

M7878 SERIES

DC/DC POWER SUPPLY



PRODUCT HIGHLIGHTS

- DC/DC CONVERTER
- MINIATURE
- HIGH DENSITY
- 18 to 48 VDC Input
- DUAL/SINGLE OUTPUT
- UP TO 6W



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
- Over temperature shutdown with auto-recovery

Environmental Conditions

Meets or exceeds MIL-STD-810D

Temperature:

Operating -55°C to $+85^{\circ}\text{C}$ (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.

‡ EMC compliance achieved when tested with 5 μH LISNs, shielded harness and static resistive load.

Electrical Specifications

DC INPUT

DC Input range: 18 to 36 VDC
(can operate down to 9V during input transient)

Optional Extended Input: 16 to 48VDC—
please consult factory.

Input transient protection:

All models meet or exceed (no damage) Spikes for 100V per MIL-STD-704A

Over-voltage shutdown with auto-recovery (shut down above 70 VDC)

Efficiency: 62%, Typical (up to 85%)

EMI/RFI:

Designed to meet † MIL-STD-461F CE101, CE102, CS101, CS114, CS115, CS116, RE101, RE102, RS101, RS103

Isolation:

100V between Input and Outputs

100V between Input and Case

DC OUTPUT (floating)

Line/Load regulation:

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

Ripple and Noise: 30mVp-p, typical (max. 1%)

Current limiting (Foldback):

Continuous protection for unlimited time

Over voltage protection:

Passive transorb on output.

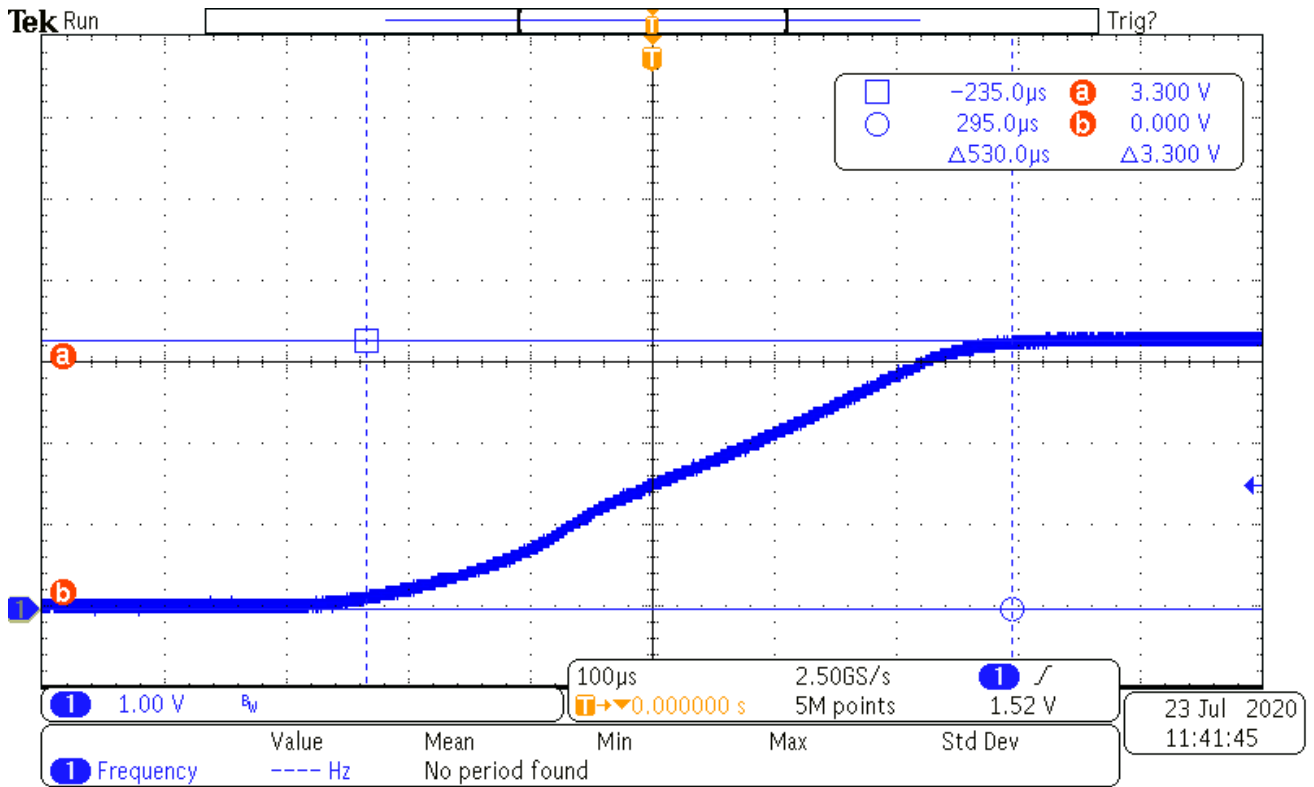
Isolation:

100V between Outputs and Input

100V between Output and Case

Test Results

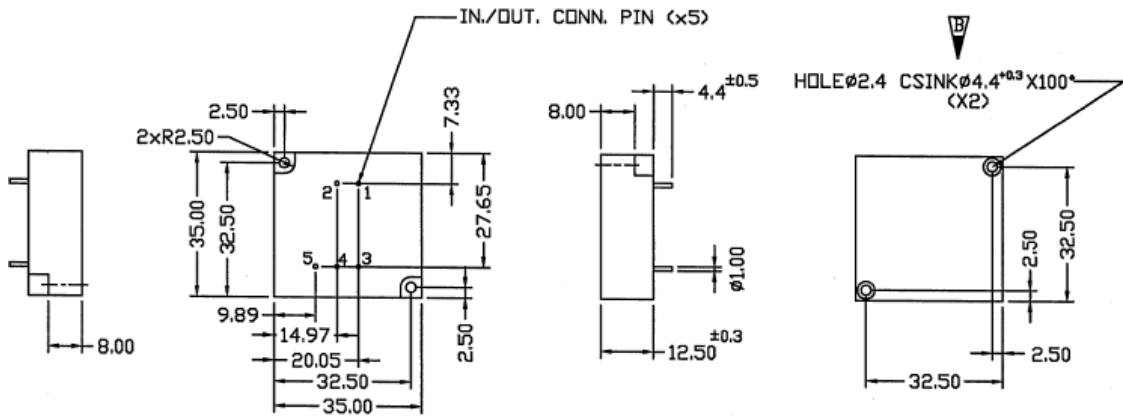
Turn On Time from power on



PIN ASSIGNMENT

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

OUTLINE DRAWING



M7878 PINOUT

- 1 - +IN
- 2 - -IN
- 3 - +OUT
- 4 - RTN
- 5 - OUT

Notes

1. Dimensions are in mm
2. Tolerance is:
 .XX ± 0.2 MM
 .XXX ± 0.1 MM
3. Weight: Approx. 0.88 Oz (25 gr.)

Standard Configurations

Part Number	Input	Output 1		Output 2	
	Voltage range	Voltage	Current	Voltage	Current
M7878-100	18 to 36 V _{DC}	3.3 V _{DC}	0.25 A	3.3 V _{DC}	0.25 A
M7878-101	18 to 36 V _{DC}	5 V _{DC}	0.25 A	5 V _{DC}	0.25 A
M7878-102	18 to 36 V _{DC}	12 V _{DC}	0.15 A	12 V _{DC}	0.15 A

Note: Specifications are subject to change without prior notice by the manufacturer.