

**FEATURES :**

- 10 Watt DIL Package
- 4:1Wide Input Voltage
- 100% Burned In
- High Efficiency To 85%
- Customized Solutions Available
- Remote Control:On/Off
- UL94V-0 Package Material
- Operating Temperature:-40°C TO +87°C
- 3 Years Warranty
- Design refer to EN50155

YUAN DEAN SCIENTIFIC



DC-DC Converter

**68DW-R1 SERIES**

10Watt 1.6KV Isolated

4 : 1 Input Voltage Range

Single & Dual Output

1.25"X0.8"

Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

| Part Number   | Input Voltage | Input Current    |                    | Output Voltage | Output Current | Efficiency |
|---------------|---------------|------------------|--------------------|----------------|----------------|------------|
|               | Vdc           | No Load (mA TYP) | Full Load (mA TYP) | Vdc            | Full Load (mA) |            |
| 68DW-110S03R1 | 40-160        | 6                | 112                | 3.3            | 3000           | 81         |
| 68DW-110S05R1 | 40-160        | 6                | 110                | 5              | 2000           | 82         |
| 68DW-110S12R1 | 40-160        | 6                | 108                | 12             | 833            | 84         |
| 68DW-110S15R1 | 40-160        | 6                | 107                | 15             | 670            | 85         |
| 68DW-110D12R1 | 40-160        | 6                | 106                | ±12            | ±420           | 85         |
| 68DW-110D15R1 | 40-160        | 6                | 109                | ±15            | ±340           | 85         |

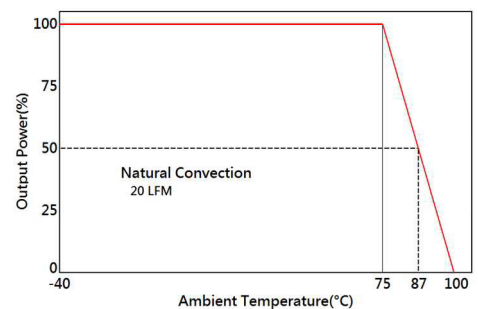


**Input Specifications**

| Parameters                        | Conditions                | Min | Typ | Max | Units |
|-----------------------------------|---------------------------|-----|-----|-----|-------|
| Voltage Types                     |                           |     |     | 4:1 |       |
| Surge Voltage (1 sec. max.)       | 110V models               |     |     | 170 | Vdc   |
| Input Filter                      | PI Type                   |     |     |     |       |
| Reflected ripple current          |                           |     | 30  |     | mAp-p |
| Remote ON/OFF (Refer to -Vin PIN) | Positive Logic            |     |     |     |       |
|                                   | ON : Open                 | 3   |     | 12  | Vdc   |
|                                   | OFF: Short                | 0   |     | 1.2 | Vdc   |
|                                   | Input current of Ctrl PIN | 0.5 |     | 0.5 | mA    |
|                                   | Remote off input current  |     | 3   |     | mA    |



**Temperature Derating Graph**



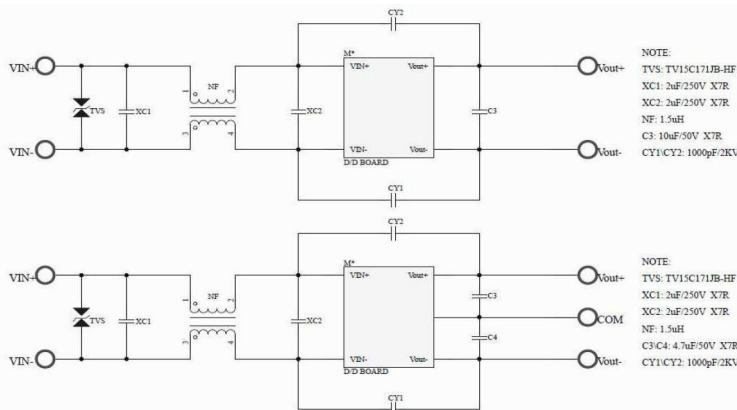
Output Specifications

| Parameters                      | Conditions                           | Min | Typ | Max        | Units |
|---------------------------------|--------------------------------------|-----|-----|------------|-------|
| Voltage Tolerance               | Full load@ Vin(nom.)                 |     |     | ±2         | %     |
| Line Regulation                 |                                      |     |     | ±0.5       | %     |
| Load Regulation                 | Single                               |     |     | ±0.5       | %     |
|                                 | Dual(Balance Load)                   |     |     | ±0.5       | %     |
| Cross Regulation                | Dual(25% To 100% Load)               |     |     | ±5         | %     |
| Ripple & Noise                  | Output:3-15V TYPES<br>BW=DC To 20MHz |     |     | 100        | mVp-p |
|                                 | Output > 15V TYPES<br>BW=DC To 20MHz |     |     | 1% of Vout | mVp-p |
| Transient response setting time | 25% load step change                 |     |     | 350        | us    |
| Short Circuit Protection        | Hiccup, automatic Recovery           |     |     |            |       |

General Specifications

| Parameters            | Conditions                                   | Min    | Typ            | Max | Units |
|-----------------------|--|--------|----------------|-----|-------|
| Isolation Voltage     |  |        | 1600           |     | Vdc   |
| Isolation Resistance  | 500Vdc                                       | 1000   |                |     | MΩ    |
| Switching Frequency   |  |        | 330            |     | KHz   |
| Operating Temperature | With derating                                | -40    |                | 87  | °C    |
| Storage Temperature   |  | -55    |                | 125 | °C    |
| Humidity              | Non Condensing                               |        |                | 95  | %     |
| Cooling               | Natural Convection (20LFM)                   |        |                |     |       |
| Case material         | Nickel coated copper with no-conductive base |        |                |     |       |
| MTBF                  | MIL-HDBK-217F@25°C                           | 900000 |                |     | Hours |
| Weight                |  |        | 17.5           |     | g     |
| Dimensions            |  |        | 31.6x20.1x10.0 |     | mm    |

Recommended Test Circuit

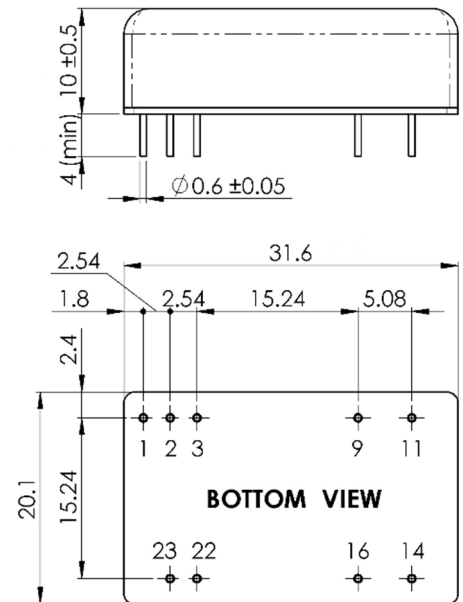


Part Number

|      |   |    |   |    |   |   |
|------|---|----|---|----|---|---|
| 68DW | - | 24 | S | 03 | R | 1 |
| A    |   | B  | C | D  | E | F |

- A : Series
- B : Input Voltage
- C : Single(S);Dual(D)
- D : Output Voltage
- E : Regulated(R)
- F : Case Type

Dimensions



Unit : mm  
Tolerance : XX.X ± 0.5 , XX.XX ± 0.25

PIN Assignment

| Pin    | 1             | 2,3  | 9   | 11    | 14    | 16    | 22,23 |
|--------|---------------|------|-----|-------|-------|-------|-------|
| Single | Remote On/Off | -Vin | NC  | NC    | +Vout | -Vout | +Vin  |
| Dual   | Remote On/Off | -Vin | Com | -Vout | +Vout | Com   | +Vin  |

