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Dates of Tests: Sep 17~Oct 5, 2010
 Test Report S/N: LR500191010C
 Test Site : LTA CO., LTD.

FCC ID

XBQ-N5PREMIUM

APPLICANT

YUKYUNG TECHNOLOGIES INC.

TEST REPORT

FCC Part 22H / 24E

Classification	PCS Licensed Transmitter (PCT)
Manufacturing Description	: MID(MOBILE INTERNET DEVICE)
Manufacturer	: YUKYUNG TECHNOLOGIES INC.
Model name	: N5 Premium
Variant Model name	: N5 EX
Test Device Serial No.:	: Identical prototype
FCC Rule Part(s)	: §22(H), §24(E), §15, §2
Frequency Range	: 824.70 ~ 848.31 MHz (Cellular) / 1851.25 ~ 1908.75MHz(PCS)
Max. RF Output Power	: 0.37W ERP (Cellular) / 0.49W EIRP (PCS)
Emission Designators:	: 1M25F9W
Data of issue	: October 5, 2010

This test report is issued under the authority of:

The test was supervised by:

Kyung-Taek LEE, Technical Manager

Hyun-Chae You, Test Engineer

This test result only responds to the tested sample. It is not allowed to copy this report even partly without the allowance of the test laboratory. This report must not be used by the applicant to claim product endorsement by any agency.

NVLAP LAB Code.: 200723-0

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1. General information's

1-1 Test Performed

Company name : LTA Co., Ltd.
 Address : 243, Jubug-ri, Yangji-Myeon, Youngin-Si, Kyunggi-Do, Korea. 449-822
 Web site : <http://www.ltalab.com>
 E-mail : chahn@ltalab.com
 Telephone : +82-31-323-6008
 Facsimile : +82-31-323-6010

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the “General requirements for the competents of calibration and testing laboratory”.

1-2 Accredited agencies

LTA Co., Ltd. is approved to perform EMC testing by the following agencies:

Agency	Country	Accreditation No.	Validity	Reference
NVLAP	U.S.A	200723-0	2011-09-30	ECT accredited Lab.
RRL	KOREA	KR0049	2011-06-20	EMC accredited Lab.
FCC	U.S.A	610755	2011-04-22	FCC filing
VCCI	JAPAN	R2133, C2307	2011-06-21	VCCI registration
IC	CANADA	IC5799	2012-05-14	IC filing

2. Information's about test item

2-1 Client

Company name : YUKYUNG TECHNOLOGIES INC.
 Address : 200-11, Anyang-Dong, Manan-Ku, Anyang-Si, Kyunggi-Do, Korea
 Tel / Fax : TEL No : +82-31-463-6906 / FAX No : +82-31-445-5995

2-2 Equipment Under Test (EUT)

Trade name : MID(MOBILE INTERNET DEVICE)
 Model name : N5 Premium
 Varient Model name : N5 EX
 Serial number : Identical prototype
 Date of receipt : September 16, 2010
 EUT condition : Pre-production, not damaged
 TX Frequency Range : 824.70 ~ 848.31 MHz (Cellualr) / 1851.25 ~ 1908.75MHz(PCS)
 Frequency Tolerance : $\pm 0.00025\%$ (2.5ppm)
 Emission Designators : 1M25F9W
 Power Source for Batt. : Battery Pack: 3.7V (Polymer Lithium Ion Battery)
 Power Source adaptor : Input: 100-240VAC, 0.4A Output: 5.0VDC, 3A

2-3 Tested frequency

Mode	Frequency (CH)	TX (MHz)
Cellular	Low (1013)	824.7
	Mid (283)	833.49
	High (777)	848.31
PCS	Low (25)	1851.25
	Mid (600)	1880
	High (1175)	1908.75

3. Test Report

3.1 Summary of tests

Parameter	Status
Transmitter Requirements	
I. FCC Part Section(s)	
CDMA Module is certified by FCC(FCC ID: QISEM660).	
Refer to the test report of FCC ID:QISEM660 as for the conducted part of the module	
Effective Radiated Power	C
Radiated Spurious emission	C
AC Conducted emission	C

Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable

Note 2: The data in this test report are traceable to the national or international standards.

Emission Designator:

EMISSION Designator = 1M25F9W

Calculation : 2M + 2DK

CDMA BW = 1.25MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

(Measured at the 99.75% power bandwidth)

3.2 DESCRIPTION OF TESTS

3.1.1 Occupied Bandwidth Emission Limits

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.

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.

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

3.1.2 Occupied Bandwidth

The 99% power bandwidth was measured with a calibrated spectrum analyzer.

3.1.3 Spurious and Harmonic Emissions at Antenna Terminal

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer.

The spectrum is scanned from the lowest frequency generated in the equipment up to 10 GHz.

At the input terminals of the spectrum analyzer, an isolator(RF circulator with one port terminated with 50ohms) and an 870 MHz to 890 MHz band pass filter is connected between the test transceiver(for conducted tests)or the receive antenna(for radiated tests) and the analyzer . The rejection of the band pass filter to signals in the 825-845 MHz range is adequate to limit the transmit energy from the test transceiver which appears to a level which will allow the analyzer to measure signals less than-90dBm. Calibration of the test receiver is performed in the 870-890 MHz range to insure accuracy to allow variation in the band pass filter insertion loss to be calibrated.

3.1.4 Frequencies

At the input terminals of the spectrum analyzer, an isolator (RF pad) and a high-pass filter are connected between the test transceiver (for conducted tests) or the receive antenna (for radiated tests) and the analyzer. The high-pass filter is to limit the fundamental frequency from interfering with the measurement of low-level spurious and harmonic emissions and to ensure that the preamplifier is not saturated.

3.1.5 Radiation Spurious and Harmonic Emissions

Radiation and harmonic emissions are measured outdoors at our 3-meter test range. The equipment under test is placed on a wooden turntable 3-meters from the receive antenna.

The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer reading. This level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

3.1.6 Frequency Stability/Temperature Variation.

The frequency stability of the transmitter is measured by:

Temperature :The temperature is varied from -30°C to + 60°C using an environmental chamber.

Primary Supply Voltage :The primary supply voltage is varied from 85% to 115% of the voltage Normally at the input to the device or at the power supply terminals if cables are not normally supplied.

Specification –The minimum frequency stability shall be +/- 0.00025% at any time during normal operation.

Specification — The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ± 0.00025 (± 2.5 ppm) of the center frequency.

Time Period and Procedure:

The carrier frequency of the transmitter and the individual oscillators is measured at room temperature (25°C to 27 °C to provide a reference)

The equipment is subjected to an overnight “soak” at -30°C without any power applied.

After the overnight ”soak” at -30°C(usually 14-16 hours),the equipment is turned on in a “standby” condition for one minute before applying power to the transmitter. Measurement of the carrier frequency to the transmitter and the individual oscillators is made within a three minute interval after applying power to the transmitter.

Frequency measurements is made at 10°C interval up to room temperature. At least a period of one and one half hour is provided to allow stabilization of the equipment at each temperature level.

Again the transmitter carrier frequency and the individual oscillators is measured at room temperature to begin measurement of the upper temperature levels.

Frequency were made at 10 intervals starting at -30°C up to +50°C allowing at least two hours at each temperature for stabilization. In all measurements the frequency is measured within three minutes after applying power to the transmitter.

The artificial load is mounted external to the temperature chamber.

3.1.7 Radiated Emission

Final test was performed according to ANSI C63.4-2003 at the open field test site. There are no deviations from the standard.

The EUT was placed in a 0.8m high table along with the peripherals. The turn table was separated from the antenna distance 3meters. Cables were placed in a position to produce maximum emissions as determined by experimentation, and operation mode was selected for maximum.

The frequencies and amplitudes of maximum emission were measured at varying azimuths, antenna heights and antenna polarities. Reported are maximized emission levels.

These tests were performed at 120kHz of 6dB bandwidth.

3.1.8 Conducted Emission

The power line conducted interference measurements were performed according to ANSI C63.4-2003 in a shielded enclosure with peripherals placed on a table, 0.8m high over a metal floor. It was located more than required distance away from the shielded enclosure wall. There are no deviations from the standard.

The EUT was plugged into the LISN and the frequency range of interest scanned.

Reported are maximized emission levels.

These tests were performed at 9kHz of 6dB bandwidth.

3.1.9 General Set up Description

The device can Support Cellular/PCS Band, and Support the CDMA2000 1x standard and the CDMA2000 EV-DO Rev. A/ Rev. 0 standard. During this measurement, the device works in CDMA / EV-DO mode and Cellular Band.

Test mode is :

Mode	Parameter		note
CDMA 1XRTT	TM1	TM3	–
EVDO	Sub0	Sub2	–

CDMA MODE:

- TM1: Forward Traffic Channel Radio Configuration 1, Reverse Traffic Channel Radio Configuration 1
- TM3: Forward Traffic Channel Radio Configuration 3, Reverse Traffic Channel Radio Configuration 3

EVDO MODE:

- Subtype 0 : indicates that the protocol subtype assigned to the Access Channel MAC protocol is Default Access Channel MAC and its Subtype ID number is 0x0000.
- Subtype 2 : indicates that the protocol subtype assigned to the Access Channel MAC protocol is Enhanced Access Channel MAC and its Subtype ID number is 0x0002

3.3.1 Conducted Output Power

- PreTest Measurement data (Celluar)

Test condition	RF Output Power					
	Ch 1013		Ch 283		Ch 777	
	Measured (dBm)	Limit (dBm)	Measured (dBm)	Limit (dBm)	Measured (dBm)	Limit (dBm)
TM1	24.3	38.5	24.6	38.5	24.3	38.5
TM3*	24.4	38.5	24.5	38.5	24.4	38.5
Sub0	24.3	38.5	24.4	38.5	24.2	38.5
Sub2	24.3	38.5	24.4	38.5	24.3	38.5

- PreTest Measurement data (PCS)

Test condition	RF Output Power					
	Ch 25		Ch 600		Ch 1175	
	Measured (dBm)	Limit (dBm)	Measured (dBm)	Limit (dBm)	Measured (dBm)	Limit (dBm)
TM1*	23.9	33	23.7	33	22.6	33
TM3	23.8	33	23.8	33	22.5	33
Sub0	23.7	33	23.6	33	22.4	33
Sub2	23.6	33	23.6	33	22.5	33

The output power was measured under all modulation which are listed below measurement data.

1. The worst case output power is reported with TM3 for CELLULAR band. Therefore this device was tested under TM3 for CELLULAR band.
2. The worst case output power is reported with TM1 for PCS band. Therefore this device was tested under TM1 for PCS band.

3.3.2 Effective Radiated Power

-Cellular (ERP)

Test Mode	Frequency (MHz)	TEST CONDITIONS				
		Ref. level (dBm)	Pol. (H/V)	CORR. FACTOR (dB)	ERP (dBm)	ERP (W)
TM3	824.7	22.98	V	2.63	25.61	0.364
TM3	833.49	23.12	V	2.63	25.75	0.376
TM3	848.31	22.73	V	2.63	25.36	0.344
SUB2	824.7	22.78	V	2.63	25.41	0.348
SUB2	833.49	22.95	V	2.63	25.58	0.361
SUB2	848.31	22.75	V	2.63	25.38	0.345

-PCS (EIRP)

Test Mode	Frequency (MHz)	TEST CONDITIONS				
		Ref. level (dBm)	Pol. (H/V)	CORR. FACTOR (dB)	EIRP (dBm)	EIRP (W)
TM1	1851.25	19.23	V	7.72	26.95	0.49
TM1	1880	18.85	V	7.72	26.57	0.45
TM1	1908.75	18.23	V	7.72	25.95	0.39
SUB0	1851.25	18.78	V	7.72	26.50	0.45
SUB0	1880	18.12	V	7.72	25.84	0.38
SUB0	1908.75	17.70	V	7.72	25.42	0.35

Note1 : CORR.FACTOR = Antenna + Cable loss

Note2 : ERP(EIRP) = SGP (dBm) - Cable loss + Antenna gain(dBd/dBi)

NOTES:

Effective Radiated Power Output Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. The conducted power at the terminals of the dipole is measured. The ERP is recorded.

3.3.3 Field Strength of spurious Radiation

OPERATING FREQUENCY : 824.7 MHz
 CHANNEL : 1013(Low)
 MEASURED OUTPUT POWER : 24.40 dBm = 0.275 W
 MODULATION : Cellular CDMA (TM3)
 DISTANCE : 3 meters
 LIMIT : $43 + 10 \log_{10} (W)$ = 37.39 dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	
-	-	-	-	-	-
No emissions were detected are a level greater than 20dB below limit.					
-	-	-	-	-	-

Note1: Radiated measurements at 3 meters by Substitution Method.

--- Blank ---

3.3.3 Field Strength of spurious Radiation

--- Continue

OPERATING FREQUENCY : 833.49 MHz

CHANNEL : 0283(Mid)

MEASURED OUTPUT POWER : 24.5 dBm = 0.282 W

MODULATION : Cellular CDMA (TM3)

DISTANCE : 3 meters

LIMIT : $43 + 10 \log_{10} (W)$ = 37.50 dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	
-	-	-	-	-	-
No emissions were detected are a level greater than 20dB below limit.					
-	-	-	-	-	-

Note1: Radiated measurements at 3 meters by Substitution Method.

--- Blank ---

3.3.3 Field Strength of spurious Radiation

--- Continue

OPERATING FREQUENCY : 848.31 MHz

CHANNEL : 777(Mid)

MEASURED OUTPUT POWER : 24.4 dBm = 0.275 W

MODULATION : Cellular CDMA (TM3)

DISTANCE : 3 meters

LIMIT : $43 + 10 \log_{10} (W)$ = 37.39 dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	
-	-	-	-	-	-
No emissions were detected are a level greater than 20dB below limit.					
-	-	-	-	-	-

Note1: Radiated measurements at 3 meters by Substitution Method.

--- Blank ---

OPERATING FREQUENCY : 1851.25 MHz

CHANNEL : 25(Low)

MEASURED OUTPUT POWER : 23.9 dBm = 0.245 W

MODULATION : PCS CDMA (TM1)

DISTANCE : 3 meters

LIMIT : $43 + 10 \log_{10} (W) = 36.89$ dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	
-	-	-	-	-	-
No emissions were detected are a level greater than 20dB below limit.					
-	-	-	-	-	-

Note1: Radiated measurements at 3 meters by Substitution Method.

--- Blank ---

3.3.3 Field Strength of spurious Radiation

--- Continue

OPERATING FREQUENCY : 1880 MHz

CHANNEL : 600(Mid)

MEASURED OUTPUT POWER : 23.7 dBm = 0.234 W

MODULATION : PCS CDMA (TM1)

DISTANCE : 3 meters

LIMIT : $43 + 10 \log_{10} (W)$ = 36.69 dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	
-	-	-	-	-	-
No emissions were detected are a level greater than 20dB below limit.					
-	-	-	-	-	-

Note1: Radiated measurements at 3 meters by Substitution Method.

3.3.3 Field Strength of spurious Radiation

--- Continue

OPERATING FREQUENCY : 1908.75 MHz

CHANNEL : 1175(High)

MEASURED OUTPUT POWER : 22.6 dBm = 0.182 W

MODULATION : PCS CDMA (TM1)

DISTANCE : 3 meters

LIMIT : $43 + 10 \log_{10} (W)$ = 35.60 dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	
-	-	-	-	-	-
No emissions were detected are a level greater than 20dB below limit.					
-	-	-	-	-	-

Note1: Radiated measurements at 3 meters by Substitution Method.

3.3.4 Radiated Emission

Radiated Emissions – PC Mode

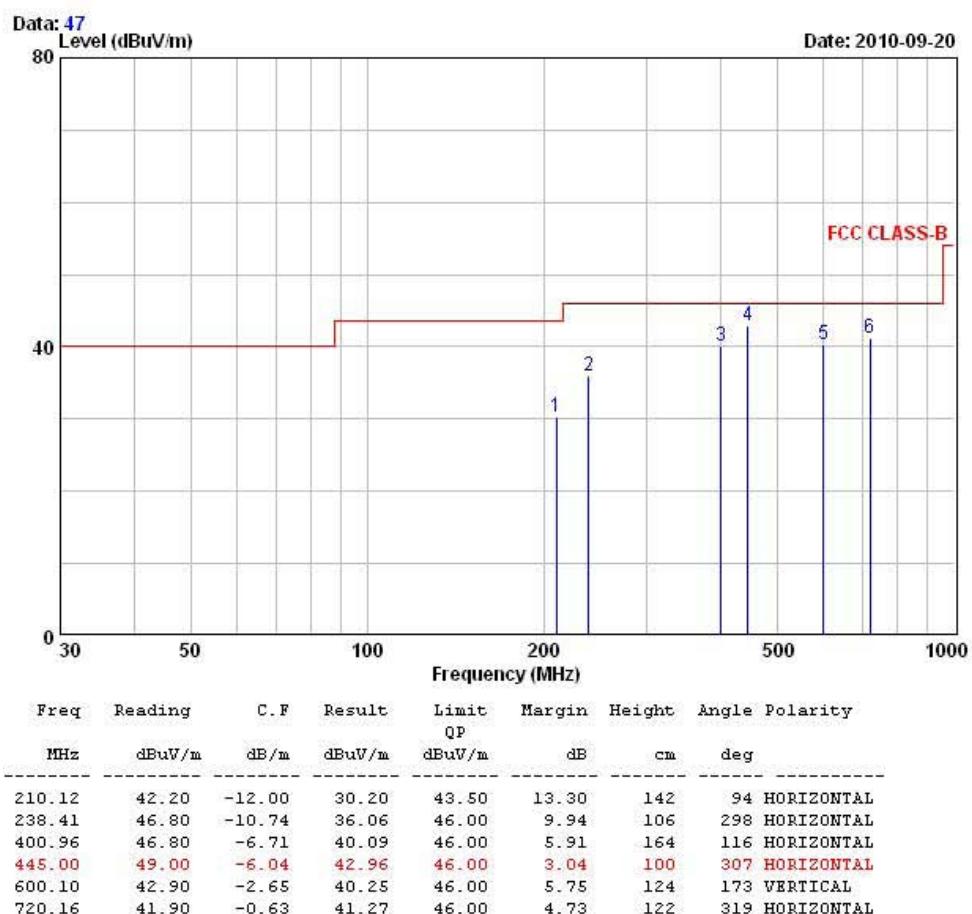
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Fax :+82-31-3236010

EUT/Model No.: N5 Premium

TEST MODE: "H"+FILE UP/DOWN+MP3 PLAY mode

Temp Humi : 23 / 59

Tested by: PARK.H.W



Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions – CDMA Mode

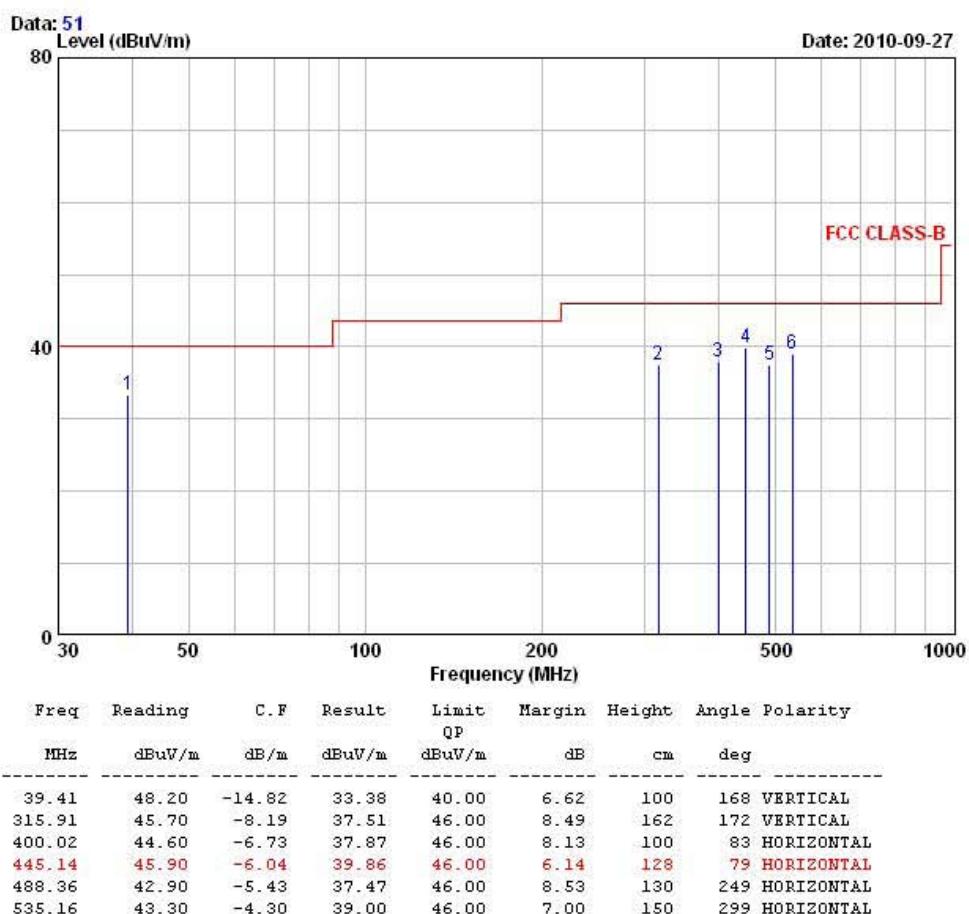
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Tel :+82-31-3236008,9
Fax :+82-31-3236010

EUT/Model No.: N5 Premium

TEST MODE: CDMA mode

Temp Humi : 23 / 59

Tested by: PARK.H.W



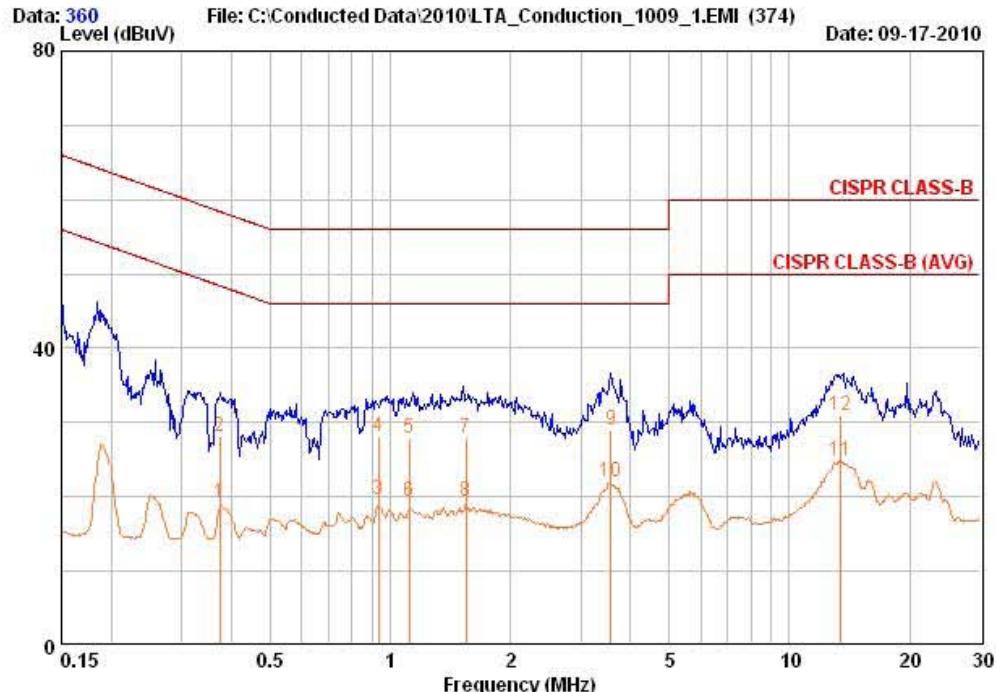
Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

3.3.5 AC Conducted Emission – PC Line



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EUT / Model No. : NS Premium Phase : LINE
Test Mode : "H"+FILE UP/DOWN+ MP3 PLAY mode Test Power : 120 / 60
Temp./Humi. : 24 / 58 Test Engineer : PARK H W



Freq MHz	RD QP dBuV	RD AV dBuV	C. F dB	Result		Result		Limit		Margin	
				QP dBuV	AV dBuV	QP dBuV	AV dBuV	QP dBuV	AV dBuV	QP dB	AV dB
0.374	18.45	9.55	9.67	28.12	19.22	58.41	48.41	30.29	29.19		
0.933	18.26	9.76	9.79	28.05	19.55	56.00	46.00	27.95	26.45		
1.114	18.17	9.57	9.79	27.96	19.36	56.00	46.00	28.04	26.64		
1.547	18.19	9.49	9.80	28.00	19.30	56.00	46.00	28.00	26.70		
3.576	19.13	12.23	9.87	29.00	22.10	56.00	46.00	27.00	23.90		
13.401	20.60	14.50	10.33	30.93	24.83	60.00	50.00	29.07	25.17		

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss

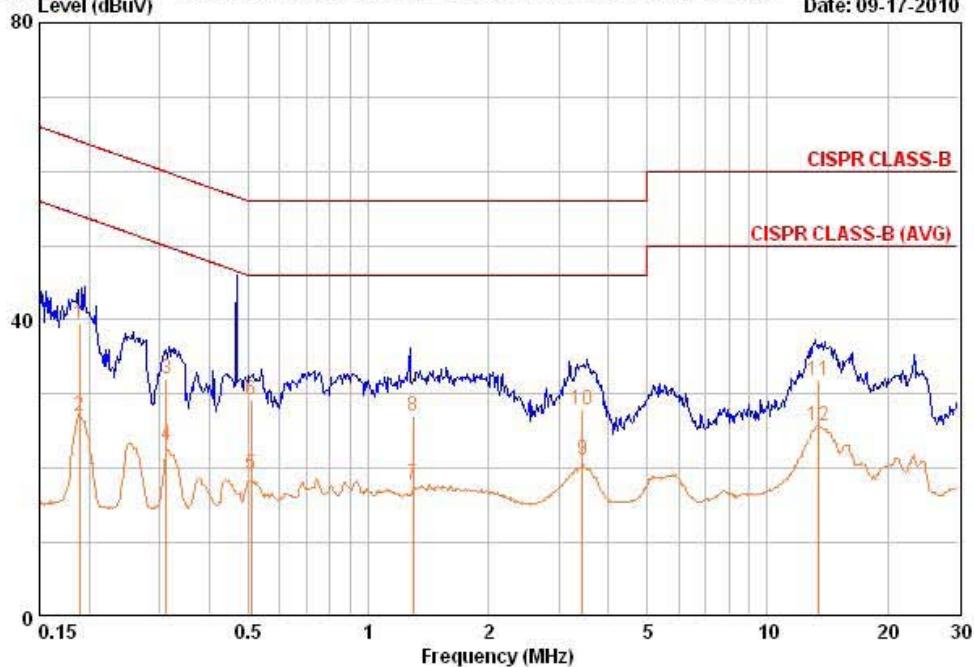
3.3.5 AC Conducted Emission – PC Neutral



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EUT / Model No. : NS Premium Phase : NEUTRAL
Test Mode : "H"+FILE UP/DOWN+ MP3 PLAY mode Test Power : 120 / 60
Temp./Humid. : 24 / 58 Test Engineer : PARK H W

Data: 362 File: C:\Conducted Data\2010\LTA_Conduction_1009_1.EMI (374) Date: 09-17-2010



Freq MHz	RD dBuV	RD dBuV	C. F dB	Result dBuV	Result dBuV	Limit dBuV	Limit dBuV	Margin dB	Margin dB
	QP	AV		QP	AV	QP	AV		
0.189	29.76	17.46	9.66	39.42	27.12	64.08	54.08	24.66	26.96
0.312	22.36	13.36	9.66	32.02	23.02	59.92	49.92	27.90	26.90
0.508	19.45	9.45	9.67	29.12	19.12	56.00	46.00	26.88	26.88
1.293	17.28	7.98	9.79	27.07	17.77	56.00	46.00	28.93	28.23
3.447	17.94	11.24	9.86	27.80	21.10	56.00	46.00	28.20	24.90
13.405	21.50	15.40	10.33	31.83	25.73	60.00	50.00	28.17	24.27

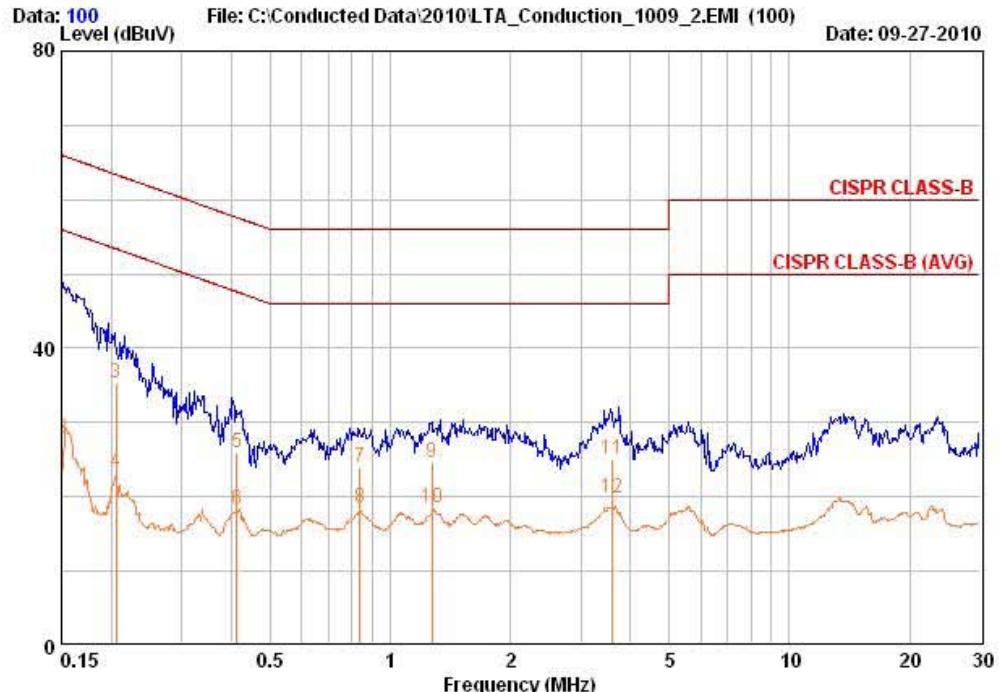
Remarks: C.F (Correction Factor) = Insertion loss + Cable loss

3.3.5 AC Conducted Emission – CDMA Line



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EUT / Model No. : NS Premium Phase : LINE
 Test Mode : CDMA mode Test Power : 120 / 60
 Temp./Humi. : 26 / 53 Test Engineer : KIM.K.I



Freq MHz	RD QP	RD AV	C. F dB	Result QP	Result AV	Limit QP	Limit AV	Margin QP	Margin AV
	dBuV	dBuV		dBuV	dBuV	dBuV	dBuV	dB	dB
0.150	35.15	18.25	9.65	44.80	27.90	66.00	56.00	21.20	28.10
0.206	25.76	13.66	9.65	35.41	23.31	63.37	53.37	27.96	30.06
0.413	16.25	8.65	9.67	25.92	18.32	57.59	47.59	31.67	29.27
0.840	14.26	8.76	9.78	24.04	18.54	56.00	46.00	31.96	27.46
1.273	14.78	8.68	9.80	24.57	18.47	56.00	46.00	31.43	27.53
3.596	15.13	10.03	9.87	25.00	19.90	56.00	46.00	31.00	26.10

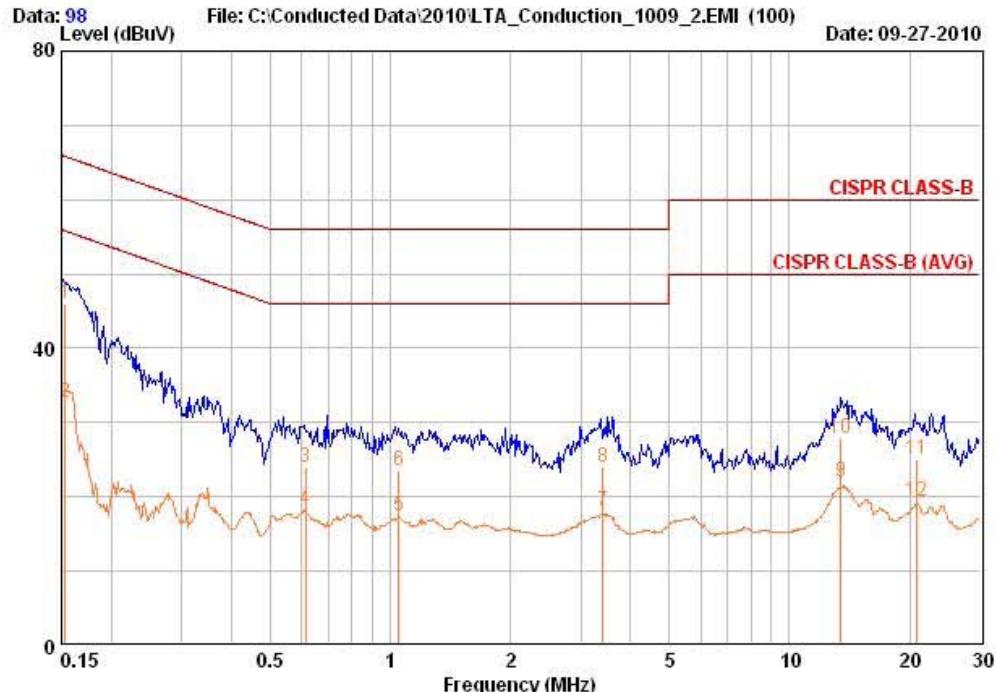
Remarks: C.F (Correction Factor) = Insertion loss + Cable loss

3.3.5 AC Conducted Emission – CDMA Neutral



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EUT / Model No. : NS Premium Phase : NEUTRAL
Test Mode : CDMA mode Test Power : 120 / 60
Temp./Humid. : 26 / 53 Test Engineer : KIM.K.I



Freq MHz	RD QP		RD AV		C. F dB	Result QP		Result AV		Limit QP		Limit AV		Margin dB	Margin dB
	dBuV	dBuV	dBuV	dBuV		dBuV	dBuV	dBuV	dBuV	dBuV	dBuV	dBuV	dBuV		
0.153	36.35	22.95	9.66	9.66	46.01	32.61	65.84	55.84	55.84	19.82	23.22				
0.615	14.16	8.66	9.73	9.73	23.88	18.38	56.00	46.00	46.00	32.12	27.62				
1.051	13.76	7.76	9.78	9.78	23.55	17.55	56.00	46.00	46.00	32.45	28.45				
3.401	14.14	8.24	9.86	9.86	24.00	18.10	56.00	46.00	46.00	32.00	27.90				
13.473	17.50	11.70	10.33	10.33	27.84	22.04	60.00	50.00	50.00	32.16	27.96				
20.818	14.54	8.84	10.62	10.62	25.16	19.46	60.00	50.00	50.00	34.84	30.54				

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss

APPENDIX 1

TEST EQUIPMENT USED FOR TESTS

	Description	Model No.	Serial No.	Manufacturer	Next Cal. Date
1	Spectrum Analyzer	FSV-30	100757	R&S	Feb-11
2	Spectrum Analyzer	8563E	3425A02505	HP	Mar-11
3	Spectrum Analyzer	8594E	3710A04074	HP	Oct-10
4	Signal Generator	8648C	3623A02597	HP	Mar-11
5	Signal Generator	83711B	US34490456	HP	Mar-11
6	Attenuator (3dB)	8491A	37822	HP	Oct-10
7	Attenuator (10dB)	8491A	63196	HP	Oct-10
8	Attenuator (30dB)	8498A	1801A06689	HP	Oct-10
9	EMI Test Receiver	ESVD	843748/001	R&S	Mar-11
10	Horn Antenna(18 ~ 40GHz)	SAS-574	154	Schwarzbeck	Nov-10
11	Horn Antenna(18 ~ 40GHz)	SAS-574	155	Schwarzbeck	Nov-10
12	RF Amplifier	8447D	2949A02670	HP	Oct-10
13	RF Amplifier	8449B	3008A02126	HP	Mar-11
14	Test Receiver	ESHS10	828404/009	R&S	Mar-11
15	TRILOG Antenna	VULB 9160	9160-3212	SCHWARZBECK	Apr-11
16	Log.-Per. Antenna	VULP 9118	9118 A 401	SCHWARZBECK	Apr-11
17	Biconical Antenna	BBA 9106	VHA 9103-2315	SCHWARZBECK	Apr-11
18	Horn Antenna	3115	00055005	ETS LINDGREN	Mar-11
19	Horn Antenna	BBHA 9120D	9120D122	SCHWARZBECK	Dec-11
20	Dipole Antenna	VHA9103	2116	SCHWARZBECK	Nov-10
21	Dipole Antenna	VHA9103	2117	SCHWARZBECK	Nov-10
22	Dipole Antenna	VHA9105	2261	SCHWARZBECK	Nov-10
23	Dipole Antenna	VHA9105	2262	SCHWARZBECK	Nov-10
24	Hygro-Thermograph	THB-36	0041557-01	ISUZU	Mar-11
25	Splitter (SMA)	ZFSC-2-2500	SF617800326	Mini-Circuits	-
26	RF Switch	MP59B	6200414971	ANRITSU	-
27	Power Divider	11636A	6243	HP	Oct-10
28	DC Power Supply	6622A	3448A03079	HP	Oct-10
29	Frequency Counter	5342A	2826A12411	HP	Mar-11
30	Power Meter	EPM-441A	GB32481702	HP	Mar-11
31	Power Sensor	8481A	2702A64048	HP	Mar-11
32	Audio Analyzer	8903B	3729A18901	HP	Oct-10
33	Modulation Analyzer	8901B	3749A05878	HP	Oct-10
34	TEMP & HUMIDITY Chamber	YJ-500	LTAS06041	Jin Young Tech	Oct-10
35	LOOP-ANTENNA	FMZB 1516	151602/94	SCHWARZBECK	Mar-11
36	Stop Watch	HS-3	601Q09R	CASIO	Mar-11
37	LISN	ENV216	100408	R&S	Oct-10
38	UNIVERSAL RADIO COMMUNICATION TESTER	CMU200	106243	R&S	May-12