

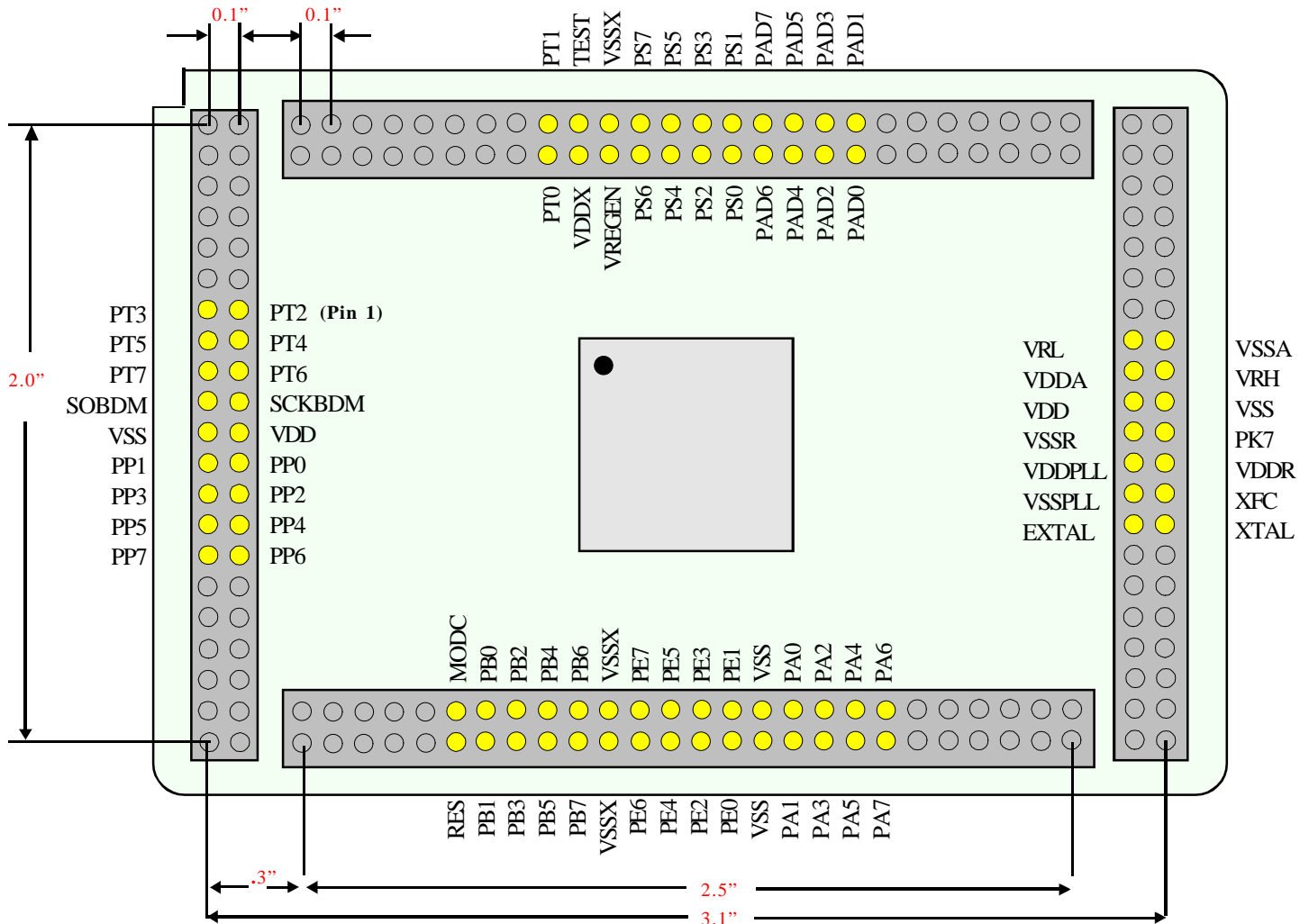
## EMUL-S12T64 Family Layout

This is the top view looking down onto the target board or on top of the MC9S12T64 personality card.

## Top View - EMUL-S12T64

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".

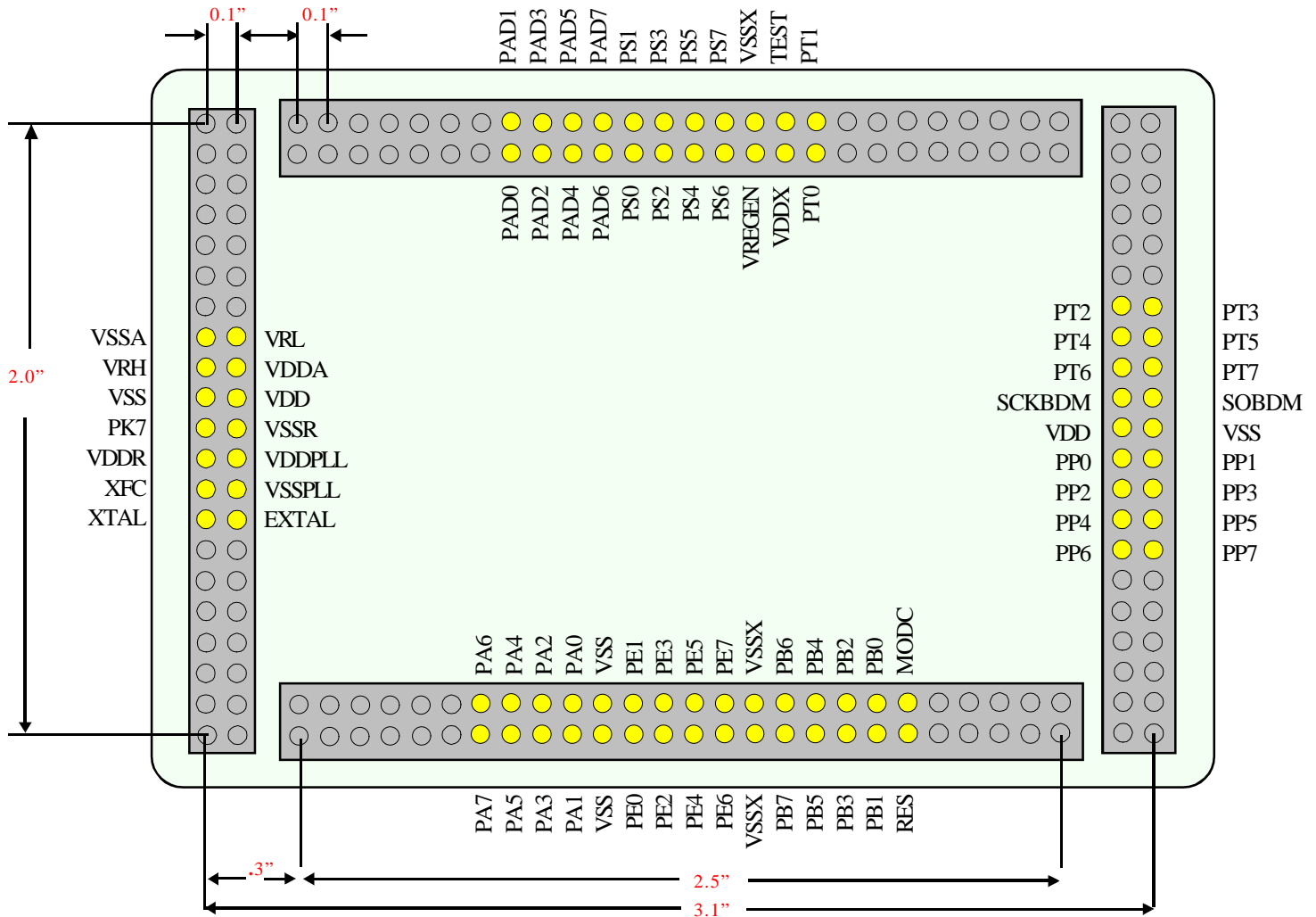
## EMUL-S12T64 Family Layout

This view is looking at the bottom of the emulator.

## Bottom View - EMUL-S12T64

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.

## EMUL-HCS12T64 family Pinouts

These are all the pin assignments for the HCS12T64 family with the alternate names, if applicable.

Version 1.0

June 1, 2003

Pin 1	IOC2/PT2	Pin 41	PE4/ECLK
Pin 2	IOC3/PT3	Pin 42	PE5/MODA/IPIPE0
Pin 3	IOC4/PT4	Pin 43	PE6/MODB/IPIPE1
Pin 4	IOC5/PT5	Pin 44	PE7/NOACC/ $\overline{\text{XCLKS}}$
Pin 5	IOC6/PT6	Pin 45	PA0/ADDR8/DATA8/DATA0
Pin 6	IOC7/PT7	Pin 46	PA1/ADDR9/DATA9/DATA1
Pin 7	MODC/ $\overline{\text{TAGHI}}$ /SI/BKGD	Pin 47	PA2/ADDR10/DATA10/DATA2
Pin 8	SCKBDM/SPIMODE	Pin 48	PA3/ADDR11/DATA11/DATA3
Pin 9	SO	Pin 49	PA4/ADDR12/DATA12/DATA4
Pin 10	VDD1	Pin 50	VDD2
Pin 11	VSS1	Pin 51	VSS2
Pin 12	PWM0/PP0	Pin 52	PA5/ADDR13/DATA13/DATA5
Pin 13	PWM1/PP1	Pin 53	PA6/ADDR14/DATA14/DATA6
Pin 14	PWM2/PP2	Pin 54	PA7/ADDR15/DATA15/DATA7
Pin 15	PWM3/PP3	Pin 55	VDDA
Pin 16	PWM4/PP4	Pin 56	VRH
Pin 17	PWM5/PP5	Pin 57	VRL
Pin 18	PWM6/PP6	Pin 58	VSSA
Pin 19	PWM7/PP7	Pin 59	PAD0/AN0
Pin 20	ADDR0/DATA0/PB0	Pin 60	PAD1/AN1
Pin 21	ADDR1/DATA1/PB1	Pin 61	PAD2/AN2
Pin 22	ADDR2/DATA2/PB2	Pin 62	PAD3/AN3
Pin 23	ADDR3/DATA3/PB3	Pin 63	PAD4/AN4
Pin 24	ADDR4/DATA4/PB4	Pin 64	PAD5/AN5
Pin 25	ADDR5/DATA5/PB5	Pin 65	PAD6/AN6
Pin 26	ADDR6/DATA6/PB6	Pin 66	PAD7/AN7/ETRIG
Pin 27	$\overline{\text{ADDR7}}$ /DATA7/PB7	Pin 67	PS0/RxD0
Pin 28	RESET	Pin 68	PS1/TxD0
Pin 29	EXTAL	Pin 69	PS2/RxD1
Pin 30	XTAL	Pin 70	PS3/TxD1
Pin 31	VSSPLL	Pin 71	PS4/MISO
Pin 32	XFC	Pin 72	PS5/MOSI
Pin 33	VDDPLL	Pin 73	PS6/ $\overline{\text{SCK}}$
Pin 34	VDDR	Pin 74	PS7/SS
Pin 35	VSSR	Pin 75	VREGEN
Pin 36	$\overline{\text{ROMONE}}$ / $\overline{\text{ECS}}$ /PK7	Pin 76	VSSX
Pin 37	$\overline{\text{XIRQ}}$ /PE0	Pin 77	VDDX
Pin 38	$\overline{\text{IRQ}}$ /PE1	Pin 78	TEST
Pin 39	$\overline{\text{R/W}}$ /PE2	Pin 79	PT0/IOC0
Pin 40	$\overline{\text{TAGLO}}$ /LSTRB/PE3	Pin 80	PT1/IOC1

**Note:** These pinouts are for the 80-pin version of the device.