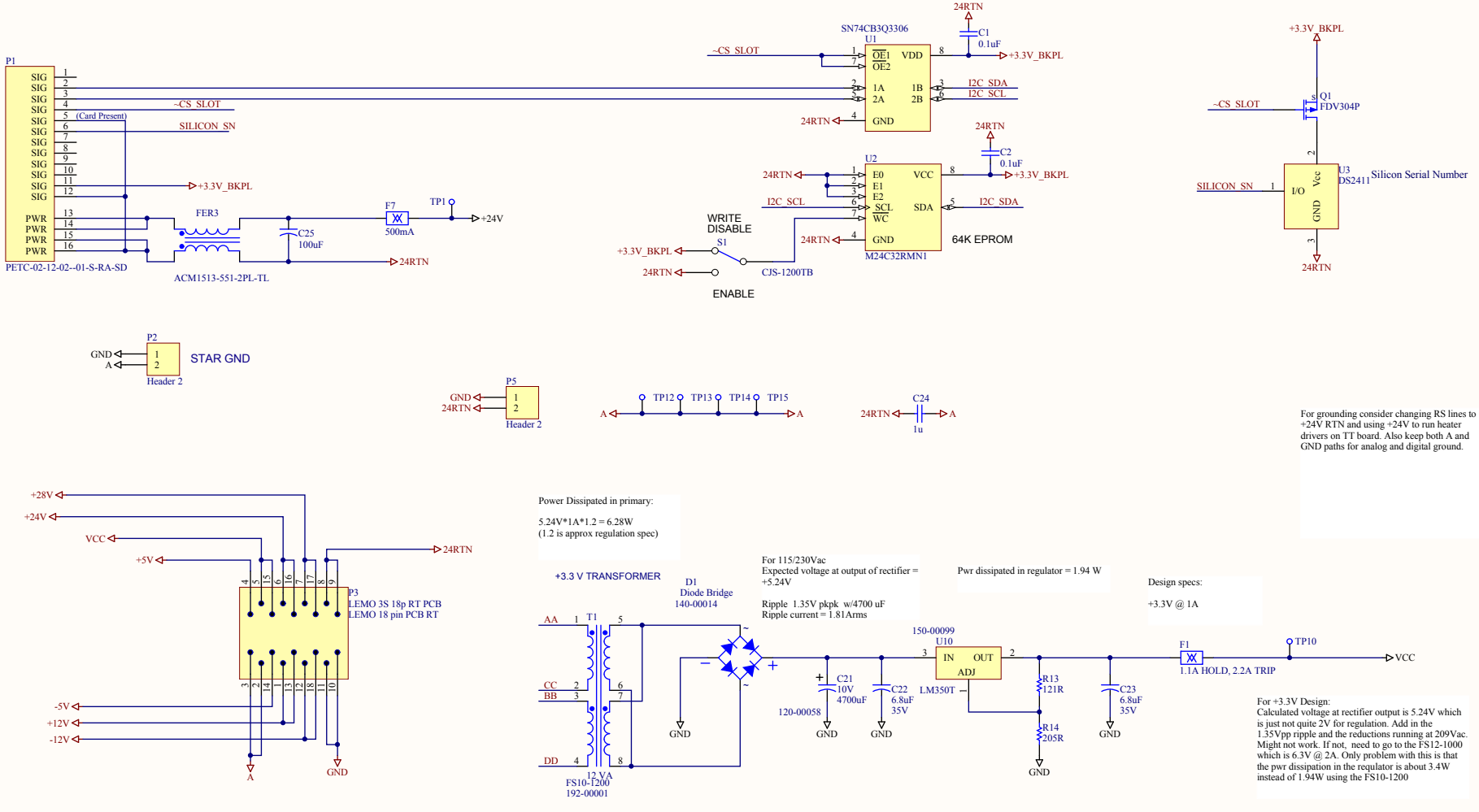
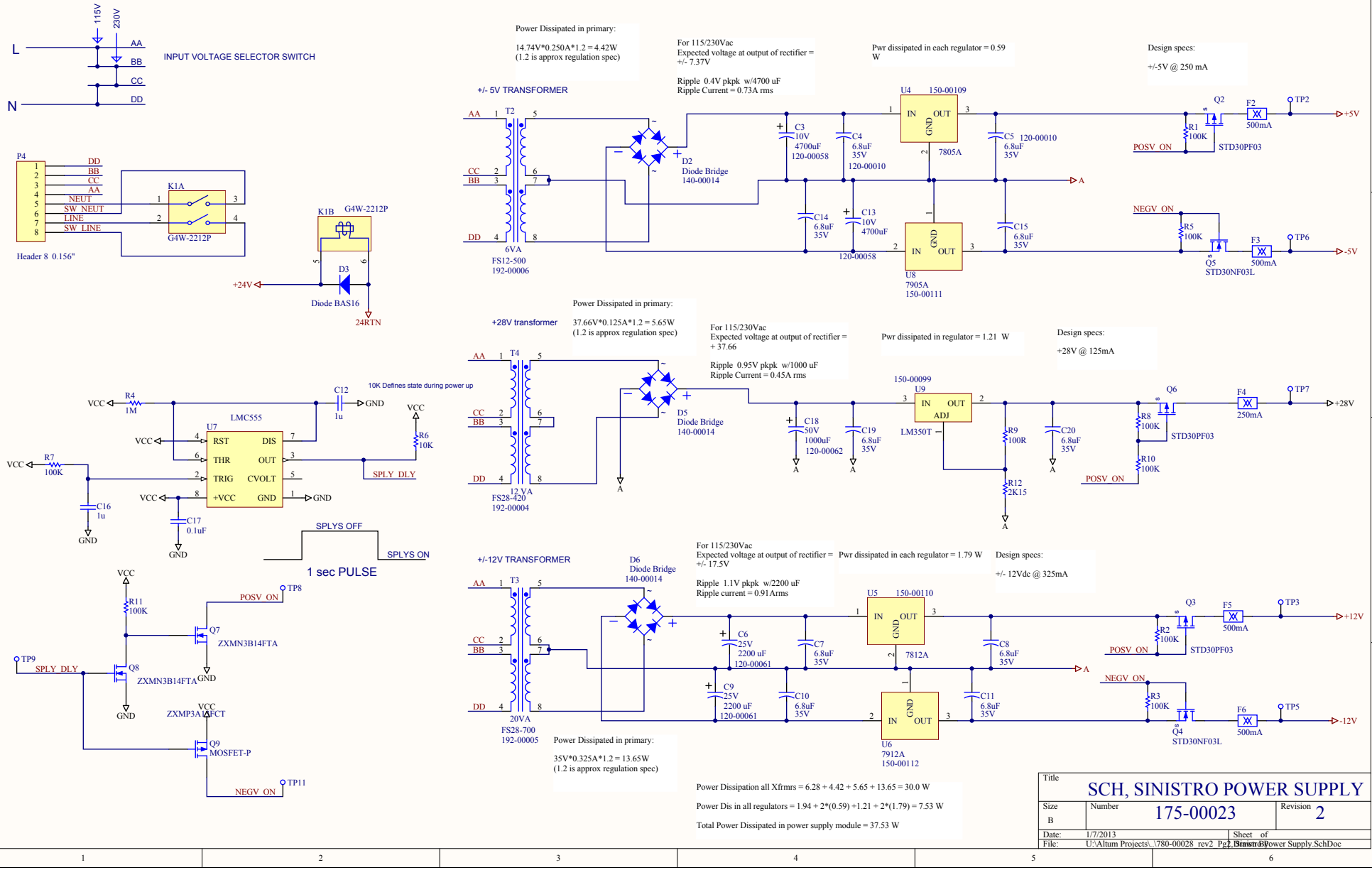


Title	SCH, SINISTRO POWER SUPPLY	
Size: B	Number: 175-00023	Revision: 2
Date: 1/7/2013	Sheet of	
File: U:\Altum Projects\..\780-00028_rev2_Pg1_Sinistro Power Supply.SchDoc		


INPUT VOLTAGE SELECTOR SWITCH
115V
230V
L
N
AA
BB
CC
DD
P4
NEUT
SW_NEUT
LINE
SW_LINE
K1A
G4W-2212P
Header 8 0.156"
K1B G4W-2212P
D3
Diode BAS16
+24V
24RTN
Power Dissipated in primary:
14.74V*0.250A*1.2 = 4.42W
(1.2 is approx regulation spec)
For 115/230Vac
Expected voltage at output of rectifier = +/- 7.37V
Ripple 0.4V pkpk w/4700 uF
Ripple Current = 0.73A rms
Pwr dissipated in each regulator = 0.59 W
Design specs:
+/-5V @ 250 mA
+/- 5V TRANSFORMER
T2
6VA
FS12-500
192-00006
D2
Diode Bridge
140-00014
U4 150-00109
7805A
U8
7905A
150-00111
C3 10V 4700uF 120-00058
C4 6.8uF 35V 120-00010
C5 120-00010 6.8uF 35V
C13 10V 4700uF
120-00058
C14 6.8uF 35V
C15 6.8uF 35V
Q2
F2 500mA
TP2
+5V
R1 100K
POSV_ON
STD30PF03
NEGV_ON
R5 100K
Q5
STD30NF03L
F3 500mA
TP6
-5V
+28V transformer
Power Dissipated in primary:
37.66V*0.125A*1.2 = 5.65W
(1.2 is approx regulation spec)
For 115/230Vac
Expected voltage at output of rectifier = + 37.66
Ripple 0.95V pkpk w/1000 uF
Ripple Current = 0.45A rms
Pwr dissipated in regulator = 1.21 W
Design specs:
+28V @ 125mA
T4
12 VA
FS28-420
192-00004
D5
Diode Bridge
140-00014
U9 150-00099
LM350T
ADJ
C18 50V 1000uF 120-00062
C19 6.8uF 35V
R9 100R
R12 2K15
C20 6.8uF 35V
Q6
R8 100K
R10 100K
STD30PF03
F4 250mA
TP7
+28V
10K Defines state during power up
R4 1M
C12 1u
R6 10K
R7 100K
C16 1u
C17 0.1uF
U7
LMC555
RST
DIS
THR
OUT
TRIG
CVOLT
+VCC
GND
SPLY_DLY
SPLYS OFF
SPLYS ON
1 sec PULSE
+/-12V TRANSFORMER
T3
20VA
FS28-700
192-00005
D6
Diode Bridge
140-00014
U5 150-00110
7812A
U6
7912A
150-00112
C6 25V 2200 uF 120-00061
C7 6.8uF 35V
C8 6.8uF 35V
C9 25V 2200 uF 120-00061
C10 6.8uF 35V
C11 6.8uF 35V
For 115/230Vac
Expected voltage at output of rectifier = +/- 17.5V
Ripple 1.1V pkpk w/2200 uF
Ripple current = 0.91Arms
Pwr dissipated in each regulator = 1.79 W
Design specs:
+/- 12Vdc @ 325mA
Q3
R2 100K
STD30PF03
F5 500mA
TP3
+12V
R3 100K
Q4
STD30NF03L
F6 500mA
TP5
-12V
Power Dissipated in primary:
35V*0.325A*1.2 = 13.65W
(1.2 is approx regulation spec)
Power Dissipation all Xfrmrs = 6.28 + 4.42 + 5.65 + 13.65 = 30.0 W
Power Dis in all regulators = 1.94 + 2*(0.59) +1.21 + 2*(1.79) = 7.53 W
Total Power Dissipated in power supply module = 37.53 W
Q7
ZXMN3B14FTA
Q8
ZXMN3B14FTA
ZXMP3A17FCT
Q9
MOSFET-P
TP8
TP9
TP11
R11 100K
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