

BP818

Magnetic Coupler Isolator



Description

The BP818 is a magnetically coupled isolator designed for communication between primary and secondary of offline power supplies.

The BP818 has two built-in coupling coils and utilizes the magnetic coupling to communicate information, while providing galvanic isolation. The BP818 offers stable and reliable performance eliminating the disadvantages of traditional optocouplers such as low precision and nonlinear current transfer ratio, as well as limited lifetime. The BP818 operates without bias current on both the primary and secondary sides, which greatly reduces the system standby power consumption. In combination with the corresponding primary and secondary controllers of BPS, it can establish a high-performance switching power supply total solution.

The BP818 meets the global safety requirements for reinforced insulation. It utilizes an LSOP-4 package with a creepage distance of 8 mm and isolation voltage up to 5000 VAC. Certified by UL62368, TUV (IEC62368), CQC (GB4943.1), VDE (IEC60747) for safety regulations.



LSOP-4 package

Feature

- Magnetic coupling with stable performance
- No lifetime decay
- Wide operating temperature: -55 °C ~ 125 °C
- No bias current required, reduces standby power consumption
- Up to 5000 VAC isolation voltage
- Creepage distance >8 mm
- UL62368 and TUV (IEC62368) certification
- CQC certification per GB4943.1-2022
- VDE (IEC60747) approved

Applications

- QC / USB PD / programable AC/DC chargers
- Adapters
- AC/DC auxiliary power

Electrical Schematic

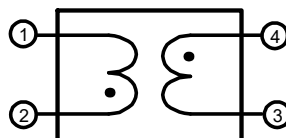


Figure 1. Electrical Schematic

Ordering Information

Part Number	Package	Packing	Marking
BP818	LSOP-4	Reel 3000 pcs/Reel	BP818 XXXXXXYY ZZZZWWX

Pin Configuration and Making Information

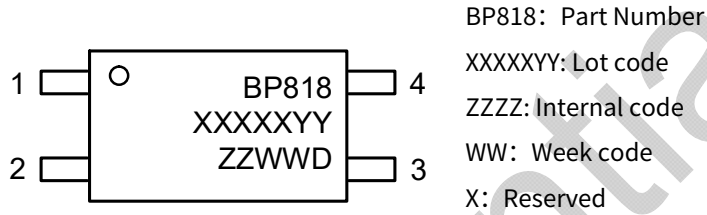


Figure 2. LSOP-4 pin Configuration

Absolute Maximum Ratings (Note 1)

Symbol	Parameter	Value	Units
V _{ISO}	Isolation Voltage	5000	Vrms
P _{DMAX}	Continuous power dissipation (Note 2)	300	mW
T _{OPR}	Operating temperature	-55 to +125	°C
T _{STG}	Storage temperature	-55 to +150	°C
T _{LEAD}	Lead temperature (Note 3)	265	°C

Note 1: Stresses beyond those listed under Absolute Maximum Ratings may cause permanent damage to the device. The electrical characteristics table defines the operation range of the device, and the electrical characteristics is assured on DC and AC voltage by test program. For the parameters without minimum and maximum value in the EC table, the typical value defines the operation range, but the accuracy is not guaranteed by spec.

Note 2: The maximum power dissipation decreases if temperature rises. It is decided by T_{JMAX} , θ_{JA} , and environment temperature (T_A). The maximum power dissipation is the lower one between $P_{DMAX} = (T_{JMAX} - T_A) / \theta_{JA}$ and the number listed in the maximum table.

Note 3: Duration 10 seconds

Disclaimer

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