APPLICANT: WIDELINK CO., LTD.

FCC ID: PISWAP-1100E

TABLE OF CONTENTS

TEST REPORT CONTAINING:

EXHIBIT ATTACHMENTS:

TEST EQUIPMENT LIST

1._X_Spectrum Analyzer: HP 8566B-Opt 462, S/N 3138A07786, w/ preselector HP 85685A, S/N 3221A01400, Quasi-Peak Adapter HP 8565OA, S/N 3303A01690 & Preamplifier HP 8449B-OPT H02, S/N 3008A00372
2._X_Biconnical Antenna: Eaton Model 94455-1, S/N 1057, Cal 3/15/00
3.___Biconnical Antenna: Electro-Metrics Model BIA-25, S/N 1171
4._X_Log-Periodic Antenna: Electro-Metrics Model EM-6950, S/N 632
5.___Log-Periodic Antenna: Electro-Metrics Model LPA-30, S/N 409
6._X_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
10.___Temperature Chamber: Tenney Engineering Model TTRC, S/N 11717-7
11.___Frequency Counter: HP Model 5385A, S/N 3242A07460
12.___Peak Power Meter: HP Model 8900C, S/N 2131A00545
13._X_Open Area Test Site #1-3meters
14.___Signal Generator: HP 8640B, S/N 2308A21464
15.___Signal Generator: HP 8614A, S/N 2015A07428
16.___Passive Loop Antenna: EMCO Model 6512, 9KHz to 30MHz, S/N 9706-1211
17.___Dipole Antenna Kit: Electro-Metrics Model TDA-30/1-4, S/N 153
18.___AC Voltmeter: HP Model 400FL, S/N 2213A14499
19.___Digital Multimeter: Fluke Model 8012A, S/N 4810047
20.___Digital Multimeter: Fluke Model 77, S/N 43850817
21.___Oscilloscope: Tektronix Model 2230, S/N 300572

TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of TIMCO ENGINEERING, INC. Shielded interface cables were used in all cases except for cables connecting to the telephone line and the power cords. A test program was run which simulated a normal data transmission on a network.

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-1992 using a 50uH LISN. Both lines were observed with the UUT transmitting. The bandwidth of the spectrum analyzer was 10kHz with an appropriate sweep speed. The ambient temperature of the UUT was 77oF with a humidity of 53%.

BANDWIDTH 6.0dB: The measurements were made with the spectrum analyzer's resolution bandwidth(RBW)=1.0MHz and the video bandwidth(VBW) =3.0MHz and the span set as shown on Page 7A.

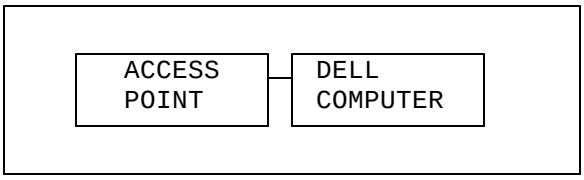
POWER OUTPUT: The RF power output was measured at the antenna feed point using a peak power meter.

ANTENNA CONDUCTED EMISSIONS: The RBW=100KHz, VBW=300KHz and the span set to 10.0MHz and the spectrum was scanned from 30MHz to the 10th Harmonic of the fundamental. Above 1.0GHz the resolution bandwidth was 1.0MHz and the VBW = 3.0MHz and the span to 50MHz.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-1992 using a HEWLETT PACKARD spectrum analyzer with a preselector. The bandwidth(RBW) of the spectrum analyzer was 100kHz up to 1GHz and 1.0MHz above 1GHz with an appropriate sweep speed. The VBW above 1.0GHz was = 3.0MHz. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the UUT was 80°F with a humidity of 40%.

PRODUCT DESCRIPTION:

This device is a wireless LAN adapter card that provides wireless connection between computers.



FREQUENCY RANGE:	2.4-2.4835 GHz
SUPPORT BIT RATES:	11 Mbps CCK, 5.5 Mbps CCK, 2 Mbps DQPSK, 1 mPBS dbsk
SPREADING:	DSSS (Direct Sequence Spread Spectrum)
CHIP RATE:	11 Mcps
ANTENNA:	External 2 dBi Antenna with reverse SMA connector
MEDIA ACCESS PROTOCOL:	CSMA/CA (Collission Avoidance) with ACK

APPLICANT: WIDELINK CO., LTD.

FCC ID: PISWAP-1100E

NAME OF TEST: POWER LINE CONDUCTED INTERFERENCE

RULES PART NUMBER: 15.107(a)

REQUIREMENTS: .45 - 30 MHz 250 uV OR 47.96 dBuV

TEST PROCEDURE: ANSI STANDARD C63.4-1992. The spectrum was scanned from .45 to 30 MHz.

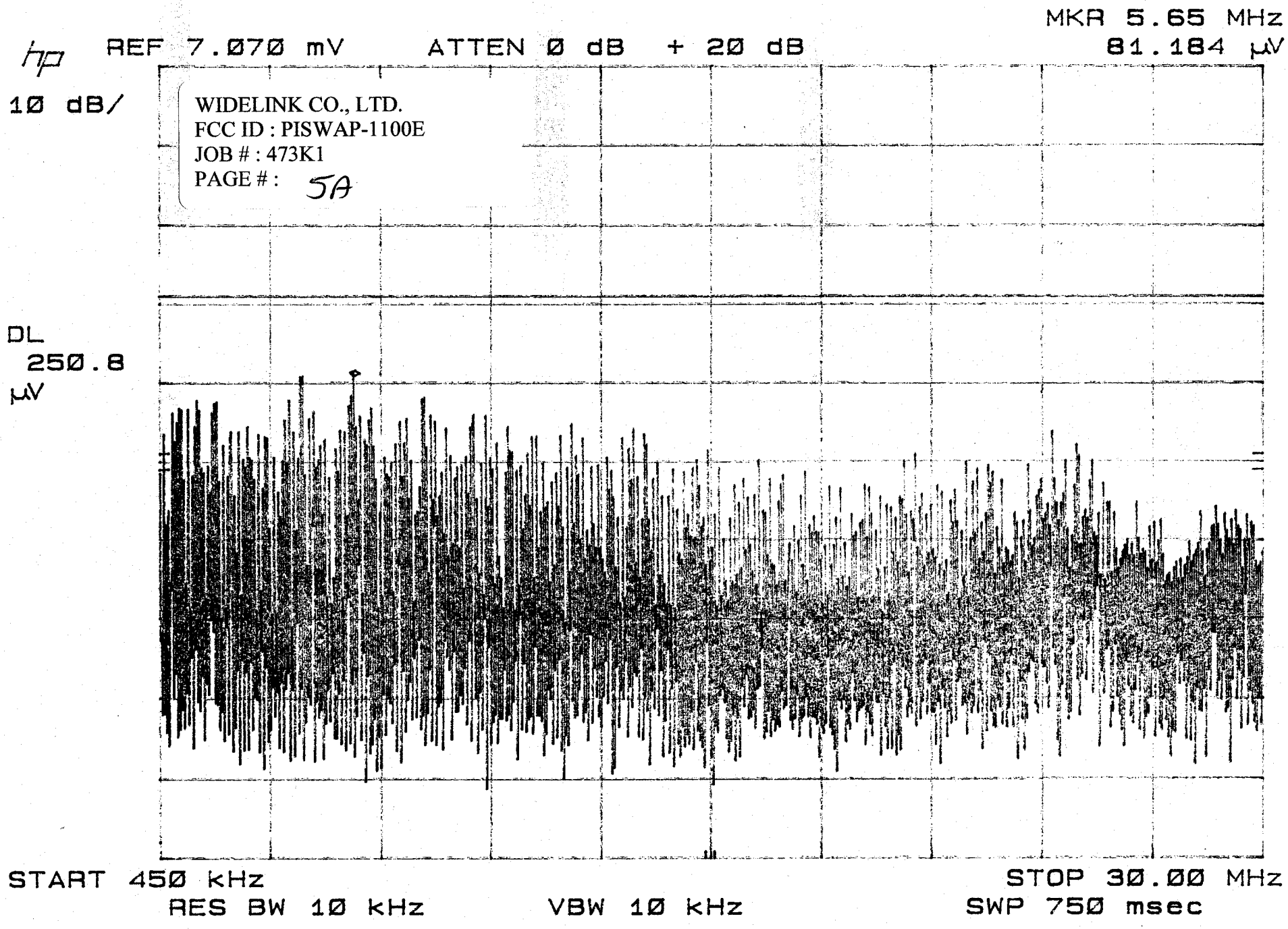
TEST DATA:

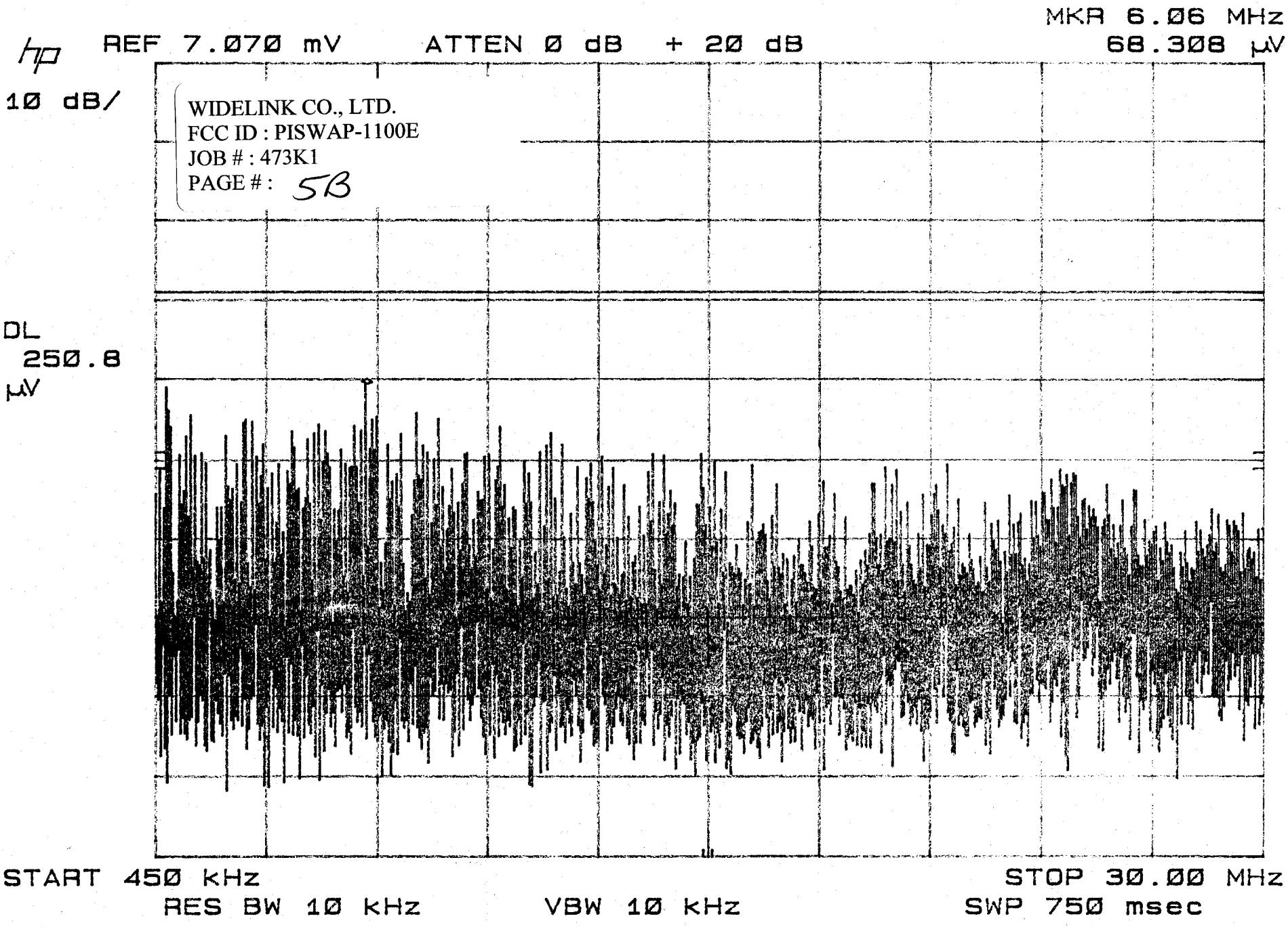
THE HIGHEST EMISSION READ FOR LINE 1 WAS 81.184 uV @ 5.65 MHz.

THE HIGHEST EMISSION READ FOR LINE 2 WAS 68.308 uv @ 6.06 MHz.

THE GRAPHS IN THE NEXT TWO PAGES REPRESENT THE EMISSIONS TAKEN 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.


MKR 5.65 MHz
81.184 µV
hp REF 7.070 mV ATTEN 0 dB + 20 dB
10 dB/
WIDELINK CO., LTD.
FCC ID : PISWAP-1100E
JOB # : 473K1
PAGE # : 5A
DL
250.8
µV
START 450 kHz
STOP 30.00 MHz
RES BW 10 kHz
VBW 10 kHz
SWP 750 msec


MKR 6.06 MHz
REF 7.070 mV
ATTEN 0 dB + 20 dB
68.308 µV
10 dB/
WIDELINK CO., LTD.
FCC ID : PISWAP-1100E
JOB # : 473K1
PAGE # : 58
DL
250.8
µV
START 450 kHz
STOP 30.00 MHz
RES BW 10 kHz
VBW 10 kHz
SWP 750 msec

APPLICANT: WIDELINK CO., LTD.

FCC ID: PISWAP-1100E

NAME OF TEST: 6.0dB BANDWIDTH

RULES PART NUMBER: 15.247(a)(2)

REQUIREMENTS: The 6.0dB bandwidth must be greater than 500KHz.

MEASUREMENT: The 6.0dB bandwidth measured @ 2442.00MHz was 10.50MHz.

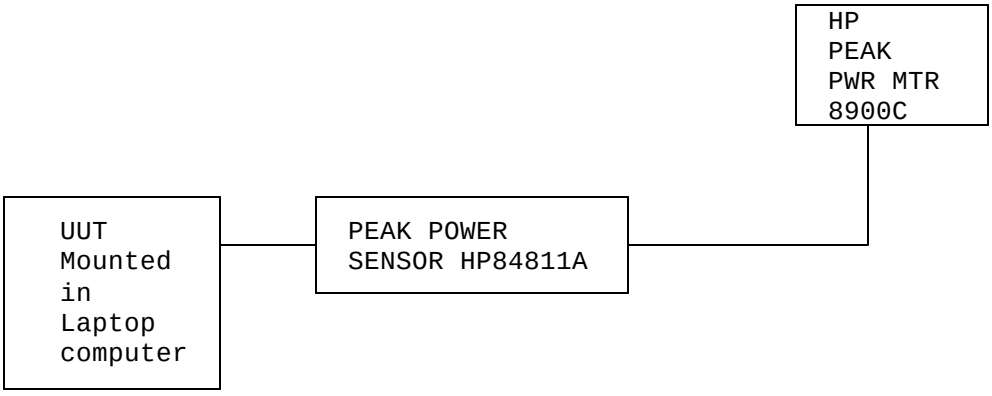
MEASUREMENT DATA: See plots on the next 3 pages.

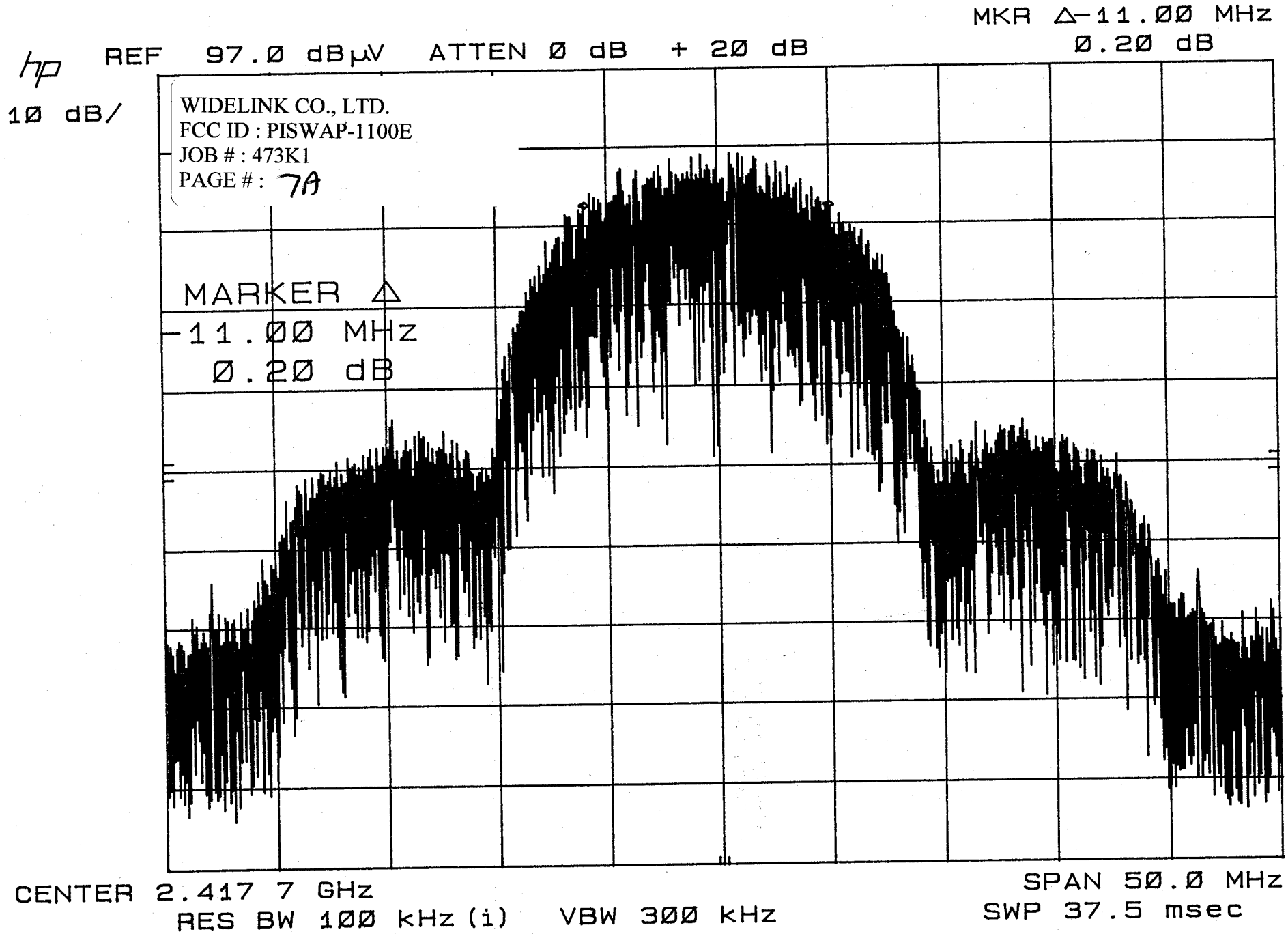
NAME OF TEST: POWER OUTPUT

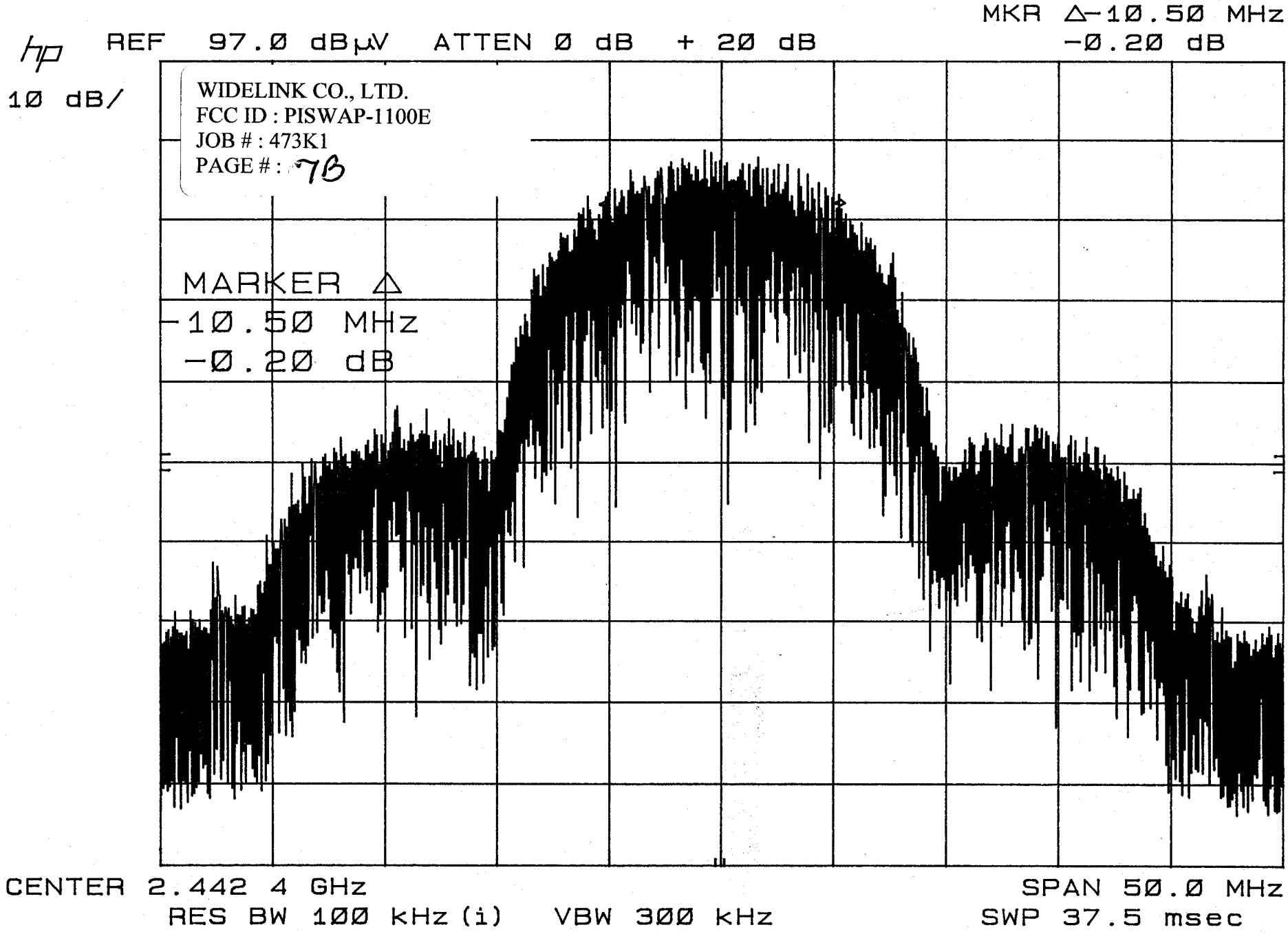
RULES PART NUMBER: 15.247(b) 1.0Watt or +30dBm

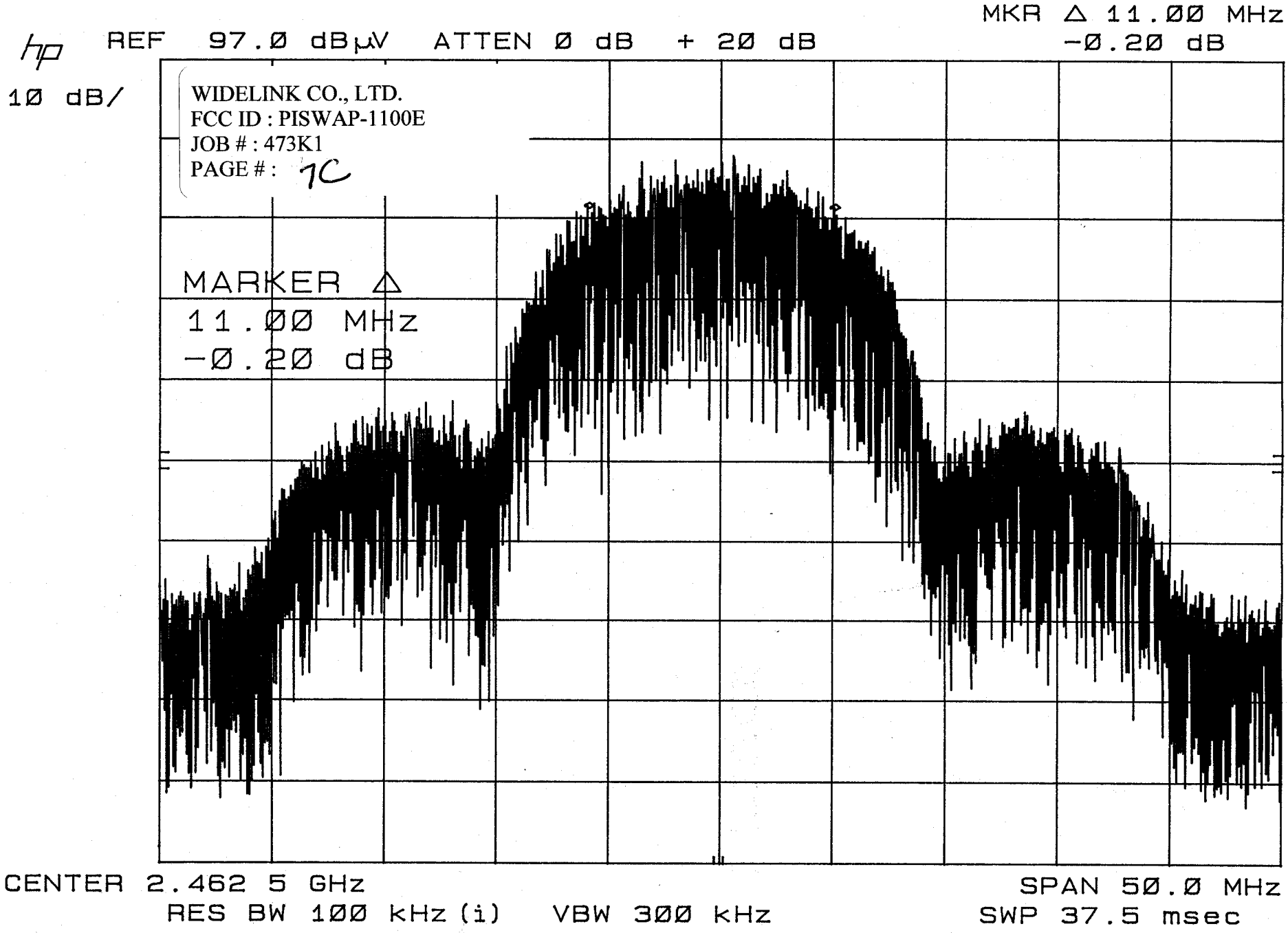
MEASUREMENT: 17 mWATTS @ 2417.00 MHz
20 mWATTS @ 2442.00 MHz
20 mWATTS @ 2462.00 MHz

15.247(c) Method of Measuring RF Power output:
The Peak power Sensor was connected
in place of the antenna.

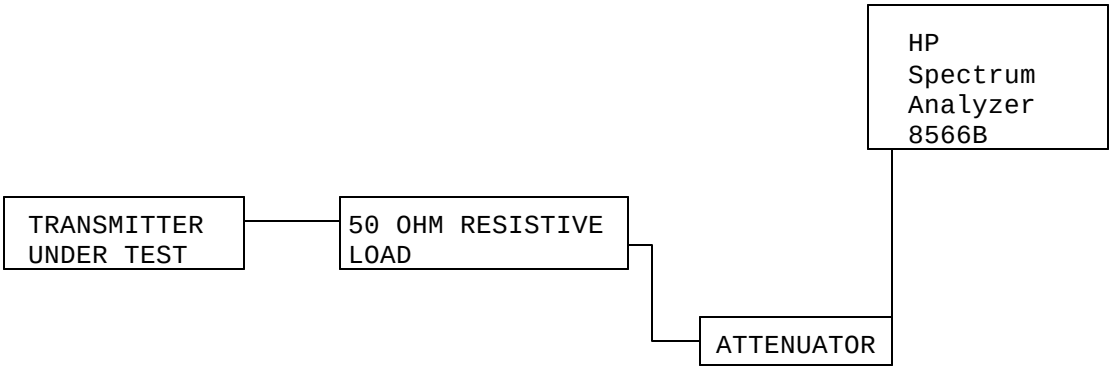



MKR △-11.00 MHz
0.20 dB
hp REF 97.0 dBμV ATTEN 0 dB + 20 dB
10 dB/
WIDELINK CO., LTD.
FCC ID : PISWAP-1100E
JOB # : 473K1
PAGE # : 7A
MARKER △
-11.00 MHz
0.20 dB
CENTER 2.417 7 GHz
RES BW 100 kHz (i) VBW 300 kHz
SPAN 50.0 MHz
SWP 37.5 msec


MKR Δ-10.50 MHz
-0.20 dB
REF 97.0 dBμV ATTEN 0 dB + 20 dB
10 dB/
WIDELINK CO., LTD.
FCC ID : PISWAP-1100E
JOB # : 473K1
PAGE # : 7B
MARKER Δ
-10.50 MHz
-0.20 dB
CENTER 2.442 4 GHz
SPAN 50.0 MHz
RES BW 100 kHz (i)
VBW 300 kHz
SWP 37.5 msec


MKR △ 11.00 MHz
-0.20 dB
hp REF 97.0 dBμV ATTEN 0 dB + 20 dB
10 dB/
WIDELINK CO., LTD.
FCC ID : PISWAP-1100E
JOB # : 473K1
PAGE # : 7C
MARKER △
11.00 MHz
-0.20 dB
CENTER 2.462 5 GHz
SPAN 50.0 MHz
RES BW 100 kHz (i)
VBW 300 kHz
SWP 37.5 msec

15.247(c) Method of Measuring RF Conducted Spurious Emissions



NAME OF TEST: SPURIOUS EMISSIONS AT ANTENNA TERMINALS

REQUIREMENTS: Emissions must be at least 20dB down from the highest emission level within the authorized band as measured with a 1 MHz RBW.

EMISSION FREQUENCY ___MHz___	dB BELOW CARRIER _____
2417.0	00.0
4834.0	93.0
7251.0	74.3
9668.0	95.7
2442.0	00.0
4884.0	82.7
7326.0	75.1
9768.0	98.8
2462.0	00.0
4924.0	75.0
7486.0	68.3
9848.0	102.0
19696.0	102.3

NOTE: THE SPECTRUM WAS SCANNED TO THE TENTH HARMONIC.

15.247(c),15.205 &15.209(b) Field_strength_of_spurious_emissions:

REQUIREMENTS:

FIELD STRENGTH of Fundamental:	FIELD STRENGTH of Harmonics	S15.209
902-928MHz		30 - 88 MHz 40 dBuV/m @3M
2.4-2.4835GHz		88 -216 MHz 43.5
127.38dBuV/m @3m		216 -960 MHz 46
		ABOVE 960 MHz 54dBuV/m

REQUIREMENTS: Emissions that fall in the restricted bands (15.205) must be less than 54dBuV/m otherwise the spurious and harmonics must be attenuated by at least 20dB.

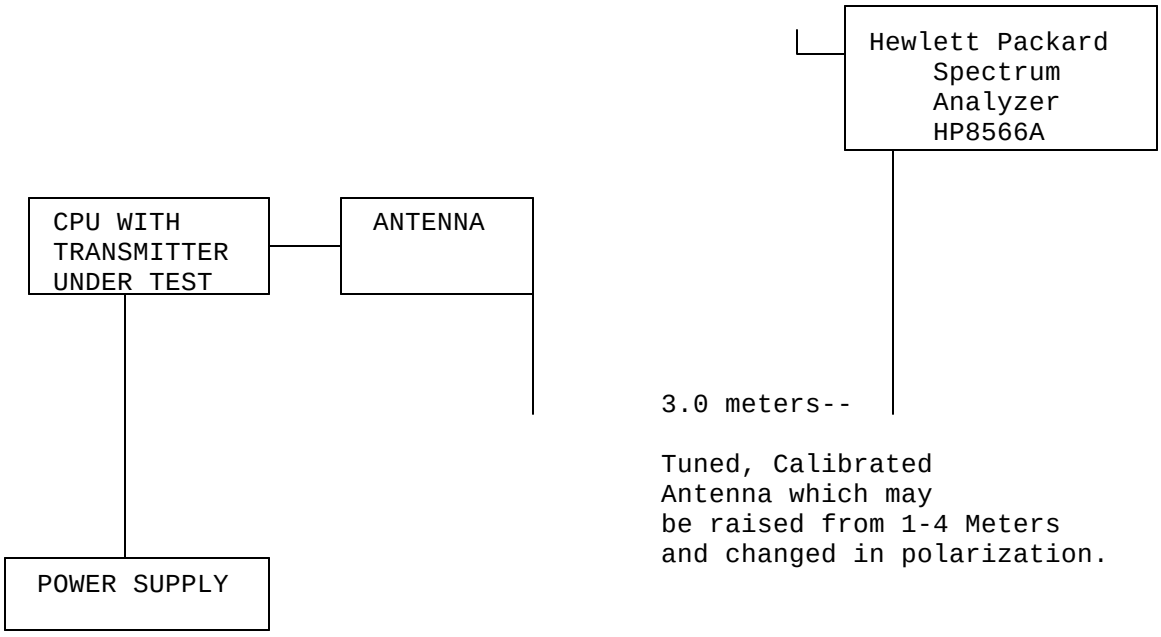
TEST DATA:

EMISSION FREQUENCY MHz	METER READING @ 3m dBuV	COAX LOSS dB	ACF dB	FIELD STRENGTH dBuV/m	FCC. LIMIT dB	MARGIN dB	ANT.
Intentional Radiator Emissions							
2412.00	67.50	1.09	29.03	97.62	127.38	29.76	V
4824.00R	4.30	1.45	33.93	39.68	54.00	14.32	V
7236.00R	0.50	1.82	36.64	38.96	54.00	15.04	V
9648.00	1.90	2.11	38.59	42.61	54.00	11.39	V
2442.00	66.50	1.10	29.10	96.70	127.38	30.68	V
4884.00R	5.80	1.46	33.99	41.26	54.00	12.74	V
9768.00	8.50	2.12	38.67	49.30	54.00	4.70	V
2467.00	67.00	1.10	29.17	97.27	127.38	30.11	V
4934.00R	4.00	1.47	34.05	39.52	54.00	14.48	V
9868.00	1.30	2.13	38.74	42.17	54.00	11.83	V

METHOD OF MEASUREMENT: The procedure used was ANSI STANDARD C63.4-1992 & the Guidance on Measurements for Direct Sequence Spread Spectrum Systems. Measurements were made at the open field test site of TIMCO ENGINEERING INC. located at 849 N.W. State Road, Newberry, FL 32669.

2.993(a)(b) Continued Field_strength_of_spurious_emissions:

Method of Measuring Radiated Spurious Emissions



Equipment placed 80 cm above ground
on a rotatable platform.

APPLICANT: WIDELINK CO., LTD.

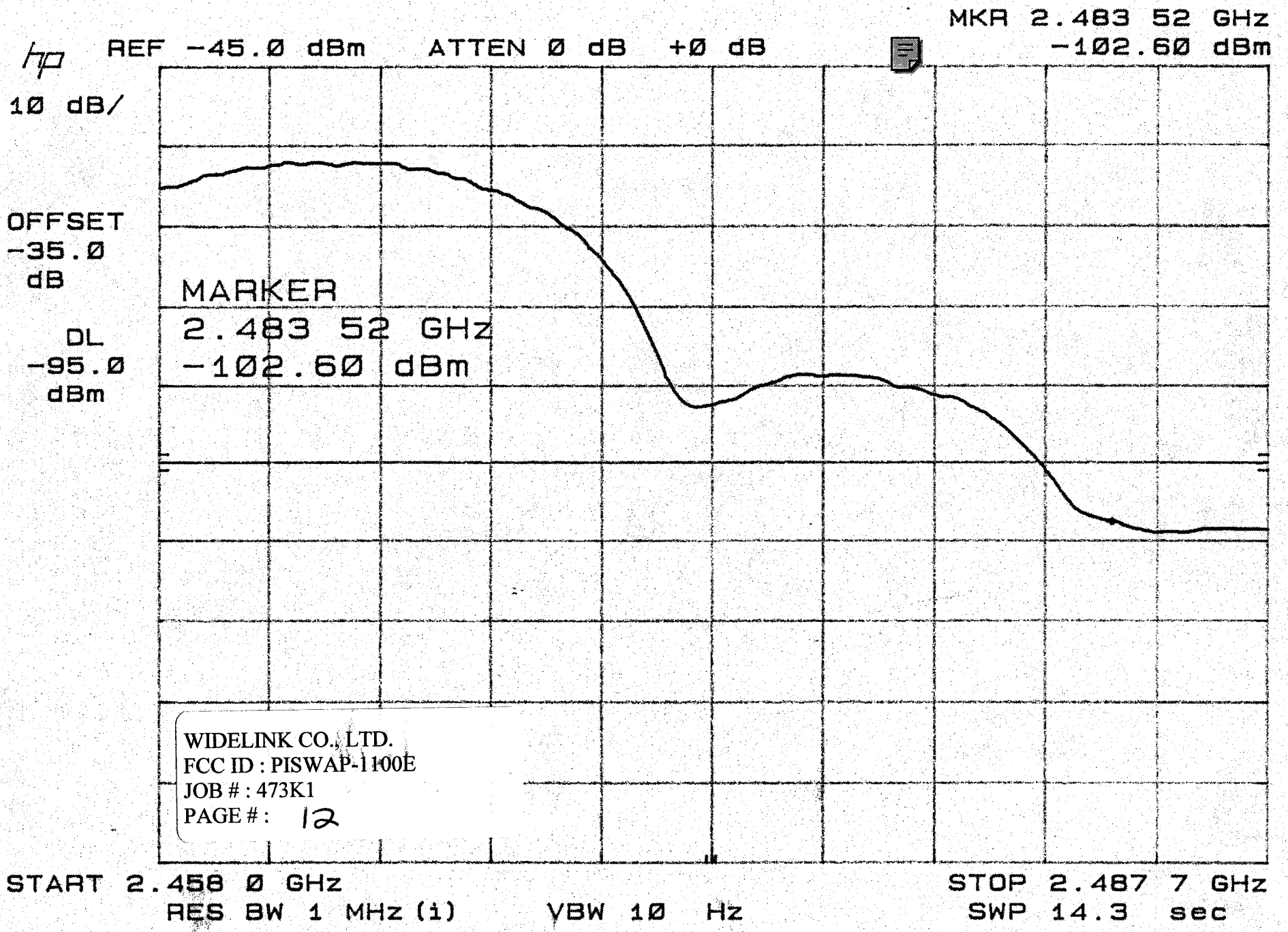
FCC ID: PISWAP-1100E

NAME OF TEST: RADIATED SPURIOUS EMISSIONS INTO ADJACENT RESTRICTED BAND

REQUIREMENTS: Emissions that fall in the restricted bands (15.205). These emissions must be less than or equal to 500 uV/m (54 dBuV/m).

TEST PROCEDURE: An in band field strength measurement of the fundamental emissions using the RBW and detector function required by C63.4-2000 and FCC rules. The procedure was repeated with an average detector and a plot made. The calculated field strength in the adjacent restricted band is presented below.

```
-102.60 dBm - from Plot
+ 29.21 dB  - ACF
+  1.1  dB  - Coax Loss
__________
- 72.99 dBm
+107.00     - CF
__________
  34.71 dBuV
```


MKR 2.483 52 GHz
REF -45.0 dBm
ATTEN 0 dB +0 dB
-102.60 dBm
10 dB/
OFFSET
-35.0
dB
MARKER
2.483 52 GHz
-102.60 dBm
DL
-95.0
dBm
WIDELINK CO., LTD.
FCC ID : PISWAP-1100E
JOB # : 473K1
PAGE # : 12
START 2.458 0 GHz
STOP 2.487 7 GHz
RES BW 1 MHz (i)
VBW 10 Hz
SWP 14.3 sec

APPLICANT: WIDELINK CO., LTD.

FCC ID: PISWAP-1100E

NAME OF TEST: POWER SPECTRAL DENSITY

RULES PART NUMBER: 15.247(d)

REQUIREMENTS: The peak level measured must be no greater than +8.0dBm.

DATA: THE PLOT IS ON THE NEXT 3 PAGES.

The level at 2413.182MHz was -24.10dBm.

2417.70 MHz	2462.26 MHz	2443.19 MHz	
- 31.2 dBuV	- 28.9 dBuV	- 36.2 dBuV	From plots
+ 20.0 dB	+ 20.0 dB	+ 20.0 dB	Attenuation used
+ 35.0	+ 35.0	+ 35.0	Correction Factor
86.2	83.9	91.2	dBuV
-107.0	-107.0	- 107.0	dBuV to dBm
- 20.8 dBm	- 23.1 dBm	- 15.8 dBm	Spectral Density

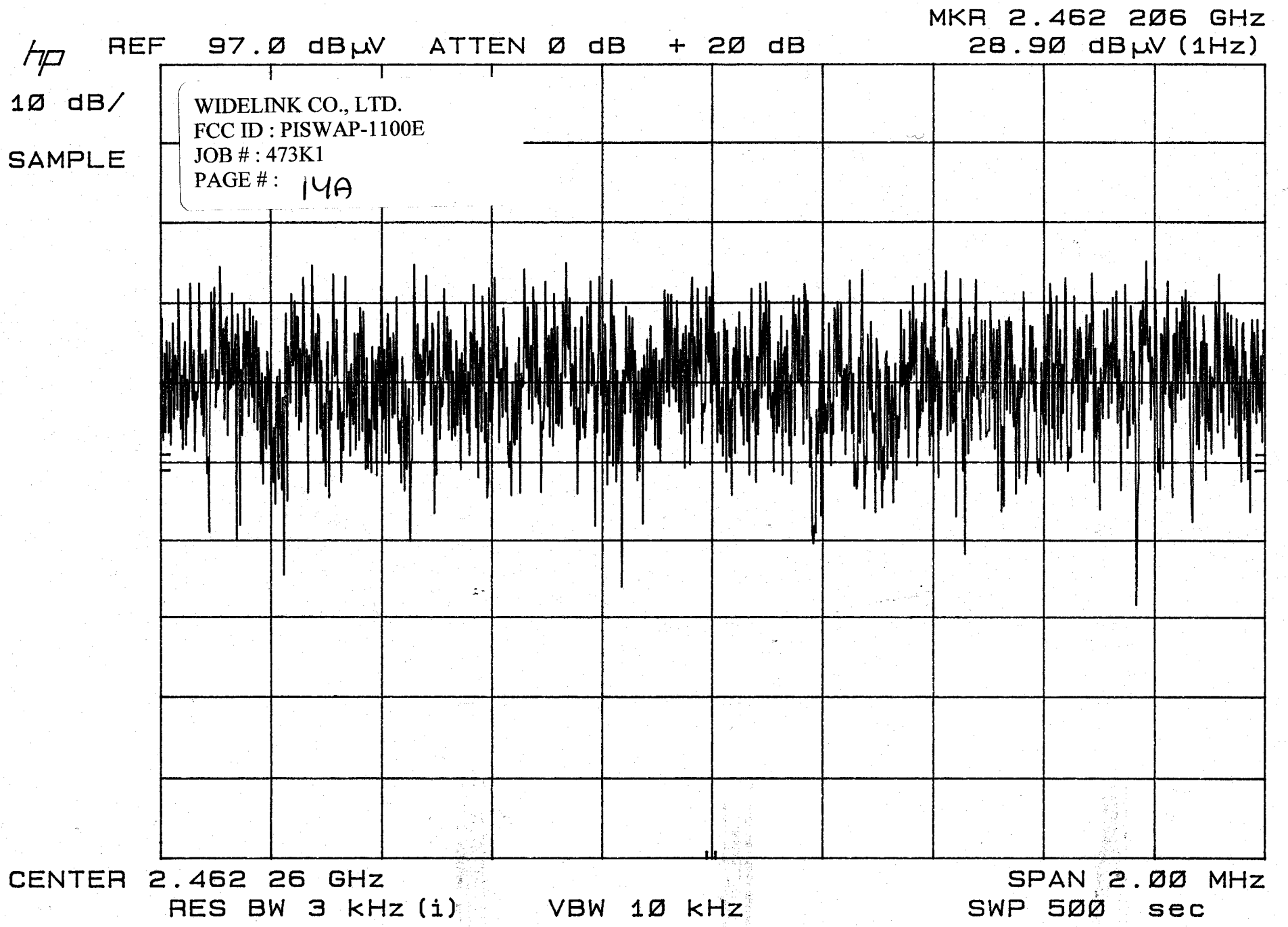
NAME OF TEST: PROCESSING GAIN

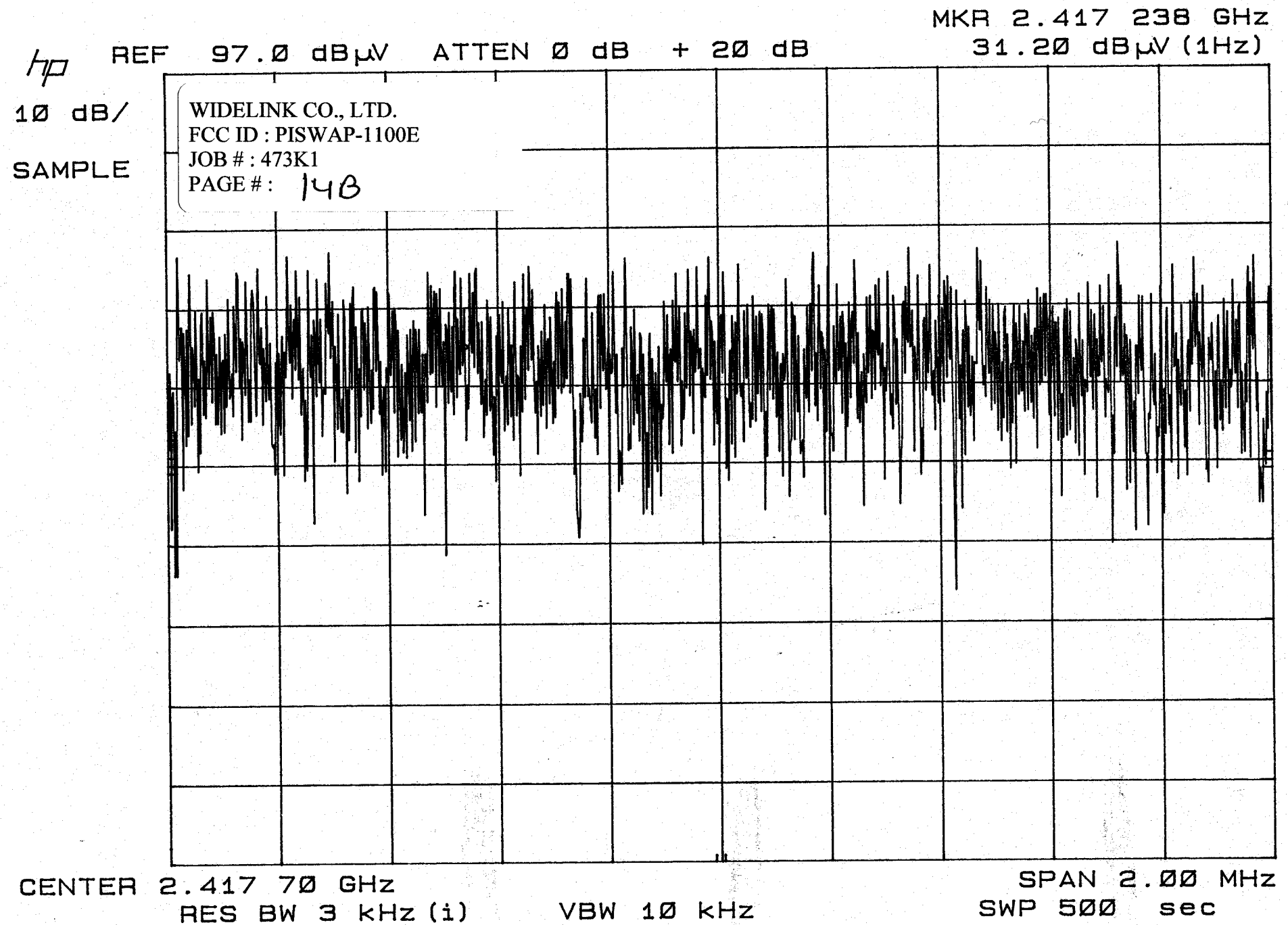
RULES PART NUMBER: 15.247(e)

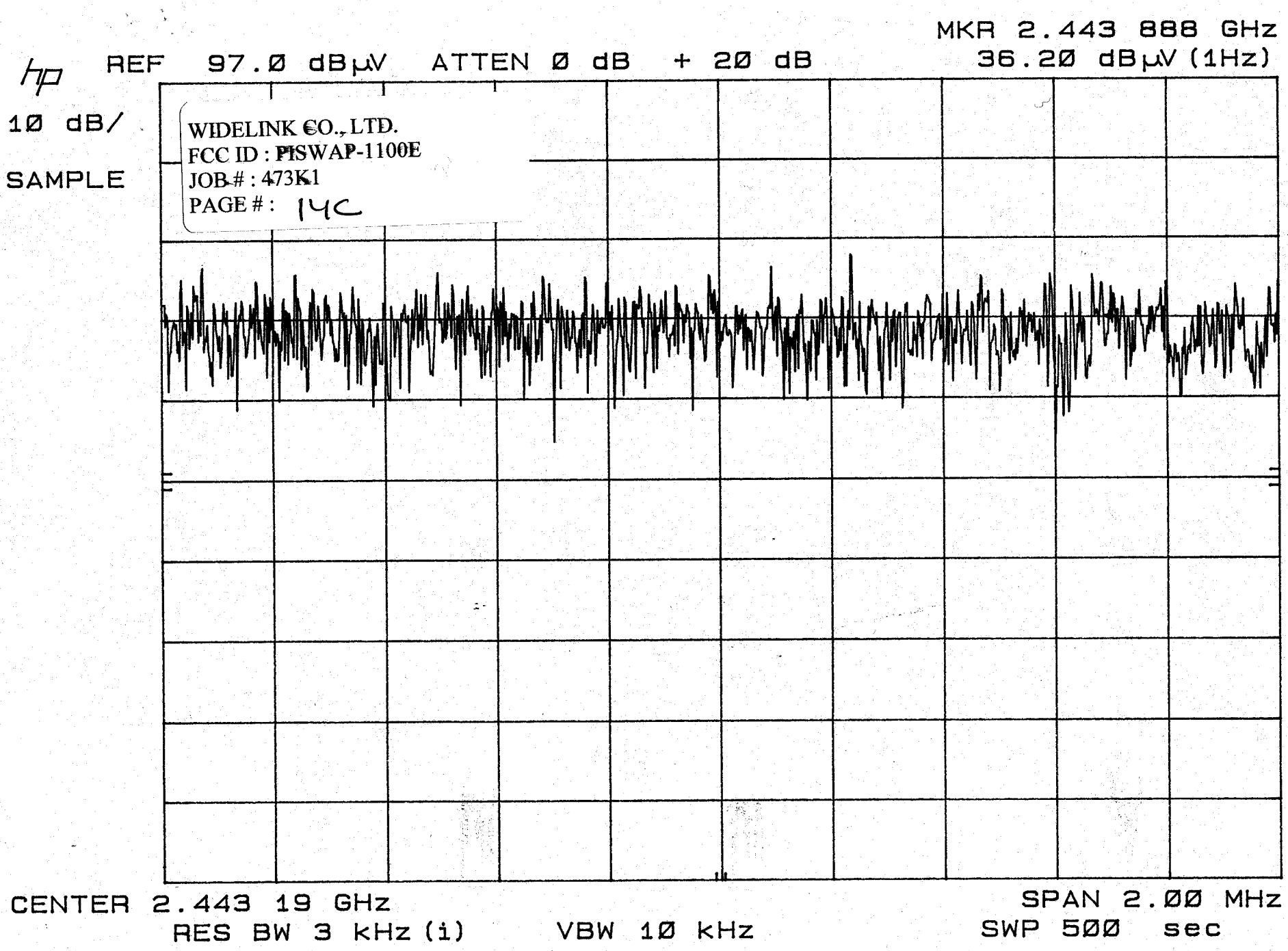
REQUIREMENTS:

DATA: The processing gain information supplied by the manufacturer is 10.0dB.

See Exhibit 8 for processing gain test methods and data.


MKR 2.462 206 GHz
REF 97.0 dBµV ATTEN 0 dB + 20 dB
28.90 dBµV (1Hz)
10 dB/
SAMPLE
WIDELINK CO., LTD.
FCC ID : PISWAP-1100E
JOB # : 473K1
PAGE # : 14A
CENTER 2.462 26 GHz
SPAN 2.00 MHz
RES BW 3 kHz (i)
VBW 10 kHz
SWP 500 sec


MKR 2.417 238 GHz
31.20 dBµV (1Hz)
hp REF 97.0 dBµV ATTEN 0 dB + 20 dB
10 dB/
SAMPLE
WIDELINK CO., LTD.
FCC ID : PISWAP-1100E
JOB # : 473K1
PAGE # : 14B
CENTER 2.417 70 GHz
RES BW 3 kHz (i)
VBW 10 kHz
SPAN 2.00 MHz
SWP 500 sec


MKR 2.443 888 GHz
REF 97.0 dBμV ATTEN 0 dB + 20 dB
36.20 dBμV (1Hz)
10 dB/
SAMPLE
WIDELINK CO., LTD.
FCC ID : PISWAP-1100E
JOB # : 473K1
PAGE # : 14C
CENTER 2.443 19 GHz
SPAN 2.00 MHz
RES BW 3 kHz (i)
VBW 10 kHz
SWP 500 sec