SMPS-10W

PRELIMINARY

ZPL10SXX00WAB Series AC-DC Power Module

FEATURES

- AC input voltage range:85VAC-305VAC
- DC input voltage range: 100VDC-430VDC
- Compact size, easy installation
- Ambient temperature range: -40°C ~85°C
- High efficiency low standby Power consumption, green environmental protection function
- Built-in output OCP, OVP, SCP
- Isolation voltage: Input –Output≥4200VAC 60s
- Class II Construction

MODEL LIST

Model No.	Output Power	DC Voltage	Rated Current	Efficiency 230VAC, % Typ.	Ripple &Noise (max)	Ambient TEMP(°C)	Weight	Certificate		
								UL	TUV	CB
ZPL10S0300WAB	8.58W	3.3Vdc	2600mA	79%	＜100mV	50	34g		●	
ZPL10S0500WAB	10W	5Vdc	2000mA	83%	＜100mV	50	34g		●	
ZPL10S0900WAB	10W	9Vdc	1100mA	81%	＜100mV	55	34g		●	
ZPL10S1200WAB	10W	12Vdc	830mA	84%	＜100mV	55	34g		●	
ZPL10S1500WAB	10W	15Vdc	660mA	84%	＜100mV	55	34g		●	
ZPL10S1800WAB	10W	18Vdc	550mA	84%	＜100mV	55	34g		●	
ZPL10S2400WAB	10W	24Vdc	410mA	85%	＜100mV	55	34g		●	

GENERAL DATA

Input 输入参数	Rated Voltage / 额定电压	100-277VAC	
	Voltage Range / 输入电压范围	85-305VAC or 100-430VDC	
	Frequency (Hz) / 输入频率范围	47-63 Hz	
	Current (Full load) / 输入电流	115VAC	230VAC
		230mA	150mA
	Inrush Current (<500us) / 冲击电流	25A	40A
	No Load Loss / 待机功耗	0.1W Typ. @230VAC	
	HOT PLUG / 热拔插	Unavailable	
Output 输出参数	Voltage (V) / 输出电压	Refer to “Model List”	
	Current (mA) max. / 输出额定电流	Refer to “Model List”	
	Voltage Accuracy / 输出电压精度	±2% Typ.	
	Line Regulation / 线性调节率	±0.5%	
	Load Regulation / 负载调节率	±1%	
	Minimum Load (mA) / 最小负载	0	
	Ripple & Noise / 输出纹波	Refer to “Model List”	
	Efficiency（typ.）/ 工作效率	Refer to “Model List”	
	Start-up Time / 开机延迟时间	3s	
	Hold up Time / 掉电保持时间(典型值)	40ms/230VAC , 10ms min/115VAC	
Protection 保护特性	Over Current Protection / 过流保护	Hiccup mode	
	Short Circuit Protection / 短路保护	Hiccup mode	

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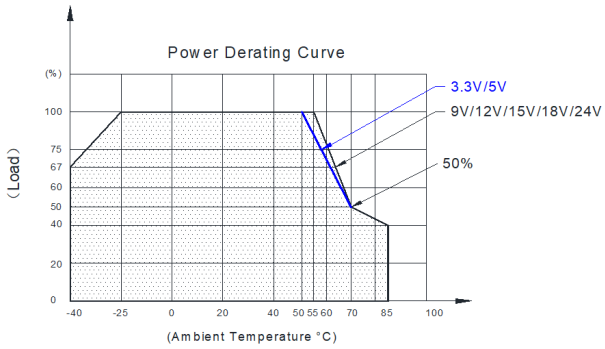
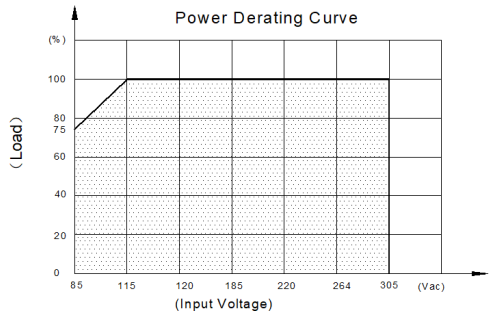
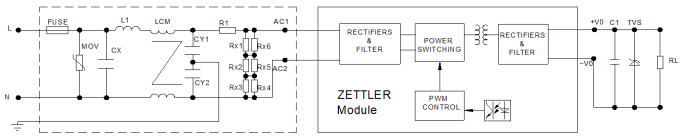
Environment 环境	Operating Temperature / 工作温度	-40°C…+85°C (refer to the Power derating Curve)	
	Operating Humidity / 工作湿度	10~90% RH (No Condensing) at full load	
	Storage Temperature / 存储温度	-40°C~85°C	
	Storage Humidity / 存储湿度	5~95% RH	
	Temperature Coefficient/温度漂移系数	±0.05%/°C（0~50°C）	
Physical 外观结构	Case Material / 外壳材质	Plastic （UL 94V-0 rated）	
	Weight / 产品净重	34g（ref.）	
Safety & EMC 安全认证及电磁兼容	Dielectric Strength / 绝缘强度	I/P-O/P : 4200VAC	
	Protection against electric shock	Class II construction ⧈	
	Safety Standards / 安全标准	Compliance with EN62368-1, EN61558-2-16, Plastic materials in accordance with EN60335-1 clause 30	
	EMI / 电磁兼容	Compliance with EN55032 CLASS B, EN61000-3-2, EN61000-3-3	
	EMS (Noise Immunity)/ 电磁抗干扰	Compliance with EN55035	Need to add external EMC component (Refer to the Schematic)
Reliability Requirement 可靠性要求	MTBF/平均故障间隔时间	3200Khrs Min MIL-HDBK-217F（25°C）	
	Burn-In Test/ 老化测试	The unit shall be burned in for 2~4 Hours under 277Vac input and with full load at 25°C	

PRODUCT CHARACTERISTIC CURVE





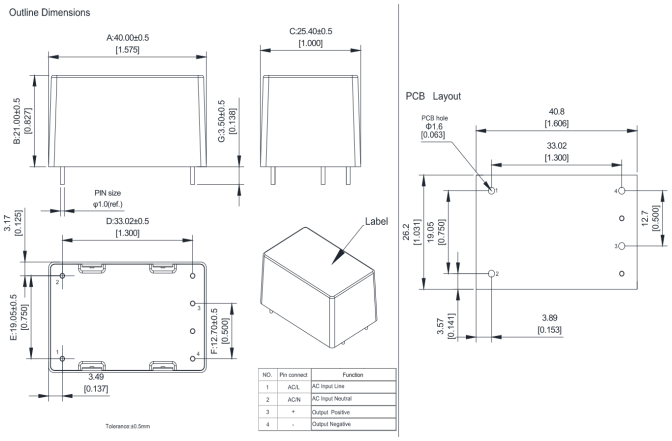
TYPICAL APPLICATION SCHEMATIC



ITEM	MOV	CX	L1	LCM	CY1,CY2	FUSE	R1	Rx1-Rx6
1~2W	14D561K	0.1-0.47uF	0.5~2mH/0.5A	10-30mH	100~2200pF	1A/300V	22Ω/3W	1206/1.5MΩ
3-10W	14D561K	0.1-0.47uF	0.5~2mH/1A	10-30mH	100~2200pF	2A/300V	12Ω/5W	1206/1.5MΩ
10~20W	14D561K	0.1-0.47uF	0.5~2mH/1A	10-30mH	100~2200pF	3.15A/300V	6.8Ω/5W	1206/1.5MΩ

Note: External circuit components are only recommendations, customers should choose their own components and values according to their specific system application requirements.

PCB FOOTPRINT



ORDERING DATA

ZPL 10 S 12 00 W AB

- AB: Case Dimension: AB:= AB Type case
- W: Input AC Voltage Range: W= Wide Voltage
- 00: Second Output Voltage:00 = No Second
- 12: First Output Voltage: 12 = 12V
- S: Output Type: S = Single Output
- 10: Output Power (W): 10 = 10W
- ZPL: ZPL=Zettler standard series

ZETTLER

NOTES

General

1. All values in this datasheet are at a reference temperature of 23°C (73°F) unless stated otherwise.
2. Evaluate the component's performance and operating conditions under the worst-case conditions of the actual application.
3. The datasheet and the component's specifications are subject to change without notice.

Storage, handling, and environmental guidelines

4. Protect SMPS from exposure to corrosive gases. Corrosion of internal magnetic device and electronics to may cause failure.
5. For automated dual wave soldering process we recommend preheating at 120°C (248°F) for max. 120 seconds and a soldering temperature at 260 ±5°C (500 ±9°F) for max. 10 seconds soldering time (max. 5 seconds per wave). For manual soldering we recommend 350°C (662°F) max. temperature for max. 5 seconds. Do not apply force to SMPS terminals during soldering.
6. Non-sealed SMPS must not be washed, immersion cleaned or conformal coated as substances may enter the case and cause corrosion or seizure of Internal magnetic device and electronics to fail.
7. During operation, storage and transport, ambient temperature should be within the specified operating temperature range. Humidity should be in the range of 5% to 85% RH. Icing and condensation must be avoided.

Design guidelines

8. The input voltage must be within the rated voltage range. Otherwise irreversible damage may be caused.
9. The load must be within the rated range and refer to the product characteristic curve; otherwise the electrical parameters may exceed the specification range.
10. The operating temperature range must be within the rated range
11. The peripheral EMC circuit can refer to the recommended circuit diagram.

DISCLAIMER

This product specification is to be used in conjunction with the application notes, which can be downloaded from the regional ZETTLER magnetic websites. The specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.

ZETTLER GROUP

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