



EC2SB SERIES 10 WATT 2:1 INPUT DC-DC CONVERTERS

FEATURES

- * 10W Isolated Output
- * Efficiency to 87%
- * 2:1 INPUT RANGE
- * Regulated Outputs
- * Fixed Switching Frequency
- * Input under-voltage Protection
- * Over Current Protection
- * Remote ON/OFF
- * Continuous Short Circuit Protection
- * Without Tantalum Capacitors inside



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	Cap. Load max.
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC2SB -12S33	9-18 VDC	3.3 VDC	0 mA	2500 mA	25 mA	838 mA	82	2470uF
EC2SB -12S05	9-18 VDC	5 VDC	0 mA	2000 mA	25 mA	980 mA	85	2000uF
EC2SB -12S12	9-18 VDC	12 VDC	0 mA	833 mA	25 mA	957 mA	87	940uF
EC2SB -12S15	9-18 VDC	15 VDC	0 mA	666 mA	25 mA	956 mA	87	690uF
EC2SB -24S33	18-36 VDC	3.3 VDC	0 mA	2500 mA	20 mA	419 mA	82	2470uF
EC2SB -24S05	18-36 VDC	5 VDC	0 mA	2000 mA	20 mA	490 mA	85	2000uF
EC2SB -24S12	18-36 VDC	12 VDC	0 mA	833 mA	20 mA	478 mA	87	940uF
EC2SB -24S15	18-36 VDC	15 VDC	0 mA	666 mA	20 mA	478 mA	87	690uF
EC2SB -48S33	36-75 VDC	3.3 VDC	0 mA	2500 mA	20 mA	212 mA	81	2470uF
EC2SB -48S05	36-75 VDC	5 VDC	0 mA	2000 mA	20 mA	245 mA	85	2000uF
EC2SB -48S12	36-75 VDC	12 VDC	0 mA	833 mA	20 mA	239 mA	87	940uF
EC2SB -48S15	36-75 VDC	15 VDC	0 mA	666 mA	20 mA	239 mA	87	690uF

NOTE: 1. Nominal Input Voltage 12, 24 or 48 VDC

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range 12V 9 - 18V
 24V 18 - 36V
 48V 36 - 75V

Under voltage lockout 12Vin power up: 9V, power down: 8V
 24Vin power up: 17V, power down: 16V
 48Vin power up: 34V, power down: 32V

Input Surge Voltage (100mS max.)..... EC2SB-12Sxx ...25Vdc max.
 EC2SB-24Sxx...50Vdc max.
 EC2SB-48Sxx...100Vdc max.

Input Filter PI Type

Positive Logic Remote on/off Control :

Logic Compatibility CMOS or Open Collector TTL

Module ON >+5.5V to 75VDC or Open Circuit

Module OFF <1.2VDC

OUTPUT SPECIFICATIONS:

Voltage Accuracy ±1.5% max.

Transient Response: 25% Step Load Change <500u sec.

Ripple and Noise, 20MHz BW(Note 3) 50mV p-p max.
 SMD Type100mV p-p max.

Temperature Coefficient ±0.03%/C max.

Short Circuit Protection Continuous

Line Regulation, Note1 ±0.2% max.
 SMD Type ±0.3% max.

Load Regulation, Note2 ±0.2% max.
 SMD Type ±0.5% max.

Over Voltage Protection Zener or TVS Clamp

External Trim Adj. Range ±10%

Current Limit 110% - 140% Nominal Output

Start up time T.B.D.

GENERAL SPECIFICATIONS:

Efficiency See Table

Isolation Voltage 1500 VDC min.

Isolation Resistance 10⁹ Ohms min.

Switching Frequency 350KHz typ.

Operating Ambient Temperature Range..... -40°C to +85°C

Derating, Above 71°C Linearly to Zero Power at +105°C

Case Temperature (Note 4) 105°C

Cooling Natural Convection

Storage Temperature Range -55°C to +125°C

Humidity.....95% RH max. Non condensing

MTBF MIL-STD-217-F..... T.B.D.hrs

Dimensions 1.00x1.00x0.4 inches (25.4x25.4x10.2mm)
 SMD Type ... 1.00x1.00x0.36 inches (25.4 x 25.4 x 9.2mm)

Case Material Black Coated Copper with Non-Conductive Base

Weight.....18.4g

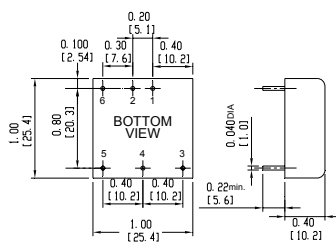
NOTE :

1. Measured From High Line to Low Line
2. Measured From Full Load to min. Load
3. The output ripple and noise is measured with 10uF tantalum and 1uF Ceramic capacitor across output.
4. Maximum case temperature under any operating condition should Not be exceeded 105°C.

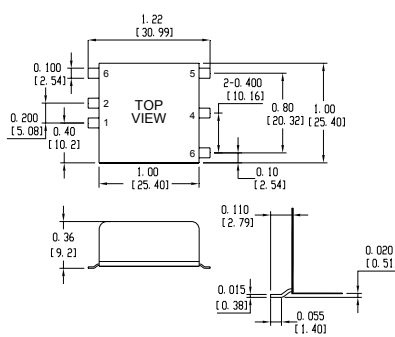
SIZE SB Dimensions:

All Dimensions In Inches (mm)
 Tolerances Inches: X.XX= ±0.04 , X.XXX= ±0.010
 Millimeters: X.X= ±1.0 , X.XX=±0.25

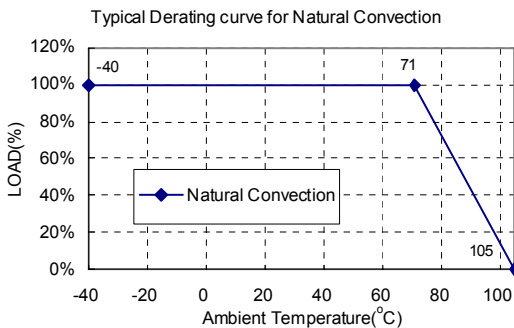
THROUGH-HOLE PACKAGE



SMD - PACKAGE



Pin	Function	
	Single	Dual
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

