EMC Test Report for FCC

On Behalf of
WUHAN Lucky Partners Co., Ltd

Summary

The equipment comply with the requirements according to the following standard(s):

47CFR Part 18 (2004): Industrial, Scientific, and Medical Equipment

FCC/OET MP-5 (1986): FCC Methods of Measurements of Radio Noise Emissions From Industrial, Scientific, and Medical Equipment

ANSI C63.4 (2003): Interim Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz.

Description

The appliances were tested by Intertek Testing Services ETL SEMKO Shanghai Limited and found compliance with relevant requirements described in FCC Part 18 RF lighting Device.

Test results are contained in this test report and Intertek Testing Services ETL SEMKO Shanghai Limited is assumed full responsibility for the accuracy and completeness of these measurements.

Date of Test: July 25-26, 2006
Date of Issue: Sep 15, 2006

Prepared by:	Report Approved by:
Ada Zou *(Engineer)*	Steve Li *(EMC Manager)*

Description of Test Facility

Name	Intertek Testing Service Shanghai Limited
Address	Building No.86, 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone	86 21 64956565
Telefax	86 21 64956263

CONTENTS

1.Applicant Information

Applicant : WUHAN Lucky Partners Co.,Ltd
7F,East Tower Bldg,562 Int Trade New Bldg,Jianshe Ave.
Hankou Wuhan Hubei 430022

Manufacturer: SUZHOU DAMING ELECTRIC Co.,Ltd
Weixi Village Weitang Town Xiangcheng District ,Suzhou China

Difference between models:

The SGF series include: SGF 5W,SGF 7W, SGF 11W,SGF14W,SER15W,SER 24W.

The SM-1 series include: SMI 9W,SMI 11W,SMI 13W,SMI 15W,SMR 9W,SMR 11W,SMR 13W,SMR 15W.

The SDF52-A series include: SDF 10W,SDF 12W,SDF 14W,SDF 16W,SDF 18W,SDF 20W,SDF 22W, SDF 24W,SDF 26W.

FCC ID: UQ6DAMING-S
Country of origin: P.R. China
Name of contact: Wu Keping
Telephone: 0086-0512-65904886
Telefax: 0086-0512-65904887

2.Information of Equipment Under Test (EUT)

2.1 Identification of the EUT

Equipment: Energy Saving Lamp
Type of EUT: ☑ Production ☐ Pre-product ☐ Pro-type
Type/model: SGF5,SGF7,SGF9,SGF11,SGF14,SGF15,SGF24
SMI9,SMI11,SMI13,SMI15,SMR9,SMR11,SMR13,SMR15
SDF10,SDF12,SDF14,SDF16,SDF18,SDF20,SDF22,SDF24,
SDF26
Serial number: none
Date of sample receipt 2006-07-25
Date of test 2006-07-25~26
Rating: 120v AC, 60Hz
Operation frequency : none

2.2 Additional information about the EUT

none

2.3 Peripheral equipment

none

3. Conducted Powerline Measurement

3.1 Conduction Limit for non-consumer RF lighting device

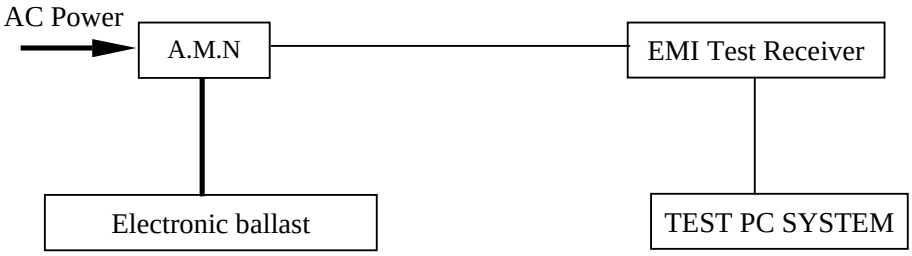
Frequency (MHz)	Maximum RF line voltage measured with a 50uH/50 ohm LISN	
	(μV)	dB(μV)
0.45-2.51 MHz	250	47.9
2.51-3.0 MHz	3000	69.5
3.0-30 MHz	250	47.9
RF Line Voltage dB(μV) = 20 lg RF Line Voltage (μV)		

3.2 Instruments List

The following instruments were used during the measurement of RF voltage conducted back into the power lines.

Item	Equipment	Manu.	Type	Serials no.	Last Cal.	Cal. Interval
1	EMI Test Receiver	Rohde & Schwarz	ESCS 30	828985/026	2006-2-9	1 Year
2	A.M.N.	Rohde & Schwarz	ESH3-Z5	825640/018	2006-2-9	1 Year

3.3 Test Setup



Note: ——— means “power line”
——— means “signal line”

3.4 Test Configuration

The Conducted Powerline Measurement was proceeded in a shielded room.

The EUT was connected to AC power source through an Artificial Mains Network (A.M.N.). which provides a 50 ohm, standardized RF impedance for the measured equipment. Other support equipment was powered by another AMN.

The EUT was placed on a 1m×1.5m×0.8m wooden table and keep 40 centimeters from the wall of the earthed shielded room, which was considered as Ground Reference Plane(GRP), and kept at least 80 centimeters from any other earthed conducting surface. The EUT was placed at a distance of 80 centimeters from the AMN’s, and connected thereto by a unshielded lead of 1 meter in length.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition.

The frequency range from 450 kHz to 30 MHz was checked.

The bandwidth of Test Receiver ESCS 30 was set at 10 kHz.
Both 120V and 277V operation conditions were tested

After scanned by automatic peak mode, the frequency producing the max. level was reexamined using the detector function set to the CISPR Quasi-peak mode by manual.

The EUT, support equipment and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was maximized by switching power lines,

varying the mode of operation or resolution, clock or data exchange speed, if applicable, whichever determined the worst-case emission.

During measurement, EUT was set at “Lighting ” mode.

Test Results were listed in sec. 3.6.

3.5 Test Procedure

3.5.1 Establish the test setup as sec. 3.3.
3.5.2 Set the Electronic ballast to “Lighting” mode.
3.5.3 Proceed the measurement

3.6 Test Results

■ Pass □ Fail

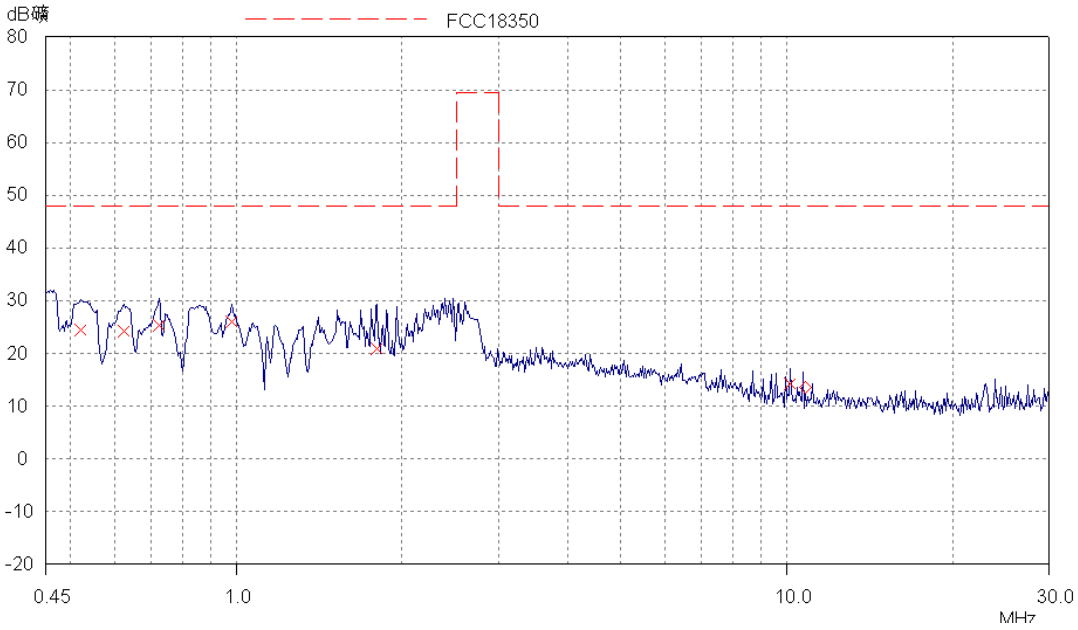
3.6.1 Measurement environment

Temperature ： 22.7 °C Relative Humidity ： 47 %

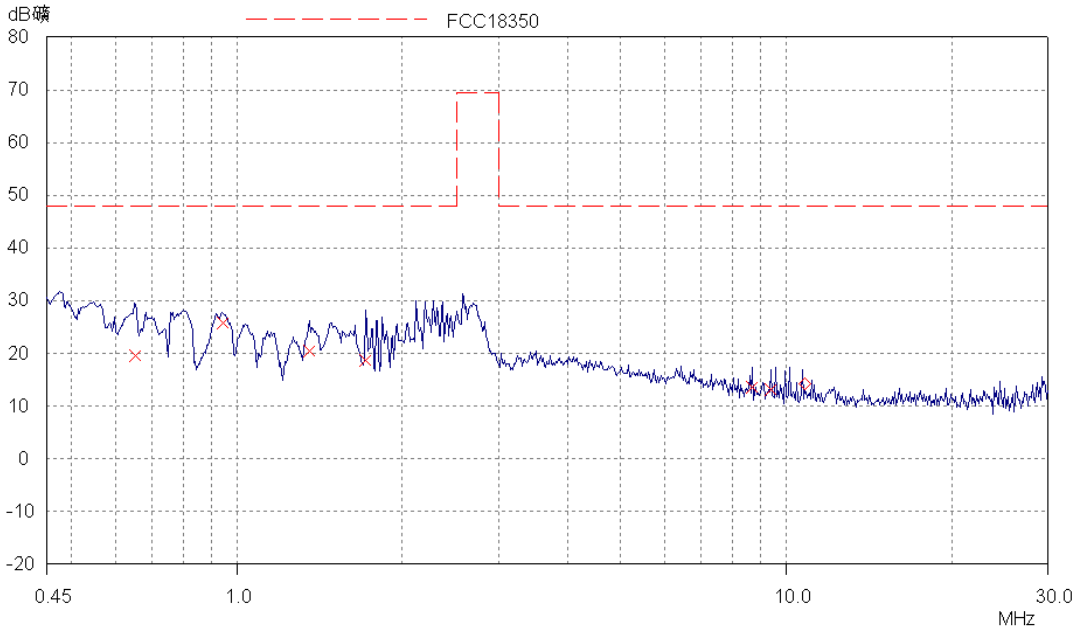
3.6.2 Data table

All emissions not listed below are too low against the prescribed limits.

SGF 5W L



SGF 5W N

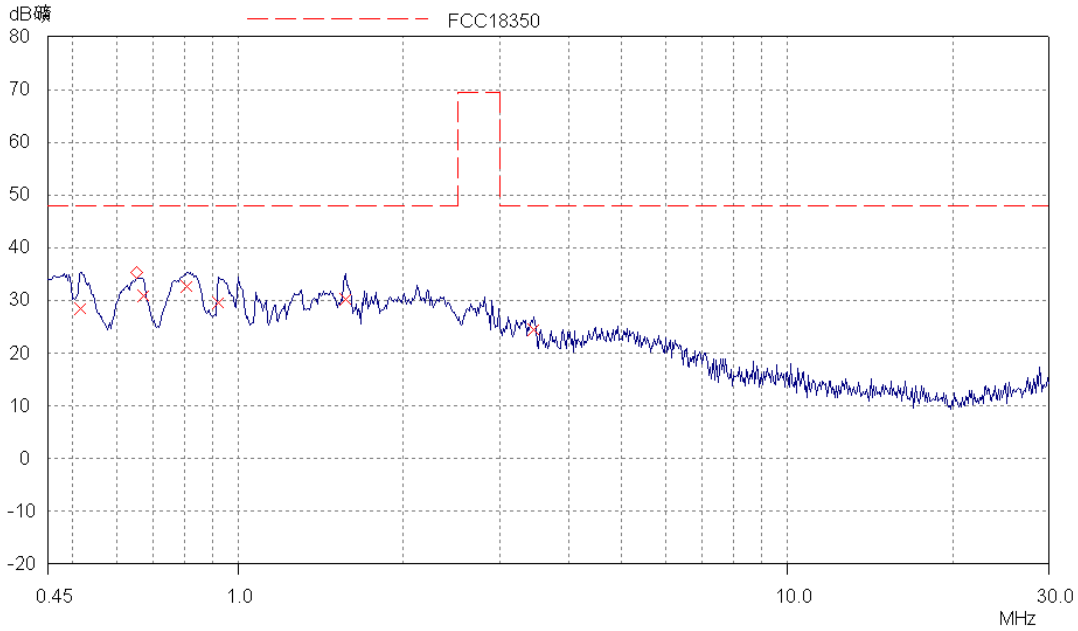


Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	0.51954	24.54	48.00	23.46
	0.62427	24.20	48.00	23.80
	0.72364	25.29	48.00	22.71
	0.97623	***26.03***	***48.00***	***21.97***
	1.79808	21.01	48.00	26.99
	10.12764	14.36	48.00	33.64
N	0.6523	19.58	48.00	28.42
	0.94177	25.77	48.00	22.23
	1.34891	20.52	48.00	27.48
	1.71398	*18.61*	*48.00*	*29.39*
	8.66749	13.50	48.00	34.50
	9.35048	13.20	48.00	34.80

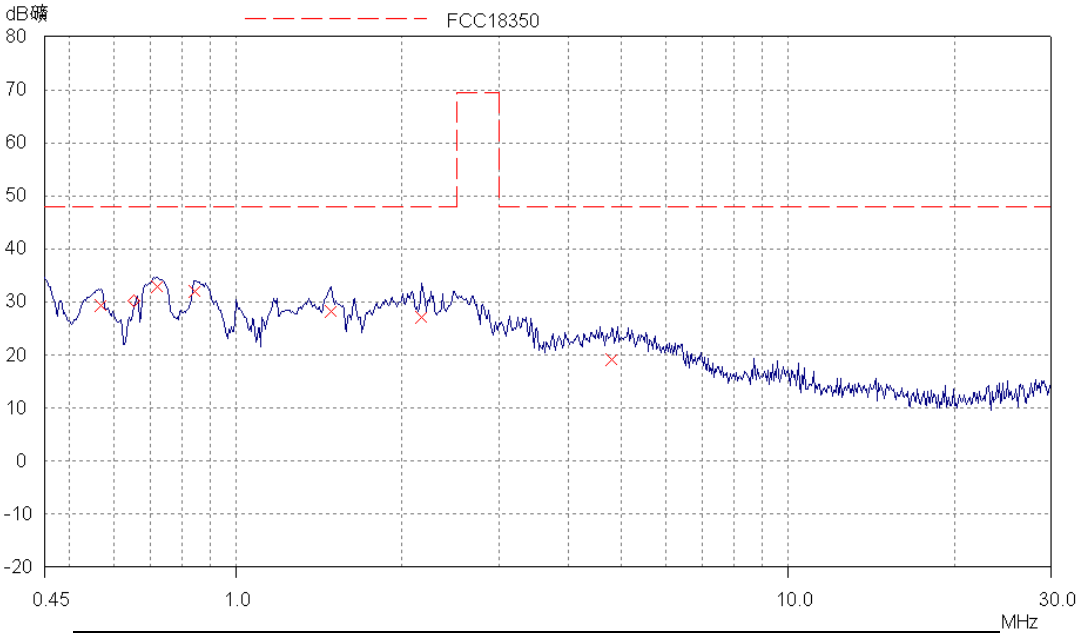
Note:

1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.97623 MHz with emission level 26.03 dBμV, at line L

SGF 7W L



SGF 7W N

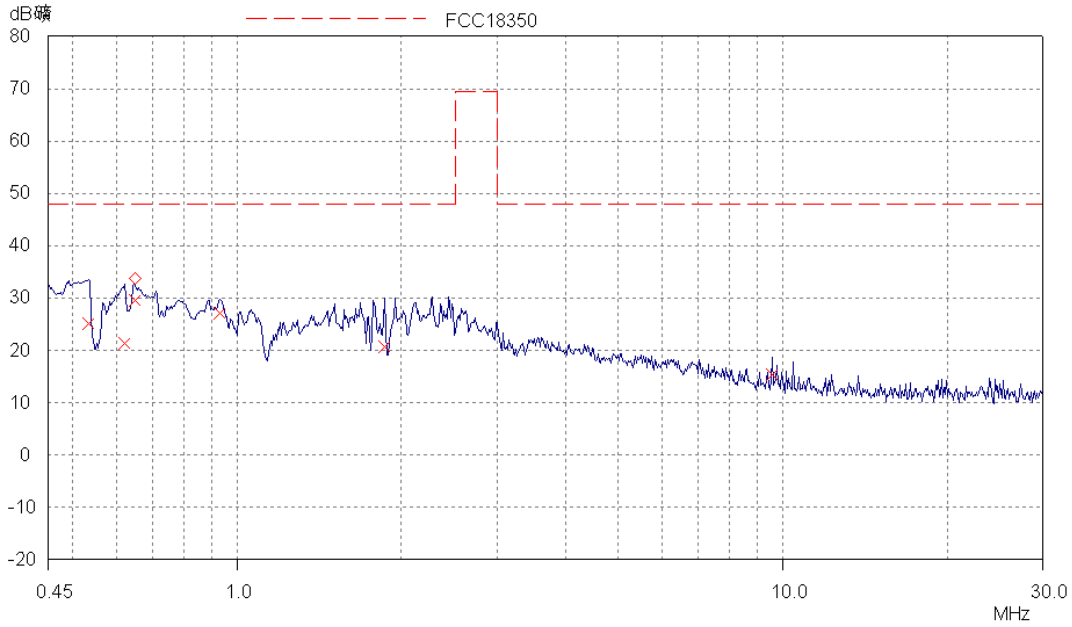


Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	0.51541	28.41	48.00	19.59
	0.67078	30.83	48.00	17.17
	0.80599	32.66	48.00	15.34
	0.91941	29.44	48.00	18.56
	1.56361	30.13	48.00	17.87

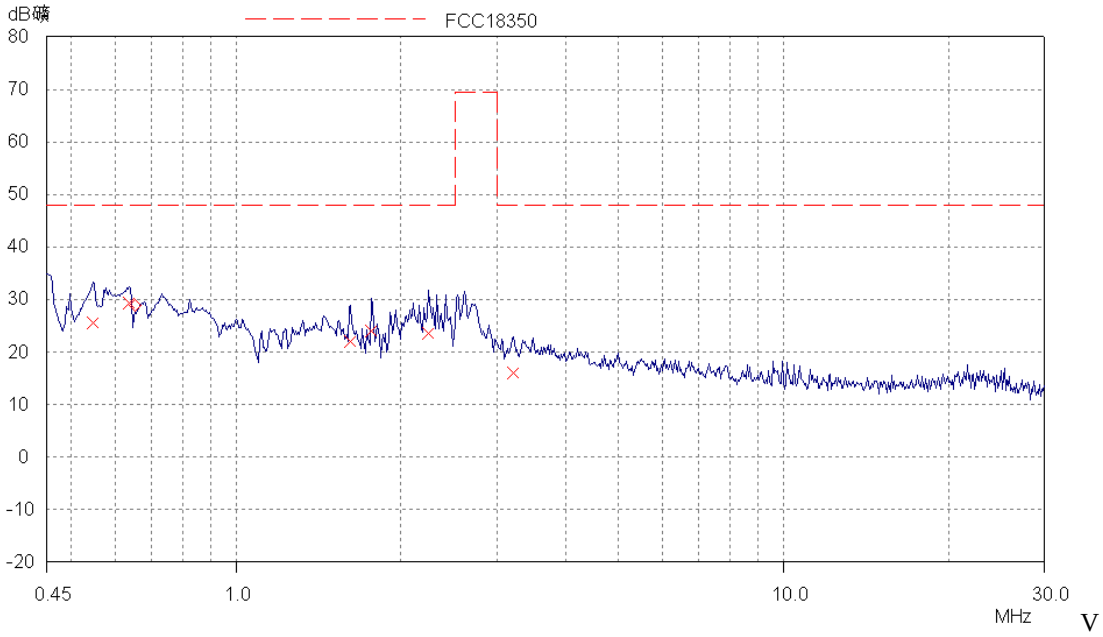
	3.44672	24.34	48.00	23.66
N	*0.56724*	*29.29*	*48.00*	*18.71*
	0.71788	**32.86**	**48.00**	**15.14**
	0.83882	32.03	48.00	15.97
	1.48454	28.14	48.00	19.86
	2.16917	27.19	48.00	20.81
	4.78156	19.12	48.00	28.88

Note:

1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.71788 MHz with emission level 32.86 dBμV, at line N SGF 9W L



SGF 9E N



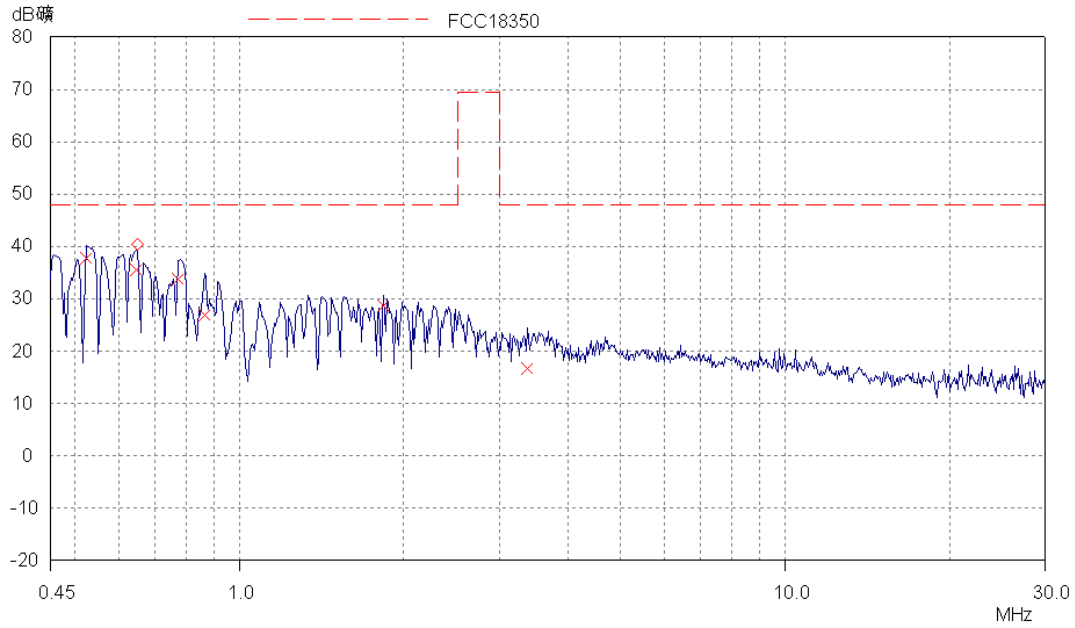
Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	0.53214	25.07	48.00	22.93
	0.62178	21.34	48.00	26.66
	0.6497	**29.48**	**48.00**	**18.52**
	0.92686	27.20	48.00	20.80
	1.85643	20.73	48.00	27.27
	9.53899	15.30	48.00	32.70
N	*0.54722*	*25.65*	*48.00*	*22.35*
	0.63432	29.23	48.00	18.77
	1.61436	22.09	48.00	25.91
	1.76255	24.05	48.00	23.95
	2.23957	23.61	48.00	24.39
	3.20774	15.99	48.00	32.01

Note:

1 All data listed are Quasi-Peak value.

2. The worst emission was founded at 0.6497 MHz with emission level 29.48 dBμV, at line L

SGF 11W L



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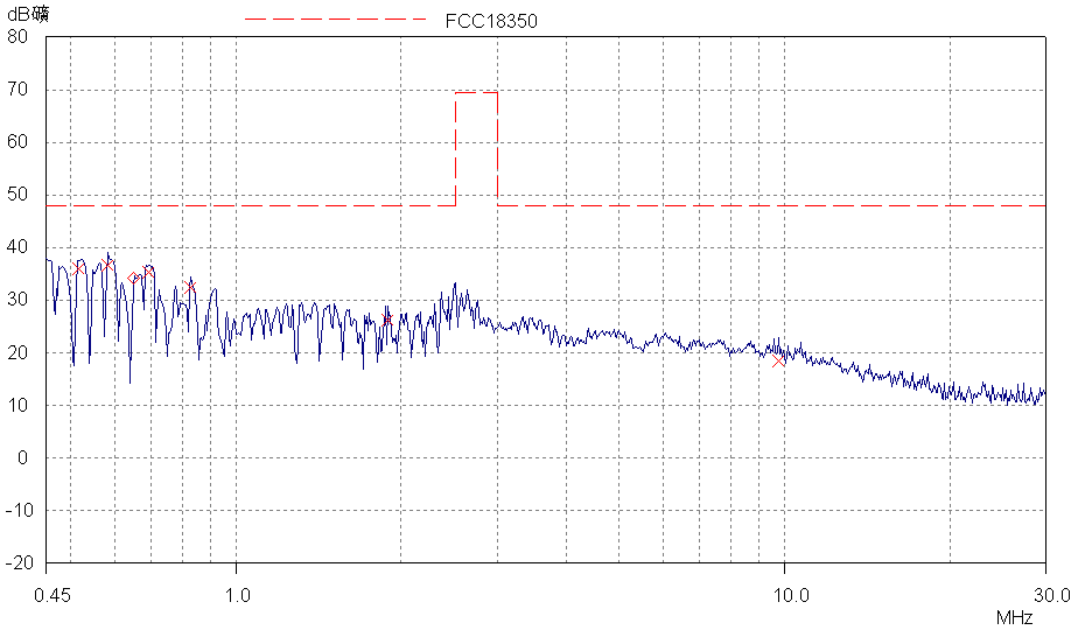


Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	**0.52371**	**37.68**	**48.00**	**10.32**
	0.64453	35.56	48.00	12.44
	0.77137	33.75	48.00	14.25
	0.86259	26.94	48.00	21.06

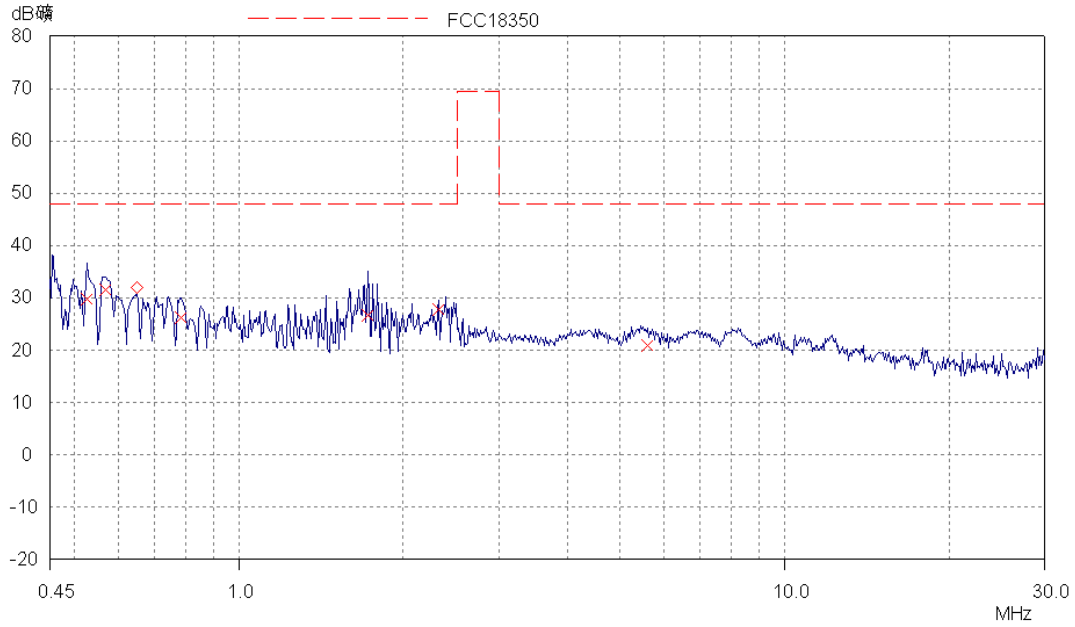
	1.83433	28.67	48.00	19.33
	3.36514	16.73	48.00	31.27
N	*0.51541*	*35.87*	*48.00*	*12.13*
	0.58331	36.62	48.00	11.38
	0.69522	35.22	48.00	12.78
	0.82224	32.53	48.00	15.47
	1.88632	26.13	48.00	21.87
	9.73131	18.41	48.00	29.59

Note:

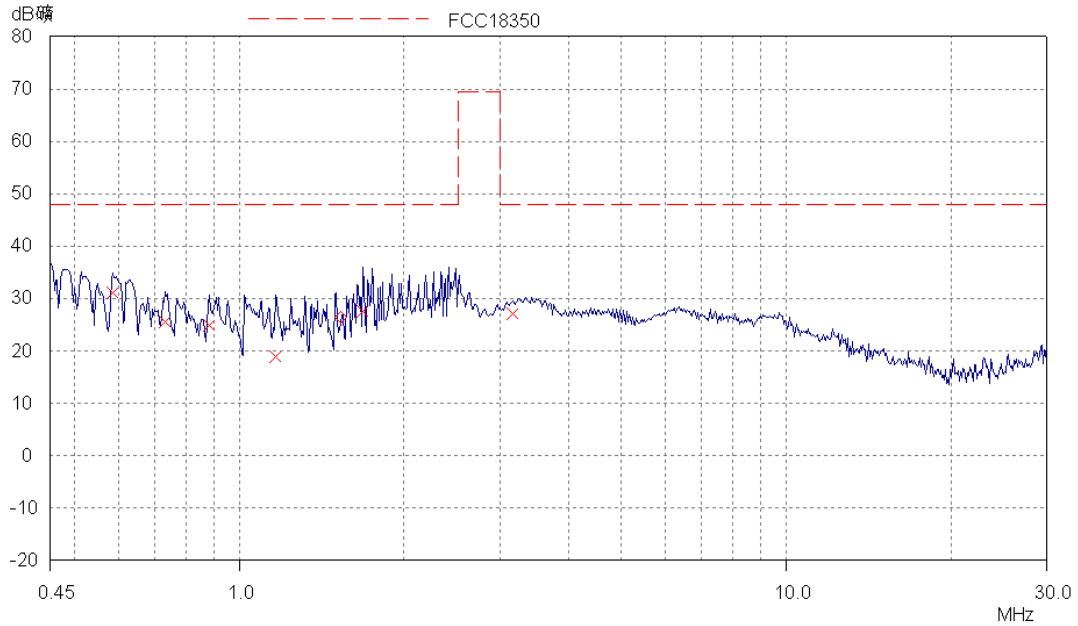
1 All data listed are Quasi-Peak value.

2 The worst emission was founded at 0.52371 MHz with emission level 37.68 dBμV, at line L

SGF 14W L



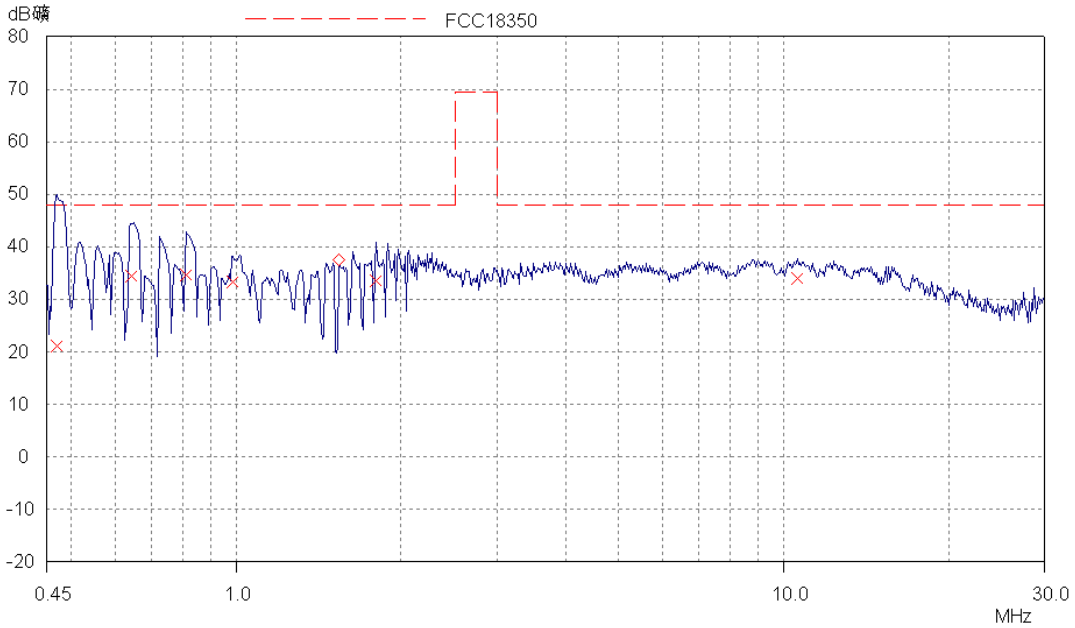
SGF 14W N



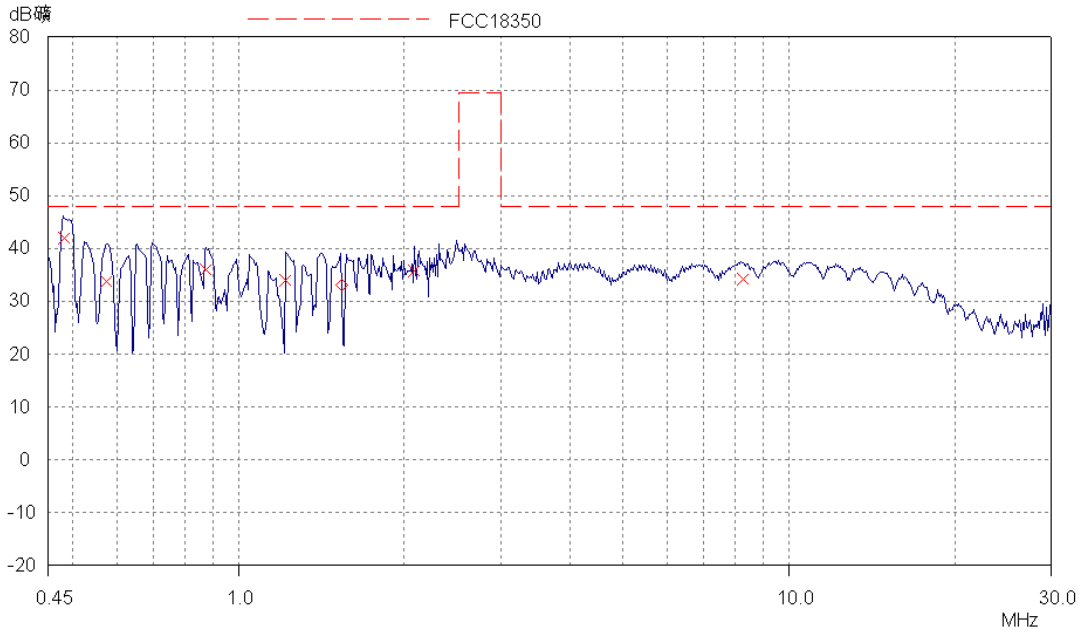
Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	0.5258	29.70	48.00	18.30
	0.56724	**31.49**	**48.00**	**16.51**
	0.78066	26.32	48.00	21.68
	1.72083	26.59	48.00	21.41
	2.32149	27.75	48.00	20.25
	5.58708	20.93	48.00	27.07
N	*0.58564*	*31.17*	*48.00*	*16.83*
	0.72944	25.59	48.00	22.41
	0.87648	24.89	48.00	23.11
	1.16368	18.96	48.00	29.04
	1.68011	27.55	48.00	20.45
	3.15692	27.06	48.00	20.94

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.56724 MHz with emission level 31.49 dBμV, at line L

SER 15W L



SER 15W N

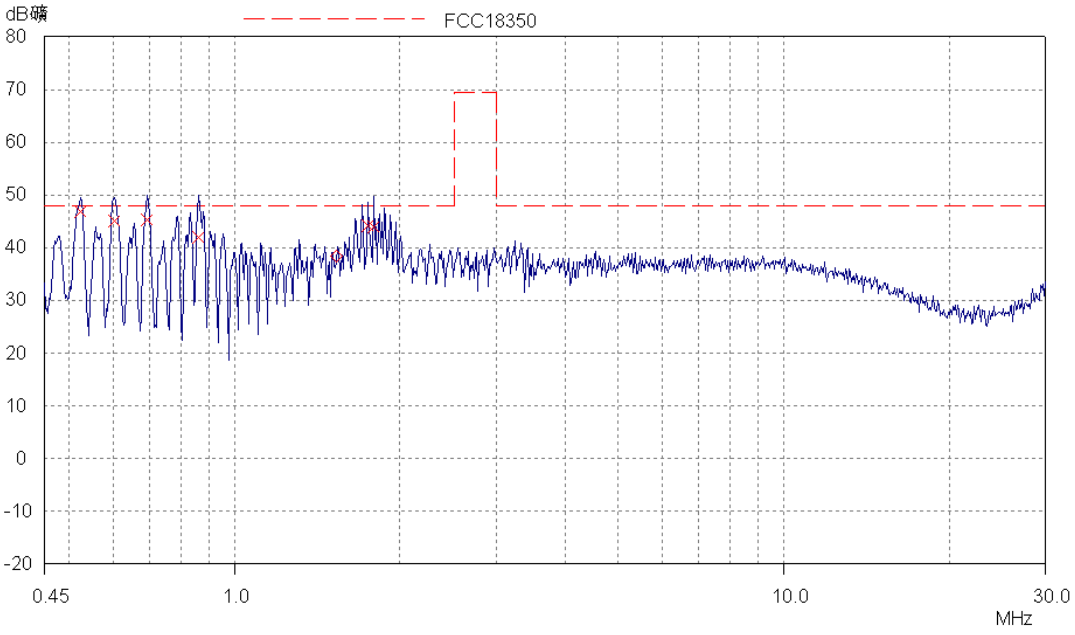


Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	0.46832	21.03	48.00	26.97
	0.64196	34.48	48.00	13.52
	0.80922	34.55	48.00	13.45
	0.98405	33.24	48.00	14.76

	1.79808	33.48	48.00	14.52
	10.58228	33.91	48.00	14.09
N	***0.47968***	***41.91***	***48.00***	***6.09***
	0.57407	33.79	48.00	14.21
	0.86951	36.07	48.00	11.93
	1.21592	33.99	48.00	14.01
	2.08429	35.70	48.00	12.30
	8.26207	34.12	48.00	13.88

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.47968 MHz with emission level 41.91 dBμV, at line N

SER 24W L



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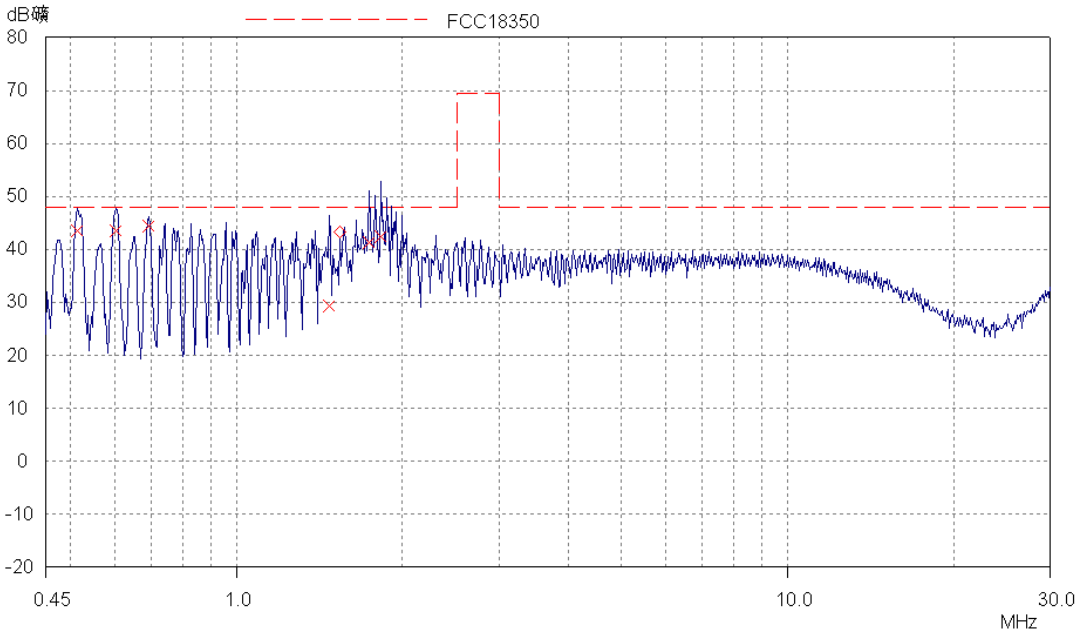
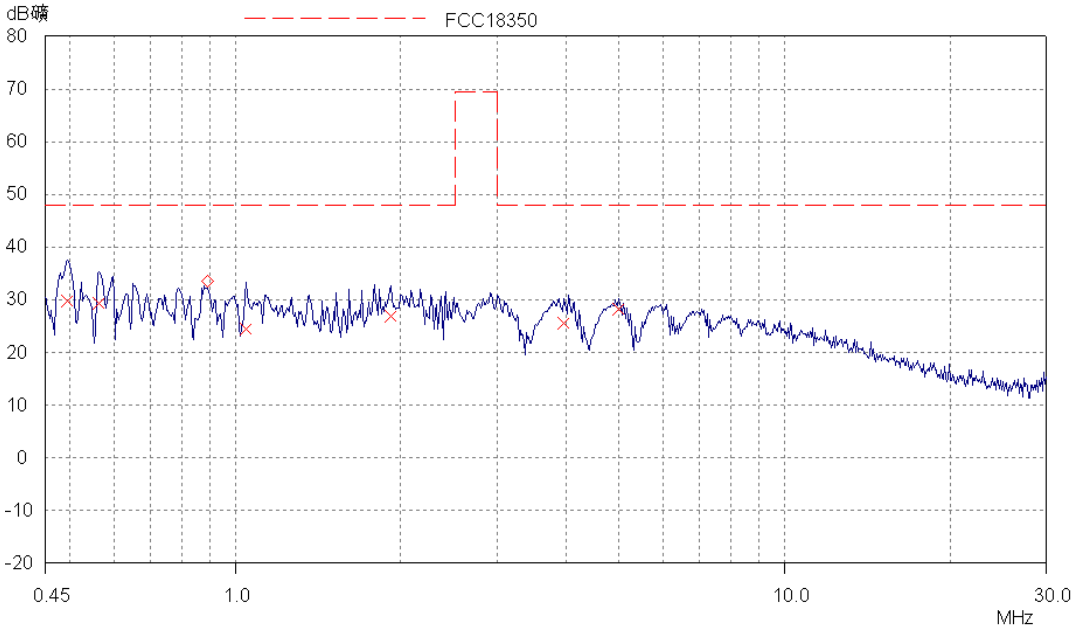


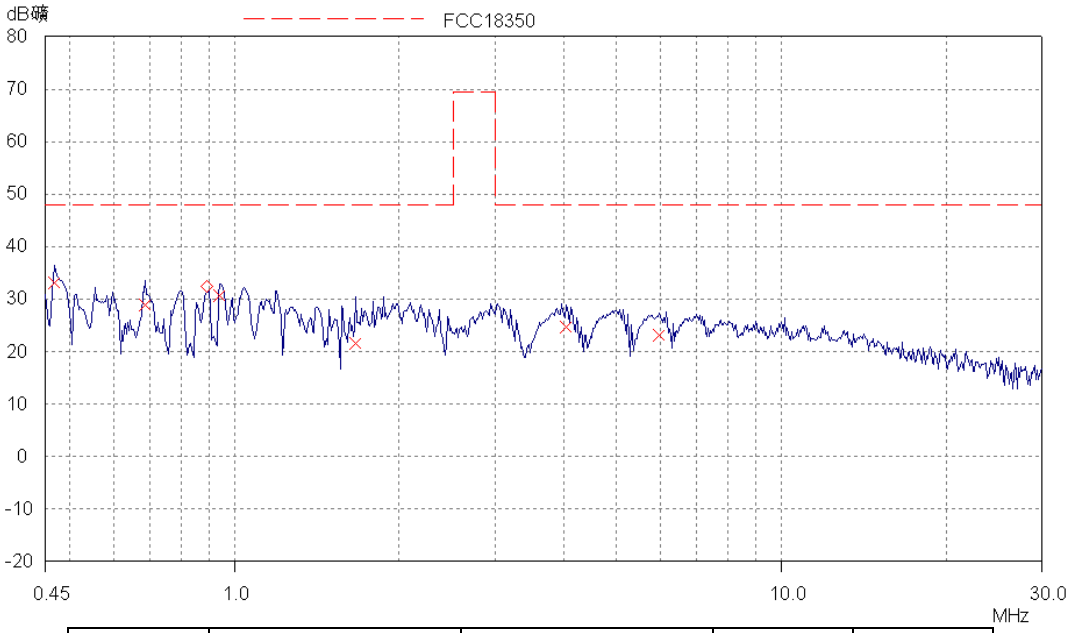
Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	**0.52371**	**46.79**	**48.00**	**1.21**
	0.60224	45.11	48.00	2.89
	0.69255	45.34	48.00	2.66
	0.85915	41.99	48.00	6.01
	1.74157	44.08	48.00	3.92
	1.79092	44.06	48.00	3.94
N	*0.51336*	*43.62*	*48.00*	*4.38*
	0.60224	43.58	48.00	4.42
	0.68979	44.33	48.00	3.67
	1.47273	29.22	48.00	18.78
	1.73463	41.24	48.00	6.76
	1.81975	42.38	48.00	5.62

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.52371 MHz with emission level 46.79 dBμV, at line L

SMI 9W L



SMI 9W N

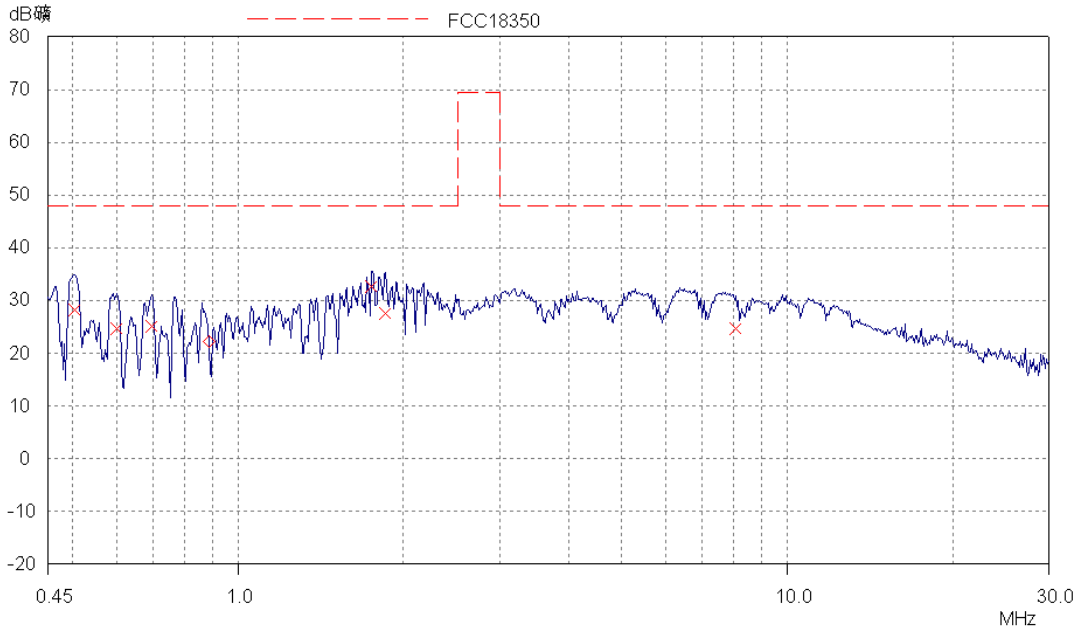


Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	0.49237	29.67	48.00	18.33
	0.56273	29.35	48.00	18.65
	1.04062	24.45	48.00	23.55
	1.91668	26.94	48.00	21.06
	3.94777	25.47	48.00	22.53

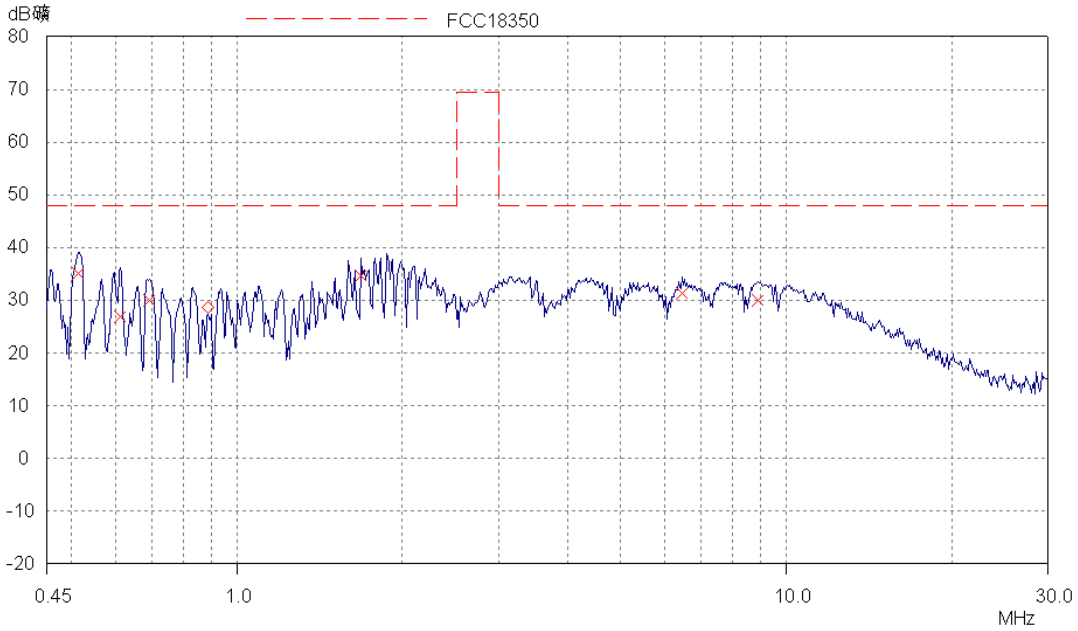
	4.97631	28.18	48.00	19.82
N	***0.46646***	***32.99***	***48.00***	***15.01***
	0.6843	28.79	48.00	19.21
	0.93429	30.69	48.00	17.31
	1.6601	21.51	48.00	26.49
	4.02736	24.59	48.00	23.41
	5.97941	23.06	48.00	24.94

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.46646 MHz with emission level 32.99 dBμV, at line N

SMI 11W L



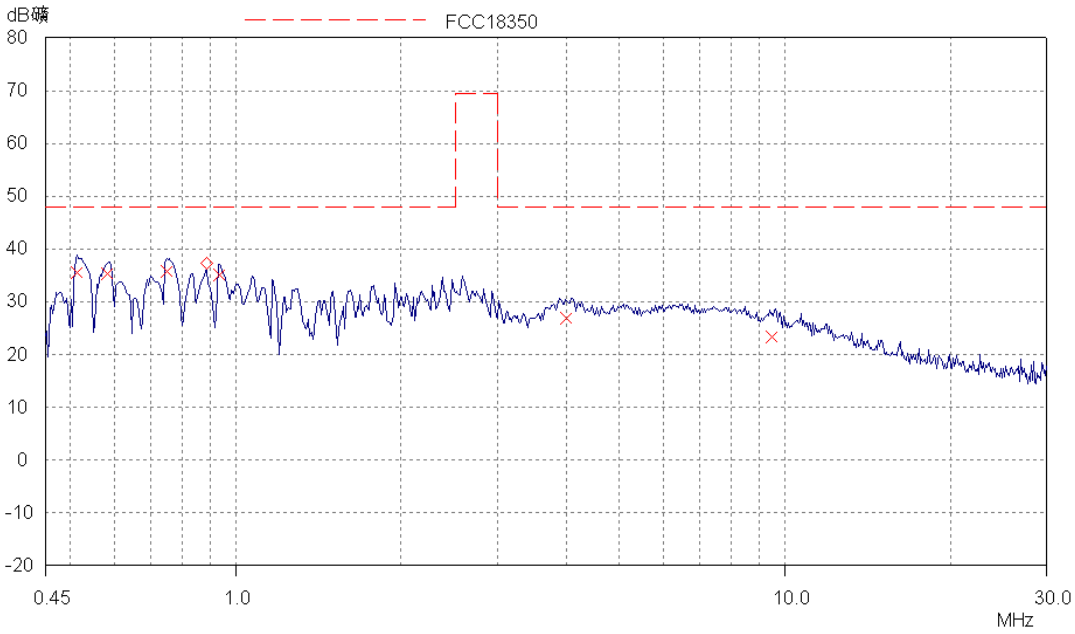
SMI 11W N



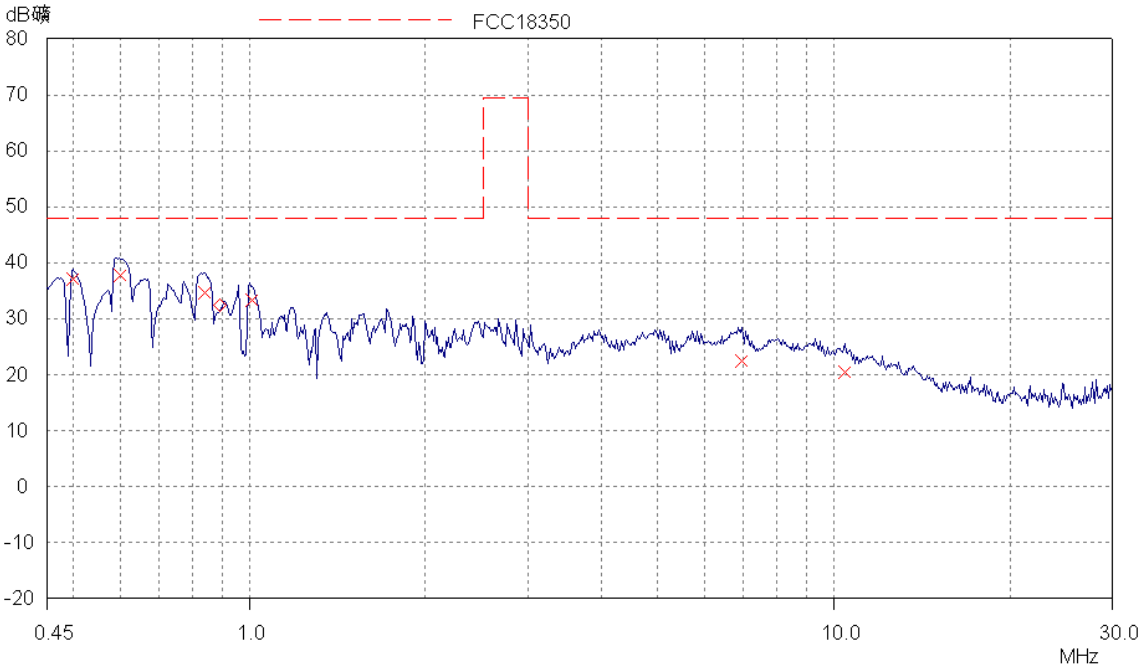
Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	0.50321	28.29	48.00	19.71
	0.59984	24.60	48.00	22.40
	0.69532	25.15	48.00	22.85
	1.74853	32.73	48.00	15.27
	1.84904	27.66	48.00	20.34
	8.06653	24.66	48.00	23.34
N	***0.51336***	***35.11***	***48.00***	***12.89***
	0.61193	27.00	48.00	21.00
	0.68979	29.92	48.00	18.08
	1.68011	34.58	48.00	13.42
	6.45058	31.23	48.00	16.77
	8.8778	29.97	48.00	18.03

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.51336 MHz with emission level 35.11 dBμV, at line N

SMI 13W L



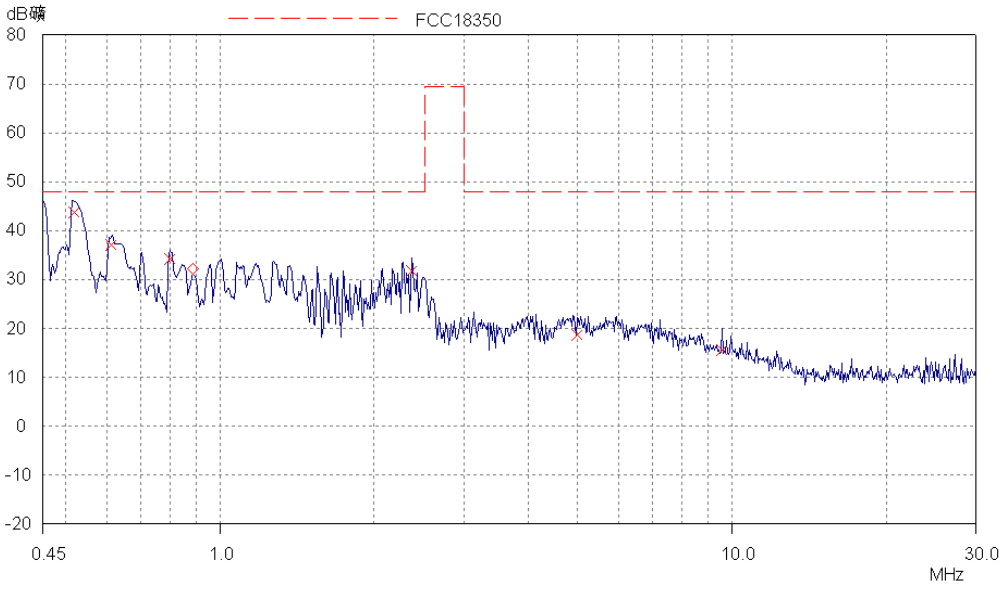
SMI 13W N



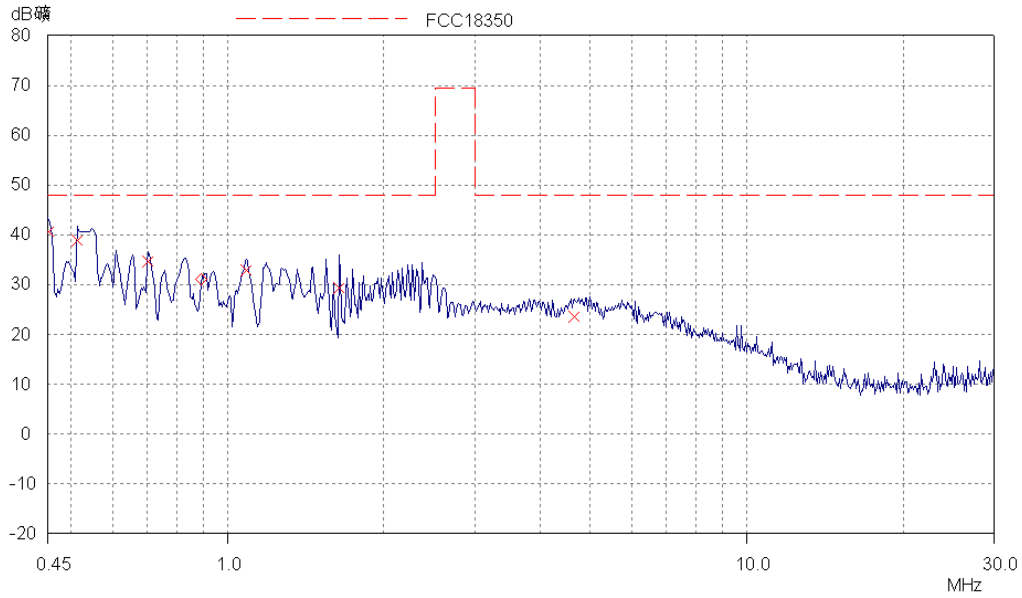
Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	0.51131	35.46	48.00	12.54
	0.58331	35.24	48.00	12.76
	0.74712	35.70	48.00	12.30

	0.93056	35.16	48.00	12.48
	3.99533	26.80	48.00	21.20
	9.46314	23.30	48.00	24.70
N	*0.49722*	*37.12*	*48.00*	*10.88*
	0.59984	**37.65**	**48.00**	**10.35**
	0.83548	34.71	48.00	13.29
	1.00791	33.26	48.00	14.74
	6.93115	22.35	48.00	25.65
	10.41464	20.48	48.00	27.52

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.83548 MHz with emission level 37.65 dBμV, at line N
SMI 15W L



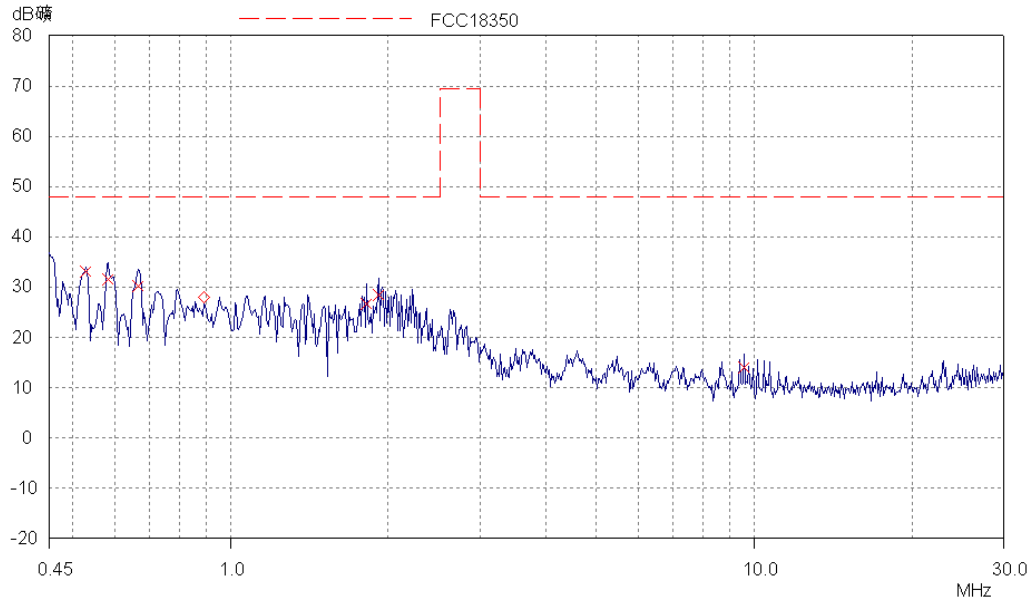
SMI 15W N



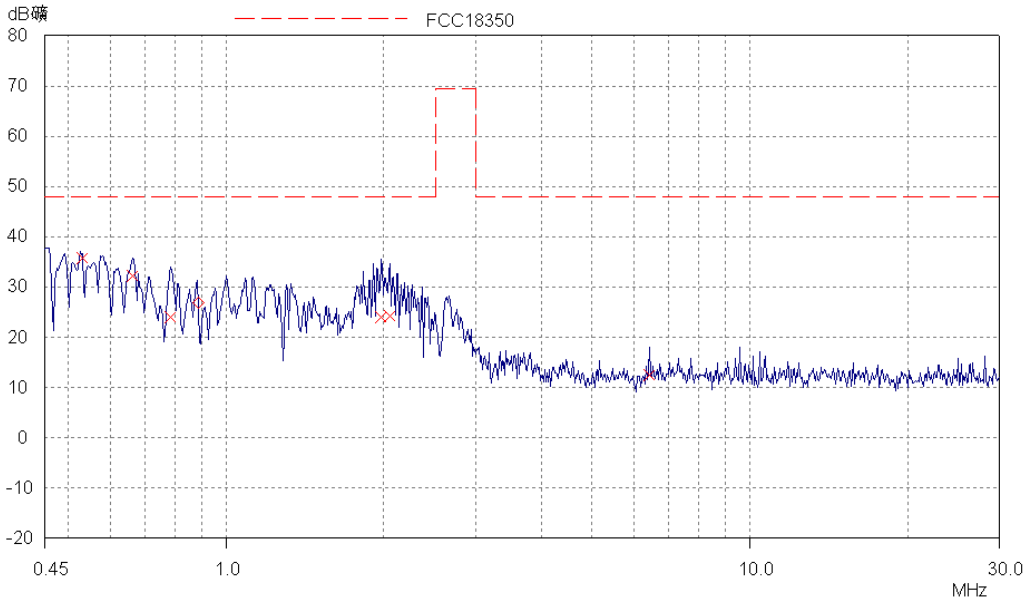
Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	**0.51747**	**43.78**	**48.00**	**4.22**
	0.61193	37.09	48.00	10.91
	0.7964	34.20	48.00	13.8
	2.3683	31.78	48.00	16.22
	4.97631	18.61	48.00	29.39
	9.53899	15.53	48.00	32.47
N	*0.4518*	*40.60*	*48.00*	*7.40*
	0.51336	38.89	48.00	9.11
	0.70089	34.63	48.00	13.37
	1.083	32.93	48.00	15.07
	1.64034	29.41	48.00	18.59
	4.6489	23.46	48.00	24.54

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.51747 MHz with emission level 43.78 dBμV, at line L

SDF 10W L

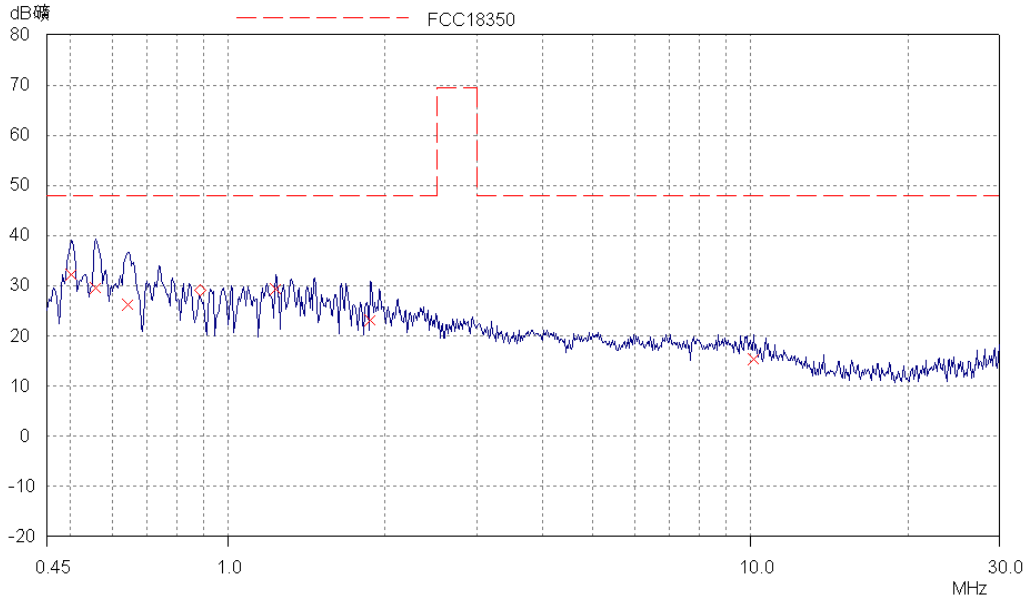


SDF 10W N

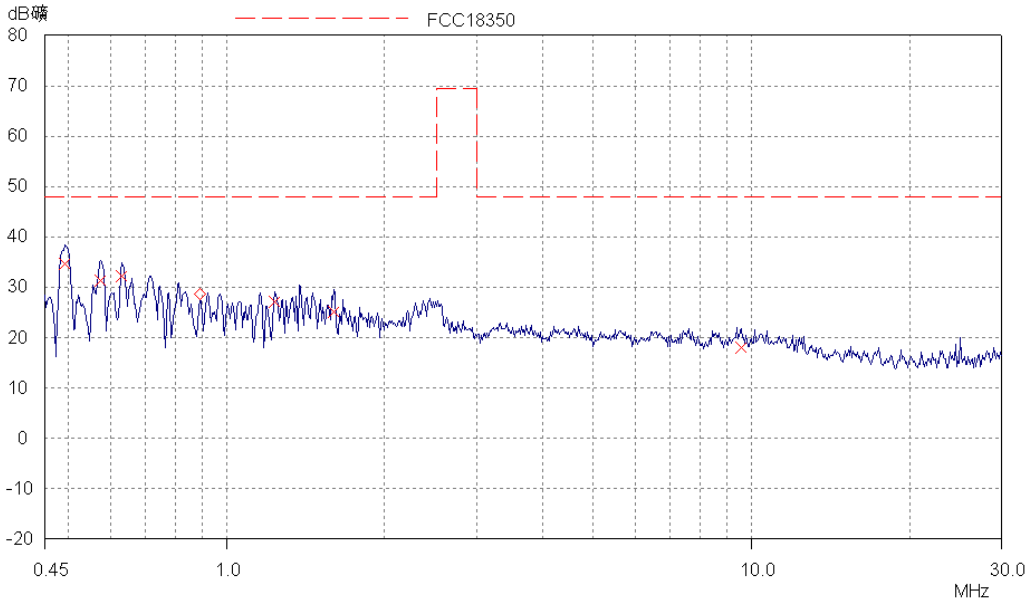


Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	0.52791	33.08	48.00	14.92
	0.58099	31.49	48.00	16.51
	0.6628	30.22	48.00	17.78
	1.8125	26.73	48.00	21.27
	1.91668	28.39	48.00	19.61
	9.53899	13.98	48.00	34.02
N	***0.53002***	***35.78***	***48.00***	***12.22***
	0.66015	32.31	48.00	15.69
	0.78066	23.90	48.00	24.10
	1.97099	24.01	48.00	23.99
	2.05127	24.20	48.00	23.80
	6.42488	12.46	48.00	35.54

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.53002 MHz with emission level 35.78 dBμV, at linen N SDF 12W L



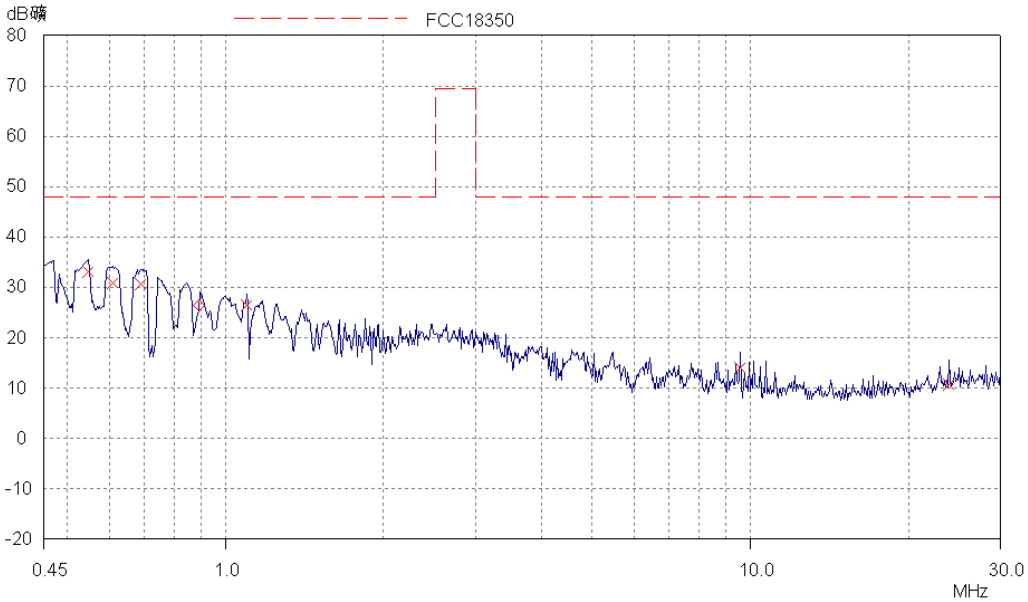
SDF 12W N



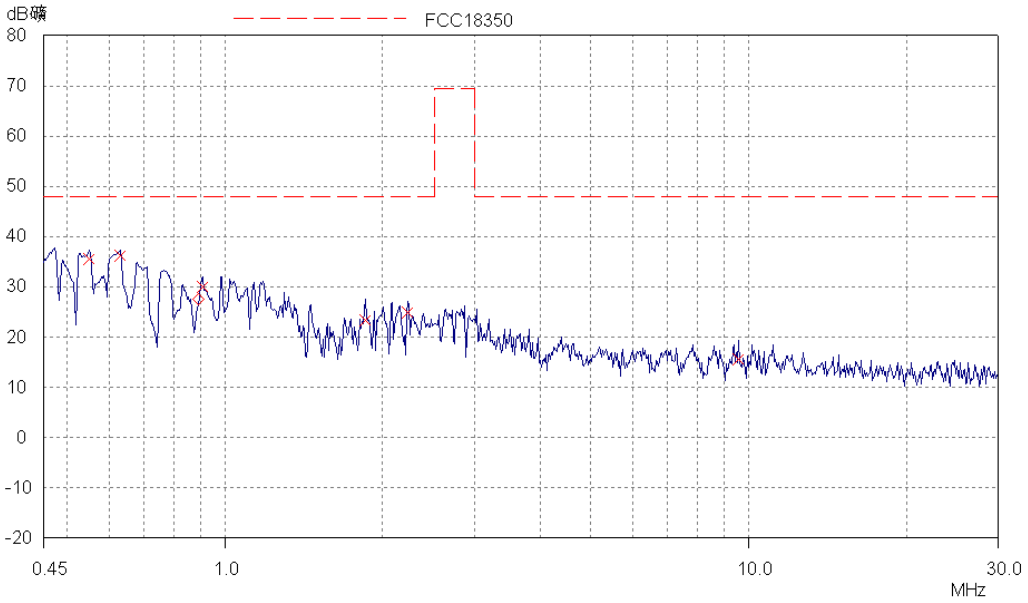
Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	0.50121	32.19	48.00	15.81
	0.55603	29.58	48.00	18.42
	0.64196	26.18	48.00	21.82
	1.23057	29.30	48.00	18.70
	1.87131	23.18	48.00	24.82
	10.1764	15.33	48.00	32.67
N	***0.48935***	***34.61***	***48.00***	***13.39***
	0.57407	31.41	48.00	16.59
	0.62928	32.27	48.00	15.73
	1.23057	27.15	48.00	20.85
	1.59514	25.12	48.00	22.88
	9.53899	18.02	48.00	29.98

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.48953 MHz with emission level 34.61 dBμV, at line N

SDF 14W L



SDF 14W N

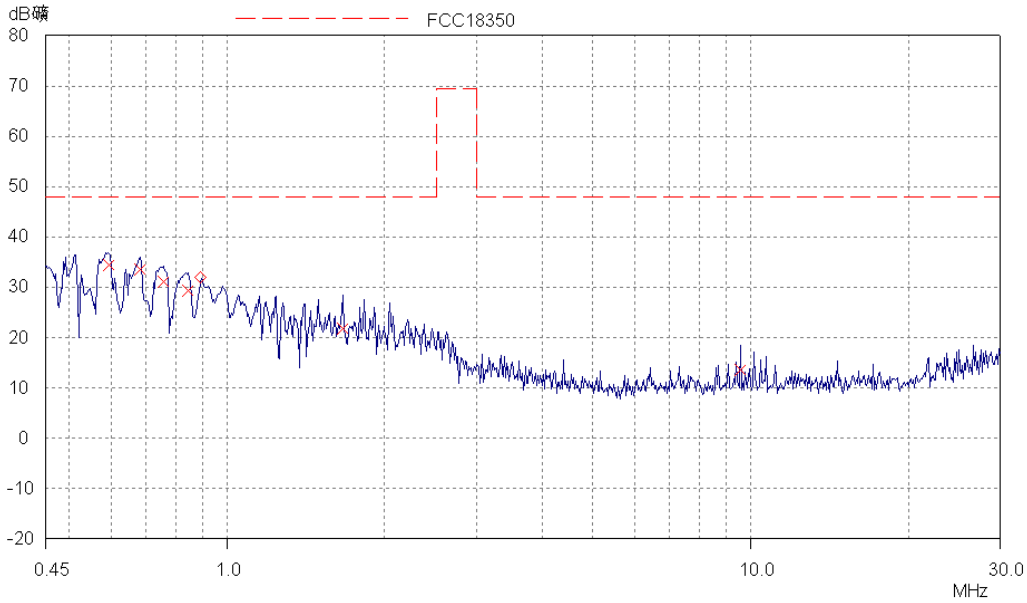


Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	0.54504	33.10	48.00	14.09
	0.60707	30.79	48.00	17.21
	0.68704	30.71	48.00	17.29
	1.09605	26.45	48.00	21.55
	9.53899	14.00	48.00	34.00
	23.89223	10.63	48.00	37.37

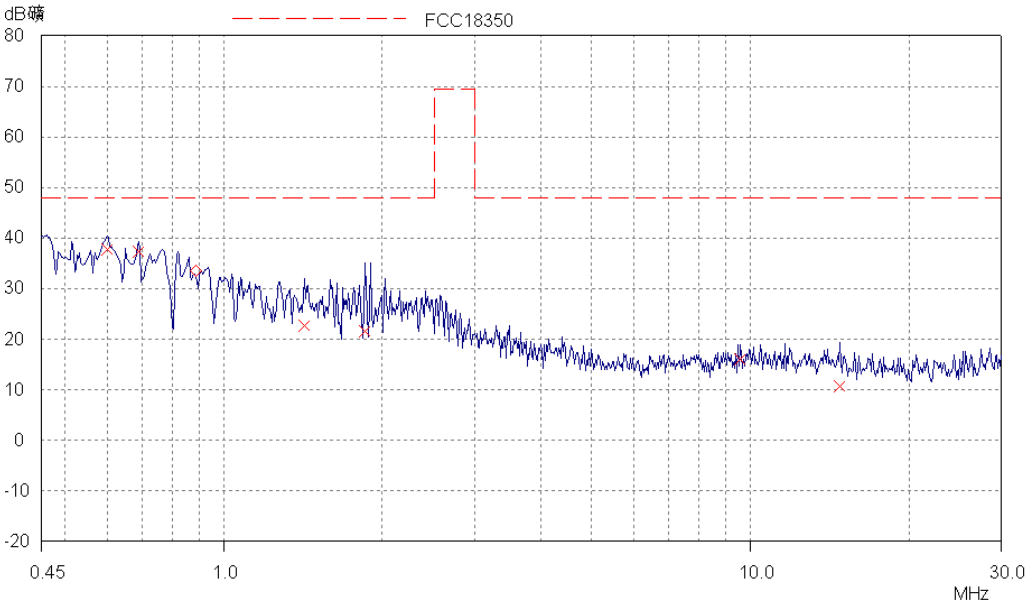
N	*0.54941*	*35.50*	*48.00*	*12.50*
	0.62928	**36.29**	**48.00**	**11.71**
	0.90492	30.10	48.00	17.90
	1.84904	23.43	48.00	24.57
	2.23064	24.90	48.00	23.10
	9.53899	15.55	48.00	32.45

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.62928 MHz with emission level 36.29 dBμV, at line N

SDF 16W L

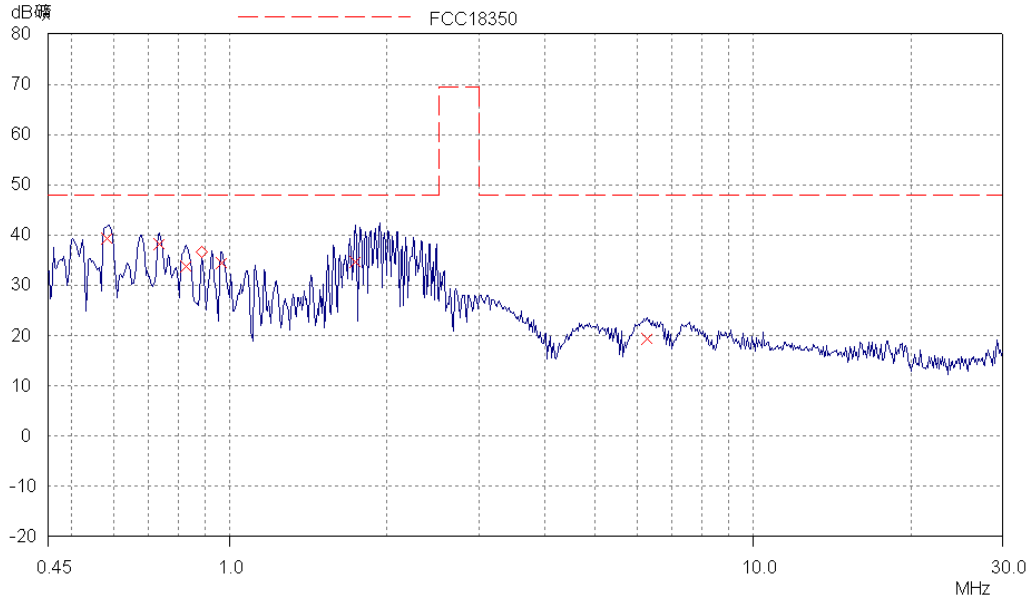


SDF 16W N

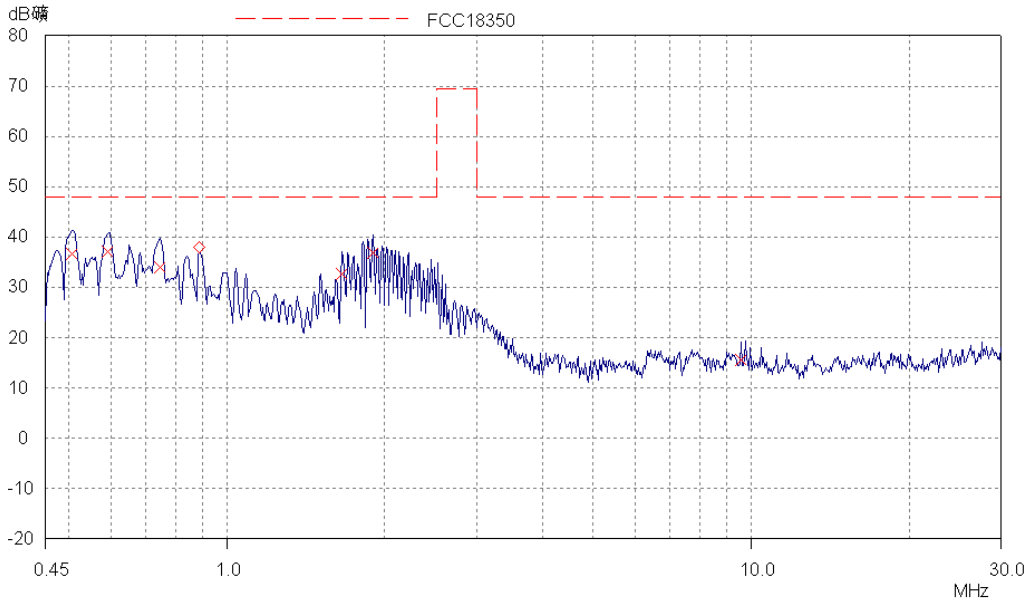


Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	0.5927	34.53	48.00	13.47
	0.68158	33.65	48.00	14.35
	0.75311	31.17	48.00	16.83
	0.83882	29.40	48.00	18.60
	1.6601	21.75	48.00	26.25
	9.53899	13.50	48.00	34.50
N	**0.59984**	***37.82***	***48.00***	***10.18***
	0.68704	37.39	48.00	10.61
	1.42076	22.74	48.00	25.26
	1.84904	21.46	48.00	26.54
	9.53899	16.05	48.00	31.95
	14.79827	10.76	48.00	37.24

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.59984 MHz with emission level 37.82 dBμV, at line N SDF 18W L



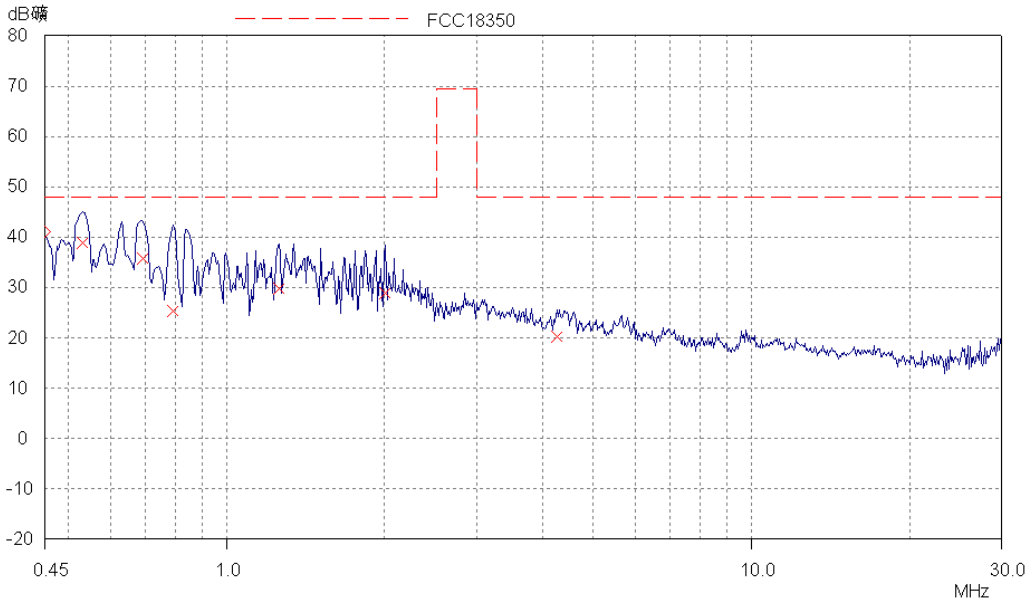
SDF 18W N



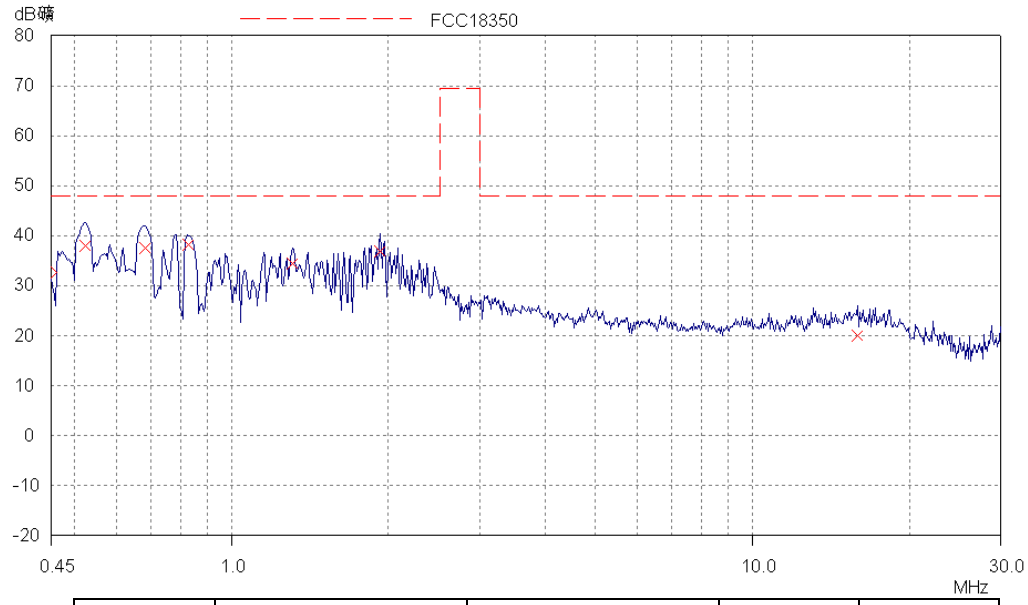
Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	**0.58099**	**39.26**	**48.00**	**8.74**
	0.73236	38.16	48.00	9.84
	0.82224	33.83	48.00	14.17
	0.9646	34.38	48.00	13.62
	1.73463	34.07	48.00	13.30
	6.27282	19.37	48.00	28.63
N	0.50522	*36.68*	*48.00*	*11.32*
	0.50934	37.19	48.00	10.81
	0.74414	33.96	48.00	14.04
	1.65349	32.60	48.00	15.40
	1.89386	36.87	48.00	11.13
	9.53899	15.59	48.00	32.41

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.58099 MHz with emission level 39.26 dBμV, at line L

SDF 20W L



SDF 20W N

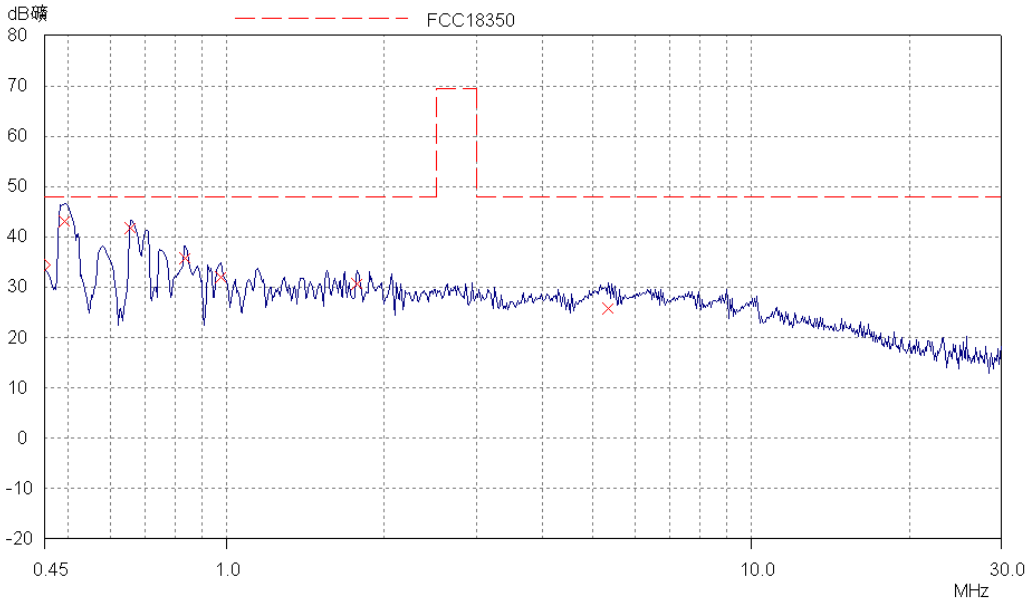


Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	**0.53002**	**38.94**	**48.00**	**9.06**
	0.68979	35.81	48.00	12.19
	0.79007	25.27	48.00	22.73
	1.25538	29.69	48.00	18.31
	2.00272	28.91	48.00	19.09
	4.25885	20.31	48.00	27.69

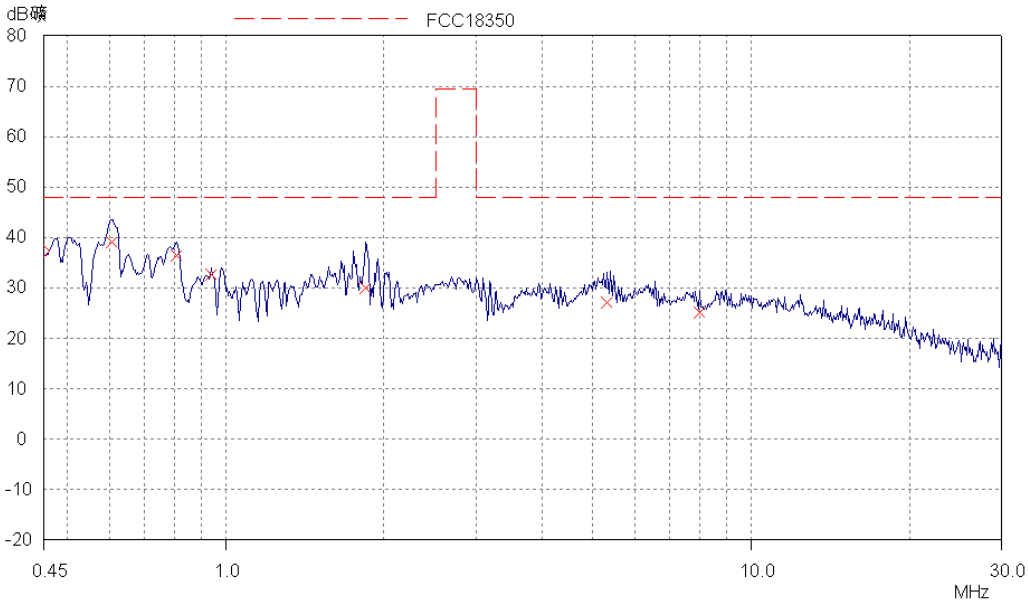
N	0.52162	*38.02*	*48.00*	*9.98*
	0.68158	37.53	48.00	10.47
	0.82553	38.20	48.00	9.80
	1.30651	34.39	48.00	13.61
	1.92434	36.96	48.00	11.04
	15.90076	20.12	48.00	27.88

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.53002 MHz with emission level 38.94 dBμV, at line L

SDF 22W L



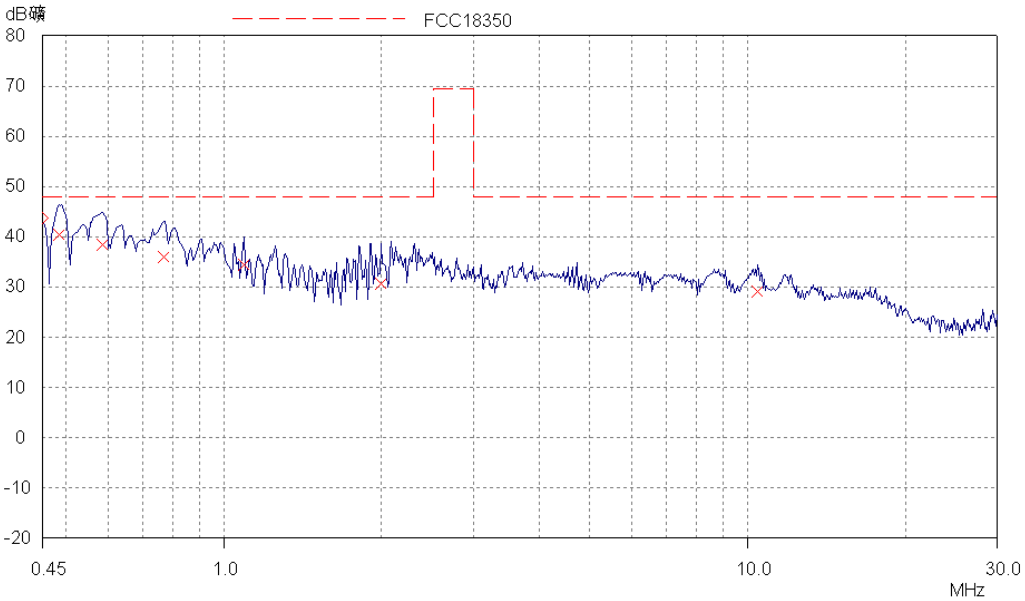
SDF 22W N



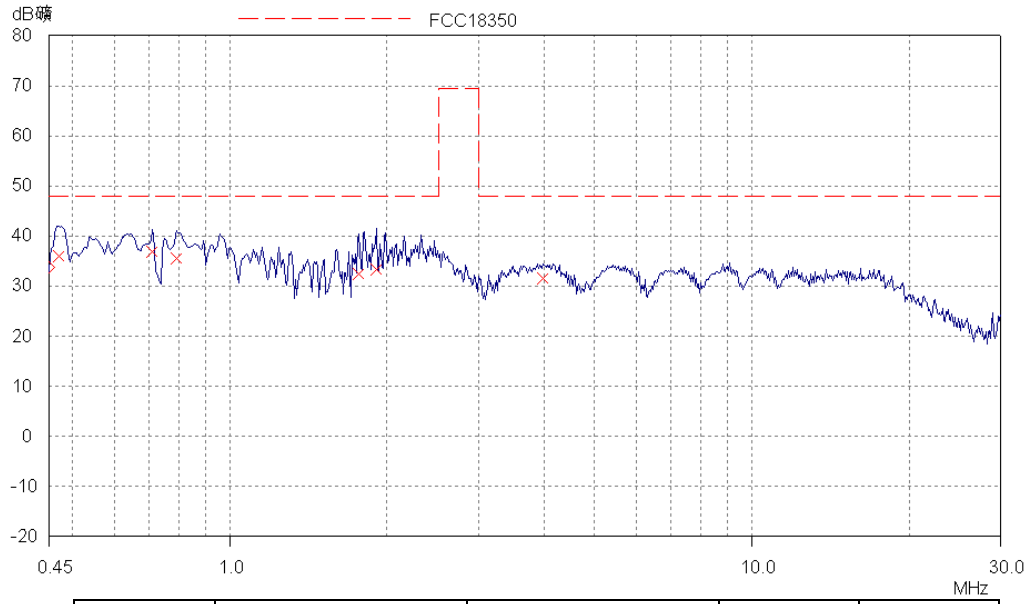
Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	**0.4913**	**43.09**	**48.00**	**4.91**
	0.6549	41.77	48.00	6.23
	0.83215	35.81	48.00	12.19
	0.97234	32.05	48.00	15.95
	1.7696	30.63	48.00	17.37
	5.32574	25.72	48.00	22.28
N	0.60465	*39.12*	*48.00*	*8.88*
	0.80599	36.44	48.00	11.56
	0.93429	32.55	48.00	15.45
	1.84167	30.10	48.00	17.90
	5.30453	27.10	48.00	20.90
	7.9705	25.20	48.00	22.80

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.4913 MHz with emission level 43.09dBμV, at line L

SDF 24W L



SDF 24W N

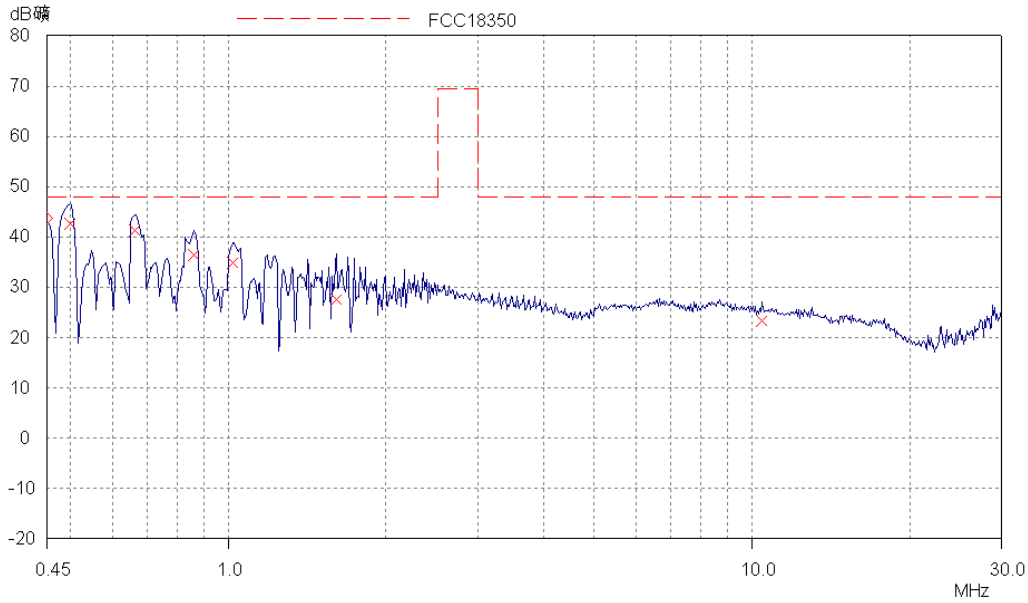


Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	**0.48352**	**40.36**	**48.00**	**7.64**
	0.58564	38.37	48.00	9.63
	0.76523	36.09	48.00	11.91
	1.08733	34.33	48.00	13.67
	1.99474	30.72	48.00	17.28
	10.41464	29.04	48.00	18.96

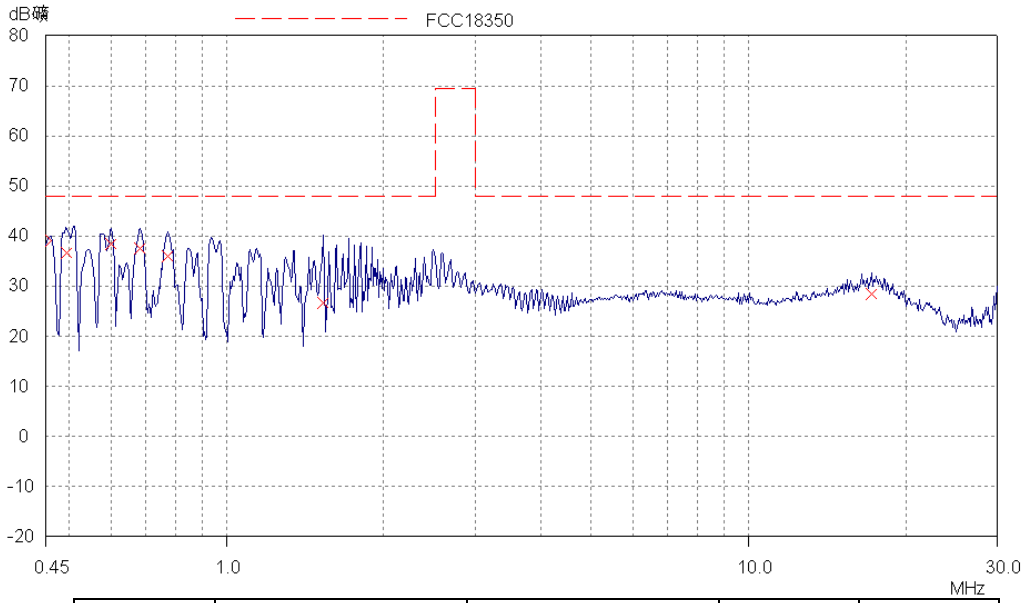
N	0.46832	*35.98*	*48.00*	*12.02*
	0.70934	36.94	48.00	11.06
	0.78692	35.48	48.00	12.52
	1.76255	32.38	48.00	15.62
	1.90904	33.26	48.00	14.74
	3.97941	31.44	48.00	16.56

Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.48352 MHz with emission level 40.36dBμV, at line L

SDF 26W L



SDF 26W N



Test Line	Frequency (MHz)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)
L	**0.49722**	**42.66**	**48.00**	**5.34**
	0.66015	41.41	48.00	6.59
	0.85915	36.52	48.00	11.48
	1.01599	34.94	48.00	13.06
	1.60152	27.61	48.00	20.39
	10.41464	23.24	48.00	24.76
N	0.49327	*36.65*	*48.00*	*11.35*
	0.59984	38.49	48.00	9.51
	0.68158	37.49	48.00	10.51
	0.77137	35.99	48.00	12.01
	1.52661	36.67	48.00	21.33
	17.22234	28.39	48.00	19.61

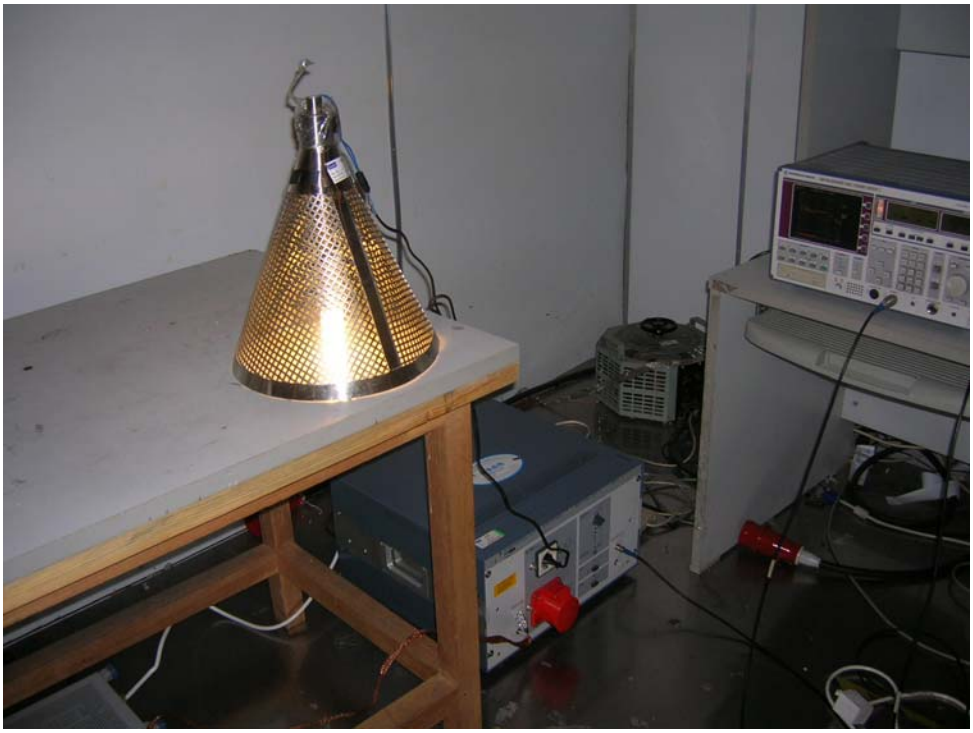
Note:
1. All data listed are Quasi-Peak value.
2. The worst emission was founded at 0.49722 MHz with emission level 42.66dBμV, at line L

3.7 Measurement Uncertainty

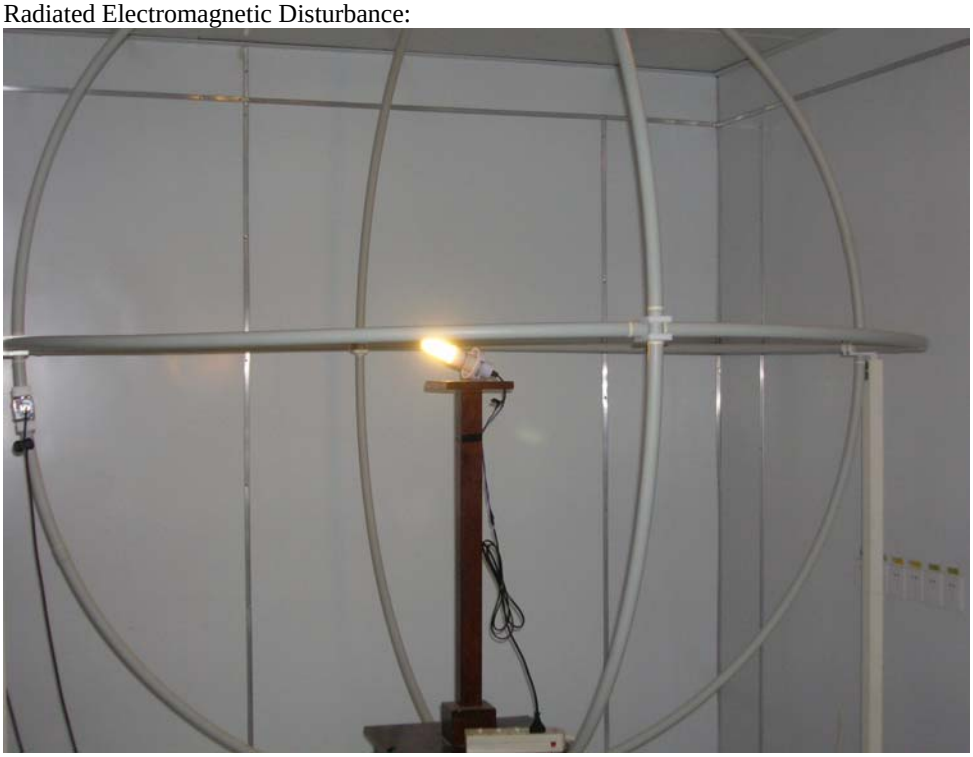
Measurement uncertainty of conducted power line test is ±3.34dB
The measurement uncertainty is given with a confidence of 95%, k=2.

4. Photograph of Test setup

Conducted Emission:



Radiated Electromagnetic Disturbance:



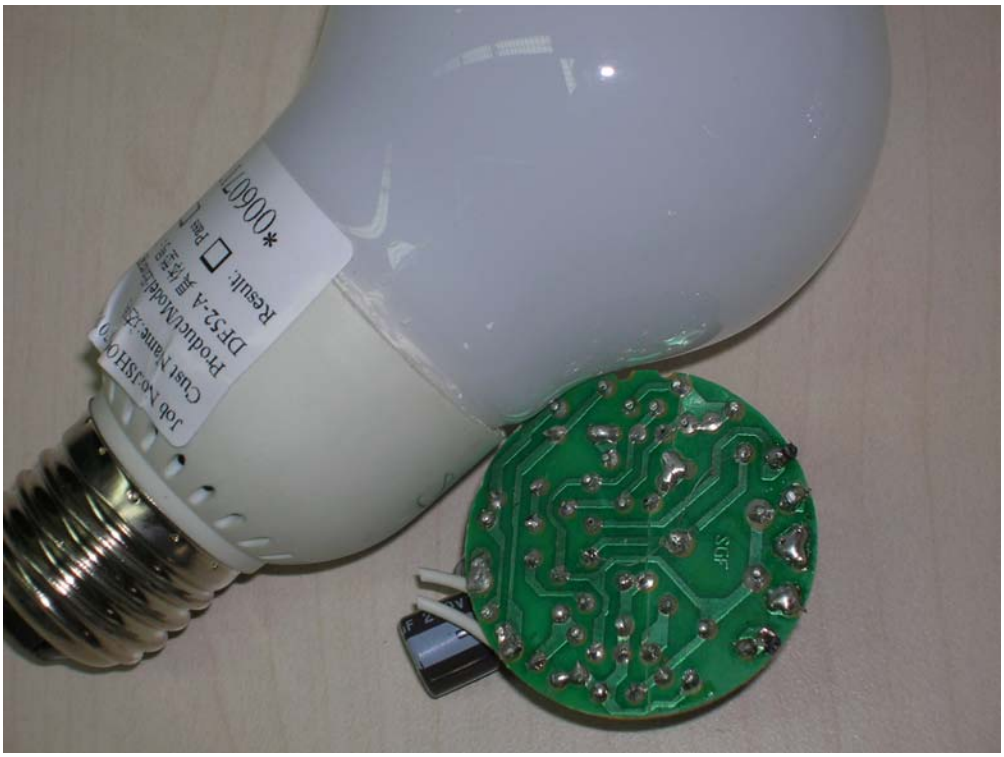
5. Photograph of EUT

SM-1:

SGF:

SDF52-A:

SGF:



SM-1::


17.07.2006
PCB :S
11W 120V 60Hz
Result:
Pass

SDF52-A: