

M8637 SERIES

THE MOST COMPLETE
MINIATURE, HIGH DENSITY,
TRIPLE OUTPUT,
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 80%

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	Output #1	Output #2	Output #3	Regulation	Ripple, Typical (20 MHz BW)
M8637-1	18-70V	5V/10A	15V/2.5A	15V/2.5A	± 1%	50 mVp-p
M8637-2	18-70V	5V/10A	12V/3A	12V/3A	± 1%	50 mVp-p
M8637-4	18-70V	5V/0.5A	15V/3A	15V/0.5A	± 1%	50 mVp-p
M8637-5	18-70V	5.15V/8A	15V/3A	15V/3A	± 1%	50 mVp-p
M8637-6	18-70V	5V/5A	12V/1.2A	12V/1.2A	± 1%	50 mVp-p
M8637-7	18-70V	5V/5A	8.5V/2A	8.5V/0.7A	± 1%	50 mVp-p
M8637-8	18-70V	19V/1.23A	28V/0.06A	50V/1.2A	± 1%	50 mVp-p
M8637-9	18-70V	5V/0.19A	15V/0.21A	15V/0.12A	± 1%	50 mVp-p
M8637-10	18-70V	5V/1.35A	28V/0.86A	22V/0.86A	± 1%	50 mVp-p
M8637-11	18-70V	5V/1.0A	28V/3A	28V/1A	± 1%	50 mVp-p
M8637-12	18-70V	5V/14A	15V/2A	15V/1.5A	± 1%	50 mVp-p
M8637-13	18-70V	-5V/3A	15V/3.5A	15V/3.5A	± 1%	50 mVp-p
M8637-14	18-70V	5.15V/10A	15V/2.5A	15V/2.5A	± 1%	50 mVp-p
M8637-15	18-70V	5V/8.5A	12V/0.03A	12V/0.24A	± 1%	50 mVp-p
M8637-16	18-70V	5V/4A	5V/1A	15V/1A	± 1%	50 mVp-p
M8637-17	18-70V	5V/10A	15V/0.5A	-15V/0.5A	± 1%	50 mVp-p
M8637-19	18-70V	5V/5A	15V/3A	15V/3A	± 1%	50 mVp-p
M8637-20	18-70V	18V/1.4A	12V/1A	12V/1A	± 1%	50 mVp-p
M8637-21	18-70V	3.2V/5A	5.1/3.3A	-5.1/6A	± 1%	50 mVp-p
M8637-22	18-70V	5V/7A	15V/3A	15V/3A	± 1%	50 mVp-p
M8637-23	18-70V	5V/2A	5V/1A	3.3V/5A	± 1%	50 mVp-p
M8637-24	18-70V	5.1V/11A	12V/2.5A	12V/2.5A	± 1%	50 mVp-p
M8637-25	18-70V	5.1V/10A	12V/3A	12V/3A	± 1%	50 mVp-p
M8637-26	18-70V	18V/1.8A	14V/1A	14V/1A	± 1%	50 mVp-p
M8637-27	18-70V	5V/5A	12V/3A	12V/1.5A	± 1%	50 mVp-p
M8637-30	18-70V	5V/5A	12V/4A	-12V/4A	± 1%	50 mVp-p
M8637-34	18-70V	3.3V/2.5A	12V/3A	-12V/1A	± 1%	50 mVp-p
M8637-35	18-70V	5.1V/10A	15V/1A	15V/1A	± 1%	50 mVp-p
M8637-37	18-70V	5.1V/5A	12V/0.5A	12V/0.5A	± 1%	50 mVp-p
M8637-38	18-70V	6.3V/3A	6.1V/1.3A	15V/1.5A	± 1%	50 mVp-p
M8637-39	18-70V	15V/0.2A	15V/0.2A	27V/3.5A	± 1%	50 mVp-p
M8637-40	18-70V	5.15V/10A	15V/2.5A	15V/2.5A	± 1%	50 mVp-p
M8637-41	18-70V	5V/2A	18V/2A	-15V/0.4A	± 1%	50 mVp-p
M8637-41A	18-70V	5.5V/5A	18V/2A	-15V/0.4A	± 1%	50 mVp-p
M8637-44	18-70V	11V/6A	5V/3A	-12V/1A	± 1%	50 mVp-p
M8637-45	18-70V	5.15V/2A	15V/5.5A	15V/1.5A	± 1%	50 mVp-p
M8637-46	18-70V	3.3V/5A	5.15V/7A	12.8V/5.5A	± 1%	50 mVp-p
M8637-47	18-70V	3.3V/2A	12V/6A	-12V/2A	± 1%	50 mVp-p
M8637-48	18-36V	5.1V/9A	15.15V/1.3A	-15.15V/1.1A	± 1%	50 mVp-p
M8637-49	18-70V	5V/5A	15V/3A	15V/3A	± 1%	50 mVp-p
M8637-50	18-36V	3V/3.65A	15V/1.2A	15V/1.4A	± 1%	50 mVp-p

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

PIN ASSIGNMENT

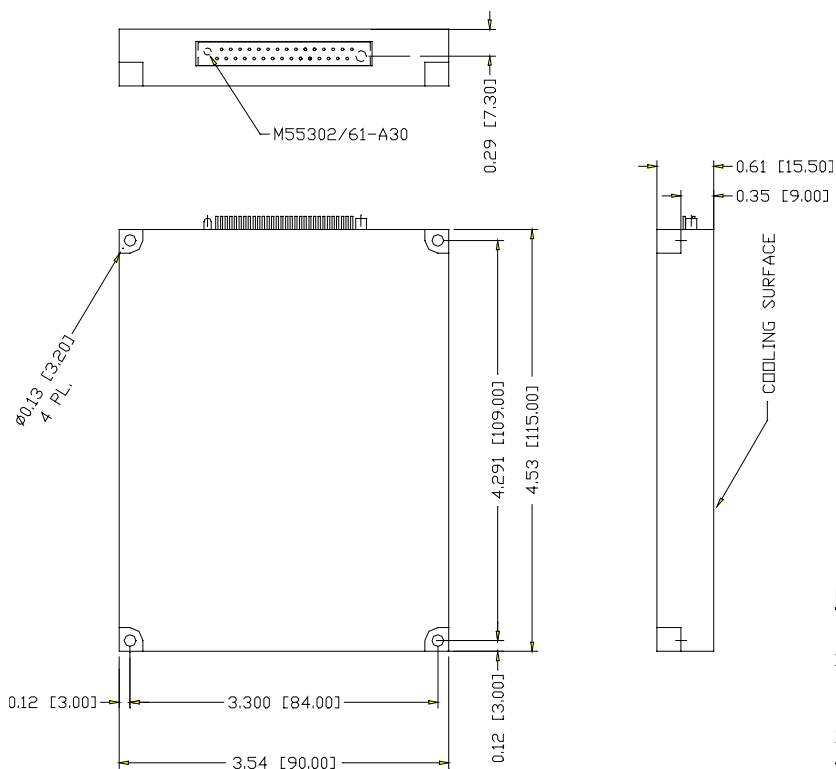
PIN No.	PIN Function
1	+ OUT 1
2	+ OUT 1
3	+ OUT 1
4	- OUT 1
5	- OUT 1
6	+ OUT 2
7	- OUT 2
8	+ OUT 3
9	- OUT 3
10	N.C.

PIN No.	PIN Function
11	SIGNAL RTN *
12	- VIN
13	- VIN
14	+ VIN
15	+ VIN
16	+ OUT 1
17	+ OUT 1
18	- OUT 1
19	- OUT 1
20	- OUT 1

PIN No.	PIN Function
21	+ OUT 2
22	- OUT 2
23	+ OUT 3
24	- OUT 3
25	INHIBIT
26	- VIN
27	- VIN
28	+ VIN
29	+ VIN
30	SYN

* Signal RTN for the INHIBIT and the SYN signals.

OUTLINE DRAWING



Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:
.XX ± 0.02 IN
.XXX ± 0.01 IN
3. Weight: 12.8 Oz (365 gr)
4. Add suffix SL to specify connector with guide set per M55302/57-A30X

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