

DESCRIPTION

The 82S226 and 82S229 include on-chip decoding and 2 chip enable inputs for ease of memory expansion. They feature either open collector or tri-state outputs for optimization of word expansion in bused organizations.

Both 82S226 and 82S229 devices are available in the commercial and military temperature ranges. For the commercial temperature range (0°C to +75°C) specify N82S226/229, F or N, and for the military temperature range (-55°C to +125°C specify S82S226/229, F only.

FEATURES

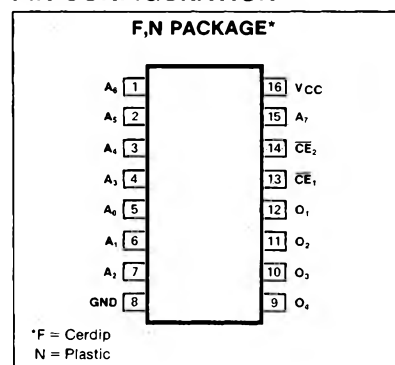
- **Address access time:**
N82S226/229: 50ns max
S82S226/229 70ns max

- **Power dissipation:** 0.5mW/bit typ
- **Input loading:**
N82S226/229: -100 μ A max
S82S226/229: -150 μ A max
- **On-chip address decoding**
- **Output options:**
82S226: Open collector
82S229: Tri-state
- **Fully compatible with Signetics 82S126/129 1024-bit PROMs**
- **Fully TTL compatible**

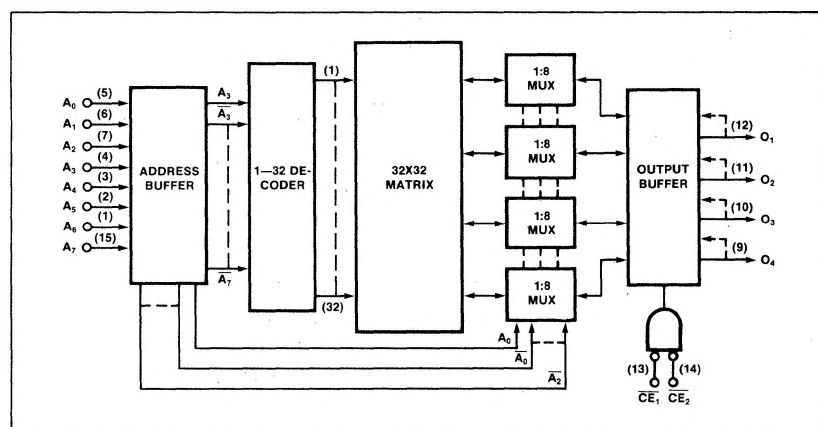
APPLICATIONS

- Volume production
- Sequential controllers
- Microprogramming
- Hardwired algorithms
- Control store
- Random logic
- Code conversion

PIN CONFIGURATION



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

PARAMETER	RATING	UNIT
V _{CC} Supply voltage	+7	Vdc
V _{IN} Input voltage	+5.5	Vdc
V _{OH} Output voltage		Vdc
V _{OH} High (82S226)	+5.5	
V _O Off-state (82S229)	+5.5	
T _A Temperature range		°C
T _A Operating		
N82S226/229	0 to +75	
S82S226/229	-55 to +125	
T _{STG} Storage	-65 to +150	

DC ELECTRICAL CHARACTERISTICS N82S226/229: $0^{\circ}\text{C} \leq T_A \leq +75^{\circ}\text{C}$, $4.75\text{V} \leq V_{CC} \leq 5.25\text{V}$
 S82S226/229: $-55^{\circ}\text{C} \leq T_A \leq +125^{\circ}\text{C}$, $4.5\text{V} \leq V_{CC} \leq 5.5\text{V}$

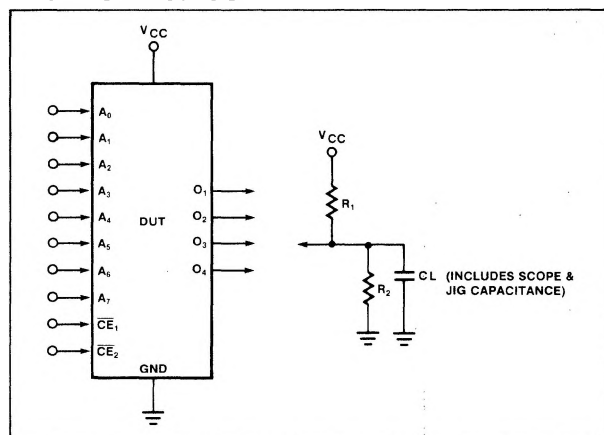
PARAMETER	TEST CONDITIONS ¹	N82S226/229			S82S226/229			UNIT
		Min	Typ ²	Max	Min	Typ ²	Max	
V_{IL} V_{IH} V_{IC}	Input voltage Low High Clamp							V
		2.0	-0.8	-1.2	2.0	-0.8	-1.2	
V_{OL} V_{OH}	Output voltage Low High (82S229)							V
	$I_{OUT} = 16\text{mA}$ $\overline{CE}_1 = \overline{CE}_2 = \text{Low}$, $I_{OUT} = -2\text{mA}$, High stored	2.4		0.45	2.4		0.5	
I_{IL} I_{IH}	Input current Low High							μA
	$V_{IN} = 0.45\text{V}$ $V_{IN} = 5.5\text{V}$			-100 40			-150 50	
I_{OLK} $I_{O(OFF)}$	Output current Leakage (82S226) Hi-Z state (82S229)			40 40			60 60	μA
I_{OS}	Short circuit (82S229)			-40			-60	μA
	$V_{OUT} = 0\text{V}$	-20		-70	-15		-85	mA
I_{CC}	V_{CC} supply current		105	120		105	125	mA
C_{IN} C_{OUT}	Capacitance Input Output							pF
	$V_{CC} = 5.0\text{V}$ $V_{IN} = 2.0\text{V}$ $V_{OUT} = 2.0\text{V}$		5 8			5 8		

AC ELECTRICAL CHARACTERISTICS $R_1 = 270\Omega$, $R_2 = 600\Omega$, $C_L = 30\text{pF}$
 N82S226/229: $0^{\circ}\text{C} \leq T_A \leq +75^{\circ}\text{C}$, $4.75\text{V} \leq V_{CC} \leq 5.25\text{V}$
 S82S226/229: $-55^{\circ}\text{C} \leq T_A \leq +125^{\circ}\text{C}$, $4.5\text{V} \leq V_{CC} \leq 5.5\text{V}$

PARAMETER	TO	FROM	N82S226/229			S82S226/229			UNIT
			Min	Typ ²	Max	Min	Typ ²	Max	
T_{AA} T_{CE}	Access time Output Output	Address Chip enable		35 15	50 25		35 15	70 35	ns
T_{CD}	Disable time Output	Chip disable		15	25		15	35	ns

NOTES

- Positive current is defined as into the terminal referenced.
- Typical values are at $V_{CC} = 5.0\text{V}$, $T_A = +25^{\circ}\text{C}$.

TEST LOAD CIRCUIT**VOLTAGE WAVEFORM**