



特点

- * 输入输出不隔离降压型变换器
- * 3.3V 和 5V 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
- * 3.3V and 5V 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)	3.0~5.5Vdc	6Vdc Max	
遥控功能 (Remote On/Off Function)			
正逻辑 (Positive Logic)	开启 (On)	悬空或低电平 (0-0.4Vdc) 或与 GND 短路 (Open Circuit or Low Level (0-0.4Vdc) or Connect to GND)	相对于 GND (Reference to GND)
	关闭 (Off)	高电平 (3.0-5.5Vdc/1mA) (High Level (3.0-5.5Vdc/1mA))	

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 ~ 3.63Vdc		
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)	300mV	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		
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)

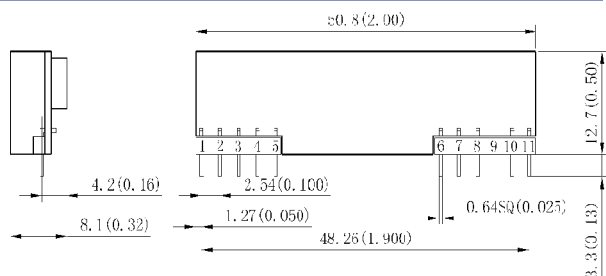
性能列表 (Voltage Trim)

标称输入电压 (Input Voltage) Vdc	标称输出电压 (Output Voltage) Vdc	外接电阻 Rtrim (External Resistor) k Ω	标称负载 (Output Current) A	额定输出功率 (Output Power) W	效率 (Efficiency) %	输出杂音电压峰峰值 (Ripple and Noise) mVp-p
5	0.7525	Open	16.00	12	81	50
5	1.20	41.973	16.00	19.2	86	50
5	1.50	23.077	16.00	24	88	50
5	1.80	15.004	16.00	28.8	89	50
5	2.50	6.974	16.00	40	92	50
5	3.30	3.160	16.00	52.8	94	50

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 0.7525~3.3Vdc 之间的任意输出电压。
(Note: Programmable output voltage via external resistor from 0.7525Vdc to 3.3Vdc)

安装尺寸 (Mechanical Drawing)

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

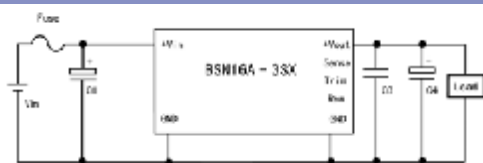


* 引脚可以与 PCB 垂直; 型号后加尾缀 "B"。
(Pins perpendicular to PCB are Optional, add suffix "B")

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

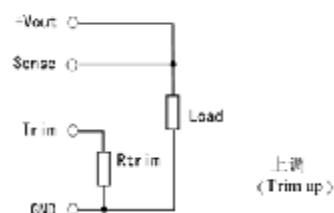
引脚定义 (Pin Definition)	
引脚 (Pin)	单路 (Single)
1	+Vout
2	+Vout
3	Sense
4	+Vout
5	GND
6	GND
7	+Vin
8	+Vin
9	NP
10	Trim
11	Rem

应用电路推荐 (Recommended Application Circuit)



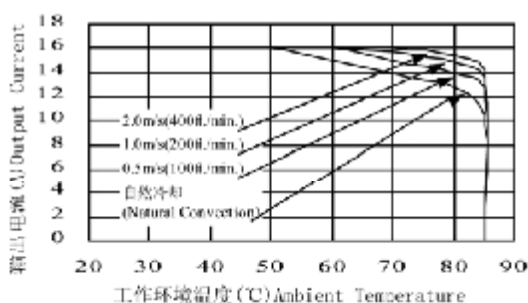
C1 推荐值 (Recommended): 2 × 100 μF 钽电容 (Tantalum Capacitor) 和
(And) 2 × 10 μF 陶瓷电容 (Ceramic Capacitor) 并联 (parallel connection)
C3 推荐值 (Recommended): 1 μF 陶瓷电容 (Ceramic Capacitor)
C4 推荐值 (Recommended): 10 μF 钽电容 (Tantalum Capacitor)

输出电压调节 (Output Voltage Trim)



$$R_{trim} = \left(\frac{21070}{V_o - 0.7525} - 5110 \right) \Omega$$

Vin=5V, Vo=0.75V 时温度降额曲线 (Temperature Derating Curve Circuit)



Vin=5V, Vo=3.3V 时温度降额曲线 (Temperature Derating Curve)

