



# EC2SAN SERIES

## 2WATT, UNREGULATED OUTPUT DC-DC CONVERTERS

### FEATURE

- \* Industry Standard SIP Packages
- \* Efficiency up to 86%
- \* 1000VDC Isolation
- \* Low Cost
- \* Unregulated Outputs
- \* Industry Standard Pinout
- \* Without Tantalum Capacitors inside

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		%	CASE
				NO LOAD	FULL LOAD	EFF.	
EC2SA01N	5 VDC	5 VDC	400 mA	60 mA	488mA	82	SIP-7
EC2SA02N	5 VDC	12 VDC	167 mA	60 mA	466mA	86	SIP-7
EC2SA03N	5 VDC	15 VDC	134 mA	60 mA	473mA	85	SIP-7
EC2SA04N	5 VDC	±12 VDC	±83 mA	60 mA	463mA	86	SIP-7
EC2SA05N	5 VDC	±15 VDC	±67 mA	60 mA	467mA	86	SIP-7
EC2SA06N	5 VDC	±5 VDC	±200 mA	60 mA	482mA	83	SIP-7
EC2SA11N	12 VDC	5 VDC	400 mA	40 mA	203mA	82	SIP-7
EC2SA12N	12 VDC	12 VDC	167 mA	40 mA	201mA	83	SIP-7
EC2SA13N	12 VDC	15 VDC	134 mA	40 mA	199mA	84	SIP-7
EC2SA14N	12 VDC	±12 VDC	±83 mA	40 mA	202mA	82	SIP-7
EC2SA15N	12 VDC	±15 VDC	±67 mA	40 mA	199mA	84	SIP-7
EC2SA16N	12 VDC	±5 VDC	±200 mA	40 mA	203mA	82	SIP-7
EC2SA21N	24 VDC	5 VDC	400 mA	20 mA	105mA	79	SIP-7
EC2SA22N	24 VDC	12 VDC	167 mA	20 mA	103mA	81	SIP-7
EC2SA23N	24 VDC	15 VDC	134 mA	20 mA	102mA	82	SIP-7
EC2SA24N	24 VDC	±12 VDC	±83 mA	20 mA	102mA	81	SIP-7
EC2SA25N	24 VDC	±15 VDC	±67 mA	20 mA	102mA	82	SIP-7
EC2SA26N	24 VDC	±5 VDC	±200 mA	20 mA	105mA	79	SIP-7

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

# SPECIFICATIONS

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

## INPUT SPECIFICATIONS :

Input Voltage Range.....	5V±10%
	12V±10%
	24V±10%
Input Filter .....	Capacitive

## OUTPUT SPECIFICATIONS :

Voltage Accuracy.....	±3.0% max.
Voltage Balance(Dual) .....	±1.0% max.
Ripple and Noise, 20MHz BW.....	150mV p-p max.
Single output, 5V.....	100mVp-p max.
Temperature Coefficient.....	±0.05%/C max.
Short Circuit Protection.....	Momentary 1sec. max.
Line Regulation, Note1.....	±1.2% max.
Load Regulation, Note2.....	±10% max.

## GENERAL SPECIFICATIONS :

Efficiency.....	See Table
Isolation Voltage.....	1000 VDC min.
Isolation Resistance .....	10 <sup>9</sup> Ohms min.
Switching Frequency .....	80KHz typ.
Operating Ambient Temperature Range.....	-40°C to +85°C
De-rating, Above 75°C .....	Linearly to Zero power at 100°C
Case temperature (Note4) .....	+100°C max.
Cooling .....	Natural Convection
Storage Temperature Range .....	-55°C to +125°C
Dimensions .....	0.77 x 0.28 x 0.40inches(19.6x7.2 x 10.2mm)
Case Material.....	Non-conductive black plastic
Weight.....	2.7g

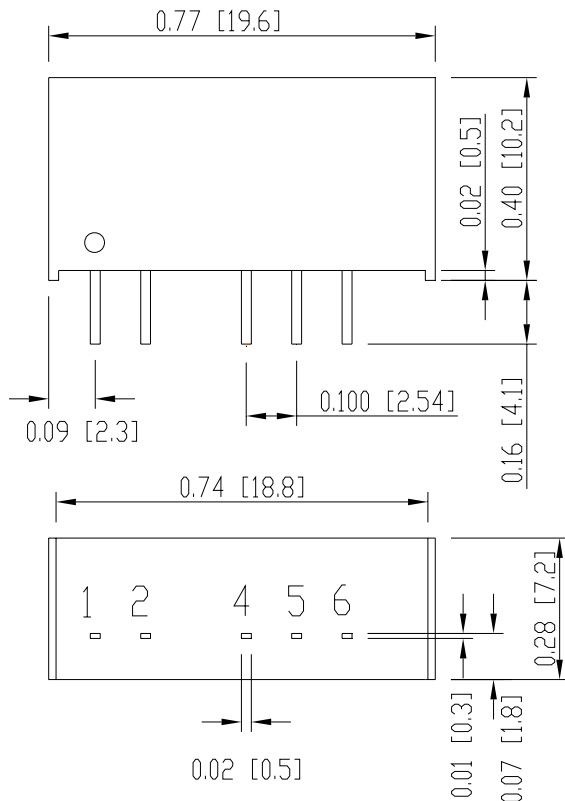
## NOTE :

1. Line regulation is per 1.0% change in input voltage
2. Load regulation is for load change from 100% to 20%
3. The output noise is measured with 0.33uF ceramic capacitor.
4. Maximum case temperature under any operating condition should not be exceeded 100°C.
5. The EC2SA2XN Input Terminal Need to Parallel With 10uF Ceramic Capacitor

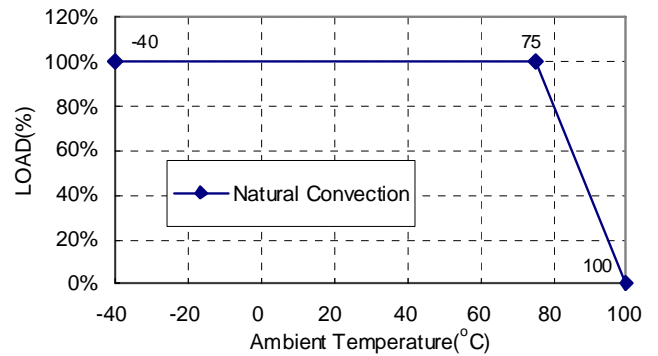
## Dimensions:

### CASE SIP-7

#### SIP PACKAGES



Typical Derating curve for Natural Convection



All Dimensions In Inches(mm)

Tolerance	Inches	Millimeters
	X.XX±0.01	X.X±0.25
	X.XXX±0.005	X.XX±0.13
Pin	±0.002	±0.05

PIN CONNECTION		
Pin	Single Output	Dual Output
1	+Vin	+Vin
2	-Vin	-Vin
4	-Vout	-Vout
5	No Pin	Common
6	+Vout	+Vout