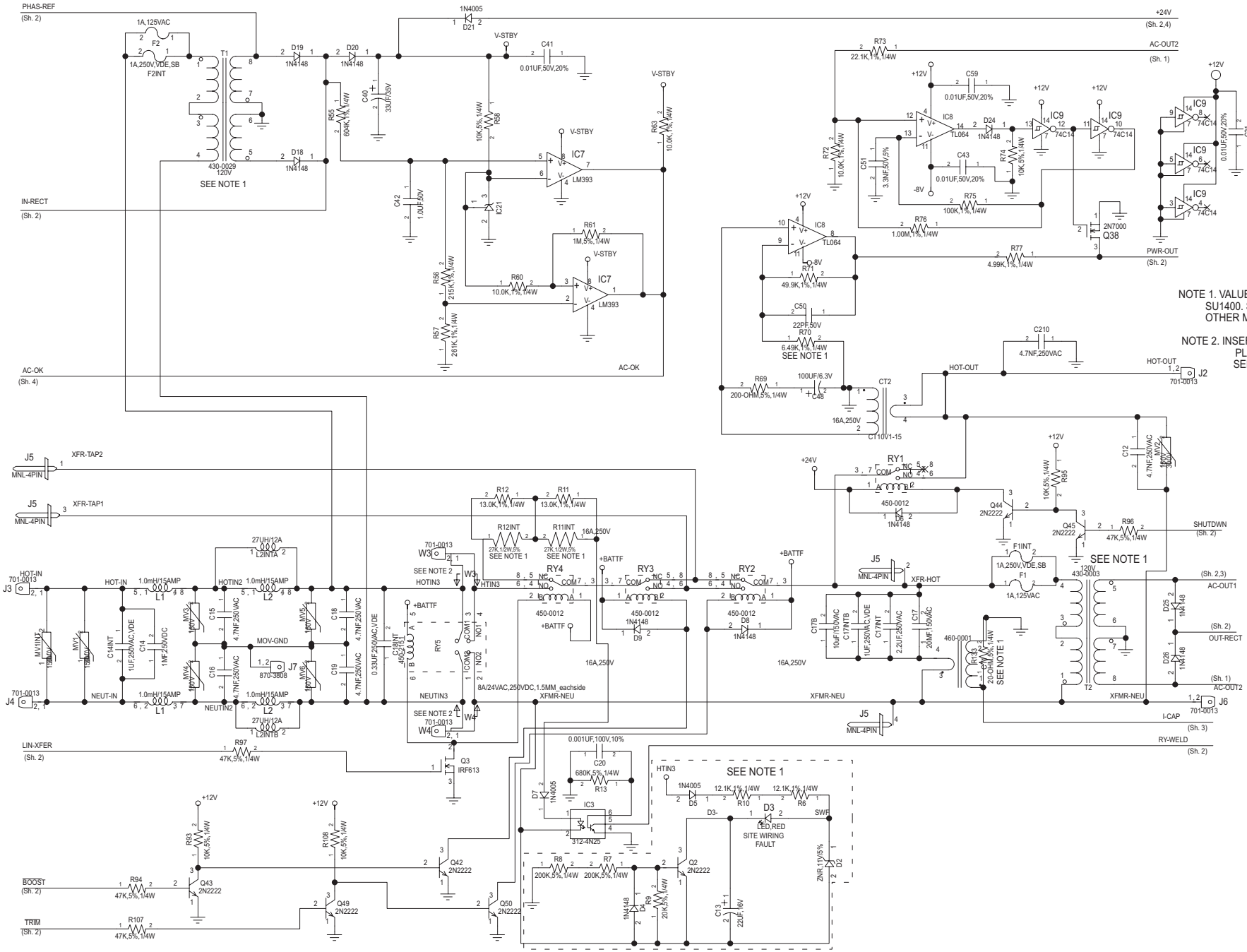
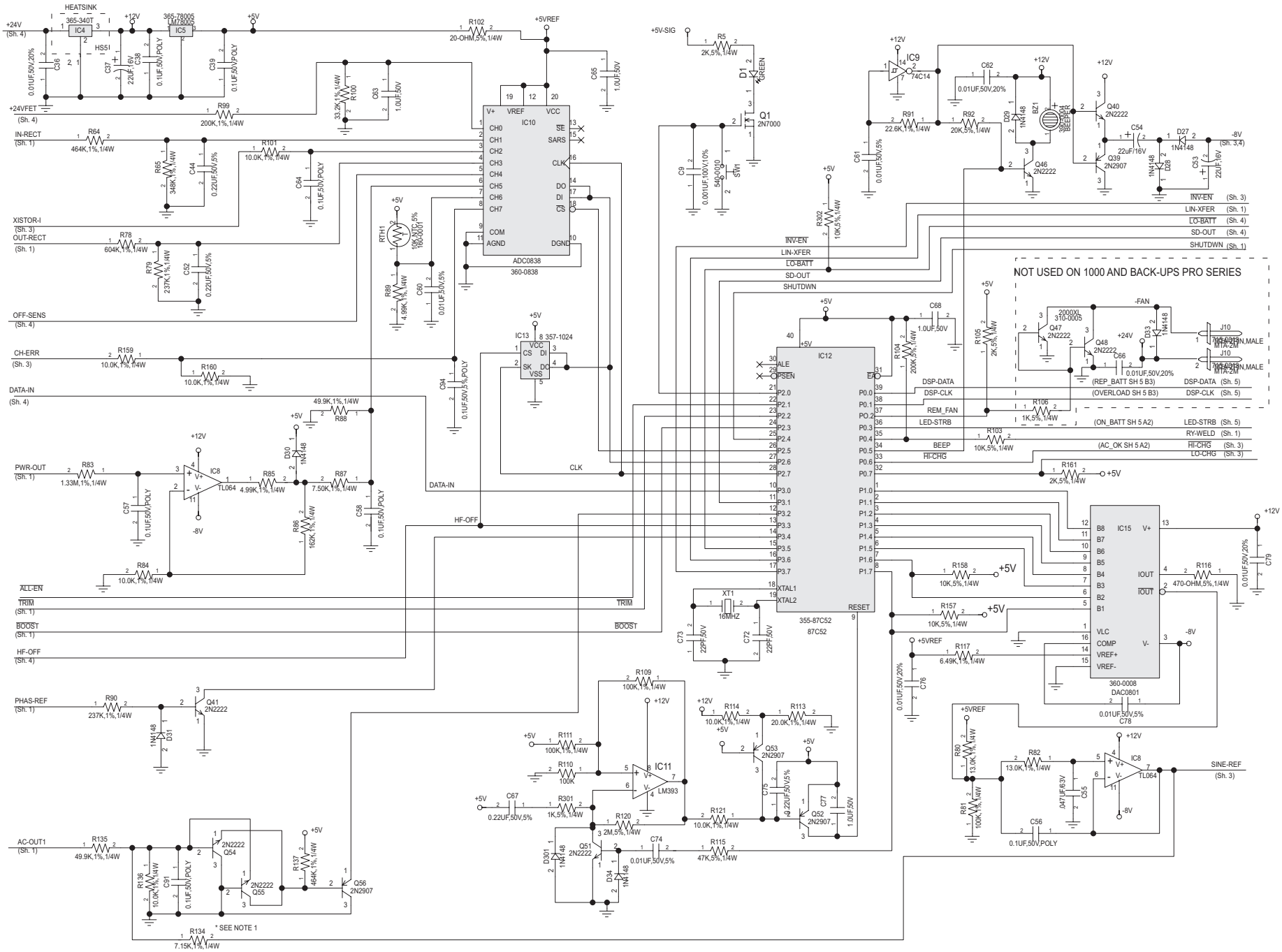
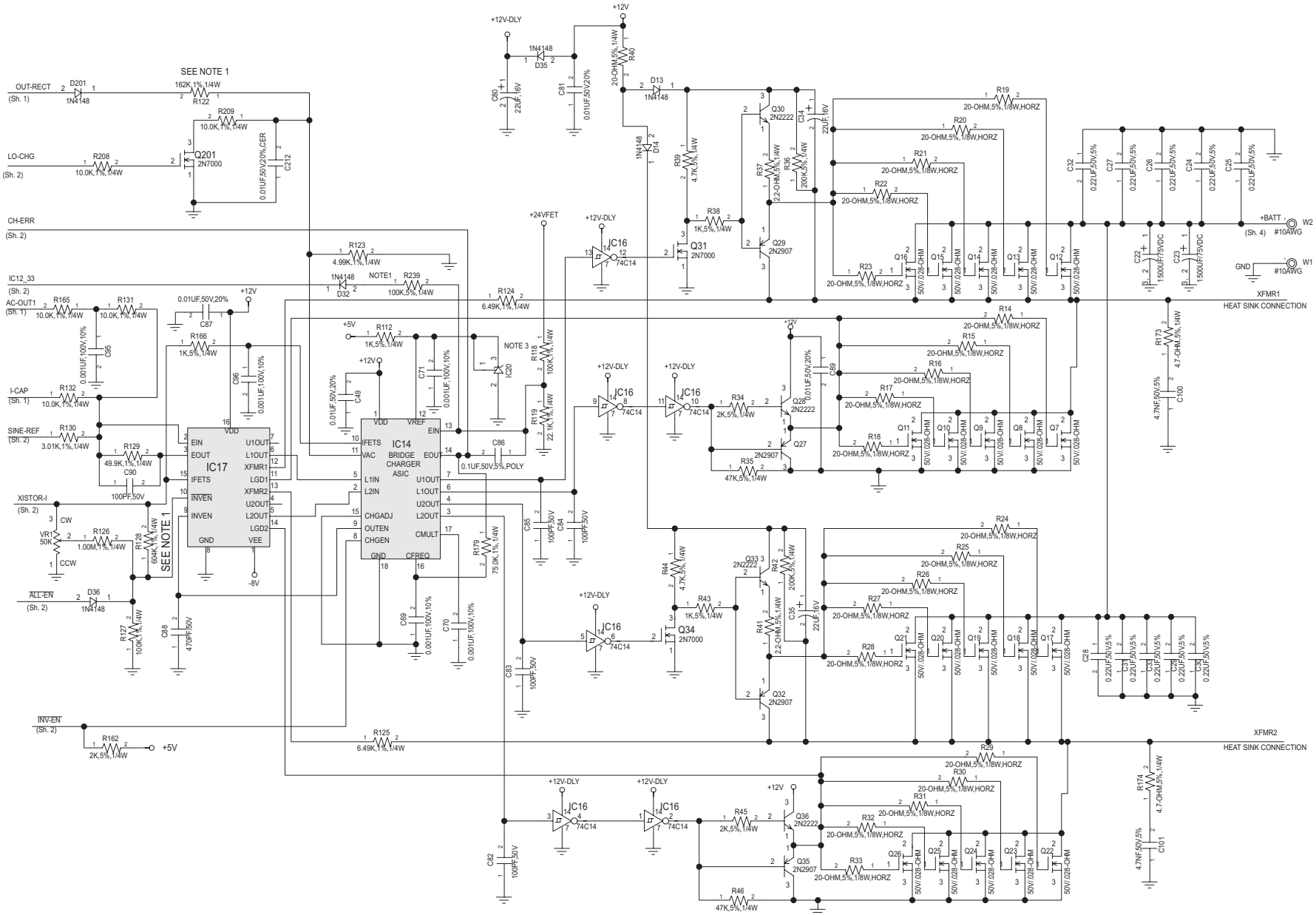
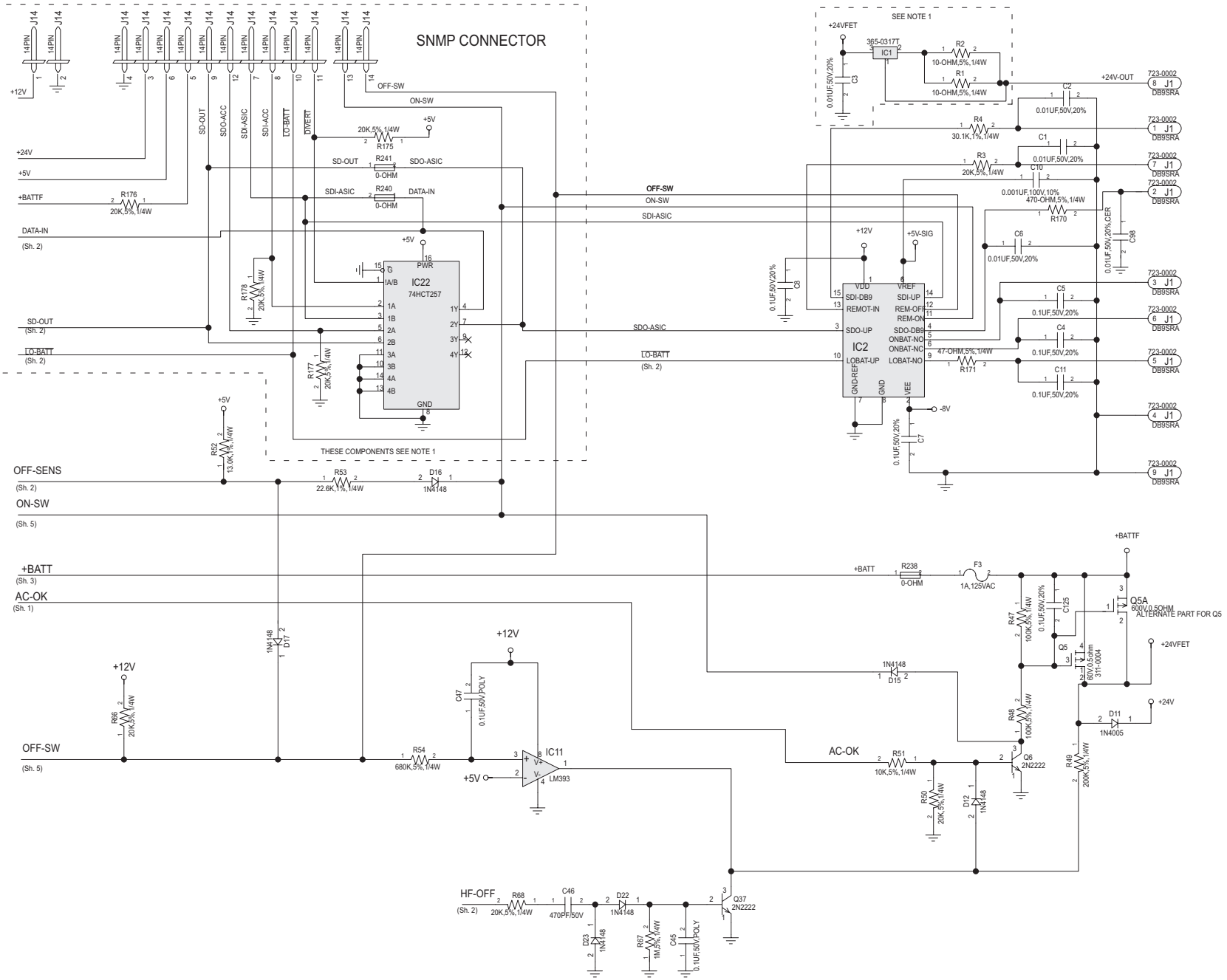
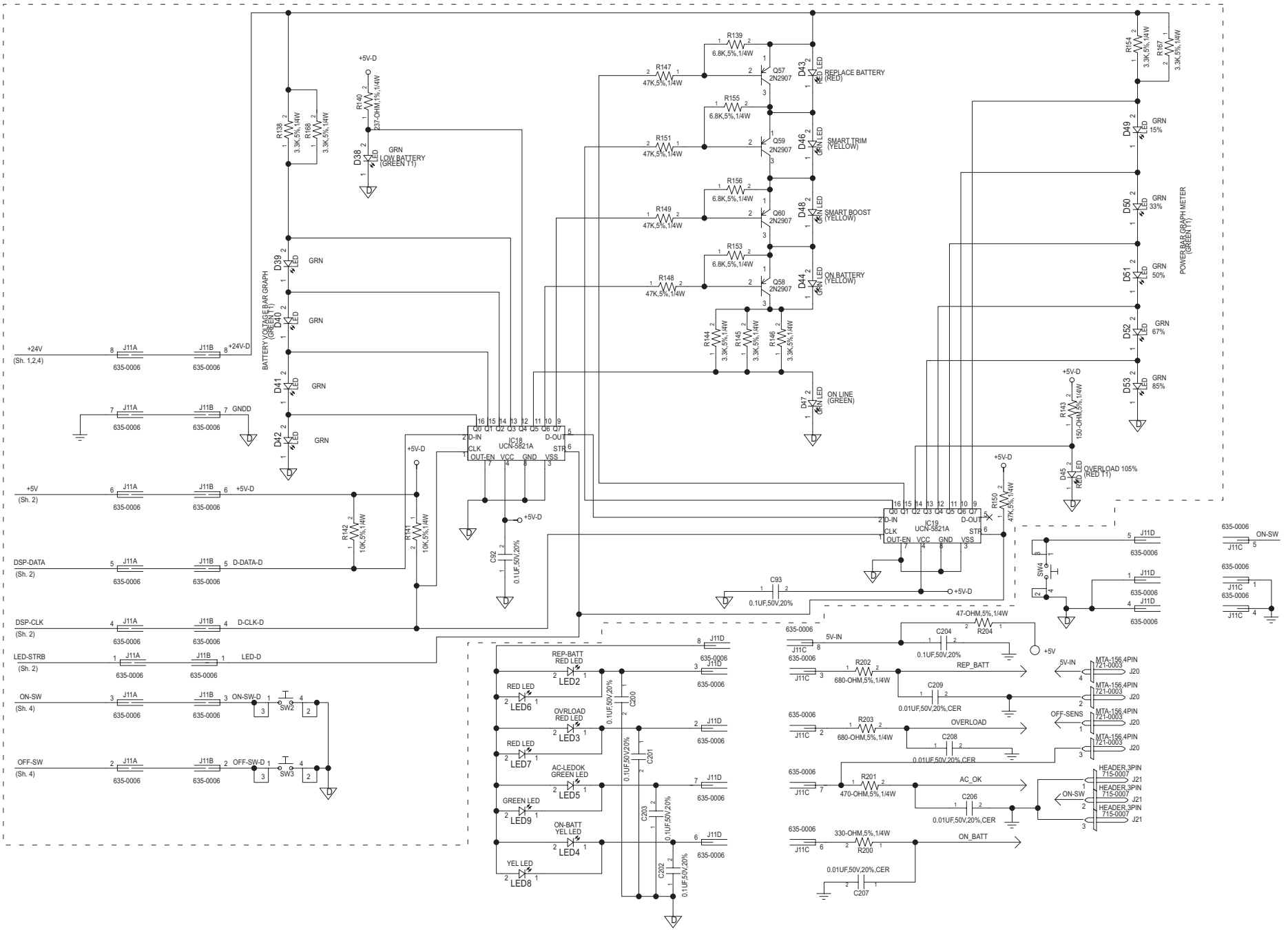

PHAS-REF
(Sh. 2)
1A,125VAC
F2
1A,250V,VDE,SB
F2INT
T1
430-0029
120V
SEE NOTE 1
D19
1N4148
D20
1N4148
D18
1N4148
1N4005
D21
+24V
(Sh. 2,4)
V-STBY
C41
0.01UF,50V,20%
C40
33UF/35V
R55
604K,1%,1/4W
R56
215K,1%,1/4W
R57
261K,1%,1/4W
R58
10K,5%,1/4W
R63
10.0K,1%,1/4W
IC7
LM393
IC21
C42
1.0UF,50V
R61
1M,5%,1/4W
R60
10.0K,1%,1/4W
IN-RECT
(Sh. 2)
AC-OK
(Sh. 4)
AC-OK
R73
22.1K,1%,1/4W
AC-OUT2
(Sh. 1)
+12V
C59
0.01UF,50V,20%
IC8
TL064
D24
1N4148
IC9
74C14
R72
10.0K,1%,1/4W
C51
3.3NF,50V,5%
R74
10K,5%,1/4W
C43
0.01UF,50V,20%
-8V
R75
100K,1%,1/4W
R76
1.00M,1%,1/4W
2N7000
Q38
PWR-OUT
(Sh. 2)
R77
4.99K,1%,1/4W
R71
49.9K,1%,1/4W
C50
22PF,50V
R70
6.49K,1%,1/4W
SEE NOTE 1
C21
0.01UF,50V,20%
NOTE 1. VALUES SHOWN FOR SU1400. SEE BOM FOR OTHER MODEL VALUES.
NOTE 2. INSERT W1,W2 IN PLACE OF RELAY SEE BOM
C210
4.7NF,250VAC
HOT-OUT
HOT-OUT
1,2
J2
701-0013
R69
200-OHM,5%,1/4W
100UF/6.3V
C48
CT2
16A,250V
CT10V1-15
J5
MNL-4PIN
XFR-TAP2
XFR-TAP1
RY1
450-0012
D6
1N4148
Q44
2N2222
Q45
2N2222
R95
10K,5%,1/4W
R96
47K,5%,1/4W
SHUTDWN
(Sh. 2)
SEE NOTE 1
C12
4.7NF,250VAC
MV2
HOT-IN
701-0013
J3
NEUT-IN
J4
HOTIN2
HOTIN3
NEUTIN2
NEUTIN3
1.0mH/15AMP
L1
L2
27UH/12A
L2INTA
L2INTB
MV1
MV2
MV3
MV4
MV5
MV6
MV1INT
MV4INT
150V
C14INT
1UF,250VAC,VDE
C14
1MF,250VDC
C15
C16
C18
C19
4.7NF,250VAC
MOV-GND
1,2
J7
870-3808
C18INT
.33UF,250VAC,VDE
R12
13.0K,1%,1/4W
R11
13.0K,1%,1/4W
R12INT
R11INT
27K,1/2W,5%
SEE NOTE 1
16A,250V
W3
W4
SEE NOTE 2
701-0013
RY2
RY3
RY4
RY5
450-0012
D8
D9
1N4148
+BATTF
+BATTF
8A/24VAC,250VDC,1.5MM_eachside
XFMR-NEU
XFR-HOT
F1INT
1A,250V,VDE,SB
F1
1A,125VAC
120V
430-0003
(Sh. 2,3)
AC-OUT1
(Sh. 2)
OUT-RECT
(Sh. 1)
AC-OUT2
D25
D26
1N4148
T2
C17B
10UF/150VAC
C17INTB
C17NT
1UF,250VAC,VDE
C17NTB
2.2UF,250VAC
C17
20MF,150VAC
460-0001
R1,R2
20-OHM,5%,2W
SEE NOTE 1
1,2
J6
701-0013
I-CAP
(Sh. 3)
RY-WELD
(Sh. 2)
LIN-XFER
(Sh. 2)
R97
47K,5%,1/4W
Q3
IRF613
0.001UF,100V,10%
C20
680K,5%,1/4W
R13
D7
1N4005
IC3
312-4N25
SEE NOTE 1
HTIN3
D5
1N4005
R10
12.1K,1%,1/4W
R6
12.1K,1%,1/4W
D3
LED,RED
SITE WIRING FAULT
SWF
D2
2NR,11V/5%
R8
200K,5%,1/4W
R7
200K,5%,1/4W
Q2
2N2222
D4
1N4148
R9
20K,5%,1/4W
C13
22UF,16V
R93
10K,5%,1/4W
R108
10K,5%,1/4W
Q42
2N2222
Q43
2N2222
Q49
2N2222
Q50
2N2222
BOOST
(Sh. 2)
R94
47K,5%,1/4W
TRIM
(Sh. 2)
R107
47K,5%,1/4W


HEATSINK
365-340T
IC4
365-7805
LM7805
IC5
+24V (Sh. 4)
+12V
+5V
+24VFET (Sh. 4)
HS51
C36 0.01UF,50V,20%
C37 22UF,16V
C38 0.1UF,50V,POLY
C39 0.1UF,50V,POLY
R99 200K,1%,1/4W
R102 20-OHM,5%,1/4W
+5VREF
R100 33.2K,1%,1/4W
C63 1.0UF,50V
C65 1.0UF,50V
IC10
ADC0838
360-0838
V+ VREF VCC
CH0 CH1 CH2 CH3 CH4 CH5 CH6 CH7
COM AGND
SE SARS CLK DO DI CS DGND
IN-RECT (Sh. 1)
R64 464K,1%,1/4W
R65 348K,1%,1/4W
C44 0.22UF,50V,5%
R101 10.0K,1%,1/4W
C64 0.1UF,50V,POLY
XISTOR-I (Sh. 3)
OUT-RECT (Sh. 1)
R78 604K,1%,1/4W
R79 237K,1%,1/4W
C52 0.22UF,50V,5%
OFF-SENS (Sh. 4)
RTH1 105-0102,5% 100-0001
R89 4.99K,1%,1/4W
C60 0.01UF,50V,5%
CH-ERR (Sh. 3)
R159 10.0K,1%,1/4W
R160 10.0K,1%,1/4W
IC13 357-1024
C34 0.1UF,50V,5%,POLY
DATA-IN (Sh. 4)
R88 49.9K,1%,1/4W
PWR-OUT (Sh. 1)
R83 1.33M,1%,1/4W
IC8 TL064
R85 4.99K,1%,1/4W
R87 7.50K,1%,1/4W
D30 1N4148
C57 0.1UF,50V,POLY
R86 162K,1%,1/4W
C58 0.1UF,50V,POLY
R84 10.0K,1%,1/4W
ALL-EN
TRIM (Sh. 1)
BOOST (Sh. 1)
HF-OFF (Sh. 4)
PHAS-REF (Sh. 1)
R90 237K,1%,1/4W
Q41 2N2222
D31 1N4148
AC-OUT1 (Sh. 1)
R135 49.9K,1%,1/4W
Q54 2N2222
Q55 2N2222
R136 10.0K,1%,1/4W
C61 0.1UF,50V,POLY
R137 464K,1%,1/4W
Q56 2N2907
R134 7.15K,1%,1/4W
* SEE NOTE 1
+5V-SIG
R5 2K,5%,1/4W
D1 GREEN
Q1 2N7000
C9 0.001UF,100V,10%
SW-4010 SW1
R302 10K,5%,1/4W
INV-EN (Sh. 3)
LIN-XFER (Sh. 1)
LO-BATT (Sh. 4)
SD-OUT (Sh. 4)
SHUTDWN (Sh. 1)
IC12
355-87C52
87C52
ALE PSEN EA
P0.0 P0.1 PO.2 P0.3 P0.4 P0.5 P0.6 P0.7
P1.0 P1.1 P1.2 P1.3 P1.4 P1.5 P1.6 P1.7
P2.0 P2.1 P2.2 P2.3 P2.4 P2.5 P2.6 P2.7
P3.0 P3.1 P3.2 P3.3 P3.4 P3.5 P3.6 P3.7
XTAL1 XTAL2 RESET
DSP-DATA
DSP-CLK
REM_FAN
LED-STRB
BEEP
HI-CHG
C68 1.0UF,50V
R105 2K,5%,1/4W
R104 200K,5%,1/4W
R106 1K,5%,1/4W
R103 10K,5%,1/4W
R161 2K,5%,1/4W
NOT USED ON 1000 AND BACK-UPS PRO SERIES
2000XL 310-0005
Q47 2N2222
Q48 2N2222
-FAN
D33 1N4148
C66 0.01UF,50V,20%
J10 MTA-2M
(REP_BATT SH 5 B3)
(OVERLOAD SH 5 B3)
(ON_BATT SH 5 A2)
(AC_OK SH 5 A2)
DSP-DATA (Sh. 5)
DSP-CLK (Sh. 5)
LED-STRB (Sh. 5)
RY-WELD (Sh. 1)
HI-CHG (Sh. 3)
LO-CHG (Sh. 3)
IC9 74C14
C62 0.01UF,50V,20%
R91 22.6K,1%,1/4W
R92 20K,5%,1/4W
D29 1N4148
BZ1 BEEP
Q46 2N2222
Q40 2N2222
Q39 2N2907
C54 22UF/16V
D27 1N4148
D28 1N4148
C53 22UF,16V
-8V (Sh. 3,4)
R109 100K,1%,1/4W
R111 100K,1%,1/4W
R110 100K
IC11 LM393
C67 0.22UF,50V,5%
R301 1K,5%,1/4W
R120 2M,5%,1/4W
R121 10.0K,1%,1/4W
Q51 2N2222
D301 1N4148
D34 1N4148
C74 0.01UF,50V,5%
R115 47K,5%,1/4W
R114 10.0K,1%,1/4W
R113 20.0K,1%,1/4W
Q53 2N2907
C75 0.22UF,50V,5%
C77
Q52 2N2907
1.0UF,50V
XT1 16MHZ
C73 22PF,50V
C72 22PF,50V
R158 10K,5%,1/4W
R157 10K,5%,1/4W
R117 6.49K,1%,1/4W
C76 0.01UF,50V,20%
IC15 DAC0801
B8 B7 B6 B5 B4 B3 B2 B1
VLC COMP VREF+ VREF-
IOUT IOUT V+ V-
R116 470-OHM,5%,1/4W
C79 0.01UF,50V,20%
0.01UF,50V,5% C78
R80 13.0K,1%,1/4W
R81 100K,1%,1/4W
R82 13.0K,1%,1/4W
C55 .047UF,63V
C56 0.1UF,50V,POLY
IC8 TL064
SINE-REF (Sh. 3)


SEE NOTE 1
OUT-RECT
(Sh. 1)
D201
1N4148
162K,1%,1/4W
R122
R209
10.0K,1%,1/4W
LO-CHG
(Sh. 2)
R208
10.0K,1%,1/4W
Q201
2N7000
0.01UF,50V,20%,CER
C212
CH-ERR
(Sh. 2)
IC12_33
(Sh. 2)
AC-OUT1
(Sh. 1)
R165
10.0K,1%,1/4W
R131
10.0K,1%,1/4W
C87
0.01UF,50V,20%
+12V
C95
0.001UF,100V,10%
R166
1K,5%,1/4W
C96
0.001UF,100V,10%
I-CAP
(Sh. 1)
R132
10.0K,1%,1/4W
SINE-REF
(Sh. 2)
R130
3.01K,1%,1/4W
R129
49.9K,1%,1/4W
C90
100PF,50V
XISTOR-I
(Sh. 2)
VR1
50K
CW
CCW
R126
1.00M,1%,1/4W
R128
604K,1%,1/4W
SEE NOTE 1
ALL-EN
(Sh. 2)
D36
1N4148
R127
100K,1%,1/4W
C88
470PF,50V
INV-EN
(Sh. 2)
R162
2K,5%,1/4W
+5V
IC17
VDD
EIN
EOUT
IFETS
INVEN
INVEN
GND
VEE
U1OUT
L1OUT
XFMR1
LGD1
XFMR2
U2OUT
L2OUT
LGD2
-8V
+5V
R112
1K,5%,1/4W
+12V
C49
0.01UF,50V,20%
C71
0.001UF,100V,10%
NOTE 3
IC20
R118
100K,1%,1/4W
R119
22.1K,1%,1/4W
C86
0.1UF,50V,5%,POLY
IC14
VDD
VREF
EIN
IFETS
VAC
BRIDGE
CHARGER
ASIC
EOUT
L1IN
L2IN
U1OUT
L1OUT
U2OUT
L2OUT
CHGADJ
OUTEN
CHGEN
CMULT
GND
CFREQ
C85
100PF,50V
C84
100PF,50V
R179
75.0K,1%,1/4W
C69
0.001UF,100V,10%
C70
0.001UF,100V,10%
C83
100PF,50V
+12V-DLY
+24VFET
IC16
74C14
R123
4.99K,1%,1/4W
1N4148
D32
NOTE1
R239
100K,5%,1/4W
R124
6.49K,1%,1/4W
R125
6.49K,1%,1/4W
+12V-DLY
1N4148
D35
C80
22UF,16V
C81
0.01UF,50V,20%
20-OHM,5%,1/4W
R40
D13
1N4148
1N4148
D14
R39
4.7K,5%,1/4W
R37
2.2-OHM,5%,1/4W
R38
200K,5%,1/4W
R38
1K,5%,1/4W
Q30
2N2222
Q29
2N2907
Q31
2N7000
C34
220UF,16V
R19
20-OHM,5%,1/8W,HORZ
R20
20-OHM,5%,1/8W,HORZ
R21
20-OHM,5%,1/8W,HORZ
R22
20-OHM,5%,1/8W,HORZ
R23
20-OHM,5%,1/8W,HORZ
Q16
Q15
Q14
Q13
Q12
50V/.028-OHM
C32
C27
C26
C24
C25
0.22UF,50V,5%
C22
C23
1500UF/75VDC
+BATT
(Sh. 4)
W2
#10AWG
GND
W1
#10AWG
XFMR1
HEAT SINK CONNECTION
R14
20-OHM,5%,1/8W,HORZ
R15
20-OHM,5%,1/8W,HORZ
R16
20-OHM,5%,1/8W,HORZ
R17
20-OHM,5%,1/8W,HORZ
R18
20-OHM,5%,1/8W,HORZ
Q11
Q10
Q9
Q8
Q7
R173
4.7-OHM,5%,1/4W
4.7NF,50V,5%
C100
C69
0.01UF,50V,20%
Q28
2N2222
Q27
2N2907
R34
2K,5%,1/4W
R35
47K,5%,1/4W
R44
4.7K,5%,1/4W
R42
200K,5%,1/4W
R43
1K,5%,1/4W
Q33
2N2222
Q32
2N2907
Q34
2N7000
C35
220UF,16V
R41
2.2-OHM,5%,1/4W
R24
20-OHM,5%,1/8W,HORZ
R25
20-OHM,5%,1/8W,HORZ
R26
20-OHM,5%,1/8W,HORZ
R27
20-OHM,5%,1/8W,HORZ
R28
20-OHM,5%,1/8W,HORZ
Q21
Q20
Q19
Q18
Q17
C28
C31
C33
C29
C30
XFMR2
HEAT SINK CONNECTION
R29
20-OHM,5%,1/8W,HORZ
R30
20-OHM,5%,1/8W,HORZ
R31
20-OHM,5%,1/8W,HORZ
R32
20-OHM,5%,1/8W,HORZ
R33
20-OHM,5%,1/8W,HORZ
Q26
Q25
Q24
Q23
Q22
R174
4.7-OHM,5%,1/4W
4.7NF,50V,5%
C101
C82
100PF,50V
R45
2K,5%,1/4W
R46
47K,5%,1/4W
Q36
2N2222
Q35
2N2907


SNMP CONNECTOR
J14
14PIN
+12V
+24V
+5V
+BATTF
DATA-IN
(Sh. 2)
SD-OUT
LO-BATT
SDO-ACC
SDI-ASIC
SDI-ACC
LO-BATT
DIVERT
OFF-SW
ON-SW
20K,5%,1/4W
R175
R241
0-OHM
SDO-ASIC
R240
DATA-IN
R176
20K,5%,1/4W
IC22
74HCT257
PWR
G
1A/B
1A
1B
2A
2B
3A
3B
4A
4B
1Y
2Y
3Y
4Y
GND
R178
R177
THESE COMPONENTS SEE NOTE 1
SEE NOTE 1
+24VFET
365-0317T
IC1
R2
10-OHM,5%,1/4W
R1
10-OHM,5%,1/4W
C3
0.01UF,50V,20%
+24V-OUT
C2
0.01UF,50V,20%
R4
30.1K,1%,1/4W
C1
R3
20K,5%,1/4W
C10
0.001UF,100V,10%
470-OHM,5%,1/4W
R170
C98
0.01UF,50V,20%,CER
C6
0.01UF,50V,20%
C5
0.1UF,50V,20%
C4
0.1UF,50V,20%
C11
0.1UF,50V,20%
C8
0.1UF,50V,20%
+5V-SIG
IC2
VDD
VREF
SDI-DB9
SDI-UP
REMOT-IN
REM-OFF
REM-ON
SDO-UP
SDO-DB9
ONBAT-NO
ONBAT-NC
LOBAT-UP
LOBAT-NO
GND-REF
GND
VEE
47-OHM,5%,1/4W
R171
-8V
C7
0.1UF,50V,20%
723-0002
DB9SRA
J1
OFF-SENS
(Sh. 2)
ON-SW
(Sh. 5)
+BATT
(Sh. 3)
AC-OK
(Sh. 1)
OFF-SW
(Sh. 5)
R52
13.0K,1%,1/4W
R53
22.6K,1%,1/4W
D16
1N4148
R66
20K,5%,1/4W
D17
R54
680K,5%,1/4W
C47
0.1UF,50V,POLY
IC11
LM393
R238
0-OHM
F3
1A,125VAC
Q5A
60V,0.5OHM
ALTERNATE PART FOR Q5
R47
100K,5%,1/4W
C125
0.1UF,50V,20%
Q5
311-0004
60V,0.5ohm
D15
R48
100K,5%,1/4W
D11
1N4005
R49
200K,5%,1/4W
R51
10K,5%,1/4W
Q6
2N2222
R50
20K,5%,1/4W
D12
HF-OFF
(Sh. 2)
R68
20K,5%,1/4W
C46
470PF,50V
D22
D23
R67
1M,5%,1/4W
C45
0.1UF,50V,POLY
Q37
2N2222


+24V (Sh. 1,2,4)
+5V (Sh. 2)
DSP-DATA (Sh. 2)
DSP-CLK (Sh. 2)
LED-STRB (Sh. 2)
ON-SW (Sh. 4)
OFF-SW (Sh. 4)
GNDD
+24V-D
+5V-D
D-DATA-D
D-CLK-D
LED-D
ON-SW-D
OFF-SW-D
J11A
J11B
635-0006
BATTERY VOLTAGE BAR GRAPH (GREEN T1)
D38 LED GRN LOW BATTERY (GREEN T1)
D39 LED GRN
D40 LED GRN
D41 LED GRN
D42 LED GRN
R138 3.3K,5%,1/4W
R168 3.3K,5%,1/4W
R140 237-OHM,1%,1/4W
IC18 UCN-5821A
D-IN
CLK
OUT-EN
VCC
GND
D-OUT
STR
R142 10K,5%,1/4W
R141 10K,5%,1/4W
C92 0.1UF,50V,20%
R139 6.8K,5%,1/4W
R147 47K,5%,1/4W
Q57 2N2907
D43 LED REPLACE BATTERY (RED)
R155 6.8K,5%,1/4W
R151 47K,5%,1/4W
Q59 2N2907
D46 LED GRN SMART TRIM (YELLOW)
R156 6.8K,5%,1/4W
R149 47K,5%,1/4W
Q60 2N2907
D48 LED GRN SMART BOOST (YELLOW)
R153 6.8K,5%,1/4W
R148 47K,5%,1/4W
Q58 2N2907
D44 LED GRN ON BATTERY (YELLOW)
R144 3.3K,5%,1/4W
R145 3.3K,5%,1/4W
R146 3.3K,5%,1/4W
D47 LED GRN ON LINE (GREEN)
IC19 UCN-5821A
R150 47K,5%,1/4W
C93 0.1UF,50V,20%
R143 150-OHM,5%,1/4W
D45 LED RED OVERLOAD 105% (RED T1)
R154 3.3K,5%,1/4W
R167 3.3K,5%,1/4W
POWER BAR GRAPH METER (GREEN T1)
D49 LED GRN 15%
D50 LED GRN 33%
D51 LED GRN 50%
D52 LED GRN 67%
D53 LED GRN 85%
SW4
ON-SW
SW2
SW3
REP-BATT RED LED LED2
RED LED LED6
OVRLOAD RED LED LED3
RED LED LED7
AC-LEDOK GREEN LED LED5
GREEN LED LED9
ON-BATT YEL LED LED4
YEL LED LED8
C200 0.1UF,50V,20%
C201 0.1UF,50V,20%
C203 0.1UF,50V,20%
C202 0.1UF,50V,20%
5V-IN
C204 0.1UF,50V,20%
47-OHM,5%,1/4W R204
R202 680-OHM,5%,1/4W
REP_BATT
C209 0.01UF,50V,20%,CER
R203 680-OHM,5%,1/4W
OVERLOAD
C208 0.01UF,50V,20%,CER
R201 470-OHM,5%,1/4W
AC_OK
C206 0.01UF,50V,20%,CER
330-OHM,5%,1/4W R200
ON_BATT
C207 0.01UF,50V,20%,CER
OFF-SENS
MTA-156,4PIN 721-0003 J20
HEADER,3PIN 715-0007 J21