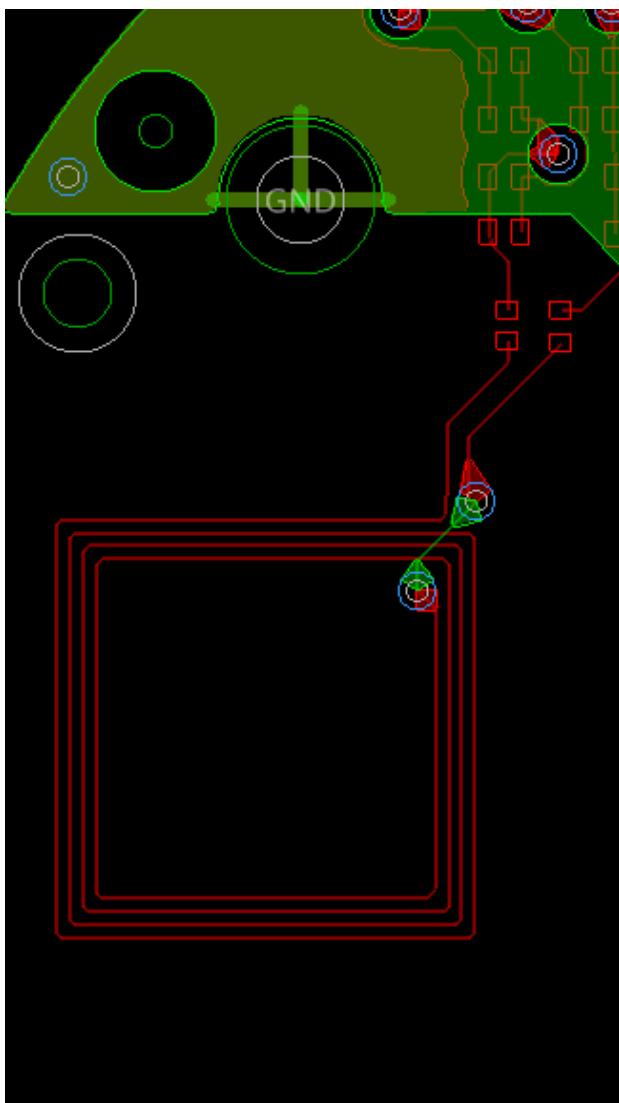


Antenna Specification of SCWCX01 module

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

1. Active NFC tag

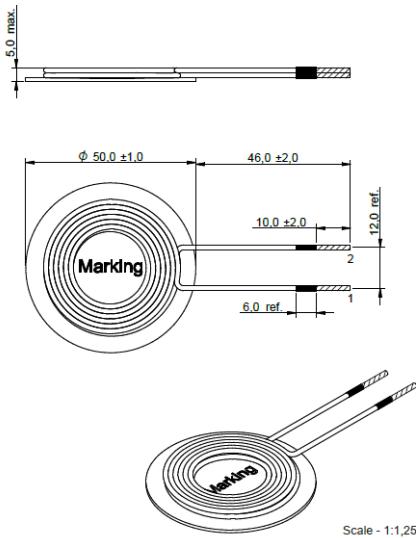
Frequency range	13.56 MHz
Type of antenna	Integral loop antenna
Description	The antenna is a 4-turn loop of 0.005-inch trace width with 0.0085 inch spacing between the traces in square shape with truncated corners. The outer dimension is approximately 10 mm x 10 mm. The inductance is approximately 550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



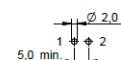
2. WPT

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]



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
Q-Factor	125 kHz/ 10 mA	Q	220	typ.
Rated Current	ΔT = 40 K	I _R	9	A
Saturation Current		I _{SAT}	16	A
DC Resistance	@ 20 °C	R _{DC}	28	mΩ
DC Resistance	@ 20 °C	R _{DC}	30	mΩ
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	

Product Marking:

Marking	760308101141
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CREATED	DECODED	GENERAL TECHNICS	PROJECTION METHOD
KaS	C50	DIN ISO 2768-1m	
DESCRIPTION WE-WPCC Wireless Power Charging Transmitter Coil			
ORDER CODE 760308101141			
REV	REVISION	STATUS	DATE (YYMMDD)
0 50	001.000	Valid	2017-07-31
			VALIDATION UNIT
			eiSos
			REV
			1/6

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 content is especially required or where a failure of the product is especially expected to cause severe personal injury or death, unless the parties have agreed on a system specifically designed for such use. Moreover Würth Elektronik eiSos GmbH & Co. KG products are neither designed nor intended for use in areas such as military, aerospace, aviation, nuclear control, transportation (automotive control, rail control, ship control), telecommunication signal, life support systems, medical, public information networks etc. Within these areas eiSos & Co. KG must be informed about the intent of each usage before the design is made. In addition, sufficient reliability verification checks for safety must be performed on every electronic component which is used in electrical circuits that require high safety and reliability functions or performance.

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