

EC8AW

S E R I E S

15 WATT 4 : 1 INPUT RANGE DC-DC CONVERTERS



Features

- 15W Isolated Output
- DIP-24 Metal Package
- Very High Efficiency Up to 90%
- Low Input Current At No Load
- 4 : 1 Input Range
- Regulated Outputs
- Conductive EMI Meet EN55022 Class A Without External Components
- Continuous Short Circuit Protection
- No Tantalum Capacitor 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	(2)	(3)	
EC8AW-24S33	9-36 VDC	3.3 VDC	0 mA	4000 mA	8 mA	625 mA	88	88	4000µF
EC8AW-24S05	9-36 VDC	5 VDC	0 mA	3000 mA	8 mA	694 mA	90	90	3000µF
EC8AW-24S12	9-36 VDC	12 VDC	0 mA	1250 mA	8 mA	694 mA	90	90	1250µF
EC8AW-24S15	9-36 VDC	15 VDC	0 mA	1000 mA	8 mA	694 mA	90	90	1000µF
EC8AW-24D12	9-36 VDC	±12 VDC	0 mA	±625 mA	8 mA	702 mA	89	89	625µF
EC8AW-24D15	9-36 VDC	±15 VDC	0 mA	±500 mA	8 mA	694 mA	90	90	500µF
EC8AW-48S33	18-75 VDC	3.3 VDC	0 mA	4000 mA	6 mA	309 mA	89	89	4000µF
EC8AW-48S05	18-75 VDC	5 VDC	0 mA	3000 mA	6 mA	347 mA	90	90	3000µF
EC8AW-48S12	18-75 VDC	12 VDC	0 mA	1250 mA	6 mA	347 mA	90	90	1250µF
EC8AW-48S15	18-75 VDC	15 VDC	0 mA	1000 mA	6 mA	347 mA	90	90	1000µF
EC8AW-48D12	18-75 VDC	±12 VDC	0 mA	±625 mA	6 mA	351 mA	89.5	89.5	625µF
EC8AW-48D15	18-75 VDC	±15 VDC	0 mA	±500 mA	6 mA	347 mA	90	90	500µF

NOTE: 1. Nominal Input Voltage 24 or 48 VDC
 2. Measured at Nominal Input Voltage
 3. Measured at 12VDC for 24Vin, 24VDC for 48Vin

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 lockout	.....24Vin power up	.....8.8V
	.....24Vin power down	.....8V
	.....48Vin power up	.....17V
	.....48Vin power down	.....16V
Input Filter	.....	.....PI Type
Remote on/off Control	.....	.....
Logic Compatibility	.....CMOS or Open Collector TTL, Referenced to -Vin	.....
Module On	.....>3.5VDC to Vin or Open Circuit	.....
Module Off	.....<1.2VDC	.....

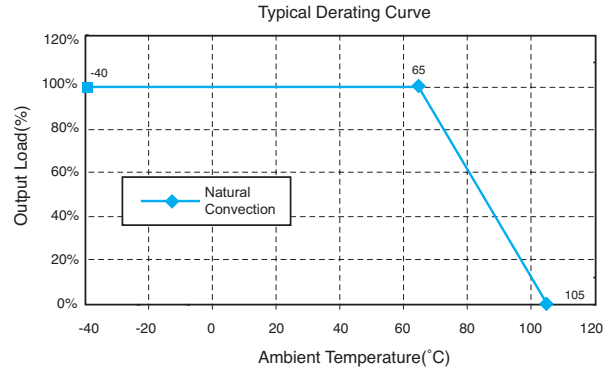
OUTPUT SPECIFICATIONS:

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	.....	.....< 250µs
Ripple & Noise, 20MHz BW ³	.....Single	.....75mV pk-pk max.
	.....Dual	.....75mV pk-pk max.
Temperature Coefficient	.....	.....±0.03%/°C
Line Regulation ¹	.....Single	.....±0.2% max.
	.....Dual	.....±0.5% max.
Load Regulation ²	.....Single	.....±0.5% max.
	.....Dual	.....±1.0% max.
Cross Regulation (Dual Output) Load Cross Variation 10%/100%	.....	.....±5% max.
Current Limit	.....	.....110% - 160% Nominal Output
Output Short Circuit Protection	.....	.....Continuous (Hiccup Mode)
Over Voltage Protection (Zener Diode Clamp)	.....	.....
3.3V	.....3.9Vdc typ., 5V	.....6.2Vdc typ.
12V	.....15Vdc typ., 15V	.....18Vdc typ.
Start up time	.....	.....15ms typ.

GENERAL SPECIFICATIONS:

Efficiency	.....	.....See Table
Isolation Voltage	.....Input/Output	.....1500VDC min.
Isolation Resistance	.....	.....10 ⁹ ohm min.
Isolation Capacitance	.....	.....1000pF typ.
Switching Frequency	.....	.....300kHz typ.
EMI/RFI	.....	.....Conductive EMI Meet EN55022 Class A
Operating Ambient Temperature	.....	.....-40°C to +85°C
De-rating, Above 65°C	.....	.....Linearly to Zero power at 105°C
Case Temperature ⁴	.....	.....105°C max.
Cooling	.....	.....Natural Convection
Storage Temperature	.....	.....-40°C to +125°C
Humidity	.....	.....95% RH max. Non condensing
MTBF	.....MIL-STD-217F, GB, 25°C, Full Load	.....TBD hrs
Dimensions	.....DIP	.....1.25x0.80x0.40 inches(31.8x20.3x10.2mm)
Case Material	.....	.....Black Coated Copper with Non-Conductive Base
Weight	.....	.....18g

EC8AW Series Derating Curve



PIN CONNECTION

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

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

NOTE:

1. Measured from high line to low line.
2. Measured from full load to min. load.
3. Measured with 0.1µF MLCC.
4. Maximum case temperature under any operating condition should not be exceeded 105°C.

Case A Dimensions:

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

