



# EC6A SERIES

## 7.5WATT 2:1 INPUT RANGE

### DC-DC CONVERTERS



## FEATURES

- \* 7.5W Isolated Output
- \* 24-Pin DIP Package
- \* Efficiency to 87%
- \* 2:1 Input Range
- \* Regulated Outputs
- \* Pi Input Filter
- \* Continuous Short Circuit Protection
- \* CE Mark Meets 2004/108/EC
- \* UL60950-1 Approval
- \* Without Tantalum Capacitor inside



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	Capacitor Load max.
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC6A01	9-18VDC	5VDC	0 mA	1500 mA	25 mA	781 mA	80	4700uF
EC6A02	9-18VDC	12VDC	0 mA	625 mA	25 mA	753 mA	83	4700uF
EC6A03	9-18VDC	15VDC	0 mA	500 mA	25 mA	744 mA	84	4700uF
EC6A04	9-18VDC	±5VDC	0 mA	±750 mA	30 mA	772 mA	81	2200uF
EC6A05	9-18VDC	±12VDC	0 mA	±310 mA	30 mA	753 mA	83	2200uF
EC6A06	9-18VDC	±15VDC	0 mA	±250 mA	30 mA	753 mA	83	2200uF
EC6A07	9-18VDC	3.3VDC	0 mA	1500 mA	25 mA	529 mA	78	4700uF
EC6A11	18-36VDC	5VDC	0 mA	1500 mA	20 mA	377 mA	83	4700uF
EC6A12	18-36VDC	12VDC	0 mA	625 mA	20 mA	359 mA	87	4700uF
EC6A13	18-36VDC	15VDC	0 mA	500 mA	20 mA	359 mA	87	4700uF
EC6A14	18-36VDC	±5VDC	0 mA	±750 mA	25 mA	372 mA	84	2200uF
EC6A15	18-36VDC	±12VDC	0 mA	±310 mA	25 mA	356 mA	87	2200uF
EC6A16	18-36VDC	±15VDC	0 mA	±250 mA	25 mA	372 mA	84	2200uF
EC6A17	18-36VDC	3.3VDC	0 mA	1500 mA	20 mA	264 mA	78	4700uF
EC6A21	36-72VDC	5VDC	0 mA	1500 mA	10 mA	193 mA	81	4700uF
EC6A22	36-72VDC	12VDC	0 mA	625 mA	10 mA	184 mA	85	4700uF
EC6A23	36-72VDC	15VDC	0 mA	500 mA	10 mA	182 mA	86	4700uF
EC6A24	36-72VDC	±5VDC	0 mA	±750 mA	15 mA	191 mA	82	2200uF
EC6A25	36-72VDC	±12VDC	0 mA	±310 mA	15 mA	182 mA	85	2200uF
EC6A26	36-72VDC	±15VDC	0 mA	±250 mA	15 mA	184 mA	85	2200uF
EC6A27	36-72VDC	3.3VDC	0 mA	1500 mA	10 mA	136 mA	76	4700uF

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

# 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
Input Surge Voltage (100ms max.) .....	12V .....	20Vdc max.
	24V .....	50Vdc max.
	48V .....	100Vdc max.
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 .....	100mV p-p max.	
Short Circuit Protection .....	Continuous	
Line Regulation Single/Dual (note 1) .....	±0.2% max.	
Load Regulation Single (note 2) .....	±0.5% max.	
	Dual (note 3) .....	±1.0% max.
Start up time .....	EC6A0XX .....	5ms typ.
	Other .....	20ms typ.

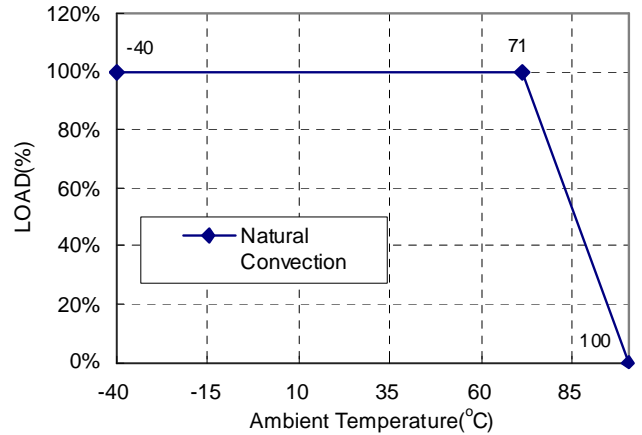
## NOTE:

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. Suffix "S" to the Model Number with SMD packages
5. Maximum case temperature under any operating condition should not be exceeded 100°C

## GENERAL SPECIFICATIONS:

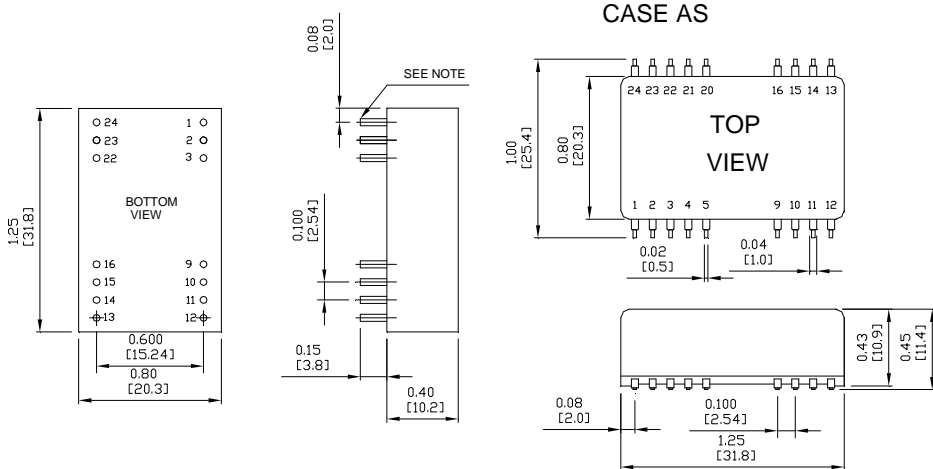
Efficiency .....	See Table	
Isolation Resistance .....	10 <sup>9</sup> ohm min.	
Isolation Capacitance .....	560pF typ.	
Isolation Voltage .....	1500VDC min.	
Switching Frequency .....	300KHz typ.	
Operating Ambient Temperature Range .....	-40°C to +85°C	
De-rating, Above 71°C .....	Linearly to Zero power at 100°C	
Case Temperature (note 5) .....	100°C max.	
Cooling .....	Natural Convection	
Storage Temperature Range .....	-40°C to +100°C	
Humidity .....	95% RH max. Non condensing	
MTBF .....	MIL-STD-217F, GB25°C, Full Load .....	1800Khrs typ.
Dimensions .....	DIP .....	1.25x0.80x0.40 inches(31.8x20.3x10.2mm)
	SMD .....	1.25x0.80x0.45 inches(31.8x20.3x11.4mm)
Weight .....	18.4g	
Case Material .....	Black Coated Copper with Non-conductive Base	

Typical Derating curve for Natural Convection



## Case A Dimensions:

NOTE: Pin Size is 0.02" Inch (0.5mm) 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



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

\* NC-NO CONNECTION WITH PIN  
 \* NP-NO PIN