

DATA OF CONDUCTION TEST

A-Pex International Co., Ltd.
No.2 SEMI ANECHOIC CHAMBER
Report No. : 23AE0021-H0

Applicant : SEIKO EPSON CORPORATION
Kind of Equipment : Bluetooth Unit
Model No. : EU-62
Serial No. : 00110
Power : AC230V/60Hz
Mode : Tx (2441MHz)
Remarks :
Date : 9/25/2002
Phase : Single Phase
Temperature : 25 °C
Humidity : 78 %
Regulation : FCC 15.207 (0.15-30MHz)

J. Iwasa
Engineer : Yoshiaki Iwasa

No.	FREQ. [MHz]	READING (N)		READING (L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dBuV]	AV	QP [dBuV]	AV				QP [dBuV]	AV	QP [dBuV]	AV	QP [dB]	AV
1.	0.1500	53.2	-	51.6	-	0.0	0.1	0.0	53.3	-	66.0	56.0	12.7	-
2.	0.2840	41.1	-	41.7	-	0.0	0.1	0.0	41.8	-	60.7	50.7	18.9	-
3.	0.4290	40.4	-	38.9	-	0.1	0.1	0.0	40.6	-	57.3	47.3	16.7	-
4.	0.2200	41.5	-	41.5	-	0.0	0.1	0.0	41.6	-	62.8	52.8	21.2	-
5.	0.5710	36.0	-	34.1	-	0.1	0.1	0.0	36.2	-	56.0	46.0	19.8	-
6.	0.9968	37.9	-	36.0	-	0.1	0.2	0.0	38.2	-	56.0	46.0	17.8	-

CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

Except for the above table : adequate margin data below the limits.
LISN:MLS-06

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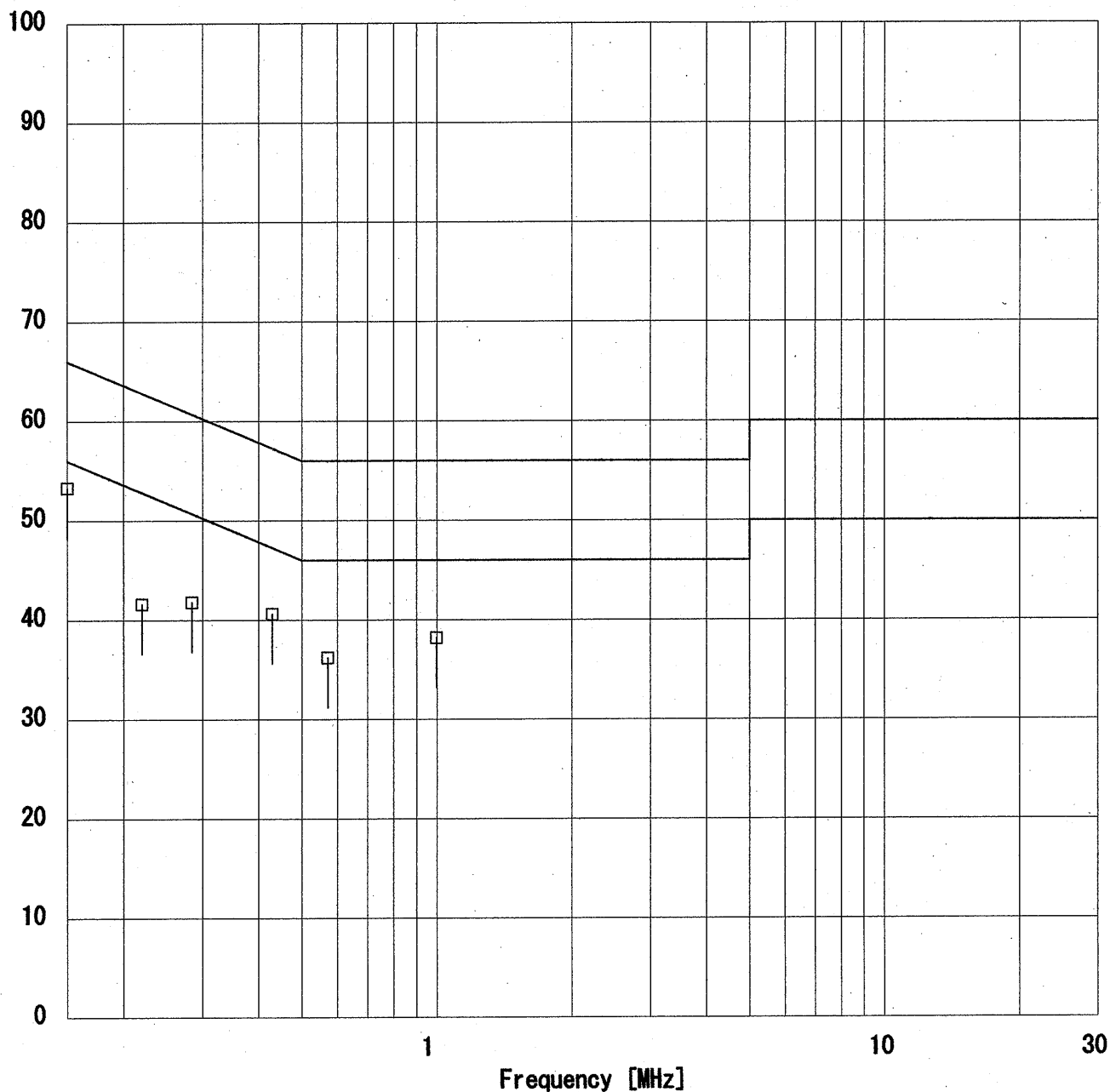
Applicant : SEIKO EPSON CORPORATION
Kind of Equipment : Bluetooth Unit
Model No. : EU-62
Serial No. : 00110
Power : AC230V/60Hz
Mode : Tx (2441MHz)
Remarks :
Date : 9/25/2002
Phase : Single Phase
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Regulation : FCC 15.207 (0.15-30MHz)

Y. Iwasa
Engineer : Yoshiaki Iwasa

Emission Level [dB μ V]

☐ Quasi-Peak

☒ Average



DATA OF CONDUCTION TEST CHART

18

A-Pex International Co., Ltd.

No.2 SEMI ANECHOIC CHAMBER

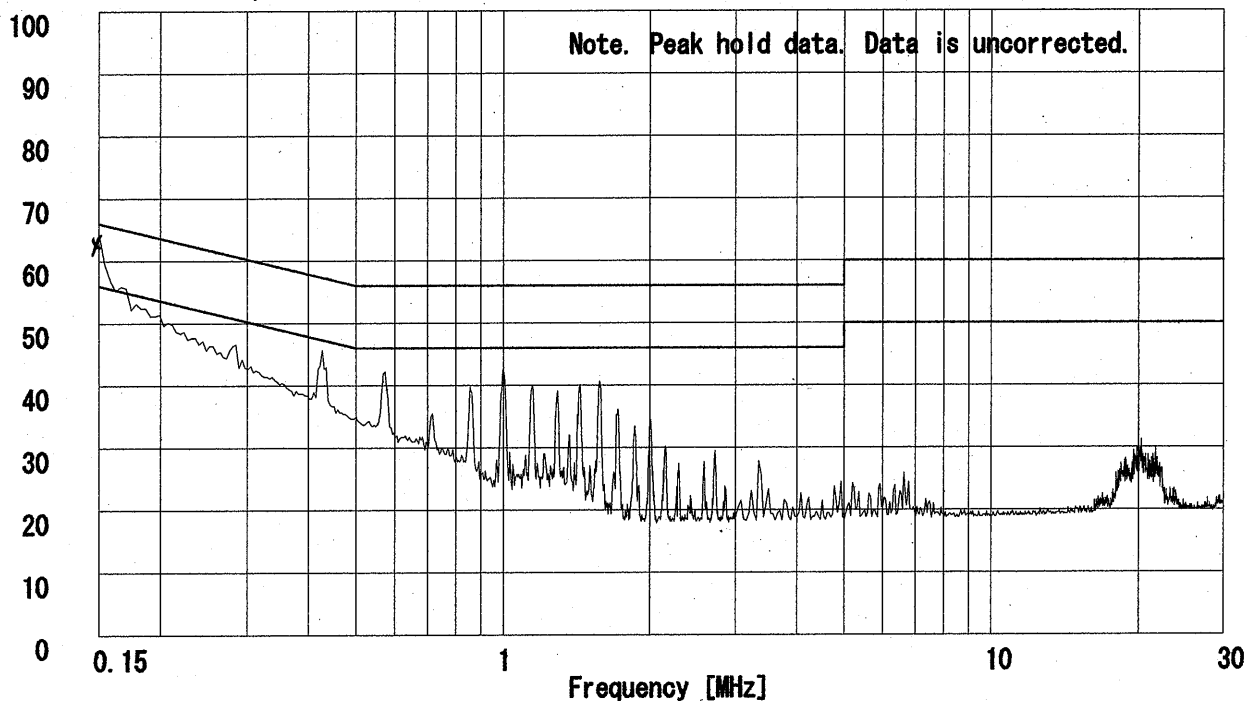
Report No. : 23AE0021-H0

Applicant : SEIKO EPSON CORPORATION
Kind of Equipment : Bluetooth Unit
Model No. : EU-62
Serial No. : 00110
Power : AC230V/60Hz
Mode : Tx (2402MHz)
Remarks :
Date : 9/25/2002
Phase : Single Phase
Temperature : 25 °C
Humidity : 78 %
Regulation 1 : FCC 15.207 (0.15-30MHz)
Regulation 2 : None

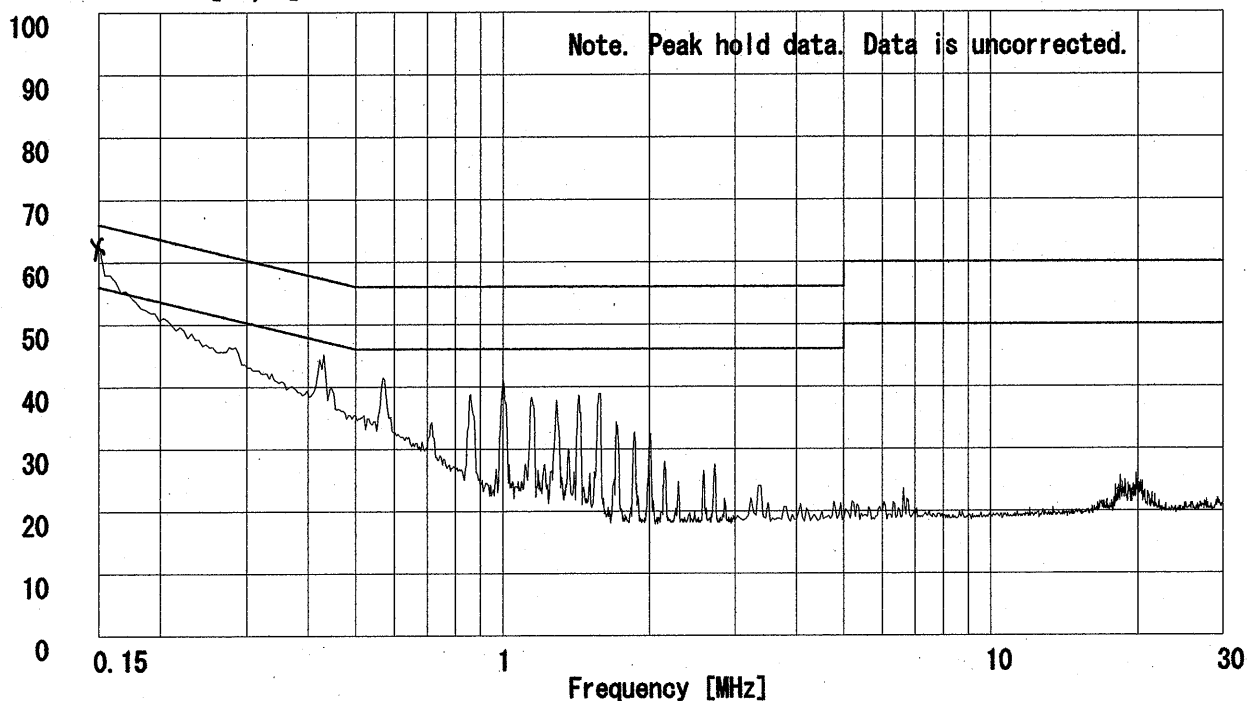
Y. Iwasa
Engineer : Yoshiaki Iwasa

Emission Level [dB μ V]

PHASE:N

Emission Level [dB μ V]

PHASE:L1



DATA OF CONDUCTION TEST CHART

19

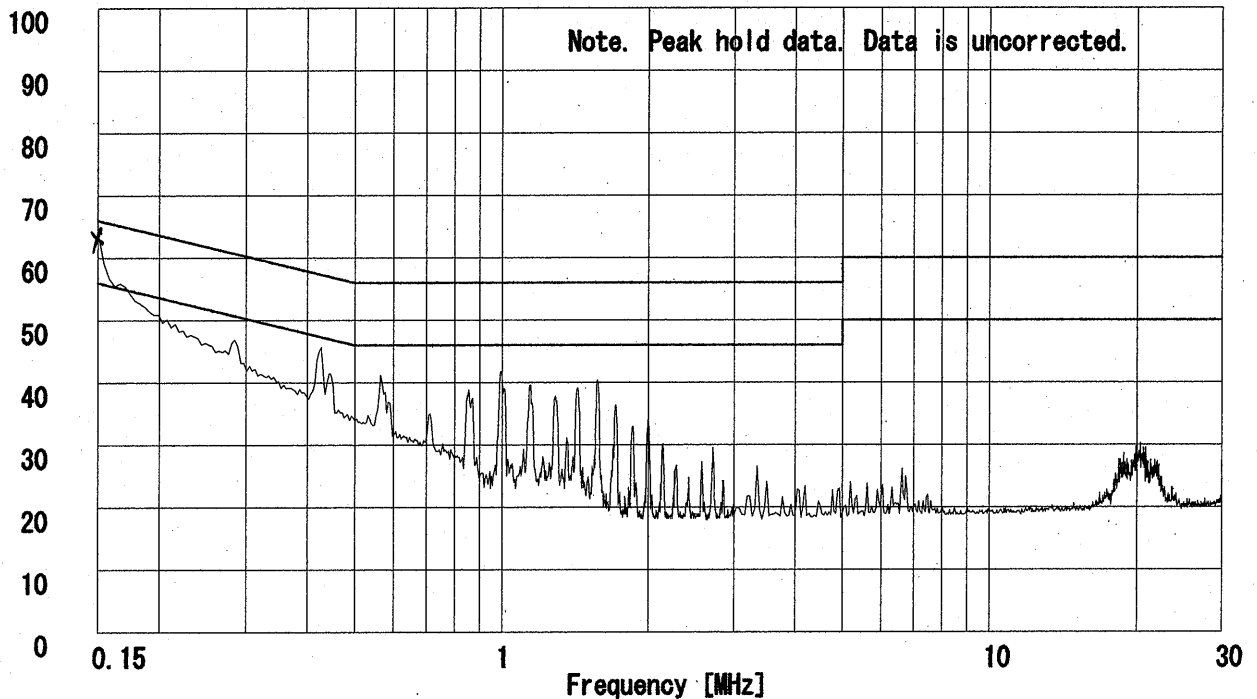
A-Pex International Co., Ltd.
No.2 SEMI ANECHOIC CHAMBER
Report No. : 23AE0021-H0

Applicant : SEIKO EPSON CORPORATION
Kind of Equipment : Bluetooth Unit
Model No. : EU-62
Serial No. : 00110
Power : AC230V/50Hz
Mode : Tx (2441MHz)
Remarks :
Date : 9/25/2002
Phase : Single Phase
Temperature : 25 °C
Humidity : 78 %
Regulation 1 : FCC 15.207 (0.15-30MHz)
Regulation 2 : None

y. Iwasa
Engineer : Yoshiaki Iwasa

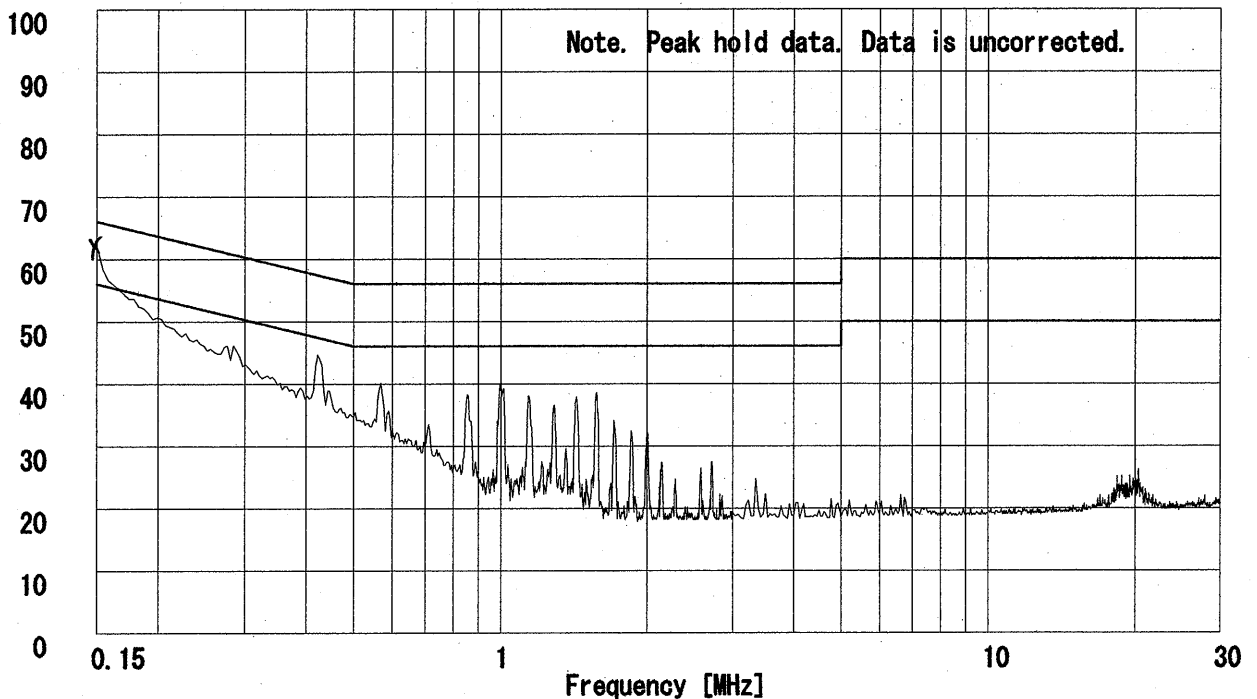
Emission Level [dB μ V]

PHASE:N



Emission Level [dB μ V]

PHASE:L1



DATA OF CONDUCTION TEST CHART

20

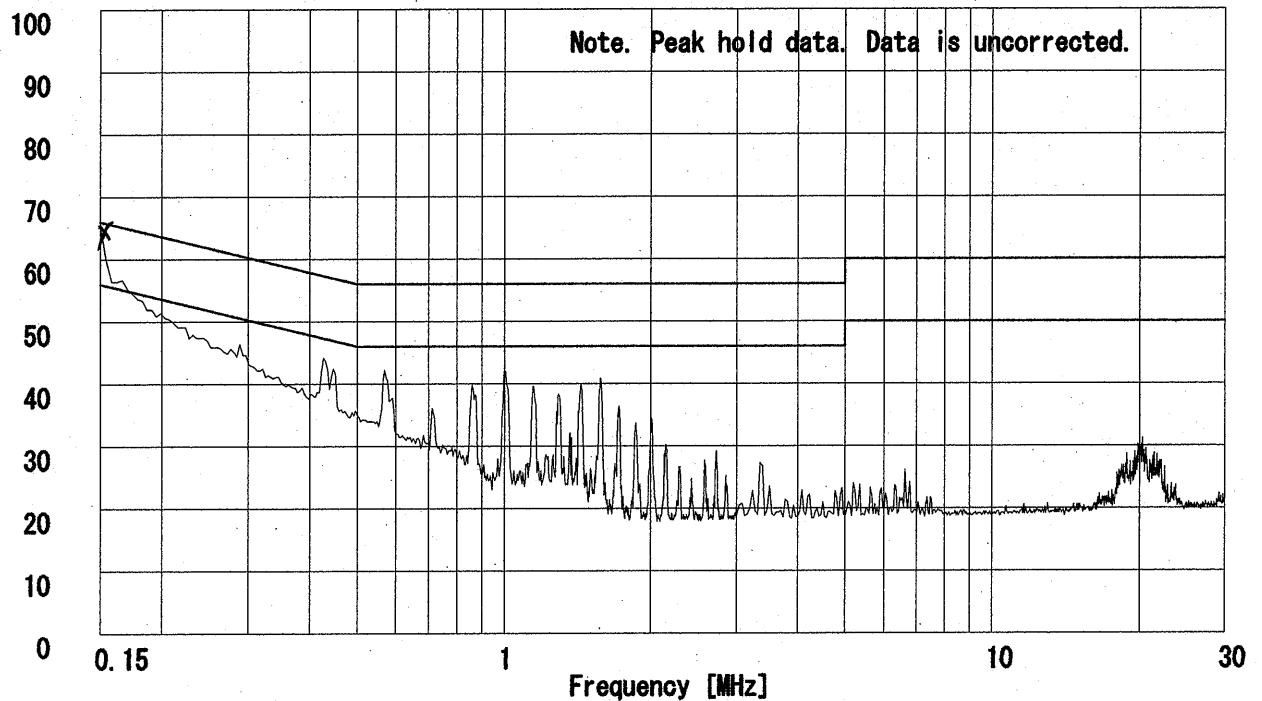
A-Pex International Co., Ltd.
No.2 SEMI ANECHOIC CHAMBER
Report No. : 23AE0021-H0

Applicant : SEIKO EPSON CORPORATION
Kind of Equipment : Bluetooth Unit
Model No. : EU-62
Serial No. : 00110
Power : AC230V/60Hz
Mode : Tx (2480MHz)
Remarks :
Date : 9/25/2002
Phase : Single Phase
Temperature : 25 °C
Humidity : 78 %
Regulation 1 : FCC 15.207 (0.15-30MHz)
Regulation 2 : None

Y. Iwasa
Engineer : Yoshiaki Iwasa

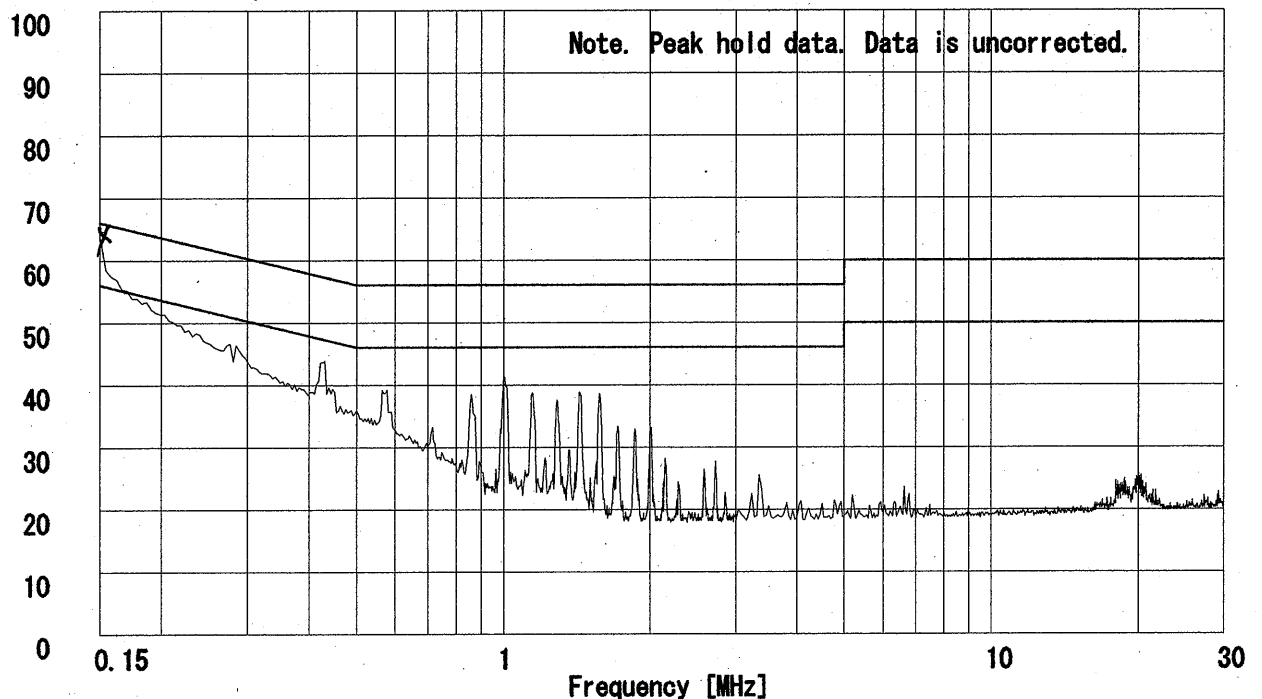
Emission Level [dB μ V]

PHASE:N



Emission Level [dB μ V]

PHASE:L1



DATA OF CARRIER FREQUENCY SEPARATION

A-Pex International Co., Ltd.

EMC HEAD OFFICE DIVISION No.3 MEASUREMENT ROOM

COMPANY	: SEIKO EPSON CORPORATION	REPORT NO	: 23AE0021-HO
EQUIPMENT	: Bluetooth Unit	REGULATION	: Fcc Part15 Subpart C 15.247(a)(1)
MODEL	: EU-62	TEST DISTANCE	: -
S/ N	: 00110	DATE	: 2002/9/20
FCC ID	: BKMFB EU-62	TEMPERATURE	: 26°C
POWER	: DC 5V (AC230V / 60Hz)	HUMIDITY	: 61%
MODE	: Tx (Hopping on)		

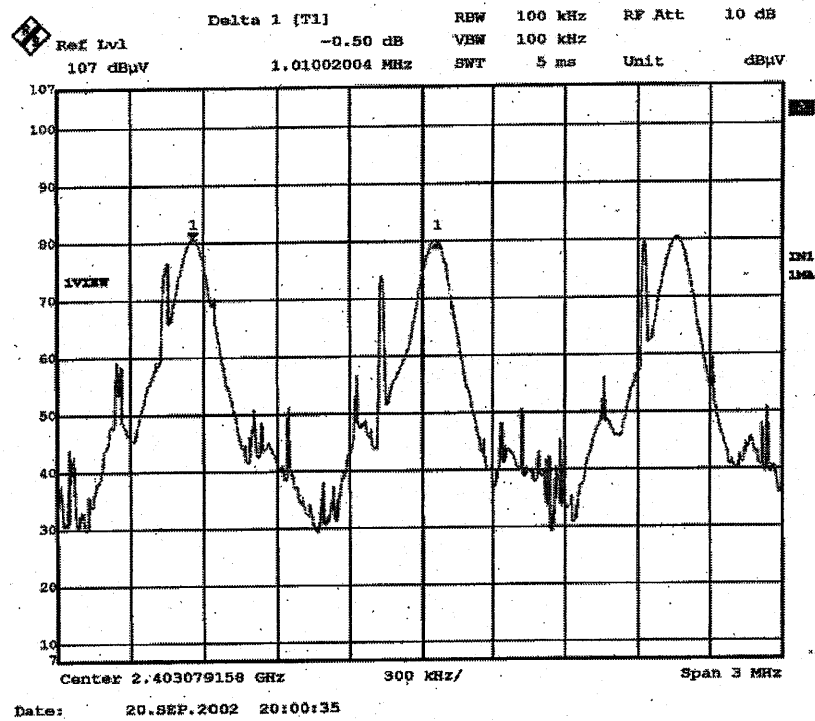
Y. Iwasa

ENGINEER : Yoshiaki Iwasa

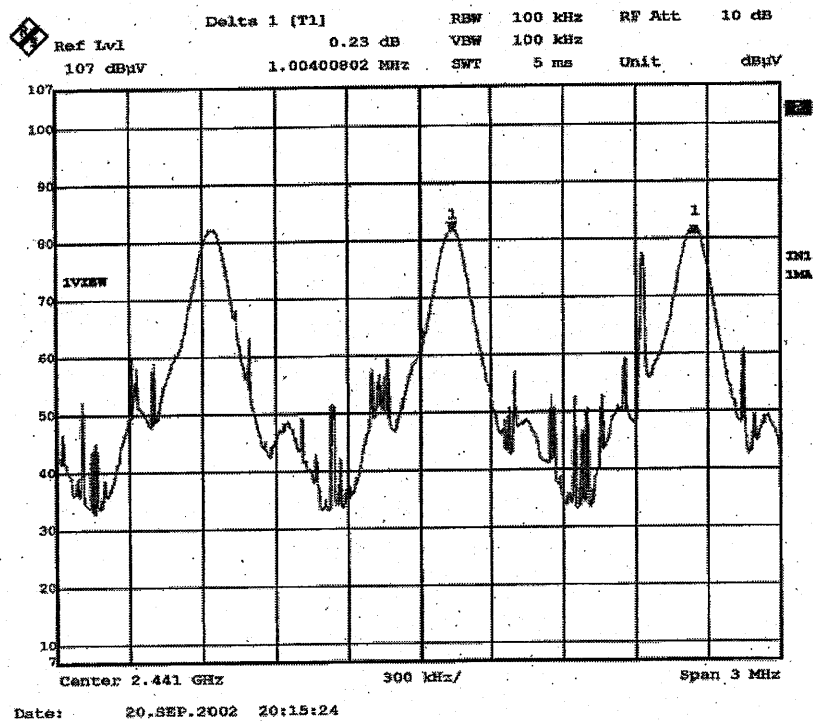
PK DETECT(S/A :span 3MHz, RBW 100kHz, VBW 100kHz, sweep time AUTO)

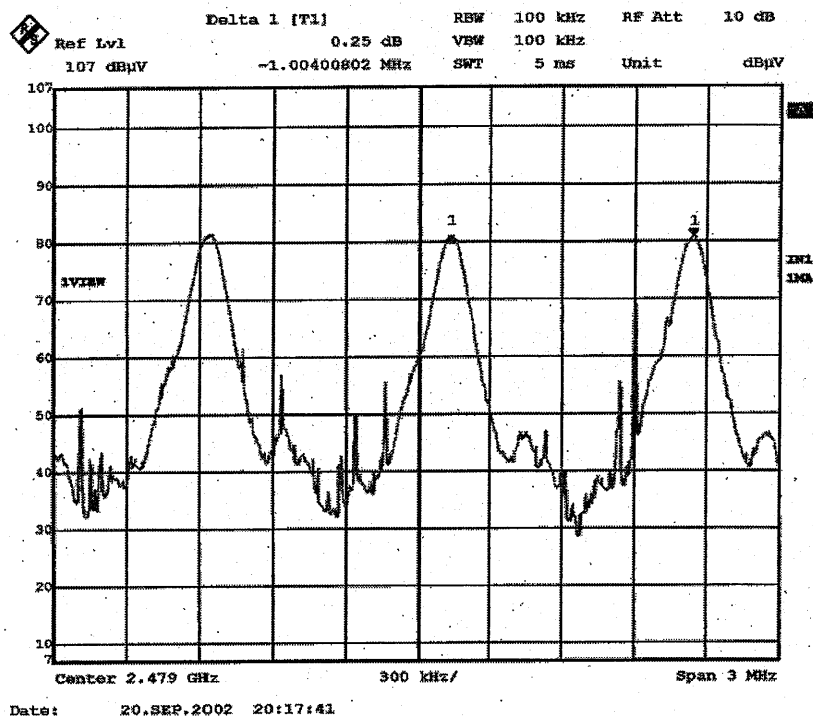
CH	FREQ	Channel separation	Limit
	[MHz]	[MHz]	
Low	2402.0	1.010	>20dB Bandwidth and 25[kHz]
Mid	2441.0	1.004	>20dB Bandwidth and 25[kHz]
High	2480.0	1.004	>20dB Bandwidth and 25[kHz]

Carrier Frequency Separation : Tx(Hopping on) 2402MHz



Carrier Frequency Separation : Tx(Hopping on) 2441MHz



Carrier Frequency Separation : Tx(Hopping on) 2480MHz

DATA OF 20dB BANDWIDTH

A-Pex International Co., Ltd.

EMC HEAD OFFICE DIVISON No.3 MEASUREMENT ROOM

COMPANY : SEIKO EPSON CORPORATION
 EQUIPMENT : Bluetooth Unit
 MODEL : EU-62
 S/ N : 00110
 FCC ID : BKMFBUE-62
 POWER : DC 5V (AC230V / 60Hz)
 MODE : Tx (Hopping off)

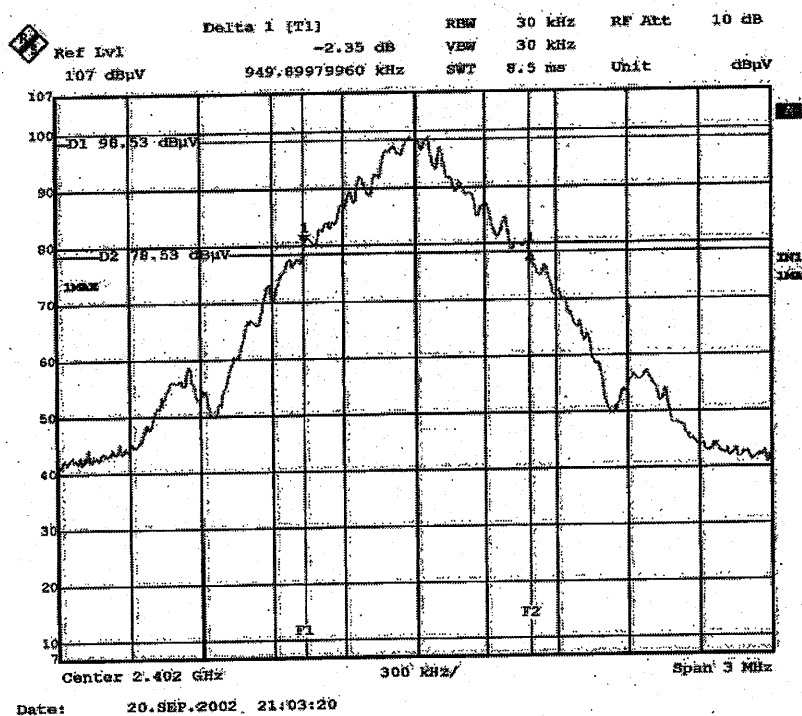
REPORT NO : 23AE0021-HO
 REGULATION : Fcc Part15 Subpart C 15.247(a)(1)
 TEST DISTANCE : -
 DATE : 2002/9/20
 TEMPERATURE : 26°C
 HUMIDITY : 61%

f. Iwasa
 ENGINEER : Yoshiaki Iwasa

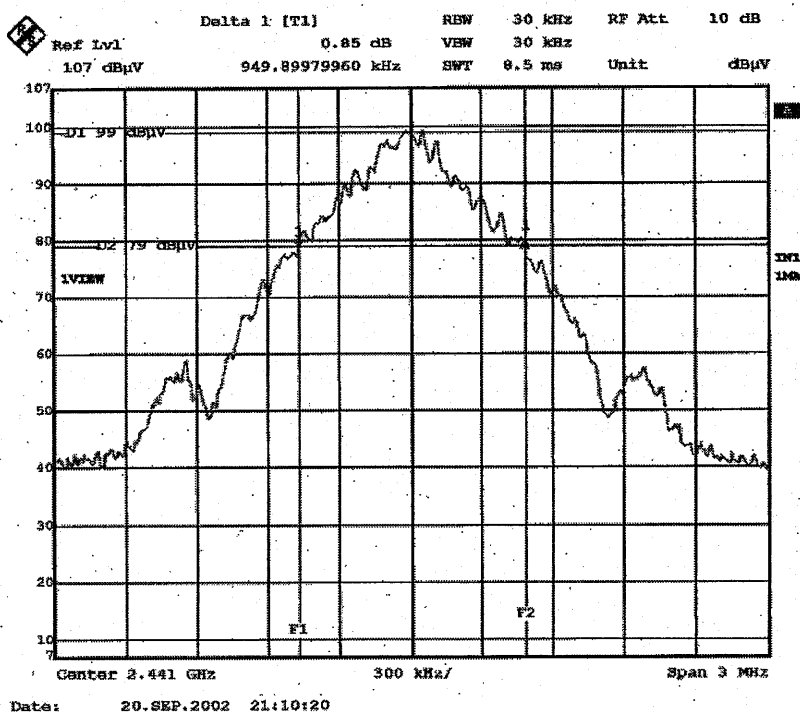
PK DETECT(S/A: span 3MHz, RBW 30kHz, VBW 30kHz, sweep time AUTO)

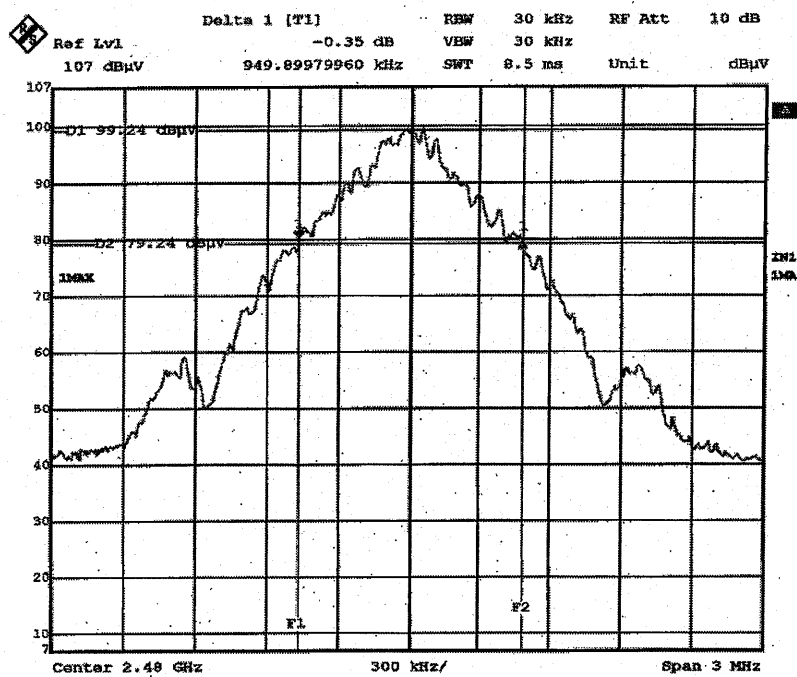
CH	FREQ	20dB Bandwidth	Limit
	[MHz]	[MHz]	[MHz]
Low	2402.0	0.950	1.0
Mid	2441.0	0.950	1.0
High	2480.0	0.950	1.0

20dB Band Width : Tx(Hopping off) 2402MHz



20dB Band Width : Tx(Hopping off) 2441MHz



20dB Band Width : Tx(Hopping off) 2480MHz

Date: 20.SEP.2002 21:06:43

DATA OF NUMBER OF HOPPING FREQUENCY

A-Pex International Co., Ltd.

EMC HEAD OFFICE DIVISION No.3 MEASUREMENT ROOM

COMPANY	: SEIKO EPSON CORPORATION	REPORT NO	: 23AE0021-HO
EQUIPMENT	: Bluetooth Unit	REGULATION	: Fcc Part15 Subpart C 15.247(a)(1)(iii)
MODEL	: EU-62	TEST DISTANCE	: -
S/ N	: 00110	DATE	: 2002/9/20
FCC ID	: BKMFBUEU-62	TEMPERATURE	: 26°C
POWER	: DC 5V (AC230V / 60Hz)	HUMIDITY	: 61%
MODE	: Tx (Hopping on)		

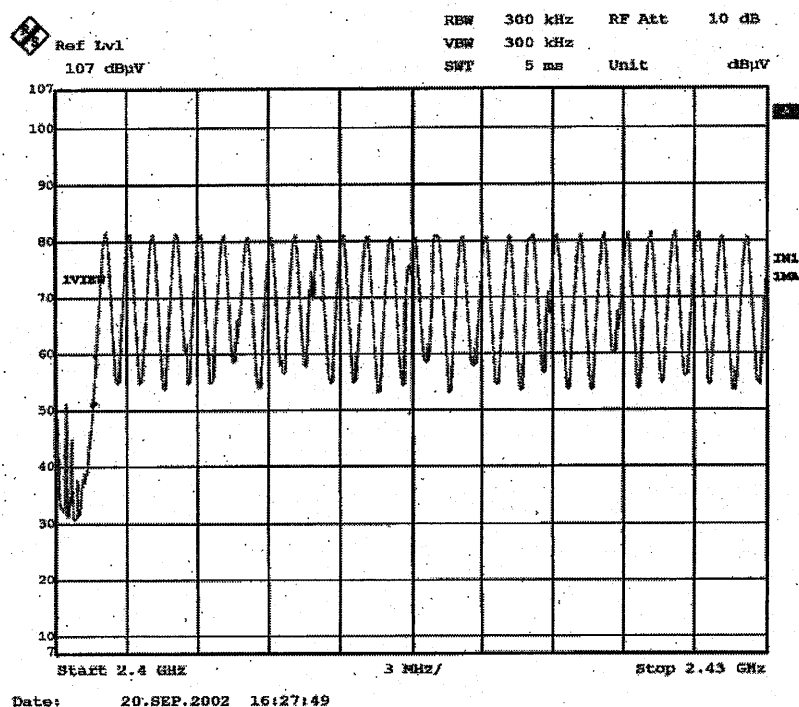
Y. Iwasa

ENGINEER : Yoshiaki Iwasa

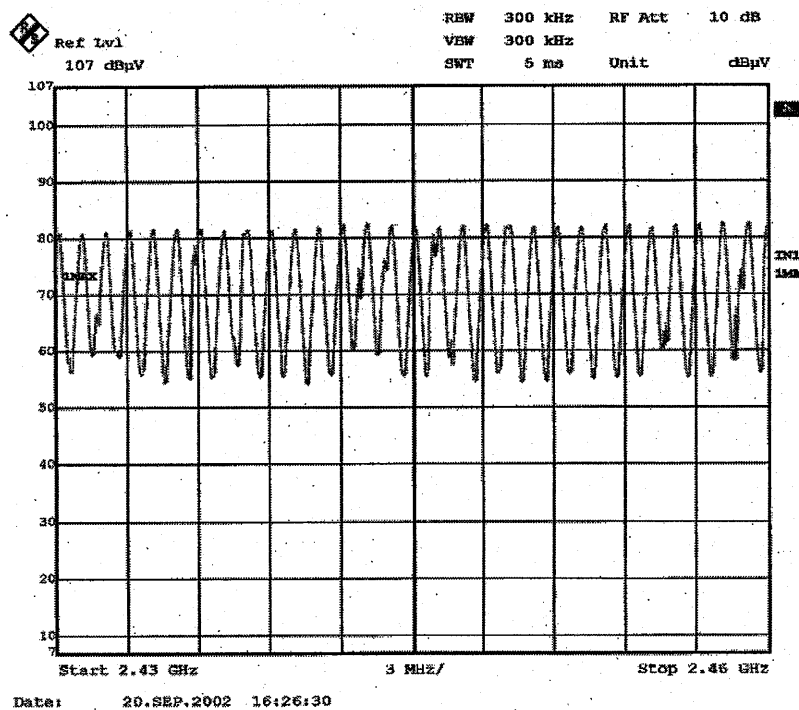
PK DETECT(S/A : RBW 300kHz, VBW 300kHz, sweep time AUTO)

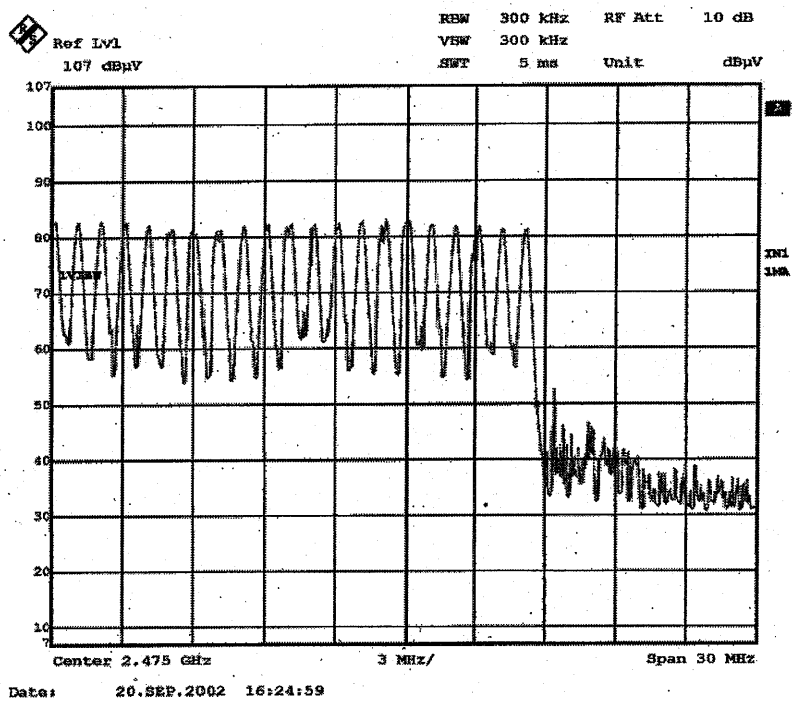
Mode	Number of channel	Limit
	[time]	[time]
Tx (Hoppng on)	79.0	≥ 15

Number of Hopping Frequency : Tx(Hopping on) 2400-2430MHz



Number of Hopping Frequency : Tx(Hopping on) 2430-2460MHz



Number of Hopping Frequency : Tx(Hopping on) 2460-2490MHz

DATA OF DWELL TIME

A-Pex International Co., Ltd.

EMC HEAD OFFICE DIVISION No.3 MEASUREMENT ROOM

COMPANY : SEIKO EPSON CORPORATION
 EQUIPMENT : Bluetooth Unit
 MODEL : EU-62
 S/N : 00110
 FCC ID : BKMFB EU-62
 POWER : DC 5V (AC230V / 60Hz)
 MODE : Tx (Hopping off)
 MEASURED CH : 2441MHz

REPORT NO : 23AE0021-HO
 REGULATION : Fcc Part15 Subpart C 15.247(a)(1)(iii)
 TEST DISTANCE : -
 DATE : 2002/9/20
 TEMPERATURE : 26°C
 HUMIDITY : 61%

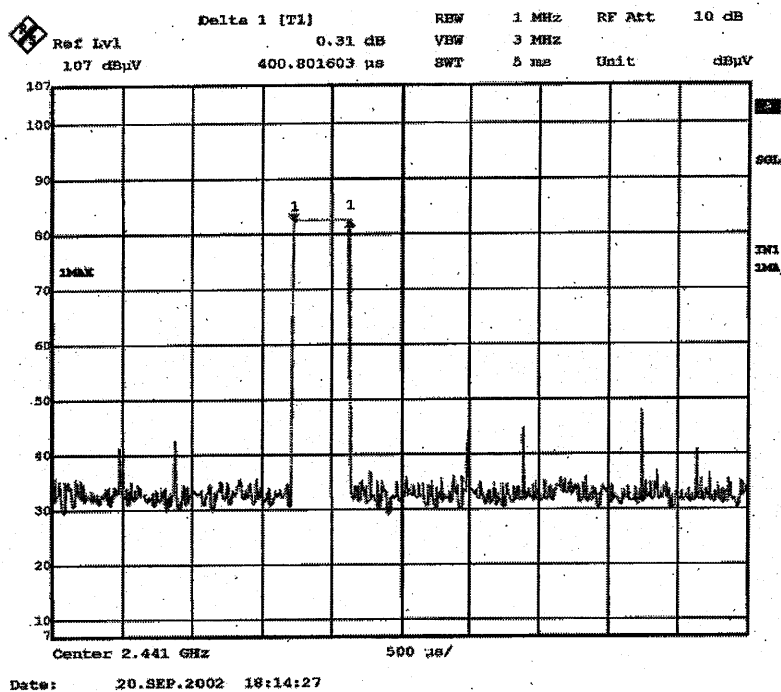
Y. Iwase

ENGINEER : Yoshiaki Iwasa

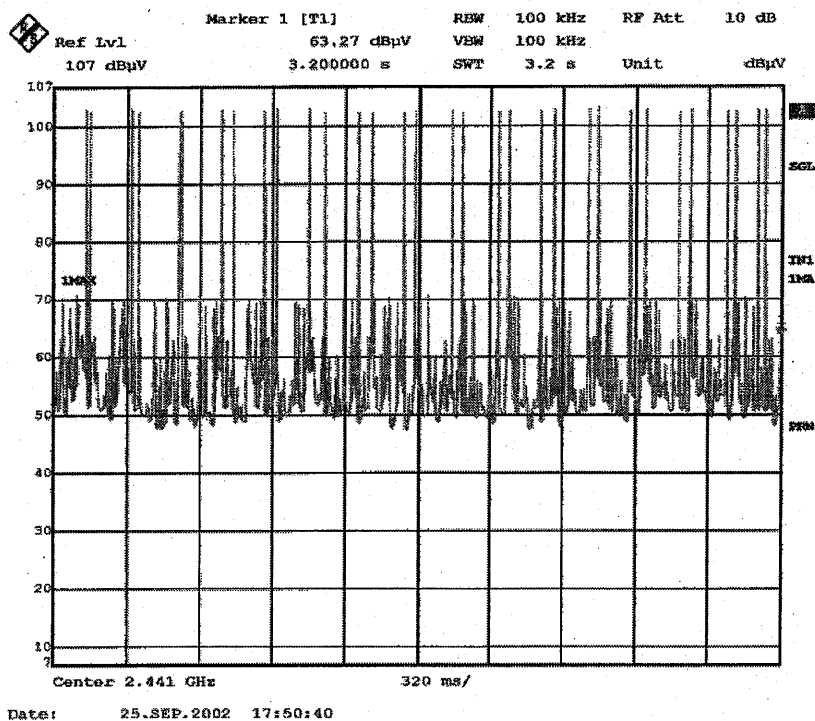
PK DETECT(S/A :span ZERO, RBW 1MHz, VBW 3MHz, sweep time 5-10ms)

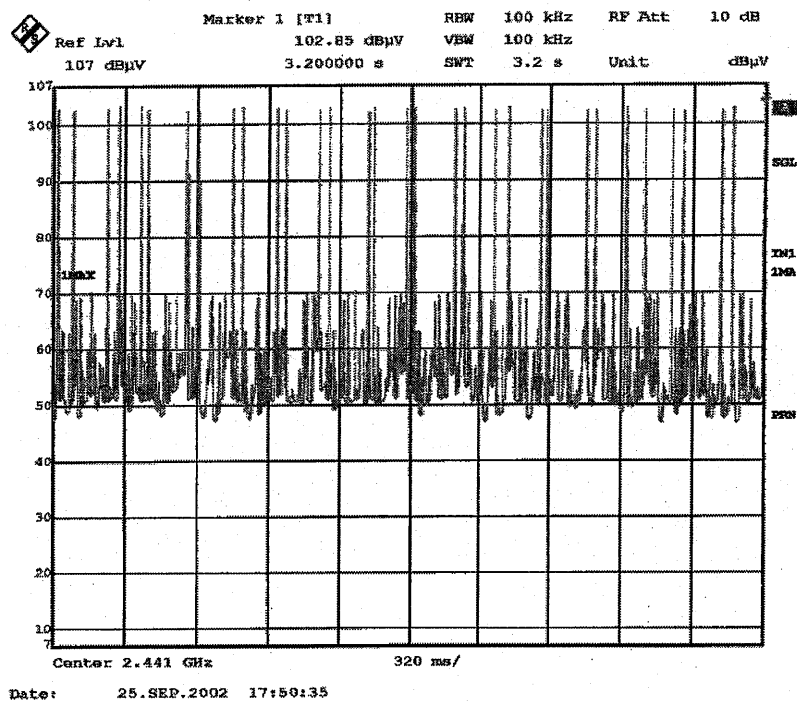
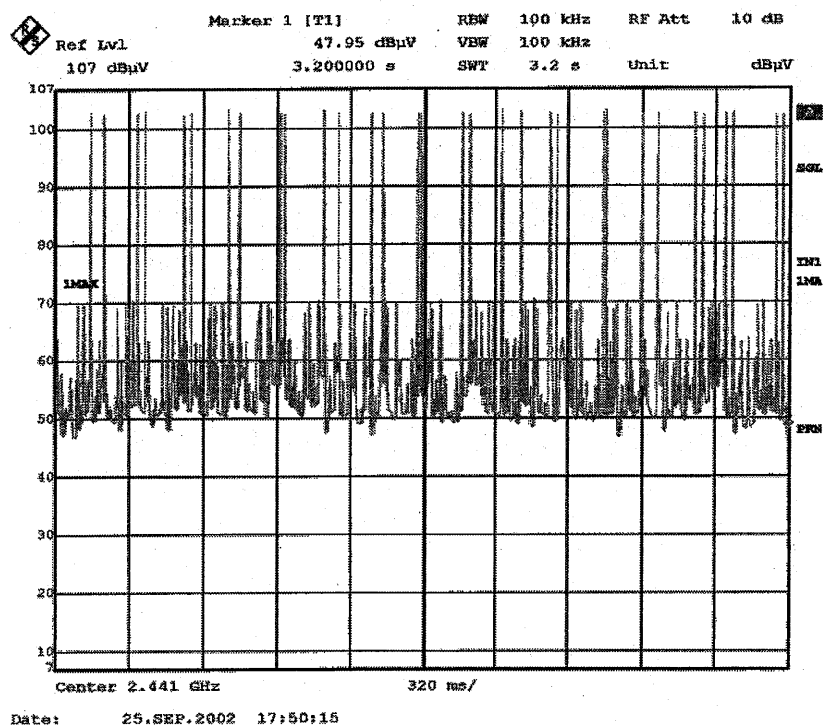
Mode	Number of transmission in a 0.4 second period * 79 channels	Length of transmission time [msec]	Result [msec]	Limit [msec]
DH1	323 times	0.401	130	400
DH3	163 times	1.663	271	400
DH5	118 times	2.906	343	400

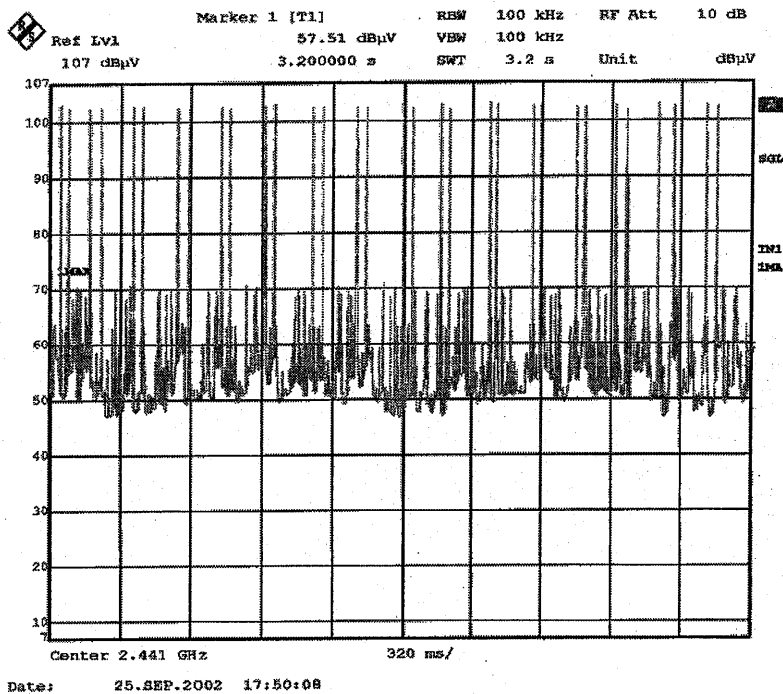
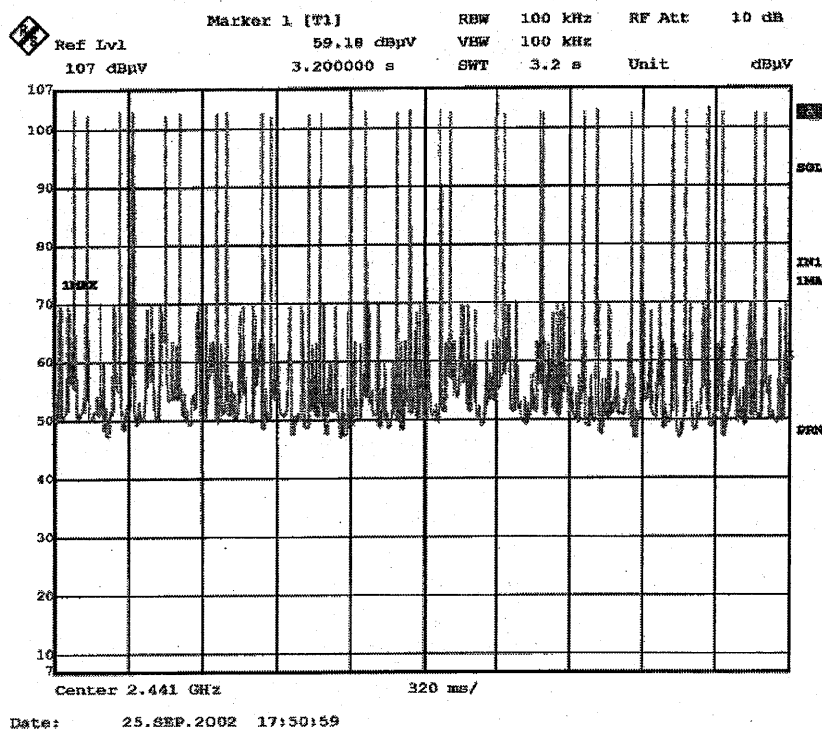
Dwell time : Tx(Hopping on) DH1(1)

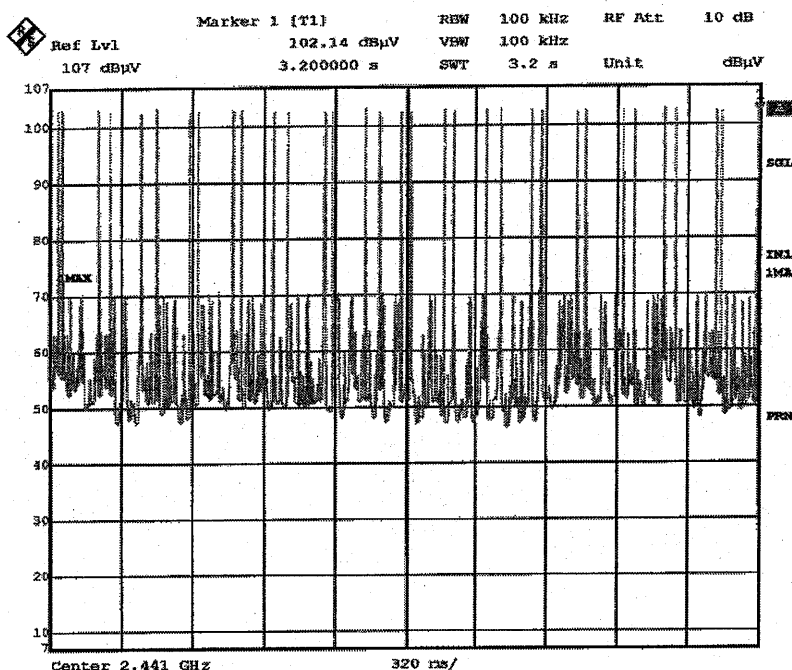


Dwell time : Tx(Hopping on) DH1(2)

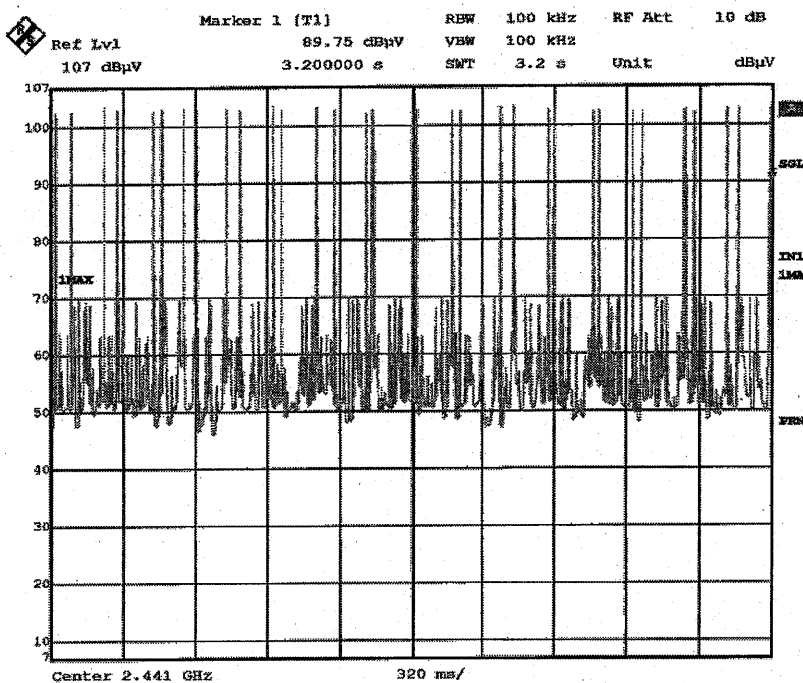


Dwell time : Tx(Hopping on) DH1(3)Dwell time : Tx(Hopping on) DH1(4)

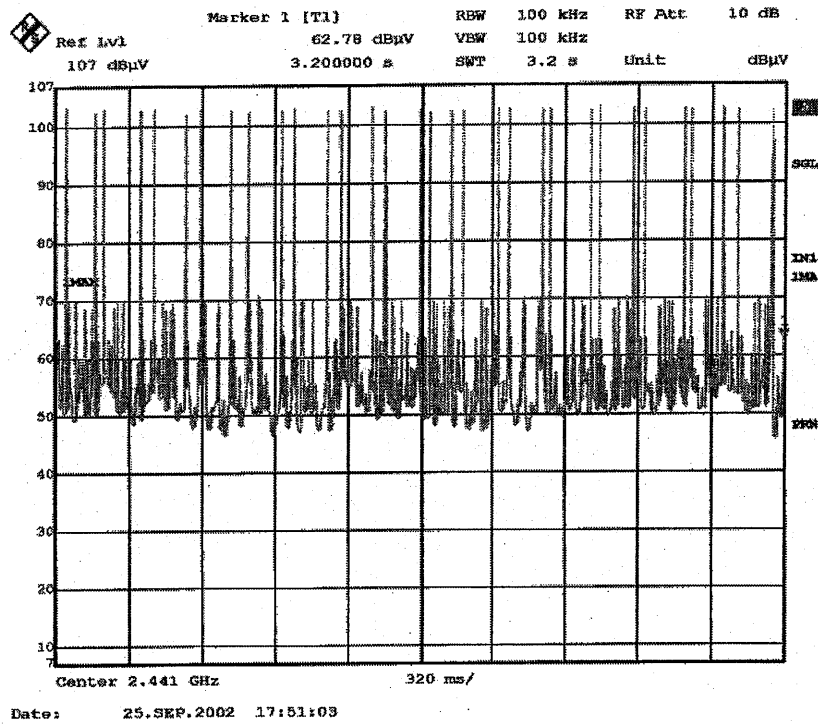
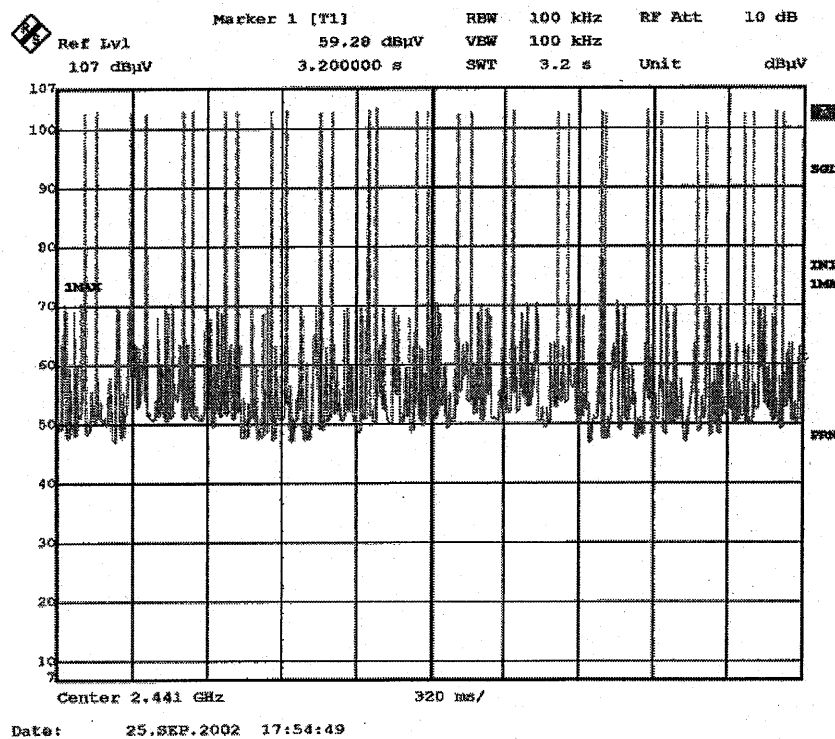
Dwell time : Tx(Hopping on) DH1(5)Dwell time : Tx(Hopping on) DH1(6)

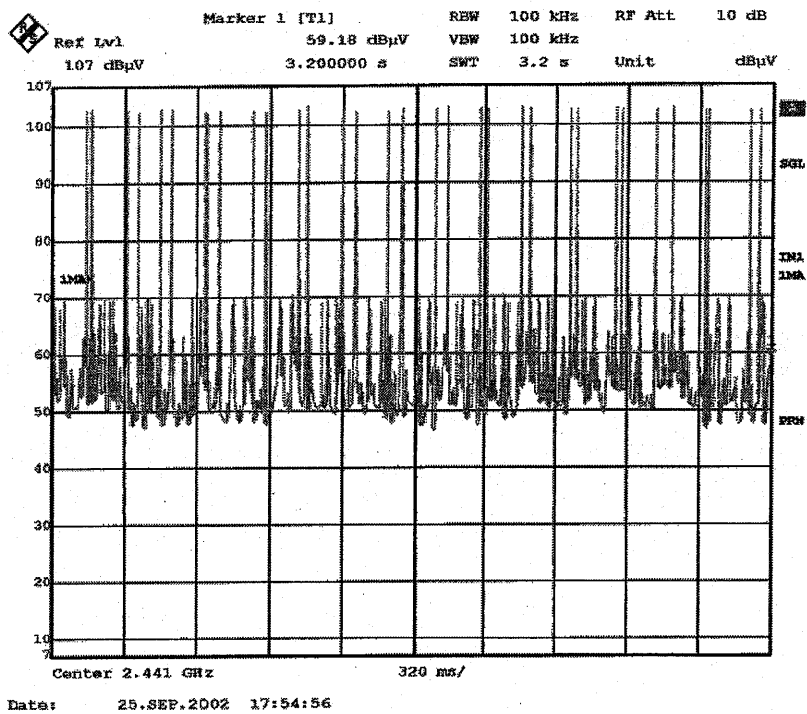
Dwell time : Tx(Hopping on) DH1(7)

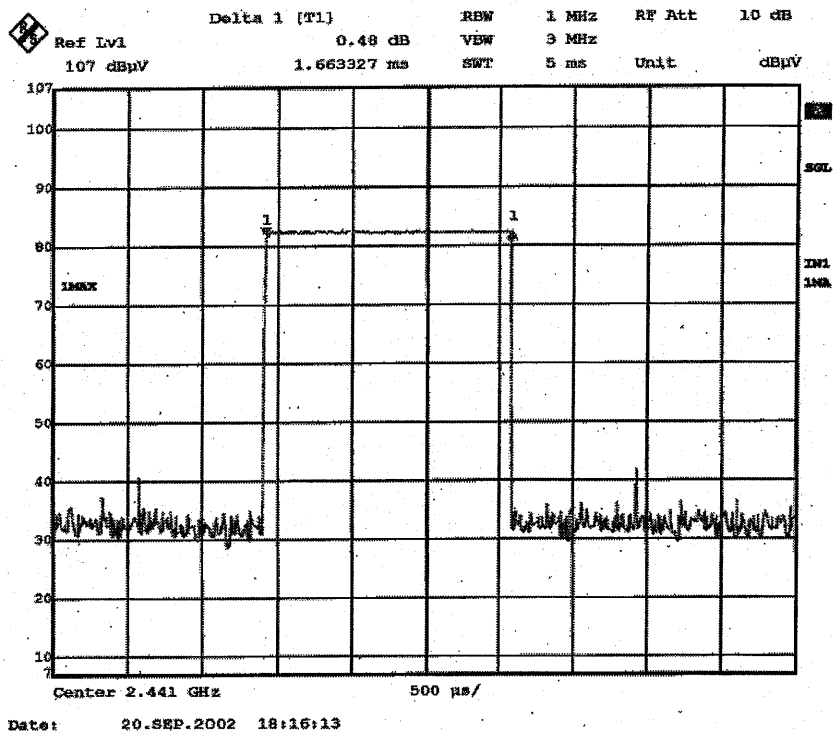
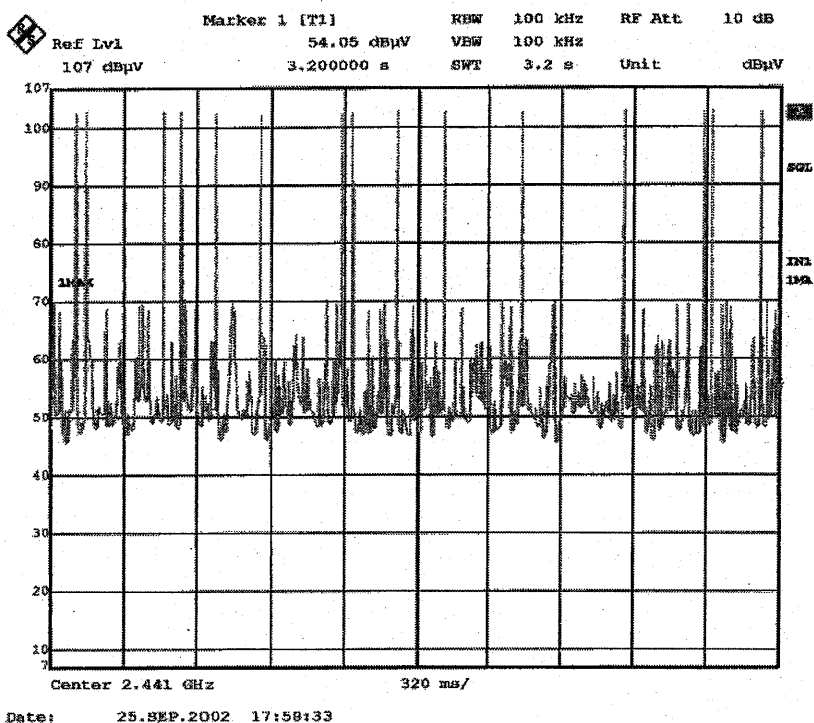
Date: 25.SEP.2002 17:50:54

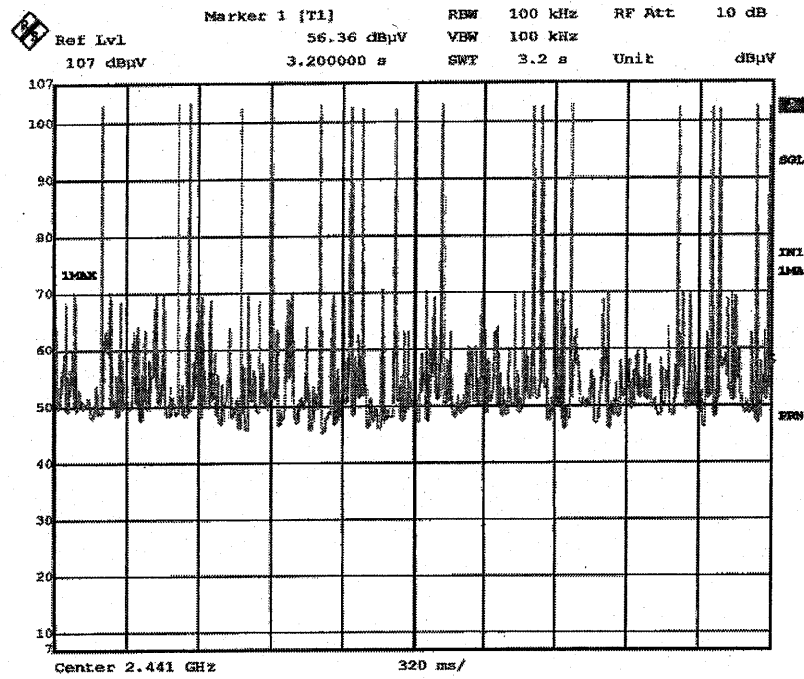
Dwell time : Tx(Hopping on) DH1(8)

Date: 25.SEP.2002 17:50:45

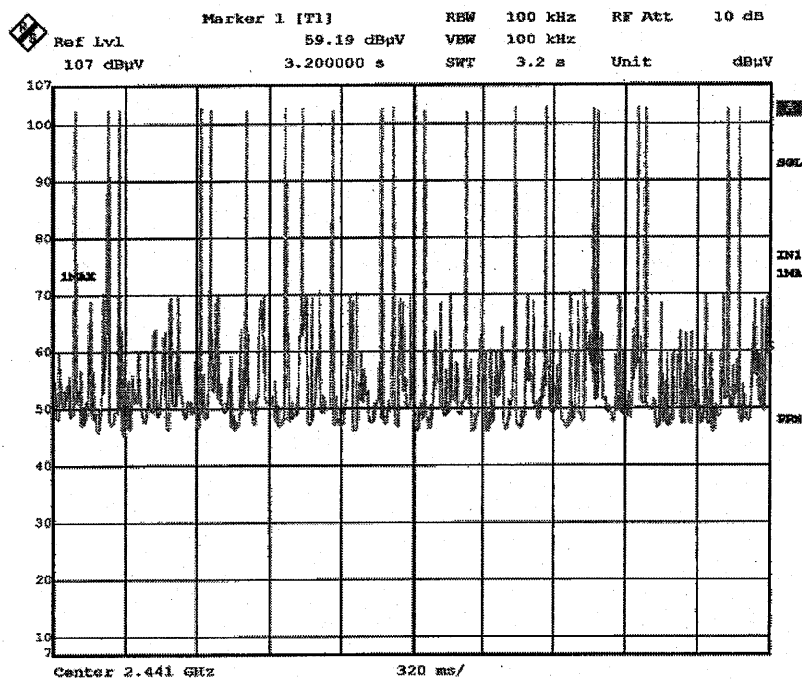
Dwell time : Tx(Hopping on) DH1(9)Dwell time : Tx(Hopping on) DH1(10)

Dwell time : Tx(Hopping on) DH1(11)

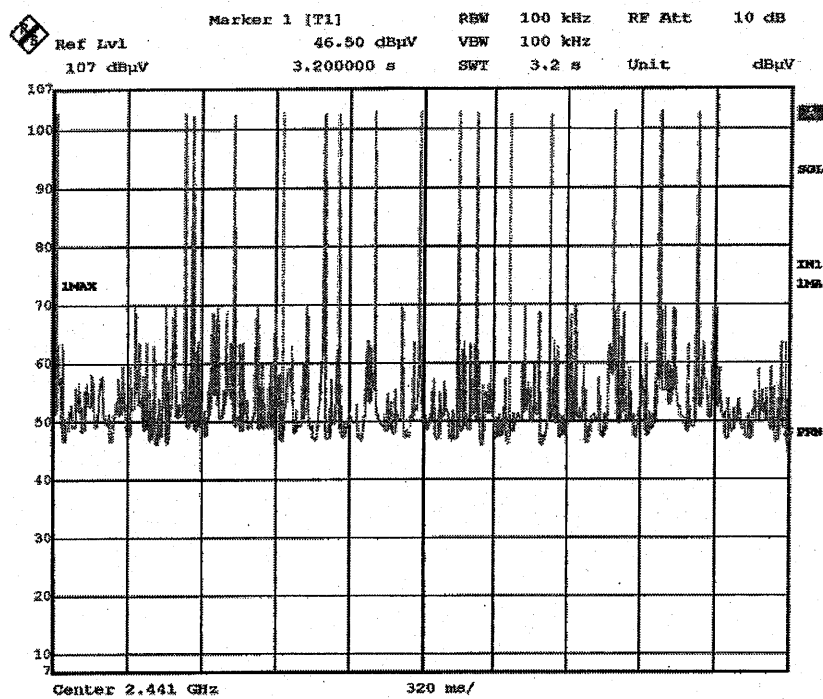
Dwell time : Tx(Hopping on) DH3(1)Dwell time : Tx(Hopping on) DH3(2)

Dwell time : Tx(Hopping on) DH3(3)

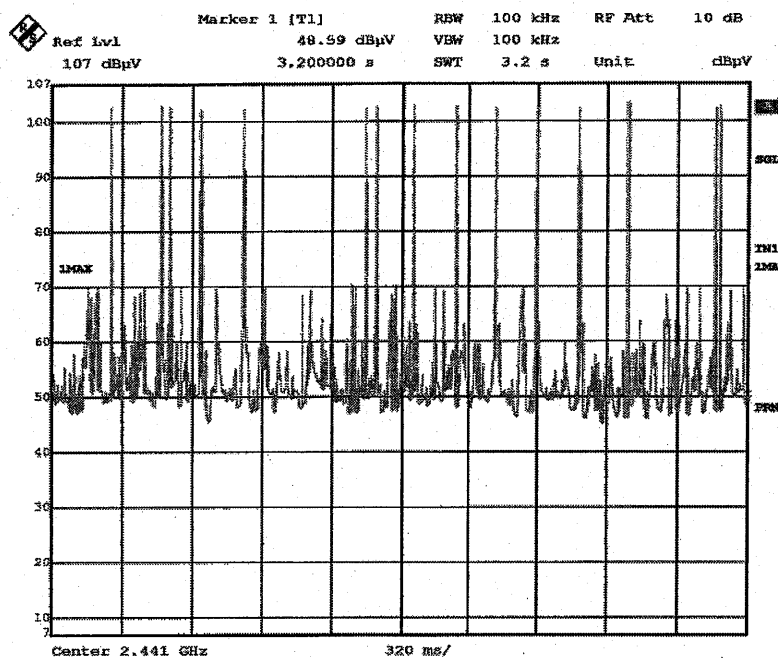
Date: 25.SEP.2002 17:58:43

Dwell time : Tx(Hopping on) DH3(4)

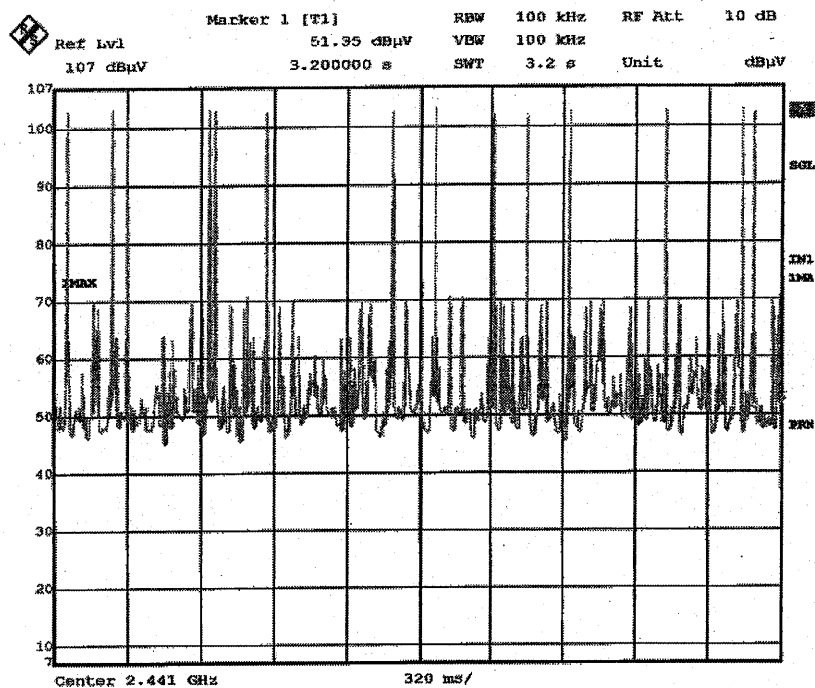
Date: 25.SEP.2002 17:58:58

Dwell time : Tx(Hopping on) DH3(5)

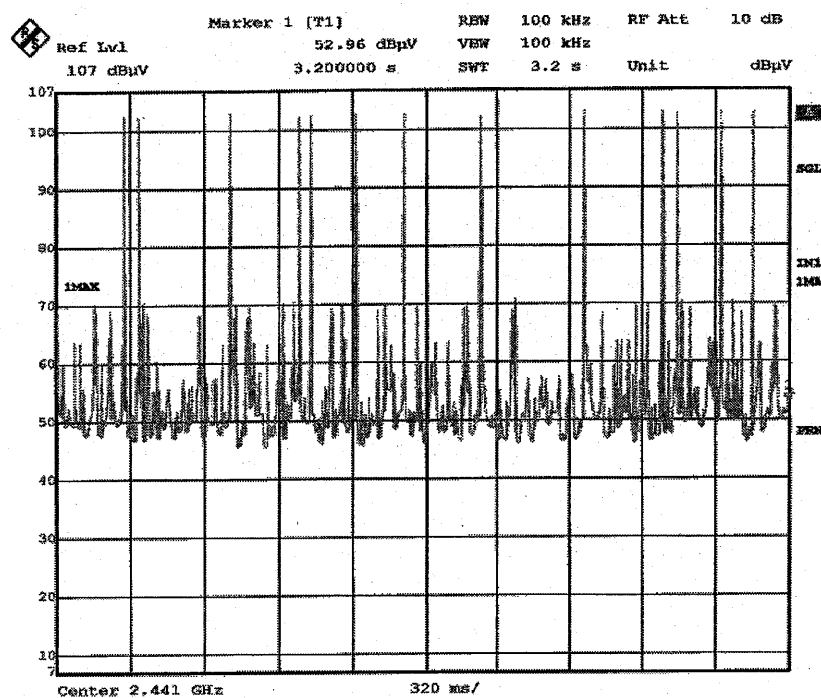
Date: 25.SEP.2002 17:59:03

Dwell time : Tx(Hopping on) DH3(6)

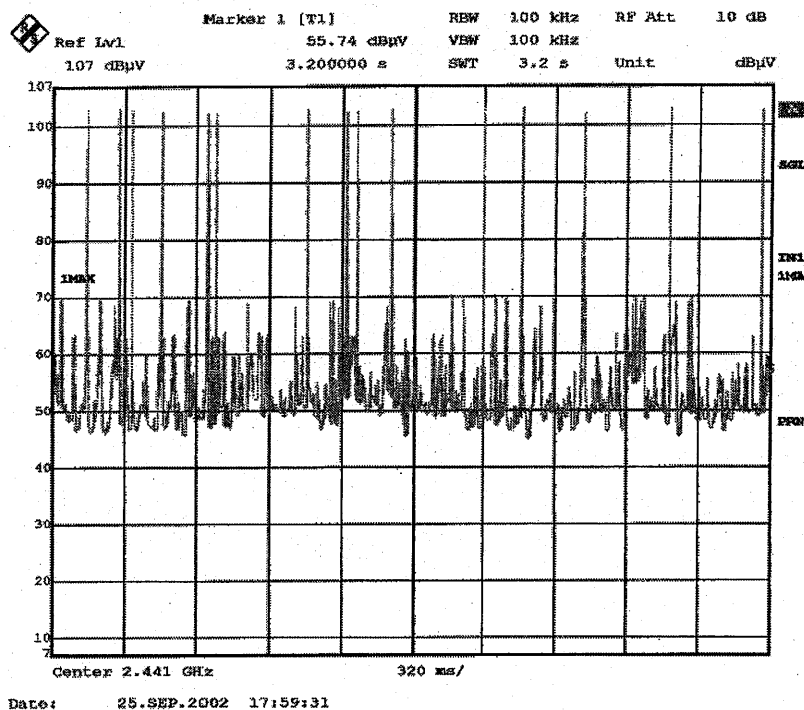
Date: 25.SEP.2002 17:59:08

Dwell time : Tx(Hopping on) DH3(7)

Date: 25.SEP.2002 17:59:13

Dwell time : Tx(Hopping on) DH3(8)

Date: 25.SEP.2002 17:59:19

Dwell time : Tx(Hopping on) DH3(9)Dwell time : Tx(Hopping on) DH3(10)