

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

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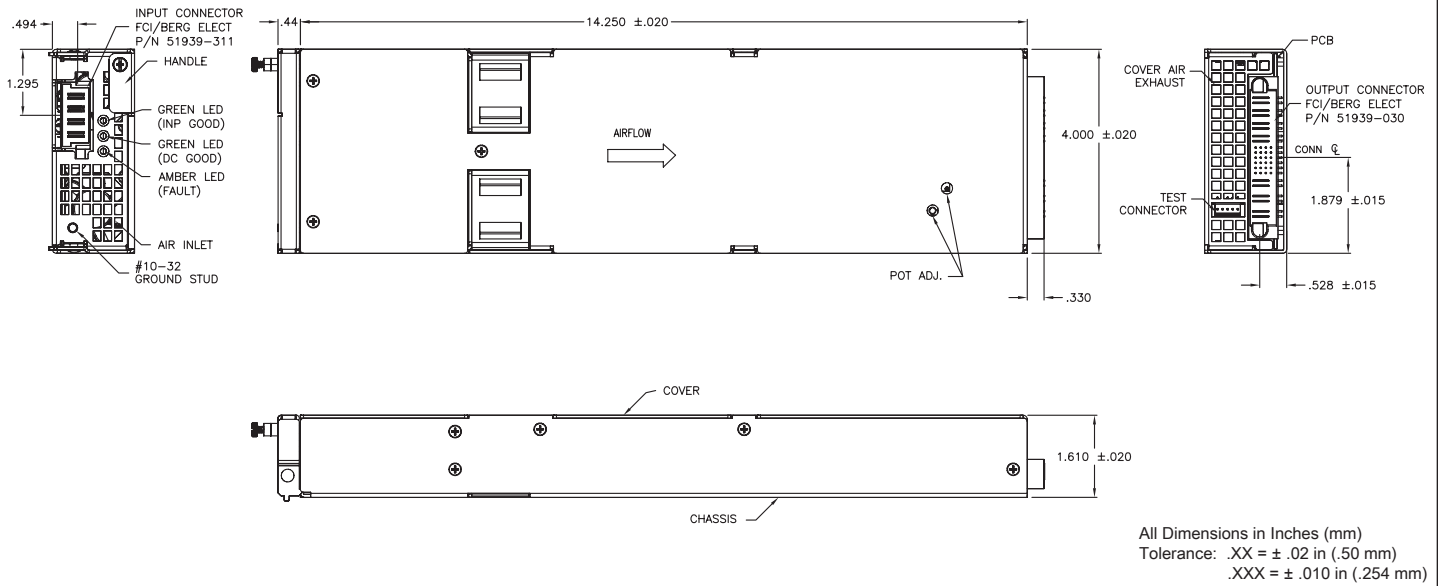
Lineage Power (China)

3000 Skyline Dr.
Mesquite, TX 75149
Phone: (972) 284-2000

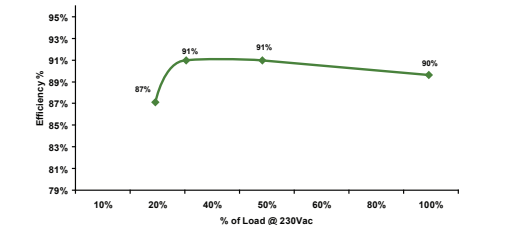
2841 Dow Avenue
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OUTLINE DRAWING



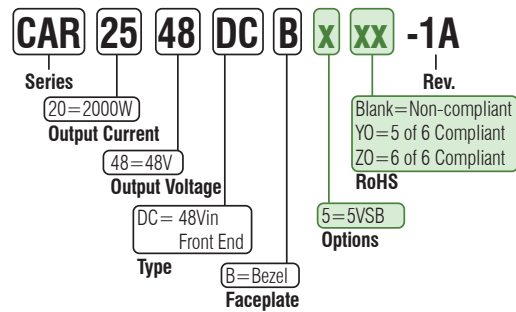
EFFICIENCY CURVE:



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:

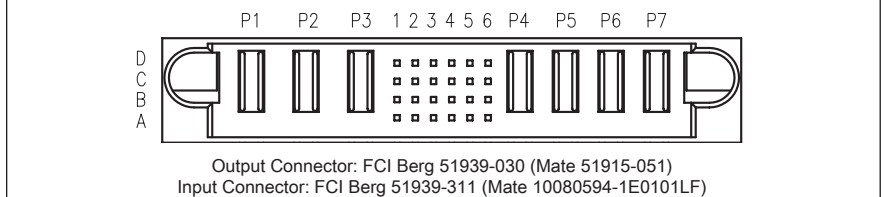


Examples:

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