



electronic powersolutions

EC2SANH SERIES

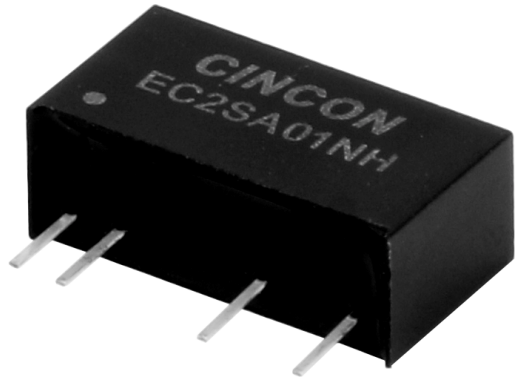
2WATT, UNREGULATED OUTPUT

DC-DC CONVERTERS



FEATURES

- * Industry Standard SIP-7 Packages
- * Efficiency up to 88%
- * 3000VDC Isolation
- * Unregulated Outputs
- * Industry Standard Pinout
- * No Tantalum Capacitors inside



| MODEL NUMBER | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | INPUT CURRENT | | % EFF. | CAPACITOR LOAD MAX. |
|--------------|---------------|----------------|----------------|---------------|-----------|--------|---------------------|
| | | | | NO LOAD | FULL LOAD | | |
| EC2SA01NH | 5 VDC | 5 VDC | 400 mA | 40 mA | 488 mA | 82 | 220uF |
| EC2SA02NH | 5 VDC | 12 VDC | 167 mA | 50 mA | 477 mA | 84 | 220uF |
| EC2SA03NH | 5 VDC | 15 VDC | 134 mA | 55 mA | 473 mA | 85 | 220uF |
| EC2SA04NH | 5 VDC | ±12 VDC | ±83 mA | 50 mA | 469 mA | 85 | 100uF |
| EC2SA05NH | 5 VDC | ±15 VDC | ±67 mA | 45 mA | 462 mA | 87 | 100uF |
| EC2SA06NH | 5 VDC | ±5 VDC | ±200 mA | 40 mA | 482 mA | 83 | 100uF |
| EC2SA11NH | 12 VDC | 5 VDC | 400 mA | 20 mA | 203 mA | 82 | 220uF |
| EC2SA12NH | 12 VDC | 12 VDC | 167 mA | 20 mA | 192 mA | 87 | 220uF |
| EC2SA13NH | 12 VDC | 15 VDC | 134 mA | 20 mA | 193 mA | 87 | 220uF |
| EC2SA14NH | 12 VDC | ±12 VDC | ±83 mA | 20 mA | 193 mA | 86 | 100uF |
| EC2SA15NH | 12 VDC | ±15 VDC | ±67 mA | 20 mA | 193 mA | 87 | 100uF |
| EC2SA16NH | 12 VDC | ±5 VDC | ±200 mA | 20 mA | 198 mA | 84 | 100uF |
| EC2SA21NH | 24 VDC | 5 VDC | 400 mA | 10 mA | 102 mA | 82 | 220uF |
| EC2SA22NH | 24 VDC | 12 VDC | 167 mA | 10 mA | 96 mA | 87 | 220uF |
| EC2SA23NH | 24 VDC | 15 VDC | 134 mA | 10 mA | 95 mA | 88 | 220uF |
| EC2SA24NH | 24 VDC | ±12 VDC | ±83 mA | 10 mA | 96 mA | 87 | 100uF |
| EC2SA25NH | 24 VDC | ±15 VDC | ±67 mA | 10 mA | 95 mA | 88 | 100uF |
| EC2SA26NH | 24 VDC | ±5 VDC | ±200 mA | 10 mA | 100 mA | 83 | 100uF |

NOTE:

1. Nominal Input Voltage 5, 12 or 24 VDC
2. An External Input Capacitor 1uF tantalum for 24Vin Models are recommended to Reduce Input Ripple Voltage.

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 (note 5) | Capacitive |

OUTPUT SPECIFICATIONS :

| | |
|-------------------------------------------|---------------------------|
| Voltage Accuracy | ±3.0% max. |
| Voltage Balance (Dual) | ±1.0% max. |
| Ripple and Noise, 20MHz BW (note 3) | 200mV pk-pk max. |
| Temperature Coefficient | ±0.05%/°C max. |
| Short Circuit Protection..... | Continuous, Self-Recovery |
| Line Regulation (note 1) | ±1.2% max. |
| Load Regulation (note 2) | ±10% max. |

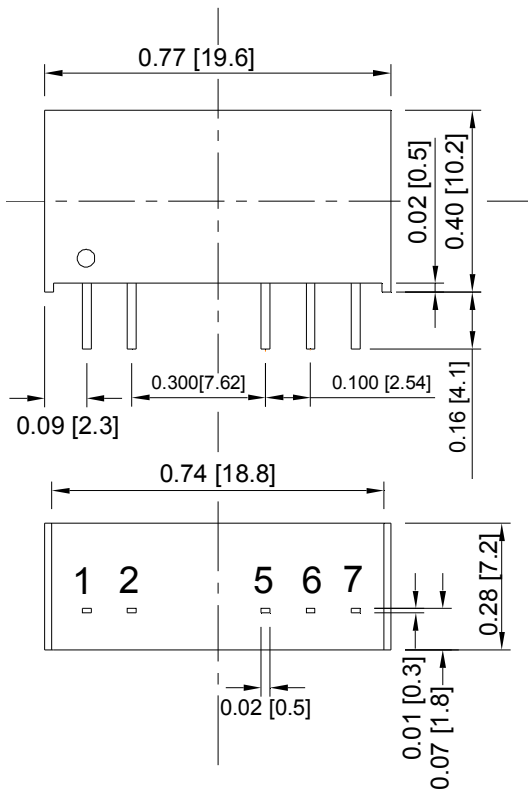
NOTE:

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 120°C.
5. The EC2SA2XNH input terminal need to parallel with 1uF tantalum capacitor.

CASE SIP-7 Dimensions:

All Dimensions In Inches(mm)

| | | |
|-----------|-------------|-------------|
| Tolerance | Inches | Millimeters |
| | X.XX±0.01 | X.X±0.25 |
| | X.XXX±0.005 | X.XX±0.13 |
| Pin | ±0.002 | ±0.05 |



| PIN CONNECTION | | |
|----------------|---------------|-------------|
| Pin | Single Output | Dual Output |
| 1 | +V Input | +V Input |
| 2 | -V Input | -V Input |
| 5 | -V Output | -V Output |
| 6 | No Pin | Common |
| 7 | +V Output | +V Output |

GENERAL SPECIFICATIONS :

| | |
|-------------------------------------------|-----------------------------------------|
| Efficiency | See Table |
| Isolation Voltage | 3000 VDC min. |
| Isolation Resistance | 10 ⁹ ohm min. |
| Isolation Capacitance | 18 pF typ. |
| Switching Frequency | 60KHz typ. |
| Operating Ambient Temperature Range | -40°C to +105°C |
| De-rating, Above 85°C | See Derating Curve |
| Case temperature (note 4) | +120°C max. |
| Cooling | Natural Convection |
| Storage Temperature Range | -55°C to +125°C |
| Humidity | 95% RH max. Non condensing |
| MTBF | MIL-HDBK-217F, GB 3.3Mhrs min. |
| Dimensions | 0.77x0.28x0.40 inches(19.6x7.2x10.2 mm) |
| Case Material | Non-conductive black plastic |
| Weight | 2.7g |

