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FORM PTO-1595 (Modified)	Docket No.: SEC.2058CIP
(Rev. 03-01) RECORDATION OMB No. 0651-0027 (exp.5/31/2002)	FORM COVER SHEET U.S. DEPARTMENT OF COMME
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Tab settings	<u>_</u> ¥ ¥ ¥
1. Name of conveying party(ies):	Coffice: Please record the attached original documents or copy thereo
Woo-Ycong CHO Jun-Soo BAE Ki-Sung KIM Du-Eung KIM Kwang-Jin LEE	2. Name and address of receiving party(ies): Name: <u>Samsung Electronics Co., Ltd.</u>
Additional names(s) of conveying party(ies)	Address: 416, Maetan-dong, Yeongtong-gu
Assignment Merger	
 Security Agreement Other Change of Name 	City: Suwon-si State/Prov.: Gyeonggi-do
	Country: Republic of Korea ZIP: 442-742
Execution Date: November 20 and 30, 2009	Additional name(s) & address(es)
Patent Application No. Filing date	, the execution date of the application is:
Lictoret Al-Listoria et	B. Patent No.(s)
Patent Application No. Filing date 12/632,018 December 7, 2009	B. Patent No.(s)
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Patent Application No. Filing date 12/632,018 December 7, 2009 Additional numbers Name and address of party to whom correspondence	B. Patent No.(s) <u>Yes</u> XI No 6. Total number of applications and patents involved:
Patent Application No. Filing date 12/632,018 December 7, 2009	B. Patent No.(s) <u>Yes X No</u> 6. Total number of applications and patents involved: 7. Total fee (37 CFR 3.41):\$ 40.00
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Patent Application No. Filing date 12/632,018 December 7, 2009	B. Patent No.(s) Yes X No 6. Total number of applications and patents involved: 7. Total fee (37 CFR 3.41):\$ 40.00 Enclosed - Any excess or insufficiency should be
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Patent Application No. Filing date 12/632,018 December 7, 2009	B. Patent No.(s) Yes No 6. Total number of applications and patents involved: 1 7. Total fee (37 CFR 3.41):\$ 40.00 Enclosed - Any excess or insufficiency should be credited or debited to deposit account Authorized to be charged to deposit account 8. Deposit account number:
Patent Application No. Filing date 12/632,018 December 7, 2009	B. Patent No.(s) □ Yes ⊠ No 6. Total number of applications and patents involved: 1 7. Total fee (37 CFR 3.41):\$ 40.00 □ Enclosed - Any excess or insufficiency should be credited or debited to deposit account ▲ Authorized to be charged to deposit account 8. Deposit account number:
Patent Application No. Filing date 12/632,018 December 7, 2009 Image: Additional numbers Additional numbers Name and address of party to whom correspondence concerning document should be mailed: Name: STEPHEN R. WHITT	B. Patent No.(s) Yes No 6. Total number of applications and patents involved: 1 7. Total fee (37 CFR 3.41):\$ 40.00 Enclosed - Any excess or insufficiency should be credited or debited to deposit account Authorized to be charged to deposit account 8. Deposit account number: 50-0238 (Attach duplicate copy of this page if paying by deposit account)
Patent Application No. Filing date 12/632,018 December 7, 2009 12/632,018 December 7, 2009 Name and address of party to whom correspondence concerning document should be mailed: Name: STEPHEN R. WHITT Name: STEPHEN R. WHITT Registration No. 34,753 Address: VOLENTINE & WHITT, PLLC DNE FREEDOM SQUARE	B. Patent No.(\$) □ Yes ⊠ No 6. Total number of applications and patents involved: 1 7. Total fee (37 CFR 3.41):\$ 40.00 □ Enclosed - Any excess or insufficiency should be credited or debited to deposit account ⊠ Authorized to be charged to deposit account 8. Deposit account number: 50-0238 (Attach duplicate copy of this page if paying by deposit account)
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	ASSI	GNMENT
- .	In consideration of the sum of O consideration paid to each of the un	ne Dollar (\$1.00) and other good and valuable dersigned
Insert Name(s) of	1. Woo-Yeong CHO	7
Inventor(s)	2. Ki-Sung KIM	8
	3. Du-Eung KIM	
		10
		11
Insert	the undersigned hereby sell(s) and a	12 ssign(s) to
Name(s) of Assignee(s) &	SAMSUNG	ELECTRONICS CO., LTD.
Address(es)	416, Maetan-dong, of Suwon-si, Gveongg	Yeongtong-gu, i-do 442-742, Republic of Korea
	thereinafter designated as the Assig	nee) the entire right, title and interest for the United
	DEVICE AND MULTI-LEVEL	<u>TI-LEVEL VARIABLE RESISTIVE MEMORY</u> VARIABLE RESISTIVE MEMORY DEVICE
Date of Signing of Application		in the United States of America has been executed by
Signing of	for which an application for patent i the undersigned on November : The undersigned agree(s) to execute application and any continuing, divi	in the United States of America has been executed by
Signing of	for which an application for patent is the undersigned on <u>November</u> : The undersigned agree(s) to execute application and any continuing, divi execute separate assignments in con- deem necessary or expedient. The undersigned agree(s) to execute interference which may be declared	VARIABLE RESISTIVE MEMORY DEVICE in the United States of America has been executed by 20 and 30, 2009 e all papers necessary in connection with this isional or reissue applications thereof and also to anection with such applications as the Assignee may e all papers necessary in connection with any concerning this application or continuing. division of h the Assignee in every way possible in obtaining
Signing of	for which an application for patent is the undersigned on <u>November</u> : The undersigned agree(s) to execute application and any continuing, divi- execute separate assignments in con- deem necessary or expedient. The undersigned agree(s) to execute interference which may be declared reissue thereof and to cooperate with evidence and going forward with su The undersigned agree(s) to execute	VARIABLE RESISTIVE MEMORY DEVICE in the United States of America has been executed by 20 and 30, 2009 e all papers necessary in connection with this isional or reissue applications thereof and also to anection with such applications as the Assignee may e all papers necessary in connection with any concerning this application or continuing. division of h the Assignee in every way possible in obtaining the interference. e all papers and documents and perform any act which h claims or provisions of the International Convention
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Signing of Application	for which an application for patent is the undersigned on <u>November</u> : The undersigned agree(s) to execute application and any continuing, divi- execute separate assignments in con- deem necessary or expedient. The undersigned agree(s) to execute interference which may be declared reissue thereof and to cooperate with evidence and going forward with su The undersigned agree(s) to execute may be necessary in connection with for Protection of Industrial Property The undersigned agree(s) to perform a grant of a valid United States pate	VARIABLE RESISTIVE MEMORY DEVICE in the United States of America has been executed by 20 and 30, 2009 e all papers necessary in connection with this isional or reissue applications thereof and also to anection with such applications as the Assignee may e all papers necessary in connection with any concerning this application or continuing. division of h the Assignee in every way possible in obtaining the interference. e all papers and documents and perform any act which h claims or provisions of the International Convention or similar agreements. n all affirmative acts which may be necessary to obtain to the Assignee.

VOLENTINE & WHITT, P.L.L.C.	(01/2007)	ATTORNEY DOCKET NO. <u>SEC.2058CIP</u>
power to insert on this assi	gnment any further ident	associated with the <u>CUSTOMER NUMBER 20987</u> the tification which may be necessary or desirable in order Office for recordation of this document.
Patents of the United State reissue applications thereo he has (they have) full righ executed, and will not exec	s resulting from said app f to the said Assignee, as it to convey the entire int sute, any agreement in co	s) the Commissioner of Patents to issue any and all Letter plication or any division or divisions or continuing or is Assignee of the entire interest, and hereby covenants t interest herein assigned, and that he has (they have) not conflict herewith. gned on the date(s) opposite the undersigned
Date <u>Nov. 20, 20</u>	009 Signature of	Inventor WOOYEONG CHO
Date $\frac{NbV, 20, 200}{200}$	9 Signature of	Inventor Ki-sung kim
Date $/\mathcal{V}_{\mathcal{V}, \mathcal{V}}$,	$\frac{2}{2}$ Signature of]	Inventor Un-Errah Icam
Date NOV. 20, 21	$\frac{2}{2}$ Signature of 1	Inventor Kwang-Jin Lee
Date <u>Nev.</u> 30. 20	<u>of</u> Signature of I	Inventor Jun-Soo Bal
Date	Signature of I	Inventor
witnessed by at	least two witnesses who	Inventor commended that the execution by the Inventor(s) be o sign here. However, the current practice of the U.S. rd an Assignment even it has not been witnessed.)
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