

**FCC PART 18**

**MEASUREMENT AND TEST REPORT**

For

**Dongguan Ultralite Electronics Co., Ltd.**

No. 48 Shangnan Road, Shangjiao, ChangAn, Dongguan, Guangdong, China

<b>FCC ID: SO3U202528B</b>
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December 17, 2004

<b>This Report Concerns:</b> <input checked="" type="checkbox"/> Original Report	<b>Equipment Type:</b> Self-ballasted lamp
<b>Test Engineer:</b> Louise Lu	
<b>Report Number</b> RSZ041112106	
<b>Test Date:</b> December 11, 2004	
<b>Reviewed By:</b> Chris Zeng	
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**Note:** The test report is specially limited to the above company and the product model only.  
It may not be duplicated without prior written consent of Bay Area Compliance Laboratory Corporation. This report **must not** be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the US Government.

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## GENERAL INFORMATION

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### Product Description for Equipment Under Test (EUT)

The *Dongguan Ultralite Electronics Co., Ltd.* 's model *SL20B-120*, *SL25B-120*, *SL28B-120*, *IL20B-120* or the "EUT" as referred to in this report is a *Self-ballasted lamp* which measures approximately *SL20B-120*: 14.5cm L x 6.3cm W x 6.3cm H, *SL25B-120*: 15.2cm L x 6.3cm W x 6.3cm H, *SL28B-120*: 16.0cm L x 6.3cm W x 6.3cm H, *IL20B-120*: 16.5cm L x 5.5cm W x 5.5cm H, rated input voltage: AC 120 V/60 Hz.

*\* The test data gathered are from production sample, SL20B-120 serial number: 0001200202901, SL25B-120 serial number: 0001200253150, SL28B-120 serial number: 0001200283350, IL20B-120 serial number: 0001200202900, provided by the manufacturer.*

### Objective

The following test report is prepared on behalf of *Dongguan Ultralite Electronics Co., Ltd.* in accordance with Part 2, Subpart J, and Part 18, Subparts A, B, and C of the Federal Communication Commissions rules and regulations.

The objective is to determine compliance with FCC rules.

### Related Submittal(s)/Grant(s)

No Related Submittals.

### Test Methodology

All measurements contained in this report were conducted with MP-5, FCC Methods of Measurements of Radio Noise Emissions from ISM Equipment, February 1986. All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratory Corp. The radiated testing was performed at an antenna-to-EUT distance of 3 Meters.

### Test Facility

Test site at Bay Area Compliance Laboratory Corporation has been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports has been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 11 and December 10, 1997 and Article 8 of the VCCI regulations on December 25, 1997. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2001 and FCC MP-5.

The Federal Communications Commission and Voluntary Control Council for Interference has the reports on file and is listed under FCC file 31040/SIT 1300F2 and VCCI Registration No.: C-1298 and R-1234. The test site has been approved by the FCC and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

## SYSTEM TEST CONFIGURATION

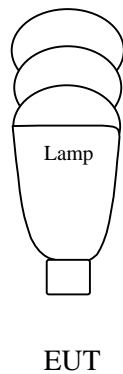
### Justification

The EUT was tested under the normal operating conditions stated in the instructions by the manufacturer.

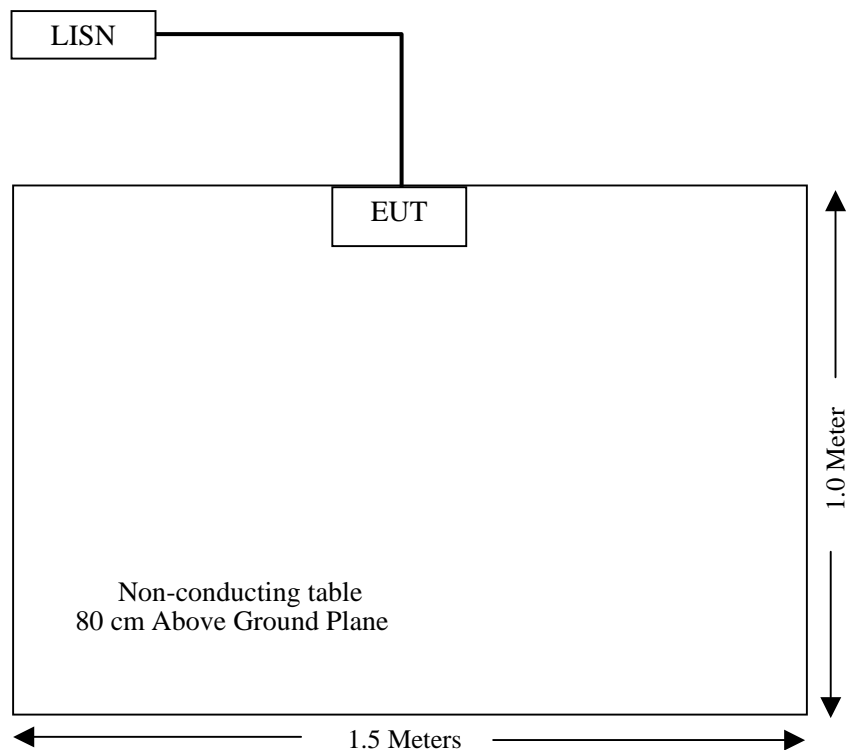
### Equipment Modifications

The EUT samples provided were reported by the manufacturer to be representative production samples.

### Configuration of Test System



### Test Setup Block Diagram



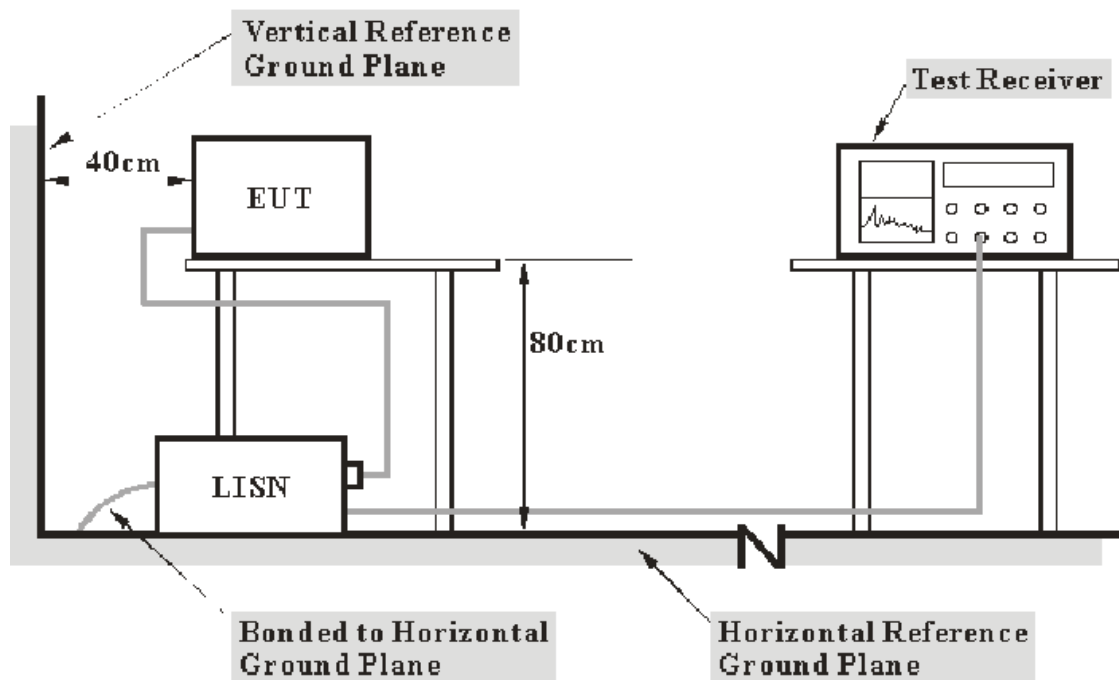
## CONDUCTED EMISSION

### Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at BACL is  $\pm 2.4$  dB.

### EUT Setup



- Note: 1. Support units were connected to second LISN.  
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with MP-5 measurement procedure. The specification used was the FCC Part 18.

The EUT was connected to a 120 VAC/60 Hz power source.

### EMI Test Receiver Setup

The EMI Test Receiver was set to investigate the spectrum from 450 kHz to 30 MHz.

During the conducted emission test, the test receiver was set with the following configurations:

<i>Frequency Range</i>	<i>IFBW</i>
450 kHz – 30 MHz	9 kHz

## Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	A.M.N	ESH2-Z5	892107/021	2004-11-20	2005-11-19
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2004-11-20	2005-11-19
Rohde & Schwarz	EMI Test Receiver	ESH3Z2	DE25985	2004-11-20	2005-11-19
THERMAX	Coaxial Cable	RGS-142	EC001	2004-11-20	2005-11-19
Compower	LISN	LT-200	12208	2004-10-29	2005-10-28
Compower	LISN	LT-200	12005	2004-10-29	2005-10-28
Fluke	True RMS Multimeter	187	78540402	2004-3-23	2005-3-22

\* **Statement of Traceability:** BACL attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

## Test Procedure

During the conducted emission test, the EUT power cord was connected to the outlet of the LISN.

Maximizing procedure were performed on the six (6) highest emissions of the EUT.

All data was recorded in the peak detection mode.

## Test Data

Date of Test	: December 11, 2004	Temperature	: 27°C
EUT	: Self-ballasted lamp	Humidity	: 65%
M/N	: SL20B-120	Operating Mode	: On
S/N	: 0001200202901	Test Engineer	: Louise Lu

LINE CONDUCTED EMISSIONS				FCC PART 18	
Frequency MHz	Amplitude dBμV	Detector QP/AV/PK	Phase Line/Neutral	Limit dBμV	Margin dB
0.465	40.60	PK	Line	48.00	-7.40
0.750	40.20	PK	Line	48.00	-7.80
0.975	39.40	PK	Neutral	48.00	-8.60
0.580	38.80	PK	Neutral	48.00	-9.20
0.890	38.10	PK	Neutral	48.00	-9.90
0.965	37.70	PK	Line	48.00	-10.30

Date of Test : December 11, 2004      Temperature : 27°C  
 EUT : Self-ballasted lamp      Humidity : 65%  
 M/N : SL25B-120      Operating Mode : On  
 S/N : 0001200253150      Test Engineer : Louise Lu

LINE CONDUCTED EMISSIONS				FCC PART 18	
Frequency MHz	Amplitude dBμV	Detector QP/AV/PK	Phase Line/Neutral	Limit dBμV	Margin dB
26.965	43.00	PK	Line	48.00	-5.00
0.730	39.50	PK	Neutral	48.00	-8.50
0.545	39.30	PK	Neutral	48.00	-8.70
24.500	35.70	PK	Neutral	48.00	-12.30
0.950	35.70	PK	Line	48.00	-12.30
16.915	31.40	PK	Line	48.00	-16.60

Date of Test : December 11, 2004      Temperature : 27°C  
 EUT : Self-ballasted lamp      Humidity : 65%  
 M/N : SL28B-120      Operating Mode : On  
 S/N : 0001200283350      Test Engineer : Louise Lu

LINE CONDUCTED EMISSIONS				FCC PART 18	
Frequency MHz	Amplitude dBμV	Detector QP/AV/PK	Phase Line/Neutral	Limit dBμV	Margin dB
0.480	40.40	PK	Neutral	48.00	-7.60
0.505	40.40	PK	Line	48.00	-7.60
0.565	40.00	PK	Neutral	48.00	-8.00
0.605	39.70	PK	Line	48.00	-8.30
0.740	39.40	PK	Neutral	48.00	-8.60
0.975	37.60	PK	Line	48.00	-10.40

Date of Test : December 11, 2004      Temperature : 27°C  
 EUT : Self-ballasted lamp      Humidity : 65%  
 M/N : IL20B-120      Operating Mode : On  
 S/N : 0001200202900      Test Engineer : Louise Lu

LINE CONDUCTED EMISSIONS				FCC PART 18	
Frequency MHz	Amplitude dBμV	Detector QP/AV/PK	Phase Line/Neutral	Limit dBμV	Margin dB
0.485	41.00	PK	Line	48.00	-7.00
0.460	39.70	PK	Neutral	48.00	-8.30
0.585	39.00	PK	Line	48.00	-9.00
0.580	38.10	PK	Neutral	48.00	-9.90
0.940	37.00	PK	Line	48.00	-11.00
0.705	36.80	PK	Neutral	48.00	-11.20

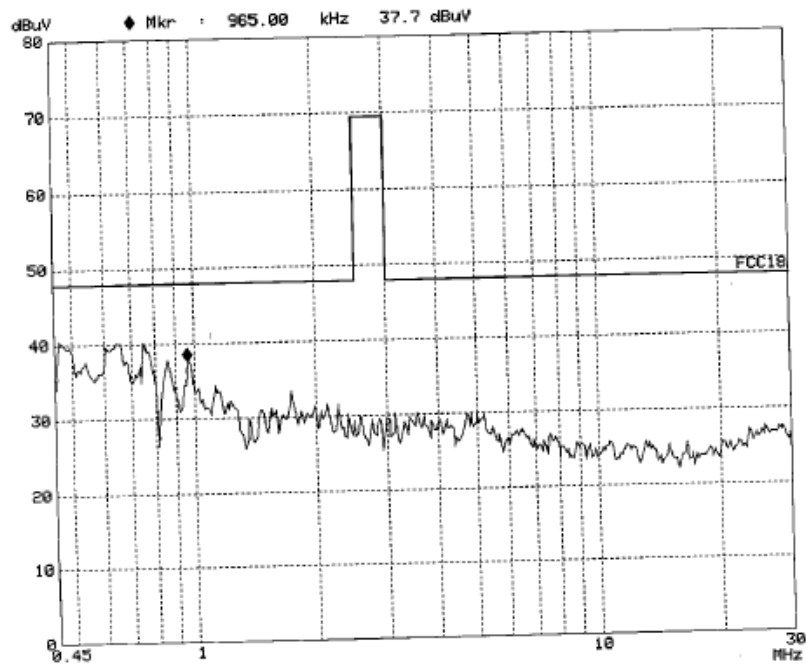
Test Result: Pass

**Plot(s) of Test Data**

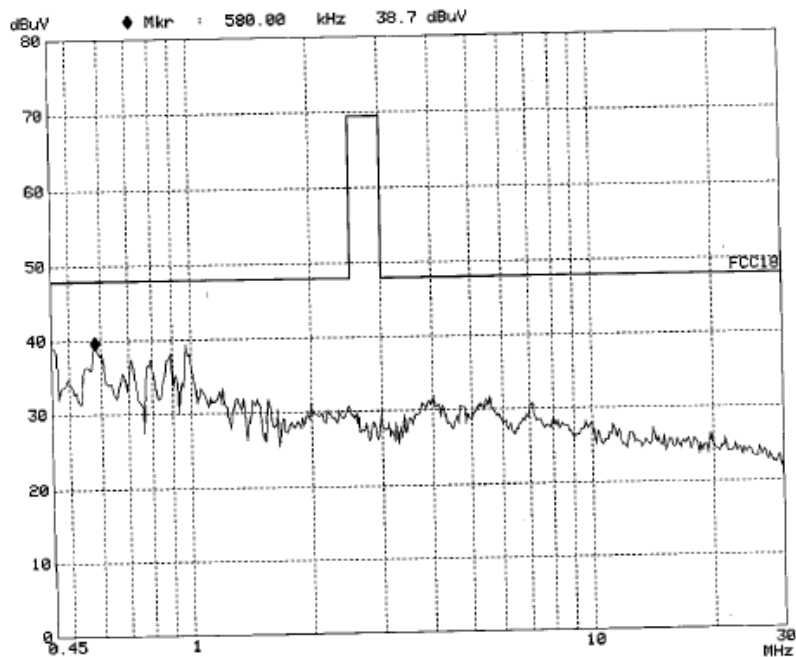
Plot(s) of Test Data is presented hereinafter as reference.

*SL20B-120:*

Line:



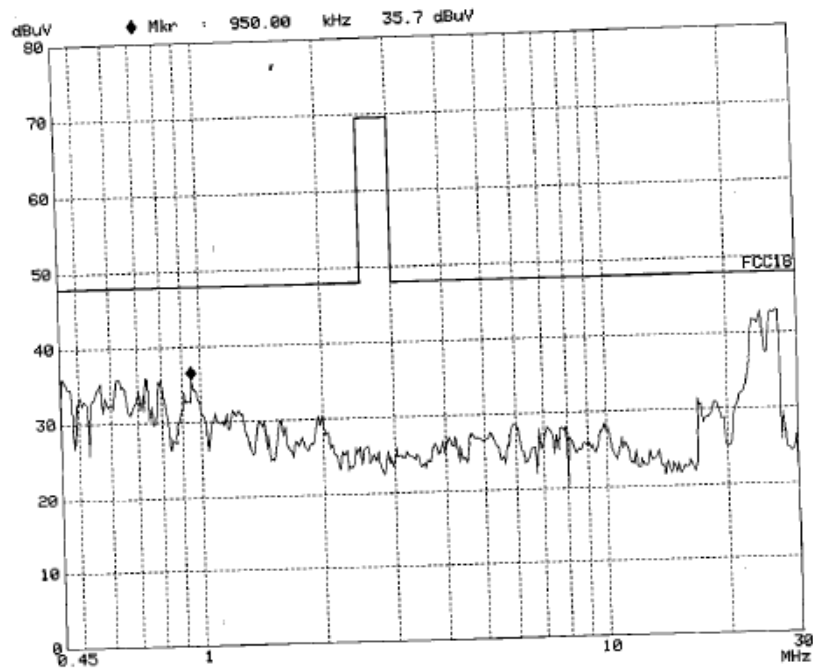
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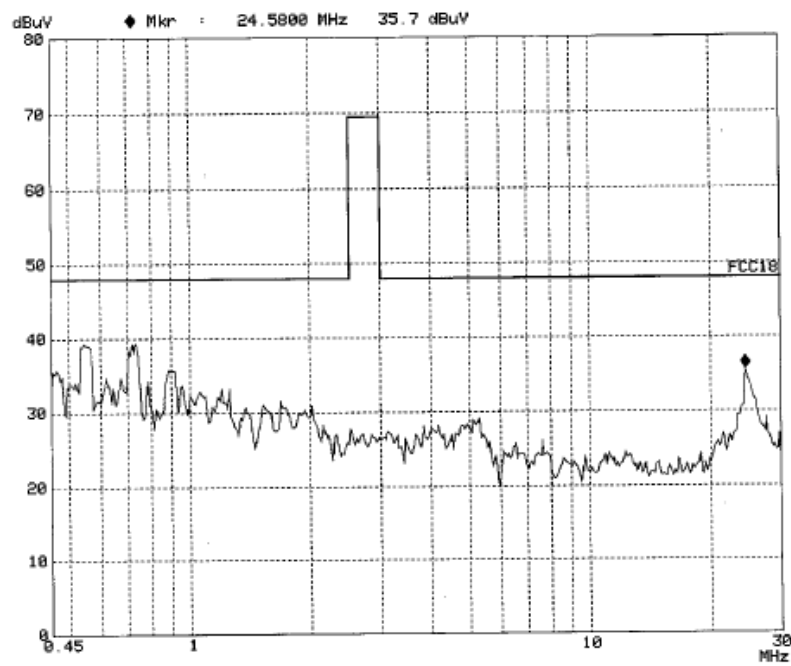


SL25B-120:

Line:

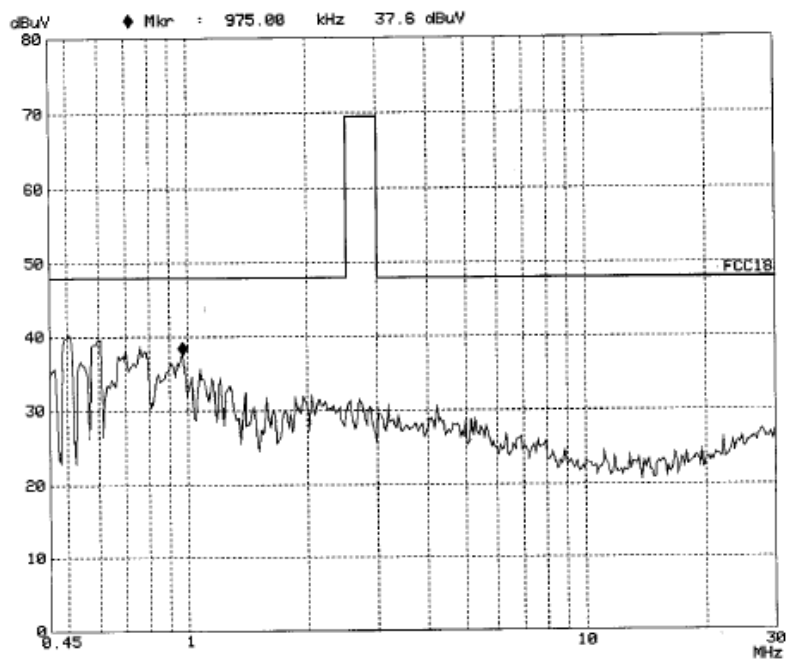


Neutral:

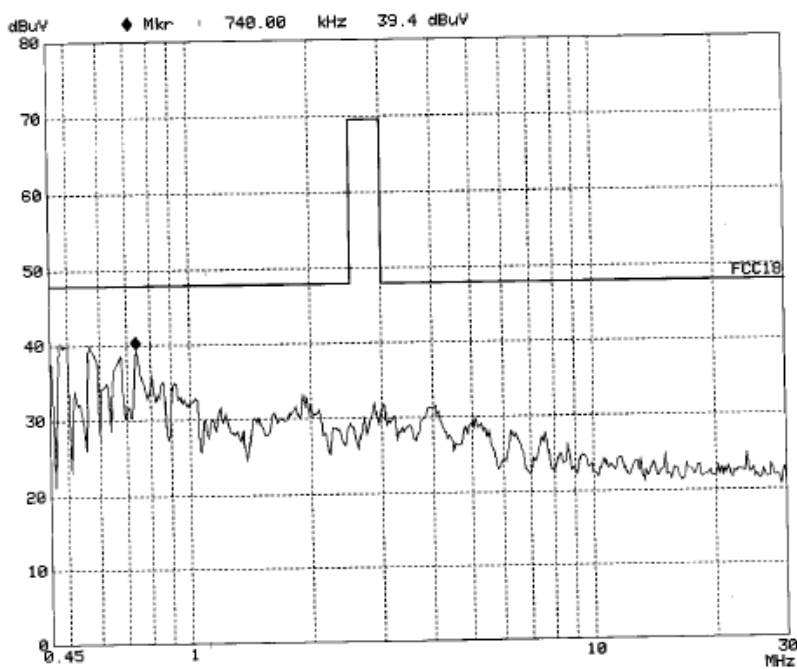


SL28B-120:

Line:

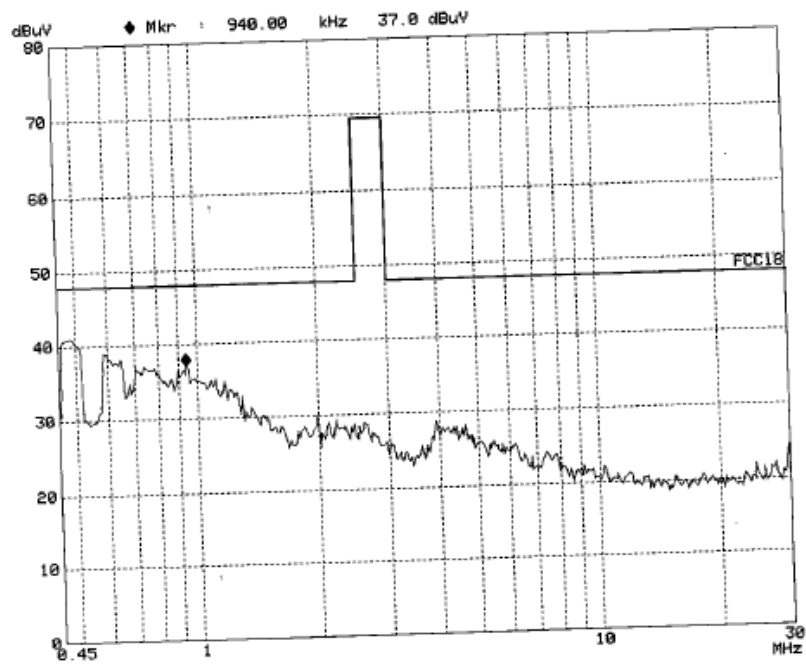


Neutral:



*IL20B-120:*

Line:



Neutral:

