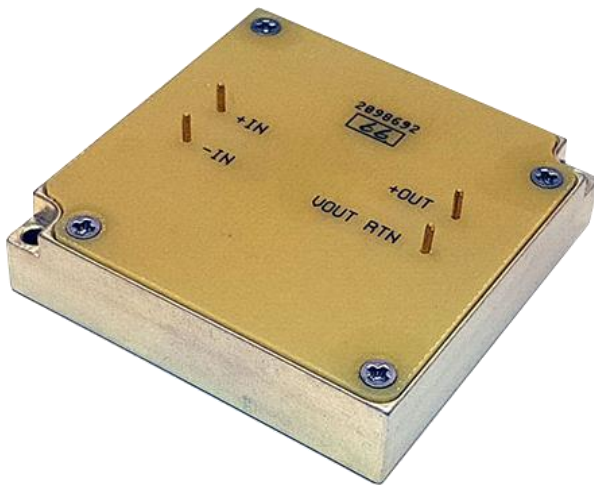


# M785 SERIES

## DC/DC POWER SUPPLY



### PRODUCT HIGHLIGHTS

- **MINIATURE**
- **HIGH DENSITY**
- **SINGLE OUTPUT**
- **DC/DC POWER SUPPLY**
- **UP TO 25 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: 18 to 36 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)

(for 600V Spike – a serial resistor is required)

Over-voltage shutdown with auto-recovery (optional)

Efficiency: 75%, Typical

EMI/RFI:

Designed to meet 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 tranzorb 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

# M785 SERIES DC/DC POWER SUPPLY

## SELECTION GUIDE

| Model    | Input          | Output       |
|----------|----------------|--------------|
| M785-1   | 18 to 36 VDC   | 5.0V / 1.0A  |
| M785-7   | 18 to 36 VDC   | 16.5V / 0.5A |
| M785-8-2 | 13.5 to 22 VDC | 2.1V / 4.5A  |
| M785-9   | 13.5 to 22 VDC | 5.1V / 2.7A  |
| M785-10  | 13.5 to 22 VDC | 15V / 1.5A   |
| M785-11  | 18 to 36 VDC   | 5.0V / 2.0A  |

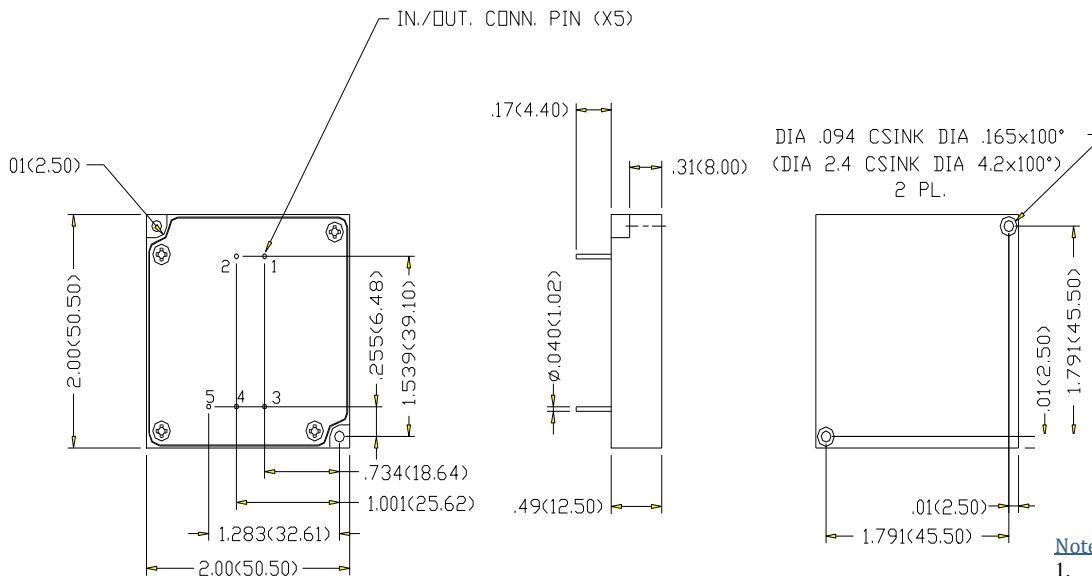
Note: other voltages and currents are available, consult factory.

## PIN ASSIGNMENT

| PIN No. | PIN Function |
|---------|--------------|
| 1       | + VIN        |
| 2       | - VIN        |
| 3       | + OUT        |
| 4       | RTN          |
| 5       | N.C.         |

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

## OUTLINE DRAWING



### Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:  
.XX ±.02 IN  
.XXX ±.01 IN
3. Weight: Approx. 1.8 Oz (51 gr.)

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