

# C67DW-R3 SERIES 15Watt 1.5KV Isolated DC-DC Converter Single & Dual Output



## FEATURES :

- 15 Watt Package
- 4:1 Wide Input Voltage
- 100% Burned In
- High Efficiency to 86%
- Customized Solutions Available
- Remote Control: On/Off
- UL94V-0 Package Material
- Operating Temperature: -40°C to +85°C
- 3 Years Warranty



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

| Part Number   | Input Voltage | Input Current (mA TYP) |           | Output Voltage | Output Current | Efficiency | Capacitor Load |
|---------------|---------------|------------------------|-----------|----------------|----------------|------------|----------------|
|               | Vdc           | No-Load                | Full Load | Vdc            | Full Load (mA) | %TYP       | uF MAX         |
| C67DW-24S03R3 | 9-36          | 60                     | 663       | 3.3            | 4000           | 83         | 3300           |
| C67DW-24S05R3 | 9-36          | 60                     | 727       | 5              | 3000           | 86         | 3300           |
| C67DW-24S12R3 | 9-36          | 40                     | 727       | 12             | 1250           | 86         | 330            |
| C67DW-24S15R3 | 9-36          | 20                     | 727       | 15             | 1000           | 86         | 330            |
| C67DW-24D05R3 | 9-36          | 70                     | 754       | ±5             | ±1500          | 83         | ±2000          |
| C67DW-24D12R3 | 9-36          | 40                     | 726       | ±12            | ±625           | 86         | ±330           |
| C67DW-24D15R3 | 9-36          | 40                     | 726       | ±15            | ±500           | 86         | ±330           |
| C67DW-48S03R3 | 18-75         | 30                     | 331       | 3.3            | 4000           | 83         | 5600           |
| C67DW-48S05R3 | 18-75         | 30                     | 363       | 5              | 3000           | 86         | 5600           |
| C67DW-48S12R3 | 18-75         | 30                     | 363       | 12             | 1250           | 86         | 680            |
| C67DW-48S15R3 | 18-75         | 30                     | 363       | 15             | 1000           | 86         | 680            |
| C67DW-48D05R3 | 18-75         | 30                     | 377       | ±5             | ±1500          | 83         | ±3300          |
| C67DW-48D12R3 | 18-75         | 30                     | 363       | ±12            | ±625           | 86         | ±220           |
| C67DW-48D15R3 | 18-75         | 30                     | 363       | ±15            | ±500           | 86         | ±220           |

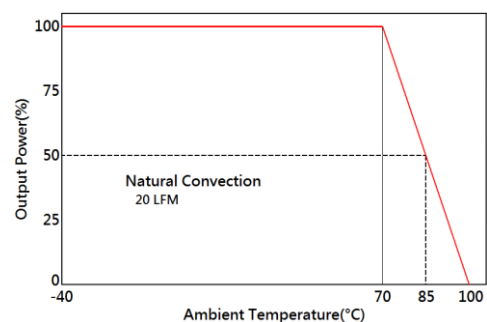
## Input Specifications

| Parameters    | Conditions | Min | Typ | Max | Units |
|---------------|------------|-----|-----|-----|-------|
| Voltage Types |            |     |     | 4:1 |       |
| Filter        | PI TYPE    |     |     |     |       |

## Output Specifications

| Parameters                      | Conditions                            | Min | Typ | Max          | Units |
|---------------------------------|---------------------------------------|-----|-----|--------------|-------|
| Voltage Tolerance               | Full load @Vin(nom.)                  |     |     | ±2           | %     |
| Short Circuit Protection        | Hiccup, automatic recovery            |     |     |              |       |
| Line Regulation                 |                                       |     |     | ±0.5         | %     |
| Load Regulation                 | Single<br>Dual (Balance Load)         |     |     | ±0.5<br>±1.0 | %     |
| 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                  |     | 300 |              | us    |

## Temperature Derating Graph



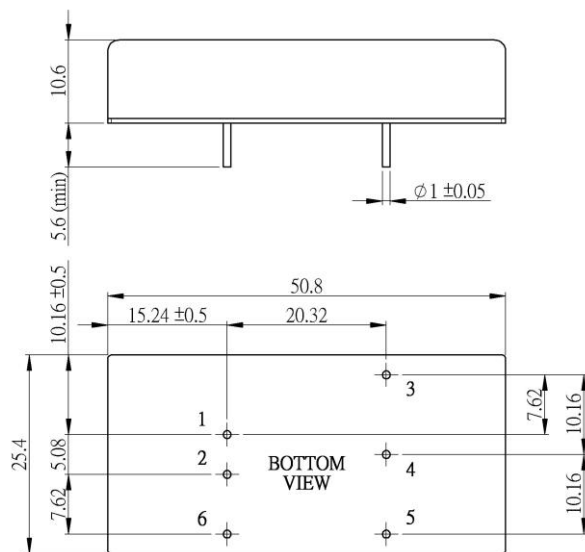
# C67DW-R3 SERIES 15Watt 1.5KV Isolated DC-DC Converter Single & Dual Output



## General Specifications

| Parameters              | Conditions                                   | Min                  | Typ            | Max   | Units |
|-------------------------|----------------------------------------------|----------------------|----------------|-------|-------|
| Isolation Voltage       |                                              |                      | 1500           |       | Vdc   |
| Isolation Resistance    | 500Vdc                                       | 1000                 |                |       | MΩ    |
| Switching Frequency     |                                              |                      | 300            |       | KHz   |
| Operating Temperature   | With derating                                | -40                  |                | 85    | °C    |
| Storage Temperature     |                                              | -55                  |                | 125   | °C    |
| Temperature Coefficient | 100% Load                                    |                      |                | ±0.02 | %/°C  |
| Humidity                | Non Condensing                               | 5                    |                | 95    | %     |
| Cooling                 | Natural Convection (20LFM)                   |                      |                |       |       |
| Case material           | Nickel coated copper with no-conductive base |                      |                |       |       |
| MTBF                    | MIL-HDBK-217F @25°C                          | 2.43x10 <sup>6</sup> |                |       | Hours |
| Weight                  |                                              |                      | 32.6           |       | g     |
| Dimensions              |                                              |                      | 50.8x25.4x10.6 |       | mm    |

## Dimensions



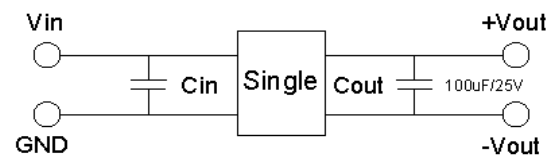
Unit : mm  
Tolerance : XX.X ± 0.5 , XX.XX ± 0.25

## Part Number

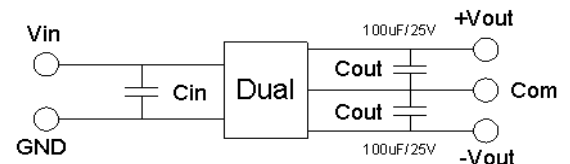
C67DW- 24 S 03 R 3  
A B C D E F

A: Series  
B: Input Voltage  
C: Single Output(S), Dual (D)  
D: Output Voltage  
E: Regulated(R)  
F: Package

## Recommended Test Circuit



24V & 48V : Cin 10uF, 100V



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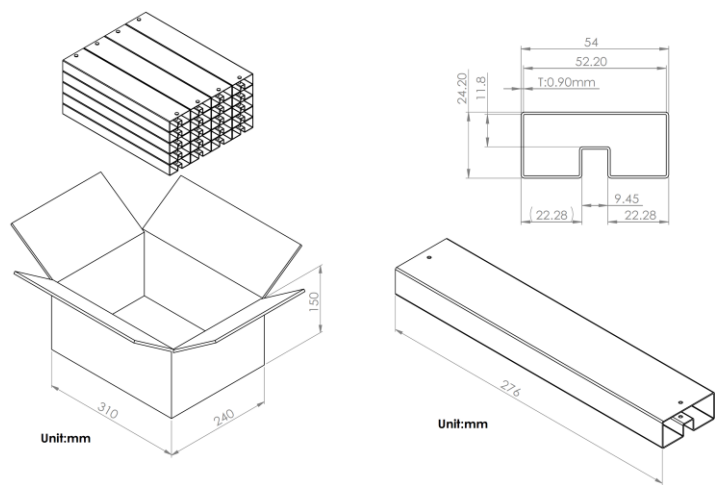
## PIN Assignment

| Pin    | 1    | 2    | 3     | 4    | 5     | 6             |
|--------|------|------|-------|------|-------|---------------|
| Single | +Vin | -Vin | +Vout | Trim | -Vout | Remote On/Off |
| Dual   | +Vin | -Vin | +Vout | Com  | -Vout | Remote On/Off |

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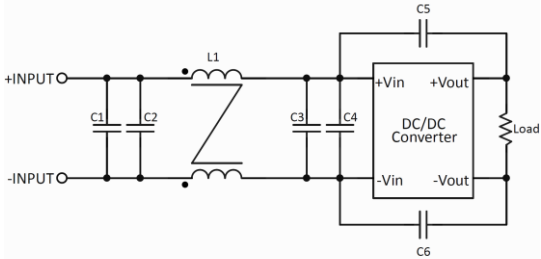
## Packing Formation



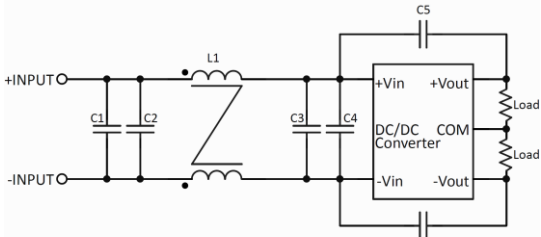
|              |                  |
|--------------|------------------|
| Tube         | 10 PCS (max)     |
| BOX          | 200 pcs (max)    |
| Weight       | 32.6 grams/pcs   |
| Total Weight | 8.52KG/BOX (max) |

## Recommended Filter for EN55032 Class A Compliance

### Single Output



### Dual Output



The components used in the above figure, together with the manufacturers' part numbers for these components, are as follows:

| Part Number | Specifications |
|-------------|----------------|
| C2          | 4.7μF/100V     |
| C3          | 4.7uF/100V     |
| C5,C6       | 1000pF/2KV     |
| L1          | 396uH          |