Appendix A - Radiated and Conducted Emissions Measurement Data

A.1 Conducted Emissions Data

Date: May 18, 2006

EUT: CT AMR Meter (S/N: 101563160000090D) Location: Washington Laboratories Laboratory

Mode: Idle

Line: Phase 1

Frequency (MHz)		Amplitude μV)	Limit ((dBµV)	Margin (dB)		
	QP	Ave	QP	Ave	QP	Ave	
0.179	32.9	32.9	64.6	54.6	-31.7	-21.7	
0.217	31.7	31.7	63.0	53.0	-31.3	-21.3	
0.289	29.4	29.4	60.6	50.6	-31.2	-21.2	
0.467	25.2	25.2	56.6	46.6	-31.4	-21.4	
3.321	18.7	18.7	56.0	46.0	-37.3	-27.3	
3.338	24.0	24.0	56.0	46.0	-32.0	-22.0	
3.586	18.8	18.8	56.0	46.0	-37.2	-27.2	

Line: Phase 2

Frequency (MHz)	Corrected Amplitude (dBµV)		Limit ((dBµV)	Margin (dB)		
(IVITIZ)	QP	Ave	QP	Ave	QP	Ave	
0.179	32.5	32.5	64.6	54.6	-32.1	-22.1	
0.217	31.2	31.2	63.0	53.0	-31.8	-21.8	
0.289	29.3	29.3	60.6	50.6	-31.3	-21.3	
0.467	24.6	24.6	56.6	46.6	-32.0	-22.0	
3.321	22.3	22.3	56.0	46.0	-33.7	-23.7	
3.338	22.2	22.2	56.0	46.0	-33.8	-23.8	
3.586	21.1	21.1	56.0	46.0	-34.9	-24.9	

Date: May 18, 2006

EUT: CT AMR Meter (S/N: 101563160000090D)
Location: Washington Laboratories Laboratory

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

Line: Phase 1

Frequency		Amplitude μV)	Limit ((dBµV)	Margin (dB)		
(MHz)	QP	Ave	QP	Ave	QP	Ave	
0.567	23.5	23.5	60.0	-	-36.5	-	
0.602	22.8	22.8	60.0	-	-37.2	-	
0.710	21.0	21.0	60.0	-	-39.0	-	
1.028	20.4	20.4	60.0	-	-39.6	-	
1.344	18.3	18.3	60.0	-	-41.7	-	
1.554	15.3	15.3	60.0	-	-44.7	-	

Line: Phase 2

Frequency (MHz)	Corrected (dB	•	Limit ((dBµV)	Margin (dB)		
(IVITZ)	QP	Ave	QP	Ave	QP	Ave	
0.567	24.0	24.0	60.0	-	-36.0	-	
0.602	22.7	22.7	60.0	-	-37.3	-	
0.710	20.9	20.9	60.0	-	-39.1	1	
1.028	20.5	20.5	60.0	-	-39.5	1	
1.344	17.9	17.9	60.0	-	-42.1	-	
1.554	16.0	16.0	60.0	-	-44.0	-	

A.2 Radiated Emissions Data

A.2.1 1.705 MHz to 30 MHz

Date: August 22, 2006

EUT: CT AMR Meter (S/N: 000D697000000002)

Location: 12028 Coldstream Drive

Mode: 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	BRK	1.0	52.5	7.0	-25.28	27.22	29.54	-2.3
15.04	FC	1.0	52.3	7.0	-25.28	27.02	29.54	-2.5
15.04	FRK	1.0	52.0	7.0	-25.28	26.72	29.54	-2.8
4.88	OH1	1.0	58.5	4.8	-31.84	26.66	29.54	-2.9
14.65	RF	1.0	51.8	7.0	-25.28	26.52	29.54	-3.0
14.84	FC	1.0	51.8	7.0	-25.28	26.52	29.54	-3.0
15.04	RC-A	1.0	51.6	7.0	-25.28	26.32	29.54	-3.2
6.64	ВС	1.0	51.4	7.0	-25.28	26.12	29.54	-3.4
4.49	RB	1.0	51.3	7.0	-25.28	26.02	29.54	-3.5
15.23	BRK	1.0	51.2	7.0	-25.28	25.92	29.54	-3.6
15.04	RB	1.0	51.2	7.0	-25.28	25.92	29.54	-3.6
6.64	BL	1.0	51.0	7.0	-25.28	25.72	29.54	-3.8
15.04	ВС	1.0	50.9	7.0	-25.28	25.62	29.54	-3.9
15.23	RC-A	1.0	50.9	7.0	-25.28	25.62	29.54	-3.9
14.65	BRK	1.0	50.7	7.0	-25.28	25.42	29.54	-4.1
6.64	BLK	1.0	50.4	7.0	-25.28	25.12	29.54	-4.4
15.43	RB	1.0	50.3	7.0	-25.28	25.02	29.54	-4.5
14.65	FRK	1.0	50.3	7.0	-25.28	25.02	29.54	-4.5
8.20	FC	1.0	50.2	7.0	-25.28	24.92	29.54	-4.6
14.65	FR	1.0	50.1	7.0	-25.28	24.82	29.54	-4.7
4.49	RF	1.0	50.0	7.0	-25.28	24.72	29.54	-4.8
4.69	RF	1.0	49.9	7.0	-25.28	24.62	29.54	-4.9
6.050	BL	1.0	49.8	7.0	-25.28	24.52	29.54	-5.0
4.88	FR	1.0	49.8	7.0	-25.28	24.52	29.54	-5.0
14.65	FL	1.0	49.7	7.0	-25.28	24.42	29.54	-5.1
14.65	BR	1.0	49.7	7.0	-25.28	24.42	29.54	-5.1
4.88	RB	1.0	49.7	7.0	-25.28	24.42	29.54	-5.1
15.04	RF	1.0	49.7	7.0	-25.28	24.42	29.54	-5.1
8.20	FR	1.0	49.7	7.0	-25.28	24.42	29.54	-5.1
4.88	FL	1.0	49.5	7.0	-25.28	24.22	29.54	-5.3
15.04	BLK	1.0	49.5	7.0	-25.28	24.22	29.54	-5.3
15.04	BL	1.0	49.5	7.0	-25.28	24.22	29.54	<i>-5.3</i>
6.64	BRK	1.0	49.5	7.0	-25.28	24.22	29.54	<i>-5.3</i>
8.20	FL	1.0	49.3	7.0	-25.28	24.02	29.54	-5.5
6.05	ВС	1.0	49.3	7.0	-25.28	24.02	29.54	-5.5
6.64	RC-A	1.0	49.3	7.0	-25.28	24.02	29.54	<i>-5.5</i>
4.49	FR	1.0	49.3	7.0	-25.28	24.02	29.54	-5.5
15.43	ВС	1.0	49.2	7.0	-25.28	23.92	29.54	-5.6
6.45	BLK	1.0	48.9	7.0	-25.28	23.62	29.54	-5.9
4.49	FRK	1.0	48.8	7.0	-25.28	23.52	29.54	-6.0
4.49	OH2	1.0	56.7	4.3	-33.75	22.95	29.54	-6.6
6.64	LF	1.0	52.8	5.0	-31.13	21.67	29.54	-7.9
4.49	RC-B	1.0	52.8	5.0	-31.13	21.67	29.54	-7.9
15.43	LC	1.0	51.0	5.0	-31.13	19.87	29.54	-9.7
6.45	LB	1.0	47.9	5.0	-31.13	16.77	29.54	-12.8

Date: August 22, 2006

EUT: CT AMR Meter (S/N: 3006637000000017)

Location: 12109 Sheets Farm Road

Mode: 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)
15.23	FRK	1.0	40.3	10.0	-19.08	21.22	29.54	-8.3
15.63	FC	1.0	40.1	10.0	-19.08	21.02	29.54	-8.5
15.43	FRK	1.0	39.3	10.0	-19.08	20.22	29.54	-9.3
5.08	FR	1.0	37.6	10.0	-19.08	18.52	29.54	-11.0
17.77	BC	1.0	33.6	10.0	-19.08	14.52	29.54	-15.0
4.88	BRK	1.0	33.4	10.0	-19.08	14.32	29.54	-15.2
18.55	FL	1.0	31.9	10.0	-19.08	12.82	29.54	-16.7
10.35	BLK	1.0	31.6	10.0	-19.08	12.52	29.54	-17.0
16.60	BR	1.0	31.4	10.0	-19.08	12.32	29.54	-17.2
11.72	BL	1.0	30.0	10.0	-19.08	10.92	29.54	-18.6
4.69	LC	1.0	40.9	5.0	-31.13	9.77	29.54	-19.8
16.21	FLK	1.0	28.7	10.0	-19.08	9.62	29.54	-19.9
16.60	RB	1.0	39.9	5.0	-31.13	8.77	29.54	-20.8
16.60	RF	1.0	39.2	5.0	-31.13	8.07	29.54	-21.5
13.48	RC	1.0	37.7	5.0	-31.13	6.57	29.54	-23.0
4.88	LB	1.0	36.7	5.0	-31.13	5.57	29.54	-24.0
15.82	LF	1.0	32.8	5.0	-31.13	1.67	29.54	-27.9

Date: August 22, 2006

EUT: CT AMR Meter (S/N: 3006637000000017)

Location: 17907 Coachmans Road

Mode: 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)
13.67	BRK	1.0	50.6	5.0	-31.13	19.47	29.54	-10.1
5.66	FL	1.0	48.3	5.0	-31.13	17.17	29.54	-12.4
13.67	BR	1.0	48.1	5.0	-31.13	16.97	29.54	-12.6
13.48	ВС	1.0	46.2	5.0	-31.13	15.07	29.54	-14.5
18.95	FC	1.0	46.0	5.0	-31.13	14.87	29.54	-14.7
17.77	FRK	1.0	45.7	5.0	-31.13	14.57	29.54	-15.0
17.38	FR	1.0	43.7	5.0	-31.13	12.57	29.54	-17.0
5.08	BLK	1.0	43.6	5.0	-31.13	12.47	29.54	-17.1
17.77	RC	1.0	52.3	3.0	-40.00	12.30	29.54	-17.2
13.67	RB	1.0	52.2	3.0	-40.00	12.20	29.54	-17.3
5.66	FLK	1.0	42.0	5.0	-31.13	10.87	29.54	-18.7
13.67	BL	1.0	42.0	5.0	-31.13	10.87	29.54	-18.7
4.49	LC	1.0	47.5	3.0	-40.00	7.50	29.54	-22.0
50.80	LB	1.0	46.9	3.0	-40.00	6.90	29.54	-22.6
18.36	RF	1.0	46.2	3.0	-40.00	6.20	29.54	-23.3
4.49	LF	1.0	44.4	3.0	-40.00	4.40	29.54	-25.1

A.2.2 30 MHz to 1000 MHz

Date: May 18, 2006

EUT: CT AMR Meter (S/N: 101563160000090D)

Location: Washington Laboratories Open Area Test Site

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

Frequency (MHz)	Antenna Location and Polarity	Antenna Height (m)	QP Level Measured on Analyzer (dBµV/m)	Measurement Distance (m)	Distance Correction Factor to 3m (dB)	QP Level Corrected to 3m (dBµV/m)	3m Limit (dBµV/m)	Margin (dB)
247.936	90, V	2.0	28.8	3.0	0.0	28.8	46.0	-17.2
350.001	0, V	2.0	24.8	3.0	0.0	24.8	46.0	-21.2
400.038	90. V	1.0	39.6	3.0	0.0	39.6	46.0	-6.4
500.024	45, V	1.0	31.3	3.0	0.0	31.3	46.0	-14.7
600.026	0, V	1.0	37.3	3.0	0.0	37.3	46.0	-8.7
650.018	0, V	1.0	35.6	3.0	0.0	35.6	46.0	-10.4
247.936	45, H	1.5	23.7	3.0	0.0	23.7	46.0	-22.3
350.027	0, H	1.0	30.6	3.0	0.0	30.6	46.0	-15.4
400.029	90.H	1.0	32.8	3.0	0.0	32.8	46.0	-13.2
500.034	45, H	2.0	36.6	3.0	0.0	36.6	46.0	-9.4
600.026	45, H	2.5	33.8	3.0	0.0	33.8	46.0	-12.2
650.018	0,H	2.5	37.7	3.0	0.0	37.7	46.0	-8.3

Date: May 22, 2006

EUT: CT AMR Meter (S/N: 101563160000090D)

Location: 17907 Coachmans Road

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

Frequency (MHz)	Antenna Location and Polarity	Antenna Height (m)	QP Level Measured on Analyzer (dBµV/m)	Measurement Distance (m)	Distance Correction Factor to 3m (dB)	QP Level Corrected to 3m (dBµV/m)	3m Limit (dBµV/m)	Margin (dB)
250.02	CO, V	1.0	41.6	3.0	0.0	41.6	46.0	-4.4
350.01	R22.5, V	1.0	32.7	3.0	0.0	32.7	46.0	-13.3
400.00	L45, V	1.0	38.4	3.0	0.0	38.4	46.0	-7.6
500.01	R22.5, V	2.0	38.3	3.0	0.0	38.3	46.0	<i>-7.7</i>
600.00	CO, V	1.0	39.1	3.0	0.0	39.1	46.0	-6.9
650.00	CO, V	1.0	35.8	3.0	0.0	35.8	46.0	-10.2
250.02	CO, H	1.5	37.2	3.0	0.0	<i>37.2</i>	46.0	-8.8
350.01	R22.5, H	1.0	31.6	3.0	0.0	31.6	46.0	-14.4
400.00	L22.5, H	1.0	42.8	3.0	0.0	42.8	46.0	-3.2
500.01	L45, H	1.0	33.1	3.0	0.0	33.1	46.0	-12.9
600.00	L22.5, H	1.0	38.8	3.0	0.0	38.8	46.0	-7.2
650.00	R22.5, H	1.0	33.3	3.0	0.0	33.3	46.0	-12.7

Date: May 24, 2006

EUT: CT AMR Meter (S/N: 101563160000090D)

Location: 16116 Orange Grove Road

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

Frequency (MHz)	Antenna Location and Polarity	Antenna Height (m)	QP Level Measured on Analyzer (dBµV/m)	Measurement Distance (m)	Distance Correction Factor to 3m (dB)	QP Level Corrected to 3m (dBµV/m)	3m Limit (dBµV/m)	Margin (dB)
248.34	CO, V	2.0	27.4	3.0	0.0	27.4	46.0	-18.6
350.01	L22.5, V	1.0	24.0	3.0	0.0	24.0	46.0	-22.0
400.00	CO, V	2.0	42.3	3.0	0.0	42.3	46.0	-3.7
500.01	R90, V	1.5	28.1	3.0	0.0	28.1	46.0	-17.9
600.00	CO, V	1.5	40.5	3.0	0.0	40.5	46.0	-5.5
650.00	CO, V	1.5	35.6	3.0	0.0	35.6	46.0	-10.4
248.34	L67.5, H	1.5	32.5	3.0	0.0	32.5	46.0	-13.5
350.01	L67.5, H	1.0	29.6	3.0	0.0	29.6	46.0	-16.4
400.00	CO, H	1.0	41.1	3.0	0.0	41.1	46.0	-4.9
500.01	CO, H	1.5	36.0	3.0	0.0	36.0	46.0	-10.0
600.00	CO, H	1.0	39.0	3.0	0.0	39.0	46.0	-7.0
650.00	CO, H	1.0	40.5	3.0	0.0	40.5	46.0	-5.5