



M8216/M8226

4-BIT PARALLEL BIDIRECTIONAL BUS DRIVER

Military

- Not Recommended for New Designs
- Data Bus Buffer Driver for M8080A CPU
- Low Input Load Current: 0.25 mA Maximum
- High Output Drive Capability for Driving System Data Bus
- 16-Pin Dual-In-Line Package
- 3.40V Output High Voltage for Direct Interface to M8080A CPU
- 3-State Outputs
- Military Temperature Range: -55°C to $+125^{\circ}\text{C}$ (T_C)
- $\pm 10\%$ Power Supply Tolerance

The M8216/M8226 is a 4-bit directional bus driver/receiver. All inputs are low power TTL compatible. For driving MOS, the DO outputs provide a high 3.40V V_{OH} , and for high capacitance terminated bus structures, the DB outputs provide a high 50 mA I_{OL} capability. A non-inverting (M8216) and an inverting (M8226) are available to meet a wide variety of applications for buffering in microcomputer systems.

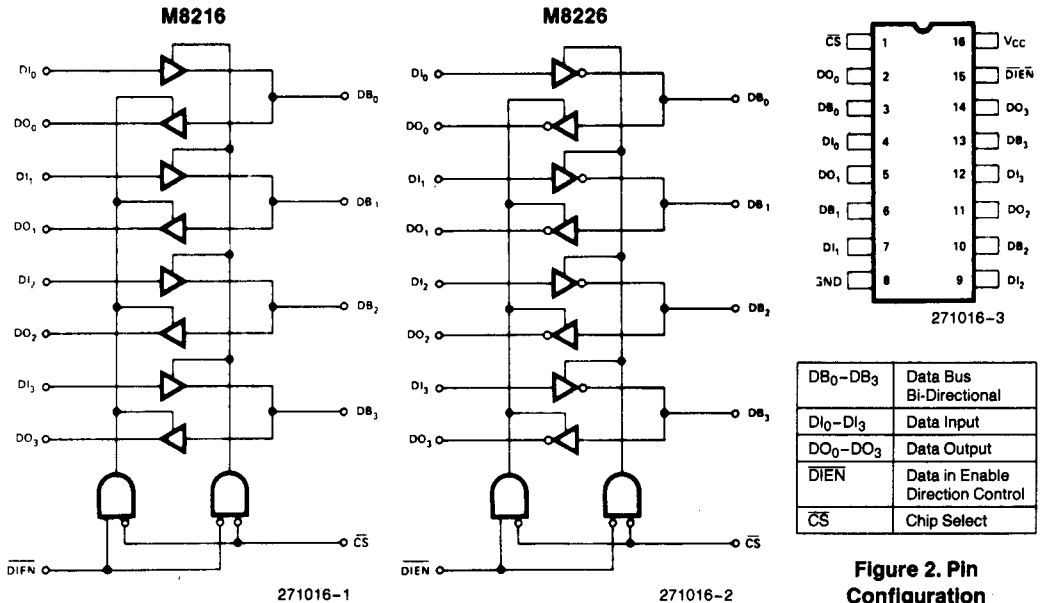
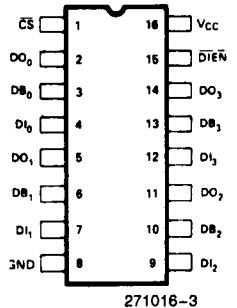


Figure 1. Logic Diagrams



DB ₀ -DB ₃	Data Bus Bi-Directional
DI ₀ -DI ₃	Data Input
DO ₀ -DO ₃	Data Output
DIEN	Data in Enable Direction Control
CS	Chip Select

Figure 2. Pin Configuration

A.C. CHARACTERISTICS $T_C = -55^{\circ}\text{C}$ to $+125^{\circ}\text{C}$, $V_{CC} = +5\text{V} \pm 10\%$

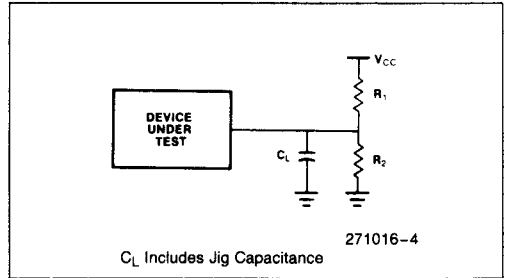
Symbol	Parameter	Limits			Unit	Conditions
		Min	Typ(1)	Max		
T_{PD1}	Input to Output Delay DO Outputs		15	25	ns	(Note 2)
T_{PD2}	Input to Output Delay DB Outputs M8216		19	33	ns	(Note 2)
T_{PD2}	Input to Output Delay DB Outputs M8226		16	26	ns	(Note 2)
T_E	Output Enable Time M8216		42	75	ns	(Note 2)
T_E	Output Enable Time M8226		36	62	ns	(Note 2)
T_D	Output Disable Time M8216		16	40	ns	(Note 2)
T_D	Output Disable Time M8226		16	38	ns	(Note 2)

NOTES:

1. Typical values are for $T_C = 25^{\circ}\text{C}$, $V_{CC} = 5.0\text{V}$.
- 2.

Test	C_L	R_1	R_2
T_{PD1}	30 pF	300 Ω	600 Ω
T_{PD2}	300 pF	90 Ω	180 Ω
$T_{E, (DO, ENABLE \uparrow)}$	30 pF	10 K Ω	1 K Ω
$T_{E, (DO, ENABLE \downarrow)}$	30 pF	300 Ω	600 Ω
$T_{E, (DB, ENABLE \uparrow)}$	300 pF	10 K Ω	1 K Ω
$T_{E, (DB, ENABLE \downarrow)}$	300 pF	90 Ω	180 Ω
$T_{D, (DO, DISABLE \uparrow)}$	5 pF	300 Ω	600 Ω
$T_{D, (DO, DISABLE \downarrow)}$	5 pF	10 K Ω	1 K Ω
$T_{D, (DB, DISABLE \uparrow)}$	5 pF	90 K Ω	180 Ω
$T_{D, (DB, DISABLE \downarrow)}$	5 pF	10 K Ω	1 K Ω

A.C. TESTING LOAD



WAVEFORMS

