

AC/DC converter

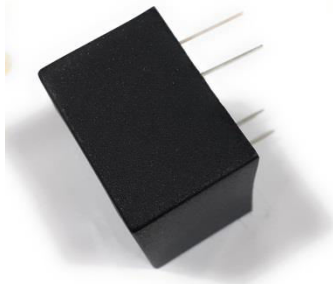


Micro SMPS

www.easypower.in

AC/ DC converter

Features



- **Universal Input : 110- 260 VAC**
- **Operating Temperature Range : 0°C - +50°C**
- **High isolation voltage up to 1kV**
- **Regulated output, low ripple and noise**
- **High efficiency, high reliability**

SO24V500 Micro SMPS – a compact size power converter offered by *EASY POWER*. It features universal input voltage, taking AC/DC voltage, low power consumption, high reliability, and safer isolation.

| Input Specification | | | | | |
|---------------------------------|---------------------|-----------------------------------|------|------|------|
| Item | Operating condition | Min. | Typ. | Max. | Unit |
| Input Voltage Range | AC input | 110 | | 260 | VAC |
| Input Voltage Range | DC input | 150 | | 300 | VDC |
| Input frequency | | 50 | | 50 | Hz |
| Leakage current | | 0.1 mA RMS typ. 230 VAC/50 Hz | | | |
| Recommended external input fuse | | 1A/ 250V, slow fusing, necessary. | | | |

| Output Specification | | | | | |
|-----------------------------------|----------------------------------|--------------------------|-------|-----|------|
| Item | Operating conditions | Min. | Typ. | Max | Unit |
| Output voltage accuracy | 24V output | - | ±0.2 | - | % |
| Line regulation | Full load | - | ±0.5 | - | |
| Load regulation | 0% - 100% load | - | ±1 | - | |
| Ripple & Noise | 20 MHz bandwidth (Pk – Pk) value | - | 200 | 400 | mV |
| Output current | | - | 400 | 500 | mA |
| Temperature drift coefficient | | - | ±0.02 | - | %/°C |
| Min Load | | 0 | - | 0 | % |
| Isolation voltage – Input voltage | Test time: 1min | 1000 | - | - | VAC |
| Operating Temperature | | 0 | - | +50 | °C |
| Storage Temperature | | 0 | - | +60 | °C |
| Storage Humidity | | - | - | 90 | %RH |
| Welding Temperature | Wave soldering | 260 ± 5°C; time 5 – 10s | | | |
| | Manual welding | 360 ± 10 °C; time 3 – 5s | | | |
| Switching frequency | | - | 100 | - | kHz |

AC/DC converter

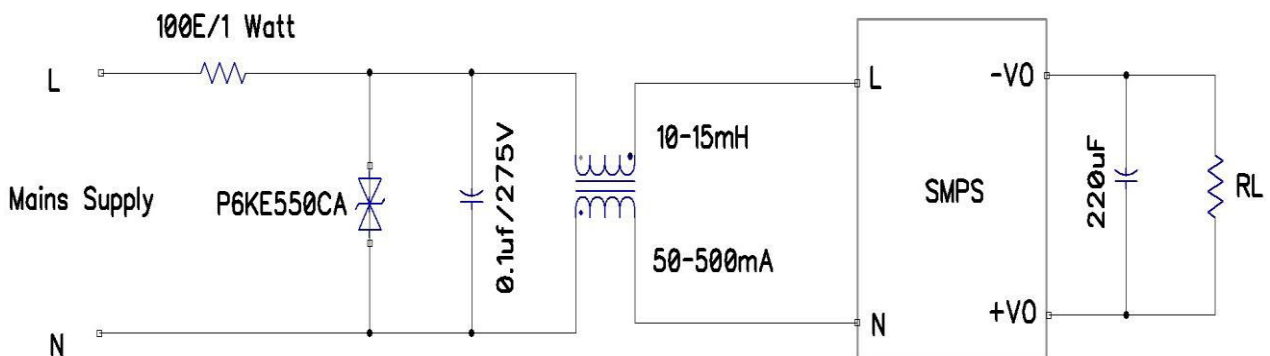


Micro SMPS

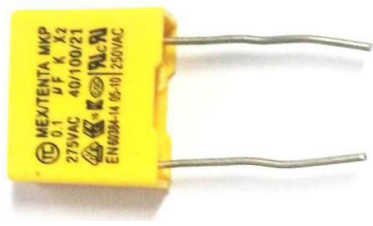
| Physical Specification | |
|------------------------|------------------------------|
| Casing Material | Black colour, heat resistant |
| Packaging Dimension | 37.02 x 34 x 24.00 |
| Weight | 22 gm (Typ.) |
| Cooling method | Free air convection |

| Design reference |
|------------------|
|------------------|

Typical Application Diagram -



| Component number/ Recommended device | Function | Value |
|---|--|---------------------------------------|
| Fuse | Protect the circuit from damage when the module is abnormal. | 100E/1Watt |
| TVS Diode | Protect the module do not damaged in the accumulative surge | P6KE550CA |
| C1/Safety capacitor | Filtering safety protection (EMC certification) | 0.1µF/275Vac |
| L1/Common mode choke | EMI filtering | Sense value 10-15mH, current 70-500mA |



Safety capacitor



Common mode choke

Output section

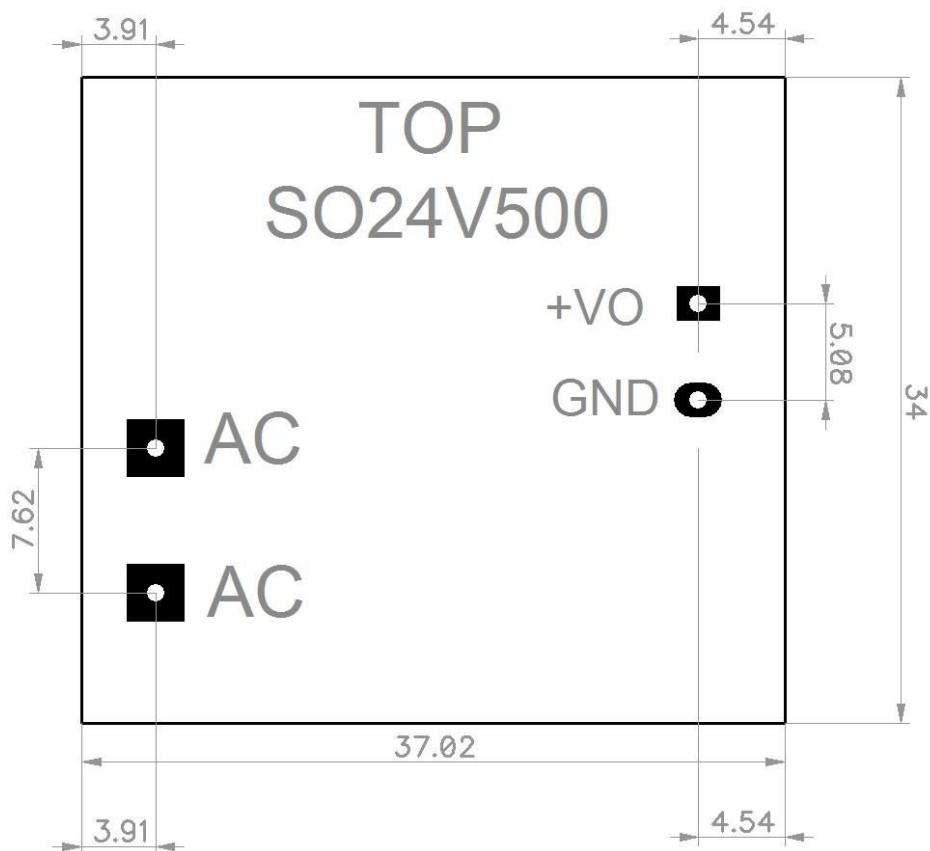
| Component number/ Recommended device | Function | Value |
|---|--|--|
| C2/ Filtering capacitor | Filtering the output AC signal can be maintain within 30mV | Aluminum electrolytic capacitors, capacitance range 100-220uF, Pressure drop>75% |
| RL/ Load | Load | |

Note : C2 filtering capacitor can bring down the output signal from the original 50mV to less than 30mV.

AC/DC converter

Micro SMPS

Footprint:



All dimensions are in **millimetre**.

Product height is of 24 mm

Product width is of 34 mm

Product length is of 37.02 mm