

UK-Type Examination Certificate

Radio Equipment Regulation SI 2017:1206

Element CAB: UK Approved Body Number 0982

- 1 Certificate Number: 2M2206100132 Date: 2022-06-29
- 2 Equipment: VN55 – RFID Wireless Power Transfer to smart tags
- 3 Manufacturer: Energous Corporation
- 4 Address: 3590 North First Street, Suite 210, San Jose, CA 95134, USA
- 5 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- 6 Element Materials Technology Washington DC LLC (hereafter referred to as Element) Approved Body number 0982 in accordance with Regulation 46 of the Radio Equipment Regulations 2017, SI 2017:1206 (as amended) certifies that this equipment has been found to comply with the Essential Requirements relating to the design and construction of radio equipment given in the following Sections of the Regulation:
- 6(2) – Radio spectrum** **6(1)(b) – EMC performance**
- The examination and test results are recorded in the test reports listed in section 14 of this certificate
- 7 Compliance with the Essential Requirements has been assured by application and compliance with:
- | | | | |
|---------------|----------------------------|----------------------------|-----------------------------|
| EMC: | EN 301 489-1 V2.2.3 | EN 301 489-3 V2.2.0 | EN 301 489-17 V3.2.4 |
| Radio: | EN 300 328 V2.2.2 | EN 302 208 V3.3.1 | EN 303 851 V0.0.2 |
- 8 This Type Examination certificate relates only to the design and construction of the specified equipment in accordance with the RE Regulations. Further requirements of this Regulation apply to the manufacture and supply of this equipment. These are not covered by this certificate.
- 9 This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the rules of the Element Radio Certification Scheme and remains valid for only so long as the equipment conforms to the type described herein.
- 10 Any deviation to the design and construction of the specified equipment that is not certified by Element shall render this certificate invalid.

Nima Molaei, Certification Manager
Issue Date: 2022-06-29



11 General description of equipment or protective system included within the scope of this certificate

The VN55 uses Radio Frequency Identification (RFID) signals to locate smart tags and provide power to the tag. Bluetooth Low Energy (BLE) technology is used to communicate information with the tag.

Model: VN55

12 Technical description

RFID and Power Transfer (FW version: 3.6.255)	Tx:	865.7 MHz
	Rx:	None
	Tx Power:	22.1 dBm, ERP
	Modulation:	AM

RFID and Power Transfer (FW version: 3.5.9_FP255)	Tx:	916.3 MHz
	Rx:	None
	Tx Power:	21.7 dBm, ERP
	Modulation:	AM

RFID and Power Transfer (FW version: 3.5.9_FP255)	Tx:	917.5 MHz
	Rx:	None
	Tx Power:	22.2 dBm, ERP
	Modulation:	AM

RFID and Power Transfer	Tx:	2450 MHz
	Rx:	None
	Tx Power:	21.8 dBm, e.i.r.p.
	Modulation:	O-QPSK

SRD Communication

Tx: 2402 MHz to 2480 MHz

Rx: 2402 MHz to 2480 MHz

Tx Power: 19.7 dBm, e.i.r.p.

Modulation: GFSK

SRD Communication

Tx: 2402 MHz to 2480 MHz

Rx: 2402 MHz to 2480 MHz

Tx Power: 6.9 dBm, e.i.r.p.

Modulation: GFSK

13 Technical Documents describing the certified equipment

The list of technical documents is given in Appendix A to this schedule.

14 Test report No.:	1C2204250018-01;	2022-05-30	1C2204250018-04;	2022-05-30
	1C2204250018-02-R1;	2022-05-30	1C2204250018-05-R1;	2022-05-30
	1C2204250018-03-R1;	2022-05-30	1C2204250018-06;	2022-05-30

15 Essential Requirements (Directive Article 3)

Covered by application of the standards listed in section 7 of this certificate and the assessment conducted in the test report/s listed in section 14 of this certificate.

16 “Restrictions on Use”, if any:

None

17 “Routine tests”, if any:

None.

18 Other information, if any:

Product safety as per Section 6(1)(a) of the UK RER is not included as part of this UK-TEC.

19 Details of variations to this certificate

None

20 Notes to UKCA marking

In respect of UKCA marking, Element accepts no responsibility for the compliance of the equipment against all applicable Regulations in all applications.

21 Notes to this certificate

Element certification reference: 2M2206100132

Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.

Approved Body 0982 is the designation for Element Materials Technology Washington DC LLC.
(Formerly known as PCTEST)

This UK Type Examination Certificate remains valid unless changes occur to the radio equipment, or the test standards applied, or the designation of the radio bands used, or the way the radio equipment is used.

This UK Type Examination Certificate is based on the application of draft standards and deviations from published standards.

24 Conditions for the validity of this certificate

This certificate remains valid for so long as:

- (i) The radio equipment listed on this certificate is manufactured in accordance with the technical documents listed in Appendix A of this certificate.
- (ii) The standards listed in section 7 of this certificate continue to satisfy the Essential Requirements relating to the design and construction of radio equipment given in Section 6 of the Radio Equipment Regulation.
- (iii) The generally acknowledged state of the art for this equipment remains unchanged.
- (iv) There are no changes or updates to the understanding of the designation of the applicable frequency bands.

APPENDIX A – LIST OF TECHNICAL DOCUMENTS REVIEWED

Antenna details	Assembly diagrams	Block Diagram
Circuit schematics	External photos	Internal photos
Label	PCB layout	Technical description
Test reports	Test photos	User manual
UK Declaration of Conformity	Risk Assessment	

In case of UKCA marking, the device shall be marked with the UKCA mark as shown in accordance with the Radio Equipment Regulation.



Disclaimer: *This certificate remains valid as long as the stated product stays in compliance with the essential requirements of the RED. In case any references standard on this UK TEC is withdrawn or superseded and the presumption of conformity with the essential requirements has ceased, investigation by the Notified Body is needed to determine the validity of this UK-TEC.*