

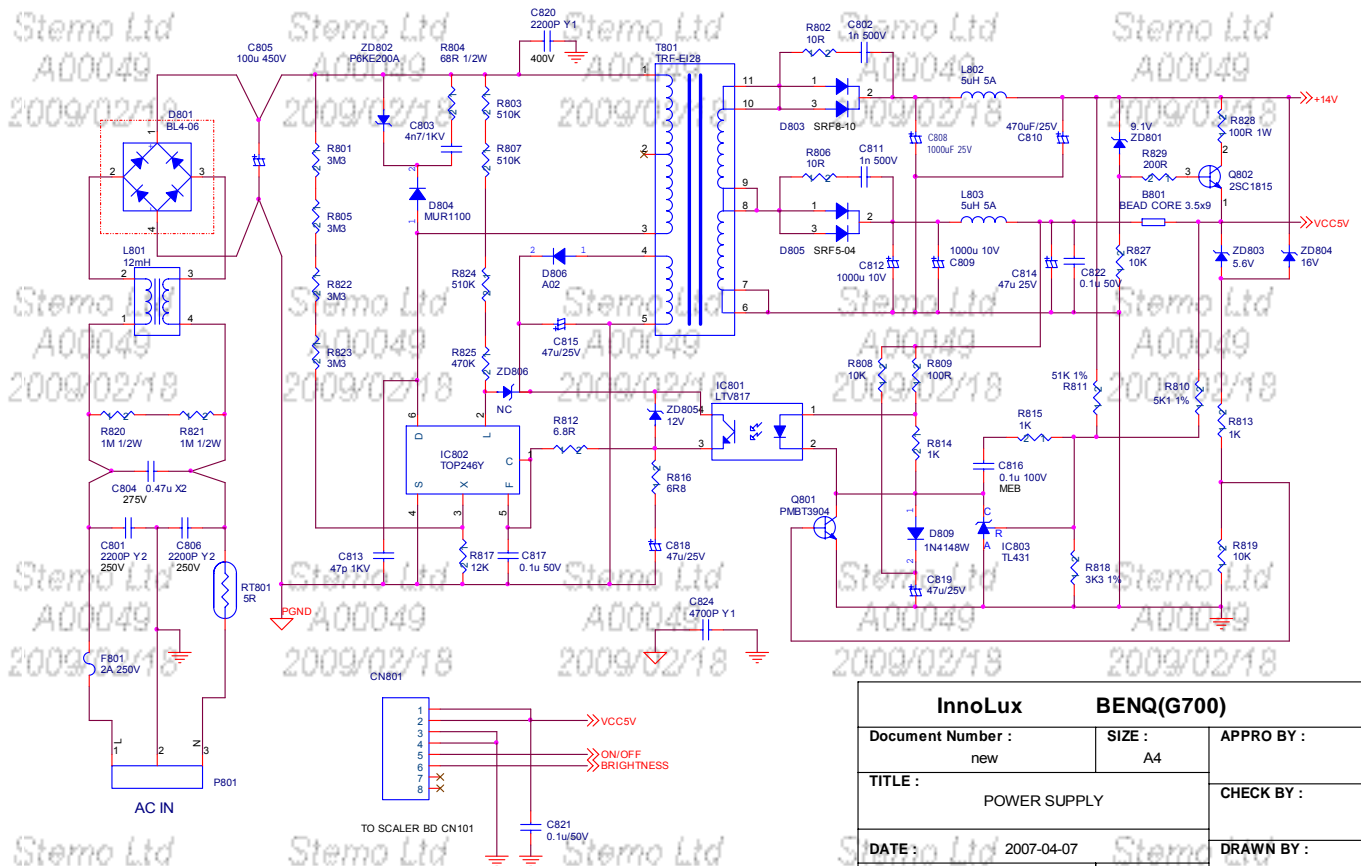
BenQ G700A

Service Manual

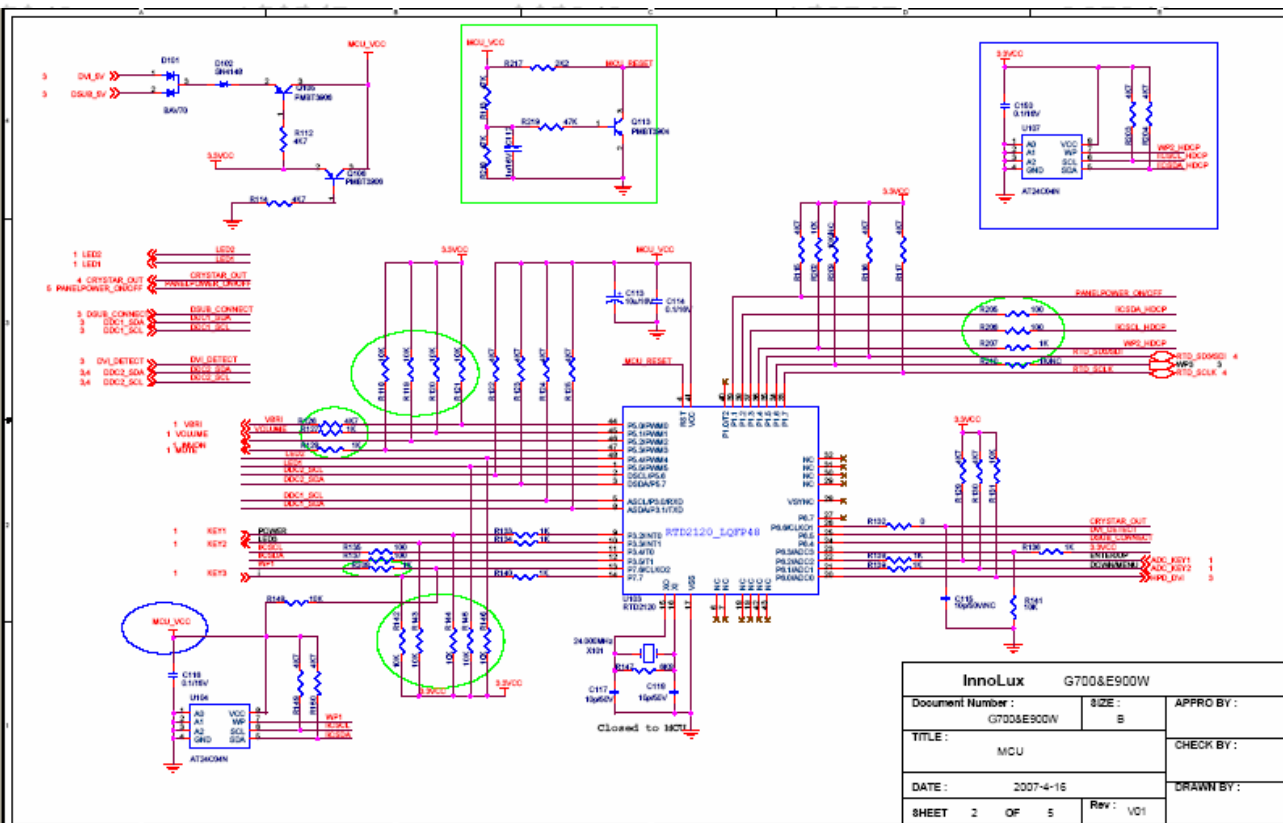
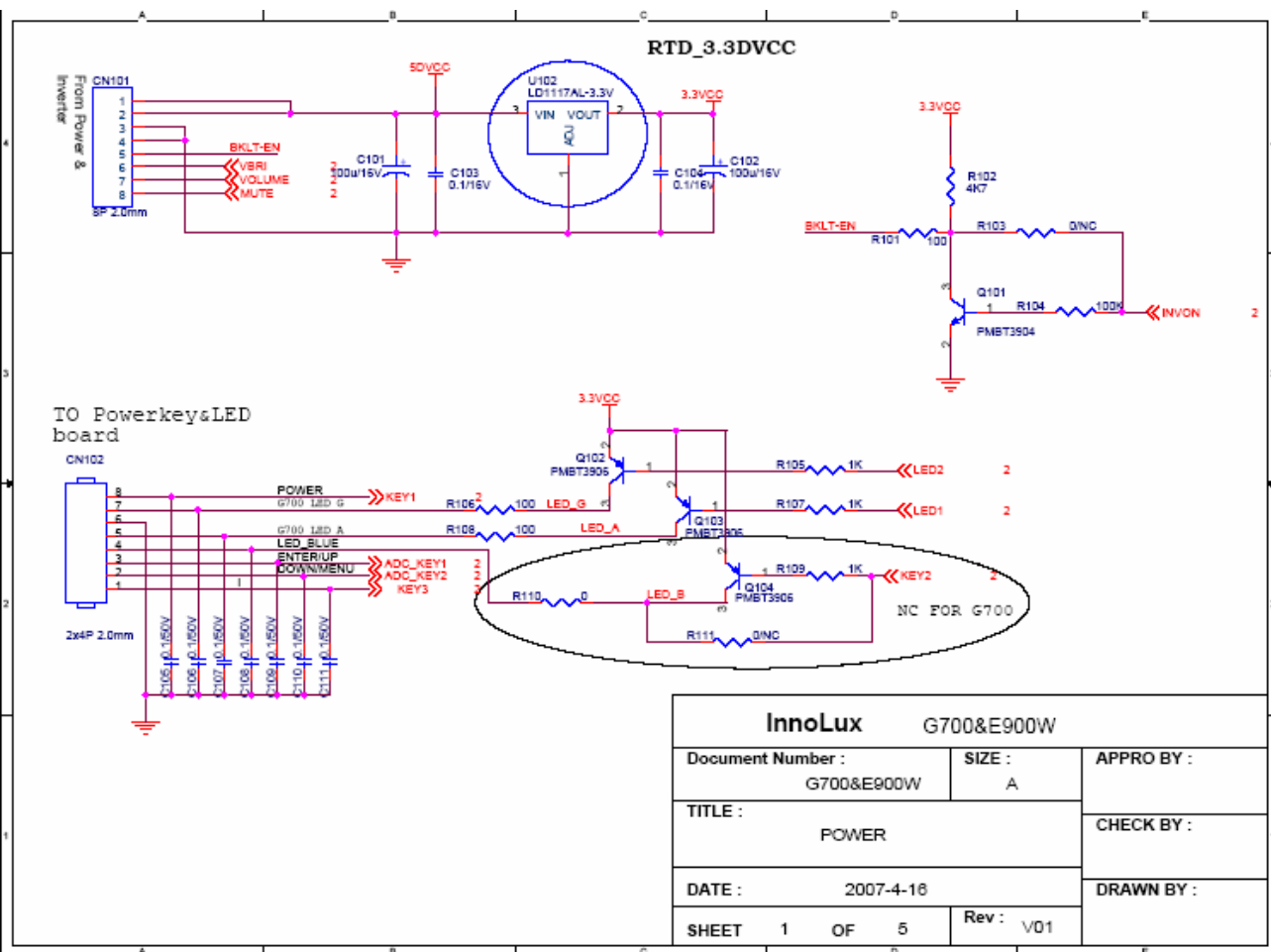
5. Level 2 Circuit Board and Standard Parts Replacement

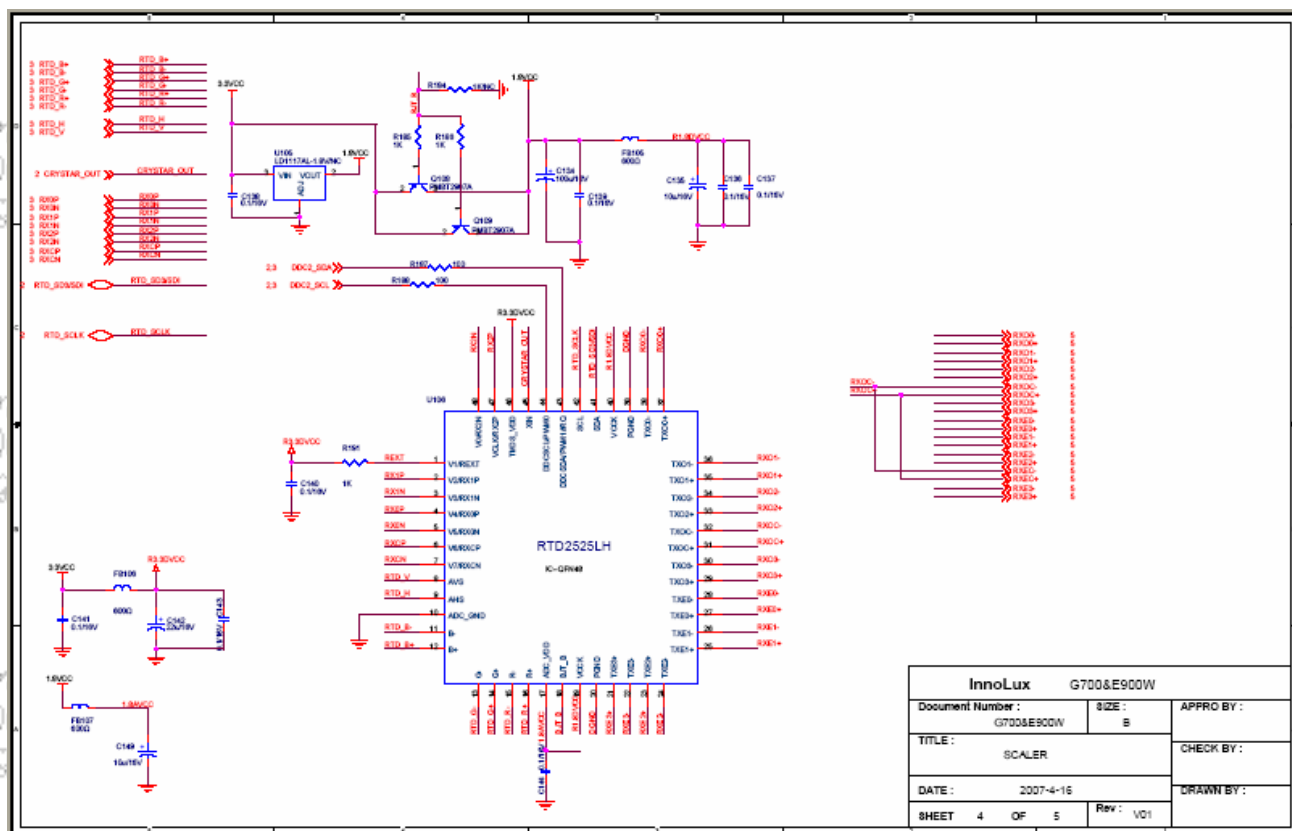
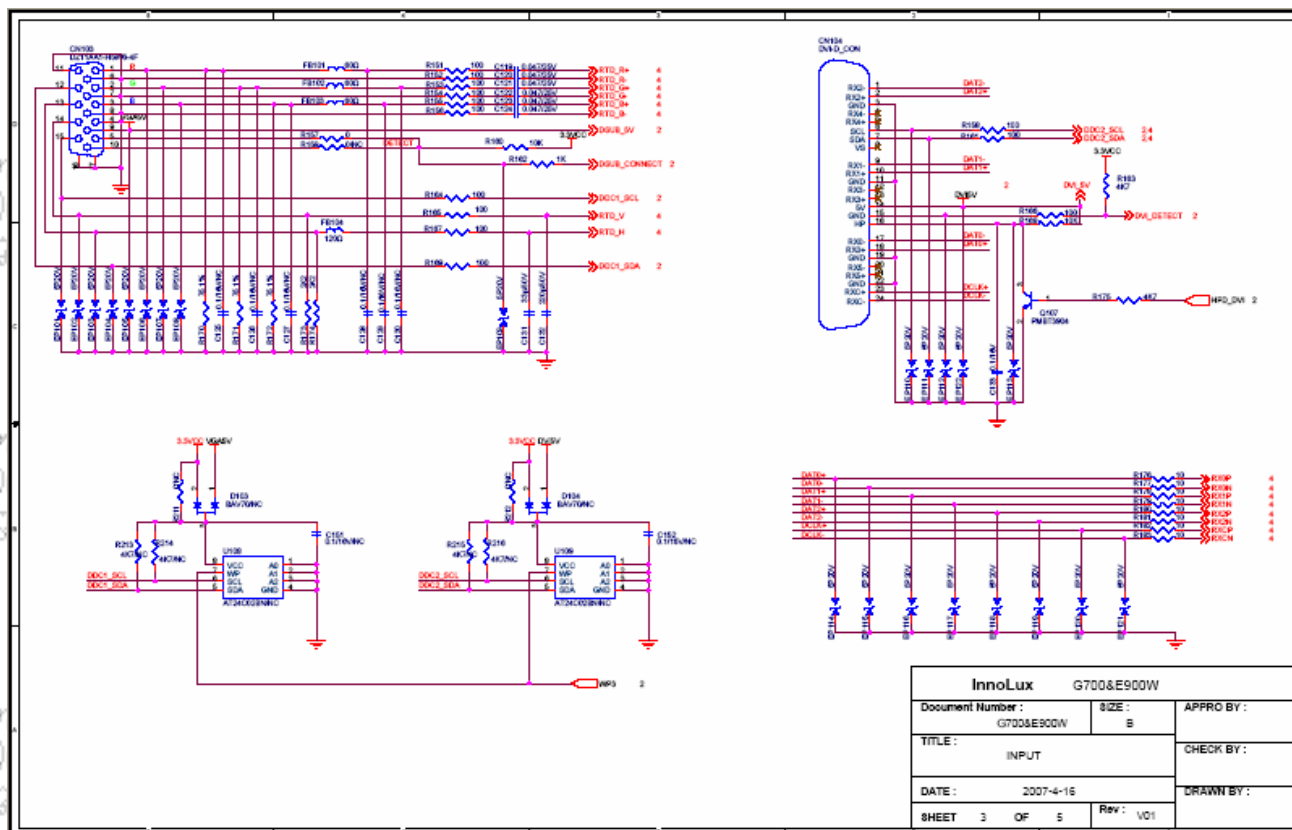
5.1. Block diagram

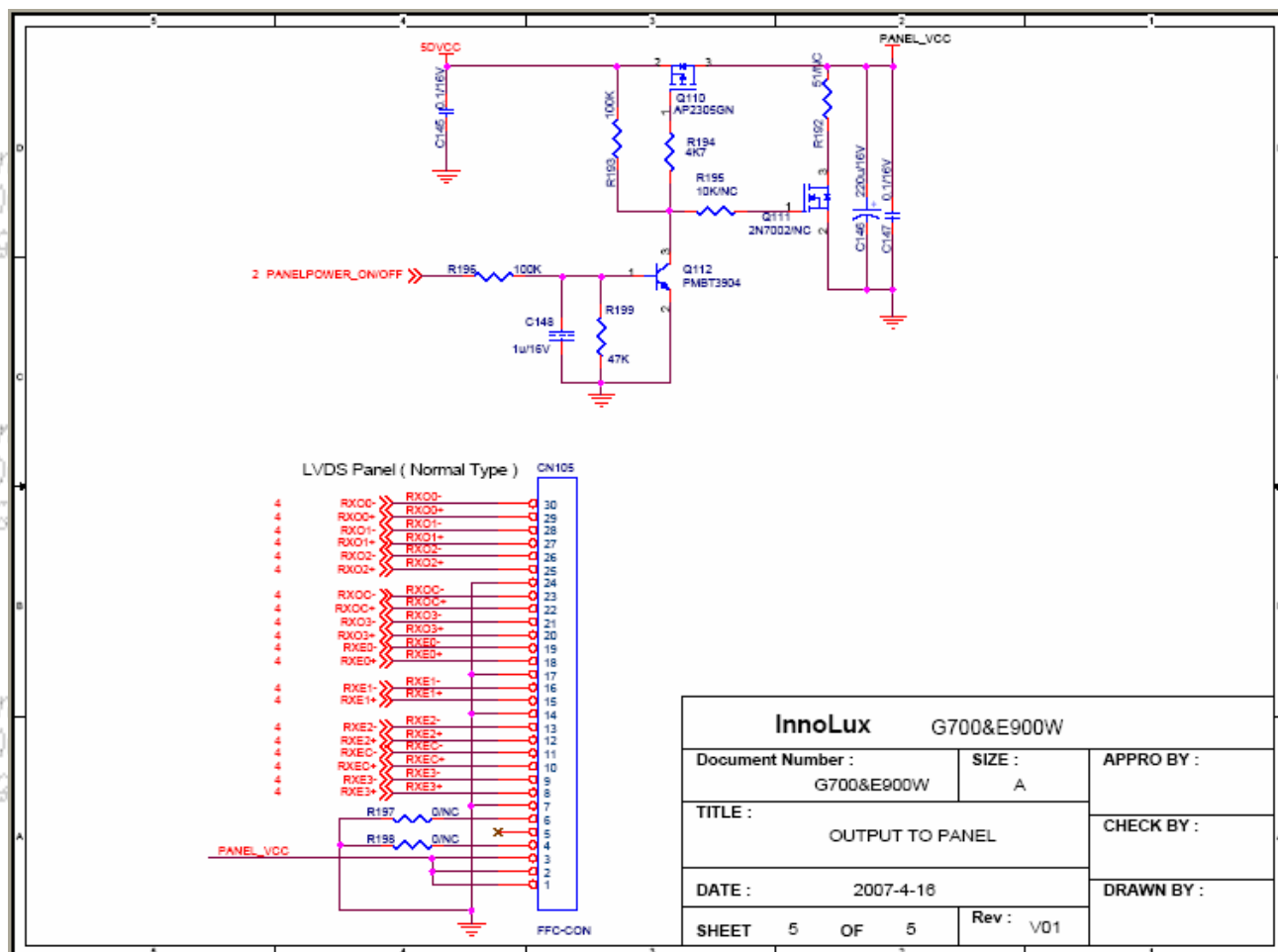
Power Board



IF Board







5.2 Circuit operation theory

5.2.1. Electronic Circuit Theory

Switching Mode Power Supply theory

2.1.1 AC Current Input Circuit

P801 is a connector for connecting AC Power. F801 is a fuse to protect all the circuit. AC input voltage is from 90V to 264V. R820 and R821 joined between two inputting main circuit to prevent man from shock.

L801 is used to clear up low frequency wave. C801 and C806 are used to discharge the waves that L801 produced. High frequency waves are damped by C801 and C806. D801 is a rectifier which composed of 4 build-in diodes, it inverts AC to DC.

2.1.2 High Voltage to Low Voltage Control Circuit

C805 is used to smooth the wave from rectifier. IC802 is a highly integrated PWM controller, which build-in a power MOSFET. When rectified DC high voltage is applied to the DRAIN pin during start-up, the MOSFET is off initially, and the CONTROL pin capacitor is charged through a switched high voltage current source connected internally between the DRAIN and CONTROL pins. When the CONTROL pin voltage V_c reaches approximately 5.8V, the control circuitry is activated and the soft-start begins. The soft-start circuit gradually increases the duty cycle of the MOSFET from zero to the maximum value over approximately 10ms. If no external feedback/supply current is fed into the CONTROL pin by the end of