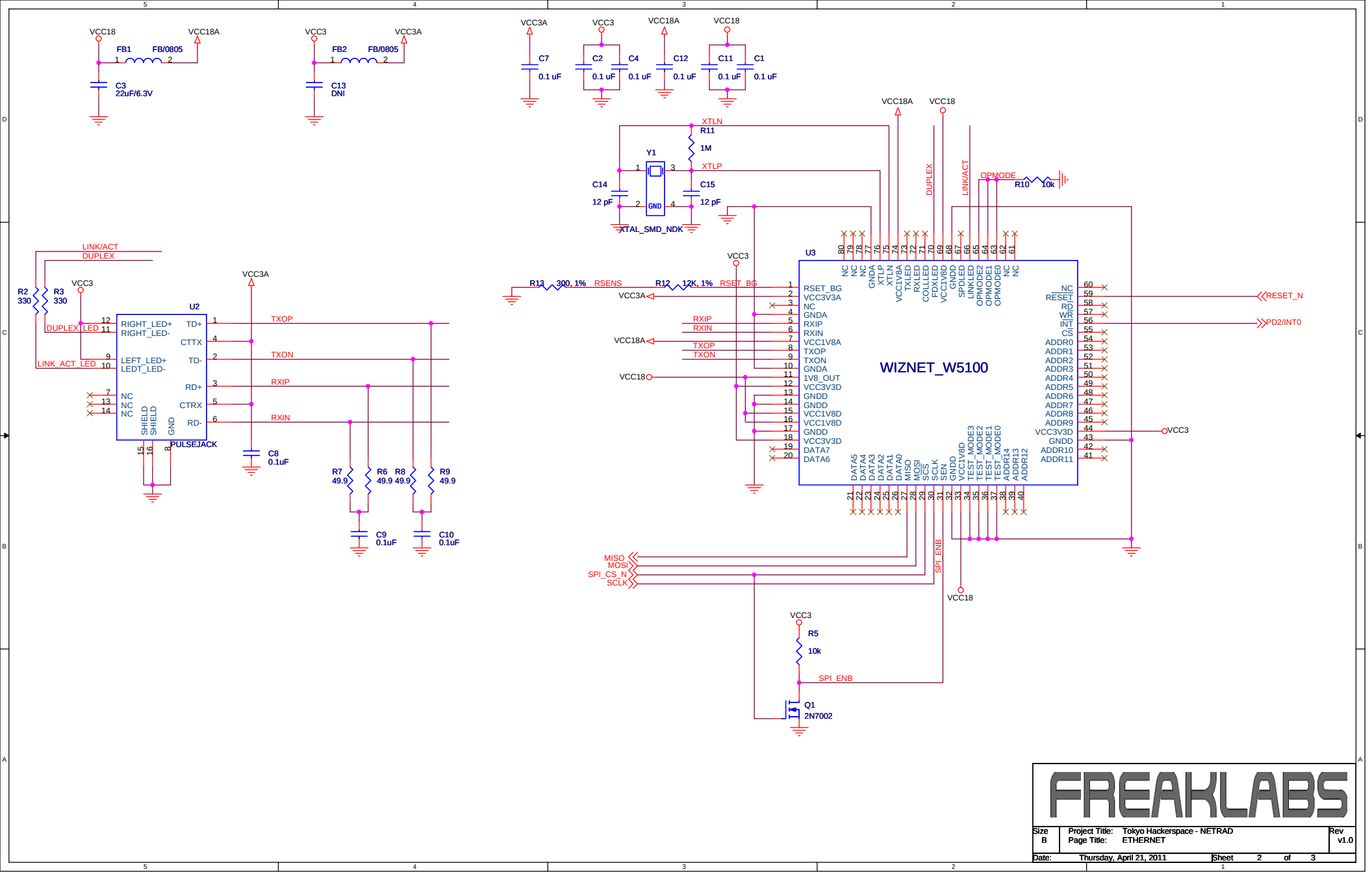
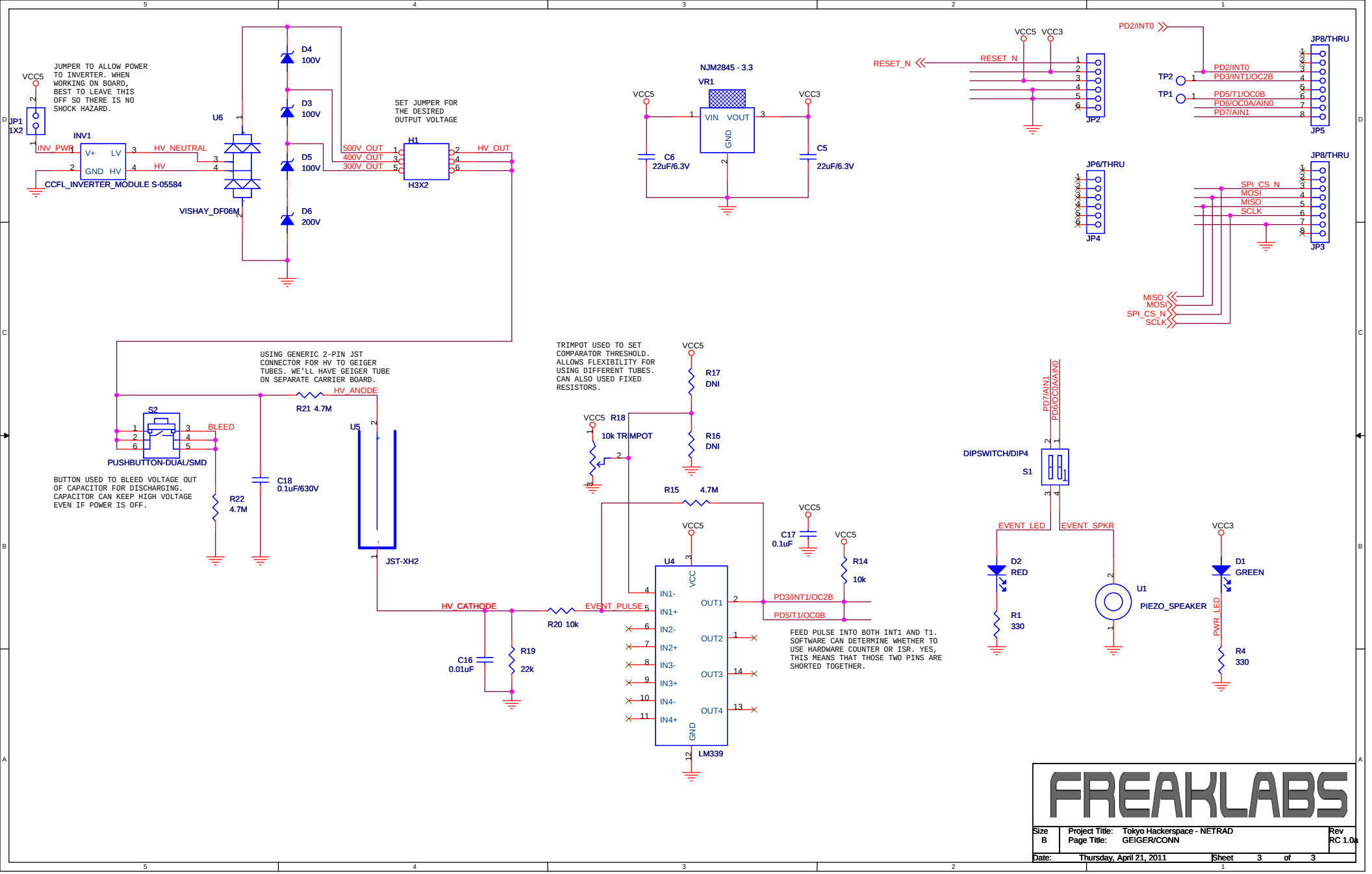


FREAKLABS

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JUMPER TO ALLOW POWER TO INVERTER. WHEN WORKING ON BOARD, BEST TO LEAVE THIS OFF SO THERE IS NO SHOCK HAZARD.
VCC5
JP1
1X2
INV1
INV_PWR
V+
LV
GND
HV
HV_NEUTRAL
HV
CCFL_INVERTER_MODULE S-05584
U6
VISHAY_DF06M
D4
100V
D3
100V
D5
100V
D6
200V
SET JUMPER FOR THE DESIRED OUTPUT VOLTAGE
500V_OUT
400V_OUT
300V_OUT
H1
H3X2
HV_OUT
NJM2845 - 3.3
VR1
VIN
VOUT
GND
VCC5
VCC3
C6
22uF/6.3V
C5
22uF/6.3V
RESET_N
JP2
PD2/INT0
PD3/INT1/OC2B
PD5/T1/OC0B
PD6/OC0A/AIN0
PD7/AIN1
TP2
TP1
JP5
JP8/THRU
JP6/THRU
JP4
SPI_CS_N
MOSI
MISO
SCLK
JP3
USING GENERIC 2-PIN JST CONNECTOR FOR HV TO GEIGER TUBES. WE'LL HAVE GEIGER TUBE ON SEPARATE CARRIER BOARD.
HV_ANODE
R21 4.7M
S2
PUSHBUTTON-DUAL/SMD
BLEED
BUTTON USED TO BLEED VOLTAGE OUT OF CAPACITOR FOR DISCHARGING. CAPACITOR CAN KEEP HIGH VOLTAGE EVEN IF POWER IS OFF.
R22
4.7M
C18
0.1uF/630V
U5
JST-XH2
TRIMPOT USED TO SET COMPARATOR THRESHOLD. ALLOWS FLEXIBILITY FOR USING DIFFERENT TUBES. CAN ALSO USED FIXED RESISTORS.
R17
DNI
R18
10k TRIMPOT
R16
DNI
R15
4.7M
C17
0.1uF
R14
10k
U4
VCC
GND
IN1-
IN1+
IN2-
IN2+
IN3-
IN3+
IN4-
IN4+
OUT1
OUT2
OUT3
OUT4
LM339
HV_CATHODE
EVENT_PULSE
R20 10k
C16
0.01uF
R19
22k
PD3/INT1/OC2B
PD5/T1/OC0B
FEED PULSE INTO BOTH INT1 AND T1. SOFTWARE CAN DETERMINE WHETHER TO USE HARDWARE COUNTER OR ISR. YES, THIS MEANS THAT THOSE TWO PINS ARE SHORTED TOGETHER.
DIPSWITCH/DIP4
S1
EVENT_LED
EVENT_SPKR
D2
RED
R1
330
U1
PIEZO_SPEAKER
D1
GREEN
PWR_LED
R4
330
FREAKLABS
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