



Accredited testing-laboratory

DAR registration number: DGA-PL-176/94-D1

**Federal Motor Transport Authority (KBA)
DAR registration number: KBA-P 00070-97**

**Recognized by the Federal Communications Commission
Anechoic chamber registration no.: 90462 (FCC)
Anechoic chamber registration no.: 3462C-1 (IC)
Certification ID: DE 0001
Accreditation ID: DE 0002**

Accredited Bluetooth® Test Facility (BQTF)

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Test report no. : 1-1928-02-02/10 B
Type identification : PMV-C010
Applicant : Pacific Industrial Co., Ltd
FCC ID : PAXPMVC010
IC Certification No : 3729A-PMVC010
Test standards : 47 CFR Part 15.231 (a) & (e)
RSS - 210 Issue 7

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1 General information

1.1 Notes

The test results of this test report relate exclusively to the test item specified in 3.1.1. The CETECOM ICT Services GmbH does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the CETECOM ICT Services GmbH.

Test laboratory manager:

2010-03-01

Date

Marco Bertolino

Name



Signature

Technical responsibility for area of testing:

2010-03-01

Date

Stefan Bös

Name



Signature

1.2 Testing laboratory

CETECOM ICT Services GmbH

Untertürkheimer Straße 6 - 10

66117 Saarbrücken

Germany

Phone: + 49 681 5 98 - 0

Fax: + 49 681 5 98 - 9075

e-mail: info@ICT.cetecom.de

Internet: http://www.cetecom-ict.de

State of accreditation:

The test laboratory (area of testing) is accredited according to
DIN EN ISO/IEC 17025

DAR registration number: DGA-PL-176/94-D1

Accredited by:

Federal Motor Transport Authority (KBA)
DAR registration number: KBA-P 00070-97

Testing location, if different from CETECOM ICT Services GmbH:

Name :

Street :

Town :

Country :

Phone :

Fax :

1.3 Details of applicant

Name:	Pacific Industrial Co., Ltd
Street:	Godo-Cho, Anpachi
Town:	Gifu 503-2397
Country:	JAPAN
Telephone:	-/-
Fax:	-/-
Contact:	Kunitaka Yano
E-mail:	knyano@pacific-ind.co.jp
Telephone:	-/-

1.4 Application details

Date of receipt of order:	2010-01-19
Date of receipt of test item:	2010-01-25
Date of start test:	2010-01-26
Date of end test:	2010-01-27
Persons(s) who have been present during the test:	-/-

2 Test standard/s

47 CFR Part 15	2008-07	Title 47 of the Code of Federal Regulations; Chapter I- Federal Communications Commission subchapter A - general, Part 15-Radio frequency devices
RSS - 210 Issue 7	2007-06	Spectrum Management and Telecommunications - Radio Standards Specification Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment

3 Technical tests

3.1 Details of manufacturer

Name:	Pacific Industrial Co., Ltd
Street:	Godo-Cho, Anpachi
Town:	Gifu 503-2397
Country:	JAPAN

3.1.1 Test Item (Additional EUT information For IC Canada (appendix 2))

Kind of test item	:	Tire Pressure Monitoring System
Type identification	:	PMV-C010
S/N serial number	:	0000001
HW hardware status	:	A3
SW software status	:	C1T_EX_V0a11
Frequency Band [MHz]	:	260 MHz – 470 MHz
Frequency Range (or fixed frequency)	:	315 MHz
Type of Modulation	:	F2D
Number of channels	:	1
Antenna information	:	Built-in type – for more information please take a look at sub-clause 9 → Photos of the EUT
Power Supply	:	3 V DC by lithium battery BR2450A
Temperature Range	:	No information available!

Max. field strength: 62.66 dBμV/m AV at 3 m distance

FCC ID: PAXPMVC010
IC: 3729A-PMVC010

3.2 Additional EUT information For IC Canada (appendix 2)

IC Registration Number:	3729A-PMVC010
Model Name:	PMV-C010
Manufacturer (complete Address):	CETECOM Japan K.K. 1-19-2 Tomigaya , Shibuya-ku Tokyo 151-0063 JAPAN
Tested to Radio Standards Specification (RSS) No.:	RSS-210 Issue 7
Open Area Test Site Industry Canada Number:	IC 3462C-1
Frequency Range (or fixed frequency) [MHz]:	314.98 MHz
Field Strength (at what distance):	62.66 dBμV/m at 3 m distance
Antenna Type:	Built-in type – for more information please take a look at sub-clause 9 → Photos of the EUT
Occupied Bandwidth (99% BW) [kHz]:	63.14
Type of Modulation:	F2D
Emission Designator (TRC-43):	63K1F2D
Transmitter Spurious (worst case) [dBμV/m in 3m]:	37.82 (Outside Restricted Bands)
Receiver Spurious (worst case) [dBμV/m in 10m]:	No receiver mode available!
Power Supply :	3 V DC by lithium battery BR2450A
Temperature Range :	No information available!

ATTESTATION:

I attest that the testing was performed or supervised by me; that the test measurements were made in accordance with the above-mentioned departmental standard(s), and that the radio equipment identified in this application has been subject to all applicable test conditions specified in the departmental standards and all of the requirements of the standards have been met.

Signature:



Test engineer: Marco Bertolino **Date:** 2010-03-01

3.2.1 RF Technical Brief Cover Sheet acc. To RSS-102

All Fields must be completed with the requested information or the following codes: N/A for Not Applicable, N/P for Not Performed or N/V for Not Available. Where applicable, check appropriate box.

- | | |
|------------------------|-----------------------------|
| 1. COMPANY NUMBER: | 3729A |
| 2. MODEL NUMBER: | PMV-C010 |
| 3. MANUFACTURER: | Pacific Industrial Co., Ltd |
| 4. TYPE OF EVALUATION: | N/A |

Declaration of RF Exposure Compliance

ATTESTATION:

I attest that the information provided in the test report is correct; that a Technical Brief was prepared and the information it contains is correct; that the device evaluation was performed or supervised by me; that applicable measurement methods and evaluation methodologies have been followed and that the device meets the SAR and/or RF exposure limits of RSS-102.

Name: Dipl.-Ing. (FH) Marco Bertolino
Title: Expert
Company: Cetecom ICT Services GmbH

Signature:



Date: 2010-03-01

3.2.2 Extreme conditions testing values

Description	Shortcut	Unit	Value
Nominal Temperature	T _{nom}	°C	20
Nominal Humidity	H _{nom}	%	36
Nominal Power Source	V _{nom}	V	3

Type of power source: **DC by lithium battery BR2450A**

3.2.3 Additional comments

The manufacturer declaration:

The complete technical parameters are specified in the following reference documents:

Reference documents: Technical Document for Type Approval for Tire Pressure Monitoring System Transmitter
Type: PMV-C010 Jan. 2010

Operation manual LF trigger device for TPMS transmitter type B2N1 (PMV-107S & PMV-107U) Version 2.10

The stationary mode and the rotating mode will be certified according to § 15.231(e).

The pressure alert mode and high temperature alert mode will be certified according to § 15.231(a).

These two modes are automatic transmission modes and will be activated when a rapid pressure change or temperature change is being detected.

4 Statement of Compliance

4.1 Summary of Measurement Results

- ☒ No deviations from the technical specifications were ascertained
☐ There were deviations from the technical specifications ascertained

4.1.1 CFR 47 Part 15 Unintentional Radiators

Section in this Report	Test Name / Section FCC Part 15	Test Name / Section RSS 210 Issue 7	Measurement applicable	Verdict
6.1	§ 15.35 (c) Timing of the transmitter (Duty cycle correction factor)	RSS-GEN Issue 2 Section 4.5	YES	PASS
6.2	§ 15.231 (a) (2) Switch off time	RSS-210 Issue 7 Section A1.1.1	YES	PASS
6.3	§ 15.231 (3) (c) Emission Bandwidth	RSS-210 Issue 7 Section A1.1.3	YES	PASS
6.4	§ 15.231 (b) Fieldstrength of Fundamental	RSS-210 Issue 7 Section A1.1.2 / 2.7 Table 4	YES	PASS
6.5	§ 15.209 Fieldstrength of harmonics and spurious	RSS-210 Issue 7 Section 2.7 Table 4	YES	PASS
6.6	§ 15.209 Receiver spurious emissions (radiated)	RSS-GEN Issue Section 6	NO	-/-

5 Measurements and results

The radiated measurements are performed in vertical and horizontal plane in the frequency range from 9 kHz to 20 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber.

The receiving antennas are confirmed with specifications ANSI C63.2-1996 clause 15 and ANSI C63.4-2003 clause 4.1.5. These antennas can be moved over the height range between 1.0 m and 4.0 m in order to search for maximum field strength emitted from EUT. The measurement distances between EUT and receiving antennas are indicated in the test set-ups for the various frequency ranges. For each measurement, the EUT is rotated in all three axes until the maximum field strength is received.

The wanted and unwanted emissions are received by spectrum analysers where the detector modes and resolution bandwidths over various frequency ranges are set according to requirement ANSI C63.4-2003 clause 4.2.

Antennas are confirmed with ANSI C63.2-1996 item 15.

150 kHz - 30 MHz: Quasi Peak measurement, 9 kHz Bandwidth, active loop antenna.

30 MHz - 200 MHz: Quasi Peak measurement, 120 kHz Bandwidth, tri-log antenna

200MHz - 1GHz: Quasi Peak measurement, 120 kHz Bandwidth, tri-log antenna

>1GHz: Average, RBW 1MHz, VBW 10 Hz, wave guide horn

All measurement settings are according to FCC 15.109 and 15.107

6 FCC Part 15 Subpart C

6.1.1 Timing of the transmitter

Reference

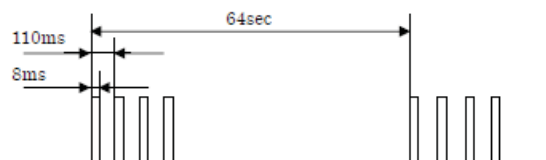
FCC:	CFR Part SUBCLAUSE § 15.231 (e)
IC:	RSS-GEN Issue 2 Section 4.5

Manufacturer declaration:

Explanation of transmitting

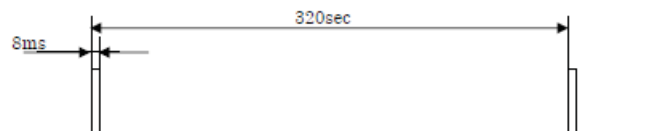
This transmitter sends the signals as the following the transmission timing.

☐ Rotating mode



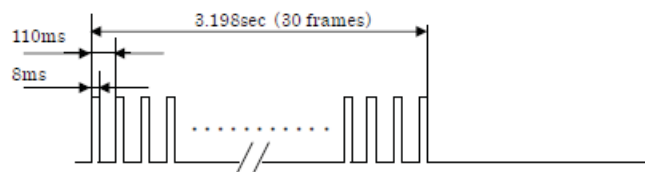
The rotation mode is transmitted by four frames every 64 seconds.

☐ Stationary mode



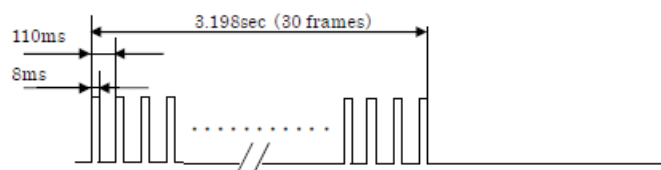
The stationary mode is transmitted by one frame every 320 seconds.

☐ Pressure alert



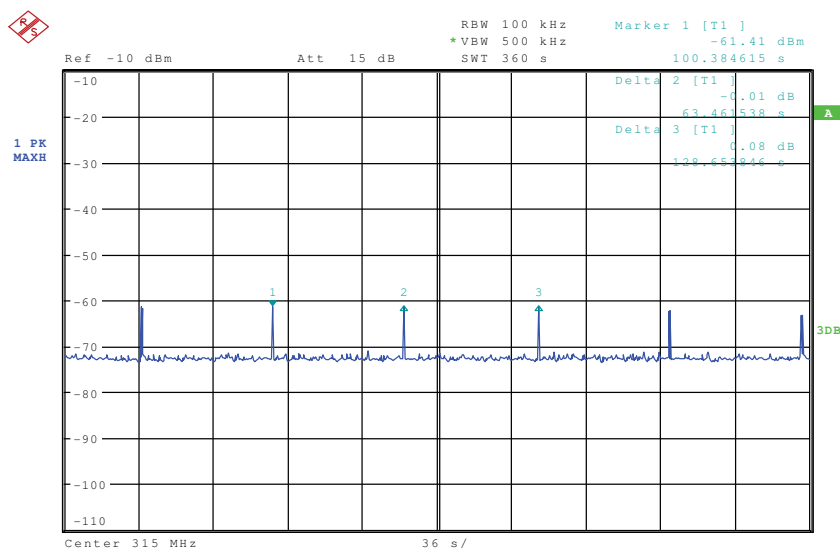
The pressure alert mode stops after continuously transmitting 30 frames.

☐ High temperature alert



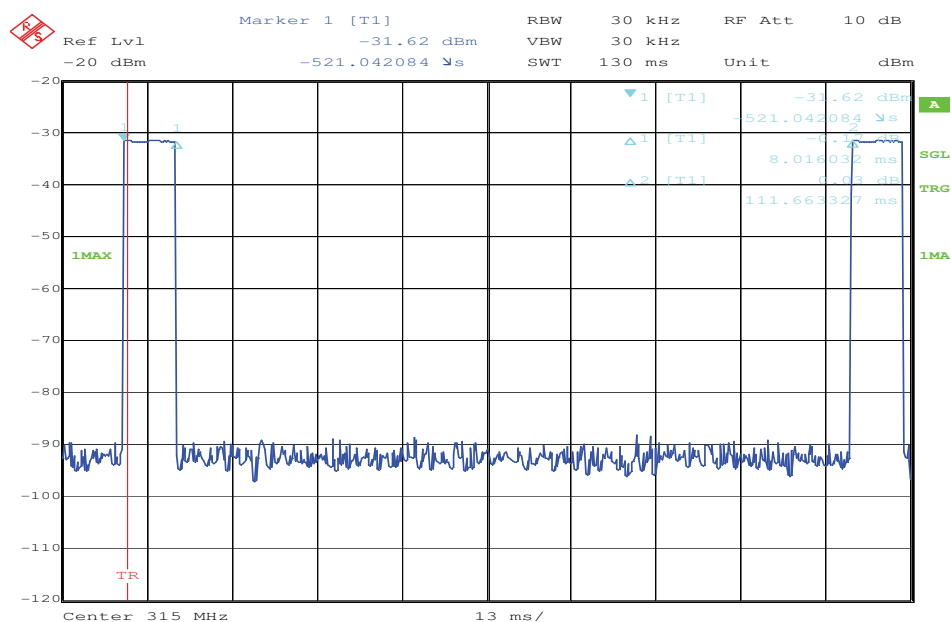
The high temperature alert mode stops after continuously transmitting 30 frames.

Plot 1: Timing of the transmitter



Date: 26.JAN.2010 09:28:20

Plot 2: Timing of the frame



Date: 29.JAN.2010 07:26:45

Rotating mode:

Duration of Transmission:	4 x 8ms + 3 x 110ms	= 362ms < 1 second
Minimum Silent Period:	30 x 362ms	= 10.86sec
Silent Period:	64sec – 362ms	= 63.638sec > 10.86sec

Stationary mode:

Duration of Transmission:	1 x 8ms	= 8ms < 1 second
Minimum Silent Period:	30 x 8ms	= 240ms à Minimum silent period = 10sec
Silent Period:	320sec – 8ms	= 319.992sec > 10sec

Limits: § 15.231 (a) (1) (2)

A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

A transmitter activated automatically shall cease transmission within 5 seconds after activation.

Limits: § 15.231 (e)

In addition, devices operated under the provisions of this paragraph shall be provided with a means for automatically limiting operation so that the duration of each transmission shall not be greater than one second and silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds.

6.1.2 Switch off time

Reference

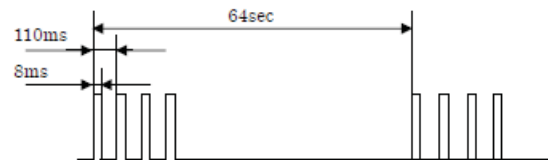
FCC:	CFR Part SUBCLAUSE § 15.231 (a) (2)
IC:	RSS-210 Issue 7 Section A1.1.1

Manufacturer declaration:

Explanation of transmitting

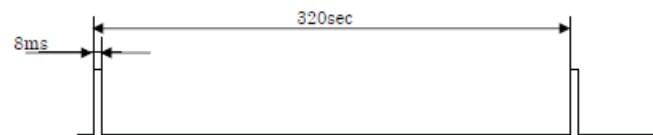
This transmitter sends the signals as the following the transmission timing.

☐ Rotating mode



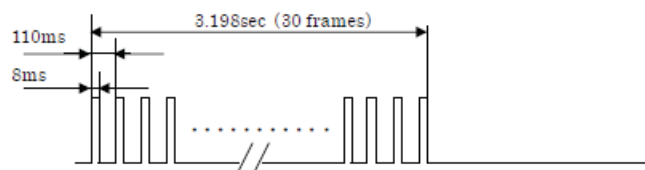
The rotation mode is transmitted by four frames every 64 seconds.

☐ Stationary mode



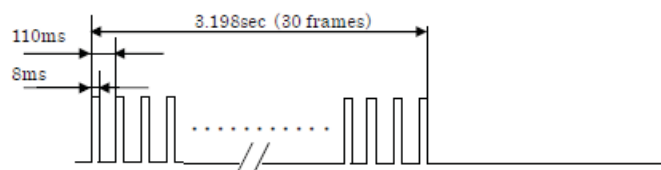
The stationary mode is transmitted by one frame every 320 seconds.

☐ Pressure alert



The pressure alert mode stops after continuously transmitting 30 frames.

☐ High temperature alert



The high temperature alert mode stops after continuously transmitting 30 frames.

The maximum transmit time: $30 * 1 \text{ frame (8ms)} \rightarrow 3.198 \text{ seconds} < 5 \text{ seconds}$

Limits: § 15.231 (a) (2)

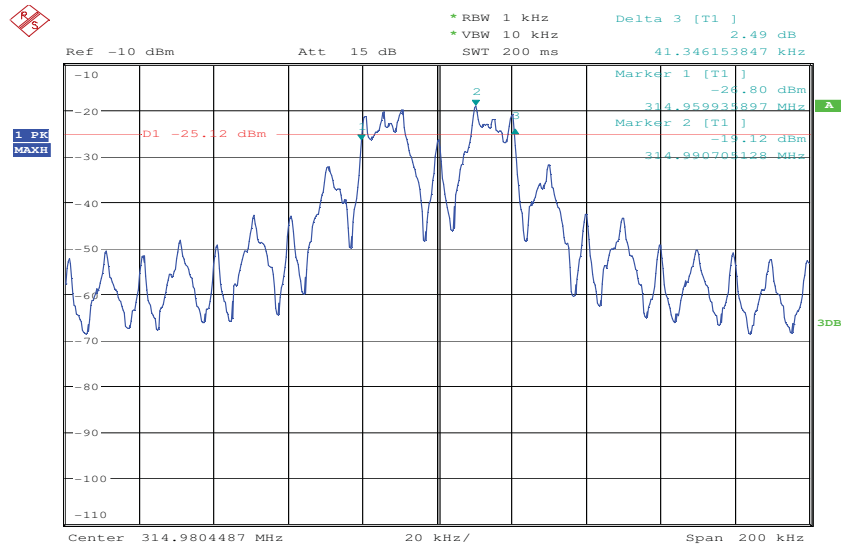
A transmitter activated automatically shall cease transmission within 5 seconds after activation.

6.1.3 Emission Bandwidth

Reference

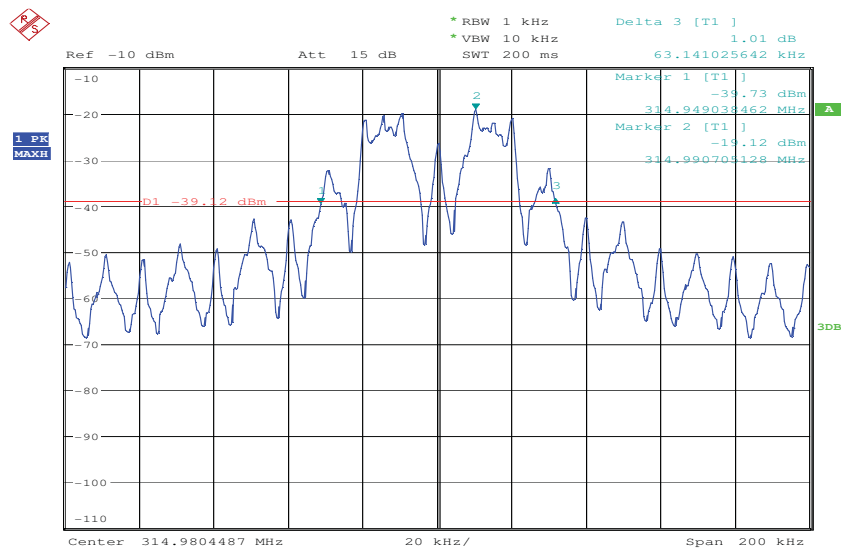
FCC:	CFR Part SUBCLAUSE § 15.231 (c)
IC:	RSS-210 Issue 7 Section A1.1.3

Plot 1: 6 dB bandwidth



Date: 26.JAN.2010 09:39:22

Plot 2: 20 dB bandwidth



Date: 26.JAN.2010 09:39:51

Limit: § 15.231 (3) (c)

The OBW shall not be wider than 0.25% of the centre frequency, here maximum 787.5 kHz.

6.1.4 Field Strength of the Fundamental

Reference

FCC:	CFR Part SUBCLAUSE § 15.231 (b) ; § 15.231 (e)
IC:	RSS-210 Issue 7 Section A1.1.2 / 2.7 Table 4 / Table 5

MAXIMUM FIELD STRENGTH

TEST CONDITIONS		MAXIMUM POWER (dBμV/m at 3 m distance)	
Mode		Peak	Re-calculated with the duty cycle
T _{nom}	V _{nom}	84.6 dBμV/m @ 3m	62.66 dBμV/m @ 3m
Measurement uncertainty		±3dB	

RBW/VBW: 120 kHz

Note:

TX on time: 8ms
Period: 100ms

Duty cycle: 8%

Correction factor: $20 \cdot \log(1/\text{duty cycle}) = 21.94 \text{ dB}$

Limits (Average Values)

SUBCLAUSE § 15.231 (b)

Fundamental Frequency (MHz)	Field strength of Fundamental (μV/m)	Field strength of spurious(μV/m)
40.66 – 40.70	2,250	225
70-130	1,250	125
130-174	1,250 to 3,750	125 to 375
174-260	3,750	375
260-470 (315)	3,750 to 12,500(6041.67)	375 to 1,250(604.167)
Above 470	12,500	1,250

Limits

SUBCLAUSE § 15.231 (e)

Fundamental Frequency (MHz)	Field strength of Fundamental (μV/m)	Field strength of spurious(μV/m)
40.66 – 40.70	1,000	100
70-130	500	50
130-174	500 to 1,500	50 to 150
174-260	1,500	150
260-470 (315)	1,500 to 5,000	150 to 500
Above 470	5,000	500

6.1.5 Field Strength of the Harmonics and Spurious

Reference

FCC:	CFR Part SUBCLAUSE § 15.231 (b) & (e)
IC:	RSS-210 Issue 7 Section 2.7 Table 4

Results:

EMISSION LIMITATIONS					
f		amplitude of emission PK/AV/QP	limit max. allowed	actual attenuation below frequency of operation (dB)	results
Vertical polarization			20dBc or 62 dBμ V/m and 54 dBμ V/m in restricted bands		Complies
1260.00 MHz		37.82 dBμ V/m*			Complies
1574.75 MHz		33.42 dBμ V/m*			Complies
1890.00 MHz		Outside the RB Emission 20 dB below the limit*			Complies
2204.71 MHz		32.02 dBμ V/m			Complies
2519.80 MHz		Outside the RB Emission 20 dB below the limit*			Complies
3464.50 MHz		Outside the RB Emission 20 dB below the limit*			Complies
Horizontal polarization					Complies
1260.00 MHz		Outside the RB Emission 20 dB below the limit*			Complies
1574.75 MHz		32.61 dBμ V/m*			Complies
1890.00 MHz		Outside the RB Emission 20 dB below the limit*			Complies
2204.77 MHz		32.76 dBμ V/m*			Complies
2519.80 MHz		Outside the RB Emission 20 dB below the limit*			Complies
3149.50 MHz		Outside the RB Emission 20 dB below the limit*			Complies
3464.50 MHz		Outside the RB Emission 20 dB below the limit*			Complies
3779.63 MHz		36.11 dBμ V/m*			Complies
Measurement uncertainty			± 3dB		

Note:

* All values are re-calculated with the duty cycle correction factor.

TX on time: 8ms
 Period: 100ms
 Duty cycle: 8%
 Correction factor: $20 \cdot \log(1/\text{duty cycle}) = 21.94 \text{ dB}$

Limits:

SUBCLAUSE § 15.231 (b)

Fundamental Frequency (MHz)	Field strength of Fundamental (µV/m)	Field strength of spurious(µV/m)
40.66 – 40.70	2,250	225
70-130	1,250	125
130-174	1,250 to 3,750	125 to 375
174-260	3,750	375
260-470(315)	3,750 to 12,500(6041.67)	375 to 1,250(604.167)
Above 470	12,500	1,250

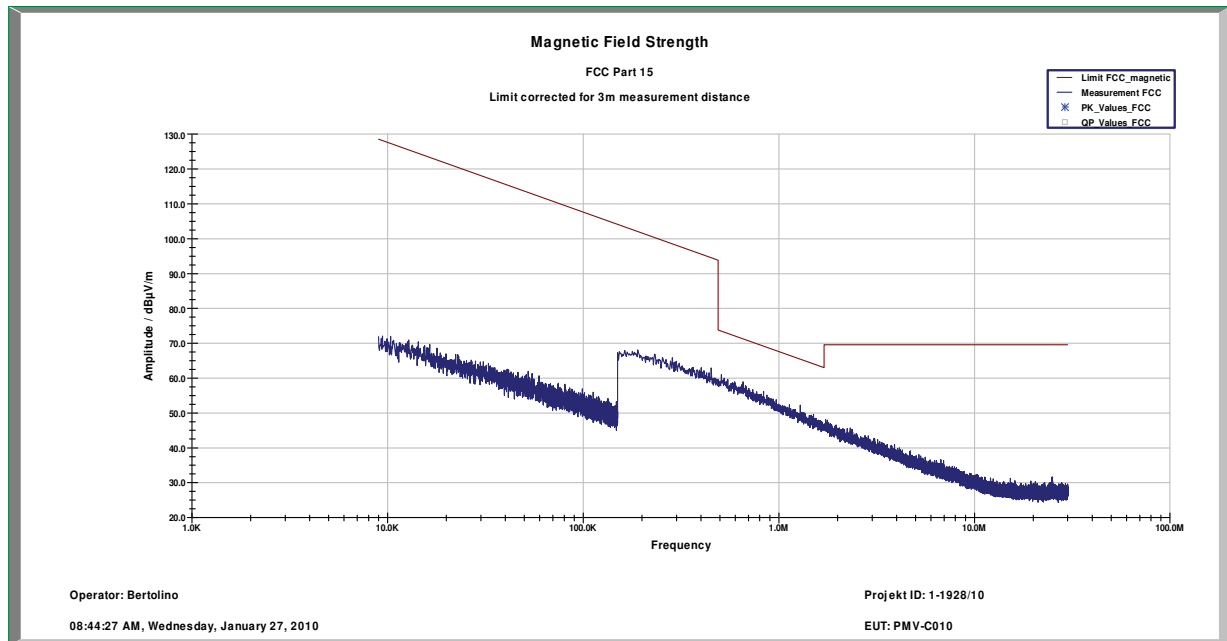
Limits:

SUBCLAUSE § 15.231 (e)

Fundamental Frequency (MHz)	Field strength of Fundamental (µV/m)	Field strength of spurious(µV/m)
40.66 – 40.70	1,000	100
70-130	500	50
130-174	500 to 1,500	50 to 150
174-260	1,500	150
260-470 (315)	1,500 to 5,000	150 to 500
Above 470	5,000	500

Part 15.109 Magnetics

Measurement distance 3m



Limits

SUBCLAUSE § 15.209

Frequency (MHz)	Field strength (μV/m)	Measurement distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
above 960	500	3

Plot 1: Tx mode, 30 MHz – 1 GHz, vertical polarization

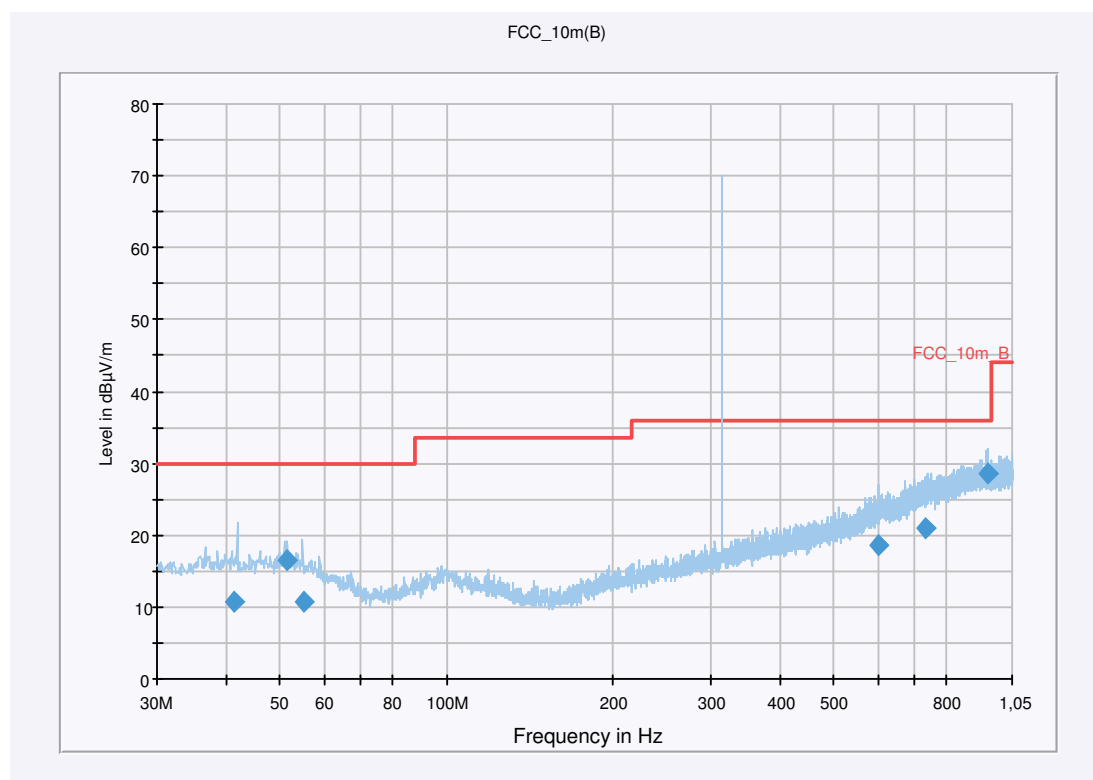
Common Information

EUT: PMV-C010
 Serial Number: 000001
 Test Description: FCC Part15 @ 10 m
 Operating Conditions: continous Tx
 Operator Name: Lang
 Comment: Battery Powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)
 Level Unit: dB μ V/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1,05 GHz	QuasiPeak	120 kHz	15 s	Receiver



Final Result 1

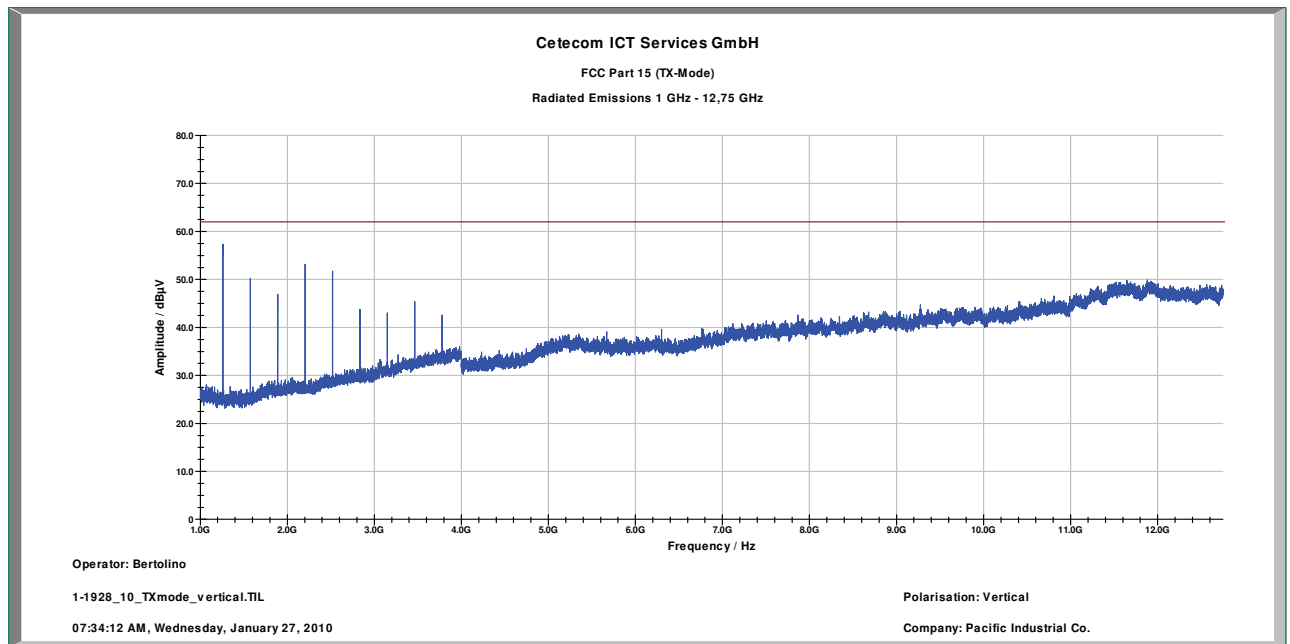
Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)	Comment
41.402550	10.8	15000.000	120.000	121.0	V	47.0	13.5	19.2	30.0	
51.624750	16.4	15000.000	120.000	100.0	V	151.0	13.4	13.6	30.0	
55.263000	10.8	15000.000	120.000	368.0	V	241.0	13.0	19.2	30.0	
601.106250	18.7	15000.000	120.000	200.0	V	356.0	21.4	17.3	36.0	
732.455550	21.1	15000.000	120.000	371.0	V	35.0	23.8	14.9	36.0	
944.898900	28.7	15000.000	120.000	127.0	H	4.0	25.8	7.3	36.0	

Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

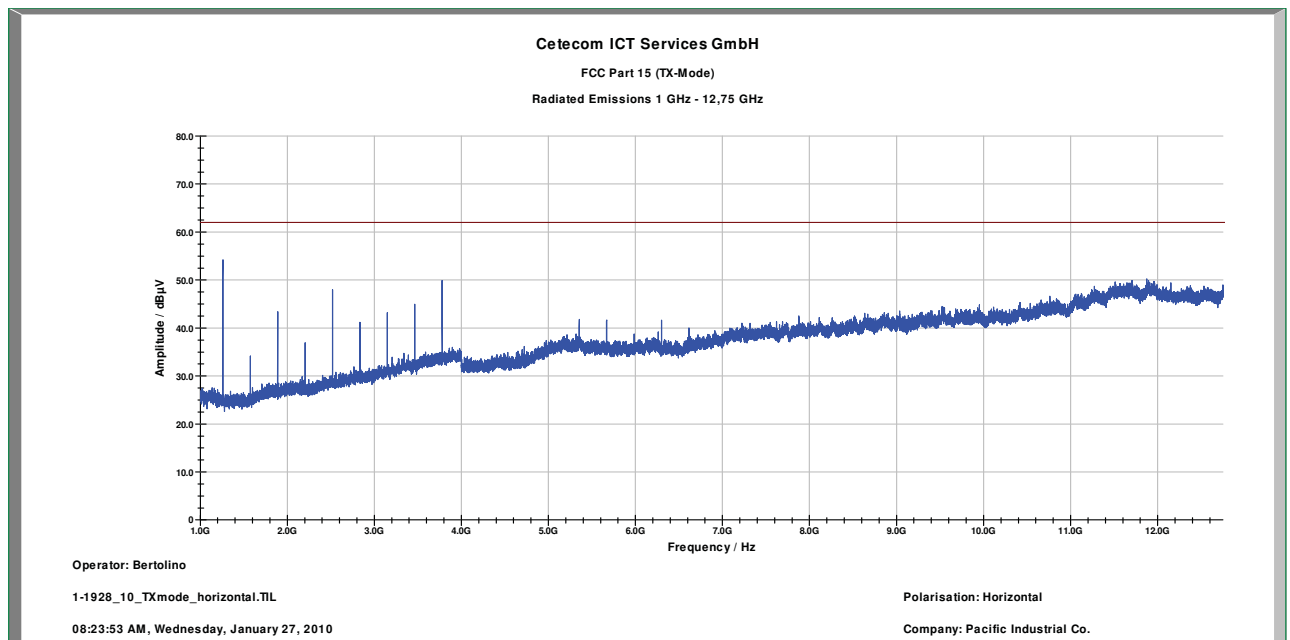
Subrange 1	
Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0909)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 8.10.00

Plot 2: Tx mode, 1 GHz – 12.75 GHz, vertical polarization



Plot 3: Tx mode, 1 GHz – 12.75 GHz, horizontal polarization



6.1.6 Receiver Spurious Emission (radiated)**Reference**

FCC:	CFR Part SUBCLAUSE § 15.109
IC:	RSS-GEN Issue Section 6

Not applicable!

No receiver mode available!

Limits**SUBCLAUSE § 15.109**

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Measurement distance (m)
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
above 960	500	3

7 Test equipment and ancillaries used for tests

To simplify the identification on each page of the test equipment used, on each page of the test report, each item of test equipment and ancillaries such as cables are identified (numbered) by the Test Laboratory, below.

All reported calibration intervals are calibrations according to the EN/ISO/IEC 17025 standard. These calibrations were performed from an accredited external calibration laboratory.

Additional to these calibrations the laboratory performed comparison measurements with other calibrated systems and performed a weekly chamber inspection.

All used devices are connected with a 10 MHz external reference.

According to the manufacturers' instruction is it possible to establish a calibration interval for the FSP unit of 24 month, if the device has an external 10 MHz reference.

Anechoic chamber C:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	Anechoic chamber	MWB	87400/02	300000996	Monthly verification		
2	System-Rack 85900	HP I.V.	*	300000222	n.a.		
3	Measurement System 1						
4	PSA-Spektrumanalysator 3 Hz - 26.5 GHz (E4440A)	Agilent	MY48250080	300003812	05.08.2008	24	05.08.2010
5	EMI Preselector 9 kHz - 1 GHz (N9039A)	Agilent	MY48260003	300003825	19.08.2008	24	19.08.2010
6	Microwave Analog Signal Generator (N5183A)	Agilent	MY47420220	300003813	06.08.2008	24	06.08.2010
7	PC	F+W			n.a.		
8	TILE	TILE			n.a.		
9	TRILOG Super Broadband Antenna (VULB9163)	Schwarzbeck	371	300003854	Monthly verification (System cal.)		
10	Double Ridged Antenna 3115	EMCO	3088	300001032	Monthly verification (System cal.)		
11	Active Loop Antenna 6502	EMCO	2210	300001015	Monthly verification (System cal.)		
12	Switch / Control Unit 3488A	HP	2719A15013	300001156	n.a.		
13	Power Supply 6032A	HP	2818A03450	300001040	08.01.2009	36	08.01.2012
14	Busisolator	Kontron		300001056	n.a.		
15	Leitungsteiler 11850C	HP		300000997	Monthly verification (System cal.)		
16	Power attenuator 8325	Byrd	1530	300001595	Monthly verification (System cal.)		
17	Band reject filter WRCG1855/1910	Wainwright	7	300003350	Monthly verification (System cal.)		
18	Band reject filter WRCG2400/2483	Wainwright	11	300003351	Monthly verification (System cal.)		
19	Hochpassfilter WHK1.1/15G-10SS	Wainwright	3	300003255	Monthly verification (System cal.)		
20	Hochpassfilter WHKX2.9/18G-12SS	Wainwright	1	300003492	Monthly verification (System cal.)		
21	Hochpassfilter WHKX7.0/18G-8SS	Wainwright	18	300003789	Monthly verification (System cal.)		
22	Switch / Control Unit 3488A	HP	2605e08770	300001443	n.a.		
23	Trenntrafo RT5A	Grundig	9242	300001263	n.a.		
24	Relais Matrix PSU	R&S	890167/024	300001168	n.a.		
25	Netznachbildung ESH3-Z5	R&S	828576/020	300001210	n.a.		

SRD Laboratory Room 005:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	Spektrum Analyzer 8566B	HP	2747A05275	300000219	18.01.2008	24	18.01.2010
2	Spektrum Analyzer Display 85662A	HP	2816A16497	300001690	23.01.2008	24	23.01.2010
3	Quasi-Peak-Adapter 85650A	HP	2811A01135	300000216	23.01.2008	24	23.01.2010
4	Power Supply	Heiden	003202	300001187	12.05.2007	36	12.05.2010
5	Power Supply	Heiden	1701	300001392	12.05.2007	36	12.05.2010

Anechoic chamber F:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	Control Computer	F+W	FW0502032	300003303	-/-	-/-	-/-
2	Trilog Antenna VULB 9163	Schwarzbeck	295	300003787	01.04.2008	24	01.04.2010
3	Amplifier - 0518C-138	Veritech Micro-wave Inc.	-/-	-/-	-/-	-/-	-/-
4	Switch - 3488A	HP		300000368	-/-	-/-	-/-
5	EMI Test receiver - ESCI	R&S	100083	300003312	01.06.2009	24	01.06.2011
6	Turntable Controller - 1061 3M	EMCO	1218	300000661	-/-	-/-	-/-
7	Tower Controller 1051 Controller	EMCO	1262	300000625	-/-	-/-	-/-
8	Tower - 1051	EMCO	1262	300000625	-/-	-/-	-/-
10	Ultra Notch-Filter Rejected band Ch. 62	WRCD	9	-/-	-/-	-/-	-/-

Test laboratory 011:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	Climatic box VUK 04/500	Heraeus Vötsch	32678	300000297	29.07.2008	24	27.07.2010
2	Spectrum Analyser 8565E	HP	3738A00773	300001665	08.01.2008	24	08.01.2010
3	Spectrum Analyser FSU 50	R&S	200012	300003443	05.06.2008	24	05.06.2010
4	SGH 12 ... 18 GHz	narda	01005	300000787	cyclic verification		
5	SGH 18 ... 27 GHz	narda	01005	300000487	cyclic verification		
6	SGH 27 ... 40 GHz	narda	82016	300000510	cyclic verification		
7	SGH 33 ... 50 GHz	Thomson		300000812	cyclic verification		
8	Adapter WG/SMA	narda	64088	-/-	cyclic verification		
9	Adapter WG/SMA	flann	213	-/-	cyclic verification		
10	Adapter WG/SMA	HP	00231	-/-	cyclic verification		
11	SGH 50 ... 75GHz	Thomson	-/-	300000813	cyclic verification		
12	Mixer 50 ... 75 GHz 11970V	HP	-/-	30000781i	07.08.2007	36	07.08.2010
13	SGH 75 ... 110 GHz	Thomson	-/-	30000798b	cyclic verification		
14	Mixer 75 ... 110 GHz 11970W	HP	-/-	30000781e	07.08.2007	36	07.08.2010
15	SGH 110 ... 170 GHz	Flann	-/-	300001999	cyclic verification		
16	Mixer 110 ... 170 GHz	Tektronix	B010186	300001685d	cyclic verification		
17	SGH 170 ... 325 GHz	Flann	-/-	300002000	cyclic verification		
18	Mixer 170 ... 325 GHz	Tektronix	B010241	300001685j	cyclic verification		

8 Photographs of the Test Set-up

Photo documentation:

Photo 1:



Photo 2:



9 Photographs of the EUT

Photo documentation: External photos

Photo 1:



Photo 2:



Photo 3:



Photo 4:



Photo 5:



Photo documentation: Internal photos

Internal photos

