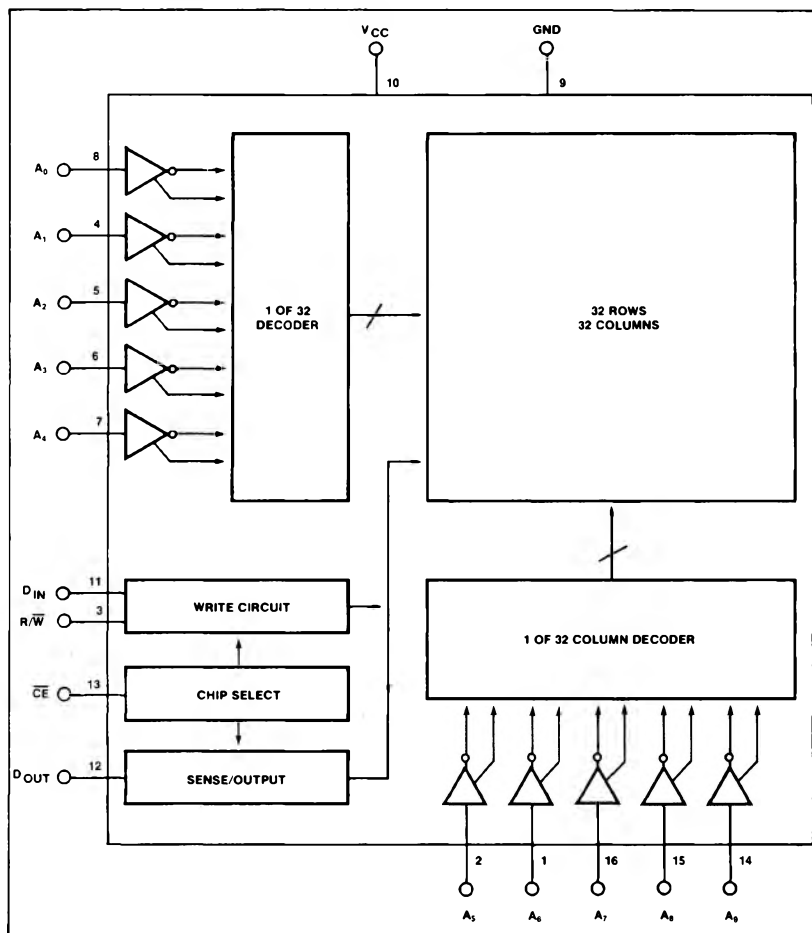
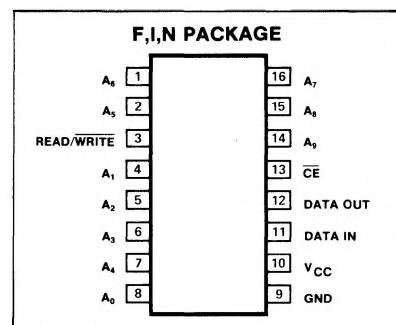


DESCRIPTION

The 2102, 2102-1 and 2102-2 are static random access read/write memories fabricated with low threshold n-channel silicon gate technology.

FEATURES

- Fully static
- Require no clocks
- Completely DTL/TTL compatible
- Single 5V power supply
- Three-state output for OR-tie capability

BLOCK DIAGRAM**PIN CONFIGURATION****ABSOLUTE MAXIMUM RATINGS¹**

PARAMETER	RATING	UNIT
T _{STG} Temperature range	-65 to 150	°C
P _D Storage		
Power dissipation ²		
N package	640	mW
F package	1	W
I package	1	W
All input, output and supply voltages with respect to ground	-0.5 to 7	V

DC ELECTRICAL CHARACTERISTICS $T_A = 0^\circ\text{C}$ to 70°C , $V_{CC} = 5\text{V} \pm 5\%$ unless otherwise specified.

PARAMETER	TEST CONDITIONS	LIMITS			UNIT
		Min	Typ ¹	Max	
V_{IL} Input voltage Low V_{IH} High		-0.5 2.2		0.65 V_{CC}	V
V_{OL} Output voltage Low V_{OH} High	$I_{OL} = 1.9\text{mA}$ $I_{OH} = -100\mu\text{A}$	2.2		0.45	V
I_{LI} Input load current (All input pins)	$V_{IN} = 0$ to 5.25V			10	μA
Leakage current I_{LOH} I_{LOL}	$\overline{CE} = 2.2\text{V}$ $V_{OUT} = 4.0\text{V}$ $V_{OUT} = 0.45\text{V}$			10 -100	μA
Supply current I_{CC1} I_{CC2}	All inputs = 5.25V , Data out open $T_A = 25^\circ\text{C}$ $T_A = 0^\circ\text{C}$		30	60 70	mA

AC ELECTRICAL CHARACTERISTICS $T_A = 0^\circ\text{C}$ to 70°C , $V_{CC} = 5\text{V} \pm 5\%$ unless otherwise specified.

PARAMETER	TO	FROM	2102			2102-1			2102-2			UNIT
			Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
t_{RC} READ CYCLE Read cycle			1,000			500			650			ns
t_A Access time					1,000			500			650	ns
t_{CO}	Output	Chip enable			500			350			400	ns
Previous data valid with respect to												ns
t_{OH1} Address			50			50			50			
t_{OH2} Chip enable			0			0			0			
t_{WC} WRITE CYCLE Write cycle			1,000			500			650			ns
t_{WP} Write pulse width			750			300			400			ns
t_{WR} Write recovery time			50			50			50			ns
Setup and hold time												ns
t_{AW} Setup time	Write	Address	200			150			200			
t_{PW} Setup time	Rise of $R/\overline{W}$	Data in	800			330			450			
t_{DH} Hold time	Change of data in	Rise of $R/\overline{W}$	100			100			100			
t_{CW} Setup time	Write	Chip enable	900			400			550			

NOTES

- Stresses above those listed under Absolute Maximum Ratings may cause permanent damage to the device. This is a stress rating only and functional operation of the device of these or any other condition above those indicated in the operation of the device of these or any other condition above those indicated in the operation sections of this specification is not implied.
- For operating at elevated temperatures the device must be derated based on a $+150^\circ\text{C}$ maximum junction temperature and a thermal resistance of 150°C/W junction to ambient ("B" package).
- All inputs protected against static charge.
- Parameter valid over operating temperature range unless otherwise specified.
- All voltage measurements are referenced to ground.
- Manufacturer reserves the right to make design and process changes and improvements.
- Typical values are at $+25^\circ\text{C}$ and typical supply voltages.

TIMING DIAGRAMS

