

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.

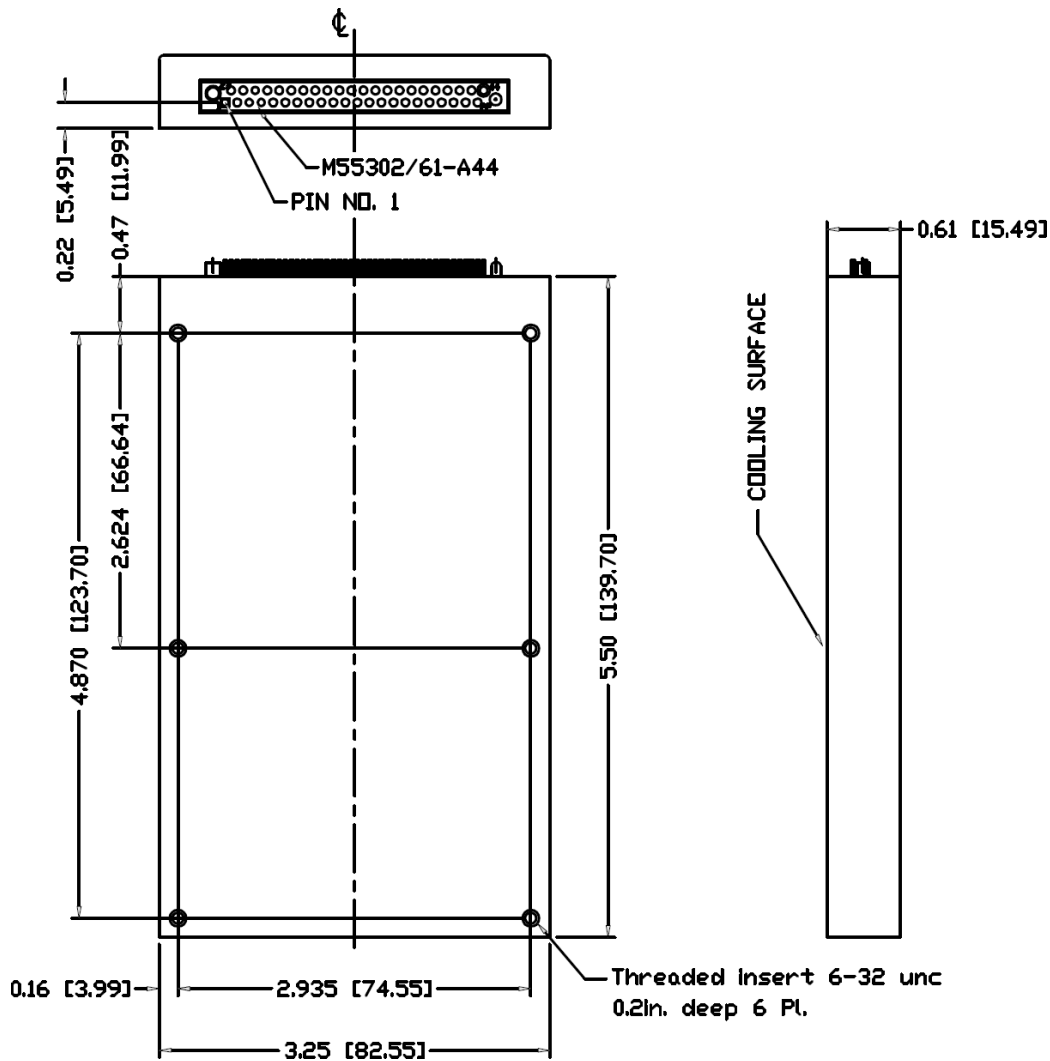
Function	Pin No.
VIN (+)	11, 12, 32, 33
VIN RTN (–)	13, 14, 34, 35
SIGNAL RTN	30
SYNC	31
INHIBIT	9
OUT 1 (+)	18, 19, 20, 40, 41, 42
OUT 1 RTN (–)	15, 16, 17, 37, 38, 39
OUT 1 SENSE (+)	43
OUT 1 SENSE RTN (–)	36
OUT 2 (+)	6, 7, 27, 28, 29
OUT 2 RTN (–)	3, 4, 24, 25, 26
OUT 2 SENSE (+)	8
OUT 2 SENSE RTN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

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OUTLINE DRAWING

Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:
.XX ±.02 IN
.XXX ±.01 IN
3. Weight: Approx. 10.5 Oz (300 gr)
4. 3D model available



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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
M8453100	18 to 48 VDC	3.3VDC	20A	5VDC	10A	12VDC	1.25A	12VDC	1.25A
M8453101	18 to 48 VDC	3.3VDC	10A	5VDC	15A	8VDC	1.25A	15VDC	1.25A
M8453102	18 to 48 VDC	5VDC	16.4A	3.3VDC	15A	12VDC	1A	N.C	N.C

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