ITEM1	1	L929PB	Blank PCB P35/P1 FMJ Amp Microcontroller Board	

CON1 MOLEX 5229-NAPB
SPARE1
STANDBY
SPKR1 ON
SPKR2 ON
THERMPROT 1
VIPROT 1
DCPROT 1
AC PRESENT
TRIGGER
REMOTE
R22 10K 0W25 MF
R23 10K 0W25 MF
R24 10K 0W25 MF
R25 10K 0W25 MF

CON2 MOLEX 5229-NAPB
SPARE2
STANDBY
SPKR1 ON
SPKR2 ON
THERMPROT 2
VIPROT 2
DCPROT 2
AC PRESENT
TRIGGER
REMOTE
R9 10K 0W25 MF
R10 10K 0W25 MF
R11 10K 0W25 MF
R26 10K 0W25 MF

IC1
HT48R30A-1
L019SW
DIP-28
SP2 SW
SP1 SW
SP1 LED
SPKR2 ON
SPKR1 ON
STANDBY
PWR SW
REMOTE
TRIGGER
AC PRESENT
THERMPROT
DCPROT
VIPROT
SP2 LED
PWR GRN
PWR RED
SPARE

LK1 0R0 0W25 MF
LK2 0R0 0W25 MF

LINK LK1 IS USED
TO CONFIGURE PCB
FOR USE IN P35 OR P1

FOR P35 - LEAVE LK1 INTACT
FOR P1 - CUT LINK

D1 1N4148 DO-35
R16 100K 0W25 MF
C1 100N 50V X7R
C5 10UF 50V YK
X1 4.00MHz SIL-3

IC2A 74HC32N DIP-14
THERMPROT 1
THERMPROT 2
THERMPROT

IC2B 74HC32N DIP-14
VIPROT 1
VIPROT 2
VIPROT

IC2C 74HC32N DIP-14
DCPROT 1
DCPROT 2
DCPROT

IC2D 74HC32N DIP-14
SPARE1
SPARE2
SPARE

R1 10K 0W25 MF
R2 10K 0W25 MF
TR1 BC556B TO-92
R12 560R 0W25 MF
LED1 5mm GRN LED 5mm
R3 10K 0W25 MF
R4 10K 0W25 MF
TR2 BC556B TO-92
R13 560R 0W25 MF
LED2 5mm GRN LED 5mm
R5 10K 0W25 MF
R6 10K 0W25 MF
TR4 BC556B TO-92
R14 330R 0W25 MF
3mm BICOL LED 3mm
RED
GRN
TR3 BC556B TO-92
R15 180R 0W25 MF
LED3
R7 10K 0W25 MF
R8 10K 0W25 MF

SW1 SKHVPB000A
SW2 SKHVPB000A
SW3 SKHVPB000A
SP2 SW
SP1 SW
PWR SW

R19 470R 0W25 MF
TR5 BC546B TO-92
R17 10K 0W25 MF
R18 10K 0W25 MF
D2 1N4148 DO-35
C14 100UF 25V YK
R20 470R 0W25 MF
TR6 BC546B TO-92
R21 470R 0W25 MF
TR7 BC546B TO-92
SPKR1 ON
SPKR2 ON
STANDBY

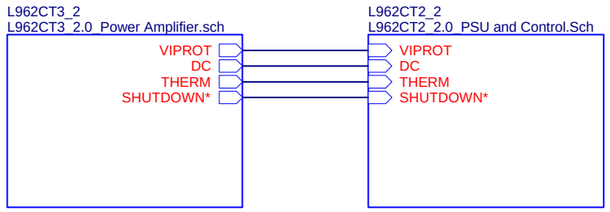
IC2E 74HC32N DIP-14
C2 100N 50V X7R
C3 100N 50V X7R
C4 100N 50V X7R
C6 100UF 25V YK
C7 100UF 25V YK
C8 100UF 25V YK

FIX1 Dia 3.5mm
FIX2 Dia 3.5mm
FIX3 Dia 3.5mm
FIX4 Dia 3.5mm
FIX5 Dia 3.5mm
C9 100N 50V X7R
C10 100N 50V X7R
C11 100N 50V X7R
C12 100N 50V X7R
C13 100N 50V X7R

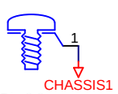
TOOL1 TOOL2

DRAWING TITLE						
P35 / P1 Switch PCB						
ARCAM A & R Cambridge Ltd. Pembroke Avenue Waterbeach Cambridge CB5 9PB	**Filename:** L929CT_1.0.sch	03_E125	KAL	8/05/03	Redrawn, LED1, 2 swapped, Connectors rewired, LK1, 2 added	1.0
	Notes:	03_E001	WAF	2/01/02	HOLTEK, Z1 UPDATED	B.1
			JR	1/11/01	LEDS TO 5MM AND MAINS SWITCH	B.0
		ECO No.	INITIALS	DATE	DESCRIPTION OF CHANGE	ISSUE
	Contact Engineer: Kevin Lamb	Contact Tel: (01223) 203243	Printed: 13-May-2003	Sheet 1 of 1	A3	DRAWING NO. L929CT

ITEM	QTY	PART No.	DESCRIPTION	NOTES
ITEM1	1	F006	Clip For SW Profile Heatsink	Clip for REG1
ITEM2	1	F022	Fuseholder Cover For 20mm Fuseholder	Cover For FHLDR1
ITEM3	1	F022	Fuseholder Cover For 20mm Fuseholder	Cover For FHLDR2
ITEM4	1	F022	Fuseholder Cover For 20mm Fuseholder	Cover For FHLDR3
ITEM5	1	F022	Fuseholder Cover For 20mm Fuseholder	Cover For FHLDR4
ITEM6	1	F022	Fuseholder Cover For 20mm Fuseholder	Cover For FHLDR5
ITEM7	1	F022	Fuseholder Cover For 20mm Fuseholder	Cover For FHLDR6
ITEM8	1	L962PB	Blank PCB P1 Amplifier Main Board	
ITEM9	2	E802AP	Pad Damping 15x6x3MM Sorbothane	See Assy Drawing for location
ITEM10	3	E826AP	Pad Damping 7.5x6x3 Sorbothane	See Assy Drawing for location
ITEM11	1	8M101	Earth Lead Assy 75MM	

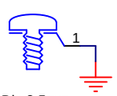


FIX1 Dia 3.2mm



FIX2 Dia 3.2mm

FIX5 Dia 3.5mm



FIX6 Dia 3.5mm

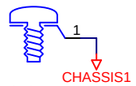
FIX9 Dia 3.5mm

FIX10 Dia 3.5mm

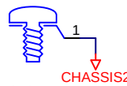
FIX13 Dia 3.5mm

FIX3 Dia 3.5mm

FIX4 Dia 3.5mm



FIX7 Dia 3.5mm



FIX8 Dia 3.5mm

FIX11 Dia 3.5mm

FIX12 Dia 3.5mm

FIX14 Dia 3.5mm

FD1
FD2
FD3
FD4

TOOL1
TOOL2
TOOL3
TOOL4

DRAWING TITLE **P1 Amplifier Main PCB**		03_E249	KAL	22/08/03	Stability mods	2.0
		03_E203	KAL	16/07/03	Production Release, VI Limiting changes	1.0
2 3 4 2 5	**Filename:** L962CT1_2.0.Sch	03_E184	KAL	23/06/03	Changed sorbothane part numbers, corrected R179-182, R185-187	B.1
	Notes:	03_E111	KAL	11/04/03	Corrected CON4, Redesigned protection cct and voicing mods	B.0
		03_E055	KAL	18/02/03	Minor Change to re-label gain switch positions	A.1
		ECO No.	INITIALS	DATE	DESCRIPTION OF CHANGE	ISSUE

A & R Cambridge Ltd.
Pembroke Avenue
Waterbeach
Cambridge CB5 9PB

Contact Engineer: Kevin Lamb | Contact Tel: (01223) 203243 | Printed: 22-Aug-2003 | Sheet 1 of 1 | DRAWING NO. L962CT1

MAINS WIRING AND AUXILIARY SUPPLY

NEUTRAL
LIVE
EARTH
SH1
EMC Shield
SKT1
BULGIN
PX0580
N
E
L
C1
3N3
250V
CER
C2
3N3
250V
CER
C5
220N
275V
PP X2
R2
1M5
0W5
VR37
CON1
GREEN
WAGO
256
SW1
18-000-0019
115V
230V
2A
2B
1A
1B
FHLDR1
20mm HLDR
FS1 T6.3A S506
FS2 T6.3A S506
FHLDR2
20mm HLDR
TX1
Open Frame
115V
115V
9V
9V
FS3
T315mA
S504
FHLDR3
20mm HLDR
C11
100N
50V
0805
RLY1B
Takamisawa
F1CA005V
C3
3N3
250V
CER
RLY1A
F1CA005V
Takamisawa
C4
3N3
250V
CER
CON3
MOLEX
44472
TX WIRE COLOURS
1 BLUE
3 BROWN
4 BLACK
6 WHITE
DBR1
W02G
D3
BAS16
SOT-323
HS1A
SW50-2
8.8CW
REG2
L4940V5
TO-220
+5V(D)
C21
3300UF
25V
YK
C12
100N
50V
0805
C13
100N
50V
0805
C33
1000UF
10V
YK
DGND

MAINS PRESENT DETECT

+5V(D)
R15
10K
0W25
1206
P3
R16
2K2
0W25
1206
R17
4K7
0W25
1206
TR10
BC849B
SOT-23
P4
TR11
MMUN2211LT1
SOT-23
C36
100UF
25V
YK
D6
BAS16
SOT-323
DGND

CON2
MOLEX
44472
VN70VAC2
VP58VAC1
VP58VAC2
VN58VAC1
VN58VAC2
VN70VAC1
VP70VAC1
VP70VAC2
VP18VAC2
VP18VAC1
TX WIRE COLOURS
1 GREEN
2 YELLOW
3 ORANGE
4 RED
5 WHITE
6 GREY
7 VIOLET
8 BLACK
9 BROWN
10 BLUE

SKT2
HOSIDEN
HSJ
NC1
NC2
GND2
GND1
D1 BAS16
SOT-323
D2 BAS16
SOT-323
P1
C6
100P
100V
0805
EMCGND

SKT3
HOSIDEN
HSJ
NC1
NC2
GND2
GND1
C9
100N
50V
0805
C10
100N
50V
0805
CHASSIS1

TR1
BD179
TO-126
TR2
FMMT497
SOT-23
R1
10R
0W25
1206
R3
3K3
0W25
1206
+12V(D)
REG1
L7812CV
TO-220
+12
+18V(D)
C7
100N
50V
0805
C8
100N
50V
0805
DGND
R4
2K2
0W25
1206
DZ1
BZX84C
4V7
SOT-23
R18
10K
0W25
1206
L1
70R@100MHz

FS4
T315mA
S504
FHLDR4
20mm HLDR
DBR2
W02G
C14
100N
100V
MKS2
DBR5
GBU8D
C15
100N
100V
MKS2
C24
10,000UF
71V
AM
C25
10,000UF
71V
AM
AGND_C1
VP58V
R19
10K
1W
CF
DBR6
GBU8D
C16
100N
100V
MKS2
C26
10,000UF
71V
AM
C27
10,000UF
71V
AM
AGND_C2
VN58V
R20
10K
1W
CF
AGND_PSU3
FS5
T315mA
S504
FHLDR5
20mm HLDR
DBR3
W02G
C17
100N
100V
MKS2
FS6
T315mA
S504
FHLDR6
20mm HLDR
DBR4
W02G
C18
100N
100V
MKS2
+18V(D)
C32
1000UF
35V
YK
DGND
VP70V
C22
1000UF
100V
YK
VN70V
C23
1000UF
100V
YK
AGND_PSU2
AGND_PSU1
D4
BAS16
SOT-323
TR3
2SA1930
TO-220
VP67V
C34
100UF
100V
YXF
R5
2K2
0W25
1206
R6
2K2
0W25
1206
TR4
FMMT497
SOT-23
C28
47UF
100V
YK
C30
47UF
100V
YK
C19
100N
100V
MKS2
R13
68K
0W25
1206
C29
47UF
100V
YK
C31
47UF
100V
YK
C20
100N
100V
MKS2
R14
68K
0W25
1206
R7
2K2
0W25
1206
R8
2K2
0W25
1206
TR5
FMMT597
SOT-23
TR6
2SC5171
TO-220
D5
BAS16
SOT-323
VN67V
C35
100UF
100V
YXF

AGND_PSU2
SP1
AGND_SIG
AGND_PSU1
AGND_PSU3
AGND_C1
AGND_LS
AGND_C2
AGND_RC

R12
100R 0W25
1206
P2
CHASSIS2
DGND

+5V(D)
R10
2K2
0W25
1206
P7
TR8
FMMT497
SOT-23
DGND
RLY1C
Takamisawa
F1CA005V
D7
BAS16
SOT-323
TR7
FMMT497
SOT-23
P5
R9
2K2
0W25
1206
P6
+12V(D)
AMPLIFIER
MUTING
RELAY
RLY2B
Omron
G2R-1-E-12VDC
D8
BAS16
SOT-323
TR9
FMMT497
SOT-23
P8
R11
2K2
0W25
1206
SHUTDOWN
DC
DCPROT
VIPROT
VIPROT
THERM
THERMPROT
CON4
TRIGGER
AC PRESENT
SPKR2 ON
SPKR1 ON
STANDBY*
TO DISPLAY CARD
MOLEX
5229-NCPB

DRAWING TITLE: **P1 Amplifier Main PCB**	03_E249	KAL	22/08/03	Stability mods	2.0
	03_E203	KAL	16/07/03	Production Release, VI Limiting changes	1.0
23425	03_E184	KAL	23/06/03	Changed sorbothane part numbers, corrected R179-182, R185-187	B.1
Filename: L962CT2_2.0_PSU and Control.Sch	03_E111	KAL	11/04/03	Corrected CON4, Redesigned protection cct and voicing mods	B.0
Notes:	03_E055	KAL	18/02/03	Minor Change to re-label gain switch positions	A.1
	ECO No.	INITIALS	DATE	DESCRIPTION OF CHANGE	ISSUE

A & R Cambridge Ltd.
Pembroke Avenue
Waterbeach
Cambridge CB5 9PB

Contact Engineer: Kevin Lamb | Contact Tel: (01223) 203243 | Printed: 22-Aug-2003 | Sheet 2 of 3 | DRAWING NO. L962CT1

Trim output stage Iq

Measure Iq

Over temperature sensing

Instant SOA limiting

DC offset detection

60V DC Output Fault Detect

DRAWING TITLE: P1 Amplifier Main PCB	03_E249	KAL	22/08/03	Stability mods	2.0
	03_E203	KAL	16/07/03	Production Release, VI Limiting changes	1.0
2 3 4 2 5	03_E184	KAL	23/06/03	Changed sorbothane part numbers, corrected R179-182, R185-187	B.1
Filename: L962CT3_2.0_Power Amplifier.sch	03_E111	KAL	11/04/03	Corrected CON4, Redesigned protection cct and voicing mods	B.0
Notes:	03_E055	KAL	18/02/03	Minor Change to re-label gain switch positions	A.1
A & R Cambridge Ltd. Pembroke Avenue Waterbeach Cambridge CB5 9PB	ECO No.	INITIALS	DATE	DESCRIPTION OF CHANGE	ISSUE
Contact Engineer: Kevin Lamb	Contact Tel: (01223) 203243	Printed: 22-Aug-2003	Sheet 3 of 3	DRAWING NO. L962CT	

Transformer Specification For 115/230V P1 transformer

Arcam Part Number L926TX

Material Safety Specification

1. Winding Wire to be Grade 2 (130C rating) to BS 60317-4 1995

2. Mylar Polyester Insulator 130C Rated

3. Potting Compound PC3502 E135297(M) or equivalent.

Mechanical Specification

1. Centre of transformer to be potted (as shown).

2. Primary windings connect to 6 way MOLEX connector 39-01-2065. Secondary windings connect to 10 way molex connector 39-01-2105. Use MOLEX pin 44476-3112.
MOLEX connectors have pin numbers indicated on them. Connectors to be UL94V0 rated.

Note Molex UL94V0 receptacles may be long lead time items.

Equivalent Conexcon 6740 Series UL94V0 parts may be used.
6 Way receptacle 6740-1060
10 Way receptacle 6740-1100

3. Primary wires are enclosed in a common sleeve. Secondary wires are enclosed in a common sleeve.
Use UL rated sleeving.

4. All wire lengths in mm. Lengths are +5.0, -0

5. Please adhere rubber insulating pad to bottom of transformer as shown.

Electrical Specification

1. Transformer to have dual 115V primaries to allow parallel operation for 115V input and series operation with 230V input.

2. Transformer input voltage range

115V -18% +14% (97.5V to 132.5V)
230V -18% +14% (195V to 265V)

3. Transformer to have 5 secondary windings as show in the adjacent drawing.

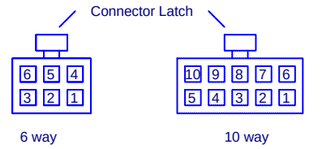
4. Loaded DC voltages specified at 230V AC in (with transformer primaries in series)

5. Each secondary winding to have a full wave (4diode) bridge to produce a single DC rail.
(AS shown in diagram)

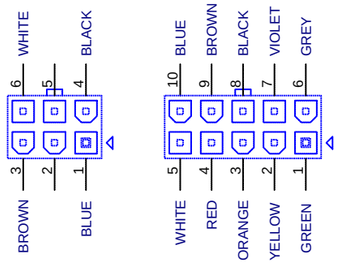
6. Output Capacitance to be as specified per rail.

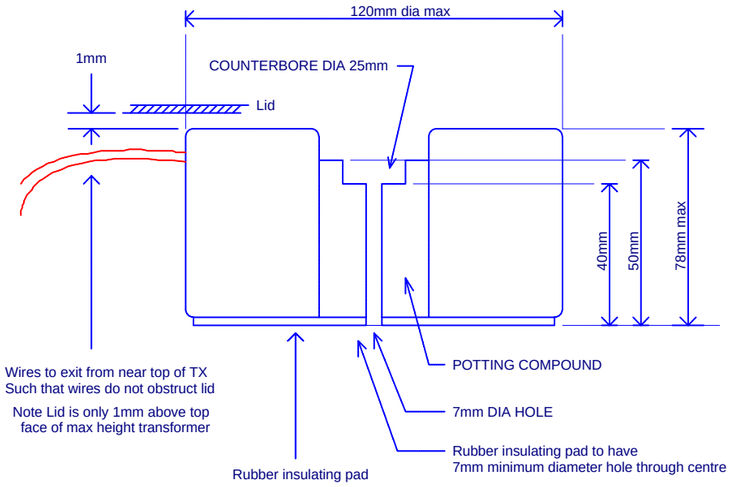
7. Output voltages to be as specified in table and as shown in diagram.

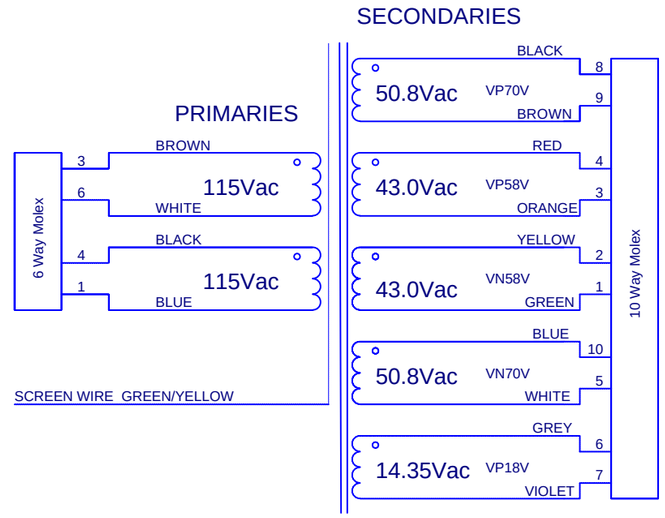
8. Note. Transformer to be used in a power amplifer. The specified load currents on the high power rails (VP58V, VN58V) represent the effective current drawn when the amplifier is loaded to full rated power (200W) into an 8ohm load and operated continuously.
This load current is not typical of normal operation which is considered to be 1/8th of full rated power.



Pin outs of Molex connectors
As viewed looking down at the end
the wires enter the connector

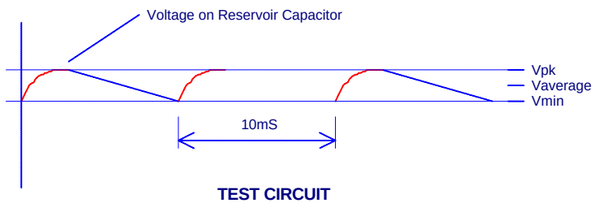




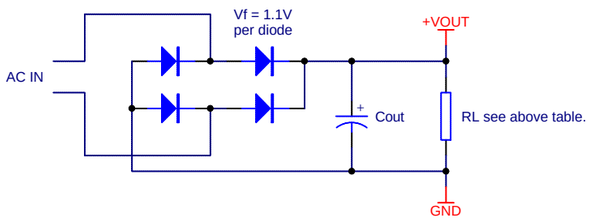


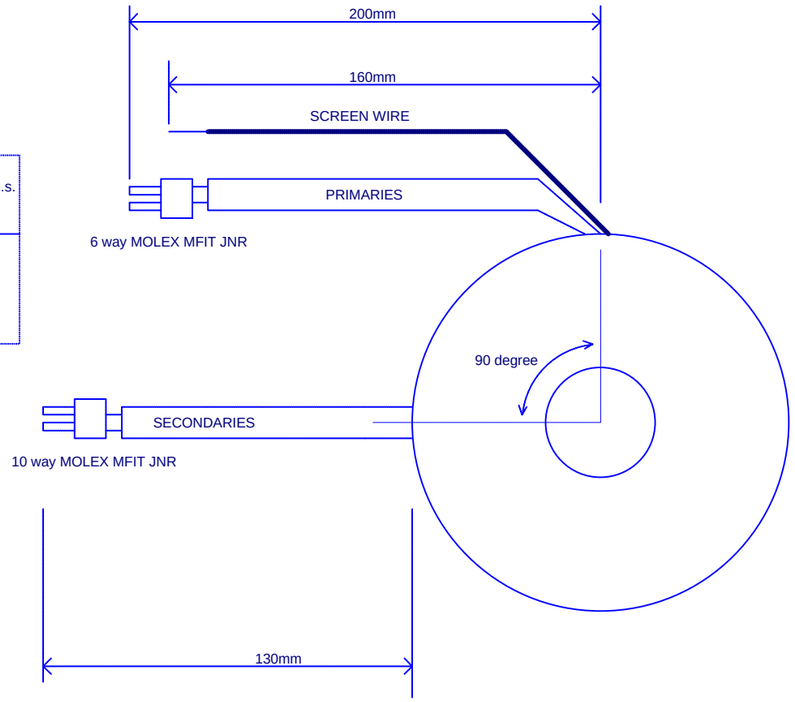
Secondary Winding Voltage and Current Specs
Bridge Rectifier Vf diode = 1.1V per leg = 2.2V Total
(ideal TX assumed)

AC Winding Label	Capacitor Cout (uF)	Effective DC Load Current (mA)	Secondary Voltage (V r.m.s.)	Capacitor Peak Voltage Vpk (Volt)	Capacitor Min Voltage Vmin (Volt)	Capacitor Average Voltage (Volt)	Load Resistor to simulate Load RL (Ohm)	Secondary Winding r.m.s. Current (A r.m.s.)
VP70V	1000	50	50.8	70.2	69.8	70.0	1400	0.25
VP58V	20,000	2250	43.0	58.8	57.8	58.3	25.6	8.0
VN58V	20,000	2250	43.0	58.8	57.8	58.3	25.6	8.0
VN70V	1000	50	50.8	70.2	69.8	70.0	1400	0.25
VP18V	1000	175	14.35	18.75	17.25	18.0	102.8	0.52



TEST CIRCUIT





DRAWING TITLE						
POWER TX FOR P1 115/230V		03_E240	KAL		Reduced VP58V, VN58V to 43.0Vac	1.0
		03_E193	SLS		'UL rated sleeving' was 'UL94-V0'	B.3
ARCAM	**Filename:** L926TX_1.0.sch	03_E192	KAL		Added note about UL94-V0 sleeving	B.2
	Notes:	03_E158	KAL		Corrected Schematic Symbol pin numbers	B.1
		03_E141	KAL		Changed Pri wire colours, VP58 and VN58 +1V, lead out forms	B.0
		ECO No.	INITIALS	DATE	DESCRIPTION OF CHANGE	ISSUE

A & R Cambridge Ltd.
Pembroke Avenue
Waterbeach
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Contact Engineer: Kevin Lamb | Contact Tel: (01223) 203243

Printed: 7-Aug-2003 | Sheet 1 of 1 | A3 | DRAWING NO. L926TX

Transformer Specification For 100V P1 transformer

Arcam Part Number L927TX

Material Safety Specification

1. Winding Wire to be Grade 2 (130C rating) to BS 60317-4 1995

2. Mylar Polyester Insulator 130C Rated

3. Potting Compound PC3502 E135297(M) or equivalent.

Mechanical Specification

1. Centre of transformer to be potted (as shown).

2. Primary windings connect to 6 way MOLEX connector 39-01-2065. Secondary windings connect to 10 way molex connector 39-01-2105. Use MOLEX pin 44476-3112.
MOLEX connectors have pin numbers indicated on them. Connectors to be UL94V0 rated.

Note Molex UL94V0 receptacles may be long lead time items.

Equivalent Conexcon 6740 Series UL94V0 parts may be used.
6 Way receptacle 6740-1060
10 Way receptacle 6740-1100

3. Primary wires are enclosed in a common sleeve. Secondary wires are enclosed in a common sleeve.
Use UL rated sleeving.

4. All wire lengths in mm. Lengths are +5.0, -0

5. Please adhere rubber insulating pad to bottom of transformer as shown.

Electrical Specification

1. Transformer to have dual 100V primaries to allow parallel operation for 100V input.

2. Transformer input voltage range

100V -15% +15% (85V to 115V)

3. Transformer to have 5 secondary windings as show in the adjacent drawing.

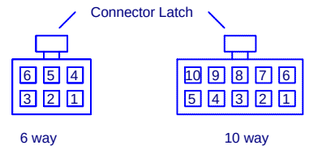
4. Loaded DC voltages specified at 100V AC in (with transformer primaries in parrallel)

5. Each secondary winding to have a full wave (4diode) bridge to produce a single DC rail.
(AS shown in diagram)

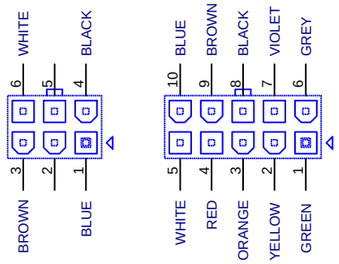
6. Output Capacitance to be as specified per rail.

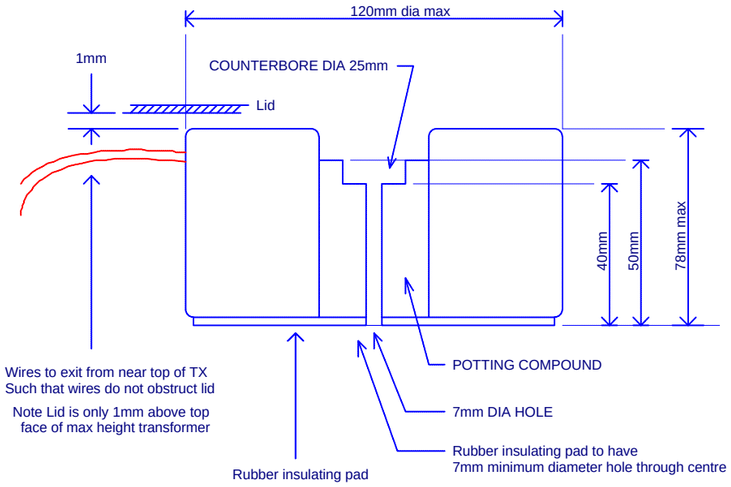
7. Output voltages to be as specified in table and as shown in diagram.

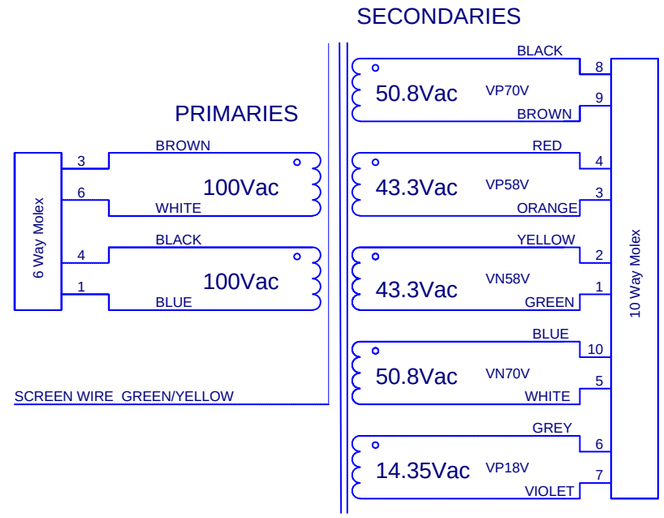
8. Note. Transformer to be used in a power amplifer. The specified load currents on the high power rails (VP58V, VN58V) represent the effective current drawn when the amplifier is loaded to full rated power (200W) into an 8ohm load and operated continuously.
This load current is not typical of normal operation which is considered to be 1/8th of full rated power.



Pin outs of Molex connectors
As viewed looking down at the end
the wires enter the connector

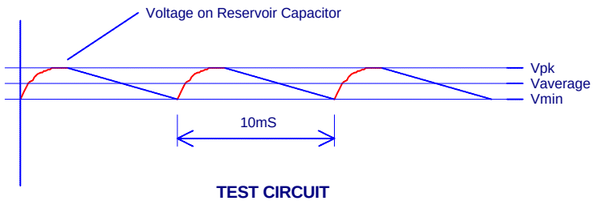




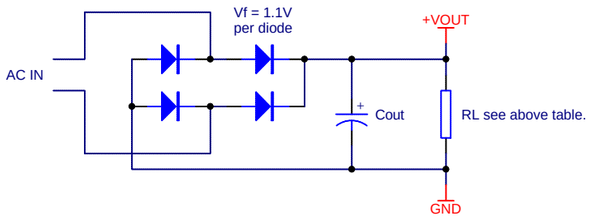


Secondary Winding Voltage and Current Specs
Bridge Rectifier Vf diode = 1.1V per leg = 2.2V Total
(ideal TX assumed)

AC Winding Label	Capacitor Cout (uF)	Effective DC Load Current (mA)	Secondary Voltage (V r.m.s.)	Capacitor Peak Voltage Vpk (Volt)	Capacitor Min Voltage Vmin (Volt)	Capacitor Average Voltage (Volt)	Load Resistor to simulate Load RL (Ohm)	Secondary Winding r.m.s. Current (A r.m.s.)
VP70V	1000	50	50.8	70.2	69.8	70.0	1400	0.25
VP58V	20,000	2250	43.0	58.8	57.8	58.3	25.6	8.0
VN58V	20,000	2250	43.0	58.8	57.8	58.3	25.6	8.0
VN70V	1000	50	50.8	70.2	69.8	70.0	1400	0.25
VP18V	1000	175	14.35	18.75	17.25	18.0	102.8	0.52



TEST CIRCUIT



DRAWING TITLE
POWER TX FOR P1 100V

ARCAM

A & R Cambridge Ltd.
Pembroke Avenue
Waterbeach
Cambridge CB5 9PB

Filename: L927TX_1.0.sch

Notes:

ECO No.	INITIALS	DATE	DESCRIPTION OF CHANGE	ISSUE
03_E240	KAL		Reduced VP58V, VN58V to 43.0Vac	1.0
03_E193	SLS		'100V' text was '115/230V', 'UL rated sleeving' was 'UL94-V0'	B.1
03_E192	KAL		Changed voltages as per L926TX, sleeving to be UL94-V0	B.0
03_E006	KAL		Prototype Release	A.0

Contact Engineer: Kevin Lamb | Contact Tel: (01223) 203243 | Printed: 7-Aug-2003 | Sheet 1 of 1 | A3 | DRAWING NO. L927TX

ELECTRICAL SPECIFICATION

1. FREQUENCY :- 50 - 60Hz

2. INTERWINDING SCREEN :-

3. SECONDARY WINDING :-

   a. Regulation (AC)/load current -
   b. Continuous VA rating - 4VA @ 100V
   c. Voltage unbalance -

4. GENERAL

   a. Magnetic radiation - VERY LOW & CONSISTENT
   b. Acoustic noise - THE DEVICE SHOULD BE DESIGNED TO BE AS QUIET AS POSSIBLE
   c. Maximum ambient temperature - 50 C
   d. Application -

      POWER SUPPLY FOR DIGITAL LOGIC IN AMPLIFIER USING FULL WAVE BRIDGE RECTIFIER AND 3300uF RESERVOIR CAPACITOR. QUIESCENT LOAD 100mA DC.

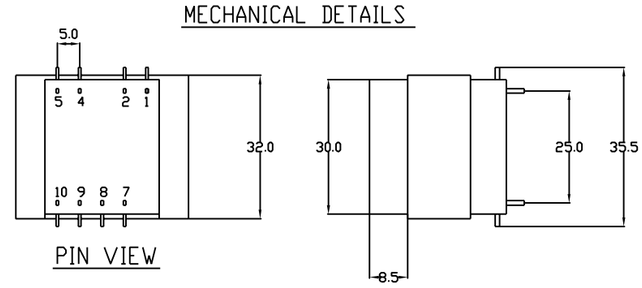
Voltages shown when used at 100V.

5. SAFETY APPROVAL :- To meet BS415/IEC65

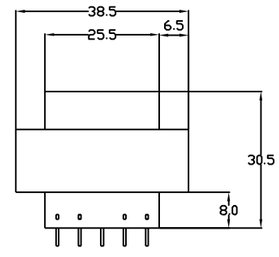
NOTES

PINS NOT SPECIFIED IN TABLE ON SHEET TWO SHOULD NOT BE INCLUDED

MECHANICAL DETAILS



PIN VIEW

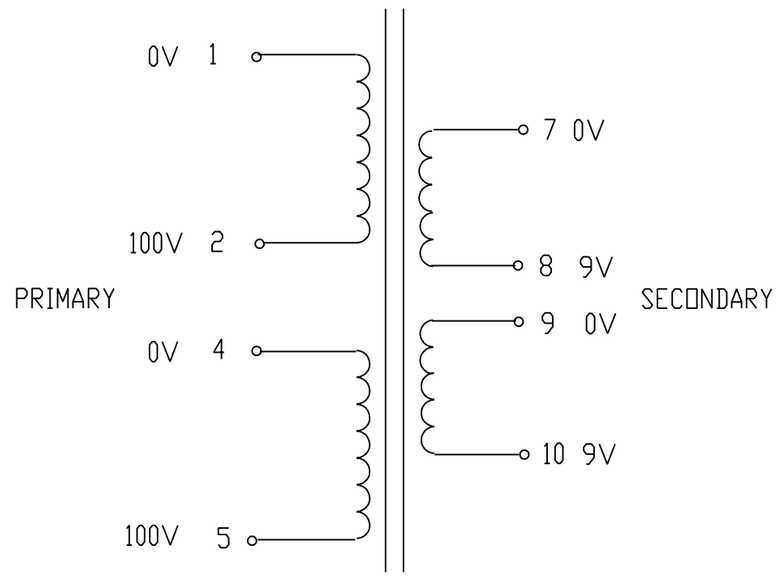


PIN DIMENSIONS 1.0 x 0.6mm NOMINAL
PIN LENGTH 5.0mm TYP.

DIMENSIONS SHOWN, EXCEPT THOSE DETAILING PIN SPACING, ARE NOMINAL ONLY

ARCAM A & R CAMBRIDGE LTD	DRAWING TITLE: A85/A90 AMPLIFIER DIGITAL TRANSFORMER 100V	DRAWN BY: CL				
DRAWN TO THIRD ANGLE PROJECTION		DATE: 18-09-00				
		CHECKED BY:				
		ANGULAR TOL. ± 2 DEGREES:		03_E336	17-12-03	A90 ADDED TO DRAWING TITLE BLOCK — 3.2
TOLERANCES UNLESS OTHERWISE STATED: 0.00 - 020, 0.0 - 05	ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED	ORIGINAL SCALE: NTS	PLOT SCALE: 1X		18-09-00	PRODUCTION RELEASE — 1
MATERIAL		SHT 1 OF 2	SHT SIZE: A3	ECO NUMBER	DATE	DESCRIPTION OF CHANGE — ISSUE
FINISH		DRAWN WITH REFERENCE TO BS 308		PART NUMBER AND DRAWING NUMBER: L907TX		

1,4	0V	
5	100V	+/- 15%
2	100V	+/- 15%
7,9	0V	
8	9V	
10	9V	
3,6	N.C.	NO PIN



ARCAM A & R CAMBRIDGE LTD	DRAWING TITLE: A85/A90 AMPLIFIER DIGITAL TRANSFORMER 100V	DRAWN BY: CL				
DRAWN TO THIRD ANGLE PROJECTION		DATE: 18-09-00				
		CHECKED BY:				
		ANGULAR TOL. ± 2 DEGREES:		03_E336	17-12-03	A90 ADDED TO DRAWING TITLE BLOCK — 3.2
TOLERANCES UNLESS OTHERWISE STATED: 0.00 - 020, 0.0 - 05	ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED	ORIGINAL SCALE: NTS	PLOT SCALE: 1X		18-09-00	PRODUCTION RELEASE — 1
MATERIAL		SHT 2 OF 2	SHT SIZE: A3	ECO NUMBER	DATE	DESCRIPTION OF CHANGE — ISSUE
FINISH		DRAWN WITH REFERENCE TO BS 308		PART NUMBER AND DRAWING NUMBER: L907TX		