

10 WATT 4:1 INPUT DC-DC CONVERTERS



Features:

- 10W Isolated Output
- Efficiency to 86%
- 4:1 INPUT RANGE
- Regulated Outputs
- Input under-voltage Protection
- Remote ON/OFF
- Continuous Short Circuit Protection
- Without Tantalum Capacitors inside

Electrical Characteristics:

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT | | INPUT CURRENT | | %EFF | SIZE |
|--------------|---------------|----------------|----------------|----------|---------------|-----------|------|-------|
| | | | MIN | MAX | NO LOAD | FULL LOAD | | |
| EC2SBW-24S33 | 9-36 VDC | 3.3VDC | 0 mA | 2500 mA | 5 mA | 425 mA | 81 | 1"x1" |
| EC2SBW-24S05 | 9-36 VDC | 5VDC | 0 mA | 2000 mA | 5 mA | 496 mA | 84 | 1"x1" |
| EC2SBW-24S12 | 9-36 VDC | 12VDC | 0 mA | 835mA | 10 mA | 486 mA | 86 | 1"x1" |
| EC2SBW-24S15 | 9-36 VDC | 15VDC | 0 mA | 666mA | 10mA | 486 mA | 86 | 1"x1" |
| EC2SBW-24D05 | 9-36 VDC | ± 5 VDC | 0 mA | ±1000 mA | 10mA | 496 mA | 84 | 1"x1" |
| EC2SBW-24D12 | 9-36 VDC | ± 12 VDC | 0 mA | ±416mA | 10 mA | 486 mA | 86 | 1"x1" |
| EC2SBW-24D15 | 9-36 VDC | ± 15 VDC | 0 mA | ±333mA | 10 mA | 486 mA | 86 | 1"x1" |
| EC2SBW-48S33 | 18-75 VDC | 3.3 VDC | 0 mA | 2500 mA | 5 mA | 210 mA | 82 | 1"x1" |
| EC2SBW-48S05 | 18-75 VDC | 5 VDC | 0 mA | 2000 mA | 5 mA | 248mA | 84 | 1"x1" |
| EC2SBW-48S12 | 18-75 VDC | 12 VDC | 0 mA | 835mA | 5 mA | 243 mA | 86 | 1"x1" |
| EC2SBW-48S15 | 18-75 VDC | 15VDC | 0 mA | 666mA | 5 mA | 243 mA | 86 | 1"x1" |
| EC2SBW-48D05 | 18-75 VDC | ± 5 VDC | 0 mA | ±1000mA | 5 mA | 248 mA | 84 | 1"x1" |
| EC2SBW-48D12 | 18-75 VDC | ± 12 VDC | 0 mA | ±416mA | 8 mA | 243 mA | 86 | 1"x1" |
| EC2SBW-48D15 | 18-75 VDC | ± 15 VDC | 0 mA | ±333mA | 8 mA | 243 mA | 86 | 1"x1" |

NOTE: 1. Nominal Input Voltage 24 or 48 VDC

Specification

INPUT SPECIFICATIONS:

| | | |
|---|------------------------|--|
| Input Voltage Range..... | 24V..... | 9-36V |
| | 48V..... | 18-75V |
| Under voltage lockout | 24Vin power up | 8.8V typ |
| | 24Vin power down | 8.0V typ |
| | 48Vin power up | 17V typ |
| | 48Vin power down | 16V typ |
| Input Filter | | LC Type |
| Positive Logic Remote on/off Control : (Note 3) | | |
| Logic Compatibility | | CMOS or Open Collector TTL, ref. to -Vin |
| Module ON | | >+3.5V to 36VDC or Open Circuit |
| Module OFF | | <1.2VDC |

OUTPUT SPECIFICATIONS:

| | |
|--|---------------------------------------|
| Voltage Accuracy | ±1.5% max |
| Voltage Balance(Dual) | ±1.0% max |
| Transient Response: 75% ~ 100% Step Load Change. | |
| Error Band | ±5% Vout nominal, Recovery Time |
| Ripple & Noise, 20MHz BW (note5) | |
| | Vo=3.3 & 5V 75mV p-p max |
| | Vo=12 & 15V 100mV p-p max |
| Temperature Coefficient | ±0.03%/C max |
| Module OFF | >+3.5V to 75VDC or Open Circuit |
| Short Circuit Protection | Continuous |
| Line Regulation(Note1), | ±0.5% max |
| Load Regulation(Note2) ... Single | ±0.5% max |
| Dual | ±1.0% max |
| Cross Regulation(Dual output) Load cross variation 25%/100%..... | ±5% max |
| Over Voltage Protection | Zener or TVS Clamp |
| External Trim Adj. Range (single output models only) | ±10% |

Specification

GENERAL SPECIFICATIONS:

| | |
|--|--|
| Efficiency..... | See Table |
| Isolation Voltage | 1500VDC min |
| Isolation Resistance | 10 ⁹ ohm min. |
| Switching Frequency | 100KHz typ. |
| Operating Ambient Temperature Range..... | -40°C to +85°C |
| Derating, Above 71°C | Linearly to Zero Power at +105°C |
| Case Temperature (note 6)..... | 105°C max |
| Humidity..... | 95% RH max. Non condensing |
| Cooling..... | Natural Convection |
| Storage Temperature Range | -55°C to +125°C |
| Dimensions | 1.00x1.00x0.4 inches (25.4x25.4x10.2mm) |
| Case Material | Black Coated Copper with Non-Conductive Base |
| Weight..... | 18.4g |

NOTE:

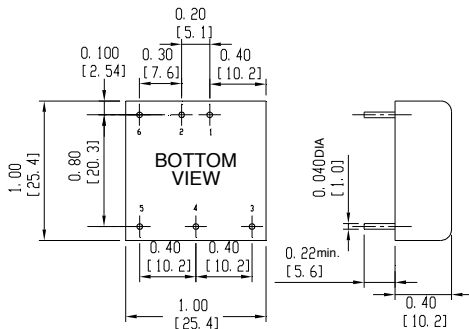
1. Measured From High Line to Low Line
2. Measured From Full Load to min. Load
3. Suffix "N" to the Model Number with Negative Logic Remote ON/OFF

| | |
|------------------|---------------------------------|
| Module ON | <1.2VDC |
| Module OFF | >+3.5V to 75VDC or Open Circuit |
4. The output ripple and noise is measured with 10uF tantalum and 1uF Ceramic capacitor across output.
5. Maximum case temperature under any operating condition should Not be exceeded 105°C

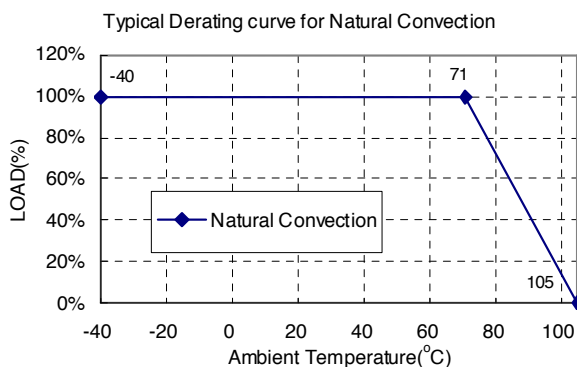
SIZE SB Dimensions

SIZE SB Dimensions:

Tolerances Inches: X.XX= ±0.04 , X.XXX= ±0.010
 Millimeters: X.X= ±1.0 , X.XX=±0.25



| Pin | PIN CONNECTION | |
|-----|----------------|-----------|
| | DIP Function | |
| 1 | +Input | +Input |
| 2 | -Input | -Input |
| 3 | +V Output | +V Output |
| 4 | Trim | Common |
| 5 | -V Output | -V Output |
| 6 | Remote | Remote |



EXTERNAL OUTPUT TRIM

