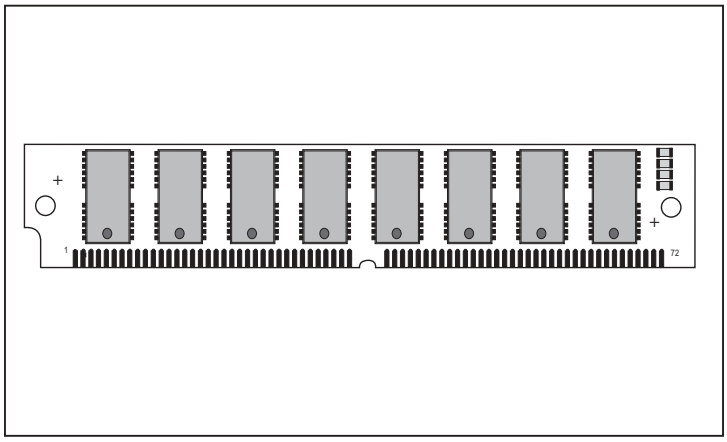
Accutek Microcircuit Corporation

AK5324096W
4,194,304 Word by 32 Bit CMOS Dynamic Random Access Memory

DESCRIPTION

The Accutek AK5324096W high density memory module is a CMOS Dynamic RAM organized in 4096K x 32 bit words. The module consists of eight standard 4 Meg x 4 DRAMs in plastic SOJ packages mounted on the front surface of a printed circuit board with a low profile height of only 0.875" in a 72 pin leadless SIM configuration. This configuration allows socket-mounting of large quantities of memory in applications where high density and ease of inserting additional memory are important.

The operation of the AK5324096W is identical to eight 4 Meg x 4 drams. There are four $\overline{CAS}$ lines and two $\overline{RAS}$ lines. Independent byte control is accomplished by four $\overline{CAS}$ lines. Each separate $\overline{CAS}$ line controls two of the 4 Meg x 4 DRAMs to form an 8 bit byte. The bank of 32 bits is controlled by the two $\overline{RAS}$ lines. A sixteen bit data path can be produced by connecting DQ_0 to DQ_{16}, DQ_1 to DQ_{17}, etc. and alternately strobing $\overline{RAS_0}$ with $\overline{RAS_2}$.



FEATURES

- 4,194,304 x 32 bit organization
- Low profile board height of 0.875 inch
- 72 pad Single In-Line Module
- Multiple $\overline{CAS}$ and $\overline{RAS}$ lines allow x16 or x32 bit widths
- Power
  5.28 Watt Max Active (60nS)
  4.40 Watt Max Active (70 nS)
  44 mW Max Standby
- $\overline{CAS}$-before-$\overline{RAS}$, $\overline{RAS}$-only or hidden refresh
- Single 5 Volt Power Supply
- 2048 Refresh Cycles, 32 mSEC
- Available in Fast Page Mode and EDO
- Available in leadless SIM or leaded ZIP versions
- Downward compatible with AK5322048W, AK5321024W, AK532512W and AK536256W
- Upward compatible with AK5328192W, AK53216384 and AK53232768
- Operating free air temperature 0^0C to 70^0C

ADDITIONAL OPTIONS AVAILABLE

4 Meg x 32 version, using 4K Refresh Drams, AK5324096W4K

PIN NOMENCLATURE

A_0 - A_{10}	Address Inputs
DQ_0 - DQ_{31}	Data In/Data Our
$\overline{CAS_0}$ - $\overline{CAS_3}$	Column Address Strobe
$\overline{RAS_0}$, $\overline{RAS_2}$	Row Address Strobe
$\overline{WE}$	Write Enable
$\overline{OE}$	Output Enable
PD_1 - PD_4	Presence Detect
Vcc	5v Supply
Vss	Ground
NC	No Connect

MODULE OPTIONS

Leadless SIM: AK5324096W
Leaded ZIP: AK5324096Z

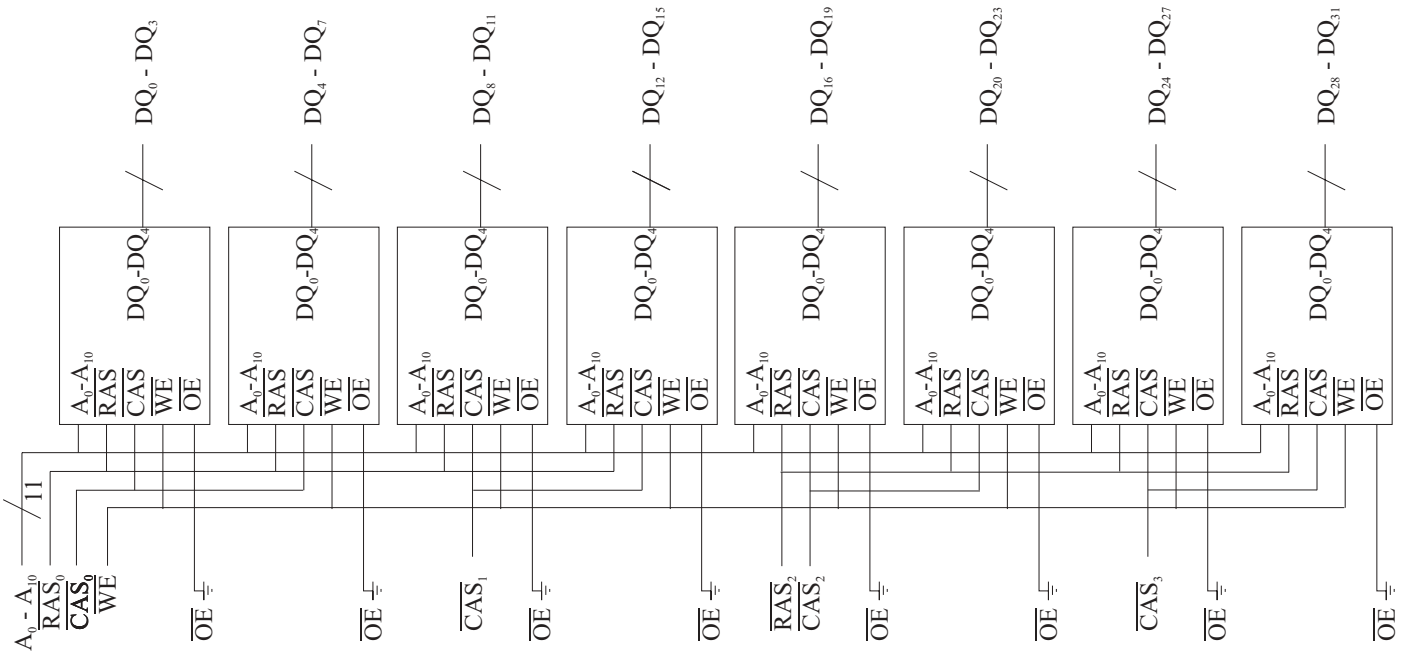
PIN ASSIGNMENT

PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL
1	Vss	19	A10	37	NC	55	DQ11
2	DQ0	20	DQ4	38	NC	56	DQ27
3	DQ16	21	DQ20	39	Vss	57	DQ12
4	DQ1	22	DQ5	40	CAS0	58	DQ28
5	DQ17	23	DQ21	41	CAS2	59	Vcc
6	DQ2	24	DQ6	42	CAS3	60	DQ29
7	DQ18	25	DQ22	43	CAS1	61	DQ13
8	DQ3	26	DQ7	44	RAS0	62	DQ30
9	DQ19	27	DQ23	45	NC	63	DQ14
10	Vcc	28	A7	46	NC	64	DQ31
11	NC	29	NC	47	WE	65	DQ15
12	A0	30	Vcc	48	NC	66	NC
13	A1	31	A8	49	DQ8	67	PD1
14	A2	32	A9	50	DQ24	68	PD2
15	A3	33	NC	51	DQ9	69	PD3
16	A4	34	RAS2	52	DQ25	70	PD4
17	A5	35	NC	53	DQ10	71	NC
18	A6	36	NC	54	DQ26	72	Vss

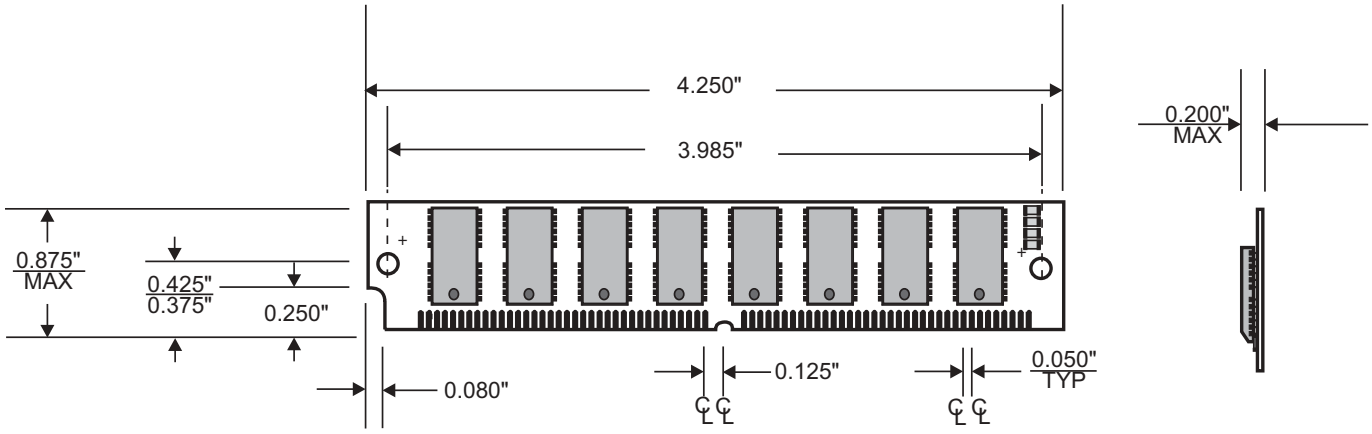
Presence Detect -

	-60	-70
PD1	Vss	Vss
PD2	NC	NC
PD3	NC	Vss
PD4	NC	NC

FUNCTIONAL DIAGRAM



MECHANICAL DIMENSIONS



ACCUTEK MICROCIRCUIT CORPORATION
BUSINESS CENTER at NEWBURYPORT
2 NEW PASTURE ROAD, SUITE 1
NEWBURYPORT, MA 01950-4054
PHONE: 978-465-6200 FAX: 978-462-3396
E-Mail: sales@accutekmicro.com
Internet: www.accutekmicro.com

Accutek reserves the right to make changes in specifications at any time and without notice. Accutek does not assume any responsibility for the use of any circuitry described; no circuit patent licenses are implied. Preliminary data sheets contain minimum and maximum limits based upon design objectives, which are subject to change upon full characterization over the specific operating conditions.