

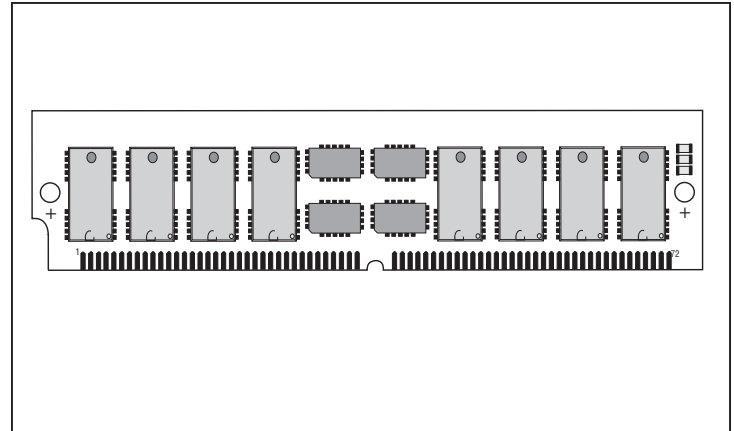
## DESCRIPTION

The Accutek AK536256W high density memory module is a CMOS dynamic RAM organized in 256K x 36 bit words. The module consists of eight standard 256K x 4 DRAMs in plastic SOJ packages and four 256K x 1 DRAMs in PLCC packages. The assembly has 12 drams mounted on the front side of a printed circuit board in a 72 pad leadless SIM configuration.

The operation of the AK536256W is identical to eight 256K x 4 plus four 256K x 1 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, along with one 256K x 1 DRAM with data in tied to data out to form a 9 bit byte. The bank of 36 bits is controlled by the two  $\overline{\text{RAS}}$  lines. An eighteen bit data path can be produced by connecting  $\text{DQ}_0$  to  $\text{DQ}_{18}$ ,  $\text{DQ}_1$  to  $\text{DQ}_{19}$ , etc. and alternately strobing  $\overline{\text{RAS}}_0$  and  $\overline{\text{RAS}}_2$ .

## FEATURES

- 262,144 x 36 bit organization
- 72 pad Single In-Line Module
- Multiple  $\overline{\text{CAS}}$  and  $\overline{\text{RAS}}$  lines allow x18 or x36 bit widths
- $\overline{\text{CAS}}$ -before- $\overline{\text{RAS}}$  refresh
- Operating free air temperature 0°C to 70°C
- Single 5 Volt Power Supply



- Power
  - 2.705 Watt Max Active (70nS)
  - 2.375 Watt Max Active (80 nS)
  - 2.045 Watt Max Active (100 nS)
  - 66 mW Max Standby
- 512 Refresh Cycles, 8 mSEC
- Available in Fast Page Mode and Static Column Mode versions
- Upward compatible with AK536512W, AK5361024W, AK5362048W, AK5364096W and AK5368192W

## PIN NOMENCLATURE

DQ <sub>0</sub> - DQ <sub>35</sub>	Data In/Data Out
A <sub>0</sub> - A <sub>8</sub>	Address Inputs
$\overline{\text{CAS}}_0$ - $\overline{\text{CAS}}_3$	Column Address Strobe
$\overline{\text{RAS}}_0$ , $\overline{\text{RAS}}_2$	Row Address Strobe
$\overline{\text{WE}}$	Write Enable
PD	Presence Detect
V <sub>cc</sub>	5v Supply
V <sub>ss</sub>	Ground
NC	No Connect

## MODULE OPTIONS

Leadless SIM: AK536256W

Leaded ZIP: AK536256Z

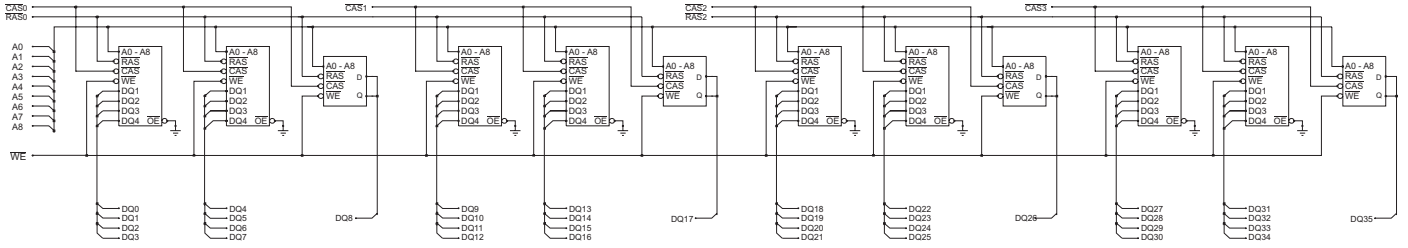
## PIN ASSIGNMENT

PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL
1	V <sub>ss</sub>	19	NC	37	DQ17	55	DQ12
2	DQ0	20	DQ4	38	DQ35	56	DQ30
3	DQ18	21	DQ22	39	V <sub>ss</sub>	57	DQ13
4	DQ1	22	DQ5	40	$\overline{\text{CAS}}_0$	58	DQ31
5	DQ19	23	DQ23	41	$\overline{\text{CAS}}_2$	59	V <sub>cc</sub>
6	DQ2	24	DQ6	42	$\overline{\text{CAS}}_3$	60	DQ32
7	DQ20	25	DQ24	43	$\overline{\text{CAS}}_1$	61	DQ14
8	DQ3	26	DQ7	44	$\overline{\text{RAS}}_0$	62	DQ33
9	DQ21	27	DQ25	45	NC	63	DQ15
10	V <sub>cc</sub>	28	A7	46	NC	64	DQ34
11	NC	29	NC	47	$\overline{\text{WE}}$	65	DQ16
12	A0	30	V <sub>cc</sub>	48	NC	66	NC
13	A1	31	A8	49	DQ9	67	PD1
14	A2	32	NC	50	DQ27	68	PD2
15	A3	33	NC	51	DQ10	69	PD3
16	A4	34	$\overline{\text{RAS}}_2$	52	DQ28	70	PD4
17	A5	35	DQ26	53	DQ11	71	NC
18	A6	36	DQ8	54	DQ29	72	V <sub>ss</sub>

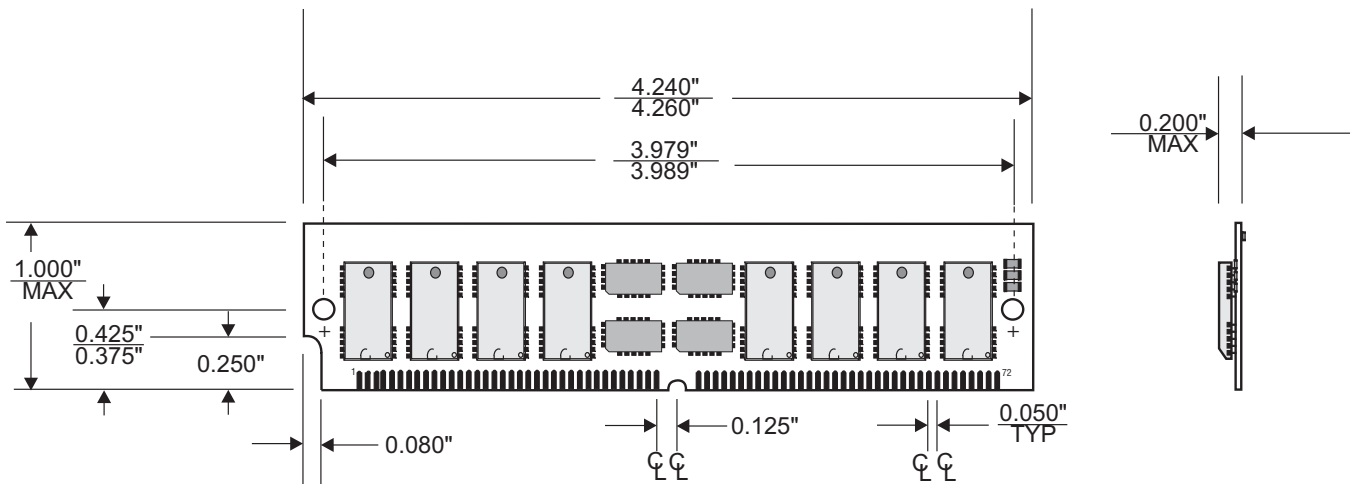
### Presence Detect -

	-60	-70	-80
PD1	V <sub>ss</sub>	V <sub>ss</sub>	V <sub>ss</sub>
PD2	NC	NC	NC
PD3	NC	V <sub>ss</sub>	NC
PD4	NC	NC	V <sub>ss</sub>

# FUNCTIONAL DIAGRAM



# MECHANICAL DIMENSIONS



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