

EC3SA

SERIES

3 WATT REGULATED
DC-DC CONVERTERS

NEW





Features

- 3W Isolated Output
 - SIP-8 Package
 - Efficiency to 86%
 - 2:1 Input Range
- Regulated Outputs
 - Remote On/Off Control
 - 1500VDC Isolation
 - Continuous Short Circuit Protection

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	CASE
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC3SA-05S33	4.5-9.0 VDC	3.3VDC	0 mA	700 mA	60 mA	632 mA	73	SIP-8
EC3SA-05S05		5VDC	0 mA	600 mA		769 mA	78	
EC3SA-05S12		12VDC	0 mA	250 mA		759 mA	81	
EC3SA-05S15		15VDC	0 mA	200 mA		741 mA	81	
EC3SA-05D05		±5VDC	±0 mA	±300 mA		769 mA	78	
EC3SA-05D12		±12VDC	±0 mA	±125 mA		741 mA	81	
EC3SA-05D15		±15VDC	±0 mA	±100 mA		741 mA	81	
EC3SA-12S33	9-18 VDC	3.3VDC	0 mA	700 mA	30 mA	253 mA	76	SIP-8
EC3SA-12S05		5VDC	0 mA	600 mA		309 mA	81	
EC3SA-12S12		12VDC	0 mA	250 mA		301 mA	83	
EC3SA-12S15		15VDC	0 mA	200 mA		298 mA	84	
EC3SA-12D05		±5VDC	±0 mA	±300 mA		305 mA	82	
EC3SA-12D12		±12VDC	±0 mA	±125 mA		301 mA	83	
EC3SA-12D15		±15VDC	±0 mA	±100 mA		298 mA	84	
EC3SA-24S33	18-36 VDC	3.3VDC	0 mA	700 mA	18 mA	125 mA	77	SIP-8
EC3SA-24S05		5VDC	0 mA	600 mA		154 mA	81	
EC3SA-24S12		12VDC	0 mA	250 mA		149 mA	84	
EC3SA-24S15		15VDC	0 mA	200 mA		147 mA	85	
EC3SA-24D05		±5VDC	±0 mA	±300 mA		156 mA	80	
EC3SA-24D12		±12VDC	±0 mA	±125 mA		149 mA	84	
EC3SA-24D15		±15VDC	±0 mA	±100 mA		147 mA	85	
EC3SA-48S33	36-75 VDC	3.3VDC	0 mA	700 mA	9 mA	63mA	77	SIP-8
EC3SA-48S05		5VDC	0 mA	600 mA		77 mA	81	
EC3SA-48S12		12VDC	0 mA	250 mA		73 mA	86	
EC3SA-48S15		15VDC	0 mA	200 mA		73 mA	86	
EC3SA-48D05		±5VDC	±0 mA	±300 mA		77 mA	81	
EC3SA-48D12		±12VDC	±0 mA	±125 mA		73 mA	86	
EC3SA-48D15		±15VDC	±0 mA	±100 mA		73 mA	86	

NOTE: 1. Nominal Input Voltage 5, 12, 24 or 48 VDC

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range..... 5V.....4.5-9V
12V.....9-18V
24V.....18-36V
48V.....36-75V
Input Filter.....Capacitive
Remote on/off control :
Module On.....< 1.2VDC or Open Circuit
Module Off.....5.5...15VDC
Module Off (input idle current).....1mA max.

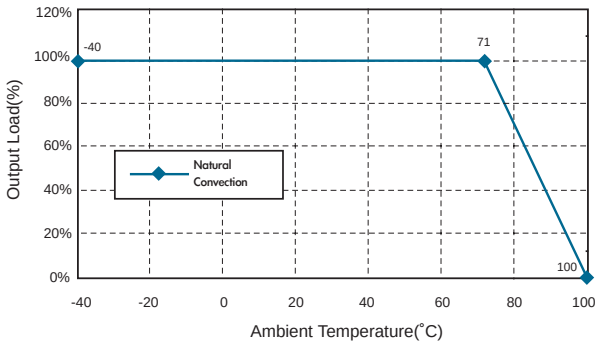
OUTPUT SPECIFICATIONS:

Voltage Accuracy : ±1.5% max.
Voltage Balance(Dual) ±1.0% max.
Cross regulation(Dual)¹.....Asymmetrical load 25%/100%.....±5.0% max.
Transient Response: 25% Step Load Change
Error Band ±6% Vout nominal
Recovery Time< 500us
Ripple & Noise, 20MHz BW..... 75mV pk-pk, max.
Temperature Coefficient..... ±0.03%/°C
Line Regulation² ±0.5% max.
Load Regulation³.....Single..... ±0.5% max.
Dual..... ±1.0% max.
Output Short Circuit Protection Continuous

GENERAL SPECIFICATIONS:

Efficiency.....See Table
Isolation Voltage1500VDC min.
Isolation Resistance10^9 ohm min.
Switching Frequency100KHz min.
Operating Ambient Temperature..... -40°C to +85°C
De-rating, Above 71°C Linearly to Zero power at 100°C
Case Temperature⁴..... 100°C max.
Cooling.....Natural Convection
Storage Temperature -55°C to +125°C
Dimensions0.86×0.36×0.44 inches(21.80×9.20×11.10 mm)
Case Material Non-Conductive Black Plastic
Weight.....4.8g

EC3SA Series Derating Curve



Ambient Temperature (°C)	Output Load (%)
-40	100
71	100
100	0

NOTE:

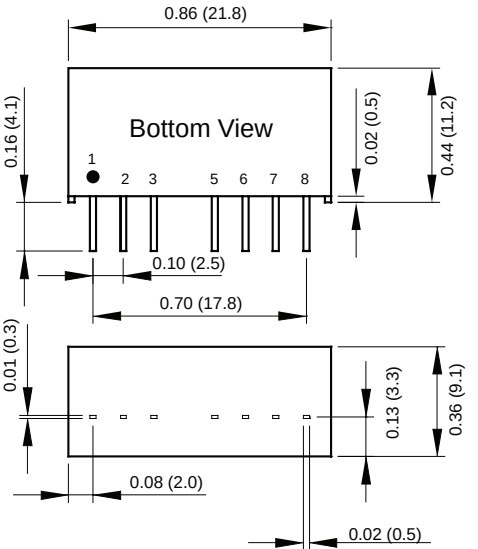
1. For asymmetric loading, Both channels must be at 25% load or more.
2. Measured From High Line to Low Line
3. Measured From Full Load to 10% Load
4. Maximum case temperature under any operating condition should not exceed 100°C.

PIN CONNECTION

Pin	Single Output	Dual Output
1	-V Input	-V Input
2	+V Input	+V Input
3	CTRL	CTRL
5	NC	NC
6	+V Output	+V Output
7	-V Output	Common
8	NC	-V Output

CASE A

All Dimensions In Inches(mm)
Tolerance Inches: .xx= ±.02, .xxx= ±.002
Millimeters: .x= ±.5, .xx= ±.05



Top View Dimensions: 0.86 (21.8) x 0.44 (11.2) inches. Pin pitch: 0.10 (2.5) inches. Pin 1 location: 0.16 (4.1) inches from left edge.

Bottom View Dimensions: 0.70 (17.8) x 0.36 (9.1) inches. Pin pitch: 0.08 (2.0) inches. Pin 1 location: 0.01 (0.3) inches from left edge.

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