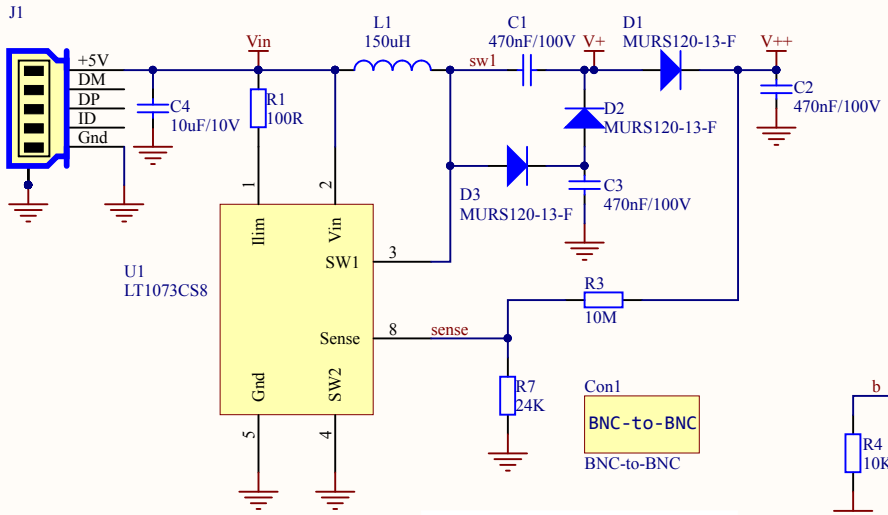
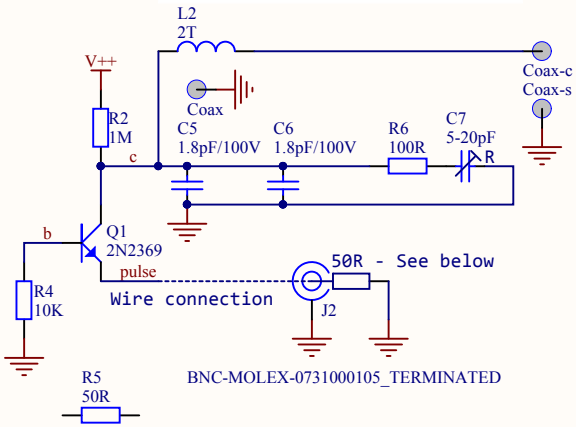


Adjust C5, C6, C7 to obtain appropriate magnitude of pulse. Can also replace C5 & C6 with 50R co-axial cable directly soldered to Q1 case and ground plane to extend pulse.

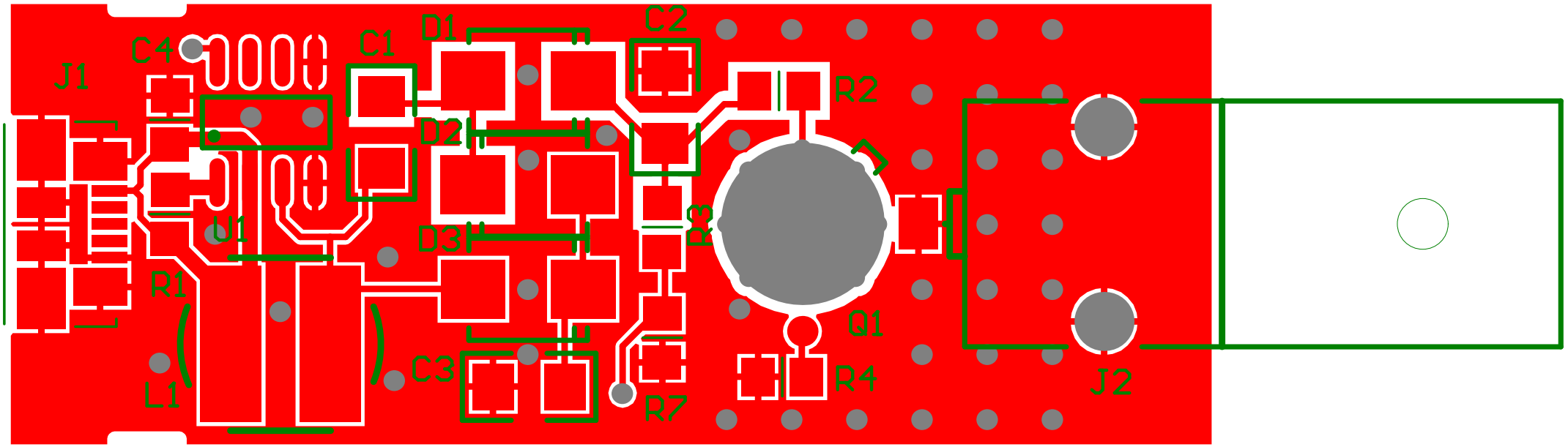


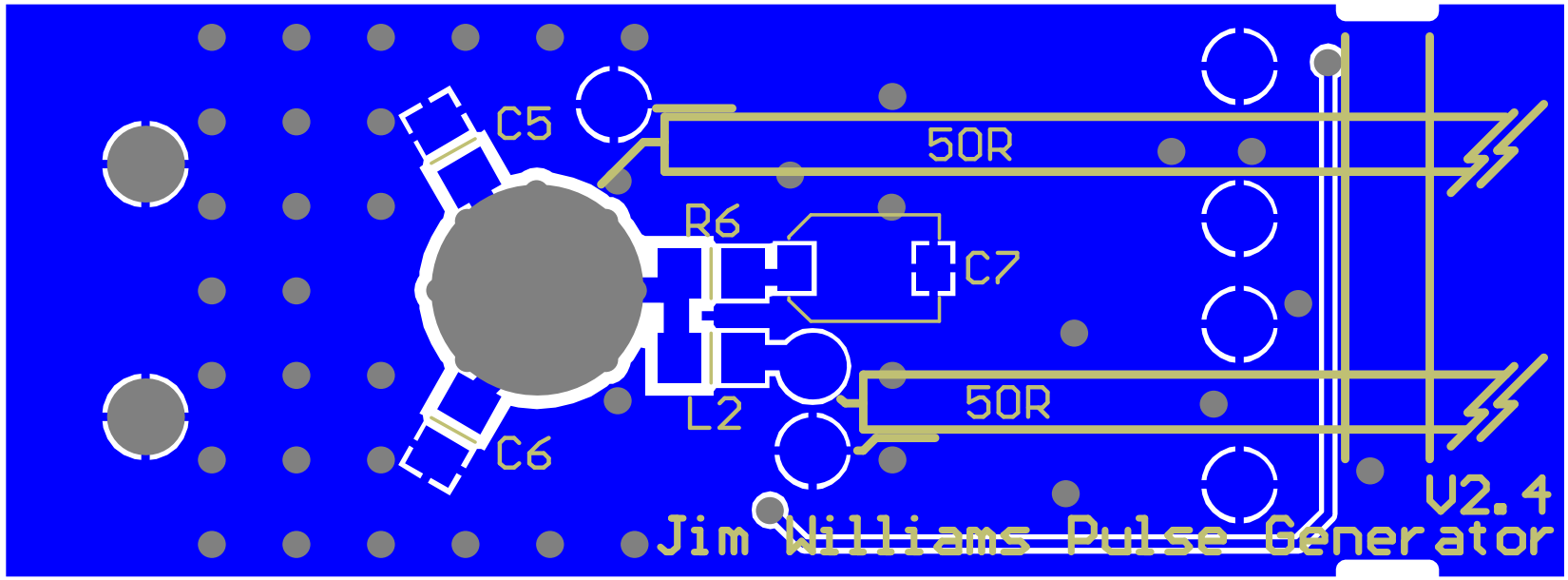
R5 is mounted between BNC centre and ground plane

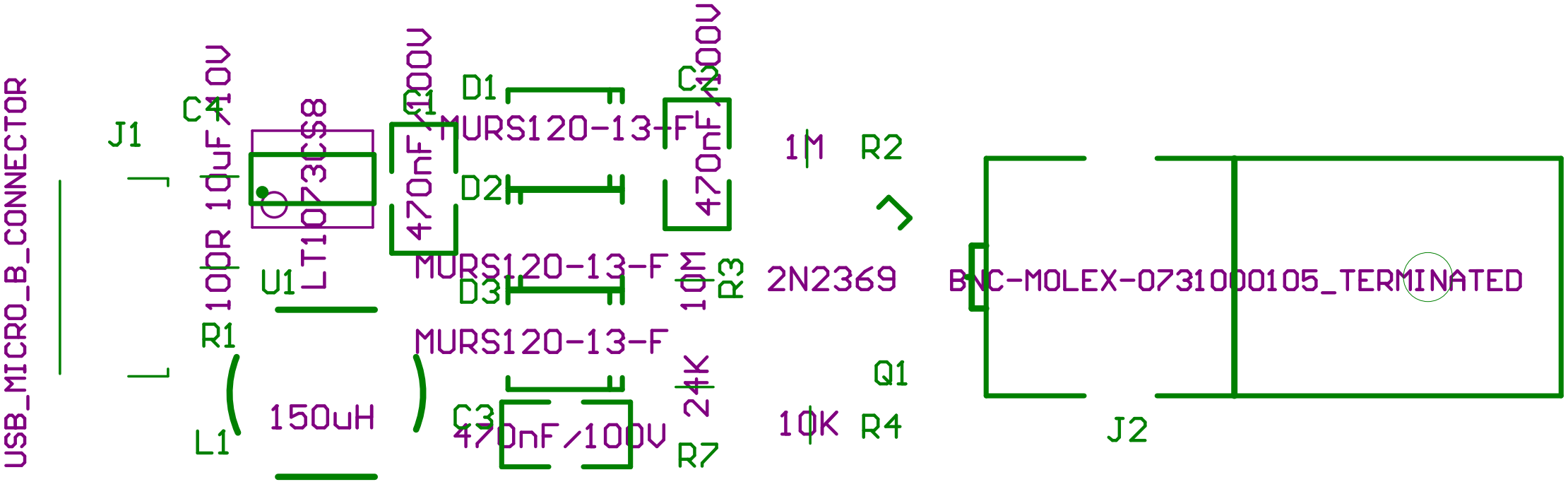
V2.0 - Revised
V2.1 - Added delay line hooks
V2.3 - Added mechanical vias for Q1
V2.4 - Added variable cap

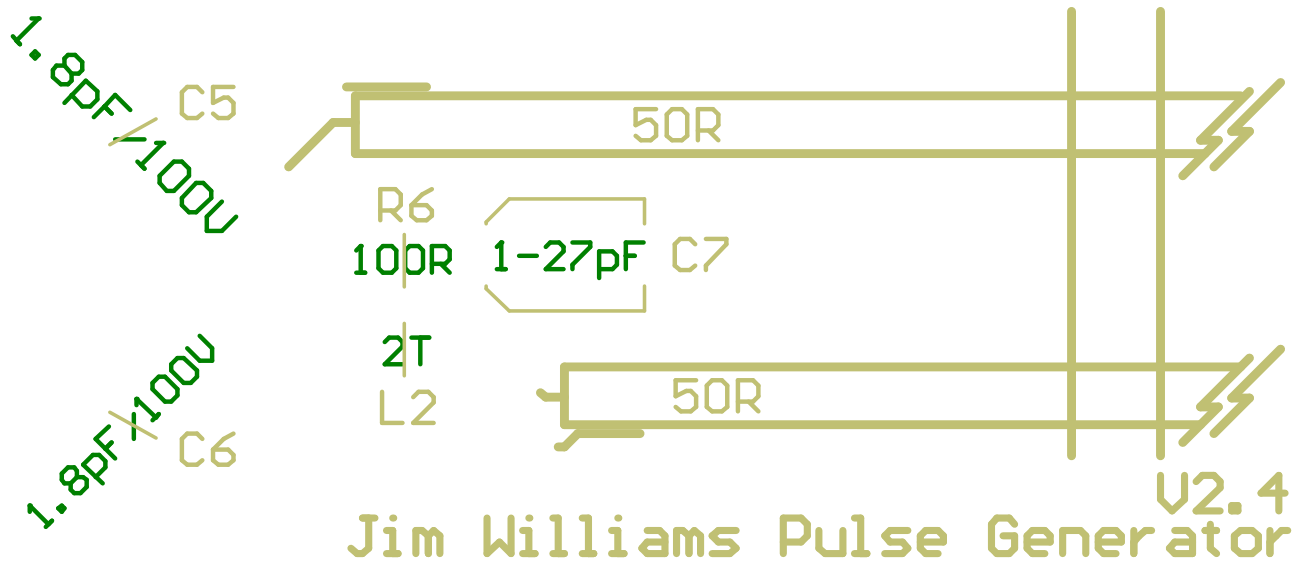
May need to try several 2N2369s to obtain one that avalanches in a suitable fashion.
Try to obtain from different batches (suppliers)

Title: Jim Williams Pulse Generator		
Size: A4	Number:	Revision: V2.4
Date: 2/03/2017		Sheet of
File: C:\Users\..\Pulser.SchDoc		Drawn By:


J1
C4
C1
D1
C2
R2
D2
U1
D3
R1
Q1
C3
R4
L1
R7
J2


C5
50R
R6
C7
L2
50R
C6
V2.4
Jim Williams Pulse Generator


USB_MICRO_B_CONNECTOR
J1
C4
10uF/10V
R1
100R
U1
LT1073CS8
L1
150uH
C1
470nF/100V
D1
MURS120-13-F
D2
MURS120-13-F
D3
MURS120-13-F
C3
470nF/100V
C2
470nF/100V
R3
10M
R7
24K
1M
R2
2N2369
Q1
10K
R4
BNC-MOLEX-0731000105_TERMINATED
J2


1.8pF/100V
C5
50R
R6
100R
1-27pF
C7
2T
L2
50R
1.8pF/100V
C6
V2.4
Jim Williams Pulse Generator

Bill of Materials

Bill of Materials For Project [Pulser.PrjPCB] (No PCB Document Selected)

Source Data From:		**Pulser.PrjPCB**
Project:		**Pulser.PrjPCB**
Variant:		**None**
Creation Date:	2/03/2017	10:52:52 PM
Print Date:	02-Mar-17	10:52:57 PM

Footprint	Comment	Farnell PN	Digikey	Designator	Description	Quantity
CCNP3216-1206	470nF/100V	2497173		C1, C2, C3	Capacitor	3
CCNP2012-0805	10uF/10V			C4	Capacitor SMT 0805	1
CCNP2012-0805	1.8pF/100V	2672812		C5, C6	Capacitor	2
CAP_TRIM_SMT_TZC3	5-20pF	9528652		C7	Trimmer Capacitor muRata TZC3 series	1
BNC-to-BNC	BNC-to-BNC	4195255		Con1		1
SMB_Diode	MURS120-13-F	1858618		D1, D2, D3	Fast / Ultrafast Diode, 200 V, 1 A	3
MOLEX - 47346-0001	USB_MICRO_B_CONNECTOR	1568026		J1	USB Micro-B Connector	1
BNC_RA CON - Molex - Resistor	BNC-MOLEX-0731000105_TERMINATED	1418237	WM5524-ND	J2	BNC Connector	1
INDUCTOR_SMT	150uH	1864148		L1	Inductor - SMT 3mm	1
CL2012-0805	2T			L2	Resistor	1
TO-18-flush	2N2369	9206850		Q1	High Speed Switching Transistor	1
CR2012-0805	100R			R1, R6	Resistor	2
CR2012-0805	1M			R2	Resistor	1
CR2012-0805	10M			R3	Resistor	1
CR2012-0805	10K			R4	Resistor	1
CR3216-1206	50R			R5	Resistor	1
CR2012-0805	24K			R7	Resistor	1
SO-8_L	LT1073CS8	1273663		U1	Micropower DC/DC Converter (Adjustable, 212mV reference)	1
						24

Approved **Notes**