

DK1002 Theory of Operation

Introduction

The Remote Keyless Entry System Evaluation Kit is designed to allow the user to easily and quickly demonstrate the operation of the RF2514 and RF2919 in a typical application. Everything needed to demonstrate a one way link is included in the kit. The devices are setup to demonstrate a typical keyless entry system using a rolling code encoder and decoder while operating at 868MHz. Batteries are included and antennas are printed on the circuit boards. This kit most accurately demonstrates a keyless entry application, although these devices are suitable for a variety of applications including wireless security systems and other remote control applications. The kit includes technical information on the RF2514 and the RF2919 along with applications information. Also included are the schematics, layouts, and bills of material for the demonstration boards. Electronic versions of these documents are available on the Internet at www.rfmd.com.

Remote Keyless Entry System Evaluation Kit

Contents

The Remote Keyless Entry System Evaluation Kit contains the following items:

- Keyless Entry Demonstration Transmitter
- Keyless Entry Demonstration Receiver
- 9V battery for receiver
- 3V battery for transmitter
- Evaluation Kit, Transmitter, and Receiver Data Sheets
- RF2514 Transmit IC Data Sheet
- RF2919 Receive IC Data Sheet

In a typical environment, this transmitter and receiver pair should operate over a distance of 50feet to 100feet. A greater distance may be observed when using the transmitter with receivers having more appropriate antennas. The printed antenna used in the demonstration receiver is very convenient, but not very efficient from an electrical perspective.

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TECHNICAL NOTES
AND ARTICLES