

1 Startup

The startup waveform is shown in Figure 1. The input voltage is set at 12.0V, with full load at the output (20W).

Channel C1: **input voltage**
Channel C2: **output voltage**

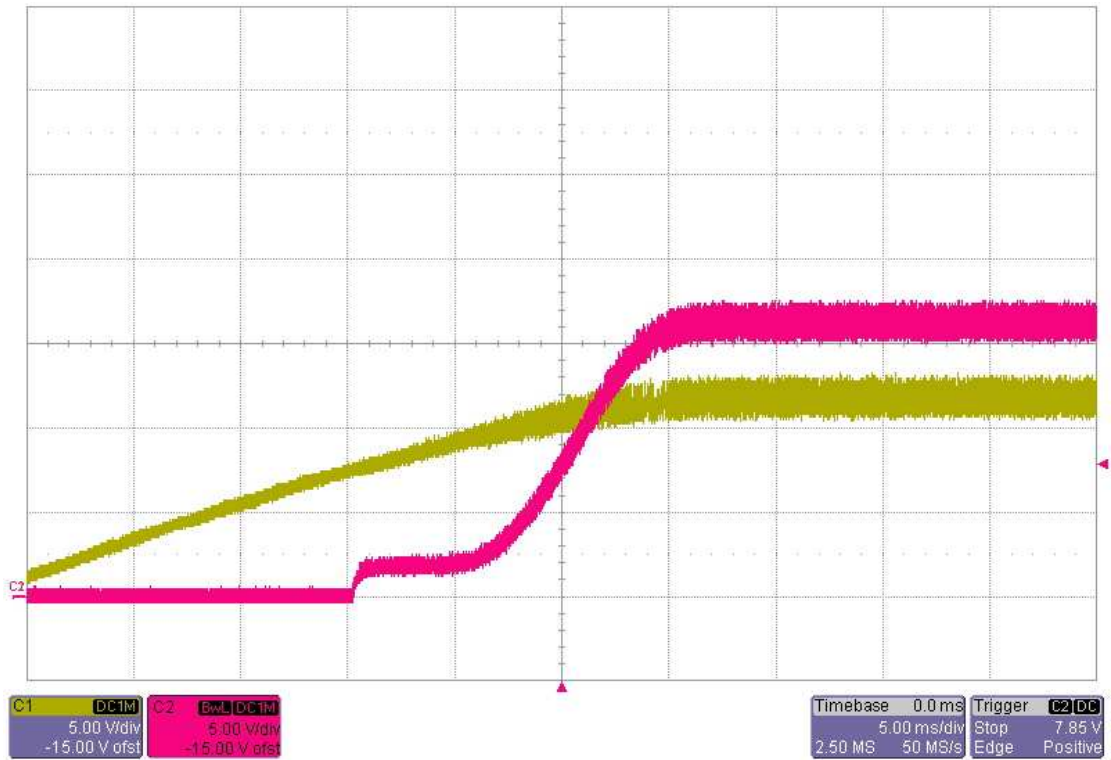


Figure 1

2 Shutdown

The shutdown waveform is shown in Figure 2. The input voltage is set at 12.0V with full load at the output (20W).

Channel C1: **input voltage**

Channel C2: **output voltage**

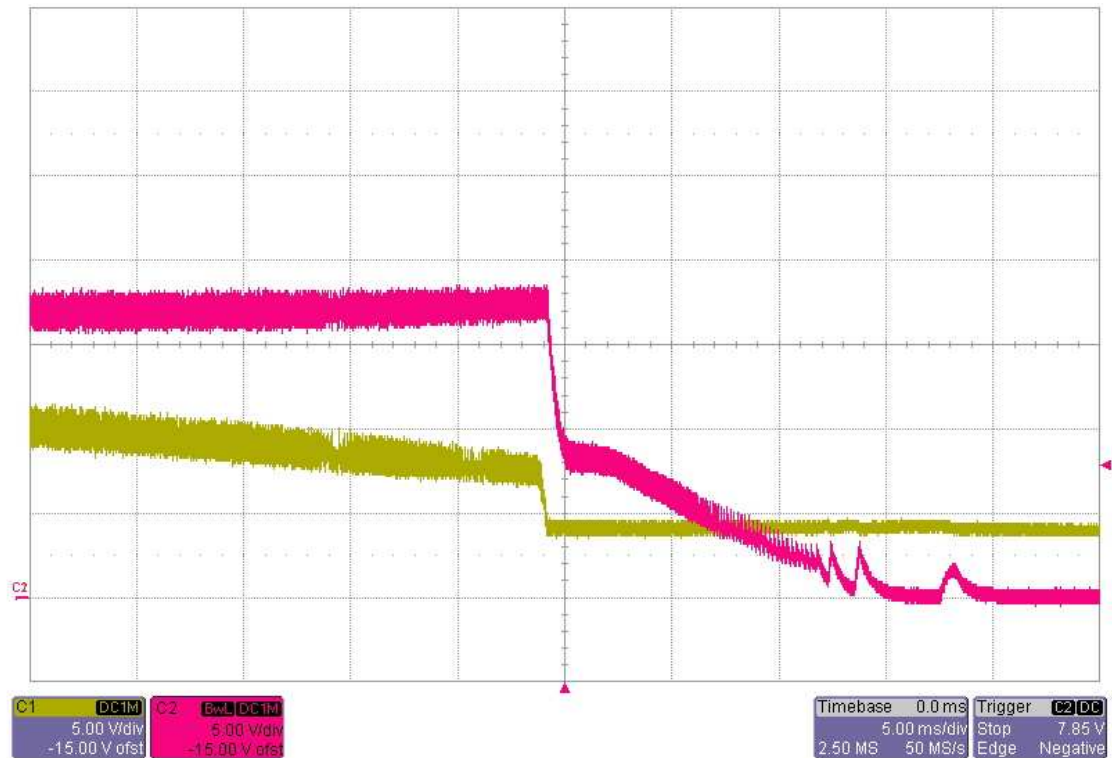


Figure 2

3 Efficiency

The efficiency of the converter is shown in Figure 3.

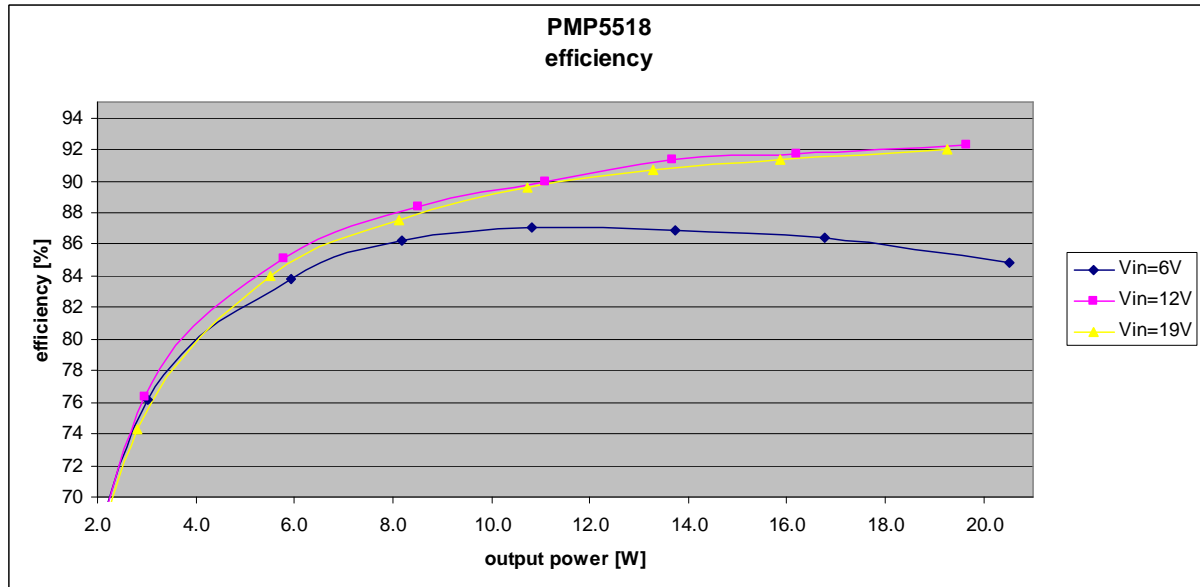


Figure 3

4 Line regulation

The line regulation is shown in Figure 4.

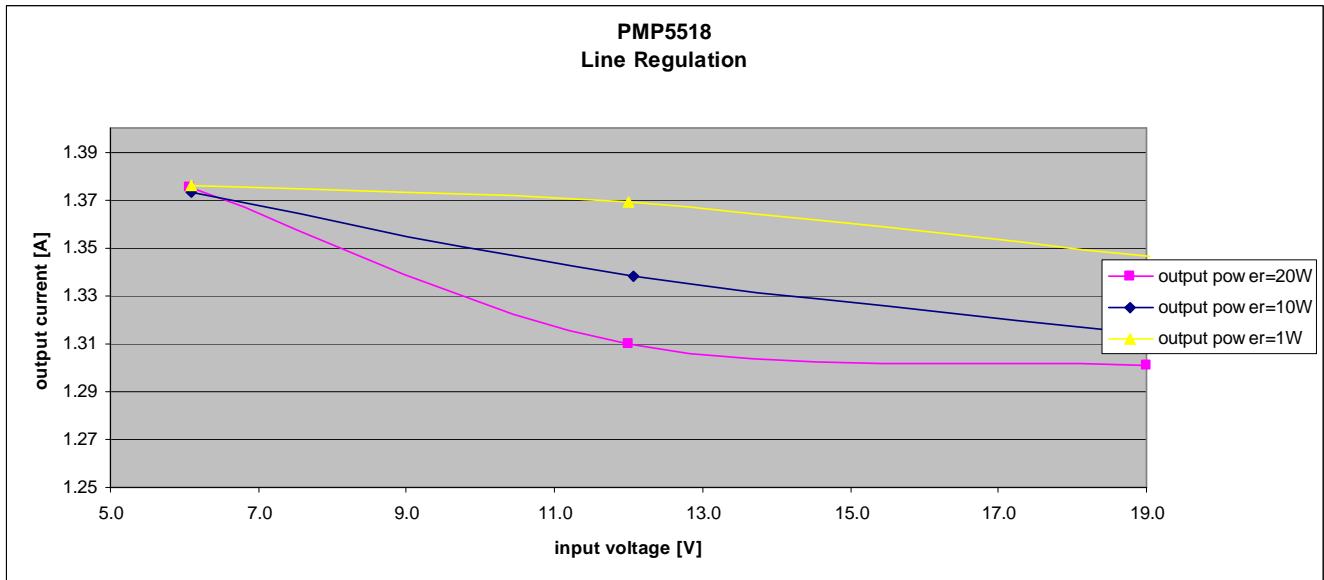


Figure 4

5 Frequency response

Figure 5 shows the loop response with 6.0V and 19V input and full load (20W).

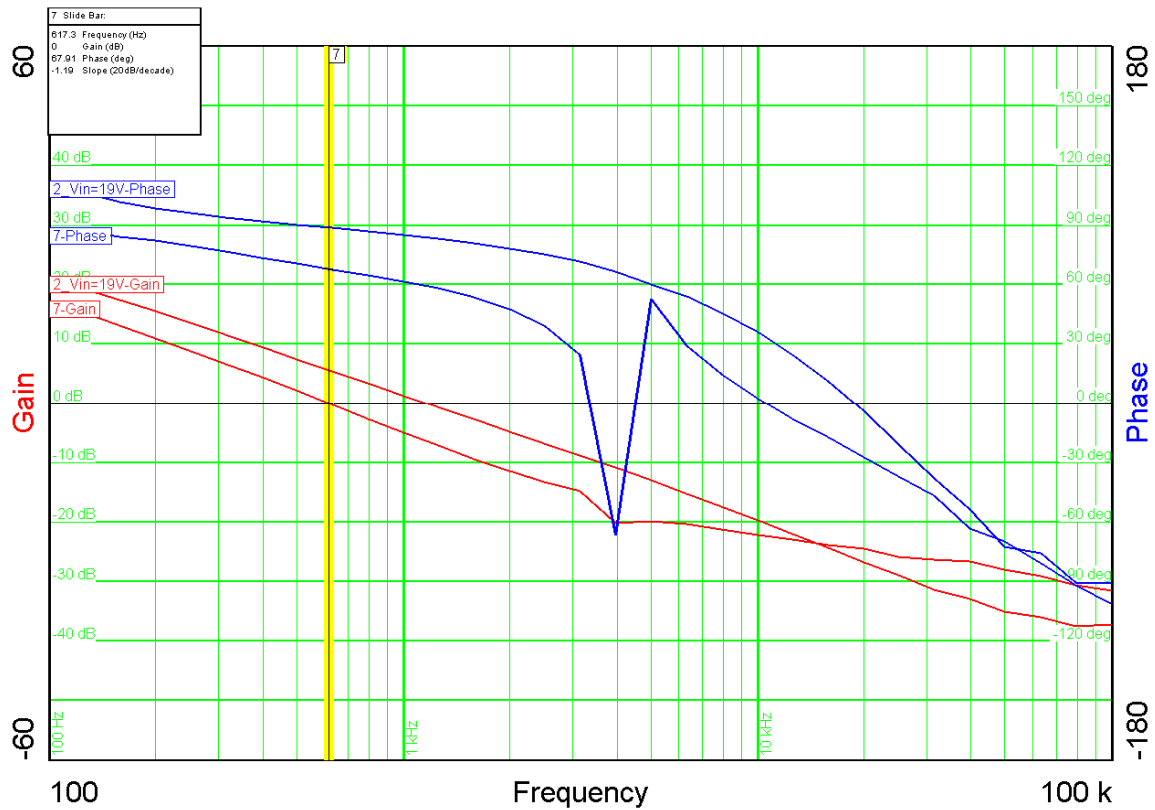


Figure 5

Input voltage = 6V, output power = 20W:

67.9 deg phase margin @ crossover frequency 0.62kHz

6 Miscellaneous waveforms

The voltage on the switch node is shown in Figure 6 to Figure 8.

Input voltage = 6.0V

Output voltage = 14.5V

Output power = 20W

Channel C4: **switch node voltage**

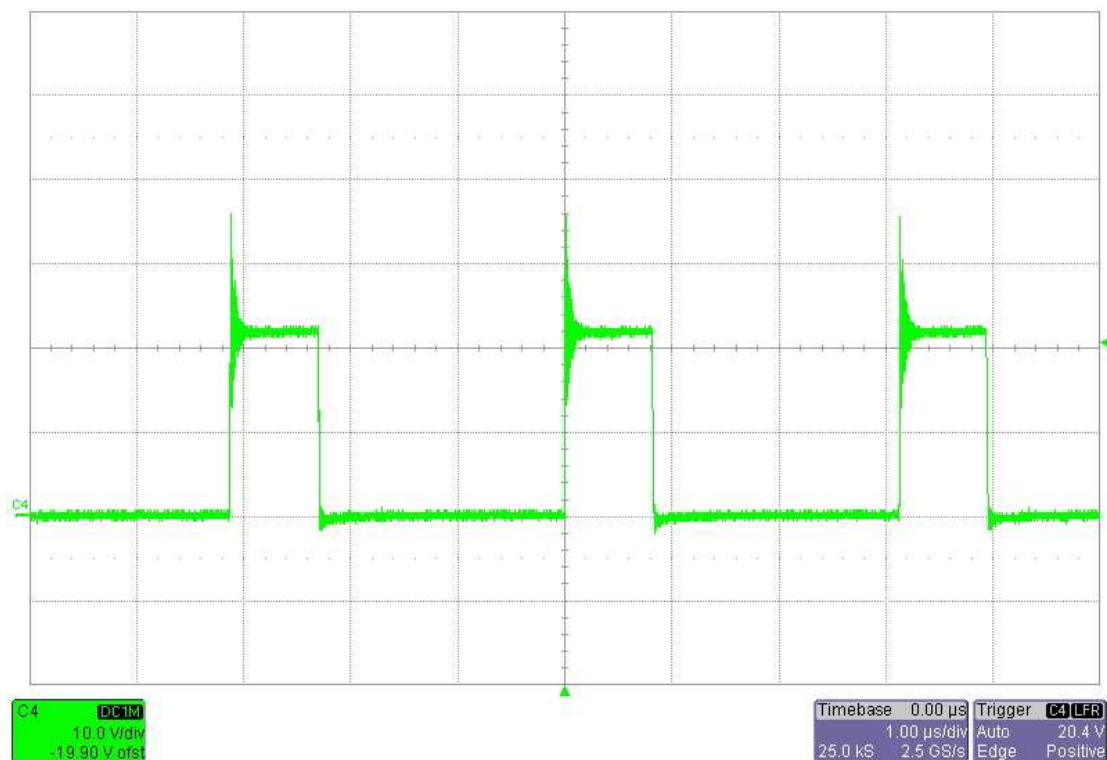


Figure 6

Input voltage = 12.0V

Output voltage = 14.5V

Output power = 20W

Channel C4: **switch node voltage**

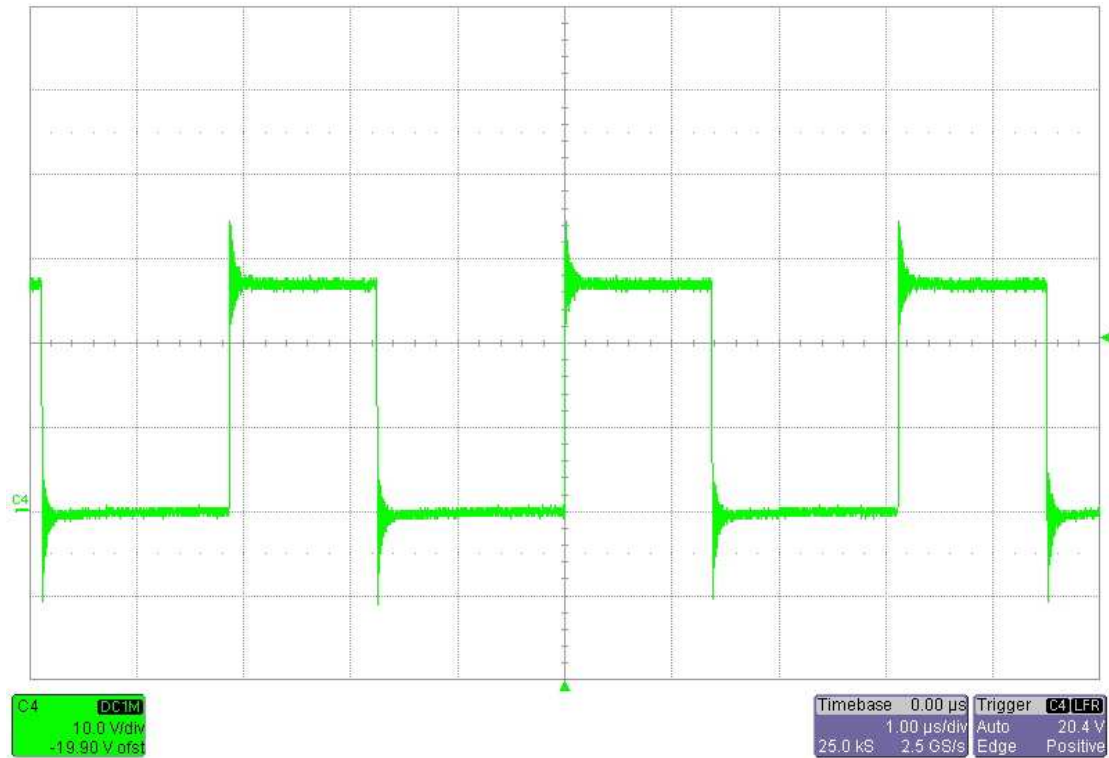


Figure 7

Input voltage = 19.0V

Output voltage = 60V

Output power = 20W

Channel C4: **switch node voltage**

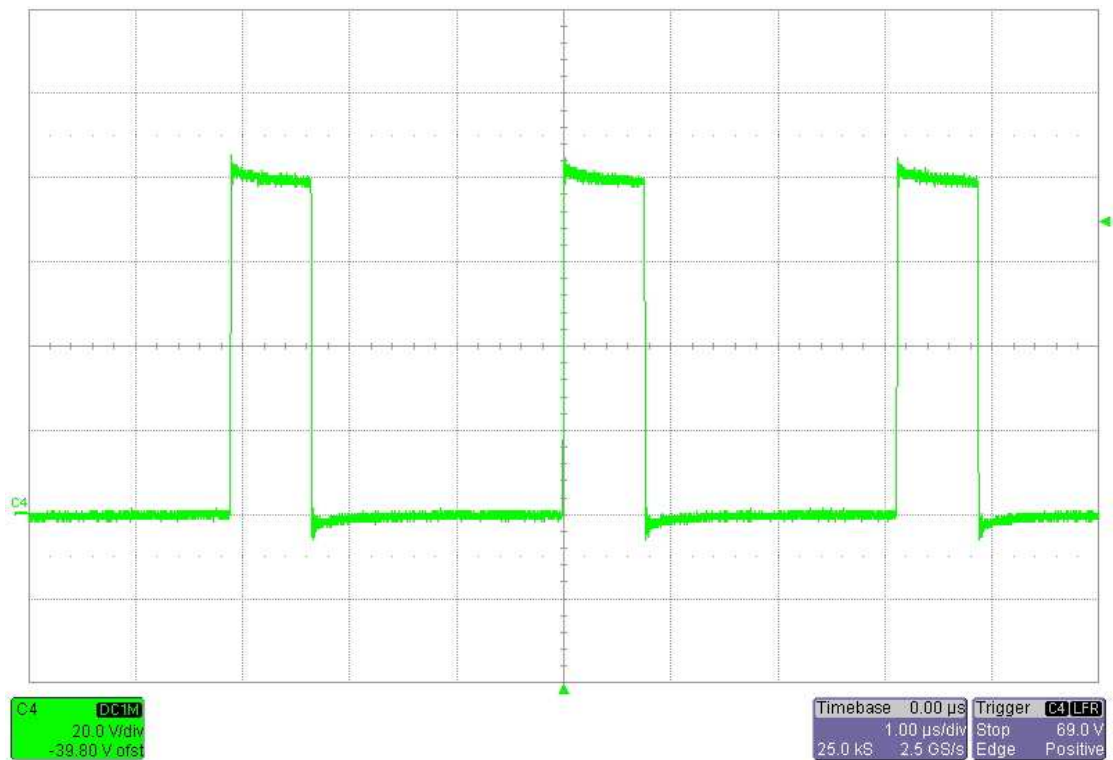


Figure 8

7 Thermal measurement

input voltage = 6V

output power = 20W

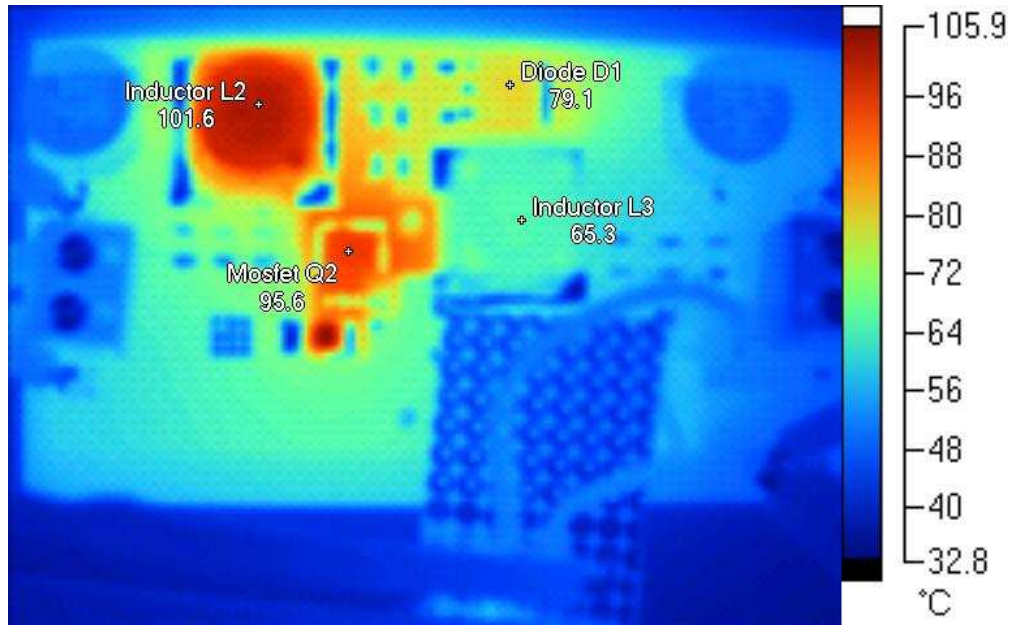


Figure 9

Name	Temperature
Mosfet Q2	95.6°C
Inductor L2	101.6°C
Inductor L3	65.3°C
Diode D1	79.1°C

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