

Appendix A – Radiated and Conducted Emissions Measurement Data

A.1 Conducted Emissions Data

Conducted emissions limits do not apply to this Access BPL equipment

A.2 Radiated Emissions Data

A.2.1 1.705 MHz to 30 MHz

Date: August 30, 2006

EUT: CT Bridge® URD 5000mv1 (S/N: 10075CF60000062C)

Location: CURRENT Technologies Orchard Hills Test Area – PLB-A1

Mode: LV Active (transmitting LV-signal, 4.4 MHz to 20.8 MHz, using nuttcp command)

Frequency (MHz)	Antenna Location	Antenna Height (m)	QP Level Measured on Analyzer (dBμV/m)	Measurement Distance (m)	Distance Correction Factor to 30m (dB)	QP Level Corrected to 30m (dBμV/m)	30m Limit (dBμV/m)	Margin (dB)
4.69	L67.5	1.0	47.5	10.0	-19.08	28.42	29.54	-1.1
4.88	R90	1.0	47.5	10.0	-19.08	28.42	29.54	-1.1
8.59	L67.5	1.0	47.4	10.0	-19.08	28.32	29.54	-1.2
4.88	L90	1.0	47.3	10.0	-19.08	28.22	29.54	-1.3
4.88	L67.5	1.0	47.3	10.0	-19.08	28.22	29.54	-1.3
9.38	L45	1.0	47.2	10.0	-19.08	28.12	29.54	-1.4
17.38	R90	1.0	47.2	10.0	-19.08	28.12	29.54	-1.4
8.59	L90	1.0	47.1	10.0	-19.08	28.02	29.54	-1.5
17.77	R90	1.0	47.1	10.0	-19.08	28.02	29.54	-1.5
8.59	R45	1.0	46.9	10.0	-19.08	27.82	29.54	-1.7
16.99	L45	1.0	46.5	10.0	-19.08	27.42	29.54	-2.1
8.40	L22.5	1.0	52.2	7.0	-25.28	26.92	29.54	-2.6
17.38	R45	1.0	46.0	10.0	-19.08	26.92	29.54	-2.6
17.36	L45	1.0	45.7	10.0	-19.08	26.62	29.54	-2.9
17.77	L45	1.0	45.7	10.0	-19.08	26.62	29.54	-2.9

Date: August 30, 2006
 EUT: CT Bridge® URD 5000mv1 (S/N: 10075CF60000061F)
 Location: CURRENT Technologies Orchard Hills Test Area – PLB-A2
 Mode: LV Active (transmitting LV-signal, 4.4 MHz to 20.8 MHz, using nuttcp command)

Frequency (MHz)	Antenna Location	Antenna Height (m)	QP Level Measured on Analyzer (dBμV/m)	Measurement Distance (m)	Distance Correction Factor to 30m (dB)	QP Level Corrected to 30m (dBμV/m)	30m Limit (dBμV/m)	Margin (dB)
7.62	R80	1.0	46.7	10.0	-19.08	27.62	29.54	-1.9
4.49	L80	1.0	45.1	10.0	-19.08	26.02	29.54	-3.5
8.01	R80	1.0	45.0	10.0	-19.08	25.92	29.54	-3.6
4.49	R80	1.0	43.8	10.0	-19.08	24.72	29.54	-4.8
4.88	L100	1.0	42.6	10.0	-19.08	23.52	29.54	-6.0
4.88	L80	1.0	42.4	10.0	-19.08	23.32	29.54	-6.2
8.20	L50	1.0	42.2	10.0	-19.08	23.12	29.54	-6.4
4.88	R50	1.0	41.8	10.0	-19.08	22.72	29.54	-6.8
5.66	L50	1.0	41.6	10.0	-19.08	22.52	29.54	-7.0
5.08	L100	1.0	41.6	10.0	-19.08	22.52	29.54	-7.0
7.62	L30	1.0	47.5	7.0	-25.28	22.22	29.54	-7.3
6.64	R80	1.0	40.8	10.0	-19.08	21.72	29.54	-7.8
6.64	L30	1.0	46.8	7.0	-25.28	21.52	29.54	-8.0
8.20	R100	1.0	40.3	10.0	-19.08	21.22	29.54	-8.3
7.62	R50	1.0	40.0	10.0	-19.08	20.92	29.54	-8.6
5.66	L30	1.0	45.9	7.0	-25.28	20.62	29.54	-8.9
8.20	L100	1.0	39.6	10.0	-19.08	20.52	29.54	-9.0
4.49	R100	1.0	39.4	10.0	-19.08	20.32	29.54	-9.2
4.88	L50	1.0	39.3	10.0	-19.08	20.22	29.54	-9.3

Date: August 30, 2006
 EUT: CT Bridge® URD 5000mv1 (S/N: 10075EC6000006E7)
 Location: CURRENT Technologies Orchard Hills Test Area – PLB-A3
 Mode: LV Active (transmitting LV-signal, 4.4 MHz to 20.8 MHz, using nuttcp command)

Frequency (MHz)	Antenna Location	Antenna Height (m)	QP Level Measured on Analyzer (dBμV/m)	Measurement Distance (m)	Distance Correction Factor to 30m (dB)	QP Level Corrected to 30m (dBμV/m)	30m Limit (dBμV/m)	Margin (dB)
4.49	L50	1.0	47.9	10.0	-19.08	28.82	29.54	-0.7
7.62	L50	1.0	45.7	10.0	-19.08	26.62	29.54	-2.9
4.88	L50	1.0	44.9	10.0	-19.08	25.82	29.54	-3.7
6.64	L50	1.0	44.7	10.0	-19.08	25.62	29.54	-3.9
4.49	L80	1.0	43.6	10.0	-19.08	24.52	29.54	-5.0
4.88	L80	1.0	42.3	10.0	-19.08	23.22	29.54	-6.3
4.49	R50	1.0	41.1	10.0	-19.08	22.02	29.54	-7.5
4.49	L100	1.0	40.5	10.0	-19.08	21.42	29.54	-8.1
4.69	R100	1.0	40.5	10.0	-19.08	21.42	29.54	-8.1
4.49	R100	1.0	40.2	10.0	-19.08	21.12	29.54	-8.4
10.94	L80	1.0	40.0	10.0	-19.08	20.92	29.54	-8.6
4.88	R50	1.0	39.8	10.0	-19.08	20.72	29.54	-8.8
4.49	L10	1.0	45.8	7.0	-25.28	20.52	29.54	-9.0
5.08	L100	1.0	39.5	10.0	-19.08	20.42	29.54	-9.1
4.88	R100	1.0	39.5	10.0	-19.08	20.42	29.54	-9.1
4.69	R50	1.0	39.2	10.0	-19.08	20.12	29.54	-9.4
6.05	L100	1.0	38.9	10.0	-19.08	19.82	29.54	-9.7
4.88	R80	1.0	38.9	10.0	-19.08	19.82	29.54	-9.7
5.66	L100	1.0	38.8	10.0	-19.08	19.72	29.54	-9.8
4.88	L10	1.0	44.9	7.0	-25.28	19.62	29.54	-9.9
4.49	R80	1.0	38.7	10.0	-19.08	19.62	29.54	-9.9

A.2.2 30 MHz to 50 MHz

Date: August 25, 2006

EUT: CT Bridge® URD 5000-R (S/N: 101562E600000908)

Location: CURRENT Technologies Potomac Test Area – TFX-1

Mode: MV Active (transmitting MV-signal, 31.5 MHz to 47.8 MHz, using nuttcp command)

Frequency (MHz)	Antenna Location	Antenna Height (m)	QP Level Measured on Analyzer (dBμV/m)	Measurement Distance (m)	Distance Correction Factor to 10m (dB)	QP Level Corrected to 10m (dBμV/m)	10m Limit (dBμV/m)	Margin (dB)
40.15	R67.5-10m vertical	1.0	38.0	10	0.00	38.00	39.08	-1.1
41.12	R67.5-10m vertical	1.0	37.7	10	0.00	37.70	39.08	-1.4
37.22	R67.5-10m vertical	1.0	37.3	10	0.00	37.30	39.08	-1.8
38.98	R67.5-10m vertical	1.0	36.9	10	0.00	36.90	39.08	-2.2
33.12	R90-10m vertical	1.0	36.9	10	0.00	36.90	39.08	-2.2
45.62	R90-10m vertical	1.0	36.9	10	0.00	36.90	39.08	-2.2
46.20	R135-10m vertical	1.0	47.3	3	-10.46	36.84	39.08	-2.2
40.15	R22.5-10m vertical	1.0	36.8	10	0.00	36.80	39.08	-2.3
39.17	R135-10m vertical	1.0	47.2	3	-10.46	36.74	39.08	-2.3
39.95	R22.5-10m vertical	1.0	36.7	10	0.00	36.70	39.08	-2.4
37.61	R135-10m vertical	1.0	47.1	3	-10.46	36.64	39.08	-2.4
40.15	R135-10m vertical	1.0	47.1	3	-10.46	36.64	39.08	-2.4
41.12	R135-10m vertical	1.0	46.9	3	-10.46	36.44	39.08	-2.6
41.12	R22.5-10m vertical	1.0	36.3	10	0.00	36.30	39.08	-2.8
41.12	L135-10m vertical	1.0	46.6	3	-10.46	36.14	39.08	-2.9
35.27	C0-10m vertical	1.0	36.1	10	0.00	36.10	39.08	-3.0

Date: August 30, 2006
 EUT: CT Bridge® URD 5000-R (S/N: 10156656000000AFF)
 Location: CURRENT Technologies Urbana Test Area – TXF-D2
 Mode: MV Active (transmitting MV-signal, 31.5 MHz to 47.8 MHz, using nuttcp command)

Frequency (MHz)	Antenna Location	Antenna Height (m)	QP Level Measured on Analyzer (dBμV/m)	Measurement Distance (m)	Distance Correction Factor to 10m (dB)	QP Level Corrected to 10m (dBμV/m)	10m Limit (dBμV/m)	Margin (dB)
47.77	R112.5-10m vertical	1.0	35.2	10	0.0	35.2	39.1	-3.9
47.57	R112.5-10m vertical	1.0	33.6	10	0.0	33.6	39.1	-5.5
47.77	R135-10m vertical	1.0	32.5	10	0.0	32.5	39.1	-6.6
47.77	R90-10m vertical	1.0	32.3	10	0.0	32.3	39.1	-6.8
47.18	R135-10m vertical	1.0	31.0	10	0.0	31.0	39.1	-8.1
38.98	C0-10m vertical	1.0	30.9	10	0.0	30.9	39.1	-8.2
47.37	R90-10m vertical	1.0	30.5	10	0.0	30.5	39.1	-8.6
42.69	R22.5-10m vertical	1.0	30.4	10	0.0	30.4	39.1	-8.7
40.34	R22.5-10m vertical	1.0	30.2	10	0.0	30.2	39.1	-8.9
39.95	C0-10m vertical	1.0	30.1	10	0.0	30.1	39.1	-9.0
37.61	C0-10m vertical	1.0	30.1	10	0.0	30.1	39.1	-9.0
40.93	C0-10m vertical	1.0	30.1	10	0.0	30.1	39.1	-9.0
37.61	R22.5-10m vertical	1.0	29.8	10	0.0	29.8	39.1	-9.3
45.62	C0-10m vertical	1.0	29.6	10	0.0	29.6	39.1	-9.5
37.61	R45-10m vertical	1.0	29.4	10	0.0	29.4	39.1	-9.7
32.92	C0-10m vertical	1.0	29.2	10	0.0	29.2	39.1	-9.9
39.17	R22.5-10m vertical	1.0	29.2	10	0.0	29.2	39.1	-9.9

Date: August 24, 2006
 EUT: CT Bridge® URD 5000-R (S/N: 1015665600000B06)
 Location: CURRENT Technologies Urbana Test Area – TXF-U1
 Mode: MV Active (transmitting MV-signal, 31.5 MHz to 47.8 MHz, using nuttcp command)

Frequency (MHz)	Antenna Location	Antenna Height (m)	QP Level Measured on Analyzer (dBμV/m)	Measurement Distance (m)	Distance Correction Factor to 10m (dB)	QP Level Corrected to 10m (dBμV/m)	10m Limit (dBμV/m)	Margin (dB)
45.81	R22.5-10m vertical	1.0	32.0	10	0.0	32.0	39.1	-7.1
41.52	R112.5-10m vertical	1.0	31.6	10	0.0	31.6	39.1	-7.5
45.81	C0-10m vertical	1.0	31.5	10	0.0	31.5	39.1	-7.6
40.73	R112.5-10m vertical	1.0	31.5	10	0.0	31.5	39.1	-7.6
43.27	C0-10m vertical	1.0	31.1	10	0.0	31.1	39.1	-8.0
44.64	R22.5-10m vertical	1.0	31.1	10	0.0	31.1	39.1	-8.0
45.81	R135-10m vertical	1.0	31.1	10	0.0	31.1	39.1	-8.0
41.52	R45-10m vertical	1.0	30.9	10	0.0	30.9	39.1	-8.2
41.32	C180-10m vertical	1.0	30.0	10	0.0	30.0	39.1	-9.1

A.2.3 50 MHz to 1000 MHz

Date: May 18, 2006

EUT: CT Bridge® URD 5000-R (S/N: 101563160000090D)

Location: Washington Laboratories Open Area Test Site

Mode: LV Active (transmitting LV-signal, 4.4 MHz to 20.8 MHz); MV Active (transmitting MV-signal, 31.5 MHz to 47.8 MHz)

Vertical Polarity:

Frequency (MHz)	Antenna Location and Polarity	Antenna Height (m)	QP Level Measured on Analyzer (dBμV/m)	Measurement Distance (m)	Distance Correction Factor to 10m (dB)	QP Level Corrected to 10m (dBμV/m)	10m Limit (dBμV/m)	Margin (dB)
200.02	90	1.0	22.7	3	10.5	12.2	43.5	-31.3
203.77			32.3	3	10.5	21.8	43.5	-21.7
250.00	0	1.0	30.5	3	10.5	20.0	46.4	-26.4
261.29	180	1.0	38.2	3	10.5	27.7	46.4	-18.7
300.01	135	2.0	32.4	3	10.5	21.9	46.4	24.5
313.54	180	1.8	23.6	3	10.5	13.1	46.4	-33.3
350.03	315	2.0	25.8	3	10.5	15.3	46.4	-31.1
400.01	90	1.5	28.3	3	10.5	17.8	46.4	-28.6
500.01	90	1.5	30.0	3	10.5	19.5	46.4	-26.9
600.01	90	1.0	35.4	3	10.5	24.9	46.4	-21.5
650.01	90	1.0	32.3	3	10.5	21.8	46.4	-24.6

Horizontal Polarity:

Frequency (MHz)	Antenna Location and Polarity	Antenna Height (m)	QP Level Measured on Analyzer (dBμV/m)	Measurement Distance (m)	Distance Correction Factor to 10m (dB)	QP Level Corrected to 10m (dBμV/m)	10m Limit (dBμV/m)	Margin (dB)
200.020	90	3.0	27.6	3	10.5	17.1	43.5	-26.4
203.769			14.4	3	10.5	3.9	43.5	-39.6
250.000	90	3.0	29.1	3	10.5	18.6	46.4	-27.8
261.286	180	1.0	46.6	3	10.5	36.1	46.4	-10.3
261.282	180	1.0	45.5	3	10.5	35.0	46.4	-11.4
300.011	180	1.0	40.4	3	10.5	29.9	46.4	-16.5
313.542	180	1.0	27.9	3	10.5	17.4	46.4	-29.0
350.027	180	1.5	23.4	3	10.5	12.9	46.4	-33.5
400.011	180	1.0	26.2	3	10.5	15.7	46.4	-30.7
450.039	180	1.0	28.7	3	10.5	18.2	46.4	-28.2
600.011	225	2.0	30.0	3	10.5	19.5	46.4	-26.9

Date: June 15, 2006
 EUT: CT Bridge® URD 5000-R (S/N: 101562E600000908)
 Location: CURRENT Technologies Potomac Test Area – TXF-1
 Mode: LV Active (transmitting LV-signal, 4.4 MHz to 20.8 MHz); MV Active (transmitting MV-signal, 31.5 MHz to 47.8 MHz)

Vertical Polarity:

Frequency (MHz)	Antenna Location and Polarity	Antenna Height (m)	QP Level* Measured on Analyzer (dBμV/m)	Measurement Distance (m)	Distance Correction Factor to 10m (dB)	QP Level Corrected to 10m (dBμV/m)	10m Limit (dBμV/m)	Margin (dB)
199.77	C180	2.0	30.0	3	-10.46	19.54	43.52	-24.0
203.74	C0	2.0	42.3	3	-10.46	31.84	43.52	-11.7
250.00	L45	1.0	29.0	3	-10.46	18.54	46.44	-27.9
261.30	L45	1.0	36.1	3	-10.46	25.64	46.44	-20.8
300.00	L22.5	1.0	29.1*	3	-10.46	18.64	46.44	-27.8*
313.54	L45	1.0	27.0*	3	-10.46	16.54	46.44	-29.9*
350.00	L157.5	1.0	28.8*	3	-10.46	18.34	46.44	-28.1*
400.00	L90	1.0	30.4*	3	-10.46	19.94	46.44	-26.5*
500.00	C180	1.0	36.6*	3	-10.46	26.14	46.44	-20.3*
600.00	C180	1.0	39.8*	3	-10.46	29.34	46.44	-17.1*
650.00	R90	1.0	41.7*	3	-10.46	31.24	46.44	-15.2*

* Measurement was indistinguishable from ambient level

Horizontal Polarity:

Frequency (MHz)	Antenna Location and Polarity	Antenna Height (m)	QP Level* Measured on Analyzer (dBμV/m)	Measurement Distance (m)	Distance Correction Factor to 10m (dB)	QP Level Corrected to 10m (dBμV/m)	10m Limit (dBμV/m)	Margin (dB)
199.77	L135	1.5	33.9	3	-10.46	23.4	43.52	-20.1
203.74	L135	1.5	51.1	3	-10.46	40.6	43.52	-2.9
250.00	L135	1.0	23.1	3	-10.46	12.6	46.44	-33.8
261.30	L90	2.0	32.3	3	-10.46	21.8	46.44	-24.6
300.00	R45	1.0	27.5*	3	-10.46	17.0	46.44	-29.4*
313.54	R90	1.0	27.1*	3	-10.46	16.6	46.44	-29.8*
350.00	R90	1.0	29.3*	3	-10.46	18.8	46.44	-27.6*
400.00	R45	1.0	31.0*	3	-10.46	20.5	46.44	-25.9*
500.00	R135	1.0	36.6*	3	-10.46	26.1	46.44	-20.3*
600.00	L90	1.0	41.0*	3	-10.46	30.5	46.44	-15.9*
650.00	L45	1.0	41.9*	3	-10.46	31.4	46.44	-15.0*

* Measurement was indistinguishable from ambient level

Date: June 27, 2006
 EUT: CT Bridge® URD 5000-R (S/N: 101562E600000912)
 Location: CURRENT Technologies Urbana Test Area – TXF-U1
 Mode: LV Active (transmitting LV-signal, 4.4 MHz to 20.8 MHz); MV Active (transmitting MV-signal, 31.5 MHz to 47.8 MHz)

Vertical Polarity:

Frequency (MHz)	Antenna Location and Polarity	Antenna Height (m)	QP Level Measured on Analyzer (dBμV/m)	Measurement Distance (m)	Distance Correction Factor to 10m (dB)	QP Level Corrected to 10m (dBμV/m)	10m Limit (dBμV/m)	Margin (dB)
200.00	L135	1.5	27.3	3	-10.46	16.84	43.52	-26.7
203.74	C180	1.5	33.1	3	-10.46	22.64	43.52	-20.9
250.00	R90	1.5	30.9	3	-10.46	20.44	46.44	-26.0
261.30	R135	2.0	33.5	3	-10.46	23.04	46.44	-23.4
300.00	C0	1.0	30.3*	3	-10.46	19.84	46.44	-26.6*
313.54	C0	1.0	30.7*	3	-10.46	20.24	46.44	-26.2*
350.00	R90	1.0	32.1*	3	-10.46	21.64	46.44	-24.8*
400.00	L45	1.0	33.9*	3	-10.46	23.44	46.44	-23.0*
500.00	C0	1.0	39.6*	3	-10.46	29.14	46.44	-17.3*
600.00	R90	1.0	43.1*	3	-10.46	32.64	46.44	-13.8*
650.00	L45	1.0	44.0*	3	-10.46	33.54	46.44	-12.9*

* Measurement was indistinguishable from ambient level

Horizontal Polarity:

Frequency (MHz)	Antenna Location and Polarity	Antenna Height (m)	QP Level Measured on Analyzer (dBμV/m)	Measurement Distance (m)	Distance Correction Factor to 10m (dB)	QP Level Corrected to 10m (dBμV/m)	10m Limit (dBμV/m)	Margin (dB)
200.00	L135	2.0	32.6	3	-10.46	22.14	43.52	-21.4
203.74	L135	3.0	49.1	3	-10.46	38.64	43.52	-4.9
250.00	L135	2.0	30.6	3	-10.46	20.14	46.44	-26.3
261.30	C180	2.5	32.2	3	-10.46	21.74	46.44	-24.7
300.00	R45	1.0	30.5*	3	-10.46	20.04	46.44	-26.4*
313.54	R90	1.0	30.5*	3	-10.46	20.04	46.44	-26.4*
350.00	C0	1.0	32.3*	3	-10.46	21.84	46.44	-24.6*
400.00	C180	1.0	34.3*	3	-10.46	23.84	46.44	-22.6*
500.00	L90	1.0	40.1*	3	-10.46	29.64	46.44	-16.8*
600.00	R45	1.0	43.5*	3	-10.46	33.04	46.44	-13.4*
650.00	C180	1.0	44.0*	3	-10.46	33.54	46.44	-12.9*

* Measurement was indistinguishable from ambient level