

M8253 SERIES

MINIATURE, HIGH DENSITY,
DUAL OUTPUT,
DC/DC CONVERTERS
(UP TO 150W)

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/RFI 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 $+85^{\circ}\text{C}$ (baseplate)

Storage -55°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

DC Input range: 18 to 48 VDC

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%

EMI/RFI:

Design to meet or exceed MIL-STD-461C

CE03, CE07, CS01, CS02, CS06, RE02, RS02, RS03

MIL-STD-461D – Optional, please contact factory.

Isolation:

200V between Input and Output

200V between Input and Case

DC OUTPUT (floating)

Line/Load regulation:

Less than 1% (no load to full load, -55°C to $+85^{\circ}\text{C}$)

Ripple and Noise: 50mVp-p, typical (max. 1%)

Current limiting (HickUp):

Continuous protection for unlimited time

Over voltage protection:

Passive tranzorb 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:

200V between Output and Input

100V between Output and Case

SELECTION GUIDE

Model	Input	Output#1	Output#2	Regulation Typical
M8253-1	18 to 48VDC	5V/15A	3.3V/15A	± 1%
M8253-2	18 to 48VDC	5.15V/10A	3.3V/6A	± 1%
M8253-3	18 to 36VDC	12V/10A	-12V/3A	± 1%
M8253-4	18 to 48VDC	5.3V/7A	15.3V/7A	± 1%
M8253-5	18 to 36VDC	10.25V/15A	12V/0.5A	± 1%
M8253-6	18 to 36VDC	3.6V/7.5A	2.5V/13A	± 1%
M8253-7	18 to 36VDC	5.8V/13.8A	5V/13A	± 1%
M8253-8	18 to 48VDC	5V/15A	15V/3A	± 1%
M8253-9	18 to 48VDC	19V/4A	-19V/4A	± 1%

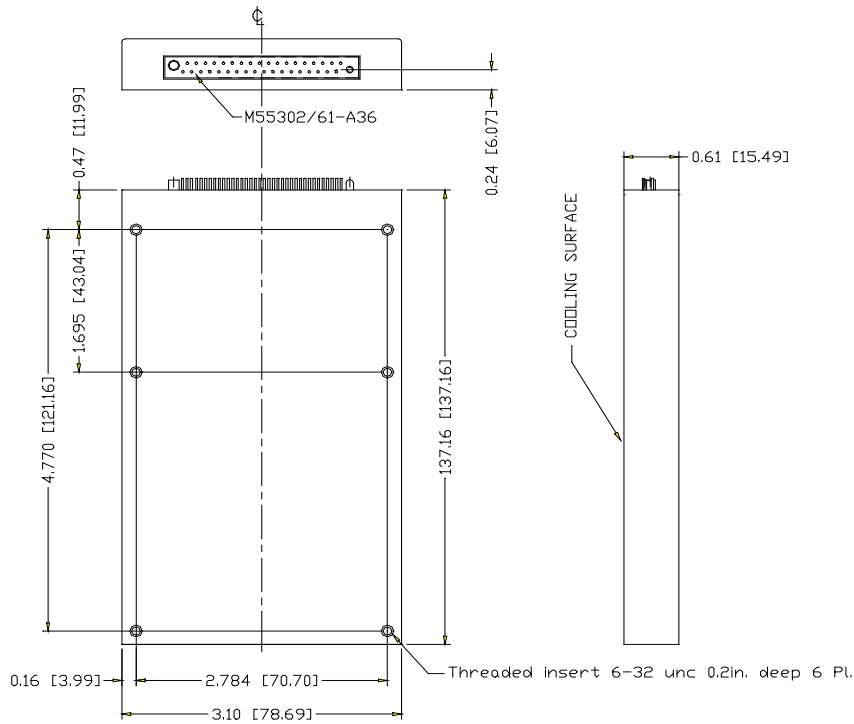
Note: other voltages and currents are available, consult factory.

PIN ASSIGNMENT

PIN Function	PIN No.
+VIN	9, 10, 27, 28
VIN RTN	11, 12, 29, 30
SIGNAL RTN *	8
SYN INPUT	6
INHIBIT	7
+ OUT1	13, 14, 15, 16, 33
- OUT 1	17, 18, 34, 35, 36
OUT 1 + SENSE	32
OUT 1 – SENSE	31
+ OUT 2	1, 2, 19, 20, 21
- OUT 2	3, 4, 5, 22, 23
OUT 2 + SENSE	25
OUT 2 – SENSE	24
CHASSIS	26

* Signal RTN for the INHIBIT and the SYN signals.

OUTLINE DRAWING



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

Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:
.XX ±.02 IN
.XXX ±.01 IN
3. Weight: Approx. 10.23 Oz (±0.35Oz)
290gr (±10gr)