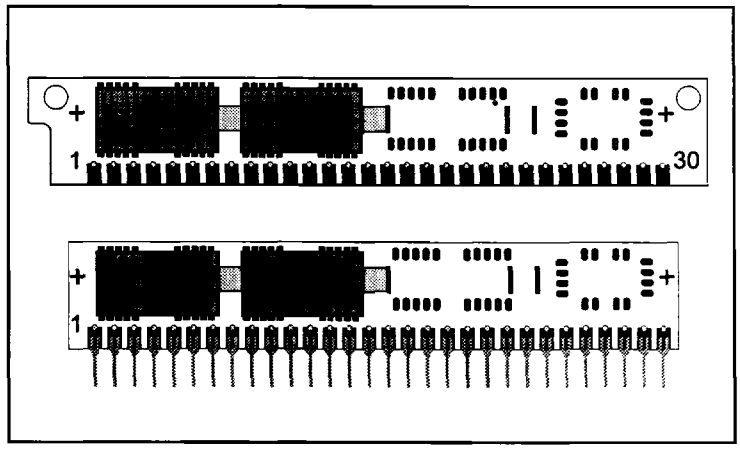
AK58256AG / AK58256AS
262,144 x 8 bit CMOS
Dynamic Random Access Memory

ACCUTEK MICROCIRCUIT CORPORATION

DESCRIPTION

The Accutek AK58256AG/AS high density memory modules is a random access memory organized in 256K x 8 bit words. The assembly consists of two 256K x 4 DRAMs in surface mount packages mounted to a printed circuit board. The module can be configured as a leadless 30 pad SIM or a leaded 30 pin SIP. This packaging approach provides a better than 6 to 1 density increase over standard DIP packaging.

The operation of the AK58256 is identical to two 256K x 4 DRAMs. The data input/output is brought out separately for each 256K x 4 device, with common $\overline{RAS}$, $\overline{CAS}$ and $\overline{WE}$ control. The $\overline{OE}$ pins are tied to Vss which dictates the use of early-write cycles to prevent contention of D and Q. Since the Write-Enable ($\overline{WE}$) signal must always go low before $\overline{CAS}$ in a write cycle, Read-Write and Read-Modify-Write operation is not possible.



FEATURES

- 256K x 8 bit organization
- Optional 30 Pad SIM (Single In-Line Module) or 30 Pin leaded SIP (Single In-Line Package)
- JEDEC approved pinout
- Common $\overline{CAS}$, $\overline{RAS}$ and $\overline{WE}$ control for eight DQ lines
- Separate $\overline{CAS}$ control for one separate pair of D and Q lines
- 1024 refresh cycles/16ms, A_0 to A_8
- Power:
  .99 Watt Max Active (60 nS)
  .88 Watt Max Active (70 nS)
  .77 Watt Max Active (80 nS)
  .65 Watt Max Active (100 nS)
  11 mWatt standby (max)
- Operating free air temperature: 0^0 to 70^0C
- Upward compatible with AK581024, AK584096 and AK5816384
- Functionally and Pin compatible with AK48256
- Available with access times of 60 to 100 nS

PIN NOMENCLATURE

DQ_1 - DQ_8	Data In/Data Out
A_0 - A_8	Address Inputs
$\overline{CAS}$	Column Address Strobe
$\overline{RAS}$	Row Address Strobe
$\overline{WE}$	Write Enable
Vcc	5v Supply
Vss	Ground
NC	No Connect

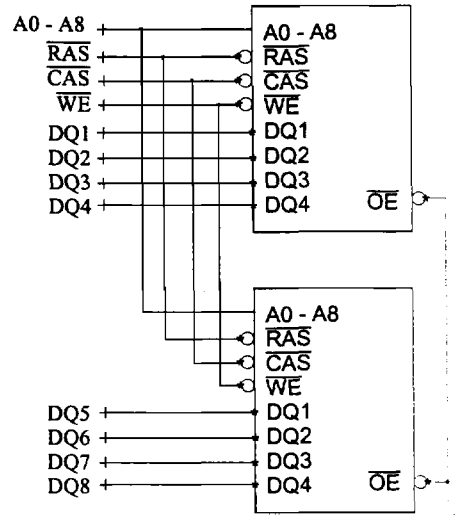
MODULE OPTIONS

Leadless SIM: AK58256AS
Leaded SIP: AK58256AG

PIN ASSIGNMENT

PIN #	SYMBOL	PIN #	SYMBOL
1	Vcc	16	DQ5
2	CAS	17	A8
3	DQ1	18	nc
4	A0	19	NC
5	A1	20	DQ6
6	DQ2	21	WE
7	A2	22	Vss
8	A3	23	DQ7
9	Vss	24	NC
10	DQ3	25	DQ8
11	A4	26	NC
12	A5	27	RAS
13	DQ4	28	NC
14	A6	29	NC
15	A7	30	Vcc

FUNCTIONAL DIAGRAM



ACMCS00069

ORDERING 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

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

8 Speed (first two significant digits)

DRAMS		SRAMS	
60	= 60 nS	8	= 8 nS
70	= 70 nS	12	= 12 nS
80	= 80 nS	15	= 15 nS
10	= 100 nS	20	= 20 nS
12	= 120 nS	70	= 70 nS
15	= 150 nS	85	= 85 nS

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.

EXAMPLES:

AK58256ASP-60

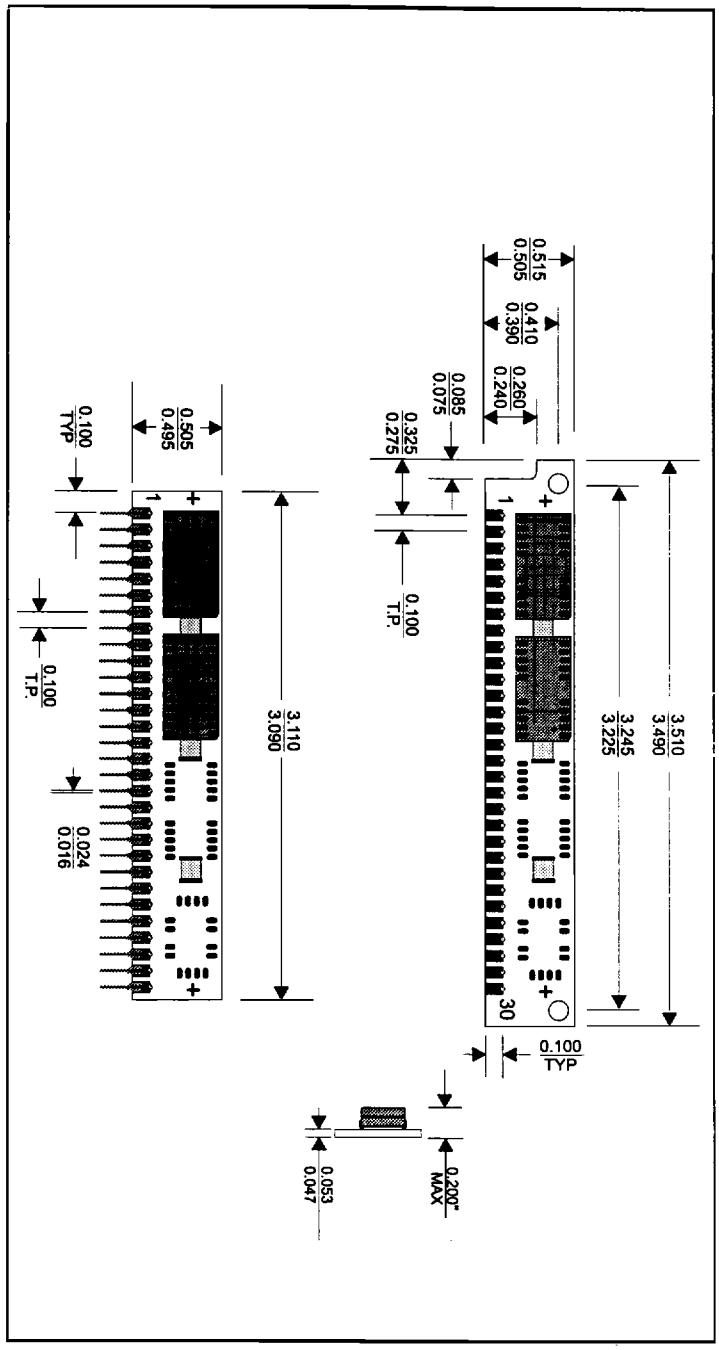
256K x 8, Dynamic RAM, Leadless SIM, Page Mode, Commercial, 60 nSEC Access Time

AK58256AGK-70

256K x 8, Dynamic RAM, Leaded SIP, Static Column Mode Commercial, 70 nSEC AccessTime

MECHANICAL DIMENSIONS

Inches



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