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	9-18VDC	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℃ 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 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.

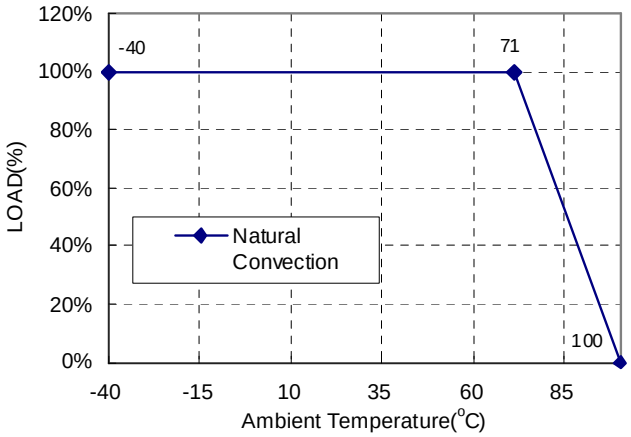
NOTE:

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℃

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 (note 5) ..... 100℃ max.
Cooling ..... Natural Convection
Storage Temperature Range ..... -40℃ to +100℃
Humidity ..... 95% RH max. Non condensing
MTBF ..... MIL-STD-217F, GB25℃, Full Load ..... 1800Khrs typ.
Dimensions ..... DIP ..... 1.25×0.80x0.40 inches(31.8x20.3×10.2mm)
SMD ..... 1.25×0.80x0.45 inches(31.8x20.3×11.4mm)
Weight 18.4g
Case Material ..... Black Coated Copper with Non-conductive Base

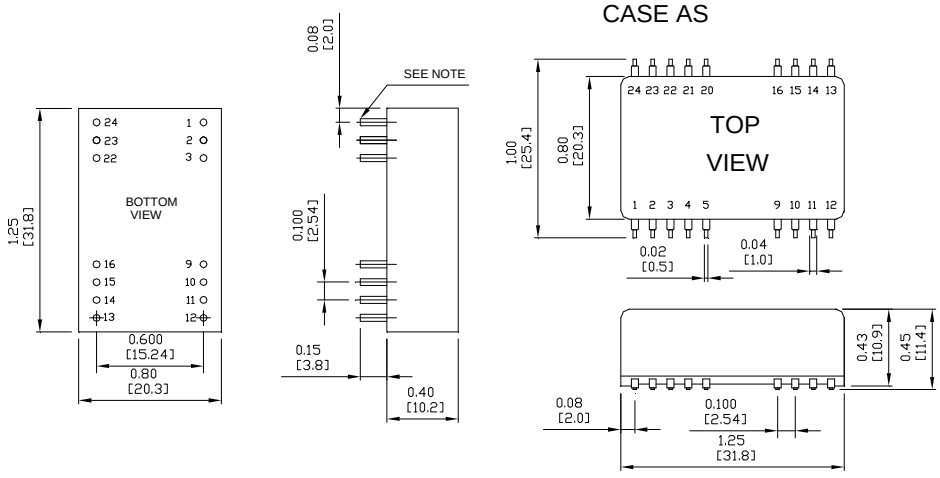
Typical Derating curve for Natural Convection



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

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

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Cincon:

EC6A27 EC6A01 EC6A02 EC6A03 EC6A04 EC6A05 EC6A06 EC6A07 EC6A11 EC6A12 EC6A13 EC6A14 EC6A15 EC6A16 EC6A17 EC6A21 EC6A22 EC6A23 EC6A24 EC6A25 EC6A13S EC6A03S EC6A24S EC6A11S EC6A27S EC6A02S EC6A15S EC6A26 EC6A25S EC6A23S EC6A04S EC6A12S EC6A22S EC6A05S EC6A07S EC6A21S EC6A06S EC6A17S EC6A26S EC6A01S EC6A14S EC6A16S