

**UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

HERITAGE IP LLC,

Plaintiff,

v.

TDK CORPORATION OF AMERICA.,

Defendant.

Case No. 2:20-cv-408

**COMPLAINT FOR PATENT  
INFRINGEMENT**

**JURY TRIAL DEMANDED**

**ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Heritage IP LLC (“Heritage” or “Plaintiff”) hereby asserts the following claims for patent infringement against Defendant TDK Corporation of America, (“TDK” or “Defendant”), and alleges as follows:

**SUMMARY**

1. Heritage owns United States Patent No. 6,854,067 (“the ’067 Patent”).
2. Defendant infringes the ’067 Patent by implementing, without authorization, Heritage’s proprietary technologies in a number of its products, for example the Silmee W11 wristband activity tracker and other substantially similar products (the “Accused Products”).
3. By this action, Heritage seeks to obtain compensation for the harm it has suffered as a result of Defendant’s infringement of the ’067 Patent.

**NATURE OF THE ACTION**

4. This is a civil action for patent infringement arising under the patent laws of the

United States, 35 U.S.C. § 1 *et seq.*

5. Defendant has infringed and continues to infringe the claims of the '067 Patent.

6. Defendant has induced and continues to induce its customers and end-users to infringe the '067 Patent since at least as early as the filing of this Original Complaint, and has contributed to and continues to contribute to infringement of, at least one or more claims of the '067 Patent at least by making, using, selling, and/or offering to sell its products and services in the United States, including in this District.

7. Heritage is the legal owner by assignment of the '067 Patent, which were duly and legally issued by the United States Patent and Trademark Office ("USPTO"). Heritage seeks monetary damages for Defendant's infringement of the '067 Patent.

#### **THE PARTIES**

8. Plaintiff Heritage IP LLC is a Texas limited liability company with its principal place of business at 10900 Research Blvd, Ste 160C PMB 1042, Austin, TX 78759. Heritage is the owner of intellectual property rights at issue in this action.

9. On information and belief, Defendant TDK Corporation of America is a corporation organized and existing under the laws of California that maintains its principal place of business at 455 RXR Plaza, Uniondale, New York, 11556. Defendant may be served via its registered agent, The Prentice-Hall Corporation System, Inc., 251 Little Falls Drive, Wilmington, DE 19808.

10. On information and belief, Defendant directly and/or indirectly develops, designs, manufactures, distributes, markets, offers to sell and/or sells infringing products and services in the United States, including in the Eastern District of Texas, and otherwise directs infringing activities to this District in connection with its products and services.

**JURISDICTION AND VENUE**

11. As this is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, this Court has subject matter jurisdiction over the matters asserted herein under 28 U.S.C. §§ 1331 and 1338(a).

12. This Court has personal jurisdiction over Defendant, in part because Defendant does continuous and systematic business in this District, including by providing infringing products and services to the residents of this District that Defendant knew would be used within this District, and by soliciting business from the residents of this District. For example, Defendant is subject to personal jurisdiction in this Court because, *inter alia*, and on information and belief, Defendant maintains an office in the District and directly and through agents regularly does, solicits, and transacts business in the Eastern District of Texas.

13. In particular, Defendant has committed and continues to commit acts of infringement in violation of 35 U.S.C. § 271, and has made, used, marketed, distributed, offered for sale, sold, and/or imported infringing products in the State of Texas, including in this District, and engaged in infringing conduct within and directed at or from this District. For example, Defendant has purposefully and voluntarily placed the Accused Products into the stream of commerce with the expectation that the Accused Products will be used in this District. The Accused Products have been and continue to be distributed to and used in this District. Defendant's acts cause and have caused injury to Heritage, including within this District.

14. Venue is proper in this District under the provisions of 28 U.S.C. § 1400(b) at least because Defendant has committed acts of infringement in this District and maintains an office in Collin County at 3320 Matric Drive, Suite 100, Richardson TX 75082.

**THE '067 PATENT**

15. U.S. Patent No. 6,854,067 (“the ’067 Patent”) is entitled “Method and System for Interaction Between a Processor and a Power on Reset circuit to Dynamically Control Power States in a Microcontroller,” and was issued on February 8, 2005. A true and correct copy of the ’067 Patent is attached as Exhibit A.

16. The ’067 Patent was filed on June 22, 2001 as U.S. Patent Application No. 09/887,923.

17. Heritage is the owner of all rights, title, and interest in and to the ’067 Patent, with the full and exclusive right to bring suit to enforce the ’067 Patent, including the right to recover for past infringement.

18. The ’067 Patent is valid and enforceable under United States Patent Laws.

19. The ’067 Patent recognized several problems with existing microcontrollers having Power on Reset (POR) circuits. Specifically, the prior art was “problematic because it either fails to address microcontroller power stability issues beyond initial boot-up POR, requires the dedication of existing system resources to address them, or requires the provision of additional resources to address them.” Exhibit A at 1:63-67.

20. The ’067 Patent states that in the prior art systems “POR circuits, conventionally, are separate from SMP control, both during and after booting-up sequence.” *Id.* at 1:41-42. POR circuits conventionally “are typically used in microcontrollers to initialize stable power states, ensuring that booting is accomplished safely. . . Conventionally, this is the sole function of a POR circuit.” *Id.* at 1:24-33.

21. The ’067 Patent describes the problem with using separate POR circuits, *i.e.*, “several other microcontroller functions related to power state stability either go unaddressed, or

require separate functionalities to enable them.” *Id.* at 1:34-35. For instance, the ’067 Patent recognized that “[d]edicating existing resources, internal to the microcontroller, to sense, analyze, and react to post-booting power instability removes circuitry from other possible applications.” *Id.* at 2:4-7. “Further, these effectively internal control functions demand the expenditure of power, heat dissipation, logic, memory, and other system infrastructure and energy.” *Id.* at 2:7-9. “These finite system resources then become unavailable for executing the design external control functions of the microcontroller. Thus, microcontroller performance can suffer.” *Id.* at 2:10-12. On the other hand, “providing additional resources, e.g., adding them into the microcontroller as build-ons, to sense, analyze, and react to post-booting power instability, makes the microcontroller more expensive to manufacture and thus to acquire.” *Id.* at 2:13-17.

22. “Further still, such a microcontroller becomes more expensive to operate, in terms of also demanding the additional expenditures of power, heat dissipation, logic, memory, and other system infrastructure and energy to meet an effectively internal control function, especially to achieve power control automatically.” *Id.* at 2:17-22. “These resources also thus become unavailable for executing the design external control functions of the microcontroller. Thus, the performance of microcontrollers, even with power stability resources built-on according to the conventional art, may suffer.” *Id.* at 2:22-27.

23. To address these shortcomings of these prior art, the ’067 Patent discloses, *inter alia*, a “method and system which effectively functions to provide dynamic power control capabilities for a microcontroller.” The ’067 Patent further discloses a method and system that retains the inherent advantages of existing POR and processor technology to accomplish the foregoing requirements with no extra demand on system resources or requirement for additional System resources. *Id.* at 2:52-63.

24. The '067 Patent provided an unconventional solution by using the POR and SMB to continually monitor the voltage levels provided to the microcontroller in order to change the state of the microcontroller from a fully operational state to power safe reset state. Decl. David Hartup at ¶ 19 (attached hereto as Exhibit 1) (citing '067 Patent at 11:59-64; 12:43-56.) “Using the POR and SMB to continually monitor voltage levels and to control functions of the microcontroller as a result, such as providing an interrupt or changing the power state of the microcontroller, was not something that was commonly done at the time of the invention. This suggested by the patent itself.” *Id.*

25. For example, claim 1 provides that the SMP be connected to the POR and microcontroller and that the SMP receive and be responsive to signals from the POR. The POR is used to sense a power state, determines the suitability of the power state, informs the microcontroller and SMP of the state of the power state, and controls certain functions of the microcontroller as a result, such as providing an interrupt or placing the microcontroller in a fully operational state or a reset state as a result. It accomplished this using the circuit shown in Figure 2. This approach was unconventional at the time of the '067 Patent. *Id.* at ¶ 20.

**COUNT I: INFRINGEMENT OF U.S. PATENT NO. 6,854,067**

26. Heritage incorporates by reference and re-alleges paragraphs 1-25 of this Complaint as if fully set forth herein.

27. Defendant has infringed and is infringing, either literally or under the doctrine of equivalents, the '067 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale, or selling in the United States, and/or importing into the United States without authority or license, the Accused Products.

28. As just one non-limiting example, set forth below (with claim language in bold and

italics) is exemplary evidence of infringement of Claim 1 of the '067 Patent in connection with the Accused Products. This description is based on publicly available information. Heritage reserves the right to modify this description, including, for example, on the basis of information about the Accused Products that it obtains during discovery.

***1(a): In a microcontroller with an embedded processor, a switched mode pump power supply and power on reset circuit, a method of dynamically controlling a plurality of power stability functions for said microcontroller, said method comprising:*** Defendant makes, uses, sells, and/or offers to sell a device or system that practices the method in accordance with Claim 1.

For instance, the Accused Products include a DA14585 SoC which has an integrated transceiver and an ARM Cortex M0 microcontroller. See Exhibit A-1, Figs. 1-5.

***1(b): Supplying a power state to said microcontroller from said switched mode pump power supply, wherein said processor and said power on reset circuit are interconnectedly coupled, and wherein said switched mode pump power supply is interconnectedly coupled with said power on reset circuit and responsive to signals therefrom;***—Defendant makes, uses, sells, and/or offers to sell a device or system that supplies a power state to the microcontroller from the power supply, wherein the processor and power on reset circuit are interconnectedly coupled and the power supply is interconnectedly coupled with the power on reset circuit.

For instance, the Accused Product practices supplying a power state (e.g., a power state corresponding to a buck converted voltage) to said microcontroller (e.g., Arm Cortex-M0 based microcontroller) from said switched mode pump power supply (e.g., buck converter), wherein said processor (e.g., ARM Cortex M0 core processor) and said power on reset circuit are interconnectedly coupled, and wherein said switched mode pump power supply (e.g., buck

converter) is interconnectedly coupled with said power on reset circuit (e.g., connected through LDO\_RET) and responsive to signals therefrom (e.g., generated  $V_{DD}$ ). See Exhibit A-1, Figs. 6-8.

***1(c): sensing a power state condition of said power state;***—Defendant makes, uses, sells, and/or offers to sell a device or system that sense a power state condition of the power state.

For instance, the Accused Products practices sensing a power state condition (e.g., power state corresponding to a voltage level) of said power state (e.g., power state corresponding to a buck converted voltage). See Exhibit A-1, Figs. 9-10

***1(d): determining a suitability status of said power state condition;***—Defendant makes, uses, sells, and/or offers to sell a device or system that determines a suitability status of the power state condition.

For instance, the Accused Products compare with threshold voltage of the power state condition (e.g., power state corresponding to a voltage level). See Exhibit A-1, Figs. 11-13.

***1(e): communicating said suitability status between said power on reset circuit and said processor;***—Defendant makes, uses, sells, and/or offers to sell a device or system that communicates suitability status between the power on reset circuit and said processor.

For instance, as noted above, the Accused Products practice communicating (e.g., generation PWR ON RESET signal) said suitability status (e.g., comparison output with threshold voltage) between said power on reset circuit and said processor (e.g., ARM Cortex core processor) See Exhibit A-1, Figs. 14-15.

***1(f): controlling certain functions of said microcontroller accordingly.***—Defendant makes, uses, sells, and/or offers to sell a device or system that controls certain functions of the microcontroller accordingly.

For instance, the Accused Products practices controlling certain functions of said



microcontroller accordingly (e.g., POR signal resets specific registers of the controller of DA14580 which controls various functions). *See* Exhibit A-1, Figs. 16-18.

29. Additionally, Defendant has been and/or currently is an active inducer of infringement of the '067 Patent under 35 U.S.C. § 271(b).

30. At least as early as of the date of the filing of the Original Complaint, Defendant has had actual knowledge of the '067 Patent.

31. Since the filing of the Original Complaint, Defendant has continued making, selling, and/or offering for sale the Accused Products to its customers, and on information and belief, providing instruction manuals and support, which demonstrate how to use the Accused Products in an infringing manner while being on notice of the '067 Patent and Defendant's infringement. Defendant has known of the '067 Patent and that its acts would induce its customers and end-users to infringe the '067 Patent since at least the filing of the Original Complaint.

32. For example, in connection with the sale and/or offering for sale of the Accused Products, Defendant provides instruction manuals to resellers and end-use customers regarding the use and operation of the Accused Products. Specifically, Defendant provides manuals and support online at [https://product.tdk.com/en/products/biosensor/biosensor/silmee\\_w11/pdf/Silmee\\_W11\\_Instructions\\_E\\_0311.pdf](https://product.tdk.com/en/products/biosensor/biosensor/silmee_w11/pdf/Silmee_W11_Instructions_E_0311.pdf) When end-users follow such instructions, they directly infringe the '067 Patent.

33. Accordingly, Defendant knowingly and intentionally encourages and aids at least its end-user customers to directly infringe the '067 Patent.

34. Defendant's end-user customers directly infringe at least one or more claims of the '067 Patent by using the Accused Products in their intended manner to infringe. Defendant induces such infringement by providing the Accused Products and instructions to enable and facilitate

infringement, knowing of, or being willfully blind to the existence of, the '067 Patent. On information and belief, Defendant specifically intends that its actions will result in infringement of one or more claims of the '067 Patent, or subjectively believe that their actions will result in infringement of the '067 Patent, but took deliberate actions to avoid learning of those facts, as set forth above.

35. At least as early as the filing and/or service of this Complaint, Defendant's infringement of the '067 Patent was and continues to be willful and deliberate, entitling Heritage to enhanced damages.

36. Additional allegations regarding Defendant's knowledge of the '067 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

37. Defendant's infringement of the '067 Patent is exceptional and entitles Heritage to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

38. Heritage is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '067 Patent.

39. Heritage is entitled to recover from Defendant all damages that Heritage has sustained as a result of Defendant's infringement of the '067 Patent, including, without limitation, a reasonable royalty.

#### **PRAYER FOR RELIEF**

WHEREFORE, Heritage respectfully requests:

A. That Judgment be entered that Defendant has infringed at least one or more claims of the '067 Patent, directly and/or indirectly, literally and/or under the doctrine of equivalents;

B. That Judgment be entered that Defendant has induced its customers and end-users to infringe the claims of the '067 Patent;

C. An award of damages sufficient to compensate Heritage for Defendant's infringement under 35 U.S.C. § 284, including an enhancement of damages on account of Defendant's willful infringement;

D. That the case be found exceptional under 35 U.S.C. § 285 and that Heritage be awarded its reasonable attorneys' fees;

E. Costs and expenses in this action;

F. An award of prejudgment and post-judgment interest; and

G. Such other and further relief as the Court may deem just and proper.

**DEMAND FOR JURY TRIAL**

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Heritage respectfully demands a trial by jury on all issues triable by jury.

Respectfully submitted,

Dated: December 31, 2020

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