Compact HE converter for small to medium telecom applications

The Flatpack S DC/DC converter incorporates Telecom specifications, high efficiency, ORing protection on output and high power in a small, 217 mm deep box.

Its high efficiency helps on the overall efficiency of a remote DC power feed and hence also the business case for selecting such a solution for powering remote sites.

Its small dimensions make it perfect for integration into custom server racks.

Flatpack S DC/DC Converter

DC/DC 380/54 750 HE

Doc 241122.185.DS3 – v1.2

APPLICATIONS

TELECOM - FIXED

- Remote end converter for DSLAM

TELECOM – MOBILE / WIRELESS

- Distributed antenna systems
- Range extender for remote radio heads

DATA CENTERS

- Front–end /in-rack power conversion

241122.903 FPS PS 2R stand alone

KEY FEATURES

- SMALL
- SHORT
- POWER DENSITY – 19.5 W/INCH^3
- HIGH EFFICIENCY
- ORING PROTECTION ON OUTPUT
- HOT PLUGGABLE
- VOLTAGE AND POWER KEYING

242100.415 Smartpack S Panel

Flatpack S DC/DC Converter

Doc 241122.185.DS3 – v1.2

MODEL	FLATPACK S DCDC 380/54 750
Part number	241122.185
INPUT DATA	
Voltage (nominal)	300 - 400 V_{DC}
Voltage (operating range)	200 - 400 V_{DC}
Current (maximum)	2.9 A_{DC}
Protection	Fuse in Positive & Negative Reversed polarity insensitive Shutdown above 410 V_{DC}
OUTPUT DATA	
Voltage (fixed)	54 V_{DC}
Power (maximum) @ nominal input	750 W
Power (maximum) @ 200 V_{DC} input	500 W
Current (maximum) @ nominal input	13.8 A (@V_{OUT} < 54 V_{DC})
Hold up time, maximum output power	>10ms; output voltage > 41 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	> 96 %
Isolation	4.2 kV_{DC} - input to output 2.25 kV_{DC} - input to earth 710 V_{DC} - output to earth
Alarms: Red LED	Low and high input voltage, High and low temperature shutdown, Rectifier Failure, Overvoltage shutdown on output, Fan failure when fan stops, Low output voltage alarm, CAN bus failure
Warnings: Yellow LED	Converter in power de-rate mode, Remote output current limit activated, Input voltage out of range, flashing at overvoltage, Loss of CAN communication with controller
Normal operation: Green LED	
Alarm relay (NO - opens when de-energized)	Opens on Alarms[1] and missing input voltage.
MTBF (Telcordia SR-332 Issue I method III (a))	>350 000 (@ $T_{ambient}$: 25 °C)
Operating temperature (5-95% RH n.cond. hum.) Maximum output power de-rates above temp / to	-40 to + 85°C [-40 to +185°F] 60°C [140°F] / 500W @ 70°C [158°F] / 125W @ 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 40 x 217mm[2] (2.84 x 1.57 x 8.54")[2] / < 850 g (1.9 lbs)
DESIGN STANDARDS	
Electrical safety	UL 60950-1:2011, EN 60950-1:2006+A11:2009+A1:2010+A12:2011
EMC	ETSI EN 300 386 v1.6.1, FCC CFR 47 Part 15:2013 EN 61000-6-1:2007, -6-2:2005, - 6-3:2007 + A1:2010, - 6-4:2007 + A1:2010
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) for high and low temperature shutdown and fan failure alarms the relay will open at least 5s before the module shuts down
2) including handle depth is 234mm [9.21"] and height 42mm [1.65"]

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