

Section 10: Appendix 2

Appendix 2: Electronic Design Drawing Pack


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2.3 General

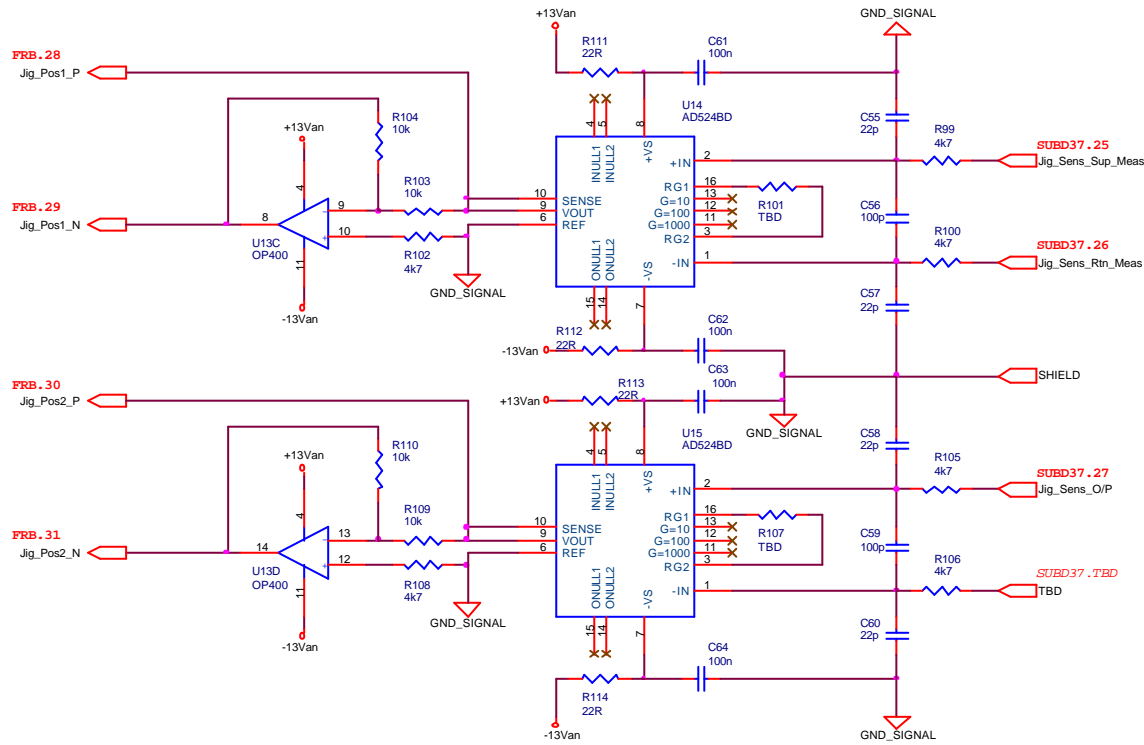
 <p>HERSCHEL SPIRE</p>	<p>SPIRE Beam Steering Mirror Design description v 4.0 Appendix 2</p>	<p>Ref: SPIRE-ATC-PRJ-000587 Page : Page 2 of 9 Date : 20 Jun 01 Author: IP</p>
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The following diagrams show the BSM Warm Electronics circuit diagrams. The BSM wiring is described in the document 'BSM Electronics Interface'.

The processor board (LAM MAC board) is described in separate LAM documentation. These circuit diagrams are best viewed in Microsoft Word with 'Zoom' set to 200%, or printed.

2.4 Circuit Diagrams

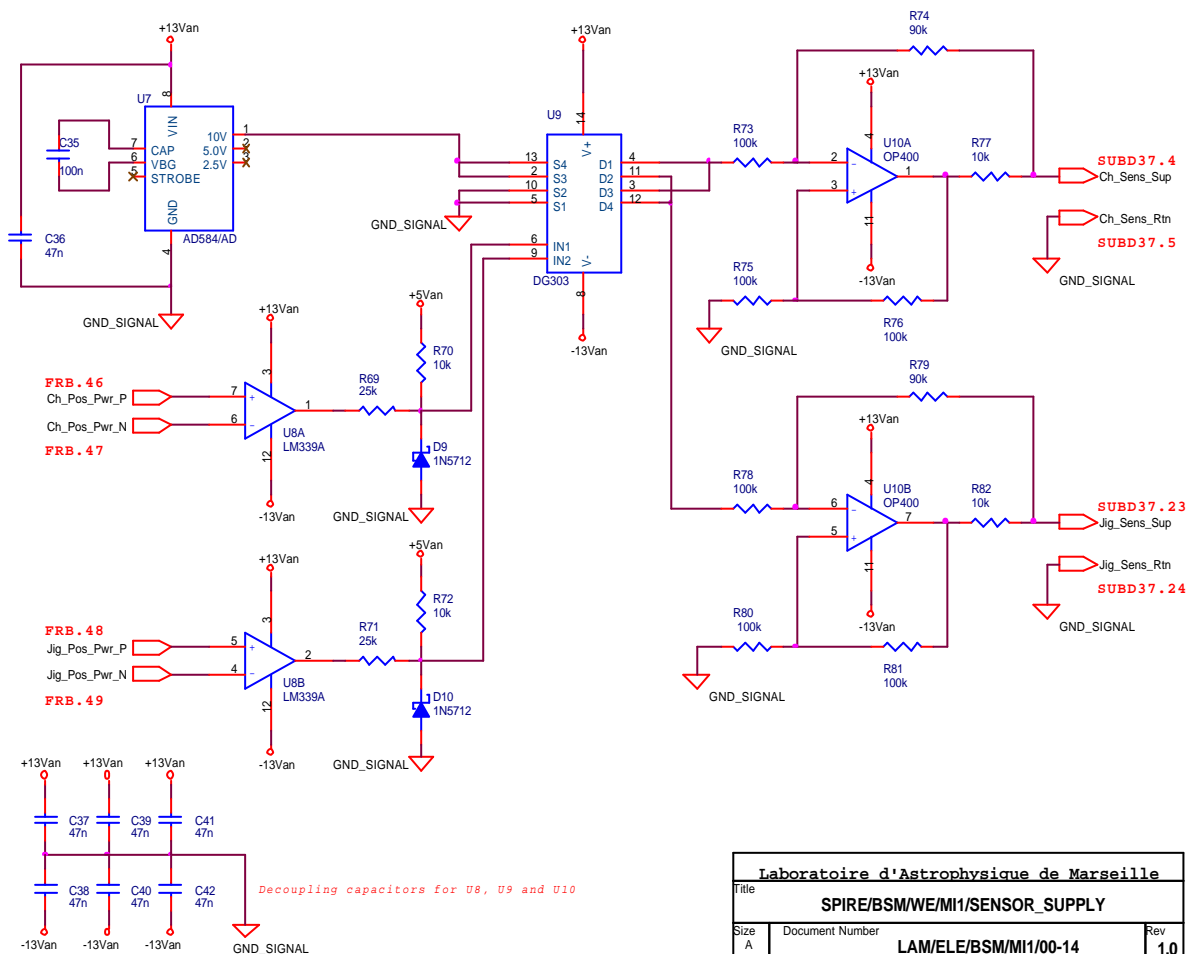
Figure A2-1 POSITION SENSOR PREAMPLIFIER (CHOP AND JIGGLE SAME)



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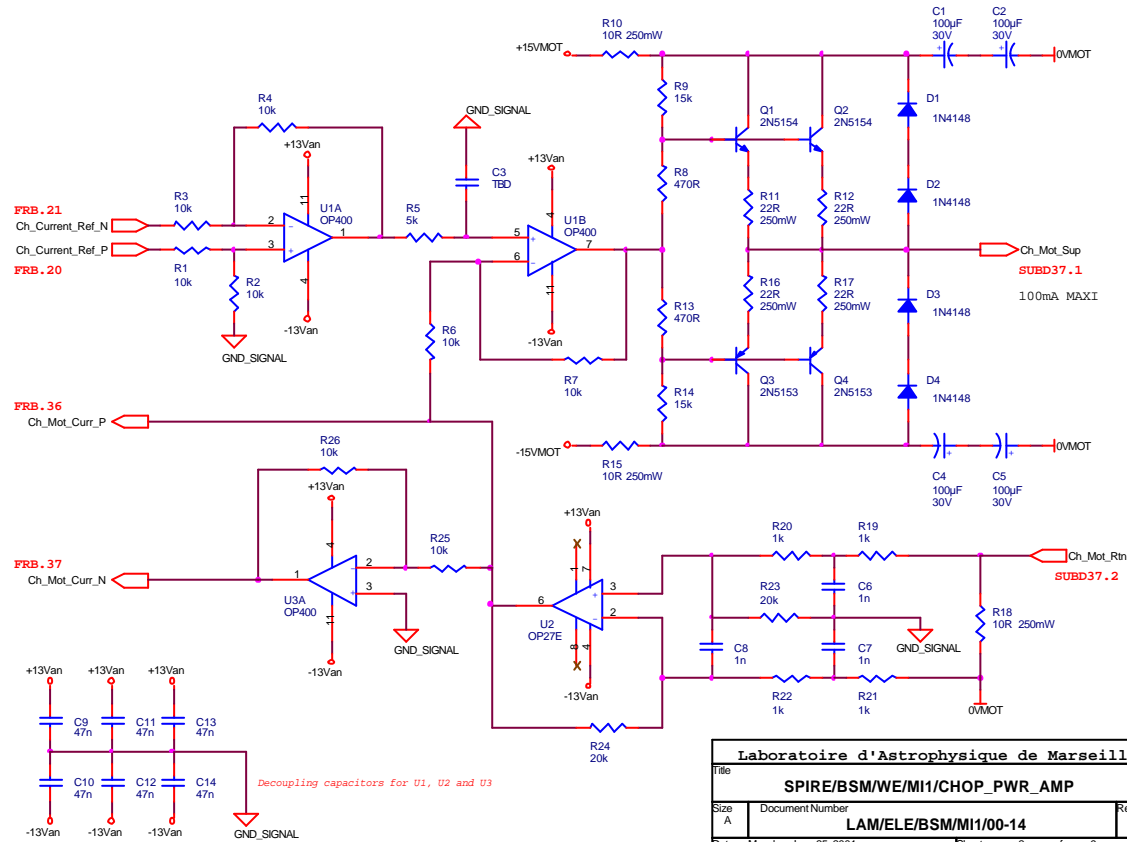
SPIRE Beam Steering Mirror Design description
v 4.0
Appendix 2

Figure A2-2 POSITION SENSOR CURRENT SUPPLY



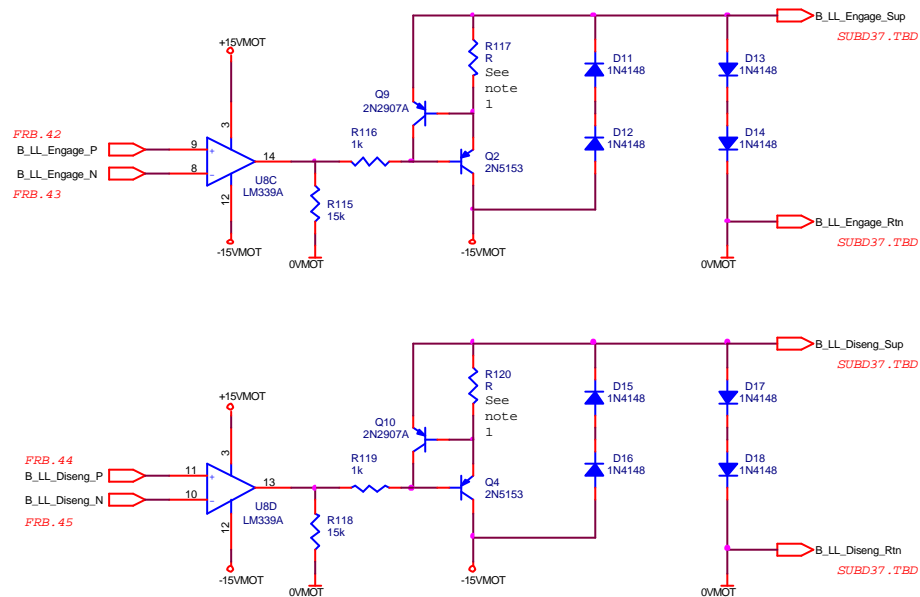
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Figure A2-3 MOTOR POWER AMPLIFIER (CHOP AND JIGGLE SAME)



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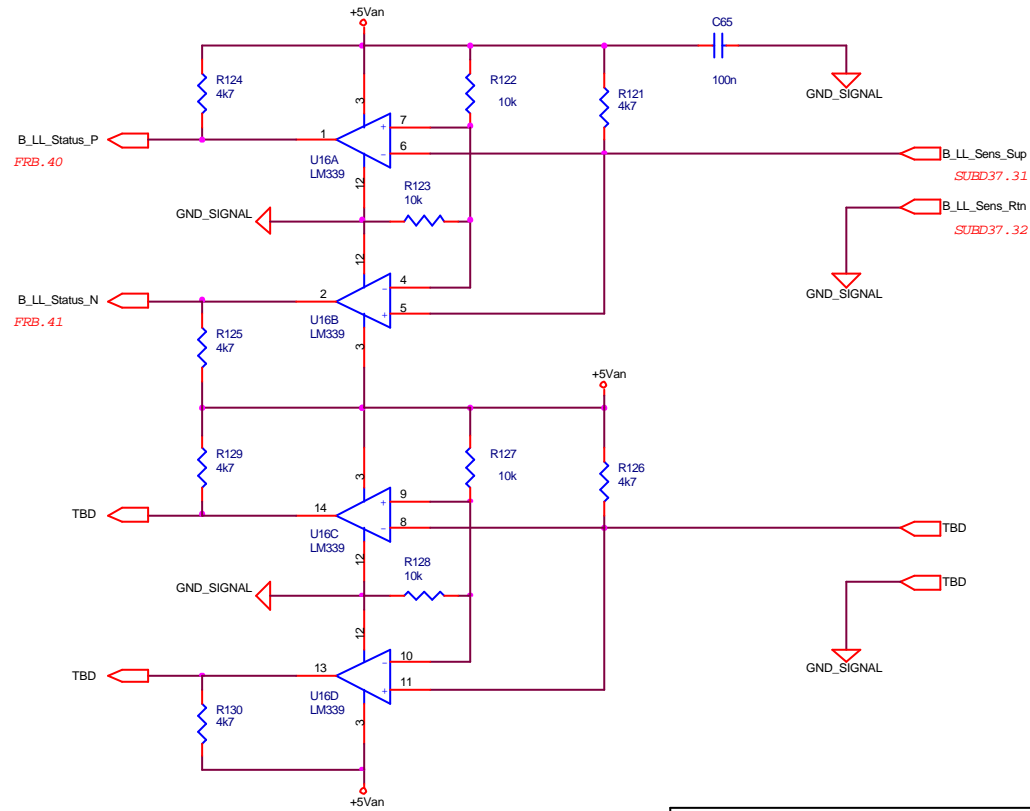
Figure A2-4 BSM LAUNCH LATCH INTERFACE



NOTE 1: R=33 Ohms for I=25 mA
R=22 Ohms for I=35 mA

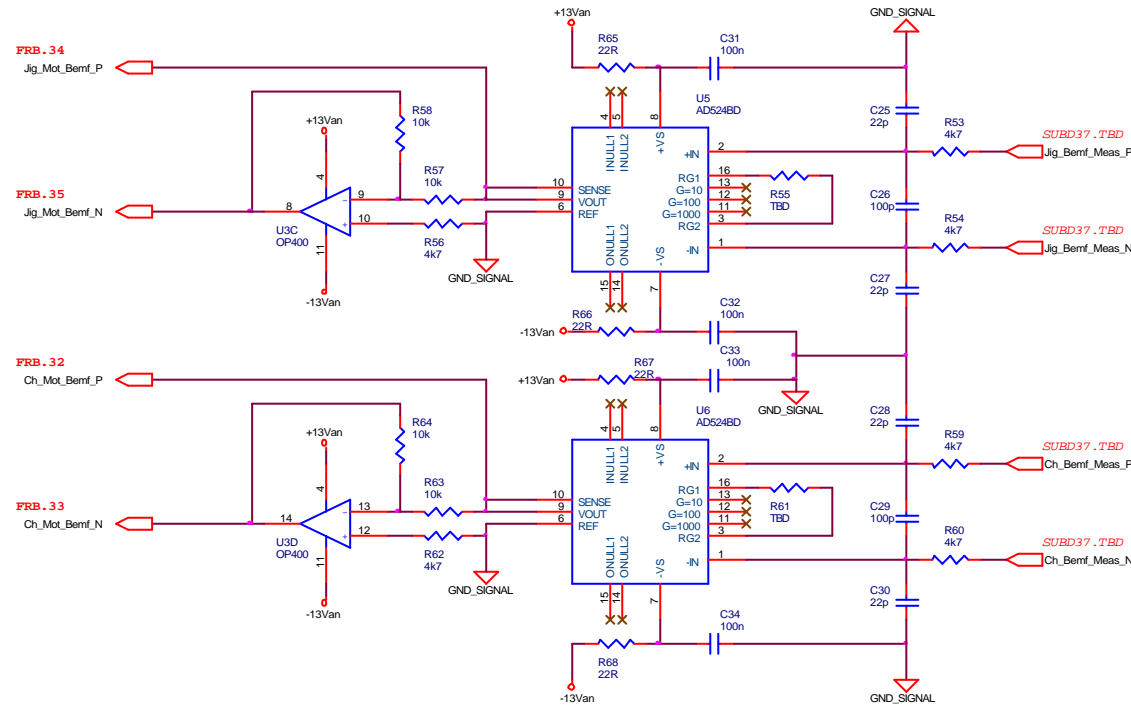
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File SPIRE/BSM/WE/M11/LAUNCH LATCH		
Size A	Document Number LAM/ELE/BSM/M11/00-14	Rev 1.0
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Figure A2-5 LAUNCH LATCH STATUS INTERFACE



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Figure A2-6 MOTOR BACK EMF SENSOR (CHOP AND JIGGLE)



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2.5 Parts Lists

2.5.1 Warm Electronics

Parts Lists for electronic components will be issued by LAM when the detailed design is finalised.

2.5.2 *Beam Steering Mechanism*

SPIRE Beam Steering Mirror Assembly Standard Parts List

This list defines the space-qualified parts used in the BSM mechanism that are covered in the ESA/SCC EEE Components Specifications.

NOTE : The 37-way MDM connector types specified below are selected from the ESA/SCC EEE Components Specifications Lists. However, this is a compromise, as the desired solder-bucket type is not included in the lists, so a solid-wire termination type has been selected. This will require multiple solder joints and heat-shrink coverings before potting. If a space-qualified solder-bucket MDM connector is used by anyone else, it would be better to use the appropriate part number for that type, but for a 37-way pin connector.

Part number	Description	Quantity	Notes
3401029 02 B 37P FR116	Micro-miniature rectangular connector (MDM type) with uninsulated solid wire terminations	10	For 3 models plus spares
3401 041 06 B 37 PS	Connector saver, 37-way MDM type	10	
3401 032 05 B	Srew lock assembly for connector saver	20	
3401 032 01 B	Screw lock assembly for connector	20	
3901 013 21 B 050m	PTFE insulated Screened Twisted Pair wire, 28 AWG	1	
3901 013 46 B 050m	PTFE insulated Screened Twisted Triple wire, 28 AWG	1	
3701/003 04 B	Microswitch	10	
CX-1030-CU	Cernox Thermometers (CX1030)	10	