

STR-W6756 120 V ac input, 100 W power supply



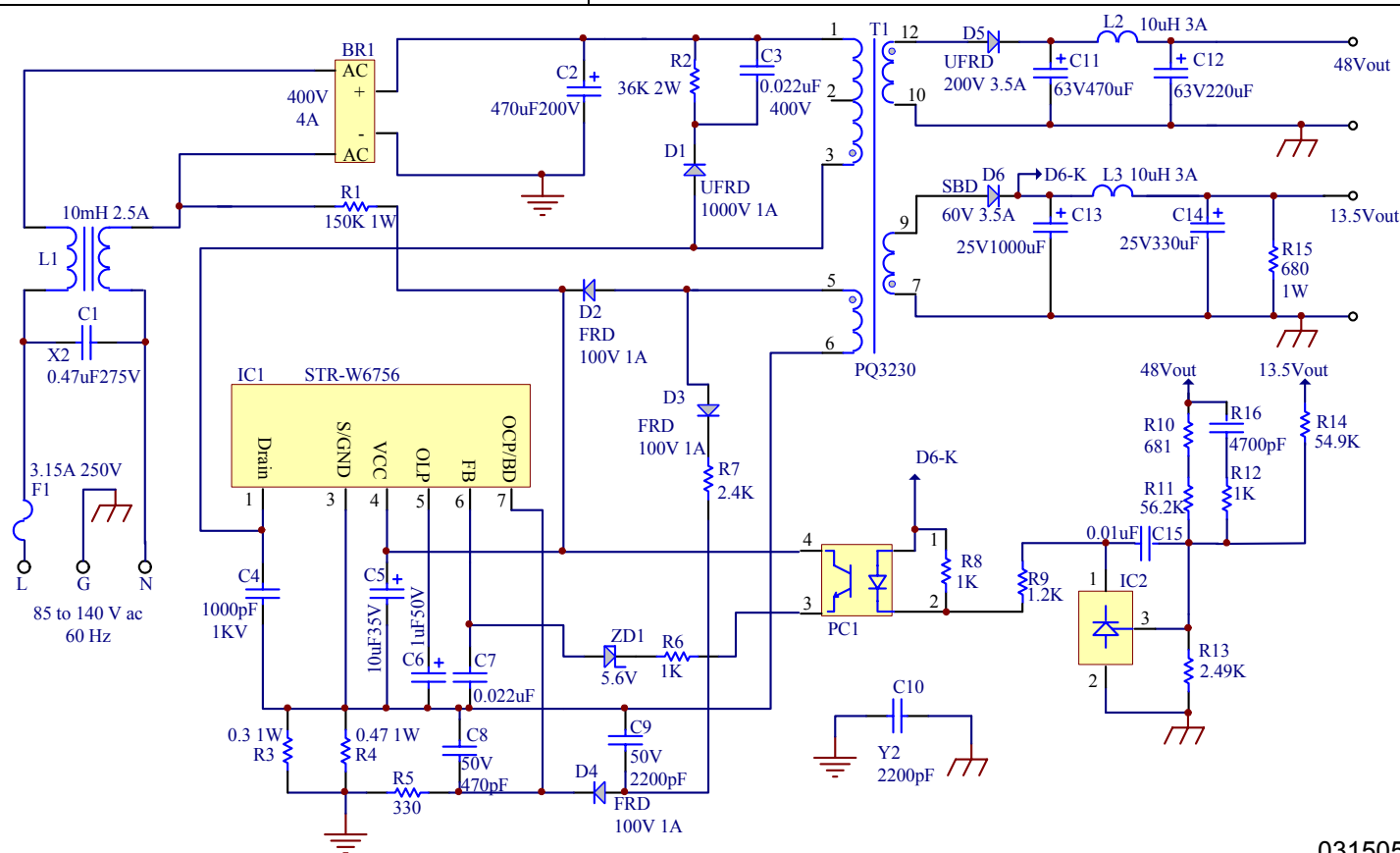
**Sanken power devices from
Allegro MicroSystems, Inc.,**

1. Description

A power supply design with 120 V ac input, 100 W output power (48 V and 13.5 V).

2. Features and specifications

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| <ul style="list-style-type: none"> • AC input: 85 to 140 V ac, 60 Hz • Output: 100 W
13.5 V \pm 10 % (0 – 1.5 A), 48 V \pm 5 % (50 mA – 1.65 A) • Efficiency: 85% (85 V ac, max. load) | <ul style="list-style-type: none"> • Operation: Quasi-resonant topology IC with bottom-skip function • EMI noise: CISPR Class-B (conductive) • Protection: Overload, overvoltage / open loop (secondary sensing), short circuit |
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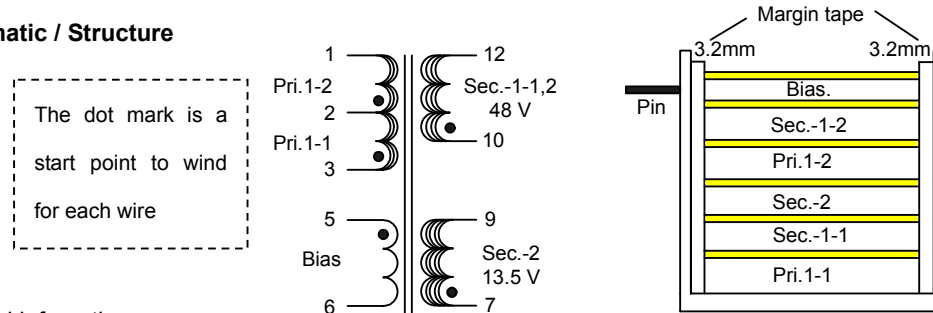
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3. Transformer design

- Parameters

Primary inductance: 270 μ H, AI-value:281 nH/N²

- Schematic / Structure



- Material information

Material	Description
Core	TDK PC44 PQ32/30 or equivalent
Bobbin	TDK BPQ32/30 or equivalent
Primary wire	AWG26 Double-coated magnetic wire
Secondary wire	AWG26, 28 Double-coated magnetic wire
Bias wire	AWG32 Double-coated magnetic wire

- Wiring information

Symbol	Wire	No. of wires	No. of layers	No. of turns	Methodology
Bias	AWG32	1	1	5	Space winding over the width
Sec. 1-2	AWG28	2	1	14	Close windings over 1 layer
Pri. 1-2	AWG26	3	2	16	Close windings over 2 layer
Sec. 2	AWG26	5	1	4	Space winding over the width
Sec. 1-1	AWG28	2	1	14	Close windings over 1 layer
Pri. 1-1	AWG26	3	2	15	Close windings over 2 layer