

M7018 SERIES

THE MOST COMPLETE
MINIATURE, HIGH DENSITY,
SINGLE OUTPUT,
DC/DC CONVERTERS
(UP TO 150W)

APPLICATIONS

Military, Ruggedized, Telecom, Industrial

SPECIAL FEATURES

- Miniature size
- High efficiency
- Wide input range
- Up to 22 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 (Option A)
33 to 78 VDC (Option B)

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: 76 ÷ 82%

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)
7018-1A	18-48V	5 VDC	0 A	20 A	± 1%	50 mVp-p
7018-1A-01	18-48V	5.15 VDC	0 A	19 A	± 1%	50 mVp-p
7018-1B	33-78V	5 VDC	0 A	20 A	± 1%	50 mVp-p
7018-2A	18-48V	12 VDC	0 A	13 A	± 1%	50 mVp-p
7018-2B	33-78V	12 VDC	0 A	13 A	± 1%	50 mVp-p
7018-3A	18-48V	15 VDC	0 A	10 A	± 1%	50 mVp-p
7018-3A-01	18-48V	15 VDC	0 A	3 A	± 1%	50 mVp-p
7018-3B	33-78V	15 VDC	0 A	10 A	± 1%	50 mVp-p
7018-4A	18-48V	24 VDC	0 A	6 A	± 1%	50 mVp-p
7018-4A-SL	18-48V	24 VDC	0 A	6 A	± 1%	50 mVp-p
7018-4B	33-78V	24 VDC	0 A	6 A	± 1%	50 mVp-p
7018-5A	18-48V	28 VDC	0 A	5 A	± 1%	50 mVp-p
7018-5B	33-78V	28 VDC	0 A	5 A	± 1%	50 mVp-p
7018-SP1	18-48V	12 VDC	0 A	8 A	± 1%	50 mVp-p
7018-11	18-36V	38 VDC	0 A	4 A	± 1%	50 mVp-p
7018-12	18-36V	6 VDC	0 A	5 A	± 1%	50 mVp-p
7018-13	18-36V	18 VDC	0 A	0.5 A	± 1%	50 mVp-p
7018-14	18-36V	15 VDC	0 A	1 A	± 1%	50 mVp-p
7018-15	18-70V	16 VDC	0 A	5 A	± 1%	50 mVp-p
7018-16	18-36V	18 VDC	0 A	5 A	± 1%	50 mVp-p
7018-17A	18-48V	18 VDC	0 A	4 A	± 1%	50 mVp-p
7018-18A	18-50V	28 VDC	0 A	1.5 A	± 1%	50 mVp-p
7018-19	18-48V	5 VDC	0 A	20 A	± 1%	50 mVp-p
7018-20	18-36V	5 VDC	0 A	20 A	± 1%	50 mVp-p
7018-21	18-36V	15 VDC	0 A	1.5 A	± 1%	50 mVp-p
7018-22	18-36V	35 VDC	0 A	0.2 A	± 1%	50 mVp-p
7018-23	18-36V	28 VDC	0 A	2 A	± 1%	50 mVp-p
7018-24	18-48V	9 VDC	0 A	4.5 A	± 1%	50 mVp-p
7018-25	18-36V	24 VDC	0 A	2.5 A	± 1%	50 mVp-p
7018-26	18-36V	15 VDC	0 A	2.5 A	± 1%	50 mVp-p
7018-27	18-36V	32 VDC	0 A	4.65 A	± 1%	50 mVp-p
7018-28	18-70V	16 VDC	0 A	9 A	± 1%	50 mVp-p
7018-29	18-36V	15 VDC	0 A	10 A	± 1%	50 mVp-p
7018-30	18-36V	15 VDC	0 A	1 A	± 1%	50 mVp-p
7018-31	33-78V	28 VDC	0 A	5 A	± 1%	50 mVp-p
7018-32	18-48V	5.15 VDC	0 A	20 A	± 1%	50 mVp-p
7018-33	18-48V	9 VDC	0 A	9 A	± 1%	50 mVp-p
7018-34	18-48V	22 VDC	0 A	22 A	± 1%	50 mVp-p
7018-35	18-48V	17 VDC	0 A	17 A	± 1%	50 mVp-p
7018-36	18-48V	18 VDC	0 A	6 A	± 1%	50 mVp-p
7018-37	18-48V	3.3 VDC	0 A	20 A	± 1%	50 mVp-p
7018-38	18-48V	12.1 VDC	0 A	7 A	± 1%	50 mVp-p
7018-39	18-48V	6.5 VDC	0 A	14 A	± 1%	50 mVp-p
7018-40	18-48V	9 VDC	0 A	11 A	± 1%	50 mVp-p

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

Continued on next page..



P.O. BOX 810, 7 FIELD LANE RD., ROUTE 106, BELMONT, NEW HAMPSHIRE 03220, U.S.A.
 TEL: (603)267-8865, FAX: (603)267-7258 WEBSITE: www.milpower.com

SELECTION GUIDE (Continued)

Model	Input	Output	Minimum Load	Maximum Load	Regulation	Ripple (20 MHz BW)
7018-41	18-36V	5.1 VDC	0 A	16 A	± 1%	50 mVp-p
7018-42	18-48V	15 VDC	0 A	8 A	± 1%	50 mVp-p
7018-43	18-48V	36 VDC	0 A	4 A	± 1%	50 mVp-p
7018-44	18-48V	11 VDC	0 A	13.5 A	± 1%	50 mVp-p
7018-46	18-48V	5 VDC	0 A	20 A	± 1%	50 mVp-p
7018-47	18-48V	22.5 VDC	0 A	4 A	± 1%	50 mVp-p
7018-49	18-48V	50 VDC	0 A	2 A	± 1%	50 mVp-p
7018-50	18-48V	28 VDC	0 A	3 A	± 1%	50 mVp-p
7018-52	18-48V	5.1 VDC	0 A	20 A	± 1%	50 mVp-p
7018-53	18-48V	28 VDC	0 A	5 A	± 1%	50 mVp-p
7018-55	18-48V	3.45 VDC	0 A	8.2 A	± 1%	50 mVp-p
7018-56	18-48V	28 VDC	0 A	15 A	± 1%	50 mVp-p

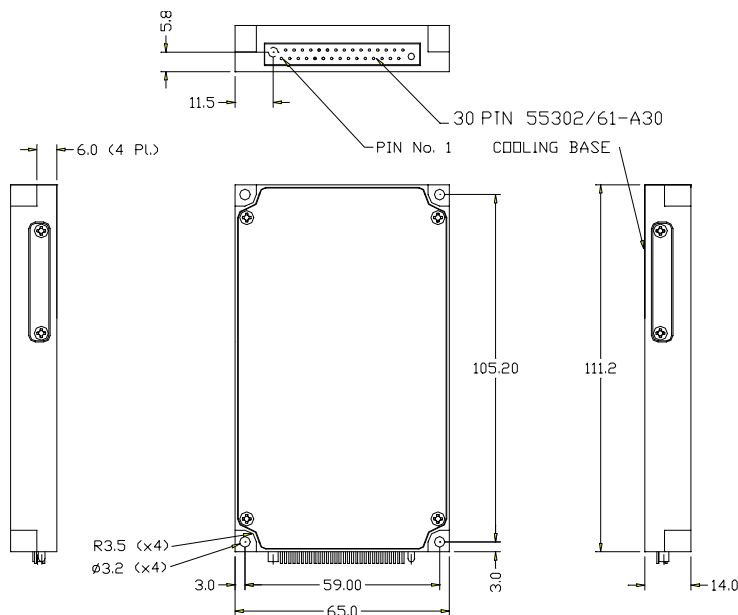
PIN ASSIGNMENT

PIN No.	PIN Function
1	+ VIN
2	+ VIN
3	- VIN
4	- VIN
5	PAR IN
6	PAR OUT
7	CURR. LIMIT CAL
8	SYNC OUT
9	+ OUT
10	+ OUT

PIN No.	PIN Function
11	+ OUT
12	- OUT
13	- OUT
14	- OUT
15	+ SENSE
16	+ VIN
17	+ VIN
18	- VIN
19	- VIN
20	ENABLE

PIN No.	PIN Function
21	OUT V/CAL
22	OUT SIGNAL RTN
23	SYNC IN
24	+ OUT
25	+ OUT
26	+ OUT
27	- OUT
28	- OUT
29	- OUT
30	- SENSE

OUTLINE DRAWING



Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:
.XX ±.02 IN
.XXX ±.01 IN
3. Weight: 7.45 Oz (213 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

MPS MILPOWER SOURCE, INC.

DIVISION OF QUASAR POWER TECHNOLOGIES INC.

Represented and Distributed by SD Electronics
Tel:514-735-9673 email:info@sdelectronics.com