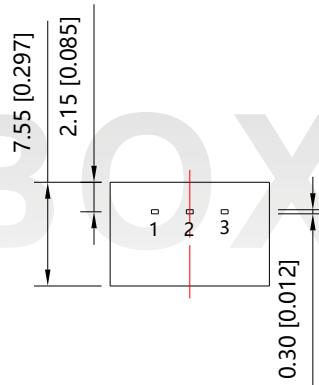
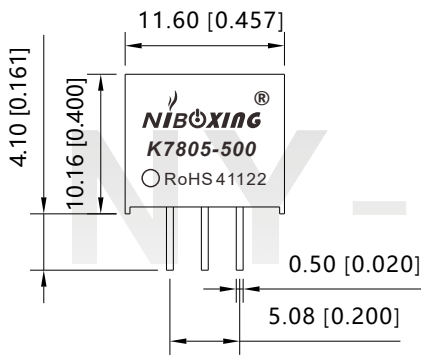


DC/DC Non-isolated module power supply

FEATURES

- ★ Small SIP package
- ★ Industrial grade, high reliability
- ★ International standard pin mode
- ★ Input and output are not isolated
- ★ Low ripple & noise
- ★ Operating temperature range: -40°C to +85°C
- ★ Three-year quality assurance

K78xx-500 is an efficient switching regulator and an ideal substitute for LM78xx series three-terminal linear regulators. It has high efficiency and low loss, and does not need to add heat sink when in use. The products can be widely used in industrial control, electric power, instrumentation and other industries.

Dimensions


| PIN | Function |
|-----|----------|
| 1 | Vin |
| 2 | GND |
| 3 | +Vo |

Note:
Unit:mm[inch]
General tolerances:±0.50[±0.020]

Selection Guide

| Part No. | Input Voltage (VDC) | Nominal Output Voltage (VDC) | Current (mA) | Efficiency (%) (Typ.) @ Full Load |
|-----------|-----------------------|------------------------------|--------------|-----------------------------------|
| K7803-500 | 4.5~30V (Typ: 24V) | 3.3V | 500mA | 85% |
| K7805-500 | 6.0~36V (Typ: 24V) | 5V | 500mA | 86% |
| K7809-500 | 12~36V (Typ: 24V) | 9V | 500mA | 87% |
| K7812-500 | 15~36V (Typ: 24V) | 12V | 500mA | 87% |
| K7815-500 | 18~36V (Typ: 24V) | 15V | 500mA | 88% |

Output Specifications

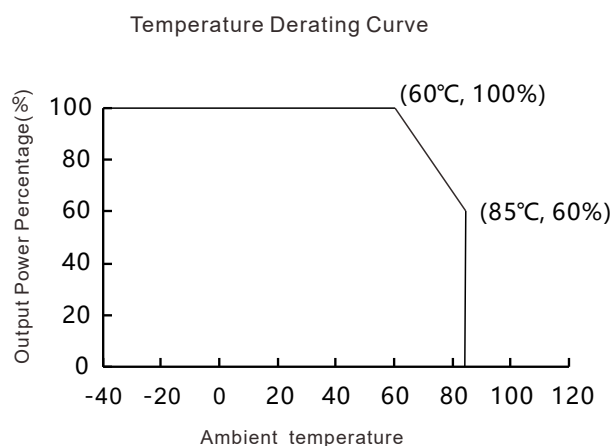
| Item | Operating Conditions | Min | Typ | Max |
|-----------------------------|---|-----|---------|-----|
| Output Voltage Accuracy | 100% load | -- | ±2% | -- |
| Line Regulation | Input voltage change: ±1% | -- | ±0.5% | -- |
| Load Regulation | 10%~100% Load | -- | ±0.5% | -- |
| Ripple & Noise* | 20MHz bandwidth (peak-to-peak value) | -- | 100mV | -- |
| Short Circuit Protection | Hiccup, continuous, self-recovery | | | |
| Over-current Protection | | -- | ≥110%Io | -- |
| Over-temperature protection | Chip built-in | | | |

Note: *Ripple and noise tested with "parallel cable" method, please see DC-DC Converter Application Notes for specific operation methods.

General Specifications

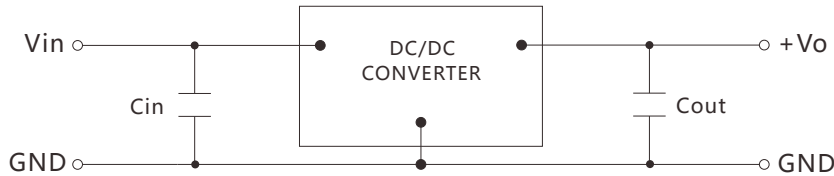
| Item | Operating Conditions | Min | Typ | Max |
|-----------------------|--|-------|-----------|--------|
| Operating Temperature | | -40°C | -- | +85°C |
| Storage Temperature | | -55°C | -- | +105°C |
| Storage Humidity | | -- | -- | 95%RH |
| Working Frequency | | -- | 500KHz | -- |
| MTBF | MIL-HDBK-217F, 25°C | | 3500,000h | |
| Casing Material | Black flame-retardant and heat-resistant plastic (UL94-V0) | | | |

Product Characteristic Curve



Design Reference
1 Typical application

Note The comments on the right are preferred.



| | |
|-----|----------|
| Cin | 33μF/50V |
|-----|----------|

| | | | | | |
|----------------|-----------|----|-----------|-----|-----|
| Output Voltage | 3.3V | 5V | 9V | 12V | 15V |
| Cout | 220μF/10V | | 220μF/25V | | |

注释(图一)

- a. It is recommended to use high-frequency and low-resistance aluminum electrolytic capacitors for the external capacitors at the input or output of the product.
- b. The product does not support output and joint power or hot plug
- c. If the input voltage is higher than 30V, a 33UF high-frequency and low-resistance electrolytic capacitor must be externally connected to the input.

Safety precautions

1. If the product is not operated within the required load range, the product performance cannot be guaranteed to comply with all parameters in the datasheet;
2. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25°C, humidity<75% with nominal input voltage and rated output load;
3. All index testing methods in this datasheet are based on our Company's corporate standards;
4. We can provide product customization service, please contact our technicians directly for specific information;
5. For more product information, please visit our official website www.gzny-boxing.com or email us (sales@gzny-boxing.com).