

2) Transformer Part

Transformer is the part that delivers the first power to the second. It is configured in a way that when the Switch of Switch part is turned on, power is delivered On-On. Using Volt-second Balance of the transformer to converts DC to non-sinusoidal AC in order to deliver power that is proportional to first and second turns ratio.

4.2.6 High-speed rectifier and parts

Removes EMF of high-frequency that is delivered from second transformer. Configured as diode that converts to square voltage power and filter circuit that percolates square voltage to DC voltage.

4.2.7 Reverse Current Protection Circuit

When the rectifier module is used parallel and problem occurs at the rectifier module, the Protection Circuit has Diode at the final output, so outputs from other modules may flow.

4.2.8 PWM Control and Protection Circuit (Power Factor Improving Part)

PWM Control of Power Factor Improving Part compares output voltage (DC400V), input pulsating voltage and wave form of current to set Pulse On Duty of control output 10%~90%. It also chops pulsating voltage to 100kHz within 120Hz, lets input current flow 100kHz (within 120Hz). It is configured as circuit that controls On Duty of Switch (FET letting sinusoidal converting) and circuit that protects by shut-downing rectifier output when the output is below 300V due to Feed back loop or parts problem.

4.2.9 PWM Control Circuit (Main Circuit Part)

It is configured as output voltage controlling Feedback circuit, main Switch running driver circuit, over-react condition removing Soft Start circuit when powering on. Voltage that compares reference voltage and output Feedback voltage is compared to triangle wave, 100kHz Pulse output is amplified at the driver circuit , controlling Duty ration of main switch.

4.2.10 Protection Circuit

Protection circuit restricts current when the output current is rising. It is configured as output stopping Over-Voltage-Shutdown Circuit when the output becomes high voltage due to Feedback break and Alarm Circuit that sends alarm when there is no output.

4.2.11 Alarm Transmission Circuit

It is circuit that transmits abnormal condition from rectifier module to control Unit, and alarm types are Abnormal Rectifier Module (high voltage output, short-circuited), battery discharge, abnormal AC input (blackout and over the limit).

5. Control PCB Module (KLTE413-CTL)

Control PCB Module is installed inside the recitifer module. Operation description is attached.

File : KLTE-413 Control Operation MANUAL(120210).pdf

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