



Open mounting holes of all RF modules to #6 clearance holes (0.144"). Then, use #4 screws and insulating shoulder washers as well as a thermal pad to isolate the RF modules from the front panel.

Mount splitter on top of ZFDC-20-5B-S coupler with 3/4" standoffs. Use insulating shoulder washers and nylon nuts.

Remove -15V regulator from power board. Mount power board with 1/4" standoffs. Mount voltage regulator with insulator and insulating shoulder washer. Check for shorts.

Cables C1 to C8 are flexible semi-rigid RG405. Cables require SMA connectors on both ends.

Cables V1-V3 are twisted pair, soldered on one side and crimped to a Molex connector on the other. Solder 10nF across amplifier power terminal. V3 terminates at the power connector.

PN1 Connector SMA Digi-Key ACX1177-ND	PN6 Connector SMA, R/A Digi-Key ACX1181-ND	PN11 RG405 cable semi-rigid Newark 99F6456	
PN2 Connector SMA	PN7 Conn. SMA, R/A	PN12 Conn. SMA, R/A	PN16 Conn. SMA, R/A
PN3 Connector SMA	PN8 Conn. SMA, R/A	PN13 Conn. SMA, R/A	PN17 Conn. SMA, R/A
PN4 Connector SMA	PN9 Conn. SMA, R/A	PN14 Conn. SMA, R/A	PN18 Cable, 1 pair, shielded Mouser 566-9501-100
PN5 Connector SMA	PN10 Conn. SMA, R/A	PN15 Conn. SMA, R/A	

Title RF TTFSS Pre Amplifier		
Size A	Number D1700324	Revision 1
Date: 7/17/2017	Sheet 1 of 2	
File: D:\Users\...\RFTTFSSPreAmplifier1.SchDoc	Drawn By: Daniel Sigg	

Delrin inserts

M1 #4-40 1/4" flat

M2 #4-40 1/4" flat

M3 #4-40 1/4" flat

M4 #4-40 1/4" flat

McMaster-Carr
91099A155

M5 #4 nut

M6 #4 nut

M7 #4 nut

M8 #4 nut

McMaster-Carr
90480A005

M9 #4 lock washer

M10 #4 lock washer

M11 #4 lock washer

M12 #4 lock washer

McMaster-Carr
91113A005

PN19
Delrin N insert

RF Modules

H1 #4 screw, flat, 1/2"

H2 #4 lock washer

H3 #4 nut

H4 ins. should. washer

H5 #4 screw, flat, 1/2"

H6 #4 lock washer

H7 #4 nut

H8 ins. should. washer

H9 #4 standoff, 3/4"

Digi-Key
36-1946-ND

M13 #4-40 1/4" flat

M14 #4-40 1/4" flat

M15 #4-40 1/4" flat

M16 #4-40 1/4" flat

McMaster-Carr
91099A155

M17 #4 nut

M18 #4 nut

M19 #4 nut

M20 #4 nut

McMaster-Carr
90480A005

M21 #4 lock washer

M22 #4 lock washer

M23 #4 lock washer

M24 #4 lock washer

McMaster-Carr
91113A005

PN20
Delrin N insert

H10 #4 screw, flat, 1/2"

H11 #4 lock washer

H12 #4 nut

H13 ins. should. washer

H14 #4 screw, flat, 1/2"

H15 #4 lock washer

H16 #4 nut

H17 ins. should. washer

H18 #4 standoff, 3/4"

M25 #4-40 1/4" flat

M26 #4-40 1/4" flat

M27 #4-40 1/4" flat

M28 #4-40 1/4" flat

McMaster-Carr
91099A155

M29 #4 nut

M30 #4 nut

M31 #4 nut

M32 #4 nut

McMaster-Carr
90480A005

M33 #4 lock washer

M34 #4 lock washer

M35 #4 lock washer

M36 #4 lock washer

McMaster-Carr
91113A005

PN21
Delrin N insert

H19 #4 screw, flat, 1/2"

H20 #4 lock washer

H21 #4 nut

H22 ins. should. washer

H23 #4 screw, flat, 1/2"

H24 #4 lock washer

H25 #4 nut

H26 ins. should. washer

H27 #4 standoff, 3/4"

M37 #4-40 1/4" flat

M38 #4-40 1/4" flat

M39 #4-40 1/4" flat

M40 #4-40 1/4" flat

McMaster-Carr
91099A155

M41 #4 nut

M42 #4 nut

M43 #4 nut

M44 #4 nut

McMaster-Carr
90480A005

M45 #4 lock washer

M46 #4 lock washer

M47 #4 lock washer

M48 #4 lock washer

McMaster-Carr
91113A005

PN22
Delrin N insert

H28 #4 screw, flat, 1/2"

H29 #4 lock washer

H30 #4 nut

H31 ins. should. washer

H32 #4 screw, flat, 1/2"

H33 #4 lock washer

H34 #4 nut

H35 ins. should. washer

H36 #4 standoff, 3/4"

M49 #4-40 1/4" flat

M50 #4-40 1/4" flat

M51 #4-40 1/4" flat

M52 #4-40 1/4" flat

McMaster-Carr
91099A155

M53 #4 nut

M54 #4 nut

M55 #4 nut

M56 #4 nut

McMaster-Carr
90480A005

M57 #4 lock washer

M58 #4 lock washer

M59 #4 lock washer

M60 #4 lock washer

McMaster-Carr
91113A005

PN23
Delrin N insert
LIGO
D1700019-v1

H37 #4 screw, flat, 1/2"

H38 #4 lock washer

H39 #4 nut, nylon

H40 ins. should. washer

H41 #4 screw, flat, 1/2"

H42 #4 lock washer

H43 #4 nut, nylon

H44 ins. should. washer

PN24
Thermal pad
Digi-Key
BER233-ND

Front Panel

H53 Handle, 3"

H54 Handle, 3"

Mouser
534-9109

H55 Ferrule

H56 Ferrule

H57 Ferrule

H58 Ferrule

Mouser
534-9121

H59 #6-32 3/8" flat

H60 #6-32 3/8" flat

H61 #6-32 3/8" flat

H62 #6-32 3/8" flat

McMaster-Carr
91099A215

PN25
Front Panel
LIGO
D1700325-v1

H45 #4 screw, flat, 1/2"

H46 #4 lock washer

H47 #4 nut, nylon

H48 ins. should. washer

H49 #4 screw, flat, 1/2"

H50 #4 lock washer

H52 ins. should. washer

H51 #4 nut, nylon

Digi-Key
36-9605-ND

RF TTFSS Pre Amplifier

Title
Size A Number **D1700324** Revision **1**

Date: 7/17/2017 Sheet 2 of 2

File: D:\Users\...\RFTTFSSPreAmplifer2.SchDoc Drawn By: Daniel Sigg

Power

H63 #4 screw, flat, 1/2"

H64 #4 lock washer

H65 #4 nut

H66 insulator

Mouser
532-53-77-4ACG
H67 ins. should. washer

Mouser
532-7721-7PPS
M61 #4-40 1/4" flat

M62 #4-40 1/4" flat

M63 #4-40 1/4" flat

M64 #4-40 1/4" flat

H68 #4 standoff, 1/4"

H69 #4 standoff, 1/4"

H70 #4 standoff, 1/4"

H71 #4 standoff, 1/4"

H72 #4 lock washer

H73 #4 nut

H74 #4 lock washer

H75 #4 nut

H76 #4 lock washer

H77 #4 nut

H78 #4 lock washer

H79 #4 nut

PN26
Power pin, AWG 16-20

PN27
Power pin, AWG 16-20

Digi-Key
626-1140-ND

PN28
Power socket, AWG 16-20

Digi-Key
626-1144-ND

PN29
D-sub shell, 3W3C

Digi-Key
626-1098-ND

PN30
Jack screw
Newark
80K5431

PN31
Molex 4-pin
Digi-Key
WM2102-ND

PN32
Molex contact

PN33
Molex contact
Digi-Key
WM1114-ND

PN34
Molex 3-pin

PN35
Molex 3-pin
Digi-Key
WM2123-ND

PN36
Molex contact

PN37
Molex contact

PN38
Molex contact

PN39
Molex contact