



Product Service

FCC & IC TEST REPORT

Report Number : **68.760.11.369.01** Date of Issue: 9 February 2012

Model : **NPPC-1**

Product Type : Notebook Computer

Applicant : Novero Canada Inc

Address : 19 allstate parkway, suite 300, L3R 5A4 Markham

Ontario Canada

Production Facility : Wanlida Group Co., Ltd.

Address : Wanlida Industry Zone, Nanjing, Fujian, China 363601

Test Result : ☒ **Positive** ☐ **Negative**

Total pages including
Appendices : 18

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2 Details about the Test Laboratory

Details about the Test Laboratory

Test site1:

Company name: Jiangsu TÜV Product Service Ltd. – Shenzhen Branch
6th Floor, H Hall,
Century Craftwork Culture Square,
No. 4001, Fuqiang Road,
Futian District 518048,
Shenzhen,P.R.C.

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12 Building, Shangsha Innovation and Technology Park, Futian District,
Shenzhen, 518048, P. R. China

Telephone: 86 755 3332 2000

Fax: 86 755 3332 2000

3 Description of the Equipment Under Test

Description of the Equipment Under Test

Product: Notebook Computer

Model no.: NPPC-1

Brand Name: NOVERO

Options and accessories: NIL

Rating: DC 12V, 2.5A
Test with adaptor MPA-631 with following rating:
Input: AC 100-240V, 50/60Hz, 1A Max
Output: DC 12V, 2.5A

Antenna: Integral antenna inside enclosure of EUT, NOT accessible by end user

RF Transmission Frequency: WiFi/Bluetooth: 2400-2483.5MHz
GSM850/WCDMA850: 824-849MHz
GSM1900/WCDMA1900: 1920-1980MHz

Description of the EUT: NIL

Auxiliary Equipment and Cable Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
LCD monitor	DELL	1907FPt	7735430660P0G WD-04
Mouse	DELL	OCJ339	G0203WAZ
Headphone	ODDO	---	----
SD card	Kingston	SD4/4GBFE	----
USB flash drive	Kingston	USB/4GB	----
Printer	Lenovo	LJ2600D	----
VGA cable	DELL	Unshield	140cm
HDMI Cable	DELL	Shield	120cm
AC Power cable	DELL	Unshield	180cm



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4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart B	PART 15 - RADIO FREQUENCY DEVICES Subpart B - Unintentional Radiators
ICES-003	Spectrum Management and Telecommunications Policy Interference-Causing Equipment Standard

5 Summary of Test Results

Technical Requirements				
FCC Part 15 Subpart B, ICES-003				
Test Condition	Pages	Test Result		
		Pass	Fail	N/A
Conducted Emission AC Power Port 150kHz to 30MHz	9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spurious radiated emissions 30MHz to 18000MHz	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



6 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: XWTNPPC-1 and IC verification filing to comply with Section 15.107, 15.109 of the FCC Part 15 Subpart B and ICES-003.



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SUMMARY:

All tests according to the regulations cited on page 5 were

■ - Performed

□ - **Not** Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

Sample Received Date: 15 December 2011

Testing Start Date: 17 December 2011

Testing End Date: 29 December 2011

- Jiangsu TÜV Product Service Ltd. – Shenzhen Branch -

Tested By
Test Lab Engineer

2012-02-09
Date

Wangshansha.
Name

Wang Shanshan

Signature

Prepared By
Project Engineer

2012-02-09
Date

Peter Kang
Name

Peter Kang

Signature

Reviewed By
EMC Project Manager

2012-02-09
Date

Ken Li
Name

Ken Li

Signature

7 Technical Requirement

7.1 Conducted Emission

Test Method

- 1 The EUT was placed on a table, which is 0.8m above ground plane
- 2 The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
- 3 Maximum procedure was performed to ensure EUT compliance
- 4 A EMI test receiver is used to test the emissions from both sides of AC line

Limit

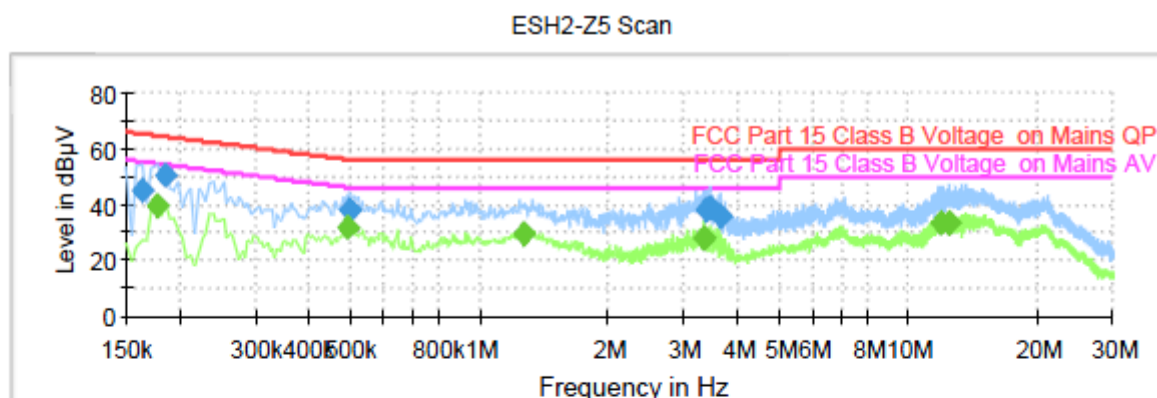
Frequency MHz	QP Limit dB μ V	AV Limit dB μ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

* Decreasing linearly with logarithm of the frequency

Conducted Emission

EUT: NPPC-1
Op Cond: Run test program
Test Spec: L&N
Comment: AC 120V/60Hz

ESH2-Z5 Scan



- FCC Part 15 Class B Voltage on Mains QP.LimitLine
- FCC Part 15 Class B Voltage on Mains AV.LimitLine
- Preview Result 1
- Preview Result 2
- ◆ Final Result 1
- ◆ Final Result 2

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.163500	45.1	FLO	N	10.1	20.2	65.3	
0.186000	50.1	FLO	N	10.1	14.1	64.2	
0.501000	38.4	FLO	L1	10.0	17.6	56.0	
3.367500	38.0	FLO	N	10.2	18.0	56.0	
3.466500	39.0	FLO	N	10.2	17.0	56.0	
3.655500	36.0	FLO	N	10.2	20.0	56.0	

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.177000	39.3	FLO	N	10.1	15.3	54.6	
0.496500	32.0	FLO	L1	10.0	14.1	46.1	
1.275000	29.8	FLO	L1	10.1	16.2	46.0	
3.340500	28.3	FLO	N	10.2	17.7	46.0	
11.976000	33.3	FLO	N	10.4	16.7	50.0	
12.471000	33.5	FLO	N	10.4	16.5	50.0	

**Test Equipment List****Conducted Emission Test**

DESCRIPTION	MODEL	MANUFACTURER	CAL. DUE DATE
Test Receiver	ESCI	Rohde & Schwarz	2012-12-31
LISN	ESH2-Z5	Rohde & Schwarz	2012-12-31

7.2 Radiated emissions

Test Method

- 1 The EUT is placed on a turntable, which is 0.8m above ground plane.
- 2 The turntable shall be rotated for 360 degrees to determine the position of maximum emission level
- 3 EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- 4 Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5 Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

Limit

FCC 15.109

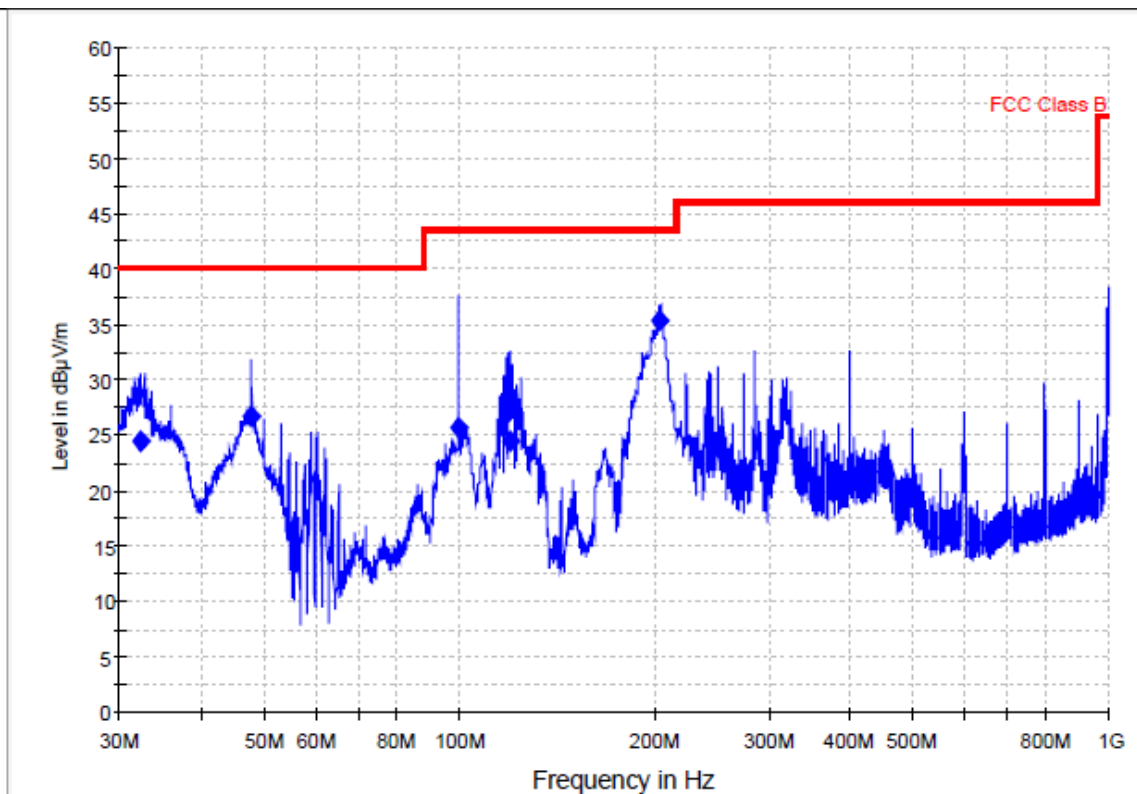
Frequency MHz	Field Strength uV/m	Field Strength dBμV/m	Detector
30-88	100	40	QP
88-216	150	43.5	QP
216-960	200	46	QP
960-1000	500	54	QP
Above 1000	500	54	AV
Above 1000	5000	74	PK

ICES-003

Frequency MHz	Field Strength dBμV/m	Detector
30-230	40	QP
230-1000	47	QP

Radiated Emission

EUT: NPPC-1
Op Cond: Run test program
Test Spec: Horizontal & Vertical
Comment: AC 120V/60Hz
Remark: FCC Part 15 B test result

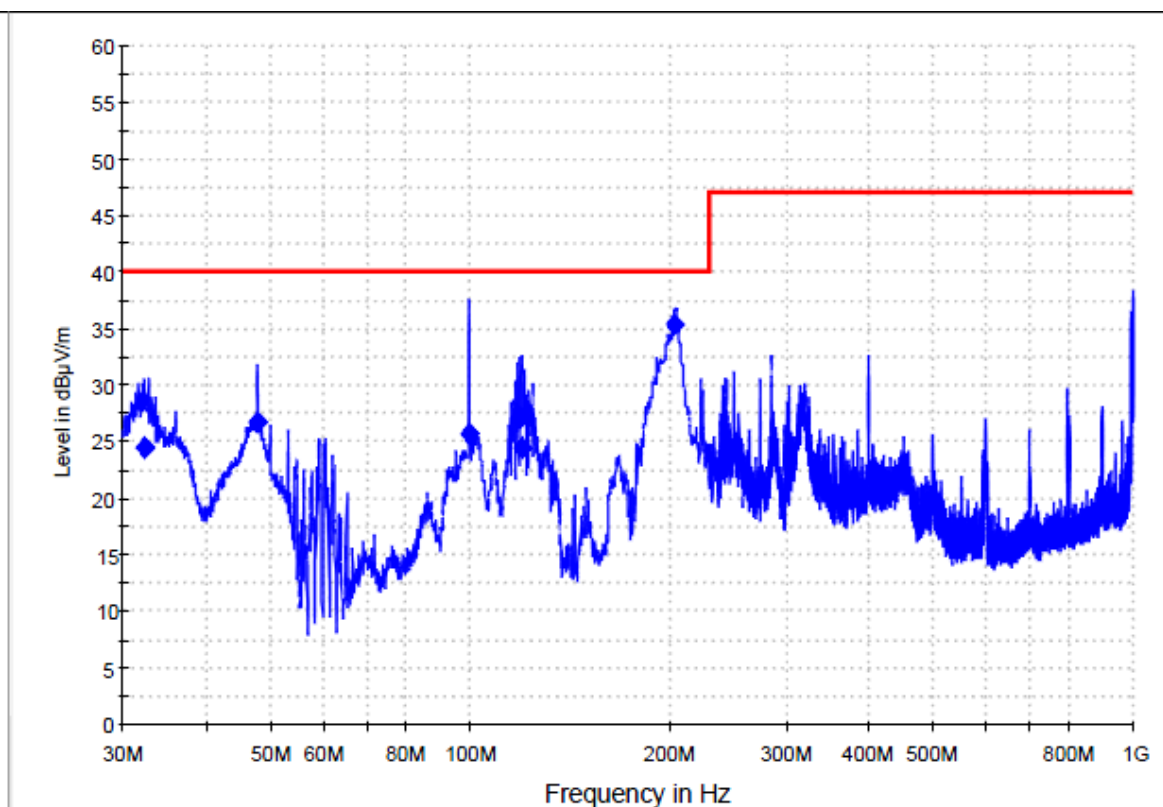


Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
32.367648	24.5	1000.000	120.000	100.0	V	145.0	-37.3	15.5	40.0
47.988555	26.7	1000.000	120.000	150.0	V	34.0	-34.9	13.3	40.0
100.042519	25.7	1000.000	120.000	150.0	H	15.0	-35.3	17.8	43.5
***	***	***	***	***	***	***	***	***	***

Radiated Emission

EUT: NPPC-1
Op Cond: Run test program
Test Spec: Horizontal & Vertical
Comment: AC 120V/60Hz
Remark: ICES-003 test result

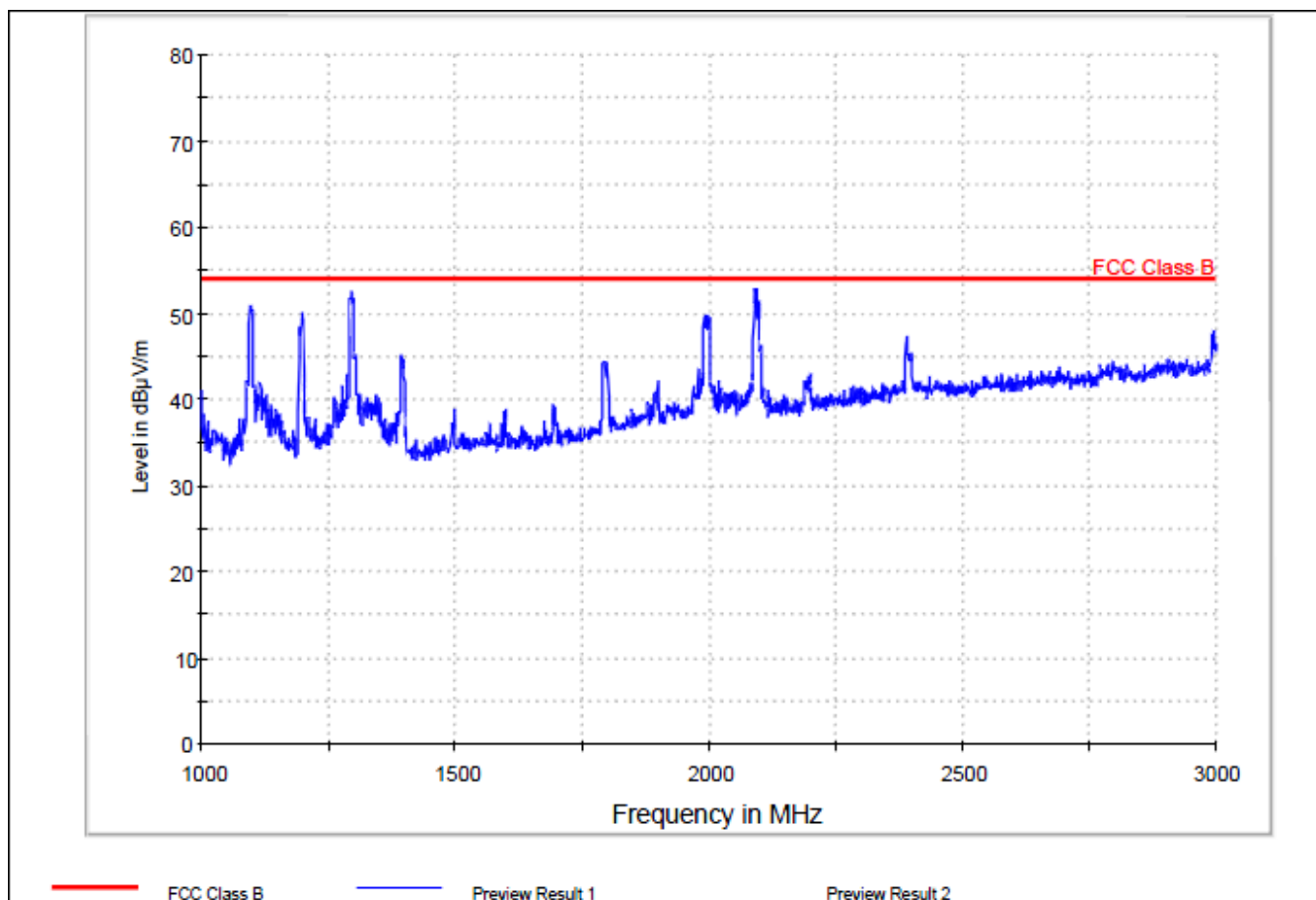


Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
32.367648	24.5	1000.000	120.000	100.0	V	145.0	-37.3	15.5	40.0
47.988555	26.7	1000.000	120.000	150.0	V	34.0	-34.9	13.3	40.0
100.042519	25.7	1000.000	120.000	150.0	H	15.0	-35.3	14.3	40.0
...

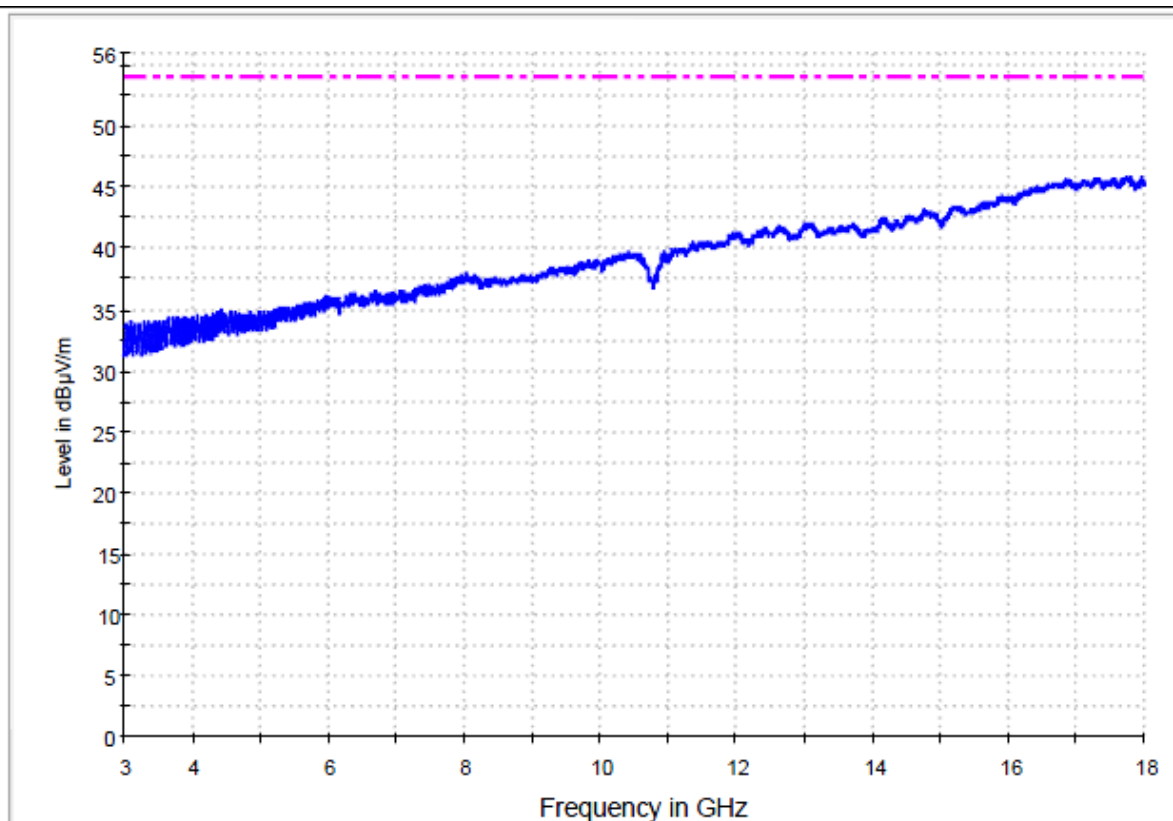
Radiated Emission

EUT: NPPC-1
Op Cond: Run test program
Test Spec: Horizontal & Vertical
Comment: AC 120V/60Hz
Remark: FCC Part 15 B test result



Radiated Emission

EUT: NPPC-1
Op Cond: Run test program
Test Spec: Horizontal & Vertical
Comment: AC 120V/60Hz
Remark: FCC Part 15 B test result



--- FCC Part 15 Class B Electric Field Strength QP+AV

— Preview Result 1

Test Equipment List**Radiated Emission Test**

DESCRIPTION	MODEL	MANUFACTURER	CAL. DUE DATE.
Test Receiver	ESCI	Rohde&Schwarz	2012-12-24
Spectrum Analyzer	FSP40	Rohde&Schwarz	2012-12-24
BiLog Antenna	9163	Schwarzbeck	2012-03-02
Dual-Ridge Waveguide Horn Antenna	3164-05	ETS-Lindgren	2012-02-18
Universal Radio Communication Tester	CMU200	Rohde&Schwarz	2012-03-25

8 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty

Items		Extended Uncertainty
RE	Field strength (dB μ V/m)	U=4.18dB(k=2) (30MHz~1GHz)
		U=4.06dB(k=2) (1GHz~18GHz)
CE	Disturbance Voltage (dB μ V)	U=2.76dB(k=2)