



Size:
2.0 x 1.0 x 0.4 inches
50.8 x 25.4 x 10.2 mm

Applications:

- Battery Operated Equipment
- Telecom
- Industry Control Systems
- Wireless Networks
- Measurement Equipment
- Military Applications

FEATURES

- Single and Dual Outputs
- 15 Watts Output Power
- 1500VDC I/O Isolation
- High Efficiency up to 87%
- Lead Free Design, RoHS Compliant
- High Power Density
- Fixed Switching Frequency
- 2:1 Input Voltage Ranges: 9-18VDC, 18-36VDC, & 36-75VDC
- Shielded Metal Case with Insulated Base-plate
- -55°C to +95°C Operating Temperature Range
- Industry Standard 2.0" x 1.0" x 0.4" DIP Package
- Short Circuit, Over Voltage, Over Load Protection
- IEC/EN 60950-1 Safety Approvals
- Custom Designs Available

DESCRIPTION

The DCMUA15 series of isolated DC/DC power converters provides 15 Watts of continuous output power in a 2.0" x 1.0" x 0.4" shielded metal case. This series consists of single and dual output models with 2:1 input voltage ranges of 9-18VDC, 18-36VDC, and 36-75VDC. Some features include high efficiency up to 87%, 1500VDC I/O isolation, and -55°C to +95°C extended operating temperature range. The DCMUA15 series is RoHS compliant and has short circuit, over load, and over voltage protection. These converters are best suited for use in military applications, battery operated equipment, measurement equipment, telecom, wireless networks, industry control systems, and anywhere where isolated, tightly regulated voltages and compact size are required.

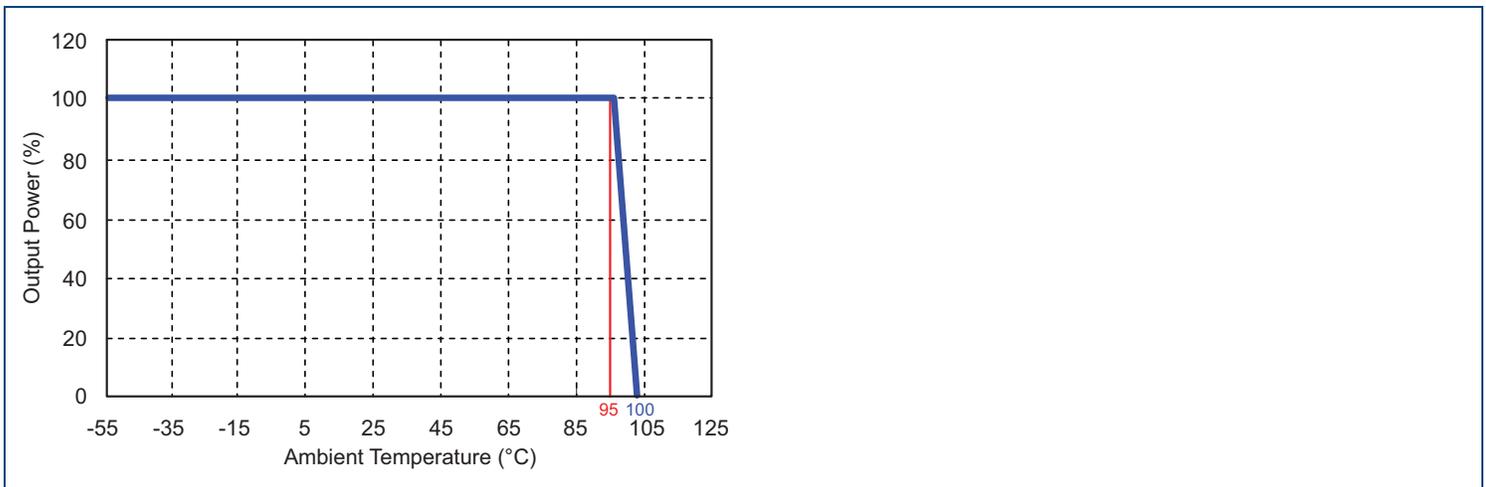
MODEL SELECTION TABLE

Model Number	Input Voltage	Output Voltage	Output Current		Input Current		Output Power	Efficiency	Maximum Capacitive Load
			Min Load ⁽¹⁾	Full Load	No Load	Full Load			
DCMUA12S5-15	12 VDC (9 – 18 VDC)	5 VDC	0mA	3000mA	16mA	1624mA	15W	81%	3300µF
DCMUA12S12-5		12 VDC	40mA	1250mA	20mA	1525mA	15W	86%	1000µF
DCMUA12D15-15		±15 VDC	0mA	±500mA	26mA	1525mA	15W	86%	±68µF
DCMUA24S5-15	24 VDC (18 – 36 VDC)	5 VDC	0mA	3000mA	9mA	801mA	15W	82%	3300µF
DCMUA24S12-5		12 VDC	0mA	1250mA	10mA	753mA	15W	87%	1000µF
DCMUA24D15-15		±15 VDC	0mA	±500mA	18mA	762mA	15W	86%	±100µF
DCMUA48S5-15	48 VDC (36 – 75 VDC)	5 VDC	0mA	3000mA	5mA	396mA	15W	83%	3300µF
DCMUA48S12-5		12 VDC	0mA	1250mA	6mA	377mA	15W	87%	680µF
DCMUA48D15-15		±15 VDC	0mA	±500mA	9mA	382mA	15W	86%	±100µF

NOTES

1. Output current under this value will not damage these devices; however, they may not meet all listed specifications.

DERATING

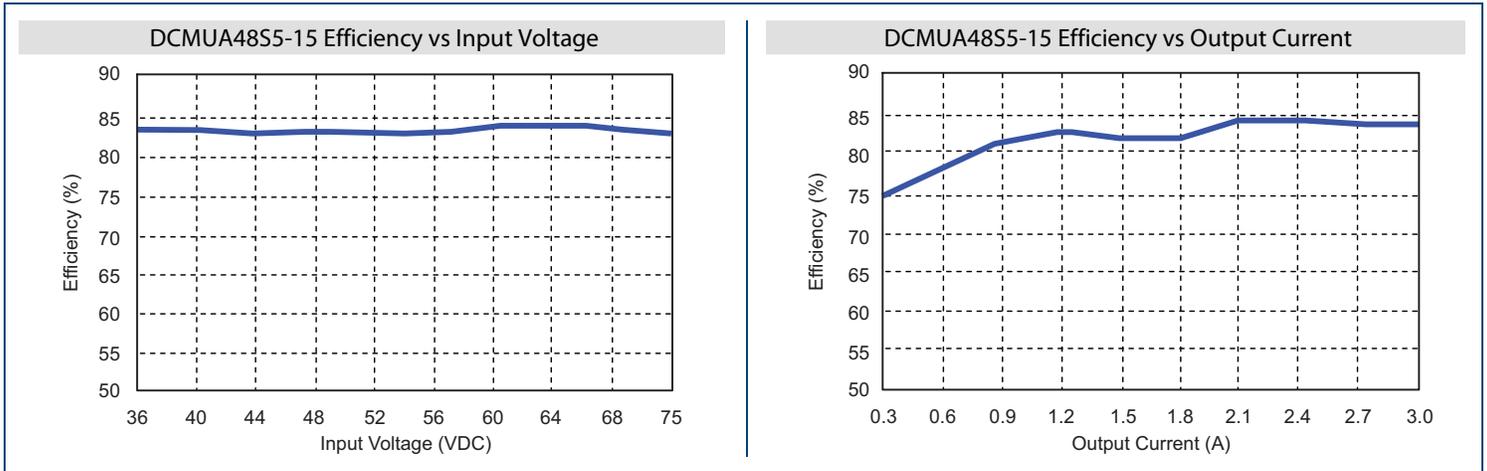


TECHNICAL SPECIFICATIONS: DCMUA15 SERIES

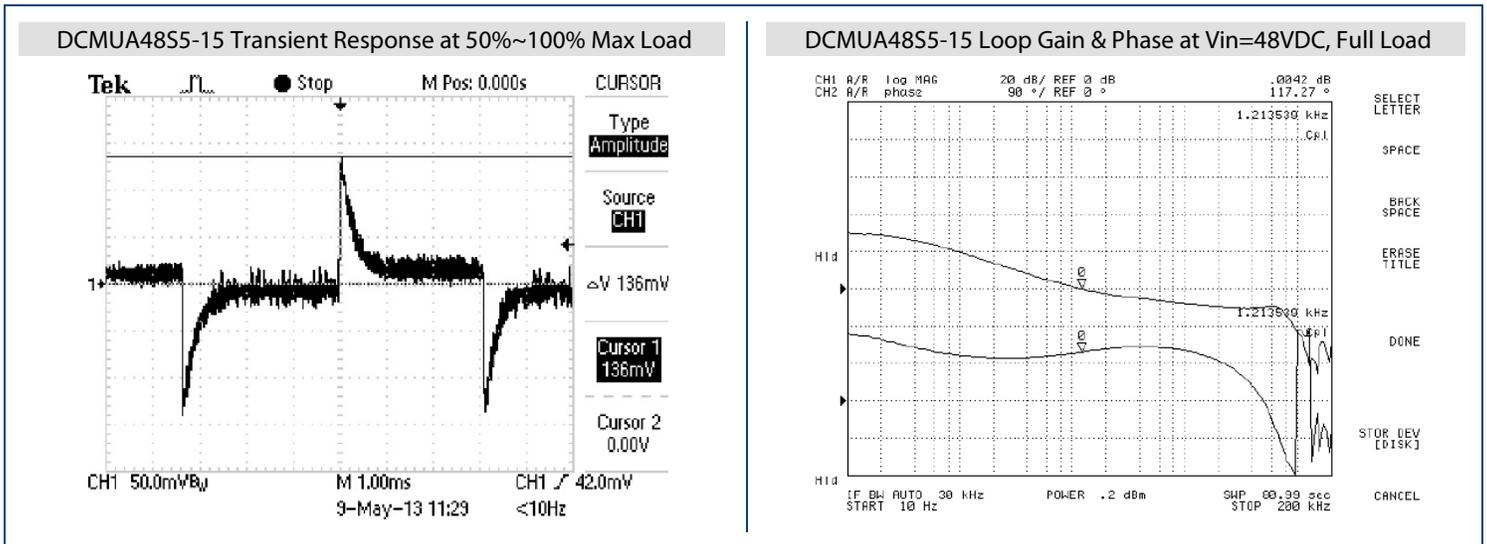
All specifications are based on 25°C, nominal input voltage, and maximum output current unless otherwise noted.
 We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS		Min	Nom	Max	Unit		
INPUT SPECIFICATIONS								
Input Voltage Range	12VDC nominal input models		9	12	18	VDC		
	24VDC nominal input models		18	24	36			
	48VDC nominal input models		36	48	75			
Input Surge Voltage (100ms max)	12VDC nominal input models			25		VDC		
	24VDC nominal input models			50				
	48VDC nominal input models			100				
Input Reflected Ripple Current	Nominal Vin and full load			250		mAp-p		
Input Current	See Table							
Input Filter	Pi Type							
Sourcing Current of Remote Control Pin	Nominal Vin				0.2	mA		
Idle Input Current (at Remote OFF State)	Nominal Vin				3	mA		
OUTPUT SPECIFICATIONS								
Output Voltage	See Table							
Voltage Accuracy	Full load and nominal Vin		-1		+1	%		
Output Current	See Table							
Minimum Load	See Table							
Maximum Capacitive Load	See Table							
Start-up Time	Nominal Vin and constant resistive load			400		ms		
Line Regulation	LL to HL at full load		-0.8		+0.8	%		
Load Regulation	Single output models	25% load to full load	-1.0		+1.0	%		
		Balanced output	-1.0		+1.0			
	Dual output models	Unbalanced load 25% to full load	-5		+5			
Output Power						15	W	
Ripple & Noise	20MHz bandwidth				75	mVp-p		
Temperature Coefficient						±0.02	%/°C	
Transient Response Overshoot	di/dt=0.8A/μs				±5	% of Vo		
Transient Response Settling Time	50% load step change			1400		μs		
PROTECTION								
Over Voltage Protection	5VDC output models	Zener Diode Clamp			6.2	VDC		
	12VDC output models				15			
	15VDC output models				18			
Short Circuit Protection	continuous, automatic recovery							
Over Load Protection	% of full load at nominal input			150		%		
Reverse Voltage Protection						1.0	A	
GENERAL SPECIFICATIONS								
Efficiency	Nominal input		See Table					
Isolation Voltage (Input to Output)	Input to Output		1500			VDC		
Isolation Resistance (Input to Output)	500VDC		1			GΩ		
Isolation Capacitance						580	pF	
Switching Frequency						300	KHz	
ENVIRONMENTAL SPECIFICATIONS								
Operating Temperature	With derating (see derating curve)		-55		+95	°C		
Maximum Case Surface Temperature						+100	°C	
Storage Temperature						+125	°C	
Relative Humidity						5	95	% RH
Cooling	Free air convection							
MTBF	1,960,000 hours							
PHYSICAL SPECIFICATIONS								
Case Material	Nickel-coated copper							
Base Material	Non-conductive black plastic							
Potting Material	Silicon rubber (UL94V-0)							
Weight	1.06oz (30g)							
Dimensions (L x W x H)	2.0 x 1.0 x 0.4 inches (50.8 x 25.4 x 10.2 mm)							

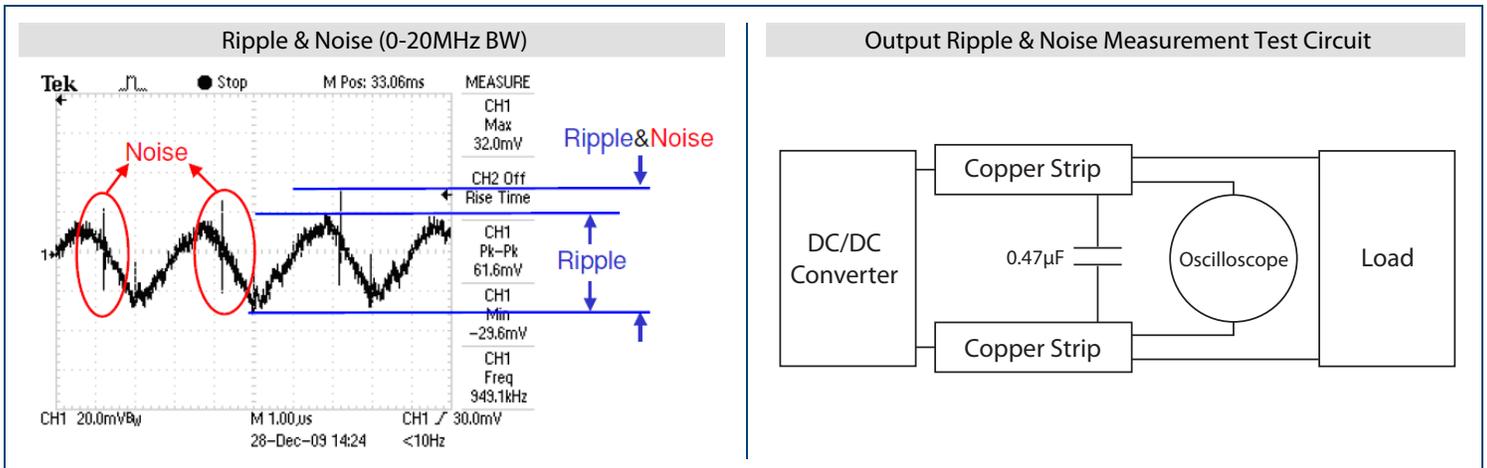
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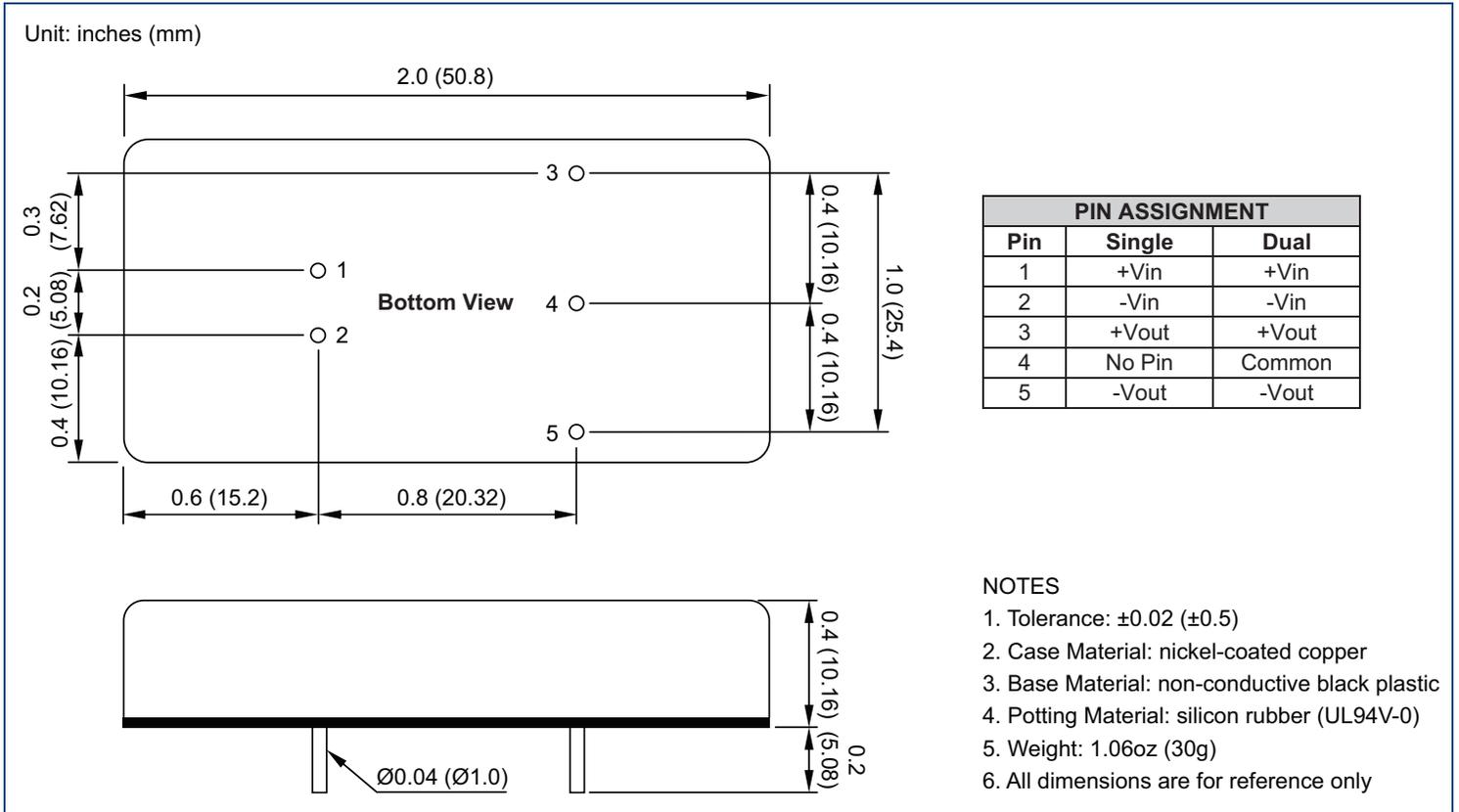
CHARACTERISTICS



RIPPLE & NOISE



MECHANICAL DRAWING



COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001-2008 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

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