

High-power rectifier for Telecom applications

16kW per 1U 19" can be realized with the Flatpack2 40/4000 HE rectifier.

It is a cost efficient solution for the medium to large telecom applications from 4kW to multi cabinet installations.



Flatpack2 48V Rectifier

48 / 4000 HE

Doc 241119.904.DS3 – v1

APPLICATIONS

TELECOM - WIRELESS

- Radio base station / Cell sites
- LTE / 5G / WiMAX
- Mobile switching center (MCS)
- Microwave
- Broadband

TELECOM - FIXED

- Central office
- Telephony servers / switches
- Fiber optics
- Microwave
- Broadband
- Broadcast
- Data center



6U 500A power core with Smartpack S controller



Flatpack2 power core in T3 Outdoor cabinet

KEY FEATURES

- HIGH POWER DENSITY – 44 W/IN3
- COMPATIBLE WITH HC/HVDC POWER SHELVES
- PATENTED TECHNOLOGY
- HOT PLUGGABLE



Smartpack2 Touch controller

Flatpack2 48V Rectifier

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Model	48/4000 HE
Part number	241119.904
INPUT DATA	
Voltage range	85 - 300 V _{AC}
Voltage range (nominal)	185 - 275 V _{AC}
Frequency	45 - 66 Hz
Maximum current	23.9 A _{RMS}
Power Factor	0.99 (@ 50-100% load)
Protection	Varistor for transient protection, fuse in Live, shutdown when V _{IN} is out of range
OUTPUT DATA	
Default voltage	53.5 V _{DC}
Voltage range	43.5 - 57.6 V _{DC}
Max power, nominal input	4000 W
Max power, 85V input	1682 W
Hold-up time, default voltage and 3000 W load	10 ms
Ripple and noise, 30 MHz bandwidth	< 200 mV _{P-P}
Max current, @V _{OUT} = 48 V _{DC}	83.3 A
Current sharing	±5% of maximum current from 10 to 100% load
Static voltage regulation	±0.5% from 10 - 100% load and nominal input
Dynamic voltage regulation	±5% for 20 to 80% or 80-20% load step, regulation time < 50ms
Protection	Overvoltage shutdown, short circuit proof, high temperature, hot plug-in inrush current limiting, Fuse
OTHER SPECIFICATIONS	
Efficiency @ nominal input	94.3 %
Isolation	3.0 kV _{AC} – input and output, 1.5 kV _{AC} – input earth, 0.5 kV _{DC} – output earth
Alarms: Red LED	High and low mains shutdown, High and low temperature shutdown, Rectifier Failure, Overvoltage shutdown on output, Fan failure, Low voltage alarm, CAN bus failure
Warnings: Yellow LED	Rectifier in power de-rate mode, Remote battery current limit activated, Input voltage out of range, flashing at overvoltage
Normal operation: Green LED	
MTBF (Telcordia SR-332 Issue I method III (a))	>300 000 h (@T _{AMBIENT} = 25°C)
Operating temperature (5 - 95% RH non-cond.)	-40 to +75°C [-40 to +167°F]
Output power de-rates above temp / to	+45°C / 2800W @ +75°C
Output current de-rates above temp / to	+35°C / 76.2 @ +45-75°C
Storage temperature	-40 to +85°C (-40 to +185°F), humidity 0 - 99% RH non-condensing
Dimensions[WxHxD] / Weight	109 x 41.0 x 327mm (WxHxD) [4.25 x 1.61 x 13"] / 1.75 kg [3.9 lbs]
DESIGN STANDARDS	
Electrical safety	EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
EMC	EN 61000-6-1:2007, -6-2:2005, -6-3:2007 + A1:2011, -6-4:2007 + A1:2011 EN 300 386:v2.1.1, EN 55032 Class A
Environment	ETSI EN 300 019: 2-1 (Class 1.2) & 2-2 (Class 2.3) 2011/65/EU (RoHS) & 2012/19/EU (WEEE) Normal operating conditions as per IEC 62040-5-3:2016 clause 4.2. Other operating conditions as per IEC 62040-5-3:2016 clause 4.3, must be advised

Specifications are subject to change without notice