

PUBLIC VERSION

**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC 20436**

In the Matter of

**CERTAIN VOLTAGE REGULATORS,
COMPONENTS THEREOF, AND
PRODUCTS CONTAINING SAME**

Investigation No. 337-TA-564

Enforcement Proceeding

COMMISSION OPINION

I. INTRODUCTION

On March 18, 2010, the presiding administrative law judge (“ALJ”) (Judge Charneski) issued a final enforcement initial determination (“ID”) that a violation of the Commission’s limited exclusion order (“LEO”) issued in the underlying investigation has occurred. The LEO issued on September 24, 2007, at the conclusion of the underlying investigation. The ALJ determined that the respondent, Advanced Analogic Technologies, Inc.’s (“AATI”) redesigned products at issue in the enforcement proceeding do not avoid infringement of claims 2 and 34 of United States Patent No. 6,580,258 (“258 patent”), and recommended a cease and desist order issue against AATI. On May 14, 2010, the Commission determined not to review the ALJ’s ID, and issued a *Federal Register* notice regarding its determination and inviting briefing on the issues of remedy, the public interest, and bonding. This opinion details the Commission’s final determination regarding those issues.

II. BACKGROUND

A. Procedural History

The underlying investigation was instituted by publication of a notice in the *Federal Register* on March 22, 2006, in order to determine:

[W]hether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain voltage regulators, components thereof or products containing same by reason of infringement of one or more of claims 1-14 and 23-35 of U.S. Patent No. 6,411,531 and claims 1-19, 31, 34, and 35 of U.S. Patent No. 6,580,258, and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

71 Fed. Reg. 14545 (2006).

Linear Technology Corp. of Milpitas, California (“Linear”) was the complainant. For the violation investigation, the presiding ALJ was Judge Sidney Harris. On May 22, 2007, Judge Harris issued a violation initial determination in Investigation No. 337-TA-564, finding no violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337). The ALJ found that none of the accused products of the respondent, AATI, infringed the asserted claims of the ‘258 patent, but that one accused product infringed two claims of United States Patent No. 6,411,531 (“the ‘531 patent”). The ALJ also determined that certain claims of the ‘258 and ‘531 patents (including the claims that the ALJ found to be infringed) were invalid due to anticipation.

The Commission determined to review certain portions of the violation initial determination concerning the ‘258 patent, but not to review the violation initial determination with respect to the ‘531 patent (except for one issue on which it ultimately took no position), resulting in a final determination of no violation with respect to the ‘531 patent. 72 Fed. Reg. 55250 (Sept. 28, 2007).

On September 24, 2007, the Commission issued its final determination in the violation investigation with respect to the '258 patent, reversing the ALJ on certain issues, and finding a violation of section 337. *Id.* The Commission found claims 2, 3, and 34 of the '258 patent valid and infringed by a representative AATI product. The Commission issued a LEO directed to AATI voltage regulators covered by claims 2, 3, and 34 of the '258 patent. The Commission required that the bond during the Presidential review period be 100 percent of the entered value of each voltage regulator subject to the LEO. *Id.*

Linear and AATI both appealed portions of the Commission's final determination to the United States Court of Appeals for the Federal Circuit. The Federal Circuit affirmed the Commission's final determination as to the '531 patent. With respect to the '258 patent, the Federal Circuit affirmed in part, reversed in part, and remanded in part the Commission's final determination. A remand proceeding was rendered unnecessary in light of a consent order entered into regarding products that were the subject of the violation investigation. The LEO was not modified.

On February 20, 2008, Linear (the complainant in the violation investigation) filed a complaint, an amended complaint on June 18, 2008, and a second amended complaint on August 29, 2008, requesting that the Commission institute a formal enforcement proceeding against AATI under Rule 210.75 of the Commission's Rules of Practice and Procedure for violation of the LEO based on alleged infringement of claims 2 and 34 of the '258 patent through the importation of AATI's redesigned products.¹ *See* 19 C.F.R. § 210.75. Pursuant to 19 U.S.C. § 1337, and Commission Rule 210.75, the Commission instituted a formal enforcement proceeding to determine whether AATI violated the LEO at issue, and what, if any, enforcement measures

¹ The redesigned products that are the subject of the enforcement proceeding will be referred to hereinafter as the "accused products."

were appropriate. The enforcement proceeding was assigned to Judge Charneski (hereinafter, “the ALJ”)

On March 18, 2010, Judge Charneski issued the enforcement ID, finding a violation of the LEO. AATI filed a petition for review of the ALJ’s ID and Linear filed a contingent petition for review thereof. The Commission determined not to review the ALJ’s ID and requested briefing on possible modification of the LEO, remedy, the public interest, and bonding. 75 Fed. Reg. 28284 (May 20, 2010). Linear, AATI, and the IA filed opening and responsive briefs regarding the topics for which briefing was requested.²

B. Technology and Patent at Issue

The ‘258 patent covers voltage regulators as used, for example, in cellular telephones, laptop computers, and other electronic equipment containing circuitry that requires a steady stream of current at a particular voltage.³ ID at 4. Voltage regulators help solve the voltage problem between mismatched batteries and circuitry.⁴ When a battery produces a voltage different than that required by the circuitry, a voltage regulator adapts the current from the battery to the current required by the load. This proceeding is particularly focused on switching voltage regulators. Switching voltage regulators contain a switch circuit that turns on and off to provide power through the circuit to the output. Necessary power adjustments are made by the correct timing of switches through an error amplifier. When compared to linear voltage regulators, which operate much like an adjustable valve to control power flow, switching voltage

² The parties’ opening briefs will be referred to as Linear Brief, AATI Brief, and IA Brief, respectively, and responses thereto will be referred to as Linear Response, AATI Response, and IA Response, respectively.

³ Voltage may be thought of as electrical pressure. Blauschild Tutorial Tr. 7-8. Current is the flow of electrons. Wei Tutorial Tr. 60-61.

⁴ Circuitry that needs to be powered is called a “load.”

regulators use much less power and more efficiently control power flow. Blauschild Tutorial Tr. 12-14.

1. The '258 Patent

The '258 patent, entitled "Control Circuit and Method for Maintaining High Efficiency Over Broad Current Ranges in a Switching Regulator Circuit," was filed on October 15, 2001, and issued on June 17, 2003. JX-3. Milton E. Wilcox and Randy G. Flatness are the named inventors, and complainant Linear is the named assignee. *Id.* The '258 patent generally discloses and claims a control circuit and method for maintaining high efficiency over broad current ranges, including low output currents, in a switching regulator circuit.

Claim 2 of the '258 patent, as well as claim 1 from which claim 2 depends, and claim 34 provide as follows:

1. A circuit for controlling a switching voltage regulator, the regulator having (1) a switch coupled to receive an input voltage and including a pair of synchronously switched switching transistors and (2) an output for supplying current at a regulated voltage to load which includes an output capacitor, the circuit comprising:

a first circuit for monitoring the output to generate a first feedback signal;

a second circuit for generating a first control signal during a first state of circuit operation, the first control signal being responsive to the first feedback signal to vary the duty cycle of the switching transistors to maintain the output at the regulated voltage; and

a third circuit for generating a second control signal during a second state of circuit operation to cause both switchin[g] transistors to be OFF for a first period of time during which the output capacitor maintains the output substantially at the regulated voltage.

2. The circuit of claim 1 wherein the second control signal is generated in response to the first feedback signal.

34. A method for controlling a switching voltage regulator, the regulator having (1) a switch coupled to receive an input voltage and including a pair of synchronously switched switching transistors and (2) an output for supplying current at a regulated voltage to a load which includes an output capacitor, the method comprising the steps of:

- (a) monitoring the output to generate a first feedback signal;
- (b) varying the duty cycle of the switching transistors in response to the first feedback signal to maintain the output at the regulated voltage during a first state of circuit operations;
- (c) turning both switching transistors OFF for a first period of time following the first state of circuit operation so as to allow the output capacitor to maintain the output substantially at the regulated voltage by discharging during a second state of circuit operation; and
- (d) turning at least one of said switching transistors ON to recharge the output capacitor following the second state of circuit operation.

JX-3, col. 16, lines 39-59; col. 18, line 57 through col. 19, line 10.

C. The Accused Products

Linear accuses AATI products bearing the following model numbers in this enforcement proceeding:

(referred to collectively as the “accused products”). Linear Br. At 16-17. The parties have stipulated that the AAT2158 is representative of the accused products. JX-1001C at 2. Linear accused AATI of violating the LEO by importing voltage regulators incorporating into their design and construction claims 2 or 34 of the ‘258 patent.

III. ANALYSIS

A. Remedy

1. Possible Modification of the Existing LEO

In light of potential confusion regarding the scope of the existing LEO, the Commission requested briefing regarding possible modifications to the LEO. At this stage, however, the parties agree that no modification to the LEO's existing language is necessary. AATI states that the issue in the enforcement proceeding was whether the accused products were covered by the LEO, that the ALJ determined that they are covered, and that the Commission affirmed that finding. Br. at 6. Accordingly, AATI concludes that "[s]ince the existing LEO covers these low-noise parts, no modification of the LEO is required." Similarly, the IA states that he agrees with the ALJ that, in light of the enforcement proceeding, the existing LEO would encompass the accused products in the enforcement proceeding, and that, therefore, he does not believe that modification is warranted. Br. at 2.

Linear also argues that modification is not necessary, but argues that the Commission should clarify in its opinion that the LEO's "entry for consumption" language covers entry for testing of the accused products. Br. at 4-5. Linear argues in the alternative that the LEO could be modified to make that clarification explicit.

In AATI's responsive brief, however, AATI does not contest that importation for testing is "entry for consumption" under the existing LEO. The IA argues that AATI never advanced the position upon which Linear bases its need for clarification, i.e., that importation for testing is not prohibited by the order.

In light of the agreement that the existing LEO covers the accused products, and need not be changed to reflect the ALJ's finding of indirect infringement, and agreement that the LEO covers importation of the accused products for testing, the Commission has determined to leave the existing LEO in place without modification.

2. Possible Issuance of a Cease-and-Desist Order

Linear and the IA argue that issuance of a cease-and-desist order is appropriate, while AATI opposes. Linear argues that a cease-and-desist order is appropriate because AATI maintains a commercially significant inventory in the United States, as found by the ALJ. *See* Br. at 6-7; ID at 43-44. Linear argues that AATI's inventory is significant both in quantity and in importance to AATI's operations. Br. at 7. Furthermore, Linear argues that AATI's "disregard" of the LEO, through importation of the infringing accused products, provides an additional justification for a cease-and-desist order. Br. at 9-10. The IA argues that a cease-and-desist order is warranted for two reasons: (1) as a deterrent to further violations of the LEO; and (2) because the record now shows a commercially significant domestic inventory of infringing products. Br. at 2. The IA argues further that AATI's decision not to seek an advisory opinion before importing the accused products provides an additional justification for the deterrent value of a cease-and-desist order.

AATI contends that the ALJ's recommendation to issue a cease-and-desist order rests on assumptions that are "based on a misapplication of the evidentiary record." Br. at 7. Specifically, AATI argues that its domestic inventory is not "commercially significant" but is merely not-for-sale "engineering parts" or "sample stock" worth only about \$1000. AATI argues that a packing list characterized in the ID (at page 44) as "for further distribution" actually reflects the shipment of material to a scrap facility for destruction. Br. at 9. AATI contends that in the original investigation the Commission rejected the exact argument Linear now makes regarding the commercial significance of AATI's inventory. Resp. at 4 (citing *Certain Voltage Regulators, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-564, Comm'n Op. at 77-78 (Sept. 24, 2007)).

AATI argues that it showed no disregard of the LEO, noting that many of its products were found non-infringing by the ALJ and Commission in the violation phase, rendering importation of them permissible until issuance of the Federal Circuit's decision on appeal. Finally, AATI argues that "deterrence" is not a proper ground for the imposition of a cease-and-desist order, particularly in light of AATI's proactive cessation of importation and entry of consent orders after the Federal Circuit's decision in the violation phase.

We conclude that the evidence does not demonstrate that AATI maintains a commercially significant domestic inventory of accused products. While non-sellable products, such as sample stock and R&D parts, may be part of a commercially significant domestic inventory, the 5800 samples and 75,000 engineering parts at issue here do not constitute a commercially significant inventory in the context of the millions of parts maintained and sold abroad by AATI. *See* ID at 44. Moreover, we agree with AATI that it would be improper to conclude that AATI acted in disregard of the LEO by importing products found non-infringing by the ALJ and Commission in the violation phase, even if those findings were later reversed or vacated by the Federal Circuit. Accordingly, we disagree with Linear that AATI acted in disregard of the LEO, and disagree with the IA that a cease-and-desist order is needed for its deterrent effect. We note that this determination does not mean that Linear receives no remedy for AATI's violation, however, because the LEO has now been determined to cover all the accused products. *See Fuji Photo Film Co. v. Int'l Trade Comm'n*, 386 F.3d 1095, 1107 (Fed. Cir. 2004).

B. The Public Interest

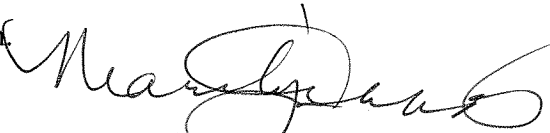
Linear argues that there is no evidence that any of the statutory public-interest factors are implicated by the relief requested. Br. at 12-13. Linear notes that the Commission already concluded that no public-interest concerns are raised by the LEO that ultimately issued, and

AATI presented no evidence that would alter that finding. The IA agrees, arguing that the analysis has not changed since the Commission addressed the issue at the violation stage. AATI does not address the public-interest factors. We agree with Linear and the IA that the analysis of the public-interest factors has not changed since the Commission's issuance of the LEO, and therefore find that the factors would not preclude the requested relief. The issue, however, is moot because we do not recommend issuing additional relief.

C. Bonding

Because the Commission has determined not to issue a cease-and-desist order, and because the parties agree that the existing LEO should remain in place with no need for modification or Presidential review, there is no need or reason to impose a bond.

By order of the Commission

A handwritten signature in cursive script, appearing to read "Marilyn R. Abbott".

Marilyn R. Abbott
Secretary to the Commission

Issued: August 3, 2010

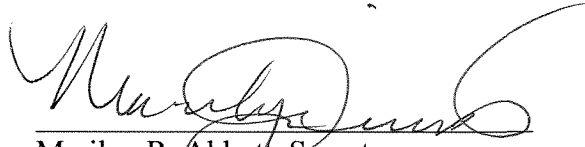
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CERTIFICATE OF SERVICE

I, Marilyn R. Abbott, hereby certify that the attached **COMMISSION OPINION** has been served by hand upon the Commission Investigative Attorney, Daniel L. Girdwood, Esq., and the following parties as indicated, on

AUG 03 2010



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