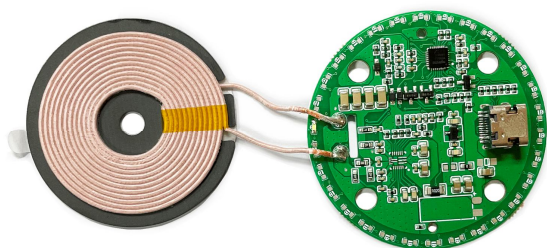


WCM-8011

20V-15W Full-bridge Wireless Power Transmitter



The WCM-8011 is a highly integrated wireless power transmitter that integrates full-bridge MOSFETs, MOSFETs drivers, current sense amplifiers, and protection circuits. It is in compliance with the latest WPC V1.2.4 Extended Power Profile (EPP) and Baseline Power Profile (BPP). The WCM-8011 supports EPP-required foreign object detection (FOD). The default transmitter distance is $\leq 8\text{mm}$ and can be customized up to 30mm by customizing the antenna and firmware. Furthermore, the product housing can be made of aluminum if it is a must (customized).

| SPECIFICATION | | | | | |
|---|--|---|------|-----|------|
| Standard | Compliance Qi 1.3 Version / WPC V1.2.4 EPP and BPP | | | | |
| Input Power | 5V/2A ; 9V/1.67A ; 12V/1.67A | | | | |
| Wireless Output Power | 5W/ 7.5W/ 15W/ 20W (auto detection) | | | | |
| Interface | Type C connector | | | | |
| Charging Efficiency | Over 85% high wireless charging efficiency | | | | |
| Charging Distance | $\leq 8\text{ mm}$ (default); Able to tailor-made distance up to 30mm | | | | |
| Housing Material | Product housing can be made of aluminum (Customized) | | | | |
| Safety Protection | | | | | |
| Foreign Object Detection (FOD) | Advance FOD to avoid any metallic objects being exposed to alternating magnetic fields | | | | |
| Over Temperature (OTP) | The charging power will be shut down when temperature over 45°C | | | | |
| Short-Circuit Protection (SCP) | WCM-8011 integrates a latch mode short-circuit protection | | | | |
| Over Voltage (OVLO) | > 22.5V (typical) | | | | |
| Low Voltage (UVLO) | < 3.4V (typical) | | | | |
| Over Current (OCP) | > 10A (typical) | | | | |
| Dimension | | | | | |
| PCBA Size | Diameter 50mm / 6.5mm thickness | | | | |
| Coil size | Diameter 45mm with pad/ 2.05mm | | | | |
| Recommend Operating Conditions VDD=5.0V±5%, GND=0V, T_A=25°C | | | | | |
| Description | Symbol | Min | Type | Max | Unit |
| Supply Voltage | | | | | |
| Input Voltage | V _{in} | 4 | 12 | 20 | V |
| Under Voltage Lockout Threshold | V _{in-UVLO} | Rising edge | 3.6 | | V |
| | | Falling edge | 3.4 | | V |
| Voltage Regulator (VDD) | | | | | |
| VDD Output Voltage | VDD | V _{IN} = 5.0V I _{VDD} = 10mA | 4.9 | | V |
| | | V _{IN} = 9.0V I _{VDD} = 10mA | 5 | | |
| VDD Current Limit | I _{VDD_LIM} | | 30 | | mA |

* Features and specification are subject to change without notice.