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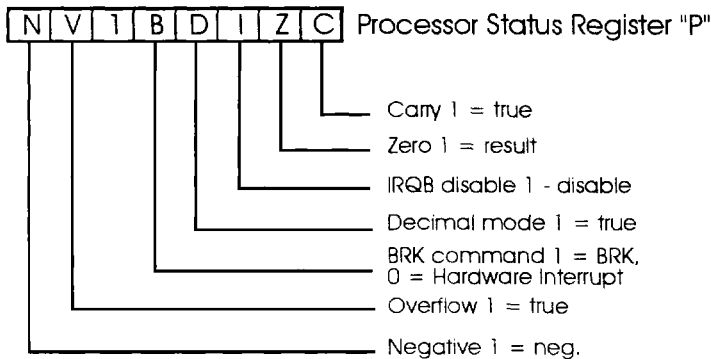
http://www.wdesignc.com

W65C02S 8-BIT MICROPROCESSOR

DATA SHEET

The W65C02S architecture embodies one of the world's highest volume microprocessor families. The small die size and legendary instruction set makes the W65C02S an excellent choice in single-chip microcontroller ASIC designs. The core design has been implemented into a wide variety of applications and is especially desirable for communications, consumer, hi-rel and medical products that require low power. The C02 core technology can be found in applications such as video games, set-top cable converters, dashboard controllers, pagers, portable communications, defibrillators, and personal assistants.

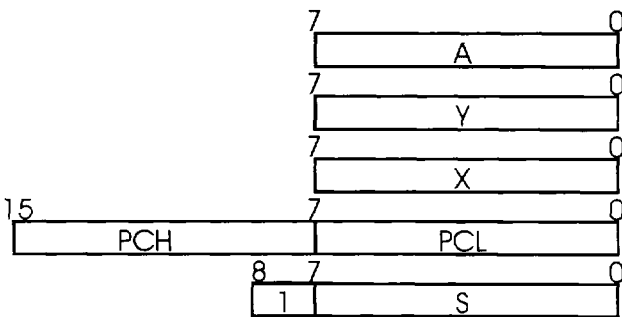
MPU type	8-bit
Instructions	71
OpCodes	212
Addressing Modes	15
Address Space	64K
Additional instructions	bit manipulation
Clock operation	0-20 MHz
Package types	40 DIP, 44 PLCC, 44 QFP
Low power	.5mA/MHz @ 5V
Low standby	< 1uA
Fully static operation	Yes
Wide supply operation	1.2V-6.0V
Single phase clock	Yes
Additional features	RDY, BE functions
Core module for ASIC's	Yes



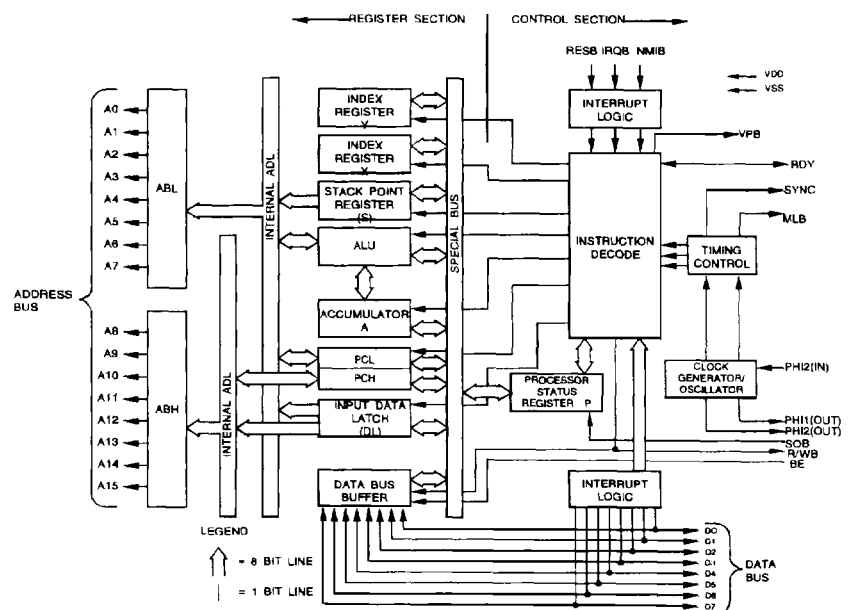
- .8u process
- 3349 gates
- foundry independent design rules
- technology independent models
- royalty based licensing
- ASIC module size -

1.67mm x 1.23mm or 66x48 mils

W65C02S STATUS REGISTER CODING

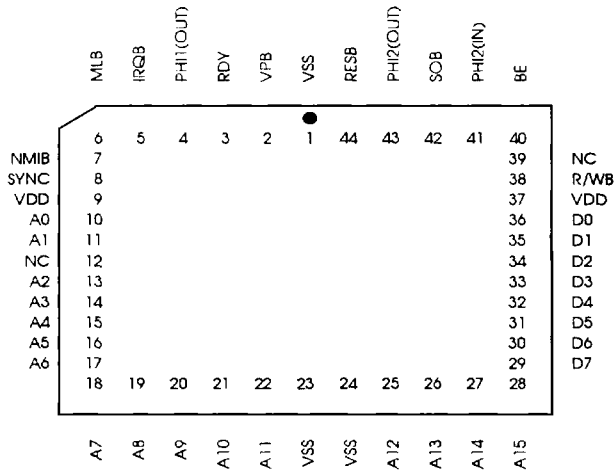


W65C02S PROGRAMMING MODEL

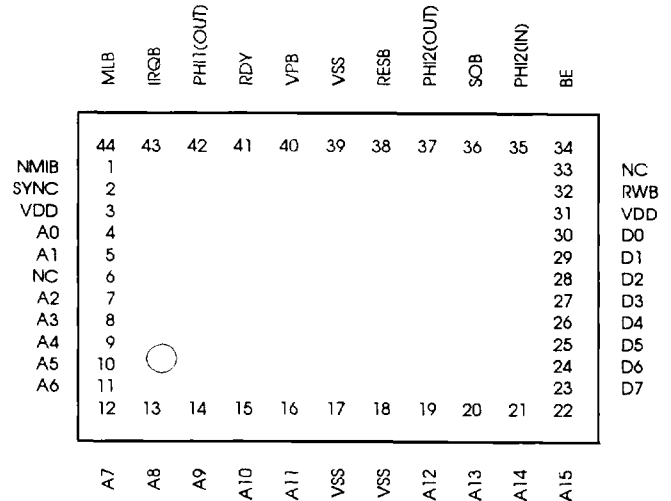


W65C02S BLOCK DIAGRAM

W65C02S



44 LEAD PLCC PINOUT



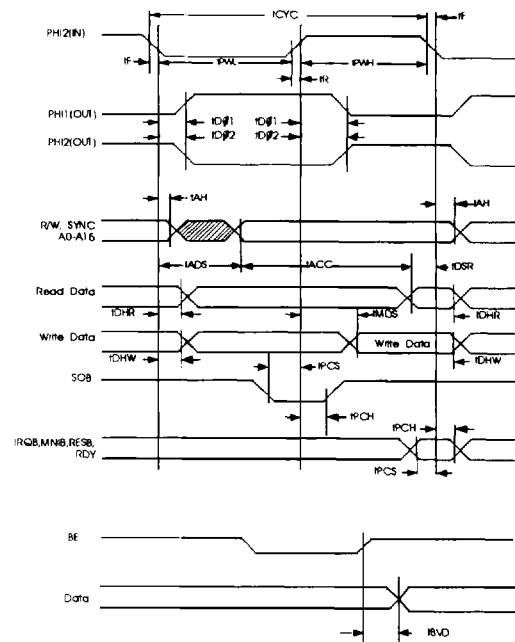
44 LEAD QFP PINOUT

Parameter	Symbol	14 MHz		20 MHz		Unit
		Min	Max	Min	Max	
Cycle Time	t _{CYC}	70	DC	50	DC	nS
Clock Pulse Width Low	t _{PWL}	35	-	25	-	nS
Clock Pulse Width High	t _{PWH}	35	-	25	-	nS
Fall Time, Rise Time	t _F , t _R	-	5	-	5	nS
Delay Time, PH12(IN), PH1(OUT)	t _{D01}	-	22	-	16	nS
Delay Time, PH2(IN), PH2(OUT)	t _{D02}	-	22	-	16	nS
Address Hold Time	t _{AH}	10	-	10	-	nS
Address Setup Time	t _{ADS}	-	30	-	25	nS
Access Time	t _{ACC}	30	-	20	-	nS
Read Data Hold Time	t _{DHR}	10	-	10	-	nS
Read Data Setup Time	t _{DSR}	10	-	5	-	nS
Write Data Delay Time	t _{MDS}	-	25	-	20	nS
Write Data Hold Time	t _{DHW}	10	-	10	-	nS
Processor Control Setup Time	t _{PCS}	10	-	5	-	nS
Processor Control Hold Time	t _{PCH}	10	-	10	-	nS
Capacitive Load	C _{EXT}	-	35	-	35	pF
BE to Valid data	t _{BVD}	-	25	-	20	nS

GENERAL AC CHARACTERISTICS

VDD=5V +/- 5%, VSS=0V, IA=0oC to +70oC

WDC publishes individual detailed specifications for our standard products and also offers a complete data book in a 3-ring binder format for your technical library. A Developer Guide, which includes third party support tools, is also available. Our company business model is described in a brochure and also article reprints from EDN and Microprocessor Report. A Software Manual is available for \$65.00. Samples for evaluation are available upon qualification. WDC has developed technology independent models for various design methodologies. Technology purchases can be made direct through e-mail, fax, or phone call to WDC.



TIMING DIAGRAM

W65C02S8PL-14	
Description W65C - standard product	W65C
Product Identification Number 02S	02S
Foundry Process 8 - 8u	8
Package P - Plastic Dual-In-Line, 40 pins PL - Plastic Leaded Chip Carrier, 44 pins Q - Quad Flat Pack, 44 pins	PL
Temperature Blank - 0°C to +70°C	
Speed Designator -14 14MHz -20 20MHz	-14