

M8727 SERIES

DC/DC POWER SUPPLY



PRODUCT HIGHLIGHTS

- MINIATURE
- HIGH DENSITY
- DUAL OUTPUT
- DC/DC CONVERTER
- UP TO 80W



Applications

Military, Ruggedized, Telecom, Industrial

Special Features

- Miniature size
- High efficiency
- Wide input range
- Up to 20 W/in³
- Input / Output isolation
- Fixed switching frequency (250 kHz)
- TTL logic enable
- EMI 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.

Electrical Specifications

DC INPUT

DC Input range: 18 to 48V_{DC}

Input transient protection:

All models withstand surges (no operation, no damage) IAW MIL-STD-1275A (100V for 50ms) and MIL-STD-704A/D (80V for 0.1s)

Over-voltage lockout with auto-recovery

Efficiency: Up to 82%

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

Isolation:

200V_{DC} between Input and Output

200V_{DC} between Input and Case

DC OUTPUTS (floating)

Line/Load regulation: Up to ±1% (Low to high line voltage, no load to full load, -55°C to +85°C)

Ripple and Noise: 50mV_{p-p}, typical (up

to 1%) Current limiting (Foldback):

Continuous protection for unlimited time

Over voltage protection:

Passive transorb

on output. Over

temperature

protection:

Shutdown if baseplate temperature exceeds +100°C ±5°C. Automatic recovery at baseplate temperature lower than +90°C ±5°C).

Isolation:

100V_{DC} between Output and Case

* Compliance achieved with 5μH LISN, shielded harness and static resistive load.

PIN ASSIGNMENT

Connector type: Airborne RM272-040-312-2900 or eq.

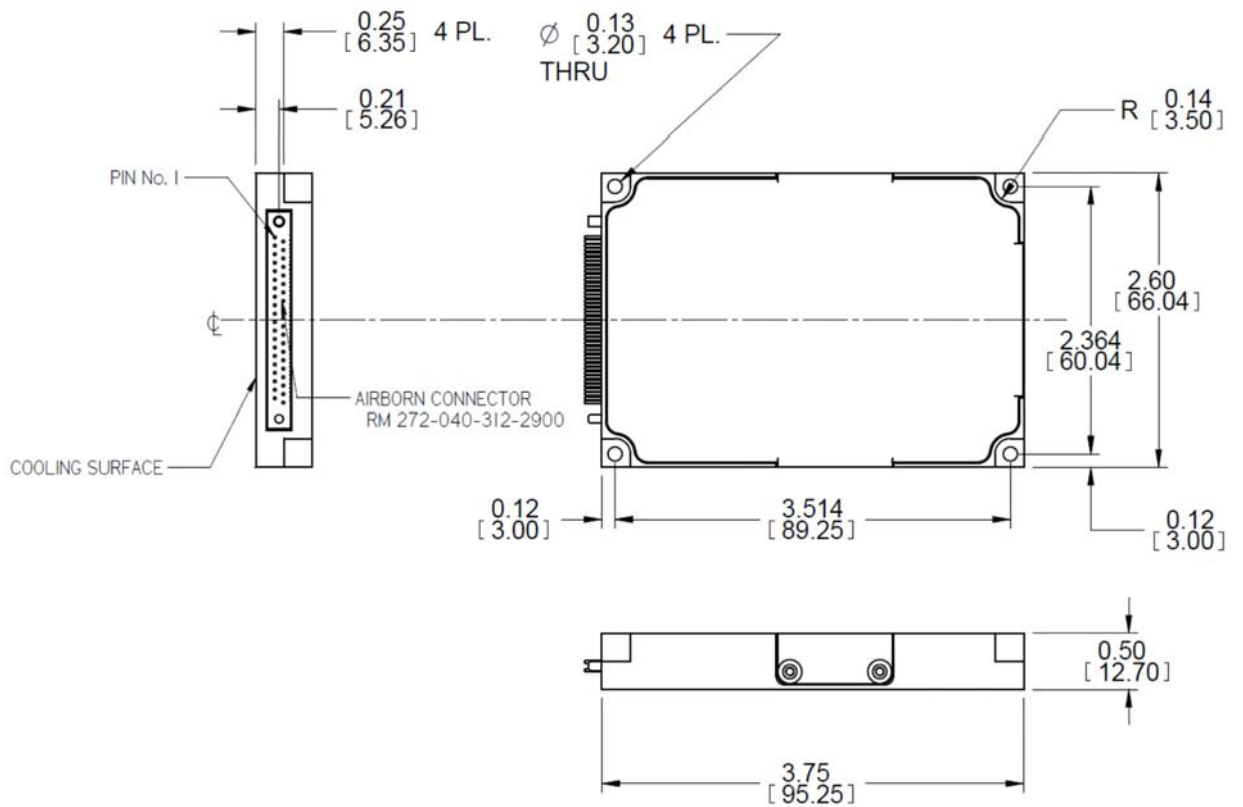
Mates with: Airborne RM242-040-571-5900 (crimp removable pins) or RM242-040-241-5900 (solder cup pins).

Pin No.	Function	Pin No.	Function	Pin No.	Function
18, 19, 20, 38, 39	VOUT 1 (+)	6, 7, 25, 26, 27	VOUT 2 RTN (-)	15	SENSE 1 RTN (-)
16, 17, 35, 36, 37	VOUT 1 RTN (-)	1	SYNC	2	SENSE 2 (+)
12, 13, 32, 33	VIN (+)	21	SIGNAL RTN	8	SENSE 2 RTN (-)
10, 11, 29, 30	VIN RTN (-)	22	INHIBIT	14	CHASSIS
3, 4, 5, 23, 24	VOUT 2 (+)	40	SENSE 1 (+)	9, 28, 31, 34	N.C.

Notes:

1. SIGNAL RTN is the reference line for INHIBIT and SYNC signals.
2. For optimal performance, connect all pins with identical function/designation together.
3. Always connect the sense lines to either the respective load terminals or their respective output pins – do not leave the sense lines open! Please contact factory if sense functionality is not required.

OUTLINE DRAWING



Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:
 .XX ± 0.01 IN
 .XXX ± 0.005 IN
3. Weight: Approx. 6.35 oz (180g)

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