



## 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	9-18 VDC	5 VDC	0 mA	1500 mA	25 mA	781 mA	80	4700uF
EC6A02	9-18 VDC	12 VDC	0 mA	625 mA	25 mA	753 mA	83	4700uF
EC6A03	9-18 VDC	15 VDC	0 mA	500 mA	25 mA	744 mA	84	4700uF
EC6A04	9-18 VDC	±5 VDC	0 mA	±750 mA	30 mA	772 mA	81	2200uF
EC6A05	9-18 VDC	±12 VDC	0 mA	±310 mA	30 mA	753 mA	83	2200uF
EC6A06	9-18 VDC	±15 VDC	0 mA	±250 mA	30 mA	753 mA	83	2200uF
EC6A07	9-18 VDC	3.3 VDC	0 mA	1500 mA	25 mA	529 mA	78	4700uF
EC6A11	18-36 VDC	5 VDC	0 mA	1500 mA	20 mA	377 mA	83	4700uF
EC6A12	18-36 VDC	12 VDC	0 mA	625 mA	20 mA	359 mA	87	4700uF
EC6A13	18-36 VDC	15 VDC	0 mA	500 mA	20 mA	359 mA	87	4700uF
EC6A14	18-36 VDC	±5 VDC	0 mA	±750 mA	25 mA	372 mA	84	2200uF
EC6A15	18-36 VDC	±12 VDC	0 mA	±310 mA	25 mA	356 mA	87	2200uF
EC6A16	18-36 VDC	±15 VDC	0 mA	±250 mA	25 mA	372 mA	84	2200uF
EC6A17	18-36 VDC	3.3 VDC	0 mA	1500 mA	20 mA	264 mA	78	4700uF
EC6A21	36-72 VDC	5 VDC	0 mA	1500 mA	10 mA	193 mA	81	4700uF
EC6A22	36-72 VDC	12 VDC	0 mA	625 mA	10 mA	184 mA	85	4700uF
EC6A23	36-72 VDC	15 VDC	0 mA	500 mA	10 mA	182 mA	86	4700uF
EC6A24	36-72 VDC	±5 VDC	0 mA	±750 mA	15 mA	191 mA	82	2200uF
EC6A25	36-72 VDC	±12 VDC	0 mA	±310 mA	15 mA	182 mA	85	2200uF
EC6A26	36-72 VDC	±15 VDC	0 mA	±250 mA	15 mA	184 mA	85	2200uF
EC6A27	36-72 VDC	3.3 VDC	0 mA	1500 mA	10 mA	136 mA	76	4700uF

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



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# 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 pk-pk max.
Short Circuit Protection	Continuous
Line Regulation Single/Dual (note1)	±0.2% max.
Load Regulation Single (note2)	±0.5% max.
Dual (note3)	±1.0% max.
Start up time	EC6A0XX 5ms typ.
Other	20ms typ.

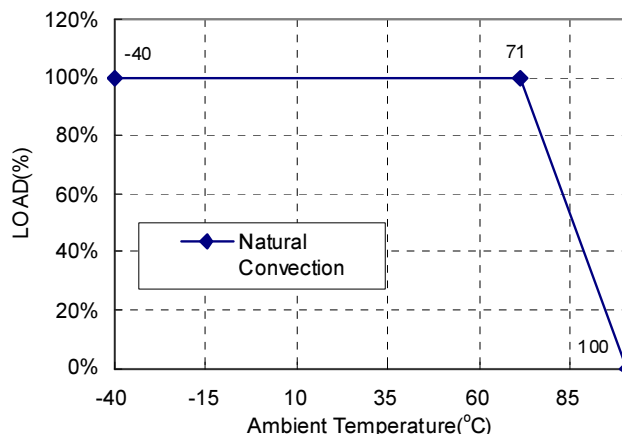
## NOTE:

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:

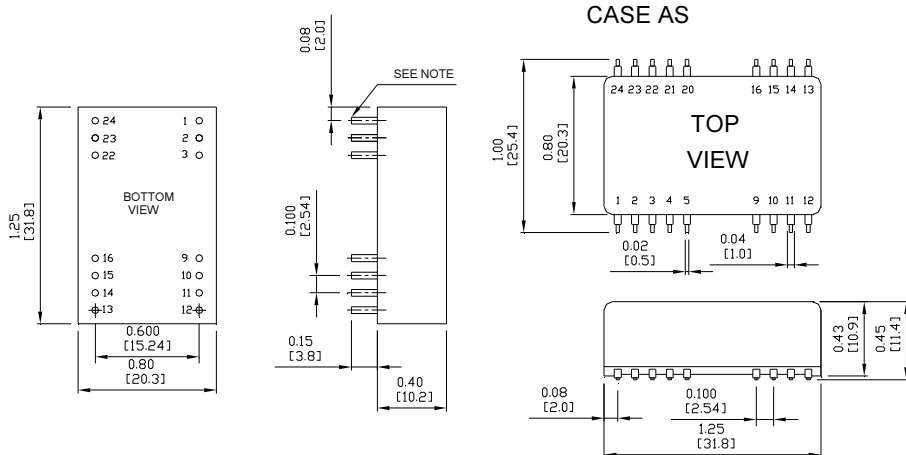
Efficiency	See Table
Isolation Resistance	10 <sup>9</sup> ohm min.
Isolation Capacitance	560pF typ.
Isolation Voltage	1500VDC min.
Switching Frequency	300KHz typ.
Operating Ambient Temperature Range	-40°C to +85°C
De-rating, Above 71°C	Linearly to Zero power at 100°C
Case Temperature (note5)	100°C max.
Cooling	Natural Convection
Storage Temperature Range	-40°C to +100°C
Humidity	95% RH max. Non condensing
MTBF	MIL-STD-217F, GB, 25°C, Full Load 1800Khrs typ.
Dimensions	DIP 1.25x0.80x0.40 inches(31.8x20.3x10.2 mm)
SMD	1.25x0.80x0.45 inches(31.8x20.3x11.4 mm)
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±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



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