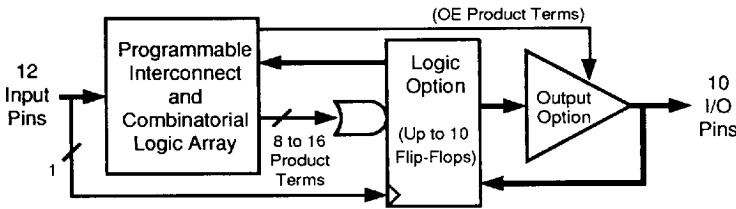


Features

- **High Speed Programmable Logic Device**
15 ns Max Propagation Delay
5 V ±10% Operation
- **Low Power CMOS Operation**
- **CMOS and TTL Compatible Inputs and Outputs**
10 µA Leakage Maximum
- **Reprogrammable - Tested 100% for Programmability**
- **High Reliability CMOS Technology**
2000 V ESD Protection
200 mA Latchup Immunity
- **Full Military, Commercial and Industrial Temperature Ranges**
- **Dual-In-Line and Surface Mount Packages**

| | | | |
|---------------------------|-------|---------|--------|
| Speed | "L" | -15,-20 | All |
| Temp | C/M | C/M | Others |
| I_{cc}(mA) | 12/15 | 90/100 | 55 |

Logic Diagram



Description

The AT22V10 and AT22V10L are CMOS high performance Erasable Programmable Logic Devices (EPLDs). Speeds down to 15 ns and power dissipation as low as 12 mA are offered. All speed ranges are specified over the full 5 V ±10% range. All pins offer a low ±10 µA leakage.

The AT22V10L provides the optimum low power CMOS EPLD solution, with low DC power (8 mA typical) and full CMOS output levels. The AT22V10L significantly reduces total system power and enhances system reliability.

Full CMOS output levels help reduce power in many other system components.

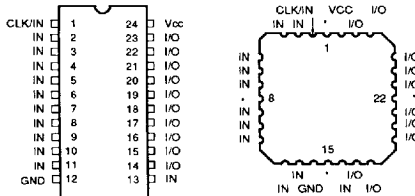
The AT22V10 and AT22V10L incorporate a variable product term architecture. Each output is allocated from eight to 16 product terms, which allows highly complex logic functions to be realized.

Two additional product terms are included to provide synchronous preset and asynchronous reset. These terms are common to all 10 registers. All registers are automatically cleared upon power up.

Register Preload simplifies testing. A Security Fuse prevents unauthorized copying of programmed fuse patterns.

Pin Configurations

| Pin Name | Function |
|----------|------------------------|
| CLK/IN | Clock and Logic Input |
| IN | Logic Inputs |
| I/O | Bidirectional Buffers |
| * | No Internal Connection |
| VCC | +5 V Supply |



1074177 0005426 033

**High Speed
UV Erasable
Programmable
Logic Device**

7

Absolute Maximum Ratings*

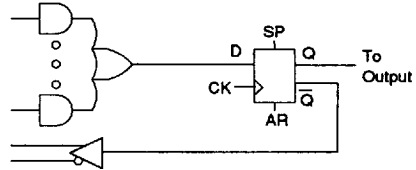
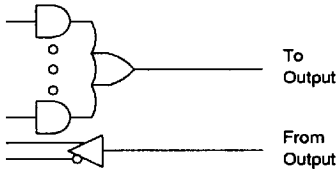
| | |
|--|----------------------------------|
| Temperature Under Bias..... | -55°C to +125°C |
| Storage Temperature..... | -65°C to +150°C |
| Voltage on Any Pin with Respect to Ground..... | -2.0 V to +7.0 V ⁽¹⁾ |
| Voltage on Input Pins with Respect to Ground During Programming..... | -2.0 V to +14.0 V ⁽¹⁾ |
| Programming Voltage with Respect to Ground..... | -2.0 V to +14.0 V ⁽¹⁾ |
| Integrated UV Erase Dose..... | 7258 W-sec/cm ² |

*NOTICE: Stresses beyond 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 at these or any other conditions beyond those indicated in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

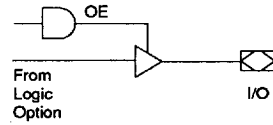
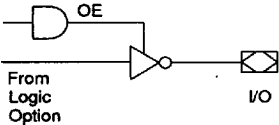
Note:

1. Minimum voltage is -0.6 V dc which may undershoot to -2.0 V for pulses of less than 20 ns. Maximum output pin voltage is V_{CC}+0.75 V dc which may overshoot to +7.0 V for pulses of less than 20 ns.

Logic Options



Output Options



D.C. and A.C. Operating Conditions

| | Commercial AT22V10/L -15, -20, -25, -35 | Industrial AT22V10/L -15, -20, -25, -35 | Military AT22V10/L -15, -20, -25, -30 |
|------------------------------|--|--|--|
| Operating Temperature (Case) | 0°C - 70°C | -40°C - 85°C | -55°C - 125°C |
| V _{CC} Power Supply | 5 V ± 10% | 5 V ± 10% | 5 V ± 10% |

Operating Modes

| Mode | 24-Pin DIP | 1 | 5 | 8 | 13 | I/Os | V _{CC} (24) |
|-------------|------------------|-----------------------------------|----------------|-----------------|--------|------|----------------------|
| | 28-Pin JLC | 2 | 6 | 10 | 16 | I/Os | V _{CC} (28) |
| "EPLD" | X ⁽¹⁾ | X | X | X | X | I/O | 5 V |
| Program | V _{PP} | X / V _H ⁽²⁾ | X | V _{PP} | DIN | 6 V | |
| PGM Verify | V _{PP} | X / V _H | X | V _{IL} | DOUT | 6 V | |
| PGM Inhibit | V _{PP} | X / V _H | X | V _{IH} | High Z | 6 V | |
| Preload | X | X | V _H | X | DIN | 5 V | |

Notes: 1. X can be V_{IL} or V_{IH}.

2. V_H = 11.0 V to 14.0 V

D.C. Characteristics

| Symbol | Parameter | Condition | Min | Typ | Max | Units | |
|--------------------------------|------------------------------|---|-------------------------------|----------------------|-----------------------|-------|----|
| I _{LI} | Input Load Current | V _{IN} = -0.1 V to V _{CC} +1 V | | | 10 | μA | |
| I _{LO} | Output Leakage Current | V _{OUT} = -0.1 V to V _{CC} +0.1 V | | | 10 | μA | |
| I _{CC} | Power Supply Current | V _{CC} = MAX, V _{IN} = GND, Outputs Open | AT22V10-15,-20 | Com. | 90 | mA | |
| | | | | Ind., Mil. | 100 | mA | |
| | | | AT22V10-25,-35 ⁽²⁾ | | 55 | mA | |
| I _{CC2} | Clocked Power Supply Current | f = 1 MHz, V _{CC} = MAX, Outputs Open | AT22V10L ⁽²⁾ | Com. | 1.7 | 12 | mA |
| | | | | Ind., Mil. | 2.0 | 15 | mA |
| I _{OS} ⁽¹⁾ | Output Short Circuit Current | V _{OUT} = 0.5 V | | | -90 | mA | |
| V _{IL} | Input Low Voltage | | -0.6 | | 0.8 | V | |
| V _{IH} | Input High Voltage | | 2.0 | | V _{CC} +0.75 | V | |
| V _{OL} | Output Low Voltage | V _{IN} = V _{IH} or V _{IL} , V _{CC} = MIN | I _{OL} = 16 mA | Com., Ind. | 0.5 | V | |
| | | | I _{OL} = 12 mA | Mil. | 0.5 | V | |
| | | | I _{OL} = 24 mA | Com. | 0.8 | V | |
| V _{OH} | Output High Voltage | V _{IN} =V _{IH} or V _{IL} , V _{CC} =MIN | I _{OH} = -100 μA | V _{CC} -0.3 | | V | |
| | | | I _{OH} = -4.0 mA | | 2.4 | V | |

Notes: 1. Not more than one output at a time should be shorted. 2. See I_{CC} vs. Frequency curves in the back of this data sheet.
Duration of short circuit test should not exceed 30 sec.

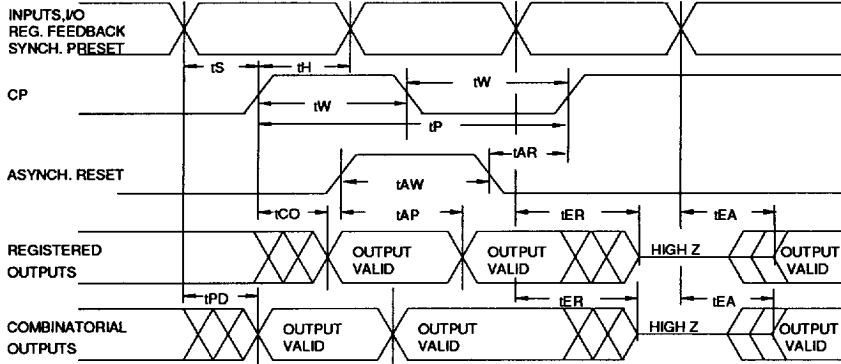
A.C. Characteristics, Commercial and Industrial

| Symbol | Parameter | AT22V10-15 | | | AT22V10/L-20 | | | AT22V10/L-25 | | | AT22V10/L-35 | | | Units |
|------------------|--|------------|-----|------|--------------|-----|------|--------------|-----|------|--------------|-----|------|-------|
| | | Min | Typ | Max | Min | Typ | Max | Min | Typ | Max | Min | Typ | Max | |
| t _{PD} | Input or Feedback to Non-Registered Output | | 10 | 15 | | 12 | 20 | | 15 | 25 | | 20 | 35 | ns |
| t _{EA} | Input to Output Enable | | 10 | 15 | | | 20 | | 15 | 25 | | 20 | 35 | ns |
| t _{ER} | Input to Output Disable | | 10 | 15 | | | 20 | | 15 | 25 | | 20 | 35 | ns |
| t _{CF} | Clock to Feedback | 0 | 1 | 2.5 | 0 | 4 | 8 | 0 | 5 | 10 | 0 | 10 | 15 | ns |
| t _{CO} | Clock to Output | 0 | 7 | 10 | 0 | 8 | 12 | 0 | 10 | 15 | 0 | 12 | 20 | ns |
| t _S | Input or Feedback Setup Time | 10 | | 8 | 12 | | 8 | 15 | | 12 | 20 | | 15 | ns |
| t _H | Hold Time | 0 | | | 0 | | | 0 | | | 0 | | | ns |
| t _P | Clock Period | 12 | | | 20 | | | 24 | | | 30 | | | ns |
| t _W | Clock Width | 6 | | | 10 | | | 12 | | | 15 | | | ns |
| F _{MAX} | External Feedback 1/(t _S +t _{CO}) | | | 50.0 | | | 41.6 | | | 33.3 | | | 25.0 | MHz |
| | Internal Feedback 1/(t _S +t _{CF}) | | | 80.0 | | | 50.0 | | | 40.0 | | | 28.5 | MHz |
| | No Feedback 1/(t _P) | | | 83.3 | | | 50.0 | | | 41.6 | | | 33.3 | MHz |
| t _{AW} | Asynchronous Reset Width | 15 | | 8 | 20 | | 9 | 25 | | 10 | 30 | | 15 | ns |
| t _{AR} | Asynchronous Reset, Synchronous Preset, Recovery Time | 15 | | 8 | 20 | | 12 | 25 | | 15 | 30 | | 18 | ns |
| t _{AP} | Asynchronous Reset to Registered Output Reset | | 12 | 20 | | 15 | 22 | | 18 | 25 | | 20 | 30 | ns |



1074177 0005428 906

A.C. Waveforms ⁽¹⁾

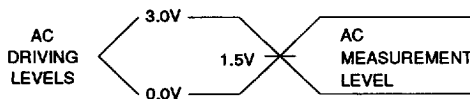


Note: 1. Timing measurement reference is 1.5 V. Input AC driving levels are 0.0 V and 3.0 V, unless otherwise specified.

A.C. Characteristics, Military

| Symbol | Parameter | AT22V10-15 | | | AT22V10/L-20 | | | AT22V10/L-25 | | | AT22V10/L-30 | | | Units |
|------------------|--|------------|-----|------|--------------|-----|------|--------------|-----|------|--------------|-----|------|-------|
| | | Min | Typ | Max | Min | Typ | Max | Min | Typ | Max | Min | Typ | Max | |
| t _{PD} | Input or Feedback to Non-Registered Output | | 10 | 15 | | 12 | 20 | | 15 | 25 | | 20 | 30 | ns |
| t _{EA} | Input to Output Enable | | 10 | 15 | | | 20 | | 15 | 25 | | 20 | 30 | ns |
| t _{ER} | Input to Output Disable | | 10 | 15 | | | 20 | | 15 | 25 | | 20 | 30 | ns |
| t _{CF} | Clock to Feedback | 0 | 1 | 2.5 | 0 | 4 | 8 | 0 | 5 | 10 | 0 | 10 | 15 | ns |
| t _{CO} | Clock to Output | 0 | 7 | 10 | 0 | 8 | 15 | 0 | 10 | 15 | 0 | 12 | 20 | ns |
| t _{SF} | Feedback Setup Time | 10 | 8 | | 12 | 10 | | 15 | 12 | | 18 | 15 | | ns |
| t _S | Input Setup Time | 10 | 8 | | 17 | 14 | | 18 | 15 | | 20 | 15 | | ns |
| t _H | Hold Time | 0 | | | 0 | | | 0 | | | 0 | | | ns |
| t _P | Clock Period | 12 | | | 20 | | | 24 | | | 30 | | | ns |
| t _W | Clock Width | 6 | | | 10 | | | 12 | | | 15 | | | ns |
| F _{MAX} | External Feedback 1/(t _S +t _{CO}) | | | 50.0 | | | 31.2 | | | 30.3 | | | 25.0 | MHz |
| | Internal Feedback 1/(t _S +t _{CF}) | | | 80.0 | | | 50.0 | | | 40.0 | | | 30.0 | MHz |
| | No Feedback 1/(t _P) | | | 83.3 | | | 50.0 | | | 41.6 | | | 33.3 | MHz |
| t _{AW} | Asynchronous Reset Width | 15 | 8 | | 20 | 9 | | 25 | 10 | | 30 | 15 | | ns |
| t _{AR} | Asynchronous Reset Recovery Time | 15 | 8 | | 20 | 12 | | 25 | 15 | | 30 | 18 | | ns |
| t _{AP} | Asynchronous Reset to Registered Output Reset | | 12 | 20 | | 15 | 22 | | 18 | 25 | | 20 | 30 | ns |

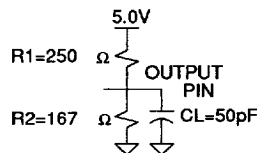
Input Test Waveforms and Measurement Levels



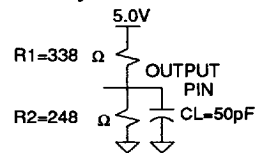
t_R, t_F < 5 ns (10% to 90%)

Output Test Loads:

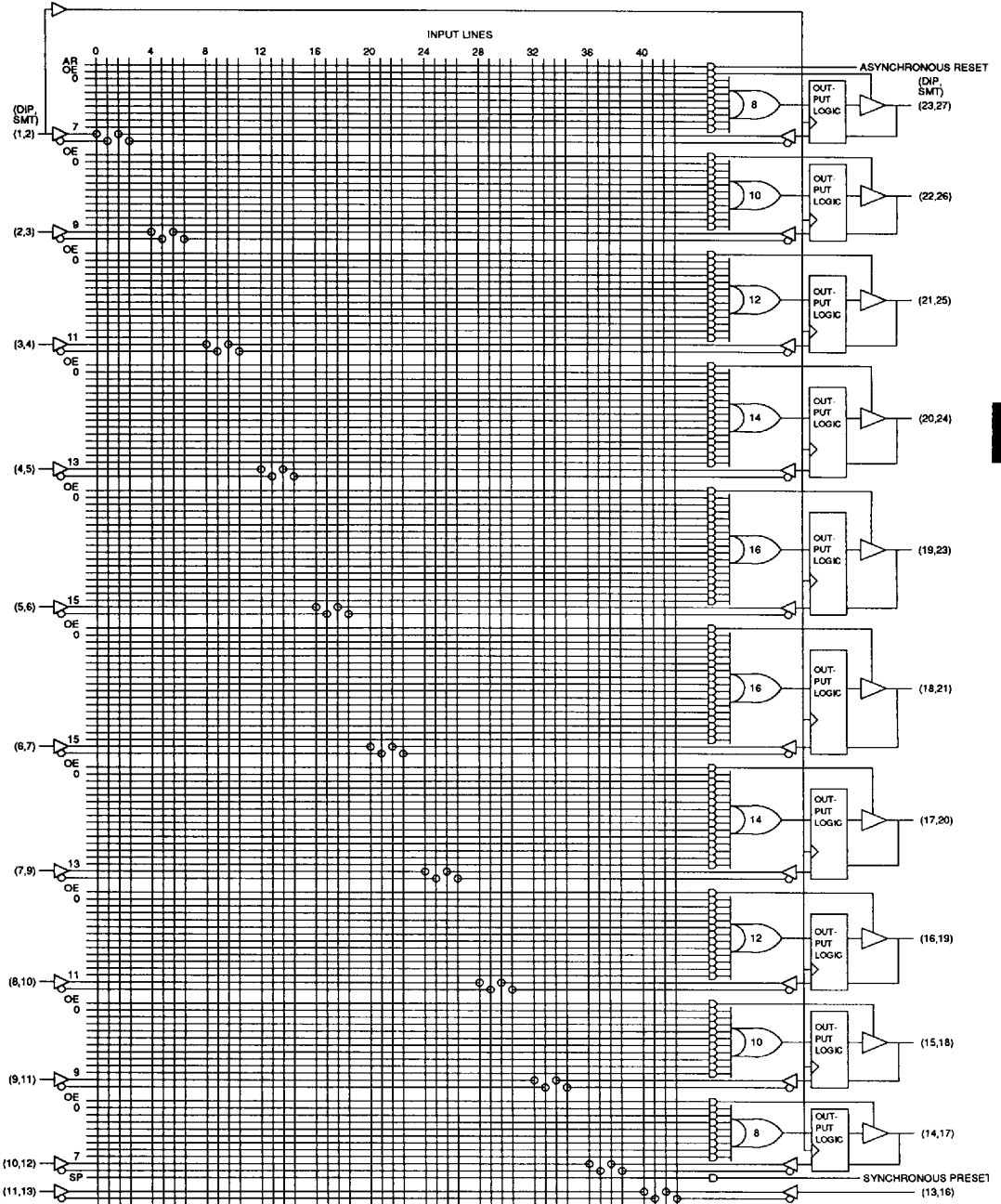
Commercial



Military



Functional Logic Diagram AT22V10/L



7

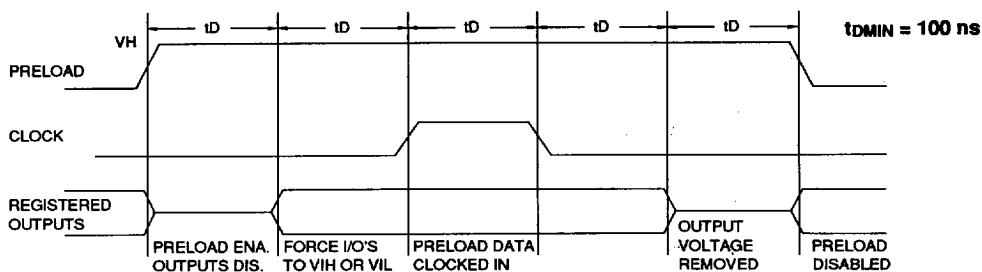


1074177 0005430 564

Preload of Registered Outputs

The registers in the AT22V10 and AT22V10L are provided with circuitry to allow loading of each register asynchronously with either a high or a low. This feature will simplify testing since any state can be forced into the registers to control test sequencing. A V_{IH} level on the I/O pin will force the register high; a V_{IL} will force it low, independent of the polarity bit (C0) setting. The PRELOAD state is entered by placing an 11 V to 14 V signal on pin 8 on DIPs, and pin 10 on SMPs. When the clock pin is pulsed high, the data on the I/O pins is placed into the ten registers.

| Level forced on registered output pin during PRELOAD cycle. | Register state After Cycle |
|---|----------------------------|
| V_{IH} | High |
| V_{IL} | Low |

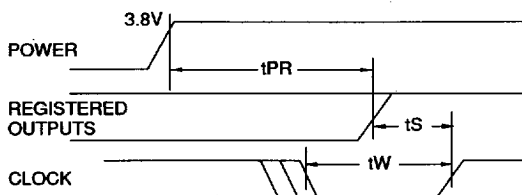


Power Up Reset

The registers in the AT22V10 and AT22V10L are designed to reset during power up. At a point delayed slightly from V_{CC} crossing 3.8 V, all registers will be reset to the low state. The output state will depend on the polarity of the output buffer.

This feature is critical for state machine initialization. However, due to the asynchronous nature of reset and the uncertainty of how V_{CC} actually rises in the system, the following conditions are required:

- 1) The V_{CC} rise must be monotonic,
- 2) After reset occurs, all input and feedback setup times must be met before driving the clock pin high, and
- 3) The clock must remain stable during t_{PR} .



| Parameter | Description | Min | Typ | Max | Units |
|-----------|---------------------|-----|-----|------|-------|
| t_{PR} | Power-Up Reset Time | | 600 | 1000 | ns |

Pin Capacitance (f = 1 MHz, T = 25°C) ⁽¹⁾

| | Typ | Max | Units | Conditions |
|-----------|-----|-----|-------|-----------------|
| C_{IN} | 5 | 8 | pF | $V_{IN} = 0$ V |
| C_{OUT} | 6 | 8 | pF | $V_{OUT} = 0$ V |

Note: 1. Typical values for nominal supply voltage. This parameter is only sampled and is not 100% tested.

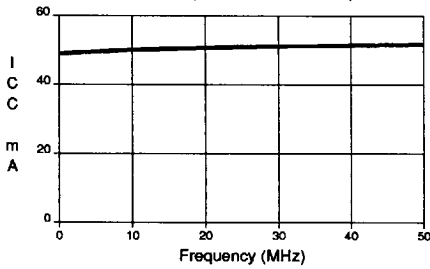
Erase Characteristics

The entire fuse array of an AT22V10 or AT22V10L is erased after exposure to ultraviolet light at a wavelength of 2537 Å. Complete erasure is assured after a minimum of 20 minutes exposure using 12,000 $\mu\text{W}/\text{cm}^2$ intensity lamps spaced one inch away from the chip. Minimum erase time for lamps at other in-

tensity ratings can be calculated from the minimum integrated erasure dose of 15 W-sec/cm². To prevent unintentional erasure, an opaque label is recommended to cover the clear window on any UV erasable EPPLD which will be subjected to continuous fluorescent indoor lighting or sunlight.

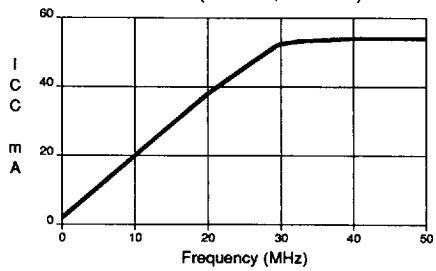
SUPPLY CURRENT vs. INPUT FREQUENCY

AT22V10 (TA = 25C, VCC = 5V)

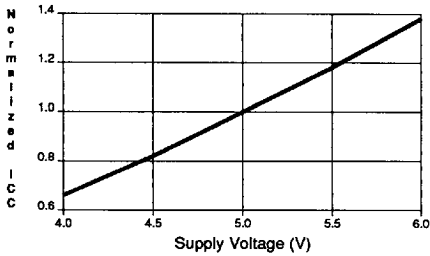


SUPPLY CURRENT vs. INPUT FREQUENCY

AT22V10L (TA = 25C, VCC = 5V)

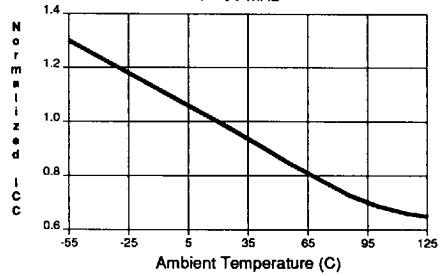


NORMALIZED SUPPLY CURRENT vs. SUPPLY VOLTAGE

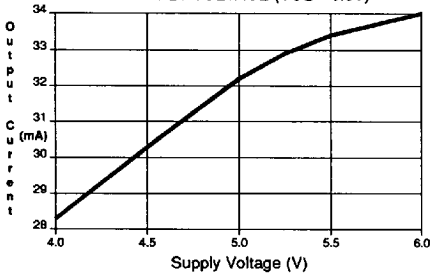


NORMALIZED ICC vs. AMBIENT TEMP.

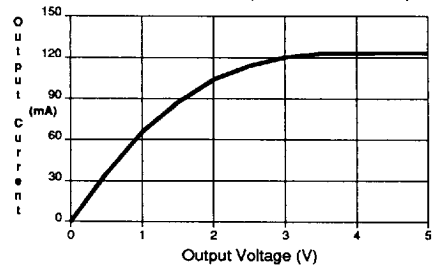
f = 30 MHz



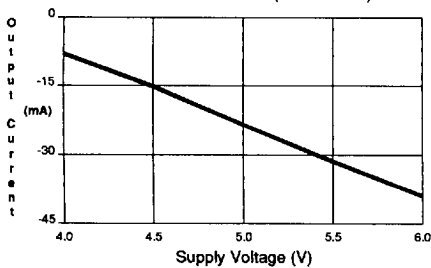
OUTPUT SINK CURRENT vs. SUPPLY VOLTAGE (VOL = 0.5V)



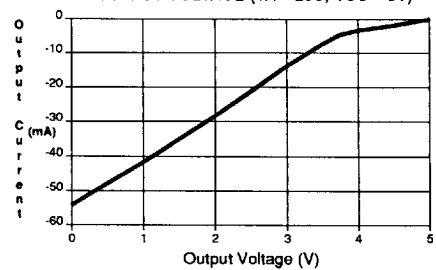
OUTPUT SINK CURRENT vs. OUTPUT VOLTAGE (TA = 25C, VCC = 5V)



OUTPUT SOURCE CURRENT vs. SUPPLY VOLTAGE (VOH = 2.4V)



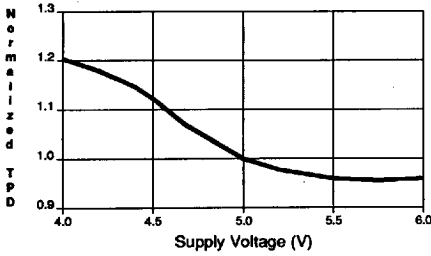
OUTPUT SOURCE CURRENT vs. OUTPUT VOLTAGE (TA = 25C, VCC = 5V)



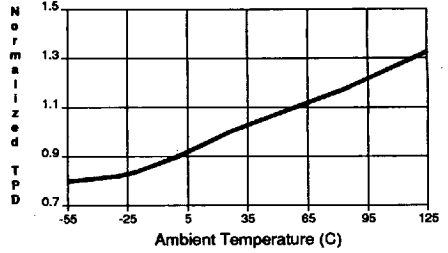
1074177 0005432 337



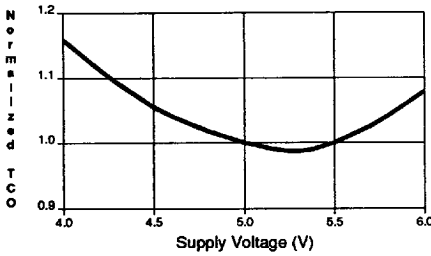
NORMALIZED TPD
vs. SUPPLY VOLTAGE



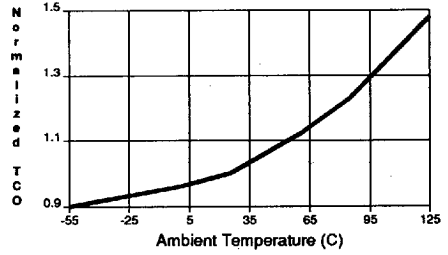
NORMALIZED TPD
vs. TEMPERATURE



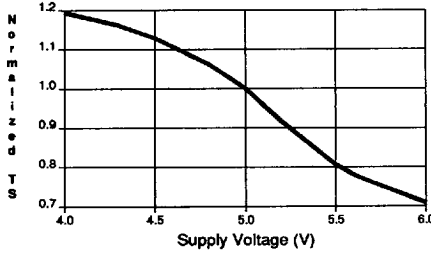
NORMALIZED TCO
vs. SUPPLY VOLTAGE



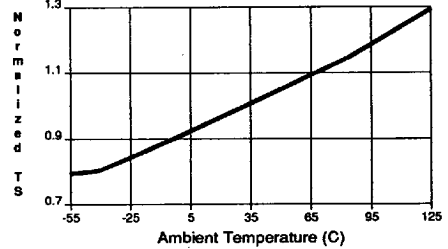
NORMALIZED TCO
vs. TEMPERATURE



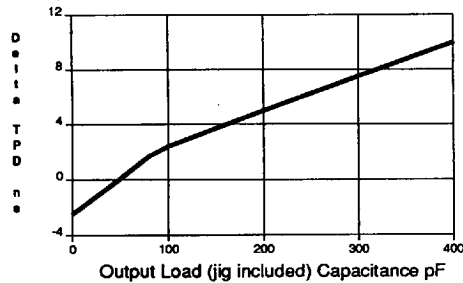
NORMALIZED TS
vs. SUPPLY VOLTAGE



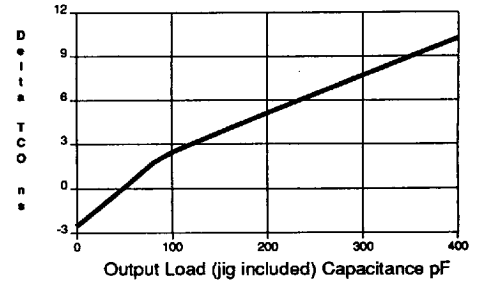
NORMALIZED TS
vs. TEMPERATURE



DELTA TPD vs. OUTPUT LOADING
(VCC = 4.5V, OUTPUT LOAD = COMMERCIAL)



DELTA TCO vs. OUTPUT LOADING
(VCC = 4.5V, OUTPUT LOAD = COMMERCIAL)



Ordering Information

| tPD (ns) | tS (ns) | tCO (ns) | Ordering Code | Package | Operation Range | |
|------------------|---------|---|---------------|---------|-----------------------------|-------------------------------|
| 15 | 10 | 10 | AT22V10-15DC | 24DW3 | Commercial (0°C to 70°C) | |
| | | | AT22V10-15FC | 24C | | |
| | | | AT22V10-15GC | 24D3 | | |
| | | | AT22V10-15JC | 28J | | |
| | | | AT22V10-15KC | 28KW | | |
| | | | AT22V10-15LC | 28LW | | |
| | | | AT22V10-15NC | 28L | | |
| | | | AT22V10-15PC | 24P3 | | |
| | | | AT22V10-15SC | 24S | | |
| | | | AT22V10-15YC | 24CW | | |
| | | | AT22V10-15DI | 24DW3 | | Industrial (-40°C to 85°C) |
| | | | AT22V10-15FI | 24C | | |
| | | | AT22V10-15GI | 24D3 | | |
| | | | AT22V10-15JI | 28J | | |
| | | | AT22V10-15KI | 28KW | | |
| | | | AT22V10-15LI | 28LW | | |
| AT22V10-15NI | 28L | | | | | |
| AT22V10-15PI | 24P3 | | | | | |
| AT22V10-15SI | 24S | | | | | |
| AT22V10-15YI | 24CW | | | | | |
| AT22V10-15DM | 24DW3 | Military (-55°C to 125°C) | | | | |
| AT22V10-15FM | 24C | | | | | |
| AT22V10-15GM | 24D3 | | | | | |
| AT22V10-15KM | 28KW | | | | | |
| AT22V10-15LM | 28LW | | | | | |
| AT22V10-15NM | 28L | | | | | |
| AT22V10-15YM | 24CW | | | | | |
| AT22V10-15DM/883 | 24DW3 | Military/883C (-55°C to 125°C) Class B, Fully Compliant | | | | |
| AT22V10-15FM/883 | 24C | | | | | |
| AT22V10-15GM/883 | 24D3 | | | | | |
| AT22V10-15KM/883 | 28KW | | | | | |
| AT22V10-15LM/883 | 28LW | | | | | |
| AT22V10-15NM/883 | 28L | | | | | |
| AT22V10-15YM/883 | 24CW | | | | | |
| 20 | 12 | 15 | AT22V10-20DC | 24DW3 | Commercial (0°C to 70°C) | |
| | | | AT22V10-20FC | 24C | | |
| | | | AT22V10-20GC | 24D3 | | |
| | | | AT22V10-20JC | 28J | | |
| | | | AT22V10-20KC | 28KW | | |
| | | | AT22V10-20LC | 28LW | | |
| | | | AT22V10-20NC | 28L | | |
| | | | AT22V10-20PC | 24P3 | | |
| | | | AT22V10-20SC | 24S | | |
| | | | AT22V10-20YC | 24CW | | |

7



1074177 0005434 10T



Ordering Information

| tpd (ns) | ts (ns) | tco (ns) | Ordering Code | Package | Operation Range |
|-------------|------------|-------------|--|---|---|
| 20 | 12 | 15 | AT22V10-20DI AT22V10-20FI AT22V10-20GI AT22V10-20JI AT22V10-20KI AT22V10-20LI AT22V10-20NI AT22V10-20PI AT22V10-20SI AT22V10-20YI | 24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24S 24CW | Industrial (-40°C to 85°C) |
| 20 | 17 | 15 | AT22V10-20DM AT22V10-20FM AT22V10-20GM AT22V10-20KM AT22V10-20LM AT22V10-20NM AT22V10-20YM | 24DW3 24C 24D3 28KW 28LW 28L 24CW | Military (-55°C to 125°C) |
| | | | AT22V10-20DM/883 AT22V10-20FM/883 AT22V10-20GM/883 AT22V10-20KM/883 AT22V10-20LM/883 AT22V10-20NM/883 AT22V10-20YM/883 | 24DW3 24C 24D3 28KW 28LW 28L 24CW | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 25 | 15 | 15 | AT22V10-25DC AT22V10-25FC AT22V10-25GC AT22V10-25JC AT22V10-25KC AT22V10-25LC AT22V10-25NC AT22V10-25PC AT22V10-25SC AT22V10-25YC | 24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24S 24CW | Commercial (0°C to 70°C) |
| | | | AT22V10-25DI AT22V10-25FI AT22V10-25GI AT22V10-25JI AT22V10-25KI AT22V10-25LI AT22V10-25NI AT22V10-25PI AT22V10-25SI AT22V10-25YI | 24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24S 24CW | Industrial (-40°C to 85°C) |

Ordering Information

| tPD (ns) | ts (ns) | tCO (ns) | Ordering Code | Package | Operation Range |
|----------|---------|----------|--|---|---|
| 25 | 18 | 15 | AT22V10-25DM AT22V10-25FM AT22V10-25GM AT22V10-25KM AT22V10-25LM AT22V10-25NM AT22V10-25YM | 24DW3 24C 24D3 28KW 28LW 28L 24CW | Military (-55°C to 125°C) |
| | | | AT22V10-25DM/883 AT22V10-25FM/883 AT22V10-25GM/883 AT22V10-25KM/883 AT22V10-25LM/883 AT22V10-25NM/883 AT22V10-25YM/883 | 24DW3 24C 24D3 28KW 28LW 28L 24CW | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 30 | 20 | 20 | AT22V10-30DM AT22V10-30FM AT22V10-30GM AT22V10-30KM AT22V10-30LM AT22V10-30NM AT22V10-30YM | 24DW3 24C 28D3 28KW 28LW 28L 24CW | Military (-55°C to 125°C) |
| | | | AT22V10-30DM/883 AT22V10-30FM/883 AT22V10-30GM/883 AT22V10-30KM/883 AT22V10-30LM/883 AT22V10-30NM/883 AT22V10-30YM/883 | 24DW3 24C 24D3 28KW 28LW 28L 24CW | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 35 | 25 | 25 | AT22V10-35DC AT22V10-35FC AT22V10-35GC AT22V10-35JC AT22V10-35KC AT22V10-35LC AT22V10-35NC AT22V10-35PC AT22V10-35SC AT22V10-35YC | 24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24S 24CW | Commercial (0°C to 70°C) |
| | | | AT22V10-35DI AT22V10-35FI AT22V10-35GI AT22V10-35JI AT22V10-35KI AT22V10-35LI AT22V10-35NI AT22V10-35PI AT22V10-35SI AT22V10-35YI | 24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24S 24CW | Industrial (-40°C to 85°C) |

7



1074177 0005436 T82



Ordering Information

| IPD (ns) | ts (ns) | tco (ns) | Ordering Code | Package | Operation Range |
|----------|---------|----------|--|-----------------------|---|
| 20 | 17 | 15 | 5962-87539 04 LX 5962-87539 04 3X | 24DW3 28LW | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 25 | 18 | 15 | 5962-87539 01 KX 5962-87539 01 LX 5962-87539 01 3X | 24CW 24DW3 28LW | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 30 | 20 | 20 | 5962-87539 02 KX 5962-87539 02 LX 5962-87539 02 3X | 24CW 24DW3 28LW | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 40 | 30 | 25 | 5962-87539 03 KX 5962-87539 03 LX 5962-87539 03 3X | 24CW 24DW3 28LW | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 15 | 10 | 10 | 5962-88670 05 LX 5962-88670 05 3X | 24D3 28L | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 20 | 17 | 15 | 5962-88670 04 KX 5962-88670 04 LX 5962-88670 04 3X | 24C 24D3 28L | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 25 | 18 | 15 | 5962-88670 01 KX 5962-88670 01 LX 5962-88670 01 3X | 24C 24D3 28L | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 30 | 20 | 20 | 5962-88670 02 KX 5962-88670 02 LX 5962-88670 02 3X | 24C 24D3 28L | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 40 | 30 | 25 | 5962-88670 03 KX 5962-88670 03 LX 5962-88670 03 3X | 24C 24D3 28L | Military/883C (-55°C to 125°C) Class B, Fully Compliant |

| Package Type | |
|--------------|--|
| 24DW3 | 24 Lead, 0.300" Wide, Windowed, Ceramic Dual Inline Package (Cerdip) |
| 24C | 24 Lead, Non-Windowed, Ceramic Flat Package (Cerpack) |
| 24D3 | 24 Lead, 0.300" Wide, Non-Windowed (OTP), Ceramic Dual Inline Package (Cerdip) |
| 28J | 28 Lead, Plastic J-Leaded Chip Carrier OTP (PLCC) |
| 28KW | 28 Lead, Windowed, Ceramic J-Leaded Chip Carrier (JLCC) |
| 28LW | 28 Pad, Windowed, Ceramic Leadless Chip Carrier (LCC) |
| 28L | 28 Pad, Non-Windowed, Ceramic Leadless Chip Carrier OTP (LCC) |
| 24P3 | 24 Lead, 0.300" Wide, Plastic Dual Inline Package OTP (PDIP) |
| 24S | 24 Lead, 0.300" Wide, Plastic Gull Wing Small Outline OTP (SOIC) |
| 24CW | 24 Lead, Windowed, Ceramic Flat Package (Cerpack) |

7-30

AT22V10/L

■ 1074177 0005437 919 ■

Ordering Information

| tpd (ns) | ts (ns) | tco (ns) | Ordering Code | Package | Operation Range |
|----------|---------|----------|--|---|---|
| 20 | 12 | 15 | AT22V10L-20DC AT22V10L-20FC AT22V10L-20GC AT22V10L-20JC AT22V10L-20KC AT22V10L-20LC AT22V10L-20NC AT22V10L-20PC AT22V10L-20SC AT22V10L-20YC | 24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24S 24CW | Commercial (0°C to 70°C) |
| | | | AT22V10L-20DI AT22V10L-20FI AT22V10L-20GI AT22V10L-20JI AT22V10L-20KI AT22V10L-20LI AT22V10L-20NI AT22V10L-20PI AT22V10L-20SI AT22V10L-20YI | 24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24S 24CW | Industrial (-40°C to 85°C) |
| 20 | 17 | 15 | AT22V10L-20DM AT22V10L-20FM AT22V10L-20GM AT22V10L-20KM AT22V10L-20LM AT22V10L-20NM AT22V10L-20YM | 24DW3 24C 24D3 28KW 28LW 28L 24CW | Military (-55°C to 125°C) |
| | | | AT22V10L-20DM/883 AT22V10L-20FM/883 AT22V10L-20GM/883 AT22V10L-20KM/883 AT22V10L-20LM/883 AT22V10L-20NM/883 AT22V10L-20YM/883 | 24DW3 24C 24D3 28KW 28LW 28L 24CW | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 25 | 15 | 15 | AT22V10L-25DC AT22V10L-25FC AT22V10L-25GC AT22V10L-25JC AT22V10L-25KC AT22V10L-25LC AT22V10L-25NC AT22V10L-25PC AT22V10L-25SC AT22V10L-25YC | 24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24S 24CW | Commercial (0°C to 70°C) |

7



1074177 0005438 855



Ordering Information

| t _{PD} (ns) | t _s (ns) | t _{CO} (ns) | Ordering Code | Package | Operation Range |
|-------------------------|------------------------|-------------------------|--|---|---|
| 25 | 15 | 15 | AT22V10L-25DI AT22V10L-25FI AT22V10L-25GI AT22V10L-25JI AT22V10L-25KI AT22V10L-25LI AT22V10L-25NI AT22V10L-25PI AT22V10L-25SI AT22V10L-25YI | 24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24S 24CW | Industrial (-40°C to 85°C) |
| 25 | 18 | 15 | AT22V10L-25DM AT22V10L-25FM AT22V10L-25GM AT22V10L-25KM AT22V10L-25LM AT22V10L-25NM AT22V10L-25YM | 24DW3 24C 24D3 28KW 28LW 28L 24CW | Military (-55°C to 125°C) |
| | | | AT22V10L-25DM/883 AT22V10L-25FM/883 AT22V10L-25GM/883 AT22V10L-25KM/883 AT22V10L-25LM/883 AT22V10L-25NM/883 AT22V10L-25YM/883 | 24DW3 24C 24D3 28KW 28LW 28L 24CW | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 30 | 20 | 20 | AT22V10L-30DM AT22V10L-30FM AT22V10L-30GM AT22V10L-30KM AT22V10L-30LM AT22V10L-30NM AT22V10L-30YM | 24DW3 24C 24D3 28KW 28LW 28L 24CW | Military (-55°C to 125°C) |
| | | | AT22V10L-30DM/883 AT22V10L-30FM/883 AT22V10L-30GM/883 AT22V10L-30KM/883 AT22V10L-30LM/883 AT22V10L-30NM/883 AT22V10L-30YM/883 | 24DW3 24C 24D3 28KW 28LW 28L 24CW | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 35 | 25 | 25 | AT22V10L-35DC AT22V10L-35FC AT22V10L-35GC AT22V10L-35JC AT22V10L-35KC AT22V10L-35LC AT22V10L-35NC AT22V10L-35PC AT22V10L-35SC AT22V10L-35YC | 24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24S 24CW | Commercial (0°C to 70°C) |

Ordering Information

| tpd (ns) | ts (ns) | tco (ns) | Ordering Code | Package | Operation Range |
|----------|---------|----------|--|---|---|
| 35 | 25 | 15 | AT22V10L-35DI AT22V10L-35FI AT22V10L-35GI AT22V10L-35JI AT22V10L-35KI AT22V10L-35LI AT22V10L-35NI AT22V10L-35PI AT22V10L-35SI AT22V10L-35YI | 24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24S 24CW | Industrial (-40°C to 85°C) |
| 20 | 17 | 15 | 5962-88724 04 KX 5962-88724 04 LX 5962-88724 04 3X | 24CW 24DW3 28LW | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 25 | 18 | 15 | 5962-88724 01 KX 5962-88724 01 LX 5962-88724 01 3X | 24CW 24DW3 28LW | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 30 | 20 | 20 | 5962-88724 02 KX 5962-88724 02 LX 5962-88724 02 3X | 24CW 24DW3 28LW | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 40 | 30 | 25 | 5962-88724 03 KX 5962-88724 03 LX 5962-88724 03 3X | 24CW 24DW3 28LW | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 20 | 17 | 15 | 5962-89755 04 KX 5962-89755 04 LX 5962-89755 04 3X | 24C 24D3 28L | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 25 | 18 | 15 | 5962-89755 01 KX 5962-89755 01 LX 5962-89755 01 3X | 24C 24D3 28L | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 30 | 20 | 20 | 5962-89755 02 KX 5962-89755 02 LX 5962-89755 02 3X | 24C 24D3 28L | Military/883C (-55°C to 125°C) Class B, Fully Compliant |
| 40 | 30 | 25 | 5962-89755 03 KX 5962-89755 03 LX 5962-89755 03 3X | 24C 24D3 28L | Military/883C (-55°C to 125°C) Class B, Fully Compliant |

7

Package Type

| | |
|--------------|--|
| 24DW3 | 24 Lead, 0.300" Wide, Windowed, Ceramic Dual Inline Package (Cerdip) |
| 24C | 24 Lead, Non-Windowed, Ceramic Flat Package (Cerpack) |
| 24D3 | 24 Lead, 0.300" Wide, Non-Windowed (OTP), Ceramic Dual Inline Package (Cerdip) |
| 28J | 28 Lead, Plastic J-Leaded Chip Carrier OTP (PLCC) |
| 28KW | 28 Lead, Windowed, Ceramic J-Leaded Chip Carrier (JLCC) |
| 28LW | 28 Pad, Windowed, Ceramic Leadless Chip Carrier (LCC) |
| 28L | 28 Pad, Non-Windowed, Ceramic Leadless Chip Carrier OTP (LCC) |
| 24P3 | 24 Lead, 0.300" Wide, Plastic Dual Inline Package OTP (PDIP) |
| 24S | 24 Lead, 0.300" Wide, Plastic Gull Wing Small Outline OTP (SOIC) |
| 24CW | 24 Lead, Windowed, Ceramic Flat Package (Cerpack) |



■ 1074177 0005440 403 ■