

### 80K Cartridge ROM

#### FEATURES

- Mask Programmable Storage Providing 8192 x 10 Bit Words
- 16 Bit On-Chip Address Latch
- Control Decoder
- Programmable Memory Map Circuitry to Place 8K ROM Page Within 65K Word Memory Space Located on Two Independent 4K Boundaries

#### CIRCUIT REQUIREMENTS

The RO9580 operates as the program memory for systems using a CP1600 series microprocessor.

It is configured as 8192 x 10 bit words and contains several features which reduce the device count in a practical microprocessor application.

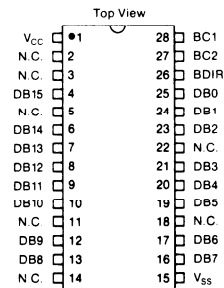
#### DESCRIPTION

The RO9580 contains a programmable memory map location for its own 8K page and if a valid address is detected, the particular addressed location will transfer its contents to the chip output buffers. If the control code following the address cycle was a Read, the RO9580 will output the 10 bits of addressed data and also drive a logic zero on the top 6 bits of the bus.

#### BUS CONTROL SIGNALS

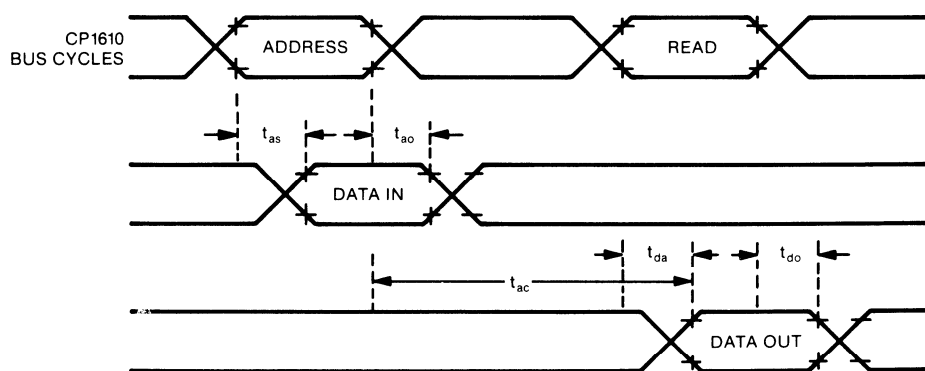
BDIR	BC2	BC1	Signal	Decoded Function
0	0	0	NACT	No ACTION, D0-D15 = High Impedance
0	0	1	ADAR	Address Data to Address Register, D0-D15 = High Impedance
0	1	0	IAB	No Action
0	1	1	DTB	Data To Bus, D0-D15 = Input
1	0	0	BAR	Bus to Address Register
1	0	1	DW	No Action
1	1	0	DWS	No Action
1	1	1	INTAK	INTerrupt Acknowledge

#### PIN CONFIGURATION 28 LEAD DUAL IN LINE



READ ONLY MEMORY

#### TIMING DIAGRAM



**ELECTRICAL CHARACTERISTICS**

**Maximum Ratings\***

Temperature Under Bias .....	0° C to +100° C
Storage Temperature .....	-55° C to +150° C
All Input or Output Voltages with Respect to V <sub>SS</sub> .....	-0.2V to +12V
V <sub>CC</sub> with Respect to V <sub>SS</sub> .....	-0.2V to +12V

\* Exceeding these ratings could cause permanent damage to the device. This is a stress rating only and functional operation of this device at these conditions is not implied—operating ranges are specified in Standard Conditions. Exposure to absolute maximum rating conditions for extended periods may affect device reliability. Data labeled "typical" is presented for design guidance only and is not guaranteed.

**Standard Conditions** (unless otherwise noted):

Ambient Temperature: -40° C to +85° C  
V<sub>CC</sub> = +4.50V to +5.50V,  
V<sub>SS</sub> = 0V

**DC CHARACTERISTICS**

Characteristics	Sym	Min	Typ	Max	Units	Conditions
<b>Inputs</b>						
Input Logic Low	V <sub>IL</sub>	0	—	0.8	V	V <sub>IN</sub> = 0V to V <sub>CC</sub>
Input Logic High	V <sub>OH</sub>	2	—	V <sub>CC</sub>	V	
Input Leakage	I <sub>IL</sub>	—	—	5	μA	
<b>CPU Bus Outputs</b>						
Output Logic Low	V <sub>OL</sub>	0	—	0.4	V	I <sub>OL</sub> = 1.6mA I <sub>OH</sub> = 100μA
Output Logic High	V <sub>OH</sub>	2.4	—	V <sub>CC</sub>	V	
<b>Supply Current</b>						
V <sub>CC</sub> Supply	I <sub>CC</sub>	—	—	75	mA	

**AC CHARACTERISTICS**

Characteristics	Sym	Min	Typ	Max	Units	Conditions
<b>Inputs</b>						
Address Set Up	t <sub>AS</sub>	300	—	—	ns	
Address Overlap	t <sub>AO</sub>	50	—	65	ns	
<b>CPU Bus Outputs</b>						
Turn ON Delay	t <sub>DA</sub>	—	—	300	ns	
Turn OFF Delay	t <sub>DO</sub>	80	—	250	ns	
Access Time	t <sub>AC</sub>	—	—	1.5	μs	

READ ONLY MEMORY