Digilab – Division Power Analysis
V.le S. Sisto 439
06132 – Perugia – Italy
Tel 0755292148 – 3396747413
digilab@libero.it
info@digilabtek.it
www.digilabtek.it

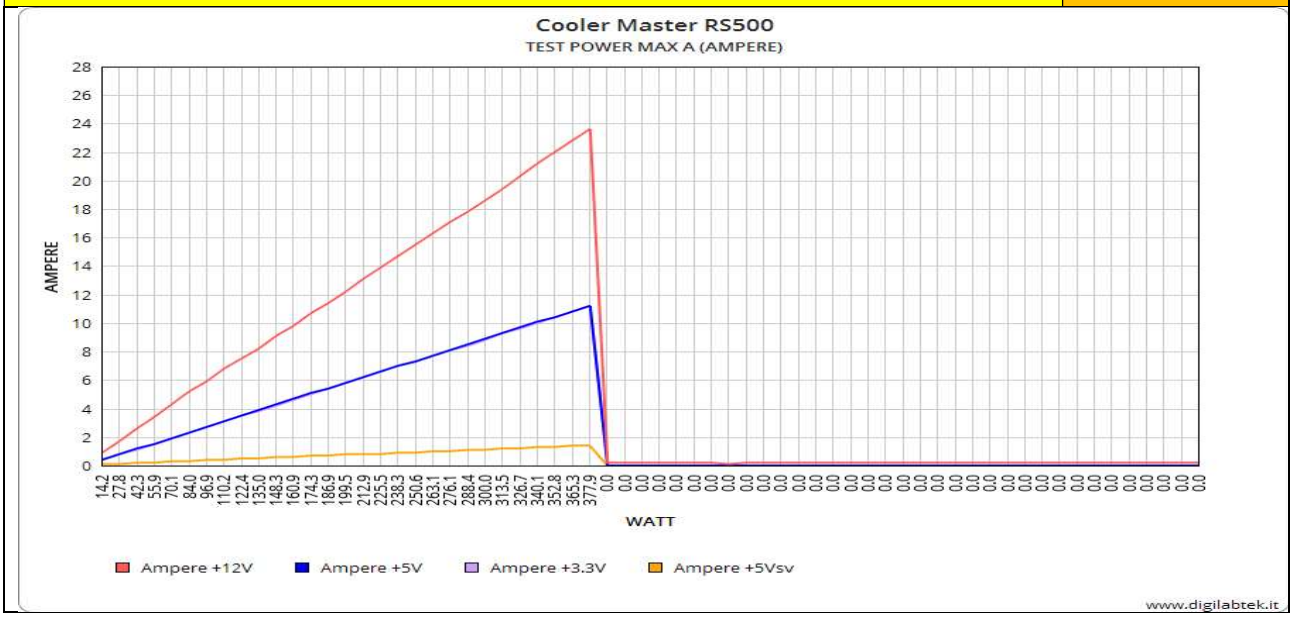
DigilabTek EvalP YELLOW 62

| Testing Report - Performance - Efficiency | Date 10/10/2018 |
|---|---|
| **Efficiency Load 50%** | **78.65** |
| **Everange Efficiency Load 10% - 100%** | **75.79** |
| **General Evaluation** | **61.52/100** |

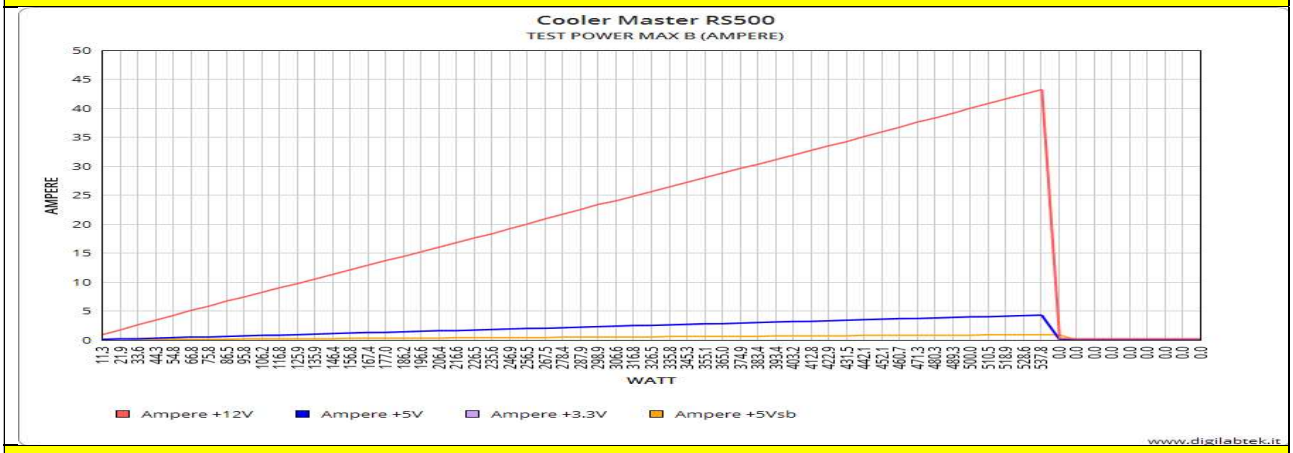
| | |
|---|---|
| **Manufacturer** | Cooler Master |
| **Model** | RS-500-PSAP-J3 |
| **Serial** | - |
| **Type** | ATX |
| **PFC** | Passive |


| Specification | Value | |
|---|---|---|
| **Input Voltage (Volt AC)** | 220-240 | |
| **Input Current (Ampere)** | 7 | |
| **Input Frequency (Hz)** | 50 | |
| **Output Power (Watt)** | 500 | |
| | **Ampere** | **Watt** |
| **Output +12V** | 20A+20A | 360W |
| **Output +5V** | 22A | 130W |
| **Output +3.3V** | 20A | |
| **Output +5Vsb** | 2.5A | 12.5W |
| **Output -12V** | 0.8A | 9.6W |

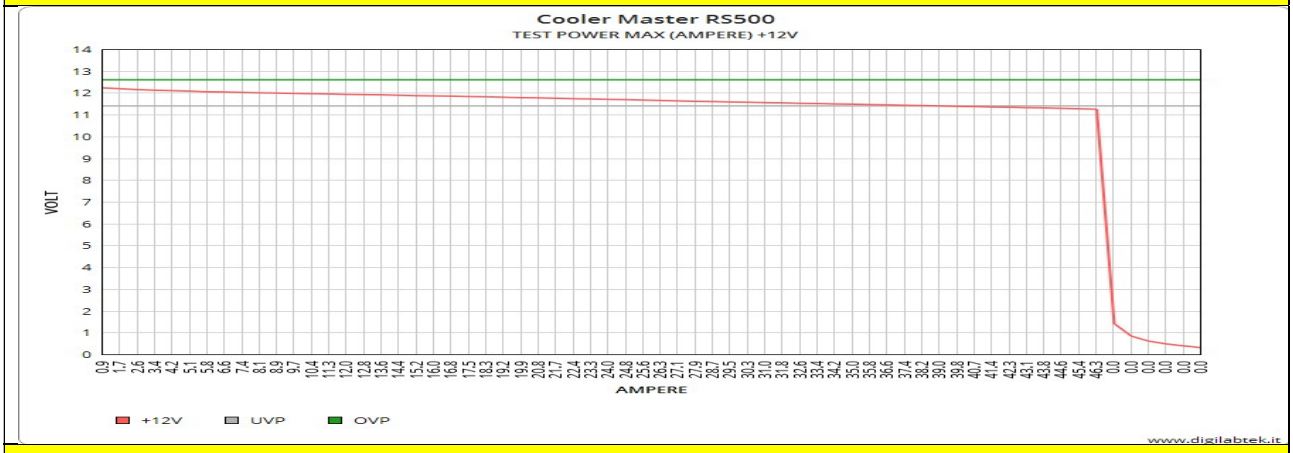
| **Measurement conditions (pure sine wave):** | **220V / 50Hz** |
|---|---|
| **Power Max Ampere A -** Value [+12V–52A]-[+5V–25A]-[+3.3V–25A]-[+5Vsb–3A] | **Rating:** 6.37/10 |



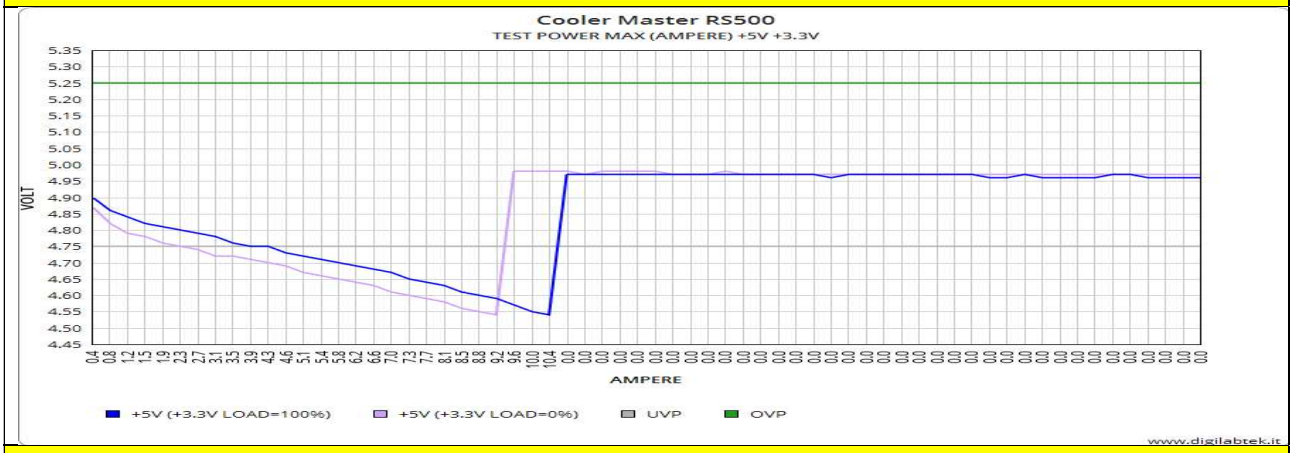
**Power Max Ampere B -** Value [+12V–52A]-[+5V–5A]-[+3.3V–5A]-[+5Vsb–1A]



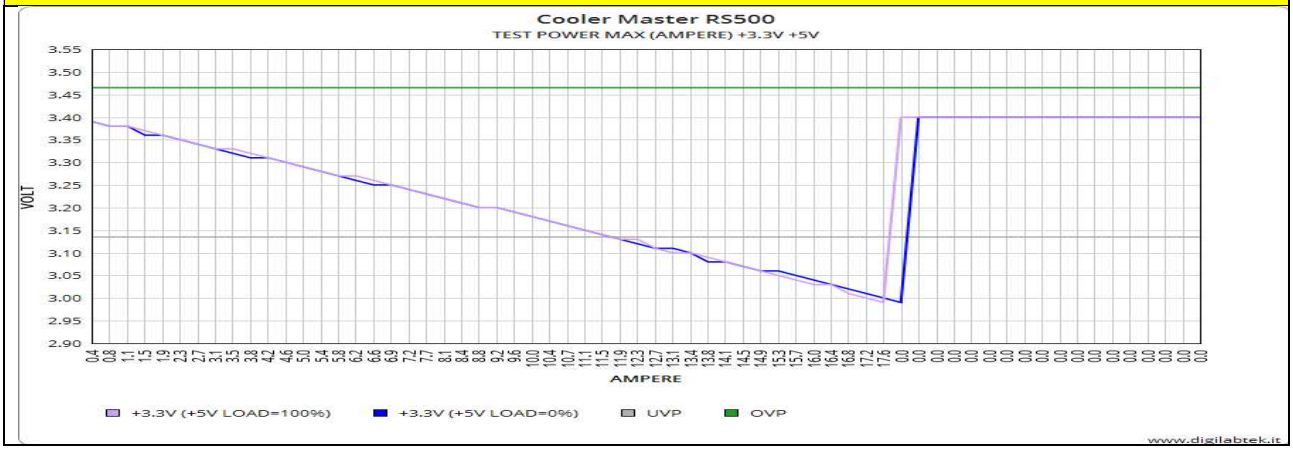

**Power Max Ampere 12V -** Value [+12V–52A]-[+5V-0A]-[+3.3V–0A]-[+5Vsb–0A]



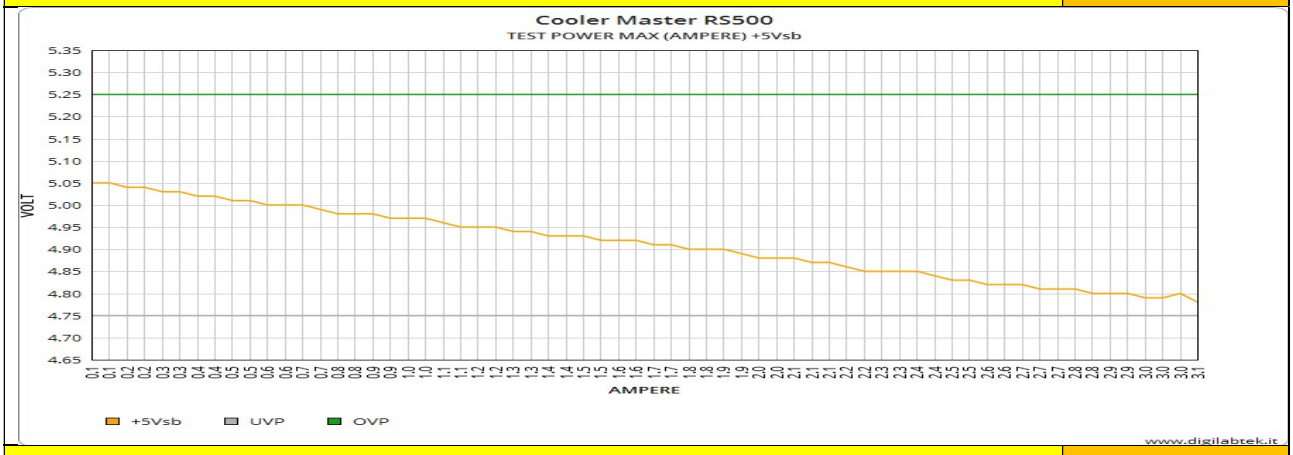

**Power Max Ampere 5V -** Value [+12V–0A]-[+5V–25A]-[+3.3V–0A]-[+5Vsb–0A]



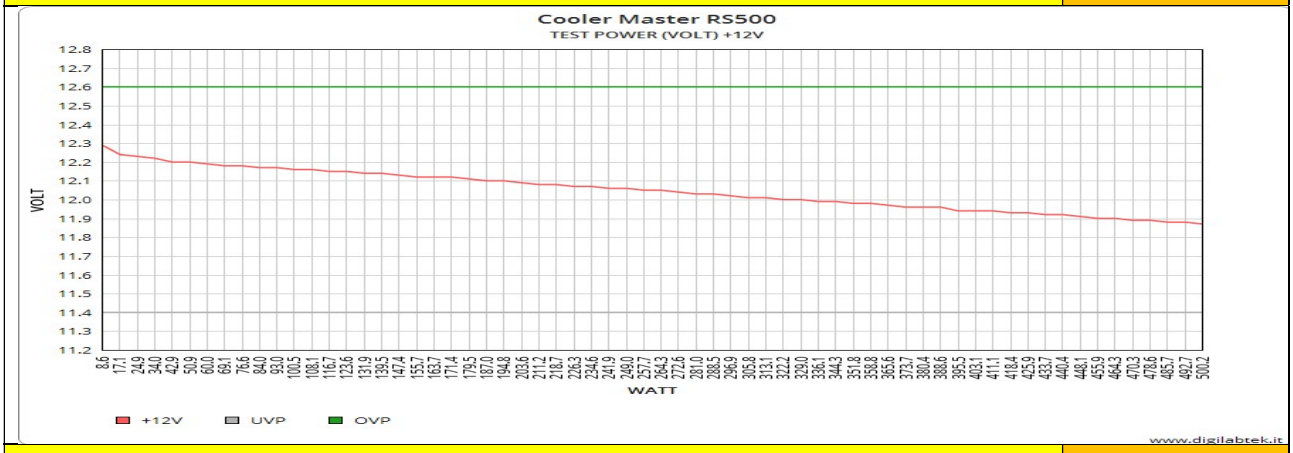

**Power Max Ampere 3.3V -** Value [+12V–0A]-[+5V–0A]-[+3.3V–25A]-[+5Vsb–0A]



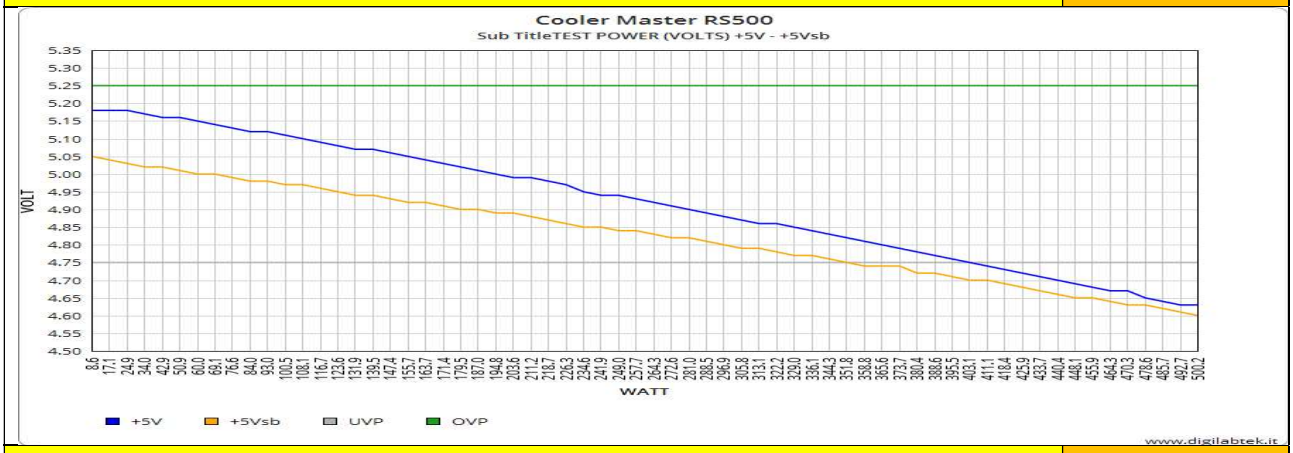
**Power Max Ampere 5Vsb -** Value [+12V–0A]-[+5V–0A]-[+3.3V–0A]-[+5Vsb–3.0A] **Rating:** 6.45/10



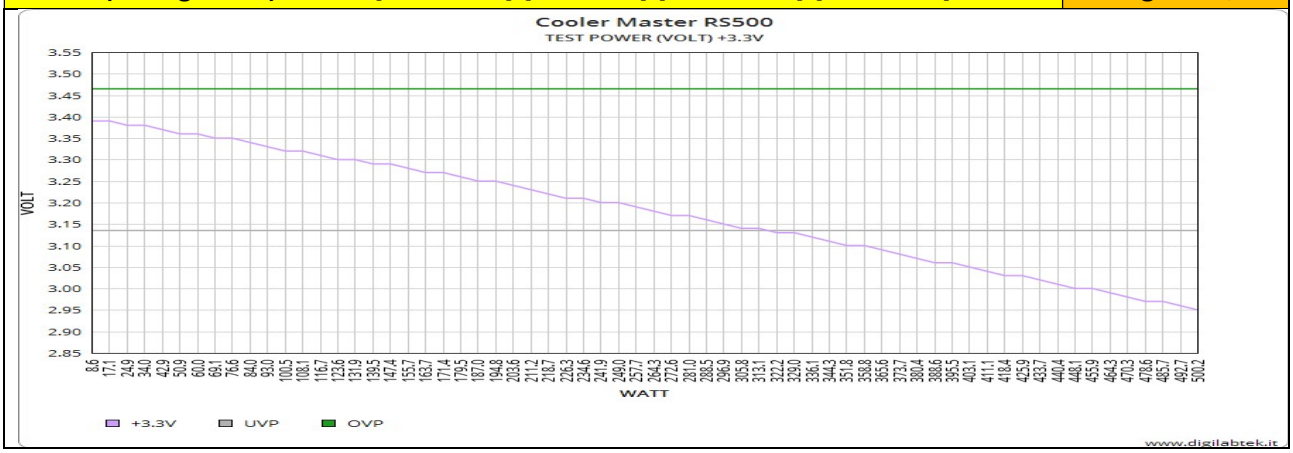

**Power (Voltage 12V) -** Value [+12V–35A]-[+5V–11A]-[+3.3V–10A]-[+5Vsb–2A] **Rating:** 8.88/10




**Power (Voltage 5V + 5Vsb) -** Value [+12V–35A]-[+5V–11A]-[+3.3V–10A]-[+5Vsb–2A] **Rating:** 6.47/10

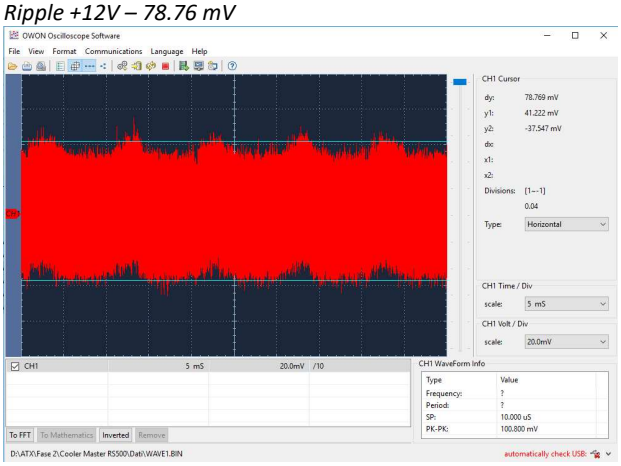



**Power (Voltage 3.3V) -** Value [+12V–35A]-[+5V–11A]-[+3.3V–10A]-[+5Vsb–2A] **Rating:** 4.92/10

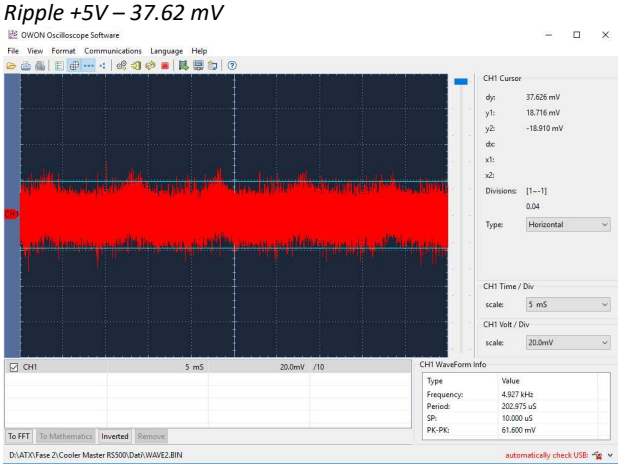


**Ripple (Voltage Pk-Pk) -** Value [+12V–17A]-[+5V–5.5A] - [+3.3V–5A]-[+5Vsb–0.1A]

*Ripple +12V – 78.76 mV*

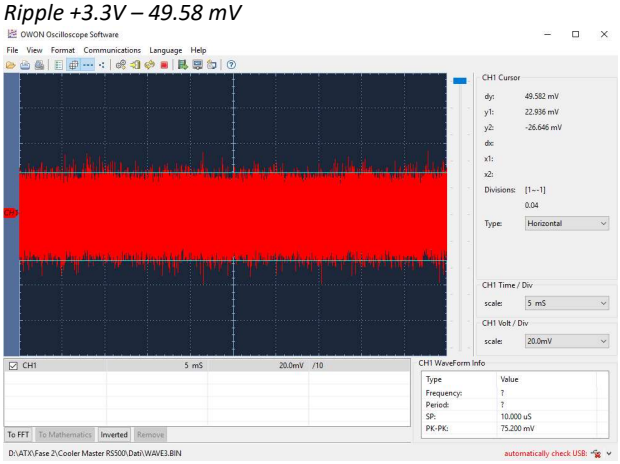



*Ripple +5V – 37.62 mV*

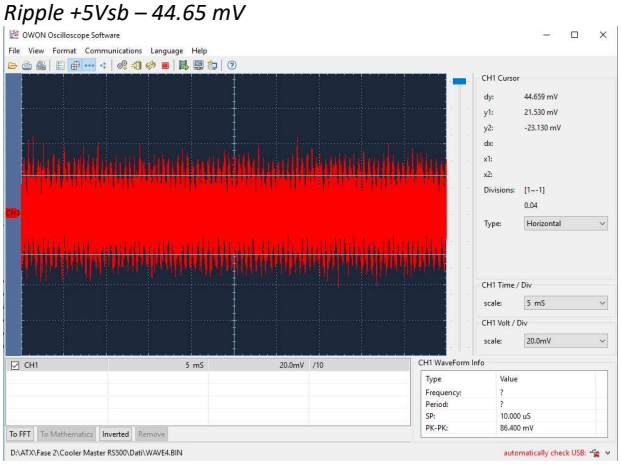



**Ripple (Voltage Pk-Pk) -** Value [+12V–17A]-[+5V–5.5A] - [+3.3V–5A]-[+5Vsb–0.1A]

*Ripple +3.3V – 49.58 mV*

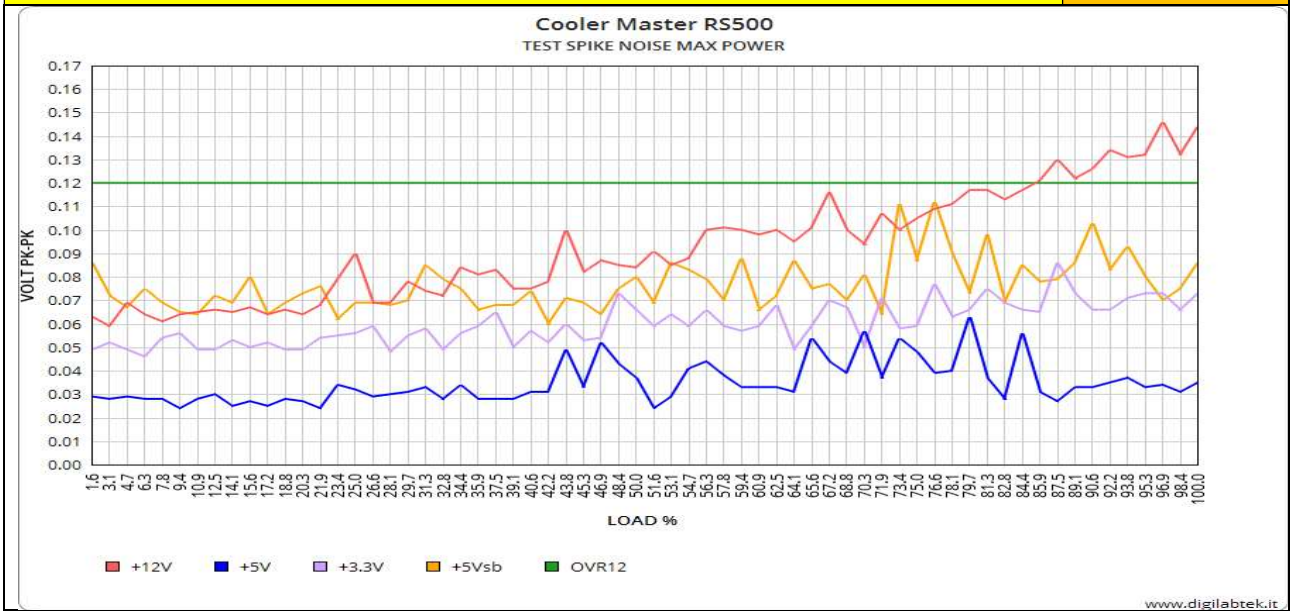



*Ripple +5Vsb – 44.65 mV*



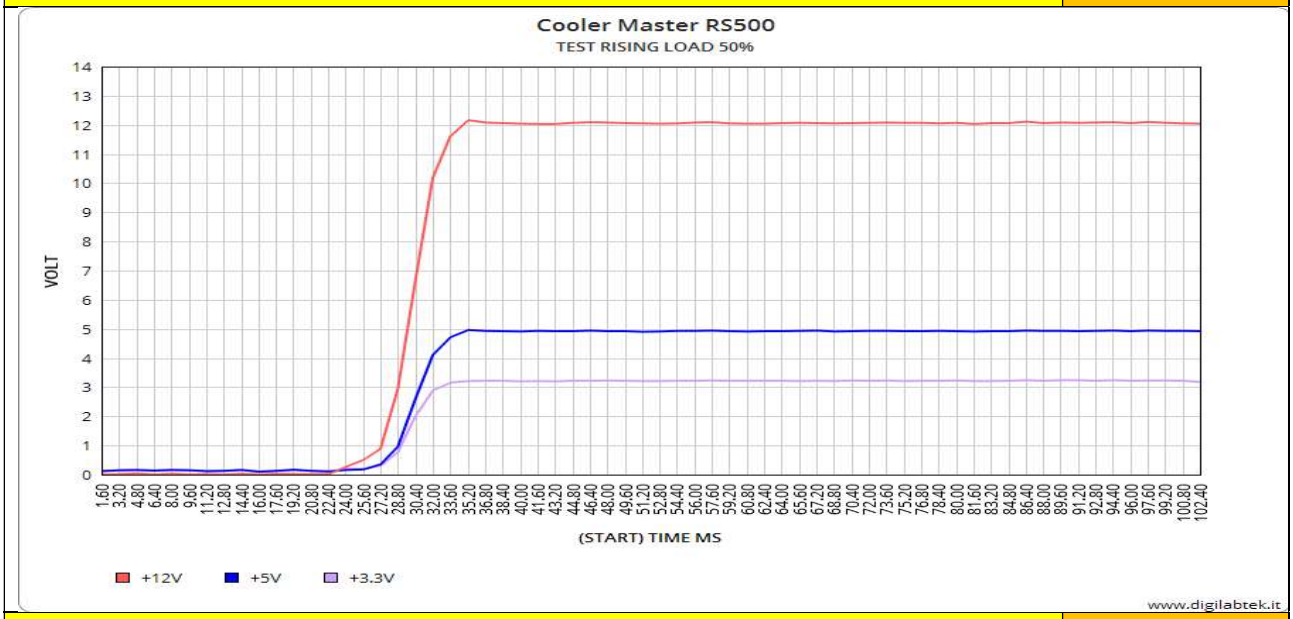

**Spike Noise (Voltage Pk-Pk) -** Value [+12V–35A]-[+5V–11A]-[+3.3V–10A]-[+5Vsb–

**Rating:** 8.31/10



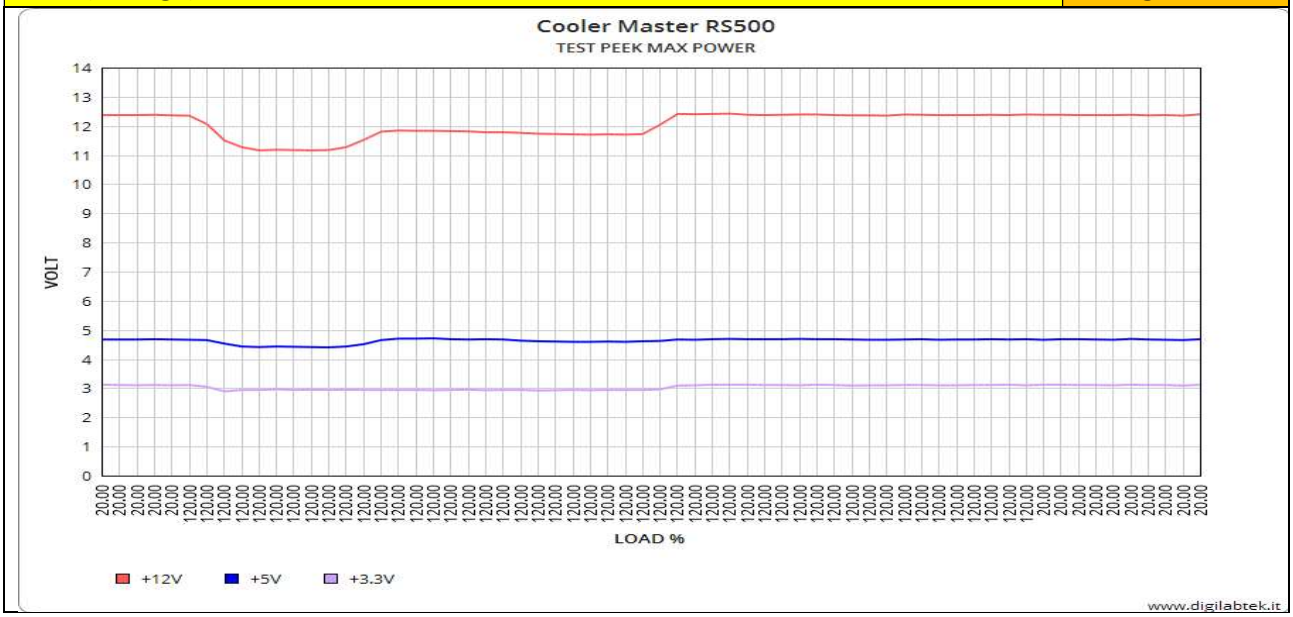

**Digilab – Division Power Analysis – V.le S. Sisto 439 – 06132 – Perugia Tel 0755292148 – 3396747413 – Email digilab@libero.it**

**Rising (Voltage) -** Value [+12V–17A]-[+5V–5.5A]-[+3.3V–5A]-[+5Vsb–1A] **Rating:** 8.44/10

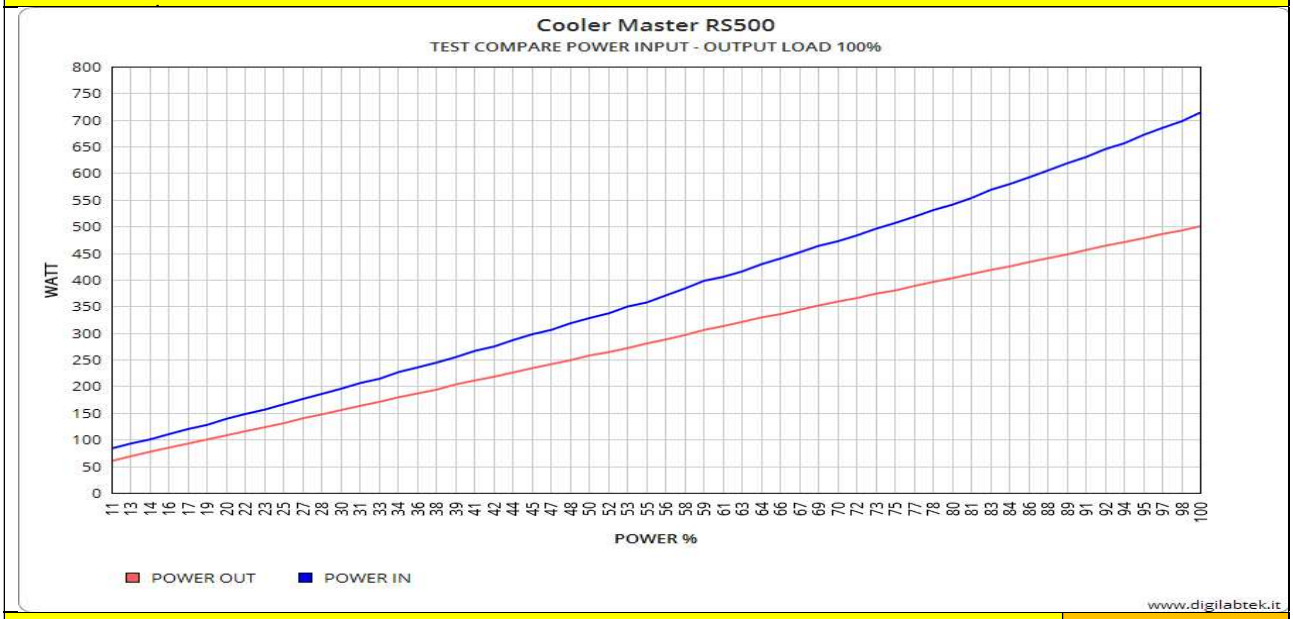



**Falling (Voltage) -** Value [+12V–17A]-[+5V–5.5A]-[+3.3V–5A]-[+5Vsb–1A] **Rating:** 6.46/10

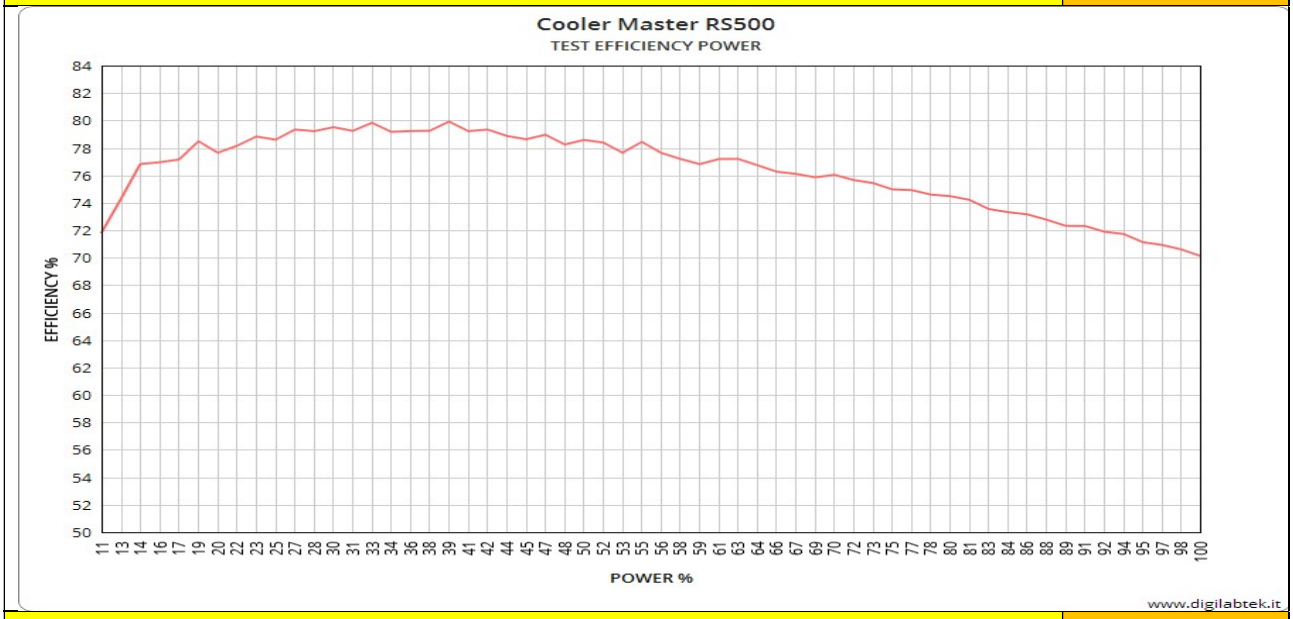

**Peek (Voltage) -** Value [+12V–35A]-[+5V–11A]-[+3.3V–10A]-[+5Vsb–2A] **Rating:** 7.54/10



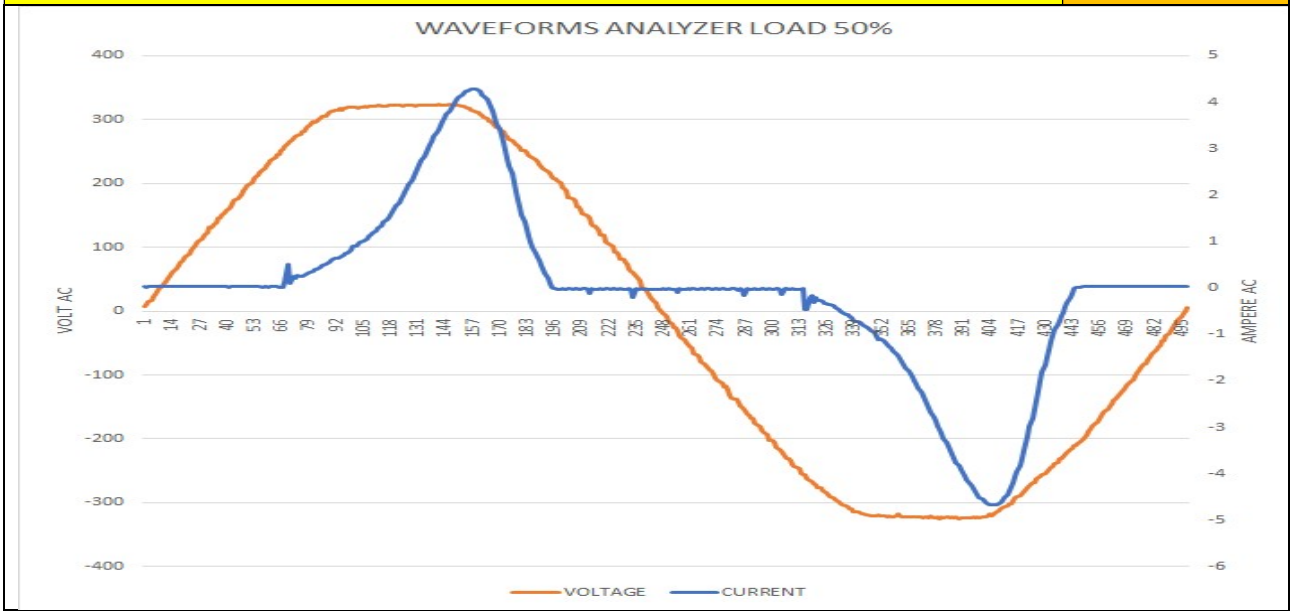
## Compare Input and Output Power




## Efficiency Power Supply — Rating: 5/10




## Current and Voltage Waveforms Value [+12V–32A]-[+5V–5A]-[+3.3V–5A]-[+5Vsb–1A] — Rating:



## Efficiency Report 220V AC / 50Hz

| Watt In | I-rms | PF | Load % | +12V/A | +5V/A | +3.3V/A | +5Vsb/A | Watt Out | Efficiency |
|---|---|---|---|---|---|---|---|---|---|
| - | - | - | 10% | - | - | - | - | - | - |
| 138.43 | 0.754 | 0.77 | 20% | 12.2/7.17 | 5.1/1.97 | 3.3/1.97 | 5.0/0.54 | 106.46 | 76.91% |
| 320.27 | 1.812 | 0.76 | 50% | 12.1/16.9 | 4.9/5.48 | 3.2/4.94 | 4.8/1.07 | 251.90 | 78.65% |
| 710.95 | 3.965 | 0.75 | 100% | 11.9/34.7 | 4.7/11.0 | 3.0/9.89 | 4.6/2.11 | 502.46 | 70.67% |

| Watt In | I-rms | PF | Load % | Standby Efficiency +5Vsb/A | Watt Out | Efficiency |
|---|---|---|---|---|---|---|
| 4.04 | 0.067 | - | 20% | 5.02/0.54 | 2.72 | 67.11% |
| 9.08 | 0.093 | 0.40 | 50% | 5.49/1.34 | 6.63 | 72.88% |
| 17.13 | 0.135 | 0.53 | 100% | 4.77/2.61 | 12.45 | 72.64% |

| Standby Power IEC62301-2011 (MAX 0.5W) | PASS | 0.307W |
|---|---|---|

### Conclusions

**Positive notes:**

-
-
-

**Negative notes:**

-
-
-