Description of circuitry used

For G7706 with EB-55F

This fluorescent lamp was equipped with an electronic ballast EB-55F

120V/60Hz power supply firstly pass a filter (FT-150). Then pass an over-load protection fuse (5A/125V), then enter the radio filter component by 2 capacitors (104/275Vac) and a chokes (30mHx 2).

Then, enter the rectifier consisting of 2 parts .One is the rectifier doubler component by 2 diodes (FR105) and 2 capacitors (68uF/200V) for raising the voltage from 120V AC to 260V DC. One is the rectifier filter composed by a capacitors (334/400V) for smoothing the wave shape.

Now, full-wavely rectified 260V DC the filtered supply is divided into two blanches. One passes through the resistor 'R'(82K/2W), here a 12V DC voltage drop attains and is supplied to IR2151 as its DC working power; Another is a push-pull output which is supplied to Q_1 and Q_2 (IRF830). The self--oscillation circuit is composed of RC and IR2151. The lead 7 and the lead 5 of IR2151 have rectangular output signals of the same amplitude, but there is a 180° phase angle deviation between the two signals. Their frequencies are about 45KHz. Changing the resistance between lead 2 and 3, the oscillation frequency will be changed and then different output power can be derived. Sampling circuit works together with Q_3 and Q_4 (CS9014C) as the abnormal condition protection, no-load protection circuit. When abnormal cases take place at no-load status, Q_3 starts to operate, the working voltage (12V DC) of IR2151 will be decreased to 2V, so that IR2151 is stopped oscillating and the output is cut off. To do that, the ballast can operate continuously.