504697513 12/20/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4744235

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TAKAYUKI TSUMAGARI	12/07/2017
YOSHIFUMI UCHITA	12/07/2017
SHINICHI TAKASE	12/07/2017
HIROHISA SAITO	12/05/2017

RECEIVING PARTY DATA

Name:	SUMITOMO ELECTRIC PRINTED CIRCUITS, INC.	
Street Address:	30, HINOKIGAOKA, MINAKUCHI-CHO	
City:	KOKA-SHI, SHIGA	
State/Country:	JAPAN	
Postal Code:	528-0068	
Name:	AUTONETWORKS TECHNOLOGIES, LTD.	
Street Address:	1-14, NISHISUEHIRO-CHO	
City:	YOKKAICHI, MIE	
State/Country:	JAPAN	
Postal Code:	510-8503	
Name:	SUMITOMO ELECTRIC INDUSTRIES, LTD.	
Street Address:	5-33, KITAHAMA 4-CHOME, CHUO-KU	
City:	OSAKA-SHI, OSAKA	
State/Country:	JAPAN	
Postal Code:	541-0041	
Name:	SUMITOMO WIRING SYSTEMS, LTD.	
Street Address:	1-14, NISHISUEHIRO-CHO	
City:	YOKKAICHI, MIE	
State/Country:	JAPAN	
Postal Code:	510-8503	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15738301

PATENT REEL: 044449 FRAME: 0932

504697513

CORRESPONDENCE DATA

Fax Number: (202)204-0289

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.

Phone: 202-842-8800

Email: DCPatentFiling@dbr.com

Correspondent Name: DRINKER BIDDLE & REATH (DC)

Address Line 1: 1500 K STREET, N.W.

Address Line 2: SUITE 1100

Address Line 4: WASHINGTON, D.C. 20005-1209

ATTORNEY DOCKET NUMBER:	201917-0278-00-US-572230
NAME OF SUBMITTER:	PETER J. SISTARE
SIGNATURE:	/Peter J. Sistare/
DATE SIGNED:	12/20/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 6

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PATENT REEL: 044449 FRAME: 0933

SOLE/JOINT INVENTION (U.S. Rights Only) Page 1 of 3

COMBINED DECLARATION AND ASSIGNMENT

WHEREAS I/WE, the below-named inventor(s) – hereinafter referred to as Assignor(s) – have made an invention entitled:

Flexible Printed Circuit Board

for which I/WE are filing an application for United States Letters Patent, the application being the one identified in the Declaration set forth below; and

WHEREAS, (1) SUMITOMO ELECTRIC PRINTED CIRCUITS, INC., (2) AutoNetworks Technologies, Ltd., (3) Sumitomo Electric Industries, Ltd. and (4) Sumitomo Wiring Systems, Ltd., a corporation of Japan, whose post office address is (1) 30, Hinokigaoka, Minakuchi-cho, Koka-shi, Shiga 528-0068 Japan, (2) 1-14, Nishisuehiro-cho, Yokkaichi, Mie 510-8503 Japan, (3) 5-33, Kitahama 4-chome, Chuo-ku, Osaka-shi, Osaka 541-0041 Japan, and (4) 1-14, Nishisuehiro-cho, Yokkaichi, Mie 510-8503 Japan (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention, the application for United States Letters Patent on this invention and the Letters Patent to issue upon this application;

NOW THEREFORE, be it known that, for good and valuable consideration, the receipt of which from Assignee is hereby acknowledged, I/WE, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, MY/OUR entire right, title, and interest in and to this invention and this application, and all divisionals, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and I/WE hereby authorize and request the United States Patent and Trademark Office to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY covenant that I/WE have the full right to convey the interest assigned by this Assignment, and I/WE have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE HEREBY further covenant and agree that I/WE will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to ME/US respecting this invention and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors and assigns, execute all divisional, continuation, and reissue applications, and all rights to claim priority on the basis of such applications, make all rightful oaths or the like, and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns;

IN TESTIMONY WHEREOF, I/WE have hereunto set our hand(s) in the appropriate space below.

SOLE/JOINT INVENTION (U.S. Rights Only) Page 2 of 3

出願データシート(連邦規則法典第37編規 実用又は意匠出願のための、連邦規則法典第 宣言書として、下記に記名され、署名のある のように宣言する。	第 37 編規則 1.63 の る各発明者は、次	AS A DECLARATION UNDER 37 C.F.R. § 1.63, for a utility or design application using an Application Data Sheet (37 C.F.R. § 1.76), each below-named inventor for which a signature has been provided hereby declares that: This Declaration is directed to (please check one of the following
この宣言書は次に向けられたものである (ボックスのうち1つにチェックを入れてく)		two boxes):
添付された出願、又は 出願番号 である米国出願若しくはPCT国際出願。	こ出願された 	The attached application, or United States application or PCT international application number PCT/JP2016/068488 filed on June 22, 2016.
上記の出願は、私によってなされたか、又になされるよう権限を与えられたものである。 私は、この出願で請求されている発明の最初最初の共同発明者であると信じている。 私は、特許請求の範囲を含むこの出願の内を理解した。 私は、連邦規則法典第37編規則1.56に規定さに、特許性について私が知っているすべての庁に開示する義務があることを知っている。 私は、この宣言書においてなされたいかなるの供述は、合衆国法典第18編第1001条の下5年以下の懲役又はその両方に処される事を	別の発明者又は 学を検討し、且つ れている情報を の重要によるを が節金若しくは	The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. I have reviewed and understand the contents of the application, including the claims. I am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 C.F.R. § 1.56. I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.
注記:もし前もって提出されていないのであれば 名前を挙げた出願データシート (PTO/AIA/14 又に もの)をこの用紙に添付しなければならない。		Note: An application data sheet (PTO/AIA/14 or equivalent) naming the entire inventive entity must accompany this form if not submitted previously.
STATEMENT OF ACCURATE TRANS		37 C.F.R. § 1.69(b): provided in this document is an accurate translation.
Signature:Masah	liro Noda	

SOLE/JOINT INVENTION (U.S. Rights Only) Page 3 of 3

唯一または第一発明者の法律上の氏名	LEGAL NAME OF SOLE/FIRST ASSIGNOR/INVENTOR
氏名:	Print Name: Takayuki TSUMAGARI
日付:	Describes 57 2019
署名:	Signature: Jakayuhi Isumgani
第二発明者の法律上の氏名	LEGAL NAME OF SECOND ASSIGNOR/INVENTOR
氏名:	Print Name: Yoshifumi UCHITA
日付:	Date: December 07, 2017
署名:	C
第三発明者の法律上の氏名	LEGAL NAME OF THIRD ASSIGNOR/INVENTOR
氏名:	Print Name: Shinichi TAKASE
日付:	
署名:	Signature:
第四発明者の法律上の氏名	LEGAL NAME OF FOURTH ASSIGNOR/INVENTOR
氏名:	— Print Name: <u>Hirohisa SAITO</u>
日付:	Date: Pecember 05, 2017
署名:	Signature: Hirofisa Santo
第五発明者の法律上の氏名	LEGAL NAME OF FIFTH ASSIGNOR/INVENTOR
氏名:	Print Name:
日付:	
署名:	
第六発明者の法律上の氏名	LEGAL NAME OF SIXTH ASSIGNOR/INVENTOR
氏名:	— Print Name:
日付:	Date:
署名:	Signature:
発明者のリストは添付のページに続く: □ はい □ いいえ	Name(s) of additional Assignor(s)/Inventor(s) attached: ☐ Yes ☑ No

DC01/3306284.1

PATENT REEL: 044449 FRAME: 0936

SOLE/JOINT INVENTION (U.S. Rights Only) Page 1 of 3

COMBINED DECLARATION AND ASSIGNMENT

WHEREAS I/WE, the below-named inventor(s) – hereinafter referred to as Assignor(s) – have made an invention entitled:

Flexible Printed Circuit Board

for which I/WE are filing an application for United States Letters Patent, the application being the one identified in the Declaration set forth below; and

WHEREAS, (1) SUMITOMO ELECTRIC PRINTED CIRCUITS, INC., (2) AutoNetworks Technologies. Ltd., (3) Sumitomo Electric Industries, Ltd. and (4) Sumitomo Wiring Systems, Ltd., a corporation of Japan, whose post office address is (1) 30, Hinokigaoka, Minakuchi-cho, Koka-shi, Shiga 528-0068 Japan, (2) 1-14, Nishisuehiro-cho, Yokkaichi, Mie 510-8503 Japan, (3) 5-33, Kitahama 4-chome, Chuo-ku, Osaka-shi, Osaka 541-0041 Japan, and (4) 1-14, Nishisuehiro-cho, Yokkaichi, Mie 510-8503 Japan (hereinaster referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention, the application for United States Letters Patent on this invention and the Letters Patent to issue upon this application;

NOW THEREFORE, be it known that, for good and valuable consideration, the receipt of which from Assignee is hereby acknowledged, I/WE, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, MY/OUR entire right, title, and interest in and to this invention and this application, and all divisionals, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and I/WE hereby authorize and request the United States Patent and Trademark Office to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY covenant that I/WE have the full right to convey the interest assigned by this Assignment, and I/WE have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE HEREBY further covenant and agree that I/WE will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to ME/US respecting this invention and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors and assigns, execute all divisional, continuation, and reissue applications, and all rights to claim priority on the basis of such applications, make all rightful oaths or the like, and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns;

IN TESTIMONY WHEREOF, I/WE have hereunto set our hand(s) in the appropriate space below.

SOLE/JOINT INVENTION (U.S. Rights Only) Page 2 of 3

	出願データシート(連邦規則法典第37編規則1.76)を用いた 実用又は意匠出願のための、連邦規則法典第37編規則1.63の 宣言書として、下記に記名され,署名のある各発明者は、次 のように宣言する。	AS A DECLARATION UNDER 37 C.F.R. § 1.63, for a utility or design application using an Application Data Sheet (37 C.F.R. § 1.76), each below-named inventor for which a signature has been provided hereby declares that:
	この宣言書は次に向けられたものである (次の2つの ボックスのうち1つにチェックを入れてください) :	This Declaration is directed to (please check one of the following two boxes):
	添付された出願、又は に出願された 出願番号 である米国出願若しくはPCT 国際出願。	The attached application, or United States application or PCT international application number PCT/JP2016/068488 filed on June 22, 2016.
	上記の出願は、私によってなされたか、又は私によって なされるよう権限を与えられたものである。	The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor
	私は、この出願で請求されている発明の最初の発明者又は 最初の共同発明者であると信じている	of a claimed invention in the application. I have reviewed and understand the contents of the application,
	私は、特許請求の範囲を含むこの出願の内容を検討し、且つ 理解した。	I am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 C.F.R. §
	に、特許性について私が知っているすべての重要な情報を 庁に開示する義務があることを知っている。 私は、この宣書書においてなされたいかなる故意による虚偽	1.56. I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.
	- 1211 - 12 CONTROL CONTROL CONTROL OF SECULOR CONTROL	
	注記:もし前もって提出されていないのであれば、発明主体全員の 名前を挙げた出願データシート(PTO/AIA/14 又はそれに相当する もの)をこの用紙に添付しなければならない。	Note: An application data sheet (PTO/AIA/14 or equivalent) naming the entire inventive entity must accompany this form if not submitted previously.
i	STATEMENT OF ACCURATE TRANSLATION UNDER:	37 C.F.R. § 1.69(b):
	To the best of my knowledge, the English-language translation p	provided in this document is an accurate translation.
	Signature:	
	Masahiro Noda	

SOLE/JOINT INVENTION (U.S. Rights Only) Page 3 of 3

唯一または第一発明者の法律上の氏名	LEGAL NAME OF SOLE/FIRST ASSIGNOR/INVENTOR
氏名:	Print Name: <u>Takayuki TSUMAGARI</u>
日付:	
署名:	Signature:
第二発明者の法律上の氏名	LEGAL NAME OF SECOND ASSIGNOR/INVENTOR
氏名:	Print Namo: Yoshifumi UCHTA
日付:	Date:
署名:	
第三発明者の法律上の氏名	LEGAL NAME OF THIRD ASSIGNOR/INVENTOR
氏名:	Print Name: Shinichi TAKASE
日付:	Date: 7/bec/2017
署名:	Signaturo: Thinich Toface
第四発明者の法律上の氏名	LEGAL NAME OF FOURTH ASSIGNOR/INVENTOR
氏名:	Print Name: Hirohisa SAITO
日付:	Date:
署名:	
第五発明者の法律上の氏名	LEGAL NAME OF FIFTH ASSIGNOR/INVENTOR
氏名:	Print Name:
日付:	Date:
署名:	
第六発明者の法律上の氏名	LEGAL NAME OF SIXTH ASSIGNOR/INVENTOR
氏名:	
日付:	Date:
署名:	Signature:
発明者のリストは添付のページに続く: □ はい □ いいえ	Namc(s) of additional Assignor(s)/Inventor(s) attached: 🔲 Yes 🛛 No

DC01/3306284.1

PATENT REEL: 044449 FRAME: 0939

RECORDED: 12/20/2017