

Project name	AUDI NFC Reader
Document	NFC supplier Antenna specification
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Document History

Maturity	Version	Date	Author	Comment, Description
Released	AA	07/08/2025	Tomáš Fryšček	Initial version

1.1. SCOPE

This specification defines the characteristics of the NFC Antenna which will be used in combination with a dedicated ECU. The combination of the two elements will form the complete NFC reader solution formally named “Audi NFC Gateway”.

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1.3. Antenna manufacturer's name and address

Company name:
WITTE ACCESS TECHNOLOGY s.r.o.

Company address:
Průmyslová 1500,
Ostrov nad Ohří, 363 01
Česká republika

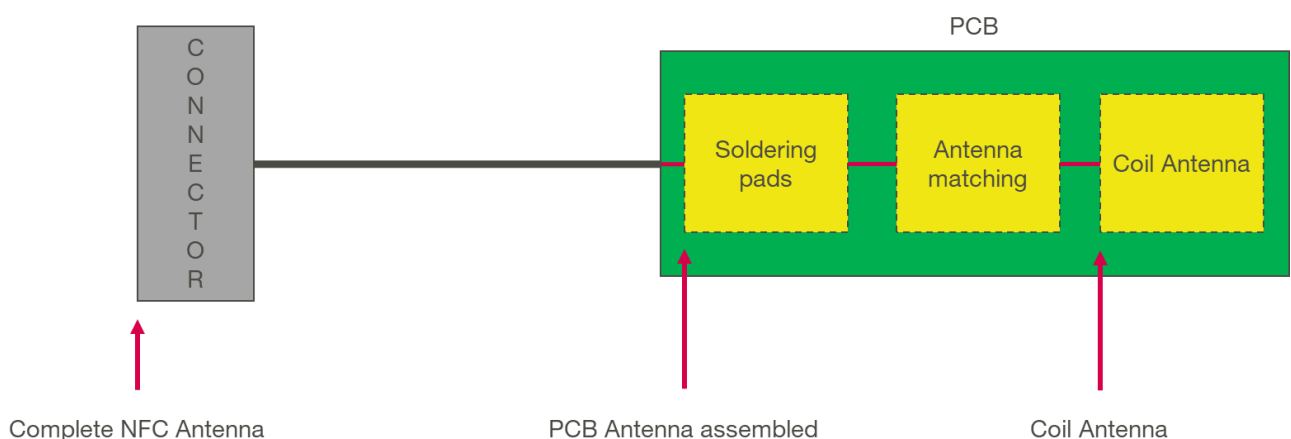
1.4. Antenna manufacturer's model/type designation

Product name: ETAB version V6

1.5. NFC ANTENNA OVERVIEW

The complete NFC antenna assembly is composed of three main elements:

- Connector
- Cable with shielding
- PCB



This specification describes the characteristics of different sub elements which compose the complete NFC antenna. Each of these characteristics are specified to ensure the good performance level of the complete system.

2. Characteristics

The following characteristics are required:

2.1. Operating conditions

Temperature range -40°C to 85°C

2.2. Complete antenna characteristics

Unless otherwise specified, the following characteristics shall be met over:

- Full temperature range
- Including mechanical assembly, potting, paint coating, chrome cover etc..

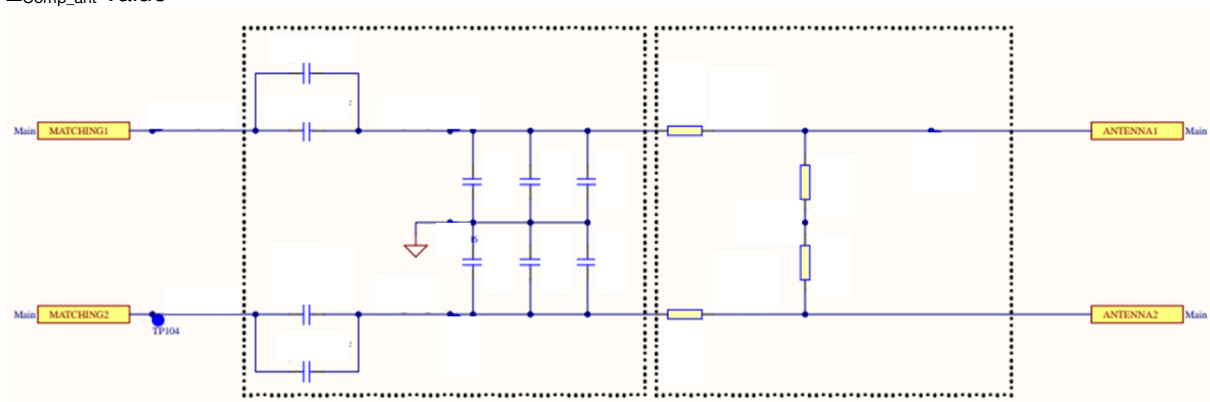
Coil antenna characteristics

Parameters	Value	Tolerance	Units	Comments
Length	46	± 1	mm	
Width	18	± 1	mm	
Nb of coil turns	3		-	
Coil Width trace	0.5	$\pm 0,01$	mm	
Coil pitch	1	$\pm 0,01$	mm	

2.3. Antenna matching topology

PCB antenna topology shall be the same as the one shown below. Capacitance values shall be determined to meet

Z_{Comp_ant} value



Keep only topology without values

2.4. Cable characteristics

The following characteristics are required:

- Shielded cable
- Twisted cables

To comply with EMC requirements, the shielded cable should be connected to Ground on the reader side

2.5. Antenna schematic

Vitesco performed matching of external antenna which shall be used for serial production Schematic of matching circuit

