

M7220 SERIES

THE MOST COMPLETE
MINIATURE, HIGH DENSITY,
SINGLE OUTPUT,
DC/DC CONVERTERS
(UP TO 320W)



APPLICATIONS

Military, Ruggedized, Telecom, Industrial

SPECIAL FEATURES

- Miniature size
- High efficiency
- Wide input range
- Up to 24 W/IN³
- Input / Output isolation
- Remote sense
- Parallel connection of modules
- Redundancy connection
- Fixed switching frequency (250 KHz)
- External synchronization capability
- TTL logic enable
- EMI/RFI filters included
- Output voltage adjustment with external resistor
- 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°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

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: 80 ÷ 90%

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°C)

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

Current limiting (HickUp):

Continuous protection for unlimited time

Over voltage protection:

Electronic shutdown with automatic recovery and

a passive transistor on output.

Over temperature protection:

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

Automatic recovery at baseplate temperature

lower than +95°C (±5°C)

Isolation:

200V between Output and Input

100V between Output and Case

SELECTION GUIDE

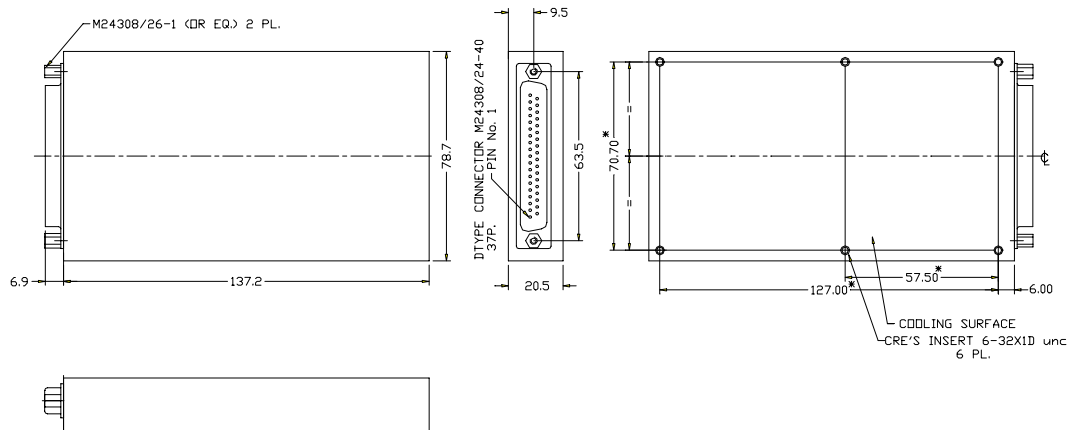
Model	Input	Output	Minimum Load	Maximum Load	Regulation	Ripple (20 MHz BW)
M7220-1	18 to 48 VDC	3.3 VDC	0 A	60 A	± 1%	50 mVp-p
M7220-2	18 to 48 VDC	5 VDC	0 A	60 A	± 1%	50 mVp-p
M7220-3	18 to 48 VDC	8 VDC	0 A	40 A	± 1%	50 mVp-p
M7220-4	18 to 48 VDC	2.5 VDC	0 A	60 A	± 1%	50 mVp-p
M7220-5	16 to 42 VDC	1.8 VDC	0 A	60 A	± 1%	50 mVp-p

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

PIN ASSIGNMENT

PIN No.	PIN Function	PIN No.	PIN Function	PIN No.	PIN Function	PIN No.	PIN Function
1	+ SENSE	11	- SENSE	21	+ OUT	31	INHIBIT
2	+ OUT	12	- SIGNAL IN	22	+ OUT	32	+ SYN IN
3	+ OUT	13	SYN OUT	23	+ OUT	33	- CURR. SHARE
4	+ OUT	14	CURR. SHARE	24	+ OUT	34	+ VIN
5	+ OUT	15	+ VIN	25	- OUT	35	+ VIN
6	+ OUT	16	+ VIN	26	- OUT	36	- VIN
7	- OUT	17	N.C.	27	- OUT	37	- VIN
8	- OUT	18	- VIN	28	- OUT		
9	- OUT	19	- VIN	29	- OUT		
10	- OUT	20	+ OUT	30	- OUT		

OUTLINE DRAWING



Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:
.XX ±.02 IN
.XXX ±.01 IN
3. Weight: 15.6 Oz (450 gr)

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

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