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10402-AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	X	5.75	68.52	17.20	0.00	150.0	± 9.6 %
		Y	6.00	68.61	17.22		150.0	
		Z	5.85	68.43	17.27		150.0	
10403-AAB	CDMA2000 (1xEV-DO, Rev. 0)	X	1.62	71.70	14.06	0.00	115.0	± 9.6 %
		Y	2.42	76.19	18.04		115.0	
		Z	2.10	74.61	16.14		115.0	
10404-AAB	CDMA2000 (1xEV-DO, Rev. A)	X	1.62	71.70	14.06	0.00	115.0	± 9.6 %
		Y	2.42	76.19	18.04		115.0	
		Z	2.10	74.61	16.14		115.0	
10406-AAB	CDMA2000, RC3, SQ32, SCH0, Full Rate	X	100.00	117.99	27.44	0.00	100.0	± 9.6 %
		Y	100.00	121.24	30.40		100.0	
		Z	100.00	144.44	39.35		100.0	
10410-AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	X	19.28	98.85	22.74	3.23	80.0	± 9.6 %
		Y	100.00	117.24	28.30		80.0	
		Z	100.00	136.44	36.26		80.0	
10415-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	X	1.06	65.24	16.38	0.00	150.0	± 9.6 %
		Y	1.07	65.00	16.42		150.0	
		Z	1.05	65.12	16.52		150.0	
10416-AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	X	4.56	67.81	16.94	0.00	150.0	± 9.6 %
		Y	4.80	67.60	16.95		150.0	
		Z	4.67	67.63	17.03		150.0	
10417-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	X	4.56	67.81	16.94	0.00	150.0	± 9.6 %
		Y	4.80	67.60	16.95		150.0	
		Z	4.67	67.63	17.03		150.0	
10418-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)	X	4.56	68.02	17.00	0.00	150.0	± 9.6 %
		Y	4.79	67.73	16.95		150.0	
		Z	4.66	67.80	17.05		150.0	
10419-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)	X	4.57	67.95	16.98	0.00	150.0	± 9.6 %
		Y	4.81	67.69	16.96		150.0	
		Z	4.68	67.75	17.05		150.0	
10422-AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	X	4.68	67.92	16.99	0.00	150.0	± 9.6 %
		Y	4.94	67.70	16.98		150.0	
		Z	4.80	67.74	17.07		150.0	
10423-AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	X	4.82	68.21	17.09	0.00	150.0	± 9.6 %
		Y	5.15	68.11	17.13		150.0	
		Z	4.97	68.08	17.19		150.0	
10424-AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	X	4.75	68.16	17.07	0.00	150.0	± 9.6 %
		Y	5.06	68.03	17.09		150.0	
		Z	4.89	68.03	17.16		150.0	
10425-AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	X	5.52	68.81	17.49	0.00	150.0	± 9.6 %
		Y	5.82	68.94	17.56		150.0	
		Z	5.73	69.04	17.74		150.0	
10426-AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	X	5.70	69.45	17.81	0.00	150.0	± 9.6 %
		Y	5.87	69.10	17.63		150.0	
		Z	5.87	69.57	18.01		150.0	



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10427-AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	X	5.52	68.75	17.46	0.00	150.0	± 9.6 %
		Y	5.81	68.83	17.49		150.0	
		Z	5.81	69.28	17.86		150.0	
10430-AAB	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	X	4.32	72.89	18.89	0.00	150.0	± 9.6 %
		Y	4.46	71.28	18.79		150.0	
		Z	4.32	71.84	18.79		150.0	
10431-AAB	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	X	4.20	68.56	16.90	0.00	150.0	± 9.6 %
		Y	4.54	68.28	17.05		150.0	
		Z	4.35	68.37	17.05		150.0	
10432-AAB	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	X	4.51	68.30	17.01	0.00	150.0	± 9.6 %
		Y	4.83	68.11	17.07		150.0	
		Z	4.65	68.13	17.12		150.0	
10433-AAB	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	X	4.77	68.19	17.09	0.00	150.0	± 9.6 %
		Y	5.07	68.08	17.11		150.0	
		Z	4.90	68.05	17.18		150.0	
10434-AAA	W-CDMA (BS Test Model 1, 64 DPCH)	X	4.43	73.79	18.70	0.00	150.0	± 9.6 %
		Y	4.56	72.04	18.76		150.0	
		Z	4.41	72.68	18.67		150.0	
10435-AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.14	81.90	18.21	3.23	80.0	± 9.6 %
		Y	100.00	117.32	28.33		80.0	
		Z	100.00	143.13	39.08		80.0	
10447-AAB	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	3.46	68.62	15.88	0.00	150.0	± 9.6 %
		Y	3.85	68.50	16.60		150.0	
		Z	3.63	68.53	16.29		150.0	
10448-AAB	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	X	4.06	68.35	16.77	0.00	150.0	± 9.6 %
		Y	4.35	68.04	16.91		150.0	
		Z	4.18	68.13	16.91		150.0	
10449-AAB	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	X	4.34	68.12	16.91	0.00	150.0	± 9.6 %
		Y	4.61	67.91	16.96		150.0	
		Z	4.46	67.94	17.01		150.0	
10450-AAB	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	4.55	67.94	16.94	0.00	150.0	± 9.6 %
		Y	4.79	67.80	16.95		150.0	
		Z	4.66	67.79	17.02		150.0	
10451-AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	X	3.30	68.56	15.21	0.00	150.0	± 9.6 %
		Y	3.79	68.84	16.34		150.0	
		Z	3.53	68.71	15.83		150.0	
10456-AAB	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	X	6.66	69.85	17.92	0.00	150.0	± 9.6 %
		Y	6.71	69.45	17.67		150.0	
		Z	6.84	70.06	18.14		150.0	
10457-AAA	UMTS-FDD (DC-HSDPA)	X	3.85	66.45	16.66	0.00	150.0	± 9.6 %
		Y	3.96	66.18	16.69		150.0	
		Z	3.89	66.20	16.74		150.0	
10458-AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	X	3.94	72.42	17.52	0.00	150.0	± 9.6 %
		Y	4.14	71.12	18.17		150.0	
		Z	4.05	71.94	17.97		150.0	
10459-AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	X	4.97	69.66	18.34	0.00	150.0	± 9.6 %
		Y	5.21	68.22	18.41		150.0	
		Z	5.08	68.98	18.50		150.0	



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10460-AAA	UMTS-FDD (WCDMA, AMR)	X	1.48	78.99	21.39	0.00	150.0	± 9.6 %
		Y	1.45	77.90	21.28		150.0	
		Z	1.59	80.39	22.09		150.0	
10461-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	7.79	91.54	22.09	3.29	80.0	± 9.6 %
		Y	100.00	120.65	29.97		80.0	
		Z	100.00	146.64	40.89		80.0	
10462-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.67	60.00	6.21	3.23	80.0	± 9.6 %
		Y	2.70	68.44	11.89		80.0	
		Z	100.00	116.38	26.63		80.0	
10463-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.68	60.00	5.65	3.23	80.0	± 9.6 %
		Y	1.89	64.43	9.76		80.0	
		Z	100.00	108.57	23.12		80.0	
10464-AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.71	81.04	18.02	3.23	80.0	± 9.6 %
		Y	100.00	117.86	28.53		80.0	
		Z	100.00	143.96	39.41		80.0	
10465-AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.67	60.00	6.15	3.23	80.0	± 9.6 %
		Y	2.42	67.33	11.38		80.0	
		Z	100.00	115.28	26.13		80.0	
10466-AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.68	60.00	5.62	3.23	80.0	± 9.6 %
		Y	1.79	63.92	9.48		80.0	
		Z	100.00	107.69	22.73		80.0	
10467-AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.27	82.80	18.62	3.23	80.0	± 9.6 %
		Y	100.00	118.08	28.62		80.0	
		Z	100.00	144.42	39.61		80.0	
10468-AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.66	60.00	6.16	3.23	80.0	± 9.6 %
		Y	2.47	67.58	11.50		80.0	
		Z	100.00	115.66	26.29		80.0	
10469-AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.68	60.00	5.61	3.23	80.0	± 9.6 %
		Y	1.79	63.93	9.48		80.0	
		Z	100.00	107.73	22.74		80.0	
10470-AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.29	82.84	18.62	3.23	80.0	± 9.6 %
		Y	100.00	118.09	28.62		80.0	
		Z	100.00	144.54	39.65		80.0	
10471-AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.66	60.00	6.15	3.23	80.0	± 9.6 %
		Y	2.46	67.51	11.45		80.0	
		Z	100.00	115.53	26.23		80.0	
10472-AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.68	60.00	5.59	3.23	80.0	± 9.6 %
		Y	1.78	63.87	9.45		80.0	
		Z	100.00	107.56	22.66		80.0	
10473-AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.26	82.74	18.58	3.23	80.0	± 9.6 %
		Y	100.00	118.05	28.60		80.0	
		Z	100.00	144.48	39.62		80.0	
10474-AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.66	60.00	6.14	3.23	80.0	± 9.6 %
		Y	2.45	67.47	11.44		80.0	
		Z	100.00	115.55	26.24		80.0	
10475-AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.68	60.00	5.60	3.23	80.0	± 9.6 %
		Y	1.78	63.86	9.44		80.0	
		Z	100.00	107.61	22.68		80.0	



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10477-AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.66	60.00	6.12	3.23	80.0	± 9.6 %
		Y	2.39	67.24	11.32		80.0	
		Z	100.00	115.18	26.07		80.0	
10478-AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.68	60.00	5.58	3.23	80.0	± 9.6 %
		Y	1.77	63.82	9.41		80.0	
		Z	100.00	107.46	22.61		80.0	
10479-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	6.67	85.59	21.53	3.23	80.0	± 9.6 %
		Y	7.57	85.20	22.75		80.0	
		Z	100.00	134.96	37.67		80.0	
10480-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.55	68.74	13.04	3.23	80.0	± 9.6 %
		Y	7.10	79.46	19.05		80.0	
		Z	100.00	122.22	31.55		80.0	
10481-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.97	65.53	11.23	3.23	80.0	± 9.6 %
		Y	6.00	76.58	17.69		80.0	
		Z	100.00	119.54	30.23		80.0	
10482-AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.92	67.27	13.28	2.23	80.0	± 9.6 %
		Y	4.18	76.13	18.67		80.0	
		Z	5.15	80.78	20.05		80.0	
10483-AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.84	63.51	10.57	2.23	80.0	± 9.6 %
		Y	4.96	74.64	17.64		80.0	
		Z	12.06	90.00	23.06		80.0	
10484-AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.83	63.19	10.41	2.23	80.0	± 9.6 %
		Y	4.81	73.95	17.39		80.0	
		Z	9.18	85.84	21.74		80.0	
10485-AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.87	72.75	17.16	2.23	80.0	± 9.6 %
		Y	4.55	77.45	19.99		80.0	
		Z	5.58	82.88	22.13		80.0	
10486-AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.49	67.19	13.98	2.23	80.0	± 9.6 %
		Y	3.85	71.60	17.36		80.0	
		Z	3.82	73.05	17.72		80.0	
10487-AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.49	66.79	13.77	2.23	80.0	± 9.6 %
		Y	3.85	71.21	17.19		80.0	
		Z	3.74	72.30	17.39		80.0	
10488-AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.35	73.28	18.73	2.23	80.0	± 9.6 %
		Y	4.67	76.04	20.03		80.0	
		Z	4.82	78.84	21.64		80.0	
10489-AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.21	69.34	16.94	2.23	80.0	± 9.6 %
		Y	4.09	71.15	18.25		80.0	
		Z	3.93	72.12	18.91		80.0	
10490-AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.30	69.19	16.87	2.23	80.0	± 9.6 %
		Y	4.18	70.90	18.17		80.0	
		Z	4.00	71.79	18.77		80.0	
10491-AAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.56	71.57	18.33	2.23	80.0	± 9.6 %
		Y	4.63	73.64	19.22		80.0	
		Z	4.53	75.06	20.33		80.0	
10492-AAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.60	68.77	17.23	2.23	80.0	± 9.6 %
		Y	4.41	70.23	18.14		80.0	
		Z	4.17	70.67	18.66		80.0	



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10493-AAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.66	68.65	17.18	2.23	80.0	± 9.6 %
		Y	4.48	70.07	18.09		80.0	
		Z	4.22	70.47	18.57		80.0	
10494-AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.82	72.82	18.73	2.23	80.0	± 9.6 %
		Y	5.10	75.31	19.68		80.0	
		Z	5.05	77.01	20.93		80.0	
10495-AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.62	69.06	17.46	2.23	80.0	± 9.6 %
		Y	4.47	70.76	18.36		80.0	
		Z	4.22	71.12	18.90		80.0	
10496-AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.71	68.83	17.40	2.23	80.0	± 9.6 %
		Y	4.54	70.40	18.25		80.0	
		Z	4.27	70.70	18.75		80.0	
10497-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.13	61.32	8.92	2.23	80.0	± 9.6 %
		Y	3.06	71.77	16.13		80.0	
		Z	2.72	71.33	15.18		80.0	
10498-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.16	60.00	7.12	2.23	80.0	± 9.6 %
		Y	2.43	65.85	12.60		80.0	
		Z	1.66	62.55	9.94		80.0	
10499-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.17	60.00	6.98	2.23	80.0	± 9.6 %
		Y	2.39	65.36	12.23		80.0	
		Z	1.61	61.96	9.47		80.0	
10500-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.08	73.02	17.82	2.23	80.0	± 9.6 %
		Y	4.46	76.36	19.85		80.0	
		Z	5.03	80.54	21.72		80.0	
10501-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.85	68.44	15.30	2.23	80.0	± 9.6 %
		Y	3.96	71.38	17.69		80.0	
		Z	3.90	72.79	18.22		80.0	
10502-AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.88	68.20	15.11	2.23	80.0	± 9.6 %
		Y	4.01	71.16	17.55		80.0	
		Z	3.93	72.44	18.00		80.0	
10503-AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.31	73.08	18.63	2.23	80.0	± 9.6 %
		Y	4.61	75.84	19.94		80.0	
		Z	4.75	78.59	21.53		80.0	
10504-AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.20	69.24	16.88	2.23	80.0	± 9.6 %
		Y	4.08	71.08	18.20		80.0	
		Z	3.92	72.03	18.85		80.0	
10505-AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.28	69.10	16.82	2.23	80.0	± 9.6 %
		Y	4.16	70.82	18.12		80.0	
		Z	3.98	71.70	18.71		80.0	
10506-AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.79	72.69	18.66	2.23	80.0	± 9.6 %
		Y	5.06	75.18	19.61		80.0	
		Z	5.00	76.85	20.85		80.0	
10507-AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.61	69.01	17.42	2.23	80.0	± 9.6 %
		Y	4.46	70.70	18.32		80.0	
		Z	4.21	71.07	18.87		80.0	



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10508-AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.69	68.77	17.35	2.23	80.0	± 9.6 %
		Y	4.53	70.34	18.22		80.0	
		Z	4.26	70.64	18.71		80.0	
10509-AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.10	71.17	18.11	2.23	80.0	± 9.6 %
		Y	5.13	73.07	18.80		80.0	
		Z	4.94	73.85	19.66		80.0	
10510-AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.09	68.66	17.48	2.23	80.0	± 9.6 %
		Y	4.93	70.22	18.21		80.0	
		Z	4.62	70.25	18.62		80.0	
10511-AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.16	68.45	17.43	2.23	80.0	± 9.6 %
		Y	4.96	69.90	18.12		80.0	
		Z	4.66	69.89	18.51		80.0	
10512-AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.21	72.40	18.45	2.23	80.0	± 9.6 %
		Y	5.47	74.86	19.33		80.0	
		Z	5.33	75.95	20.33		80.0	
10513-AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.98	68.82	17.56	2.23	80.0	± 9.6 %
		Y	4.84	70.66	18.36		80.0	
		Z	4.53	70.63	18.79		80.0	
10514-AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.02	68.46	17.46	2.23	80.0	± 9.6 %
		Y	4.82	70.14	18.22		80.0	
		Z	4.53	70.08	18.61		80.0	
10515-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	X	1.03	65.64	16.57	0.00	150.0	± 9.6 %
		Y	1.04	65.40	16.62		150.0	
		Z	1.02	65.55	16.73		150.0	
10516-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	X	6.80	117.18	34.20	0.00	150.0	± 9.6 %
		Y	6.88	117.54	34.51		150.0	
		Z	100.00	165.60	44.98		150.0	
10517-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	X	0.97	70.02	18.51	0.00	150.0	± 9.6 %
		Y	1.00	69.97	18.62		150.0	
		Z	0.98	70.59	18.94		150.0	
10518-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	X	4.55	67.92	16.93	0.00	150.0	± 9.6 %
		Y	4.80	67.68	16.94		150.0	
		Z	4.66	67.72	17.01		150.0	
10519-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	X	4.71	68.12	17.04	0.00	150.0	± 9.6 %
		Y	5.03	68.00	17.09		150.0	
		Z	4.85	67.98	17.14		150.0	
10520-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	X	4.57	68.07	16.96	0.00	150.0	± 9.6 %
		Y	4.87	67.99	17.02		150.0	
		Z	4.70	67.95	17.07		150.0	
10521-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	X	4.50	68.03	16.94	0.00	150.0	± 9.6 %
		Y	4.80	67.99	17.00		150.0	
		Z	4.63	67.93	17.05		150.0	
10522-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	X	4.56	68.21	17.07	0.00	150.0	± 9.6 %
		Y	4.85	67.97	17.04		150.0	
		Z	4.70	68.06	17.16		150.0	



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10523-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	X	4.47	68.11	16.93	0.00	150.0	± 9.6 %
		Y	4.71	67.84	16.89		150.0	
		Z	4.57	67.88	16.98		150.0	
10524-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	X	4.50	68.14	17.05	0.00	150.0	± 9.6 %
		Y	4.80	67.94	17.04		150.0	
		Z	4.64	67.99	17.13		150.0	
10525-AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	X	4.53	67.16	16.62	0.00	150.0	± 9.6 %
		Y	4.76	66.91	16.59		150.0	
		Z	4.63	66.95	16.67		150.0	
10526-AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	X	4.67	67.49	16.75	0.00	150.0	± 9.6 %
		Y	4.97	67.34	16.74		150.0	
		Z	4.80	67.35	16.83		150.0	
10527-AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	X	4.60	67.46	16.69	0.00	150.0	± 9.6 %
		Y	4.88	67.31	16.69		150.0	
		Z	4.72	67.30	16.77		150.0	
10528-AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	X	4.61	67.47	16.72	0.00	150.0	± 9.6 %
		Y	4.90	67.34	16.73		150.0	
		Z	4.74	67.32	16.80		150.0	
10529-AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	X	4.61	67.47	16.72	0.00	150.0	± 9.6 %
		Y	4.90	67.34	16.73		150.0	
		Z	4.74	67.32	16.80		150.0	
10531-AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	X	4.59	67.54	16.72	0.00	150.0	± 9.6 %
		Y	4.92	67.51	16.77		150.0	
		Z	4.73	67.45	16.83		150.0	
10532-AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)	X	4.46	67.39	16.65	0.00	150.0	± 9.6 %
		Y	4.76	67.37	16.71		150.0	
		Z	4.59	67.28	16.75		150.0	
10533-AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	X	4.62	67.56	16.73	0.00	150.0	± 9.6 %
		Y	4.91	67.36	16.71		150.0	
		Z	4.75	67.38	16.79		150.0	
10534-AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	X	5.23	67.58	16.84	0.00	150.0	± 9.6 %
		Y	5.47	67.57	16.83		150.0	
		Z	5.36	67.55	16.95		150.0	
10535-AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	X	5.33	67.93	17.02	0.00	150.0	± 9.6 %
		Y	5.55	67.74	16.90		150.0	
		Z	5.53	68.11	17.23		150.0	
10536-AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	X	5.19	67.81	16.93	0.00	150.0	± 9.6 %
		Y	5.42	67.73	16.88		150.0	
		Z	5.33	67.81	17.05		150.0	
10537-AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	X	5.27	67.86	16.97	0.00	150.0	± 9.6 %
		Y	5.49	67.71	16.87		150.0	
		Z	5.39	67.79	17.04		150.0	
10538-AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	X	5.34	67.83	16.99	0.00	150.0	± 9.6 %
		Y	5.60	67.80	16.96		150.0	
		Z	5.47	67.75	17.07		150.0	
10540-AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	X	5.22	67.62	16.90	0.00	150.0	± 9.6 %
		Y	5.52	67.79	16.97		150.0	
		Z	5.43	67.88	17.15		150.0	



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10541-AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)	X	5.17	67.41	16.78	0.00	150.0	± 9.6 %
		Y	5.45	67.52	16.82		150.0	
		Z	5.36	67.60	17.00		150.0	
10542-AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	X	5.37	67.64	16.91	0.00	150.0	± 9.6 %
		Y	5.65	67.72	16.94		150.0	
		Z	5.53	67.71	17.07		150.0	
10543-AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	X	5.46	67.79	17.01	0.00	150.0	± 9.6 %
		Y	5.75	67.79	16.99		150.0	
		Z	5.64	67.86	17.17		150.0	
10544-AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	X	5.56	67.54	16.77	0.00	150.0	± 9.6 %
		Y	5.74	67.54	16.74		150.0	
		Z	5.68	67.54	16.88		150.0	
10545-AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	X	5.92	68.56	17.25	0.00	150.0	± 9.6 %
		Y	6.10	68.43	17.13		150.0	
		Z	6.09	68.70	17.42		150.0	
10546-AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	X	5.62	67.75	16.85	0.00	150.0	± 9.6 %
		Y	5.88	67.97	16.91		150.0	
		Z	5.79	67.91	17.04		150.0	
10547-AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	X	5.81	68.20	17.07	0.00	150.0	± 9.6 %
		Y	5.97	68.06	16.95		150.0	
		Z	5.90	68.08	17.12		150.0	
10548-AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)	X	6.38	70.11	17.98	0.00	150.0	± 9.6 %
		Y	7.05	71.33	18.52		150.0	
		Z	6.92	71.26	18.64		150.0	
10550-AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	X	5.87	68.56	17.27	0.00	150.0	± 9.6 %
		Y	5.93	68.04	16.96		150.0	
		Z	5.98	68.49	17.35		150.0	
10551-AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	X	5.63	67.75	16.83	0.00	150.0	± 9.6 %
		Y	5.91	68.00	16.90		150.0	
		Z	5.73	67.69	16.89		150.0	
10552-AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	X	5.55	67.58	16.73	0.00	150.0	± 9.6 %
		Y	5.76	67.58	16.70		150.0	
		Z	5.66	67.50	16.80		150.0	
10553-AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	X	5.61	67.53	16.74	0.00	150.0	± 9.6 %
		Y	5.85	67.63	16.75		150.0	
		Z	5.72	67.49	16.83		150.0	
10554-AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	X	6.04	67.97	16.90	0.00	150.0	± 9.6 %
		Y	6.20	68.05	16.90		150.0	
		Z	6.16	68.03	17.03		150.0	
10555-AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	X	6.23	68.52	17.15	0.00	150.0	± 9.6 %
		Y	6.42	68.60	17.14		150.0	
		Z	6.43	68.79	17.40		150.0	
10556-AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	X	6.27	68.61	17.19	0.00	150.0	± 9.6 %
		Y	6.44	68.63	17.16		150.0	
		Z	6.43	68.76	17.37		150.0	
10557-AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	X	6.14	68.21	17.01	0.00	150.0	± 9.6 %
		Y	6.37	68.41	17.06		150.0	
		Z	6.28	68.30	17.16		150.0	



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10558-AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	X	6.17	68.34	17.09	0.00	150.0	± 9.6 %
		Y	6.48	68.78	17.26		150.0	
		Z	6.34	68.51	17.28		150.0	
10560-AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	X	6.18	68.22	17.07	0.00	150.0	± 9.6 %
		Y	6.39	68.36	17.09		150.0	
		Z	6.33	68.35	17.24		150.0	
10561-AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)	X	6.13	68.30	17.14	0.00	150.0	± 9.6 %
		Y	6.33	68.40	17.15		150.0	
		Z	6.29	68.45	17.33		150.0	
10562-AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	X	6.17	68.40	17.19	0.00	150.0	± 9.6 %
		Y	6.65	69.34	17.63		150.0	
		Z	6.40	68.79	17.49		150.0	
10563-AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	X	7.10	70.79	18.35	0.00	150.0	± 9.6 %
		Y	7.19	70.42	18.11		150.0	
		Z	6.90	69.90	18.03		150.0	
10564-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	X	4.87	67.92	17.05	0.46	150.0	± 9.6 %
		Y	5.14	67.78	17.09		150.0	
		Z	5.00	67.79	17.17		150.0	
10565-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	X	5.08	68.33	17.36	0.46	150.0	± 9.6 %
		Y	5.40	68.27	17.42		150.0	
		Z	5.23	68.24	17.49		150.0	
10566-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	X	4.92	68.17	17.18	0.46	150.0	± 9.6 %
		Y	5.23	68.14	17.25		150.0	
		Z	5.06	68.10	17.32		150.0	
10567-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	X	4.93	68.51	17.52	0.46	150.0	± 9.6 %
		Y	5.25	68.48	17.56		150.0	
		Z	5.08	68.42	17.63		150.0	
10568-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	X	4.83	67.98	16.96	0.46	150.0	± 9.6 %
		Y	5.14	67.90	17.01		150.0	
		Z	4.99	67.95	17.13		150.0	
10569-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	X	4.91	68.68	17.61	0.46	150.0	± 9.6 %
		Y	5.17	68.45	17.55		150.0	
		Z	5.03	68.49	17.68		150.0	
10570-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	X	4.93	68.56	17.56	0.46	150.0	± 9.6 %
		Y	5.23	68.37	17.54		150.0	
		Z	5.07	68.42	17.66		150.0	
10571-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	X	1.19	66.27	16.86	0.46	130.0	± 9.6 %
		Y	1.29	67.09	17.42		130.0	
		Z	1.24	67.09	17.68		130.0	
10572-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	X	1.21	66.99	17.30	0.46	130.0	± 9.6 %
		Y	1.32	67.88	17.87		130.0	
		Z	1.26	67.93	18.17		130.0	
10573-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	X	100.00	155.53	41.87	0.46	130.0	± 9.6 %
		Y	100.00	152.55	41.01		130.0	
		Z	100.00	157.67	42.87		130.0	
10574-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	X	1.50	75.85	21.66	0.46	130.0	± 9.6 %
		Y	1.79	77.89	22.51		130.0	
		Z	1.76	79.14	23.42		130.0	

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10575-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	X	4.62	67.61	17.00	0.46	130.0	± 9.6 %
		Y	4.90	67.51	17.09		130.0	
		Z	4.77	67.59	17.23		130.0	
10576-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	X	4.65	67.80	17.07	0.46	130.0	± 9.6 %
		Y	4.92	67.66	17.14		130.0	
		Z	4.79	67.75	17.28		130.0	
10577-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	X	4.83	68.06	17.23	0.46	130.0	± 9.6 %
		Y	5.17	68.03	17.34		130.0	
		Z	5.00	68.06	17.47		130.0	
10578-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	X	4.73	68.19	17.33	0.46	130.0	± 9.6 %
		Y	5.05	68.17	17.43		130.0	
		Z	4.89	68.19	17.55		130.0	
10579-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)	X	4.49	67.46	16.63	0.46	130.0	± 9.6 %
		Y	4.84	67.59	16.82		130.0	
		Z	4.67	67.56	16.92		130.0	
10580-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	X	4.54	67.57	16.68	0.46	130.0	± 9.6 %
		Y	4.89	67.60	16.84		130.0	
		Z	4.73	67.67	16.97		130.0	
10581-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	X	4.63	68.26	17.29	0.46	130.0	± 9.6 %
		Y	4.95	68.23	17.37		130.0	
		Z	4.79	68.24	17.50		130.0	
10582-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	X	4.43	67.30	16.45	0.46	130.0	± 9.6 %
		Y	4.80	67.41	16.66		130.0	
		Z	4.62	67.42	16.76		130.0	
10583-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	X	4.62	67.61	17.00	0.46	130.0	± 9.6 %
		Y	4.90	67.51	17.09		130.0	
		Z	4.77	67.59	17.23		130.0	
10584-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	X	4.65	67.80	17.07	0.46	130.0	± 9.6 %
		Y	4.92	67.66	17.14		130.0	
		Z	4.79	67.75	17.28		130.0	
10585-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	X	4.83	68.06	17.23	0.46	130.0	± 9.6 %
		Y	5.17	68.03	17.34		130.0	
		Z	5.00	68.06	17.47		130.0	
10586-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	X	4.73	68.19	17.33	0.46	130.0	± 9.6 %
		Y	5.05	68.17	17.43		130.0	
		Z	4.89	68.19	17.55		130.0	
10587-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	X	4.49	67.46	16.63	0.46	130.0	± 9.6 %
		Y	4.84	67.59	16.82		130.0	
		Z	4.67	67.56	16.92		130.0	
10588-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	X	4.54	67.57	16.68	0.46	130.0	± 9.6 %
		Y	4.89	67.60	16.84		130.0	
		Z	4.73	67.67	16.97		130.0	
10589-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	X	4.63	68.26	17.29	0.46	130.0	± 9.6 %
		Y	4.95	68.23	17.37		130.0	
		Z	4.79	68.24	17.50		130.0	
10590-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	X	4.43	67.30	16.45	0.46	130.0	± 9.6 %
		Y	4.80	67.41	16.66		130.0	
		Z	4.62	67.42	16.76		130.0	



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10591-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)	X	4.78	67.66	17.10	0.46	130.0	± 9.6 %
		Y	5.05	67.55	17.18		130.0	
		Z	4.92	67.61	17.31		130.0	
10592-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	X	4.91	67.98	17.24	0.46	130.0	± 9.6 %
		Y	5.23	67.91	17.30		130.0	
		Z	5.07	67.97	17.45		130.0	
10593-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	X	4.83	67.87	17.10	0.46	130.0	± 9.6 %
		Y	5.16	67.88	17.22		130.0	
		Z	5.00	67.89	17.34		130.0	
10594-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	X	4.88	68.03	17.26	0.46	130.0	± 9.6 %
		Y	5.21	68.00	17.35		130.0	
		Z	5.05	68.04	17.48		130.0	
10595-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)	X	4.85	68.02	17.17	0.46	130.0	± 9.6 %
		Y	5.19	68.00	17.26		130.0	
		Z	5.02	68.02	17.39		130.0	
10596-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle)	X	4.78	68.01	17.18	0.46	130.0	± 9.6 %
		Y	5.12	67.99	17.27		130.0	
		Z	4.96	68.04	17.41		130.0	
10597-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	X	4.73	67.88	17.03	0.46	130.0	± 9.6 %
		Y	5.07	67.94	17.17		130.0	
		Z	4.91	67.93	17.29		130.0	
10598-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	X	4.71	68.07	17.28	0.46	130.0	± 9.6 %
		Y	5.05	68.15	17.42		130.0	
		Z	4.88	68.11	17.52		130.0	
10599-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)	X	5.71	68.97	17.81	0.46	130.0	± 9.6 %
		Y	5.84	68.51	17.57		130.0	
		Z	5.81	68.83	17.91		130.0	
10600-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	X	6.12	70.36	18.47	0.46	130.0	± 9.6 %
		Y	6.49	70.59	18.61		130.0	
		Z	6.57	71.34	19.15		130.0	
10601-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	X	5.70	69.05	17.83	0.46	130.0	± 9.6 %
		Y	6.06	69.32	17.98		130.0	
		Z	5.98	69.54	18.27		130.0	
10602-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	X	5.87	69.32	17.89	0.46	130.0	± 9.6 %
		Y	6.11	69.18	17.83		130.0	
		Z	6.12	69.69	18.26		130.0	
10603-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	X	6.00	69.82	18.27	0.46	130.0	± 9.6 %
		Y	6.16	69.32	18.01		130.0	
		Z	6.12	69.71	18.39		130.0	
10604-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	X	5.81	69.25	17.97	0.46	130.0	± 9.6 %
		Y	5.88	68.60	17.65		130.0	
		Z	5.78	68.63	17.83		130.0	
10605-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	X	5.95	69.72	18.21	0.46	130.0	± 9.6 %
		Y	6.12	69.34	18.03		130.0	
		Z	6.28	70.35	18.72		130.0	
10606-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	X	5.59	68.67	17.53	0.46	130.0	± 9.6 %
		Y	5.70	68.15	17.28		130.0	
		Z	5.60	68.23	17.49		130.0	



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10607-AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	X	4.63	67.00	16.74	0.46	130.0	± 9.6 %
		Y	4.89	66.84	16.77		130.0	
		Z	4.77	66.94	16.93		130.0	
10608-AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	X	4.79	67.38	16.90	0.46	130.0	± 9.6 %
		Y	5.11	67.29	16.94		130.0	
		Z	4.96	67.37	17.11		130.0	
10609-AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	X	4.68	67.22	16.73	0.46	130.0	± 9.6 %
		Y	5.00	67.17	16.81		130.0	
		Z	4.85	67.23	16.95		130.0	
10610-AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	X	4.73	67.37	16.89	0.46	130.0	± 9.6 %
		Y	5.05	67.32	16.96		130.0	
		Z	4.89	67.37	17.10		130.0	
10611-AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	X	4.64	67.18	16.74	0.46	130.0	± 9.6 %
		Y	4.97	67.18	16.83		130.0	
		Z	4.81	67.20	16.97		130.0	
10612-AAB	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	X	4.65	67.36	16.80	0.46	130.0	± 9.6 %
		Y	4.99	67.35	16.88		130.0	
		Z	4.83	67.41	17.04		130.0	
10613-AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	X	4.64	67.19	16.65	0.46	130.0	± 9.6 %
		Y	5.01	67.27	16.79		130.0	
		Z	4.83	67.28	16.92		130.0	
10614-AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	X	4.59	67.35	16.87	0.46	130.0	± 9.6 %
		Y	4.92	67.40	16.99		130.0	
		Z	4.76	67.39	17.11		130.0	
10615-AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	X	4.64	67.05	16.52	0.46	130.0	± 9.6 %
		Y	4.98	67.01	16.62		130.0	
		Z	4.82	67.07	16.76		130.0	
10616-AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	X	5.37	67.60	17.07	0.46	130.0	± 9.6 %
		Y	5.63	67.63	17.10		130.0	
		Z	5.54	67.70	17.30		130.0	
10617-AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	X	5.53	68.12	17.31	0.46	130.0	± 9.6 %
		Y	5.71	67.81	17.16		130.0	
		Z	5.77	68.45	17.66		130.0	
10618-AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	X	5.37	67.94	17.23	0.46	130.0	± 9.6 %
		Y	5.59	67.83	17.18		130.0	
		Z	5.54	68.05	17.46		130.0	
10619-AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	X	5.42	67.89	17.15	0.46	130.0	± 9.6 %
		Y	5.63	67.70	17.06		130.0	
		Z	5.57	67.91	17.33		130.0	
10620-AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	X	5.47	67.80	17.15	0.46	130.0	± 9.6 %
		Y	5.74	67.77	17.14		130.0	
		Z	5.63	67.87	17.36		130.0	
10621-AAB	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	X	5.43	67.73	17.23	0.46	130.0	± 9.6 %
		Y	5.66	67.66	17.19		130.0	
		Z	5.58	67.77	17.42		130.0	
10622-AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	X	5.40	67.76	17.24	0.46	130.0	± 9.6 %
		Y	5.72	67.99	17.35		130.0	
		Z	5.68	68.28	17.67		130.0	

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10623-AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	X	5.27	67.25	16.85	0.46	130.0	± 9.6 %
		Y	5.56	67.41	16.95		130.0	
		Z	5.51	67.65	17.24		130.0	
10624-AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	X	5.52	67.67	17.13	0.46	130.0	± 9.6 %
		Y	5.82	67.82	17.22		130.0	
		Z	5.71	67.85	17.40		130.0	
10625-AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	X	5.65	67.98	17.35	0.46	130.0	± 9.6 %
		Y	6.70	70.31	18.51		130.0	
		Z	6.41	69.92	18.49		130.0	
10626-AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	X	5.69	67.50	16.96	0.46	130.0	± 9.6 %
		Y	5.86	67.47	16.93		130.0	
		Z	5.83	67.61	17.18		130.0	
10627-AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	X	6.19	68.98	17.68	0.46	130.0	± 9.6 %
		Y	6.32	68.68	17.50		130.0	
		Z	6.43	69.33	18.02		130.0	
10628-AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	X	5.74	67.66	16.95	0.46	130.0	± 9.6 %
		Y	5.99	67.87	17.03		130.0	
		Z	5.92	67.90	17.23		130.0	
10629-AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	X	5.94	68.16	17.20	0.46	130.0	± 9.6 %
		Y	6.09	67.97	17.08		130.0	
		Z	6.11	68.31	17.44		130.0	
10630-AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	X	6.77	70.81	18.49	0.46	130.0	± 9.6 %
		Y	8.04	73.47	19.72		130.0	
		Z	7.75	73.08	19.73		130.0	
10631-AAB	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	X	6.18	69.15	17.87	0.46	130.0	± 9.6 %
		Y	6.78	70.26	18.39		130.0	
		Z	6.44	69.57	18.23		130.0	
10632-AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	X	6.23	69.30	17.98	0.46	130.0	± 9.6 %
		Y	6.24	68.58	17.58		130.0	
		Z	6.37	69.33	18.15		130.0	
10633-AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	X	5.76	67.72	17.01	0.46	130.0	± 9.6 %
		Y	6.09	68.11	17.17		130.0	
		Z	5.89	67.73	17.16		130.0	
10634-AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	X	5.72	67.68	17.04	0.46	130.0	± 9.6 %
		Y	5.99	67.85	17.10		130.0	
		Z	5.88	67.80	17.25		130.0	
10635-AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	X	5.59	66.99	16.43	0.46	130.0	± 9.6 %
		Y	5.89	67.28	16.57		130.0	
		Z	5.76	67.16	16.69		130.0	
10636-AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	X	6.19	68.00	17.13	0.46	130.0	± 9.6 %
		Y	6.36	68.10	17.15		130.0	
		Z	6.35	68.20	17.38		130.0	
10637-AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	X	6.46	68.76	17.50	0.46	130.0	± 9.6 %
		Y	6.63	68.78	17.47		130.0	
		Z	6.72	69.23	17.89		130.0	
10638-AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	X	6.50	68.87	17.53	0.46	130.0	± 9.6 %
		Y	6.63	68.75	17.44		130.0	
		Z	6.72	69.20	17.85		130.0	



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10639-AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	X	6.31	68.28	17.27	0.46	130.0	± 9.6 %
		Y	6.54	68.48	17.34		130.0	
		Z	6.47	68.46	17.51		130.0	
10640-AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	X	6.30	68.28	17.21	0.46	130.0	± 9.6 %
		Y	6.65	68.83	17.46		130.0	
		Z	6.50	68.54	17.50		130.0	
10641-AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	X	6.50	68.67	17.44	0.46	130.0	± 9.6 %
		Y	6.58	68.36	17.24		130.0	
		Z	6.63	68.71	17.61		130.0	
10642-AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	X	6.41	68.51	17.52	0.46	130.0	± 9.6 %
		Y	6.62	68.60	17.52		130.0	
		Z	6.61	68.77	17.80		130.0	
10643-AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	X	6.29	68.35	17.34	0.46	130.0	± 9.6 %
		Y	6.48	68.41	17.34		130.0	
		Z	6.46	68.53	17.59		130.0	
10644-AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	X	6.32	68.42	17.38	0.46	130.0	± 9.6 %
		Y	6.90	69.63	17.97		130.0	
		Z	6.59	68.92	17.79		130.0	
10645-AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	X	7.64	71.83	19.05	0.46	130.0	± 9.6 %
		Y	7.39	70.52	18.36		130.0	
		Z	7.46	71.07	18.85		130.0	
10646-AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	X	25.63	121.16	40.60	9.30	60.0	± 9.6 %
		Y	48.23	126.94	41.13		60.0	
		Z	100.00	158.36	52.52		60.0	
10647-AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	X	19.37	115.59	39.19	9.30	60.0	± 9.6 %
		Y	44.84	126.23	41.10		60.0	
		Z	100.00	159.92	53.21		60.0	
10648-AAA	CDMA2000 (1x Advanced)	X	0.66	64.86	10.10	0.00	150.0	± 9.6 %
		Y	1.05	69.33	14.44		150.0	
		Z	0.80	66.62	11.78		150.0	
10652-AAB	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	3.49	67.66	16.60	2.23	80.0	± 9.6 %
		Y	4.04	68.34	17.41		80.0	
		Z	3.85	68.69	17.66		80.0	
10653-AAB	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	X	4.05	66.97	16.95	2.23	80.0	± 9.6 %
		Y	4.56	67.69	17.52		80.0	
		Z	4.34	67.66	17.70		80.0	
10654-AAB	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	X	4.05	66.55	16.99	2.23	80.0	± 9.6 %
		Y	4.50	67.32	17.51		80.0	
		Z	4.31	67.19	17.68		80.0	
10655-AAB	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	4.13	66.48	17.04	2.23	80.0	± 9.6 %
		Y	4.56	67.37	17.57		80.0	
		Z	4.38	67.16	17.72		80.0	
10658-AAA	Pulse Waveform (200Hz, 10%)	X	3.25	67.22	10.58	10.00	50.0	± 9.6 %
		Y	6.71	76.21	16.38		50.0	
		Z	13.06	85.50	19.12		50.0	
10659-AAA	Pulse Waveform (200Hz, 20%)	X	1.94	65.17	8.65	6.99	60.0	± 9.6 %
		Y	8.04	79.80	16.42		60.0	
		Z	100.00	108.13	23.68		60.0	



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10660-AAA	Pulse Waveform (200Hz, 40%)	X	0.98	63.30	6.81	3.98	80.0	± 9.6 %
		Y	100.00	105.15	21.55		80.0	
		Z	100.00	105.96	21.42		80.0	
10661-AAA	Pulse Waveform (200Hz, 60%)	X	0.56	62.24	5.43	2.22	100.0	± 9.6 %
		Y	100.00	103.68	19.83		100.0	
		Z	100.00	100.21	17.94		100.0	
10662-AAA	Pulse Waveform (200Hz, 80%)	X	0.16	60.00	3.38	0.97	120.0	± 9.6 %
		Y	100.00	102.95	18.13		120.0	
		Z	99.98	90.06	12.54		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.



ANNEX D: CD835V3 Dipole Calibration Certificate

**Calibration Laboratory of
Schmid & Partner
Engineering AG**
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **TA-SH (Auden)**

Certificate No: **CD835V3-1133_Nov17**

CALIBRATION CERTIFICATE			
Object	CD835V3 - SN: 1133		
Calibration procedure(s)	QA CAL-20.v6 Calibration procedure for dipoles in air		
Calibration date:	November 22, 2017		
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-17 (No. 217-02521/02522)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-17 (No. 217-02521)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-17 (No. 217-02522)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20k)	07-Apr-17 (No. 217-02528)	Apr-18
Type-N mismatch combination	SN: 5047.2 / 06327	07-Apr-17 (No. 217-02529)	Apr-18
Probe ER3DV6	SN: 2336	30-Dec-16 (No. ER3-2336_Dec16)	Dec-17
DAE4	SN: 781	13-Jul-17 (No. DAE4-781_Jul17)	Jul-18
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter Agilent 4419B	SN: GB42420191	09-Oct-09 (in house check Oct-17)	In house check: Oct-20
Power sensor HP E4412A	SN: US38485102	05-Jan-10 (in house check Oct-17)	In house check: Oct-20
Power sensor HP 8482A	SN: US37295597	09-Oct-09 (in house check Oct-17)	In house check: Oct-20
RF generator R&S SMT-06	SN: 832283/011	27-Aug-12 (in house check Oct-17)	In house check: Oct-20
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-17)	In house check: Oct-18
Calibrated by:	Name Leif Klysner	Function Laboratory Technician	Signature
Approved by:	Name Katja Pokovic	Function Technical Manager	Signature
Issued: November 23, 2017			
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			

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The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

References

- [1] ANSI-C63.19-2011
American National Standard, Methods of Measurement of Compatibility between Wireless Communications
Devices and Hearing Aids.

Methods Applied and Interpretation of Parameters:

- **Coordinate System:** y-axis is in the direction of the dipole arms. z-axis is from the basis of the antenna (mounted on the table) towards its feed point between the two dipole arms. x-axis is normal to the other axes. In coincidence with the standards [1], the measurement planes (probe sensor center) are selected to be at a distance of 15 mm above the top metal edge of the dipole arms.
- **Measurement Conditions:** Further details are available from the hardcopies at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated. The forward power to the dipole connector is set with a calibrated power meter connected and monitored with an auxiliary power meter connected to a directional coupler. While the dipole under test is connected, the forward power is adjusted to the same level.
- **Antenna Positioning:** The dipole is mounted on a HAC Test Arch phantom using the matching dipole positioner with the arms horizontal and the feeding cable coming from the floor. The measurements are performed in a shielded room with absorbers around the setup to reduce the reflections. It is verified before the mounting of the dipole under the Test Arch phantom, that its arms are perfectly in a line. It is installed on the HAC dipole positioner with its arms parallel below the dielectric reference wire and able to move elastically in vertical direction without changing its relative position to the top center of the Test Arch phantom. The vertical distance to the probe is adjusted after dipole mounting with a DASY5 Surface Check job. Before the measurement, the distance between phantom surface and probe tip is verified. The proper measurement distance is selected by choosing the matching section of the HAC Test Arch phantom with the proper device reference point (upper surface of the dipole) and the matching grid reference point (tip of the probe) considering the probe sensor offset. The vertical distance to the probe is essential for the accuracy.
- **Feed Point Impedance and Return Loss:** These parameters are measured using a HP 8753E Vector Network Analyzer. The impedance is specified at the SMA connector of the dipole. The influence of reflections was eliminated by applying the averaging function while moving the dipole in the air, at least 70cm away from any obstacles.
- **E-field distribution:** E field is measured in the x-y-plane with an isotropic ER3D-field probe with 100 mW forward power to the antenna feed point. In accordance with [1], the scan area is 20mm wide, its length exceeds the dipole arm length (180 or 90mm). The sensor center is 15 mm (in z) above the metal top of the dipole arms. Two 3D maxima are available near the end of the dipole arms. Assuming the dipole arms are perfectly in one line, the average of these two maxima (in subgrid 2 and subgrid 8) is determined to compensate for any non-parallelity to the measurement plane as well as the sensor displacement. The E-field value stated as calibration value represents the maximum of the interpolated 3D-E-field, in the plane above the dipole surface.

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%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.0
Phantom	HAC Test Arch	
Distance Dipole Top - Probe Center	15 mm	
Scan resolution	dx, dy = 5 mm	
Frequency	835 MHz ± 1 MHz	
Input power drift	< 0.05 dB	

Maximum Field values at 835 MHz

E-field 15 mm above dipole surface	condition	Interpolated maximum
Maximum measured above high end	100 mW input power	106.6 V/m = 40.56 dBV/m
Maximum measured above low end	100 mW input power	104.9 V/m = 40.42 dBV/m
Averaged maximum above arm	100 mW input power	105.8 V/m ± 12.8 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters

Frequency	Return Loss	Impedance
800 MHz	16.1 dB	40.1 Ω - 10.1 jΩ
835 MHz	28.4 dB	52.7 Ω + 2.8 jΩ
900 MHz	17.0 dB	48.5 Ω - 14.0 jΩ
950 MHz	20.0 dB	49.4 Ω + 10.0 jΩ
960 MHz	15.0 dB	61.5 Ω + 16.3 jΩ

3.2 Antenna Design and Handling

The calibration dipole has a symmetric geometry with a built-in two stub matching network, which leads to the enhanced bandwidth.

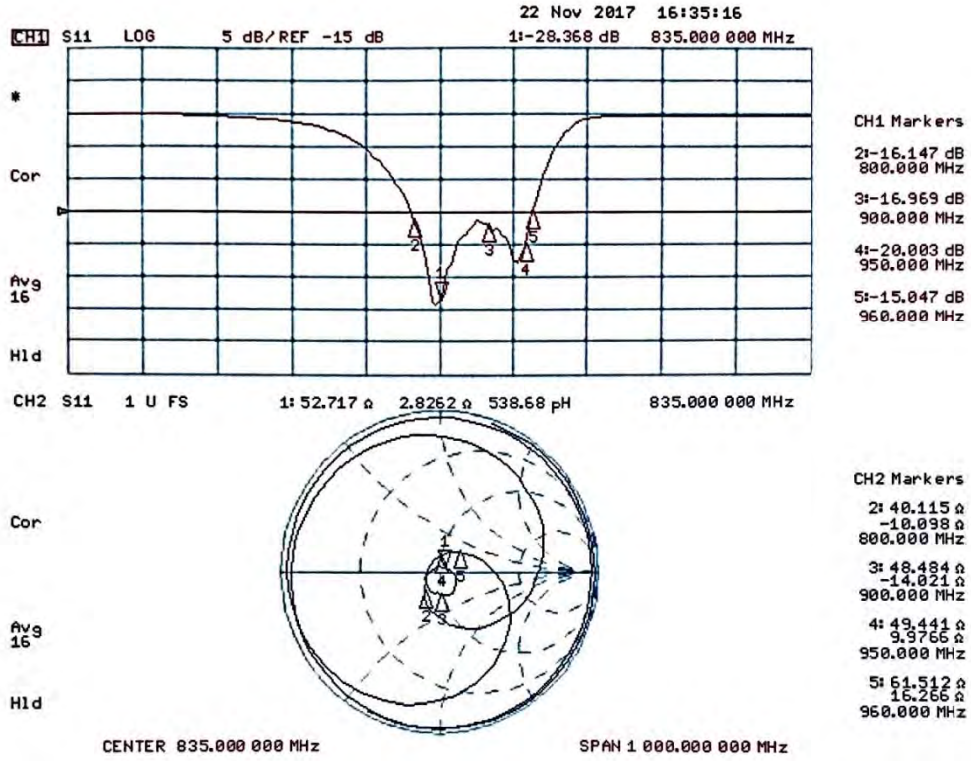
The dipole is built of standard semirigid coaxial cable. The internal matching line is open ended. The antenna is therefore open for DC signals.

Do not apply force to dipole arms, as they are liable to bend. The soldered connections near the feedpoint may be damaged. After excessive mechanical stress or overheating, check the impedance characteristics to ensure that the internal matching network is not affected.

After long term use with 40W radiated power, only a slight warming of the dipole near the feedpoint can be measured.



Impedance Measurement Plot



DASY5 E-field Result

Date: 22.11.2017

Test Laboratory: SPEAG Lab2

DUT: HAC-Dipole 835 MHz; Type: CD835V3; Serial: CD835V3 - SN: 1133

Communication System: UID 0 - CW ; Frequency: 835 MHz
 Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
 Phantom section: RF Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ER3DV6 - SN2336; ConvF(1, 1, 1); Calibrated: 30.12.2016;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn781; Calibrated: 13.07.2017
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole E-Field measurement @ 835MHz/E-Scan - 835MHz d=15mm/Hearing Aid Compatibility Test (41x361x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 109.1 V/m; Power Drift = -0.00 dB

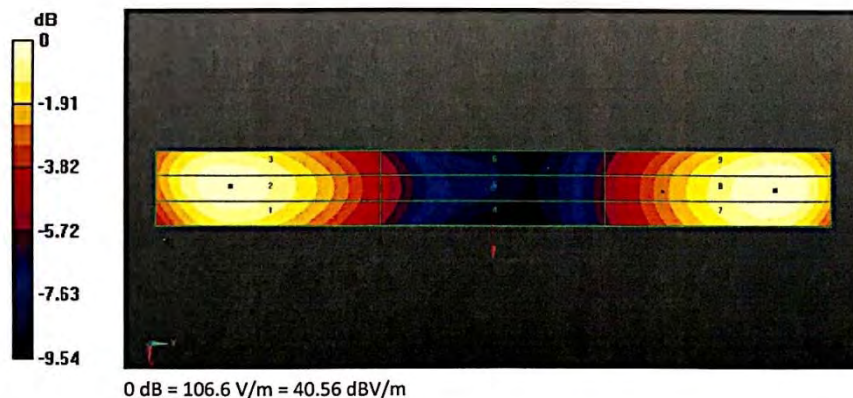
Applied MIF = 0.00 dB

RF audio interference level = 40.56 dBV/m

Emission category: M3

MIF scaled E-field

Grid 1 M3 40.18 dBV/m	Grid 2 M3 40.42 dBV/m	Grid 3 M3 40.33 dBV/m
Grid 4 M4 35.75 dBV/m	Grid 5 M4 35.91 dBV/m	Grid 6 M4 35.79 dBV/m
Grid 7 M3 40.44 dBV/m	Grid 8 M3 40.56 dBV/m	Grid 9 M3 40.39 dBV/m





ANNEX E: CD1880V3 Dipole Calibration Certificate

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Accreditation No.: SCS 0108

Client TA-SH (Auden)

Certificate No: CD1880V3-1115_Nov17

CALIBRATION CERTIFICATE			
Object	CD1880V3 - SN: 1115		
Calibration procedure(s)	QA CAL-20.v6 Calibration procedure for dipoles in air		
Calibration date:	November 22, 2017		
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-17 (No. 217-02521/02522)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-17 (No. 217-02521)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-17 (No. 217-02522)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20k)	07-Apr-17 (No. 217-02528)	Apr-18
Type-N mismatch combination	SN: 5047.2 / 06327	07-Apr-17 (No. 217-02529)	Apr-18
Probe ER3DV6	SN: 2336	30-Dec-16 (No. ER3-2336_Dec16)	Dec-17
DAE4	SN: 781	13-Jul-17 (No. DAE4-781_Jul17)	Jul-18
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter Agilent 4419B	SN: GB42420191	09-Oct-09 (in house check Oct-17)	In house check: Oct-20
Power sensor HP E4412A	SN: US38485102	05-Jan-10 (in house check Oct-17)	In house check: Oct-20
Power sensor HP 8482A	SN: US37295597	09-Oct-09 (in house check Oct-17)	In house check: Oct-20
RF generator R&S SMT-06	SN: 832283/011	27-Aug-12 (in house check Oct-17)	In house check: Oct-20
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-17)	In house check: Oct-18
Calibrated by:	Name Leif Klynsner	Function Laboratory Technician	Signature
Approved by:	Name Katja Pokovic	Function Technical Manager	Signature
			Issued: November 23, 2017
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			

Certificate No: CD1880V3-1115_Nov17

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Accreditation No.: **SCS 0108**

References

- [1] ANSI-C63.19-2011
American National Standard, Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids.

Methods Applied and Interpretation of Parameters:

- **Coordinate System:** y-axis is in the direction of the dipole arms. z-axis is from the basis of the antenna (mounted on the table) towards its feed point between the two dipole arms. x-axis is normal to the other axes. In coincidence with the standards [1], the measurement planes (probe sensor center) are selected to be at a distance of 15 mm above the top metal edge of the dipole arms.
- **Measurement Conditions:** Further details are available from the hardcopies at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated. The forward power to the dipole connector is set with a calibrated power meter connected and monitored with an auxiliary power meter connected to a directional coupler. While the dipole under test is connected, the forward power is adjusted to the same level.
- **Antenna Positioning:** The dipole is mounted on a HAC Test Arch phantom using the matching dipole positioner with the arms horizontal and the feeding cable coming from the floor. The measurements are performed in a shielded room with absorbers around the setup to reduce the reflections. It is verified before the mounting of the dipole under the Test Arch phantom, that its arms are perfectly in a line. It is installed on the HAC dipole positioner with its arms parallel below the dielectric reference wire and able to move elastically in vertical direction without changing its relative position to the top center of the Test Arch phantom. The vertical distance to the probe is adjusted after dipole mounting with a DASY5 Surface Check job. Before the measurement, the distance between phantom surface and probe tip is verified. The proper measurement distance is selected by choosing the matching section of the HAC Test Arch phantom with the proper device reference point (upper surface of the dipole) and the matching grid reference point (tip of the probe) considering the probe sensor offset. The vertical distance to the probe is essential for the accuracy.
- **Feed Point Impedance and Return Loss:** These parameters are measured using a HP 8753E Vector Network Analyzer. The impedance is specified at the SMA connector of the dipole. The influence of reflections was eliminated by applying the averaging function while moving the dipole in the air, at least 70cm away from any obstacles.
- **E-field distribution:** E field is measured in the x-y-plane with an isotropic ER3D-field probe with 100 mW forward power to the antenna feed point. In accordance with [1], the scan area is 20mm wide, its length exceeds the dipole arm length (180 or 90mm). The sensor center is 15 mm (in z) above the metal top of the dipole arms. Two 3D maxima are available near the end of the dipole arms. Assuming the dipole arms are perfectly in one line, the average of these two maxima (in subgrid 2 and subgrid 8) is determined to compensate for any non-parallelity to the measurement plane as well as the sensor displacement. The E-field value stated as calibration value represents the maximum of the interpolated 3D-E-field, in the plane above the dipole surface.

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%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.0
Phantom	HAC Test Arch	
Distance Dipole Top - Probe Center	15 mm	
Scan resolution	dx, dy = 5 mm	
Frequency	1880 MHz ± 1 MHz	
Input power drift	< 0.05 dB	

Maximum Field values at 1880 MHz

E-field 15 mm above dipole surface	condition	Interpolated maximum
Maximum measured above high end	100 mW input power	90.5 V/m = 39.13 dBV/m
Maximum measured above low end	100 mW input power	87.8 V/m = 38.87 dBV/m
Averaged maximum above arm	100 mW input power	89.2 V/m ± 12.8 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters

Frequency	Return Loss	Impedance
1730 MHz	31.0 dB	52.8 Ω - 0.7 jΩ
1880 MHz	21.1 dB	51.9 Ω + 8.8 jΩ
1900 MHz	21.6 dB	54.2 Ω + 7.6 jΩ
1950 MHz	29.7 dB	52.3 Ω + 2.4 jΩ
2000 MHz	18.9 dB	46.8 Ω + 10.6 jΩ

3.2 Antenna Design and Handling

The calibration dipole has a symmetric geometry with a built-in two stub matching network, which leads to the enhanced bandwidth.

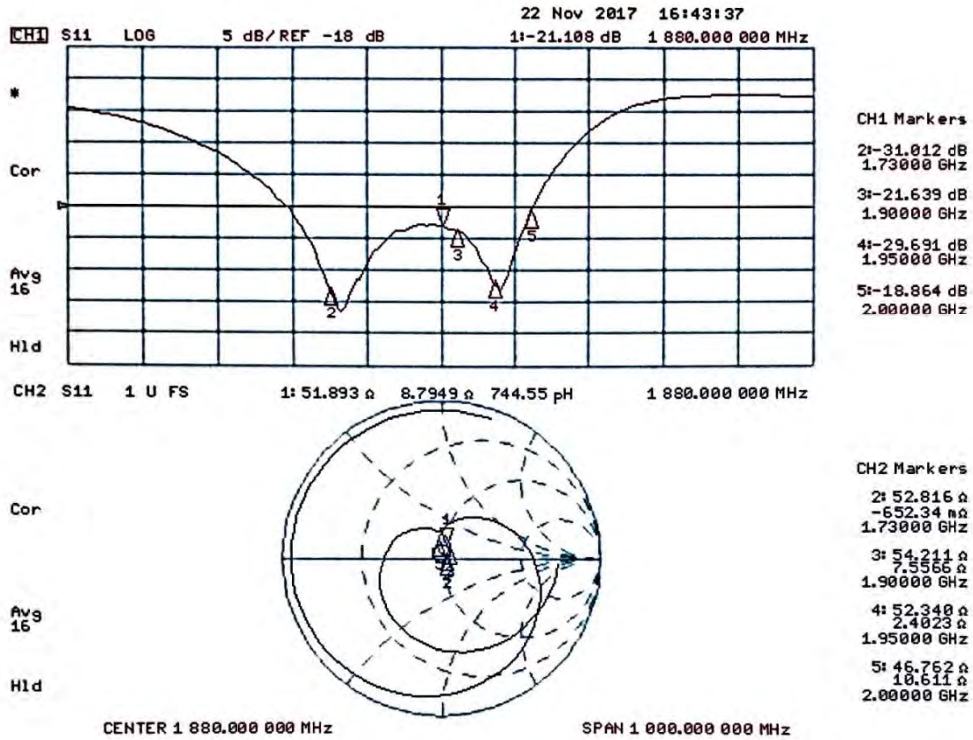
The dipole is built of standard semirigid coaxial cable. The internal matching line is open ended. The antenna is therefore open for DC signals.

Do not apply force to dipole arms, as they are liable to bend. The soldered connections near the feedpoint may be damaged. After excessive mechanical stress or overheating, check the impedance characteristics to ensure that the internal matching network is not affected.

After long term use with 40W radiated power, only a slight warming of the dipole near the feedpoint can be measured.



Impedance Measurement Plot



DASY5 E-field Result

Date: 22.11.2017

Test Laboratory: SPEAG Lab2

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: CD1880V3 - SN: 1115

Communication System: UID 0 - CW ; Frequency: 1880 MHz
 Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
 Phantom section: RF Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

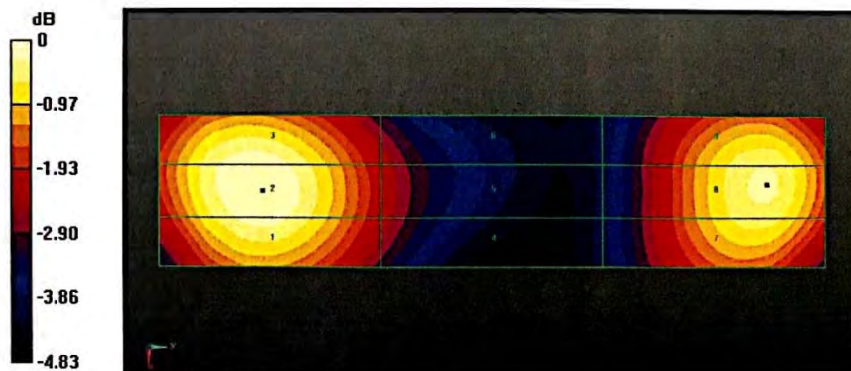
- Probe: ER3DV6 - SN2336; ConvF(1, 1, 1); Calibrated: 30.12.2016;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn781; Calibrated: 13.07.2017
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole E-Field measurement @ 1880MHz/E-Scan - 1880MHz d=15mm/Hearing Aid Compatibility Test (41x181x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
 Device Reference Point: 0, 0, -6.3 mm
 Reference Value = 155.7 V/m; Power Drift = -0.01 dB
 Applied MIF = 0.00 dB
 RF audio interference level = 39.13 dBV/m
Emission category: M2

MIF scaled E-field

Grid 1 M2	Grid 2 M2	Grid 3 M2
38.94 dBV/m	39.13 dBV/m	39.02 dBV/m
Grid 4 M2	Grid 5 M2	Grid 6 M2
36.82 dBV/m	36.95 dBV/m	36.82 dBV/m
Grid 7 M2	Grid 8 M2	Grid 9 M2
38.67 dBV/m	38.87 dBV/m	38.79 dBV/m



0 dB = 90.50 V/m = 39.13 dBV/m



ANNEX F: CD2600V3 Dipole Calibration Certificate

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Accreditation No.: SCS 0108

Client TA-SH (Auden)

Certificate No: CD2600V3-1016_Jan18

CALIBRATION CERTIFICATE			
Object	CD2600V3 - SN: 1016		
Calibration procedure(s)	QA CAL-20.v6 Calibration procedure for dipoles in air		
Calibration date:	January 09, 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-17 (No. 217-02521/02522)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-17 (No. 217-02521)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-17 (No. 217-02522)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20k)	07-Apr-17 (No. 217-02528)	Apr-18
Type-N mismatch combination	SN: 5047.2 / 06327	07-Apr-17 (No. 217-02529)	Apr-18
Probe EF3DV3	SN: 4013	14-Jun-17 (No. EF3-4013_Jun17)	Jun-18
Probe H3DV6	SN: 6065	30-Dec-17 (No. H3-6065_Dec17)	Dec-18
D4E4	SN: 781	13-Jul-17 (No. D4E4-781_Jul17)	Jul-18
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter Agilent 4419B	SN: GB42420191	09-Oct-09 (in house check Oct-17)	In house check: Oct-20
Power sensor HP E4412A	SN: US38485102	05-Jan-10 (in house check Oct-17)	In house check: Oct-20
Power sensor HP 8482A	SN: US37295597	09-Oct-09 (in house check Oct-17)	In house check: Oct-20
RF generator R&S SMT-06	SN: 832283/011	27-Aug-12 (in house check Oct-17)	In house check: Oct-20
Network Analyzer HP B753E	SN: US37390585	18-Oct-01 (in house check Oct-17)	In house check: Oct-18
Calibrated by:	Name Leif Klysner	Function Laboratory Technician	Signature
Approved by:	Name Katja Pokovic	Technical Manager	
			Issued: January 15, 2018
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			

Certificate No: CD2600V3-1016_Jan18

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Accreditation No.: SCS 0108

References

- [1] ANSI-C63.19-2011
American National Standard, Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids.

Methods Applied and Interpretation of Parameters:

- **Coordinate System:** y-axis is in the direction of the dipole arms. z-axis is from the basis of the antenna (mounted on the table) towards its feed point between the two dipole arms. x-axis is normal to the other axes. In coincidence with the standards [1], the measurement planes (probe sensor center) are selected to be at a distance of 15 mm above the top metal edge of the dipole arms.
- **Measurement Conditions:** Further details are available from the hardcopies at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated. The forward power to the dipole connector is set with a calibrated power meter connected and monitored with an auxiliary power meter connected to a directional coupler. While the dipole under test is connected, the forward power is adjusted to the same level.
- **Antenna Positioning:** The dipole is mounted on a HAC Test Arch phantom using the matching dipole positioner with the arms horizontal and the feeding cable coming from the floor. The measurements are performed in a shielded room with absorbers around the setup to reduce the reflections. It is verified before the mounting of the dipole under the Test Arch phantom, that its arms are perfectly in a line. It is installed on the HAC dipole positioner with its arms parallel below the dielectric reference wire and able to move elastically in vertical direction without changing its relative position to the top center of the Test Arch phantom. The vertical distance to the probe is adjusted after dipole mounting with a DASY5 Surface Check job. Before the measurement, the distance between phantom surface and probe tip is verified. The proper measurement distance is selected by choosing the matching section of the HAC Test Arch phantom with the proper device reference point (upper surface of the dipole) and the matching grid reference point (tip of the probe) considering the probe sensor offset. The vertical distance to the probe is essential for the accuracy.
- **Feed Point Impedance and Return Loss:** These parameters are measured using a HP 8753E Vector Network Analyzer. The impedance is specified at the SMA connector of the dipole. The influence of reflections was eliminated by applying the averaging function while moving the dipole in the air, at least 70cm away from any obstacles.
- **E-field distribution:** E field is measured in the x-y-plane with an isotropic ER3D-field probe with 100 mW forward power to the antenna feed point. In accordance with [1], the scan area is 20mm wide, its length exceeds the dipole arm length (180 or 90mm). The sensor center is 15 mm (in z) above the metal top of the dipole arms. Two 3D maxima are available near the end of the dipole arms. Assuming the dipole arms are perfectly in one line, the average of these two maxima (in subgrid 2 and subgrid 8) is determined to compensate for any non-parallelity to the measurement plane as well as the sensor displacement. The E-field value stated as calibration value represents the maximum of the interpolated 3D-E-field, in the plane above the dipole surface.

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%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.0
Phantom	HAC Test Arch	
Distance Dipole Top - Probe Center	15 mm	
Scan resolution	dx, dy = 5 mm	
Frequency	2600 MHz ± 1 MHz	
Input power drift	< 0.05 dB	

Maximum Field values at 2600 MHz

E-field 15 mm above dipole surface	condition	Interpolated maximum
Maximum measured above high end	100 mW input power	87.3 V/m = 38.82 dBV/m
Maximum measured above low end	100 mW input power	86.3 V/m = 38.72 dBV/m
Averaged maximum above arm	100 mW input power	86.8 V/m ± 12.8 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters

Frequency	Return Loss	Impedance
2450 MHz	20.9 dB	43.3 Ω - 5.2 jΩ
2550 MHz	30.4 dB	48.7 Ω + 2.7 jΩ
2600 MHz	36.1 dB	50.8 Ω + 1.4 jΩ
2650 MHz	35.7 dB	51.7 Ω - 0.2 jΩ
2750 MHz	22.8 dB	48.2 Ω - 6.9 jΩ

3.2 Antenna Design and Handling

The calibration dipole has a symmetric geometry with a built-in two stub matching network, which leads to the enhanced bandwidth.

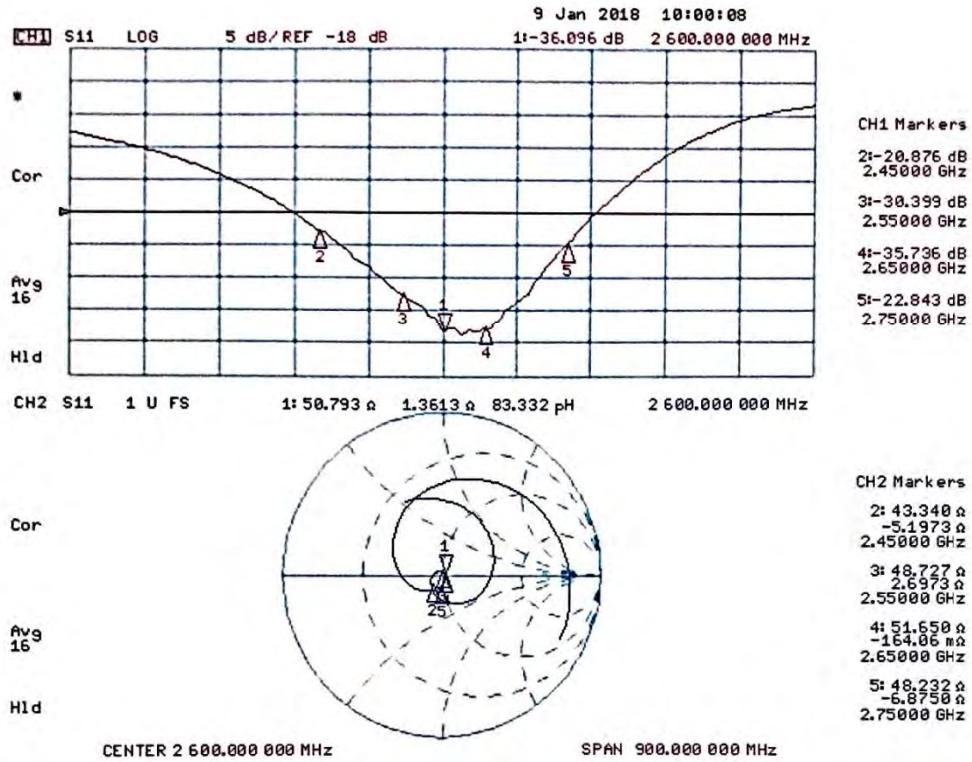
The dipole is built of standard semirigid coaxial cable. The internal matching line is open ended. The antenna is therefore open for DC signals.

Do not apply force to dipole arms, as they are liable to bend. The soldered connections near the feedpoint may be damaged. After excessive mechanical stress or overheating, check the impedance characteristics to ensure that the internal matching network is not affected.

After long term use with 40W radiated power, only a slight warming of the dipole near the feedpoint can be measured.



Impedance Measurement Plot



DASY5 E-field Result

Date: 09.01.2018

Test Laboratory: SPEAG Lab2

DUT: HAC Dipole 2600 MHz; Type: CD2600V3; Serial: CD2600V3 - SN: 1016

Communication System: UID 0 - CW ; Frequency: 2600 MHz
 Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
 Phantom section: RF Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

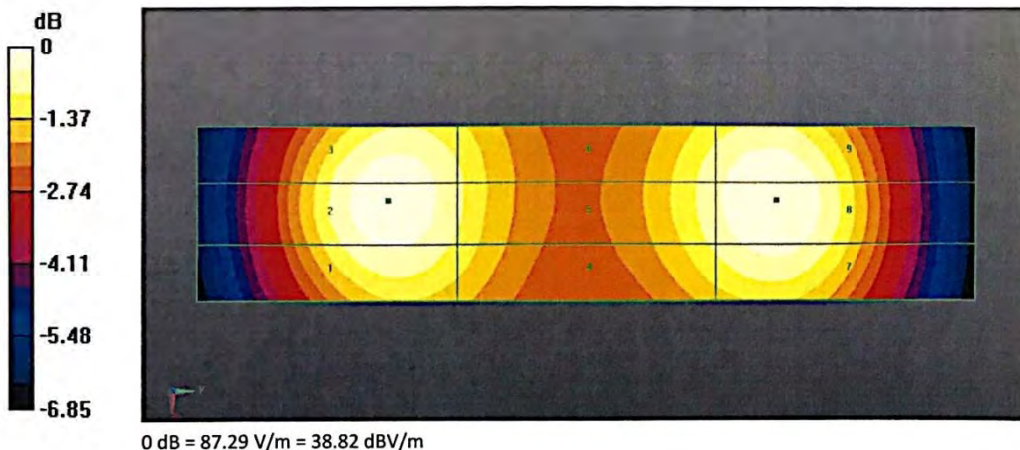
DASY52 Configuration:

- Probe: EF3DV3 - SN4013; ConvF(1, 1, 1); Calibrated: 14.06.2017;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn781; Calibrated: 13.07.2017
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole E-Field measurement @ 2600MHz/E-Scan - 2600MHz d=15mm/Hearing Aid Compatibility Test (41x181x1):
 Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
 Device Reference Point: 0, 0, -6.3 mm
 Reference Value = 66.44 V/m; Power Drift = -0.00 dB
 Applied MIF = 0.00 dB
 RF audio interference level = 38.82 dBV/m
Emission category: M2

MIF scaled E-field

Grid 1 M2	Grid 2 M2	Grid 3 M2
38.42 dBV/m	38.72 dBV/m	38.67 dBV/m
Grid 4 M2	Grid 5 M2	Grid 6 M2
38.01 dBV/m	38.27 dBV/m	38.24 dBV/m
Grid 7 M2	Grid 8 M2	Grid 9 M2
38.53 dBV/m	38.82 dBV/m	38.76 dBV/m





ANNEX G: DAE4 Calibration Certificate

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client TA-SH (Auden)

Certificate No: DAE4-1291_Oct17

CALIBRATION CERTIFICATE																							
Object	DAE4 - SD 000 D04 BM - SN: 1291																						
Calibration procedure(s)	QA CAL-06.v29 Calibration procedure for the data acquisition electronics (DAE)																						
Calibration date:	October 31, 2017																						
<p>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.</p> <p>All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.</p> <p>Calibration Equipment used (M&TE critical for calibration)</p> <table border="1"> <thead> <tr> <th>Primary Standards</th> <th>ID #</th> <th>Cal Date (Certificate No.)</th> <th>Scheduled Calibration</th> </tr> </thead> <tbody> <tr> <td>Keithley Multimeter Type 2001</td> <td>SN: 0810278</td> <td>31-Aug-17 (No:21092)</td> <td>Aug-18</td> </tr> <tr> <th>Secondary Standards</th> <th>ID #</th> <th>Check Date (in house)</th> <th>Scheduled Check</th> </tr> <tr> <td>Auto DAE Calibration Unit</td> <td>SE UWS 053 AA 1001</td> <td>05-Jan-17 (in house check)</td> <td>In house check: Jan-18</td> </tr> <tr> <td>Calibrator Box V2.1</td> <td>SE UMS 006 AA 1002</td> <td>05-Jan-17 (in house check)</td> <td>In house check: Jan-18</td> </tr> </tbody> </table>				Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration	Keithley Multimeter Type 2001	SN: 0810278	31-Aug-17 (No:21092)	Aug-18	Secondary Standards	ID #	Check Date (in house)	Scheduled Check	Auto DAE Calibration Unit	SE UWS 053 AA 1001	05-Jan-17 (in house check)	In house check: Jan-18	Calibrator Box V2.1	SE UMS 006 AA 1002	05-Jan-17 (in house check)	In house check: Jan-18
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Calibrator Box V2.1	SE UMS 006 AA 1002	05-Jan-17 (in house check)	In house check: Jan-18																				
Calibrated by:	Name Eric Hainfeld	Function Laboratory Technician	Signature 																				
Approved by:	Sven Kühn	Deputy Manager																					
			Issued: October 31, 2017																				
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.																							

**Calibration Laboratory of
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Engineering AG**
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Accreditation No.: **SCS 0108**

Glossary

DAE data acquisition electronics
Connector angle information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters

- **DC Voltage Measurement:** Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- **Connector angle:** The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.
 - **DC Voltage Measurement Linearity:** Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
 - **Common mode sensitivity:** Influence of a positive or negative common mode voltage on the differential measurement.
 - **Channel separation:** Influence of a voltage on the neighbor channels not subject to an input voltage.
 - **AD Converter Values with inputs shorted:** Values on the internal AD converter corresponding to zero input voltage
 - **Input Offset Measurement:** Output voltage and statistical results over a large number of zero voltage measurements.
 - **Input Offset Current:** Typical value for information; Maximum channel input offset current, not considering the input resistance.
 - **Input resistance:** Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
 - **Low Battery Alarm Voltage:** Typical value for information. Below this voltage, a battery alarm signal is generated.
 - **Power consumption:** Typical value for information. Supply currents in various operating modes.



DC Voltage Measurement

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1μV , full range = -100...+300 mV

Low Range: 1LSB = 61nV , full range = -1.....+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	402.531 ± 0.02% (k=2)	403.204 ± 0.02% (k=2)	403.118 ± 0.02% (k=2)
Low Range	3.97419 ± 1.50% (k=2)	3.97827 ± 1.50% (k=2)	3.97437 ± 1.50% (k=2)

Connector Angle

Connector Angle to be used in DASY system	309.5 ° ± 1 °
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Appendix (Additional assessments outside the scope of SCS0108)

1. DC Voltage Linearity

High Range	Reading (μV)	Difference (μV)	Error (%)
Channel X + Input	200033.09	-1.13	-0.00
Channel X + Input	20005.24	0.43	0.00
Channel X - Input	-20002.50	2.70	-0.01
Channel Y + Input	200031.52	-2.54	-0.00
Channel Y + Input	20002.99	-1.90	-0.01
Channel Y - Input	-20005.78	-0.47	0.00
Channel Z + Input	200033.14	-0.98	-0.00
Channel Z + Input	20001.98	-2.75	-0.01
Channel Z - Input	-20006.08	-0.65	0.00

Low Range	Reading (μV)	Difference (μV)	Error (%)
Channel X + Input	2001.76	0.75	0.04
Channel X + Input	201.56	0.40	0.20
Channel X - Input	-198.62	0.27	-0.14
Channel Y + Input	2001.35	0.49	0.02
Channel Y + Input	202.20	1.16	0.57
Channel Y - Input	-200.25	-1.24	0.62
Channel Z + Input	2000.49	-0.37	-0.02
Channel Z + Input	200.01	-0.98	-0.49
Channel Z - Input	-200.38	-1.21	0.61

2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (μV)
Channel X	200	9.58	7.76
	- 200	-6.07	-8.06
Channel Y	200	13.34	13.80
	- 200	-15.13	-15.41
Channel Z	200	-16.12	-16.97
	- 200	14.39	14.53

3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (μV)	Channel Y (μV)	Channel Z (μV)
Channel X	200	-	0.30	-3.79
Channel Y	200	6.95	-	0.36
Channel Z	200	10.83	4.52	-

4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16119	16474
Channel Y	15930	16813
Channel Z	16170	16434

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Input 10MΩ

	Average (μV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (μV)
Channel X	0.93	-0.36	2.05	0.49
Channel Y	-0.05	-1.46	0.88	0.48
Channel Z	-1.03	-2.76	1.81	0.59

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

9. Power Consumption (Typical values for information)

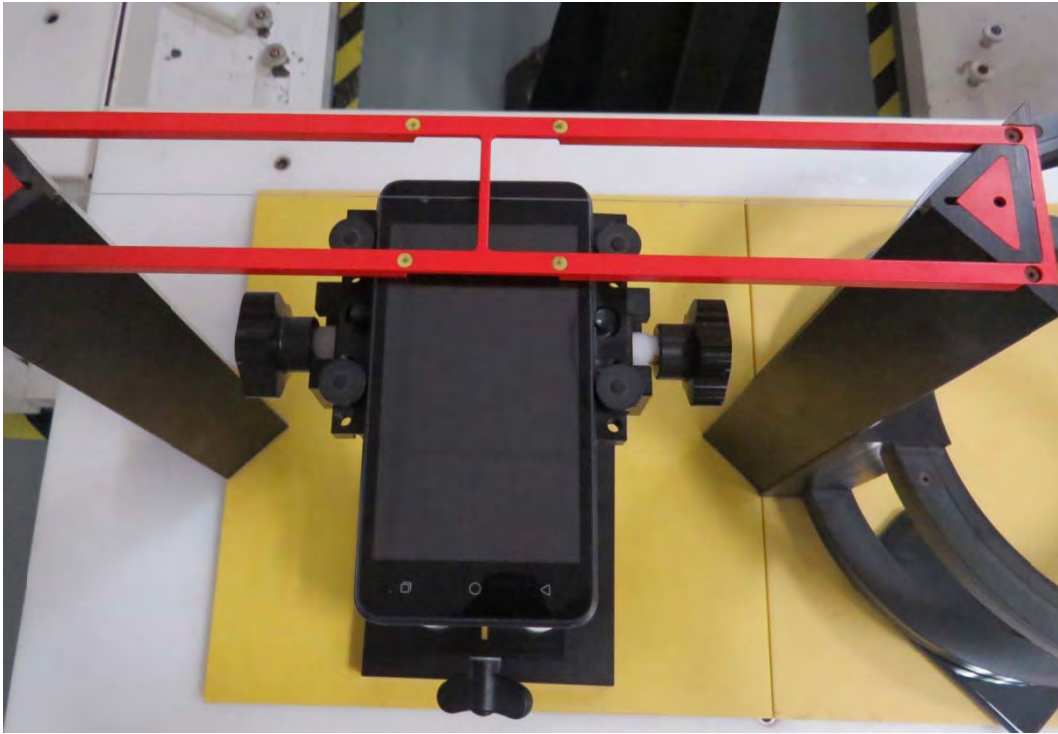
Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	-0.01	-8	-9

ANNEX H: The EUT Appearances and Test Configuration



a: EUT

Picture 1: Constituents of EUT



Picture 2: Test Setup