

EMC Technologies (NZ) Ltd

Test Report No 51211.1

Report date: 12 December 2005

TEST REPORT

DOT 301 Downlight

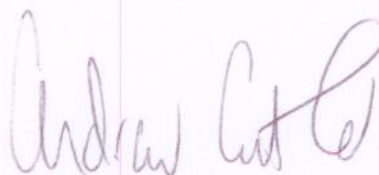
tested to the Specification

AS/NZS CISPR 15, 2002

for

Nimbus Lighting Group Ltd

This Test Report is issued with the authority of:



Andrew Cutler - General Manager



All tests reported
herein have been
performed in accordance
with the laboratory's
scope of accreditation

EMC Technologies (NZ) Ltd

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1. STATEMENT OF COMPLIANCE

The **DOT 301 Downlight** complies with AS/NZS CISPR 15, 2002.

2. RESULTS SUMMARY

The results from testing the sample **DOT 301 Downlight** are summarised in the following table:

Parameter	Result
Disturbance Voltage Limits At Mains Terminals 9 kHz – 30 MHz	Complies with a margin of 11.70 dB at 0.521206 MHz (average).
Radiated Emissions 9 kHz – 30 MHz	Complies. No results recorded.

3. INTRODUCTION

This report describes the tests and measurements for the purpose of determining compliance with the specification under the following conditions:

The test sample was selected by the client.

This report relates only to the sample tested.

This report contains no corrections or erasures.

Measurement uncertainties with statistical confidence intervals of 95% are shown below test results. Both class A and Class B uncertainties have been accounted for, as well as influence uncertainties where appropriate.

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4. CLIENT INFORMATION

Company Name	Nimbus Lighting Group Ltd
Address	PO Box 12-535 Penrose
City	Auckland
Country	New Zealand
Contact	Mr Mike Austin

5. DESCRIPTION OF TEST SAMPLE

Brand Name	DOT Downlights
Model	301
Product	Downlight
Manufacturer	Nimbus Lighting Group Ltd
Country of Origin	New Zealand
Serial Number	16495

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6. MEASUREMENT STANDARD, SETUPS AND PROCEDURES

Standard

The sample was tested in accordance with AS/NZS CISPR 15, 2002.

Methods and Procedures

The measurement methods and procedures used were as follows:

6.1 Description Of Disturbance Voltage Test Set up

Disturbance voltage testing was carried out over the frequency range of 9 kHz to 30 MHz. Testing of the Device Under Test (DUT) for conducted emissions was carried out at the laboratory's MacKelvie Street premises in a 2.4 m x 2.4 m x 2.4 m screened room.

The DUT was placed 0.8 m away from the artificial mains terminal network on the emissions test table which is 1 m x 1.5 m, and is 0.8 m above the screened room floor which acts as the horizontal ground plane and is 0.4 m away from the screened room wall which acts as the vertical ground plane.

Measurement uncertainty with a confidence interval of 95% is:

- Mains terminal tests (0.09 - 30 MHz) ± 2.2 dB

6.2 Description Of Radiated Electromagnetic Disturbance Test Set up

Radiated electromagnetic disturbance testing was carried out over the frequency range of 9 kHz to 30 MHz.

Testing of the Device Under Test (DUT) for radiated emissions was carried out at the laboratory's MacKelvie Street premises in a 5.6 m x 9.6 m x 4.1 m screened room using a 2m Van Veen Loop.

The DUT was placed in the centre of the Van Veen Loop with each loop in turn being scanned between 9 kHz and 30 MHz.

Measurement uncertainty with a confidence interval of 95% is:

- Radiated emissions tests (0.09 - 30 MHz) ± 3.0 dB

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7. TEST EQUIPMENT USED

Instrument	Manufacturer	Model	Serial No	Asset Ref
2m triple Antenna	Rohde & Schwarz	HM020	843885/004	-
Artificial Mains Network	Rohde & Schwarz	ESH 2-Z5	881362/034	RFS 3628
Measurement Receiver	Rohde & Schwarz	ESHS 10	828404/005	RFS 3728
Personal Computer	DECpc	LPx 433dx	-	3737
Software	Rohde & Schwarz	ESK1 140	-	-

8. ACCREDITATIONS

The tests were carried out in accordance with the terms of EMC Technologies (NZ) Ltd's International Accreditation New Zealand (IANZ) Accreditation to NZS/IEC/ ISO 17025.

All measurement equipment has been calibrated in accordance with the terms of EMC Technologies (NZ) Ltd's International Accreditation New Zealand (IANZ) Accreditation to NZS/IEC/ ISO 17025.

International Accreditation New Zealand has Mutual Recognition Arrangements for testing and calibration with 46 accreditation bodies in 34 economies. This includes NATA (Australia), UKAS (UK), SANAS (South Africa), NVLAP (USA), A2LA (USA), SWEDAC (Sweden). Further details can be supplied on request.

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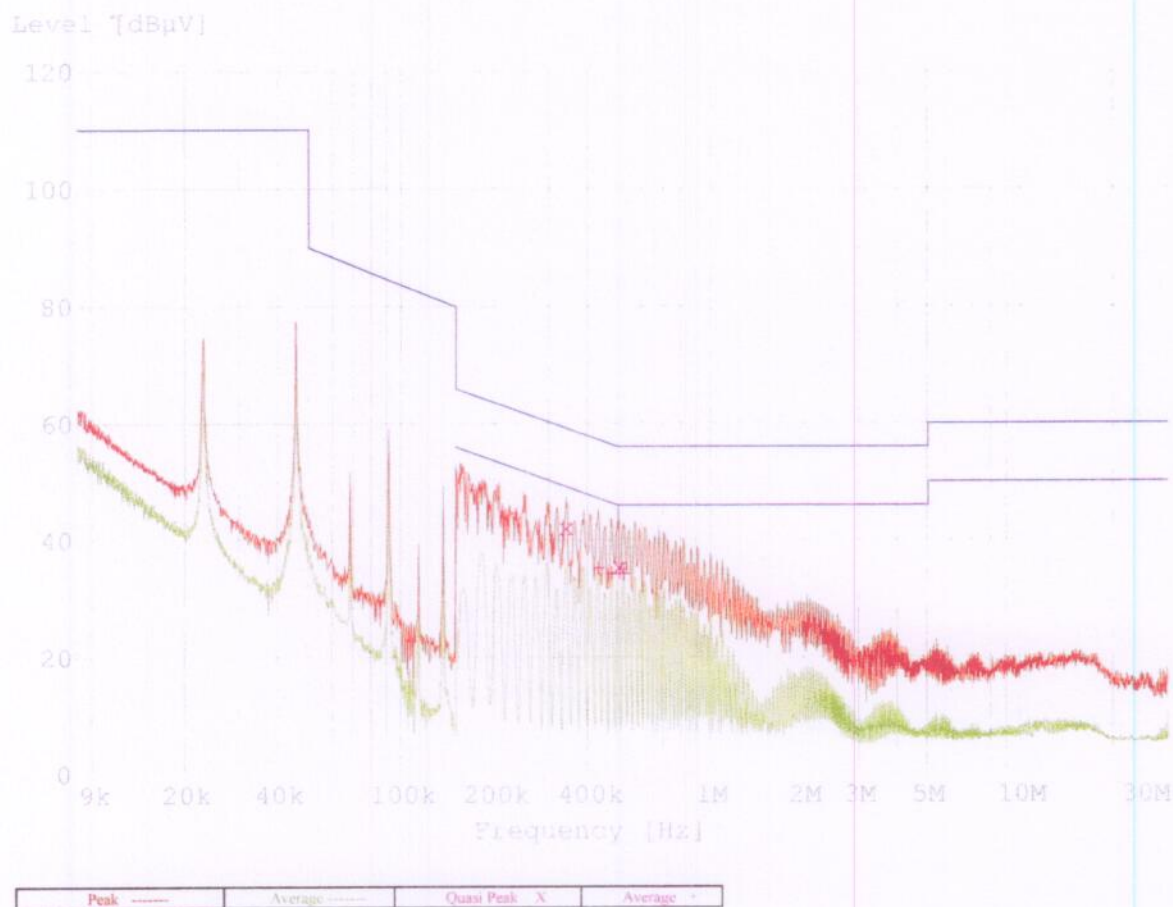
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9. RESULTS

Noise Terminal Voltage

Comments: Device tested using 240 Vac. The EUT was operating under normal conditions.



Quasi-Peak Measurements

Frequency MHz	Level dBμV	Limit dBμV	Margin dB	Exceed	Phase	Rechecks dBμV
0.340018	42.11	59.20	17.09		N	
0.502813	35.51	56.00	20.49		N	

Average Measurements

Frequency MHz	Level dBμV	Limit dBμV	Margin dB	Exceed	Phase	Rechecks dBμV
0.430320	35.27	47.25	11.98		N	
0.475482	34.38	46.42	12.04		N	
0.521206	34.30	46.00	11.70		N	

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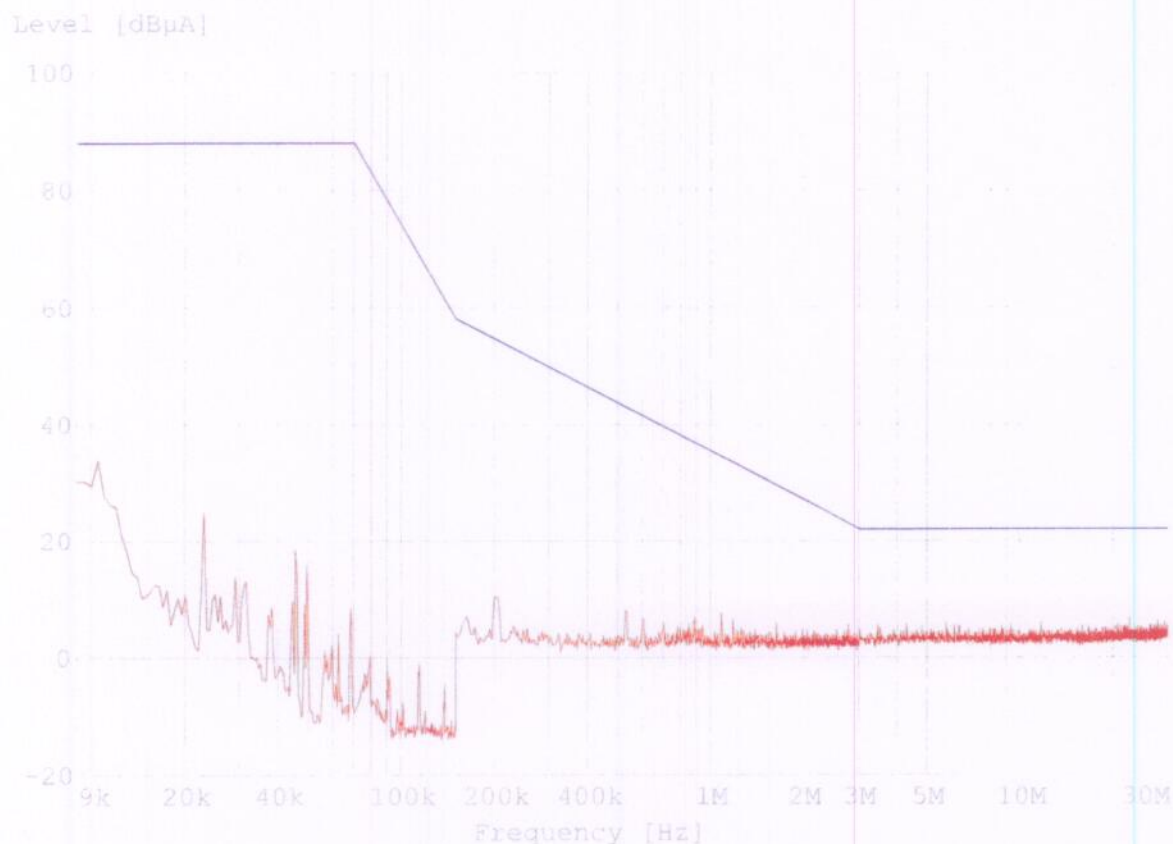
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Radiated Emissions using the Van Veen Loops

Comments: Device tested using 240 Vac. The EUT was operating under normal conditions



Peak ----- Quasi Peak X

Quasi-Peak Measurements

Frequency MHz	Level dBμV	Limit dBμV	Margin dB	Exceed	Phase	Rechecks dBμV
No results recorded within 12dB of the limit						

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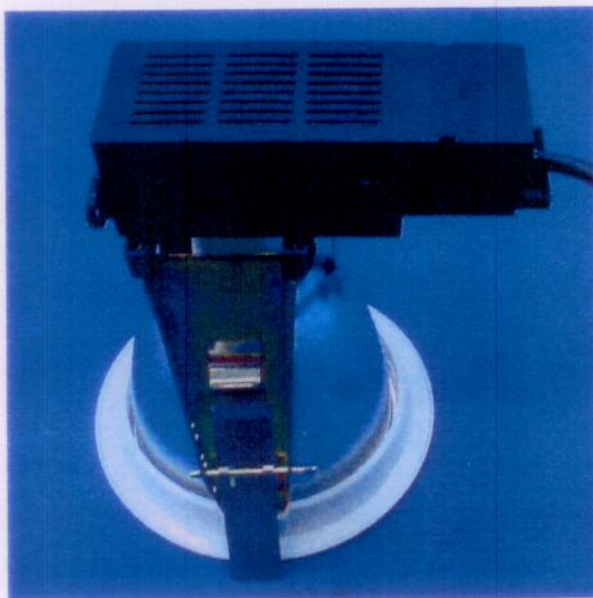
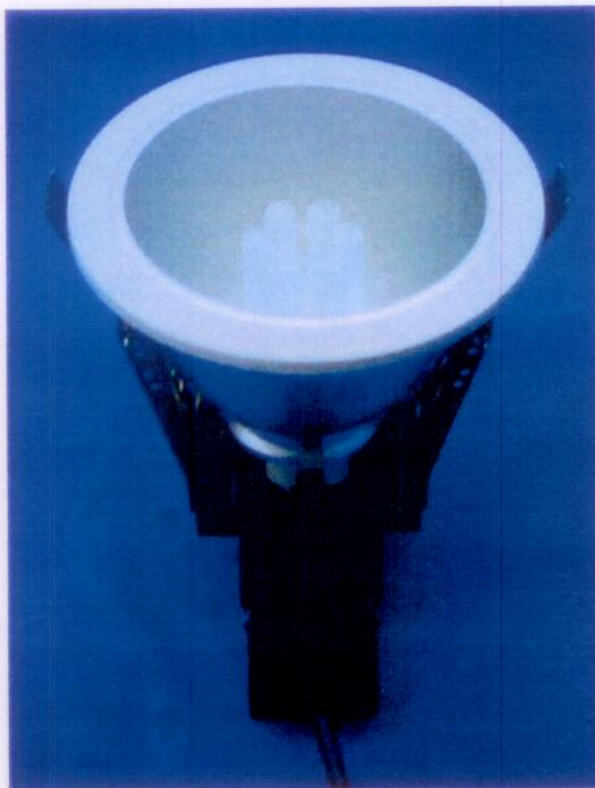
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10. PHOTOGRAPH (S)



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