

PUMA-2509 VITA 62 3U 1" 300W PSU

- MIL-STD-704F | MIL-STD 1275E
- 80V to 264V AC 50 to 400Hz Input
- 18V to 75V DC Input
- MIL-STD 461F
- Wide -40C to 85C temperature range
- 300W nominal output <350W for 3s
- Wedgelock Cooling
- 6 fully controlled and regulated outputs
- MIL-STD 810G shock and vibration for harsh environments
- UK designed and manufactured **ITAR & EAR99 FREE**



Description

The PUMA-2509 is an industry standard VITA 62 conduction cooled VPX power supply.

The unit has been designed in the UK, and is manufactured in UK facilities certified to AS-9100, J-STD-001, & IPC-A-610 Class 3.

PUMA-2509 is 3U high, 1" slot wide and wedgelock cooled through the chassis.

It can provide a nominal 300W from combined outputs, and over-power to 350W for 3s.

With an efficiency of >90% at nominal input voltage.

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Input

Input Voltage	18...75VDC
Input Protection	Mil-Std 704E MIL-STD 1275E
Input to Output Isolation	3000 VAC RMSTest Voltage
Input to Case Isolation	1500 VAC RMSTest Voltage
Output to Case Isolation	500V RMS
Input Connector	VITA 62
Earth Connection	through chassis

General

Overall Efficiency	>90% Typical
MTBF	150,000 Hours
Hold-up	Optional external

Output

Output Power	300W
Output Voltage	see output table
Typical Output Regulation	+/- 2%
Output Protection	Circuit Breaker
Overvoltage Protection	
Overcurrent Protection	110 to 115%
Output Connector	VITA 62

Environmental

Operating Temperature	-40C to +85C
Environment	Mil-Std 810G
Vibration	Mil-Std 810G Method 514.3 Category 1 (Designed to Meet) Mil-Std 810G Method 514.4 Category 3 (Designed to Meet)
Shock	Mil-Std 810G Method 516.3 Procedure I (Designed to Meet)
EMI	Mil-Std 461F Part 1 & 2 CE101 CE102 CS101 CS106 CS114 CS115 CS116 RE101 RE102 RS101 RS103

Mechanical

Dimensions	148.5mm x 101mm x 22.47mm (L x H x W) 3U x 1" VITA 62
Weight	<2Kg
Cooling	Conduction cooled through wedgelocks to chassis

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Outputs

Output 1: VS1: +12V @ 25A

Output voltage	12V typical	Setpoint $\pm 1\%$, nominal output, full load, 25°C
Voltage sense		Compensates up to 500mV drop in output cables
Load current	25A	
Current limit	28A	Constant current topology
Ripple & Noise	120mV	peak to peak, nominal input voltage
Load regulation	0.2%	
Line regulation	0.2%	
Efficiency	90%	Nominal input voltage, full load

Output 2: VS2: +3v3 @ 40A

Output voltage	3v3 typical	Setpoint $\pm 2.5\%$, nominal output, full load, 25°C
Voltage sense		Compensates up to 500mV drop in output cables
Load current	40A	
Current limit	52A	Constant current topology
Ripple & Noise	3mV	peak to peak, nominal input voltage
Load regulation	0.1%	
Line regulation	0.1%	
Efficiency	95%	Nominal Input voltage, full load

Output 3: VS3: +5V @ 30A

Output voltage	5V typical	Setpoint $\pm 1.5\%$, nominal output, full load, 25°C
Voltage sense		Compensates up to 500mV drop in output cables
Load current	30A	
Current limit	33A	Constant current topology
Ripple & Noise	50mV	peak to peak, nominal input voltage
Load regulation	0.1%	
Line regulation	0.1%	
Efficiency	94%	Nominal input voltage, full load

Output 4: AUX: +3v3 @ 4A

Output voltage	3v3 typical	Setpoint $\pm 1.5\%$, nominal output, full load, 25°C
Voltage sense		Compensates up to 500mV drop in output cables
Load current	4A	
Current limit	4.4A	Constant current topology
Ripple & Noise	75mV	peak to peak, nominal input voltage
Load regulation	0.2%	
Line regulation	0.2%	
Efficiency	89%	Nominal input voltage, full load

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Output 5: AUX: +12V @ 12A

Output voltage	12V typical	Setpoint $\pm 1\%$, nominal output, full load, 25°C
Voltage sense		Compensates up to 500mV drop in output cables
Load current	12A	
Current limit	13A	Constant current topology
Ripple & Noise	120mV	peak to peak, nominal input voltage
Load regulation	0.2%	
Line regulation	0.2%	
Efficiency	90%	Nominal input voltage, full load

Output 6: AUX: -12V @ 2.8A

Output voltage	-12V typical	Setpoint $\pm 1\%$, nominal output, full load, 25°C
Voltage sense		Compensates up to 500mV drop in output cables
Load current	2.8A	
Current limit	3A	Constant current topology
Ripple & Noise	120mV	peak to peak, nominal input voltage
Load regulation	0.2%	
Line regulation	0.2%	
Efficiency	>87%	Nominal input voltage, full load