



AK5816384S / AK5816384G

16,777,216 Word by 8 Bit CMOS

Dynamic Random Access Memory

DESCRIPTION

The Accutek AK5816384 high density memory module is a CMOS DRAM organized in 16 Meg x 8 bit words. The assembly consists of eight 16 Meg x 1 DRAMs in plastic SOJ packages mounted to the front side of a printed circuit board in 30 pad SIM (leadless) or SIP (leadless) configuration. The module is only 0.8 inch high (same height as standard 1 Meg modules), making it ideally suited for applications with low height restrictions.

The operation of the AK5816384 is identical to eight 16 Meg x 1 DRAMs. The data input is tied to the data output and brought out separately for each device, with common $\overline{\text{RAS}}$, $\overline{\text{CAS}}$ and $\overline{\text{WE}}$ control. This common I/O feature dictates the use of early-write cycles to prevent contention of D and Q. Since the Write-Enable ($\overline{\text{WE}}$) signal must always go low before $\overline{\text{CAS}}$ in a write cycle, Read-Write and Read-Modify-Write operation is not possible.

FEATURES

- 16,777,216 x 8 bit organization
- Optional 30 Pad leadless SIM (Single In-Line Module) or 30 Pin leadless SIP (Single In-Line Package)
- JEDEC standard pinout
- Each device (data bit) has common DQ lines with common $\overline{\text{CAS}}$ and $\overline{\text{RAS}}$ controls
- $\overline{\text{CAS}}$ -before- $\overline{\text{RAS}}$ refresh
- Downward compatible with AK584096, AK581024/481024, AK58256/48256
- TTL-Compatible Inputs and Outputs
- $\overline{\text{RAS}}$ -Only Refresh
- 4096 Cycle Refresh every 64mSEC
- Power:
3.96 Watt Max Active (60 nS)
4.40 Watt Max Active (70 nS)
3.52 Watt Max Active (80 nS)
44 mWatt Max Standby
- Operating free air temperature 0°C to 70°C
- Fast Page Mode
- 9 Bit version (with parity bit) also available

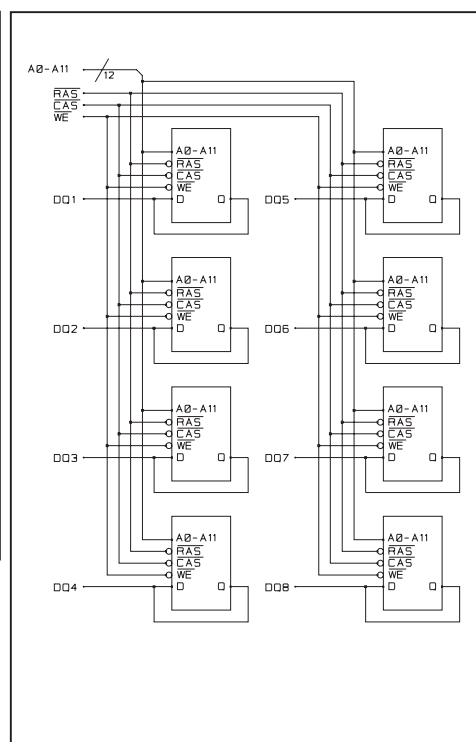
PIN NOMENCLATURE

DQ ₁ - DQ ₈	Data In/Data Out
A ₀ - A ₁₁	Address Inputs
$\overline{\text{CAS}}$	Column Address Strobe
$\overline{\text{RAS}}$	Row Address Strobe
$\overline{\text{WE}}$	Write Enable
V _{cc}	5v Supply
V _{ss}	Ground
NC	No Connect

PIN ASSIGNMENT

PIN #	SYMBOL	PIN #	SYMBOL
1	V _{cc}	16	DQ ₅
2	$\overline{\text{CAS}}$	17	A ₈
3	DQ ₁	18	A ₉
4	A ₀	19	A ₁₀
5	A ₁	20	DQ ₆
6	DQ ₂	21	$\overline{\text{WE}}$
7	A ₂	22	V _{ss}
8	A ₃	23	DQ ₇
9	V _{ss}	24	A ₁₁
10	DQ ₃	25	DQ ₈
11	A ₄	26	NC
12	A ₅	27	$\overline{\text{RAS}}$
13	DQ ₄	28	NC
14	A ₆	29	NC
15	A ₇	30	V _{cc}

FUNCTIONAL DIAGRAM



MODULE OPTIONS

Leadless SIM: AK5816384S
Leaded SIP: AK5816384G

