

特点

- * 输入输出不隔离降压型变换器
- * 12V 标称输入电压, 16A 标称输出负载
- * 外形尺寸: 50.8 × 12.7 × 8.1 mm
- * 高效率、高功率密度

Features

- * Non-isolated Buck Converter
- * 12V Nominal Input Voltage, 16A Output Current
- * Size: 2.0 × 0.5 × 0.3 inch
- * High Efficiency, High Power Density

输入特性(Input)		注释(Notes and Conditions)	
输入电压范围(Input Voltage Range)	10.0~14.0Vdc	15Vdc Max	
遥控功能(Remote On/Off Function)			
正逻辑(Positive Logic)	开启(On)	悬空或高电平(10.0-14.0Vdc) (Open Circuit or High Level)	相对于GND(Reference to GND)
	关闭(Off)	低电平(0-0.4Vdc)或与 GND 短路 (Low Level or Connect to GND)	

输出特性(Output)		注释(Notes and Conditions)	
输出电压精度(Voltage Set-Point Accuracy)	± 2%	Vinom and Ionom	
源效应(Line Regulation)	± 1%Vo	Vimin~Vimax, Ionom	
负载效应(Load Regulation)	± 1%Vo	0~100%Ionom, Vinom	
输出电压调节范围(Output Voltage Trim Range)	0.7525 ~ 5.5Vdc		
输出过流保护点 (Current Limit Threshold Range)	≥ 110%Ionom		
短路保护(Short-Circuit Protection)	连续可恢复 (Continuous, Automatic Recovery)		
瞬态响应(Dynamic Response)			
过冲幅度(Peak Deviation)	200mV	25%-50%-25% of Ionom, Vin=Vinom	
恢复时间(Settling Time)	≤ 50 μs	and 50%-75%-50% of Ionom, Vin=Vinom	

一般特性(General)		注释(Notes and Conditions)	
温度系数(Temperature Coefficient)	± 0.02%/°C		
相对湿度(Relative Humidity)	≤ 95%RH, (40 ± 2)°C		
工作环境温度(Operating Ambient Temperature) ¹	-40°C ~ +85°C		
贮存温度(Storage Temperature)	-55°C ~ +125°C		
过温保护(Thermal Shutdown Range)	+110°C	基板温度(PCB Temperature)	
开关频率(Switching Frequency)	300kHz		
冷却方式(Cooling)	自然冷却(Natural Convection)	或强制风冷(or Forced Convection)	
平均故障间隔时间(MTBF)	2 × 10 ⁵ h	MIL-HDBK-217	
重量(Weight)	6.5g		

注: 除非另有说明, 指标一般在标称输入电压、满载和 25°C 环境温度下测得。

Note: All specifications are typical at nominal input, full load at 25°C unless otherwise stated.

1 参见降额曲线图(Reference to Derating Curve)

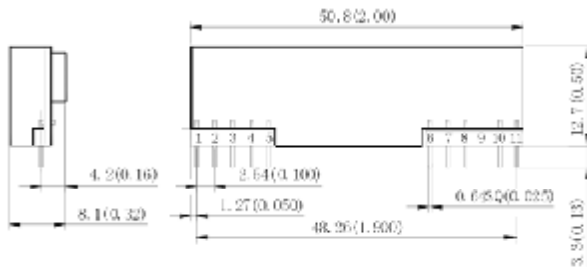
性能列表 (Voltage Trim)

标称输入电压 (Input Voltage)	标称输出电压 (Output Voltage)	外接电阻 Rtrim (External Resistor)	标称负载 (Output Current)	额定输出功率 (Output Power)	效率 (Efficiency)	输出杂音电压峰峰值 (Ripple and Noise)
Vdc	Vdc	k Ω	A	W	%	mVp-p
12	0.75	Open	16.00	12	78	75
12	1.20	22.46	16.00	19.2	84	75
12	1.50	13.05	16.00	24	85	75
12	1.80	9.024	16.00	28.8	87	75
12	2.50	5.009	16.00	40	90	75
12	3.30	3.122	16.00	52.8	91	75
12	5.00	1.472	16.00	80	93	75

注: Trim 和 GND 出针之间接一合适的电阻 Rtrim(具体接法参见输出电压调节图)就可获得从 0.7525~5.0Vdc 之间的任意输出电压。
(Note: Programmable output voltage via external resistor from 0.7525Vdc to 5.0Vdc)

安装尺寸 (Mechanical Drawing)

尺寸单位是 mm(inches); All Dimensions in mm (inches)

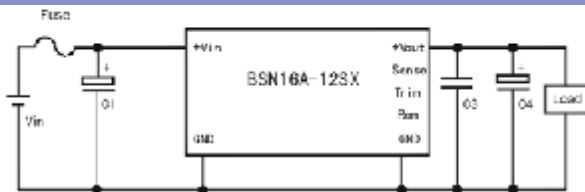


* 引脚可以与PCB垂直; 型号后加尾缀“/B”。
(Pins are perpendicular to PCB
Optional ,add suffix"/B")

未注公差按下表 (Tolerances Unless Otherwise Specified)	
mm	inches
.x ±0.5	.xx ±0.02
.xx ±0.25	.xxx ±0.010

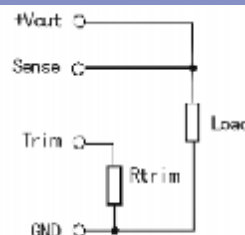
引脚定义 (Pin Definition)	
引脚(Pin)	单路(Single)
1	+Vout
2	+Vout
3	Sense
4	+Vout
5	GND
6	GND
7	+Vin
8	+Vin
9	NP
10	Trim
11	Rem

应用电路推荐 (Recommended Application Circuit)



- C1 推荐值(Recommended): 4 × 47 μ F 钽电容(Tantalum Capacitor)
- C3 推荐值(Recommended): 1 μ F 陶瓷电容(Ceramic Capacitor)
- C4 推荐值(Recommended): 10 μ F 钽电容(Tantalum Capacitor)

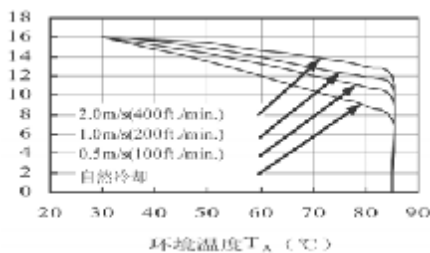
输出电压调节 (Output Voltage Trim)



上调
(Trim up)

$$R_{trim} = \left(\frac{10500}{V_o - 0.7525} - 1000 \right) \Omega$$

Vin=12V, Vo=0.75V 时温度降额曲线 (Temperature Derating Curve Circuit)



Vin=12V, Vo=5.0V 时温度降额曲线 (Temperature Derating Curve)

