



MOLE SEMI

低PF_DOB应急灯M9036解决方案

应急灯解决方案 Test Report

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Time	Action/Modification History
2020-09-20	Initial Version
...	...

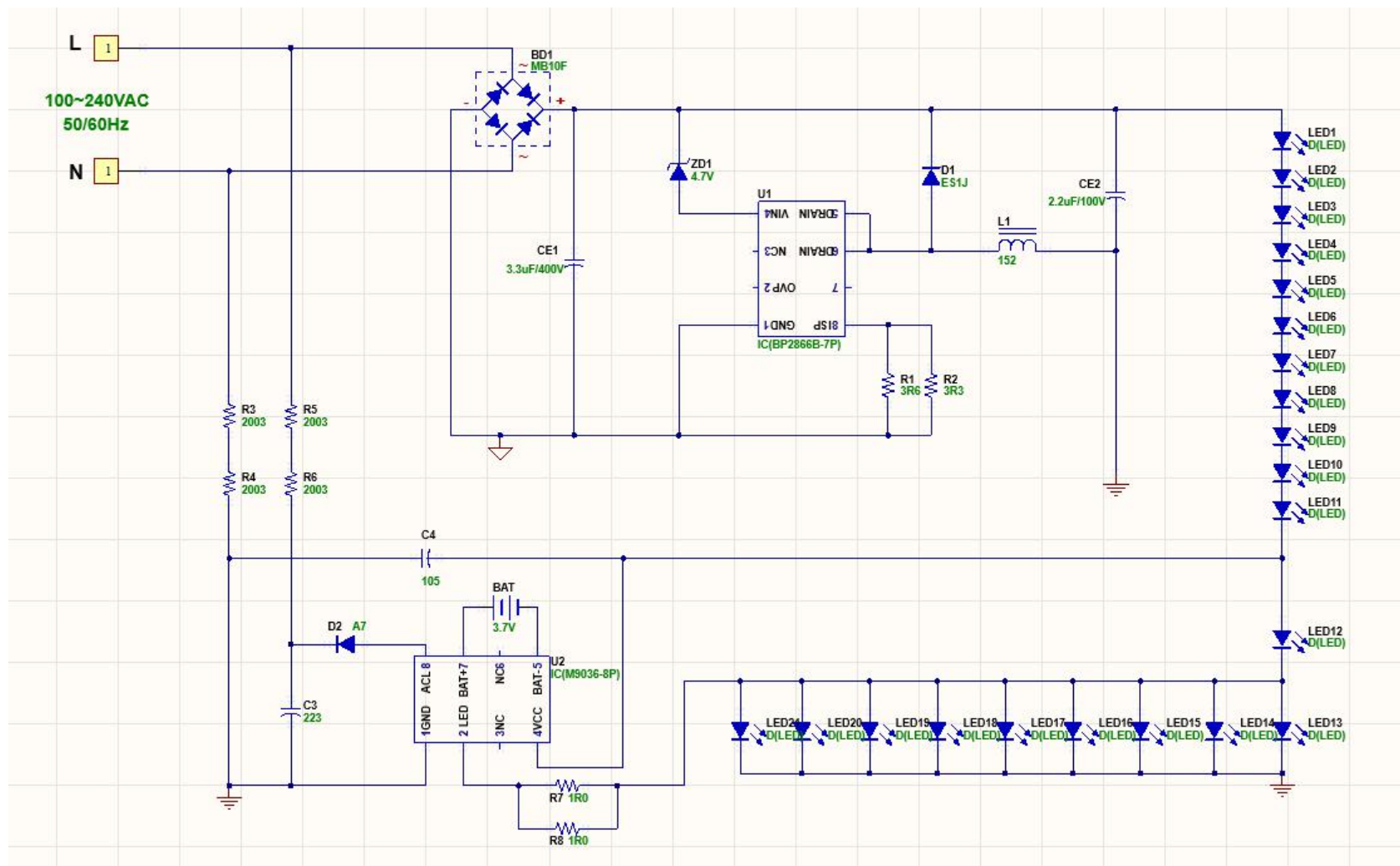
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- Rev History and Check List
- Test Condition and Circuit
- Bill of Materials
- Room Temperature Evaluation (AC Test)
- Application Specification
- Typical Perform A CE Characteristics
- Appendix

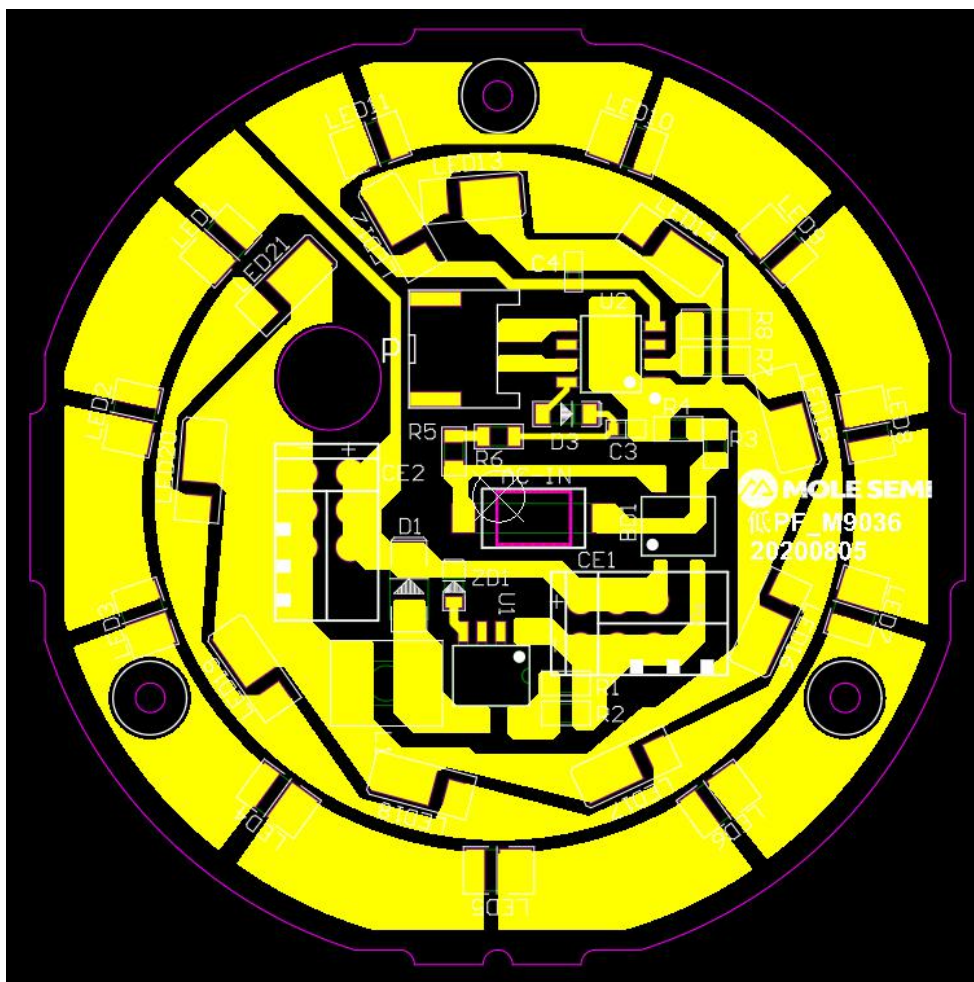


➤ 实验原理图



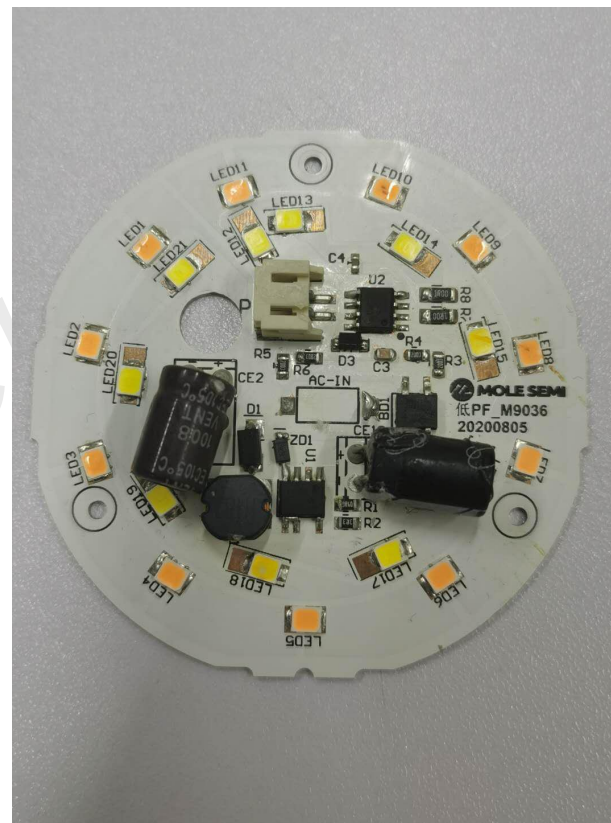


➤ Layout



➤ 实验设备 & 实物图

序号	设备名称	设备编号
1	直流电源	GPD-3303S
2	模拟电池	ASD906A
3	示波器	MDO3014
4	电子负载	IT8511
5	万用表	FLUKE15B+





➤ 物料清单

Footprint	Comment	LibRef	Designator	Description	Quantity
	3.7V	Pro1A.tmp_6V_7	BAT		1
D-BRIDGE-C	MB10F	D(B-DIODE)	BD1	DIODE	1
1608	223	C	C3	CAPACITOR	1
1608	105	C	C4	CAPACITOR	1
C-8.0/10.0L	3.3uF/400V	C(DIP)	CE1	CAPACITOR	1
C-5.5/10.0L	2.2uF/100V	C(DIP)	CE2	CAPACITOR	1
SMA	ES1J	D(DIODE)	D1	DIODE	1
SOD123	A7	D(DIODE)	D2	DIODE	1
L-6.0	152	L(IND)	L1	INDUCTOR	1
LED-3528	D(LED)	D(LED)	LED1, LED2, LED3, LED4, LED5, LED6, LED7, LED8, LED9, LED10, LED11	LED	11
LED-5630	D(LED)	D(LED)	LED12, LED13, LED14, LED15, LED16, LED17, LED18, LED19, LED20, LED21	LED	10
0805	3R6	R	R1	RESISTOR	1
0805	3R3	R	R2	RESISTOR	1
0805	2003	R	R3, R4, R5, R6	RESISTOR	4
1206	1R0	R	R7	RESISTOR	1
0805	1R0	R	R8	RESISTOR	1
SOP8	IC(BP2866B-7P)	IC(JW1967-7P)	U1	IC	1
SOP8N	IC(M9036-8P)	IC(9031-8P)_1	U2	IC	1
SOD323	4.7V	D(ZENER)	ZD1	DIODE	1
					41



Description	Symbol	Min	Typ	Max	Unit	Comment
Input						
Voltage	V _{in}	90	220	264	V _{ac}	
Power	P _{in}		9		W	
Power factor	PF					
AC Output						
LED Voltage	V _{LED}		72		V	
LED current	I _{LED}		100		mA	
DC Output						
LED Voltage	V _{LED}		3		V	
LED current	I _{LED}		500		mA	



➤ 效率测试（不带电池测试）

输入电压（V）	输入功率（W）	输出电压（V）	输出电流（mA）	输出功率（W）	效率（%）	功率因数
90.00	6.45	69.10	91.00	6.29	97.49%	0.663
110.00	7.90	70.80	105.00	7.43	94.10%	0.603
130.00	8.18	70.90	108.00	7.66	93.61%	0.586
150.00	8.20	71.00	107.00	7.60	92.65%	0.569
170.00	8.44	71.60	108.00	7.73	91.62%	0.556
190.00	8.44	71.30	107.00	7.63	90.39%	0.545
220.00	8.58	71.00	107.00	7.60	88.54%	0.532
240.00	8.70	71.10	108.00	7.68	88.26%	0.526
264.00	8.84	71.10	109.00	7.75	87.67%	0.518
90.00	6.45	69.10	91.00	6.29	97.49%	0.663



➤ 效率测试（带电池测试3.6V）

输入电压（V）	输入功率（W）	输出电压（V）	输出电流（mA）	输出功率（W）	功率因数	效率（%）
90.00	6.25	67.70	88.00	5.96	95.32%	0.648
110.00	7.81	69.20	103.00	7.13	91.26%	0.596
130.00	8.05	69.30	105.00	7.28	90.39%	0.588
150.00	8.04	69.20	104.00	7.20	89.51%	0.567
170.00	8.09	69.10	104.00	7.19	88.83%	0.551
190.00	8.17	69.10	104.00	7.19	87.96%	0.542
220.00	8.32	69.10	105.00	7.26	87.21%	0.531
240.00	8.43	69.10	104.00	7.19	85.25%	0.523
264.00	8.61	69.20	106.00	7.34	85.19%	0.517
90.00	6.25	67.70	88.00	5.96	95.32%	0.648



Thanks

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