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

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Amphenol
MILITARY HIGH SPEED

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°C (baseplate)
Storage –55°C to +125°C

Reliability

150,000 hours, calculated per MIL-STD-217F at +85°C baseplate, ground fixed.

ǂ 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 ǂ 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°C)

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

Current limiting (Foldback):
Continuous protection for unlimited time

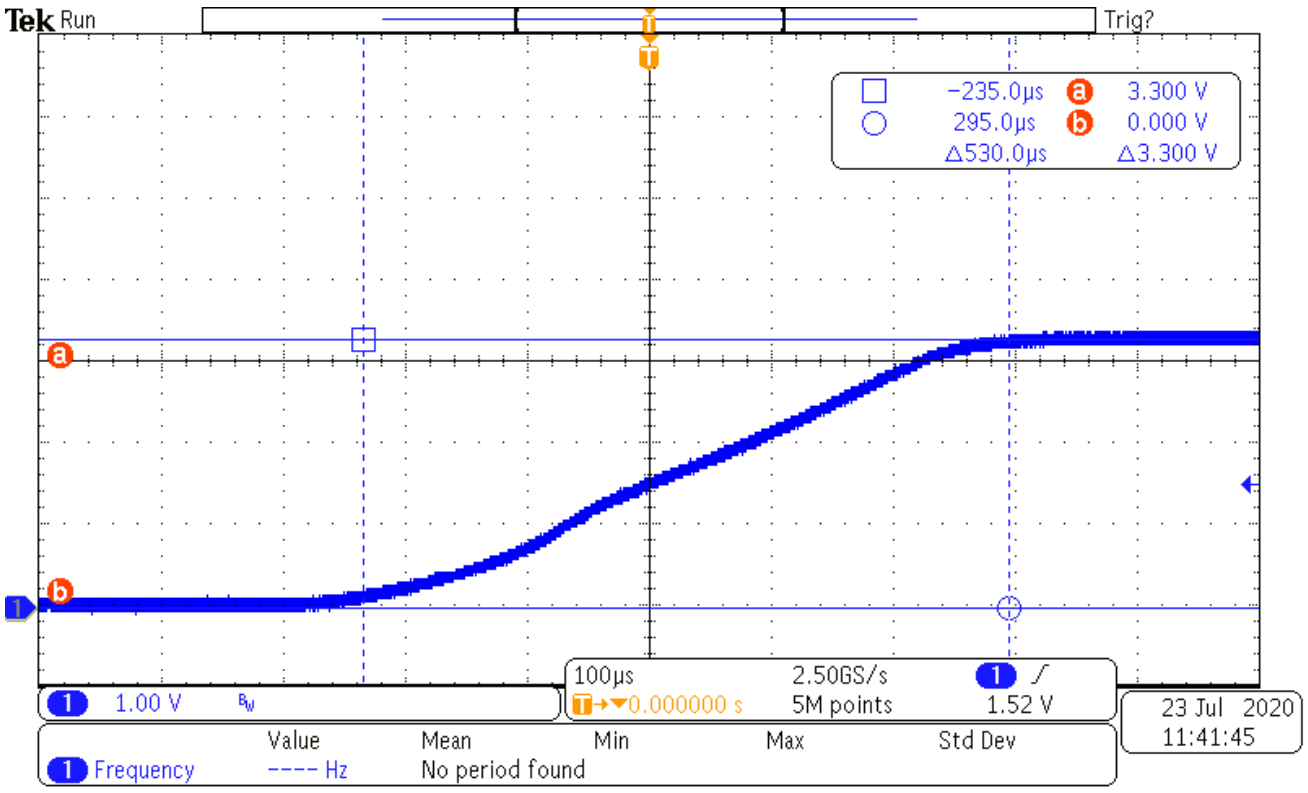
Over voltage protection:
Passive transorb on output.

Isolation:
100V between Outputs and Input
100V between Output and Case

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Test Results

Turn On Time from power on

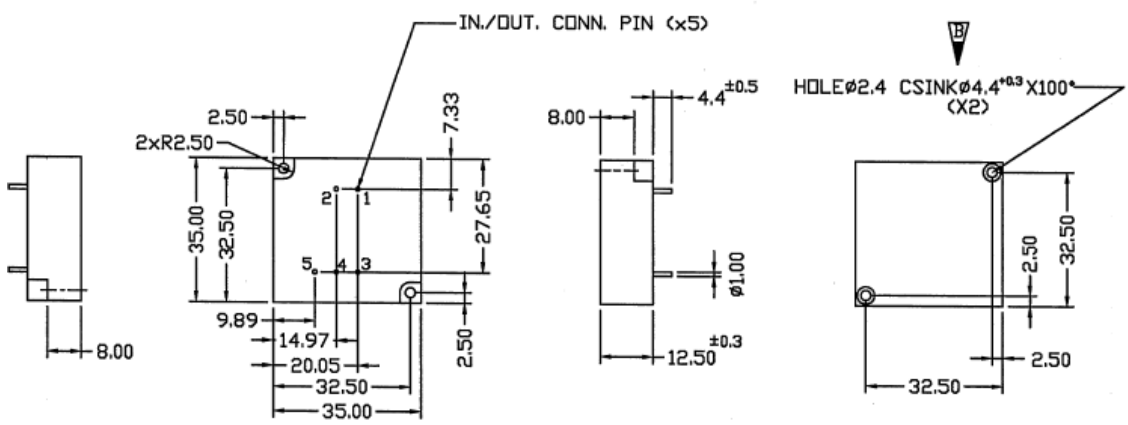


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PIN ASSIGNMENT

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 ±0.2MM
   .XXX ±0.1MM
3. Weight: Approx. 0.88 Oz (25 gr.)

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Standard Configurations

Part Number	Input	Output 1		Output 2	
	Voltage range	Voltage	Current	Voltage	Current
M7878100	18 to 36 V_{DC}	3.3 V_{DC}	0.25 A	3.3 V_{DC}	0.25 A
M7878101	18 to 36 V_{DC}	5 V_{DC}	0.25 A	5 V_{DC}	0.25 A
M7878102	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.

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