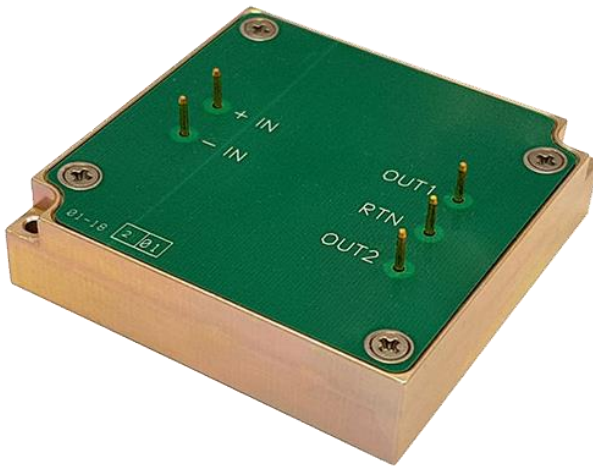


## **M786 SERIES**

*DC/DC POWER SUPPLY*



### **PRODUCT HIGHLIGHTS**

- **MINIATURE**
- **HIGH DENSITY**
- **SINGLE/DUAL OUTPUT**
- **DC/DC POWER SUPPLY**
- **UP TO 30 W**

## APPLICATIONS

Military, Ruggedized, Telecom, Industrial

## SPECIAL FEATURES

- Miniature size
- High efficiency
- Wide input range
- Input / Output isolation
- Fixed switching frequency (250 KHz)
- EMI/RFI filters included
- Indefinite short circuit protection with auto-recovery
- Input over-voltage shutdown with auto-recovery (optional)
- Over temperature shutdown with auto-recovery

## ENVIRONMENTAL

Meets or exceeds MIL-STD-810D

Temperature:

Operating  $-55^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  (baseplate)

Storage  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$

## RELIABILITY

273,000 hours, calculated per  
MIL-STD-217F at  $+85^{\circ}\text{C}$  baseplate, AUF.

1,200,000 hours, calculated per  
MIL-STD-217F at  $+85^{\circ}\text{C}$  baseplate, GF.

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

## ELECTRICAL SPECIFICATIONS

### DC INPUT

DC input range: 16 to 36 VDC

Input transient protection:

All models meet or exceed (no damage)  
MIL-STD-1275A (100V for 50mSec) and  
MIL-STD-704A, MIL-STD-704D (80V for 0.1Sec)  
(for 600V Spike – a serial resistor is required)

Overvoltage shutdown with auto-recovery (optional)

Efficiency: 75%, Typical

EMI/RFI:

Design to meet or exceed  
MIL-STD-461C - CS01, CS02, CE03, RS02 &  
RS03, MIL-STD-461D - CE102-16

Isolation:

200V between Input and Output  
200V between Input and Case

### DC OUTPUT (floating)

Line /load regulation:

Less than  $\pm 2\%$  (no load to full load,  $-55^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ )

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

Current limiting:

Continuous protection for unlimited time.

Over voltage protection:

Passive transzorb on output.

Over temperature protection:

Shutdown at baseplate temperature of  $+100^{\circ}\text{C}$  ( $\pm 5^{\circ}\text{C}$ )  
Automatic recovery at baseplate  
temperature lower than  $+90^{\circ}\text{C}$  ( $\pm 5^{\circ}\text{C}$ )

Isolation:

200V between Output and Input  
200V between Output and Case

# M786 SERIES DC/DC POWER SUPPLY

## SELECTION GUIDE

Model	Input	Output #1	Output #2
M786-16	16 to 36VDC	5V / 2A	3.3V / 1A
M786-17	16 to 36VDC	5V / 2A	3.3V / 2A
M786-18	18 to 36VDC	5V / 1A	3.3V / 2A
M786-19	16 to 45VDC	5V / 2A	3.3V / 3A
M786-20	18 to 36VDC	15V / 1.6A	15V / 0.4A

## PIN ASSIGNMENT

### Option 1

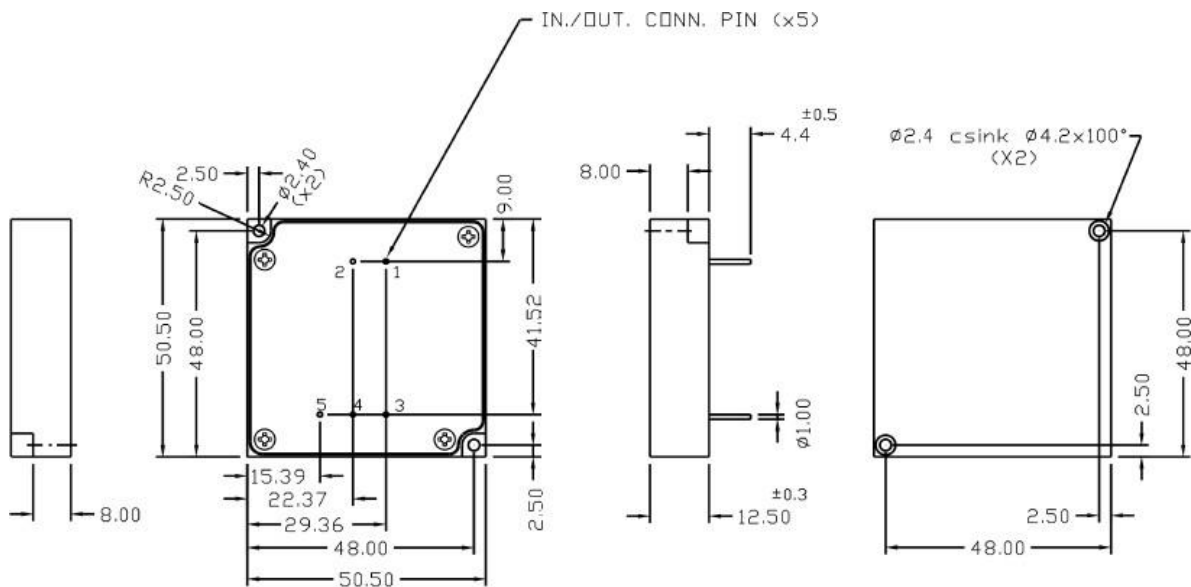
Pin No.	Pin Function
1	+ VIN
2	- VIN
3	+ OUT1 1
4	RTN
5	+ OUT 2

*MPS can customize this product to your requirements - contact us!*

### Option 2

Pin No.	Pin Function
1	+ VIN
2	- VIN
3	+ OUT 1
4	RTN
5	- OUT 2

## OUTLINE DRAWING



### Notes

1. Dimensions are in mm
2. Tolerance is:  
.XX ±.02 IN  
.XXX ±.01 IN
3. Weight: Approx. 2 Oz (60 gr.)

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