ACCUTEK
MICROCIRCUIT CORPORATION

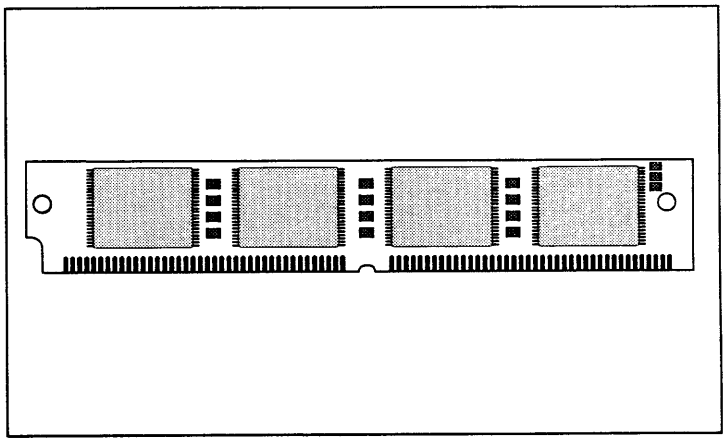
AK2321024W
1,048,576 by 32 Bit Flash Memory

DESCRIPTION

The Accutek AK2321024W flash memory module is a CMOS Flash Memory organized in 1024K x 32 bit words. The module consists of four standard 1 Meg x 8 flash memory components in plastic TSOP packages mounted on the front side of a printed circuit board in an 80 pad leadless SIM configuration.

The operation of the AK2321024W is identical to four 1 Meg x 8 flash memory components. The Flash memories use a common Chip Select and a common Output Enable. There are separate Write Enable connections used independently to control separate bytes.

There are four presence detect pins for module density identification, PD1 thru PD4, and three presence detect pins for module speed identification, PD5 thru PD7. This module can be supplied in a variety of speeds ranging from 45 nSEC to 200 nSEC.



FEATURES

- 1,048,576 x 32 bit organization
- JEDEC Standardized 80 pin SIM format
- Common Output Enable ($\overline{OE}$) and Chip Enable ($\overline{CS1}$)
- Four separate Write Enables ($\overline{WE}$)
- Operating free air temperature 0°C to 70°C
- Single Power Supply
- 1.8 Volt uses AMD AM29SL800
- 2.2 Volt uses AMD AM29LL800
- 3.3 Volt uses AMD AM29LV800
- 5.0 Volt uses AMD AM29F800
- $\overline{RESET}$ connected to pin 7 for system control on reset
- Top boot sector or bottom boot sector options available
- Power:
  0.8 uA Standby Current
  28 mA Read Current
  60 mA Program/Erase Current

PIN NOMENCLATURE

A0 - A19	Address Inputs
DQ0 - DQ31	Data In / Data Out
$\overline{WE0}$ - $\overline{WE3}$	Write Enable
$\overline{OE}$	Output Enable
$\overline{CS1}$	Chip Enable
RST	Reset
Vcc	Power Supply
Vss	Ground
PD1 - PD7	Presence Detect
NC	No Connect

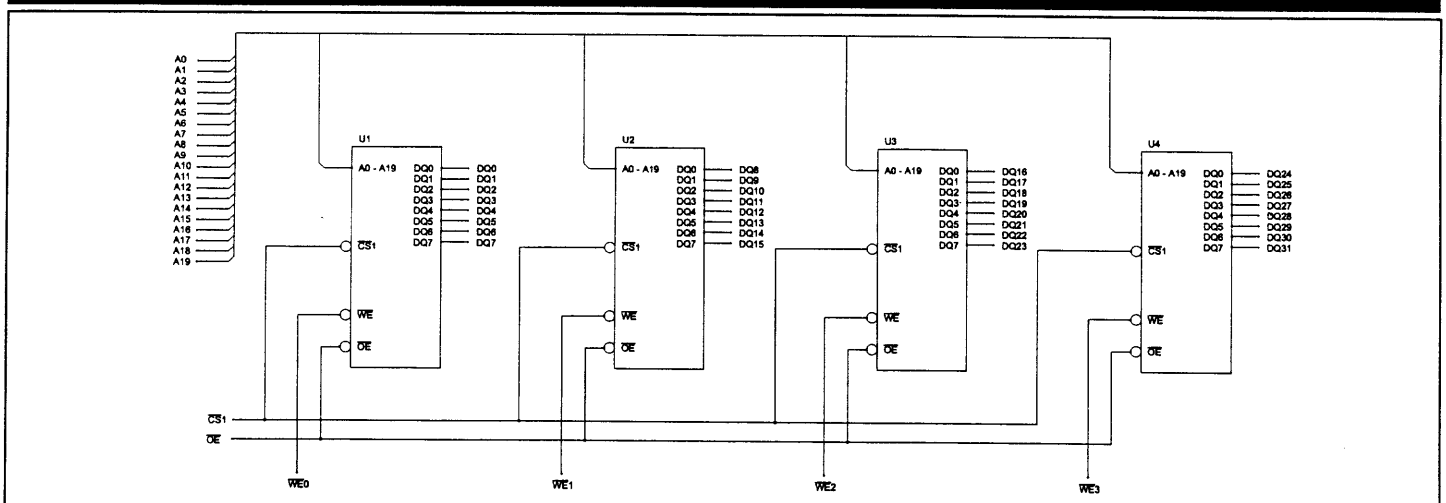
MODULE OPTIONS

Leadless SIM: AK2321024W
Leaded ZIP: AK2321024Z

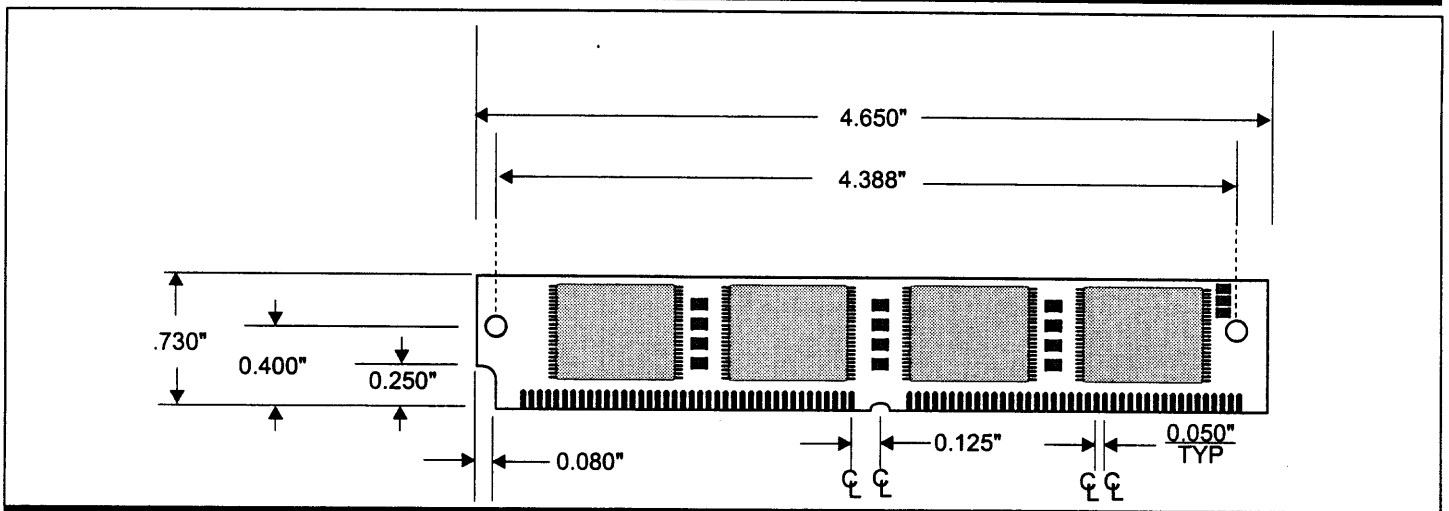
PIN ASSIGNMENT

PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL
1	Vss	21	NC	41	A11	61	DQ9
2	Vcc	22	NC	42	A10	62	DQ8
3	NC	23	NC	43	A9	63	DQ7
4	$\overline{OE}$	24	CS1	44	A8	64	DQ6
5	$\overline{WE0}$	25	Vss	45	A7	65	DQ5
6	$\overline{WE1}$	26	DQ29	46	A6	66	DQ4
7	RST	27	DQ30	47	A5	67	DQ3
8	DQ16	28	DQ31	48	A4	68	DQ2
9	DQ17	29	$\overline{WE2}$	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	A0	72	Vcc
13	DQ21	33	A19	53	$\overline{WE3}$	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

FUNCTIONAL DIAGRAM



MECHANICAL DIMENSIONS



PRESENCE DETECT

	PD1	PD2	PD3	PD4	PD5	PD6	PD7
Not Defined	Open	Vss	Open	Vss	Open	Open	Open
45 nS	Open	Vss	Open	Vss	Vss	Open	Open
55 nS	Open	Vss	Open	Vss	Open	Vss	Open
70 nS	Open	Vss	Open	Vss	Vss	Vss	Open
90 nS	Open	Vss	Open	Vss	Open	Open	Vss
120 nS	Open	Vss	Open	Vss	Vss	Open	Vss
150 nS	Open	Vss	Open	Vss	Open	Vss	Vss
200 nS	Open	Vss	Open	Vss	Vss	Vss	Vss

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