PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:		NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT		
CONVEYING PARTY	DATA			
		Name	Execution Date	
Richard C. Ruby			04/13/2012	
RECEIVING PARTY [DATA			
Name:	Avago Technologies Wireless IP (Singapore) Pte. Ltd.			
Street Address:	No. 1 Yishun Av	enue 7		
City:	Singapore			
State/Country:	SINGAPORE			
Postal Code: 768923				
PROPERTY NUMBER	RS Total: 1			
]	
Property T	уре	Number		
Property T Application Number:		Number 361724		7724
	13			13361724
Application Number:	13	361724		13361724
Application Number: CORRESPONDENCE Fax Number: Email:	E DATA (571)283-0 cjohnson@	361724 740 volentine.com		
Application Number: CORRESPONDENCE Fax Number: Email:	E DATA (571)283-0 cjohnson@	740	t will be sent	\$40.00
Application Number: CORRESPONDENCE Fax Number: Email: <i>Correspondence will I via US Mail.</i> Correspondent Name	E DATA (571)283-0 cjohnson@ be sent to the e-m : AVAGO TE	361724 740 volentine.com <i>ail address first; if that is unsuccessful, in</i> CHNOLOGIES, LTD.	t will be sent	
Application Number: CORRESPONDENCE Fax Number: Email: <i>Correspondence will I via US Mail.</i> Correspondent Name Address Line 1:	E DATA (571)283-0 cjohnson@ be sent to the e-m : AVAGO TE 4380 Ziegle	361724 740 volentine.com <i>ail address first; if that is unsuccessful, in</i> CHNOLOGIES, LTD. er Road	t will be sent	\$40.00
Application Number: CORRESPONDENCE Fax Number: Email: <i>Correspondence will I via US Mail.</i> Correspondent Name	E DATA (571)283-0 cjohnson@ be sent to the e-m : AVAGO TE 4380 Ziegle	361724 740 volentine.com <i>ail address first; if that is unsuccessful, in</i> CHNOLOGIES, LTD.	t will be sent	\$40.00
Application Number: CORRESPONDENCE Fax Number: Email: <i>Correspondence will I via US Mail.</i> Correspondent Name Address Line 1:	E DATA (571)283-0 cjohnson@ be sent to the e-m : AVAGO TE 4380 Ziegle Fort Collins	361724 740 volentine.com <i>ail address first; if that is unsuccessful, in</i> CHNOLOGIES, LTD. er Road	t will be sent	\$40.00
Application Number: CORRESPONDENCE Fax Number: Email: <i>Correspondence will I via US Mail.</i> Correspondent Name Address Line 1: Address Line 4:	13 E DATA (571)283-0 cjohnson@ be sent to the e-m : AVAGO TE 4380 Ziegle Fort Collins NUMBER:	361724 740 volentine.com <i>ail address first; if that is unsuccessful, in</i> CHNOLOGIES, LTD. er Road , COLORADO 80525	t will be sent	\$40.00

AVAGO TECHNOLOGIES, LTD. 4380 Ziegler Road Fort Collins, Colorado 80525

ASSIGNMENT OF PATENT APPLICATION TO AVAGO TECHNOLOGIES WIRELESS IP (SINGAPORE) PTE. LTD.

I/We, the undersigned (each) have agreed and hereby agree to assign to Avago Technologies Wireless IP (Singapore) Pte. Ltd. (Company Registration No. 200512332K), a company incorporated under the laws of Singapore whose registered office is at No. 1 Yishun Avenue 7, Singapore 768923 (hereinafter "AVAGO"), in furtherance of my/our obligations to AVAGO, and do hereby assign and transfer to AVAGO, its successors and assigns, the entire right, title and interest, including the right of priority, in, to and under an application for Letters Patent of the United States entitled:

TEMPERATURE CONTROLLED ACOUSTIC RESONATOR

Filing date: January 30, 2012 Serial No. 13/361,724

and the invention(s) and improvements(s) set forth therein, and any and all continuations, continuations-in-part (C-I-P's), divisionals, and renewals of and substitutes for said application for said Letters Patent, and any and all Letters Patent of the United States and of countries foreign thereto which may be granted thereon or therefor; and any reissues, or reexaminations, or extensions of said Letters Patent.

I/we additionally authorize AVAGO to file applications in my/our name for Letters Patent in any country, to be held and enjoyed by AVAGO, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by me/us had this assignment, and transfer not been made;

AND I/we hereby covenant that I/we have full right to convey the entire interest herein assigned, and that I/we have not executed and will not execute any agreement in conflict herewith, and I/we further covenant and agree that I/we will, each time a request is made, and without undue delay, execute and deliver all such papers as my be necessary or desirable to perfect the title to said invention(s) or improvement(s), said application and said Letters Patent, to AVAGO, its successors, assigns, nominees or legal representatives, and I/we agree to communicate to AVAGO, or to its nominee, all known facts respecting said invention(s) or improvement(s), said application and said Letters Patent, to testify in any legal proceedings, to sign all lawful papers, to execute all disclaimers and divisionals, continuations, C-I-P's, reissue and foreign applications, to make all rightful oaths and declarations, and generally to do everything possible to aid AVAGO, its successors, assigns, nominees and legal representatives to obtain and enforce, for its or their own benefit, proper patent protection for said invention(s) in any and all countries provided the expenses which may be incurred by me/us in lending such cooperation and assistance are paid by AVAGO;

AND I/we hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to AVAGO, as assignee of the entire right, title and interest, any and all Letters Patent for said invention(s) or improvements(s), including any and all Letters Patent of the United States which may be issued and granted on or as a result of the application aforesaid, in accordance with the terms of this assignment.

I/we further authorize and direct AVAGO's attorneys to insert the serial number and filing date of said application now identified by the attorney docket number and title set forth above as soon as the same shall have been made known to them by the United States Patent and Trademark Office.

Inventor's Signature -

Inventor's Typed Name: Richard C. Ruby

Date Assignment Signed: Date Application Signed: 4/13/2012

PATENT REEL: 028046 FRAME: 0029

RECORDED: 04/13/2012