



## Lot 9 Compliance Guide for Unitrends Recovery MAX Appliances

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**UNITRENDS** **MSP**



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Unitrends, Inc  
200 Wheeler Road  
North Tower, 2nd Floor  
Burlington, MA 01803, USA  
Phone: 1.866.359.5411

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# Chapter 1: Lot 9 Compliance Guide for Unitrends Recovery Max Appliances

This document describes Unitrends Recovery Series appliance requirements and results for Lot 9 compliance. See these topics for details:

- "Product description"
- "Lot 9 requirements and results"

## Product description

The following table provides product type, manufacturer name, registered trade name and address, and model numbers of the Unitrends Recovery MAX appliances that require Lot 9 compliance:

Item	Description
Product type	Data storage
Manufacturer's name	Unitrends
Registered trade name	Unitrends
Registered trade address	200 Summit Drive, Suite 200 Burlington, MA 01803
Product model numbers	MAX2-32, MAX2-64, MAX4-32, MAX4-64, MAX8-32, MAX8-64 UMSP2-32, UMSP2-64, UMSP4-32, UMSP4-64, UMSP8-32, UMSP8-64
Year of manufacture	2019

## Lot 9 requirements and results

Lot 9 requirements are described in the following table. See the applicable section referenced in the Result column for detailed results and remarks.

Lot 9 Requirement	Description	Result
PSU efficiency	PSU efficiency at 10% (if applicable), 20%, 50% and 100% of rated output power, with the exception of direct current online data storage products, expressed in % and rounded to the first decimal place.	For details, see " <a href="#">80 PLUS ratings</a> ".
Power factor	Power factor at 50% of the rated load level, with the exception of direct current online data storage products, rounded to three decimal places.	For details, see " <a href="#">80 PLUS Verification Testing Report</a> ".
Operating condition class	Declared operating condition class. This product has been tested in order to verify that it will function within the boundaries (such as temperature and humidity) of the declared operating condition class.	For details, see " <a href="#">Operating condition classes</a> ".
Data deletion	Instructions for secure data deletion.	To securely delete data from a Recovery Series appliance, Unitrends recommends that you re-image the appliance. For details, see this Unitrends Knowledge Base article: <a href="#">How to reimage a Unitrends appliance</a> .

## 80 PLUS ratings

80 PLUS test type	115 V internal non-redundant				230 V internal redundant				230 V EU internal non-redundant			
	10%	20%	50%	100%	10%	20%	50%	100%	10%	20%	50%	100%
80 PLUS	n/a	80%	80%	80%	n/a	n/a	n/a	n/a	n/a	82%	85%	82%
80 PLUS Bronze	n/a	82%	85%	82%	n/a	81%	85%	81%	n/a	85%	88%	85%
80 PLUS Silver	n/a	85%	88%	85%	n/a	85%	89%	85%	n/a	87%	90%	87%
80 PLUS Gold	n/a	87%	90%	87%	n/a	88%	92%	88%	n/a	90%	92%	89%



80 PLUS test type	115 V internal non-redundant				230 V internal redundant				230 V EU internal non-redundant			
	10%	20%	50%	100%	10%	20%	50%	100%	10%	20%	50%	100%
80 PLUS Platinum	n/a	90%	92%	89%	n/a	90%	94%	91%	n/a	92%	94%	90%
80 PLUS Titanium	90%	92%	94%	90%	90%	94%	96%	91%	90%	94%	96%	94%

## Operating condition classes

Operating condition class	Dry bulb temp range	Humidity range, non-condensing	Max dew point (°C)	Max rate of change (°C/hr)
A1	<ul style="list-style-type: none"> <li>Allowable: 5 – 32</li> <li>Recommended: 18 – 27</li> </ul>	<ul style="list-style-type: none"> <li>Allowable: –12 °C Dew Point (DP) and 8% relative humidity (RH) to 17 °C DP and 80% RH</li> <li>Recommended: –9 °C DP to 15 °C DP and 60% RH</li> </ul>	17	5/20
A2	<ul style="list-style-type: none"> <li>Allowable: 10 – 35</li> <li>Recommended: 18 – 27</li> </ul>	<ul style="list-style-type: none"> <li>Allowable: –12 °C DP and 8% RH to 21 °C DP and 80% RH</li> <li>Recommended: –9 °C DP to 15 °C DP and 60% RH</li> </ul>	21	5/20
A3	<ul style="list-style-type: none"> <li>Allowable: 5 – 40</li> <li>Recommended: 18 – 27</li> </ul>	<ul style="list-style-type: none"> <li>Allowable: –12 °C DP and 8 % RH to 24 °C DP and 85% RH</li> <li>Recommended: –9 °C DP to 15 °C DP and 60% RH</li> </ul>	24	5/20

Operating condition class	Dry bulb temp range	Humidity range, non-condensing	Max dew point (°C)	Max rate of change (°C/hr)
A4	<ul style="list-style-type: none"><li>• Allowable: 5 – 45</li><li>• Recommended: 18 – 27</li></ul>	<ul style="list-style-type: none"><li>• Recommended : -9 °C DP to 15 °C DP and 60% RH</li></ul>	24	5/20

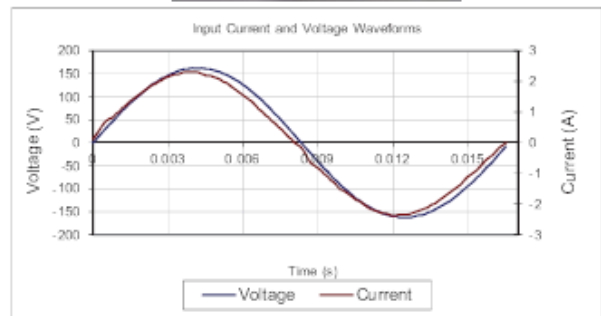
# 80 PLUS Verification Testing Report

## 80 PLUS Verification and Testing Report

<b>TYPICAL EFFICIENCY (50% Load):</b>	<b>92.51%</b>
<b>AVERAGE EFFICIENCY :</b>	<b>91.23%</b>
<b>80 PLUS COMPLIANT:</b>	<b>YES</b>



<b>Ecos ID#</b>	4445.1
<b>Manufacturer</b>	Super Micro Computer, Inc.
<b>Model Number</b>	PWS-350-1H
<b>Serial Number</b>	N/A
<b>Year</b>	2015
<b>Type</b>	1U
<b>Test Date</b>	9/15/15

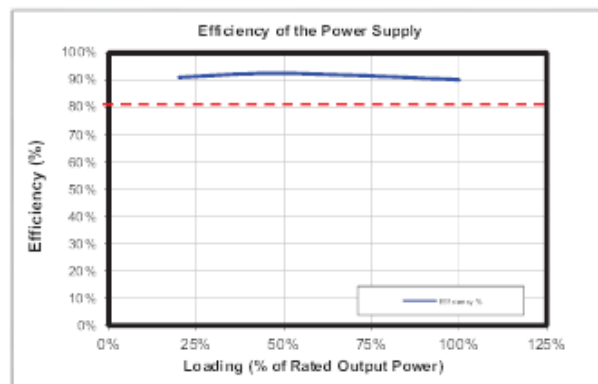
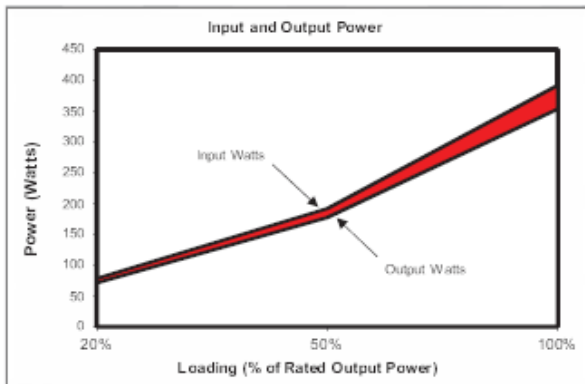


Input AC Current Waveform (ITHD = 1.89%, 50% Load)

Rated Specifications	Value	Units
Input Voltage	100-240	Volts
Input Current	5-2.5	Amps
Input Frequency	50-60	Hz
<b>Rated Output Power</b>	<b>350</b>	<b>Watts</b>

Note: All measurements were taken with input voltage at 115 V nominal at 60 Hz

I <sub>RMSA</sub> A	PF	I <sub>THD</sub> (%)	Load (%)	Input Watts	DC Terminal Voltage (V)/ DC Load Current (A)					Output Watts	Efficiency %
					12V (cumulative of 12V1, 12V2, etc.)		-12V	3.3V	5V		
0.40	0.90	11.34%	10%	41.39	12.14/2.28	12.08/0.02	3.34/0.66	5.15/0.82	5.14/0.24	35.64	86.10%
0.70	0.97	6.97%	20%	77.90	12.09/4.57	11.75/0.03	3.34/1.32	5.14/1.65	5.13/0.47	70.89	91.00%
1.67	0.99	1.89%	50%	191.23	12.07/11.44	11.32/0.08	3.33/3.29	5.13/4.08	5.11/1.18	176.91	92.51%
3.41	1.00	1.16%	100%	391.40	12.06/22.86	11.18/0.16	3.32/6.58	5.11/8.17	5.06/2.36	352.98	90.18%



These tests were conducted by a third party independent testing firm on behalf of the 80 PLUS Program. 80 PLUS is a certification program to promote highly-efficient power supplies (greater than 80% efficiency in the active mode) in technology applications.  
<http://www.80plus.org/>

