

APPLICANT: CHERISH TELECOM CO., LTD.

FCC ID: FNXCG-201

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SECURITY CODING INFORMATION

15.214(d) - THIS DEVICE COMPLIES WITH THE SECURITY CODE REQUIREMENTS OF 15.214(d)(1)(2) AND (3) BY MEANS OF THE FOLLOWING:

THIS PHONE IS EQUIPPED WITH A DIGITAL SECURITY SYSTEM WITH OVER 1 MILLION CODE COMBINATIONS.

WHEN MAKING A CALL, THE TELEPHONE SEARCHES THROUGH ITS 40 AVAILABLE CHANNELS AUTO CHANNEL SCAN TO FIND THE CLEAREST ONE.

THE RECEIVER PORTION OF THIS TELEPHONE, FCC ID: FNXCG-201, WAS TESTED WITH PASSING RESULTS. A VERIFICATION REPORT HAS BEEN ISSUED PER FCC RULES PART 15.109.

TEST EQUIPMENT LIST

1. Spectrum Analyzer: HP 8566B-Opt 462, S/N 3138A07786, w/ preselector HP 85685A, S/N 3221A01400, Quasi-Peak Adapter HP 85650A, S/N 3303A01690 & Preamplifier HP 8449B-OPT H02, S/N 3008A00372 Cal. 10/17/99
2. Biconical Antenna: Eaton Model 94455-1, S/N 1057
3. Biconical Antenna: Electro-Metrics Model BIA-25, S/N 1171
4. Log-Periodic Antenna: Electro-Metrics Model EM-6950, S/N 632
5. Log-Periodic Antenna: Electro-Metrics Model LPA-30, S/N 409
6. Double-Ridged Horn Antenna: Electro-Metrics Model RGA-180, 1-18 GHz, S/N 2319
7. 18-26.3GHz Systron Donner Standard Gain Horn #DBE-520-20
8. Horn 40-60GHz: ATM Part #19-443-6R
9. Line Impedance Stabilization Network: Electro-Metrics Model ANS-25/2, S/N 2604 Cal. 2/9/00
10. Temperature Chamber: Tenney Engineering Model TTRC, S/N 11717-7
11. Frequency Counter: HP Model 5385A, S/N 3242A07460 Cal 10/6/99
12. Peak Power Meter: HP Model 8900C, S/N 2131A00545
13. Open Area Test Site #1-3meters Cal. 12/22/99
14. Signal Generator: HP 8640B, S/N 2308A21464 Cal. 9/23/99
15. Signal Generator: HP 8614A, S/N 2015A07428
16. Passive Loop Antenna: EMCO Model 6512, 9KHz to 30MHz, S/N 9706-1211 Cal. 6/10/00
17. Dipole Antenna Kit: Electro-Metrics Model TDA-30/1-4, S/N 153 Cal. 11/24/99
18. AC Voltmeter: HP Model 400FL, S/N 2213A14499 Cal. 9/21/99
19. Digital Multimeter: Fluke Model 8012A, S/N 4810047 Cal 9/21/99
20. Digital Multimeter: Fluke Model 77, S/N 43850817 Cal 9/21/99
21. Oscilloscope: Tektronix Model 2230, S/N 300572 Cal 9/23/99

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TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of TIMCO ENGINEERING, INC.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-1992 using a HEWLETT PACKARD spectrum analyzer with a preselector. The bandwidth of the spectrum analyzer was 100 kHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100kHz and the video bandwidth was 300kHz up to 1.0GHz. Above 1.0GHz the RBW = 1.0MHz and the VBW=3.0MHz. The ambient temperature of the UUT was 76oF with a humidity of 42%.

ANSI STANDARD C63.4-1992 10.1.7 MEASUREMENT PROCEDURES: The UUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The UUT was placed flush with the back of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

The situation was similar for the conducted measurement except that the table did not rotate. The EUT was setup as described in ANSI C63.4-1992 with the EUT 40 cm from the vertical ground wall.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the Preselector was accounted for in the Spectrum Analyzer Meter Reading.

Example:

Freq (MHz)	METER READING + ACF = FS
33	20 dBuV + 10.36 dB = 30.36 dBuV/m @ 3m

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-1992 using a 50uH LISN. Both lines were observed. The bandwidth of the spectrum analyzer was 10kHz with an appropriate sweep speed. The ambient temperature of the UUT was 76oF with a humidity of 42%.

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APPLICANT: CHERISH TELECOM CO., LTD.

FCC ID: FNXCG-201 (BASE)

NAME OF TEST: RADIATION INTERFERENCE

RULES PART NO.: 15.249

REQUIREMENTS: Carrier frequency will not exceed 94.0 dBuV/m

FREQUENCY MHz	LEVEL dBuV/M
902- 928 MHz:	54.0 dBuV/M
ABOVE 960 MHz:	54.0 dBuV/M

BASE FREQUENCY RANGE: 2403.05 - 2405.00 MHz

TEST DATA:

EMISSION FREQUENCY MHz	METER READING AT 3 METERS dBuV	COAX LOSS dB	ANTENNA CORRECTION FACTOR	FIELD STRENGTH dBuV/m@3m	MARGIN dB	ANT. POL.
BASE TUNED FREQUENCY - 2403.60 MHz - CH 12						
2403.60	60.90	1.09	29.01	91.00	3.00	V
4807.20	3.90	1.45	33.91	39.26	14.74	V
BASE TUNED FREQUENCY 2404.90 MHz - CH38						
2404.90	60.60	1.09	29.01	90.70	3.30	V
4809.70	3.90	1.45	33.91	39.26	14.74	V

SAMPLE CALCULATION: $FSdBuV/m = MR(dBuV) + ACFdB$.

METHOD OF MEASUREMENT: The procedure used was ANSI STANDARD C63.4-1992. Measurements were made at Timco Engineering, Inc. 849 N.W. State Road 45, Newberry, FL 32669.

TEST RESULTS: The unit DOES meet the FCC requirements.

PERFORMED BY: JOSEPH SCOGLIO DATE: JANUARY 12, 2001

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APPLICANT: CHERISH TELECOM CO., LTD.
FCC ID: FNXCG-201 (HANDSET)
NAME OF TEST: RADIATION INTERFERENCE PAGE 1 OF 1
RULES PART NO.: 15.249
REQUIREMENTS: Carrier frequency will not exceed 94.0 dBuV/m

FREQUENCY	LEVEL
____MHz____	_dBuV/M_
902- 928 MHz:	54.0 dBuV/M
ABOVE 960 MHz:	54.0 dBuV/M

HANDSET FREQUENCY RANGE: 2474.00 - 2475.95 MHz

TEST DATA:

EMISSION FREQUENCY MHz	METER READING dBuV	COAX LOSS dB	ANTENNA CORRECTION FACTOR	FIELD STRENGTH dBuV/m@3m	MARGIN dB	ANT. POL.
HANDSET TUNED FREQUENCY - 2474.60 MHz - CH 13						
2474.60	55.00	1.10	29.19	85.29	8.71	H
4949.20	1.00	1.47	34.07	36.54	17.46	V
HANDSET TUNED FREQUENCY - 2475.70 MHz - CH 35						
2475.70	55.10	1.10	29.19	85.39	8.61	H
4951.40	0.50	1.47	34.07	36.04	17.96	V

SAMPLE CALCULATION: FSdBuV/m = MR(dBuV) + ACFdB.

METHOD OF MEASUREMENT: The procedure used was ANSI STANDARD C63.4-1992 with the following exception: the unit was operated into its own antenna with the antenna at a height of four feet. Measurements were made at Timco Engineering, Inc. 849 N.W. State Road 45, Newberry, FL 32669.

TEST RESULTS: The unit DOES meet the FCC requirements.

PERFORMED BY: JOSEPH SCOGLIO DATE: JANUARY 12, 2001

APPLICANT: CHERISH TELECOM CO., LTD.
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APPLICANT: CHERISH TELECOM CO., LTD.

FCC ID: FNXCG-201

NAME OF TEST: Occupied Bandwidth

RULES PART NO.: 15.233

REQUIREMENTS: The field strength of any emissions appearing between the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 26 dB below the level of the unmodulated carrier or to the general limits of 15.209, whichever permits the higher emission levels.

THE GRAPHS IN THE NEXT 4 PAGES REPRESENT THE EMISSIONS TAKEN FOR THIS DEVICE.

METHOD OF MEASUREMENT: A small sample of the transmitter output was fed into the spectrum analyzer and the above photo was taken. The vertical scale is set to -10 dBm per division. The horizontal scale is set to 5 kHz per division.

TEST RESULTS: The unit DOES meet the FCC requirements.

PERFORMED BY: JOSEPH SCOGLIO JANUARY 12, 2001

APPLICANT: CHERISH TELECOM CO., LTD.
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BASE

OCCUPIED BANDWIDTH PLOT - CW

MKR 2.403 301 10 GHz

71.90 dB μ VREF 73.0 dB μ V ATTEN 10 dB +0 dB

10 dB/

OFFSET -20.0 dB

DL 47.0 dB μ V

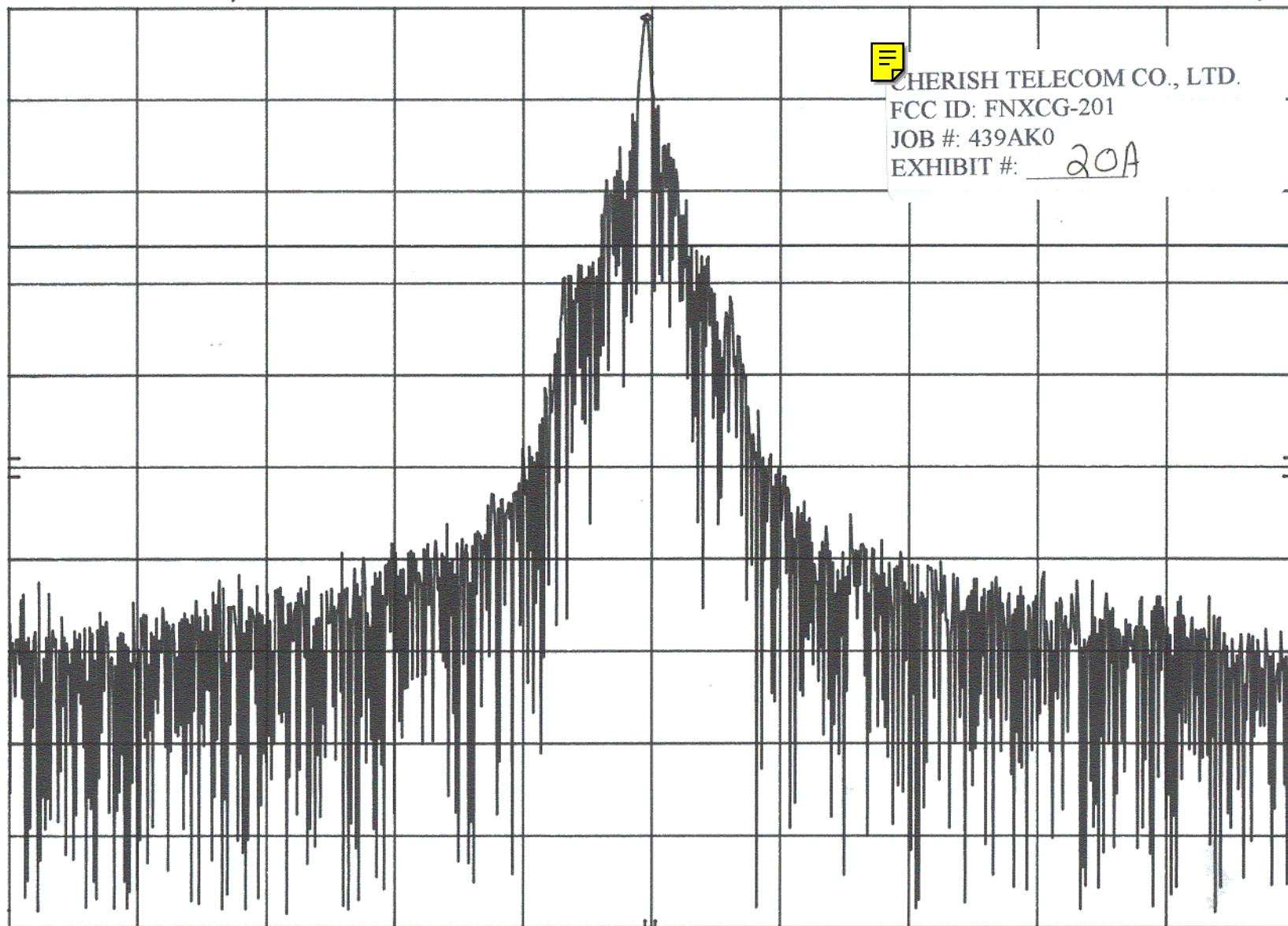
CENTER 2.403 301 3 GHz

RES BW 300 Hz (i)

VBW 100 kHz

SPAN 50.0 kHz

SWP 4.00 sec



BASE

2.5 GHz TONE OCCUPIED BANDWIDTH

MKR 2.403 301 00 GHz
69.30 dB μ V

HANDSET

OCCUPIED BANDWIDTH PLOT - CW

MKR 2.475 148 44 GHz
72.40 dB μ V

hp REF 73.0 dB μ V ATTEN 10 dB +0 dB 72.40 dB μ V

10 dB/

OFFSET -20.0 dB

DL 47.0 dB μ V

CENTER 2.475 148.6 GHz SPAN 50.0 kHz

RES BW 300 Hz (i) VBW 100 kHz SWP 4.00 sec

CHERISH TELECOM CO., LTD.
FCC ID: FNXCG-201
JOB #: 439AK0
EXHIBIT #: 20C

HANDSET

OCCUPIED BANDWIDTH PLOT

MKR 2.475 155 69 GHz

62.10 dB μ V

hp REF 73.0 dB μ V ATTEN 10 dB +0 dB

10 dB/

OFFSET
-20.0
dB

DL
47.0
dB μ V

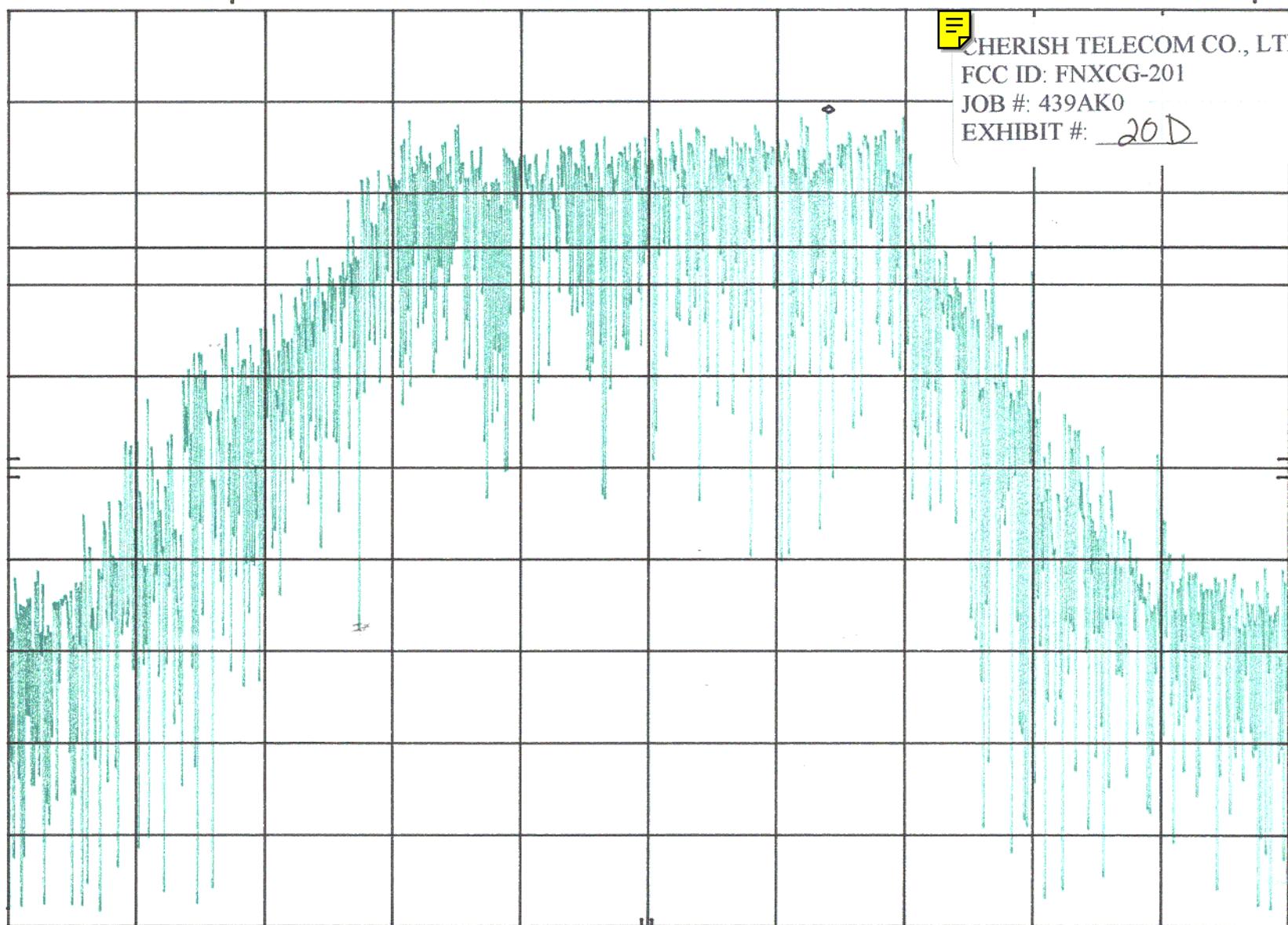
CENTER 2.475 148 6 GHz

RES BW 300 Hz (i)

VBW 100 kHz

SPAN 50.0 kHz

SWP 4.00 sec



APPLICANT: CHERISH TELECOM CO., LTD.

FCC ID: FNXCG-201

NAME OF TEST: POWER LINE CONDUCTED INTERFERENCE

RULES PART NUMBER: 15.207

MINIMUM REQUIREMENTS:	FREQUENCY	LEVEL
	MHz	uV
	0.450-30	250

TEST PROCEDURE: ANSI STANDARD C63.4-1992

THE HIGHEST EMISSION READ FOR LINE 1 WAS 17.357 uV @ 210 kHz.

THE HIGHEST EMISSION READ FOR LINE 2 WAS 19.475 uV @ 210 kHz.

THE GRAPHS IN THE NEXT 2 PAGES REPRESENT THE EMISSIONS READ FOR POWERLINE CONDUCTED FOR THIS DEVICE.

TEST RESULTS: Both lines were observed. The measurements indicate that the unit DOES appear to meet the FCC requirements for this class of equipment.

PERFORMED BY: JOSEPH SCOGLIO

DATE: JANUARY 12, 2001

APPLICANT: CHERISH TELECOM CO., LTD.

FCC ID: FNXCG-201

DATE: JANUARY 12, 2001

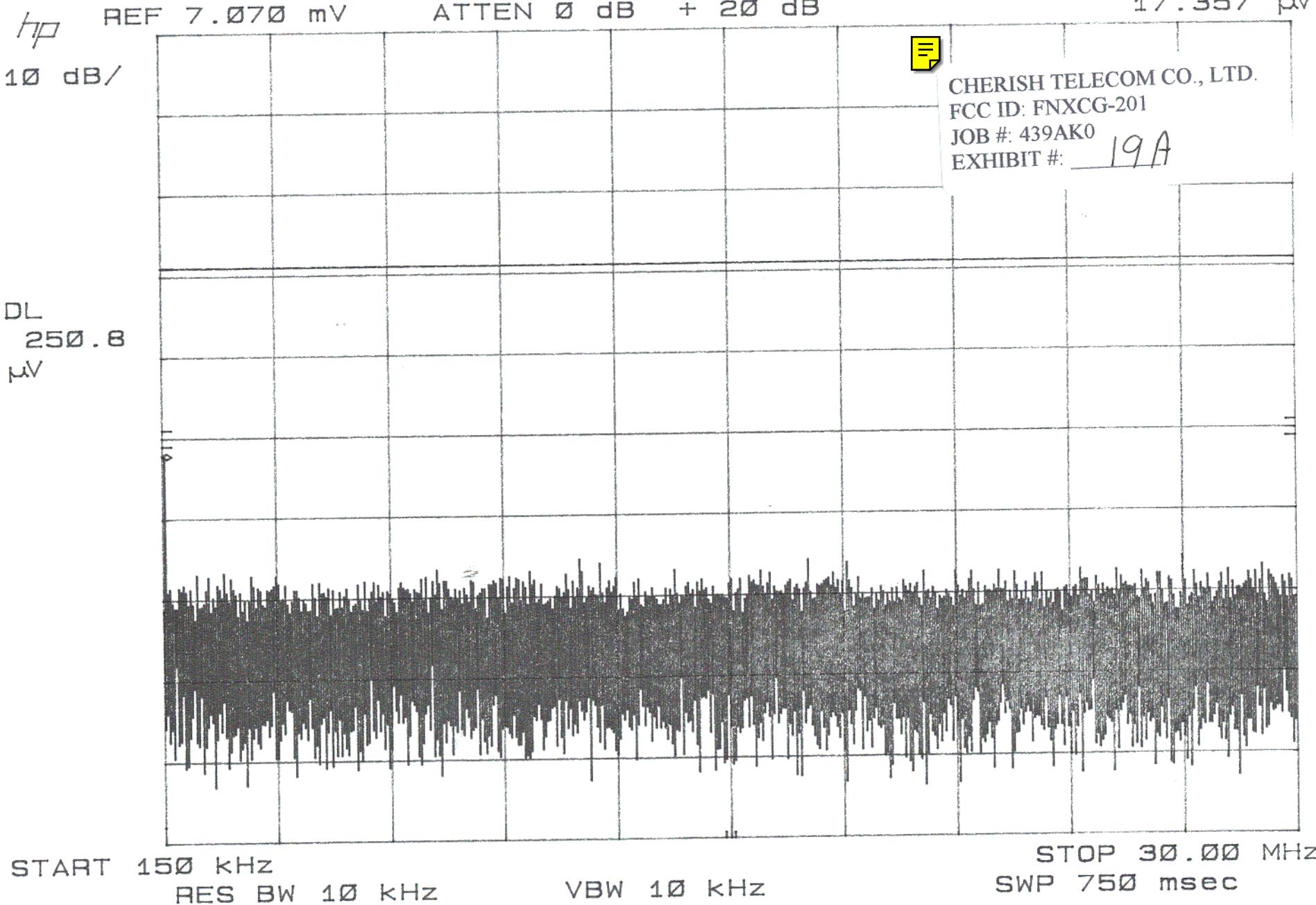
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LINE 1

MKR 210 kHz

17.357 μ V



LINE 2

MKR 210 kHz

19.475 μ V

hp REF 7.070 mV ATTEN 0 dB + 20 dB

10 dB/

DL 250.8 μ V

START 150 kHz

RES BW 10 kHz

VBW 10 kHz

STOP 30.00 MHz

SWP 750 msec



CHERISH TELECOM CO., LTD.
FCC ID: FNXCG-201
JOB #: 439AK0
EXHIBIT #: 19B