

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6371550

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
AIRBUS DEFENCE AND SPANCE LIMITED	07/02/2020
RECEIVING PARTY DATA	
Name:	ZINIR LIMITED
Street Address:	COACHMAKERS BUSINESS CENTRE, 116A SEASIDE
City:	EASTBOURNE
State/Country:	UNITED KINGDOM
Postal Code:	BN22 7QP
PROPERTY NUMBERS Total: 5	
Property Type	Number
Patent Number:	10326036
Patent Number:	9335478
Patent Number:	9335479
Patent Number:	9671285
Patent Number:	9703037
CORRESPONDENCE DATA	
Fax Number:	
<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>	
Phone:	5022761796
Email:	contact@kafiling.com
Correspondent Name:	DEVASENA REDDY
Address Line 1:	1570 HERITAGE BAY DRIVE
Address Line 4:	SAN JOSE, CALIFORNIA 95138
ATTORNEY DOCKET NUMBER:	87-5-ASSIGNMENT
NAME OF SUBMITTER:	DEVASENA REDDY
SIGNATURE:	/DEVASENA REDDY/
DATE SIGNED:	10/28/2020
This document serves as an Oath/Declaration (37 CFR 1.63).	
Total Attachments: 14	

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THIS ASSIGNMENT is made on.....2nd July 2020.....

BETWEEN

Airbus Defence and Space Limited, of Gunnels Wood Road, Stevenage, Hertfordshire, SG1 2AS, United Kingdom ("the Assignor")

and

ZiNIR Limited, of The Coachmakers Business Centre, 116a Seaside, Eastbourne, East Sussex, BN22 7QP, United Kingdom ("the Assignee")

WHEREAS:


1. The Assignor has agreed to assign all of the Assignor's rights, title and interest in the patents and patent applications set out in the Schedule below ("the Patents") and in the inventions claimed by the Patents ("the Inventions"), and all patents derived therefrom, to the Assignee as set out below.

NOW THIS ASSIGNMENT WITNESSES as follows:

1. In consideration of the sum of £10, the receipt of which is hereby acknowledged, the Assignor with full title guarantee hereby assigns to the Assignee:
all the Assignor's rights, title and interest in and to the Inventions and the Patents and all patents granted thereon;
the right to apply for and obtain patents or other similar forms of protection in respect of the Inventions in all countries of the world together with the right to make any new application or applications in respect of any part of the subject matter of any application or specification filed in connection with the Inventions and the right to claim priority from the Patents; and
the right to bring proceedings for any previous infringement of the rights assigned by this assignment
TO HOLD the same unto the Assignee absolutely.

2. The Assignor hereby covenants with the Assignee that the Assignor will at the expense of the Assignee execute, sign and do all such instruments, applications, documents, acts and things as may be required by the Assignee to enable the Assignee or its nominee to enjoy the full benefit of the rights hereby assigned.

IN WITNESS of which this Assignment has been executed on the date stated above:


.....

SIGNED by.....ALAN SHAW.....
on behalf of AIRBUS DEFENCE AND SPACE LIMITED

.....

SIGNED by.....
on behalf of ZINIR LIMITED

SCHEDULE

ADS ref.	Title	Application No.	Filing date	Grant date	Grant no.	Country	Status
VS1050AUw	Resonator Optimisation	2012323084	09-Oct-2012	06-Aug-2015	2012323084	Australia	Registered
VS1050CAw	Resonator Optimisation	2,855,792	09-Oct-2012	12-Nov-2019	CA 2,855,792	Canada	Registered
VS1050CNw	Resonator Optimisation	201280056611	09-Oct-2012	24-May-2017	ZL20128005661	P. R. China	Registered
VS1050DEe	Resonator Optimisation	7	09-Oct-2012		1.7		
VS1050DEe	Resonator Optimisation	12773291.5	09-Oct-2012	06-Jun-2018	2766758	Germany	Registered
VS1050EP	Resonator Optimisation	11275129.2	14-Oct-2011			European Patent Office	Abandoned
VS1050EPw	Resonator Optimisation	12773291.5	09-Oct-2012	06-Jun-2018	2766758	European Patent Office	Expired
VS1050Fle	Resonator Optimisation	12773291.5	09-Oct-2012	06-Jun-2018	2766758	Finland	Registered
VS1050FRE	Resonator Optimisation	12773291.5	09-Oct-2012	06-Jun-2018	2766758	France	Registered
VS1050GBe	Resonator Optimisation	12773291.5	09-Oct-2012	06-Jun-2018	2766758	United Kingdom	Registered
VS1050ITe	Resonator Optimisation	12773291.5	09-Oct-2012	06-Jun-2018	5020180000221 49 (EP2766758)	Italy	Registered
VS1050JPw	Resonator Optimisation	2014-535023	09-Oct-2012	14-Jun-2019	JP 6537129	Japan	Registered
VS1050JP div	Resonator Optimisation	2019-029690	09-Oct-2012			Japan	Abandoned
VS1050KRw	Resonator Optimisation	10-2014-7012896	09-Oct-2012	05-Dec-2019	10-2054785	Republic of Korea	Registered
VS1050MYw	Resonator Optimisation	PI 2014001106	09-Oct-2012	06-Aug-2019	MY-170473-A	Malaysia	Registered
VS1050NLe	Resonator Optimisation	12773291.5	09-Oct-2012	06-Jun-2018	2766758	Netherlands	Registered
VS1050WO	Resonator Optimisation	PCT/EP2012/ 0699935	09-Oct-2012			Patent Cooperation Treaty	Expired
VS1050SGw	Resonator Optimisation	11201401485X	09-Oct-2012	10-Apr-2015	11201401485X	Singapore	Registered
VS1050USw	Resonator Optimisation	14/351,851	09-Oct-2012	11-Jul-2017	9,703,037	United States of America	Registered
VS1051AUw	Suppression of Back Reflection in a Waveguide	2012323094	09-Oct-2012	09-Jun-2016	2012323094	Australia	Registered
VS1051CAw	Suppression of Back Reflection in a Waveguide	2,856,647	09-Oct-2012	03-Dec-2019	CA 2856647	Canada	Registered
VS1051CNw	Suppression of Back Reflection in a Waveguide	20128005843	09-Oct-2012	23-Jun-2017	ZL2012800584	P. R. China	Registered
VS1051DEe	Suppression of Back Reflection in a Waveguide	12773292.3	09-Oct-2012	09-May-2018	39.9 2766759	Germany	Registered

VS1051EP	Suppression of Back Reflection in a Waveguide	11275128.4	14-Oct-2011				European Patent Office	Abandoned
VS1051EPw	Suppression of Back Reflection in a Waveguide	12773292.3	09-Oct-2012	09-May-2018	2766759		European Patent Office	Expired
VS1051FlE	Suppression of Back Reflection in a Waveguide	12773292.3	09-Oct-2012	09-May-2018	2766759		Finland	Registered
VS1051FRe	Suppression of Back Reflection in a Waveguide	12773292.3	09-Oct-2012	09-May-2018	2766759		France	Registered
VS1051GBe	Suppression of Back Reflection in a Waveguide	12773292.3	09-Oct-2012	09-May-2018	2766759		United Kingdom	Registered
VS1051ITe	Suppression of Back Reflection in a Waveguide	12773292.3	09-Oct-2012	09-May-2018	5020180000182 59 (EP2766759)		Italy	Registered
VS1051JPw	Suppression of Back Reflection in a Waveguide	2014-535027	09-Oct-2012	18-Aug-2017	JP 6192173		Japan	Registered
VS1051KRw	Suppression of Back Reflection in a Waveguide	10-2014-7012929	09-Oct-2012	08-Oct-2019	10-2032155		Republic of Korea	Registered
VS1051MYw	Suppression of Back Reflection in a Waveguide	PI 2014001104	09-Oct-2012	21-Aug-2019	MY-170617-A		Malaysia	Registered
VS1051NLe	Suppression of Back Reflection in a Waveguide	12773292.3	09-Oct-2012	09-May-2018	2766759		Netherlands	Registered
VS1051WO	Suppression of Back Reflection in a Waveguide	PCT/EP2012/069956	09-Oct-2012				Patent Cooperation Treaty	Expired
VS1051SGw	Suppression of Back Reflection in a Waveguide	11201401489V	09-Oct-2012				Singapore	Abandoned
VS1051SG div	Suppression of Back Reflection in a Waveguide	10201603283T	09-Oct-2012	27-Dec-2016	10201603283T		Singapore	Registered
VS1051USw	Suppression of Back Reflection in a Waveguide	14/351,727	09-Oct-2012	10-May-2016	9,335,478		United States of America	Registered
VS1052AUw	A Spectrometer	2012323079	09-Oct-2012	06-Aug-2015	2012323079		Australia	Registered
VS1052CAw	A Spectrometer	2,856,643	09-Oct-2012	26-Feb-2019	CA 2 856 643		Canada	Registered
VS1052CNw	A Spectrometer	201280061657.8	09-Oct-2012	24-May-2017	ZL201280061657.8		P. R. China	Registered
VS1052DDe	A Spectrometer	12769130.1	09-Oct-2012	13-Jun-2018	2766755		Germany	Registered
VS1052EP	A Spectrometer	11275127.6	14-Oct-2011				European Patent Office	Abandoned
VS1052EPw	A Spectrometer	12769130.1	09-Oct-2012	13-Jun-2018	2766755		European Patent Office	Expired

VS1052Fle	A Spectrometer	12769130.1	09-Oct-2012	13-Jun-2018	2766755	Finland	Registered
VS1052FRE	A Spectrometer	12769130.1	09-Oct-2012	13-Jun-2018	2766755	France	Registered
VS1052Gbe	A Spectrometer	12769130.1	09-Oct-2012	13-Jun-2018	2766755	United Kingdom	Registered
VS1052ITe	A Spectrometer	12769130.1	09-Oct-2012	13-Jun-2018	502018000023 989 (EP2766755)	Italy	Registered
VS1052JPw	A Spectrometer	2014-535021	09-Oct-2012	08-Sep-2017	6201218	Japan	Registered
VS1052KRw	A Spectrometer	10-2014- 7012875	09-Oct-2012	11-Oct-2019	10-2033397	Republic of Korea	Registered
VS1052MYw	A Spectrometer	PI 2014001102	09-Oct-2012			Malaysia	Pending
VS1052NLe	A Spectrometer	12769130.1	09-Oct-2012	13-Jun-2018	2766755	Netherlands	Registered
VS1052WO	A Spectrometer	PCT/EP2012/ 069928	09-Oct-2012			Patent Cooperation Treaty	Expired
VS1052SGw	A Spectrometer	11201401484Y	09-Oct-2012	10-Apr-2015	11201401484Y	Singapore	Registered
VS1052USw	A Spectrometer	14/351,809	09-Oct-2012	06-Jun-2017	US9,671,285 B2	United States of America	Registered
VS1053AUw	Resonator with Reduced Losses	2012323095	09-Oct-2012	06-Aug-2015	2012323095	Australia	Registered
VS1053CAw	Resonator with Reduced Losses	2,856,650	09-Oct-2012	24-Sep-2019	CA 2856650	Canada	Registered
VS1053CNw	Resonator with Reduced Losses	201280061656	09-Oct-2012	19-Sep-2017	ZL20128006165 6.3	P. R. China	Registered
VS1053DBe	Resonator with Reduced Losses	12769137.6	09-Oct-2012	08-Aug-2018	60 2012 049 511.1	Germany	Registered
VS1053EP	Resonator with Reduced Losses	11275126.8	14-Oct-2011			European Patent Office	Abandoned
VS1053EPw	Resonator with Reduced Losses	12769137.6	09-Oct-2012	08-Aug-2018	EP2766756	European Patent Office	Expired
VS1053Fle	Resonator with Reduced Losses	12769137.6	09-Oct-2012	08-Aug-2018	EP2766756	Finland	Registered
VS1053FRE	Resonator with Reduced Losses	12769137.6	09-Oct-2012	08-Aug-2018	EP2766756	France	Registered
VS1053GBe	Resonator with Reduced Losses	12769137.6	09-Oct-2012	08-Aug-2018	EP2766756	United Kingdom	Registered
VS1053ITe	Resonator with Reduced	12769137.6	09-Oct-2012	08-Aug-2018	502018000025	Italy	Registered

	Losses					862 (EP2766756)		
VS1053JPw	Resonator with Reduced Losses	2014-535028	09-Oct-2012				Japan	Abandoned
VS1053KRw	Resonator with Reduced Losses	10-2014-7012932	09-Oct-2012	11-Oct-2019		10-2033398	Republic of Korea	Registered
VS1053MYw	Resonator with Reduced Losses	PI 2014001105	09-Oct-2012	28-Aug-2019		MY-170767-A	Malaysia	Registered
VS1053NLe	Resonator with Reduced Losses	12769137.6	09-Oct-2012	08-Aug-2018		EP2766756	Netherlands	Registered
VS1053WO	Resonator with Reduced Losses	PCT/EP2012/069957	09-Oct-2012				Patent Cooperation Treaty	Expired
VS1053SGw	Resonator with Reduced Losses	11201401491Q	09-Oct-2012	02-Dec-2016		11201401491Q	Singapore	Registered
VS1053USw	Resonator with Reduced Losses	14/351,833	09-Oct-2012	10-May-2016		9,335,479	United States of America	Registered
VS1054AUw	Device with Quantum Well Layer	2012323083	09-Oct-2012	06-Aug-2015		2012323083	Australia	Registered
VS1054CAw	Device with Quantum Well Layer	2,856,644	09-Oct-2012	03-Dec-2019		CA 2856644	Canada	Registered
VS1054CNw	Device with Quantum Well Layer	201280061774	09-Oct-2012				P.R. China	Abandoned
VS1054DEe	Device with Quantum Well Layer	12772908.5	09-Oct-2012	08-Aug-2018		60 2012 049 519.7	Germany	Registered
VS1054EP	Device with Quantum Well Layer	11275125.0	14-Oct-2011				European Patent Office	Abandoned
VS1054EPw	Device with Quantum Well Layer	12772908.5	09-Oct-2012	08-Aug-2018		EP2766757	European Patent Office	Expired
VS1054FLe	Device with Quantum Well Layer	12772908.5	09-Oct-2012	08-Aug-2018		EP2766757	Finland	Registered
VS1054FRe	Device with Quantum Well Layer	12772908.5	09-Oct-2012	08-Aug-2018		EP2766757	France	Registered
VS1054GBe	Device with Quantum Well Layer	12772908.5	09-Oct-2012	08-Aug-2018		EP2766757	United Kingdom	Registered
VS1054ITe	Device with Quantum Well Layer	12772908.5	09-Oct-2012	08-Aug-2018		5020180000277	Italy	Registered

	Layer							
VS1054JPw	Device with Quantum Well Layer	2014-535022	09-Oct-2012	03-Feb-2017	73 (EP2766757) 6084622	Japan	Registered	
VS1054KRw	Device with Quantum Well Layer	10-2014-7012901	09-Oct-2012	05-Dec-2019	10-2054781	Republic of Korea	Registered	
VS1054MYw	Device with Quantum Well Layer	PI 2014001103	09-Oct-2012			Malaysia	Pending	
VS1054NLe	Device with Quantum Well Layer	12772908.5	09-Oct-2012	08-Aug-2018	EP2766757	Netherlands	Registered	
VS1054WO	Device with Quantum Well Layer	PCT/EP2012/069934	09-Oct-2012			Patent Cooperation Treaty	Expired	
VS1054SGw	Device with Quantum Well Layer	11201401487T	09-Oct-2012	03-Apr-2019	11201401487T	Singapore	Registered	
VS1054USw	Device with Quantum Well Layer	14/351,696	09-Oct-2012			United States of America	Abandoned	
VS1054US div	Device with Quantum Well Layer	15/636,775	29-Jun-2017	18-Jun-2019	10,326,036 B2	United States of America	Registered	

THIS ASSIGNMENT is made on.....2nd July 2020.....

BETWEEN

Airbus Defence and Space Limited, of Gunnels Wood Road, Stevenage, Hertfordshire, SG1 2AS, United Kingdom ("the Assignor")

and

ZiNIR Limited, of The Coachmakers Business Centre, 116a Seaside, Eastbourne, East Sussex, BN22 7QP, United Kingdom ("the Assignee")

WHEREAS:

1. The Assignor has agreed to assign all of the Assignor's rights, title and interest in the patents and patent applications set out in the Schedule below ("the Patents") and in the inventions claimed by the Patents ("the Inventions"), and all patents derived therefrom, to the Assignee as set out below.

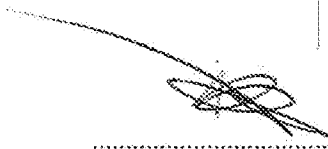
NOW THIS ASSIGNMENT WITNESSES as follows:

1. In consideration of the sum of £10, the receipt of which is hereby acknowledged, the Assignor with full title guarantee hereby assigns to the Assignee:
all the Assignor's rights, title and interest in and to the Inventions and the Patents and all patents granted thereon;
the right to apply for and obtain patents or other similar forms of protection in respect of the Inventions in all countries of the world together with the right to make any new application or applications in respect of any part of the subject matter of any application or specification filed in connection with the Inventions and the right to claim priority from the Patents; and
the right to bring proceedings for any previous infringement of the rights assigned by this assignment
TO HOLD the same unto the Assignee absolutely.

2. The Assignor hereby covenants with the Assignee that the Assignor will at the expense of the Assignee execute, sign and do all such instruments, applications, documents, acts and things as may be required by the Assignee to enable the Assignee or its nominee to enjoy the full benefit of the rights hereby assigned.

IN WITNESS of which this Assignment has been executed on the date stated above:

.....
SIGNED by
on behalf of AIRBUS DEFENCE AND SPACE LIMITED


.....
SIGNED by IAN GOODYER
on behalf of ZINIR LIMITED

SCHEDULE

ADS ref.	Title	Application No.	Filing date	Grant date	Grant no.	Country	Status
VS1050ALW	Resonator Optimisation	2012323084	09-Oct-2012	06-Aug-2015	2012323084	Australia	Registered
VS1050CAW	Resonator Optimisation	2,855,792	09-Oct-2012	12-Nov-2019	CA 2,855,792	Canada	Registered
VS1050CNW	Resonator Optimisation	201280056611	09-Oct-2012	24-May-2017	ZL201280056611	P.R. China	Registered
VS1050Dec	Resonator Optimisation	12773291.5	09-Oct-2012	06-Jun-2018	2766758	Germany	Registered
VS1050EP	Resonator Optimisation	11275129.2	14-Oct-2011			European Patent Office	Abandoned
VS1050EPw	Resonator Optimisation	12773291.5	09-Oct-2012	06-Jun-2018	2766758	European Patent Office	Expired
VS1050Fie	Resonator Optimisation	12773291.5	09-Oct-2012	06-Jun-2018	2766758	Finland	Registered
VS1050FRE	Resonator Optimisation	12773291.5	09-Oct-2012	06-Jun-2018	2766758	France	Registered
VS1050GBe	Resonator Optimisation	12773291.5	09-Oct-2012	06-Jun-2018	2766758	United Kingdom	Registered
VS1050IIt	Resonator Optimisation	12773291.5	09-Oct-2012	06-Jun-2018	5020180000221	Italy	Registered
VS1050JPw	Resonator Optimisation	2014-535023	09-Oct-2012	14-Jun-2019	49 (EP2766758)	Japan	Registered
VS1050JP div	Resonator Optimisation	2019-029690	09-Oct-2012		JP 6537129	Japan	Abandoned
VS1050KRw	Resonator Optimisation	10-2014-7012896	09-Oct-2012	05-Dec-2019	10-2054785	Republic of Korea	Registered
VS1050MYw	Resonator Optimisation	PI 2014001106	09-Oct-2012	06-Aug-2019	MY-170473-A	Malaysia	Registered
VS1050NLt	Resonator Optimisation	12773291.5	09-Oct-2012	06-Jun-2018	2766758	Netherlands	Registered
VS1050WO	Resonator Optimisation	PCI/EP2012/069935	09-Oct-2012			Patent Cooperation Treaty	Expired
VS1050SGw	Resonator Optimisation	11201401485X	09-Oct-2012	10-Apr-2015	11201401485X	Singapore	Registered
VS1050USw	Resonator Optimisation	14/351,851	09-Oct-2012	11-Jul-2017	9,703,037	United States of America	Registered
VS1051AUw	Suppression of Back Reflection in a Waveguide	2012323094	09-Oct-2012	09-Jun-2016	2012323094	Australia	Registered
VS1051CAw	Suppression of Back Reflection in a Waveguide	2,856,647	09-Oct-2012	03-Dec-2019	CA 2856647	Canada	Registered
VS1051CNw	Suppression of Back Reflection in a Waveguide	20128005843	09-Oct-2012	23-Jun-2017	ZL20128005843	P.R. China	Registered
VS1051DEt	Suppression of Back Reflection in a Waveguide	12773292.3	09-Oct-2012	09-May-2018	2766759	Germany	Registered

VS1051EP	Suppression of Back Reflection in a Waveguide	11275128.4	14-Oct-2011				European Patent Office	Abandoned
VS1051EPw	Suppression of Back Reflection in a Waveguide	12773292.3	09-Oct-2012	09-May-2018	2766759		European Patent Office	Expired
VS1051f1e	Suppression of Back Reflection in a Waveguide	12773292.3	09-Oct-2012	09-May-2018	2766759		Finland	Registered
VS1051fRe	Suppression of Back Reflection in a Waveguide	12773292.3	09-Oct-2012	09-May-2018	2766759		France	Registered
VS1051GBe	Suppression of Back Reflection in a Waveguide	12773292.3	09-Oct-2012	09-May-2018	2766759		United Kingdom	Registered
VS1051f1e	Suppression of Back Reflection in a Waveguide	12773292.3	09-Oct-2012	09-May-2018	5020180000182 59 (EP2766759)		Italy	Registered
VS1051JPw	Suppression of Back Reflection in a Waveguide	2014-535027	09-Oct-2012	18-Aug-2017	JP 6192173		Japan	Registered
VS1051KRw	Suppression of Back Reflection in a Waveguide	10-2014-7012929	09-Oct-2012	08-Oct-2019	10-2032155		Republic of Korea	Registered
VS1051MYw	Suppression of Back Reflection in a Waveguide	PI 2014001104	09-Oct-2012	21-Aug-2019	MY-170617-A		Malaysia	Registered
VS1051N1e	Suppression of Back Reflection in a Waveguide	12773292.3	09-Oct-2012	09-May-2018	2766759		Netherlands	Registered
VS1051WO	Suppression of Back Reflection in a Waveguide	PCT/EP2012/069956	09-Oct-2012				Patent Cooperation Treaty	Expired
VS1051SGw	Suppression of Back Reflection in a Waveguide	11201401489V	09-Oct-2012				Singapore	Abandoned
VS1051SG div	Suppression of Back Reflection in a Waveguide	10201603283T	09-Oct-2012	27-Dec-2016	10201603283T		Singapore	Registered
VS1051USw	Suppression of Back Reflection in a Waveguide	14/351,727	09-Oct-2012	10-May-2016	9,335,478		United States of America	Registered
VS1052ALw	A Spectrometer	2012323079	09-Oct-2012	06-Aug-2015	2012323079		Australia	Registered
VS1052CAw	A Spectrometer	2 856 643	09-Oct-2012	26-Feb-2019	CA 2 856 643		Canada	Registered
VS1052CNw	A Spectrometer	2012800616578	09-Oct-2012	24-May-2017	ZL2012800616578		P.R. China	Registered
VS1052DEe	A Spectrometer	12769130.1	09-Oct-2012	13-Jun-2018	2766755		Germany	Registered
VS1052EP	A Spectrometer	11275127.6	14-Oct-2011				European Patent Office	Abandoned
VS1052EPw	A Spectrometer	12769130.1	09-Oct-2012	13-Jun-2018	2766755		European Patent Office	Expired

VS1052FfE	A Spectrometer	12769130.1	09-Oct-2012	13-Jun-2018	2766755	Finland	Registered
VS1052FRe	A Spectrometer	12769130.1	09-Oct-2012	13-Jun-2018	2766755	France	Registered
VS1052Gbe	A Spectrometer	12769130.1	09-Oct-2012	13-Jun-2018	2766755	United Kingdom	Registered
VS1052IfE	A Spectrometer	12769130.1	09-Oct-2012	13-Jun-2018	502018000023 989 (EP2766755)	Italy	Registered
VS1052JfPw	A Spectrometer	2014-533021	09-Oct-2012	08-Sep-2017	6201218	Japan	Registered
VS1052KRw	A Spectrometer	10-2014- 7012875	09-Oct-2012	11-Oct-2019	10-2033397	Republic of Korea	Registered
VS1052MYw	A Spectrometer	PI 2014001102	09-Oct-2012			Malaysia	Pending
VS1052NLe	A Spectrometer	12769130.1	09-Oct-2012	13-Jun-2018	2766755	Netherlands	Registered
VS1052WO	A Spectrometer	PCT/EP2012/ 069928	09-Oct-2012			Patent Cooperation Treaty	Expired
VS1052SSGw	A Spectrometer	11201401484Y	09-Oct-2012	10-Apr-2015	11201401484Y	Singapore	Registered
VS1052USw	A Spectrometer	14/351,809	09-Oct-2012	06-Jun-2017	US9,671,285 B2	United States of America	Registered
VS1053AUw	Resonator with Reduced Losses	2012323095	09-Oct-2012	06-Aug-2015	2012323095	Australia	Registered
VS1053CAw	Resonator with Reduced Losses	2,856,650	09-Oct-2012	24-Sep-2019	CA 2856650	Canada	Registered
VS1053CNw	Resonator with Reduced Losses	201280061656	09-Oct-2012	19-Sep-2017	ZL20128006165 6.3	P.R. China	Registered
VS1053DEe	Resonator with Reduced Losses	12769137.6	09-Oct-2012	08-Aug-2018	60 2012 049	Germany	Registered
VS1053FBP	Resonator with Reduced Losses	11275126.8	14-Oct-2011		511.1	European Patent Office	Abandoned
VS1053EFPw	Resonator with Reduced Losses	12769137.6	09-Oct-2012	08-Aug-2018	EP2766756	European Patent Office	Expired
VS1053FfE	Resonator with Reduced Losses	12769137.6	09-Oct-2012	08-Aug-2018	EP2766756	Finland	Registered
VS1053FRe	Resonator with Reduced Losses	12769137.6	09-Oct-2012	08-Aug-2018	EP2766756	France	Registered
VS1053GBe	Resonator with Reduced Losses	12769137.6	09-Oct-2012	08-Aug-2018	EP2766756	United Kingdom	Registered
VS1053IfE	Resonator with Reduced Losses	12769137.6	09-Oct-2012	08-Aug-2018	502018000025	Italy	Registered

	Losses					862 (EP2766756)	Japan	Abandoned
VS1053JPw	Resonator with Reduced Losses	2014-035028	09-Oct-2012				Japan	Abandoned
VS1053KRw	Resonator with Reduced Losses	10-2014-7012932	09-Oct-2012	11-Oct-2019	10-2033398		Republic of Korea	Registered
VS1053MYw	Resonator with Reduced Losses	PI 2014001105	09-Oct-2012	28-Aug-2019	MY-170767-A		Malaysia	Registered
VS1053NLc	Resonator with Reduced Losses	12769137.6	09-Oct-2012	08-Aug-2018	EP2766756		Netherlands	Registered
VS1053WO	Resonator with Reduced Losses	PCT/EP2012/069957	09-Oct-2012				Patent Cooperation Treaty	Expired
VS1053SGw	Resonator with Reduced Losses	11201401491Q	09-Oct-2012	02-Dec-2016	11201401491Q		Singapore	Registered
VS1053USw	Resonator with Reduced Losses	14/351,833	09-Oct-2012	10-May-2016	9,335,479		United States of America	Registered
VS1054AUw	Device with Quantum Well Layer	20122323083	09-Oct-2012	06-Aug-2015	20122323083		Australia	Registered
VS1054CAw	Device with Quantum Well Layer	2,856,644	09-Oct-2012	03-Dec-2019	CA 2856644		Canada	Registered
VS1054CNw	Device with Quantum Well Layer	201280061774.4	09-Oct-2012				P.R. China	Abandoned
VS1054DDe	Device with Quantum Well Layer	12772908.5	09-Oct-2012	08-Aug-2018	60 2012 049 519.7		Germany	Registered
VS1054EP	Device with Quantum Well Layer	11275125.0	14-Oct-2011				European Patent Office	Abandoned
VS1054EPw	Device with Quantum Well Layer	12772908.5	09-Oct-2012	08-Aug-2018	EP2766757		European Patent Office	Expired
VS1054Fle	Device with Quantum Well Layer	12772908.5	09-Oct-2012	08-Aug-2018	EP2766757		Finland	Registered
VS1054FRE	Device with Quantum Well Layer	12772908.5	09-Oct-2012	08-Aug-2018	EP2766757		France	Registered
VS1054GBc	Device with Quantum Well Layer	12772908.5	09-Oct-2012	08-Aug-2018	EP2766757		United Kingdom	Registered
VS1054ITc	Device with Quantum Well Layer	12772908.5	09-Oct-2012	08-Aug-2018	5020180000277		Italy	Registered

VS1054J1Pw	Layer Device with Quantum Well Layer	2014-535022	09-Oct-2012	03-Feb-2017	73 (EP2766757) 6084622	Japan	Registered
VS1054KRW	Device with Quantum Well Layer	10-2014- 2012901	09-Oct-2012	05-Dec-2019	10-2054781	Republic of Korea	Registered
VS1054MYw	Device with Quantum Well Layer	PI 2014001103	09-Oct-2012			Malaysia	Pending
VS1054N1e	Device with Quantum Well Layer	12772908.5	09-Oct-2012	08-Aug-2018	EP2766757	Netherlands	Registered
VS1054WO	Device with Quantum Well Layer	PCT/EP2012/ 0699934	09-Oct-2012			Parent Cooperation Treaty Singapore	Expired
VS1054SGw	Device with Quantum Well Layer	11201401487T	09-Oct-2012	03-Apr-2019	11201401487T	Singapore	Registered
VS1054USw	Device with Quantum Well Layer	14/351,696	09-Oct-2012			United States of America	Abandoned
VS1054US div	Device with Quantum Well Layer	15/636,775	29-Jun-2017	18-Jun-2019	10,326,036 Ba	United States of America	Registered