

Accutek Microcircuit Corporation

AK536256W
262,144 Word by 36 Bit CMOS
Dynamic Random Access Memory

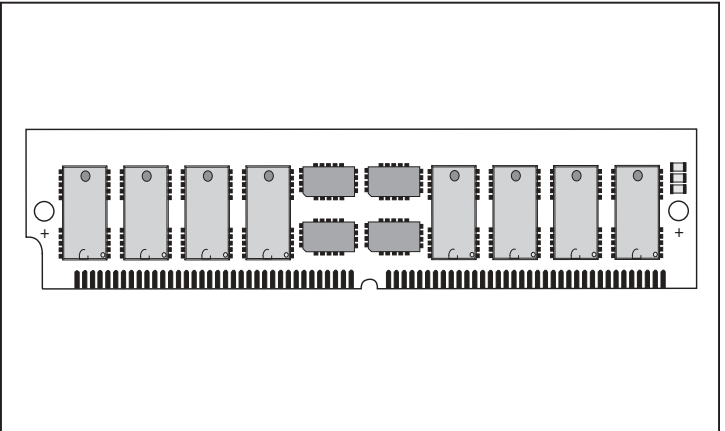
DESCRIPTION

The Accutek AK536256W high density memory module is a CMOS dynamic RAM organized in 256K x 36 bit words. The module consists of eight standard 256K x 4 DRAMs in plastic SOJ packages and four 256K x 1 DRAMs in PLCC packages. The assembly has 12 drams mounted on the front side of a printed circuit board in a 72 pad leadless SIM configuration.

The operation of the AK536256W is identical to eight 256K x 4 plus four 256K x 1 DRAMs. There are four $\overline{\text{CAS}}$ lines and two $\overline{\text{RAS}}$ lines. Independent byte control is accomplished by four $\overline{\text{CAS}}$ lines. Each separate $\overline{\text{CAS}}$ line controls two 256K x 4 DRAMs, along with one 256K 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 $\overline{\text{RAS}}$ 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 $\overline{\text{RAS}}_0$ and $\overline{\text{RAS}}_2$.

FEATURES

- 262,144 x 36 bit organization
- 72 pad Single In-Line Module
- Multiple $\overline{\text{CAS}}$ and $\overline{\text{RAS}}$ lines allow x18 or x36 bit widths
- $\overline{\text{CAS}}$ -before- $\overline{\text{RAS}}$ refresh
- Operating free air temperature 0°C to 70°C
- Single 5 Volt Power Supply
- Power
 - 2.705 Watt Max Active (70nS)
 - 2.375 Watt Max Active (80 nS)
 - 2.045 Watt Max Active (100 nS)
 - 66 mW Max Standby
- 512 Refresh Cycles, 8 mSEC
- Available in Fast Page Mode and Static Column Mode versions
- Upward compatible with AK536512W, AK5361024W, AK5362048W, AK5364096W and AK5368192W



PIN NOMENCLATURE

$\text{DQ}_0 - \text{DQ}_{35}$	Data In/Data Out
$\text{A}_0 - \text{A}_8$	Address Inputs
$\overline{\text{CAS}}_0 - \overline{\text{CAS}}_3$	Column Address Strobe
$\overline{\text{RAS}}_0, \overline{\text{RAS}}_2$	Row Address Strobe
$\overline{\text{WE}}$	Write Enable
PD	Presence Detect
Vcc	5v Supply
Vss	Ground
NC	No Connect

MODULE OPTIONS

Leadless SIM: AK536256W
Leaded ZIP: AK536256Z

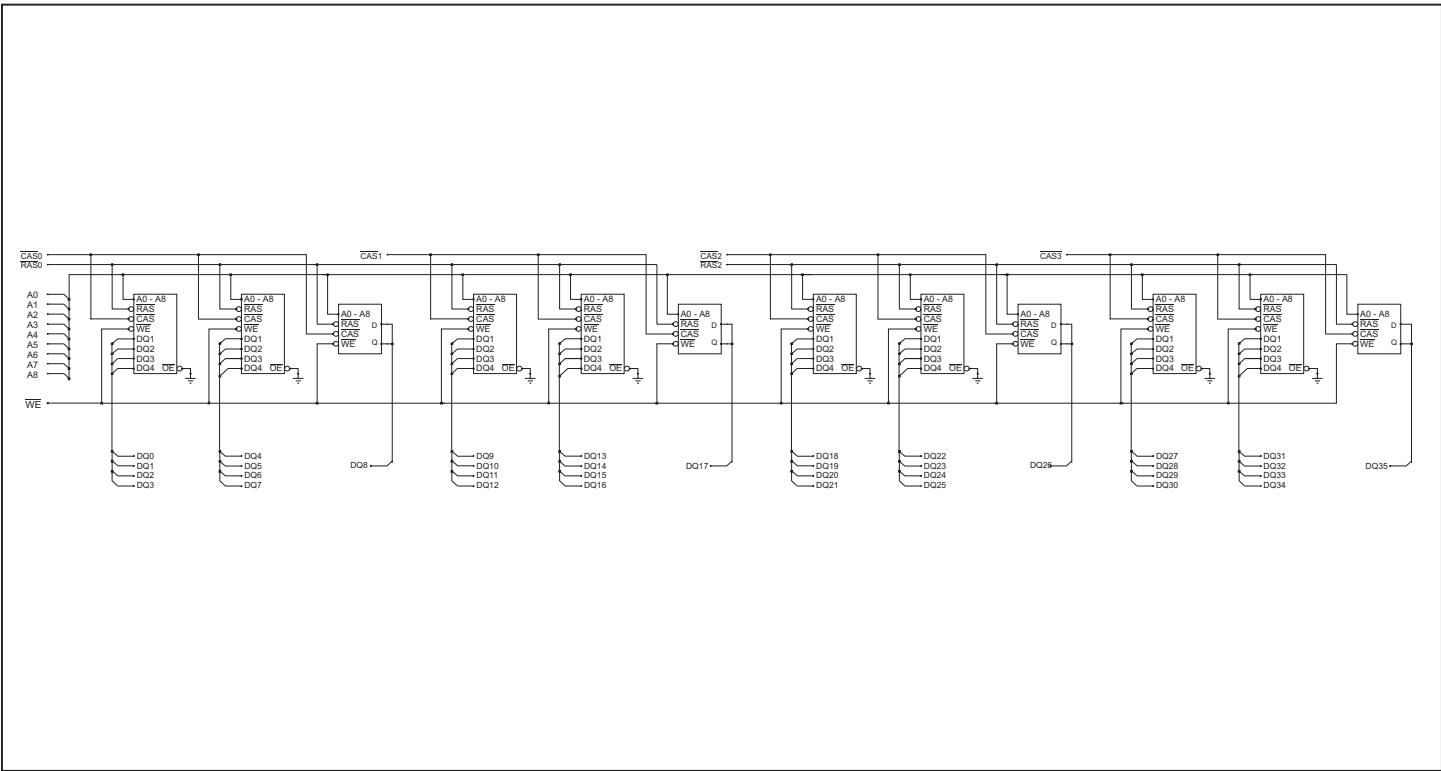
PIN ASSIGNMENT

PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL
1	Vss	19	NC	37	DQ17	55	DQ12
2	DQ0	20	DQ4	38	DQ35	56	DQ30
3	DQ18	21	DQ22	39	Vss	57	DQ13
4	DQ1	22	DQ5	40	$\overline{\text{CAS}}_0$	58	DQ31
5	DQ19	23	DQ23	41	$\overline{\text{CAS}}_2$	59	Vcc
6	DQ2	24	DQ6	42	$\overline{\text{CAS}}_3$	60	DQ32
7	DQ20	25	DQ24	43	$\overline{\text{CAS}}_1$	61	DQ14
8	DQ3	26	DQ7	44	$\overline{\text{RAS}}_0$	62	DQ33
9	DQ21	27	DQ25	45	NC	63	DQ15
10	Vcc	28	A7	46	NC	64	DQ34
11	NC	29	NC	47	$\overline{\text{WE}}$	65	DQ16
12	A0	30	Vcc	48	NC	66	NC
13	A1	31	A8	49	DQ9	67	PD1
14	A2	32	NC	50	DQ27	68	PD2
15	A3	33	NC	51	DQ10	69	PD3
16	A4	34	$\overline{\text{RAS}}_2$	52	DQ28	70	PD4
17	A5	35	DQ26	53	DQ11	71	NC
18	A6	36	DQ8	54	DQ29	72	Vss

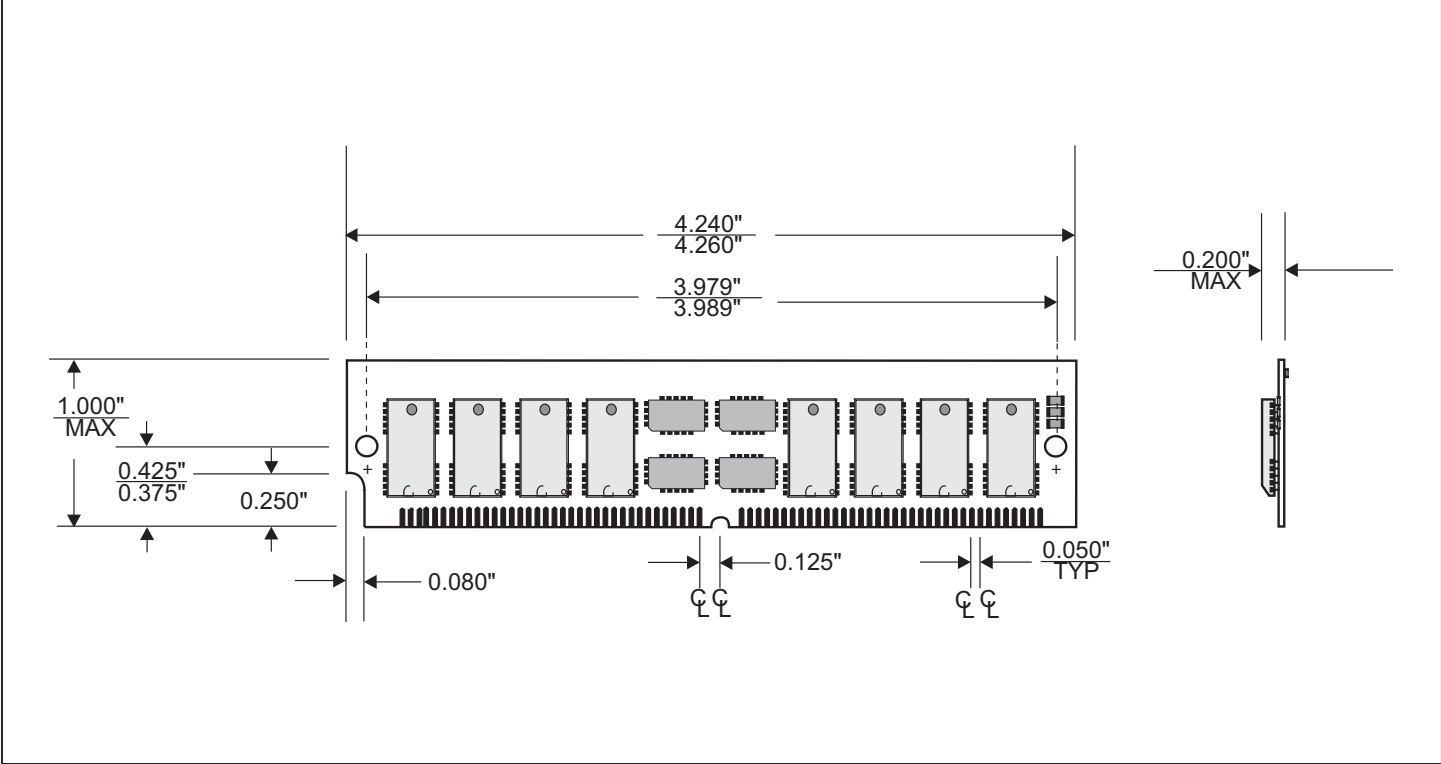
Presence Detect -

	-60	-70	-80
PD1	Vss	Vss	Vss
PD2	NC	NC	NC
PD3	NC	Vss	NC
PD4	NC	NC	Vss

FUNCTIONAL DIAGRAM



MECHANICAL DIMENSIONS

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