Compact HE rectifiers for small to medium telecom applications

The Flatpack S rectifiers incorporate Telecom specifications, high efficiency, ORing protection on output and high power in a small, 217 mm deep box.

Used in the 1U high, 2 or 3 rectifier positions power rack with Smartpack S controller and battery and load distributions, the Flatpack S rectifiers cover 2 to 5.4kW applications using a minimum of space, less than 6 liters, and low heat dissipation.

FLATPACK S 48V RECTIFIERS

1000W HE & 1800W HE

Doc 241122.1x5.DS3 – v1

APPLICATIONS

TELECOM – MOBILE / WIRELESS

- **RADIO BASE STATIONS/ CELL SITES**
- **LTE / 4G / WIMAX**
- **DISTRIBUTED ANTENNA SYSTEMS**
- **MICROWAVE**
- **BROADBAND**

TELECOM – FIXED

- **TELEPHONY SERVERS / SWITCHES**
- **FIBER OPTICS / FTTX**
- **MICROWAVE**
- **CABLE**
- **BROADBAND**

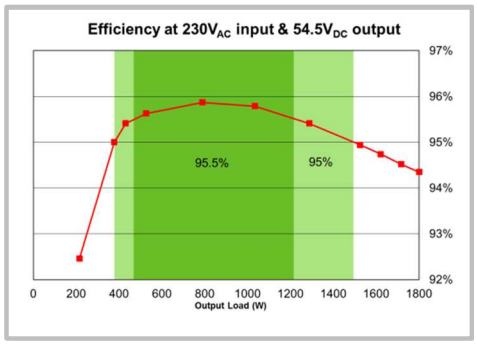
1U 50A SYSTEM

1U 100A SYSTEM

3U SYSTEM BULK OUTPUT

KEY FEATURES

- SMALL
- SHORT
- POWER DENSITY - 47 W/INCH^3
- HIGH EFFICIENCY
- ORING PROTECTION ON OUTPUT
- HOT PLUG-ABLE
- VOLTAGE AND POWER KEYING



FLATPACKS 48V 1800W EFFICIENCY PLOT

FLATPACK S 48V RECTIFIERS

1000W HE & 1800W HE

Model	48/1000 HE	48/1800 HE
Part number	241122.105	241122.125
INPUT DATA		
Voltage (nominal)	185 - 270 V_{AC} / 185 - 250 V_{DC} [1)]	195 - 277 V_{AC} / 195 - 250 V_{DC} [1)]
Voltage (operating range)	85 - 300 V_{AC} / 85 - 250 V_{DC} [1)]	85 - 305 V_{AC} / 85 - 250 V_{DC} [1)]
Current (maximum) @ nominal input, full load	5.9 A_{RMS}	9.9 A_{RMS}
Frequency	45 - 66 Hz / 0 Hz[1)]	
Power Factor	> 0.99 at 50% load or more	
Protection	Fuse in L & N Varistor Shutdown when input voltage is out of operating range	
OUTPUT DATA		
Voltage (default)	53.5 V_{DC}	
Voltage (adjustable range)	43.5 - 57.6 V_{DC}	
Power (maximum) @ nominal input	1000 W	1800 W
Power @ 85 VAC	420 W	700 W
Current (maximum) @ nominal input	20.9 A (@V_{OUT} < 48V_{DC})	37.5 A (@V_{OUT} < 48V_{DC})
Hold up time, maximum output power	>20ms; output voltage > 41 V_{DC}	>10ms; output voltage > 42 V_{DC}
Current sharing (10 - 100% load)	±5% of maximum current from 10 to 100% load	
Static Voltage regulation (10 - 100% load)	±0.5%	
Dynamic Voltage regulation	±5.0% for 10-90% or 90-10% load variation, regulation time < 50ms	
Ripple	< 150 mV_{PP} , 30 MHz bandwidth	
Protection	ORing FET Short circuit proof High temperature protection Over voltage Shutdown	
OTHER SPECIFICATIONS		
Efficiency	Up to 95.5 %	Up to 95.8 %
Isolation	3.0 kV_{AC} - input to output 1.5 kV_{AC} - input to earth 710 V_{DC} - output to earth	
Alarms: Red LED	Low and high input voltage shutdown, High and low temperature shutdown, Rectifier Failure, Overvoltage shutdown on output, Fan failure, Low output voltage alarm, CAN bus failure	
Warnings: Yellow LED	Rectifier in power derate mode, Remote output current limit activated, Input voltage out of range, flashing at overvoltage, Loss of CAN communication with controller	
Normal operation: Green LED		
MTBF (Telcordia SR-332 Issue I method III (a))	>315 000 (@ $T_{ambient}$: 25 °C)	>300 000 (@ $T_{ambient}$: 25 °C)
Operating temperature (5-95% RH n.cond. hum.) Maximum output power derates above temp / to	-40 to + 85°C [-40 to +185°F] 45°C [113°F] / 600W @ 85°C[185°F]	-40 to + 85°C [-40 to +185°F] 45°C [113°F] / 1000W @ 85°C[185°F]
Storage temperature	-40 to +85°C (-40 to +185°F), humidity 0 - 99% RH non-condensing	
Dimensions[WxHxD] / Weight	72 x 41.5 x 217mm (2.83 x 1.63 x 8.54") / < 850 g (1.9 lbs)	
DESIGN STANDARDS		
Electrical safety	UL 60950-1, EN 60950-1	
EMC	ETSI EN 300 386 EN 61000-6-1 / -2 / -3 / -4 TS 61000-6-5 FCC CFR 47 Part 15	
Environment	ETSI EN 300 019: 2-1 (Class 1.2), 2-2 (Class 2.3) & 2-3 (Class 3.2) RoHS (2011/65/EU) and WEEE (2002/96/EC) compliant	

1) DC input only allowed when up-stream breaker is rated for the applicable DC input voltage and has a maximum current rating of 32A

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