

60W DC/DC POWER SUPPLY

LBCZ60D-7600

(Without IITPS version)

Revision: 1B



60W DC/DC POWER SUPPLY FOR AUTOMOBILE

1 Function Description

DC/DC power supply, 6V~36V input, 12V/5A. .

2 Operation Environment

Item	Unit	Minimum	Typical	Maximum	Test Conditon
Temperature	°C	-20		50	
RH	%RH	40		90	No Condensation

3 Technique Requirement

3.1 Input Characteristic

Item	Unit	Minimum	Typical	Maximum	Test Conditon
DC INPUT	Vdc	6	12/24	36	
Input Current	A		10		

3.2 Output Characteristic

3.2.1 Output Voltage Regulation

Output	Min. Load	Max. Load	Peak Load	Output Voltage range	Ripple (pk-pk) (rated load、20MHz limit) *
+12V	0.1A	5A		11.40~12.60V	120mV

*: Need to add 47μF tantalum capacitor and 0.1μF high frequency capacitor on test point when testing.

3.2.2 Others Output Characteristics

Item	Unit	Minimum	Typical	Maximum	Test Conditon
Output Power	W		60		DC output power
Efficiency	%		92		Rated load
Turn on Overshoot	%			10	
Rise Time	ms		20		Output voltage up from 0% to 95%, rated load
Hold up Time	ms		2		Rated load

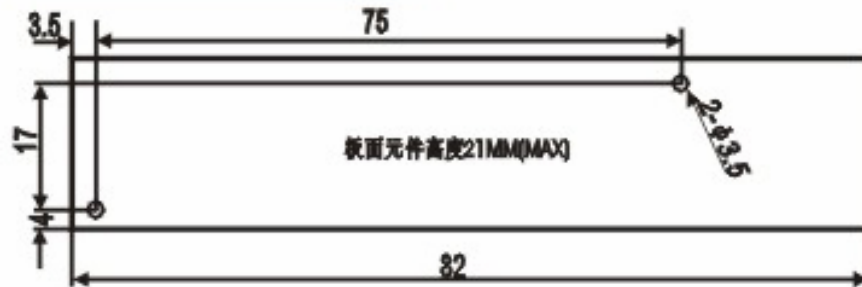
3.3 EMC Requirement

Item	Request	Standard	Judgement Grade
Conducted interference	CLASS A, 3dB margin	EN55022	Ensure system pass the CLASS A and have 3dB margin
Radiation interference	CLASS A, 3dB margin	EN55022	Ensure system pass the CLASS A and have 3dB margin

3.4 Protection Function

Item	Unit	Yes/No	Minimum	Typical	Maximum	Recovery Characteristic
Input inversion protection		Yes				
Input OVP	V		55		60	
+12V OVP	V	Yes	13.2		15.6	Latched
Short Circuit Protection (+12V)		Yes				Latched

4 Dimension



6 Reliability Requirement

MTBF should exceed 60,000Hours under 80% loading, 25°C ambient

7 Package, Store and Traffic Requirement

standard

LBCZ60D-7600

RoHS

60W DC/DC变换器，小型化设计

性能：

- 6-36V宽范围输入设计
- 小型化设计
- 提供LCD供电
- OVP、OCP、短路等功能
- 高效率，薄尺寸
- 输入反向保护

应用领域：

- 公共汽车LCD，汽车触摸屏
- 车载外设供电



如无特殊说明，所有参数是在额定输入、满载、25摄氏度温度环境下的测试结果。

输入参数	
输入电压:	6-36VDC
输入电流:	6A @ 12VDC
冲击电流:	10A
输入保险丝:	10A

输出参数	
输出电压	+12V
输出电流	5A
电压调整	2%
输出纹波	100mV
过压保护	Yes
过流保护	Yes
短路保护	Yes
上升时间	10ms

一般参数	
效率:	94% typical
维持时间:	1ms
开关频率:	Fixed 200 kHz
安全标准:	UL, CE, CCC
重量:	50g
平均无故障时间:	>120,000hours

EMC 标准	
传导标准:	EN55022, Level A
辐射标准:	EN55022, Level A
静电标准:	EN61000-4-2, level 3
雷击标准:	EN61000-4-5, level 2
放射标准:	EN61000-4-3 10 V/m

环境参数	
工作温度:	-10 °C to +50 °C
储存温度:	-40 °C to +85 °C
冷却方式:	自然冷却
相对湿度:	5% to 95% RH
工作高度:	10,000 feet max.
震动标准:	5-500 Hz, 2.4 G rms

