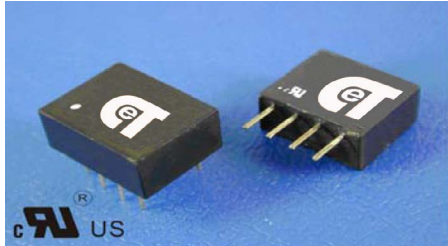


CT-13D1-1W SERIES

3000Vdc Isolation Single Output 1 Watt Dc-Dc Converter



FEATURES:

- 4 PIN SIP and 8 PIN DIL Package.
- High insulation 3000Vdc.
- High Efficiency up to 85%.
- Unregulated Output Types.
- Internal SMD Construction ● No External Component Required
- Operating Temperature:-40°C TO +85°C ● Industry Standard Pinout



| Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified | | | | |
|--|----------------|----------------|------------|---------------|
| Part Number | Output Voltage | Output Current | Efficiency | Package Style |
| | Vdc | mA | %TYP | "X" |
| CT-XXS03NX | 3.3 | 303 | 70 | 1/2/3/4 |
| CT-XXS05NX | 5 | 200 | 70 | 1/2/3/4 |
| CT-XXS09NX | 9 | 112 | 75 | 1/2/3/4 |
| CT-XXS12NX | 12 | 84 | 78 | 1/2/3/4 |
| CT-XXS15NX | 15 | 67 | 80 | 2/3/4 |
| CT-XXS24NX | 24 | 42 | 82 | 2/3/4 |

Note: 1. "XX" Is Input Voltage: 03=3.3Vdc, 05=05Vdc, 09=09Vdc, 12=12Vdc, 15=15Vdc, 24=24Vdc. 2. Over 24Vdc input voltage, using the 3 package
3. The input voltage increases, there will be an increase in efficiency.

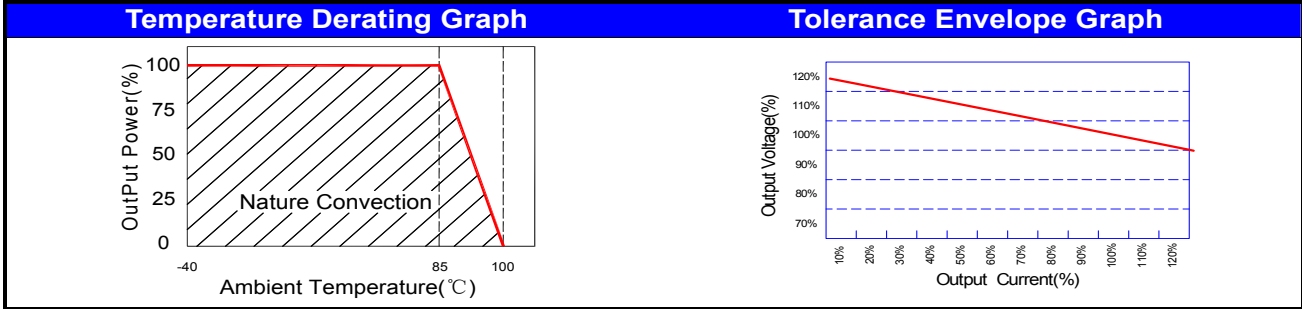
| Input Specifications | | | | | |
|----------------------|------------|-----|-----|------|-------|
| Parameters | Conditions | Min | Typ | Max | Units |
| Voltage Tolerance | Vo, Io Nom | | | ± 10 | % |
| Filter | Capacitor | | | | |

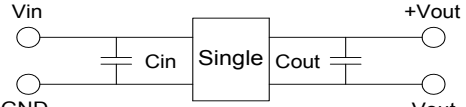
| Output Specifications | | | | | |
|---------------------------------|--------------------------------------|-----|-----|-------|-------|
| Parameters | Conditions | Min | Typ | Max | Units |
| Voltage Tolerance | 100% full load | | | ± 5 | % |
| Short Circuit Protection | Short Term | | | 1 Sec | |
| Line Regulation | For 1.0% OF Vin | | 1.2 | | % |
| Load Regulation | 3.3V & 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 (Package 1) | | | 150 | mVp-p |
| Ripple & Noise | BW=DC To 20MHz (Package 2/3/4) | | | 100 | mVp-p |
| Transient response setting time | 50% load step change | | 350 | | us |

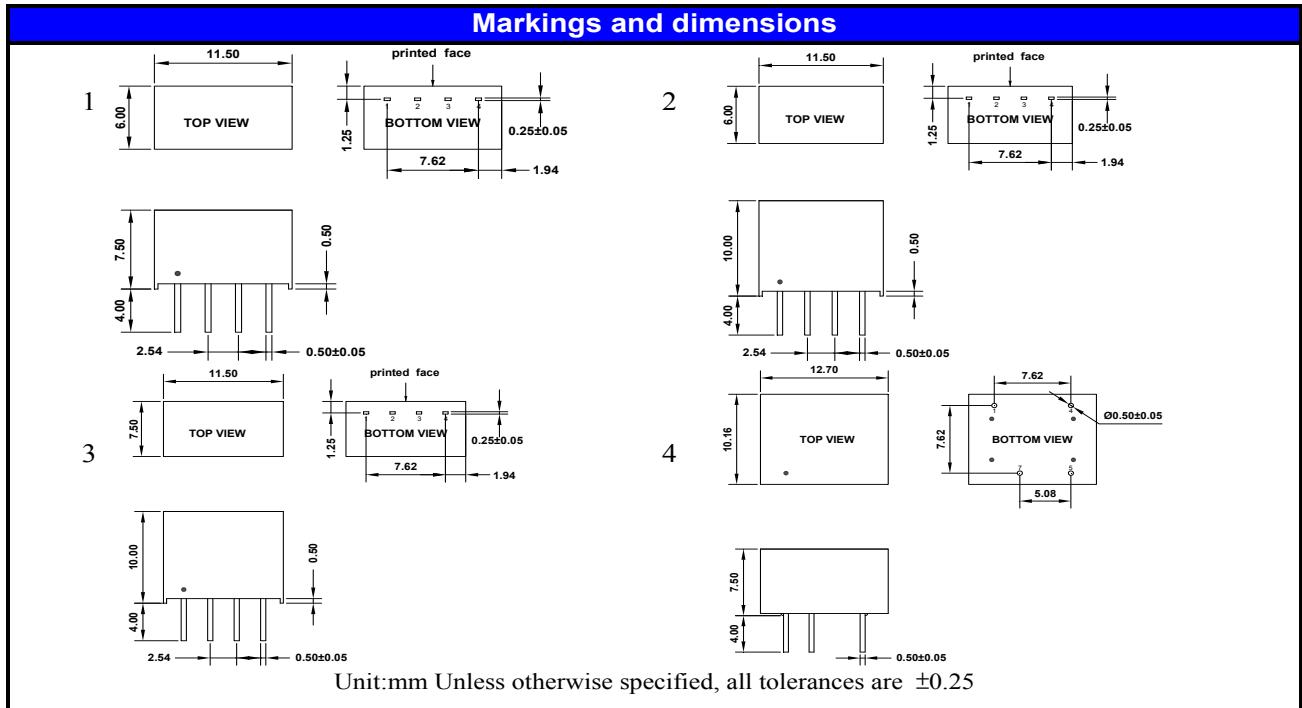
| General Specifications | | | | | |
|------------------------|--------------------------|---------|-----------------|-----|-------|
| Parameters | Conditions | Min | Typ | Max | Units |
| Isolation Resistance | 500Vdc | 1000 | | | MΩ |
| Switching Frequency | Full load, nominal input | | 100 | | KHz |
| Operating Temperature | | -40 | | +85 | °C |
| Humidity | Non Condensing | | | 95 | % |
| Cooling | Free air Convection | | | | |
| Case material | DAP | | | | |
| MTBF | MIL-HDBK-217F@25°C | 3500000 | | | Hours |
| Weight | Package 1/2/3/4 | | 1.1/1.5/1.9/1.9 | | g |
| Dimensions | Package 1 | | 11.50x6.00x7.5 | | mm |
| Dimensions | Package 2 | | 11.50x6.00x10.0 | | mm |
| Dimensions | Package 3 | | 11.50x7.50x10.0 | | mm |
| Dimensions | Package 4 | | 12.7x10.16x7.50 | | mm |

CT-13D1-1W SERIES

3000Vdc Isolation Single Output 1 Watt Dc-Dc Converter



| Recommended Test Circuit | Part Number |
|---|---|
|  <p> 3.3V :Cin 4.7uF,25V 3.3V :Cout 22uF,16V 5V :Cin 4.7uF,25V 5V :Cout 10uF,25V 9V :Cin 4.7uF,25V 9V :Cout 4.7uF,25V 12V :Cin 2.2uF,25V 12V :Cout 2.2uF,25V 15V :Cin 1uF,50V 15V :Cout 1uF,50V 24V :Cin 1uF,50V 24V :Cout 1uF,50V </p> | <p>13D1 - 03 S 05 N 2</p> <p>A B C D E F</p> <p> A:Series B:Input Voltage C:Single Output D:Output Voltage E:Unregulated(N) F:Package </p> |



| PIN Connection | 1 | 2 | 3 | 4 | 5 | 7 |
|----------------|------|------|-------|-------|-------|-------|
| 4IN | -Vin | +Vin | -Vout | +Vout | | |
| 8IN | -Vin | | | +Vin | +Vout | -Vout |