

Features

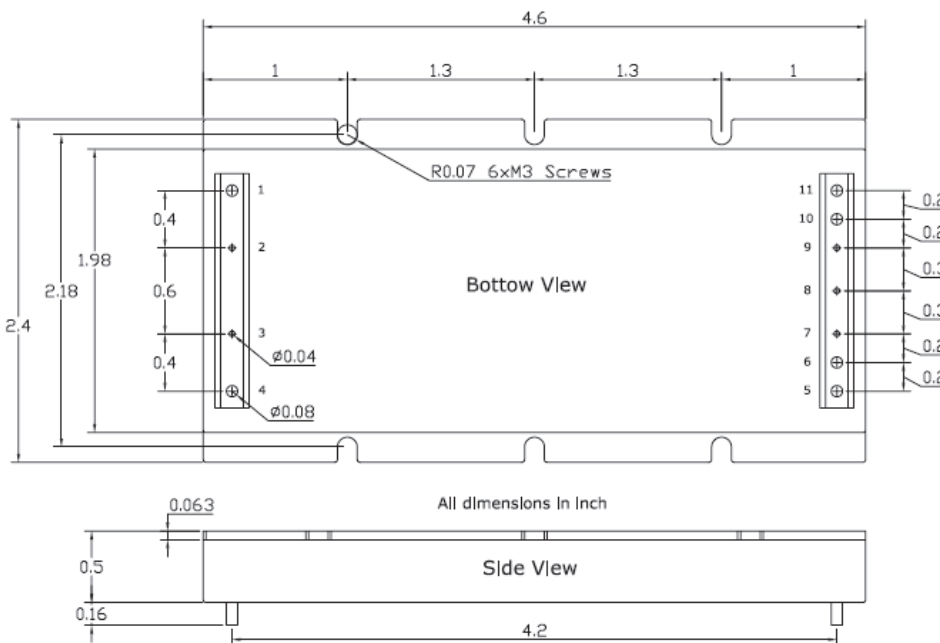
- High efficiency – **Synchronous Rectifier Topology**
- Fixed switching frequency provides predictable **EMI**
- **No life-span constrained Capacitor** inside
- Single wire connection for **Load Share**
- No minimum load requirement
- Output current limit and short circuit protection
- Output over-voltage protection
- Remote sense for the output voltage
- Output voltage trim range of -10%, +10%
- Input under-voltage lockout
- Input-to-output isolation 2250V
- Thermal shutdown
- RoHS compliant

Description

SFB Full-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.

Mechanical Dimensions :

Bottom View



Pin Connections:

Pin#	Function
1	-Vin
2	Load Share
3	Enable
4	+Vin
5	+Vout
6	+Vout
7	+Sense
8	Trim
9	-Sense
10	-Vout
11	-Vout

All dimension in inch
Tolerance: X.X±0.02



Model Selection Guide

Typical @ Ta=+25 °C under nominal line and full load condition noted.

Model	Input			Output			Efficiency @FL
	Voltage(V)		Current(A)	Voltage	Current	Power	Typ.(%)
	Range	Nominal	Full load	(V)	(A)	(W)	
SFB024120-60-P	18-36	24	33.3	12	60	720	89%
SFB024150-48-P	18-36	24	33.3	15	48	720	89%
SFB024240-30-P	18-36	24	33.3	24	30	720	89%
SFB024280-25-P	18-36	24	33.3	28	25.7	720	89%
SFB024480-15-P	18-36	24	33.3	48	15	720	89%
SFB270120-60-P	150-450	270	2.96	12	60	720	89%
SFB270150-66-P	150-450	270	3.70	15	60	900	89%
SFB270240-40-P	150-450	270	3.95	24	40	960	89%
SFB270280-34-P	150-450	270	3.95	28	34	960	89%
SFB270480-20-P	150-450	270	3.95	48	20	960	89%

※ modification or custom designs are available. Please contact us for detail.



Electrical Specifications

Input Specifications

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

Parameter	Notes and Conditions	Min.	Typ	Max.	Unit
Transient Input Voltage ranges	SFB24 models SFB270 models			50 500	VDC
Operating Input Voltage ranges	SFB24 models SFB270 models	9 150	18 270	36 450	VDC
Under-Voltage Lockout Turn-ON Threshold	SFB24 models SFB270 models	17.5 145			VDC
Under-Voltage Lockout Turn-OFF Threshold	SFB24 models SFB270 models			17 140	VDC
Input Current	See model selection guide, Standby mode (OFF,UVLO)5mA				
High Input Level	Enable Function Input	8		60	VDC
Low Input Level		0		1.2	VDC
Input Filter	All models	Built-in Pi Filter			

Output Specifications

Parameter	Notes and Conditions	Min.	Typ	Max.	Unit
Output Voltage Accuracy	50% Load			±1.5	%
Line Regulation	Low line to High line			±0.3	%
Load Regulation	10% to 100% load			±0.5	%
Minimum Load	Single output	0			%
Output Ripple and Noise Voltage each output	Bandwidth 20MHz and with 1uF MLCC.Output Capacitor each output		1	1.5	%V _{pk-pk}
Temperature Coefficient				±0.04	% / °C
Transient Recovery Time	25% load step change		800		µSec.
Transient Peak Deviation	$\Delta I_o / \Delta t = 2.5A/\mu s$			±2	%V _o
Start-Up time	When use Enable Function		5	20	mSec.
Trimming Output Voltage	Single output		±10		%
Over voltage protection			120		%
Output Power Protection	Hiccup Mode		120		%

General Specifications

Parameter	Notes and Conditions	Min.	Typ	Max.	Unit
Switching Frequency		220	260	300	KHz
Storage Temperature range	All models	-60		125	°C
Operating Case Temperature	All models	-45		100	°C
Over temperature Protection	All models, Auto. Recovery		110		
Isolation Voltage Input to Output	All models, 1 Minute 500VDC, At 70%RH			2250	VDC
Isolation Resistance Input to Output	All models, At 70%RH	100			MΩ
Isolation Capacitance Input to Output	All models		1500		pF
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" x4.6" x 0.5" (61.0 x 117.0 x 12.7mm)				
Case Material	Aluminum				
Potting Material	Silicone				

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.