

Japan MIC

Test Report

Equipment Under Test	EmbraceMini
Model Name	EmbraceMini
Variant Model Name	-
Applicant	Empatica S.r.l
Manufacturer	INTOPS Co.,Ltd. Suwon
Date of Test(s)	2025. 12. 18 ~ 2025. 12. 19
Date of Issue	2026. 01. 19

This test report is prepared according to the requirements of ISO / IEC 17025.
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
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Issue to	Issue by
Empatica S.r.l Via Stendhal, 36 20144 Milano (MI), Italy Tel.: +39-02-3616-5068 Fax: -	DEKRA Korea Co., Ltd. 498-2, Geumeo-ro, Pogok-eup,Cheoin-gu, Yongin-si, Gyeonggi-do, South Korea Tel.: +82-31-338-8837 Fax: +82-31-338-8847

Revision history

Revision	Date of issue	Description	Revised by
--	JAN 19, 2026	Initial	-
			-

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1. Applicant Information

1.1. Details of applicant

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1.2. Manufacturer Information

Manufacturer : INTOPS Co.,Ltd. Suwon
Address : 97, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi-do, Republic of Korea

2. Laboratory Information

Company name : DEKRA Korea Co., Ltd.
Address : 498-2, Geumeo-ro, Pogok-eup, Cheoin-gu, Yongin-si, Gyeonggi-do, South Korea
Web site : <http://www.dekra.kr>
Telephone : +82-31-338-8837
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3. Summary of test results

The EUT has been tested according to the following specifications:

Section in Radio equipment regulations, ARIB STD-T66	Description	Result	Uncertainty
RE 5 Table No.1 STD-T66 3.2	Frequency Tolerance	C	5.579 kHz
RE 6 Table No.2 RE 49.20, STD-T66 3.2	Occupied Bandwidth (99%)	C	6.574 kHz
RE 14, RE 49.20 STD-T66 3.2	Antenna power	C	0.642 dB
RE 7 STD-T66 3.2	Unwanted emission strength	C	0.646 dB
RE 24 STD-T66 3.3	RX spurious emission	C	0.976 dB
RLE 6-2, RE 9-4 STD-T66 3.4	Interference Prevention Function	C	N/A

※ Abbreviation

C Complied

N/A Not applicable

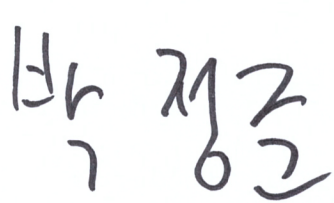
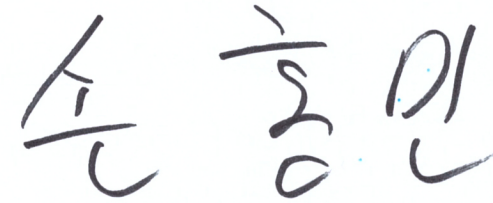
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※ Note

Note 1 : Standard / Article 2, Paragraph 1, Item 19.

Note 2 : Test Methods / Ministry of Internal Affairs and Communications Notification Article 88
Appendix 43

Approval Signatories

Test and Report Completed by :	Report Approval by :
	
Len Park Test Engineer DEKRA Korea Co., Ltd.	Kin Son Technical Manager DEKRA Korea Co., Ltd.

The above test certificate is a test report not related to the Korean Laboratory Accreditation Scheme.

4. EUT Description

Kind of product	Wearable Gear
Model name	EmbraceMini
Serial Number	N/A
Power supply	DC 3.85 V
Frequency range	2 402 MHz ~ 2 480 MHz (Bluetooth LE 1 Mbps, LE 2 Mbps)
Modulation technique	GFSK
Number of channels	40 ch. (Bluetooth LE)
Antenna gain	-12.35 dB i(Max.)

4.1. Test Condition

Temperature (°C)	Humidity (%)	Voltage (DCV)
23	51	Lowest (3.47) / Normal (3.85) / Highest (4.24)

4.2. Table for Test Modes and Frequency

Mode	Data rate(Worst case)	Frequency (Freq. MHz)
Bluetooth LE	1 Mbps	Lowest (2 402) / Middle (2 442) / Highest (2 480)
Bluetooth LE	2 Mbps	Lowest (2 402) / Middle (2 442) / Highest (2 480)

5. Measurement equipment

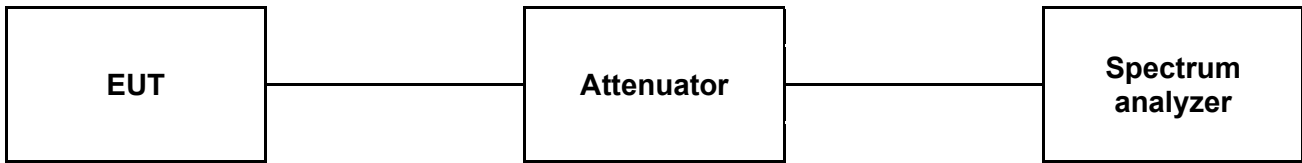
Equipment	Manufacturer	Model	Calibration date.	Calibration due.	Calibration body.	Calibration method.	Serial No
Signal Generator	R&S	SMB100A	2025-05-16	2026-05-16	HCT	c)	178128
Spectrum Analyzer	R&S	FSV40-N	2025-05-15	2026-05-15	HCT	c)	102168
Power Sensor	R&S	NRP-Z85	2025-05-16	2026-05-16	HCT	c)	102464
DC Power Supply	Agilent	U8002A	2025-05-15	2026-05-15	HCT	c)	MY56110033
Temperature Chamber	Allthree	SU-222	2025-05-15	2026-05-15	HCT	c)	93021250

Note: Calibration Method

- a) : Calibration conducted by the National Institute of Information and Communications Technology(NICT) or a designated calibration agency under Article 102-18 paragraph (1) of the Radio Law.
- b) : Calibration conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992) Japan Calibration Service System.
- c) : Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).
- d) : Calibration conducted by using other equipment that listed above from a) to c).

6. Frequency tolerance

6.1. Test setup



6.2. Limit

$\pm 50 \times 10^{-6}$ (50 ppm or below)

6.3. Test procedure

1. The transmitter output is connected to the Spectrum analyzer
2. Setting the spectrum analyzer is as follows.

Center frequency	Operating frequency
Resolution BW	50 Hz
Video BW	50 Hz
Span	5 kHz
Sweep time	Auto
Detector mode	Positive peak
Trace mode	Max. hold

6.4. Test results

Test mode :LE 1 Mbps

Test voltage	Operating frequency	Measured value (MHz)	Tolerance (ppm)
Normal Voltage	Lowest frequency	2 401.982 050	-7.47
	Middle frequency	2 441.988 050	-4.89
	Highest frequency	2 480.003 000	1.21
Highest Voltage	Lowest frequency	2 402.000 000	0.00
	Middle frequency	2 441.982 050	-7.35
	Highest frequency	2 480.000 000	0.00
Lowest Voltage	Lowest frequency	2 401.967 100	-13.70
	Middle frequency	2 442.000 000	0.00
	Highest frequency	2 479.997 000	-1.21

※ Remark

FT (ppm) = [(Measured value(MHz) - Operating frequency(MHz)) / Operating frequency(MHz)] $\times 10^6$

7. Occupied bandwidth (99%)

7.1. Test setup

Same as clause 6.1.

7.2. Limit

Occupied Bandwidth (99%): 26 MHz or less

7.3. Test procedure

1. The transmitter output is connected to the Spectrum analyzer
2. Setting the spectrum analyzer is as follows.

Center frequency	Operating frequency
Resolution BW	30 kHz
Video BW	30 kHz
Span	3.5 MHz
Sweep time	Auto
Detector mode	Positive peak
Trace mode	Max. hold

7.4. Test results

Test mode : LE 1 Mbps

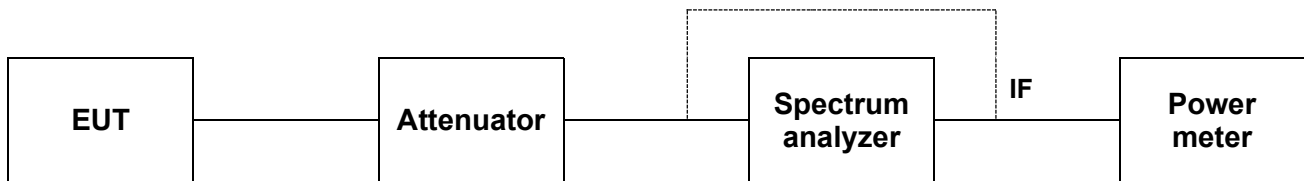
Test voltage	Operating frequency	Occupied bandwidth (MHz)
Normal Voltage	Lowest frequency	1.038
	Middle frequency	1.038
	Highest frequency	1.042
Highest Voltage	Lowest frequency	1.042
	Middle frequency	1.038
	Highest frequency	1.042
Lowest Voltage	Lowest frequency	1.042
	Middle frequency	1.038
	Highest frequency	1.042

Test mode : LE 2 Mbps

Test voltage	Operating frequency	Occupied bandwidth (MHz)
Normal Voltage	Lowest frequency	2.088
	Middle frequency	2.108
	Highest frequency	2.088
Highest Voltage	Lowest frequency	2.093
	Middle frequency	2.098
	Highest frequency	2.088
Lowest Voltage	Lowest frequency	2.098
	Middle frequency	2.088
	Highest frequency	2.108

8. Antenna power

8.1. Test setup



8.2. Limit

Output power: 3 mW/MHz or Below (BDR, EDR)

Output power: 10 mW or Below (LE)

Output power tolerance: Maximum +20 %, Minimum -80 %

8.3. Test procedure

1. The transmitter output is connected to the Power meter
2. Setting the EUT is operating frequency.

8.4. Test results

Test mode : LE 1 Mbps

Test voltage	Operating frequency	Measure value	Power tolerance (%)
		(mW)	
Normal Voltage	Lowest frequency	2.111	5.556
	Middle frequency	1.979	-1.034
	Highest frequency	1.852	-7.380
Highest Voltage	Lowest frequency	2.111	5.556
	Middle frequency	1.979	-1.034
	Highest frequency	1.852	-7.380
Lowest Voltage	Lowest frequency	2.111	5.556
	Middle frequency	1.975	-1.262
	Highest frequency	1.852	-7.380
Declared power(mW)		2.00	

Test mode : LE 2 Mbps

Test voltage	Operating frequency	Measure value	Power tolerance (%)
		(mW)	
Normal Voltage	Lowest frequency	2.344	11.620
	Middle frequency	2.197	4.595
	Highest frequency	2.059	-1.935
Highest Voltage	Lowest frequency	2.344	11.620
	Middle frequency	2.191	4.355
	Highest frequency	2.059	-1.935
Lowest Voltage	Lowest frequency	2.344	11.620
	Middle frequency	2.191	4.355
	Highest frequency	2.059	-1.935
Declared power(mW)		2.10	

※ Remark

Antenna power(mW) = $10^{(\text{Measured value(dBm)} \times 0.1)}$

Power tolerance (%) = $\{[\text{Output power} - \text{Declared power}] \div \text{Declared power}\} \times 100$

Antenna gain(G) = -12.35 dBi

9. Unwanted emission strength

9.1. Test setup

Same as clause 6.1.

9.2. Limit

$2\,387\text{ MHz} \leq f < 2\,400\text{ MHz}$ and $2\,483.5\text{ MHz} < f \leq 2\,496.5\text{ MHz}$: $25\text{ }\mu\text{W}$ or less

$2\,387\text{ MHz} > f$ and $2\,496.5\text{ MHz} < f$: $2.5\text{ }\mu\text{W}$ or less

9.3. Test procedure

1. Connect transmitter output to the spectrum analyzer input port.
2. The EUT should be transmitting modulated signal.
3. Unwanted emission strength is measured by following setting:
4. Set the spectrum analyzer RBW: 100 kHz, VBW: same as RBW
Sweep time : auto, Start : 30 MHz, Stop : 1 000 MHz. Sweep mode: single and mark highest level.
5. Set the spectrum analyzer RBW: 1 MHz, VBW: 1 MHz, Sweep time: auto, Start: 1 000 MHz, Stop: 2 387 MHz.
Sweep mode: single and mark highest level.
6. Set the spectrum analyzer RBW: 1 MHz, VBW: 1 MHz, Sweep time: auto, Start: 2 387 MHz, Stop: 2 400 MHz.
Sweep mode: single and mark highest level.
7. Set the spectrum analyzer RBW: 1 MHz, VBW: 1 MHz, Sweep time: auto, Start: 2 483.5 MHz, Stop: 2 496.5 MHz.
Sweep mode: single and mark highest level.
8. Set the spectrum analyzer RBW: 1 MHz, VBW: 1 MHz, Sweep time: auto, Start: 2 496.5 MHz, Stop: 12.5 GHz.
Sweep mode: single and mark highest level.
9. Detector mode: Peak mode.

9.4. Test results

Test mode : LE 1 Mbps

Operating frequency	Normal Voltage		Highest Voltage		Lowest Voltage		Remark
	Freq(MHz)	Value(dBm)	Freq(MHz)	Value(dBm)	Freq(MHz)	Value(dBm)	
Lowest frequency	518.880	-62.18	915.210	-62.63	989.830	-62.72	◆1
	2 386.300	-49.28	1 201.600	-51.06	1 201.600	-50.94	◆2
	2 399.994	-34.51	2 399.942	-34.44	2 399.994	-34.55	◆3
	2 485.623	-53.32	2 491.597	-53.65	2 486.519	-53.00	◆4
	6 958.500	-47.10	6 928.500	-46.76	5 829.500	-42.75	◆5
Middle frequency	757.260	-62.37	883.230	-62.28	867.730	-63.01	◆1
	1 221.000	-51.30	1 222.400	-51.69	1 221.000	-51.67	◆2
	2 397.968	-52.97	2 399.994	-52.32	2 397.136	-53.16	◆3
	2 490.130	-53.69	2 495.221	-53.85	2 484.143	-53.21	◆4
	6 858.500	-47.21	6 958.500	-47.17	6 978.500	-46.23	◆5
Highest frequency	995.640	-62.73	237.860	-62.70	949.130	-61.96	◆1
	1 240.400	-52.21	1 240.400	-52.19	1 240.400	-51.78	◆2
	2 390.097	-53.91	2 387.136	-53.32	2 395.058	-53.25	◆3
	2 484.013	-40.59	2 484.013	-40.21	2 483.974	-40.16	◆4
	5 829.500	-45.42	5 829.500	-41.24	6 828.500	-46.34	◆5

Test mode : LE 2 Mbps

Operating frequency	Normal Voltage		Highest Voltage		Lowest Voltage		Remark
	Freq(MHz)	Value(dBm)	Freq(MHz)	Value(dBm)	Freq(MHz)	Value(dBm)	
Lowest frequency	973.350	-63.12	734.970	-62.53	991.760	-61.01	◆1
	1 201.600	-50.45	1 200.200	-51.23	1 201.600	-51.03	◆2
	2 399.994	-21.79	2 399.994	-21.85	2 399.994	-21.92	◆3
	2 485.455	-54.01	2 484.130	-53.33	2 488.545	-53.78	◆4
	6 918.500	-46.30	6 998.500	-46.60	6 918.500	-46.04	◆5
Middle frequency	859.010	-63.08	860.940	-62.68	904.550	-62.47	◆1
	1 221.000	-50.63	1 221.000	-51.78	1 221.000	-50.37	◆2
	2 387.123	-53.65	2 392.708	-53.36	2 396.825	-54.39	◆3
	2 496.494	-53.74	2 484.442	-53.95	2 492.377	-53.61	◆4
	6 958.500	-46.38	6 788.500	-45.72	6 928.500	-46.84	◆5
Highest frequency	973.350	-62.97	917.150	-62.46	997.580	-61.94	◆1
	1 240.400	-50.97	1 240.400	-51.90	1 240.400	-51.22	◆2
	2 392.994	-53.73	2 387.201	-53.18	2 390.175	-53.89	◆3
	2 484.026	-41.74	2 484.013	-41.57	2 483.987	-42.35	◆4
	6 888.500	-46.58	6 888.500	-46.32	6 808.500	-46.79	◆5

※ Remark

- ◆1:Freq Range1 (30 MHz ≤ F < 1 000 MHz)
- ◆2:Freq Range2 (1 000 MHz ≤ F < 2 387 MHz)
- ◆3:Freq Range3 (2 387 MHz ≤ F < 2 400 MHz)
- ◆4:Freq Range4 (2 483.5 MHz < F ≤ 2 496.5 MHz)
- ◆5:Freq Range5 (2 496.5 MHz < F ≤ 12 500 MHz)

10. RX spurious emission

10.1. Test setup

Same as clause 6.1.

10.2. Limit

Below 1 GHz: 4 nW or less

Above 1 GHz: 20 nW or less

10.3. Test procedure

1. Connect transmitter output to the spectrum analyzer input port.
2. The EUT should be transmitting at low, middle and high channel.
3. RX spurious emission is measured by following setting:
4. Set the spectrum analyzer RBW: 100 kHz, VBW: 100 kHz, Sweep: Auto, Start: 30 MHz, Stop: 1 000 MHz.
Max hold view, mark highest level.
5. Set the spectrum analyzer RBW: 1 MHz, VBW: 1 MHz, Sweep: Auto, Start: 1 000 MHz, Stop: 12.5 GHz.
Max hold view, mark highest level.
6. Detector mode: Peak mode.

10.4. Test results

Test mode : LE 1 Mbps

Operating frequency	Normal Voltage		Highest Voltage		Lowest Voltage		Remark
	Freq(MHz)	Value(dBm)	Freq(MHz)	Value(dBm)	Freq(MHz)	Value(dBm)	
Lowest frequency	958.820	-82.96	989.830	-81.70	907.460	-82.92	◆1
	6 839.700	-66.26	6 830.700	-66.52	7 001.500	-65.35	◆2
	11 664.600	-74.20	11 162.600	-74.08	11 212.500	-74.31	◆3
Middle frequency	999.520	-82.70	963.660	-82.25	772.760	-82.64	◆1
	6 803.700	-66.86	6 983.500	-66.45	6 785.700	-66.84	◆2
	11 160.100	-74.12	11 749.500	-73.90	12 356.400	-73.90	◆3
Highest frequency	916.180	-81.91	191.340	-83.22	971.410	-82.79	◆1
	6 965.500	-67.26	6 947.600	-66.69	6 848.700	-66.32	◆2
	10 645.600	-74.70	10 300.900	-74.17	11 352.400	-74.63	◆3

Test mode : LE 2 Mbps

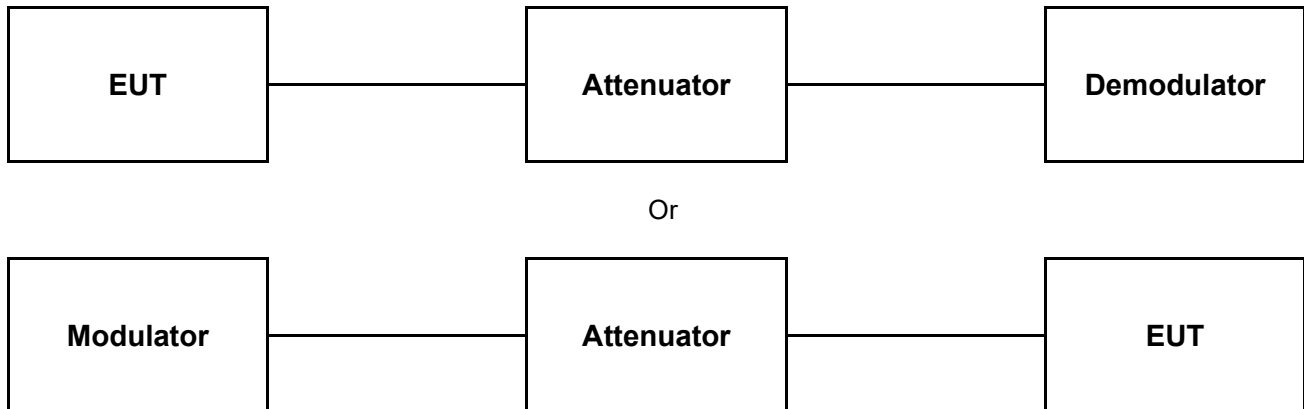
Operating frequency	Normal Voltage		Highest Voltage		Lowest Voltage		Remark
	Freq(MHz)	Value(dBm)	Freq(MHz)	Value(dBm)	Freq(MHz)	Value(dBm)	
Lowest frequency	954.940	-82.59	955.910	-82.34	986.920	-82.81	◆1
	6 785.700	-67.04	6 902.600	-66.53	6 965.500	-66.03	◆2
	10 660.600	-74.27	10 663.100	-73.92	11 285.000	-73.68	◆3
Middle frequency	932.650	-82.89	867.730	-82.92	999.520	-82.47	◆1
	6 911.600	-66.77	6 992.500	-67.26	6 983.500	-66.50	◆2
	11 767.000	-74.15	11 749.500	-73.99	12 091.700	-74.58	◆3
Highest frequency	969.480	-82.29	323.130	-82.55	889.050	-82.72	◆1
	6 857.600	-67.08	6 938.600	-66.17	6 803.700	-66.35	◆2
	10 046.200	-73.55	10 660.600	-74.21	11 250.000	-74.38	◆3

※ Remark

- ◆1:Freq Range1 ($F < 1\,000\text{ MHz}$)
- ◆2:Freq Range2 ($1\,000\text{ MHz} \leq F < 10\,000\text{ MHz}$)
- ◆3:Freq Range3 ($10\,000\text{ MHz} \leq F \leq 12\,500\text{ MHz}$)

11. Interference prevention function

11.1. Test Setup



11.2. Limit

Radio equipment used mainly on the same premises and automatically transmits or receives identification code

11.3. Test results

Test mode : LE 1 Mbps

Test voltage	Lowest frequency	Middle frequency	Highest frequency
Normal Voltage	Pass	Pass	Pass
Highest Voltage	Pass	Pass	Pass
Lowest Voltage	Pass	Pass	Pass

Test mode : LE 2 Mbps

Test voltage	Lowest frequency	Middle frequency	Highest frequency
Normal Voltage	Pass	Pass	Pass
Highest Voltage	Pass	Pass	Pass
Lowest Voltage	Pass	Pass	Pass