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Ref. FCC ID XDW3663-0001 Exhibit 11: RF Exposure Information and statement.

1. Intentional RF transmission is at 13.56MHz. The product uses an inductive loop to interact with a passive RFID tag over a distance of less than 50mm. Electrically, the antenna-coil is better considered as one inductor within a low-Q tuned and coupled circuit. The antenna functions very poorly as an RF radiator, since its electric (near) field is minimised in favour of the magnetic field required by the application.
2. The maximum possible power input to the radiating element is 200mW (ref. Exhibit 12: TRF7961.pdf). The RFID design is in accordance with ISO / IEC 15693, an international standard that is in harmony with the Code of Federal Regulations.
3. The RFID transmission is highly discontinuous. The maximum possible duty cycle (as used during compliance testing – ref. test report 75933746, Exhibit 6) is calculated as follows: width of energy burst (constant amplitude) = 41ms. The burst is emitted four times over a period of 1.95s, so duty cycle (max) is $0.041/1.95 = 2.1\%$.
4. The location of the transmitting antenna within the product is such that the Main PCB is behind the loop, in the same axis as the maximum field density for the tag reading transmission – this hugely attenuates the RFID signal radiated from the back of the printer, meaning that maximum field strength is to be obtained at the front of the printer – again ref. test report 75933746.
5. The minimum unobstructed distance between any part of the body of an operator and the radiating antenna in the direction of maximum field strength (i.e. facing the product, as would be the use-case) is greater than 200mm.
6. Due to the small dimensions of the antenna (ref. Exhibit 12A and point 1, above), the efficiency is very low and there is no gain associated with the antenna. Although the amount of RF loss has not been calculated it is very high – again ref. test report 75933746 for evidence in support of this statement.

Manufacturer's Statement:

With reference to points 1 – 6 above, the results for emission field strength contained in test report 75933746 and by inspection of the table given in Appendix C (*SAR Test Exclusion Thresholds* for <100MHz and <200mm) contained in FCC OET document: 447498 D01 General RF Exposure Guidance v06; it is submitted that the product is below SAR test exclusion thresholds and within the MPE limits given by the FCC (ref. Subchapter A: section 1.1310 “Radiofrequency radiation exposure limits”).