

EC2SA

SERIES

2 WATT REGULATED
DC-DC CONVERTERS



Features

- 2W Isolated Output
 - SIP-8 Package
 - Efficiency to 83%
 - 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		
EC2SA-05S33	4.5-9.0 VDC	3.3VDC	0 mA	500 mA	60 mA	458 mA	72	SIP-8
EC2SA-05S05		5VDC	0 mA	400 mA		526 mA	76	
EC2SA-05S12		12VDC	0 mA	167 mA		507 mA	79	
EC2SA-05S15		15VDC	0 mA	134 mA		503 mA	80	
EC2SA-05D05		±5VDC	±0 mA	±200 mA		526 mA	76	
EC2SA-05D12		±12VDC	±0 mA	±83 mA		498 mA	80	
EC2SA-05D15		±15VDC	±0 mA	±67 mA		503 mA	80	
EC2SA-12S33	9-18 VDC	3.3VDC	0 mA	500 mA	30 mA	186 mA	74	SIP-8
EC2SA-12S05		5VDC	0 mA	400 mA		214 mA	78	
EC2SA-12S12		12VDC	0 mA	167 mA		206 mA	81	
EC2SA-12S15		15VDC	0 mA	134 mA		204 mA	82	
EC2SA-12D05		±5VDC	±0 mA	±200 mA		208 mA	80	
EC2SA-12D12		±12VDC	±0 mA	±83 mA		202 mA	82	
EC2SA-12D15		±15VDC	±0 mA	±67 mA		204 mA	82	
EC2SA-24S33	18-36 VDC	3.3VDC	0 mA	500 mA	18 mA	90 mA	76	SIP-8
EC2SA-24S05		5VDC	0 mA	400 mA		107 mA	78	
EC2SA-24S12		12VDC	0 mA	167 mA		103 mA	81	
EC2SA-24S15		15VDC	0 mA	134 mA		102 mA	82	
EC2SA-24D05		±5VDC	±0 mA	±200 mA		107 mA	78	
EC2SA-24D12		±12VDC	±0 mA	±83 mA		102 mA	81	
EC2SA-24D15		±15VDC	±0 mA	±67 mA		102 mA	82	
EC2SA-48S33	36-75 VDC	3.3VDC	0 mA	500 mA	9 mA	46 mA	74	SIP-8
EC2SA-48S05		5VDC	0 mA	400 mA		53 mA	78	
EC2SA-48S12		12VDC	0 mA	167 mA		51 mA	82	
EC2SA-48S15		15VDC	0 mA	134 mA		50 mA	83	
EC2SA-48D05		±5VDC	±0 mA	±200 mA		53 mA	78	
EC2SA-48D12		±12VDC	±0 mA	±83 mA		50 mA	83	
EC2SA-48D15		±15VDC	±0 mA	±67 mA		51 mA	82	

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



NEW

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).....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 85°C Linearly to Zero power at 100°C

Case Temperature⁴..... 100°C max.

Cooling.....Natural Convection

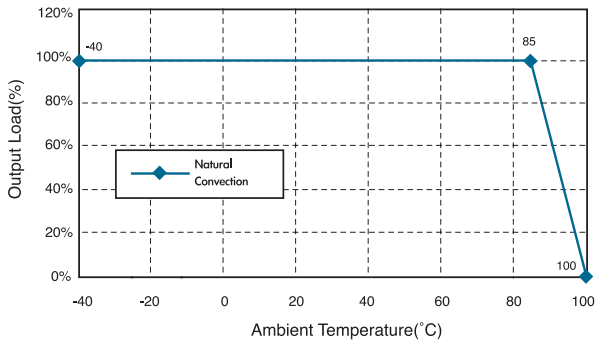
Storage Temperature -55°C to +125°C

Dimensions0.86×0.36×0.44 inches(21.80×9.20×11.10 mm)

Case Material Non-Conductive Black Plastic

Weight.....4.8g

EC2SA Series Derating Curve



NOTE:

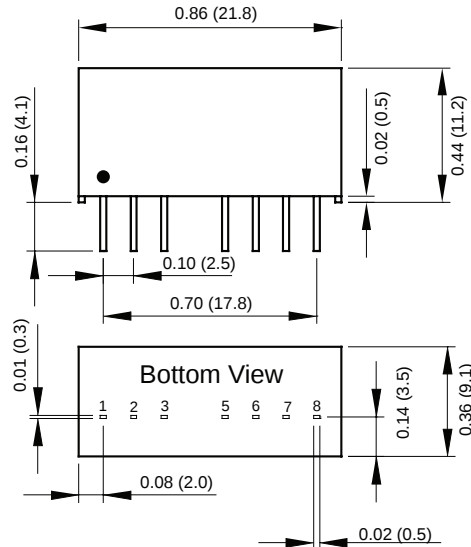
1. For asymmetric loading, Both channels must be at 25% load or more.
2. Measured From High Line to Low Line
3. Measured From Full Load to 10% Load
4. Maximum case temperature under any operating condition should not exceed 100°C.

PIN CONNECTION

Pin	Single Output	Dual Outputs
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.