



查询B1000R供应商

MicroPower Direct



10W, 5 VDC Input
Compact, Dual Output
DC/DC Converters
B1000R Series

Key Features

- 5 VDC Input
- 10W Output Power
- Meets EN55022 Class "A"
- 1500 VDC Isolation
- Tightly Regulated Dual Outputs
- Low Cost

Electrical Specifications

Specifications typical @ +25°C with nominal input voltage & rated output current, unless otherwise noted. Specifications subject to change without notice.

Input

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage Range		4.5	5.0	5.5	VDC
Input Filter	π (Pi) Filter (Complies with EN55022 Class A)				
Reverse Polarity Input Current				2.0	A
Short Circuit Input Power			3,500	4,500	mW

Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage Accuracy			± 0.5	± 1.0	%
Output Voltage Balance	Dual Output , Balanced Loads		± 0.2	± 0.5	%
Line Regulation	$V_{in} = \text{Min to Max}$			± 0.1	%
Load Regulation	$I_{out} = 10\% \text{ to } 100\%$			± 0.15	%
Ripple & Noise (20 MHz)			20	30	mV P - P
Output Power Protection		150			%
Transient Recovery Time (Note 1)	25% Load Step Change			200	μSec
Transient Response Deviation				± 4.0	%
Temperature Coefficient			± 0.01	± 0.02	%/°C
Output Short Circuit	Continuous				

General

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage	60 Seconds	1,500			VDC
Isolation Resistance	500 VDC	1,000			M Ω
Isolation Capacitance	100 kHz, 1V		500	600	pF
Switching Frequency		270	280	290	kHz

Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range		-40	+25	+71	°C
Storage Temperature Range		-40		+125	°C
Cooling	Free Air Convection				
Humidity	RH, Non-condensing			95	%
RFI	Six-Sided Shielded, Metal Case				
Conducted EMI	EN55022 Class A				

Physical

Case Size	2.0 x 1.0 x 0.40 Inches (50.8 x 25.4 x 10.2 mm)				
Case Material	Metal with Non-Conductive Base				
Weight	1.06 Oz (30g)				

Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign		700		kHours

Absolute Maximum Ratings

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage Surge (1 Sec)		-0.7		7.5	VDC
Internal Power Dissipation				5,000	mW

Caution: Exceeding Absolute Maximum Ratings may damage the module. These are not continuous operating ratings.

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Model Selection Guide

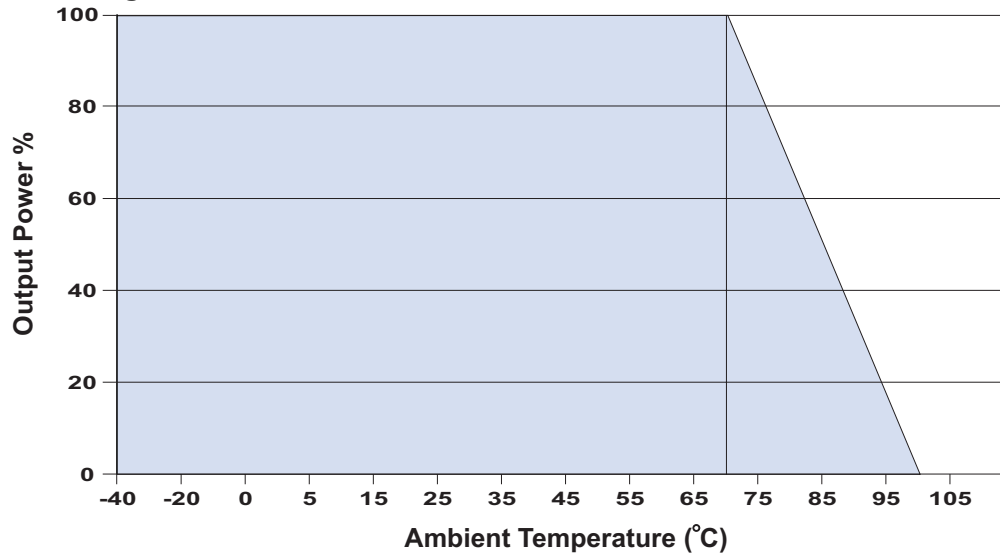
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Model Number	Input Voltage (VDC)		Input Current (mA)		Reflected Ripple Current (mA, Typ)	Output			Efficiency (% Typ)	Fuse Rating Slow-Blow (mA)
	Nominal	Range	Full-Load	No-Load		Voltage (VDC)	Current (mA, Max)	Current (mA, Min)		
B1001R	5	4.5 - 5.5	2,500	30	>50	±12.0	±415	±42	78	5,000
B1002R	5	4.5 - 5.5	2,538	30	>50	±15.0	±330	±33	78	5,000
B1003R	5	4.5 - 5.5	2,669	60	>50	±18.0	±278	±28	75	5,000

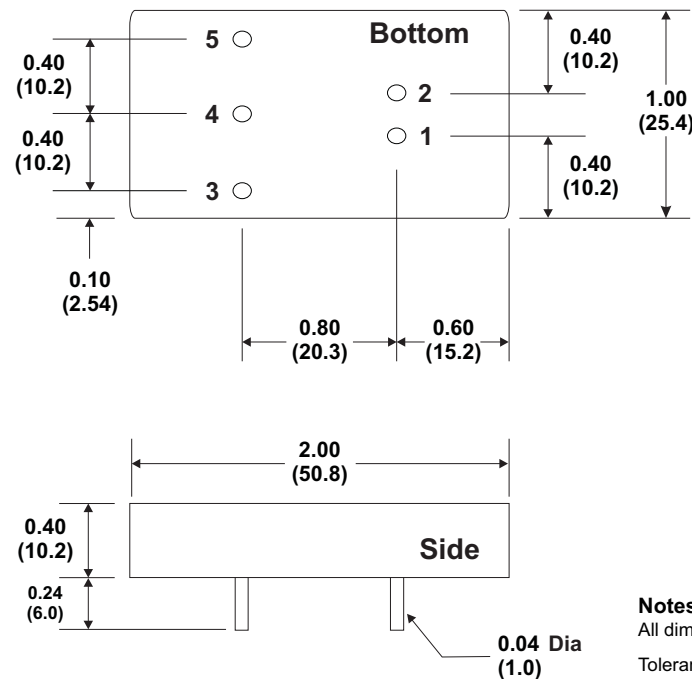
Notes:

- Transient recovery is measured to within a 1% error band for a load step change of 75% to 100%.
- When measuring output ripple, it is recommended that an external 0.47 μF ceramic capacitor be placed from each output (pin 3 & pin 5) to common (pin 4).
- Dual output units may be connected to provide a 24 VDC, 30 VDC or 36 VDC output. To do this, connect the load across the positive (+Vout) and negative (-Vout) outputs and float the output common.

Derating Curve



Mechanical Dimensions



Capacitive Load

μF Max
±1,000

Pin Connections

Pin	Function
1	+Vin
2	-Vin
3	+Vout
4	Common
5	-Vout

Notes:

All dimensions are typical in inches (mm)
 Tolerance x.xx = ±0.01 (±0.25)



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