

FCC TEST REPORT

REPORT NO.: RF940627L07

MODEL NO.: 1054

RECEIVED: Jun. 27, 2005

TESTED: Jun. 28, 2005

ISSUED: Jul. 06, 2005

APPLICANT : Microsoft Corporation

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U.S.A.

ISSUED BY : Advance Data Technology Corporation

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1 CERTIFICATION

PRODUCT : Microsoft® Wireless Notebook Laser Mouse 6000
BRAND NAME : Microsoft®
MODEL NO. : 1054
APPLICANT : Microsoft Corporation
TESTED : Jun. 28, 2005
TEST SAMPLE : ENGINEERING SAMPLE
STANDARDS : FCC Part 15, Subpart C (Section 15.227)
Canada RSS-210, 2001, Issued 5, Amend 1
ANSI C63.4:2003

The above equipment has been tested by **Advance Data Technology Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Suntee Liu , **DATE :** Jul. 06, 2005
(Suntee Liu)

TECHNICAL
ACCEPTANCE : Gary Chang , **DATE :** Jul. 06, 2005
Responsible for RF (Gary Chang)

APPROVED BY : Cody Chang , **DATE :** Jul. 06, 2005
(Cody Chang, Deputy Manager)

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C			
STANDARD PARAGRAPH	TEST TYPE	RESULT	REMARK
15.207	Conducted Emission Test	NA	Power supply is 1.5Vdc from batteries
15.227 15.209	Radiated Emission Test	PASS	Minimum passing margin is -17.67dB at 910.58MHz

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4:

Measurement	Frequency	Uncertainty
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.73 dB
	200MHz ~ 1000MHz	3.74 dB
	1GHz ~ 18GHz	2.20 dB
	18GHz ~ 40GHz	1.88 dB

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Microsoft® Wireless Notebook Laser Mouse 6000
MODEL NO.	1054
POWER SUPPLY	1.5Vdc from battery
MODULATION TYPE	FSK
CARRIER FREQUENCY OF EACH CHANNEL	27.045, 27.145 MHz
NUMBER OF CHANNEL	2
ANTENNA TYPE	Loop antenna
DATA CABLE	NA
I/O PORTS	NA

NOTE:

1. The EUT is a wireless mouse.
2. Fission Configuration Information:

Configuration #:		Comments: DV phase Mouse unit for formal report			
Manufacturer	Component type	Part no.	Revision no.	Description	BOM (if known)
Microsoft	Mouse			Model: 1054	
ST	Optical Sensor	11300398000	A	CHIP IC Aviator ASIC TQFP-32L	11300398000
ST	Microcontroller	11300398000	A	CHIP IC Aviator ASIC TQFP-32L	11300398000
ULM	Laser	VCSEL-001	NA	VCSEL (850nm)	10740114200
OSRAM	Laser	F 0497B - MS	NA	VCSEL (850nm)	10740114200
Microsoft	firmware			Fission_0_35_32_1d03_DV_56p.ram	
Ta Chien	PCB	10230456200	5	SPCB,FISSION TX,AVIAT,S2L	10230456200
KYE	PCB Assy	20000696201	A	PCBA,FISSION,TX	20000696201
	Case tooling				
Merrich	Top case	15102047201	01	Top case	15102047201
Mibtech	Bottom case	15120484201	01	Bottom case	15120484201
	Overmold			Overmold	
Merrich	Keytop	15130571201	01	Keytop	15130571201
Merrich	Scallop	15190113201	01	Scallop	15190113201
Merrich	Battery Tray	15190117201	01	Battery Tray	15190117201
Merrich	Battery Door	15190116201	01	Battery Door	15190116201
Merrich	Battery Door Latch	15190114201	01	Battery Door Latch	15190114201
Mibtech	Rosso wheel hub	15190110201	00	Rosso wheel hub	15190110201
	Rosso wheel overmold			Rosso wheel overmold	
Mibtech	Rosso carriage-Left	15190120201	00	Rosso carriage-Left	15190120201

Mibtech	Rosso carriage-Right	15190119201	00	Rosso carriage-Right	15190119201
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Configuration #:		Comments: DV phase Receiver unit with EMC fixes for formal report			
Manufacturer	Component type	Part no.	Revision no.	Description	BOM (if known)
Microsoft	Receiver			Model: 1051	
Sunplus	Microcontroller	11300605200		CHIPIC,SPCP18A	11300605200
TI		11300606200		CHIPIC,TRF7904,QFN 20	11300606200
Microsoft	firmware		V7		
Express	PCB	10230436200	8	RS,SPCB,H-ROLLER RX	10230436200
KYE	PCB Assy.	20000670201		PCBA,HIGH ROLLER,RX	20000670201
	Case tooling				
Merrich	Receiver Top Case	15102049201	01	Receiver Top Case	15102049201
Merrich	Receiver Bottom Case	15120486201	01	Receiver Bottom Case	15120486201
Merrich	Receiver Connect Button	15130574201	01	Receiver Connect Button	15130574201

3. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

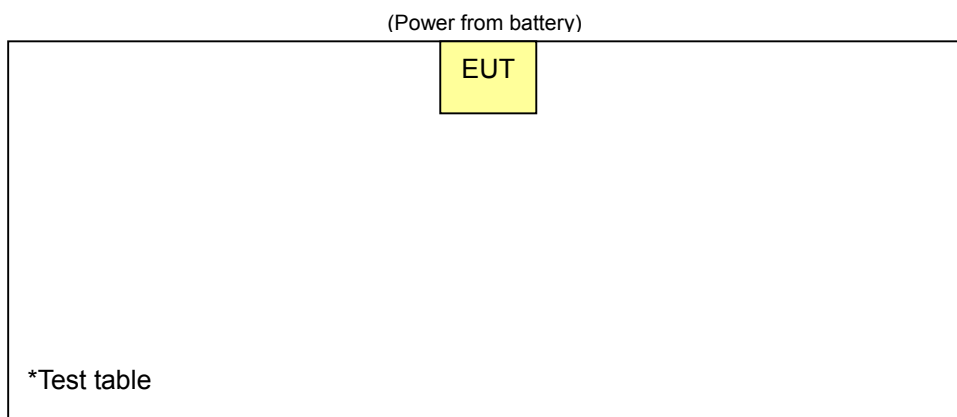
There are 2 channels provided to the EUT.

Channel	Frequency (MHz)
0	27.045
1	27.145

There are 3 sets of identical samples tested and presented in the report under Microsoft's request.

Mouse Serial Number
FIT-DV-099/492
FIT-DV-099/493
FIT-DV-100/496

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT Configure Mode	Applicable to		Description
	PLC	RE<1G	
1	Note	v	FIT-DV-099/492, operating@27.045
2	Note	v	FIT-DV-099/492, operating@27.145
3	Note	v	FIT-DV-099/493, operating@27.045
4	Note	v	FIT-DV-099/493, operating@27.145
5	Note	v	FIT-DV-100/496, operating@27.045
6	Note	v	FIT-DV-100/496, operating@27.145

Where PLC: Power Line Conducted Emission RE<1G RE: Radiated Emission below 1GHz

Note: No need to concern of Conducted Emission due to the EUT is powered by battery.

Radiated Emission Test (Below 1 GHz):

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Channel	Tested Channel	Modulation Type
1	0, 1	0	FSK
2	0, 1	1	FSK
3	0, 1	0	FSK
4	0, 1	1	FSK
5	0, 1	0	FSK
6	0, 1	1	FSK

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Microsoft® Wireless Notebook Laser Mouse 6000. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C (15.227)
ANSI C63.4:2003

All test items have been performed and recorded as per the above standards.

3.4 DESCRIPTION OF SUPPORT UNITS

NA

4 TEST PROCEDURE AND RESULT

4.1 CONDUCTED EMISSION MEASUREMENT

NA

4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

According to 15.227 the field strength of Emissions from intentional radiators operated under these frequencies bands shall not exceed the following:

Fundamental Frequency (MHz)	Field Strength of Fundamental (dBuV/m)	
	Peak	Average
26.96-27.28	100	80

Field strength limits are at the distance of 3 meters, Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.2.2 TEST INSTRUMENT

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESIB7	100188	Dec. 19, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Nov. 21, 2005
BILOG Antenna SCHWARZBECK	VULB9168	9168-157	Jan. 22, 2006
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-407	Jan. 16, 2006
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170241	Feb. 23, 2006
Preamplifier Agilent	8449B	3008A01961	Nov. 09, 2005
Preamplifier Agilent	8447D	2944A10629	Nov. 09, 2005
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218182/4	Feb. 17, 2006
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218194/4	Feb. 17, 2006
Loop Antenna	HFH2-Z2	100070	Nov. 14, 2005
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower ADT.	AT100	AT93021702	NA
Turn Table ADT.	TT100.	TT93021702	NA
Controller ADT.	SC100.	SC93021702	NA

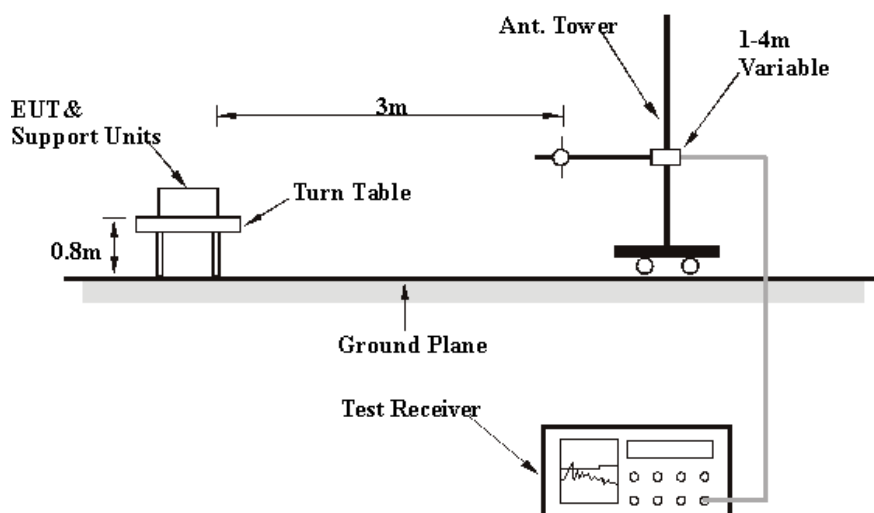
- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Chamber 1.
 3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 4. The IC Site Registration No. is IC4924-2.

4.2.3 TEST PROCEDURE

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak method or average method as specified and then reported in data sheet.

NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.

4.2.4 TEST SETUP



For the actual test configuration, please refer to the related item in this test report - Photographs of the Test Configuration.

4.2.5 EUT OPERATING CONDITION

Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.

4.2.6 TEST RESULTS

EUT	Microsoft® Wireless Notebook Laser Mouse 6000	MODEL	1054
INPUT POWER	3Vdc	FREQUENCY RANGE	Below 1000 MHz
ENVIRONMENTAL CONDITIONS	26 deg. C, 64% RH, 991 hPa	DETECTOR FUNCTION	Peak / Average
TEST MODE	1	TESTED BY	Match Tsui

TEST DISTANCE: 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*27.045	42.03 PK	100.00	-57.97	2.23	360	28.53	13.50
2	*27.045	39.41 AV	80.00	-40.59	2.23	360	25.91	13.50

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. "*" = Fundamental frequency.
 6. Loop Antenna was used for all frequency below 30MHz.

EUT	Microsoft® Wireless Notebook Laser Mouse 6000	MODEL	1054
INPUT POWER	3Vdc	FREQUENCY RANGE	Below 1000 MHz
ENVIRONMENTAL CONDITIONS	26 deg. C, 64% RH, 991 hPa	DETECTOR FUNCTION	Peak / Average
TEST MODE	2	TESTED BY	Match Tsui

TEST DISTANCE: 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*27.145	42.12 PK	100.00	-57.88	2.02	12	28.62	13.50
2	*27.145	39.86 AV	80.00	-40.14	2.02	12	26.36	13.50

REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. "*" = Fundamental frequency.
6. Loop Antenna was used for all frequency below 30MHz.

EUT	Microsoft® Wireless Notebook Laser Mouse 6000	MODEL	1054
INPUT POWER	3Vdc	FREQUENCY RANGE	Below 1000 MHz
ENVIRONMENTAL CONDITIONS	26 deg. C, 64% RH, 991 hPa	DETECTOR FUNCTION	Quasi-Peak
TEST MODE	1	TESTED BY	Match Tsui

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	683.15	22.39 QP	46.00	-23.61	1.75 H	142	0.37	22.02
2	790.06	23.81 QP	46.00	-22.19	1.25 H	7	0.17	23.64
3	823.11	22.79 QP	46.00	-23.21	2.00 H	175	-1.11	23.90
4	863.93	24.40 QP	46.00	-21.60	1.75 H	229	0.01	24.40
5	910.58	28.33 QP	46.00	-17.67	1.00 H	139	3.11	25.21
6	955.29	24.24 QP	46.00	-21.76	1.50 H	196	-1.38	25.62

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	35.83	17.53 QP	40.00	-22.47	1.00 V	310	3.21	14.32
2	70.82	19.05 QP	40.00	-20.95	1.00 V	256	6.93	12.12
3	830.88	23.57 QP	46.00	-22.43	1.75 V	28	-0.39	23.96
4	863.93	24.35 QP	46.00	-21.65	2.50 V	253	-0.04	24.40
5	906.69	25.56 QP	46.00	-20.44	1.50 V	280	0.39	25.17
6	957.23	24.81 QP	46.00	-21.19	1.75 V	316	-0.81	25.62

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.

EUT	Microsoft® Wireless Notebook Laser Mouse 6000	MODEL	1054
INPUT POWER	3Vdc	FREQUENCY RANGE	Below 1000 MHz
ENVIRONMENTAL CONDITIONS	26 deg. C, 64% RH, 991 hPa	DETECTOR FUNCTION	Peak / Average
TEST MODE	3	TESTED BY	Match Tsui

TEST DISTANCE: 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*27.045	43.76 PK	100.00	-56.27	1.42	264	30.26	13.50
2	*27.045	40.38 AV	80.00	-39.42	1.42	264	26.88	13.50

REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. "*" = Fundamental frequency.
6. Loop Antenna was used for all frequency below 30MHz.

EUT	Microsoft® Wireless Notebook Laser Mouse 6000	MODEL	1054
INPUT POWER	3Vdc	FREQUENCY RANGE	Below 1000 MHz
ENVIRONMENTAL CONDITIONS	26 deg. C, 64% RH, 991 hPa	DETECTOR FUNCTION	Peak / Average
TEST MODE	4	TESTED BY	Match Tsui

TEST DISTANCE: 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*27.145	43.96 PK	100.00	-56.04	1.96	342	30.46	13.50
2	*27.145	40.52 AV	80.00	-39.48	1.96	342	27.02	13.50

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. "*" = Fundamental frequency.
 6. Loop Antenna was used for all frequency below 30MHz.

EUT	Microsoft® Wireless Notebook Laser Mouse 6000	MODEL	1054
INPUT POWER	3Vdc	FREQUENCY RANGE	Below 1000 MHz
ENVIRONMENTAL CONDITIONS	26 deg. C, 64% RH, 991 hPa	DETECTOR FUNCTION	Quasi-Peak
TEST MODE	4	TESTED BY	Match Tsui

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	741.46	23.32 QP	46.00	-22.68	1.25 H	139	0.10	23.22
2	774.51	22.97 QP	46.00	-23.03	1.25 H	16	-0.58	23.56
3	811.44	23.61 QP	46.00	-22.39	2.00 H	154	-0.19	23.80
4	865.87	23.79 QP	46.00	-22.21	1.25 H	232	-0.64	24.43
5	914.47	24.77 QP	46.00	-21.23	2.50 H	313	-0.48	25.25
6	947.52	25.23 QP	46.00	-20.77	1.75 H	313	-0.36	25.59

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	35.83	17.50 QP	40.00	-22.50	1.00 V	262	3.18	14.32
2	70.82	18.93 QP	40.00	-21.07	1.00 V	310	6.81	12.12
3	826.99	23.18 QP	46.00	-22.82	1.25 V	211	-0.75	23.93
4	873.65	24.00 QP	46.00	-22.00	1.75 V	79	-0.59	24.59
5	906.69	24.77 QP	46.00	-21.23	2.00 V	58	-0.41	25.17
6	939.74	25.32 QP	46.00	-20.68	1.00 V	145	-0.19	25.51

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.

EUT	Microsoft® Wireless Notebook Laser Mouse 6000	MODEL	1054
INPUT POWER	3Vdc	FREQUENCY RANGE	Below 1000 MHz
ENVIRONMENTAL CONDITIONS	26 deg. C, 64% RH, 991 hPa	DETECTOR FUNCTION	Peak / Average
TEST MODE	5	TESTED BY	Match Tsui

TEST DISTANCE: 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*27.045	43.64 PK	100.00	-56.36	2.09	1	30.14	13.50
2	*27.045	40.29 AV	80.00	-39.71	2.09	1	26.79	13.50

REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. "*" = Fundamental frequency.
6. Loop Antenna was used for all frequency below 30MHz.

EUT	Microsoft® Wireless Notebook Laser Mouse 6000	MODEL	1054
INPUT POWER	3Vdc	FREQUENCY RANGE	Below 1000 MHz
ENVIRONMENTAL CONDITIONS	26 deg. C, 64% RH, 991 hPa	DETECTOR FUNCTION	Peak / Average
TEST MODE	6	TESTED BY	Match Tsui

TEST DISTANCE: 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*27.145	43.58 PK	100.00	-56.42	1.99	15	30.08	13.50
2	*27.145	40.11 AV	80.00	-39.89	2.09	1	26.61	13.50

REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. "*" = Fundamental frequency.
6. Loop Antenna was used for all frequency below 30MHz.

EUT	Microsoft® Wireless Notebook Laser Mouse 6000	MODEL	1054
INPUT POWER	3Vdc	FREQUENCY RANGE	Below 1000 MHz
ENVIRONMENTAL CONDITIONS	23 deg. C, 68% RH, 991 hPa	DETECTOR FUNCTION	Quasi-Peak
TEST MODE	5	TESTED BY	Match Tsui

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	737.58	22.57 QP	46.00	-23.43	3.50 H	250	-0.55	23.13
2	768.68	23.24 QP	46.00	-22.76	1.25 H	142	-0.29	23.52
3	809.50	23.86 QP	46.00	-22.14	2.00 H	127	0.08	23.78
4	871.70	24.30 QP	46.00	-21.70	1.75 H	175	-0.24	24.55
5	914.47	25.42 QP	46.00	-20.58	1.50 H	337	0.17	25.25
6	959.18	24.76 QP	46.00	-21.24	2.00 H	142	-0.86	25.62

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	35.83	17.61 QP	40.00	-22.39	1.00 V	184	3.29	14.32
2	70.82	19.14 QP	40.00	-20.86	1.00 V	277	7.02	12.12
3	828.94	23.66 QP	46.00	-22.34	1.50 V	244	-0.29	23.94
4	881.42	24.66 QP	46.00	-21.34	1.75 V	187	-0.08	24.74
5	914.47	25.03 QP	46.00	-20.97	2.00 V	160	-0.22	25.25
6	949.46	24.08 QP	46.00	-21.92	1.00 V	256	-1.53	25.61

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.

4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Radiated Emission Test



5 INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025:

USA	FCC, NVLAP, UL, A2LA
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	CNLA, BSMI, DGT
Netherlands	Telefication
Singapore	PSB , GOST-ASIA(MOU)
Russia	CERTIS(MOU)

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml. If you have any comments, please feel free to contact us at the following:

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The address and road map of all our labs can be found in our web site also.