SANMINA

Exhibit 1:

Test Report

Applicant: Nortel Networks

Class II Permissive Change Application

PCS

NORTEL
NORTHERN TELECOM

S8000 Outdoor and Indoor BTS GSM 1900 : FCC Part 24 Class II Permissive Change Application AB6OUDS8000 : exhibits document

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Abstract / Comments :

Documents PCS/BTS/DJD/0743 and PCS/BTS/DJD/0746 present the FCC regulatory assessment realized in order to introduce the following items into the S8000 Outdoor and Indoor BTS systems :

- EDGE DRX (e-DRX) module
- EDGE Single Carrier Power Amplifier (e-SCPA) module

PCS/BTS/DJD/0743 document is reporting Product Information.
PCS/BTS/DJD/0746 document is reporting Exhibits.

Distribution lists :

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VERSION	DATE	COMMENTS	AUTHOR
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PCS

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TABLE OF CONTENTS

1. INTRODUCTION

1.1. OBJECT

In complement with PCS/BTS/DJD/0743 document, this report presents the FCC regulatory assessment realized in order to introduce the following items into the S8000 Outdoor BTS system:

- EDGE DRX (e-DRX) module
- EDGE Single Carrier Power Amplifier (e-SCPA) module

These new modules are part of BTS evolution towards GPRS and EDGE : they are compatible with 8-PSK modulated signals and therefore ready to support EDGE functionalities in the future. For GMSK-modulated signals, they are fully compatible with previous New Design DRX and PA in the BTS.

These modifications have been evaluated to be a class II permissive change to the original FCC Part 24 Type Accepted equipment, as described in FCC Part 2 rules:

2.1043 Changes in type accepted equipment.

(a) Equipment of the same type is defined for purposes of type acceptance as being equipment which is electrically and mechanically interchangeable and in addition will have the same basic tube or semiconductor lineup, frequency multiplication, basic frequency determining and stabilizing circuitry, basic modulator circuit and maximum power rating. Variations in electrical and mechanical construction, other than the items indicated above are permitted, provided the variation or change is made in compliance with the requirements of paragraphs (b), (c) and (d) of this section.

(b) Two classes of permissive changes may be made in type accepted equipment without requiring a new application for and grant of type acceptance.

(1) A Class I permissive change includes those modifications in the equipment which do not change the equipment characteristics beyond the rated limits established by the manufacturer and accepted by the Commission when type acceptance is granted, and which do not change the type of equipment as defined in paragraph (a) of this section. No filing with the Commission is required for a Class I permissive change.

(2) A Class II permissive change includes those modifications which bring the performance of the equipment outside the manufacturer's rated limits as originally filed but not below the minimum requirements of the applicable rules, and do not change the type of equipment as defined in paragraph (a) of this

section. When a Class II permissive change is made by the grantee, he shall supply the Commission with complete information and results of tests of the characteristics affected by such change. The modified equipment shall not be marketed under the existing grant of type acceptance prior to acknowledgment by the Commission that the change is acceptable.

1.2. SCOPE

This document applies to the S8000 BTS GSM 1900, Outdoor and Indoor versions.
It is the Exhibit part of the FCC Part 24 Class II Permissive Change Application.

2. RELATED DOCUMENTS

2.1. APPLICABLE DOCUMENTS

[A1]	CFR 47 - Part 2	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS
[A2]	CFR 47 - Part 24	PERSONAL COMMUNICATIONS SERVICES

2.2. REFERENCE DOCUMENTS

[R1]	PE/BTS/DJD/0222	FCC Part 24 Type Acceptance Filing for Nortel's S8000 Outdoor BTS AB6OUDS8000
[R2]	PCS/BTS/DJD/0730	AB6OUDS8000 : FCC Part 24 Class II Permissive Change Application : S8000 Indoor BTS
[R3]	Nortel/STR/00138	DRX EDGE: Thermal test Report
[R4]	149003DK	EMC Test Report - GYL TECHNOLOGY

[R5] PCS/BTS/DJD/0743 S8000 Outdoor and Indoor BTS GSM 1900 : FCC Part 24 Class II Permissive Change Application AB6OUDS8000

3. ABBREVIATIONS & DEFINITIONS

3.1. ABBREVIATIONS

DRX	Driver Receiver Unit
e-DRX	EDGE DRX
BCF	Base Common Function
BTS	Base Transceiving Station
GSM	Global System for Mobile Communications
GPRS	General Packet Radio Service
EDGE	Enhanced Data for GSM Evolution
PA	Power Amplifier
e-SCPA	EDGE Single Carrier PA
LNA	Low Noise Amplifier
OMC	Operation and Maintenance Center
TCU	Trans-Coding Unit
MSC	Mobile Switching Center
RF	Radio Frequency
Tx	Transmitter

3.2. DEFINITIONS

Frequency Band and Channels

PCS 1900	C512	C661	C810
F Tx (MHz)	1930.2	1960	1989.8
F Rx (MHz)	1850.2	1880	1909.8

For 512 < n <810

$F_{Rx}(n) = 1850.2 + 0.2*(n-512)$

$T_{Tx}(n) = F_{Rx}(n) + 80$

4. EXHIBIT 1 : TEST REPORT

4.1. INTRODUCTION

The following information is submitted for update of the type acceptance of a Broadband PCS Base Station for Northern Telecom, Inc., in accordance with FCC Part 24, Subpart E and Part 2, Subpart J of the FCC Rules and Regulations. The measurement procedures were in accordance with the requirements of Part 2.999.

4.2. MEASUREMENT RESULTS

Table 1 is a summary of the measurement results for this update.

Table 1 : Measurement Results Summary

FCC Measurement Specification	IC Limit Specification	Description	Result
2.1046	24.232	RF Power Output	Complies
2.987		Modulation characteristics	Complies
2.1049		Occupied Bandwidth	Complies
2.1051, 2.1057	24.238	Spurious Emissions at Antenna Terminals	Complies
2.1053, 2.1057	24.238	Field Strength of Spurious Radiation	Complies
2.1055	24.235	Frequency Stability	Complies
1.1307	1.1310	RF Exposure	Not tested

4.3. NAME OF TEST : 2.985 RF POWER OUTPUT

4.3.1. FCC REQUIREMENTS

4.3.1.1. FCC Part 24.232

(a) Base stations are limited to 1640 watts peak equivalent isotropically radiated power (e.i.r.p.) with an antenna height up to 300 meters HAAT. See 24.53 for HAAT calculation method. Base station antenna heights may exceed 300 meters with a corresponding reduction in power. In no case may the peak output power of a base station transmitter exceed 100 watts

(b) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

4.3.2. TEST RESULTS

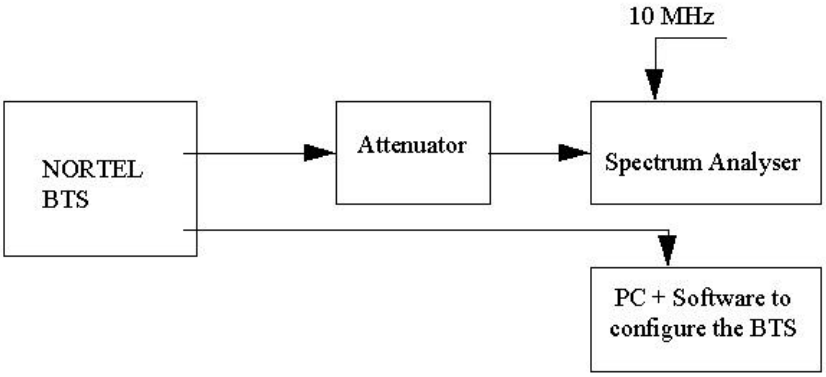
Table 1 shows the test results for RF Output Power.

Radio Channel	Frequency (MHz)	Measured RF Output Power (dBm)	Maximum Rated Power (dBm)	Limit (dBm)
513	1930,4	43,7	44,8 (30 W)	50
548	1937,4	43,95	44,8 (30 W)	50
585	1944,8	44,1	44,8 (30 W)	50
587	1945,2	44,12	44,8 (30 W)	50
598	1947,4	44,09	44,8 (30 W)	50
610	1949,8	44,05	44,8 (30 W)	50
612	1950,2	44,08	44,8 (30 W)	50
648	1957,4	44,15	44,8 (30 W)	50
685	1964,8	44,04	44,8 (30 W)	50
687	1965,2	44,06	44,8 (30 W)	50
698	1967,4	44,1	44,8 (30 W)	50
710	1969,8	44,14	44,8 (30 W)	50
712	1970,2	44,09	44,8 (30 W)	50
723	1972,4	43,91	44,8 (30 W)	50
735	1974,8	43,86	44,8 (30 W)	50
737	1975,2	43,95	44,8 (30 W)	50
773	1982,4	43,97	44,8 (30 W)	50
809	1989,6	44	44,8 (30 W)	50

4.3.3. TEST PROCEDURE

The equipment was configured as shown in figure 1.

Figure 1 : Test configuration for RF Output Power



The BTS was configured to transmit at maximum power (static level 0). Measurements were made at frequencies which are the bottom, middle and top of each of the licensed blocks.

The peak output power was measured using the spectrum analyzer which had the following settings :

Resolution bandwidth :	300 kHz
Video bandwidth :	1 MHz
Span :	0 Hz
Reference level :	45 dBm
Reference Level Offset :	Corrected to account for cable(s) and attenuator losses
Level range :	10 dB
Sweep time :	5 ms

4.4. NAME OF TEST : 2.1049 OCCUPIED BANDWIDTH

4.4.1. FCC REQUIREMENTS

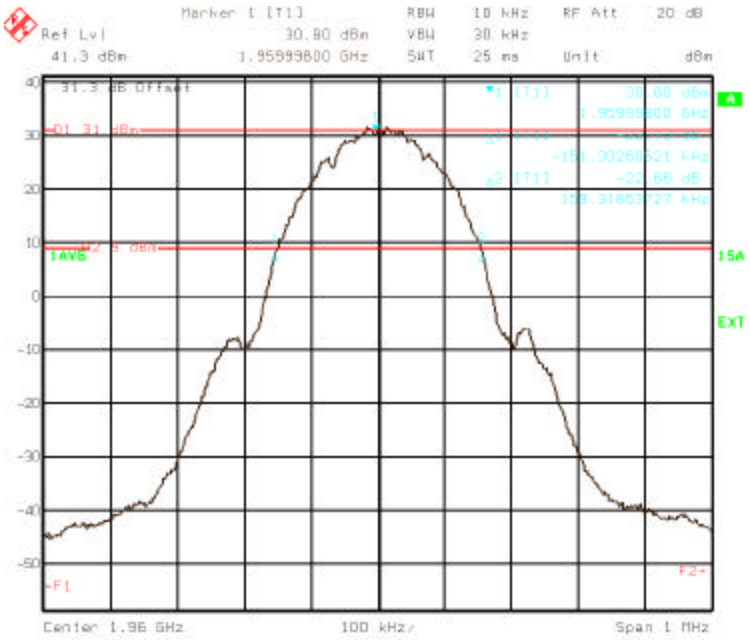
4.4.1.1. FCC Part 2.1049

The occupied bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 23 dB below the transmitter power.

4.4.2. TEST RESULTS

The maximum occupied bandwidth was found to be 310.6 kHz (measured on channel 661, f = 1960.0 MHz).

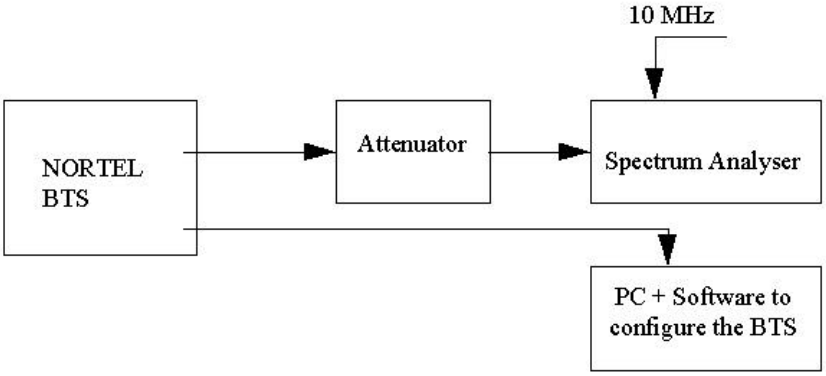
Figure 1: Sample plot for occupied bandwidth



4.4.3. TEST PROCEDURE

The equipment was configured as shown in figure 2.

Figure 2 : Test configuration for Occupied bandwidth



The BTS was configured to transmit at maximum power (Static Level 0). Measurements were made at frequencies which were at the bottom and top of the transmit band.

The occupied bandwidth was measured by determining the bandwidth out of which all emissions are attenuated at least 23 dB below the transmitter power.

The spectrum analyzer had the following settings :

Resolution bandwidth :	10 kHz
Video bandwidth :	30 kHz
Span :	1 MHz
Reference level :	45 dBm
Reference Level Offset :	Corrected to account for cable(s) and attenuator losses
Level range :	100 dB
Sweep time :	25 ms*

4.5. NAME OF TEST : 2.991 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

4.5.1. FCC REQUIREMENTS

4.5.1.1. FCC Part 24.238

(a) On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB.

(b) Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(c) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.

(d) The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

4.5.2. TEST RESULTS

The reference level for spurious emissions at the antenna terminals is taken from the measured output power (43.9 dBm = 24.5 Watts).
Therefore the spurious emissions must be attenuated by at least 43 + 10*Log(24.5) = 56.9 dB. The measured output power was 43.9 dBm ; therefore the limit is 43.9 - 56.9 = -13 dBm.

Tables 2 and 3 show the results for Spurious Emissions at Antenna Terminals.

Table 2 : Test results for Spurious Emissions at Antenna Terminals

	Channel	Power emission level	Spurious Emissions Level (dBm)	Limit (dBm)	Margin (dB)
A	512	Pmax - 12 dB	-16,36	-13	3,36
A	513	Pmax	-31,55	-13	18,55
A	584	Pmax	-31,58	-13	18,58
A	585	Pmax - 12 dB	-13,56	-13	0,56
D	587	Pmax - 12 dB	-16,06	-13	3,06
D	588	Pmax	-32,2	-13	19,2
D	609	Pmax	-31,16	-13	18,16
D	610	Pmax - 12 dB	-13,26	-13	0,26
B	612	Pmax - 12 dB	-15,7	-13	2,7
B	613	Pmax	-33,02	-13	20,02
B	684	Pmax	-31,78	-13	18,78
B	685	Pmax - 12 dB	-13,54	-13	0,54
E	687	Pmax - 12 dB	-16,27	-13	3,27
E	688	Pmax	-32,6	-13	19,6
E	709	Pmax	-30,86	-13	17,86
E	710	Pmax - 12 dB	-13,83	-13	0,83
F	712	Pmax - 12 dB	-16,14	-13	3,14
F	713	Pmax	-32,13	-13	19,13
F	734	Pmax	-31,97	-13	18,97
F	735	Pmax - 12 dB	-13,76	-13	0,76
C	737	Pmax - 12 dB	-16,26	-13	3,26
C	738	Pmax	-31,81	-13	18,81
C	809	Pmax	-31,55	-13	18,55
C	810	Pmax -12 dB	-13,8	-13	0,8

Table 3 : Test results for Spurious Emissions at Antenna Terminals

Frequency (MHz)	Spurious Emissions Level (dBm)	Limit (dBm)	Margin (dB)
32.2	-31.8	-13	19
59.9	-38.5	-13	25
1761,01	-26,18	-13	13,2
1972,15	-42,38	-13	29,4
1974,24	-53,74	-13	40,7
1990	-13.90	-13	0.90
1991.1	-30	-13	17
3738,8	-26,24	-13	13,2
6637,27	-21,6	-13	8,6
11567	-25,41	-13	12,4
18589	-21,71	-13	8,7

Notes :

Figure 3 and Figure 4 show sample plots for the case when the transmitter was tuned to Channel 512 (lowest channel in Tx band) with the power reduced by 12 dB.

Figure 5 shows a sample plots for the case when the transmitter was tuned to Channel 810 (highest channel in Tx band) with the power reduced by 12 dB.

Figure 6 and Figure 7 show sample plots for the case when the transmitter was tuned to Channel 513 with the maximum power available.

Figure 8 to Figure 10 show sample plots for frequency spans from 0 to 20 GHz with emission on channel 810 (Pmax -12 dB).

Figure 3 : -1 MHz adjacent band (Channel 512, Pmax - 12 dB)

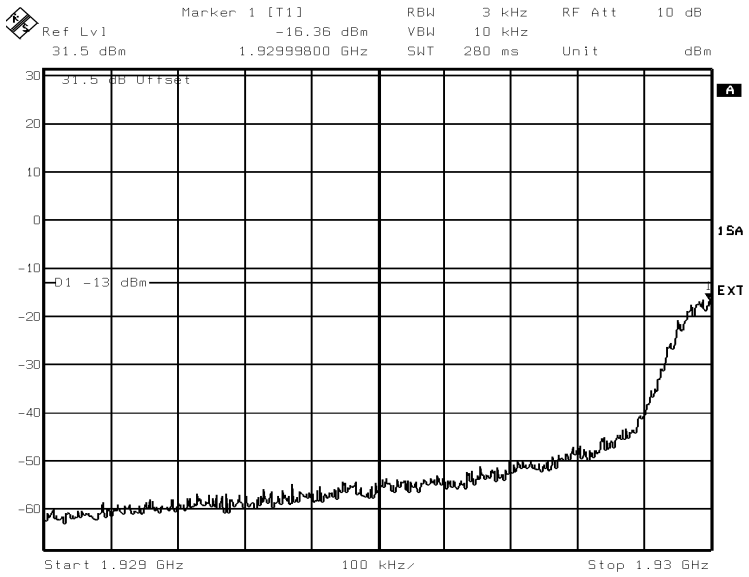


Figure 4 : +1 MHz adjacent band (Channel 512, Pmax - 12 dB)

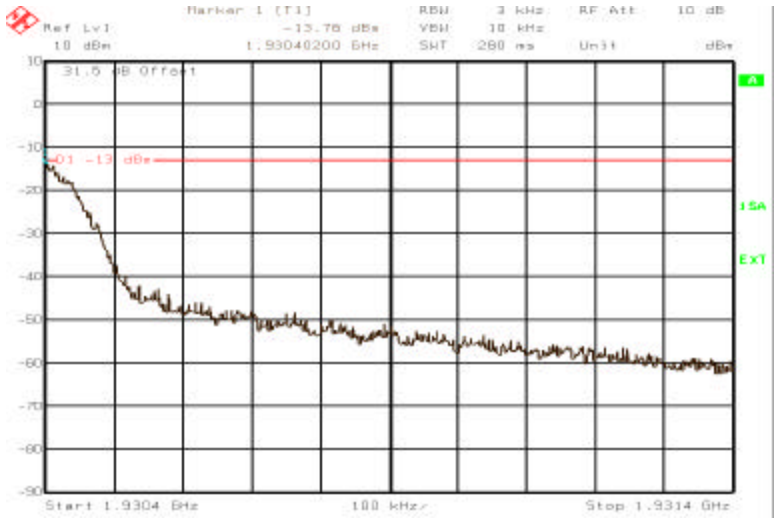


Figure 5 : +1 MHz adjacent band (Channel 810, Pmax - 12 dB)

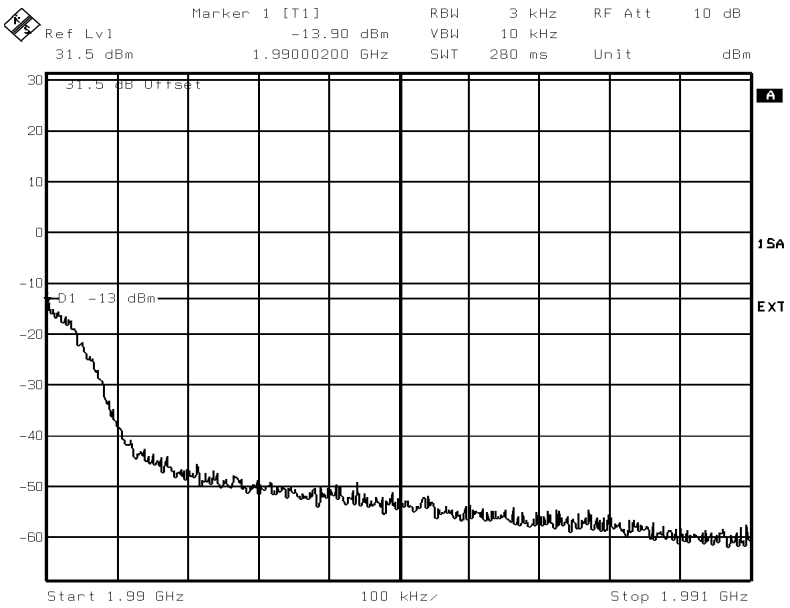


Figure 6 : -1 MHz adjacent band (Channel 513, Pmax)

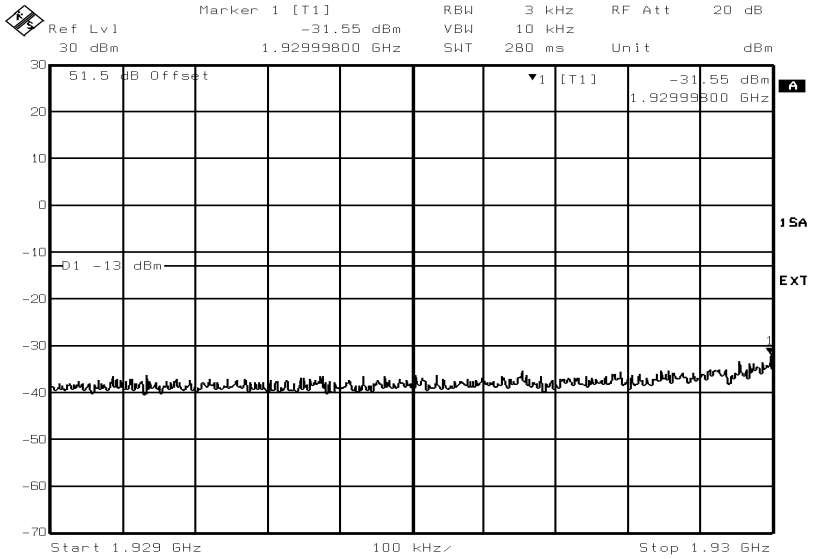


Figure 7 : +1 MHz adjacent band (Channel 809, Pmax)

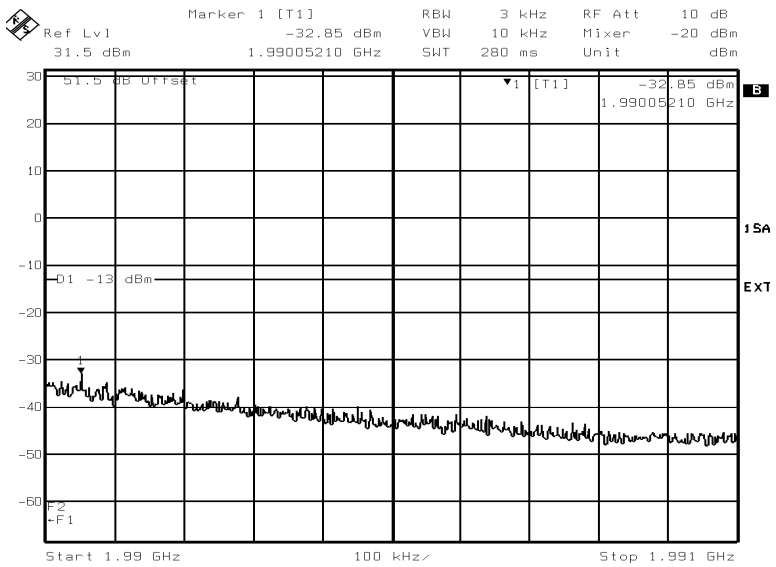
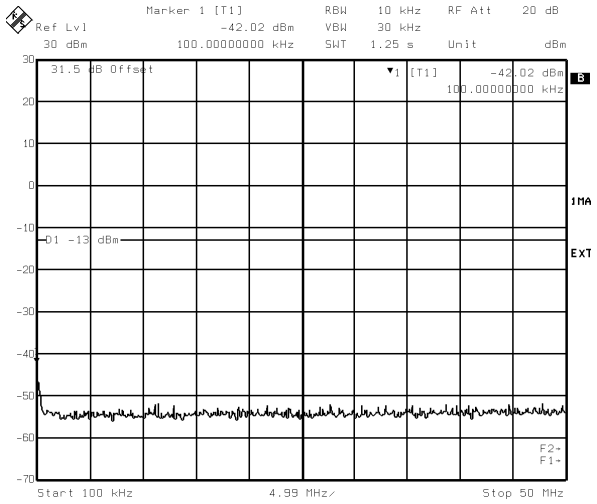
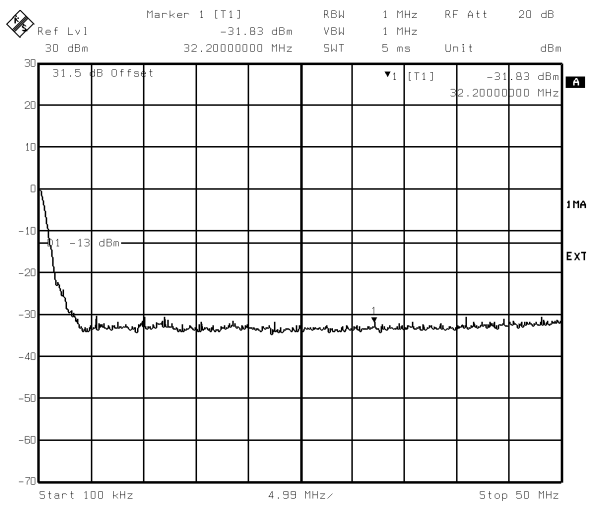


Figure 8 : Out of block emissions (Channel 810, Pmax - 12 dB)

Band 100kHz – 50 MHz



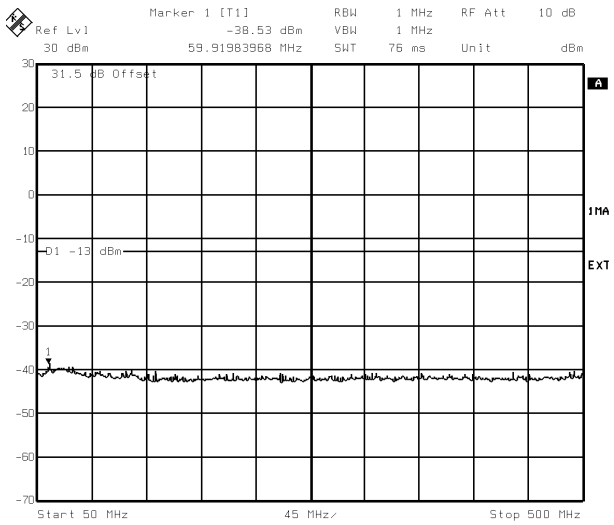
RBW = 10 kHz



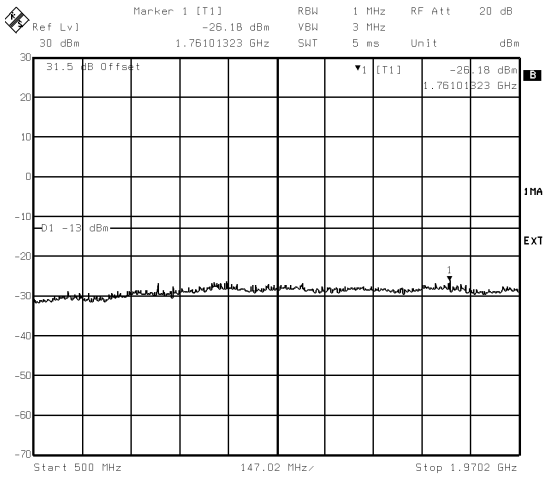
RBW = 1 MHz (*)

(*) Note : spectrum lines at 100 kHz is internal DC spectrum line of analyzer.

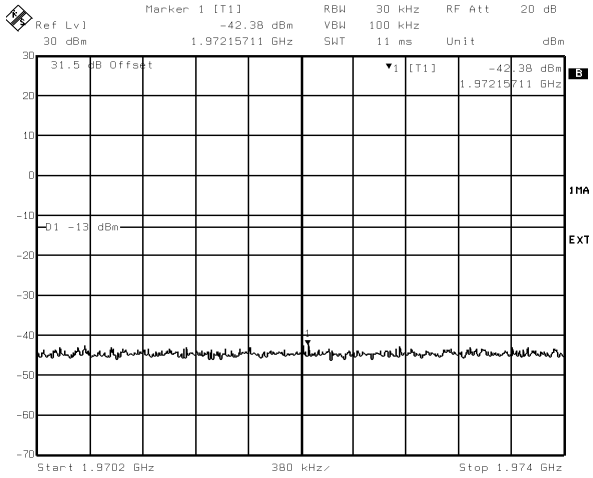
Band 50 MHz –500MHz



Band 500 MHz- 1970.2 MHz



Band 1970.2 – 1974 MHz



Band 1974 MHz - 1975 MHz

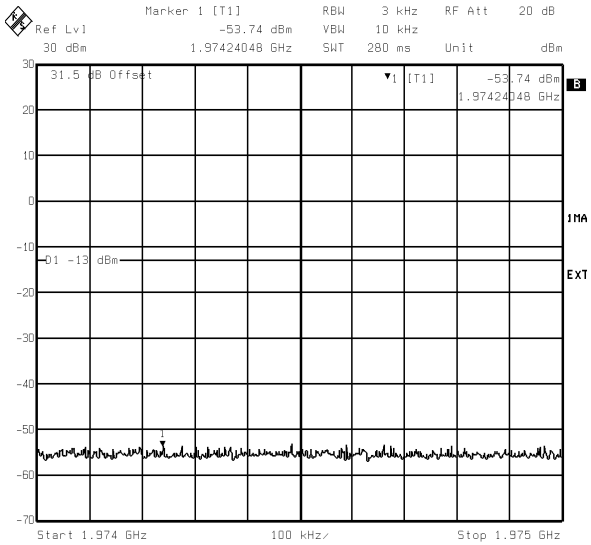
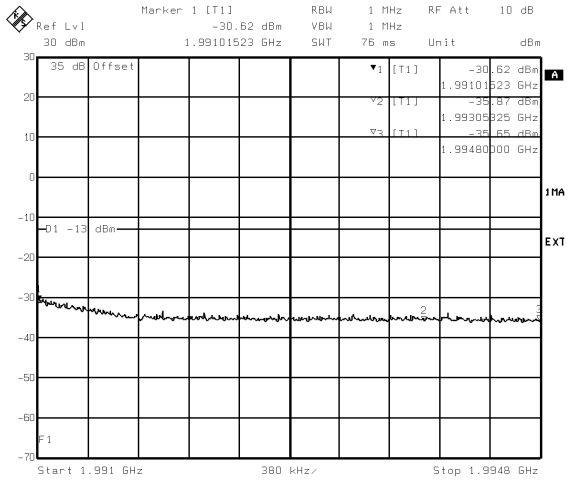


Figure 9 : Out of block emissions (Channel 810, Pmax - 12 dB)

Band 1991 MHz - 1994.8 MHz



Band 1994.8 MHz - 4 GHz

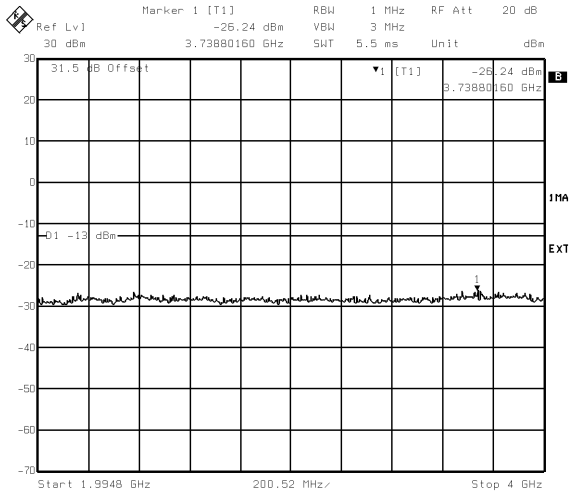
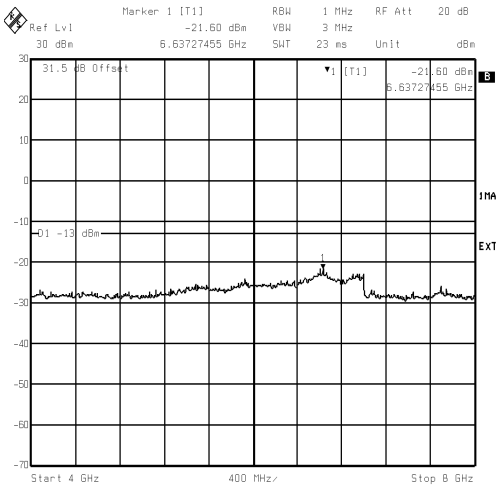
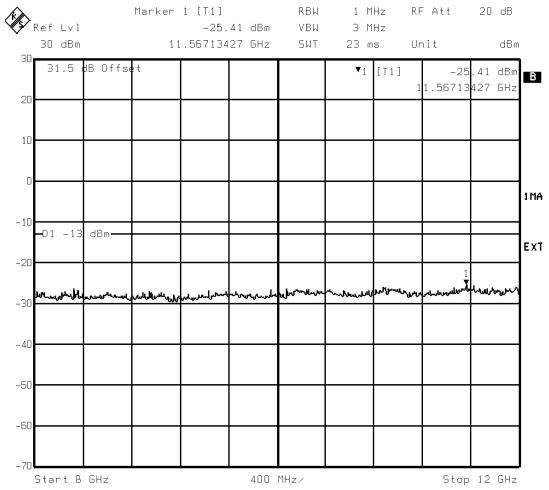


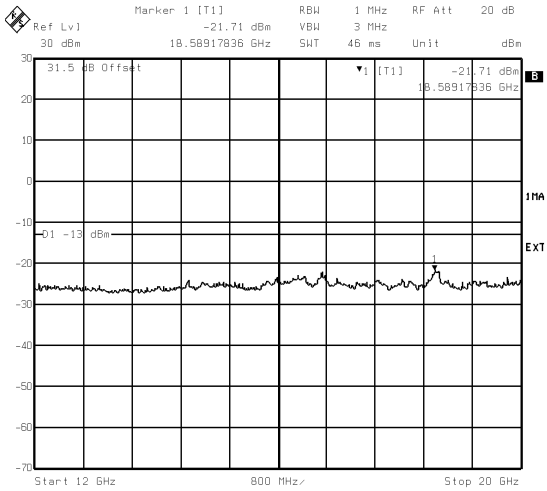
Figure 10 : Out of block emissions (Channel 810, Pmax - 12 dB)

Band 4 – 12 GHz





Band 12 - 20 GHz



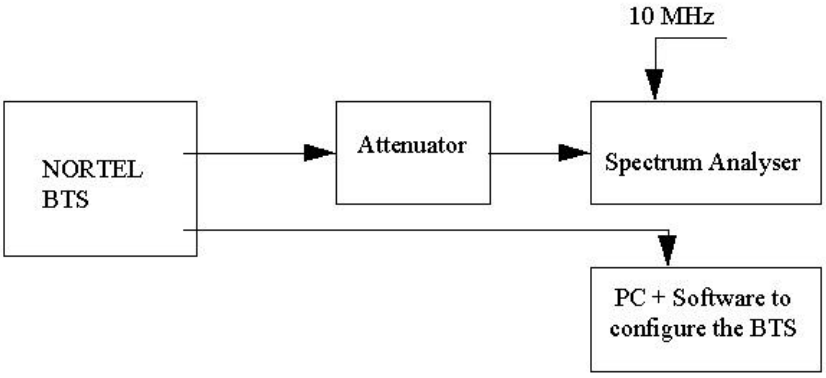
In order to comply with the emission limits in the 1 MHz bands immediately outside and adjacent to the frequency block, the transmit power level of the block edge channels has been reduced by 12 dB .

Measurements were also performed when the BTS was maximum power on channels adjacent to band edge channels and it was found that the emission requirements were met with greater than 15 dB margin in the 1 MHz adjacent frequency band.

4.5.3. TEST PROCEDURE

The equipment was configured as shown in figure 11.

Figure 11 : Test configuration for Spurious emissions at antenna terminals



For adjacent channels emissions, the BTS nominal carrier frequency was adjusted to each block edge channel.

Channels 512 and 810 are those channels which are at the lower and upper edges of the PCS band respectively.

The transmitter was set to operate to maximum power minus 12 dB in Tx activation mode GMSK no synchro.

For these measurements, the resolution bandwidth was of the spectrum analyzer was set to at least 1% of the emission bandwidth. In this case the emission bandwidth measured was 310.6 kHz. Therefore, the resolution bandwidth was set to 3 kHz.

The spectrum analyzer had the following settings for adjacent band

Resolution bandwidth :	3 kHz
Video bandwidth :	10 kHz
Span :	1 MHz
Reference level :	10 dBm
Reference Level Offset :	Corrected to account for cable(s), filter and attenuator losses
Level range :	100 dB
Sweep time :	Coupled
Detector :	Sample
Trace :	Max Hold
Sweep count :	200

For all other measurements the BTS carrier frequency was adjusted to Channel 810.

The spectrum analyzer had the following settings for out of block emissions.

Resolution bandwidth :	1 MHz
Video bandwidth :	1 MHz

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 -13 dBm limit.

4.6. NAME OF TEST : 2.1055 FREQUENCY STABILITY

4.6.1. FCC REQUIREMENTS

4.6.1.1. FCC Part 24.235

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

4.6.2. TEST RESULTS

Tables 4 shows the Frequency Stability for channel 661 (f=1960MHz) in quick test bench configuration in extreme conditions and frequency Stability in BTS S8000 Indoor at ambient temperature for channel B,M,T.

Table 4a : Frequency Stability in quick test bench configuration – Channel 661

External BTS temperature		Module Temperature (°C)	Maximum Carrier Frequency Deviation (Hz) in quick test bench configuration		
BTS S8000 Indoor	BTS S8000 Outdoor		DC Supply Voltage DRX –40V PA -36V	DC Supply Voltage DRX –48V PA -48V	DC Supply Voltage DRX –57V PA -60V
-5		-5	13.88	14.08	10.78
5	-40 to 0	5	14.33	12.40	13.30
15	5	15	12.79	12.98	14.14
25	15	25	-13.50	-16.98	13.17
35	25	35	-13.69	12.46	12.40
45	35	45	14.21	12.46	12.79
	45	55	12.79	-12.46	14.01
	50	65	-13.17	-17.18	-15.95

Table 4b : Test results for BTS S8000 frequency stability at ambient temperature

	Maximum Carrier Frequency Deviation (Hz) in BTS Configuration Ambient temperature		
Channel	C512 (f=1930.2 MHz)	C661 (f=1960 MHz)	C810 (f= 1989.8 MHz)
	-19	-24	+17

The maximum frequency deviation allowed is 89 Hz.

The maximum deviation measured (-24Hz) is more than sufficient to ensure that the fundamental emission stays within the authorized frequency block.

The S8000 Outdoor BTS still complies with the requirement.

4.6.3. TEST PROCEDURE

Thermal tests has been performed with modules eDRX with eSCPA inside BTS8000 . These tests have shown that thermal features of eDRX/eSCPA were equivalent or better than old DRX and PA versions inside BTS S8000 in extreme conditions. [R1] , [R2], [R3].

The BTS S8000 must operate in following external extreme temperatures:

- BTS S8000 Indoor : - 5°C / +45 °C
- BTS S8000 Outdoor : -40°C / +50°C

These external temperature ranges involve the extreme temperature range from -5°C to +65°C on eDRX and eSCPA modules .

Frequency stability are checked in BTS S8000 Indoor at ambient temperature.

Frequency stability test is performed with a quick test bench for module configuration in following extreme conditions :

- Temperature from -5 to +65 centigrade at intervals of 10 centigrades
- With DC power supply variations eSCPA (-36V/-60V) and eDRX (-40V/-57V)

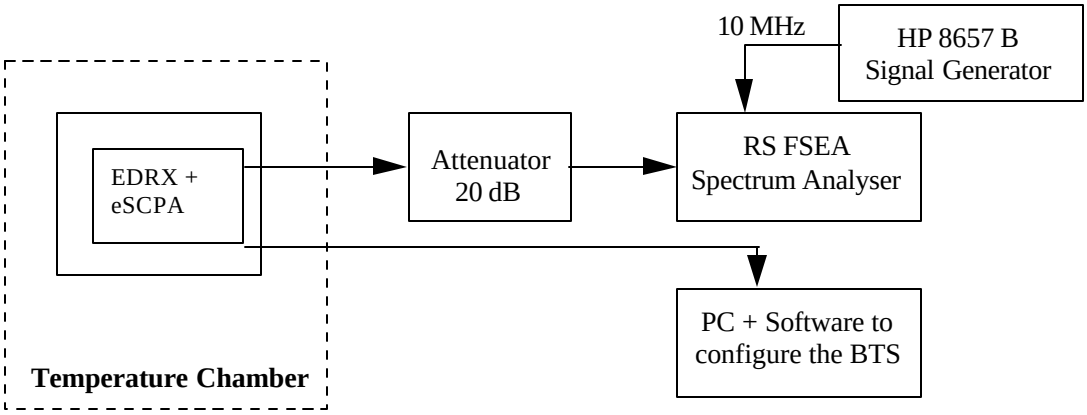
Modules (eDRX – eSCPA) run with nominal power regulation at maximum power (30W) in GMSK modulation.

The eDRX/eSCPA was configured to transmit at maximum power (Static level 0).

A period of at least one hour was allowed prior to measurement to ensure that all of the components of the oscillator circuit had stabilized at each temperature.

The equipment was configured as shown in figure 12.

Figure 12 : Test configuration for Frequency Stability



4.7. 2.993 FIELD STRENGHT OF SPURIOUS RADIATION

4.7.1. FCC REQUIREMENTS

4.7.1.1. FCC Part 24.238

(a) On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB.

4.7.1.2. FCC Part 2.993

(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 harmonic and other spurious emission.

4.7.2. TEST RESULTS

Measurement is done with all transmitters activated.

Table 5 shows the results for radiated spurious emissions measurements.

Table 5 : Test results for spurious emissions

Antenna Polarization	Frequency (MHz)	Measured Level (dBµV)	Correction Factor (dB)	Corrected Level (dBµv/m)	Limit (dBµV/m) @ 1 m
Vertical	1930.2	54	29.9	83.9	Fundamental frequency
	1939.8	55.4		85.5	
	1949.8	51.3		81.2	
	1958	56.1		86	
	1967	58.6		88.5	
	1976	58.6		88.5	
	1985	59		88.9	
	1989.8	60.3		90.2	

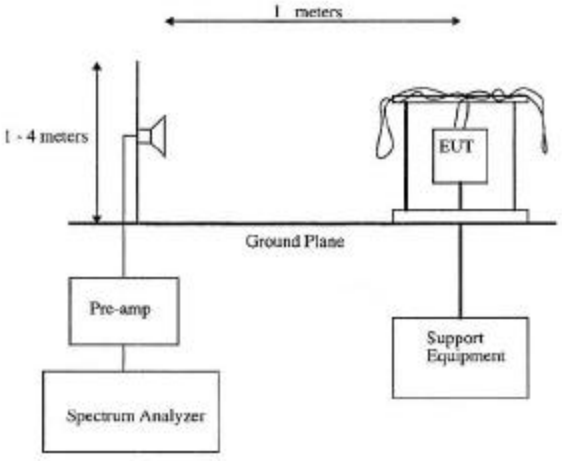
The field strength is calculate by adding the correction factor to the measured level to obtain the corrected level. A sample calculation is as follows :

Correction $Factor_{(dB)}$ = Cable $Losses_{(dB)}$ + Antenna $Factor_{(dB)}$ - pre-amplifier $gain_{(dB)}$
Corrected $Level_{(dB\mu V/m)}$ = Measured $Level_{(dB\mu V/m)}$ + Correction $Factor_{(dB)}$

No spurious emissions were found with a level upper to noise level in 100 kHz bandwidth (17 dBµV) from 1 GHz to 20 GHz.

4.7.3. TEST PROCEDURE

The equipment was configured as shown in figure below.



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 :

$$E\left(\frac{V}{M}\right) = \frac{1}{R(m)} * \sqrt{30 * Pt * G}$$

Where,

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

Therefore :

$$E\left(\frac{V}{M}\right) = \sqrt{30 * 30 * 1.64}$$

E = 38.42 V/m = 151.69 dBµV/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 dBµV/m – 57.7 dB = 93.9 dBµV/m

4.8. MEASUREMENT EQUIPMENT LIST

Table 5 is a list of all of the measurement equipment used in this report.

Table 5 : Measurement Equipment List

Equipment Description	Manufacturer	Model No.	Serial No.	V/A date
Network Analyzer	HP	8719D	521768	12/01
Power Meter	Giga-tronics	8542C	519565	02/03
CW Power Sensor	Giga-tronics	80401A	522394	02/03
Spectrum Analyzer	Rohde & Schwarz	FSEM	517751	03/02
30 dB attenuator	HP	8498A	519471	
Signal Generator	HP	HP 8657 B	509093	03/02
Programmable DC source	LAMBDA	Model LLS9060	ELC08493	03/03
Programmable DC source	LAMBDA	Model LLS9060	500222	03/02
Attenuator 20 dB	Radiall	R417020128	-	

5. EXHIBIT 2 : UPDATED EQUIPMENT LIST

Description	Hardware code	Comment
Base Cabinet	NTQA30AA NTQA30EA NTQA30CA NTQA30FA	To be used with ACU cooling system " To be used with DACS cooling system "
Sectorial or extension cabinet	NTQA30BA NTQA30EA NTQA30DA NTQA30FA	To be used with ACU cooling system " To be used with DACS cooling system "
AC main US	NTQA90AA	
ACU	NTQA95AB	
DACS	NTQA97AA	
GSM 1900 DRX	NTQA01AA NTQA01BA NTQA01CA NTQA01CB NTQA01DA NTQA88PA	 New Design DRX eDRX
GSM 1900 Splitter	NTQA10AA	
GSM 1900 Power Amplifier	NTQA50AA NTQA50GA	 eSCPA
GSM 1900 Duplexer	NTQA51DA	
GSM 1900 Two Ways Hybrid Duplexer	NTQA51AA	
GSM 1900 Four Way Hybrid Duplexer	NTQA52QA	
GSM 1900 Tx Filter	NTQA52CA	
VSWR	NTQA51ZC	
Rectifier unit	NTQA91AA NT5C15BC NT6C34AB	Philips APS APS Low Cost
Power Control Unit	NTQA9101 NT5C90LZ NT5C90NP	
Converter Type F Converter Type J	NTQA57AA NTQA02CA	
PSCMD	NTQA08AA	
GTW	NTQA06AA	
CSWM	NTQA09AA	
PCMI T1	NTQA04AA	
DSC	NTQA05AA	
SYNC	NTQA03AA	
ALCO	NTQA21AA	
COMICO	NTQA60AA NTQA60CA	Interconnection panel
PAICO	NTQA41AA	Interconnection panel
DRXICO	NTQA40AA	Interconnection panel
RECAL	NTQA66DA	
CPCMI T1	NTQA66AA	
CMCF	NTQA66CA	
CBCF	NTQA66BA	

6. EXHIBIT 3 : SCHEMATICS

6.1. E-DRX ASSEMBLY

ADQA88PA (3 pages).

6.2. E-RDRX (RADIO BOARD)

CSQA8007 (30 pages).

6.3. E-LDRX (LOGIC BOARD)

CSQA8001 (32 pages).

6.4. E-SCPA ASSEMBLY

NTQA50GA (7 pages).

END OF DOCUMENT