

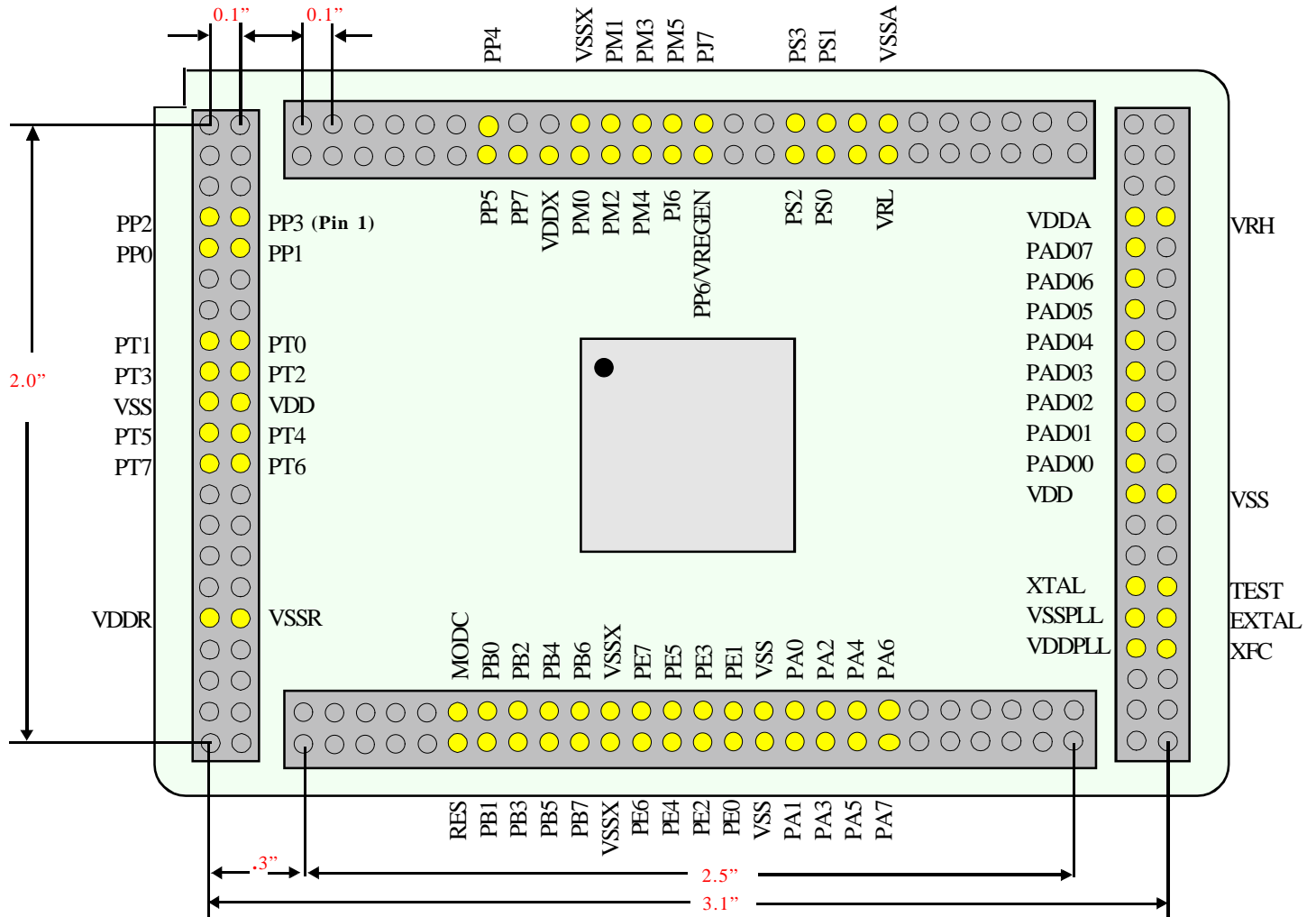
EMUL-S12C Family Layout

This is the top view looking down onto the target board or on top of the MC9S12C personality card.

Top View - EMUL-S12C

Version 1.0

June 1, 2003



- 1) The grayed out pins are not connected. They are physically located on the bottom of the emulator board but are not used on the personality card. They are for future expansion.
- 2) The target microcontroller needs to be removed from the target since the HC12 family cannot tri-state.
- 3) The target adapters do not plug into the top of the emulator, they plug in on the bottom side.

Helpful measurements when laying out the board:

On the top side, the emulator expands 0.2\"/>

On the bottom side, the emulator expands 4.3\"/>

On the left side the emulator expands 0.3\"/>

On the right side the emulator expands 0.6\"/>

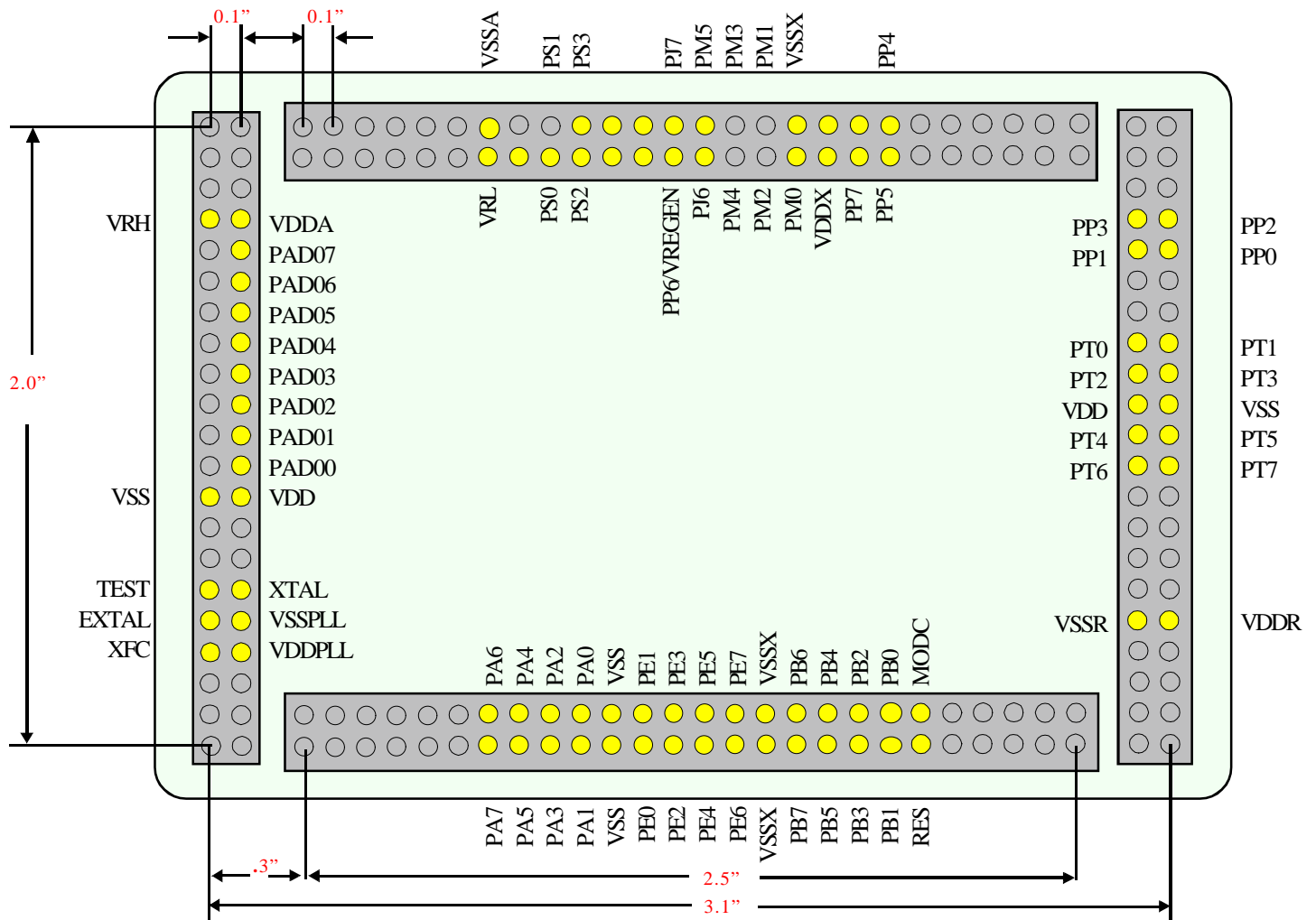
EMUL-S12C Family Layout

This view is looking at the bottom of the emulator.

Bottom View - EMUL-S12C

Version 1.0

June 1, 2003



- 1) The grayed out pins are not connected. They are physically located on the bottom of the emulator board but are not used on the personality card. They are for future expansion.
- 2) The target microcontroller needs to be removed from the target since the HC12 family cannot tri-state.
- 3) The target adapters do not plug into the top of the emulator, they plug in on the bottom side.



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EMUL-S12C Family Pinouts

These are all the pin assignments for the EMUL-S12C family with the alternate names, if applicable.

Version 1.0

June 1, 2003

Pin 1	PW3 / KWP3/PP3	Pin 41	PA0 / ADDR8 / DATA8
Pin 2	PW2 / KWP2 / PP2	Pin 42	PA1 / ADDR9 / DATA9
Pin 3	PW1 / KWP1 / PP1	Pin 43	PA2 / ADDR10 / DATA10
Pin 4	PW0 / KWP0 / PP0	Pin 44	PA3 / ADDR11 / DATA11
Pin 5	PW0 / IOC0 / PT0	Pin 45	PA4 / ADDR12 / DATA12
Pin 6	PW1 / IOC1 / PT1	Pin 46	PA5 / ADDR13 / DATA13
Pin 7	PW2 / IOC2 / PT2	Pin 47	PA6 / ADDR14 / DATA14
Pin 8	PW3 / IOC3 / PT3	Pin 48	PA7 / ADDR15 / DATA15
Pin 9	VDD1	Pin 49	VDD2
Pin 10	VSS1	Pin 50	VSS2
Pin 11	PW4 / IOC4 / PT4	Pin 51	PAD00 / AN00
Pin 12	IOC5 / PT5	Pin 52	PAD01 / AN01
Pin 13	IOC6 / PT6	Pin 53	PAD02 / AN02
Pin 14	IOC7 / PT7	Pin 54	PAD03 / AN03
Pin 15	MODC / TAGHI / BKGD	Pin 55	PAD04 / AN04
Pin 16	ADDR0 / DATA0 / PB0	Pin 56	PAD05 / AN05
Pin 17	ADDR1 / DATA1 / PB1	Pin 57	PAD06 / AN06
Pin 18	ADDR2 / DATA2 / PB2	Pin 58	PAD07 / AN07
Pin 19	ADDR3 / DATA3 / PB3	Pin 59	VDDA
Pin 20	ADDR4 / DATA4 / PB4	Pin 60	VRH
Pin 21	ADDR5 / DATA5 / PB5	Pin 61	VRL
Pin 22	ADDR6 / DATA6 / PB6	Pin 62	VssA
Pin 23	ADDR7 / DATA7 / PB7	Pin 63	PS0 / RXD
Pin 24	XCLKS / NOACC / PE7	Pin 64	PS1 / TXD
Pin 25	MODB / IPIPE1 / PE6	Pin 65	PS2
Pin 26	MODA / IPIPE0 / PE5	Pin 66	PS3
Pin 27	ECLK / PE4	Pin 67	PP6 / KWP6 / ROMCTL
Pin 28	VSSR	Pin 68	PJ7 / KWJ7
Pin 29	VDDR	Pin 69	PJ6 / KWJ6
Pin 30	RESET	Pin 70	PM5 / SCK
Pin 31	V DDPLL	Pin 71	PM4 / MOSI
Pin 32	XFC	Pin 72	PM3 / \overline{SS}
Pin 33	V SSPLL	Pin 73	PM2 / MISO
Pin 34	EXTAL	Pin 74	PM1 / TXCAN
Pin 35	XTAL	Pin 75	PM0 / RXCAN
Pin 36	TEST / VPP	Pin 76	VSSX
Pin 37	LSTRB / TAGLO / PE3	Pin 77	VDDX
Pin 38	R / \overline{W} / PE2	Pin 78	PP7 / KWP7
Pin 39	\overline{IRQ} / PE1	Pin 79	PP5 / KWP5 / PW5
Pin 40	\overline{XIRQ} / PE0	Pin 80	PP4 / KWP4 / PW4

Note: These pinouts are for the 80-pin version of the device. The signals shown in **bold** are not available on the 52- or 48-pin packages. The signals shown in **bold italics** are available in the 52-, but not the 48-pin device.