EX3DV4-- SN:7410

July 16, 2019

10110 CAG LTE-FDD 5.7.6 ±9.6 % 10111 CAG LTE-FDD 6.7.4 ±9.6 % 10112 CAG LTE-FDD 6.7.4 ±9.6 % 10112 CAG LTE-FDD 6.7.4 ±9.6 % 10112 CAG LTE-FDD 6.7.2 ±9.6 % 10114 CAC LEEE 602.11n (HT Greenfield, 318 Mbps, BP-SK) WLAN 8.4.6 ±9.6 % 10116 CAC LEEE 602.11n (HT Greenfield, 61 Mbps, 16-GAM) WLAN 8.4.6 ±9.6 % 10116 CAC LEEE 602.11n (HT Moxed, 61 Mbps, 16-GAM) WLAN 8.15 ±9.6 % 10116 CAC LEEE 602.11n (HT Moxed, 61 Mbps, 16-GAM) WLAN 8.15 ±9.6 % 10116 CAC LEEE 602.11n (HT Moxed, 61 Mbps, 16-GAM) UTE-FDD 6.63 ±9.6 % 10116 CAC LEEE 602.11n (HT Moxed, 61 Mbps, 16-GAM) LTE-FDD 6.73 ±9.6 % 10140 CAE LTE-FDD (SC-FDM, 100% RB, 16 MHz, 46-GAM) LTE-FDD 6.73 ±9.6 % 101	40100				-	
10111 CAG LTE-FDD 6.49 19.6 % 10112 CAG LTE-FDD (SC-FDMA, 100%, RB, 10 MHz, 64-OAM) LTE-FDD 6.59 19.6 % 10113 CAG LTE-FDD (SC-FDMA, 100%, RB, 10 MHz, 64-OAM) LTE-FDD 6.50 19.6 % 10114 CAG LTE-FDD (SC-FDMA, 100%, RB, 10 MHz, 64-OAM) WLAN 8.46 19.6 % 10115 CAG LEEE 602.11n (HT Greenfield, 31 Mbps, 64-OAM) WLAN 8.46 19.6 % 10117 CAG LEEE 602.11n (HT Mixed, 135 Mbps, 64-OAM) WLAN 8.69 19.6 % 10118 CAG LEEE 602.11n (HT Mixed, 135 Mbps, 64-OAM) WLAN 8.69 19.6 % 10140 CAE LTE-FDD (SC-FDMA, 100%, RB, 15 MHz, 16-OAM) UTE-FDD 6.41 19.6 % 10141 CAE LTE-FDD (SC-FDMA, 100%, RB, 13 MHz, 16-OAM) LTE-FDD 5.73 19.6 % 10142 CAE LTE-FDD (SC-FDMA, 100%, RB, 14 MHz, 16-OAM) LTE-FDD 6.74 19.6 % 10142 CAE LTE-FDD (SC-FDMA, 100%, RB, 14 MHz, 16-OAM) LTE-FDD 6.72	10109	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	±9.6 %
19112 CAG LTE-FDD 6.50 ±9.6 % 19113 CAG LTE-FDD 6.52 ±9.6 % 19114 CAG LEEE B02.1 fn (HT Greenfield, 13.6 Mbps, BPSK) WLAN 8.16 ±9.6 % 19115 CAG LEEE B02.1 fn (HT Greenfield, 13.6 Mbps, BP-CAM) WLAN 8.16 ±9.6 % 19116 CAC LEEE B02.1 fn (HT Meed, 81 Mbps, 16-CAM) WLAN 8.16 ±9.6 % 19116 CAC LEEE B02.1 fn (HT Meed, 81 Mbps, 16-CAM) WLAN 8.13 ±9.6 % 19116 CAC LEEE B02.1 fn (HT Meed, 81 Mbps, 16-CAM) WLAN 8.13 ±9.6 % 19116 CAC LEEE B02.1 fn (HT Meed, 81 Mbp, 16-CAM) WLAN 8.13 ±9.6 % 19147 CAE LTE-FDD (5C-FDMA, 100% RB, 15 MHz, 16-CAM) LTE-FDD 6.53 ±9.6 % 19147 CAE LTE-FDD (5C-FDMA, 100% RB, 14 MHz, 16-CAM) LTE-FDD 6.57 ±9.6 % 19144 CAE LTE-FDD (5C-FDMA, 100% RB, 14 MHz, 16-CAM) LTE-FDD 6.62 ±9.6 % 19144 CAE			LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)		5.75	± 9.6 %
10113 CAG LTE-FDD 672 1 = 6 + 70 10114 CAC LEEE 602.11n (HT Greenfeld, 13 Mbps, 16-CAM) WLAN 8.16 9.8 %, 10115 CAC LEEE 602.11n (HT Greenfeld, 13 Mbps, 16-CAM) WLAN 8.16 9.8 %, 10116 CAC LEEE 602.11n (HT Mseed, 135 Mbps, 18-CAM) WLAN 8.16 9.8 %, 10117 CAC LEEE 602.11n (HT Mseed, 135 Mbps, 18-CAM) WLAN 8.17 9.8 %, 10118 CAC LEEE 602.11n (HT Mseed, 135 Mbps, 18-CAM) WLAN 8.16 9.8 %, 10140 CAC LEEE 602.11n (HT Mseed, 135 Mbps, 18-CAM) WLAN 8.17 9.8 %, 10141 CAC LEEF 602.57DM, 100%, RB, 15 MHz, 16-CAM) LTE-FDD 6.53 19.6 %, 10142 CAE LTE-FDD (SC-FDM, 100%, RB, 15 MHz, 16-CAM) LTE-FDD 6.53 19.6 %, 10142 CAE LTE-FDD (SC-FDM, 100%, RB, 14 MHz, 16-CAM) LTE-FDD 6.36 19.6 %, 10142 CAE LTE-FDD (SC-FDM, 400%, RB, 14 MHz, 16-CAM) LTE-FDD 6.36 19.6 %		· • • • • • • • • • • • • • • • • • • •		LTE-FDD	6.44	± 9.6 %
10114 CAC EEEE 802.11n (HT Greenfield, 31 Mpps, BPSK) WLAN 8.40 19.85% 10115 CAC EEEE 802.11n (HT Greenfield, 31 Mpps, BC-OAM) WLAN 8.40 19.85% 10116 CAC EEEE 802.11n (HT Greenfield, 135 Mbps, BC-OAM) WLAN 8.07 2.96.5% 10116 CAC EEEE 802.11n (HT Mixed, 81 Mbps, 16-OAM) WLAN 8.13 2.96.5% 10116 CAC EEEE 802.11n (HT Mixed, 81 Mbps, 16-OAM) WLAN 8.13 2.96.5% 10140 CAC EEEE 802.11n (HT Mixed, 81 Mbps, 16-OAM) UTE+FDD 6.49 2.96.5% 10141 CAE LTE+FDD (SC-FDMA, 100% RB, 3 MHz, 16-OAM) UTE+FDD 6.57 3.96.5% 10142 CAE LTE+FDD (SC-FDMA, 100% RB, 3 MHz, 16-OAM) LTE+FDD 6.57 3.96.5% 10144 CAE LTE+FDD (SC-FDMA, 100% RB, 3 MHz, 16-OAM) LTE+FDD 6.65 3.96.5% 10145 CAF LTE+FDD (SC-FDMA, 50% RB, 20 MHz, 16-OAM) LTE+FDD (SC-FDMA, 50% B.76 4.96.5% 10146 CAF LTE+FDD (SC-FDMA, 50% RB, 20 MHz,			LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)		6.59	± 9.6 %
10116 CAC LEEE 802.11n (HT Greenfield, 35 Mbps, 64-GAM) WLAN 8.14 2.88 % 10117 CAC LEEE 802.11n (HT Wared, 135 Mbps, 82-GAM) WLAN 8.13 2.86 % 10118 CAC LEEE 802.11n (HT Wared, 135 Mbps, 82-GAM) WLAN 8.13 2.86 % 10119 CAC LEEE 802.11n (HT Wared, 135 Mbps, 82-GAM) WLAN 8.13 2.86 % 10140 CAC LEEE 802.11n (HT Wared, 136 Mbps, 82-GAM) WLAN 8.13 2.86 % 10141 CAC LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-GAM) UTE-FDD 6.33 2.86 % 10143 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-GAM) UTE-FDD 6.36 4.98 % 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 0FSK) LTE-FDD 6.76 4.98 % 4.98 % 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 12 MHz, 16-GAM) LTE-FDD 6.71 3.98 % 4.98 % 10145 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-GAM) LTE-FDD 6.72 4.86 % 5.96 % 5.96 % 5.96 % 5			LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10110 CAC LEE 802.11n (HT Greenfield, 135 Mbps, 84-CAM) WI AN 8.15 18.8 % 10117 CAC LEEE 802.11n (HT Mixed, 81 Mbps, 46-CAM) WI AN 8.59 13.8 % 10118 CAC LEEE 802.11n (HT Mixed, 81 Mbps, 46-CAM) WI AN 8.59 13.8 % 10140 CAE LTE-FDD (SC-FDMA, 100% FB; 15 MHz, 18-CAM) LTE-FDD (6.49 8.3 % 10141 CAE LTE-FDD (SC-FDMA, 100% FB; 15 MHz, 18-CAM) LTE-FDD (6.53 9.8 % 10142 CAE LTE-FDD (SC-FDMA, 100% FB; 14 MHz, 18-CAM) LTE-FDD (6.57 9.8 % 10144 CAE LTE-FDD (SC-FDMA, 100% FB; 14 MHz, 18-CAM) LTE-FDD (6.57 9.8 % 10145 CAF LTE-FDD (SC-FDMA, 100% FB; 14 MHz, 18-CAM) LTE-FDD (6.67 9.8 % 10147 CAF LTE-FDD (SC-FDMA, 100% FB; 14 MHz, 18-CAM) LTE-FDD (6.67 9.8 % 10147 CAF LTE-FDD (SC-FDMA, 100% FB; 14 MHz, 18-CAM) LTE-FDD (6.67 9.8 % 10147 CAF LTE-FDD (SC-FDMA, 50% FB; 20 MHz, 18-CAM) LTE-FDD (6.67 9.8 % 10160 CAE				WLAN	8.10	± 9.6 %
10112 CAC IEEE 802.11n (HT Mixed, 13.5 MBps, 8F-SA) WUAN 8.007 2.80 SK 10118 CAC IEEE 802.11n (HT Mixed, 136 Mbps, 64-OAM) WUAN 8.103 8.90 SK 10140 CAC IEEE 802.11n (HT Mixed, 136 Mbps, 64-OAM) ULAN 8.13 SK 10140 CAE ITE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-OAM) ITE-FDD 6.53 9.6 % 10141 CAE ITE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-OAM) ITE-FDD 6.53 9.6 % 10142 CAE ITE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-OAM) ITE-FDD 6.53 9.6 % 10144 CAE ITE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-OAM) ITE-FDD 6.65 9.6 % 10145 CAF ITE-FDD (SC-FDMA, 100% RB, 14 MHz, 16-OAM) ITE-FDD 6.62 9.6 % 10147 CAF ITE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-OAM) ITE-FDD 6.62 9.6 % 10147 CAF ITE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-OAM) ITE-FDD 6.62 9.6 % 10147 CAF ITE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-OAM) ITE-FDD 6.62 9.6 % 10147 CAF ITE-FDD (SC-FDMA, 50% RB			IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	± 9.6 %
10118 CAC IEEE 802.11n (HT Mixed, 81 Mbps, 16-CAM) WLAN 8.59 ± 9.6 % 10119 CAC IEEE 802.11n (HT Mixed, 135 Mbps, 64-CAM) LTE-FDD 6.40 ± 9.6 % 10141 CAE LTE-FDD (53C-FDM, 109% RB, 15 MHz, 16-CAM) LTE-FDD 6.53 ± 9.6 % 10142 CAE LTE-FDD (53C-FDM, 109% RB, 3 MHz, 26-CAM) LTE-FDD 6.53 ± 9.6 % 10143 CAE LTE-FDD (53C-FDM, 109% RB, 3 MHz, 26-CAM) LTE-FDD 6.65 ± 9.6 % 10144 CAE LTE-FDD (53C-FDM, 109% RB, 14 MHz, 0FSA) LTE-FDD 6.66 ± 9.6 % 10146 CAF LTE-FDD (53C-FDM, 109% RB, 14 MHz, 0FSA) LTE-FDD 6.62 ± 9.6 % 10147 CAF LTE-FDD (53C-FDM, 50% RB, 20 MHz, 0FAAM) LTE-FDD 6.62 ± 9.6 % 10150 CAG LTE-FDD (53C-FDM, 50% RB, 20 MHz, 0FAAM) LTE-FDD 6.62 ± 9.6 % 10151 CAG LTE-FDD (SC-FDM, 50% RB, 20 MHz, 0FAAM) LTE-FDD 9.62 ± 9.6 %	a second s		IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	± 9.6 %
10118 CAC IEEE 802.11n (HT Mixed, 313 Mbps, 46-CAM) WLAN 8.59 ± 9.6 % 10119 CAC IEEE 802.11n (HT Mixed, 313 Mbps, 46-CAM) LTE-FDD 6.49 ± 9.6 % 10141 CAE LTE-FDD (5.57 ± 9.6 % 10142 CAE LTE-FDD (5.57 ± 9.6 % 10142 CAE LTE-FDD (5.57 ± 9.6 % 10142 CAE LTE-FDD (5.57 ± 9.6 % 10144 CAE LTE-FDD (5.57 ± 9.6 % 10144 CAE LTE-FDD (5.57 ± 9.6 % 10146 CAF LTE-FDD (5.67 MA, 50% RB, 20 MHz, 0°SK) LTE-FDD 6.41 ± 9.6 % 10147 CAF LTE-FDD (5.57 MA, 50% RB, 20 MHz, 0°SK) LTE-FDD 6.42 ± 9.6 % 10149 CAE LTE-FDD (5.67 MA, 50% RB, 20 MHz, 0°SK) LTE-FDD 6.42 ± 9.6 % 10147 CAE LTE-FDD (5.67 MA, 50% RB, 20 MHz, 0°SK) LTE-FDD 6.42 ± 9.6 % <tr< td=""><td>and the second s</td><td></td><td>IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)</td><td>WLAN</td><td>8.07</td><td></td></tr<>	and the second s		IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	
10119 CAC IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) WLAN 8.13 ± 9.6 %. 10140 CAE LTE-FDD (6.57) ± 9.6 %. 10141 CAE LTE-FDD (6.53) ± 9.6 %. 10142 CAE LTE-FDD (6.53) ± 9.6 %. 10143 CAE LTE-FDD (6.53) ± 9.6 %. 10144 CAE LTE-FDD (6.56) ± 9.6 %. 10144 CAE LTE-FDD (6.56) ± 9.6 %. 10146 CAF LTE-FDD (6.57) ± 9.6 %. 10146 CAF LTE-FDD (6.52) ± 9.6 %. 10147 CAF LTE-FDD (6.52) ± 9.6 %. 10149 CAE LTE-FDD (6.52) ± 9.6 %. 10141 CAE LTE-FDD (6.22) ± 9.6 %. 10151 CAG LTE-FDD (6.22) ± 9.6 %. 10145 CAE LTE-FDD (6.72) ± 9.6 %. 10152 CAG		CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)			
10140 CAE LTE-FDD 66.49 ± 9 6 % 10141 CAE LTE-FDD 65.73 ± 9 6 % 10142 CAE LTE-FDD 65.73 ± 9 6 % 10143 CAE LTE-FDD 65.73 ± 9 6 % 10144 CAE LTE-FDD 65.73 ± 9 6 % 10144 CAE LTE-FDD 65.75 ± 9 6 % 10144 CAE LTE-FDD 65.75 ± 9 6 % 10146 CAF LTE-FDD 65.75 ± 9 6 % 10146 CAF LTE-FDD 10 7 % R8.14 MHz, 64-QAM) LTE-FDD 6.62 ± 9 6 % 10147 CAE LTE-FDD 10 7 % R8.14 MHz, 64-QAM) LTE-FDD 6.62 ± 9 6 % 10150 CAG LTE-FDD 10 7 % R8.20 MHz, 64-QAM) LTE-FDD 5.75 ± 9 6 % 10151 CAG LTE-FDD 10 7 % R8.20 MHz, 16-QAM) LTE-FDD 5.75 ± 9 6 % 10152 CAG LTE-FDD <td></td> <td>CAC</td> <td>IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)</td> <td></td> <td></td> <td></td>		CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)			
10141 CAE LTE-FDD 65.3 = 59.6% 10142 CAE LTE-FDD 65.3 = 59.6% 10143 CAE LTE-FDD 65.3 = 59.6% 10144 CAE LTE-FDD 65.3 # 96.% 10144 CAE LTE-FDD 65.65 # 96.% 10144 CAE LTE-FDD 65.76 ± 96.6% 10145 CAF LTE-FDD 65.76 ± 96.6% 10146 CAF LTE-FDD 65.72 ± 9.6 % 10147 CAF LTE-FDD (65.79M.A. 100% RB.1 4 MHz, 16-CAM) LTE-FDD 6.42 ± 9.6 % 10149 CAE LTE-FDD (65.79M.A. 50% RB.2 0 MHz, 16-CAM) LTE-FDD 6.42 ± 9.6 % 10151 CAG LTE-FDD (65.79M.A. 50% RB.2 0 MHz, 16-CAM) LTE-FDD 5.72 ± 9.6 % 10152 CAG LTE-FDD (65.79M.A. 50% RB.2 0 MHz, 16-CAM) LTE-FDD 5.73 ± 9.6 % 10156 CAG LTE-FDD (65.79M.A. 50% RB.2 0 M	10140	CAE				
10143 CAE LITE-FDD 5.73 # 9.9 % 10143 CAE LITE-FDD 65.73 # 9.9 % 10144 CAE LITE-FDD 65.65 # 9.6 % 10145 CAF LITE-FDD 65.76 # 9.6 % 10146 CAF LITE-FDD 65.76 # 9.6 % 10146 CAF LITE-FDD 65.77 # 9.6 % 10147 CAF LITE-FDD 65.72 # 9.6 % 10149 CAE LITE-FDD 65.72 # 9.6 % 10149 CAE LITE-FDD (65.70 M, 50% RB, 20 MHz, 04-CAM) LITE-FDD 6.62 # 9.6 % 10151 CAG LITE-FDD (65.70 M, 50% RB, 20 MHz, 16-CAM) LITE-FDD 9.02 # 9.6 % 10152 CAG LITE-FDD (65.70 M, 50% RB, 20 MHz, 16-CAM) LITE-FDD 10.05 & 9.6 % 10153 CAG LITE-FDD (65.70 M, 50% RB, 10 MHz, 20 FSK) LITE-FDD 5.79 & # 9.6 % 10155 CAG LITE-FDD (65.70 M, 50% RB, 5 MHz, 20 FSK)	10141	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)		· · · · · · · · · · · · · · · · · · ·	
10143 CAE LTE-FDD (56, 27) 10144 CAE LTE-FDD (56, 27) (57)	10142	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)			
10144 CAE LTE-FDD 6.65 9.9 % 10145 CAF LTE-FDD 65.76 ± 9.6 % 10146 CAF LTE-FDD 65.77 ± 9.6 % 10146 CAF LTE-FDD 65.77 ± 9.6 % 10147 CAF LTE-FDD 65.72 ± 9.6 % 10149 CAE LTE-FDD 65.72 ± 9.6 % 10160 CAE LTE-FDD (65.70 MA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.60 ± 9.6 % 10151 CAG LTE-TDD (9.27 FDMA, 50% RB, 20 MHz, 40-QAM) LTE-TDD 9.92 ± 9.6 % 10152 CAG LTE-TDD (9.5C-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.75 ± 9.6 % 10153 CAG LTE-FDD (5C-FDMA, 50% RB, 50 MHz, QPSK) LTE-FDD 6.76 ± 9.6 % 10155 CAG LTE-FDD (5C-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 6.76 ± 9.6 % 10157 CAG LTE-FDD (5C-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 6.49 ± 9.6 %<	10143					
10146 CAF LTE-FDD (5.76 ±9.6 % 10146 CAF LTE-FDD (5.77 ±9.6 % 10147 CAF LTE-FDD (5.77 ±9.6 % 10149 CAF LTE-FDD (5.77 ±9.6 % 10149 CAF LTE-FDD (5.77 ±9.6 % 10151 CAG LTE-TDD (5.77 ±9.6 % 10152 CAG LTE-TDD (5.77 ±9.6 % 10153 CAG LTE-TDD (5.77 ±9.6 % 10154 CAG LTE-TDD (5.77 ±9.6 % 10155 CAG LTE-TDD (5.77 ±9.6 % 10156 CAG LTE-FDD (5.77 ±9.6 % 10156 CAG LTE-FDD (5.77 ±9.6 % 10157 CAG LTE-FDD (5.77 ±9.6 % 10157 CAG LTE-FDD (5.78 ±9.6 % 10156 CAG LTE-FDD (5.78 ±9.6 % <t< td=""><td>10144</td><td></td><td>LTE-FDD (SC-FDMA, 100% BB, 3 MHz, 64-OAM)</td><td></td><td></td><td></td></t<>	10144		LTE-FDD (SC-FDMA, 100% BB, 3 MHz, 64-OAM)			
10146 CAF LTE-FDD 65.7 12.8 7 10147 CAF LTE-FDD 65.7 12.8 6% 10149 CAE LTE-FDD 65.7 19.6 6% 11.6 6% 19.6 6% 10.6 19.6 6% 11.6 6% 19.6 6% 11.6 6% 19.6 6% 11.6 6% 19.6 6% 11.6 6% 11.6 6% 11.6 6% 11.6 6% 11.6 6% 11.6 6% 11.6 6% 11.6 6% 11.6 6% 11.6	10145		LTE-EDD (SC-EDMA 100% BB 14 MHz OPSK)			
10147 CAF LTE-FDD SC-FDMA, 100% RB, 14 MHz, 16-GAM) LTE-FDD 6.72 ±9.6 % 10149 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-GAM) LTE-FDD 6.42 ±9.6 % 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-GAM) LTE-FDD 6.60 ±9.6 % 10151 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-GAM) LTE-FDD 9.28 ±9.6 % 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-GAM) LTE-FDD 10.05 ±9.6 % 10154 CAG LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-GAM) LTE-FDD 5.76 ±9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 0PSK) LTE-FDD 5.79 ±9.6 % 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 0PSK) LTE-FDD 6.43 ±9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 0-GAM) LTE-FDD 6.42 ±9.6 % 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 0-GAM) LTE-FDD 6.43 ±9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% R						
10149 CAE LTE-FDD (SC-FDMA, 50%, RB, 20 MHz, 16-QAM) LTE-FDD 6.42 19.6 % 10150 CAE LTE-FDD (SC-FDMA, 50%, RB, 20 MHz, 04-QAM) LTE-FDD 6.60 ±9.6 % 10151 CAG LTE-TDD (SC-FDMA, 50%, RB, 20 MHz, 16-QAM) LTE-TDD 9.22 ±9.6 % 10152 CAG LTE-TDD (SC-FDMA, 50%, RB, 20 MHz, 16-QAM) LTE-TDD 9.92 ±9.6 % 10154 CAG LTE-TDD (SC-FDMA, 50%, RB, 10 MHz, 04-QN) LTE-FDD 6.75 ±9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50%, RB, 5 MHz, 04-QAM) LTE-FDD 6.43 ±9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50%, RB, 5 MHz, 04-QAM) LTE-FDD 6.62 ±9.6 % 10159 CAG LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, 04-QAM) LTE-FDD 6.56 ±9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, 04-QAM) LTE-FDD 6.56 ±9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50%, RB, 16 MHz, 04-QAM) LTE-FD						
10150 CAE LTE-FDD SC-FDMA, 50% RB, 20 MHz, GPSK) LTE-FDD 6.66 ± 9.6 % 10151 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, GCAM) LTE-TDD 9.28 ± 9.6 % 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, GCAM) LTE-TDD 10.05 ± 9.6 % 10153 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, G-GAM) LTE-TDD 10.05 ± 9.6 % 10154 CAG LTE-TDD (SC-FDMA, 50% RB, 50 MHz, G+GAM) LTE-FDD 5.75 ± 9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 50 MHz, G+GAM) LTE-FDD 6.43 ± 9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 50 MHz, G+GAM) LTE-FDD 6.42 ± 9.6 % 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 50 MHz, G+GAM) LTE-FDD 6.62 ± 9.6 % 10169 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, G+GAM) LTE-FDD 6.82 ± 9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 10 MHz, G+GAM) LTE-FDD 6.82 ± 9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 14 MHz,			TE-EDD (SC-EDMA, 100% RB, 20 MHz, 16 OAM)			
10151 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 60-AM) LTE-TDD 9.28 ±0.6 % 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-TDD 10.06 ±9.6 % 10154 CAG LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 5.75 ±9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 6.43 ±9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 6.49 ±9.6 % 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-FDD 6.62 ±9.6 % 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.62 ±9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) 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, 14 MHz, 0PSK) LTE-FDD 6.48 ±9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 0PSK) LTE-FDD 6.48 ±9.6 % 10162 CAE			TE-EDD (SC-EDMA 50% PP 20 MUL- CA CAMA	1 ·····		
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, 10 MHz, Q-PSK) LTE-FDD 5.7 ± 9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, Q-PSK) LTE-FDD 5.7 ± 9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, Q-PSK) LTE-FDD 5.7 ± 9.6 % 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, Q-PSK) LTE-FDD 5.6 ± 9.6 % 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, Q-PSK) LTE-FDD 6.62 ± 9.6 % 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, Q-GAM) LTE-FDD 6.62 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.43 ± 9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.48 ± 9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 6.48 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 6.73 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 17 KB, 20 MHz,			TE-TOD (00-10WA, 00% RD, 20 WH- 0000)			
10153 CAG LTE-TDD (SC-FDMA, 50%, RB, 20 MHz, 64-0AM) LTE-TDD 10.06 ±9.6 % 10154 CAG LTE-FDD (SC-FDMA, 50%, RB, 10 MHz, QPSK) LTE-FDD 6.75 ±9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50%, RB, 10 MHz, QPSK) LTE-FDD 6.43 ±9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50%, RB, 10 MHz, 16-QAM) LTE-FDD 6.43 ±9.6 % 10157 CAG LTE-FDD (SC-FDMA, 50%, RB, 10 MHz, 64-QAM) LTE-FDD 6.62 ±9.6 % 10160 CAG LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, 64-QAM) LTE-FDD 5.82 ±9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, 64-QAM) LTE-FDD 6.63 ±9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, 64-QAM) LTE-FDD 6.43 ±9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, 64-QAM) LTE-FDD 6.43 ±9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50%, RB, 14 MHz, 0FSK) LTE-FDD 6.48 ±9.6 % 10162 CAF LTE-FDD (SC-FDMA, 50%, RB, 14 MHz, 0FSK) <td></td> <td></td> <td>TETETED (SC EDMA 50% BB 20 MUL 40 CAME</td> <td></td> <td></td> <td></td>			TETETED (SC EDMA 50% BB 20 MUL 40 CAME			
10154 CAG LTE-FDD SC:FDMA, 50%, RB, 10 MHz, GPSK) LTE-FDD 5.75 ± 9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50%, RB, 10 MHz, 16-QAM) LTE-FDD 6.43 ± 9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50%, RB, 5 MHz, 16-QAM) LTE-FDD 6.49 ± 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, 15 MHz, 64-QAM) LTE-FDD 6.62 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, 64-QAM) LTE-FDD 6.64 ± 9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, 64-QAM) LTE-FDD 6.43 ± 9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50%, RB, 14 MHz, QPSK) LTE-FDD 6.44 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50%, RB, 14 MHz, GP-QAM) LTE-FDD 6.21 ± 9.6 % 10167 CAF LTE-FDD (SC-FDMA, 178, 20 MHz, 64-QAM) LTE-FDD 6.73 ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 50%,			LTE TOD (SO FDMA 50% RB, 20 MHZ, 16-QAM)			
10155 CAG LTE-FDD Sci 200, NHz, 16-QAM) LTE-FDD 6.43 ± 8.6 % 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 6.62 ± 9.6 % 10158 CAG LTE-FDD (SC-FDMA, 50%, RB, 5 MHz, 16-QAM) LTE-FDD 6.62 ± 9.6 % 10159 CAG LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, 16-QAM) LTE-FDD 6.62 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, 16-QAM) LTE-FDD 6.43 ± 9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, 16-QAM) LTE-FDD 6.44 ± 9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50%, RB, 14 MHz, 16-QAM) LTE-FDD 6.74 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50%, RB, 14 MHz, 16-QAM) LTE-FDD 6.73 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 17 MB, 20 MHz, 16-QAM) LTE-FDD 6.73 ± 9.6 % 10171 CAG LTE-FDD (SC-FDMA, 17 RB, 20 MHz,						
10156 CAG LTE-FDD SC.FDMA, 50%, RB, 5 MHz, QPSK) LTE-FDD 5.79 ± 0.6 % 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, 5 MHz, 64-QAM) LTE-FDD 6.62 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, QCAM) LTE-FDD 5.82 ± 9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, QCAM) LTE-FDD 6.43 ± 9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50%, RB, 14 MHz, QCSK) LTE-FDD 6.43 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50%, RB, 14 MHz, QCSK) LTE-FDD 6.42 ± 9.6 % 10167 CAE LTE-FDD (SC-FDMA, 50%, RB, 14 MHz, QCSK) LTE-FDD 6.79 ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 10%, 20% RB, 14 MHz, QCSK) LTE-FDD 6.79 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 10%, 20 MHz, QCSK) LTE-FDD 6.73 ± 9.6 % 10171 CAE LTE-FDD (SC-FDMA, 17 B, 20 MHz,			LIE-FUD (SU-FUMA, SU% KB, 10 MHZ, QPSK)		and the second se	
10157 CAG LTE-FDD (SC-FDMA, 50% RB, 6 MHz, 16-QAM) LTE-FDD 6.49 13.06 % 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD 6.62 19.6 % 10169 CAC LTE-FDD (SC-FDMA, 50% RB, 55 MHz, 26-QAM) LTE-FDD 6.56 19.6 % 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 26-QAM) LTE-FDD 6.58 19.6 % 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.58 19.6 % 10163 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 46-QAM) LTE-FDD 6.46 19.6 % 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 64-QAM) LTE-FDD 6.41 19.6 % 10169 CAE LTE-FDD (SC-FDMA, 10%, 20 MHz, 16-QAM) LTE-FDD 5.73 19.6 % 10170 CAE LTE-FDD (SC-FDMA, 178, 20 MHz, 64-QAM) LTE-FDD 6.52 19.6 % 10171 AAE LTE-FDD (SC-FDMA, 178, 20 MHz, 64-QAM) LTE-FDD 6.52 19.6 % 10172 CAG LTE-FDD (SC-FDMA, 178, 20 MHz, 64-QAM) LT			LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)			
10158 CAG LTE-FDD (SC-FDMA, 50% RB, 5 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, 16-QAM) LTE-FDD 6.43 ± 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, 14 MHz, 0FSK) LTE-FDD 6.43 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 0FSK) LTE-FDD 6.79 ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 18, 20 MHz, 16-QAM) LTE-FDD 6.79 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.52 ± 9.6 % 10171 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 9.6 % 10172 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 9.6 % 10172 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 9.21 ± 9.6 % 10176 CAG			LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)		5.79	
10159 CAG 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, 16-QAM) LTE-FDD 6.43 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 6.21 ± 9.6 % 10169 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 6.79 ± 9.6 % 10169 CAE LTE-FDD (SC-FDMA, 182, 20 MHz, 16-QAM) LTE-FDD 6.73 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 9.6 % 10171 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 9.48 ± 9.6 % 10172 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 9.48 ± 9.6 % 10174 CAG LTE-FDD (SC-FDMA, 1 RB, 10 M			LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)		6.49	
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, 04-QAM) LTE-FDD 6.54 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 04-QAM) LTE-FDD 6.74 ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 18B, 20 MHz, 04-QAM) LTE-FDD 6.71 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 6.52 ± 9.6 % 10171 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 6.49 ± 9.6 % 10172 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 9.21 ± 9.6 % 10173 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-FDD 9.21 ± 9.6 % 10174 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD			LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)		6.62	± 9.6 %
10161 CAE LTE-FDD 6.43 ± 9.6 % 10162 CAE LTE-FDD 6.43 ± 9.6 % 10162 CAE LTE-FDD 6.58 ± 9.6 % 10166 CAF LTE-FDD (5.67) ± 9.6 % 10167 CAF LTE-FDD (5.67) ± 9.6 % 10168 CAF LTE-FDD (5.71) ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.73 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 178, 20 MHz, 0PSK) LTE-FDD 6.73 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 178, 20 MHz, 04-QAM) LTE-FDD 6.49 ± 9.6 % 10171 AAE LTE-FDD (SC-FDMA, 178, 20 MHz, 16-QAM) LTE-FDD 9.44 ± 9.6 % 10172 CAG LTE-FDD (SC-FDMA, 178, 20 MHz, 16-QAM) LTE-FDD 9.44 ± 9.6 % 10174 CAG LTE-FDD (SC-FDMA, 178, 20 MHz, 16-QAM) LTE-FDD 5.72 ± 9.6 % 10175 CAG LTE-FDD (SC-FDM			LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)		6.56	±9.6 %
10162 CAE LTE-FDD 6.53 ± 9.6 % 10166 CAF LTE-FDD 6.54 ± 9.6 % 10166 CAF LTE-FDD (5.46 ± 9.6 % 10167 CAF LTE-FDD (5.21 ± 9.6 % 10168 CAF LTE-FDD (5.21 ± 9.6 % 10168 CAF LTE-FDD (5.73 ± 9.6 % 10169 CAE LTE-FDD (5.73 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, G4-QAM) LTE-FDD 6.52 ± 9.6 % 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, G4-QAM) LTE-FDD 6.49 ± 9.6 % 10172 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, G4-QAM) LTE-FDD 9.48 ± 9.6 % 10173 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, G4-QAM) LTE-FDD 9.48 ± 9.6 % 10174 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, G4-QAM) LTE-FDD 5.72 ± 9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, G4-QAM) LTE-FDD				LTE-FDD	5.82	
10162 CAE LTE-FDD 6.58 ± 9.6 % 10166 CAF LTE-FDD 6.46 ± 9.6 % 10167 CAF LTE-FDD 6.46 ± 9.6 % 10168 CAF LTE-FDD 6.21 ± 9.6 % 10169 CAF LTE-FDD 6.79 ± 9.6 % 10169 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 6.73 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, G4-QAM) LTE-FDD 6.44 ± 9.6 % 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-TDD 9.21 ± 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, G4-QAM) LTE-TDD 10.25 ± 9.6 % 10174 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, G4-QAM) LTE-FDD 5.72 ± 9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, GPSK) LTE-FDD 5.72 ± 9.6 % 10176				LTE-FDD	6.43	± 9.6 %
10166 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 0PSK) LTE-FDD 6.46 ± 9.6 % 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.79 ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.79 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.52 ± 9.6 % 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.48 ± 9.6 % 10172 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 9.21 ± 9.6 % 10173 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 9.48 ± 9.6 % 10173 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 9.48 ± 9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 04-QAM) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 04-QAM) LTE-FDD 5.72 ± 9.6 % 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 04-QAM) LTE-FDD 5.73 ± 9.6 % 10178 CAG			LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	
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 6.73 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 0PSK) 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-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 9.21 ± 9.6 % 10173 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-FDD 9.21 ± 9.6 % 10174 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 9.22 ± 9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 04-QAM) LTE-FDD 6.52 ± 9.6 % 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) LTE			LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD		
10168 CAF LTE-FDD (SC-FDMA, 10% 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 6.52 ± 9.6 % 10171 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 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, 64-QAM) LTE-TDD 9.21 ± 9.6 % 10173 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-TDD 9.48 ± 9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 6.52 ± 9.6 % 10179 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10180 CAE LT		CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD		
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, QPSK) LTE-TDD 9.21 ± 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, G4-QAM) LTE-TDD 9.48 ± 9.6 % 10174 CAG LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10177 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QAM) LTE-FDD 5.72 ± 9.6 % 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QAM) LTE-FDD 6.52 ± 9.6 % 10179 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QAM) LTE-FDD 5.	10168	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD		
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, QPSK) 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 9.48 ± 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, QPSK) LTE-FDD 5.73 ± 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, 64-QAM) LTE-FDD 6.52 ± 9.6 % 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) LTE-FDD 6.50 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 6.52 ± 9.6 % 10182 CAE LTE-FDD (S	10169	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	and the second se		
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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 5.73 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) LTE-FDD 6.52 ± 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, 65 Mbps, 16-QAM) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10196 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.10 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.13 ± 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, 16-QAM) LTE-FDD 6.52 ± 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, 65 Mbps, 16-QAM) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10196 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.11 ± 9.6 % 10196 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.10 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 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, 6.5 Mbps, BPSK) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10196 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.11 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, 16-QAM) WLAN 8.13 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.13 ± 9.6 %			LTE-FUD (SU-FUMA, 1 KB, 1.4 MHz, QPSK)			the second se
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 8.12 ± 9.6 % 10196 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.21 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 9.6 %			LTE-FDD (SC-FDMA, 1 KB, 1.4 MHz, 16-QAM)		******	
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 Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 9.6 %			LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)			± 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 Mixed, 6.5 Mbps, BPSK) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 9.6 %			IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)		8.09	±9.6 %
10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.21 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 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 %			IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN		
10196 CAC IEEE 802.11n (HT Mixed, 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 %			IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN		
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 %			IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)			
10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.27 ± 9.6 %			IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)			
			IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)			
	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	$\pm 9.6\%$
10223	CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	± 9.6 % ± 9.6 %
10224	CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	*****	8.08	
10225	CAB	UMTS-FDD (HSPA+)		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	<u>±9.6 %</u> ±9.6 %
10232	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48 10.25	
10233	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD		± 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	$\pm 9.6\%$
10240	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	$\pm 9.6\%$
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	$\pm 9.6\%$
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	$\pm 9.6\%$
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 %
10000	AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.49	± 9.6 %
10295		LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	± 9.6 %
10295	AAD				
	AAD AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD LTE-FDD	5.72 6.39	± 9.6 %

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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	WIMAX	15.24	± 9.6 %
10306	AAA	symbols) IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18	WiMAX	14.67	± 9.6 %
10307	AAA	symbols) IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18	WIMAX	14.49	± 9.6 %
10308	AAA	symbols) IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	10/:00/	44.40	
10309	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, POSC)	WIMAX WIMAX	14.46 14.58	± 9.6 %
		symbols)	VVIIV/32	14.00	± 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 9
10353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	± 9.6 9
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	LTE-TDD	7.82	± 9.6 %
		Subframe=2,3,4,7,8,9, Subframe Conf=4)			
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 preambule)	WLAN	8.14	± 9.6 %
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preambule)	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, Clippin 44%)	LTE-FDD	7.53	± 9.6 %
10449	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	LTE-FDD	7.51	± 9.6 %
10450	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)			- 0.0 /

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 WCDMA	8.25 2.39	±9.6 % ±9.6 %
10460	AAA	UMTS-FDD (WCDMA, AMR) LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL		7.82	$\pm 9.6\%$ $\pm 9.6\%$
10461	AAA	Subframe=2,3,4,7,8,9)		1.02	1 3.0 %
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 %

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10535 10536 10537 10538 10540 10541	AAB AAB AAB AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle) IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	WLAN WLAN WLAN	8.45 8.32	<u>±9.6 %</u> ±9.6 %
10537 10538 10540	AAB				
10538 10540				8.44	± 9.6 %
10540		IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	WLAN	8.54	± 9.6 %
	AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 95pc duty cycle)	WLAN	8.39	± 9.6 %
10041	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	WLAN	8.46	± 9.6 %
10542	AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	WLAN	8.65	± 9.6 %
10542	AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	WLAN	8.65	± 9.6 %
10545	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 %
10540	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 Will (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 %
10556	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	WLAN	8.25	± 9.6 %
10304	~~~	cvcle)	VVL/IN	0.20	1 2 3.0 /0
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 cvcle)	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 %
	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	WLAN WLAN	8.70	<u>± 9.6 %</u> ± 9.6 %
10585 10586	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)			

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40500	1				
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	$\pm 9.6\%$ $\pm 9.6\%$
10612	AAB	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	$\pm 9.6\%$ $\pm 9.6\%$
10613	AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	WLAN	8.94	
10614	AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	WLAN		± 9.6 %
10615	AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)		8.59	± 9.6 %
10616	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10617	AAB		WLAN	8.82	± 9.6 %
10618	AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10619	AAB		WLAN	8.58	± 9.6 %
10620		IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	WLAN	8.86	± 9.6 %
	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	
10645	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	WLAN	9.05	± 9.6 %
10646	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	LTE-TDD		± 9.6 %
10647	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)		11.96	± 9.6 %
10648	AAA	CDMA2000 (1x Advanced)	LTE-TDD	11.96	± 9.6 %
10652	AAD	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	CDMA2000	3.45	± 9.6 %
			LTE-TDD	6.91	± 9.6 %
	ΔΔΠ				
10653 10654	AAD AAD	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%) LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD LTE-TDD	7.42 6.96	±9.6 % ±9.6 %

40055		LTE TOD (OEDMA, OO MILE E TMO 4 Offening 449()		7.04	
10655	AAE	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD Test	7.21	±9.6 % ±9.6 %
10658 10659	AAA AAA	Pulse Waveform (200Hz, 10%) Pulse Waveform (200Hz, 20%)	Test	6.99	$\pm 9.6\%$
10659	AAA	Pulse Waveform (200Hz, 40%)	Test	3.98	± 9.6 %
10661	AAA	Pulse Waveform (200Hz, 40%)	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 %
10671	AAA	IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle)	WLAN	9.09	± 9.6 %
10672	AAA	IEEE 802.11ax (20MHz, MCS1, 90pc duty cycle)	WLAN	8.57	±9.6 %
10673	AAA	IEEE 802.11ax (20MHz, MCS2, 90pc duty cycle)	WLAN	8.78	± 9.6 %
10674	AAA	IEEE 802.11ax (20MHz, MCS3, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10675	AAA	IEEE 802.11ax (20MHz, MCS4, 90pc duty cycle)	WLAN	8.90	±9.6%
10676	AAA	IEEE 802.11ax (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6%
10677	AAA	IEEE 802.11ax (20MHz, MCS6, 90pc duty cycle)	WLAN	8.73	± 9.6 %
10678	AAA	IEEE 802.11ax (20MHz, MCS7, 90pc duty cycle)	WLAN	8.78	±9.6 %
10679	AAA	IEEE 802.11ax (20MHz, MCS8, 90pc duty cycle)	WLAN	8.89	± 9.6 %
10680	AAA	IEEE 802.11ax (20MHz, MCS9, 90pc duty cycle)	WLAN	8.80	±9.6 %
10681	AAA	IEEE 802.11ax (20MHz, MCS10, 90pc duty cycle)	WLAN	8.62	± 9.6 %
10682	AAA	IEEE 802.11ax (20MHz, MCS11, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10683	AAA	IEEE 802.11ax (20MHz, MCS0, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10684		IEEE 802.11ax (20MHz, MCS1, 99pc duty cycle)	WLAN	8.26	±9.6 %
10685	AAA	IEEE 802.11ax (20MHz, MCS2, 99pc duty cycle)	WLAN	8.33	$\pm 9.6\%$
10686	AAA	IEEE 802.11ax (20MHz, MCS3, 99pc duty cycle)	WLAN	8.28	± 9.6 %
10687	AAA	IEEE 802.11ax (20MHz, MCS4, 99pc duty cycle)	WLAN	8.45	± 9.6 % ± 9.6 %
10688	AAA	IEEE 802.11ax (20MHz, MCS5, 99pc duty cycle)	WLAN WLAN	8.29	$\pm 9.6\%$ $\pm 9.6\%$
10689	AAA AAA	IEEE 802.11ax (20MHz, MCS6, 99pc duty cycle) IEEE 802.11ax (20MHz, MCS7, 99pc duty cycle)	WLAN	8.55	$\pm 9.6\%$ $\pm 9.6\%$
10690	AAA	IEEE 802.11ax (20MHz, MCS7, 99pc duty cycle)	WLAN	8.25	± 9.6 %
10692	AAA	IEEE 802.11ax (20MHz, MCS8, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10693	AAA	IEEE 802.11ax (20MHz, MCS3, 39pc duty cycle)	WLAN	8.25	± 9.6 %
10694	AAA	IEEE 802.11ax (20MHz, MCS11, 99pc duty cycle)	WLAN	8.57	±9.6 %
10695	AAA	IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle)	WLAN	8.78	±9.6 %
10696	AAA	IEEE 802.11ax (40MHz, MCS1, 90pc duty cycle)	WLAN	8.91	±9.6 %
10697	AAA	IEEE 802.11ax (40MHz, MCS2, 90pc duty cycle)	WLAN	8.61	± 9.6 %
10698	AAA	IEEE 802.11ax (40MHz, MCS3, 90pc duty cycle)	WLAN	8.89	± 9.6 %
10699	AAA	IEEE 802.11ax (40MHz, MCS4, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10700	AAA	IEEE 802.11ax (40MHz, MCS5, 90pc duty cycle)	WLAN	8.73	± 9.6 %
10701	AAA	IEEE 802.11ax (40MHz, MCS6, 90pc duty cycle)	WLAN	8.86	± 9.6 %
10702	AAA	IEEE 802.11ax (40MHz, MCS7, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10703	AAA	IEEE 802.11ax (40MHz, MCS8, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10704	AAA	IEEE 802.11ax (40MHz, MCS9, 90pc duty cycle)	WLAN	8.56	±9.6 %
10705	AAA	IEEE 802.11ax (40MHz, MCS10, 90pc duty cycle)	WLAN	8.69	±9.6 %
10706	AAA	IEEE 802.11ax (40MHz, MCS11, 90pc duty cycle)	WLAN	8.66	± 9.6 %
10707	AAA	IEEE 802.11ax (40MHz, MCS0, 99pc duty cycle)	WLAN	8.32	± 9.6 %
10708	AAA	IEEE 802.11ax (40MHz, MCS1, 99pc duty cycle)	WLAN	8.55	± 9.6 %
10709	AAA	IEEE 802.11ax (40MHz, MCS2, 99pc duty cycle)	WLAN	8.33	± 9.6 %
10710		IEEE 802.11ax (40MHz, MCS3, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10711	AAA	IEEE 802.11ax (40MHz, MCS4, 99pc duty cycle)	WLAN	8.39	±9.6%
10712	AAA	IEEE 802.11ax (40MHz, MCS5, 99pc duty cycle) IEEE 802.11ax (40MHz, MCS6, 99pc duty cycle)	WLAN WLAN	8.67	<u>± 9.6 %</u> ± 9.6 %
10713		IEEE 802.11ax (40MHz, MCS6, 99pc duty cycle)	WLAN	8.26	$\pm 9.6\%$
10714	AAA AAA	IEEE 802.11ax (40MHz, MCS7, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10715	AAA	IEEE 802.11ax (40MHz, MCS8, 99pc duty cycle)	WLAN	8.30	± 9.6 %
10716	AAA	IEEE 802.11ax (40MHz, MCS9, 99pc duty cycle)	WLAN	8.48	± 9.6 %
10717	AAA	IEEE 802.11ax (40MHz, MCS10, 99pc duty cycle)	WLAN	8.24	± 9.6 %
10719	AAA	IEEE 802.11ax (80MHz, MCS0, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10713	AAA	IEEE 802.11ax (80MHz, MCS1, 90pc duty cycle)	WLAN	8.87	± 9.6 %
1	AAA	IEEE 802.11ax (80MHz, MCS2, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10721				8.55	± 9.6 %
10721		I LEEE 802.11ax (80MHZ, MCS3, 90DC QUIV CVCIE)	WLAN	1 0.00	
10722	AAA	IEEE 802.11ax (80MHz, MCS3, 90pc duty cycle) IEEE 802.11ax (80MHz, MCS4, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10722 10723		IEEE 802.11ax (80MHz, MCS3, 90pc duty cycle) IEEE 802.11ax (80MHz, MCS4, 90pc duty cycle) IEEE 802.11ax (80MHz, MCS5, 90pc duty cycle)	WLAN WLAN		
10722	AAA AAA	IEEE 802.11ax (80MHz, MCS4, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10722 10723 10724	AAA AAA AAA	IEEE 802.11ax (80MHz, MCS4, 90pc duty cycle) IEEE 802.11ax (80MHz, MCS5, 90pc duty cycle)	WLAN WLAN	8.70 8.90	± 9.6 % ± 9.6 %

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10728	AAA	IEEE 802.11ax (80MHz, MCS9, 90pc duty cycle)	WLAN	8.65	±9.6 %
10729	AAA	IEEE 802.11ax (80MHz, MCS10, 90pc duty cycle)	WLAN	8.64	± 9.6 %
10730	AAA	IEEE 802.11ax (80MHz, MCS11, 90pc duty cycle)	WLAN	8.67	± 9.6 %
10731	AAA	IEEE 802.11ax (80MHz, MCS0, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10732	AAA	IEEE 802.11ax (80MHz, MCS1, 99pc duty cycle)	WLAN	8.46	± 9.6 %
10733	AAA	IEEE 802.11ax (80MHz, MCS2, 99pc duty cycle)	WLAN	8.40	± 9.6 %
10734	AAA	IEEE 802.11ax (80MHz, MCS3, 99pc duty cycle)	WLAN	8.25	± 9.6 %
10735	AAA	IEEE 802.11ax (80MHz, MCS4, 99pc duty cycle)	WLAN	8.33	± 9.6 %
10736	AAA	IEEE 802.11ax (80MHz, MCS5, 99pc duty cycle)	WLAN	8.27	± 9.6 %
10737	AAA	IEEE 802.11ax (80MHz, MCS6, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10738	AAA	IEEE 802.11ax (80MHz, MCS7, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10739	AAA	IEEE 802.11ax (80MHz, MCS8, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10740	AAA	IEEE 802.11ax (80MHz, MCS9, 99pc duty cycle)	WLAN	8.48	± 9.6 %
10741	AAA	IEEE 802.11ax (80MHz, MCS10, 99pc duty cycle)	WLAN	8.40	± 9.6 %
10742	AAA	IEEE 802.11ax (80MHz, MCS11, 99pc duty cycle)	WLAN	8.43	± 9.6 %
10743	AAA	IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10744	AAA	IEEE 802.11ax (160MHz, MCS1, 90pc duty cycle)	WLAN	9.16	± 9.6 %
10745	AAA	IEEE 802.11ax (160MHz, MCS2, 90pc duty cycle)	WLAN	8.93	± 9.6 %
10746	AAA	IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle)	WLAN	9.11	± 9.6 %
10747	AAA	IEEE 802.11ax (160MHz, MCS4, 90pc duty cycle)	WLAN	9.04	± 9.6 %
10748	AAA	IEEE 802.11ax (160MHz, MCS5, 90pc duty cycle)	WLAN	8.93	±9.6 %
10749	AAA	IEEE 802.11ax (160MHz, MCS6, 90pc duty cycle)	WLAN	8.90	± 9.6 %
10750	AAA	IEEE 802.11ax (160MHz, MCS7, 90pc duty cycle)	WLAN	8.79	±9.6 %
10751	AAA	IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10752	AAA	IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle)	WLAN	8.81	±9.6 %
10753	AAA	IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle)	WLAN	9.00	±9.6 %
10754	AAA	IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle)	WLAN	8.94	±9.6 %
10755	AAA	IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle)	WLAN	8.64	± 9.6 %
10756	AAA	IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle)	WLAN	8.77	±9.6 %
10757	AAA	IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle)	WLAN	8.77	±9.6 %
10758	AAA	IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle)	WLAN	8.69	± 9.6 %
10759	AAA	IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle)	WLAN	8.58	±9.6 %
10760	AAA	IEEE 802.11ax (160MHz, MCS5, 99pc duty cycle)	WLAN	8.49	± 9.6 %
10761	AAA	IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle)	WLAN	8.58	±9.6 %
10762	AAA	IEEE 802.11ax (160MHz, MCS7, 99pc duty cycle)	WLAN	8.49	±9.6 %
10763	AAA	IEEE 802.11ax (160MHz, MCS8, 99pc duty cycle)	WLAN	8.53	± 9.6 %
10764	AAA	IEEE 802.11ax (160MHz, MCS9, 99pc duty cycle)	WLAN	8.54	± 9.6 %
10765	AAA	IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle)	WLAN	8.54	± 9.6 %
10766	AAA	IEEE 802.11ax (160MHz, MCS11, 99pc duty cycle)	WLAN	8.51	± 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.

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





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Swiss Calibration Service

Accreditation No.: SCS 0108

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

Client PC Test

Certificate No: EX3-7488_Jan19

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN:7488				
Calibration procedure(s)	CALCAL-01 v9, CIA CAL-14 v5, CIA CAL-23 v5, CIA CAL-25.v7 Shov Calibration procedure for dosimetric E-field probes h106(2010				
Calibration date:	January 24, 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

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	de Ma
			and from the
Approved by:	Katja Pokovic	Technical Manager	20101
			Ande
			Issued: January 29, 2019

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

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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Service suisse d'étalonnage

Accreditation No.: SCS 0108

- С Servizio svizzero di taratura
- S Swiss Calibration Service

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Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,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 §	9 rotation around an axis that is in the plane normal to probe axis (at measurement center),
	i.e., 9 = 0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Connector Angle

Calibration is Performed According to the Following Standards:

- a) 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
- b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from handheld and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) 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
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORMx, y, z: Assessed for E-field polarization $\vartheta = 0$ (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,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.
- DCPx,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
- Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,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 ≤ 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 NORMx, 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 NORMX (no uncertainty required).

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm $(\mu V/(V/m)^2)^A$	0.45	0.49	0.50	± 10.1 %
DCP (mV) ^B	98.9	102.3	99.6	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dBõV	C	D dB	VR mV	Max dev.	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	149.5	± 2.7 %	±4.7 %
-		Y	0.00	0.00	1.00		140.8		
		Z	0.00	0.00	1.00		138.2		
10352-	Pulse Waveform (200Hz, 10%)	X	10.21	80.63	15.98	10.00	60.0	± 3.1 %	± 9.6 %
AAA		Y	5.90	74.67	14.18		60.0		
		Z	15.00	89.30	20.53		60.0		
10353-	Pulse Waveform (200Hz, 20%)	X	15.00	85.88	16.55	6.99	80.0	± 2.1 %	±9.6 %
AAA	,	Y	15.00	84.35	15.79		80.0		
		Z	15.00	92.51	21.01		80.0		
10354-	Pulse Waveform (200Hz, 40%)	X	15.00	90.08	17.19	3.98	95.0	± 1.3 %	± 9.6 %
AAA		Y	15.00	83.37	13.66		95.0		
		Z	15.00	104.27	25.33		95.0		
10355-	Pulse Waveform (200Hz, 60%)	X	15.00	97.36	19.30	2.22	120.0	± 1.2 %	± 9.6 %
AAA		Y	0.26	60.00	4.43		120.0	1	
		Z	15.00	117.38	29.81]	120.0		
10387-	QPSK Waveform, 1 MHz	Х	0.51	60.28	7.04	0.00	150.0	± 3.3 %	± 9.6 %
AAA		Y	0.47	60.00	5.79		150.0		
		Z	0.61	61.09	8.42		150.0		
10388-	QPSK Waveform, 10 MHz	Х	2.29	69.54	16.64	0.00	150.0	± 1.1 %	± 9.6 %
AAA		Y	1.90	66.64	14.97		150.0		
		Z	2.23	68.54	16.09		150.0		
10396-	64-QAM Waveform, 100 kHz	Х	2.94	72.04	19.55	3.01	150.0	±0.7 %	± 9.6 %
AAA		Ý	2.49	68.13	17.71		150.0	[
		Ż	3.35	73.33	20.07		150.0		
10399-	64-QAM Waveform, 40 MHz	X	3.54	67.80	16.20	0.00	150.0	± 2.2 %	± 9.6 %
AAA		Y	3.42	67.12	15.74	1	150.0	_	1
		Z	3,49	67.32	15.92		150.0		
10414-	WLAN CCDF, 64-QAM, 40MHz	Х	4.65	65.56	15.55	0.00	150.0	± 4.0 %	± 9.6 %
AAA		Y	4.74	65.87	15.68		150.0	-	
		Z	4.80	65.75	15.62		150.0		1

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.

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	Т6
X	35.2	259.64	34.83	7.55	0.00	5.04	1.52	0.11	1.01
Y	34.3	261.80	36.90	6.01	0.21	5.06	0.00	0.41	1.01
Z	40.7	301.53	35.10	11.37	0.14	5.09	1.94	0.15	1.01

Other Probe Parameters

Triangular
-129.2
enabled
disabled
337 mm
10 mm
9 mm
2.5 mm
1 mm
1 mm
1 mm
1.4 mm
· · · · ·

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	10.77	10.77	10.77	0.56	0.80	± 12.0 %
835	41.5	0.90	10.37	10.37	10.37	0.40	0.93	± 12.0 %
1750	40.1	1.37	8.87	8.87	8.87	0.33	0.84	± 12.0 %
1900	40.0	1.40	8.53	8.53	8.53	0.27	0.84	± 12.0 %
2300	39.5	1.67	8.25	8.25	8.25	0.33	0.85	± 12.0 %
2450	39.2	1.80	7.86	7.86	7.86	0.34	0.90	± 12.0 %
2600	39.0	1.96	7.69	7.69	7.69	0.35	0.86	± 12.0 %
5250	35.9	4.71	5.35	5.35	5.35	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.70	4.70	4.70	0.40	1.80	± 13.1 %
5750	35.4	5.22	5.03	5.03	5.03	0.40	1.80	± 13.1 %

Calibration Parameter Determined in Head Tissue Simulating Media

^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

^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.

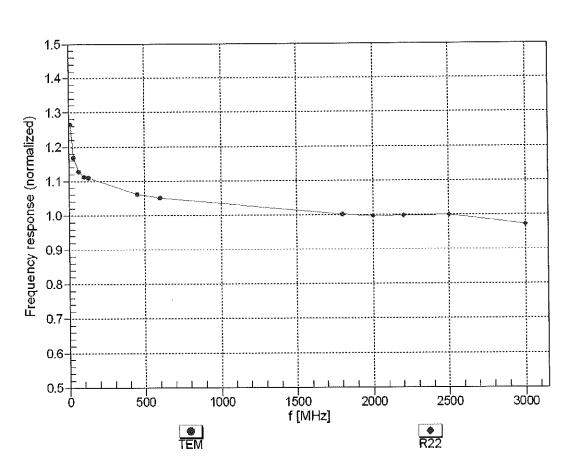
f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	55.5	0.96	11.28	11.28	11.28	0.46	0.80	± 12.0 %
835	55.2	0.97	11.03	11.03	11.03	0.46	0.81	± 12.0 %
1750	53.4	1.49	8.68	8.68	8.68	0.38	0.88	± 12.0 %
1900	53.3	1.52	8.37	8.37	8.37	0.38	0.88	± 12.0 %
2300	52.9	1.81	8.21	8.21	8.21	0.42	0.84	± 12.0 %
2450	52.7	1.95	8.07	8.07	8.07	0.35	0.98	± 12.0 %
2600	52.5	2.16	7.94	7.94	7.94	0.25	0.95	± 12.0 %
5250	48.9	5.36	4.82	4.82	4.82	0.50	1.90	± 13.1 %
5600	48.5	5.77	4.09	4.09	4.09	0.50	1.90	± 13.1 %
5750	48.3	5.94	4.32	4.32	4.32	0.50	1.90	± 13.1 %

Calibration Parameter Determined in Body Tissue Simulating Media

^c Frequency validity above 300 MHz of \pm 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to \pm 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 \pm 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 \pm 110 MHz. ^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to \pm 10% if liquid compensation formula is applied to

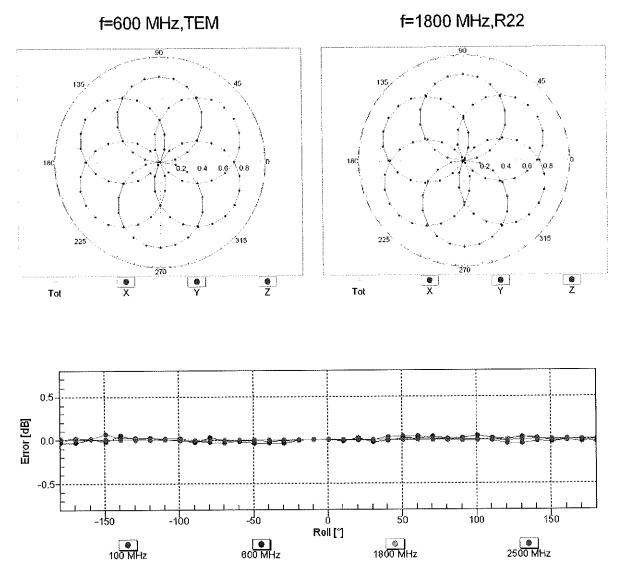
^F At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters. ⁶ Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is

^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.



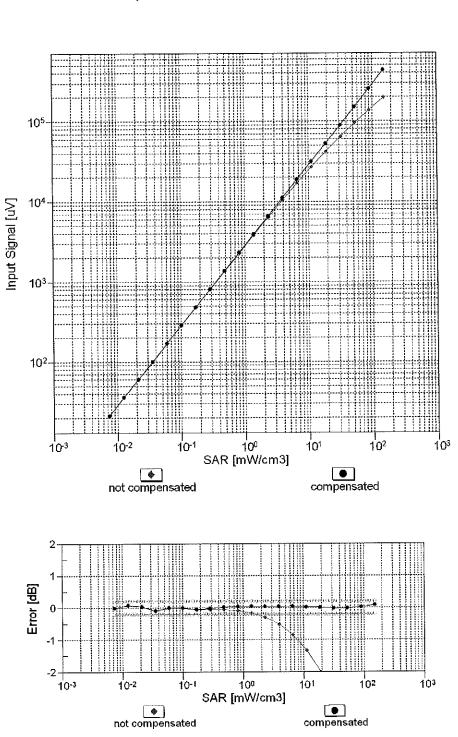
Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)

Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)



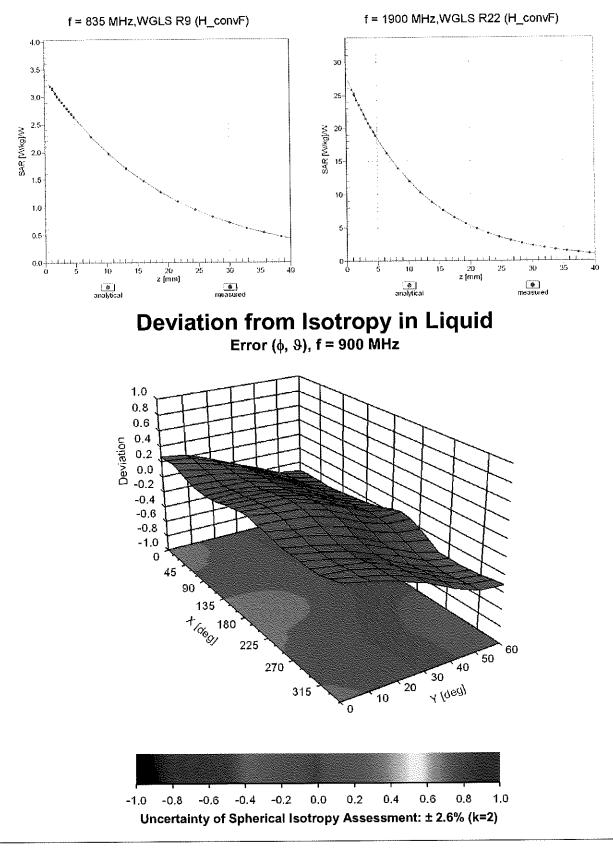
Receiving Pattern (ϕ), $\vartheta = 0^{\circ}$

Uncertainty of Axial Isotropy Assessment: ± 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

Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E (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		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		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 10067		IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	± 9.6 %
	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	± 9.6 %
10068		IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	± 9.6 %
10069 10071		IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	WLAN WLAN	10.56	± 9.6 %
	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)		9.83	± 9.6 %
10072 10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9.62	±9.6 % ±9.6 %
10073	CAB CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN WLAN	9.94	
10074	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 24 Mpps)	WLAN	10.30	± 9.6 % ± 9.6 %
10075		IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 38 Mbps)	WLAN	10.77	
10078	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	11.00	$\pm 9.6\%$
10077	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000		$\pm 9.6\%$
10081		IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	AMPS	<u>3.97</u> 4.77	± 9.6 % ± 9.6 %
10082	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	$\pm 9.6\%$ $\pm 9.6\%$
10090	CAB	UMTS-FDD (HSDPA)	WCDMA	3.98	± 9.6 %
10097		UMTS-FDD (HSUPA) UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	± 9.6 %
10098	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	$\pm 9.6\%$ $\pm 9.6\%$
10100					
		LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	$\pm 9.6\%$
10101 10102		LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10103		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		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 %

10110 CAG LTE-FDD (SC-FDMA, 100%, RB, 5 MHz, QPSK) LTE-FDD 5.75 ± 10111 CAG LTE-FDD (SC-FDMA, 100%, RB, 5 MHz, 4C-QAM) LTE-FDD 6.44 ± 10112 CAG LTE-FDD (SC-FDMA, 100%, RB, 10 MHz, 4C-QAM) LTE-FDD 6.59 ± 10113 CAG LTE-FDD (SC-FDMA, 100%, RB, 5 MHz, 64-QAM) WLAN 8.10 ± 10114 CAC IEEE 802.11n (HT Greenfield, 13.5 Mbps, 64-QAM) WLAN 8.16 ± 10116 CAC IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) WLAN 8.17 ± 10117 CAC IEEE 802.11n (HT Mixed, 136 Mbps, 64-QAM) WLAN 8.17 ± 10118 CAC IEEE 802.11n (HT Mixed, 136 Mbps, 64-QAM) WLAN 8.13 ± 10140 CAC IEEE 802.11n (HT Mixed, 136 Mbps, 64-QAM) WLAN 8.13 ± 10141 CAE LTE-FDD (SC-FDMA, 100%, RB, 15 MHz, 16-QAM) LTE-FDD 6.63 ± 10142 CAE LTE-FDD (SC-FDMA, 100%, RB, 3 MHz, 64-QAM)	$\begin{array}{c} 9.6 \% \\$
10111 CAG LTE-FDD (SC-FDMA, 100%, RB, 5 MHz, 16-QAM) LTE-FDD 6.44 ± 10112 CAG LTE-FDD (SC-FDMA, 100%, RB, 5 MHz, 64-QAM) LTE-FDD 6.59 ± 10113 CAG LTE-FDD (SC-FDMA, 100%, RB, 5 MHz, 64-QAM) LTE-FDD 6.52 ± 10114 CAG LTE-FDD (SC-FDMA, 100%, RB, 5 MHz, 64-QAM) WLAN 8.10 ± 10115 CAC LEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) WLAN 8.46 ± 10116 CAC LEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) WLAN 8.07 ± 10118 CAC LEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) WLAN 8.13 ± 10119 CAC LEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) WLAN 8.13 ± 10119 CAC LTE-FDD (SC-FDMA, 100%, RB, 15 MHz, 64-QAM) LTE-FDD 6.53 ± 10141 CAE LTE-FDD (SC-FDMA, 100%, RB, 3 MHz, 16-QAM) LTE-FDD 6.35 ± 10142 CAE LTE-FDD (SC-FDMA, 100%, RB, 3 MHz, 16-QAM)	$\begin{array}{c} 9.6 \ \% \\$
10112 CAG LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-FDD 6.69 ± 10113 CAG LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-FDD 6.62 ± 10114 CAC IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) WLAN 8.16 ± 10116 CAC IEEE 802.11n (HT Greenfield, 13.5 Mbps, 64-QAM) WLAN 8.15 ± 10117 CAC IEEE 802.11n (HT Mixed, 13.5 Mbps, 64-QAM) WLAN 8.59 ± 10118 CAC IEEE 802.11n (HT Mixed, 13.5 Mbps, 64-QAM) WLAN 8.13 ± 10119 CAC IEEE 802.11n (HT Mixed, 13.5 Mbps, 64-QAM) WLAN 8.13 ± 10140 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-FDD 6.53 ± 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-FDD 6.65 ± 10143 CAE LTE-FDD (SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-FDD 6.65 ± 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-FDD <td>$\begin{array}{c} 9.6 \ \% \\$</td>	$\begin{array}{c} 9.6 \ \% \\$
10113 CAG LTE-FDD 6.62 ± 10114 CAC IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) WLAN 8.10 ± 10115 CAC IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) WLAN 8.46 ± 10116 CAC IEEE 802.11n (HT Greenfield, 13.5 Mbps, 64-QAM) WLAN 8.15 ± 10117 CAC IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK) WLAN 8.15 ± 10118 CAC IEEE 802.11n (HT Mixed, 13.5 Mbps, 64-QAM) WLAN 8.13 ± 10119 CAC IEEE 802.11n (HT Mixed, 13.5 Mbps, 64-QAM) WLAN 8.13 ± 10140 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-FDD 6.5.73 ± 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) LTE-FDD 6.5.73 ± 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) LTE-FDD 6.65 ± 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 0PSK) LTE-FDD 6.66 ± 10145	$\begin{array}{c} 9.6 \ \% \\$
10114 CAC IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) WLAN 8.10 ± 10116 CAC IEEE 802.11n (HT Greenfield, 13.5 Mbps, 16-QAM) WLAN 8.16 ± 10116 CAC IEEE 802.11n (HT Greenfield, 13.5 Mbps, 64-QAM) WLAN 8.15 ± 10117 CAC IEEE 802.11n (HT Mixed, 13.5 Mbps, 64-QAM) WLAN 8.07 ± 10118 CAC IEEE 802.11n (HT Mixed, 13.5 Mbps, 64-QAM) WLAN 8.13 ± 10110 CAC IEEE 802.11n (HT Mixed, 13.5 Mbps, 64-QAM) WLAN 8.13 ± 10114 CAC IEEE 802.11n (HT Mixed, 13.5 Mbps, 64-QAM) WLAN 8.13 ± 10140 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-FDD 6.73 ± 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 04-QAM) LTE-FDD 6.73 ± 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.72 ± 10145 CAF LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) LTE-FDD 6.72	$\begin{array}{c} 9.6 \ \% \\$
10115 CAC IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM) WLAN 8.46 ± 10116 CAC IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) WLAN 8.17 ± 10117 CAC IEEE 802.11n (HT Mixed, 135 Mbps, BPSK) WLAN 8.07 ± 10118 CAC IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) WLAN 8.15 ± 10119 CAC IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) WLAN 8.13 ± 10140 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) UTE-FDD 6.43 ± 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-FDD 6.53 ± 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-FDD 6.35 ± 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-FDD 6.65 ± 10144 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-FDD 6.41 ± 10145 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.65 <t< td=""><td>$\begin{array}{c} 9.6 \ \% \\$</td></t<>	$\begin{array}{c} 9.6 \ \% \\$
10116 CAC IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) WLAN 8.15 ± 10117 CAC IEEE 802.11n (HT Mixed, 135 Mbps, BPSK) WLAN 8.07 ± 10118 CAC IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) WLAN 8.59 ± 10119 CAC IEEE 802.11n (HT Mixed, 136 Mbps, 64-QAM) WLAN 8.13 ± 10110 CAC IEEE 802.11n (HT Mixed, 136 Mbps, 64-QAM) UTE-FDD 6.49 ± 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-FDD 6.53 ± 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 0F-QAM) LTE-FDD 6.53 ± 10143 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 0F-QAM) LTE-FDD 6.65 ± 10145 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 0F-SK) LTE-FDD 6.42 ± 10146 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 0F-QAM) LTE-FDD 6.42 ± 10147 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.42 ±	$\begin{array}{c} 9.6 \ \% \\$
10117 CAC IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK) WLAN 8.07 ± 10118 CAC IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM) WILAN 8.59 ± 10119 CAC IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM) WILAN 8.13 ± 10140 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-FDD 6.49 ± 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 16 MHz, QFSK) LTE-FDD 6.53 ± 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-FDD 6.35 ± 10143 CAE LTE-FDD (SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-FDD 6.35 ± 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.41 ± 10145 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 6.42 ± 10146 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 6.42 ± 10147 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 6.42 ±	$\begin{array}{c} 9.6 \ \% \\$
10118 CAC IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM) WLAN 8.59 ± 10119 CAC IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) WLAN 8.13 ± 10140 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 04-QAM) LTE-FDD 6.49 ± 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 04-QAM) LTE-FDD 6.53 ± 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 04-QAM) LTE-FDD 6.35 ± 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 04-QAM) LTE-FDD 6.65 ± 10145 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 64-QAM) LTE-FDD 6.76 ± 10146 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 64-QAM) LTE-FDD 6.72 ± 10147 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.60 ± 10147 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 04-QAM) LTE-FDD 6.42 ± 10147 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.60	$\begin{array}{c} 9.6 \ \% \\$
10119 CAC IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) WLAN 8.13 ± 10140 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-FDD 6.49 ± 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QAM) LTE-FDD 6.53 ± 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QAM) LTE-FDD 6.53 ± 10143 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QAM) LTE-FDD 6.65 ± 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-FDD 6.66 ± 10145 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-FDD 6.76 ± 10146 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, QAM) LTE-FDD 6.41 ± 10147 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-FDD 6.42 ± 10149 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-FDD 6.42 ± 10150 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-FDD 6.42 ±	$\begin{array}{c} 9.6 \ \% \\$
10140 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-FDD 6.49 ± 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-FDD 6.53 ± 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-FDD 5.73 ± 10143 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, G4-QAM) LTE-FDD 6.65 ± 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, G4-QAM) LTE-FDD 6.65 ± 10145 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, G4-QAM) LTE-FDD 6.76 ± 10146 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 64-QAM) LTE-FDD 6.41 ± 10147 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.42 ± 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-FDD 6.60 ± 10151 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-FDD 9.28 ± 10152 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-FDD 9.27	9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 %
10141 CAE LTE-FDD SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-FDD 6.53 ± 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-FDD 5.73 ± 10143 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-FDD 6.65 ± 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) LTE-FDD 6.65 ± 10145 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.67 ± 10146 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.41 ± 10147 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.42 ± 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, G4-QAM) LTE-FDD 6.42 ± 10151 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, G4-QAM) LTE-FDD 6.42 ± 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, G4-QAM) LTE-FDD 9.92 ± 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, G4-QAM) LTE-FDD	9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 %
10142 CAE LTE-FDD S.73 ± 10143 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-FDD 6.35 ± 10143 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-FDD 6.65 ± 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-FDD 6.65 ± 10145 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-FDD 6.76 ± 10146 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 64-QAM) LTE-FDD 6.72 ± 10147 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.42 ± 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-TDD 9.28 ± 10151 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, G4-QAM) LTE-TDD 9.22 ± 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, G4-QAM) LTE-FDD 5.75 ± 10152 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 5.75	9.6 % 9.6 %
10143 CAE LTE-FDD S.5 ± 10144 CAE LTE-FDD SC-FDMA, 100% RB, 3 MHz, 64-QAM) LTE-FDD S.65 ± 10144 CAF LTE-FDD SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-FDD S.76 ± 10146 CAF LTE-FDD SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-FDD S.76 ± 10146 CAF LTE-FDD SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-FDD S.71 ± 10147 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD S.42 ± 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD S.42 ± 10151 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-TDD 9.92 ± 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 5.75 ± 10153 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 0PSK) LTE-FDD 5.75 ± 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 0PSK) LTE-FDD 5.75	9.6 % 9.6 %
10144 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) LTE-FDD 6.65 ± 10145 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-FDD 5.76 ± 10146 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.41 ± 10147 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.42 ± 10149 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.42 ± 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.60 ± 10151 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 9.28 ± 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 0F-QAM) LTE-FDD 9.92 ± 10152 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 0F-QAM) LTE-FDD 9.92 ± 10152 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 0F-QAM) LTE-FDD 9.92 ±	9.6 % 9.6 %
10145 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-FDD 5.76 ± 10146 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.41 ± 10147 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.72 ± 10149 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.72 ± 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.60 ± 10151 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 04-QAM) LTE-TDD 9.28 ± 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 04-QAM) LTE-TDD 9.92 ± 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 04-QAM) LTE-TDD 9.92 ± 10153 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 04-QAM) LTE-FDD 5.75 ± 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 04-QAM) LTE-FDD 5.79 ± 10155 CAG	9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 %
10146 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.41 ± 10147 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.72 ± 10149 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.72 ± 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.60 ± 10151 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 04-QAM) LTE-TDD 9.28 ± 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-TDD 9.92 ± 10153 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 04-QAM) LTE-TDD 9.92 ± 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 04-QAM) LTE-TDD 9.92 ± 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 04-QAM) LTE-FDD 5.75 ± 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 04-QAM) LTE-FDD 5.79 ± 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-FDD	9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 %
10147 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.72 ± 10149 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.42 ± 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-FDD 6.60 ± 10151 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-TDD 9.28 ± 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-TDD 9.92 ± 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-TDD 10.05 ± 10152 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-FDD 5.75 ± 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 5.79 ± 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 6.62 ± 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, G4-QAM) LTE-FDD 6.82 ± 10158 CAG	9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 %
10149 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-FDD 6.42 ± 10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-FDD 6.60 ± 10151 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-TDD 9.28 ± 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-TDD 9.92 ± 10153 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-TDD 9.92 ± 10154 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-TDD 9.92 ± 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.75 ± 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 6.43 ± 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 5.79 ± 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, G4-QAM) LTE-FDD 6.62 ± 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.62 ± <td>9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 %</td>	9.6 % 9.6 % 9.6 % 9.6 % 9.6 % 9.6 %
10150 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-FDD 6.60 ± 10151 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-TDD 9.28 ± 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-TDD 9.92 ± 10153 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-TDD 10.05 ± 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-FDD 5.75 ± 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 6.43 ± 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-FDD 6.49 ± 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 6.62 ± 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-FDD 6.62 ± 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.82 ± 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.84 ± <td>9.6 % 9.6 % 9.6 % 9.6 % 9.6 %</td>	9.6 % 9.6 % 9.6 % 9.6 % 9.6 %
10151 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-TDD 9.28 ± 10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-TDD 9.92 ± 10153 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-TDD 10.05 ± 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 5.75 ± 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 6.43 ± 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, GPSK) LTE-FDD 6.43 ± 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-FDD 6.49 ± 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-FDD 6.62 ± 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.62 ± 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 5.82 ± 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.43 ±<	9.6 % 9.6 % 9.6 % 9.6 % 9.6 %
10152 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM) LTE-TDD 9.92 ± 10153 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-TDD 10.05 ± 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-TDD 10.05 ± 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 5.75 ± 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-FDD 6.43 ± 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 6.49 ± 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 6.62 ± 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD 6.62 ± 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 5.82 ± 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, G4-QAM) LTE-FDD 5.82 ± 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.43 ±	9.6 % 9.6 % 9.6 % 9.6 %
10153 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-TDD 10.05 ± 10154 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 5.75 ± 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 6.43 ± 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 5.79 ± 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-FDD 6.49 ± 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD 6.62 ± 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.62 ± 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.82 ± 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.43 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-FDD 6.84 ± 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-FDD 5.73 ±<	9.6 % 9.6 % 9.6 %
10154 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 5.75 ± 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-FDD 6.43 ± 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 5.79 ± 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-FDD 6.49 ± 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-FDD 6.62 ± 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD 6.62 ± 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.82 ± 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.43 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.58 ± 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 64-QAM) LTE-FDD 5.46 ± 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.21 ± </td <td>9.6 % 9.6 %</td>	9.6 % 9.6 %
10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-FDD 6.43 ± 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 5.79 ± 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-FDD 6.49 ± 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD 6.62 ± 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD 6.62 ± 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 5.82 ± 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.43 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.43 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-FDD 6.58 ± 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-FDD 5.46 ± 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.79 ± 10168 CAF LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	9.6 %
10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 5.79 ± 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-FDD 6.49 ± 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD 6.62 ± 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD 6.62 ± 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 04-QAM) LTE-FDD 5.82 ± 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 04-QAM) LTE-FDD 6.43 ± 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 04-QAM) LTE-FDD 6.43 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 04-QAM) LTE-FDD 6.58 ± 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 04-QAM) LTE-FDD 5.46 ± 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 04-QAM) LTE-FDD 6.21 ± 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 04-QAM) LTE-FDD 6.79	
10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-FDD 6.49 ± 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD 6.62 ± 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD 6.62 ± 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-FDD 6.56 ± 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 5.82 ± 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.43 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.58 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-FDD 6.58 ± 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-FDD 5.46 ± 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 04-QAM) LTE-FDD 6.21 ± 10168 CAF LTE-FDD (SC-FDMA, 10% RB, 20 MHz, QPSK) LTE-FDD 5.73	
10158 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD 6.62 ± 10159 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-FDD 6.56 ± 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 5.82 ± 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.43 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.58 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.58 ± 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-FDD 5.46 ± 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.21 ± 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.79 ± 10169 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 5.73 ± 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-FDD 6.52 ± </td <td>9.6 %</td>	9.6 %
10159 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-FDD 6.56 ± 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 5.82 ± 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.43 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.58 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.58 ± 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 5.46 ± 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, G4-QAM) LTE-FDD 6.21 ± 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.79 ± 10169 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 5.73 ± 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-FDD 6.52 ± 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 6.49 ±	9.6 %
10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 5.82 ± 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.43 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.58 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.58 ± 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-FDD 5.46 ± 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.21 ± 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.79 ± 10169 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 5.73 ± 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-FDD 6.52 ± 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 10172 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 9.21 ±	9.6 %
10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.43 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.58 ± 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.58 ± 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-FDD 5.46 ± 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.21 ± 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.79 ± 10169 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 5.73 ± 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-FDD 6.52 ± 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 10172 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 9.21 ±	9.6 %
10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.58 ± 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 5.46 ± 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-FDD 6.21 ± 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.79 ± 10169 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 5.73 ± 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-FDD 6.52 ± 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 10172 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 9.21 ±	9.6 %
10166 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-FDD 5.46 ± 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.21 ± 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.79 ± 10169 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 5.73 ± 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-FDD 6.52 ± 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 10172 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-TDD 9.21 ±	9.6 %
10167 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-FDD 6.21 ± 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.79 ± 10169 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 5.73 ± 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-FDD 6.52 ± 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 10172 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-TDD 9.21 ±	9.6 %
10168 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) LTE-FDD 6.79 ± 10169 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 5.73 ± 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 6.52 ± 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 10172 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-TDD 9.21 ±	9.6 %
10169 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 5.73 ± 10169 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-FDD 5.73 ± 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-FDD 6.52 ± 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 10172 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-TDD 9.21 ±	9.6 %
10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-FDD 6.52 ± 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 10172 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-TDD 9.21 ±	9.6 %
10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 10172 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-TDD 9.21 ±	9.6 %
10172 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) LTE-TDD 9.21 ±	9.6 %
	9.6 %
	9.6 %
	9.6 %
	9.6 %
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	9.6 %
	9.6 %
	9.6 %
	9.6 %
10181 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 5.72 ±	9.6 %
	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 ±	
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 % : 9.6 %
	9.6 % 9.6 % 9.6 %
To too of the EEE open that the time of th	9.6 % 9.6 % 9.6 % 9.6 %
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	9.6 % 9.6 % 9.6 % 9.6 % 9.6 %
10219 CAC IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK) WLAN 8.03 ±	9.6 % 9.6 % 9.6 % 9.6 % 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		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	10.02	± 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	10.00	± 9.6 %
10200	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TDD	9.58	± 9.6 %
10270	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 %
10270	CAA	PHS (QPSK)	PHS	11.81	± 9.6 %
10277	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	± 9.6 %
10270	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	± 9.6 %
10273	AAB	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	± 9.6 %
10291	AAB	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	± 9.6 %
10291	AAB	CDMA2000, RC3, SO33, Full Rate	CDMA2000	3.39	± 9.6 %
10292	AAB	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.50	± 9.6 %
10295	AAB	CDMA2000, RC3, SO3, Full Rate CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000 CDMA2000	12.49	±9.6%
10295	AAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	± 9.6 %
10297	AAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.72	$\pm 9.6\%$ $\pm 9.6\%$
10298	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	$\pm 9.6\%$ $\pm 9.6\%$
10233				ບ.ວອ	

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	ΑΑΑ	IEEE 802.16e WIMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	WIMAX	15.24	± 9.6 %
10306	ΑΑΑ	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 Generic	0.97 5.10	± 9.6 % ± 9.6 %
10387 10388	AAA AAA	QPSK Waveform, 1 MHz QPSK Waveform, 10 MHz	Generic	5.22	$\pm 9.6\%$
10386		64-QAM Waveform, 100 kHz	Generic	6.27	± 9.6 %
10390	AAA	64-QAM Waveform, 100 KHz	Generic	6.27	± 9.6 %
10395	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 preambule)	WLAN	8.14	± 9.6 %
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preambule)	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		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, Clippin 44%)	LTE-FDD	7.53	± 9.6 %
10449	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 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 %

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10451	AAA	W CDMA (BS Toot Model 4, 64 DDOLL Officering 449()		7 50	
10451	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)		7.59	± 9.6 %
10456		IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle) UMTS-FDD (DC-HSDPA)	WLAN WCDMA	8.63 6.62	± 9.6 % ± 9.6 %
10457	AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	$\pm 9.6\%$ $\pm 9.6\%$
10459	AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	8.25	$\pm 9.6\%$
10460	AAA	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	± 9.6 %
10461	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL	LTE-TDD	7.82	± 9.6 %
		Subframe=2,3,4,7,8,9)	212 100	1102	
10462	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL	LTE-TDD	8.30	± 9.6 %
		Subframe=2,3,4,7,8,9)			
10463	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL	LTE-TDD	8.56	± 9.6 %
		Subframe=2,3,4,7,8,9)			
10464	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL	LTE-TDD	7.82	± 9.6 %
40.405		Subframe=2,3,4,7,8,9)			
10465	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL	LTE-TDD	8.32	±9.6 %
10466	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL		0.57	1004
10400		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	LTE-TDD	7.82	± 9.6 %
10401		Subframe=2,3,4,7,8,9)		1.02	1 9.0 %
10468	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL	LTE-TDD	8.32	± 9.6 %
		Subframe=2,3,4,7,8,9)		0.02	
10469	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL	LTE-TDD	8.56	± 9.6 %
		Subframe=2,3,4,7,8,9)			
10470	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL	LTE-TDD	7.82	±9.6 %
		Subframe=2,3,4,7,8,9)			
10471	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL	LTE-TDD	8.32	±9.6 %
40.470		Subframe=2,3,4,7,8,9)			
10472	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL	LTE-TDD	8.57	± 9.6 %
10473	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL	LTE-TDD	7.82	± 9.6 %
10475		Subframe=2,3,4,7,8,9)		1.02	19.0 %
10474	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL	LTE-TDD	8.32	± 9.6 %
10111	1	Subframe=2,3,4,7,8,9)		0.02	1 2 0.0 %
10475	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL	LTE-TDD	8.57	± 9.6 %
		Subframe=2,3,4,7,8,9)			
10477	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL	LTE-TDD	8.32	± 9.6 %
		Subframe=2,3,4,7,8,9)			
10478	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL	LTE-TDD	8.57	±9.6 %
40470		Subframe=2,3,4,7,8,9)			
10479	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL	LTE-TDD	7.74	±9.6 %
10480	AAA	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL	LTE-TDD	8.18	± 9.6 %
10400		Subframe=2,3,4,7,8,9)		0.10	± 9.0 %
10481	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL	LTE-TDD	8.45	± 9.6 %
		Subframe=2,3,4,7,8,9)		0.10	
10482	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL	LTE-TDD	7.71	± 9.6 %
		Subframe=2,3,4,7,8,9)			
10483	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL	LTE-TDD	8.39	± 9.6 %
	<u> </u>	Subframe=2,3,4,7,8,9)			
10484	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL	LTE-TDD	8.47	± 9.6 %
40.40 7		Subframe=2,3,4,7,8,9)			
10485	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL	LTE-TDD	7.59	± 9.6 %
10486	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL	LTE-TDD	8.38	± 9.6 %
10400		Subframe=2,3,4,7,8,9)		0.00	1 9.0 %
10487	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL	LTE-TDD	8.60	± 9.6 %
		Subframe=2,3,4,7,8,9)		5.00	
10488	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL	LTE-TDD	7.70	± 9.6 %
		Subframe=2,3,4,7,8,9)			
10489	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL	LTE-TDD	8.31	± 9.6 %
		Subframe=2,3,4,7,8,9)			ļ]
10490	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL	LTE-TDD	8.54	± 9.6 %
10404		Subframe=2,3,4,7,8,9)		7 7 1	
10491	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 %
L	.1	Subframe=2,3,4,7,8,9)	l.	l	

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 %
	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.08	± 9.6 %
10523	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.27	± 9.6 %
10524		IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	WLAN	8.36	±9.6 %
10524 10525	AAB				
10524 10525 10526	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10524 10525 10526 10527	AAB AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	WLAN WLAN	8.42 8.21	± 9.6 % ± 9.6 %
10524 10525 10526 10527 10528	AAB AAB AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	WLAN WLAN WLAN	8.42 8.21 8.36	± 9.6 % ± 9.6 % ± 9.6 %
10524 10525 10526 10527 10528 10529	AAB AAB AAB AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	WLAN WLAN WLAN WLAN	8.42 8.21 8.36 8.36	± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %
10524105251052610527105281052910531	AAB AAB AAB AAB AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	WLAN WLAN WLAN WLAN WLAN	8.42 8.21 8.36 8.36 8.43	± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %
10524 10525 10526 10527 10528 10529	AAB AAB AAB AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	WLAN WLAN WLAN WLAN	8.42 8.21 8.36 8.36	± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %

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10535			r		
	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 %
10563	AAC		WLAN	8.25	± 9.6 %
10364		IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty	VV LAIN	0,20	I 9.0 %
10565	AAA	cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty	WLAN	8.45	± 9.6 %
10365			VVLAIN	0.40	± 9.0 %
40500			WLAN	0.40	± 9.6 %
10566	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty	VVLAIN	8.13	I9.0 %
40507			360 0.01		106%
10567	AAA	IEEE 802.11g WIFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty	WLAN	8.00	± 9.6 %
40500			16/1 661	0.07	1000
10568	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty	WLAN	8.37	±9.6 %
40500	1			0.40	1001/
10569	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty	WLAN	8.10	± 9.6 %
40570				- 0.00	
10570	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty	WLAN	8.30	± 9.6 %
	1	cycle)			
40574				4.00	106%
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, 1 Mbps, 90pc duty cycle) IEEE 802.11b WIFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	WLAN	1.99	± 9.6 %
10572 10573	AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	WLAN WLAN	1.99 1.98	± 9.6 % ± 9.6 %
10572 10573 10574	AAA AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	WLAN WLAN WLAN	1.99 1.98 1.98	± 9.6 % ± 9.6 % ± 9.6 %
10572 10573	AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty	WLAN WLAN	1.99 1.98	± 9.6 % ± 9.6 %
10572 10573 10574 10575	AAA AAA AAA AAA	IÉEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59	± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %
10572 10573 10574	AAA AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty	WLAN WLAN WLAN	1.99 1.98 1.98	± 9.6 % ± 9.6 % ± 9.6 %
10572 10573 10574 10575 10576	AAA AAA AAA AAA AAA AAA AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60	± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %
10572 10573 10574 10575	AAA AAA AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty	WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59	± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %
10572 10573 10574 10575 10576 10577	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70	± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %
10572 10573 10574 10575 10576	AAA AAA AAA AAA AAA AAA AAA AAA	IÉEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc dutyIEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty	WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60	± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %
10572 10573 10574 10575 10576 10577 10578	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10572 10573 10574 10575 10576 10577	AAA	IÉEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc dutyIEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty	WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70	± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %
10572 10573 10574 10575 10576 10577 10578 10579	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10572 10573 10574 10575 10576 10577 10578	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty	WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10572 10573 10574 10575 10576 10577 10578 10579	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10572 10573 10574 10575 10576 10577 10578 10579	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty	WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10572 10573 10574 10575 10576 10577 10578 10579 10580	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10572 10573 10574 10575 10576 10577 10578 10579 10580	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10572 10573 10574 10575 10576 10577 10578 10579 10580 10581	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10572 10573 10574 10575 10576 10577 10578 10579 10580 10581	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10572 10573 10574 10575 10576 10577 10578 10579 10580 10581 10583	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76 8.67	$\begin{array}{r} \pm 9.6 \% \\ \end{array}$
10572 10573 10574 10575 10576 10577 10578 10579 10580 10581 10582 10583	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76 8.35 8.67 8.59	$\begin{array}{c} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10572 10573 10574 10575 10576 10577 10578 10579 10580 10581 10582 10583	AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76 8.35 8.67 8.59	± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %

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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, MCS0, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10609	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	WLAN	8.57	± 9.6 %
10610	AAB				
10610	AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	WLAN	8.78	$\pm 9.6\%$
			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	$\pm 9.6\%$
10636	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	WLAN	8.83	
10637	AAC	IEEE 802.11ac WIFI (160MHz, MCS0, 90pc duty cycle)			$\pm 9.6\%$
10638	AAC	IEEE 802.11ac WiFI (160MHz, MCS1, 90pc duty cycle)	WLAN	8.79	± 9.6 %
			WLAN	8.86	± 9.6 %
10639	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	WLAN	8.85	$\pm 9.6\%$
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 %
	AAA	CDMA2000 (1x Advanced)	CDMA2000	3.45	±9.6 %
10648				0.04	
10652	AAD	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	± 9.6 %
		LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%) LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD LTE-TDD	6.91 7.42	± 9.6 % ± 9.6 %

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January 24, 2019

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	$\pm 9.6\%$
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	$\pm 9.6\%$
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.

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





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Schweizerischer Kalibrierdienst С

- Service suisse d'étalonnage
- Servizio svizzero di taratura
- S Swiss Calibration Service

Accreditation No.: SCS 0108

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

Client PC Test Certificate No: EX3-7417_Feb19

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN:7417	
Calibration procedure(s)	OA CAL-01 -9 - QA CAL-23 v5, QA CAL-25 v7 Calbration procedure for desimetric E-field probes	
Calibration date:	February 19, 2019	q
	ents the traceability to national standards, which realize the physical units of measurements (SI). tainties 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

	Name	Function	Signature
Calibrated by:	Claudio Leubler	Laboratory Technician	
			VE
Approved by:	Katja Pokovic	Technical Manager	Jel UG-
			Issued: February 20, 2019

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

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst

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Accreditation No.: SCS 0108

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

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,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 9	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:

- a) 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
- b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from handheld and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) 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
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORMx, y, z: Assessed for E-field polarization 9 = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx, y, z are only intermediate values, i.e., the uncertainties of NORMx, y, z does not affect the E²-field uncertainty inside TSL (see below *ConvF*).
- NORM(f)x,y,z = NORMx,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*.
- *DCPx,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
- *Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,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 ≤ 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 NORMx,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 NORMx (no uncertainty required).

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm $(\mu V/(V/m)^2)^A$	0.54	0.43	0.53	± 10.1 %
DCP (mV) ⁸	98.7	97.4	100.4	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dBõV	С	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-	Pulse Waveform (200Hz, 10%)	X	15.00	88.38	19.65	10.00	60.0	± 3.3 %	±9.6 %
AAA		Y	4.33	71.38	13.30		60.0		
		Z	7.40	77.44	14.95		60.0		
10353-	Pulse Waveform (200Hz, 20%)	X	15.00	92.19	20.43	6.99	80.0	± 2.2 %	± 9.6 %
AAA		Y	5.53	76.01	13.64		80.0		
		Z	15.00	85.74	16.43		80.0		
10354-	Pulse Waveform (200Hz, 40%)	X	15.00	107.68	26.54	3.98	95.0	± 1.3 %	± 9.6 %
AAA		Y	9.05	79.53	12.66		95.0		
		Z	15.00	90.71	17.41		95.0	l	
10355-	Pulse Waveform (200Hz, 60%)	X	15.00	127.17	33.83	2.22	120.0	± 1.2 %	± 9.6 %
AAA		Y	0.26	60.00	4.45		120.0		
		Z	15.00	99.84	20.30		120.0		
10387-	QPSK Waveform, 1 MHz	X	0.56	60.62	7.74	0.00	150.0	± 3.6 %	± 9.6 %
AAA		Y	0.42	60.00	4.69		150.0		
		Ž	0.44	60.00	5.48		150.0		
10388-	QPSK Waveform, 10 MHz	Х	2.27	69.09	16.46	0.00	150.0	± 1.3 %	± 9.6 %
AAA		Y	1.94	67.43	15.43		150.0		
		Z	2.06	68.27	16.05		150.0		
10396-	64-QAM Waveform, 100 kHz	X	3.15	72.71	19.95	3.01	150.0	± 2.5 %	± 9.6 %
AAA		Y	2.04	67.08	18.19		150.0		
		Z	2.07	66.03	16.88		150.0		
10399-	64-QAM Waveform, 40 MHz	X	3.52	67.53	16.10	0.00	150.0	± 2.4 %	± 9.6 %
AAA		Y	3.32	66.83	15.68		150.0		
		Ž	3.38	67.15	15.89		150.0		
10414-	WLAN CCDF, 64-QAM, 40MHz	X	4.80	65.90	15.74	0.00	150.0	± 4.4 %	± 9.6 %
AAA		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.

	C1 fF	C2 fF	α V ⁻¹	T1 ms.V⁻²	T2 ms.V⁻¹	T3 ms	T4 V⁻²	T5 V ⁻¹	Т6
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

Sensor Model Parameters

Other Probe Parameters

Triangular
120.5
enabled
disabled
337 mm
10 mm
9 mm
2.5 mm
1 mm
1 mm
1 mm
1.4 mm

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 %

Calibration Parameter Determined in Head Tissue Simulating Media

^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 Frequency validity above sub MHz of \pm 100 MHz only applies for DAST v4.4 and higher (see Page 2), else it is restricted to \pm 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 \pm 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 \pm 110 MHz.

measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (c and o) is restricted to ± 5%. The uncertainty is the RSS of

the ConvF uncertainty for indicated target tissue parameters. ⁶ 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.

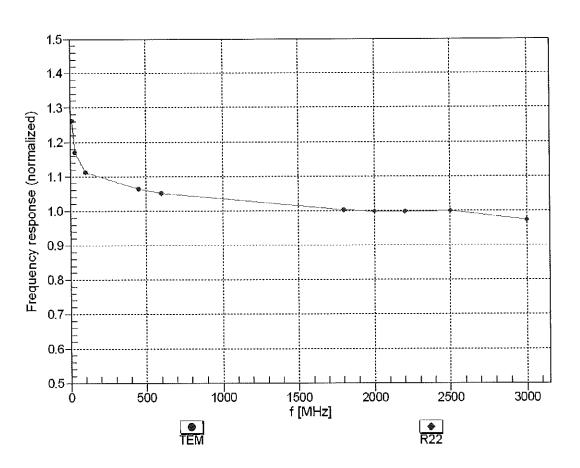
			-		-			
f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	55.5	0.96	10.35	10.35	10.35	0.63	0.84	± 12.0 %
835	55.2	0.97	10.11	10.11	10.11	0.43	0.84	± 12.0 %
1750	53.4	1.49	8.21	8.21	8.21	0.43	0.88	± 12.0 %
1900	53.3	1.52	7.86	7.86	7.86	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 %

Calibration Parameter Determined in Body Tissue Simulating Media

^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 \pm 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 \pm 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

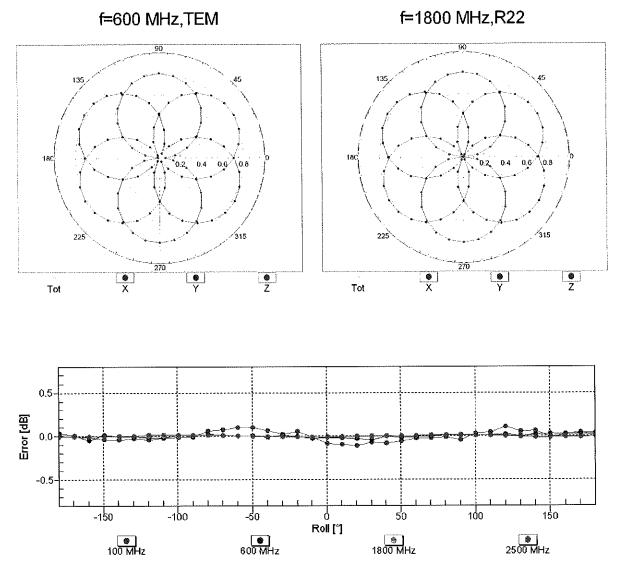
^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than \pm 1% for frequencies below 3 GHz and below \pm 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from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



Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)

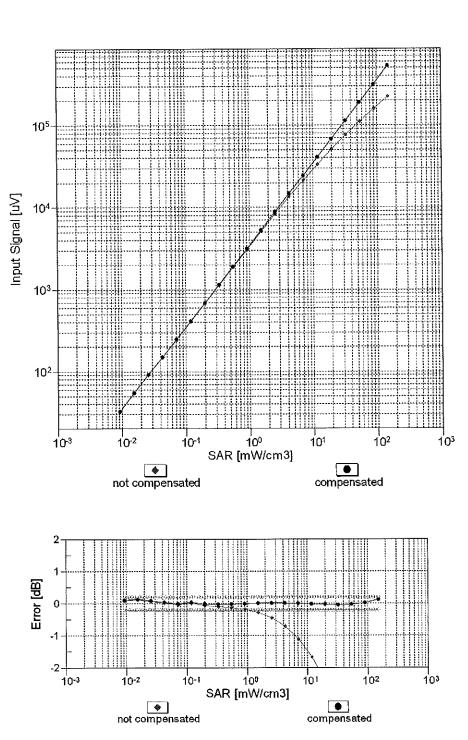
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

Certificate No: EX3-7417_Feb19



Receiving Pattern (ϕ), $\vartheta = 0^{\circ}$

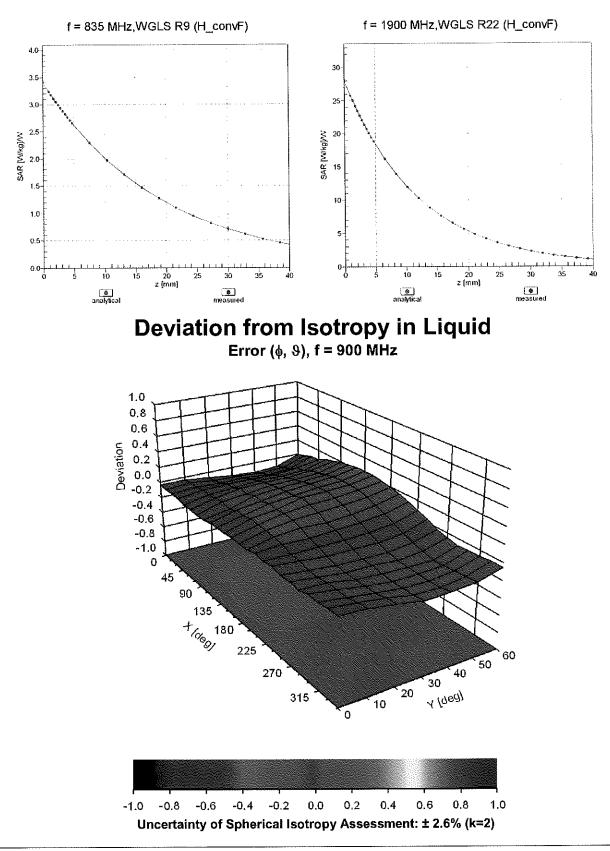
Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)



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

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

Certificate No: EX3-7417_Feb19



Conversion Factor Assessment

Appendix: Modulation Calibration Parameters

UID	Rev			PAR (dB)	Unc ^E (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 %
			LTE-TDD		
10105	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)		10.01	± 9.6 %

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10109 CAG LTE-FDD 56.47 ± 96.% 10110 CAG LTE-FDD 56.75 ± 96.% 101112 CAG LTE-FDD 56.75 ± 96.% 10112 CAG LTE-FDD 56.75 ± 96.% 10113 CAG LTE-FDD 55.97 ± 96.% 10113 CAG LTE-FDD 55.97 ± 96.% 10113 CAG LTE-FDD 55.97 ± 96.% 10113 CAG LEEE 802.11n (HT Greenfield, 81.5Mbps, 80-CAM) WLAN 8.10 ± 98.5% 10116 CAG LEEE 802.11n (HT Meed, 135 Mbps, 80-CAM) WLAN 8.03 ± 80.5% 10113 CAG LEEE 802.11n (HT Meed, 135 Mbps, 80-CAM) WLAN 8.03 ± 80.5% 10114 CAG LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 40-CAM) WLAN 8.03 ± 80.5% 10114 CAG LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 40-CAM) LTE-FDD 6.32 ± 80.5% 10141 CAG LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 40-CAM) LTE-FDD <th></th> <th></th> <th></th> <th>-</th> <th></th> <th></th>				-		
10111 CAG LTE-EDD (SC-FDMA, 100% RE, 5 MHz, 16-CAM) LTE-FDD (S.59) ±9.8 % 10112 CAG LTE-EDD (SC-FDMA, 100% RE, 5 MHz, 64-CAM) LTE-FDD (S.59) ±9.8 % 10113 CAG LEEE 802.11n (HT Greenfield, 81 Mbps, 16-CAM) WLAN 8.10 ±3.8 % 10116 CAG LEEE 802.11n (HT Greenfield, 81 Mbps, 16-CAM) WLAN 8.46 ±3.8 % 10116 CAG LEEE 802.11n (HT Mseed, 13.5 Mbps, 16-CAM) WLAN 8.59 ±3.8 % 10117 CAG LEEE 802.11n (HT Mseed, 13.6 Mbps, 16-CAM) WLAN 8.59 ±3.8 % 10118 CAG LEEE 802.11n (HT Mseed, 13.6 Mbps, 16-CAM) WLAN 8.59 ±3.8 % 10141 CAE LTE-FDD (SC-FDMA, 100% KB, 13.MHz, 16-CAM) LTE-FDD 6.43 ±3.8 % 10142 CAE LTE-FDD (SC-FDMA, 100% KB, 3.MHz, 16-CAM) LTE-FDD 5.73 ±3.8 % 10142 CAE LTE-FDD (SC-FDMA, 100% KB, 3.MHz, 16-CAM) LTE-FDD 5.73 ±3.8 % 10144 CAE LTE-FDD (SC-FDMA, 100% KB, 3.MHz, 16-CAM) LTE-FDD <t< td=""><td>10109</td><td>CAG</td><td>LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)</td><td>LTE-FDD</td><td>6.43</td><td>±9.6%</td></t<>	10109	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	±9.6%
10112 CAG L'TE-FDD SC-FDAA 100F RS, 5 MHz, 64-OAM) L'TE-FDD 6.62 ±9.8 % 10113 CAG L'TE-FDD SC-FDAA 100F RS, 5 MHz, 64-OAM) ULAN 8.62 ±9.8 % 10114 CAC L'EEE B02.11n (HT Greenfield, 135 Mbps, BPSK) WLAN 8.46 ±9.8 % 10116 CAC L'EEE B02.11n (HT Greenfield, 135 Mbps, BPSK) WLAN 8.47 ±9.8 % 10116 CAC L'EEE B02.11n (HT Maxd, 31 Mbps, 80-OAM) WLAN 8.13 ±9.6 % 10118 CAC L'EEE B02.11n (HT Maxd, 31 Mbps, 80-OAM) WLAN 8.13 ±9.6 % 10118 CAC L'EE FDD (SC-FDMA, 100% RB, 15 MHz, 16-OAM) UTE-FDD 6.33 ±9.6 % 10141 CAE L'TE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-OAM) UTE-FDD 6.35 ±9.6 % 10142 CAE L'TE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-OAM) UTE-FDD 6.35 ±9.6 % 10144 CAE L'TE-FDD (SC-FDMA, 100% RB, 14 MHz, 16-OAM) UTE-FDD 6.56 ±9.6 % 10144 CAE <td>10110</td> <td>CAG</td> <td></td> <td></td> <td></td> <td>and the second se</td>	10110	CAG				and the second se
10113 CAG LTE-FDD 6.82 ± 9.8 % 10114 CAC LEEE 802.11n (HT Greenfield, 13.5 Mbps, 19-GAM) WLAN 8.10 ± 9.8 % 10116 CAC LEEE 802.11n (HT Greenfield, 13.5 Mbps, 49-GAM) WLAN 8.10 ± 9.8 % 10117 CAC LEEE 802.11n (HT Mixed, 13.5 Mbps, 49-GAM) WLAN 8.57 ± 9.8 % 10118 CAC LEEE 802.11n (HT Mixed, 13.5 Mbps, 64-GAM) WLAN 8.59 ± 9.6 % 10140 CAC LEEE 802.11n (HT Mixed, 13.5 Mbps, 64-GAM) WLAN 8.51 ± 9.6 % 10141 CAC LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-GAM) LTE-FDD (S.53 ± 9.6 % 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-GAM) LTE-FDD (S.53 ± 9.6 % 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 0PSK) LTE-FDD (S.51 ± 9.6 % 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 0PSK) LTE-FDD (S.61 ± 9.6 % 10144 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-CAM) LTE-FDD (S.62 ± 9.6 % 10144 CAE <td>10111</td> <td>CAG</td> <td></td> <td></td> <td></td> <td></td>	10111	CAG				
10114 CAC TEEE 802.11n (HT Generifield, 31 Mbps, 16-OAM) WLAN 8.46 ± 9.8 % 10116 CAC IEEE 802.11n (HT Generifield, 135 Mbps, 86-OAM) WLAN 8.46 ± 9.8 % 10116 CAC IEEE 802.11n (HT Mixed, 81 Mbps, 16-OAM) WLAN 8.17 ± 9.8 % 10118 CAC IEEE 802.11n (HT Mixed, 81 Mbps, 16-OAM) WLAN 8.13 ± 9.6 % 10118 CAC IEEE 802.11n (HT Mixed, 81 Mbps, 16-OAM) UTE-FDD 6.33 ± 9.6 % 10140 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-OAM) LTE-FDD 6.33 ± 9.6 % 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 04-OAM) LTE-FDD 6.35 ± 9.6 % 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 04-OAM) LTE-FDD 6.85 ± 9.6 % 10146 CAF LTE-FDD (SC-FDMA, 100% RB, 14 MHz, 16-OAM) LTE-FDD 6.86 ± 9.6 % 10147 CAE LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-OAM) LTE-FDD 6.42 ± 9.6 % 10146 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-OAM) <td< td=""><td>10112</td><td>CAG</td><td></td><td></td><td></td><td></td></td<>	10112	CAG				
10116 CAC IEEE 802.11n (HT Greenfield, 35 Mbps, 46-CAM) WLAN 8.46 ± 9.8 % 10117 CAC IEEE 802.11n (HT Moed, 135 Mbps, 92-SA) WLAN 8.07 ± 9.8 % 10118 CAC IEEE 802.11n (HT Moed, 135 Mbps, 94-CAM) WLAN 8.90 ± 9.8 % 10119 CAC IEEE 802.11n (HT Moed, 135 Mbps, 94-CAM) WLAN 8.90 ± 9.8 % 10140 CAE ITEF-DD (SC-FDMA, 100% RB, 15 MHz, 16-CAM) UTE-FDD 6.49 ± 9.8 % 10141 CAE ITEF-DD (SC-FDMA, 100% RB, 13 MHz, 16-CAM) UTE-FDD 5.3 ± 9.6 % 10142 CAE ITEF-DD (SC-FDMA, 100% RB, 14 MHz, 16-CAM) UTE-FDD 5.76 ± 9.6 % 10143 CAE ITEF-DD (SC-FDMA, 100% RB, 14 MHz, 16-CAM) UTE-FDD 6.41 ± 9.6 % 10146 CAE ITEF-DD (SC-FDMA, 100% RB, 12 MHz, 16-CAM) UTE-FDD 6.41 ± 9.6 % 10146 CAE ITEF-DD (SC-FDMA, 50% RB, 20 MHz, 16-CAM) ITEF-DD 6.42 ± 9.6 % 10146 CAE ITEF-DD (SC-FDMA, 50% RB, 20 MHz, 16-CAM) ITEF-	10113	CAG				
10116 CAC LEE 802.11n (LT Greenfield, 135 Mbps, 64-CAM) WLAN 8.15 ± 9.8 % 10117 CAC IEEE 802.11n (LT Mixed, 81 Mbps, 16-CAM) WLAN 8.07 ± 9.8 % 10118 CAC IEEE 802.11n (LT Mixed, 81 Mbps, 16-CAM) WLAN 8.13 ± 9.8 % 10140 CAE IEEE 802.11n (LT Mixed, 81 Mbps, 16-CAM) UTE-FDD 6.49 ± 9.8 % 10141 CAE ITE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-CAM) UTE-FDD 6.53 ± 9.6 % 10142 CAE ITE-FDD (SC-FDMA, 100% RB, 3 MHz, 04-CAM) UTE-FDD 6.85 ± 9.6 % 10142 CAE ITE-FDD (SC-FDMA, 100% RB, 14 MHz, 16-CAM) ITE-FDD 6.86 ± 9.6 % 10145 CAE ITE-FDD (SC-FDMA, 100% RB, 14 MHz, 16-CAM) ITE-FDD 6.87 ± 9.8 % 10147 CAE ITE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-CAM) ITE-FDD 6.86 ± 9.8 % 10147 CAE ITE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-CAM) ITE-FDD 6.61 ± 9.8 % 10146 CAE ITE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-CAM) <td>10114</td> <td>CAC</td> <td></td> <td></td> <td></td> <td></td>	10114	CAC				
10117 CAC LEEE 802.11n (LT Mixed, 13.5 Mbps, BPSK) WLAN 8.07 ± 9.8 % 10118 CAC LEEE 802.11n (LT Mixed, 135 Mbps, 64-OAM) WLAN 8.59 ± 9.8 % 10140 CAC LEEE 802.11n (LT Mixed, 135 Mbps, 64-OAM) UTE-FDD 6.49 ± 9.8 % 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-OAM) LTE-FDD 5.73 ± 9.8 % 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-OAM) LTE-FDD 5.73 ± 9.8 % 10143 CAE LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-OAM) LTE-FDD 6.65 ± 9.8 % 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 1 A MHz, 16-OAM) LTE-FDD 6.61 ± 9.8 % 10146 CAF LTE-FDD (SC-FDMA, 100% RB, 1 A MHz, 16-OAM) LTE-FDD 6.42 ± 9.8 % 10147 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-OAM) LTE-FDD 6.42 ± 9.8 % 10146 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-OAM) LTE-FDD 6.42 ± 9.8 % 10147 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-OAM)	10115	CAC				
10118 CAC IEEE 802.11n (ITT Mixed, 81 Mbps, 16-CAM) WLAN 8.59 ± 9.6 % 10140 CAE LTEFEDD (SC-FDMA, 100% RB, 15 MHz, 16-CAM) LTEFEDD 6.49 ± 9.6 % 10141 CAE LTEFED (SC-FDMA, 100% RB, 31 MHz, 64-CAM) LTEFEDD 5.73 ± 9.6 % 10142 CAE LTEFED (SC-FDMA, 100% RB, 31 MHz, 64-CAM) LTEFEDD 5.73 ± 9.6 % 10143 CAE LTEFEDD (SC-FDMA, 100% RB, 31 MHz, 64-CAM) LTEFEDD 5.76 ± 9.6 % 10144 CAE LTEFEDD (SC-FDMA, 100% RB, 14 MHz, 16-CAM) LTEFEDD 5.76 ± 9.6 % 10147 CAF LTEFEDD (SC-FDMA, 100% RB, 14 MHz, 16-CAM) LTEFEDD 6.72 ± 9.6 % 10147 CAF LTEFEDD (SC-FDMA, 00% RB, 20 MHz, 16-CAM) LTEFEDD 6.42 ± 9.6 % 10146 CAE LTEFEDD (SC-FDMA, 00% RB, 20 MHz, 16-CAM) LTEFEDD 6.42 ± 9.6 % 10146 CAE LTEFEDD (SC-FDMA, 50% RB, 20 MHz, 16-CAM) LTEFEDD 6.42 ± 9.6 % 10147 CAE LTEFEDD (SC-FDMA, 50% RB, 20 MHz, 16-C	10116	CAC				
10110 CAC IEEE 802.11n (IFT Mixed, 135 Mbps, 64-CAM) WLAN 8.13 29.8 % 10140 CAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 44-CAM) LTE-FDD 6.53 29.8 % 10141 CAE LTE-FDD (SC-FDMA, 100% RB, 31 MHz, 16-CAM) LTE-FDD 6.73 29.8 % 10142 CAE LTE-FDD (SC-FDMA, 100% RB, 31 MHz, 16-CAM) LTE-FDD 6.86 29.8 % 10144 CAE LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-CAM) LTE-FDD 6.76 19.8 % 10144 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-CAM) LTE-FDD 6.72 19.8 % 10147 CAF LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-CAM) LTE-FDD 6.72 19.8 % 10147 CAF LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-CAM) LTE-FDD 6.42 9.8 6 % 10151 CAG LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 4C-CAM) LTE-FDD 6.76 19.8 % 10152 CAG LTE-FDD MA, 50% RB, 10 MHz, 46-CAM) LTE-FDD 6.76 19.8 % 10152 CAG LTE-FDD MA, 50% RB, 10 MHZ, 40-CAM)	10117	CAC				
TOTAD CALE ITTE-FDD 6.49 ±9.8 % 10141 CALE ITTE-FDD 6.53 ±9.6 % 10142 CAE ITTE-FDD 100% RB, 3 MHz, QFSK) ITTE-FDD 6.53 ±9.6 % 10143 CAE ITTE-FDD 100% RB, 3 MHz, QFSK) ITTE-FDD 6.66 ±9.6 % 10144 CAE ITTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QFSK) ITTE-FDD 6.76 ±9.6 % 10145 CAF ITTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, GF2AM) ITTE-FDD 6.72 ±9.6 % 10146 CAF ITTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, GF2AM) ITTE-FDD 6.72 ±9.6 % 10147 CAF ITTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) ITTE-FDD 6.72 ±9.6 % 10151 CAG ITTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) ITE-FDD 6.72 ±9.6 % 10152 CAG ITE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) ITE-FDD 6.42 ±9.6 % 10153 CAG ITE-FDD (SC-FDMA, 50% RB, 10 MHz, GPSK) ITE-FDD 5.05 % ±9.6 %	10118					
10141 CAE ITE-FDD 6.53 ± 9.8 % 10142 CAE ITE-FDD SC-FDMA, 100% RB, 3 MHz, 16-CAM) ITE-FDD 6.73 ± 9.8 % 10143 CAE ITE-FDD SC-FDMA, 100% RB, 3 MHz, 16-CAM) ITE-FDD 6.85 ± 9.6 % 10144 CAE ITE-FDD SC-FDMA, 100% RB, 14 MHz, 16-CAM) ITE-FDD 5.76 ± 9.6 % 10146 CAF ITE-FDD SC-FDMA, 100% RB, 14 MHz, 16-CAM) ITE-FDD 6.71 ± 9.6 % 10147 CAF ITE-FDD (SC-FDMA, 00% RB, 14 MHz, 16-CAM) ITE-FDD 6.72 ± 9.6 % 10147 CAF ITE-FDD (SC-FDMA, 60% RB, 20 MHz, 64-CAM) ITE-FDD 6.60 ± 9.6 % 10151 CAG ITE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-CAM) ITE-FDD 5.76 ± 9.6 % 10152 CAG ITE-FDD (SC-FDMA, 50% RB, 10 MHz, 0FSK) ITE-FDD 6.60 ± 9.6 % 10153 CAG ITE-FDD (SC-FDMA, 50% RB, 10 MHz, 0FSK) ITE-FDD 5.75 ± 9.6 % 10154 CAG ITE-FDD (SC-FDMA, 50% RB, 10 MHz, 0F						
10142 CAE LTE-FDD 5.73 ± 9.6 % 10143 CAE LTE-FDD 6.53 ± 9.6 % 10144 CAE LTE-FDD 6.65 ± 9.6 % 10144 CAE LTE-FDD 6.65 ± 9.6 % 10146 CAF LTE-FDD 6.65 ± 9.6 % 10146 CAF LTE-FDD 6.67 ± 9.6 % 10147 CAF LTE-FDD 6.72 ± 9.6 % 10147 CAF LTE-FDD (5C-FDMA, 100% R8, 14 MHz, 16-QAM) LTE-FDD 6.72 ± 9.6 % 10149 CAE LTE-FDD (5C-FDMA, 50% R8, 20 MHz, 16-QAM) LTE-FDD 6.60 ± 9.6 % 10151 CAG LTE-FDD (5C-FDMA, 50% R8, 20 MHz, 16-QAM) LTE-FDD 6.60 ± 9.6 % 10152 CAG LTE-FDD (5C-FDMA, 50% R8, 10 MHz, 0PSK) LTE-FDD 5.73 ± 9.6 % 10153 CAG LTE-FDD (5C-FDMA, 50% R8, 10 MHz, 0PSK) LTE-FDD 5.78 ± 9.6 % 10156 CAG						
10143 CAE LTE-FDD 6.35 ± 9.6 % 10144 CAE LTE-FDD 6.65 ± 9.6 % 10145 CAF LTE-FDD 5.76 ± 9.6 % 10146 CAF LTE-FDD 5.76 ± 9.6 % 10146 CAF LTE-FDD 5.76 ± 9.6 % 10147 CAF LTE-FDD 6.72 ± 9.6 % 10147 CAF LTE-FDD 6.72 ± 9.6 % 10146 CAE LTE-FDD 6.72 ± 9.6 % 10150 CAE LTE-FDD (6.2 + 9.6 %) LTE-FDD 6.42 ± 9.6 % 10151 CAG LTE-TDD (6.2 + 9.6 %) LTE-FDD 6.42 ± 9.6 % 10152 CAG LTE-TDD (6.2 + 9.6 %) LTE-FDD 6.43 ± 9.6 % 10153 CAG LTE-FDD (6.2 + 9.6 %) LTE-FDD 6.43 ± 9.6 % 10156 CAG LTE-FDD (6.2 + 9.6 %) LTE-FDD 6.42 ± 9.6 %						
10144 CAE LTE-FDD 66.65 19.6% 10145 CAF LTE-FDD 6.67 19.6% 10146 CAF LTE-FDD 6.67 19.6% 10147 CAF LTE-FDD 65.76 19.6% 10147 CAF LTE-FDD 65.77 19.6% 10147 CAF LTE-FDD 65.72 19.6% 10149 CAE LTE-FDD 65.72 19.6% 10150 CAE LTE-FDD (5C-FDMA, 50% RB, 20 MHz, 16-OAM) LTE-FDD 6.60 19.6% 10151 CAG LTE-FDD (5C-FDMA, 50% RB, 20 MHz, 0FOAM) LTE-FDD 9.82 19.6% 10152 CAG LTE-FDD (5C-FDMA, 50% RB, 20 MHz, 0FOAM) LTE-FDD 5.75 19.6% 10153 CAG LTE-FDD (5C-FDMA, 50% RB, 10 MHz, 0FOK) LTE-FDD 5.75 19.6% 10156 CAG LTE-FDD (5C-FDMA, 50% RB, 10 MHz, 0FOK) LTE-FDD 5.79 19.6% 10156 CAG LTE-						
10146 CAF LTE-FDD S.76 ± 9.6% 10146 CAF LTE-FDD S.76 ± 9.6% 10147 CAF LTE-FDD S.76 ± 9.6% 10147 CAF LTE-FDD S.72 ± 9.6% 10147 CAF LTE-FDD S.72 ± 9.6% 10160 CAE LTE-FDD S.72 ± 9.6% 10161 CAG LTE-TDD S.78 B.20 MHz, 64-OAM LTE-FDD 9.22 ± 9.6% 10152 CAG LTE-TDD ICS-FDMA, 50% RB, 20 MHz, 16-OAM LTE-TDD 9.02 ± 9.6% 10153 CAG LTE-TDD ICS-FDMA, 50% RB, 20 MHz, 0FSK) LTE-FDD 10.05 ± 9.6% 10156 CAG LTE-FDD ICS-FDMA, 50% RB, 10 MHz, 16-OAM LTE-FDD 6.43 ± 9.6% 10156 CAG LTE-FDD ICS-FDMA, 50% RB, 10 MHz, 0PSK) LTE-FDD 6.42 ± 9.6% 10156 CAG LTE-FDD ICS-FDMA, 50% RB, 10 MHz, 0PSK) LTE-FDD 6.42 ± 9.						
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10160 CAE LTE-FDD SC-FDMA, 50% RB, 20 MHz, 16-OAM) LTE-FDD 6.42 19.6% 10160 CAE LTE-FDD ISC-FDMA, 50% RB, 20 MHz, 0F-OAM) LTE-FDD 9.28 ± 9.6% 10161 CAG LTE-TDD ISC-FDMA, 50% RB, 20 MHz, 0F-OAM) LTE-TDD 9.28 ± 9.6% 10153 CAG LTE-TDD ISC-FDMA, 50% RB, 20 MHz, 0F-OAM) LTE-TDD 9.28 ± 9.6% 10154 CAG LTE-FDD ISC-FDMA, 50% RB, 10 MHz, 0F-OAM) LTE-TDD 5.75 ± 9.6% 10156 CAG LTE-FDD ISC-FDMA, 50% RB, 10 MHz, 16-OAM) LTE-FDD 5.77 ± 9.6% 10156 CAG LTE-FDD ISC-FDMA, 50% RB, 10 MHz, 16-OAM) LTE-FDD 6.43 ± 9.6% 10157 CAG LTE-FDD ISC-FDMA, 50% RB, 10 MHz, 16-OAM) LTE-FDD 6.66 ± 9.6% 10158 CAG LTE-FDD ISC-FDMA, 50% RB, 14 MHz, 16-OAM) LTE-FDD 6.66 ± 9.6% 10160 CAE LTE-FDD ISC-FDMA, 50% RB, 14 MHz, 16-OAM) LTE-FDD				****		
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10151 CAG LTE-TDD SC-FDMA, 50%, RB, 20 MHz, DPSK) LTE-TDD 9.28 ±9.6 % 10152 CAG LTE-TDD SC-FDMA, 50%, RB, 20 MHz, D-CAM) LTE-TDD 9.92 ±9.6 % 10153 CAG LTE-TDD SC-FDMA, 50%, RB, 20 MHz, D-CAM) LTE-TDD 10.05 ±9.6 % 10154 CAG LTE-FDD (SC-FDMA, 50%, RB, 10 MHz, QPSK) LTE-FDD 5.75 ±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, 5 MHz, 16-QAM) LTE-FDD 6.56 ±9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50%, RB, 15 MHz, 16-QAM) LTE-FDD 6.84 ±9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50%, RB, 14 MHz, 16-QAM) LTE-FDD 6.84 ±9.6 % 10162 CAF LTE-FDD (SC-FDMA, 50%, RB, 14 MHz, 16-QAM) LTE-FDD 6.84 ±9.6 % 10161 CAF L						
10152 CAG LTE-TDD 9.92 19.05 10153 CAG LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM) LTE-TDD 10.05 19.65 % 10154 CAG LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 5.75 19.6 % 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD 5.79 19.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, Q-AAM) LTE-FDD 6.49 19.6 % 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, Q-AAM) LTE-FDD 6.49 19.6 % 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-OAM) LTE-FDD 6.62 19.6 % 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-OAM) LTE-FDD 6.48 19.6 % 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 6.58 19.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 6.73 19.6 % 10166 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
10153 CAG LTE-TDD SC-FDMA, 50% RB, 20 MHz, QPSK) 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, 5 MHz, QPSK) LTE-FDD 6.43 ± 9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 6.49 ± 9.6 % 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-FDD 6.62 ± 9.6 % 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD 6.62 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-FDD 6.43 ± 9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 6.43 ± 9.6 % 10162 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 6.42 ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 6.42 ± 9.6 % 10168 CAE LTE-FDD (SC-FDMA, 18 & 20 MHz, 04-QAM)						
10154 CAG LTE-FDD S.75 ± 9.6 % 10155 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-FDD 6.43 ± 9.6 % 10156 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-FDD 6.49 ± 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 6.56 ± 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, QPSK) LTE-FDD 6.58 ± 9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 5.46 ± 9.6 % 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 178, 20 MHz, GAQM) LTE-FDD 5.73 ± 9.6 % 1017						
10156 CAG LTE-FDD S0:43 ± 9.6 % 10156 CAG LTE-FDD S0:79 ± 9.6 % 10157 CAG LTE-FDD S0:79 ± 9.6 % 10158 CAG LTE-FDD S0:79 ± 9.6 % 10158 CAG LTE-FDD S0:79 ± 9.6 % 10159 CAG LTE-FDD S0:79 ± 9.6 % 10159 CAG LTE-FDD S0:79 ± 9.6 % 10150 CAG LTE-FDD S0:70MA, 50% RB, 50 MHz, 16-QAM) LTE-FDD 5.62 ± 9.6 % 10161 CAE LTE-FDD S0:70MA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 5.48 ± 9.6 % 10162 CAE LTE-FDD S0:70MA, 50% RB, 14 MHz, 16-QAM) LTE-FDD 5.46 ± 9.6 % 10166 CAF LTE-FDD S0:70MA, 50% RB, 14 MHz, 16-QAM) LTE-FDD 5.73 ± 9.6 % 10176 CAF LTE-FDD S0:70MA, 17 MB, 20 MHz, 16-QAM) LTE-FDD 5.73 ± 9.6 % 10170 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td></td<>						
10136 CAG LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-FDD 5.79 ± 9.6 % 10157 CAG LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD 6.49 ± 9.6 % 10158 CAG LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.62 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.83 ± 9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-FDD 6.84 ± 9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 16-QAM) LTE-FDD 6.84 ± 9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 16-QAM) LTE-FDD 6.79 ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 18, 20 MHz, 42-QAM) LTE-FDD 6.79 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 18, 20 MHz, 46-QAM) LTE-FDD 6.73 ± 9.6 % 10171 CAE LTE-FDD (SC-FDMA, 17, 20 MHz, 46-QAM) LTE-FDD 6.72 ± 9.6 % 10172 CAG L			LTE-FDD (SC-FDMA, 50% RB 10 MHz, 16-OAM)			
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, 5 MHz, 46-QAM) LTE-FDD 6.62 ± 9.6 % 10160 CAG LTE-FDD (SC-FDMA, 50% RB, 55 MHz, 46-QAM) LTE-FDD 5.82 ± 9.6 % 10161 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 46-QAM) LTE-FDD 6.43 ± 9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 46-QAM) LTE-FDD 6.44 ± 9.6 % 10162 CAE LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 46-QAM) LTE-FDD 5.46 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, 64-QAM) LTE-FDD 5.73 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 17 RB, 20 MHz, 6-QAM) LTE-FDD 6.52 ± 9.6 % 10171 AAE LTE-FDD (SC-FDMA, 17 RB, 20 MHz, 6-QAM) LTE-FDD 6.52 ± 9.6 % 10172 CAG LTE-FDD (SC-FDMA, 17 RB, 20 MHz, 6-QAM) LTE-FDD 6.52 ± 9.6 %	-		LTE-FDD (SC-FDMA 50% RB 5 MHz OPSK)			
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, 15 MHz, 64-QAM) LTE-FDD 6.56 ± 9.6 % 10160 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.43 ± 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, 1.4 MHz, QPSK) LTE-FDD 6.43 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-FDD 6.79 ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 18, 20 MHz, QPSK) LTE-FDD 6.79 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 18, 20 MHz, QPSK) LTE-FDD 6.79 ± 9.6 % 10171 AAE LTE-FDD (SC-FDMA, 18, 20 MHz, QPSK) LTE-FDD 6.79 ± 9.6 % 10172 CAG LTE-FDD (SC-FDMA, 18, 20 MHz, 16-QAM) LTE-FDD 6.49 ± 9.6 % 10172 CAG LTE-FDD (SC-FDMA, 18, 20 MHz,						
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10160 CAE LTE-FDD S.6.2 ± 9.6 % 10161 CAE LTE-FDD S.6.2 ± 9.6 % 10162 CAE LTE-FDD S.C.FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.5.8 ± 9.6 % 10162 CAE LTE-FDD S.C.FDMA, 50% RB, 1.4 MHz, QPSK) LTE-FDD 5.46 ± 9.6 % 10166 CAF LTE-FDD S.C.FDMA, 50% RB, 1.4 MHz, QPSK) LTE-FDD 6.71 ± 9.6 % 10169 CAF LTE-FDD (SC-FDMA, 18B, 20 MHz, 64-QAM) LTE-FDD 6.73 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.62 ± 9.6 % 10171 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 9.6 % 10172 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 9.21 ± 9.6 % 10173 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 9.48 ± 9.6 %				LTE-FDD	6.56	
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, QFSK) LTE-FDD 6.56 ± 9.6 % 10166 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QFSK) LTE-FDD 6.21 ± 9.6 % 10167 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QFSK) LTE-FDD 6.21 ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 50% RB, 14 MHz, QFSK) LTE-FDD 6.73 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 1RB, 20 MHz, QPSK) LTE-FDD 6.52 ± 9.6 % 10171 CAE LTE-FDD (SC-FDMA, 1RB, 20 MHz, G4-QAM) LTE-FDD 9.21 ± 9.6 % 10172 CAG LTE-FDD (SC-FDMA, 1RB, 20 MHz, G4-QAM) LTE-FDD 9.21 ± 9.6 % 10173 CAG LTE-FDD (SC-FDMA, 1RB, 20 MHz, G4-QAM) LTE-FDD 9.2 ± 9.6 % 10174 CAG LTE-FDD (SC-FDMA, 1RB, 20 MHz, G4-QAM) LTE-FDD 5.73 ± 9.6 % 10177 CAG <					5.82	±9.6 %
10162 CAE LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-FDD 6.58 ± 9.6 % 10168 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, 16-QAM) LTE-FDD 6.79 ± 9.6 % 10168 CAF LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-FDD 6.73 ± 9.6 % 10170 CAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-FDD 6.49 ± 9.6 % 10171 AAE LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-TDD 9.48 ± 9.6 % 10172 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-TDD 9.48 ± 9.6 % 10173 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, GPSK) LTE-FDD 10.25 ± 9.6 % 10174 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10177 CAI	and the second se			LTE-FDD	6.43	±9.6 %
10166 CAF 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 6.49 ± 9.6 % 10171 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 6.49 ± 9.6 % 10172 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 9.21 ± 9.6 % 10173 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM) LTE-FDD 9.21 ± 9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 04-QAM) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 04-QAM) LTE-FDD 5.73 ± 9.6 % 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 04-QAM) LTE-FDD 5.73 ± 9.6 % <td></td> <td></td> <td>LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)</td> <td>LTE-FDD</td> <td>6.58</td> <td>±9.6 %</td>			LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	±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, QPSK) LTE-FDD 6.52 ± 9.6 % 10171 AAE LTE-FDD (SC-FDMA, 1 RB, 20 MHz, G4-QAM) LTE-FDD 6.49 ± 9.6 % 10172 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, G4-QAM) LTE-TDD 9.21 ± 9.6 % 10173 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, G4-QAM) LTE-TDD 9.48 ± 9.6 % 10174 CAG LTE-TDD (SC-FDMA, 1 RB, 10 MHz, G4-QAM) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, GPSK) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, GPSK) LTE-FDD 5.72 ± 9.6 % 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, GPSK) LTE-FDD 5.72 ± 9.6 % 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, G4-QAM) LTE-FDD	10166	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD		
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, 64-QAM) LTE-TDD 9.21 ± 9.6 % 10173 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-TDD 9.24 ± 9.6 % 10174 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, G4-QAM) LTE-FDD 5.72 ± 9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 6.52 ± 9.6 % 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, G4-QAM) LTE-FDD 6.50 ± 9.6 % 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, G4-QAM) LTE-FDD 6.50 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, G4-QAM) LTE-FDD	10167	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)			
10100 CAE LTE-FDD (6.52) ± 9.6 % 10170 CAE LTE-FDD (6.52) ± 9.6 % 10171 AAE 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, QPSK) LTE-TDD 9.48 ± 9.6 % 10174 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, G4-QAM) LTE-TDD 9.48 ± 9.6 % 10175 CAG LTE-FDD (SC-FDMA, 1 RB, 20 MHz, G4-QAM) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, G4-QAM) LTE-FDD 5.73 ± 9.6 % 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, G4-QAM) LTE-FDD 5.73 ± 9.6 % 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, G4-QAM) LTE-FDD 5.72 ± 9.6 % 10179 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, G4-QAM) LTE-FDD 5.72 ± 9.6 % 10180	10168	CAF				
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1017 CAG LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM) LTE-TDD 10.25 ± 9.6 % 10175 CAG LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10176 CAG LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-FDD 6.52 ± 9.6 % 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 6.52 ± 9.6 % 10178 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 6.52 ± 9.6 % 10179 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10179 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10180 CAG LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10181 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, G4-QAM) LTE-FDD 6.50 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 3 MHz, G4-QAM) LTE-FDD	······			and the second se		
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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, 04-QAM) LTE-FDD 6.52 ± 9.6 % 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 0PSK) LTE-FDD 6.52 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 04-QAM) LTE-FDD 6.50 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 04-QAM) LTE-FDD 6.50 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 0PSK)			LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)			
10170 CAC LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10177 CAI LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD 6.52 ± 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, 15 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10181 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 6.52 ± 9.6 % 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 0-QAM) LTE-FDD 6.52 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 0-QAM) LTE-FDD 6.51 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 6.51 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD						
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10170 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, 5 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10182 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 6.50 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM) LTE-FDD 6.50 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 0PSK) LTE-FDD 5.73 ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 04-QAM) LTE-FDD 6.50 ± 9.6 % 10187 CAF LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 04-QAM) LTE-FDD 6.50 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK) LTE-FDD 6.52 ± 9.6 % 10189 AAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD						
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10160 OAC LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 5.72 ± 9.6 % 10181 CAE LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) LTE-FDD 6.52 ± 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, G4-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, GPSK) LTE-FDD 5.73 ± 9.6 % 10188 CAF LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10198 CAC IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK) WLAN <td></td> <td></td> <td>1 TE EDD (SC-EDMA 1 PR 5 MHz 64-0AM)</td> <td></td> <td></td> <td></td>			1 TE EDD (SC-EDMA 1 PR 5 MHz 64-0AM)			
10161 Order LTE-FDD (6.52 ± 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, 0PSK) 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 % 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, 64-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 %						******
10102 O/LC LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-FDD 6.50 ± 9.6 % 10183 AAD LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 6.51 ± 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, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, 64-QAM) WLAN 8.10 ± 9.6 % 10196 CAC <						
10183 AAB LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 5.73 ± 9.6 % 10184 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK) LTE-FDD 6.51 ± 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, QPSK) 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 % 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, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN<						
10104 CAC LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) LTE-FDD 6.51 ± 9.6 % 10185 CAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 6.50 ± 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 8.10 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.13 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, 64-QA						
10100 O/L LTE-FDD Color ± 9.6 % 10186 AAE LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM) LTE-FDD 5.73 ± 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, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, 64-QAM) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.13 ± 9.6 %<						
10180 IVE LTE-FDD 5.73 ± 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 8.12 ± 9.6 % 10196 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.10 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) WLAN 8.13 ± 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 %						
1015/ 0.7.5 LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM) LTE-FDD 6.52 ± 9.6 % 10188 CAF 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, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10196 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, 64-QAM) WLAN 8.10 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 6.5 Mbps, 16-QAM) WLAN 8.13 ± 9.6 % 10198 CAC IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM) WLAN 8.13 ± 9.6 %						
10180 OAR 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, 6.5 Mbps, BPSK) WLAN 8.12 ± 9.6 % 10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10196 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.12 ± 9.6 % 10197 CAC IEEE 802.11n (HT Mixed, 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 8.13 ± 9.6 %						
10100 Jun LTET B0 (2011) HT Greenfield, 6.5 Mbps, BPSK) WLAN 8.09 ± 9.6 % 10193 CAC IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) WLAN 8.12 ± 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 Mixed, 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 %					6.50	
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, 65 Mbps, 64-QAM) WLAN 8.10 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 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 %					8.09	± 9.6 %
10195 CAC IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) WLAN 8.21 ± 9.6 % 10196 CAC IEEE 802.11n (HT Mixed, 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 8.13 ± 9.6 %			IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN		± 9.6 %
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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 %			IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)			
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 %			IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)			
			IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	±9.6 %

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10220	CAC CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10221		IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	±9.6 %
10222		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 %
	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 %
		LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	±9.6 %
10227		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 %
	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	<u>± 9.6 %</u>
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		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 %
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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	WIMAX	15.24	± 9.6 %
10306	AAA	symbols) IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18	WIMAX	14.67	± 9.6 %
10307	AAA	symbols) 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 7.82	± 9.6 % ± 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	1.02	
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 preambule)	WLAN	8.14	± 9.6 %
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle,	WLAN	8.19	± 9.6 %
10110		Short preambule)			
		Short preambule)	WLAN	8.32	± 9.6 %
10422	AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN WLAN	8.32 8.47	± 9.6 % ± 9.6 %
10422 10423	AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN WLAN WLAN	8.32 8.47 8.40	± 9.6 % ± 9.6 % ± 9.6 %
10422 10423 10424	AAB AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.47	± 9.6 %
10422 10423 10424 10425	AAB AAB AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN WLAN	8.47 8.40	± 9.6 % ± 9.6 %
10422 10423 10424 10425 10426	AAB AAB AAB AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN WLAN WLAN	8.47 8.40 8.41	± 9.6 % ± 9.6 % ± 9.6 %
10422 10423 10424 10425 10426 10427	AAB AAB AAB AAB AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN WLAN WLAN WLAN	8.47 8.40 8.41 8.45	± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %
10422 10423 10424 10425 10426 10427 10430	AAB AAB AAB AAB AAB AAD	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	WLAN WLAN WLAN WLAN WLAN	8.47 8.40 8.41 8.45 8.41	$\begin{array}{c} \pm \ 9.6 \ \% \\ \pm \ 9.6 \ \% \end{array}$
10422 10423 10424 10425 10426 10427 10430 10431	AAB AAB AAB AAB AAB AAD AAD	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	WLAN WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD	8.47 8.40 8.41 8.45 8.41 8.28	$\begin{array}{c} \pm \ 9.6 \ \% \\ \pm \ 9.6 \ \% \end{array}$
10422 10423 10424 10425 10426 10427 10430 10431 10432	AAB AAB AAB AAB AAB AAD AAD AAC	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	WLAN WLAN WLAN WLAN LTE-FDD LTE-FDD	8.47 8.40 8.41 8.45 8.41 8.28 8.38	$\begin{array}{c} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10422 10423 10424 10425 10426 10427 10430 10431 10432 10433	AAB AAB AAB AAB AAB AAD AAD AAD AAC AAC	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	WLAN WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD	8.47 8.40 8.41 8.45 8.41 8.28 8.38 8.38 8.34	$\begin{array}{c} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10422 10423 10424 10425 10426 10427 10430 10431 10432	AAB AAB AAB AAB AAB AAD AAD AAC	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)IEEFDD (OFDMA, 5 MHz, E-TM 3.1)LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)W-CDMA (BS Test Model 1, 64 DPCH)LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL	WLAN WLAN WLAN WLAN UTE-FDD LTE-FDD LTE-FDD LTE-FDD	8.47 8.40 8.41 8.45 8.41 8.28 8.38 8.38 8.34 8.34	$\begin{array}{c} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10422 10423 10424 10425 10426 10427 10430 10431 10432 10433 10434 10435	AAB AAB AAB AAB AAD AAD AAD AAC AAC AAA AAF	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) IEEFDD (OFDMA, 5 MHz, E-TM 3.1) ITE-FDD (OFDMA, 10 MHz, E-TM 3.1) ITE-FDD (OFDMA, 20 MHz, E-TM 3.1) ITE-FDD (OFDMA, 20 MHz, E-TM 3.1) ITE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	WLAN WLAN WLAN UTE-FDD LTE-FDD LTE-FDD LTE-FDD WCDMA LTE-TDD	8.47 8.40 8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60 7.82	$\begin{array}{c} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10422 10423 10424 10425 10426 10427 10430 10431 10432 10433 10434 10435 10447	AAB AAB AAB AAB AAD AAD AAD AAC AAC AAA AAF AAD	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) IEEFDD (OFDMA, 5 MHz, E-TM 3.1) ITE-FDD (OFDMA, 10 MHz, E-TM 3.1) ITE-FDD (OFDMA, 20 MHz, E-TM 3.1) ITE-FDD (OFDMA, 20 MHz, E-TM 3.1) ITE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) ITE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	WLAN WLAN WLAN UTE-FDD LTE-FDD LTE-FDD LTE-FDD WCDMA LTE-TDD	8.47 8.40 8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60 7.82 7.56	$\begin{array}{c} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10422 10423 10424 10425 10426 10427 10430 10431 10432 10433 10434 10435	AAB AAB AAB AAB AAD AAD AAD AAC AAC AAA AAF	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) IEEFDD (OFDMA, 5 MHz, E-TM 3.1) ITE-FDD (OFDMA, 10 MHz, E-TM 3.1) ITE-FDD (OFDMA, 20 MHz, E-TM 3.1) ITE-FDD (OFDMA, 20 MHz, E-TM 3.1) ITE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	WLAN WLAN WLAN UTE-FDD LTE-FDD LTE-FDD LTE-FDD WCDMA LTE-TDD	8.47 8.40 8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60 7.82	$\begin{array}{c} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$

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	LTE-TDD	8.57	± 9.6 %
10467	AAE	Subframe=2,3,4,7,8,9) 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 %

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10.100				0.44	100%
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	LTE-TDD	8.55	± 9.6 %
		Subframe=2,3,4,7,8,9)			
10494	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 %
		Subframe=2,3,4,7,8,9)		0.07	±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	±9.0%
10496	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL	LTE-TDD	8.54	± 9.6 %
10100		Subframe=2,3,4,7,8,9)			
10497	AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL	LTE-TDD	7.67	±9.6%
		Subframe=2,3,4,7,8,9)	LTE-TDD	0.40	
10498	AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LIE-IDD	8.40	±9.6 %
10499	AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL	LTE-TDD	8.68	± 9.6 %
10400	,	Subframe=2,3,4,7,8,9)			
10500	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL	LTE-TDD	7.67	± 9.6 %
		Subframe=2,3,4,7,8,9)		0.44	
10501	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL	LTE-TDD	8.44	±9.6 %
10502	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL	LTE-TDD	8.52	±9.6 %
10002		Subframe=2,3,4,7,8,9)			
10503	AAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL	LTE-TDD	7.72	±9.6 %
		Subframe=2,3,4,7,8,9)		0.04	
10504	AAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL	LTE-TDD	8.31	± 9.6 %
10505	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL	LTE-TDD	8.54	±9.6 %
10000	AME	Subframe=2,3,4,7,8,9)		0.04	
10506	AAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 %
		Subframe=2,3,4,7,8,9)		_	
10507	AAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL	LTE-TDD	8.36	± 9.6 %
10508	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL	LTE-TDD	8.55	±9.6 %
10506	AAC	Subframe=2,3,4,7,8,9)		0.00	
10509	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL	LTE-TDD	7.99	±9.6 %
		Subframe=2,3,4,7,8,9)		- 1-	
10510	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL	LTE-TDD	8.49	± 9.6 %
10511	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL	LTE-TDD	8.51	± 9.6 %
10011		Subframe=2,3,4,7,8,9)		0.01	20.0 %
10512	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 %
		Subframe=2,3,4,7,8,9)			
10513	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL	LTE-TDD	8.42	± 9.6 %
10514	AAF	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL	LTE-TDD	8.45	± 9.6 %
10514		Subframe=2,3,4,7,8,9)		0.40	1 0.0 /0
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	$\pm 9.6\%$
10533	AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	WLAN WLAN	8.38	± 9.6 % ± 9.6 %
10534	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	VVLAN	0.40	1 1 9.0 70

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10535	1 + - =		······		
	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, MCS3, 99pc duty cycle)	WLAN	8.61	± 9.6 %
10550					
	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	WLAN	8.25	±9.6 %
		cycle)			
10565	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty	WLAN	8.45	± 9.6.%
		cycle)			
10566	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty	WLAN	8.13	± 9.6 %
		cycle)			
10567	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty	WLAN	8.00	± 9.6 %
		cycle)			
10568	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty	WLAN	8.37	± 9.6 %
		cycle)			
10569	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty	WLAN	8.10	± 9.6 %
		cycle)			
10570) AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty	WLAN	8.30	± 9.6 %
		cycle)			
10571					
	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	WLAN	1.99	±9.6 %
10572	AAA		WLAN WLAN	1.99	± 9.6 % ± 9.6 %
10572 10573		IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	WLAN	1.99	± 9.6 %
10573	AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	WLAN WLAN	1.99 1.98	± 9.6 % ± 9.6 %
10573 10574	AAA AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	WLAN WLAN WLAN	1.99 1.98 1.98	± 9.6 % ± 9.6 % ± 9.6 %
10573	AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty	WLAN WLAN	1.99 1.98	± 9.6 % ± 9.6 %
10573 10574 10575	AAA AAA AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59	$\begin{array}{c} \pm \ 9.6 \ \% \\ \pm \ 9.6 \ \% \end{array}$
10573 10574	AAA AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty	WLAN WLAN WLAN	1.99 1.98 1.98	± 9.6 % ± 9.6 % ± 9.6 %
10573 10574 10575 10576	AAA AAA AAA AAA AAA AAA AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60	$\begin{array}{r} \pm 9.6 \% \\ \end{array}$
10573 10574 10575	AAA AAA AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty	WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59	$\begin{array}{c} \pm \ 9.6 \ \% \\ \pm \ 9.6 \ \% \end{array}$
10573 10574 10575 10576 10577	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10573 10574 10575 10576	AAA AAA AAA AAA AAA AAA AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty	WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60	$\begin{array}{r} \pm 9.6 \% \\ \end{array}$
10573 10574 10575 10576 10577 10577	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10573 10574 10575 10576 10577	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10573 10574 10575 10576 10577 10578 10579	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10573 10574 10575 10576 10577 10577	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty	WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10573 10574 10575 10576 10577 10578 10579 10580	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10573 10574 10575 10576 10577 10578 10579	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty	WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10573 10574 10575 10576 10577 10578 10579 10580 10581	AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76 8.35	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10573 10574 10575 10576 10577 10578 10579 10580	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10573 10574 10575 10576 10577 10578 10579 10580 10581	AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76 8.35	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10573 10574 10575 10576 10577 10578 10579 10580 10581	AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76 8.35	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10573 10574 10575 10576 10577 10578 10579 10580 10581	AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76 8.35 8.67	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10573 10574 10575 10576 10577 10578 10579 10580 10581 10582 10583	AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76 8.35 8.67 8.69	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$
10573 10574 10575 10576 10577 10578 10579 10580 10581 10582 10583	AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	1.99 1.98 1.98 8.59 8.60 8.70 8.49 8.36 8.76 8.35 8.67 8.59	$\begin{array}{r} \pm 9.6 \% \\ \pm 9.6 \% \end{array}$

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				a	
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	±96%
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 %
10631	AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	WLAN	8.74	$\pm 9.6\%$
10632	AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10633	AAB	IEEE 802.11ac WiFI (80MHz, MCS8, 90pc duty cycle)	WLAN	8.80	±9.6%
10634	AAB	IEEE 802.11ac WiFI (80MHz, MCS8, 90pc duty cycle)	WLAN	8.81	
	AAB		WLAN		$\pm 9.6\%$
10636		IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)		8.83	$\pm 9.6\%$
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 %

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February 19, 2019

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	$\pm 9.6\%$
10662	AAA	Pulse Waveform (200Hz, 80%)	Test	0.97	± 9.6 %
10670	AAA	Bluetooth Low Energy	Bluetooth	2.19	$\pm 9.6\%$

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

Calibration Laboratory of Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland

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

KA

Schweizerischer Kalibrierdienst

- Service suisse d'étalonnage
- Servizio svizzero di taratura
- Swiss Calibration Service

Accreditation No.: SCS 0108

ATM

5/30/19

Client PC Test

Certificate No: EX3-7538_May19

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CALIBRATION CERTIFICATE

Object

EX3DV4 - SN:7538

Calibration procedure(s)

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

Calibration date:

May 16, 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	03-Apr-19 (No. 217-02892/02893)	Apr-20
Power sensor NRP-Z91	SN: 103244	03-Apr-19 (No. 217-02892)	Apr-20
Power sensor NRP-Z91	SN: 103245	03-Apr-19 (No. 217-02893)	Apr-20
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-19 (No. 217-02894)	Apr-20
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

	Name	Function	Signature
Calibrated by:	Manu Seitz	Laboratory Technician	11 ÷ 6
			Lef
Approved by:	Katja Pokovic	Technical Manager	2211
			H. H.F.
			lssued: May 16, 2019
This calibration certificate	e shall not be reproduced except in	full without written approval of the lab	oratory.

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





Schweizerischer Kalibrierdienst

- Service suisse d'étalonnage
- S Servizio svizzero di taratura
 - Swiss Calibration Service

Accreditation No.: SCS 0108

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

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,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 9	9 rotation around an axis that is in the plane normal to probe axis (at measurement center),
Connector Angle	i.e., $\vartheta = 0$ is normal to probe axis information used in DASY system to align probe sensor X to the robot coordinate system
_	is a system to digit provo concorrection to the tobol cool diffate system

Calibration is Performed According to the Following Standards:

- a) 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
- b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from handheld and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) 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
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORMx, y, z: Assessed for E-field polarization 9 = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx, y, z are only intermediate values, i.e., the uncertainties of NORMx, y, z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,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.
- *DCPx,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
- *Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,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 ≤ 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 NORMx,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 NORMx (no uncertainty required).

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm $(\mu V/(V/m)^2)^A$	0.61	0.47	0.62	± 10.1 %
DCP (mV) ^B	98.8	98.5	101.3	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dBõV	С	D dB	VR mV	Max dev,	Max Unc ^E (k≕2)
0	CW	X	0.00	0.00	1.00	0.00	155.2	± 3.0 %	$\pm 4.7\%$
		Y	0.00	0.00	1.00		137.9	- 0.0 /0	1 4.1 70
		Z	0.00	0.00	1.00		155.8		
10352-	Pulse Waveform (200Hz, 10%)	X	15.00	88.04	20.18	10.00	60.0	± 3.0 %	± 9.6 %
AAA		Y	15.00	90.19	21.39	1	60.0		20.0 %
		Z	15.00	88.18	20.24		60.0		
10353-	Pulse Waveform (200Hz, 20%)	X	15.00	88.45	19.13	6.99	80.0	± 1.6 %	±9.6 %
AAA		Y	15.00	91.70	21.05	1	80.0		20.0 %
		Z	15.00	89,12	19.45		80.0		
10354-	Pulse Waveform (200Hz, 40%)	X	15.00	88.58	17.59	3.98	95.0	± 1.1 %	± 9.6 %
AAA		Y	15.00	94.84	21.19		95.0		
		Z	15.00	89.93	18.24		95.0		
10355-	Pulse Waveform (200Hz, 60%)	X	15.00	86.39	15.08	2.22	120.0	± 1.2 %	±9.6 %
AAA		Y	15.00	105.53	24.85		120.0	/0	- 0.0 //
		Z	15.00	88.42	16.02		120.0		
10387-	QPSK Waveform, 1 MHz	X	0.62	60.57	7.83	0.00	150.0	±2.8 %	± 9.6 %
AAA		Y	0.80	62.61	10.33		150.0		
		Z	0.58	60.38	7.49		150.0		
10388-	QPSK Waveform, 10 MHz	X	2.13	67.36	15.14	0.00	150.0	± 1.1 %	± 9.6 %
AAA		Y	2.28	68.19	15.85		150.0		, •
		Z	2.15	67.77	15.44	1	150.0		
10396-	64-QAM Waveform, 100 kHz	Х	2.91	69.44	18.28	3.01	150.0	± 0.8 %	± 9.6 %
AAA		Y	3.20	71.32	19.14		150.0		
		Z	2.90	69.50	18.32		150.0		
10399-	64-QAM Waveform, 40 MHz	Х	3.48	66.95	15.60	0.00	150.0	± 1.9 %	±9.6 %
AAA		Y	3.54	67.12	15.83		150.0	-	
		Ζ	3.50	67.18	15,77		150.0		
10414-	WLAN CCDF, 64-QAM, 40MHz	X	4.92	65.80	15.63	0.00	150.0	± 3.9 %	± 9.6 %
AAA		Y	4.92	65,59	15.57		150.0	_	
		Ζ	4.88	65,83	15.67		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.

	C1 fF	C2 fF	α V ⁻¹	T1 ms.V ⁻²	T2 ms.V ⁻¹	T3 ms	T4 V ⁻²	T5 V ⁻¹	Т6
Х	46.5	359.24	37.65	15.76	0.50	5.10	0.00	0.57	1.01
Y	51.3	388.10	36.40	16.50	0.29	5.10	1.26	0.35	1.01
Ζ	43.5	334.60	37.33	14.65	0.48	5.10	0.00	0.56	1.01

Sensor Model Parameters

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	13.9
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

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	10.68	10.68	10.68	0.38	0.86	± 12.0 %
835	41.5	0.90	10.30	10.30	10.30	0.31	0.98	± 12.0 %
1750	40.1	1.37	8.67	8.67	8.67	0.35	0.90	± 12.0 %
1900	40.0	1.40	8.32	8.32	8.32	0.32	0.90	± 12.0 %
2300	39.5	1.67	7.79	7.79	7.79	0.37	0.87	± 12.0 %
2450	39.2	1.80	7.41	7.41	7.41	0.30	0.87	± 12.0 %
2600	39.0	1.96	7.20	7.20	7.20	0.27	0.97	± 12.0 %

Calibration Parameter Determined in Head Tissue Simulating Media

^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 \pm 110 MHz. ^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to \pm 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. ⁶ 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.

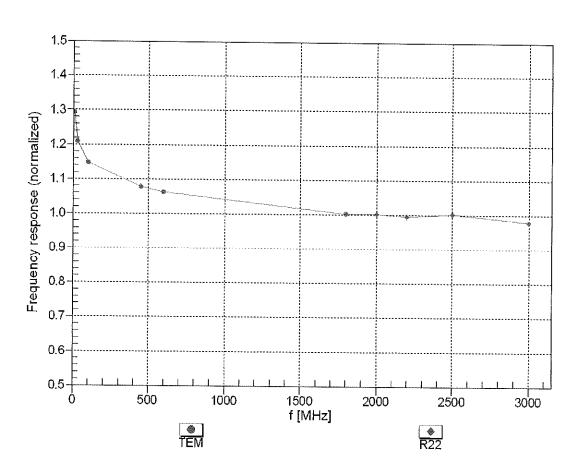
f (MHz) ^c	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	55.5	0.96	10.11	10.11	10.11	0.38	0.86	± 12.0 %
835	55.2	0.97	9.85	9.85	9.85	0.31	0.98	± 12.0 %
1750	53.4	1.49	8.52	8.52	8.52	0.37	0.93	± 12.0 %
1900	53.3	1.52	8.08	8.08	8.08	0.31	0.99	± 12.0 %
2300	52.9	1.81	7.73	7.73	7.73	0.36	0.90	± 12.0 %
2450	52.7	1.95	7.66	7.66	7.66	0.31	0.87	± 12.0 %
2600	52.5	2.16	7.36	7.36	7.36	0.28	0.99	± 12.0 %

Calibration Parameter Determined in Body Tissue Simulating Media

^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.

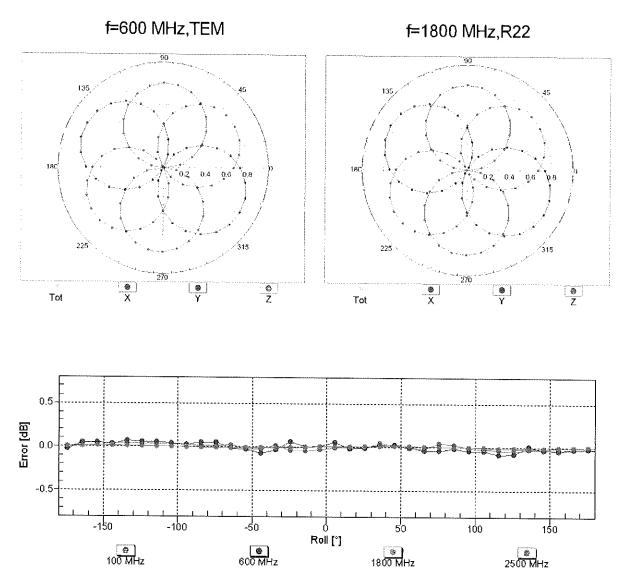
At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of ⁶ Alpha/Depth 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.



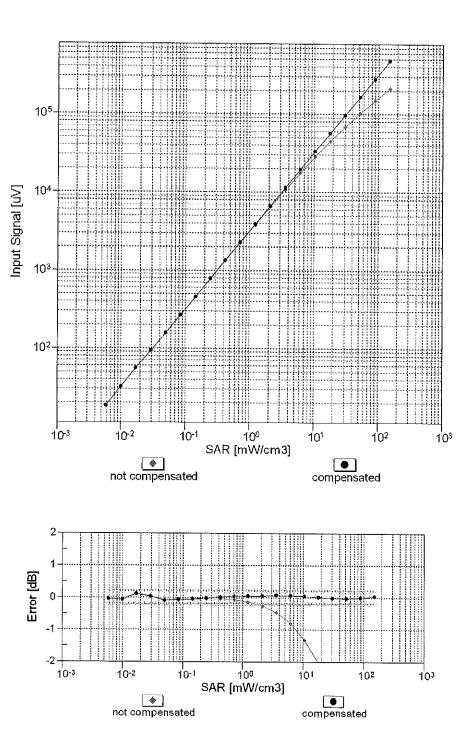
Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)

Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)



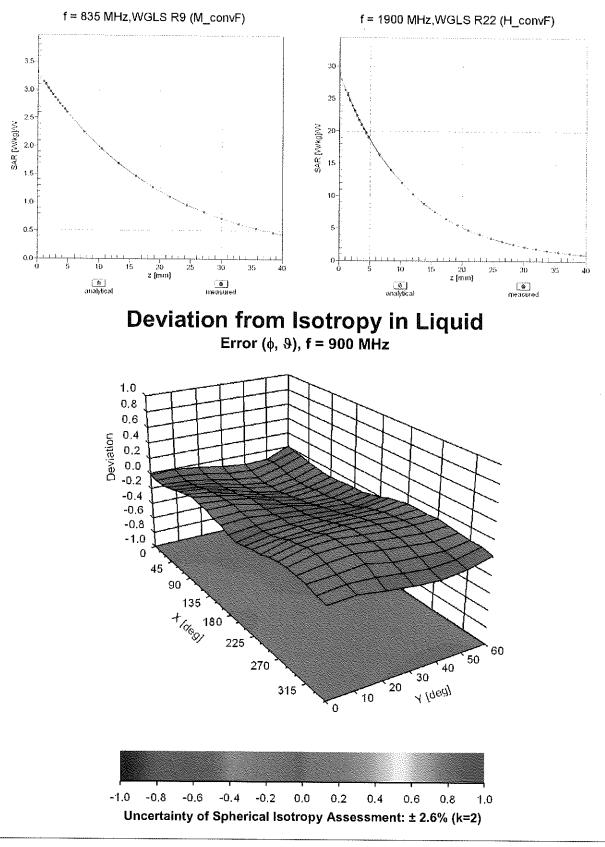
Receiving Pattern (ϕ), $\vartheta = 0^{\circ}$

Uncertainty of Axial Isotropy Assessment: ± 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

Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E (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	EEE 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, 12 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	10.00	± 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 %
10100	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 %
10102	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	± 9,6 %
10103	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.97	± 9.6 %
10104	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHZ, 16-QAM)	LTE-TDD	10.01	± 9.6 %
10103	CAG	LTE-FDD (SC-FDMA, 100% RB, 20 MHZ, 04-QAM)	LTE-FDD	5.80	± 9.6 %
10100		1 Lies of our divin, invite, in which, where the test of		0.00	1 1 9.0 70

10109	CAG	TE EDD /SC EDMA 100% DB 10 MULT 10 OAM		0.40	
10109	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	6.43	± 9.6 %
10110	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSR)	LTE-FDD	5.75	±9.6%
10112	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHZ, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.44	± 9.6 %
10112	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.59	± 9.6 %
10114	CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	LTE-FDD	6.62	± 9.6 %
10115	CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN WLAN	8.10	± 9.6 %
10116	CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.46	± 9.6 %
10117	CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.15	± 9.6 %
10118	CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.07 8.59	± 9.6 % ± 9.6 %
10119	CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	$\pm 9.6\%$
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, 16-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		LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	±9.6 %
10162		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 CAE	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	±9.6 %
10109	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	±9.6%
10170	AAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	±9.6 %
10172	CAG	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 (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9,21	± 9.6 %
10174	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10175	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	10.25	±9.6 %
10176	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	5.72	±9.6%
10177	CAI	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	6.52	± 9.6 %
10178	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	5.73	± 9.6 %
10179	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)		6.52	$\pm 9.6\%$
10180	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD LTE-FDD	6.50	± 9.6 %
10181	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	6.50 5.72	± 9.6 %
10182	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	±9.6 % ±9.6 %
10183	AAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 % ± 9.6 %
10184	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	
10185	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	±9.6 % ±9.6 %
10186	AAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	$\pm 9.6\%$ $\pm 9.6\%$
10187	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	$\pm 9.6\%$ $\pm 9.6\%$
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	$\pm 9.6\%$ $\pm 9.6\%$
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 Mixed, 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 %
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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		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		LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %
10269		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)		4.87	± 9.6 %
10275	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.96	± 9.6 %
10277		PHS (QPSK)	PHS	11.81	± 9.6 %
10278	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	± 9.6 %
10279		PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	± 9.6 %
10290	AAB	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	$\pm 9.6\%$
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 %
1 112/016	AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.49	± 9.6 %
10295		A THE GIVEN CONTRACT SOUTH OF THE AND A DESCRIPTION OF THE STREET AND A DESCRIPTION OF THE ADDRESS OF THE ADDRE	7 1 1 L L 1 1	681	1 4 4 6 9/
10297	AAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	± 9.6 %
	AAD AAD AAD	LTE-FDD (SC-FDMA, 30% RB, 20 MR2, QFSK) LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD LTE-FDD	5.72 6.39	± 9.6 % ± 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	WIMAX	12.03	± 9.6 %
		symbols)		12.07	1 3.0 %
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	WIMAX	15.24	± 9.6 %
		symbols)	******	10.24	2 3.0 %
10306	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18	WIMAX	14.67	± 9.6 %
		symbols)	V V 11VI/	14.07	1 3.0 %
10307	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18	WIMAX	14.49	± 9.6 %
		symbols)		14.40	1 0.0 70
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	WIMAX	14.58	± 9.6 %
		symbols)		11.00	10.0 %
10310	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18	WIMAX	14,57	±9.6 %
		symbols)			
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	$\pm 9.6\%$
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	$\pm 9.6\%$
10387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	$\pm 9.6\%$
10388	AAA	QPSK Waveform, 10 MHz			
10396	AAA	64-QAM Waveform, 100 kHz	Generic Generic	5.22	± 9.6 %
10399	AAA	64-QAM Waveform, 40 MHz		6.27	± 9.6 %
10400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	Generic	6.27	± 9.6 %
10401	AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	WLAN	8.37	±9.6 %
10401	AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	WLAN	8.60	± 9.6 %
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	WLAN	8.53	± 9.6 %
10403	AAB	CDMA2000 (1XEV-DO, Rev. 0) CDMA2000 (1XEV-DO, Rev. A)	CDMA2000	3.76	±9.6%
10406	AAB	CDMA2000 (1227-DO, Rev. A) CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	3.77	±9.6 %
10410	AAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL	CDMA2000	5.22	± 9.6 %
10410		Subframe=2,3,4,7,8,9, Subframe Conf=4)	LTE-TDD	7.82	± 9.6 %
10414	AAA	WLAN CCDF, 64-QAM, 40MHz	Ormania	0.54	
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	Generic	8.54	±9.6 %
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	WLAN	1.54	±9.6 %
10417	AAB	IEEE 802.11g Wirl 2.4 GHz (ERF-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)	WLAN	8.23	±9.6 %
10410		Long preambule)	WLAN	8.14	±9.6 %
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle,		0.40	
10410	,,,,,	Short preambule)	WLAN	8.19	± 9.6 %
10422	AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	14(1-0.5)	0.00	100%
10423	AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.32	± 9.6 %
10424	AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 10-QAM)	WLAN	8,47	± 9.6 %
10425	AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	8.40	±96%
10426	AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.41	± 9.6 %
10420	AAB	IEEE 002.1111 (HT Greenfield, 50 Mbps, 16-QAM)	WLAN	8.45	±9.6 %
10427		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 %
	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	LTE-TDD	7.82	±9.6 %
10/17	A A E	Subframe=2,3,4,7,8,9)			
10447	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	±9.6 %
	AAD	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	LTE-FDD	7.53	±9.6 %
10448					
10448 10449 10450	AAC AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD LTE-FDD	7.51	± 9.6 %

10466 AAB FIEE B02, 11ac VIIF (1060/Hz, 64-OAM, 99pc duly cycle) VUCN 8.62 ± 9.6 % 10457 AAA COMA2000 (12EV-DO, Rev. B., 2 carriers) CDMA2000 8.52 ± 9.6 % 10458 AAA COMA2000 (12EV-DO, Rev. B., 2 carriers) CDMA2000 8.25 ± 9.6 % 10460 AAA UNTE-FDD (WCDMA, AMR) WCDMA 2.30 ± 9.6 % 10461 AAA UTE-TDD (5.7-DMA, 1 RB, 1.4 MHz, 16-OAM, UL LTE-TDD 8.30 ± 9.6 % 10461 AAA LTE-TDD (5.7-DMA, 1 RB, 1.4 MHz, 16-OAM, UL LTE-TDD 8.26 ± 9.6 % 10463 AAA LTE-TDD (5.7-DMA, 1 RB, 1.4 MHz, 0FSK, UL LTE-TDD 7.82 ± 9.6 % 10464 AAB LTE-TDD (5.2-FDMA, 1 RB, 3 MHz, 0-GAM, UL LTE-TDD 7.82 ± 9.6 % 10466 AAB LTE-TDD (5.2-FDMA, 1 RB, 5 MHz, 16-QAM, UL LTE-TDD 7.82 ± 9.6 % 10467 AAE LTE-TDD (5.2-FDMA, 1 RB, 5 MHz, 16-QAM, UL LTE-TDD 7.82 ± 9.6 % 10468 AAB LTE-TDD (5.2-FDMA, 1 RB, 5 MHz, 16-QAM, UL	10451	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	± 9.6 %
10457 AAA UMTS-FDD (DC-H5DPA) WCDMA 6.6.5 ± 9.6 % 10458 AAA CDMA2000 (EKEV-DO, Rev. B. 3 carriers) CDMA2000 6.55 ± 9.6 % 10460 AAA CDMA2000 (EKEV-DO, Rev. B. 3 carriers) CDMA2000 8.25 ± 9.6 % 10460 AAA LTE-TDD (SC-FDMA, 1 RB, 14 MHz, OPSK, UL UTE-TDD 7.82 ± 9.6 % 10461 AAA LTE-TDD (SC-FDMA, 1 RB, 14 MHz, 16-OAM, UL LTE-TDD 8.30 ± 9.6 % 10462 AAA LTE-TDD (SC-FDMA, 1 RB, 3 MHz, OPSK, UL LTE-TDD 7.82 ± 9.6 % 10464 AAB LTE-TDD (SC-FDMA, 1 RB, 3 MHz, OPSK, UL LTE-TDD 7.82 ± 9.6 % 10466 AAB LTE-TDD (SC-FDMA, 1 RB, 3 MHz, OPSK, UL LTE-TDD 8.32 ± 9.6 % 10466 AAB LTE-TDD (SC-FDMA, 1 RB, 3 MHz, OPSK, UL LTE-TDD 8.32 ± 9.6 % 10467 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, OPSK, UL LTE-TDD 8.32 ± 9.6 % 10468 AAB LTE-TDD (SC-FDMA, 1 RB, 5 MHz, OPSK, UL LTE-TDD						
10458 AAA CDMA2000 (152'-DG, Nev. B, 3 carriers) CDMA2000 8.25 ± 9.6 % 10459 AAA UMTS-FDD (WCDMA, AMR) WCDMA 2.39 f. % 10461 AAA UMTS-FDD (WCDMA, AMR) WCDMA 2.39 f. % 10461 AAA UTE-TDD (SCPDMA, 1RB, 14 MHz, GPSK, UL LTE-TDD 7.32 ± 9.6 % 10462 AAA LTE-TDD (SCPDMA, 1RB, 14 MHz, 16-QAM, UL LTE-TDD 8.30 ± 9.6 % 10463 AAA LTE-TDD (SCPDMA, 1RB, 14 MHz, 16-QAM, UL LTE-TDD 7.32 ± 9.6 % 10464 AAB LTE-TDD (SCPDMA, 1RB, 3 MHz, QPSK, UL LTE-TDD 7.32 ± 9.6 % 10466 AAB LTE-TDD (SCPDMA, 1RB, 3 MHz, QPSK, UL LTE-TDD 7.82 ± 9.6 % 10466 AAB LTE-TDD (SCPDMA, 1RB, 5 MHz, QPSK, UL LTE-TDD 7.82 ± 9.6 % 10467 AAE LTE-TDD (SCPDMA, 1RB, 5 MHz, QPSK, UL LTE-TDD 7.82 ± 9.6 % 10468 AAE LTE-TDD (SCPDMA, 1RB, 5 MHz, G-QAM, UL LTE-TDD 7.82 ± 9.6 %						
10459 AAA CDMA2000 (1xEV-DO, Rav. B. 3 carriers) CDMA2000 (1xEV-DA, 1RB, 14 MHz, QPSK, UL UTE-TDD 7.82 ±9.6 % 10461 AAA LTE-TDD (SC-FDMA, 1RB, 14 MHz, QPSK, UL LTE-TDD 7.82 ±9.6 % 10462 AAA LTE-TDD (SC-FDMA, 1RB, 14 MHz, 16-QAM, UL LTE-TDD 8.30 ±9.6 % 10463 AAA LTE-TDD (SC-FDMA, 1RB, 14 MHz, 46-QAM, UL LTE-TDD 8.56 ±9.6 % 10464 AAB LTE-TDD (SC-FDMA, 1RB, 3 MHz, QPSK, UL LTE-TDD 7.82 ±9.6 % 10464 AAB LTE-TDD (SC-FDMA, 1RB, 3 MHz, QPSK, UL LTE-TDD 8.32 ±9.6 % 10465 AAB LTE-TDD (SC-FDMA, 1RB, 3 MHz, QPSK, UL LTE-TDD 8.32 ±9.6 % 10466 AAB LTE-TDD (SC-FDMA, 1RB, 5 MHz, QPSK, UL LTE-TDD 8.32 ±9.6 % 10467 AAE LTE-TDD (SC-FDMA, 1RB, 5 MHz, G-QAM, UL LTE-TDD 8.32 ±9.6 % 10468 AAE LTE-TDD (SC-FDMA, 1RB, 5 MHz, G-QAM, UL LTE-TDD 8.32 ±9.6 % 10469 AAE LTE-TDD (SC-						
10460 AAA UMTS-FDD (WCDMA, AMR) WCDMA 2.39 ± 9.6 % 10461 AAA LTE-TDD (SC-FDMA, 148, 14 MHz, GPSK, UL LTE-TDD 7.82 ± 9.6 % 10462 AAA LTE-TDD (SC-FDMA, 148, 14 MHz, GPSK, UL LTE-TDD 8.30 ± 9.6 % 10463 AAA LTE-TDD (SC-FDMA, 148, 14 MHz, 64-QAM, UL LTE-TDD 8.56 ± 9.6 % 10464 AB LTE-TDD (SC-FDMA, 148, 3 MHz, 16-QAM, UL LTE-TDD 7.82 ± 9.6 % 10465 AB LTE-TDD (SC-FDMA, 148, 3 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10466 AB LTE-TDD (SC-FDMA, 148, 3 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10467 AAE LTE-TDD (SC-FDMA, 188, 5 MHz, 16-QAM, UL LTE-TDD 7.82 ± 9.6 % 10468 AAE LTE-TDD (SC-FDMA, 188, 5 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10467 AAE LTE-TDD (SC-FDMA, 188, 5 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10468 AAE LTE-TDD (SC-FDMA, 188, 5 MHz, 16-QAM, UL LTE-TDD				CDMA2000		
10461 AAA LTE-TDD IC-FDD 7.82 ± 9.6 % 10462 AAA LTE-TDD S.01 ± 9.6 % S.01 ± 9.6 % 10463 AAA LTE-TDD S.01 ± 9.6 % S.01 ± 9.6 % 10463 AAA LTE-TDD S.02 ± 9.6 % S.01 ± 9.6 % 10464 AAB LTE-TDD S.02 ± 9.6 % S.01 LTE-TDD 8.56 ± 9.6 % 10464 AAB LTE-TDD S.02 ± 9.6 % S.01 LTE-TDD 8.22 ± 9.6 % 10466 AAB LTE-TDD S.02 ± 9.6 % S.01 LTE-TDD 8.32 ± 9.6 % 10467 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 0 GAM, UL LTE-TDD 7.82 ± 9.6 % 10468 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 0 GAM, UL LTE-TDD 7.82 ± 9.6 % 10470 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 0 GAM, UL LTE-TDD 7.82 ± 9.6 % 10471 AAE LTE-TDD						
Subframe-23.4.7.8.9) TE-TDD 8.30 ± 9.6 % 10462 AA LTE-TDD 8.30 ± 9.6 % 10463 AA LTE-TDD 8.16 ± 9.6 % 10463 AA LTE-TDD 8.16 ± 9.6 % 10464 AB LTE-TDD 7.82 ± 9.6 % 10464 AB LTE-TDD 7.82 ± 9.6 % 10465 AB LTE-TDD 7.82 ± 9.6 % 10465 AB LTE-TDD 7.82 ± 9.6 % 10466 AB LTE-TDD 7.82 ± 9.6 % 10466 AB LTE-TDD 7.82 ± 9.6 % 10467 AE LTE-TDD 7.82 ± 9.6 % 10468 AE LTE-TDD 7.82 ± 9.6 % 10469 AE LTE-TDD 8.56 ± 9.6 % 10470 AE LTE-TDD 7.82 ± 9.6 % 10470 AE LTE-TDD 7.82 ± 9.6 % 10477						
10462 AAA LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 46-OAM, UL LTE-TDD 8.30 ±9.6 % 10463 AAA LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-OAM, UL LTE-TDD 8.56 ±9.6 % 10464 AAB LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL LTE-TDD 7.82 ±9.6 % 10464 AAB LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL LTE-TDD 8.32 ±9.6 % 10466 AAB LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL LTE-TDD 8.32 ±9.6 % 10467 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL LTE-TDD 7.82 ±9.6 % 10467 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, G4-QAM, UL LTE-TDD 8.32 ±9.6 % 10468 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, G4-QAM, UL LTE-TDD 8.32 ±9.6 % 10470 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL LTE-TDD 8.32 ±9.6 % 10471 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL LTE-TDD 8.32 ±9.6 % 10472 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL	10101	1.000			1.02	2010 /0
Subframe=2.3.4,7.8.9 TE-TDD 8.56 ± 9.6 % 10463 AA LTE-TDD 8.56 ± 9.6 % 10464 AA LTE-TDD 7.82 ± 9.6 % 10464 AA LTE-TDD 7.82 ± 9.6 % 10465 AA LTE-TDD 7.82 ± 9.6 % 10466 AA LTE-TDD 8.72 ± 9.6 % 10466 AA LTE-TDD 8.77 ± 9.6 % 10466 AA LTE-TDD 7.82 ± 9.6 % 10467 AA LTE-TDD 7.82 ± 9.6 % 10467 AA LTE-TDD 7.82 ± 9.6 % 10468 AA LTE-TDD 8.32 ± 9.6 % 10468 AA LTE-TDD 8.32 ± 9.6 % 10470 AA LTE-TDD 7.82 ± 9.6 % 10470 AE LTE-TDD 7.82 ± 9.6 % 10474 AE LTE-TDD 7.82 ± 9.6 % 10474	10462		LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL	LTE-TDD	8.30	±9.6 %
10463 AAA LTE-TDD (SC-FDMA, 1 RB, 1 4 MHz, 64-0AM, UL LTE-TDD 8.56 ± 9.6 % 10464 AAB LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-0AM, UL LTE-TDD 7.82 ± 9.6 % 10465 AAB LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-0AM, UL LTE-TDD 8.32 ± 9.6 % 10466 AAB LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-0AM, UL LTE-TDD 8.67 ± 9.6 % 10467 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-0AM, UL LTE-TDD 7.82 ± 9.6 % 10468 AAE LTE-TDO (SC-FDMA, 1 RB, 5 MHz, 64-0AM, UL LTE-TDD 8.32 ± 9.6 % 10469 AAE LTE-TDO (SC-FDMA, 1 RB, 5 MHz, 64-0AM, UL LTE-TDD 8.56 ± 9.6 % 10470 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-0AM, UL LTE-TDD 7.82 ± 9.6 % 10471 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-0AM, UL LTE-TDD 8.57 ± 9.6 % 10472 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-0AM, UL LTE-TDD 8.57 ± 9.6 % 10471 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64						/ _
Subframe-2,3,4,7,8,9) LTE-TDD 7.82 ± 9.6 % 10464 AAB LTE-TDD (SC-FDMA, 1RB, 3 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10465 AAB LTE-TDD (SC-FDMA, 1RB, 3 MHz, 64-QAM, UL LTE-TDD 8.32 ± 9.6 % 10466 AAB LTE-TDD (SC-FDMA, 1RB, 5 MHz, QPSK, UL LTE-TDD 7.82 ± 9.6 % 10467 AAE LTE-TDD (SC-FDMA, 1RB, 5 MHz, QPSK, UL LTE-TDD 8.32 ± 9.6 % 10468 AAE LTE-TDD (SC-FDMA, 1RB, 5 MHz, 0PSK, UL LTE-TDD 8.32 ± 9.6 % 10469 AAE LTE-TDD (SC-FDMA, 1RB, 5 MHz, 0PSK, UL LTE-TDD 8.32 ± 9.6 % 10470 AAE LTE-TDD (SC-FDMA, 1RB, 10 MHz, 0PSK, UL LTE-TDD 8.32 ± 9.6 % 10471 AAE LTE-TDD (SC-FDMA, 1RB, 10 MHz, 0PSK, UL LTE-TDD 8.32 ± 9.6 % 10472 AAE LTE-TDD (SC-FDMA, 1RB, 10 MHz, 0PSK, UL LTE-TDD 8.32 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1RB, 10 MHz, 0PSK, UL LTE-TDD 8.32 ± 9.6 % </td <td>10463</td> <td>AAA</td> <td>LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL</td> <td>LTE-TDD</td> <td>8.56</td> <td>±9.6 %</td>	10463	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL	LTE-TDD	8.56	±9.6 %
10464 AAB LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL LTE-TDD 7.82 ± 9.6 % 10465 AAB LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10466 AAB LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL LTE-TDD 8.57 ± 9.6 % 10467 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL LTE-TDD 7.82 ± 9.6 % 10468 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL LTE-TDD 8.32 ± 9.6 % 10469 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10470 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 0-QPSK, UL LTE-TDD 7.82 ± 9.6 % 10471 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 0-QPSK, UL LTE-TDD 7.82 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 0-QPSK, UL LTE-TDD 8.32 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 0-QPSK, UL LTE-TDD 8.32 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 0-QAM, UL						
Subframe-2,3,4,7,8,9) ITE-TOD 8.32 ± 9.6 % 10466 AAB ITE-TOD 8.32 ± 9.6 % 10466 AAB ITE-TOD 8.37 ± 9.6 % 10466 AAB ITE-TOD 8.57 ± 9.6 % 10467 AAE ITE-TOD 105C-FDMA, 1 RB, 5 MHz, QPSK, UL ITE-TOD 8.32 ± 9.6 % 10468 AAE ITE-TOD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL ITE-TDD 8.32 ± 9.6 % 10469 AAE ITE-TDD (SC-FDMA, 1 RB, 5 MHz, 04-QAM, UL ITE-TDD 7.82 ± 9.6 % 10470 AAE ITE-TDD (SC-FDMA, 1 RB, 5 MHz, 04-QAM, UL ITE-TDD 7.82 ± 9.6 % 10471 AAE ITE-TDD (SC-FDMA, 1 RB, 10 MHz, 04-QAM, UL ITE-TDD 7.82 ± 9.6 % 10471 AAE ITE-TDD (SC-FDMA, 1 RB, 10 MHz, 04-QAM, UL ITE-TDD 8.32 ± 9.6 % 10471 AAE ITE-TDD (SC-FDMA, 1 RB, 15 MHz, 04-QAM, UL ITE-TDD 8.32 ± 9.6 % 10473 AAE ITE-TDD (SC-FDMA, 1 RB, 15 MHz, 04-QAM, UL ITE-TDD </td <td>10464</td> <td>AAB</td> <td></td> <td>LTE-TDD</td> <td>7.82</td> <td>± 9.6 %</td>	10464	AAB		LTE-TDD	7.82	± 9.6 %
10466 AAB LTE-TDD (So.2) ± 9.6 % 10466 AAB LTE-TDD (So.7) ± 9.6 % 10466 AAB LTE-TDD (So.7) ± 9.6 % 10467 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 0PSK, UL LTE-TDD 7.82 ± 9.6 % 10468 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 0PSK, UL LTE-TDD 8.32 ± 9.6 % 10468 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL LTE-TDD 8.52 ± 9.6 % 10470 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 0PSK, UL LTE-TDD 7.82 ± 9.6 % 10470 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL LTE-TDD 8.52 ± 9.6 % 10471 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL LTE-TDD 8.52 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL LTE-TDD 8.52 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL LTE-TDD 8.57 ± 9.6 % 10475 AAE LTE-TDD (SC-FDMA,			Subframe=2,3,4,7,8,9)			
Subframe=2,3,4,7,8,9 LTE-TDD 8.57 ± 9.6 % 10466 AAB LTE-TDD [SC-FDMA, 1 RB, 5 MHz, QPSK, UL LTE-TDD 7.82 ± 9.6 % 10467 AAE LTE-TDD [SC-FDMA, 1 RB, 5 MHz, QPSK, UL LTE-TDD 8.32 ± 9.6 % 10468 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 44-QAM, UL LTE-TDD 8.56 ± 9.6 % 10469 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 44-QAM, UL LTE-TDD 8.56 ± 9.6 % 10470 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 0PSK, UL LTE-TDD 7.82 ± 9.6 % 10471 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 0PSK, UL LTE-TDD 8.52 ± 9.6 % 10472 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 0PSK, UL LTE-TDD 8.32 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 0A-QAM, UL LTE-TDD 8.32 ±	10465	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL	LTE-TDD	8.32	± 9.6 %
Subframe=2,3,4,7,8,9 LTE-TDD 7.82 ± 9.6 % 10467 AAE LTE-TDD [SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10468 AAE LTE-TDD [SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL LTE-TDD 8.56 ± 9.6 % 10469 AAE LTE-TDD [SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL LTE-TDD 8.56 ± 9.6 % 10470 AAE LTE-TDD [SC-FDMA, 1 RB, 10 MHz, 0PSK, UL LTE-TDD 7.82 ± 9.6 % 10471 AAE LTE-TDD [SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10471 AAE LTE-TDD [SC-FDMA, 1 RB, 10 MHz, 0FSK, UL LTE-TDD 8.32 ± 9.6 % 10472 AAE LTE-TDD [SC-FDMA, 1 RB, 15 MHz, 0PSK, UL LTE-TDD 8.57 ± 9.6 % 10473 AAE LTE-TDD [SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10474 AAE LTE-TDD [SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL LTE-TDD 8.32 ± 9.6 % 10474 AAE LTE-TDD [SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL LTE-TDD 8.57 <			Subframe=2,3,4,7,8,9)			
10467 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL LTE-TDD 7.82 ± 9.6 % 10468 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10469 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL LTE-TDD 8.56 ± 9.6 % 10470 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 0PSK, UL LTE-TDD 7.82 ± 9.6 % 10471 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 0PSK, UL LTE-TDD 8.32 ± 9.6 % 10471 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 0PSK, UL LTE-TDD 8.32 ± 9.6 % 10472 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 0PSK, UL LTE-TDD 8.57 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 0PSK, UL LTE-TDD 8.32 ± 9.6 % 10475 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 0A-QAM, UL LTE-TDD 8.32 ± 9.6 % 10476 AAE LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL LTE-TDD 8.57 ± 9.6 % 10477 AAF LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL </td <td>10466</td> <td>AAB</td> <td>LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL</td> <td>LTE-TDD</td> <td>8.57</td> <td>±9.6 %</td>	10466	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL	LTE-TDD	8.57	±9.6 %
Subframe-2,3,4,7,8,9) LTE-TDD 8.32 ± 9.6 % 10468 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL LTE-TDD 8.52 ± 9.6 % 10469 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL LTE-TDD 8.56 ± 9.6 % 10470 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL LTE-TDD 7.82 ± 9.6 % 10471 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, G-QAM, UL LTE-TDD 8.32 ± 9.6 % 10472 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, G-QAM, UL LTE-TDD 8.57 ± 9.6 % 10473 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 0-QAK, UL LTE-TDD 7.82 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 0-QAM, UL LTE-TDD 8.57 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL LTE-TDD 8.57 ± 9.6 % 10477 AAF LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 0-QAM, UL LTE-TDD 8.57						
10468 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10469 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL LTE-TDD 8.56 ± 9.6 % 10470 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL LTE-TDD 7.82 ± 9.6 % 10471 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL LTE-TDD 8.32 ± 9.6 % 10472 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL LTE-TDD 8.57 ± 9.6 % 10473 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL LTE-TDD 8.57 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL LTE-TDD 8.32 ± 9.6 % 10475 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL LTE-TDD 8.32 ± 9.6 % 10476 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL LTE-TDD 8.57 ± 9.6 % 10477 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL LTE-TDD 8.57 ± 9.6 % 10478 AAF LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM,	10467	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL	LTE-TDD	7.82	±9.6 %
Subframe-2.3.4,7,8,9 LTE-TDD 8.56 ± 9.6 % 10469 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL LTE-TDD 8.56 ± 9.6 % 10470 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL LTE-TDD 7.82 ± 9.6 % 10471 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, GAQM, UL LTE-TDD 8.32 ± 9.6 % 10472 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL LTE-TDD 8.57 ± 9.6 % 10473 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 0PSK, UL LTE-TDD 8.57 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 0PSK, UL LTE-TDD 8.32 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL LTE-TDD 8.32 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL LTE-TDD 8.57 ± 9.6 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL LTE-TDD 8.57 ± 9.6 % 10477 AAF LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 0FQNK, UL LTE-TDD 8.57						
10469 AAE LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL LTE-TDD 8.56 ± 9.6 % 10470 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL LTE-TDD 7.82 ± 9.6 % 10471 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL LTE-TDD 8.32 ± 9.6 % 10471 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL LTE-TDD 8.32 ± 9.6 % 10472 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL LTE-TDD 8.57 ± 9.6 % Subframe=2,3,4,7,8,9) TOTO (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL LTE-TDD 7.82 ± 9.6 % Subframe=2,3,4,7,8,9) TE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL LTE-TDD 8.32 ± 9.6 % 10475 AAE LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL LTE-TDD 8.57 ± 9.6 % 10476 AAE LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL LTE-TDD 8.57 ± 9.6 % 10477 AAF LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL LTE-TDD 8.7 ± 9.6 % 10478 AAF LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL	10468	AAE		LTE-TDD	8.32	±9.6 %
Subframe=2,3,4,7,8,9) LTE-TDD 7.82 ± 9.6 % 10470 AAE LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9) LTE-TDD 8.32 ± 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, 15 MHz, 0PSK, UL Subframe=2,3,4,7,8,9) LTE-TDD 8.57 ± 9.6 % 10473 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 % 10474 AAE LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) LTE-TDD 8.57 ± 9.6 % 10476 AAE LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-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, 64-QAM, UL LTE-TDD 8.57 ± 9.6 % 10476 AAF LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL LTE-TDD 8.57 ± 9.6 % 10477 AAF LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, G4-QAM, UL LTE-TDD 7.74 ± 9.6 % 10478<			Subframe=2,3,4,7,8,9)			
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Subframe=2,3,4,7,8,9)	40474				0.00	100%
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10488 AAE LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL LTE-TDD 7.70 ± 9.6 % 10489 AAE LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL LTE-TDD 8.31 ± 9.6 % 10490 AAE LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL LTE-TDD 8.31 ± 9.6 % 10490 AAE LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL LTE-TDD 8.54 ± 9.6 % 10491 AAE LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL LTE-TDD 7.74 ± 9.6 %	10407				0.00	1 7 0 10
Subframe=2,3,4,7,8,9) LTE-TDD 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 LTE-TDD 7.74 ± 9.6 %	10488				7 70	+96%
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 LTE-TDD 7.74 ± 9.6 %	10400	1.0.1				20,0 /0
Subframe=2,3,4,7,8,9) LTE-TDD 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 LTE-TDD 7.74 ± 9.6 %	10489	AAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-OAM, UI		8.31	± 9.6 %
10490 AAE LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL LTE-TDD 8.54 ± 9.6 % Subframe=2,3,4,7,8,9) 10491 AAE LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL LTE-TDD 7.74 ± 9.6 %			Subframe=2,3,4,7,8,9)			,,,
Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL LTE-TDD 7.74 ± 9.6 %	10490	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz. 64-QAM, UL	LTE-TDD	8.54	± 9.6 %
10491 AAE LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL LTE-TDD 7.74 ± 9.6 %		1				
	10491	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 %
			Subframe=2,3,4,7,8,9)			

10492	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL		0.11	
10492		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	LTE-TDD	8.55	± 9.6 %
		Subframe=2,3,4,7,8,9)			
10494	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 %
10495	AAF	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL	LTE-TDD	8.37	± 9.6 %
10100	/	Subframe=2,3,4,7,8,9)		0.37	x 9.0 %
10496	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL	LTE-TDD	8.54	± 9.6 %
40407		Subframe=2,3,4,7,8,9)			
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	LTE-TDD	8.40	± 9.6 %
·····		Subframe=2,3,4,7,8,9)			10.0 %
10499	AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL	LTE-TDD	8.68	±9.6 %
10500	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL		7.07	
10000		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	LTE-TDD	8.44	± 9.6 %
		Subframe=2,3,4,7,8,9)			
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	LTE-TDD	7.72	± 9.6 %
		Subframe=2,3,4,7,8,9)		1.12	1 9.0 %
10504	AAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL	LTE-TDD	8.31	±9.6 %
10505	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL			
10303		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	LTE-TDD	7.74	± 9.6 %
		Subframe=2,3,4,7,8,9)			_ 0,0 ,0
10507	AAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL	LTE-TDD	8.36	± 9.6 %
10508	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL	LTE-TDD	8.55	± 9.6 %
		Subframe=2,3,4,7,8,9)		0.00	± 9.0 %
10509	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL	LTE-TDD	7.99	± 9.6 %
10510	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL			
10010		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	LTE-TDD	8.51	± 9.6 %
		Subframe=2,3,4,7,8,9)			
10512	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL	LTE-TDD	7.74	±9.6 %
10513	AAF	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL	LTE-TDD	8.42	± 9.6 %
		Subframe=2,3,4,7,8,9)		0.42	19.0 %
10514	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL	LTE-TDD	8.45	± 9.6 %
10515		Subframe=2,3,4,7,8,9)			
10515	AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	WLAN	1.58	±9.6%
10517	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	WLAN WLAN	<u>1.57</u> 1.58	±9.6 % ±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 10522	AAB AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	WLAN	7.97	± 9.6 %
10523	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 38 Mbps, 99pc duty cycle)	WLAN WLAN	8.45 8.08	± 9.6 % ± 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 10527	AAB 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) IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	WLAN	8.21	± 9.6 %
10529	AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	WLAN WLAN	8.36 8.36	±9.6 % ±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 10534	AAB AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	WLAN	8.38	±9.6 %
10004		IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	WLAN	8.45	±9.6 %

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10535	AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10536	AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	WLAN	8.32	$\pm 9.6\%$
10537	AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	WLAN	8.44	± 9.6 %
10538	AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	WLAN	8.54	± 9.6 %
10530	AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	WLAN	8.39	± 9.6 %
10540			WLAN		
		IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)		8.46	$\pm 9.6\%$
10542		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	WLAN	8.25	± 9.6 %
		cvcle)			
10565	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty	WLAN	8.45	± 9.6 %
		cycle)			
10566	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty	WLAN	8.13	± 9.6 %
		cycle)			
10567	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty	WLAN	8.00	± 9.6 %
		cvcle)			
10568	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty	WLAN	8.37	± 9.6 %
		cycle)			
10569	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty	WLAN	8.10	± 9.6 %
		cycle)			/*
10570	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty	WLAN	8.30	± 9.6 %
	1	cycle)			
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	WLAN	8.59	± 9.6 %
10070	1,000	cycle)		0.09	1 2 3.0 /0
10576	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty	WLAN	8.60	± 9.6 %
10070		cycle)		0.00	2 3.0 /0
10577	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty	WLAN	8.70	± 9.6 %
10011			** 67711	0.70	1 2 3.0 %
10578	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty	WLAN	8.49	± 9.6 %
10070		cycle)	VVLAIN	0.49	1 9.0 %
10579	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty	WLAN	0.26	+069/
10079			VVL/N	8.36	± 9.6 %
10500		cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty	WLAN	0.76	+060/
10580	AAA		VV LAIN	8.76	± 9.6 %
10504	AAA	cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty		0.05	+0.0.04
10581	AAA		WLAN	8.35	± 9.6 %
40500		cycle)		0.07	
10582	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty	WLAN	8,67	± 9.6 %
10-20-5	+				<u> </u>
10583	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	<u>± 9.6 %</u>
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		

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40505					
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	$\pm 9.6\%$
10606	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	WLAN		
10607	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)		8.82	±9.6%
10608	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	WLAN	8.64	± 9.6 %
10609	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10610	AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	WLAN	8.57	± 9.6 %
10610	AAB		WLAN	8.78	± 9.6 %
10612		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 %
	AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	WL.AN	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	
10632	AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	WLAN		$\pm 9.6\%$
10633	AAB	IEEE 802.11ac WiFI (80MHz, MCS0, 90pc duty cycle)	WLAN	8.74	$\pm 9.6\%$
10634	AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)		8.83	±9.6%
10635	AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	WLAN	8.80	±9.6%
10636	AAC		WLAN	8.81	± 9.6 %
10637	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	WLAN	8.83	±9.6 %
		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 %
	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	WLAN	8.89	±9.6 %
10643	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	WLAN	9.05	± 9.6 %
10644				9.11	±9.6 %
10644 10645	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	WLAN	9.11	J.U./0
10644 10645 10646	AAC AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	LTE-TDD		
10644 10645 10646 10647	AAC AAF AAF		LTE-TDD	11.96	±9.6 %
10644 10645 10646 10647 10648	AAC AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	LTE-TDD LTE-TDD	11.96 11.96	± 9.6 % ± 9.6 %
10644 10645 10646 10647 10648 10652	AAC AAF AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7) LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	LTE-TDD LTE-TDD CDMA2000	11.96 11.96 3.45	± 9.6 % ± 9.6 % ± 9.6 %
10644 10645 10646 10647 10648	AAC AAF AAF AAA	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7) LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) CDMA2000 (1x Advanced)	LTE-TDD LTE-TDD	11.96 11.96	± 9.6 % ± 9.6 %

•

10655	AAE	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	± 9.6 %
10658		Pulse Waveform (200Hz, 10%)	Test	10.00	± 9.6 %
10659	AAA	Pulse Waveform (200Hz, 20%)	Test	6,99	$\pm 9.6\%$
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 %
10671	AAA	IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle)	WLAN	9.09	± 9.6 %
10672	AAA	IEEE 802.11ax (20MHz, MCS1, 90pc duty cycle)	WLAN	8.57	±9.6 %
10673	AAA	IEEE 802.11ax (20MHz, MCS2, 90pc duty cycle)	WLAN	8.78	± 9.6 %
10674	AAA	IEEE 802.11ax (20MHz, MCS3, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10675	AAA	IEEE 802.11ax (20MHz, MCS4, 90pc duty cycle)	WLAN	8.90	± 9.6 %
10676	AAA	IEEE 802.11ax (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6 %
10677	AAA	IEEE 802.11ax (20MHz, MCS6, 90pc duty cycle)	WLAN	8,73	±9.6 %
10678	AAA	IEEE 802.11ax (20MHz, MCS7, 90pc duty cycle)	WLAN	8.78	± 9.6 %
10679	AAA	IEEE 802.11ax (20MHz, MCS8, 90pc duty cycle)	WLAN	8.89	± 9.6 %
10680	AAA	IEEE 802.11ax (20MHz, MCS9, 90pc duty cycle)	WLAN	8.80	±9.6 %
10681	AAA	IEEE 802.11ax (20MHz, MCS10, 90pc duty cycle)	WLAN	8.62	± 9.6 %
10682	AAA	IEEE 802.11ax (20MHz, MCS11, 90pc duty cycle)	WLAN	8.83	±9.6 %
10683	AAA	IEEE 802.11ax (20MHz, MCS0, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10684	AAA	IEEE 802.11ax (20MHz, MCS1, 99pc duty cycle)	WLAN	8.26	± 9.6 %
10685	AAA	IEEE 802.11ax (20MHz, MCS2, 99pc duty cycle)	WLAN	8.33	± 9.6 %
10686	AAA	IEEE 802.11ax (20MHz, MCS3, 99pc duty cycle)	WLAN	8.28	± 9.6 %
10687	AAA	IEEE 802.11ax (20MHz, MCS4, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10688	AAA	IEEE 802.11ax (20MHz, MCS5, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10689	AAA	IEEE 802.11ax (20MHz, MCS6, 99pc duty cycle)	WLAN	8.55	± 9.6 %
10690	AAA	IEEE 802.11ax (20MHz, MCS7, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10691	AAA	IEEE 802.11ax (20MHz, MCS8, 99pc duty cycle)	WLAN	8.25	± 9.6 %
10692	AAA	IEEE 802.11ax (20MHz, MCS9, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10693	AAA AAA	IEEE 802.11ax (20MHz, MCS10, 99pc duty cycle) IEEE 802.11ax (20MHz, MCS11, 99pc duty cycle)	WLAN	8.25	± 9,6 %
10695		IEEE 802.11ax (200Hz, MCS11, 99pc duty cycle)	WLAN WLAN	8.57	± 9.6 %
10696	AAA	IEEE 802.11ax (40MHz, MCS0, 90pc duty cycle)	WLAN	8.78 8.91	$\pm 9.6\%$
10697	AAA	IEEE 802.11ax (40MHz, MCS2, 90pc duty cycle)	WLAN	8.61	± 9.6 % ± 9.6 %
10698	AAA	IEEE 802.11ax (40MHz, MCS3, 90pc duty cycle)	WLAN	8.89	± 9.6 %
10699	AAA	IEEE 802.11ax (40MHz, MCS4, 90pc duty cycle)	WLAN	8,82	± 9.6 %
10700	AAA	IEEE 802.11ax (40MHz, MCS5, 90pc duty cycle)	WLAN	8.73	± 9.6 %
10701	AAA	IEEE 802.11ax (40MHz, MCS6, 90pc duty cycle)	WLAN	8.86	± 9.6 %
10702	AAA	IEEE 802.11ax (40MHz, MCS7, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10703	AAA	IEEE 802.11ax (40MHz, MCS8, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10704	AAA	IEEE 802.11ax (40MHz, MCS9, 90pc duty cycle)	WLAN	8.56	± 9.6 %
10705	AAA	IEEE 802.11ax (40MHz, MCS10, 90pc duty cycle)	WLAN	8.69	± 9.6 %
10706	AAA	IEEE 802.11ax (40MHz, MCS11, 90pc duty cycle)	WLAN	8.66	± 9.6 %
10707	AAA	IEEE 802.11ax (40MHz, MCS0, 99pc duty cycle)	WLAN	8.32	± 9.6 %
10708	AAA	IEEE 802.11ax (40MHz, MCS1, 99pc duty cycle)	WLAN	8.55	± 9.6 %
10709	AAA	IEEE 802.11ax (40MHz, MCS2, 99pc duty cycle)	WLAN	8.33	± 9.6 %
10710	AAA	IEEE 802.11ax (40MHz, MCS3, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10711	AAA	IEEE 802.11ax (40MHz, MCS4, 99pc duty cycle)	WLAN	8.39	± 9.6 %
10712	AAA	IEEE 802.11ax (40MHz, MCS5, 99pc duty cycle)	WLAN	8.67	± 9.6 %
10713	AAA	IEEE 802.11ax (40MHz, MCS6, 99pc duty cycle)	WLAN	8.33	±9.6 %
10714	AAA	IEEE 802.11ax (40MHz, MCS7, 99pc duty cycle)	WLAN	8.26	±9.6 %
10715	AAA	IEEE 802.11ax (40MHz, MCS8, 99pc duty cycle)	WLAN	8.45	±9.6 %
10716	AAA	IEEE 802.11ax (40MHz, MCS9, 99pc duty cycle)	WLAN	8.30	± 9.6 %
10717	AAA	IEEE 802.11ax (40MHz, MCS10, 99pc duty cycle)	WLAN	8.48	± 9.6 %
10718	AAA	IEEE 802.11ax (40MHz, MCS11, 99pc duty cycle)	WLAN	8.24	± 9.6 %
10719	AAA	IEEE 802.11ax (80MHz, MCS0, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10720	AAA	IEEE 802.11ax (80MHz, MCS1, 90pc duty cycle)	WLAN	8.87	± 9.6 %
10721	AAA	IEEE 802.11ax (80MHz, MCS2, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10722	AAA	IEEE 802.11ax (80MHz, MCS3, 90pc duty cycle)	WLAN	8.55	± 9.6 %
10723	AAA	IEEE 802.11ax (80MHz, MCS4, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10724	AAA	IEEE 802.11ax (80MHz, MCS5, 90pc duty cycle)	WLAN	8.90	± 9.6 %
10725	AAA	IEEE 802.11ax (80MHz, MCS6, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10726		IEEE 802.11ax (80MHz, MCS7, 90pc duty cycle)	WLAN	8.72	± 9.6 %
10727	AAA	IEEE 802.11ax (80MHz, MCS8, 90pc duty cycle)	WLAN	8.66	± 9.6 %

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10729 AAA IEEE 802.11ax (80MHz, MCS10, 90pc duty cycle) WLAN B 10730 AAA IEEE 802.11ax (80MHz, MCS11, 90pc duty cycle) WLAN B 10731 AAA IEEE 802.11ax (80MHz, MCS0, 99pc duty cycle) WLAN B 10731 AAA IEEE 802.11ax (80MHz, MCS0, 99pc duty cycle) WLAN B 10732 AAA IEEE 802.11ax (80MHz, MCS1, 99pc duty cycle) WLAN B	3.65 3.64 3.67 3.42	<u>± 9.6 %</u> <u>± 9.6 %</u> ± 9.6 %
10730 AAA IEEE 802.11ax (80MHz, MCS11, 90pc duty cycle) WLAN 8 10731 AAA IEEE 802.11ax (80MHz, MCS0, 99pc duty cycle) WLAN 8 10732 AAA IEEE 802.11ax (80MHz, MCS1, 99pc duty cycle) WLAN 8	3.67 3.42	
10731 AAA IEEE 802.11ax (80MHz, MCS0, 99pc duty cycle) WLAN 8 10732 AAA IEEE 802.11ax (80MHz, MCS1, 99pc duty cycle) WLAN 8	3.42	±9.6 %
10732 AAA IEEE 802.11ax (80MHz, MCS1, 99pc duty cycle) WLAN 8		
		±9.6 %
	3.46	±9.6 %
	3.40	± 9.6 %
10734 AAA IEEE 802.11ax (80MHz, MCS3, 99pc duty cycle) WLAN 8	3.25	±9.6 %
	3.33	± 9.6 %
10736 AAA IEEE 802.11ax (80MHz, MCS5, 99pc duty cycle) WLAN 8	3.27	± 9.6 %
	3.36	± 9.6 %
10738 AAA IEEE 802.11ax (80MHz, MCS7, 99pc duty cycle) WLAN 8	3.42	± 9.6 %
10739 AAA IEEE 802.11ax (80MHz, MCS8, 99pc duty cycle) WLAN 8	3.29	±9.6 %
	3.48	± 9.6 %
10741 AAA IEEE 802.11ax (80MHz, MCS10, 99pc duty cycle) WLAN 8	3.40	± 9.6 %
10742 AAA IEEE 802.11ax (80MHz, MCS11, 99pc duty cycle) WLAN 8	3.43	± 9.6 %
	3.94	± 9.6 %
10744 AAA IEEE 802.11ax (160MHz, MCS1, 90pc duty cycle) WLAN 9	9.16	±9.6 %
10745 AAA IEEE 802.11ax (160MHz, MCS2, 90pc duty cycle) WLAN 8	3.93	±9.6 %
10746 AAA IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle) WLAN 9	9.11	±9.6 %
10747 AAA IEEE 802.11ax (160MHz, MCS4, 90pc duty cycle) WLAN 9	9.04	±9.6 %
10748 AAA IEEE 802.11ax (160MHz, MCS5, 90pc duty cycle) WLAN 8	3.93	±9.6 %
10749 AAA IEEE 802.11ax (160MHz, MCS6, 90pc duty cycle) WLAN 8	3.90	± 9.6 %
10750 AAA IEEE 802.11ax (160MHz, MCS7, 90pc duty cycle) WLAN 8	3.79	± 9.6 %
10751 AAA IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle) WLAN 8	3.82	±9.6 %
10752 AAA IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle) WLAN 8	3.81	± 9.6 %
10753 AAA IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle) WLAN 9	9.00	± 9.6 %
10754 AAA IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle) WLAN 8	3.94	± 9.6 %
	3.64	± 9.6 %
	3.77	±9.6 %
10757 AAA IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle) WLAN 8	3.77	±9.6 %
10758 AAA IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle) WLAN 8	3.69	±9.6 %
10759 AAA IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle) WLAN 8	3.58	±9.6 %
	3.49	± 9.6 %
10761 AAA IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle) WLAN 8	3.58	± 9.6 %
	3.49	± 9.6 %
10763 AAA IEEE 802.11ax (160MHz, MCS8, 99pc duty cycle) WLAN 8	3.53	±9.6%
10764 AAA IEEE 802.11ax (160MHz, MCS9, 99pc duty cycle) WLAN 8	3.54	± 9.6 %
	3.54	± 9.6 %
	3.51	± 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.

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland Hac MRA



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Swiss Calibration Service

Accreditation No.: SCS 0108

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

PC Test Client

Certificate No: EX3-7547_Jul19

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN:7547
Calibration procedure(s)	QA CAL-01.v9, QA CAL-23.v5, QA CAL-25.v7 Calibration procedure for dosimetric E-field probes
Calibration date:	July 15, 2019
	nts the traceability to national standards, which realize the physical units of measurements (SI). ainties with confidence probability are given on the following pages and are part of the certificate.
All calibrations have been conducted	ed in the closed laboratory facility: environment temperature (22 \pm 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	03-Apr-19 (No. 217-02892/02893)	Apr-20
Power sensor NRP-Z91	SN: 103244	03-Apr-19 (No. 217-02892)	Арг-20
Power sensor NRP-Z91	SN: 103245	03-Apr-19 (No. 217-02893)	Apr-20
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-19 (No. 217-02894)	Apr-20
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

	Name	Function	Signature
Calibrated by:	Claudio Leubler	Laboratory Technician	
			VAL -
Approved by:	Katja Pokovic	Technical Manager	Still
			Issued: July 16, 2019
This calibration certificate	e shall not be reproduced except in full	without written approval of the lab	oratory.

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland



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Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,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 8	9 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:

- a) 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
- b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from handheld and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) 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
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORMx,y,z: Assessed for E-field polarization θ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E²-field uncertainty inside TSL (see below *ConvF*).
- NORM(f)x,y,z = NORMx,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.
- *DCPx,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
- *Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,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 ≤ 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 NORMx, 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 NORMx (no uncertainty required).

Accreditation No.: SCS 0108

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm $(\mu V/(V/m)^2)^A$	0.59	0.63	0.61	± 10.1 %
DCP (mV) ^B	98.4	100.8	101.2	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dBõV	С	D dB	VR mV	Max dev.	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	157.4	± 3.0 %	± 4.7 %
		Y	0.00	0.00	1.00		159.4	1	
		Z	0.00	0.00	1.00		160.6	1	
10352-	Pulse Waveform (200Hz, 10%)	X	15.00	88.58	20.42	10.00	60.0	± 3.5 %	± 9.6 %
AAA		Y	15.00	89.45	20.46		60.0		
		Z	15.00	88.70	20.44		60.0		
10353-	Pulse Waveform (200Hz, 20%)	X	15.00	89.81	19.82	6.99	80.0	±2.1 %	± 9.6 %
AAA		Y	15.00	91.92	20.74		80.0		
		Z	15.00	90.32	20.04		80.0	1	
10354-	Pulse Waveform (200Hz, 40%)	X	15.00	91.03	18.86	3.98	95.0	± 0.9 %	± 9.6 %
AAA		Y	15.00	96.09	21.49		95.0	1	
		Z	15.00	91.99	19.30	1	95.0	1	
10355-	Pulse Waveform (200Hz, 60%)	X	15.00	90.53	17.16	2.22	120.0	± 1.0 %	± 9.6 %
AAA		Y	15.00	100.76	22.40		120.0	1	
		Z	15.00	92.09	17.89		120.0	1	
10387-	QPSK Waveform, 1 MHz	X	0.62	60.63	7.84	0.00	150.0	± 2.7 %	± 9.6 %
AAA		Y	0.55	60.00	7.54		150.0	1	
		Z	0.56	60.00	7.41		150,0	1	
10388-	QPSK Waveform, 10 MHz	X	2.12	67.29	15.12	0.00	150.0	± 1.3 %	± 9.6 %
AAA		Y	2.04	66.92	15.14		150.0	1	
		Z	1.95	66.11	14.57		150.0	1	
10396-	64-QAM Waveform, 100 kHz	X	2.72	68.69	17.94	3.01	150.0	± 1.0 %	±9.6%
AAA		Y	2.50	67.90	17.50		150.0		
		Z	2.48	67.31	17.30		150.0		
10399-	64-QAM Waveform, 40 MHz	X	3.48	66.97	15.58	0.00	150.0	± 2.1 %	± 9.6 %
AAA		Y	3.38	66.64	15.46		150.0		
		Z	3.31	66.20	15.19		150.0		
10414-	WLAN CCDF, 64-QAM, 40MHz	X	4.69	65.04	15.19	0.00	150.0	± 4.2 %	± 9.6 %
AAA		Y	4.71	65.39	15.34		150.0		
		Z	4.69	65.12	15.20		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.

Sensor Model Parameters

	C1	C2	α	T1	T2	Т3	T4	T5	T6
	fF	fF	V ⁻¹	ms.V ⁻²	ms.V⁻¹	ms	V-2	V ⁻¹	
X	44.2	336.23	36.63	14.57	0.38	5.10	0.00	0.49	1.01
Y	39.2	289.50	34.84	14.48	0.00	5.10	0.68	0.28	1.01
Z	42.3	319.56	36.16	13.50	0.33	5.10	0.00	0.44	1.01

Other Probe Parameters

Triangular
-29.5
enabled
disabled
. 337 mm
10 mm
9 mm
2.5 mm
1 mm
1 mm
1 mm
1.4 mm

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	10.00	10.00	10.00	0.60	0.80	± 12.0 %
835	41.5	0.90	9.59	9.59	9.5 9	0.60	0.81	± 12.0 %
1750	40.1	1.37	8.25	8.25	8.25	0.31	0.86	± 12.0 %
1900	40.0	1.40	7.85	7.85	7.85	0.37	0.86	± 12.0 %
2300	39.5	1.67	7.57	7.57	7.57	0.31	0.93	± 12.0 %
2450	39.2	1.80	7.17	7.17	7.17	0.36	0.93	± 12.0 %
2600	39.0	1.96	6.99	6.99	6.99	0.39	0.93	± 12.0 %

Calibration Parameter Determined in Head Tissue Simulating Media

^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.

⁶ At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to \pm 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 \pm 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

^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:7547

			-		-			
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	9.81	9.81	9.81	0.49	0.80	± 12.0 %
835	55.2	0.97	9.57	9.57	9.57	0.47	0.80	± 12.0 %
1750	53.4	1.49	7.81	7.81	7.81	0.46	0.86	± 12.0 %
1900	53.3	1.52	7.53	7.53	7.53	0.34	0.86	± 12.0 %
2300	52.9	1.81	7.47	7.47	7.47	0.36	0.93	± 12.0 %
2450	52.7	1.95	7.30	7.30	7.30	0.34	0.93	± 12.0 %
2600	52.5	2.16	7.18	7.18	7.18	0.30	0.93	± 12.0 %

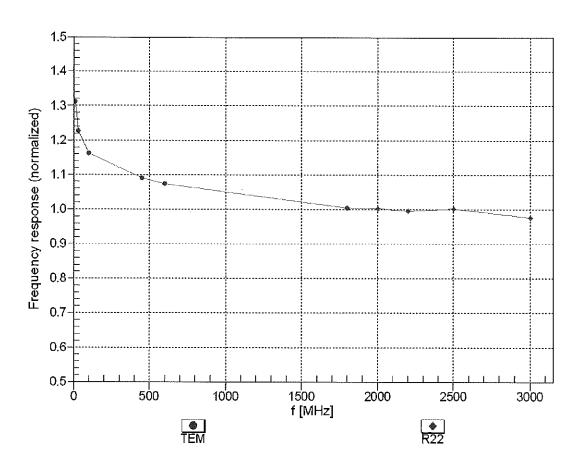
Calibration Parameter Determined in Body Tissue Simulating Media

^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.

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

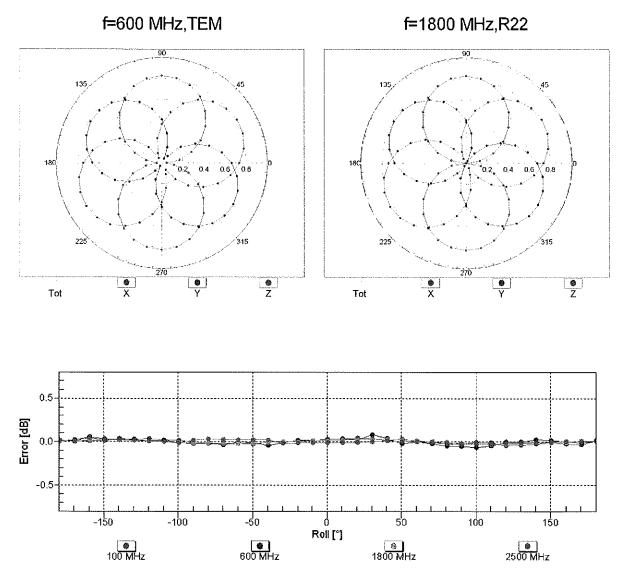
the ConvF uncertainty for indicated target tissue parameters. ⁹ Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)

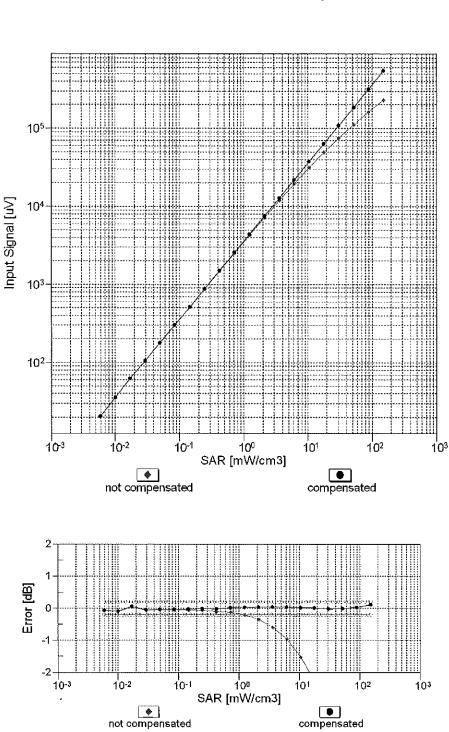
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)



Receiving Pattern (ϕ), $\vartheta = 0^{\circ}$

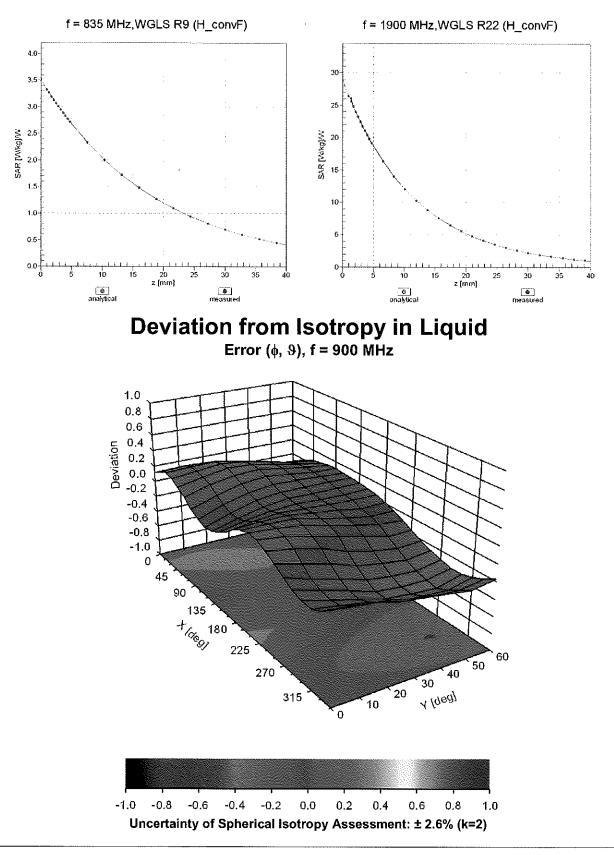
Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

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

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



Conversion Factor Assessment

.

Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc [±] (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	±96%
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	7.74	±96%
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%
	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	±9.6 %
10105 10108	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	±9.6 %

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10109		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		LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	± 9.6 %
10144	CAE CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	± 9.6 %
10145		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 CAE	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	± 9.6 %
10149		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-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	6.60	± 9.6 %
10152	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.28	$\pm 9.6\%$
10152	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 18-QAM) LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	9.92 10.05	$\pm 9.6\%$
10154	CAG	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 04-QAM)	LTE-FDD	5.75	±9.6 % ±9.6 %
10155	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-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		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 Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10197 10198	CAC 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)		8.27	± 9.6 %
10219	LOAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 %

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10220 CAG IEEE 802.11n (IHT Muxed, 25 Mbps, 81-OAM) WLAN 8.12 ± 9.6 %. 10221 CAG IEEE 802.11n (IHT Muxed, 15 Mbps, 81-OAM) WLAN 8.02 ± 9.6 %. 10223 CAG IEEE 802.11n (IHT Muxed, 15 Mbps, 81-OAM) WLAN 8.48 ± 9.6 %. 10224 CAG IEEE 802.11n (IHT Muxed, 150 Mbps, 64-OAM) WLAN 8.49 ± 9.6 %. 10225 CAB IHTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-OAM) ILTE-TDD 9.4 ± 9.6 %. 10226 CAA IHTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-OAM) ILTE-TDD 9.4 ± 9.6 %. 10226 CAA IHTE-TDD (SC-FDMA, 1 RB, 3.MHz, 16-OAM) ILTE-TDD 9.4 ± 9.6 %. 10230 CAC IHTE-TDD (SC-FDMA, 1 RB, 3.MHz, 16-OAM) ILTE-TDD 9.1 ± 9.6 %. 10231 CAF IHTE-TDD (SC-FDMA, 1 RB, 3.MHz, 16-OAM) ILTE-TDD 9.2 ± 9.6 %. 10232 CAF IHTE-TDD (SC-FDMA, 1 RB, 3.MHz, 16-OAM) IHTE-TDD 9.2 ± 9.6 %. 10234 CAF IHTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-OAM) IHTE-TDD 9.2 ± 9.6 %. 10234	40000			1 1 4 1 4 1 1	0.10	
10222 CAC IEEE 802.11n (HT Mixed, 15 Mbps, 16-OAM) WLAN 8.46 ± 9.6 %. 10233 CAC IEEE 802.11n (HT Mixed, 150 Mbps, 16-OAM) WLAN 8.47 ± 9.6 %. 10226 CAB UMTS-FDD (ISC-FDM, 1 RB, 14 MHz, 16-OAM) ITE-TDD (9.27 FDM, 1 RB, 14 MHz, 16-OAM) ITE-TDD (9.27 FDM, 1 RB, 14 MHz, 07-OAM) ITE-TDD (9.28 ± 9.6 %. 10226 CAA ITE-TDD (9.27 FDM, 1 RB, 14 MHz, 07-OAM) ITE-TDD (9.28 ± 9.6 %. 10.28 ± 9.6 %. 10228 CAA ITE-TDD (9.27 FDM, 1 RB, 14 MHz, 07-OAM) ITE-TDD (9.28 ± 9.6 %. 10.28 ± 9.6 %. 10228 CAC ITE-TDD (9.27 FDM, 1 RB, 3 MHz, 16-OAM) ITE-TDD (9.28 ± 9.6 %. 10.28 ± 9.6 %. 10231 CAC ITE-TDD (9.27 FDM, 1 RB, 5 MHz, 16-OAM) ITE-TDD (9.28 ± 9.6 %. 10.28 ± 9.6 %. 10232 CAF ITE-TDD (9.27 FDM, 1 RB, 5 MHz, 16-OAM) ITE-TDD (9.24 ± 9.6 %. 10.28 ± 9.6 %. 10233 CAF ITE-TDD (9.26 FDM, 1 RB, 16 MHz, 0-OAM) ITE-TDD (9.22 ± 9.6 %. 10.28 ± 9.6 %. 10234 CAF ITE-TDD (9.27 FDM, 1 RB, 16 MHz, 0-OAM) ITE-TDD (9.24 ± 9.6 %. 10.28 ± 9.6 %. 10.28 ± 9.6 %. <t< td=""><td>10220</td><td>CAC</td><td>IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)</td><td>WLAN</td><td>8.13</td><td>± 9.6 %</td></t<>	10220	CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10223 CAC IEEE 802.11n (HT Mixed, 90 Mbps, 16-OAM) WLAN 8.08 ± 9.6 % 10224 CAC IEEE 802.11n (HT Mixed, 90 Mbps, 64-OAM) WLOBMA 5.07 ± 9.6 % 10226 CAB UMTS-PD (HSPA4) WLOBMA 5.97 ± 9.6 % 10226 CAA LTE-TDD (SC-FDMA, 1 RB, 14 MHz, 64-OAM) LTE-TDD 9.49 ± 9.6 % 10227 CAA LTE-TDD (SC-FDMA, 1 RB, 14 MHz, 64-OAM) LTE-TDD 9.22 ± 9.6 % 10228 CAA LTE-TDD (SC-FDMA, 1 RB, 14 MHz, 64-OAM) LTE-TDD 9.24 ± 9.6 % 10230 CAC LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-OAM) LTE-TDD 9.28 ± 9.6 % 10231 CAC LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-OAM) LTE-TDD 9.21 ± 9.6 % 10232 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-OAM) LTE-TDD 9.21 ± 9.6 % 10235 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-OAM) LTE-TDD 9.21 ± 9.6 % 10236 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 20-SAM) LTE-TDD 9.22 </td <td>·</td> <td></td> <td></td> <td></td> <td></td> <td></td>	·					
10224 CAC IEEE 802.110 (PT Mixed, 150 Mbps, 64-0AM) WLAN 8.08 19.6 % 10225 CAA LTE-TDD (SC-PDMA, 1R8, 1.4 MHz, 16-0AM) LTE-TDD 9.6 % 10226 CAA LTE-TDD (SC-PDMA, 1R8, 1.4 MHz, 0F-0AM) LTE-TDD 9.28 10226 CAA LTE-TDD (SC-PDMA, 1R8, 1.4 MHz, 0F-0AM) LTE-TDD 9.42 9.8 % 10228 CAA LTE-TDD (SC-PDMA, 1R8, 1.4 MHz, 0F-0AM) LTE-TDD 9.42 9.8 % 10229 CAC LTE-TDD (SC-PDMA, 1R8, 1.4 MHz, 0F-0AM) LTE-TDD 9.42 9.8 % 10231 CAC LTE-TDD (SC-PDMA, 1R8, 1.4 Hz, 0P-SK) LTE-TDD 9.42 9.8 % 10232 CAF LTE-TDD (SC-PDMA, 1R8, 0.4 Hz, 0AM) LTE-TDD 9.25 9.8 % 10233 CAF LTE-TDD (SC-PDMA, 1R8, 10.4 Hz, 0AM) LTE-TDD 9.25 9.6 % 10234 CAF LTE-TDD (SC-PDMA, 1R8, 10.4 Hz, 16-OAM) LTE-TDD 9.25 9.6 % 10235 CAF LTE-TDD (SC-PDMA, 1R8, 10.4 Hz, 16-OAM) LTE-TDD 9.25 9.6 %						
10226 CAB UMIS-FDD (H\$PA+) VCDMA 5.97 ±9.6 % 10227 CAA LTE-TDD (SC+FDMA, 1 RB, 14 MHz, 64-GAM) LTE-TDD (0.26 ±9.6 % 10228 CAA LTE-TDD (SC+FDMA, 1 RB, 14 MHz, 64-GAM) LTE-TDD (0.26 ±9.6 % 10228 CAC LTE-TDD (SC+FDMA, 1 RB, 3 MHz, 16-GAM) LTE-TDD (0.26 ±9.6 % 10230 CAC LTE-TDD (SC+FDMA, 1 RB, 3 MHz, 64-GAM) LTE-TDD (0.27 ±9.6 % 10231 CAC LTE-TDD (SC+FDMA, 1 RB, 5 MHz, 0FGAM) LTE-TDD (0.27 ±9.6 % 10232 CAF LTE-TDD (SC+FDMA, 1 RB, 5 MHz, 0FGAM) LTE-TDD (0.27 ±9.6 % 10234 CAF LTE-TDD (SC+FDMA, 1 RB, 10 MHz, 4-GAM) LTE-TDD (0.27 ±9.6 % 10236 CAF LTE-TDD (SC+FDMA, 1 RB, 10 MHz, 4-GAM) LTE-TDD (0.26 ±9.6 % 10238 CAF LTE-TDD (SC+FDMA, 1 RB, 10 MHz, 4-GAM) LTE-TDD (0.26 ±9.6 % 10238 CAF LTE-TDD (SC+FDMA, 1 RB, 10 MHz, 4-GAM) LTE-TDD (0.26 ±9.6 % 10242 CAA LTE-TDD (SC+FDMA, 1 RB, 10 MHz, 6+GAM) LTE-TDD (0.26 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
10226 CAA LTE-TDD (SC-FDMA, 1 RB, 14 MHz, 46-CAM) LTE-TDD (D, 26 9.49 ± 9.6 %. 10228 CAA LTE-TDD (SC-FDMA, 1 RB, 14 MHz, 4C-ACAM) LTE-TDD (D, 26 ± 9.6 %. 10228 CAC LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-CAM) LTE-TDD (D, 25 ± 9.6 %. 10231 CAC LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-CAM) LTE-TDD (D, 25 ± 9.6 %. 10232 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 26-CAM) LTE-TDD (D, 25 ± 9.6 %. 10232 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 20-CAM) LTE-TDD (D, 25 ± 9.6 %. 10233 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 20-CAM) LTE-TDD (D, 25 ± 9.6 %. 10236 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 20-CAM) LTE-TDD (D, 25 ± 9.6 %. 10237 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 20-CAM) LTE-TDD (D, 25 ± 9.6 %. 10238 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 26-CAM) LTE-TDD (D, 25 ± 9.6 %. 10238 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 26-CAM) LTE-TDD (D, 25 ± 9.6 %. 10240 CAA LTE						
10227 CAA LTE-TDD IO.26 ± 9.6 % 10228 CAC LTE-TDD SC-FDMA, 18R, 3 MHz, 16-QAM) LTE-TDD 9.42 ± 9.6 % 10230 CAC LTE-TDD SC-FDMA, 18R, 3 MHz, 16-QAM) LTE-TDD 9.48 ± 9.6 % 10231 CAC LTE-TDD SC-FDMA, 18R, 3 MHz, 16-QAM) LTE-TDD 9.48 ± 9.6 % 10232 CAF LTE-TDD SC-FDMA, 18R, 5 MHz, 16-QAM) LTE-TDD 9.48 ± 9.6 % 10234 CAF LTE-TDD SC-FDMA, 18R, 5 MHz, 16-QAM) LTE-TDD 9.21 ± 9.6 % 10236 CAF LTE-TDD [SC-FDMA, 18R, 10 MHz, 16-QAM) LTE-TDD 9.21 ± 9.6 % 10238 CAF LTE-TDD [SC-FDMA, 18R, 10 MHz, 16-QAM) LTE-TDD 9.21 ± 9.6 % 10240 CAF LTE-TDD [SC-FDMA, 18R, 16 MHz, 16-QAM) LTE-TDD 9.21 ± 9.6 % 10241 CAA LTE-TDD [SC-FDMA, 18R, 16 MHz, 2FSA) LTE-TDD 9.21 ± 9.6 % 10242 CAA LTE-TDD [SC-FDMA, 50% RB, 14 MHz, 16-QAM)						
10228 CAA LTE-TDD 9.22 ± 9.6 %. 10229 CAC LTE-TDD GAC LTE-TDD 9.42 ± 9.6 %. 10230 CAC LTE-TDD GAC LTE-TDD 9.6 %. 10231 CAC LTE-TDD GSC-FDMA, 1RB, 3 MHz, 64-OAM) LTE-TDD 9.48 ± 9.6 %. 10232 CAF LTE-TDD (SC-FDMA, 1RB, 5 MHz, 64-OAM) LTE-TDD 9.48 ± 9.6 %. 10234 CAF LTE-TDD (SC-FDMA, 1RB, 5 MHz, 64-OAM) LTE-TDD 9.21 ± 9.6 %. 10235 CAF LTE-TDD (SC-FDMA, 1RB, 10 MHz, 46-OAM) LTE-TDD 9.24 ± 9.6 %. 10236 CAF LTE-TDD (SC-FDMA, 1RB, 10 MHz, 46-OAM) LTE-TDD 9.24 ± 9.6 %. 10237 CAF LTE-TDD (SC-FDMA, 1RB, 16 MHz, 26-SGN) LTE-TDD 9.24 ± 9.6 %. 10238 CAF LTE-TDD (SC-FDMA, 178, 16 MHz, 26-SGN) LTE-TDD 9.24 ± 9.6 %. 10240 CAF LTE-TDD (SC-FDMA, 50%, RB, 14 MHz, 64-OAM) LTE-TDD 9.24 ± 9.6 %.						
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10240 CAF LTE-TDD SC-EDMA, 50% RB, 14 MHz, 16-OAM) LTE-TDD 9.21 ± 9.6 % 10241 CAA LTE-TDD (SC-EDMA, 50% RB, 14 MHz, 16-OAM) LTE-TDD 9.86 ± 9.6 % 10242 CAA LTE-TDD (SC-EDMA, 50% RB, 14 MHz, 16-OAM) LTE-TDD 9.46 ± 9.6 % 10243 CAC LTE-TDD (SC-EDMA, 50% RB, 31 MHz, 16-OAM) LTE-TDD 9.46 ± 9.6 % 10244 CAC LTE-TDD (SC-EDMA, 50% RB, 31 MHz, 04-OAM) LTE-TDD 10.06 ± 9.6 % 10245 CAC LTE-TDD (SC-EDMA, 50% RB, 31 MHz, 04-OAM) LTE-TDD 9.30 ± 9.6 % 10246 CAC LTE-TDD (SC-EDMA, 50% RB, 5 MHz, 04-OAM) LTE-TDD 9.91 ± 9.6 % 10248 CAF LTE-TDD (SC-EDMA, 50% RB, 5 MHz, 04-OAM) LTE-TDD 9.29 ± 9.6 % 10251 CAF LTE-TDD (SC-EDMA, 50% RB, 10 MHz, 04-OAM) LTE-TDD 9.24 ± 9.6 % 10252 CAF LTE-TDD (SC-EDMA, 50% RB, 10 MHz, 04-OAM) LTE-TDD 9.4 ± 9.6 % 10252 CAF LTE-TDD (SC-EDMA, 50% RB, 15 MHz, 04-OAM) LTE-TDD 9.4 ± 9.6 % 10253 CAF LT		1				
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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 9.01 ± 9.6 % 10254 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-TDD 9.20 ± 9.6 % 10255 CAF LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.96 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-TDD 9.34 ± 9.6 % 10258 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.34 ± 9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.97 ± 9.6 % 10261 CAC LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.24 ± 9.6 % 10263 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.23 ± 9.6 %			LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)			
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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, QPSK) LTE-TDD 9.20 ± 9.6 % 10256 CAF LTE-TDD (SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-TDD 9.20 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-TDD 9.90 ± 9.6 % 10257 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-TDD 9.34 ± 9.6 % 10258 CAA LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 46-QAM) LTE-TDD 9.98 ± 9.6 % 10259 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 46-QAM) LTE-TDD 9.98 ± 9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.97 ± 9.6 % 10261 CAC LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD 9.83 ± 9.6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD 9.24 ± 9.6 % 10263 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.24 ± 9.6 % 10264 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td></t<>						
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10258 CAA 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, 16-QAM) LTE-TDD 9.97 ± 9.6 % 10261 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 2PSK) LTE-TDD 9.24 ± 9.6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-TDD 9.24 ± 9.6 % 10263 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 0F-QAM) LTE-TDD 9.24 ± 9.6 % 10264 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 0F-QAM) LTE-TDD 9.24 ± 9.6 % 10265 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-TDD 9.23 ± 9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 9.01 ± 9.6 % 10267 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.07 ± 9.6 % 10268 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.06						
10259 CAC LTE-TDD SO: 4 : 0.0 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, 64-QAM) LTE-TDD 9.23 ± 9.6 % 10264 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD 9.23 ± 9.6 % 10265 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.22 ± 9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.30 ± 9.6 % 10267 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 0F-QAM) LTE-TDD 10.07 ± 9.6 % 10268 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 0F-QAM) LTE-TDD 10.06 ± 9.6 % 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 0F-QAM) LTE-TDD 10.13 ± 9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 0F		1				
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10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 %						
				LTE-FDD		±9.6 %

40200				0.00	
10300 10301	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10301	AAA AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC)		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	10.50	+069/
10304	AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, 64QAM, POSC)	WIMAX	12.52 11.86	± 9.6 %
10305	AAA	IEEE 802.16e WIMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15	WIMAX	15.24	±9.6 % ±9.6 %
10000	1.000	symbols)		10.24	1 3.0 %
10306	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18	WIMAX	14.67	± 9.6 %
		symbols)		11.01	10.0 %
10307	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18	WIMAX	14.49	± 9.6 %
		symbols)			
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	WiMAX	14.58	±9.6 %
		symbols)			
10310	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18	WIMAX	14.57	± 9.6 %
40044		symbols)			
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 10317	AAB AAC	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle) IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	± 9.6 %
10317	AAA	Pulse Waveform (200Hz, 10%)	WLAN	8.36	±9.6 %
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	± 9.6 %
10354	AAA	Pulse Waveform (200Hz, 40%)	Generic Generic	6.99	$\pm 9.6\%$
10355	AAA	Pulse Waveform (200Hz, 60%)	Generic	3.98 2.22	±9.6 % ±9.6 %
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	$\pm 9.6\%$
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	LTE-TDD	7.82	± 9.6 %
	ļ	Subframe=2,3,4,7,8,9, Subframe Conf=4)			
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,	WLAN	8.14	±9.6 %
10110		Long preambule)			
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle,	WLAN	8.19	±9.6 %
10400		Short preambule)	1440 4 1 1		
10422 10423	AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.32	±9.6%
10423	AAB 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) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.41	± 9.6 %
10427	AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.45	± 9.6 %
10427	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)		8.41	± 9.6 %
10430	AAD	LTE-FDD (OFDMA, 3 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LTE-FDD LTE-FDD	8.28	$\pm 9.6\%$
10431	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FDD	8.38	±9.6%
10433	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	<u>8.34</u> 8.34	±9.6%
10434	AAA	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	± 9.6 % ± 9.6 %
10435	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL	LTE-TDD	7.82	± 9.6 %
		Subframe=2,3,4,7,8,9)		1.02	± 3,0 70
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, Clippin 44%)	LTE-FDD	7.53	± 9.6 %
10449	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 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 %
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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		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	LTE-TDD	8.41	± 9.6 %
10493	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL	LTE-TDD	8.55	± 9.6 %
10100	1,0,0	Subframe=2,3,4,7,8,9)		0.00	1 3.0 %
10494	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL	LTE-TDD	7.74	±9.6 %
10495	AAF	Subframe=2,3,4,7,8,9)		0.07	1001
10495		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	LTE-TDD	8.54	± 9.6 %
	<u> </u>	Subframe=2,3,4,7,8,9)			
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	LTE-TDD	8.40	±9.6 %
		Subframe=2,3,4,7,8,9)		0110	- 0.0 /0
10499	AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL	LTE-TDD	8.68	±9.6 %
10500	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL	LTE-TDD	7.67	± 9.6 %
10000	,,,,,,	Subframe=2,3,4,7,8,9)		7.07	± 9.0 %
10501	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL	LTE-TDD	8.44	± 9.6 %
10502	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL		0.50	
10002		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	LTE-TDD	7.72	± 9.6 %
10501		Subframe=2,3,4,7,8,9)			
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	LTE-TDD	8.54	±9.6 %
		Subframe=2,3,4,7,8,9)			_ 0.0 /0
10506	AAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 %
10507	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL	LTE-TDD	8.36	± 9.6 %
10001		Subframe=2,3,4,7,8,9)		0.30	I9.0 %
10508	AAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL	LTE-TDD	8.55	± 9.6 %
10509	AAE	Subframe=2,3,4,7,8,9)			
10009	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	LTE-TDD	8.49	± 9.6 %
40544		Subframe=2,3,4,7,8,9)			
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	LTE-TDD	7.74	± 9.6 %
		Subframe=2,3,4,7,8,9)			
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	LTE-TDD	8.45	± 9.6 %
		Subframe=2,3,4,7,8,9)		0.40	
10515	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	WLAN	1.58	± 9.6 %
10516 10517	AAA 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) IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	WLAN WLAN	1.58	±9.6%
10510	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.23	± 9.6 %
10520	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.39	± 9.6 %
10521	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	WLAN	8.12 7.97	±9.6%
10522	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.45	±9.6 % ±9.6 %
10523	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	WLAN		$\pm 9.6\%$ $\pm 9.6\%$
10524	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.08	
10525	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	WLAN	8.27 8.36	±9.6 % ±9.6 %
10526	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	WLAN	8.42	$\pm 9.6\%$ $\pm 9.6\%$
10527	AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	WLAN	8.21	$\pm 9.6\%$ $\pm 9.6\%$
10528	AAB	IEEE 802.11ac WiFI (20MHz, MCS3, 99pc duty cycle)	WLAN	8.36	$\pm 9.6\%$ $\pm 9.6\%$
10529	AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	WLAN	8.36	± 9.0 % ± 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 %
			1 YY - 71N	1 0.40	1 2 3.0 70

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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 WiFt (160MHz, MCS3, 99pc duty cycle)	WLAN		± 9.6 %
10558	AAC	IEEE 802.11ac WiFt (160MHz, MCS3, 99pc duty cycle)	WLAN	8.52	
10560	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)		8,61	± 9.6 %
10561	AAC		WLAN	8,73	± 9.6 %
10562		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 %
	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	WLAN	8.25	± 9.6 %
40505					
10565	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty	WLAN	8.45	± 9.6 %
40500					
10566	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty	WLAN	8.13	± 9.6 %
40507					
10567	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty	WLAN	8.00	± 9.6 %
40500	0.0.0				
10568	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty	WLAN	8.37	± 9.6 %
40500					ļ
10569	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty	WLAN	8.10	±9.6 %
40570					
10570	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty	WLAN	8.30	± 9.6 %
40574					
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	WLAN	8.59	± 9.6 %
	<u></u>	cycle)			
10576	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty	WLAN	8.60	± 9.6 %
	<u> </u>	cycle)			
10577	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty	WLAN	8.70	±9.6 %
		cycle)			
10578	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty	WLAN	8.49	±9.6 %
	<u> </u>	cycle)			<u> </u>
10579	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty	WLAN	8.36	± 9.6 %
				•	
		cycle)			[]
10580	AAA	IEEE 802.11g WiFI 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty	WLAN	8.76	± 9.6 %
		IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)		8.76	± 9.6 %
10580 10581	AAA AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty	WLAN	8.76 8.35	± 9.6 % ± 9.6 %
10581	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)			
		IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty			
10581 10582	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.35	±9.6 %
10581	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty	WLAN	8.35	±9.6 %
10581 10582	AAA AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	WLAN WLAN	8.35	± 9.6 % ± 9.6 % ± 9.6 %
10581 10582 10583	AAA AAA AAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	WLAN WLAN WLAN	8.35 8.67 8.59 8.60	± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %
10581 10582 10583 10584	AAA AAA AAB AAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	WLAN WLAN WLAN WLAN	8.35 8.67 8.59	± 9.6 % ± 9.6 % ± 9.6 %

40500	0.00			0.70	
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 %
		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 10594	AAB AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	WLAN	8.64	± 9.6 %
		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) IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	WLAN	8.72	± 9.6 %
10598	AAB		WLAN	8.50	± 9.6 %
10599 10600	AAB AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	WLAN WLAN	8.79 8.88	±9.6 % ±9.6 %
10601	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	WLAN	8.82	$\pm 9.6\%$
10602	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	WLAN	8.94	$\pm 9.6\%$
10602	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	WLAN	9.03	$\pm 9.6\%$
10604	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCG4, 30pc duty cycle)	WLAN	9.03 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, MCSO, sope duty cycle)	WLAN	8.82	± 9.6 %
10607	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	WLAN	8.64	$\pm 9.6\%$ $\pm 9.6\%$
10608	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	WLAN	8.77	$\pm 9.6\%$
10609	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	WLAN	8.57	$\pm 9.6\%$
10610	AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	WLAN	8.78	± 9.6 %
10611	AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10612	AAB	IEEE 802.11ac Will (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 10641	AAC 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) IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	WLAN	9.06	± 9.6 %
10643	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	WLAN WLAN	8.89	±9.6%
10645	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	WLAN	9.05 9.11	± 9.6 % ± 9.6 %
10646	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	9.11 11.96	
10647	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, 0L Subframe=2,7)	LTE-TDD	11.96	$\pm 9.6\%$
10648	AAA	CDMA2000 (1x Advanced)	CDMA2000	3.45	$\pm 9.6\%$
10652	AAD	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	<u>3.45</u> 6.91	± 9.6 % ± 9.6 %
10653	AAD	LTE-TDD (OFDMA, 3 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 %
<u></u>	1,010	$\frac{1}{1}$		0.30	<u>- 3.0 70</u>

10055	A A 67				
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 %
10671	AAA	IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle)	WLAN	9.09	± 9.6 %
10672	AAA	IEEE 802.11ax (20MHz, MCS1, 90pc duty cycle)	WLAN	8.57	±9.6 %
10673	AAA	IEEE 802.11ax (20MHz, MCS2, 90pc duty cycle)	WLAN	8.78	±9.6 %
10674	AAA	IEEE 802.11ax (20MHz, MCS3, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10675	AAA	IEEE 802.11ax (20MHz, MCS4, 90pc duty cycle)	WLAN	8.90	±9.6%
10676	AAA	IEEE 802.11ax (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10677	AAA	IEEE 802.11ax (20MHz, MCS6, 90pc duty cycle)	WLAN	8.73	± 9.6 %
10678	AAA	IEEE 802.11ax (20MHz, MCS7, 90pc duty cycle)	WLAN	8.78	± 9.6 %
10679	AAA	IEEE 802.11ax (20MHz, MCS8, 90pc duty cycle)	WLAN	8.89	±9.6 %
10680	AAA	IEEE 802.11ax (20MHz, MCS9, 90pc duty cycle)	WLAN	8.80	±9.6 %
10681	AAA	IEEE 802.11ax (20MHz, MCS10, 90pc duty cycle)	WLAN	8.62	±9.6 %
10682	AAA	IEEE 802.11ax (20MHz, MCS11, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10683	AAA	IEEE 802.11ax (20MHz, MCS0, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10684	AAA	IEEE 802.11ax (20MHz, MCS1, 99pc duty cycle)	WLAN	8.26	± 9.6 %
10685	AAA	IEEE 802.11ax (20MHz, MCS2, 99pc duty cycle)	WLAN	8.33	± 9.6 %
10686	AAA	IEEE 802.11ax (20MHz, MCS3, 99pc duty cycle)	WLAN	8.28	± 9.6 %
10687	AAA	IEEE 802.11ax (20MHz, MCS4, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10688	AAA	IEEE 802.11ax (20MHz, MCS5, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10689	AAA	IEEE 802.11ax (20MHz, MCS6, 99pc duty cycle)	WLAN	8.55	± 9.6 %
10690	AAA	IEEE 802.11ax (20MHz, MCS7, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10691	AAA	IEEE 802.11ax (20MHz, MCS8, 99pc duty cycle)	WLAN	8,25	$\pm 9.6\%$
10692	AAA	IEEE 802.11ax (20MHz, MCS9, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10693	AAA	IEEE 802.11ax (20MHz, MCS10, 99pc duty cycle)	WLAN	8.25	± 9.6 %
10694	AAA	IEEE 802.11ax (20MHz, MCS11, 99pc duty cycle)	WLAN	8.57	± 9.6 %
10695	AAA	IEEE 802.11ax (40MHz, MCS0, 90pc duty cycle)	WLAN		
10696	AAA	IEEE 802.11ax (40MHz, MCS1, 90pc duty cycle)	WLAN	8.78	$\pm 9.6\%$
10697	AAA	IEEE 802.11ax (40MHz, MCS2, 90pc duty cycle)	WLAN	8.91 8.61	± 9.6 %
10698	AAA	IEEE 802.11ax (40MHz, MCS3, 90pc duty cycle)	WLAN		± 9.6 %
10699	AAA	IEEE 802.11ax (40MHz, MCS4, 90pc duty cycle)		8.89	± 9.6 %
10700	AAA	IEEE 802.11ax (40MHz, MCS4, sope duty cycle)	WLAN	8.82	± 9.6 %
10701	AAA	IEEE 802.11ax (40MHz, MCS6, 90pc duty cycle)	WLAN	8.73	± 9.6 %
10702	AAA	IEEE 802.11ax (40MHz, MCS0, 90pc duty cycle)	WLAN	8.86	± 9.6 %
10702	AAA		WLAN	8.70	±9.6 %
10703	AAA	IEEE 802.11ax (40MHz, MCS8, 90pc duty cycle)	WLAN	8.82	±9.6 %
10704		IEEE 802.11ax (40MHz, MCS9, 90pc duty cycle)	WLAN	8.56	±9.6 %
	AAA	IEEE 802.11ax (40MHz, MCS10, 90pc duty cycle)	WLAN	8.69	±9.6 %
10706	AAA	IEEE 802.11ax (40MHz, MCS11, 90pc duty cycle)	WLAN	8.66	±9.6 %
10707	AAA	IEEE 802.11ax (40MHz, MCS0, 99pc duty cycle)	WLAN	8.32	±9.6 %
10708	AAA	IEEE 802.11ax (40MHz, MCS1, 99pc duty cycle)	WLAN	8.55	± 9.6 %
10709	AAA	IEEE 802.11ax (40MHz, MCS2, 99pc duty cycle)	WLAN	8.33	±9.6 %
10710	AAA	IEEE 802.11ax (40MHz, MCS3, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10711	AAA	IEEE 802.11ax (40MHz, MCS4, 99pc duty cycle)	WLAN	8.39	±9.6 %
10712	AAA	IEEE 802.11ax (40MHz, MCS5, 99pc duty cycle)	WLAN	8.67	±9.6 %
10713	AAA	IEEE 802.11ax (40MHz, MCS6, 99pc duty cycle)	WLAN	8.33	± 9.6 %
10714	AAA	IEEE 802.11ax (40MHz, MCS7, 99pc duty cycle)	WLAN	8.26	±9.6 %
10715	AAA	IEEE 802.11ax (40MHz, MCS8, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10716	AAA	IEEE 802.11ax (40MHz, MCS9, 99pc duty cycle)	WLAN	8.30	±9.6 %
10717	AAA	IEEE 802.11ax (40MHz, MCS10, 99pc duty cycle)	WLAN	8.48	±9.6 %
10718	AAA	IEEE 802.11ax (40MHz, MCS11, 99pc duty cycle)	WLAN	8.24	± 9.6 %
10719	AAA	IEEE 802.11ax (80MHz, MCS0, 90pc duty cycle)	WLAN	8.81	±9.6 %
10720	AAA	IEEE 802.11ax (80MHz, MCS1, 90pc duty cycle)	WLAN	8.87	±9.6 %
10721	AAA	IEEE 802.11ax (80MHz, MCS2, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10722	AAA	IEEE 802.11ax (80MHz, MCS3, 90pc duty cycle)	WLAN	8.55	± 9.6 %
10723	AAA	IEEE 802.11ax (80MHz, MCS4, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10724	AAA	IEEE 802.11ax (80MHz, MCS5, 90pc duty cycle)	WLAN	8.90	± 9.6 %
10725	AAA	IEEE 802.11ax (80MHz, MCS6, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10726	AAA	IEEE 802.11ax (80MHz, MCS7, 90pc duty cycle)	WLAN	8.72	± 9.6 %
10727	AAA	IEEE 802.11ax (80MHz, MCS8, 90pc duty cycle)	WLAN	8.66	± 9.6 %
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10728	AAA	IEEE 802.11ax (80MHz, MCS9, 90pc duty cycle)	WLAN	8.65	± 9.6 %
10729	AAA	IEEE 802.11ax (80MHz, MCS10, 90pc duty cycle)	WLAN	8.64	± 9.6 %
10730	AAA	IEEE 802.11ax (80MHz, MCS11, 90pc duty cycle)	WLAN	8.67	±9.6 %
10731	AAA	IEEE 802.11ax (80MHz, MCS0, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10732	AAA	IEEE 802.11ax (80MHz, MCS1, 99pc duty cycle)	WLAN	8.46	± 9.6 %
10733	AAA	IEEE 802.11ax (80MHz, MCS2, 99pc duty cycle)	WLAN	8.40	± 9.6 %
10734	AAA	IEEE 802.11ax (80MHz, MCS3, 99pc duty cycle)	WLAN	8.25	± 9.6 %
10735	AAA	IEEE 802.11ax (80MHz, MCS4, 99pc duty cycle)	WLAN	8.33	± 9.6 %
10736	AAA	IEEE 802.11ax (80MHz, MCS5, 99pc duty cycle)	WLAN	8.27	± 9.6 %
10737	AAA	IEEE 802.11ax (80MHz, MCS6, 99pc duty cycle)	WLAN	8.36	±9.6%
10738	AAA	IEEE 802.11ax (80MHz, MCS7, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10739	AAA	IEEE 802.11ax (80MHz, MCS8, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10740	AAA	IEEE 802.11ax (80MHz, MCS9, 99pc duty cycle)	WLAN	8.48	± 9.6 %
10741	AAA	IEEE 802.11ax (80MHz, MCS10, 99pc duty cycle)	WLAN	8.40	± 9.6 %
10742	AAA	IEEE 802.11ax (80MHz, MCS11, 99pc duty cycle)	WLAN	8.43	± 9.6 %
10743	AAA	IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10744	AAA	IEEE 802.11ax (160MHz, MCS1, 90pc duty cycle)	WLAN	9.16	± 9.6 %
10745	AAA	IEEE 802.11ax (160MHz, MCS2, 90pc duty cycle)	WLAN	8.93	± 9.6 %
10746	AAA	IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle)	WLAN	9.11	±9.6 %
10747	AAA	IEEE 802.11ax (160MHz, MCS4, 90pc duty cycle)	WLAN	9.04	±9.6 %
10748	AAA	IEEE 802.11ax (160MHz, MCS5, 90pc duty cycle)	WLAN	8.93	±9.6 %
10749	AAA	IEEE 802.11ax (160MHz, MCS6, 90pc duty cycle)	WLAN	8.90	± 9.6 %
10750	AAA	IEEE 802.11ax (160MHz, MCS7, 90pc duty cycle)	WLAN	8.79	±9.6 %
10751	AAA	IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10752	AAA	IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10753	AAA	IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle)	WLAN	9.00	± 9.6 %
10754	AAA	IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10755	AAA	IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle)	WLAN	8.64	± 9.6 %
10756	AAA	IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle)	WLAN	8.77	± 9.6 %
10757	AAA	IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle)	WLAN	8.77	± 9.6 %
10758	AAA	IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle)	WLAN	8.69	± 9.6 %
10759	AAA	IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle)	WLAN	8.58	± 9.6 %
10760	AAA	IEEE 802.11ax (160MHz, MCS5, 99pc duty cycle)	WLAN	8,49	± 9.6 %
10761	AAA	IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle)	WLAN	8.58	± 9.6 %
10762	AAA	IEEE 802.11ax (160MHz, MCS7, 99pc duty cycle)	WLAN	8.49	± 9.6 %
10763	AAA	IEEE 802.11ax (160MHz, MCS8, 99pc duty cycle)	WLAN	8.53	± 9.6 %
10764	AAA	IEEE 802.11ax (160MHz, MCS9, 99pc duty cycle)	WLAN	8.54	± 9.6 %
10765	AAA	IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle)	WLAN	8.54	± 9.6 %
10766	AAA	IEEE 802.11ax (160MHz, MCS11, 99pc duty cycle)	WLAN	8.51	± 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.



S Schweizerischer Kalibrierdienst
 Service suisse d'étalonnage
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 S Swiss Calibration Service

Accreditation No.: SCS 0108

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CALIBRATION CERTIFICATE

Client PC Test

Certificate No: D5GHzV2-1057_Jan18

Calibration procedure(s)	QA CAL-22,v2		
Calification procedura(s)		dure for dipole validation kits be	tween 3-6 GHz
			BN
Calibration date:	January 16, 2018	3	01-25-2018
This calibration certificate docum The measurements and the unce	ents the traceability to nati rtaintles with confidence p	ional standards, which realize the physical un robability are given on the following pages a	nits of measurements (SI). BN 01-25-9018 nd are part of the certificate. 02106 C and humidity < 70%.
All calibrations have been conduc	ted in the closed laborato	ry facility: environment temperature (22 \pm 3)°	°C and humidity < 70%.
			,
Calibration Equipment used (M&)	re critical for calibration)		
Primary Standards	[D #	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 Atlenuator	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
Reference Probe EX3DV4	SN: 3503	30-Dec-17 (No. EX3-3503_Dec17)	Dec-18
DAE4	SN: 601	26-Oct-17 (No. DAE4-601_Oct17)	Oct-18
DAE4	1	/	
	1D #	Check Date (in house)	Scheduled Check
DAE4 Secondary Standards	ID # SN: GB37480704	Check Date (in house) 07-Oct-15 (in house check Oct-16)	Scheduled Check In house check: Oct-18
DAE4 Secondary Standards Power meter EPM-442A Power sensor HP 8481A	ID # SN: GB37480704 SN: US37292783	Check Date (in house) 07-Oct-15 (in house check Oct-16) 07-Oct-15 (in house check Oct-16)	Scheduled Check In house check: Oct-18 In house check: Oct-18
DAE4 Secondary Standards Power meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A	ID # SN: GB37480704 SN: US37292783 SN: MY41092317	Check Date (in house) 07-Oct-15 (in house check Oct-16) 07-Oct-15 (in house check Oct-16) 07-Oct-15 (in house check Oct-16)	Scheduled Check In house check: Oct-18 In house check: Oct-18 In house check: Oct-18
DAE4 Secondary Standards Power meter EPM-442A Power sensor HP 8481A	ID # SN: GB37480704 SN: US37292783	Check Date (in house) 07-Oct-15 (in house check Oct-16) 07-Oct-15 (in house check Oct-16)	Scheduled Check In house check: Oct-18 In house check: Oct-18
DAE4 Secondary Standards Power meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A RF generator R&S SMT-06	ID # SN: GB37480704 SN: US37292783 SN: MY41092317 SN: 100972	Check Date (in house) 07-Oct-15 (in house check Oct-16) 07-Oct-15 (in house check Oct-16) 07-Oct-15 (in house check Oct-16) 15-Jun-15 (in house check Oct-16)	Scheduled Check In house check: Oct-18 In house check: Oct-18 In house check: Oct-18 In house check: Oct-18
DAE4 Secondary Standards Power meter EPM-442A Power sensor HP 8481A Power sensor HP 8481A RF generator R&S SMT-06	ID # SN: GB37480704 SN: US37292783 SN: MY41092317 SN: 100972 SN: US37390585	Check Date (in house) 07-Oct-15 (in house check Oct-16) 07-Oct-15 (in house check Oct-16) 07-Oct-15 (in house check Oct-16) 15-Jun-15 (in house check Oct-16) 18-Oct-01 (in house check Oct-17)	Scheduled Check In house check: Oct-18 In house check: Oct-18 In house check: Oct-18 In house check: Oct-18 In house check: Oct-18

Certificate No: D5GHzV2-1057_Jan18

Calibration Laboratory of

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





Schweizerischer Kalibrierdienst

- S Service sulsse d'étalonnage
- С Servizio svizzero di taratura
- S Swiss Calibration Service

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) 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
- b) 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
- c) 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
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

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%.

Accreditation No.: SCS 0108

Measurement Conditions

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

DASY Version	DASY5	V52.10.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4.0 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	5200 MHz ± 1 MHz 5250 MHz ± 1 MHz 5600 MHz ± 1 MHz 5750 MHz ± 1 MHz 5800 MHz ± 1 MHz	

Head TSL parameters at 5250 MHz The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.9	4.71 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	36.2 ± 6 %	4.55 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5250 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.91 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	79.2 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.28 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	22.8 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.5	5.07 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.8 ± 6 %	4.90 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5600 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.41 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	84.1 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.40 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.0 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5750 MHz The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.4	5.22 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.5 ± 6 %	5.06 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5750 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.06 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	80.5 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.30 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.0 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5200 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	49.0	5.30 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	47.3 ± 6 %	5.41 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5200 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.36 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	73.1 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.06 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	20.4 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5250 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.9	5.36 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	47.2 ± 6 %	5.48 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5250 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.64 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	75.9 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.13 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.1 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5600 MHz The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.5	5.77 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.6 ± 6 %	5.94 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5600 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	8.05 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	79.9 W/kg ± 19.9 % (k=2)
	1	

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.25 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	22.3 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5750 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.3	5.94 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.3 ± 6 %	6.15 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5750 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.72 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	76.7 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.14 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.2 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5800 MHz The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.2	6.00 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.2 ± 6 %	6.22 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5800 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.68 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	76.3 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.13 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.1 W/kg ± 19.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL at 5250 MHz

Impedance, transformed to feed point	50.0 Ω - 5.5 jΩ
Return Loss	- 25.2 dB

Antenna Parameters with Head TSL at 5600 MHz

Impedance, transformed to feed point	54.7 Ω - 2.1 jΩ
Return Loss	- 26.2 dB

Antenna Parameters with Head TSL at 5750 MHz

Impedance, transformed to feed point	52.7 Ω + 0.0 jΩ
Return Loss	- 31.5 dB

Antenna Parameters with Body TSL at 5200 MHz

Impedance, transformed to feed point	49.3 Ω - 6.7 jΩ
Return Loss	- 23.4 dB

Antenna Parameters with Body TSL at 5250 MHz

Impedance, transformed to feed point	48.4 Ω - 3.9 jΩ
Return Loss	- 27.4 dB

Antenna Parameters with Body TSL at 5600 MHz

Impedance, transformed to feed point	55.3 Ω - 1.6 jΩ
Return Loss	- 25.6 dB

Antenna Parameters with Body TSL at 5750 MHz

Impedance, transformed to feed point	52.6 Ω + 1.1 jΩ
Return Loss	- 31.2 dB

Antenna Parameters with Body TSL at 5800 MHz

Impedance, transformed to feed point	51.8 Ω - 0.4 jΩ
Return Loss	- 34.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction) 1.203 ns	Electrical Delay (one direction)	1.203 ns
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After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	November 27, 2006

Appendix (Additional assessments outside the scope of SCS 0108)

Measurement Conditions (f=5200 MHz)

DASY system configuration, as far as not given on page 1 and 3.

Phantom	SAM Head Phantom	For usage with cSAR3DV2-R/L

SAR result with SAM Head (Top)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.24 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	82.6 W/kg ± 20.3 % (k=2)
CAD successed over 10 cm ³ (10 s) of Head TCI	condition	
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 100 mW input power	2.35 W/kg

SAR result with SAM Head (Mouth)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.54 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	85.6 W/kg ± 20.3 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.37 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.7 W/kg ± 19.9 % (k=2)

SAR result with SAM Head (Neck)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.14 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	81.6 W/kg ± 20.3 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.37 W/kg

SAR result with SAM Head (Ear)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	5.16 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	51.7 W/kg ± 20.3 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 100 mW input power	1.76 W/kg

Measurement Conditions (f=5800 MHz)

DASY system configuration, as far as not given on page 1 and 3.

Phantom	SAM Head Phantom	For usage with cSAR3DV2-R/L
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SAR result with SAM Head (Top)

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.62 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	86.3 W/kg ± 20.3 % (k=2)
SAR averaged over 10 $ m cm^3$ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.41 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	

SAR result with SAM Head (Mouth)

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.88 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	88.9 W/kg ± 20.3 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.44 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.4 W/kg ± 19.9 % (k=2)

SAR result with SAM Head (Neck)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.33 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	83.4 W/kg ± 20.3 % (k=2)
SAB averaged over 10 cm ³ (10 g) of Head TSI	condition	

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.35 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.5 W/kg ± 19.9 % (k=2)

SAR result with SAM Head (Ear)

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	5.68 W/kg
SAR for nominal Head TSL parameters	eters normalized to 1W 56.8 W	
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 100 mW input power	1.89 W/kg

DASY5 Validation Report for Head TSL

Date: 11.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1057

Communication System: UID 0 - CW; Frequency: 5250 MHz, Frequency: 5600 MHz, Frequency: 5750 MHz Medium parameters used: f = 5250 MHz; $\sigma = 4.55$ S/m; $\varepsilon_r = 36.2$; $\rho = 1000$ kg/m³, Medium parameters used: f = 5600 MHz; $\sigma = 4.9$ S/m; $\varepsilon_r = 35.8$; $\rho = 1000$ kg/m³, Medium parameters used: f = 5750 MHz; $\sigma = 5.06$ S/m; $\varepsilon_r = 35.5$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

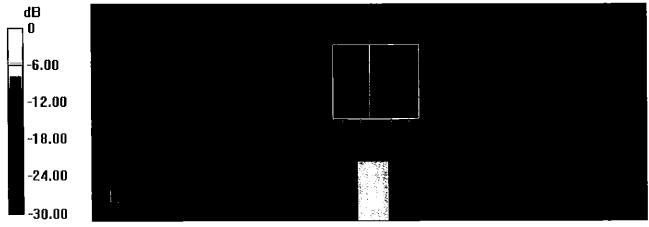
DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(5.51, 5.51, 5.51); Calibrated: 30.12.2017, ConvF(5.05, 5.05, 5.05); Calibrated: 30.12.2017, ConvF(4.98, 4.98, 4.98); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601 modified; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

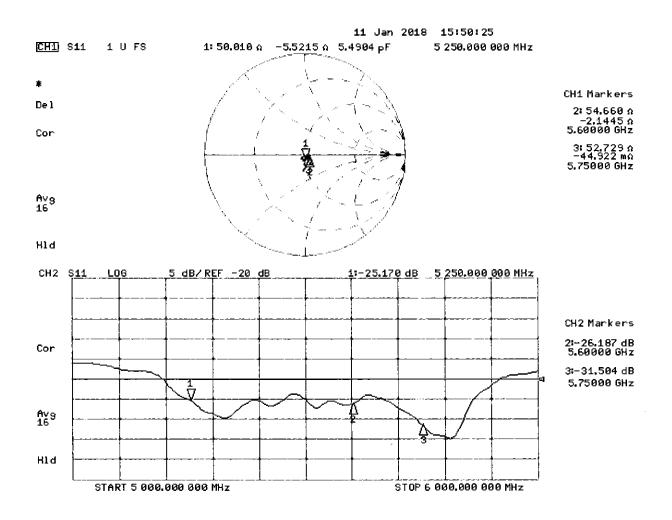
Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5250 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 72.54 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 27.5 W/kg SAR(1 g) = 7.91 W/kg; SAR(10 g) = 2.28 W/kg Maximum value of SAR (measured) = 17.7 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 72.77 V/m; Power Drift = -0.07 dB Peak SAR (extrapolated) = 32.2 W/kg SAR(1 g) = 8.41 W/kg; SAR(10 g) = 2.4 W/kg Maximum value of SAR (measured) = 19.7 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5750 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 70.93 V/m; Power Drift = -0.09 dB Peak SAR (extrapolated) = 31.4 W/kg SAR(1 g) = 8.06 W/kg; SAR(10 g) = 2.3 W/kg Maximum value of SAR (measured) = 18.9 W/kg



0 dB = 18.9 W/kg = 12.76 dBW/kg



DASY5 Validation Report for Body TSL

Date: 10.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1057

Communication System: UID 0 - CW; Frequency: 5200 MHz, Frequency: 5250 MHz, Frequency: 5600 MHz, Frequency: 5750 MHz, Frequency: 5800 MHz Medium parameters used: f = 5200 MHz; $\sigma = 5.41$ S/m; $\varepsilon_r = 47.3$; $\rho = 1000$ kg/m³, Medium parameters used: f = 5250 MHz; $\sigma = 5.48$ S/m; $\varepsilon_r = 47.2$; $\rho = 1000$ kg/m³, Medium parameters used: f = 5600 MHz; $\sigma = 5.94$ S/m; $\varepsilon_r = 46.6$; $\rho = 1000$ kg/m³, Medium parameters used: f = 5750 MHz; $\sigma = 6.15$ S/m; $\varepsilon_r = 46.3$; $\rho = 1000$ kg/m³, Medium parameters used: f = 5800 MHz; $\sigma = 6.22$ S/m; $\varepsilon_r = 46.2$; $\rho = 1000$ kg/m³ Medium parameters used: f = 5800 MHz; $\sigma = 6.22$ S/m; $\varepsilon_r = 46.2$; $\rho = 1000$ kg/m³

DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(5.35, 5.35, 5.35); Calibrated: 30.12.2017, ConvF(5.26, 5.26, 5.26); Calibrated: 30.12.2017, ConvF(4.65, 4.65, 4.65); Calibrated: 30.12.2017, ConvF(4.57, 4.57, 4.57); Calibrated: 30.12.2017, ConvF(4.53, 4.53, 4.53); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 64.05 V/m; Power Drift = -0.03 dB Peak SAR (extrapolated) = 27.6 W/kg SAR(1 g) = 7.36 W/kg; SAR(10 g) = 2.06 W/kg Maximum value of SAR (measured) = 17.1 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5250 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 64.53 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 29.4 W/kg SAR(1 g) = 7.64 W/kg; SAR(10 g) = 2.13 W/kg Maximum value of SAR (measured) = 17.9 W/kg

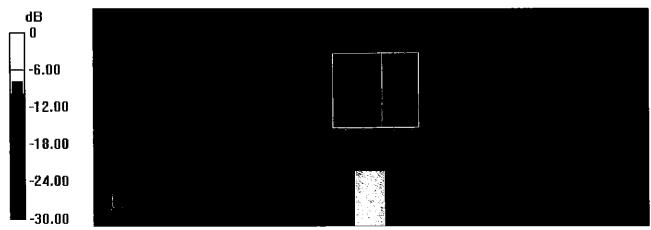
Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 65.09 V/m; Power Drift = -0.08 dB Peak SAR (extrapolated) = 34.0 W/kg SAR(1 g) = 8.05 W/kg; SAR(10 g) = 2.25 W/kg Maximum value of SAR (measured) = 19.5 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5750 MHz/Zoom Scan,

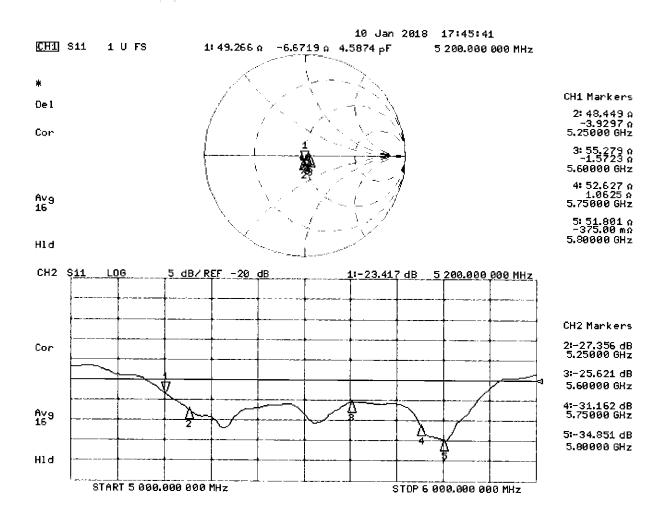
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 63.45 V/m; Power Drift = -0.06 dB Peak SAR (extrapolated) = 32.9 W/kg SAR(1 g) = 7.72 W/kg; SAR(10 g) = 2.14 W/kg Maximum value of SAR (measured) = 18.9 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 63.14 V/m; Power Drift = -0.08 dB Peak SAR (extrapolated) = 33.3 W/kg SAR(1 g) = 7.68 W/kg; SAR(10 g) = 2.13 W/kg



0 dB = 18.9 W/kg = 12.76 dBW/kg

Impedance Measurement Plot for Body TSL



DASY5 Validation Report for SAM Head

Date: 16.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1057

Communication System: UID 0 - CW; Frequency: 5200 MHz, Frequency: 5800 MHz Medium parameters used: f = 5200 MHz; $\sigma = 4.59$ S/m; $\epsilon r = 36.5$; $\rho = 1000$ kg/m3, Medium parameters used: f = 5800 MHz; $\sigma = 5.28$ S/m; $\epsilon r = 35.4$; $\rho = 1000$ kg/m3 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(5.75, 5.75, 5.75); Calibrated: 30.12.2017, ConvF(4.96, 4.96, 4.96); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: SAM Head
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

SAM Head/Top - 5200/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm,

dz=1.4mm Reference Value = 72.99 V/m; Power Drift = 0.04 dB Peak SAR (extrapolated) = 30.6 W/kg SAR(1 g) = 8.24 W/kg; SAR(10 g) = 2.35 W/kg Maximum value of SAR (measured) = 19.7 W/kg

SAM Head/Top - 5800/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mmReference Value = 73.00 V/m; Power Drift = 0.07 dB Peak SAR (extrapolated) = 36.5 W/kg SAR(1 g) = 8.62 W/kg; SAR(10 g) = 2.41 W/kg Maximum value of SAR (measured) = 21.9 W/kg

SAM Head/Mouth - 5200/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 72.79 V/m; Power Drift = -0.04 dB Peak SAR (extrapolated) = 29.5 W/kg SAR(1 g) = 8.54 W/kg; SAR(10 g) = 2.37 W/kg Maximum value of SAR (measured) = 20.7 W/kg SAM Head/Mouth - 5800/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 71.69 V/m; Power Drift = -0.07 dB Peak SAR (extrapolated) = 34.9 W/kg

SAR(1 g) = 8.88 W/kg; SAR(10 g) = 2.44 W/kgMaximum value of SAR (measured) = 23.0 W/kg

SAM Head/Neck - 5200/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm,

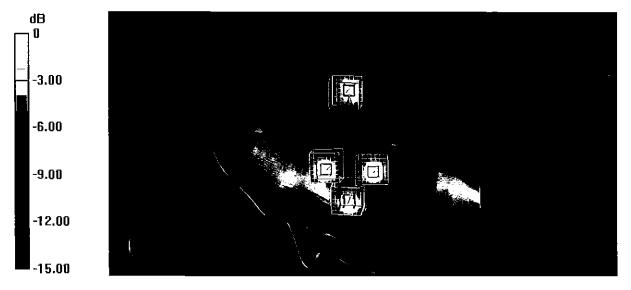
dz=1.4mm Reference Value = 72.48 V/m; Power Drift = 0.05 dB Peak SAR (extrapolated) = 27.9 W/kg SAR(1 g) = 8.14 W/kg; SAR(10 g) = 2.37 W/kg Maximum value of SAR (measured) = 19.3 W/kg

SAM Head/Neck - 5800/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 72.90 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 33.4 W/kg SAR(1 g) = 8.33 W/kg; SAR(10 g) = 2.35 W/kg Maximum value of SAR (measured) = 21.8 W/kg

SAM Head/Ear - 5200/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 54.68 V/m; Power Drift = 0.03 dB Peak SAR (extrapolated) = 16.3 W/kg SAR(1 g) = 5.16 W/kg; SAR(10 g) = 1.76 W/kg Maximum value of SAR (measured) = 11.1 W/kg

SAM Head/Ear - 5800/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 56.96 V/m; Power Drift = -0.05 dB Peak SAR (extrapolated) = 21.2 W/kg SAR(1 g) = 5.68 W/kg; SAR(10 g) = 1.89 W/kg Maximum value of SAR (measured) = 13.8 W/kg



0 dB = 13.8 W/kg = 11.40 dBW/kg



PCTEST ENGINEERING LABORATORY, INC. 7185 Oakland Mills Road, Columbia, MD 21046 USA Tel. +1.410.290.6652 / Fax +1.410.290.6654

http://www.pctest.com



Certification of Calibration

Object

D5GHzV2 - SN: 1057

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

1/16/2019

Extension Calibration date:

Description:

SAR Validation Dipole at 5250, 5600, and 5750 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Network Analyzer	2/8/2018	Annual	2/8/2019	US39170122
Agilent	N5182A	MXG Vector Signal Generator	4/18/2018	Annual	4/18/2019	MY47420800
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433971
Anritsu	MA2411B	Pulse Power Sensor	3/2/2018	Annual	3/2/2019	1207364
Anritsu	MA2411B	Pulse Power Sensor	3/2/2018	Annual	3/2/2019	1339018
Anritsu	ML2495A	Power Meter	10/21/2018	Annual	10/21/2019	941001
Control Company	4040	Therm./Clock/Humidity Monitor	3/31/2017	Biennial	3/31/2019	170232394
Control Company	4352	Ultra Long Stem Thermometer	5/2/2017	Biennial	5/2/2019	170330156
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	6/4/2018	Annual	6/4/2019	MY53401181
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Seekonk	NC-100	Torque Wrench	7/11/2018	Annual	7/11/2019	N/A
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/3/2018	Annual	10/3/2019	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/18/2018	Annual	6/18/2019	1334
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/11/2018	Annual	9/11/2019	1091
SPEAG	EX3DV4	SAR Probe	8/23/2018	Annual	8/23/2019	7308
SPEAG	EX3DV4	SAR Probe	6/25/2018	Annual	6/25/2019	7409

Measurement Uncertainty = ±23% (k=2)

	Name	Function	Signature
Calibrated By:	Brodie Halbfoster	Test Engineer	BRODIE HALBFOSTER
Approved By:	Kaitlin O'Keefe	Senior Technical Manager	XOK

Object:	Date Issued:	Page 1 of 4	
D5GHzV2 – SN: 1057	01/16/2019	Fage 1014	

DIPOLE CALIBRATION EXTENSION

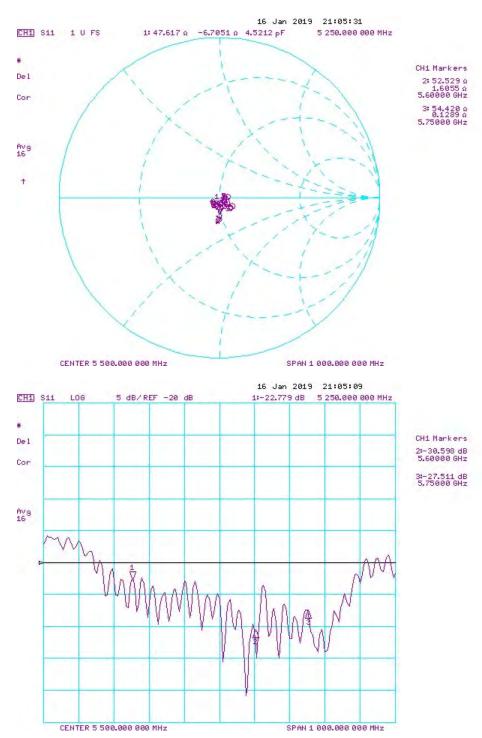
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

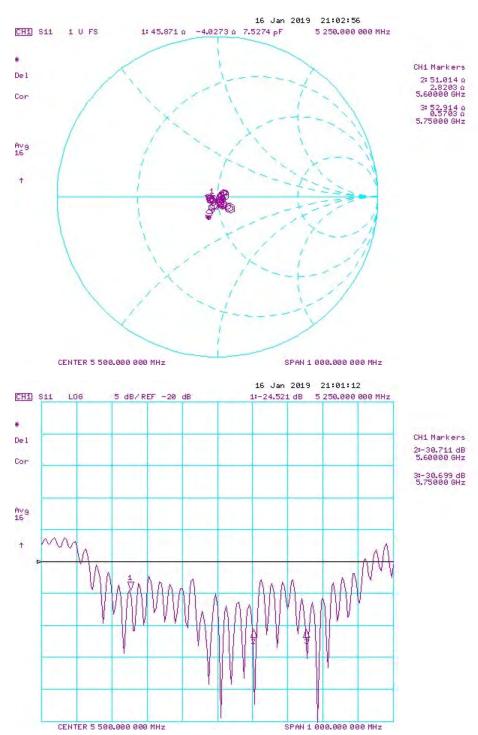
Frequency (MHz)	Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 17.0 dBm	Measured Head SAR (1g) W/kg @ 17.0 dBm	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 17.0 dBm	Measured Head SAR (10g) W/kg @ 17.0 dBm	Deviation 10g (%)		Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary	Measured Impedance Head (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)	PASS/FAIL
5250	1/16/2018	1/16/2019	1.203	3.96	3.63	-8.33%	1.14	1.04	-8.77%	50	47.6	2.4	-5.5	-6.7	1.2	-25.2	-22.8	9.60%	PASS
5600	1/16/2018	1/16/2019	1.203	4.205	3.84	-8.68%	1.2	1.09	-9.17%	54.7	52.5	2.2	-2.1	1.6	3.7	-26.2	-30.6	-16.80%	PASS
5750	1/16/2018	1/16/2019	1.203	4.025	3.76	-6.58%	1.15	1.07	-6.96%	52.7	54.4	1.7	0	0.1	0.1	-31.5	-27.5	12.70%	PASS
Frequency (MHz)	Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Body (1g) W/kg @ 17.0 dBm	Measured Body SAR (1g) W/kg @ 17.0 dBm	Deviation 1g (%)	Certificate SAR Target Body (10g) W/kg @ 17.0 dBm	Measured Body SAR (10g) W/kg @ 17.0 dBm	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Body (Ohm) Imaginary	Measured Impedance Body (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
5250	1/16/2018	1/16/2019	1.203	3.795	3.73	-1.71%	1.06	1.03	-2.37%	48.4	45.9	2.5	-3.9	-4	0.1	-27.4	-24.5	10.50%	PASS
5600	1/16/2018	1/16/2019	1.203	3.995	4.06	1.63%	1.12	1.12	0.45%	55.3	51	4.3	-1.6	2.8	4.4	-25.6	-30.7	-20.00%	PASS
5750	1/16/2018	1/16/2019	1.203	3.835	3.65	-4.82%	1.06	1.02	-3.77%	52.6	52.9	0.3	1.1	0.6	0.5	-31.2	-30.7	1.60%	PASS

Object:	Date Issued:	Dogo 2 of 4
D5GHzV2 – SN: 1057	01/16/2019	Page 2 of 4



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Dage 2 of 4
D5GHzV2 – SN: 1057	01/16/2019	Page 3 of 4



Impedance & Return-Loss Measurement Plot for Body TSL

Object:	Date Issued:	Page 4 of 4
D5GHzV2 – SN: 1057	01/16/2019	Page 4 of 4

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



S С S

Schweizerischer Kalibrierdienst

- Service suisse d'étalonnage
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Accreditation No.; SCS 0108

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

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PC Test Client

Certificate No: D5GHzV2-1237_Aug18

CALIBRATION CERTIFICATE

Object	D5GHzV2 - SN:12	237	· · ·	
	QA CAL-22.v3 Calibration procee	lure for dipole validation kits betw	reen 3-6 GHz 🕅	BNV 08/09/20
Calibration date:	August 10, 2018	· · · · · · · · · · · · · · · · · · ·		BN 08/09/20
The measurements and the uncerts	ainties with confidence pr	onal standards, which realize the physical units obability are given on the following pages and	l are part of the certifica	te.
All calibrations have been conducts Calibration Equipment used (M&TE		y facility: environment temperature (22 ± 3)°C	and numiony < 70%.	
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibr	ation
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	ļ
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-19	
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-19	
Reference Probe EX3DV4	SN: 3503	30-Dec-17 (No. EX3-3503_Dec17)	Dec-18	
DAE4	SN: 601	26-Oct-17 (No. DAE4-601_Oct17)	Oct-18	
Secondary Standards	10 #	Check Date (in house)	Scheduled Chec	k İ
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (In house check Oct-16)	in house check:	Oct-18
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-16)	In house check:	Oct-18
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-16)	In house check:	Oct-18
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-16)	In house check:	Oct-18
Network Analyzer Agilent E8358A		31-Mar-14 (in house check Oct-17)	in house check:	Oct-19
Calibrated by:	Name Manu Seitz	Function Laboratory Technician	Signature	5
Approved by:	Katja Pokovic	Technical Manager	T OU	Ţ_
		n full without written approval of the laboratory	Issued: August 1	7, 2018

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





S

Schweizerischer Kalibrierdienst

C Service suisse d'étalonnage

Servizio svizzero di taratura

S Swiss Calibration Service

Accreditation No.: SCS 0108

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

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) 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
- b) 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
- c) 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
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

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	V52.10.1
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4.0 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	5250 MHz ± 1 MHz 5600 MHz ± 1 MHz 5750 MHz ± 1 MHz	

Head TSL parameters at 5250 MHz The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.9	4.71 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.6 ± 6 %	4.61 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5250 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.15 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	81.3 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.36 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.5 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.5	5.07 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.1 ±6 %	4.98 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5600 MHz

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.60 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	85.7 W / kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.46 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.5 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5750 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.4	5.22 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	34.9 ± 6 %	5.14 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5750 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.09 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	80.6 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.32 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.1 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5250 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.9	5.36 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.9 ± 6 %	5.49 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5250 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.62 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	75.6 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.14 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.2 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.5	5.77 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.3 ± 6 %	5.96 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5600 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.91 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	78.5 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.22 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	22.0 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5750 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.3	5.94 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.0 ± 6 %	6.16 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5750 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.65 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	75.9 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.14 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.2 W/kg ± 19.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL at 5250 MHz

Impedance, transformed to feed point	47.5 Ω - 3.5 jΩ
Return Loss	- 27.0 dB

Antenna Parameters with Head TSL at 5600 MHz

Impedance, transformed to feed point	50.1 Ω + 4.7 jΩ
Return Loss	- 26.7 dB

Antenna Parameters with Head TSL at 5750 MHz

Impedance, transformed to feed point	52.7 Ω + 0.8 jΩ
Return Loss	- 31.2 dB

Antenna Parameters with Body TSL at 5250 MHz

Impedance, transformed to feed point	46.5 Ω - 1.3 jΩ
Return Loss	- 28.2 dB

Antenna Parameters with Body TSL at 5600 MHz

Impedance, transformed to feed point	53.1 Ω + 6.2 jΩ
Return Loss	- 23.5 dB

Antenna Parameters with Body TSL at 5750 MHz

Impedance, transformed to feed point	53.6 Ω + 2.1 jΩ
Return Loss	- 27.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction) 1,195 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufac	tured by	SPEAG
Manufac	tured on	May 04, 2015

DASY5 Validation Report for Head TSL

Date: 10.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1237

Communication System: UID 0 - CW; Frequency: 5250 MHz, Frequency: 5600 MHz, Frequency: 5750 MHz Medium parameters used: f = 5250 MHz; σ = 4.61 S/m; ϵ_r = 35.6; ρ = 1000 kg/m³, Medium parameters used: f = 5600 MHz; σ = 4.98 S/m; ϵ_r = 35.1; ρ = 1000 kg/m³, Medium parameters used: f = 5750 MHz; σ = 5.14 S/m; ϵ_r = 34.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

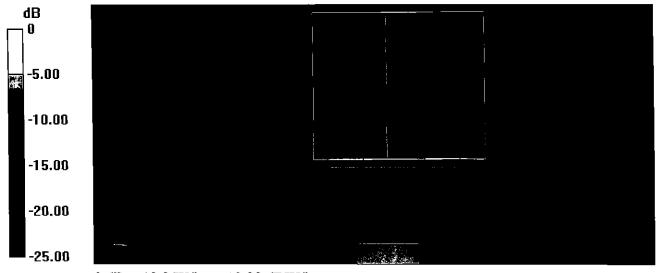
DASY52 Configuration:

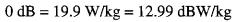
- Probe: EX3DV4 SN3503; ConvF(5.51, 5.51, 5.51) @ 5250 MHz, ConvF(5.05, 5.05, 5.05) @ 5600 MHz, ConvF(4.98, 4.98, 4.98) @ 5750 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601 (5GHz); Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

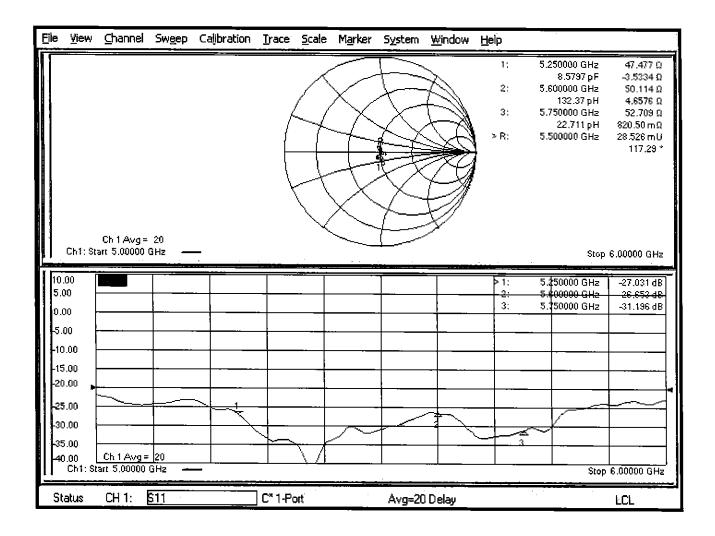
Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5250 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 75.17 V/m; Power Drift = -0.03 dB Peak SAR (extrapolated) = 27.8 W/kg SAR(1 g) = 8.15 W/kg; SAR(10 g) = 2.36 W/kg Maximum value of SAR (measured) = 18.4 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 75.53 V/m; Power Drift = -0.05 dB Peak SAR (extrapolated) = 32.4 W/kg SAR(1 g) = 8.6 W/kg; SAR(10 g) = 2.46 W/kg Maximum value of SAR (measured) = 20.2 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5750 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 73.04 V/m; Power Drift = -0.04 dB Peak SAR (extrapolated) = 31.1 W/kg SAR(1 g) = 8.09 W/kg; SAR(10 g) = 2.32 W/kg Maximum value of SAR (measured) = 19.9 W/kg







DASY5 Validation Report for Body TSL

Date: 10.08.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1237

Communication System: UID 0 - CW; Frequency: 5250 MHz, Frequency: 5600 MHz, Frequency: 5750 MHz Medium parameters used: f = 5250 MHz; σ = 5.49 S/m; ϵ_r = 46.9; ρ = 1000 kg/m³, Medium parameters used: f = 5600 MHz; σ = 5.96 S/m; ϵ_r = 46.3; ρ = 1000 kg/m³, Medium parameters used: f = 5750 MHz; σ = 6.16 S/m; ϵ_r = 46; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

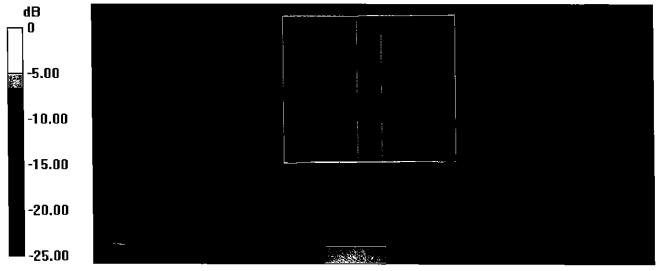
DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(5.26, 5.26, 5.26) @ 5250 MHz, ConvF(4.65, 4.65, 4.65) @ 5600 MHz, ConvF(4.57, 4.57, 4.57) @ 5750 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601 (5GHz); Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5250 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 68.22 V/m; Power Drift = -0.09 dB Peak SAR (extrapolated) = 28.5 W/kg SAR(1 g) = 7.62 W/kg; SAR(10 g) = 2.14 W/kg Maximum value of SAR (measured) = 17.3 W/kg

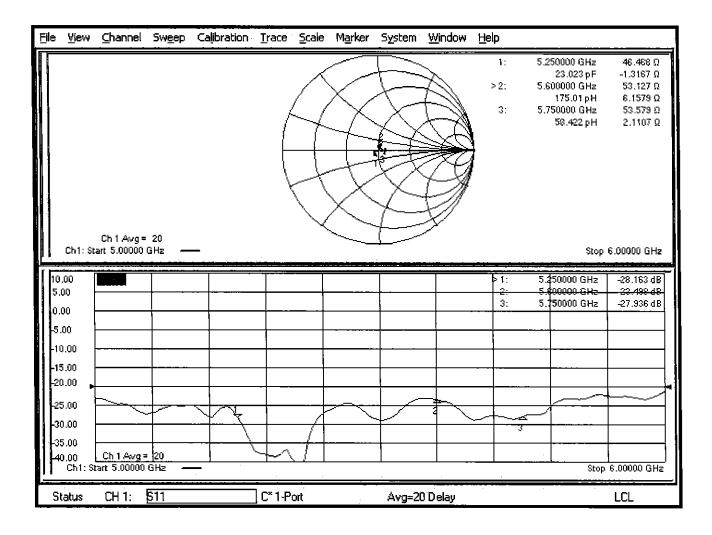
Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 67.51 V/m; Power Drift = -0.07 dB Peak SAR (extrapolated) = 32.1 W/kg SAR(1 g) = 7.91 W/kg; SAR(10 g) = 2.22 W/kg Maximum value of SAR (measured) = 18.5 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5750 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 65.91 V/m; Power Drift = -0.08 dB Peak SAR (extrapolated) = 31.7 W/kg SAR(1 g) = 7.65 W/kg; SAR(10 g) = 2.14 W/kg Maximum value of SAR (measured) = 18.0 W/kg



0 dB = 18.0 W/kg = 12.55 dBW/kg

Impedance Measurement Plot for Body TSL





PCTEST ENGINEERING LABORATORY, INC. 7185 Oakland Mills Road, Columbia, MD 21046 USA Tel. +1.410.290.6652 / Fax +1.410.290.6654

http://www.pctest.com



Certification of Calibration

Object

D5GHzV2 - SN: 1237

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

08/09/2019

Extended Calibration date:

Description:

SAR Validation Dipole at 5GHz

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Network Analyzer		Annual	10/2/2019	US39170118
Agilent	N5182A	MXG Vector Signal Generator	6/27/2019	Annual	6/27/2020	US46240505
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	343972
Anritsu	ML2495A	Power Meter	10/21/2018	Annual	10/21/2019	941001
Anritsu	MA2411B	Pulse Power Sensor	10/30/2018	Annual	10/30/2019	1207470
Anritsu	MA2411B	Pulse Power Sensor	11/20/2018	Annual	11/20/2019	1339007
Control Company	4040	Temperature / Humidity Monitor	2/28/2018	Biennial	2/28/2020	150761911
Control Company	4352	Ultra Long Stem Thermometer	2/28/2018	Biennial	2/28/2020	170330160
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	7/2/2019	Annual	7/2/2020	MY53401181
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	5/23/2018	Biennial	5/23/2020	N/A
SPEAG	EX3DV4	SAR Probe	2/19/2019	Annual	2/19/2020	7417
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/13/2019	Annual	2/13/2020	665
SPEAG	EX3DV4	SAR Probe	7/15/2019	Annual	7/15/2020	7547
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2019	Annual	7/11/2020	1323
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/11/2018	Annual	9/11/2019	1091

Measurement Uncertainty = $\pm 23\%$ (k=2)

	Name	Function	Signature
Calibrated By:	Brodie Halbfoster	Test Engineer	BRODIE HALBFOSTER
Approved By:	Kaitlin O'Keefe	Senior Technical Manager	XOK

Object:	Date Issued:	Daga 1 of 4	
D5GHzV2 – SN: 1237	08/09/2019	Page 1 of 4	

DIPOLE CALIBRATION EXTENSION

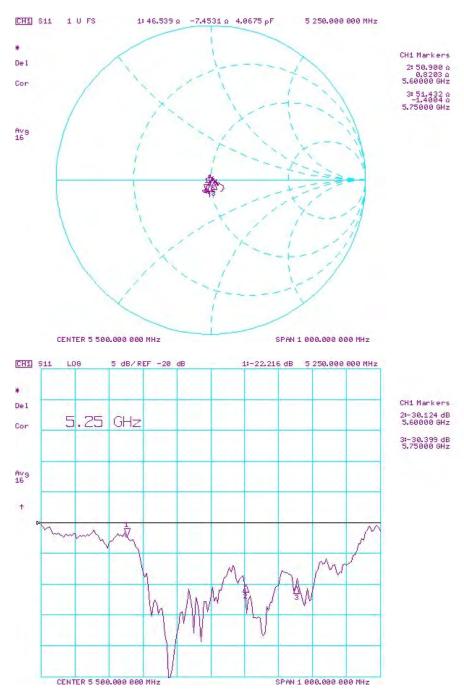
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

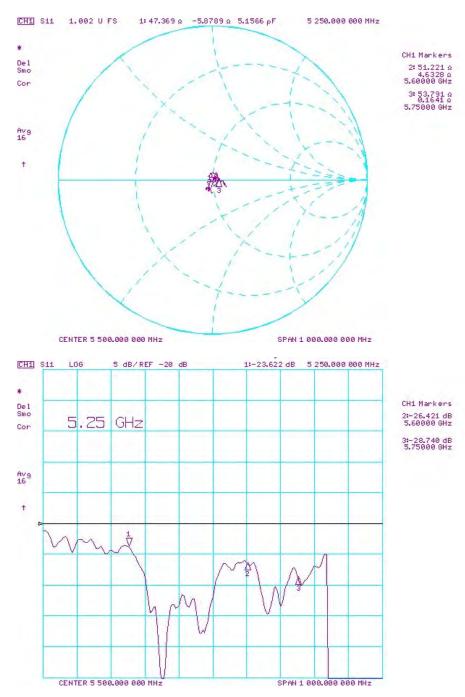
Frequency (MHz)	Calibration Date	Extension Date	Certificate Electrical Delay (ns)		Measured Head SAR (1g) W/kg @ 17.0 dBm		Certificate SAR Target Head (10g) W/kg @ 17.0 dBm	(10a) W/ka @	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary	Measured Impedance Head (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)	PASS/FAIL
5250	8/10/2018	8/9/2019	1.195	4.065	3.81	-6.27%	1.18	1.09	-7.23%	47.5	46.5	1	-3.5	-7.5	4	-27	-22.2	17.70%	PASS
5600	8/10/2018	8/9/2019	1.195	4.285	4.06	-5.25%	1.23	1.15	-6.12%	50.1	50.9	0.8	4.7	0.8	3.9	-26.7	-30.1	-12.80%	PASS
5750	8/10/2018	8/9/2019	1.195	4.03	3.8	-5.71%	1.16	1.07	-7.36%	52.7	51.4	1.3	0.8	-1.4	2.2	-31.2	-30.4	2.60%	PASS
Frequency (MHz)	Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Body (1g) W/kg @ 17.0 dBm	Measured Body SAR (1g) W/kg @ 17.0 dBm	Deviation 1g (%)	Certificate SAR Target Body (10g) W/kg @ 17.0 dBm	(10a) W/ka @	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Body (Ohm) Imaginary	Measured Impedance Body (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
5250	8/10/2018	8/9/2019	1.195	3.78	3.52	-6.88%	1.06	0.981	-7.45%	46.5	47.4	0.9	-1.3	-5.9	4.6	-28.2	-23.6	16.20%	PASS
5600	8/10/2018	8/9/2019	1.195	3.925	3.81	-2.93%	1.1	1.05	-4.55%	53.1	51.2	1.9	6.2	4.6	1.6	-23.5	-26.4	-12.40%	PASS
5750	8/10/2018	8/9/2019	1.195	3.795	3.58	-5.67%	1.06	1	-5.66%	53.6	53.8	0.2	2.1	0.2	1.9	-27.9	-28.7	-3.00%	PASS

Object:	Date Issued:	Daga 2 of 4
D5GHzV2 – SN: 1237	08/09/2019	Page 2 of 4



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Dage 2 of 4	
D5GHzV2 – SN: 1237	08/09/2019	Page 3 of 4	



Impedance & Return-Loss Measurement Plot for Body TSL

Object:	Date Issued:	Deris 4 of 4
D5GHzV2 – SN: 1237	08/09/2019	Page 4 of 4

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



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

Accreditation No.: SCS 0108

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

Client PC Test

Certificate No: D750V3-1003_Jan18

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CALIBRATION	CERTIFICATE

Object	ct D750V3 - SN:1003							
Calibration procedure(s) QA CAL-05.v9 Calibration procedure for dipole validation kits above 700 MHz								
Calibration date:	January 15, 201	3	BN 01-25-2018					
This callbration certificate documents and the unce	ents the traceability to nat rtainties with confidence p	ional standards, which realize the physical un probability are given on the following pages an	d are part of the certificate					
		ry facility: environment temperature (22 \pm 3)°(02106/2010					
Calibration Equipment used (M&T								
Primary Slandards	ID#	Cal Date (Certificate No.)	Scheduled Calibration					
Power meter NRP	SN: 104778	04-Apr-17 (No. 217-02521/02522)						
Power sensor NRP-Z91	SN: 103244	04-Apr-17 (No. 217-02521)	Apr-18 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					
Reference Probe EX3DV4	SN: 7349	30-Dec-17 (No. EX3-7349_Dec17)	Dec-18					
DAE4	SN: 601	26-Oct-17 (No. DAE4-601_Oct17)	Oct-18					
Secondary Standards	ID #	Check Date (in house)	Scheduled Check					
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-16)	In house check: Oct-18					
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-16)	In house check: Oct-18					
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-16)	in house check: Oct-18					
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-16)	In house check: Oci-18					
Nelwork Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-17)	In house check: Oct-18					
	Name	Function	Signature					
Calibrated by:	Ləlf Klysner	Laboratory Technician	Seaf The					
Approved by:	Katja Pokovic	Technical Manager	helly					
This calibration certificate shall no	l be reproduced except in	full without written approval of the laboratory	Issued: January 15, 2018					

ept in full without written approval of the laboratory.

Certificate No: D750V3-1003_Jan18

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst Service suisse d'étalonnage Servizio svizzero dl taratura Swiss Calibration Service

Accreditation No.: SCS 0108

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

Glossary:

tissue simulating liquid sensitivity in TSL / NORM x,y,z not applicable or not measured
not applicable of not measured

Calibration is Performed According to the Following Standards:

- a) 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
- b) 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
- c) 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
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

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

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

DASY Version	DASY5	
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5.0 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.9 ± 6 %	0.90 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.10 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.28 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.37 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	5.42 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.0 ± 6 %	0.96 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.15 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	8.58 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.43 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	5.71 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	53.8 Ω - 2.1 jΩ
Return Loss	- 27.6 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	49.2 Ω - 6.2 jΩ
Return Loss	- 24.0 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.043 ns
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After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	January 21, 2009

Appendix (Additional assessments outside the scope of SCS 0108)

Measurement Conditions

DASY system configuration, as far as not given on page 1 and 3.

Phantom

SAM Head Phantom

For usage with cSAR3DV2-R/L

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SAR result with SAM Head (Top)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition		
SAR measured	250 mW input power	1.98 W/kg	
SAR for nominal Head TSL parameters	normalized to 1W 7.94 W/kg ± 17.5 %		
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition		
SAR measured	250 mW input power	1.33 W/kg	
SAR for nominal Head TSL parameters			

SAR result with SAM Head (Mouth)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.05 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.22 W/kg ± 17.5 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.38 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	5.52 W/kg ± 16.9 % (k=2)

SAR result with SAM Head (Neck)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition		
SAR measured	250 mW input power	2.01 W/kg	
SAR for nominal Head TSL parameters	normalized to 1W 8.06 W/kg ± 17.5 %		
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition		
SAR measured	250 mW input power	1.38 W/kg	

SAR result with SAM Head (Ear)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition		
SAR measured	250 mW input power	1.67 W/kg	
SAR for nominal Head TSL parameters	normalized to 1W 6.70 W/kg ± 17.5		
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition		
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 250 mW input power	1.15 W/kg	

DASY5 Validation Report for Head TSL

Date: 12.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1003

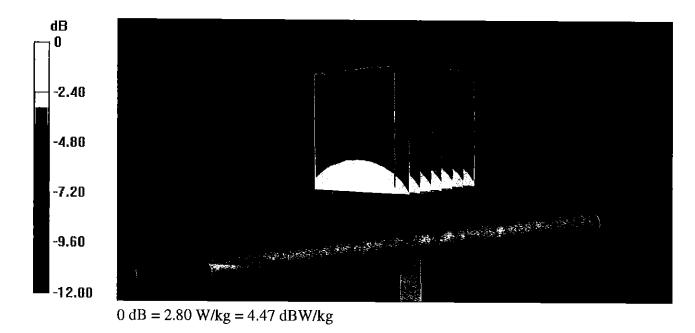
Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.9$ S/m; $\varepsilon_r = 40.9$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

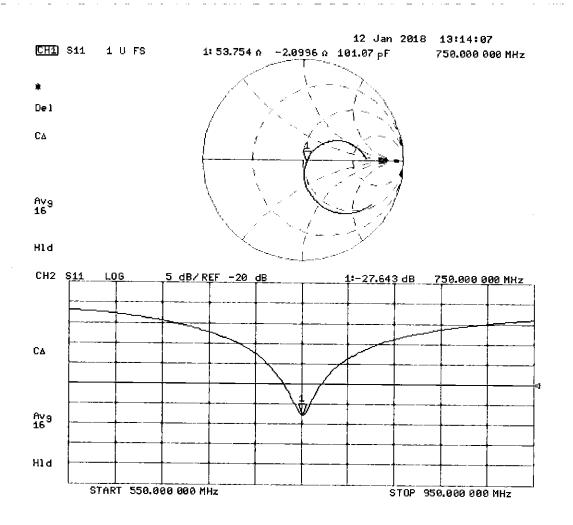
- Probe: EX3DV4 SN7349; ConvF(10.22, 10.22, 10.22); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 59.11 V/m; Power Drift = -0.04 dB Peak SAR (extrapolated) = 3.15 W/kg SAR(1 g) = 2.1 W/kg; SAR(10 g) = 1.37 W/kg Maximum value of SAR (measured) = 2.80 W/kg



Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 12.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1003

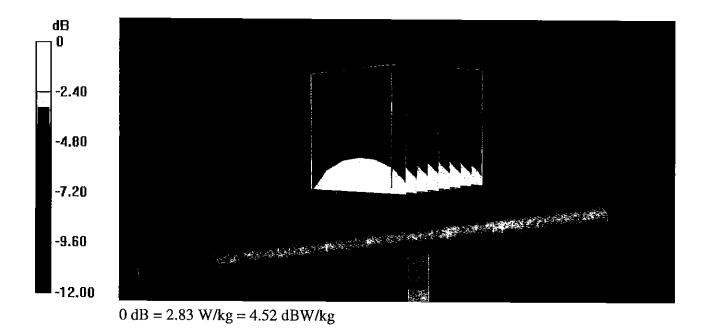
Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.96$ S/m; $\epsilon_r = 55$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

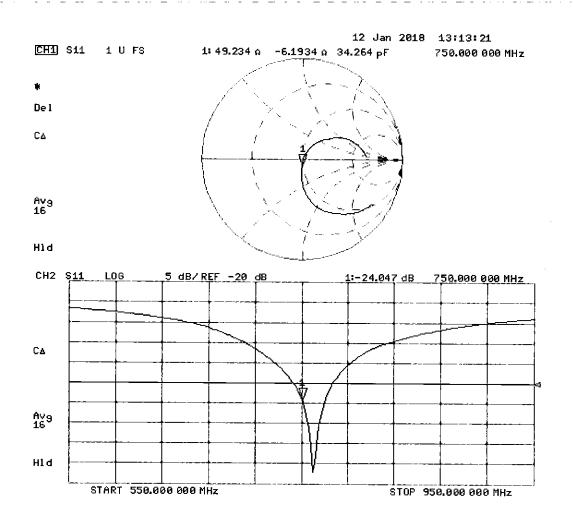
- Probe: EX3DV4 SN7349; ConvF(10.19, 10.19, 10.19); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x8x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 57.31 V/m; Power Drift = -0.01 dB Peak SAR (extrapolated) = 3.17 W/kg SAR(1 g) = 2.15 W/kg; SAR(10 g) = 1.43 W/kg Maximum value of SAR (measured) = 2.83 W/kg



Impedance Measurement Plot for Body TSL



Date: 15.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1003

Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.9$ S/m; $\varepsilon_r = 44.2$; $\rho = 1000$ kg/m³ Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

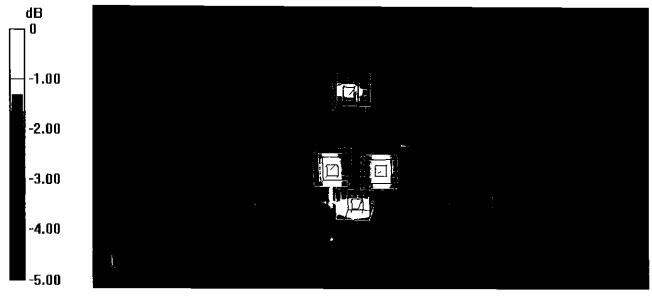
- Probe: EX3DV4 SN7349; ConvF(10.22, 10.22, 10.22); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: SAM Head
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

SAM Head/Top/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 56.79 V/m; Power Drift = -0.01 dB Peak SAR (extrapolated) = 2.89 W/kg SAR(1 g) = 1.98 W/kg; SAR(10 g) = 1.33 W/kg Maximum value of SAR (measured) = 2.58 W/kg

SAM Head/Mouth/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 56.85 V/m; Power Drift = -0.06 dB Peak SAR (extrapolated) = 2.94 W/kg SAR(1 g) = 2.05 W/kg; SAR(10 g) = 1.38 W/kg Maximum value of SAR (measured) = 2.62 W/kg

SAM Head/Neck/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 56.29 V/m; Power Drift = 0.04 dB Peak SAR (extrapolated) = 2.78 W/kg SAR(1 g) = 2.01 W/kg; SAR(10 g) = 1.38 W/kg Maximum value of SAR (measured) = 2.56 W/kg

SAM Head/Ear/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 51.01 V/m; Power Drift = 0.02 dB Peak SAR (extrapolated) = 2.31 W/kg SAR(1 g) = 1.67 W/kg; SAR(10 g) = 1.15 W/kg Maximum value of SAR (measured) = 2.11 W/kg



0 dB = 2.58 W/kg = 4.12 dBW/kg



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http://www.pctest.com



Certification of Calibration

Object

D750V3 - SN: 1003

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

1/15/2019

Extension Calibration date:

Description:

SAR Validation Dipole at 750 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Network Analyzer	2/8/2018	Annual	2/8/2019	US39170122
Agilent	N5182A	MXG Vector Signal Generator	4/18/2018	Annual	4/18/2019	MY47420800
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433971
Anritsu	MA2411B	Pulse Power Sensor	3/2/2018	Annual	3/2/2019	1207364
Anritsu	MA2411B	Pulse Power Sensor	3/2/2018	Annual	3/2/2019	1339018
Anritsu	ML2495A	Power Meter	10/21/2018	Annual	10/21/2019	941001
Control Company	4040	Therm./Clock/Humidity Monitor	3/31/2017	Biennial	3/31/2019	170232394
Control Company	4352	Ultra Long Stem Thermometer	5/2/2017	Biennial	5/2/2019	170330156
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	6/4/2018	Annual	6/4/2019	MY53401181
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Pasternack	PE2208-6	Bidirectional Coupler	CBT	N/A	CBT	N/A
Seekonk	NC-100	Torque Wrench	7/11/2018	Annual	7/11/2019	N/A
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/3/2018	Annual	10/3/2019	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/18/2018	Annual	6/18/2019	1334
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/11/2018	Annual	9/11/2019	1091
SPEAG	EX3DV4	SAR Probe	8/23/2018	Annual	8/23/2019	7308
SPEAG	EX3DV4	SAR Probe	6/25/2018	Annual	6/25/2019	7409

Measurement Uncertainty = $\pm 23\%$ (k=2)

	Name	Function	Signature
Calibrated By:	Brodie Halbfoster	Test Engineer	BRODIE HALBFOSTER
Approved By:	Kaitlin O'Keefe	Senior Technical Manager	XOK

Object:	Date Issued:	Page 1 of 4	
D750V3 – SN: 1003	01/15/2019	Fage 1 01 4	

DIPOLE CALIBRATION EXTENSION

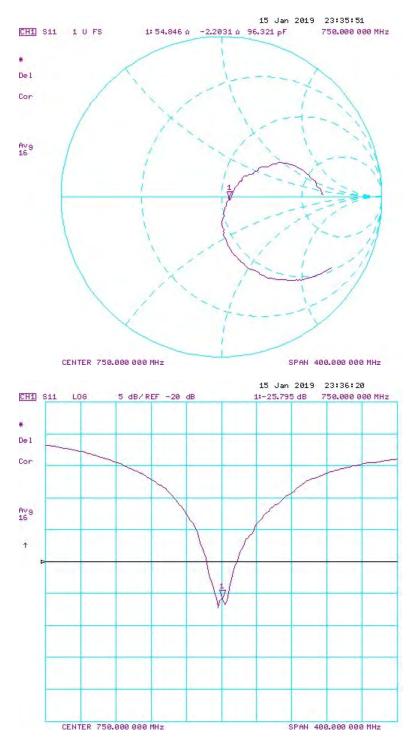
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

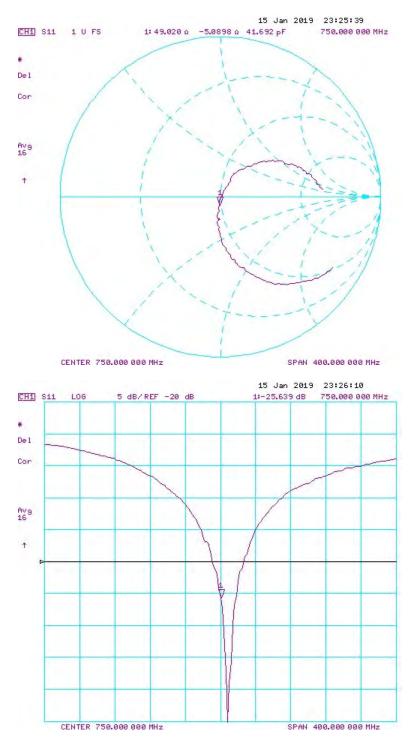
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 23.0 dBm	Measured Head SAR (1g) W/kg @ 23.0 dBm		Certificate SAR Target Head (10g) W/kg @ 23.0 dBm	(40-) 10/0-0	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary	Measured Impedance Head (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)	PASS/FAIL
1/15/2018	1/15/2019	1.043	1.656	1.75	5.68%	1.08	1.15	6.09%	53.8	54.8	1	-2.1	-2.2	0.1	-27.6	-25.8	6.50%	PASS
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Body (1g) W/kg @ 23.0 dBm	Measured Body SAR (1g) W/kg @ 23.0 dBm			(10a) W/ka	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Body (Ohm) Imaginary	Measured Impedance Body (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
1/15/2018	1/15/2019	1.043	1.716	1.84	7.23%	1.14	1.23	7.71%	49.2	49	0.2	-6.2	-5.1	1.1	-24	-25.6	-6.80%	PASS

Object:	Date Issued:	Page 2 of 4	
D750V3 – SN: 1003	01/15/2019	raye 2 01 4	



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Dage 2 of 4
D750V3 – SN: 1003	01/15/2019	Page 3 of 4



Impedance & Return-Loss Measurement Plot for Body TSL

Object:	Date Issued:	Page 4 of 4
D750V3 – SN: 1003	01/15/2019	Page 4 of 4

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

PC Test

Client



Schweizerischer Kalibrierdienst S

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- S Swiss Calibration Service

Accreditation No.: SCS 0108

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

Certificate No: D750V3-1054 Mar19/2

CALIBRATION C	ERTIE (CAT	E (Replacement of No:D	0750V3-1154_Mar19)			
Object	D750V3 - SN:1054					
Calibration procedure(s)	QA CAL-05.v11 Calibration Proce	edure for SAR Validation Source	es between 0.7-3 GHz کار کار کار کار کار کار کار کار کار کار کار			
Calibration date:	March 18, 2019					
This calibration certificate documer The measurements and the uncert	nts the traceability to nat ainties with confidence p	ional standards, which realize the physical (probability are given on the following pages a	units of measurements (SI). and are part of the certificate.			
All calibrations have been conducte	ed in the closed laborato	ry facility: environment temperature (22 \pm 3))°C and humidity < 70%.			
Calibration Equipment used (M&TE	E 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: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-19			
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-19			
Reference Probe EX3DV4	SN: 7349	31-Dec-18 (No. EX3-7349_Dec18)	Dec-19			
DAE4	SN: 601	04-Oct-18 (No. DAE4-601_Oct18)	Oct-19			
Secondary Standards	ID #	Check Date (in house)	Scheduled Check			
Power meter E4419B	SN: GB39512475	07-Oct-15 (in house check Feb-19)	I⊓ house check: Oct-20			
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20			
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20			
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20			
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19			
	Name	Function	Signature			
Calibrated by:	Manu Seitz	Laboratory Techniclan	Æ			
Approved by:	Katja Pokovic	Technical Manager	Ally			
This calibration certificate shall not	be reproduced except in	full without written approval of the laborato	Issued: April 12, 2019			

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst

S Service suisse d'étalonnage

С 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

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) 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
- b) 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
- c) 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
- d) KDB 865664. "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna . connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

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%.

Accreditation No.: SCS 0108

Measurement Conditions

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

DASY Version	DASY5	V52.10.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	······································
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5.0 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	42.1 ± 6 %	0.89 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.07 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.29 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 250 mW input power	1.37 W/kg

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.5 ± 6 %	0.98 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		₩ ₩ ₩

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.18 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	8.55 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.44 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	5.67 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	54.5 Ω - 0.3 jΩ
Return Loss	- 27.2 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	50.2 Ω - 3.0 jΩ
Return Loss	- 30.3 dB

General Antenna Parameters and Design

Electrical Delevis (and allow at as)	1 005
Electrical Delay (one direction)	1.035 ns
, ,	11000 110

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

Appendix (Additional assessments outside the scope of SCS 0108)

Measurement Conditions

DASY system configuration, as far as not given on page 1 and 3.

Phantom	SAM Head Phantom	For usage with cSAR3DV2-R/L

SAR result with SAM Head (Top)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition		
SAR measured	250 mW input power	1.93 W/kg	
SAR for nominal Head TSL parameters	normalized to 1W	7.72 W/kg ± 17.5 % (k=2)	
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition		
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 250 mW input power	1.31 W/kg	

SAR result with SAM Head (Mouth)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.05 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.20 W/kg ± 17.5 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.39 W/kg

SAR result with SAM Head (Neck)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.00 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.00 W/kg ± 17.5 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.38 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	5.51 W/kg ± 16.9 % (k=2)

SAR result with SAM Head (Ear)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition		
SAR measured	250 mW input power	1.66 W/kg	
SAR for nominal Head TSL parameters	normalized to 1W	6.64 W/kg ± 17.5 % (k=2)	
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition		
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 250 mW input power	1.14 W/kg	

DASY5 Validation Report for Head TSL

Date: 13.03.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1054

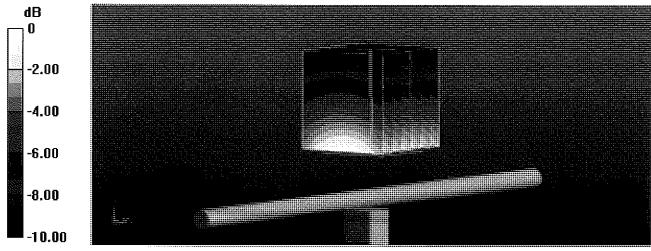
Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.89$ S/m; $\epsilon_r = 42.1$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10.32, 10.32, 10.32) @ 750 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 58.96 V/m; Power Drift = 0.00 dB Peak SAR (extrapolated) = 3.06 W/kg SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.37 W/kg Maximum value of SAR (measured) = 2.73 W/kg



0 dB = 2.73 W/kg = 4.36 dBW/kg

Impedance Measurement Plot for Head TSL

Elle View	Channel S	weep Callbration	<u>Trace S</u> cale	M <u>a</u> rker S <u>v</u> s	stem <u>Wi</u> ndow	<u>H</u> elp	
					$\Delta =$).000000 MHz 834.50 pF).000000 MHz	-254.29 mΩ
Ch1: 9	Ch 1 Avg = 20 Start 550,000 MH			~~_ _			Stop 950,000 MHz
10.00 5.00 -5.00 -10.00 -15.00 -25.00 -25.00 -30.00 -35.00 -40.00 Ch1: 5	Ch 1 Avg = 20				> 1: 750		-27.245 dB
Status	CH 1: 51	1	C* 1-Port	Av	g=20 Delay		LCL

DASY5 Validation Report for Body TSL

Date: 13.03.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1054

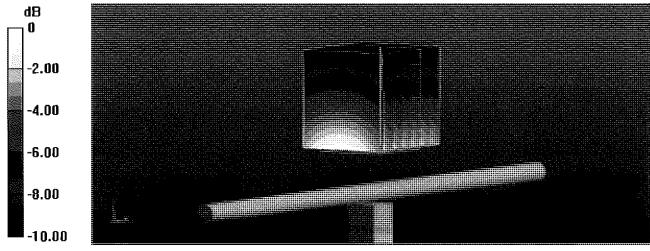
Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; σ = 0.98 S/m; ϵ_r = 54.5; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10.29, 10.29, 10.29) @ 750 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 57.37 V/m; Power Drift = -0.01 dB Peak SAR (extrapolated) = 3.19 W/kg SAR(1 g) = 2.18 W/kg; SAR(10 g) = 1.44 W/kg Maximum value of SAR (measured) = 2.87 W/kg



0 dB = 2.87 W/kg = 4.58 dBW/kg

Impedance Measurement Plot for Body TSL

<u>File V</u> iew	Channel	Sw <u>e</u> ep Ca	libration	<u>T</u> race <u>S</u> cale	M <u>a</u> rker	System	<u>W</u> indow <u>H</u>	elp		
				A				000000 № 69.776 000000 №	рF	50.211 Ω -3.0413 Ω 30.407 mU -84.301 °
Ch1: St	Ch 1 Avg = art 550.000 ł									Stop 950.000 MHz
5.00 0.00 -5.00 -10.00 -15.00 -20.00 -25.00 -30.00 -35.00 -40.00	Ch 1 Avg = art 550,000 b	20 MHz				> 1	; 750,1			-30.340 dB
Status	CH 1:	311] (≥*1-Port		Avg=20 D	elay			LCL

DASY5 Validation Report for SAM Head

Date: 18.03.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1054

Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; σ = 0.904 S/m; ε_r = 44.22; ρ = 1000 kg/m³ Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10.32, 10.32, 10.32) @ 750 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: SAM Head
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

SAM Right/Head/Top/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 55.66 V/m; Power Drift = -0.02 dB

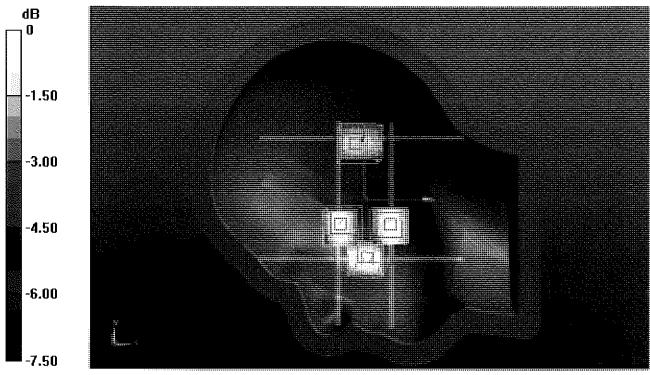
Peak SAR (extrapolated) = 2.80 W/kgSAR(1 g) = 1.93 W/kg; SAR(10 g) = 1.31 W/kgMaximum value of SAR (measured) = 2.52 W/kg

SAM Right/Head/Mouth/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm,

dz=5mm Reference Value = 57.68 V/m; Power Drift = 0.03 dB Peak SAR (extrapolated) = 2.98 W/kg SAR(1 g) = 2.05 W/kg; SAR(10 g) = 1.39 W/kg Maximum value of SAR (measured) = 2.68 W/kg

SAM Right/Head/Neck/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 56.23 V/m; Power Drift = -0.04 dB Peak SAR (extrapolated) = 2.82 W/kg SAR(1 g) = 2 W/kg; SAR(10 g) = 1.38 W/kg Maximum value of SAR (measured) = 2.56 W/kg

SAM Right/Head/Ear/Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 50.76 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 2.32 W/kg SAR(1 g) = 1.66 W/kg; SAR(10 g) = 1.14 W/kg Maximum value of SAR (measured) = 2.11 W/kg



0 dB = 2.11 W/kg = 3.24 dBW/kg

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



Schweizerischer Kalibrierdienst S

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 - 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 PC Test Certificate No: D835V2-4d047 Mar19

CALIBRATION CERTIFICATE

Object	D835V2 - SN:4d0	047	
Calibration procedure(s)	QA CAL-05.v11 Calibration Proce	dure for SAR Validation Source	s between 0.7-3 GHz
			gN ~
Calibration date:	March 13, 2019		BN~ 04-12-2019
The measurements and the uncerta	ainties with confidence p ed in the closed laborator	onal standards, which realize the physical ur robability are given on the following pages a ry facility: environment temperature (22 \pm 3)°	nd are part of the certificate.
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: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-19
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-19
Reference Probe EX3DV4	SN: 7349	31-Dec-18 (No. EX3-7349_Dec18)	Dec-19
DAE4	SN: 601	04-Oct-18 (No. DAE4-601_Oct18)	Oct-19
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	07-Oct-15 (in house check Feb-19)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19
	Name	Function	Signature
Calibrated by:	Manu Seitz	Laboratory Technician	- Ale
Approved by:	Katja Pokovic	Technical Manager	- Cliff
This calibration cortificate shall not	he reproduced except in	full without written approval of the Jahoraton	Issued: March 13, 2019

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst

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- S Swiss Calibration Service

Accreditation No.: SCS 0108

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

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) 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
- b) 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
- c) 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
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power. •
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna • connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

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	V52.10.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	····
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	41.9 ± 6 %	0.91 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.37 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.42 W/kg ± 17.0 % (k=2)
		· · · ·
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.54 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	6.13 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.3 ± 6 %	1.01 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	****	

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.45 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	9.47 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.61 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	6.27 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	51.4 Ω - 2.6 jΩ
Return Loss	- 30.7 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.8 Ω - 6.1 jΩ
Return Loss	- 22.9 dB

General Antenna Parameters and Design

/ (one direction)	1.387 ns	

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

nufactured by	SPEAG
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DASY5 Validation Report for Head TSL

Date: 13.03.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d047

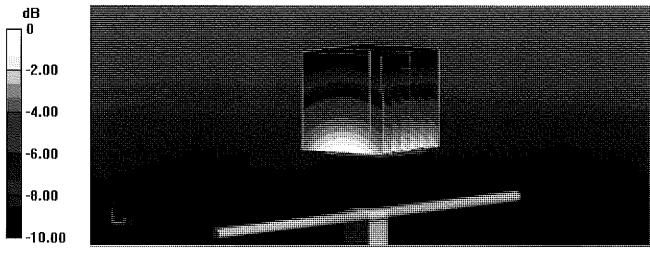
Communication System: UID 0 - CW; Frequency: 835 MHz Medium parameters used: f = 835 MHz; σ = 0.91 S/m; ϵ_r = 41.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10, 10, 10) @ 835 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

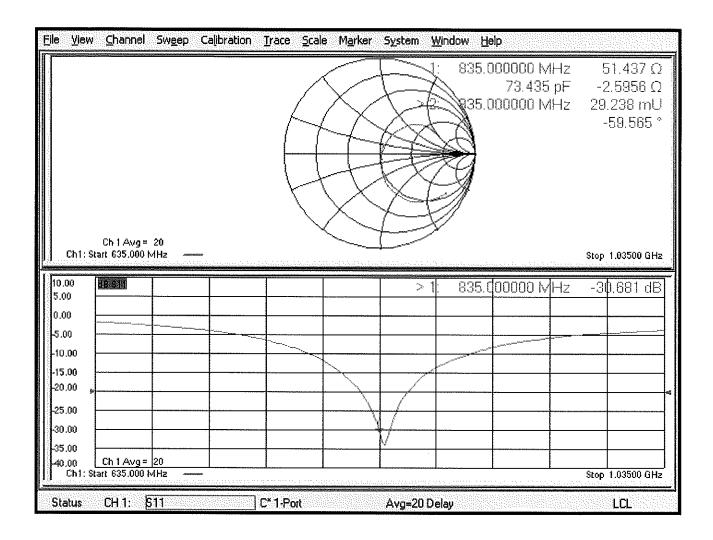
Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 62.48 V/m; Power Drift = -0.08 dB Peak SAR (extrapolated) = 3.60 W/kg SAR(1 g) = 2.37 W/kg; SAR(10 g) = 1.54 W/kg Maximum value of SAR (measured) = 3.18 W/kg



0 dB = 3.18 W/kg = 5.02 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 13.03.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d047

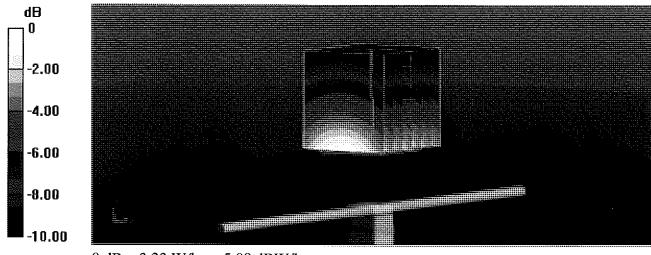
Communication System: UID 0 - CW; Frequency: 835 MHz Medium parameters used: f = 835 MHz; $\sigma = 1.01$ S/m; $\varepsilon_r = 54.3$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10.15, 10.15, 10.15) @ 835 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

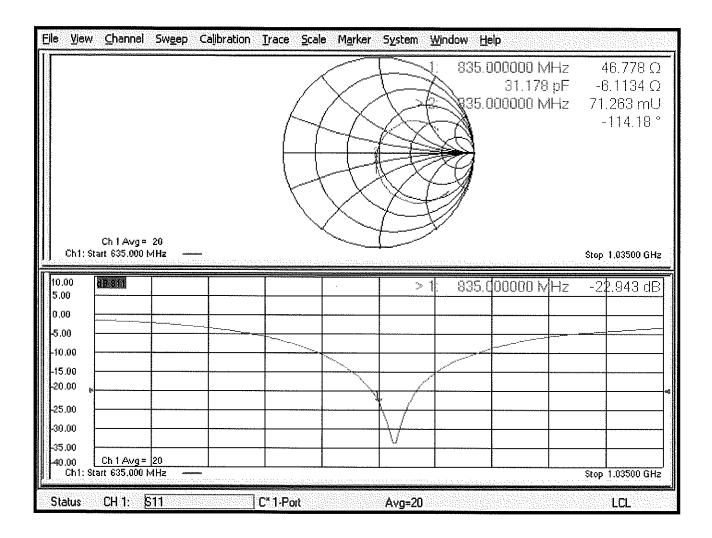
Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 60.49 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 3.58 W/kg SAR(1 g) = 2.45 W/kg; SAR(10 g) = 1.61 W/kg Maximum value of SAR (measured) = 3.23 W/kg



0 dB = 3.23 W/kg = 5.09 dBW/kg

Impedance Measurement Plot for Body TSL



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PC Test

Client

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Certificate No: D835V2-4d132_Jan19

CALIBRATION CERTIFICATE

Object	D835V2 - SN:4d	132 (1997) (19	(addited a state and second
	an an ann an		BN V 02/06/2019
Calibration procedure(s)	QA CAL-05.v11		
	Calibration Proce	dure for SAR Validation Sources	s between 0.7-3 GHz
Calibration date:	January 22, 2019		
This calibration certificate documer	nts the traceability to nati	ional standards, which realize the physical ur	nits of measurements (SI).
The measurements and the uncerte	aintles with confidence p	robability are given on the following pages ar	nd are part of the certificate.
All calibrations have been conducte	ed in the closed laborato	ry facility: environment temperature (22 \pm 3)°	C and humidity < 70%.
Calibration Equipment used (M&TE	critical for calibration)		
	1		
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: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-19
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-19
Reference Probe EX3DV4	SN: 7349	31-Dec-18 (No. EX3-7349_Dec18)	Dec-19
DAE4	SN: 601	04-Oct-18 (No. DAE4-601_Oct18)	Oct-19
	l		
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19
	Al	E a all	
	Name	Function	Signature
Calibrated by:	Leif Klysner	Laboratory Technician	Solah
			ayng
Approved by:	Katja Pokovic	Technical Manager	and the second
rippiorod bj.			El 45
			Issued: January 22, 2019
This calibration certificate shall not	be reproduced except in	n full without written approval of the laboratory	<i>y</i> .
		··	



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Accreditation No.: SCS 0108

S Swiss Calibration Service

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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- S Swiss Calibration Service

Accreditation No.: SCS 0108

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

Glossarv:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) 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
- b) 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
- c) 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
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end • of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed • point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole • positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. • No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power. •
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the • nominal SAR result.

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	V52.10.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5.0 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	41.3 ± 6 %	0.92 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.44 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.59 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm³ (10 g) of Head ⊤SL	condition	

SAR averaged over 10 cm° (10 g) of head SL	condition	
SAR measured	250 mW input power	1,58 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	6.23 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.6 ± 6 %	0.99 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.46 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	9.67 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.61 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	6.35 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	49.6 Ω - 3.6 jΩ
Return Loss	- 28.7 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.4 Ω - 6.2 jΩ
Return Loss	- 23.2 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.387 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Appendix (Additional assessments outside the scope of SCS 0108)

Measurement Conditions

DASY system configuration, as far as not given on page 1 and 3.

Phantom

SAM Head Phantom

For usage with cSAR3DV2-R/L

SAR result with SAM Head (Top)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.35 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.38 W/kg ± 17.5 % (k=2)
	······································	
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.5 7 W/kg

SAR result with SAM Head (Mouth)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.4 7 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.86 W/kg ± 17.5 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.65 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	6.58 W/kg ± 16.9 % (k=2)

SAR result with SAM Head (Neck)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.36 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.42 W/kg ± 17.5 % (k=2)
	1	
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	

SAR measured	250 mW input power	1.60 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	6.38 W/kg ± 16.9 % (k=2)

SAR result with SAM Head (Ear)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.02 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.06 W/kg ± 17.5 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.36 W/kg

normalized to 1W

5.42 W/kg ± 16.9 % (k=2)

SAR for nominal Head TSL parameters

DASY5 Validation Report for Head TSL

Date: 17.01.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d132

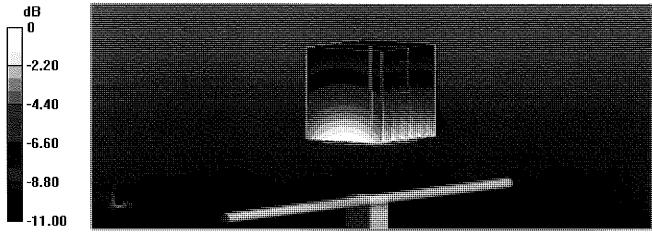
Communication System: UID 0 - CW; Frequency: 835 MHz Medium parameters used: f = 835 MHz; $\sigma = 0.92$ S/m; $\varepsilon_r = 41.3$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10, 10, 10) @ 835 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

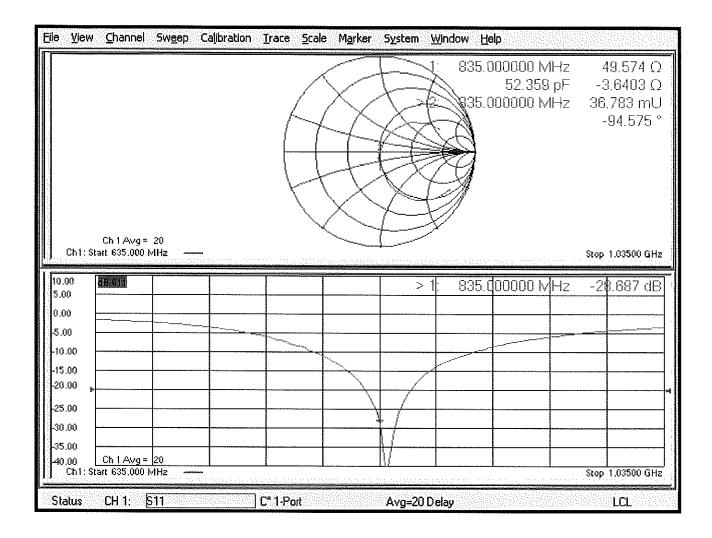
Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 34.24 V/m; Power Drift = -0.00 dB Peak SAR (extrapolated) = 3.73 W/kg SAR(1 g) = 2.44 W/kg; SAR(10 g) = 1.58 W/kg Maximum value of SAR (measured) = 3.28 W/kg



0 dB = 3.28 W/kg = 5.16 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 17.01.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d132

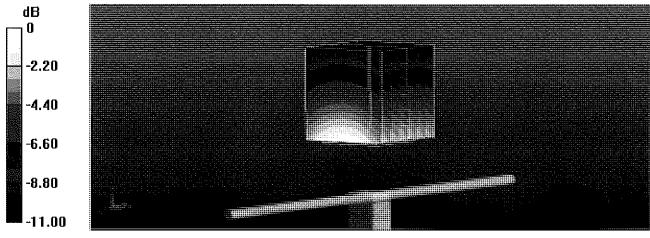
Communication System: UID 0 - CW; Frequency: 835 MHz Medium parameters used: f = 835 MHz; $\sigma = 0.99$ S/m; $\varepsilon_r = 54.6$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10.15, 10.15, 10.15) @ 835 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

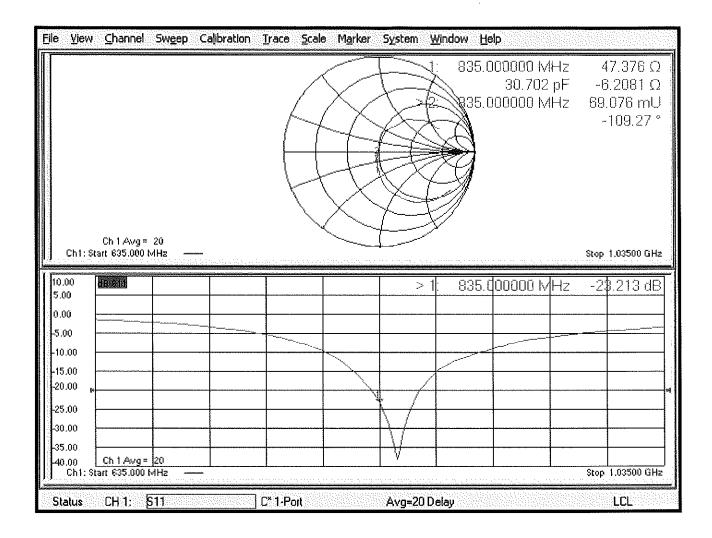
Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 63.32 V/m; Power Drift = -0.07 dB Peak SAR (extrapolated) = 3.64 W/kg SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.61 W/kg Maximum value of SAR (measured) = 3.26 W/kg



0 dB = 3.26 W/kg = 5.13 dBW/kg

Impedance Measurement Plot for Body TSL



DASY5 Validation Report for SAM Head

Date: 22.01.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d132

Communication System: UID 0 - CW; Frequency: 835 MHz Medium parameters used: f = 835 MHz; $\sigma = 0.92$ S/m; $\varepsilon_r = 44.4$; $\rho = 1000$ kg/m³ Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

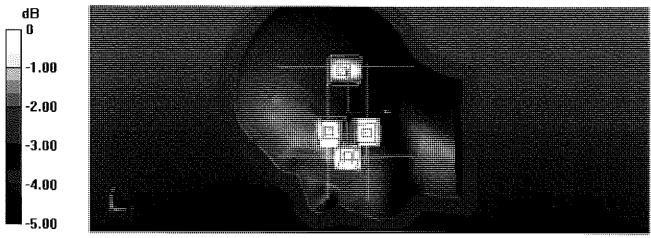
- Probe: EX3DV4 SN7349; ConvF(10, 10, 10) @ 835 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: SAM Head
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

SAM/Head/Top/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 61.32 V/m; Power Drift = -0.04 dB Peak SAR (extrapolated) = 3.51 W/kg SAR(1 g) = 2.35 W/kg; SAR(10 g) = 1.57 W/kg Maximum value of SAR (measured) = 3.12 W/kg

SAM/Head/Mouth/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 62.25 V/m; Power Drift = 0.01 dB Peak SAR (extrapolated) = 3.67 W/kg SAR(1 g) = 2.47 W/kg; SAR(10 g) = 1.65 W/kg Maximum value of SAR (measured) = 3.24 W/kg

SAM/Head/Neck/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 60.69 V/m; Power Drift = 0.05 dB Peak SAR (extrapolated) = 3.43 W/kg SAR(1 g) = 2.36 W/kg; SAR(10 g) = 1.6 W/kg Maximum value of SAR (measured) = 3.08 W/kg

SAM/Head/Ear/Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 55.79 V/m; Power Drift = 0.05 dB Peak SAR (extrapolated) = 2.94 W/kg SAR(1 g) = 2.02 W/kg; SAR(10 g) = 1.36 W/kg Maximum value of SAR (measured) = 2.62 W/kg



0 dB = 2.62 W/kg = 4.18 dBW/kg

Calibration Laboratory of

PC Test

Client

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland

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Certificate No: D835V2-4d133_Oct18

CALIBRATION CERTIFICATE

Object	D835V2 - SN:4d	133	
Calibration procedure(s)	QA CAL-05.v10 Calibration proce	dure for dipole validation kits ab	ove 700 MHz BN / 10 30 2018
Calibration date:	October 19, 2018)	
The measurements and the uncerta	ainties with confidence p ed in the closed laborator	onal standards, which realize the physical u robability are given on the following pages a ry facility: environment temperature (22 ± 3)	nd are part of the certificate.
	1		
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: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-19
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-19
Reference Probe EX3DV4	SN: 7349	30-Dec-17 (No. EX3-7349_Dec17)	Dec-18
DAE4	SN: 601	04-Oct-18 (No. DAE4-601_Oct18)	Oct-19
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19
Calibrated by:	Name Manu Seitz	Function Laboratory Technician	Signature
Approved by:	Katja Pokovic	Technical Manager	Aug
This calibration certificate shall not	be reproduced except in	full without written approval of the laborator	lssued: October 22, 2018 y.



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Accreditation No.: SCS 0108

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Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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Accreditation No.: SCS 0108

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) 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
- b) 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
- c) 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
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

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	V52.10.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.6 ± 6 %	0.91 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.39 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.43 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL		
	condition	
SAR measured	250 mW input power	1.54 W/kg

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.9 ± 6 %	0.98 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.46 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	9.75 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.61 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	6.40 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	50.6 Ω - 2.4 jΩ
Return Loss	- 32.2 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	45.0 Ω - 6.7 jΩ
Return Loss	- 21.1 dB

General Antenna Parameters and Design

Electrical Delay (one direction) 1.397 ns		
	Electrical Delay (one direction)	1.397 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	July 22, 2011

DASY5 Validation Report for Head TSL

Date: 19.10.2018

Test Laboratory: The name of your organization

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d133

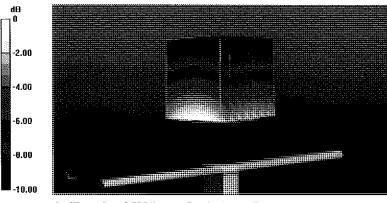
Communication System: UID 0 - CW; Frequency: 835 MHz Medium parameters used: f = 835 MHz; $\sigma = 0.91$ S/m; $\varepsilon_r = 40.6$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(9.9, 9.9, 9.9) @ 835 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 63.02 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 3.68 W/kg SAR(1 g) = 2.39 W/kg; SAR(10 g) = 1.54 W/kg Maximum value of SAR (measured) = 3.24 W/kg



0 dB = 3.24 W/kg = 5.11 dBW/kg

Impedance Measurement Plot for Head TSL

		5.000000 MHz 79.672 pF 5.000000 MHz	50.571 Ω -2.3924 Ω 24.448 mU -75.225 °
Ch 1 Avg = 20 Ch 1: Start 635,000 MHz			Stop 1.03500 GHz
50.00 40.00 30.00 20.00 10.00 0.00 -10.00 -20.00 -20.00 -40.00 -40.00 -50.00 Ch 1 Avg = 20 Ch1: Start 635.000 MHz	> 1: 83	5.00000 MHz	-32.235 dB

DASY5 Validation Report for Body TSL

Date: 19.10.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d133

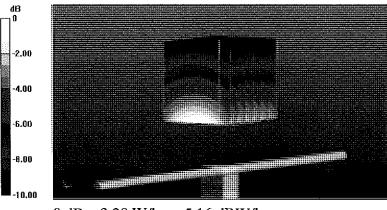
Communication System: UID 0 - CW; Frequency: 835 MHz Medium parameters used: f = 835 MHz; $\sigma = 0.98$ S/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10.05, 10.05, 10.05) @ 835 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

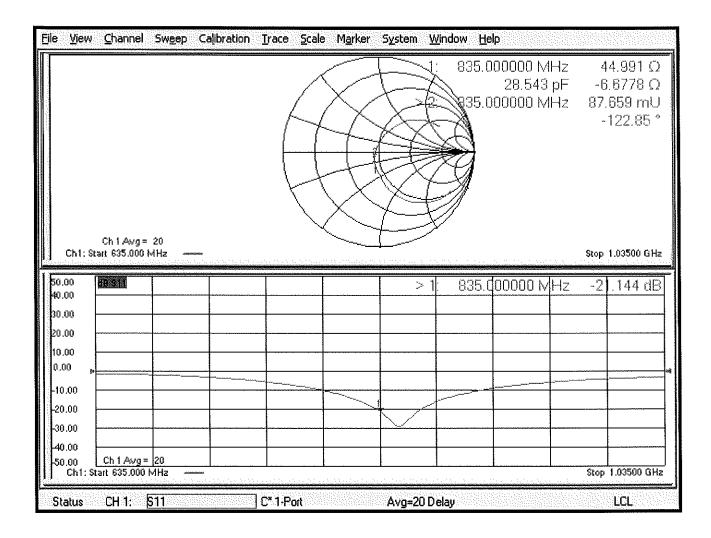
Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 61.61 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 3.69 W/kg SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.61 W/kg Maximum value of SAR (measured) = 3.28 W/kg



0 dB = 3.28 W/kg = 5.16 dBW/kg

Impedance Measurement Plot for Body TSL



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Accreditation No.: SCS 0108

Certificate No: D1750V2-1148_May19

PC Test Client

CALIBRATION CERTIFICATE

Object	D1750V2 - SN:1*	148	
Calibration procedure(s)	QA CAL-05.v11 Calibration Proce	dure for SAR Validation Sources	between 0.7-3 GHz BN ^V 05 ⁻²³⁻²⁰ 0
Calibration date:	May 15, 2019		05-23-20
The measurements and the uncerta	ainties with confidence p ed in the closed laborator	onal standards, which realize the physical uni robability are given on the following pages an ry facility: environment temperature (22 ± 3)°C	d are part of the certificate.
Calibration Equipment used (M&TE	critical for calibration)		
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	03-Apr-19 (No. 217-02892/02893)	Apr-20
Power sensor NRP-Z91	SN: 103244	03-Apr-19 (No. 217-02892)	Apr-20
Power sensor NRP-Z91	SN: 103245	03-Apr-19 (No. 217-02893)	Apr-20
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-19 (No. 217-02894)	Apr-20
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-19 (No. 217-02895)	Apr-20
Reference Probe EX3DV4	SN: 7349	31-Dec-18 (No. EX3-7349_Dec18)	Dec-19
DAE4	SN: 601	30-Apr-19 (No. DAE4-601_Apr19)	Apr-20
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Feb-19)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19
	Name	Function	Signature
Calibrated by:	Leif Klysner	Laboratory Technician	Seef Align
Approved by:	Katja Pokovic	Technical Manager	fll
This calibration certificate shall not	he reproduced except in	full without written approval of the laboratory	lssued: May 15, 2019

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Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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Accreditation No.: SCS 0108

Glossary:	
TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) 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
- b) 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
- c) 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
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. • No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna . connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

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	V52.10.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5.0 mm	
Frequency	1750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

¥	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.1	1.37 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.0 ± 6 %	1.34 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.13 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	37.0 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	4.83 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	19.5 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.4	1.49 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	53.5 ± 6 %	1.47 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	9.35 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	37.7 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	4.93 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	19.8 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	51.4 Ω - 0.2 jΩ
Return Loss	- 37.0 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.4 Ω - 0.5 jΩ
Return Loss	- 31.4 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.222 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

Appendix (Additional assessments outside the scope of SCS 0108)

Measurement Conditions

DASY system configuration, as far as not given on page 1 and 3.

Phantom	SAM Head Phantom	For usage with cSAR3DV2-R/L

SAR result with SAM Head (Top)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.38 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	37.9 W/kg ± 17.5 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.04 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	20.3 W/kg ± 16.9 % (k=2)

SAR result with SAM Head (Mouth)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition		
SAR measured	250 mW input power	9.34 W/kg	
SAR for nominal Head TSL parameters	normalized to 1W	37.8 W/kg ± 17.5 % (k=2)	
	· · · · · · · · · · · · · · · · · · ·		
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition		
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 250 mW input power	5.04 W/kg	

SAR result with SAM Head (Neck)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.06 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	36.6 W/kg ± 17.5 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	4.95 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	19.9 W/kg ± 16.9 % (k=2)

SAR result with SAM Head (Ear)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	7.11 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	28.7 W/kg ± 17.5 % (k=2)

SAR averaged over 10 cm 3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	3.98 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	16.0 W/kg ± 16.9 % (k=2)

DASY5 Validation Report for Head TSL

Date: 08.05.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1148

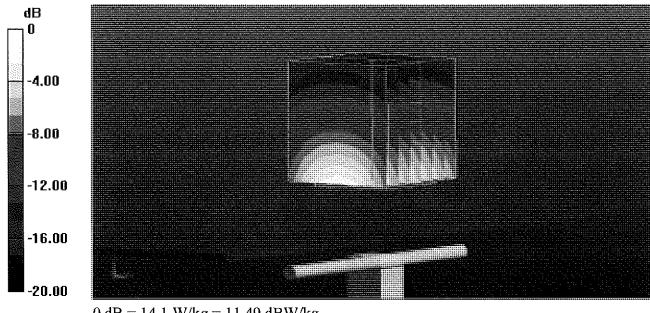
Communication System: UID 0 - CW; Frequency: 1750 MHz Medium parameters used: f = 1750 MHz; $\sigma = 1.34$ S/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.59, 8.59, 8.59) @ 1750 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.04.2019
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

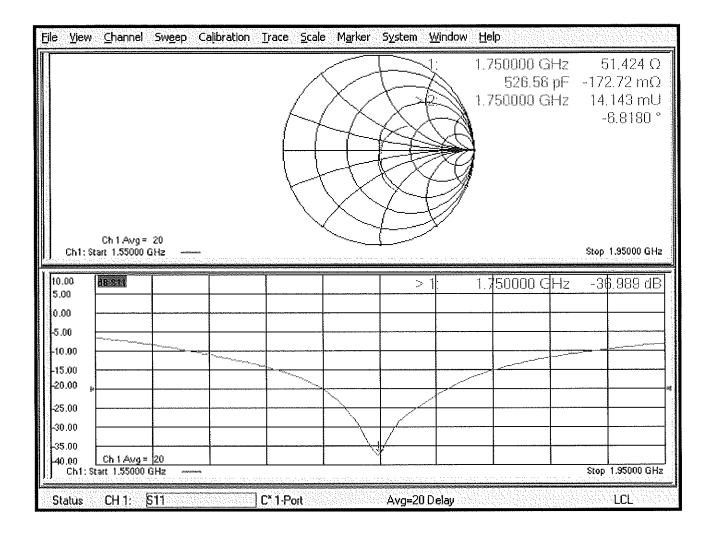
Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 107.8 V/m; Power Drift = -0.01 dB Peak SAR (extrapolated) = 16.7 W/kg SAR(1 g) = 9.13 W/kg; SAR(10 g) = 4.83 W/kg Maximum value of SAR (measured) = 14.1 W/kg



0 dB = 14.1 W/kg = 11.49 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 08.05.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1148

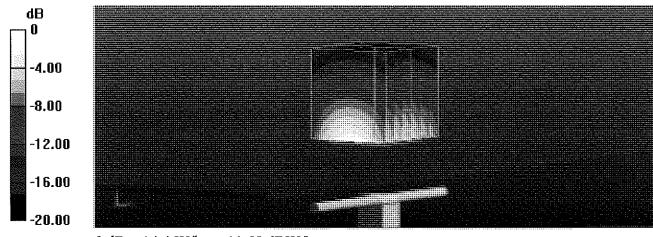
Communication System: UID 0 - CW; Frequency: 1750 MHz Medium parameters used: f = 1750 MHz; σ = 1.47 S/m; ϵ_r = 53.5; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

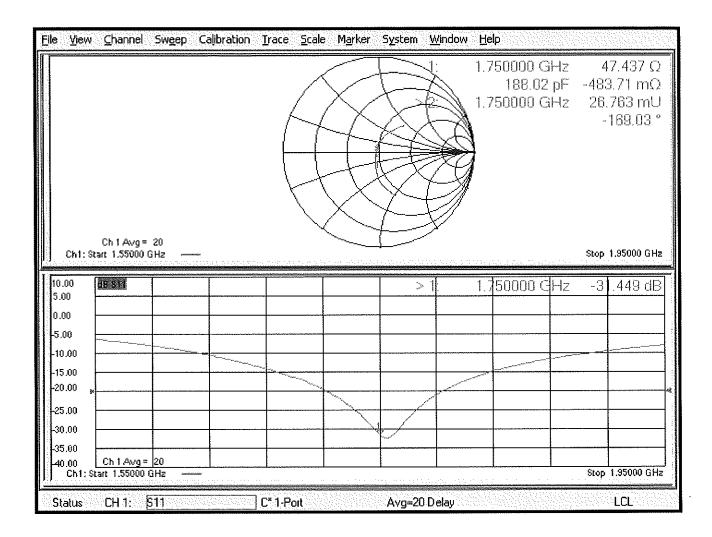
- Probe: EX3DV4 SN7349; ConvF(8.43, 8.43, 8.43) @ 1750 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.04.2019
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 103.1 V/m; Power Drift = -0.04 dB Peak SAR (extrapolated) = 17.2 W/kg SAR(1 g) = 9.35 W/kg; SAR(10 g) = 4.93 W/kg Maximum value of SAR (measured) = 14.4 W/kg



0 dB = 14.4 W/kg = 11.58 dBW/kg



DASY5 Validation Report for SAM Head

Date: 15.05.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1148

Communication System: UID 0 - CW; Frequency: 1750 MHz Medium parameters used: f = 1750 MHz; σ = 1.37 S/m; ϵ_r = 42.1; ρ = 1000 kg/m³ Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

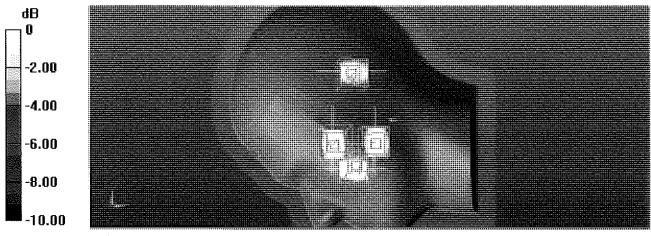
- Probe: EX3DV4 SN7349; ConvF(8.59, 8.59, 8.59) @ 1750 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.04.2019
- Phantom: SAM Head
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

SAM Head/Top/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 107.2 V/m; Power Drift = 0.01 dB Peak SAR (extrapolated) = 16.6 W/kg SAR(1 g) = 9.38 W/kg; SAR(10 g) = 5.04 W/kg Maximum value of SAR (measured) = 14.2 W/kg

SAM Head/Mouth/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 104.7 V/m; Power Drift = 0.02 dB Peak SAR (extrapolated) = 16.5 W/kg SAR(1 g) = 9.34 W/kg; SAR(10 g) = 5.04 W/kg Maximum value of SAR (measured) = 13.9 W/kg

SAM Head/Neck/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 103.3 V/m; Power Drift = 0.01 dB Peak SAR (extrapolated) = 15.5 W/kg SAR(1 g) = 9.06 W/kg; SAR(10 g) = 4.95 W/kg Maximum value of SAR (measured) = 13.1 W/kg

SAM Head/Ear/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 90.82 V/m; Power Drift = 0.02 dB Peak SAR (extrapolated) = 12.0 W/kg SAR(1 g) = 7.11 W/kg; SAR(10 g) = 3.98 W/kg Maximum value of SAR (measured) = 10.2 W/kg



0 dB = 10.2 W/kg = 10.09 dBW/kg

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PC Test

Client

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland

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

Certificate No: D1750V2-1150_Oct18

CALIBRATION CERTIFICATE D1750V2 - SN:1150 Object Calibration procedure(s) QA CAL-05.v10 Calibration procedure for dipole validation kits above 700 MHz BN1 10/30/2018 October 22, 2018 Calibration date: 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) Cal Date (Certificate No.) 1D # Scheduled Calibration Primary Standards SN: 104778 04-Apr-18 (No. 217-02672/02673) Power meter NRP 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: 5058 (20k) 04-Apr-18 (No. 217-02682) Apr-19 Type-N mismatch combination SN: 5047.2 / 06327 04-Apr-18 (No. 217-02683) Apr-19 Dec-18 Reference Probe EX3DV4 SN: 7349 30-Dec-17 (No. EX3-7349_Dec17)

SN: 601 Oct-19 DAE4 04-Oct-18 (No. DAE4-601_Oct18) Secondary Standards ID # Check Date (in house) Scheduled Check SN: GB37480704 07-Oct-15 (in house check Oct-18) In house check: Oct-20 Power meter EPM-442A Power sensor HP 8481A SN: US37292783 07-Oct-15 (in house check Oct-18) In house check: Oct-20 Power sensor HP 8481A SN: MY41092317 07-Oct-15 (in house check Oct-18) In house check: Oct-20 RF generator R&S SMT-06 SN: 100972 15-Jun-15 (in house check Oct-18) In house check: Oct-20 Network Analyzer Agilent E8358A SN: US41080477 31-Mar-14 (in house check Oct-18) In house check: Oct-19 Name

 Name
 Function
 Signature

 Calibrated by:
 Michael Weber
 Laboratory Technician
 Milling

 Approved by:
 Katja Pokovic
 Technical Manager
 Issued: October 22, 2018

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



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- S Swiss Calibration Service

Accreditation No.: SCS 0108

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

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) 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
- b) 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
- c) 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
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed • point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole ٠ positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. ٠ No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

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	V52.10.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.1	1.37 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.8 ± 6 %	1.33 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.02 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	36.5 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	4.76 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	19.2 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.4	1.49 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	53.5 ± 6 %	1.46 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	9.04 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	36.6 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	4.82 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	19.4 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	50.9 Ω - 0.4 jΩ
Return Loss	- 40.1 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.6 Ω - 0.1 jΩ
Return Loss	- 29.2 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.217 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	April 10, 2015

DASY5 Validation Report for Head TSL

Date: 22.10.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1150

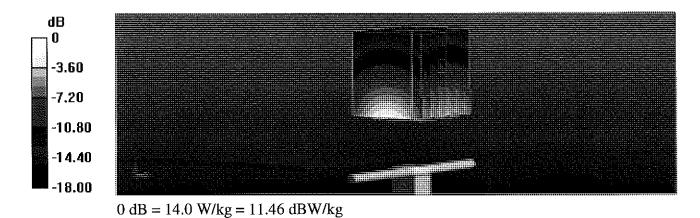
Communication System: UID 0 - CW; Frequency: 1750 MHz Medium parameters used: f = 1750 MHz; $\sigma = 1.33$ S/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

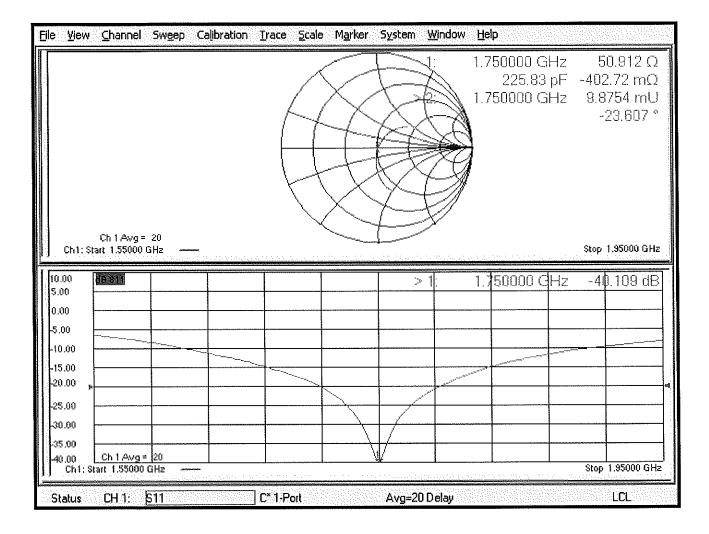
- Probe: EX3DV4 SN7349; ConvF(8.5, 8.5, 8.5) @ 1750 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electromics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 108.1 V/m; Power Drift = -0.09 dB Peak SAR (extrapolated) = 16.7 W/kg SAR(1 g) = 9.02 W/kg; SAR(10 g) = 4.76 W/kg Maximum value of SAR (measured) = 14.0 W/kg



Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 22.10.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1150

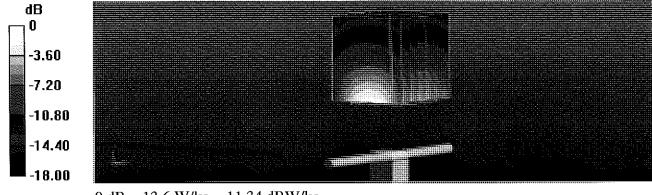
Communication System: UID 0 - CW; Frequency: 1750 MHz Medium parameters used: f = 1750 MHz; σ = 1.46 S/m; ϵ_r = 53.5; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.35, 8.35, 8.35) @ 1750 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

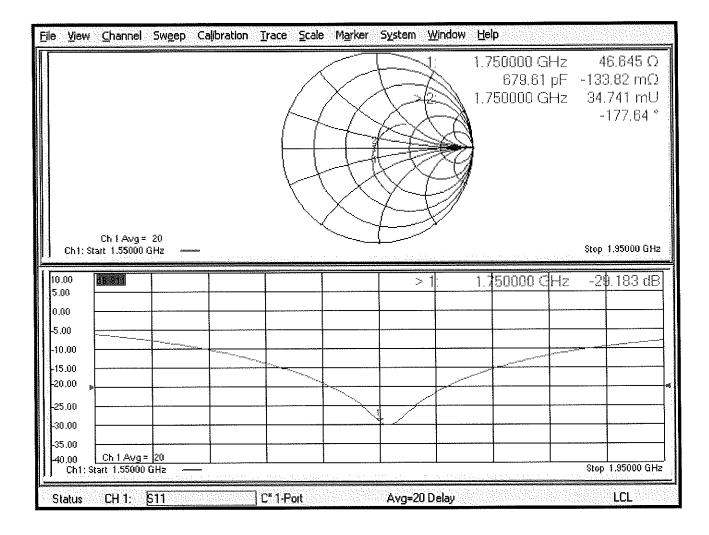
Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 102.1 V/m; Power Drift = -0.09 dB Peak SAR (extrapolated) = 16.0 W/kg SAR(1 g) = 9.04 W/kg; SAR(10 g) = 4.82 W/kg Maximum value of SAR (measured) = 13.6 W/kg



0 dB = 13.6 W/kg = 11.34 dBW/kg

Impedance Measurement Plot for Body TSL



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Accreditation No.: SCS 0108

PC Test Client

Certificate N				

CALIBRATION	CERTIFICATE
Object	D1900V2 - SN:5d148
Calibration procedure(s)	QA CAL-05.v11 Calibration Procedure for SAR Validation Sources between 0.7-3 GHz
Calibration date:	12NV 13-01-19
This calibration certificate docu The measurements and the un	ments the traceability to national standards, which realize the physical units of measurements (SI). certainties with confidence probability are given on the following pages and are part of the certificate.
All calibrations have been cond	lucted in the closed laboratory facility: environment temperature (22 \pm 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: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-19
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-19
Reference Probe EX3DV4	SN: 7349	31-Dec-18 (No. EX3-7349_Dec18)	Dec-19
DAE4	SN: 601	04-Oct-18 (No. DAE4-601_Oct18)	Oct-19
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	07-Oct-15 (in house check Feb-19)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19
	Name	Function	Signature
Calibrated by:	Manu Seltz	Laboratory Technician	and i
Approved by	14 D B 1 1	<u></u>	
Approved by:	Katja Pokovic	Technical Manager	J. C.U.S
			Issued: February 21, 2019
This calibration certificate shall not	be reproduced except in	full without written approval of the laboratory	

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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

Glossary:

TSL	tissue simulating liquid
IOL	U
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) 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
- b) 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
- c) 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
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

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%.

Accreditation No.: SCS 0108

Measurement Conditions

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

DASY Version	DASY5	V52.10.2	
Extrapolation	Advanced Extrapolation		
Phantom	Modular Flat Phantom		
Distance Dipole Center - TSL	10 mm	with Spacer	
Zoom Scan Resolution	dx, dy, dz = 5 mm		
Frequency	1900 MHz ± 1 MHz		

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.9 ± 6 %	1.38 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition		
SAR measured	250 mW input power	9.65 W/kg	
SAR for nominal Head TSL parameters	normalized to 1W	39.1 W/kg ± 17.0 % (k=2)	
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition		
SAR measured	250 mW input power	5.05 W/kg	

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	53.6 ± 6 %	1.47 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	9.56 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	39.1 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.05 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	20.5 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	51.8 Ω + 6.8 jΩ
Return Loss	- 23.2 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	48.4 Ω + 7.8 jΩ
Return Loss	- 21.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	
	1.170 ns
	1370115

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
	JEAG

DASY5 Validation Report for Head TSL

Date: 21.02.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d148

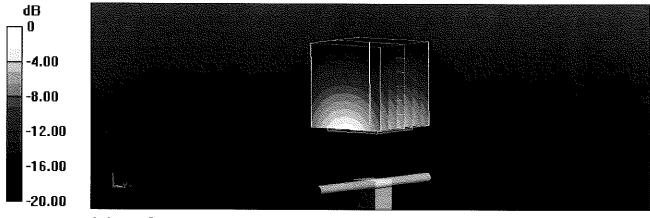
Communication System: UID 0 - CW; Frequency: 1900 MHz Medium parameters used: f = 1900 MHz; $\sigma = 1.38$ S/m; $\varepsilon_r = 40.9$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.26, 8.26, 8.26) @ 1900 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 109.4 V/m; Power Drift = 0.01 dB Peak SAR (extrapolated) = 17.8 W/kg **SAR(1 g) = 9.65 W/kg; SAR(10 g) = 5.05 W/kg** Maximum value of SAR (measured) = 15.0 W/kg



0 dB = 15.0 W/kg = 11.76 dBW/kg

Impedance Measurement Plot for Head TSL

<u>File Viev</u>	v <u>C</u> hannel Sw <u>e</u> e	ep Calibration <u>T</u> r	ace <u>S</u> cale M <u>a</u> r	'ker S <u>y</u> stem <u>Wi</u> ni	dow Help	
Ch1::	Ch 1 Awg = 20 Start 1.70000 GHz				1.900000 GHz 573.82 pH 1.900000 GHz	51.822 Ω 6.8503 Ω 69.458 mU 71.260 °
10.00 5.00 -5.00 -10.00 -15.00 -20.00 -25.00 -30.00 -35.00 -40.00 Ch1: 5	Ch 1 Avg = 20 3tart 1.70000 GHz				1.900000 GHz	-23.166 dB
Status	CH 1: <u>811</u>	C*-	1-Port	Avg=20 Delay		Stop 2.10000 GHz

DASY5 Validation Report for Body TSL

Date: 21.02.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d148

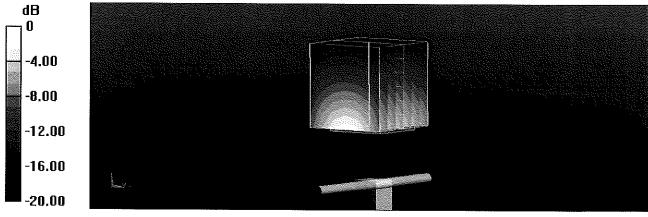
Communication System: UID 0 - CW; Frequency: 1900 MHz Medium parameters used: f = 1900 MHz; $\sigma = 1.47$ S/m; $\epsilon_r = 53.6$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.23, 8.23, 8.23) @ 1900 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 103.7 V/m; Power Drift = -0.03 dB Peak SAR (extrapolated) = 17.0 W/kg SAR(1 g) = 9.56 W/kg; SAR(10 g) = 5.05 W/kg Maximum value of SAR (measured) = 14.4 W/kg



0 dB = 14.4 W/kg = 11.58 dBW/kg

Impedance Measurement Plot for Body TSL

File	View	<u>C</u> hannel	Sw <u>e</u> ep	Calibration	<u>Irace S</u> ca	ale M <u>a</u> rker	System	Window	<u>H</u> elp		
		Ch1Avg=				XXX			1.900000 GH; 652.32 pH 1.900000 GH;	H 7.1 z 80.4	l.446 Ω 7874 Ω ·12 mU 6.762 °
		rt 1.70000 (-4			Stop 2.	10000 GHz
10.0	0		1	1	I		1				
5.04 0.03 -5.0 -10, -15, -20, -25, -30, -30, -40, (Ch 1 Avg = rt 1.70000 c	20						1.900000 GH2		894 dB