

**FEATURES:**

- Wireless Charging Transmitter Coil Array
- Outline Dimensions: 107.95mm x 52.5mm x 4mm
- Linear Array of Primary Coils, 2 lower coils (12.0μH), 1 upper coil (11.5μH).
- For Tx applications working with 12V
- High permeability shielding to protect sensitive electronics
- Durable construction
- RoHS Compliant & Pb free.

**APPLICATIONS:**

- Wireless Charging Stations
- Automotive Industry (in car charging)
- Batteries Chargers
- Consumer Electronics Chargers
- Mobile Phone Charging Accessories
- Power Tool Charging Systems
- Approved part for IDT Part Number IDTP9036A

**DESCRIPTION & KEY ELECTRICAL SPECIFICATIONS**

The MCTC12 is a Wireless Charging Coils that can be used in receive applications. This is a single coil design with inductance of 12μH.

**Maximum Ratings**

Part Number	Inductance		DC Resistance	Q	R25	SRF	Current Rating (rms)	Operating Temperature Range
MCTC107	Upper Coil 11.5μH ±10%	Lower Coil 12.0uH ±10%	56mΩ ±20%	80±30%	10KΩ±3%	7MHz	7.5A Typ.	T=-25°C + 85°C, RH≤ 90%.
Test Condition	100KHz / 1V		20±15°C	100KHz /1V	Ta=25 ±0.05°C Pτ ≤0.1mw			Storage Temperature Range
Test Environment	Ambient Temperature: 20±15°C, RH:65%±20%							-25°C~85°C, 90%RH (Max.)

**Test Conditions**

Ambient Temperature: 20±15°C, RH: 65% ±20%.

If any doubt on the results, measurements/tests should be made within the following limits:

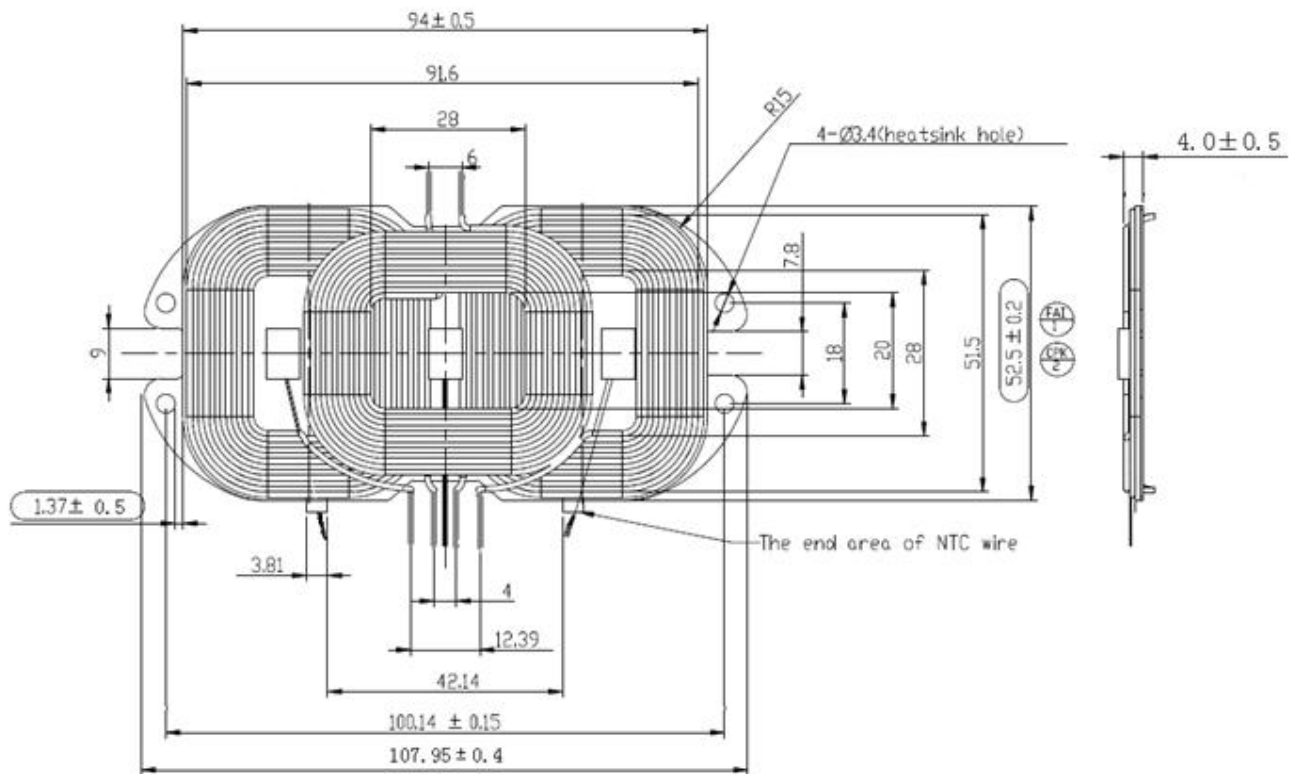
Ambient Temperature: 20±2°C, RH: 65%±5%

**STORAGE AND OPERATIONAL CONDITION:**
**Storage condition**

- ❖ Recommended storage conditions: -25°C~85°C, 70%RH (Max.)
- ❖ Service life: Within the limits of six month from being produced.
- ❖ The appearance and solder ability should be check, if product is not in expiry date.

**Operation Conditions**

- ❖ Use condition limit: T=-25°C ~ 85°C, RH≤ 90%.

**DIMENSIONS:**

**Winding Specifications**

No.	Wire	Number of turns	Inductance
Upper 1	$\varnothing 0.08 \times 100$	12	$11.5 \mu\text{H} \pm 10\%$
Upper 2	$\varnothing 0.08 \times 100$	12	$12 \mu\text{H} \pm 10\%$

**Product Customization**

Inductance Range ( $\mu\text{H}$ )	DC Resistance Range( $\text{m}\Omega$ )	Dimension Range (mm)	Thickness range (mm)
1 ~ 100	10 ~ 1000	10 ~ 200	0.4 ~ 10

- ❖ Wave Soldering Profile: Not suitable for wave soldering
- ❖ Manual Soldering:  $350^\circ\text{C}$  Max, 3secs
- ❖ Packaging: Box, 100pcs MOQ