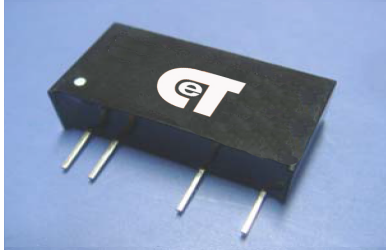


## CT-12D-2W SERIES

### 3000Vdc Isolation Single & Dual Output 2 Watt Dc-Dc Converter



#### FEATURES:

- 7PIN SIP Package
- High Efficiency up to 85%
- Unregulated Output Types
- Internal SMD Construction
- No External Component Required ● Industry Standard Pinout
- Operating Temperature: -40°C TO +85°C



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

| Part Number   | Output Voltage | Output Current | Efficiency |
|---------------|----------------|----------------|------------|
|               | Vdc            | mA             | %TYP       |
| CT-XXS05N2WNL | 5              | 400            | 70         |
| CT-XXS09N2WNL | 9              | 222            | 75         |
| CT-XXS12N2WNL | 12             | 167            | 80         |
| CT-XXS15N2WNL | 15             | 133            | 80         |
| CT-XXS24N2WNL | 24             | 84             | 85         |
| CT-XXD05N2WNL | ±5             | ±200           | 70         |
| CT-XXD09N2WNL | ±9             | ±111           | 75         |
| CT-XXD12N2WNL | ±12            | ±84            | 80         |
| CT-XXD15N2WNL | ±15            | ±67            | 80         |
| CT-XXD24N2WNL | ±24            | ±42            | 85         |

Note: 1. "XX" Is Input Voltage :05=5Vdc,09=9Vdc,12=12Vdc,15=15Vdc,24=24Vdc.

2. The input voltage increases, there will be an increase in efficiency.

#### Input Specifications

| Parameters        | Conditions                          | Min | Typ | Max | Units |
|-------------------|-------------------------------------|-----|-----|-----|-------|
| Voltage Tolerance | V <sub>o</sub> , I <sub>o</sub> Nom |     |     | ±5  | %     |
| Filter            | Capacitor                           |     |     |     |       |

#### Output Specifications

| Parameters                      | Conditions                      | Min | Typ | Max   | Units |
|---------------------------------|---------------------------------|-----|-----|-------|-------|
| Voltage Tolerance               | 100% full load                  |     |     | ±5    | %     |
| Short Circuit Protection        | Short Term                      |     |     | 1 Sec |       |
| Line Regulation                 | For 1.0% OF Vin                 |     | 1.2 |       | %     |
| Load Regulation                 | 5V(10% To 100% F.L)             |     |     | 15    | %     |
| Load Regulation                 | 9V,12V,15V,24V(10% To 100% F.L) |     |     | 10    | %     |
| Ripple & Noise                  | BW=DC To 20MHz                  |     |     | 100   | mVp-p |
| Transient response setting time | 50% load step change            |     | 350 |       | us    |

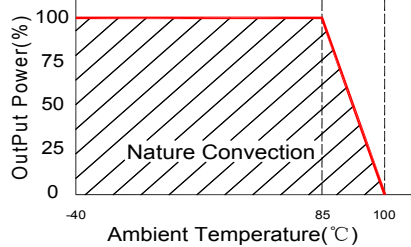
#### General Specifications

| Parameters            | Conditions              | Min     | Typ           | Max | Units |
|-----------------------|-------------------------|---------|---------------|-----|-------|
| Isolation Resistance  | 500Vdc                  | 1000    |               |     | MΩ    |
| Switching Frequency   | Full load,nominal input |         | 100           |     | KHz   |
| Operation Temperature |                         | -40     |               | +85 | °C    |
| Humidity              | Non Condensing          |         |               | 95  | %     |
| Cooling               | Free air Convection     |         |               |     |       |
| Case material         | DAP                     |         |               |     |       |
| MTBF                  | MIL-HDBK-217F@25°C      | 3500000 |               |     | Hours |
| Weight                |                         |         | 2.7           |     | g     |
| Dimensions            |                         |         | 19.5x7.1x10.0 |     | mm    |

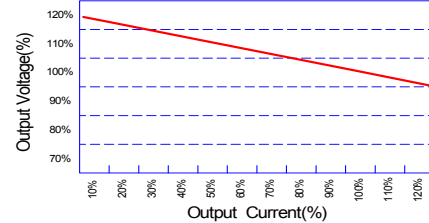
## CT-12D-2W SERIES

### 3000Vdc Isolation Single & Dual Output 2 Watt Dc-Dc Converter

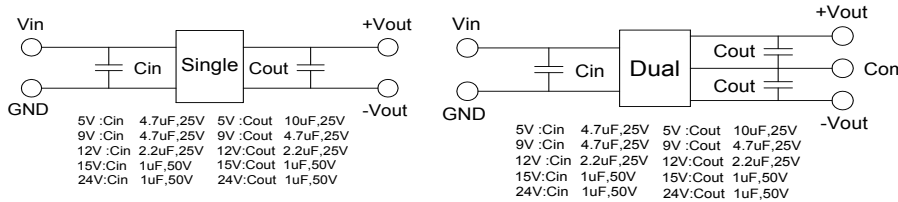
#### Temperature Derating Graph



#### Tolerance Envelope Graph



#### Recommended Test Circuit

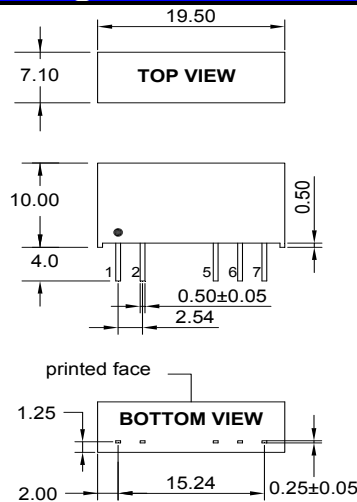


#### Part Number

12D - 05 S 05 N 2W NL  
 A B C D E F G

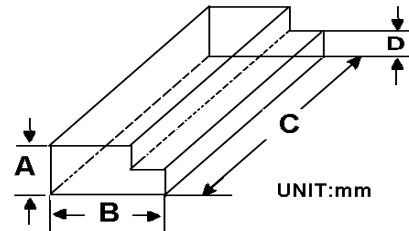
A:Series  
 B:Input Voltage  
 C:Single(S) Dual(D)  
 D:Output Voltage  
 E:Unregulated(N)  
 F:Output Power  
 G:RoHS Version

#### Markings and dimensions



UNIT:mm Unless otherwise specified,all tolerances are ±0.25

#### Packaging



| Size(mm) |       |     |      |
|----------|-------|-----|------|
| A        | B     | C   | D    |
| 9.50     | 16.50 | 522 | 5.00 |

#### PIN Connection

| PIN    | 1    | 2    | 5     | 6      | 7     |
|--------|------|------|-------|--------|-------|
| Single | +Vin | -Vin | -Vout | No Pin | +Vout |
| Dual   | +Vin | -Vin | -Vout | Common | +Vout |