

Accutec Microcircuit Corporation

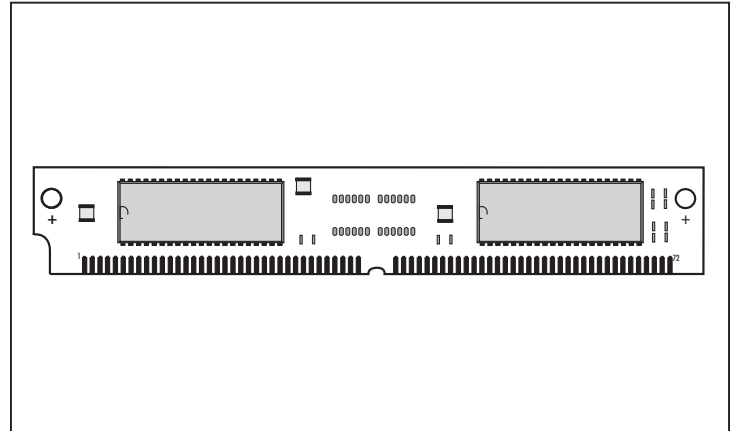
AK5321024BW 1,048,576 Word by 32 Bit CMOS Dynamic Random Access Memory

DESCRIPTION

The Accutec AK5321024BW high density memory module is a CMOS dynamic RAM organized in 1024K x 32 bit words. The module consists of two standard 1 Meg x 16 bits DRAMs in plastic SOJ packages mounted on the front 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 AK5321024BW is identical to eight 1 Meg x 4 Drams. There are four CAS lines and two RAS lines. On each bank of 1M x 32, independent byte control is accomplished by four CAS lines. Each separate CAS line controls one byte of the 1 Meg x 16 Dram.



FEATURES

- 1,048,576 x 32 bit organization
- 72 pad Single In-Line Module
- Standard with gold fingers, solder or tin plating optional
- CAS-before-RAS, 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:
 - 2.0 Watt Max Active (50nS)
 - 1.7 Watt Max Active (60 nS)
 - 1.6 Watt Max Active (70 nS)
 - 20 mW Max Standby
- Downward compatible with AK532512W and AK532256W
- Upward compatible with AK5322048W, AK5324096W and AK5328192W

ADDITIONAL OPTIONS AVAILABLE

- 1 Meg x 36 version, AK5361024BW
- 2 Meg x 32 version, AK5322048BW
- 2 Meg x 36 version, AK5362048BW

PIN NOMENCLATURE

A ₀ - A ₉	Address Inputs
DQ ₀ - DQ ₃₄	Data In/Data Out
\overline{WE}	Write Enable
$\overline{RAS_0}$, $\overline{RAS_2}$	Row Address Strobe
$\overline{CAS_0}$ - $\overline{CAS_3}$	Column Address Strobe
PD ₁ - PD ₄	Presence Detect
V _{ss}	Ground
V _{cc}	5v Supply
NC	No Connect

MODULE OPTIONS

Leadless SIM: AK5321024BW
Leades ZIP: AK5321024BZ

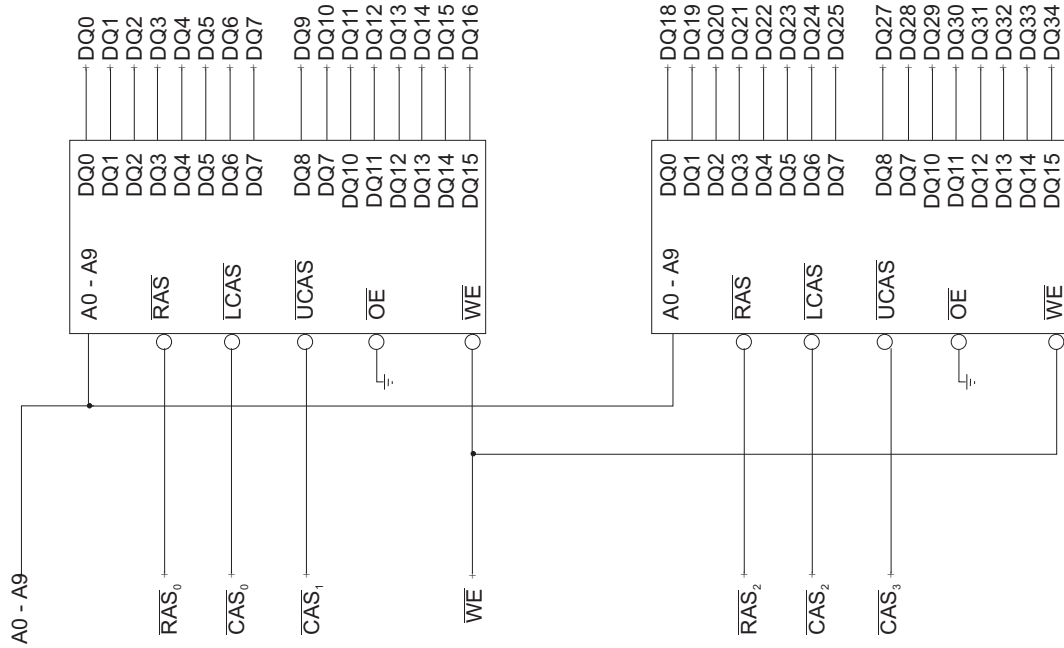
PIN ASSIGNMENT

PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL
1	V _{ss}	19	NC	37	NC	55	DQ12
2	DQ0	20	DQ4	38	NC	56	DQ30
3	DQ18	21	DQ22	39	V _{ss}	57	DQ13
4	DQ1	22	DQ5	40	$\overline{CAS_0}$	58	DQ31
5	DQ19	23	DQ23	41	$\overline{CAS_2}$	59	V _{cc}
6	DQ2	24	DQ6	42	$\overline{CAS_3}$	60	DQ32
7	DQ20	25	DQ24	43	$\overline{CAS_1}$	61	DQ14
8	DQ3	26	DQ7	44	$\overline{RAS_0}$	62	DQ33
9	DQ21	27	DQ25	45	NC	63	DQ15
10	V _{cc}	28	A7	46	NC	64	DQ34
11	NC	29	NC	47	\overline{WE}	65	DQ16
12	A0	30	V _{cc}	48	NC	66	NC
13	A1	31	A8	49	DQ9	67	PD1
14	A2	32	A9	50	DQ27	68	PD2
15	A3	33	NC	51	DQ10	69	PD3
16	A4	34	RAS2	52	DQ28	70	PD4
17	A5	35	NC	53	DQ11	71	NC
18	A6	36	NC	54	DQ29	72	V _{ss}

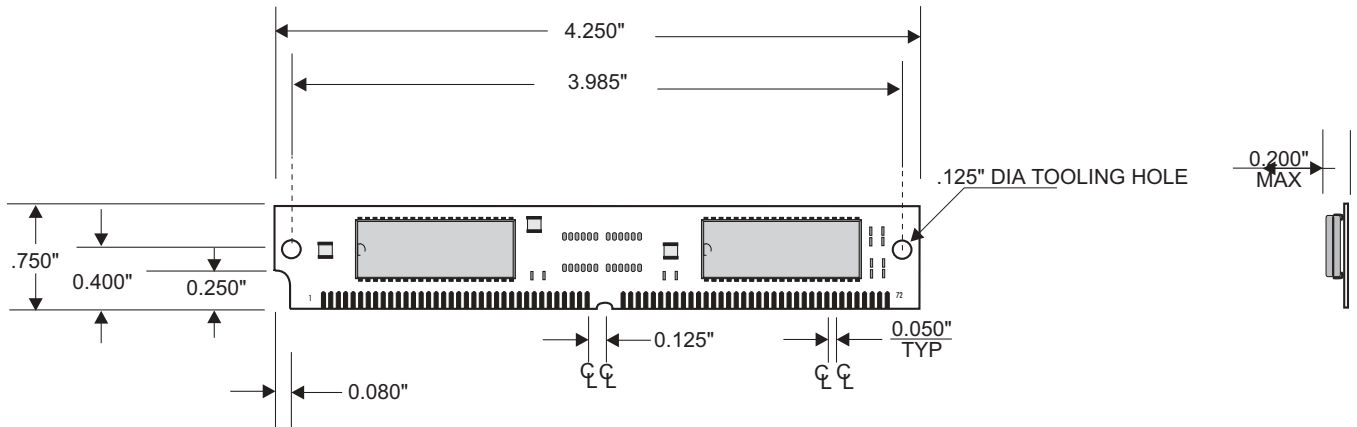
Presence Detect

	-50	-60	-70
PD1	V _{ss}	V _{ss}	V _{ss}
PD2	V _{ss}	V _{ss}	V _{ss}
PD3	V _{ss}	NC	V _{ss}
PD4	V _{ss}	NC	NC

FUNCTIONAL DIAGRAM



MECHANICAL DIMENSIONS



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