

# Wireless Charging Coils (Single)

## Overview

Signal's Wireless Charging Coil (WCC) Series are wireless charging transmission coils, available in single, double and multiple windings configurations. The WCC Series allows power to be transmitted wirelessly through inductive coupling to charge an array of products.

The WCC Series transmitter coils utilize inductive coupling to transfer signals, data and power from one source to another. Of its many applications, the most common include phones, tablets, gaming controllers, wearable devices, tooth-brushes, robotic cleaners, drones and many smart car charging applications.

The advantages of the WCC's use of inductive coupling eliminates conductive connections and traditional wiring, seamlessly transferring data and power while avoiding the mechanical abrasion, corrosion and wearing-out of conductive contacts. The fixed-in position inductive coils are non-moving, resistant to vibration and corrosion, and are designed for reliability and longevity.



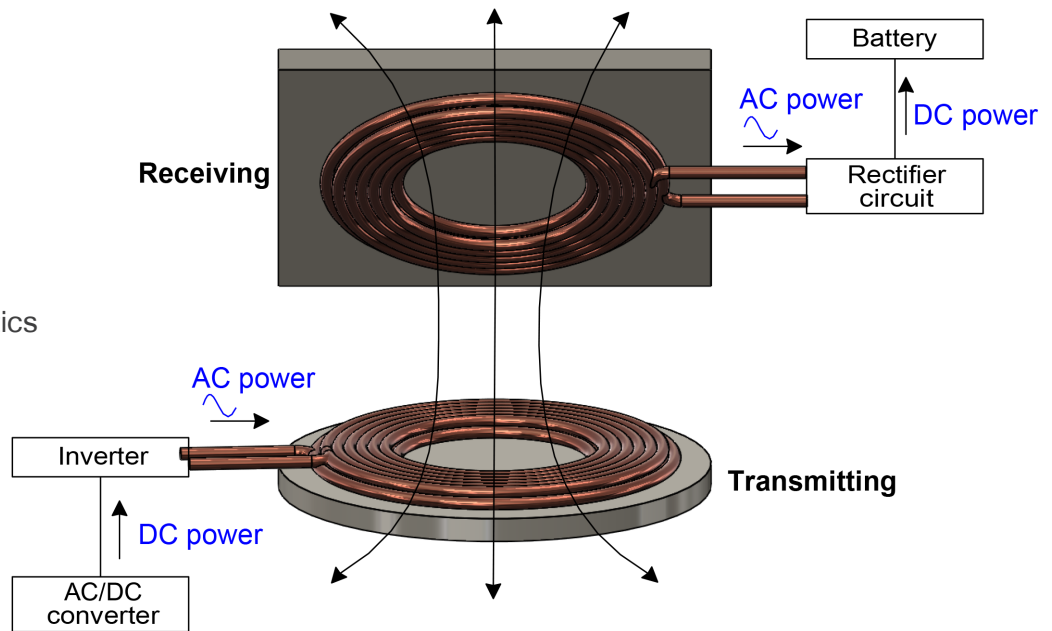
**Model Shown:**  
WTSC-10R0K-A3,  
Top View



**Model Shown:**  
WTSC-24R0K-A10, Front View

## Features

1. Pin cooling technology and tight pin tolerance control within  $\pm 1.0$  mm after the Tin Immersion process
2. Two core shapes, square/rectangular (Q) or circular (C)
3. Size and shape characteristics are customizable
4. Qi standard compliance
5. Low profile & high mechanical intensity
6. Inductance tolerance is  $\pm 5\%$  for (J),  $\pm 10\%$  for (K), with inductance of 6R3 for 6.3uH
7. Performance had been confirmed based on WPC equipment
8. Operating temp:  $-20^{\circ}\text{C}$  to  $85^{\circ}\text{C}$  (general applications);  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$  (automotive)
9. Compliance with all environmental requirements, including RoHS, REACH, Prop 65 & Conflict Minerals



Custom versions available upon request.

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## Product Identification

W T S C – 6R3 K – A11

(1) (2) (3) (4) - (5) (6) - (7)

(1) Wireless Charging Coil Assembly

(2) Location: **T**: Transmitter, **R**: Receive

(3) Number of Windings: **S**: Single, **M**: Multiple

(4) Single Winding Core Shape:

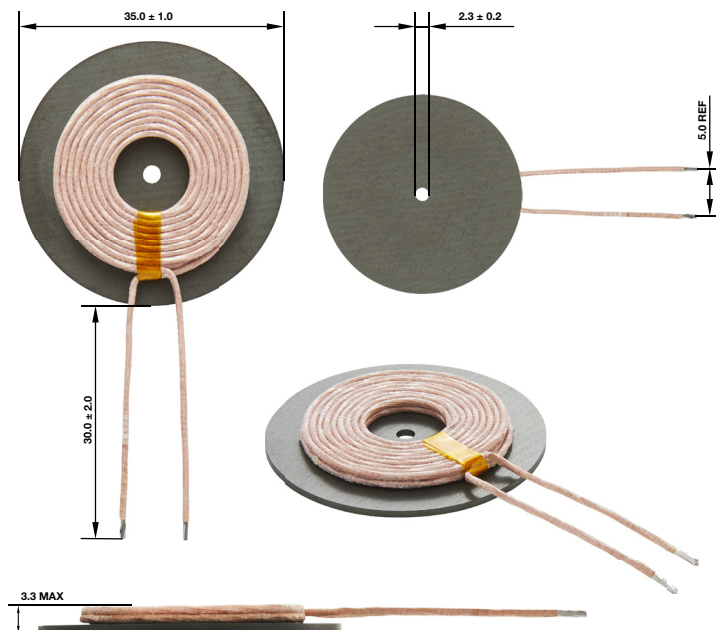
**Q**: Square/rectangle, **C**: Circular

(5) Inductance: 6R3 for 6.3uH

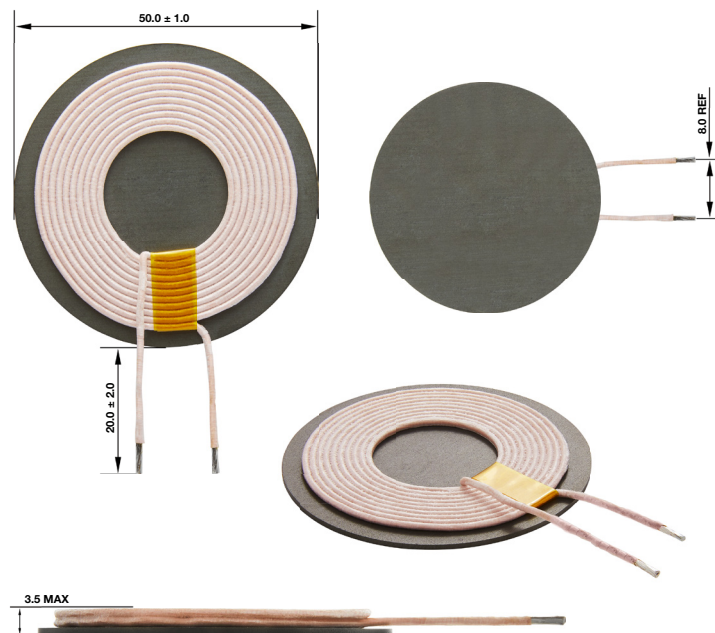
(6) Inductance Tolerance: **J**:  $\pm 5\%$ , **K**:  $\pm 10\%$

(7) Qi Standard Code or other

| P/N: WTSC-10R0K-A3  |                  |
|---------------------|------------------|
| Structure size (mm) | 35.0 X 2.3 X 3.3 |
| L (uH)              | 10.0 $\pm 10\%$  |
| Test Frequency      | @100kHz, 1.0V    |
| DCR (mΩ)            | 75 MAX           |
| I rms (A)           | 4.0              |
| I sat (A)           | 6.0              |



| P/N: WTSC-6R3K-A11  |                |
|---------------------|----------------|
| Structure size (mm) | 50.0 X 3.5     |
| L (uH)              | 6.3 $\pm 10\%$ |
| Test Frequency      | @100kHz, 1.0V  |
| DCR (mΩ)            | 40 MAX         |
| I rms (A)           | 6.0            |
| I sat (A)           | 10.0           |



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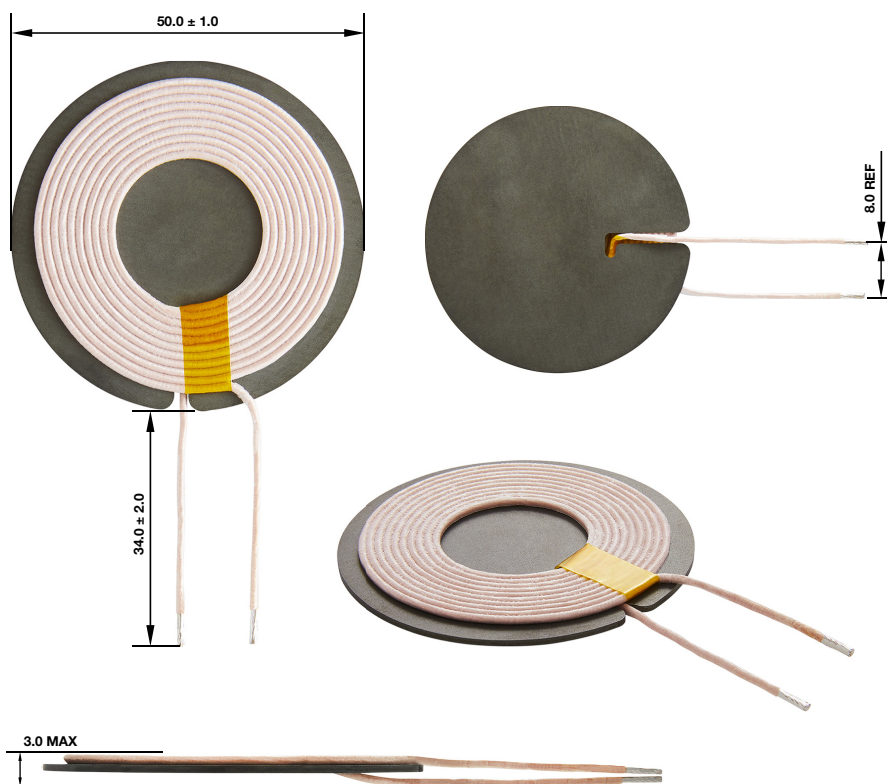
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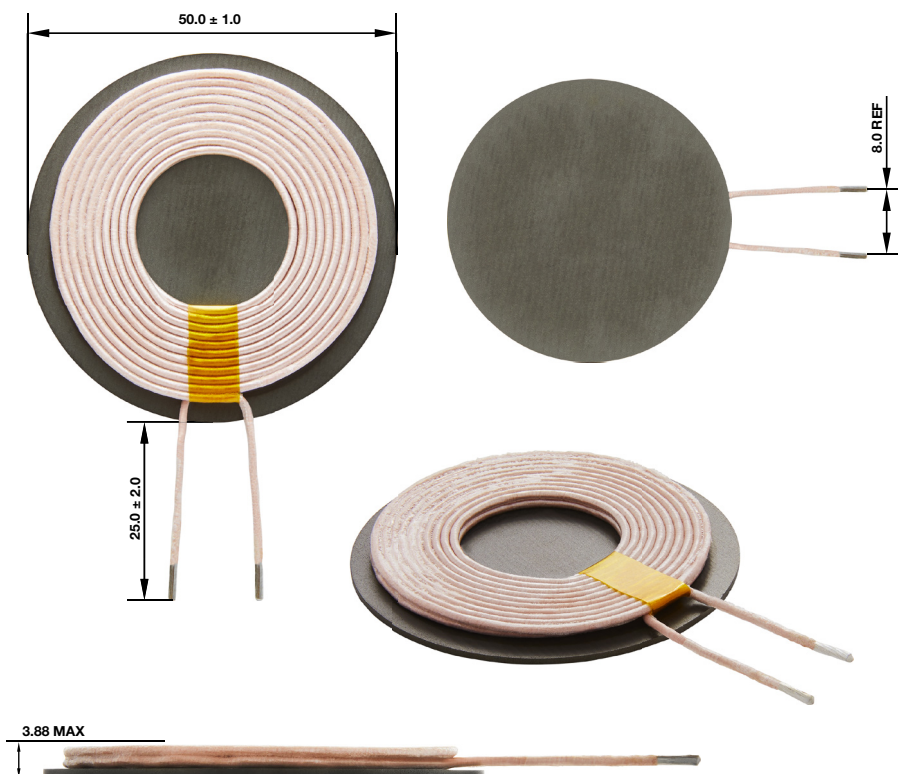
# Wireless Charging Coils (Single)



**P/N: WTSC-6R3K-A11B**

|                     |               |
|---------------------|---------------|
| Structure size (mm) | 50.0 X 3.0    |
| L (uH)              | 6.3±10%       |
| Test Frequency      | @100kHz, 1.0V |
| DCR (mΩ)            | 40 MAX        |
| I rms (A)           | 6.0           |
| I sat (A)           | 10.0          |

|                            |               |
|----------------------------|---------------|
| <b>P/N: WTSC-24R0K-A10</b> |               |
| Structure size (mm)        | 50.0 X 4.0    |
| L (uH)                     | 24.0±10%      |
| Test Frequency             | @100kHz, 1.0V |
| DCR (mΩ)                   | 85 MAX        |
| I rms (A)                  | 6.0           |
| I sat (A)                  | 10.0          |



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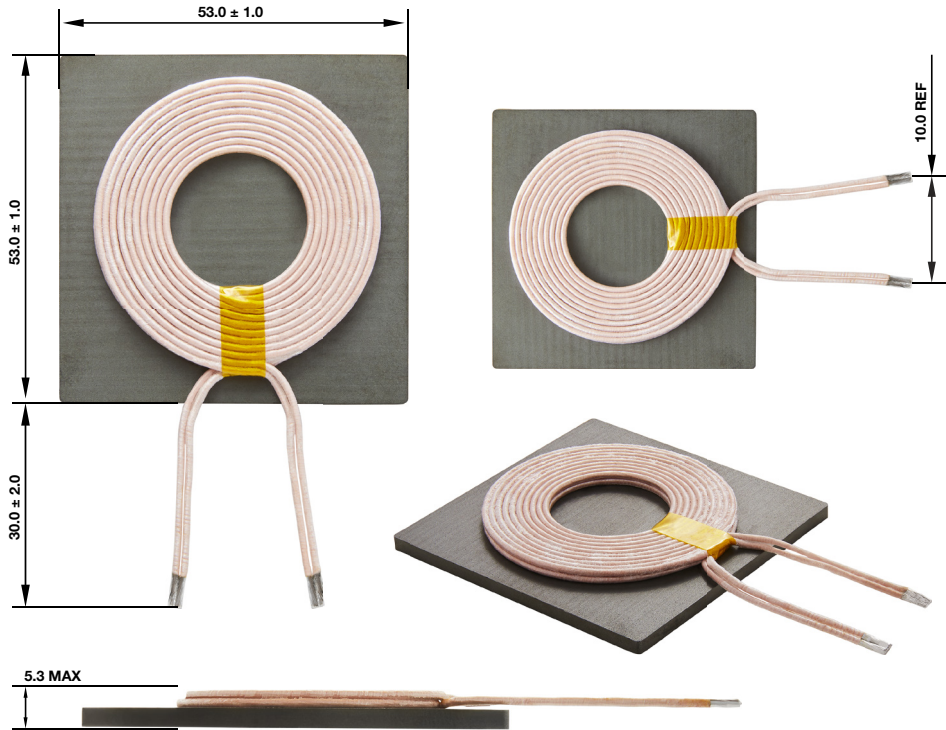


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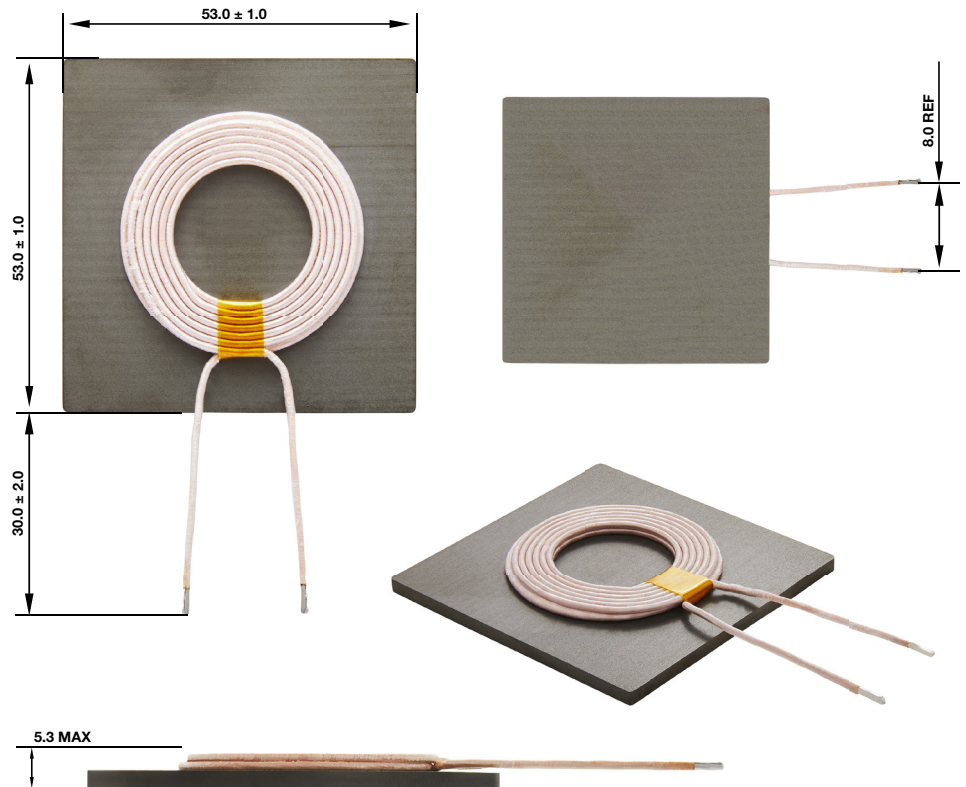
# Wireless Charging Coils (Single)



**P/N: WTSQ-6R3K-A11**

|                     |                   |
|---------------------|-------------------|
| Structure size (mm) | 53.0 X 53.0 X 5.3 |
| L (uH)              | 6.3±10%           |
| Test Frequency      | @100kHz, 1.0V     |
| DCR (mΩ)            | 25 MAX            |
| I rms (A)           | 9.0               |
| I sat (A)           | 10.0              |

|                              |                   |
|------------------------------|-------------------|
| <b>P/N: WTSQ-10R0K-MP-A5</b> |                   |
| Structure size (mm)          | 53.0 X 53.0 X 5.3 |
| L (uH)                       | 10±10%            |
| Test Frequency               | @100kHz, 1.0V     |
| DCR (mΩ)                     | 48 MAX            |
| I rms (A)                    | 7.0               |
| I sat (A)                    | 10.0              |



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