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User Guide for
FEBFAN6754WAMR_CP450v1
Evaluation Board

Low-Cost, Green-Mode, PWM Controller
for Flyback Converter 65 W (19 V / 3.42 A)
NB Adapter

Featured Fairchild Products:
FAN6754WAMR, FAN6204MY

***Direct questions or comments
about this Evaluation Board to:
“Worldwide Direct Support”***

Fairchild Semiconductor.com

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1. General Introduction

This document describes a 65 W power supply using FAN6754WAMR and FAN6204MY synchronous rectification IC. This power supply is targeted towards power adapters and open-frame consumer products. With the internal high-voltage startup circuitry, the power loss due to bleeding resistors is eliminated. To further reduce power consumption, FAN6754WAMR is manufactured using the BiCMOS process. This allows an operating current of only 1.5 mA and low startup current of 30 μ A. Built-in synchronized slope compensation ensures the stability of peak-current-mode control. In addition, FAN6204MY improves conduction losses in heavy load, and the SR controller stops all SR switching operation to reduce the operating current in light load. This kit supercedes the FEBFAN6754AMR_CP450v1. The revised kit incorporates the next generation FAN6754WAMR, which implements a new frequency hopping method.

1.1. General Specification

Specification	Min.	Max.	Units
Input Voltage	90	264	V _{AC}
Frequency	47	63	Hz
Output Voltage		19	V
Output Current		3.42	A
Total Output Power		65	W

2. Functional Test Report

Test Model	FEBFAN6754WAMR_CP450v1
Test Date	July 27, 2012
Test Temperature	Ambient
Test Equipment	AC Source: 6220 AC POWER SOURCE Electronic Load: Chroma 63030 Power Meter: WT210 Oscilloscope: LeCroy 434 Differential Probe: LDP-6002
Test Items	<ol style="list-style-type: none"> 1. Input current 2. Input wattage at no load condition 3. Turn-on time 4. DC output rising time 5. Line and load regulation 6. Efficiency 7. Output ripple and noise 8. Step response 9. Over-current protection 10. Hold-up time 11. Short-circuit protection 12. Brownout test 13. V_{DD} voltage level 14. Voltage stress on MOSFET and rectifier

2.1. Input Current

2.1.1. Test Condition

Measure the AC input current at maximum load.

2.1.2. Test Result

Input Voltage	Input Current	Specification
90 V / 60 Hz	1.61 A	< 2 A
264 V / 50 Hz	0.63 A	

2.2. Input Wattage at No-Load Condition

2.2.1. Test Condition

Measure the input wattage and output voltage at no load.

2.2.2. Test Result

FAN6754WAMR + FAN6204MY				
Input Voltage	Input Wattage	Frequency	Output Voltage	Specification
90 V / 60 Hz	0.068 W	47.16 Hz	19.05 V	< 0.3 W
264 V / 50 Hz	0.127 W	46.87 Hz	19.05 V	

FAN6754WAMR				
Input Voltage	Input Wattage	Frequency	Output Voltage	Specification
90 V / 60 Hz	0.045 W	32.63 Hz	19.07 V	< 0.3 W
264 V / 50 Hz	0.098 W	30.19 Hz	19.07 V	

2.2.3. Measured Waveform

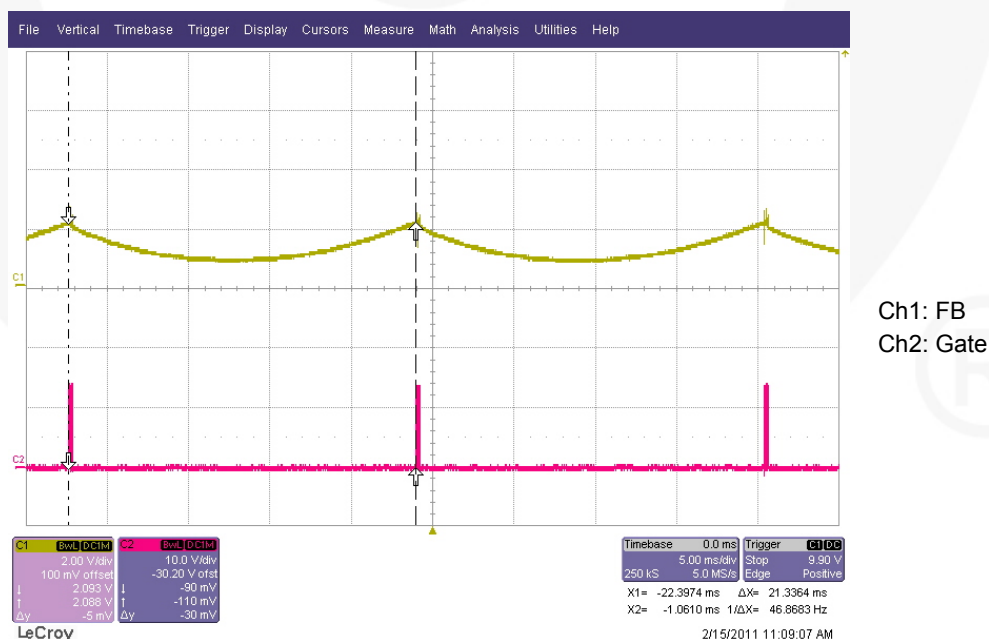


Figure 1. 264 V / 60 Hz at No Load

2.3. Turn-On Time

2.3.1. Test Condition

Set output at maximum load. Measure the interval between AC plug-in and stable output.

2.3.2. Test Result

Input Voltage	Turn-On Time	Specification
90 V / 60 Hz	1.87 s	< 3s
264 V / 50 Hz	0.68 s	

2.4. DC Output Rising Time

2.4.1. Test Condition

Set output at maximum loading. Measure the time interval between 10% to 90% output during startup.

2.4.2. Test Result

Input Voltage	Maximum Load	Specification
90 V / 60 Hz	12.39 ms	< 20 ms
264 V / 50 Hz	7.80 ms	

2.5. Line and Load Regulation

2.5.1. Test Condition

Measure line and load regulation according to the table below.

2.5.2. Test Result

Input Voltage	Output Voltage at 0% Load	Output Voltage at 100% Load	Load Regulation	Specification
90 V / 60 Hz	19.04 V	18.70 V	1.80%	< 5%
115 V / 60 Hz	19.04 V	18.94 V	0.53%	
230 V / 50 Hz	19.04 V	19.01 V	0.16%	
264 V / 50 Hz	19.04 V	19.01 V	0.16%	
Line regulation	0%	1.64%		

2.6. Efficiency

2.6.1. Test Condition

Output at maximum load.

2.6.2. Test Result

FAN6754WAMR + FAN6204MY (6.8kΩ at PC817 with Remote Sense)						
Input Voltage	25% (0.855 A)	50% (1.71 A)	75% (2.565 A)	100% (3.42 A)	Avg.	Specification
90V / 60 Hz	91.27%	91.43%	90.30%	88.83%	90.46%	> 85%
115 V / 60 Hz	90.96%	91.35%	91.26%	90.70%	91.07%	
230 V / 50 Hz	89.27%	91.06%	91.64%	91.95%	90.98%	
264 V / 50 Hz	88.45%	90.01%	91.69%	92.14%	90.57%	
FAN6754WAMR (6.8kΩ at PC817 with Remote Sense)						
Input Voltage	25% (0.855 A)	50% (1.71 A)	75% (2.565 A)	100% (3.42 A)	Avg.	Specification
90 V / 60 Hz	88.76%	88.53%	87.73%	85.31%	87.58%	> 85%
115 V / 60 Hz	88.85%	89.08%	88.57%	87.58%	88.52%	
230 V / 50 Hz	87.31%	88.55%	89.21%	89.13%	88.55%	
264 V / 50 Hz	86.58%	88.19%	88.67%	89.16%	88.15%	

2.7. Output Ripple and Noise

2.7.1. Test Condition

Ripple and noise are measured using a 20 MHz bandwidth-limited oscilloscope with a 10 μF capacitor paralleled with a high-frequency 0.1 μF capacitor across each output.

2.7.2. Test Result

Input Voltage	Max. Load	Min. Load	No Load	Specification
90 V / 60 Hz	69.4 mV	63.6 mV	27.2 mV	< 200 mV
115 V / 60 Hz	46.6 mV	28.5 mV	29.0 mV	
230 V / 50 Hz	31.8 mV	26.5 mV	40.9 mV	
264 V / 50 Hz	30.9 mV	26.5 mV	41.9 mV	

2.7.3. Measured Waveforms

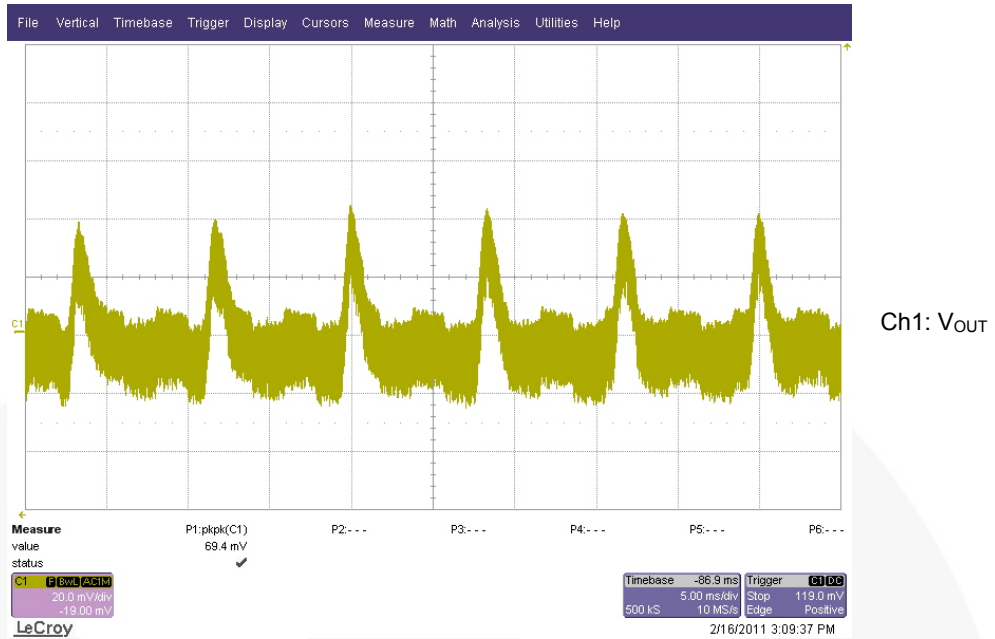


Figure 2. 90 V / 60 Hz at Maximum Load

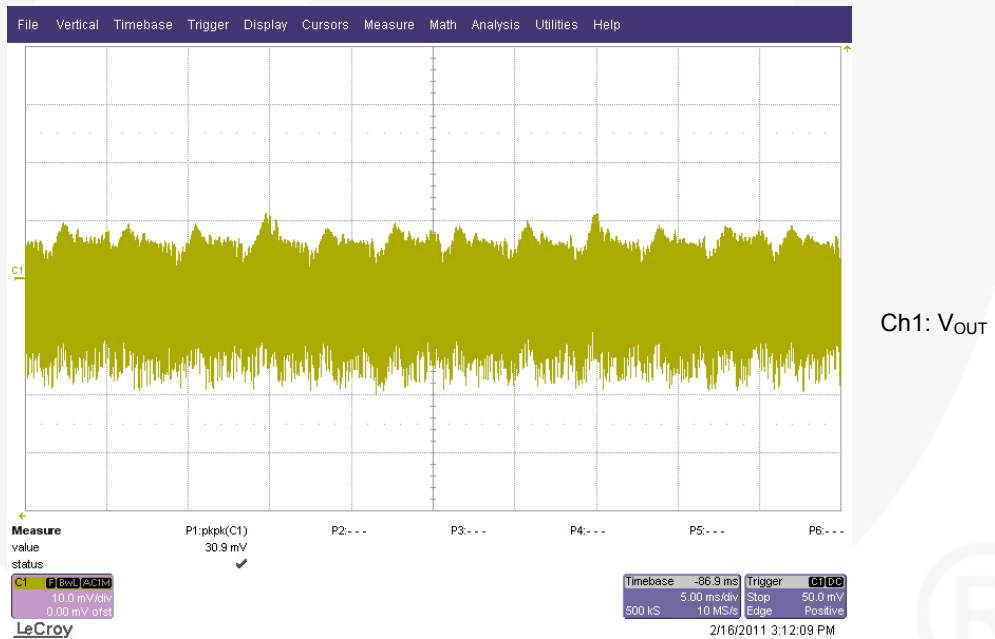


Figure 3. 264 V / 50 Hz at Maximum Load

2.8. Step Response

2.8.1. Test Condition

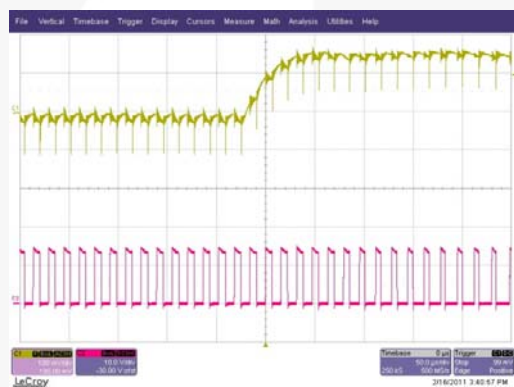
Dynamic loading (20%–80% of the full load, 5 ms duty cycle, 2.5 A/ μ s rise/fall time).

2.8.2. Test Result

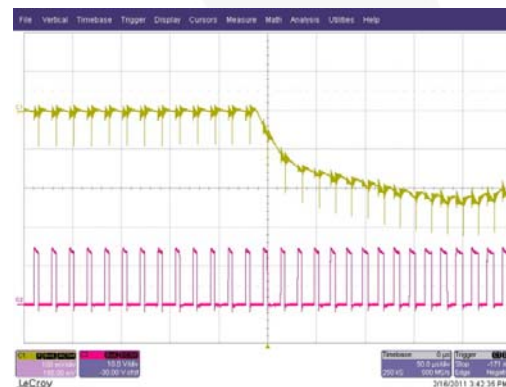
FAN6754WAMR + FAN6204MY			
Input Voltage	Overshoot	Undershoot	Specification
115 V / 60 Hz	157 mV	206 mV	< 250 mV
230 V / 50 Hz	146 mV	163 mV	

FAN6754AWMR			
Input Voltage	Overshoot	Undershoot	Specification
115 V / 60 Hz	166 mV	219 mV	< 250 mV
230 V / 50 Hz	163 mV	197 mV	

2.8.3. Measured Waveforms



**Figure 4. FAN6754WAMR+FAN6204MY
115 V/60 Hz, Overshoot
(Ch1: V_{OUT}, Ch2: Gate)**



**Figure 5. FAN6754WAMR+FAN6204MY,
115 V/60 Hz, Undershoot
(Ch1: V_{OUT}, Ch2: Gate)**



**Figure 6. FAN6754WAMR+FAN6204MY
115 V/60 Hz, 20% Load
(Ch1: Gate, Ch2: Gate_SR, Ch4: V_{dS})**



**Figure 7. FAN6754WAMR+FAN6204MY,
115 V/60 Hz, 80% Load
(Ch1: Gate, Ch2: Gate_SR, Ch4: V_{dS})**

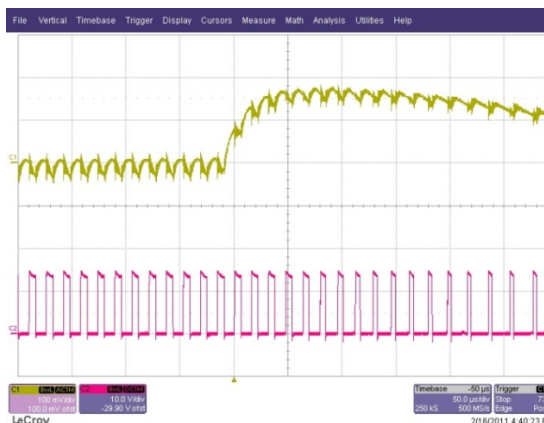


Figure 8. FAN6754WAMR 115 V / 60 Hz, Overshoot (Ch1: V_{OUT}, Ch2: Gate)

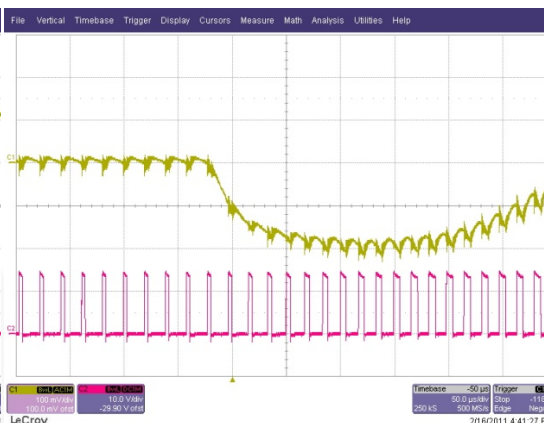


Figure 9. FAN6754WAMR 115 V / 60 Hz, Undershoot (Ch1: V_{OUT}, Ch2: Gate)

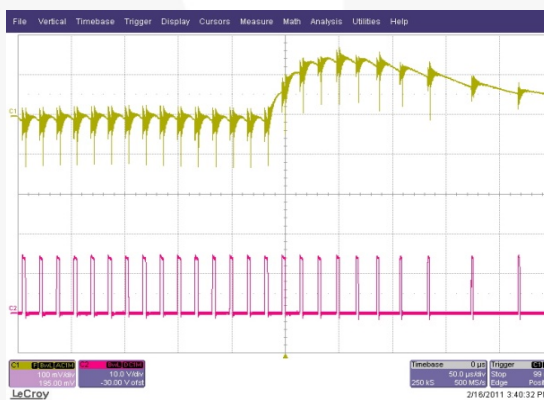


Figure 10. FAN6754WAMR+FAN6204MY 230 V/50 Hz, Overshoot (Ch1: V_{OUT}, Ch2: Gate)

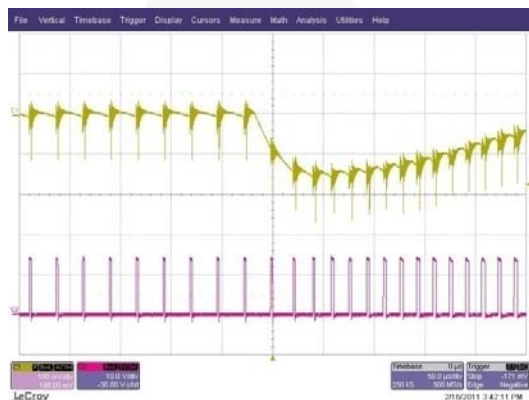


Figure 11. FAN6754WAMR+FAN6204MY 230 V/50 Hz, Undershoot (Ch1: V_{OUT}, Ch2: Gate)



Figure 12. FAN6754WAMR+FAN6204MY 230 V/50 Hz, 20% Load (Ch1: Gate, Ch2: Gate_{SR}, Ch4: V_{dS})

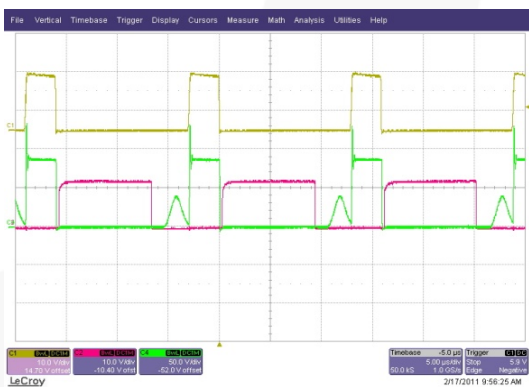


Figure 13. FAN6754WAMR+FAN6204MY 230 V/50 Hz, 80% Load (Ch1: Gate, Ch2: Gate_{SR}, Ch4: V_{dS})

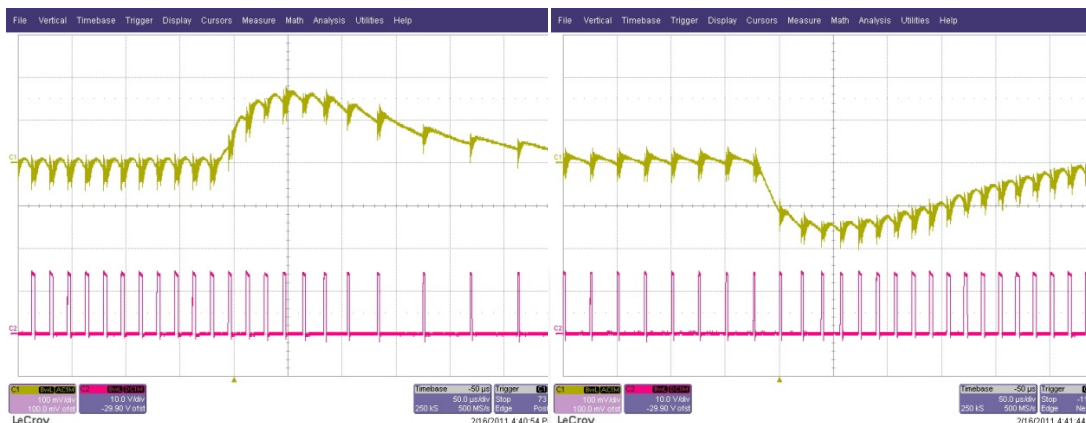


Figure 14. FAN6754WAMR 230 V / 50 Hz, Overshoot (Ch1: V_{OUT}, Ch2: Gate)

Figure 15. FAN6754WAMR 230 V / 50 Hz, Undershoot (Ch1: V_{OUT}, Ch2: Gate)

2.9. Over-Current Protection

2.9.1. Test Condition

Increase output load gradually.

2.9.2. Test Result

Input Voltage	Output Current	Specification
90 V / 60 Hz	4.381 A	< 5.13 A
115 V / 60 Hz	4.800 A	
230 V / 50 Hz	4.846 A	
264 V / 50 Hz	4.741 A	

2.10. Hold-Up Time

2.10.1. Test Condition

Set output at maximum load. Measure the time interval between AC off and output voltage falling to the lower limit of the rated value. The AC waveform should be off at zero degrees.

2.10.2. Test Result

Input Voltage	Hold-Up Time
90 V / 60 Hz	12.08 ms
115 V / 60 Hz	15.24 ms
230 V / 50 Hz	84.79 ms
264 V / 50 Hz	116.90 ms

2.10.3. Measured Waveforms

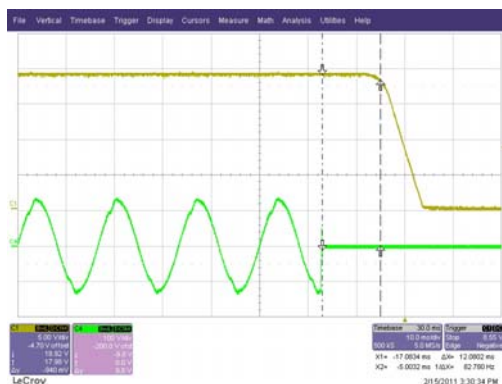


Figure 16. 90 V / 60 Hz at Maximum Load (Ch1: V_{OUT}; Ch4: V_{AC})

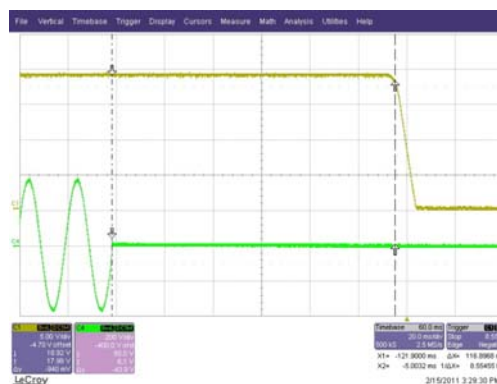


Figure 17. 264 V / 50 Hz at Maximum Load (Ch1: V_{OUT}; Ch4: V_{AC})

2.11. Short-Circuit Protection

2.11.1. Test Condition

Short the output of the power supply. The power supply should enter “Hiccup” Mode protection with less than 5 W input wattage.

2.11.2. Test Result

Input Voltage	Input Wattage at Maximum Loading	Specification
90 V / 60 Hz	0.390 W	< 2 W
264 V / 50 Hz	0.722 W	

2.12. Brown-in / Brownout Test

2.12.1. Test Condition

Set the output at maximum load and change the R_{HV} resistor to record the brown-in (BR_In) / brownout (BR_Out) points.

2.12.2. Test Result

R _{HV}	BR_In	BR_Out	ΔV =BR_In - BR_Out
150 kΩ	66 V	59 V	7 V
200 kΩ	84 V	77 V	7 V

2.13. V_{DD} Voltage Level

2.13.1. Test Result

	Min. Load	Max. Load	Near OPP	Output SC (Max. Value)
90 V / 60 Hz	16.60 V	21.10 V	22.75 V	17.15 V
264 V / 50 Hz	16.60 V	18.05 V	19.35 V	17.15 V

2.14. Voltage Stress on MOSFET and Rectifiers

2.14.1. Test Condition

Measure the voltage stress on the MOSFET and secondary rectifiers under conditions specified in the table below.

2.14.2. Test Result

	Stress on MOSFET	Rating	Stress on Output Rectifier	Rating
264 V / 50 Hz, Maximum Load	583 V	650 V	144 V	150 V
264 V / 50 Hz, Maximum Load, (Output Short)	580 V		150 V	
264 V / 50 Hz, Maximum Load, (Pre-Short)	571 V		147 V	

2.15. Electromagnetic Interference (EMI) Test

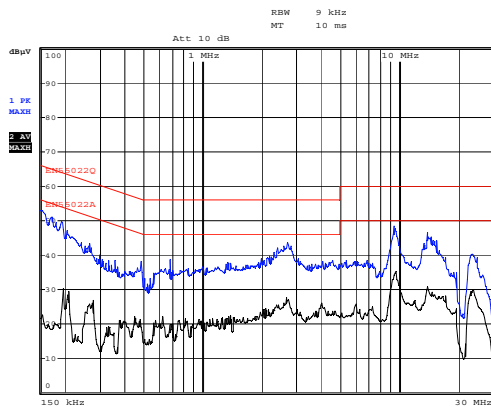


Figure 18. Conduction-Line at 115 V_{AC}

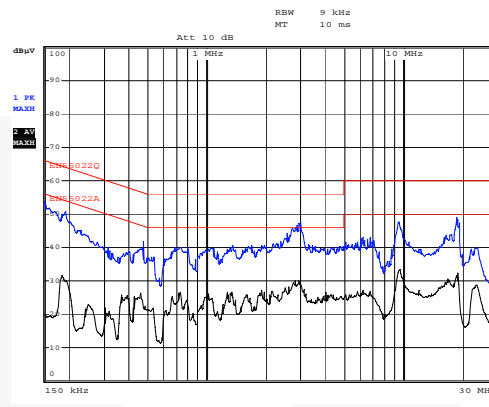


Figure 19. Conduction-Line at 230 V_{AC}

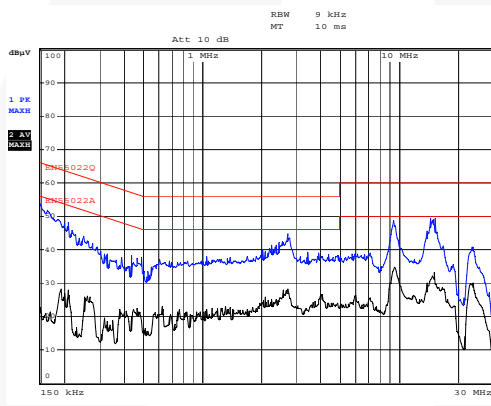


Figure 20. Conduction-Neutral at 115 V_{AC}

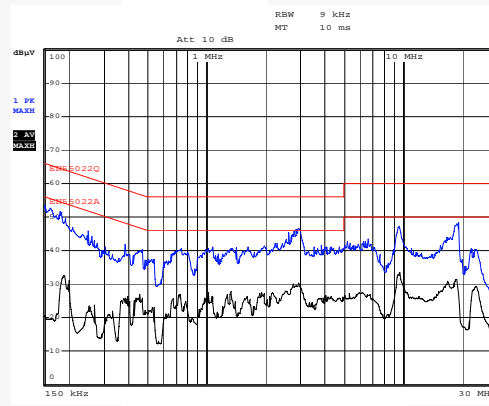


Figure 21. Conduction-Neutral at 230 V_{AC}

2.16. Surge Test

Mode	Polarity	Phase	Voltage	Condition
L-N	±	0°	1 kV	Pass
	±	90°		Pass
	±	180°		Pass
	±	270°		Pass
L-PE	±	0°	6 kV	Pass
	±	90°		Pass
	±	180°		Pass
	±	270°		Pass
N-PE	±	0°	6 kV	Pass
	±	90°		Pass
	±	180°		Pass
	±	270°		Pass

2.17. Electrostatic Discharge (ESD) Test

Air Discharge (16.5 kV)		Contact Discharge (8.8 kV)	
Pass	Pass	Pass	Pass

3. Photographs



Figure 22. Top View

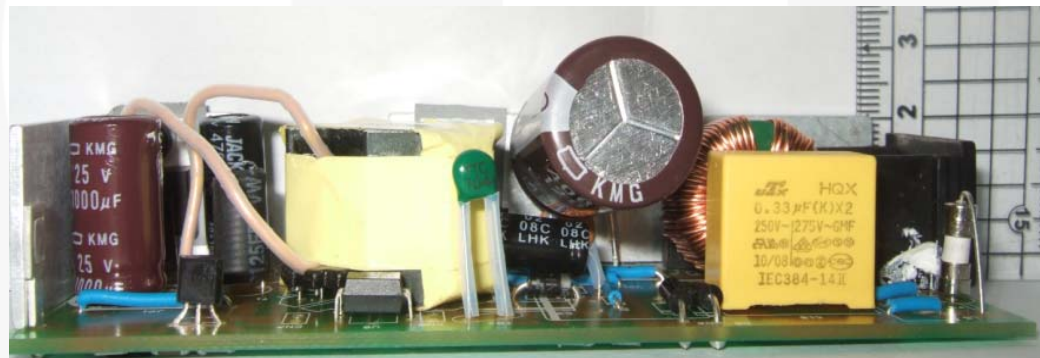


Figure 23. Side View

4. Circuit Schematic

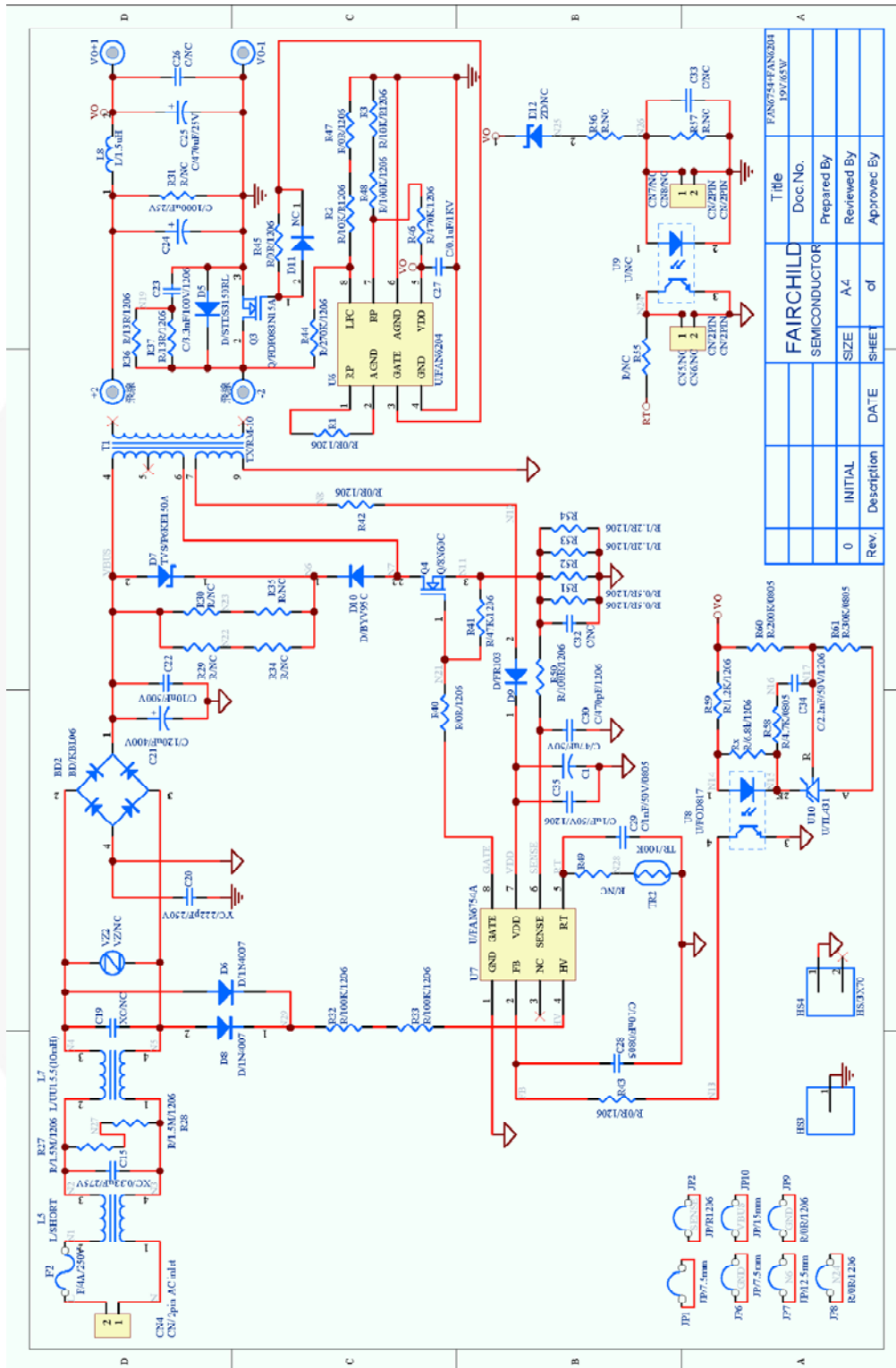
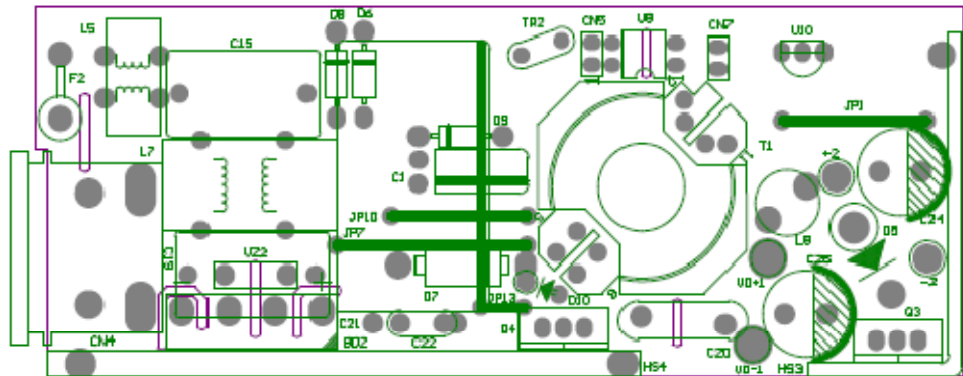


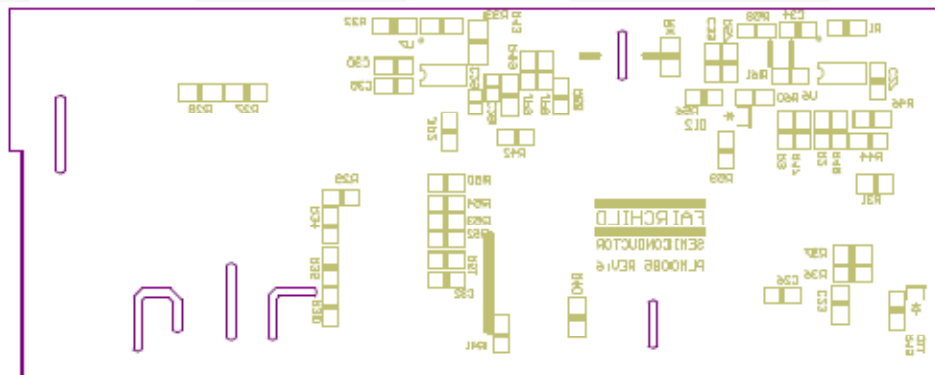
Figure 24. Circuit Schematic

5. PCB Layout



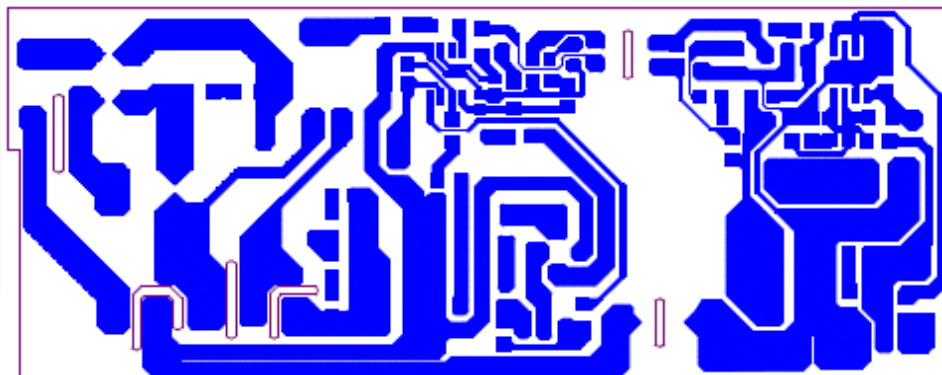
Top Overlay

Figure 25. Top Overlay



Bottom Overlay

Figure 26. Bottom Overlay



Bottom Layer

Figure 27. Bottom Layer

6. Bill of Materials

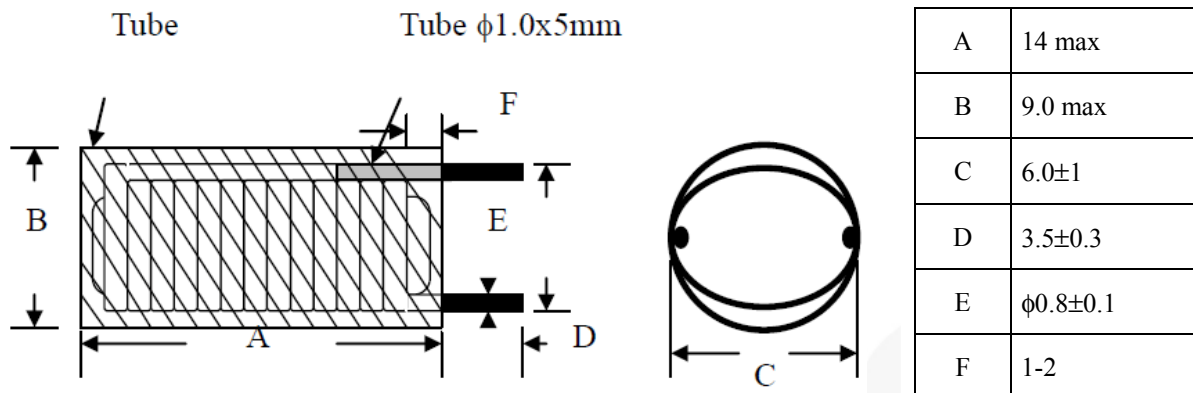
Component	Qty.	Part No.	Manufacturer	Reference
JUMPER WIRE 0.8ψ(mm)	6			L5, JP1, JP7, JP10, JP13
Chip Resistor 0805 6k8Ω ±5%	1			Rx
Chip Resistor 1206 0 Ω ±5%	6			JP2, JP9, R1, R43, R45, R47
Chip Resistor 1206 0Ω5 ±5%	2			R51, R52
Chip Resistor 1206 1Ω2 ±5%	2			R53, R54
Chip Resistor 1206 2Ω2 ±5%	1			R42
Chip Resistor 1206 13 Ω ±5%	2			R36, R37
Chip Resistor 1206 43 Ω ±5%	1			R40
Chip Resistor 1206 100 Ω ±5%	1			R50
Chip Resistor 1206 1k2Ω ±5%	1			R59
Chip Resistor 1206 4k7Ω ±1%	1			R58
Chip Resistor 1206 10 kΩ ±1%	2			R2, R3
Chip Resistor 1206 30 kΩ ±5%	1			R61
Chip Resistor 1206 47 kΩ ±5%	1			R41
Chip Resistor 1206 100 kΩ ±5%	3			R32, R33, R48
Chip Resistor 1206 200 kΩ ±5%	1			R60
Chip Resistor 1206 270 kΩ ±5%	1			R44
Chip Resistor 1206 470 kΩ ±5%	1			R46
Chip Resistor 1206 1M5Ω ±5%	2			R27, R28
NTC 5ψ 100000Ω	1			TR2
Ceramic Capacitor 103P 500 V +80/-20%	1			C22
0805 MLCC X7R ±10% 102P 50 V	1			C29
Chip Resistor 1206 30kΩ ±5%	1			R61
Chip Resistor 1206 47kΩ ±5%	1			R41
Chip Resistor 1206 100kΩ ±5%	3			R32, R33, R48
Chip Resistor 1206 200kΩ ±5%	1			R60
Chip Resistor 1206 270kΩ ±5%	1			R44
Chip Resistor 1206 470kΩ ±5%	1			R46
Chip Resistor 1206 1M5Ω ±5%	2			R27, R28
NTC 5ψ 100000Ω	1			TR2
Ceramic Capacitor 103P 500 V +80/-20%	1			C22
0805 MLCC X7R ±10% 102P 50 V	1			C29
0805 MLCC X7R ±10% 103P 50 V	1			C28

Component	Qty.	Part No.	Manufacturer	Reference
1206 MLCC X7R ±10% 104P 50 V	2			C27, C35
1206 MLCC X7R ±10% 222P 50 V	1			C34
1206 MLCC X7R ±10% 332P 100 V	1			C23
1206 MLCC X7R ±10% 471P 50 V	1			C30
Electrolytic Capacitor 47 μ 50 V 105°C	1	LHK	JACKCON	C1
Electrolytic Capacitor 120 μ 400 V 105°C	1	KMG	NCC	C21
Electrolytic Capacitor 470 μ 25 V 105°C	1	KMG	NCC	C25
Electrolytic Capacitor 1000 μ 25 V 105°C	1	KMG	NCC	C24
X2 Capacitor 0.33μ 275 V ±20%	1			C15
Y2 Capacitor 222P 250 V ±20%	1			C20
Inductor DR4x12 1.6 μH	1	TRN0083	SEN HUEI	L8
Common Choke 9 mH (RT181007)	1	TRN0211	SEN HUEI	L7
Bead Core C8B 3.5*3.2*1.0	1	MCH0040		D10
Transformer RM-10 510 μH	1	TRN0237	SEN HUEI	T1
Fast Diode 1A/200V DO-41	1	FR103	CP	D9
Fast Diode 1A/1000V DO-41	1	FR107	CP	D10
Diode 1A/1000V DO-41	2	1N4007	Fairchild Semiconductor	D6, D8
Bridge 4A/600V KBL	1	KBL06	Fairchild Semiconductor	BD2
Schottky Diode 3A/150 V DO- 201AD	1	STPS3150	ST	D5
Adjustable/2.5V, 1% Tolerance Shunt Regulator	1	TL431ACZ-AP	Fairchild Semiconductor	U10
MOSFET 105A/150V TO-220	1	FDP083N15A_F102	Fairchild Semiconductor	Q3
MOSFET 8A/600V TO-220	1	FQP8N60C	Fairchild Semiconductor	Q4
4-Pin DIP Phototransistor Output Opto-Coupler	1	FOD817A	Fairchild Semiconductor	U8
SR Controller IC SOIC 8	1	FAN6204MY	Fairchild Semiconductor	U6
PWM Controller IC SOIC 8	1	FAN6754WAMRM	Fairchild Semiconductor	U7
FUSE GLASS 250V4A QUICK	1			F2
TVS P6KE150A	1			D7
INLET 2P 90°	1			CN4
HS MCH0534	1			HS4
HS MCH0555	1			HS3
PCB PLM0085 REV6	1			

7. Transformer / Output Inductor / Heat Sink

1. DIMENSION :

UNIT : mm



2. ELECTRICAL SPECIFICATION : at 1 kHz, 0.3 V

2.1 INDUCTANCE : 1.6 μ H min.

2.2 DC RESISTANCE : 11 m Ω max.

2.3 TURN & WIRE : ϕ 0.8x12.5TS(ref)

MATERIALS LIST :

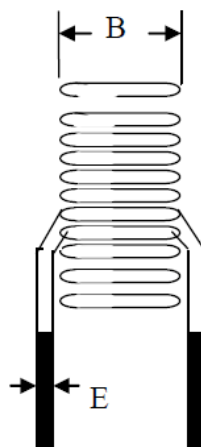
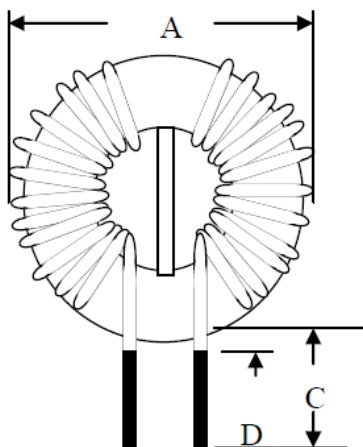
COMPONENT	MATERIAL	MANUFACTURER	UL FILE NO.
1. CORE	S6,SGB or equivalent	Ferrite core R4x12 Jaw Shianq.	
2. WIRE	THFN-216 130°C	Ta Ya Electronic Wire & Cable Co., Ltd.	E197768
	UEWN/U 130°C	Pacific Electronic Wire & Cable Co., Ltd.	E201757
	UEY 130°C	Chuen Yih Wire Co., Ltd.	E174837
3. TUBE	UL TUBE	Shengzhen Changyuan Co., Ltd.	E180908
4. TERMINALS	Tin-coated Copper wire	Will Fore Special Wire Corp.	
5. SOLDER	96.5% Su 3% Ag 0.5% Cu	Xin Yuan Co., Ltd.	

UNIT	m/m	DRAWN	CHECK	TITLE	
TEL	(02)29450588	Ci wun Chen	Guo long Huang	IDENT N O.	TRN-083
FAX	(02)29447647	SEN HUEI INDUSTRIAL CO.,LTD.		D W G N O.	10026
No.26-1, Lane 128, Sec. 2, Singnan Rd., Jhonghe City, Taipei County 235, Taiwan (R.O.C.)					



1. DIMENSION :

UNIT : mm



A	25 max
B	15 max
C	5 ± 1
D	1 max
E	φ0.65±0.1

2. ELECTRICAL SPECIFICATION : at 1kHz, 1V

2.1 INDUCTANCE : L1=L2 : 9.0 mH min.

2.2 DC RESISTANCE : L1=L2 : 0.78Ω max.

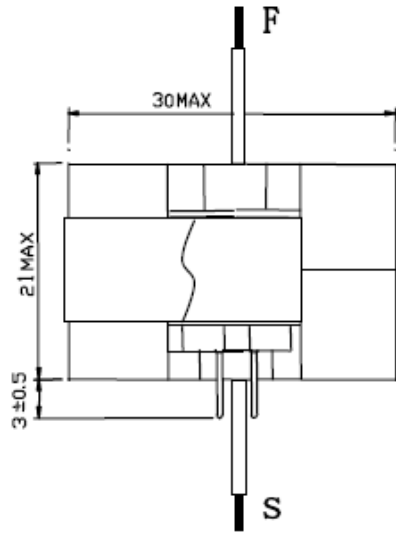
2.3 TURN & WIRE : L1=L2 : φ 0.65 x 37.5TS

MATERIALS LIST :

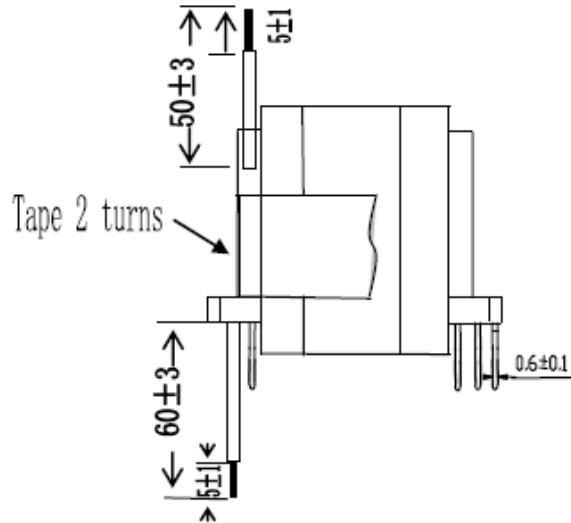
COMPONENT	MATERIAL	MANUFACTURER	UL FILE NO.
1. CORE	T18x10x7	Core T18x10x7 TOMITA.	
2. WIRE	THFN-216	Ta Ya Electronic Wire & Cable Co., Ltd.	E197768
	UEWN/U	Pacific Wire & Cable Co., Ltd.	E201757
	UEWE	Tai-l Electronic Wire & Cable Co., Ltd.	E85640
	UWY	Jang Shing Wire Co., Ltd.	E174837
3. SOLDER	96.5% Sn 3% Ag 0.5% Cu	Xin Yuan Co., Ltd.	

UNIT	m/m	DRAWN	CHECK	TITLE	
TEL	(02)29450588	Ci wun Chen	Guo long Huang	IDENT N O.	RT181007
FAX	(02)29447647	SEN HUEI INDUSTRIAL CO.,LTD.		D W G N O.	I0060
No.26-1, Lane 128, Sec. 2, Singnan Rd., Jhonghe City, Taipei County 235, Taiwan (R.O.C.)					

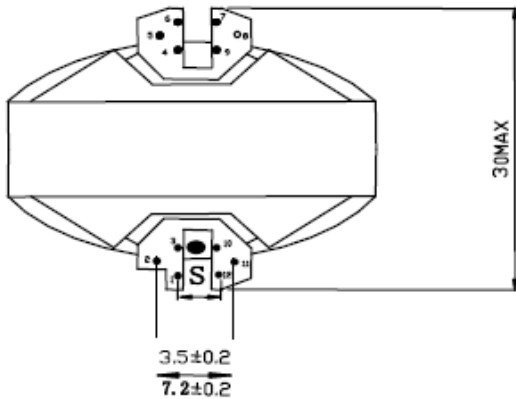
1.DIMENSION : Unit : mm



ELEVATION VIEW



SIDE VIEW



BOTTOM VIEW

TRN-0237

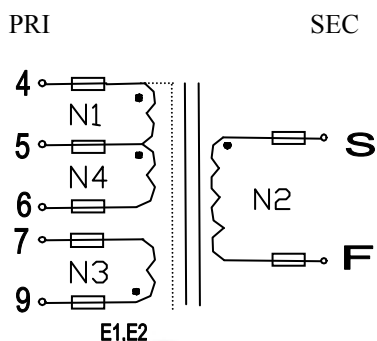
Paste label on the top of transformer,
and the wording peak faces pin 1 & pin 12

NOTE:

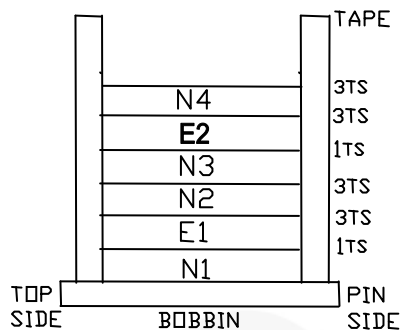
- 1) Pin 8 No.
- 2) Pin 5 cut off 2/3.
- 3) Add insulation tape *2 turns to fix core and bobbin.

UNIT	m/m	DRAWN	CHECK	TITLE	TRANS
TEL	(02)29450588	Ci wun Chen	Guo long Huang	IDENT N O.	TN-0237
FAX	(02)29447647	SEN HUEI INDUSTRIAL CO.,LTD.		D W G N O.	19903 KB773-9192
No.26-1, Lane 128, Sec. 2, Singnan Rd., Jhonghe City, Taipei County 235, Taiwan (R.O.C.)					

2. SCHEMATIC :



2.1 SCHEMATIC :



Note: All wire shields weld 0.2 φ lead. Teflon pipe connects to pin4.

2.3 WINDING:

SET	WINDING	MATERIAL	START-FINISH	TURNS	TAPE	REMARK
1	N1	2UEW- φ 0.50×1P	4-5	19 ^{TS}	1 ^{TS}	
2	E1	T0.025×7mm	-4	1.2 ^{TS}	3 ^{TS}	Adhesive tape of copper foil
3	N2	TEX-E - φ 0.90×1P	S-F	8 ^{TS}	3 ^{TS}	
4	N3	2UEW- φ 0.40×1P	9-7	7 ^{TS}	1 ^{TS}	Middle densely circles
5	E2	T0.025×7mm	-4	1.2 ^{TS}	3 ^{TS}	Adhesive tape of copper foil
6	N4	2UEW- φ 0.50×1P	5-6	19 ^{TS}	3 ^{TS}	

UNIT	m/m	DRAWN	CHECK	TITLE	TRANS
TEL	(02)29450588	Ci wun Chen	Guo long Huang	IDENT N O.	TRN-0237
FAX	(02)29447647	SEN HUEI INDUSTRIAL CO., LTD.		D W G N O.	I9903 KB773-9192
No.26-1, Lane 128, Sec. 2, Singnan Rd., Jhonghe City, Taipei County 235, Taiwan (R.O.C.)					

3. ELECTRICAL SPECIFICATION:

3.1 Inductance test : at 1 kHz, 1 V

L4-6=510 μ H \pm 5%

3.2 Leakage inductance : at 1 kHz, 1 V

P(4-6) : 20 μ H max. (shorted A,B)

3.3 DC Resistance test at 255°C

P(4-6) : 23 m Ω max.

3.4 Hi-pot test :

AC 3.0 kV / 60 Hz/0.5 mA hi-pot for one minute between primary and secondary.

AC 1.5 kV / 60 Hz/0.5 mA hi-pot for one minute between primary and core.

AC 1.5 kV / 60 Hz/0.5 mA hi-pot for one minute between secondary and core.

3.5 Insulation test :

The insulation resistance is between primary and secondary and windings to core measured by DC 500 V, must be over 100 M Ω .

3.6 Terminal strength :

1.0 Kg on terminals for 30 seconds, test the breakdown.

UNIT	m/m	DRAWN	CHECK	TITLE	TRANS
TEL	(02)29450588	Ci wun Chen	Guo long Huang	IDENT NO.	TRN-0237
FAX	(02)29447647	SEN HUEI INDUSTRIAL CO., LTD.		DWG NO.	I9903 KB773-9192
No.26-1, Lane 128, Sec. 2, Singnan Rd., Jhonghe City, Taipei County 235, Taiwan (R.O.C.)					

MATERIALS LIST :

COMPONENT	MATERIAL	MANUFACTURER	FILE NO.
1. Bobbin	Phenolic 94v-0,T375J,150 °C	RM-10 Chang Chun Plastics Co., Ltd.	E59481(S)
2. Core	FERRITE RM10 R2K (GAP)	Ferrite Core RM-10 Yang Guang Da Co., Ltd.	
3. Wire	UEY 130°C	Hoi Luen Electrical MFR Co., Ltd.	E164409
	TEX-E 130°C	Shenzhen Changyuan Electronic Material Co., Ltd.	E249037
4. Varnish	48562/C 155°C	Hang Cheung Petrochemical Ltd.	E200154
5. Tape	MYLAR TAPE (PZ-YELLOW)	Jingjiang Ya Hua Pressure Sensitive Glue Co., Ltd.	E165111(N)
6. Tube	TEFLON 200°C 150V	Shenzhen Woer Heat Shrinkable Material Co., Ltd.	E203950
7. Terminals	Tin coated- Copper wire	Will Fore Special Wire Corp.	
8. Shield	Copper foil	Bo Tong Co., Ltd. (copper foil : T0.025mm×7mm +TAPE)	
9. Solder	96.5% Su 3% Ag 0.5% Cu	Xin Yuan Co., Ltd.	

UNIT	m/m	DRAWN	CHECK	TITLE	TRA NS
TEL	(02)29450588	Ci wun Chen	Guo long Huang	IDENT NO.	TRN- 0237
FAX	(02)29447647	SEN HUEI INDUSTRIAL CO., LTD.		DWG NO.	I9903 KB77 3- 9192
No.26-1, Lane 128, Sec. 2, Singnan Rd., Jhonghe City, Taipei County 235, Taiwan (R.O.C.)					

8. Revision History

Rev.	Date	Description
1.0.0	July 2012	Initial release

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Replace components on the Evaluation Board only with those parts shown on the parts list (or Bill of Materials) in the Users' Guide. Contact an authorized Fairchild representative with any questions.

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