Accreditation
N° 1-0312

TEST REPORT

N° 60039646-539502A

FCC REGISTRASTION NUMBER 93402
INDUSTRY CANADA NUMBER IC6231

ISSUED TO : NORTEL NETWORKS
PARC D ACTIVITE DE MAGNY- CHATEAUFORT
78928 YVELINES CEDEX 09
FRANCE

SUBJECT : **ELECTROMAGNETIC COMPATIBILITY TESTS ACCORDING TO THE PUBLICATIONS 47 CFR PART 15 CLASS B of 2005 AND ICES003 CLASS B of 2004**

Apparatus under test :

- Product : BASE STATION
- Trade mark : NORTEL
- manufacturer : NORTEL NETWORKS
- type : S12000 OUTDOOR BTS (DUAL BAND GSM850/PCS1900)
- Serial number : -

Test date : December 2005

Composition of document : 14 pages + 2 related documents

Fontenay-aux-Roses, December 17th, 2005

The technical manager,

Sébastien AOUT

LABORATOIRE CENTRAL
DES INDUSTRIES ELECTRIQUES
S.A. au capital de 15.745.984 €
RCS Nanterre B 408 363 174
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1 – GENERAL

1.1 - Manufacturer identification

Manufacturer : NORTEL NETWORKS
Address : PARC D'ACTIVITE DE MAGNY- CHATEAUFORT
78928 YVELINES CEDEX 09

2 - TESTING PROGRAM

The documents presents the tests which have performed to validate of the integration of the GSM 850MHz HEPA From ANDREWS modules on S12000 OUTDOOR BTS (TX FCC ID: AB6S12000BTS ;IC: 332AD-S12KBTS).

For information , this modules were integrated too on the following base station :

- S12000 Indoor BTS (TX FCC ID: AB6S12000BTS ; IC: 332AD-S12KBTS)
- S8000 Outdoor BTS (TX FCC ID: AB6S8000BTS ; IC: 332AD-S8KBTS)
- S8000 Indoor BTS (TX FCCID : AB6S8000BTS ; IC: 332AD-S8KBTS)

Test have been carried out according to the following specifications :

- Measurement of continuous conducted disturbances in the frequency range 0.15 MHz to 30 MHz - publication 47CFR Part. 15 subpart C (§ 207) class B of 2000 and standard CISPR 22 (§9) class B of 2003
- Measurement of radiated disturbances in the frequency range 30 MHz to 18 GHz - publication 47CFR Part. 15 subpart C (§209), class B of 2000
- Measurement of radiated disturbances in the frequency range 30 MHz to 1 GHz - standard CISPR 22 (§10) class B of 2003

3 - EQUIPMENT CHARACTERISTICS

3.1 - Label identification

No number plate statement.
(see hardware and software descriptions of the related document provided by NORTEL , reference PE/BTS/DJD/017192).

3.2 - Equipment configuration

The configuration of the equipment under test is described on the related documents reference LCIE 60039646-539500-C-TP-FCC and NORTEL - PE/BTS/DJD/017192.

The position of apparatus under test is given in the photographs in annex.

During the measurements, the apparatus was operating in transmitter mode and the output transmitters were connected to 50 ohms loads.
The emissions frequencies were 869.2 MHz ; 873.60MHz ; 893.8MHz for GSM850 and 1930.20 MHz ; 1962.2MHz ; 1989.6MHz for PCS1900 , and all transmitters were at maximum power 60 Watts (in BCCH mode without frequency hopping).

The frame of the BTS was grounded.

4 - OPERATING CONDITIONS

The apparatus was placed in an open field site located rue Théo Bonhomme at ECUELLES (Seine-et-Marne) was powered with a A.C. source delivering 2 x 108-60Hz (split phase) or a A.C. source delivering 230-50Hz (single or three phase).

Climatic conditions: ambient temperature : 23 °C
relative humidity : 45%
atmospheric pressure : - hPa

5 - TESTING RESULTS

Apparatus class : B

TEST	TEST SPECIFICATION	RESULTS			
		P	F	NA	Rem
Limits for conducted disturbances at mains ports	Frequency range : 0.15MHz to 30 MHz				
	Diagrams No 1 and 2 (split phase 2x108v –60Hz)	[X]	[ ]	[ ]	[ ]
	Diagram No 3 (single phase 230v-50Hz)	[X]	[ ]	[ ]	[1]
	Diagrams No 4 and 5 (three phase 230v-50Hz)	[X]	[ ]	[ ]	[1]
Limits for radiated disturbances	Frequency range : 30 MHz to 18000 MHz				
	Antennas :				
	- bilog (30 MHz to 1000 MHz)	[X]	[ ]	[ ]	[ ]
	- Horn (1 GHz to 18 GHz)	[X]	[ ]	[ ]	[2]
	Diagrams No 6 and 7, and table n°1				

P : pass - F : Fail - NA : not applicable - Rem : remark

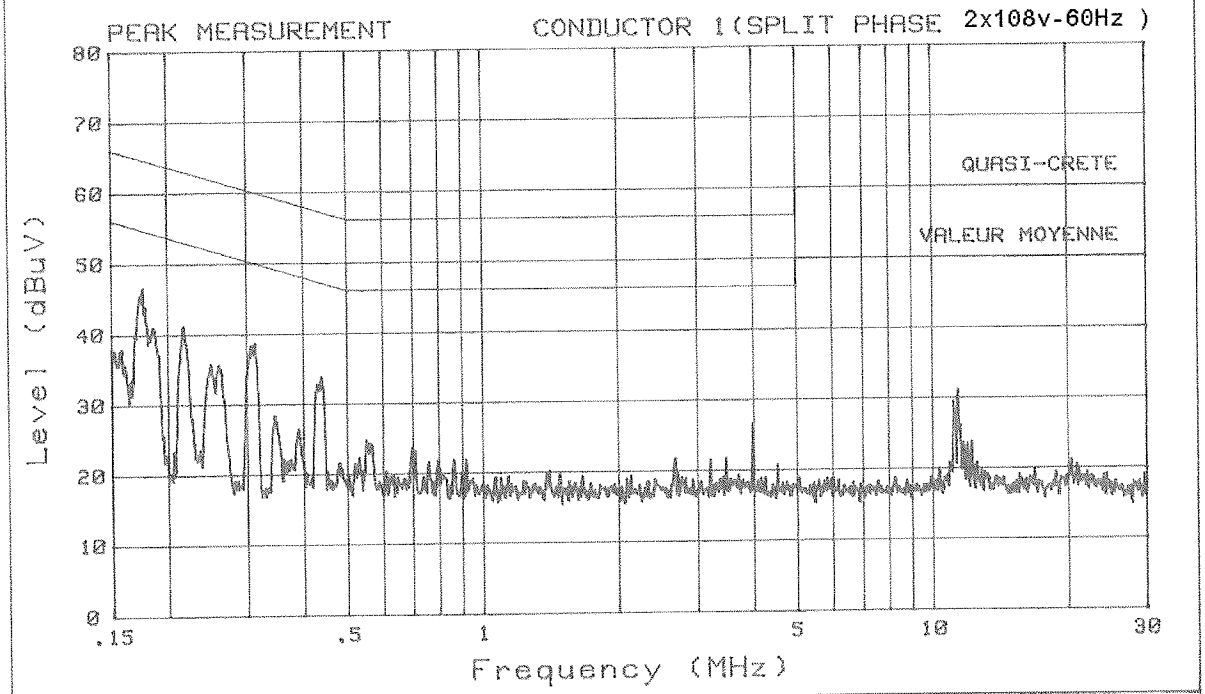
Remark N° 1 : required by the customer
Remark N° 2 : no frequency between 2 GHz to 18 GHz

6 - CONCLUSION

The apparatus of manufacturer NORTEL and model S12000 OUTDOOR BTS (DUAL BAND GSM850/PCS1900) is in compliance with the requirements of the publications 47 CFR PART 15 Subpart C (§207 and §209 in the frequency range 30 MHz to 18 GHz) class B and ICES003 class B.

DIAGRAM N°1

FCC PART .15 CLASS B	NORTEL BTS TYPE :S12000



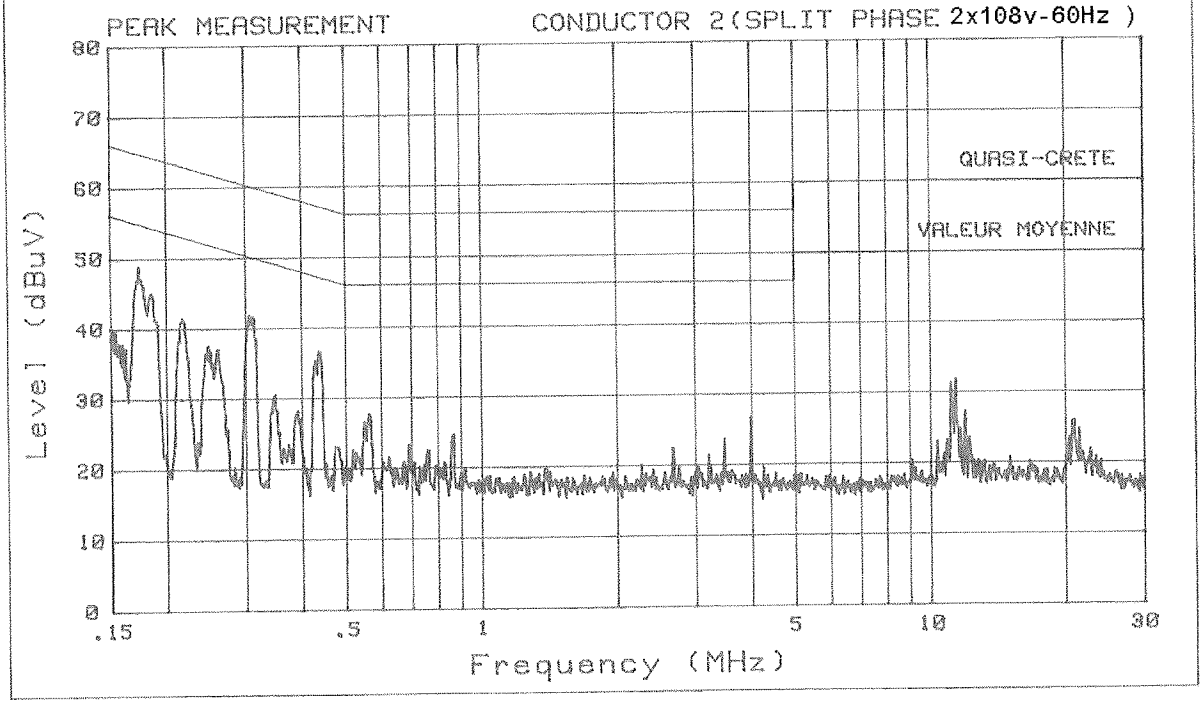


DIAGRAM N°2

FCC PART .15 CLASS B	NORTEL BTS TYPE :S12000

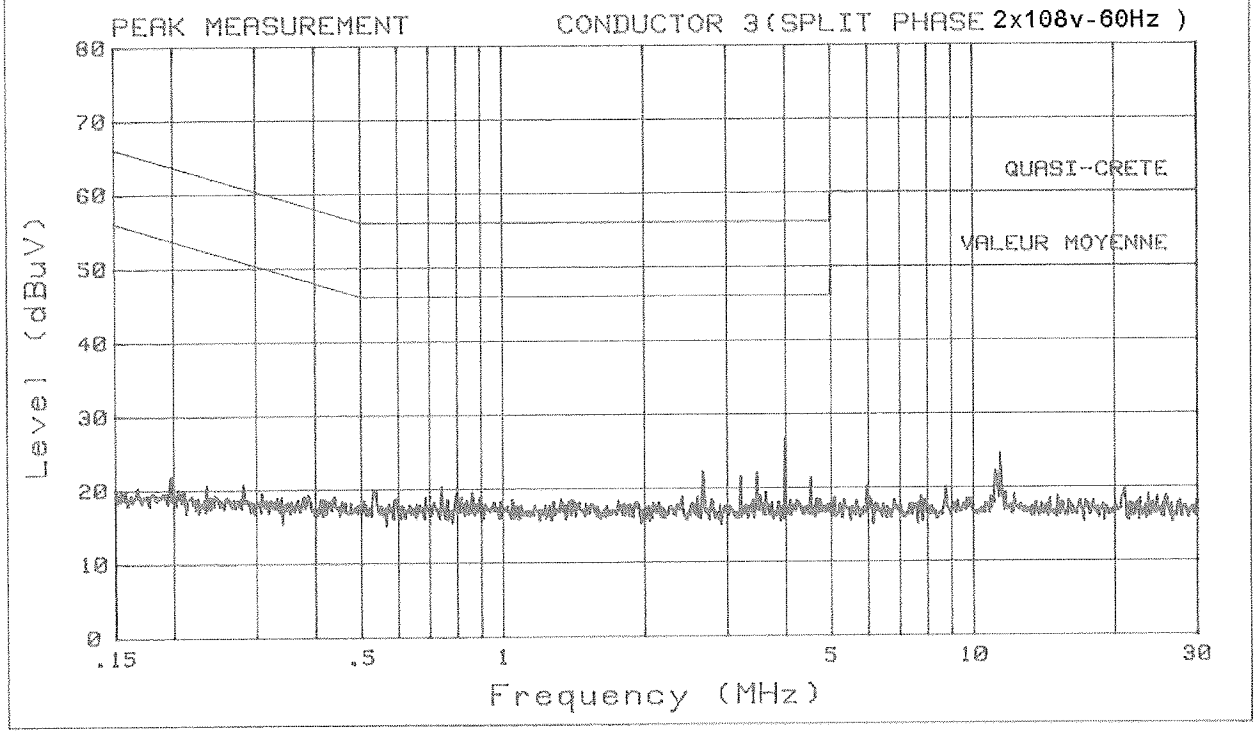
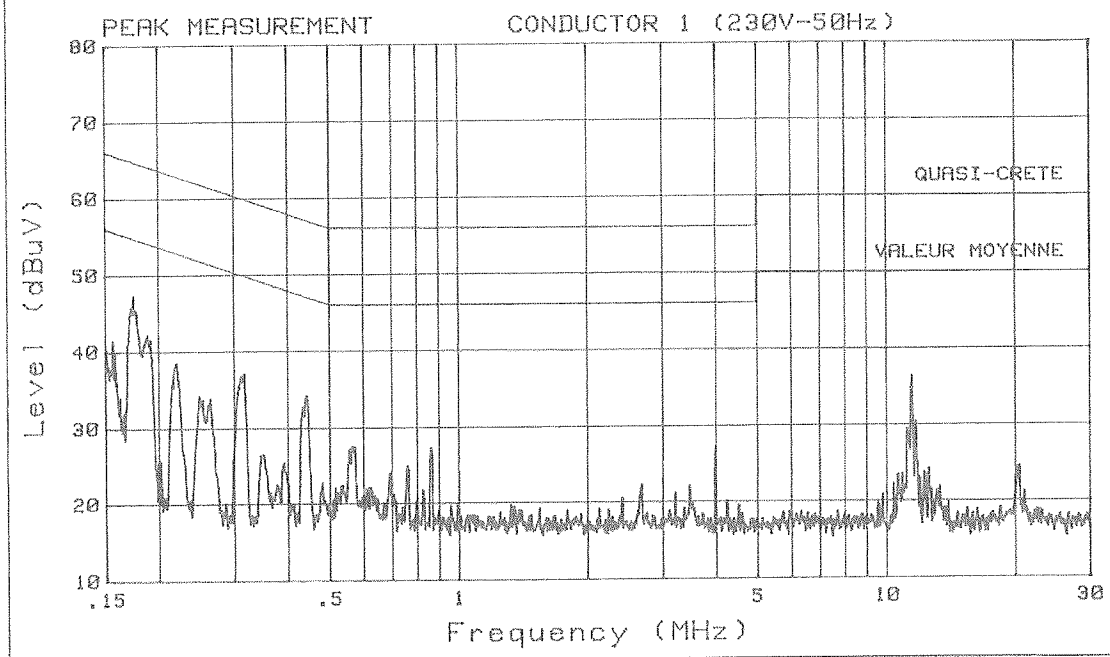


DIAGRAM N°3

FCC PART .15 CLASS B	NORTEL BTS TYPE :S12000



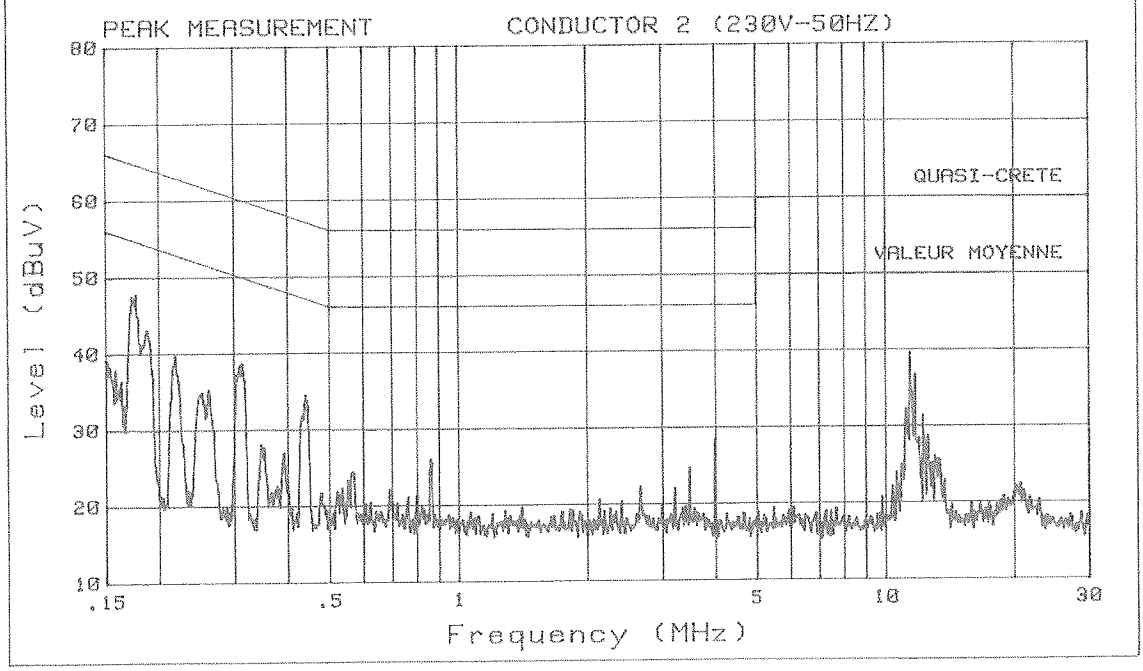
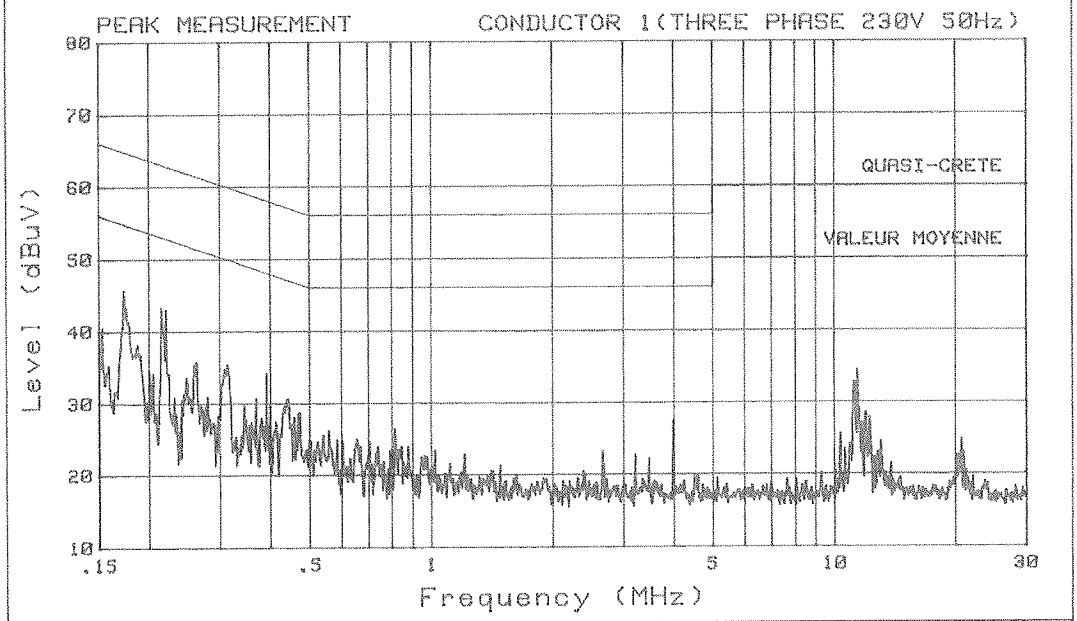


DIAGRAM N°4

FCC PART 15 CL B	NORTEL BTS TYPE :S12000



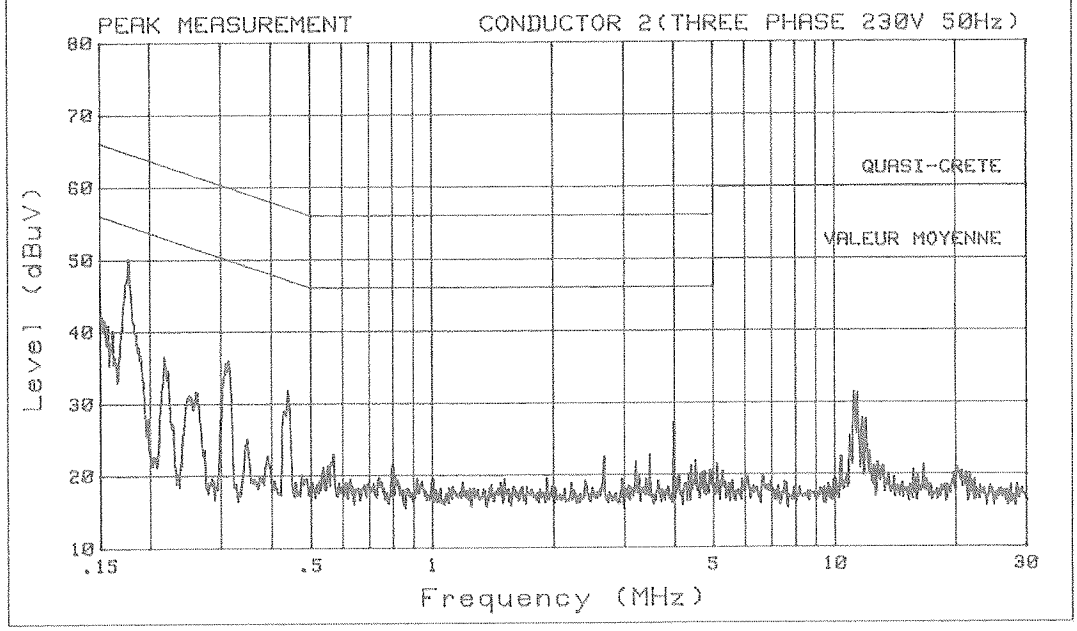
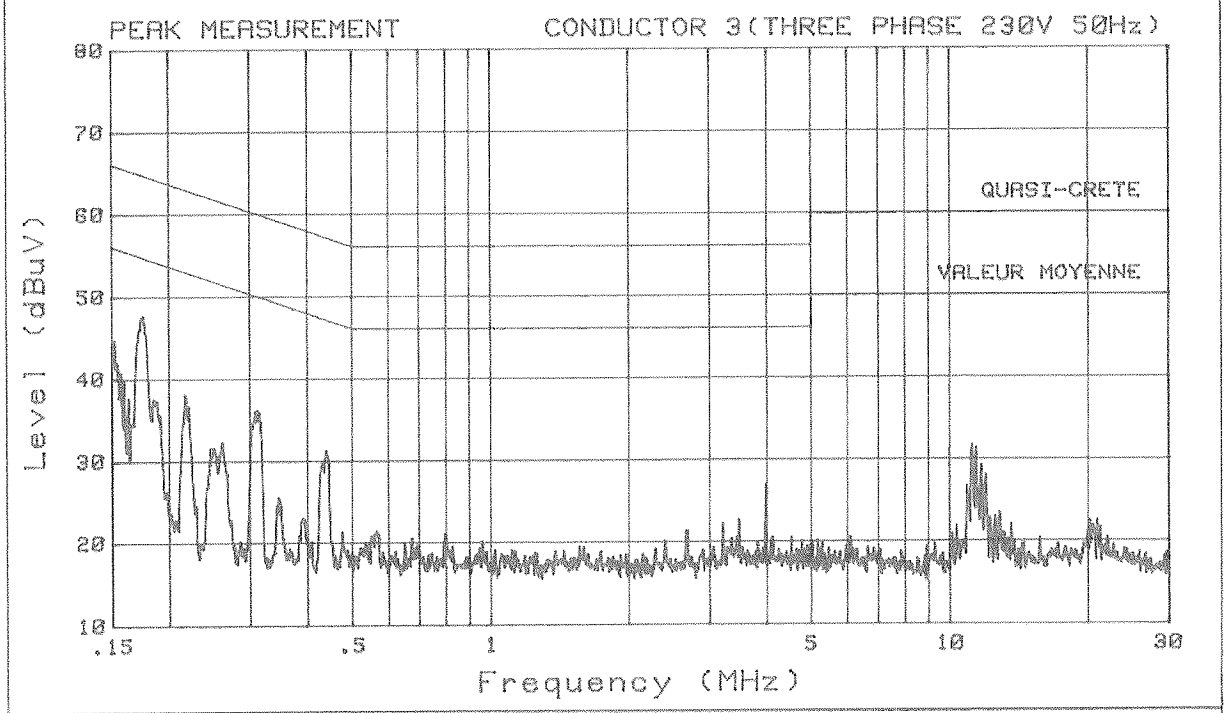


DIAGRAM N°5

FCC PART 15 CL B	NORTEL BTS TYPE :S12000



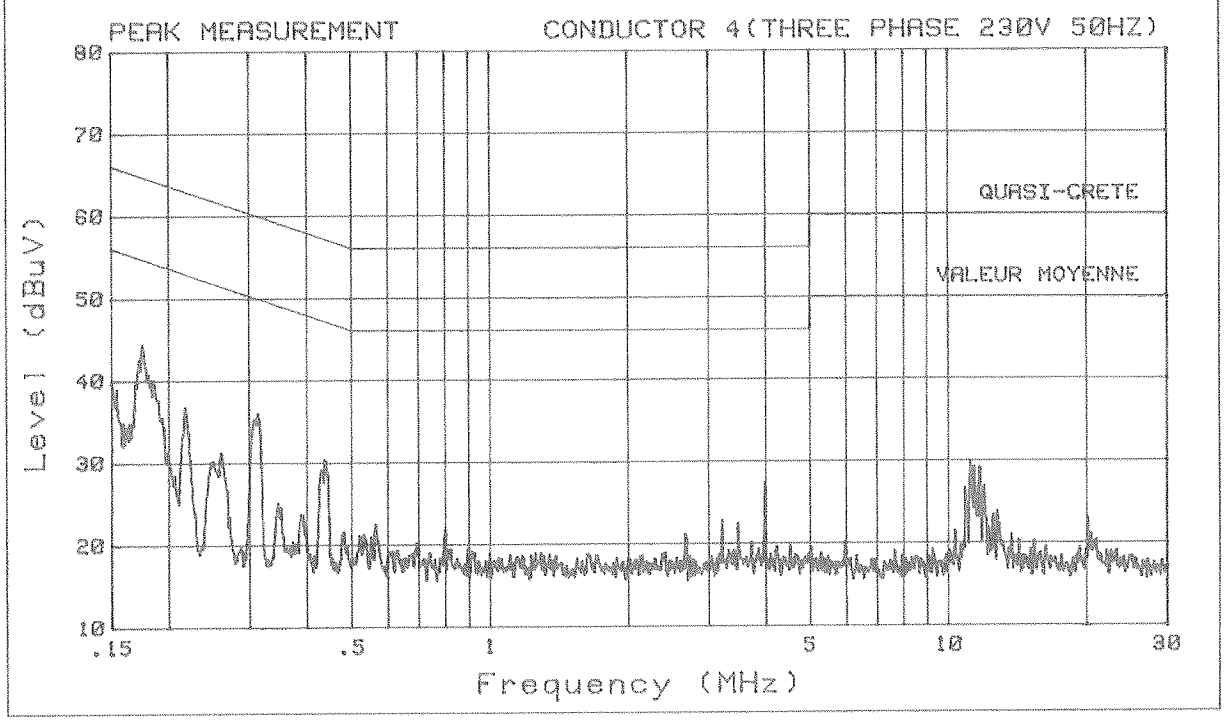


DIAGRAM N°6

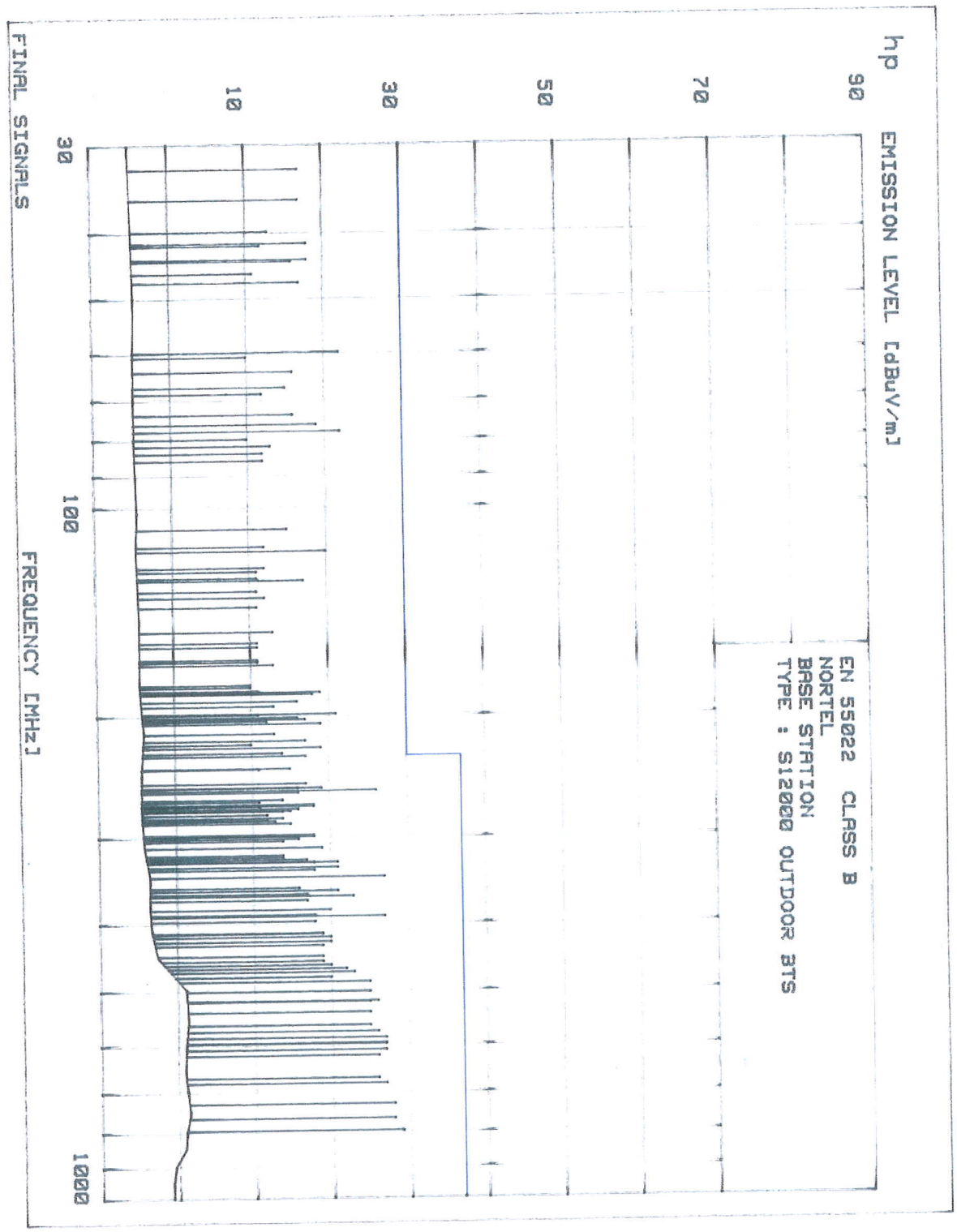

hp
EMISSION LEVEL [dBuV/m]
90
70
50
30
10
EN 55022 CLASS B
NORTEL
BASE STATION
TYPE : S12000 OUTDOOR BTS
FINAL SIGNALS
30
100
1000
FREQUENCY [MHz]

DIAGRAM N°7

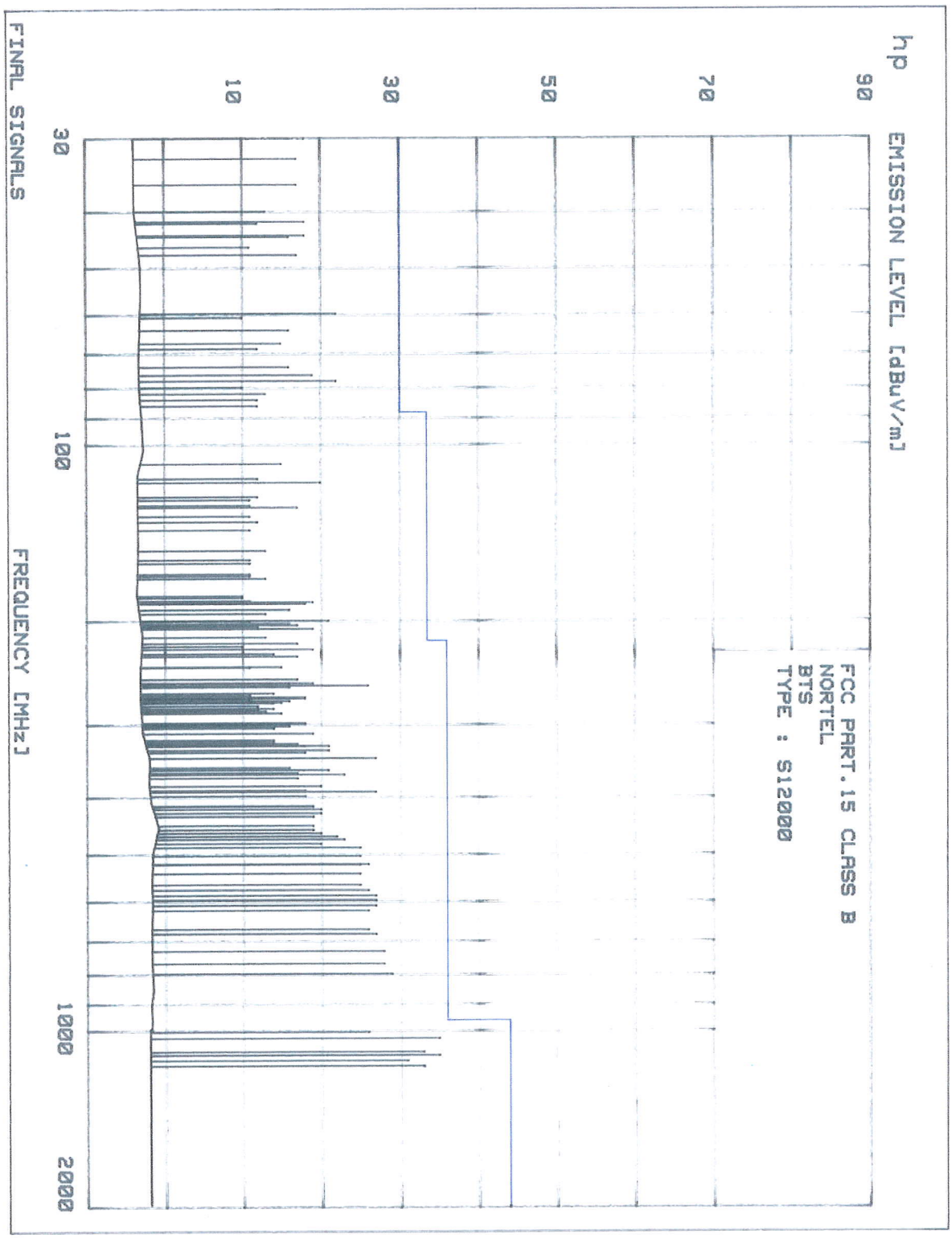

hp
EMISSION LEVEL [dBuV/m]
90
70
50
30
10
FCC PART.15 CLASS B
NORTEL
BTS
TYPE : S12000
FINAL SIGNALS
FREQUENCY [MHz]
30
100
1000
2000

TABLE N°1

Measurement at transmitters frequencies for indicative level

Frequency (MHz)	Channel	Level (dBµV/m)
869.20	Bottom	66
873.60	Middle	68
893.8	Top	65
1930.2	Bottom	70
1962.2	Middle	70
1989.6	Top	69