

M635 SERIES

THE MOST COMPLETE
MINIATURE, HIGH DENSITY,
NINE OUTPUTS,
DC/DC CONVERTERS
(UP TO 125W)



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 $+90^{\circ}\text{C}$ (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 70 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 75%

EMI/RFI:

Meets or exceeds MIL-STD-461D

CE101, CE102, CS101, CS114, CS115,

CS116, RE101, RE102, RS101, RS103

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 $+90^{\circ}\text{C}$)

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	Regulation	Ripple (20 MHz BW)
M635-1	18 to 70 VDC	± 1%	50 mVp-p

Output #1	Output #2	Output #3	Output #4
+5V/5A	+15V/2A	-15V/2A	+18V/0.7A

Output #5	Output #6	Output #7	Output #8	Output #9
-18V/0.7A	+16.5V/1A	+30V/1A	+55V/0.6A	-55V/0.6A

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

PIN ASSIGNMENT

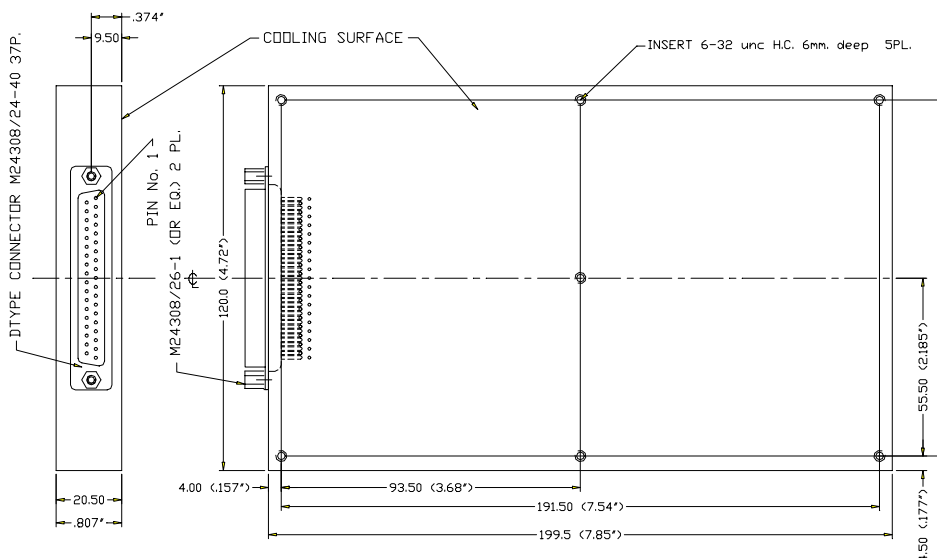
PIN No.	PIN Function
1	- VIN
2	- VIN
3	- VIN
4	+ VIN
5	+ VIN
6	+ VIN
7	- OUT 2
8	+ OUT 2
9	- OUT 3
10	+ OUT 3

PIN No.	PIN Function
11	- OUT 5
12	- OUT 4
13	- OUT 8
14	+ OUT 8
15	- OUT 9
16	+ OUT 6
17	- OUT 6
18	- OUT 1
19	+ OUT 1
20	- VIN

PIN No.	PIN Function
21	- VIN
22	- VIN
23	+ VIN
24	+ VIN
25	+ VIN
26	SIGNAL RTN
27	SYN IN
28	INHIBIT
29	- OUT 7
30	- OUT 5

PIN No.	PIN Function
31	+ OUT 4
32	+ OUT 7
33	- OUT 9
34	+ SENSE
35	- SENSE
36	- OUT 1
37	+ OUT 1

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: 28 Oz (795 gr)