

Accutec Microcircuit Corporation

AK5322048BW 2,097,152 Word by 32 Bit CMOS Dynamic Random Access Memory

DESCRIPTION

The Accutec AK5322048BW high density memory module is a CMOS dynamic RAM organized in 2048K x 32 bit words. The module consists of four standard 1 Meg x 16 bits DRAMs in plastic SOJ packages. The assembly has two DRAMs mounted on each side of a printed circuit board in a 72 pad leadless SIM configuration.

This configuration allows socket-mounting of large quantities of memory in applications where high density and ease of inserting additional memory are important.

The operation of the AK5322048BW is identical to sixteen 1 Meg x 4 DRAMs. There are four $\overline{\text{CAS}}$ lines and two $\overline{\text{RAS}}$ lines. On each bank of 1M x 32, independent byte control is accomplished by four $\overline{\text{CAS}}$ lines. Each separate $\overline{\text{CAS}}$ line controls one byte of the 1 Meg x 16 DRAM.

FEATURES

- 2,097,152 x 32 bit organization
- 72 pad Single In-Line Module
- $\overline{\text{CAS}}$ -before- $\overline{\text{RAS}}$, $\overline{\text{RAS}}$ -only or hidden refresh
- Operating free air temperature 0°C to 70°C
- Single 5 Volt Power Supply
- 1024 Refresh Cycles, 16 mSEC
- Available in Fast Page Mode or EDO

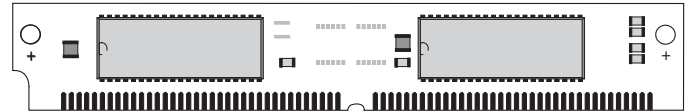
- Power:
3.96 Watt Max Active (50nS)
3.52 Watt Max Active (60 nS)
3.08 Watt Max Active (70 nS)
44 mW Max Standby
- Downward compatible with AK5321024W, AK532512W and AK532256W
- Upward compatible with AK5324096W and AK5328192W

ADDITIONAL OPTIONS AVAILABLE

1 Meg x 32 version, AK5321024BW

1 Meg x 36 version, AK5361024BW

2 Meg x 36 version, AK5362048BW



PIN NOMENCLATURE

A ₀ - A ₉	Address Inputs
DQ ₀ - DQ ₃₅	Data In/Data Out
$\overline{\text{W}}$	Write Enable
$\overline{\text{RAS}}_0, \overline{\text{RAS}}_1$	Row Address Strobe
$\overline{\text{CAS}}_0 - \overline{\text{CAS}}_3$	Column Address Strobe
PD ₁ - PD ₄	Presence Detect
Vss	Ground
Vcc	5v Supply
NC	No Connect

MODULE OPTIONS

Leadless SIM: AK5322048BW

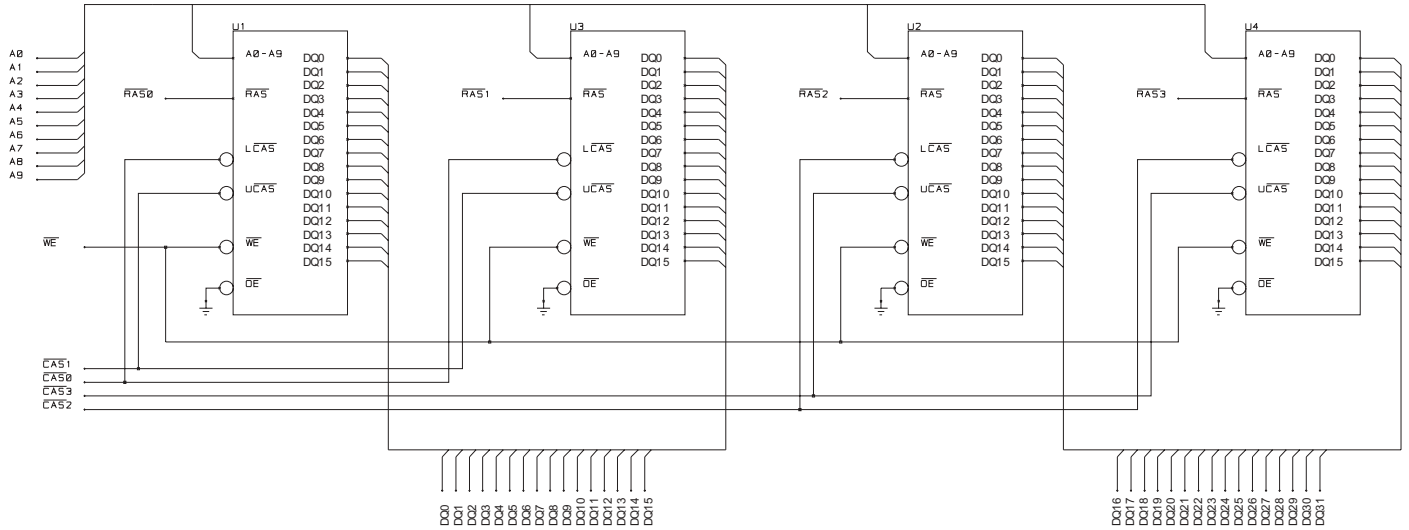
PIN ASSIGNMENT

PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL
1	Vss	19	NC	37	NC	55	DQ11
2	DQ0	20	DQ4	38	NC	56	DQ27
3	DQ16	21	DQ20	39	Vss	57	DQ12
4	DQ1	22	DQ5	40	$\overline{\text{CAS}}_0$	58	DQ28
5	DQ17	23	DQ21	41	$\overline{\text{CAS}}_2$	59	Vcc
6	DQ2	24	DQ6	42	$\overline{\text{CAS}}_3$	60	DQ29
7	DQ18	25	DQ22	43	$\overline{\text{CAS}}_1$	61	DQ13
8	DQ3	26	DQ7	44	$\overline{\text{RAS}}_0$	62	DQ30
9	DQ19	27	DQ23	45	$\overline{\text{RAS}}_1$	63	DQ14
10	Vcc	28	A7	46	NC	64	DQ31
11	NC	29	NC	47	$\overline{\text{WE}}$	65	DQ15
12	A0	30	Vcc	48	NC	66	NC
13	A1	31	A8	49	DQ8	67	PD1
14	A2	32	A9	50	DQ24	68	PD1
15	A3	33	$\overline{\text{RAS}}_3$	51	DQ9	69	PD3
16	A4	34	$\overline{\text{RAS}}_2$	52	DQ25	70	PD4
17	A5	35	NC	53	DQ10	71	NC
18	A6	36	NC	54	DQ26	72	Vss

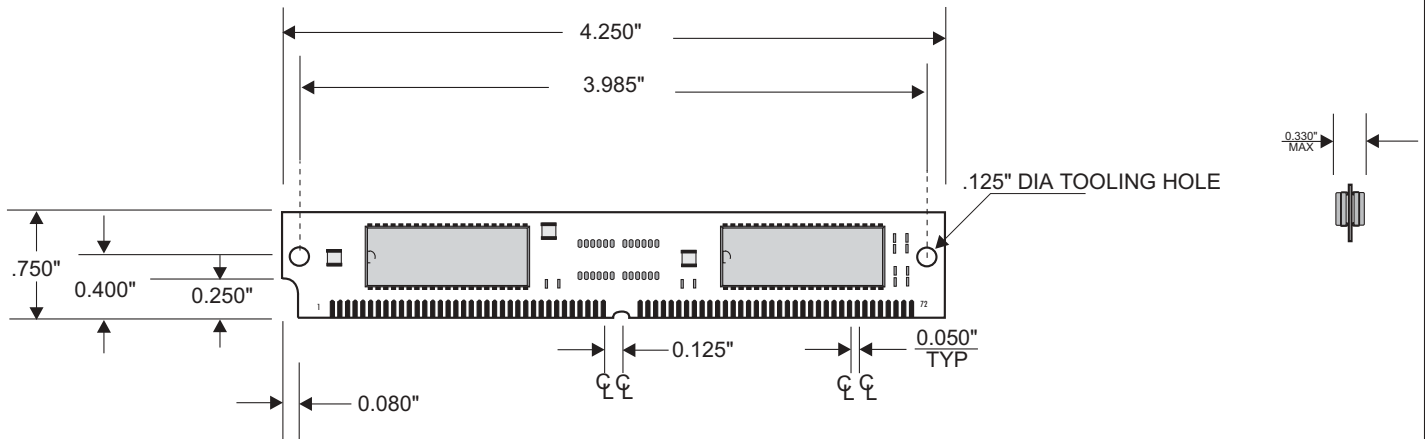
Presence Detect

	-50	-60	-70
PD1	NC	NC	NC
PD2	VC	NC	NC
PD3	Vss	NC	Vss
PD4	Vss	NC	NC

FUNCTIONAL DIAGRAM



MECHANICAL DIMENSIONS



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