

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



Features:

- 15W Isolated Output
- Efficiency to 90%
- 2:1 Input Range
- Regulated Outputs
- Remote On/Off
- Fixed Switching Frequency
- Over Current Protection
- Continuous Short Circuit Protection
- Input Under Voltage Protection
- Without Tantalum Capacitors inside

Electrical Characteristics:

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		%EFF	Cap. Load Max
			MIN	MAX	NO LOAD	FULL LOAD		
EC3SB -12S33	9-18 VDC	3.3 VDC	0 mA	4000 mA	90 mA	1280 mA	85	4000uF
EC3SB -12S05	9-18 VDC	5 VDC	0 mA	3000 mA	85 mA	1453 mA	88	3000uF
EC3SB -12S12	9-18 VDC	12 VDC	0 mA	1250 mA	70 mA	1420 mA	88	1330uF
EC3SB -12S15	9-18 VDC	15 VDC	0 mA	1000 mA	70 mA	1420 mA	88	1000uF
EC3SB -24S33	18-36 VDC	3.3 VDC	0 mA	4000 mA	50 mA	640 mA	86	4000uF
EC3SB -24S05	18-36 VDC	5 VDC	0 mA	3000 mA	50 mA	718 m	89	3000uF
EC3SB -24S12	18-36 VDC	12 VDC	0 mA	1250 mA	20 mA	695 mA	90	1330uF
EC3SB -24S15	18-36 VDC	15 VDC	0 mA	1000 mA	20 mA	695 mA	90	1000uF
EC3SB -48S33	36-75 VDC	3.3 VDC	0 mA	4000 mA	25 mA	320 mA	86	4000uF
EC3SB -48S05	36-75 VDC	5 VDC	0 mA	3000 mA	30 mA	359 mA	88	3000uF
EC3SB -48S12	36-75 VDC	12 VDC	0 mA	1250 mA	20 mA	347 mA	90	1330uF
EC3SB -48S15	36-75 VDC	15 VDC	0 mA	1000 mA	20 mA	351 mA	90	1000uF

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

Specification

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.).....	EC3SB-12Sxx ...	25Vdc max
	EC3SB-24Sxx ...	50Vdc max
	EC3SB-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 & Noise, 20MHz BW.....	50mV pk-pk, max	
	SMD Type	100mV p-p max
Temperature Coefficient.....	±0.03%/°C	
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	1500VDC min	
Isolation Resistance.....	10 ⁹ ohms min	
Switching Frequency.....	350KHz, min	
Operating Ambient Temperature Range	-40°C to +85°C	
De-rating, Above 71°C.....	Linearly to Zero power at 105°C	
Case Temperature ..(note4).....	105°C	
Cooling	Natural Convection	
Storage Temperature Range.....	-55°C to + 125°C	
Humidity.....	95% RH max. Non condensing	
MTBF	MIL-STD-217F,	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	

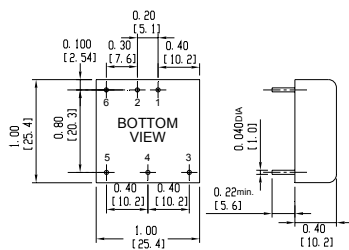
NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to 10% 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.

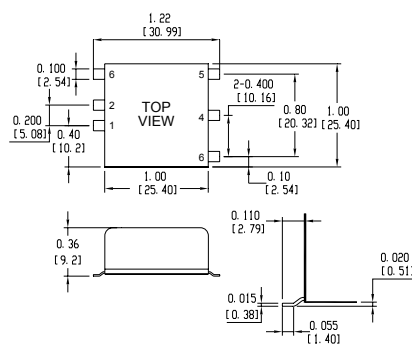
SIZE SB Dimensions

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

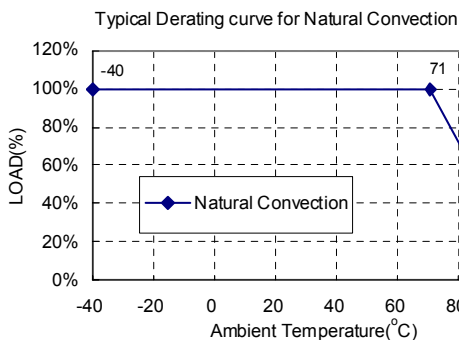
THROUGH-HOLE PACKAGE



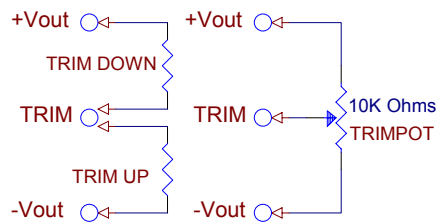
SMD- PACKAGE



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



Data sheets are subject to change without notice