

**Features**

- 50 WATT DIL PACKAGE
- 4:1 WIDE INPUT VOLTAGES
- EFFICIENCY UP TO 92%
- 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**

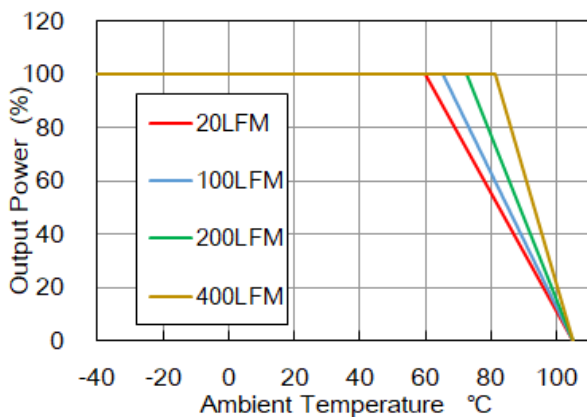
|                                 |                 |  |
|---------------------------------|-----------------|--|
| Output Voltage                  | :15Vdc          |  |
| Output Voltage Accuracy         | :±1%            | @14.85~15.15Vdc @Vin=9~36V                           |
| Output Current                  | :3330mA         |  |
| Efficiency                      | :92% Typ.       | @Vin=24Vdc   |
| Ripple / Noise                  | :150mVp-p Max.  | @20MHz Bandwidth , with 1uF*1<br>MLCC and /10uF*1 TC |
| Output Power Protection         | :180% Max.      | @Hiccup, auto-recovery                               |
| Over Voltage Protection         | :18Vdc 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 ~ +60°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 <sup>5</sup> Hours | MIL-HDBK-217F@25°C             |
| Weight                      | : 50g Typ.                   |                                |

**Temperature Derating Graph**

**Part Number**

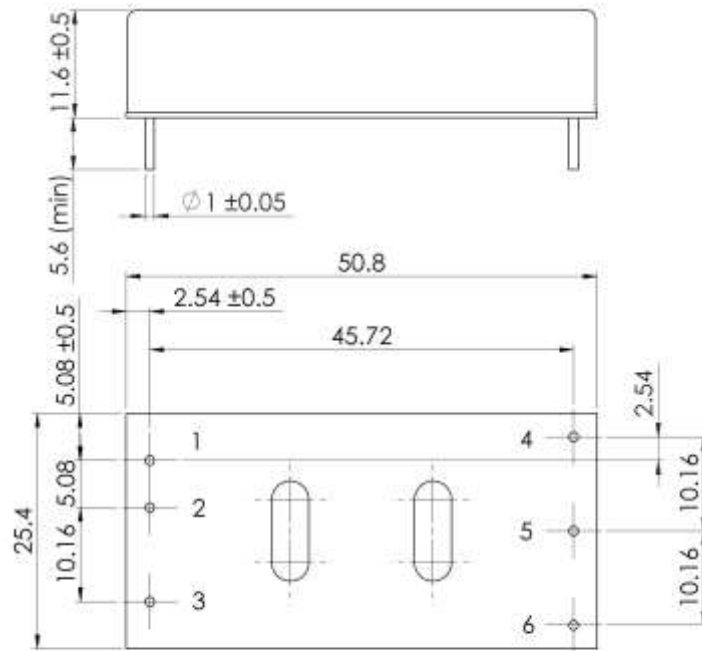


@ Nominal Vin

**YNB50- 24 S 15**  
**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 |