CONDENSED

AmC002BFLKA

2 Megabyte 5.0 Volt-only Flash Memory PC Card

Advanced Micro Devices

DISTINCTIVE CHARACTERISTICS

- **High performance**
  - — 200 ns maximum access time
- **Single supply operation**
  - — Write and erase voltage, 5.0 V ± 5%
  - — Read voltage, 5.0 V ± 5%
- **CMOS low power consumption**
  - — 31 mA maximum active read current (x8 mode)
  - — 1.75 mA maximum standby current
- **High write endurance**
  - — Minimum 100,000 erase/write cycles
- **PCMCIA/JEIDA 68-pin standard**
  - — Selectable byte or word-wide configuration
- **Write protect switch**
  - — Prevents accidental data loss
- **Zero data retention power**
  - — Batteries not required for data storage
- **Separate attribute memory**
  - — 512 byte EEPROM
- **Automated write and erase operations increase system write performance**
  - — 128 x 16K byte memory sectors for faster automated erase speed
  - — Typically 1.3 seconds per single memory sector erase
  - — Random address writes to previously erased bytes (14 µs typical per byte)
- **Total system integration solution**
  - — Support from independent software and hardware vendors
- **Low insertion and removal force**
  - — State-of-the-art connector allows for minimum card insertion and removal effort
- **Manufactured by Berg Electronics**

GENERAL DESCRIPTION

AMD's 5.0 V-only Flash Memory PC Card provides the highest system level performance for data and file storage solutions to the portable PC market segment. Manufactured with AMD's Negative Gate Erase, 5.0 V-only technology, the AMD 5.0 V-only Flash Memory Cards are the most cost-effective and reliable approach to single-supply Flash memory cards. Data files and application programs can be stored on the AmC002BFLKA. This allows OEM manufacturers of portable systems to eliminate the weight, high-power consumption and reliability issues associated with electro-mechanical disk-based systems. The AmC002BFLKA also allows today's bulky and heavy battery packs to be reduced in weight and size. Typically only two "AA" alkaline batteries are required for total system operation. AMD's Flash Memory PC Cards provide the most efficient method to transfer useful work between different hardware platforms. The enabling technology of the AmC002BFLKA enhances the productivity of mobile workers.

Widespread acceptance of the AmC002BFLKA is assured due to its compatibility with the 68-pin PCMCIA/JEIDA international standard. AMD's Flash Memory Cards can be read in either a byte-wide or word-wide mode which allows for flexible integration into various system platforms. Compatibility is assured at the hardware interface and software interchange specification. The Card Information Structure (CIS) or Metaformat, can be written by the OEM at the memory card's attribute memory address space beginning at address 00000H by using a format utility. The CIS appears at the beginning of the Card's attribute memory space and defines the low-level organization of data on the PC Card. The AmC002BFLKA contains a separate 512 byte EEPROM memory for the card's attribute memory space. This allows all of the Flash memory to be used for the common memory space.

Third party software solutions such as Microsoft's Flash File System (FFS), enable AMD's Flash Memory PC Card to replicate the function of traditional disk-based memory systems.

Manufactured by Berg Electronics BERG

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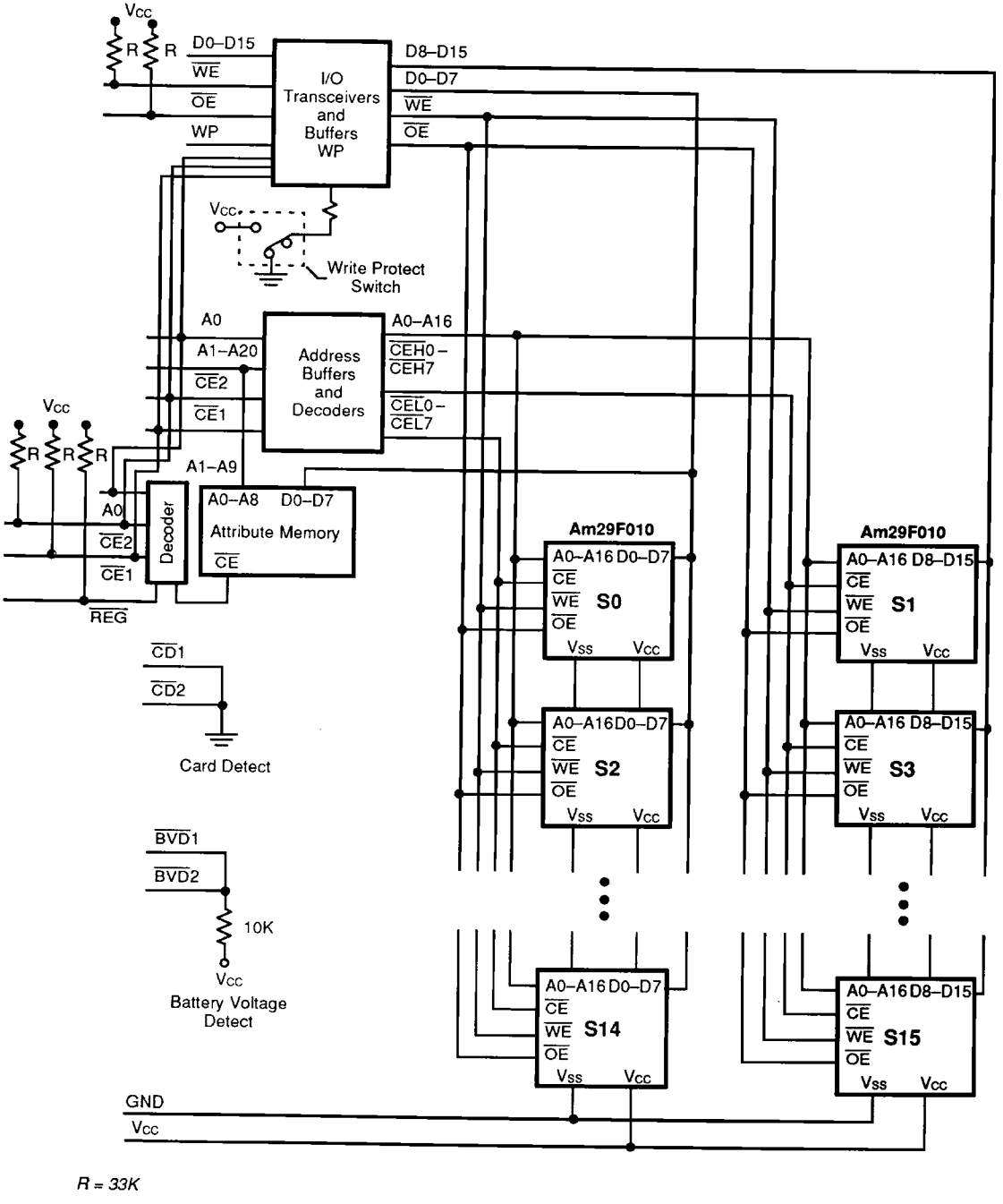
BLOCK DIAGRAM



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PC CARD PIN ASSIGNMENTS

Pin#	Signal	I/O	Function	Pin#	Signal	I/O	Function
1	GND		Ground	35	GND		Ground
2	D3	I/O	Data Bit 3	36	$\overline{CD1}$	O	Card Detect (Note 3)
3	D4	I/O	Data Bit 4	37	D11	I/O	Data Bit 11
4	D5	I/O	Data Bit 5	38	D12	I/O	Data Bit 12
5	D6	I/O	Data Bit 6	39	D13	I/O	Data Bit 13
6	D7	I/O	Data Bit 7	40	D14	I/O	Data Bit 14
7	$\overline{CE1}$	I	Card Enable (Note 3)	41	D15	I/O	Data Bit 15
8	A10	I	Address Bit 10	42	$\overline{CE2}$	I	Card Enable 2 (Note 3)
9	$\overline{OE}$	I	Output Enable	43	NC		No Connect
10	A11	I	Address Bit 11	44	NC		No Connect
11	A9	I	Address Bit 9	45	NC		No Connect
12	A8	I	Address Bit 8	46	A17	I	Address Bit 17
13	A13	I	Address Bit 13	47	A18	I	Address Bit 18
14	A14	I	Address Bit 14	48	A19	I	Address Bit 19
15	$\overline{WE}$	I	Write Enable	49	A20		Address Bit 20
16	NC		No Connect	50	NC		No Connect
17	V_{CC1}		Power Supply	51	V_{CC2}		Power Supply
18	NC		No Connect (Note 1)	52	NC		No Connect (Note 1)
19	A16	I	Address Bit 16	53	NC		No Connect
20	A15	I	Address Bit 15	54	NC		No Connect
21	A12	I	Address Bit 12	55	NC		No Connect
22	A7	I	Address Bit 7	56	NC		No Connect
23	A6	I	Address Bit 6	57	NC		No Connect
24	A5	I	Address Bit 5	58	NC		No Connect
25	A4	I	Address Bit 4	59	NC		No Connect
26	A3	I	Address Bit 3	60	NC		No Connect
27	A2	I	Address Bit 2	61	$\overline{REG}$	I	Register Select
28	A1	I	Address Bit 1	62	$\overline{BVD2}$	O	Battery Vltg Detect 2 (Note 2)
29	A0	I	Address Bit 0	63	$\overline{BVD1}$	O	Battery Vltg Detect 1 (Note 2)
30	D0	I/O	Data Bit 0	64	D8	I/O	Data Bit 8
31	D1	I/O	Data Bit 1	65	D9	I/O	Data Bit 9
32	D2	I/O	Data Bit 2	66	D10	I/O	Data Bit 10
33	WP	O	Write Protect (Note 3)	67	$\overline{CD2}$	O	Card Detect (Note 3)
34	GND		Ground	68	GND		Ground

Notes:

I = Input to card, O = Output from card

I/O = Bi-directional

NC = No connect

In systems which switch V_{CC} individually to cards, no signal should be directly connected between cards other than ground.

1. *V_{PP} not required for Programming or Reading operations.*
2. *$\overline{BVD}$ = Internally pulled-up*
3. *Signal must not be connected between cards.*

ORDERING INFORMATION

Standard Products

AMD standard products are available in several packages and operating ranges. The order number (Valid Combination) is formed by a combination of: