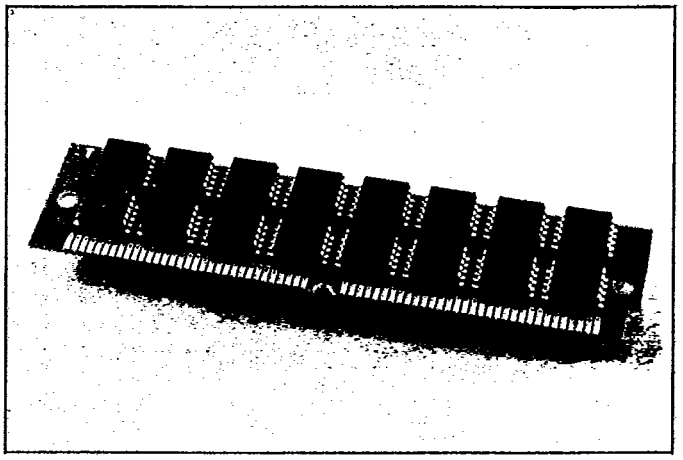
ACCUTEK MICROCIRCUIT

AK581024W
1,048,576 x 8 bit CMOS Dynamic Random Access Memory

DESCRIPTION

The Accutek AK581024W high density memory module is a random access memory organized in 1 Meg x 8 bit words. The assembly consists of eight standard 1 Meg x 1 DRAMs in plastic leaded chip carriers (SOJ) mounted to a printed wiring board. The module is configured as a leadless 64 pad SIMM. This packaging approach provides a 6 to 1 density increase over standard DIP packaging.

The operation of the AK581024 is identical to eight 1 Meg dynamic RAMs. The D, Q and $\overline{WE}$ lines for each DRAM are brought out to separate pins. $\overline{CAS}$ and $\overline{RAS}$ control are common for all DRAMs. The separate data lines allow the use of Read-Write, Read-Modify-Write and Late-Write modes. The AK581024 is ideally suited for microprocessor cycle times greater than 40 MHz by allowing the use of separate data in and data out memory busses to perform read and write operations simultaneously.



FEATURES

- 1,048,576 x 8 bit organization
- Optional 64 Pad .050 Pitch Edge Connect or 64 Pin leaded SIP (Single In-Line Package)
- JEDEC approved pinout
- Each device (data bit) has separate D, Q and $\overline{WE}$ lines with common $\overline{RAS}$ and $\overline{CAS}$ control
- $\overline{CAS}$-before-$\overline{RAS}$ refresh
- Read-Write, Read-Modify-Write operation
- Power
  3.08 Watt Max Active (80 nS)
  2.64 Watt Max Active (100 nS)
  2.20 Watt Max Active (120 nS)
  44 mWatt Max Standby
- Operating free air temperature 0°C to 70°C
- Upward compatible with AK584096W

PIN NOMENCLATURE

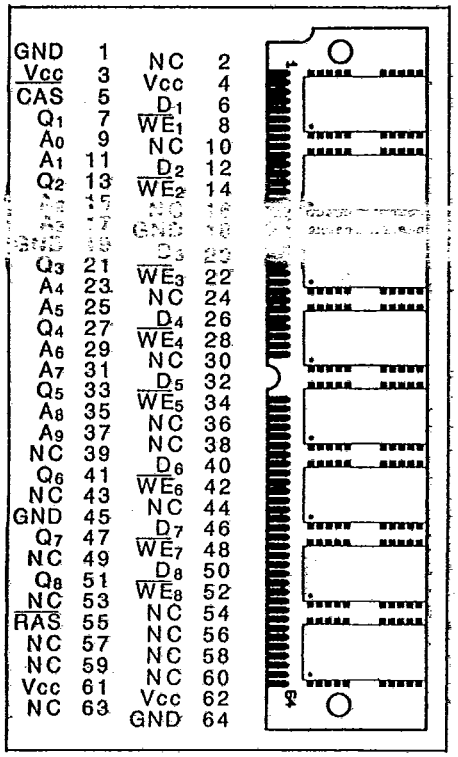
D_1 - D_8	Data In
Q_1 - Q_8	Data Out
A_0 - A_9	Address Inputs
$\overline{CAS}$	Column Address Strobe
$\overline{RAS}$	Row Address Strobe
$\overline{WE_1}$ - $\overline{WE_8}$	Write Enable
Vcc	5v Supply
Vss	Ground
NC	No Connection

MODULE OPTIONS

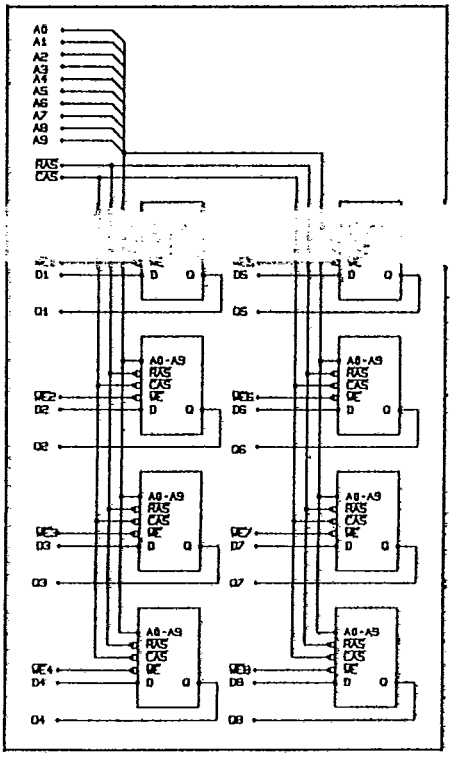
Leadless SIMM: AK581024W
.050 inch Edge Connect
Single In-Line Memory Module

PIN ASSIGNMENT

GND	1	NC	2
Vcc	3	Vcc	4
CAS	5	D_1	6
Q_1	7	$\overline{WE_1}$	8
A_0	9	NC	10
A_1	11	D_2	12
Q_2	13	$\overline{WE_2}$	14
A_2	15	NC	16
A_3	17	GND	18
GND	19	D_3	20
Q_3	21	$\overline{WE_3}$	22
A_4	23	NC	24
A_5	25	D_4	26
Q_4	27	$\overline{WE_4}$	28
A_6	29	NC	30
A_7	31	D_5	32
Q_5	33	$\overline{WE_5}$	34
A_8	35	NC	36
A_9	37	NC	38
NC	39	D_6	40
Q_6	41	$\overline{WE_6}$	42
NC	43	NC	44
GND	45	D_7	46
Q_7	47	$\overline{WE_7}$	48
NC	49	D_8	50
Q_8	51	$\overline{WE_8}$	52
NC	53	NC	54
$\overline{RAS}$	55	NC	56
NC	57	NC	58
NC	59	NC	60
Vcc	61	Vcc	62
NC	63	GND	64



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
4 = by 4
8 = by 8
9 = by 9

4 - Size/Bits Depth
256 = 256K
1024 = 1 MEG
4096 = 4 MEG

5 - Package Type
G = Single In-Line Package (SIP)
S = Single In-Line Memory Module (SIMM)
D = Dual In-Line Package (DIP)
W = .050 inch Pitch Edge Connect Module

6 - Special Designation
P = Page Mode
N = Nibble Mode
K = Static Column Mode

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)
60 = 60 nS
70 = 70 nS
80 = 80 nS
10 = 100 nS
12 = 120 nS
etc.

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:

AK581024WP-80

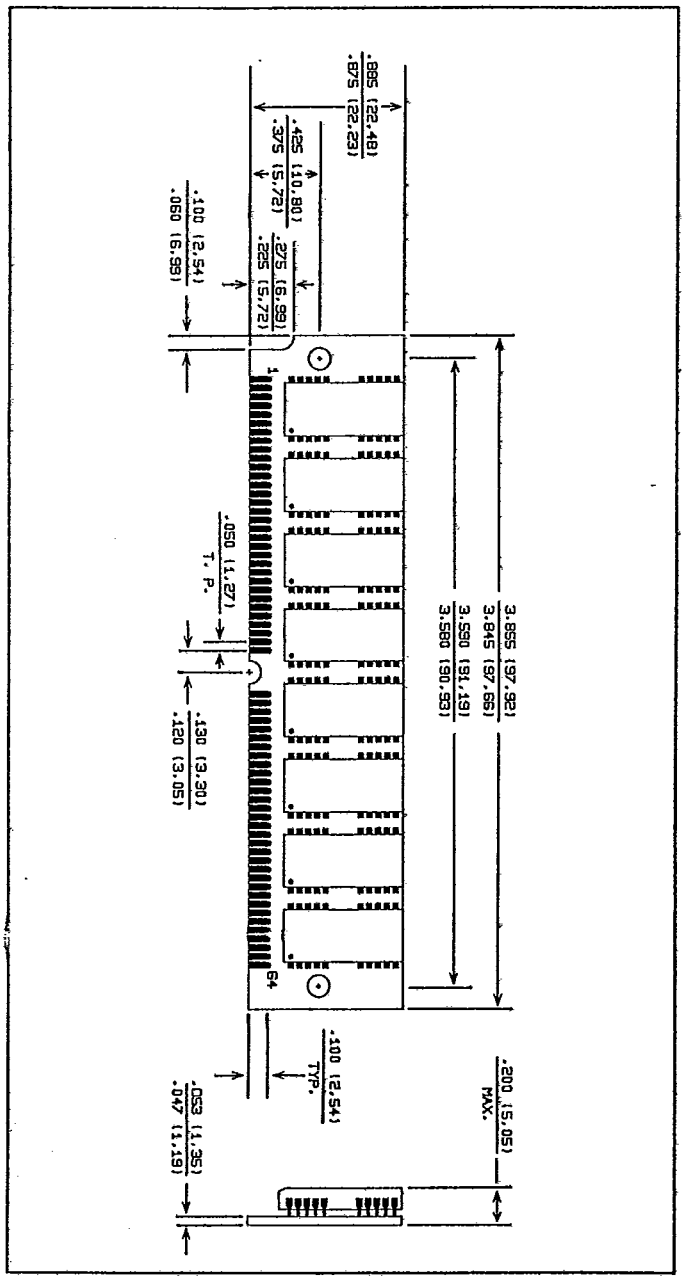
1 Meg x 8 Dynamic RAM, .050 Edge Connect, Page Mode, Commercial, 80 nS Access Time

AK581024WK-10

1 Meg x 8 Dynamic RAM, .050 Edge Connect, Static Column Mode, Commercial, 100 nS Access Time

MECHANICAL DIMENSIONS

inches (millimeters)



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