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## MRF24J40 Silicon Errata

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The MRF24J40 RF transceiver you have received conforms functionally to the Device Data Sheet (DS39776B), except for the anomalies described below.

### 1. Module: RX MAC

If the RX filter is configured for Promiscuous mode, packets with a reserved packet type in the MAC frame type field may cause the RX module to put an incorrect packet length in the RX buffer.

#### Work around

When operating in Promiscuous mode, flush the RX buffer by setting the RXFLUSH bit (RXFLUSH<0>) after every RX interrupt.

#### Date Codes that pertain to this issue:

All engineering and production devices.

### 2. Module: Security Module

When the device is performing encryption or decryption, there is a very small chance that the encryption or decryption result may be incorrect.

#### Work around

During decryption operations, repeat the decryption one or more times if a MIC error is indicated on the first attempt.

During encryption operations, verify the encryption by immediately decrypting the packet and checking it against the original for errors. If an error is found, repeat the encryption and verification.

#### Date Codes that pertain to this issue:

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### 3. Module: RX MAC

Under certain conditions, such as channel scanning, unexpected packets may be received at alternative channels spaced at 20 MHz intervals. This happens when the interfering sources have sufficient intensity and proximity to the receiver.

For example, if the device is tuned to the 2,425 MHz channel, spurious signals could be detected at 2,405 MHz, 2,445 MHz and 2,465 MHz.

#### Work around

To prevent this system degradation, do one of the following:

- Add a "Channel ID" to the "Frame Payload" of the MAC layer.  
This will enable the firmware to filter out unexpected packets.
- Increase the distance between the nodes.
- Reduce the other nodes' transmitted power.

#### Date Codes that pertain to this issue:

All engineering and production devices.

# MRF24J40

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## REVISION HISTORY

### Rev A Document (12/2006)

Original revision. Silicon errata issues 1 (RX MAC), 2 (SPI Interface), 3 (Security Module) and 4 (TX/RX PHY).

### Rev B Document (4/2007)

Added silicon issue 5 (SPI Interface).

### Rev C Document (3/2009)

Removed silicon issues 2 (SPI Interface, SDO pin) and 4 (TX/RX PHY) which were assimilated into the data sheet. Deleted issue 5 (SPI Interface). Added issue 3 (RX MAC).

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