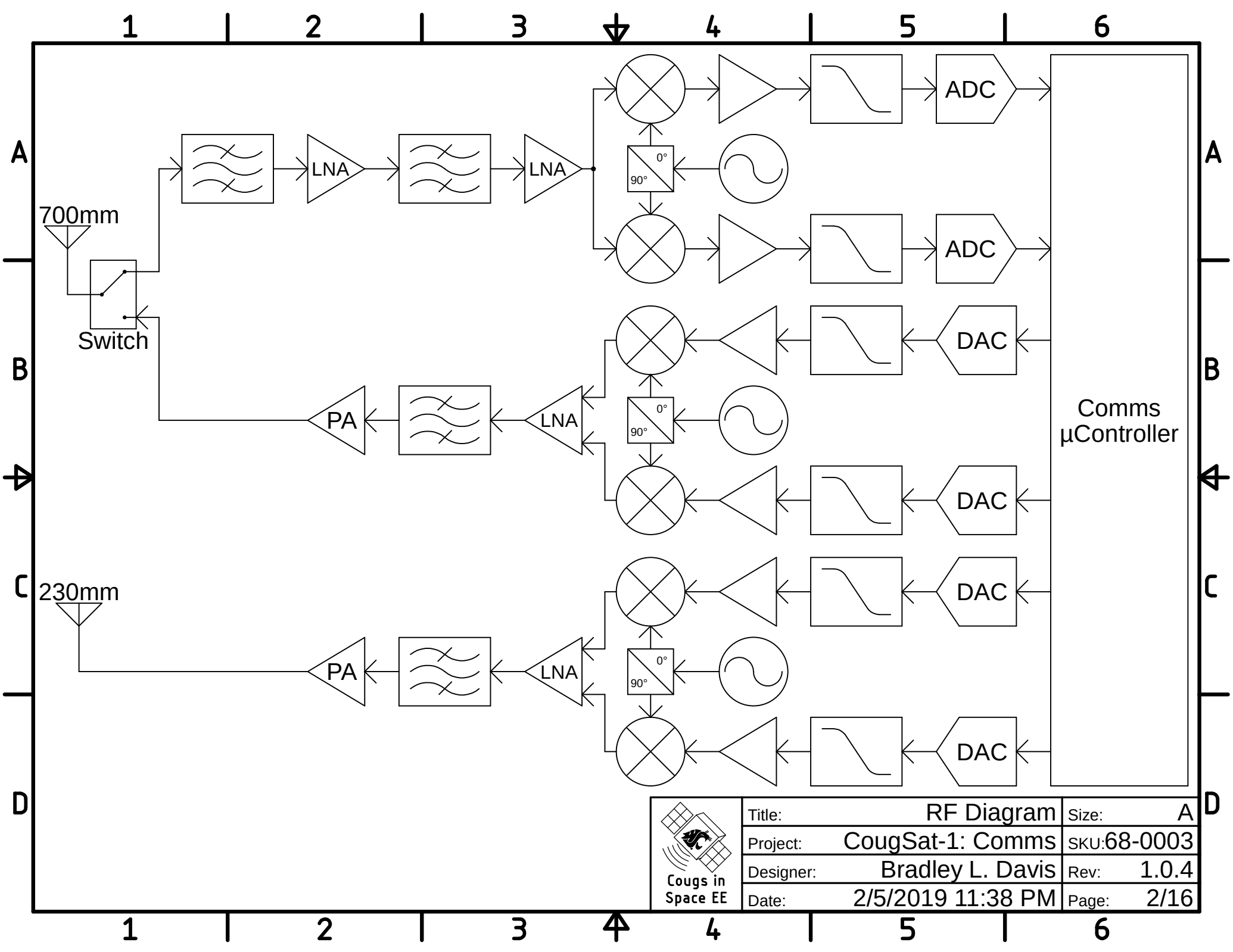



Page 1: Block Diagram  
Page 2: RF Diagram  
Page 3: Power Rails  
Page 4:  $\mu$ Controller  
Page 5: ADCs  
Page 6: Regulators  
Page 7: Power Switching & LDOs  
Page 8: RF Clocks - 700mm  
Page 9: RF Clock - 230mm

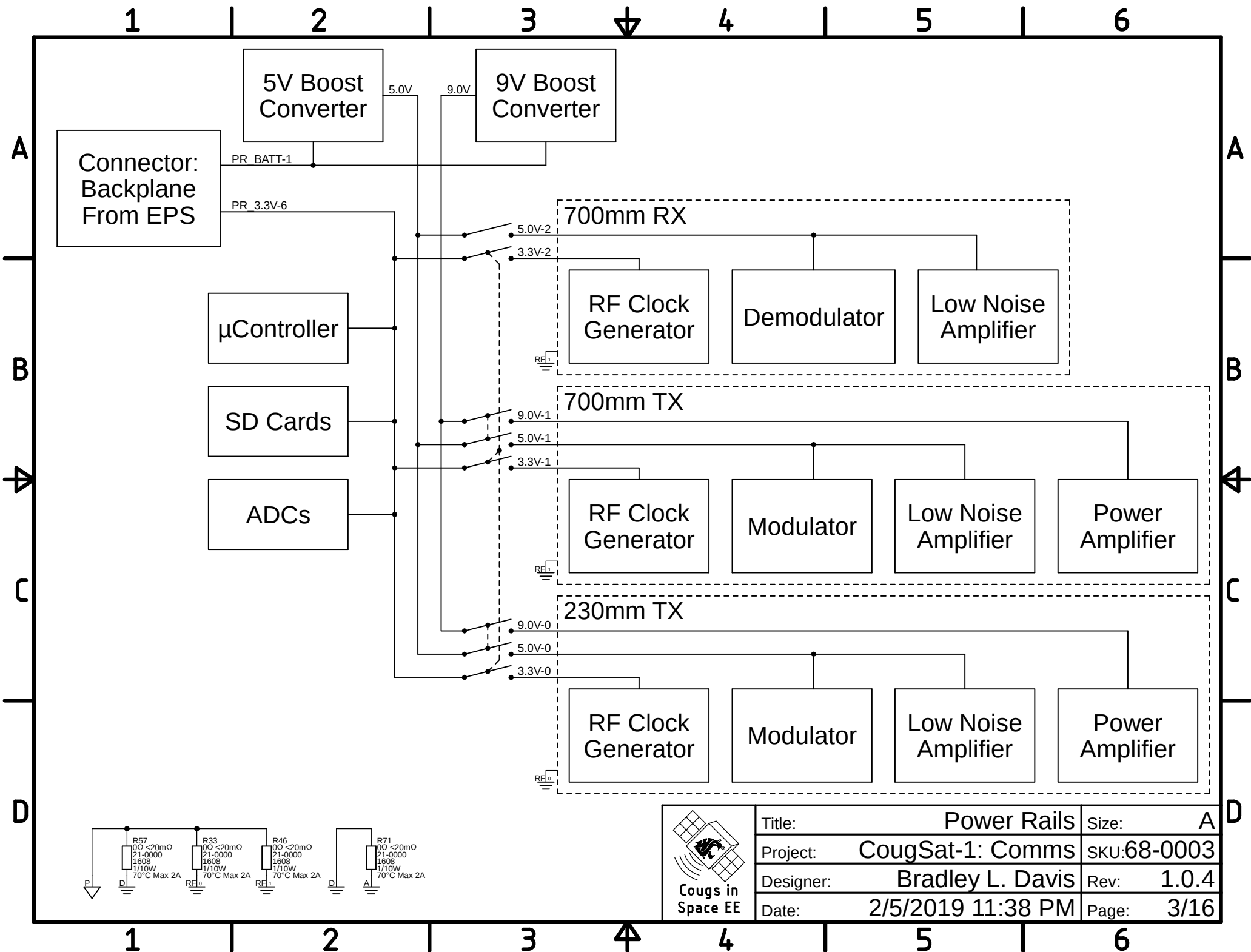
Page 10: Differential Drivers  
Page 11: 230mm Downlink  
Page 12: 700mm Downlink  
Page 13: 700mm Downlink Amplifiers  
Page 14: Demodulator  
Page 15: Flash Memory  
Page 16: Mechanical



Title:	Block Diagram	Size:	A
Project:	CougSat-1: Comms	SKU:	68-0003
Designer:	Bradley L. Davis	Rev:	1.0.4
Date:	2/5/2019 11:38 PM	Page:	1/16



 Cougs in Space EE	Title:	RF Diagram		Size:	A
	Project:	CougSat-1: Comms		SKU:	68-0003
	Designer:	Bradley L. Davis		Rev:	1.0.4
	Date:	2/5/2019 11:38 PM		Page:	2/16



1

2

3

4

5

6

A

A

B

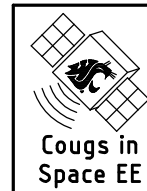
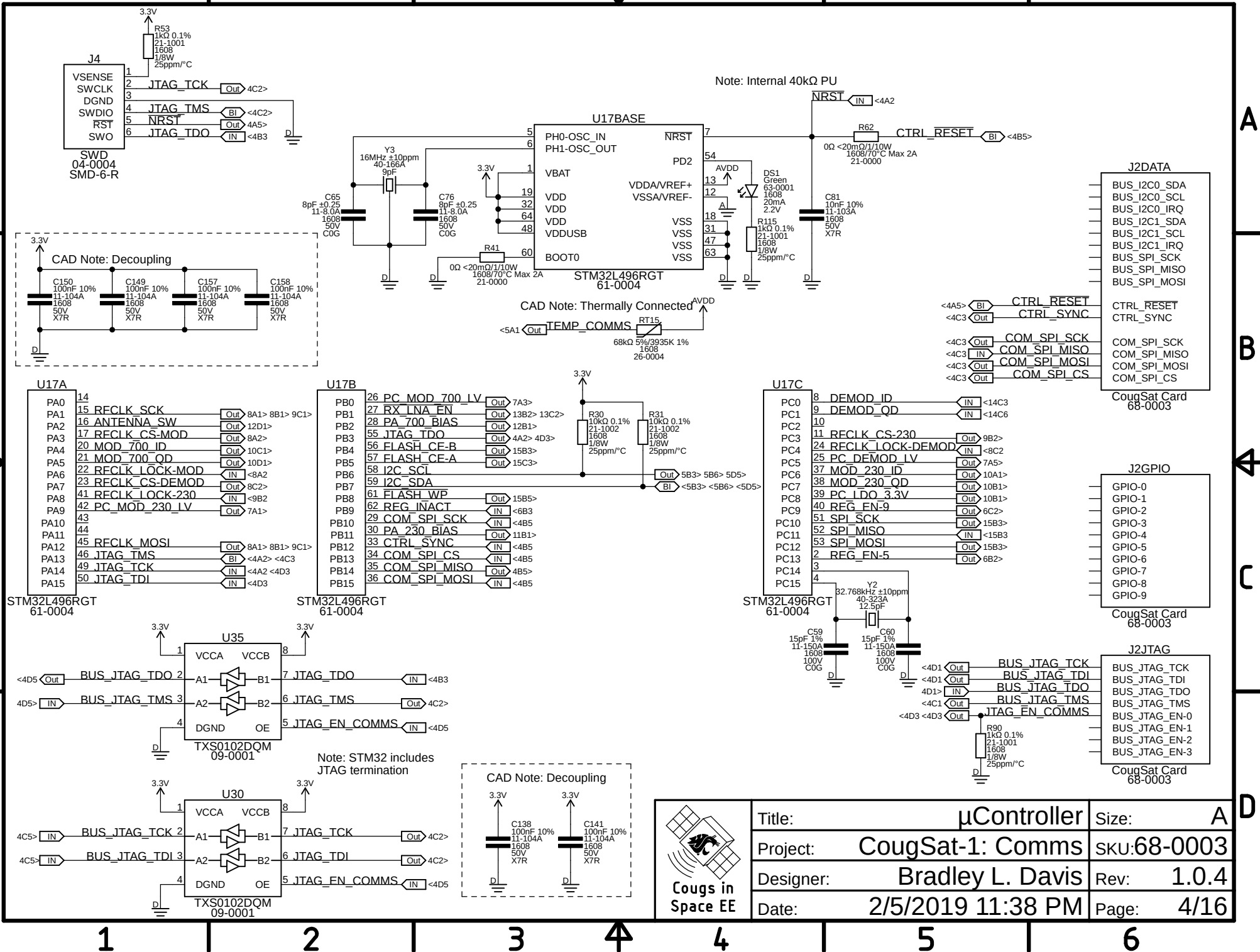
B

C

C

D

D



Title:	μController		Size:	A
Project:	CougSat-1: Comms		SKU:	68-0003
Designer:	Bradley L. Davis		Rev:	1.0.4
Date:	2/5/2019 11:38 PM		Page:	4/16



1

2

3

4

5

6

A

A

B

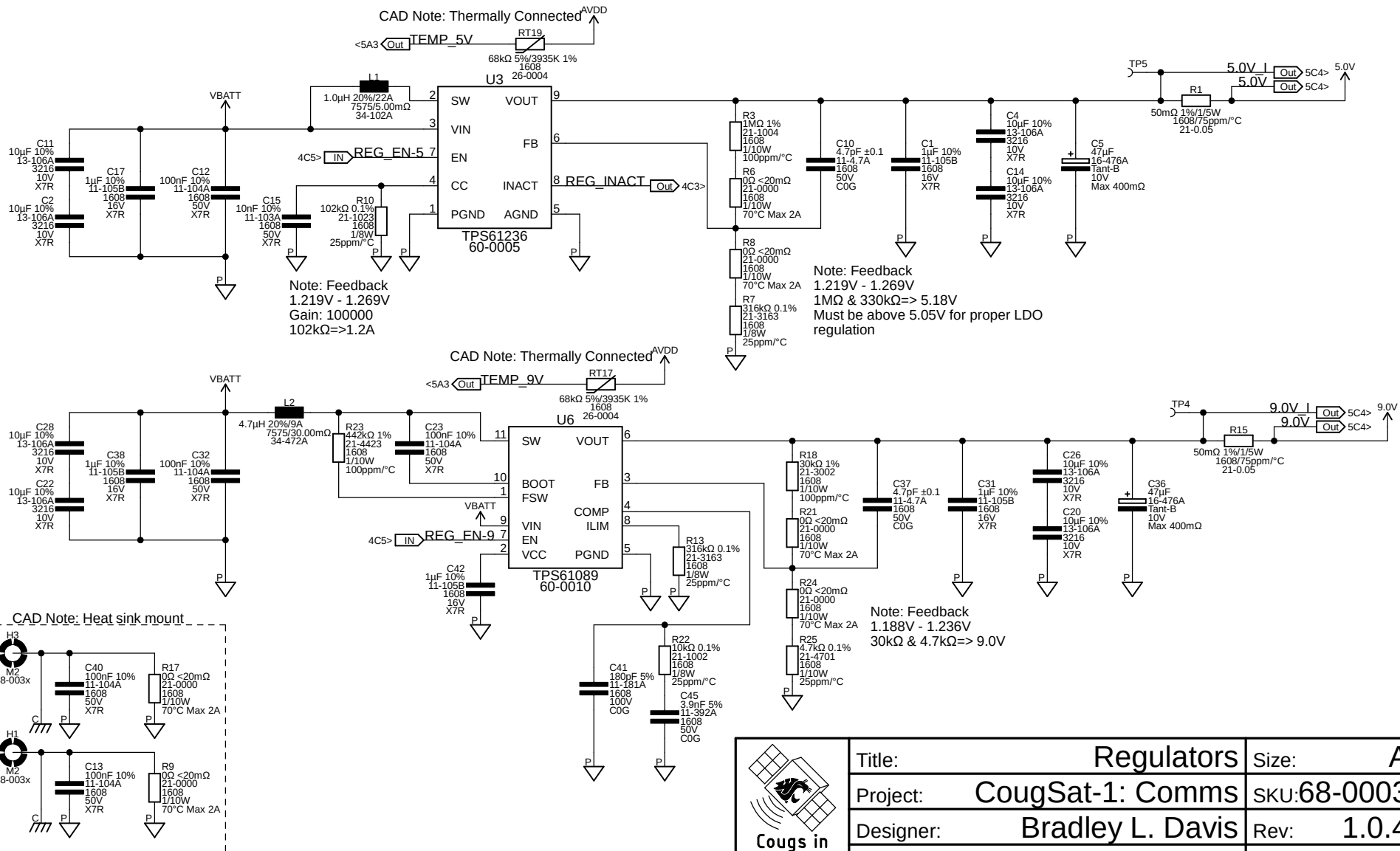
B

C

C

D

D



Title:	Regulators	Size:	A
Project:	CougsSat-1: Comms	SKU:	68-0003
Designer:	Bradley L. Davis	Rev:	1.0.4
Date:	2/5/2019 11:38 PM	Page:	6/16







1

2

3

↓

4

5

6

A

A

B

B

↓

↓

C

C

D

D

1

2

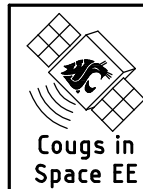
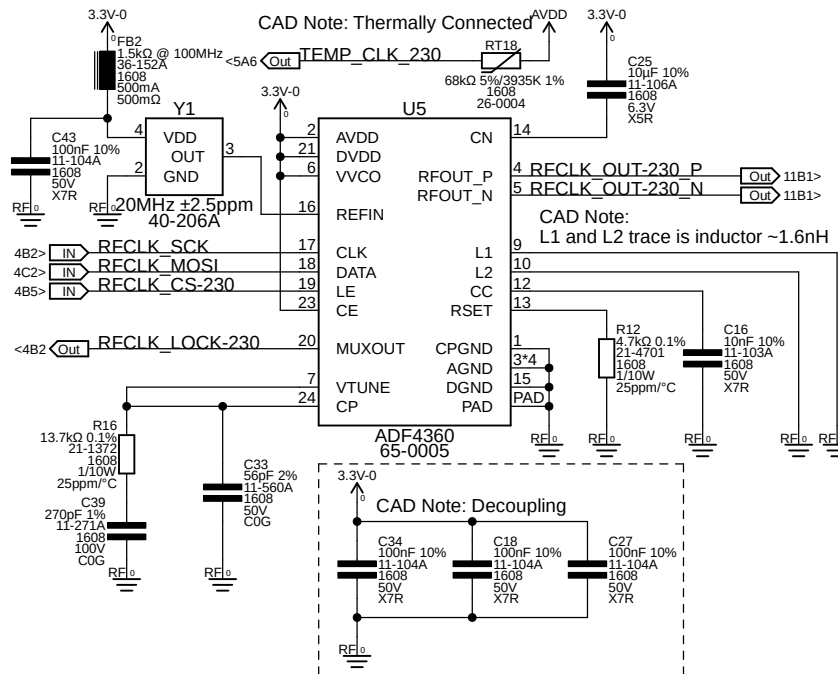
3

↑

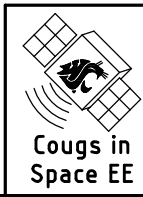
4

5

6



Title:	RF Clock - 230mm	Size:	A
Project:	CougSat-1: Comms	SKU:	68-0003
Designer:	Bradley L. Davis	Rev:	1.0.4
Date:	2/5/2019 11:38 PM	Page:	9/16





1

2

3

4

5

6

A

B

C

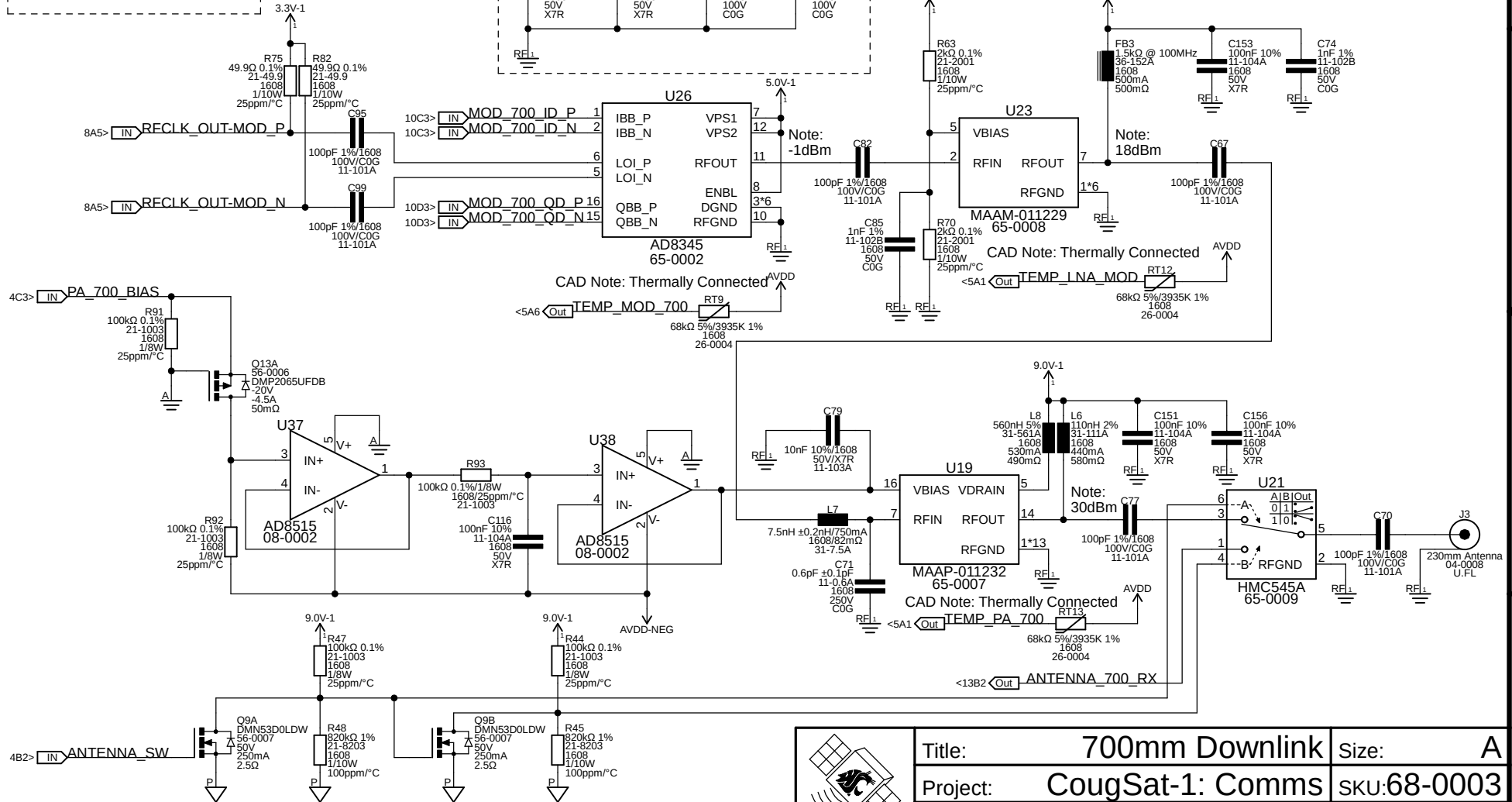
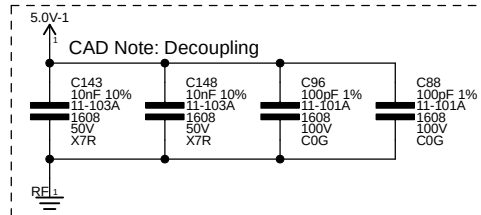
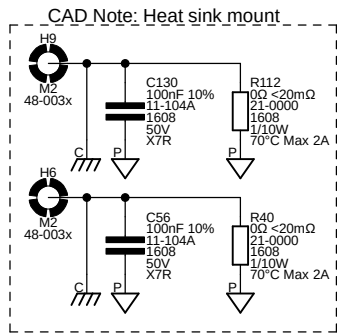
D

A

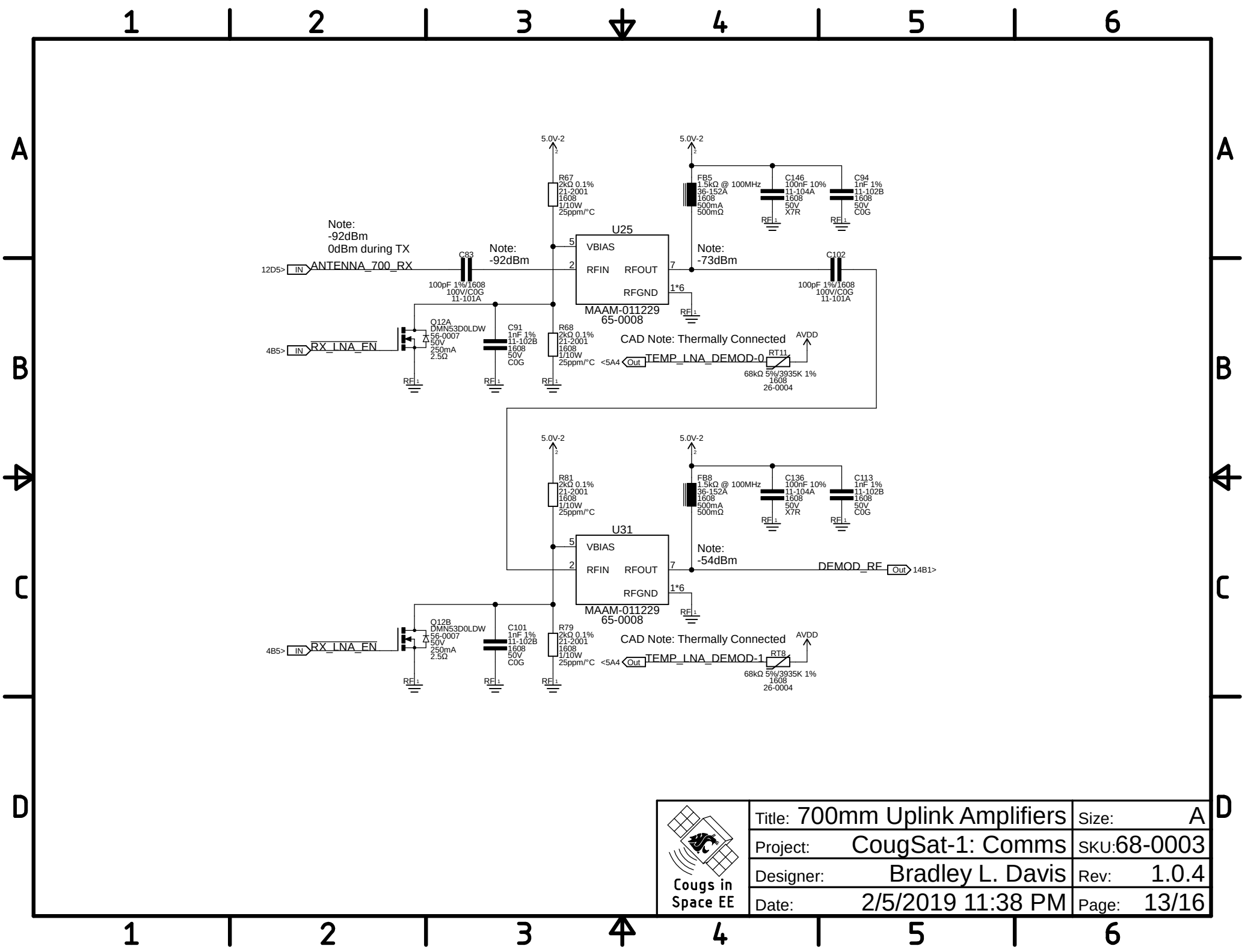
B

C

D



Title:	700mm Downlink	Size:	A
Project:	CougsSat-1: Comms	SKU:	68-0003
Designer:	Bradley L. Davis	Rev:	1.0.4
Date:	2/5/2019 11:38 PM	Page:	12/16



1

2

3

4

5

6

A

A

B

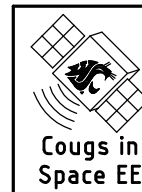
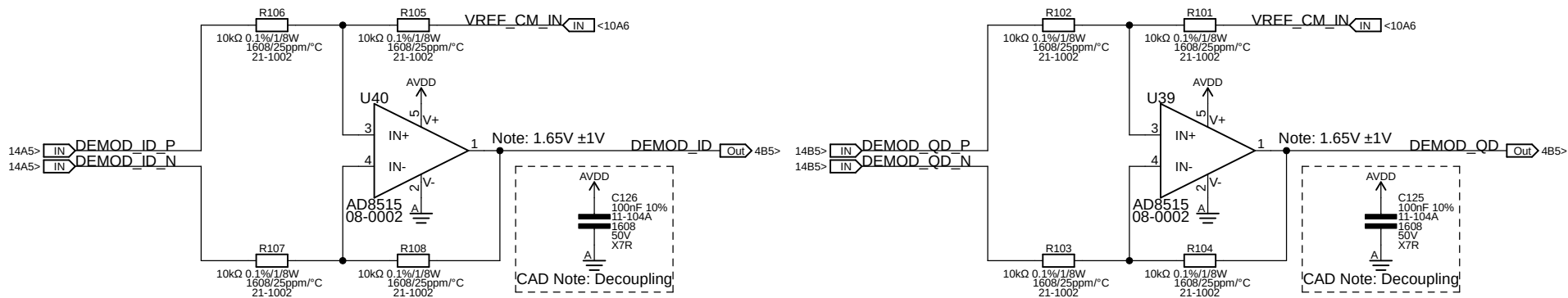
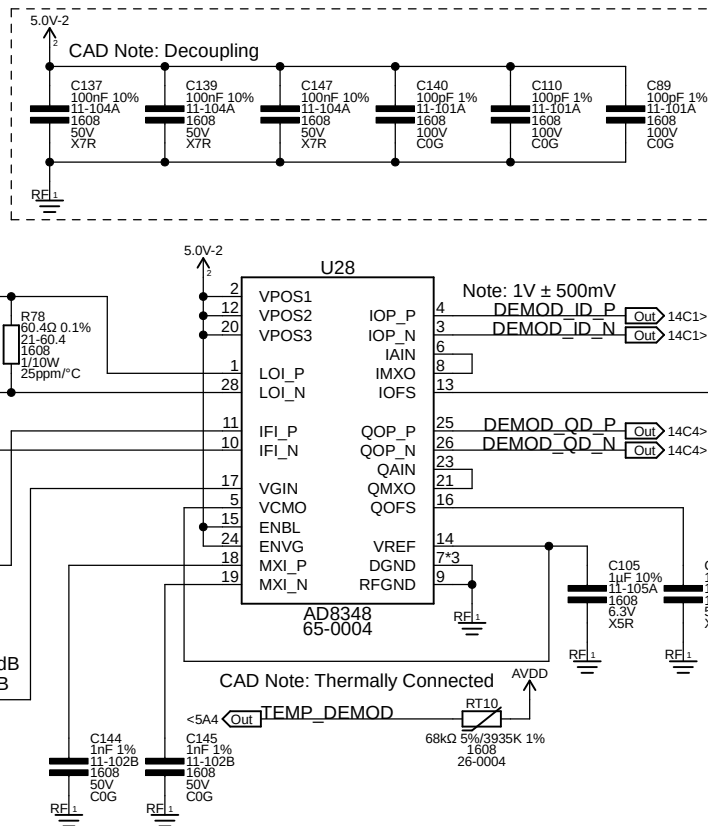
B

C

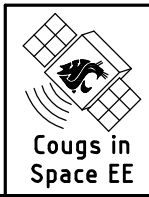
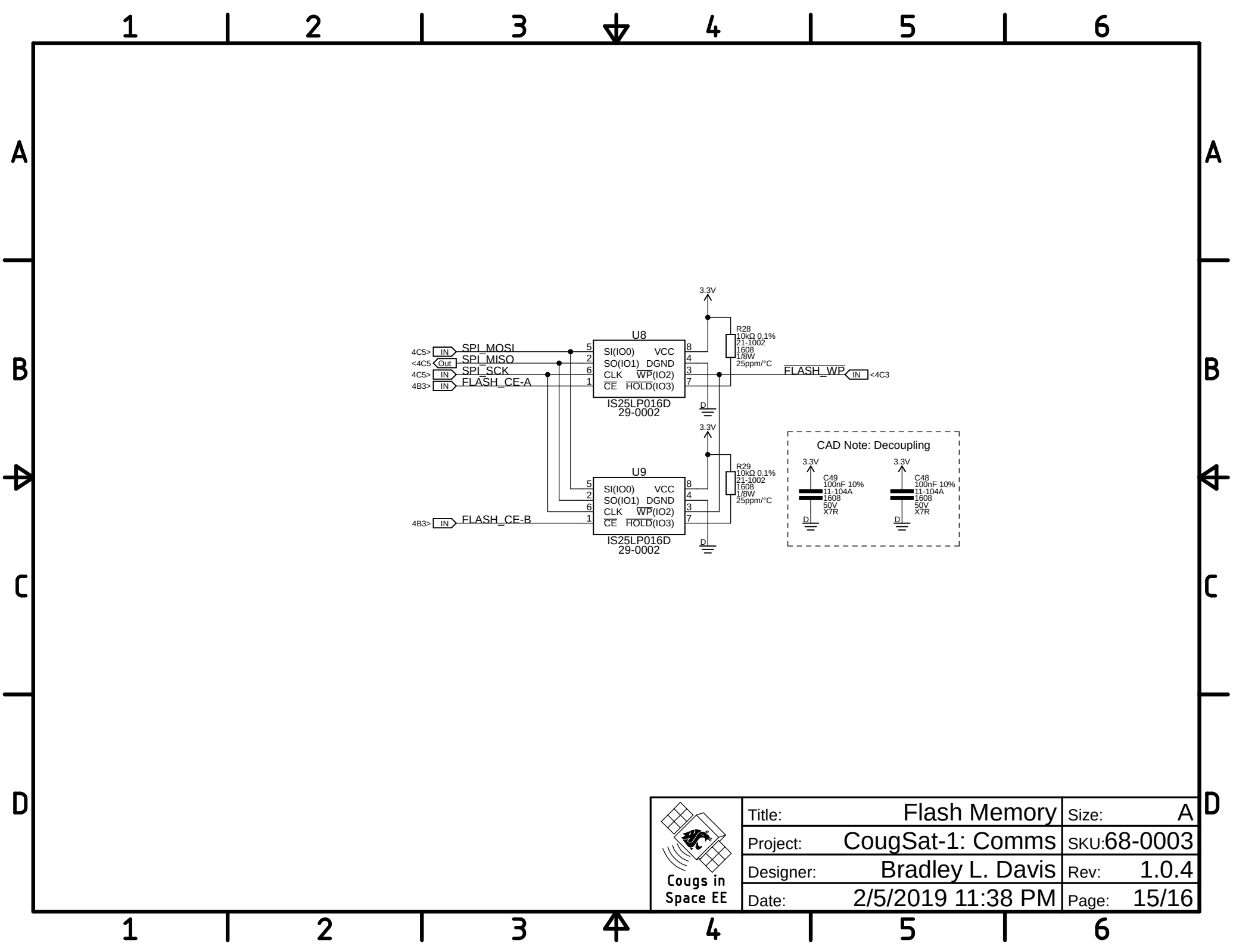
C

D

D



Title:	Demodulator	Size:	A
Project:	CougsSat-1: Comms	SKU:	68-0003
Designer:	Bradley L. Davis	Rev:	1.0.4
Date:	2/5/2019 11:38 PM	Page:	14/16



Title:	Flash Memory	Size:	A
Project:	CougSat-1: Comms	SKU:	68-0003
Designer:	Bradley L. Davis	Rev:	1.0.4
Date:	2/5/2019 11:38 PM	Page:	15/16

1

2

3

↓

4

5

6

A

B

C

D

A

B

C

D

J2MECH-TOP

J2MECH-BOTTOM

230mm  
RF Circuits

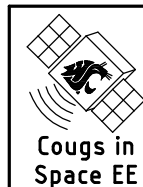
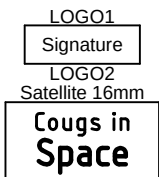
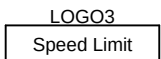
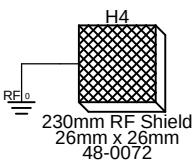
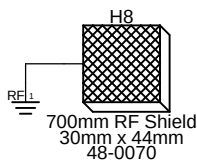
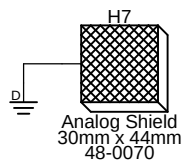
230mm Coax □ ○

700mm Coax □ ○

μController  
Analog Circuits

700mm RF Circuits

SWD

CougSat Card  
68-0003CougSat Card  
68-0003

Title:	Mechanical	Size:	A
Project:	CougSat-1: Comms	SKU:	68-0003
Designer:	Bradley L. Davis	Rev:	1.0.4
Date:	2/5/2019 11:38 PM	Page:	16/16