



CMT003B

10W Magnetic Resonant Multi-PRU Wireless Power Transmitter Module

CMT003B, is a 10W multi-PRU wireless power transmitter module using magnetic resonant wireless power technology. Thanks to its high-frequency nature, it has a large power area, which is 246mm x 89mm and it can generate quite a uniform magnetic field across the whole region. Therefore, multiple low power wireless power receivers with 3W output power, up to 3 sets, can be powered simultaneously by CMT003B. It makes it quite suitable for applications like smart shoes and gaming consoles which need drop-and-go user experience for charging.

Key Features:

- Up to 10W output power with 6.78MHz magnetic resonant wireless power technology
- Can power multiple of wireless power receivers simultaneously
- Proprietary power saving mechanism while wireless power receivers are not within the supported range
- Wide power area with Z height spatial freedom from 10mm to 30mm
- 85%+ Power amplifier efficiency
- Operating Temperature: 0°C~+50°C
- FCC part.18 pre-certification passed
- Over-current/Over-temperature/Over-voltage protection

Specification:

Power Input Interface	DC In DC jack x 1
Input Power Requirement	DC: 12V 2A
Output Power	Up to 10W output power at PTU resonator
Power coil Area (X & Y)	215mm (l) x 61mm (w) for 3W PRU coil (4cm x 4cm) at Z=2cm
Power Distance (Z)	10mm to 30mm
Dimension	CMT003B Coil board: 246 mm (l) x 89 mm (w) x 1 mm (h) CMT003B Control board: 89 mm (l) x 65 mm (w) x 11.8 mm (h)
Coil Type	PCB type

Electrical Specification:

Item	Characteristics	Condition	Min.	Typ.	Max.	Units
1	Input Voltage		11	12	13	Voltage
2	Rated input current				2	Amp
3	Maximum Resonator Output Power				10	Watt
4	Operating Frequency		6.765	6.78	6.795	MHz
5	Power amplifier efficiency	PTU resonator output power at 10W		85	-	%
6	Standby Power			1.5		Watt
7	Operating Ambient Temperature	PTU resonator output power at 10W	0		50	°C
8	Operating Humidity		10		90	%
9	Storage Temperature		-40		70	°C
10	Storage Humidity		10		90	%
11	Charging Distance	Coil surface to PRU Coil surface (Under 3W)	10	20	30	mm
12	Over Temperature Protection (OTP)	Over Temperature Protection under Ambient temperature (25 °C +/- 3 °C) @3W		90		°C

Environmental Specification:

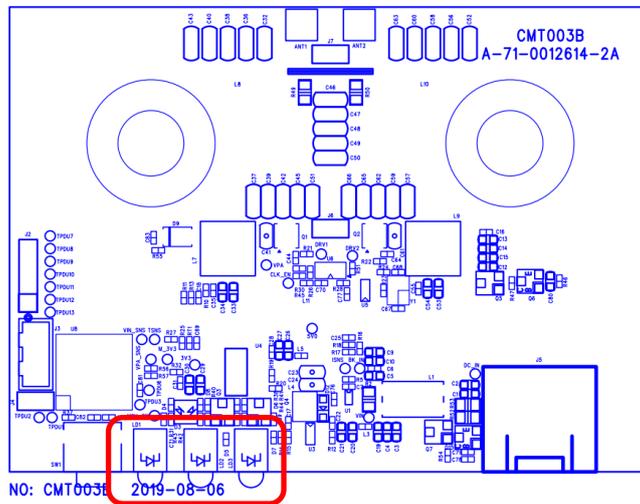
- **Operating Condition:**

Temperature range: 0°C ~ +50°C
 Humidity: 10% ~ 90 %

- **Storage Condition:**

Temperature range: -20°C ~ +70°C
 Humidity: 10% ~ 90 %

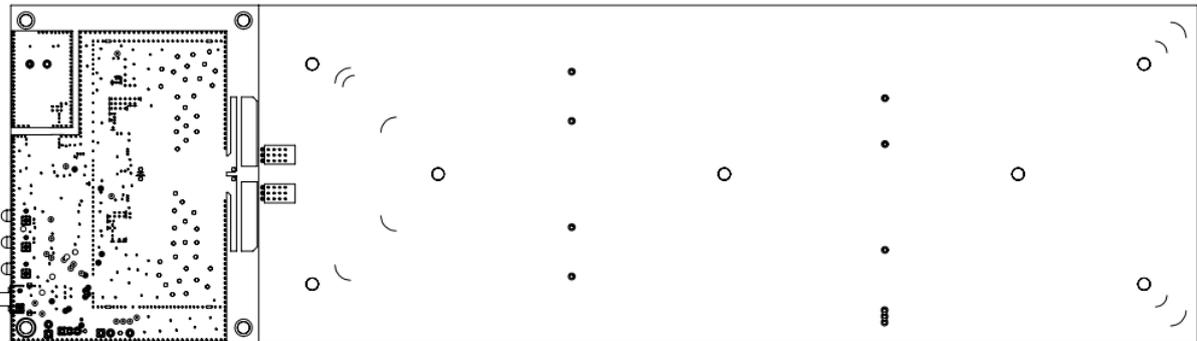
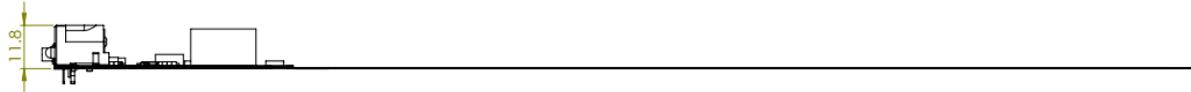
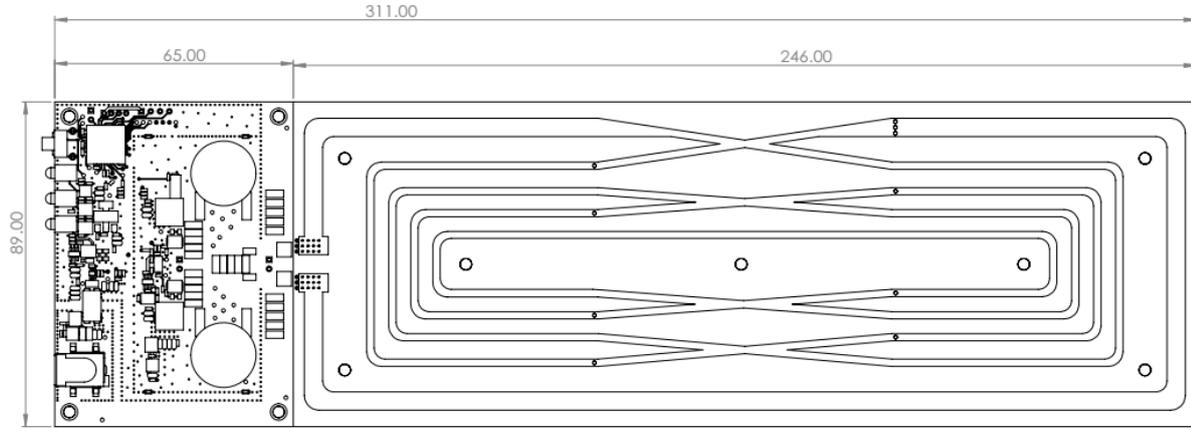
LED indicators: CMT003B PTU



LD1: DC in (Green)
 LD2: Power state (Yellow)
 LD3: Warning (Red)

Mechanical Specification:

Coil board Dimension	246 mm (l) x 89 mm (w) x 1 mm (h)
Control board Dimension	89 mm (l) x 65 mm (w) x 11.8 mm (h)



**(1) Keep PTU coil away from the large metal area**

Please keep any large metal area at least 10cm away from the PTU coil board at all directions. It's suggested NOT to put the PTU coil board on the metallic desk surface, or please lift the PTU coil board 10cm away from the metallic desk surface without any metal object in between.

(2) Keep PTU coil away from each other if multiple PTUs are turned on

Please ensure the edge to edge distance between any two PTU coil boards on the same surface is longer than 30cm. And DON'T overlap any two PTU coil boards at the vertical direction.

(3) Don't put foreign objects within the PTU coil area

jjPlus PTU generates 6.78MHz magnetic field within the PTU coil area and doesn't heat most of the metal objects like what low frequency magnetic field does. However, RFID cards and thin metal film objects like CD and DVD can be heated by 6.78MHz magnetic field and should be treated as foreign objects. Please keep them away from the PTU coil area while the PTU is in power transfer state.