





# Index

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MODEL NO.:

KYTW825A 20W

DESIGNED NO.:

KYTW825A 20W

## 1. Description

This specification apply to the Switching power whose model No. is KYTW825A 20W , which has a high efficiency and reliability, and have the over voltage, over current and short circuit function.

## 2. Electrical Specification

### 2.1 INPUT SPECIFICATION

Input voltage range	90Vac - 264Vac
Rated voltage	100Vac / 240Vac
Input frequency range	47Hz - 63Hz
Rated input frequency	50Hz / 60Hz
No Load Input Power	0.1W max.@ no loading, rated voltage
Inrush current	50A type peak @ 220Vac Input, cold start

### 2.2 OUTPUT SPECIFICATION

#### 2.2.1 Rated Output

Rated Output Voltage (Vdc)	Output Voltage Range (Vdc)	Output Ripple & Noise (mV)	Rated Output Current (A)
5.0	4.75-5.25	≤200	3.0A
9.0	8.55-9.45	≤200	2.22A
12.0	11.4-12.6	≤200	1.67A
3.6-5.9	3.6-5.9	≤200	3.0A
3.6-11	3.6-11	≤200	1.8A

**Notes:** The test condition as with oscilloscope with bandwidth 20MHz . A 10uF E-cap and 0.1uF ceramic-cap shall be connected to the connector in parallel.

#### 2.2.2 Output Overshoot At Turn On & Turn Off

Rated Output Voltage (Vdc)	Proportion of the output voltage overshoot	
	Turn on	Turn off
5.0	10%	10%
9.0	10%	10%
12.0	10%	10%
3.3-5.9	10%	10%
3.3-11	10%	10%

**Note:** test condition as: All of output current from Min to Max

#### 2.2.3 Combined Load / Line Regulation

Rated Output Voltage (Vdc)	Min. Loading	Rated. Loading	Line Regulation	Load Regulation
5.0V	0A	3.0A	±3%	±5%
9.0V	0A	2.22A	±3%	±5%
12.0V	0A	1.67A	±3%	±5%

3.3-5.9	0A	3.0A	±3%	±5%
3.3-11	0A	1.8A	±3%	±5%

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#### 2.2.4 Turn on delay time:

3 Second Max. at 115Vac input and output Max. load.

#### 2.2.5 Rise time:

40mS Max. at 115Vac input and output Max load.

#### 2.2.6 Hold up time:

10mS Min. at 115Vac input and output Min. Load.

#### 2.2.7 Average Efficiency:

In the regular voltage, The output current is at 25%, 50%, 75% and full load cases, The average efficiency of  $\cong 81.3\%$  ( warm up 30 minutes) , Which meet the standards of energy efficiency level VI.

### 3. Protection Feature

#### 3.1 Output Short circuit protection:

Input voltage 90V/60Hz and 264VAC/50Hz, when the output is full and the electronic load is set to CC mode, when the output is short-circuited and the short circuit lasts for 3 seconds, the input power is less than 3W; when the short circuit is released, the output voltage can be 3 The power supply automatically recovers in seconds.

#### 3.2 Over current Protection:

Input rated voltage, electronic load setting CC mode, OCP current range: 110%–150%, when the output is overcurrent, the product enters the protection state; when the overcurrent is released, the output voltage can be automatically restored within 3 seconds. normal.

### 4. Reliability Requirements

#### 4.1. Burn-in

The power supply shall be burn-in for 2-4 Hours under normal input and 80% rated load at  $40^{\circ}\text{C} \pm 5^{\circ}\text{C}$

#### 4.2. MTBF Qualification

The MTBF shall be at least **20,000**hours at  $25^{\circ}\text{C}$ , Full load and nominal input condition

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## 5. Environment Requirement

5.1 Operating Temperature: 0°C-35°C

5.2 Storage Temperature: -40°C to 85°C

5.3 Relative Humidity: Relative Humidity 25%-90%, Non -Condensing

5.4 Storage Humidity: Relative Humidity 10%-90%, Non -Condensing

### 5.5 Vibration

5.5.1. Operating Standard: IEC 721-3-3 3M3

5~9Hz, A=1.5mm

9~200Hz, Acceleration 5m/S

5.5.2. Transportation: IEC 721-3-2 2M2

5~9Hz, A=3.5mm

9~200Hz, Acceleration=5m/S

200~500Hz, Acceleration=15m/S

5.5.3. Axes, 10 cycles per axis:

No permanent damage may occur during testing, and The product can restore to its original situation after power off / on.

### 5.6 Dropping Packed:

After the Dropping test (1 corner, 1 edges, and 1 surfaces, Height:100cm, 3times), function well.

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## 6. Safety and EMI Requirement:

### 6.1 Safety: accord with:

certificate	Country	standards	
<input type="checkbox"/> UL/CUL	USA	UL60065	
<input type="checkbox"/> UL/CUL	USA	UL60950	
<input type="checkbox"/> TUV/GS	Europe	EN60065	
<input type="checkbox"/> TUV/GS	Europe	EN60950	
<input type="checkbox"/> FCC	USA	Class B	
<input type="checkbox"/> CE	Europe	EN60065	
<input type="checkbox"/> CE	Europe	EN62368	
<input type="checkbox"/> MEPS	Australia	AS/NZS 4665	
<input type="checkbox"/> SAA	Australia	AS/NZS 60065	
<input type="checkbox"/> SAA	Australia	AS/NZS 60950	
<input type="checkbox"/> CCC	China	GB8898	
<input type="checkbox"/> CCC	China	GB4943	
<input type="checkbox"/> PSE	Japan	J60950 (H22)	
<input type="checkbox"/> CB	Europe	IEC60065	
<input type="checkbox"/> CB	Europe	IEC60950	
<input type="checkbox"/> C-TICK	Australia	AS/NZS CISPR13:2004	
<input type="checkbox"/> EK/KC	Korea	K60065	
<input type="checkbox"/> EK/KC	Korea	K60950	

### 6.2 EMI STANDARD: Meets the Limits

6.2.1. Fcc class B rules

6.2.2. EN55032 class B rules

### 6.3 Dielectric Strength Testing: Dielectric strength to meet the requirements under the table)

#### 6.3.1 HI-POT TEST:

ITEM	SPECIFICATION	REMARK
Primary to Secondary	3000Vac/5mA/60S	No arcing
Primary to P.G	1500Vac/5mA/60S	No arcing
Secondary to P.G	—	—

Note: before testing, input L/N short circuit, make output positive and negative short circuit and connected.

6.3.2. Isolation Test : Input to output 500Vdc/2Sec, isolation resistance > 50M ohm

Note: at the test, input L/N short circuit, make output positive and negative short circuit

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## 7. Test Equipment List

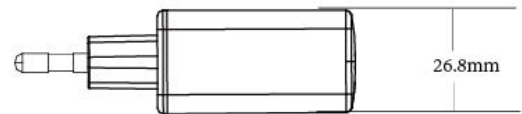
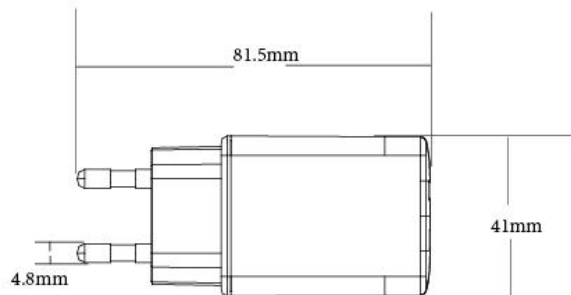
ITEM	Equipment Name	Manufacture	Model
1	AC power source	Chroma	6120
2	Oscilloscope	Tektronix	TDS1002B
3	Electronic load	TET	T3515
4	Multimeter	FLUCK	87III
5	Dynamometer	Chroma	2100
6	hermograph	LUTRON	TW-902C
7	Plug lead bend test machine		LX-817
8	Saltsprayingtester		LX-8827B
9	Vibration table		FZD-25
10	Drop test bed		
11	Digimatic caliper		0-150mm

## 8. MECHANICAL REQUIREMENT:

### 8.1 Enclosure:

The power supply size: L \* W \* H =81.5mm \* 41mm \* 26.8mm

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10. label

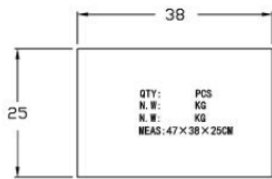
직류전원장치 (AC/DC ADAPTER)  
모 델 명: KYTW825A 20W  
정격입력: 100-240V~ 50/60Hz 0.5A Max  
정격출력(USB-C):  
(PDO) 5V=3A or 9V=2.22A or 12V=1.67A  
(PPS) 3.6-5.9V=3.0A or 3.6-11V=1.8A  
인증번호:  
제조년월:  
A/S연락처:  
MADE IN CHINA



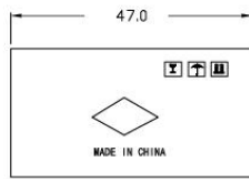
MODEL NO.:	KYTW825A 20W	DESIGNED NO.:	KYTW825A 20W
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## 12. Package Drawing

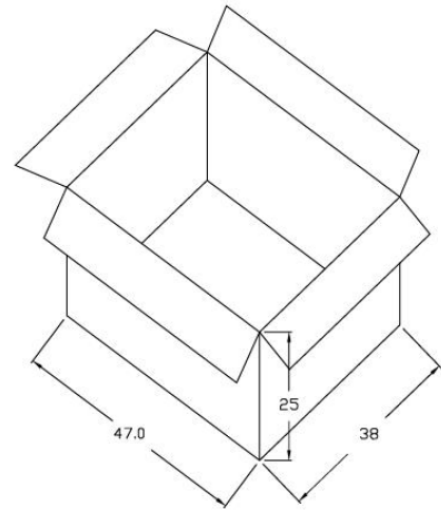
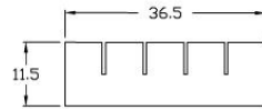
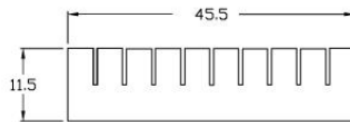
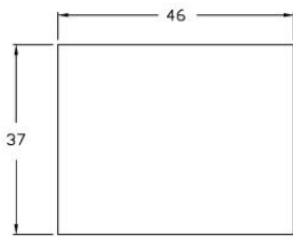
200PCS



外埠



正埠



### PACKING:

**Our own packing style will be adopted if no special packing required .**

**a Inner package**

**PO bag**

**b Outer package**

**paper-box.**

**Size: 47×38×25cm, 1sheet 46X37cm**

**c Outer package notes include the information**

**Customer Name, LOT Number, Model No., Date, and so on.**

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