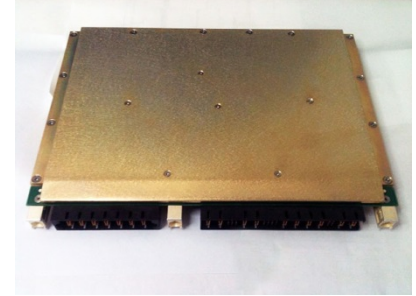


M4068 SERIES

VITA 62 compliant 6U VPX

**MINIATURE, HIGH DENSITY,
SEVEN OUTPUTS
DC/DC Converters
(up to 1KW)**



Applications

Military (Airborne, ground-fix, shipboard), Ruggedized, Telecom, Industrial

Special Features

- VITA 62/6U
- High efficiency
- Wide input range
- Input / Output isolation
- Remote sense
- External On/Off Inhibit
- External On/Off enable
- Fixed switching frequency (250 KHz)
- External synchronization capability
- EMI/RFI filters included
- I2C communication
- Parallel Connection of outputs (optional)
- Indefinite short circuit protection with auto-recovery
- Over-voltage shutdown with auto-recovery
- Over temperature shutdown with auto-recovery
- Reverse battery protection
- FAN 28V Filter + CL

Electrical Specifications

DC Input:

DC Input range: 18 to 48 V_{DC},
(up to 80V) per MIL-STD-704E.
MIL-STD-1275A (100V for 50mSec -
no damage)
MIL-STD-704A (80V for 0.1 Sec)

Line/Load regulation:

Less than 1% (no load to full
load, -55°C to +85°C).

Ripple and Noise:

Less than 50mVp-p, typical
(max. 1%) without external
capacitance. When connected to
system capacitance ripple drops
significantly.

DC Output:

3.3V/10A	3.3V_Aux	+Sense
5V/10A	P03	+Sense
12V/40A	P01	(Current share
12V/40A	P02	& Sense)
+12V/1A	12V_Aux	
-12V/1A	-12V_Aux	

Load Transient Overshoot and undershoot

Output resistance at load change of 50%-
100% is 30-120 mΩ (depending on output
voltage). Output back to steady stated
within 300-500μSec

Isolation:

200V between Input and Output
200V between Input and Case
100V between Output and Case

EMI/RFI:

Includes EMI/RFI filters

Efficiency :

up to 90%

I2C

I2C communication for voltages and
temperature (GAX, SCL, SDA)

Protections * (* Thresholds and protections can be modified / removed – please consult factory).

Input

- **Inrush Current Limiter** –
peak value of 5 x I_{in} for less
than 50μSec.
- **Under voltage protection** –
unit protects itself (no damage)
below 16.5Vdc.
- **Over voltage protection** –
unit protects itself (no damage)

Output

- **Passive tranzorb on outputs** –
20% above nominal voltage.
- **Current limiting** –
Continuous protection (10-30% above
maximum current) for unlimited time
(Hiccup).

General

- **Over temperature protection:**
Shutdown at temperature of +105°C
(±5°C) Automatic recovery at
temperature lower than +85°C
(±5°C)

Environmental

Design to Meet MIL-STD-810F

Temperature:

Operating: -55°C to +85°C
(at wedgelock edge)

Storage: -55°C to +125°C

Humidity:

Method 507.4 - Up to 95%.

Altitude:

Method 500.4, Procedure I & II, 40,000 ft.
and 70,000 ft. Operational

Vibration and Shock:

Shock - Saw-tooth, 20g peak, 11mS.

Vibration - Figure 514.5C-17. General
minimum integrity exposure. (1 hour per
axis)

Salt Fog:

Method 509-4

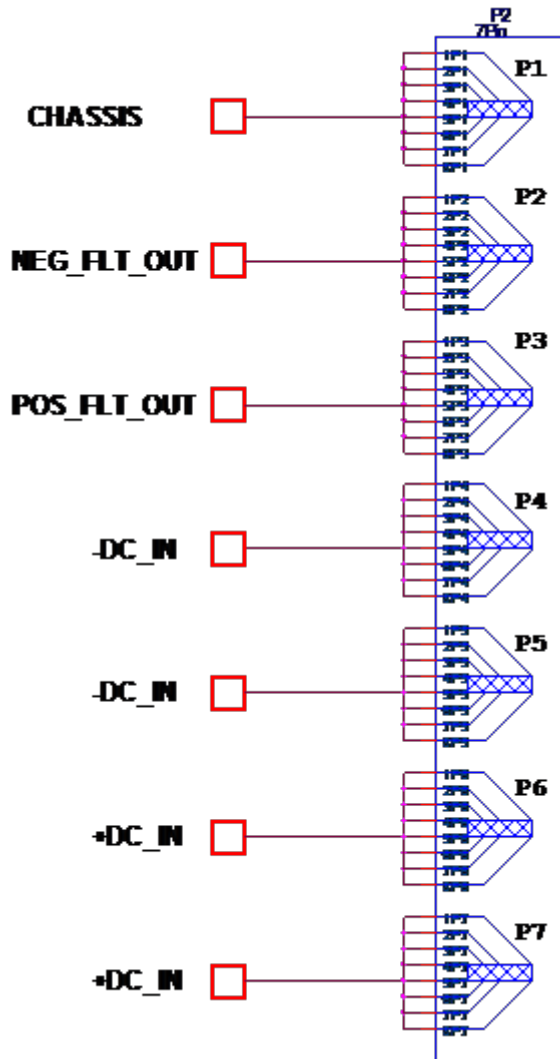
Reliability

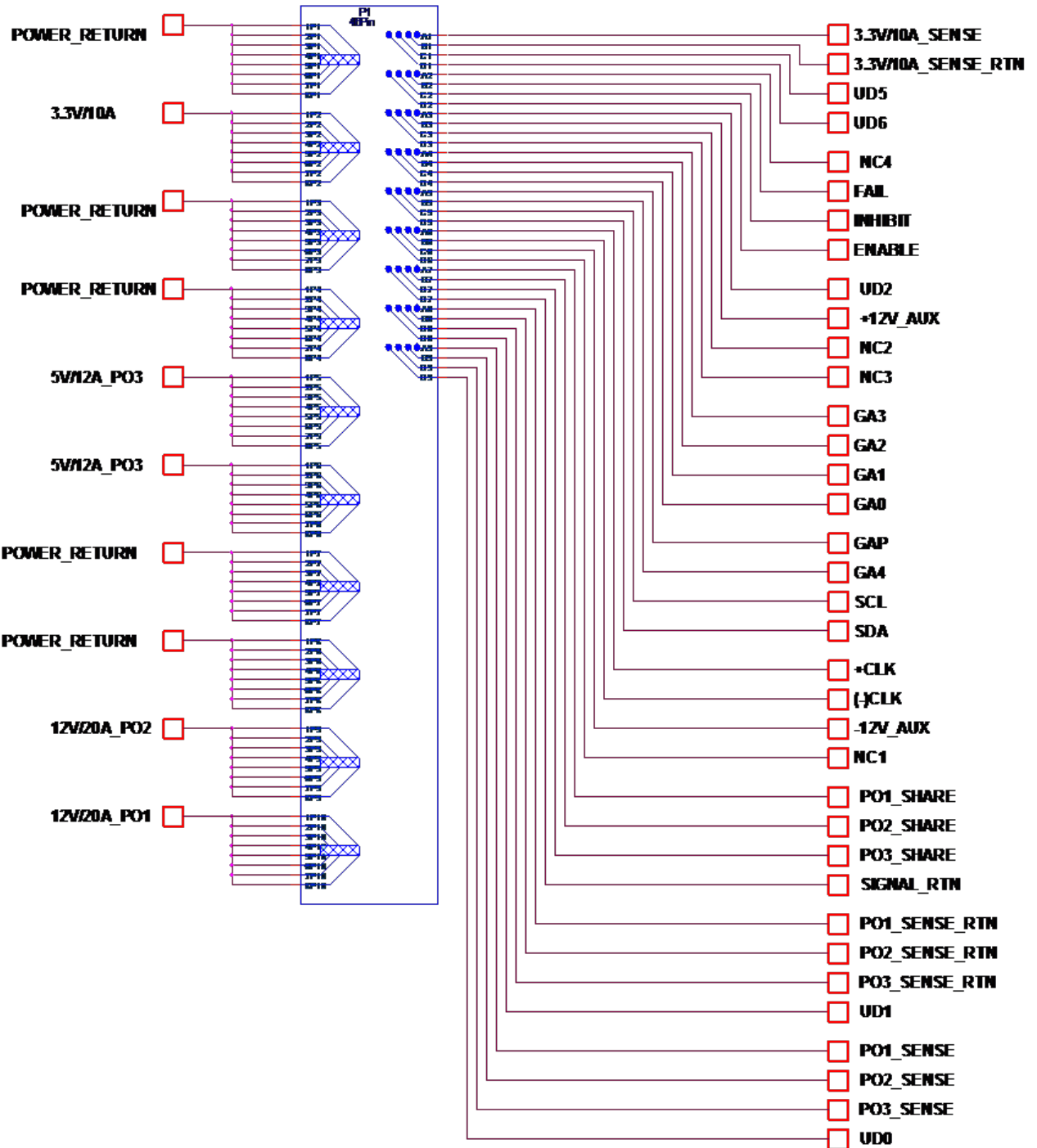
150'000 hours, calculated per
MIL-STD-217F at +85°C base plate,
Ground fixed

Environmental Stress Screening (ESS)

Including random vibration and thermal cycles is also available. **Please consult factory for details.**

Pin Assignment





Functions and Signals - according to VITA 62

INHIBIT signal

The INHIBIT signal is used to turn the power supply ON and OFF.

SYNC signal

The SYNC IN signal is used to allow the power supply frequency to sync with the system frequency.

Fail signal

Outputs good signal.

Enable signal

The Enable signal is used to turn the outputs ON and OFF.

VOUT SENSE

The SENSE is used to achieve accurate load regulations at load terminals (this is done by connecting the pins directly to the load's terminals).

The use of remote sense has a limit of voltage dropout between converter's output and load terminals of 2-10% of voltage output.

Load Share

Used for parallel several M4068 units (optional).

Weight:

Weight: Approx. TBD

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