

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT7920496

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
KARTHIK RANGANATHAN	07/18/2022
GREGORY CRUZAN	08/26/2022
SAMER KABBANI	04/20/2022
GILBERTO OSEGUERA	08/15/2022
IRA LEVENTHAL	10/05/2022
HIROKI IKEDA	07/20/2022
TOSHIYUKI KIYOKAWA	07/20/2022
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	ADVANTEST TEST SOLUTIONS, INC.
<b>Street Address:</b>	3061 ZANKER ROAD
<b>City:</b>	SAN JOSE
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	95134
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	17479808
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(408)938-9069
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	4089389060
<b>Email:</b>	misaac@MHBPATENTS.COM
<b>Correspondent Name:</b>	MURABITO, HAO & BARNES LLP
<b>Address Line 1:</b>	111 NORTH MARKET STREET, SUITE 700
<b>Address Line 2:</b>	SUITE 700
<b>Address Line 4:</b>	SAN JOSE, CALIFORNIA 95113
<b>ATTORNEY DOCKET NUMBER:</b>	AATS-0103-01U00US
<b>NAME OF SUBMITTER:</b>	ANTHONY C. MURABITO
<b>SIGNATURE:</b>	/ANTHONY C. MURABITO/
<b>DATE SIGNED:</b>	04/25/2023

PATENT

**Total Attachments: 10**

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**Assignment to Advantest Test Solutions, Inc.**

In consideration of good and valuable consideration, receipt of which is hereby acknowledged, I/we **Karthik Ranganathan, Gregory Cruzan, Samer Kabbani, Gilberto Oseguera, Ira Leventhal, Hiroki Ikeda, Toshiyuki Kiyokawa**

do hereby sell, assign, and transfer unto Advantest Test Solutions, Inc. (hereinafter called Advantest), a Delaware Corporation having its principal place of business at 3061 Zanker Road, San Jose, CA 95134 and its successors and assigns, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements, including the right of priority in, to, and under, the application for the United States patent entitled:

**PASSIVE CARRIER-BASED DEVICE DELIVERY FOR SLOT-BASED HIGHVOLUME SEMICONDUCTOR TEST SYSTEM**

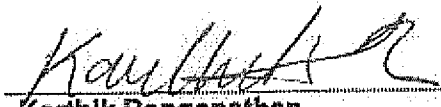
\_\_\_\_\_ filed herewith and the inventions set forth and described therein, and any and all Letters Patent of the United States and of countries foreign thereto which may be granted thereon or therefor; or

Serial No.: 17/479,808 filed on 09-20-2021 and the inventions set forth and described therein, and any and all Letters Patent of the United States and of countries foreign thereto which may be granted thereon or therefor;

And for the above consideration, I/we agree promptly upon request of Advantest, its successors or assigns, to execute and deliver without further compensation any power of attorney, assignment, application, whether original, continuation, divisional or reissue, or other papers which may be necessary or desirable fully to secure to Advantest, its successors and assigns, the inventions described in said application and all patent rights therein, in the United States and in any country foreign thereto, and to cooperate and assist in the prosecution of interference proceedings involving said inventions and in the adjudication or reexamination of said Letters Patent provided the expenses which may be incurred by me/us in lending such cooperation and assistance are paid by Advantest.

I/we further covenant with Advantest, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned;

In witness whereof, I/we hereunto set my/our hand(s) and seal:

Inventor's Signature:  Date: JULY 18, 2021  
**Karthik Ranganathan**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Gregory Cruzan**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Samer Kabbani**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Gilberto Oseguera**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Ira Leventhal**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Inventor's Signature: **Hiroki Ikeda**  
**Toshiyuki Kiyokawa** \_\_\_\_\_ Date: \_\_\_\_\_

### Assignment to Advantest Test Solutions, Inc.

In consideration of good and valuable consideration, receipt of which is hereby acknowledged, I/we **Karthik Ranganathan, Gregory Cruzan, Samer Kabbani, Gilberto Oseguera, Ira Leventhal, Hiroki Ikeda, Toshiyuki Kiyokawa**

do hereby sell, assign, and transfer unto Advantest Test Solutions, Inc. (hereinafter called Advantest), a Delaware Corporation having its principal place of business at 3061 Zanker Road, San Jose, CA 95134 and its successors and assigns, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements, including the right of priority in, to, and under, the application for the United States patent entitled:

#### **PASSIVE CARRIER-BASED DEVICE DELIVERY FOR SLOT-BASED HIGHVOLUME SEMICONDUCTOR TEST SYSTEM**

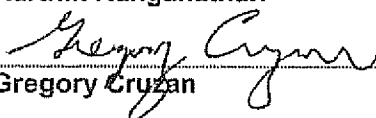
\_\_\_\_\_ filed herewith and the inventions set forth and described therein, and any and all Letters Patent of the United States and of countries foreign thereto which may be granted thereon or therefor; or

Serial No.: 17/479,808 filed on 09-20-2021 and the inventions set forth and described therein, and any and all Letters Patent of the United States and of countries foreign thereto which may be granted thereon or therefor;

And for the above consideration, I/we agree promptly upon request of Advantest, its successors or assigns, to execute and deliver without further compensation any power of attorney, assignment, application, whether original, continuation, divisional or reissue, or other papers which may be necessary or desirable fully to secure to Advantest, its successors and assigns, the inventions described in said application and all patent rights therein, in the United States and in any country foreign thereto, and to cooperate and assist in the prosecution of interference proceedings involving said inventions and in the adjudication or reexamination of said Letters Patent provided the expenses which may be incurred by me/us in lending such cooperation and assistance are paid by Advantest.

I/we further covenant with Advantest, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned;

In witness whereof, I/we hereunto set my/our hand(s) and seal:

Inventor's Signature: _____	Date: _____
<b>Karthik Ranganathan</b>	
Inventor's Signature: _____	Date: <u>2022-08-26</u>
 <b>Gregory Cruzan</b>	
Inventor's Signature: _____	Date: _____
<b>Samer Kabbani</b>	
Inventor's Signature: _____	Date: _____
<b>Gilberto Oseguera</b>	
Inventor's Signature: _____	Date: _____
<b>Ira Leventhal</b>	
Inventor's Signature: _____	Date: _____
<b>Hiroki Ikeda</b>	
Inventor's Signature: _____	Date: _____

**Toshiyuki Kiyokawa**

## Assignment to Advantest Test Solutions, Inc.

For good and valuable consideration received in the course of my employment at Advantest, I, **Samer KABBANI**, hereby assign to Advantest Test Solutions, Inc. ("Advantest"), 3061 Zanker Road, San Jose, CA 95134, a Delaware corporation, and its successors and assigns, my entire right, title, and interest for the United States and all foreign countries, including the right of priority in, to, and under, the United States Patent Application Nos. 17/479,808 (titled "Passive Carrier-based Device Delivery for Slot-based High-Volume Semiconductor Test System"; filed September 20, 2021), 17/479,998 (titled "Thermal Solution for Massively Parallel Testing"; filed September 20, 2021), and 17/491,145 (titled "Shielded Socket and Carrier for High-Volume Test of Semiconductor Devices"; filed September 30, 2021) ("Existing Patent Applications"), including, any continuation, continuation-in-part, divisional, reissue, and foreign equivalent applications and/or patents of the Existing Patent Applications (collectively, the "Patents"), and any patentable inventions disclosed therein to the extent having priority based on the Existing Patent Applications (the "Inventions"). I assign to Advantest my entire right, title, and interest to any subsequent patent application claiming priority to any of the Patents and/or claiming any of the Inventions, in the United States and in any foreign country thereto. I assign to Advantest, my entire, right, title, and interest to all causes of action for infringement and enforcement of all of the foregoing patents and applications, including all rights to pursue damages, injunctive relief, and other remedies for past and future infringement.

And for the above consideration, I agree promptly upon request of Advantest, its successors or assigns, to execute and deliver without further compensation any power of attorney, oath, application, assignment, or other papers which may be necessary to secure to Advantest, its successors and assigns, ownership of the foregoing Patents and Inventions, in the United States and in any country foreign thereto.

I further covenant with Advantest, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that, to my knowledge, full right to convey the same as herein expressed is possessed by the undersigned. Aside from the foregoing, I make no representations or warranties, implied or otherwise, regarding the patent application or any patent, or any claim of a patent, that may issue therefrom.

Inventor's Signature: \_\_\_\_\_

  
Samer KABBANI

Date: \_\_\_\_\_

4-20-2022

### Assignment to Advantest Test Solutions, Inc.

In consideration of good and valuable consideration, receipt of which is hereby acknowledged, I/we  
**Karthik Ranganathan, Gregory Cruzan, Samer Kabbani, Gilberto Oseguera, Ira Leventhal, Hiroki Ikeda, Toshiyuki Kiyokawa**

do hereby sell, assign, and transfer unto Advantest Test Solutions, Inc. (hereinafter called Advantest), a Delaware Corporation having its principal place of business at 3061 Zanker Road, San Jose, CA 95134 and its successors and assigns, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements, including the right of priority in, to, and under, the application for the United States patent entitled:

#### **PASSIVE CARRIER-BASED DEVICE DELIVERY FOR SLOT-BASED HIGHVOLUME SEMICONDUCTOR TEST SYSTEM**

\_\_\_\_\_ filed herewith and the inventions set forth and described therein, and any and all Letters Patent of the United States and of countries foreign thereto which may be granted thereon or therefor; or

Serial No.: 17/479,808 filed on 09-20-2021 and the inventions set forth and described therein, and any and all Letters Patent of the United States and of countries foreign thereto which may be granted thereon or therefor;

And for the above consideration, I/we agree promptly upon request of Advantest, its successors or assigns, to execute and deliver without further compensation any power of attorney, assignment, application, whether original, continuation, divisional or reissue, or other papers which may be necessary or desirable fully to secure to Advantest, its successors and assigns, the inventions described in said application and all patent rights therein, in the United States and in any country foreign thereto, and to cooperate and assist in the prosecution of interference proceedings involving said inventions and in the adjudication or reexamination of said Letters Patent provided the expenses which may be incurred by me/us in lending such cooperation and assistance are paid by Advantest.

I/we further covenant with Advantest, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned;

In witness whereof, I/we hereunto set my/our hand(s) and seal:

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Karthik Ranganathan**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Gregory Cruzan**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Samer Kabbani**

Inventor's Signature: *G. Oseguera* Date: 8/15/22  
**Gilberto Oseguera**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Ira Leventhal**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Hiroki Ikeda**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_



**Toshiyuki Kiyokawa**

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### SHIELDED SOCKET AND CARRIER FOR HIGH-VOLUME TEST OF SEMICONDUCTOR DEVICES

..... filed herewith and the inventions set forth and described therein, and any and all Letters Patent of the United States and of countries foreign thereto which may be granted thereon or therefor; or

Serial No.: 17/479,808 filed on 09-20-2021 and the inventions set forth and described therein, and any and all Letters Patent of the United States and of countries foreign thereto which may be granted thereon or therefor;

And for the above consideration, I/we agree promptly upon request of Advantest, its successors or assigns, to execute and deliver without further compensation any power of attorney, assignment, application, whether original, continuation, divisional or reissue, or other papers which may be necessary or desirable fully to secure to Advantest, its successors and assigns, the inventions described in said application and all patent rights therein, in the United States and in any country foreign thereto, and to cooperate and assist in the prosecution of interference proceedings involving said inventions and in the adjudication or reexamination of said Letters Patent provided the expenses which may be incurred by me/us in lending such cooperation and assistance are paid by Advantest.

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In witness whereof, I/we hereunto set my/our hand(s) and seal:

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Karthik Ranganathan**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Gregory Cruzan**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Samer Kabbani**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Gilberto Oseguera**

Inventor's Signature:  Date: 10/05/2022  
**Ira Leventhal**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Hiroki Ikeda**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Toshiyuki Kiyokawa

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And for the above consideration, I/we agree promptly upon request of Advantest, its successors or assigns, to execute and deliver without further compensation any power of attorney, assignment, application, whether original, continuation, divisional or reissue, or other papers which may be necessary or desirable fully to secure to Advantest, its successors and assigns, the inventions described in said application and all patent rights therein, in the United States and in any country foreign thereto, and to cooperate and assist in the prosecution of interference proceedings involving said inventions and in the adjudication or reexamination of said Letters Patent provided the expenses which may be incurred by me/us in lending such cooperation and assistance are paid by Advantest.

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**Karthik Ranganathan**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Gregory Cruzan**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Samer Kabbani**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Gilberto Oseguera**

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
**Ira Leventhal**

Inventor's Signature: 池田 浩樹 Date: 20/07/2022  
**Hiroki Ikeda**

Inventor's Signature: 清川 敏之 Date: 20/07/2022  
**Toshiyuki Kiyokawa**