

Coulisse B.V.

MPE ASSESSMENT REPORT

Report Type:

FCC MPE assessment report

Model:

CM-34-120

REPORT NUMBER:

201101037SHA-002

ISSUE DATE:

March 5, 2021

DOCUMENT CONTROL NUMBER:

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Applicant: Coulisse B.V.
VONDERWEG 48, 7568 DC ENTER, NETHERLANDS

Manufacturer: Coulisse B.V.
VONDERWEG 48, 7568 DC ENTER, NETHERLANDS

FCC ID: ZY4CM34

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06

FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY:

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REVIEWED BY:

Reviewer
Daniel Zhao

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Revision History

Report No.	Version	Description	Issued Date
201101037SHA-002	Rev. 01	Initial issue of report	March 5, 2021

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Receiver
Type/Model:	CM-34-120
Description of EUT:	The EUT is a transceiver, it works at 433.90MHz Frequency, there is only one model, we test it and list the worst results in this report.
Rating:	Input: 120Vac, 60Hz, 3A; Output: max.360W, 3A
Category of EUT:	Class B
EUT type:	<input checked="" type="checkbox"/> Table top <input type="checkbox"/> Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	November 23, 2020
Date of test:	December 02, 2020 – January 28, 2021

1.2 Technical Specification

Operation Frequency:	433.90MHz
Type of Modulation:	GFSK
Product Type:	<input type="checkbox"/> Mobile <input type="checkbox"/> Portable <input checked="" type="checkbox"/> Fix Location
Channel Number:	1
Antenna Designation:	Line Antenna
Gain of Antenna:	2.5dBi

1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN1175
	IC Registration Lab CAB identifier.: CN0051
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

2 MPE Assessment

Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density S_{eq} (W/m ²)
0-1 Hz	-	$3,2 \times 10^4$	4×10^4	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	4 000/f	5 000/f	-
0,025-0,8 kHz	250/f	4/f	5/f	-
0,8-3 kHz	250/f	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	0,73/f	0,92/f	-
1-10 MHz	$87/f^{1/2}$	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	f/200
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

TEST REPORT**2.2 Assessment Results**

Power density (S) is calculated according to the formula:

$$S = P / (4\pi R^2)$$

Where S = power density in mW/cm²

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 201101037SHA-001:

The maximum radiated power = 80.80-95.3= -14.5dBm =0.04 mW;

Here R is chosen to be 20cm,

$$S = P / (4\pi R^2) = 0.04 / (4 * 3.14 * 20 * 20) = 0.000007 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

TEST REPORT

Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended.

***** END *****