

Features

- 50 WATT DIL PACKAGE
- 4:1 WIDE INPUT VOLTAGES
- EFFICIENCY UP TO 91%
- PI INPUT FILTER
- 100% BURNED IN
- UL 94V-0 PACKAGE MATERIAL
- CUSTOMIZED SOLUTIONS AVAILABLE
- REGULATED OUTPUT TYPE



50 Watt DC/DC Converter

WIDE INPUT VOLTAGE RANGE
50 WATT DC-DC CONVERTER



Input Specifications

| | | |
|---|-------------------------------|-------------------------------------|
| Input Voltage | :24Vdc | |
| Input Voltage Range | :9~36Vdc | |
| Input Surge Voltage | :50Vdc Max. | @100 ms Max. |
| Start-up Voltage | :9Vdc Max. | |
| Under Voltage Shutdown | :7.5Vdc Typ. | |
| Start-up Time (constant resistive load) | :30ms Typ. | @Power-up & Remote |
| Input Filter | :Internal PI Type | |
| Remote ON/OFF | :Open or 3.5~12Vdc(DC/DC ON) | @Positive logic |
| | :Short or 0~1.2Vdc(DC/DC OFF) | (Refer to –Vin PIN) |
| | :-0.5 ~ +0.5 mA | @Input current of Remote ON/OFF pin |
| | :3 mA Typ. | @Remote off input current |

Output Specifications

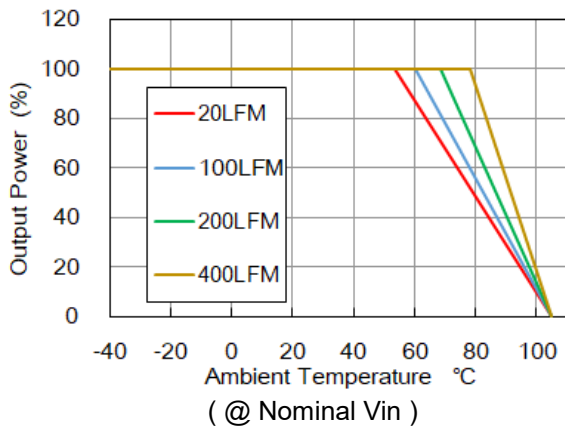
| | | |
|---------------------------------|-----------------|---|
| Output Voltage | :5Vdc | |
| Output Voltage Accuracy | :±1% | @5.95~5.05Vdc @Vin=9~36V |
| Output Current | :10000mA | |
| Efficiency | :91% Typ. | @Vin=24Vdc |
| Ripple / Noise | :100mVp-p Max. | @20MHz Bandwidth , with 1uF*1 MLCC and /10uF*1 TC |
| Output Power Protection | :180% Max. | @Hiccup, auto-recovery |
| Over Voltage Protection | :6.2Vdc Typ. | |
| Short Circuit Protection | :Continuous | @Hiccup, auto-recovery |
| Line Regulation | :±0.2% Max. | @Full Load |
| Load Regulation | :±0.5% Max. | @0% TO 100% load |
| Voltage adjustability | :±10% Max. | |
| Temperature coefficient | :±0.02%/°C Max. | |
| Transient response setting time | :350us Typ. | @25% load step change |
| Transient response Deviation | :±5% Max. | @25% load step change |

General Specifications

| | | |
|-----------------------------|------------------------------|--------------------------------|
| Operating Temperature Range | : -40°C ~ +53°C | without derating @ Nominal Vin |
| Operating Case Temperature | : +105°C Max. | |
| Over Temperature Protection | : +115°C Typ. | @Case Temperature |
| Storage Temperature | : -55°C ~ +125°C | |
| Switching Frequency | : 280KHz Typ. | |
| Humidity | : 95% Max | @Non Condensing |
| Isolation Voltage | : 1600VDC | @Input To Output |
| | : 1000VDC | @Input(Output) To Case |
| Isolation Resistance | : 1000M Ω Min | @500Vdc |
| Isolation Capacitance | : 2200pF Max | |
| Cooling | : Natural Convection | @20LFM |
| Case Material | : Copper | |
| Potting material | : Silicone (UL94-V0) | |
| MTBF | : 2.59x10 ⁵ Hours | MIL-HDBK-217F@25°C |
| Weight | : 50g Typ. | |

Temperature Derating Graph

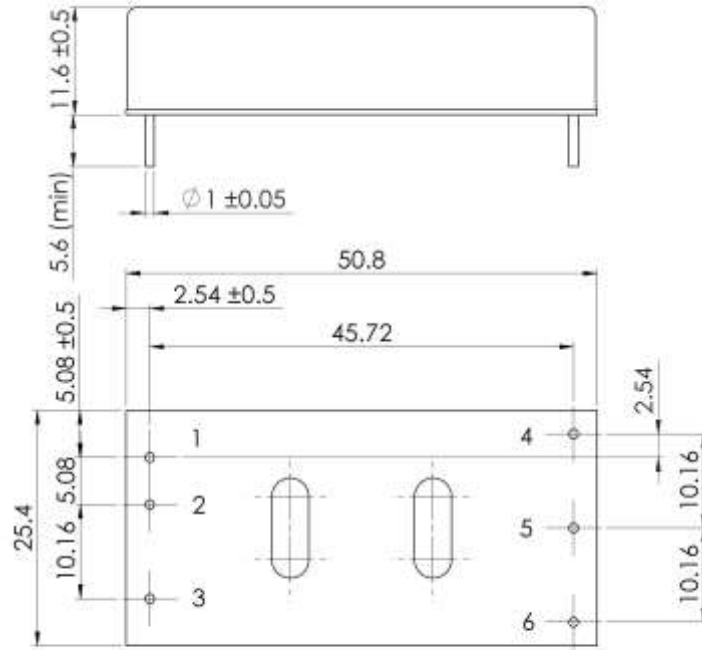
Part Number



YNB50- 24 S 05
A B C D

- A: Series**
- B: Input Voltage**
- C: Single Output**
- D: Output Voltage**

Outline Dimensions



BOTTOM VIEW

Unit : mm

Tolerance : XX.X ± 0.5 , XX.XX ± 0.25

PIN Assignment

| PIN | 1 | 2 | 3 | 4 | 5 | 6 |
|----------|------|------|---------------|-------|-------|------|
| FUNCTION | +Vin | -Vin | Remote On/Off | +Vout | -Vout | Trim |