

## Features

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

## 1. Description

The AT45DCB008, AT45DCB004 and AT45DCB002 are 2.7-volt only SPI compatible serial interface DataFlash<sup>®</sup> 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.

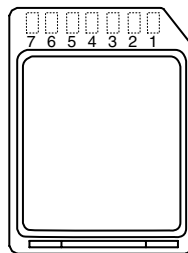
For detailed device specifications, please refer to the corresponding DataFlash datasheets: [www.DataSheet4U.com](http://www.DataSheet4U.com)

- AT45DCB008 reference AT45DB642
- AT45DCB004 reference AT45DB321B
- AT45DCB002 reference AT45DB161B

**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<sup>®</sup>  
Cards**

**AT45DCB008  
AT45DCB004  
AT45DCB002**





## 2. Ordering Information

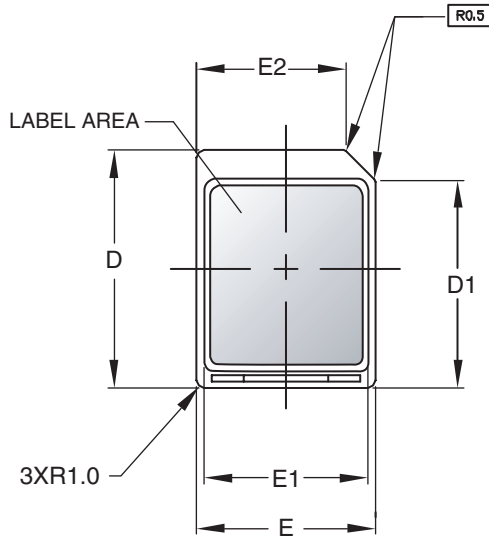
f <sub>sck</sub> (MHz)	I <sub>cc</sub> (mA)		Ordering Code	Package	Operation Range
	Active	Standby			
20	10	0.01	AT45DCB008 AT45DCB004 AT45DCB002	7DF1 <sup>(1)</sup>	Industrial (-40°C to 85°C)

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

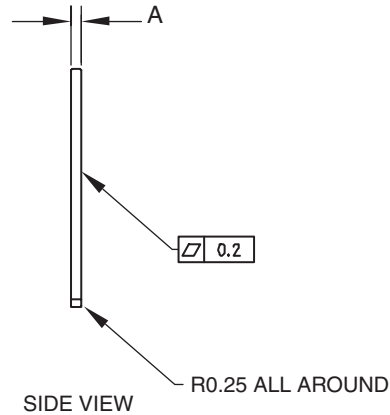
Package Type	
7DF1	7-lead, 2.5 mm Pitch 24 x 32 x 1.4 mm Body DataFlash Card

### 3. Packaging Information

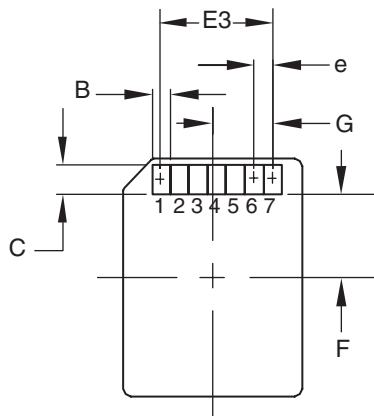
#### 3.1 7DF1 – DataFlash Card



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

**ATMEL** 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

<b>Revision Level – Revision Date</b>	<b>History</b>
A – November 2001	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





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## Literature Requests

[www.atmel.com/literature](http://www.atmel.com/literature)

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