

PIC16CE623

PIC16CE623 Rev. A Silicon Errata Sheet

The PIC16CE623 (Rev. A) parts you have received conform functionally to the Device Data Sheet (DS40182**B**), except for the anomalies described below.

All the problems listed here will be addressed in future revisions of the PIC16CE623 silicon.

1. Module: RESET

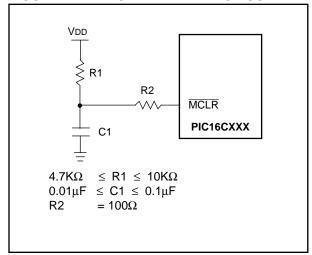
The minimum specification for the \overline{MCLR} must be met in order to RESET the PIC16CXXX. If a \overline{MCLR} pulse occurs that is less that the minimum specification (parameter #30), improper device operation can occur.

If the Minimum specification cannot be met, then an external circuit must be used to insure that any pulse width less than the specification will be filtered before it reaches the \overline{MCLR} pin.

Work Around

A possible circuit is shown in Figure 1. Proper design validation needs to be done to ensure desired operation over the applications operating conditions

FIGURE 1: MCLR EXTERNAL CIRCUIT



Note: As with any windowed EPROM device, please cover the window at all times, except when erasing.

PIC16CE623

2. Module: OSCILLATOR

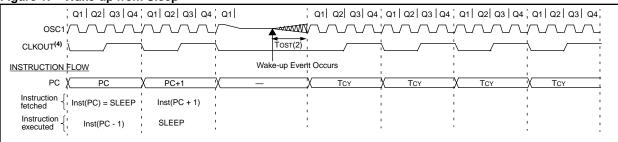
The Oscillator Start-up Timer (TOST) delay may not occur when the device wakes-up from sleep.

Figure 1 shows the start-up of the crystal after the event that causes the device to wake up from sleep mode (as specified in device data sheet). The start-up time (Tost) may not occur.

The events that wake-up the device from sleep are:

- An interrupt
- A WDT overflow (wake-up)
- · A Brown-out Reset
- A MCLR reset

Figure 1: Wake-up from Sleep



- Note 1: For Tost delay to be enabled, the XT, HS or LP oscillator mode must be selected.
 - 2: Tost = 1024Tosc, This delay may not occur, and every valid clock edge will generate internal device clocks.
 - 3: CLKOUT is not available in these osc modes, but shown here for timing reference.

In applications where time based measurements are started immediately after wake-up from sleep, the suggested work around should be implemented.

Work Around

After the SLEEP instruction, do a software delay of 256 TcY (same as 1024 Tosc). At the Reset and Interrupt vector addresses, test to see if the device woke from sleep (the $\overline{\text{TO}}$ and $\overline{\text{PD}}$ bits), and if the device did wake from sleep, ensure that the total cycle delay is 256 TcY.

Clarifications/Corrections to the Data Sheet:

In the Device Data Sheet (DS40182**B**), the following clarifications and corrections should be noted.

none



WORLDWIDE SALES AND SERVICE

AMERICAS

Corporate Office

Microchip Technology Inc. 2355 West Chandler Blvd. Chandler, AZ 85224-6199 Tel: 602-786-7200 Fax: 602-786-7277 Technical Support: 602 786-7627 Web: http://www.microchip.com

Atlanta

Microchip Technology Inc. 500 Sugar Mill Road, Suite 200B Atlanta, GA 30350 Tel: 770-640-0034 Fax: 770-640-0307

Boston

Microchip Technology Inc. 5 Mount Royal Avenue Marlborough, MA 01752 Tel: 508-480-9990 Fax: 508-480-8575

Chicago

Microchip Technology Inc. 333 Pierce Road, Suite 180 Itasca, IL 60143 Tel: 630-285-0071 Fax: 630-285-0075

Dallas

Microchip Technology Inc. 14651 Dallas Parkway. Suite 816 Dallas, TX 75240-8809 Tel: 972-991-7177 Fax: 972-991-8588

Dayton

Microchip Technology Inc. Two Prestige Place, Suite 150 Miamisburg, OH 45342 Tel: 937-291-1654 Fax: 937-291-9175

Microchip Technology Inc. 42705 Grand River, Suite 201 Novi, MI 48375-1727 Tel: 248-374-1888 Fax: 248-374-2874

Los Angeles

Microchip Technology Inc. 18201 Von Karman, Suite 1090 Irvine, CA 92612 Tel: 714-263-1888 Fax: 714-263-1338

New York

Microchip Technology Inc. 150 Motor Parkway, Suite 202 Hauppauge, NY 11788 Tel: 516-273-5305 Fax: 516-273-5335

San Jose

Microchip Technology Inc. 2107 North First Street, Suite 590 San Jose, CA 95131 Tel: 408-436-7950 Fax: 408-436-7955

AMERICAS (continued)

Toronto

Microchip Technology Inc. 5925 Airport Road, Suite 200 Mississauga, Ontario L4V 1W1, Canada Tel: 905-405-6279 Fax: 905-405-6253

ASIA/PACIFIC

Hong Kong Microchip Asia Pacific

RM 3801B, Tower Two Metroplaza 223 Hing Fong Road Kwai Fong, N.T., Hong Kong Tel: 852-2-401-1200 Fax: 852-2-401-3431

Microchip Technology Inc. India Liaison Office No. 6, Legacy, Convent Road Bangalore 560 025, India Tel: 91-80-229-0061 Fax: 91-80-229-0062

Japan

Microchip Technology Intl. Inc. Benex S-1 6F 3-18-20, Shinyokohama Kohoku-Ku, Yokohama-shi Kanagawa 222-0033 Japan Tel: 81-45-471- 6166 Fax: 81-45-471-6122

Korea

Microchip Technology Korea 168-1, Youngbo Bldg. 3 Floor Samsung-Dong, Kangnam-Ku Seoul, Korea Tel: 82-2-554-7200 Fax: 82-2-558-5934

Shanghai

Microchip Technology RM 406 Shanghai Golden Bridge Bldg. 2077 Yan'an Road West, Hong Qiao District Shanghai, PRC 200335 Tel: 86-21-6275-5700 Fax: 86 21-6275-5060

ASIA/PACIFIC (continued)

Singapore

Microchip Technology Singapore Pte Ltd. 200 Middle Road #07-02 Prime Centre Singapore 188980 Tel: 65-334-8870 Fax: 65-334-8850

Taiwan, R.O.C

Microchip Technology Taiwan 10F-1C 207 Tung Hua North Road Taipei, Taiwan, ROC

Tel: 886-2-2717-7175 Fax: 886-2-2545-0139

EUROPE

United Kingdom

Arizona Microchip Technology Ltd. 505 Eskdale Road Winnersh Triangle Wokingham Berkshire, England RG41 5TU Tel: 44-1189-21-5858 Fax: 44-1189-21-5835

Arizona Microchip Technology SARL Zone Industrielle de la Bonde 2 Rue du Buisson aux Fraises 91300 Massy, France Tel: 33-1-69-53-63-20 Fax: 33-1-69-30-90-79

Germany

Arizona Microchip Technology GmbH Gustav-Heinemann-Ring 125 D-81739 Müchen, Germany Tel: 49-89-627-144 0 Fax: 49-89-627-144-44

Italy

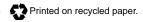
Arizona Microchip Technology SRL Centro Direzionale Colleoni Palazzo Taurus 1 V. Le Colleoni 1 20041 Agrate Brianza Milan, Italy Tel: 39-39-6899939 Fax: 39-39-6899883

9/8/98



Microchip received ISO 9001 Quality System certification for its worldwide headquarters, design, and wafer fabrication facilities in January, 1997. Our field-programmable PICmicro™ 8-bit MCUs, Serial EEPROMs, related specialty memory products and development systems conform to the stringent quality standards of the International Standard Organization (ISO).

All rights reserved. © 1998 Microchip Technology Incorporated. Printed in the USA. 12/98 🏻 📢 Printed on recycled paper.



Information contained in this publication regarding device applications and the like is intended for suggestion only and may be superseded by updates. No representation or warranty is given and no liability is assumed by Microchip Technology Incorporated with respect to the accuracy or use of such information, or infringement of patents or other intellectual property rights arising from such use or otherwise. Use of Microchip's products as critical components in life support systems is not authorized except with express written approval by Microchip. No licenses are conveyed, implicitly or otherwise, under any intellectual property rights. The Microchip logo and name are registered trademarks of Microchip Technology Inc. in the U.S.A. and other countries. All rights reserved. All other trademarks mentioned herein are the property of their respective companies.