

MCP215X Rev. A Silicon/Data Sheet Errata

The MCP215X parts you have received conform functionally to the device data sheets (DS21655A and DS21690A), except for the anomalies described below.

All of the issues listed here will be addressed in Revision B of the MCP215X silicon.

1. Module: IR Protocol Handler

When the Primary Device has initiated IR communication with the MCP215X, and the Primary Device is removed before the MCP215X enters Discovery mode, the MCP215X will lock-up.

Work around

Ensure that communication between the Primary and Secondary IS NOT interrupted during initial communication. If the MCP215X has not indicated a valid link for a given timeframe (as determined by the application), then the MCP215X will need to be reset.

2. Module: Host UART

If the MCP215X does not have a link established in Normal Connect Mode (NCM), overflowing the Host UART buffer will lock up the device.

Work around

The Host Controller firmware must respect the Host UART CTS Flow Control signal, as is indicated in the data sheet.

3. Module: IR Protocol Handler

Note: For Palm® PDA applications only

If an unexpected command or response from the Palm PDA occurs during the Discovery phase, the MCP215X may lock up. This is due to the Palm Operating System (Palm OS®) terminating Discovery when the IrDA® Standard Secondary Device transmits an unexpected response to the Palm OS. The MCP215X will lock up when the Primary Device aborts Discovery phase.

Work around

The MCP215X will need to be reset if the MCP215X has not indicated a valid link for a given timeframe (as determined by the application).

4. Module: IR Protocol Handler

The MCP215X does not properly monitor the number of packets received by the Primary. If the number of packets received by the Primary does not match the number sent, the link may shut down.

Work around

The Primary Device may reestablish a link to the MCP215X (the Secondary Device) as permitted by the application.

5. Module: Test Escapes

The test flow for some MCP215X devices was not adhered to. Devices with the following Traceability Codes do not function (will not communicate with the UART port or IR port) and should be replaced.

Package	Traceability Code
PDIP	0145H9K
	0215G9B
SOIC	0215G9U
SSOP	0210GUQ

Work around

Contact your Microchip sales representative to authorize a RMA to exchange these devices.

6. Module: Host UART

Note: For the MCP2150 only

The state of the DSR pin correctly indicates when the MCP2150 has initialized after a device reset (until an IR link is established), but will continue to track the state of the CD pin after a link has been established.

Work around

Monitor the DSR pin to determine when the device has completed initialization until a link is established. The DSR pin can then be ignored until the next time the Host Controller resets the MCP2150.

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7. Module: IR Protocol Handler

The MCP215X issues two RR packets upon entry into Normal Response Mode (NRM) prior to the Primary Device sending a packet.

This does not appear to be a compatibility issue with current IrDA compatible devices.

Work around

None

Clarifications/Corrections to the Data Sheet:

In the device data sheets, DS21655A and DS21690A, the following clarifications and corrections should be noted:

None.

Enhancements for Rev B Devices:

The following device enhancements should be noted for Silicon Rev. B devices (from Silicon Rev. A devices):

1. The MCP2150 now has retransmit capability for outgoing IR Packets. This retransmission occurs when the number of "packets" sent does not match the number "packets" received. The MCP215X will attempt to retransmit a "packet" only a limited number of times.
2. The Host UART Receive Buffer window (# of bytes that MCP2150 Host UART can receive before de-asserting CTS) was increased from 40 to 60 bytes. This provides consistency with the MCP2155.
3. Increased the number of initial BOF characters from 1 BOF to 11 BOF for better compatibility with future IrDA Standard devices.

APPENDIX A: REVISION HISTORY

Revision A (February 2006)

- Initial release of this document.

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APPENDIX B: SILICON REVISION HISTORY

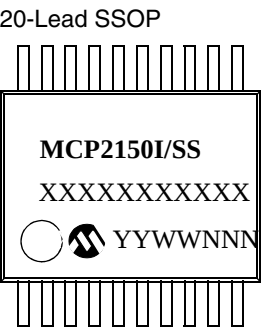
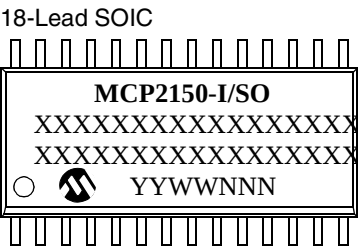
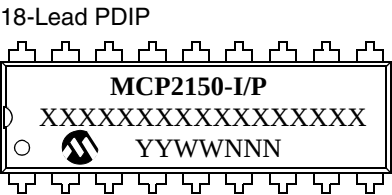
Table B-1 and the “Package Marking Information” sections indicate how to determine the Revision of the MCP215X device you have. The Revision information can be determined by the Year and Week Codes of manufacture, which are printed on the device.

TABLE B-1: SILICON REVISION/DEVICE MARKING

Silicon Revision	YYWWNNN
Rev A	All devices before: 0231NNN
Rev B	All devices on or after: 0231NNN

Legend: ‘N’ is any alphanumeric character.

Package Marking Information



Legend: XX...X Customer specific information*
YY Year code
(last 2 digits of calendar year)
WW Week code
(week of January 1 is week ‘01’)
NNN Alphanumeric traceability code

Note: In the event the full Microchip part number cannot be marked on one line, it will be carried over to the next line thus limiting the number of available characters for customer specific information.

* Standard marking consists of Microchip part number, year code, week code, and traceability code.

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