

ACCUTEK

MICROCIRCUIT CORPORATION

AK536256W

262,144 Word by 36 Bit CMOS

Dynamic Random Access Memory

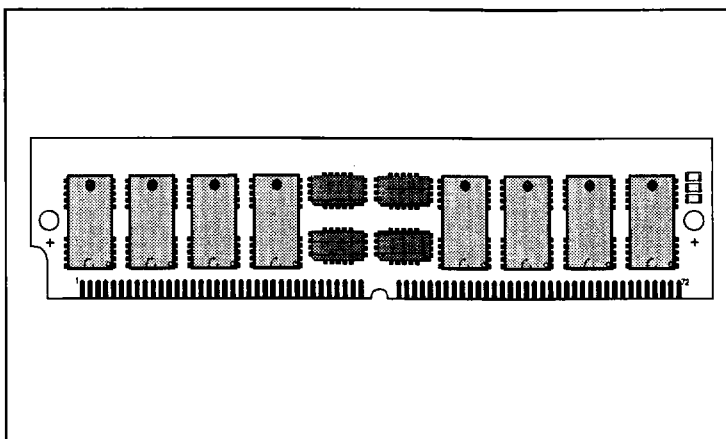
DESCRIPTION

The Accuthek 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 CAS lines and two RAS lines. Independent byte control is accomplished by four CAS lines. Each separate 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 RAS lines. An eighteen bit data path can be produced by connecting DQ₀ to DQ₁₈, DQ₁ to DQ₁₉, etc. and alternately strobing RAS₀ and RAS₂.

FEATURES

- 262,144 x 36 bit organization
- 72 pad Single In-Line Module
- Multiple CAS and RAS lines allow x18 or x36 bit widths
- CAS-before-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

DQ ₀ - DQ ₃₅	Data In/Data Out
A ₀ - A ₈	Address Inputs
CAS ₀ - CAS ₃	Column Address Strobe
RAS ₀ , RAS ₂	Row Address Strobe
WE	Write Enable
PD	Presence Detect
Vcc	5v Supply
Vss	Ground
NC	No Connect

MODULE OPTIONS

Leadless SIM: AK536256W

Leaded ZIP: AK536256WZ

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	CAS0	58	DQ31
5	DQ19	23	DQ23	41	CAS2	59	Vcc
6	DQ2	24	DQ6	42	CAS3	60	DQ32
7	DQ20	25	DQ24	43	CAS1	61	DQ14
8	DQ3	26	DQ7	44	RAS0	62	DQ33
9	DQ21	27	DQ25	45	NC	63	DQ15
10	Vcc	28	A7	46	NC	64	DQ34
11	NC	29	NC	47	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	RAS2	52	DQ28	70	PD4
17	A5	35	DQ26	53	DQ11	71	NC
18	A6	36	DQ8	54	DQ29	72	Vss

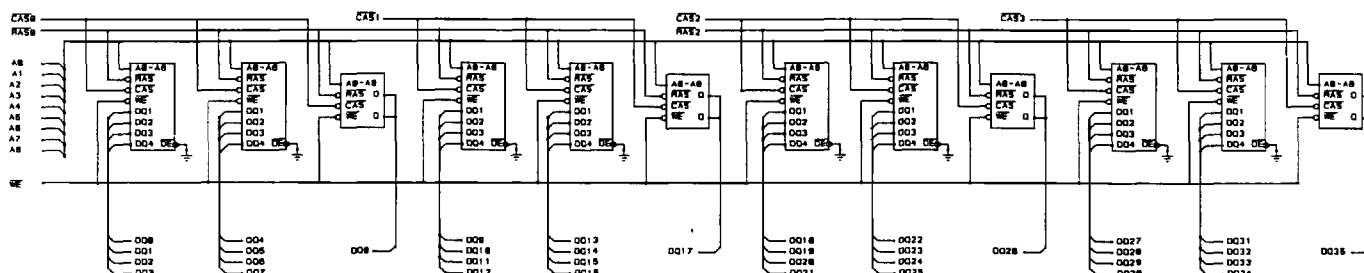
Presence Detect -

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

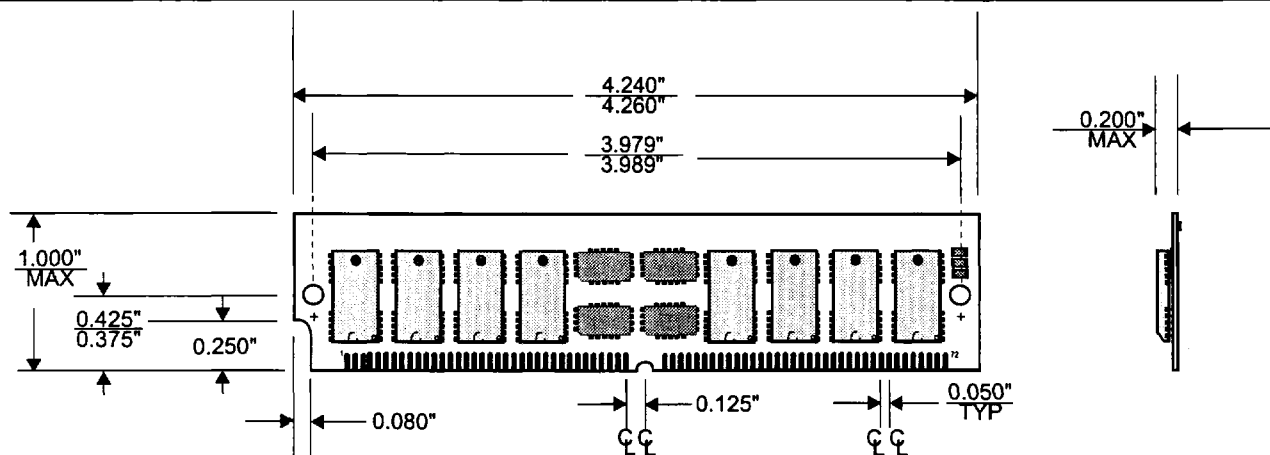


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FUNCTIONAL DIAGRAM



MECHANICAL DIMENSIONS



ORDER INFORMATION

PART NUMBER CODING INTERPRETATION

Position 1 2 3 4 5 6 7 8

1 Product

AK = Accutek Memory

2 Type

4 = Dynamic RAM
5 = CMOS Dynamic RAM
6 = Static RAM

3 Organization/Word Width

1 = by 1 16 = by 16
4 = by 4 32 = by 32
8 = by 8 36 = by 36
9 = by 9

4 Size/Bits Depth

64 = 64K 4096 = 4 MEG
256 = 256K 8192 = 8 MEG
1024 = 1 MEG 16384 = 16 MEG

The numbers and coding on this page do not include all variations available, but are shown as examples of the most widely used variations. Contact Accutek if other information is required.

Position

1 2 3 4 5 6 7 8

5 Package Type

G = Single In-Line Package (SIP)
S = Single In-Line Module (SIM)
D = Dual In-Line Package (DIP)
W = .050 Inch Pitch Edge Connect
N = Dual Row SODim
Z = Zig-Zag In-Line Package (ZIP)

6 Special Designation

P = Page Mode
N = Nibble Mode
K = Static Column Mode
W = Write Per Bit Mode
V = Video Ram

7 Separator

- = Commercial 0°C to +70°C
M = Military Equivalent Screened (-55°C to +125°C)
I = Industrial Temperature Tested (-45°C to +85°C)
X = Burned In

8 Speed (first two significant digits)

DRAMS	SRAMS
60 = 60 nS	12 = 12 nS
70 = 70 nS	15 = 15 nS
80 = 80 nS	20 = 20 nS



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