6805-Series Microprocessors

General 6805 Family Features

Hardware

- 8-bit architecture
- Fully static operation
- Self-check mode in microcomputers
- Master Reset and Power-on Reset
- Single 3-6V power supply
- Power-saving STOP and WAIT modes

Software

- Software compatible with entire 6805 family
- 61 instructions and 10 addressing modes
- Indexed addressing for tables
- True bit manipulation
- Memory-mapped I/O
- Efficient use of program space
- Versatile Interrupt handling

Comparison of CMOS CD6805 Family Microprocessors

Type	Memory Add. (Bytes)	On-chip RAM (Bytes)	Max. Clock Freq. (MHz)	Instruc. Time Min./Max. (µs)	Timer/ Counter Bits	Prescalers	Bus Structure	Interrupts	Latched I/O Lines	Maximum Operation Temperature (°C)	Package No. of Pins*
CDP6805E2 CDP6805E2C#	8K	112	5.0	2.0/10.00	8	Program	Multiplexed Address Data	V	16	0 to +70	40D, E 44Q
CDP6805E3 CDP6805E3C#	64K	112	5.0	2.0/10.00	8	Program	Multiplexed Address Data	V	13	0 to +70	40D, E 44Q

V = Vectored address # 'C' Version has -40 to +85°C operating temperature range. * See interpretation guide and packaging section

1800-Series Microprocessors and Microcomputers

General Features:

- 16 x 16 matrix of registers for use as multiple program counters, data pointers or data registers
- Single-phase clock; optional on-chip crystal-controlled oscillator
- Flexible programmed I/O mode
- Four flag inputs directly tested by branch instructions
- Programmable single-bit output port
- Static circuitry - no minimum clock frequency
- 8-bit parallel organization with bi-directional data bus and multiplexed address bus

Type	Memory Add. (Bytes)	On-chip RAM (Bytes)	On-chip ROM (Bytes)	Max. Clock Freq. (MHz)	Instruc. Time Min./Max. (µs)	Timer/ Counter Bits	Pre-scalers	Bus Structure	Interrupts	Latch I/O	Max. Oper. Temp. (°C)	Pkg No. of Pin*
CDP1802A CDP1802AC	64K	-	-	3.2	5.0/7.5	-	-	Multiplexed Address Lines	✓	Off-chip	-55 to +125	40D 40E 40Q
CDP1802BC	64K	-	-	5.0	3.2/4.8	-	-	Multiplexed Address Lines	✓	Off-chip	-55 to +125	40D 40E 40Q
CDP1804AC	64K	64	2K	5.0	3.2/16.0	8	÷32	Multiplexed Address Lines	✓	Off-chip	-55 to +125	40D 40E
CDP1805AC	64K	64	-	5.0	3.2/16.6	8	÷32	Multiplexed Address Lines	✓	Off-chip	-55 to +125	40D 40E 40Q
CDP1806AC	64K	-	-	5.0	3.2/16.0	8	÷32	Multiplexed Address Lines	✓	Off-chip	-55 to +125	40D 40E 40Q

* See interpretation guide and packaging section