

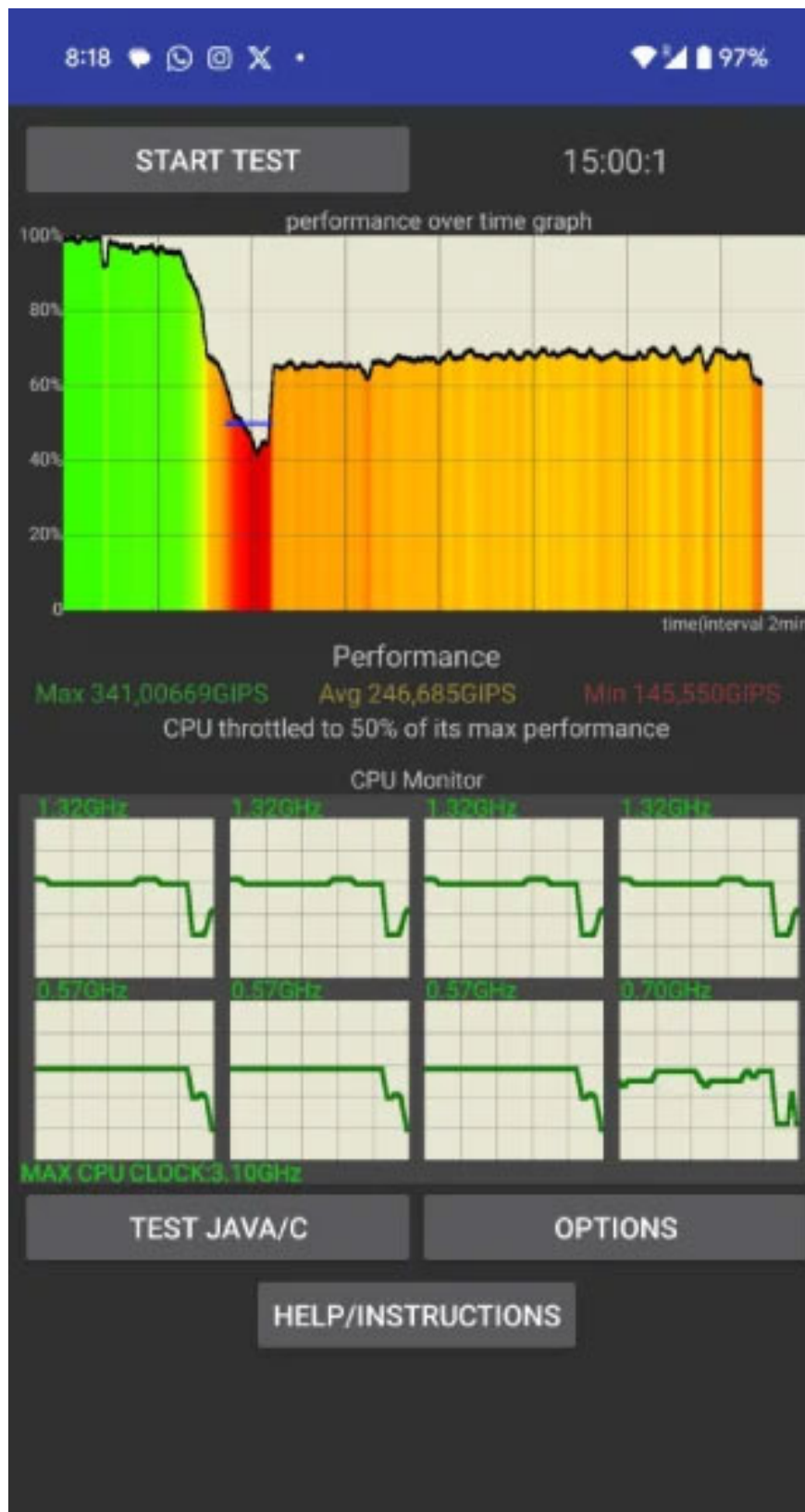
The Google Tensor G4 chip loses more than 50% of its performance when overheated

After many years of 'struggling' in its ambition to turn Tensor into a perfect chip, Google still seems unable to find the right direction.

Google's homegrown chip has faced constant criticism for its ability to manage heat and maintain stable performance. Currently, initial reports show that the Tensor G4 equipped on the Pixel 9 Pro XL flagship model may be particularly susceptible to the problem of a noticeable performance drop when overheating (thermal throttling).

A technology blogger with the nickname @callmeshazzam, shared disturbing findings from a CPU test on the Pixel 9 Pro XL that he currently owns. Benchmark results show that the Tensor G4 processor loses up to 50% of its capacity under prolonged load.

The test monitored the frequencies of all eight CPU cores in the Tensor G4. After just 3 minutes of pushing the phone to its limits, performance drops seemed to start to occur. Performance continued to plummet until the 4-minute mark, when the CPU was estimated to have lost nearly 60% of its ideal performance.



Raw performance figures from the test show the Tensor G4 peaking at 341 GIPS (giga instructions per second), with an average performance of 246.6 GIPS.

At its sharpest drop, Google's processor performance reportedly dropped to just 145.5 GIPS—or 42.6% of peak performance. Performance seemed to recover somewhat after that, stabilizing at around 65% of maximum

potential, but overall results were still disappointing.

When looking at the clock chart from the test, the Tensor G4's performance cores appear to have dropped to as low as 1.32GHz, while the performance cores hit a minimum of just 570MHz.

Google is keeping the Tensor G4's official specs under wraps, but Geekbench results show a single core clocked at 3.1GHz, three cores clocked at 3.6GHz, and four power-efficient cores clocked at 1.95GHz.

It's important to note that the GIPS index isn't the most comprehensive performance metric, and the tests essentially push devices to their absolute limits. In real usage scenarios, performance degradation may be milder. However, these initial assessments show that Google still needs to optimize its chip further if it wants to have success on the new product line.

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