

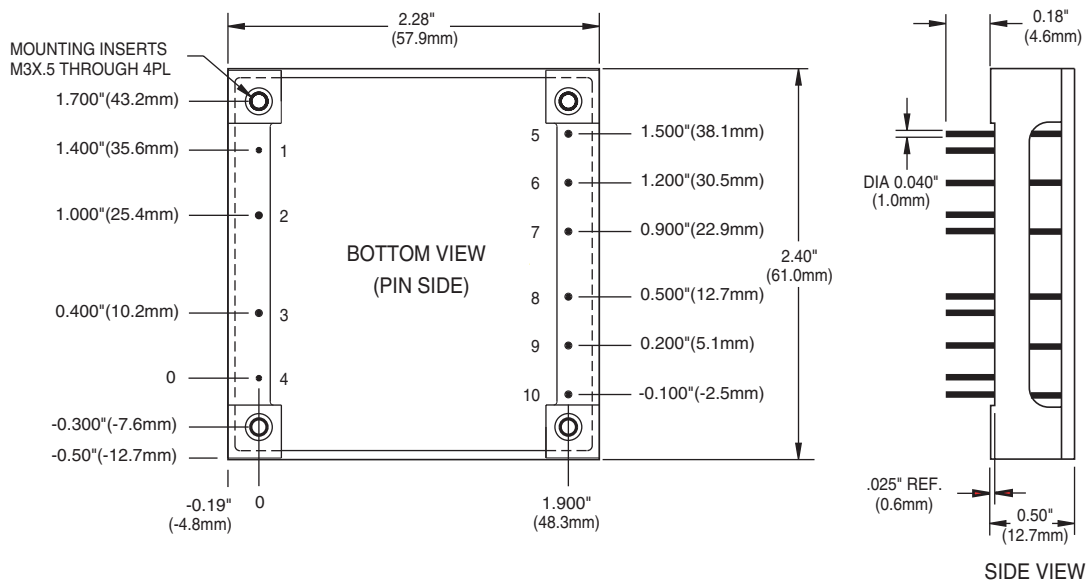
Model Selection

MODEL	INPUT VOLTAGE (VOLTS)	INPUT VOLTAGE RANGE (VOLTS)	MAXIMUM INPUT CURRENT (AMPS)*	OUTPUT VOLTAGE (VOLTS)	RATED OUTPUT CURRENT (AMPS)&&	RIPPLE & NOISE pk-pk (mV)	TYPICAL EFFICIENCY**
HBD040YED-A	24	18-36	2.89	3.3/2.5	12/15	75/75	75%
HBD060YGE-A	24	18-36	4.54	5.0/3.3	12/15	100/75	78%
HBD040YGE-A	24	18-36	3.02	5.0/3.3	8/12	100/75	80%
HBD030ZED-A	48	34-75	1.50	3.3/2.5	9/12***	75/75	75%
HBD040ZGE-A	48	34-75	1.51	5.0/3.3	8/12	100/75	80%
HBD040ZED-A	48	34-75	1.62	3.3/2.5	12/15	75/75	75%
HBD060ZGE-A	48	34-75	2.27	5.0/3.3	12/15	75/75	75%

NOTES: * Maximum input current at minimum input voltage, maximum rated output power.
 ** At nominal V_{in} , rated output.
 *** Total output power to be restricted to 30 Watts.
 && Current can be drawn from either output to its maximum value, or from both outputs to a combined total of 15A.

Model numbers highlighted in yellow or shaded are not recommended for new designs.

Mechanical Drawing



Thermal Impedance	
Natural Convection	6.6 °C/W
100 LFM	5.7 °C/W
200 LFM	4.2 °C/W
300 LFM	3.1 °C/W
400 LFM	2.6 °C/W
Note: Thermal impedance data is dependent on many environmental factors. The exact thermal performance should be validated for specific application.	

Pin	Function
1	- V_{in}
2	Case
3	On/Off
4	+ V_{in}
5	+ $V_{out 2}$
6	- $V_{out 2}$
7	Trim 2
8	+ $V_{out 1}$
9	- $V_{out 1}$
10	Trim 1

Tolerances	
Inches:	(Millimeters)
.XX ± 0.020	.X ± 0.5
.XXX ± 0.010	.XX ± 0.25
Pin:	
± 0.002	± 0.05
(Dimensions as listed unless otherwise specified.)	

Ordering Information
Suffix Code Identification:

Series Applicability: HAS, HBD, HBS, HES, QBS, QES, TES, TQD		
Features & Options	Descriptions	Suffix Code
Remote ON/OFF	Positive Logic	None
	Negative Logic	N
Trim	Standard Power-One (Negative)	None
	Industry-standard (Positive)	T
Pin Length	0.18" (4.6mm), standard model length	None
	0.145" (3.68mm)	7
	0.110" (2.8mm)	8
Special Options	Customer-specific models	S#
NOTE: Contact factory for availability of specific options.		

NUCLEAR AND MEDICAL APPLICATIONS - Power-One products are not designed, intended for use in, or authorized for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems without the express written consent of the respective divisional president of Power-One, Inc.

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.