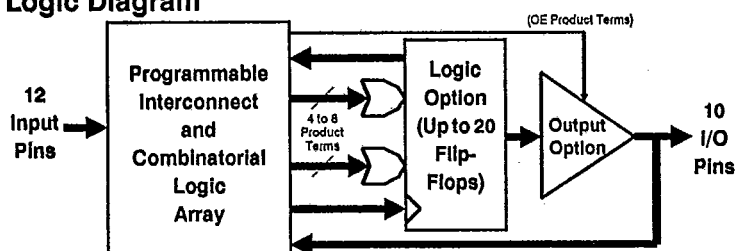


T-46-13-47

Features

- Third Generation Programmable Logic Structure
High Density Replacement for Discrete Logic
- High Speed - Plus a New Low Power Version
- Increased Logic Flexibility
42 Inputs and 20 SUM terms
- Flexible Output Logic
20 Flip-Flops - 10 Extra
All Can Be Individually Buried or 10 Output Directly
Each has Individual Asynchronous Reset or Clock Terms
- Multiple Feedback Paths Provide for Buried State Machines and I/O Bus Compatibility
- Pin Compatible with the AT22V10
Upgrade With The V750's 2X Usable Gates
- Proven and Reliable High Speed CMOS EPROM Process
2000V ESD Protection
200 mA Latchup Immunity
- Reprogrammable - Tested 100% for Programmability
- 24 pin, 300 mil Dual-In-line and 28 Lead Surface Mount Packages

Logic Diagram**Description**

The ATV750/L is 100% more powerful than most other programmable logic devices in 24 pin packages. Increased Product terms, SUM Terms, and Flip-Flops translate into more usable gates.

Each of the ATV750's 22 logic pins can be used as an input. Ten of these can be used as input, output, or bi-directional I/O pins. All 20 Flip-Flops can be fed back into the array independently. This flexibility allows burying all of the SUM terms and Flip-Flops.

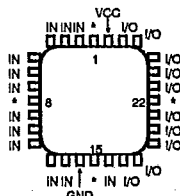
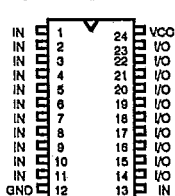
There are 171 Product Terms available. A variable format is used to assign between 4 and 8 Product Terms per Sum Term. There are 2 Sum Terms per output, providing added flexibility. Much more logic can be replaced by this one 24 pin device.

The ATV750/L has more flip-flops available than other EPLDs in this density range. Complex state machines are easily implemented.

Product terms are available providing Asynchronous Resets, Flip-Flop clocks, and Output Enables. One reset and one clock term are provided per Flip-Flop, with one Enable term per output. One product term provides a global synchronous Preset. Register Preload simplifies testing. The device has an internal power up clear function.

Pin Configurations

Pin Name	Function
IN	Logic Inputs
I/O	Bidirectional Buffers
*	No Internal Connection
VCC	+5V Supply



Absolute Maximum Ratings*

ATMEL CORP

29E D

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

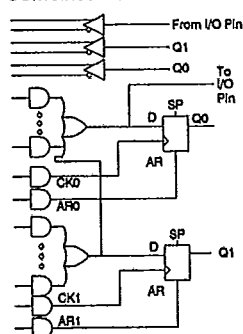
*NOTICE: Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

Note:

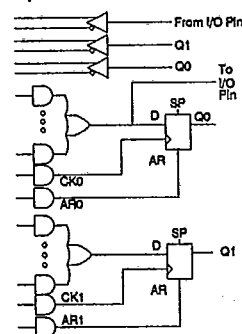
1. Minimum voltage is -0.6V dc which may undershoot to -2.0V for pulses of less than 20ns. Maximum output pin voltage is $V_{CC}+0.75V$ dc which may overshoot to +7.0V for pulses of less than 20ns.

Logic Options

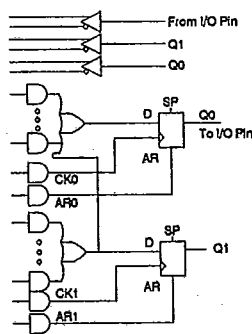
Combined Terms



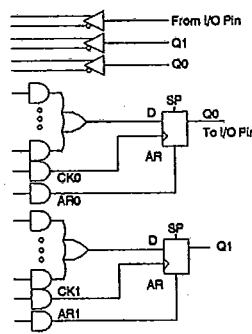
Separate Terms



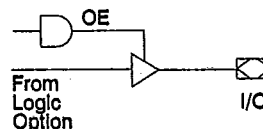
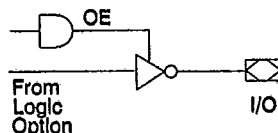
Combined Terms



Separate Terms



Output Options



D.C. and A.C. Operating Conditions

		ATV750/L-20 ⁽¹⁾	ATV750-25/L ⁽¹⁾	ATV750/L-30	ATV750/L-35	ATV750/L-40
Operating Temperature (Case)	Com.	0°C - 70°C	0°C - 70°C	0°C - 70°C	0°C - 70°C	
	Ind.	-40°C - 85°C	-40°C - 85°C	-40°C - 85°C ⁽¹⁾	-40°C - 85°C	-40°C - 85°C
	Mil.	-55°C - 125°C	-55°C - 125°C	-55°C - 125°C ⁽¹⁾	-55°C - 125°C	-55°C - 125°C
Vcc Power Supply		5V ± 10%	5V ± 10%	5V ± 10%	5V ± 10%	5V ± 10%

Note: 1. All ATV750L Characteristics are preliminary. ATV750 Characteristics for -20 and -25 are preliminary, and ATV750-30 Industrial and Military are preliminary.

ATV750/L

T-46-13-47

D.C. Characteristics

Symbol	Parameter	Condition	Min	Max	Units	
I _{LI}	Input Load Current	V _{IN} = -0.1V to V _{CC} + 1V		10	μA	
I _{LO}	Output Leakage Current	V _{OUT} = -0.1V to V _{CC} + 0.1V		10	μA	
I _{CC}	Power Supply Current	V _{CC} = MAX, V _{IN} = GND, Outputs Open	ATV750	Com.	120	mA
				Ind.,Mil.	140	mA
			ATV750L ⁽²⁾	Com.	12	mA
				Ind.,Mil.	15	mA
I _{CC2} ⁽³⁾	Clocked Power Supply Current	f = 1MHz, V _{CC} = MAX, Outputs Open	ATV750L ⁽²⁾	Com.	15	mA
				Ind.,Mil.	20	mA
I _{OS} ⁽¹⁾	Output Short Circuit Current	V _{OUT} = 0.5V		-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} = 12mA Com.,Ind.	0.5	V	
			I _{OL} = 8mA Mil.	0.5	V	
			I _{OL} = 24mA, Com.	1.0	V	
V _{OH}	Output High Voltage	V _{IN} = V _{IH} or V _{IL} , V _{CC} = MIN	I _{OH} = -100μA	V _{CC} -0.3	V	
			I _{OH} = -4.0mA	2.4	V	

Notes: 1. Not more than one output at a time should be shorted.
Duration of short circuit test should not exceed 30 sec. This parameter is only sampled and is not 100% tested. See Absolute Maximum Ratings.

2. Preliminary Data
3. Outputs not loaded.

Operating Modes

Mode	24 DIP Pin	1	5	8	11	13	I/O's	V _{CC} (24)
	28 JLCC Pin	2	6	10	13	16	I/O's	V _{CC} (28)
"EPLD"		X ⁽¹⁾	X	X	X	X	I/O	5V
Program		V _{PP}	X/V _H ⁽²⁾	X	X/V _H	V _{PP}	D _{IN}	6V
PGM Verify		V _{PP}	X/V _H	X	X/V _H	V _{IL}	D _{OUT}	5V
PGM Inhibit		V _{PP}	X/V _H	X	X/V _H	V _{IH}	High Z	5-6V
Preload #1		X	X	V _H	X	V _{IL}	D _{IN}	5V
Preload #2		X	X	V _H	X	V _{IH}	D _{IN}	5V

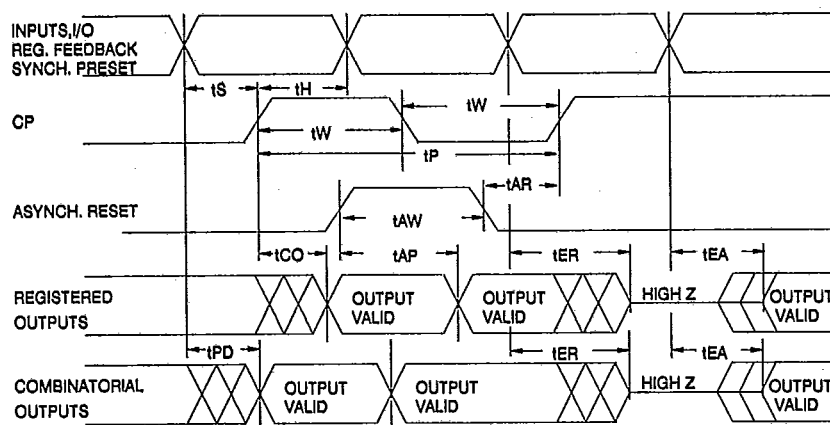
Notes: 1. X can be V_{IL} or V_{IH}.
2. V_H = 11.0V to 14.0V



A.C. Waveforms⁽¹⁾

ATMEL CORP

29E D



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

A.C. Characteristics

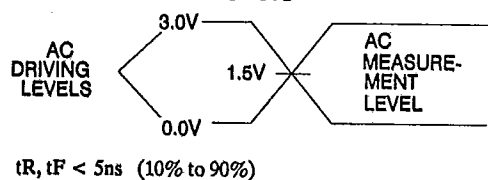
Symbol Parameter		ATV750-30		ATV750-35		ATV750-40		Units
		Min	Max	Min	Max	Min	Max	
tpd	Input or Feedback to Non-Registered Output		30		35		40	ns
tea	Input to Output Enable		30		35		40	ns
ter	Input to Output Disable		30		35		40	ns
tco	Clock to Output	5	25	10	30	10	35	ns
tcf	Clock to Feedback	5	10	10	12	10	15	ns
ts	Input Setup Time	15		18		20		ns
th	Hold Time	5		10		15		ns
tp	Clock Period	25		30		35		ns
tw	Clock Width	12		15		17		ns
FMAX	Maximum Frequency		40		33		28	MHz
taw	Asynchronous Reset Width	30		35		40		ns
tar	Asynchronous Reset Recovery Time	30		35		40		ns
tap	Asynchronous Reset to Registered Output Reset		30		35		40	ns
tsp	Setup Time, Synchronous Preset	15		18		20		ns

A.C. Characteristics, Preliminary

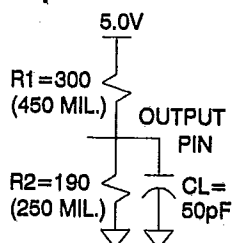
Symbol	Parameter	ATV750/L-20		ATV750/L-25		ATV750L-30		Units
		Min	Max	Min	Max	Min	Max	
t _{PD}	Input or Feedback to Non-Registered Output		20		25		30	ns
t _{EA}	Input to Output Enable		20		25		30	ns
t _{ER}	Input to Output Disable		20		25		30	ns
t _{CO}	Clock to Output		18		22	5	25	ns
t _{CF}	Clock to Feedback	5	10	5	10	5	10	ns
t _S	Input Setup Time	10		12		15		ns
t _{SF}	Feedback Setup Time	5		7		15		ns
t _H	Hold Time	5		5		5		ns
t _P	Clock Period	18		22		25		ns
t _W	Clock Width	8		10		12		ns
F _{MAX}	Maximum Frequency		55		45		40	MHz
t _{AW}	Asynchronous Reset Width	15		20		30		ns
t _{AR}	Asynchronous Reset Recovery Time	15		20		30		ns
t _{AP}	Asynchronous Reset to Registered Output Reset		20		25		30	ns
t _{SP}	Setup Time, Synchronous Preset	12		15		15		ns

7

Input Test Waveforms and Measurement Levels



Output Test Load

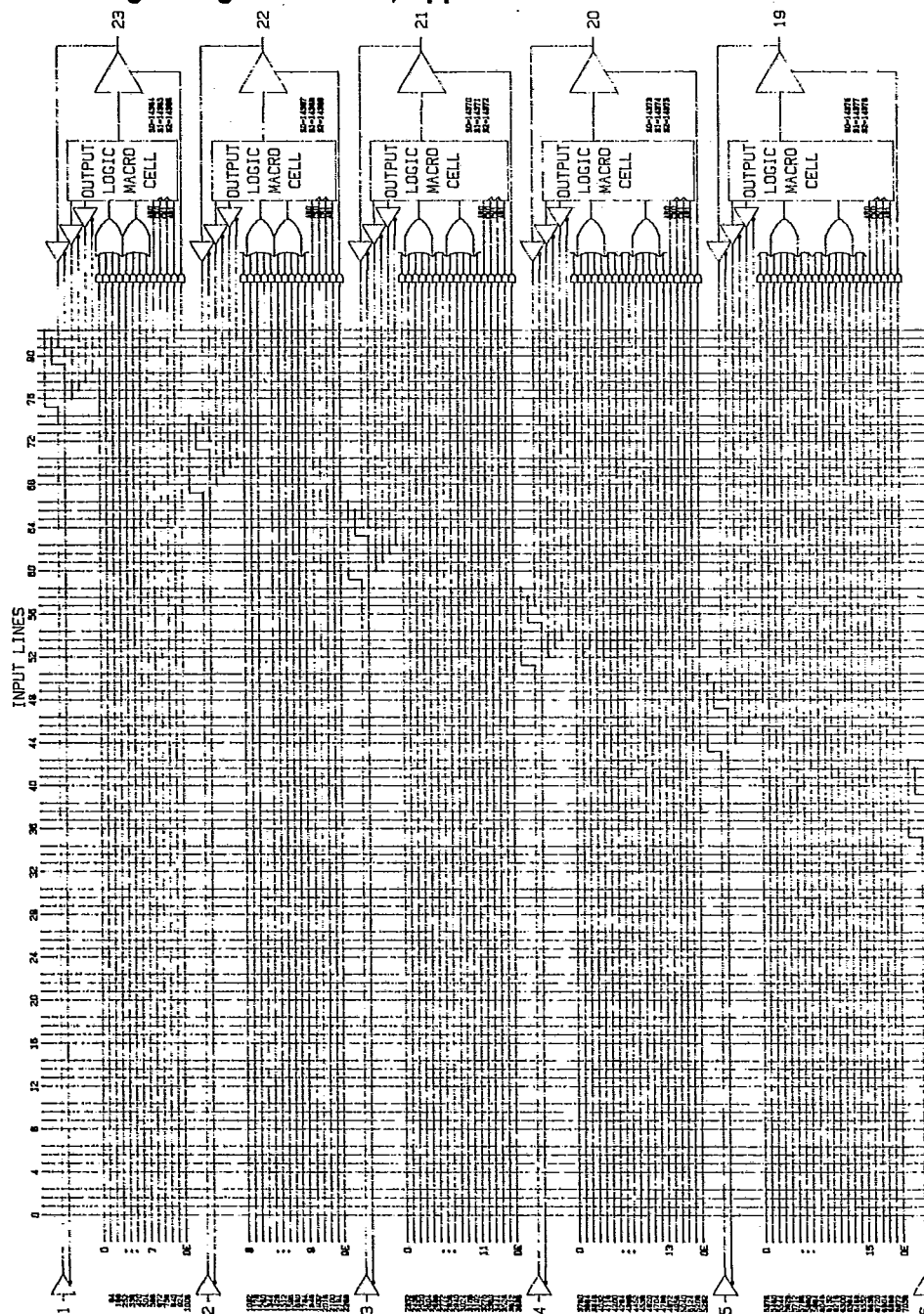




ATMEL CORP

29E D

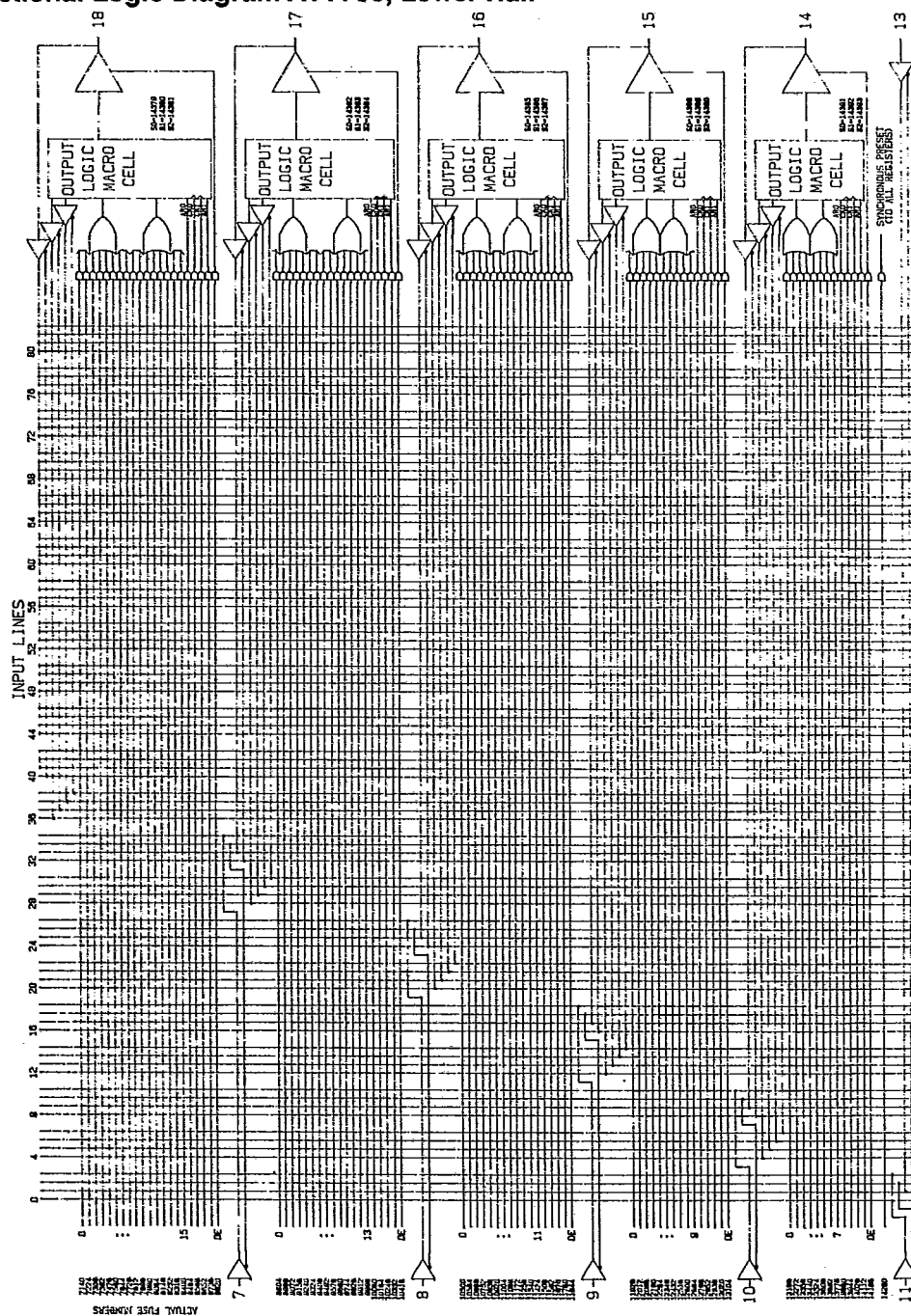
Functional Logic Diagram ATV750, Upper Half



ATV750/L

T-46-13-47

Functional Logic Diagram ATV750, Lower Half



7



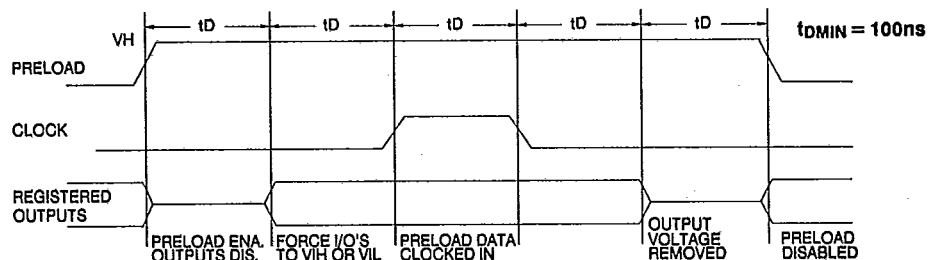
Preload of Registered Outputs

ATMEL CORP

29E D

The ATV750's registers 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 (S0) setting. The PRELOAD state is entered by placing an 11V to 14V signal on pin 8 on DIPs, and pin 10 on SMPs. When the clock term is pulsed high, the data on the I/O pin is placed into the register chosen by the Select Pin.



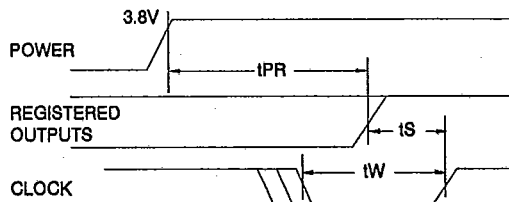
Level forced on registered output pin during PRELOAD cycle	Select Pin State	Register #1 state after cycle	Register #2 State after cycle
V_{IH}	Low	High	X
V_{IL}	Low	Low	X
V_{IH}	High	X	High
V_{IL}	High	X	Low

Power Up Reset

The registers in the ATV750/L are designed to reset during power up. At a point delayed slightly from V_{CC} crossing 3.8V, 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 term high, and
- 3) The signals from which the clock is derived must remain stable during t_{PR} .



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

Pin Capacitance ($f = 1\text{MHz}$ $T = 25^\circ\text{C}$) ⁽¹⁾

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

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

Using The ATV750's Many Advanced Features

The ATV750's flexibility puts more usable gates in 24 pins than other EPLDs. The ATV750/L starts with an architecture similar to the popular AT22V10, and adds several enhancements:

- **Asynchronous Clocks** - Each of the Flip-Flops in the ATV750/L has a dedicated product term driving the clock. The user is no longer constrained to using one clock for all the registers. Buried state machines, counters, and registers can all coexist in one device, while running on separate clocks. The ATV750/L clock period matches that of similar synchronous devices.
- **A Full Bank of 10 More Registers** - The ATV750/L provides two Flip-Flops for each Output

Macrocell - a total of 20. Each register has its own clock and reset product terms, as well as its own SUM term.

- **Independent I/O Pin and Feedback Paths** - Each I/O pin on the ATV750/L has a dedicated input path. Each of the 20 registers has individual feedback terms into the array. This feature, combined with individual product terms for each I/O's Output Enable, facilitates designs using bi-directional I/O buses.
- **Combinable Sum Terms** - Each Output Macrocell's 2 SUM terms can be combined in an OR gate before the Output or the Register. This provides up to 16 product terms per Output or Flip-Flop. This architecture increases the number of usable gates available.

Programming Software Support

Software which is capable of transforming Boolean equations, state machine descriptions and truth tables into JEDEC files for the ATV750/L is available from the following sources:

Data I/O / Futurenet Corp. - ABEL 2.1, 3.0, and above
Logical Devices - CUPL 2.15B, and above

Synchronous Preset and Asynchronous Reset

One synchronous preset line is provided for all 20 registers in the ATV750/L. The appropriate input signals to cause the internal clocks to go to a high state must be received during a synchronous preset. Appropriate setup and hold times must be met, as shown in the switching waveform diagram.

An individual asynchronous reset line is provided for each of the 20 Flip-Flops. Both Master and Slave halves of the Flip-Flops are reset when the input signals received combine so as to force the internal resets high.

7

Security Fuse Usage

A single fuse is provided to prevent unauthorized copying of the ATV750/L fuse patterns. Once programmed, the output buffers will remain in a high impedance state during verify.

The security fuse should be programmed last, as its effect is immediate.

Erase Characteristics

The entire memory array of an ATV750/L 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

intensity ratings can be calculated from the minimum integrated erasure dose of $15\text{W}\cdot\text{sec}/\text{cm}^2$. To prevent unintentional erasure, an opaque label is recommended to cover the clear window on any UV erasable EPLD which will be subjected to continuous fluorescent indoor lighting or sunlight.

Atmel CMOS EPLDs

Atmel's Erasable Programmable Logic Devices utilize an advanced 1.5 micron CMOS EPROM technology. This technology's state of the art features are the optimum combination for EPLDs:

- CMOS technology provides high speed, low power, and high noise immunity.
- EPROM technology is the most cost effective method for producing EPLDs - surpassing bipolar fusible link technology in low cost, while providing the necessary reprogrammability.

ogy in low cost, while providing the necessary reprogrammability.

- EPROM reprogrammability, which is 100% tested before shipment, provides inherently better programmability and reliability than one-time fusible PLDs.
- Atmel's EPROM process has proven extremely reliable in the volume production of a full line of advanced EPROM memory products, from 64k to 1 megabit devices.





Ordering Information

ATMEL CORP

29E D

t _{PD} (ns)	t _{CO} (ns)	f _{MAX} (MHz)	Ordering Code	Package	Operation Range
20	18	55	ATV750-20DC	24DW3	Commercial (0°C to 70°C)
			ATV750-20FC	24C	
			ATV750-20GC	24D3	
			ATV750-20JC	28J	
			ATV750-20KC	28KW	
			ATV750-20LC	28LW	
			ATV750-20NC	28L	
			ATV750-20PC	24P3	
			ATV750-20YC	24CW	
			ATV750-20DI	24DW3	Industrial (-40°C to 85°C)
			ATV750-20FI	24C	
			ATV750-20GI	24D3	
			ATV750-20JI	28J	
			ATV750-20KI	28KW	
			ATV750-20LI	28LW	
			ATV750-20NI	28L	
			ATV750-20PI	24P3	
			ATV750-20YI	24CW	
			ATV750-20DM	24DW3	Military (-55°C to 125°C)
			ATV750-20FM	24C	
			ATV750-20GM	28D3	
			ATV750-20KM	28KW	
			ATV750-20LM	28LW	
			ATV750-20NM	28L	
			ATV750-20YM	24CW	
			ATV750-20DM/883	24DW3	Military/883C (-55°C to 125°C) Class B, Fully Compliant
			ATV750-20FM/883	24C	
			ATV750-20GM/883	24D3	
			ATV750-20KM/883	28KW	
			ATV750-20LM/883	28LW	
			ATV750-20NM/883	28L	
			ATV750-20YM/883	24CW	
25	22	45	ATV750-25DC	24DW3	Commercial (0°C to 70°C)
			ATV750-25FC	24C	
			ATV750-25GC	24D3	
			ATV750-25KC	28KW	
			ATV750-25LC	28LW	
			ATV750-25NC	28L	
			ATV750-25YC	24CW	
			ATV750-25DI	24DW3	Industrial (-40°C to 85°C)
			ATV750-25FI	24C	
			ATV750-25GI	24D3	
			ATV750-25JI	28J	
			ATV750-25KI	28KW	
			ATV750-25LI	28LW	
			ATV750-25NI	28L	
			ATV750-25PI	24P3	
			ATV750-25YI	24CW	

ATV750/L

T-46-13-47

Ordering Information

t _{PD} (ns)	t _{CO} (ns)	f _{MAX} (MHz)	Ordering Code	Package	Operation Range
25	22	45	ATV750-25DM ATV750-25FM ATV750-25GM ATV750-25KM ATV750-25LM ATV750-25NM ATV750-25YM	24DW3 24C 24D3 28KW 28LW 28L 24CW	Military (-55°C to 125°C)
			ATV750-25DM/883 ATV750-25FM/883 ATV750-25GM/883 ATV750-25KM/883 ATV750-25LM/883 ATV750-25NM/883 ATV750-25YM/883	24DW3 24C 24D3 28KW 28LW 28L 24CW	Military/883C (-55°C to 125°C) Class B, Fully Compliant
30	25	40	ATV750-30DC ATV750-30FC ATV750-30GC ATV750-30JC ATV750-30KC ATV750-30LC ATV750-30NC ATV750-30PC ATV750-30YC	24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24CW	Commercial (0°C to 70°C)
			ATV750-30DI ATV750-30FI ATV750-30GI ATV750-30JI ATV750-30KI ATV750-30LI ATV750-30NI ATV750-30PI ATV750-30YI	24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24CW	Industrial (-40°C to 85°C)
			ATV750-30DM ATV750-30FM ATV750-30GM ATV750-30KM ATV750-30LM ATV750-30NM ATV750-30YM	24DW3 24C 24D3 28KW 28LW 28L 24CW	Military (-55°C to 125°C)
			ATV750-30DM/883 ATV750-30FM/883 ATV750-30GM/883 ATV750-30KM/883 ATV750-30LM/883 ATV750-30NM/883 ATV750-30YM/883	24DW3 24C 24D3 28KW 28LW 28L 24CW	Military/883C (-55°C to 125°C) Class B, Fully Compliant

7





Ordering Information

ATMEL CORP

29E D

t _{PD} (ns)	t _{CO} (ns)	f _{MAX} (MHz)	Ordering Code	Package	Operation Range
35	30	33	ATV750-35DC	24DW3	Commercial (0°C to 70°C)
			ATV750-35FC	24C	
			ATV750-35GC	24D3	
			ATV750-35JC	28J	
			ATV750-35KC	28KW	
			ATV750-35LC	28LW	
			ATV750-35NC	28L	
			ATV750-35PC	24P3	
			ATV750-35YC	24CW	
			ATV750-35DI	24DW3	Industrial (-40°C to 85°C)
			ATV750-35FI	24C	
			ATV750-35GI	24D3	
			ATV750-35JI	28J	
			ATV750-35KI	28KW	
			ATV750-35LI	28LW	
			ATV750-35NI	28L	
			ATV750-35PI	24P3	
			ATV750-35YI	24CW	
			ATV750-35DM	24DW3	Military (-55°C to 125°C)
			ATV750-35FM	24C	
			ATV750-35GM	24D3	
			ATV750-35KM	28KW	
			ATV750-35LM	28LW	
			ATV750-35NM	28L	
			ATV750-35YM	24CW	
			ATV750-35DM/883	24DW3	Military/883C (-55°C to 125°C) Class B, Fully Compliant
			ATV750-35FM/883	24C	
			ATV750-35GM/883	24D3	
			ATV750-35KM/883	28KW	
			ATV750-35LM/883	28LW	
			ATV750-35NM/883	28L	
			ATV750-35YM/883	24CW	
40	35	28	ATV750-40DI	24DW3	Industrial (-40°C to 85°C)
			ATV750-40FI	24C	
			ATV750-40GI	24D3	
			ATV750-40JI	28J	
			ATV750-40KI	28KW	
			ATV750-40LI	28LW	
			ATV750-40NI	28L	
			ATV750-40PI	24P3	
			ATV750-40YI	24CW	
			ATV750-40DM	24DW3	Military (-55°C to 125°C)
			ATV750-40FM	24C	
			ATV750-40GM	24D3	
			ATV750-40KM	28KW	
			ATV750-40LM	28LW	
			ATV750-40NM	28L	
			ATV750-40YM	24CW	

ATV750/L

T-46-13-47

Ordering Information

t _{PD} (ns)	t _{CO} (ns)	f _{MAX} (MHz)	Ordering Code	Package	Operation Range
40	35	28	ATV750-35DM/883 ATV750-35FM/883 ATV750-35GM/883 ATV750-35KM/883 ATV750-35LM/883 ATV750-35NM/883 ATV750-35YM/883	24DW3 24C 24D3 28KW 28LW 28L 24CW	Military/883C (-55°C to 125°C) Class B, Fully Compliant
35	30	33	5962-88726 02 LX 5962-88726 02 3X	24DW3 28LW	Military/883C (-55°C to 125°C) Class B, Fully Compliant
40	35	28	5962-88726 01 LX 5962-88726 01 3X	24DW3 28LW	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 (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)
24CW	24 Lead, Windowed, Ceramic Flat Package (Cerpack)





Ordering Information

ATMEL CORP

29E D

t _{PD} (ns)	t _{CO} (ns)	f _{MAX} (MHz)	Ordering Code	Package	Operation Range
20	18	55	ATV750L-20DC ATV750L-20FC ATV750L-20GC ATV750L-20JC ATV750L-20KC ATV750L-20LC ATV750L-20NC ATV750L-20PC ATV750L-20YC	24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24CW	Commercial (0°C to 70°C)
			ATV750L-20DI ATV750L-20FI ATV750L-20GI ATV750L-20JI ATV750L-20KI ATV750L-20LI ATV750L-20NI ATV750L-20PI ATV750L-20YI	24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24CW	Industrial (-40°C to 85°C)
25	22	45	ATV750L-25DC ATV750L-25FC ATV750L-25GC ATV750L-25JC ATV750L-25KC ATV750L-25LC ATV750L-25NC ATV750L-25PC ATV750L-25YC	24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24P3	Commercial (0°C to 70°C)
			ATV750L-25DI ATV750L-25FI ATV750L-25GI ATV750L-25JI ATV750L-25KI ATV750L-25LI ATV750L-25NI ATV750L-25PI ATV750L-25YI	24DW3 24C 24D3 28J 28KW 28LW 28L 24P3 24CW	Industrial (-40°C to 85°C)
			ATV750L-25DM ATV750L-25FM ATV750L-25GM ATV750L-25KM ATV750L-25LM ATV750L-25NM ATV750L-25YM	24DW3 24C 24D3 28KW 28LW 28L 24CW	Military (-55°C to 125°C)
			ATV750L-25DM/883 ATV750L-25FM/883 ATV750L-25GM/883 ATV750L-25KM/883 ATV750L-25LM/883 ATV750L-25NM/883 ATV750L-25YM/883	24DW3 24C 24D3 28KW 28LW 28L 24CW	Military/883C (-55°C to 125°C) Class B, Fully Compliant

ATV750/L

T-46-13-47

Ordering Information

t _{PD} (ns)	t _{CO} (ns)	f _{MAX} (MHz)	Ordering Code	Package	Operation Range
30	25	40	ATV750L-30DI	24DW3	Industrial (-40°C to 85°C)
			ATV750L-30FI	24C	
			ATV750L-30GI	24D3	
			ATV750L-30JI	28J	
			ATV750L-30KI	28KW	
			ATV750L-30LI	28LW	
			ATV750L-30NI	28L	
			ATV750L-30PI	24P3	
			ATV750L-30YI	24CW	
			ATV750L-30DM	24DW3	Military (-55°C to 125°C)
			ATV750L-30FM	24C	
			ATV750L-30GM	24D3	
			ATV750L-30KM	28KW	
			ATV750L-30LM	28LW	
			ATV750L-30NM	28L	
			ATV750L-30YM	24CW	
			ATV750L-30DM/883	24DW3	Military/883C (-55°C to 125°C) Class B, Fully Compliant
			ATV750L-30FM/883	24C	
			ATV750L-30GM/883	24D3	
			ATV750L-30KM/883	28KW	
			ATV750L-30LM/883	28LW	
			ATV750L-30NM/883	28L	
			ATV750L-30YM/883	24CW	

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 (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)
24CW	24 Lead, Windowed, Ceramic Flat Package (Cerpack)

