# For Approval

| | |
|---|---|
| Product: | POWER SUPPLY |
| D/N: | |
| Customer | |
| S.O.No.: | |
| Model No | LEX1454 |
| Descript | 15V/1.2A |
| DC PLUG: | USB |
| Date: | 2013/8/5 |

Rev.: 01 Check By:

| | |
|---|---|
| Customer Approval | TO: |
| | ATTN:XXX(E-mail: |
| | CC:xxx(E-mail: |
| | TEL:+ |
| Date: | FAX:+ |

## 18 W POWER SUPPLY

Engineering specification

Model PC-01512A

Item NO. page

| | DATE 2013/8/5 |
|---|---|
| PRODUCTS FACTORY, DO NOT BE USED OR | FINAL REV : V1.0 |

# 18 W POWER SUPPLY

Engineering specification

Model LEX1454 15V 1.2A)



## General

The specification defines the performance characteristics of 18 W, Single Outputlevel switching power SUPPLY for_____.The power SUPPLY has designed highlyreliable and meet international safety and radiation requirements.

## 1.0 Input requirements

### 1.1 Input voltage range

| Type | Lowrange | High range |
|---|---|---|
| Nominal | 115Vac | 230Vac |
| Minimum | 90Vac | 185Vac |
| Maximum | 132Vac | 264Vac |
| Frequency | 47-63Hz sine wave 1¢ | 47-63Hz sine wave 1¢ |

Auto range - switch at approximately 150Vac±5Vac

Universal range - 90～264Vac

Range - Selectable by jumper connector or wire.

Range - Selectable by switch.

### 1.2 Input Current

| | |
|---|---|
| 2A rms max | At AC low line input and DC output full load |

### 1.3 Input protection

| | |
|---|---|
| 2A Fuse | The power supply shall be protected against power line surges and any abnormal condition |

### 1.4 Input surge current

| | |
|---|---|
| 20A/40A max<br>Without Ac output | At power supply cold start,ambient temperature 25℃@<br>115Vac 230Vac nominal AC input |



### 1.5 Efficiency

| | |
|---|---|
| 80%min | At AC nominal input@ output full load |

### 1.6 Hold up time

| | |
|---|---|
| 10ms min | At AC nominal input@ output full load |
| | (1half cycle) |

### 1.7 Power consumption

| | |
|---|---|
| 0.5W rms max | At AC nominal input@ output min load |

## 2.0 Output requirements

### 2.1 Turn on delay

| | |
|---|---|
| 200ms max | At AC low line input@ output full load |

* Test on delay is measured from 0 voltage output to the main output regulation.

### 2.2 DC output regulation

| Voltage | Loading(A) | | Tolerance Range | Regulation | |
|---|---|---|---|---|---|
| | Min | Normal Max | Total Regulation | Line | Load |
| +)15V | 0 | 1.2A | ±0.5V | | |
| | | | | | |
| | | | | | |

* Total regulation involved line regulation load`regulation cross regulation--etc.
* Line regulation is measured from 90Vac to 132Vac or 185Vac to 264Vac.
* Load regulation is measured all output from min load to max load at 115Vac or 230Vac nominal AC input voltage.



# 18 W POWER SUPPLY

Engineering specification

Model PLEX1454



## 2.3 Ripple/noise *

| Voltage | Low frequency*1 | High frequencky*2 | *3 | *4 |
|---|---|---|---|---|
| (DC) | Ripple mv(p-p) | Ripple mv(p-p) | Noise mv(p-p) | Ripple /Noise(p-p) |
| +)15V | | | | 200mmV |
| | | | | |
| | | | | |

* The ripple is measured from peak to peak with band widthlimit of 20MHZ (By passed at the end of connector with 10uf electrolytic and 0.1uf ceramic disk capacitor under DC output full Load ,AC nominal input 25℃ ambient temperature).
* 1.2.3.4.Unless has special requirements otherwise *4 is the testing spec.

## 2.4 Output transient response (dv,tmax)

| | |
|---|---|
| 0.3v dv max | At AC nominal input loading from 50% load to max load or peak load. |
| 3.5mst max | Dynamic rise time 10uS max , duty 40mS max, Dynamic load step is slew rate of 0.5A/uS |

* Test only for main output or designed by customer.

**2.5 Power output limit :** Peak 22 W .

**2.6 Burn in test :** Will be defined after meeting.

**2.7 LED display :** none

## 3.0 Protection

### 3.1 Short protection / Over current protection



The power supply will self-protect any output to ground,And auto recovery when abnormal circuit faults remove.

An output short circuit is defined as any output impedance of less than 0.1 ohms

| Voltage | OCP Curr_ ent (A) | Power in(W) | OCP method | | |
|---|---|---|---|---|---|
| | | | latch off | current limit | Fold back |
| +)15V | 1.2-1.5 | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | ■ |

### 3.2 Over voltage protection ☐

| Voltage | OVP Range (V) | OVP Method ☐ | | | ☐ |
|---|---|---|---|---|---|
| | | Latch off | Auto recovery | Voltage limit | ☐ |
| +)15V | | | | | ☐ |
| | | | | | |
| | | | | | |
| | | | | | |

### 3.3 No load protection ■

The power supply is provided with noload operation to ☐ prevent power supply and system from damage. ☐ ☐

### 3.4 Temperature coefficient: Less than ±0.5%/ ℃

## 4.0 PLD (power line disturbance)

### 4.1 LINE POWER SURGE

The power supply shall meet its spesefication with a rise in AC voltage to 120% of maximum rated line voltage ( 288 voltage for 100-240 Vac operation ) for a maximum of 20 milliseconds at 50Hz and 16 millsecond at 60Hz. The surge is to be applied five times with an internal of one minute between surges.

### 4.2 LINE VOLTAGE SAG

The power supply shall continue to meet its specifications with a line voltage drop (and subsequent return to minimum rated voltage ) to 68 Vac with a total power sag cycle time of 20 ms (rise and fall time shell equal 10 ms each ).

## 5.0 COOLING

| Cooling Method | |
|---|---|
| By mm fan force air cooling | |
| By natural air. | |

## 6.0 EMC

Meet EN55022 class B, Fcc part 15 Sub part B calss B.

### 6.1 CE spec.

EN55022 Limits and methods of measurement of radio disturbance characteristics of information technolgy equipment.

EN55011 Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical(ISM)high frequency equipment.

EN55014 Limits and methods of measurement of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus.

EN60555-2 By household appliances and slimilar electrical equipment “Harmonics”.

EN60555-3 By household appliances and slimilar electrical equipment “Voltage fluctuations”.

ESD Measurement(IEC801-2).

RF Field strength Susceptibility Measurement(IEC801-3).

Electrical Fast Transient/Burst Measurement(IEC801-4).

7.0 Leakage current : 0.25 mA max.

8.0 Safety approval

| | | |
|---|---|---|
| A: _____ | D: _____ | G: _____ |
| B: _____ | E: _____ | H: _____ |
| C: _____ | F: _____ | I: _____ |

9.0 HI - POT

HI-POT--A IEC 320 3pin primary to secondary (FG) 1500Vac 10mA 1mim

HI-POT--B IEC 320 secondary 3000Vac 10mA 1min







10. Environment

TEMPERATURE AND HUMIDITY

OPERATING TEMPERATURE 0 DEGREES C TO 40 DEGREES C.

OPERATING HUMIDITY 8% TO 90% RH.(RELATIVE HUMIDITY)

STORAGE TEMPERATURE -20 DEGREES C TO 85 DEGREES C.

STORAGE HUMIDITY 5% TO 95% RH.(RELATIVE HUMIDITY)

## 11.Vibration

SWEEP AND REESONANCE SEARCH

| FREQUENCY | DURATION | AXIS | AMPLITUDE |
|---|---|---|---|
| 5-20-500 | 30MINUTES | X, Y ,Z | 1G |

## 12.M.T.B.F

Shall be 3500 power on hours on greater under 25 degrees C of ambient temperature MTBF under evaluated under.