



EC6AW-110 SERIES 10 WATT 4:1 INPUT DC-DC CONVERTERS

FEATURES

- * 10W Isolated Output
- * Efficiency to 88.5%
- * Low No Load Power Consumption
- * 4:1 Input Range
- * Regulated Outputs
- * Input Under-Voltage Protection
- * Remote On/Off
- * Continuous Short Circuit Protection
- * Over Current Protection
- * CE Mark Meets 2014/30/EU
- * UL60950-1 2nd (Basic Insulation) Approval
- * Meets EN50155 with External Circuits
- * Shock & Vibration Meets EN50155 (EN61373)
- * Fire & Smoke Meets EN45545-2
- * 3050m Operating Altitude



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	CAPACITOR LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC6AW-110S12	43-160 VDC	12 VDC	0 mA	835 mA	6 mA	104 mA	88	835μF
EC6AW-110S15	43-160 VDC	15 VDC	0 mA	666 mA	6 mA	103 mA	88.5	666μF
EC6AW-110D05	43-160 VDC	±5 VDC	0 mA	±1000mA	6 mA	107 mA	85	1000μF
EC6AW-110D12	43-160 VDC	±12 VDC	0 mA	±416mA	6 mA	105 mA	87	416μF
EC6AW-110D15	43-160 VDC	±15 VDC	0 mA	±333mA	6 mA	104 mA	87.5	333μF

NOTE:

1. Nominal Input Voltage 110 VDC

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range.....	110V	43-160V
Input Surge Voltage (100ms max.)	200Vdc max.	
Under Voltage Lockout	Power up	40V
	Power down	38V
Positive Logic Remote On/Off (note 3&4)		
Input Filter	PI Type	

OUTPUT SPECIFICATIONS:

Voltage Accuracy	±1.0% max.	
Voltage Balance (Dual Output)	±2.0% max.	
Transient Response: 75% - 100% Step Load Change		
Error Band	±5% Vout nominal, Recovery Time	< 250us
Ripple & Noise, 20MHz BW (Measured with 1uF MLCC)		
Vo= ±5V	75mV pk-pk max.	
Vo=12V, 15V, ±12V, ±15V	100mV pk-pk max.	
Temperature Coefficient	±0.02%/°C max.	
Short Circuit Protection	Continuous	
Line Regulation (note1)	±0.2% max.	
Load Regulation (note2)	Single	±0.5% max.
	Dual	±1.0% max.
Cross Regulation (Dual output) Load cross variation 25%/100%		
±5.0% max.		
Over Voltage Protection	Zener or TVS Clamp	
Current Limit	110%-170% Nominal Output	
Start up time	10ms typ.	

GENERAL SPECIFICATIONS:

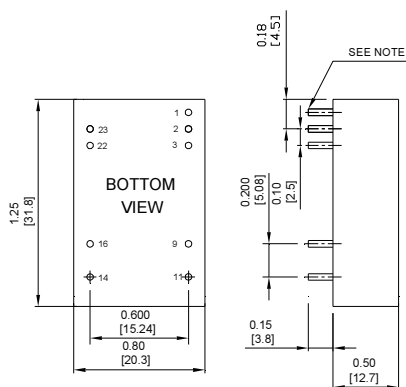
Efficiency	See Table	
Isolation Voltage	3000VDC min.	
Isolation Resistance	10 ⁹ Ohms min	
Isolation Capacitance	1000pF typ.	
Switching Frequency	240KHz typ	
Operating Ambient Temperature Range	-40°C to +85°C	
De-rating, Above 60°C	Linearly to Zero Power at +100°C	
Case Temperature (note5)	100°C max.	
Cooling	Natural Convection	
Storage Temperature Range	-55°C to +125°C	
Humidity	95% RH max. Non-Condensing	
MTBF	MIL-HDBK-217F, GB, 25°C, Full Load	1200Khrs typ.
Safety	Meets UL60950-1 2 nd (Basic insulation)	
EMC (note6)	Meets EN50155(EN50121-3-2) with external filter	
Shock/Vibration	Meets EN50155(EN61373)	
Fire & Smoke	Meet EN45545-2	
Dimensions	1.25×0.80×0.50 inches(31.8×20.3×12.7mm)	
Case Material	Non-Conductive Black Plastic	
Weight	16g	

NOTE:

1. Measured from high line to low line.
2. Measured from full load to min. load.
3. Logic Compatibility ... CMOS or open collector TTL referenced to -Vin.
Module on >3.5VDC to 160VDC or open circuit
Module off 0 to <1.2VDC
4. Suffix "N" to the model number with negative logic remote on/off
Module on 0 to < 1.2Vdc
Module off >3.5VDC to 160VDC or open circuit
5. Maximum case temperature under any operating condition should not be exceeded 100°C.
6. For information about EN50155 and RIA12, refer to application note.

CASE A Dimensions:

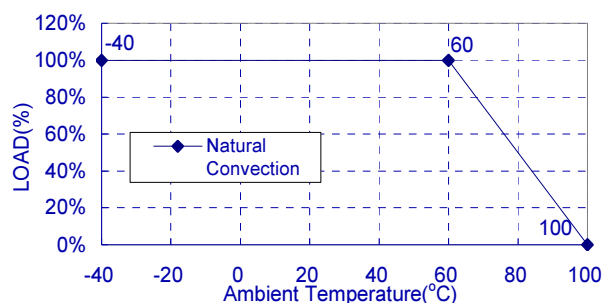
NOTE: Pin Size is 0.02±0.002 Inch (0.5±0.05 mm) DIA
All Dimensions In Inches (mm)
Tolerances Inches: X.XX= ±0.02 , X.XXX= ±0.010
Millimeters: X.X= ±0.5 , X.XX=±0.25



PIN CONNECTION		
Pin	Single Output	Dual Output
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 Input

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

Typical Derating curve for Natural Convection



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