

**UNITED STATES INTERNATIONAL TRADE COMMISSION  
WASHINGTON, D.C.**

**Before the Honorable Clark S. Cheney  
Chief Administrative Law Judge**

**In the Matter of**

**CERTAIN SEMICONDUCTOR DEVICES,  
AND METHODS OF MANUFACTURING  
SAME AND PRODUCTS CONTAINING  
THE SAME**

**Investigation No. 337-TA-1366**

**RESPONDENTS' PROPOSED CONSTRUCTIONS AND POSITIONS FOR  
IDENTIFIED TERMS AND CLAIM ELEMENTS OF THE ASSERTED PATENTS**

Respondents Innoscience (Zhuhai) Technology Company, Ltd. and Innoscience America, Inc. (collectively, “Innoscience” or “Respondents”) identify the following proposed constructions for all terms, clauses, or phrases of U.S. Patent No. 8,350,294, U.S. Patent No. 8,404,508, U.S. Patent No. 9,748,347, and U.S. Patent No. 10,312,335 (collectively, the “Asserted Patents”) previously identified by one or more parties for construction in this Investigation of the asserted claims. Order No. 2, G.R. 7.1; Order No. 7. Any proposed construction for a larger phrase that includes one or more separately construed claim terms should be understood to incorporate those separate constructions.

Respondents’ constructions of the terms, phrases, and/or clauses below are based on their current knowledge and investigations to date. Respondents’ investigation of these terms, clauses, or phrases is preliminary, and Respondents reserve the right to supplement, revise, modify, or otherwise finalize their proposed constructions based upon later-acquired information or in response to Complainant Efficient Power Conversion Corporation’s (“EPC”) and the Commission Investigative Staff’s (“Staff”) proposed constructions or to any meeting or conference regarding

claim construction—which may include contending one or more of the terms of the Asserted Patents are indefinite, e.g., based in part on expert opinion. Respondents further reserve the right to supplement and/or amend these constructions if EPC attempts and is permitted to assert any additional claims.

Any supplement and/or amendment that adds or removes any proposed construction does not constitute an admission that Respondents believe those claim terms have, or do not have, a specialized meaning separate from each term’s plain and ordinary meaning to one of ordinary skill in the art. Respondents reserve the right to contend that one or more discrete terms, phrases, or clauses within or surrounding any phrase or clause listed below should be construed rather than or in addition to the entire phrase or clause identified below. Similarly, Respondents reserve the right to contend that a phrase or clause should be construed rather than a discrete term listed below that appears within or surrounding that phrase or clause. The proposed construction of any claim term, phrase, or clause should not be interpreted as an admission that any associated claim satisfies the written description, enablement, and definiteness requirements under 35 U.S.C. § 112, or that any claim satisfies the patentability requirements under 35 U.S.C. § 101.

Respondents further reserve the right to contend one or more of the terms of the Asserted Patents is indefinite, including based in part on expert opinion, if appropriate based on subsequent events in accordance with the Ground Rules and Procedural Schedule, even if such terms are not identified in the joint chart submitted for the *Markman* hearing.

Subject to the foregoing, Respondents propose the following constructions for the following terms of the Asserted Patents:

Patent	Claim Term	Proposed By	Construction
'294	<p>“a compensated GaN layer”</p> <p>Independent Claim 1</p>	Innoscience and EPC	<p>“a doped GaN layer formed with a step to passivate its impurities”</p> <p>Which is a “product-by-process” limitation.</p>
'508	<p>“etching away the doped GaN layer, except a portion of the doped GaN layer beneath the gate contact”</p> <p>Independent Claim 1</p>	Innoscience	“etching away the doped GaN layer in all regions extending outside the gate contact”
	<p>“applying a gate photo resistant pattern;</p> <p>etching away the gate contact layer outside the gate region;</p> <p>etching away the doped GaN layer, except a portion of the doped GaN layer beneath the gate contact;</p> <p>removing the gate photo resistant pattern”</p> <p>Independent Claim 1</p>	Innoscience	<p>“applying a gate photo resistant pattern;</p> <p>using the gate photo resistant pattern to etch away the gate contact layer outside the gate region;</p> <p>using the gate photo resistant pattern to etch away the doped GaN layer in all regions extending outside the gate contact;</p> <p>removing the gate photo resistant pattern”</p>
'347	<p>“forming side surfaces of the p-type gate material that extend horizontally towards the source and drain contacts, respectively, and contact the barrier layer”</p> <p>Independent Claim 1</p>	Innoscience	“forming side surfaces of the p-type gate material such that the bottom of the p-type gate material is more than 10% wider than the top of the material, leading to sloped side surfaces that contact the barrier layer”
	<p>“forming side surfaces of the p-type gate material that extend horizontally towards the source and drain contacts, respectively”</p> <p>Independent Claim 1</p>	EPC	“forming side surfaces of the p-type gate material such that the bottom of the p-type gate material is more than 10% wider than the top of the material, leading to sloped side surfaces”

Patent	Claim Term	Proposed By	Construction
	<p>“etching the gate metal and the p-type gate material . . . ;”</p> <p>Independent Claim 1</p>	Innoscience	“using the photoresist to etch the gate metal and the p-type gate material”
	<p>“etching the gate metal to form a pair of ledges”</p> <p>Independent Claim 1</p>	Innoscience	“after the etching of the gate metal and the p-type gate material, etching the gate metal to form a pair of ledges”
'335	<p>“side surfaces extending horizontally towards the source contact and drain contact, respectively, and contacting the barrier layer” / “side surfaces that extend horizontally towards the source contact and drain contact, respectively, and contacting the barrier layer”</p> <p>Independent Claims 1 and 5</p>	Innoscience	“side surfaces of the p-type gate material formed such that the bottom of the p-type gate material is more than 10% wider than the top of the material, leading to sloped side surfaces that contact the barrier layer”
	<p>“p-type gate material having side surfaces extending horizontally towards the source and drain contact, respectively”</p> <p>Independent Claim 1</p>	EPC	“p-type gate material having side surfaces of the p-type gate material formed such that the bottom of the p-type gate material is more than 10% wider than the top of the material, leading to sloped side surfaces”
	<p>“wherein the p-type gate material comprises...(ii) side surfaces that extend horizontally towards the source contact and drain contact, respectively”</p> <p>Independent Claim 5</p>	EPC	“wherein the p-type gate material has side surfaces of the p-type gate material formed such that the bottom of the p-type gate material is more than 10% wider than the top of the material, leading to sloped side surfaces”
	<p>“wherein the pair of horizontal ledges of the p-type gate material are self-aligned” / “a pair of self-aligned ledges”</p> <p>Dependent Claim 2 and Independent Claim 5</p>	Innoscience	<p>“wherein the pair of horizontal ledges of the p-type gate material are created by a self-aligned process” / “a pair of ledges created by a self-aligned process”</p> <p>Which are “product-by-process” limitations.</p>

Date: September 5, 2023

Respectfully submitted,

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**CERTAIN SEMICONDUCTOR DEVICES, AND  
METHODS OF MANUFACTURING SAME AND  
PRODUCTS CONTAINING THE SAME**

**Inv. No. 337-TA-1366**

**CERTIFICATE OF SERVICE**

I, Katelyn Powell, hereby certify that on September 5, 2023, copies of the foregoing were served upon the following as indicated:

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**UNITED STATES INTERNATIONAL TRADE COMMISSION  
WASHINGTON, D.C.**

**Before the Honorable Clark S. Cheney  
Chief Administrative Law Judge**

In the Matter of

CERTAIN SEMICONDUCTOR DEVICES,  
AND METHODS OF MANUFACTURING  
SAME AND PRODUCTS CONTAINING  
THE SAME

Investigation No. 337-TA-1366

**COMPLAINANT’S PROPOSED CONSTRUCTIONS**

Pursuant to the Procedural Schedule (Order No. 7) and Ground Rule 7.1, Complainant Efficient Power Conversion Corporation (“EPC” or “Complainant”) hereby serves its proposed construction for the claim terms identified by EPC, Respondents Innoscience (Zhuhai) Technology Company, Ltd. and Innoscience America, Inc. (collectively, “Innoscience” or “Respondents”). The below are the only claim terms the private parties and the Commission Investigative Staff (“the Staff”) identified as potentially requiring construction by Chief Administrative Law Judge Cheney. EPC proposed construction for the parties’ identified terms are as follows:

Claim	Term	EPC’s Proposed Construction
U.S. Patent 8,350,294		
1	“a compensated GaN layer”	A semiconductor GaN gate material in which one type of dopant, impurity, or imperfection (for example, donor) partially cancels the electrical effects of the other type of dopant, impurity, or imperfection (for example, acceptor).
U.S. Patent 8,404,508		
1	“etching away the doped GaN layer, except a portion	Etching away the doped GaN layer without etching beneath the gate contact.

	of the doped GaN layer beneath the gate contact”	
1	“applying a gate photo resistant pattern; etching away the gate contact layer outside the gate region; etching away the doped GaN layer, except a portion of the doped GaN layer beneath the gate contact; removing the gate photo resistant pattern”	These are four distinct steps.
U.S. Patent 9,748,347		
1	“forming side surfaces of the p-type gate material that extend horizontally towards the source and drain contacts, respectively”	Forming side surfaces of the p-type gate semiconductor material such that the bottom of the material is wider than the top of the material.
1	“forming side surfaces of the p-type gate material that extend horizontally towards the source and drain contacts, respectively, and contact the barrier layer”	Forming side surfaces of the p-type gate semiconductor material such that the bottom of the material, which contacts the barrier layer, is wider than the top of the material.
1	“etching the gate metal and the p-type gate material...;”	Etching the gate metal and etching the p-type gate material.
1	“etching the gate metal to form a pair of ledges”	Performing a process during which gate metal is removed and two ledges are created.
U.S. Patent 10,312,335		
1	“p-type gate material having side surfaces extending horizontally towards the source and drain contact, respectively”	p-type gate material having side surfaces extending horizontally such that the bottom of the material is wider than the top of the material.
1	“side surfaces extending horizontally towards the source contact and drain contact, respectively, and contacting the barrier layer”	p-type gate material having side surfaces extending horizontally such that the bottom of the material, which contacts the barrier layer, is wider than the top of the material.



2	“wherein the pair of horizontal ledges of the p-type gate material are self-aligned”	Wherein the process of creating the pair of ledges involves forming the p-type gate material and the gate metal using a single photo mask.
5	“wherein the p-type gate material comprises...(ii) side surfaces that extend horizontally towards the source contact and drain contact, respectively”	p-type gate material having side surfaces extending horizontally such that the bottom of the material is wider than the top of the material.
5	“side surfaces that extend horizontally towards the source contact and drain contact, respectively, and contacting the barrier layer”	p-type gate material having side surfaces extending horizontally such that the bottom of the material, which contacts the barrier layer, is wider than the top of the material.
5	“a pair of self-aligned ledges”	A pair of ledges created with a process that involves forming the p-type gate material and the gate metal using a single photo mask.

EPC’s proposed constructions are preliminary, as its investigation and discovery are ongoing. EPC reserves the right to amend its proposed constructions based on information learned during the meet and confer process with the Respondents and the Staff, information learned during this investigation, and any changes or amendments to the contentions.

Dated: September 5, 2023

Respectfully submitted,

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## CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing *Complainant's Identification of Proposed Constructions*. was served upon the following as indicated below on September 5, 2023:

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