

Drop XL

Model: DROPXL01

FCC ID: X3QDROPXL01

Technical Description:

The following requirements have been met according to clause 5b of 680106 D01 RF Exposure Wireless Charging App v03.

(1) Power transfer frequency is less than 1 MHz.

Ans: the operating frequency is 110kHz – 205kHz

(2) Output power from each primary coil is less than or equal to 15 watts.

Ans: The WPT is less than 15watts.

(3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.

Ans: Two different client devices can put onto the wireless charging device for charging at the same time, but each charging area zone can only accepts single client device only.

(4) Client device is placed directly in contact with the transmitter.

Ans: Yes.

(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).

Ans: Yes, it is not for portable use.

(6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

Ans: the result can be found on RF exposure report.

Circuitry Description

The product is a wireless charging transmitter meeting the WPC Qi standard and can supply all the wireless charging receiver which also meeting the Qi standard.

Wireless charging system use magnetic induction wireless charging technology, energy transmission is realized by using series resonance method. The main control chip IC RT3181C, it is work with inverter circuit, TX coil L, resonant circuit, capacitance C and other components combined as wireless charging transmitter. TX input side input DC voltage (15V), the DC voltage pass through power full bridge U2/U3 and produces an AC voltage, give the TX coil AC electric signal, AC electrical signals change to changing magnetic field, the AC electrical signal work frequency is 110~205KHz. The changing magnetic field pass through the RX coil, the receiving coil will generate an electric filed. And the system communicates through demodulation the AM signal which coupled to the transmitting coil from RX coil, and TX system controls the energy transmission through the adjustment of frequency, phase and duty cycle.