

## **CATV-Compliant ARIB Essential Patent Portfolio**

July 1, 2025

### **Dolby International AB**

JP5562408

### **INFOCITY, Inc.**

JP5247097

JP6310109

### **INFOCITY, Inc. / Nippon Hoso Kyokai**

JP6789553

### **JVCKENWOOD Corporation**

JP4620788

JP5070979

### **KDDI CORPORATION**

JP5254162

### **LG Electronics Inc.**

JP6291081

JP6392792

### **Maxell, Ltd.**

JP4431598

JP4431599

JP4565049

JP4625757

JP4625764

JP4625870

JP4629789

JP4629790

JP4629791

JP4654309

JP4997362

JP5002370

JP5063827

**Maxell, Ltd.**

JP5081512  
JP5095018  
JP5095026  
JP5111542  
JP5111543  
JP5114600  
JP5188634  
JP5223027  
JP5223028  
JP5223029  
JP5223030  
JP5236112  
JP5236113  
JP5241945  
JP5241946  
JP5372383  
JP5380614  
JP5413534  
JP5450875  
JP5450876  
JP5522644  
JP5603475  
JP5695150  
JP5805835  
JP5896436  
JP5947411  
JP6734742  
JP6734743  
JP6734755  
JP6734758

**Maxell, Ltd.**

JP6739315  
JP6739316  
JP6739674  
JP6739675  
JP6739676  
JP6739677  
JP6806944  
JP6806945  
JP6808879  
JP6808880  
JP6808881  
JP6836685  
JP6854947  
JP6854948  
JP6854949  
JP6854950  
JP6854951  
JP6854952  
JP6885707  
JP6892239  
JP6892240  
JP6905631  
JP6906925  
JP6912632  
JP6912633  
JP6912634  
JP7164754  
JP7164755  
JP7166485  
JP7325678

**Maxell, Ltd.**

JP7325680

JP7395692

JP7428850

JP7428851

**MxH Corporation**

JP7206449

JP7542271

**NEC Corporation**

JP4666231

JP5300074

JP5682181

**NHK Foundation**

JP5113954

JP5113955

**Nippon Hoso Kyokai**

JP5156037

JP5156038

JP5156039

JP5156143

JP5156144

JP5175883

JP5269237

JP5269238

JP5269239

JP5269240

JP5269241

JP5271445

**Nippon Hoso Kyokai**

JP5544395

JP5548726

JP5584729

JP5584730

JP5586657

JP5586658

JP5586770

JP5923137

JP6018796

JP6068721

JP6097443

JP6101384

JP6154972

JP6214809

JP6214810

JP6214811

JP6271065

JP6271066

JP6275308

JP6323805

JP6388295

JP6803357

JP6858303

JP7300250

**Orange SA**

JP5396600

**Panasonic Holdings Corporation**

JP7410107

**Sharp Corporation**

JP4786739

JP6363745

JP7478316

JP7634763

JP7634764

**Sony Group Corporation**

JP4518058

JP4581955

JP4883199

JP4895113

JP5029037

JP5516826

JP5595590

JP5696913

JP5696914

JP5696915

JP5708874

JP5708875

JP5725390

JP5725391

JP5725392

JP5754491

JP5757601

JP5765478

JP5765479

JP5765480

JP5777793

JP5777794

JP5949825

JP6065881

**Sony Group Corporation**

JP6207673

JP6217779

JP6269754

JP6269798

JP6323514

JP6327296

JP6338720

JP6350514

JP6369524

JP6465233

JP6471820

JP6604395

JP6607303

JP6614279

**Toshiba Corporation**

JP4350714

JP4772899

JP4843686

JP5032419

JP5143050

JP5254411

JP5379881

JP5479631

JP5735069

JP5902279

JP5902280

JP5921398

JP6009946

JP6239674

JP6271203

**Toshiba Corporation**

JP6400783

JP6501859

**TVS REGZA Corporation**

JP5060251

JP5087022

JP5132808

JP5404864

JP6510089

JP6510090

JP6560658

JP6560659

JP6560660

JP6560661

JP6607843

JP6607844

JP6607845

JP6633507

JP6633804

JP6633805

JP6633806

JP6633807

JP6633808

JP6633809

JP6633810

JP6633811

JP6686219

JP6686220

JP6697492

JP6703176

JP6705844



**TVS REGZA Corporation**

JP6707479

JP6707704

JP6707705

JP6732991

JP6732992

JP6734981

JP6734982

JP6734983

JP6734984

JP6779927

JP6780145

JP6780146

JP6786533

JP6786740

JP6786741

JP6794386

JP6794387

JP6794568

JP6794569

JP6812378

JP6812379

JP6812380

JP6812589

JP6812590

JP6812591

JP6812592

JP6812593

JP6812594

JP6812595

JP6829697

**TVS REGZA Corporation**

JP6829786

JP6829787

JP6841775

JP6841776

JP6841777

JP6841959

JP6841960

JP6841961

JP6841962

JP6841963

JP6858355

JP6858356

JP6858357

JP6858358

JP6858359

JP6858360

JP6888163

JP6888164

JP6888165

JP6891328

JP6891329

JP6891330

JP6891331

JP6891332

JP6891333

JP6891334

JP6891335

JP6914865

JP6914866

JP6942769

**TVS REGZA Corporation**

JP6968940

JP6972254

**Fujitsu Limited**

JP3918329	* Expired November 24, 2018
JP4603570	* Expired March 31, 2023
JP4791521	* Expired March 31, 2023
JP4791583	* Expired March 31, 2023

**INFOCITY, Inc.**

JP3759720	* Expired May 13, 2017
JP4302537	* Expired January 7, 2024

**InterDigital CE Patent Holdings, SAS**

JP2806587	* Expired October 20, 2009
JP3169903	* Expired January 31, 2017
JP3650064	* Expired January 4, 2015
JP3699129	* Expired May 22, 2017
JP3880616	* Expired December 1, 2014
JP3881236	* Expired January 4, 2015
JP3907706	* Expired December 15, 2017
JP3960483	* Expired March 6, 2018
JP3962064	* Expired January 4, 2015
JP4070831	* Expired November 20, 2015
JP4174549	* Expired November 20, 2015
JP4219963	* Expired November 20, 2015
JP4251668	* Expired August 21, 2015
JP4302313	* Expired June 30, 2018
JP4331765	* Expired March 6, 2018
JP4335936	* Expired June 28, 2016
JP4347275	* Expired August 20, 2013
JP4347276	* Expired August 20, 2013
JP4360557	* Expired June 28, 2016
JP4360560	* Expired December 17, 2017
JP4382150	* Expired December 1, 2014

**InterDigital CE Patent Holdings, SAS**

JP4385302	* Expired December 1, 2014
JP4418754	* Expired October 2, 2023
JP4424621	* Expired November 30, 2015
JP4446399	* Expired June 28, 2016
JP4492973	* Expired March 6, 2018
JP4527135	* Expired August 21, 2015
JP4531259	* Expired September 24, 2019
JP4548676	* Expired November 30, 2015
JP4565521	* Expired December 17, 2017
JP4583513	* Expired August 1, 2017
JP4605615	* Expired November 30, 2015
JP4614245	* Expired December 17, 2017
JP4623524	* Expired August 21, 2015
JP4671248	* Expired August 20, 2013
JP4721478	* Expired June 30, 2018
JP4729176	* Expired October 8, 2019
JP4805639	* Expired June 30, 2018
JP5005868	* Expired January 3, 2021
JP5147081	* Expired October 8, 2019
JP5263847	* Expired August 1, 2017
JP5645277	* Expired August 1, 2017
JP5781049	* Expired October 8, 2019

**JVCKENWOOD Corporation**

JP2521160	* Expired November 7, 2009
JP2874729	* Expired January 30, 2015
JP3055540	* Expired January 30, 2015
JP3156892	* Expired July 30, 2013
JP3156893	* Expired August 19, 2013
JP3405345	* Expired January 24, 2020
JP3405347	* Expired January 24, 2020

**JVCKENWOOD Corporation**

JP3405348	* Expired January 24, 2020
JP3422458	* Expired July 11, 2017
JP3431609	* Expired July 11, 2017
JP3453696	* Expired November 7, 2016
JP3518753	* Expired January 30, 2015
JP3518754	* Expired January 30, 2015
JP3518757	* Expired January 30, 2015
JP3518761	* Expired January 30, 2015
JP3518764	* Expired January 30, 2015
JP3531823	* Expired January 30, 2015
JP3531824	* Expired January 30, 2015
JP3531830	* Expired January 30, 2015
JP3531831	* Expired January 30, 2015
JP3582428	* Expired November 16, 2019
JP3627734	* Expired October 29, 2013
JP3676740	* Expired January 30, 2015
JP3804865	* Expired January 30, 2015
JP3818525	* Expired January 30, 2015
JP3818526	* Expired January 30, 2015
JP3818527	* Expired January 30, 2015
JP3818528	* Expired January 30, 2015
JP3818529	* Expired January 30, 2015
JP3818533	* Expired January 30, 2015
JP3818534	* Expired January 30, 2015
JP3818535	* Expired January 30, 2015
JP3818536	* Expired January 30, 2015
JP3830074	* Expired June 15, 2020
JP4221732	* Expired October 29, 2013
JP4269506	* Expired September 29, 2020
JP4743237	* Expired September 29, 2020

**JVCKENWOOD Corporation**

JP4884505	* Expired September 29, 2020
JP5214039	* Expired September 29, 2020

**JVCKENWOOD Corporation / Panasonic Holdings Corporation**

JP2924538	* Expired January 28, 2013
JP3405344	* Expired January 24, 2020
JP3405346	* Expired January 24, 2020

**KYOCERA Corporation**

JP4753565	* Expired November 10, 2024
-----------	-----------------------------

**LG Electronics Inc.**

JP4278657	* Expired March 19, 2018
JP4806702	* Expired May 13, 2022

**Maxell, Ltd.**

JP2760799	* Expired April 28, 2008
JP2798086	* Expired April 28, 2008
JP2798087	* Expired April 28, 2008
JP2870531	* Expired April 28, 2008
JP2870532	* Expired April 28, 2008
JP2960803	* Expired August 28, 2011
JP2980085	* Expired April 28, 2008
JP2989742	* Expired May 20, 2014
JP2993487	* Expired April 28, 2008
JP3008884	* Expired July 20, 2010
JP3008885	* Expired July 20, 2010
JP3011239	* Expired July 20, 2010
JP3025658	* Expired July 20, 2010
JP3031284	* Expired July 20, 2010
JP3031285	* Expired July 20, 2010

**Maxell, Ltd.**

JP3119116	* Expired June 7, 2015
JP3139910	* Expired March 31, 2014
JP3149627	* Expired June 7, 2013
JP3178467	* Expired July 20, 2010
JP3217137	* Expired July 28, 2012
JP3275881	* Expired April 28, 2008
JP3275916	* Expired July 20, 2010
JP3275917	* Expired July 20, 2010
JP3277894	* Expired April 28, 2008
JP3443572	* Expired July 28, 2012
JP3491431	* Expired February 20, 2016
JP3496635	* Expired March 22, 2014
JP3498403	* Expired February 10, 2015
JP3502241	* Expired August 28, 2011
JP3502260	* Expired August 28, 2011
JP3520595	* Expired March 29, 2015
JP3527908	* Expired July 28, 2012
JP3564961	* Expired August 21, 2017
JP3591274	* Expired February 17, 2018
JP3601181	* Expired April 19, 2016
JP3652176	* Expired August 13, 2019
JP3661001	* Expired July 20, 2010
JP3675442	* Expired February 17, 2014
JP3685093	* Expired April 27, 2015
JP3714276	* Expired April 27, 2015
JP3780079	* Expired October 29, 2017
JP3785010	* Expired December 1, 2019
JP3793543	* Expired July 20, 2010
JP3795266	* Expired July 30, 2019
JP3829574	* Expired March 9, 2020



**Maxell, Ltd.**

JP3882295	* Expired November 10, 2017
JP3922110	* Expired February 20, 2016
JP3937889	* Expired March 28, 2022
JP3995017	* Expired November 10, 2017
JP4029569	* Expired January 10, 2021
JP4042419	* Expired January 31, 2022
JP4046006	* Expired August 21, 2017
JP4062890	* Expired April 20, 2021
JP4093214	* Expired August 21, 2017
JP4103933	* Expired January 11, 2022
JP4103934	* Expired January 11, 2022
JP4103935	* Expired January 11, 2022
JP4162033	* Expired April 20, 2021
JP4192995	* Expired November 10, 2017
JP4201055	* Expired January 31, 2022
JP4208033	* Expired April 19, 2016
JP4225365	* Expired January 22, 2021
JP4238928	* Expired January 31, 2022
JP4254903	* Expired April 20, 2021
JP4299976	* Expired March 2, 2021
JP4300170	* Expired October 15, 2012
JP4300190	* Expired July 31, 2017
JP4332284	* Expired June 9, 2020
JP4340693	* Expired March 2, 2021
JP4340694	* Expired March 2, 2021
JP4340702	* Expired February 16, 2021
JP4340708	* Expired February 16, 2021
JP4340709	* Expired February 16, 2021
JP4345694	* Expired April 27, 2015
JP4353306	* Expired February 17, 2014

**Maxell, Ltd.**

JP4353307	* Expired February 17, 2014
JP4360382	* Expired January 19, 2019
JP4379428	* Expired December 17, 2016
JP4379528	* Expired March 28, 2022
JP4406669	* Expired September 30, 2024
JP4406672	* Expired September 30, 2024
JP4424118	* Expired December 1, 2019
JP4431617	* Expired October 29, 2017
JP4431619	* Expired October 29, 2017
JP4431633	* Expired December 17, 2016
JP4431635	* Expired December 17, 2016
JP4443060	* Expired February 9, 2021
JP4474434	* Expired January 19, 2019
JP4474442	* Expired January 19, 2019
JP4474486	* Expired December 3, 2023
JP4484840	* Expired June 9, 2020
JP4484945	* Expired February 17, 2018
JP4500847	* Expired December 15, 2020
JP4512664	* Expired June 9, 2020
JP4538414	* Expired October 19, 2021
JP4538488	* Expired July 31, 2017
JP4538489	* Expired July 31, 2017
JP4547097	* Expired January 22, 2021
JP4558100	* Expired February 17, 2018
JP4576066	* Expired April 10, 2021
JP4576471	* Expired January 10, 2023
JP4576481	* Expired January 10, 2023
JP4597229	* Expired June 25, 2018
JP4597231	* Expired October 19, 2021
JP4597252	* Expired February 9, 2021

**Maxell, Ltd.**

JP4597266	* Expired October 19, 2021
JP4613212	* Expired October 13, 2024
JP4613256	* Expired January 22, 2021
JP4627790	* Expired January 22, 2021
JP4637226	* Expired January 10, 2021
JP4637254	* Expired March 28, 2022
JP4654302	* Expired February 28, 2021
JP4654307	* Expired June 25, 2018
JP4654319	* Expired February 9, 2021
JP4663601	* Expired July 28, 2018
JP4686584	* Expired December 15, 2017
JP4686632	* Expired December 15, 2017
JP4686641	* Expired December 15, 2017
JP4709298	* Expired April 10, 2021
JP4719818	* Expired February 9, 2021
JP4729634	* Expired December 3, 2023
JP4729635	* Expired December 3, 2023
JP4734464	* Expired February 28, 2021
JP4734482	* Expired February 28, 2021
JP4740384	* Expired January 10, 2021
JP4742176	* Expired June 25, 2018
JP4747223	* Expired December 15, 2020
JP4751953	* Expired December 15, 2020
JP4751959	* Expired April 10, 2021
JP4783850	* Expired June 21, 2021
JP4790825	* Expired July 28, 2018
JP4790850	* Expired January 10, 2023
JP4792543	* Expired July 28, 2018
JP4871992	* Expired October 13, 2024
JP4876189	* Expired June 21, 2021

**Maxell, Ltd.**

JP4901993	* Expired October 13, 2024
JP4959851	* Expired June 21, 2021
JP5002699	* Expired October 13, 2024
JP5002771	* Expired April 22, 2013
JP5002772	* Expired April 22, 2013
JP5002773	* Expired April 22, 2013
JP5050122	* Expired October 13, 2024
JP5050129	* Expired October 13, 2024
JP5063629	* Expired June 4, 2021
JP5156803	* Expired June 4, 2021
JP5292371	* Expired October 11, 2022
JP5452685	* Expired October 11, 2022
JP5478690	* Expired June 4, 2021

**Maxell, Ltd. / Nippon Hoso Kyokai**

JP3884881	* Expired May 21, 2019
JP4414969	* Expired May 21, 2019
JP4791567	* Expired May 21, 2019

**Maxell, Ltd. / Pioneer Corporation**

JP2911861	* Expired November 26, 2017
-----------	-----------------------------

**Mitsubishi Electric Corporation**

JP2935788	* Expired June 4, 2013
JP3172425	* Expired February 1, 2016
JP3215952	* Expired April 7, 2012
JP3216531	* Expired July 24, 2016
JP3216534	* Expired August 29, 2016
JP3301055	* Expired March 29, 2016
JP3316572	* Expired April 7, 2012
JP3316573	* Expired April 7, 2012

**Mitsubishi Electric Corporation**

JP3468115	* Expired August 4, 2018
JP3505378	* Expired January 29, 2018
JP3740712	* Expired June 13, 2015
JP3800886	* Expired October 12, 2019
JP3817816	* Expired March 12, 2017
JP3909947	* Expired February 16, 2018
JP4040053	* Expired March 12, 2017
JP4040078	* Expired March 12, 2017
JP4089714	* Expired June 13, 2015
JP4096995	* Expired June 13, 2015
JP4250817	* Expired August 4, 2019
JP4250832	* Expired October 14, 2019
JP4270833	* Expired September 27, 2022
JP4303085	* Expired October 23, 2023
JP4336063	* Expired June 12, 2021
JP4553996	* Expired May 14, 2018
JP4697369	* Expired July 12, 2021
JP4844588	* Expired February 1, 2020
JP4888458	* Expired October 14, 2019
JP4888459	* Expired October 14, 2019
JP4947192	* Expired May 14, 2018
JP4947198	* Expired May 14, 2018
JP5071569	* Expired February 1, 2020
JP5267707	* Expired February 1, 2020

**NEC Corporation**

JP3090137	* Expired January 29, 2019
JP3332072	* Expired April 9, 2018
JP3501213	* Expired July 13, 2019
JP3531604	* Expired November 24, 2020
JP3832321	* Expired November 20, 2021

**NEC Corporation**

JP4045805	* Expired January 11, 2022
JP4051968	* Expired March 7, 2022
JP4066999	* Expired December 28, 2024
JP4200893	* Expired December 19, 2023
JP4973790	* Expired January 28, 2025
JP5056965	* Expired October 5, 2015

**Nippon Hosho Kyokai**

JP2883238	* Expired February 6, 2012
JP2904986	* Expired January 31, 2012
JP3103617	* Expired June 13, 2011
JP3133958	* Expired May 19, 2017
JP3133960	* Expired May 28, 2017
JP3457482	* Expired September 12, 2016
JP3691211	* Expired May 30, 2017
JP3795183	* Expired May 16, 2017
JP3884869	* Expired September 25, 2018
JP4249249	* Expired November 13, 2020
JP4249253	* Expired November 13, 2020
JP4266387	* Expired November 13, 2020
JP4806444	* Expired May 24, 2021

**Orange SA**

JP4391412	* Expired April 30, 2023
JP4673302	* Expired June 2, 2024
JP4864322	* Expired September 5, 2023

**Orange SA / TDF SAS**

JP3044899	* Expired January 17, 2012
JP3827718	* Expired June 13, 2015

**Panasonic Holdings Corporation**

JP3008651	* Expired March 27, 2012
JP3061053	* Expired March 27, 2012
JP3061054	* Expired March 27, 2012
JP3109552	* Expired March 26, 2013
JP3114727	* Expired March 27, 2012
JP3149328	* Expired January 9, 2015
JP3154704	* Expired March 26, 2013
JP3154705	* Expired March 26, 2013
JP3154706	* Expired March 26, 2013
JP3154707	* Expired March 26, 2013
JP3162452	* Expired February 3, 2012
JP3231035	* Expired September 24, 2013
JP3231036	* Expired September 24, 2013
JP3233625	* Expired September 24, 2013
JP3233626	* Expired September 24, 2013
JP3233850	* Expired March 13, 2016
JP3248807	* Expired March 25, 2014
JP3327914	* Expired March 25, 2014
JP3327915	* Expired March 25, 2014
JP3327916	* Expired March 25, 2014
JP3359327	* Expired March 26, 2013
JP3359328	* Expired September 24, 2013
JP3366194	* Expired October 1, 2016
JP3380138	* Expired May 30, 2017
JP3382569	* Expired October 14, 2019
JP3387769	* Expired February 21, 2017
JP3408469	* Expired September 14, 2019
JP3410077	* Expired September 24, 2013
JP3410078	* Expired September 24, 2013
JP3410085	* Expired March 25, 2014

**Panasonic Holdings Corporation**

JP3431465	* Expired September 11, 2017
JP3431470	* Expired September 1, 2017
JP3439738	* Expired September 24, 2013
JP3439739	* Expired September 24, 2013
JP3447207	* Expired December 5, 2017
JP3450320	* Expired March 27, 2012
JP3450321	* Expired March 25, 2014
JP3450322	* Expired September 24, 2013
JP3464656	* Expired August 10, 2021
JP3472774	* Expired March 26, 2013
JP3482750	* Expired September 28, 2015
JP3489574	* Expired February 26, 2018
JP3491549	* Expired January 28, 2019
JP3511013	* Expired January 22, 2021
JP3526458	* Expired October 19, 2019
JP3529395	* Expired October 23, 2012
JP3534710	* Expired March 13, 2016
JP3563346	* Expired April 16, 2018
JP3588460	* Expired March 27, 2012
JP3588461	* Expired March 27, 2012
JP3588462	* Expired September 24, 2013
JP3588463	* Expired March 25, 2014
JP3610914	* Expired February 27, 2021
JP3611995	* Expired January 14, 2020
JP3615685	* Expired April 6, 2020
JP3642210	* Expired February 4, 2019
JP3643834	* Expired March 26, 2013
JP3643835	* Expired March 26, 2013
JP3643836	* Expired March 26, 2013
JP3646110	* Expired May 30, 2017



**Panasonic Holdings Corporation**

JP3646113	* Expired September 1, 2017
JP3677018	* Expired May 30, 2017
JP3754999	* Expired December 9, 2017
JP3779311	* Expired February 26, 2018
JP3829141	* Expired March 27, 2012
JP3869839	* Expired March 27, 2012
JP3881679	* Expired March 25, 2014
JP3881680	* Expired September 24, 2013
JP3918830	* Expired February 4, 2019
JP3958249	* Expired December 5, 2017
JP3958250	* Expired December 5, 2017
JP3965205	* Expired February 28, 2023
JP3965207	* Expired February 28, 2023
JP3965208	* Expired February 28, 2023
JP3987526	* Expired March 26, 2013
JP4028641	* Expired September 24, 2018
JP4042745	* Expired July 16, 2023
JP4044077	* Expired March 23, 2019
JP4065014	* Expired December 6, 2015
JP4135252	* Expired March 23, 2019
JP4243256	* Expired May 30, 2017
JP4317844	* Expired December 11, 2018
JP4317845	* Expired December 11, 2018
JP4369990	* Expired July 27, 2020
JP4409743	* Expired October 20, 2020
JP4410307	* Expired July 27, 2020
JP4561822	* Expired July 16, 2023
JP4649533	* Expired March 9, 2021
JP4666110	* Expired July 16, 2023
JP4735264	* Expired January 26, 2025

**Panasonic Holdings Corporation**

JP4744625 \* Expired July 27, 2020

**Panasonic Holdings Corporation / Nippon Hoso Kyokai**

JP3083159 \* Expired June 30, 2018

JP4057603 \* Expired June 30, 2018

JP4197568 \* Expired June 30, 2018

JP4197690 \* Expired June 30, 2018

**Pioneer Corporation**

JP2852295 \* Expired May 26, 2017

JP2883866 \* Expired April 21, 2017

JP2963895 \* Expired July 6, 2018

JP3437666 \* Expired February 21, 2015

**Sanyo Electric Co., Ltd.**

JP3108392 \* Expired October 1, 2017

JP3475031 \* Expired January 9, 2017

JP3481107 \* Expired December 4, 2017

**Sharp Corporation**

JP2945569 \* Expired October 27, 2013

JP2981448 \* Expired October 27, 2013

JP3205713 \* Expired January 10, 2017

JP3256434 \* Expired March 29, 2016

JP3439653 \* Expired April 8, 2018

JP3483703 \* Expired May 29, 2016

JP3499128 \* Expired March 24, 2018

JP3504487 \* Expired February 13, 2018

JP3518739 \* Expired January 30, 2015

JP3522542 \* Expired July 29, 2018

JP3523470 \* Expired November 17, 2017

**Sharp Corporation**

JP3524706	* Expired December 16, 2016
JP3544165	* Expired March 22, 2020
JP3590511	* Expired November 21, 2017
JP3659776	* Expired September 24, 2017
JP3698654	* Expired April 26, 2021
JP3708028	* Expired May 30, 2021
JP3714886	* Expired April 24, 2021
JP3717422	* Expired May 28, 2021
JP3720347	* Expired April 13, 2024
JP3720722	* Expired March 7, 2021
JP3775937	* Expired March 18, 2019
JP3824833	* Expired February 21, 2020
JP3841617	* Expired April 13, 2020
JP3842959	* Expired June 21, 2020
JP3916499	* Expired April 24, 2022
JP4137613	* Expired December 3, 2022
JP4165987	* Expired August 10, 2020

**Sony Group Corporation**

JP3077467	* Expired October 8, 2013
JP3082820	* Expired November 25, 2013
JP3114339	* Expired March 13, 2012
JP3125787	* Expired December 28, 2015
JP3127920	* Expired December 25, 2015
JP3209421	* Expired November 25, 2013
JP3209422	* Expired November 25, 2013
JP3250333	* Expired August 27, 2013
JP3252706	* Expired May 16, 2016
JP3371367	* Expired November 25, 2013
JP3371368	* Expired November 25, 2013
JP3381164	* Expired August 27, 2013

**Sony Group Corporation**

JP3381165	* Expired August 27, 2013
JP3407712	* Expired May 16, 2016
JP3417406	* Expired January 27, 2012
JP3430792	* Expired October 27, 2015
JP3452236	* Expired March 19, 2017
JP3570402	* Expired August 27, 2013
JP3610973	* Expired May 22, 2015
JP3613865	* Expired December 7, 2015
JP3617115	* Expired March 31, 2015
JP3630441	* Expired October 29, 2013
JP3644455	* Expired September 29, 2014
JP3658919	* Expired April 15, 2017
JP3666093	* Expired December 25, 2015
JP3685182	* Expired November 13, 2015
JP3712009	* Expired March 28, 2015
JP3712063	* Expired March 28, 2015
JP3835655	* Expired June 9, 2018
JP3844527	* Expired May 31, 2015
JP3864514	* Expired September 22, 2017
JP3901179	* Expired October 8, 2012
JP3906592	* Expired January 5, 2019
JP3988755	* Expired May 22, 2015
JP4046873	* Expired November 16, 2018
JP4049180	* Expired February 10, 2017
JP4051688	* Expired January 21, 2020
JP4051689	* Expired January 21, 2020
JP4072692	* Expired September 29, 2014
JP4081780	* Expired April 30, 2018
JP4099599	* Expired February 10, 2017
JP4190594	* Expired December 28, 2015

**Sony Group Corporation**

JP4296895	* Expired December 28, 2015
JP4314745	* Expired April 17, 2020
JP4543555	* Expired April 11, 2020
JP5071746	* Expired June 24, 2024
JP5071749	* Expired June 24, 2024
JP5187352	* Expired June 21, 2024
JP5339168	* Expired June 24, 2024

**Sony Group Corporation / Nippon Hoso Kyokai**

JP3940541	* Expired February 25, 2020
-----------	-----------------------------

**Sony Group Corporation / Toshiba Corporation / Nippon Hoso Kyokai**

JP2975932	* Expired July 9, 2018
-----------	------------------------

**The Trustees of Columbia University in the City of New York**

JP4194240	* Expired January 29, 2019
JP4393591	* Expired February 13, 2018

**Toshiba Corporation**

JP2941398	* Expired September 29, 2010
JP3139909	* Expired March 15, 2014
JP3139936	* Expired March 24, 2015
JP3435277	* Expired January 30, 2016
JP3490666	* Expired March 15, 2014
JP3805910	* Expired October 5, 2018
JP3971346	* Expired June 16, 2023
JP4346471	* Expired February 27, 2024

**Toshiba Corporation / TVS REGZA Corporation**

JP3239084	* Expired May 30, 2017
JP3474510	* Expired February 29, 2020
JP3602768	* Expired April 12, 2020

**Toshiba Corporation / TVS REGZA Corporation**

JP3663149	* Expired May 21, 2021
JP3824574	* Expired February 29, 2020
JP3824575	* Expired February 29, 2020
JP3917611	* Expired April 12, 2020
JP4127778	* Expired August 26, 2022
JP4607941	* Expired August 26, 2022
JP4703631	* Expired August 26, 2022
JP4703632	* Expired August 26, 2022

**TVS REGZA Corporation**

JP4138575	* Expired May 22, 2023
JP4542914	* Expired February 8, 2025
JP5225324	* Expired February 8, 2025