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EC7BW-110 SERIES

20 WATT 4:1 INPUT

DC-DC CONVERTERS



FEATURES

- * 20W Isolated Output
- * Efficiency to 90%
- * 250KHz Switching Frequency
- * 4:1 Input Range
- * Regulated Outputs
- * Remote On/Off
- * Low No Load Power Consumption
- * Continuous Short Circuit Protection
- * 2"x1"x0.4" Size Meets Industrial Standard
- * UL60950-1 (Basic Insulation) Approval
- * Meets EN50155
- * Fire & Smoke Meets EN45545-2
- * Safety Meets IEC/EN/UL 62368-1



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	CAPACITOR LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD		
EC7BW-110S05	43-160 VDC	5 VDC	0 mA	4000 mA	3 mA	205.4 mA	88.5	5600uF
EC7BW-110S12	43-160 VDC	12 VDC	0 mA	1670 mA	3 mA	202.0 mA	90	1000uF
EC7BW-110S15	43-160 VDC	15 VDC	0 mA	1330 mA	3 mA	203.1 mA	89.5	1000uF
EC7BW-110D12	43-160 VDC	±12 VDC	0 mA	±833 mA	3 mA	204.3 mA	89	680uF
EC7BW-110D15	43-160 VDC	±15 VDC	0 mA	±667 mA	3 mA	205.4 mA	88.5	350uF

NOTE: 1. Nominal Input Voltage 110VDC

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 (note4&5)
 Input Filter Pi Type

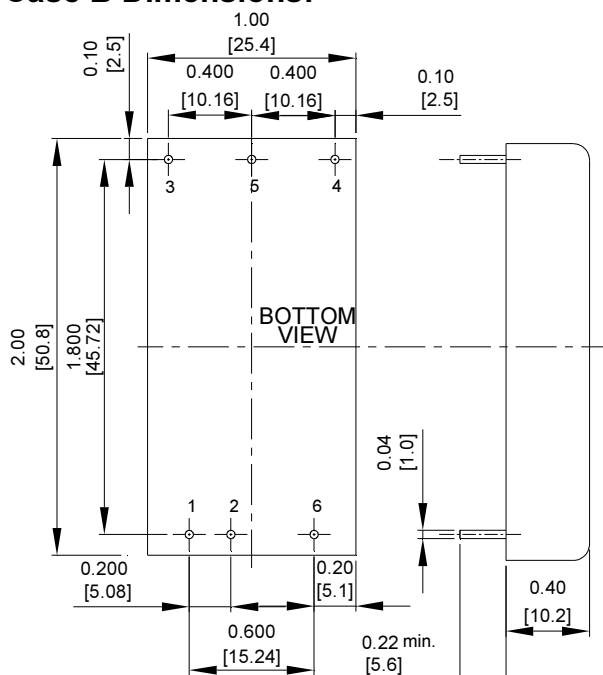
OUTPUT SPECIFICATIONS:

Voltage Accuracy ±1.5% max.
 Voltage Balance (Dual Output) ±1.0% max.
 Transient Response: 25% Step Load Change <250µs
 External Trim Adj. Range (Single Output Models Only) ±10%
 Ripple & Noise, 20MHz BW (note3) 5V 40mV RMS max.
 75mV pk-pk max.
 12V & 15V & ±12V & ±15V 40mV RMS max.
 100mV pk-pk max.
 Temperature Coefficient ±0.03%/°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 10%/100% ±5.0% max.
 Over Voltage Protection Zener or TVS Clamp
 Current Limit 110%-160% Nominal Output
 Start up Time Single 15ms typ.
 Dual 25ms typ.

NOTE:

- Measured from high line to low line.
- Measured from full load to zero load.
- Output ripple and noise measured with 1µF ceramic capacitor across output.
- Logic compatibility open collector ref. to -Input
 Module on > 3.5VDC to 75VDC or open circuit
 Module off 0 to < 1.2VDC
- Suffix "N" to the model number with negative logic remote on/off
 Module on 0 to < 1.2VDC
 Module off >3.5VDC to 75VDC or open circuit
- Design meet EN50155 and RIA12 refer to application note.

Case B Dimensions:



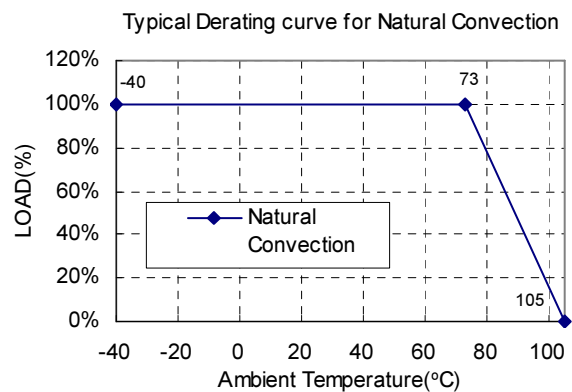
PIN CONNECTION		
Pin	Single	Dual
1	+V Input	+V Input
2	-V Input	-V Input
3	+V Output	+V Output
4	Trim	-V Output
5	-V Output	Common
6	Remote On/Off	

NOTE: Pin Size is 0.04±0.004 Inch (1.0±0.1 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

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GENERAL SPECIFICATIONS:

Efficiency See Table
 Isolation Voltage Input/Output 3000VDC min.
 Isolation Resistance 10⁹ Ohm min.
 Isolation Capacitance 1000pF typ.
 Switching Frequency 250KHz typ.
 EMI/RFI Conductive EMI Meets EN55032 Class A
 Operating Ambient Temperature -40°C to +85°C
 De-rating, Above 73°C Linearly to Zero Power at 105°C
 Case Temperature 105°C max.
 Storage Temperature -55°C to +125°C
 Humidity 95% RH max. Non Condensing
 MTBF MIL-HDBK-217F, GB, 25°C, Full Load 880Khrs typ.
 Safety UL60950-1 2nd (Basic insulation)
 EMC (note6) Meet EN50155(EN50121-3-2) with external filter
 Shock/Vibration Meet EN50155(EN61373)
 Fire & Smoke Meet EN45545-2
 Dimensions 2.00x1.00x0.40 inches (50.8x25.4x10.2 mm)
 Case Material Black Coated Copper with Non-Conductive Base
 Weight 35g



EXTERNAL OUTPUT TRIM

