



2017 UHD Training Materials

49UJ6300 WebOS^{3.5} UHD TV POWER SUPPLY

(Layout and Voltage Readings)

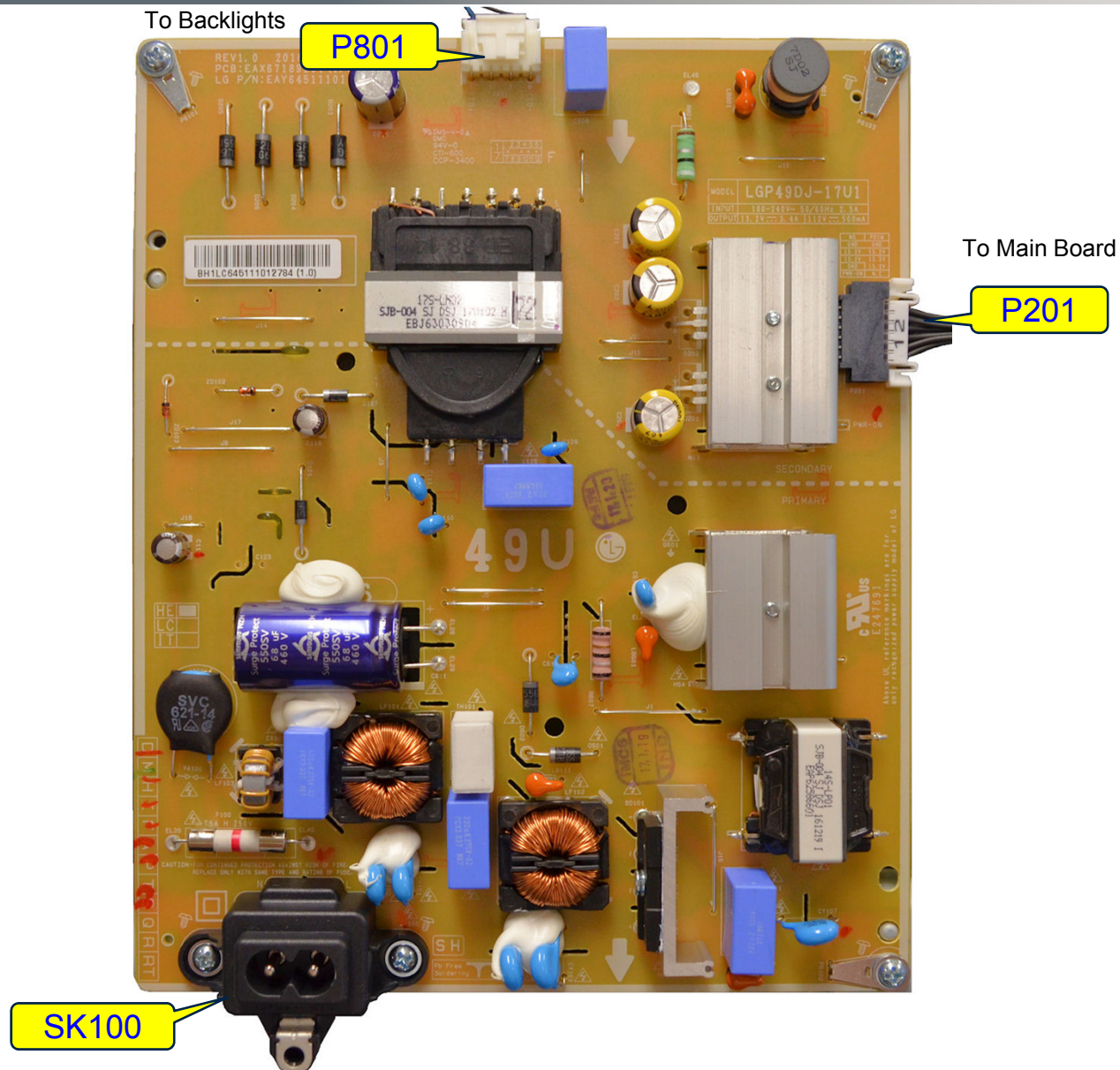
Part numbers are subject to change. Please check GSFS before ordering any part numbers from this document.

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Power Supply (SMPS) Board Picture (p/n: EAY64511101)

49UJ6300 (2017) Power Supply Info



49UJ6300 SMPS (Power Supply) Drawing

P801 To Panel Backlight Power pin 7.
P801 Pin 1 goes to Backlight Driver
Q801 (Back of SMPS)

LED- (50.7V) 50%
LED+ (154.8V) 50%

P801 "SMPS Board" To "LED Backlights"

PIN	LABEL	RUN	Diode
1 ←	LED-	67V~36.30V	OL
3 →	N/C	n/c	n/c
5 ←	N/C	n/c	n/c
7 →	LED+	158.1V~151.8V	OL

In → Out ← Dim to Bright

During Stand-By LED+ will fluctuate 107V-110V
Main Board Disconnected: 98V
Backlight Setting Dim 0% to Bright 100%
Pins 2-6 are not connection.
Direct Lit Backlights (LED Array Strips)

SMPS TEST: Forcing SMPS On.

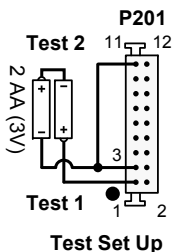
This test requires simple 3V jig. See below.

Remove AC Power.

Disconnect P1001 on Main Board.

Test 1: Using a 3V jig, Jump 3V to pin 1 (PWR_ON).
Apply AC Power. (No Backlights in Test 1)
(Pins 4-8) rises to 13.11V. Backlight Power 157.8V.
PDIM will be 3.77V. Remove AC Power.

Test 2: Using a 3V jig, Jump 3V to pin 11 (DRV_ON).
Apply AC Power. All Voltages should be produced.
(13.11V to Main and 142.8V to the Backlights).
This will also force the Backlights to come on.
PDIM will be 3.77V



Test Set Up

Note:

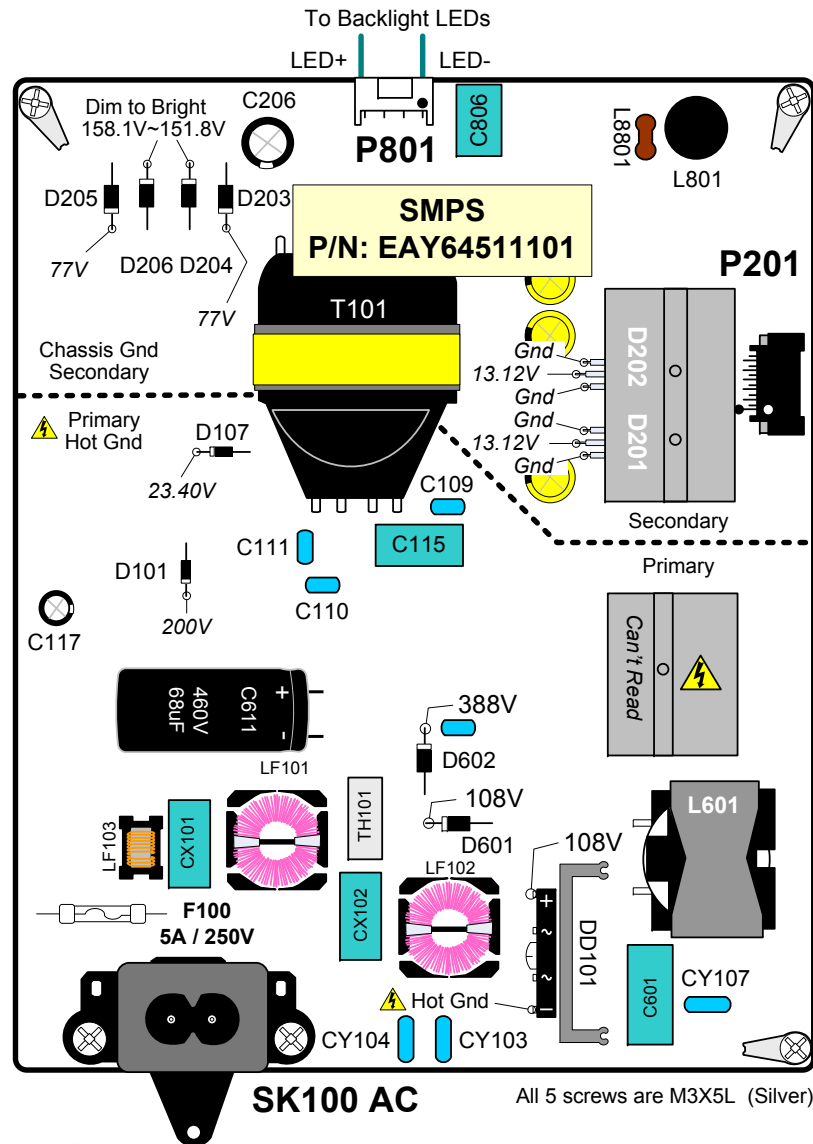
P201 still inserted. P1001 removed.
Use P1001 side to insert needles.
Note: STBY 7.90V (Pins 4-8)
Must be present when AC is applied
before beginning test indicating
Standby voltage is OK.

3V JIG: Made from 2 (AA) batteries.
(Also see Article 8979). Jump + to - on one side.
On the other side, solder two red wires (needle tipped) to the + and one
black wire (needle tipped) to the - side.

USING THE SMART JIG WITH MULTI-GENDER BOARD (See Article 9267)

LED Power during TEST, Backlights On: (146.4V)

Test LED Ground Return Line: (28.72V)



All 5 screws are M3X5L (Silver)

49UJ6300 (2017) Power Supply Section

You CAN use Smart Test Jig with the Multi-Gender Board on this model for SMPS test.
You CAN'T use the Smart Test Jig and Vx1 Cable for Panel Test in this model.

P201 "SMPS Board" To P1001 "MAIN Board"

PIN	LABEL	STBY	RUN	Diode	MAIN
(3) 12	PDIM	0V	*0.17V-3.28V	OL	2
(2) 11	MS (Drv_On)	0V	2.09V	OL	1
9-10	Gnd	Gnd	Gnd	Gnd	3-4
4-8	13.2V	7.90V	13.11V	OL	5-8 & 10
3	Gnd	Gnd	Gnd	Gnd	9
(3) 2	N/C	n/c	n/c	n/c	12
(1) 1	PWR_ON	0V	3.36V	0.94V	11

*Dim to Bright

(1) **PWR-On Pin 1:** Turns on 13.2V to the Main. No backlights at this time. Backlight Power is 107V.

(2) **MS (DRV_On) Pin 11:** Turns on the Backlights. Backlight power goes to 158V.

(3) **PDIM Pin 12:** Will vary according to incoming video IRE level and OSD Backlight setting. Output from the Video Processor. And the Backlight settings in the Customer's Menu 0% TO 100%. It is then routed out P1001 to P201 and sent to the LED Driver IC on the Back of the SMPS. The Range is: Dim 0.17V ~ Bright 3.28V. (1.76V at 50%) PDIM is actually a 3.44V p/p pulse (PWM Control).

Hot Gnd
(Shock Hazard)

VOLTAGE LABEL

MODEL	LGP49DJ-17U1
INPUT	AC100V~240V~50/60Hz. 2.5A
OUTPUT	13.2V = 3.4A
	112V – 500mA

P201 Power Supply Connector Voltage and Diode Check

49UJ6300 (2017) Power Supply Info

P201 "SMPS Board" to "MAIN Board" P1001

Pin	Label	STBY	Run	Diode Check
12	⁽³⁾ PDIM	0V	0.17V~3.28V	OL
11	⁽²⁾ MS (DRV_ON)	0V	2.09V	OL
9-10	Gnd	Gnd	Gnd	Gnd
4-8	13.2V	7.90V	13.11V	OL
3	Gnd	Gnd	Gnd	Gnd
2	N/C	n/c	n/c	n/c
1	⁽¹⁾ PWR-ON	0V	3.36V	0.94V

⁽³⁾ Dim to Bright

⁽¹⁾ **PWR-On Pin 1:** Turns on 13.2V to the Main. No backlights at this time. Backlight Power is 107V~110V.

⁽²⁾ **MS (DRV_On) Pin 11:** Turns on the Backlights. Backlight power goes to 158V.

P801 "SMPS Board" To "Panel LEDs"

Pin	Label	Run	Diode Check	50% B/L
1 →	LED-	67V~36.30V	OL	50.7V
3	N/C	n/c	n/c	n/c
5	N/C	n/c	n/c	n/c
7 ←	LED+	158.1V~151.8V	OL	154.8V

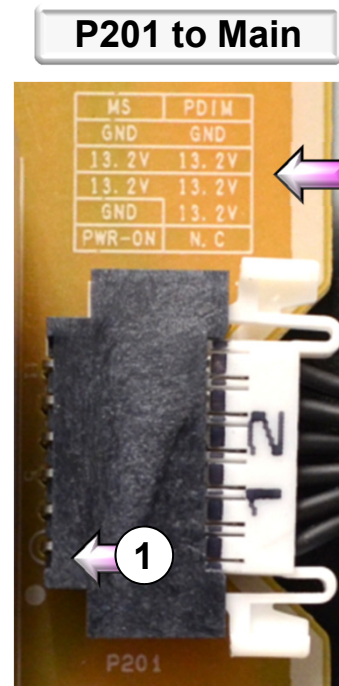
→ In
← Out

*Dim (0%) to Bright (100%)

Note: During STBY, LED+ will fluctuate 107V~110V.
With Main disconnected 98V

Main

2
1
3-4
5-8
9
12
11



Pin Silk Screen Label

Top Row of pins are odd numbers

Diode Mode values taken with all Connectors Removed

⁽³⁾ **PDIM Pin 12:** Will vary according to incoming video IRE level and OSD Backlight setting Output from the Video Processor. And the Backlight settings in the Customer's Menu 0% TO 100%. It is then routed out P1001 to P201 and sent to the LED Driver IC on the Back of the SMPS.

Caution: Pin Numbers on Main are not the same as pins on SMPS.