

M8453 SERIES

DC/DC POWER SUPPLY



PRODUCT HIGHLIGHTS

- **DC/DC CONVERTER**
- **18 to 48 VDC INPUT**
- **QUAD OUTPUT**
- **UP TO 150W**
- **MINIATURE**
- **HIGH DENSITY**

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APPLICATIONS

Military, Ruggedized, Telecom, Industrial

SPECIAL FEATURES

- Miniature size
- High efficiency
- Wide input range
- Input / Output isolation
- Fixed switching frequency (250 kHz)
- External synchronization capability
- TTL logic enable
- EMI filters included
- Indefinite short circuit protection with auto-recovery
- Over-voltage shutdown with auto-recovery
- Over temperature shutdown with auto-recovery

ENVIRONMENTAL

Meets or exceeds MIL-STD-810D

Temperature:

Operating –55°C to +85°C (baseplate)

Storage –55°C to +125°C

RELIABILITY

150,000 hours, calculated per

MIL-STD-217F at +85°C baseplate,

Ground Fixed.

Electrical Specifications

DC INPUT

Input range: 18 to 48 V_{DC} Input transient

protection:

All models meet or exceed (no damage)

MIL-STD-1275A (100V for 50 mSec) and

MIL-STD-704A, MIL-STD-704D (80V for 0.1 Sec)

Efficiency: up to

87%

EMC: Designed to meet

MIL-STD-461F*

CE101, CE102, CS101, CS114, CS115, CS116,

RE101, RE102, RS101, RS103

Isolation:

Input to Output: 200V

Input to Chassis: 200V

DC OUTPUT (floating)

Line/Load Regulation:

Less than 1% (no load to full load, –55°C to +85°C)

Ripple and Noise: 50mV_{p-p}, typical (max. 1%)

Current Limiting:

Continuous protection for unlimited time

Over Voltage Protection:

Passive transorb on outputs.

Over Temperature Protection:

Shutdown at baseplate temperature of +105°C (±5°C)

Automatic recovery at baseplate temperature lower than +95°C (±5°C)

Isolation:

Output to Chassis: 100V

*Compliance achieved with 5µH LISN, shielded harness and static resistive load.

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PIN ASSIGNMENT

Connector Type: M55302/61-A44 or eq.

Mates with: M55302/64-B44X*R54 (straight type) or WTAX44SACJTA (Solder Cups) or eq.

Function	Pin No.
VIN (+)	11, 12, 32, 33
VIN RTN (–)	13, 14, 34, 35
SIGNAL RTN	30
SYNC	31
INHIBIT	9
OUT 1 (+)	18, 19, 20, 40, 41, 42
OUT 1 RTN (–)	15, 16, 17, 37, 38, 39
OUT 1 SENSE (+)	43
OUT 1 SENSE RTN (–)	36
OUT 2 (+)	6, 7, 27, 28, 29
OUT 2 RTN (–)	3, 4, 24, 25, 26
OUT 2 SENSE (+)	8
OUT 2 SENSE RTN (–)	5
OUT 3 (+)	44
OUT 3 RTN (–)	21
OUT 4 (+)	1
OUT 4 RTN (–)	2
CHASSIS	10

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Standard Configurations

Part number	Input	Output #1		Output #2		Output #3		Output #4	
	Voltage range	Voltage	Current	Voltage	Current	Voltage	Current	Voltage	Current
M8453-100	18 to 48 VDC	3.3VDC	20A	5VDC	10A	12VDC	1.25A	12VDC	1.25A
M8453-101	18 to 48 VDC	3.3VDC	10A	5VDC	15A	8VDC	1.25A	15VDC	1.25A
M8453-102	18 to 48 VDC	5VDC	16.4A	3.3VDC	15A	12VDC	1A	N.C	N.C
M8453-103	18 to 48 VDC	3.3VDC	20A	5VDC	10A	24VDC	1.25A	N.C	N.C
M8453-803	18 to 48 VDC	3.3VDC	20A	5VDC	10A	24VDC	1.25A	N.C	N.C

SPECIAL FEATURES For M8453-8XX:

- This Product is REACH Compliant.
- The aluminum parts comprising this converter are chromate conversion coated per MIL-DTL[1]5541F, Type II CLASS 1A or eq.

* Specifications are subject to change without prior notice by the manufacturer