

AK532256W

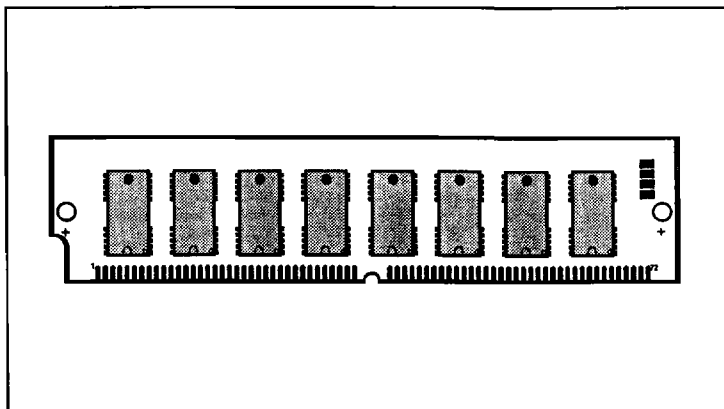
262,144 Word by 32 Bit CMOS

Dynamic Random Access Memory

DESCRIPTION

The Accutec AK532256W high density memory module is a CMOS dynamic RAM organized in 256K x 32 bit words. The module consists of eight standard 256K x 4 DRAMs in plastic SOJ packages. The assembly has eight drams mounted on the front side of a printed circuit board in a 72 pad leadless SIM configuration.

The operation of the AK532256W is identical to eight 256K x 4 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 to form an 8 bit byte. The bank of 32 bits is controlled by the two $\overline{\text{RAS}}$ lines. A sixteen bit data path can be produced by connecting DQ₁ to DQ₁₇, DQ₂ to DQ₁₈ and alternately strobing $\overline{\text{RAS}}_0$ with $\overline{\text{RAS}}_2$.



FEATURES

- 262,144 x 32 bit organization
- 72 pin Single In-Line Module
- Multiple $\overline{\text{CAS}}$ and $\overline{\text{RAS}}$ lines allow x16 or x32 bit widths
- $\overline{\text{CAS}}$ -before- $\overline{\text{RAS}}$ Refresh, $\overline{\text{RAS}}$ -only Refresh or Hidden refresh
- Operating free air temperature 0°C to 70°C
- Single 5 Volt Power Supply
- 512 Refresh Cycles, 8mSEC
- Power
 - 2.00 Watt Max Active (60nS)
 - 1.78 Watt Max Active (70 nS)
 - 1.562 Watt Max Active (80 nS)
 - 44 mW Max Standby

- Available in Fast Page Mode, EDO and Static Column Mode versions
- Available in leadless SIM or leaded Zip versions
- Upward compatible with AK532512, AK5321024, AK5322048, AK5324096 and AK5328192

ADDITIONAL OPTIONS AVAILABLE

- 512K x 32 version, AK532256
- 1 Meg x 32 version, AK5321024
- 2 Meg x 32 version, AK5322048
- 4 Meg x 32 version, AK5324096
- 8 Meg x 32 version, AK5328192

PIN NOMENCLATURE

A0 - A8	Address Inputs
DQ1 - DQ32	Data In/Data Out
CAS0 - CAS3	Column Address Strobe
RAS0, RAS2	Row Address Strobe
$\overline{\text{WE}}$	Write Enable
PD1 - PD4	Presence Detect
Vcc	5v Supply
Vss	Ground
NC	No Connect

MODULE OPTIONS

Leadless SIM: AK532256W

Leaded ZIP: AK532256WZ

PIN ASSIGNMENT

PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL
1	Vss	19	NC	37	NC	55	DQ12
2	D1	20	DQ5	38	NC	56	DQ28
3	DQ17	21	DQ21	39	Vss	57	DQ13
4	DQ2	22	DQ6	40	CAS0	58	DQ29
5	DQ18	23	DQ22	41	CAS2	59	Vcc
6	DQ3	24	DQ7	42	CAS3	60	DQ30
7	DQ19	25	DQ23	43	CAS1	61	DQ14
8	DQ4	26	DQ8	44	RAS0	62	DQ31
9	DQ20	27	DQ24	45	NC	63	DQ15
10	Vcc	28	A7	46	NC	64	DQ32
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	DQ25	68	PD2
15	A3	33	NC	51	DQ10	69	PD3
16	A4	34	RAS2	52	DQ26	70	PD4
17	A5	35	NC	53	DQ11	71	NC
18	A6	36	NC	54	DQ27	72	Vss

Presence Detect -

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

16-PIN D-SUB CONNECTOR

0.000" MAX

4.250"

3.985"

0.080"

0.125"

0.050" TYP

0.200" MAX

0.425"

0.375"

0.250"

PART NUMBER CODING INTERPRETATION

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1  Product
   AK = Accuthek Memory
2  Type
   4 = Dynamic RAM
   5 = CMOS Dynamic RAM
   6 = Static RAM
3  Organization/Word Width
   1 = b y 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

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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)

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

- = 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

DRAMS		SRAMS	
60	=	60 nS	8 = 8 nS
70	=	70 nS	10 = 10 nS
80	=	80 nS	15 = 15 nS
			20 = 20 nS

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