

M523X Evaluation Board

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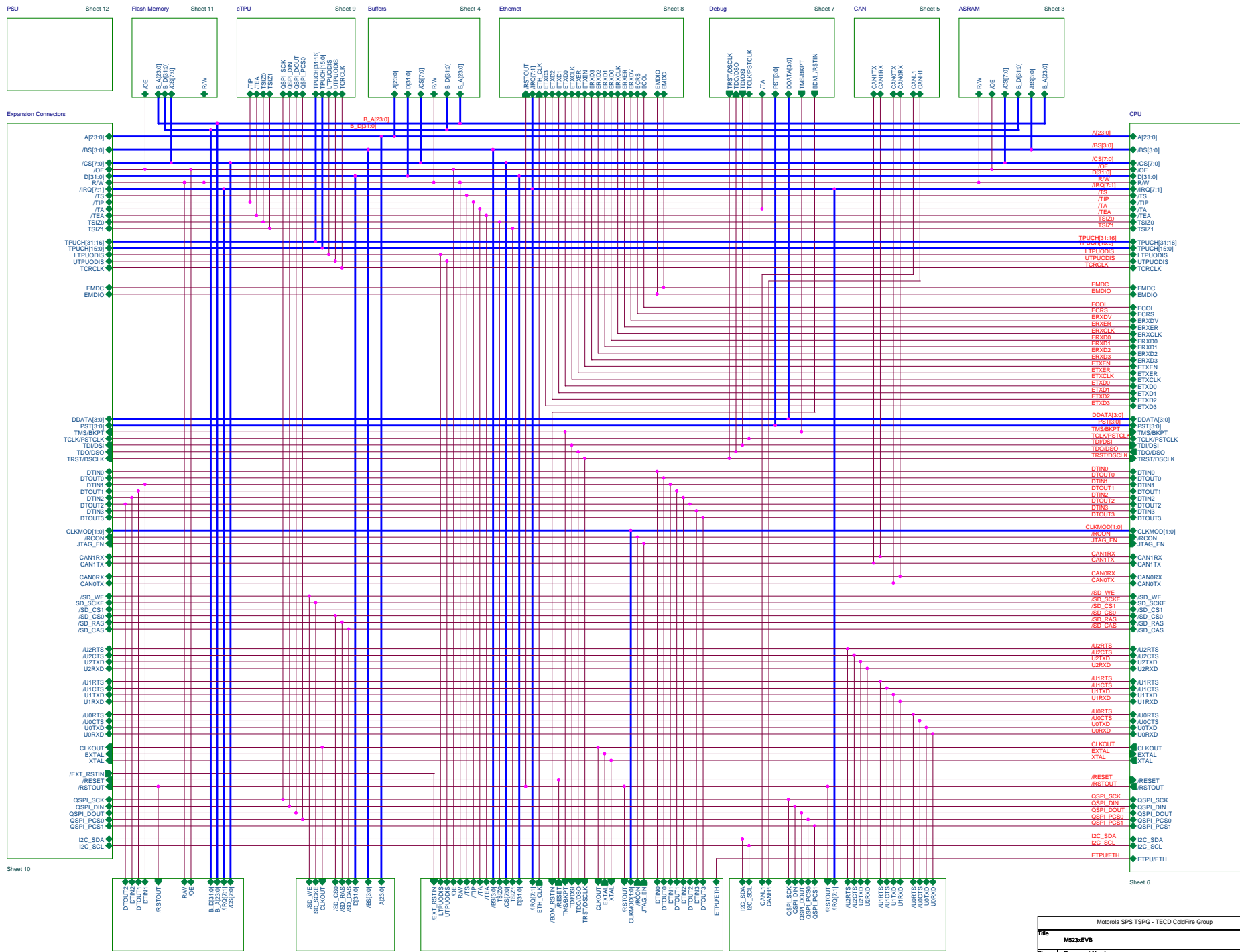
Revision Information

Rev	Date	Designer	Comments
0.0	02 Feb 04	L. Anderson	Provisional release
A	05 Mar 04	P. Highton	Added Metrowerks schematic part number and revision letter.
B	30 Apr 04	L. Anderson	Removed alternative footprint for 90-pin SSOP 32-bit Flash and replaced with 16-bit Flash, corrected RJ45 pinout and added 18Kohm pull-down resistors to U11 (ethernet transceiver).
C	23 Jun 04	L. Anderson & Pete Highton	Final update including silkscreen modifications of the reset configuration tables. Correction of signals on the RJ-45 connector and addition of pull-down resistors on the ethernet signals.

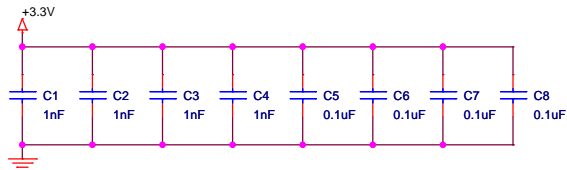
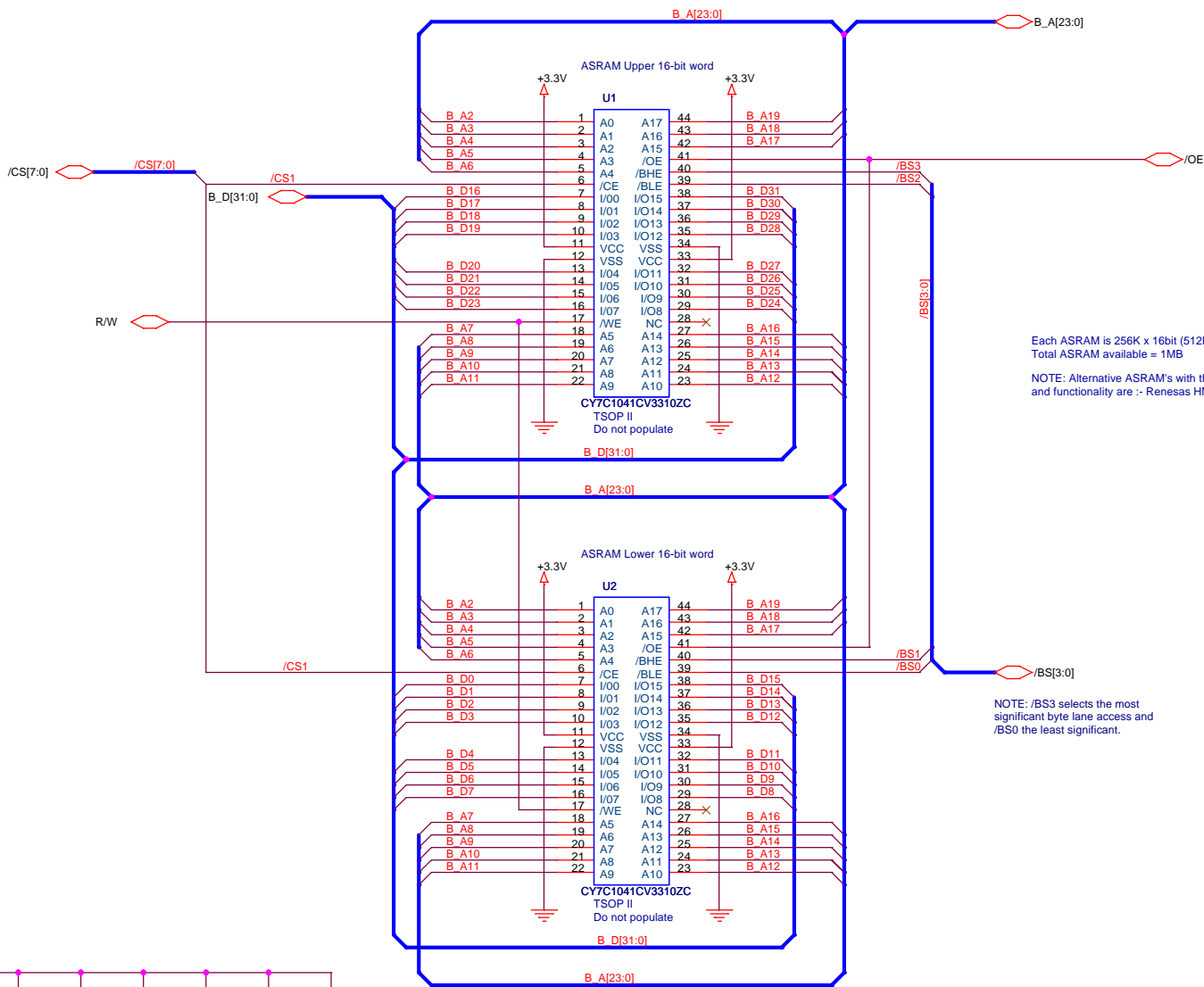
Notes:

- All decoupling caps less than 0.1uF are COG SMD 0805 unless otherwise stated
- All decoupling caps greater than 0.1uF are X7R SMD 0805 unless otherwise stated
- All connectors are denoted Jx
- All jumpers are denoted JPx
- All Switches are denoted SWx
- All test points are denoted TPx

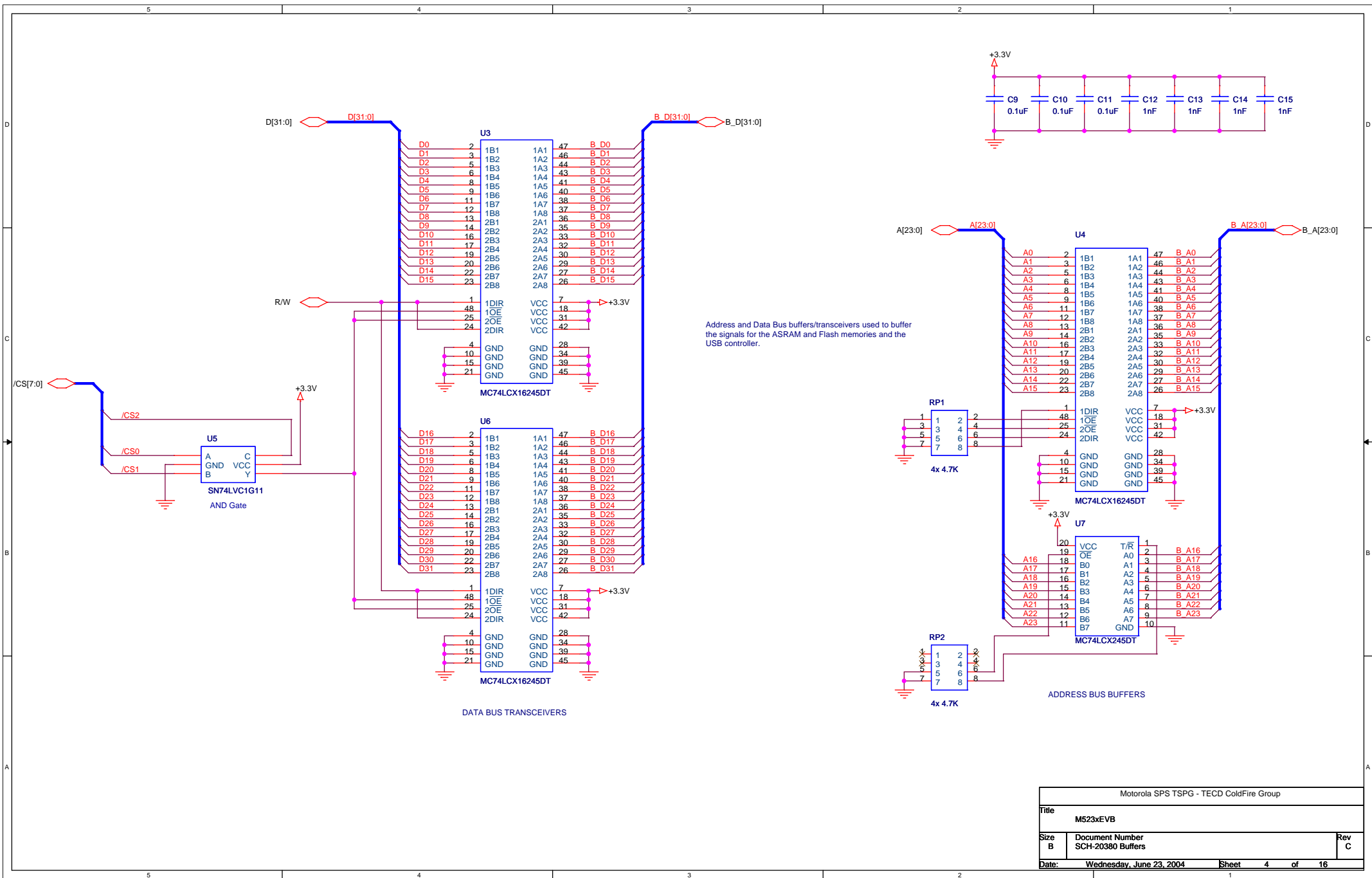
Motorola SPS TSPG - TECD ColdFire Group		
Title M523xEVB		
Size B	Document Number SCH-20380 General Notes and Information	Rev C
Date:	Monday, September 13, 2004	Sheet 1 of 16

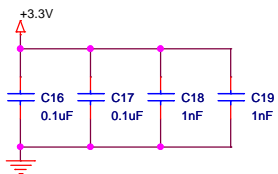
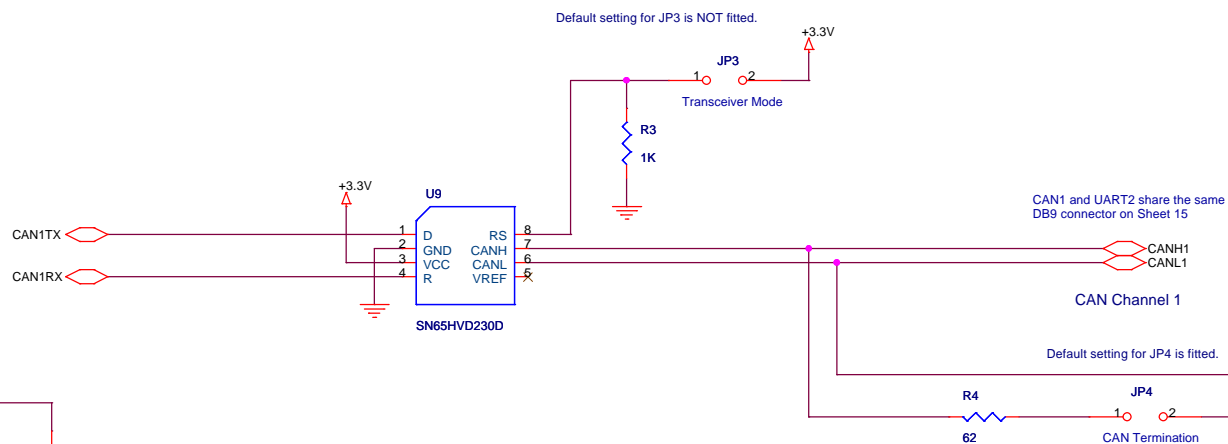
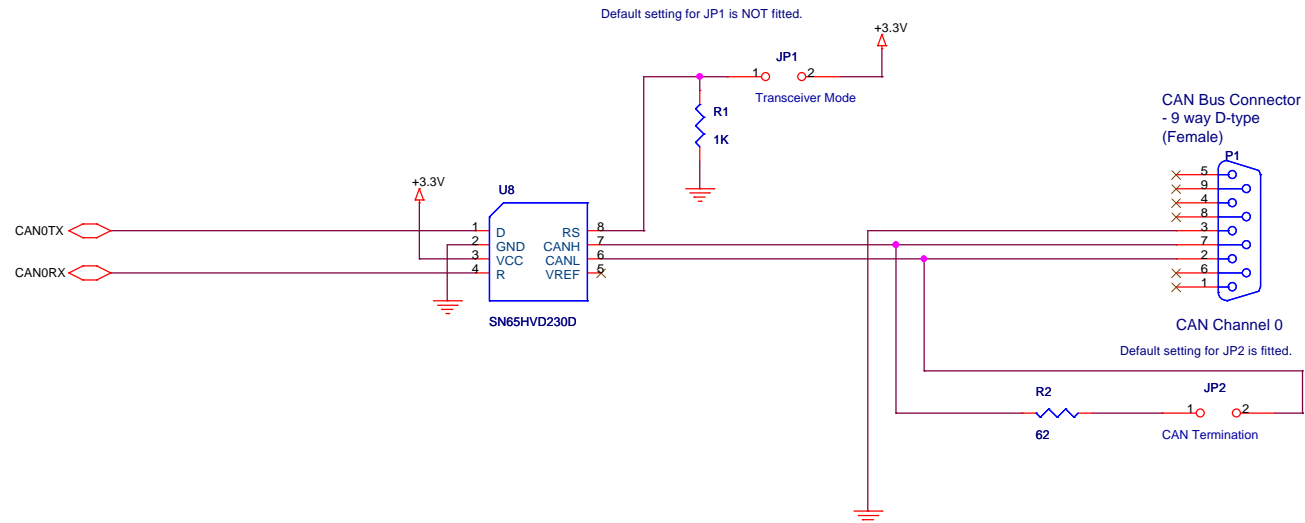


Motorola SPS TSPG - TECO ColdFire Group		
Title		
M623xEVb		
Size		
C		
Document Number		
SCH-20380 Hierarchical Block Diagram		
Date		
Monday, September 13, 2004		
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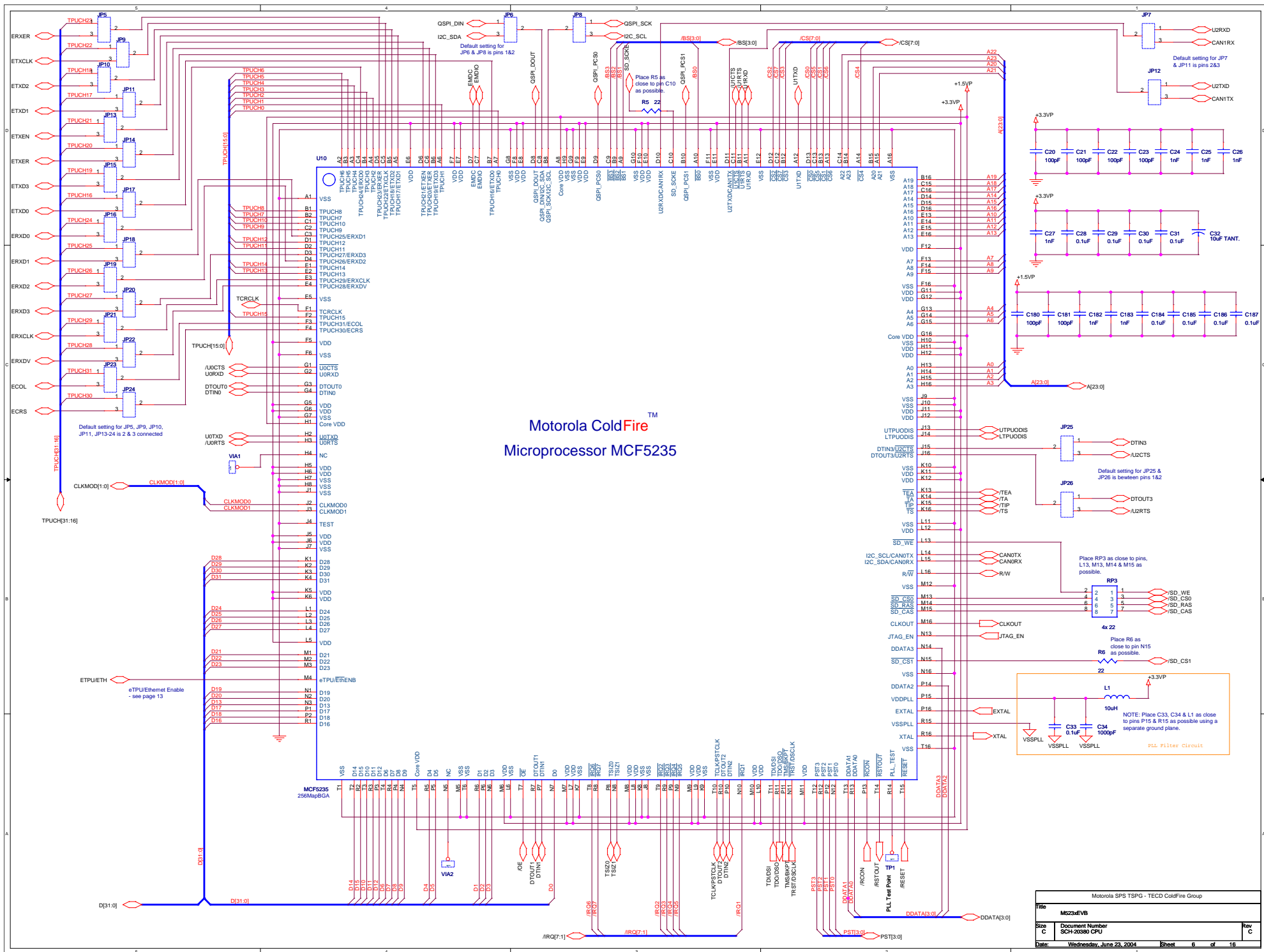
Motorola SPS TSPG - TECD ColdFire Group		
Title	M523xEVB	
Size	Document Number	Rev
B	SCH-20380 Asynchronous SRAM	C
Date:	Wednesday, June 23, 2004	Sheet 3 of 16

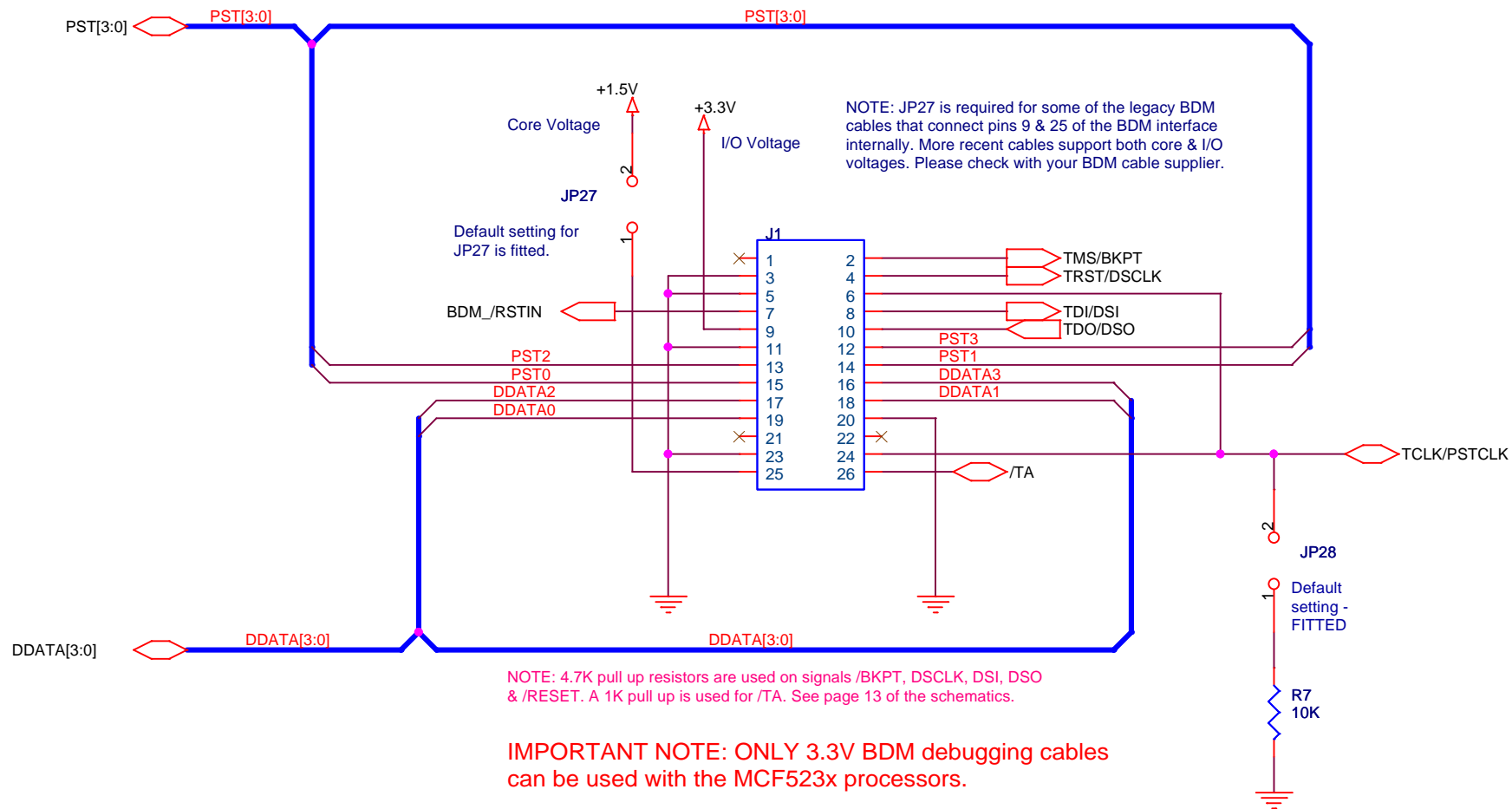




Motorola SPS TSPG - TECO ColdFire Group		
Title	M523xEVB	
Size B	Document Number	Rev C
	SCH-20380 CAN Transceivers	
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Motorola ColdFire™
Microprocessor MCF5235





Motorola SPS TSPG - TECD ColdFire Group		
Title		
M523xEVB		
Size	Document Number	Rev
A	SCH-20380 BDM/JTAG Debug Port	C
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ETH_CLK
/RSTOUT

NOTE: U11 KS8721BL has an on-chip LDO that derives the +2.5V supply from the +3.3V supply.

NOTE: Ethernet Ch. physical addr. default setting is addr. = 1 selected via internal resistor biasing during reset.

EMDIO
EMDC

ERXD3
ERXD2
ERXD1
ERXD0

ERXDV
ERXCLK
ERXER
ETXCLK

ETXER
ETXEN

ETXD0
ETXD1
ETXD2
ETXD3

ECOL
ECRS

Place RP4 & RP5 as close to U11 as possible.

Place RP6 & RP7 as close to the MCF523x (CPU) as possible.

NOTE: RP27 is present to ensure the correct configuration of U11 out of reset.

Place the capacitors above close to pins 7 and 24 on U11.

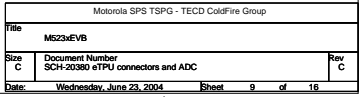
Place R8, R9, R10 & R11 close to U11.

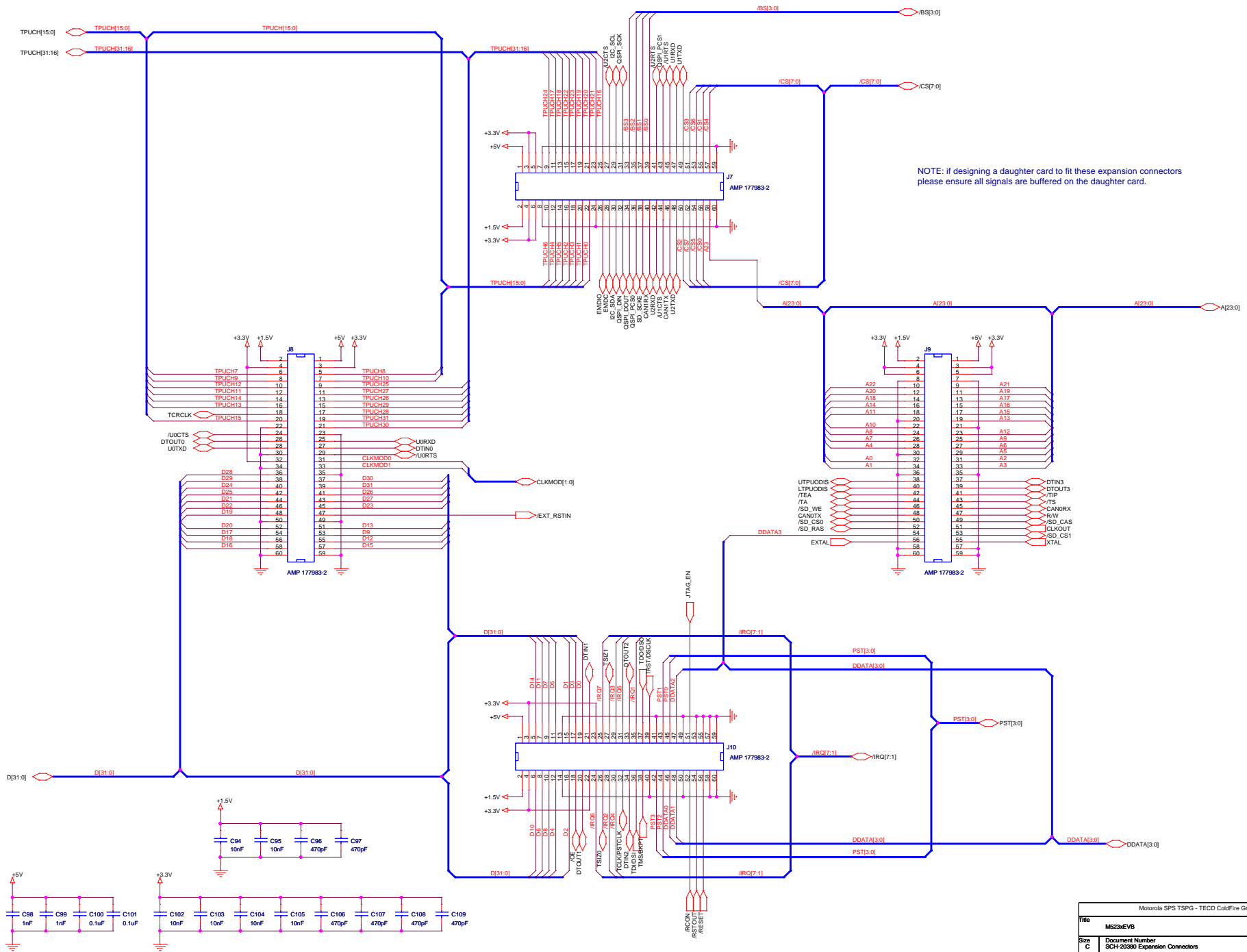
Place silk screen LED labels next to D1 thru D4.

Separate RJ45 connector chassis ground.

Halo HFJ11-2450E

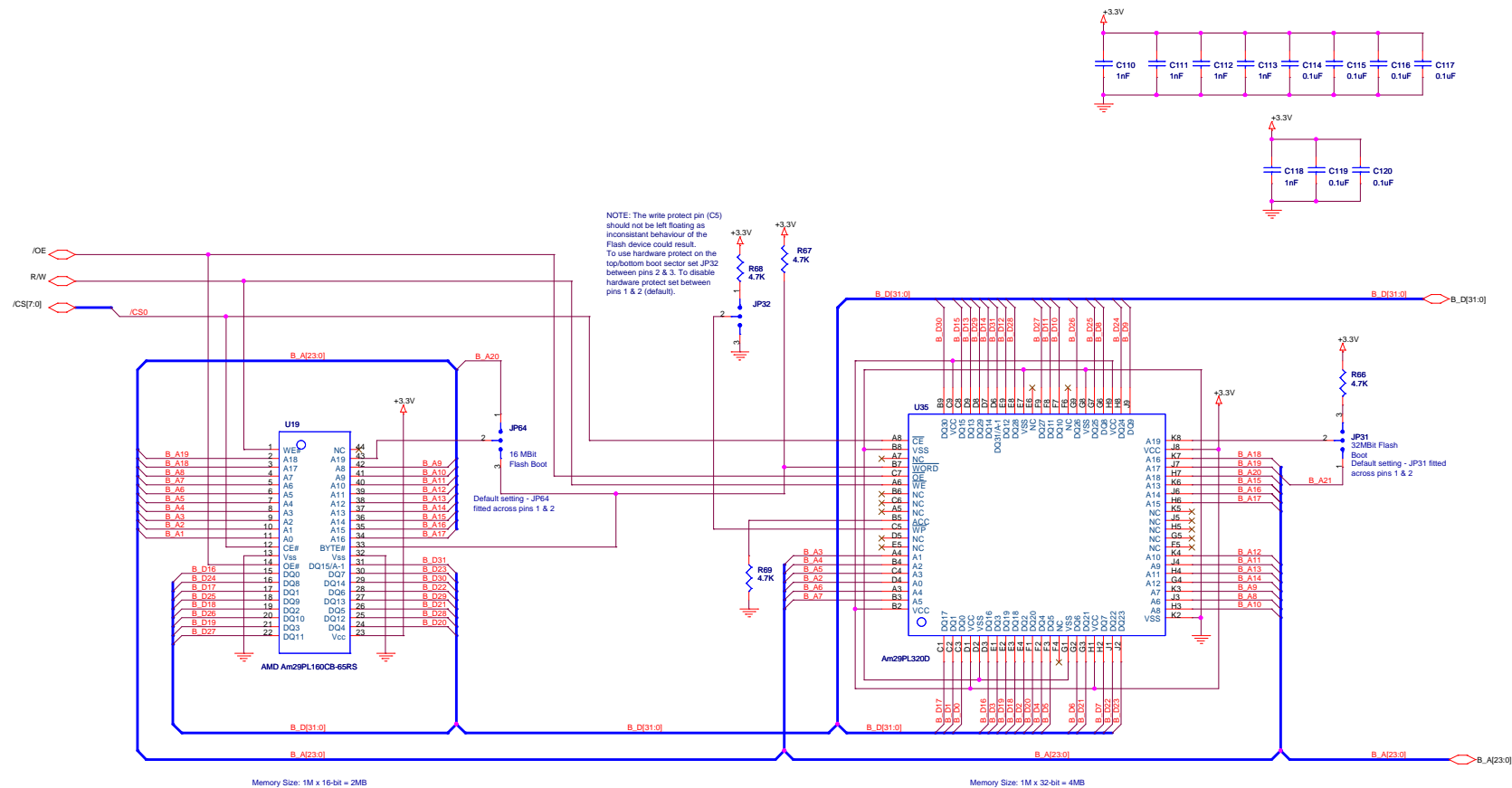
Motorola SPS TSPG - TECD ColdFire Group		
Title	M523xEVB	
Size	Document Number	Rev
B	SCH-20380 10/100BaseT Ethernet Transceiver	C
Date:	Wednesday, June 23, 2004	Sheet 8 of 16

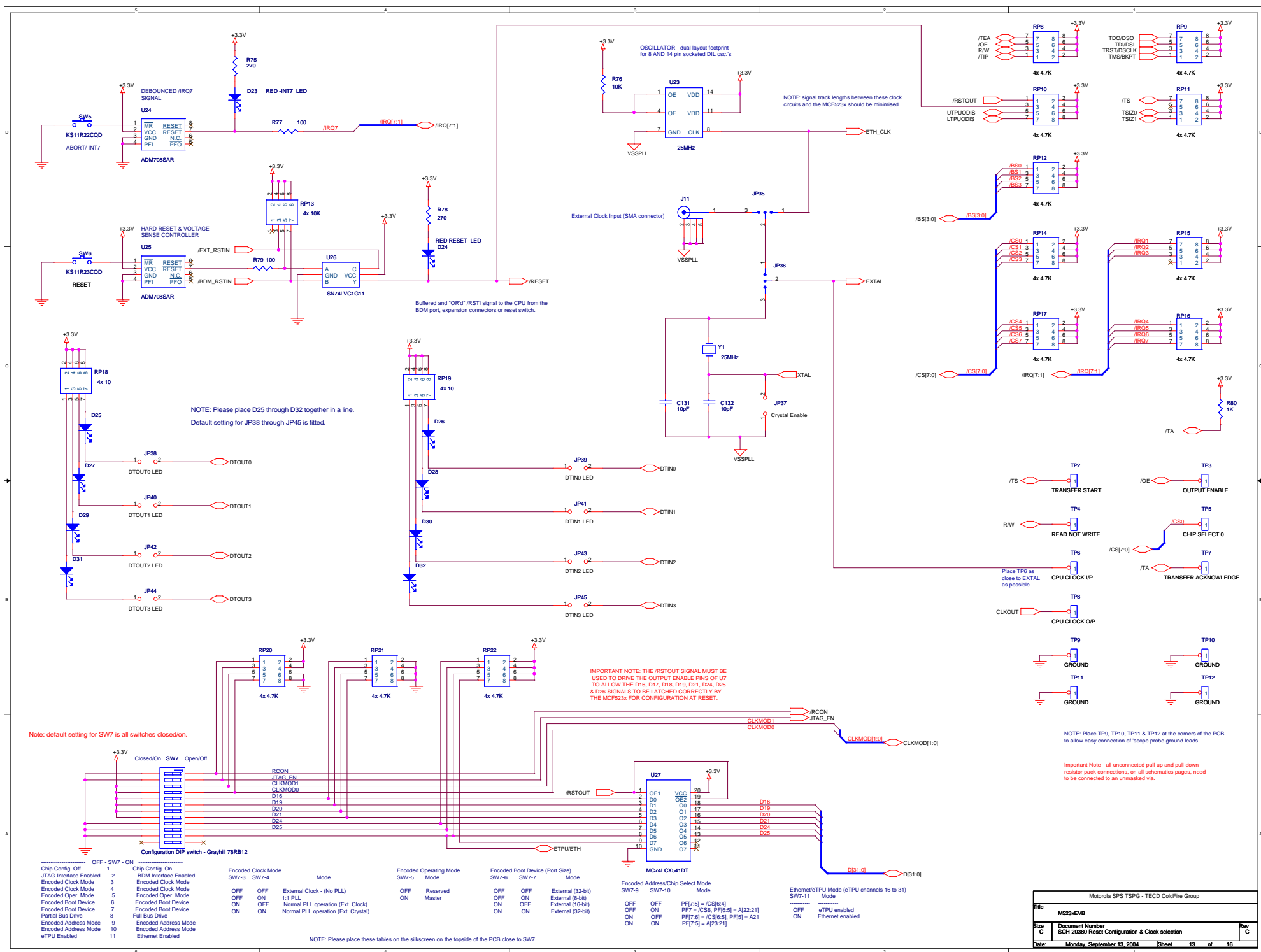


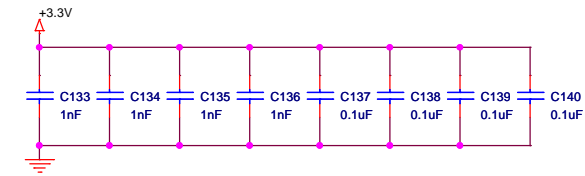
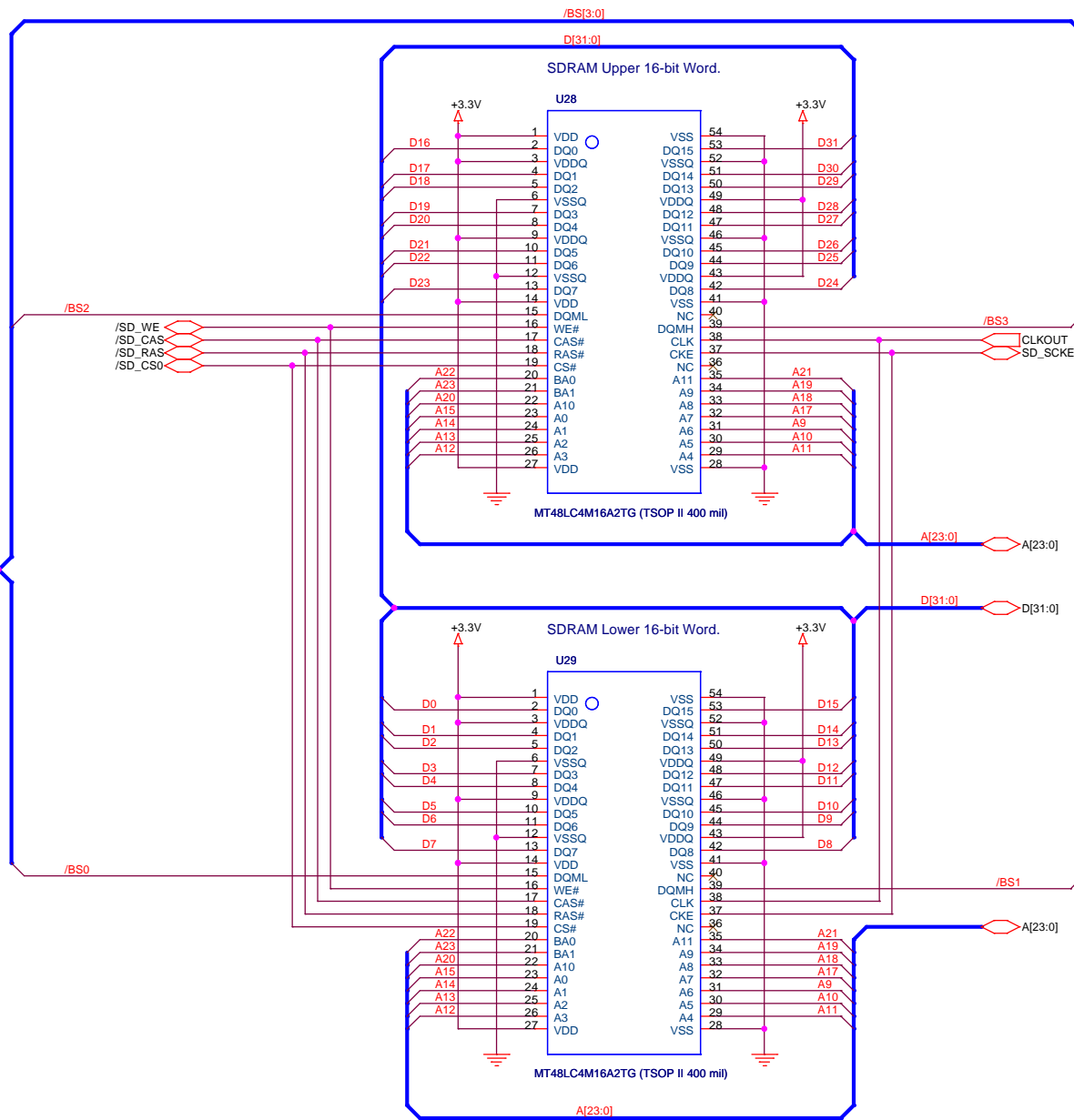


NOTE: if designing a daughter card to fit these expansion connectors
please ensure all signals are buffered on the daughter card.

Motorola SPS TSPG - TECO ColdFire Group			
Title		M623xEVb	
Size		Document Number	
C		SCH-20380 Expansion Connectors	
Date		Wednesday, June 23, 2004	Sheet 10 of 16



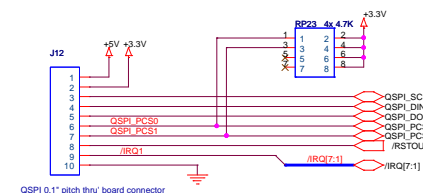
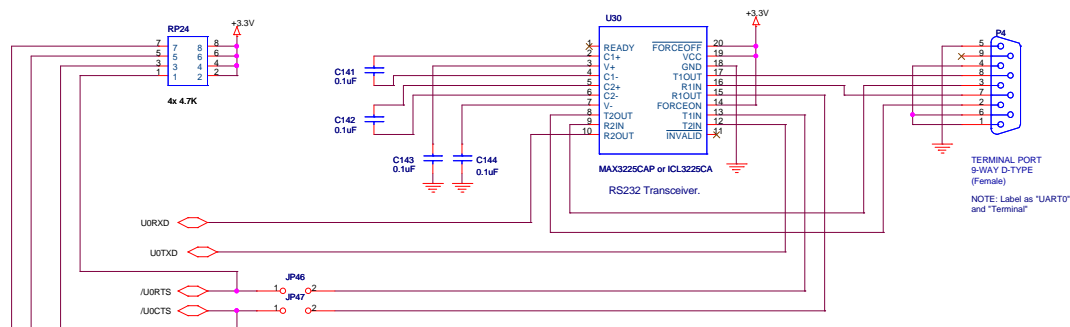




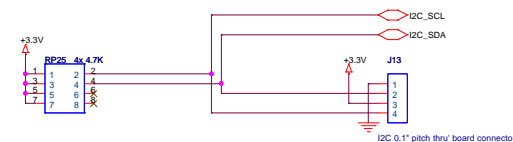
NOTE: Memory size: Each SDRAM memory is configured 4M x 16bit (8MB). Total available SDRAM is 16MB.

NOTE: Alternative SDRAM's with the same PCB footprint are:
 Samsung K4S641632E
 Hyundai HY57V641620HG
 Toshiba TC59S6416CFT
 Infineon HYB39S64160ET
 Winbond W986416DH

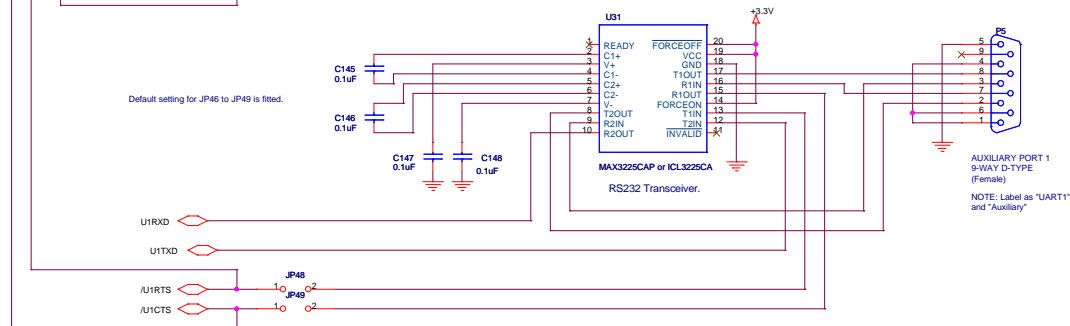
Motorola SPS TSPG - TECO ColdFire Group		
Title	M523xEVB	
Size B	Document Number	Rev C
	SCH-20380 SDRAM	
Date:	Wednesday, June 23, 2004	Sheet 14 of 16



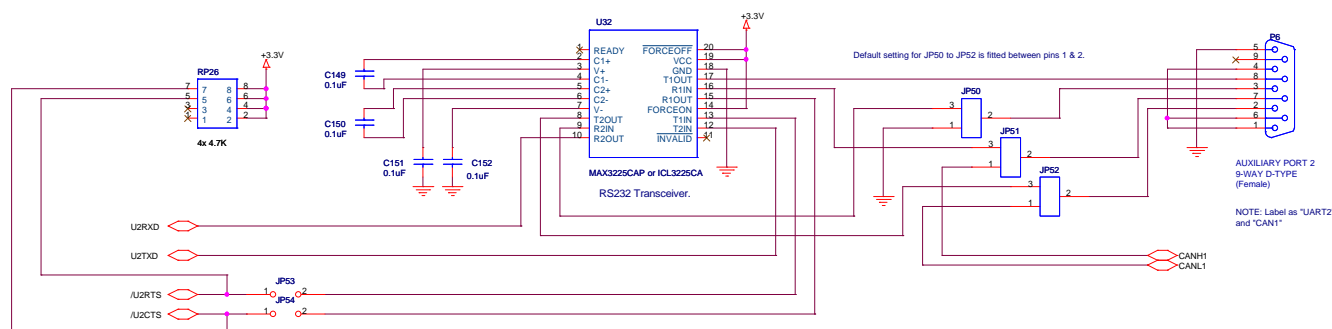
NOTE: the I2C bus on the MCF523x processor is 3.3V tolerant only. If connection to a 5V system is required high frequency voltage level shifters will be required between the peripheral and processor.



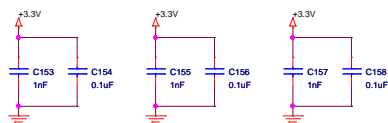
Default setting for JP46 to JP49 is fitted.



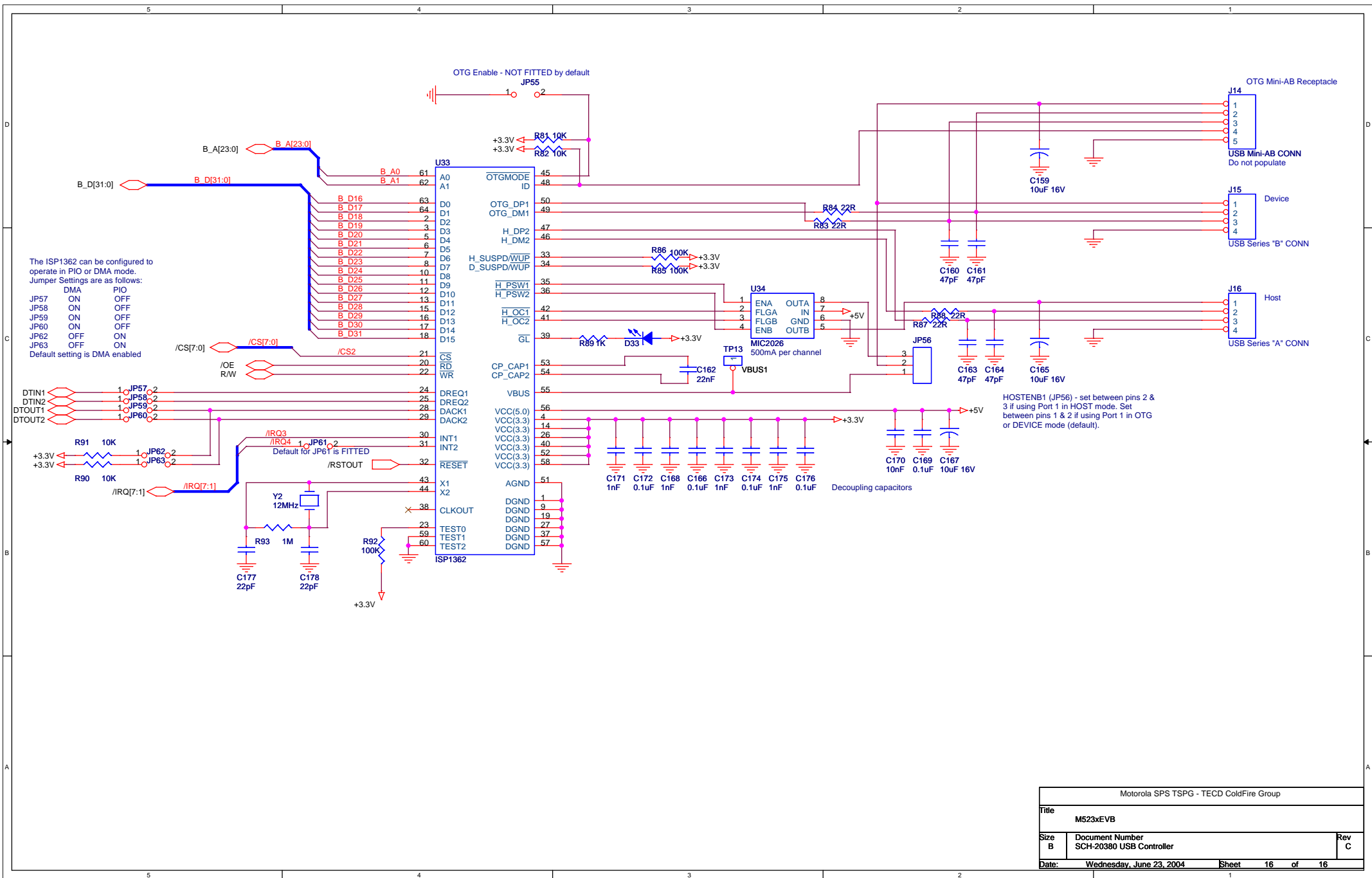
Default setting for JP50 to JP52 is fitted between pins 1 & 2.



Default setting for JP53 & JP54 is NOT fitted.



Motorola SPS TSPG - TECO ColdFire Group			
Title	M523xEVB		
Size	Document Number	Rev	
C	SCH-20380 Serial IO	C	
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Motorola SPS TSPG - TECD ColdFire Group		
Title	M523xEVB	
Size	Document Number	Rev
B	SCH-20380 USB Controller	C
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