

SIEMENS

Microcomputer Components

8-Bit CMOS Microcontroller

C517A

Data Sheet 01.99

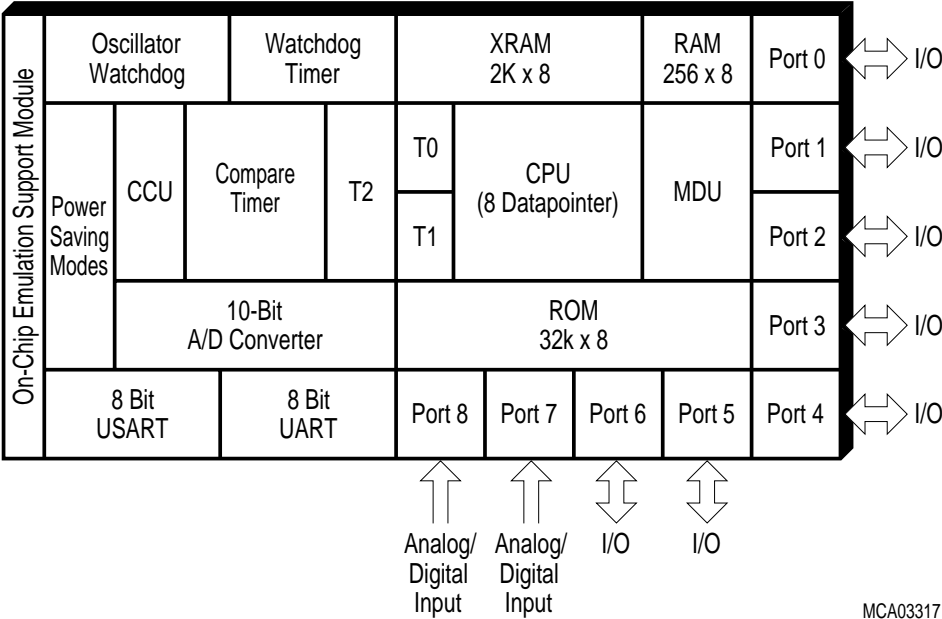
<http://www.siemens.com/semiconductor/>

C517A Data Sheet		
Revision History : 01.99		
Previous Releases : 08.97 (Original Version)		
Page (previous version)	Page (new version)	Subjects (changes since last revision)
All sections	All sections	V_{CC} is changed to V_{DD} and I_{CC} is changed to I_{DD} .
2	2	"with wake-up capability through INT0 pin" is removed.
2	2	P-LCC-84 package is added under the feature list.
2 to 3	2	Table 1; deleted and replaced by "Ordering Information" paragraph "Additional Literature";deleted.
5	5	Figure 4; added.
5	6	Table 1; modified, column "P-LCC-84" is added.
47	50	"or by a short low pulse at pin P3.2/INT0" is removed.
48	50	"Short low pulse at pin P3.2/INT0" is removed.
49	52	"Absolute Maximum Ratings" is changed to tabular form.
49	52	Fifth line; "During overload conditions ..." changed to "During absolute maximum rating conditons ...".
49	52	"Operating Conditions" is added.
50	53	" $V_{CC} = 5\text{ V} + 10\% \dots$ " is replaced by "(Operating Conditions apply)".
51		

Advance Information

- Full upward compatibility with SAB 80C517A/83C517A-5
- Up to 24 MHz external operating frequency
 - 500 ns instruction cycle at 24 MHz operation
- Superset of the 8051 architecture with 8 datapointers
- On-chip emulation support logic (Enhanced Hooks Technology™)
- 32K byte on-chip ROM (with optional ROM protection)
 - alternatively up to 64K byte external program memory
- Up to 64K byte external data memory
- 256 byte on-chip RAM
- Additional 2K byte on-chip RAM (XRAM)
- Seven 8-bit parallel I/O ports
- Two input ports for analog/digital input

(further features are on next page)



Features (continued) :

- Two full duplex serial interfaces (USART)
 - 4 operating modes, fixed or variable baud rates
 - programmable baud rate generators
- Four 16-bit timer/counters
 - Timer 0 / 1 (C501 compatible)
 - Timer 2 for 16-bit reload, compare, or capture functions
 - Compare timer for compare/capture functions
- Powerful 16-bit compare/capture unit (CCU) with up to 21 high-speed or PWM output channels and 5 capture inputs
- 10-bit A/D converter
 - 12 multiplexed analog inputs
 - Built-in self calibration
- Extended watchdog facilities
 - 15-bit programmable watchdog timer
 - Oscillator watchdog
- Power saving modes
 - Slow down mode
 - Idle mode (can be combined with slow down mode)
 - Software power-down mode
 - Hardware power-down mode
- 17 interrupt sources (7 external, 10 internal) selectable at 4 priority levels
- P-MQFP-100 and P-LCC-84 packages
- Temperature Ranges :

SAB-C517A	$T_A = 0 \text{ to } 70 \text{ }^{\circ}\text{C}$
SAF-C517A	$T_A = -40 \text{ to } 85 \text{ }^{\circ}\text{C}$

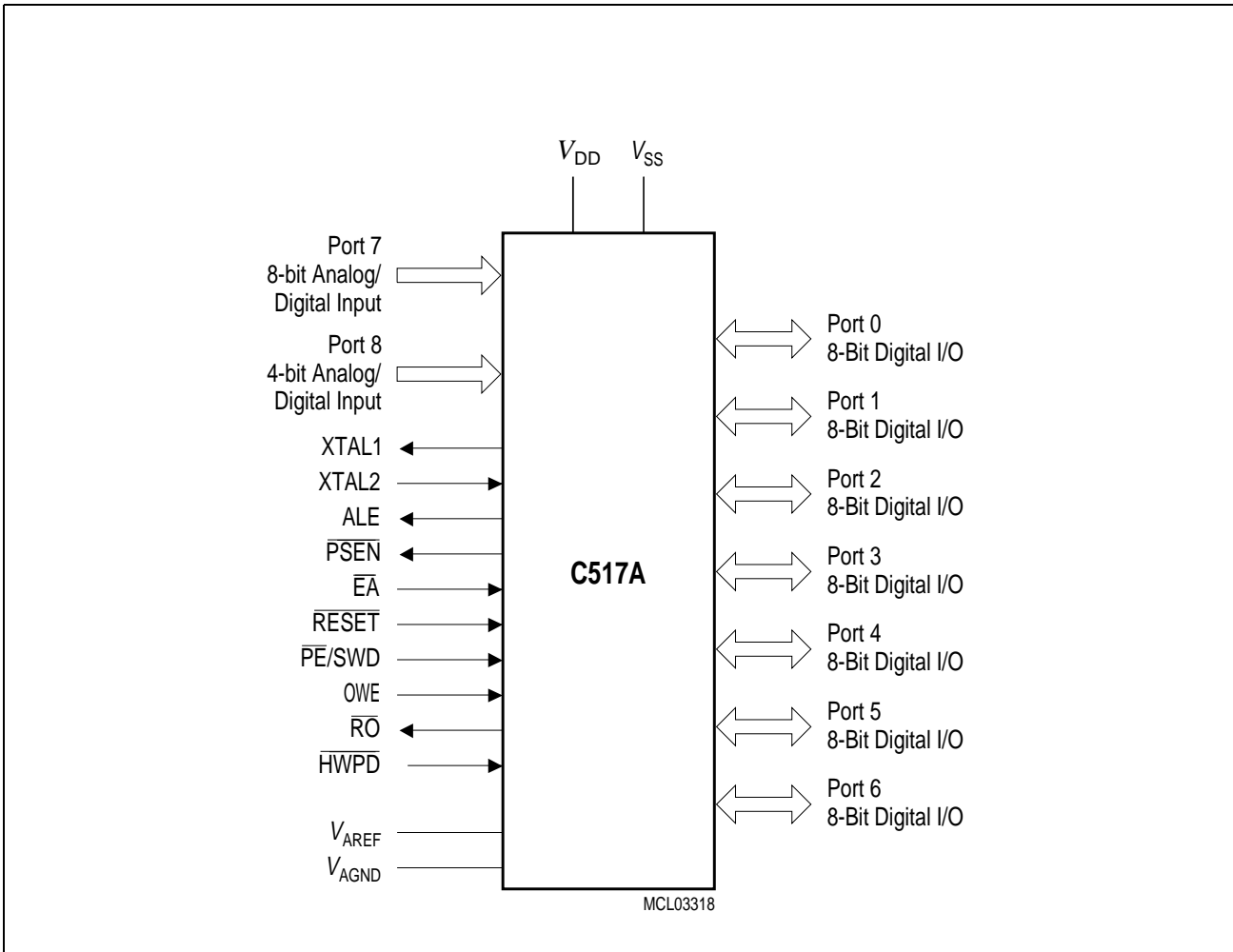


Figure 2
Logic Symbol

