



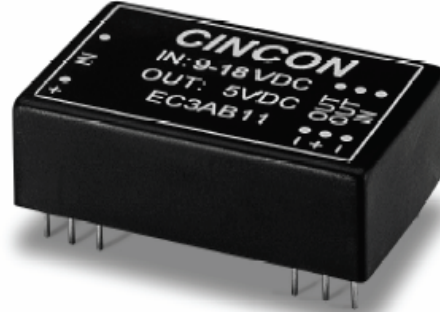
## EC3AB SERIES

### 3 WATT 2:1 INPUT RANGE DC-DC CONVERTERS



## FEATURES

- \* 3W Isolated Output
- \* DIP-24/SMD Package
- \* Efficiency to 80%
- \* Regulated Outputs
- \* Pi Input Filter
- \* Continuous Short Circuit Protection
- \* Meets EN55022 Class B, Conducted
- \* Remote On/Off (Option)



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.	CASE
				NO LOAD	FULL LOAD		
EC3AB11	9-18 VDC	5 VDC	600 mA	7.5 mA	329 mA	76	DIP-24
EC3AB12	9-18 VDC	12 VDC	250 mA	7.5 mA	316 mA	79	DIP-24
EC3AB13	9-18 VDC	15 VDC	200 mA	7.5 mA	321 mA	78	DIP-24
EC3AB14	9-18 VDC	±5 VDC	±300 mA	12 mA	329 mA	76	DIP-24
EC3AB15	9-18 VDC	±12 VDC	±125 mA	12 mA	325 mA	77	DIP-24
EC3AB16	9-18 VDC	±15 VDC	±100 mA	12 mA	329 mA	76	DIP-24
EC3AB17	9-18 VDC	3.3 VDC	600 mA	7.5 mA	229 mA	72	DIP-24
EC3AB21	18-36 VDC	5 VDC	600 mA	5 mA	162 mA	77	DIP-24
EC3AB22	18-36 VDC	12 VDC	250 mA	5 mA	156 mA	80	DIP-24
EC3AB23	18-36 VDC	15 VDC	200 mA	5 mA	156 mA	80	DIP-24
EC3AB24	18-36 VDC	±5 VDC	±300 mA	7.5 mA	164 mA	76	DIP-24
EC3AB25	18-36 VDC	±12 VDC	±125 mA	7.5 mA	156 mA	80	DIP-24
EC3AB26	18-36 VDC	±15 VDC	±100 mA	7.5 mA	162 mA	77	DIP-24
EC3AB27	18-36 VDC	3.3 VDC	600 mA	5 mA	111 mA	74	DIP-24
EC3AB31	36-72 VDC	5 VDC	600 mA	2 mA	81 mA	77	DIP-24
EC3AB32	36-72 VDC	12 VDC	250 mA	2 mA	81 mA	77	DIP-24
EC3AB33	36-72 VDC	15 VDC	200 mA	2 mA	81 mA	77	DIP-24
EC3AB34	36-72 VDC	±5 VDC	±300 mA	3 mA	80 mA	78	DIP-24
EC3AB35	36-72 VDC	±12 VDC	±125 mA	3 mA	82 mA	76	DIP-24
EC3AB36	36-72 VDC	±15 VDC	±100 mA	3 mA	82 mA	76	DIP-24
EC3AB37	36-72 VDC	3.3 VDC	600 mA	3 mA	58 mA	71	DIP-24

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

# SPECIFICATIONS

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

## INPUT SPECIFICATIONS:

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

Positive Logic Remote ON/OFF ( see note 6 )

Input Filter ..... Pi Type

## OUTPUT SPECIFICATIONS:

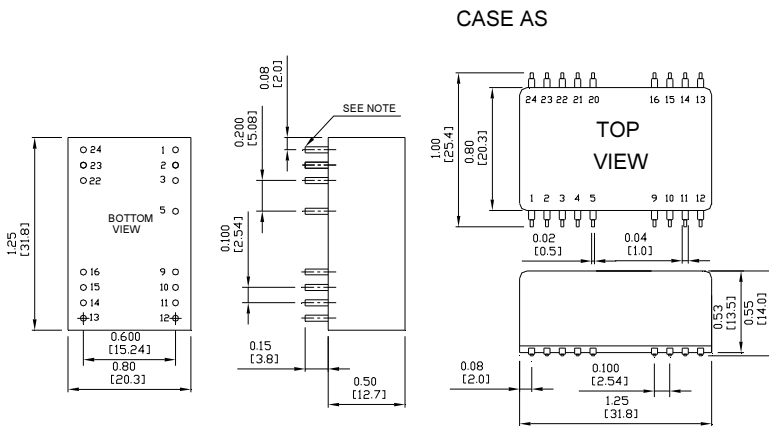
Voltage Accuracy	±2.0% max.
Voltage Balance (Dual)	±1.0% max.
Temperature Coefficient	±0.05%/°C
Ripple & Noise, 20MHz BW	3.3V/5V ..... 100mV pk-pk max.
	12V/15V ..... 1% pk-pk max.
Short Circuit Protection	Continuous
Line Regulation Single/Dual (note1)	±0.5% max.
Load Regulation (note2) Single	±0.5% max.
	Dual (note3) ..... ±1.0% max.

## GENERAL SPECIFICATIONS:

Efficiency	See Table
Isolation Resistance	10 <sup>9</sup> ohm min.
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 note 8)	95°C max.
	(Copper case note 8) ..... 100°C max.
Cooling	Natural Convection
Storage Temperature Range	-40°C to +100°C
EMI/RFI	Conductive EMI Meet EN55022 Class B
Dimensions	DIP ..... 1.25x0.80x0.50 inches(31.8x20.3x12.7 mm)
	SMD ..... 1.25x0.80x0.55 inches(31.8x20.3x14.0 mm)

## Case A Dimensions:

NOTE: Pin Size is 0.02±0.002 Inch (0.5±0.05 mm) DIA  
 All Dimensions In Inches (mm)  
 Tolerances Inches: X.XX= ±0.02 , X.XXX= ±0.010  
 Millimeters: X.X= ±0.5 , X.XX=±0.25



## ISOLATION VOLTAGE:

500 VDC min.	Standard Models
3K VDC min. (note4)	Suffix "H" Models
1.5K VDC min.	Suffix "HM" Models

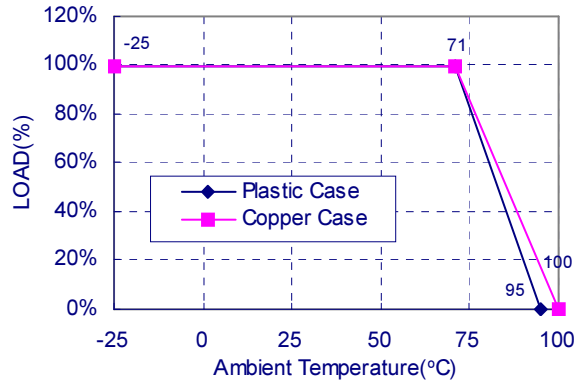
## CASE MATERIAL:

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

## NOTE:

- Measured from high line to low line.
- Measured from full load to 10% load.
- Measured from full load to 1/4 load.
- Non-conductive black plastic only.
- Suffix "T" to the model number with remote on/off for "H"/"HM" versions only.
- Logic Compatibility .... CMOS or open collector TTL, ref. to -Vin  
 Module on ..... >5.5VDC or open circuit  
 Module off ..... <1.8Vdc.  
 Shutdown Idle ..... 10mA  
 Control common ..... referenced to input minus
- Suffix "S" to the model number with SMD packages.
- Maximum case temperature under any operating condition should not be exceeded 95°C (Plastic Case), 100°C (Copper Case).

Typical Derating curve for Natural Convection



PIN CONNECTION									
Pin	500 VDC				1.5K & 3K VDC				
	Single Output		Dual Output		Pin	Single Output		Dual Output	
	DIP	SMD	DIP	SMD		DIP	SMD	DIP	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	5	NP/ Remote On/Off	NC/ Remote On/Off	NP/ Remote On/Off	NC/ Remote On/Off
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	NP	NC
21	NP	NC	NP	NC	22,23	+V Input		+V Input	

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