EC6A SERIES

7.5WATT 2:1 INPUT RANGE DC-DC CONVERTERS

E176177



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

SPECIFICATIONS

All Specifications Typical At Nominal Line, Full Load, and 25℃ 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%/℃
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.

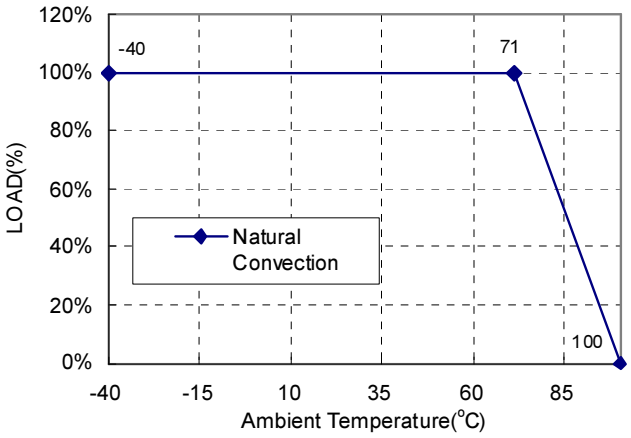
NOTE:

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℃

GENERAL SPECIFICATIONS:

Efficiency ..... See Table
Isolation Resistance ..... 10^9 ohm min.
Isolation Capacitance ..... 560pF typ.
Isolation Voltage ..... 1500VDC min.
Switching Frequency ..... 300KHz typ.
Operating Ambient Temperature Range ..... -40℃ to +85℃
De-rating, Above 71℃ ..... Linearly to Zero power at 100℃
Case Temperature (note5) ..... 100℃ max.
Cooling ..... Natural Convection
Storage Temperature Range ..... -40℃ to +100℃
Humidity ..... 95% RH max. Non condensing
MTBF ..... MIL-STD-217F, GB, 25℃, 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

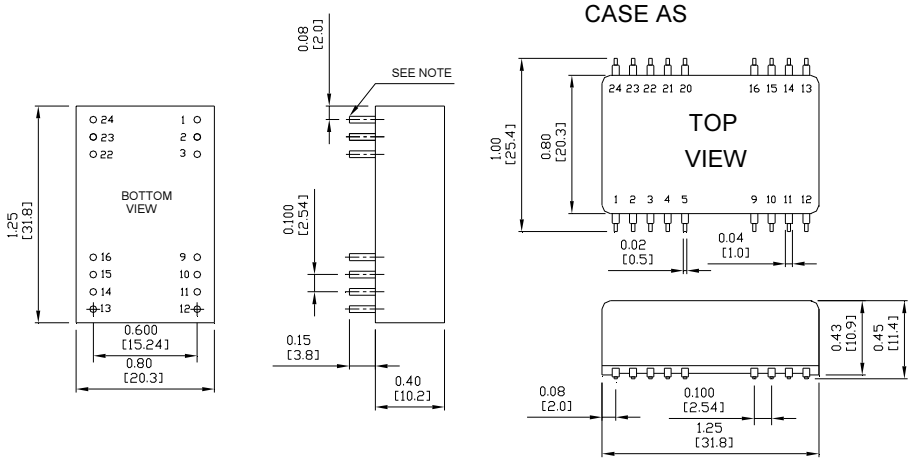
Typical Derating curve for Natural Convection



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

CASE AS



PIN CONNECTION				
Pin	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