STSW-ST25R003

Data brief

ST25R95 NFC / RFID reader antenna tuning circuit with EMI filter calculation tool

Features

- ST25R95 antenna tuning calculation tool including EMI filter
- Tuning circuit input impedance curve drawing
- Tuning circuit voltages curves calculation and drawing
- Theoretical magnetic field strength calculation and drawing
- Smith Chart plot

Description

In combination with the application note "ST25R95 RF transceiver antenna tuning circuit with EMI filter", STSW-ST25R003 worksheet helps customers to calculate and adjust the antenna tuning circuit for the ST25R95 NFC / RFID reader.

STSW-ST25R003 allows to estimates the theoretical circuit component values to achieve the desired input impedance of the tuning circuit.

From chosen and calculated component values, the input impedance curve is given as a function of the frequency for comparison and adjustment of component values on the application board.

STSW-ST25R003 also estimates the voltages at different location of the circuit.

An estimation of the magnetic field strength generated by the reader at various distance (free space, reader not loaded by any tag) is also provided.

A Smith chart with 50 Ω reference impedance is provided for tuning circuit input impedance trimming from 10 to 20 Mhz.

Product status link
STSW-ST25R003

Revision history

Table 1. Document revision history

Date	Revision	Changes
17-Oct-2018	1	Initial release.

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