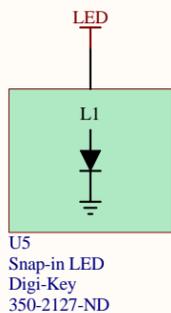
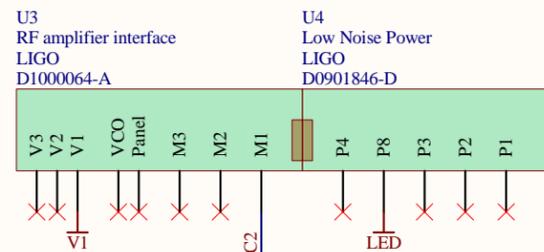


A1  
SMA 0dB attenuator  
Pasternack  
PE9103

A2  
SMA male-male  
Pasternack  
PE9069



CA1 SMA cable 7"  
EAM  
SMA cable 7"; both straight  
CA2 SMA cable 6"  
EAM  
SMA cable 6"; both straight  
CA3 SMA cable 6"  
EAM  
SMA cable 6"; both straight

- |                               |                            |                            |                      |                      |
|-------------------------------|----------------------------|----------------------------|----------------------|----------------------|
| H1 #2-56 flat head, 3/8"      | E1 #4-40 3/16" flat        | H11 Handle, 1.25"          | E12 #4-40 3/16" flat | E34 #4-40 3/16" flat |
| H2 #2-56 flat head, 3/8"      | E2 #4-40 3/16" flat        | H12 Handle, 1.25"          | E13 #4-40 3/16" flat | E35 #4-40 3/16" flat |
| H3 #2-56 flat head, 3/8"      | McMaster-Carr<br>91771A111 | Mouser<br>534-9106         | E14 #4-40 3/16" flat | E36 #4-40 3/16" flat |
| H4 #2-56 flat head, 3/8"      | E3 #6-32 1/4" flat         | H13 Ferrule                | E15 #4-40 3/16" flat | E37 #4-40 3/16" flat |
| McMaster-Carr<br>91771A105    | E4 #6-32 1/4" flat         | H14 Ferrule                | E16 #4-40 3/16" flat | E38 #4-40 3/16" flat |
|                               | E5 #6-32 1/4" flat         | H15 Ferrule                | E17 #4-40 3/16" flat | E39 #4-40 3/16" flat |
| H5                            | E6 BNC lock washer         | H16 Ferrule                | E18 #4-40 3/16" flat | E40 #4-40 3/16" flat |
| #6-32 pan, lock washer, 5/16" | E7 BNC nut                 | Mouser<br>534-9121         | E19 #4-40 3/16" flat | E41 #4-40 3/16" flat |
| H6                            | E8 BNC lock washer         | M1 #6-32 1/4" flat         | E20 #4-40 3/16" flat | E42 #4-40 3/16" flat |
| #6-32 pan, lock washer, 5/16" | E9 BNC nut                 | M2 #6-32 1/4" flat         | E21 #4-40 3/16" flat | E43 #4-40 3/16" flat |
| H7                            | E10 BNC lock washer        | M3 #6-32 1/4" flat         | E22 #4-40 3/16" flat | E44 #4-40 3/16" flat |
| #6-32 pan, lock washer, 5/16" | E11 BNC nut                | M4 #6-32 1/4" flat         | E23 #4-40 3/16" flat | E45 #4-40 3/16" flat |
| H8                            |                            | M5 #6-32 1/4" flat         | E24 #4-40 3/16" flat | E46 #4-40 3/16" flat |
| #6-32 pan, lock washer, 5/16" |                            | M6 #6-32 1/4" flat         | E25 #4-40 3/16" flat | E47 #4-40 3/16" flat |
| H9                            |                            | McMaster-Carr<br>91099A205 | E26 #4-40 3/16" flat | E48 #4-40 3/16" flat |
| #6-32 pan, lock washer, 5/16" |                            | M7 #6-32 3/8" flat         | E27 #4-40 3/16" flat | E49 #4-40 3/16" flat |
| H10                           |                            | M8 #6-32 3/8" flat         | E28 #4-40 3/16" flat | E50 #4-40 3/16" flat |
| #6-32 pan, lock washer, 5/16" |                            | M9 #6-32 3/8" flat         | E29 #4-40 3/16" flat | E51 #4-40 3/16" flat |
| McMaster-Carr<br>93405A145    |                            | M10 #6-32 3/8" flat        | E30 #4-40 3/16" flat | E52 #4-40 3/16" flat |
|                               |                            | McMaster-Carr<br>91099A215 | E31 #4-40 3/16" flat | E53 #4-40 3/16" flat |
|                               |                            |                            | E32 #4-40 3/16" flat | E54 #4-40 3/16" flat |
|                               |                            |                            | E33 #4-40 3/16" flat | E55 #4-40 3/16" flat |

RF modules need to be mounted on mounting plate.

Cables C1 to C3 are flexible semi-rigid RG405.  
Cables require SMA connectors on both ends. Red dot marks R/A connector.

Cables V1 is twisted pair and soldered to the amplifier.  
Solder 10nF across each power terminal.

The position A1 at the inside of J1 is used to adjust power levels by adding a fixed attenuators:  
Pasternack PE7161/PE7001 instead of PE9103, or Mini-Circuits BW-SxW2+ series.

C1: L=7", Belden 1671A with SMA Male and SMA Male  
C2/C3: L=6", Belden 1671A with SMA Male and SMA Male

PN1  
Cable, 1 pair, shielded  
Mouser  
566-9501-100  
V1 cables

PN2 Mounting Plate  
LIGO  
D1002181-v1

PN3 IU chassis  
LIGO  
D1001098-v1

PN4 Front Panel  
LIGO  
D1002179-v1

PN5 Rear Panel  
LIGO  
D1002180-v1

Title <b>RF Frequency Doubler</b>		
Size B	Number <b>D1002178</b>	Revision <b>1</b>
Date: 8/13/2010	Sheet 1 of 2	
File: C:\Users\...\RFFrequencyDoubler1.SchDoc	Drawn By: Daniel Sigg	