

Country code	Patent kind code	Application number	Application date	Registration number	Registration date
KR	A	10-2013-0157260	2013-12-17		
KR	B1	10-2001-0071488	2001-11-16	10-0451984	2004-09-30
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KR	A	10-2009-0003559	2009-01-16		
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KR	B1	10-2013-0066087	2013-06-10	10-1295940	2013-08-06
KR	B1	10-2013-0090368	2013-07-30	10-1488247	2015-01-26
KR	A	10-2001-0010629	2001-02-23		
KR	B1	10-2001-0071488	2001-11-16	10-0451984	2004-09-30
KR	A	10-2002-0018111	2002-03-30		
KR	B1	10-2005-0133749	2005-12-29	10-0746878	2007-08-01
KR	B1	10-2002-0055578	2002-09-13	10-0476462	2005-03-04
KR	B1	10-2003-0087242	2003-12-03	10-0540180	2005-12-23
KR	A	10-2004-0000211	2004-01-05		
KR	B1	10-2004-0020122	2004-03-24	10-0515031	2005-09-07
KR	A	10-2006-7016269	2005-01-12		
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KR	B1	10-2008-0076860	2008-08-06	10-1012998	2011-01-27
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US	B2	13/632604	2012-10-01	9463393	2016-10-11
US	B2	13/720773	2012-12-19	8960595	2015-02-24
US	B2	14/383038	2013-03-07	9938368	2018-04-10
US	A1	13/917615	2013-06-13		
US	A	06/474996	1983-03-14	4527000	1985-07-02
US	A	06/566516	1983-12-29	4544504	1985-10-01
US	A	06/593058	1984-03-26	4548804	1985-10-22
US	A	06/704442	1985-02-22	4722839	1988-02-02
US	A	06/719881	1985-04-04	4861714	1989-08-29
US	A	06/899301	1986-08-21	4752051	1988-06-21
US	A	06/932088	1986-11-18	4863856	1989-09-05
US	A	07/043956	1987-04-29	4755005	1988-07-05
US	A	07/333831	1989-04-05	5100783	1992-03-31
US	A	07/393656	1989-08-14	4997753	1991-03-05
US	A	07/787579	1991-11-04	5465523	1995-11-14
US	A	07/893232	1992-06-03	5519165	1996-05-21
US	A	08/190390	1994-02-02	5497671	1996-03-12
US	A	08/371289	1995-01-11	5495690	1996-03-05

US	A	08/563122	1995-11-29	5659994	1997-08-26
US	A	08/562705	1996-04-10	5678730	1997-10-21
US	A	08/856522	1997-05-14	5993406	1999-11-30
US	A	08/889340	1997-07-08	5941007	1999-08-24
US	A	08/893964	1997-07-16	5906525	1999-05-25
US	A	08/932573	1997-09-19	5879387	1999-03-09
US	A	08/964876	1997-11-05	6004444	1999-12-21
US	A	09/076479	1998-05-12	6038804	2000-03-21
US	B1	09/089602	1998-06-02	6260795	2001-07-17
US	B1	09/291549	1999-04-14	6228248	2001-05-08
US	B1	09/294737	1999-04-19	6379619	2002-04-30
US	A	09/351361	1999-07-12	6053794	2000-04-25
US	B1	09/435984	1999-11-08	6250330	2001-06-26
US	B1	09/456275	1999-12-07	6331178	2001-12-18
US	B1	09/627808	2000-07-28	6537575	2003-03-25
US	B1	09/686608	2000-10-11	6564720	2003-05-20
US	B2	09/846598	2001-04-30	6406101	2002-06-18
US	B2	09/850364	2001-05-07	6547940	2003-04-15
US	A1	09/877903	2001-06-08		
US	B1	09/891083	2001-06-25	6486334	2002-11-26
US	A1	09/893720	2001-06-28		
US	B1	10/060142	2002-02-01	6893307	2005-05-17
US	B2	10/358038	2003-02-03	8048155	2011-11-01
US	B2	10/384039	2003-03-07	6799519	2004-10-05
US	B2	10/411641	2003-04-11	7179356	2007-02-20
US	B2	10/618949	2003-07-14	6915859	2005-07-12
US	B2	10/627967	2003-07-28	7208089	2007-04-24
US	A1	10/631982	2003-07-31		
US	B1	10/677206	2003-10-02	7137465	2006-11-21
US	B1	10/781331	2004-02-17	7083492	2006-08-01
US	B1	10/781172	2004-02-17	7070473	2006-07-04
US	B2	10/810518	2004-03-26	7597885	2009-10-06
US	B1	10/845910	2004-05-14	6997765	2006-02-14
US	B2	10/898673	2004-07-23	7769487	2010-08-03
US	B2	10/928073	2004-08-26	7007609	2006-03-07
US	B1	10/936928	2004-09-09	7039292	2006-05-02
US	A1	10/936066	2004-09-09		
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