



EXHIBIT 2B

S12000 EMC Report

Applicant: Northern Telecom Ltd.

For Certification on:

AB6INDS12000



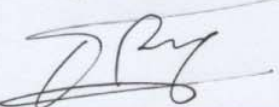
TEST REPORT

**CFR 47 Part 15
CFR 47 Part 22
and CFR 47 24**

S12000 indoor (Base + Extension cabinets)

N°149016DK

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EMC TEST REPORT
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Written by : D.RAUD

19 July 2002

Identification : 149016DK

Summary

Table with 2 columns: Section Name and Page Number. Includes sections like APPLICANT, PRODUCT DESCRIPTION, GENERAL TEST CONDITIONS, etc.

Appendixes 1-1 and 1-2
Appendixes C1 to C14

Applicant:

SANMINA SCI
(Yoann BRUNETIERE)
19 rue du Centre - CT506
Guyancourt
78928
FRANCE

Product description

Product: S12000 indoor (Base + Extension cabinets)

Manufacturer :

NORTEL NETWORKS
38, rue Paul Cézanne
Guyancourt
78928 Yvelines

Responsible of the equipment: (Yoann BRUNETIERE)

Product type: BTS S12000 INDOOR 850/1900 MHz in S222_222 configuration

Ref.:NTU420AA P2 Serial: SNMN75007YBF (base cabinet)

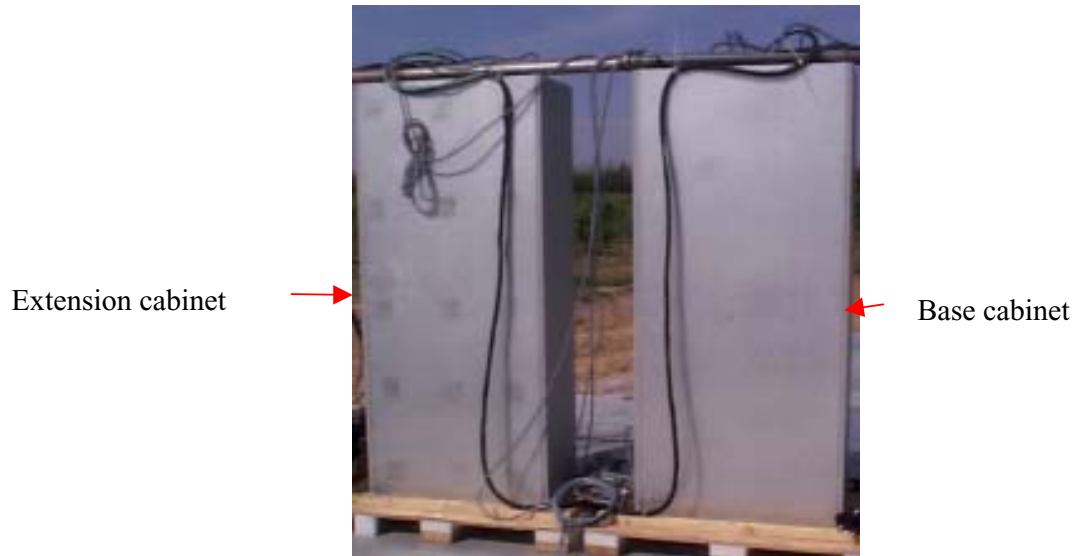
Ref.:NTU420AA P2 Serial: SNMN75007Y?? (extension cabinet)

Manual: none

Power supply: 0/-48Vdc , tested at : 0/-48Vdc

PRODUCT PICTURE:





PRODUCT COMPOSITION:

Composition: appendixes C10 to C13

Interconnection and cables type: appendix C9



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UTILISATION:

Base Transceiver Station

General test conditions**AUXILIARY EQUIPMENT:**

AC/DC power supply; mark SORENSON; model DHP60-220M1
S/N: 0214A9018

WORKING MODE DURING TEST

Measurements are done in transmitter mode (all transmitters at maximum power , in BCCH mode without frequency hopping), and in receiver mode

Channels configuration for the test:

DRX#	Base cabinet		Extension cabinet	
	CHANNEL #	FREQUENCY (MHz)	CHANNEL #	FREQUENCY (MHz)
0	172	878.0	512	1930.2
1	194	882.4	566	1941.0
2	128	869.2	620	1951.8
3	150	873.6	674	1962.6
4	216	886.8	728	1973.4
5	238	891.2	782	1984.2
6	539	1935.6	139	871.4
7	593	1946.4	161	875.8
8	647	1957.2	183	880.2
9	701	1968.0	205	884.6
10	755	1978.8	227	889.0
11	810	1989.8	251	893.8



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Reference standards choice

The product is information technology equipment . The product standard CFR47 Part 15 has to be used for emission (class B because of residential, commercial and light industry use).

The product is a personal communication service equipment

So, applicable standards are:

CFR47 Part 15 class B (2001)

CFR47 part 22, (2000)

CFR47 part 24, (2000)

Interpretation and remarks:

This equipment complies with limits standards for EMC measurements.

IMPORTANT REMARK :

Substitution method was not performed as there was nor spurious emission neither emission within the limits detected in prescan as shown by appendixes 1-1 and 1-2

The EUT Plot on pages 14 and 17 shows measured noise floor levels detected while testing the BTS 12000



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Test according to CFR 47 Part 15 Class B

Tests performed by Daniel RAUD at GYL Technologies laboratories in July, 17 and 18 of 2002 .

REFERENCE DOCUMENTATION:

FCC CFR 47 part 0 to 15, (2001)
ANSI C63.4 (1992).

CONDUCTED DISTURBANCE AT INPUT POWER ACCESS :

Not applicable: powered by -48Vdc

RADIATED DISTURBANCE :

Limit :

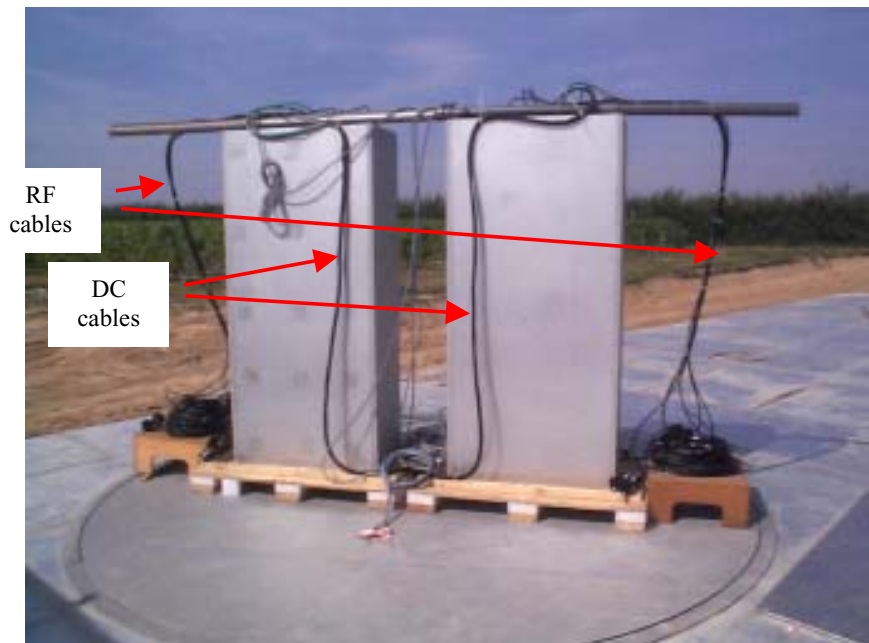
Class B of USA standard regulation CFR 47 part 15 subpart B for radiated emission limit (§15.109 class B device) for unintentional radiator and (§15.209 class B device) for intentional radiator

General measurement conditions.

Conforms to ANSI C63.4.

Diagram in 0° position, angles are positives in the reverse clock wise.

Equipment under test.



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Method of measurement.

Method of measurement and test installation according to Section 8 of the ANSI C63.4 measurement standard.

Measurement are done at 10m in a free area.

We try to obtain a maximum at all frequencies by moving the product orientation and antenna polarisation. The height of the antenna can vary from 1 m to 4 m.

Test equipment used :

APPARATUS	MANUFACTURER	REFERENCE	SERIAL NUMBER	Date of verification
Free field open area test site				Jul-02
Receiver	Rohde & Schwarz	ESI 7	834638/007	Dec-01
*RECEIVERS 30 MHz to 1000 MHz				
Receptive chain :	Hewlett Packard	HP 8574 A	-	-
Q-P Adaptator	Hewlett Packard	HP 85650A	2811A01134	Jan-02
Spectrum analyser	Hewlett Packard	HP 8568 B	2816A116603	Jan-02
Preselector	Hewlett Packard	HP 685685A	287A00784	Jan-02
REMS Software	Hewlett Packard	HP 85879A	-	-
for fieldstrength		rev A.02.01		
*ANTENNAS				
Bilog	CHASE	CBL-6112	2434	Nov-01



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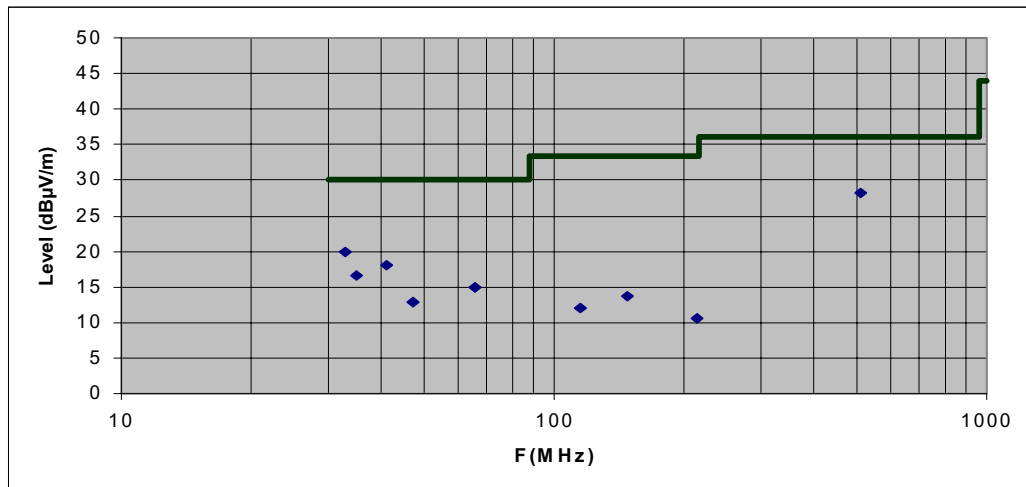
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Results :

Highest lines table (spurious signals):

Frequency (MHz)	Quasi-peak (dBμ V/m)	Std limit (dBμ V/m)	Margin dB	Angle (Deg.)	Site (cm)	Polarisation	Comment
32.762	20.0	30	-10	175	300	V	
34.834	16.6	30	-13.4	270	180	V	
40.960	18.0	30	-12	95	290	V	
47.090	12.8	30	-17.2	25	160	V	
65.520	15.0	30	-15	280	160	V	
114.688	12.0	33.5	-21.5	285	100	V	
147.455	13.8	33.5	-19.73	220	270	H	
212.991	10.6	33.5	-22.9	360	140	V	
512.000	28.3	36	-7.7	325	320	H	

No spurious signal found over 512,000 MHz



Pre-Scan measurement to identify spurious emissions from EUT at D=3m on appendixes 1-1 and 1-

INTERPRETATION AND REMARKS:

Conform



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Measurement at transmitters frequencies (D=10m) for indicative level transmitters output connected to resistive 50 ohms loads .

F (MHz)	Peak Level (dB μ V/m)	Antenna polarity	F (MHz)	Peak Level (dB μ V/m)	Antenna polarity
878.0	66.8	H	871.4	72.8	H
882.4	63	H	875.8	69.9	H
869.2	48.7	H	880.2	53.1	H
873.6	86.2	H	884.6	51.7	H
886.8	63.5	H	889.0	66	H
891.2	64	H	893.8	68.2	H

Test according to CFR 47 Part 22

Subpart E: § 24.238

Tests performed by Daniel RAUD at GYL Technologies laboratories in July, 18 of 2002 .

REFERENCE DOCUMENTATION:

CFR 47 part 20 to 39, (2000)

ANSI C63.4 (1992).

RADIATED DISTURBANCE :

General measurement conditions.

Conforms to Section 8 of the ANSI C63.4 measurement standard.



Method of measurement.

Method of measurement and test installation according ANSI C63.4.

Measurement are done at 1m in a free area.

We try to obtain a maximum at all frequencies by moving the product orientation and antenna polarisation. The height of the antenna can vary from 1 m to 4 m.

Measurements done in transmitter mode (all transmitters at maximum power 30 W, in BCCH mode without frequency hopping) and in receiver mode.



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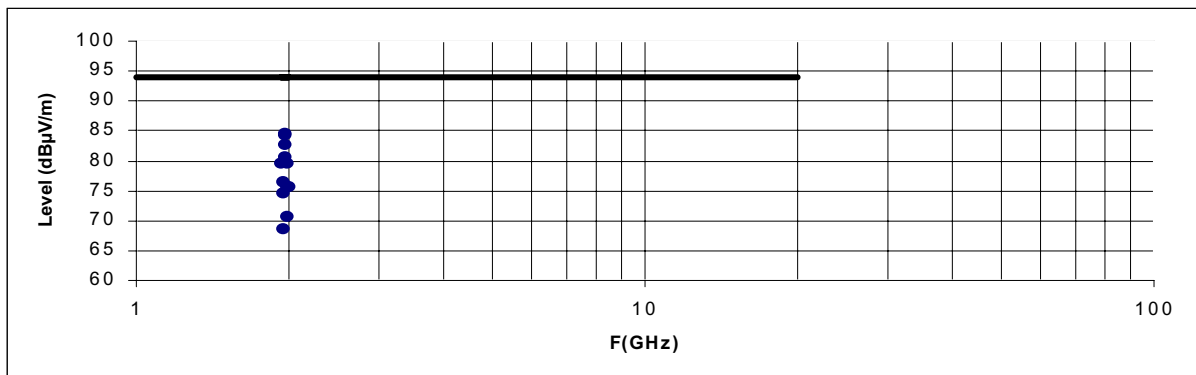
Test equipment used :

APPARATUS	MANUFACTURER	REFERENCE	SERIAL NUMBER	Date of verification
Free field open area test site				Jul-02
Horn antenna	EMCO	9504 - 4496	3115	Apr-00
Spectrum analyzer(20Hz-26.5GHz)	Rohde & Schwarz	FSEM30	107 985 00.30	Apr-01

Results :

1 - Measurement at transmitters frequencies for indicative level
transmitters output connected to resistive 50 ohms loads.

FREQUENCY (GHz)	Measure (dBμV)	AF (A)	Loss cable (B)	Correc.Factor (A)+(B)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1						93.9	
1.9356	46.60	27.9	2	29.9	76.50	93.9	-17.4
1.9464	38.69	27.9	2	29.9	68.59	93.9	-25.3
1.9572	54.59	27.9	2	29.9	84.49	93.9	-9.4
1.9680	50.68	27.9	2	29.9	80.58	93.9	-13.3
1.9788	45.85	27.9	2	29.9	75.75	93.9	-18.2
1.9898	45.85	27.9	2	29.9	75.75	93.9	-18.2
1.9302	49.75	27.9	2	29.9	79.65	93.9	-14.3
1.9410	44.78	27.9	2	29.9	74.68	93.9	-19.2
1.9518	52.94	27.9	2	29.9	82.84	93.9	-11.1
1.9626	54.41	27.9	2	29.9	84.31	93.9	-9.6
1.9734	49.58	27.9	2	29.9	79.48	93.9	-14.4
1.9842	40.79	27.9	2	29.9	70.69	93.9	-23.2
20						93.9	





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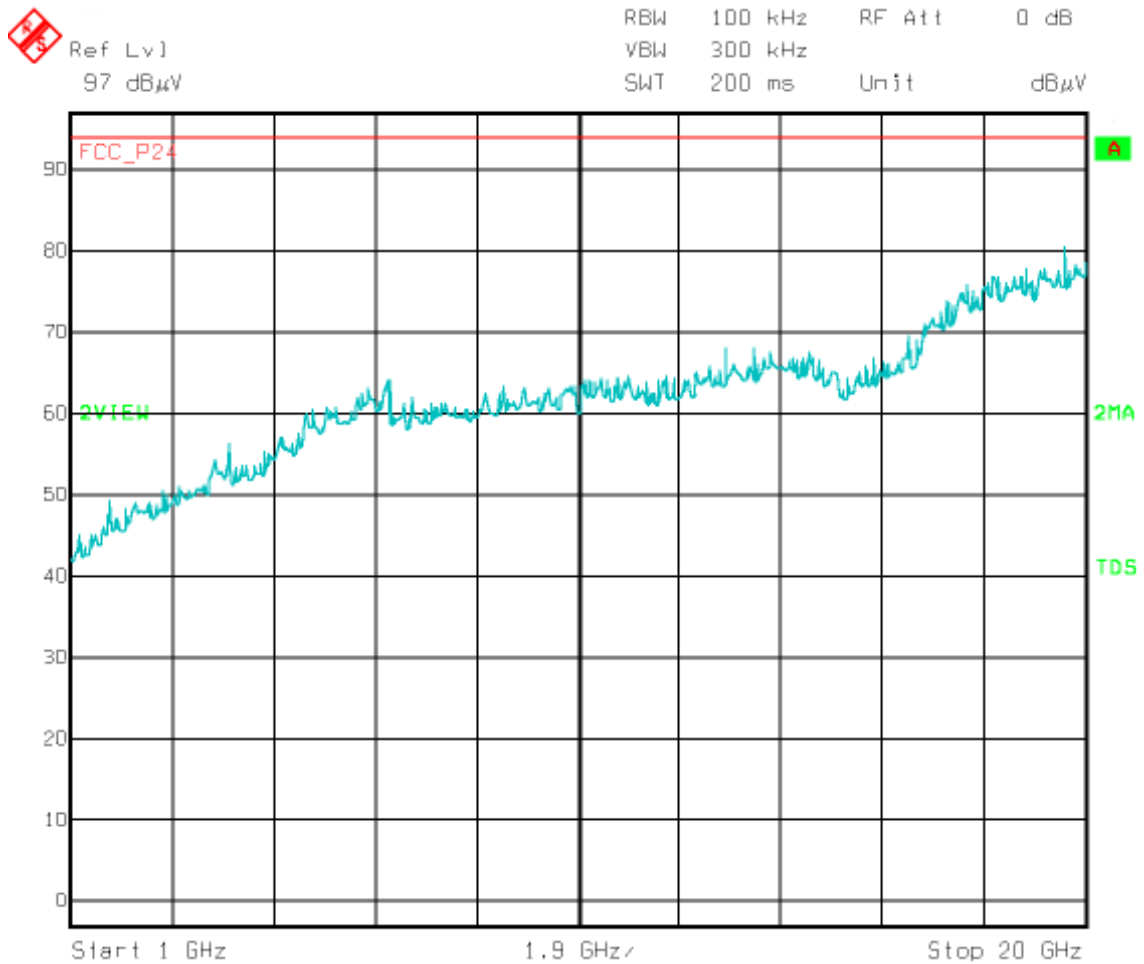
2 - Spurious emissions measurement.

No spurious emission found which level upper to noise level in 100KHz bandwidth (harmonics transmitters frequencies under noise level).

INTERPRETATION AND REMARKS:

Conform

Spectrum of noise level from 1GHz to 20GHz including loss cable and antenna factors.



Test according to CFR 47 Part 24

Subpart E: § 24.238

Tests performed by Daniel RAUD at GYL Technologies laboratories in July, 18 of 2002 .

REFERENCE DOCUMENTATION:

CFR 47 part 20 to 39, (2000)

ANSI C63.4 (1992).

RADIATED DISTURBANCE :

General measurement conditions.

Conforms to Section 8 of the ANSI C63.4 measurement standard.



Method of measurement.

Method of measurement and test installation according ANSI C63.4.

Measurement are done at 1m in a free area.

We try to obtain a maximum at all frequencies by moving the product orientation and antenna polarisation. The height of the antenna can vary from 1 m to 4 m.

Measurements done in transmitter mode (all transmitters at maximum power 30 W, in BCCH mode without frequency hopping) and in receiver mode.

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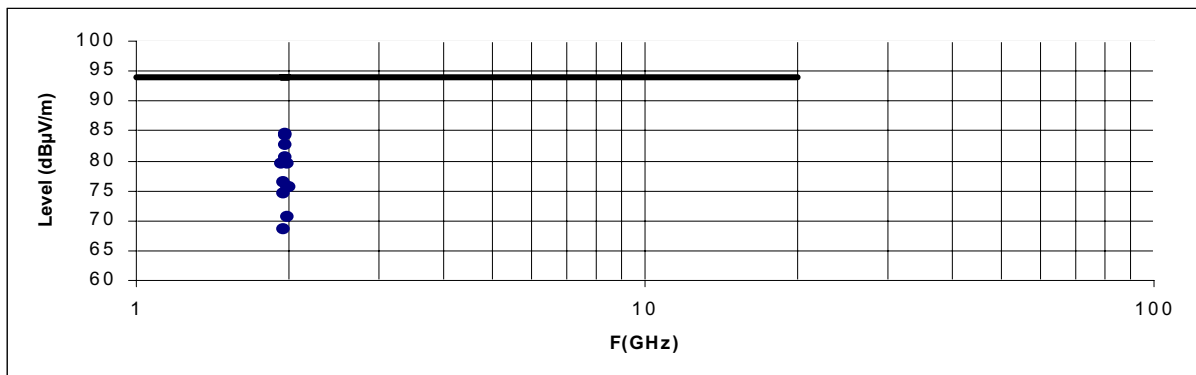
Test equipment used :

APPARATUS	MANUFACTURER	REFERENCE	SERIAL NUMBER	Date of verification
Free field open area test site				Jul-02
Horn antenna	EMCO	9504 - 4496	3115	Apr-00
Spectrum analyzer(20Hz-26.5GHz)	Rohde & Schwarz	FSEM30	107 985 00.30	Apr-01

Results :

1 - Measurement at transmitters frequencies for indicative level
transmitters output connected to resistive 50 ohms loads.

FREQUENCY (GHz)	Measure (dBμV)	AF (A)	Loss cable (B)	Correc.Factor (A)+(B)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1						93.9	
1.9356	46.60	27.9	2	29.9	76.50	93.9	-17.4
1.9464	38.69	27.9	2	29.9	68.59	93.9	-25.3
1.9572	54.59	27.9	2	29.9	84.49	93.9	-9.4
1.9680	50.68	27.9	2	29.9	80.58	93.9	-13.3
1.9788	45.85	27.9	2	29.9	75.75	93.9	-18.2
1.9898	45.85	27.9	2	29.9	75.75	93.9	-18.2
1.9302	49.75	27.9	2	29.9	79.65	93.9	-14.3
1.9410	44.78	27.9	2	29.9	74.68	93.9	-19.2
1.9518	52.94	27.9	2	29.9	82.84	93.9	-11.1
1.9626	54.41	27.9	2	29.9	84.31	93.9	-9.6
1.9734	49.58	27.9	2	29.9	79.48	93.9	-14.4
1.9842	40.79	27.9	2	29.9	70.69	93.9	-23.2
20						93.9	





SANMINA - SCI

S12000 Indoor 850 / 1900 MHz : EMC test Plan

Reference: Nortel-STP-00346
Version: 01-en
Status: Approved
Date: 08/07/2002

Product Name: S12000 BTS
Frequency: 850 / 1900 MHz
Discipline: EMC

Author: Y. BRUNETIERE

Verified by: T. LUCHINI

Approved by: C. CHANSARD

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PUBLICATION HISTORY

VERSION	DATE	AUTHOR	MODIFICATION
01-en	08/07/2002	Y. BRUNETIERE	Creation of the document

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1. INTRODUCTION

This objective of this document is to present the test plan for EMC testing on the S12000 BTS Indoor configured in 850 / 1900 MHz.

This strategy is the following :

- Realize the qualification in the Indoor 850/1900 MHz in S222_222 configuration (Base & Extension cabinet).

The qualification on the S12000 Indoor BTS will be done according to the FCC Part 15, 22 & 24 as defined by Nortel Networks.

This document presents then the requirements Sanmina needed to ensure the results of the qualification during the qualification phase, and also the tests that will be realized during the two steps described above.

This document applied to :

- Product : S12000 Indoor
- Manufacturer : Nortel Networks
- Frequencies : 850 / 1900 MHz
- Configuration : S222_222 (Base & Extension cabinet)
- Ancillary : TBD
- Options : TBD

2. APPLICABLES DOCUMENTS

[A1]	CFR 47 Part 2	Code of Federal Regulations - Part 2 - Frequency Allocations and Radio Treaty Matters. General Rules and Regulations. Date : June 1996.
[A2]	CFR 47 Part 15	Code of Federal Regulations - Part 15 - Radio Frequency Devices.
[A3]	CFR 47 Part 22	Code of Federal Regulations - Part 22 - Public Mobile Services.
[A4]	CFR 47 Part 24	Code of Federal Regulations - Part 24 - Personal Communications Services. Date : June 1996.

3. TEST PLAN SUMMARY

The following table presents the test plan summary for the qualification of the S12000 Indoor in 850/1900 MHz configuration.

Test	Required	Test Specification	Reference Method	Configuration of the EUT
Radiated Emissions	Yes	FCC Part 15	Section 15.109	S12000 Indoor in S222_222
Radiated Emissions	Yes	FCC Part 22	Section 22.917	
Radiated Emissions	Yes	FCC Part 24	Section 24.238	

4. RADIATED EMISSION TESTS

Standard Coverage : FCC Part 15.109, FCC Part 22.917 & FCC Part 24.238

Intend :

- (a) Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonics and other spurious emission. For this test, single sideband, independent sideband, and controlled carrier transmitters shall be modulated under the conditions specified in paragraph (c) of 2.989, as appropriate. For equipment operating on frequencies below 890 MHz, an open field test is normally required, with the measuring instrument antenna located in the far-field at all test frequencies. In the event it is either impractical or impossible to make open filed measurements (e.g., a broadcast transmitter installed in a building) measurements will be acceptable of the equipment as installed. Such measurements must be accompanied by a description of the site where the measurements were made showing the location of any possible source of reflections which might distort the field strength measurements. Information submitted shall include the relative radiated power of each spurious emission with reference to the rated power output of the transmitter, assuming all emissions are radiated from half-wave dipole antennas.
- (b) The measurements specified in paragraph (a) of this section shall be made for the following equipment :
 - (1) Those in which the spurious emission are required to be 60 dB or more below the mean power of the transmitter.
 - (2) All equipment operating on frequencies higher than 25 MHz.
 - (3) All equipment where the antenna is an integral part of, and attached directly to the transmitter.
 - (4) Other types of equipment as required, when deemed necessary by the Commission.

Test Procedure :

Radiated emission measurement procedures shall be performed as outlined in Section 8 of the ANSI C63.4 measurement standard. The BTS will be tested to the applicable limits of the FCC rules. For radiated emission measurements the measurement distance between the center of the measurement antenna and the equipment under test shall be 3 meters (or less for frequencies above 1 GHz). In order to maximize all emission levels from the equipment, the emissions will be searched with the receive antenna at varied height levels. The equipment shall also be rotated a full 360 degrees on the turntable with the receive antenna at varying height levels (1 to 4 meters). Tests shall be made with the antenna positioned in both the horizontal and vertical planes of polarization. The BTS shall be placed on the turntable as per ANSI C63.4 measurement procedures. Please see the Part 15 test plan as Part 22 & 24 radiated requirements will be tested in conjunction with the Part 15 testing. The spectrum shall be searched to identify emissions. A complete scan of the applicable spectrum shall be completed (up to 10th harmonic of fundamental). The transmitter shall then be turned off, with the rest of the equipment powered on. A complete scan of the spectrum shall be done and referred to as "ambient" without the transmitter keyed on. Emissions emanating from the transmitter shall be identified from comparing these two scans. The identified emissions (from the transmitter) shall be measured and the levels recorded with the transmitter keyed on at full rated power output.

Important remark :

Substitution measurements must be made on all detected emissions given that the limits for the FCC are given in power measurements. If no emissions are detected, measurements should be made et the noise floor levels for each of the transmitter harmonic frequencies and a statement should be placed in the test report indicating that no emissions were detected.

S12000 Indoor 850 / 1900 MHz : EMC test Plan

The equipment was configured as shown in the next figure.

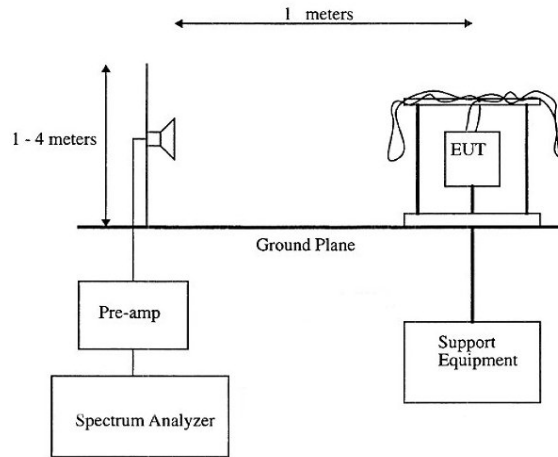


Figure 7 : Test configuration for Radiated Spurious emissions

The BTS was configured to transmit at maximum power (static level 0). Measurements were made according to the procedures outline in ANSI C63.4. The emissions were investigated up to the tenth harmonic of the fundamental emission (20 GHz). The measured level of the emissions was recorded and compared to the limit. The reference level for spurious radiation was taken with reference to an ideal dipole antenna excited by the rated output power according to the following relationship :

$$E(V / m) = \frac{1}{R(m)} * \sqrt{30 * P_t * G}$$

Where,

- E = Field Strength in Volts/meter,
- R = Measurement distance in meters,
- P_t = Transmitter Rated Power in Watts (30 Watts),
- G = Gain of ideal Dipole (linear)

Therefore :

$$E(V / m) = \sqrt{30 * 30 * 1.64}$$

E = 38.42 V/m = 151.69 dB μ V/m

The spurious emissions must be attenuated by at least 43 + 10*Log(30) = 57.7 dB.

Therefore the field strength limit at 1 meters is :

E = 151.69 dB μ V/m – 57.7 dB = 93.9 dB μ V/m

S12000 Indoor 850 / 1900 MHz : EMC test Plan

Spectrum Analyzer setting during measurements shall be as following :

Receiver Setting	Pre-Scan (to identify spurious emissions from EUT)	Final Measurements
Detector Type	Peak	Quasi-Peak (CISPR)
Mode	Max Hold	Not Applicable
Bandwidth	100 kHz or 1 MHz (for > 1GHz)	120 kHz*
Amplitude Range	60 dB	20 dB
Measurement Time	Not Applicable	> 1s
Observation Time	Not Applicable	> 15s
Step size	Continuous sweep	Not Applicable
Sweep Time	Coupled	Not Applicable
Measuring Distance	3m for 30 MHz - 1GHz 1m for 1GHz - 20GHz	10m for 30 MHz - 1GHz 1m for 1GHz - 20GHz

Pass / Fail criteria :

- For 30 MHz to 1 GHz :
Measurement distance : **10 m**
Limit : [30 MHz-88 MHz] **30 dB μ V/m**
 [88 MHz-216 MHz] **33.5 dB μ V/m**
 [216 MHz-960 MHz] **36 dB μ V/m**
 Above 960 MHz **43.5 dB μ V/m**
- For 1 GHz to 20 GHz :
Measurement distance : 1 m
Limit : **93.9 dB μ V/m**

S/W Configuration – Traffic data flow :

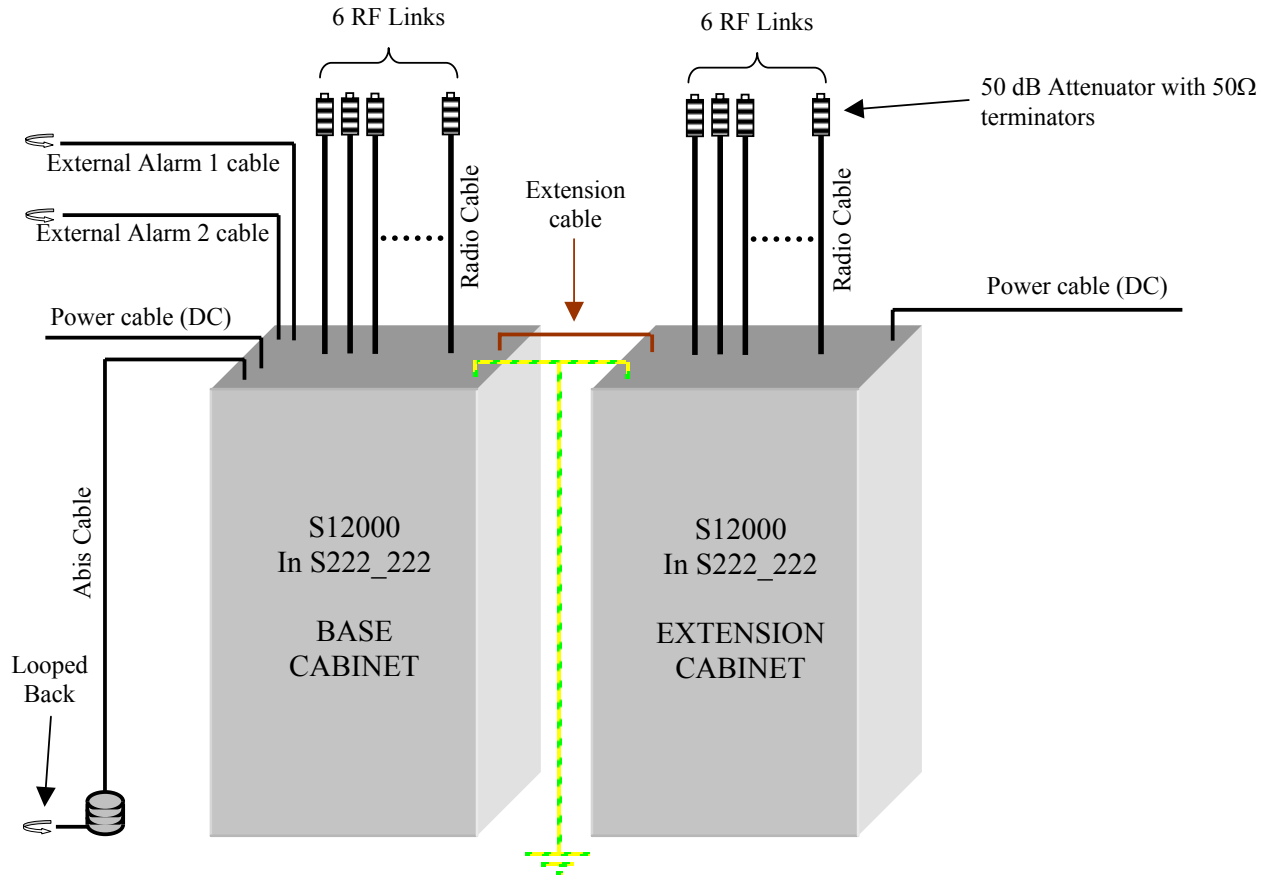
All transmitters in the EUT should be transmitting at full power.

The transmitters' operating frequencies should be selected by setting the Absolute Radio Frequency Channel Numbers (ARFCN) equally distributed over the BSS operating band, subject to any restrictions of the configuration of the EUT.

Transmit Power : All TX at 30 W

5. INSTALLATION DIAGRAM

The drawing gives a representation of functional test bench.



The following table presents the list of cable :

S12000 Indoor Base Cabinet configured in S222_222				
Cables	Description	Length		Quantity
Radio cables	RG214	10 m	Shielded	6
Abis cable	NTQA1717	5.5 m	Shielded	1
Power cable DC (0v/-48v)	Type H07 RN-F	/	Not Shielded	1
Ground cable DC	Type H07 VK	/	/	1
External Alarm cables	/	5 m	Shielded	2
Equipotentiality braid	/	1.5 m	/	1
Extension cable	NTQA6533	/	Shielded	1

S12000 Indoor Extension Cabinet configured in S222_222				
Cables	Description	Length		Quantity
Radio cables	RG214	10 m	Shielded	6
Power cable DC (0v/-48v)	Type H07 RN-F	/	Not Shielded	1
Ground cable DC	Type H07 VK	/	/	1
Equipotentiality braid	/	0.5 m	/	1

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6. TECHNICAL STATUS

6.1. BASE CABINET

DRX ND PCS					
	NTQA01DA	14	NNTM7503CXSK	47.162.62.5	
	NTQA01DA	14	NNTM7503CXSG	47.162.62.5	
	NTQA01DA	14	NNTM7503CXSI	47.162.62.5	
E - DRX GSM1900					
	NTQA88PA	02	NNTM7503E513	47.162.62.5	
	NTQA88PA	02	NNTM7503E4Q4	47.162.62.5	
	NTQA88PA	02	NNTM7503E4PH	47.162.62.5	
E - DRX GSM850					
	NTQA88HA	D2	CDN200208004	47.162.62.5	
	NTQA88HA	D2	CDN200208011	47.162.62.5	
	NTQA88HA	D2	CDN200211007	47.162.62.5	
	NTQA88HA	D2	CDN200211011	47.162.62.5	
	NTQA88HA	D2	CDN200211009	47.162.62.5	
	NTQA88HA	D2	CDN200211010	47.162.62.5	
SPL PCS					
	NTQA10AA	04	NNTMES001QR6	NTQA10AA	04 NNTMES001QR0
	NTQA10AA	04	NNTMES001QQY		
RX SPLITTER GSM850					
	NTQA88XA	P1	NNTMES00CQZU	NTQA88XA	P1 NNTMES00CQZK
	NTQA88XA	P1	NNTMES00CQZH		
COMBINER W/0 VSWR ASSY 850MHZ					
	NTQA38BA	D1	FORM01285415	NTQA38BA	D1 FORM01285417
	NTQA38BA	D1	FORM01269369		
HDPL PCS HYBRID+DIPL					
	NTQA51AA	07	MTEC0223B126	NTQA51AA	07 MTEC0223B109
	NTQA51AA	03	FORM01295152		
DUPLEXER W/0 VSWR ASSY 850MHZ					
	NTQA38CA	D1	FORM01285409	NTQA38CA	D1 FORM01285407
	NTQA38CA	D1	FORM01285402		
PCS 1900 COMBINER DIPLEXER					
	NTQA51DA	01	FORM01303761	NTQA51DA	07 MTEC0212A802
	NTQA51DA	07	MTEC0213A388		

S12000 Indoor 850 / 1900 MHz : EMC test Plan

PA PCS 1900 MODULE PHASE 2
NTQA50DB 01 PWWT03D47CRP NTQA50DB 01 PWWT03D485YP
NTQA50DB 01 PWWT03D47NOP

PA EDGE 1900
NTQA50GA 01 PWWT03D3D5JP NTQA50GA 01 PWWT03D334NP
NTQA50GA 01 PWWT03D4D5LP

ESCPA 850MHZ S8000
NTQA37AA D1 PWWT01D3KCFC NTQA37AA 01 PWWT01D3KC9C
NTQA37AA D1 PWWT01D3KCPC NTQA37AA 01 PWWT01D35T8C
NTQA37AA D1 PWWT01D3KCKC NTQA37AA 01 PWWT01D3KCLC

TYPE F PSU
NTQA57AA 03 ADPL09002DR7 NTQA57AA 03 ADPL09002DRZ

CPCMI T1 PCBA
NTQA66AA 05 NNTMER00CB2B NTQA66AA 05 NNTMER00CB2C
NTQA66AA 05 NNTMER00CB5L

CMCF PCBA PHASE 2
NTQA66CB 05 NNTMES00FRPC 47.162.62.
NTQA66CB 05 NNTMES00FRPM 47.162.62.

RECAL PCBA
NTQA66DA 02 NNTMES00FOKH

CBCF SHELF
NTQA66GA 01 SNMN75007V8V

CAB: S12000 IND ASSY
NTU420AA P2 SNMN75007YBF

MOD: ICS S12000 IND
NTU424AA P3 XBA 109 02/1 P3A n° 133

MOD: DRXICO
NTU460AA P2 SNMN27000JBJ

MOD: COMICO
NTU465AA P1 SNMN2700045P

S12000 IN BARE CABINET
SA000113 P2 SNMN75007YBE

S12000 IN DC MAIN
SA000114 P1 SNMN75007TZF

S12000 PAICO
SA000115 P1 SNMN75007SY8

6.2. EXTENSION CABINET

DRX ND PCS					
NTQA01DA	14	NNTM7503CXLG	47.162.62.5		
NTQA01DA	14	NNTM7503CXM3	47.162.62.5		
NTQA01DA	14	NNTM7500906P	47.162.62.5		
E - DRX GSM1900					
NTQA88PA	02	NNTM7503DB5W	47.162.62.5		
NTQA88PA	02	NNTM7503DBUA	47.162.62.5		
NTQA88PA	02	NNTM7503DBU5	47.162.62.5		
E - DRX GSM850					
NTQA88HA	D2	CDN200208006	47.162.62.5		
NTQA88HA	D2	CDN200211002	47.162.62.5		
NTQA88HA	D2	CDN200208007	47.162.62.5		
NTQA88HA	D2	CDN200211012	47.162.62.5		
NTQA88HA	P1	CDN200203006	47.162.62.5		
NTQA88HA	P1	CDN200206003	47.162.62.5		
SPL PCS					
NTQA10AA	03	NNTMES001LZL	NTQA10AA	03	NNTMES001QQ3
NTQA10AA	03	NNTMES001QNB			
RX SPLITTER GSM850					
NTQA88XA	P1	NNTMES00CQZR	NTQA88XA	P1	NNTMES00ONSL
NTQA88XA	P1	NNTMES00CQZI			
COMBINER W/0 VSWR ASSY 850MHZ					
NTQA38BA	D1	FORM01269375	NTQA38BA	P2	FORM01323513
NTQA38BA	D1	FORM01269370			
HDPL PCS HYBRID+DIPL					
NTQA51AA	07	MTEC0223B116	NTQA51AA	03	FORM01295142
NTQA51AA	03	FORM01295144			
DUPLER W/0 VSWR ASSY 850MHZ					
NTQA38CA	D1	FORM01285408	NTQA38CA	D1	FORM01285411
NTQA38CA	D1	FORM01285399			
PCS 1900 COMBINER DIPLEXER					
NTQA51DA	03	FORM01303759	NTQA51DA	03	FORM01303762
NTQA51DA	07	MTEC0213A370			

S12000 Indoor 850 / 1900 MHz : EMC test Plan

PA PCS 1900 MODULE PHASE 2
NTQA50DB 01 PWWT03D485XP NTQA50DB 01 PWWT03D486RP
NTQA50DB 01 PWWT03D47WEP NTQA50DB 01 PWWT03D4853P
NTQA50DB 01 PWWT03D47VCP NTQA50DB 01 PWWT03D47F5P

ESCPA 850MHZ S8000
NTQA37AA D1 PWWT01D355TC NTQA37AA 01 PWWT01D35TCC
NTQA37AA D1 PWWT01D35R0C NTQA37AA 01 PWWT01D35RYC
NTQA37AA D1 PWWT01D35R1C NTQA37AA 01 PWWT01D3KCEC

TYPE F PSU
NTQA57AA 03 ADPL09002D?? NTQA57AA 03 ADPL09002D??

CPCMI T1 PCBA
NTQA66AA 05 NNTMER00CB3T NTQA66AA 05 NNTMER00CB3B
NTQA66AA 05 NNTMER00CB6L

CMCF PCBA PHASE 2
NTQA66CB 05 NNTMES00FR52 47.162.62.
NTQA66CB 05 NNTMES00FRRO 47.162.62.

RECAL PCBA
NTQA66DA 02 NNTMES00FOHQ

CBCF SHELF
NTQA66GA 01 SNMN75007V??

CAB: S12000 IND ASSY
NTU420AA P2 SNMN75007Y??

MOD: ICS S12000 IND
NTU424AA P3 XBA 109 02/1 P3A n° 134

MOD: DRXICO
NTU460AA P2 SNMN27000JBI

MOD: COMICO
NTU465AA P1 SNMN2700045P

S12000 IN BARE CABINET
SA000113 P2 SNMN75007Y??

S12000 IN DC MAIN
SA000114 P1 SNMN75007VGY

S12000 PAICO
SA000115 P1 SNMN75007W4Q

7. ABBREVIATIONS AND DEFINITIONS

7.1. ABBREVIATIONS

BTS	Base Transceiver Station
DC	Direct Current
DCS	Digital Cellular System
DRX	Driver Receiver unit
EMC	ElectroMagnetic Compatibility
EN	European Norm
ETS	ETSI Standard
EUT	Equipment Under Test
GSM	Global System Mobile
IT	Information Technology
N/A	Not Applicable
RF	Radio Frequency
RXQUAL	Receive Quality
TRX	Transmitter / Receiver

7.2. DEFINITIONS

FCC Part 2 – This part contains the table of frequency allocations and special requirements in international regulations, recommendations, agreements, and treaties. This part also contains standards and procedures concerning the marking and importation of radio frequency devices, and for obtaining equipment authorization.

FCC Part 15 – This part contains rules setting out the regulations under which an international, unintentional, or incidental radiator may be operated without an individual license. It also contains the technical specifications, administrative requirements and other conditions relating to the marketing of Part 15 Devices.

FCC Part 22 – The purpose of these rule is to establish the requirements and conditions under which domestic common carrier radio stations may be licensed and used in the Public Mobile Services.

FCC Part 24 – This part states the conditions under which portions of the radio spectrum are made available and licensed for PCS.

Effective Radiated Power (ERP) – The product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction.


Equivalent Isotropically Radiated Power (e.i.r.p.) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Mean power (of a radio transmitter) – The average power supplied to the antenna transmission line by a transmitter during an interval of time sufficiently long compared with the lowest frequency encountered in the modulation taken under normal operating conditions.

❧END OF DOCUMENT❧

REPORT : 149016DK APPENDIX 1-1
 PRODUCT NAME : S12000 INDOOR (BASE+EXTENSION)
 STANDARD : FCC CFR47 PART 15 CLASS B (Limit for D=3m)
 MEASUREMENT : ELECTRIC FIELD 30MHz-1GHz (PRESCAN) D=3m
 HIGHER LEVEL SIGNALS FOUND DURING PRESCAN MEASUREMENT
 CONDITIONS : 0Vdc/-48Vdc
 DATE : July, 17 of 2002
 MEASUREMENT DONE BY : D.RAUD
 ALL SUSPECTS

No	FREQ	BND	PEAK	ANT	AZ	COMMENTS
	MHz		LIM ABS P cm deg			
1	32.760	1	-5 25.0	V100	0	
2	34.839	1	-2 28.5	V100	180	
3	40.960	2	-6 23.8	V100	180	
4	47.090	2	-11 18.5	V100	0	
5	65.520	5	-7 22.6	H100	180	
6	111.997	11	-11 22.7	V100	180	
7	114.680	11	-13 20.7	H100	0	
8	122.876	12	-13 20.9	H100	0	
9	131.066	12	-11 22.1	H100	180	
10	135.169	13	-16 17.7	V100	180	
11	137.297	14	-14 19.0	V100	180	
12	139.263	14	-14 19.8	H100	180	
13	147.469	15	-6 27.1	H100	180	
14	155.292	16	-15 18.7	V100	0	
15	163.820	17	-9 24.3	H100	0	
16	185.345	18	-17 16.1	V100	0	
17	187.420	18	-18 15.3	H100	0	
18	212.986	19	-9 24.3	V100	0	
19	214.036	19	-16 17.1	V100	0	
20	221.180	20	-15 20.9	H100	180	
21	225.270	20	-17 18.9	H100	0	
22	229.356	20	-18 18.4	H100	0	
23	426.128	23	-2 34.3	V100	0	
24	468.048	25	-5 31.1	V100	180	
25	512.00	26	-1 34.9	H100	0	
26	869.190	29	47 82.6	V100	180	
27	871.410	29	36 71.9	H100	180	
28	873.660	29	50 86.0	V100	180	
29	875.870	29	38 73.9	H100	180	
30	878.040	29	42 77.8	H100	0	
31	880.250	29	30 65.6	H100	0	
32	882.460	29	41 77.2	H100	0	
33	884.633	29	30 65.6	H100	0	
34	886.890	29	33 69.2	H100	0	
35	889.035	29	31 67.5	V100	180	
36	891.258	29	34 70.4	H100	0	
37	893.858	29	34 70.0	V100	180	

} 12 Transmitters 

* denotes a Final List signal

REPORT : 149016DK APPENDIX 1-2
 PRODUCT NAME : S12000 INDOOR (BASE+EXTENSION)
 STANDARD : FCC CFR47 PART 15 CLASS B (Limit for D=3m)
 MEASUREMENT : ELECTRIC FIELD 30MHz-1GHz (PRESCAN) D=3m
 HIGHER LEVEL SIGNALS FOUND DURING PRESCAN MEASUREMENT
 CONDITIONS : 0Vdc/-48Vdc
 DATE : July, 17 of 2002
 MEASUREMENT DONE BY : D.RAUD

