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# EC1TAN SERIES

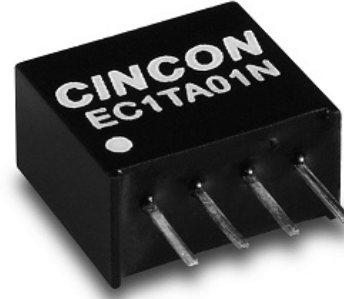
## 1WATT, UNREGULATED OUTPUT

### DC-DC CONVERTERS



## FEATURES

- \* Industry Standard SIP Packages
- \* Efficiency up to 82%
- \* 1000VDC Isolation
- \* Low Cost
- \* Unregulated Outputs
- \* Low Ripple and Noise
- \* No Tantalum Capacitors inside



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.	CAPACITOR LOAD MAX.
				NO LOAD	FULL LOAD		
EC1TA01N	5 VDC	5 VDC	200 mA	40 mA	253 mA	79	220uF
EC1TA02N	5 VDC	12 VDC	84 mA	40 mA	255 mA	79	220uF
EC1TA03N	5 VDC	15 VDC	67 mA	40 mA	251 mA	80	220uF
EC1TA11N	12 VDC	5 VDC	200 mA	15 mA	103 mA	81	220uF
EC1TA12N	12 VDC	12 VDC	84 mA	15 mA	103 mA	81	220uF
EC1TA13N	12 VDC	15 VDC	67 mA	15 mA	102 mA	82	220uF
EC1TA21N	24 VDC	5 VDC	200 mA	7 mA	52 mA	80	220uF
EC1TA22N	24 VDC	12 VDC	84 mA	7 mA	52 mA	80	220uF
EC1TA23N	24 VDC	15 VDC	67 mA	7 mA	52 mA	81	220uF

NOTE: 1. Nominal Input Voltage 5, 12 or 24VDC

# SPECIFICATIONS

All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted

## INPUT SPECIFICATIONS :

Input Voltage Range ..... ±10%  
 Input Surge Voltage (100ms max.) ..... 5V ..... 9Vdc max.  
 ..... 12V ..... 18Vdc max.  
 ..... 24V ..... 30Vdc max.  
 Input Filter ..... Capacitive

## GENERAL SPECIFICATIONS :

Efficiency ..... See Table  
 Isolation Voltage ..... 1000 VDC min.  
 Isolation Resistance ..... 10<sup>9</sup> ohm min.  
 Isolation Capacitance ..... 10pF typ.  
 Switching Frequency ..... 5&12V Input ..... 90KHz typ.  
 ..... 24V Input ..... 80KHz typ.

## OUTPUT SPECIFICATIONS:

Voltage Accuracy ..... ±3.0% max.  
 Ripple and Noise, 20MHz BW ..... 100mV pk-pk max.  
 Temperature Coefficient ..... ±0.05%/°C max.  
 Short Circuit Protection ..... Momentary 1sec. max.  
 Line Regulation (note1) ..... ±1.2% max.  
 Load Regulation (note2) ..... ±10% max.

Operating Ambient Temperature Range ..... -40°C to +85°C  
 De-rating, Above 85°C ..... Linearly to Zero power at 100°C  
 Case temperature (note4) ..... +100°C max.  
 Cooling ..... Natural Convection  
 Storage Temperature Range ..... -55°C to +125°C  
 Humidity ..... 95% RH max. Non condensing  
 MTBF ..... MIL-STD-217F, GB ..... 1.7Mhrs min.

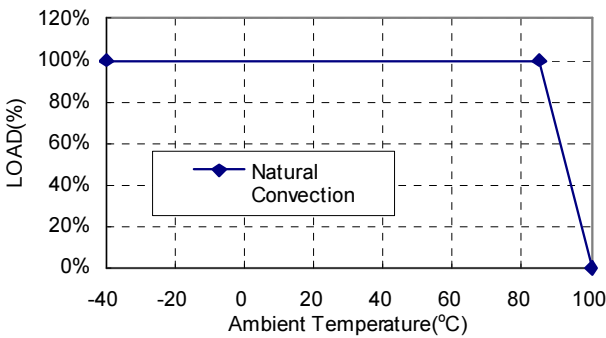
### Dimensions:

5&12V input ..... 0.46x0.24x0.40 inches(11.6x6.0x10.2 mm)  
 24V input ..... 0.46x0.30x0.40 inches(11.6x7.5x10.2 mm)  
 Case Material ..... Non-conductive black plastic  
 Weight ..... 5&12V Input ..... 1.3g  
 ..... 24V Input ..... 1.7g

## NOTE :

1. Line regulation is per 1.0% change in input voltage.
2. Load regulation is for load change from 100% to 20%.
3. The output noise is measured with 0.33uF ceramic capacitor.
4. Maximum case temperature under any operating condition should not be exceeded 100°C.
5. The EC1TA2XN input terminal need to parallel with 4.7uF ceramic capacitor.

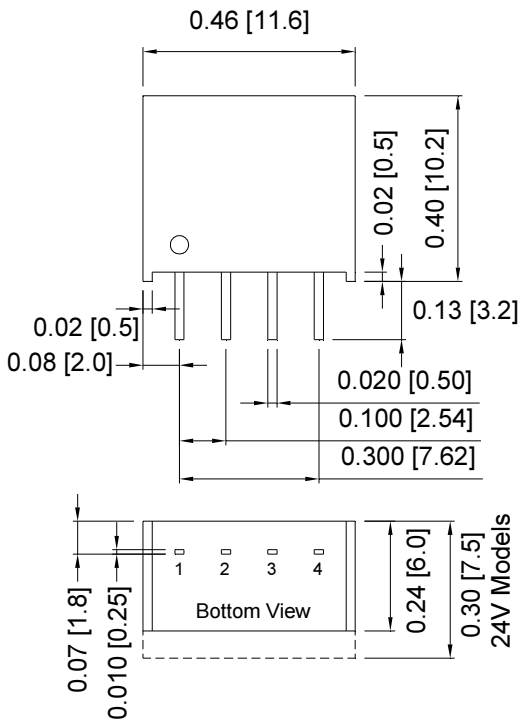
Typical Derating curve for Natural Convection



## CASE SIP-4:

All Dimensions In Inches (mm)

Tolerances	Inches	Millimeters
	±0.01	±0.25
Pin	±0.002	±0.05



PIN CONNECTION	
Pin	Single
1	-Vin
2	+Vin
3	-Vout
4	+Vout