

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**

M7878 SERIES DC/DC POWER SUPPLY – PCB

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.

Over-voltage shutdown with auto-recovery

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:

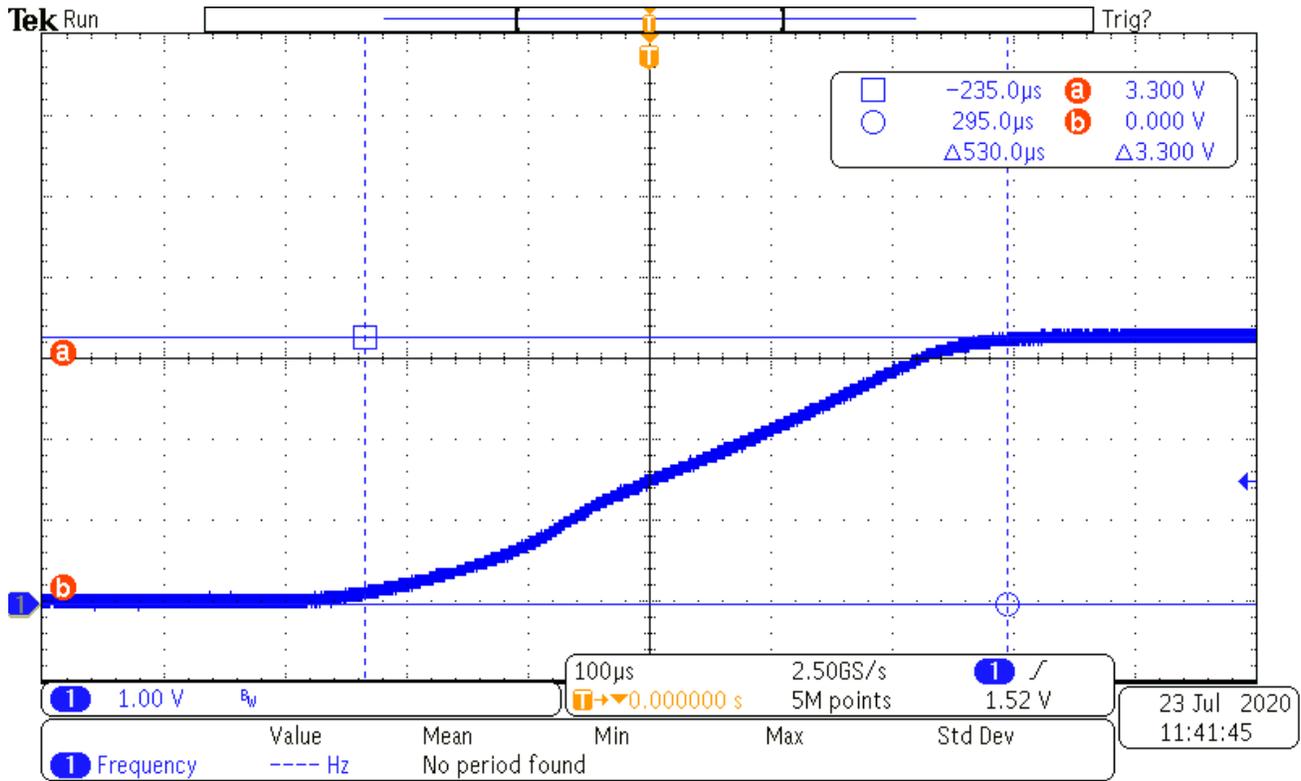
100V between Outputs and Input

100V between Output and Case

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Test Results

Turn On Time from power on



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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.