



TEN PAO INTERNATIONAL LTD.

SPECIFICATION FOR APPROVAL



CUSTOMER: HK业务组 TEN PAO MODEL NO.: S012GM0500210

CUSTOMER P/N: _____ TEN PAO P/N: R018026V-M

CUSTOMER MAINFRAME MODEL: _____ REV. NO.: 0

DATE: Sep. 06,2012

DESCRIPTION: Input:100-240Vac ;Output: 5.0Vdc 2.1A, SMPS Adaptor

Dear Customer:

Please send one copy of this specification back after you sign and approve for production

Approved By: _____

Date: _____

ISSUED BY		CHECKED BY		APPROVED BY	
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E0-3-011 B/3

TEN PAO INTERNATIONAL LTD.

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Design Revision History

Rev.	Mark	Release Date	Description of Change		Revised By	Approved By
			Before	After		
0	/	Sep. 06,2012	Creation		罗海浪	

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Sample Delivery Information

1. Sample Background

Circuit Diagram Revision No: _____ PCB Layout Revision No: _____ BOM Revision No: _____ Transformer Revision No.: _____

2. Sample Purpose:

A. Working Sample B. Function Sample C. Pilot Sample D. Safety Sample E. Molding Sample
 F. Final sample G. Other Sample

3. Difference Between This Time Samples to Final Mass Production Samples

Position No.	Description	The Alternative Parts On This Samples	Mass Production Demand	Correction Date

Remark:

4. The Change List Compare To Last Time Samples was:

The()Samples,This Time Samples' Tracking Number was:(), Delivery Date:().

No.	What is At Last Time Samples	What is At This Time Samples	Change Reason And Approval
1			
2			
3			
4			
5			

5. Here's high-light items of this samples delivered to your attention:

Specification only, No sample.

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1. SCOPE

This document details the electrical, mechanical and environmental specifications of a switching power supply.

1.1 Description

- Wall Mount
 Desk-Top
 Open Frame
 Others

2. INPUT REQUIREMENTS

2.1 Input Voltage & Frequency

The range of input voltage is from 90Vac to 264Vac

	Min.	Normal	Max.
Input Voltage	90Vac	100-240Vac	264Vac
Input Frequency	47Hz	50/60Hz	63Hz

2.2 Input Current

The maximum input current is 450mA max. at 100-240Vac.

2.3 Inrush Current

The inrush current will not exceed 50A at 100-240Vac input and Max load for a cold start at 25°C.

2.4 Stand-By Power

The input power should be less than with No-Load.

3. OUTPUT FEATURES

3.1 Output Parameters

	Output Data	Spec. Limit			Test Condition
		Min. Value	Typical	Max. Value	
3.1.1	5.0Vdc				
3.1.2	Output Voltage	4.75Vdc	5.0Vdc	5.25Vdc	0~2.1A Loading
3.1.3	Output Load	0.0A	—	2.1A	
3.1.4	Ripple and Noise	—	—	150mVp-p	20MHz Bandwidth 10uF Ele. Cap.0.1uF Cer. Cap.
3.1.5	Output Overshoot	—	—	10%	MAX. load(2.1A) & 100-240Vac
3.1.6	D+ D- Test	D+: 2.7V 2.58~2.85V	—	D-: 2.0V 1.92~2.13V	0 A Loading

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3.2 Turn On Delay

During turn on and turn off, no output voltage shall exceed its nominal voltage by more than **10%** and no output shall change its polarity with respect to its return line. All outputs shall reach their steady state values within **3** seconds of turn on.

3.3 Hold Up Time

10 ms minimum at **115Vac/60Hz** input at maximum load, and **20** ms minimum at **230Vac/50Hz** input at maximum load.

3.4 Typical Efficiency

The efficiency (watts out / watts in) shall be higher than _____ typical while measuring at nominal line and maximum load condition, test in 1 minute after power on.

3.5 Output Transient Response

The power supply shall maintain output transient response time within **10ms** with a loading current change from 20% to 80% of maximum current and 0.5A/ μ s rise up /drop down test at end of output terminal.

4. PROTECTION REQUIREMENT

4.1 Over-Voltage Protection

Over-voltage protection shall be included in the adaptor circuit. A single component failure must not cause an over voltage.

4.2 Over-Current Protection

The adaptor must have a current limiting function on the output voltage. in overload mode, the output must drop to a low voltage.

4.3 Short-Circuit Protection

The adaptor must withstand a continuous short circuit on the output without damage.

5. ENVIRONMENTAL CONDITIONS

5.1 Operating

The power supply shall be capable of operating normally in any mode without malfunction happens in the following environmental conditions.

5.1.1 Operating Temperature: 0°C ~40°C (Can operate normally)

Relative Humidity: 10% ~ 90%

Altitude: Sea level to 2,000 m.

5.1.2 Vibration: 1.0mm, 10 –55Hz, 15 minutes per cycle for each axis (X, Y, Z).

5.1.3 Cooling: Natural convection cooling

5.2 Non - Operating

The power supply shall be capable of withstanding the following environmental conditions extended periods of time, without sustaining electrical or mechanical damage and subsequent operational deficiencies.

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5.2.1 Storage Temperature: -30°C ~ 70°C

5.2.2 Relative Humidity: 10% ~ 90%

5.2.3 Altitude: Sea level to 2,000 m.

5.2.4 Vibration and Shock:

The power supply shall be designed to withstand normal transportation vibration per MIL-STD-810D, method 514 and procedures X, as it is mounted in the chassis assembly and packed for shipping.

6. RELIABILITY AND QUALITY CONTROL

6.1 MTBF

When the power supply is operating within the limits of this specification the MTBF shall be at least 50,000 hours at 25°C (MIL-HDBK-217F).

6.2 Burn-In

The power supply shall withstand a minimum of 4 hours Burn-In test under full load at 35°C ~40°C room temperatures, after test, product shall operate normally.

6.3 Component Derating

Semiconductor junction temperatures shall not exceed the manufacturer's maximum thermal rating.

7. MECHANICAL CHARACTERISTICS

7.1 Physical Dimensions

The detail dimension of the power supply is drawn on APPENDIX A.

7.2 Nameplate

The label of the power supply, please see APPENDIX C.

7.3 Drop test

Dropped freely from 1 m (for wall mount product) height onto the surface is consisted of hardwood 13 mm thick, mounted on two layers of plywood each 19-20 mm thick, all supported on concrete floor 1 time from 3 different surface, after test, it's no safety damage for product.

8. SAFETY

8.1 Safety Standard

The power supply shall be certified under the following international regulatory standards

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Item	Country	Certified	Standard
UL	USA	Approved	UL60950-1
CE	Europe	Approved	EN60950-1

8.2 Insulation Resistance

Input to output: **10 MΩ** min. at **500 VDC**.

8.3 Dielectric Strength (Hi-Pot)

Primary to Secondary **DC4242V,3.5mA** 1 minute for type test,
DC4500V,3.5mA 2 seconds for product.

8.4 Leakage Current

The leakage current shall be less than **0.25mA** for **Class II** when the power supply is operated maximum input voltage and maximum frequency.

9. EMC STANDARDS

9.1 EMI Standards

The power supply shall meet the radiated and conducted emission requirements for **EN55022,FCC PART 15 CLASS B.**

9.2 EMS Standards(**EN55024**)

The power supply shall meet the following EMS standards

9.2.1 IEC61000-4-2 Electrostatic Discharge (ESD)

Static – discharge test by contact or air should be conducted with Static – discharge tester, energy storage capacitance of 150pF, and discharge resistance of 330Ω.
8KV air discharge, **4KV** contact discharge, Performance Criterion B.

9.2.2 IEC61000-4-3 Radiated Electromagnetic Fields(RS)

Radio- frequency Electromagnetic Field Susceptibility Test, RS, 80-1000MHz,3V/m, 80%AM(1KHz), Performance Criterion A.

9.2.3 IEC61000-4-4 Electrical Fast Transient / Burst (EFT)

Power Line to Line: **1KV**
Performance Criterion B.

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9.2.4 EN61000-4-5 Lightning Surge Attachment

Lightning Surge voltage of differential and common modes shall be applied across AC input lines and across input and frame ground.

Power Line to Line: **1KV**

Performance Criterion B.

9.2.5 IEC61000-4-6 Conducted Radio Frequency Disturbances (CS)

Conducted Radio Frequency Disturbances Test, CS, 0.15-80 MHz, 3V/m, 80%AM, 1KHz, Performance Criterion A.

9.2.6 IEC61000-4-11 Voltage Dips/Short Interruption/Variations

Voltage Dips, 30% reduction- 10ms, Performance Criterion B, 60%

Reduction – 100ms, Performance Criterion C, Voltage Interruptions>95%

Reduction- 5000ms, Performance Criterion C.

10. OTHER REQUIREMENTS

10.1 Hazardous Substances

The components and used materials shall be in compliance with

- EU Directive 2002/95/EC "RoHS"
- EU Directive 2002/96/EC "WEEE"
- Halogen Free
- Nonce Europe "REACH" regulation

10.2 Energy Efficiency

10.2.1 The No-Load power consumption shall be less than **0.3W** at input **115/230Vac,60/50Hz.**

10.2.2 The average active mode efficiency shall be higher than **73.74%** at input **115/230Vac,60/50Hz.**

10.2.3 International Efficiency Level **V** .

Korea Energy Efficiency Label

10.2.4 This power supply is therefore in compliance with the requirements of

California Energy Commission Energy Efficiency requirements for external power supplies (CEC)

Energy Star Energy Efficiency requirements for external power supplies (EPS Version 2.0)

EU Code of Conduct on Energy Efficiency of External Power Supplies (Version 4)

Australian and New Zealand Energy Performance Requirements for external power supplies (MEPS,AS/NZS 4665.1,AS/NZS 4665.2)

China Energy Efficiency requirements for external power supplies (GB20943)

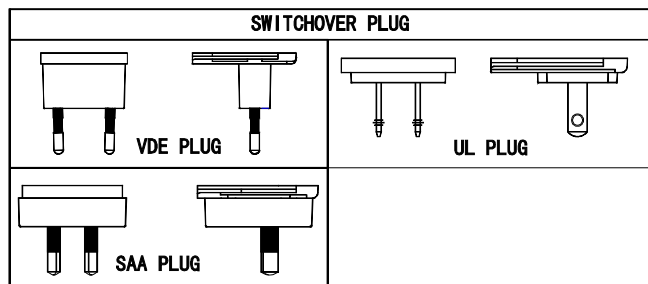
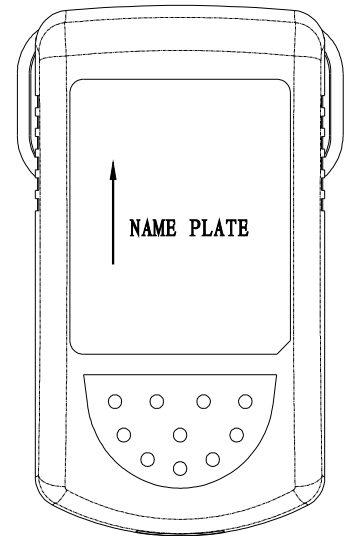
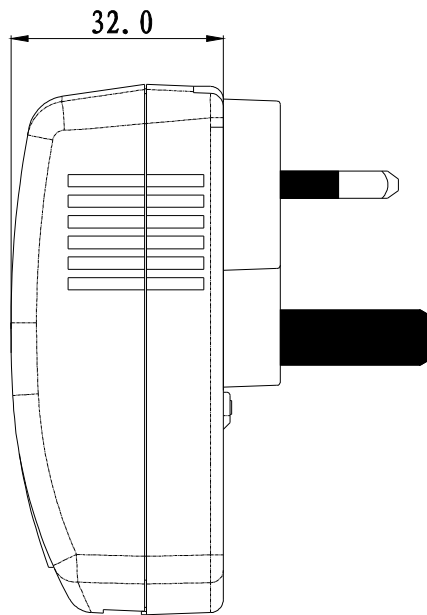
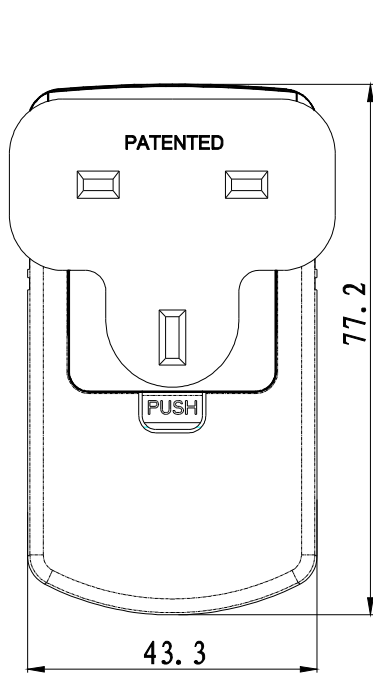
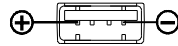
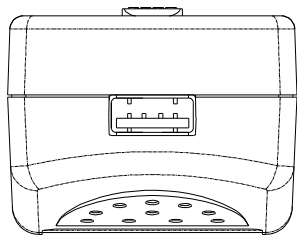
Korea regulation on Energy Efficiency Labeling and Standards for external power supplies (MKE's Notification 2008-99)

Implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for no-load condition electric power consumption and average active efficiency of external power supplies (**No 278/2009 ,Stage 2**)

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APPENDIX A

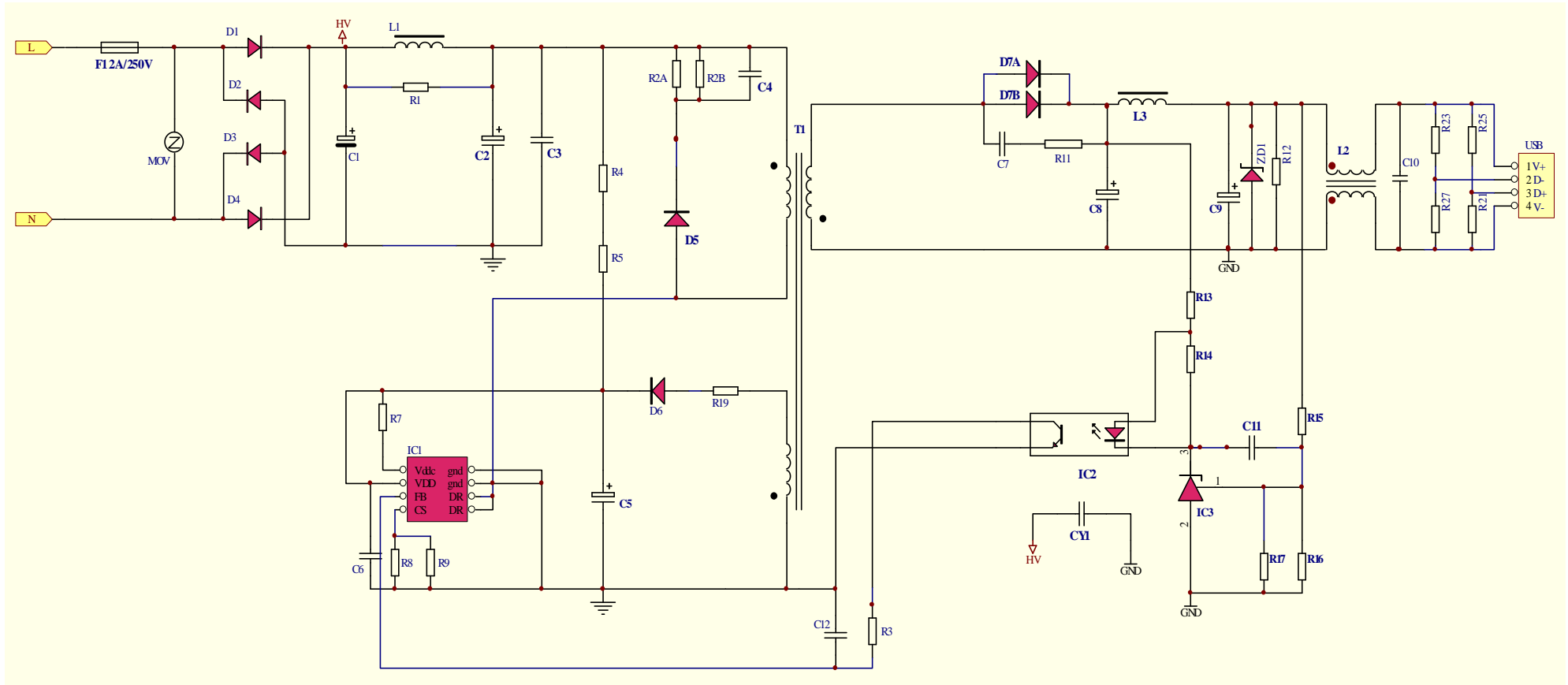
Mechanical Dimensions(Unit: mm) Tolerance Of unspecified Parts:±1.5mm



REMARK	COLOR: BLACK
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APPENDIX B

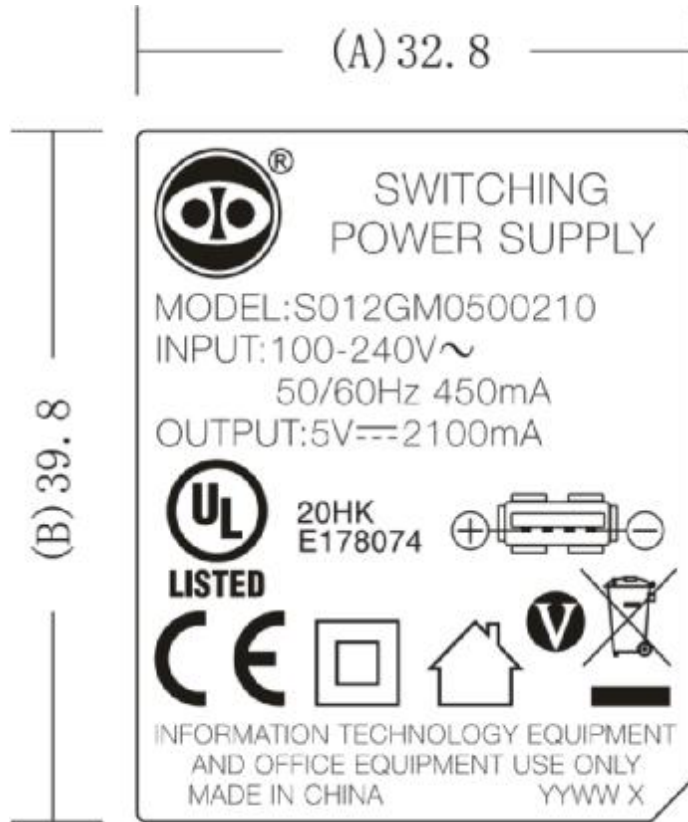


CIRCUIT DIAGRAM	DATE	Sep. 06,2012	REV.	0
	DESIGN	罗海浪	APPROVE	吴锦明

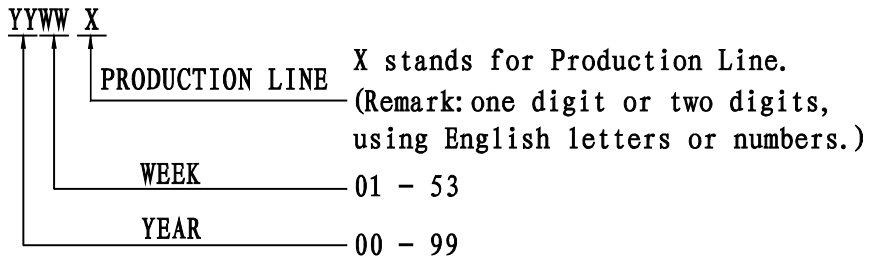
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APPENDIX C

Name Plate:



DATE CODE:



Unit: mm

Word Color: **Grey (Laser Print)**

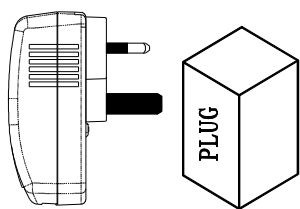
* Please Advise If Any Comments About The Name Plate Information.

Otherwise, This Information Is Defaulted As Customer Approval,
 And Will Be Applied To Production .

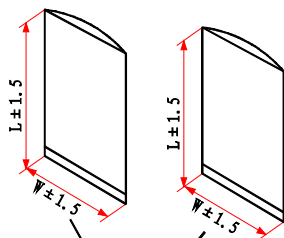
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APPENDIX D

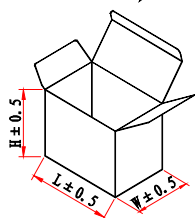
PRODUCT:
PLUG:



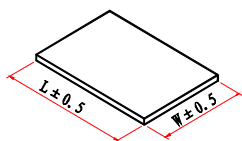
PLASTIC BAG:



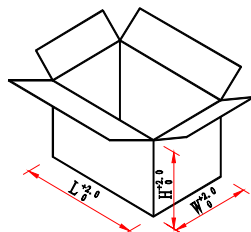
WHITE BOX:



PAPERBOARD:



CARTON:



DIMENSION(UNIT IN cm):

	L	W	H
PLASTIC BAG(PLUG)*3PCS	13.0	8.0	
PLASTIC BAG	18.0	12.0	
WHITE BOX	13.0	7.5	6.5
PAPERBOARD	52.0	38.0	
CARTON	54.0	39.5	22.5

PACKING METHOD:

PAPERBOARD PLACEMENT METHOD	PUT A PAPERBOARD BETWEEN THE TOP AND BOTTOM,TOTAL 2PCS.
PACKING METHOD	20SETS/LAYER X 3 LAYERS
QTY	60SETS
N.W./SET	132g
G.W./CARTON	10.4Kg

REMARK:

1. STORAGE CONDITION

TEMPERATURE: -10°C~+60°C

RELATIVE HUMIDITY: 30%~80%

2. STORAGE PERIOD: 6 MONTHES

3. ANLISTATIG: NO REQUIREMENT

4. PLEASE ADVISE IF ANY COMMENTS ABOUT THE PACKING INFORMATION.

OTHERWISE,THIS INFORMATION IS DEFAULTED AS CUSTOMER APPROVAL,
AND WILL BE APPLIED TO PRODUCTION.

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APPENDIX E

SAMPLE PRIMARY TEST REPORT

CUSTOMER		HK业务组												
MODEL NO.		S012GM0500210				PRODUCT NO.				R018026V-M				
Test Items.	Test Condition	Unit	Sample Number and Test Result										Pass/ Fail	
			1#	2#	3#	4#	5#	6#	7#	8#	9#	10#		
Unload output voltage/ (0.0A) 4.75Vdc - 5.25Vdc	90Vac	V												/
	132Vac	V												
	180Vac	V												
	264Vac	V												
D-:output voltage/ (0.0A) 1.92Vdc - 2.13Vdc	90Vac	V												
	132Vac	V												
	180Vac	V												
	264Vac	V												
D+:output voltage/ (0.0A) 2.58Vdc - 2.85Vdc	90Vac	V												
	132Vac	V												
	180Vac	V												
	264Vac	V												
Rated load output voltage/ (2.1A) 4.75Vdc - 5.25Vdc	90Vac	V												
	132Vac	V												
	180Vac	V												
	264Vac	V												
Output ripple & noise voltage≤150mV (test at full loading)	90Vac	mV												
	132Vac	mV												
	180Vac	mV												
	264Vac	mV												
Short-circuit protection test (Short at end of DC plug)	90Vac	W												
	264Vac	W												
Over current protection (Ocp≤--A)	90Vac	A												
	264Vac	A												
Hi-pot test	4242Vdc/3.5mA/ 1Minute													

TEST BY	CHECKED BY	APPROVED BY	DATE	REV.	SHEET
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APPENDIX F

SAMPLE TEST REPORT

CUSTOMER:		HK业务组								
TEN PAO MODEL NO.:		S012GM0500210		TEN PAO P/N:				R018026V-M		
Items No.	Test Items	Unit	Test condition & result						Spec. Limit	Pass/Fail
			90Vac	115Vac	132Vac	180Vac	230Vac	264Vac		
1	Unload input current									/
2	Unload input power									
3	Rated load input current									
4	Rated load input power									
5	Unload output voltage(0.0A)									
6	Rated load output voltage(2.1A)									
7	Output ripple&noise voltage(2.1-0A)									
8	Output transient response(20-80%)									
9	Short-circuit test (Pin&lout)									
10	Over current protection									
11	Over voltage protection									
12	Output overshoot/Max load									
13	Turn on delay time									
14	Hold up time									
15	Efficiency(Full load)									
16	Mech. Dimension									
17	Hi-pot test									
18	Drop test									
19	Max. and Light load change test									
20	Appe. label and fusion									
21	Mosfet(IC)/Vds(normal:95% ,other:100%)									
22	Diode /Vrr(normal:90% ,other:100%)									
TEST BY	CHECKED BY	APPROVED BY		DATE	REV	SHEET				
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APPENDIX F

SAMPLE TEST REPORT

CUSTOMER:	HK业务组		
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1. TEST STANDARD: _____

2. Product Specification:
 Input voltage, frequency, current: _____

- 3. TEST METHOD:**
- 3.1. Under input 230VAC / 50Hz, output normal load, the EUT continuous operating for 30 minutes.
- 3.2. Under input 115VAC / 60Hz and 230VAC / 50Hz, the EUT is measured at 100%, 75%, 50% and 25% of rated output current. Record values are output voltage, output current, input power, input current. Then calculating average efficiency at four active mode load conditions.
- 3.3. Input 115VAC / 60Hz and 230VAC / 50Hz, test the input power, input current, output voltage in the no-load condition.

4. TEST DATA: (Room temperature: 25-30°C, relative humidity : 10-90%).

4.1 Input voltage, frequency 115V,60Hz:

Sample No.	Item	Unload	25%*I _L	50%*I _L	75%*I _L	100%*I _L	Average	
1#	Output	Current(mA)					/	
		Voltage(V)						
		Power(W)						
	Input	Power(W)						
		THD _V (%)						
		True PF						
		Current(mA)						
Efficiency(%)								
2#	Output	Current(mA)					/	
		Voltage(V)						
		Power(W)						
	Input	Power(W)						
		THD _V (%)						
		True PF						
		Current(mA)						
Efficiency(%)								
3#	Output	Current(mA)					/	
		Voltage(V)						
		Power(W)						
	Input	Power(W)						
		THD _V (%)						
		True PF						
		Current(mA)						
Efficiency(%)								
Energy Efficiency (Min.) :								

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SAMPLE TEST REPORT

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4.2 Input voltage, frequency 230V,50Hz:

Sample No.	Item	Unload	25%*I _L	50%*I _L	75%*I _L	100%*I _L	Average	
1#	Output	Current(mA)					/	
		Voltage(V)						
		Power(W)						
	Input	Power(W)						
		THD _V (%)						
		True PF						
		Current(mA)						
Efficiency(%)								
2#	Output	Current(mA)					/	
		Voltage(V)						
		Power(W)						
	Input	Power(W)						
		THD _V (%)						
		True PF						
		Current(mA)						
Efficiency(%)								
3#	Output	Current(mA)					/	
		Voltage(V)						
		Power(W)						
	Input	Power(W)						
		THD _V (%)						
		True PF						
		Current(mA)						
Efficiency(%)								
Energy Efficiency (Min.) :								

5.EQUIPMENTS LIST:

6.REMARK:

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QQGQ.E178074

Power Supplies, Information Technology Equipment Including Electrical Business Equipment

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Power Supplies, Information Technology Equipment Including Electrical Business Equipment

[See General Information for Power Supplies, Information Technology Equipment Including Electrical Business Equipment](#)

TEN PAO INDUSTRIAL CO LTD

E178074

6TH FL, ROOM 10 11

KWONG SANG HONG CENTRE

KWUN TONG, 151-153 HOI BUN RD

KOWLOON, HONG KONG

AC adapter, Model(s) U078045AV, PS-0034

AC adapters, Model(s) PS-0033, PS-0034, PS-0035, U065035A12V, U078045AV, U080030A12V

AC adapters, Model(s) S006HU055C100, SR-829T, TP-829T, U120650A63, U135125EB4

AC-AC adapters, Model(s) D060322A21, D068C25A21, JxxxxxyA*, UxxxxxyA30*, UxxxxxyA31*, JxxxxxyAA3*, UxxxxxyAA4*

AC-DC adapters, Model(s) D050C6CDU, D12008CDU, S004CU(x)zzzz Series, TL63056FD, LxxxxxyE, UxxxxxyD*, UxxxxxyD30, UxxxxxyD31*, UxxxxxyDA3*, UxxxxxyDA4*

AC/AC adaptor, Model(s) J05003CA12V, U080030A12V, PS-0035

AC/AC adapters, Model(s) U060030A12V, U075015A12V, U075020A12V, U075035A12V, U090025A12V

AC/DC ADAPTOR (or ITE POWER SUPPLY), Model(s) U060050E, U070030E

AC/DC ADAPTOR or Switching Power Supply, Model(s) S1A1184, S005JU0500100

AC/DC adapters, Model(s) UC60020DV, U090020DV, U120070C35

Battery chargers, Model(s) C2401301, GB-20C, GB-40C, S002AP0420010, S002AP0420015, S002AP0420020, S002AP0420025, S002AP0420030,

S002AP0420035, S002AP0420040, S002AP0420045, S002AP0420050, U1202501C

Direct plug-in adapters, Model(s) S012BM:xxxxxy (m), S012EU1200080, S012EU1200100, S012EU1200120 S024Ezxy series, where 'z' can be V, B, L, C and M, 'x' is 3 digital number, represents output voltage from 3.0 V dc "030" to 24.0 V dc "240" ; 'y'

is 4 digital number, represents output current from 0.5 A "0050" to 3.0 A "0300"

Direct plug-in linear power adapters, Model(s) D060030D24

Direct plug-in power supplies, Model(s) AFE1S1-13, GMRS 25AC, S012CU0500250, U030110A, U030180A, U030190A, U030200A, U030210A,

UC30220A, UC45070D, U045075D, U045080D, U045085D, U045090D, U060060D, U060065, U060065D, U060070D, U060075D, U060080D, UC60100A, UC60100D, U060120A, U060130A, U060140A, U090050D, U090055D, J090060A, J090060D, U090065D, UC90070A, UC90080A, UC90080D, U090090A, U120030D, U120035D, U120040D, U120045D, U120050A, U120050D, U120060A, U120070A, U150030D, U150035D, U150040A, U150040D, U150045A, U150050A, U150055A, U240020A, U240020D, U240025A, U240025D, U240028A, U30230A

Direct plug-in switching power supplies, Model(s) S002EU045XXXX, where XXXX = 0010 to 0035, S003DU0550050

S010AUbc, where b can be C30 to 150, c can be 020 to 0200

S010FU0500200, S015BC, S015BU, SR-827T, SR-827TE

I.T.E. POWER SUPPLY, Model(s) S004VU0510075

I.T.E. power supply, Model(s) S006RUC510115

ITE power supplies, Model(s) S003F*0500060, S004F*0500065, S004F*0500070, S004F*0500080, U050C30E, U100050A

ITE power supply/car chargers, Model(s) S005EU0500100

Linear direct plug-in power supplies, Model(s) J030030C30, U120100D4201

Linear power supplies, Model(s) U060650AB4

Portable Notebook Power Adapter, Model(s) SPJ/100

Power adapters, Model(s) 3DS10628ADAA, 3DS10628ACA4, D060020D2, D060040D24, D090020D24, D090025A22, D090030D24,

S012BU0500150, S012BU0500160, S012BU0500170, S012BU0500180, S012BU0500190, S012BU0500200, S012BU0500210, S012BU0500220, S012BU0500230, S012BU0500240, S012BU0500250, S012BU0550200, S012BU0600150, S012BU0600160, S012BU0600170, S012BU0600180, S012BU0600190, S012BU0600200, S012BU1200090, S012BU1200090, S012BU1200100, S012BU1200110, S012BU1200120, S012BU1200125

Power supplies, Model(s) URE048060CS301, UWE030060T311, UxxxxxyAB4(a), UxxxxxyAB6(b), UxxxxxyA50*, UxxxxxyA51*, UxxxxxyD50*, UxxxxxyD51*

Switching mode power supplies, Model(s) PSxxxxxy Series, S003AUXXXXXX*, S003BUXXXXXX*

S024DFxy series, where "x" is 3 digital number, denotes output voltage from 3 V dc "030" to 24 V dc "240"; "y" is 4 digital number, denotes output current from 0.5 A "0050" to 3.0 A "0300"

Switching power adaptors, Model(s) PS0050XXXX2 (c), PS0060XXXX2 (c), PS0075XXXX2 (c), PS0090XXXX2 (c), PS0100XXXX2 (c), PS0120XXXX2 (c), PS0140XXXX2 (c), PS0150XXXX2 (c), PS0160XXXX2 (c), PS0180XXXX2 (c), PS0190XXXX2 (c), PS0200XXXX2 (c), PS0220XXXX2 (c), PS0240XXXX2 (c), S015AU03xxxx, where xxxx can be 0030-0300, S024AMXXXYYYY(c)

S150Aw120y, where w can be O or Q, y can be 0500 to 1000

S150Aw125y, where w can be O or Q, y can be 0570 to 0960

S150Aw130y, where w can be O or Q, y can be 0570 to 0924

S150Aw135y, where w can be O or Q, y can be 0550 to 0899

S150Aw140y, where w can be O or Q, y can be 0500 to 0857

S150Aw145y, where w can be O or Q, y can be 0490 to 0828

S150Aw150y, where w can be O or Q, y can be 0500 to 0800

S150Aw155y, where w can be O or Q, y can be 0460 to 0775

S150Aw160y, where w can be O or Q, y can be 0460 to 0850

S150Aw165y, where w can be O or Q, y can be 0450 to 0825

S150Aw180y, where w can be O or Q, y can be 0410 to 0755

S150Aw185y, where w can be O or Q, y can be 0410 to 0754

S150Aw190y, where w can be O or Q, y can be 0390 to 0779

S150Aw195y, where w can be O or Q, y can be 0390 to 0756

S150Aw200y, where w can be O or Q, y can be 0375 to 0740

S150Aw205y, where w can be O or Q, y can be 0375 to 0722

S150Aw220y, where w can be O or Q, y can be 0340 to 0680

S150Aw225y, where w can be O or Q, y can be 0340 to 0665

S150Aw240y, where w can be O or Q, y can be 0310 to 0625

Switching power supplies, Model(s) AD-1014, AD-1016, AD-1017, L4808D-STG, PS-0011, PS0050yyyy1, where yyyy can be 0150-0450,

PS0050yyyy1, where yyyy can be 0150-0420, PS0075yyyy1, where yyyy can be 0150-0400, PS0090yyyy1, where yyyy can be 0150-0335,

PS0100yyyy1, where yyyy can be 0100-0340, PS0120yyyy1, where yyyy can be 0100-0285, PS0140yyyy1, where yyyy can be 0090-0245,

PS0150yyyy1, where yyyy can be 0080-0230, PS0160yyyy1, where yyyy can be 0070-0215, PS0180yyyy1, where yyyy can be 0070-0190,

PS0190yyyy1, where yyyy can be 0060-0180, PS0200yyyy1, where yyyy can be 0060-0170, PS0220yyyy1, where yyyy can be 0050-0155,

PS0240yyyy1, where yyyy can be 0050-0145, S002CU1900010, S002CYZZZZZ, S002CU1900010, PS-0011, S004DUxxxxxy Series#,

S004JUxxxxxy series (n), S005CUxxxxxy, S005IUxxxxxy series (l), S006JU0500120, S008CXXXXXXX Series (h), S009AU0600100,

S009AU0600110, S009AU0600120, S009AU0600130, S009AU0600140, S009AU0600150, S009BUxxxxxy(%), S012APxxxxxy(d),

S012JU0500200, S012JU0500200, S012JU0500250, S012JU0500250, S015AU04xxxx, where xxxx can be 0030-0300, S015AU045xxxx, where

xxxx can be 0030-0300, S015AJ050xxxx, where xxxx can be 0030-0300, S015AU05xxxx, S015AU060xxxx, where xxxx can be 0025-0250

S015AU065XXX (XXXX can be 0000-0130, represent rated output current 0-1300 mA)

S015AU070xxxx, where xxxx can be 0020-0214, S015AU075xxxx, where xxxx can be 0019-0200, S015AU080xxxx, where xxxx can be 0016-0188,

S015AU090xxxx, where xxxx can be 0015-0167, S015AU100xxxx, where xxxx can be 0015-0150, S015AU110xxxx, where xxxx can be 0012-0135,

S015AU120xxxx, where xxxx can be 0010-0125, S015AU140xxxx, where xxxx can be 0010-0107, S015AU150xxxx, where xxxx can be 0010-0100,

S015AU160xxxx, where xxxx can be 0010-0094, S015AU180xxxx, where xxxx can be 0010-0083, S015AU190xxxx, where xxxx can be 0010-0079,

S015AU200xxxx, where xxxx can be 0010-0075, S015AU220xxxx, where xxxx can be 0010-0068, S015AU240xxxx, where xxxx can be 0010-0063,

S015BMO90x, S016AQ***** (e), S016AP***** (e), S016AQ***** (e), S018BUxxxxxy Series (j), S018EMxxxxxy Series (i),

S018EU0500300, S018KUxxxxxy(z), S024JU1200200, S024JU1200200, S026AM12001502, S030AQ12001503, S034AF12002002, S036Bzy

Series, S036Czy Series, S039AQ4800080, S040AMxy, S040AMxy xy, S040BM1700230, S040CUxy, S040Ezy series (k), S048AOxy series,

S048APxy series, S048AQxy series, S060B*** (f), S060C*** (g), S075AOxy Series, S075APxy Series, S075AQxy Series

S080APxxxxxy, where xxx can be 090-240, denotes output voltage ranging from 9 V dc to 24 V dc; yyy can be 0200-0700, denotes output

current ranging from 2 A to 7 A

S080AXxxxxxy, where xxx can be 090-240, denotes output voltage ranging from 9 V dc to 24 V dc; yyy can be 0200-0700, denotes output

current ranging from 2 A to 7 A

SR-828T

SWITCHING POWER SUPPLY, Model(s) 22-163, L1220D-USA, L4803D-USA, L4803D-UST, L5107D-USA, L5107U-USA, S002MUxxxxxy series

(ab)

S003CU060xxxx, "xxxx" will be replaced by 0010 to 0050, represents output current from 100mA to 500mA.

S003IUxxxxxy (w), S003IUXXXXXY (y), S003FU0500060, S003PU0600050

Switching Power Supply, Model(s) S004AM060yyyy (yyyy=0010-0060, represent output current rating from 100-600 mA.)

SWITCHING POWER SUPPLY, Model(s) S004LUxxxxxy series (p), S004YMxxxxxy(v), S005SU050xxxx (q), S006MUxxxxxy series (ac),

S009CU090xxxx Series (aa)

S009GUxxxxxyy ("xxx" represents the output voltage ranged from 050 (3.0Vdc) to 150 (15.0Vdc), "yyyy" represents the output current ranged from 0045 (0.45A) to 0180 (1.8A)

S009HU0/000802, S010EM0500200, L5020D-USA

S010LUC500200, PSTA-XXXXT (The "X" represents the digit number from 0 to 9, or represents the letter from A to Z.)

S010LU1900050, WCA-C01WT, S012FU1200100, S012NU120y (aaaa), S012UM050XXXX (&), S012WUxxxxxyy (#), S014CU0900150
S015DP1500100, 168/02XXXX ('X' represent the digit is from 0 to 9)

S015KM4800030, S018BU1200100, S018EM1200100, S018GU120y, S018KMxxxxxyy (+), S024TM1200200

S024WZxxxxxyy (Z= M or U, M represents removable blades; U represents fixed blades; xxx represents output voltage from 050 to 240 (5Vdc to 24Vdc), yyyy represents output current from 0060 to 0350 (0.6A to 3.5A)).

S030SP120yyyy (ae)

S030SU120y ("y" can be 0150-0250, indicating the output current varied from 1.5 -2.5A)

S040DO2000200, S040DP2000200, S060DK12003402, S060EP12003402, S065BOxxxxxyy (t), S065BPxxxxxyy (t), S065BQxxxxxyy (t),
S074APxxxxxyy, S084AQ12005002, S150BPXXXXYYY(r), S150BQXXXXYYY(r)

SWITCHING POWER SUPPLY/TRAVEL CHARGER, Model(s) S004EUxxxxxyy (abc)

TRAVEL ADAPTER, Model(s) MCS-01WT, MCS-02WT, S002GU0480040, STA-U35WT2, S004GU0460040, SAC-48, S004NU0510070,

S005TU0480100, S005YL0500085, S006EU0500120, STA-U17WT

STA-XYZWT (X, Y, Z represent the digit number from 0 to 9, or represent the letter from A to Z)

**Travel adapters, Model(s) ATAD⁰¹⁰⁰⁰¹⁰⁰, ATAD^{01000100 (0100)}, ATAD^{01000100 (0100)}, ATAD^{01000100 (0100)}, ATAD^{01000100 (0100)}, ATADXXXXXX (o),
ATADXXXXXX(YYY) (o), ATADXXXXXX_YY (o), ATADXXXXXXXXX (o), ATADXXXXXXXXX (o), S004GU0500070**

S004GUXXXXYYY (XXX=048 or 050, YYY=0010~0055)

TRAVEL CHARGER, Model(s) S004UUxxxxxyy (@), S005UUxxxxxyy (ad), S012GMxy(x=050-055, y=0100-0210) (bb)

**Travel chargers, Model(s) CHUSB-ADP, Model(s) S003HUxxxxxyy Series (j), S003FU0500030, S003FU0500035, S003FU0500040,
S003FU0500045, S003FU0500050**

S003KU050xxx (XXXX denotes output current from 100mA(0010) to 400mA(0040), 50mA(0005) per step.)

l - "xxx" represents the output voltage from 150(15Vdc) to 180(18Vdc), "yyyy" represents the output current 0495Max (4.95A Max)

- where xxx indicates output voltage; yyyy indicates output current.

s - xxx=050-240, is 3 digit number which represents the output voltage in volt dividing by 10 in step of 0.1V; yyyy =0050-0200, which represents the output current from 0.1A to 2.0A, maximum rated output power does not exceed 12W

&-XXXX represents output current from 0100(1000mA) to 0180 (1800mA).

(%) -where xxx = 050-080, yyyy = 0010-0150; or xxx = 081-100, yyyy = 0010-0110; or xxx = 101-120, yyyy = 0010-0089

(a) - Where xxx can be 075 -240; and yyy can be 160-620

(aa) - where "xxxx" denote output current from 0010(100mA) to 0100 (1000mA)

(aaaa) - y represents the output current from 0010 (0.10 A) to 0100 (1.00 A) step is 10 mA

(ab) - where xxx can be 040 to 090, represent rated output voltage 4.0Vdc to 9.0Vdc; yyyy can be 0010 to 0050, represent rated output current 0.1A to 0.5A. All models with output power not more than 2 W.

(abc) - xxx represents the output voltage from 045(4.5Vdc) to 060(6.0Vdc), yyyy represents the output current from 0001(10mA) to 0065(650Ma), maximum output power is 3W

(ac) - where xxx can be 030 to 120, represent rated output voltage 3.0Vdc to 12.0Vdc; yyyy can be 0010 to 0120, represent rated output current 0.1A to 1.2A; All models with output power not more than 6W.

(ad) - "xxx" represents output voltage from 050 to 060 (5Vdc to 6Vdc), "yyyy" represents output current from 0020 to 0100 (200mA to 1000mA), and output power did not exceed 5 watts.

(ae) -where "yyyy": four digits represent output current in Ampere, from 0200 to 0250, minimum rise step is 0.01A. e.g. 0200=2.0A, 0250=2.5A.

(b) - Where xxx can be 075 - 240; and yyy can be 210-800.

(bb) - "x" is 3 digits of number from 050 to 055 which represent output voltage from 5.0Vdc to 5.5Vdc by step of 0.1V; "y" is 4 digits of number from 0100 to 0210 which represent output current from 1.0A to 2.1A by step of 10mA

(c) - Where XXXX can be 0050 thru. 0400

(d) - Where xxx = 033-240; yyyy = 0020-0250

(e) - Where the 1st to 3rd digits (*) can be 030-240, denotes output voltage ranging from 3 V dc to 24 V, the 4th to 7th digits (*) can be 0020-0250, denotes output current ranging from 0.2 A to 2.5 A.

(f) -Where the first "*" denote the input connection, e.g. "P" denote appliance inlet; "U" denote non-detachable American power cord and plug. The second "*" denote the output voltage, which can be 090 (9.0 Vdc) to 240 (24.0 Vdc). The third "*" denote the output current, which can be 0150 (1.5 A) to 0500 (5.0 A).

(g) -Where the first "*" denote the input connection, e.g. "Q" -denote inlet type C14 used; "O" denote inlet type C6 used; "U" denote non-detachable American power cord and plug. The second "*" denote the output voltage, which can be 090 (9.0 Vdc) to 240 (24.0 Vdc). The third "*"denote the output current, which can be 0150 (1.5 A) to 0500 (5.0 A).

(h) - where 1st digital were U and M, U is US version and M is detachable plug. 2nd to 4th digital represents output voltage from 3.0 Vdc "030" to 12.0 Vdc "120". 5th to 8th digital represents output current from 100mA "0010" to 1200 mA "0120".

(i) - where xxx = 050-055, yyyy = 0200-0300, represent rated output 5.0-5.5Vdc/ 2.0-3.0A; or xxx = 056-060, yyyy = 0200-0280, represent rated output 5.6-6.0Vdc/2.0-2.8A; or xxx = 061-065, yyyy = 0170-0270, represent rated output 6.1-6.5Vdc/1.7-2.7A; or xxx = 066-072, yyyy =

0170-0250, represent rated output 6.6-7.2Vdc/1.7-2.5A; or xxx = 073-100, yyyy = 0150-0247, represent rated output 7.3-10Vdc/1.5-2.47A; or xxx = 101-139, yyyy = 0110-0178, represent rated output 10.1-13.9Vdc/1.1-1.78A; or xxx = 140-165, yyyy = 0090-0129, represent rated output 14-16.5Vdc/0.9-1.29A; or xxx = 166-200, yyyy = 0075-0108, represent rated output 16.6-20Vdc/0.75-1.08A; or xxx = 201-240, yyyy = 0050-0090, represent rated output 20.1-24Vdc/0.6-0.9A). All models with output power not more than 18 W.

(j) - where xxx can be 045-060, represent rated output voltage 4.5-6Vdc; yyyy=0000-0070, represent rated output current 0-0.7A. All models with output power not more than 3.5 W.

(k) - z can be U, representing equipment with integral input blades formed as mains plug, or M, representing equipment associated with removable input blades formed as mains plug; x = 090-129, y = 0200-0300, representing rated output 9.0-12.9Vdc / 2.0-3.0A; x = 130-159, y = 0200-0260, representing rated output 13.0-15.9Vdc / 2.0-2.6A; x = 160-189, y = 0150-0230, representing rated output 16.0-18.9Vdc / 1.5-2.3A; x = 190-219, y = 0120-0210, representing rated output 19.0-21.9Vdc / 1.2-2.1A; x = 220-240, y = 0100-0170, representing rated output 22.0-24.0Vdc / 1.0-1.7A). All models with maximum rated output power not more than 40 W, except for models which x = 090-129 and y = 0200-0300, rated output power shall not exceed 36 W.

(l) - Where xxx = 050-067, yyyy = 0010-0080; or xxx = 068-075, yyyy = 0010-0079; or xxx = 076-090, yyyy = 0010-0071; or xxx = 091-120, yyyy = 0010-0059

(m) -Where "M" represents the different country plug type, can be U, C, V, S, K or B;

(n) - where xxx can be 060-090, represent rated output voltage 6.0-9.0 Vdc, yyyy can be 0010-0060, represent rated output current 100-600 mA; Production of rated output voltage and current shall not more than 3.6 W except model S004JU0750050

(o) -The "X" and "Y" represents number from 0-9 , or represents capital from A-Z.

(p) - where "xxx"= 040 to 090, stands for output voltage from 4.0Vdc to 9.0Vdc increased by step of 0.1Vdc; "yyyy"= 0010-0080, stands for output current from 100mA to 800mA increased by step of 10mA.

(c) - "xxxx" represents output current from 0050(500mA) to 0100 (1000mA)

(r) - XXX represents output voltage 12-25Vdc, YYY represents output current 9-5A Maximum.

(t) - xxx can be 090-139, represent output voltage 9.0V-13.9V, yyyy can be 0250-0500, represent output current 2.5A-5A, maximum output power is 60W; xxx can be 140-165, represent output voltage 14V-16.5V, yyyy can be 0200-0425, represent output current 2.0A-4.25A, maximum output power is 60W; xxx can be 166-200, represent output voltage 16.6V-20V, yyyy can be 0200-0360, represent output current 2.0A-3.6A, maximum output power is 65W; xxx can be 201-240, represent output voltage 20.1V-24V, yyyy can be 0150-0270, represent output current 1.5A-2.7A, maximum output power is 65 W.

(v) - "xxx" can be 050-090; represents output voltage from 5.0V to 9.0V, step is 0.1V"yyyy" can be 0010-0080, represents output current from 100mA to 800mA The product of "xxx" and "yyyy" did not exceed 4500.

(w) - where xxx can be 040 to 090, represent rated output voltage 4.0Vdc to 9.0Vdc; yyyy can be 0001 to 0080, represent rated output current 0.01A to 0.8A; All models with output power not more than 3.6W.

(x) -represents output voltage range 030-090.

(y) - XXX=050 or 060, represents output voltage is 5.0Vdc or 6.0Vdc; YYY=0001-0050, represents output current: from 0.01A to 0.5A

(z) -"xxx" represents output voltage from 050(5.0Vdc) to 240(24.0Vdc), "yyyy" represents the output current from 0010(0.10A) to 0300(3.00A), maximum 18W.

* - Where x, y or z may be any alphanumeric character.

+ - xxx=050-240, which represents the output voltage from 5V to 24V;yyyy =0010-0300, which represents the output current from 0.1A to 3.0A, maximum rated output power does not exceed 18W

@ - "xxx" represents output voltage from 045 to 060 (4.5Vdc to 6Vdc), "yyyy" represents output current from 0010 to 0070 (0.1A to 0.7A), and output power did not exceed 3.5 watts.

xxxx - Where xxxx can be 0060-0240, denotes output voltage ranging from 6 V dc to 24 V dc

xy - For S040AMxy, S040CUxy only, x can be 050 to 240; y can be 0024 to 0400; For S075APxy, S075AQxy and S075AQxy Series only, Where "x" can be 090, 095, 100, 105, 110, 115, 120, 125, 130, 135, 138, 140, 145, 150, 155, 160, 165, 170, 175, 180, 185, 190, 195, 200, 205, 210, 215, 220, 225, 230, 235 and 240 represent output voltage after divided by 10; where 'y' can be any 4 digit number which represents the output current in ampere after dividing by 100 and by step of 0.01 A

yyyy - Where yyyy can be 0045-0080, denotes output current ranging from 1A to 5A

zzzz -represents output amount range 0080-0060

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R018026V-M

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Test Verification of Conformity

On the basis of the referenced test report(s), the sample(s) of the below product has been found to comply with the relevant harmonized standard(s) to the directive(s) listed on this verification at the time the tests were carried out. The manufacturer may indicate compliance to only the said directives by signing a DoC himself and may affix the CE marking to products identical to the tested sample(s) if the product complies with all CE marking directives that has the product in their scope. In addition, the manufacturer shall file and keep the documentation according to the rules of the applicable directive(s) and shall consider changes of the standards as they may occur. Additional requirements, additional directives and local laws may be applicable.

Applicant Name & Address	: Ten Pao Industrial Co., Ltd. Room 10-11, 6/F., Kwong Sang Hong Centre, 151-153 Hoi Bun Road, Kwun Tong, Kowloon, Hong Kong
Product(s) Tested	: SWITCHING POWER SUPPLY (TRAVEL CHARGER)
Ratings and principal characteristics	: Input: 100-240 Vac, 50/60 Hz, 450 mA, Class II Output: 5.0-5.5 Vdc, 1000-2100 mA
Model(s)	: See Annex to Test Verification of Conformity for detailed Ratings and principal characteristics
Brand name	:  or  or  or  or Ten Pao
Relevant Standard(s) / Specification(s) / Directive(s)	: EN 55022: 2006+A1: 2007/ Information technology equipment — Radio disturbance characteristics — Limits and methods of measurement EN 61000-3-2: 2006+A1: 2009+ A2: 2009/ Electromagnetic compatibility (EMC) — Part 3-2: Limits — Limits for harmonic current emissions (equipment input current ≤ 16 A per phase) EN 61000-3-3: 2008/ Electromagnetic compatibility (EMC) — Part 3-3: Limits — Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection EN 55024: 1998+A1: 2001+A2: 2003/ Information technology equipment — Immunity characteristics — Limits and methods of measurement EMC Directive 2004/108/EC
Verification Issuing Office Name & Address	: Same as Legal Entity
Verification/Report Number(s)	: GZ11070011-1R2 / GZ11070011-1R2

Note 1: This verification is part of the full test report(s) and should be read in conjunction with it.

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Note 2: This verification supersedes previous verification with Verification number GZ11070011-1R1 dated 09 January 2012.




 Signature
 Name: Steven Zhou
 Position: Sr. Project Engineer
 Date: 10 May 2012

P. 1 of 2

Annex to Test Verification of Conformity

This is an Annex to Test Verification of Conformity with Verification/Report Number(s): GZ11070011-1R2 / GZ11070011-1R2. The issuing office is Intertek Testing Services Shenzhen Ltd. Guangzhou Branch (Address: Block E, No. 7-2 Guang Dong Software Science Park, Caipin Road Guangzhou Science City, GETDD Guangzhou).

Model(s)

Model: S012GMxy

Input: 100-240 Vac, 50/60 Hz, 450 mA, Class II

Output: 5,0-5,5 Vdc, 1000-2100 mA

This series power supply was attached a detachable plug, the letter "M" can represent European plug, UK plug.

The letter "x" represents output voltage from "050" (5,0 V) to "055" (5,5 V), dividing by step of 0,1V

The letter "y" represents output current from "0100" (1000 mA) to "0210" (2100 mA),

dividing by step of 0,01A

Note 1: This annex is part of the Test Verification of Conformity and should be read in conjunction with it.

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Note 2: This annex to verification supersedes previous annex to verification with Verification number GZ11070011-1R1 dated 09 January 2012.



Signature

Name: Steven Zhou

Position: Sr. Project Engineer

Date: 10 May 2012



Test Verification of Conformity

On the basis of the referenced test report(s), the sample(s) of the below product has been found to comply with the relevant harmonized standard(s) to the directive(s) listed on this verification at the time the tests were carried out.

The manufacturer may indicate compliance to only the said directives by signing a DoC himself and may affix the CE marking to products identical to the tested sample(s) if the product complies with all CE marking directives that has the product in their scope. In addition, the manufacturer shall file and keep the documentation according to the rules of the applicable directive(s) and shall consider changes of the standards as they may occur. Additional requirements, additional directives and local laws may be applicable.

Applicant Name & Address	: Ten Pao Industrial Co., Ltd. Room 10-11, 6/F., Kwong Sang Hong Centre, 151-153 Hoi Bun Road, Kwun Tong, Kowloon, Hong Kong
Manufacturing Site & Address	: Ten Pao Electronics (Huizhou) Co., Ltd. Dongjiang Industrial Area, Shuikou Town, Huizhou City, Guangdong Province, P.R.China
Product(s) Tested	: SWITCHING POWER SUPPLY (TRAVEL CHARGER)
Ratings and principal characteristics	: Input: 100-240 Vac, 50/60 Hz, 450 mA, Class II Output: 5.0-5.5 Vdc, 1000-2100 mA
Model(s)	: See Annex to Test Verification of Conformity
Brand name	:  or  or  or  or  or Ten Pao
Relevant Standard(s) / Specification(s) / Directive(s)	: EN 60950-1:2006+A11:2009 + A1:2010 + A12:2011 Information technology equipment – Safety – Part1:General requirements Low Voltage Directive 2006/95/EC
Verification Issuing Office Name & Address	: Same as Intertek Legal Entity
Date of Test(s)	: 02 May 2012 – 03 May 2012
Verification/Report Number(s)	: GZ12041251-A / GZ11070010-1, GZ11070010-1R1, GZ11070010-1R2

NOTE1: This verification is part of the full test report(s) and should be read in conjunction with it.
NOTE2: This verification supersedes previous verification with verification number GZ11120551-A, dated 29 Dec 2011

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Signature

Name: Peter Lu
 Position: Team Leader
 Date: 03 May 2012



Intertek Legal Entity: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
Block B, No.7-2 Guang Dong Software Science Park, Cuijin Road,
Guangzhou Science City, GETDD, Guangzhou, China
Tel: (86 20) 8212 9688 Fax: (86 20) 3205 7938
Website: www.china.intertek-testing.com

Annex to Test Verification of Conformity

This is an Annex to Test Verification of Conformity with Verification/Report Number(s):
GZ12041251-A / GZ11070010-1, GZ11070010-1R1, GZ11070010-1R2. The issuing office is Intertek
Legal Entity as above.

Model(s)	Model: S012GMxy Input: 100-240 Vac, 50/60 Hz, 450 mA, Class II Output: 5.0-5.5 Vdc, 1000-2100 mA This series power supply was attached a detachable plug, the letter "M" can represent European plug, UK plug. The letter "x" represents output voltage from "050" (5.0 V) to "055" (5.5 V), dividing by step of 0.1V The letter "y" represents output current from "0100" (1000 mA) to "0210" (2100 mA), dividing by step of 0.01A
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NOTE1: This annex is part of the Test Verification of Conformity and should be read in conjunction with it.

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Signature

Name: Peter Lu
Position: Team Leader
Date: 03 May 2012

EPS BASIC MODEL COMPLIANCE STATEMENT



Basic Model: S012GM0500210

Manufacturer's or Private Labeler's Name and Address:

Ten Pao Electronics (Huizhou) Co., Ltd.

Dong Jiang Industrial Area, Shui Kou Town, Huizhou City, Guangdong Province, P.R.China

This compliance statement and all certification reports submitted are in accordance with 10 CFR Part 430 (Energy or Water Conservation Program for Consumer Products) and the Energy Policy and Conservation Act, as amended. The compliance statement is signed by a responsible official of the above named company. The basic model(s) listed in the certification reports comply with the applicable energy conservation standard. All testing on which the certification reports are based was conducted in conformance with applicable test requirements prescribed in 1- CFR Part 430 Subpart B.

All information reported in the certification report(s) is true, accurate, and complete. The company is aware of the penalties associated with violations of the Act and the regulations thereunder, and is also aware of the provision contained in 18 U.S.C. 1001, which prohibits knowingly making false statements to the Federal Government.

Name of Company Official: zhanyunzhang

Signature: Z. Y. Zhang

Title: Manager

Firm or Organization: Ten Pao Electronics (Huizhou) Co., Ltd.

Address: Dong Jiang Industrial Area, Shui Kou Town, Huizhou City, Guangdong Province, P.R.China

Telephone Number: 0752-2312899

Facsimile Number: 0752-2313888

Date: Sep. 06, 2012

Third Party Representation (if applicable)

For certification reports prepared and submitted by a third party organization under the provision of Sec. 430.62 of 10 CFR Part 430 the company official who authorized said third party representation is:

Name: _____

Title: _____

Address: _____

Telephone Number: _____

Facsimile Number: _____

The third party organization submitting the certification report on behalf of the company is:

Third Party Organization: _____

Telephone Number: _____

Facsimile Number: _____