		Z	4.62	66.87	16.43		130.0	
10597-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	X	4.60	66.68	16.27	0.46	130.0	± 9.6 %
		Y	4.67	67.01	16.40		130.0	
		Z	4.57	66.74	16.29		130.0	
10598-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	X	4.59	66.93	16.55	0.46	130.0	± 9.6 %
		Y	4.66	67.26	16.68		130.0	
		Z	4.56	67.00	16.58		130.0	
10599-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)	X	5.32	67.00	16.59	0.46	130.0	± 9.6 %
		Y	5.34	67.19	16.62		130.0	
		Z	5.28	67.04	16.61		130.0	
10600-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	X	5.45	67.42	16.77	0.46	130.0	± 9.6 %
		Y	5.44	67.51	16.75		130.0	
		Z	5.41	67.45	16.79		130.0	
10601-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	X	5.34	67.16	16.66	0.46	130.0	± 9.6 %
		Y	5.36	67.35	16.69		130.0	
		Z	5.30	67.21	16.68		130.0	
10602-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	X	5.45	67.27	16.63	0.46	130.0	± 9.6 %
		Y	5.48	67.47	16.67		130.0	
		Z	5.43	67.37	16.68		130.0	
10603-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	X	5.52	67.55	16.90	0.46	130.0	± 9.6 %
		Y	5.54	67.72	16.93		130.0	
		Z	5.50	67.66	16.96		130.0	
10604-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	X	5.38	67.16	16.70	0.46	130.0	± 9.6 %
		Y	5.41	67.36	16.73		130.0	
		Z	5.38	67.32	16.78		130.0	
10605-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	X	5.44	67.34	16.78	0.46	130.0	± 9.6 %
		Y	5.45	67.47	16.78		130.0	
		Z	5.41	67.37	16.80		130.0	
10606-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	X	5.17	66.57	16.25	0.46	130.0	± 9.6 %
		Y	5.21	66.82	16.32		130.0	
		Z	5.14	66.65	16.29		130.0	

10607-AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	X	4.48	65.79	15.98	0.46	130.0	± 9.6 %
		Y	4.55	66.14	16.12		130.0	
		Z	4.46	65.89	16.02		130.0	
10608-AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	X	4.65	66.17	16.14	0.46	130.0	± 9.6 %
		Y	4.72	66.52	16.28		130.0	
		Z	4.61	66.26	16.18		130.0	
10609-AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	X	4.54	66.00	15.96	0.46	130.0	± 9.6 %
		Y	4.61	66.36	16.11		130.0	
		Z	4.51	66.08	15.99		130.0	
10610-AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	X	4.59	66.17	16.14	0.46	130.0	± 9.6 %
		Y	4.66	66.53	16.28		130.0	
		Z	4.56	66.26	16.17		130.0	
10611-AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	X	4.51	65.97	15.97	0.46	130.0	± 9.6 %
		Y	4.57	66.32	16.12		130.0	
		Z	4.47	66.05	16.01		130.0	
10612-AAB	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	X	4.51	66.11	16.01	0.46	130.0	± 9.6 %
		Y	4.58	66.46	16.16		130.0	
		Z	4.47	66.19	16.05		130.0	
10613-AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	X	4.51	65.96	15.88	0.46	130.0	± 9.6 %
		Y	4.57	66.31	16.02		130.0	
		Z	4.46	66.02	15.90		130.0	
10614-AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	X	4.46	66.18	16.13	0.46	130.0	± 9.6 %
		Y	4.53	66.55	16.29		130.0	
		Z	4.43	66.26	16.17		130.0	
10615-AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	X	4.50	65.78	15.73	0.46	130.0	± 9.6 %
		Y	4.57	66.13	15.88		130.0	
		Z	4.46	65.86	15.76		130.0	
10616-AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	X	5.13	66.23	16.19	0.46	130.0	± 9.6 %
		Y	5.18	66.52	16.28		130.0	
		Z	5.10	66.28	16.22		130.0	
10617-AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	X	5.21	66.44	16.26	0.46	130.0	± 9.6 %
		Y	5.24	66.68	16.33		130.0	
		Z	5.17	66.48	16.29		130.0	
10618-AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	X	5.09	66.44	16.28	0.46	130.0	± 9.6 %
		Y	5.14	66.73	16.37		130.0	
		Z	5.07	66.51	16.32		130.0	
10619-AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	X	5.10	66.22	16.10	0.46	130.0	± 9.6 %
		Y	5.14	66.49	16.19		130.0	
		Z	5.07	66.27	16.13		130.0	
10620-AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	X	5.19	66.25	16.17	0.46	130.0	± 9.6 %
		Y	5.23	66.52	16.25		130.0	
		Z	5.15	66.30	16.20		130.0	
10621-AAB	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	X	5.20	66.42	16.38	0.46	130.0	± 9.6 %
		Y	5.25	66.70	16.46		130.0	
		Z	5.17	66.46	16.41		130.0	
10622-AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	X	5.21	66.59	16.46	0.46	130.0	± 9.6 %
		Y	5.25	66.84	16.53		130.0	
		Z	5.16	66.58	16.46		130.0	

10623-AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	X	5.08	66.07	16.06	0.46	130.0	± 9.6 %
		Y	5.13	66.35	16.15		130.0	
		Z	5.04	66.08	16.07		130.0	
10624-AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	X	5.27	66.29	16.24	0.46	130.0	± 9.6 %
		Y	5.32	66.55	16.31		130.0	
		Z	5.24	66.33	16.26		130.0	
10625-AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	X	5.56	67.05	16.67	0.46	130.0	± 9.6 %
		Y	5.57	67.20	16.69		130.0	
		Z	5.45	66.85	16.58		130.0	
10626-AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	X	5.45	66.29	16.15	0.46	130.0	± 9.6 %
		Y	5.49	66.58	16.24		130.0	
		Z	5.42	66.33	16.18		130.0	
10627-AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	X	5.69	66.90	16.42	0.46	130.0	± 9.6 %
		Y	5.70	67.08	16.45		130.0	
		Z	5.66	66.94	16.45		130.0	
10628-AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	X	5.46	66.33	16.07	0.46	130.0	± 9.6 %
		Y	5.50	66.60	16.14		130.0	
		Z	5.42	66.33	16.07		130.0	
10629-AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	X	5.54	66.41	16.10	0.46	130.0	± 9.6 %
		Y	5.57	66.66	16.17		130.0	
		Z	5.51	66.44	16.12		130.0	
10630-AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	X	5.93	67.80	16.79	0.46	130.0	± 9.6 %
		Y	5.86	67.72	16.70		130.0	
		Z	5.85	67.67	16.74		130.0	
10631-AAB	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	X	5.84	67.65	16.92	0.46	130.0	± 9.6 %
		Y	5.86	67.82	16.94		130.0	
		Z	5.79	67.61	16.91		130.0	
10632-AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	X	5.66	66.99	16.61	0.46	130.0	± 9.6 %
		Y	5.68	67.19	16.65		130.0	
		Z	5.64	67.07	16.66		130.0	
10633-AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	X	5.53	66.52	16.20	0.46	130.0	± 9.6 %
		Y	5.57	66.82	16.28		130.0	
		Z	5.50	66.56	16.22		130.0	
10634-AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	X	5.51	66.55	16.27	0.46	130.0	± 9.6 %
		Y	5.56	66.86	16.37		130.0	
		Z	5.48	66.58	16.29		130.0	
10635-AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	X	5.38	65.83	15.63	0.46	130.0	± 9.6 %
		Y	5.42	66.12	15.72		130.0	
		Z	5.34	65.82	15.63		130.0	
10636-AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	X	5.87	66.66	16.24	0.46	130.0	± 9.6 %
		Y	5.90	66.93	16.31		130.0	
		Z	5.85	66.69	16.27		130.0	
10637-AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	X	6.02	67.05	16.42	0.46	130.0	± 9.6 %
		Y	6.04	67.25	16.46		130.0	
		Z	5.99	67.06	16.43		130.0	
10638-AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	X	6.02	67.01	16.38	0.46	130.0	± 9.6 %
		Y	6.04	67.26	16.44		130.0	
		Z	5.99	67.04	16.40		130.0	

10639-AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	X	5.99	66.94	16.39	0.46	130.0	± 9.6 %
		Y	6.02	67.20	16.45		130.0	
		Z	5.96	66.96	16.40		130.0	
10640-AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	X	5.99	66.93	16.32	0.46	130.0	± 9.6 %
		Y	6.01	67.17	16.38		130.0	
		Z	5.95	66.93	16.33		130.0	
10641-AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	X	6.05	66.90	16.33	0.46	130.0	± 9.6 %
		Y	6.06	67.10	16.36		130.0	
		Z	6.02	66.93	16.35		130.0	
10642-AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	X	6.08	67.13	16.62	0.46	130.0	± 9.6 %
		Y	6.11	67.39	16.68		130.0	
		Z	6.05	67.15	16.64		130.0	
10643-AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	X	5.92	66.82	16.35	0.46	130.0	± 9.6 %
		Y	5.94	67.04	16.40		130.0	
		Z	5.89	66.84	16.37		130.0	
10644-AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	X	6.04	67.19	16.56	0.46	130.0	± 9.6 %
		Y	6.06	67.41	16.60		130.0	
		Z	5.99	67.13	16.53		130.0	
10645-AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	X	6.20	67.30	16.58	0.46	130.0	± 9.6 %
		Y	6.18	67.42	16.57		130.0	
		Z	6.12	67.19	16.53		130.0	
10646-AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	X	13.97	103.27	34.96	9.30	60.0	± 9.6 %
		Y	20.81	112.89	38.12		60.0	
		Z	13.67	103.09	35.06		60.0	
10647-AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	X	12.30	101.10	34.41	9.30	60.0	± 9.6 %
		Y	17.37	109.51	37.26		60.0	
		Z	12.00	100.85	34.49		60.0	
10648-AAA	CDMA2000 (1x Advanced)	X	0.49	61.28	8.20	0.00	150.0	± 9.6 %
		Y	0.65	63.85	10.60		150.0	
		Z	0.46	61.03	7.80		150.0	
10652-AAB	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	3.40	66.41	16.15	2.23	80.0	± 9.6 %
		Y	3.58	67.18	16.52		80.0	
		Z	3.42	66.69	16.22		80.0	
10653-AAB	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	X	3.94	65.81	16.40	2.23	80.0	± 9.6 %
		Y	4.08	66.40	16.64		80.0	
		Z	3.94	66.00	16.46		80.0	
10654-AAB	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	X	3.93	65.47	16.42	2.23	80.0	± 9.6 %
		Y	4.06	66.03	16.64		80.0	
		Z	3.94	65.63	16.48		80.0	
10655-AAB	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	3.99	65.43	16.46	2.23	80.0	± 9.6 %
		Y	4.13	65.99	16.67		80.0	
		Z	4.01	65.58	16.52		80.0	
10658-AAA	Pulse Waveform (200Hz, 10%)	X	7.13	77.36	16.21	10.00	50.0	± 9.6 %
		Y	16.32	87.94	19.95		50.0	
		Z	9.11	80.61	17.72		50.0	
10659-AAA	Pulse Waveform (200Hz, 20%)	X	35.68	94.53	19.76	6.99	60.0	± 9.6 %
		Y	100.00	107.23	23.45		60.0	
		Z	100.00	106.51	23.11		60.0	

10660-AAA	Pulse Waveform (200Hz, 40%)	X	100.00	100.10	18.83	3.98	80.0	± 9.6 %
		Y	100.00	106.47	21.86		80.0	
		Z	100.00	102.58	20.01		80.0	
10661-AAA	Pulse Waveform (200Hz, 60%)	X	1.25	67.33	8.37	2.22	100.0	± 9.6 %
		Y	100.00	108.17	21.47		100.0	
		Z	100.00	96.28	16.23		100.0	
10662-AAA	Pulse Waveform (200Hz, 80%)	X	0.30	60.00	2.55	0.97	120.0	± 9.6 %
		Y	100.00	113.09	21.91		120.0	
		Z	0.20	60.00	3.18		120.0	

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



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 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **PC-Test**

Certificate No: **EX3-7308_Aug18**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7308**

Calibration procedure(s) **QA CAL-01.v9, QA CAL-14.v4, QA CAL-23.v5, QA CAL-25.v6**
Calibration procedure for dosimetric E-field probes

Calibration date: **August 23, 2018**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-18 (No. 217-02682)	Apr-19
Reference Probe ES3DV2	SN: 3013	30-Dec-17 (No. ES3-3013_Dec17)	Dec-18
DAE4	SN: 660	21-Dec-17 (No. DAE4-660_Dec17)	Dec-18
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-17)	In house check: Oct-18

Calibrated by:	Name Jeton Kastrati	Function Laboratory Technician	Signature
Approved by:	Name Katja Pokovic	Function Technical Manager	Signature

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Issued: August 24, 2018



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 0108**

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 Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization ϕ	ϕ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E^2 -field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z}** = NORM_{x,y,z} * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; VR_{x,y,z}**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).

Probe EX3DV4

SN:7308

Manufactured: March 11, 2014
Calibrated: August 23, 2018

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$) ^A	0.49	0.60	0.44	$\pm 10.1 \%$
DCP (mV) ^B	99.6	97.1	102.5	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB $\sqrt{\mu V}$	C	D dB	VR mV	Unc ^E (k=2)
0	CW	X	0.0	0.0	1.0	0.00	177.2	$\pm 3.5 \%$
		Y	0.0	0.0	1.0		165.4	
		Z	0.0	0.0	1.0		159.6	

Note: For details on UID parameters see Appendix.

Sensor Model Parameters

	C1 fF	C2 fF	α V^{-1}	T1 $ms.V^{-2}$	T2 $ms.V^{-1}$	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
X	53.71	401.2	35.76	12.80	0.351	5.077	0.717	0.413	1.005
Y	56.67	439.8	38.08	13.44	0.524	5.100	0.000	0.597	1.012
Z	40.98	304.1	35.29	8.573	0.334	5.045	1.531	0.174	1.005

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of Norm X,Y,Z do not affect the E^2 -field uncertainty inside TSL (see Pages 5 and 6).

^B Numerical linearization parameter: uncertainty not required.

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

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	41.9	0.89	10.23	10.23	10.23	0.57	0.81	± 12.0 %
835	41.5	0.90	9.96	9.96	9.96	0.58	0.81	± 12.0 %
1750	40.1	1.37	8.66	8.66	8.66	0.36	0.80	± 12.0 %
1900	40.0	1.40	8.26	8.26	8.26	0.29	0.85	± 12.0 %
2300	39.5	1.67	7.81	7.81	7.81	0.29	0.85	± 12.0 %
2450	39.2	1.80	7.45	7.45	7.45	0.35	0.91	± 12.0 %
2600	39.0	1.96	7.30	7.30	7.30	0.35	0.87	± 12.0 %
5250	35.9	4.71	5.10	5.10	5.10	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.85	4.85	4.85	0.40	1.80	± 13.1 %
5750	35.4	5.22	5.04	5.04	5.04	0.40	1.80	± 13.1 %

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) ^c	Relative Permittivity ^f	Conductivity (S/m) ^f	ConvF X	ConvF Y	ConvF Z	Alpha ^g	Depth ^g (mm)	Unc (k=2)
750	55.5	0.96	10.38	10.38	10.38	0.36	0.99	± 12.0 %
835	55.2	0.97	10.19	10.19	10.19	0.50	0.82	± 12.0 %
1750	53.4	1.49	8.13	8.13	8.13	0.27	1.04	± 12.0 %
1900	53.3	1.52	7.79	7.79	7.79	0.38	0.85	± 12.0 %
2300	52.9	1.81	7.73	7.73	7.73	0.37	0.80	± 12.0 %
2450	52.7	1.95	7.57	7.57	7.57	0.34	0.88	± 12.0 %
2600	52.5	2.16	7.40	7.40	7.40	0.29	0.95	± 12.0 %
5250	48.9	5.36	4.48	4.48	4.48	0.50	1.90	± 13.1 %
5600	48.5	5.77	4.00	4.00	4.00	0.50	1.90	± 13.1 %
5750	48.3	5.94	4.18	4.18	4.18	0.50	1.90	± 13.1 %

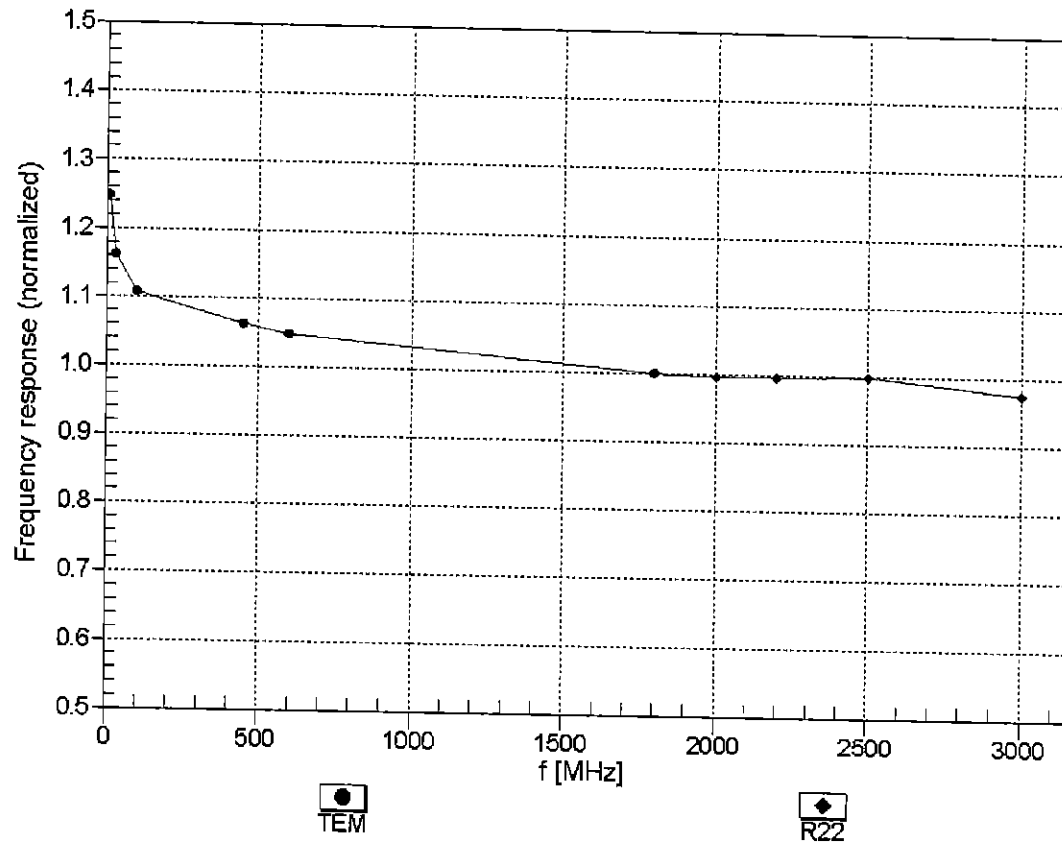
^c Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^f At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^g Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Frequency Response of E-Field

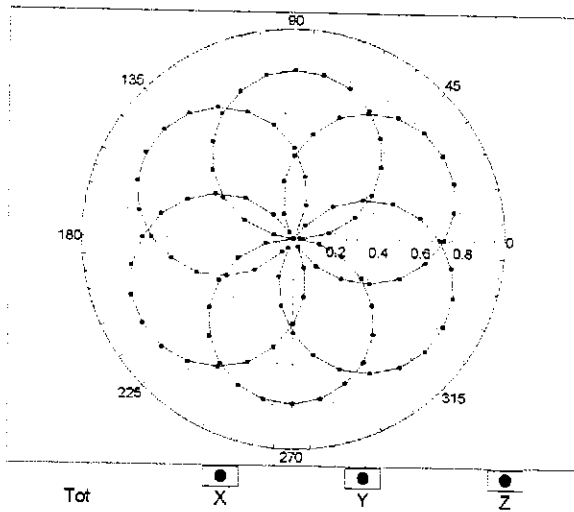
(TEM-Cell:ifi110 EXX, Waveguide: R22)



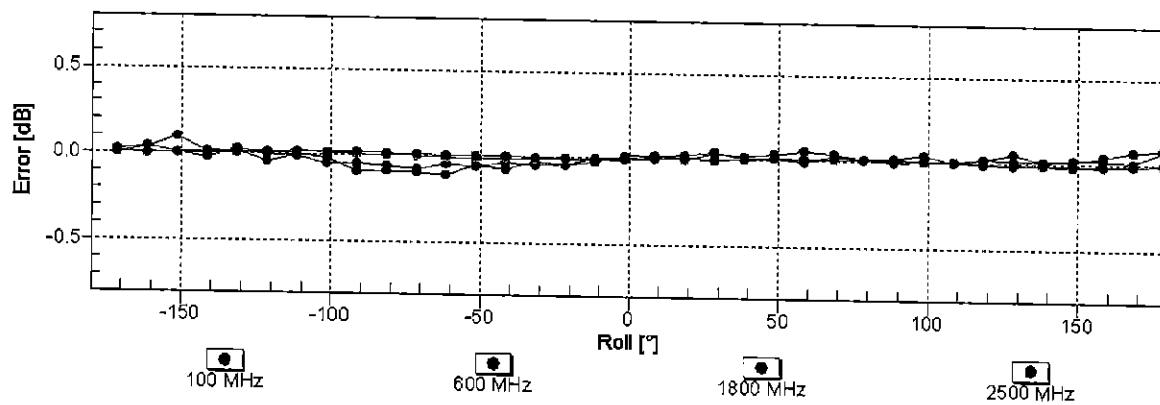
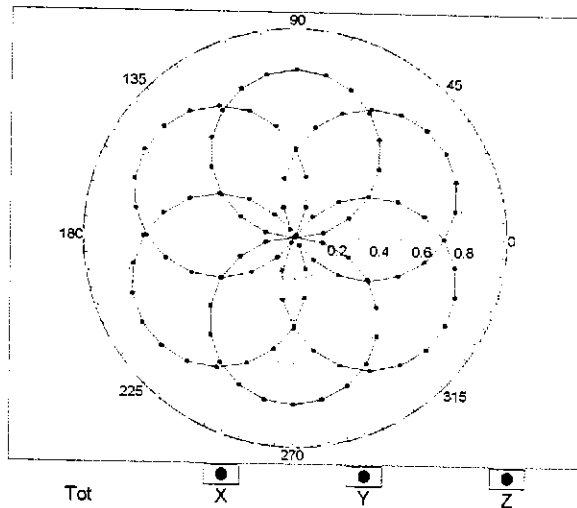
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

Receiving Pattern (ϕ), $\theta = 0^\circ$

f=600 MHz, TEM

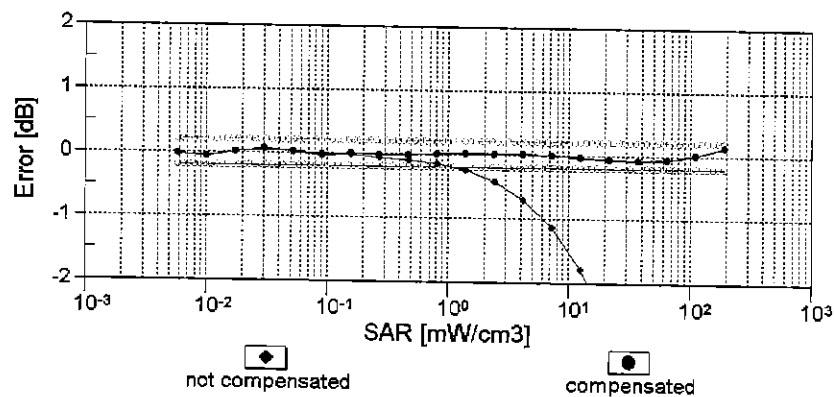
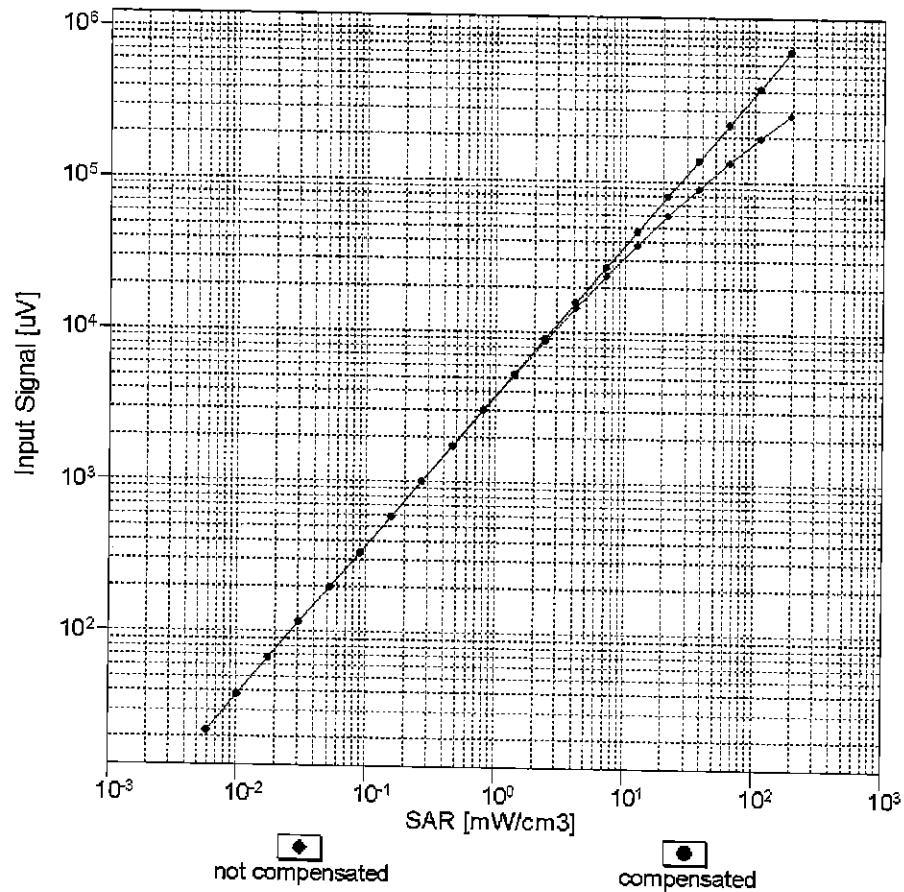


f=1800 MHz, R22



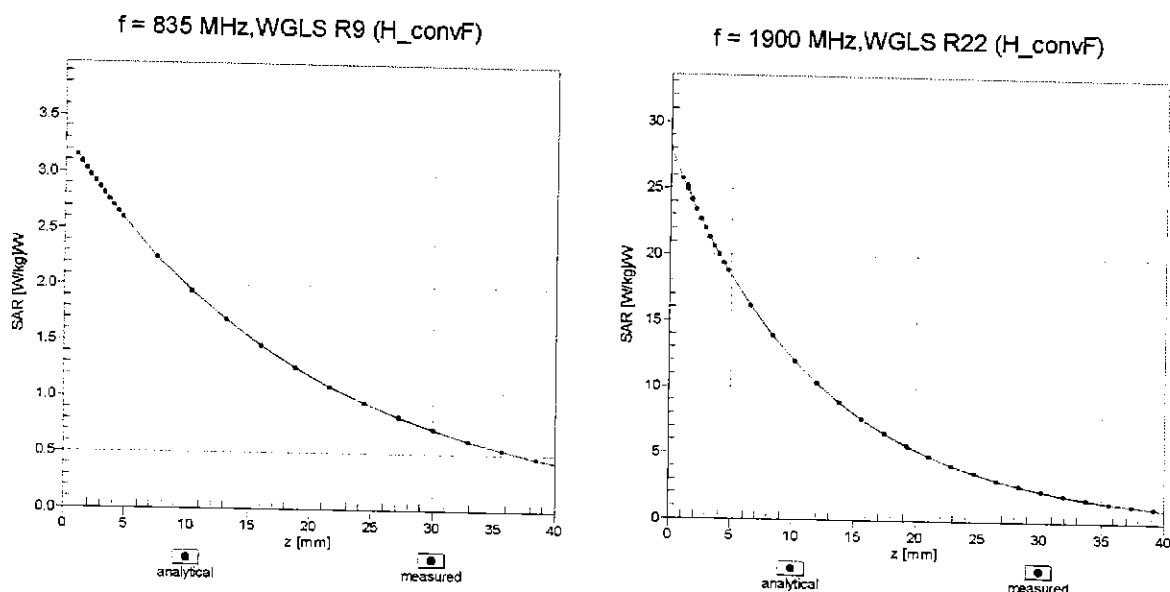
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell , $f_{\text{eval}} = 1900 \text{ MHz}$)



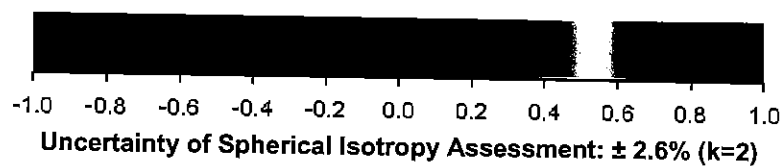
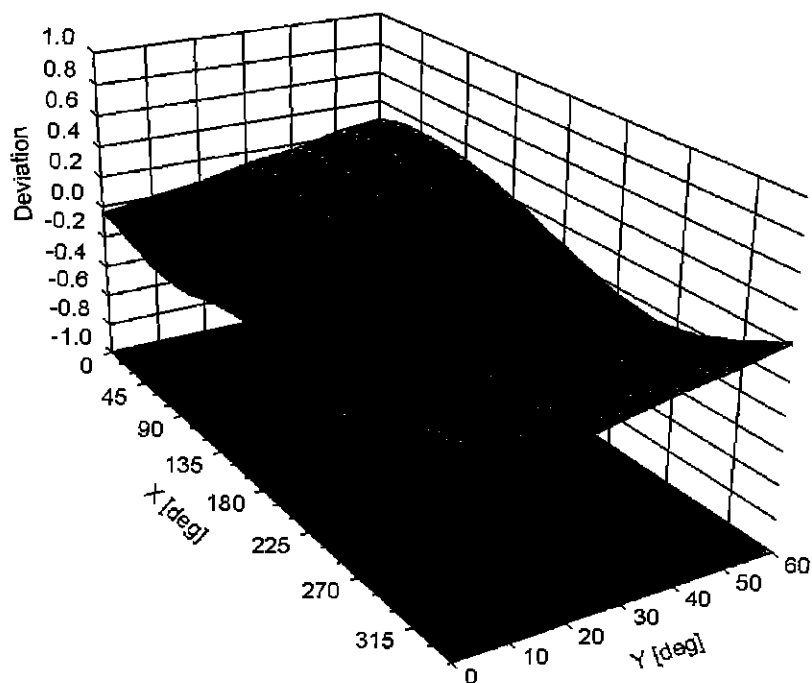
Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ, θ), $f = 900 \text{ MHz}$



DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	108.5
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Appendix: Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB $\sqrt{\mu V}$	C	D dB	VR mV	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	177.2	$\pm 3.5\%$
		Y	0.00	0.00	1.00		165.4	
		Z	0.00	0.00	1.00		159.6	
10010- CAA	SAR Validation (Square, 100ms, 10ms)	X	2.71	68.17	11.26	10.00	20.0	$\pm 9.6\%$
		Y	2.39	66.64	10.67		20.0	
		Z	1.90	64.26	9.03		20.0	
10011- CAB	UMTS-FDD (WCDMA)	X	1.19	70.37	17.06	0.00	150.0	$\pm 9.6\%$
		Y	0.96	66.50	14.51		150.0	
		Z	1.05	68.92	16.00		150.0	
10012- CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	X	1.18	64.67	16.08	0.41	150.0	$\pm 9.6\%$
		Y	1.11	63.43	15.04		150.0	
		Z	1.13	64.11	15.48		150.0	
10013- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	X	4.93	66.75	17.26	1.46	150.0	$\pm 9.6\%$
		Y	4.92	66.47	17.15		150.0	
		Z	4.74	66.75	17.08		150.0	
10021- DAC	GSM-FDD (TDMA, GMSK)	X	100.00	114.38	27.28	9.39	50.0	$\pm 9.6\%$
		Y	100.00	114.83	27.64		50.0	
		Z	100.00	109.69	24.90		50.0	
10023- DAC	GPRS-FDD (TDMA, GMSK, TN 0)	X	100.00	113.94	27.13	9.57	50.0	$\pm 9.6\%$
		Y	100.00	114.49	27.54		50.0	
		Z	100.00	109.21	24.74		50.0	
10024- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	X	100.00	115.48	26.77	6.56	60.0	$\pm 9.6\%$
		Y	100.00	114.18	26.29		60.0	
		Z	100.00	109.85	23.86		60.0	
10025- DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	X	6.22	84.66	34.29	12.57	50.0	$\pm 9.6\%$
		Y	4.94	76.24	29.94		50.0	
		Z	5.36	79.88	31.57		50.0	
10026- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	X	11.81	100.22	36.35	9.56	60.0	$\pm 9.6\%$
		Y	11.10	97.75	35.30		60.0	
		Z	7.89	90.81	32.78		60.0	
10027- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	X	100.00	118.27	27.22	4.80	80.0	$\pm 9.6\%$
		Y	100.00	114.44	25.61		80.0	
		Z	100.00	111.67	23.86		80.0	
10028- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	X	100.00	122.72	28.40	3.55	100.0	$\pm 9.6\%$
		Y	100.00	114.80	25.04		100.0	
		Z	100.00	114.83	24.49		100.0	
10029- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	X	6.56	85.50	29.56	7.80	80.0	$\pm 9.6\%$
		Y	6.53	84.80	29.16		80.0	
		Z	4.80	79.03	26.78		80.0	
10030- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	X	100.00	114.96	26.10	5.30	70.0	$\pm 9.6\%$
		Y	100.00	112.69	25.18		70.0	
		Z	100.00	108.37	22.73		70.0	
10031- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	X	100.00	126.84	28.53	1.88	100.0	$\pm 9.6\%$
		Y	100.00	105.21	19.68		100.0	
		Z	100.00	108.61	20.59		100.0	

10032-CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	X	100.00	146.53	35.02	1.17	100.0	± 9.6 %
		Y	100.00	95.65	15.05		100.0	
		Z	100.00	112.23	21.08		100.0	
10033-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	X	100.00	133.98	36.90	5.30	70.0	± 9.6 %
		Y	94.91	132.14	36.35		70.0	
		Z	24.70	106.96	28.52		70.0	
10034-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	X	8.70	95.28	25.33	1.88	100.0	± 9.6 %
		Y	4.18	83.23	21.11		100.0	
		Z	3.97	82.01	19.44		100.0	
10035-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	X	3.83	83.82	21.38	1.17	100.0	± 9.6 %
		Y	2.23	74.99	17.69		100.0	
		Z	2.33	75.94	16.98		100.0	
10036-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	X	100.00	134.50	37.14	5.30	70.0	± 9.6 %
		Y	100.00	133.48	36.76		70.0	
		Z	56.60	119.91	31.85		70.0	
10037-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	X	7.69	93.53	24.78	1.88	100.0	± 9.6 %
		Y	3.89	82.31	20.76		100.0	
		Z	3.40	80.12	18.77		100.0	
10038-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	X	3.93	84.59	21.78	1.17	100.0	± 9.6 %
		Y	2.28	75.57	18.03		100.0	
		Z	2.38	76.51	17.34		100.0	
10039-CAB	CDMA2000 (1xRTT, RC1)	X	2.78	78.14	18.71	0.00	150.0	± 9.6 %
		Y	1.67	70.12	14.94		150.0	
		Z	2.00	74.01	15.76		150.0	
10042-CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	X	100.00	110.92	24.96	7.78	50.0	± 9.6 %
		Y	100.00	110.22	24.75		50.0	
		Z	100.00	106.01	22.46		50.0	
10044-CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	X	0.00	112.58	4.43	0.00	150.0	± 9.6 %
		Y	0.07	121.95	9.84		150.0	
		Z	0.01	118.94	9.83		150.0	
10048-CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	X	100.00	111.48	27.44	13.80	25.0	± 9.6 %
		Y	100.00	112.85	28.28		25.0	
		Z	18.65	86.54	19.90		25.0	
10049-CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	X	100.00	112.40	26.75	10.79	40.0	± 9.6 %
		Y	100.00	113.42	27.38		40.0	
		Z	46.23	99.19	22.45		40.0	
10056-CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	X	100.00	126.85	34.82	9.03	50.0	± 9.6 %
		Y	100.00	126.84	34.96		50.0	
		Z	73.14	116.99	30.84		50.0	
10058-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	X	4.87	79.06	26.07	6.55	100.0	± 9.6 %
		Y	4.89	78.72	25.82		100.0	
		Z	3.78	74.24	23.87		100.0	
10059-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	X	1.24	66.08	16.89	0.61	110.0	± 9.6 %
		Y	1.15	64.70	15.80		110.0	
		Z	1.15	65.12	16.08		110.0	
10060-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	X	100.00	145.11	38.67	1.30	110.0	± 9.6 %
		Y	100.00	138.14	35.54		110.0	
		Z	100.00	143.13	37.45		110.0	

10061-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	X	5.01	92.44	27.34	2.04	110.0	± 9.6 %
		Y	3.88	86.79	24.94		110.0	
		Z	2.64	81.37	23.02		110.0	
10062-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	X	4.74	66.80	16.70	0.49	100.0	± 9.6 %
		Y	4.72	66.44	16.52		100.0	
		Z	4.55	66.78	16.53		100.0	
10063-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	X	4.76	66.90	16.81	0.72	100.0	± 9.6 %
		Y	4.74	66.55	16.64		100.0	
		Z	4.57	66.86	16.62		100.0	
10064-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	X	5.07	67.18	17.05	0.86	100.0	± 9.6 %
		Y	5.06	66.88	16.91		100.0	
		Z	4.83	67.08	16.83		100.0	
10065-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	X	4.93	67.08	17.15	1.21	100.0	± 9.6 %
		Y	4.92	66.80	17.03		100.0	
		Z	4.69	66.95	16.91		100.0	
10066-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	X	4.95	67.11	17.33	1.46	100.0	± 9.6 %
		Y	4.94	66.84	17.22		100.0	
		Z	4.70	66.94	17.07		100.0	
10067-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	X	5.22	67.17	17.72	2.04	100.0	± 9.6 %
		Y	5.23	66.94	17.65		100.0	
		Z	4.99	67.15	17.52		100.0	
10068-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	X	5.28	67.31	17.99	2.55	100.0	± 9.6 %
		Y	5.30	67.12	17.95		100.0	
		Z	5.01	67.08	17.69		100.0	
10069-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	X	5.36	67.24	18.15	2.67	100.0	± 9.6 %
		Y	5.38	67.05	18.11		100.0	
		Z	5.09	67.11	17.88		100.0	
10071-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	X	5.01	66.83	17.56	1.99	100.0	± 9.6 %
		Y	5.01	66.58	17.48		100.0	
		Z	4.83	66.80	17.36		100.0	
10072-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	X	5.00	67.20	17.81	2.30	100.0	± 9.6 %
		Y	5.01	66.96	17.73		100.0	
		Z	4.79	67.07	17.56		100.0	
10073-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	X	5.05	67.32	18.13	2.83	100.0	± 9.6 %
		Y	5.06	67.11	18.07		100.0	
		Z	4.84	67.21	17.87		100.0	
10074-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	X	5.01	67.17	18.27	3.30	100.0	± 9.6 %
		Y	5.03	66.98	18.23		100.0	
		Z	4.82	67.10	18.01		100.0	
10075-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	X	5.05	67.33	18.61	3.82	90.0	± 9.6 %
		Y	5.08	67.18	18.60		90.0	
		Z	4.84	67.13	18.28		90.0	
10076-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	X	5.04	67.01	18.67	4.15	90.0	± 9.6 %
		Y	5.06	66.85	18.66		90.0	
		Z	4.86	66.95	18.41		90.0	
10077-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	X	5.05	67.06	18.76	4.30	90.0	± 9.6 %
		Y	5.07	66.89	18.74		90.0	
		Z	4.89	67.03	18.52		90.0	

10081-CAB	CDMA2000 (1xRTT, RC3)	X	1.10	69.87	14.99	0.00	150.0	± 9.6 %
		Y	0.78	64.74	11.83		150.0	
		Z	0.78	66.34	11.97		150.0	
10082-CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	X	0.69	60.00	4.39	4.77	80.0	± 9.6 %
		Y	0.71	60.00	4.39		80.0	
		Z	7.97	68.50	6.36		80.0	
10090-DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	X	100.00	115.53	26.81	6.56	60.0	± 9.6 %
		Y	100.00	114.29	26.36		60.0	
		Z	100.00	109.90	23.90		60.0	
10097-CAB	UMTS-FDD (HSDPA)	X	1.95	68.97	16.62	0.00	150.0	± 9.6 %
		Y	1.75	66.81	15.24		150.0	
		Z	1.87	68.90	16.13		150.0	
10098-CAB	UMTS-FDD (HSUPA, Subtest 2)	X	1.91	68.95	16.60	0.00	150.0	± 9.6 %
		Y	1.71	66.77	15.20		150.0	
		Z	1.83	68.86	16.11		150.0	
10099-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	X	11.93	100.45	36.42	9.56	60.0	± 9.6 %
		Y	11.20	97.95	35.37		60.0	
		Z	7.96	90.99	32.84		60.0	
10100-CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	3.40	71.76	17.45	0.00	150.0	± 9.6 %
		Y	3.10	69.82	16.33		150.0	
		Z	3.12	70.91	17.03		150.0	
10101-CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	3.36	68.15	16.35	0.00	150.0	± 9.6 %
		Y	3.24	67.23	15.77		150.0	
		Z	3.17	67.74	16.07		150.0	
10102-CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	3.45	68.05	16.42	0.00	150.0	± 9.6 %
		Y	3.34	67.19	15.87		150.0	
		Z	3.28	67.71	16.16		150.0	
10103-CAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	6.86	77.75	21.56	3.98	65.0	± 9.6 %
		Y	6.56	76.62	21.10		65.0	
		Z	5.69	75.27	20.45		65.0	
10104-CAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	6.41	74.58	21.07	3.98	65.0	± 9.6 %
		Y	6.33	74.04	20.86		65.0	
		Z	5.58	72.74	20.11		65.0	
10105-CAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	6.09	73.43	20.88	3.98	65.0	± 9.6 %
		Y	6.03	72.95	20.69		65.0	
		Z	5.24	71.29	19.75		65.0	
10108-CAF	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	2.97	70.94	17.29	0.00	150.0	± 9.6 %
		Y	2.72	69.08	16.17		150.0	
		Z	2.70	70.20	16.88		150.0	
10109-CAF	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	3.02	68.05	16.32	0.00	150.0	± 9.6 %
		Y	2.90	67.02	15.66		150.0	
		Z	2.83	67.71	15.99		150.0	
10110-CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	2.42	70.09	17.00	0.00	150.0	± 9.6 %
		Y	2.21	68.14	15.78		150.0	
		Z	2.18	69.46	16.49		150.0	
10111-CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	2.76	69.06	16.78	0.00	150.0	± 9.6 %
		Y	2.59	67.59	15.88		150.0	
		Z	2.59	68.99	16.39		150.0	

10112-CAF	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	3.14	67.97	16.35	0.00	150.0	± 9.6 %
		Y	3.03	67.00	15.72		150.0	
		Z	2.95	67.72	16.05		150.0	
10113-CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	2.92	69.11	16.87	0.00	150.0	± 9.6 %
		Y	2.75	67.72	16.02		150.0	
		Z	2.74	69.14	16.51		150.0	
10114-CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	X	5.18	67.31	16.57	0.00	150.0	± 9.6 %
		Y	5.14	66.93	16.36		150.0	
		Z	5.02	67.26	16.48		150.0	
10115-CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	X	5.52	67.57	16.70	0.00	150.0	± 9.6 %
		Y	5.51	67.29	16.56		150.0	
		Z	5.27	67.30	16.50		150.0	
10116-CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	X	5.29	67.56	16.61	0.00	150.0	± 9.6 %
		Y	5.27	67.21	16.43		150.0	
		Z	5.10	67.44	16.50		150.0	
10117-CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	X	5.16	67.25	16.55	0.00	150.0	± 9.6 %
		Y	5.13	66.89	16.36		150.0	
		Z	4.99	67.15	16.44		150.0	
10118-CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	X	5.59	67.74	16.79	0.00	150.0	± 9.6 %
		Y	5.60	67.49	16.67		150.0	
		Z	5.34	67.49	16.60		150.0	
10119-CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	X	5.26	67.49	16.59	0.00	150.0	± 9.6 %
		Y	5.24	67.15	16.41		150.0	
		Z	5.09	67.40	16.49		150.0	
10140-CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	3.50	68.05	16.33	0.00	150.0	± 9.6 %
		Y	3.39	67.19	15.79		150.0	
		Z	3.30	67.72	16.07		150.0	
10141-CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	3.62	68.10	16.48	0.00	150.0	± 9.6 %
		Y	3.51	67.27	15.96		150.0	
		Z	3.43	67.85	16.25		150.0	
10142-CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	2.22	70.35	16.88	0.00	150.0	± 9.6 %
		Y	1.98	67.98	15.45		150.0	
		Z	1.97	69.67	16.10		150.0	
10143-CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	2.70	70.21	16.79	0.00	150.0	± 9.6 %
		Y	2.44	68.12	15.58		150.0	
		Z	2.48	69.97	16.00		150.0	
10144-CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	2.42	67.64	15.07	0.00	150.0	± 9.6 %
		Y	2.26	66.15	14.15		150.0	
		Z	2.13	66.86	13.96		150.0	
10145-CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	1.54	68.23	14.00	0.00	150.0	± 9.6 %
		Y	1.25	64.93	12.03		150.0	
		Z	1.00	63.72	10.21		150.0	
10146-CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	2.38	68.67	13.30	0.00	150.0	± 9.6 %
		Y	2.63	70.03	14.41		150.0	
		Z	1.37	62.94	8.80		150.0	
10147-CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	3.01	71.74	14.81	0.00	150.0	± 9.6 %
		Y	3.44	73.73	16.16		150.0	
		Z	1.50	63.86	9.38		150.0	

10149-CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	3.03	68.12	16.37	0.00	150.0	± 9.6 %
		Y	2.91	67.08	15.71		150.0	
		Z	2.84	67.78	16.04		150.0	
10150-CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	3.15	68.03	16.39	0.00	150.0	± 9.6 %
		Y	3.03	67.05	15.76		150.0	
		Z	2.96	67.78	16.09		150.0	
10151-CAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	7.33	80.62	22.85	3.98	65.0	± 9.6 %
		Y	6.93	79.21	22.28		65.0	
		Z	6.07	78.22	21.74		65.0	
10152-CAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	5.98	74.73	20.92	3.98	65.0	± 9.6 %
		Y	5.89	74.12	20.68		65.0	
		Z	5.12	72.74	19.78		65.0	
10153-CAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	6.33	75.57	21.65	3.98	65.0	± 9.6 %
		Y	6.23	74.94	21.41		65.0	
		Z	5.49	73.78	20.61		65.0	
10154-CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	2.49	70.63	17.32	0.00	150.0	± 9.6 %
		Y	2.26	68.57	16.06		150.0	
		Z	2.24	69.92	16.77		150.0	
10155-CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	2.77	69.07	16.79	0.00	150.0	± 9.6 %
		Y	2.59	67.59	15.89		150.0	
		Z	2.59	69.02	16.41		150.0	
10156-CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	2.11	70.85	16.93	0.00	150.0	± 9.6 %
		Y	1.83	68.04	15.26		150.0	
		Z	1.82	69.80	15.80		150.0	
10157-CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	2.31	68.61	15.35	0.00	150.0	± 9.6 %
		Y	2.08	66.62	14.16		150.0	
		Z	1.98	67.47	13.92		150.0	
10158-CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	2.92	69.17	16.92	0.00	150.0	± 9.6 %
		Y	2.75	67.77	16.06		150.0	
		Z	2.75	69.22	16.57		150.0	
10159-CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	2.44	69.17	15.69	0.00	150.0	± 9.6 %
		Y	2.19	67.06	14.45		150.0	
		Z	2.09	67.96	14.21		150.0	
10160-CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	2.90	69.57	16.90	0.00	150.0	± 9.6 %
		Y	2.74	68.24	16.05		150.0	
		Z	2.70	69.25	16.60		150.0	
10161-CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	3.05	67.98	16.35	0.00	150.0	± 9.6 %
		Y	2.93	66.95	15.69		150.0	
		Z	2.86	67.77	16.01		150.0	
10162-CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	3.15	68.06	16.42	0.00	150.0	± 9.6 %
		Y	3.03	67.06	15.79		150.0	
		Z	2.97	67.96	16.14		150.0	
10166-CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	3.67	69.77	19.22	3.01	150.0	± 9.6 %
		Y	3.71	69.61	19.37		150.0	
		Z	3.45	70.11	19.35		150.0	
10167-CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	4.61	72.92	19.78	3.01	150.0	± 9.6 %
		Y	4.57	72.37	19.78		150.0	
		Z	4.42	74.02	20.14		150.0	

10168-CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	5.13	75.25	21.12	3.01	150.0	± 9.6 %
		Y	5.05	74.54	21.07		150.0	
		Z	5.13	77.22	21.87		150.0	
10169-CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	3.12	70.03	19.37	3.01	150.0	± 9.6 %
		Y	3.15	69.73	19.46		150.0	
		Z	2.86	69.57	19.15		150.0	
10170-CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	4.58	77.10	22.08	3.01	150.0	± 9.6 %
		Y	4.39	75.79	21.81		150.0	
		Z	4.44	78.23	22.53		150.0	
10171-AAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	3.64	72.24	19.05	3.01	150.0	± 9.6 %
		Y	3.59	71.47	18.98		150.0	
		Z	3.36	72.39	19.02		150.0	
10172-CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	12.64	100.34	31.84	6.02	65.0	± 9.6 %
		Y	12.97	100.68	32.37		65.0	
		Z	5.77	87.24	27.51		65.0	
10173-CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	36.96	114.71	33.67	6.02	65.0	± 9.6 %
		Y	30.92	112.16	33.64		65.0	
		Z	22.36	108.00	31.61		65.0	
10174-CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	22.92	104.35	30.17	6.02	65.0	± 9.6 %
		Y	21.96	104.04	30.70		65.0	
		Z	11.65	95.24	27.25		65.0	
10175-CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	3.08	69.68	19.10	3.01	150.0	± 9.6 %
		Y	3.11	69.39	19.20		150.0	
		Z	2.82	69.22	18.88		150.0	
10176-CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	4.59	77.13	22.09	3.01	150.0	± 9.6 %
		Y	4.40	75.82	21.82		150.0	
		Z	4.45	78.26	22.55		150.0	
10177-CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	3.11	69.85	19.21	3.01	150.0	± 9.6 %
		Y	3.14	69.56	19.30		150.0	
		Z	2.84	69.38	18.97		150.0	
10178-CAF	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	4.53	76.83	21.94	3.01	150.0	± 9.6 %
		Y	4.34	75.53	21.68		150.0	
		Z	4.39	77.99	22.42		150.0	
10179-CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	4.06	74.50	20.40	3.01	150.0	± 9.6 %
		Y	3.95	73.49	20.26		150.0	
		Z	3.83	75.09	20.61		150.0	
10180-CAF	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	3.62	72.15	18.99	3.01	150.0	± 9.6 %
		Y	3.58	71.38	18.93		150.0	
		Z	3.35	72.32	18.97		150.0	
10181-CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	3.10	69.83	19.20	3.01	150.0	± 9.6 %
		Y	3.13	69.54	19.29		150.0	
		Z	2.84	69.36	18.97		150.0	
10182-CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	4.52	76.80	21.93	3.01	150.0	± 9.6 %
		Y	4.33	75.51	21.66		150.0	
		Z	4.38	77.96	22.40		150.0	
10183-AAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	3.62	72.12	18.97	3.01	150.0	± 9.6 %
		Y	3.57	71.35	18.91		150.0	
		Z	3.34	72.29	18.96		150.0	

10184-CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	3.11	69.88	19.22	3.01	150.0	± 9.6 %
		Y	3.14	69.58	19.32		150.0	
		Z	2.85	69.41	18.99		150.0	
10185-CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	4.54	76.88	21.97	3.01	150.0	± 9.6 %
		Y	4.35	75.59	21.70		150.0	
		Z	4.41	78.06	22.45		150.0	
10186-AAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	3.64	72.20	19.01	3.01	150.0	± 9.6 %
		Y	3.59	71.42	18.95		150.0	
		Z	3.36	72.37	19.00		150.0	
10187-CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	3.12	69.93	19.28	3.01	150.0	± 9.6 %
		Y	3.15	69.63	19.37		150.0	
		Z	2.86	69.48	19.07		150.0	
10188-CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	4.72	77.70	22.40	3.01	150.0	± 9.6 %
		Y	4.51	76.33	22.11		150.0	
		Z	4.61	78.98	22.92		150.0	
10189-AAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	3.73	72.70	19.32	3.01	150.0	± 9.6 %
		Y	3.67	71.88	19.24		150.0	
		Z	3.46	72.92	19.33		150.0	
10193-CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	X	4.59	66.76	16.33	0.00	150.0	± 9.6 %
		Y	4.55	66.31	16.09		150.0	
		Z	4.42	66.80	16.19		150.0	
10194-CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	X	4.77	67.10	16.45	0.00	150.0	± 9.6 %
		Y	4.74	66.66	16.21		150.0	
		Z	4.58	67.08	16.32		150.0	
10195-CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	X	4.82	67.12	16.46	0.00	150.0	± 9.6 %
		Y	4.78	66.69	16.22		150.0	
		Z	4.62	67.10	16.34		150.0	
10196-CAC	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	X	4.60	66.84	16.36	0.00	150.0	± 9.6 %
		Y	4.56	66.40	16.12		150.0	
		Z	4.41	66.83	16.20		150.0	
10197-CAC	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	X	4.79	67.12	16.46	0.00	150.0	± 9.6 %
		Y	4.75	66.69	16.22		150.0	
		Z	4.59	67.09	16.33		150.0	
10198-CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	X	4.82	67.14	16.47	0.00	150.0	± 9.6 %
		Y	4.78	66.71	16.24		150.0	
		Z	4.61	67.11	16.35		150.0	
10219-CAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	X	4.55	66.86	16.33	0.00	150.0	± 9.6 %
		Y	4.51	66.41	16.08		150.0	
		Z	4.37	66.86	16.17		150.0	
10220-CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	X	4.79	67.10	16.45	0.00	150.0	± 9.6 %
		Y	4.75	66.67	16.22		150.0	
		Z	4.58	67.05	16.32		150.0	
10221-CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	X	4.83	67.06	16.45	0.00	150.0	± 9.6 %
		Y	4.79	66.64	16.23		150.0	
		Z	4.62	67.04	16.33		150.0	
10222-CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	X	5.14	67.26	16.55	0.00	150.0	± 9.6 %
		Y	5.11	66.90	16.36		150.0	
		Z	4.97	67.15	16.43		150.0	

10223-CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	X	5.45	67.43	16.65	0.00	150.0	± 9.6 %
		Y	5.45	67.18	16.52		150.0	
		Z	5.25	67.35	16.55		150.0	
10224-CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	X	5.19	67.37	16.53	0.00	150.0	± 9.6 %
		Y	5.15	66.99	16.33		150.0	
		Z	5.01	67.26	16.42		150.0	
10225-CAB	UMTS-FDD (HSPA+)	X	2.89	66.55	15.78	0.00	150.0	± 9.6 %
		Y	2.80	65.71	15.24		150.0	
		Z	2.72	66.49	15.32		150.0	
10226-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	42.12	117.30	34.47	6.02	65.0	± 9.6 %
		Y	34.39	114.35	34.35		65.0	
		Z	25.78	110.75	32.49		65.0	
10227-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	33.34	110.83	32.01	6.02	65.0	± 9.6 %
		Y	29.14	109.23	32.25		65.0	
		Z	23.91	107.08	30.63		65.0	
10228-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	15.66	105.06	33.38	6.02	65.0	± 9.6 %
		Y	15.84	105.37	33.95		65.0	
		Z	7.75	93.33	29.68		65.0	
10229-CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	37.28	114.84	33.72	6.02	65.0	± 9.6 %
		Y	31.13	112.26	33.67		65.0	
		Z	22.62	108.17	31.67		65.0	
10230-CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	29.88	108.76	31.36	6.02	65.0	± 9.6 %
		Y	26.58	107.43	31.66		65.0	
		Z	20.85	104.61	29.86		65.0	
10231-CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	14.65	103.59	32.85	6.02	65.0	± 9.6 %
		Y	14.88	103.95	33.43		65.0	
		Z	7.34	92.15	29.19		65.0	
10232-CAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	37.25	114.84	33.71	6.02	65.0	± 9.6 %
		Y	31.10	112.26	33.67		65.0	
		Z	22.58	108.16	31.67		65.0	
10233-CAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	29.82	108.74	31.35	6.02	65.0	± 9.6 %
		Y	26.53	107.41	31.66		65.0	
		Z	20.76	104.56	29.85		65.0	
10234-CAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	13.83	102.21	32.30	6.02	65.0	± 9.6 %
		Y	14.10	102.64	32.91		65.0	
		Z	7.03	91.14	28.71		65.0	
10235-CAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	37.39	114.93	33.74	6.02	65.0	± 9.6 %
		Y	31.21	112.34	33.70		65.0	
		Z	22.65	108.24	31.69		65.0	
10236-CAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	30.43	109.05	31.43	6.02	65.0	± 9.6 %
		Y	27.03	107.71	31.73		65.0	
		Z	21.22	104.87	29.93		65.0	
10237-CAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	14.73	103.74	32.90	6.02	65.0	± 9.6 %
		Y	14.96	104.11	33.48		65.0	
		Z	7.35	92.21	29.22		65.0	
10238-CAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	37.20	114.83	33.71	6.02	65.0	± 9.6 %
		Y	31.07	112.26	33.67		65.0	
		Z	22.51	108.13	31.66		65.0	

10239-CAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	29.73	108.72	31.35	6.02	65.0	± 9.6 %
		Y	26.48	107.40	31.66		65.0	
		Z	20.66	104.50	29.83		65.0	
10240-CAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	14.67	103.66	32.88	6.02	65.0	± 9.6 %
		Y	14.89	104.03	33.46		65.0	
		Z	7.33	92.17	29.20		65.0	
10241-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	8.22	81.62	25.84	6.98	65.0	± 9.6 %
		Y	8.21	81.11	25.93		65.0	
		Z	7.55	81.89	25.74		65.0	
10242-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	7.60	79.92	25.06	6.98	65.0	± 9.6 %
		Y	7.70	79.68	25.24		65.0	
		Z	6.63	79.21	24.57		65.0	
10243-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	6.06	76.28	24.43	6.98	65.0	± 9.6 %
		Y	6.20	76.29	24.69		65.0	
		Z	5.27	75.02	23.70		65.0	
10244-CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	6.94	79.13	20.40	3.98	65.0	± 9.6 %
		Y	7.61	80.93	21.65		65.0	
		Z	4.63	73.01	16.54		65.0	
10245-CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	6.74	78.35	20.03	3.98	65.0	± 9.6 %
		Y	7.38	80.11	21.28		65.0	
		Z	4.46	72.20	16.14		65.0	
10246-CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	8.26	86.16	23.38	3.98	65.0	± 9.6 %
		Y	7.07	83.23	22.34		65.0	
		Z	4.76	77.46	19.00		65.0	
10247-CAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	5.60	76.50	20.35	3.98	65.0	± 9.6 %
		Y	5.37	75.45	19.96		65.0	
		Z	4.29	72.64	17.71		65.0	
10248-CAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	5.54	75.70	19.98	3.98	65.0	± 9.6 %
		Y	5.35	74.79	19.65		65.0	
		Z	4.24	71.91	17.36		65.0	
10249-CAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	9.19	88.24	24.95	3.98	65.0	± 9.6 %
		Y	7.96	85.32	23.90		65.0	
		Z	6.28	82.28	22.02		65.0	
10250-CAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	6.20	77.76	22.32	3.98	65.0	± 9.6 %
		Y	6.01	76.85	21.97		65.0	
		Z	5.20	75.42	20.86		65.0	
10251-CAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	5.85	75.32	20.92	3.98	65.0	± 9.6 %
		Y	5.73	74.58	20.63		65.0	
		Z	4.92	73.12	19.45		65.0	
10252-CAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	8.09	84.95	24.58	3.98	65.0	± 9.6 %
		Y	7.42	82.94	23.81		65.0	
		Z	6.31	81.52	22.96		65.0	
10253-CAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	5.80	74.00	20.63	3.98	65.0	± 9.6 %
		Y	5.72	73.40	20.39		65.0	
		Z	5.04	72.28	19.52		65.0	
10254-CAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	6.14	74.84	21.30	3.98	65.0	± 9.6 %
		Y	6.05	74.22	21.07		65.0	
		Z	5.36	73.21	20.25		65.0	

10255-CAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	6.81	79.50	22.67	3.98	65.0	± 9.6 %
		Y	6.50	78.25	22.16		65.0	
		Z	5.72	77.37	21.59		65.0	
10256-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	5.54	75.38	17.88	3.98	65.0	± 9.6 %
		Y	6.45	78.02	19.55		65.0	
		Z	3.15	67.52	12.83		65.0	
10257-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	5.31	74.31	17.34	3.98	65.0	± 9.6 %
		Y	6.14	76.80	18.96		65.0	
		Z	3.05	66.79	12.37		65.0	
10258-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	6.24	81.13	20.76	3.98	65.0	± 9.6 %
		Y	5.52	78.91	19.97		65.0	
		Z	3.09	70.62	15.05		65.0	
10259-CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	5.84	76.93	21.04	3.98	65.0	± 9.6 %
		Y	5.63	75.94	20.66		65.0	
		Z	4.68	73.82	18.92		65.0	
10260-CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	5.84	76.54	20.88	3.98	65.0	± 9.6 %
		Y	5.65	75.62	20.54		65.0	
		Z	4.68	73.47	18.76		65.0	
10261-CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	7.94	85.32	24.30	3.98	65.0	± 9.6 %
		Y	7.17	83.07	23.45		65.0	
		Z	5.90	80.89	22.01		65.0	
10262-CAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	6.19	77.72	22.28	3.98	65.0	± 9.6 %
		Y	6.00	76.81	21.93		65.0	
		Z	5.19	75.36	20.81		65.0	
10263-CAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	5.84	75.30	20.91	3.98	65.0	± 9.6 %
		Y	5.72	74.57	20.63		65.0	
		Z	4.91	73.09	19.44		65.0	
10264-CAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	8.00	84.72	24.48	3.98	65.0	± 9.6 %
		Y	7.34	82.73	23.71		65.0	
		Z	6.24	81.28	22.84		65.0	
10265-CAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	5.98	74.73	20.93	3.98	65.0	± 9.6 %
		Y	5.89	74.12	20.69		65.0	
		Z	5.12	72.74	19.78		65.0	
10266-CAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	6.33	75.56	21.64	3.98	65.0	± 9.6 %
		Y	6.22	74.93	21.40		65.0	
		Z	5.49	73.76	20.60		65.0	
10267-CAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	7.32	80.56	22.82	3.98	65.0	± 9.6 %
		Y	6.92	79.16	22.26		65.0	
		Z	6.05	78.17	21.72		65.0	
10268-CAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	6.52	74.24	21.04	3.98	65.0	± 9.6 %
		Y	6.45	73.73	20.85		65.0	
		Z	5.74	72.63	20.16		65.0	
10269-CAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	6.46	73.71	20.87	3.98	65.0	± 9.6 %
		Y	6.39	73.22	20.69		65.0	
		Z	5.73	72.22	20.02		65.0	
10270-CAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	6.79	76.82	21.42	3.98	65.0	± 9.6 %
		Y	6.57	75.90	21.04		65.0	
		Z	5.88	75.11	20.59		65.0	

10274-CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	X	2.66	66.98	15.73	0.00	150.0	± 9.6 %
		Y	2.54	65.90	15.04		150.0	
		Z	2.55	67.07	15.35		150.0	
10275-CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	X	1.78	69.77	16.72	0.00	150.0	± 9.6 %
		Y	1.55	67.13	15.03		150.0	
		Z	1.62	69.04	16.02		150.0	
10277-CAA	PHS (QPSK)	X	2.12	61.97	7.55	9.03	50.0	± 9.6 %
		Y	2.25	62.30	7.96		50.0	
		Z	1.72	60.31	5.78		50.0	
10278-CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	X	10.93	86.19	21.29	9.03	50.0	± 9.6 %
		Y	9.64	84.41	20.95		50.0	
		Z	3.57	69.00	13.15		50.0	
10279-CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	X	11.22	86.49	21.46	9.03	50.0	± 9.6 %
		Y	9.91	84.71	21.11		50.0	
		Z	3.69	69.35	13.38		50.0	
10290-AAB	CDMA2000, RC1, SO55, Full Rate	X	1.95	72.86	16.32	0.00	150.0	± 9.6 %
		Y	1.38	67.46	13.46		150.0	
		Z	1.34	68.81	13.27		150.0	
10291-AAB	CDMA2000, RC3, SO55, Full Rate	X	1.06	69.47	14.79	0.00	150.0	± 9.6 %
		Y	0.76	64.53	11.71		150.0	
		Z	0.76	66.05	11.81		150.0	
10292-AAB	CDMA2000, RC3, SO32, Full Rate	X	1.83	78.35	18.94	0.00	150.0	± 9.6 %
		Y	0.91	67.73	13.68		150.0	
		Z	1.34	73.93	15.68		150.0	
10293-AAB	CDMA2000, RC3, SO3, Full Rate	X	4.73	93.04	24.47	0.00	150.0	± 9.6 %
		Y	1.31	72.72	16.40		150.0	
		Z	6.43	94.81	23.11		150.0	
10295-AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	X	10.60	89.87	26.40	9.03	50.0	± 9.6 %
		Y	10.25	88.78	26.08		50.0	
		Z	12.25	89.80	24.68		50.0	
10297-AAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	2.99	71.06	17.36	0.00	150.0	± 9.6 %
		Y	2.73	69.18	16.24		150.0	
		Z	2.72	70.32	16.96		150.0	
10298-AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	1.90	70.47	15.90	0.00	150.0	± 9.6 %
		Y	1.56	67.01	13.91		150.0	
		Z	1.44	67.67	13.50		150.0	
10299-AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	3.07	71.64	15.53	0.00	150.0	± 9.6 %
		Y	3.23	72.42	16.33		150.0	
		Z	2.17	67.61	12.32		150.0	
10300-AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	2.19	66.26	12.34	0.00	150.0	± 9.6 %
		Y	2.31	66.80	13.02		150.0	
		Z	1.57	63.33	9.50		150.0	
10301-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	X	4.82	65.43	17.57	4.17	50.0	± 9.6 %
		Y	4.87	65.32	17.50		50.0	
		Z	4.60	65.72	17.49		50.0	
10302-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	X	5.31	66.17	18.35	4.96	50.0	± 9.6 %
		Y	5.36	66.00	18.25		50.0	
		Z	5.00	66.00	18.02		50.0	

10303-AAA	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	X	5.06	65.83	18.21	4.96	50.0	± 9.6 %
		Y	5.11	65.70	18.12		50.0	
		Z	4.75	65.61	17.82		50.0	
10304-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	X	4.87	65.69	17.69	4.17	50.0	± 9.6 %
		Y	4.90	65.47	17.55		50.0	
		Z	4.58	65.56	17.35		50.0	
10305-AAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	X	4.43	67.35	19.83	6.02	35.0	± 9.6 %
		Y	4.56	67.70	19.98		35.0	
		Z	4.15	67.17	19.10		35.0	
10306-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	X	4.77	66.43	19.36	6.02	35.0	± 9.6 %
		Y	4.86	66.61	19.45		35.0	
		Z	4.49	66.31	18.82		35.0	
10307-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	X	4.67	66.65	19.36	6.02	35.0	± 9.6 %
		Y	4.78	66.88	19.46		35.0	
		Z	4.37	66.39	18.75		35.0	
10308-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	X	4.64	66.81	19.48	6.02	35.0	± 9.6 %
		Y	4.74	67.03	19.58		35.0	
		Z	4.35	66.60	18.90		35.0	
10309-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	X	4.84	66.72	19.54	6.02	35.0	± 9.6 %
		Y	4.94	66.92	19.63		35.0	
		Z	4.52	66.47	18.95		35.0	
10310-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	X	4.71	66.49	19.33	6.02	35.0	± 9.6 %
		Y	4.81	66.68	19.42		35.0	
		Z	4.43	66.37	18.80		35.0	
10311-AAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	3.36	70.26	16.95	0.00	150.0	± 9.6 %
		Y	3.08	68.46	15.91		150.0	
		Z	3.08	69.51	16.57		150.0	
10313-AAA	IDEN 1:3	X	5.95	81.40	19.48	6.99	70.0	± 9.6 %
		Y	4.30	76.35	17.48		70.0	
		Z	3.21	73.80	16.43		70.0	
10314-AAA	IDEN 1:6	X	12.17	97.07	27.72	10.00	30.0	± 9.6 %
		Y	7.44	87.94	24.60		30.0	
		Z	6.18	85.76	23.72		30.0	
10315-AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	X	1.10	64.61	16.02	0.17	150.0	± 9.6 %
		Y	1.01	63.21	14.85		150.0	
		Z	1.05	64.14	15.48		150.0	
10316-AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	X	4.65	66.81	16.47	0.17	150.0	± 9.6 %
		Y	4.62	66.42	16.27		150.0	
		Z	4.46	66.78	16.31		150.0	
10317-AAC	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	X	4.65	66.81	16.47	0.17	150.0	± 9.6 %
		Y	4.62	66.42	16.27		150.0	
		Z	4.46	66.78	16.31		150.0	
10400-AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	X	4.78	67.16	16.44	0.00	150.0	± 9.6 %
		Y	4.74	66.73	16.21		150.0	
		Z	4.55	67.11	16.31		150.0	
10401-AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	X	5.43	67.23	16.53	0.00	150.0	± 9.6 %
		Y	5.42	66.92	16.38		150.0	
		Z	5.24	67.11	16.40		150.0	

10402-AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	X	5.71	67.66	16.59	0.00	150.0	± 9.6 %
		Y	5.70	67.34	16.43		150.0	
		Z	5.52	67.48	16.45		150.0	
10403-AAB	CDMA2000 (1xEV-DO, Rev. 0)	X	1.95	72.86	16.32	0.00	115.0	± 9.6 %
		Y	1.38	67.46	13.46		115.0	
		Z	1.34	68.81	13.27		115.0	
10404-AAB	CDMA2000 (1xEV-DO, Rev. A)	X	1.95	72.86	16.32	0.00	115.0	± 9.6 %
		Y	1.38	67.46	13.46		115.0	
		Z	1.34	68.81	13.27		115.0	
10406-AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	X	100.00	122.38	30.73	0.00	100.0	± 9.6 %
		Y	81.48	123.67	32.28		100.0	
		Z	100.00	114.83	26.66		100.0	
10410-AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	X	100.00	123.65	31.04	3.23	80.0	± 9.6 %
		Y	100.00	127.30	33.02		80.0	
		Z	100.00	122.18	29.60		80.0	
10415-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	X	1.02	63.74	15.40	0.00	150.0	± 9.6 %
		Y	0.94	62.36	14.20		150.0	
		Z	0.99	63.49	14.99		150.0	
10416-AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	X	4.59	66.79	16.39	0.00	150.0	± 9.6 %
		Y	4.55	66.36	16.15		150.0	
		Z	4.42	66.82	16.27		150.0	
10417-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	X	4.59	66.79	16.39	0.00	150.0	± 9.6 %
		Y	4.55	66.36	16.15		150.0	
		Z	4.42	66.82	16.27		150.0	
10418-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)	X	4.58	66.96	16.41	0.00	150.0	± 9.6 %
		Y	4.54	66.49	16.15		150.0	
		Z	4.42	67.01	16.31		150.0	
10419-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)	X	4.61	66.90	16.41	0.00	150.0	± 9.6 %
		Y	4.56	66.45	16.16		150.0	
		Z	4.43	66.95	16.30		150.0	
10422-AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	X	4.73	66.90	16.41	0.00	150.0	± 9.6 %
		Y	4.69	66.47	16.18		150.0	
		Z	4.54	66.92	16.31		150.0	
10423-AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	X	4.91	67.24	16.54	0.00	150.0	± 9.6 %
		Y	4.87	66.82	16.31		150.0	
		Z	4.68	67.21	16.40		150.0	
10424-AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	X	4.82	67.19	16.51	0.00	150.0	± 9.6 %
		Y	4.79	66.76	16.28		150.0	
		Z	4.61	67.16	16.38		150.0	
10425-AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	X	5.41	67.47	16.65	0.00	150.0	± 9.6 %
		Y	5.40	67.17	16.50		150.0	
		Z	5.21	67.35	16.53		150.0	
10426-AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	X	5.41	67.47	16.65	0.00	150.0	± 9.6 %
		Y	5.40	67.19	16.50		150.0	
		Z	5.23	67.42	16.56		150.0	

10427-AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	X	5.42	67.47	16.64	0.00	150.0	± 9.6 %
		Y	5.41	67.16	16.48		150.0	
		Z	5.22	67.32	16.51		150.0	
10430-AAC	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	X	4.40	71.17	18.58	0.00	150.0	± 9.6 %
		Y	4.23	70.08	17.99		150.0	
		Z	4.30	72.10	18.56		150.0	
10431-AAC	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	X	4.31	67.42	16.46	0.00	150.0	± 9.6 %
		Y	4.26	66.88	16.15		150.0	
		Z	4.07	67.45	16.24		150.0	
10432-AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	X	4.60	67.26	16.49	0.00	150.0	± 9.6 %
		Y	4.56	66.79	16.22		150.0	
		Z	4.38	67.26	16.33		150.0	
10433-AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	X	4.84	67.23	16.53	0.00	150.0	± 9.6 %
		Y	4.80	66.80	16.30		150.0	
		Z	4.63	67.20	16.40		150.0	
10434-AAA	W-CDMA (BS Test Model 1, 64 DPCH)	X	4.54	72.17	18.64	0.00	150.0	± 9.6 %
		Y	4.31	70.81	17.94		150.0	
		Z	4.47	73.20	18.53		150.0	
10435-AAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	123.43	30.93	3.23	80.0	± 9.6 %
		Y	100.00	127.09	32.93		80.0	
		Z	100.00	121.88	29.46		80.0	
10447-AAC	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	3.63	67.60	15.97	0.00	150.0	± 9.6 %
		Y	3.55	66.82	15.51		150.0	
		Z	3.36	67.49	15.39		150.0	
10448-AAC	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	X	4.14	67.21	16.33	0.00	150.0	± 9.6 %
		Y	4.08	66.64	16.00		150.0	
		Z	3.93	67.24	16.11		150.0	
10449-AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	X	4.40	67.10	16.39	0.00	150.0	± 9.6 %
		Y	4.35	66.60	16.11		150.0	
		Z	4.21	67.10	16.24		150.0	
10450-AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	4.59	67.00	16.40	0.00	150.0	± 9.6 %
		Y	4.54	66.54	16.14		150.0	
		Z	4.41	66.98	16.27		150.0	
10451-AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	X	3.56	67.91	15.68	0.00	150.0	± 9.6 %
		Y	3.45	67.01	15.16		150.0	
		Z	3.21	67.51	14.85		150.0	
10456-AAB	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	X	6.26	68.01	16.78	0.00	150.0	± 9.6 %
		Y	6.26	67.75	16.66		150.0	
		Z	6.13	67.97	16.72		150.0	
10457-AAA	UMTS-FDD (DC-HSDPA)	X	3.81	65.42	16.11	0.00	150.0	± 9.6 %
		Y	3.77	64.98	15.86		150.0	
		Z	3.73	65.50	15.98		150.0	
10458-AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	X	4.16	71.37	18.08	0.00	150.0	± 9.6 %
		Y	3.92	69.91	17.32		150.0	
		Z	4.02	72.11	17.63		150.0	
10459-AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	X	5.19	68.40	18.36	0.00	150.0	± 9.6 %
		Y	5.10	67.75	18.06		150.0	
		Z	5.01	69.18	18.25		150.0	

10460-AAA	UMTS-FDD (WCDMA, AMR)	X	1.07	72.05	18.39	0.00	150.0	± 9.6 %
		Y	0.81	67.05	15.17		150.0	
		Z	0.95	70.49	17.24		150.0	
10461-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	129.11	33.59	3.29	80.0	± 9.6 %
		Y	100.00	132.68	35.56		80.0	
		Z	100.00	128.17	32.38		80.0	
10462-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	29.76	94.39	20.32	3.23	80.0	± 9.6 %
		Y	100.00	112.07	25.94		80.0	
		Z	0.79	60.49	7.76		80.0	
10463-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.50	68.97	12.20	3.23	80.0	± 9.6 %
		Y	100.00	107.58	23.85		80.0	
		Z	0.77	60.00	6.89		80.0	
10464-AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	126.29	32.12	3.23	80.0	± 9.6 %
		Y	100.00	130.29	34.26		80.0	
		Z	100.00	124.25	30.42		80.0	
10465-AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	9.13	82.53	17.12	3.23	80.0	± 9.6 %
		Y	100.00	111.30	25.58		80.0	
		Z	0.75	60.00	7.44		80.0	
10466-AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.98	66.71	11.27	3.23	80.0	± 9.6 %
		Y	99.88	106.88	23.53		80.0	
		Z	0.78	60.00	6.83		80.0	
10467-AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	126.60	32.25	3.23	80.0	± 9.6 %
		Y	100.00	130.59	34.40		80.0	
		Z	100.00	124.67	30.60		80.0	
10468-AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	11.66	85.00	17.83	3.23	80.0	± 9.6 %
		Y	100.00	111.53	25.68		80.0	
		Z	0.75	60.09	7.51		80.0	
10469-AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.98	66.75	11.28	3.23	80.0	± 9.6 %
		Y	100.00	106.90	23.54		80.0	
		Z	0.77	60.00	6.83		80.0	
10470-AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	126.64	32.26	3.23	80.0	± 9.6 %
		Y	100.00	130.65	34.41		80.0	
		Z	100.00	124.69	30.60		80.0	
10471-AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	11.32	84.67	17.72	3.23	80.0	± 9.6 %
		Y	100.00	111.46	25.64		80.0	
		Z	0.75	60.04	7.47		80.0	
10472-AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.96	66.63	11.22	3.23	80.0	± 9.6 %
		Y	100.00	106.82	23.49		80.0	
		Z	0.77	60.00	6.81		80.0	
10473-AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	126.60	32.24	3.23	80.0	± 9.6 %
		Y	100.00	130.61	34.39		80.0	
		Z	100.00	124.64	30.58		80.0	
10474-AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	11.06	84.45	17.66	3.23	80.0	± 9.6 %
		Y	100.00	111.47	25.64		80.0	
		Z	0.74	60.02	7.45		80.0	
10475-AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.95	66.59	11.20	3.23	80.0	± 9.6 %
		Y	99.99	106.84	23.50		80.0	
		Z	0.77	60.00	6.81		80.0	

10477-AAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	9.10	82.47	17.07	3.23	80.0	± 9.6 %
		Y	100.00	111.24	25.54		80.0	
		Z	0.74	60.00	7.42		80.0	
10478-AAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.93	66.47	11.14	3.23	80.0	± 9.6 %
		Y	96.81	106.44	23.40		80.0	
		Z	0.77	60.00	6.80		80.0	
10479-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	9.68	90.97	25.10	3.23	80.0	± 9.6 %
		Y	13.83	97.37	27.65		80.0	
		Z	12.23	94.71	25.17		80.0	
10480-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	11.91	88.02	22.17	3.23	80.0	± 9.6 %
		Y	19.25	95.65	25.10		80.0	
		Z	7.50	81.30	18.54		80.0	
10481-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	9.15	83.59	20.38	3.23	80.0	± 9.6 %
		Y	15.12	91.18	23.39		80.0	
		Z	4.40	74.24	15.71		80.0	
10482-AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.76	79.70	20.44	2.23	80.0	± 9.6 %
		Y	3.53	74.74	18.45		80.0	
		Z	2.62	71.60	16.13		80.0	
10483-AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	5.87	78.17	19.16	2.23	80.0	± 9.6 %
		Y	8.24	83.44	21.55		80.0	
		Z	2.93	69.04	14.15		80.0	
10484-AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	5.35	76.61	18.60	2.23	80.0	± 9.6 %
		Y	7.24	81.28	20.83		80.0	
		Z	2.73	67.94	13.69		80.0	
10485-AAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.47	78.87	21.04	2.23	80.0	± 9.6 %
		Y	3.68	75.23	19.49		80.0	
		Z	3.15	74.27	18.50		80.0	
10486-AAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.79	72.50	18.04	2.23	80.0	± 9.6 %
		Y	3.38	70.29	17.05		80.0	
		Z	2.84	69.02	15.57		80.0	
10487-AAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.74	71.89	17.77	2.23	80.0	± 9.6 %
		Y	3.37	69.86	16.85		80.0	
		Z	2.81	68.50	15.32		80.0	
10488-AAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.24	75.86	20.43	2.23	80.0	± 9.6 %
		Y	3.83	73.65	19.40		80.0	
		Z	3.28	72.72	18.85		80.0	
10489-AAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.72	70.49	18.27	2.23	80.0	± 9.6 %
		Y	3.53	69.26	17.66		80.0	
		Z	3.19	68.97	17.14		80.0	
10490-AAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.79	70.18	18.14	2.23	80.0	± 9.6 %
		Y	3.62	69.04	17.58		80.0	
		Z	3.27	68.77	17.05		80.0	
10491-AAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.23	73.19	19.42	2.23	80.0	± 9.6 %
		Y	3.95	71.65	18.67		80.0	
		Z	3.47	70.90	18.25		80.0	
10492-AAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.97	69.24	17.95	2.23	80.0	± 9.6 %
		Y	3.85	68.36	17.51		80.0	
		Z	3.50	68.04	17.11		80.0	

10493-AAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.03	69.04	17.87	2.23	80.0	± 9.6 %
		Y	3.92	68.21	17.46		80.0	
		Z	3.56	67.90	17.04		80.0	
10494-AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.79	75.46	20.14	2.23	80.0	± 9.6 %
		Y	4.38	73.53	19.24		80.0	
		Z	3.78	72.48	18.78		80.0	
10495-AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.03	69.76	18.19	2.23	80.0	± 9.6 %
		Y	3.90	68.85	17.73		80.0	
		Z	3.53	68.35	17.31		80.0	
10496-AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.08	69.35	18.04	2.23	80.0	± 9.6 %
		Y	3.97	68.51	17.62		80.0	
		Z	3.60	68.09	17.22		80.0	
10497-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.72	75.87	18.08	2.23	80.0	± 9.6 %
		Y	2.64	70.76	15.98		80.0	
		Z	1.51	64.60	11.77		80.0	
10498-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.30	66.27	12.99	2.23	80.0	± 9.6 %
		Y	2.02	64.31	12.06		80.0	
		Z	1.20	60.00	8.21		80.0	
10499-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.18	65.35	12.41	2.23	80.0	± 9.6 %
		Y	1.97	63.70	11.62		80.0	
		Z	1.22	60.00	8.05		80.0	
10500-AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.19	76.87	20.53	2.23	80.0	± 9.6 %
		Y	3.63	74.04	19.27		80.0	
		Z	3.15	73.35	18.54		80.0	
10501-AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.74	71.57	18.07	2.23	80.0	± 9.6 %
		Y	3.44	69.83	17.26		80.0	
		Z	3.03	69.25	16.29		80.0	
10502-AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.79	71.34	17.92	2.23	80.0	± 9.6 %
		Y	3.50	69.66	17.14		80.0	
		Z	3.07	69.05	16.12		80.0	
10503-AAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.18	75.62	20.32	2.23	80.0	± 9.6 %
		Y	3.77	73.43	19.30		80.0	
		Z	3.23	72.50	18.74		80.0	
10504-AAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.70	70.40	18.21	2.23	80.0	± 9.6 %
		Y	3.52	69.18	17.61		80.0	
		Z	3.17	68.86	17.07		80.0	
10505-AAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.77	70.08	18.09	2.23	80.0	± 9.6 %
		Y	3.60	68.95	17.53		80.0	
		Z	3.25	68.67	16.99		80.0	
10506-AAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.74	75.29	20.06	2.23	80.0	± 9.6 %
		Y	4.34	73.37	19.17		80.0	
		Z	3.74	72.32	18.70		80.0	
10507-AAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.01	69.69	18.15	2.23	80.0	± 9.6 %
		Y	3.88	68.79	17.69		80.0	
		Z	3.51	68.29	17.27		80.0	

10508-AAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.07	69.28	18.00	2.23	80.0	± 9.6 %
		Y	3.96	68.45	17.58		80.0	
		Z	3.59	68.02	17.17		80.0	
10509-AAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.87	73.12	19.15	2.23	80.0	± 9.6 %
		Y	4.57	71.69	18.46		80.0	
		Z	4.08	70.95	18.12		80.0	
10510-AAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.46	69.19	17.97	2.23	80.0	± 9.6 %
		Y	4.36	68.46	17.61		80.0	
		Z	3.98	67.93	17.23		80.0	
10511-AAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.49	68.83	17.85	2.23	80.0	± 9.6 %
		Y	4.40	68.15	17.52		80.0	
		Z	4.03	67.70	17.16		80.0	
10512-AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	5.35	75.53	19.95	2.23	80.0	± 9.6 %
		Y	4.89	73.64	19.09		80.0	
		Z	4.27	72.56	18.64		80.0	
10513-AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.37	69.62	18.15	2.23	80.0	± 9.6 %
		Y	4.26	68.83	17.75		80.0	
		Z	3.86	68.15	17.33		80.0	
10514-AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.36	69.04	17.95	2.23	80.0	± 9.6 %
		Y	4.26	68.32	17.60		80.0	
		Z	3.89	67.75	17.20		80.0	
10515-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	X	0.98	64.01	15.52	0.00	150.0	± 9.6 %
		Y	0.90	62.52	14.23		150.0	
		Z	0.95	63.71	15.08		150.0	
10516-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	X	0.96	80.43	22.24	0.00	150.0	± 9.6 %
		Y	0.52	69.16	15.73		150.0	
		Z	0.74	75.71	19.80		150.0	
10517-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	X	0.87	66.95	16.73	0.00	150.0	± 9.6 %
		Y	0.75	64.30	14.64		150.0	
		Z	0.81	66.10	15.98		150.0	
10518-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	X	4.59	66.88	16.37	0.00	150.0	± 9.6 %
		Y	4.55	66.43	16.12		150.0	
		Z	4.41	66.91	16.25		150.0	
10519-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	X	4.79	67.13	16.49	0.00	150.0	± 9.6 %
		Y	4.75	66.71	16.26		150.0	
		Z	4.57	67.10	16.35		150.0	
10520-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	X	4.64	67.11	16.43	0.00	150.0	± 9.6 %
		Y	4.60	66.67	16.18		150.0	
		Z	4.43	67.05	16.27		150.0	
10521-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	X	4.57	67.12	16.42	0.00	150.0	± 9.6 %
		Y	4.53	66.66	16.16		150.0	
		Z	4.36	67.04	16.26		150.0	
10522-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	X	4.63	67.16	16.48	0.00	150.0	± 9.6 %
		Y	4.59	66.70	16.22		150.0	
		Z	4.42	67.17	16.36		150.0	

10523-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	X	4.51	67.05	16.34	0.00	150.0	± 9.6 %
		Y	4.46	66.56	16.06		150.0	
		Z	4.33	67.10	16.24		150.0	
10524-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	X	4.58	67.09	16.46	0.00	150.0	± 9.6 %
		Y	4.53	66.64	16.20		150.0	
		Z	4.37	67.10	16.33		150.0	
10525-AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	X	4.55	66.14	16.05	0.00	150.0	± 9.6 %
		Y	4.50	65.66	15.78		150.0	
		Z	4.38	66.18	15.95		150.0	
10526-AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	X	4.74	66.53	16.19	0.00	150.0	± 9.6 %
		Y	4.69	66.05	15.93		150.0	
		Z	4.52	66.50	16.07		150.0	
10527-AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	X	4.66	66.50	16.15	0.00	150.0	± 9.6 %
		Y	4.61	66.01	15.87		150.0	
		Z	4.45	66.47	16.02		150.0	
10528-AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	X	4.67	66.52	16.18	0.00	150.0	± 9.6 %
		Y	4.62	66.03	15.91		150.0	
		Z	4.47	66.48	16.05		150.0	
10529-AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	X	4.67	66.52	16.18	0.00	150.0	± 9.6 %
		Y	4.62	66.03	15.91		150.0	
		Z	4.47	66.48	16.05		150.0	
10531-AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	X	4.67	66.65	16.20	0.00	150.0	± 9.6 %
		Y	4.63	66.16	15.93		150.0	
		Z	4.44	66.54	16.04		150.0	
10532-AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)	X	4.53	66.51	16.14	0.00	150.0	± 9.6 %
		Y	4.48	66.01	15.86		150.0	
		Z	4.32	66.41	15.98		150.0	
10533-AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	X	4.68	66.56	16.16	0.00	150.0	± 9.6 %
		Y	4.63	66.06	15.89		150.0	
		Z	4.48	66.56	16.05		150.0	
10534-AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	X	5.19	66.60	16.20	0.00	150.0	± 9.6 %
		Y	5.16	66.20	15.99		150.0	
		Z	5.01	66.50	16.09		150.0	
10535-AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	X	5.26	66.75	16.27	0.00	150.0	± 9.6 %
		Y	5.22	66.35	16.06		150.0	
		Z	5.06	66.65	16.16		150.0	
10536-AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	X	5.13	66.73	16.24	0.00	150.0	± 9.6 %
		Y	5.09	66.32	16.02		150.0	
		Z	4.95	66.64	16.13		150.0	
10537-AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	X	5.19	66.69	16.22	0.00	150.0	± 9.6 %
		Y	5.15	66.30	16.01		150.0	
		Z	5.00	66.59	16.11		150.0	
10538-AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	X	5.28	66.73	16.28	0.00	150.0	± 9.6 %
		Y	5.26	66.36	16.08		150.0	
		Z	5.08	66.58	16.14		150.0	
10540-AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	X	5.21	66.72	16.29	0.00	150.0	± 9.6 %
		Y	5.17	66.33	16.08		150.0	
		Z	5.01	66.56	16.15		150.0	

10541-AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)	X	5.18	66.60	16.22	0.00	150.0	± 9.6 %
		Y	5.14	66.20	16.01		150.0	
		Z	4.99	66.47	16.09		150.0	
10542-AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	X	5.33	66.65	16.26	0.00	150.0	± 9.6 %
		Y	5.31	66.28	16.07		150.0	
		Z	5.14	66.55	16.15		150.0	
10543-AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	X	5.41	66.68	16.29	0.00	150.0	± 9.6 %
		Y	5.39	66.31	16.11		150.0	
		Z	5.20	66.56	16.18		150.0	
10544-AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	X	5.49	66.70	16.18	0.00	150.0	± 9.6 %
		Y	5.45	66.31	15.98		150.0	
		Z	5.34	66.58	16.07		150.0	
10545-AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	X	5.68	67.09	16.32	0.00	150.0	± 9.6 %
		Y	5.66	66.76	16.15		150.0	
		Z	5.51	66.98	16.23		150.0	
10546-AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	X	5.57	66.94	16.26	0.00	150.0	± 9.6 %
		Y	5.54	66.57	16.08		150.0	
		Z	5.38	66.73	16.11		150.0	
10547-AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	X	5.64	66.98	16.27	0.00	150.0	± 9.6 %
		Y	5.63	66.66	16.11		150.0	
		Z	5.45	66.79	16.14		150.0	
10548-AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)	X	5.90	67.92	16.71	0.00	150.0	± 9.6 %
		Y	5.97	67.87	16.68		150.0	
		Z	5.63	67.50	16.47		150.0	
10550-AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	X	5.59	66.92	16.26	0.00	150.0	± 9.6 %
		Y	5.55	66.54	16.07		150.0	
		Z	5.42	66.82	16.17		150.0	
10551-AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	X	5.60	66.98	16.25	0.00	150.0	± 9.6 %
		Y	5.56	66.60	16.06		150.0	
		Z	5.40	66.75	16.10		150.0	
10552-AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	X	5.51	66.77	16.16	0.00	150.0	± 9.6 %
		Y	5.47	66.37	15.96		150.0	
		Z	5.35	66.67	16.06		150.0	
10553-AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	X	5.60	66.81	16.21	0.00	150.0	± 9.6 %
		Y	5.56	66.43	16.01		150.0	
		Z	5.41	66.65	16.08		150.0	
10554-AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	X	5.89	67.05	16.26	0.00	150.0	± 9.6 %
		Y	5.86	66.69	16.08		150.0	
		Z	5.75	66.91	16.14		150.0	
10555-AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	X	6.02	67.35	16.38	0.00	150.0	± 9.6 %
		Y	6.00	67.02	16.22		150.0	
		Z	5.86	67.17	16.25		150.0	
10556-AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	X	6.04	67.39	16.40	0.00	150.0	± 9.6 %
		Y	6.02	67.06	16.23		150.0	
		Z	5.88	67.24	16.28		150.0	
10557-AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	X	6.01	67.32	16.38	0.00	150.0	± 9.6 %
		Y	5.99	66.98	16.22		150.0	
		Z	5.85	67.13	16.24		150.0	

10558-AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	X	6.07	67.49	16.48	0.00	150.0	± 9.6 %
		Y	6.05	67.17	16.33		150.0	
		Z	5.88	67.26	16.33		150.0	
10560-AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	X	6.06	67.34	16.44	0.00	150.0	± 9.6 %
		Y	6.04	66.99	16.28		150.0	
		Z	5.88	67.13	16.30		150.0	
10561-AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)	X	5.98	67.30	16.46	0.00	150.0	± 9.6 %
		Y	5.96	66.96	16.30		150.0	
		Z	5.81	67.11	16.32		150.0	
10562-AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	X	6.11	67.72	16.67	0.00	150.0	± 9.6 %
		Y	6.12	67.46	16.55		150.0	
		Z	5.89	67.37	16.45		150.0	
10563-AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	X	6.43	68.23	16.87	0.00	150.0	± 9.6 %
		Y	6.50	68.16	16.85		150.0	
		Z	5.96	67.23	16.35		150.0	
10564-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	X	4.91	66.93	16.51	0.46	150.0	± 9.6 %
		Y	4.88	66.54	16.31		150.0	
		Z	4.73	66.93	16.37		150.0	
10565-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	X	5.16	67.40	16.83	0.46	150.0	± 9.6 %
		Y	5.13	67.02	16.64		150.0	
		Z	4.93	67.35	16.69		150.0	
10566-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	X	4.99	67.26	16.66	0.46	150.0	± 9.6 %
		Y	4.96	66.87	16.45		150.0	
		Z	4.77	67.18	16.50		150.0	
10567-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	X	5.02	67.67	17.02	0.46	150.0	± 9.6 %
		Y	4.98	67.25	16.79		150.0	
		Z	4.81	67.60	16.88		150.0	
10568-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	X	4.90	67.00	16.42	0.46	150.0	± 9.6 %
		Y	4.87	66.62	16.22		150.0	
		Z	4.67	66.94	16.26		150.0	
10569-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	X	4.97	67.73	17.07	0.46	150.0	± 9.6 %
		Y	4.93	67.29	16.83		150.0	
		Z	4.78	67.78	16.99		150.0	
10570-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	X	5.01	67.57	17.00	0.46	150.0	± 9.6 %
		Y	4.97	67.15	16.77		150.0	
		Z	4.80	67.57	16.89		150.0	
10571-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	X	1.17	65.22	16.39	0.46	130.0	± 9.6 %
		Y	1.09	63.89	15.30		130.0	
		Z	1.10	64.48	15.68		130.0	
10572-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	X	1.19	65.91	16.81	0.46	130.0	± 9.6 %
		Y	1.10	64.45	15.65		130.0	
		Z	1.12	65.08	16.07		130.0	
10573-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	X	11.95	118.97	33.95	0.46	130.0	± 9.6 %
		Y	2.10	86.50	22.92		130.0	
		Z	2.78	93.83	26.37		130.0	
10574-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	X	1.42	73.69	20.72	0.46	130.0	± 9.6 %
		Y	1.20	70.19	18.52		130.0	
		Z	1.24	71.54	19.44		130.0	

10575-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	X	4.69	66.71	16.57	0.46	130.0	± 9.6 %
		Y	4.67	66.34	16.38		130.0	
		Z	4.50	66.68	16.40		130.0	
10576-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	X	4.72	66.88	16.64	0.46	130.0	± 9.6 %
		Y	4.69	66.50	16.44		130.0	
		Z	4.53	66.88	16.48		130.0	
10577-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	X	4.94	67.20	16.81	0.46	130.0	± 9.6 %
		Y	4.91	66.83	16.62		130.0	
		Z	4.71	67.13	16.63		130.0	
10578-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	X	4.83	67.37	16.92	0.46	130.0	± 9.6 %
		Y	4.81	66.98	16.72		130.0	
		Z	4.61	67.29	16.74		130.0	
10579-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)	X	4.60	66.66	16.24	0.46	130.0	± 9.6 %
		Y	4.57	66.30	16.05		130.0	
		Z	4.37	66.49	16.00		130.0	
10580-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	X	4.64	66.67	16.25	0.46	130.0	± 9.6 %
		Y	4.62	66.31	16.06		130.0	
		Z	4.41	66.55	16.03		130.0	
10581-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	X	4.73	67.42	16.87	0.46	130.0	± 9.6 %
		Y	4.70	67.02	16.65		130.0	
		Z	4.52	67.36	16.71		130.0	
10582-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	X	4.54	66.41	16.03	0.46	130.0	± 9.6 %
		Y	4.53	66.07	15.85		130.0	
		Z	4.30	66.25	15.78		130.0	
10583-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	X	4.69	66.71	16.57	0.46	130.0	± 9.6 %
		Y	4.67	66.34	16.38		130.0	
		Z	4.50	66.68	16.40		130.0	
10584-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	X	4.72	66.88	16.64	0.46	130.0	± 9.6 %
		Y	4.69	66.50	16.44		130.0	
		Z	4.53	66.88	16.48		130.0	
10585-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	X	4.94	67.20	16.81	0.46	130.0	± 9.6 %
		Y	4.91	66.83	16.62		130.0	
		Z	4.71	67.13	16.63		130.0	
10586-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	X	4.83	67.37	16.92	0.46	130.0	± 9.6 %
		Y	4.81	66.98	16.72		130.0	
		Z	4.61	67.29	16.74		130.0	
10587-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	X	4.60	66.66	16.24	0.46	130.0	± 9.6 %
		Y	4.57	66.30	16.05		130.0	
		Z	4.37	66.49	16.00		130.0	
10588-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	X	4.64	66.67	16.25	0.46	130.0	± 9.6 %
		Y	4.62	66.31	16.06		130.0	
		Z	4.41	66.55	16.03		130.0	
10589-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	X	4.73	67.42	16.87	0.46	130.0	± 9.6 %
		Y	4.70	67.02	16.65		130.0	
		Z	4.52	67.36	16.71		130.0	
10590-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	X	4.54	66.41	16.03	0.46	130.0	± 9.6 %
		Y	4.53	66.07	15.85		130.0	
		Z	4.30	66.25	15.78		130.0	

10591-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)	X	4.84	66.77	16.66	0.46	130.0	± 9.6 %
		Y	4.82	66.41	16.48		130.0	
		Z	4.66	66.76	16.51		130.0	
10592-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	X	5.01	67.12	16.79	0.46	130.0	± 9.6 %
		Y	4.99	66.76	16.61		130.0	
		Z	4.79	67.07	16.64		130.0	
10593-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	X	4.93	67.04	16.68	0.46	130.0	± 9.6 %
		Y	4.91	66.69	16.51		130.0	
		Z	4.71	66.95	16.50		130.0	
10594-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	X	4.98	67.20	16.83	0.46	130.0	± 9.6 %
		Y	4.96	66.84	16.65		130.0	
		Z	4.76	67.13	16.67		130.0	
10595-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)	X	4.95	67.16	16.73	0.46	130.0	± 9.6 %
		Y	4.93	66.80	16.55		130.0	
		Z	4.73	67.10	16.57		130.0	
10596-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle)	X	4.89	67.16	16.74	0.46	130.0	± 9.6 %
		Y	4.87	66.79	16.55		130.0	
		Z	4.66	67.08	16.56		130.0	
10597-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	X	4.84	67.08	16.63	0.46	130.0	± 9.6 %
		Y	4.82	66.71	16.44		130.0	
		Z	4.61	66.96	16.43		130.0	
10598-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	X	4.82	67.33	16.90	0.46	130.0	± 9.6 %
		Y	4.80	66.95	16.70		130.0	
		Z	4.60	67.20	16.70		130.0	
10599-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)	X	5.51	67.30	16.83	0.46	130.0	± 9.6 %
		Y	5.50	67.04	16.72		130.0	
		Z	5.31	67.18	16.69		130.0	
10600-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	X	5.66	67.75	17.03	0.46	130.0	± 9.6 %
		Y	5.70	67.66	17.00		130.0	
		Z	5.42	67.55	16.85		130.0	
10601-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	X	5.54	67.49	16.91	0.46	130.0	± 9.6 %
		Y	5.55	67.29	16.83		130.0	
		Z	5.33	67.34	16.76		130.0	
10602-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	X	5.62	67.47	16.82	0.46	130.0	± 9.6 %
		Y	5.64	67.27	16.74		130.0	
		Z	5.46	67.51	16.77		130.0	
10603-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	X	5.72	67.83	17.13	0.46	130.0	± 9.6 %
		Y	5.72	67.56	17.01		130.0	
		Z	5.53	67.80	17.05		130.0	
10604-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	X	5.51	67.26	16.84	0.46	130.0	± 9.6 %
		Y	5.51	67.00	16.72		130.0	
		Z	5.40	67.44	16.85		130.0	
10605-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	X	5.62	67.58	16.99	0.46	130.0	± 9.6 %
		Y	5.63	67.37	16.91		130.0	
		Z	5.43	67.48	16.86		130.0	
10606-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	X	5.39	67.04	16.59	0.46	130.0	± 9.6 %
		Y	5.38	66.75	16.46		130.0	
		Z	5.18	66.82	16.39		130.0	

10607-AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	X	4.69	66.11	16.30	0.46	130.0	± 9.6 %
		Y	4.65	65.70	16.09		130.0	
		Z	4.51	66.12	16.16		130.0	
10608-AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	X	4.89	66.54	16.47	0.46	130.0	± 9.6 %
		Y	4.86	66.13	16.26		130.0	
		Z	4.67	66.48	16.32		130.0	
10609-AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	X	4.78	66.40	16.32	0.46	130.0	± 9.6 %
		Y	4.74	65.99	16.10		130.0	
		Z	4.56	66.32	16.14		130.0	
10610-AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	X	4.83	66.56	16.48	0.46	130.0	± 9.6 %
		Y	4.80	66.15	16.27		130.0	
		Z	4.61	66.49	16.31		130.0	
10611-AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	X	4.74	66.37	16.33	0.46	130.0	± 9.6 %
		Y	4.71	65.96	16.12		130.0	
		Z	4.52	66.28	16.15		130.0	
10612-AAB	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	X	4.76	66.53	16.38	0.46	130.0	± 9.6 %
		Y	4.73	66.12	16.16		130.0	
		Z	4.52	66.43	16.20		130.0	
10613-AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	X	4.76	66.43	16.27	0.46	130.0	± 9.6 %
		Y	4.74	66.03	16.06		130.0	
		Z	4.52	66.26	16.05		130.0	
10614-AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	X	4.70	66.62	16.50	0.46	130.0	± 9.6 %
		Y	4.67	66.19	16.28		130.0	
		Z	4.48	66.49	16.31		130.0	
10615-AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	X	4.74	66.19	16.10	0.46	130.0	± 9.6 %
		Y	4.72	65.79	15.90		130.0	
		Z	4.52	66.11	15.92		130.0	
10616-AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	X	5.34	66.61	16.47	0.46	130.0	± 9.6 %
		Y	5.32	66.28	16.32		130.0	
		Z	5.14	66.47	16.32		130.0	
10617-AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	X	5.40	66.74	16.51	0.46	130.0	± 9.6 %
		Y	5.38	66.41	16.35		130.0	
		Z	5.21	66.65	16.39		130.0	
10618-AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	X	5.29	66.79	16.56	0.46	130.0	± 9.6 %
		Y	5.27	66.46	16.39		130.0	
		Z	5.11	66.70	16.43		130.0	
10619-AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	X	5.31	66.61	16.40	0.46	130.0	± 9.6 %
		Y	5.30	66.30	16.25		130.0	
		Z	5.11	66.46	16.24		130.0	
10620-AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	X	5.41	66.67	16.47	0.46	130.0	± 9.6 %
		Y	5.41	66.38	16.34		130.0	
		Z	5.19	66.48	16.30		130.0	
10621-AAB	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	X	5.40	66.76	16.64	0.46	130.0	± 9.6 %
		Y	5.38	66.43	16.48		130.0	
		Z	5.21	66.64	16.50		130.0	
10622-AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	X	5.41	66.91	16.70	0.46	130.0	± 9.6 %
		Y	5.39	66.60	16.55		130.0	
		Z	5.20	66.74	16.55		130.0	

10623-AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	X	5.29	66.45	16.36	0.46	130.0	± 9.6 %
		Y	5.27	66.12	16.20		130.0	
		Z	5.08	66.28	16.19		130.0	
10624-AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	X	5.48	66.64	16.51	0.46	130.0	± 9.6 %
		Y	5.47	66.35	16.38		130.0	
		Z	5.28	66.51	16.36		130.0	
10625-AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	X	5.87	67.67	17.07	0.46	130.0	± 9.6 %
		Y	5.92	67.56	17.03		130.0	
		Z	5.48	66.99	16.66		130.0	
10626-AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	X	5.62	66.65	16.41	0.46	130.0	± 9.6 %
		Y	5.59	66.32	16.26		130.0	
		Z	5.46	66.52	16.28		130.0	
10627-AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	X	5.86	67.19	16.64	0.46	130.0	± 9.6 %
		Y	5.87	66.96	16.54		130.0	
		Z	5.68	67.07	16.52		130.0	
10628-AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	X	5.67	66.78	16.37	0.46	130.0	± 9.6 %
		Y	5.65	66.49	16.24		130.0	
		Z	5.47	66.52	16.18		130.0	
10629-AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	X	5.76	66.87	16.41	0.46	130.0	± 9.6 %
		Y	5.74	66.55	16.26		130.0	
		Z	5.55	66.62	16.22		130.0	
10630-AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	X	6.21	68.41	17.17	0.46	130.0	± 9.6 %
		Y	6.36	68.57	17.26		130.0	
		Z	5.84	67.72	16.78		130.0	
10631-AAB	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	X	6.11	68.22	17.27	0.46	130.0	± 9.6 %
		Y	6.15	68.07	17.21		130.0	
		Z	5.81	67.73	16.97		130.0	
10632-AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	X	5.83	67.26	16.81	0.46	130.0	± 9.6 %
		Y	5.82	66.98	16.68		130.0	
		Z	5.67	67.19	16.73		130.0	
10633-AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	X	5.73	66.95	16.48	0.46	130.0	± 9.6 %
		Y	5.72	66.66	16.35		130.0	
		Z	5.54	66.74	16.32		130.0	
10634-AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	X	5.72	66.98	16.56	0.46	130.0	± 9.6 %
		Y	5.70	66.65	16.41		130.0	
		Z	5.52	66.78	16.40		130.0	
10635-AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	X	5.60	66.32	15.97	0.46	130.0	± 9.6 %
		Y	5.59	66.03	15.84		130.0	
		Z	5.39	66.04	15.76		130.0	
10636-AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	X	6.03	67.02	16.50	0.46	130.0	± 9.6 %
		Y	6.02	66.74	16.37		130.0	
		Z	5.89	66.87	16.36		130.0	
10637-AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	X	6.19	67.40	16.66	0.46	130.0	± 9.6 %
		Y	6.19	67.15	16.56		130.0	
		Z	6.02	67.21	16.51		130.0	
10638-AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	X	6.19	67.38	16.63	0.46	130.0	± 9.6 %
		Y	6.19	67.12	16.52		130.0	
		Z	6.03	67.21	16.49		130.0	

10639-AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	X	6.18	67.36	16.66	0.46	130.0	± 9.6 %
		Y	6.17	67.09	16.55		130.0	
		Z	6.00	67.13	16.50		130.0	
10640-AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	X	6.19	67.39	16.62	0.46	130.0	± 9.6 %
		Y	6.20	67.16	16.53		130.0	
		Z	5.99	67.11	16.43		130.0	
10641-AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	X	6.21	67.22	16.56	0.46	130.0	± 9.6 %
		Y	6.20	66.94	16.44		130.0	
		Z	6.05	67.08	16.43		130.0	
10642-AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	X	6.27	67.52	16.87	0.46	130.0	± 9.6 %
		Y	6.26	67.23	16.75		130.0	
		Z	6.09	67.31	16.72		130.0	
10643-AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	X	6.10	67.19	16.61	0.46	130.0	± 9.6 %
		Y	6.09	66.93	16.50		130.0	
		Z	5.93	67.00	16.46		130.0	
10644-AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	X	6.29	67.77	16.92	0.46	130.0	± 9.6 %
		Y	6.32	67.61	16.86		130.0	
		Z	6.02	67.30	16.63		130.0	
10645-AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	X	6.72	68.61	17.29	0.46	130.0	± 9.6 %
		Y	6.81	68.60	17.31		130.0	
		Z	6.13	67.29	16.58		130.0	
10646-AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	X	26.22	119.06	40.53	9.30	60.0	± 9.6 %
		Y	23.98	116.77	40.23		60.0	
		Z	13.39	105.96	36.68		60.0	
10647-AAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	X	21.91	115.56	39.67	9.30	60.0	± 9.6 %
		Y	20.79	114.08	39.59		60.0	
		Z	11.12	102.25	35.63		60.0	
10648-AAA	CDMA2000 (1x Advanced)	X	0.80	65.60	12.34	0.00	150.0	± 9.6 %
		Y	0.65	62.69	10.17		150.0	
		Z	0.58	62.96	9.61		150.0	
10652-AAC	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	3.70	67.38	17.08	2.23	80.0	± 9.6 %
		Y	3.59	66.56	16.66		80.0	
		Z	3.39	66.83	16.41		80.0	
10653-AAC	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	X	4.17	66.50	17.03	2.23	80.0	± 9.6 %
		Y	4.11	65.95	16.76		80.0	
		Z	3.90	66.02	16.55		80.0	
10654-AAC	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	X	4.13	66.12	17.00	2.23	80.0	± 9.6 %
		Y	4.07	65.60	16.75		80.0	
		Z	3.90	65.62	16.55		80.0	
10655-AAD	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	4.19	66.12	17.04	2.23	80.0	± 9.6 %
		Y	4.13	65.62	16.79		80.0	
		Z	3.96	65.57	16.58		80.0	
10658-AAA	Pulse Waveform (200Hz, 10%)	X	100.00	111.27	26.15	10.00	50.0	± 9.6 %
		Y	100.00	112.15	26.71		50.0	
		Z	14.35	85.50	18.40		50.0	
10659-AAA	Pulse Waveform (200Hz, 20%)	X	100.00	110.66	24.83	6.99	60.0	± 9.6 %
		Y	100.00	110.25	24.76		60.0	
		Z	100.00	105.29	22.07		60.0	

10660-AAA	Pulse Waveform (200Hz, 40%)	X	100.00	112.93	24.53	3.98	80.0	± 9.6 %
		Y	100.00	108.47	22.64		80.0	
		Z	100.00	104.83	20.58		80.0	
10661-AAA	Pulse Waveform (200Hz, 60%)	X	100.00	118.71	25.68	2.22	100.0	± 9.6 %
		Y	100.00	104.33	19.70		100.0	
		Z	100.00	104.48	19.32		100.0	
10662-AAA	Pulse Waveform (200Hz, 80%)	X	100.00	138.66	31.49	0.97	120.0	± 9.6 %
		Y	0.19	60.00	4.09		120.0	
		Z	100.00	91.23	12.90		120.0	

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



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Accreditation No.: **SCS 0108**

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 Multilateral Agreement for the recognition of calibration certificates

Client **PC Test**

Certificate No: **EX3-7417_Feb19**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7417**

Calibration procedure(s) **QA CAL-01.v9, QA CAL-23.v5, QA CAL-25.v7**
Calibration procedure for dosimetric E-field probes

Calibration date: **February 19, 2019**

BN ✓
 02-26-2019

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-18 (No. 217-02682)	Apr-19
DAE4	SN: 660	19-Dec-18 (No. DAE4-660_Dec18)	Dec-19
Reference Probe ES3DV2	SN: 3013	31-Dec-18 (No. ES3-3013_Dec18)	Dec-19
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

Calibrated by:	Name	Function	Signature
	Claudio Leubler	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: February 20, 2019

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



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Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization ϕ	ϕ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E^2 -field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z}** = NORM_{x,y,z} * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; VR_{x,y,z}**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7417

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.54	0.43	0.53	± 10.1 %
DCP (mV) ^B	98.7	97.4	100.4	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB $\sqrt{\mu\text{V}}$	C	D dB	VR mV	Max dev.	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	144.6	± 3.3 %	± 4.7 %
		Y	0.00	0.00	1.00		149.7		
		Z	0.00	0.00	1.00		143.1		
10352- AAA	Pulse Waveform (200Hz, 10%)	X	15.00	88.38	19.65	10.00	60.0	± 3.3 %	± 9.6 %
		Y	4.33	71.38	13.30		60.0		
		Z	7.40	77.44	14.95		60.0		
10353- AAA	Pulse Waveform (200Hz, 20%)	X	15.00	92.19	20.43	6.99	80.0	± 2.2 %	± 9.6 %
		Y	5.53	76.01	13.64		80.0		
		Z	15.00	85.74	16.43		80.0		
10354- AAA	Pulse Waveform (200Hz, 40%)	X	15.00	107.68	26.54	3.98	95.0	± 1.3 %	± 9.6 %
		Y	9.05	79.53	12.66		95.0		
		Z	15.00	90.71	17.41		95.0		
10355- AAA	Pulse Waveform (200Hz, 60%)	X	15.00	127.17	33.83	2.22	120.0	± 1.2 %	± 9.6 %
		Y	0.26	60.00	4.45		120.0		
		Z	15.00	99.84	20.30		120.0		
10387- AAA	QPSK Waveform, 1 MHz	X	0.56	60.62	7.74	0.00	150.0	± 3.6 %	± 9.6 %
		Y	0.42	60.00	4.69		150.0		
		Z	0.44	60.00	5.48		150.0		
10388- AAA	QPSK Waveform, 10 MHz	X	2.27	69.09	16.46	0.00	150.0	± 1.3 %	± 9.6 %
		Y	1.94	67.43	15.43		150.0		
		Z	2.06	68.27	16.05		150.0		
10396- AAA	64-QAM Waveform, 100 kHz	X	3.15	72.71	19.95	3.01	150.0	± 2.5 %	± 9.6 %
		Y	2.04	67.08	18.19		150.0		
		Z	2.07	66.03	16.88		150.0		
10399- AAA	64-QAM Waveform, 40 MHz	X	3.52	67.53	16.10	0.00	150.0	± 2.4 %	± 9.6 %
		Y	3.32	66.83	15.68		150.0		
		Z	3.38	67.15	15.89		150.0		
10414- AAA	WLAN CCDF, 64-QAM, 40MHz	X	4.80	65.90	15.74	0.00	150.0	± 4.4 %	± 9.6 %
		Y	4.58	65.58	15.59		150.0		
		Z	4.60	65.76	15.65		150.0		

Note: For details on UID parameters see Appendix

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of Norm X,Y,Z do not affect the E²-field uncertainty inside TSL (see Pages 5 and 6).

^B Numerical linearization parameter: uncertainty not required.

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

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7417

Sensor Model Parameters

	C1 fF	C2 fF	α V^{-1}	T1 $ms.V^{-2}$	T2 $ms.V^{-1}$	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
X	37.6	279.10	35.33	9.45	0.00	5.09	1.69	0.14	1.01
Y	29.6	227.60	37.50	5.19	0.43	5.04	0.00	0.16	1.01
Z	28.8	214.34	35.37	6.91	0.00	5.04	0.00	0.24	1.00

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	120.5
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7417

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^c	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	41.9	0.89	10.36	10.36	10.36	0.54	0.99	± 12.0 %
835	41.5	0.90	10.07	10.07	10.07	0.48	0.84	± 12.0 %
1750	40.1	1.37	8.39	8.39	8.39	0.38	0.85	± 12.0 %
1900	40.0	1.40	8.11	8.11	8.11	0.39	0.84	± 12.0 %
2300	39.5	1.67	7.73	7.73	7.73	0.30	0.93	± 12.0 %
2450	39.2	1.80	7.46	7.46	7.46	0.39	0.95	± 12.0 %
2600	39.0	1.96	7.17	7.17	7.17	0.31	1.05	± 12.0 %

^c Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7417

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	55.5	0.96	10.35	10.35	10.35	0.63	0.84	± 12.0 %
835	55.2	0.97	10.11	10.11	10.11	0.43	0.84	± 12.0 %
1750	53.4	1.49	8.21	8.21	8.21	0.43	0.88	± 12.0 %
1900	53.3	1.52	7.86	7.86	7.86	0.43	0.87	± 12.0 %
2300	52.9	1.81	7.64	7.64	7.64	0.41	0.93	± 12.0 %
2450	52.7	1.95	7.51	7.51	7.51	0.40	0.95	± 12.0 %
2600	52.5	2.16	7.37	7.37	7.37	0.33	1.05	± 12.0 %

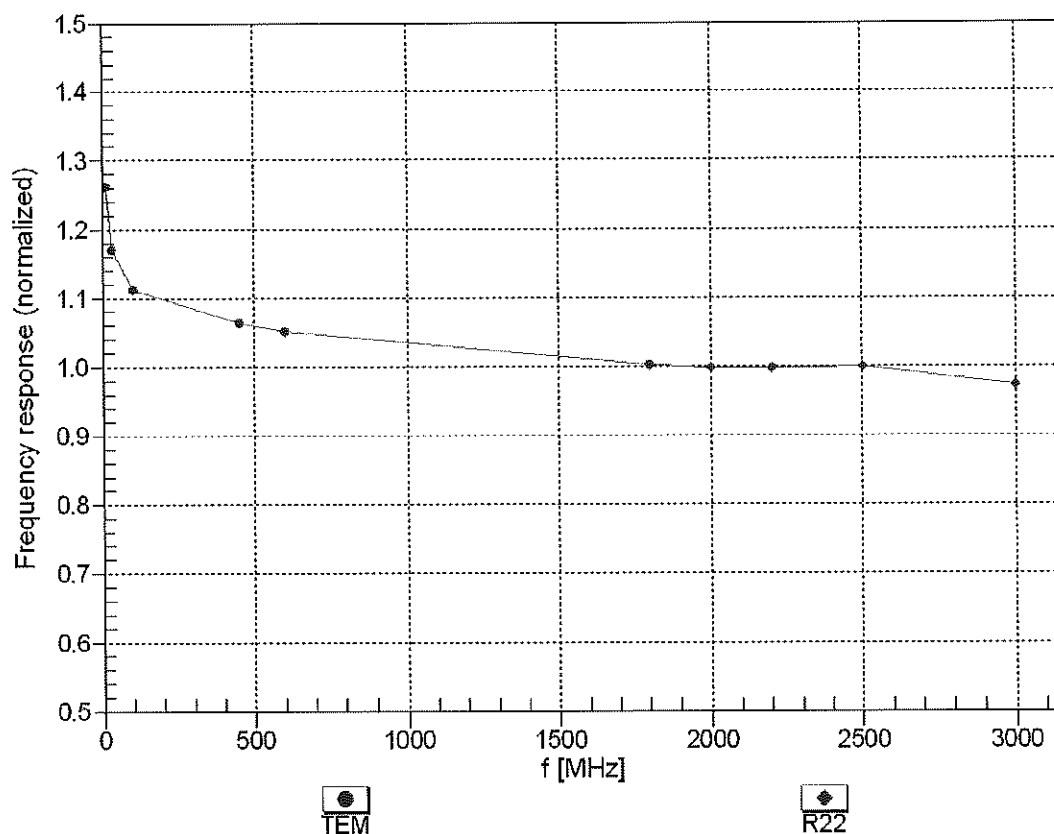
^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Frequency Response of E-Field

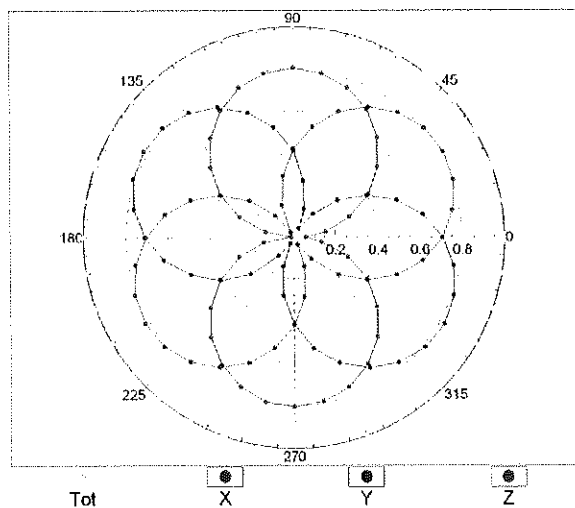
(TEM-Cell:ifi110 EXX, Waveguide: R22)



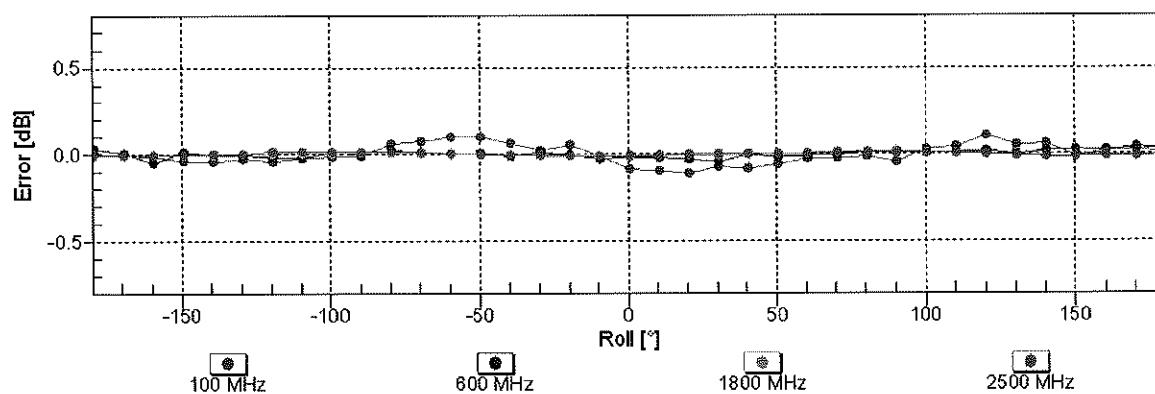
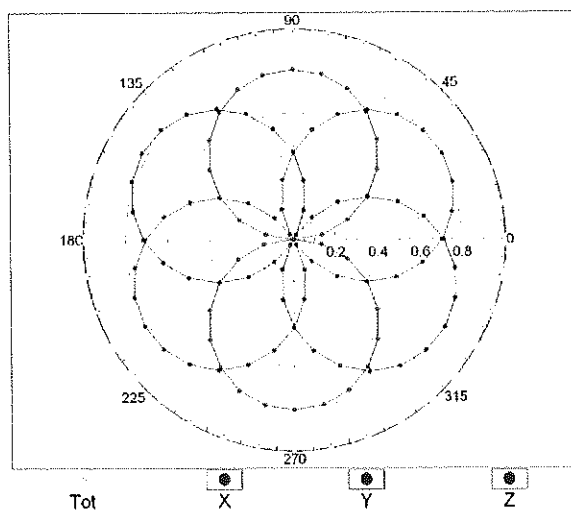
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

Receiving Pattern (ϕ), $\theta = 0^\circ$

f=600 MHz,TEM

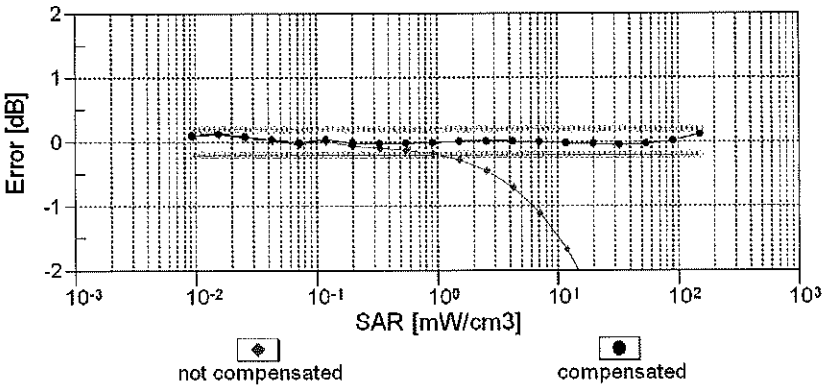
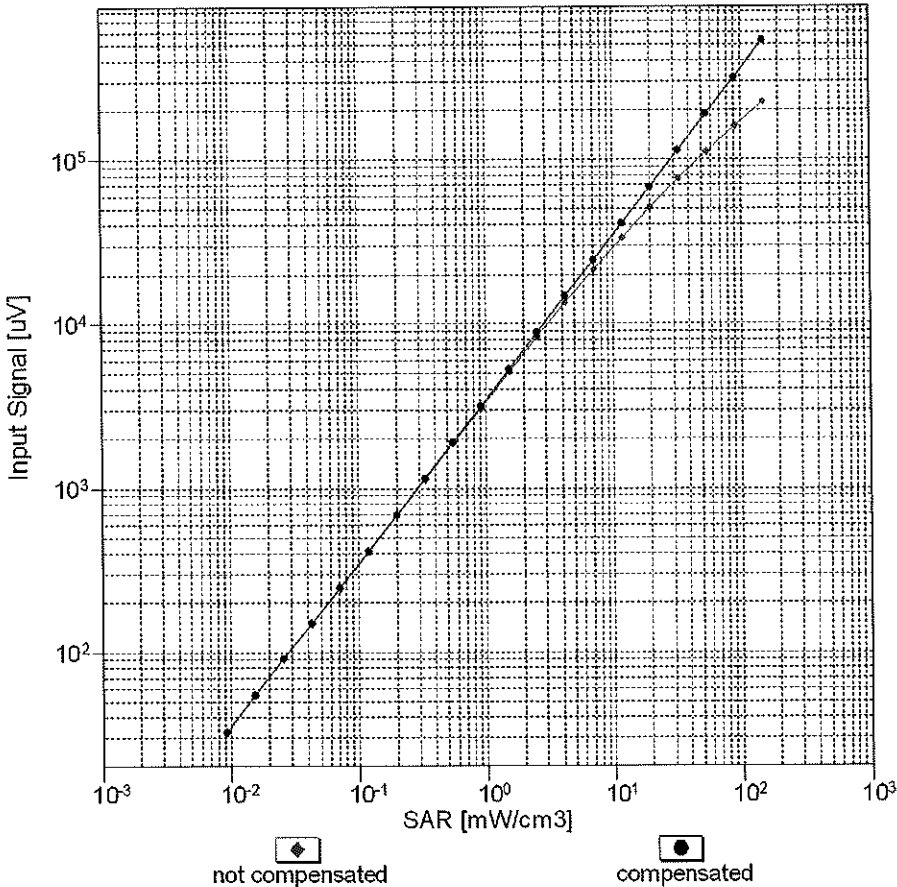


f=1800 MHz,R22



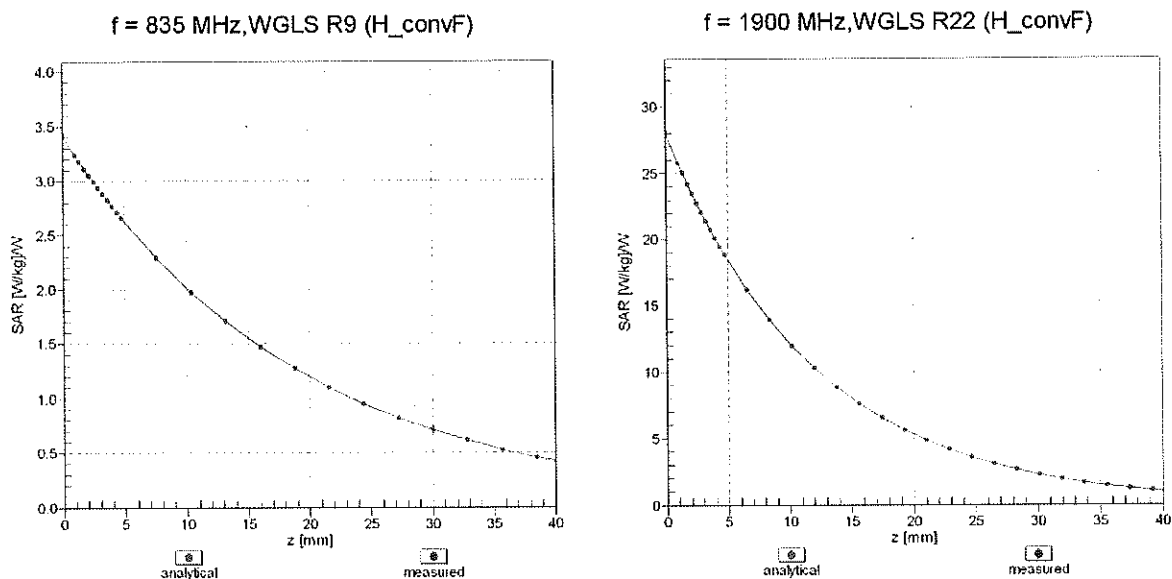
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

Dynamic Range f(SAR_{head})
(TEM cell , f_{eval}= 1900 MHz)



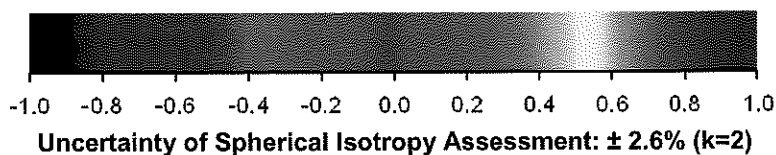
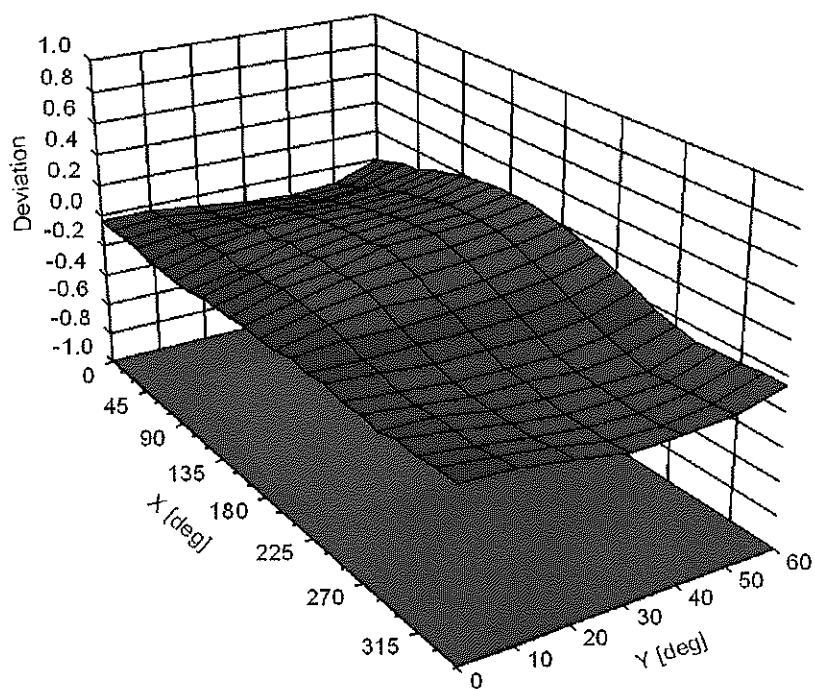
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), $f = 900 \text{ MHz}$



Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^F (k=2)
0		CW	CW	0.00	± 4.7 %
10010	CAA	SAR Validation (Square, 100ms, 10ms)	Test	10.00	± 9.6 %
10011	CAB	UMTS-FDD (WCDMA)	WCDMA	2.91	± 9.6 %
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	± 9.6 %
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.46	± 9.6 %
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.39	± 9.6 %
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	9.57	± 9.6 %
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	6.56	± 9.6 %
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	± 9.6 %
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	± 9.6 %
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.80	± 9.6 %
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	± 9.6 %
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.78	± 9.6 %
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	5.30	± 9.6 %
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	± 9.6 %
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	1.16	± 9.6 %
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	7.74	± 9.6 %
10034	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	± 9.6 %
10035	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	3.83	± 9.6 %
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	± 9.6 %
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	± 9.6 %
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	± 9.6 %
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	± 9.6 %
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	AMPS	7.78	± 9.6 %
10044	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	0.00	± 9.6 %
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	± 9.6 %
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	± 9.6 %
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	± 9.6 %
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	± 9.6 %
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	± 9.6 %
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	± 9.6 %
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	± 9.6 %
10062	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	± 9.6 %
10063	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	± 9.6 %
10064	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	± 9.6 %
10065	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	± 9.6 %
10066	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	± 9.6 %
10067	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	± 9.6 %
10068	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	± 9.6 %
10069	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	± 9.6 %
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	± 9.6 %
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.62	± 9.6 %
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9.94	± 9.6 %
10074	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	± 9.6 %
10075	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10.77	± 9.6 %
10076	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	10.94	± 9.6 %
10077	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	WLAN	11.00	± 9.6 %
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	± 9.6 %
10082	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	AMPS	4.77	± 9.6 %
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	± 9.6 %
10097	CAB	UMTS-FDD (HSDPA)	WCDMA	3.98	± 9.6 %
10098	CAB	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	± 9.6 %
10099	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	± 9.6 %
10100	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	± 9.6 %
10101	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10102	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10103	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10104	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.97	± 9.6 %
10105	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	± 9.6 %
10108	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	± 9.6 %

10109	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10110	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10111	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FDD	6.44	± 9.6 %
10112	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	± 9.6 %
10113	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10114	CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10115	CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	± 9.6 %
10116	CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	± 9.6 %
10117	CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	± 9.6 %
10118	CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	± 9.6 %
10119	CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	± 9.6 %
10140	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10141	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	± 9.6 %
10142	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10143	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	± 9.6 %
10144	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	± 9.6 %
10145	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	± 9.6 %
10146	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	± 9.6 %
10147	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	± 9.6 %
10149	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10150	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10151	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
10152	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10153	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	± 9.6 %
10154	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10155	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.43	± 9.6 %
10156	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	± 9.6 %
10157	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10158	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10159	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	± 9.6 %
10160	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	± 9.6 %
10161	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10162	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	± 9.6 %
10166	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	± 9.6 %
10167	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	± 9.6 %
10168	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	± 9.6 %
10169	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10170	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10171	AAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	± 9.6 %
10172	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10173	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10174	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10175	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10176	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10177	CAI	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10178	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10179	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10180	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10181	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10182	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10183	AAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10184	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10185	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	± 9.6 %
10186	AAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10187	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10188	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10189	AAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10193	CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	± 9.6 %
10194	CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	± 9.6 %
10195	CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	± 9.6 %
10196	CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10197	CAC	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10198	CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10219	CAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 %

10220	CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10221	CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10222	CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	± 9.6 %
10223	CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	± 9.6 %
10224	CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	± 9.6 %
10225	CAB	UMTS-FDD (HSPA+)	WCDMA	5.97	± 9.6 %
10226	CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	± 9.6 %
10227	CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	± 9.6 %
10228	CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	± 9.6 %
10229	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10230	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10231	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.19	± 9.6 %
10232	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10233	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10234	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10235	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10236	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10237	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10238	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10239	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10240	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10241	CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	± 9.6 %
10242	CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	± 9.6 %
10243	CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TDD	9.46	± 9.6 %
10244	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %
10245	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDD	10.06	± 9.6 %
10246	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10247	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	± 9.6 %
10248	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	10.09	± 9.6 %
10249	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10250	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	± 9.6 %
10251	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	10.17	± 9.6 %
10252	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10253	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	± 9.6 %
10254	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	± 9.6 %
10255	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	± 9.6 %
10256	CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	± 9.6 %
10257	CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	± 9.6 %
10258	CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	± 9.6 %
10259	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	± 9.6 %
10260	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	± 9.6 %
10261	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10262	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83	± 9.6 %
10263	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	± 9.6 %
10264	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	± 9.6 %
10265	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10266	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-TDD	10.07	± 9.6 %
10267	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10268	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %
10269	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	± 9.6 %
10270	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TDD	9.58	± 9.6 %
10274	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	WCDMA	4.87	± 9.6 %
10275	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.96	± 9.6 %
10277	CAA	PHS (QPSK)	PHS	11.81	± 9.6 %
10278	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	± 9.6 %
10279	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	± 9.6 %
10290	AAB	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	± 9.6 %
10291	AAB	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	± 9.6 %
10292	AAB	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	± 9.6 %
10293	AAB	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	± 9.6 %
10295	AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.49	± 9.6 %
10297	AAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	± 9.6 %
10298	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10299	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	± 9.6 %

10300	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10301	AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	WiMAX	12.03	± 9.6 %
10302	AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	WiMAX	12.57	± 9.6 %
10303	AAA	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	12.52	± 9.6 %
10304	AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	11.86	± 9.6 %
10305	AAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	WiMAX	15.24	± 9.6 %
10306	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	WiMAX	14.67	± 9.6 %
10307	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	WiMAX	14.49	± 9.6 %
10308	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WiMAX	14.46	± 9.6 %
10309	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	WiMAX	14.58	± 9.6 %
10310	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	WiMAX	14.57	± 9.6 %
10311	AAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.06	± 9.6 %
10313	AAA	IDEN 1:3	IDEN	10.51	± 9.6 %
10314	AAA	IDEN 1:6	IDEN	13.48	± 9.6 %
10315	AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	WLAN	1.71	± 9.6 %
10316	AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	± 9.6 %
10317	AAC	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	± 9.6 %
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	± 9.6 %
10353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	± 9.6 %
10354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.98	± 9.6 %
10355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	± 9.6 %
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	± 9.6 %
10387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	± 9.6 %
10388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	± 9.6 %
10396	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	± 9.6 %
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	± 9.6 %
10400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	WLAN	8.37	± 9.6 %
10401	AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	WLAN	8.60	± 9.6 %
10402	AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	WLAN	8.53	± 9.6 %
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	± 9.6 %
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	± 9.6 %
10406	AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	± 9.6 %
10410	AAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	LTE-TDD	7.82	± 9.6 %
10414	AAA	WLAN CCDF, 64-QAM, 40MHz	Generic	8.54	± 9.6 %
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	WLAN	1.54	± 9.6 %
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.23	± 9.6 %
10417	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.23	± 9.6 %
10418	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)	WLAN	8.14	± 9.6 %
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)	WLAN	8.19	± 9.6 %
10422	AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.32	± 9.6 %
10423	AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	± 9.6 %
10424	AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	± 9.6 %
10425	AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	8.41	± 9.6 %
10426	AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.45	± 9.6 %
10427	AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.41	± 9.6 %
10430	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FDD	8.28	± 9.6 %
10431	AAD	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LTE-FDD	8.38	± 9.6 %
10432	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
10433	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
10434	AAA	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	± 9.6 %
10435	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10447	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	± 9.6 %
10448	AAD	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.53	± 9.6 %
10449	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.51	± 9.6 %
10450	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.48	± 9.6 %

10451	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	± 9.6 %
10456	AAB	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	WLAN	8.63	± 9.6 %
10457	AAA	UMTS-FDD (DC-HSDPA)	WCDMA	6.62	± 9.6 %
10458	AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	± 9.6 %
10459	AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	8.25	± 9.6 %
10460	AAA	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	± 9.6 %
10461	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10462	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.30	± 9.6 %
10463	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	± 9.6 %
10464	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10465	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10466	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10467	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10468	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10469	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	± 9.6 %
10470	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10471	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10472	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10473	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10474	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10475	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10477	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10478	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10479	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %
10480	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.18	± 9.6 %
10481	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	± 9.6 %
10482	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.71	± 9.6 %
10483	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.39	± 9.6 %
10484	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.47	± 9.6 %
10485	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.59	± 9.6 %
10486	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.38	± 9.6 %
10487	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.60	± 9.6 %
10488	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.70	± 9.6 %
10489	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	± 9.6 %
10490	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	± 9.6 %
10491	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %

10492	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.41	± 9.6 %
10493	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	± 9.6 %
10494	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %
10495	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.37	± 9.6 %
10496	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	± 9.6 %
10497	AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	± 9.6 %
10498	AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.40	± 9.6 %
10499	AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.68	± 9.6 %
10500	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	± 9.6 %
10501	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.44	± 9.6 %
10502	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.52	± 9.6 %
10503	AAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.72	± 9.6 %
10504	AAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	± 9.6 %
10505	AAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	± 9.6 %
10506	AAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %
10507	AAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.36	± 9.6 %
10508	AAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	± 9.6 %
10509	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.99	± 9.6 %
10510	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.49	± 9.6 %
10511	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.51	± 9.6 %
10512	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %
10513	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.42	± 9.6 %
10514	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	± 9.6 %
10515	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	WLAN	1.58	± 9.6 %
10516	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	WLAN	1.57	± 9.6 %
10517	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	WLAN	1.58	± 9.6 %
10518	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.23	± 9.6 %
10519	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.39	± 9.6 %
10520	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.12	± 9.6 %
10521	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	WLAN	7.97	± 9.6 %
10522	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10523	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.08	± 9.6 %
10524	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.27	± 9.6 %
10525	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10526	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10527	AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	WLAN	8.21	± 9.6 %
10528	AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10529	AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10531	AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	WLAN	8.43	± 9.6 %
10532	AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10533	AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	WLAN	8.38	± 9.6 %
10534	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	WLAN	8.45	± 9.6 %

10535	AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10536	AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	WLAN	8.32	± 9.6 %
10537	AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	WLAN	8.44	± 9.6 %
10538	AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	WLAN	8.54	± 9.6 %
10540	AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	WLAN	8.39	± 9.6 %
10541	AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)	WLAN	8.46	± 9.6 %
10542	AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	WLAN	8.65	± 9.6 %
10543	AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	WLAN	8.65	± 9.6 %
10544	AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	WLAN	8.47	± 9.6 %
10545	AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	WLAN	8.55	± 9.6 %
10546	AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	WLAN	8.35	± 9.6 %
10547	AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	WLAN	8.49	± 9.6 %
10548	AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)	WLAN	8.37	± 9.6 %
10550	AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	WLAN	8.38	± 9.6 %
10551	AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	WLAN	8.50	± 9.6 %
10552	AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10553	AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10554	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	WLAN	8.48	± 9.6 %
10555	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	WLAN	8.47	± 9.6 %
10556	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	WLAN	8.50	± 9.6 %
10557	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	WLAN	8.52	± 9.6 %
10558	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	WLAN	8.61	± 9.6 %
10560	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	WLAN	8.73	± 9.6 %
10561	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)	WLAN	8.56	± 9.6 %
10562	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	WLAN	8.69	± 9.6 %
10563	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	WLAN	8.77	± 9.6 %
10564	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.25	± 9.6 %
10565	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10566	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.13	± 9.6 %
10567	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	WLAN	8.00	± 9.6 %
10568	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.37	± 9.6 %
10569	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.10	± 9.6 %
10570	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.30	± 9.6 %
10571	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	WLAN	1.99	± 9.6 %
10572	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	WLAN	1.99	± 9.6 %
10573	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	WLAN	1.98	± 9.6 %
10574	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	WLAN	1.98	± 9.6 %
10575	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	± 9.6 %
10576	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	WLAN	8.60	± 9.6 %
10577	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10578	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	WLAN	8.49	± 9.6 %
10579	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)	WLAN	8.36	± 9.6 %
10580	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10581	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	WLAN	8.35	± 9.6 %
10582	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	± 9.6 %
10583	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	± 9.6 %
10584	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	WLAN	8.60	± 9.6 %
10585	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10586	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	WLAN	8.49	± 9.6 %
10587	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	WLAN	8.36	± 9.6 %

10588	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10589	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	WLAN	8.35	± 9.6 %
10590	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	± 9.6 %
10591	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)	WLAN	8.63	± 9.6 %
10592	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10593	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	WLAN	8.64	± 9.6 %
10594	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10595	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10596	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle)	WLAN	8.71	± 9.6 %
10597	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	WLAN	8.72	± 9.6 %
10598	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	WLAN	8.50	± 9.6 %
10599	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10600	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	WLAN	8.88	± 9.6 %
10601	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10602	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10603	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	WLAN	9.03	± 9.6 %
10604	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10605	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	WLAN	8.97	± 9.6 %
10606	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10607	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	WLAN	8.64	± 9.6 %
10608	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10609	AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	WLAN	8.57	± 9.6 %
10610	AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	WLAN	8.78	± 9.6 %
10611	AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10612	AAB	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10613	AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10614	AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	WLAN	8.59	± 9.6 %
10615	AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10616	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10617	AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10618	AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	WLAN	8.58	± 9.6 %
10619	AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	WLAN	8.86	± 9.6 %
10620	AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	WLAN	8.87	± 9.6 %
10621	AAB	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10622	AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	WLAN	8.68	± 9.6 %
10623	AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10624	AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	WLAN	8.96	± 9.6 %
10625	AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	WLAN	8.96	± 9.6 %
10626	AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10627	AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	WLAN	8.88	± 9.6 %
10628	AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	WLAN	8.71	± 9.6 %
10629	AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	WLAN	8.85	± 9.6 %
10630	AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	WLAN	8.72	± 9.6 %
10631	AAB	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10632	AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10633	AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10634	AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	WLAN	8.80	± 9.6 %
10635	AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10636	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10637	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10638	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	WLAN	8.86	± 9.6 %
10639	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	WLAN	8.85	± 9.6 %
10640	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	WLAN	8.98	± 9.6 %
10641	AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	WLAN	9.06	± 9.6 %
10642	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	WLAN	9.06	± 9.6 %
10643	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	WLAN	8.89	± 9.6 %
10644	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	WLAN	9.05	± 9.6 %
10645	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	WLAN	9.11	± 9.6 %
10646	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	± 9.6 %
10647	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	± 9.6 %
10648	AAA	CDMA2000 (1x Advanced)	CDMA2000	3.45	± 9.6 %
10652	AAD	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	± 9.6 %
10653	AAD	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.42	± 9.6 %
10654	AAD	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.96	± 9.6 %

10655	AAE	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	± 9.6 %
10658	AAA	Pulse Waveform (200Hz, 10%)	Test	10.00	± 9.6 %
10659	AAA	Pulse Waveform (200Hz, 20%)	Test	6.99	± 9.6 %
10660	AAA	Pulse Waveform (200Hz, 40%)	Test	3.98	± 9.6 %
10661	AAA	Pulse Waveform (200Hz, 60%)	Test	2.22	± 9.6 %
10662	AAA	Pulse Waveform (200Hz, 80%)	Test	0.97	± 9.6 %
10670	AAA	Bluetooth Low Energy	Bluetooth	2.19	± 9.6 %

^E 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
- 4) The complex relative permittivity ϵ' can be calculated from the below equation (Pournaropoulos and Misra):

$$Y = \frac{j2\omega\epsilon_r\epsilon_0}{[\ln(b/a)]^2} \int_a^b \int_a^b \int_0^\pi \cos\phi' \frac{\exp[-j\omega r(\mu_0\epsilon_r'\epsilon_0)^{1/2}]}{r} d\phi' d\rho' d\rho$$

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, $r^2 = \rho^2 + \rho'^2 - 2\rho\rho'\cos\phi'$, ω is the angular frequency, and $j = \sqrt{-1}$.

Table D-I
Composition of the Tissue Equivalent Matter

Frequency (MHz)	750	750	835	835	1750	1750	1900	1900	2450	2450	3500 - 5800	3500 - 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		26.7		
HEC	See page 2-3	See page 2	1	1					See page 4	0.1	See page 5	See page 6
NaCl			1.45	0.94	0.4	0.2	0.18	0.39				
Sucrose			57	44.9								
Water			40.45	53.06	52.6	68.8	54.9	70.17		73.2		

FCC ID: A3LSMG977U	 PCTEST ENGINEERING LABORATORY, INC.	SAR EVALUATION REPORT		Approved by: Quality Manager
Test Dates: 01/21/19 - 03/25/19	DUT Type: Portable Handset			APPENDIX D: Page 1 of 6

2 Composition / Information on ingredients

The Item is composed of the following ingredients:

H ₂ 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-methyl-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.

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s p e a g

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Measurement Certificate / Material Test

Item Name	Body Tissue Simulating Liquid (MSL750V2)
Product No.	SL AAM 075 AA (Batch: 170608-1)
Manufacturer	SPEAG

Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

Setup Validation

Validation results were within $\pm 2.5\%$ towards the target values of Methanol.

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	1.212 g/cm ³
TSL Heat-capacity	3.006 kJ/(kg·K)

f [MHz]	Measured			Target		Diff.to Target [%]	
	e'	e''	sigma	eps	sigma	Δ-eps	Δ-sigma
600	57.3	25.02	0.84	56.1	0.95	2.2	-12.2
625	57.1	24.67	0.86	56.0	0.95	1.9	-10.1
650	56.8	24.32	0.88	55.9	0.96	1.6	-8.0
675	56.6	24.02	0.90	55.8	0.96	1.3	-5.8
700	56.3	23.71	0.92	55.7	0.96	1.1	-3.8
725	56.1	23.48	0.95	55.6	0.96	0.8	-1.5
750	55.9	23.25	0.97	55.5	0.96	0.6	0.7
775	55.6	23.04	0.99	55.4	0.97	0.3	2.9
800	55.4	22.82	1.02	55.3	0.97	0.1	5.0
825	55.2	22.65	1.04	55.2	0.98	-0.1	6.3
838	55.1	22.56	1.05	55.2	0.98	-0.3	6.9
850	54.9	22.47	1.06	55.2	0.99	-0.4	7.5
875	54.7	22.34	1.09	55.1	1.02	-0.7	6.7
900	54.5	22.21	1.11	55.0	1.05	-0.9	5.9
925	54.3	22.08	1.14	55.0	1.06	-1.3	6.9
950	54.1	21.95	1.16	54.9	1.08	-1.6	7.9
975	53.8	21.86	1.19	54.9	1.09	-1.9	9.1
1000	53.6	21.76	1.21	54.8	1.10	-2.2	10.2

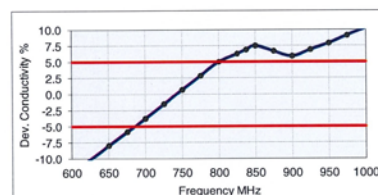
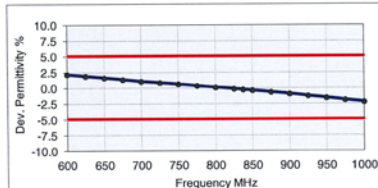


Figure D-2

750MHz Body Tissue Equivalent Matter

FCC ID: A3LSMG977U		SAR EVALUATION REPORT		Approved by: Quality Manager
Test Dates: 01/21/19 - 03/25/19	DUT Type: Portable Handset			APPENDIX D: Page 2 of 6

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.

Setup Validation

Validation results were within $\pm 2.5\%$ towards the target values of Methanol.

Target Parameters

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

Test Condition

Ambient Environment temperatur ($22 \pm 3^\circ\text{C}$ and humidity $< 70\%$).
 TSL Temperature 22°C
 Test Date 20-Jun-17
 Operator CL

Additional Information

TSL Density 1.284 g/cm^3
 TSL Heat-capacity $2.701 \text{ kJ/(kg}^\circ\text{K)}$

f [MHz]	Measured			Target		Diff.to Target [%]	
	e'	e''	sigma	eps	sigma	$\Delta\text{-eps}$	$\Delta\text{-sigma}$
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

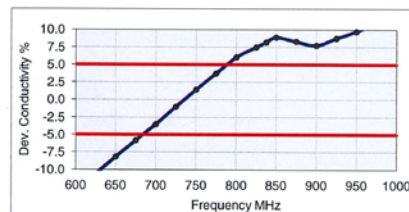
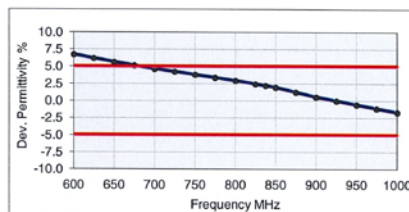


Figure D-3
750MHz Head Tissue Equivalent Matter

FCC ID: A3LSMG977U		SAR EVALUATION REPORT		Approved by: Quality Manager
Test Dates: 01/21/19 - 03/25/19	DUT Type: Portable Handset			APPENDIX D: Page 3 of 6

3 Composition / Information on ingredients

The Item is composed of the following ingredients:

Water	50 – 73 %	
Non-ionic detergents	25 – 50 %	polyoxyethylenesorbitan monolaurate
NaCl	0 – 2 %	
Preservative	0.05 – 0.1 %	Preventol-D7

Safety relevant ingredients:

CAS-No. 55965-84-9	< 0.1 %	aqueous preparation, containing 5-chloro-2-methyl-3(2H)-isothiazolone and 2-methyl-3(2H)-isothiazolone
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CAS-No. 9005-64-5	< 50 %	polyoxyethylenesorbitan monolaurate
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According to international guidelines, the product is not a dangerous mixture and therefore not required to be marked by symbols.

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.

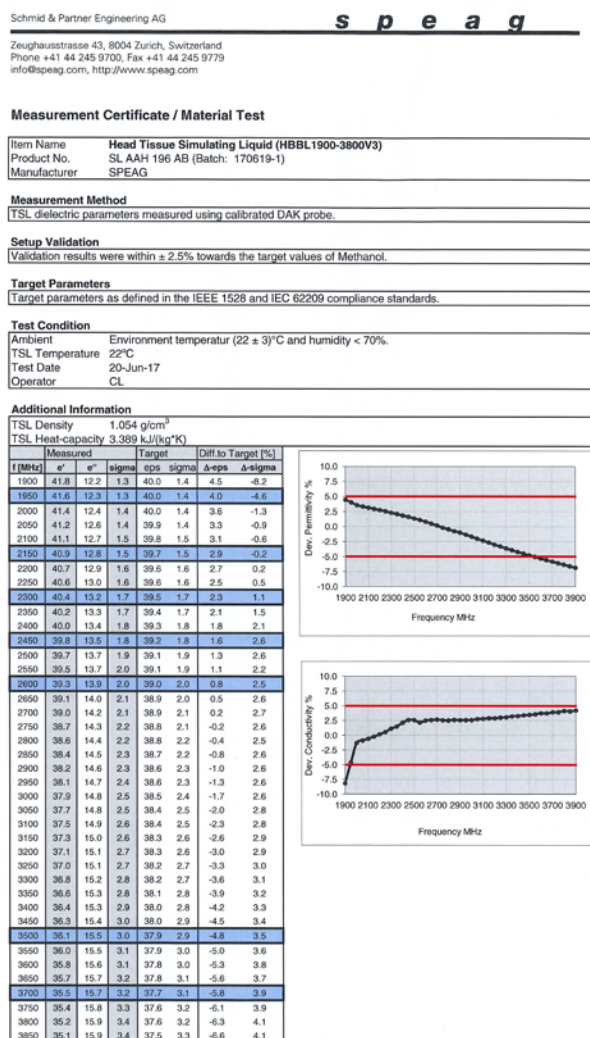


Figure D-5
2.4 GHz Head Tissue Equivalent Matter

FCC ID: A3LSMG977U		SAR EVALUATION REPORT		Approved by: Quality Manager
Test Dates: 01/21/19 - 03/25/19	DUT Type: Portable Handset			APPENDIX D: Page 4 of 6

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 3.5 – 5 GHz Head Tissue Equivalent Matter

Note: 3.5 – 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.

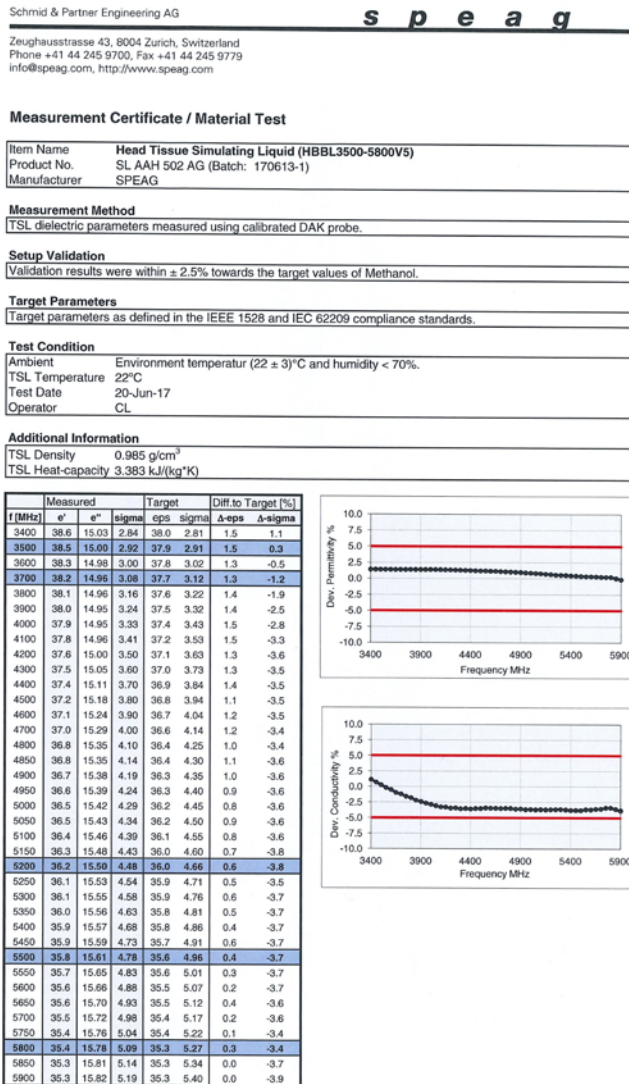


Figure D-7

3.5 – 5 GHz Head Tissue Equivalent Matter

FCC ID: A3LSMG977U		SAR EVALUATION REPORT		Approved by: Quality Manager
Test Dates: 01/21/19 - 03/25/19	DUT Type: Portable Handset			APPENDIX D: Page 5 of 6

3 Composition / Information on ingredients

The Item is composed of the following ingredients:

Water	60 – 80%
Esters, Emulsifiers, Inhibitors	20 – 40%
Sodium salt	0 – 1.5%

Figure D-8
Composition of 3.5 – 5 GHz Body Tissue Equivalent Matter

Note: 3.5 – 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.

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Measurement Certificate / Material Test

Item Name	Body Tissue Simulating Liquid (MBBL3500-5800V5)
Product No.	SL AAM 501 EA (Batch: 180423-2)
Manufacturer	SPEAG

Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

Setup Validation

Validation results were within $\pm 2.5\%$ towards the target values of Methanol.

Target Parameters

Target parameters as defined in the KDB 865664 compliance standard.

Test Condition

Ambient	Environment temperatur (22 ± 3)°C and humidity < 70%.
TSL Temperature	22°C
Test Date	25-Apr-18
Operator	WM

Additional Information

TSL Density	0.996 g/cm ³
TSL Heat-capacity	3.765 kJ/(kg*K)

f [MHz]	Measured			Target		Diff.to Target [%]	
	e'	e''	sigma	eps	sigma	Δ-eps	Δ-sigma
3400	50.7	16.46	3.11	51.5	3.20	-1.5	-2.7
3500	50.5	16.50	3.21	51.3	3.31	-1.6	-3.1
3600	50.4	16.56	3.32	51.2	3.43	-1.5	-3.2
3700	50.3	16.62	3.42	51.1	3.55	-1.5	-3.6
3800	50.2	16.72	3.53	50.9	3.66	-1.4	-3.7
3900	50.1	16.81	3.65	50.8	3.78	-1.3	-3.5
4000	49.9	16.93	3.77	50.6	3.90	-1.5	-3.3
4100	49.8	17.05	3.89	50.5	4.01	-1.4	-3.1
4200	49.6	17.18	4.01	50.4	4.13	-1.5	-2.9
4300	49.5	17.32	4.14	50.2	4.25	-1.5	-2.5
4400	49.3	17.46	4.27	50.1	4.37	-1.6	-2.2
4500	49.2	17.59	4.40	50.0	4.48	-1.5	-1.8
4600	49.0	17.73	4.54	49.8	4.60	-1.7	-1.3
4700	48.8	17.86	4.67	49.7	4.72	-1.8	-1.0
4800	48.6	17.99	4.80	49.6	4.83	-1.9	-0.7
4850	48.5	18.05	4.87	49.5	4.89	-2.0	-0.4
4900	48.4	18.11	4.94	49.4	4.95	-2.1	-0.2
4950	48.3	18.17	5.00	49.4	5.01	-2.1	-0.1
5000	48.2	18.23	5.07	49.3	5.07	-2.2	0.1
5050	48.1	18.29	5.14	49.2	5.12	-2.3	0.3
5100	48.0	18.34	5.20	49.2	5.18	-2.3	0.3
5150	47.9	18.39	5.27	49.1	5.24	-2.4	0.6
5200	47.9	18.45	5.34	49.0	5.30	-2.3	0.8
5250	47.8	18.50	5.40	48.9	5.36	-2.3	0.8
5300	47.7	18.56	5.47	48.9	5.42	-2.4	1.0
5350	47.6	18.61	5.54	48.8	5.47	-2.5	1.2
5400	47.5	18.67	5.61	48.7	5.53	-2.5	1.4
5450	47.4	18.72	5.68	48.7	5.59	-2.6	1.6
5500	47.3	18.77	5.74	48.6	5.65	-2.7	1.6
5550	47.2	18.83	5.81	48.5	5.71	-2.8	1.8
5600	47.1	18.88	5.88	48.5	5.77	-2.8	2.0
5650	47.1	18.93	5.95	48.4	5.82	-2.7	2.1
5700	47.0	18.99	6.02	48.3	5.88	-2.8	2.3
5750	46.9	19.04	6.09	48.3	5.94	-2.8	2.5
5800	46.8	19.10	6.16	48.2	6.00	-2.9	2.7
5850	46.7	19.16	6.23	48.1	6.06	-3.0	2.8
5900	46.6	19.22	6.31	48.1	6.12	-3.0	3.2

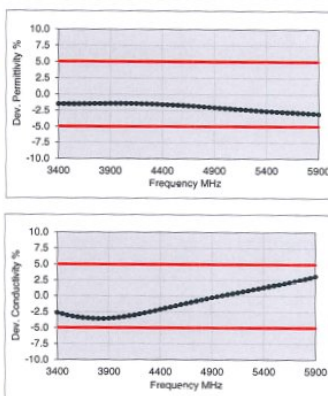


Figure D-9
3.5 – 5 GHz Body Tissue Equivalent Matter

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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.

Table E-1
SAR System Validation Summary – 1g

SAR System	Freq. (MHz)	Date	Probe SN	Probe Cal Point		Cond. (σ)	Perm. (εr)	CW VALIDATION			MOD. VALIDATION		
								SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
G	750	8/9/2018	7410	750	Head	0.898	41.769	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
H	1750	7/16/2018	7409	1750	Head	1.331	41.186	PASS	PASS	PASS	N/A	N/A	N/A
D	1750	10/26/2018	7357	1750	Head	1.345	39.703	PASS	PASS	PASS	N/A	N/A	N/A
G	1900	8/9/2018	7410	1900	Head	1.429	38.607	PASS	PASS	PASS	GMSK	PASS	N/A
E	2300	2/6/2019	3589	2300	Head	1.724	40.93	PASS	PASS	PASS	N/A	N/A	N/A
G	2450	8/7/2018	7410	2450	Head	1.865	39.618	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
H	2450	8/8/2018	7409	2450	Head	1.844	40.474	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
E	2450	2/5/2019	3589	2450	Head	1.825	39.836	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
G	2600	8/8/2018	7410	2600	Head	2.04	39.033	PASS	PASS	PASS	TDD	PASS	N/A
E	2600	2/7/2019	3589	2600	Head	1.964	40.46	PASS	PASS	PASS	TDD	PASS	N/A
H	3500	10/30/2018	3949	3500	Head	2.803	38.5	PASS	PASS	PASS	TDD	PASS	N/A
H	3700	10/30/2018	3949	3700	Head	2.997	38.156	PASS	PASS	PASS	TDD	PASS	N/A
H	5250	7/5/2018	7409	5250	Head	4.492	34.994	PASS	PASS	PASS	OFDM	N/A	PASS
H	5600	7/5/2018	7409	5600	Head	4.839	34.496	PASS	PASS	PASS	OFDM	N/A	PASS
H	5750	7/5/2018	7409	5750	Head	4.995	34.288	PASS	PASS	PASS	OFDM	N/A	PASS
E	750	2/5/2019	3589	750	Body	0.984	54.096	PASS	PASS	PASS	N/A	N/A	N/A
D	835	8/15/2018	7357	835	Body	1	53.368	PASS	PASS	PASS	GMSK	PASS	N/A
G	1750	8/29/2018	7410	1750	Body	1.464	52.807	PASS	PASS	PASS	N/A	N/A	N/A
J	1750	2/7/2019	7488	1750	Body	1.509	51.017	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	1900	2/8/2019	7488	1900	Body	1.571	52.538	PASS	PASS	PASS	GMSK	PASS	N/A
K	2300	4/3/2018	3319	2300	Body	1.871	51.575	PASS	PASS	PASS	N/A	N/A	N/A
K	2450	4/3/2018	3319	2450	Body	2.043	51.13	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2450	3/6/2019	7417	2450	Body	2.039	50.67	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2600	4/3/2018	3319	2600	Body	2.225	50.665	PASS	PASS	PASS	TDD	PASS	N/A
L	3500	11/1/2018	3914	3500	Body	3.336	51.607	PASS	PASS	PASS	TDD	PASS	N/A
L	3700	11/2/2018	3914	3700	Body	3.55	51.31	PASS	PASS	PASS	TDD	PASS	N/A
L	5250	10/29/2018	7308	5250	Body	5.511	48.77	PASS	PASS	PASS	OFDM	N/A	PASS
L	5600	10/29/2018	7308	5600	Body	5.994	48.2	PASS	PASS	PASS	OFDM	N/A	PASS
L	5750	10/29/2018	7308	5750	Body	6.219	47.96	PASS	PASS	PASS	OFDM	N/A	PASS

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Table E-2
SAR System Validation Summary – 10g

SAR System	Freq. (MHz)	Date	Probe SN	Probe Cal Point		Cond. (σ)	Perm. (ϵ_r)	CW VALIDATION			MOD. VALIDATION		
								SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
J	1750	9/5/2018	3347	1750	Body	1.454	53.515	PASS	PASS	PASS	N/A	N/A	N/A
G	1750	8/29/2018	7410	1750	Body	1.464	52.807	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	1900	2/8/2019	7488	1900	Body	1.571	52.538	PASS	PASS	PASS	GMSK	PASS	N/A
K	2300	4/3/2018	3319	2300	Body	1.871	51.575	PASS	PASS	PASS	N/A	N/A	N/A
K	2450	4/3/2018	3319	2450	Body	2.043	51.13	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2600	4/3/2018	3319	2600	Body	2.225	50.665	PASS	PASS	PASS	TDD	PASS	N/A
L	3500	11/1/2018	3914	3500	Body	3.336	51.607	PASS	PASS	PASS	TDD	PASS	N/A
L	3700	11/2/2018	3914	3700	Body	3.55	51.31	PASS	PASS	PASS	TDD	PASS	N/A
L	5250	10/29/2018	7308	5250	Body	5.511	48.77	PASS	PASS	PASS	OFDM	N/A	PASS
L	5600	10/29/2018	7308	5600	Body	5.994	48.2	PASS	PASS	PASS	OFDM	N/A	PASS
L	5750	10/29/2018	7308	5750	Body	6.219	47.96	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 POWER REDUCTION VERIFICATION

Per the May 2017 TCBC Workshop Notes, demonstration of proper functioning of the power reduction mechanisms is required to support the corresponding SAR configurations. The verification process was divided into two parts: (1) evaluation of output power levels for individual or multiple triggering mechanisms and (2) evaluation of the triggering distances for proximity-based sensors.

G.1 Power Verification Procedure

The power verification was performed according to the following procedure:

1. A base station simulator was used to establish a conducted RF connection and the output power was monitored. The power measurements were confirmed to be within expected tolerances for all states before and after a power reduction mechanism was triggered.
2. Step 1 was repeated for all relevant modes and frequency bands for the mechanism being investigated.
3. Steps 1 and 2 were repeated for all individual power reduction mechanisms and combinations thereof. For the combination cases, one mechanism was switched to a 'triggered' state at a time; powers were confirmed to be within tolerances after each additional mechanism was activated.

G.2 Distance Verification Procedure

The distance verification procedure was performed according to the following procedure:

1. A base station simulator was used to establish an RF connection and to monitor the power levels. The device being tested was placed below the relevant section of the phantom with the relevant side or edge of the device facing toward the phantom.
2. The device was moved toward and away from the phantom to determine the distance at which the mechanism triggers and the output power is reduced, per KDB Publication 616217 D04v01r02 and FCC Guidance. Each applicable test position was evaluated. The distances were confirmed to be the same or larger (more conservative) than the minimum distances provided by the manufacturer.
3. Steps 1 and 2 were repeated for low, mid, and high bands, as appropriate (see note below Table G-2 for more details).
4. Steps 1 through 3 were repeated for all distance-based power reduction mechanisms.

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G.3 Main Antenna Verification Summary

Table G-1
Power Measurement Verification for Main Antenna

Mechanism(s)		Mode/Band	Conducted Power (dBm)		
1st	2nd		Un-triggered (Max)	Mechanism #1 (Reduced)	Mechanism #2 (Reduced)
Hotspot On		GPRS 1900	29.73	27.45	
Hotspot On	Grip	GPRS 1900	29.72	27.48	27.51
Grip		GPRS 1900	29.72	27.54	
Grip	Hotspot On	GPRS 1900	29.71	27.54	27.56
Hotspot On		UMTS 1750	23.13	19.15	
Hotspot On	Grip	UMTS 1750	23.15	19.15	19.15
Grip		UMTS 1750	23.15	19.14	
Grip	Hotspot On	UMTS 1750	23.14	19.14	19.16
Hotspot On		UMTS 1900	23.38	19.83	
Hotspot On	Grip	UMTS 1900	23.35	19.86	19.85
Grip		UMTS 1900	23.36	20.88	
Grip	Hotspot On	UMTS 1900	23.35	20.88	19.78
Hotspot On		PCS CDMA	24	19.01	
Hotspot On	Grip	PCS CDMA	24.01	19	19.11
Grip		PCS CDMA	24.01	20.05	
Grip	Hotspot On	PCS CDMA	24.01	20	19.15
Hotspot On		LTE FDD Band 4	22.97	19.07	
Hotspot On	Grip	LTE FDD Band 4	22.99	19.01	18.97
Grip		LTE FDD Band 4	23.1	19.01	
Grip	Hotspot On	LTE FDD Band 4	23.01	19.02	19.05
Hotspot On		LTE FDD Band 66	23.07	18.64	
Hotspot On	Grip	LTE FDD Band 66	23.05	18.52	18.51
Grip		LTE FDD Band 66	23.08	18.53	
Grip	Hotspot On	LTE FDD Band 66	23.04	18.6	18.5
Hotspot On		LTE FDD Band 2	24.06	19.1	
Hotspot On	Grip	LTE FDD Band 2	24.08	19.08	19.07
Grip		LTE FDD Band 2	24.05	21.06	
Grip	Hotspot On	LTE FDD Band 2	24.08	21.07	19.12
Hotspot On		LTE FDD Band 30 Ant A	22	19.43	
Hotspot On	Grip	LTE FDD Band 30 Ant A	22.01	19.43	19.36
Grip		LTE FDD Band 30 Ant A	22.01	19.43	
Grip	Hotspot On	LTE FDD Band 30 Ant A	22.02	19.44	19.45
Hotspot On		LTE FDD Band 30 Ant B	23.31	19.77	
Hotspot On	Grip	LTE FDD Band 30 Ant B	23.35	19.81	19.77
Grip		LTE FDD Band 30 Ant B	23.41	19.89	
Grip	Hotspot On	LTE FDD Band 30 Ant B	23.48	19.94	19.91
Hotspot On		LTE FDD Band 7	21.68	19.73	
Hotspot On	Grip	LTE FDD Band 7	21.7	19.74	19.72
Grip		LTE FDD Band 7	21.72	19.77	
Grip	Hotspot On	LTE FDD Band 7	21.71	19.78	19.75
Hotspot On		LTE TDD Band 48	21.59	18.58	
Hotspot On	Grip	LTE TDD Band 48	21.55	18.59	18.57
Grip		LTE TDD Band 48	21.56	18.57	
Grip	Hotspot On	LTE TDD Band 48	21.59	18.56	18.58
Hotspot On		LTE TDD Band 38	23.01	20.02	
Hotspot On	Grip	LTE TDD Band 38	23	20.03	20.01
Grip		LTE TDD Band 38	23.02	20.02	
Grip	Hotspot On	LTE TDD Band 38	23.01	19.99	20.1
Hotspot On		LTE TDD Band 41	23.95	21.94	
Hotspot On	Grip	LTE TDD Band 41	23.92	21.95	21.93
Grip		LTE TDD Band 41	23.91	21.95	
Grip	Hotspot On	LTE TDD Band 41	23.95	21.91	21.89

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	Mechanism(s)		Mode/Band	Conducted Power (dBm)		
	1st	2nd		Un-triggered (Max)	Mechanism #1 (Reduced)	Mechanism #2 (Reduced)
mmWave Active	Hotspot On		LTE FDD Band 2	24.2	19.2	
	Hotspot On	Grip	LTE FDD Band 2	24.2	19.2	17.6
	Grip		LTE FDD Band 2	24.2	17.6	
	Grip	Hotspot On	LTE FDD Band 2	24.2	17.6	17.6
	Hotspot On		LTE FDD Band 4	24.1	19.9	
	Hotspot On	Grip	LTE FDD Band 4	24.1	19.9	18.3
	Grip		LTE FDD Band 4	24.1	18.3	
	Grip	Hotspot On	LTE FDD Band 4	24.1	18.3	18.3
	Hotspot On		LTE FDD Band 30 Ant B	23.6	20.1	
	Hotspot On	Grip	LTE FDD Band 30 Ant B	23.6	20.1	17.6
	Grip		LTE FDD Band 30 Ant B	23.6	17.6	
	Grip	Hotspot On	LTE FDD Band 30 Ant B	23.6	17.6	17.6
	Hotspot On		LTE FDD Band 66	24.1	20	
	Hotspot On	Grip	LTE FDD Band 66	24.1	20	18.2
	Grip		LTE FDD Band 66	24.1	18.2	
	Grip	Hotspot On	LTE FDD Band 66	24.1	18.2	18.2

Table G-2
Distance Measurement Verification for Main Antenna

Mechanism(s)	Test Condition	Band	Distance Measurements (mm)		Minimum Distance per Manufacturer (mm)
			Moving Toward	Moving Away	
Grip	Phablet - Back Side	Mid	8	9	8
Grip	Phablet - Back Side	High	8	9	8
Grip	Phablet - Front Side	Mid	7	9	6
Grip	Phablet - Front Side	High	7	9	6
Grip	Phablet - Bottom Edge	Mid	10	12	10
Grip	Phablet - Bottom Edge	High	10	12	10

*Note: Mid band refers to: GSM 1900, UMTS B2/4, CDMA BC1, LTE B2/4/66; High band refers to: LTE B30 Ant A &Ant B, LTE B7, LTE B38, LTE B41, LTE B48

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G.4 WIFI Verification Summary

Table G-3
Power Measurement Verification WIFI

Mechanism(s)	Mode/Band	Conducted Power (dBm)	
1st		Un-triggered (Max)	Mechanism #1 (Reduced)
Held-to-Ear	802.11b	19.83	16.91
Held-to-Ear	802.11g	16.74	15.03
Held-to-Ear	802.11n (2.4GHz)	16.91	15.23
Held-to-Ear	802.11a	17.16	11.80
Held-to-Ear	802.11n (5GHz, 20MHz BW)	17.36	12.64
Held-to-Ear	802.11ac (20MHz BW)	17.52	12.51
Held-to-Ear	802.11n (5GHz, 40MHz BW)	16.00	12.82
Held-to-Ear	802.11ac (40MHz BW)	15.43	12.90
Held-to-Ear	802.11ac (80MHz BW)	14.18	12.40

*Note: 802.11ax and MIMO WIFI modes were not evaluated due to equipment limitations.

	Mechanism(s)		Mode/Band	Conducted Power (dBm)		
	1st	2nd		Un-triggered (Max)	Mechanism #1 (Reduced)	Mechanism #2 (Reduced)
2.4 GHz WLAN	mmWave Active		802.11b	19.8	15.85	
	mmWave Active		802.11g	17.09	16.31	
	mmWave Active		802.11n (2.4 GHz)	17.22	16.16	
	mmWave Active	RSDB + RCV	802.11b	19.72	15.85	12.71
	mmWave Active	RSDB + RCV	802.11g	17.19	16.31	13.33
	mmWave Active	RSDB + RCV	802.11n (2.4 GHz)	17.12	16.16	13.24
5 GHz WLAN	mmWave Active		802.11a	16.88	12.38	
	mmWave Active		802.11n (5GHz, 20 MHz BW)	16.9	12.45	
	mmWave Active		802.11ac (20 MHz BW)	16.84	12.56	
	mmWave Active		802.11n (40 MHz BW)	15.89	12.78	
	mmWave Active		802.11ac (40 MHz BW)	15.96	12.88	
	mmWave Active		802.11ac (80 MHz BW)	15.15	13.14	

*Note: 802.11ax and MIMO WIFI modes were not evaluated due to equipment limitations.

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APPENDIX H: 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.
- Downlink CA combinations for SISO and 4x4 Downlink MIMO operations were measured independently, per May 2017 TCBC Workshop notes.

Table 1 – Example of Exclusion Table for SISO Configurations

Index	2CC	Supported Channel Bandwidth (MHz)	Restriction	Completely Covered by Measurement Superset
CCC #1	CA [2C]	5, 10, 15, 20	None	Yes
CCC #2	CA [2A]	5, 10, 15, 20	None	Yes
CCC #3	CA [2A]	5, 10, 15, 20	None	Yes
CCC #4	CA [2A]	5, 10, 15, 20	None	Yes
CCC #5	CA [2A]	5, 10, 15, 20	None	Yes
CCC #6	CA [2A]	5, 10, 15, 20	None	Yes
CCC #7	CA [2A]	5, 10, 15, 20	None	Yes
CCC #8	CA [2A]	5, 10, 15, 20	None	Yes
CCC #9	CA [2A]	5, 10, 15, 20	None	Yes
CCC #10	CA [2A]	5, 10, 15, 20	None	Yes
CCC #11	CA [2A]	5, 10, 15, 20	None	Yes
CCC #12	CA [2A]	5, 10, 15, 20	None	Yes
CCC #13	CA [2A]	5, 10, 15, 20	None	Yes
CCC #14	CA [2A]	5, 10, 15, 20	None	Yes
CCC #15	CA [2A]	5, 10, 15, 20	None	Yes
CCC #16	CA [2A]	5, 10, 15, 20	None	Yes
CCC #17	CA [2A]	5, 10, 15, 20	None	Yes
CCC #18	CA [2A]	5, 10, 15, 20	None	Yes
CCC #19	CA [2A]	5, 10, 15, 20	None	Yes
CCC #20	CA [2A]	5, 10, 15, 20	None	Yes
CCC #21	CA [2A]	5, 10, 15, 20	None	Yes
CCC #22	CA [2A]	5, 10, 15, 20	None	Yes
CCC #23	CA [2A]	5, 10, 15, 20	None	Yes
CCC #24	CA [2A]	5, 10, 15, 20	None	Yes
CCC #25	CA [2A]	5, 10, 15, 20	None	Yes
CCC #26	CA [2A]	5, 10, 15, 20	None	Yes
CCC #27	CA [2A]	5, 10, 15, 20	None	Yes
CCC #28	CA [2A]	5, 10, 15, 20	None	Yes
CCC #29	CA [2A]	5, 10, 15, 20	None	Yes
CCC #30	CA [2A]	5, 10, 15, 20	None	Yes
CCC #31	CA [2A]	5, 10, 15, 20	None	Yes
CCC #32	CA [2A]	5, 10, 15, 20	None	Yes
CCC #33	CA [2A]	5, 10, 15, 20	None	Yes
CCC #34	CA [2A]	5, 10, 15, 20	None	Yes
CCC #35	CA [2A]	5, 10, 15, 20	None	Yes
CCC #36	CA [2A]	5, 10, 15, 20	None	Yes
CCC #37	CA [2A]	5, 10, 15, 20	None	Yes
CCC #38	CA [2A]	5, 10, 15, 20	None	Yes
CCC #39	CA [2A]	5, 10, 15, 20	None	Yes
CCC #40	CA [2A]	5, 10, 15, 20	None	Yes
CCC #41	CA [2A]	5, 10, 15, 20	None	Yes
CCC #42	CA [2A]	5, 10, 15, 20	None	Yes
CCC #43	CA [2A]	5, 10, 15, 20	None	Yes
CCC #44	CA [2A]	5, 10, 15, 20	None	Yes
CCC #45	CA [2A]	5, 10, 15, 20	None	Yes
CCC #46	CA [2A]	5, 10, 15, 20	None	Yes
CCC #47	CA [2A]	5, 10, 15, 20	None	Yes
CCC #48	CA [2A]	5, 10, 15, 20	None	Yes
CCC #49	CA [2A]	5, 10, 15, 20	None	Yes
CCC #50	CA [2A]	5, 10, 15, 20	None	Yes
CCC #51	CA [2A]	5, 10, 15, 20	None	Yes
CCC #52	CA [2A]	5, 10, 15, 20	None	Yes
CCC #53	CA [2A]	5, 10, 15, 20	None	Yes
CCC #54	CA [2A]	5, 10, 15, 20	None	Yes
CCC #55	CA [2A]	5, 10, 15, 20	None	Yes
CCC #56	CA [2A]	5, 10, 15, 20	None	Yes
CCC #57	CA [2A]	5, 10, 15, 20	None	Yes
CCC #58	CA [2A]	5, 10, 15, 20	None	Yes
CCC #59	CA [2A]	5, 10, 15, 20	None	Yes
CCC #60	CA [2A]	5, 10, 15, 20	None	Yes
CCC #61	CA [2A]	5, 10, 15, 20	None	Yes
CCC #62	CA [2A]	5, 10, 15, 20	None	Yes
CCC #63	CA [2A]	5, 10, 15, 20	None	Yes
CCC #64	CA [2A]	5, 10, 15, 20	None	Yes
CCC #65	CA [2A]	5, 10, 15, 20	None	Yes
CCC #66	CA [2A]	5, 10, 15, 20	None	Yes
CCC #67	CA [2A]	5, 10, 15, 20	None	Yes
CCC #68	CA [2A]	5, 10, 15, 20	None	Yes
CCC #69	CA [2A]	5, 10, 15, 20	None	Yes
CCC #70	CA [2A]	5, 10, 15, 20	None	Yes
CCC #71	CA [2A]	5, 10, 15, 20	None	Yes
CCC #72	CA [2A]	5, 10, 15, 20	None	Yes
CCC #73	CA [2A]	5, 10, 15, 20	None	Yes
CCC #74	CA [2A]	5, 10, 15, 20	None	Yes
CCC #75	CA [2A]	5, 10, 15, 20	None	Yes
CCC #76	CA [2A]	5, 10, 15, 20	None	Yes
CCC #77	CA [2A]	5, 10, 15, 20	None	Yes
CCC #78	CA [2A]	5, 10, 15, 20	None	Yes
CCC #79	CA [2A]	5, 10, 15, 20	None	Yes
CCC #80	CA [2A]	5, 10, 15, 20	None	Yes
CCC #81	CA [2A]	5, 10, 15, 20	None	Yes
CCC #82	CA [2A]	5, 10, 15, 20	None	Yes
CCC #83	CA [2A]	5, 10, 15, 20	None	Yes
CCC #84	CA [2A]	5, 10, 15, 20	None	Yes
CCC #85	CA [2A]	5, 10, 15, 20	None	Yes
CCC #86	CA [2A]	5, 10, 15, 20	None	Yes
CCC #87	CA [2A]	5, 10, 15, 20	None	Yes
CCC #88	CA [2A]	5, 10, 15, 20	None	Yes
CCC #89	CA [2A]	5, 10, 15, 20	None	Yes
CCC #90	CA [2A]	5, 10, 15, 20	None	Yes
CCC #91	CA [2A]	5, 10, 15, 20	None	Yes
CCC #92	CA [2A]	5, 10, 15, 20	None	Yes
CCC #93	CA [2A]	5, 10, 15, 20	None	Yes
CCC #94	CA [2A]	5, 10, 15, 20	None	Yes
CCC #95	CA [2A]	5, 10, 15, 20	None	Yes
CCC #96	CA [2A]	5, 10, 15, 20	None	Yes
CCC #97	CA [2A]	5, 10, 15, 20	None	Yes
CCC #98	CA [2A]	5, 10, 15, 20	None	Yes
CCC #99	CA [2A]	5, 10, 15, 20	None	Yes
CCC #100	CA [2A]	5, 10, 15, 20	None	Yes

Table 2 – Example of Exclusion Table for 4x4 Downlink MIMO Configurations

Index	2CC	Supported Channel Bandwidth (MHz)	Restriction	Completely Covered by Measurement Superset
CCC #1	CA [2C]	5, 10, 15, 20	None	Yes
CCC #2	CA [2A]	5, 10, 15, 20	None	Yes
CCC #3	CA [2A]	5, 10, 15, 20	None	Yes
CCC #4	CA [2A]	5, 10, 15, 20	None	Yes
CCC #5	CA [2A]	5, 10, 15, 20	None	Yes
CCC #6	CA [2A]	5, 10, 15, 20	None	Yes
CCC #7	CA [2A]	5, 10, 15, 20	None	Yes
CCC #8	CA [2A]	5, 10, 15, 20	None	Yes
CCC #9	CA [2A]	5, 10, 15, 20	None	Yes
CCC #10	CA [2A]	5, 10, 15, 20	None	Yes
CCC #11	CA [2A]	5, 10, 15, 20	None	Yes
CCC #12	CA [2A]	5, 10, 15, 20	None	Yes
CCC #13	CA [2A]	5, 10, 15, 20	None	Yes
CCC #14	CA [2A]	5, 10, 15, 20	None	Yes
CCC #15	CA [2A]	5, 10, 15, 20	None	Yes
CCC #16	CA [2A]	5, 10, 15, 20	None	Yes
CCC #17	CA [2A]	5, 10, 15, 20	None	Yes
CCC #18	CA [2A]	5, 10, 15, 20	None	Yes
CCC #19	CA [2A]	5, 10, 15, 20	None	Yes
CCC #20	CA [2A]	5, 10, 15, 20	None	Yes
CCC #21	CA [2A]	5, 10, 15, 20	None	Yes
CCC #22	CA [2A]	5, 10, 15, 20	None	Yes
CCC #23	CA [2A]	5, 10, 15, 20	None	Yes
CCC #24	CA [2A]	5, 10, 15, 20	None	Yes
CCC #25	CA [2A]	5, 10, 15, 20	None	Yes
CCC #26	CA [2A]	5, 10, 15, 20	None	Yes
CCC #27	CA [2A]	5, 10, 15, 20	None	Yes
CCC #28	CA [2A]	5, 10, 15, 20	None	Yes
CCC #29	CA [2A]	5, 10, 15, 20	None	Yes
CCC #30	CA [2A]	5, 10, 15, 20	None	Yes
CCC #31	CA [2A]	5, 10, 15, 20	None	Yes
CCC #32	CA [2A]	5, 10, 15, 20	None	Yes
CCC #33	CA [2A]	5, 10, 15, 20	None	Yes
CCC #34	CA [2A]	5, 10, 15, 20	None	Yes
CCC #35	CA [2A]	5, 10, 15, 20	None	Yes
CCC #36	CA [2A]	5, 10, 15, 20	None	Yes
CCC #37	CA [2A]	5, 10, 15, 20	None	Yes
CCC #38	CA [2A]	5, 10, 15, 20	None	Yes
CCC #39	CA [2A]	5, 10, 15, 20	None	Yes
CCC #40	CA [2A]	5, 10, 15, 20	None	Yes
CCC #41	CA [2A]	5, 10, 15, 20	None	Yes
CCC #42	CA [2A]	5, 10, 15, 20	None	Yes
CCC #43	CA [2A]	5, 10, 15, 20	None	Yes
CCC #44	CA [2A]	5, 10, 15, 20	None	Yes
CCC #45	CA [2A]	5, 10, 15, 20	None	Yes
CCC #46	CA [2A]	5, 10, 15, 20	None	Yes
CCC #47	CA [2A]	5, 10, 15, 20	None	Yes
CCC #48	CA [2A]	5, 10, 15, 20	None	Yes
CCC #49	CA [2A]	5, 10, 15, 20	None	Yes
CCC #50	CA [2A]	5, 10, 15, 20	None	Yes
CCC #51	CA [2A]	5, 10, 15, 20	None	Yes
CCC #52	CA [2A]	5, 10, 15, 20	None	Yes
CCC #53	CA [2A]	5, 10, 15, 20	None	Yes
CCC #54	CA [2A]	5, 10, 15, 20	None	Yes
CCC #55	CA [2A]	5, 10, 15, 20	None	Yes
CCC #56	CA [2A]	5, 10, 15, 20	None	Yes
CCC #57	CA [2A]	5, 10, 15, 20	None	Yes
CCC #58	CA [2A]	5, 10, 15, 20	None	Yes
CCC #59	CA [2A]	5, 10, 15, 20	None	Yes
CCC #60	CA [2A]	5, 10, 15, 20	None	Yes
CCC #61	CA [2A]	5, 10, 15, 20	None	Yes
CCC #62	CA [2A]	5, 10, 15, 20	None	Yes
CCC #63	CA [2A]	5, 10, 15, 20	None	Yes
CCC #64	CA [2A]	5, 10, 15, 20	None	Yes
CCC #65	CA [2A]	5, 10, 15, 20	None	Yes
CCC #66	CA [2A]	5, 10, 15, 20	None	Yes
CCC #67	CA [2A]	5, 10, 15, 20	None	Yes
CCC #68	CA [2A]	5, 10, 15, 20	None	Yes
CCC #69	CA [2A]	5, 10, 15, 20	None	Yes
CCC #70	CA [2A]	5, 10, 15, 20	None	Yes
CCC #71	CA [2A]	5, 10, 15, 20	None	Yes
CCC #72	CA [2A]	5, 10, 15, 20	None	Yes
CCC #73	CA [2A]	5, 10, 15, 20	None	Yes
CCC #74	CA [2A]	5, 10, 15, 20	None	Yes
CCC #75	CA [2A]	5, 10, 15, 20	None	Yes
CCC #76	CA [2A]	5, 10, 15, 20	None	Yes
CCC #77	CA [2A]	5, 10, 15, 20	None	Yes
CCC #78	CA [2A]	5, 10, 15, 20	None	Yes
CCC #79	CA [2A]	5, 10, 15, 20	None	Yes
CCC #80	CA [2A]	5, 10, 15, 20	None	Yes
CCC #81	CA [2A]	5, 10, 15, 20	None	Yes
CCC #82	CA [2A]	5, 10, 15, 20	None	Yes
CCC #83	CA [2A]	5, 10, 15, 20	None	Yes
CCC #84	CA [2A]	5, 10, 15, 20	None	Yes
CCC #85	CA [2A]	5, 10, 15, 20	None	Yes
CCC #86	CA [2A]	5, 10, 15, 20	None	Yes
CCC #87	CA [2A]	5, 10, 15, 20	None	Yes
CCC #88	CA [2A]	5, 10, 15, 20	None	Yes
CCC #89	CA [2A]	5, 10, 15, 20	None	Yes
CCC #90	CA [2A]	5, 10, 15, 20	None	Yes
CCC #91	CA [2A]	5, 10, 15, 20	None	Yes
CCC #92	CA [2A]	5, 10, 15, 20	None	Yes
CCC #93	CA [2A]	5, 10, 15, 20	None	Yes
CCC #94	CA [2A]	5, 10, 15, 20	None	Yes
CCC #95	CA [2A]	5, 10, 15, 20	None	Yes
CCC #96	CA [2A]	5, 10, 15, 20	None	Yes
CCC #97	CA [2A]	5, 10, 15, 20	None	Yes
CCC #98	CA [2A]	5, 10, 15, 20	None	Yes
CCC #99	CA [2A]	5, 10, 15, 20	None	Yes
CCC #100	CA [2A]	5, 10, 15, 20	None	Yes

Note: [CC] indicates component carrier with 4x4 DL MIMO antenna configuration

FCC ID: A3LSMG977U		SAR EVALUATION REPORT		Reviewed by: Quality Manager
Test Dates: 01/21/19 - 03/25/19	DUT Type: Portable Handset	APPENDIX H: Page 1 of 13		

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.

This device supports LAA with downlink carrier aggregation only. It uses carrier aggregation in the downlink to combine LTE in the unlicensed spectrum (i.e. LTE Band 46) with LTE in the licensed band (served as PCC). All uplink communications and acknowledgements on the PCC remain identical to specifications when downlink carrier aggregation is inactive.

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.

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 KDB 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.

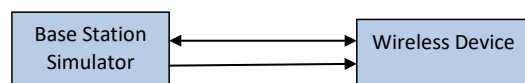


Figure 1
DL CA Power Measurement Setup

FCC ID: A3LSMG977U	 PCTEST ENGINEERING LABORATORY, INC.	SAR EVALUATION REPORT		Reviewed by: Quality Manager
Test Dates: 01/21/19 - 03/25/19	DUT Type: Portable Handset			APPENDIX H: Page 2 of 13

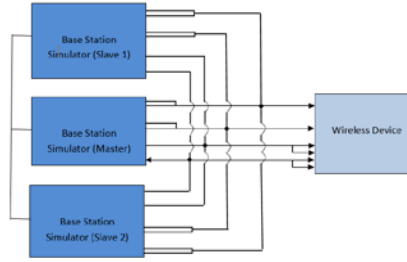


Figure 2
DL CA with DL 4x4 MIMO Power Measurement Setup

1.3 Downlink Carrier Aggregation RF Conducted Powers

1.3.1 LTE Band 12 as PCC

Table 1
Maximum Output Powers

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 1				SCC 2				SCC 3				Power	
										SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (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-12A (1)	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	-	-	-	-	-	-	-	-	24.84	24.83
CA 4A-12A (1)	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	24.80	24.83
CA 4A-12A (2)	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	24.80	24.83
CA 12A-66A (1)	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	24.78	24.83
CA 12A-66A (2)	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	24.78	24.83
CA 4A-4A-12A	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	-	-	-	-	24.83	24.83
CA 2A-2A-4A-12A	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B4	20	2175	2132.5	24.91	24.83
CA 4A-4A-12A	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B30	10	9820	2355	24.84	24.83
CA 2A-2A-12A-66A	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	24.82	24.83
CA 2A-12A-66A-66A	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	66786	2145	24.85	24.83
CA 2A-12A-66C	LTE B12	10	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	66684	2164.8	24.79	24.83

1.3.2 LTE Band 13 as PCC

Table 2
Maximum Output Powers

Combination	PCC Band	PCC BW [MHz]	PCC								SCC1				SCC2				SCC3				SCC4				Power	
			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]	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 CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)	
CA 2A-4A-13A	LTE B13	10	23230	782	QPSK	1	0	5230	753	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	25.04	25.11	
CA 4A-4A-13A	LTE B13	10	23230	782	QPSK	1	0	5230	753	LTE B4	20	2175	2132.5	LTE B4	20	2350	2150	-	-	-	-	-	-	-	-	25.10	25.11	
CA 2A-13A-66A	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B2	20	900	1960	LTE B46	20	50565	5537.5	-	-	-	-	-	-	-	-	25.19	25.15	
CA 13A-46A-66A	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B46	20	50565	5537.5	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	25.23	25.15	
CA 2A-2A-13A-66A	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	-	-	-	-	-	25.07	25.15
CA 2A-13A-66A-66A	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	66786	2145	-	-	-	-	-	25.05	25.15
CA 2A-13A-66B	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B2	20	900	1960	LTE B66	15	66879	2154.3	-	-	-	-	-	-	-	-	25.11	25.15	
CA 2A-13A-66C	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	66684	2164.8	-	-	-	-	-	25.17	25.15
CA 13A-46A-66B	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B46	20	50565	5537.5	LTE B66	15	66786	2145	LTE B66	15	67261	2162.5	-	-	-	-	-	25.07	25.15
CA 13A-46A-66C	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B46	20	50565	5537.5	LTE B66	15	66786	2145	LTE B66	15	67261	2162.5	-	-	-	-	-	25.07	25.15
CA 2A-13A-46C	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B2	20	900	1960	LTE B46	20	50565	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	25.10	25.15
CA 13A-46C-66A	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B46	20	50565	5537.5	LTE B46	20	50467	5517.7	LTE B66	20	66786	2145	-	-	-	-	-	25.17	25.15
CA 2A-13A-46A-46C	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B2	20	900	1960	LTE B46	20	50565	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	25.12	25.15
CA 2A-13A-46C-66A	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B2	20	900	1960	LTE B46	20	50565	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	25.18	25.15
CA 2A-13A-46B-66A	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B2	20	900	1960	LTE B46	20	50565	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	25.15	25.15
CA 2A-13A-46B-66B	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B2	20	900	1960	LTE B46	20	50565	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	25.15	25.15
CA 13A-46C-46C	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B46	20	50565	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50467	5517.7	-	-	-	-	-	25.15	25.15
CA 13A-46C	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B46	20	50565	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50467	5517.7	-	-	-	-	-	25.15	25.15
CA 2A-13A-46D	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B2	20	900	1960	LTE B46	20	50565	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	25.18	25.15
CA 13A-46D	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B46	20	50565	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50467	5517.7	-	-	-	-	-	25.18	25.15
CA 13A-46D-66A	LTE B13	5	23230	782	QPSK	1	12	5230	753	LTE B46	20	50565	5537.5	LTE B46	20	50467	5517.7	LTE B66	20	66786	2145	-	-	-	-	-	25.22	25.15

1.3.3 LTE Band 14 as PCC

Table 3
Maximum Output Powers

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 1				SCC 2				SCC 3				SCC 4				Power	
										SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (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]	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-2A-14A-30A-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B30	10	9820	2355	LTE B66	20	66786	2145	24.84	24.90
CA 2A-2A-14A-66A-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	LTE B66	20	66786	2145	24.91	24.90
CA 2A-14A-30A-66A-66A	LTE B14	5	23330	793	QPSK	1	12	5330	763	LTE B2	20	900	1960	LTE B30	10	9820	2355	LTE B66	20	66786	2145	LTE B66	20	66786	2145	24.86	24.90

FCC ID: A3LSMG977U		SAR EVALUATION REPORT		Reviewed by: Quality Manager
Test Dates: 01/21/19 - 03/25/19	DUT Type: Portable Handset			APPENDIX H: Page 3 of 13

1.3.4 LTE Band 5 as PCC

Table 4
Maximum Output Powers

[illegible]

1.3.5 LTE Band 66 as PCC

Table 5
Maximum Output Powers

[illegible]

1.4 DL CA with DL 4x4 MIMO RF Conduction Powers

This device supports downlink 4x4 MIMO operations for some LTE bands. Uplink transmission is limited to a single output stream. When carrier aggregation was applicable, the general test selection and setup procedures described in Section 1.2 were applied.

Per May 2017 TCB Workshop Notes, SAR for 4x4 DL MIMO was not needed since the maximum average output power in 4x4 DL MIMO mode was not more than 0.25 dB higher than the maximum output power with 4x4 DL MIMO inactive. Additionally, SAR for 4x4 MIMO Downlink Carrier Aggregation was not needed since the maximum average output power in 4x4 MIMO Downlink Carrier Aggregation mode was not more than 0.25 dB higher than the maximum output power with 4x4 MIMO Downlink and downlink carrier aggregation inactive.

1.4.1 LTE 4x4 MIMO DL Standalone Powers

Table 9
Maximum Output Powers

LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	Modulation	RB Size	RB Offset	4x4 DL MIMO Tx. Power [dBm]	Single Antenna Tx. Power [dBm]
66	1.4	132665	1779.3	QPSK	3	2	24.53	24.57
2	3	18615	1851.5	QPSK	1	14	24.09	23.92
30	5	27710	2310	QPSK	1	24	23.89	23.85

FCC ID: A3LSMG977U	 PCTEST ENGINEERING LABORATORY, INC.	SAR EVALUATION REPORT		Reviewed by: Quality Manager
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1.4.2 LTE Band 12 as PCC

Table 10
Maximum Output Powers

PCC										SCC 1				SCC 2				SCC 3				Power						
Combination	PCC Band	PCC BW [MHz]	PCC (U/L) Ch.	PCC (U/L) Freq. [MHz]	Mod.	PCC UL R/B	PCC UL R/B Offset	PCC (D/L) Ch.	PCC (D/L) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (D/L) Ch.	SCC (D/L) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (D/L) Ch.	SCC (D/L) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (D/L) Ch.	SCC (D/L) Freq. [MHz]	DL Ant. Config.	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)	
CA [2A]-[2A]-[1]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	-	-	-	-	-	-	-	-	-	-	-	24.82	24.83
CA [4A]-[2A]-[1]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	-	24.79	24.83
CA [2A]-[2A]-[2]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B6	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	-	24.79	24.83
CA [2A]-[66A]-[1]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	-	24.84	24.83
CA [2A]-[66A]-[2]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	-	24.84	24.83
CA [4A]-[4A]-[2A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	20	2350	2150	2x2	-	-	-	-	-	-	24.86	24.83
CA [4A]-[4A]-[2A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	20	2350	2150	4x4	-	-	-	-	-	-	24.84	24.83
CA [2A]-[2A]-[4A]-[2A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	2x2	LTE B2	20	700	1940	2x2	LTE B4	20	2175	2132.5	4x4	24.90	24.83	
CA [2A]-[2A]-[4A]-[2A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	LTE B2	20	700	1940	2x2	LTE B4	20	2175	2132.5	4x4	24.92	24.83	
CA [2A]-[2A]-[4A]-[2A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	LTE B2	20	700	1940	4x4	LTE B4	20	2175	2132.5	2x2	24.91	24.83	
CA [2A]-[2A]-[4A]-[2A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	LTE B2	20	700	1940	4x4	LTE B4	20	2175	2132.5	4x4	24.95	24.83	
CA [2A]-[2A]-[30A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	2x2	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	4x4	24.91	24.83	
CA [2A]-[2A]-[30A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	LTE B2	20	700	1940	2x2	LTE B30	10	9820	2355	2x2	24.91	24.83	
CA [2A]-[2A]-[30A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	LTE B2	20	700	1940	4x4	LTE B30	10	9820	2355	2x2	24.92	24.83	
CA [2A]-[2A]-[30A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	LTE B2	20	700	1940	4x4	LTE B30	10	9820	2355	4x4	24.89	24.83	
CA [2A]-[2A]-[66A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	24.95	24.83	
CA [2A]-[2A]-[66A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	2x2	24.92	24.83	
CA [2A]-[2A]-[66A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	24.90	24.83	
CA [2A]-[2A]-[66A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	2x2	24.90	24.83	
CA [2A]-[2A]-[66A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	24.88	24.83	
CA [2A]-[2A]-[66A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66786	2150	2x2	24.88	24.83	
CA [2A]-[2A]-[66A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66786	2150	2x2	24.87	24.83	
CA [2A]-[2A]-[66A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66786	2145	4x4	24.85	24.83	
CA [2A]-[2A]-[66A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	66786	2145	4x4	24.89	24.83	
CA [2A]-[2A]-[66A]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	66786	2150	4x4	24.88	24.83	
CA [2A]-[2A]-[66C]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	66984	2164.8	2x2	24.86	24.83	
CA [2A]-[2A]-[66C]	LTE B12	20	23095	707.5	QPSK	1	0	5095	737.5	2x2	LTE B2	20	900	1360	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	24.88	24.83	

1.4.3 LTE Band 13 as PCC

Table 11
Maximum Output Powers

Combination		PCC Band	PCC BW [MHz]	PCC [UL] Freq. [MHz]	PCC [UL] Mod.	PCC A				PCC B				SSC 1				SSC 2				SSC 3				SSC 4				Power	
						PCC RB	PCC L	PCC RB Off	PCC [UL] Freq. [MHz]	PCC [UL] Freq. [MHz]	DL Ant. Config.	SSC Band	SSC BW [MHz]	SSC [DL] Freq. [MHz]	SSC [DL] Ch.	DL Ant. Config.	SSC Band	SSC BW [MHz]	SSC [DL] Freq. [MHz]	SSC [DL] Ch.	DL Ant. Config.	SSC Band	SSC BW [MHz]	SSC [DL] Freq. [MHz]	SSC [DL] Ch.	DL Ant. Config.	SSC Band	SSC BW [MHz]	SSC [DL] Freq. [MHz]	SSC [DL] Ch.	DL Ant. Config.
CA 2A-4A-13A	LTE B13	10	21320	782	QPSK	1	0	5.230	721	242	LTE B2	20	900	1360	242	LTE B4	20	2175	2125.5	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-4A-13A	LTE B13	10	21320	782	QPSK	1	0	5.230	721	242	LTE B2	20	900	1360	242	LTE B4	20	2175	2125.5	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-4A-13A	LTE B13	10	21320	782	QPSK	1	0	5.230	721	242	LTE B2	20	900	1360	242	LTE B4	20	2175	2125.5	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 4A-4A-13A	LTE B13	10	21320	782	QPSK	1	0	5.230	721	242	LTE B4	20	2175	2125.5	242	LTE B4	20	2175	2125.5	242	LTE B4	20	2175	2125.5	242	21.05	20.11				
CA 2A-4A-13A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B4	20	2175	2125.5	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-4A-13A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B4	20	2175	2125.5	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2A-13A-6A	LTE B13	5	21320	782	QPSK	1	12	5.230	721	242	LTE B2	20	900	1360	242	LTE B2	20	900	1360	242	LTE B6	20	900	1360	242	21.05	20.11				
CA 2A-2																															

1.4.4 LTE Band 14 as PCC

Table 12
Maximum Output Powers

Combination	PCC Band	PCC				SCC 1				SCC 2				SCC 3				SCC 4				Power										
		PCC BW [MHz]	PCC [UL/DL]	PCC [UL/DL] Freq. [MHz]	Mod.	PCC UL RB	PCC UL RB Offset	PCC [DL] Ch.	PCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [UL/DL]	SCC [UL/DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [UL/DL]	SCC [UL/DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [UL/DL]	SCC [UL/DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [UL/DL]	SCC [UL/DL] Freq. [MHz]	DL Ant. Config.	LTE Tx Power with UL CA Enabled [dBm]	LTE Single Carrier Tx Power [dBm]
CA (24-2A, 24A)	LTE-B14	5	21330	783	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	4x4	LTE-B10	20	8020	2355	4x4	23.95	23.95
CA (24-2A, 24A, 30A)	LTE-B14	5	21330	783	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	4x4	LTE-B10	20	8020	2355	4x4	LTE-B10	20	8020	2355	4x4	23.95	23.95
CA (24-2A, 24A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	793	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	4x4	LTE-B6B	10	66786	2145	4x4	LTE-B6B	10	66786	2145	4x4	24.07	24.07
CA (24-2A, 24A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	793	2x2	LTE-B12	20	900	1960	4x4	LTE-B6B	10	66786	2145	4x4	LTE-B6B	10	66786	2145	4x4	LTE-B6B	10	66786	2145	4x4	24.07	24.07
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	793	2x2	LTE-B12	20	900	1960	4x4	LTE-B6B	10	66786	2145	4x4	LTE-B6B	10	66786	2145	4x4	LTE-B6B	10	66786	2145	4x4	24.07	24.07
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	793	2x2	LTE-B12	20	900	1960	4x4	LTE-B6B	10	66786	2145	4x4	LTE-B6B	10	66786	2145	4x4	LTE-B6B	10	66786	2145	4x4	24.07	24.07
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12	5330	783	2x2	LTE-B12	20	900	1960	4x4	LTE-B12	20	700	1940	2x2	LTE-B10	20	8020	2355	2x2	LTE-B6B	10	66786	2145	4x4	24.83	24.83
CA (24-2A, 24A, 66A, 66A)	LTE-B14	5	21330	793	QPSK	1	12																									

FCC ID: A3LSMG977U

Test Dates:
01/21/19 - 03/25/19

DUT Type:
Portable Handset

SAR EVALUATION REPORT



Reviewed by:	Quality Manager
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1.4.5 LTE Band 5 as PCC

Table 13
Maximum Output Powers

Combination	PCB Band	PCB BW [MHz]	PCC [U] Freq. [MHz]	Mod.	PCC URB	PCC URB Offset	PCC [U] Ch. Cl.	PCC [U] Freq. [MHz]	DL Ant. Config.	Sect 1				Sect 2				Sect 3				Sect 4				Power						
										Sect Band	Sect BW [MHz]	Sect [U] Ch. Cl.	Sect [U] Freq. [MHz]	DL Ant. Config.	Sect Band	Sect BW [MHz]	Sect [U] Ch. Cl.	Sect [U] Freq. [MHz]	DL Ant. Config.	Sect Band	Sect BW [MHz]	Sect [U] Ch. Cl.	Sect [U] Freq. [MHz]	DL Ant. Config.	Sect Band	Sect BW [MHz]	Sect [U] Freq. [MHz]	DL Ant. Config.	LTE Tx Power with CA (Enb. Ed01)	LTE Single Carrier Tx Power (Ed05)		
CA [2A]-2A-46A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B46	20	5065	5337.5	2x2	-	-	-	-	-	-	25.02	24.94				
CA [2A]-2A-4A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	2x2	LTE B4	20	2175	2132.5	4x4	LTE B66	20	5065	5337.5	2x2	-	-	25.06	24.94			
CA [2A]-2A-4A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B4	20	2175	2132.5	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	4x4	LTE B4	20	2175	2132.5	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0	2325	881.5	2x2	LTE B62	20	900	1960	4x4	LTE B62	20	700	1940	2x2	LTE B30	20	9820	2355	4x4	LTE B66	20	5065	5337.5	2x2	-	-
CA [2A]-2A-1A-5A-66A	LTE B5	10	2025	838.5	CPXK	1	0</																									

1.4.7 LTE Band 2 as PCC

Table 15
Maximum Output Powers

Combination	PCC Band	PCC BW [MHz]	PCC [M] Ch.	PCC [M] Freq. [MHz]	Mod.	PCC				SCC1				SCC2				SCC3				SCC4				SCC5				SCC6				SCC7				SCC8				SCC9				SCC10				SCC11				SCC12				SCC13				SCC14				SCC15				SCC16				SCC17				SCC18				SCC19				SCC20				SCC21				SCC22				SCC23				SCC24				SCC25				SCC26				SCC27				SCC28				SCC29				SCC30				SCC31				SCC32				SCC33				SCC34				SCC35				SCC36				SCC37				SCC38				SCC39				SCC40				SCC41				SCC42				SCC43				SCC44				SCC45				SCC46				SCC47				SCC48				SCC49				SCC50				SCC51				SCC52				SCC53				SCC54				SCC55				SCC56				SCC57				SCC58				SCC59				SCC60				SCC61				SCC62				SCC63				SCC64				SCC65				SCC66				SCC67				SCC68				SCC69				SCC70				SCC71				SCC72				SCC73				SCC74				SCC75				SCC76				SCC77				SCC78				SCC79				SCC80				SCC81				SCC82				SCC83				SCC84				SCC85				SCC86				SCC87				SCC88				SCC89				SCC90				SCC91				SCC92				SCC93				SCC94				SCC95				SCC96				SCC97				SCC98				SCC99				SCC100				SCC101				SCC102				SCC103				SCC104				SCC105				SCC106				SCC107				SCC108				SCC109				SCC110				SCC111				SCC112				SCC113				SCC114				SCC115				SCC116				SCC117				SCC118				SCC119				SCC120				SCC121				SCC122				SCC123				SCC124				SCC125				SCC126				SCC127				SCC128				SCC129				SCC130				SCC131				SCC132				SCC133				SCC134				SCC135				SCC136				SCC137				SCC138				SCC139				SCC140				SCC141				SCC142				SCC143				SCC144				SCC145				SCC146				SCC147				SCC148				SCC149				SCC150				SCC151				SCC152				SCC153				SCC154				SCC155				SCC156				SCC157				SCC158				SCC159				SCC160				SCC161				SCC162				SCC163				SCC164				SCC165				SCC166				SCC167				SCC168				SCC169				SCC170				SCC171				SCC172				SCC173				SCC174				SCC175				SCC176				SCC177				SCC178				SCC179				SCC180				SCC181				SCC182				SCC183				SCC184				SCC185				SCC186				SCC187				SCC188				SCC189				SCC190				SCC191				SCC192				SCC193				SCC194				SCC195				SCC196				SCC197				SCC198				SCC199				SCC200				SCC201				SCC202				SCC203				SCC204				SCC205				SCC206				SCC207				SCC208				SCC209				SCC210				SCC211				SCC212				SCC213				SCC214				SCC215				SCC216				SCC217				SCC218				SCC219				SCC220				SCC221				SCC222				SCC223				SCC224				SCC225				SCC226				SCC227				SCC228				SCC229				SCC230				SCC231				SCC232				SCC233				SCC234				SCC235				SCC236				SCC237				SCC238				SCC239				SCC240				SCC241				SCC242				SCC243				SCC244				SCC245				SCC246				SCC247				SCC248				SCC249				SCC250				SCC251				SCC252				SCC253				SCC254				SCC255				SCC256				SCC257				SCC258				SCC259				SCC260				SCC261				SCC262				SCC263				SCC264				SCC265				SCC266				SCC267				SCC268				SCC269				SCC270				SCC271				SCC272				SCC273				SCC274				SCC275				SCC276				SCC277				SCC278				SCC279				SCC280				SCC281				SCC282				SCC283				SCC284				SCC285				SCC286				SCC287				SCC288				SCC289				SCC290				SCC291				SCC292				SCC293				SCC294				SCC295				SCC296				SCC297				SCC298				SCC299				SCC300				SCC301				SCC302				SCC303				SCC304				SCC305				SCC306				SCC307				SCC308				SCC309				SCC310				SCC311				SCC312				SCC313				SCC314				SCC315				SCC316				SCC317				SCC318				SCC319				SCC320				SCC321				SCC322				SCC323				SCC324				SCC325				SCC326				SCC327				SCC328				SCC329				SCC330				SCC331				SCC332				SCC333				SCC334				SCC335				SCC336				SCC337				SCC338				SCC339				SCC340				SCC341				SCC342				SCC343				SCC344				SCC345				SCC346				SCC347				SCC348				SCC349				SCC350				SCC351				SCC352				SCC353				SCC354				SCC355				SCC356				SCC357				SCC358				SCC359				SCC360				SCC361				SCC362				SCC363				SCC364				SCC365				SCC366				SCC367				SCC368				SCC369				SCC370				SCC371				SCC372				SCC373				SCC374				SCC375				SCC376				SCC377				SCC378				SCC379				SCC380				SCC381				SCC382				SCC383				SCC384				SCC385				SCC386				SCC387				SCC388				SCC389				SCC390				SCC391				SCC392				SCC393				SCC394				SCC395				SCC396				SCC397				SCC398				SCC399				SCC400				SCC401				SCC402				SCC403				SCC404				SCC405				SCC406				SCC407				SCC408				SCC409				SCC410				SCC411				SCC412				SCC413				SCC414				SCC415				SCC416				SCC417				SCC418				SCC419				SCC420				SCC421				SCC422				SCC423				SCC424				SCC425				SCC426				SCC427				SCC428				SCC429				SCC430				SCC431				SCC432				SCC433				SCC434				SCC435				SCC436				SCC437				SCC438				SCC439				SCC440				SCC441				SCC442				SCC443				SCC444				SCC445				SCC446				SCC447				SCC448				SCC449				SCC450				SCC451				SCC452				SCC453				SCC454				SCC455				SCC456				SCC457				SCC458				SCC459				SCC460				SCC461				SCC462				SCC463				SCC464				SCC465				SCC466				SCC467				SCC468				SCC469				SCC470				SCC471				SCC472				SCC473				SCC474				SCC475				SCC476				SCC477				SCC478				SCC479				SCC480				SCC481				SCC482				SCC483				SCC484				SCC485				SCC486				SCC487				SCC488				SCC489				SCC490				SCC491				SCC492				SCC493				SCC494				SCC495				SCC496				SCC497				SCC498				SCC499				SCC500				SCC501				SCC502				SCC503				SCC504				SCC505				SCC506				SCC507				SCC508				SCC509				SCC510				S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1.4.8 LTE Band 30 Ant A as PCC

Table 16
Maximum Output Powers

Combination	PCC Band	PCC										SSC 1				SSC 2				SSC 3				SSC 4				Power				
		PCC BW [MHz]	PCC [U] Ch	PCC [U] Freq. [MHz]	Mod.	PCC LRA BB Offset [Ch]	PCC [U] Ch	PCC [U] Freq. [MHz]	DL Ant. Config.	SSC Band	SSC BW [MHz]	SSC [U] Ch	SSC [U] Freq. [MHz]	DL Ant. Config.	SSC Band	SSC BW [MHz]	SSC [U] Ch	SSC [U] Freq. [MHz]	DL Ant. Config.	SSC Band	SSC BW [MHz]	SSC [U] Ch	SSC [U] Freq. [MHz]	DL Ant. Config.	SSC Band	SSC BW [MHz]	SSC [U] Ch	SSC [U] Freq. [MHz]	DL Ant. Config.	LTE Power with 12.4 Enb (dBm)	LTE Single Carrier Power (dBm)	
CA 12A-2A-8A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B5	10	2525	881.5	242	LTE B6	20	6678	2145	242	21.67	21.85
CA 12A-2A-8A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B5	10	2525	881.5	242	LTE B6	20	6678	2145	242	21.67	21.85
CA 2A-12A-10A-8A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	242	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	242	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	242	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20	900	1960	444	LTE B2	20	700	1940	242	LTE B12	10	5095	773.5	242	LTE B6	20	6678	2145	242	21.64	21.85
CA 12A-2A-12A-10A	LTE B3	10	27710	2310	QPSK	1	0	9820	2355	444	LTE B3	20																				

Note: ^ - Indicates that Band 30 operations are using antenna A

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APPENDIX I: IEEE 802.11AX RU SAR EXCLUSION

1.1 IEEE 802.11ax RU SAR Exclusion

To make the most efficient use of the additional available subcarriers (data tones), IEEE 802.11ax can utilize Orthogonal Frequency-Division Multiple Access (OFDMA) which divides the existing 802.11 channels into smaller subchannels called Resource Units (RUs). Possible RU sizes are: 26T, 52T, 106T, 242T, 484T and 996T.

Per FCC Guidance, 802.11ax was considered a higher order 802.11 mode when compared to a/b/g/n/ac to apply KDB Publication 248227 D01v02r02 for OFDM mode selection. Therefore, SAR tests were not required for 802.11ax based on the maximum allowed output powers of OFDM modes and the reported SAR values. Per FCC Guidance, maximum conducted powers were performed for each RU size to demonstrate that the output powers would not be higher than the other OFDM 802.11 modes.

1.2 IEEE 802.11ax RU Target Powers

1.2.1 Maximum 802.11ax RU WLAN Output Power

		SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
Tones		2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz	2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz
		Ch & RU index							
26T	Maximum	14	11	11	11	14	11	11	11
	Nominal	13	10	10	10	13	10	10	10
52T	Maximum	15	13	12	11	15	13	12	11
	Nominal	14	12	11	10	14	12	11	10
106T	Maximum	16	15	13	12	16	15	13	12
	Nominal	15	14	12	11	15	14	12	11
242T	Maximum	17	16	14	13	17	16	14	13
		ch 1: 16, ch 11: 15.5				ch 1: 16, ch 11: 15.5			
	Nominal	16	15	13	12	16	15	13	12
		ch 1: 15, ch 11: 14.5				ch 1: 15, ch 11: 14.5			
484T	Maximum			14	13			14	13
	Nominal			13	12			13	12
996T	Maximum				13				13
	Nominal				12				12

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1.2.2 Reduced 802.11ax RU WLAN Output Power

		SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
Tones		2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz	2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz
		Ch & RU index							
26T	Maximum	14	11	11	11	14	11	11	11
	Nominal	13	10	10	10	13	10	10	10
52T	Maximum	15	13	12	11	15	13	12	11
	Nominal	14	12	11	10	14	12	11	10
106T	Maximum	16	14	13	12	16	15	13	12
	Nominal	15	13	12	11	15	14	12	11
242T	Maximum	17	14	14	13	17	16	14	13
		ch 1: 16, ch 11: 15.5				ch 1: 16, ch 11: 15.5			
	Nominal	16	13	13	12	16	15	13	12
		ch 1: 15, ch 11: 14.5				ch 1: 15, ch 11: 14.5			
484T	Maximum			14	13			14	13
	Nominal			13	12			13	12
996T	Maximum				13				13
	Nominal				12				12

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1.2.3 Maximum 802.11ax RU WLAN Output Power During Conditions with Simultaneous 2.4 GHz WLAN and 5 GHz WLAN

		SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
Tones		2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz	2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz
		Ch & RU index							
26T	Maximum	14	11	11	11	14	11	11	11
	Nominal	13	10	10	10	13	10	10	10
52T	Maximum	15	13	12	11	15	13	12	11
	Nominal	14	12	11	10	14	12	11	10
106T	Maximum	16	14	13	12	16	15	13	12
	Nominal	15	13	12	11	15	14	12	11
242T	Maximum	17	14	14	13	17	16	14	13
		ch 1: 16, ch 11: 15.5				ch 1: 16, ch 11: 15.5			
	Nominal	16	13	13	12	16	15	13	12
		ch 1: 15, ch 11: 14.5				ch 1: 15, ch 11: 14.5			
484T	Maximum			14	13			14	13
	Nominal			13	12			13	12
996T	Maximum				13				13
	Nominal				12				12

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1.2.4 Reduced 802.11ax RU WLAN Output Power During Conditions with Simultaneous 2.4 GHz WLAN and 5 GHz WLAN

		SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
Tones		2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz	2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz
		Ch & RU index							
26T	Maximum	14	11	11	11	14	11	11	11
	Nominal	13	10	10	10	13	10	10	10
52T	Maximum	14	13	12	11	15	13	12	11
	Nominal	13	12	11	10	14	12	11	10
106T	Maximum	14	14	13	12	16	15	13	12
	Nominal	13	13	12	11	15	14	12	11
242T	Maximum	14	14	14	13	17	16	14	13
						ch 1: 16, ch 11: 15.5			
	Nominal	13	13	13	12	16	15	13	12
						ch 1: 15, ch 11: 14.5			
484T	Maximum			14	13			14	13
	Nominal			13	12			13	12
996T	Maximum				13				13
	Nominal				12				12

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1.2.5

Reduced 802.11ax RU WLAN Output Power During Conditions with mmWave active

		SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
Tones		2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz	2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz
		Ch & RU index							
26T	Maximum	14	11	11	11	14	11	11	11
	Nominal	13	10	10	10	13	10	10	10
52T	Maximum	14	13	12	11	15	13	12	11
	Nominal	13	12	11	10	14	12	11	10
106T	Maximum	14	14	13	12	16	15	13	12
	Nominal	13	13	12	11	15	14	12	11
242T	Maximum	14	14	14	13	17	16	14	13
						ch 1: 16, ch 11: 15.5			
	Nominal	13	13	13	12	16	15	13	12
						ch 1: 15, ch 11: 14.5			
484T	Maximum			14	13			14	13
	Nominal			13	12			13	12
996T	Maximum				13				13
	Nominal				12				12

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1.2.6

Reduced 802.11ax RU WLAN Output Power During Conditions with Simultaneous 2.4 GHz WLAN and 5 GHz WLAN and mmWave active

		SISO (ANT1/2) /in dBm				MIMO (ALL) /in dBm			
Tones		2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz	2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz
		Ch & RU index							
26T	Maximum	14	11	11	11	14	11	11	11
	Nominal	13	10	10	10	13	10	10	10
52T	Maximum	14	13	12	11	15	13	12	11
	Nominal	13	12	11	10	14	12	11	10
106T	Maximum	14	14	13	12	16	15	13	12
	Nominal	13	13	12	11	15	14	12	11
242T	Maximum	14	14	14	13	17 ch 1: 16, ch 11: 15.5	16	14	13
	Nominal	13	13	13	12	16 ch 1: 15, ch 11: 14.5	15	13	12
484T	Maximum			14	13			14	13
	Nominal			13	12			13	12
996T	Maximum				13				13
	Nominal				12				12

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1.3 IEEE 802.11ax Measured Powers

Table 1
Maximum 2.4 GHz 802.11ax RU Output Power – Ant 1

RU Index	Tones	Ch. 1	Ch. 2	Ch. 6	Ch. 10	Ch. 11
		Average	Average	Average	Average	Average
0	26	13.61		13.59		13.35
4	26	13.67		13.52		13.99
8	26	13.72		13.96		13.67
37	52	14.69		14.69		14.95
38	52	14.86		14.98		14.82
40	52	14.52		14.90		14.59
53	106	15.82		15.89		15.63
54	106	15.98		15.52		15.37
61	242	15.79	16.65	16.60	16.89	15.39

Table 2
Maximum 2.4 GHz 802.11ax RU Output Power – Ant 2

RU Index	Tones	Ch. 1	Ch. 2	Ch. 6	Ch. 10	Ch. 11
		Average	Average	Average	Average	Average
0	26	13.99		13.97		13.99
4	26	13.65		13.89		13.82
8	26	13.98		13.75		13.96
37	52	14.75		14.74		14.82
38	52	14.78		14.80		14.83
40	52	14.75		14.98		14.81
53	106	15.78		15.88		15.85
54	106	15.53		15.87		15.70
61	242	15.74	16.60	16.88	16.78	15.14

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Table 3
Maximum 5 GHz 802.11ax RU Output Power – Ant 1

5GHz - 20MHz													
RU Index	Tones	UNII 1			UNII 2A			UNII 2C			UNII 3		
		Ch. 36	Ch. 40	Ch. 48	Ch. 52	Ch. 56	Ch. 64	Ch. 100	Ch. 120	Ch. 144	Ch. 149	Ch. 157	U3 - Ch. 165
		Average	Average	Average	Average	Average	Average	Average	Average	Average	Average	Average	Average
0	26	10.56	10.54	10.54	10.41	10.95	10.50	10.95	10.77	10.67	10.93	10.83	10.50
4	26	10.87	10.80	10.94	10.65	10.66	10.71	10.64	10.98	10.96	10.65	10.70	10.90
8	26	10.73	10.68	10.78	10.98	10.54	10.50	10.94	10.76	10.76	10.70	10.77	10.58
37	52	12.75	12.70	12.65	12.51	12.57	12.60	12.82	12.68	12.72	12.96	12.82	12.57
38	52	12.83	12.89	12.88	12.70	12.75	12.72	12.90	12.81	12.88	12.63	12.99	12.75
40	52	12.81	12.82	12.86	12.57	12.58	12.57	12.86	12.64	12.70	12.75	12.77	12.55
53	106	14.54	14.65	14.61	14.50	14.58	14.57	14.72	14.52	14.55	14.91	14.77	14.59
54	106	14.75	14.73	14.68	14.56	14.51	14.53	14.72	14.51	14.93	14.79	14.73	14.59
61	242	15.73	15.63	15.65	15.52	15.51	15.56	15.54	15.85	15.82	15.73	15.79	15.52

5GHz - 40MHz											
RU Index	Tones	UNII 1		UNII 2A		UNII 2C			UNII 3		
		Ch. 38	Ch. 46	Ch. 54	Ch. 62	Ch. 102	Ch. 118	Ch. 142	Ch. 151	Ch. 159	
		Average	Average	Average	Average	Average	Average	Average	Average	Average	
0	26	10.52	10.48	10.92	10.83	10.88	10.60	10.71	10.92	10.83	
8	26	10.88	10.80	10.91	10.92	10.88	10.60	10.85	10.91	10.83	
17	26	10.63	10.58	10.95	10.92	10.99	10.98	10.65	10.80	10.87	
37	52	11.86	11.74	11.85	11.74	11.97	11.83	11.96	11.83	11.99	
40	52	11.81	11.72	11.98	11.98	11.98	11.52	11.81	11.83	11.68	
44	52	11.83	11.87	11.85	11.60	11.58	11.70	11.82	11.72	11.94	
53	106	12.97	12.92	12.99	12.98	12.76	12.94	12.62	12.97	12.89	
54	106	12.80	12.82	12.99	12.88	12.76	12.99	12.78	12.93	12.78	
56	106	12.96	12.95	12.98	12.78	12.75	12.88	12.98	12.81	12.80	
61	242	13.98	13.89	13.60	13.56	13.87	13.99	13.80	13.98	13.75	
62	242	13.87	13.74	13.68	13.92	13.99	13.98	13.58	13.71	13.81	
65	484	13.55	13.60	13.90	13.76	13.68	13.86	13.98	13.81	13.97	

5GHz - 80MHz							
RU Index	Tones	UNII 1	UNII 2A	UNII 2C		UNII 3	
		Ch. 42	Ch. 58	Ch. 106	Ch. 122	Ch. 138	Ch. 155
		Average	Average	Average	Average	Average	Average
0	26	10.56	10.77	10.85	10.99	10.83	10.68
17	26	10.65	10.98	10.84	10.89	10.74	10.76
36	26	10.57	10.85	10.54	10.70	10.98	10.53
37	52	10.68	10.91	10.98	10.75	10.67	10.88
44	52	10.60	10.50	10.82	10.94	10.82	10.83
52	52	10.69	10.99	10.90	10.89	10.70	10.72
53	106	11.93	11.71	11.65	11.84	11.67	11.65
56	106	11.83	11.98	11.82	11.98	11.79	11.80
60	106	11.80	11.76	11.89	11.48	11.82	11.97
61	242	12.85	12.96	12.85	12.57	12.80	12.88
62	242	12.93	12.73	12.83	12.98	12.84	12.90
64	242	12.68	12.98	12.71	12.91	12.98	12.56
65	484	12.98	12.81	12.87	12.71	12.56	12.57
66	484	12.98	12.77	12.99	12.69	12.99	12.55
67	996	12.98	12.79	12.48	12.74	12.95	12.99

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Table 4
Maximum 5 GHz 802.11ax RU Output Power – Ant 2

5GHz - 20MHz													
RU Index	Tones	UNII 1			UNII 2A			UNII 2C			UNII 3		
		Ch. 36	Ch. 40	Ch. 48	Ch. 52	Ch. 56	Ch. 64	Ch. 100	Ch. 120	Ch. 144	Ch. 149	Ch. 157	U3 - Ch. 165
		Average	Average	Average	Average	Average	Average	Average	Average	Average	Average	Average	Average
0	26	10.61	10.59	10.70	10.86	10.79	10.44	10.53	10.61	10.71	10.75	10.64	10.72
4	26	10.98	10.94	10.98	10.98	10.72	10.73	10.87	10.72	10.86	10.91	10.94	10.99
8	26	10.80	10.66	10.82	10.83	10.98	10.88	10.77	10.92	10.85	10.98	10.95	10.96
37	52	12.99	12.63	12.65	12.81	12.94	12.99	12.69	12.58	12.68	12.64	12.91	12.98
38	52	12.86	12.81	12.91	12.70	12.98	12.71	12.73	12.63	12.75	12.72	12.61	12.81
40	52	12.64	12.80	12.80	12.92	12.92	12.98	12.45	12.85	12.85	12.90	12.77	12.81
53	106	14.50	14.55	14.66	14.93	14.98	14.99	14.99	14.98	14.96	14.98	14.82	14.89
54	106	14.60	14.61	14.69	14.87	14.99	14.53	14.98	14.84	14.86	14.71	14.63	14.71
61	242	15.98	15.99	15.97	15.85	15.85	15.80	15.98	15.85	15.86	15.74	15.68	15.78

5GHz - 40MHz											
RU Index	Tones	UNII 1		UNII 2A		UNII 2C			UNII 3		
		Ch. 38	Ch. 46	Ch. 54	Ch. 62	Ch. 102	Ch. 118	Ch. 142	Ch. 151	Ch. 159	
		Average	Average	Average	Average	Average	Average	Average	Average	Average	
0	26	10.97	10.51	10.74	10.81	10.67	10.62	10.72	10.85	10.60	
8	26	10.62	10.61	10.77	10.70	10.58	10.80	10.54	10.73	10.98	
17	26	10.50	10.53	10.79	10.68	10.68	10.86	10.54	10.67	10.85	
37	52	11.63	11.72	11.95	11.94	11.88	11.58	11.75	11.93	11.72	
40	52	11.64	11.71	11.84	11.83	11.55	11.74	11.60	11.75	11.85	
44	52	11.59	11.72	11.98	11.93	11.70	11.91	11.56	11.79	11.53	
53	106	12.76	12.92	12.70	12.72	12.39	12.95	12.96	12.55	12.97	
54	106	12.71	12.52	12.73	12.85	12.50	12.85	12.43	12.60	12.79	
56	106	12.77	12.89	12.62	12.50	12.58	12.73	12.82	12.41	12.84	
61	242	13.64	13.97	13.80	13.79	13.71	13.93	13.86	13.67	13.80	
62	242	13.51	13.96	13.72	13.65	13.86	13.99	13.69	13.70	13.82	
65	484	13.53	13.95	13.67	13.60	13.60	13.93	13.64	13.50	13.80	

RU Index	Tones	UNII 1	UNII 2A	UNII 2C		UNII 3	
		Ch. 42	Ch. 58	Ch. 106	Ch. 122	Ch. 138	Ch. 155
		Average	Average	Average	Average	Average	Average
0	26	10.93	10.63	10.70	10.97	10.75	10.62
17	26	10.48	10.69	10.94	10.95	10.80	10.85
36	26	10.55	10.73	10.76	10.86	10.95	10.67
37	52	10.70	10.76	10.93	10.65	10.99	10.77
44	52	10.53	10.75	10.96	10.66	10.91	10.96
52	52	10.70	10.91	10.92	10.65	10.80	10.87
53	106	11.76	11.97	11.89	11.65	11.86	11.75
56	106	11.65	11.82	11.99	11.71	11.80	11.91
60	106	11.85	11.95	11.98	11.72	11.40	11.86
61	242	12.99	12.72	12.58	12.89	12.72	12.94
62	242	12.98	12.99	12.74	12.84	12.63	12.96
64	242	12.61	12.67	12.40	12.76	12.81	12.84
65	484	12.89	12.55	12.93	12.65	12.87	12.78
66	484	12.94	12.65	12.89	12.60	12.78	12.71
67	996	12.88	12.77	12.86	12.52	12.96	12.60

FCC: A3LSMG977U	 SAR EVALUATION REPORT 	Reviewed by: Quality Manager
Test Dates: 01/21/19 - 03/25/19	DUT Type: Portable Handset	APPENDIX I: Page 9 of 9