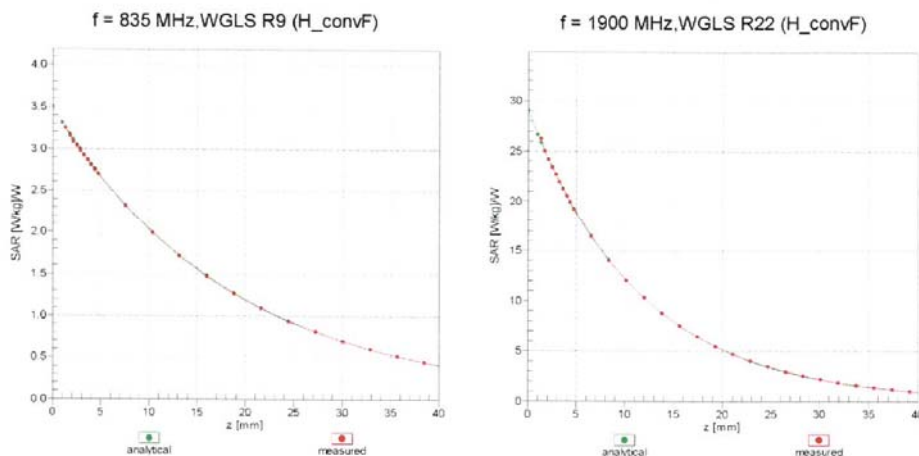


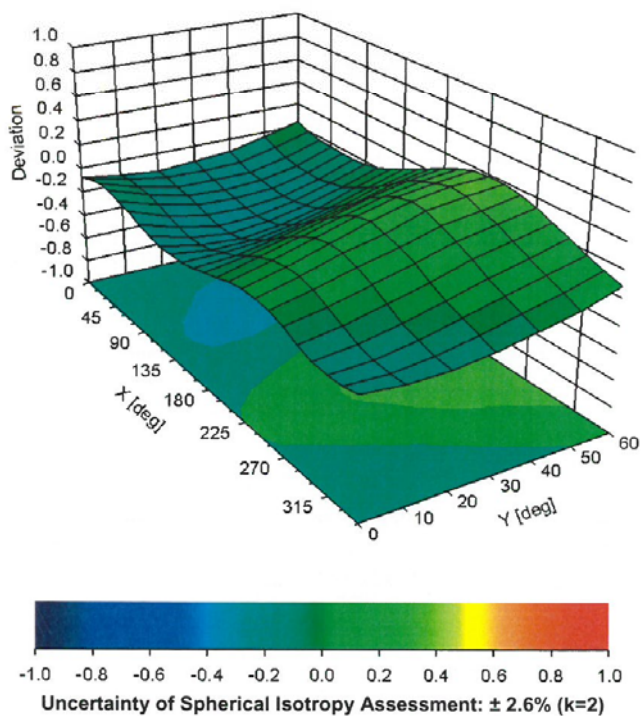
EX3DV4- SN:3801

June 26, 2018

Conversion Factor Assessment



Deviation from Isotropy in Liquid Error (ϕ, θ), f = 900 MHz





EX3DV4- SN:3801

June 26, 2018

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3801**Other Probe Parameters**

Sensor Arrangement	Triangular
Connector Angle (°)	126.3
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



EX3DV4- SN:3801

June 26, 2018

Appendix: Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB/μV	C	D dB	VR mV	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	166.4	± 3.0 %
		Y	0.00	0.00	1.00		173.4	
		Z	0.00	0.00	1.00		164.7	
10010- CAA	SAR Validation (Square, 100ms, 10ms)	X	3.37	69.78	12.74	10.00	20.0	± 9.6 %
		Y	6.44	76.86	15.76		20.0	
		Z	3.21	69.39	12.43		20.0	
10011- CAB	UMTS-FDD (WCDMA)	X	0.83	64.38	12.95	0.00	150.0	± 9.6 %
		Y	0.99	67.13	14.98		150.0	
		Z	0.83	64.35	12.93		150.0	
10012- CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	X	1.10	62.97	14.26	0.41	150.0	± 9.6 %
		Y	1.20	64.42	15.48		150.0	
		Z	1.09	62.83	14.21		150.0	
10013- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	X	4.80	66.58	16.95	1.46	150.0	± 9.6 %
		Y	4.93	66.87	17.23		150.0	
		Z	4.79	66.54	16.94		150.0	
10021- DAC	GSM-FDD (TDMA, GMSK)	X	100.00	116.48	28.92	9.39	50.0	± 9.6 %
		Y	100.00	116.87	29.39		50.0	
		Z	100.00	116.44	28.77		50.0	
10023- DAC	GPRS-FDD (TDMA, GMSK, TN 0)	X	100.00	116.20	28.84	9.57	50.0	± 9.6 %
		Y	100.00	116.71	29.35		50.0	
		Z	100.00	116.08	28.65		50.0	
10024- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	X	100.00	113.53	26.55	6.56	60.0	± 9.6 %
		Y	100.00	114.45	27.34		60.0	
		Z	100.00	114.34	26.74		60.0	
10025- DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	X	4.69	72.18	26.92	12.57	50.0	± 9.6 %
		Y	15.97	110.85	44.06		50.0	
		Z	4.44	71.01	26.44		50.0	
10026- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	X	11.01	95.24	33.64	9.56	60.0	± 9.6 %
		Y	27.30	117.67	41.25		60.0	
		Z	9.87	93.32	33.15		60.0	
10027- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	X	100.00	112.38	25.28	4.80	80.0	± 9.6 %
		Y	100.00	114.07	26.45		80.0	
		Z	100.00	113.67	25.65		80.0	
10028- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	X	100.00	111.82	24.34	3.55	100.0	± 9.6 %
		Y	100.00	114.73	26.07		100.0	
		Z	100.00	113.39	24.82		100.0	
10029- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	X	6.96	84.53	28.40	7.80	80.0	± 9.6 %
		Y	12.11	97.00	33.17		80.0	
		Z	6.28	82.79	27.89		80.0	
10030- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	X	100.00	111.17	25.02	5.30	70.0	± 9.6 %
		Y	100.00	112.86	26.19		70.0	
		Z	100.00	112.10	25.26		70.0	
10031- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	X	100.00	105.29	20.26	1.88	100.0	± 9.6 %
		Y	100.00	113.55	24.19		100.0	
		Z	100.00	105.78	20.26		100.0	

Certificate No: EX3-3801_Jun18

Page 12 of 39



EX3DV4- SN:3801

June 26, 2018

10032-CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	X	100.00	101.22	17.75	1.17	100.0	± 9.6 %
		Y	100.00	116.20	24.29		100.0	
		Z	100.00	100.56	17.31		100.0	
10033-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	X	18.92	99.43	26.35	5.30	70.0	± 9.6 %
		Y	100.00	126.11	33.82		70.0	
		Z	20.67	102.09	27.36		70.0	
10034-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	X	3.06	75.57	16.71	1.88	100.0	± 9.6 %
		Y	9.98	92.25	23.17		100.0	
		Z	2.90	75.55	16.88		100.0	
10035-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	X	1.83	70.29	14.26	1.17	100.0	± 9.6 %
		Y	4.00	80.96	19.27		100.0	
		Z	1.74	70.11	14.32		100.0	
10036-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	X	30.39	106.85	28.45	5.30	70.0	± 9.6 %
		Y	100.00	126.44	33.98		70.0	
		Z	35.81	110.82	29.76		70.0	
10037-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	X	2.84	74.70	16.36	1.88	100.0	± 9.6 %
		Y	8.90	90.73	22.69		100.0	
		Z	2.69	74.65	16.52		100.0	
10038-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	X	1.85	70.62	14.50	1.17	100.0	± 9.6 %
		Y	4.14	81.72	19.65		100.0	
		Z	1.75	70.43	14.57		100.0	
10039-CAB	CDMA2000 (1xRTT, RC1)	X	1.12	65.78	11.74	0.00	150.0	± 9.6 %
		Y	1.72	71.14	15.18		150.0	
		Z	1.13	65.83	11.81		150.0	
10042-CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	X	100.00	111.21	25.70	7.78	50.0	± 9.6 %
		Y	100.00	112.25	26.50		50.0	
		Z	100.00	111.42	25.65		50.0	
10044-CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	X	0.04	119.18	11.18	0.00	150.0	± 9.6 %
		Y	0.01	110.75	9.59		150.0	
		Z	0.04	119.30	10.88		150.0	
10048-CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	X	100.00	116.95	30.57	13.80	25.0	± 9.6 %
		Y	100.00	118.90	31.58		25.0	
		Z	100.00	115.50	29.86		25.0	
10049-CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	X	100.00	116.02	29.07	10.79	40.0	± 9.6 %
		Y	100.00	116.75	29.64		40.0	
		Z	100.00	115.45	28.70		40.0	
10056-CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	X	26.45	101.81	27.79	9.03	50.0	± 9.6 %
		Y	95.09	123.36	33.94		50.0	
		Z	35.26	107.00	29.30		50.0	
10058-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	X	5.27	78.98	25.36	6.55	100.0	± 9.6 %
		Y	7.85	87.34	28.81		100.0	
		Z	4.82	77.53	24.91		100.0	
10059-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	X	1.16	64.21	14.95	0.61	110.0	± 9.6 %
		Y	1.31	66.27	16.46		110.0	
		Z	1.14	63.97	14.87		110.0	
10060-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	X	8.60	97.03	24.51	1.30	110.0	± 9.6 %
		Y	100.00	133.40	34.07		110.0	
		Z	7.00	95.42	24.31		110.0	

Certificate No: EX3-3801_Jun18

Page 13 of 39



EX3DV4- SN:3801

June 26, 2018

10061-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	X	3.49	81.85	22.13	2.04	110.0	± 9.6 %
		Y	10.88	100.68	28.62		110.0	
		Z	3.06	80.49	21.85		110.0	
10062-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	X	4.56	66.41	16.26	0.49	100.0	± 9.6 %
		Y	4.69	66.72	16.55		100.0	
		Z	4.56	66.38	16.26		100.0	
10063-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	X	4.58	66.53	16.38	0.72	100.0	± 9.6 %
		Y	4.72	66.85	16.68		100.0	
		Z	4.58	66.50	16.38		100.0	
10064-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	X	4.86	66.80	16.63	0.86	100.0	± 9.6 %
		Y	5.01	67.14	16.92		100.0	
		Z	4.86	66.78	16.63		100.0	
10065-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	X	4.75	66.74	16.76	1.21	100.0	± 9.6 %
		Y	4.90	67.11	17.07		100.0	
		Z	4.75	66.71	16.76		100.0	
10066-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	X	4.77	66.80	16.95	1.46	100.0	± 9.6 %
		Y	4.93	67.18	17.28		100.0	
		Z	4.77	66.76	16.95		100.0	
10067-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	X	5.09	67.08	17.46	2.04	100.0	± 9.6 %
		Y	5.24	67.39	17.76		100.0	
		Z	5.08	67.03	17.46		100.0	
10068-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	X	5.14	67.13	17.70	2.55	100.0	± 9.6 %
		Y	5.32	67.54	18.04		100.0	
		Z	5.13	67.08	17.69		100.0	
10069-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	X	5.22	67.17	17.91	2.67	100.0	± 9.6 %
		Y	5.40	67.53	18.24		100.0	
		Z	5.22	67.11	17.90		100.0	
10071-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	X	4.91	66.72	17.29	1.99	100.0	± 9.6 %
		Y	5.04	67.03	17.58		100.0	
		Z	4.90	66.67	17.29		100.0	
10072-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	X	4.90	67.07	17.53	2.30	100.0	± 9.6 %
		Y	5.05	67.46	17.86		100.0	
		Z	4.89	67.01	17.52		100.0	
10073-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	X	4.99	67.32	17.91	2.83	100.0	± 9.6 %
		Y	5.14	67.73	18.26		100.0	
		Z	4.97	67.24	17.90		100.0	
10074-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	X	5.00	67.29	18.10	3.30	100.0	± 9.6 %
		Y	5.15	67.70	18.46		100.0	
		Z	4.97	67.19	18.08		100.0	
10075-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	X	5.05	67.46	18.45	3.82	90.0	± 9.6 %
		Y	5.22	67.96	18.86		90.0	
		Z	5.02	67.34	18.42		90.0	
10076-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	X	5.08	67.31	18.60	4.15	90.0	± 9.6 %
		Y	5.23	67.75	18.99		90.0	
		Z	5.05	67.18	18.57		90.0	
10077-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	X	5.11	67.39	18.71	4.30	90.0	± 9.6 %
		Y	5.26	67.83	19.09		90.0	
		Z	5.08	67.25	18.67		90.0	

Certificate No: EX3-3801_Jun18

Page 14 of 39



EX3DV4-- SN:3801

June 26, 2018

10081-CAB	CDMA2000 (1xRTT, RC3)	X	0.58	62.15	9.26	0.00	150.0	± 9.6 %
		Y	0.79	65.29	12.01		150.0	
		Z	0.59	62.18	9.31		150.0	
10082-CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	X	0.89	60.00	5.00	4.77	80.0	± 9.6 %
		Y	1.06	60.10	5.42		80.0	
		Z	0.82	60.00	4.83		80.0	
10090-DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	X	100.00	113.61	26.61	6.56	60.0	± 9.6 %
		Y	100.00	114.52	27.40		60.0	
		Z	100.00	114.43	26.80		60.0	
10097-CAB	UMTS-FDD (HSDPA)	X	1.61	65.84	14.20	0.00	150.0	± 9.6 %
		Y	1.79	67.45	15.49		150.0	
		Z	1.61	65.80	14.19		150.0	
10098-CAB	UMTS-FDD (HSUPA, Subtest 2)	X	1.57	65.77	14.15	0.00	150.0	± 9.6 %
		Y	1.75	67.41	15.45		150.0	
		Z	1.57	65.73	14.14		150.0	
10099-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	X	11.08	95.35	33.68	9.56	60.0	± 9.6 %
		Y	27.49	117.79	41.28		60.0	
		Z	9.94	93.45	33.20		60.0	
10100-CAD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	2.79	68.48	15.57	0.00	150.0	± 9.6 %
		Y	3.10	70.20	16.56		150.0	
		Z	2.79	68.46	15.56		150.0	
10101-CAD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	3.04	66.54	15.23	0.00	150.0	± 9.6 %
		Y	3.21	67.43	15.84		150.0	
		Z	3.04	66.53	15.23		150.0	
10102-CAD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	3.15	66.58	15.37	0.00	150.0	± 9.6 %
		Y	3.32	67.39	15.93		150.0	
		Z	3.15	66.57	15.36		150.0	
10103-CAD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	6.94	77.02	20.93	3.98	65.0	± 9.6 %
		Y	8.30	79.59	21.98		65.0	
		Z	6.60	76.51	20.82		65.0	
10104-CAD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	6.60	74.37	20.62	3.98	65.0	± 9.6 %
		Y	7.74	76.89	21.76		65.0	
		Z	6.34	73.90	20.51		65.0	
10105-CAD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	6.43	73.76	20.67	3.98	65.0	± 9.6 %
		Y	7.21	75.46	21.47		65.0	
		Z	6.12	73.09	20.46		65.0	
10108-CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	2.42	67.75	15.36	0.00	150.0	± 9.6 %
		Y	2.70	69.42	16.38		150.0	
		Z	2.42	67.73	15.35		150.0	
10109-CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	2.68	66.30	15.02	0.00	150.0	± 9.6 %
		Y	2.87	67.25	15.73		150.0	
		Z	2.69	66.28	15.02		150.0	
10110-CAE	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	1.93	66.75	14.78	0.00	150.0	± 9.6 %
		Y	2.19	68.51	15.97		150.0	
		Z	1.93	66.73	14.77		150.0	
10111-CAE	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	2.36	66.83	15.03	0.00	150.0	± 9.6 %
		Y	2.58	67.98	15.96		150.0	
		Z	2.36	66.80	15.03		150.0	

Certificate No: EX3-3801_Jun18

Page 15 of 39



EX3DV4- SN:3801

June 26, 2018

10112-CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	2.81	66.38	15.13	0.00	150.0	± 9.6 %
		Y	2.99	67.24	15.78		150.0	
		Z	2.82	66.36	15.13		150.0	
10113-CAE	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	2.51	67.07	15.23	0.00	150.0	± 9.6 %
		Y	2.73	68.12	16.09		150.0	
		Z	2.52	67.04	15.23		150.0	
10114-CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	X	4.99	66.82	16.16	0.00	150.0	± 9.6 %
		Y	5.10	67.13	16.38		150.0	
		Z	5.00	66.82	16.16		150.0	
10115-CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	X	5.25	66.91	16.21	0.00	150.0	± 9.6 %
		Y	5.40	67.27	16.46		150.0	
		Z	5.26	66.91	16.22		150.0	
10116-CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	X	5.07	66.99	16.17	0.00	150.0	± 9.6 %
		Y	5.20	67.33	16.40		150.0	
		Z	5.08	66.99	16.17		150.0	
10117-CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	X	4.96	66.69	16.10	0.00	150.0	± 9.6 %
		Y	5.07	67.00	16.33		150.0	
		Z	4.96	66.68	16.10		150.0	
10118-CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	X	5.33	67.12	16.33	0.00	150.0	± 9.6 %
		Y	5.48	67.48	16.57		150.0	
		Z	5.34	67.12	16.33		150.0	
10119-CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	X	5.06	66.96	16.16	0.00	150.0	± 9.6 %
		Y	5.17	67.27	16.38		150.0	
		Z	5.07	66.96	16.16		150.0	
10140-CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	3.18	66.58	15.28	0.00	150.0	± 9.6 %
		Y	3.35	67.40	15.85		150.0	
		Z	3.18	66.57	15.28		150.0	
10141-CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	3.31	66.74	15.49	0.00	150.0	± 9.6 %
		Y	3.48	67.49	16.02		150.0	
		Z	3.31	66.73	15.48		150.0	
10142-CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	1.67	66.36	14.09	0.00	150.0	± 9.6 %
		Y	1.96	68.43	15.60		150.0	
		Z	1.68	66.34	14.10		150.0	
10143-CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	2.13	66.92	14.26	0.00	150.0	± 9.6 %
		Y	2.43	68.64	15.63		150.0	
		Z	2.14	66.91	14.27		150.0	
10144-CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	1.95	64.98	12.78	0.00	150.0	± 9.6 %
		Y	2.21	66.44	14.07		150.0	
		Z	1.96	64.98	12.81		150.0	
10145-CAE	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	0.89	61.84	8.95	0.00	150.0	± 9.6 %
		Y	1.18	64.72	11.53		150.0	
		Z	0.90	61.92	9.05		150.0	
10146-CAE	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	1.50	63.67	9.83	0.00	150.0	± 9.6 %
		Y	2.10	66.97	12.06		150.0	
		Z	1.48	63.51	9.75		150.0	
10147-CAE	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	1.66	64.83	10.55	0.00	150.0	± 9.6 %
		Y	2.53	69.23	13.24		150.0	
		Z	1.63	64.59	10.43		150.0	

Certificate No: EX3-3801_Jun18

Page 16 of 39



EX3DV4- SN:3801

June 26, 2018

10149-CAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	2.69	66.35	15.07	0.00	150.0	± 9.6 %
		Y	2.88	67.31	15.77		150.0	
		Z	2.70	66.34	15.06		150.0	
10150-CAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	2.82	66.43	15.17	0.00	150.0	± 9.6 %
		Y	3.00	67.30	15.82		150.0	
		Z	2.82	66.41	15.17		150.0	
10151-CAD	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	7.29	79.43	21.93	3.98	65.0	± 9.6 %
		Y	9.32	83.12	23.40		65.0	
		Z	6.94	78.98	21.87		65.0	
10152-CAD	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	6.14	74.36	20.27	3.98	65.0	± 9.6 %
		Y	7.37	77.20	21.60		65.0	
		Z	5.87	73.88	20.17		65.0	
10153-CAD	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	6.57	75.50	21.13	3.98	65.0	± 9.6 %
		Y	7.80	78.18	22.37		65.0	
		Z	6.29	74.99	21.02		65.0	
10154-CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	1.96	67.07	14.99	0.00	150.0	± 9.6 %
		Y	2.23	68.90	16.22		150.0	
		Z	1.97	67.05	14.99		150.0	
10155-CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	2.36	66.85	15.05	0.00	150.0	± 9.6 %
		Y	2.58	68.00	15.98		150.0	
		Z	2.37	66.82	15.05		150.0	
10156-CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	1.49	66.02	13.56	0.00	150.0	± 9.6 %
		Y	1.80	68.47	15.37		150.0	
		Z	1.50	66.01	13.58		150.0	
10157-CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	1.74	65.03	12.45	0.00	150.0	± 9.6 %
		Y	2.04	66.94	14.07		150.0	
		Z	1.75	65.04	12.50		150.0	
10158-CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	2.52	67.13	15.27	0.00	150.0	± 9.6 %
		Y	2.73	68.18	16.14		150.0	
		Z	2.52	67.10	15.27		150.0	
10159-CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	1.82	65.36	12.68	0.00	150.0	± 9.6 %
		Y	2.15	67.39	14.35		150.0	
		Z	1.83	65.38	12.73		150.0	
10160-CAD	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	2.49	67.29	15.33	0.00	150.0	± 9.6 %
		Y	2.71	68.48	16.17		150.0	
		Z	2.50	67.27	15.32		150.0	
10161-CAD	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	2.71	66.34	15.05	0.00	150.0	± 9.6 %
		Y	2.90	67.23	15.75		150.0	
		Z	2.71	66.32	15.05		150.0	
10162-CAD	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	2.82	66.54	15.20	0.00	150.0	± 9.6 %
		Y	3.01	67.37	15.86		150.0	
		Z	2.82	66.52	15.19		150.0	
10166-CAE	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	3.40	69.00	18.89	3.01	150.0	± 9.6 %
		Y	3.70	70.05	19.33		150.0	
		Z	3.38	68.85	18.78		150.0	
10167-CAE	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	4.04	71.48	19.17	3.01	150.0	± 9.6 %
		Y	4.70	73.38	19.92		150.0	
		Z	4.01	71.26	19.04		150.0	

Certificate No: EX3-3801_Jun18

Page 17 of 39



EX3DV4- SN:3801

June 26, 2018

10168-CAE	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	4.52	73.94	20.64	3.01	150.0	± 9.6 %
		Y	5.25	75.73	21.26		150.0	
		Z	4.48	73.68	20.49		150.0	
10169-CAD	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	2.77	67.75	18.34	3.01	150.0	± 9.6 %
		Y	3.18	70.11	19.36		150.0	
		Z	2.75	67.60	18.22		150.0	
10170-CAD	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	3.59	72.80	20.42	3.01	150.0	± 9.6 %
		Y	4.67	76.93	21.92		150.0	
		Z	3.54	72.56	20.26		150.0	
10171-AAD	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	2.99	69.00	17.71	3.01	150.0	± 9.6 %
		Y	3.76	72.40	19.07		150.0	
		Z	2.96	68.80	17.56		150.0	
10172-CAD	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	9.91	94.44	29.85	6.02	65.0	± 9.6 %
		Y	26.96	112.91	35.22		65.0	
		Z	8.39	91.68	29.04		65.0	
10173-CAD	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	17.47	101.05	30.02	6.02	65.0	± 9.6 %
		Y	73.48	124.50	35.94		65.0	
		Z	15.60	99.60	29.69		65.0	
10174-CAD	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	14.33	96.21	27.96	6.02	65.0	± 9.6 %
		Y	38.46	111.23	31.91		65.0	
		Z	12.63	94.55	27.54		65.0	
10175-CAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	2.74	67.47	18.09	3.01	150.0	± 9.6 %
		Y	3.14	69.79	19.11		150.0	
		Z	2.72	67.32	17.97		150.0	
10176-CAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	3.59	72.83	20.43	3.01	150.0	± 9.6 %
		Y	4.68	76.96	21.93		150.0	
		Z	3.55	72.58	20.27		150.0	
10177-CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	2.76	67.60	18.18	3.01	150.0	± 9.6 %
		Y	3.17	69.94	19.20		150.0	
		Z	2.74	67.46	18.06		150.0	
10178-CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	3.56	72.65	20.32	3.01	150.0	± 9.6 %
		Y	4.63	76.72	21.81		150.0	
		Z	3.52	72.40	20.17		150.0	
10179-CAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	3.26	70.78	18.93	3.01	150.0	± 9.6 %
		Y	4.17	74.53	20.35		150.0	
		Z	3.22	70.55	18.78		150.0	
10180-CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	2.99	68.95	17.67	3.01	150.0	± 9.6 %
		Y	3.75	72.33	19.02		150.0	
		Z	2.95	68.75	17.52		150.0	
10181-CAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	2.75	67.59	18.17	3.01	150.0	± 9.6 %
		Y	3.17	69.93	19.20		150.0	
		Z	2.73	67.44	18.06		150.0	
10182-CAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	3.56	72.62	20.31	3.01	150.0	± 9.6 %
		Y	4.62	76.70	21.80		150.0	
		Z	3.51	72.38	20.16		150.0	
10183-AAC	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	2.98	68.93	17.66	3.01	150.0	± 9.6 %
		Y	3.74	72.31	19.01		150.0	
		Z	2.95	68.73	17.51		150.0	

Certificate No: EX3-3801_Jun18

Page 18 of 39



EX3DV4- SN:3801

June 26, 2018

10184-CAD	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	2.76	67.63	18.19	3.01	150.0	± 9.6 %
		Y	3.18	69.97	19.22		150.0	
		Z	2.74	67.48	18.08		150.0	
10185-CAD	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	3.58	72.69	20.35	3.01	150.0	± 9.6 %
		Y	4.64	76.77	21.83		150.0	
		Z	3.53	72.45	20.19		150.0	
10186-AAD	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	3.00	68.99	17.69	3.01	150.0	± 9.6 %
		Y	3.76	72.38	19.04		150.0	
		Z	2.96	68.79	17.54		150.0	
10187-CAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	2.77	67.68	18.26	3.01	150.0	± 9.6 %
		Y	3.19	70.03	19.28		150.0	
		Z	2.75	67.54	18.15		150.0	
10188-CAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	3.68	73.28	20.71	3.01	150.0	± 9.6 %
		Y	4.80	77.49	22.22		150.0	
		Z	3.63	73.04	20.56		150.0	
10189-AAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	3.05	69.36	17.95	3.01	150.0	± 9.6 %
		Y	3.85	72.83	19.33		150.0	
		Z	3.02	69.15	17.80		150.0	
10193-CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	X	4.37	66.23	15.79	0.00	150.0	± 9.6 %
		Y	4.50	66.54	16.08		150.0	
		Z	4.38	66.22	15.79		150.0	
10194-CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	X	4.53	66.52	15.92	0.00	150.0	± 9.6 %
		Y	4.67	66.86	16.20		150.0	
		Z	4.54	66.50	15.92		150.0	
10195-CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	X	4.57	66.55	15.95	0.00	150.0	± 9.6 %
		Y	4.71	66.89	16.22		150.0	
		Z	4.58	66.54	15.94		150.0	
10196-CAC	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	X	4.37	66.26	15.80	0.00	150.0	± 9.6 %
		Y	4.50	66.60	16.10		150.0	
		Z	4.38	66.25	15.80		150.0	
10197-CAC	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	X	4.54	66.53	15.94	0.00	150.0	± 9.6 %
		Y	4.68	66.88	16.22		150.0	
		Z	4.55	66.52	15.93		150.0	
10198-CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	X	4.57	66.56	15.96	0.00	150.0	± 9.6 %
		Y	4.71	66.90	16.23		150.0	
		Z	4.58	66.55	15.95		150.0	
10219-CAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	X	4.32	66.27	15.75	0.00	150.0	± 9.6 %
		Y	4.45	66.61	16.06		150.0	
		Z	4.32	66.26	15.75		150.0	
10220-CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	X	4.54	66.50	15.92	0.00	150.0	± 9.6 %
		Y	4.68	66.85	16.21		150.0	
		Z	4.54	66.49	15.92		150.0	
10221-CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	X	4.58	66.50	15.95	0.00	150.0	± 9.6 %
		Y	4.72	66.83	16.22		150.0	
		Z	4.59	66.49	15.94		150.0	
10222-CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	X	4.93	66.68	16.09	0.00	150.0	± 9.6 %
		Y	5.04	67.01	16.33		150.0	
		Z	4.94	66.67	16.09		150.0	

Certificate No: EX3-3801_Jun18

Page 19 of 39



EX3DV4- SN:3801

June 26, 2018

10223-CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	X	5.24	66.96	16.26	0.00	150.0	± 9.6 %
		Y	5.34	67.20	16.45		150.0	
		Z	5.25	66.96	16.26		150.0	
10224-CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	X	4.97	66.79	16.07	0.00	150.0	± 9.6 %
		Y	5.09	67.12	16.31		150.0	
		Z	4.98	66.78	16.07		150.0	
10225-CAB	UMTS-FDD (HSPA+)	X	2.61	65.30	14.50	0.00	150.0	± 9.6 %
		Y	2.77	66.01	15.22		150.0	
		Z	2.62	65.28	14.51		150.0	
10226-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	19.06	102.80	30.64	6.02	65.0	± 9.6 %
		Y	84.74	127.31	36.73		65.0	
		Z	16.97	101.30	30.30		65.0	
10227-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	18.47	100.66	29.36	6.02	65.0	± 9.6 %
		Y	61.00	119.15	34.00		65.0	
		Z	16.71	99.46	29.10		65.0	
10228-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	11.22	97.35	30.90	6.02	65.0	± 9.6 %
		Y	42.26	122.26	37.83		65.0	
		Z	9.70	95.02	30.26		65.0	
10229-CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	17.60	101.16	30.06	6.02	65.0	± 9.6 %
		Y	73.82	124.58	35.96		65.0	
		Z	15.72	99.72	29.73		65.0	
10230-CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	16.98	99.07	28.81	6.02	65.0	± 9.6 %
		Y	54.30	116.97	33.37		65.0	
		Z	15.38	97.90	28.55		65.0	
10231-CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	10.61	96.11	30.42	6.02	65.0	± 9.6 %
		Y	38.34	120.13	37.18		65.0	
		Z	9.21	93.87	29.80		65.0	
10232-CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	17.57	101.15	30.06	6.02	65.0	± 9.6 %
		Y	73.88	124.60	35.97		65.0	
		Z	15.69	99.70	29.73		65.0	
10233-CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	16.93	99.04	28.80	6.02	65.0	± 9.6 %
		Y	54.26	116.98	33.37		65.0	
		Z	15.34	97.87	28.54		65.0	
10234-CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	10.13	95.03	29.94	6.02	65.0	± 9.6 %
		Y	35.09	118.08	36.51		65.0	
		Z	8.83	92.87	29.34		65.0	
10235-CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	17.61	101.20	30.07	6.02	65.0	± 9.6 %
		Y	74.39	124.74	36.01		65.0	
		Z	15.72	99.75	29.75		65.0	
10236-CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	17.15	99.23	28.85	6.02	65.0	± 9.6 %
		Y	55.30	117.26	33.44		65.0	
		Z	15.54	98.06	28.59		65.0	
10237-CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	10.63	96.19	30.45	6.02	65.0	± 9.6 %
		Y	38.84	120.43	37.26		65.0	
		Z	9.22	93.94	29.82		65.0	
10238-CAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	17.54	101.13	30.05	6.02	65.0	± 9.6 %
		Y	73.93	124.62	35.97		65.0	
		Z	15.66	99.68	29.72		65.0	

Certificate No: EX3-3801_Jun18

Page 20 of 39



EX3DV4- SN:3801

June 26, 2018

10239-CAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	16.87	99.00	28.79	6.02	65.0	± 9.6 %
		Y	54.20	116.98	33.38		65.0	
		Z	15.28	97.83	28.53		65.0	
10240-CAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	10.60	96.15	30.43	6.02	65.0	± 9.6 %
		Y	38.66	120.35	37.24		65.0	
		Z	9.20	93.89	29.81		65.0	
10241-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	8.68	82.76	26.12	6.98	65.0	± 9.6 %
		Y	11.24	87.33	27.87		65.0	
		Z	8.20	81.79	25.80		65.0	
10242-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	8.24	81.67	25.60	6.98	65.0	± 9.6 %
		Y	9.94	84.69	26.78		65.0	
		Z	7.73	80.54	25.21		65.0	
10243-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	6.66	78.27	25.11	6.98	65.0	± 9.6 %
		Y	7.69	80.76	26.19		65.0	
		Z	6.24	77.03	24.63		65.0	
10244-CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	6.51	76.73	18.61	3.98	65.0	± 9.6 %
		Y	8.90	80.96	20.59		65.0	
		Z	6.20	76.45	18.60		65.0	
10245-CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	6.23	75.82	18.19	3.98	65.0	± 9.6 %
		Y	8.52	80.01	20.18		65.0	
		Z	5.95	75.55	18.18		65.0	
10246-CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	5.89	78.26	19.20	3.98	65.0	± 9.6 %
		Y	10.33	86.66	22.77		65.0	
		Z	5.69	78.38	19.42		65.0	
10247-CAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	5.27	73.98	18.20	3.98	65.0	± 9.6 %
		Y	6.98	78.14	20.37		65.0	
		Z	5.06	73.79	18.26		65.0	
10248-CAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	5.20	73.29	17.89	3.98	65.0	± 9.6 %
		Y	6.82	77.27	20.01		65.0	
		Z	5.00	73.09	17.94		65.0	
10249-CAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	7.64	82.87	21.98	3.98	65.0	± 9.6 %
		Y	12.50	90.52	24.99		65.0	
		Z	7.27	82.69	22.09		65.0	
10250-CAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	6.39	77.19	21.35	3.98	65.0	± 9.6 %
		Y	7.97	80.62	22.94		65.0	
		Z	6.07	76.69	21.28		65.0	
10251-CAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	5.95	74.70	19.94	3.98	65.0	± 9.6 %
		Y	7.31	77.83	21.49		65.0	
		Z	5.69	74.26	19.87		65.0	
10252-CAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	7.81	82.79	23.08	3.98	65.0	± 9.6 %
		Y	11.09	88.26	25.20		65.0	
		Z	7.35	82.26	23.04		65.0	
10253-CAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	6.02	73.87	20.02	3.98	65.0	± 9.6 %
		Y	7.15	76.53	21.33		65.0	
		Z	5.76	73.39	19.91		65.0	
10254-CAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	6.41	74.89	20.77	3.98	65.0	± 9.6 %
		Y	7.57	77.46	22.02		65.0	
		Z	6.13	74.39	20.66		65.0	

Certificate No: EX3-3801_Jun18

Page 21 of 39



EX3DV4- SN:3801

June 26, 2018

10255-CAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	6.95	78.78	21.87	3.98	65.0	± 9.6 %
		Y	8.80	82.37	23.35		65.0	
		Z	6.59	78.27	21.78		65.0	
10256-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	4.69	71.51	15.31	3.98	65.0	± 9.6 %
		Y	6.81	76.30	17.77		65.0	
		Z	4.50	71.34	15.32		65.0	
10257-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	4.47	70.51	14.76	3.98	65.0	± 9.6 %
		Y	6.44	75.12	17.21		65.0	
		Z	4.29	70.34	14.77		65.0	
10258-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	4.06	72.26	15.82	3.98	65.0	± 9.6 %
		Y	7.18	80.25	19.65		65.0	
		Z	3.95	72.43	16.05		65.0	
10259-CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	5.72	75.25	19.37	3.98	65.0	± 9.6 %
		Y	7.37	79.06	21.29		65.0	
		Z	5.47	74.94	19.38		65.0	
10260-CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	5.72	74.91	19.23	3.98	65.0	± 9.6 %
		Y	7.31	78.59	21.12		65.0	
		Z	5.48	74.60	19.24		65.0	
10261-CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	7.27	81.87	22.09	3.98	65.0	± 9.6 %
		Y	10.93	88.24	24.66		65.0	
		Z	6.86	81.50	22.12		65.0	
10262-CAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	6.37	77.12	21.30	3.98	65.0	± 9.6 %
		Y	7.95	80.56	22.90		65.0	
		Z	6.05	76.62	21.23		65.0	
10263-CAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	5.94	74.67	19.93	3.98	65.0	± 9.6 %
		Y	7.30	77.80	21.49		65.0	
		Z	5.68	74.24	19.86		65.0	
10264-CAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	7.72	82.55	22.97	3.98	65.0	± 9.6 %
		Y	10.95	88.00	25.09		65.0	
		Z	7.26	82.02	22.93		65.0	
10265-CAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	6.14	74.37	20.28	3.98	65.0	± 9.6 %
		Y	7.36	77.20	21.61		65.0	
		Z	5.87	73.89	20.17		65.0	
10266-CAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	6.57	75.48	21.12	3.98	65.0	± 9.6 %
		Y	7.80	78.16	22.36		65.0	
		Z	6.28	74.97	21.00		65.0	
10267-CAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	7.27	79.38	21.91	3.98	65.0	± 9.6 %
		Y	9.30	83.06	23.38		65.0	
		Z	6.92	78.93	21.85		65.0	
10268-CAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	6.75	74.24	20.68	3.98	65.0	± 9.6 %
		Y	7.82	76.54	21.74		65.0	
		Z	6.49	73.77	20.56		65.0	
10269-CAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	6.72	73.83	20.55	3.98	65.0	± 9.6 %
		Y	7.73	76.02	21.58		65.0	
		Z	6.46	73.36	20.43		65.0	
10270-CAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	6.94	76.39	20.90	3.98	65.0	± 9.6 %
		Y	8.26	78.95	21.97		65.0	
		Z	6.65	75.97	20.82		65.0	

Certificate No: EX3-3801_Jun18

Page 22 of 39



EX3DV4- SN:3801

June 26, 2018

10274-CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	X	2.40	65.55	14.34	0.00	150.0	± 9.6 %
		Y	2.55	66.36	15.12		150.0	
		Z	2.40	65.52	14.34		150.0	
10275-CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	X	1.37	65.59	13.82	0.00	150.0	± 9.6 %
		Y	1.57	67.69	15.34		150.0	
		Z	1.37	65.56	13.81		150.0	
10277-CAA	PHS (QPSK)	X	2.46	62.30	7.92	9.03	50.0	± 9.6 %
		Y	2.99	63.83	9.17		50.0	
		Z	2.33	62.06	7.69		50.0	
10278-CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	X	4.98	72.46	15.62	9.03	50.0	± 9.6 %
		Y	8.77	80.80	19.53		50.0	
		Z	5.06	73.09	15.89		50.0	
10279-CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	X	5.10	72.72	15.78	9.03	50.0	± 9.6 %
		Y	8.97	81.08	19.68		50.0	
		Z	5.19	73.36	16.06		50.0	
10290-AAB	CDMA2000, RC1, SO55, Full Rate	X	0.97	64.08	10.61	0.00	150.0	± 9.6 %
		Y	1.37	68.00	13.49		150.0	
		Z	0.98	64.13	10.68		150.0	
10291-AAB	CDMA2000, RC3, SO55, Full Rate	X	0.58	62.04	9.17	0.00	150.0	± 9.6 %
		Y	0.77	65.07	11.88		150.0	
		Z	0.58	62.07	9.23		150.0	
10292-AAB	CDMA2000, RC3, SO32, Full Rate	X	0.64	63.79	10.46	0.00	150.0	± 9.6 %
		Y	0.99	69.13	14.24		150.0	
		Z	0.64	63.81	10.51		150.0	
10293-AAB	CDMA2000, RC3, SO3, Full Rate	X	0.81	66.57	12.32	0.00	150.0	± 9.6 %
		Y	1.56	75.54	17.45		150.0	
		Z	0.81	66.55	12.35		150.0	
10295-AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	X	11.79	88.13	24.57	9.03	50.0	± 9.6 %
		Y	13.93	91.96	26.60		50.0	
		Z	12.03	89.02	24.99		50.0	
10297-AAC	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	2.43	67.83	15.42	0.00	150.0	± 9.6 %
		Y	2.71	69.51	16.44		150.0	
		Z	2.43	67.81	15.41		150.0	
10298-AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	1.17	64.21	11.42	0.00	150.0	± 9.6 %
		Y	1.51	67.23	13.79		150.0	
		Z	1.18	64.25	11.49		150.0	
10299-AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	2.14	67.38	12.81	0.00	150.0	± 9.6 %
		Y	2.87	70.55	14.69		150.0	
		Z	2.09	67.00	12.62		150.0	
10300-AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	1.64	63.53	10.15	0.00	150.0	± 9.6 %
		Y	2.07	65.55	11.64		150.0	
		Z	1.63	63.41	10.08		150.0	
10301-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	X	4.80	65.91	17.41	4.17	50.0	± 9.6 %
		Y	5.18	67.15	18.29		50.0	
		Z	4.75	65.66	17.30		50.0	
10302-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	X	5.25	66.32	18.01	4.96	50.0	± 9.6 %
		Y	5.53	67.15	18.67		50.0	
		Z	5.21	66.16	17.95		50.0	

Certificate No: EX3-3801_Jun18

Page 23 of 39



EX3DV4- SN:3801

June 26, 2018

10303-AAA	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	X	5.02	66.03	17.86	4.96	50.0	± 9.6 %
		Y	5.30	66.93	18.58		50.0	
		Z	4.98	65.85	17.79		50.0	
10304-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	X	4.79	65.79	17.29	4.17	50.0	± 9.6 %
		Y	5.06	66.59	17.94		50.0	
		Z	4.76	65.63	17.23		50.0	
10305-AAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	X	4.90	69.87	20.22	6.02	35.0	± 9.6 %
		Y	5.31	71.48	21.54		35.0	
		Z	4.75	69.22	19.95		35.0	
10306-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	X	4.99	68.00	19.55	6.02	35.0	± 9.6 %
		Y	5.28	69.01	20.47		35.0	
		Z	4.90	67.60	19.37		35.0	
10307-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	X	4.92	68.28	19.55	6.02	35.0	± 9.6 %
		Y	5.25	69.46	20.56		35.0	
		Z	4.82	67.84	19.36		35.0	
10308-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	X	4.92	68.59	19.73	6.02	35.0	± 9.6 %
		Y	5.26	69.83	20.78		35.0	
		Z	4.82	68.12	19.53		35.0	
10309-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	X	5.04	68.19	19.68	6.02	35.0	± 9.6 %
		Y	5.35	69.29	20.64		35.0	
		Z	4.95	67.79	19.50		35.0	
10310-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	X	4.96	68.14	19.55	6.02	35.0	± 9.6 %
		Y	5.25	69.19	20.50		35.0	
		Z	4.87	67.72	19.37		35.0	
10311-AAC	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	2.77	67.21	15.18	0.00	150.0	± 9.6 %
		Y	3.07	68.80	16.10		150.0	
		Z	2.77	67.19	15.17		150.0	
10313-AAA	iDEN 1:3	X	4.50	74.82	16.72	6.99	70.0	± 9.6 %
		Y	8.14	81.70	19.31		70.0	
		Z	4.21	74.79	16.81		70.0	
10314-AAA	iDEN 1:6	X	6.62	83.57	22.82	10.00	30.0	± 9.6 %
		Y	15.63	96.40	26.94		30.0	
		Z	6.51	84.13	23.15		30.0	
10315-AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	X	1.00	62.64	14.01	0.17	150.0	± 9.6 %
		Y	1.09	64.02	15.23		150.0	
		Z	0.99	62.54	13.97		150.0	
10316-AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	X	4.44	66.34	15.98	0.17	150.0	± 9.6 %
		Y	4.58	66.68	16.29		150.0	
		Z	4.45	66.32	15.98		150.0	
10317-AAC	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	X	4.44	66.34	15.98	0.17	150.0	± 9.6 %
		Y	4.58	66.68	16.29		150.0	
		Z	4.45	66.32	15.98		150.0	
10400-AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	X	4.51	66.55	15.91	0.00	150.0	± 9.6 %
		Y	4.66	66.92	16.21		150.0	
		Z	4.52	66.54	15.91		150.0	
10401-AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	X	5.26	66.85	16.18	0.00	150.0	± 9.6 %
		Y	5.36	67.11	16.38		150.0	
		Z	5.27	66.86	16.18		150.0	

Certificate No: EX3-3801_Jun18

Page 24 of 39



EX3DV4- SN:3801

June 26, 2018

10402-AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	X	5.49	67.07	16.16	0.00	150.0	± 9.6 %
		Y	5.61	67.41	16.38		150.0	
		Z	5.50	67.07	16.16		150.0	
10403-AAB	CDMA2000 (1xEV-DO, Rev. 0)	X	0.97	64.08	10.61	0.00	115.0	± 9.6 %
		Y	1.37	68.00	13.49		115.0	
		Z	0.98	64.13	10.68		115.0	
10404-AAB	CDMA2000 (1xEV-DO, Rev. A)	X	0.97	64.08	10.61	0.00	115.0	± 9.6 %
		Y	1.37	68.00	13.49		115.0	
		Z	0.98	64.13	10.68		115.0	
10406-AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	X	30.79	107.36	27.23	0.00	100.0	± 9.6 %
		Y	100.00	120.16	29.82		100.0	
		Z	19.65	100.98	25.49		100.0	
10410-AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	X	100.00	124.91	31.71	3.23	80.0	± 9.6 %
		Y	100.00	121.32	30.41		80.0	
		Z	100.00	125.61	31.93		80.0	
10415-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	X	0.92	61.75	13.36	0.00	150.0	± 9.6 %
		Y	0.98	62.81	14.44		150.0	
		Z	0.92	61.72	13.35		150.0	
10416-AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	X	4.37	66.26	15.86	0.00	150.0	± 9.6 %
		Y	4.50	66.58	16.15		150.0	
		Z	4.38	66.25	15.86		150.0	
10417-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	X	4.37	66.26	15.86	0.00	150.0	± 9.6 %
		Y	4.50	66.58	16.15		150.0	
		Z	4.38	66.25	15.86		150.0	
10418-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)	X	4.36	66.42	15.89	0.00	150.0	± 9.6 %
		Y	4.49	66.74	16.17		150.0	
		Z	4.37	66.40	15.88		150.0	
10419-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)	X	4.38	66.37	15.89	0.00	150.0	± 9.6 %
		Y	4.51	66.69	16.17		150.0	
		Z	4.39	66.35	15.89		150.0	
10422-AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	X	4.50	66.38	15.91	0.00	150.0	± 9.6 %
		Y	4.63	66.69	16.18		150.0	
		Z	4.51	66.36	15.91		150.0	
10423-AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	X	4.64	66.66	16.02	0.00	150.0	± 9.6 %
		Y	4.79	67.00	16.30		150.0	
		Z	4.65	66.65	16.02		150.0	
10424-AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	X	4.57	66.61	15.99	0.00	150.0	± 9.6 %
		Y	4.72	66.95	16.27		150.0	
		Z	4.58	66.60	15.99		150.0	
10425-AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	X	5.19	66.94	16.22	0.00	150.0	± 9.6 %
		Y	5.31	67.25	16.45		150.0	
		Z	5.20	66.93	16.22		150.0	
10426-AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	X	5.21	67.03	16.26	0.00	150.0	± 9.6 %
		Y	5.32	67.28	16.46		150.0	
		Z	5.22	67.02	16.26		150.0	