



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

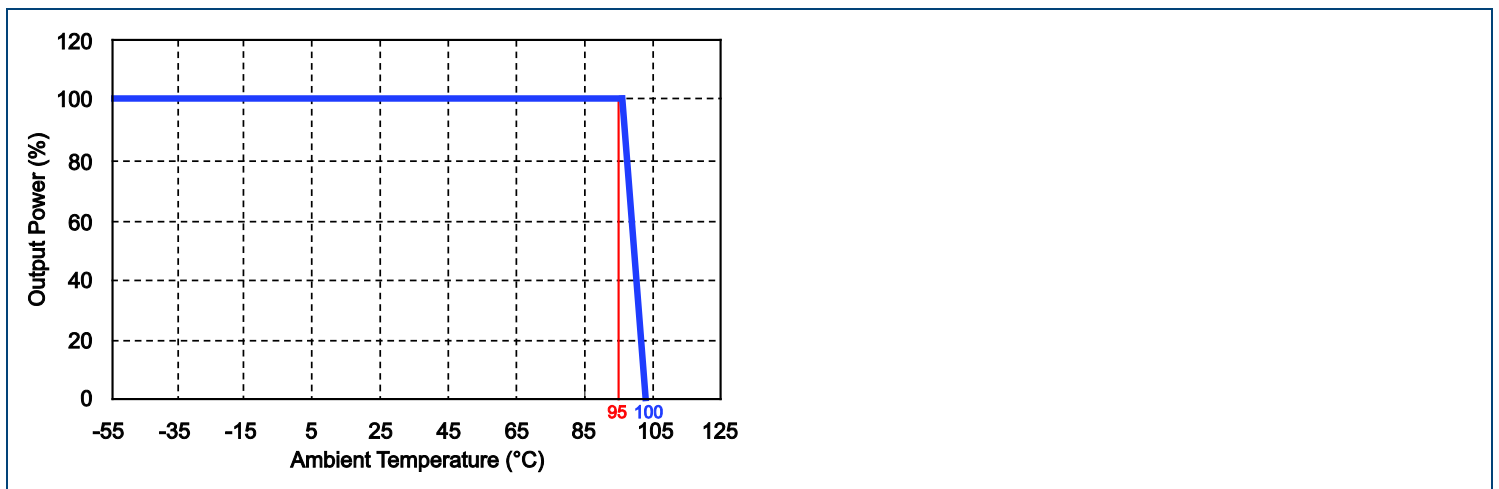
Model Number	Input Voltage	Output Voltage	Output Current		Input Current		Output Power	Efficiency	Maximum Capacitive Load
			Min Load ⁽¹⁾	Full Load	No Load	Full Load			
DCMUA12S5-15	12 VDC	5 VDC	0mA	3000mA	16mA	1624mA	15W	81%	3300µF
DCMUA12S12-5	(9 – 18 VDC)	12 VDC	40mA	1250mA	20mA	1525mA	15W	86%	1000µF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

Due to advances in technology, specifications subject to change without notice.

DERATING

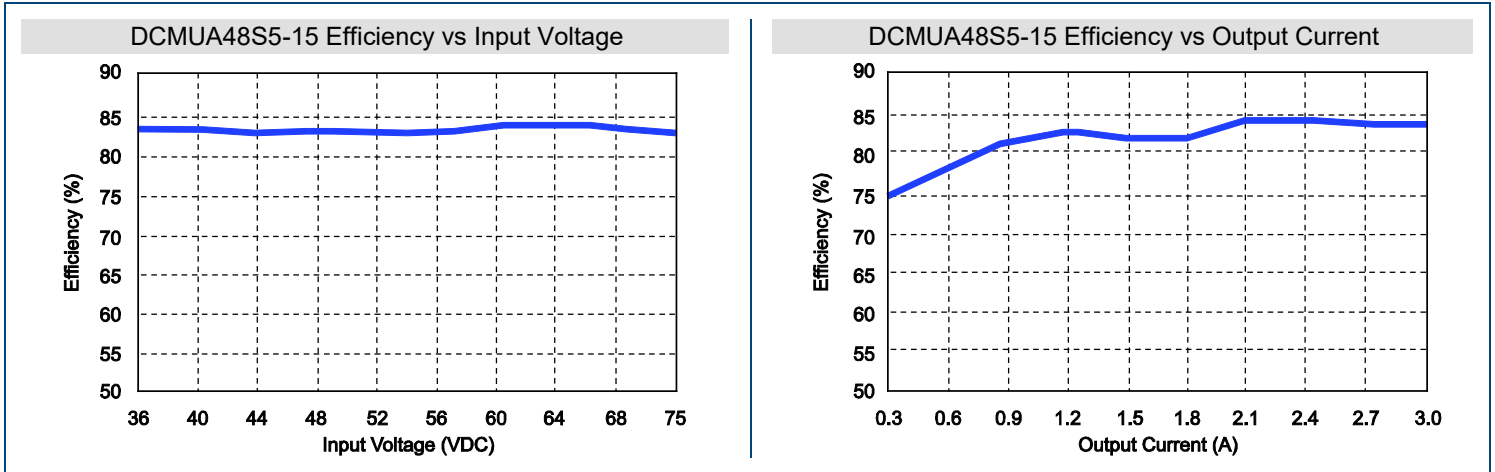


TECHNICAL SPECIFICATIONS: DCMUA15 SERIES

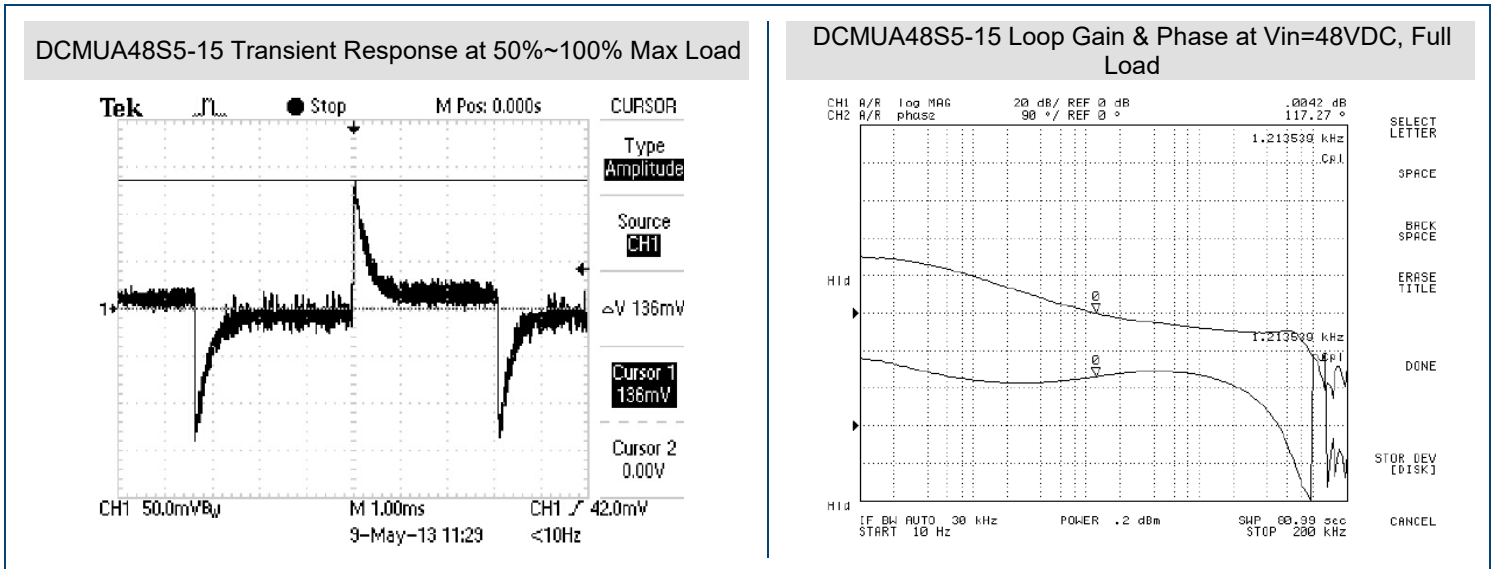
All specifications are based on 25°C, nominal input voltage, and maximum output current unless otherwise noted.
 We reserve the right to change specifications based on technological advances.

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	%
	Single output models	25% load to full load	-1.0	+1.0	%
Load Regulation	Dual output models	Balanced output	-1.0	+1.0	
		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		-55		+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)			

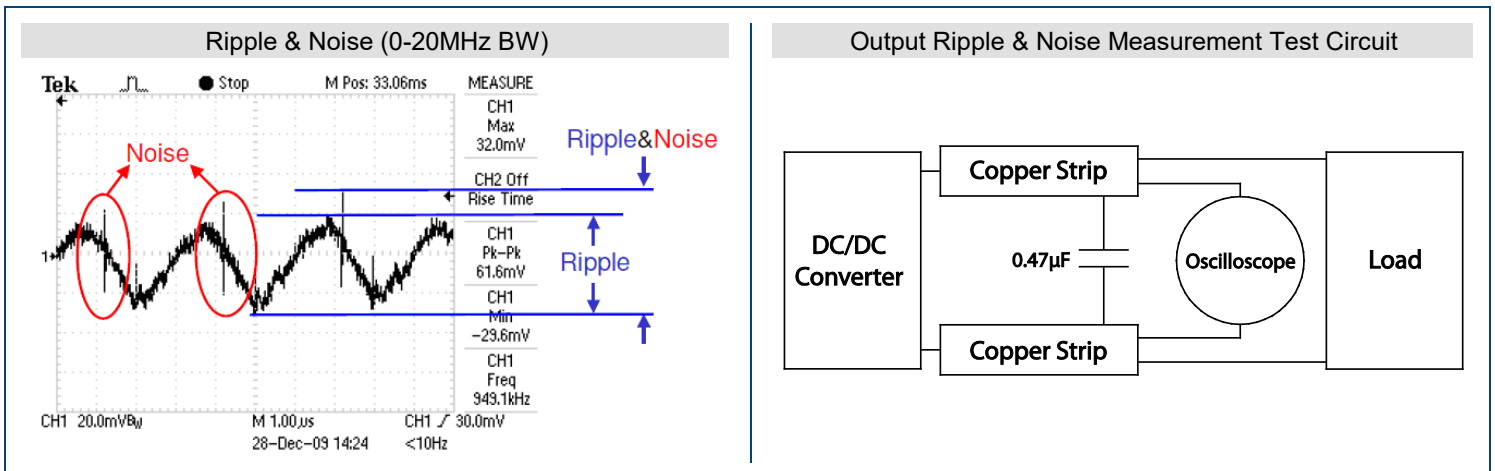
EFFICIENCY



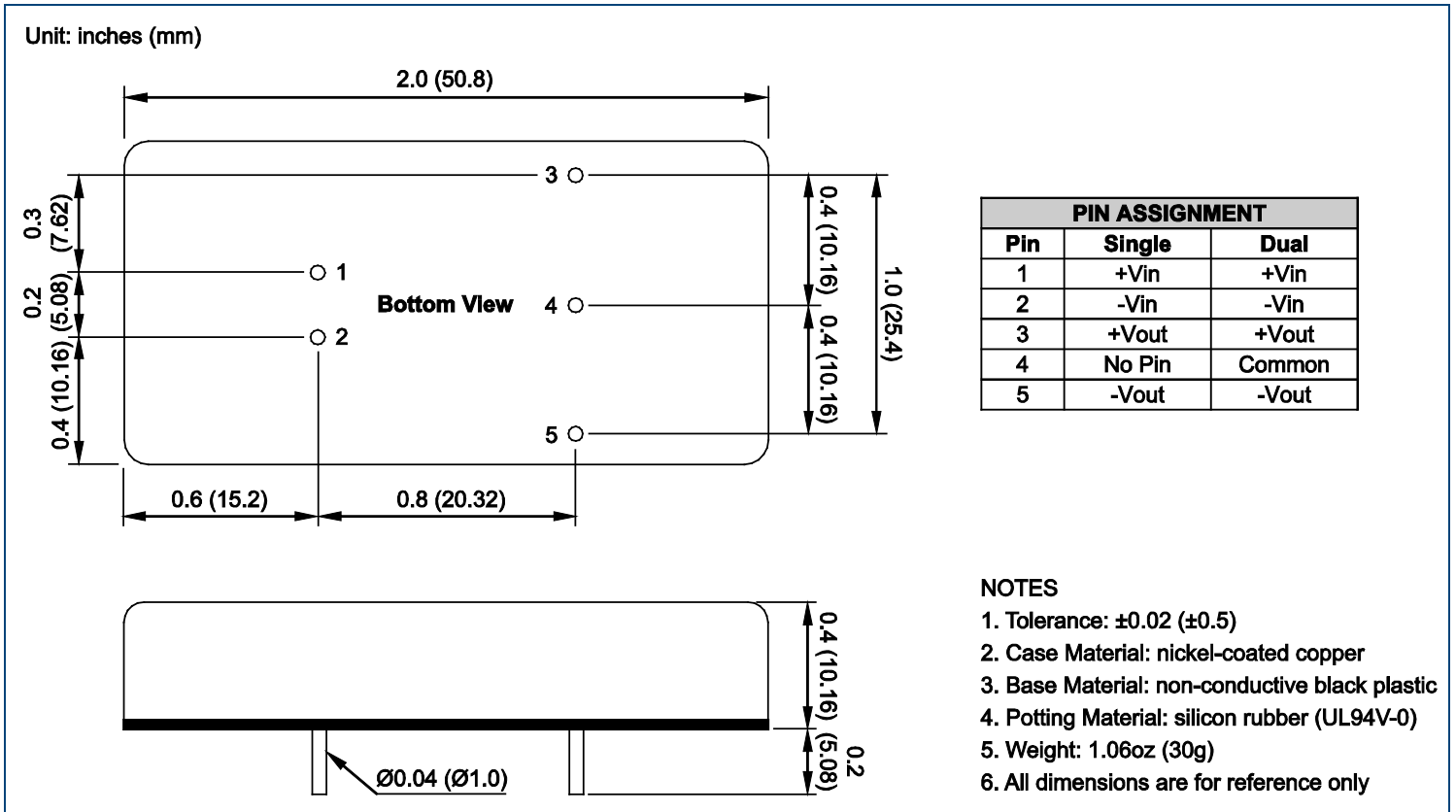
CHARACTERISTICS



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 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.

Contact **Wall Industries** for further information:

Phone: ☎(603)778-2300
 Toll Free: ☎(888)597-9255
 Fax: ☎(603)778-9797
 E-mail: sales@wallindustries.com
 Web: www.wallindustries.com
 Address: 37 Industrial Drive
 Exeter, NH 03833

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