MICROPOWER DIRECT

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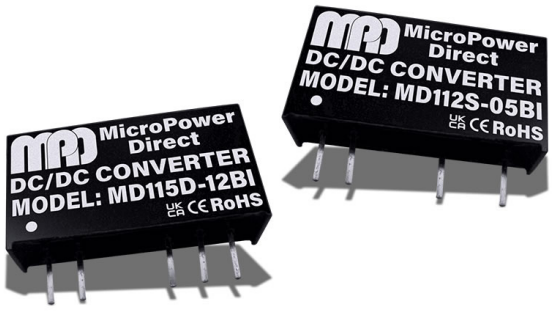
HIGH ISOLATION DC/DC POWER SUPPLIES

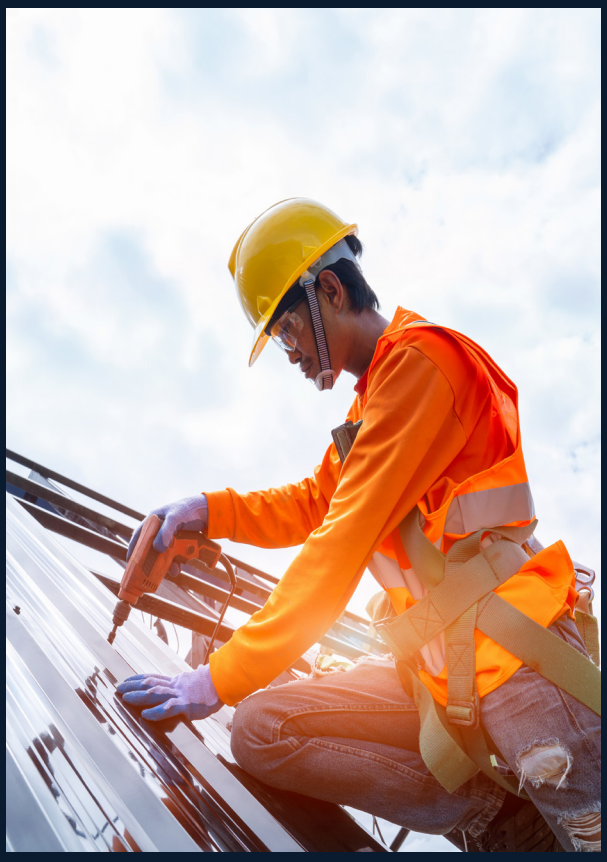
SELECTION GUIDE - 2025



WHO WE ARE

For over 25 years, MicroPower Direct has been at the forefront of power innovation, delivering high-performance, cost-effective power solutions for industrial, commercial, and medical applications.

Based in the United States, we offer over 5,000 power solutions—including AC/DC power supplies, DC/DC converters, IGBT drivers, and POL switching regulators—ensuring efficient, reliable power conversion for even the most demanding environments.



EXTENSIVE PRODUCT PORTFOLIO

A selection of over 5,000 off-the-shelf DC/DC converters, AC/DC power supplies, IGBT drivers, SiC DC/DCs and POLs. Designed for efficiency and flexibility, our power solutions come in a variety of power levels and form factors to suit any design challenge.

QUALITY

All product manufacturing is done in ISO 9000 registered facilities. Our products are manufactured using the highest quality materials and components, and they are rigorously tested to ensure they meet or exceed the most demanding industry standards.

CUSTOMER FOCUSED

But what truly sets MicroPower Direct apart is our unwavering commitment to exceptional customer service, providing expert support, fast response times, and tailored solutions to meet our customers' unique power needs.

COST EFFECTIVE SOLUTIONS

Our product line provides a range of options to meet your budget requirements, without compromising on quality or performance.

INDUSTRIES

Whether it's for industrial automation, medical equipment, transportation, renewable energy, railway or smart home applications, our open frame ac/dc power supplies are built to perform.

MEDICAL

HOUSEHOLD

INDUSTRIAL

COMMUNICATION

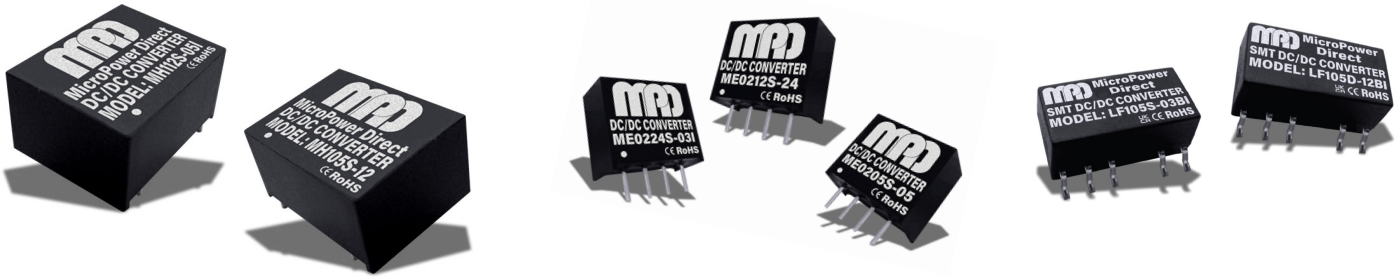
TEST & MEASUREMENT

ROBOTIC

WHY CHOOSE A HIGH ISOLATION DC/DC CONVERTER

High isolation DC/DC converters play a critical role in power system stability, safety, and EMI reduction by providing galvanic isolation between input and output. These converters are essential in applications where voltage transients, ground loops, and strict regulatory compliance are concerns.

High isolation is particularly important in motor control, medical devices, industrial automation, and power distribution systems, where preventing electrical interference and ensuring reliable operation is crucial. With reinforced isolation up to 6,000VDC, MicroPower Direct's high isolation DC/DC converters safeguard sensitive electronics, enhance signal integrity, and many comply with global safety standards such as EN 62368-1.



DESIGNING WITH HIGH ISOLATION DC/DC POWER SUPPLIES

01

Isolation Grade & Safety Requirements

Different applications require basic, functional, or reinforced isolation. Basic isolation provides separation, while reinforced isolation (such as 3,000VDC in MPD's models) ensures the highest level of operator and system protection in high-voltage environments.

02

Dielectric Strength & Creepage Distance

Proper spacing between PCB traces and components prevents arcing and insulation breakdown, reducing the risk of high-voltage failure.

03

Parasitic Capacitance & Noise Mitigation

High isolation converters reduce common-mode noise, preventing EMI issues in precision measurement, communication systems, and high-speed data transmission.

04

Power Density & Thermal Performance

High isolation converters must achieve high efficiency to minimize heat dissipation and improve reliability in compact, high-power designs.

05

Operation in Harsh Environments

Applications such as transportatin, industrial control panels, and telecommunications require converters that can withstand high voltage stress and extreme temperatures. High isolation DC/DC converters prevent creeping voltage from humidity, pollution, or physical contamination, ensuring long-term reliability.

HOW A HIGH ISOLATION DC/DC CONVERTER BENEFITS YOUR DESIGN

A 3,000VDC or higher isolation DC/DC converter provides critical advantages over lower isolation models, particularly in high-voltage, safety-critical, and EMI-sensitive applications. These benefits ensure greater system reliability, improved signal integrity, and enhanced user protection.

Prevents Ground Loops & Reduces EMI Interference

In industrial automation, medical devices, and precision instrumentation, electrical noise can corrupt signals, causing malfunctions or inaccurate readings. High isolation converters block unwanted current paths, eliminating ground loops that can introduce electrical noise or voltage offsets in complex systems. Compared to 1,500VDC isolation converters, a 3,000VDC isolation barrier significantly reduces conducted and radiated EMI.

Safety & Protection Against High-Voltage Transients

In power grid, motor drives, and renewable energy systems, voltage spikes and transient surges are common due to load switching, inductive kickback, and environmental factors. High isolation provides an added layer of safety, preventing these surges from transferring between system components. This protection reduces failure rates and extends equipment lifespan.

Supports Medical & High-Voltage Industrial Compliance

Lower isolation converters may meet basic insulation requirements, but many critical applications demand reinforced isolation to protect both operators and electronic systems. Medical-grade equipment requires reinforced isolation to prevent leakage currents. Similarly, industrial automation and power distribution systems must meet reinforced isolation standards to prevent hazardous voltage propagation.

Improves System Efficiency & Thermal Performance

High isolation models feature superior insulation materials, reducing power leakage and energy dissipation. With efficiencies up to 92%, MPDs high isolation converters minimize heat generation, reducing cooling requirements and ensuring stable operation in fanless or enclosed environments.

COMPARISON OF A HIGH ISOLATION DC/DC CONVERTER TO OTHER FORM FACTORS

High isolation models offer enhanced protection and performance compared to standard and non-isolated DC/DC converters. This chart summarizes the key differences:

Factor	High Isolation DC/DC Converters (Best for Sensitive & High-Voltage Applications)	Standard Isolated DC/DC Converters (Best for General-Purpose Isolation)	Non-Isolated DC/DC Converters (Best for Space & Cost Efficiency)
Isolation Voltage	Up to 6,000 VDC for reinforced protection	Typically 1,500 VDC isolation for basic applications	No isolation – direct voltage conversion
Noise Immunity	Superior – Eliminates ground loops & reduces EMI	Moderate – Some noise suppression	Minimal – Higher risk of electrical noise interference
Application Suitability	Medical, industrial, high-voltage power grids	General industrial & telecom applications	Low-voltage electronics, simple PCB designs
Safety Compliance	Meets IEC 60601-1, EN 62368-1 for medical & industrial	Meets basic industrial safety standards	No isolation compliance required

MICROPOWER DIRECT HIGH ISOLATION SOLUTIONS

MicroPower Direct's module AC/DC power supplies deliver industry-leading performance, compact size, and compliance with global safety standards.

SMT Series: (1W – 2W)

The SMT Series provides up to 3,000 VDC isolation in a surface-mount form factor. Designed for IoT, medical, and embedded computing, these converters support tape & reel packaging for automated assembly. With high efficiency and operation up to +105°C, they ensure reliable performance in compact designs.

SIP Series (0.25W – 2W)

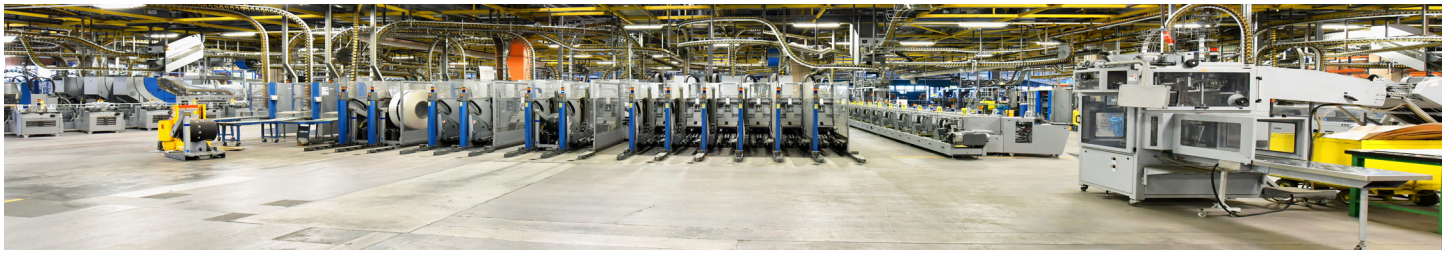
The SIP Series delivers up to 6,000 VDC isolation in ultra-compact SIP4 and SIP7 packages. Designed for industrial automation, medical, and precision instrumentation, these converters offer low-noise, high-efficiency operation. With power options from 0.25W to 2W, they provide reliable performance in space-constrained designs.

DIP Series (1W – 2W)

The DIP Series offers 1W to 2W output with up to 6,000 VDC isolation in DIP8 and DIP14 packages. Ideal for industrial control, railway, and telecom, these converters provide strong EMI protection and reliable thermal performance. Their robust design ensures stable operation in demanding environments.

Wide Input Series (2W – 6W)

The Wide Input Series supports up to 3,000 VDC isolation with wide input voltage ranges in DIP24 and SIP8 packages. Perfect for industrial automation, railway, and remote power, these converters handle fluctuating power sources with efficiency and protection. Designed for mission-critical applications, they provide rugged performance in extreme environments.



MICROPOWER DIRECT HIGH ISOLATION SELECTION GUIDE

With isolation levels from 3,000VDC to 6,000VDC, our SMT, SIP, DIP, and Wide Input high-isolation DC/DC converters deliver reliable, high-efficiency power conversion for industrial, medical, and precision applications.

MicroPower Direct offers a full range of high-isolation DC/DC solutions. Visit our website to explore more options.

Feature	SMT	SIP	DIP	Wide Input
Power Range	1W - 2W	0.25W - 2W	1W - 2W	3W - 6W
Isolation Voltage	3,000 - 6,000 VDC	3,000 - 6,000 VDC	3,000 - 6,000 VDC	3,000 - 6,000 VDC
Input Voltage Range	3.3V - 24V	3.3V - 24V	3.3V - 24V	9V - 72V
Efficiency	Up to 88%	Up to 86%	Up to 88%	Up to 91%
Leakage Current	Very Low (Optimized for Embedded Systems)	Minimal (Medical Grade Available)	Minimal (Medical Grade Available)	Low (Designed for High Voltage Applications)
Dimensions	Compact SMT Package	SIP4 & SIP7 Sizes	DIP8 & DIP14 Sizes	Larger DIP24 & SIP8 Sizes
Typical Applications	Embedded systems, IoT, smart devices	IoT, industrial sensors, medical instruments	Telecom, railway, industrial control	Automotive, energy, mission-critical systems

ML(I) SERIES

SMT PACKAGE HIGH ISOLATION DC/DC CONVERTERS

MicroPower Direct's SMD high-isolation DC/DC converters provide ultra-compact, surface-mount power solutions with reinforced insulation, making them ideal for high-density PCB designs in industrial, medical, and embedded applications.

01

- SMT (ML & LF Series) – Ultra-Compact, High-Reliability SMT Solutions
- Best for space-constrained applications requiring high isolation, automated assembly, and robust EMI performance.
- Power Options: 1W (ML100BI, ML100I, LF100BI), 2W (ML200BI).

Key Benefits:

- Ultra-compact SMD package – Designed for high-density PCB layouts where space is limited.
- 3,000 VDC reinforced isolation – Ensures superior electrical protection for industrial and medical applications.
- High efficiency up to 86% – Reduces energy loss and minimizes thermal impact on PCB design.
- Wide input voltage range (5V, 12V, 24V) – Offers flexibility across various system configurations.
- Available in Tape & Reel packaging – Ideal for high-volume, automated manufacturing processes.
- Best for: Industrial sensors, medical monitoring devices, IoT applications, and test & measurement equipment.

MLxxI SERIES

1W SMT PACKAGE

FEATURES

- Isolation Voltage: 1500VDC (3000VDC "I" version)
- Operating temperature range: -40°C to +85°C
- Efficiency: Up to 80%
- Short Circuit Protection: Momentary
- Available on Tape & Reel

UK CA CE RoHS

ML100I - 1W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
ML105S-03I	4.50 - 5.50 (5 VDC)	3.3	260	72
ML105S-05I		5	200	75
ML105S-12I		12	84	79
ML105S-15I		15	67	80
ML105D-05I		±5	±100	75
ML105D-12I		±12	±42	79
ML105D-15I		±15	±34	80
ML112S-03I	10.8 - 13.2 (12 VDC)	3.3	260	73
ML112S-05I		5	200	76
ML112S-12I		12	84	80
ML112S-15I		15	67	81
ML112D-05I		±5	±100	76
ML112D-12I		±12	±42	80
ML112D-15I		±15	±34	80
ML124S-03I	21.6 - 26.4 (24 VDC)	3.3	260	70
ML124S-05I		5	200	73
ML124S-12I		12	84	79
ML124S-15I		15	67	79
ML124D-05I		±5	±100	73
ML124D-12I		±12	±42	79
ML124D-15I		±15	±34	79

Size: 0.64 x 0.31 x 0.30 in (16.3 x 8.0 x 7.7 mm)

MLxxBI SERIES

1W TO 2W SMT PACKAGE

FEATURES

- Isolation Voltage: 1500 VDC, I = 3000 VDC
- Operating temperature range: -40°C to +105°C
- Efficiency: Up to 88%
- Short Circuit Protection: Continuous
- Size: .64 x .32 x .27 in (16.24 x 8.00 x 6.8 mm)
- Available on Tape & Reel

UK CA CE RoHS

ML100B(I) - 1W DATASHEET BI

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
ML103S-03B(I)	2.97 - 3.63 (3.3 VDC)	3.3	303	80
ML103S-05B(I)		5.0	200	82
ML103S-09B(I)		9.0	111	83
ML103S-12B(I)		12.0	84	84
ML105S-03B(I)	4.50 - 5.50 (5 VDC)	3.3	303	82
ML105S-05B(I)		5.0	200	85
ML105S-09B(I)		9.0	111	86
ML105S-12B(I)		12.0	84	86
ML105S-15B(I)		15.0	67	86
ML105S-24B(I)		24.0	42	87
ML112S-03B(I)	10.8 - 13.2 (12 VDC)	3.3	303	82
ML112S-05B(I)		5.0	200	85
ML112S-09B(I)		9.0	111	86
ML112S-12B(I)		12.0	84	86
ML112S-15B(I)		15.0	67	86
ML112S-24B(I)		24.0	42	88
ML115S-05B(I)	13.5 - 16.5 (15 VDC)	5.0	200	86
ML115S-12B(I)		12.0	84	87
ML115S-15B(I)		15.0	67	88
ML124S-03B(I)	21.6 - 26.4 (24 VDC)	3.3	303	82
ML124S-05B(I)		5.0	200	85
ML124S-09B(I)		9.0	111	86
ML124S-12B(I)		12.0	84	87
ML124S-15B(I)		15.0	67	87
ML124S-24B(I)		24.0	42	88

Size: 0.53 x 0.34 x 0.29 in (13.50 x 8.50 x 7.25 mm)

ML200B(I) - 2W DATASHEET BI

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
ML205S-05B(I)	4.5 - 5.5 (5 VDC)	5.0	400	83
ML205S-09B(I)		9.0	222	83
ML205S-12B(I)		12.0	167	84
ML205S-15B(I)		15.0	133	84
ML212S-05B(I)	10.8 - 13.2 (12 VDC)	5.0	400	83
ML212S-09B(I)		9.0	222	84
ML212S-12B(I)		12.0	167	84
ML212S-15B(I)		15.0	133	84
ML215S-05B(I)	13.5 - 16.5 (15 VDC)	5.0	400	83
ML215S-09B(I)		9.0	222	84
ML215S-12B(I)		12.0	167	84
ML215S-15B(I)		15.0	133	84

Size: 0.53 x 0.34 x 0.29 in (13.50 x 8.50 x 7.25 mm)

LF100BI - 1W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
LF105S-03BI	4.50 - 5.50 (5 VDC)	3.3	303	74
LF105S-05BI		5	200	82
LF105S-09BI		9	111	83
LF105S-12BI		12	84	83
LF105S-15BI		15	67	83
LF105S-24BI		24	42	85
LF105D-03BI		±3.3	±151	74
LF105D-05BI		±5	±100	82
LF105D-09BI		±9	±56	83
LF105D-12BI		±12	±42	83
LF105D-15BI		±15	±34	83
LF105D-24BI		±24	±21	85

Size: 0.64 x 0.32 x 0.27 in (16.24 x 8.00 x 6.8 mm)

MD(I) AND ME(I) SERIES

SIP PACKAGE HIGH ISOLATION DC/DC CONVERTERS

MicroPower Direct's SIP high-isolation DC/DC converters provide compact, high-efficiency power conversion with reinforced insulation for industrial, medical, and high-reliability applications.

01

SIP4 (ME Series) – Ultra-Compact for Space-Constrained Designs

- Best for ultra-compact designs requiring high isolation and low power.
- Power Options: 0.25W (ME02S), 0.5W (ME05S), 1W (ME100SI), 2W (ME200S).

Key Benefits:

- Ultra-miniature SIP4 package for tight PCB layouts.
- 3,000 VDC isolation for enhanced electrical safety.
- Wide input voltage range (3.3V to 24V) for flexible system compatibility.
- High efficiency up to 86%, minimizing energy loss.
- Best for: IoT devices, industrial sensors, low-power medical instruments, and precision measurement applications.

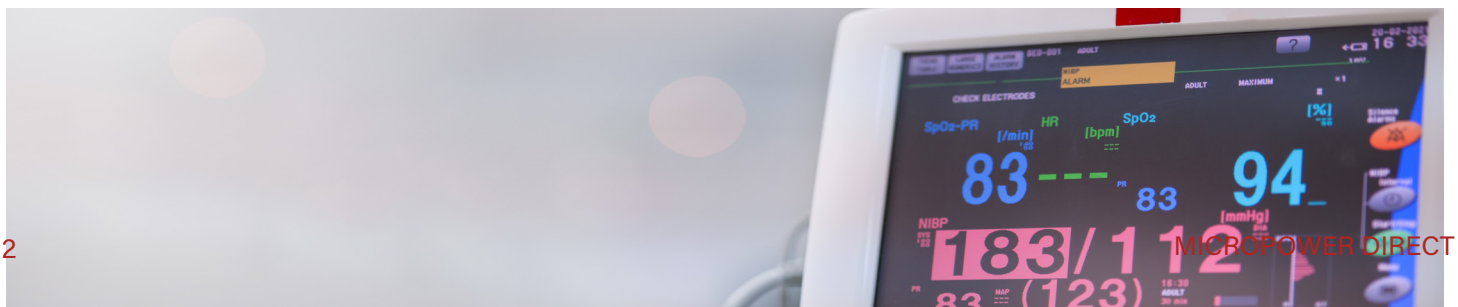
02

SIP7 (MD Series) – Higher Power in a Compact Footprint

- Best for designs needing more power, robust isolation, and enhanced EMI performance.
- Power Options: 1W (MD100BI, MD100CHI, MD100), 2W (MD200BI, MD200CHI, MD200I).

Key Benefits:

- Higher power density in a SIP7 form factor.
- Reinforced 3,000 to 6,000 VDC isolation for critical applications.
- Wide operating temperature range (-40°C to +105°C) for extreme environments.
- Optimized EMI performance:
- MD100CHI, MD200CHI – Designed for noise-sensitive applications like medical and precision instrumentation.
- MD100BI, MD200BI – Balanced efficiency and isolation for industrial automation and control.
- MD100, MD200I – Robust reliability with high isolation for telecom, railway, and industrial systems.



MExxI SERIES

.25W TO 2W SIP4 PACKAGE

ME02S(I) - 0.25W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
ME0203S-03(I)	2.97 - 3.63 (3.3 VDC)	3.3	75.7	63
ME0203S-05(I)		5	50	66
ME0203S-07(I)		7.2	34.7	64
ME0203S-09(I)		9	27.7	64
ME0203S-12(I)		12	20.8	67
ME0203S-15(I)		15	16.6	64
ME0203S-18(I)		18	13.8	66
ME0203S-24(I)		24	10.4	66
ME0205S-03(I)	4.5 - 5.5 (5 VDC)	3.3	75.7	64
ME0205S-05(I)		5	50	71
ME0205S-07(I)		7.2	34.7	68
ME0205S-09(I)		9	27.7	73
ME0205S-12(I)		12	20.8	76
ME0205S-15(I)		15	16.6	71
ME0205S-18(I)		18	13.8	72
ME0205S-24(I)		24	10.4	77
ME0212S-03(I)	10.8 - 13.2 (12 VDC)	3.3	75.7	65
ME0212S-05(I)		5	50	67
ME0212S-07(I)		7.2	34.7	67
ME0212S-09(I)		9	27.7	64
ME0212S-12(I)		12	20.8	63
ME0212S-15(I)		15	16.6	67
ME0212S-18(I)		18	13.8	65
ME0212S-24(I)		24	10.4	55
ME0215S-03(I)	13.5 - 16.5 (15 VDC)	3.3	75.7	63
ME0215S-05(I)		5	50	62
ME0215S-07(I)		7.2	34.7	60
ME0215S-09(I)		9	27.7	60
ME0215S-12(I)		12	20.8	62
ME0215S-15(I)		15	16.6	61
ME0215S-18(I)		18	13.8	57
ME0215S-24(I)		24	10.4	57
ME0224S-03(I)	21.6 - 26.4 (24 VDC)	3.3	75.7	60
ME0224S-05(I)		5	50	58
ME0224S-07(I)		7.2	34.7	57
ME0224S-09(I)		9	27.7	62
ME0224S-12(I)		12	20.8	56
ME0224S-15(I)		15	16.6	55
ME0224S-18(I)		18	13.8	57
ME0224S-24(I)		24	10.4	59

Size: .46 x .24 x .40 inches (11.7 x 6.0 x 10.2 mm)

FEATURES

- Isolation Voltage: I = 3000VDC
- Operating temperature range: -40°C to +85°C
- Efficiency: Up to 86%
- Short Circuit Protection: Momentary

ME05S(I) - 0.50W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
ME0503S-03(I)	2.97 - 3.63 (3.3 VDC)	3.3	151.5	76
ME0503S-05(I)		5	100	70
ME0503S-07(I)		7.2	69.4	70
ME0503S-09(I)		9	55.5	70
ME0503S-12(I)		12	41.6	72
ME0503S-15(I)		15	33.3	73
ME0503S-18(I)		18	27.7	73
ME0503S-24(I)		24	20.8	73
ME0505S-03(I)	4.5 - 5.5 (5 VDC)	3.3	151.5	76
ME0505S-05(I)		5	100	83
ME0505S-07(I)		7.2	69.4	75
ME0505S-09(I)		9	55.5	78
ME0505S-12(I)		12	41.6	79
ME0505S-15(I)		15	33.3	77
ME0505S-18(I)		18	27.7	79
ME0505S-24(I)		24	20.8	75
ME0512S-03(I)	10.8 - 13.2 (12 VDC)	3.3	151.5	72
ME0512S-05(I)		5	100	78
ME0512S-07(I)		7.2	69.4	73
ME0512S-09(I)		9	55.5	73
ME0512S-12(I)		12	41.6	72
ME0512S-15(I)		15	33.3	69
ME0512S-18(I)		18	27.7	68
ME0512S-24(I)		24	20.8	71
ME0515S-03(I)	13.5 - 16.5 (15 VDC)	3.3	151.5	75
ME0515S-05(I)		5	100	78
ME0515S-07(I)		7.2	69.4	75
ME0515S-09(I)		9	55.5	75
ME0515S-12(I)		12	41.6	77
ME0515S-15(I)		15	33.3	70
ME0515S-18(I)		18	27.7	66
ME0515S-24(I)		24	20.8	66
ME0524S-03(I)	21.6 - 26.4 (24 VDC)	3.3	151.5	69
ME0524S-05(I)		5	100	73
ME0524S-07(I)		7.2	69.4	70
ME0524S-09(I)		9	55.5	71
ME0524S-12(I)		12	41.6	71
ME0524S-15(I)		15	33.3	73
ME0524S-18(I)		18	27.7	73
ME0524S-24(I)		24	20.8	72

Size: .46 x .24 x .40 inches (11.7 x 9.6 x 10.2 mm)

MExxI SERIES

.25W TO 2W SIP4 PACKAGE

ME100S(I) - 1W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
ME103S-03(I)	2.97 - 3.63 (3.3 VDC)	3.3	303	72
ME103S-05(I)		5	200	77
ME103S-07(I)		7.2	138.9	79
ME103S-09(I)		9	111.1	75
ME103S-12(I)		12	100	77
ME103S-15(I)		15	66.6	79
ME103S-18(I)		18	55.5	76
ME103S-24(I)		24	50	79
ME105S-03(I)	4.5 - 5.5 (5 VDC)	3.3	303	78
ME105S-05(I)		5	200	81
ME105S-07(I)		7.2	138.9	83
ME105S-09(I)		9	111.1	80
ME105S-12(I)		12	100	80
ME105S-15(I)		15	66.6	82
ME105S-18(I)		18	55.5	81
ME105S-24(I)		24	50	83
ME112S-03(I)	10.8 - 13.2 (12 VDC)	3.3	151.5	78
ME112S-05(I)		5	100	79
ME112S-07(I)		7.2	69.4	83
ME112S-09(I)		9	55.5	78
ME112S-12(I)		12	41.6	80
ME112S-15(I)		15	33.3	79
ME112S-18(I)		18	27.7	80
ME112S-24(I)		24	20.8	71
ME115S-03(I)	13.5 - 16.5 (15 VDC)	3.3	151.5	75
ME115S-05(I)		5	100	81
ME115S-07(I)		7.2	69.4	76
ME115S-09(I)		9	55.5	74
ME115S-12(I)		12	41.6	80
ME115S-15(I)		15	33.3	79
ME115S-18(I)		18	27.7	78
ME115S-24(I)		24	20.8	81
ME124S-03(I)	21.6 - 26.4 (24 VDC)	3.3	303	77
ME124S-05(I)		5	200	80
ME124S-07(I)		7.2	138.9	77
ME124S-09(I)		9	111.1	77
ME124S-12(I)		12	100	80
ME124S-15(I)		15	66.6	81
ME124S-18(I)		18	55.5	80
ME124S-24(I)		24	50	83

Size: .46 x .24 x .40 inches (11.7 x 6.0 x 10.2 mm)

UK CA CE RoHS

ME200S(I) - 2W DATASHEET

MODEL #	NOMINAL INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
ME205S-03(I)	4.5 - 5.5 (5 VDC)	3.3	400	78
ME205S-05(I)		5.5	400	81
ME205S-07(I)		7.2	278	80
ME205S-09(I)		9	222	83
ME205S-12(I)		12	167	84
ME205S-15(I)		15	133	85
ME205S-24(I)		24	83	86
ME212S-03(I)	10.8 - 13.2 (12 VDC)	3.3	400	72
ME212S-05(I)		5.5	400	81
ME212S-07(I)		7.2	278	80
ME212S-09(I)		9	222	83
ME212S-12(I)		12	167	85
ME212S-15(I)		15	133	85
ME212S-24(I)		24	83	85
ME215S-03(I)	13.5 - 16.5 (15 VDC)	3.3	400	76
ME215S-05(I)		5.5	400	81
ME215S-07(I)		7.2	278	83
ME215S-09(I)		9	222	80
ME215S-12(I)		12	167	84
ME215S-15(I)		15	133	86
ME215S-24(I)		24	83	84
ME224S-03(I)	21.6 - 26.4 (24 VDC)	3.3	400	81
ME224S-05(I)		5.5	400	83
ME224S-07(I)		7.2	278	82
ME224S-09(I)		9	222	85
ME224S-12(I)		12	167	86
ME224S-15(I)		15	133	86
ME224S-24(I)		24	83	88

Size: .46 x .29 x .40 inches (11.7 x 7.5 x 10.2 mm)

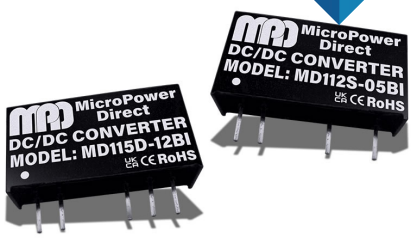
MDxxBI SERIES

1W AND 2W SIP7 PACKAGE

MD100B(I) - 1W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MD103S-03B(I)	2.97-3.63 (3.3 VDC)	3.3	303	82
MD103S-05B(I)		5	200	83
MD103S-09B(I)		9	111	84
MD103S-12B(I)		12	84	85
MD105S-03B(I)	4.5-5.5 (5 VDC)	3.3	303	83
MD105S-05B(I)		5	200	86
MD105S-09B(I)		9	111	86
MD105S-12B(I)		12	84	88
MD105S-15B(I)		15	67	88
MD105S-24B(I)		24	42	89
MD105D-05B(I)		±5	±100	84
MD105D-09B(I)		±9	±56	86
MD105D-12B(I)		±12	±42	86
MD105D-15B(I)		±15	±34	88
MD112S-03B(I)	10.8-13.2 (12 VDC)	3.3	303	88
MD112S-05B(I)		5	200	84
MD112S-09B(I)		9	111	86
MD112S-12B(I)		12	84	87
MD112S-15B(I)		15	67	87
MD112S-24B(I)		24	42	88
MD112D-03B(I)		±3.3	±152	89
MD112D-05B(I)		±5	±100	84
MD112D-09B(I)		±9	±56	86
MD112D-12B(I)		±12	±42	87
MD112D-15B(I)		±15	±34	87
MD115S-05B(I)	13.5-16.5 (15 VDC)	5	200	88
MD115S-09B(I)		9	111	86
MD115S-12B(I)		12	84	87
MD115S-15B(I)		15	67	87
MD115D-05B(I)		±5	±100	88
MD115D-12B(I)		±12	±42	86
MD115D-15B(I)		±15	±34	87
MD124S-03B(I)	21.6-26.4 (24 VDC)	3.3	303	88
MD124S-05B(I)		5	200	84
MD124S-09B(I)		9	111	87
MD124S-12B(I)		12	84	88
MD124S-15B(I)		15	67	88
MD124S-24B(I)		24	42	88
MD124D-05B(I)		±5	±100	89
MD124D-09B(I)		±9	±56	87
MD124D-12B(I)		±12	±42	88
MD124D-15B(I)		±15	±34	88

•SIZE: .77 X .24 X .40 IN (19.6 X 6.00 X 10.10 MM)



UK CA CE RoHS

FEATURES

- Isolation Voltage: I = 3000 VDC
- Operating temperature range: -40°C to +105°C
- Efficiency: Up to 89%
- Short Circuit Protection: Continuous

MD200B(I) - 2W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MD205S-03B(I)	4.5 - 5.5 (5 VDC)	3.0	400	83
MD205S-05B(I)		5.0	400	85
MD205S-09B(I)		9.0	222	85
MD205S-12B(I)		12.0	167	86
MD205S-15B(I)		15.0	133	87
MD205S-24B(I)		24.0	83	88
MD205D-03B(I)		±3.3	±303	83
MD205D-05B(I)		±5.0	±200	85
MD205D-09B(I)		±9.0	±111	85
MD205D-12B(I)		±12.0	±83	86
MD205D-15B(I)		±15.0	±67	87
MD212S-03B(I)	10.8 - 13.2 (12 VDC)	3.0	400	84
MD212S-05B(I)		5.0	400	85
MD212S-09B(I)		9.0	222	86
MD212S-12B(I)		12.0	167	87
MD212S-15B(I)		15.0	133	88
MD212S-24B(I)		24.0	83	89
MD212D-03B(I)		±3.3	±303	84
MD212D-05B(I)		±5.0	±200	85
MD212D-09B(I)		±9.0	±111	86
MD212D-12B(I)		±12.0	±83	87
MD212D-15B(I)		±15.0	±67	88
MD224S-03B(I)	21.6 - 26.4 (24 VDC)	3.0	400	84
MD224S-05B(I)		5.0	400	86
MD224S-09B(I)		9.0	222	87
MD224S-12B(I)		12.0	167	88
MD224S-15B(I)		15.0	133	89
MD224S-24B(I)		24.0	83	90
MD224D-03B(I)		±3.3	±303	84
MD224D-05B(I)		±5.0	±200	86
MD224D-09B(I)		±9.0	±111	87
MD224D-12B(I)		±12.0	±83	88
MD224D-15B(I)		±15.0	±67	89

•SIZE: .772X.278X.398 IN (19.60X7.05X10.10 MM)

MDxxI SERIES

1W AND 2W SIP7 PACKAGE

FEATURES

- Isolation Voltage: I = 3000 VDC, I4 = 4000 VDC, I5 = 5200 VDC, I6 = 6000 VDC
- Operating temperature range: -40°C to +85°C
- Efficiency: Up to 86%
- Short Circuit Protection: Momentary

MD100X - 1W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MD103S-03X	2.97 - 3.63 (3.3 VDC)	3.3	303	76
MD103S-05X		5	200	78
MD103S-07X		7	139	78
MD103S-09X		9	111	80
MD103S-12X		12	83	77
MD103S-15X		15	67	78
MD103S-18X		18	56	73
MD103S-24X		24	42	73
MD103D-03X		±3.3	±152	66
MD103D-05X		±5	±100	70
MD103D-07X		±7	±69	72
MD103D-09X		±9	±56	75
MD103D-12X		±12	±42	77
MD103D-15X		±15	±33	78
MD103D-18X		±18	±28	75
MD103D-24X		±24	±21	75
MD105S-03X	4.5 - 5.5 (5 VDC)	3.3	303	78
MD105S-05X		5	200	81
MD105S-07X		7	139	81
MD105S-09X		9	111	82
MD105S-12X		12	83	79
MD105S-15X		15	67	86
MD105S-18X		18	56	83
MD105S-24X		24	42	82
MD105D-03X		±3.3	±152	67
MD105D-05X		±5	±100	74
MD105D-07X		±7	±69	79
MD105D-09X		±9	±56	81
MD105D-12X		±12	±42	80
MD105D-15X		±15	±33	82
MD105D-18X		±18	±28	81
MD105D-24X		±24	±21	81
MD112S-03X	10.8 - 13.2 (12 VDC)	3.3	303	75
MD112S-05X		5	200	79
MD112S-07X		7	139	75
MD112S-09X		9	111	80
MD112S-12X		12	83	79
MD112S-15X		15	67	82
MD112S-18X		18	56	81
MD112S-24X		24	42	76

MD100X - 1W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MD112D-03X	10.8 - 13.2 (12 VDC)	±3.3	±152	68
MD112D-05X		±5	±100	74
MD112D-07X		±7	±69	76
MD112D-09X		±9	±56	78
MD112D-12X		±12	±42	82
MD112D-15X		±15	±33	82
MD112D-18X		±18	±28	81
MD112D-24X		±24	±21	75
MD115S-03X	13.5 - 16.5 (15 VDC)	3.3	303	80
MD115S-05X		5	200	81
MD115S-07X		7	139	78
MD115S-09X		9	111	78
MD115S-12X		12	83	80
MD115S-15X		15	67	79
MD115S-18X		18	56	80
MD115S-24X		24	42	83
MD115D-03X		±3.3	±152	75
MD115D-05X		±5	±100	75
MD115D-07X		±7	±69	75
MD115D-09X		±9	±56	77
MD115D-12X		±12	±42	77
MD115D-15X		±15	±33	77
MD115D-18X		±18	±28	75
MD115D-24X		±24	±21	75
MD124S-03X	21.6 - 26.4 (24 VDC)	3.3	303	74
MD124S-05X		5	200	77
MD124S-07X		7	139	73
MD124S-09X		9	111	76
MD124S-12X		12	83	78
MD124S-15X		15	67	80
MD124S-18X		18	56	82
MD124S-24X		24	42	80
MD124D-03X		±3.3	±152	67
MD124D-05X		±5	±100	74
MD124D-07X		±7	±69	78
MD124D-09X		±9	±56	78
MD124D-12X		±12	±42	80
MD124D-15X		±15	±33	80
MD124D-18X		±18	±28	81
MD124D-24X		±24	±21	82

Size: 0.76 x 0.24 x 0.39 in (29.5 x 6.0 x 10.0 mm)

MDxxI SERIES

1W AND 2W SIP7 PACKAGE

MD200X - 2W (NO UL APPROVAL) DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MD203S-03X	2.97 - 3.63 (3.3 VDC)	3.3	400	76
MD203S-05X		5	400	76
MD203S-07X		7	277.7	75
MD203S-09X		9	222.2	80
MD203S-12X		12	166.7	81
MD203S-15X		15	133.3	78
MD203S-18X		18	111.1	77
MD203S-24X		24	83.3	79
MD203D-03X		±3.3	±200	76
MD203D-05X		±5	±200	78
MD203D-07X		±7	±138.8	76
MD203D-09X		±9	±111.1	76
MD203D-12X		±12	±83.3	78
MD203D-15X		±15	±66.6	78
MD203D-18X		±18	±55.5	78
MD203D-24X		±24	±41.6	79
MD205S-03X	4.5 - 5.5 (5 VDC)	3.3	400	72
MD205S-05X		5	400	78
MD205S-07X		7	277.7	80
MD205S-09X		9	222.2	80
MD205S-12X		12	166.7	82
MD205S-15X		15	133.3	82
MD205S-18X		18	111.1	82
MD205S-24X		24	83.3	82
MD205D-03X		±3.3	±200	65
MD205D-05X		±5	±200	72
MD205D-07X		±7	±138.8	72
MD205D-09X		±9	±111.1	77
MD205D-12X		±12	±83.3	78
MD205D-15X		±15	±66.6	80
MD205D-18X		±18	±55.5	80
MD205D-24X		±24	±41.6	80

Size: See Datasheet

MD200X - 2W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MD212S-03X	10.8 - 13.2 (12 VDC)	3.3	400	65
MD212S-05X		5	400	77
MD212S-07X		7	277.7	80
MD212S-09X		9	222.2	80
MD212S-12X		12	166.7	82
MD212S-15X		15	133.3	82
MD212S-18X		18	111.1	80
MD212S-24X		24	83.3	80
MD212D-03X		±3.3	±200	67
MD212D-05X		±5	±200	75
MD212D-07X		±7	±138.8	76
MD212D-09X		±9	±111.1	77
MD212D-12X		±12	±83.3	82
MD212D-15X		±15	±66.6	82
MD212D-18X		±18	±55.5	82
MD212D-24X		±24	±41.6	82
MD224S-03X	21.6 - 26.4 (24 VDC)	3.3	400	72
MD224S-05X		5	400	79
MD224S-07X		7	277.7	80
MD224S-09X		9	222.2	80
MD224S-12X		12	166.7	80
MD224S-15X		15	133.3	82
MD224S-18X		18	111.1	82
MD224S-24X		24	83.3	80
MD224D-03X		±3.3	±200	68
MD224D-05X		±5	±200	75
MD224D-07X		±7	±138.8	75
MD224D-09X		±9	±111.1	80
MD224D-12X		±12	±83.3	82
MD224D-15X		±15	±66.6	82
MD224D-18X		±18	±55.5	82
MD224D-24X		±24	±41.6	82

MDxxCHI SERIES

1W AND 2W SIP7 PACKAGE

FEATURES

- Isolation Voltage: MD100CHI - 6000 VDC
- Operating temperature range: -40°C to +105°C
- Efficiency: Up to 84%
- Short Circuit Protection: Continuous

MD100CHI - 1W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MD105S-05CHI	4.5-5.5 (5 VDC)	5	200	80
MD105S-09CHI		9	111	80
MD105S-12CHI		12	84	81
MD105S-15CHI		15	67	81
MD105S-24CHI		24	42	81
MD105D-03CHI		±3.3	±152	75
MD105D-05CHI		±5	±100	80
MD105D-09CHI		±9	±56	80
MD105D-12CHI		±12	±42	81
MD105D-15CHI		±15	±34	81
MD112S-03CHI	10.8-13.2 (12 VDC)	3.3	303	76
MD112S-05CHI		5	200	79
MD112S-09CHI		9	111	81
MD112S-12CHI		12	84	83
MD112S-15CHI		15	67	83
MD112S-24CHI		24	42	82
MD112D-05CHI		±5	±100	79
MD112D-09CHI		±9	±56	79
MD112D-12CHI		±12	±42	81
MD112D-15CHI		±15	±34	81
MD115D-05CHI	13.5-16.5 (15 VDC)	±5	±100	77
MD115D-12CHI		±12	±42	79
MD115D-15CHI		±15	±33	79
MD124S-05CHI	21.6-26.4 (24 VDC)	5	200	76
MD124S-09CHI		9	111	76
MD124S-12CHI		12	84	76
MD124S-15CHI		15	67	76
MD124S-24CHI		24	42	76
MD124D-05CHI		±5	±100	75
MD124D-09CHI		±9	±56	75
MD124D-12CHI		±12	±42	76
MD124D-15CHI		±15	±34	76

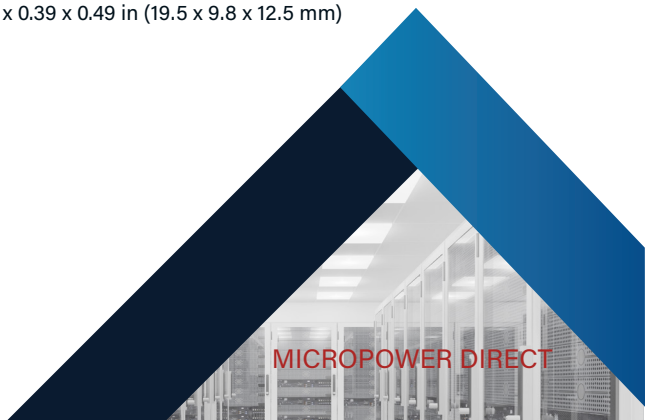
Size: 0.77 x 0.39 x 0.49 in (19.5 x 9.8 x 12.5 mm)

UK CA CE RoHS

MD200CHI - 2W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MD212S-05CHI	10.8-13.2 (12 VDC)	5	400	80
MD212S-09CHI		9	222	82
MD212S-12CHI		12	167	84
MD212S-15CHI		15	133	84
MD212D-05CHI		±5	±200	80
MD212D-09CHI		±9	±111	82
MD212D-12CHI		±12	±83	83
MD212D-15CHI		±15	±67	84
MD215D-05CHI	13.5-16.5 (15 VDC)	±5	±200	78
MD215D-09CHI		±9	±111	80
MD215D-15CHI		±15	±67	80
MD224S-05CHI	21.6-26.4 (24 VDC)	5	400	79
MD224S-09CHI		9	222	81
MD224S-12CHI		12	167	82
MD224S-15CHI		15	133	84
MD224S-24CHI		24	83	84
MD224D-05CHI		±5	±200	79
MD224D-09CHI		±9	±111	81
MD224D-12CHI		±12	±83	82
MD224D-15CHI		±15	±67	81

Size: 0.77 x 0.39 x 0.49 in (19.5 x 9.8 x 12.5 mm)



MH(I) AND MG(I) SERIES

DIP PACKAGE HIGH ISOLATION DC/DC CONVERTERS

MicroPower Direct's DIP high-isolation DC/DC converters deliver robust performance, high isolation ratings, and enhanced EMI protection, making them ideal for industrial, medical, and high-reliability applications.

01

DIP8 (MH Series) – Compact & Cost-Effective

- Best for designs requiring lower power with a space-saving form factor.
- Power Options: 0.25W (MH02SI), 0.5W (MH05SI), 1W (MH100SI).

Key Benefits:

- 3,000 VDC isolation for secure electrical separation.
- Compact DIP8 footprint for space-constrained applications.
- High efficiency (up to 85%) for minimal energy loss.
- Low ripple and noise for signal-sensitive systems.
- Best for: embedded systems, industrial control units, portable medical devices, and low-power communication modules.

02

DIP14 (MG Series) – High Power, High Isolation

- Best for designs needing high power output with reinforced isolation and superior EMI shielding.
- Power Options: 1W (MG100BI, MG100I), 2W (MG200BI, MG200I).

Key Benefits:

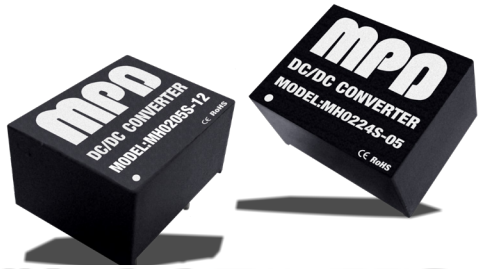
- Reinforced 3,000 to 6,000 VDC isolation for critical applications.
- Wide operating temperature range (-40°C to +105°C) for extreme conditions.
- DIP14 package for easy PCB integration.
- Optimized EMI shielding for noise-sensitive applications.
- Best for: industrial automation, medical electronics, transportation systems, and test & measurement instruments requiring reinforced insulation and stable performance.

MHxxI SERIES

.25W TO 1W DIP8 PACKAGE

FEATURES

- Isolation Voltage: I = 3000VDC
- Operating temperature range: -40°C to +85°C
- Efficiency: Up to 83%
- Short Circuit Protection: Momentary



UK CA CE RoHS

MH02S - .25W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MH0203S-03(I)	2.97 - 3.63 (3.3 VDC)	3.3	75.7	61
MH0203S-05(I)		5.0	50.0	64
MH0203S-07(I)		7.2	34.7	64
MH0203S-09(I)		9.0	27.7	64
MH0203S-12(I)		12.0	20.8	63
MH0203S-15(I)		15.0	16.6	64
MH0203S-18(I)		18.0	13.8	66
MH0203S-24(I)		24.0	10.4	66
MH0205S-03(I)	4.5 - 5.5 (5 VDC)	3.3	75.7	60
MH0205S-05(I)		5.0	50.0	69
MH0205S-07(I)		7.2	34.7	70
MH0205S-09(I)		9.0	27.7	70
MH0205S-12(I)		12.0	20.8	68
MH0205S-15(I)		15.0	16.6	68
MH0205S-18(I)		18.0	13.8	73
MH0205S-24(I)		24.0	10.4	69
MH0212S-03(I)	10.8 - 13.2 (12 VDC)	3.3	75.7	67
MH0212S-05(I)		5.0	50.0	65
MH0212S-07(I)		7.2	34.7	65
MH0212S-09(I)		9.0	27.7	60
MH0212S-12(I)		12.0	20.8	68
MH0212S-15(I)		15.0	16.6	57
MH0212S-18(I)		18.0	13.8	55
MH0212S-24(I)		24.0	10.4	51
MH0215S-03(I)	13.5 - 16.5 (15 VDC)	3.3	75.7	63
MH0215S-05(I)		5.0	50.0	63
MH0215S-07(I)		7.2	34.7	60
MH0215S-09(I)		9.0	27.7	60
MH0215S-12(I)		12.0	20.8	60
MH0215S-15(I)		15.0	16.6	59
MH0215S-18(I)		18.0	13.8	57
MH0215S-24(I)		24.0	10.4	57
MH0224S-03(I)	21.6 - 26.4 (24 VDC)	3.3	75.7	58
MH0224S-05(I)		5.0	50.0	60
MH0224S-07(I)		7.2	34.7	59
MH0224S-09(I)		9.0	27.7	58
MH0224S-12(I)		12.0	20.8	55
MH0224S-15(I)		15.0	16.6	59
MH0224S-18(I)		18.0	13.8	53
MH0224S-24(I)		24.0	10.4	55

Size: .50 x .40 x .27 inches (12.7 x 10.18 x 6.85 mm)

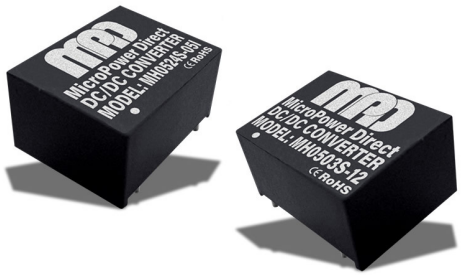
MH05S - .50W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MH0503S-03(I)	2.97 - 3.63 (3.3 VDC)	3.3	152.0	76
MH0503S-05(I)		5.0	100.0	70
MH0503S-07(I)		7.2	69.0	70
MH0503S-09(I)		9.0	56.0	70
MH0503S-12(I)		12.0	42.0	72
MH0503S-15(I)		15.0	33.0	73
MH0503S-18(I)		18.0	28.0	73
MH0503S-24(I)		24.0	21.0	73
MH0505S-03(I)	4.5 - 5.5 (5 VDC)	3.3	151.5	76
MH0505S-05(I)		5.0	100.0	81
MH0505S-07(I)		7.2	69.4	75
MH0505S-09(I)		9.0	55.5	78
MH0505S-12(I)		12.0	41.6	79
MH0505S-15(I)		15.0	33.3	77
MH0505S-18(I)		18.0	27.7	79
MH0505S-24(I)		24.0	20.8	75
MH0512S-03(I)	10.8 - 13.2 (12 VDC)	3.3	151.5	73
MH0512S-05(I)		5.0	100.0	78
MH0512S-07(I)		7.2	69.4	73
MH0512S-09(I)		9.0	55.5	73
MH0512S-12(I)		12.0	41.6	72
MH0512S-15(I)		15.0	33.3	69
MH0512S-18(I)		18.0	27.7	68
MH0512S-24(I)		24.0	20.8	71
MH0515S-03(I)	13.5 - 16.5 (15 VDC)	3.3	151.5	75
MH0515S-05(I)		5.0	100.0	78
MH0515S-07(I)		7.2	69.4	75
MH0515S-09(I)		9.0	55.5	75
MH0515S-12(I)		12.0	41.6	77
MH0515S-15(I)		15.0	33.3	70
MH0515S-18(I)		18.0	27.7	66
MH0515S-24(I)		24.0	20.8	66
MH0524S-03(I)	21.6 - 26.4 (24 VDC)	3.3	151.5	69
MH0524S-05(I)		5.0	100.0	74
MH0524S-07(I)		7.2	69.4	69
MH0524S-09(I)		9.0	55.5	71
MH0524S-12(I)		12.0	41.6	69
MH0524S-15(I)		15.0	33.3	69
MH0524S-18(I)		18.0	27.7	73
MH0524S-24(I)		24.0	20.8	72

Size: .50 x .40 x .27 inches (12.7 x 10.18 x 6.85 mm)

MHxxI SERIES

.25W TO 1W DIP8 PACKAGE



MH100S(I) - 1W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MH103S-03(I)	2.97 - 3.63 (3.3 VDC)	3.3	303	74
MH103S-05(I)		5	200	77
MH103S-07(I)		7	138.9	75
MH103S-09(I)		9	111.1	76
MH103S-12(I)		12	100	75
MH103S-15(I)		15	66.6	79
MH103S-18(I)		18	55.5	76
MH103S-24(I)		24	50	75
MH105S-03(I)	4.5 - 5.5 (5 VDC)	3.3	303	78
MH105S-05(I)		5	200	79
MH105S-07(I)		7	138.9	83
MH105S-09(I)		9	111.1	79
MH105S-12(I)		12	100	81
MH105S-15(I)		15	66.6	82
MH105S-18(I)		18	55.5	83
MH105S-24(I)		24	50	82
MH112S-03(I)	10.8 - 13.2 (12 VDC)	3.3	303	77
MH112S-05(I)		5	200	79
MH112S-07(I)		7	138.9	83
MH112S-09(I)		9	111.1	79
MH112S-12(I)		12	100	80
MH112S-15(I)		15	66.6	79
MH112S-18(I)		18	55.5	81
MH112S-24(I)		24	50	79

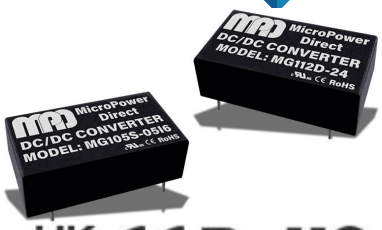
Size: .50 x .40 x .27 inches (12.7 x 10.18 x 6.85 mm)

MH100S(I) - 1W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MH115S-03(I)	13.5 - 16.5 (15 VDC)	3.3	303	75
MH115S-05(I)		5	200	80
MH115S-07(I)		7	138.9	76
MH115S-09(I)		9	111.1	78
MH115S-12(I)		12	100	82
MH115S-15(I)		15	66.6	80
MH115S-18(I)		18	55.5	78
MH115S-24(I)		24	50	81
MH124S-03(I)	21.6 - 26.4 (24 VDC)	3.3	303	79
MH124S-05(I)		5	200	79
MH124S-07(I)		7	138.9	74
MH124S-09(I)		9	111.1	79
MH124S-12(I)		12	100	80
MH124S-15(I)		15	66.6	80
MH124S-18(I)		18	55.5	82
MH124S-24(I)		24	50	82

MGxxI SERIES

1W AND 2W DIP14 PACKAGE



FEATURES

- Isolation Voltage: I = 3000 VDC, I4 = 4000 VDC, I5 = 5200 VDC, I6 = 6000 VDC
- Operating temperature range: -40°C to +85°C
- Efficiency: Up to 86%
- Short Circuit Protection: Momentary

MG100X - 1W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MG103S-03X	2.97 - 3.63 (3.3 VDC)	3.3	303	71
MG103S-05X		5	200	75
MG103S-07X		7	139	75
MG103S-09X		9	111	77
MG103S-12X		12	83	76
MG103S-15X		15	67	76
MG103S-18X		18	56	73
MG103S-24X		24	42	73
MG103D-03X		±3.3	±152	63
MG103D-05X		±5	±100	67
MG103D-07X		±7	±69	70
MG103D-09X		±9	±56	73
MG103D-12X		±12	±42	73
MG103D-15X		±15	±33	76
MG103D-18X		±18	±28	75
MG103D-24X		±24	±21	75
MG105S-03X	4.5 - 5.5 (5 VDC)	3.3	303	77
MG105S-05X		5	200	82
MG105S-07X		7	139	82
MG105S-09X		9	111	80
MG105S-12X		12	83	81
MG105S-15X		15	67	80
MG105S-18X		18	56	80
MG105S-24X		24	42	82
MG105D-03X		±3.3	±152	65
MG105D-05X		±5	±100	70
MG105D-07X		±7	±69	73
MG105D-09X		±9	±56	79
MG105D-12X		±12	±42	80
MG105D-15X		±15	±33	81
MG105D-18X		±18	±28	82
MG105D-24X		±24	±21	82
MG112S-03X	10.8 - 13.2 (12 VDC)	3.3	303	75
MG112S-05X		5	200	80
MG112S-07X		7	139	76
MG112S-09X		9	111	80
MG112S-12X		12	83	77
MG112S-15X		15	67	76
MG112S-18X		18	56	73
MG112S-24X		24	42	73

Size: 0.80 x 0.40 x 0.27 in (20.32 x 10.16 x 6.88 mm)

MG100X - 1W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MG112D-03X	10.8 - 13.2 (12 VDC)	±3.3	±152	65
MG112D-05X		±5	±100	74
MG112D-07X		±7	±69	75
MG112D-09X		±9	±56	80
MG112D-12X		±12	±42	81
MG112D-15X		±15	±33	82
MG112D-18X		±18	±28	75
MG112D-24X		±24	±21	76
MG115S-03X	13.5 - 16.5 (15 VDC)	3.3	303	75
MG115S-05X		5	200	81
MG115S-07X		7	139	75
MG115S-09X		9	111	75
MG115S-12X		12	83	80
MG115S-15X		15	67	79
MG115S-18X		18	56	80
MG115S-24X		24	42	80
MG115D-03X		±3.3	±152	75
MG115D-05X		±5	±100	75
MG115D-07X		±7	±69	75
MG115D-09X		±9	±56	77
MG115D-12X		±12	±42	77
MG115D-15X		±15	±33	77
MG115D-18X		±18	±28	75
MG115D-24X		±24	±21	75
MG124S-03X	21.6 - 26.4 (24 VDC)	3.3	303	76
MG124S-05X		5	200	80
MG124S-07X		7	139	73
MG124S-09X		9	111	75
MG124S-12X		12	83	78
MG124S-15X		15	67	80
MG124S-18X		18	56	80
MG124S-24X		24	42	81
MG124D-03X		±3.3	±152	64
MG124D-05X		±5	±100	75
MG124D-07X		±7	±69	75
MG124D-09X		±9	±56	80
MG124D-12X		±12	±42	79
MG124D-15X		±15	±33	81
MG124D-18X		±18	±28	78
MG124D-24X		±24	±21	78

MGxxI SERIES

1W AND 2W DIP14 PACKAGE

MG200X - 2W (NO UL APPROVAL) DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MG203S-03X	2.97 - 3.63 (3.3 VDC)	3.3	400	76
MG203S-05X		5	400	76
MG203S-07X		7	277.7	75
MG203S-09X		9	222.2	80
MG203S-12X		12	166.7	81
MG203S-15X		15	133.3	78
MG203S-18X		18	111.1	77
MG203S-24X		24	83.3	79
MG203D-03X		±3.3	±200	76
MG203D-05X		±5	±200	78
MG203D-07X		±7	±138.8	76
MG203D-09X		±9	±111.1	76
MG203D-12X		±12	±83.3	78
MG203D-15X		±15	±66.6	78
MG203D-18X		±18	±55.5	78
MG203D-24X		±24	±41.6	79
MG205S-03X	4.5 - 5.5 (5 VDC)	3.3	400	72
MG205S-05X		5	400	78
MG205S-07X		7	277.7	80
MG205S-09X		9	222.2	80
MG205S-12X		12	166.7	82
MG205S-15X		15	133.3	82
MG205S-18X		18	111.1	82
MG205S-24X		24	83.3	82
MG205D-03X		±3.3	±200	65
MG205D-05X		±5	±200	72
MG205D-07X		±7	±138.8	72
MG205D-09X		±9	±111.1	77
MG205D-12X		±12	±83.3	78
MG205D-15X		±15	±66.6	80
MG205D-18X		±18	±55.5	80
MG205D-24X		±24	±41.6	80

Size: 0.80 x 0.40 x 0.27 in (20.32 x 10.16 x 6.88 mm)

MG200X - 2W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MG212S-03X	10.8 - 13.2 (12 VDC)	3.3	400	65
MG212S-05X		5	400	77
MG212S-07X		7	277.7	80
MG212S-09X		9	222.2	80
MG212S-12X		12	166.7	82
MG212S-15X		15	133.3	82
MG212S-18X		18	111.1	80
MG212S-24X		24	83.3	80
MG212D-03X		±3.3	±200	67
MG212D-05X		±5	±200	75
MG212D-07X		±7	±138.8	76
MG212D-09X		±9	±111.1	77
MG212D-12X		±12	±83.3	82
MG212D-15X		±15	±66.6	82
MG212D-18X		±18	±55.5	82
MG212D-24X		±24	±41.6	82
MG224S-03X	21.6 - 26.4 (24 VDC)	3.3	400	72
MG224S-05X		5	400	79
MG224S-07X		7	277.7	80
MG224S-09X		9	222.2	80
MG224S-12X		12	166.7	80
MG224S-15X		15	133.3	82
MG224S-18X		18	111.1	82
MG224S-24X		24	83.3	80
MG224D-03X		±3.3	±200	68
MG224D-05X		±5	±200	75
MG224D-07X		±7	±138.8	75
MG224D-09X		±9	±111.1	80
MG224D-12X		±12	±83.3	82
MG224D-15X		±15	±66.6	82
MG224D-18X		±18	±55.5	82
MG224D-24X		±24	±41.6	82

X = I, I4, I5, I6

MGxxBI SERIES

1W AND 2W DIP14 PACKAGE

FEATURES

- Isolation Voltage: 1000 VDC, I = 3000
- Operating temperature range: -40°C to +105°C
- Efficiency: Up to 89%
- Short Circuit Protection: Continuous

MG100BI - 1W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MG103S-03BI	2.97 - 3.63 (3.3 VDC)	3.3	303	82
MG103S-05BI		5	200	83
MG103S-09BI		9	111	84
MG103S-12BI		12	84	85
MG105S-03BI	4.5 - 5.5 (5 VDC)	3.3	303	83
MG105S-05BI		5	200	86
MG105S-09BI		9	111	86
MG105S-12BI		12	84	88
MG105S-15BI		15	67	88
MG105S-24BI		24	42	89
MG105D-05BI		±5	±100	86
MG105D-09BI		±9	±56	86
MG105D-12BI		±12	±42	88
MG105D-15BI		±15	±34	88
MG112S-03BI	10.8 - 13.2 (12 VDC)	3.3	303	84
MG112S-05BI		5	200	86
MG112S-09BI		9	111	87
MG112S-12BI		12	84	87
MG112S-15BI		15	67	88
MG112S-24BI		24	42	89
MG112D-03BI		±3.3	±152	84
MG112D-05BI		±5	±100	86
MG112D-09BI		±9	±56	87
MG112D-12BI		±12	±42	87
MG112D-15BI		±15	±34	88

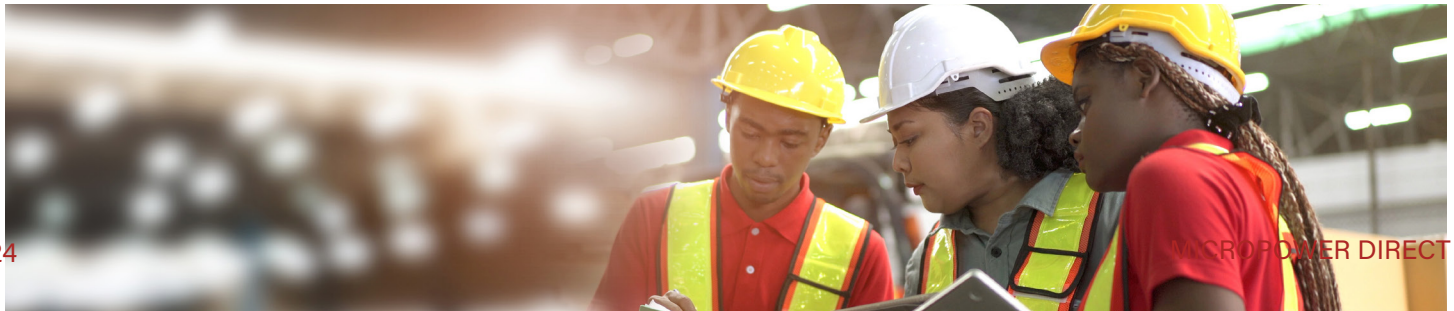
SIZE: .77 X .39 X .32 IN (19.50 X 9.80 X 8.00 MM)

UK CA CE RoHS

MG100BI - 1W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MG115S-05BI	13.5 - 16.5 (15 VDC)	5	200	86
MG115S-09BI		9	111	87
MG115S-12BI		12	84	87
MG115S-15BI		15	67	88
MG115D-05BI		±5	±100	86
MG115D-12BI		±12	±42	87
MG115D-15BI		±15	±34	88
MG124S-03BI	21.6 - 26.4 (24 VDC)	3.3	303	84
MG124S-05BI		5	200	87
MG124S-09BI		9	111	88
MG124S-12BI		12	84	88
MG124S-15BI		15	67	88
MG124S-24BI		24	42	89
MG124D-05BI		±5	±100	87
MG124D-09BI		±9	±56	88
MG124D-12BI		±12	±42	88
MG124D-15BI		±15	±34	88

SIZE: .77 X .39 X .32 IN (19.50 X 9.80 X 8.00 MM)



MGxxBI SERIES

1W AND 2W DIP14 PACKAGE

MG200B(I) - 2W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MG203S-03B(I)	2.97 - 3.63 (3.3 VDC)	3.3	400	77
MG203S-05B(I)		5	400	79
MG203S-09B(I)		9	222	80
MG203S-12B(I)		12	167	81
MG205S-03B(I)	4.5 - 5.5 (5 VDC)	3.3	400	83
MG205S-05B(I)		5	400	85
MG205S-09B(I)		9	222	85
MG205S-12B(I)		12	167	86
MG205S-15B(I)		15	133	87
MG205S-24B(I)		24	83	88
MG205D-03B(I)		±3.3	±303	83
MG205D-05B(I)		±5	±200	85
MG205D-09B(I)		±9	±111	85
MG205D-12B(I)		±12	±83	86
MG205D-15B(I)		±15	±67	87
MG212S-03B(I)	10.8 - 13.2 (12 VDC)	3.3	400	84
MG212S-05B(I)		5	400	85
MG212S-09B(I)		9	222	86
MG212S-12B(I)		12	167	87
MG212S-15B(I)		15	133	88
MG212S-24B(I)		24	83	89
MG212D-03B(I)		±3.3	±303	84
MG212D-05B(I)		±5	±200	85
MG212D-09B(I)		±9	±111	86
MG212D-12B(I)		±12	±83	87
MG212D-15B(I)		±15	±67	88

SIZE: .77 X .39 X .32 IN (19.50 X 9.80 X 8.00 MM)

MG200B(I) - 2W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MG215S-03B(I)	13.5 - 16.5 (15 VDC)	3.3	400	84
MG215S-05B(I)		5	400	85
MG215S-09B(I)		9	222	86
MG215S-12B(I)		12	167	87
MG215S-15B(I)		15	133	88
MG215S-24B(I)		24	83	89
MG215D-03B(I)		±3.3	±303	84
MG215D-05B(I)		±5	±200	85
MG215D-09B(I)		±9	±111	86
MG215D-12B(I)		±12	±83	87
MG215D-15B(I)		±15	±67	88
MG224S-03B(I)	21.6 - 26.4 (24 VDC)	3.3	400	84
MG224S-05B(I)		5	400	86
MG224S-09B(I)		9	222	87
MG224S-12B(I)		12	167	88
MG224S-15B(I)		15	133	89
MG224S-24B(I)		24	83	90
MG224D-03B(I)		±3.3	±303	84
MG224D-05B(I)		±5	±200	86
MG224D-09B(I)		±9	±111	87
MG224D-12B(I)		±12	±83	88
MG224D-15B(I)		±15	±67	89

SIZE: .77 X .39 X .32 IN (19.50 X 9.80 X 8.00 MM)

MA & MD WIDE INPUT MODULE SERIES

MODULE HIGH ISOLATION DC/DC CONVERTERS

Applications requiring wide input voltage compatibility, reinforced isolation, and stable performance in demanding environments. These converters are ideal for systems exposed to fluctuating power sources, ensuring consistent operation and long-term reliability.

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- **Wide Input High Isolation (MA & MD Series) – Flexible Input, High Protection**
- Best for applications requiring wide input voltage compatibility, reinforced isolation, and stable performance in demanding environments.
- Power Options: 3W (MA300RUI, MA300RWI), 6W (MA600RWI, MA600BRUI, MA600RUI, MD600RUI, MD600RWI).

Key Benefits:

- Wide input range (4:1 and 2:1 options) – Supports fluctuating power sources and ensures stable operation in variable voltage environments.
- High isolation (3,000 VDC) – Provides reinforced electrical protection.
- Multiple form factors – DIP24 (MA Series) for compact, high-power integration; SIP8 (MD Series) for space-constrained designs.
- High efficiency (up to 88%) – Minimizes energy loss and heat generation.
- Extended temperature range (-40°C to +105°C) – Ensures reliable operation in extreme conditions, including outdoor and harsh industrial settings.
- Optimized for industrial, railway, and remote power applications – Handles demanding environments where power fluctuations are common.
- Best for: Industrial automation, railway electronics, remote power systems, and mission-critical embedded designs.

MAxxRUI SERIES

4:1 WIDE INPUT DC/DC CONVERTERS

3W AND 6W DIP24 PACKAGE

FEATURES

- Isolation Voltage: 1500 VDC, I = 3000 VDC
- Operating temperature range: -40°C to +85°C
- Efficiency: Up to 90%
- Short Circuit Protection: Continuous

MA300RU(I) - 3W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MA324S-03RU(I)	9.0 - 36 (24 VDC)	3.3	750	77
MA324S-05RU(I)		5	600	79
MA324S-12RU(I)		12	250	82
MA324S-15RU(I)		15	200	83
MA324S-24RU(I)		24	125	81
MA324D-05RU(I)		±5	±250	80
MA324D-12RU(I)		±12	±125	82
MA324D-15RU(I)		±15	±100	82
MA348S-03RU(I)	18 - 75 (48 VDC)	3.3	750	77
MA348S-05RU(I)		5	600	80
MA348S-12RU(I)		12	250	83
MA348S-15RU(I)		15	200	84
MA348S-24RU(I)		24	125	82
MA348D-05RU(I)		±5	±250	80
MA348D-12RU(I)		±12	±125	82
MA348D-15RU(I)		±15	±100	82

Size: 1.25 x 0.8 x 0.4 in (31.75 x 20.32 x 10.16 mm)

MA600RU(I) - 6W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MA624S-03RU(I)	9.0 - 36 (24 VDC)	3.3	1200	77
MA624S-05RU(I)		5	1200	80
MA624S-12RU(I)		12	500	84
MA624S-15RU(I)		15	400	84
MA624S-24RU(I)		24	250	84
MA624D-05RU(I)		±5	±500	80
MA624D-12RU(I)		±12	±250	84
MA624D-15RU(I)		±15	±200	84
MA648S-03RU(I)	18 - 75 (48 VDC)	3.3	1200	77
MA648S-05RU(I)		5	1200	80
MA648S-12RU(I)		12	500	84
MA648S-15RU(I)		15	400	84
MA648S-24RU(I)		24	250	84
MA648D-05RU(I)		±5	±500	80
MA648D-12RU(I)		±12	±250	84
MA648D-15RU(I)		±15	±200	84

Size: 1.25 x 0.8 x 0.4 in (31.75 x 20.32 x 10.16 mm)

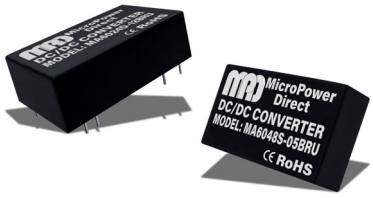
MA600BRUI SERIES

4:1 WIDE INPUT DC/DC CONVERTERS

6W DIP24 PACKAGE

FEATURES

- Isolation Voltage: 1500 VDC, I = 3000 VDC
- Operating temperature range: -40°C to +85°C
- Efficiency: Up to 88%
- Short Circuit Protection: Continuous



UK CA CE RoHS

MA600BRU - 6W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MA624S-03BRU	9 - 36 (24 VDC)	3.3	1500	77
MA624S-05BRU		5	1200	82
MA624S-09BRU		9	667	83
MA624S-12BRU		12	500	85
MA624S-15BRU		15	400	86
MA624S-24BRU		24	250	86
MA624D-05BRU		±5	±600	82
MA624D-09BRU		±9	±333	84
MA624D-12BRU		±12	±250	85
MA624D-15BRU		±15	±200	88
MA624D-24BRU		±24	±125	86
MA648S-03BRU	18 - 75 (48 VDC)	3.3	1500	80
MA648S-05BRU		5	1200	84
MA648S-09BRU		9	667	85
MA648S-12BRU		12	500	87
MA648S-15BRU		15	400	88
MA648S-24BRU		24	250	87
MA648D-05BRU		±5	±600	83
MA648D-12BRU		±12	±250	87
MA648D-15BRU		±15	±200	88

Size: 1.26 x 0.79 x 0.50 in (32.0 x 20.0 x 12.6 mm)

MA600BRUI - 6W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MA624S-03BRUI	9 - 36 (24 VDC)	3.3	1500	79
MA624S-05BRUI		5.0	1200	82
MA624S-09BRUI		9.0	667	85
MA624S-12BRUI		12.0	500	86
MA624S-15BRUI		15.0	400	88
MA624S-24BRUI		24.0	250	87
MA624D-05BRUI		±5.0	±600	80
MA624D-12BRUI		±12.0	±250	84
MA624D-15BRUI		±15.0	±200	85
MA648S-03BRUI	18 - 75 (48 VDC)	3.3	1500	79
MA648S-05BRUI		5.0	1200	83
MA648S-12BRUI		12.0	500	87
MA648S-15BRUI		15.0	400	88
MA648S-24BRUI		24.0	250	87

MAxxxRWI SERIES
2:1 WIDE INPUT DC/DC CONVERTERS
3W AND 6W DIP24 PACKAGE

FEATURES

- Isolation Voltage: 1500 VDC, I = 3000 VDC
- Operating temperature range: -40°C to +85°C
- Efficiency: Up to 87%
- Short Circuit Protection: Continuous

MA300RW(I) - 3W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MA305S-03RW(I)	4.5 - 9 (5 VDC)	3.3	600	77
MA305S-05RW(I)		5	500	78
MA305S-12RW(I)		12	250	82
MA305S-15RW(I)		15	200	82
MA305S-24RW(I)		24	125	81
MA305D-05RW(I)		±5	±250	77
MA305D-12RW(I)		±12	±125	81
MA305D-15RW(I)		±15	±100	81
MA312S-03RW(I)	9 - 18 (12 VDC)	3.3	600	79
MA312S-05RW(I)		5	500	81
MA312S-12RW(I)		12	250	85
MA312S-15RW(I)		15	200	85
MA312S-24RW(I)		24	125	84
MA312D-05RW(I)		±5	±250	80
MA312D-12RW(I)		±12	±125	84
MA312D-15RW(I)		±15	±100	84
MA324S-03RW(I)	18 - 36 (24 VDC)	3.3	600	79
MA324S-05RW(I)		5	500	81
MA324S-12RW(I)		12	250	85
MA324S-15RW(I)		15	200	85
MA324S-24RW(I)		24	125	84
MA324D-05RW(I)		±5	±250	80
MA324D-12RW(I)		±12	±125	84
MA324D-15RW(I)		±15	±100	84
MA348S-03RW(I)	36 - 72 (48 VDC)	3.3	600	79
MA348S-05RW(I)		5	500	81
MA348S-12RW(I)		12	250	85
MA348S-15RW(I)		15	200	85
MA348S-24RW(I)		24	125	84
MA348D-05RW(I)		±5	±250	80
MA348D-12RW(I)		±12	±125	84
MA348D-15RW(I)		±15	±100	84

Size: 1.25 x 0.8 x 0.4 in (31.75 x 20.32 x 10.16 mm)

MA600RW(I) - 6W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MA612S-03RW(I)	9 - 18 (12 VDC)	3.3	1200	75
MA612S-05RW(I)		5	1200	78
MA612S-12RW(I)		12	500	82
MA612S-15RW(I)		15	400	82
MA612S-24RW(I)		24	250	84
MA612D-05RW(I)		±5	±500	78
MA612D-12RW(I)		±12	±250	82
MA612D-15RW(I)		±15	±200	82
MA624S-03RW(I)	18 - 36 (24 VDC)	3.3	1200	77
MA624S-05RW(I)		5	1200	80
MA624S-12RW(I)		12	500	84
MA624S-15RW(I)		15	400	84
MA624S-24RW(I)		24	250	84
MA624D-05RW(I)		±5	±500	80
MA624D-12RW(I)		±12	±250	84
MA624D-15RW(I)		±15	±200	84
MA648S-03RW(I)	36 - 72 (48 VDC)	3.3	1200	77
MA648S-05RW(I)		5	1200	80
MA648S-12RW(I)		12	500	84
MA648S-15RW(I)		15	400	84
MA648S-24RW(I)		24	250	84
MA648D-05RW(I)		±5	±500	80
MA648D-12RW(I)		±12	±250	84
MA648D-15RW(I)		±15	±200	84

Size: 1.25 x 0.8 x 0.4 in (31.75 x 20.32 x 10.16 mm)

MDxxxRWI SERIES
2:1 WIDE INPUT
2W AND 6W SIP8 PACKAGE

FEATURES

- Isolation Voltage: I = 3000 VDC
- Operating temperature range: -40°C to +65°C
- Efficiency: Up to 87%
- Short Circuit Protection: Continuous

MD200RW(I) - 2W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MD205S-03RW(I)	4.5 - 9 (5 VDC)	3.3	500	67
MD205S-05RW(I)		5.5	400	70
MD205S-09RW(I)		9	222	72
MD205S-12RW(I)		12	167	72
MD205S-15RW(I)		15	133	73
MD205S-24RW(I)		24	83	75
MD205D-03RW(I)		±3.3	±250	70
MD205D-05RW(I)		±5	±200	70
MD205D-09RW(I)		±9	±111	74
MD205D-12RW(I)		±12	±83	75
MD205D-15RW(I)		±15	±67	75
MD205S-24RW(I)		±24	±42	71
MD212S-03RW(I)	9 - 18 (12 VDC)	3.3	500	67
MD212S-05RW(I)		5.5	400	77
MD212S-09RW(I)		9	222	78
MD212S-12RW(I)		12	167	80
MD212S-15RW(I)		15	133	78
MD212S-24RW(I)		24	83	80
MD212D-03RW(I)		±3.3	±250	73
MD212D-05RW(I)		±5	±200	75
MD212D-09RW(I)		±9	±111	79
MD212D-12RW(I)		±12	±83	80
MD212D-15RW(I)		±15	±67	79
MD212S-24RW(I)		±24	±42	76
MD224S-03RW(I)	18 - 36 (24 VDC)	3.3	500	70
MD224S-05RW(I)		5.5	400	77
MD224S-09RW(I)		9	222	80
MD224S-12RW(I)		12	167	80
MD224S-15RW(I)		15	133	80
MD224S-24RW(I)		24	83	80
MD224D-03RW(I)		±3.3	±250	73
MD224D-05RW(I)		±5	±200	78
MD224D-09RW(I)		±9	±111	79
MD224D-12RW(I)		±12	±83	80
MD224D-15RW(I)		±15	±67	80
MD224S-24RW(I)		±24	±42	78
MD248S-03RW(I)	36 - 72 (48 VDC)	3.3	500	71
MD248S-05RW(I)		5.5	400	74
MD248S-09RW(I)		9	222	78
MD248S-12RW(I)		12	167	78
MD248S-15RW(I)		15	133	78
MD248S-24RW(I)		24	83	80
MD248D-03RW(I)		±3.3	±250	73
MD248D-05RW(I)		±5	±200	74
MD248D-09RW(I)		±9	±111	79
MD248D-12RW(I)		±12	±83	79
MD248D-15RW(I)		±15	±67	80
MD248S-24RW(I)		±24	±42	75

MD600RW(I) - 6W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MD605S-03RW(I)	4.5 - 9 (5 VDC)	3.3	1300	75
MD605S-05RW(I)		5.5	1200	79
MD605S-09RW(I)		9	666	83
MD605S-12RW(I)		12	500	84
MD605S-15RW(I)		15	400	84
MD605S-24RW(I)		24	250	84
MD605D-05RW(I)		±5	±600	81
MD605D-12RW(I)		±12	±250	84
MD605D-15RW(I)		±15	±200	84
MD612S-03RW(I)	9 - 18 (12 VDC)	3.3	1300	76
MD612S-05RW(I)		5.5	1200	83
MD612S-12RW(I)		12	500	85
MD612S-15RW(I)		15	400	85
MD612S-24RW(I)		24	250	86
MD612D-05RW(I)		±5	±600	82
MD612D-12RW(I)		±12	±250	84
MD612D-15RW(I)		±15	±200	86
MD624S-03RW(I)	18 - 36 (24 VDC)	3.3	1300	78
MD624S-05RW(I)		5.5	1200	83
MD624S-12RW(I)		12	500	85
MD624S-15RW(I)		15	400	87
MD624S-24RW(I)		24	250	87
MD624D-05RW(I)		±5	±600	82
MD624D-12RW(I)		±12	±250	84
MD624D-15RW(I)		±15	±200	84
MD648S-03RW(I)	36 - 72 (48 VDC)	3.3	1300	76
MD648S-05RW(I)		5.5	1200	80
MD648S-09RW(I)		9	666	85
MD648S-12RW(I)		12	500	84
MD648S-15RW(I)		15	400	86
MD648S-24RW(I)		24	250	84
MD648D-05RW(I)		±5	±600	82
MD648D-12RW(I)		±12	±250	85
MD648D-15RW(I)		±15	±200	85

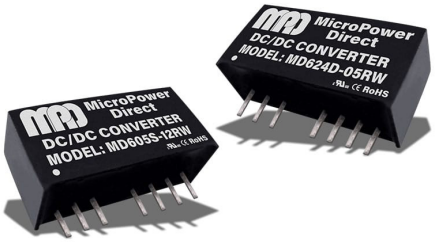
MD600RWI SERIES

4:1 WIDE INPUT DC/DC CONVERTERS

6W SIP8 PACKAGE

FEATURES

- Isolation Voltage: I = 3000 VDC
- Operating temperature range: -40°C to +71°C
- Efficiency: Up to 89%
- Short Circuit Protection: Continuous



MD600RU(I) - 6W DATASHEET

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MA, MAX)	EFFICIENCY (%, TYP)
MD624S-03RU(I)	9.0 - 36 (24 VDC)	3.3	1500	79
MD624S-05RU(I)		5	1200	84
MD624S-09RU(I)		9	666	86
MD624S-12RU(I)		12	500	87
MD624S-15RU(I)		15	400	87
MD624S-24RU(I)		24	250	87
MD624D-05RU(I)		±5.0	±600	84
MD624D-12RU(I)		±12.0	±250	86
MD624D-15RU(I)		±15.0	±200	87
MD648S-03RU(I)	18 - 75 (48 VDC)	3.3	1500	79
MD648S-05RU(I)		5	1200	83
MD648S-09RU(I)		9	666	85
MD648S-12RU(I)		12	500	87
MD648S-15RU(I)		15	400	87
MD648S-24RU(I)		24	250	87
MD648D-05RU(I)		±5.0	±600	82
MD648D-12RU(I)		±12.0	±250	85
MD648D-15RU(I)		±15.0	±200	86

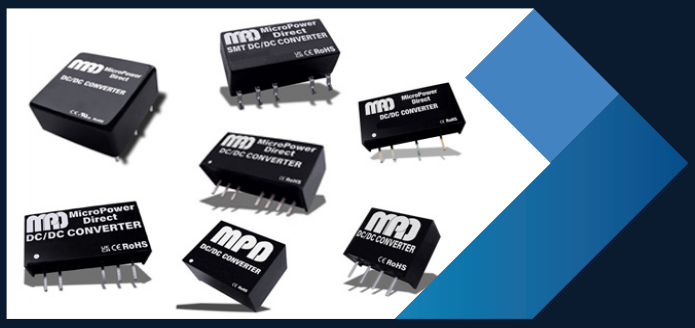
Size: 0.86 x 0.37 x 0.44 in (21.85 x 9.3 x 11.1 mm)

MORE PRODUCTS

A selection of over 5,000 off-the-shelf DC/DC converters, AC/DC power supplies, IGBT drivers, SiC DC/DCs and POLs. Designed for efficiency and flexibility, our power solutions come in a variety of power levels and form factors to suit any design challenge.

DC/DC CONVERTERS

Deliver exceptional efficiency and versatility, featuring wide input ranges, high isolation ratings, and compact designs. Available in various packages—including 1x1 modules, SIPs, and DIPs—they provide flexible solutions to meet diverse design requirements.

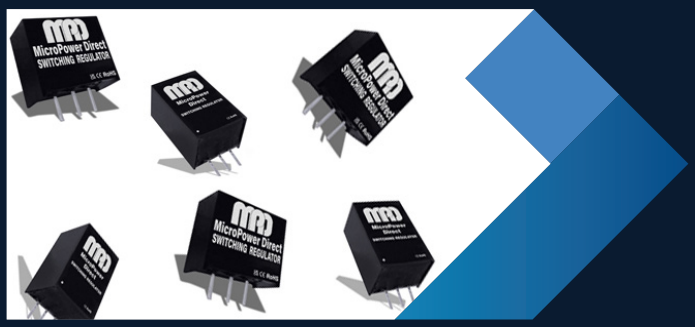


AC/DC POWER SUPPLIES

Deliver efficient, reliable power conversion with wide input ranges and high efficiency. Available in open-frame, enclosed, module, U-channel, and DIN rail configurations, they support power levels from 1W to 3000W to meet a variety of application needs.

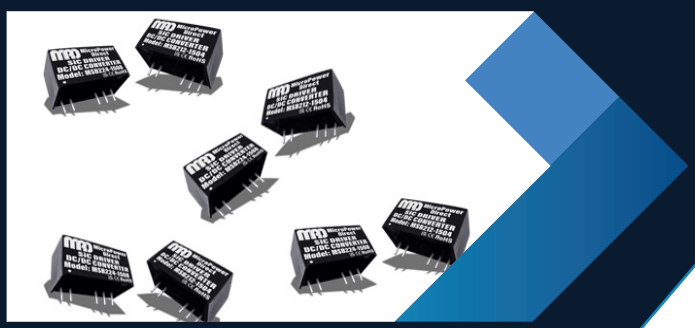
POL REGULATORS

Offer a high-efficiency, drop-in replacement for linear regulators, reducing heat output and minimizing cooling needs—ideal for compact designs.



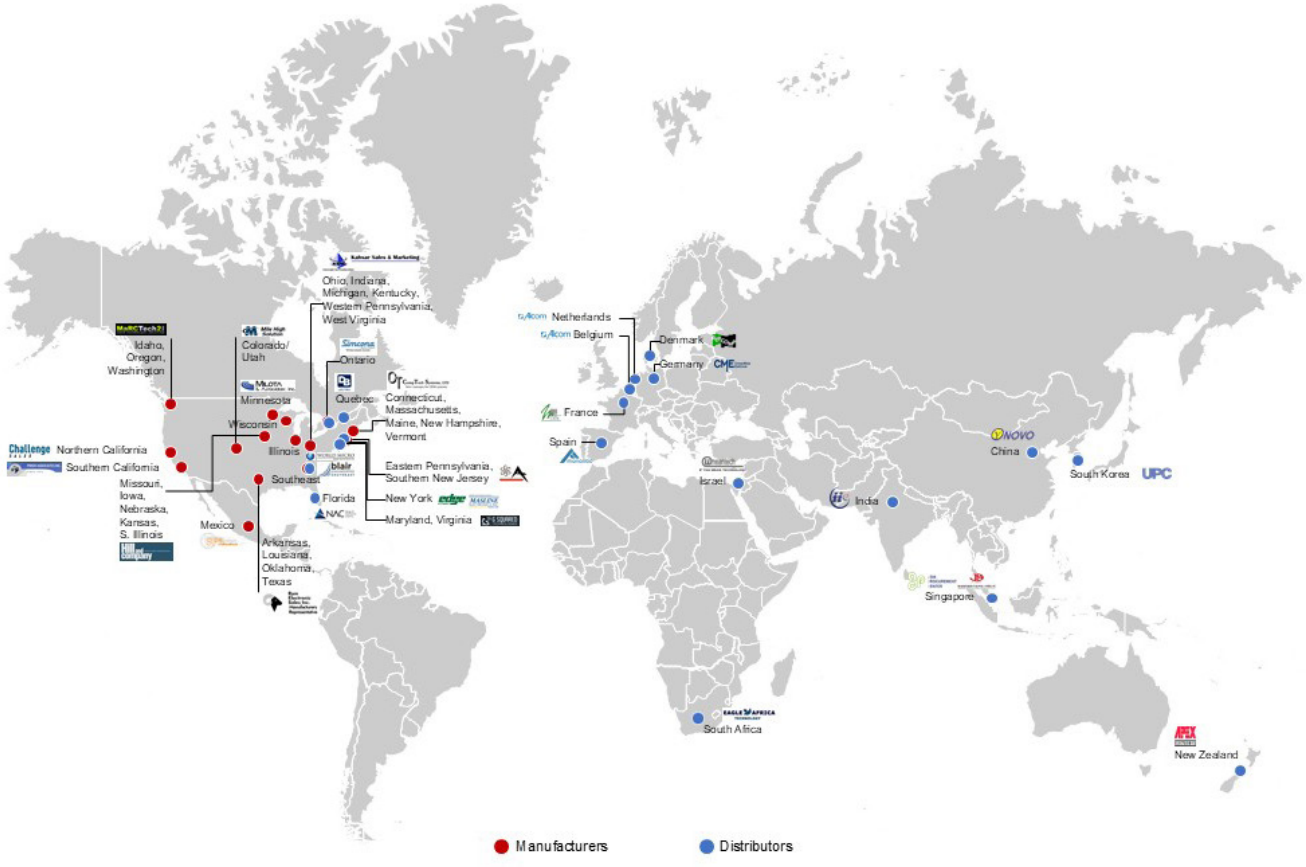
IGBT/SIC MOSFET DRIVERS

Engineered for precise switching performance. They offer optimal control in high-power applications, ensuring robust, reliable operation.



WHERE WE ARE

With a worldwide network of manufacturer representatives and distributors—now including availability on DigiKey—MicroPower Direct ensures that reliable power solutions are always within reach. No matter where you are, we're here to power your innovation.



MPD

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