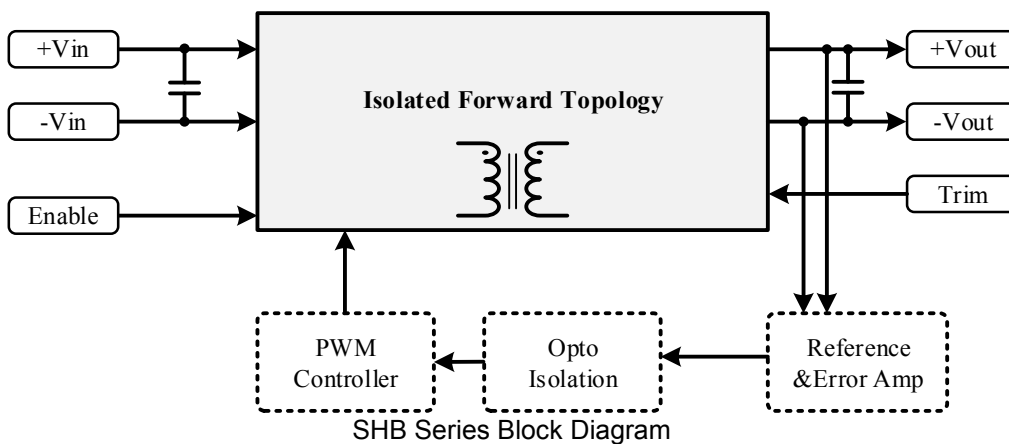


Features

- Industry-Standard **DOSA** pinout
- High efficiency
- High Input Voltage
- Fixed switching frequency provides predictable EMI
- No life-span constrained Capacitor inside
- Isolation 2250V Input-to-output
- Fully protected: **OVP, OTP, OCP** and **UVLO**
- Output voltage trim range of -10%, +10%
- Remote sense for the output voltage
- RoHS compliant

Description

SHB Half-Brick converter series is composed of Isolated, board-mountable, fixed switching frequency DC-DC converters that use synchronous rectification to achieve extremely high power conversion efficiency. These DC-DC converter modules use advanced power processing, control and packaging technologies to enhance the performance, flexibility, reliability and cost effectiveness of mature power components. Each module is six-sided metal case enclosed to provide protection from the harsh environments seen in many industrial and transportation applications.





PART NUMBER STRUCTURE

SHB	300	120	-	S	-	P	-	B	300
Series Name	Input Voltage (VDC)	Output Voltage (VDC)		Output Quantity		Remote Control Option		Shape	Watt
	300 : 150-420	120 : 12 240 : 24		S: Single		P:Positive logic N:Negative logic		B : Base Plate	300

Model Selection Guide

Typical @ Ta=+25 °C under nominal line voltage conditions unless noted.

Model	Input		Output			Efficiency
	Voltage(V)		Voltage	Current	Power	
	Range	Nominal	(V)	(A)	(W)	Typ.(%)
SHB300120-S-P-B300	150-420	300	12	25	300	89
SHB300240-S-P-B300	150-420	300	24	12.5	300	89

※ modification or customer designs are available. Please contact us for details.

**Electrical Specifications****Input Specifications**

Typical @ Ta=+25°C under nominal line voltage conditions unless noted.

Parameter	Notes and Conditions	Min.	Typ	Max.	Unit
Transient Input Voltage ranges	SHB300 models(100mS Max)			450	VDC
Operating Input Voltage ranges	SHB300 models	150	300	420	VDC
Under-Voltage Lockout Start up voltage	SHB300 models			150	VDC
Under-Voltage Lockout Shutdown voltage	SHB300 models		130		VDC
Input Current	See model selection guide, Standby mode (OFF,UVLO)5mA				
Enable Function Input	Positive logic	ON	Open or 8 ~ 20		VDC
		OFF	Short or 0 ~ 1.2		
	Negative logic	ON	Short or 0 ~ 1.2		VDC
		OFF	Open or 8 ~ 20		

Output Specifications

Parameter	Notes and Conditions	Min.	Typ	Max.	Unit
Output Voltage Accuracy	V _{NOM} 50% Load			±1.5	%
Line Regulation	Low line to High line			±0.3	%
Load Regulation	10% to 100% load			±0.5	%
Output Ripple and Noise Voltage	Bandwidth 20MHz and with 1uF MLCC Output Capacitor		1.5		%V _{pk-pk}
Temperature Coefficient				±0.04	% / °C
Transient Recovery Time	25% load step change		800		µSec.
Transient Peak Deviation	ΔI _o /Δt=2.5A/us		±2		%V _o
Start-Up time	When use Enable Function		20		mSec.
Trimming Output Voltage	V _{NOM} 10% Load		±10		%
Over voltage protection	V _{NOM} 10% Load		120		%
Output Power Protection	V _{NOM}		120		%



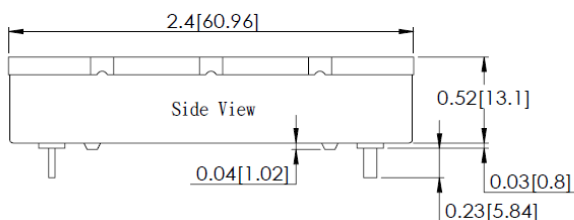
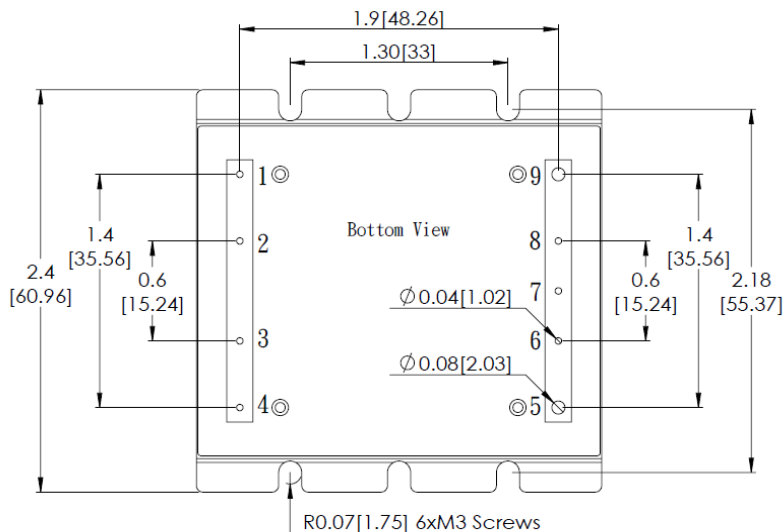
General Specifications

Parameter	Notes and Conditions	Min.	Typ	Max.	Unit
Switching Frequency	V _{NOM}	150		330	KHz
Storage Temperature range	All models	-55		125	°C
Operating Case Temperature	All models	-45		100	°C
Over temperature Protection	All models, Auto. Recovery		110		
Isolation Voltage	All models, 1 Minute	2250			VDC
Input to Output					
Isolation Resistance	All models, 500VDC, At 70%RH	100			MΩ
Input to Output					
Isolation Capacitance	All models		1500		pF
Input to Output					
Humidity (non condensing)	All models			95	%
Calculated MTBF	BellCore-TR-332@ 50°C G.B	TBD			M HR
Weight			TBD		g (oz.)
Dimensions	2.4" x 2.4" x 0.52" (61 x 61 x 13.2mm)				
Case Material	Aluminum				

It is recommended to protect the input by fuses or other protection devices.

The information and specifications contained in this data sheet are believed to be correct at time of publication. All specifications are subject to change without notice. No rights under any patent accompany the sale of any such products or information contained herein.

Mechanical Dimensions



Pin Connections

Pin#	Single
1	-Vin
2	--
3	Enable
4	+Vin
5	+Vout
6	+Sense
7	Trim
8	-Sense
9	-Vout

Note:

Pins Material: Copper alloy
 Pins Plating: Gold
 All dimension in inch[mm]
 Tolerance: .XX±0.02[.X±0.5]