



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



ABC225 Series

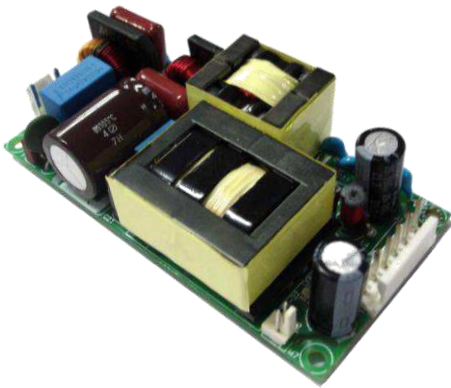
Low Profile

Open Frame Power Supplies

The ABC225 Series of open-frame power supplies, with its wide universal 90-264 VAC input range and high power density, is available at 225 W of output power and a variety of single and multiple output voltages.

The high efficiency and high power density of the ABC family ensures minimal power loss in end-use equipment, thereby facilitating higher reliability, easier thermal management and meets regulatory approvals for environmentally-friendly end products.

These power supplies are ideal for telecom, datacom, industrial equipment and other applications.



Key Features & Benefits

- 2 x 4 x 1 Inches Form Factor
- 225 W with Forced Air Cooling
- Efficiencies up to 94%
- -40 to 70 °C Operating Temperature
- 12 V Fan Output, Thermal Shut-Down Feature
- 3.37 Million Hours, Telcordia - SR332-Issue 3 MTBF
- Standby Power <0.5 W
- RoHS Compliant
- CE Marked

Applications

- Instrumentation
- Lighting
- Industrial Applications
- Applied Computing
- Renewable Energy
- Test and Measurement
- Robotics
- Wireless Communication



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1. MODEL SELECTION

MODEL NUMBER ¹	DESCRIPTION	VOLTAGE	MAX. LOAD (CONVECTION) (112.5 W)	MAX. LOAD (CONVECTION) (120 W)	MAX. LOAD (13 CFM)	MIN. LOAD	RIPPLE & NOISE ²
ABC225-1T12L ABC225-1012L	Screw Terminal Molex Connector	12 V	9.37 A	10.0 A	18.75 A	0.0 A	1%
ABC225-1T15L ABC225-1015L	Screw Terminal Molex Connector	15 V	7.5 A	8.0 A	15 A	0.0 A	1%
ABC225-1T24L ABC225-1024L	Screw Terminal Molex Connector	24 V	4.68 A	5.0 A	9.37 A	0.0 A	1%
ABC225-1T30L ABC225-1030L	Screw Terminal Molex Connector	30 V	3.75 A	4.0 A	7.5 A	0.0 A	1%
ABC225-1T48L ABC225-1048L	Screw Terminal Molex Connector	48 V	2.34 A	2.5 A	4.68 A	0.0 A	1%
ABC225-1T58L ABC225-1058L	Screw Terminal Molex Connector	58 V	1.94 A	2.07 A	3.88 A	0.0 A	1%
COVER-225-XBC ³ metal cover kit accessory							

2. INPUT SPECIFICATIONS

Specifications are for nominal input voltage, 25°C unless otherwise stated.

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Input Voltage	Universal (Derate from 100% at 100 VAC to 90% at 85 VAC)	85-264 VAC / 390 VDC
Input Frequency		47-63 Hz
Input Current	115 VAC: 230 VAC:	2.2 A max. 1.1 A max.
No Load Power	Typical	< 0.5 W
Inrush Current	115 VAC: 230 VAC: 264 VAC:	25 A 45 A 75 A
Leakage Current	Typical (N.A. For Class II Option) Touch current:	300 µA <100 µA
Power Factor	With Full Load	>0.95
Switching Frequency	PFC: PWM:	70 to 130 kHz 50-80 kHz

¹ For Class II (without input Earth pin) add suffix -2 (e.g.: ABC225-1012L-2). Ensure non-metallic mounting stud when installing a Class II product.

² Ripple is peak to peak with 20 MHz bandwidth and 10 µF (Tantalum capacitor) in parallel with a 0.1 µF capacitor at rated line voltage and load ranges.

³ When used in Cover Kit, de-rate output power to 70 % under all operating conditions.

3. OUTPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Output Power ⁴	With 13 CFM: Convection:	225 W Up to 120 W
Efficiency	48 V: 24 V, 30 V: 12 V, 15 V:	94% 93% 92%
Hold-up Time	225 W: 110 W:	10 ms 16 ms
Line Regulation		+/-0.5%
Load Regulation		+/-0.5%
Transient Response	25% step load change, at 0.1A/ μ s slew rate, 50% duty cycle, 50 Hz = 4%	Recovery time < 5 ms
Rise Time	Typical	55 ms
Set Point Tolerance ⁵		+/-1%
Output Voltage Adjustment ⁶		+/-3%
Over Current Protection		>110%
Over Voltage Protection		110 to 140%
Short Circuit Protection	Hiccup mode	

4. EMC SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Conducted Emissions	EN55032-B, CISPR22-B, FCC PART15-B	Pass
Radiated Emissions	EN 55032 A; with external core (King core K5B RC 25x12x15-M in input cable)	Pass Level B
Input Current Harmonics	EN 61000-3-2	Class D
Voltage Fluctuation and Flicker	EN 61000-3-3	Pass
ESD Immunity	EN 61000-4-2	Level 3, Criterion A
Radiated Field Immunity	EN 61000-4-3	Level 3, Criterion A
Electrical Fast Transient Immunity	EN 61000-4-4	Level 3, Criterion A
Surge Immunity	EN 61000-4-5	Level 3, Criterion A
Conducted Immunity	EN 61000-4-6	Level 3, Criterion A
Magnetic Field Immunity	EN 61000-4-8	Level 3, Criterion A
Voltage Dips, Interruptions	EN 61000-4-11	Criterion A & B

5. SAFETY SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Isolation Voltage	Input to Output: (For ITE application) Input to GND: (Not Applicable For Class II Option)	3000 VAC 1500 VAC
Safety Standard(s)	Approved to the latest edition of the following standards: CSA/UL60950-1, EN60950-1 and IEC60950-1; Class1 SELV.	
Agency Approvals	Nemko, UL, C-UL	
CE mark	Complies with LVD Directive	

⁴ Combined output power of main output, fan supply shall not exceed max. Power rating.

⁵ Fan supply output voltage tolerance including set point accuracy, line & load regulation is +/-10% and Ripple & noise is less than 10%.

⁶ Adjustment potentiometer is located on the SMT side of the PCB.

6. ENVIRONMENTAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Operating Temperature ⁷	Start-up is guaranteed, with spec deviation, see Fig. 1	-40 to +70°C
Storage Temperature		-40 to 0°C
		-40 to +85°C
Cooling	With 13 CFM forced air cooling With natural convection cooling at 100 to 264 VAC	225 W Up to 120 W
Relative Humidity	Noncondensing	5% to 95%
Altitude	Operating: Nonoperating:	16,000 ft. 40,000 ft.
Reliability	MTBF according to Telcordia -SR332-issue 3:	3.37 million hours

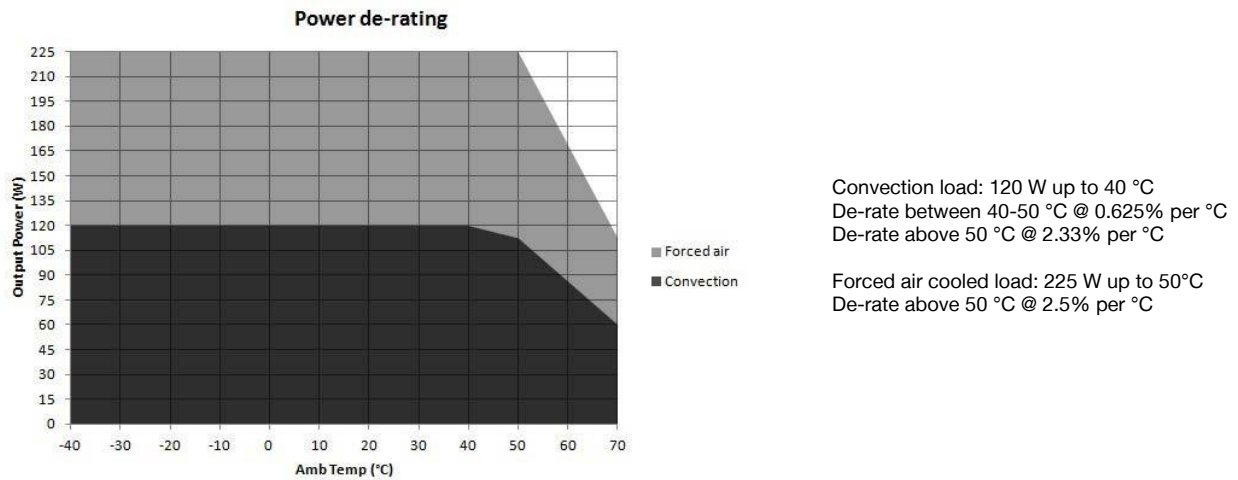


Figure 1. Derating Curve

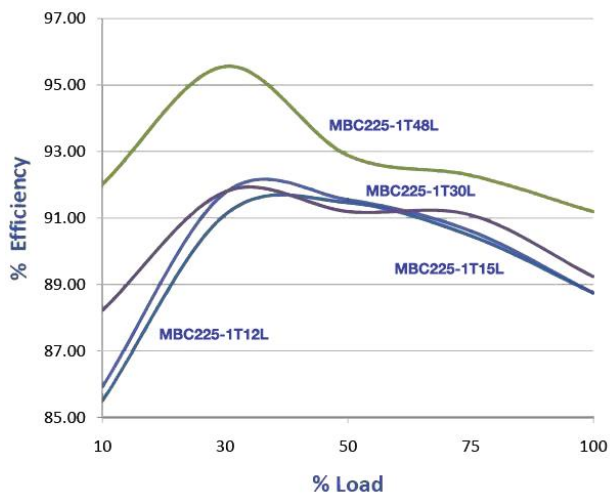


Figure 2. Efficiency Graph at 115 VAC

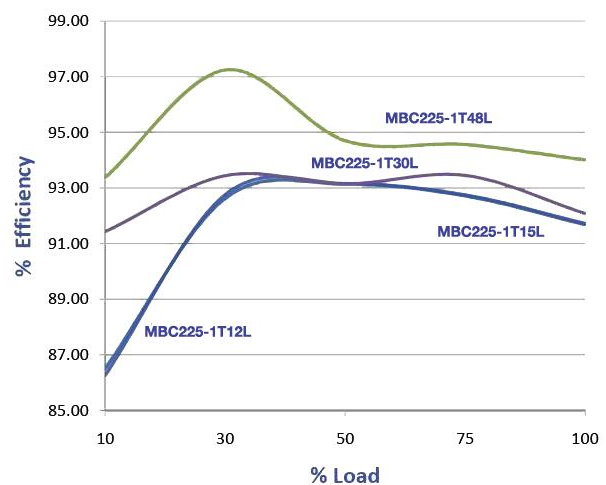


Figure 3. Efficiency Graph at 230 VAC

⁷ Output ripple can be more than 10% of the output voltage.

CONNECTOR	PIN	DESCRIPTION/CONDITION			MANUFACTURER / PN
AC Input Connector	J1	Pin 1 Pin 2 Pin 3	AC Line Not Fitted AC Neutral		Molex: 26-60-4030 Mating: 09-50-3031; Pins: 08-50-0106
DC Output Connector	J2	Pin 1,2,3 Pin 4,5,6	V1 +VE V1 - VE	Screw Terminal (Option 1)	Molex: 39357 Series or equivalent
				Molex Connector (Option 2)	Molex: 26-60-4060 Mating: 09-50-3061; Pins: 08-50-0106
Aux (Fan) Output	J3	Pin 1 Pin 2	FAN +VE FAN - VE		AMP :640456-2 Mating: 640440-2

PARAMETER	DESCRIPTION/CONDITION
Weight	200 g approx.
Dimensions	50.8 x 101.6 x 25.4 mm (2 x 4 x 1 inch)
Cooling ^a	225 W with 13 CFM forced air cooling (refer Mechanical Drawing) Up to 120 W with natural convection cooling (refer Derating Curve)



⁸ 225 W with 13CFM forced air cooling and 120 W with natural convection cooling at 100 to 264 VAC.

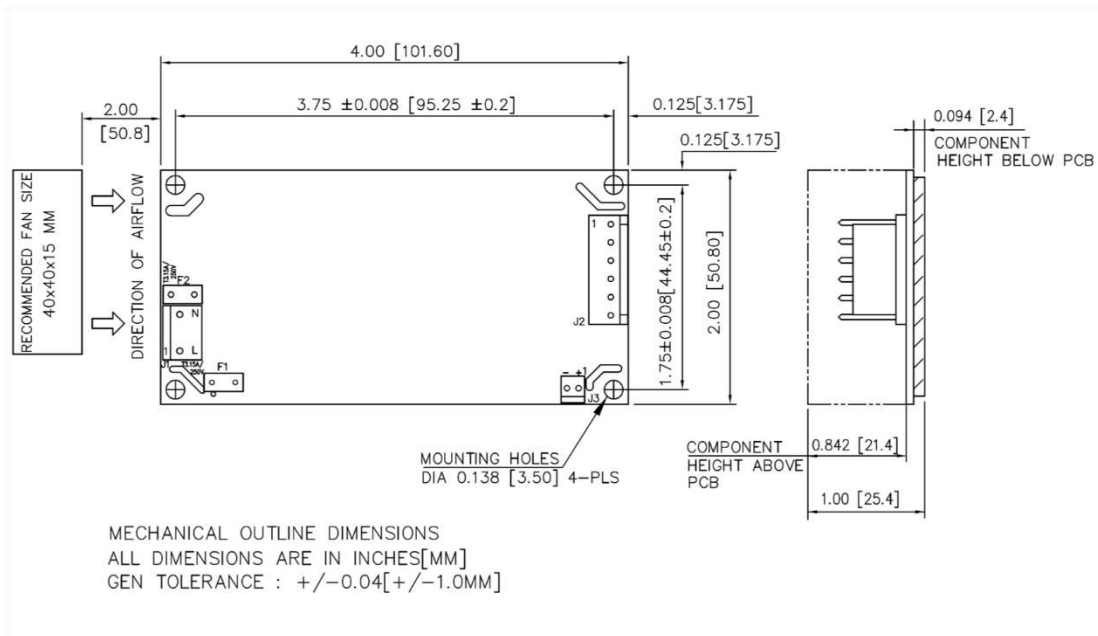


Figure 5. Mechanical Drawing – Molex Connector (Option 2)

NOTES: In case the PCB is mounted in a metal enclosure, using metal hardware ensure the following:

- 1 Stand off, used to mount PCB has OD of 5.4 mm max.
- 2 Screws, used to fix PCB on stand off, have head dia of 6.0 mm max.
- 3 Washer, if used, to have dia of 6.5 mm max.

For more information on these products consult: tech.support@psbel.com

NUCLEAR AND MEDICAL APPLICATIONS - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

TECHNICAL REVISIONS - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.