

Parameters Subject to Change Without Notice

FEATURES

- High-accuracy output current.
- Over temperature protection.
- No EMI problem.
- Compatible with PWM dimming, analog dimming and TRIAC dimming.
- Low BOM cost.

APPLICATIONS

- LED Lighting

ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Value	Unit
Input Voltage	VIN	180-250	V
Output Voltage	VOUT	280	V
Output Current	IOUT	25	mA

DESCRIPTION

EV1691D_S0_R0 is a 280V/25mA LED driver EVB based on JW1691D.

JW[®]1691D is a single channel Linear LED driver with 500V MOSFET integrated, the output current is set by the external resistor, between 5mA~60mA. The output current has little variation with OUT pin's voltage variation. The system topology is simple with few external devices and very low cost.

JW1691D provides over temperature protection. When temperature inside chip exceeds 150°C, JW1691D decreases LED current, which can help chip cooling.

EVALUATION BOARD

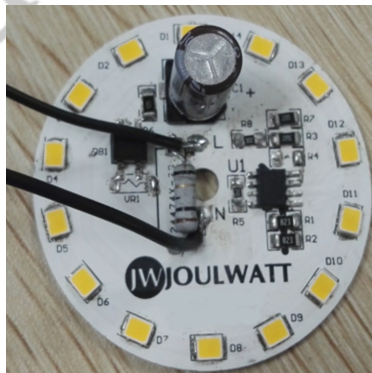
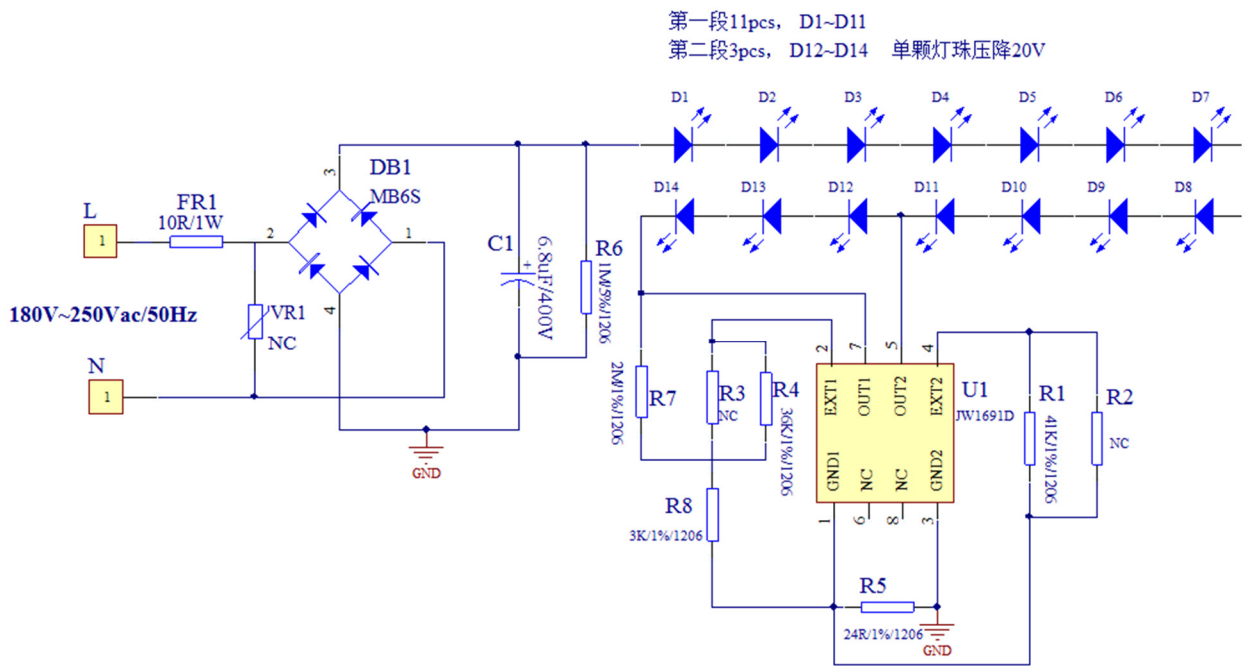


Fig.1 Top

SCHEMATIC



BILL OF MATERIALS

Qty	Designator	Comment	Description	Package	Manufacturer	Manufacturer P/N
1	BD1	MB6S	Diode Bridge	SOIC4		
1	RF1	10R/1W	Fuse resistor	DIP		
1	C1	6.8uF/400V	Electrical Cap	DIP, 8*11.5mm		
1	R1	41K/1%	Film Resistor	1206R		
1	R2	NC	Film Resistor	1206R		
1	R3	NC	Film Resistor	1206R		
1	R4	36K/1%	Film Resistor	1206R		
1	R5	24R/1%	Film Resistor	1206R		
1	R6	1M/5%	Film Resistor	1206R		
1	R7	2M/1%	Film Resistor	1206R		
1	R8	3K/1%	Film Resistor	1206R		
1	R9	0/5%	Film Resistor	1206R		
1	U1	JW1691D	IC-JW1691D	ESOP8	Joulwatt	
14	D1~D14	LED	SMD2835/20V0.5W	2835		

PRINTED CIRCUIT BOARD LAYER OUT

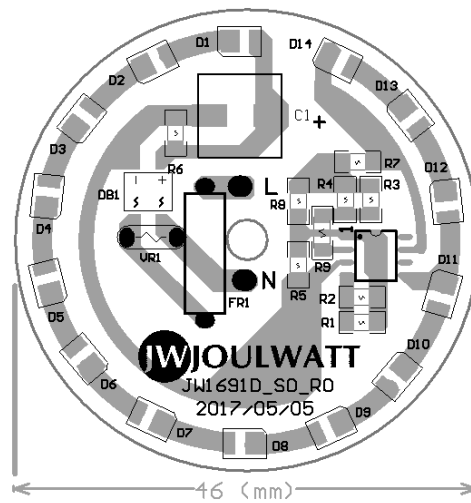


Fig.1 Top Overlay and Layer

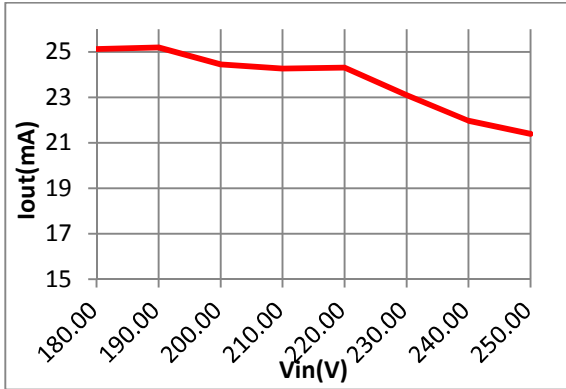
QUICK START GUIDE

1. Set the AC source to 180V ~250V, turn off the source.
2. Connect the “Line” of AC source to the “L”, and “neutral” to “N”.
3. Turn on the power supply. The evaluation board starts operating in normal condition.
4. The MAX LED current can be adjusted by changing the current sensing resistor of JW1691D.
5. For more information, please refer to the datasheets of JW1691D.

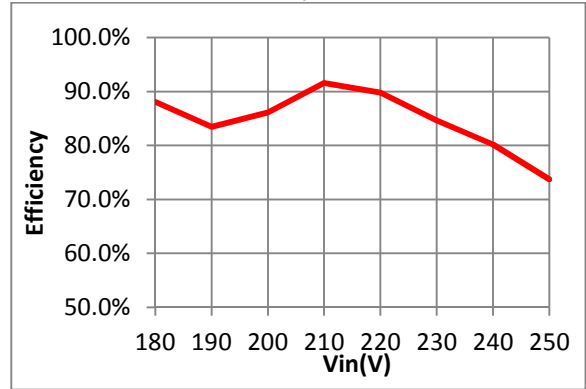
TYPICAL PERFORMANCE CHARACTERISTICS

VIN=220VAC, Output 280V25mA unless otherwise noted

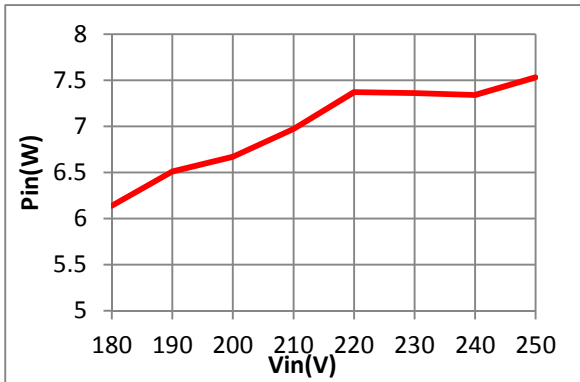
Tab.1 Iout VS Vin



Tab.2 Efficiency VS Vin



Tab.3 Pin VS Vin



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