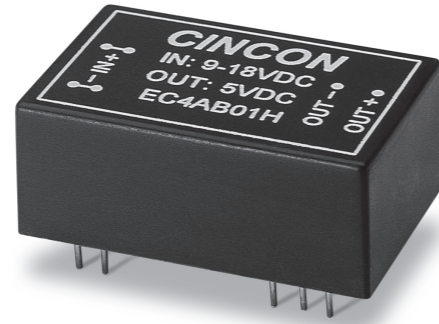


# EC4AB

S E R I E S

## 5-6 WATT EN55022 CLASS B DC-DC CONVERTERS



### Features

- 5-6W Isolated Output
- DIP-24 / SMD Package
- Regulated Outputs
- Efficiency to 84%
- Meets EN55022 Class B, Conducted
- Pi Input Filter
- Continuous Short Circuit Protection
- Remote On/Off Control (Option)

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.	CASE
				NO LOAD	FULL LOAD		
EC4AB01	9-18 VDC	5 VDC	1000 mA	7.5 mA	548 mA	76	DIP-24
EC4AB02		12 VDC	470 mA	7.5 mA	588 mA	80	
EC4AB03		15 VDC	400 mA	7.5 mA	617 mA	81	
EC4AB04		±12 VDC	±230 mA	12 mA	568 mA	81	
EC4AB05		±15 VDC	±190 mA	12 mA	586 mA	81	
EC4AB06		±5 VDC	±500 mA	12 mA	548 mA	76	
EC4AB07		3.3 VDC	1000 mA	7.5 mA	382 mA	72	
EC4AB11	18-36 VDC	5 VDC	1000 mA	5 mA	264 mA	79	DIP-24
EC4AB12		12 VDC	470 mA	5 mA	283 mA	83	
EC4AB13		15 VDC	400 mA	5 mA	298 mA	84	
EC4AB14		±12 VDC	±230 mA	7.5 mA	284 mA	81	
EC4AB15		±15 VDC	±190 mA	7.5 mA	290 mA	82	
EC4AB16		±5 VDC	±500 mA	7.5 mA	264 mA	79	
EC4AB17		3.3 VDC	1000 mA	5 mA	188 mA	73	
EC4AB21	36-72 VDC	5 VDC	1000 mA	2 mA	132 mA	79	DIP-24
EC4AB22		12 VDC	470 mA	2 mA	143 mA	82	
EC4AB23		15 VDC	400 mA	2 mA	154 mA	81	
EC4AB24		±12 VDC	±230 mA	3 mA	142 mA	81	
EC4AB25		±15 VDC	±190 mA	3 mA	148 mA	80	
EC4AB26		±5 VDC	±500 mA	3 mA	132 mA	79	
EC4AB27		3.3 VDC	1000 mA	3 mA	94 mA	73	

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

### Specifications

**INPUT SPECIFICATIONS:**

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

Positive Logic Remote ON/OFF ( see note<sup>1</sup>)

Input Filter.....Pi Type

**OUTPUT SPECIFICATIONS:**

Voltage Accuracy.....±2.0% max.  
 Voltage Balance (Dual).....±1.0% max.  
 Temperature Coefficient.....±0.05%/°C  
 Ripple and Noise, 20MHz BW.....3.3V/5V.....100mV p-p max.  
 12V/15V.....1% p-p max.

Short Circuit Protection.....Continuous

Line Regulation, Single/Dual.....±0.5% max.

Load Regulation, Single.....±0.5% max.  
 Dual.....±1.0% max.

**GENERAL SPECIFICATIONS:**

Efficiency.....See Table

Isolation Resistance.....10<sup>9</sup> Ohms

Switching Frequency.....100KHz, min

Operating Ambient Temperature Range .....-25°C to +71°C  
 De-rating, Above 71°C (Plastic Case).....Linearly to Zero power at 95°C  
 De-rating, Above 71°C (Copper Case).....Linearly to Zero power at 100°C  
 Case Temperature (Plastic case<sup>2</sup>) .....95°C max  
 (Copper case<sup>3</sup>) .....100°C max

Cooling ..... Natural Convection

Storage Temperature Range.....-40°C to +100°C

EMI / RFI.....Conductive EMI Meet EN55022 Class B

Dimensions.....DIP.....1.25 x 0.80 x 0.50 inches(31.8 x 20.3 x 12.7mm)  
 SMD.....1.25 x 0.80 x 0.55 inches(31.8 x 20.3 x 14.0mm)

Weight.....15g

**ISOLATION VOLTAGE:**

500 VDC min.....Standard Models

3K VDC min.....Suffix "H" Models

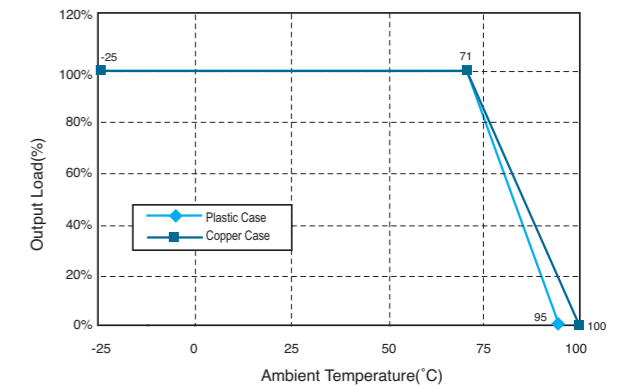
1.5 K VDC min.....Suffix "HM" Models

**CASE MATERIAL:**

Standard Models.....Non-Conductive Black Plastic

Suffix "M" Models.....Black Coated Copper with Non-Conductive Base

### EC4AB Series Derating Curve



#### NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to 10% Load
3. Measured From Full Load to 1/4 Load
4. Non-Conductive Black Plastic Only
5. Suffix "T" to the Model Number with Remote On/Off for "H"/"HM" Versions Only
6. Logic Compatibility .... CMOS or Open Collector TTL, ref. to -Vin
7. Module ON ..... >5.5Vdc or Open Circuit
8. Module OFF ..... <1.8Vdc.
9. Shutdown Idle ..... 10mA
10. Control Common ..... Referenced to Input Minus
11. Suffix "S" to the Model Number with SMD packages
12. Maximum case temperature under any operating condition should not exceed 95°C (Plastic Case), 100°C (Copper Case).

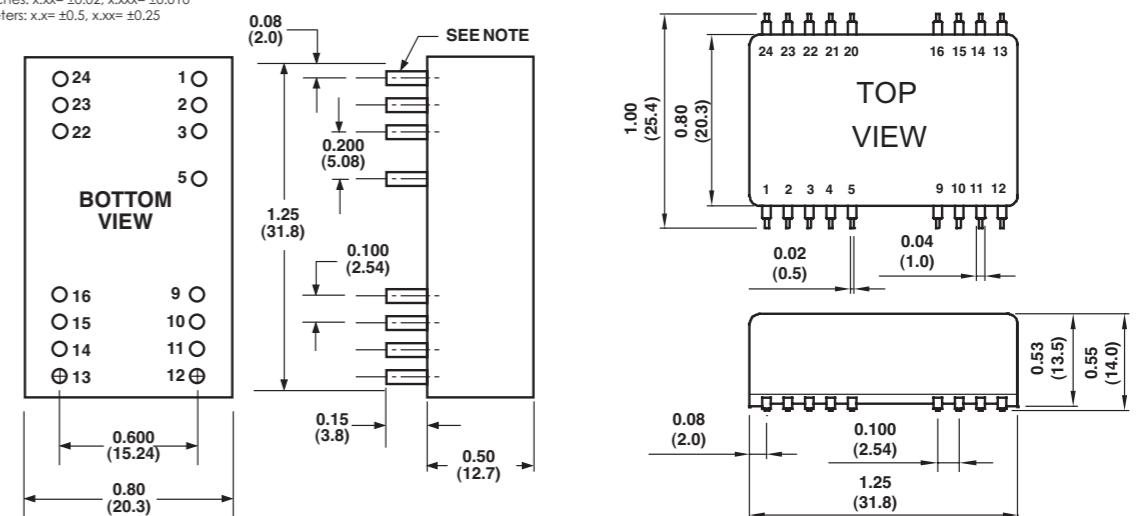
### PIN CONNECTION

Pin	500 VDC				1.5K & 3K VDC			
	Single Output DIP	Dual Output SMD	Single Output DIP	Dual Output SMD	Single Output DIP	Dual Output SMD	Single Output DIP	Dual Output SMD
1,24	+V Input	+V Input	1,24	NP	NC	NP	NC	
2,23	NC	-V Output	2,3	-V Input	-V Input			
3,22	NC	Common	4	NP	NC	NP	NC	
4	NP	NC	NP	NC	NP	NC	NC	
5	NP	NC	NP	NC	9	NC	Common	
9	NP	NC	NP	NC	10,15	NC	NC	
10,15	-V Output	Common	11	NC	-V Output			
11,14	+V Output	+V Output	12,13	NP	NC	NP	NC	
12,13	-V Input	-V Input	14	+V Output	+V Output			
16	NP	NC	NP	NC	16	-V Output	Common	
20	NP	NC	NP	NC	20,21	NP	NC	
21	NP	NC	NP	NC	22,23	+V Input	+V Input	

\*NP-NO PIN \*NC-NO CONNECTION WITH PIN \*Remote On/Off (Option)

### 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.