EC6AW

SERIES

8 WATT 4 : 1 INPUT DC-DC CONVERTERS

Features

- 8W Isolated Output
- DIP-24 / SMD Metal Package
- Efficiency to 86%
- 4 : 1 Input Range
- Regulated Outputs
- Input under-voltage Protection
- Remote ON/OFF
- Continuous Short Circuit Protection
- Without Tantalum Capacitors inside
- CE Mark Meets 2004/108/EC
- Safety Meets UL60950-1, EN60950-1, and IEC60950-1

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	Capacitor Load max.
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC6AW-24S33	9-36 VDC	3.3 VDC	0 mA	2000 mA	10 mA	344 mA	80	2000uF
EC6AW-24S05	9-36 VDC	5 VDC	0 mA	1600 mA	10 mA	406 mA	82	1600uF
EC6AW-24S12	9-36 VDC	12 VDC	0 mA	666 mA	10 mA	392 mA	85	666uF
EC6AW-24S15	9-36 VDC	15 VDC	0 mA	530 mA	10 mA	390 mA	85	530uF
EC6AW-24D05	9-36 VDC	± 5 VDC	0 mA	±800 mA	10 mA	406 mA	82	800uF
EC6AW-24D12	9-36 VDC	± 12 VDC	0 mA	±333 mA	10 mA	392 mA	85	333uF
EC6AW-24D15	9-36 VDC	± 15 VDC	0 mA	±265 mA	10 mA	390 mA	85	265uF
EC6AW-48S33	18-75 VDC	3.3 VDC	0 mA	2000 mA	5 mA	172 mA	80	2000uF
EC6AW-48S05	18-75 VDC	5 VDC	0 mA	1600 mA	5 mA	201 mA	83	1600uF
EC6AW-48S12	18-75 VDC	12 VDC	0 mA	666 mA	5 mA	194 mA	86	666uF
EC6AW-48S15	18-75 VDC	15 VDC	0 mA	530 mA	5 mA	193 mA	86	530uF
EC6AW-48D05	18-75 VDC	± 5 VDC	0 mA	±800 mA	5 mA	201 mA	83	800uF
EC6AW-48D12	18-75 VDC	± 12 VDC	0 mA	±333 mA	5 mA	194 mA	86	333uF
EC6AW-48D15	18-75 VDC	± 15 VDC	0 mA	±265 mA	5 mA	193 mA	86	265uF

NOTE: 1. Nominal Input Voltage 24 or 48 VDC

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range.....24V.....9-36V
48V.....18-75V
Input Surge Voltage (100ms max.) .....24V ..... 50Vdc max.
48V ..... 100Vdc max.
Under Voltage Protection:
24Vin Power Up ..... 8.8 VDC typ.
Power Down .....8.0 VDC typ.
48Vin Power Up .....17 VDC typ.
Power Down .....16 VDC typ.
Input Filter ..... PI Type
Positive Logic Remote on/off Control: (Note3)
Logic Compatibility .....CMOS or Open Collector TTL, ref. to -Vin
Module ON .....>+3.5V to 36VDC or Open Circuit
Module OFF ..... <1.2VDC

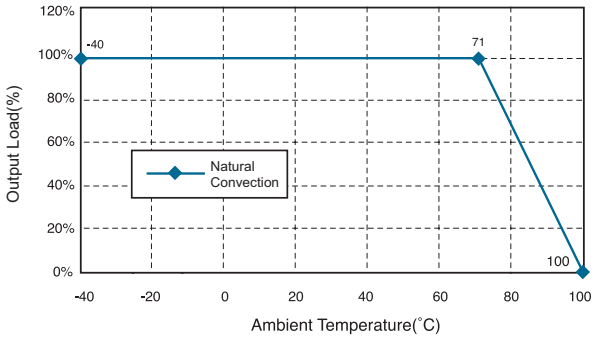
OUTPUT SPECIFICATIONS:

Voltage Accuracy ..... ±1.5% max.
Voltage Balance(Dual) .....±1.0% max.
Transient Response: 75%-100% Step Load Change
Error Band ..... ±5% Vout nominal, Recovery Time ..... < 500μs
Ripple & Noise, 20MHz BW (with 0.1uF MLCC)
Vo=3.3 & 5V ...75mV pk-pk max.
Vo=12 & 15V...100mV pk-pk max.
Temperature Coefficient .....±0.03%/°C max.
Short Circuit Protection ..... Continuous
Line Regulation[1] ..... Single/Dual ..... ±0.5% max.
Load Regulation[2] ..... Single ..... ±0.5% max.
Dual ..... ±1.0% max.
Cross Regulation (Dual output) Load cross variation 25%/100% ... ±5% max.
Over Voltage Protection ..... Zener or TVS Clamp
Start up time .....3.5ms typ.

GENERAL SPECIFICATIONS:

Efficiency.....See Table
Isolation Voltage .....1500VDC min.
Isolation Resistance ..... 10^9 ohm min.
Isolation Capacitance ..... 1000pF typ.
Switching Frequency ..... 100KHz min.
Operating Ambient Temperature..... -40°C to +85°C
De-rating, Above 71°C ..... Linearly to Zero power at 100°C
Case Temperature[5]..... 100°C max.
Cooling.....Natural Convection
Storage Temperature ..... -55°C to +125°C
Humidity ..... 95% RH max. Non condensing
MTBF.....MIL-STD-217F, GB, 25°C, Full Load .....Single..... 1500Khrs typ.
Dual.....1300Khrs typ.
Dimensions .....DIP ..... 1.25x0.80x0.40 inches (31.8x20.3x10.2 mm)
SMD ..... 1.25x0.80x0.45 inches (31.8x20.3x11.4 mm)
Case Material .....Black Coated Copper with Non-Conductive Base
Weight ..... 18.4 g

EC6AW Series Derating Curve



NOTE:

1. Measured From High Line to Low Line.
2. Measured From Full Load to min. Load.
3. Suffix "N" to the Model Number with Negative Logic Remote ON/OFF
   Module ON ..... <1.2VDC
   Module OFF ..... >+3.5V to 36VDC or Open Circuit
4. Suffix "S" to the Model Number with SMD Package.
5. Maximum case temperature under any operating condition should not be exceeded 100°C.

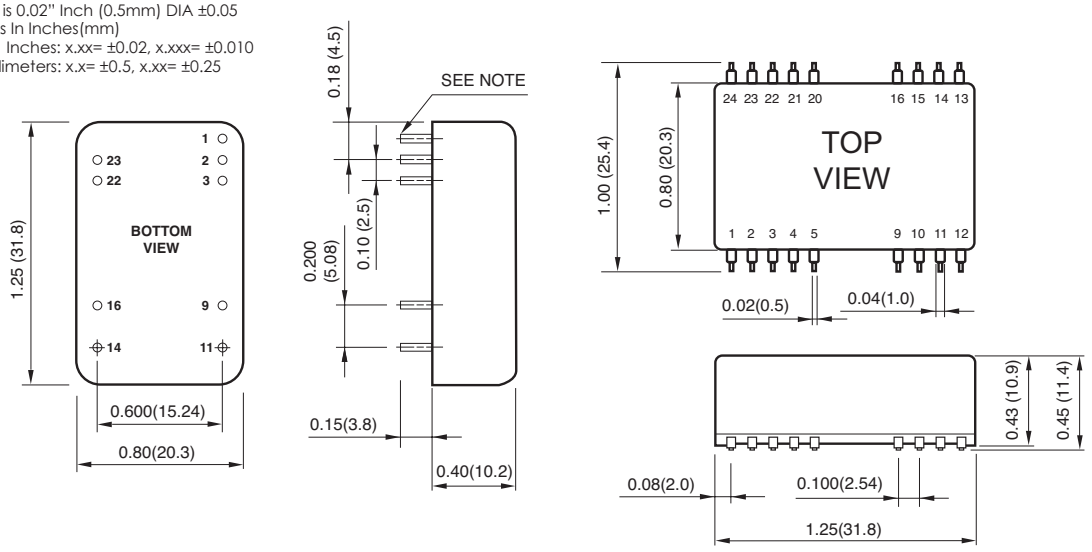
PIN CONNECTION

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

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

CASE A

NOTE:Pin Size is 0.02" Inch (0.5mm) DIA ±0.05
All Dimensions In Inches(mm)
Tolerance Inches: x.xx= ±0.02, x.xxx= ±0.010
Millimeters: x.x= ±0.5, x.xx= ±0.25



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