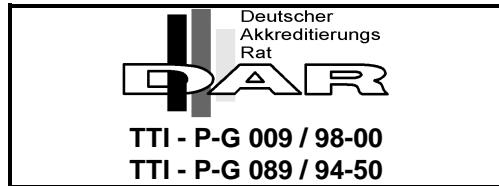


FCC ID: PGT00005382



## EMISSION -- TEST REPORT

Testreport file no. : **T 18328-1-00 KJ** Date of issue : February 01, 2001

Model : TIMLN 5382

Type : Transponder Immobilizer

Applicant : Temic Telefunken microelectronic GmbH

Manufacturer : Temic Telefunken microelectronic GmbH  
(Philippines)

Licence holder : Temic Telefunken microelectronic GmbH

Address : An der B31  
D-88090 Immenstaad  
Germany

**Test result** accrdg.  
to the regulation(s)  
at page 3

:

**POSITIVE**

This testreport with appendix consists of **28** pages.  
The testresult only responds to the tested sample. It is not allowed to copy  
this report even partly without the allowance of the testlaboratory.

File No. **T 18328-1-00 KJ** , Page **1** of **17**

**FCC ID: PGT00005382****D I R E C T O R Y**

	<b>Page</b>
<b>A) Documentation</b>	
Directory	2
Testregulations	3
General information	4-5
Discovery of worst case condition	6
Equipment under Test	16
Summary	17
<b>B) Testdata</b>	
Conducted emissions 10/150 kHz - 30 MHz	7
Spurious emissions (magnetic field) 10 kHz - 30 MHz	8-10
Spurious emissions (electric field) 30 MHz - 1000 MHz	11
Spurious emissions (electric field) 1 GHz - 18 GHz	12
Raiated power of the fundamental wave	13-14
Conducted power of the fundamental wave measured on the antenna terminals	15
<b>Attachment</b>	
A) Testdata / Band with plots	A1-A3
B) List of Test Equipment	B1
C) Photos of the test setup	C1
D) Technical description of the test sample (e.g.CDF, Declaration)	D1-D3
E) Photos of the EuT	E1-E3
F) Measurement Protocol for FCC, VCCI and AUSTEL	--

**FCC ID: PGT00005382**

**TEST REGULATIONS**

The tests were performed according to following regulations :

- o - EN 50081-1 / 2.1991
- o - EN 50081-2 / 7.1993

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- o - EN 55011 / 3.1991
- o - EN 55014 / 4.1993
- o - EN 55014 / A2:1990
- o - EN 55104 / 5.1995
- o - EN 55015 / A1:1990
- o - EN 55015 / 12.1993
- o - EN 55022 / 5.1995
- o - prEN 55103-1 / 3.1995
- o - prEN 50121-3-2 / 3.1995
- o - EN 60601-1-2 / 4.1994
- o - VCCI
- - Part 15 Subpart C (15.209)
- o - Part 15 Subpart C (15.231)

- o - Group 1
- o - class A
- o - Household appliances and similar
- o - tools
- o - Semiconductor devices
- Category:
- o - class A
- o - class B
- o - class 1
- o - class 2

**FCC ID: PGT00005382**

**ADDRESS OF THE TEST LABORATORY**

- - MIKES BABT PRODUCT SERVICE GmbH  
Ohmstrasse 2-4  
D - 94342 Strasskirchen
- - \_\_\_\_\_  
\_\_\_\_\_

**ENVIRONMENTAL CONDITIONS**

Temperature: 15-35 ° C  
Humidity 45-60 %  
Atmospheric pressure 860-1060 mbar

**POWER SUPPLY SYSTEM UTILIZED**

Power supply system : Battery Unom = 12 V DC

**STATEMENT OF MEASUREMENT UNCERTAINTY**

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities that can account for a nominal measurement error of  $\pm 4$ dB. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

**SHORT DESCRIPTION OF THE EQUIPMENT UNDER TEST (EUT)**

The TIMLN 5382 is a transponder immobilizer operating on a fundamental frequency of approx. 125 kHz.

Number of received/tested samples: 2/1

Serial Number: Prototype

**DEFINITIONS FOR SYMBOLS USED IN THIS TEST REPORT**

- - Black box indicates that the listed condition, standard or equipment is applicable for this Report.
- - Blank box indicates that the listed condition, standard or equipment was not applicable for this Report.

**FCC ID: PGT00005382**

**M E A S U R E M E N T   P R O T O C O L   F O R   F C C ,   V C C I**  
**A N D   A U S T E L**

**Test Methodology**

Conducted and radiated emission testing is performed according to the procedures in International Special Committee on Radio Interference (CISPR) Publication 22 (1993), European Standard EN 55022 and Australian Standard AS 3548 (which are based on CISPR 22).

The Japanese standard, "Voluntary Control Council for Interference (VCCI) by Data Processing Equipment and Electronic Office Machines, Technical Requirements" is technically equivalent to CISPR 22 (1993). For official compliance, a conformance report must be sent to and accepted by the VCCI.

In compliance with FCC Docket 92-152, "Harmonization of Rules for Digital Devices Incorporate International Standards", testing for FCC compliance may be done following the ANSI C63.4-1992 procedures and using the FCC limits or the CISPR 22 Limits.

**Measurement Error**

The test system for conducted emissions is defined as the LISN, tuned receiver and coaxial cable. The test system for spurious emissions is defined as the antenna, the pre-amplifier, the tuned receiver and the coaxial cable. These test systems have an expected error of  $\pm 3$  dB. The equipment comprising the test systems are calibrated on an annual basis.

**Justification**

The Equipment Under Test (EUT) is configured in a typical user arrangement in accordance with the manufacturer's instructions. A cable is connected to each available port and either terminated with a peripheral into its characteristic impedance or left unterminated. When appropriate, the cables are manually manipulated with respect to each other to obtain maximum emissions from the unit.

**General Standard Information**

The test methods used comply with CISPR Publication 22 (1993), EN 55022 (1987) and AS 3548 (1992) - "Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment" and with ANSI C63.4-1992 - "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz."

For detailed description of each measurement please refer to section testresults.

**FCC ID: PGT00005382**

**DISCOVERY OF WORST CASE MEASUREMENT CONDITION:**

The Immobilizer is designed for the operation on the fixed transmitter frequency of approx. 125 kHz.

To find out the worst case conditions for the complete measurement the following tests have been performed:

- Measurement of the radiated fieldstrength of the operating frequency measured in permanent operation mode in the specified channel. This measurement have been performed in order to find out the maximum transmitted fieldstrength of the Immobilizer.
- Measurement of the radiated spurious emissions measured in permanent operation mode in the specified channel. This measurement have been performed in order to find out the maximum spurious emissions of the Immobilizer.

Based on this testresults, the measurements have been performed completely on the specified channel. This testresults are documented in the following sections of the testreport.

**FCC ID: PGT00005382**

**T E S T R E S U L T**

**CONDUCTED EMISSIONS - 10/150 kHz - 30 MHz**

**■ - Test not applicable**

**Testlocation :**

- - Shielded room no. 1
- - Shielded room no. 2
- - Shielded room no. 3
- - Shielded room no. 4
- - Shielded room no. 5
- - Shielded room no. 6
- - Shielded room no. 7
- - Anechoic chamber
- - Full compact chamber

For TEST EQUIPMENT USED please refer to ATTACHMENT B: -----

**Description of Measurement**

The final level, expressed in dB $\mu$ V, is arrived at by taking the reading directly from the EMI receiver. This level is compared directly to the FCC Limit or to the CISPR limit, which is equivalent to the Australian AS 3548 limit.

To convert between dB $\mu$ V and  $\mu$ V, the following conversions apply:

$$\text{dB}\mu\text{V} = 20(\log \mu\text{V})$$

$$\mu\text{V} = \text{Inverse log}(\text{dB}\mu\text{V}/20)$$

Conducted emissions on the 50 Hz and/or 60 Hz power interface of the EUT are measured in the frequency range of 150 kHz to 30 MHz. The measurements are performed using a receiver, which has CISPR characteristic bandwidth and quasipeak detection, and a Line Impedance Stabilization Network (LISN), with  $50\Omega$  /  $50 \mu\text{H}$  (CISPR 16) characteristics. Table top equipment is placed on a non-conducting table 80 centimeters above the floor and is positioned 40 centimeters from the vertical ground plane (wall) of the screen room. If the minimum passing margin appears to be less than 20 dB with a peak mode measurement, the emissions are remeasured using a tuned receiver with quasipeak and average detection and recorded on the data sheets.

**Testresult**

The requirements are

**O - MET**

**O - NOT MET**

Min. limit margin \_\_\_\_\_ dB at \_\_\_\_\_ MHz

Max. limit exceeding \_\_\_\_\_ dB at \_\_\_\_\_ MHz

Remarks: EUT is connected to the DC power supply in the car. There are no requirements for conducted emissions on DC input port for car use.

**SPURIOUS EMISSION**

Spurious emissions from the EUT are measured in the frequency range of 9 kHz to 30 MHz using a tuned receiver and a shielded loop antenna. The antenna was positioned 3, 10 or 30 meters horizontally from the EUT. Measurements have been

## FCC ID: PGT00005382

made in all three orthogonal axes and the shielded loop antenna was rotated to locate the maximum of the emissions.

Spurious emissions from the EUT are measured in the frequency range of 30 MHz to 10 times the highest used frequency using a tuned receiver and appropriate broadband linearly polarized antennas. Measurements between 30 MHz and 1000 MHz are made with 120 kHz/6 dB bandwidth and quasipeak detection and measurements above 1000 MHz are made with a 1 MHz/6 dB bandwidth and peak detection, remeasurement of results which may be critical will be repeated in average mode. Table top equipment is placed on a 1.0 X 1.5 meter non-conducting table 80 centimeters above the ground plane. Floor standing equipment is placed directly on the turntable/ground plane. Interface cables that are closer than 40 centimeters to the ground plane are bundled in the center in a serpentine fashion so they are at least 40 centimeters from the ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screen room located outside the test area. The antenna was positioned 3, 10 or 30 meters horizontally from the EUT. To locate maximum emissions from the test sample the antenna is varied in height from 1 to 4 meters, measurement scans are made with both horizontal and vertical antenna polarizations and the EUT are rotated 360 degrees.

### SPURIOUS EMISSION (MAGNETIC FIELD) 9 kHz - 30 MHz

#### o - Test not applicable

- o - in a shielded room
- - at a non - reflecting open-site and
- - in a testdistance of 3 meters.
- - in a testdistance of 10 meters.
- - in a testdistance of 30 meters.

For TEST EQUIPMENT USED please refer to ATTACHMENT B: SER1 -----

### Description of Measurement

The final level, expressed in dB $\mu$ V/m, is arrived at by taking the reading from the EMI receiver (Level dB $\mu$ V) and adding the antenna correction factor and cable loss factor (Factor dB) to it. This result then has to be compared with the relevant FCC limit.

Example:

Frequency (MHz)	Level (dB $\mu$ V)	+	Factor (dB)	=	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	=	Delta (dB)
1.705	5	+	20	=	25	30	=	5

## FCC ID: PGT00005382

### Testresult in detail:

Testdistance 3m

Frequency [kHz]	L: PK [dB $\mu$ V]	L: AV [dB $\mu$ V]	L: QP [dB $\mu$ V]	Correct. [dB]	L: PK [dB $\mu$ V/m]	L: AV [dB $\mu$ V/m]	L: QP [dB $\mu$ V/m]	Limit [dB $\mu$ V/m]
366.08	23.0	22.4	23.6	20	43.0	42.4	43.6	96.33
610.08	14.7	13.8	16.8	20	34.7	33.8	36.8	71.90
855.05	6.4	3.5	8.0	20	26.4	23.5	28.0	68.96
3294.74	16.3	14.9	15.1	20	36.3	34.9	35.1	69.54
4024.51	5.2	3.2	3.6	20	25.2	23.2	23.6	69.54
4514.67	11.8	11.1	10.7	20	31.8	31.1	30.7	69.54
4758.72	12.4	12.3	12.4	20	32.4	32.3	32.4	69.54
5002.71	8.4	6.8	6.8	20	28.4	26.8	26.8	69.54
5246.72	8.8	6.2	6.5	20	28.8	26.2	26.5	69.54

Testdistance 10m

Frequency [kHz]	L: PK [dB $\mu$ V]	L: AV [dB $\mu$ V]	L: QP [dB $\mu$ V]	Correct. [dB]	L: PK [dB $\mu$ V/m]	L: AV [dB $\mu$ V/m]	L: QP [dB $\mu$ V/m]
366.08	13.6	10.5	11.2	20	33.6	30.5	31.2
610.08	11.7	11.3	11.5	20	31.7	31.3	31.5
855.05	<0	<0	<0	20	<20	<20	<20
3294.74	11.4	9.8	10.0	20	31.4	29.8	30.0
4024.51	5.0	2.6	3.0	20	25.0	22.6	23.0
4514.67	8.8	7.3	6.9	20	28.8	27.3	26.9
4758.72	7.6	4.6	4.7	20	27.6	24.6	24.7
5002.71	6.2	4.0	4.0	20	26.2	24.0	24.0
5246.72	2.6	0.2	0.5	20	22.6	20.2	20.5

Testdistance 30m

Frequency [kHz]	L: PK [dB $\mu$ V]	L: AV [dB $\mu$ V]	L: QP [dB $\mu$ V]	Correct. [dB]	L: PK [dB $\mu$ V/m]	L: AV [dB $\mu$ V/m]	L: QP [dB $\mu$ V/m]	Limit [dB $\mu$ V/m]
366.08	<0	<0	<0	20	<20	<20	<20	56.33
610.08	<0	<0	<0	20	<20	<20	<20	31.90
855.05	<0	<0	<0	20	<20	<20	<20	28.96
3294.74	<0	<0	<0	20	<20	<20	<20	29.54
4024.51	<0	<0	<0	20	<20	<20	<20	29.54
4514.67	<0	<0	<0	20	<20	<20	<20	29.54
4758.72	<0	<0	<0	20	<20	<20	<20	29.54
5002.71	<0	<0	<0	20	<20	<20	<20	29.54
5246.72	<0	<0	<0	20	<20	<20	<20	29.54

**FCC ID: PGT00005382**

The requirements are

**■ - MET**

**O - NOT MET**

Min. limit margin >5 dB at 0.009-30 MHz

Max. limit exceeding \_\_\_\_\_ dB at \_\_\_\_\_ MHz

Remarks: The limits are met.

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## FCC ID: PGT00005382

### SPURIOUS EMISSIONS (electric field) 30 MHz - 1000 MHz

#### - Test not applicable

- Open-site 1
- Open-site 2
- 3 meters
- 10 meters
- 30 meters

For TEST EQUIPMENT USED please refer to ATTACHMENT B: SER2 -----

#### Description of Measurement

The final level, expressed in dB $\mu$ V/m, is arrived by taking the reading from the EMI receiver (Level dB $\mu$ V) and adding the correction factors and cable loss factor (Factor dB) to it. This is done automatically in the EMI receiver, where the correction factors are stored. This result then has the FCC or CISPR limit subtracted from it to provide the Delta which gives the tabular data as shown in the data sheets at page 24 - 25. The CISPR 22 limit is equivalent to the Australian AS 3548 limit.

Example:

Frequency (MHz)	Level (dB $\mu$ V)	+	Factor (dB)	=	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	=	Delta (dB)
719	75	+	32.6	=	107.6	110	=	-2.4

#### Testresult

The requirements are

- MET

- NOT MET

Min. limit margin

\_\_\_\_\_ dB

\_\_\_\_\_ MHz

Min. limit margin

\_\_\_\_\_ dB

\_\_\_\_\_ MHz

Remarks: NOT APPLICABLE.

Transmission frequency 125 kHz.

## FCC ID: PGT00005382

### SPURIOUS EMISSION 1 GHz - 18 GHz

**■ - Test not applicable**

#### **Testlocation :**

- - Open-site 1
- - Open-site 2
- - Anechoic chamber
- - Full compact chamber
  
- - 1 meters
- - 3 meters
- - 10 meters

For TEST EQUIPMENT USED please refer to ATTACHMENT B: -----

#### **Description of Measurement**

The final level, expressed in dB $\mu$ V/m, is arrived by taking the reading from the Spectrumanalyzer in dB $\mu$ V and adding the correction factors of the test setup incl. cables.

Example of the correction value at 1.8 GHz

Level reading at 1.8 GHz	Correction EMCO 3115	correction Amplifier AWT 4534 + cable	Correction factor (summarized)	corrected level
56 dB $\mu$ V	+27.3 dB	-41.2 dB	-15.8 dB	42.1 dB $\mu$ V/m

#### **Testresult**

The requirements are

**O - MET**

**O - NOT MET**

Min. limit margin

\_\_\_\_\_ dB

\_\_\_\_\_ MHz

Min. limit margin

\_\_\_\_\_ dB

\_\_\_\_\_ MHz

Remarks: NOT APPLICABLE.

Transmission frequency 125 kHz.

## FCC ID: PGT00005382

### FIELD STRENGTH OF THE FUNDAMENTAL WAVE

- Test not applicable

- Open-site 1
- Open-site 2
- 3 meters
- 10 meters
- 30 meters

For TEST EQUIPMENT USED please refer to ATTACHMENT B: CPR1 -----

### Description of Measurement

The final level, expressed in dB $\mu$ V/m, is arrived by taking the reading from the EMI receiver (Level dB $\mu$ V) and adding the correction factors and cable loss factor (Factor dB) to it. This is done automatically in the EMI receiver, where the correction factors are stored. This result then has the FCC or CISPR limit subtracted from it to provide the Delta which gives the tabular data as shown in the data sheets at page 24 - 25. The CISPR 22 limit is equivalent to the Australian AS 3548 limit.

Example:

Frequency (MHz)	Level (dB $\mu$ V)	+	Factor (dB)	=	Level (dB $\mu$ V/m)	-	Limit (dB $\mu$ V/m)	=	Delta (dB)
315	45	+	22.5	=	67.5	-	74.3	=	-6.8

**FCC ID: PGT00005382****Testresult in detail:**

Testdistance 3m

Frequency [MHz]	L: PK [dB $\mu$ V]	L: AV [dB $\mu$ V]	L: QP [dB $\mu$ V]	Correct. [dB]	L: PK [dB $\mu$ V/m]	L: AV [dB $\mu$ V/m]	L: QP [dB $\mu$ V/m]	Limit [dB $\mu$ V/m]
0.122	61.3	58.5	58.1	+20	81.3	78.5	78.1	105.87

Testdistance 10m

Frequency [MHz]	L: PK [dB $\mu$ V]	L: AV [dB $\mu$ V]	L: QP [dB $\mu$ V]	Correct. [dB]	L: PK [dB $\mu$ V/m]	L: AV [dB $\mu$ V/m]	L: QP [dB $\mu$ V/m]
0.122	33.9	32.7	32.3	+20	53.9	52.7	52.3

Testdistance 30m

Frequency [MHz]	L: PK [dB $\mu$ V]	L: AV [dB $\mu$ V]	L: QP [dB $\mu$ V]	Correct. [dB]	L: PK [dB $\mu$ V/m]	L: AV [dB $\mu$ V/m]	L: QP [dB $\mu$ V/m]	Limit [dB $\mu$ V/m]
0.122	30.5	29.2	28.8	+20	50.5	49.2	48.8	65.87

**Testresult**

The requirements are

 - MET - NOT MET

Min. limit margin

\_\_\_\_ &gt;5 dB

0.009-30 MHz

Min. limit margin

\_\_\_\_ dB

\_\_\_\_ MHz

Remarks: The limits are met.

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**FCC ID: PGT00005382**

**CONDUCTED POWER OF THE FUNDAMENTAL WAVE MEASURED  
ON THE ANTENNA TERMINALS**

**■ - Test not applicable**

**Testlocation :**

- - Shielded room no. 1
- - Shielded room no. 2
- - Shielded room no. 3
- - Shielded room no. 4
- - Shielded room no. 5
- - Shielded room no. 6
- - Shielded room no. 7
- - Anechoic chamber
- - Full compact chamber
- - Climatic test chamber VLK

For TEST EQUIPMENT USED please refer to ATTACHMENT B: -----

**Description of Measurement**

The conducted power of the fundamental wave measured on the antenna terminals in a climatic test chamber. The antenna jack was connected to the input of a communication test receiver. The internal batteries have been removed also and a variable DC power supply was used instead. The measurements have been made with the EUT unmodulated. During the test the supply voltage and the temperature were varied and applied simultaneously. The lower supply voltage was given by the manufacturer. In case the equipment was switching off before, the switch off voltage was used instead.

**Testresult**

The requirements are

**O - MET**

**O - NOT MET**

Frequency range of equipment								
Tempera-ture/°C	DC supply voltage/V	Power/dBm						
-30								
-20								
-10								
0								
+10								
+20								
+30								
+40								
+50								

Remarks: NOT APPLICABLE

**EQUIPMENT UNDER TEST**

**Operation - mode of the EUT.:**

The equipment under test was operated during the measurement under following conditions:

- Standby
- Testprogram (H - Pattern)
- Testprogram (color bar)
- Testprogram (customer specific)
- Transmit in the frequency range of 121.0 kHz to 129.0 kHz.

- \_\_\_\_\_
- \_\_\_\_\_

**Configuration of the equipment under test:**

Following periphery devices and interface cables were connected during the measurement:

- \_\_\_\_\_ Type : \_\_\_\_\_

- unshielded power cable
- unshielded cables
- shielded cables MPS.No. : \_\_\_\_\_
- customer specific cables
- \_\_\_\_\_
- \_\_\_\_\_

**FCC ID: PGT00005382**

**S U M M A R Y**

**GENERAL REMARKS:**

The measured Immobilizer TIMLN 5382 operates on the frequency 125 kHz

**FINAL JUDGEMENT:**

The requirements according to the technical regulations and tested operation modes are

- - met.
- - **not** met.

The equipment under test

- - **Fulfills** the general approval requirements cited on page 3.
- - **Does not** fulfill the general approval requirements cited on page 3.

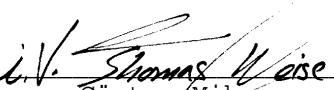
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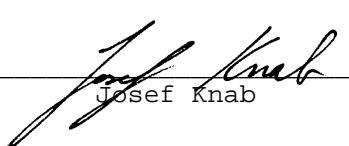
Testing Start Date : July 24, 2000

Testing End Date : July 25, 2000

- MIKES BABT PRODUCT SERVICE GmbH -

Test-engineer

  
\_\_\_\_\_  
Günter Mikes  
Dipl.-Ing. (FH)

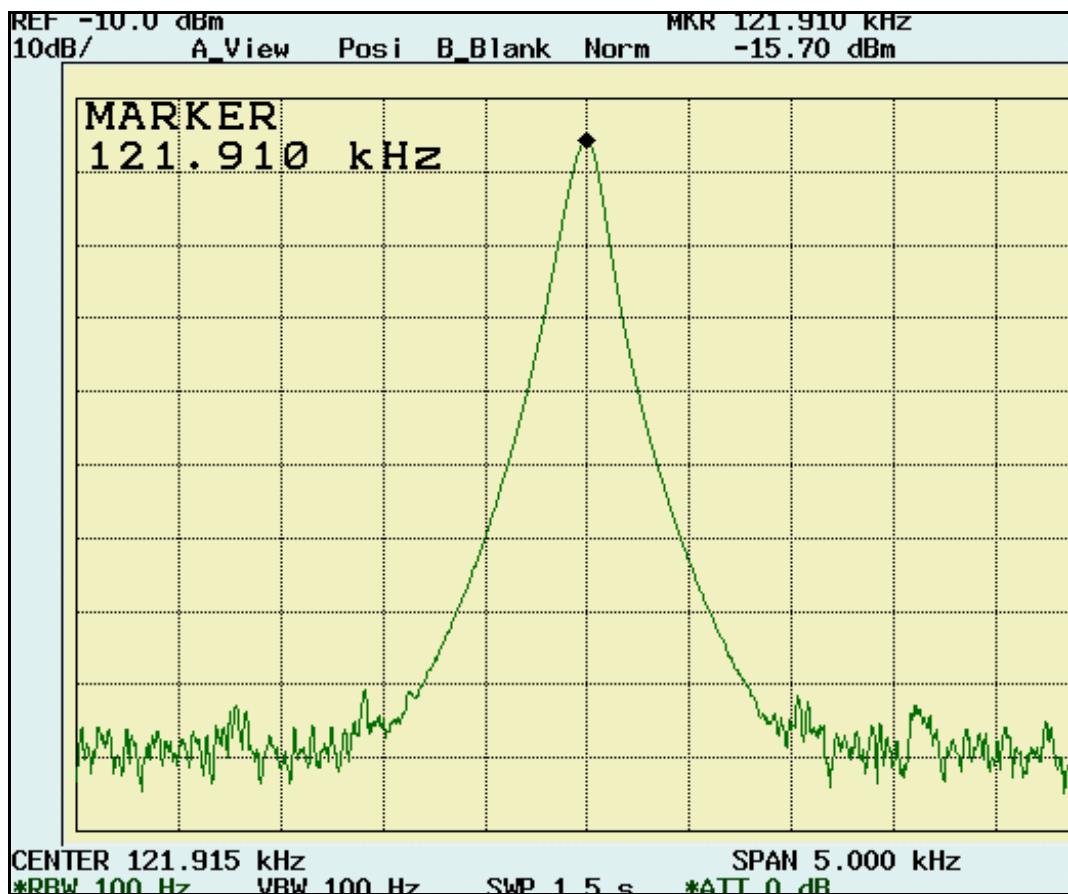
  
\_\_\_\_\_  
Josef Knab

Attachment A1

FCC ID: PGT00005382

File No:T 18328-1-00 KJ

Band width plot



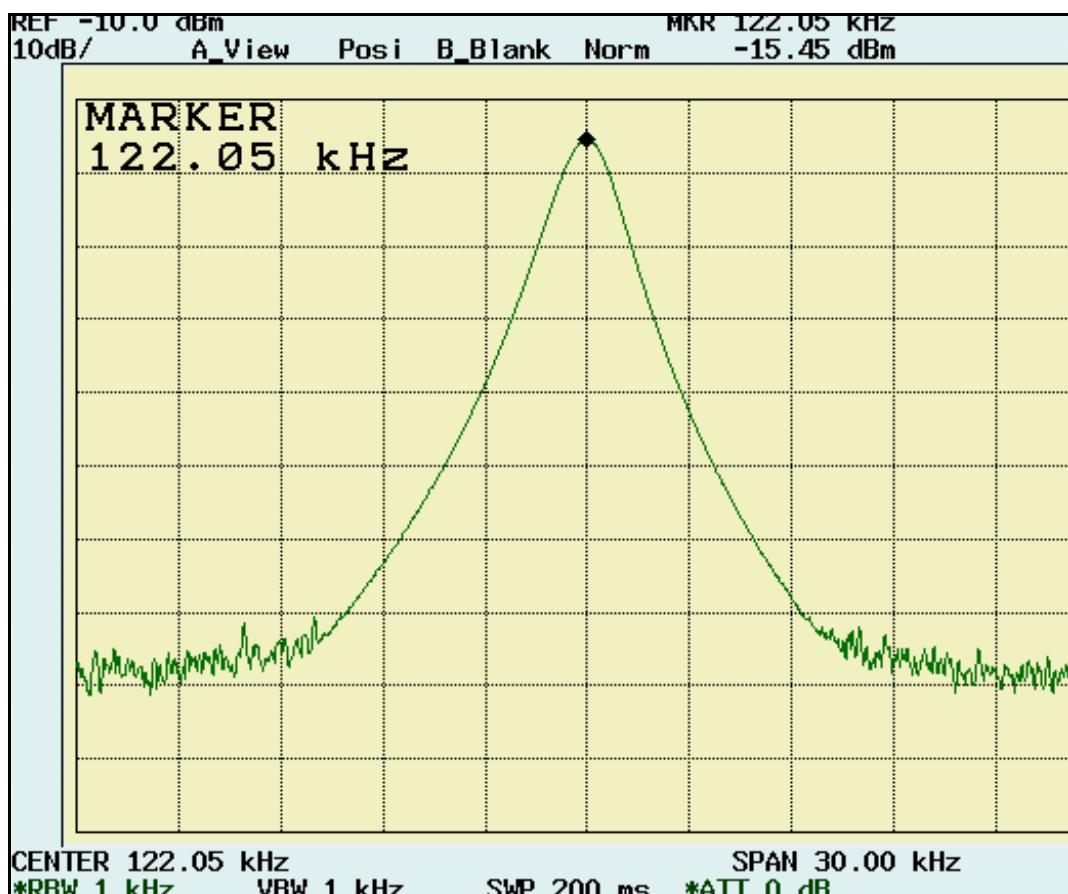
File No. T 18328-1-00 KJ, Page A1 of A3

Attachment A2

FCC ID: PGT00005382

File No: T 18328-1-00 KJ

Band width plot



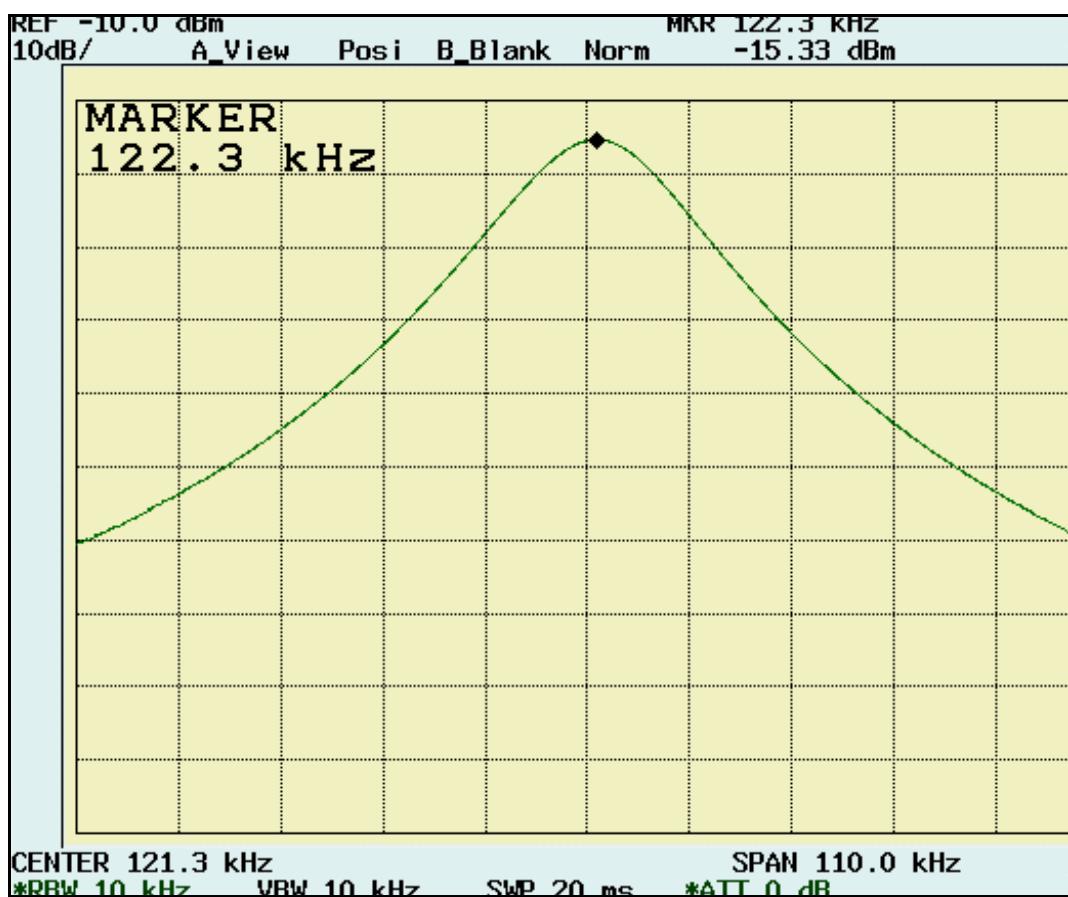
File No. T 18328-1-00 KJ, Page A2 of A3

Attachment A3

FCC ID: PGT00005382

File No: T 18328-1-00 KJ

Band width plot



File No. T 18328-1-00 KJ, Page A3 of A3

**Attachment : B****List of Test Equipment**

All test instruments used, in addition to the test accessories, are calibrated and verified regularly.

Test Report No: T 18328-1-00 KJ

Beginning of Testing: 24-Juli-2000

Test ID	Model Type	Kind of Equipment	Manufacturer	Equipment No.
CPR1	FMZB 1516	Antenna	Schwarzbeck G.	04-07/62-90-018
	ESHS 30	Test Receiver	Rohde & Schwarz München	04-07/63-92-045
SER1	FMZB 1516	Antenna	Schwarzbeck G.	04-07/62-90-018
	ESHS 30	Test Receiver	Rohde & Schwarz München	04-07/63-92-045
SER2	HCC	Controller Ant.-Mast	Rohde & Schwarz München	04-07/59-97-001
	RG 214 U	Antenna cable 2 m	Huber+Suhner	04-07/60-89-463
	HF 7/8 inch	Antenna cable 13 m	Huber+Suhner	04-07/60-99-001
	HF 7/8 inch	Antenna cable 20 m	Huber+Suhner	04-07/60-99-002
	HF 7/8 inch	Antenna cable 40 m	Huber+Suhner	04-07/60-99-003
	KR - 200	Coax Antenna Switch	Rosenberger HF-Technik	04-07/60-99-004
	VULB - 9165	Super-Broadband-Anten	Schwarzbeck G.	04-07/62-00-001
	ESVP	Test Receiver	Rohde & Schwarz München	04-07/63-89-008
	ESVP-EZM	Spectrum Monitor	Rohde & Schwarz München	04-07/74-86-016
	Antennenmast	Antenna mast	Rohde & Schwarz München	04-07/92-97-001

**CONSTRUCTIONAL DATAFORM FOR TESTING OF RADIO EQUIPMENT**

Licence holder:	Temic Telefunken microelectronic GmbH		
Address:	Temic Telefunken, An der B31, 88090 Immenstaad, Germany		
Manufacturer:	Temic Telefunken microelectronic GmbH		
Address:	Temic Telefunken, Bagsakon Road ITI Estate, 1630 Taguig Metro Manila, Philippines		
Type:	Transponder Immobilizer		
Model:	TIMLN 5382		
Serial-No.:		Protection class:	

**Additional informations to the above named model:**

<b>Antenna:</b> transmitter:	Type: Air core coil
receiver:	Length/size: about 86 turns / diameter: about 27mm
	Type: single wire of the cable harness
	Length/size: about 2λ
<b>Power supply of the transmitter:</b> Type:	nominal voltage: 12.0 V
	lowest voltage: 9.0 V
	highest voltage: 15.0 V
	current consumption
<b>Power supply of the receiver:</b> Type:	nominal voltage: 12.0 V
	current consumption

**Ancillary equipment:**

Description:	Type:	Serial-no.:
Description:	Type:	Serial-no.:
Description:	Type:	Serial-no.:

**Extreme temperature range in which the approval test should be performed:**

Category I: General (-20°C to +55°C)  
 Category II: Portable (-10°C to +55°C)  
 Category III: Equipment for normal indoor use (0°C to +55°C)  
 General (-40°C to +80°C)

**Connectable cables:**

Name of the cable	Digital	Length/m	shielded
KI. 30 / 31 / Ignition / CAN / Warning Flasher / Diagnostic / Locking-System interface	<input checked="" type="checkbox"/> yes <input type="radio"/> no	about 1.5 m	<input type="radio"/> yes <input checked="" type="checkbox"/> no
RF-Antenna	<input type="radio"/> yes <input checked="" type="checkbox"/> no	about 2λ	<input type="radio"/> yes <input checked="" type="checkbox"/> no
Ignition-Coil (125 kHz antenna)	<input checked="" type="checkbox"/> yes <input type="radio"/> no	about 30 cm	<input checked="" type="checkbox"/> yes <input type="radio"/> no
	<input type="radio"/> yes <input checked="" type="checkbox"/> no		<input type="radio"/> yes <input checked="" type="checkbox"/> no

 **If applicable, if necessary complete overleaf****Page D1**

<b>Type designation:</b> <b>TIMLN 5382</b>			
<b>Name and type designation of individual units comprising the radio equipment:</b>			
<b>Type of equipment:</b>			
<input type="checkbox"/> Radiotelephone equipment <input type="checkbox"/> One-way radiotelephone equipment <input type="checkbox"/> Personal paging system <input type="checkbox"/> Satellite earth station <input type="checkbox"/> Data transmission equipment	<input checked="" type="checkbox"/> Remote-control equipment <input checked="" type="checkbox"/> Inductive loop system <input type="checkbox"/> Radio-relay system <input type="checkbox"/> CB radiotelephone equipment <input type="checkbox"/> Movement detector	<input type="checkbox"/> Radiomaritime equipment <input type="checkbox"/> Inland waterways equipment <input type="checkbox"/> Radionavigation equipm. <input type="checkbox"/> Antenna	<input type="checkbox"/> LPD <input type="checkbox"/> RLAN <input type="checkbox"/> <input type="checkbox"/>
<b>Technical characteristics:</b>			
Frequency range	Transmitter-receiver		
Maximum no. of channels	Transmitter		
Channel spacing	Receiver		
Class of emission (type of modulation)	<b>K0D</b>		
Maximum RF output power	<b>90 dB<math>\mu</math>V/m</b>		
Maximum effective radiated power (ERP)			
Output power variable	-		
Channel switching frequency range	-		
Method of frequency generation	<input type="checkbox"/> Synthesizer <input checked="" type="checkbox"/> Crystal <input type="checkbox"/> Other		
Frequency generation TX			
Frequency generation RX			
IF	1st IF -	2nd IF -	3rd IF -
Integral selective calling			
Audio-frequency interface level at external data socket			
Modes of operation	<input type="checkbox"/> Duplex mode <input type="checkbox"/> Semi-duplex mode <input checked="" type="checkbox"/> Simplex mode		
Power source	<input type="checkbox"/> Mains <input checked="" type="checkbox"/> Vehicle-regulated <input type="checkbox"/> Integral		
Antenna socket	<input type="checkbox"/> BNC <input type="checkbox"/> TNC <input type="checkbox"/> M <input type="checkbox"/> UHF <input type="checkbox"/> None <input checked="" type="checkbox"/> tab 2.8 mm <input type="checkbox"/> N <input type="checkbox"/> Adapter		
<b>Test specifications:</b>			

O If applicable, if necessary complete overleaf

Page D 2

**Declarations:**

- We declare that the above information are correct and the named model was supplied with the maximum configuration to the accredited test laboratory.

Immenstaad ,date 22.01.2001

place of issue

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TELEFUNKEN microelectronic GmbH  
Kfz-Elektronik  
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Tel.: 07145-8-1244  
Fax: 07145-8-6062

*W. Wom*  
Seal and signature of applicant

**O If applicable, if necessary complete overleaf**

Page D 3