

## **M8453 SERIES**

*DC/DC POWER SUPPLY*



### **PRODUCT HIGHLIGHTS**

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

## M8453 SERIES DC/DC POWER SUPPLY

### 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  $-55^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  (baseplate)

Storage  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$

### RELIABILITY

150,000 hours, calculated per

MIL-STD-217F at  $+85^{\circ}\text{C}$  baseplate,

Ground Fixed.

### Electrical Specifications

#### DC INPUT

Input range: 18 to 48 V<sub>DC</sub> 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,  $-55^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ )

Ripple and Noise: 50mV<sub>p-p</sub>, 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  $+105^{\circ}\text{C}$  ( $\pm 5^{\circ}\text{C}$ )

Automatic recovery at baseplate temperature lower than  $+95^{\circ}\text{C}$  ( $\pm 5^{\circ}\text{C}$ )

Isolation:

Output to Chassis: 100V

\*Compliance achieved with 5 $\mu\text{H}$  LISN, shielded harness and static resistive load.

## M8453 SERIES DC/DC POWER SUPPLY

### PIN ASSIGNMENT

**Connector Type:** M55302/61-A44 or eq.

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

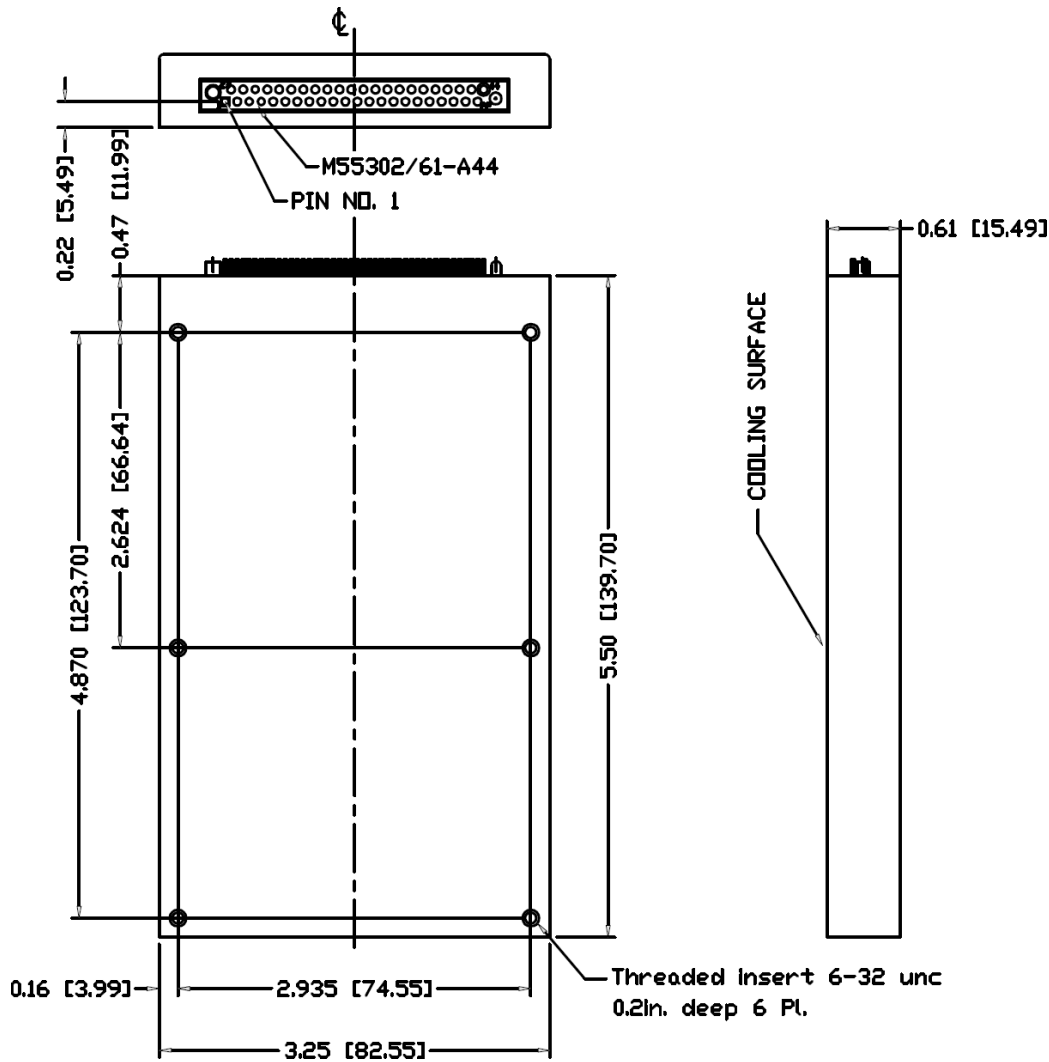
Function	Pin No.
VIN (+)	11, 12, 32, 33
VIN RTN (-)	13, 14, 34, 35
SIGNAL RTN	30
SYNC	31
INHIBIT	9
OUT 1 (+)	18, 19, 20, 40, 41, 42
OUT 1 RTN (-)	15, 16, 17, 37, 38, 39
OUT 1 SENSE (+)	43
OUT 1 SENSE RTN (-)	36
OUT 2 (+)	6, 7, 27, 28, 29
OUT 2 RTN (-)	3, 4, 24, 25, 26
OUT 2 SENSE (+)	8
OUT 2 SENSE RTN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

**M8453 SERIES DC/DC POWER SUPPLY**

**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



# M8453 SERIES DC/DC POWER SUPPLY

## 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

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