Accutek Microcircuit Corporation

DESCRIPTION

The Accutek AK5321024BW high density memory module is a CMOS dynamic RAM organized in 1024K x 32 bit words. The module consists of two standard 1 Meg x 16 bits DRAMs in plastic SOJ packages mounted on the front side of a printed circuit board in a 72 pad 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 AK5321024BW is identical to eight 1 Meg x 4 Drams. There are four $\overline{CAS}$ lines and two $\overline{RAS}$ lines. On each bank of 1M x 32, independent byte control is accomplished by four $\overline{CAS}$ lines. Each seperate $\overline{CAS}$ line controls one byte of the 1 Meg x 16 Dram.
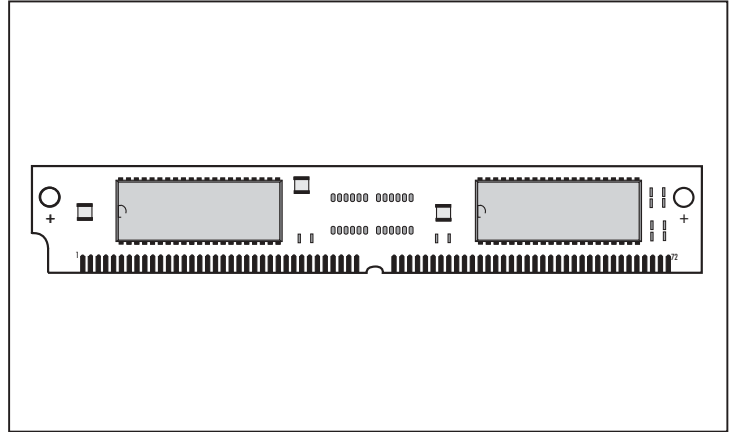
FEATURES

- 1,048,576 x 32 bit organization
- 72 pad Single In-Line Module
- Standard with gold fingers, solder or tin plating optional
- $\overline{CAS}$-before-$\overline{RAS}$, $\overline{RAS}$-only or hidden refresh
- Operating free air temperature 0^0C to 70^0C
- Single 5 Volt Power Supply
- 1024 Refresh Cycles, 16 mSEC
- Available in Fast Page Mode or EDO

- Power:
  2.0 Watt Max Active (50nS)
  1.7 Watt Max Active (60 nS)
  1.6 Watt Max Active (70 nS)
  20 mW Max Standby
- Downward compatible with AK532512W and AK532256W
- Upward compatible with AK5322048W, AK5324096W and AK5328192W

ADDITIONAL OPTIONS AVAILABLE

- 1 Meg x 36 version, AK5361024BW
- 2 Meg x 32 version, AK5322048BW
- 2 Meg x 36 version, AK5362048BW

PIN NOMENCLATURE

A_0 - A_9	Address Inputs
DQ_0 - DQ_{34}	Data In/Data Out
$\overline{WE}$	Write Enable
$\overline{RAS}_0$, $\overline{RAS}_2$	Row Address Strobe
$\overline{CAS}_0$ - $\overline{CAS}_3$	Column Address Strobe
PD_1 - PD_4	Presence Detect
Vss	Ground
Vcc	5v Supply
NC	No Connect

MODULE OPTIONS

Leadless SIM:	AK5321024BW
Leades ZIP:	AK5321024BZ

PIN ASSIGNMENT

PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL
1	Vss	19	NC	37	NC	55	DQ12
2	DQ0	20	DQ4	38	NC	56	DQ30
3	DQ18	21	DQ22	39	Vss	57	DQ13
4	DQ1	22	DQ5	40	$\overline{CAS0}$	58	DQ31
5	DQ19	23	DQ23	41	$\overline{CAS2}$	59	Vcc
6	DQ2	24	DQ6	42	$\overline{CAS3}$	60	DQ32
7	DQ20	25	DQ24	43	$\overline{CAS1}$	61	DQ14
8	DQ3	26	DQ7	44	$\overline{RAS0}$	62	DQ33
9	DQ21	27	DQ25	45	NC	63	DQ15
10	Vcc	28	A7	46	NC	64	DQ34
11	NC	29	NC	47	$\overline{WE}$	65	DQ16
12	A0	30	Vcc	48	NC	66	NC
13	A1	31	A8	49	DQ9	67	PD1
14	A2	32	A9	50	DQ27	68	PD2
15	A3	33	NC	51	DQ10	69	PD3
16	A4	34	$\overline{RAS2}$	52	DQ28	70	PD4
17	A5	35	NC	53	DQ11	71	NC
18	A6	36	NC	54	DQ29	72	Vss

Presence Detect

	-50	-60	-70
PD1	Vss	Vss	Vss
PD2	Vss	Vss	Vss
PD3	Vss	NC	Vss
PD4	Vss	NC	NC

FUNCTIONAL DIAGRAM
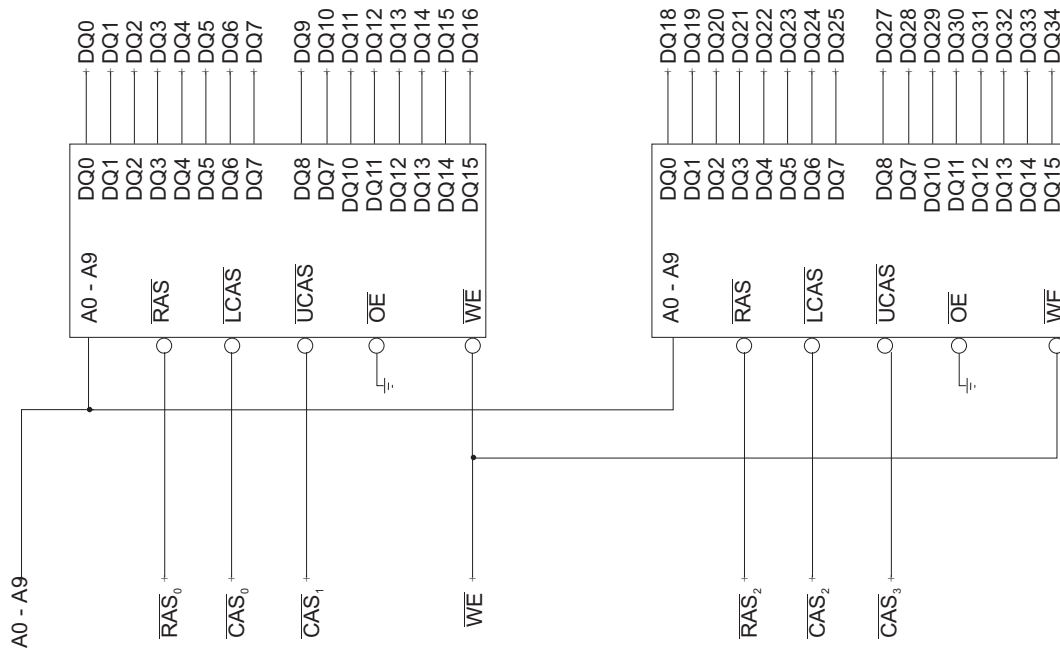
MECHANICAL DIMENSIONS
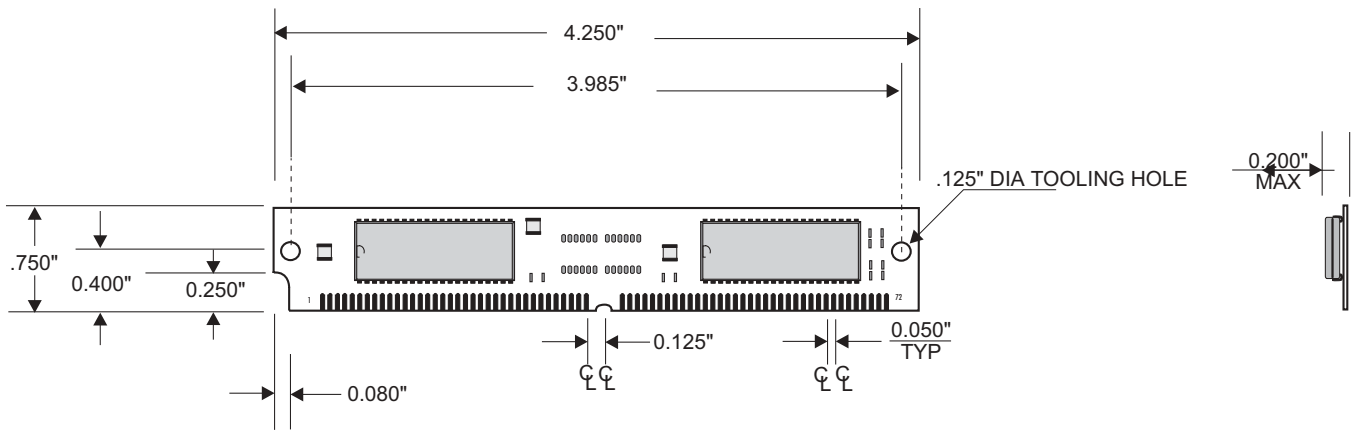
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