

## Test report

**99670630**

based on:  
FCC Part 15 Subpart C, section 15.209

Pocket reader LID571 series  
Trovan  
LID571-x

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This report comprises of four modules. The total number of pages is: 18

## Main module

### 1 Introduction

This report contains the result of tests performed by:

Telefication bv  
Edisonstraat 12a  
6902 PK Zevenaar  
The Netherlands

*Telefication complies with the accreditation criteria for test laboratories as laid down in ISO/IEC 17025:1999. The accreditation covers the quality system of the laboratory as well as the specific activities as described in the authorized annex bearing the accreditation number L021 and is granted on 30 November 1990 by the Dutch Council For Accreditation (RvA: Raad voor Accreditatie). The contents of this test report, if reproduced, shall be copied in full, unless special consent in writing for reproduction in part is granted by Telefication. Copyright of this test report is reserved to Telefication.*

Ordering party:

Company name	:	EID Aalten B.V.
Address	:	Nijverheidsweg 28
Zipcode	:	7122 AB
City/town	:	Aalten
Country	:	The Netherlands
Date of order	:	17 August 2005

## 2 Product

A sample of the following product was submitted for testing:

Product name	:	Pocket reader LID571 series
Product category	:	Intentional radiators
Manufacturer	:	EID Aalten B.V.
Trade mark	:	Trovan
Type designation	:	LID571-x
FCC ID	:	TLH 8471300
Emission designator	:	None
Hardware version	:	--
Software version	:	V9.04x
Serial number	:	--

## 3 Test schedule

Tests were carried out in accordance with the specification detailed in chapter 6 "Summary" of this report.

Tests were carried out at the following locations:

- Telefication, Zevenaar

The sample of the product was received on:

- 13 September 2005

Tests were carried out on:

- 13 September 2005

## 4 Product documentation

For production of this report the following product documentation was used:

Description	Date	Identification
LID 571 ISO USERS MANUAL	--	--
Schematic overview LID571	--	--
Description LID 571	--	--
Flowchart LID 571	--	--
Photo's LID 571 series	--	--
Bill of materials	03-03-05	LID571v12 bst 030305.xls
PCB lay out	13 -Jan-2005	LID71V12
Circuit diagram	03-07-2003	LID571V12, 4 pages

## 5 Observations and comments

None.

## 6 Summary

The product is intended for use in the following application area:

Short Range Device

The sample was tested according to the following specifications:

FCC Part 15 Subpart C, section 15.209 (10-1-04 Edition)

## 7 Conclusions

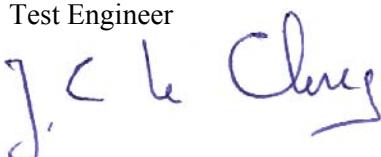
The sample of the product showed **NO NON-COMPLIANCES** to the specification stated in chapter 6 of this report.

The results of the tests as stated in this report, are exclusively applicable to the product item as identified in this report. Telefication does not accept any responsibility for the results stated in this report, with respect to the properties of product items not involved in these tests.

All tests are performed by:

name : ing. J.C. le Clercq

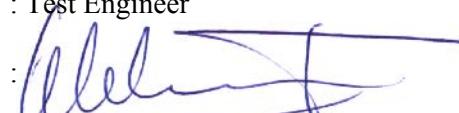
function : Test Engineer

signature : 

Review of test methods and report by:

name : H.H. Lodewijk

function : Test Engineer

signature : 

The above conclusions have been verified by the following signatory:

date : 15 September 2005

name : J.P. van de Poll

function : Co-ordinator Test Group

signature : 

## Test results module

## Summary

According to FCC Part 15 subparts C, section 15.209, the following tests have been performed:

Port	Reference	Phenomena	Result
Enclosure	section 15.209	Radiated emissions	P

## Results:

P = pass  
F = fail

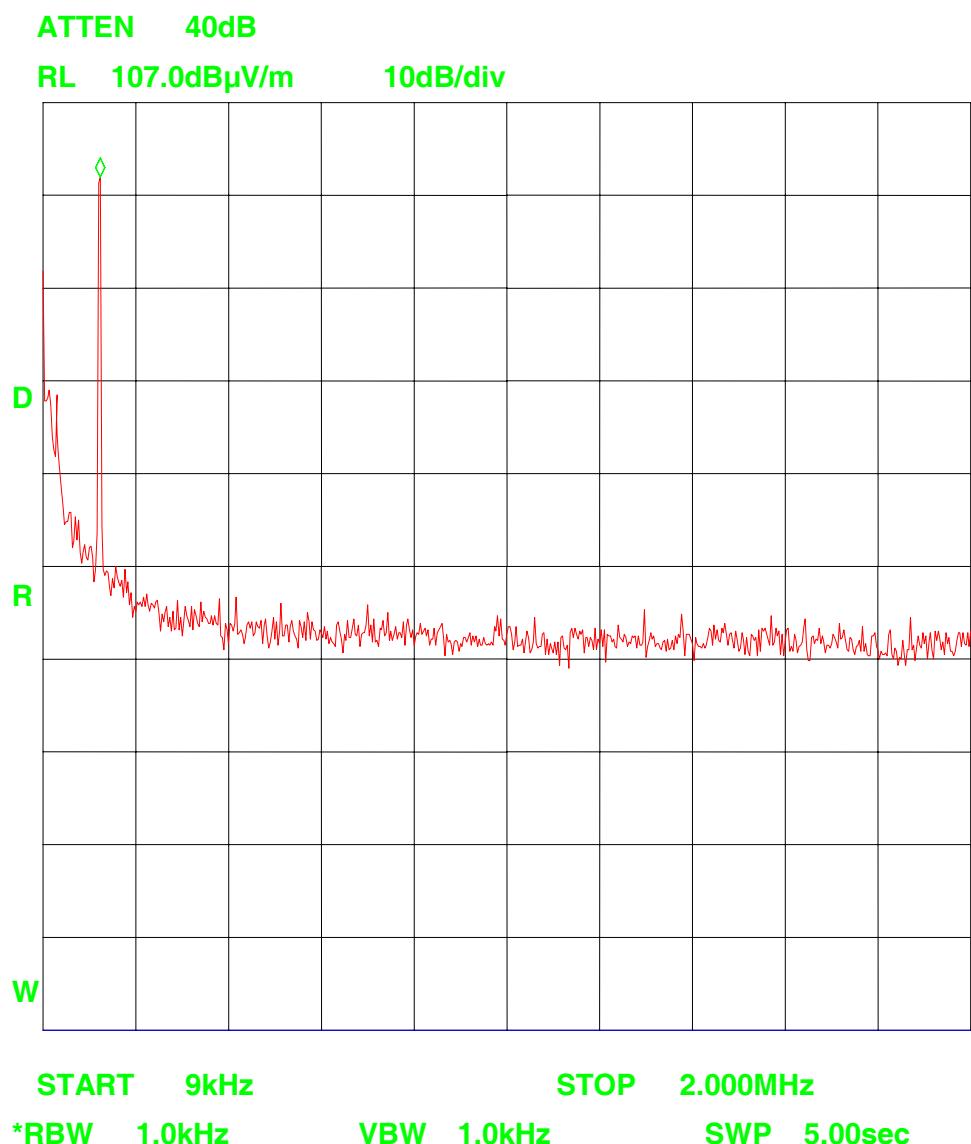
NA = not applicable  
NP = not performed

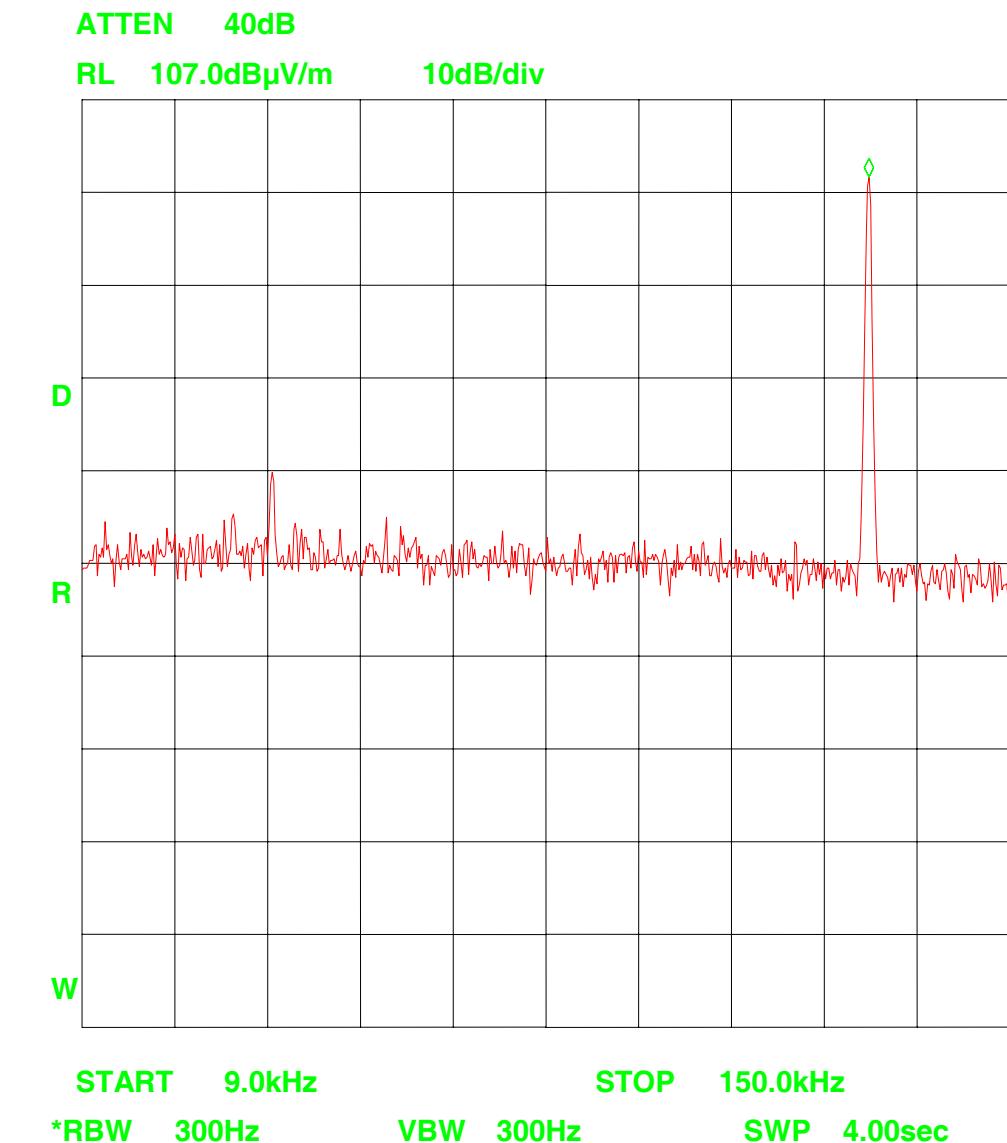
## Emission tests

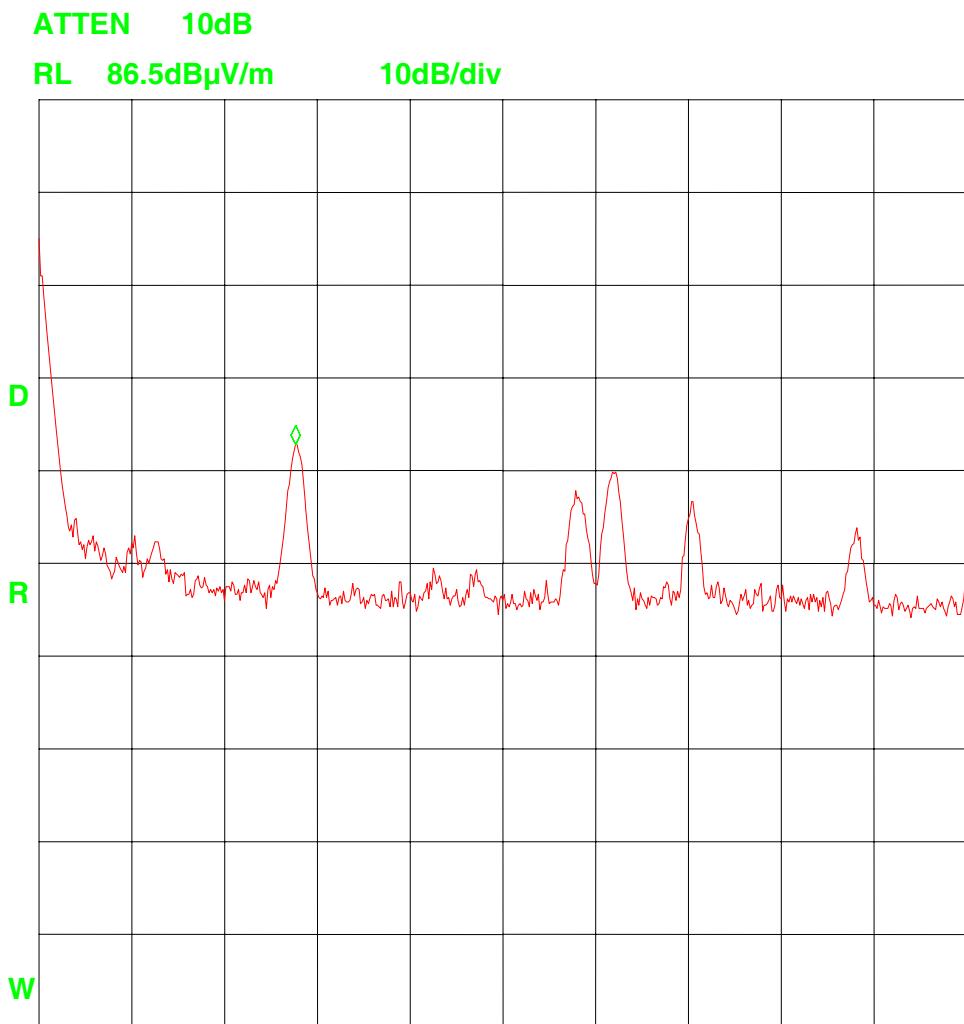
### 1.1 Field strength of emissions ( < 30 MHz)

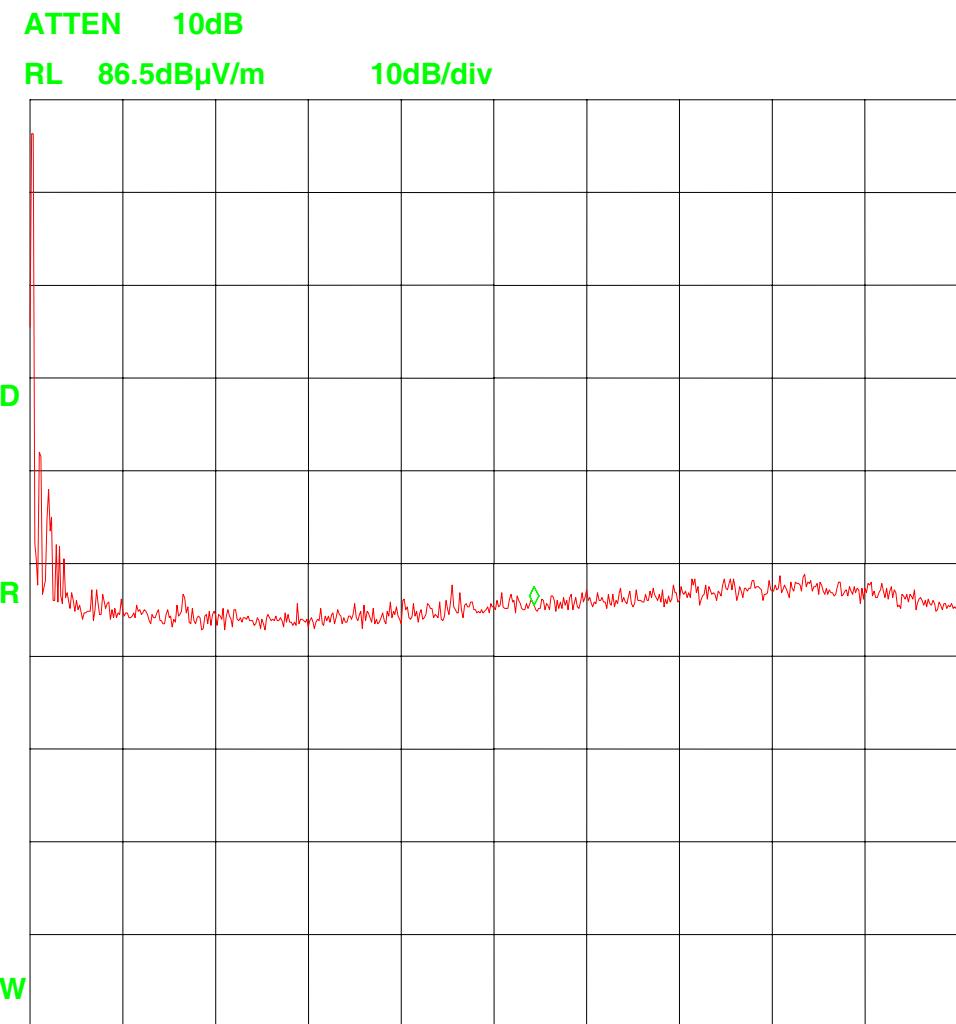
Compliance standard : FCC part 15, subpart C, section 15.209.  
Method of test : ANSI C63.4-2003, sections 5.3 & 8.2.1; FCC part 15, subpart A, section 15.31 (f)(2), 15.33, 15.35.  
Justification : Exploratory measurements have been carried out in a large triple loop antenna.  
Compliance measurements have been carried out at 3 m distance on an Open Area Test Site (OATS) without ground plane.  
An inverse linear distance extrapolation factor of -40 dB/decade has been applied to determine the result at a distance of 30/300 meters.

Test results :

(dB $\mu$ V/m, exploratory)







Test results :

(dB $\mu$ V/m, compliance)

Orientation of EUT: plane of EUT's loop parallel to plane of receive loop antenna			
Frequency (kHz)	Test result @ 3 m distance (dB $\mu$ V/m)	Extrapolation to 30/300 m distance (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)
128.3	95.3	15.3	25.4 @ 300 m
384.4	48.2	-31.8	15.9 @ 300 m
641.5	44.8	4.8	31.5 @ 30 m
898.1	39.3	-0.7	28.5 @ 30 m
1154.7	36.7	-3.3	26.4 @ 30 m

*Remark: results due to other EUT orientations proved to be considerably lower than the results above.*

Test equipment used: (Item numbers)	1, 2, 4, 6
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Item numbers refer to the used test equipment module.

## 1.2 Field strength of unwanted emissions (> 30 MHz)

Compliance standard : FCC part 15, subpart C, section 15.209;

Method of test : ANSI C63.4-2003, sections 5.4, 8.2.3 & 8.3.1.2; FCC part 15, subpart A, section 15.31 (f)(2), 15.33, 15.35.

Justification : Exploratory measurements have been performed in a compact full anechoic room. No spurious signals > 30 MHz were found. Measurements at the Open Area Test Site were judged to be not necessary, as would have been performed at

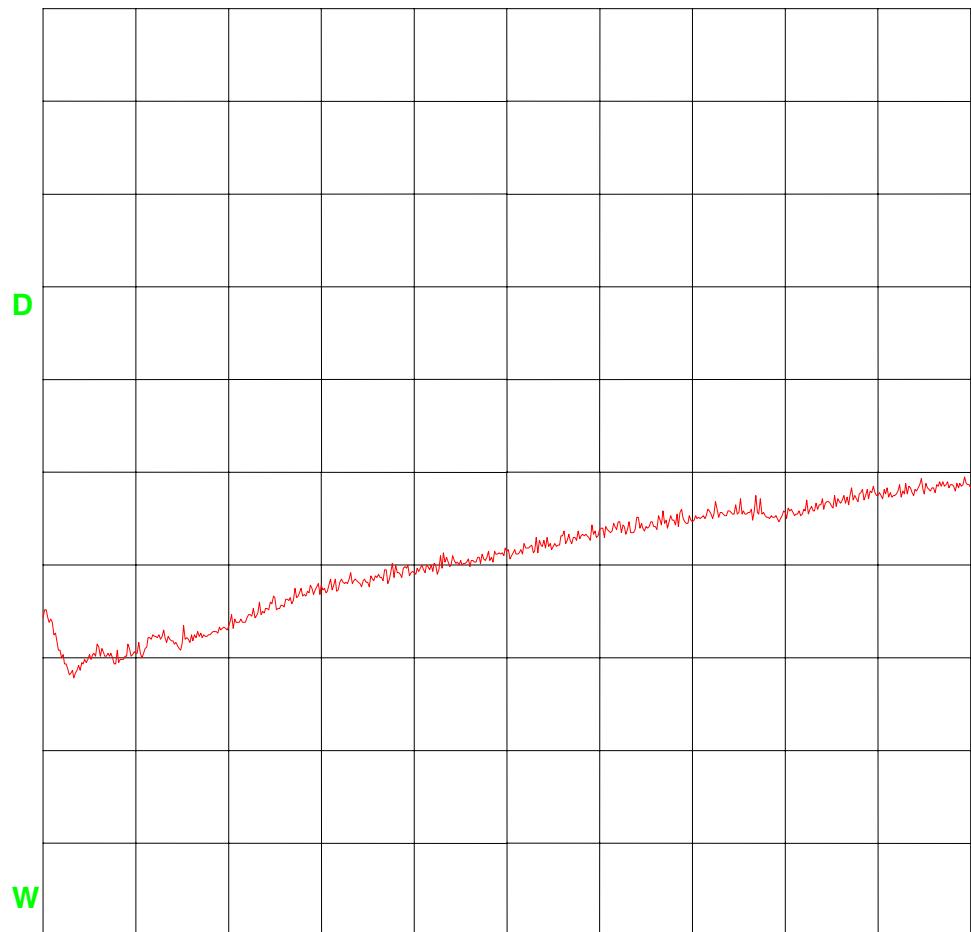
TNO Electronic Products & Services (EPS) B.V  
Smidshornerweg 18  
9822 TL Niekerk  
The Netherlands

FCC listed : 90828

Test results:

Horizontal polarization

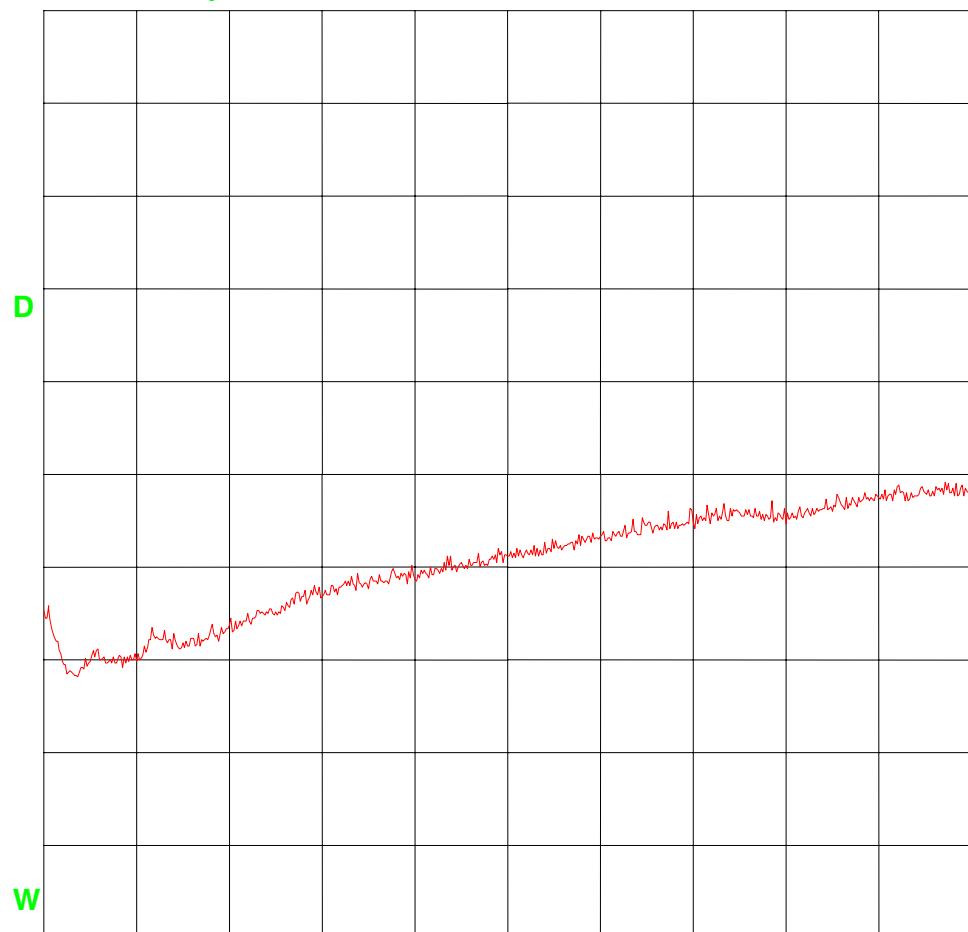
ATTEN 10dB  
RL 97.0dB $\mu$ V/m 10dB/div



START 26.0MHz STOP 1.0000GHz  
\*RBW 100kHz VBW 100kHz SWP 250ms

Vertical polarization

ATTEN 10dB

RL 97.0dB $\mu$ V/m 10dB/div

START 26.0MHz

STOP 1.0000GHz

\*RBW 100kHz

VBW 100kHz

SWP 250ms

Test equipment used: (Item numbers) 5, 6, 7, 8, 9, 10

Item numbers refer to the used test equipment module.

## Used test equipment module

This module contains the list of test equipment used.

Ref	Description	Teleficationi dent.	Manufacturer	Model
1	Test receiver	TE 00205	R & S	ESH3
2	Active loop antenna	TE 00746	R & S	HFH 2-Z2
3	Test receiver	TE 00091	R & S	ESV(P)
4	Large triple loop antenna	TE 01066	Telefication	--
5	Logper/bow-tie antenna	TE 00700	EMCO	3143
6	Spectrum analyzer	TE 00481	HP	8563E
7	Compact anechoic chamber (CFAC)	TE 01064	Euroshield	RFD-F-100

The following measurement equipment is used at TNO EPS Niekerk:

1	Test receiver	S/n 15667	Rohde & Schwarz	ESCS 30
2	Open Area Test Site	13886	Comtest	TNO EPS
3	Biconilog antenna	S/n 15633	Chase	CBL6111B