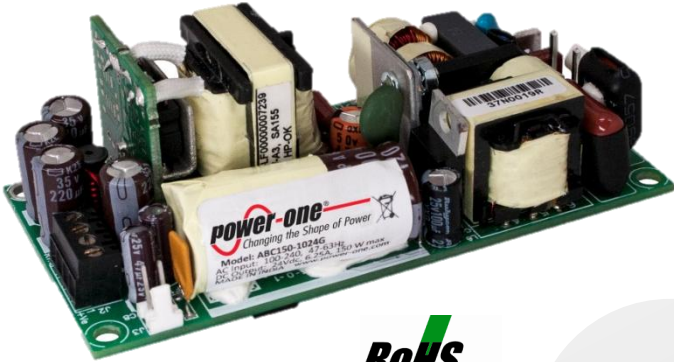


MBC150 SERIES MEDICAL 150W AC/DC



FEATURES

- 110 W convection cooled
- -20 to 50 deg C full load operation
- 2 x MOPP Isolation
- 90-264 VAC input
- 2" x 4" x 1.3" (50.8 x 101.6 x 33.6 mm)
- Fan output, 12 Vdc @ 0.5A standard
- No minimum load required
- Conducted EMI EN 55022-B, FCC Part 15 Level B
- Medical Safety Agency Approvals

APPLICATIONS

- Dialysis
- Monitoring
- Pumps
- Surgical Devices
- Home Health
- Portable Devices

TECHNICAL DATA:

Input

PARAMETER	DESCRIPTION/CONDITION	
Input Voltage Range	Universal Input	90 - 264 Vac 120 – 390 Vdc
Input Frequency Range	47-63 Hz	
Input Surge Current	230 Vac (cold start)	65 A max.
Safety Ground Leakage Current	264 Vac 50 / 60 Hz	< 250 µA max
Input Current	120 Vac @ Full load 230 Vac @ Full load	1.7 A 0.85 A

Output

PARAMETER	DESCRIPTION/CONDITION	
Voltage Adjustment	V1	± 3%
Transient Response	Main output 50 to 100% load change, 50 Hz, 50% duty cycle, 0.1A / uSec	< 10%, recovery time < 5 mSec
Over Voltage Protection	V1	110 to 150% rated max
Over Current Protection	Rated output current	110% Typical
Short Circuit Protection	Automatic recovery	
Efficiency	>86%	
Rise Time	< 100 mSec	
Set Point Accuracy (Main Output)	± 1%	

Ordering Information

PRODUCT FAMILY	VOLTS (VDC)	MAX LOAD CONVECTION ⁽¹⁾	MAX LOAD 300 LFM ⁽¹⁾	MINIMUM LOAD (A)	RIPPLE & NOISE ⁽⁴⁾	CONNECTOR	TOTAL REGULATION
MBC150-1005G	5.0	16.0 A	16 A	0	1%	JST	± 2.5%
MBC150-1005G-2	5.0	16.0 A	16 A	0	1%	JST	± 2.5%
MBC150-1T05G	5.0	16.0 A	20 A	0	1%	Screw Terminal	± 2.5%
MBC150-1T05G-2	5.0	16.0 A	20 A	0	1%	Screw Terminal	± 2.5%
MBC150-1012G	12	8.33 A	12.5 A	0	1%	JST	± 2.5%
MBC150-1012G-2	12	8.33 A	12.5 A	0	1%	JST	± 2.5%
MBC150-1T12G	12	8.33 A	12.5 A	0	1%	Screw Terminal	± 2.5%
MBC150-1T12G-2	12	8.33 A	12.5 A	0	1%	Screw Terminal	± 2.5%
MBC150-1015G	15	6.67 A	10.0 A	0	1%	JST	± 2.5%
MBC150-1015G-2	15	6.67 A	10.0 A	0	1%	JST	± 2.5%
MBC150-1T15G	15	6.67 A	10.0 A	0	1%	Screw Terminal	± 2.5%
MBC150-1T15G-2	15	6.67 A	10.0 A	0	1%	Screw Terminal	± 2.5%
MBC150-1024G	24	4.17 A	6.25 A	0	1%	JST	± 2.5%
MBC150-1024G-2	24	4.17 A	6.25 A	0	1%	JST	± 2.5%
MBC150-1T24G	24	4.17 A	6.25 A	0	1%	Screw Terminal	± 2.5%
MBC150-1T24G-2	24	4.17 A	6.25 A	0	1%	Screw Terminal	± 2.5%
MBC150-1048G	48	2.08 A	3.13 A	0	1%	JST	± 2.5%
MBC150-1048G-2	48	2.08 A	3.13 A	0	1%	JST	± 2.5%
MBC150-1T48G	48	2.08 A	3.13 A	0	1%	Screw Terminal	± 2.5%
MBC150-1T48G-2	48	2.08 A	3.13 A	0	1%	Screw Terminal	± 2.5%
Vfan (all models)	12	0.5 A ⁽³⁾	0.5 A ⁽³⁾				20%

Notes:

1. Combined power from main output and Vfan should not exceed total power rating.
2. Fan output tolerance is $\pm 20\%$.
3. Peak current for fan output is 1A.
4. Ripple is 2% up to 20% load and less than 1% above 20% load. Output noise measurement is made with a 20 MHz bandwidth using a 6" twisted pair, terminated with a 10 uF tantalum capacitor in parallel with a 0.1 uF ceramic capacitor.
5. Class 1 models have Earthing tab J4. Class 2 models (-2 suffix) have no Earthing tab.
6. Specifications are for nominal input voltage, 25°C and max load unless otherwise stated.
7. Air flow over length of supply recommended (either direction) for forced air rating.
8. Derate output power per chart below.
9. Specifications subject to change without notice.
10. Warranty 2 years.

General Specifications

PARAMETER	DESCRIPTION/CONDITION	
Hold Up Time	120 Vac	6 mSec
	230 Vac	10 mSec
MTBF	>200 khrs	Bellcore TR-332
Switching Frequency	PFC converter variable 35 to 250 kHz, 90 kHz typical	Resonant converter: Variable 35 to 250 kHz, 90 kHz typical
Isolation Voltage	Input to Output Min 5900 Vdc	Input to Ground 2120 Vdc
Weight	150 g (0.33 lbs)	

Environmental

PARAMETER	DESCRIPTION/CONDITION	
Operating Temperature	Operating	-20 to +70°C. See derating charts below.
	Storage	-40 to +85°C
Altitude	Operating 10,000 ft.	Non-operation 40,000 ft.
Humidity	95%	Non-condensing
Conducted Emissions	EN55022, FCC part 15 Level B	
Radiated Emissions	EN55022, FCC part 15 Level B	To be controlled in end system
Electromagnetic Susceptibility	EN61000-4	2, 3, 4, 5 Level 3
Harmonic Current	EN61000-3-2, Class D	

Safety

PARAMETER	DESCRIPTION/CONDITION
EN / UL / CSA	60601-1 3rd Edition

Figure 1 Output Power Vs. Temperature

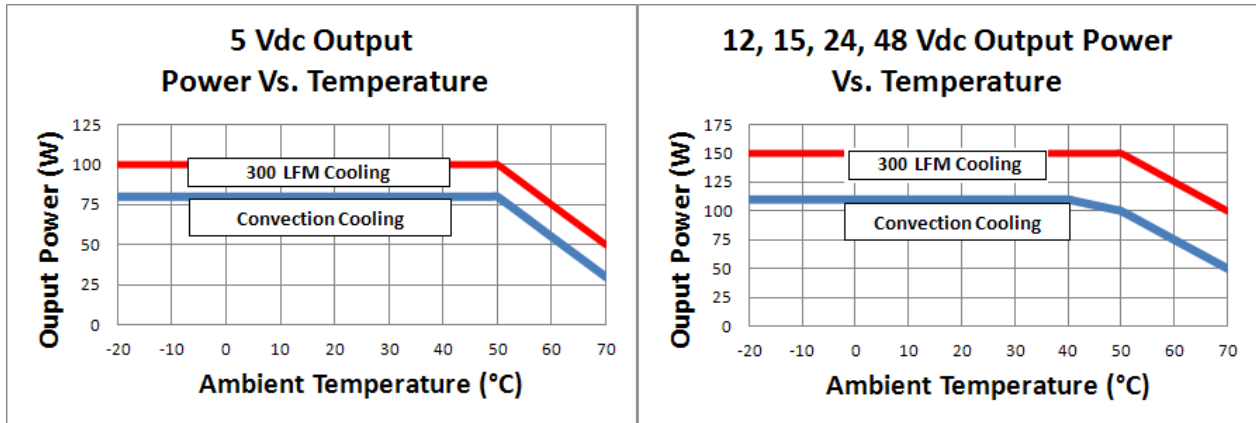
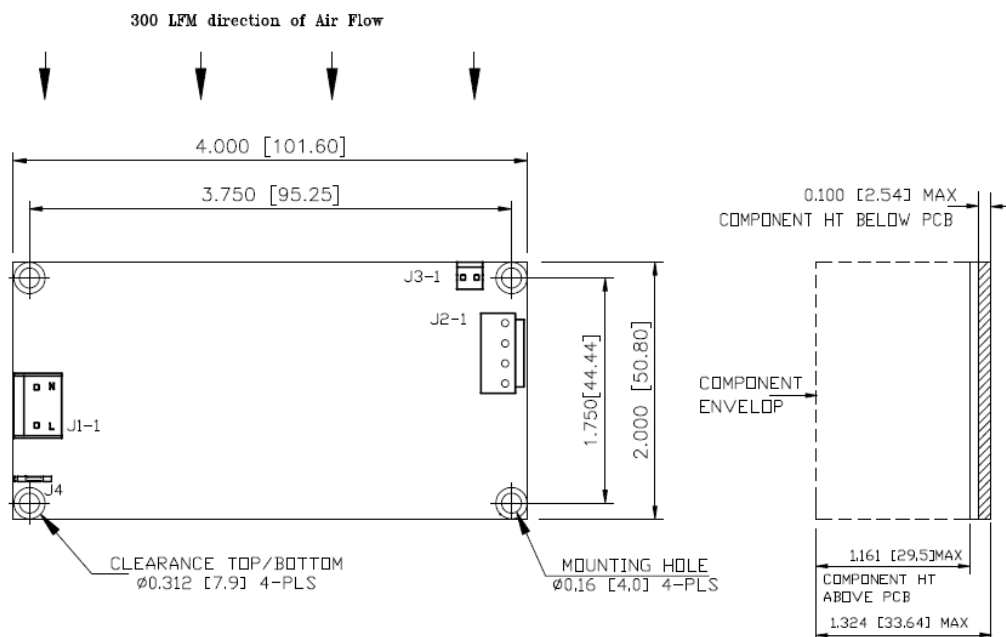


Figure 2 Dimension Drawing (Top and Side View)



MECHANICAL OUTLINE DIMENSIONS
DIMENSIONS UNIT : INCH [M.M]
GEN. TOLERANCE : +/-0.020 [0.50]

Mechanical

INPUT = J1	EARTHING TAB = J4	DC OUTPUT = J2		FAN= J3
Pin 1: AC Line Pin 2: Removed Pin 3: AC Neutral	Molex: 19705-4301	Pin 1 = V1 Pin 2 = V1	Pin 3 = RTN Pin 4 = RTN	Pin 1 = +12 V @ 0.5 A Pin 2 = Fan return (isolated from DC output)
Mating Connector: Molex: 09-50-3031 Pins: 08-50-0106	Mating Connector: Molex: 190030001	Mating Connector: JST VHR-4M, Pins: SVH-41T-P1.1 AWG #20 to #16		Mating Connector: Tyco: 640440-2

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