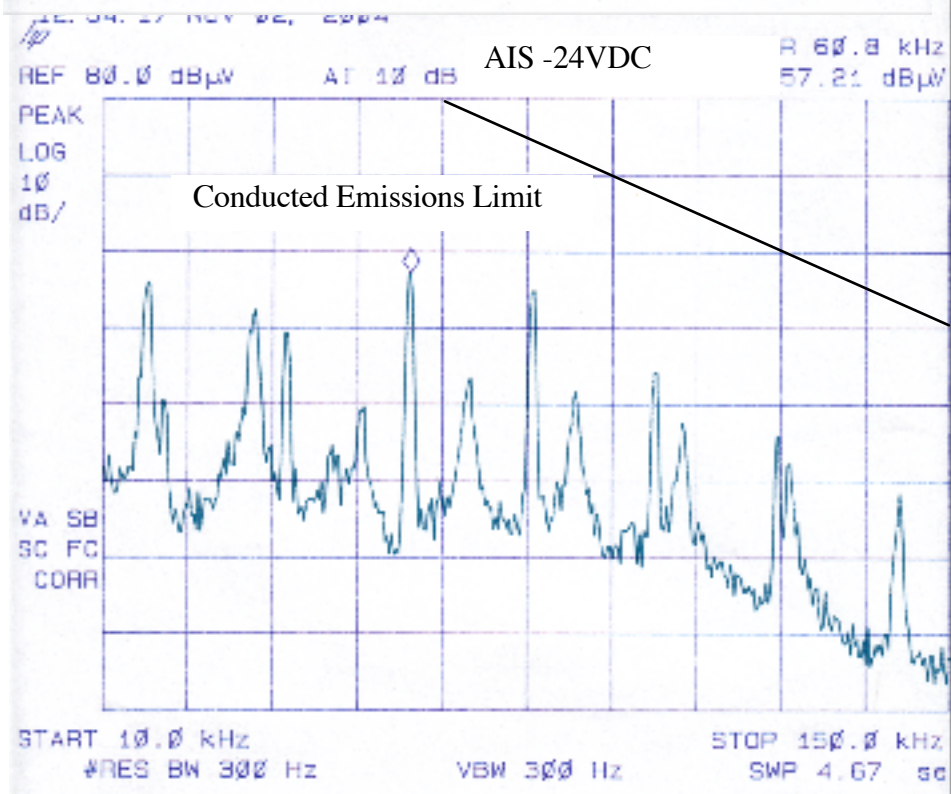
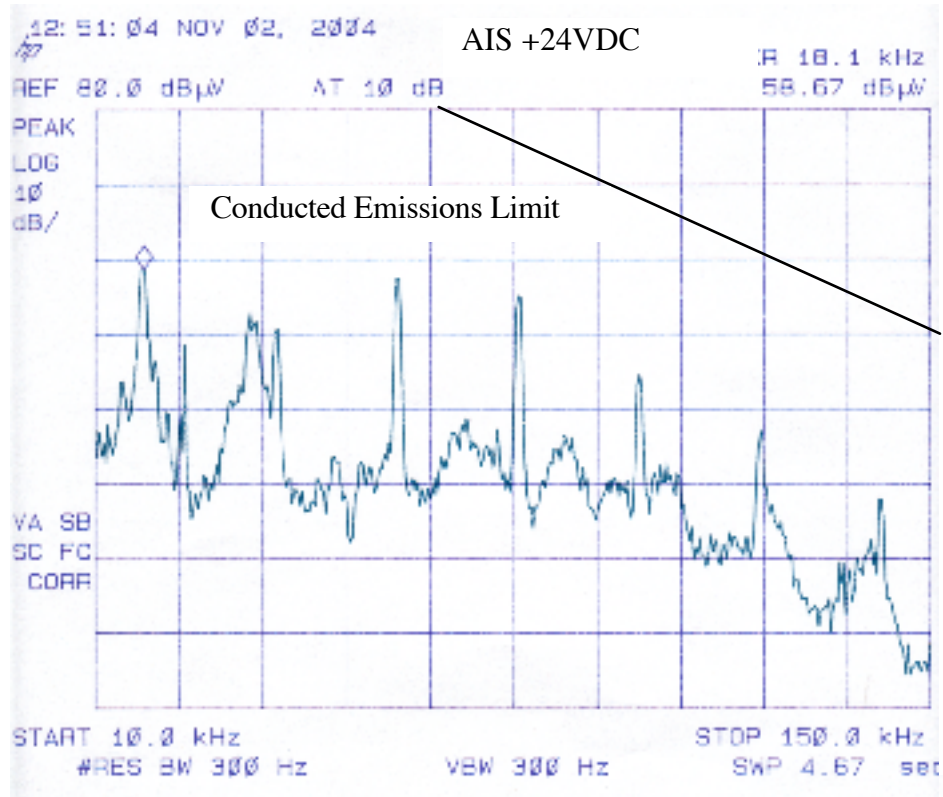


IX. EMC Measurement Results:

1. Conducted Emissions – Data.

Frequency range: 10 kHz to 150 kHz

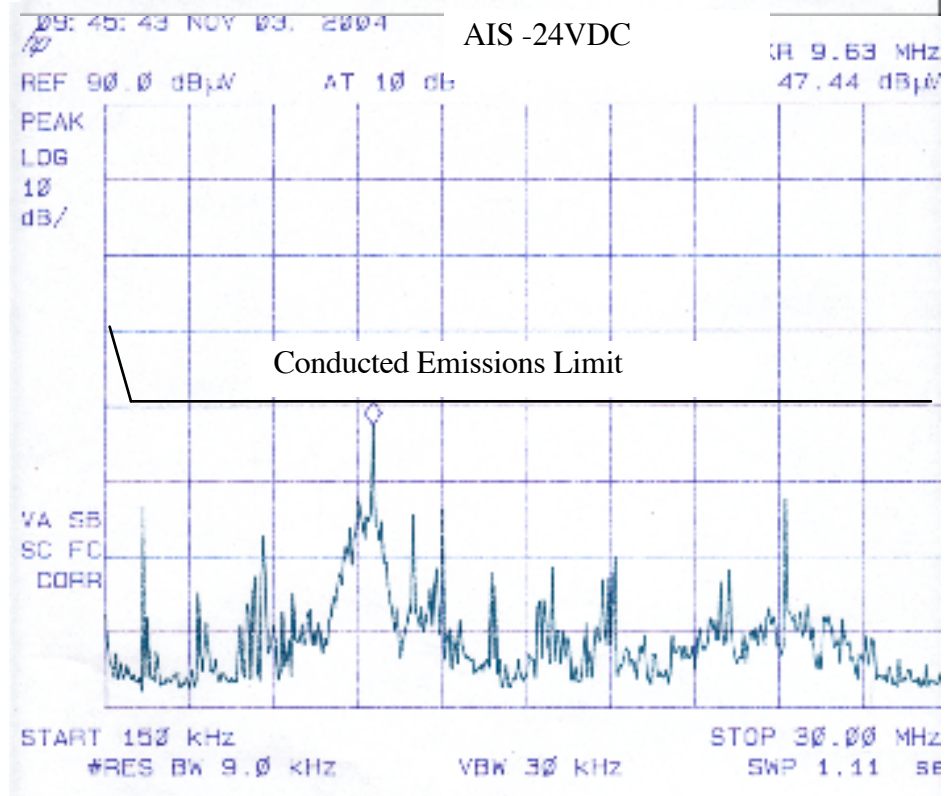
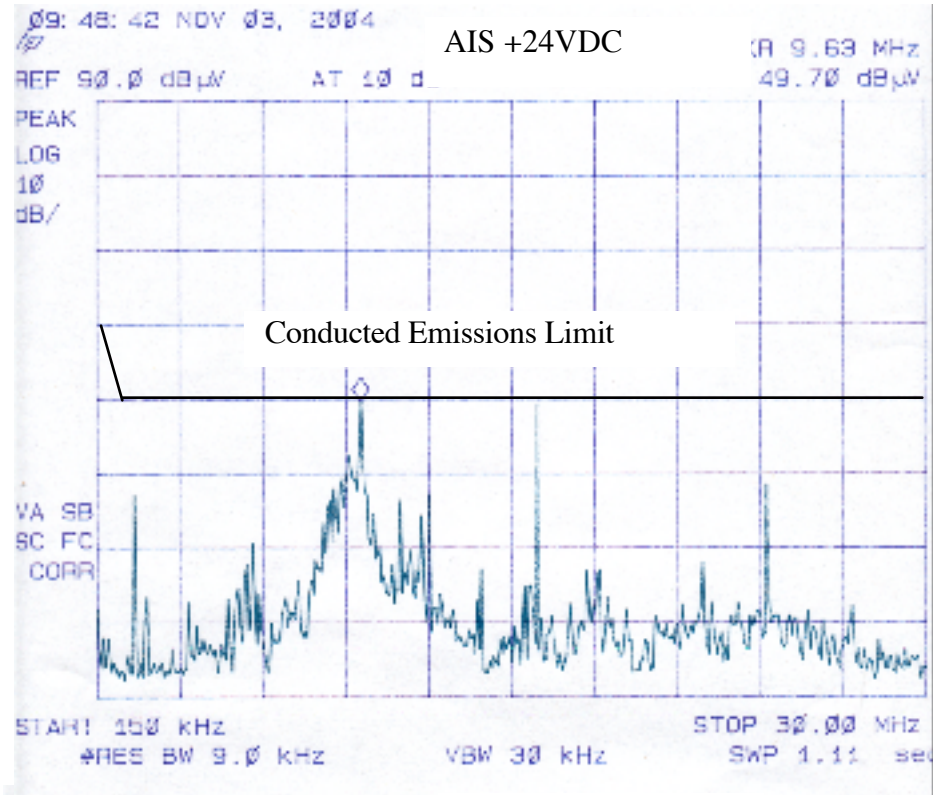
Limit: 96 dBuV decreasing to 50 dBuV



IX. EMC Measurement Results Cont'd:**1. Conducted Emissions – Data.**

Frequency range: 150 kHz to 350 kHz: Limit: 60 dBuV decreasing to 50 dBuV

Frequency range: 0.35 MHz to 30 MHz: Limit: 50 dBuV



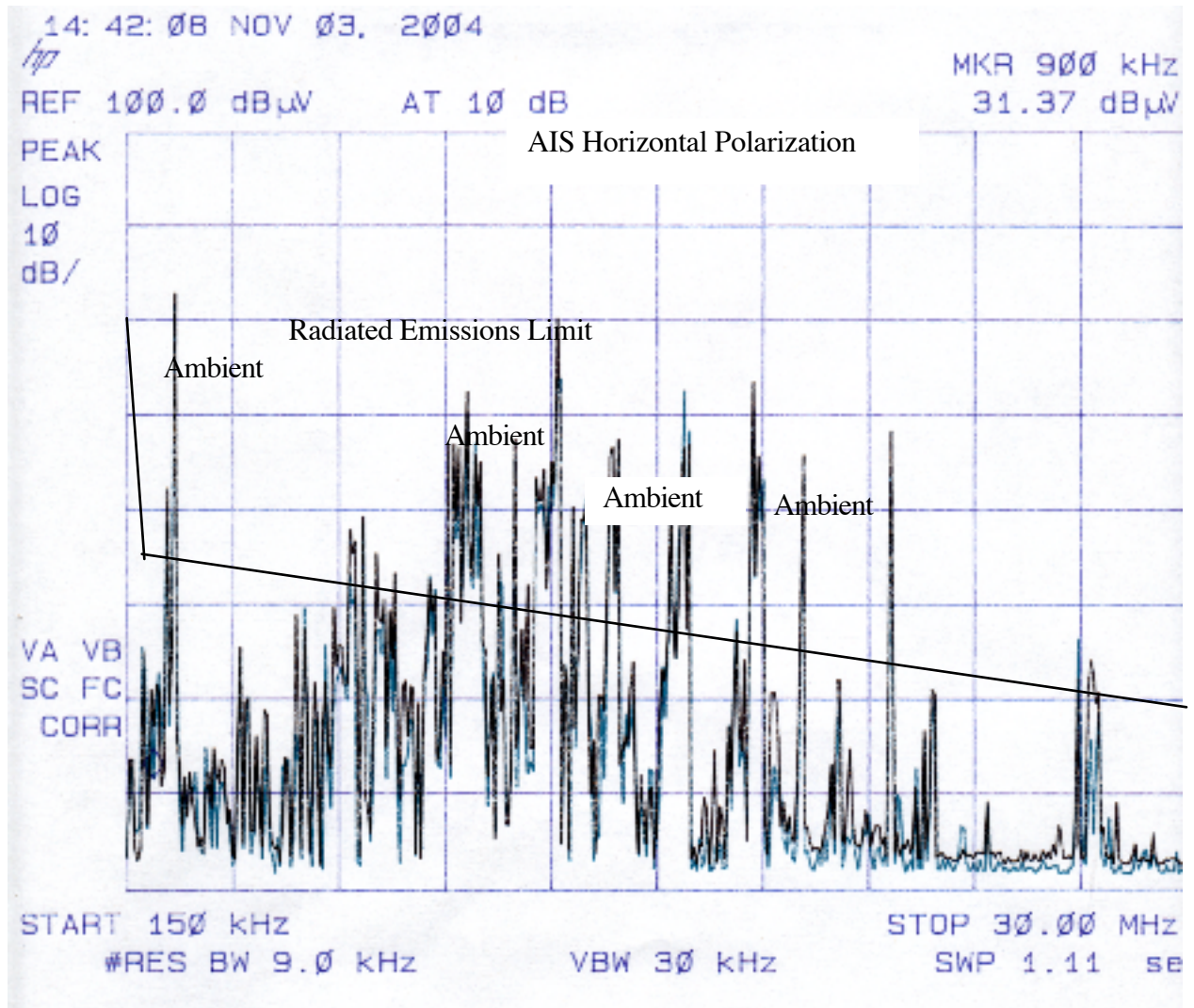
IX. EMC Measurement Results Cont'd:**2. Radiated Emissions – Correction Factors.**

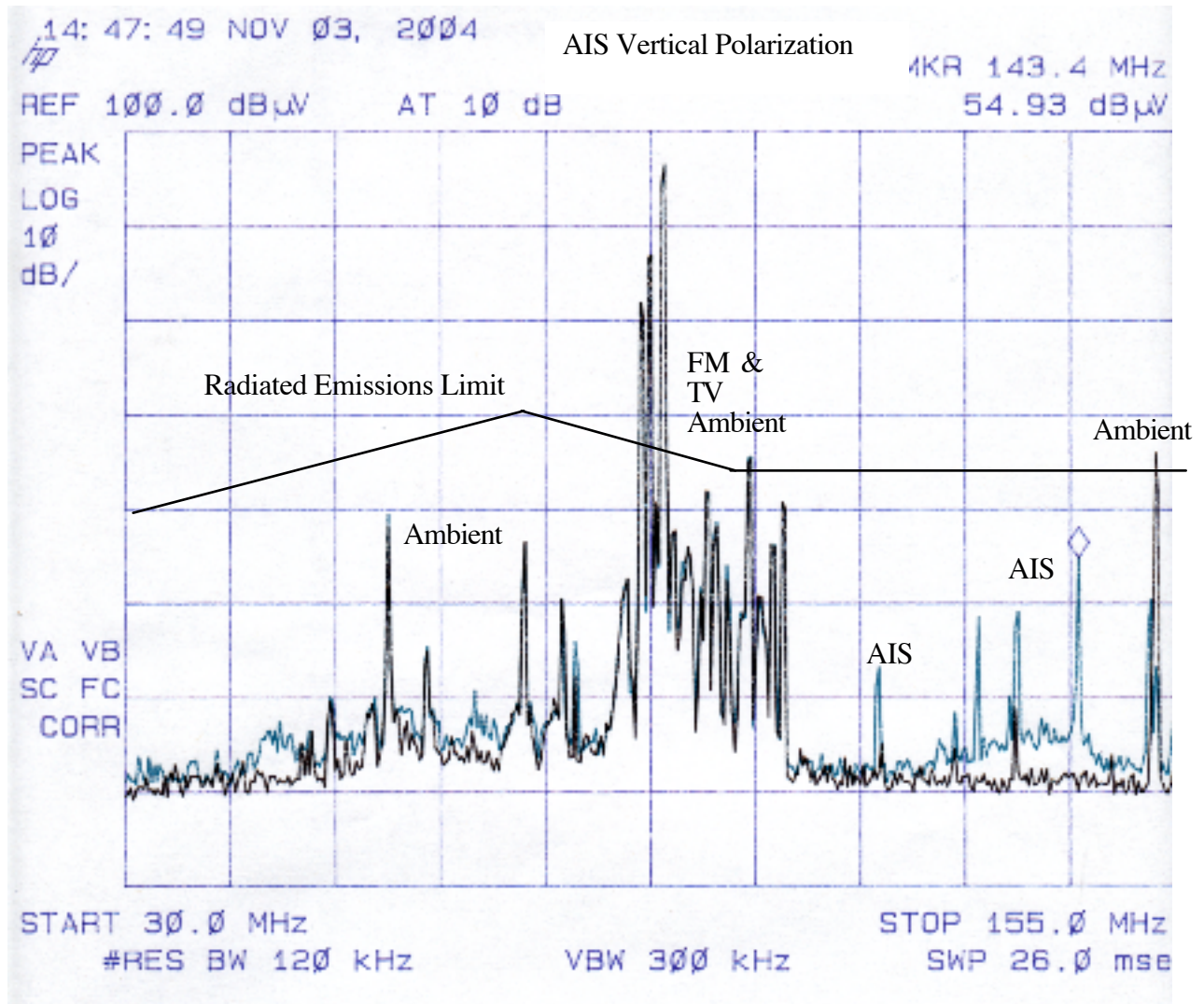
The table below describes the correction factors necessary to apply the limit to the spectrum analyzer output. The following pages contain the spectrum analyzer output with the corrected specification limits superimposed. The black pen is the ambient condition, and the other color identifies EUT emissions.

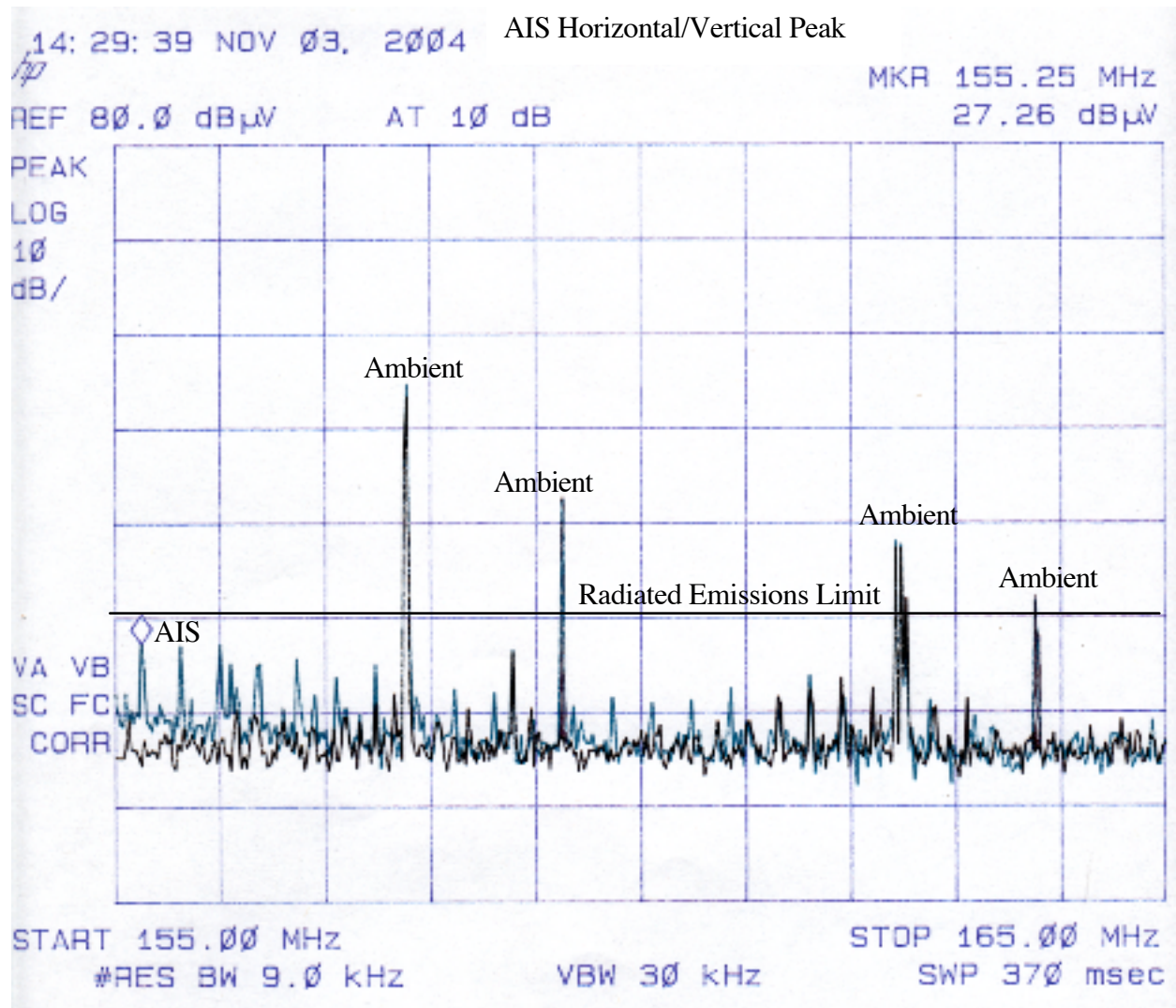
Frequency kHz	Limit @ 3m dBuV/m	Antenna dB	Correction * dB	Delta dB	Corrected Limit dBuV/m
150	80	41	51.5	10.5	90.5
300	52	39	51.5	12.5	64.5
30000	34	37	51.5	14.5	48.5
* 51.5 dB, H- to E-field correction in free space -> $20 \log (377\Omega)$					

Frequency MHz	3m limit dBuV/m	Antenna dB	Amp dB	Cable dB	Delta dB	Corrected Limit dBuV/m
30	54	18.6	29.0	5.0	5.4	59.4
50	54	15.1	29.0	5.0	8.9	62.9
75	54	8.1	29.0	5.0	15.9	69.9
100	54	12.2	28.0	6.0	9.8	63.8
125	54	12.9	28.0	6.0	9.1	63.1
155	54	11.1	28.0	6.0	10.9	64.9
156	24	13.2	27.0	7.0	6.8	30.8
165	24	13.2	27.0	7.0	6.8	30.8
166	54	13.2	27.0	7.0	6.8	60.8
300	54	14.9	28.0	7.0	6.1	60.1
500	54	18.6	28.0	7.0	2.4	56.4
1000	54	24.2	27.0	7.0	-4.2	49.8
1500	54	26.1	27.0	8.0	-7.1	46.9
2000	54	26.8	22.0	8.0	-15.8	41.2

Tables 1 & 2 – Corrected CE Limit

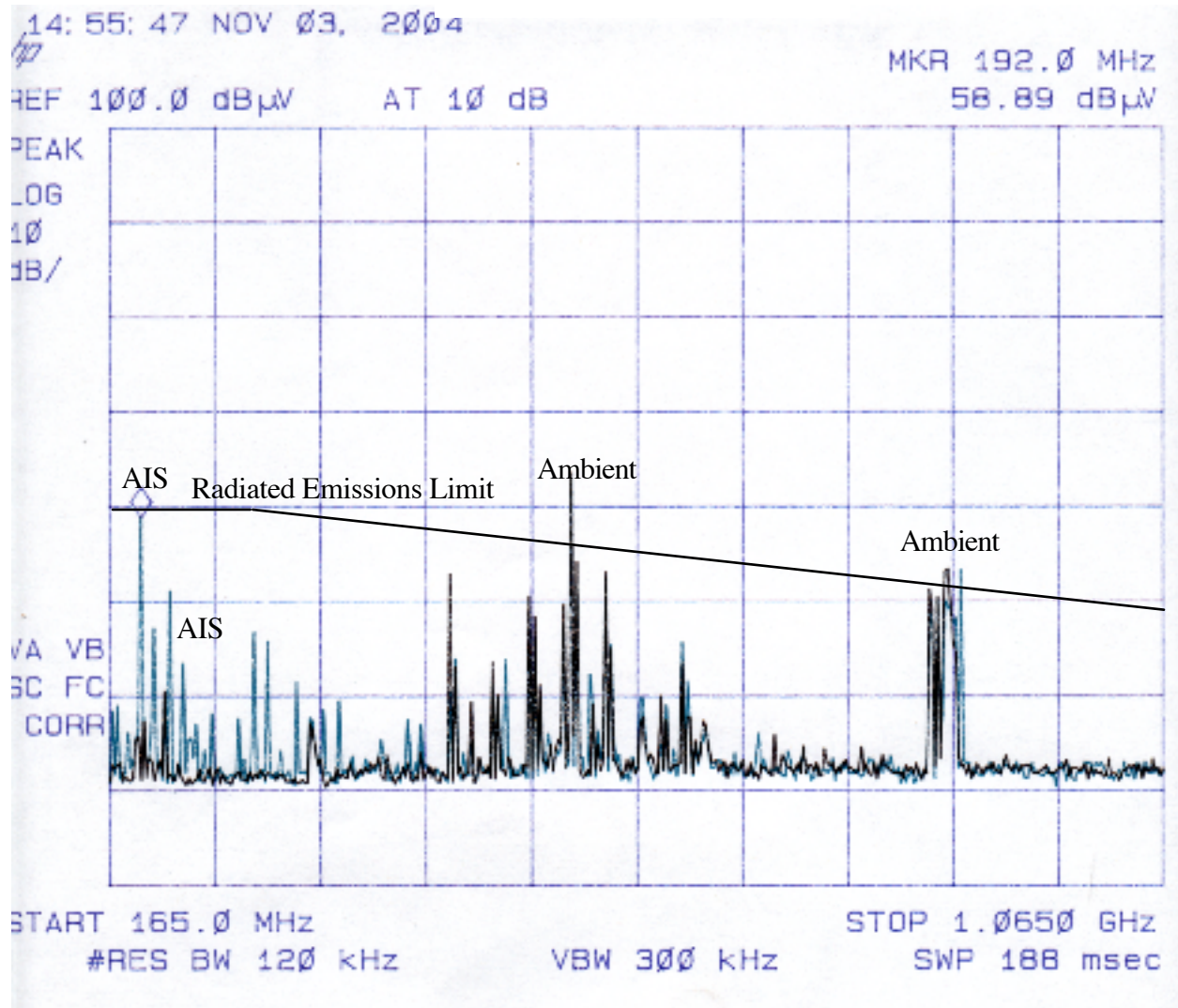
IX. EMC Measurement Results Cont'd:**2. Radiated Emissions – Data.**

IX. EMC Measurement Results Cont'd:**2. Radiated Emissions – Data.**

IX. EMC Measurement Results Cont'd:**2. Radiated Emissions – Data.**

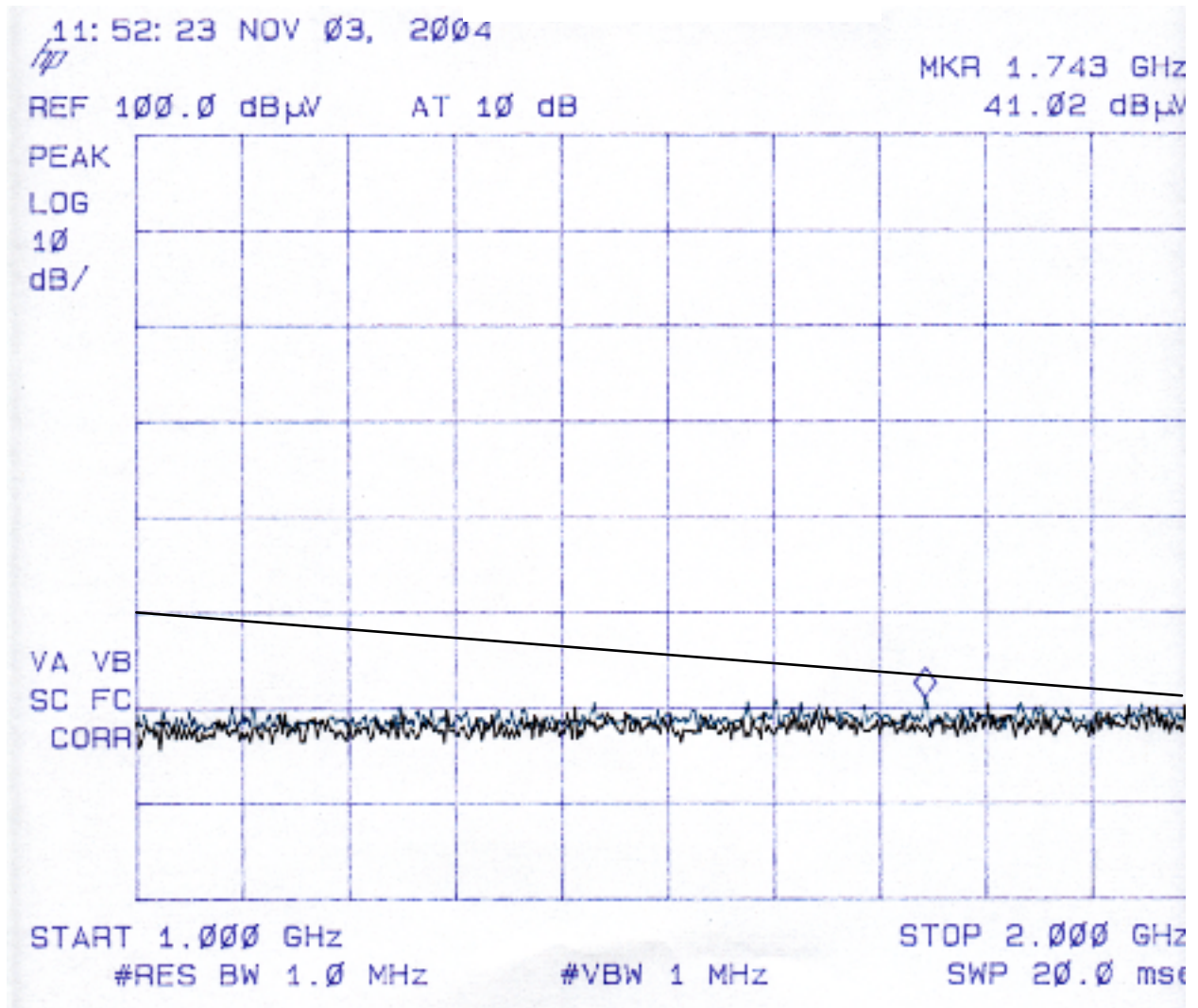
IX. EMC Measurement Results Cont'd:**2. Radiated Emissions – Data.**

AIS Horizontal/Vertical Peak



IX. EMC Measurement Results Cont'd:**2. Radiated Emissions – Data.**

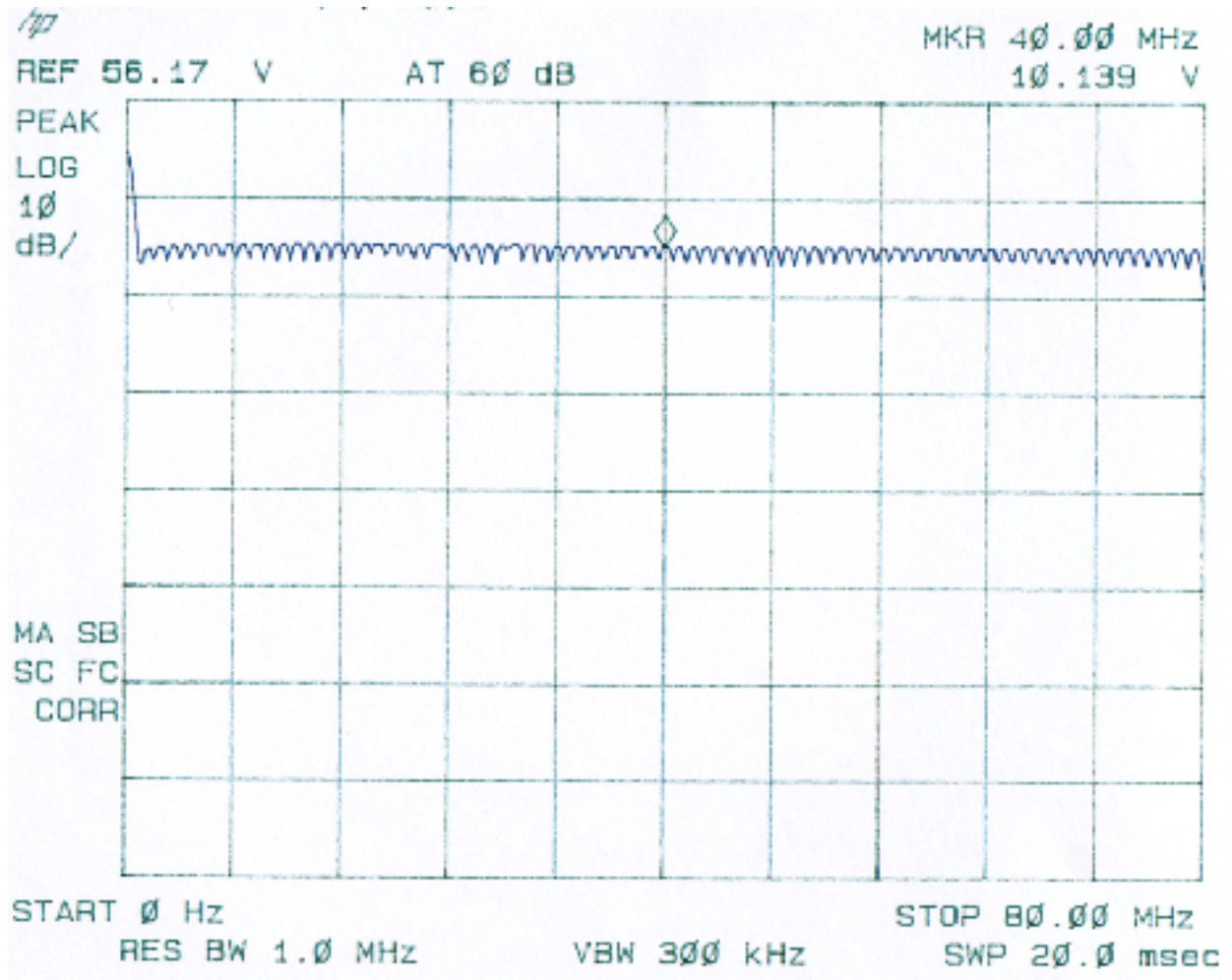
AIS Horizontal/Vertical Peak



IX. EMC Measurement Results Cont'd:**3. Conducted Immunity – Data.**

The system exhibits no susceptibility to 10-V conducted signals amplitude modulated at 400 Hz, 80%, applied directly to the power lines from 150 kHz to 80 MHz. Frequencies listed are samples; sweep rate is < 1.5 decade/s and dwell > EUT response time. The following page contains the spectrum analyzer output from device calibration.

Frequency (MHz)	Voltage	Evaluation	Criteria	Spec.	Result
0.150	10	PC Display	Disrupt Operation	A	A
0.500	10	PC Display	Disrupt Operation	A	A
0.750	10	PC Display	Disrupt Operation	A	A
1	10	PC Display	Disrupt Operation	A	A
2	10	PC Display	Disrupt Operation	A	A
3	10	PC Display	Disrupt Operation	A	A
5	10	PC Display	Disrupt Operation	A	A
10	10	PC Display	Disrupt Operation	A	A
15	10	PC Display	Disrupt Operation	A	A
20	10	PC Display	Disrupt Operation	A	A
25	10	PC Display	Disrupt Operation	A	A
30	10	PC Display	Disrupt Operation	A	A
35	10	PC Display	Disrupt Operation	A	A
40	10	PC Display	Disrupt Operation	A	A
45	10	PC Display	Disrupt Operation	A	A
50	10	PC Display	Disrupt Operation	A	A
55	10	PC Display	Disrupt Operation	A	A
60	10	PC Display	Disrupt Operation	A	A
65	10	PC Display	Disrupt Operation	A	A
70	10	PC Display	Disrupt Operation	A	A
75	10	PC Display	Disrupt Operation	A	A
80	10	PC Display	Disrupt Operation	A	A

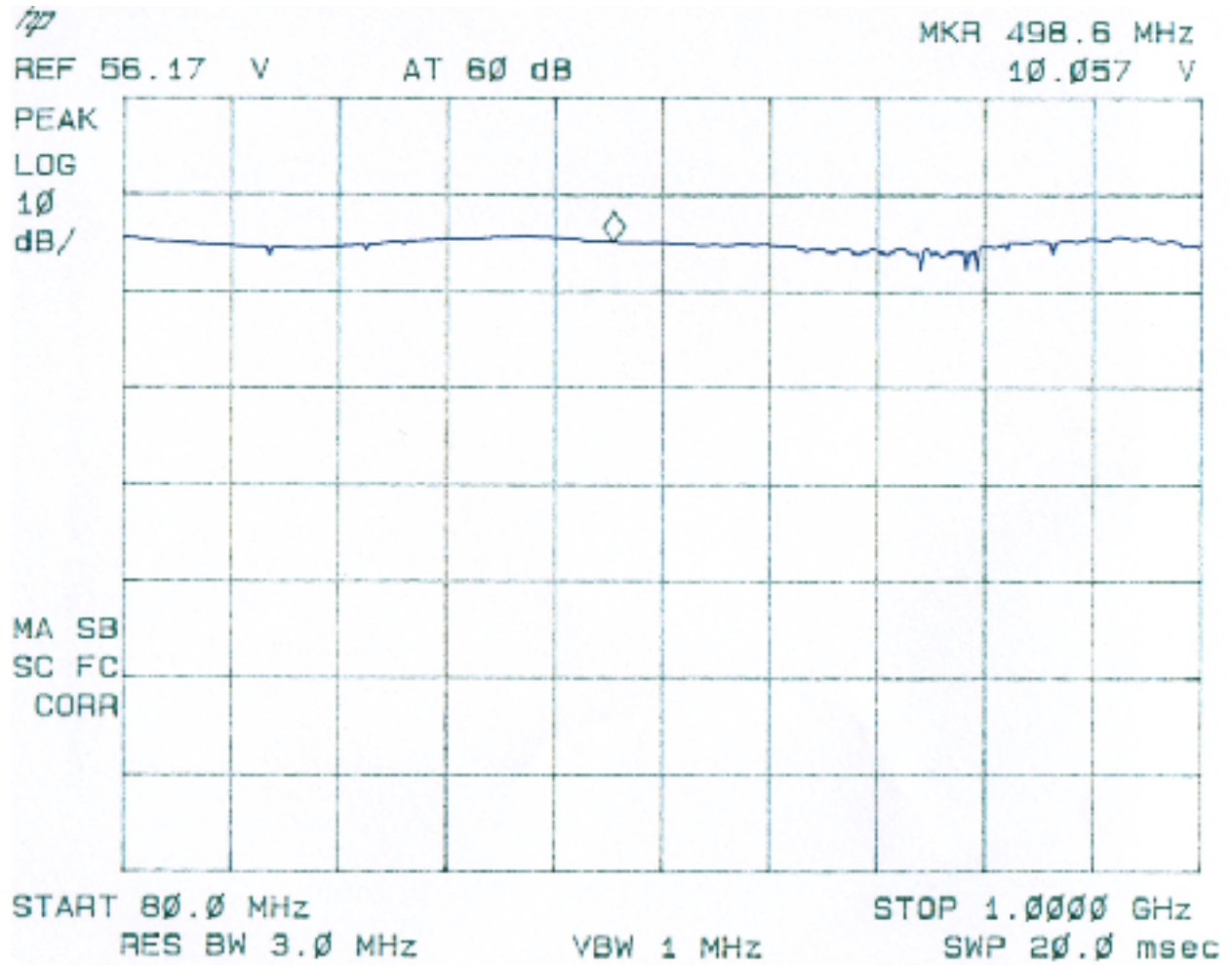
IX. EMC Measurement Results Cont'd:**3. Conducted Immunity – Calibration.**

Applied High-Frequency Conducted Immunity Voltage

IX. EMC Measurement Results Cont'd:**4. Radiated Immunity – Data.**

The system exhibits no susceptibility to 10-V/m radiated electric fields, amplitude modulated at 400 Hz, 80%, from 80 MHz to 2 GHz. Frequencies listed are samples; sweep rate is < 1.5 decade/s and dwell > EUT response time. The following page contains the spectrum analyzer output from device calibration.

Frequency (MHz)	Voltage (V)	Evaluation	Criteria	Spec.	Result
80	10	PC Display	Disrupt Operation	A	A
100	10	PC Display	Disrupt Operation	A	A
120	10	PC Display	Disrupt Operation	A	A
140	10	PC Display	Disrupt Operation	A	A
160	10	PC Display	Disrupt Operation	A	A
180	10	PC Display	Disrupt Operation	A	A
200	10	PC Display	Disrupt Operation	A	A
250	10	PC Display	Disrupt Operation	A	A
300	10	PC Display	Disrupt Operation	A	A
350	10	PC Display	Disrupt Operation	A	A
400	10	PC Display	Disrupt Operation	A	A
450	10	PC Display	Disrupt Operation	A	A
500	10	PC Display	Disrupt Operation	A	A
600	10	PC Display	Disrupt Operation	A	A
700	10	PC Display	Disrupt Operation	A	A
800	10	PC Display	Disrupt Operation	A	A
900	10	PC Display	Disrupt Operation	A	A
1000	10	PC Display	Disrupt Operation	A	A
1200	10	PC Display	Disrupt Operation	A	A
1400	10	PC Display	Disrupt Operation	A	A
1600	10	PC Display	Disrupt Operation	A	A
1800	10	PC Display	Disrupt Operation	A	A
2000	10	PC Display	Disrupt Operation	A	A

IX. EMC Measurement Results Cont'd:**4. Radiated Immunity – Calibration.**

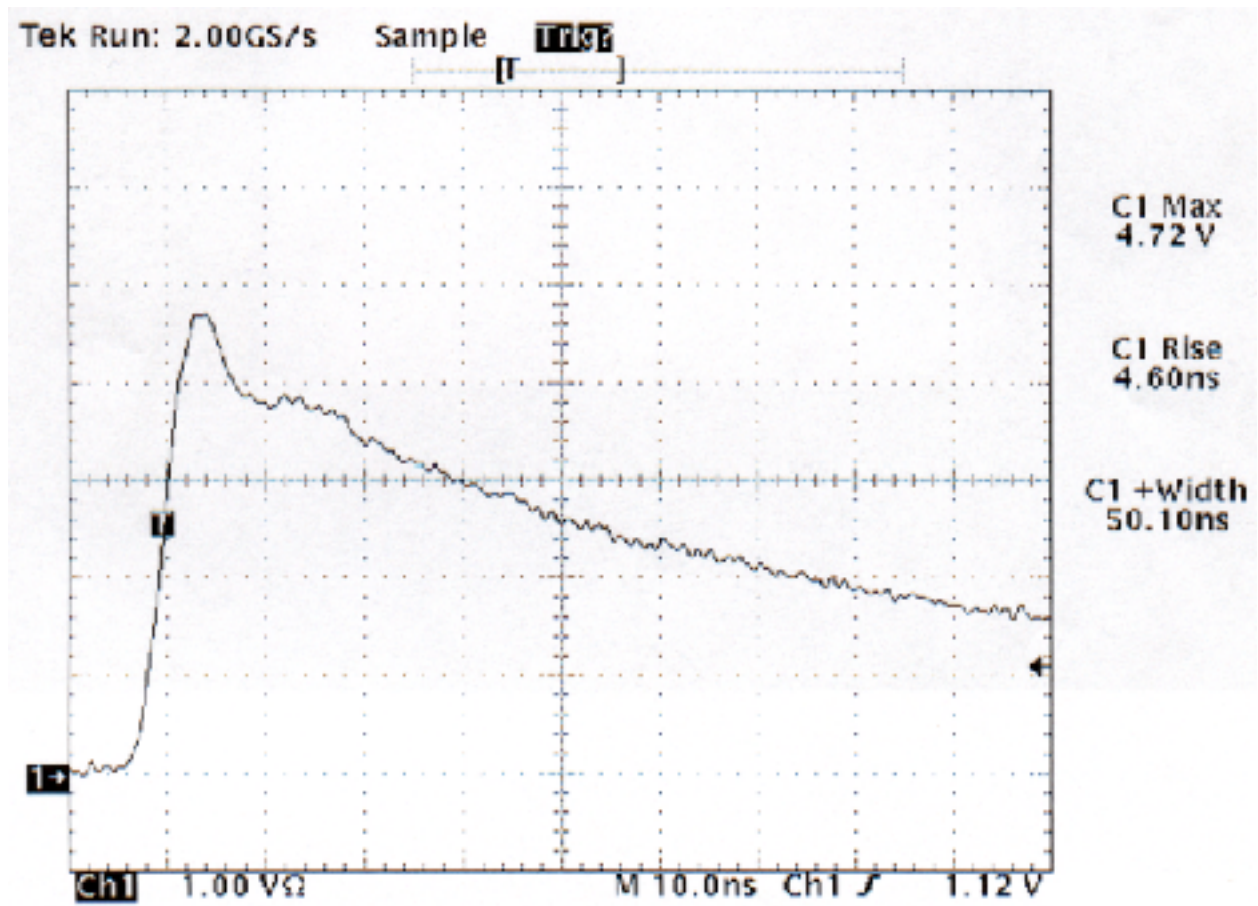
Applied Radiated Immunity Voltage

IX. EMC Measurement Results Cont'd:**5. Transient Immunity – Data.**

The system exhibits acceptable susceptibility to 0.5/1-kV transients applied capacitively to the signal, power and control lines. One-kV transients are 15 ms in duration, delivered in 5-kHz bursts every 300 ms.

The following page contains the applied waveform output from device calibration.

Level	Voltage	Application Port	Polarity and Duration	Spec.	Result
1	500	Clamp Power Lines	Plus/3 Minutes	B	B
2	1000	Clamp Power Lines	Plus/3 Minutes	B	B
1	500	Clamp Power Lines	Minus/3 Minutes	B	B
2	1000	Clamp Power Lines	Minus/3 Minutes	B	B
1	500	Clamp Data Lines	Plus/3 Minutes	B	B
2	1000	Clamp Data Lines	Plus/3 Minutes	B	B
1	500	Clamp Data Lines	Minus/3 Minutes	B	B
2	1000	Clamp Data Lines	Minus/3 Minutes	B	B

IX. EMC Measurement Results Cont'd:**5. Transient Immunity – Calibration.**

Applied Electrical Fast Transient Waveform

IX. EMC Measurement Results Cont'd:**6. Supply Failure – Data.**

The system exhibits acceptable susceptibility to voltage interruptions of 60 s for 3 repetitions.

Interrupt Voltage	Duration (s)	Application Port	Phase Angle	Spec.	Result
0	60	Power Entry	0°	C	C
0	60	Power Entry	0°	C	C
0	60	Power Entry	0°	C	C

IX. EMC Measurement Results Cont'd:**7. ESD – Data.**

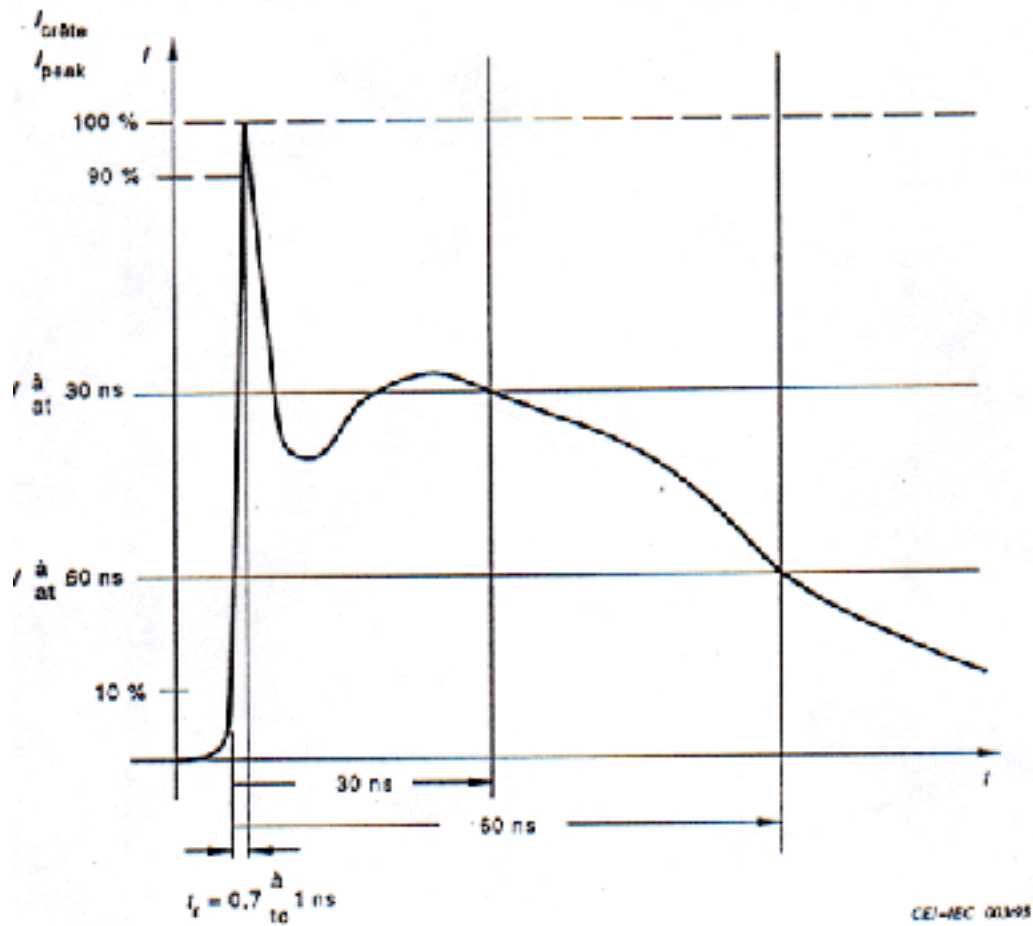
The unit exhibits acceptable susceptibility to 6 kV-contact/ 8 kV-air discharges, applied singly or repetitively, and directly or indirectly. The unit resets automatically upon application of the discharge.

The following page contains the applied waveform output from device calibration.

Level	Voltage	Application Point	Contact/Air	Spec.	Result
1	2	Enclosure	Contact	B	A
2	4	Enclosure	Contact	B	A
x	6	Enclosure	Contact	B	B
1	2	Enclosure	Air	B	A
2	4	Enclosure	Air	B	A
3	8	Enclosure	Air	B	B
1	2	Coupling Plane	Contact	B	A
2	4	Coupling Plane	Contact	B	A
x	6	Coupling Plane	Contact	B	B
1	2	Coupling Plane	Air	B	A
2	4	Coupling Plane	Air	B	A
3	8	Coupling Plane	Air	B	B
1	2	Connector	Contact	B	A
2	4	Connector	Contact	B	A
x	6	Connector	Contact	B	B
1	2	Connector	Air	B	A
2	4	Connector	Air	B	A
3	8	Connector	Air	B	B

IX. EMC Measurement Results Cont'd:

7. ESD – Waveform.



Applied ESD Event