

Functional Description

The BD2001 regulated 2W single DC/DC converter features 5V_{IN} and 3.3V_{OUT} in a SIP package with a minimum isolation voltage of 3000Vdc, 68% efficiency and an operating temperature range from -40°C to +85°C.

Electrical Specifications: Regulated INPUT SPECIFICATIONS

Measured at 25°C with the condition of V_{IN} = Nominal and Full Load. Specifications subject to change without notice.

PARAMETER	CONDITION / NOTE	MIN	TYP	MAX	UNIT
Input Voltage Range	V _{IN} Nominal ±10%	4.5	5	9	Vdc
Input Filter	Capacitor				

OUTPUT SPECIFICATIONS

PARAMETER	CONDITION / NOTE	MIN	TYP	MAX	UNIT
Output Voltage			3.3		Vdc
Output Current			500		mA
Output Voltage Accuracy			±2		%
Ripple & Noise	@20MHz BW			50	mV _{PP}
Line Regulation	Minimum V _{IN} to maximum V _{IN}			±0.5	%
Load Regulation	20% FL to FL		±0.5		%
Short Circuit Protection	Continuous, Automatic recovery				

GENERAL SPECIFICATIONS

PARAMETER	CONDITION / NOTE	MIN	TYP	MAX	UNIT
Efficiency @ FL			68		%
Isolation Voltage, Input to Output	Tested for 1 minute	3000			Vdc
Isolation Resistance		1			GΩ
Isolation Capacitance	@100kHz		30		pF
Switching Frequency	FL to 10% FL	100		700	kHz

ENVIRONMENTAL SPECIFICATIONS

PARAMETER	CONDITION / NOTE	MIN	TYP	MAX	UNIT
Operating Temperature Range	Ambient	-40		+85	°C
Storage Temperature Range		-50		+125	°C

PHYSICAL CHARACTERISTICS

PARAMETER	CONDITION / NOTE	MIN	TYP	MAX	UNIT
Dimensions (L×W×H)	0.86×0.36×0.44 in. (21.80×9.20×11.10mm)				
Weight	0.17 oz. (4.7g)				
Package Material	UL 94V-0				

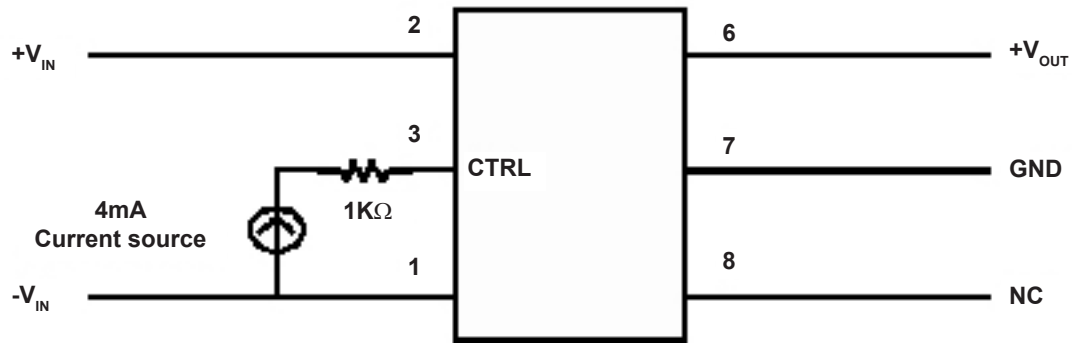


FIGURE 1. Typical connection diagram

Remote ON/OFF

ON: Open or high impedance

OFF: 3mA to 6mA input current applied via 1KΩ resistor
(OFF standby current: 10mA max.)

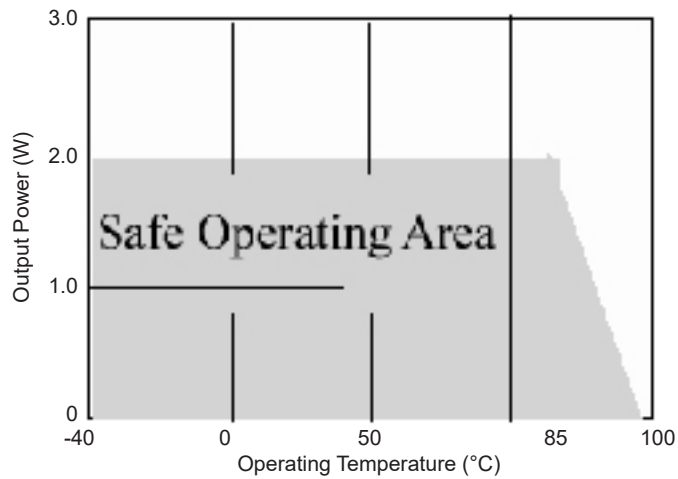


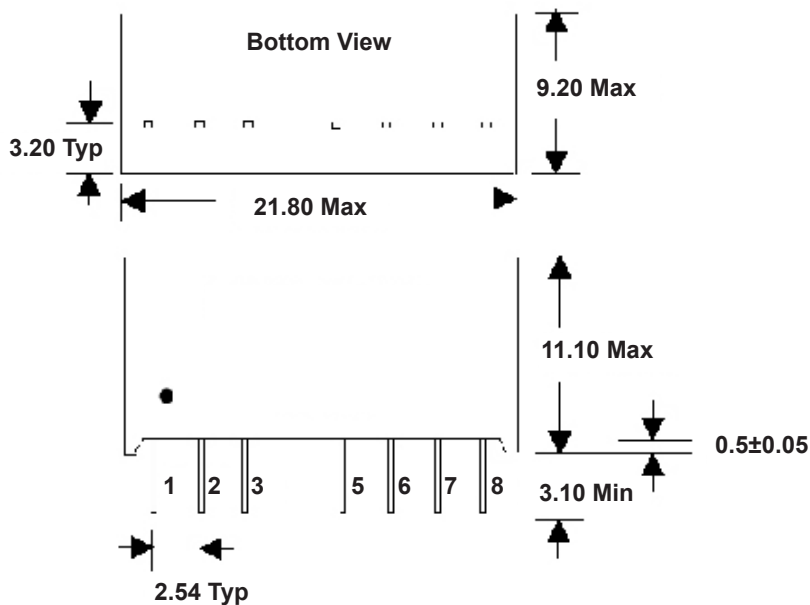
FIGURE 2. Derating

Mechanical Specifications

Unit: mm

Pin Diameter: 0.5×0.25

Tolerance: ±0.25



Pin	Function
1	-V _{IN}
2	+V _{IN}
3	CTRL
5	NC
6	+V _{OUT}
7	GND
8	NC