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

FEATURES

* 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

MODEL NUMBER	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 mA	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

SPECIFICATIONS

All Specifications Typical At Nominal Line, Full Load, and 25℃ 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.)..... 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 and Noise, 20MHz BW(Note 3) ..... 50mV p-p max.
SMD Type .....100mV 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 ..... 10^9 Ohms min.
Switching Frequency ..... 350KHz typ.
Operating Ambient Temperature Range..... -40℃ to +85℃
Derating, Above 71℃ ..... Linearly to Zero Power at +105℃
Case Temperature (Note 4) ..... 105℃
Cooling ..... Natural Convection
Storage Temperature Range ..... -55℃ to +125℃
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

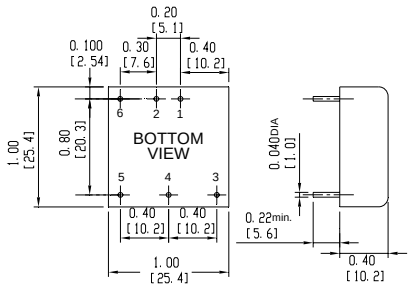
NOTE :

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℃.

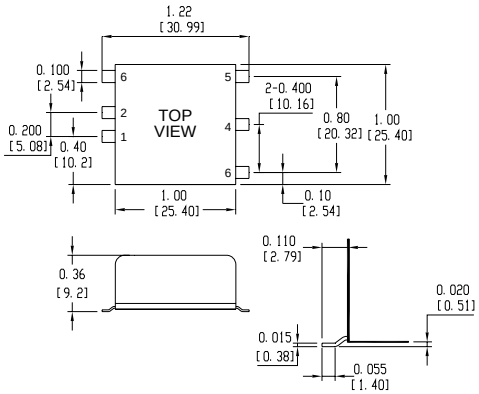
SIZE SB Dimensions:

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

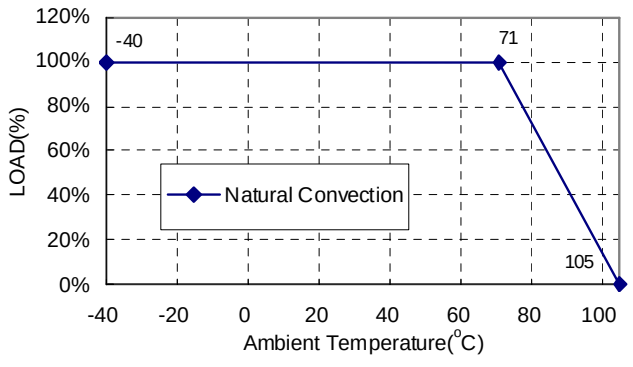


SMD- PACKAGE



PIN CONNECTION		
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

Typical Derating curve for Natural Convection



EXTERNAL OUTPUT TRIM