ANT10-M24LR16E

45 mm x 65 mm antenna reference board with external ESD protection for the M24LR16E-R Dual Interface EEPROM

Data brief

Features

- Ready-to-use printed circuit board (PCB) including
  - 45 mm x 65 mm 13.56 MHz inductive antenna etched on the PCB
  - M24LR16E-R Dual Interface EEPROM
  - DSILC6-4P6 external ESD protection for IEC. 61400-4-2 classe 4 ESD robustness
  - I^2C connector
  - Energy harvesting output (V_{OUT}) with a 10 nF capacitance filtering circuit
  - RF WIP/BUSY output with 20 kΩ pull-up resistor, to indicate that an RF operation is ongoing

Description

The ANT10-M24LR16E antenna reference board is a ready-to-use PCB that features an M24LR16E-R Dual Interface EEPROM IC connected to a 45 mm x 65 mm RF etched antenna, and to an I^2C bus on the other side.

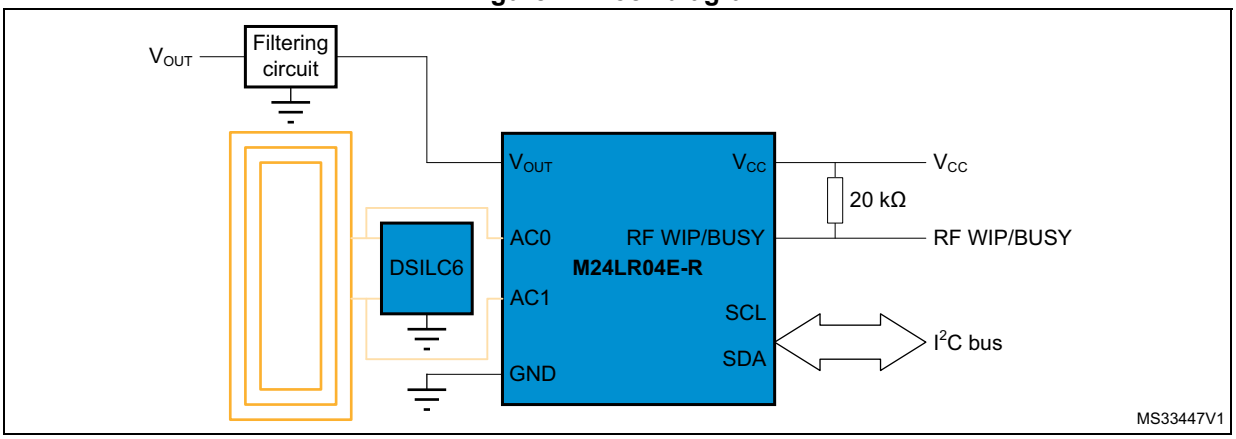
A DSILC6-4P6 external ESD protection is mounted on the M24LR16E-R antenna inputs to increase the ESD immunity to ESD discharges on antenna up to the IEC. 61400-4-2 class 4 level. Please refer to the application note AN4326 "*Increasing the M24LRXXE-R family ESD robustness on antenna using an external ESD protection*" for more details about implementing an external ESD protection on M24LRXX antennas.

The ANT10-M24LR16E antenna allows system designers to evaluate the M24LR16E-R performance and capabilities and to get started with their design.

To demonstrate the energy harvesting function, the ANT10-M24LR16E can be used in conjunction with the DEMO-CR95HF-A demonstration boards.

The ANT10-M24LR16E gerber files can be downloaded from http://www.st.com.

Figure 1. Block diagram



Associated firmware and PC software

The ANT10-M24LR16E board is supported by a PC software, the Dual Interface EEPROM tool software, that allows to configure and control the energy harvesting. This software is available from http://www.st.com.

Refer to application note AN3954 “*Developing your own Visual Basic or C/C++ application on a DEMO-CR95HF-A demonstration board*”, for how to adapt the PC software for your application.

1 Revision history

Table 1. Document revision history

Date	Revision	Changes
17-Oct-2013	1	Initial release.