

**EMISSION MEASUREMENTS IN ACCORDANCE  
WITH FCC PART 15 AND ANSI C63.4-1992 ON A  
STICKER DEACTIVATOR, BRAND TRAMPLE,  
TYPE STD 2508.**

**FCC ID: OI6TSD2508**

FCC report layout endorsed by the FCC by  
Public Notice of March 11, 1992.

Accredited by	:STERLAB accreditation number L029 D.A.R., TTI-P-G.127/96-00
Competent body	:Article 10-2 EMC Directive
Notified body nr. 0122	:Article 10-5 EMC Directive Low Voltage Directive TTE Directive
Certification body	:Electrical Products Safety regulation, Hong Kong
Designated laboratory	:TTE Directive
Notified test service	:Automotive Directive
FCC listed	:31040/SIT
VCCI registered	:R-592 C-607

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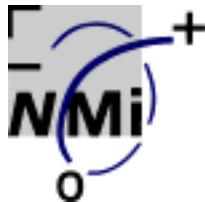
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NMI International B.V. (27239176)



Description of EUT: Sticker deactivator  
Manufacturer: Trample B.V.  
Brand mark: Trample  
Type: STD 2508  
FCC ID: OI6TSD2508

## MEASUREMENT/TECHNICAL REPORT

**TRAMPLE B.V.**

**FCC ID: OI6TSD2508**

August 18, 1999

This report concerns: Original grant

Equipment type: Shoplifting Detection Device

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)?  yes  no

If yes defer until: not applicable

Transition Rules Request per 15.37  yes  no

Report prepared by:

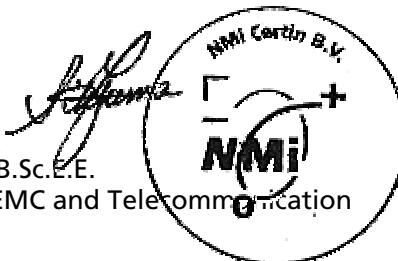
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Country	:	The Netherlands
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The data taken for this test and report herein was done in accordance with FCC Part 15 and ANSI C63.4-1992 measurements. NMi Certin B.V.. location Niekirk, The Netherlands, certifies that the data is accurate and contains a true representation of the emission-profile of the Equipment Under Test (EUT) on the date of the test noted in the test report. I have reviewed the test report and find it to be an accurate description of the test(s) performed and the EUT so tested.

Date: August 18, 1999

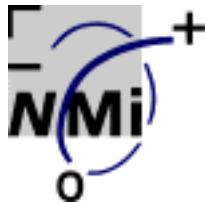
Signature:

J.S. Sikkema, B.Sc.E.E.  
Department EMC and Telecommunication



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Description of EUT: Sticker deactivator  
Manufacturer: Trample B.V.  
Brand mark: Trample  
Type: STD 2508  
FCC ID: OI6TSD2508

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## 1 General Information.

### 1.1 Product description.

#### 1.1.1 Introduction

The sticker deactivator, brand Trample, type STD 2508, has been developed to deactivate sticker tags intended for use with anti shoplifting systems. These tags consists of a resonant circuit which is disabled by the deactivator after the purchase of a product has been made.

#### 1.1.2 Choice of frequency

The operating frequency of the sticker deactivator, brand Trample, type STD 2508 is:  $8.2 \pm 1$  MHz

#### 1.1.3 Operating principles

The transceiver generates a low level 8.2 MHz FM modulated signal which is powered to the transceiver antenna. The modulation frequency is 57 Hz. When a resonant circuit (tag) approaches the antenna it is detected by the receiver part which demodulates the 8.2 MHz signal and filters out the tag signal.

As long as no tag signal is detected the deactivator part is not active. When a tag signal is detected the high voltage convertor starts to build up a voltage of 350 Volts. This power is supplied to a switching unit controlled by a 16 MHz oscillator. The signal is fed to the deactivation antenna as a 8 MHz power source. The signal is fed to the antenna for 2 microseconds which is sufficient to disable the tag.

### 1.2 Related Submittal(s)/grant(s).

Not applicable.

### 1.3 Test Methodology.

The Test methodology of ANSI C63.4-1992 has been applied to provide adequate measuring data.

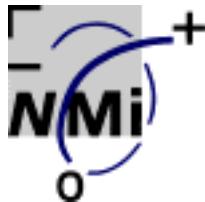
Complete data of the tested model has been recorded.

According to FCC Part 15, § 101 the EUT shall be classified as an intentional radiator and is therefore subject to certification.

### 1.4 Test facility.

The FCC has per Public Notice declared that the measurement facilities located at the NMI Certin B.V. Testsite Niekerk, Smidshornerweg 18, The Netherlands, have been reviewed and found to be in compliance with the requirements of § 2.948 (previously § 15.38) of the FCC rules per August 4, 1994.

The description of the measuring facilities have been filed with reference 31040/SIT, 1300B3 at the FCC's Offices.



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## 1.5 List of measurement equipment.

NMi number	Description	Marketing name	Type
14277	Antennamast 4m	Heinrich Deisel	HD100
14278	Controller OATS	Heinrich Deisel	MA240
14340	Biconilog antenna 20MHz - 1100MHz	EMCO	3143
12473	Log-per antenna 200MHz - 1000MHz	Eaton	96005
12471	Biconical antenna 20MHz - 200MHz	Eaton	94455-1
12636	Plastic measurement room	Polyforce	-
13886	Open Area Test Site	Comtest	-
99108	Turntable OATS	Heinrich Deisel	HD050
15667	Measuring receiver 9kHz - 2750MHz	Rohde & Schwarz	ESCS30
12507	Artificial mains network 3-phase	Rohde & Schwarz	ESH2-Z5
13313	Impuls limiter	Rohde & Schwarz	ESH3Z2.357...
99115	Voltage probe	Schwarzbeck	TK9416

## 1.6 Bandwidth and antenna factors.

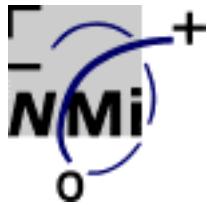
The utilized measuring equipment is stated in § 1.5. The bandwidth of the receiver switches automatically to the right bandwidth in accordance with CISPR 16. This is implemented in the receiver. Also the antennafactors are included in the testreceiver. The receiver automatically calculates the appropriate correction factor for the utilized antenna and also the appropriate correction factor for the cable loss. The total correction is automatically added to the measured value.

## 2 Product labelling.

The following text shall be attached to the EUT, by means of a label, or -in case the enclosure is too small- on a prominent location in the users manual.

**This device complies with part 15 of the FCC Rules.  
Operation is subject to the following two conditions: (1)  
This device may not cause harmful interference, and (2)  
this device must accept any interference received,  
including interference that may cause undesired  
operation.**

The dimensions of the label, the location of the label and the type of font can be found in the FCC regulation book CFR 47, parts 0 to 19, revised as per October 1, 1997.



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## 3 System test configuration.

### 3.1 Justification.

In accordance with § 11.2.4. of ANSI C63.4-1992 the placing and manipulation of interface cables has been carried out. The sticker deactivator, brand Trample, type STD 2508, includes of the following equipment:

Sticker deactivator, brand Trample, type TSD2508  
Power supply, brand Astec, type SA35-3153

### 3.2 EUT mode of operation.

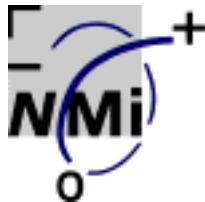
During all measurements the deactivator was set to "ON".

### 3.3 Special accessories.

Not applicable.

### 3.4 Equipment modifications.

Not applicable.



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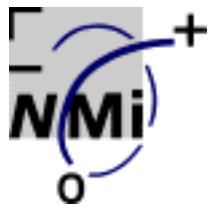
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### 3.5 Description of tested EUT.

Unit title : STD 2508  
Model number : n.a.  
Serial number : n.a.  
FCC ID number : OI6TSD2508  
Frequency range :  $8.2 \pm 1$  MHz  
Description/details : See § 1.1 of this report  
Power supply : Brand: Astec, type: SA35-3153,  
input: 100-240VAC 50/60 Hz, output: 16VDC/2.19A  
Clock oscillators : 8 MHz  
Cabinet & Screening : n.a.  
Interface Cable(s) connected : n.a.  
Method of screening : n.a.  
Method of grounding : n.a.  
Operating configuration : Sticker deactivator, brand Trample, type TSD2508  
Power supply, brand Astec, type SA35-3153

#### Applicant's information

Applicant's representative : M.H. Heerspink  
Company : Trample B.V.  
Address : Meulenakker 9  
Postal code and city : 7841 EP Sleen  
Country : The Netherlands  
Telephone number : +31-591-361928  
Fax number : +31-591-362223



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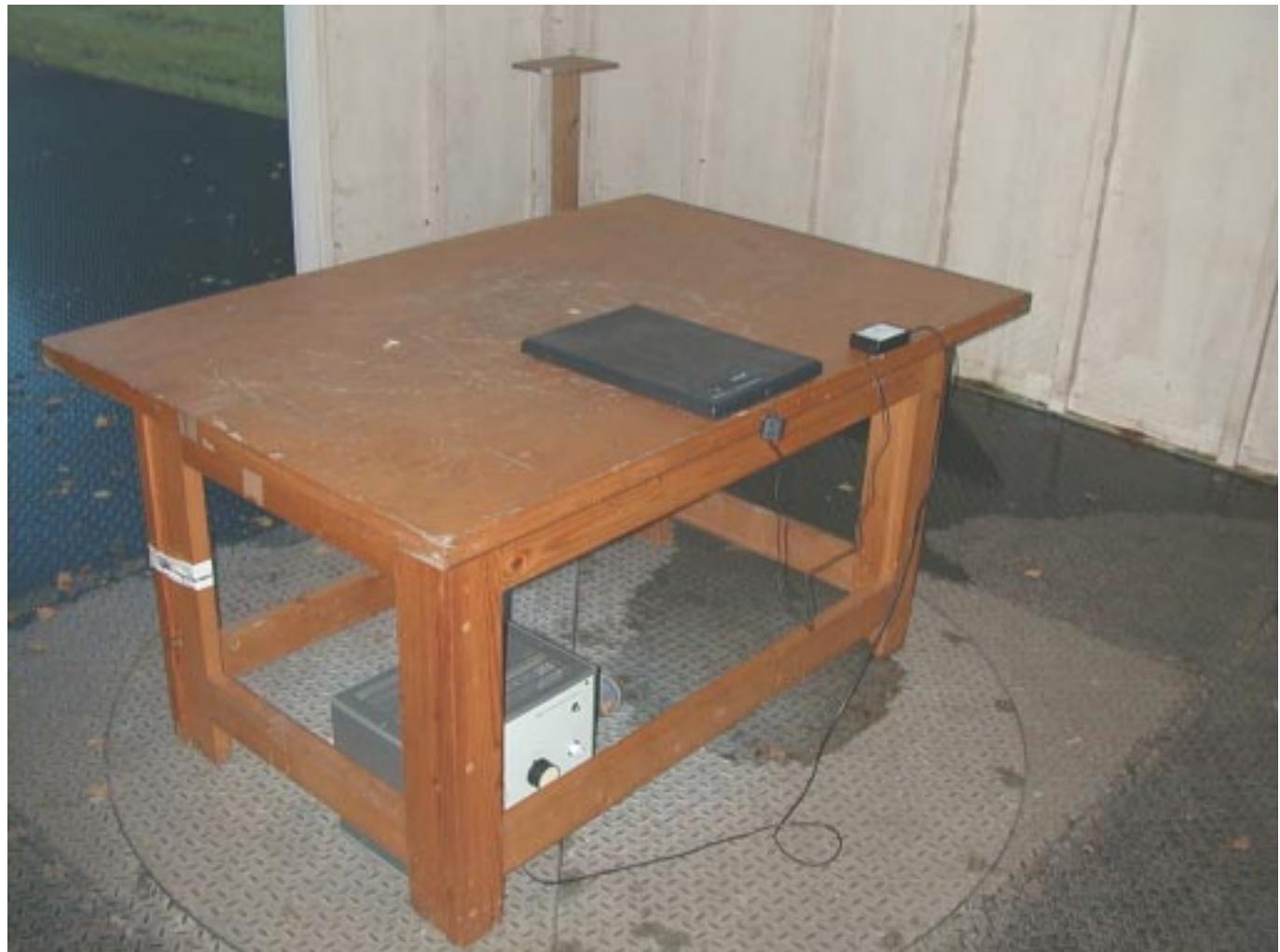
## 4 Conducted and radiated measurement photos.

On pages 9 and 10 the conducted emission measurements test setup photos are given, on page 11 and 12 the radiated emission measurements test setup photos are given.









## 5 Conducted emission data.

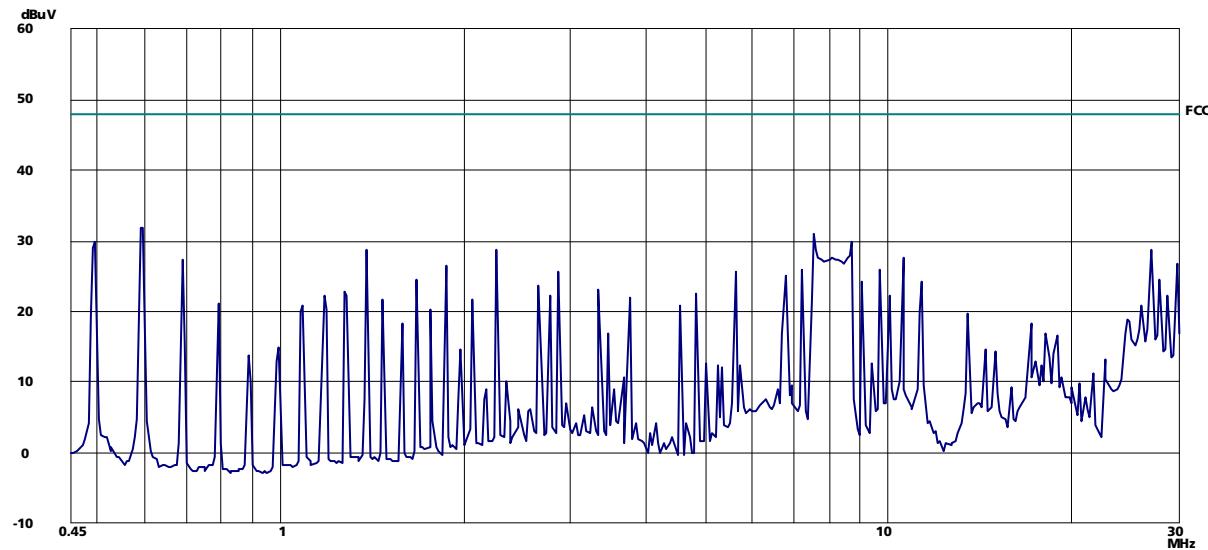


Figure 1

The results of the disturbance voltage level measurements at the AC mains connection terminal **LINE** of the EUT in accordance with FCC Part 15, § 207 and ANSI C63.4-1992, in the configuration and operation mode(s) as stated in this testreport, are depicted in figure 1. Measurement results are quasi-peak results.

Test engineer:

Tester signature : Date: August 18, 1999

Typed/printed name : P.A.J.M. Robben, B.Sc.E.E.

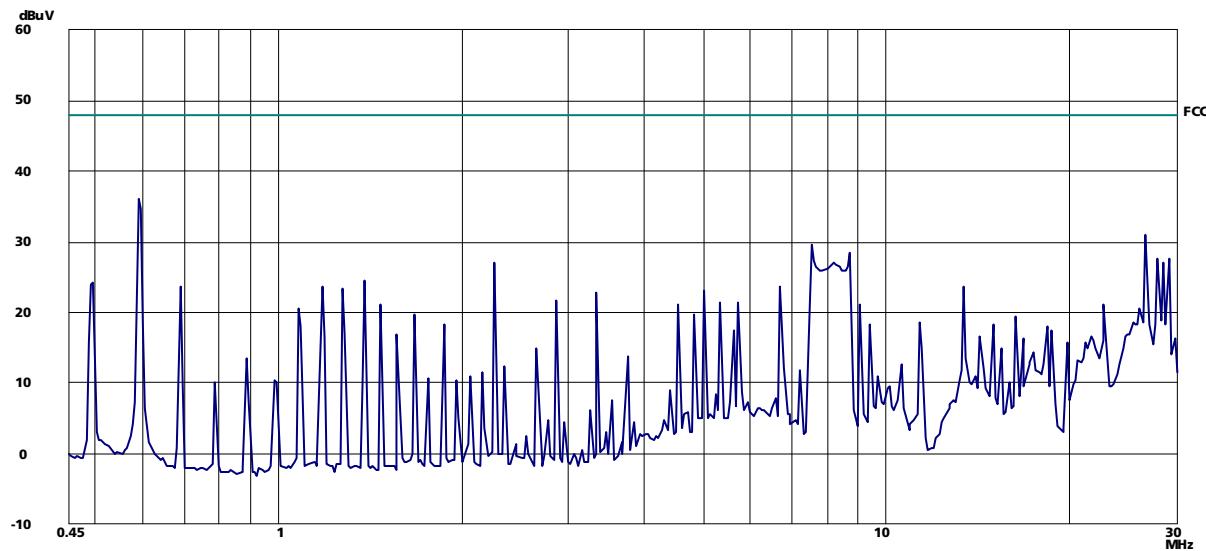


Figure 2

The results of the disturbance voltage level measurements at the AC mains connection terminal **NEUTRAL** of the EUT in accordance with FCC Part 15, § 207 and ANSI C63.4-1992, in the configuration and operation mode(s) as stated in this testreport, are depicted in figure 2. Measurement results are quasi-peak results.

Test engineer:

Tester signature : Date: August 18, 1999

Typed/printed name : P.A.J.M. Robben, B.Sc.E.E.

## 6 Radiated emission data.

### 6.1 Radiated field strength measurements (frequency range of 30 MHz to 1000 MHz, E-field)

Frequency (MHz)	Measurement results dB( $\mu$ V)/m @ 3 metres Quasi-peak		Limits dB( $\mu$ V)/m @ 3 metres Quasi-peak
	Vertical	Horizontal	
30-88	< 20.0	< 20.0	40.0
88-216	< 25.0	< 25.0	43.5
216-960	< 30.0	< 30.0	46.0
960-1000	< 33.0	< 33.0	54.0

Measured levels on frequencies not stated in this report have been measured more than 20 dB below the applicable limit.

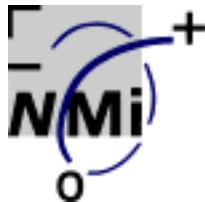
Table 1

Results of the radiated emission (electric components) measurements in accordance with FCC Part 15, § 209 and ANSI C63.4-1992, in the configuration and operation mode(s) as stated in this testreport, are depicted in table 1. Measurement results are quasi-peak results.

Test engineer:

Tester signature : Date: August 18, 1999

Typed/printed name : P.A.J.M. Robben, B.Sc.E.E.



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## 6.2 Radiated field strength measurements (frequency range of 9 kHz to 30 MHz, H-field)

Frequency (MHz)	Measurement results dB(µV)/m @ 30 metres Quasi-peak	Limits	
		dB(µV)/m Quasi-peak FCC Part 15, sect. 223	dB(µV)/m Quasi-peak FCC Part 15, sect. 209
0.009 - 0.490	<<	n.a.	2400/F (300 m.)
0.490 - 1.705	<<	n.a.	24000/F (30 m.)
1.705 - 10.00	<<	40.0	n.a.
10.00 - 30.00	<<	n.a.	29.5

Measured levels on frequencies not stated in this report have been measured more than 20 dB below the applicable limit.

Table 2

Results of the radiated electric field strength (H-field) measurements, carried out in accordance with FCC Part 15, § 209 and § 223 (edition 10-1-97) and ANSI C63.4-1992, on the EUT are depicted in table 2.

**Note 1:** According to FCC Part 15, § 223, bandwidth shall be more than 10% of the frequency to apply the limits as given in table 2. The bandwidth of the system is 7.2 MHz - 9.2 MHz.

**Note 2:** The EUT sweeps from 7.2 MHz to 9.2 MHz. The sweep does not stop in bands as listed in FCC Part 15, § 15.205 (restricted bands of operation). The fundamental emission is outside the bands, as listed in FCC Part 15, § 15.205, for more than 99% of the time when the device is actively transmitting, without compensation for duty cycle.

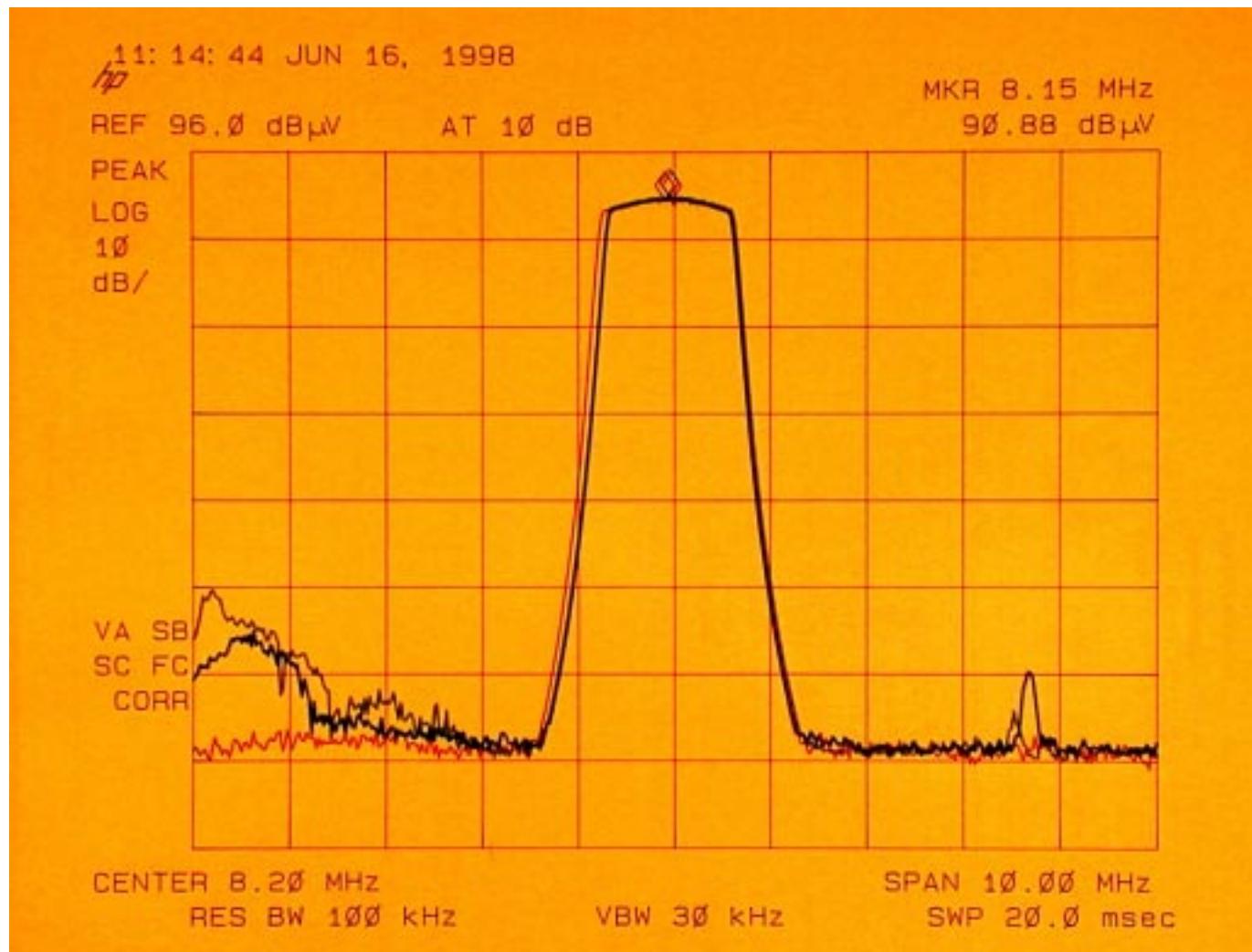
Test engineer:

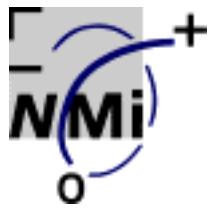
Tester signature : Date: August 18, 1999

Typed/printed name : P.A.J.M. Robben, B.Sc.E.E.

## 7 Frequency sweep bandwidth.

The frequency sweep bandwidth of the EUT has been measured with a spectrum monitor and an active loop-antenna. Measuring distance 3 metres. Operation conditions: receiver and transmitter of EUT on. The centre frequency of the system during the measurement was 8.2 MHz.





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## 8 Photos of tested EUT.

Not applicable, see § 4 of this report