ENGINEERING TEST REPORT

NOV 11, 1998

Report No. CALR-FCC-094

This is to certify that the MICROWAVE OVEN from which the following data has been derived properly complies with the requirements of " FCC Rules and Regulations Part 18 Subpart C " as of the date the measurements were made.

1. Manufacturer of Device : Shanghai Matsushita Microwave Oven Co., LTD

   868 Long Dong Road, Pu Dong Shanghai, 201203 CHINA

2. Description of Device

a.	FCC ID.	:	ACLAP9661
b.	Model No.	:	NN-S539WF
c.	Serial No.	:	PP00009
d.	Operating Frequency	:	2450 MHz
e.	Output RF Power	:	800 W (BY IEC 705)
f.	Power Consumption	:	120 V. 60 Hz
g.	Magnetron Type	:	Matsushita 2M210
h.	Employed Mode	:	Turn Table
i.	Door Seal Type	:	Choke

3. Measurement Procedure Used : FCC/OST MP-5

4. Measurement Site

   Name : Panasonic Magnetron Lab.
   Panasonic Industrial Company

   Address : 1707 N. Randall Road
   Elgin, Illinois 60123-7847

   Description of this test facility has been filed with the FCC. (Feb. 26, 1987, File # 31010/EQU 4-3-0A)

5. Date of Measurement : NOV 11, 1998

6. Measurement Data : See Attached " Data Summary "

7. Test Equipment Used : See Exhibit 1

Tested By

M. Okazaki
Applications Manager of Magnetron
Panasonic Industrial Company

DATA SUMMARY

1. Safety Check : < 0.5 mW/cm2 @ 5cm

2. Radiated Field Strength uV/m @ 300m

	Frequency (MHz)	Field Strength (uV/m)	Permissible (uV/m)
Fundamental	2460	696	-----
2nd Harmonic	4928	18.6	29.8
3rd Harmonic	7380	2.45	29.8
4th Harmonic	9845	1.91	29.8
Spurious	2355	0.45	29.8
Emission Side Band	2400	0.37	29.8
Emission Side Band	2500	0.32	29.8

3. Maximum frequency variation : 2464 MHz - 2467 MHz
(96V ~ 150V / 1000cc Load)

2467 MHz - 2473 MHz
(1000cc ~ 200cc / Load)

4. Total power input to oven : 1400 W

5. Power developed in dummy load : 712 W

6. Supply voltage : 120V , 12.8 A

ACLAP9661
EXHIBIT 5A

REPORT OF MEASUREMENTS

1. MODEL NO.: NN-S539WF
   SERIAL NO. PP00009
   MAGNETRON TYPE NO.: 2M210-M1

2. MEASUREMENT DATE: 11/11/98

3. LIST OF MEASURING EQUIPMENT AND CALIBRATION DATA:
   REFER TO ATTACHED EXHIBIT 6

4. INVESTIGATED FREQUENCY RANGE: 100Mhz to 4th Harmonic

5. DATA SUMMARY:
   Safety Check : <0.5 MW/cm2

Radiated Field Strength:	(uV/m @ 300m)		Limit
Fundamental:	2460 MHz	696uv/m	N/A
2nd. Harmonic:	4928 MHz	18.6uv/m	29.8
3rd. Harmonic:	7380 MHz	2.45uv/m	"
4th. Harmonic:	9845 MHz	1.91uv/m	"
Spurious:	2355 MHz	0.45uv/m	"
Emmission Sideband:	2400 MHz	0.37uv/m	"
Emmission Sideband:	2500 MHz	0.32uv/m	"
Greater than 4th. Harmonic	not measurable		

Maximum Frequency Variation: 2464 to 2467 MHz
(96V-150Vac, 1000 ml water load)
Maximum Frequency Variation: 2467 to 2473 MHz
(1000 ml - 200ml water load)
Total Power Input to Oven: 1400 watts
Power Developed in Dummy Load: 712 watts
Supply Voltage: 120 Volts, 60Hz, 12.8A

Description of Instrumentation and calculation

(1) Measurement equipment

a. Field Strength Meter : Electro-Metrics Model EMC-50

Bandwidth Setting : 1 MHz

Detector Function : Linear Average Detection

b. Receiving Antenna : Electro-Metrics Model RGA-180

Frequency Range : 1 - 18 GHz

c. Microwave Survey Meter : Narda Model 8110B

(2) Test Condition

a. Antenna Height Variation : 1.0 - 1.5 m

b. Distance of Antenna to Test unit : 3.0 m

c. Test Unit Height : 1.0 m

(3) Calculation Formula

Field Strength at 3 m (dBuV/m)

= Receiver Reading + Antenna Factor + Cable Loss
(dBuV) (dB/m) (dB)

Field Strength at 300m (uV/m)

$$= K * 10^{\frac{\text{Field Strength at 3 m (dBuV/m)}}{20}}$$

K : Conversion Factor for 3 m to 300 m

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Conv. Factor K
2400	29	0.7	0.0061
Fundamental	29.3	0.7	0.0062
2500	29.5	0.7	0.0063
4900	33.4	0.9	0.01
7350	36.5	1.2	0.01
9800	38.2	1.4	0.01

Example : 2nd Harmonics

Receiver Reading = 20 dB @ 3 m

$$\text{FIS @300 m} = 0.01 * 10^{\frac{20 + 33.4 + 0.9}{20}} = 5.19 \text{ (uV/m)}$$

Exhibit 1 Test Equipment List

Name / Model No.	S / No.	Manufacturer	Last Calibrated
Field Strength Meter Model EMC - 50	175	Electro Metrics	11 / 14 / 97
Microwave Survey Meter 8110B	20915	Narda	03 / 19 / 98
Ridged Guide Antenna RGA - 180	2455	Electro Metrics	08 / 20 / 88
Network Analyzer 8410B	1647A00704	Hewlett Packard	06 / 17 / 88
Reflection Unit 8743A	1330A01358	Hewlett Packard	06 / 17 / 88
Sweep Oscillator 8620C	1645A00827	Hewlett Packard	06 / 17 / 88
Frequency Meter 536A	1441A00695	Hewlett Packard	09 / 17 / 88
Power Meter 436A	1629A1172	Hewlett Packard	08 / 05 / 89
Spectrum Analyzer 8555A	1642A06830	Hewlett Packard	08 / 21 / 88

Fig. 1 Physical Description of Test Site

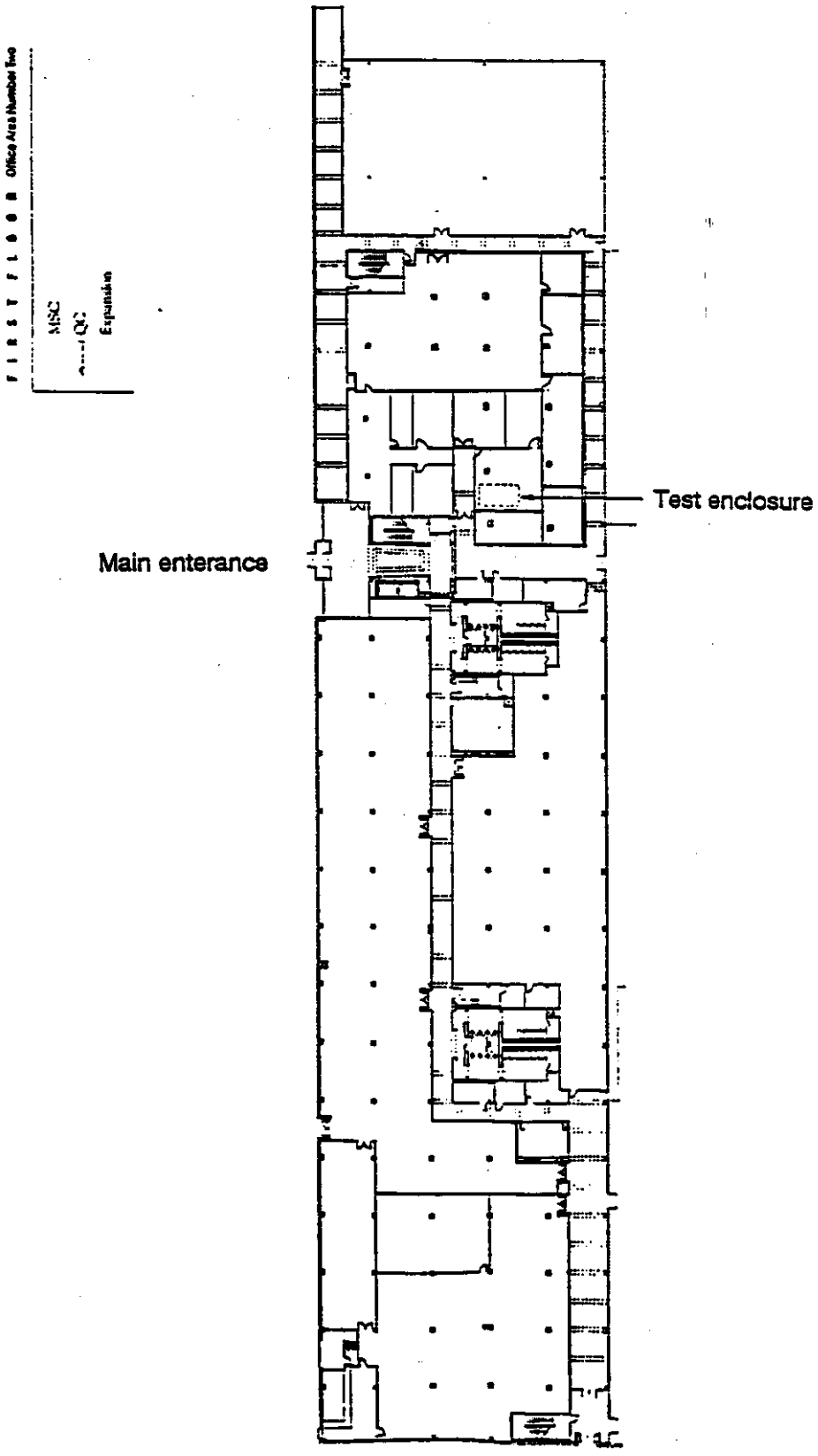
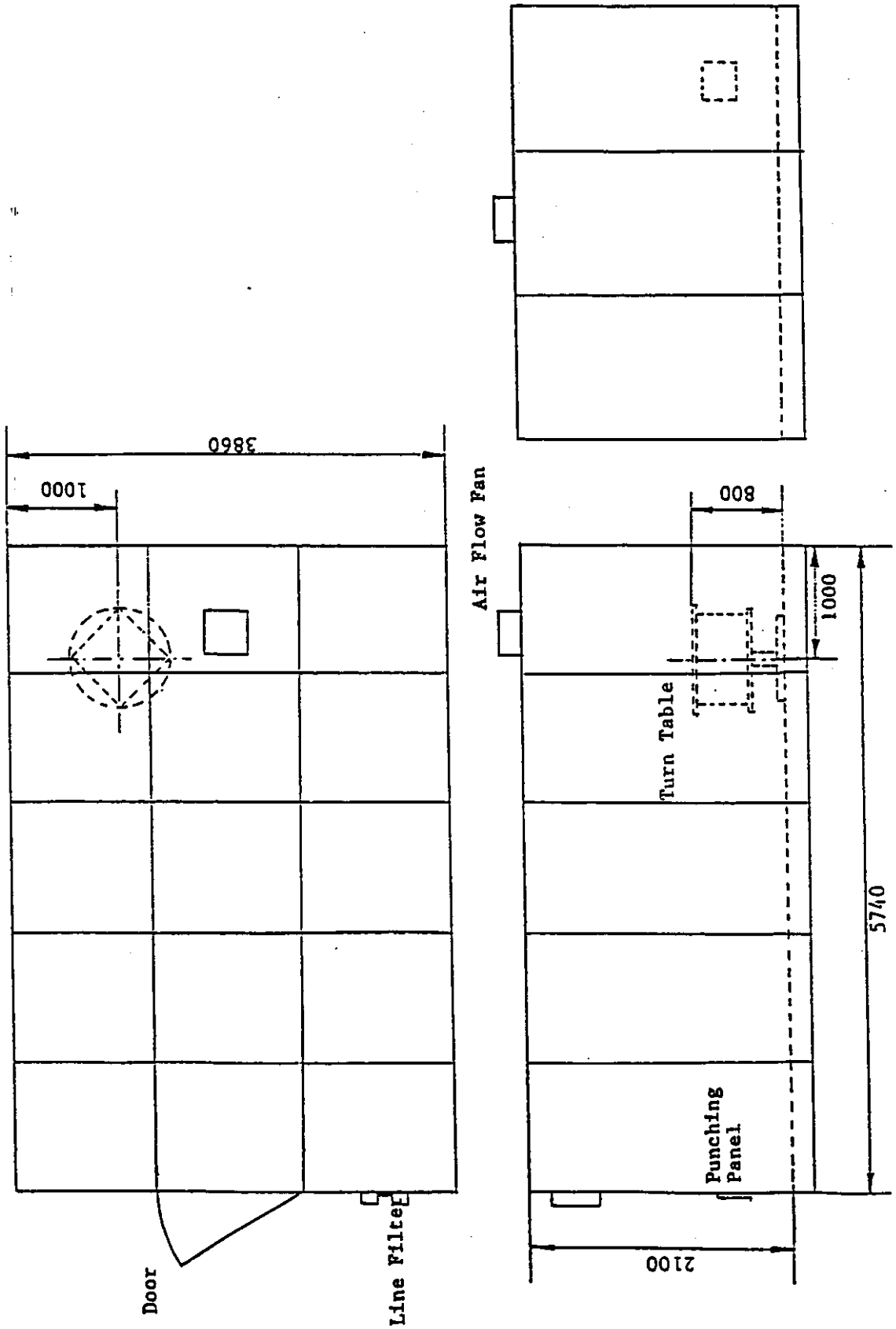


Fig. 2 Physical Dimensions of Test Site (Unit mm)



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2. Description of Device

a.	FCC ID.	:	ACLAP9661
b.	Model No.	:	NN-S539WF
c.	Serial No.	:	PP00009
d.	Operating Frequency	:	2450 MHz
e.	Output RF Power	:	800 W (BY IEC 705)
f.	Power Consumption	:	120 V. 60 Hz
g.	Magnetron Type	:	Matsushita 2M189
h.	Employed Mode	:	Turn Table
i.	Door Seal Type	:	Choke

3. Measurement Procedure Used : FCC/OST MP-5

4. Measurement Site

   Name : Panasonic Magnetron Lab.
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   Address : 1707 N. Randall Road
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5. Date of Measurement : NOV 11, 1998

6. Measurement Data : See Attached " Data Summary "

7. Test Equipment Used : See Exhibit 1

Tested By

M. Okazaki
Applications Manager of Magnetron
Panasonic Industrial Company

DATA SUMMARY

1. Safety Check : < 0.5 mW/cm2 @ 5cm

2. Radiated Field Strength uV/m @ 300m

	Frequency (MHz)	Field Strength (uV/m)	Permissible (uV/m)
Fundamental	2460	1103	-----
2nd Harmonic	4929	19.3	30.1
3rd Harmonic	7380	2.40	30.1
4th Harmonic	9845	1.95	30.1
Spurious	2356	0.45	30.1
Emission Side Band	2400	0.35	30.1
Emission Side Band	2500	0.37	30.1

3. Maximum frequency variation : 2464 MHz - 2468 MHz
(96V ~ 150V / 1000cc Load)

2464 MHz - 2470 MHz
(1000cc ~ 200cc / Load)

4. Total power input to oven : 1400 W

5. Power developed in dummy load : 724 W

6. Supply voltage : 120V , 12.5 A

ACLAP9661
EXHIBIT 5B

REPORT OF MEASUREMENTS

1. MODEL NO.: NN-S539WF
   SERIAL NO. PP00009
   MAGNETRON TYPE NO.: 2M189-M1

2. MEASUREMENT DATE: 11/11/98

3. LIST OF MEASURING EQUIPMENT AND CALIBRATION DATA:
   REFER TO ATTACHED EXHIBIT 6

4. INVESTIGATED FREQUENCY RANGE: 100Mhz to 4th Harmonic

5. DATA SUMMARY:

Safety Check : ≤0.5 MW/cm2

Radiated Field Strength:	(uV/m @ 300m)		Limit
Fundamental:	2460 MHz	1103uv/m	N/A
2nd. Harmonic:	4929 MHz	19.3uv/m	30.1
3rd. Harmonic:	7380 MHz	2.40uv/m	"
4th. Harmonic:	9845 MHz	1.95uv/m	"
Spurious:	2356 MHz	0.45uv/m	"
Emmission Sideband:	2400 MHz	0.35uv/m	"
Emmission Sideband:	2500 MHz	0.37uv/m	"
Greater than 4th. Harmonic	not measurable		

Maximum Frequency Variation: 2464 to 2468 MHz
(96V-150Vac, 1000 ml water load)
Maximum Frequency Variation: 2464 to 2470 MHz
(1000 ml - 200ml water load)
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@300 m

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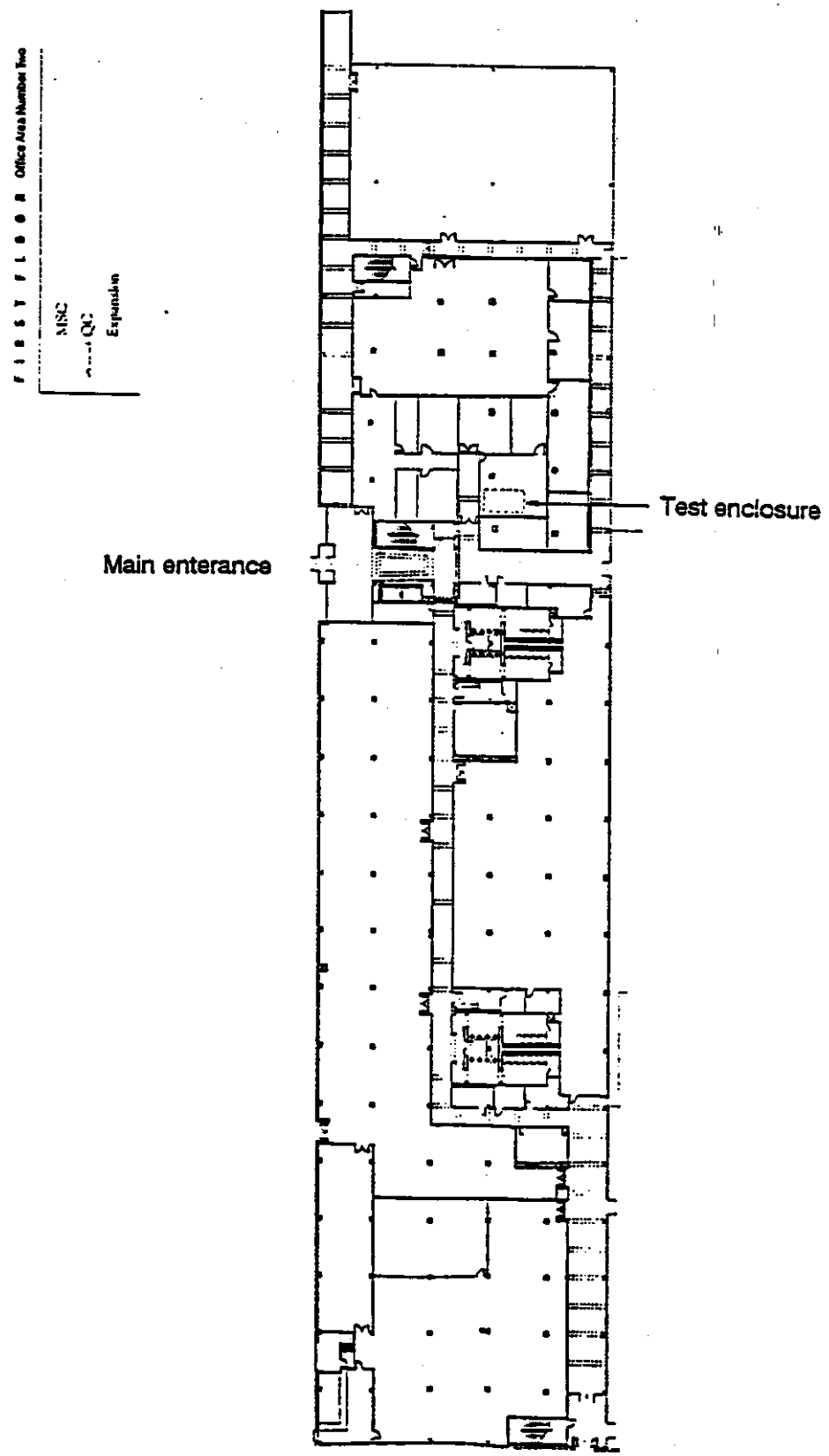

Exhibit 6D-2

Fig. 2 Physical Dimensions of Test Site (Unit mm)