



MicroPower Direct



10W , Wide Input Range
Single and Dual Output
DC/DC Converters
C1000RW Series

Key Features

- 2-1 Input Range
- Tightly Regulated Outputs
- High Efficiency
- 10W Output Power
- Internal Filter
- 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	Nominal Input	Min.	Typ.	Max.	Units
Input Start Voltage	12 VDC Input Models	8.0	8.5	9.0	VDC
	24 VDC Input Models	14.0	16.0	18.0	
	48 VDC Input Models	25.0	30.0	36.0	
Input Filter	π Filter				
Reverse Polarity Input Current				2.0	A
Short Circuit Input Power				4000	mW

Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage Accuracy			±0.5	±1.0	%
Output Voltage Balance	Dual Output Balanced Load		±0.5	±1.0	%
Line Regulation	For V_{IN} = Min. to Max.		±0.1	±0.2	%
Load Regulation	For I_{OUT} = 10% to 100%		±0.2	±0.5	%
Ripple & Noise (20 MHz)			65	100	mV Pk-Pk
Ripple & Noise (20 MHz)	Over Line, Load & Temp.			120	mV Pk-Pk
Ripple & Noise (20 MHz)				10	mV Rms
Output Power Protection		120			%
Transient Recovery Time	25% Load Step Change		250	500	µSec
Transient Response Deviation	25% Load Step Change		1.5	3.0	%
Temperature Coefficient			±0.01	±0.02	%/°C
Output Short Circuit Protection	Continuous				

General

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage	60 Seconds	500			VDC
Isolation Resistance	500 VDC	1000			MΩ
Isolation Capacitance	100 kHz, 1V		500	650	pF
Switching Frequency		80	100	120	kHz

Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature		-25	+25	+71	°C
Storage Temperature		-40		+105	°C
Humidity				95	%
Cooling	Free Air Convection				
EMI	Six Sided Shielded Metal Case				

Physical Characteristics

Case Size	2.0 x 2.0 x 0.40 Inches (50.8 x 50.8 x 10.2 mm)
Case Material	Metal With Non-Conductive Base
Weight	2.12 Oz (60.0g)

Absolute Maximum Ratings

Parameter	Nominal Input	Min.	Typ.	Max.	Units
Input Voltage Surge (1 Sec)	12 VDC Input Models	-0.7		21.0	VDC
	24 VDC Input Models	-0.7		42.0	
	48 VDC Input Models	-0.7		84.0	
Internal Power Dissipation	All Models			5000	mW

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

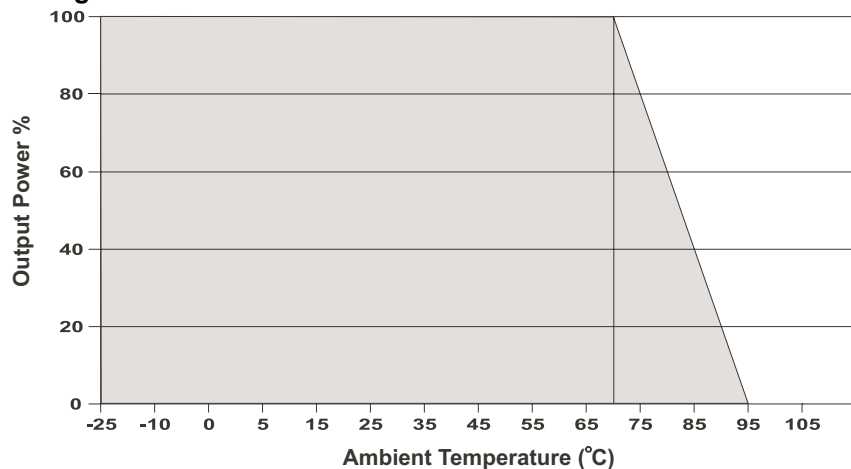
Model Selection Guide

Model Number	Input				Reflected Ripple Current (mA)	Output		Efficiency %, Typ.
	Voltage (VDC)		Current (mA)			Voltage (VDC)	Current (mA Max.)	
	Nominal	Range	No-Load	Full-Load				
C1001RW	12	9 - 18	25.0	1160.0	116	5.0	2000	72
C1002RW	12	9 - 18	25.0	1115.0	112	9.0	1100	74
C1003RW	12	9 - 18	25.0	1055.0	106	12.0	800	76
C1004RW	12	9 - 18	25.0	1075.0	108	15.0	660	77
C1005RW	12	9 - 18	25.0	1055.0	106	±12.0	±400	76
C1006RW	12	9 - 18	25.0	1075.0	108	±15.0	±330	77
C1011RW	24	18 - 36	25.0	565.0	57	5.0	2000	74
C1012RW	24	18 - 36	25.0	545.0	55	9.0	1100	76
C1013RW	24	18 - 36	25.0	515.0	52	12.0	800	78
C1014RW	24	18 - 36	25.0	525.0	53	15.0	660	79
C1015RW	24	18 - 36	25.0	515.0	52	±12.0	±400	78
C1016RW	24	18 - 36	25.0	530.0	53	±15.0	±330	78
C1021RW	48	36 - 72	10.0	275.0	28	5.0	2000	76
C1022RW	48	36 - 72	10.0	270.0	27	9.0	1100	77
C1023RW	48	36 - 72	10.0	255.0	26	12.0	800	79
C1024RW	48	36 - 72	10.0	260.0	26	15.0	660	80
C1025RW	48	36 - 72	10.0	250.0	25	±12.0	±400	80
C1026RW	48	36 - 72	10.0	260.0	26	±15.0	±330	80

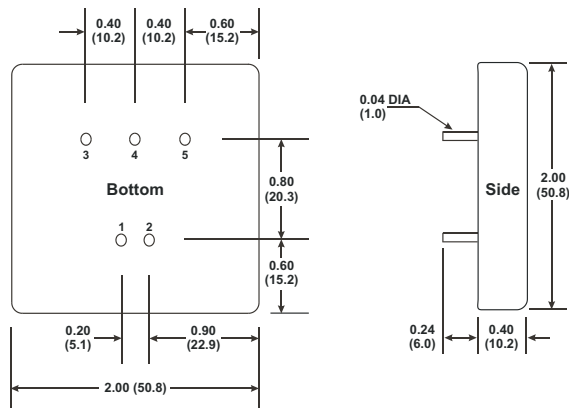
Notes:

1. Transient recovery time is measured to within a 1% error band for a step change in output load of 75% to 100%.
2. A minimum output load of 10% must be maintained to operate to within specifications
3. Total output power should not exceed the specified output ratings for any particular model.

Derating Curve



Mechanical Dimensions



Pin Connections

Pin	Single Output	Dual Output
1	+V _{in}	+V _{in}
2	-V _{in}	-V _{in}
3	+V _{out}	+V _{out}
4	NC	Common
5	-V _{out}	-V _{out}

Note All dimensions are typical in inches (mm).
 NC = No Connection
 Tolerance x.xx = ±0.01 (±0.25)



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