

Accutek Microcircuit Corporation

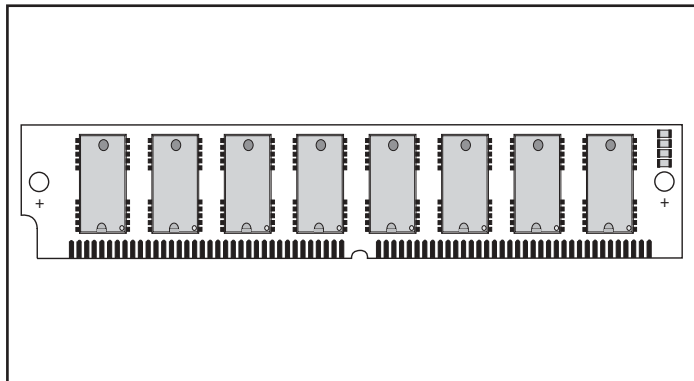
AK5361024W 1,048,576 Word by 36 Bit CMOS Dynamic Random Access Memory

DESCRIPTION

The Accutek AK5361024W high density memory module is a CMOS Dynamic RAM organized in 1024K x 36 bit words. The module consists of eight standard 1 Meg x 4 DRAMs in plastic SOJ packages mounted on the front side of a printed circuit board and four 1 Meg x 1 DRAMs in plastic SOJ packages mounted on the back side of a printed circuit board with a low profile height of only 0.875 inch 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 AK5361024W is identical to eight 1 Meg x 4 plus four 1 Meg x 1 DRAMs. There are four $\overline{\text{CAS}}$ lines and two RAS lines. Independent byte control is accomplished by four $\overline{\text{CAS}}$ lines. Each separate $\overline{\text{CAS}}$ line controls two 1Meg x 4 DRAMs, along with a 1 Meg x 1 DRAM with data in tied to data out to form a 9 bit byte. The bank of 36 bits is controlled by the two RAS lines. An eighteen bit data path can be produced by connecting DQ_0 to DQ_{18} , DQ_1 to DQ_{19} , etc. and alternately strobing RAS_0 with RAS_2 .



FEATURES

- 1,048,576 x 36 bit organization
- Low profile board height of 0.875 inch
- 72 pad Single In-Line Module
- Multiple $\overline{\text{CAS}}$ and RAS lines allow x18 or x36 bit widths
- $\overline{\text{CAS}}$ -before- RAS , RAS -only or hidden refresh
- Power
 - 7.26 Watt Max Active (60nS)
 - 6.16 Watt Max Active (70 nS)
 - 5.28 Watt Max Active (80 nS)
 - 66 mW Max Standby
- Single 5 Volt Power Supply
- 1024 Refresh Cycles, 16 mSEC
- Available in Fast Page Mode and Static Column Mode versions
- Available in leadless SIM or leaded ZIP versions
- Downward compatible with AK536512W and AK536256W
- Upward compatible with AK5362048W, AK5364096W and AK5368192W
- Operating free air temperature 0°C to 70°C

PIN NOMENCLATURE

$\text{DQ}_0 - \text{DQ}_{35}$	Data In/Data Out
$\text{A}_0 - \text{A}_9$	Address Inputs
$\overline{\text{CAS}}_0 - \overline{\text{CAS}}_3$	Column Address Strobe
RAS_0 & RAS_2	Row Address Strobe
WE	Write Enable
$\text{PD}_1 - \text{PD}_4$	Presence Detect
Vcc	5v Supply
Vss	Ground
NC	No Connect

MODULE OPTIONS

Leadless SIM: AK5361024W

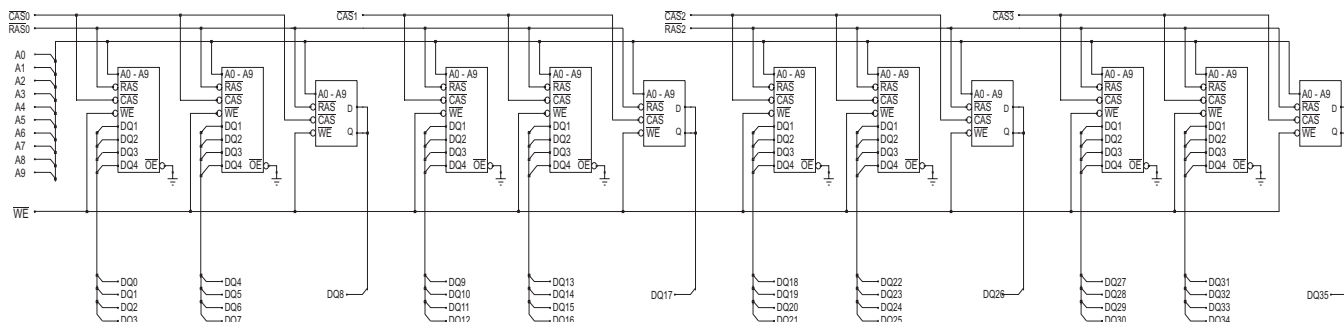
PIN ASSIGNMENT

Pin #	Symbol	Pin #	Symbol	Pin #	Symbol	Pin #	Symbol
1	Vss	19	NC	37	DQ_{17}	55	DQ_{12}
2	DQ_0	20	DQ_4	38	DQ_{35}	56	DQ_{30}
3	DQ_{18}	21	DQ_{22}	39	Vss	57	DQ_{13}
4	DQ_1	22	DQ_5	40	$\overline{\text{CAS}}_0$	58	DQ_{31}
5	DQ_{19}	23	DQ_{23}	41	$\overline{\text{CAS}}_2$	59	Vcc
6	DQ_2	24	DQ_6	42	$\overline{\text{CAS}}_3$	60	DQ_{32}
7	DQ_{20}	25	DQ_{24}	43	$\overline{\text{CAS}}_1$	61	DQ_{14}
8	DQ_3	26	DQ_7	44	$\overline{\text{RAS}}_0$	62	DQ_{33}
9	DQ_{21}	27	DQ_{25}	45	NC	63	DQ_{15}
10	Vcc	28	A_7	46	NC	64	DQ_{34}
11	NC	29	NC	47	WE	65	DQ_{16}
12	A_0	30	Vcc	48	NC	66	NC
13	A_1	31	A_8	49	DQ_9	67	PD_1
14	A_2	32	A_9	50	DQ_{27}	68	PD_2
15	A_3	33	NC	51	DQ_{10}	69	PD_3
16	A_4	34	RAS_2	52	DQ_{28}	70	PD_4
17	A_5	35	DQ_{26}	53	DQ_{11}	71	NC
18	A_6	36	DQ_8	54	DQ_{29}	72	Vss

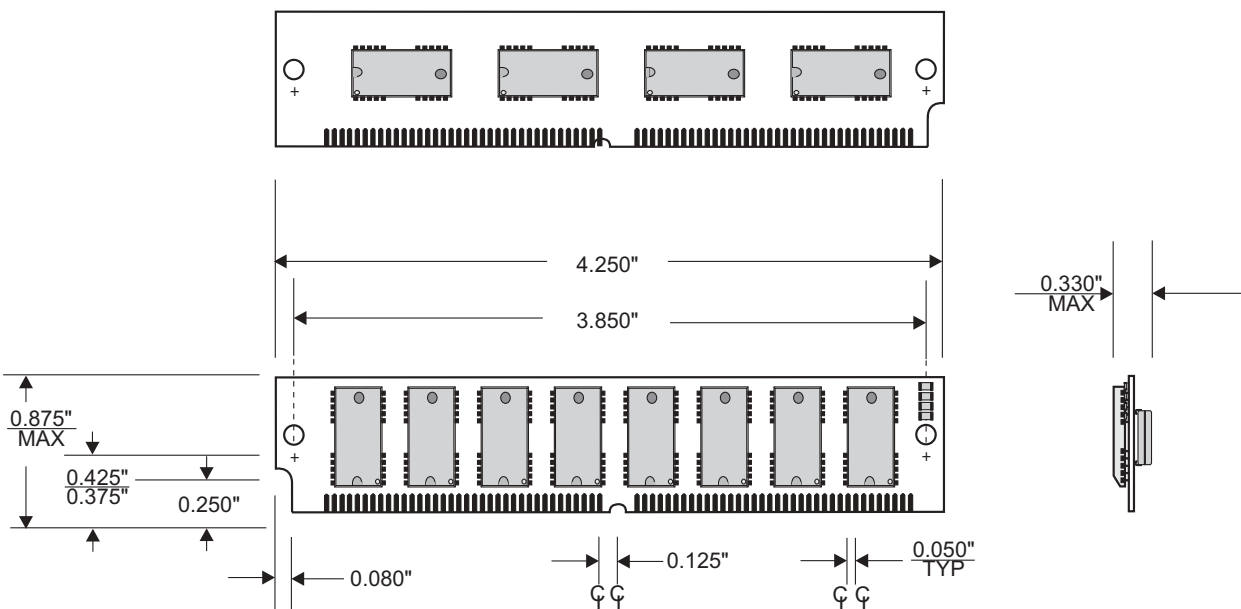
Presence Detect

	-60	-70	-80
PD_1	Vss	Vss	Vss
PD_2	Vss	Vss	Vss
PD_3	NC	Vss	NC
PD_4	NC	NC	Vss

FUNCTIONAL DIAGRAM



MECHANICAL DIMENSIONS



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