利用 iP7300 及 iT6801
1 x T5 28W 主動功因電子安定器

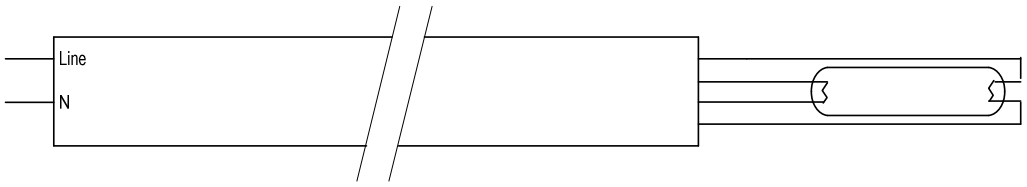
1. 簡要

輸入電壓:	90 ~ 264Vac
輸入頻率:	50~60Hz
切換頻率:	46KHz +- 5%
預熱時間:	~1.4 sec
保護:	過電壓(漏氣 壽終) 鎖住
	開路保護，復管再起動
尺寸 長寬高	27x 17 x 20 mm^3

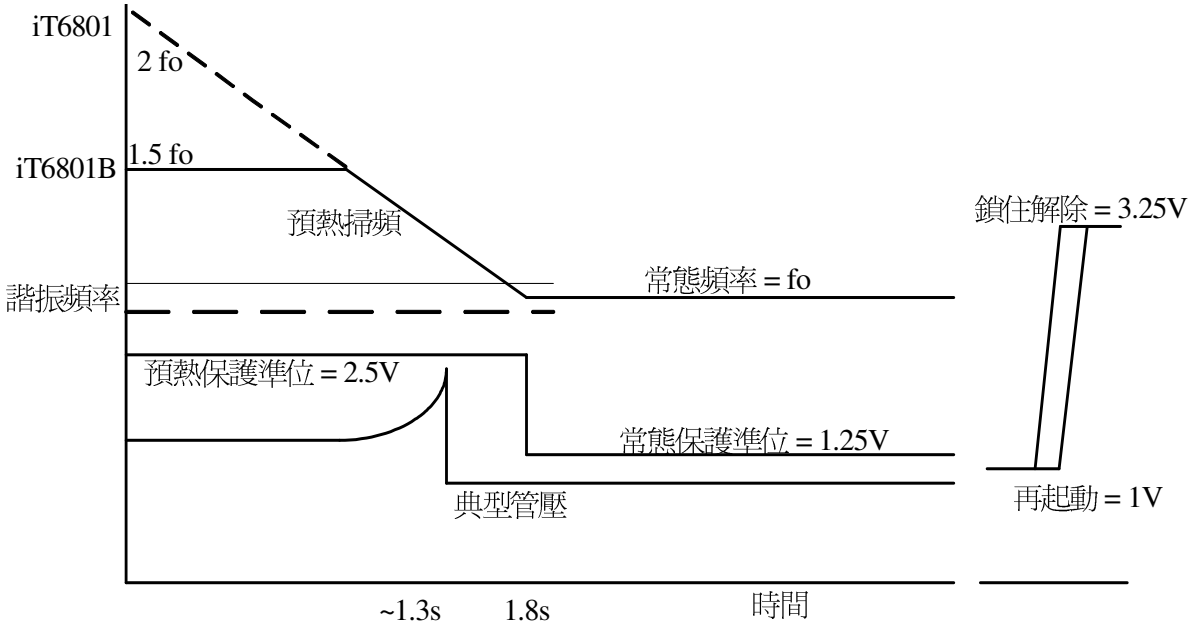
2. 性能

輸入電壓	110Vac	220Vac
燈管 1 x T5 28W	Load 1x T5/28W170V/0.16A = 28W	
輸入電流	0.29A	0.15A
輸入功率	32W(A2/A3 class)	31W(A2/A3 class)
功率因素	0.99	0.96
總諧波	<10%	<15%
效率	> 83%	> 83%
開關次數	> 20,000 次	> 20,000 次

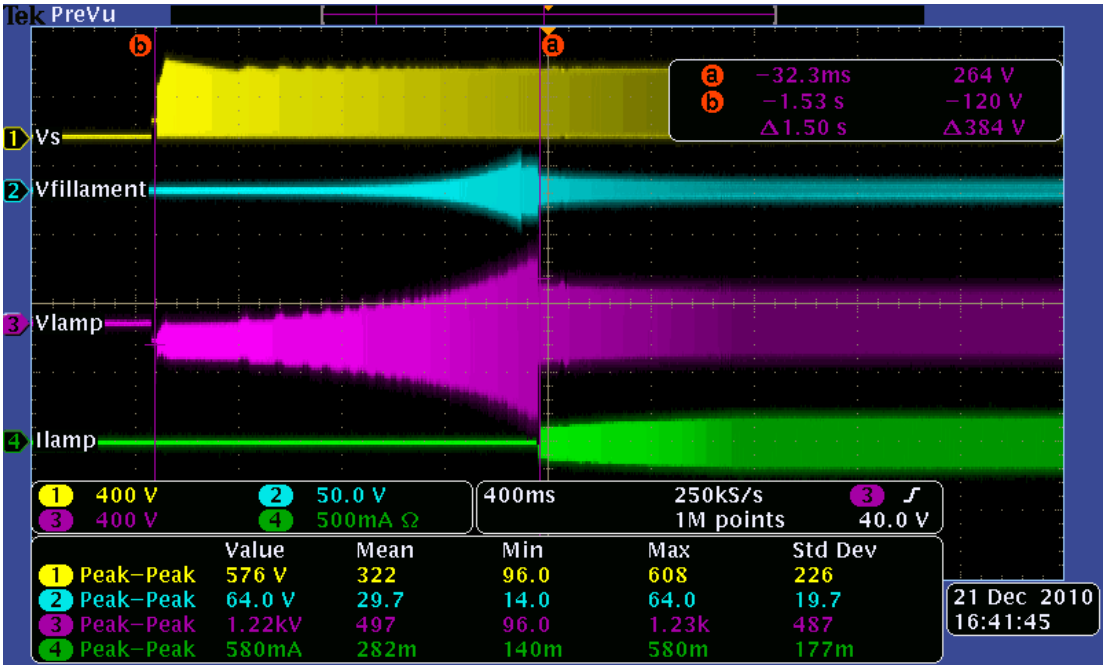
3. 接線



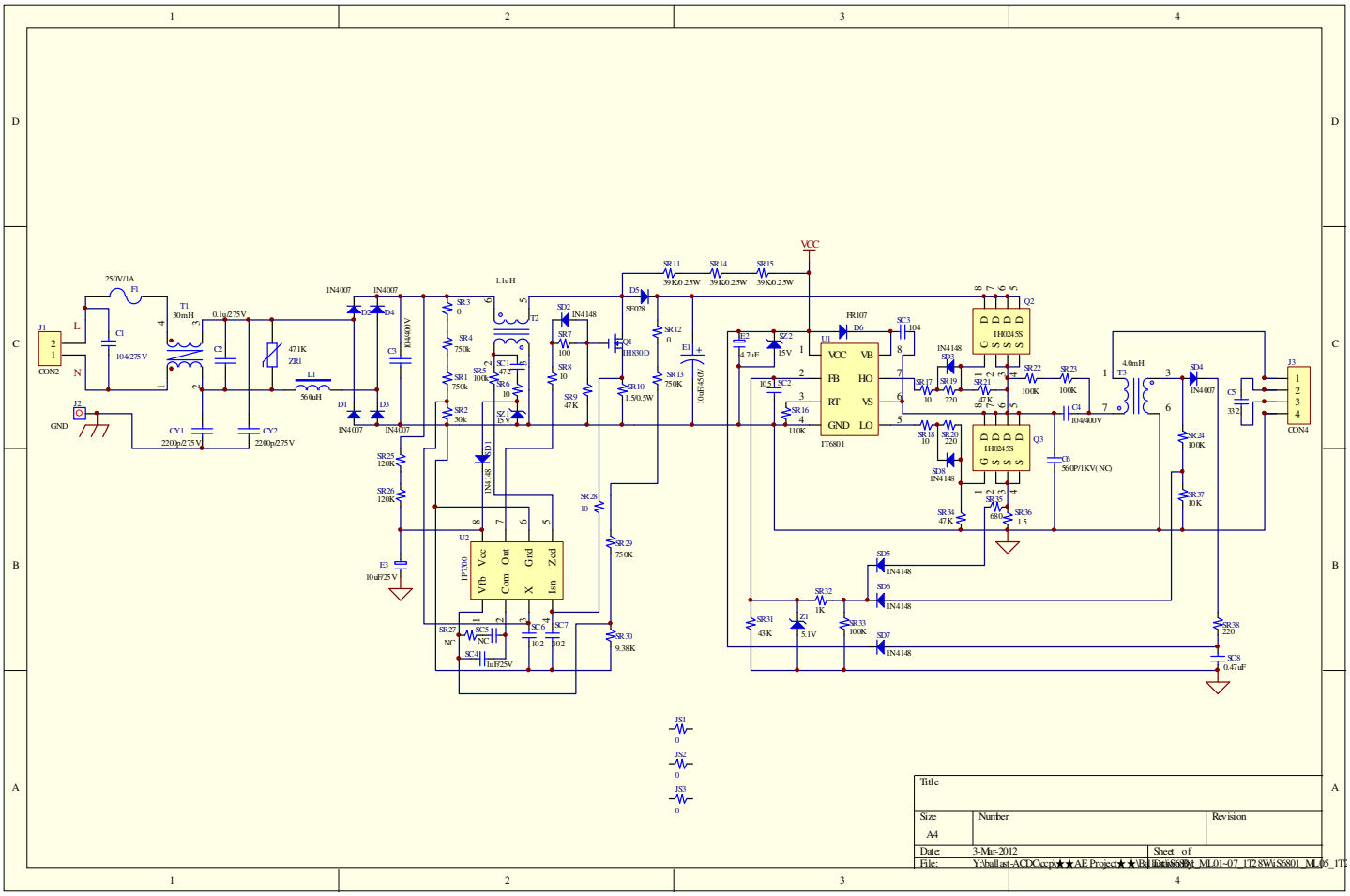
4. 預熱模式及 保護準位



5. 預熱燈管電壓、電流、燈絲電壓



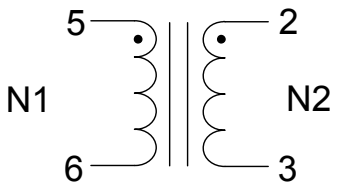
6. 電路


VCC
U1
VCC
VB
FB
HO
RT
VS
GND
LO
IT6801
U2
IP7300
Vfb
Vcc
Com
Out
X
Gnd
Isn
Zcd
Q1
IH830D
Q2
IH0245S
Q3
IH0245S
T1
30mH
T2
1.1uH
T3
4.0mH
F1
250V/1A
CON2
CON4
ZR1
471K
L1
560uH
FR107
D6
SF028
D5
1N4148
1N4007
GND
Title
Size
A4
Number
Revision
Date:
3-Mar-2012
Sheet of
File:

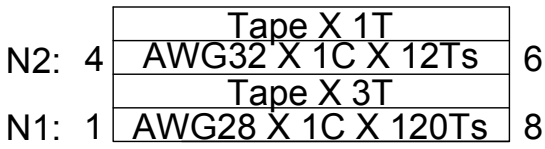
7. 電感(變壓器)

(1.1)iT6801-T5-28Wx1: PFC
(1.2)CORE: PC30或同等級材質
(1.3)BOBBIN:EE19
(1.4)L5-6=1.1mH
(1.5)PIN1,4,7,8要移除

電路圖

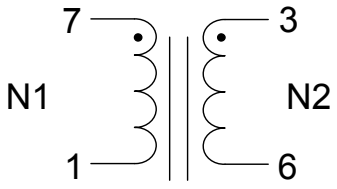


製作圖

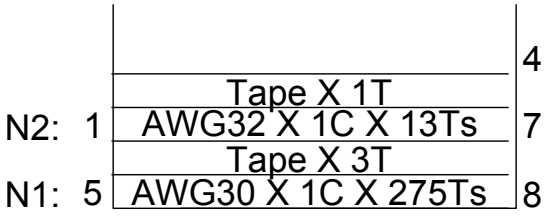


(2.1)PN: iT6801-T5-28Wx1:電感
(2.2)CORE: PC30或同等級材質
(2.3)BOBBIN:EE19
(2.4)L7-1=4.0mH
(2.5)PIN2,4,5, 8要移除

電路圖



製作圖



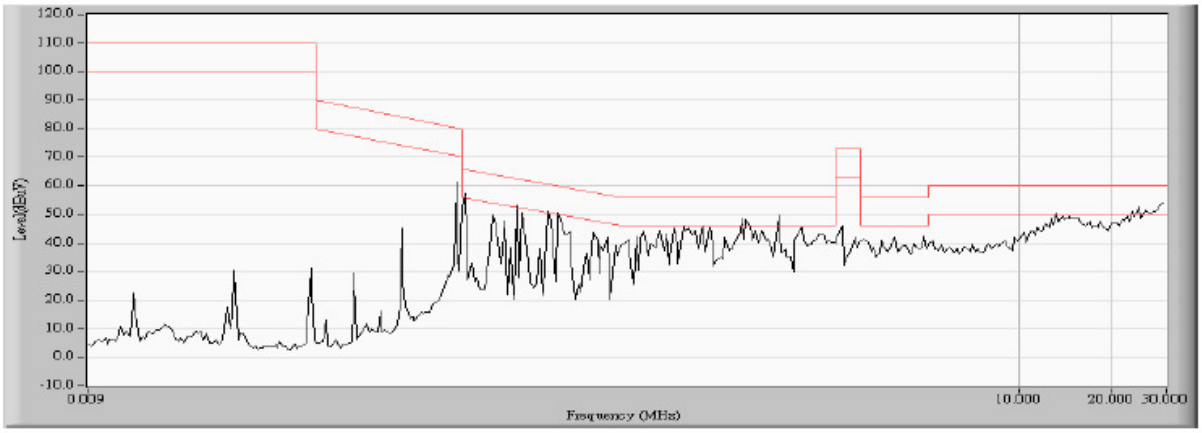
8. EMI (Conduction Mode)

L1/L2 results are comparable. Peak at 1.5MHz could be adjusted by boost inductor value and operating frequency of Ballast inveter.

QuieTek

File# : 廣閎 - Page: 94

Engineer : NICK	
Site : SR2	Time : 2010/02/25 - 15:44
Limit : CNS14115_00M_QP	Margin : 10
Probe : SR2-LISN(16A) - Line1	Power : AC 230V / 50Hz
EUT : 1T528	Note : Orinigal



9. BOM

Item	Part Type	Designator	Footprint
1	0	SR12	S0805
2	0	JS1	S0805
3	0	SR3	S0805
4	0	JS2	S1206
5	0	JS3	S1206
6	0.1u/275V	C2	C400-240
7	0.47uF/50V	SC8	S0805
8	1.1uH	T2	EE19-8-4-2
9	1.5/0.5W	SR36	R-400
10	1.5/0.5W	SR10	R-400
11	1K	SR32	S0805
12	1N4007	D3	DIODE0.4-1
13	1N4007	D2	DIODE0.4-1
14	1N4007	D4	DIODE0.4-1
15	1N4007	D1	DIODE0.4-1
16	1N4007	SD4	SD2
17	1N4148	SD7	SD1
18	1N4148	SD5	SD1
19	1N4148	SD2	SD1
20	1N4148	SD1	SD1
21	1N4148	SD8	SD1
22	1N4148	SD6	SD1
23	1N4148	SD3	SD1
24	1uF/25V	SC4	S0805
25	4.0mH/EE19	T3	EE19-8-4-1
26	4.7uF/25V	E2	S1206
27	5.1V	Z1	SZ1
28	9.38K	SR30	S0805
29	10	SR28	S0603
30	10	SR17	S0805
31	10	SR18	S0805
32	10	SR8	S1206
33	10	SR6	S1206
34	10K	SR37	S0805

35	10uF/25V	E3	CR.1/.26
36	10uF/450V	E1	CR.2/.4.R
37	15V	SZ1	SZ1
38	15V	SZ2	SZ1
39	30k	SR2	S0805
40	30mH	T1	EE13-EMI1
41	39K/0.25W	SR11	S1206
42	39K/0.25W	SR15	S1206
43	39K/0.25W	SR14	S1206
44	43K	SR31	S0805
45	47K	SR9	S0805
46	47K	SR21	S0805
47	47K	SR34	S1206
48	100	SR7	S0805
49	100K	SR22	S0805
50	100K	SR23	S0805
51	100K	SR24	S0805
52	100K	SR33	S0805
53	100k	SR5	S1206
54	102	SC7	S0805
55	102	SC6	S0805
56	104	SC3	S0805
57	104/275V	C1	C400-240
58	104/400V	C3	C400-240
59	104/400V	C4	C600-200
60	105	SC2	S0805
61	110K	SR16	S0805
62	120K	SR25	S1206
63	120K	SR26	S1206
64	220	SR19	S0805
65	220	SR20	S1206
66	220	SR38	S1206
67	250V/1A	F1	F1-10
68	332/1.2KV	C5	C600-200
69	471K	ZR1	ZR1-300
70	472	SC1	S0805
71	560P/1KV(NC)	C6	C300
72	560uH/DR12	L1	L200-340

73	680	SR35	S0805
74	750K	SR29	S0805
75	750K	SR13	S0805
76	750k	SR1	S0805
77	750k	SR4	S0805
78	2200p/275V	CY2	C100
79	2200p/275V	CY1	C100
80	CON2	J1	CON2X2-150
81	CON4	J3	CON4X4-150
82	FR107	D6	DIODE0.4-1
83	GND	J2	CON1
84	IH0245S	Q3	SO-8
85	IH0245S	Q2	SO-8
86	IH830D	Q1	TO-252
87	IP7300	U2	SO-8
88	IT6801	U1	SO-8
89	NC	SR27	S0805
90	NC	SC5	S0805
91	SF028	D5	DIODE0.5