

September 23, 2020

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3933

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm (µV/(V/m) ²) ^A	0.49	0.51	0.18	± 10.1 %
DCP (mV) ^B	101.7	101.6	91.3	

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	185.6	± 3.5 %	±4.7 %
		Y	0.00	0.00	1.00		172.1		
		Z	0.00	0.00	1.00		178.9		
10352-	Pulse Waveform (200Hz, 10%)	X	20.00	96.03	24.59	10.00	60.0	± 3.0 %	± 9.6 %
AAA		Y	20.00	94.18	23.83		60.0		
		Z	20.00	96.88	25.46		60.0		
10353-	Pulse Waveform (200Hz, 20%)	X	20.00	101.88	26.30	6.99	80.0	± 2.2 %	± 9.6 %
AAA	, , , , ,	Y	20.00	95.80	23.58		80.0		
		Z	20.00	98.98	24.83		80.0		
10354-	Pulse Waveform (200Hz, 40%)	X	20.00	122.84	34.87	3.98	95.0	± 2.5 %	± 9.6 %
AAA		Y	20.00	97.96	23.20	1	95.0]	
		Z	20.00	113.04	29.75		95.0		
10355-	Pulse Waveform (200Hz, 60%)	X	9.30	160.00	54.55	2.22	120.0	± 2.8 %	± 9.6 %
AAA	A set of the set of th	Y	20.00	105.13	25.34]	120.0]	
		Z	0.70	160.00	83.60]	120.0		
10387-	QPSK Waveform, 1 MHz	X	8.27	97.03	27.78	1.00	150.0	± 3.5 %	± 9.6 %
AAA		Y	1.97	67.72	16.46]	150.0		
		Z	20.00	117.58	34.43		150.0		
10388-	QPSK Waveform, 10 MHz	X	4.94	84.20	23.69	0.00	150.0	± 3.9 %	± 9.6 %
AAA		Y	2.71	70.84	17.31]	150.0		
		Z	20.00	111.97	33.24		150.0		
10396-	64-QAM Waveform, 100 kHz	X	2.86	74.03	22.33	3.01	150.0	± 3.4 %	± 9.6 %
AAA		Y	3.24	71.45	19.48		150.0		
		Z	14.98	111.17	36.25		150.0		
10399-	64-QAM Waveform, 40 MHz	X	4.12	71.10	18.46	0.00	150.0	± 3.3 %	± 9.6 %
AAA		Y	3.68	67.81	16.30		150.0		
		Z	4.68	74.04	20.41		150.0		
10414-	WLAN CCDF, 64-QAM, 40MHz	Х	5.03	67.22	16.89	0.00	150.0	± 3.4 %	± 9.6 %
AAA		Y	5.01	65.77	15.71		150.0		
		Z	5.17	68.11	17.89		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.

Certificate No: EX3-3933_Sep20

Page 3 of 23



September 23, 2020

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3933

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
Х	36.7	274.62	36.29	13.75	0.87	5.10	0.00	0.24	1.01
Y	57.5	424.90	35.09	25.97	0.70	5.10	0.41	0.44	1.01
Z	32.5	265.31	42.52	9.48	1.60	5.07	2.00	0.04	1.01

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	-103.2
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

Note: Measurement distance from surface can be increased to 3-4 mm for an Area Scan job.

Certificate No: EX3-3933_Sep20

Page 4 of 23

September 23, 2020

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3933

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	11.04	11.04	11.04	0.59	0.80	± 12.0 %
835	41.5	0.90	10.61	10.61	10.61	0.53	0.80	± 12.0 %
900	41.5	0.97	10.32	10.32	10.32	0.43	0.80	± 12.0 %
1750	40.1	1.37	8.97	8.97	8.97	0.33	0.86	± 12.0 %
1900	40.0	1.40	8.61	8.61	8.61	0.38	0.86	± 12.0 %
2300	39.5	1.67	8.09	8.09	8.09	0.33	0.90	± 12.0 %
2450	39.2	1.80	7.90	7.90	7.90	0.27	0.98	± 12.0 %
2600	39.0	1.96	7.69	7.69	7.69	0.38	0.90	± 12.0 %
3500	37.9	2.91	7.30	7.30	7.30	0.35	1.30	± 13.1 %
3700	37.7	3.12	7.22	7.22	7.22	0.35	1.30	± 13.1 %
5200	36.0	4.66	5.35	5.35	5.35	0.40	1.80	± 13.1 %
5300	35.9	4.76	5.25	5.25	5.25	0.40	1.80	± 13.1 %
5500	35.6	4.96	5.10	5.10	5.10	0.40	1.80	± 13.1 %
5600	35.5	5.07	5.00	5.00	5.00	0.40	1.80	± 13.1 %
5800	35.3	5.27	4.90	4.90	4.90	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 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.

Certificate No: EX3-3933_Sep20

Page 5 of 23

September 23, 2020

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3933

monormaliant and the second se										
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	10.71	10.71	10.71	0.42	0.80	± 12.0 %		
835	55.2	0.97	10.50	10.50	10.50	0.46	0.80	± 12.0 %		
900	55.0	1.05	10.36	10.36	10.36	0.48	0.80	± 12.0 %		
1750	53.4	1.49	8.77	8.77	8.77	0.32	0.86	± 12.0 %		
1900	53.3	1.52	8.38	8.38	8.38	0.38	0.86	± 12.0 %		
2300	52.9	1.81	8.13	8.13	8.13	0.41	0.90	± 12.0 %		
2450	52.7	1.95	7.89	7.89	7.89	0.37	0.90	± 12.0 %		
2600	52.5	2.16	7.74	7.74	7.74	0.34	0.90	± 12.0 %		
3500	51.3	3.31	6.90	6.90	6.90	0.40	1.35	± 13.1 %		
3700	51.0	3.55	6.83	6.83	6.83	0.40	1.35	± 13.1 %		
5200	49.0	5.30	4.79	4.79	4.79	0.50	1.90	± 13.1 %		
5300	48.9	5.42	4.69	4.69	4.69	0.50	1.90	± 13.1 %		
5500	48.6	5.65	4.37	4.37	4.37	0.50	1.90	± 13.1 %		
5600	48.5	5.77	4.22	4.22	4.22	0.50	1.90	± 13.1 %		
5800	48.2	6.00	4.26	4.26	4.26	0.50	1.90	± 13.1 %		

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.

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 (c 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 (c and σ) is restricted to \pm 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.

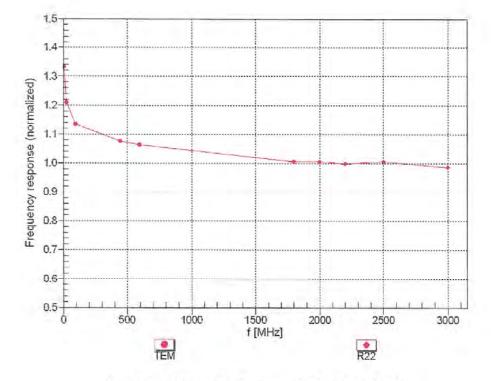
Certificate No: EX3-3933_Sep20

Page 6 of 23



September 23, 2020

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



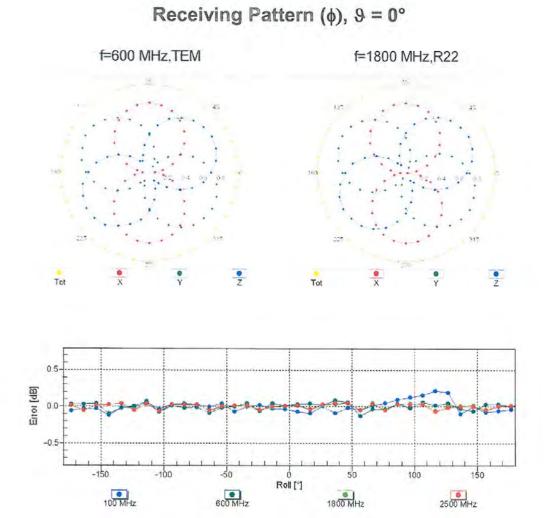
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

Certificate No: EX3-3933_Sep20

Page 7 of 23



September 23, 2020



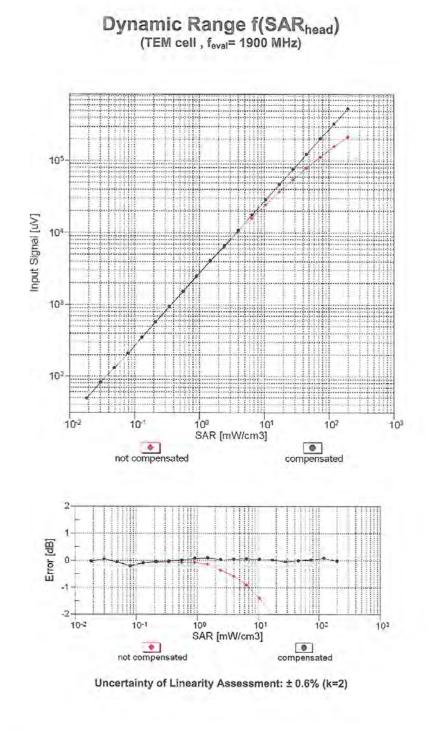
Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Certificate No: EX3-3933_Sep20

Page 8 of 23



September 23, 2020

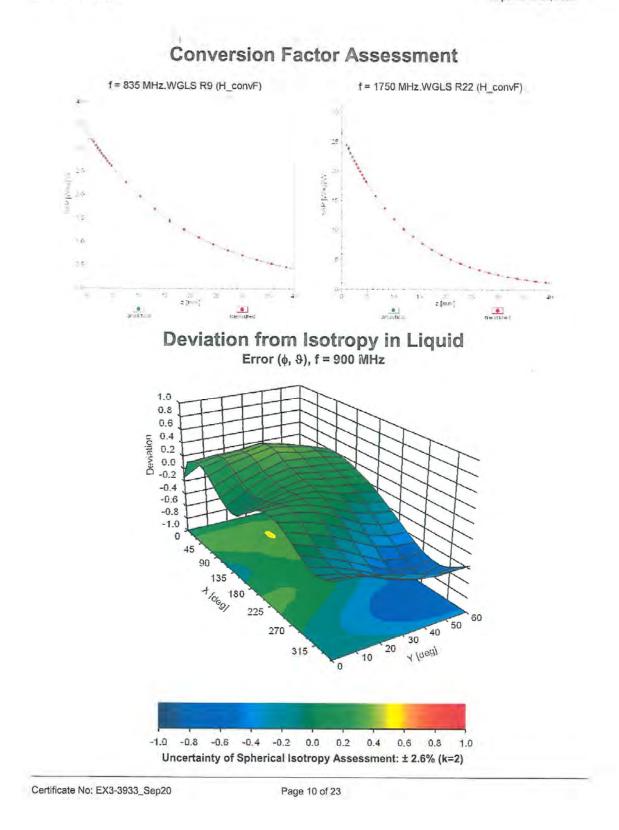


Certificate No: EX3-3933_Sep20

Page 9 of 23



September 23, 2020





September 23, 2020

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	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	± 9.6 %
10063	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	± 9.6 %
10064	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	± 9.6 %
10065		IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	± 9.6 %
10066	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	± 9.6 %
10067	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	± 9.6 %
10068	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN		
10069	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	± 9.6 %
	CAD			10.56	± 9.6 %
10071 10072	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 %
	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	CAC	UMTS-FDD (HSDPA)	WCDMA	3.98	± 9.6 %
10098	DAC	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	± 9.6 %

Certificate No: EX3-3933_Sep20

Page 11 of 23



September 23, 2020

10101 C/ 10102 C/ 10103 D/ 10104 C/ 10105 C/ 10108 C/ 10109 C/ 10109 C/ 10110 C/ 10111 C/ 10112 C/ 10113 C/ 10114 C/ 10115 C/ 10116 C/ 10117 C/ 10118 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	CAC CAB CAB CAB CAB CAC CAC CAC CAC CAC	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 31 Mbps, 16-QAM)	LTE-FDD LTE-FDD LTE-FDD LTE-TDD LTE-TDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD WLAN	5.67 6.42 6.60 9.29 9.97 10.01 5.80 6.43 5.75 6.44 6.59 6.62	± 9.6 % ± 9.6 %
10102 C/ 10103 D/ 10103 D/ 10104 C/ 10105 C/ 10108 C/ 10109 C/ 10110 C/ 10110 C/ 10111 C/ 10112 C/ 10113 C/ 10114 C/ 10115 C/ 10116 C/ 10117 C/ 10118 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	AB DAC DAC DAC DAC DAC DAC DAC DAC DAC DAC	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	LTE-FDD LTE-FDD LTE-TDD LTE-TDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD	6.42 6.60 9.29 9.97 10.01 5.80 6.43 5.75 6.44 6.59	± 9.6 % ± 9.6 %
10103 D/ 10103 D/ 10104 C/ 10105 C/ 10108 C/ 10109 C/ 10110 C/ 10111 C/ 10112 C/ 10113 C/ 10114 C/ 10115 C/ 10116 C/ 10117 C/ 10118 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	DAC CAE CAE CAE CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	LTE-FDD LTE-TDD LTE-TDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD	6.60 9.29 9.97 10.01 5.80 6.43 5.75 6.44 6.59	± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %
10104 C/ 10105 C/ 10105 C/ 10108 C/ 10109 C/ 10110 C/ 10111 C/ 10112 C/ 10113 C/ 10114 C/ 10115 C/ 10116 C/ 10117 C/ 10118 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	AE AE AG AG AG AG AG AG AG AG AG AG AG AG AD AD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	LTE-TDD LTE-TDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD	9.29 9.97 10.01 5.80 6.43 5.75 6.44 6.59	$\begin{array}{c} \pm \ 9.6 \ \% \\ \pm \ 9.6 \ \% \end{array}$
10105 C/ 10105 C/ 10108 C/ 10109 C/ 10110 C/ 10111 C/ 10112 C/ 10113 C/ 10114 C/ 10115 C/ 10116 C/ 10117 C/ 10118 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	AE AG AG AG AG AG AG AG AG AG AG AG AG AG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	LTE-TDD LTE-TDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD	9.97 10.01 5.80 6.43 5.75 6.44 6.59	$\begin{array}{c} \pm \ 9.6 \ \% \\ \pm \ 9.6 \ \% \end{array}$
10105 C/ 10108 C/ 10109 C/ 10110 C/ 10111 C/ 10112 C/ 10113 C/ 10114 C/ 10115 C/ 10116 C/ 10117 C/ 10118 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	AE AG AG AG AG AG AG AG AG AG AG AG AG AG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	LTE-TDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD	10.01 5.80 6.43 5.75 6.44 6.59	$\begin{array}{c} \pm \ 9.6 \ \% \\ \pm \ 9.6 \ \% \end{array}$
10108 C/ 10109 C/ 10110 C/ 10111 C/ 10112 C/ 10113 C/ 10114 C/ 10115 C/ 10116 C/ 10117 C/ 10118 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	AE AG AG AG AG AG AG AG AG AG AG AG AG AD AD	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD	5.80 6.43 5.75 6.44 6.59	± 9.6 % ± 9.6 % ± 9.6 % ± 9.6 %
10109 C/ 10110 C/ 10111 C/ 10112 C/ 10113 C/ 10114 C/ 10115 C/ 10116 C/ 10117 C/ 10118 C/ 10119 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD	6.43 5.75 6.44 6.59	± 9.6 % ± 9.6 % ± 9.6 %
10110 C/ 10111 C/ 10112 C/ 10113 C/ 10114 C/ 10115 C/ 10116 C/ 10117 C/ 10118 C/ 10119 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	AG AG AG AG AG AG AG AG AG AG AD AD	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	LTE-FDD LTE-FDD LTE-FDD LTE-FDD	5.75 6.44 6.59	± 9.6 % ± 9.6 %
10111 C/ 10112 C/ 10113 C/ 10114 C/ 10115 C/ 10116 C/ 10117 C/ 10118 C/ 10119 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	CAG CAG CAG CAG CAG CAG CAG CAG CAD CAD	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	LTE-FDD LTE-FDD LTE-FDD	6.44 6.59	± 9.6 %
10112 C/ 10113 C/ 10113 C/ 10114 C/ 10115 C/ 10116 C/ 10117 C/ 10118 C/ 10119 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	CAG CAG CAG CAG CAG CAG CAG CAD CAD	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	LTE-FDD LTE-FDD	6.59	
10113 C/ 10113 C/ 10114 C/ 10115 C/ 10116 C/ 10117 C/ 10118 C/ 10119 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	AG AG AG AG AG AG AD AD	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	LTE-FDD		
10114 C/ 10115 C/ 10115 C/ 10116 C/ 10117 C/ 10118 C/ 10119 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	AG AG AG AG AD AD	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)		0.02	± 9.6 % ± 9.6 %
10115 C/ 10116 C/ 10117 C/ 10118 C/ 10119 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	AG AG AG AD AD	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	VVL/NN	0.10	
10116 C/ 10117 C/ 10117 C/ 10118 C/ 10119 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	AG AG AD AD		WLAN	8.10	± 9.6 %
10117 C/ 10118 C/ 10119 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	AG AD AD	(in creating, the mops, of gran)	WLAN	8.46	± 9.6 %
10118 C/ 10119 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	AD AD	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.15	± 9.6 %
IO119 C/ 10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/	AD	IEEE 802.11n (HT Mixed, 13.3 Mbps, 16-QAM)		8.07	± 9.6 %
10140 C/ 10141 C/ 10142 C/ 10143 C/ 10144 C/ 10144 C/ 10145 C/ 10146 C/		IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.59	± 9.6 %
10141 C/ 10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/		LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	WLAN	8.13	± 9.6 %
10142 C/ 10143 C/ 10144 C/ 10145 C/ 10146 C/			LTE-FDD	6.49	± 9.6 %
10143 C/ 10144 C/ 10145 C/ 10146 C/		LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	± 9.6 %
10144 C/ 10145 C/ 10146 C/		LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10145 C/ 10146 C/	AD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	± 9.6 %
10146 C/	AC	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	± 9.6 %
0/	AC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	± 9.6 %
10147 CA	AC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	± 9.6 %
	AC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	± 9.6 %
10180	AE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	±9.6 %
10151	AE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10150	AE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
	AE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
	AE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	±9.6 %
	AF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	±9.6 %
	AF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
	AF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	± 9.6 %
	AE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	±9.6 %
	AE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	±9.6 %
	AG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	±9.6 %
10160 CA	AG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	±9.6 %
	AG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10162 CA	AG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	± 9.6 %
10166 CA	AG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	± 9.6 %
	AG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	± 9.6 %
10168 CA	AG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	± 9.6 %
10169 CA	AG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10170 CA	AG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
	AE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	± 9.6 %
10.100	AE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10170	AE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
1	AF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
1.4.1.0.0	AF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
	AF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
	AE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD		
		LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	5.73	± 9.6 %
10.100	AF			0.07	± 9.6 %
10180 CA	AE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %

Certificate No: EX3-3933_Sep20

Page 12 of 23



September 23, 2020

10181	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10182	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	±9.6%
10183	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10184	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10185	CAI	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	±9.6 %
10186	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	±9.6 %
10187	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	±9.6%
10188	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	±9.6 %
10189	CAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 9
10193	CAE	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	±9.6 %
10194	AAD	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	± 9.6 %
10195	CAE	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	± 9.6 %
10196	CAE	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10197	AAE	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	±9.6 %
10198	CAF	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	±9.6 %
10219	CAF	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 %
10220	AAF	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	CAD	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	±9.6 %
10224	CAD	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	± 9.6 9
10225	CAD	UMTS-FDD (HSPA+)	WCDMA	5.97	±9.6 %
10226	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	± 9.6 %
10227	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	± 9.6 9
10228	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	± 9.6 %
10229	DAC	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	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 9
10233	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 9
10234	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10235	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10236	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10237	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	±9.6 %
10238	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10239	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	
10240	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	±9.6 %
10241	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD		±9.6 %
10242		LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.82	±9.6 %
10242	CAD	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 04-0AM)		9.86	±9.6 %
10243	CAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	9.46	±9.6 %
10245	CAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-CAM)	LTE-TDD	10.06	± 9.6 %
10246	CAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)		10.06	±9.6 %
10240	CAG		LTE-TDD	9.30	±9.6 %
10247	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	9.91	±9.6 %
10240	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	10.09	±9.6 %
10249	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.29	±9.6 %
10250	CAG		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 %
	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	± 9.6 %
10254	CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	±9.6 %
10255	CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	±9.6 %
10256	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	±9.6 %
10257	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	±9.6 %
10258	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	±9.6 %
10259	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	±9.6 %

Certificate No: EX3-3933_Sep20

Page 13 of 23



September 23, 2020

10260	CAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	± 9.6 %
10261	CAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10262	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83	± 9.6 %
10263	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	± 9.6 %
10264	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	± 9.6 %
10265	CAG	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	CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	± 9.6 %
10270	CAB	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	CAD	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.96	±9.6 %
10277	CAD	PHS (QPSK)	PHS	11.81	± 9.6 %
10278	CAD	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	± 9.6 %
10279	CAG	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	± 9.6 %
10290	CAG	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	± 9.6 %
0291	CAG	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	± 9.6 9
0292	CAG	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.40	± 9.6 9
0293	CAG	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.59	± 9.6 %
0295	CAG	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.49	± 9.6 %
0297	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD		
0298	CAF	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.81	±9.6 9
0299		LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)		5.72	±9.6 9
0300	CAF	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.39	± 9.6 9
0301	CAC		LTE-FDD	6.60	± 9.6 9
0302	CAC	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC) IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3CTRL)	WIMAX	12.03	± 9.6 9
0302	CAB		WIMAX	12.57	± 9.6 %
0303	CAB	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	12.52	± 9.6 9
0304	CAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WIMAX	11.86	± 9.6 %
10305	CAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC)	WIMAX	15.24	± 9.6 %
0307	CAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC)	WIMAX	14.67	± 9.6 %
0308	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC)	WiMAX	14.49	± 9.6 9
	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WIMAX	14.46	± 9.6 9
0309	AAB	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM,AMC 2x3)	WIMAX	14.58	± 9.6 9
0310	AAB	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3	WiMAX	14.57	± 9.6 %
0311	AAB	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.06	± 9.6 %
0313	AAD	IDEN 1:3	IDEN	10.51	± 9.6 9
0314	AAD	IDEN 1:6	IDEN	13.48	± 9.6 9
0315	AAD	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc dc)	WLAN	1.71	± 9.6 %
0316	AAD	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc dc)	WLAN	8.36	± 9.6 %
0317	AAA	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc dc)	WLAN	8.36	± 9.6 %
0352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	± 9.6 %
0353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	± 9.6 9
0354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.98	± 9.6 9
0355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	± 9.6 %
0356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	± 9.6 %
0387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	± 9.6 %
0388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	± 9.6 %
0396	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	± 9.6 9
0399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	± 9.6 %
0400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc dc)	WLAN	8.37	± 9.6 9
0401	AAA	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc dc)	WLAN	8.60	± 9.6 9
0402	AAA	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc dc)	WLAN	8.53	± 9.6 9
0403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	± 9.6 9
	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.76	± 9.6 9
10404					

Certificate No: EX3-3933_Sep20

Page 14 of 23



September 23, 2020

10410	AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub=2,3,4,7,8,9)	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 dc)	WLAN	1.54	± 9.6 %
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10417	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10418	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Long)	WLAN	8.14	± 9.6 %
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Short)	WLAN	8.19	± 9.6 %
10422	AAA	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.32	± 9.6 %
10423	AAA	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	± 9.6 %
10424	AAE	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	± 9.6 %
10425	AAE	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	8.41	± 9.6 %
10426	AAE	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	AAB	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FDD	8.28	± 9.6 %
10431	AAC	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LTE-FDD	8.38	± 9.6 %
10432	AAB	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	AAG	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA		
10435	AAA	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	8.60	± 9.6 %
10400		LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)		7.82	± 9.6 %
10448	AAA		LTE-FDD	7.56	± 9.6 %
10449	AAA	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	LTE-FDD	7.53	± 9.6 %
10445	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	LTE-FDD	7.51	± 9.6 %
10450	AAA	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.48	± 9.6 %
	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	± 9.6 %
10453	AAC	Validation (Square, 10ms, 1ms)	Test	10.00	± 9.6 %
10456	AAC	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc dc)	WLAN	8.63	±9.6 %
10457	AAC	UMTS-FDD (DC-HSDPA)	WCDMA	6.62	± 9.6 %
10458	AAC	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	± 9.6 %
10459	AAC	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	8.25	±9.6 %
10460	AAC	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	±9.6 %
10461	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10462	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDD	8.30	±9.6 %
10463	AAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.56	± 9.6 %
10464	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.82	±9.6 %
10465	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	±9.6 %
10466	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	±9.6 %
10467	AAA	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.82	±9.6 %
10468	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10469	AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.56	± 9.6 %
10470	AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10471	AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10472	AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10473	AAA	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10474	AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10475	AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10477	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10478	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	
10479	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD		± 9.6 %
10480		LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QF3K, 0E Sub)	LTE-TDD	7.74	± 9.6 %
10481	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Sub)		8.18	± 9.6 %
10481	AAA		LTE-TDD	8.45	± 9.6 %
	AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.71	± 9.6 %
10483	AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, Sub)	LTE-TDD	8.39	± 9.6 %
10484	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.47	± 9.6 %
10485	AAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.59	± 9.6 %
10486	AAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.38	±9.6 %
10487	AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.60	±9.6 %

Certificate No: EX3-3933_Sep20

Page 15 of 23



September 23, 2020

10488	AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.70	± 9.6 %
10489	AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.31	± 9.6 %
10490	AAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	± 9.6 %
10491	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10492	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.41	± 9.6 %
10493	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.55	± 9.6 %
10494	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10495	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.37	± 9.6 %
10496	AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	± 9.6 %
10497	AAE	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.67	± 9.6 %
10498	AAE	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDD	8.40	± 9.6 %
10499	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.68	± 9.6 %
10500	AAF	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.67	± 9.6 %
10501	AAF	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Sub)	LTE-TDD	8.44	± 9.6 %
10502	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.52	± 9.6 %
10503	AAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.72	± 9.6 %
10504	AAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.31	± 9.6 %
10505	AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	± 9.6 %
10506	AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10507	AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.36	± 9.6 %
10508	AAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.55	± 9.6 %
10509	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.99	± 9.6 %
10510	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.49	± 9.6 %
10511	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.51	± 9.6 %
10512	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10513	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.42	± 9.6 %
10514	AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.45	± 9.6 %
10515	AAE	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc dc)	WLAN	1.58	± 9.6 %
10516	AAE	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc dc)	WLAN	1.57	± 9.6 %
10517	AAF	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc dc)	WLAN	1.58	± 9.6 %
10518	AAF	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10519	AAF	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc dc)	WLAN	8.39	± 9.6 %
10520	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc dc)	WLAN	8.12	± 9.6 %
10521	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc dc)	WLAN	7.97	± 9.6 %
10522	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc dc)	WLAN	8.45	± 9.6 %
10523	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc dc)	WLAN	8.08	± 9.6 %
10524	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc dc)	WLAN	8.27	± 9.6 %
10525	AAC	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc dc)	WLAN	8.36	± 9.6 %
10526	AAF	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc dc)	WLAN	8.42	± 9.6 %
10527	AAF	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc dc)	WLAN	8.21	± 9.6 %
10528	AAF	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc dc)	WLAN	8.36	± 9.6 %
10529	AAF	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc dc)	WLAN	8.36	± 9.6 %
10531	AAF	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc dc)	WLAN	8.43	± 9.6 %
10532	AAF	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc dc)	WLAN	8.29	± 9.6 %
10533	AAE	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc dc)	WLAN	8.38	± 9.6 %
10534	AAE	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc dc)	WLAN	8.45	± 9.6 %
10535	AAE	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc dc)	WLAN	8.45	± 9.6 %
10536	AAF	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc dc)	WLAN	8.32	± 9.6 %
10537	AAF	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc dc)	WLAN	8.44	± 9.6 %
10538	AAF	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc dc)	WLAN	8.54	± 9.6 %
10540	AAA	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc dc)	WLAN	8.39	± 9.6 %
10541	AAA	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc dc)	WLAN	8.46	± 9.6 %
10542	AAA	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc dc)	WLAN	8.65	± 9.6 %
10543	AAC	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc dc)	WLAN	8.65	± 9.6 %
10544	AAC	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc dc)	WLAN	8.47	± 9.6 %
10545	AAC	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc dc)	WLAN	8.55	± 9.6 %

Certificate No: EX3-3933_Sep20

Page 16 of 23



September 23, 2020

10546	AAC	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc dc)	WLAN	8 35	+0.60
10547	AAC	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc dc)	WLAN	8.35	± 9.6 %
10548	AAC	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc dc)	WLAN		± 9.6 %
10550	AAC	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc dc)	WLAN	8.37	± 9.6 %
10551	AAC	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc dc)	WLAN	8.38	± 9.6 %
10552	AAC	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc dc)	WLAN	8.50	± 9.6 %
10553	AAC	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc dc)	WLAN	8.42	± 9.6 %
10554	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc dc)		8.45	± 9.6 %
10555	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc dc)	WLAN	8.48	± 9.6 %
10556	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc dc)	WLAN	8.47	± 9.6 %
10557	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc dc)	WLAN	8.50	± 9.6 %
10558	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc dc)	WLAN	8.52	± 9.6 %
10560	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc dc)	WLAN	8.61	± 9.6 %
10561	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc dc)	WLAN	8.73	± 9.6 %
10562	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc dc)	WLAN	8.56	± 9.6 %
10563		IEEE 802.11ac WIFI (160MHz, MCS8, 99pc dc)	WLAN	8.69	± 9.6 %
10564	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc dc)	WLAN	8.77	± 9.6 %
10565	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc dc)	WLAN	8.25	± 9.6 %
	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc dc)	WLAN	8.45	± 9.6 %
10566	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc dc)	WLAN	8.13	± 9.6 %
10567	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc dc)	WLAN	8.00	± 9.6 %
10568	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc dc)	WLAN	8.37	± 9.6 %
10569	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc dc)	WLAN	8.10	± 9.6 %
10570	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc dc)	WLAN	8.30	± 9.6 %
10571	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc dc)	WLAN	1.99	± 9.6 %
10572	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc dc)	WLAN	1.99	± 9.6 %
10573	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc dc)	WLAN	1.98	± 9.6 %
10574	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc dc)	WLAN	1.98	± 9.6 %
10575	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc dc)	WLAN	8.59	
10576	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc dc)	WLAN	8.60	± 9.6 %
10577	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc dc)	WLAN	8.60	± 9.6 %
10578	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc dc)	WLAN		± 9.6 %
10579	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc dc)	WLAN	8.49	± 9.6 %
10580	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc dc)	WLAN	8.36	± 9.6 %
10581	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc dc)	WLAN	8.76	± 9.6 %
10582	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc dc)		8.35	± 9.6 %
10583	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc dc)	WLAN	8.67	± 9.6 %
10584	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc dc)	WLAN	8.59	± 9.6 %
10585	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc dc)	WLAN	8.60	± 9.6 %
10586	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc dc)	WLAN	8.70	± 9.6 %
10587			WLAN	8.49	± 9.6 %
10588	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc dc)	WLAN	8.36	± 9.6 %
10589	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc dc)	WLAN	8.76	± 9.6 %
10590	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc dc)	WLAN	8.35	±9.6 %
10590	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc dc)	WLAN	8.67	± 9.6 %
	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc dc)	WLAN	8.63	± 9.6 %
0592	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc dc)	WLAN	8.79	± 9.6 %
0593	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc dc)	WLAN	8.64	± 9.6 %
0594	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc dc)	WLAN	8.74	± 9.6 %
0595	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc dc)	WLAN	8.74	± 9.6 %
0596	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc dc)	WLAN	8.71	± 9.6 %
0597	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc dc)	WLAN	8.72	± 9.6 %
0598	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc dc)	WLAN	8.50	
0599	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc dc)	WLAN		± 9.6 %
0600	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc dc)	WLAN	8.79	± 9.6 %
0601	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc dc)	WLAN	8.88	± 9.6 %
0602	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc dc)	WLAN	8.82	± 9.6 % ± 9.6 %

Certificate No: EX3-3933_Sep20

Page 17 of 23