DC DC

Part Num

EC3SA SERIES

3 WATT REGULATED DC-DC CONVERTERS

RoHS

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

Electrical Characteristics:

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		%EFF	SIZE
			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

Specification

INPUT SPECIFICATIONS:

Input Voltage Range.....5V.....4.5-9V
12V.....9-18V
24V.....18-36V
48V.....36-72V

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

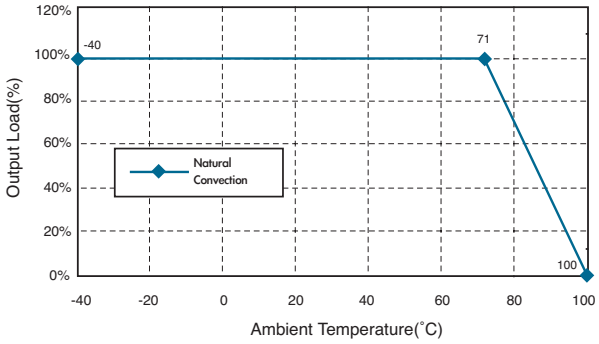
OUTPUT SPECIFICATIONS:

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 Voltage .....1500VDC min
Isolation Resistance.....10.9ohms
Switching Frequency.....100KHz, min
Operating Ambient Temperature Range .....-40˚C to +85˚C
De-rating, Above 71˚C.....Linearly to Zero power at 95˚C
Case Temperature .....100˚C max
Cooling …… Natural Convection
Storage Temperature Range.....-55°C to + 125°C
Dimensions ……..0.86×0.36x0.44 inches(21.80x9.20×11.10 mm)
Case Material …….. Non-Conductive Black Plastic
Weight……..4.8g

EC3SA Series Derating Curve



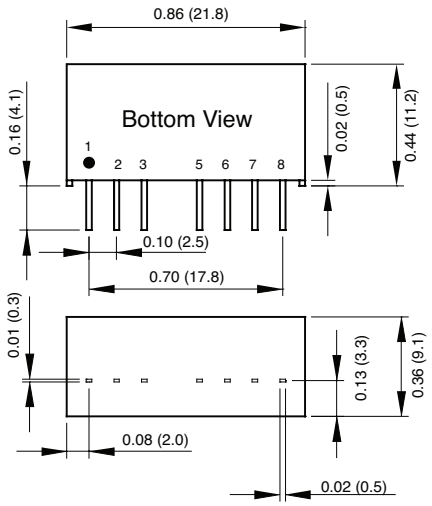
NOTE:

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



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

Data sheets are subject to change without notice