

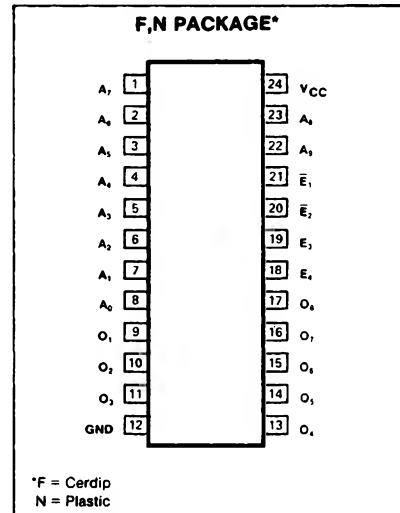
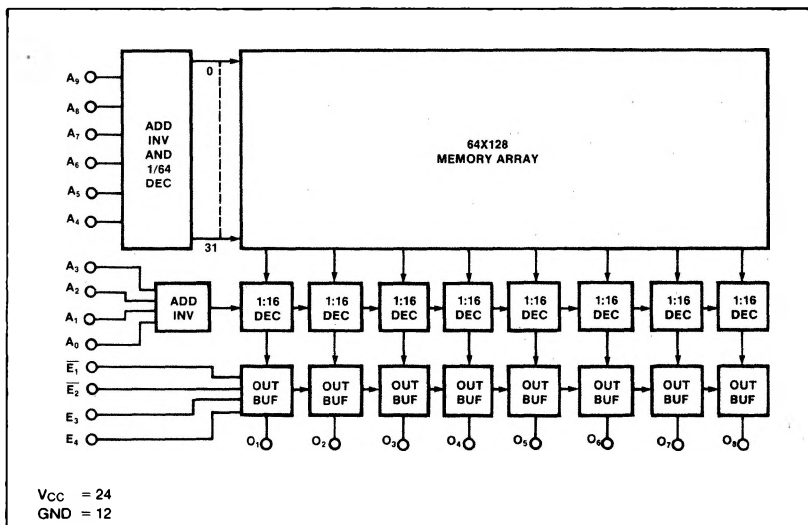
DESCRIPTION

The 82S280 and 82S281 include on-chip decoding and 4 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 82S280 and 82S281 devices are available in the commercial and military temperature ranges. For the commercial temperature range (0°C to +75°C) specify N82S280/281, F or N, and for the military temperature range (-55°C to +125°C) specify S82S280/281, F only.

FEATURES

- Address access time:
N82S280/281: 70ns max
S82S280/281: 100ns max
- Power dissipation: 60μW/bit typ
- Input loading:
N82S280/281: -100μA max
S82S280/281: -150μA max
- On-chip address decoding
- Output options:
82S280: Open collector
82S281: Tri-state
- Enable = $\bar{E}_1 \cdot \bar{E}_2 \cdot \bar{E}_3 \cdot \bar{E}_4$
- Fully TTL compatible

PIN CONFIGURATION**BLOCK DIAGRAM****ABSOLUTE MAXIMUM RATINGS**

PARAMETER	RATING	UNIT
VCC Supply voltage	+7	Vdc
VIN Input voltage	+5.5	Vdc
VO Output voltage	+5.5	Vdc
TA Operating Temperature range		°C
N82S280/281	0 to +75	
S82S280/281	-55 to +125	
TSTG Storage	-65 to +150	

DC ELECTRICAL CHARACTERISTICS N82S280/281: $0^{\circ}\text{C} \leq T_A \leq +75^{\circ}\text{C}$, $4.75\text{V} \leq V_{CC} \leq 5.25\text{V}$
 S82S280/281: $-55^{\circ}\text{C} \leq T_A \leq +125^{\circ}\text{C}$, $4.5\text{V} \leq V_{CC} \leq 5.5\text{V}$

PARAMETER	TEST CONDITIONS	N82S280/281 ¹			S82S280/281 ¹			UNIT
		Min	Typ ²	Max	Min	Typ ²	Max	
V _{IL} V _{IH} V _{IC}	Input voltage Low High Clamp	2.0	-0.8	.85	2.0	-0.8	.80	V
				-1.2			-1.2	
V _{OL} V _{OH}	Output voltage Low High	2.4		0.45	2.4		0.5	V
I _{IL} I _{IH}	Input current Low High			-100			-150	μA
				25			50	
I _{O(OFF)}	Output current Hi-Z state	-20		40	-15		100	μA
				-40			-100	
				-70			-85	
I _{OS}	Short circuit ³							mA
I _{CC}	V _{CC} supply current		100	140		100	150	mA
C _{IN} C _{OUT}	Capacitance Input Output		5 8			5 8		pF

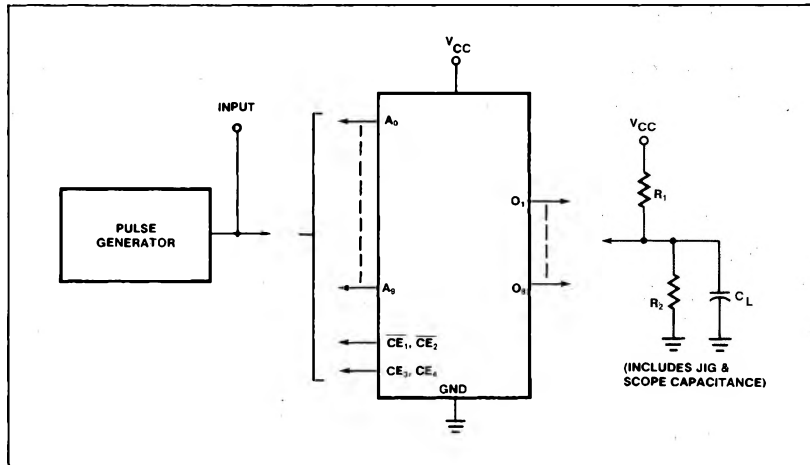
AC ELECTRICAL CHARACTERISTICS $R_1 = 470\Omega$, $R_2 = 1\text{k}\Omega$, $C_L = 30\text{pF}$
 N82S280/281: $0^{\circ}\text{C} \leq T_A \leq +75^{\circ}\text{C}$, $4.75\text{V} \leq V_{CC} \leq 5.25\text{V}$
 S82S280/281: $-55^{\circ}\text{C} \leq T_A \leq +125^{\circ}\text{C}$, $4.5\text{V} \leq V_{CC} \leq 5.5\text{V}$

PARAMETER	TO	FROM	N82S280/281			S82S280/281			UNIT
			Min	Typ ²	Max	Min	Typ ²	Max	
T _{AA} T _{CE}	Access time Output Output	Address Chip enable		40 20	70 40		40 20	100 50	ns
T _{CD}	Disable time Output	Chip disable		20	40		20	50	ns

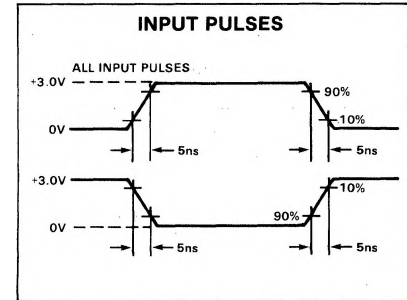
NOTES

1. Positive current is defined as into the terminal referenced.
2. Typical values are at $V_{CC} = +5.0\text{V}$ and $T_A = +25^{\circ}\text{C}$.
3. No more than one output should be grounded at the same time.

TEST LOAD CIRCUIT



VOLTAGE WAVEFORM



TIMING DIAGRAM

