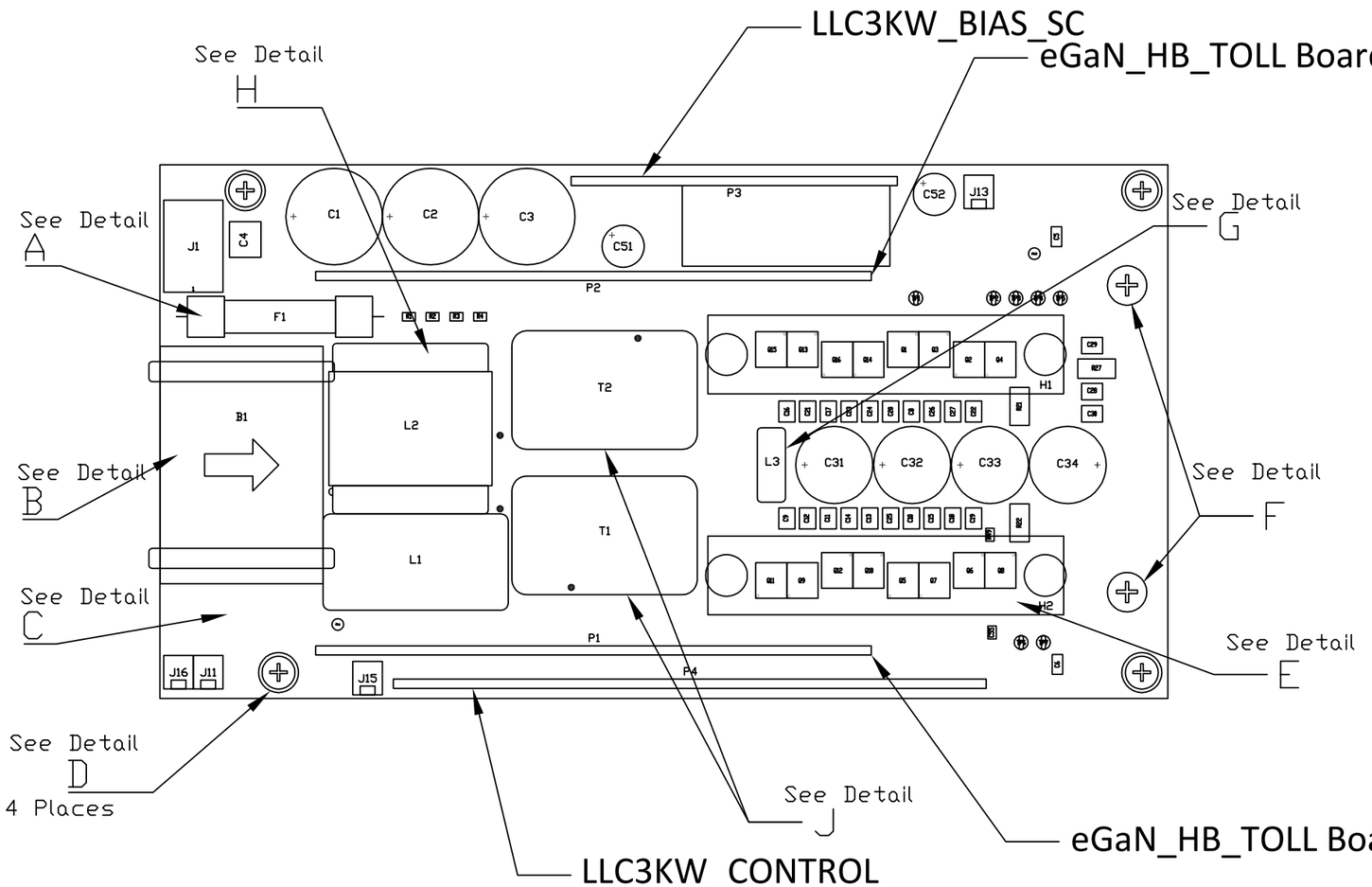
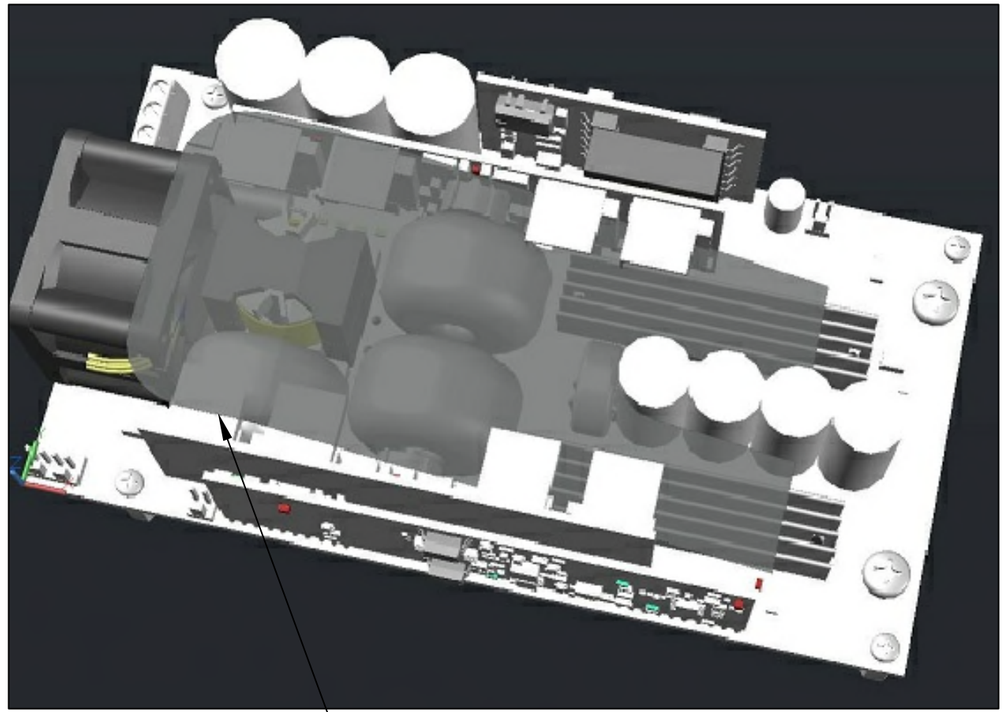
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	LLC3600W MAIN BOARD ASSEMBLY	09/05/2016	MARK STEM

Refer to separate BOM for Item part number references.





Airflow Deflector
(Shown transparent) See Detail: K

UNLESS OTHERWISE SPECIFIED	SIGNATURES	DATE
DIMENSIONS ARE IN INCHES	NAME	DATE
TOLERANCES ON:		
2 PL DECIMALS +/- .010		
3 PL DECIMALS +/- .005		
MILS +/- 5 MILS		
HOLES +/- 3 MILS		
ANGLES +		
FRACTIONS +		

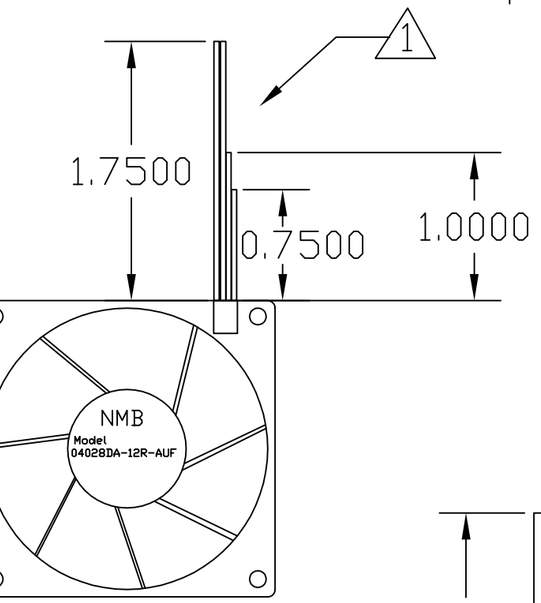
INFINEON TECHNOLOGIES
101 N. Sepulveda BLVD, El Segundo, CA 90245

TITLE: LLC3600W MAIN BOARD ASSEMBLY

SIZE	DWG NO	REV
	PCB = P100040	

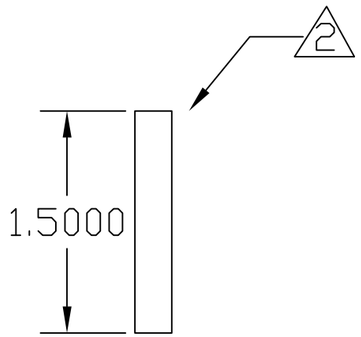
SCALE		SHEET
		1

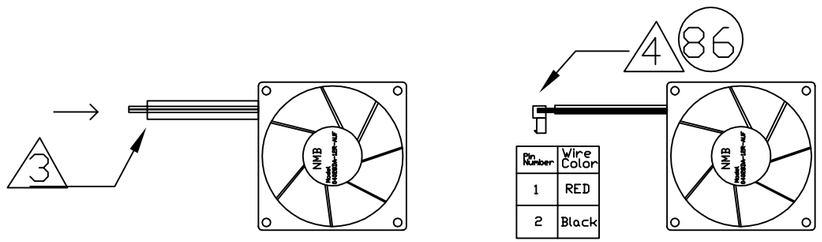
Detail - B Fan Prep Assembly

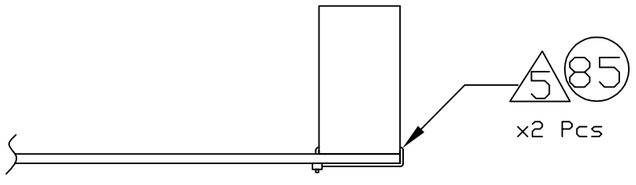


Trim fan wires to specified length below.

Wire Color	Length
Black	1.75″
Red	1.75″
White	1.0″
Brown	0.75″



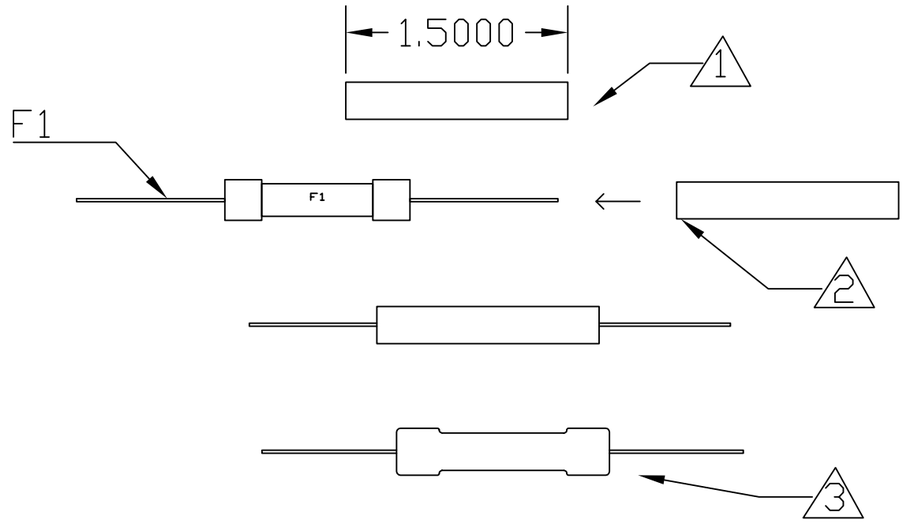




Detail - B Instructions

1. Cut Leads of fan to dimensions shown.
2. Cut 1/8″ heatshink tubing to 1.5″ in length as shown.
3. Slide tube over fan leads and use heat gun to shrink heatshink tubing.
4. Attach the fans red and black wires to connector item 86, using proper crimping tool.
5. Secure fan to motherboard with two 4″ long tie wraps, item 85.

Detail - A
Fuse Prep Assembly



Detail - A Instructions

1. Cut ¼″ heatshink tubing to 1.5″ in length.
2. Slide heatshink tubing over fuse.
3. Use heat gun to shrink heatshink tubing over fuse.

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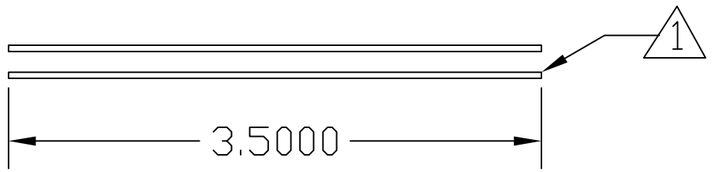
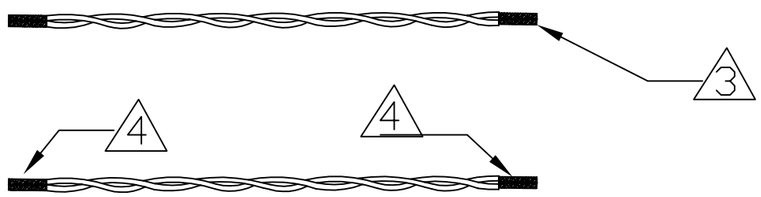
TITLE		
LLC3600W MAIN BOARD ASSEMBLY		
SIZE	DWG NO	REV
	PCB = P100040	
SCALE		SHEET
		2

Detail - C
Wire Jumper Prep Assembly (W1)



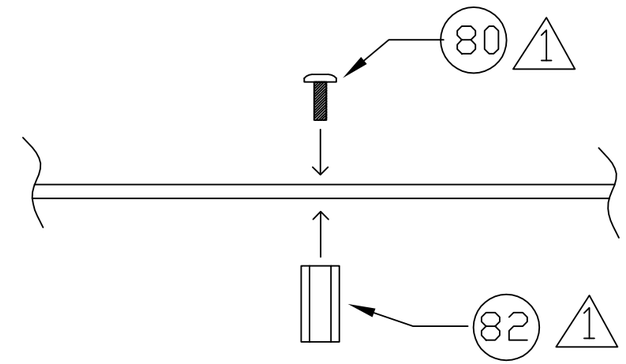


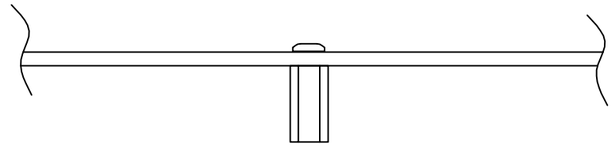


Detail - C Instructions

1. Cut 2 pieces of Rubadue litz wire to 3.5" in length.
2. Strip 0.25" of insulation off each end of litz wire as shown.
3. Twist the 2 litz wires together 3 turns per inch as shown.
3. Solder each end of wire jumper 0.25" on each end as shown.

Detail - D
Board Standoff Prep Assembly





Detail - D Instructions

1. Secure 1/4" Female Hex Stand off, item 82, with a 1/4" length 4-40 pan head steel screw, item 80. in four corners of supply.

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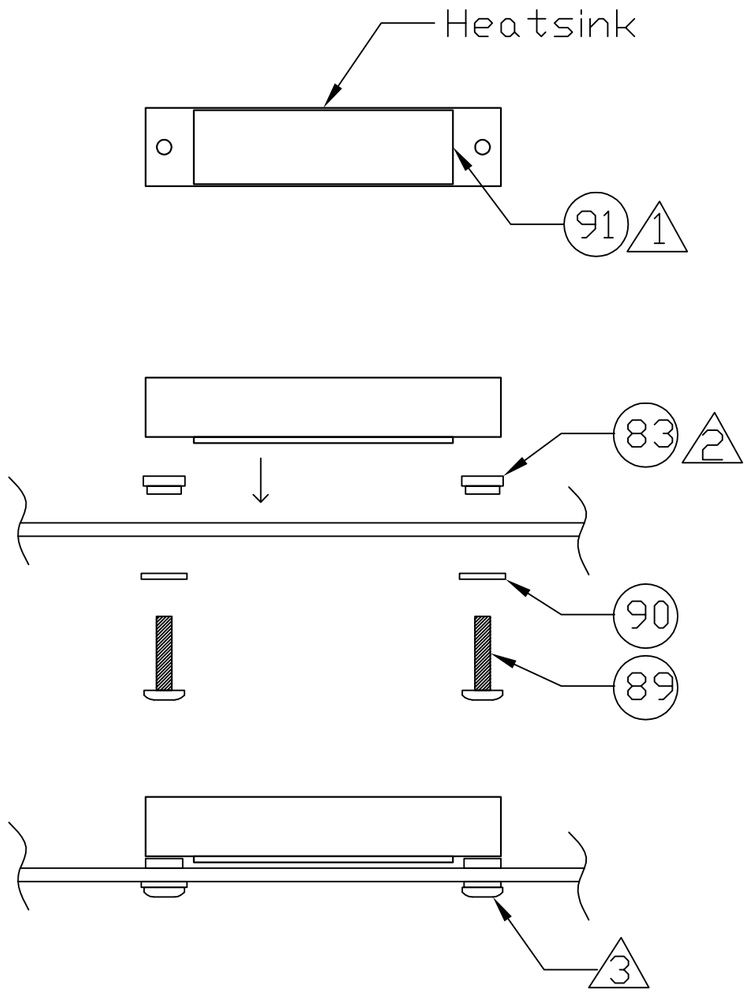
TITLE LLC3600W MAIN BOARD ASSEMBLY		
SIZE	DWG NO PCB = P100040	REV
SCALE		SHEET 3

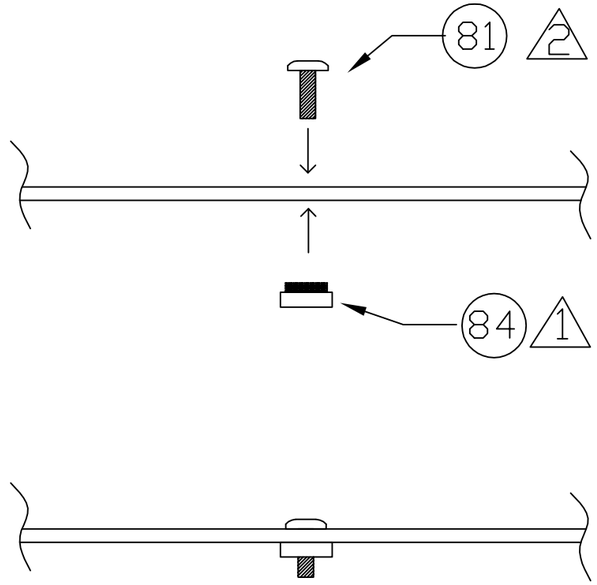
Detail - E
Secondary Heatsink Assembly



Detail - E Instructions

1. Center thermal pad on heatsink.
2. Install unthreaded Pem nut in PCB holes.
3. Install heatsink to PCB using flat washer and 4-40 x ½ screws. Tighten screws (appeox. 4-6 In/Lbs) to compress thermal pad, but do not overtighten causing PCB to flex.

Detail - F
Bottom PEM nut Prep Assembly



Detail - F Instructions

1. Swage two PEM nuts, item 42, part# P-KF2-832-ET in to PCB.
2. Screw two 8-32 pan head 3/8" long steel screws, item 41, into PEM nuts on PCB.

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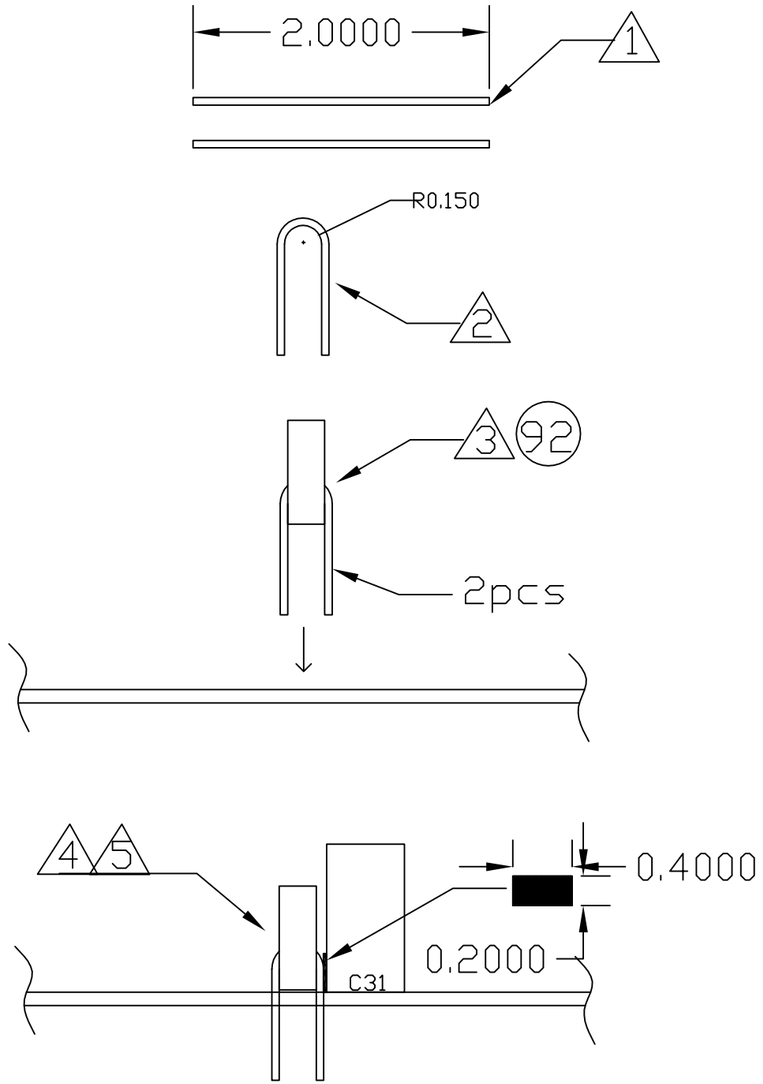
TITLE		
LLC3600W MAIN BOARD ASSEMBLY		
SIZE	DWG NO	REV
	PCB = P100040	
SCALE		SHEET 4

Detail - G

Secondary choke core Assembly (L3)

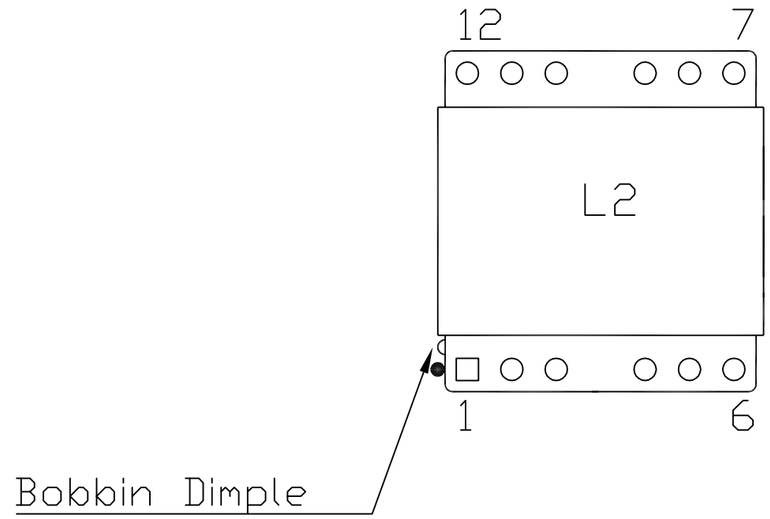


Detail - G Instructions

1. Cut 2 pieces of 15 Gauge Bus wire, item 92, to 2.0" in length as shown.
2. Bend the 15 Ga bus wire with a 0.15" radius loop in the middle as shown.
3. Place the 2 prepared bus wires together through core, item 20, as shown.
4. Place core and wire assembly into mother board PCB as shown.
5. Cut a piece of 10mil thick nomex to dimensions shown and place Nomex between Cap C31 and the 15ga wires mounting L3 to PCB. Then solder 15ga wires to PCB.

Detail - H

L2 board installation



Detail - I Instructions

1. Place L2 on PCB so that bobbin dimple in oriented in the pin 1 location.

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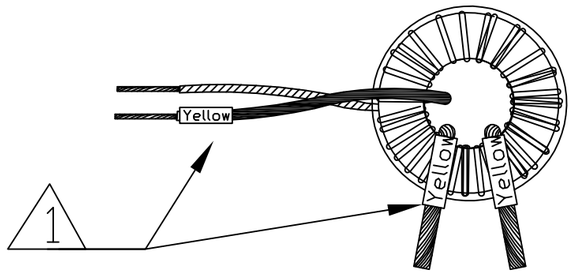
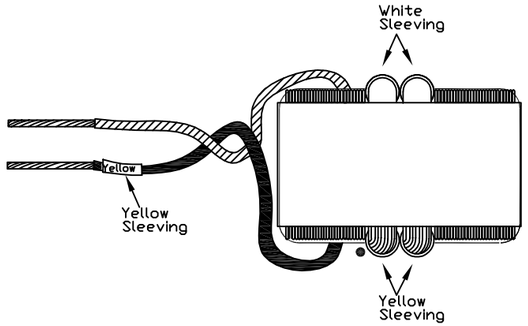
TITLE LLC3600W MAIN BOARD ASSEMBLY		
SIZE	DWG NO PCB = P100040	REV
SCALE		SHEET 5

Detail - J

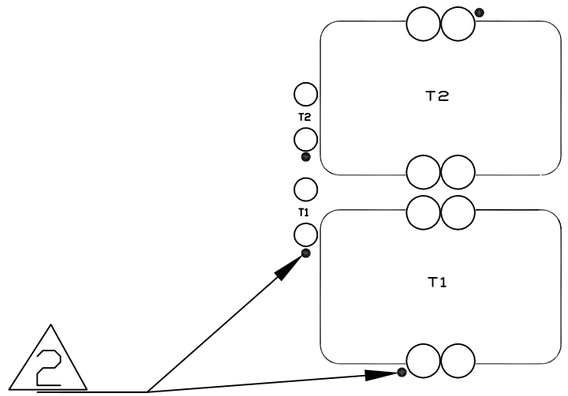
T1 and T2 board installation

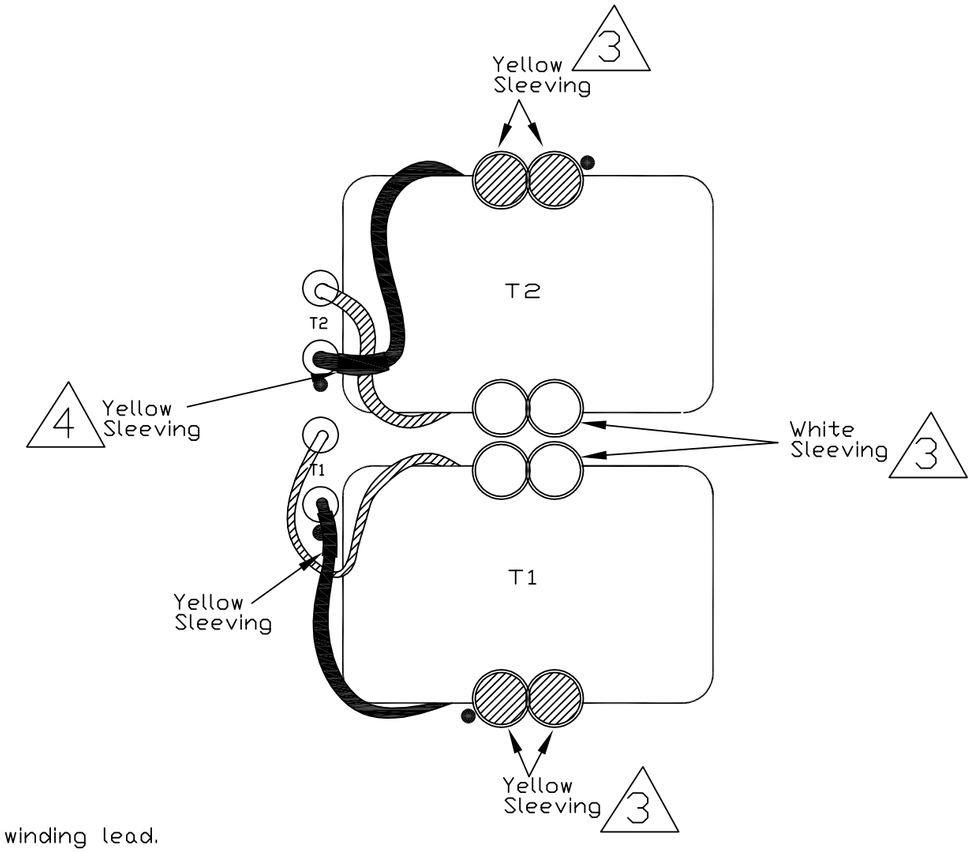


Transformer Side View



Transformer Top View





Detail - J Instructions

1. Both T1 and T2 transformers must be installed with proper phasing of windings.
   The start of winding phase on transformer is marked with a yellow heat shrink sleeve on winding lead.
2. The start location on PCB for each winding lead is marked with a dot,(•).
3. Install T1 and T2 into the PCB with the yellow sleeved main leads going into the dot mark on PCB.
4. Install the flying leads of T1 and T2 with the yellow marked sleeve going into the dot mark and the lead without any sleeve going into the other PCB hole.

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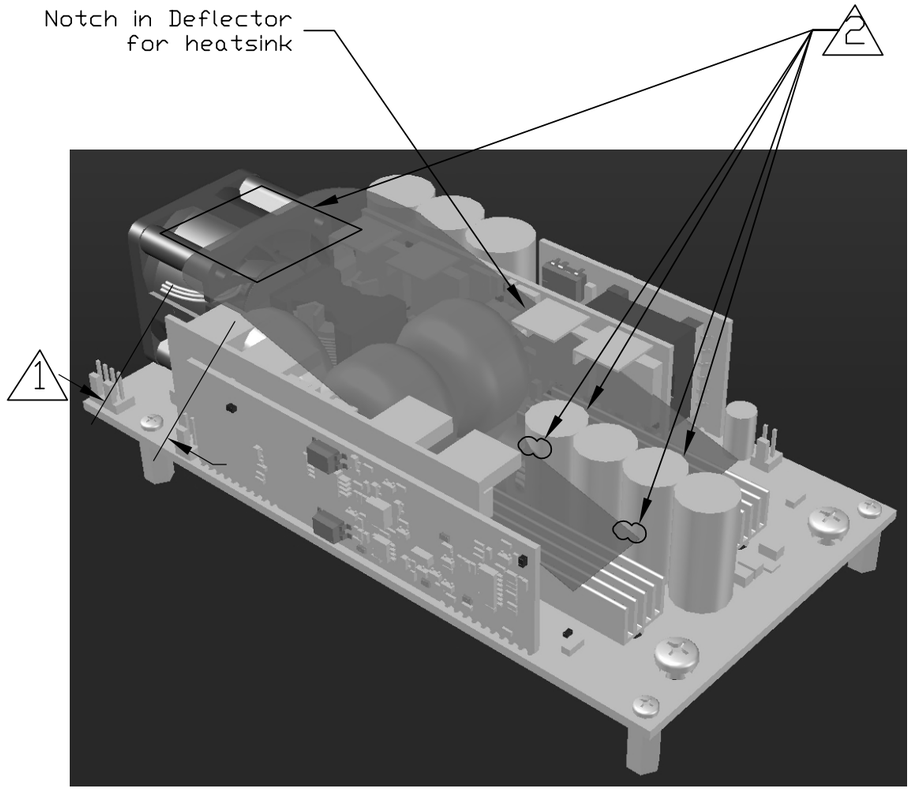
TITLE LLC3600W MAIN BOARD ASSEMBLY		
SIZE	DWG NO PCB = P100040	REV
SCALE		SHEET 6

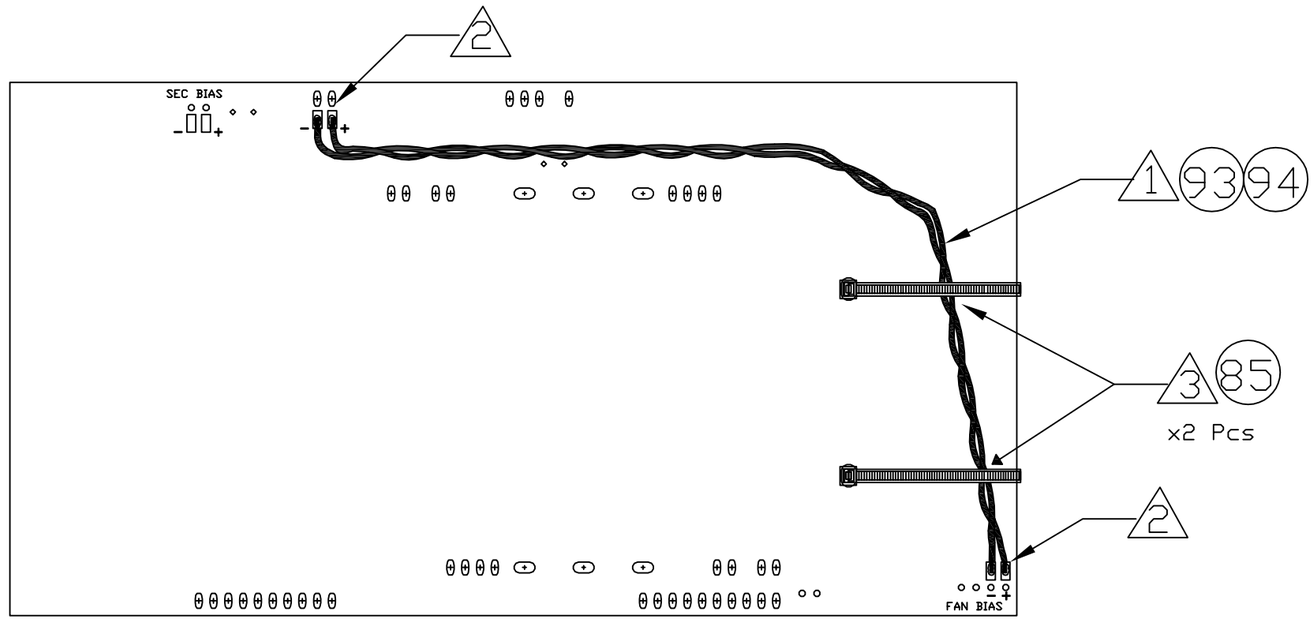
Detail - K
Airflow Deflector Assembly



Detail - K Instructions

1. Bend Airflow Deflector approx. 1 inch from end as shown.
2. Install Airflow Deflector approx. as shown, securing it to fan with tape (Uline S-423) and capacitors with RTV.

Adding wire jumper on bottom of motherboard for internal fan bias.



Fan Bias Jumper Instructions

1. Twist together a red and black 22 awg UL1569 wire at 3 turns per inch.
2. Strip and solder the fan wire jumper as shown above with the red wire soldered to the "+" terminals and the black wire to the "-" terminals.
3. Pass the fan wire jumper under the fan tie wraps, Item 85, to help secure it under the PCB.

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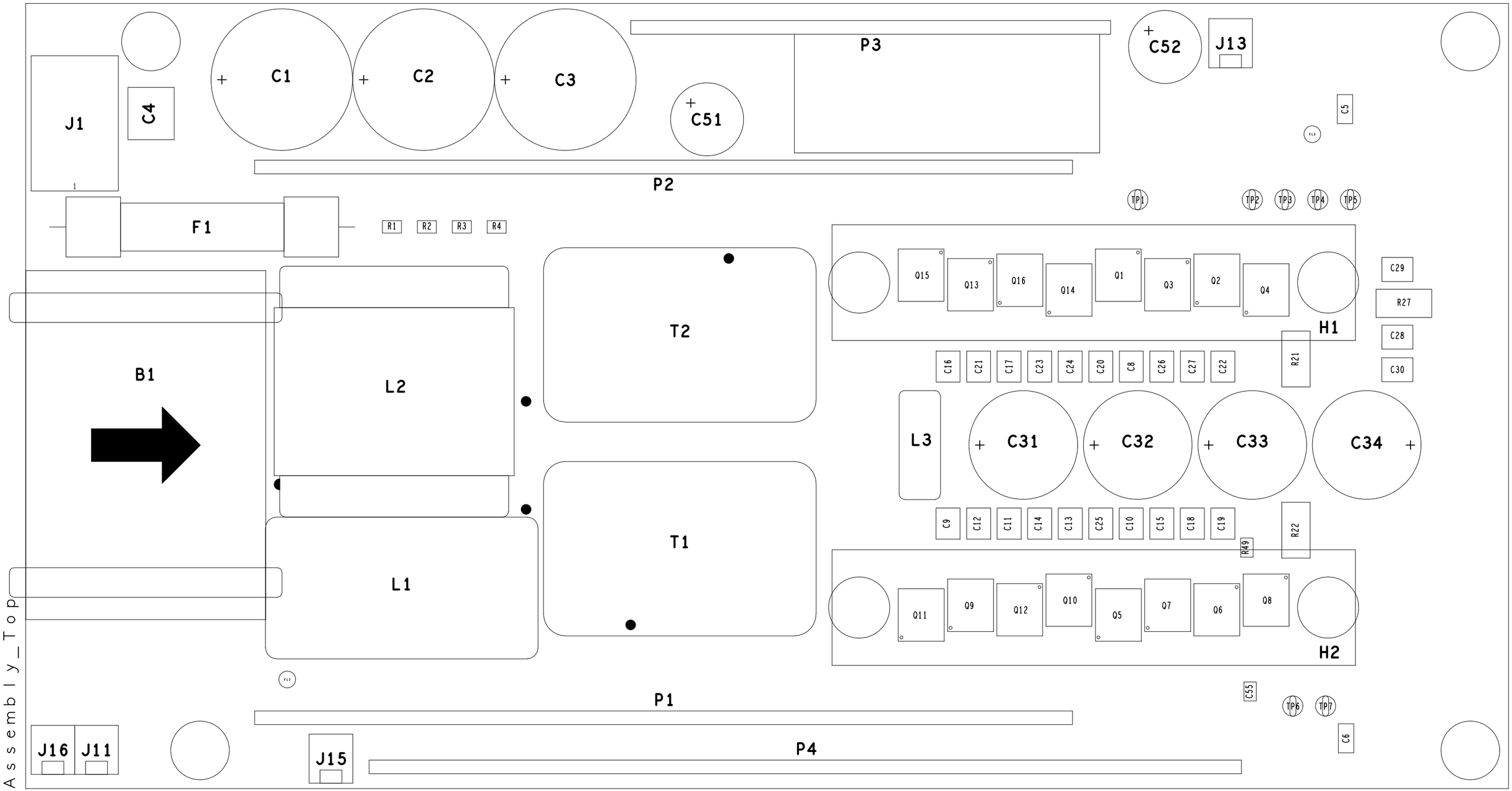
TITLE LLC3600W MAIN BOARD ASSEMBLY		
SIZE	DWG NO PCB = P100040	REV
SCALE		SHEET 7


J1
C4
C1
C2
C3
C51
P3
C52
J13
C5
P2
F1
R1
R2
R3
R4
TP1
TP2
TP3
TP4
TP5
Q15
Q13
Q16
Q14
Q1
Q3
Q2
Q4
H1
C29
R27
C28
C30
C16
C21
C17
C23
C24
C20
C8
C26
C27
C22
R21
B1
L2
T2
L3
C31
C32
C33
C34
C9
C12
C11
C14
C13
C25
C10
C15
C18
C19
R22
R49
L1
T1
Q11
Q9
Q12
Q10
Q5
Q7
Q6
Q8
H2
C55
TP6
TP7
C6
P1
P4
J16
J11
J15
Assembly_Top

J1
INPUT
1

C4
3300pF

C1
82uF

C2
82uF

C3
82uF

C51
100uF

P3

C52
680uF

Con2
J13

C5
0.047uF

Jack

P2

F1
15A / 500 Vdc

R1 750k
R2 750k
R3 750k
R4 750k

TP1 Loop
TP2 Loop
TP3 Loop
TP4 Loop
TP5 Loop

Q15 BSC026N08NS5
Q13 BSC026N08NS5
Q16 BSC026N08NS5
Q14 BSC026N08NS5
Q1 BSC026N08NS5
Q3 BSC026N08NS5
Q2 BSC026N08NS5
Q4 BSC026N08NS5

H1

C29 10uF
R27 5.11K
C28 10uF
C30 10uF

C16 10uF
C21 10uF
C17 10uF
C23 10uF
C24 10uF
C20 10uF
C8 10uF
C26 10uF
C27 10uF
C22 10uF

R21 0.0005

B1

L2

T2

L3

C31
470uF

C32
470uF

C33
470uF

C34
470uF

C9 10uF
C12 10uF
C11 10uF
C14 10uF
C13 10uF
C25 10uF
C10 10uF
C15 10uF
C18 10uF
C19 10uF

R22 0.0005

R49 10K NTC

Q11 BSC026N08NS5
Q9 BSC026N08NS5
Q12 BSC026N08NS5
Q10 BSC026N08NS5
Q5 BSC026N08NS5
Q7 BSC026N08NS5
Q6 BSC026N08NS5
Q8 BSC026N08NS5

H2

Jack

L1

T1

C55
0.1uF

TP6 Loop
TP7 Loop

C6
0.047uF

P1

P4

Con2
J16

Con2
J11

Con2
J15

Assembly_Top

J2

C54

R6 R5 R10 R25

C38 C36 C46 C50

R14 R12 R18 R26

U2 C37 U1 C35 U6 C49 U8 C45

U7 C47 U3 C39 U4 C41 R13 U5 C43 R11

R19 R15 C48 C40 R16 R17 C42 C44

J7

R20 R7 R8 R9

R30 U10 C75 R28 R32 C53 R29 R24

Assembly_Bottom

J2

J7

C54
330pF

R6 10k
R5 10k
R10 10k
R25 10k

C38 0.1uF
R14 10k
R12 10k
C36 0.1uF
C46 0.1uF
R18 10k
R26 10k
C50 0.1uF

U2 UCC27211 C37 0.1uF
U1 UCC27211 C35 0.1uF
U6 UCC27211 C49 0.1uF
U8 UCC27211 C45 0.1uF

U7 UCC27211 C47 0.1uF
U3 UCC27211 C39 0.1uF
U4 UCC27211 C41 0.1uF R13 10k
U5 UCC27211 C43 0.1uF R11 10k

R19 10k
R15 10k
C48 0.1uF
C40 0.1uF
R16 10k
C42 0.1uF
R17 10k
C44 0.1uF

R20 10k
R7 10k
R8 10k
R9 10k

R30 1K
U10 OPA4140A
C75 100pF
R28 1K
R32 200K
C53 100pF
R29 200K
R24 0

Assembly_Bottom