

## 6-24 WATT DC-DC CONVERTERS



### Features:

- 6-24W Non-Isolated Output
- DIP-24 / SMD Package
- Regulated Outputs
- Efficiency to 94%
- LC Input Filter

### Electrical Characteristics:

MODEL Number	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		%EFF.	CASE
				NO LOAD	FULL LOAD		
EC5A-05S33	4.7-6 VDC	3.3 VDC	2000 mA	15 mA	1553 mA	85	DIP-24
EC5A-12S33	9-32 VDC	3.3 VDC	2000 mA	15 mA	655 mA	84	DIP-24
EC5A-12S05	9-32 VDC	5 VDC	2000 mA	15 mA	947 mA	88	DIP-24
EC5A-12S12	9-32 VDC	12 VDC	830 mA	15 mA	954 mA	87	DIP-24
EC5A-12S15	9-32 VDC	15 VDC	666 mA	15 mA	957 mA	87	DIP-24
EC5A-24S12	16-32 VDC	12 VDC	1600 mA	15 mA	860 mA	93	DIP-24
EC5A-24S15	19-32 VDC	15 VDC	1600 mA	15 mA	1064 mA	94	DIP-24

NOTE: 1. Nominal Input Voltage 24 or 48 VDC

## Specification

### INPUT SPECIFICATIONS:

Input Voltage Range.....	5.0V.....	4.7-6V
	12V.....	9-32V
	24V.....	16-32V
	24V.....	19-32V
Input Filter.....		LC Type

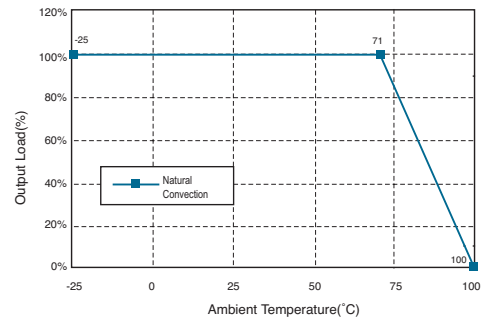
### OUTPUT SPECIFICATIONS:

Voltage Accuracy.....		±2.0% max.
Temperature Coefficient.....		±0.05%/°C
Ripple and Noise, 20MHz BW.....	3.3V/5V.....	100mV p-p max.
	12V/15V.....	1% p-p max.
Over Current Protection.....		120%~160%
Line Regulation1.....		± 0.5% max.
Load Regulation2.....		± 0.5% max.

### GENERAL SPECIFICATIONS:

Efficiency.....		See Table
Switching Frequency.....		150KHz, Typ.
Isolation Voltage (Input/Output).....		Non-Isolation
Operating Ambient Temperature Range.....		-25°C to +71°C
De-rating, Above 71°C.....		Linearly to Zero power at 100°C
Case Temperature4.....		100°C max
Cooling.....		Natural Convection
Storage Temperature Range.....		-40°C to + 100°C
Dimensions.....DIP.....	1.25 x 0.80 x 0.40 inches(31.8 x 20.3 x 10.2mm)	
	SMD.....	1.25 x 0.80 x 0.45 inches(31.8 x 20.3 x 11.4mm)
Weight.....		17.8g

## EC5A Series Derating curve



### NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to 10% Load
3. Suffix "S" to the Model Number with SMD packages
4. Maximum case temperature under any operating condition should not be exceeded 100°C

### PIN CONNECTION

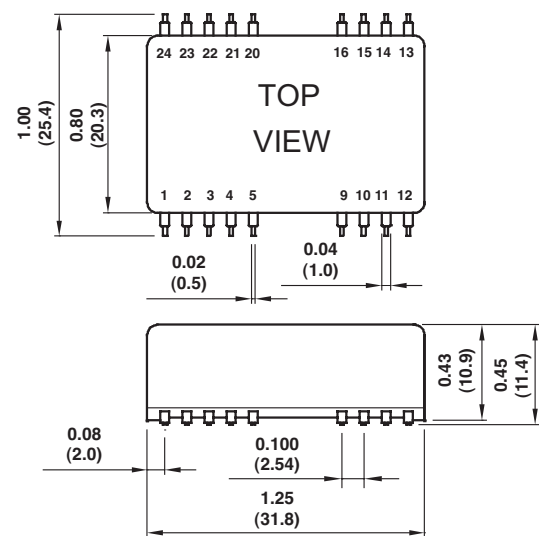
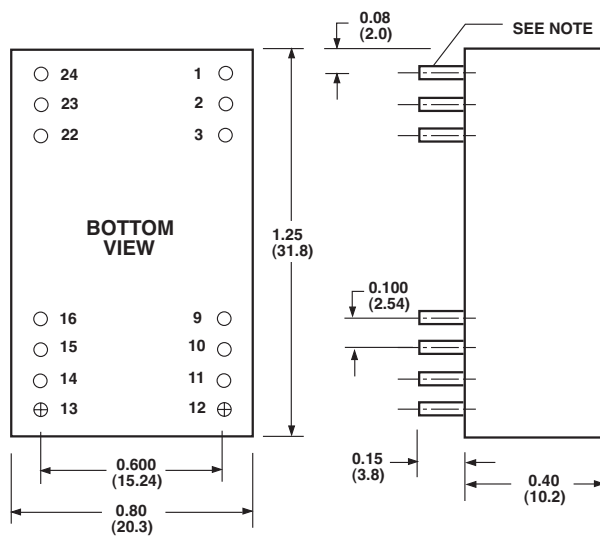
Pin	Function	
	DIP	SMD
1, 24	NP	NC
2, 3	-V Input	
4, 5	NP	NC
9, 16	-V Output	
10, 15	NC	
11, 14	+V Output	
12, 13	NP	NC
20, 21	NP	NC
22, 23	+V Input	

\*NP-NO PIN

\*NC-NO CONNECTION WITH PIN

## Case A

NOTE: Pin Size is 0.02" Inch (0.5mm) DIA  
All Dimensions In Inches(mm)  
Tolerance Inches: x.xx= ±0.02, x.xxx= ±0.010  
Millimeters: x.x= ±0.5, x.xx= ±0.25



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

Data sheets are subject to change without notice