

Features:

- Compact 1U Profile
- Constant Power Characteristic down to 48Vdc (then constant current fold down)
- Three visual LED Indicators; Input, Output and Fault status
- Redundant Operation with Active Load Sharing (Single Wire)
- Remote On/Off & Remote Sense Functions
- No Minimum Load Requirements
- Analog, I²C or PMBus means of control and monitoring
- Four (4) Modules per Rack (7.5KW N+1 Capability or 10KW Total Power)
- Mates within the ACE254 shelf side-by-side with AC Input Models



| FEATURES | BENEFITS |
|--|---|
| High Power Density 27W/in ³ | More system space for application circuits and hardware |
| Load Sharing & Fault Tolerant | Excellent reliability in N+1 operation |
| Automatic Fan Speed Control | Reduces audible noise and increases reliability |
| System Scalability up to 10kW | Allows flexibility with minimum investment |
| Universal Input & International Certifications | Reduces logistical costs |

| KEY MARKET SEGMENTS & APPLICATIONS | |
|------------------------------------|-----------------|
| ■ Distributed Power | ■ RF Amplifiers |
| ■ High End Servers | ■ ATE Equipment |
| ■ High End Routers and Switchgear | |
| ■ Semiconductor Burn-in Equipment | |

| SPECIFICATIONS | 2,500 Watt +48V Front End Power Supply with 48 VDC Input Range |
|-----------------------------|---|
| Input Voltage Range | -36 ~ -75 VDC Input Range |
| Turn on / off (Hysteresis) | -42~48VDC Turn-on / -36 VDC Turn Off (maximum) |
| Input Current Maximum | 75A, Full Load (max) |
| Input Protection | 100ADC |
| Efficiency | 87% at 20% Load / 91% @ 30~50% Load / 90% @ 100% Load (see efficiency curve) |
| Idling Power | 35W Max (output Inhibited) / 45W (output enabled) |
| Hold-Up Time | 4ms (Full load with 5,000µF external capacitance, 52V setpoint, droop to 44Vdc is permitted) |
| Isolation | 2250 VDC Input / Output, 1500 VDC Input to Frame |
| Output Voltage Range | 43.2 ~ 56 VDC with remote programming |
| Output Power | 2500 Watts / 52A @ 48Vout (max continuous) |
| Standby Bias Voltage | 3.3VSB@1A (optional 5VSB) |
| Voltage Regulation | ±2% of Vnom for any combination of line, load and temperature |
| Output Ripple & Noise | 1% (pk-pk) @ 20MHz with 0.1µF ceramic and 10µF Tantalum caps at the output |
| Transient Response | 2V max deviation Recovery time 300µs @ 50% load step and di/dt < 1A/µs |
| Remote On/Off | TTL Compatible input, ON if >3V or open, OFF if <1V |
| Over Voltage Protection | 58~60VDC Trip Point (±1V), Recycling DC input, Remote OFF/ON or i2c software implemented OFF/ON will restart the unit. |
| Current Limit Protection | 105~130% of nominal, Fold down current limit, adjustable via i2c. Hiccup mode offered via i2c when the output is <40Vdc |
| Short Circuit Protection | Self protected with auto recovery |
| Operating Temperature | -10°C to +70°C, active power derating above 50°C (2.5%/°C), startup @ -40C, within spec @ 30 min of warm up |
| Over Temperature Protection | Non-Latching, thermal shutdown point is set for 125°C and recovery point is 110°C |
| EMI | FCC-B & EN-55022-B with specified filter or rack level (GR-1089-CORE) |
| LED Indicators | 3 LED Indicators to indicate Green = Input OK / Green = DCOK / Red = Fault |
| Analog Status & Control | Voltage Programming (V Prog), Load sharing (I Share), Remote On/Off, Current Monitor (I Monitor), Input OK, DC OK, Temperature Warning, Fault, PS Present, Module Enable, |
| Digital Status & Control | I ² C and PMBus, see detailed specification for details |
| Shock & Vibration | NEBS GR-63-CORE Level 3 |
| Dimensions | 14.25 x 4.00 x 1.6" / 361.95 x 101.6 x 40.64mm |
| Safety Approvals | IEC/UL/CSA/EN60950-1, CE Mark (LVD) |
| Options | 5VSB Output |

rev 100506

www.lineagepower.com/oem

Lineage Power

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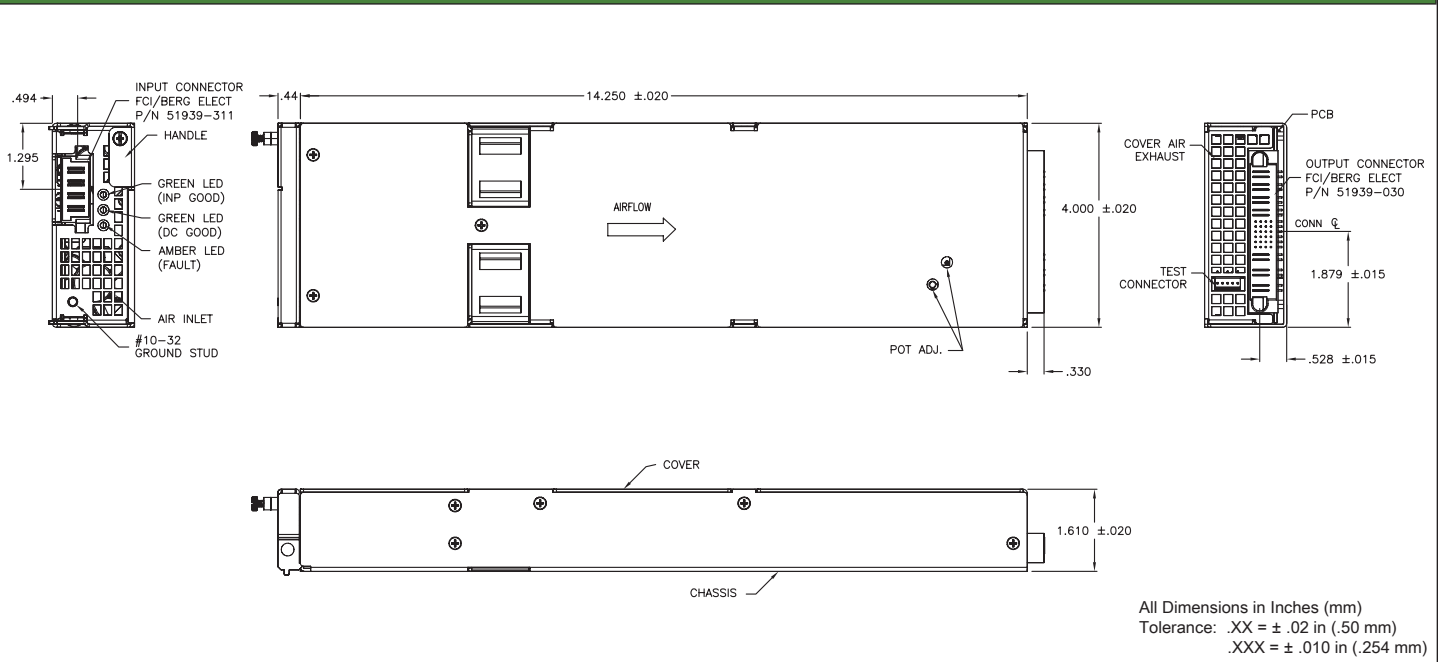
Lineage Power

2841 Dow Avenue
Tustin, CA 92780 USA
Phone: (714) 544-6665

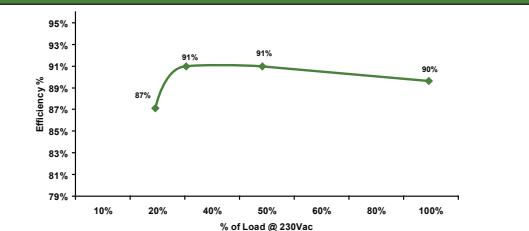
Lineage Power (China)

1353 Chenqiao Road, Shanghai Sengpu Industrial Park
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OUTLINE DRAWING



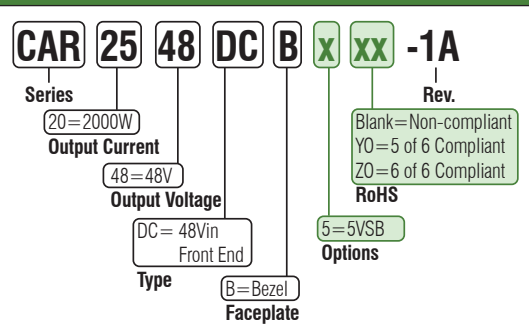
EFFICIENCY CURVE:



| TEST CONDITION | LED INDICATOR | | | MONITORING SIGNALS | | | |
|----------------------|---------------|-------|-------|--------------------|-------|--------|---------|
| | INP OK | DC OK | FAULT | FAULT | DC OK | INP OK | TEMP OK |
| 1 NORMAL OPERATION | Green | Green | Off | High | High | High | High |
| 2 OUT OF INPUT RANGE | Off | Off | Red | Low | Low | Low | High |
| 3 OVP | Green | Off | Red | Low | Low | High | High |
| 4 OVER CURRENT | Green | Off | Red | Low | Low | High | High |
| 5 THERMO ALARM | Green | Green | Red | Low | High | High | Low |

Test condition # 2 had two modules plugged in.
The second module provided back bias to the module under test with no-input applied.

PART NUMBER DEFINITION GUIDE:

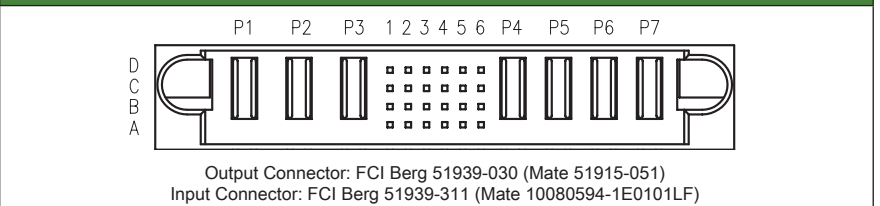


Examples:

CAR2548DCB-Z01A
PEM Modules with Bezel & RoHS (6 of 6)

CAR2548DC5B-Z01A
PEM Modules with 5VSB, Bezel & RoHS (6 of 6)

CONNECTOR DRAWING:



| Pin | Functions |
|-----|-------------------|
| A1 | VSB [3.3V] |
| A2 | VSB [3.3V] Return |
| A3 | Signal Return |
| A4 | Write Protect |
| A5 | Remote Sense (+) |
| A6 | Remote Sense (-) |

| Pin | Functions |
|-----|-------------------|
| B1 | Fault |
| B2 | I Monitor |
| B3 | PS Present |
| B4 | Module Enable |
| B5 | Serial Data Line |
| B6 | Serial Clock Line |

| Pin | Functions |
|-----|-------------------------------|
| C1 | I Share |
| C2 | N/C |
| C3 | Temp Warning |
| C4 | I ² C Address (A0) |
| C5 | I ² C Address (A1) |
| C6 | I ² C Address (A2) |

| Pin | Functions |
|-----|----------------|
| D1 | V Prog |
| D2 | OVP Test Point |
| D3 | Remote ON/OFF |
| D4 | DC OK |
| D5 | Input OK |
| D6 | Interrupt |

| Pin | Functions |
|-----|---------------|
| P1 | N/C |
| P2 | N/C |
| P3 | N/C |
| P4 | +Vout |
| P5 | +Vout |
| P6 | Output Return |
| P7 | Output Return |