

Features

- MultiMediaCard (MMC) Form Factor
- Single 2.7V to 3.6V Supply
- 66 MHz Max Clock Frequency
- Serial Peripheral Interface (SPI) Compatible
- Low Power Dissipation
 - 10 mA Active Read Current Typical
 - 25 μ A CMOS Standby Current Typical
- Industrial Temperature Range
- Pb-free/RoHS-compliant Package

1. Description

The AT45DCB008D, AT45DCB004D and AT45DCB002D are 2.7-volt only SPI compatible serial interface DataFlash[®] Cards. They are offered in 8-megabyte (64-Mbit), 4-megabyte (32-Mbit) and 2-megabyte (16-Mbit), densities. These 7-pin cards are form factor compatible to the MultiMediaCard standard leveraging on a wide range of low cost connectors that are commercially available. Additionally, the DataFlash Card is pinout compatible to the SPI version of the MMC card.

The small form factor and simple interface make the DataFlash Card ideal for a wide variety of data- and program code-storage applications where a removable storage medium is required. Applications range from voice/audio, text or image storage to software applications, system upgrades and software patches.

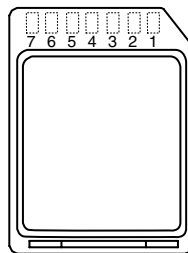
For detailed device specifications, please refer to the corresponding DataFlash datasheets:

- AT45DCB008D reference AT45DB642D
- AT45DCB004D reference AT45DB321D
- AT45DCB002D reference AT45DB161D

Table 1-1. Pin Configuration

Pin #	Pin Name	Function
1	\overline{CS}	Chip Select
2	SI	Serial Input
3	GND	Ground
4	VCC	Supply
5	SCK	Serial Clock
6	NC	No Connect
7	SO	Serial Output

Figure 1-1. DataFlash Card - Top View



**8-megabyte,
4-megabyte, and
2-megabyte
2.7-volt Only
DataFlash[®]
Cards**

**AT45DCB008D
AT45DCB004D
AT45DCB002D**



2. Ordering Information

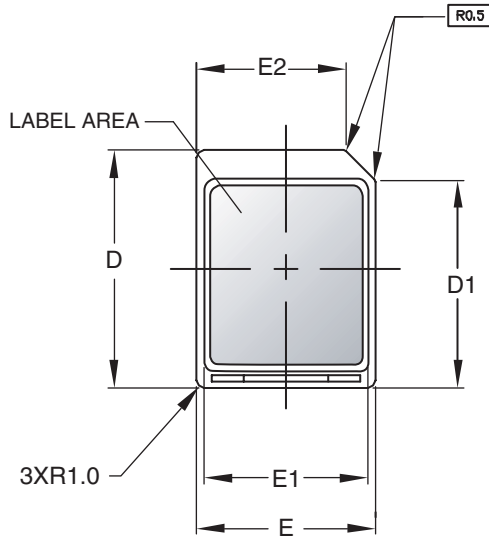
f _{sck} (MHz)	I _{cc} (mA)		Ordering Code	Package	Operation Range
	Active	Standby			
66	15	0.05	AT45DCB008D AT45DCB004D AT45DCB002D	7DF1 ⁽¹⁾	Industrial (-40° C to 85° C)

Note: 1. The 7DF1 is a Pb-free/RoHS-compliant package.

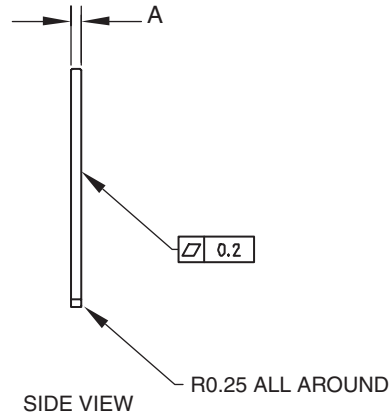
Package Type	
7DF1	7-lead, 2.5 mm Pitch 24 x 32 x 1.4 mm Body DataFlash Card

3. Packaging Information

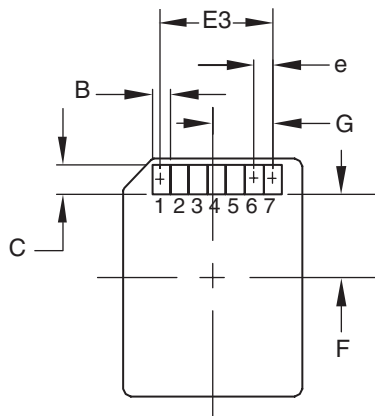
3.1 7DF1 – DataFlash Card



TOP VIEW



SIDE VIEW



BOTTOM VIEW

COMMON DIMENSIONS
(Unit of Measure = mm)

SYMBOL	MIN	NOM	MAX	NOTE
A	1.30	1.40	1.50	
B	2.40 TYP			
C	4.00 TYP			
D	31.90	32.00	32.10	
D1	28.00 REF			
E	23.90	24.00	24.10	
E1	22.00 REF			
E2	20.00 REF			
E3	15.00 TYP			
F	11.20 REF			
G	8.13 TYP			
e	2.50 TYP			

11/10/05



2325 Orchard Parkway
San Jose, CA 95131

TITLE

7DF1, 7-pad, 2.5 mm Pitch 24 x 32 x 1.4 mm Body DataFlash Card

DRAWING NO.

7DF1

REV.

B



4. Revision History

Revision Level	Revision Date	History
A	November 2005	Initial release
B	March 2006	Added text to indicate that DataFlash cards are Pb-free
C	April 2006	Added text to indicate that DataFlash cards are RoHS compliant
D	July 2007	Added AT45DCB001D part number.
E	January 2008	Removed AT45DCB001D part number.



Headquarters

Atmel Corporation
2325 Orchard Parkway
San Jose, CA 95131
USA
Tel: 1(408) 441-0311
Fax: 1(408) 487-2600

International

Atmel Asia
Room 1219
Chinachem Golden Plaza
77 Mody Road Tsimshatsui
East Kowloon
Hong Kong
Tel: (852) 2721-9778
Fax: (852) 2722-1369

Atmel Europe
Le Krebs
8, Rue Jean-Pierre Timbaud
BP 309
78054 Saint-Quentin-en-
Yvelines Cedex
France
Tel: (33) 1-30-60-70-00
Fax: (33) 1-30-60-71-11

Atmel Japan
9F, Tonetsu Shinkawa Bldg.
1-24-8 Shinkawa
Chuo-ku, Tokyo 104-0033
Japan
Tel: (81) 3-3523-3551
Fax: (81) 3-3523-7581

Product Contact

Web Site
www.atmel.com

Technical Support
dataflash@atmel.com

Sales Contact
www.atmel.com/contacts

Literature Requests
www.atmel.com/literature

Disclaimer: The information in this document is provided in connection with Atmel products. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document or in connection with the sale of Atmel products. **EXCEPT AS SET FORTH IN ATMEL'S TERMS AND CONDITIONS OF SALE LOCATED ON ATMEL'S WEB SITE, ATMEL ASSUMES NO LIABILITY WHATSOEVER AND DISCLAIMS ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO ITS PRODUCTS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL ATMEL BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, BUSINESS INTERRUPTION, OR LOSS OF INFORMATION) ARISING OUT OF THE USE OR INABILITY TO USE THIS DOCUMENT, EVEN IF ATMEL HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.** Atmel makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Atmel does not make any commitment to update the information contained herein. Unless specifically provided otherwise, Atmel products are not suitable for, and shall not be used in, automotive applications. Atmel's products are not intended, authorized, or warranted for use as components in applications intended to support or sustain life.

© 2008 Atmel Corporation. All rights reserved. Atmel®, logo and combinations thereof, DataFlash® and others, are registered trademarks or trademarks of Atmel Corporation or its subsidiaries. Other terms and product names may be trademarks of others.