



NOTES:

- Only use parts with appropriate rating due to high voltage/power requirement.
- 500K Vset pot (RV2) must be rated for 400V/1W or over (example: 53C3500K)
- All 3 power devices, Q1/Q2/Q4, as well as U2, must be mounted to a HS.
- Q1/Q2 max power dissipation of 40W/device (5V/150mA load). Q4 max 4W. U2 max power 2W
- RV1: fine voltage adj (0-40V), RV2: coarse voltage adj (0-400V)
- RV3: current limit adj (0-300mA). NOTE: >150mA will exceed power dissipation limits at low Vout values (<200V)

NOTES:

- All resistors are 1/8W, capacitors are 25V, unless stated otherwise
- HS's mandatory for MIC29302 LDO's (<30W combined), Q5 can be left without a HS (<0.5W dissipation)
- Single 4PDT toggle switch for SW1-SW4. Can use 1004P1T1B1M1QE/M2042E1W01/M2042E1W01 (flathead) for off-board (panel) mounting, or 1004P3T2B4M7QE for on-board switch mounting.
- Fault notification D8 (voltage dropout/thermal/etc) and mode notification D9/D10 (6.3V/12.6V mode)
- RV4: fine voltage adj (+/-0.5V)

- NOTES:**
- AS-3T325 from AntekInc is a good match with plenty of power and reasonable price. AS-2T350 can be used as an alternative, especially in 60Hz main countries
 - Purple wire is shield, connect to mains ground
 - With primaries in series (230V)/parallel (115V)

Danger! high-voltages present, use at your own risk. Only use appropriately rated parts. Stated power/voltage values are the minimum recommended values
 Heater 6.3VDC(<8A)/12.6VDC(<4A) with fault & mode LED notification
 Designed for 50V<Vout<400V, 0mA<Iout<150mA. Can be extended with parts modification
Anatoli Mordakhay • www.TolisDIY.com

Sheet: /	
File: HV_Programmable_PS.sch	
Title: High Voltage Programmable Power-Supply	
Size: User	Date: 2019-05-18
KiCad E.D.A.	Rev: 0.1
kiCad 4.0.6	Id: 1/1