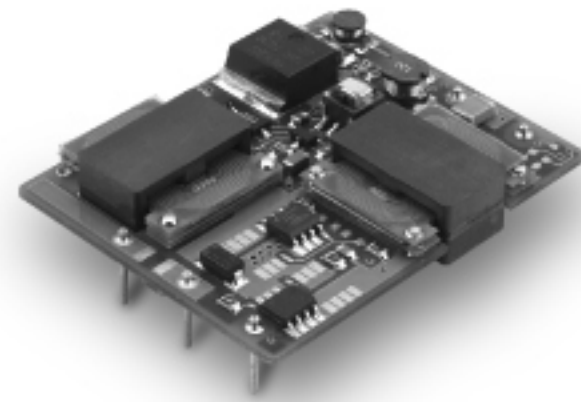


# EC2SC

S E R I E S

## 14.4 TO 25 WATT WIDE INPUT DC-DC CONVERTERS SINGLE OUTPUT



### Features

- 14.4 - 25W Isolated Output
- High Efficiency Up to 91%
- Fixed 300KHz Switching Frequency
- 2 : 1 Input Range
- Regulated Outputs
- Continuous Short Circuit Protection
- Open-Frame
- 2" X 1.6" size
- Industry Standard Pin-Out

| MODEL NUMBER | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | INPUT CURRENT NO LOAD | INPUT CURRENT FULL LOAD | %EFF | IZBS |
|--------------|---------------|----------------|----------------|-----------------------|-------------------------|------|------|
| EC2SC-24S18  | 18-36 VDC     | 1.8 VDC        | 8 A            | 50 mA                 | 723 mA                  | 83   | SC   |
| EC2SC-24S25  | 18-36 VDC     | 2.5 VDC        | 8 A            | 50 mA                 | 980 mA                  | 85   | SC   |
| EC2SC-24S33  | 18-36 VDC     | 3.3 VDC        | 6 A            | 50 mA                 | 959 mA                  | 86   | SC   |
| EC2SC-24S05  | 18-36 VDC     | 5.0 VDC        | 5 A            | 50 mA                 | 1197 mA                 | 87   | SC   |
| EC2SC-24S12  | 18-36 VDC     | 12 VDC         | 2 A            | 50 mA                 | 1136 mA                 | 88   | SC   |
| EC2SC-24S15  | 18-36 VDC     | 15 VDC         | 1.6 A          | 50 mA                 | 1136 mA                 | 88   | SC   |
| EC2SC-48S18  | 36-75 VDC     | 1.8 VDC        | 8 A            | 30 mA                 | 353 mA                  | 85   | SC   |
| EC2SC-48S25  | 36-75 VDC     | 2.5 VDC        | 8 A            | 30 mA                 | 479 mA                  | 87   | SC   |
| EC2SC-48S33  | 36-75 VDC     | 3.3 VDC        | 6 A            | 30 mA                 | 474 mA                  | 87   | SC   |
| EC2SC-48S05  | 36-75 VDC     | 5.0 VDC        | 5 A            | 30 mA                 | 572 mA                  | 91   | SC   |
| EC2SC-48S12  | 36-75 VDC     | 12 VDC         | 2 A            | 30 mA                 | 562 mA                  | 89   | SC   |
| EC2SC-48S15  | 36-75 VDC     | 15 VDC         | 1.6 A          | 30 mA                 | 562 mA                  | 89   | SC   |

NOTE : 1. Nominal Input Voltage 24, 48 VDC

### Specifications

#### INPUT SPECIFICATIONS:

|   |                          |                            |
|---|--------------------------|----------------------------|
| Input Voltage Range.....                  | 24V.....18-36V           | 48V.....36-75V             |
| Undervoltage lockout .....                | 24Vin power up ..... 17V | 24Vin power down ..... 15V |
|   | 48Vin power up ..... 34V | 48Vin power down ..... 30V |
| Positive Logic Remote ON/OFF <sup>1</sup> |                          |                            |
| Input Filter .....                        |                          | PI Type                    |

#### OUTPUT SPECIFICATIONS:

|  |                                  |
|--|----------------------------------|
| Voltage Accuracy : .....                         | ±1% max.                         |
| Transient Response: 75% - 100% Step Load Change  |                                  |
| Error Band .....                                 | ±2% Vout nominal                 |
| Recovery Time .....                              | < 300µ sec.                      |
| Output Voltage Adjustment Range , %Vo .....      | 90% - 110%                       |
| Ripple & Noise, 20MHz BW                         |                                  |
| 1.8V & 2.5V & 3.3V & 5V .....                    | 20mV RMS, max. 75mV pk-pk, max.  |
| 12V & 15V .....                                  | 20mV RMS, max. 100mV pk-pk, max. |
| Temperature Coefficient.....                     | ±0.02% / C                       |
| Output Line Regulation <sup>1</sup> .....        | ±0.5% max.                       |
| Output Load Regulation <sup>2</sup> .....        | ±0.5% max.                       |
| Output Over Voltage Clamp Range , % Vo nom. .... | 115-140%                         |
| Output Current Limit, % Nominal Output .....     | 110% -150%                       |
| Output Short Circuit Protection .....            | Continuous ( hiccup mode ).      |

#### GENERAL SPECIFICATIONS:

|  |  |
|--|--|
| Efficiency.....                                  | See Table                                      |
| Isolation Voltage .....                          | Input/Output..... 1500VDC max.                 |
| Isolation Resistance .....                       | 10 <sup>9</sup> ohm min.                       |
| Switching Frequency .....                        | 300KHz, Typ                                    |
| Operating Ambient Temperature <sup>3</sup> ..... | -40°C to +71°C                                 |
| Storage Temperature .....                        | -55°C to +125°C                                |
| Thermal Shutdown Case Temp.....                  | 120°C Typ.                                     |
| Dimensions .....                                 | 2.0 x 1.6 x 0.40 inches<br>(50.8x40.6x10.2 mm) |

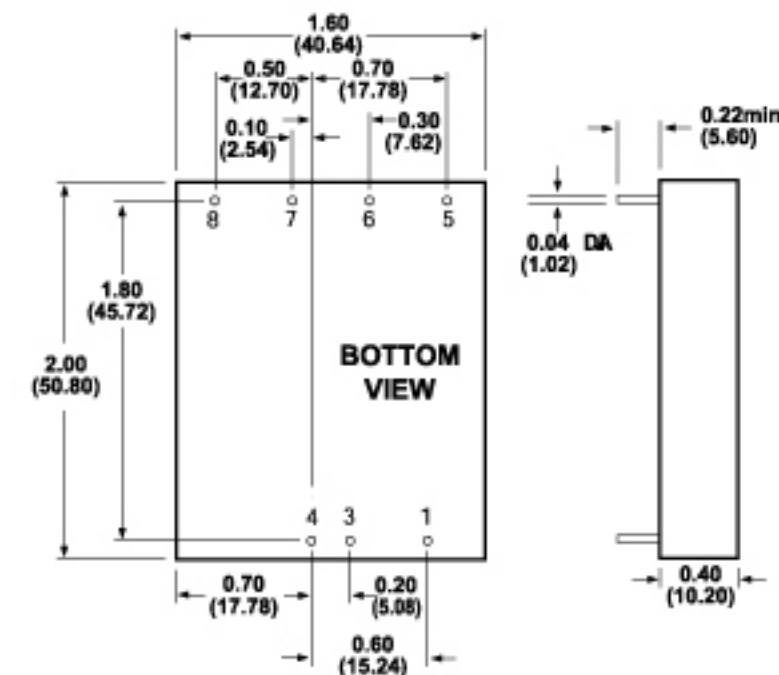
#### NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to 10% Load
3. Logic Compatibility .... CMOS or Open Collector TTL, ref. to -Vin  
Module ON ..... > +2Vdc or Open Circuit  
Module OFF ..... < 1.2Vdc
4. Suffix 'N' to the Model Number with Negative Logic Remote ON/OFF  
Module ON ..... < 1.2Vdc  
Module OFF ..... > +2Vdc or Open Circuit
5. Derating, Above 60°C ..... Linearly to Zero power at 100°C

### Mechanical Specification

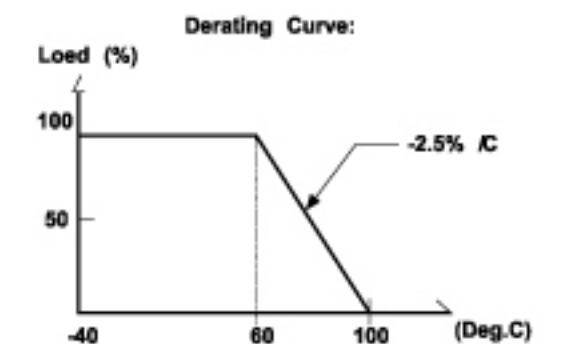
All Dimensions In Inches(mm)

Tolerances Inches .XX±.04 .XXX±.010



#### PIN CONNECTION

| Pin | Function       |
|-----|----------------|
| 1.  | On/Off Control |
| 3.  | -V Input       |
| 4.  | +V Input       |
| 5.  | Trim           |
| 6.  | -V Output      |
| 7.  | +V Output      |
| 8.  | No Pin         |



a. Operating Temperature: -40°C to 60°C ----> without derating  
b. Operating Temperature: -60°C to 100°C ----> derating (-2.5%/C)

#### External Output Trim

