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ADDENDUM to



AMENDMENT to

TEST REPORT

File Number : MR-169-2003 (A)

E.U.T. Name : K8058

No Serial

- The Test Report may not be reproduced other than in full except with a written approval of the issuing laboratory.
- The test results relate only to the items tested.

Technical Responsible EMC Centre.

Department Manager ESM



04.09.03.

EMC TEST LABORATORY

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Department manager
Technical responsible
Test engineer

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- * *EN61000-4-2 Electrostatic discharge*

- *Test Setup P. 9 .*
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If the logo->  is mentioned in front of the standard n° = measurement under accreditation
FCD-0370/2 QP-0017

- Name and address of the customer .

Name : Velleman Components N.V.
 Address : Legen Heirweg 33
 9890 Gavere (Asper) Belgie
 Contact : Dhr Santens Stefaan
 Tel/Fax : 09 /384 36 11 09/384 67 03
 09 /389 94 36 09/384 67 02

- Description of the E.U.T.

Name : K8058
 Serial N°: None
 Quotation N° : None
 Part of : -----
 Short description of the functions : (photo) if applicable
 None

PEMC date in : 24-06-2003
 PEMC date out : 07-07-2003
 Manual : No

- Measurements according following standard(s) :

EN61000-4-2 ESD (Indirect HCP/ VCP) see subclause 9.3.2 ETS300 683
 EN61000-4-3 Radiated immunity see subclause 9.2.2 ETS300 683
 (Battery operated device basic frequency 433 MHz)

- Sampling method.**- Subcontracting.**

Sampling method :
 If YES how :

Tests :
 Name subcontractor :

- Remarks and actions during measurement:

None

For contents of testplan Refer to QP-0017

- Uncertainty :

(if the measured value is within the uncertainty of the measuring system, the uncertainty will be indicated into this report. The judge Pass/Fail will not be indicated)

- Temperature & humidity during measurements was between spec:

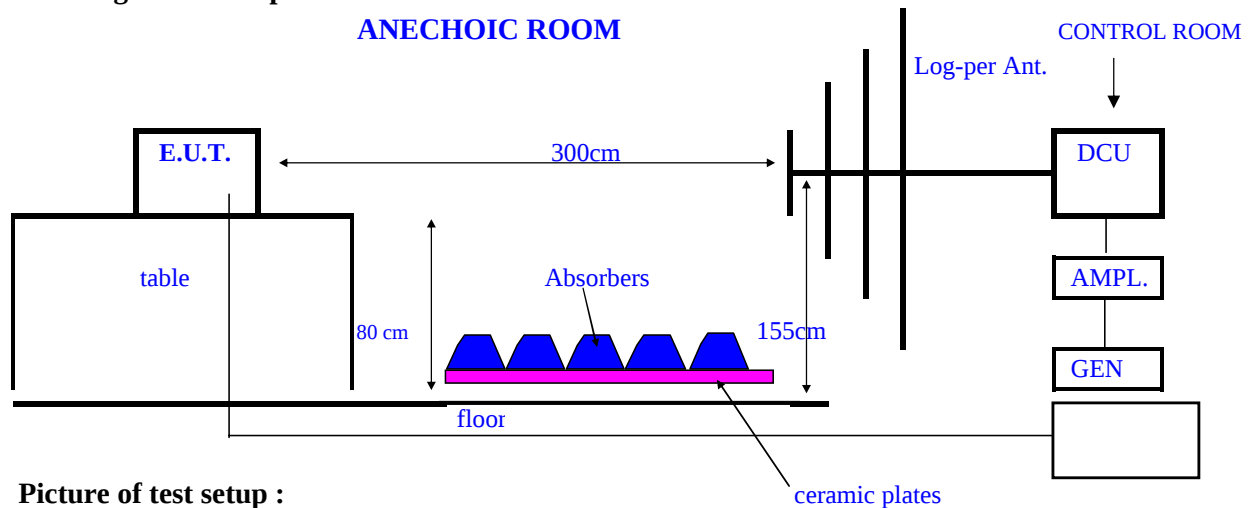
Humidity :	min 40%	Max.: 70%
Temperature:	min. 18°C	Max.: 24°C
Atmospheric pressure :	1022 hPa	
Mains Voltage :	-----	
DC Voltage :	Value : -----	Spec. : -----

PICTURE AND/OR DRAWING OF TEST SETUP

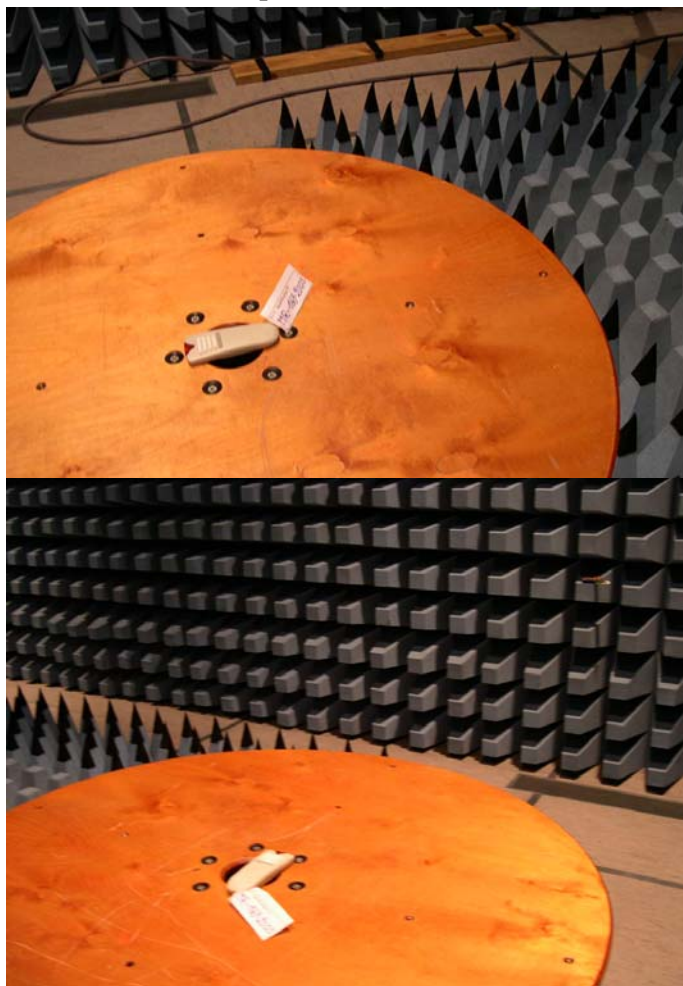
Test system : PEMC04 Immunity to radiated electromagnetic field

According standard N° : EN61000-4-3 (1996) +A1 (1998) +A2(2001)

Drawing of test setup :



Picture of test setup :



USED EQUIPMENT DURING MEASUREMENT

Test system : PEMC04 Immunity to Radio frequency electromagnetic field

Acc.stand. N° : EN61000-4-3 (1996) +A1 (1998) +A2(2001)

[illegible]

File Number : MR-169-2003 (A)

OVERVIEW TEST SEVERITY LEVELS AND RESULTS

Test System : PEMC -04

According standard : **NBN/EN 61000-4-3 (1996)/ A1 (1998) / A2(2001) Absorber-lined chamber (Anechoic Room)**

Horizontal Polarisation						Vertical Polarisation					
Test method used						Test method used					
Closed-loop leveling method (field probe levelling)						Closed-loop leveling method (field probe levelling)					
Substitution method (reference field calibration procedure)						Substitution method (reference field calibration procedure)					
Illuminated side of the EUT :						Illuminated side of the EUT :					
Special condition/remarks or request by customer.						Special condition/remarks or request by customer.					
Prototype reciever used as monitoring device						Prototype reciever used as monitoring device					
Validation						Validation					
✓ Hardware ✓ Software						P = Test Pass F = Test Fail					
- = Test not performed/input not used X = Used Input						- = Test not performed/input not used X = Used Input					
(1) Normal performance within specifications .						(1) Normal performance within specifications .					

Electromagnetic field immunity test

MR-169-2003

7/12

EUT description: K8058 no serial
Manuf. EUT/Serialn°: Velleman
Operating Condition: Normal
Test Site: ESM (EMC Centre)
Operator: Meuleman Hendrik
Test Specification: EN61000-4-3 / ETS 300 683: June 1997
Comment: Antenna: Vertical / Horizontal polarisation
Comment : Front / Right / Back / Left side EUT

IMMUNITY PARAMETER: "ETS300 683"

Unit: V/m
Imm. Level Detector: CARRIER
Frequency Sweep: Ascending

Subrange 1:

Power Gen.:	SMY 80-1000	Start Freq.:	80.000 MHz
Transducer:	AT1080	Stop Freq.:	1.000 GHz
Sensor:	<internal>	Step Mode:	LOG
Ref. Calib.:	refcal 1000-4-3	Step Size:	1.000 %
Levelling:	Ref. Calib.	Frq.Tbl.:	<none>
Power Ctrl.:	Net Power		

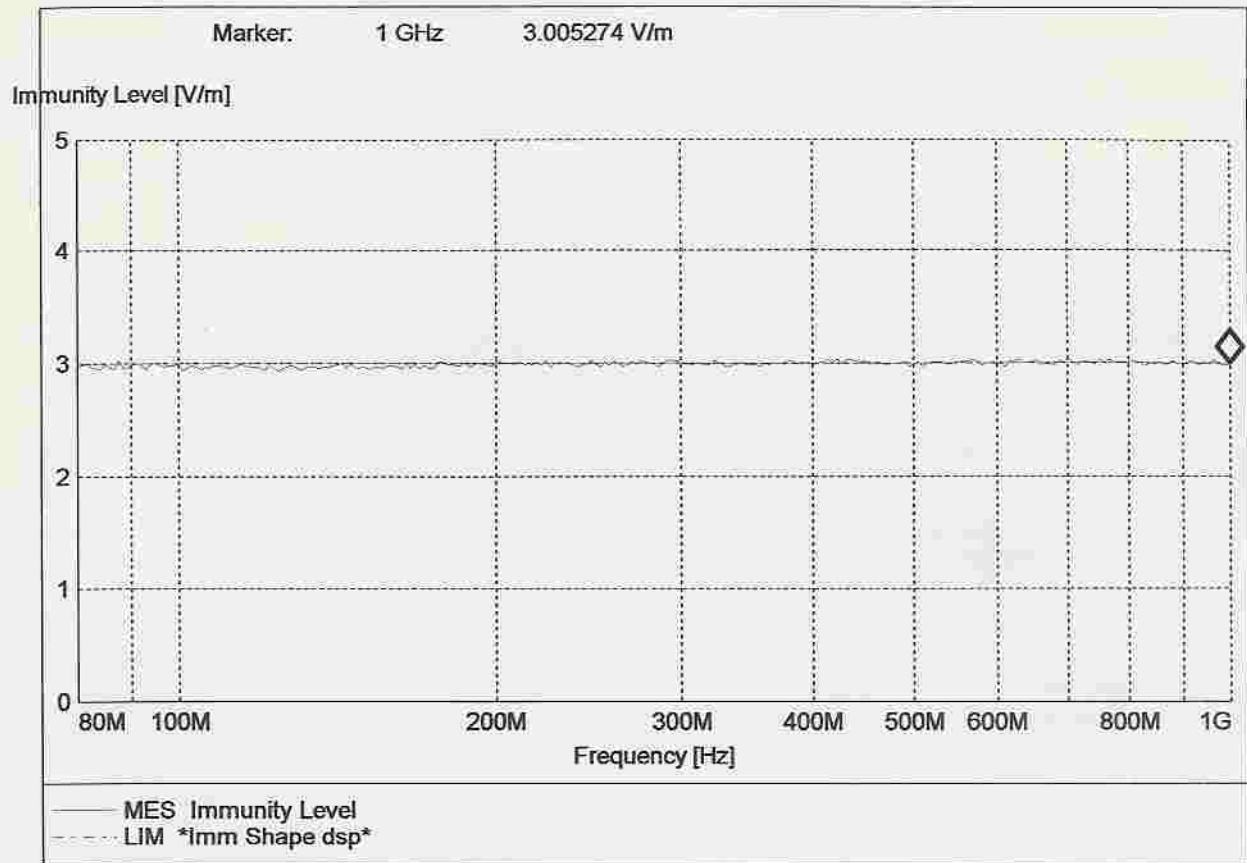
Imm.Shape:	<none>	Lower Tol.:	0.200 dB
Lim.Shape:	<none>	Upper Tol.:	0.200 dB
Imm.Level:	3.00 V/m	Dwell Time:	0.100 s

Generator Settings:

Mod. Type: AM:INT
Mod. Depth: 80.00
Deviat.: 0.00
Mod. Freq.: 400.00
AF Wave: <none>

Level Sweep:

Step Mode: Off
Max. Lev. Shift: 3.000 dB



DRAWING AND/OR PICTURE OF TEST SETUP

Test system : PEMC09 Elctostatic Discharge tests

According standard N° : IEC 61000-4-2

DRAWING OF TEST SETUP : Horizontal & vertical coupling plane

61000-4-2 Amend. 1 © IEC:1998

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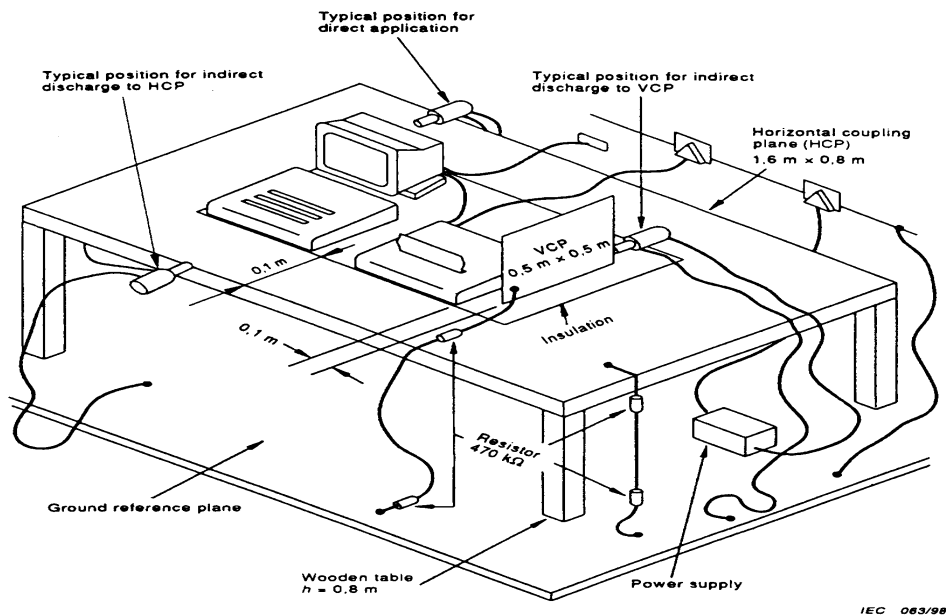
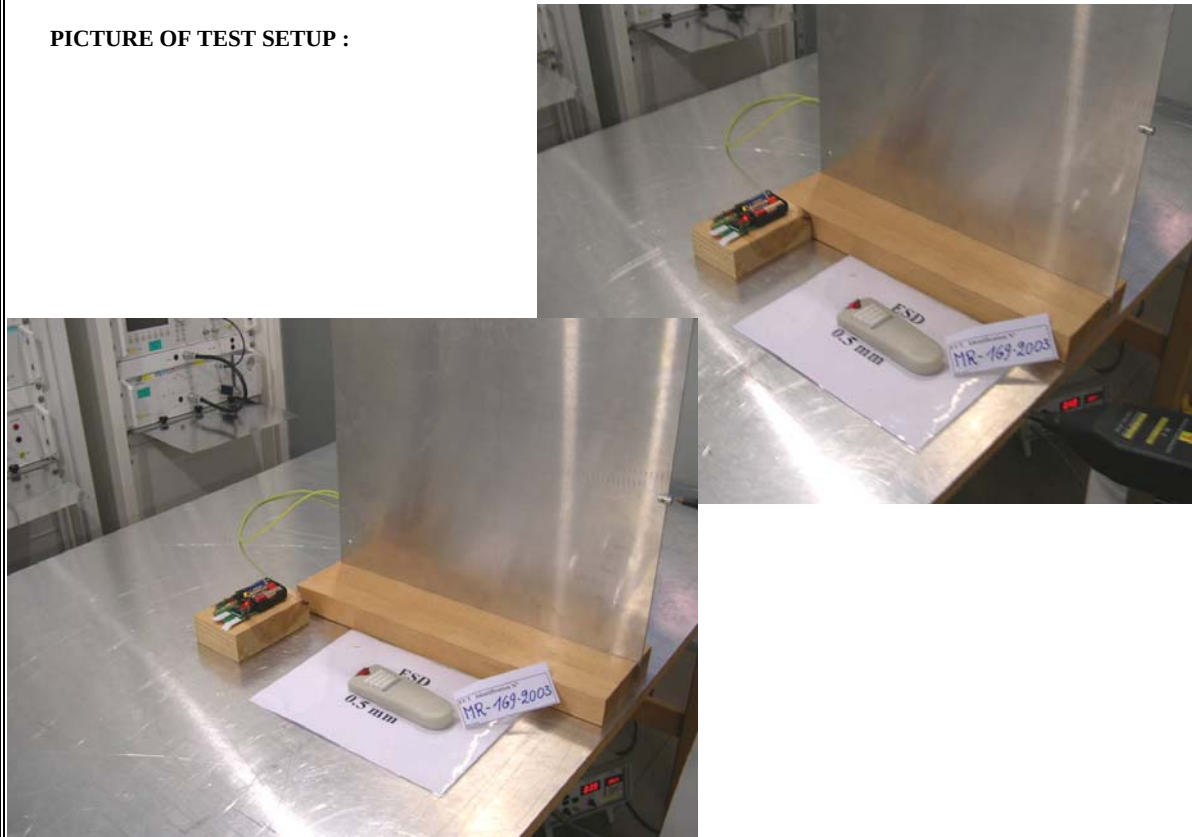


Figure 5 – Example of test set-up for table-top equipment – Laboratory tests

PICTURE OF TEST SETUP :



File Number : MR-169-2003 (A)

OVERVIEW TEST SEVERITY LEVELS AND RESULTS

Test System : PEMC 09 Electrostatic Discharge

According standard : EN55020 /A12 (1999) IEC 1000-4-2 (1995) AM 2(2000)

[illegible]

TEST REPORT

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E.U.T. :	K8058 (no serial n°)		
Manufacturer :	Velleman		
File number :	MR-169-2003 (A)		
Operating Condition :	Transmitting on		
Test Site :	EMC Centre		
Date Test :	7-6-2003	Temp. °C: 24.0 °C	RH. %: 50,0% Hpa : 1022 hPa
Operator :	Meuleman Hendrik		
Test Specification :	IEC 61000-4-2		
Comment :			

Test Pulse/Tip :	150pF/330 Ohm		
Voltage (kV) :	4 Kv		
Repetition (s) :	1 sec		
Mode :	POSITIF & NEGATIF		
Test position /coupling plane :	CONTACT--HORIZONTAL & VERTICAL COUPLING PLANE		
Events :	10 each point		
Test performed on E.U.T. point :	Sides left & right and bottom of device		
Test result :	All points Class A result		

Test Pulse/Tip :			
Voltage (kV) :			
Repetition (s) :			
Mode :	POSITIF--NEGATIF		
Test position /coupling plane :	INSIDE/OUTSIDE/COMPONENT--AIR/CONTACT--HORIZONTAL / VERTICAL		
Events :			
Test performed on E.U.T. point :			
Test result :			

Test Pulse/Tip :			
Voltage (kV) :			
Repetition (s) :			
Mode :	POSITIF--NEGATIF		
Test position /coupling plane :	INSIDE/OUTSIDE/COMPONENT--AIR/CONTACT--HORIZONTAL / VERTICAL		
Events :			
Test performed on E.U.T. point :			
Test result :			

Test Pulse/Tip :			
Voltage (kV) :			
Repetition (s) :			
Mode :	POSITIF--NEGATIF		
Test position /coupling plane :	INSIDE/OUTSIDE/COMPONENT--AIR/CONTACT--HORIZONTAL / VERTICAL		
Events :			
Test performed on E.U.T. point :			
Test result :			

Test Pulse/Tip :			
Voltage (kV) :			
Repetition (s) :			
Mode :	POSITIF--NEGATIF		
Test position /coupling plane :	INSIDE/OUTSIDE/COMPONENT--AIR/CONTACT--HORIZONTAL / VERTICAL		
Events :			
Test performed on E.U.T. point :			
Test result :			