



# 512Kx32 Flash

## DESCRIPTION

The EDI7F33512, EDI7F233512 and EDI7F433512 are organized as 512Kx32 and 2x512Kx32 and 4x512Kx32 respectively. The modules are based on AMD's AM29F040 - 512Kx8 Flash Device in TSOP packages which are mounted on an FR4 substrate.

The modules offer access times between 80 and 150ns allowing for operation of high-speed microprocessors without wait states.

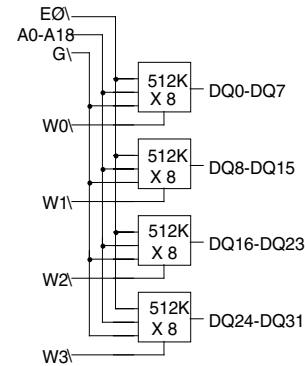
## FEATURES

- 512Kx32, 2x512Kx32 and 4x512Kx32 Densities
- Based on AMDs - AM290F040 Flash Device
- Fast Read Access Time - 80-150ns
- 5- Volt-Only Reprogramming
- Sector Erase Architecture
  - Uniform sectors of 64 Kbytes each
  - Any combination of sectors can be erased
  - Also supports full chip erase
- Sector Protection
  - Hardware method that disables any combination of sectors from write or erase operations
- Embedded Erase Algorithms
  - Automatically preprograms and erases the chip or any combination of sectors
- Embedded Program Algorithms
  - Automatically programs and verifies data at specified address
- Data Polling and Toggle Bit feature for detection of program or erase cycle completion
- Low Power Dissipation
  - 40mA per Device Active Current
  - 10µA per Device CMOS Standby Current
- Typical Endurance >100,000 Cycles
- Single 5 Volt ±10% Supply
- CMOS and TTL Compatible Inputs and Outputs
- Commercial and Industrial Temperature Range
- Package
  - 80 Pin SIMM (JEDEC)

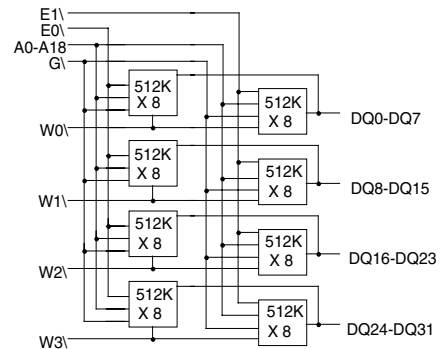
FIG. 1

### BLOCK DIAGRAMS

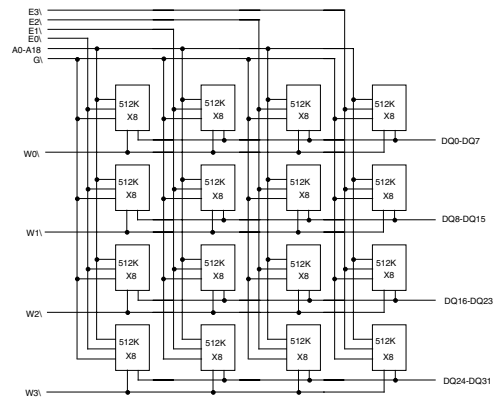
#### EDI7F33512C-BNC: 512Kx32 80 PIN SIMM



#### EDI7F233512C-BNC: 2x512Kx32 80 PIN SIMM



#### EDI7F433512C-BNC: 4x512Kx32 80 PIN SIMM





**CAPACITANCE**

(f=1.0MHz, VIN = VCC or VSS)

Parameter	Sym	512K Max	2x512K Max	4x512K Max	Units
Address Lines	CA	35	70	140	pF
Data lines	CDQ	15	30	60	pF
Chip & Write Enable Lines	CC	15	30	60	pF
Output Enable lines	CG	35	70	140	pF

**PIN CONFIGURATIONS**

Pin #	Pin Name	Pin #	Pin Name	Pin #	Pin Name	Pin #	Pin Name
1	VSS	21	*	41	A11	61	DQ9
2	VCC	22	*	42	A10	62	DQ8
3	NC	23	*	43	A9	63	DQ7
4	G\	24	*	44	A8	64	DQ6
5	W0\	25	VSS	45	A7	65	DQ5
6	W1\	26	DQ29	46	A6	66	DQ4
7	NC	27	DQ30	47	A5	67	DQ3
8	DQ16	28	DQ31	48	A4	68	DQ2
9	DQ17	29	W2\	49	A3	69	DQ1
10	DQ18	30	NC	50	A2	70	DQ0
11	DQ19	31	NC	51	A1	71	NC
12	DQ20	32	NC	52	AO	72	VCC
13	DQ21	33	NC	53	W3\	73	PD1
14	DQ22	34	A18	54	VSS	74	PD2
15	DQ23	35	A17	55	DQ15	75	PD3
16	DQ24	36	A16	56	DQ14	76	PD4
17	DQ25	37	A15	57	DQ13	77	PD5
18	DQ26	38	A14	58	DQ12	78	PD6
19	DQ27	39	A13	59	DQ11	79	PD7
20	DQ28	40	A12	60	DQ10	80	VSS

\*TBD

Simm Density			
Pin	2Mb	4Mb	8Mb
21	NC	NC	E3\
22	NC	NC	E2\
23	NC	E1\	E1\
24	E0\	E0\	E0\

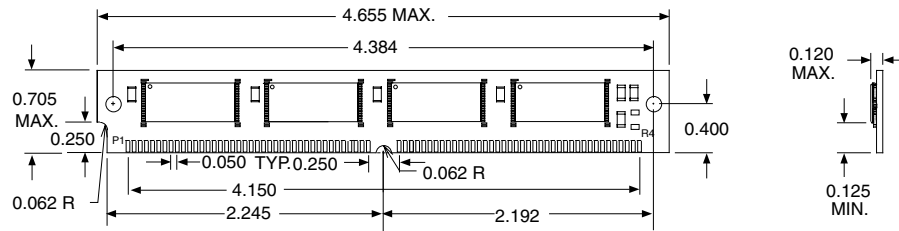
Presence Detect Pin Out			
Pin	512K	2x512K	4x512K
PD1	VSS	NC	VSS
PD2	VSS	NC	NC
PD3	VSS	NC	NC
PD4	NC	VSS	VSS

A0-A18            Address input  
 E0\-E3\            Chip Enable  
 W0\-W3\            Write Enable  
 G\                    Output Enable  
 DQ0-DQ31        Data Input/Output  
 PD                    Presence Detect  
 VCC                  Power 5V±10%  
 VSS                  Ground  
 NC                    No Connect

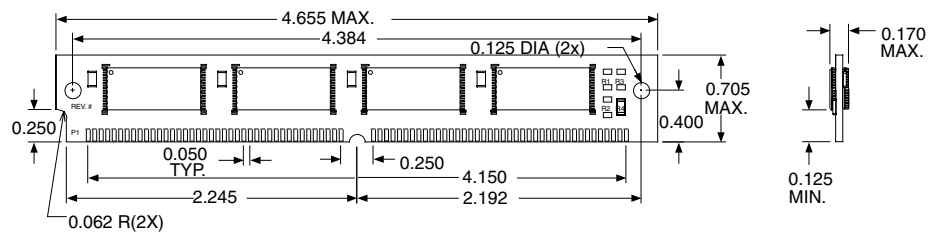


**ORDERING INFORMATION**

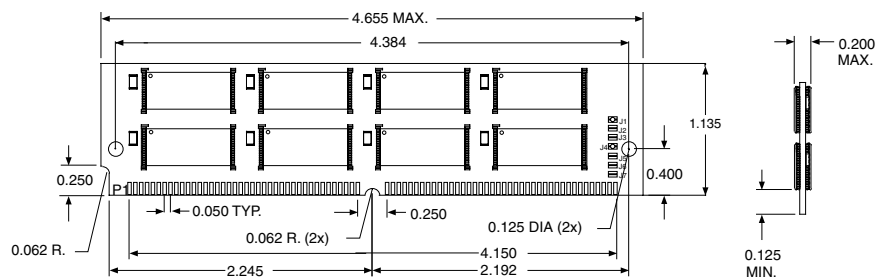
Part Number	Speed (ns)	Package
EDI7F33512C80BNC	80	366
EDI7F33512C90BNC	90	366
EDI7F33512C100BNC	100	366
EDI7F33512C120BNC	120	366
EDI7F33512C150BNC	150	366



Part Number	Speed (ns)	Package
EDI7F233512C80BNC	80	367
EDI7F233512C90BNC	90	367
EDI7F233512C100BNC	100	367
EDI7F233512C120BNC	120	367
EDI7F233512C150BNC	150	367



Part Number	Speed (ns)	Package
EDI7F433512C80BNC	80	368
EDI7F433512C90BNC	90	368
EDI7F433512C100BNC	100	368
EDI7F433512C120BNC	120	368
EDI7F433512C150BNC	150	368



ALL DIMENSIONS ARE IN INCHES

# DATASHEET APPROVALS

ECO# 15528

EDI PART NO. EDI7F33512C

NEW REV 4A

DATE 9/24/02

<u>APPROVAL:</u>	<u>INITIAL</u>	<u>DATE</u>	<u>CORRECTION ON PAGES</u>
<del>JUAN GUZMAN</del> L.K.	_____	_____	_____
<del>MUKESH TRIVEDI</del> M.A.	_____	_____	_____
PAUL MARIEN	_____	_____	_____
LARRY WINROTH	_____	_____	_____
DAVE KELLY	_____	_____	_____
MARK DOWNEY	_____	_____	_____
DAVE HARRISON	_____	_____	_____
TONY LEE	_____	_____	_____
BOB KHEDERIAN	_____	_____	_____
LUIS ESTELLA	_____	_____	_____

WILL THIS DATASHEET GO ON THE WEB?      YES      NO      LINE: \_\_\_\_\_  
FAMILY: \_\_\_\_\_  
IS THIS A NEW DATASHEET?      PROD.TYPE: \_\_\_\_\_  
ORG: \_\_\_\_\_  
WILL THIS DATASHEET REPLACE AN EXISTING      DENSITY: \_\_\_\_\_  
DATASHEET THAT'S ALREADY ON THE WEB?      SPEED: \_\_\_\_\_  
PKG: \_\_\_\_\_  
IF YES, WHAT DATASHEET IS IT REPLACING?      VOLTAGE: \_\_\_\_\_

WHAT SECTION SHOULD THIS DATASHEET BE PLACED IN ON THE WEB? \_\_\_\_\_

AFTER REVIEWING OR MAKING CORRECTIONS ON THE DATASHEET (S)  
**PLEASE SIGN-OFF ON THIS SHEET AND ,MAKE YOUR CORRECTIONS -ON  
THE ORIGINAL COPY(S).**

**AFTER REVIEWING THE DATA SHEET, TEST ENGINEERING WILL COMPLETE THE SECTION BELOW.**

TEST PROGRAM CHANGE REQUIRED:  
YES: \_\_\_\_\_ NO \_\_\_\_\_ DATE: \_\_\_\_\_

TEST ENGINEER SIGNATURE \_\_\_\_\_

**IF YES, DO NOT RELEASE DATA SHEET UNTIL TEST PROGRAM CHANGE IS COMPLETED.**

TEST PROGRAM CHANGE COMPLETION DATE: \_\_\_\_\_  
TEST PROGRAM NAME AND REVISION \_\_\_\_\_  
TEST ENGINEER SIGNATURE \_\_\_\_\_