504791134 02/23/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4837866

SUBMISSION TYPE:		NEW ASSIGNMENT	
NATURE OF CONVEYANCE:		ASSIGNMENT	
CONVEYING PARTY D	ΑΤΑ		
		Name	Execution Date
ANDREAS P. FRIEDRIC	Ж		01/31/2018
ANDREA FOLETTO			01/31/2018
NICOLAS YOAKIM			02/06/2018
ALLEGRO MICROSYST	EMS EUROP	E LIMITED	02/22/2018
RECEIVING PARTY DA	ТА		
Name: ALLEGRO MICROSYSTEMS, LLC			
Street Address:	115 NORTHEAST CUTOFF		
City:	WORCESTER		
State/Country:	MASSACHUSETTS		
Postal Code:	01606		
PROPERTY NUMBERS	Total: 1		
Property Type		Number	
Application Number: 158		2843	
CORRESPONDENCE D	ΑΤΑ		
Fax Number: (781)401-9966			
		e-mail address first; if that is uns	
•	•	hat is unsuccessful, it will be sen	t via US Mail.
Phone: 781-4 Email: mmcl		@dc-m.com	
		(, CROWLEY, MOFFORD & DURKEE, LLP	
-		TURNPIKE STREET	
Address Line 2: SUIT		E 301A	
Address Line 4:	CANTON, MASSACHUSETTS 02021-2714		
ATTORNEY DOCKET NUMBER:		ALLEG-341PUS	
NAME OF SUBMITTER:		KERMIT ROBINSON	
SIGNATURE:		/Kermit Robinson/	
DATE SIGNED:		02/23/2018	
Total Attachments: 18			
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ASSIGNMENT

Whereas I/We, Andreas P. Friedrich, Andrea Foletto and Nicolas Yoakim, have made certain inventions or discoveries (or both) set forth in an application for Letters Patent of the United States of America entitled: MAGNETIC FIELD SENSOR HAVING AT LEAST TWO CVH ELEMENTS AND METHOD OF OPERATING SAME, identified as Attorney Docket No. ALLEG-341PUS, and Client Case No. A-2234, which application was executed on <u>1/31/18</u>; <u>1/31/18</u>; <u>2/6/18</u>

and filed on 2/9/20/8, and assigned Application No. 15/92,643. In the event that the execution date, filing date, and/or Application No. are not entered above at the time this document is executed, and if such information is deemed necessary, we hereby authorize and request our attorneys at DALY, CROWLEY, MOFFORD & DURKEE, LLP, 354A Turnpike Street, Suite 301A, Canton, MA 02021-2714, to insert above the execution date, filing date, and/or Application No. of said application.

Whereas Allegro MicroSystems Europe Limited (herein AMEL), a company registered in England and having a place of business at Melita House, 124 Bridge Road, Chertsey Surrey KT16 8LH United Kingdom may have certain rights in the above identified inventions or discoveries;

Whereas, Allegro MicroSystems, LLC, a Delaware limited liability company having a place of business at 115 Northeast Cutoff, Worcester, Massachusetts 01606, and which, together with its successors and assigns, is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits and privileges hereinafter recited;

Now, therefore, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which I/We, Andreas P. Friedrich, Andrea Foletto and Nicolas Yoakim, and

AMEL, Allegro MicroSystems Europe Limited, by signature of Robert C. Hunt, hereby acknowledge, I/We each hereby, without reservation:

1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said application for Letters Patent of the United States of America, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, reissue, PCT, re-examination and Convention applications based in whole or in part upon said inventions or discoveries, or upon said applications, and any and all Letters Patent, reissues, reexaminations, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent and any provisional applications from which priority is claimed in said Letters Patent;

2. Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in my name or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;

3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignee, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;

4. Warrant that I have not knowingly conveyed to others any right in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything

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embodying or utilizing any of said inventions or discoveries; and that I have good right to assign the same to Assignee without encumbrance;

5. Bind my heirs, legal representatives, assigns, and successors, as well as myself, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to me or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by me, my heirs, legal representatives, assigns, and successors if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to me relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in my control or in the control of my heirs, legal representatives, assigns, or successors which may be useful for establishing the facts of my conceptions, disclosures, and reduction to practice of said inventions and discoveries;

6. Warrant that:

For AMEL, Robert C. Hunt, General Manager of Allegro MicroSystems Europe Limited, is authorized to act on behalf of, and to bind Allegro MicroSystems Europe Limited.

In testimony of which I/we have each executed this Assignment on the date indicated next to our name(s).

Dated: 31 January 2018

#

Andreas P. Fried

On this 31_{Day} day of $3n_{\text{Month}}$, 218, before me appeared Andreas P. Friedrich, to me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

First Witness Signature Philipp DASE-TU First Witness Printed Name

On this <u>S1</u> day of <u>January</u>, <u>2018</u>, before me appeared Andreas P. Friedrich, <u>Day</u> <u>Monsh</u>, <u>Vent</u> to me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

Second Witness Signature GILLET Ceduic Second Witness Printed Name

Dated: 31/Sdawary/2018

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instrument, and he or she acknowledged the same to be his or her-free act and deed.

First Witness Signature Philipe DOSIGTO First Witness Printed Name

On this $\frac{31}{Osy}$ day of $\frac{1}{Osy}$ $\frac{2018}{Month}$, $\frac{2018}{Year}$, before me appeared Andrea Foletto, to me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

Second Witness Signature GILLET Cedury Second Witness Printed Name

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Dated:

Nicolas Yoakim

On this _____ day of _____, ___, before me appeared Nicolas Yoakim, To me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

First Witness Signature

First Witness Printed Name

On this _____ day of _____, ___, before me appeared Nicolas Yoakim, To me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

Second Witness Signature

Second Witness Printed Name

Page 5 of 6 #

AMEL

Dated:

Allegro MicroSystems Europe Limited By: Robert C. Hunt In his capacity as General Manager of Allegro MicroSystems Europe Limited

On this _____ day of _____, ___, before me appeared Robert C. Hunt, to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.

First Witness Signature

First Witness Printed Name

On this _____ day of _____, ___, before me appeared Robert C. Hunt, ^{Day} to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.

Second Witness Signature

Second Witness Printed Name

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ASSIGNMENT

Whereas I/We, Andreas P. Friedrich, Andrea Foletto and Nicolas Yoakim, have made certain inventions or discoveries (or both) set forth in an application for Letters Patent of the United States of America entitled: MAGNETIC FIELD SENSOR HAVING AT LEAST TWO CVH ELEMENTS AND METHOD OF OPERATING SAME, identified as Attorney Docket No. ALLEG-341PUS, and Client Case No. A-2234, which application was executed on <u>1/31/18</u> · <u>1/31/18</u>.

Client Case No. A-2234, which application was executed on <u>1/31/18</u>, <u>1/31/18</u>, <u>2/6/18</u>, and filed on <u>2/9/20/8</u>, and assigned Application No. <u>15/892, 843</u>. In the event that the execution date, filing date, and/or Application No. are not entered above at the time this document is executed, and if such information is deemed necessary, we hereby authorize and request our attorneys at DALY, CROWLEY, MOFFORD & DURKEE, LLP, 354A Turnpike Street, Suite 301A, Canton, MA 02021-2714, to insert above the execution date, filing date, and/or Application No. of said application.

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Whereas, Allegro MicroSystems, LLC, a Delaware limited liability company having a place of business at 115 Northeast Cutoff, Worcester, Massachusetts 01606, and which, together with its successors and assigns, is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits and privileges hereinafter recited;

Now, therefore, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which I/We, Andreas P. Friedrich, Andrea Foletto and Nicolas Yoakim, and

AMEL, Allegro MicroSystems Europe Limited, by signature of Robert C. Hunt, hereby acknowledge, I/We each hereby, without reservation:

1. Assign, transfer and convey to Assignee the entire right, title and interest in and to said inventions and discoveries, said application for Letters Patent of the United States of America, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, reissue, PCT, re-examination and Convention applications based in whole or in part upon said inventions or discoveries, or upon said applications, and any and all Letters Patent, reissues, reexaminations, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent and any provisional applications from which priority is claimed in said Letters Patent;

2. Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in my name or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;

 Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignce, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;

4. Warrant that I have not knowingly conveyed to others any right in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything

embodying or utilizing any of said inventions or discoveries; and that I have good right to assign the same to Assignee without encumbrance;

5. Bind my heirs, legal representatives, assigns, and successors, as well as myself, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to me or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by me, my heirs, legal representatives, assigns, and successors if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to me relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in my control or in the control of my heirs, legal representatives, assigns, or successors which may be useful for establishing the facts of my conceptions, disclosures, and reduction to practice of said inventions and discoveries;

6. Warrant that:

For AMEL, Robert C. Hunt, General Manager of Allegro MicroSystems Europe Limited, is authorized to act on behalf of, and to bind Allegro MicroSystems Europe Limited.

In testimony of which I/we have each executed this Assignment on the date indicated next to our name(s).

Page 2 of 6 #

PATENT REEL: 045018 FRAME: 0286

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Dated:

井井

Andreas P. Friedrich

On this day of day of $\frac{1}{Ves}$, before me appeared Andreas P. Friedrich, before me appeared Andreas P. Friedrich, to me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

First Witness Signature

First Witness Printed Name

On this ______ day of ______, ____, before me appeared Andreas P. Friedrich, to me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

Second Witness Signature

Second Witness Printed Name

Page 3 of 6 #

Dated: _____

#

Andrea Foletto

On this day of described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

First Witness Signature

First Witness Printed Name

On this _____ day of _____, ___, before me appeared Andrea Foletto,

Second Witness Signature

Second Witness Printed Name

Page 4 of 6 #

挤 # Dated: February 36th, 2018 Yoakim On this 2 day of 2 day of 3 day of 3to me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed. First Witness^VSignature ANTOINE HASTOY First Witness Printed Name On this $\underline{\neg}_{Oay}$ day of $\underline{2}_{Noash}$, $\underline{48}_{Yest}$, before me appeared Nicolas Yoakim, to me known and known to me to be the person described in and who executed the foregoing

instrument, and he or she acknowledged the same to be his or her free act and deed.

Second Witness Signature

<u>A Lice THONAS</u> Second Witness Printed Name

Page 5 of 6 #

AMEL

Dated:

Allegro MicroSystems Europe Limited By: Robert C. Hunt In his capacity as General Manager of Allegro MicroSystems Europe Limited

On this _____ day of _____, ___, before me appeared Robert C. Hunt, to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.

First Witness Signature

First Witness Printed Name

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Second Witness Signature

Second Witness Printed Name

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Page 6 of 6 #

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Client Case No. A-2234, which application was executed on <u>1/31/18</u>; <u>1/31/18</u>; <u>2/6/18</u> , and filed on <u>2/9/30/9</u>, and assigned Application No. <u>16/892, 843</u> In the event that the execution date, filing date, and/or Application No. are not entered above at the time this document is executed, and if such information is deemed necessary, we hereby authorize and request our attorneys at DALY, CROWLEY, MOFFORD & DURKEE, LLP, 354A Turnpike Street, Suite 301A, Canton, MA 02021-2714, to insert above the execution date, filing date, and/or Application No. of said application.

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 Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in my name or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;

 Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignee, as assignee of the entire right, title and interest therein or otherwise as Assignee may direct;

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5. Bind my heirs, legal representatives, assigns, and successors, as well as myself, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to me or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by me, my heirs, legal representatives, assigns, and successors if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to me relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in my control or in the control of my heirs, legal representatives, assigns, or successors which may be useful for establishing the facts of my conceptions, disclosures, and reduction to practice of said inventions and discoveries;

6. Warrant that:

For AMEL, Robert C. Hunt, General Manager of Allegro MicroSystems Europe Limited, is authorized to act on behalf of, and to bind Allegro MicroSystems Europe Limited.

In testimony of which I/we have each executed this Assignment on the date indicated next to our name(s).

Dated: _____

Andreas P. Friedrich

On this day of day of

First Witness Signature

First Witness Printed Name

On this ______ day of ______, before me appeared Andreas P. Friedrich, to me known and known to me to be the person described in and who executed the foregoing

instrument, and he or she acknowledged the same to be his or her free act and deed.

Second Witness Signature

Second Witness Printed Name

Page 3 of 6 👘

Dated:

Andrea Foletto

On this day of $\frac{1}{Y_{exc}}$, before me appeared Andrea Foletto, to me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

First Witness Signature

First Witness Printed Name

On this ______ day of ______, ____, before me appeared Andrea Foletto, to me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

Second Witness Signature

Second Witness Printed Name

Page 4 of 6

Dated: _____

Nicolas Yoakim

On this _____ day of _____, ___, before me appeared Nicolas Yoakim, To me known and known to me to be the person described in and who executed the foregoing instrument, and he or she acknowledged the same to be his or her free act and deed.

First Witness Signature

First Witness Printed Name

On this ______ day of ______, ____, before me appeared Nicolas Yoakim, Day Yea

instrument, and he or she acknowledged the same to be his or her free act and deed.

Second Witness Signature

Second Witness Printed Name

Page 5 of 6

AMEL

Dated: 22/2/182.

Utre.

Allegro MicroSystems Europe Limited By: Robert C. Hunt In his capacity as General Manager of Allegro MicroSystems Europe Limited

On this $\frac{2}{D_{By}}$ day of $\underbrace{iCtr(C_{Y}, Q_{YSSF})}_{Model}$, before me appeared Robert C. Hunt, to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.

Zenana First Witness Signature / - 30° - 144 First Witness Printed Name

On this $\frac{22}{Day}$ day of $\frac{fa_{wery}}{Month}$, $\frac{2018}{Y_{cas}}$, before me appeared Robert C. Hunt, to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.

Second Witness Signature SUZANNE REANICKIN Second Witness Printed Name

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Page 6 of 6