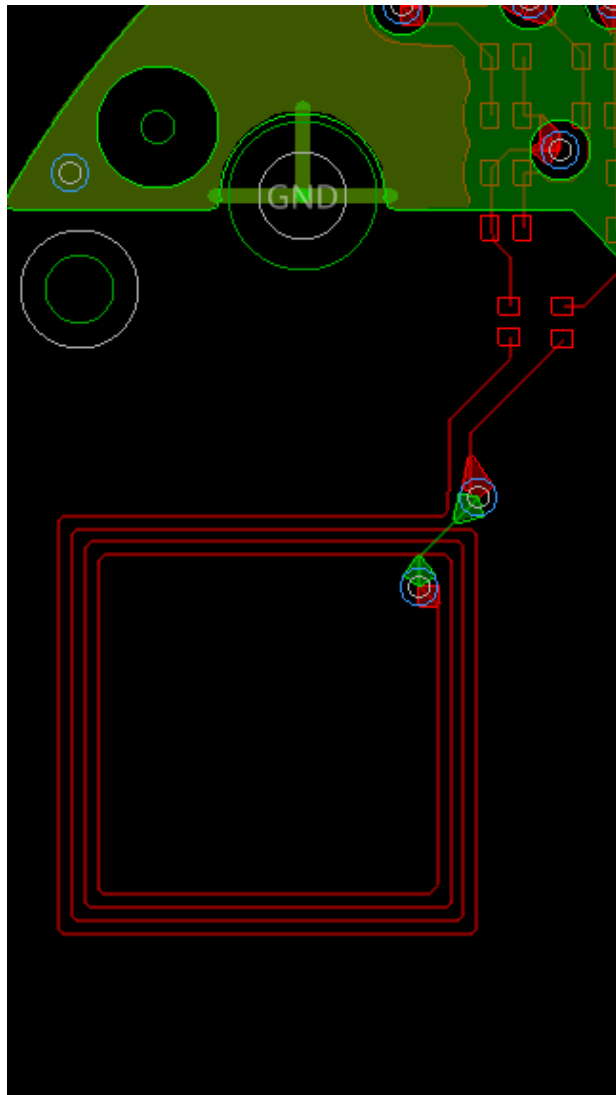


Antenna Specification of SCWCX01 module

SCWCX01 module consists of Active NFC tag and Wireless Power Transfer (WPT) transmitter.

1. Active NFC tag

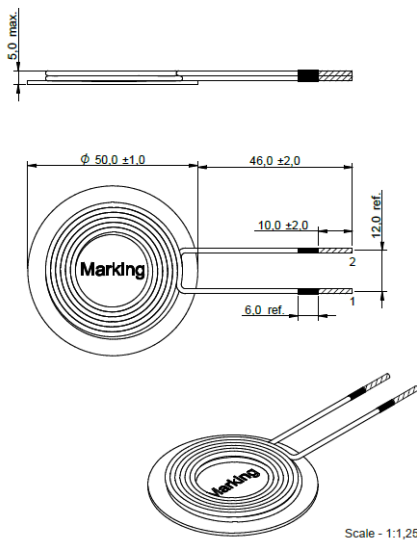
Frequency range	13.56 MHz
Type of antenna	Integral loop antenna
Description	The antenna is a 4-turn loop of 0.005-inch trace width with 0.0085 inch spacing between the traces in square shape with truncated corners. The outer dimension is approximately 10 mm x 10 mm. The inductance is approximately 550 nH.



2. WPT

Frequency range	120 – 148.5 kHz
Type of antenna	Coil antenna
Description	The antenna is a circular multi-turn loop that is 5mm in height. The multi-turn coil sits on top of a ferrite disk of 50mm diameter. This antenna is soldered onto the SCWC PCB. Inductance is 10 uH. It is the product 760308101141 from Wurth Electronics.

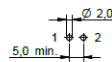
Dimensions: [mm]



Product Marking:

Marking	760308101141
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Recommended Land Pattern: [mm]



Scale: 1:1,5

Schematic:



Electrical Properties:

Properties	Test conditions	Value	Unit	Tol.
Inductance	125 kHz/ 10 mA	L	10	μH ±10%
Q-Factor	125 kHz/ 10 mA	Q	220	typ.
Rated Current	ΔT = 40 K	I _R	9	A max.
Saturation Current		I _{SAT}	16	A typ.
DC Resistance	@ 20 °C	R _{DC}	28	mΩ typ.
DC Resistance	@ 20 °C	R _{DC}	30	mΩ max.
Self Resonant Frequency		f _{res}	11	MHz

General Information:

It is recommended that the temperature of the component does not exceed +105°C under worst case conditions	
Operating Temperature	-20 °C up to +105 °C
Storage Temperature (in original packaging)	-20 °C up to +60 °C
Test conditions of Electrical Properties: +20°C, 33% RH if not specified differently	

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ORDERED	QoS	GENERAL TOLERANCE	PRECISION METHOD
QoS	QoS	EN ISO 2768-1m	QoS
DESCRIPTION		DRAWING CODE	
WE-WPCC Wireless Power Charging Transmitter Coil		760308101141	
REV	REVISION	CIRCUIT	DATE (YY-MM-DD)
01	001.000	Valid	2017-07-31
DRAWING UNIT		UNIT	
eSas		1/5	

This electronic component has been designed and developed for usage in general electronic equipment only. This product is not authorized for use in equipment where a higher safety standard and reliability standard is especially required or where a failure of the product is reasonably expected to cause severe personal injury or death, unless the parties have executed an agreement specifically guaranteeing such use. Moreover, Wurth Elektronik eSas GmbH & Co. KG products are neither designed nor intended for use in areas such as military, aerospace, nuclear, medical, automotive, transportation (aircraft, train, ship, etc.), public information network, etc. Wurth Elektronik eSas GmbH & Co. KG must be informed about the terms of such usage before the design is made. In addition, sufficient reliability evaluation checks for safety must be performed on every electronic component which is used in electrical circuits that require high safety and reliability features or performance.