Accutek Microcircuit Corporation

AK48256S / AK48256G
262,144 X 8 Bit MOS
Dynamic Random Access Memory

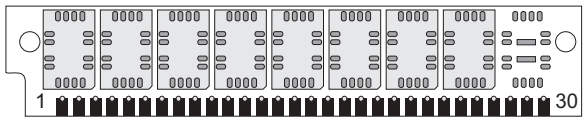
DESCRIPTION

The Accutek AK48256 high density memory modules is a random access memory organized in 256K x 8 bit words. The assembly consists of eight standard 256K x 1 DRAMs in plastic leaded chip carriers (PLCC) mounted on the front side of 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 6 to 1 density increase over standard DIP packaging.

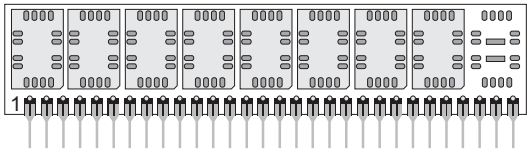
The operation of the AK48256 is identical to eight 256K x 1 DRAMs. The data input is tied to the data output and brought out separately for each device, with common $\overline{RAS}$, $\overline{CAS}$ and $\overline{WE}$ control. This common I/O feature dictates the use of early-write cycles to prevent 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.

Front View

30-Pin SIM



30-Pin SIP



FEATURES

- 262,144 by 8 bit organization
- Optional 30 Pad leadless SIM (Single In-Line Module) or 30 Pin leaded SIP (Single In-Line Package)
- JEDEC standard pinout
- Each device has common D and Q lines with common $\overline{RAS}$, $\overline{CAS}$ and $\overline{WE}$ control
- 2.8 Watt active and 180 mW standby (max)
- Operating free air temperature 0^0C to 70^0C
- Upward compatible with AK481024, AK581024, AK584096 and AK5816384
- Functionally and Pin compatible with AK58256A

PIN NOMENCLATURE

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

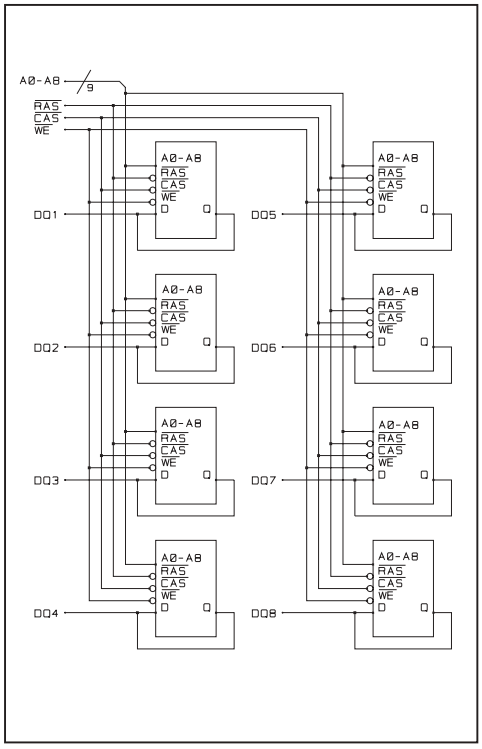
MODULE OPTIONS

Leadless SIM: AK48256S
Leaded SIP: AK48256G

PIN ASSIGNMENT

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

FUNCTIONAL DIAGRAM



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	
50	= 50 nS	8	= 8 nS
60	= 60 nS	10	= 10 nS
70	= 70 nS	12	= 12 nS
80	= 80 nS	15	= 15 nS

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

EXAMPLES:

AK48256SP-10

256K x 8, 100 nSEC DRAM 30 pin SIM Configuration, Page Mode

AK48256GK-80

256K x 8, 80 nSEC DRAM 30 pin SIP Configuration, Static Column Mode

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MECHANICAL DIMENSIONS

Inches