

L206RF(.D) Circuit Description

Power Supply VDD and VMM and GND

Via two Metallized Polyester Film Capacitors C11,C12 and the resistors R19, R20 and R21 that coupling the neutral AC line, the AC voltage is reduced a lot and added on the node of D2 and D4, and the GND is connected the hot AC line. Then through rectifier diode D4 and regulator U5 convert the AC voltage into DC Power supply VDD, zener diode D2 clamp the maximum amplitude of VBB. Via regulator U6, the VDD 5vDC is converted into 3Vdc.

AC line Zero Crossing Detection

Via R25 the AC line signal is reduced, and the R23, D3 and R30 and Q1, AC sine wave signal was converted into square wave. So the MCU could process it.

Lamp Dimmer Control

This dimmer function is controlled by the Triac Q4008L4, which triggered by the output signal from PF4 of MCU, and the Q4(MMBT2907A) and Q3(L401E3) are the trigger driver parts.

Potentiometer POT1 and Rotary switch SW1

Rotarying the SW1 or POT1 the MCU will detect the change of the status on the PIN PD1.

Radio Transceiver Module

The 03-9952 RF914 is the radio communication module, which consists of two main parts: the Antenna and the TR1004. The antenna is available for the cordless phone, features 902~928MHz resonate frequency, 50 OHM and omni directional. The TR1004 hybrid transceiver is used for Short-Range Wireless Data Communications.

Level Converter

U4(LM339 comparator) is used for the converting from 5VDC into 3VDC, and from 3VDC into 5VDC.

Oscillator for MCU

Oscillator consists of Y1 and C6,C7.

S1 is used to reset the MCU when it works disorderly. When press the S1 will trigger the MCU reset.

U2 is the memory for data storing.