



# EC3SB SERIES 15 WATT 2:1 INPUT DC-DC CONVERTERS

## FEATURE

- \* 15W Isolated Output
- \* Efficiency to 90%
- \* 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

## EC3SB Series

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	SIZE
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC3SB -12S33	9-18 VDC	3.3 VDC	0 mA	4000 mA	90 mA	1280 mA	85	1"x1"
EC3SB -12S05	9-18 VDC	5 VDC	0 mA	3000 mA	85 mA	1453 mA	88	1"x1"
EC3SB -12S12	9-18 VDC	12 VDC	0 mA	1250 mA	70 mA	1420 mA	88	1"x1"
EC3SB -12S15	9-18 VDC	15 VDC	0 mA	1000 mA	70 mA	1420 mA	88	1"x1"
EC3SB -24S33	18-36 VDC	3.3 VDC	0 mA	4000 mA	50 mA	640 mA	86	1"x1"
EC3SB -24S05	18-36 VDC	5 VDC	0 mA	3000 mA	50 mA	718 mA	89	1"x1"
EC3SB -24S12	18-36 VDC	12 VDC	0 mA	1250 mA	20 mA	695 mA	90	1"x1"
EC3SB -24S15	18-36 VDC	15 VDC	0 mA	1000 mA	20 mA	695 mA	90	1"x1"
EC3SB -48S33	36-75 VDC	3.3 VDC	0 mA	4000 mA	25 mA	320 mA	86	1"x1"
EC3SB -48S05	36-75 VDC	5 VDC	0 mA	3000 mA	30 mA	359 mA	88	1"x1"
EC3SB -48S12	36-75 VDC	12 VDC	0 mA	1250 mA	20 mA	347 mA	90	1"x1"
EC3SB -48S15	36-75 VDC	15 VDC	0 mA	1000 mA	20 mA	351 mA	90	1"x1"

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:

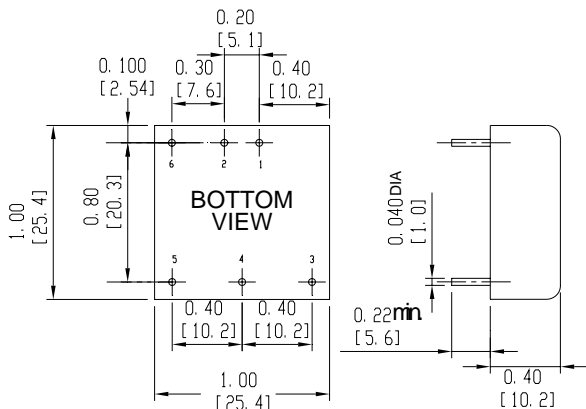
Input Voltage Range	12V	9 - 18V
	24V	18 - 36V
	48V	36 - 75V
Under voltage lockout	12Vin power up	9V
	12Vin power down	8V
	24Vin power up	17V
	24Vin power down	16V
	48Vin power up	34V
	48Vin power down	32V
Input Filter	PI Type	
Positive Logic Remote on/off Control :		
Logic Compatibility	CMOS or Open Collector TTL	
Module ON	>+5.5V to 75VDC or Open Circuit	
Module OFF	<1.2VDC	

## OUTPUT SPECIFICATIONS:

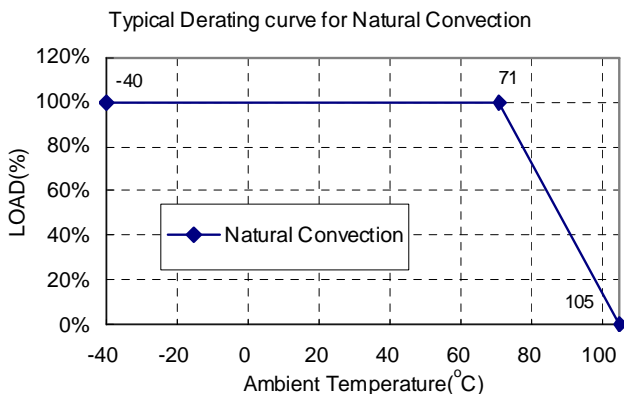
Voltage Accuracy	±1.5% max.
Transient Response: 25% Step Load Change	<500u sec.
Ripple and Noise, 20MHz BW	Vo=3.3 & 5V ..... 50mV p-p max.
	Vo=12 & 15V .... 50mV p-p max.
Temperature Coefficient	±0.03%/C max.
Short Circuit Protection	Continuous
Line Regulation, Note1	±0.2% max.
Load Regulation, Note2	±0.2% max.
Over Voltage Protection	Zener or TVS Clamp
External Trim Adj. Range	±10%
Current Limit	110% - 140% Nominal Output

## SIZE SB Dimensions:

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



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



## GENERAL SPECIFICATIONS:

Efficiency	See Table
Isolation Voltage	1500 VDC min.
Isolation Resistance	10 <sup>9</sup> Ohms min.
Switching Frequency	350KHz typ.
Operating Ambient Temperature Range	-40°C to +85°C
Derating, Above 71°C	Linearly to Zero Power at +100°C
Case Temperature (note 6)	105°C
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. 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.

## EXTERNAL OUTPUT TRIM

