

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 μ 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[®] 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.

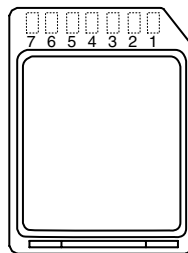
For detailed device specifications, please refer to the corresponding DataFlash datasheets:

- 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[®]
Cards**

**AT45DCB008
AT45DCB004
AT45DCB002**





2. Ordering Information

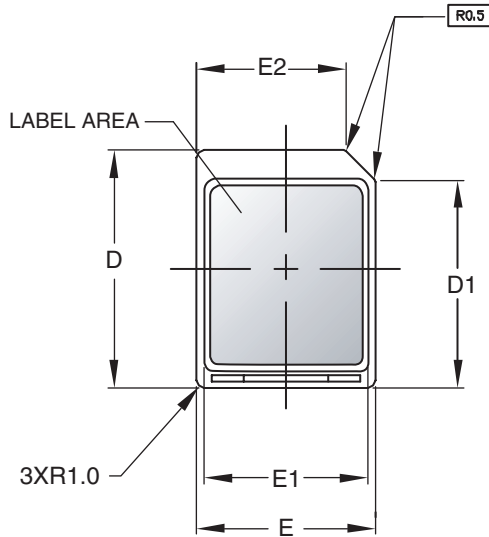
| f _{sck} (MHz) | I _{cc} (mA) | | Ordering Code | Package | Operation Range |
|---------------------------|----------------------|---------|--|---------------------|-------------------------------|
| | Active | Standby | | | |
| 20 | 10 | 0.01 | AT45DCB008 AT45DCB004 AT45DCB002 | 7DF1 ⁽¹⁾ | Industrial (-40°C to 85°C) |

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

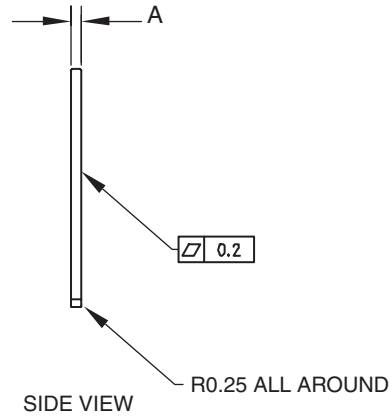
| Package Type | |
|--------------|---|
| 7DF1 | 7-lead, 2.5 mm Pitch 24 x 32 x 1.4 mm Body DataFlash Card |

3. Packaging Information

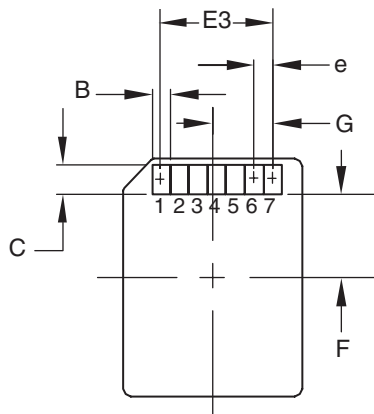
3.1 7DF1 – DataFlash Card



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 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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