

FCC and Industry Canada Testing of the
Domino UK Limited
RFiD Module, Model: EPT038882
In accordance with FCC 47 CFR Part 15B and
ICES-003

Prepared for: Domino UK Limited
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Cambridgeshire
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UK

FCC ID: 2AHFK-EPT038882
IC: 21200-EPT038882



Product Service

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Date: October 2017
Document Number: 75939628-08 | Issue: 01

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Project Management	Jennifer Harris	20 December 2017	
Authorised Signatory	Matt Russell	20 December 2017	

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD Product Service document control rules.

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC 47 CFR Part 15B and ICES-003. The sample tested was found to comply with the requirements defined in the applied rules.

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Testing	Graeme Lawler	20 December 2017	
Testing	Jack Tuckwell	20 December 2017	

FCC Accreditation
90987 Octagon House, Fareham Test Laboratory

Industry Canada Accreditation
IC2932B-1 Octagon House, Fareham Test Laboratory

EXECUTIVE SUMMARY

A sample of this product was tested and found to be compliant with FCC 47 CFR Part 15B: 2016 and ICES-003: 2016.



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ACCREDITATION

Our UKAS Accreditation does not cover opinions and interpretations and any expressed are outside the scope of our UKAS Accreditation. Results of tests not covered by our UKAS Accreditation Schedule are marked NUA (Not UKAS Accredited).

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1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
1	First Issue	20 December 2017

Table 1

1.2 Introduction

Applicant	Domino UK Limited
Manufacturer	Domino UK Limited
Model Number(s)	EPT038882
Serial Number(s)	Not Serialised (75939628-TSR0014)
Hardware Version(s)	R02
Software Version(s)	5.2
Number of Samples Tested	1
Test Specification/Issue/Date	FCC 47 CFR Part 15B: 2016 ICES-003: 2016
Order Number	PO292767
Date	03-July-2017
Date of Receipt of EUT	15-September-2017
Start of Test	20-September-2017
Finish of Test	20-September-2017
Name of Engineer(s)	Graeme Lawler and Jack Tuckwell
Related Document(s)	ANSI C63.4 (2014)



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1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15B and ICES-003 is shown below.


Section	Specification Clause		Test Description	Result	Comments/Base Standard
	Part 15B	ICES-003			
Configuration and Mode: DC Powered - RFID Idle					
2.1	15.109	6.2	Radiated Emissions	Pass	ANSI C63.4

Table 2



1.4 Declaration of Build Status

DECLARATION OF BUILD STATUS

Manufacturer	<u>Domino UK Limited</u>
Country of origin	<u>UK</u>
UK Agent	<u>Domino UK Limited</u>
Technical Description	<u>Quality Management Module Wireless</u>
Model No	<u>EPT038882</u>
Part No	<u>N/A</u>
Serial No	<u></u>
Drawing Number	<u>N/A</u>
Build Status	<u>Production</u>
Software Issue	<u>5.2</u>
Hardware Issue	<u>R02</u>
FCC ID	<u>2AHFK-EPT038882</u>
Industry Canada ID	<u>21200-EPT038882</u>
Signature	<u></u>
Date	<u>2nd October 2017</u>
D of B S Serial No	<u>30th August 2017</u>

Note: This document has been prepared to enable manufacturers with no mechanism for producing their own Declaration of Build Status, to declare the build state of the equipment submitted for test.

No responsibility will be accepted by TÜV SÜD Product Service as to the accuracy of the information declared in this document by the manufacturer.

1.5 Product Information

1.5.1 Technical Description

RFiD based device used to check the correct consumables are used with a Domino printer (i.e. tells customer they have put the wrong ink in the printer).

1.6 Deviations from the Standard

No deviations from the applicable test standard were made during testing.

1.7 EUT Modification Record

The table below details modifications made to the EUT during the test programme.
The modifications incorporated during each test are recorded on the appropriate test pages.

Modification State	Description of Modification still fitted to EUT	Modification Fitted By	Date Modification Fitted
Serial Number: Not Serialised (75939628-TSR0014)			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 3

1.8 Test Location

TÜV SÜD Product Service conducted the following tests at our Fareham Test Laboratory.

Test Name	Name of Engineer(s)	Accreditation
Configuration and Mode: DC Powered - RFiD Active		
Radiated Emissions	Graeme Lawler and Jack Tuckwell	UKAS

Table 4

Office Address:

Octagon House
Concorde Way
Segensworth North
Fareham
Hampshire
PO15 5RL
United Kingdom



2 Test Details

2.1 Radiated Emissions

2.1.1 Specification Reference

FCC 47 CFR Part 15B, Clause 15.109
ICES-003, Clause 6.2

2.1.2 Equipment Under Test and Modification State

EPT038882, S/N: Not Serialised (75939628-TSR0014) - Modification State 0

2.1.3 Date of Test

20-September-2017

2.1.4 Test Method

The test was performed in accordance with ANSI C63.4, clause 8.

2.1.5 Environmental Conditions

Ambient Temperature 18.1 - 19.0 °C
Relative Humidity 48.0 - 57.0 %

2.1.6 Test Results

DC Powered - RFID Idle

Highest frequency generated or used within the EUT: 27.12 MHz
Upper frequency test limit: 1 GHz

Frequency (MHz)	QP Level (dBuV/m)	QP Limit (dBuV/m)	QP Margin (dBuV/m)	Angle(Deg)	Height(m)	Polarity
31.776	34.7	40.0	-5.3	360	3.24	Horizontal
40.670	35.7	40.0	-4.3	143	1.68	Horizontal
96.432	29.7	43.5	-13.8	30	2.41	Horizontal
122.042	40.6	43.5	-2.9	187	2.48	Horizontal
199.986	30.0	43.5	-13.5	95	1.77	Horizontal
605.018	31.2	46.0	-14.8	243	1.17	Horizontal

Table 5 - 30 MHz to 1 GHz



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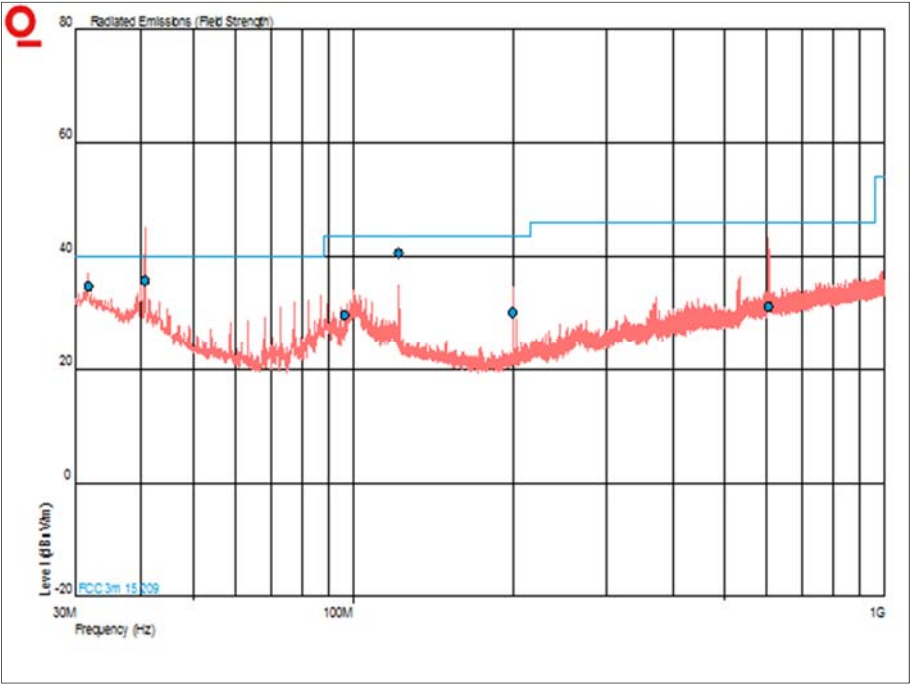


Figure 1 - 30 MHz to 1 GHz - Horizontal and Vertical



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FCC 47 CFR Part 15, Limit Clause 15.109

Frequency of Emission (MHz)	Field Strength ($\mu\text{V/m}$)
30 to 88	100.0
88 to 216	150.0
216 to 960	200.0
Above 960	500.0

ICES-003, Limit Clause 6.2

Frequency of Emission (MHz)	Quasi-Peak ($\text{dB}\mu\text{V/m}$)
30 to 88	40.0
88 to 216	43.5
216 to 960	46.0
960 to 1000	54.0

Frequency of Emission (MHz)	Field Strength ($\text{dB}\mu\text{V/m}$)	
	Linear Average Detector	Peak Detector
Above 1000	54.0	74.0

2.1.7 Test Location and Test Equipment Used

This test was carried out in EMC Chamber 5.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Antenna (Bilog)	Schaffner	CBL6143	287	24	18-Apr-2018
Antenna (Active Loop, 9kHz-30MHz)	Rohde & Schwarz	HFH2-Z2	333	24	09-Dec-2018
Antenna (Dish/Tripod/Adaptor, 1GHz-18GHz)	Rohde & Schwarz	AC-008	334	-	TU
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Comb Generator	Schaffner	RSG1000	3034	-	TU
Cable (N-N, 8m)	Rhophase	NPS-2302-8000-NPS	3248	12	02-May-2018
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	12-Nov-2017
Tilt Antenna Mast	maturo GmbH	TAM 4.0-P	3916	-	TU
Mast Controller	maturo GmbH	NCD	3917	-	TU
Digital thermo Hygrometer	Radio Spares	1260	4300	12	30-Aug-2018
Cable (Yellow, Rx, Km-Km 2m)	Scott Cables	KPS-1501-2000-KPS	4527	6	04-Nov-2017

Table 6

TU - Traceability Unscheduled



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3 Measurement Uncertainty

For a 95% confidence level, the measurement uncertainties for defined systems are:

Test Name	Measurement Uncertainty
Radiated Emissions	30 MHz to 1 GHz: ± 5.2 dB

Table 7