MACHINE
REAR

POWER PWA
041950 (Top Level)
7.85"h x 11.20"w
2oz plated to 3oz

FACING COMPONENT SIDE of POWER BD

CONTROL PWA
041953 (Top Level) 4 LAYER
2.35"h x 5.00"w

MACHINE
FRONT

L

R

16A/250V DPST

12AWG

J1

J2

10 150J

5.51"-7.85"
1.72" MAX
Height Zone

6.8uf 300vac X2

CM Choke 16arms

CM Choke Installed
on CE unit only

LAX100-NP

IN3 IN2 IN1

OUT3 OUT2 OUT1

75k 2w

.01uF Y2
300vac

HEAT
SINK

MTG3
LIFT to
Hipot

35A
1200V

AC

INPUT BRIDGES

MTG6

18 INVU

COM INVU

375VDC

TOP247

2.21M

18REG

-VBUS

E36/18/11

18PA

COMPA

18T

COMT

+24

+9

+5

+3.3

IN GND OUT

Fsw = 66khz
UVLO = 110vdc
(80vac)
OVLO = 495vdc

HCPL-7840

Vbus

Vacr

y=2.09"-5.51"
0.472" MAX
Height Zone

PFC IGBT MODULE

INVERTER IGBT MODULE

-Vbus

Fpfc=28khz
Iline Limit
37.5arms

600V
90A

0.33uF
630VDC

Finv=42khz

PFC DIODE
60A 600V

CLAMP DIODE
60A 600V

nc

375vdc

PRESSURE SW
005112
Low Press=OPEN

FAN
110CFM
24v/0.50A

GAS SOL
24v/0.13A

J4 J5 J6

L9338MD

SSR
FAN

/FAN

/GAS

GAS

PFC PWM
INVU PWM
INVL PWM
PA
/PFC DESAT
/INV DESAT
/PA DESAT
/PFC OC
/DRV FLT
/INV SAT
.5 or 24 FLT
/UVLO
/OVLO
/CAP UNBAL
GAS OK
CAPON
START
REDUNDANT START
IGBT TEMP

CPLD
44 Pin
32 I/O

EE PROM

/CS SDO \WP VSS VCC \HOLD CLK SDI

J7

SSR
FAN
/PWRFLT
GAS
FAN
NVL PWM DRV
NVU PWM DRV
PFC PWM DRV

15 ohm
50W TO247

MTG4

CONTROL to
CHASSIS GND

J12

J13

J14

J15

WHT WIRE

3.3nF
1000VDC

OUTPUT DIODE and
PILOT ARC IGBT MODULE

1200V
35A

J16 RED

MTG8
LIFT to
Hipot

4.7nF
300vac
Y2

4.7nF
300vac
Y2

J17 WHT

12AWG UL1569 WHT

20K
3W

0.01uF
300vac

OUTPUT CURRENT SENSOR

TRANSFER SENSOR

OUT3 OUT2 OUT1 LAX100-NP IN3 IN2 IN1

M

y=0.00"-2.09"
1.00" MAX
Height Zone

3.9uF 630VDC
3.9uF 630VDC
2.7uF 630VDC
2.7uF 630VDC
15 4W
15 4W
15 4W

27K 3W
2200uF 250VDC
27K 3W
2200uF 250VDC

LOW INDUCTANCE
LAYOUT

INV IPRIM

J18 J19 J20 J21 J22

JTAG/EMULATION
CONNECTOR

TEMP
YEL

CAPOFF
"TSO"
YEL

GAS LOW
YEL

POWER ON
"L/H LINE"
GRN

/RESET or
HDR FLT

ERROR
CODE

XFR

START

SERIAL
DATA

DSP 2801
4x25Mhz=100Mhz
0.78 x 0.78"
Stayout for
TEST CLIP

AMPS

720

26 POS
RIBBON
CABLE

MPX5700 BACK-UP
PRESSURE SENSOR
NOT USED

Loutput 014309
L0=410uH
L30=270uH
Rdc20C=19mohm

BLUE
ORG
VIOLET
CAP SW NC
START

M5 in Plastic

WHITE
ELECTRODE

12AWG UL1569 RED

M5 in Plastic

RED
NOZZLE

12AWG UL1015 BLK

WORK
LEAD

MUELLER

PE 98-264vac
47-63hz

CORD
STD Unit 14/3 SO Dia=0.53"
CE Unit H05VV-F3G2.5 Dia=0.39"

Lpfc 014307
L0=350uh
L60=185uh
Rdc20C=21.5mohm

11T 14T

POWER XFMR 014308
Twisted Leads
Lprim=0.75mH Rprim20C=4.8mohm
Rsec20C=10.5mohm
Lleak=0.5uH Typ

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ELEC SCHEM:PMX30 SYS

Drawn By | Date 10-5-98
Approved By | Date 10-6-98
Size D | Drawing Number 013-3364 | File Name 013364D1 | Stock Number 013364 | Rev A
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