

M7128 SERIES

THE MOST COMPLETE
MINIATURE, HIGH DENSITY,
SINGLE OUTPUT,
DC/DC CONVERTERS
(UP TO 200W)

APPLICATIONS

Military, Ruggedized, Telecom, Industrial

SPECIAL FEATURES

- Miniature size
- High efficiency
- Wide input range
- Up to 29 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
33 to 78 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: 78 ÷ 84%

EMI/RFI:

Meets or exceeds MIL-STD-461D
CE101, CE102, CS101, CS114, CS115,
CS116, RE101, RE102, RS101, RS103

Isolation:

500V between Input and Output
500V 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 tranzorb 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:

500V between Output and Input
100V between Output and Case

SELECTION GUIDE

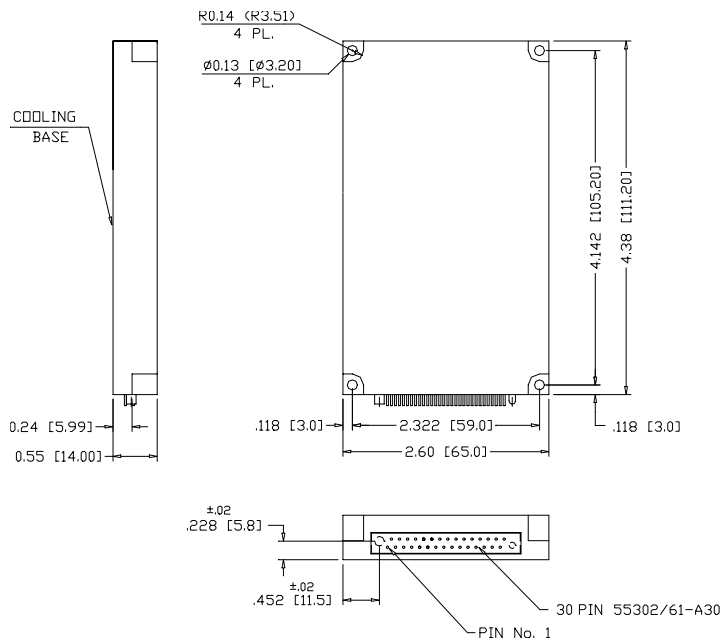
Model	Input	Output	Minimum Load	Maximum Load	Regulation	Ripple (20 MHz BW)
M7128-1	18 to 48 VDC	5 VDC	0 A	20 A	+ 1%	50 mVp-p
M7128-2	18 to 48 VDC	12 VDC	0 A	13 A	+ 1%	50 mVp-p
M7128-3	18 to 48 VDC	15 VDC	0 A	10 A	+ 1%	50 mVp-p
M7128-5	18 to 48 VDC	28 VDC	0 A	5 A	+ 1%	50 mVp-p
M7128-6	16 to 42 VDC	16 VDC	0 A	9 A	+ 1%	50 mVp-p
M7128-7	16 to 42 VDC	18 VDC	0 A	6 A	+ 1%	50 mVp-p
M7128-8	16 to 42 VDC	28 VDC	0 A	6 A	+ 1%	50 mVp-p
M7128-9	18 to 48 VDC	10.5 VDC	0 A	15 A	+ 1%	50 mVp-p
M7128-10	18 to 48 VDC	10.5 VDC	0 A	10 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
1	+ VIN	11	+ OUT	21	OUT V/CAL
2	+ VIN	12	- OUT	22	OUT SIGNAL RTN
3	- VIN	13	- OUT	23	SYNC IN
4	- VIN	14	- OUT	24	+ OUT
5	PAR IN	15	+ SENSE	25	+ OUT
6	PAR OUT	16	+ VIN	26	+ OUT
7	IN SIGNAL RTN	17	+ VIN	27	- OUT
8	SYNC OUT	18	- VIN	28	- OUT
9	+ OUT	19	- VIN	29	- OUT
10	+ OUT	20	INHIBIT	30	- SENSE

OUTLINE DRAWING



Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:
.XX ±.02 IN
.XXX ±.01 IN
3. Weight: 7.77 Oz (224 gr)
4. Add suffix SL to specify connector with guideset per M55302/57-A30X

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