

## 2 Annual Statistics

### I. Patent Applications Filed & Disposed

#### A. General Statistics of Patent Cases (2008-2017)

Year \ Item	Application	Approval	Certificate Issued	Grant
2008	83,534	0	42,365	42,284
2009	78,352	0	43,749	43,728
2010	80,380	0	45,973	46,023
2011	82,824	0	50,313	50,305
2012	85,074	0	56,611	56,608
2013	83,211	0	72,147	72,142
2014	78,015	0	76,258	76,252
2015	73,627	0	78,089	78,087
2016	72,442	0	76,406	76,406
2017	73,791	0	71,878	71,877

Note : "Application" is the number of applications for each individual year. "Approval" is the number of published approvals. This system was replaced by the patent granted system on July 1, 2004, which issues a certificate at the same time the approval is published. "Certificate Issued" is the number of certificates actually being issued.

#### B. Statistics on Patent from 2008 to 2017

##### 1. Patent Cases Filed & Disposed

Year \ Item	Application	Reexamination	Invalidation	Assignment	Licensing
2008	83,534	1,767	1,034	4,667	108
2009	78,352	2,308	978	4,316	140
2010	80,380	2,869	950	3,824	164
2011	82,824	3,439	792	4,368	116
2012	85,074	4,541	828	4,924	647
2013	83,211	6,421	660	4,735	188
2014	78,015	7,154	616	4,745	116
2015	73,627	6,871	602	5,965	63
2016	72,442	6,329	548	6,621	107
2017	73,791	5,448	525	6,176	137

Note : 1.The figures for "Application," "Reexamination," and "Invalidation" reflect the total number of cases applied each year.

2.The figures for "Assignment" and "Licensing" reflect the total number of cases concluded each year.

3.The examination of utility model patents was changed to formality examination starting July 1, 2004. Therefore, no more reexamination requests were filed since then.

## 2. Invention Patent Applications Filed & Disposed

Item Year	Application	Pre-grant Publication	Request for Examination	Reexamination	Rejection	Grant	Invalidation
2008	51,831	50,131	46,034	1,564	5,083	12,867	205
2009	46,582	52,605	40,826	2,122	8,902	14,138	233
2010	47,327	44,949	40,972	2,761	10,768	16,377	166
2011	49,919	46,154	43,411	3,311	14,875	20,025	122
2012	51,189	51,590	44,465	4,466	20,871	25,535	154
2013	49,217	52,123	43,447	6,350	26,287	40,249	123
2014	46,379	48,715	41,252	6,973	24,349	45,601	138
2015	44,415	47,363	40,475	6,667	21,372	48,315	122
2016	43,836	44,355	38,382	6,239	15,427	48,947	163
2017	46,122	43,676	40,124	5,343	10,383	45,710	163

Note : 1.Rejection decisions are rendered after examination and reexamination. "Grants" refer to approved cases published and issued certificates at the same time.  
 2.Pre-grant publication is early publication for new applications.  
 3.Requests for substantive examination are made every year.

## 3. Utility Model Patent Applications Filed & Disposed

Item Year	Application	Rejection	Grant	Requests for Technical Evaluation Report	Issuance of Technical Evaluation Report	Invalidation
2008	23,952	224	23,411	2,652	2,645	788
2009	25,032	216	23,595	2,603	1,448	703
2010	25,833	239	23,956	2,560	2,486	738
2011	25,170	313	24,038	2,301	2,821	622
2012	25,637	318	24,642	2,363	2,572	621
2013	25,025	264	24,844	2,273	2,676	481
2014	23,488	239	23,712	2,153	2,104	422
2015	21,404	193	22,106	1,964	2,155	406
2016	20,161	191	19,793	1,607	2,049	329
2017	19,549	174	19,037	1,553	2,075	314

Note : 1.Rejection decisions are rendered after examination and reexamination. "Grants" refer to approved cases published and issued certificates at the same time.  
 2. "Requests for Technical Evaluation Report" are requests for technical evaluation. "Issuance of Technical Evaluation Report" is the number of requests received and technical evaluation reports issued.

#### 4. Design Patent Applications Filed & Disposed

Year \ Item	Application	Reexamination	Rejection	Grant	Invalidation
2008	7,751	203	1,284	6,006	41
2009	6,738	186	1,094	5,995	42
2010	7,220	108	841	5,690	46
2011	7,735	127	706	6,242	48
2012	8,248	75	630	6,431	53
2013	8,969	70	753	7,049	56
2014	8,148	181	868	6,939	56
2015	7,808	204	877	7,666	74
2016	8,445	90	672	7,666	56
2017	8,120	104	521	7,130	48

Note : Rejection decisions are rendered after examination and reexamination. "Grants" refer to approved cases published and issued certificates at the same time.

#### 5. Patent Opposition and Invalidation

Year \ Item	Opposition		Invalidation		
	Sustained	Denied	Sustained	Partially Sustained	Denied
2008	6	11	496	0	596
2009	4	4	694	0	553
2010	3	3	503	0	413
2011	2	5	469	0	442
2012	3	2	462	0	421
2013	0	0	425	114	312
2014	0	1	360	135	309
2015	0	0	294	99	245
2016	0	0	277	100	300
2017	0	0	310	91	287

Note : 1. The figures are dispositions for patent objections, confirmed invalidations, acquitted invalidations, and partially sustained invalidations of the same year.

2. There are also withdrawals, rejections, and not accepted cases in addition to sustained, acquitted, and partially sustained invalidations.

3. In January 1, 2013, invalidation adopted the system of disposition by claims. Sustained invalidation refers to all claims being sustained in the invalidation request; partially sustained refers to parts of the claims in the invalidation request are sustained, while the remaining parts are either denied or rejected; Denied invalidation refers to all the claims in the invalidation request are denied or parts of them are denied and the remaining parts are rejected."

## 6. Patent Administrative Appeals, 2008-2017

Year \ Item	Administrative Appeals					
	Cases Filed	Decisions of Administrative Appeals				
		Original Decisions Revoked	Others	Administrative Appeals Rejected	Other disposals	Rate of Revocation
2008	531	57	0	512	14	9.8%
2009	508	46	0	410	16	9.8%
2010	421	39	0	465	15	7.5%
2011	378	28	0	342	8	7.4%
2012	386	29	0	341	8	7.7%
2013	444	37	2	367	8	9.4%
2014	426	21	1	390	7	5.3%
2015	367	15	4	386	6	4.6%
2016	313	14	2	296	6	5.0%
2017	288	11	3	284	2	4.7%

Note : 1. The above statistics are based on figures published by the Petitions and Appeals Committee, MOEA.

2. Rejections refer to not accepted and rejection of an appeal decision; others refer to partial rejection and partial cancellation cases; other disposals include withdrawal by the appellant, transfer of jurisdiction, and bundled proceeding.

## 7. Patent Administrative Litigation Processed by the Intellectual Property Court

Year \ Item	Cases Received	Cases Concluded							
		Withdrawn	Plaintiff Won	Plaintiff Lost	Partially Sustained	Dismissals	Settlements	Others	Total
Jul. - Dec. 2008	93	3	6	28	0	2	0	1	40
2009	143	4	20	90	11	10	0	0	135
2010	183	5	42	109	12	5	0	0	173
2011	135	5	31	102	20	3	0	0	161
2012	126	5	14	73	7	5	0	1	105
2013	133	8	16	111	12	1	0	0	148
2014	122	6	9	86	4	3	0	0	108
2015	127	3	18	87	14	6	0	0	128
2016	104	18	17	57	11	4	0	0	107
2017	103	7	16	62	11	2	0	0	98

Note : 1. The above statistics are provided by the Intellectual Property Court.

2. "Plaintiff Won" and "Partially Sustained" include appeals filed against the Ministry of Economic Affairs whose appeal decisions were revoked.

## 8. Residents and Non-Residents Patent Applications

Item Year	Residents				Non-Residents			
	Invention	Utility Model	Design	Total	Invention	Utility Model	Design	Total
2008	23,744	23,053	4,266	51,063	28,087	899	3,485	32,471
2009	22,594	24,204	4,239	51,037	23,988	828	2,499	27,315
2010	22,790	24,813	4,268	51,871	24,537	1,020	2,952	28,509
2011	23,432	24,037	4,592	52,061	26,487	1,133	3,143	30,763
2012	22,949	24,378	4,955	52,282	28,240	1,259	3,293	32,792
2013	21,633	23,769	5,133	50,535	27,584	1,256	3,836	32,676
2014	18,988	22,113	4,672	45,773	27,391	1,375	3,476	32,242
2015	17,262	20,132	4,450	41,844	27,153	1,272	3,358	31,783
2016	16,866	18,998	4,579	40,443	26,970	1,163	3,866	31,999
2017	18,199	18,343	4,293	40,835	27,923	1,206	3,827	32,956

## 9. Residents and Non-Residents Patent Grants

Item Year	Residents				Non-Residents			
	Invention	Utility Model	Design	Total	Invention	Utility Model	Design	Total
2008	6,321	22,645	3,161	32,127	6,546	766	2,845	10,157
2009	7,392	22,712	3,179	33,283	6,746	883	2,816	10,445
2010	8,367	23,107	3,451	34,925	8,010	849	2,239	11,098
2011	10,035	23,024	3,708	36,767	9,990	1,014	2,534	13,538
2012	12,140	23,482	3,929	39,551	13,395	1,160	2,502	17,057
2013	19,532	23,617	4,229	47,378	20,717	1,227	2,820	24,764
2014	21,261	22,458	4,023	47,742	24,340	1,254	2,916	28,510
2015	21,401	20,787	4,258	46,446	26,914	1,319	3,408	31,641
2016	21,178	18,608	4,185	43,971	27,769	1,185	3,481	32,435
2017	18,569	17,934	3,629	40,132	27,141	1,103	3,501	31,745

Note : The patent granted system issues the certificate at the same time the approval is published. This system took effect on July 1, 2004.

## C. Statistics on Patent-by Classification

### 1. Invention Applications and Grants by Classification in Recent 3 Years

Classification	Application			Grant		
	2014	2015	2016	2015	2016	2017
A01	386	353	347	289	281	364
A21	24	21	22	12	18	24
A22	4	0	2	1	7	2
A23	272	243	273	140	181	217
A24	80	93	77	25	31	64
A41	71	70	61	40	28	42
A42	14	11	18	15	8	11
A43	108	111	129	25	64	109
A44	112	96	98	134	155	103
A45	105	88	98	73	69	91
A46	43	28	30	18	46	14
A47	450	429	520	273	463	420
A61	2,221	2,280	2,390	1,752	2,031	2,237
A62	44	52	47	26	59	49
A63	317	323	331	268	284	340
A99	1	1	1	0	0	0
B01	478	478	452	523	472	441
B02	20	21	18	21	21	22
B03	8	11	10	9	11	8
B04	5	7	4	6	16	6
B05	241	208	185	175	240	270
B06	4	7	6	1	5	3
B07	17	14	15	14	9	26
B08	89	78	81	61	76	70
B09	23	14	21	19	25	23
B21	154	132	148	106	161	203
B22	78	87	94	63	82	103
B23	479	472	500	475	492	585
B24	239	247	205	162	191	291
B25	377	383	414	344	371	443
B26	60	53	56	62	59	64

Classification	Application			Grant		
	2014	2015	2016	2015	2016	2017
B27	12	11	17	6	18	21
B28	44	36	41	12	20	39
B29	490	506	439	313	357	487
B30	23	15	19	10	11	30
B31	8	10	5	9	8	6
B32	778	721	675	434	572	564
B33	2	10	3	0	2	1
B41	232	226	174	197	210	200
B42	24	18	9	10	16	13
B43	16	20	21	22	14	27
B44	32	23	17	24	31	24
B60	408	360	341	285	399	410
B61	24	24	30	17	42	24
B62	414	454	455	326	486	498
B63	51	43	39	20	31	47
B64	26	25	28	4	16	21
B65	642	619	622	480	703	693
B66	47	74	70	30	48	74
B67	29	19	18	13	13	25
B68	3	3	0	0	1	4
B81	56	45	90	46	45	61
B82	64	52	34	75	71	45
C01	365	309	309	358	348	282
C02	154	129	153	102	173	131
C03	423	418	381	321	310	363
C04	160	127	135	98	141	151
C05	11	20	18	12	8	10
C06	0	1	1	0	1	0
C07	1,752	1,804	1,809	1,298	1,316	1,341
C08	1,847	1,788	1,849	1,824	1,603	1,575
C09	1,334	1,477	1,412	1,239	1,182	1,180
C10	115	79	55	134	86	71
C11	71	54	73	80	65	68
C12	323	319	386	271	297	288

Classification	Application			Grant		
	2014	2015	2016	2015	2016	2017
C13	2	1	1	3	0	0
C14	7	1	3	2	7	3
C21	60	44	58	87	57	76
C22	283	281	350	349	343	276
C23	696	678	666	751	747	676
C25	195	179	166	186	214	198
C30	85	93	107	66	127	98
C40	6	1	2	2	2	1
D01	78	68	70	59	85	90
D02	18	25	14	5	9	20
D03	31	33	42	23	23	31
D04	75	63	71	48	56	76
D05	47	63	48	49	57	71
D06	70	87	121	90	97	76
D07	0	4	0	4	0	0
D21	29	31	30	42	33	29
D99	0	0	0	0	1	0
E01	28	20	21	32	23	33
E02	45	36	40	34	53	67
E03	39	62	60	37	48	69
E04	165	144	167	114	145	207
E05	135	134	121	126	165	112
E06	88	83	95	84	104	84
E21	8	5	3	9	11	12
F01	49	64	49	20	33	66
F02	90	91	50	58	65	99
F03	152	126	130	68	88	87
F04	213	181	234	243	258	203
F15	18	21	22	11	13	26
F16	665	626	663	475	770	671
F17	26	18	21	23	23	27
F21	399	276	209	303	388	366
F22	9	8	8	4	14	11
F23	51	56	43	63	69	55



Classification	Application			Grant		
	2014	2015	2016	2015	2016	2017
F24	218	160	223	132	205	233
F25	70	73	84	36	93	101
F26	10	21	14	9	26	16
F27	50	36	26	19	57	39
F28	102	124	78	78	114	156
F41	36	28	44	21	39	42
F42	3	2	5	4	3	4
G01	1,757	1,714	1,742	2,273	1,419	1,737
G02	1,767	1,602	1,461	2,584	1,926	1,851
G03	951	1,021	1,023	1,235	1,051	1,253
G04	38	50	43	26	33	42
G05	263	283	317	421	301	309
G06	4,968	4,882	4,177	5,868	5,485	4,370
G07	69	67	81	55	37	66
G08	217	213	178	198	156	166
G09	629	523	476	791	855	704
G10	191	152	142	173	176	238
G11	665	633	527	934	932	770
G12	3	4	2	5	2	4
G21	27	26	30	65	33	28
G99	0	1	1	0	0	1
H01	7,873	7,166	7,465	8,942	9,868	8,591
H02	1,116	1,050	982	1,486	1,354	1,014
H03	440	438	382	758	785	552
H04	2,801	2,612	2,671	4,110	3,907	2,739
H05	1,275	995	903	1,420	1,362	1,349
H99	0	0	0	0	0	0
X	474	686	692	0	0	0

Note : Patent application figures, in consideration of the time period differentiated between application collection and classification, may not be available by the publication deadline for the annual report. Therefore, figures from prior three years are used as the basis of the said statistics.

## 2. Utility Model Applications and Grants by Classification in Recent 3 Years

Classification	Application			Grant		
	2014	2015	2016	2015	2016	2017
A01	716	700	669	683	621	729
A21	71	65	71	64	60	72
A22	13	6	6	14	4	5
A23	164	151	165	150	139	148
A24	6	10	8	8	8	15
A41	290	254	251	259	239	237
A42	73	86	84	77	92	62
A43	218	229	230	239	234	208
A44	109	95	91	109	87	107
A45	657	578	567	604	574	518
A46	32	44	45	35	41	39
A47	1,917	1,730	1,688	1,807	1,685	1,508
A61	1,353	1,228	1,274	1,252	1,214	1,229
A62	115	120	127	112	113	126
A63	657	651	587	648	596	555
A99	0	0	0	0	0	0
B01	252	272	261	272	263	254
B02	31	18	20	21	20	14
B03	12	5	8	8	9	4
B04	8	3	7	6	6	5
B05	168	114	113	122	121	112
B06	5	3	0	6	1	0
B07	16	12	18	16	12	17
B08	59	64	54	61	64	45
B09	10	9	11	12	7	11
B21	102	91	95	90	86	100
B22	29	17	27	20	18	30
B23	437	450	404	473	379	409
B24	121	109	110	113	116	111
B25	446	464	422	430	449	339
B26	98	108	97	109	105	89
B27	53	27	43	38	34	37
B28	18	24	15	17	16	13

Classification	Application			Grant		
	2014	2015	2016	2015	2016	2017
B29	237	241	165	250	189	152
B30	28	19	17	19	17	14
B31	21	20	18	20	21	9
B32	152	164	156	163	162	137
B33	0	7	3	2	7	6
B41	110	101	76	101	95	71
B42	73	54	54	53	51	54
B43	103	68	83	78	72	75
B44	56	42	21	40	28	30
B60	793	732	644	740	663	582
B61	7	8	10	11	8	10
B62	707	636	643	679	612	588
B63	52	69	49	70	45	52
B64	8	26	15	18	20	14
B65	1,016	980	922	987	914	865
B66	109	90	81	113	69	104
B67	29	37	34	34	38	34
B68	1	2	0	1	2	0
B81	3	1	4	2	3	8
B82	2	1	1	2	1	3
C01	11	10	17	9	19	20
C02	65	102	105	81	109	101
C03	23	31	36	22	34	30
C04	8	2	6	3	3	3
C05	7	10	6	7	11	6
C06	0	1	0	1	0	0
C07	0	2	1	2	0	1
C08	22	15	10	23	9	9
C09	19	23	13	26	19	8
C10	8	6	6	6	4	10
C11	20	22	14	19	17	16
C12	45	31	33	34	35	30
C13	0	0	0	0	0	0
C14	0	0	0	0	0	1

Classification	Application			Grant		
	2014	2015	2016	2015	2016	2017
C21	11	12	7	11	9	17
C22	6	5	3	7	2	2
C23	35	42	30	50	29	20
C25	51	63	82	54	75	61
C30	14	2	7	7	5	10
C40	0	0	0	0	0	0
D01	21	11	14	13	13	10
D02	11	12	10	9	10	12
D03	20	37	24	21	38	26
D04	71	56	50	69	51	47
D05	38	50	45	48	46	34
D06	93	89	91	87	97	64
D07	3	6	3	5	6	3
D21	4	14	7	7	13	5
D99	0	1	0	0	1	0
E01	29	33	47	37	44	35
E02	41	46	50	40	46	53
E03	106	129	109	113	114	101
E04	407	381	364	397	360	353
E05	250	236	182	248	209	180
E06	243	231	249	254	224	214
E21	13	1	6	9	2	13
F01	50	35	38	43	39	39
F02	82	82	81	85	70	61
F03	135	102	109	111	91	106
F04	259	207	220	226	200	218
F15	9	11	16	12	7	18
F16	820	862	739	861	773	674
F17	33	18	18	26	12	21
F21	615	424	340	507	353	317
F22	9	9	4	7	7	6
F23	77	55	67	63	58	54
F24	436	362	358	426	324	358
F25	108	64	64	74	66	60

Classification	Application			Grant		
	2014	2015	2016	2015	2016	2017
F26	25	21	28	18	27	22
F27	15	14	18	19	16	12
F28	83	64	62	74	69	42
F41	75	72	88	74	80	73
F42	13	11	11	15	5	11
G01	548	436	469	484	464	397
G02	514	426	411	457	427	355
G03	143	128	115	107	128	115
G04	48	38	29	43	31	17
G05	54	44	60	47	49	53
G06	1,286	1,244	1,193	1,255	1,128	1,333
G07	44	50	43	53	40	54
G08	201	202	193	202	193	179
G09	213	194	177	182	182	171
G10	79	62	65	62	55	70
G11	85	79	71	85	68	43
G12	3	2	1	4	2	2
G21	1	1	2	1	1	2
G99	0	0	0	0	0	0
H01	1,907	1,645	1,395	1,823	1,432	1,411
H02	573	488	387	505	404	394
H03	24	26	20	19	27	20
H04	531	434	396	463	382	403
H05	737	586	513	696	499	475
H99	0	0	0	0	0	0
X	195	159	169	0	0	0

Note : Patent application figures, in consideration of the time period differentiated between application collection and classification, may not be available by the publication deadline for the annual report. Therefore, figures from prior three years are used as the basis of the said statistics.

### 3. Design Applications and Grants by Classification in Recent 3 Years

Classification	Application			Grant		
	2014	2015	2016	2015	2016	2017
01	63	54	45	55	26	36
02	283	288	371	243	267	339
03	191	223	245	182	232	192
04	56	48	61	44	54	50
05	77	45	55	99	62	30
06	385	431	456	286	365	290
07	351	427	413	302	360	376
08	349	387	393	316	402	334
09	491	435	604	502	431	468
10	195	232	207	216	231	191
11	264	233	283	242	232	224
12	834	817	1,074	848	741	1,016
13	581	464	467	616	477	447
14	1,187	891	914	1,043	1,035	772
15	407	407	434	404	453	319
16	253	238	262	241	265	231
17	10	6	13	10	6	7
18	17	12	10	21	12	18
19	86	66	104	92	81	64
20	68	55	40	39	52	24
21	263	270	304	260	265	258
22	41	65	79	50	74	54
23	389	426	421	373	446	370
24	189	212	180	187	197	162
25	180	161	123	161	145	113
26	523	494	454	478	387	449
27	13	7	2	14	13	0
28	238	271	271	247	242	214
29	5	19	9	7	16	11

Classification	Application			Grant		
	2014	2015	2016	2015	2016	2017
30	36	30	29	29	33	25
31	77	52	56	59	63	46
32	0	0	3	0	0	0
33	0	0	0	0	0	0
34	0	0	0	0	0	0
35	0	0	0	0	0	0
36	0	0	0	0	0	0
37	0	0	0	0	0	0
38	0	0	0	0	0	0
39	0	0	0	0	0	0
40	0	0	0	0	0	0
41	0	0	0	0	0	0
42	0	0	0	0	0	0
44	0	0	0	0	0	0
45	0	0	0	0	0	0
46	0	0	0	0	0	0
47	0	0	0	0	0	0
48	0	0	0	0	0	0
49	0	0	0	0	0	0
50	0	0	0	0	0	0
99	0	0	0	0	0	0
X	46	42	62	0	1	0

Note : Patent application figures, in consideration of the time period differentiated between application collection and classification, may not be available by the publication deadline for the annual report. Therefore, figures from prior three years are used as the basis of the said statistics.

#### 4. Invention Applications by International Patent Classification (IPC) in 2016 (TOP 20)

Rank	IPC	IPC Subject	Total
1	H01L	Semiconductor devices; electric solid state devices not otherwise provided for	5,392
2	G06F	Electric digital data processing	2,763
3	A61K	Preparations for medical, dental, or toilet purposes	1,167
4	G02B	Optical elements, systems, or apparatus	954
5	G06Q	Electronic commerce	953
6	C07D	Heterocyclic compounds	888
7	G03F	Photomechanical production of textured or patterned surfaces; materials therefor; originals therefor; apparatus specially adapted therefor; exposure apparatus	821
8	H04N	Pictorial communication	771
9	C08L	Compositions of Macromolecular Compounds	718
10	H04W	Wireless communication networks	689
11	B32B	Layered products	675
12	H05K	Printed circuits; casings or constructional details of electric apparatus; manufacture of assemblages of electrical components	650
13	H04L	Transmission of digital information	623
14	C23C	Coating metallic material; coating material with metallic material	611
15	G01N	Investigating or analysing materials by determining their chemical or physical properties	571
16	G11C	Static stores	489
17	H01R	Electrically-conductive connections	481
18	C08G	Macromolecular compounds obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds	473
19	C09J	Adhesives; non-mechanical aspects of adhesive processes in general; adhesive processes not provided for elsewhere; use of materials as adhesives	472
20	G02F	Liquid crystal display (LCD), electrophoresis display (EPD)	454

Note : 1. The order of placement is arranged by the number of applications, from most to least.

2. For detailed IPC subject, please refer to International Patent Classification version 2017.01.

3. Patent application figures, in consideration of the time period differentiated between application collection and classification, may not be available by the publication deadline for the annual collection and classification, may not be available by the publication deadline for the annual report. Therefore, figures from prior one year are used as the basis of the said statistics.



## 5. Utility Model Applications by International Patent Classification (IPC) in 2016 (TOP 20)

Rank	IPC	IPC Subject	Total
1	B65D	Containers for storage or transport of articles or materials	581
2	G06F	Electric digital data processing	567
3	H01R	Electrically-conductive connections	553
4	G06Q	Electronic commerce	501
5	A47G	Household or table equipment	475
6	H05K	Printed circuits; casings or constructional details of electric apparatus; manufacture of assemblages of electrical components	431
7	H01L	Semiconductor devices; electric solid state devices not otherwise provided for	406
8	A63B	Apparatus for physical training, gymnastics, swimming, climbing, or fencing; ball games; training equipment	386
9	A47J	Kitchen equipment; coffee mills; spice mills; apparatus for making beverages	331
10	A01K	Animal husbandry; care of birds, fishes, insects; fishing; rearing or breeding animals, not otherwise provided for; new breeds of animals	253
11	A01G	Horticulture; cultivation of vegetables, flowers, rice, fruit, vines, hops, or seaweed; forestry; watering	252
12	A61H	Physical therapy apparatus	248
13	A47B	Tables; desks; office furniture; cabinets; drawers; general details of furniture	244
14	A47C	Chairs; sofas; beds	239
14	E06B	Shutter	239
16	A61B	Diagnosis; surgery; identification	233
17	B25B	Tools or bench devices	231
17	F21V	Lighting devices	231
19	B01D	Separation	216
20	A45C	Purses; luggage; hand carried bags	196

Note : 1. The order of placement is arranged by the number of applications, from most to least.

2. For detailed IPC subject, please refer to International Patent Classification version 2017.01.

3. Patent application figures, in consideration of the time period differentiated between application collection and classification, may not be available by the publication deadline for the annual report. Therefore, figures from prior one year are used as the basis of the said statistics.

## 6. Design Applications by International Classification for Industrial Design System (LOC) in 2016 (TOP 20)

Rank	LOC	LOC Subject	Total
1	12-16	Parts, equipment and accessories for vehicles, not included in other classes or subclasses	693
2	26-06	Luminous devices for vehicles	313
3	13-03	Equipment for distribution or control of electric power	298
4	14-02	Data processing equipment as well as peripheral apparatus and devices	289
5	09-01	Bottles, flasks, pots, carboys, demijohns, and containers with dynamic dispensing means	269
6	14-03	Communications equipment, wireless remote controls and radio amplifiers	245
7	28-03	Toilet articles and beauty parlor equipment	234
8	03-01	Trunks, suitcases, briefcases, handbags, keyholders, cases specially designed for their contents, wallets and similar articles	220
9	21-01	Games and toys	217
10	09-03	Boxes, cases, containers, (preserve) tins or cans	207
11	06-04	Storage furniture	206
12	02-04	Footwear, socks and stockings	199
13	16-06	Optical articles	192
14	12-11	Cycles and motorcycles	180
15	07-02	Cooking appliances, utensils and containers	176
16	14-04	Screen Displays and Icons	168
17	23-01	Fluid distribution equipment	158
18	15-99	Miscellaneous	152
19	11-01	Jewellery	147
20	07-01	China, glassware, dishes and other articles of a similar nature	145

Note : 1. The order of placement is arranged by the number of applications, from most to least.

2. Patent application figures, in consideration of the time period differentiated between application collection and classification, may not be available by the publication deadline for the annual report. Therefore, figures from prior one year are used as the basis of the said statistics.

3. For detailed LOC subject, please refer to International Classification for Industrial Designs 9th edition.

## 7. Invention Grants by International Patent Classification (IPC) in 2017 (TOP 20)

Rank	IPC	IPC Subject	Total
1	H01L	Semiconductor devices; electric solid state devices not otherwise provided for	6,199
2	G06F	Electric digital data processing	3,350
3	G02B	Optical elements, systems, or apparatus	1,122
4	G03F	Photomechanical production of textured or patterned surfaces; materials therefor; originals therefor; apparatus specially adapted therefor; exposure apparatus	961
5	H05K	Printed circuits; casings or constructional details of electric apparatus; manufacture of assemblages of electrical components	880
6	H04N	Pictorial communication	850
7	A61K	Preparations for medical, dental, or toilet purposes	744
8	G11C	Static stores	716
8	H01R	Electrically-conductive connections	716
10	H04W	Wireless communication networks	660
11	G02F	Liquid crystal display (LCD), electrophoresis display (EPD)	629
12	C08L	Compositions of Macromolecular Compounds	627
12	C23C	Coating metallic material; coating material with metallic material	627
14	C07D	Heterocyclic compounds	626
15	G01N	Investigating or analysing materials by determining their chemical or physical properties	570
16	B32B	Layered products	564
17	H04L	Transmission of digital information	548
18	G09G	Arrangements or circuits for control of indicating devices using static means to present variable information	540
19	G06Q	Electronic commerce	535
20	G01R	Measuring electric variables; measuring magnetic variables	500

Note : 1. The order of placement is arranged by the number of grants, from most to least.

2. For detailed IPC subject, please refer to International Patent Classification version 2017.01.

## 8. Utility Model Grants by International Patent Classification (IPC) in 2017 (TOP 20)

Rank	IPC	IPC Subject	Total
1	G06Q	Electronic commerce	676
2	H01R	Electrically-conductive connections	560
3	B65D	Containers for storage or transport of articles or materials	535
4	G06F	Electric digital data processing	527
5	A47G	Household or table equipment	465
6	H01L	Semiconductor devices; electric solid state devices not otherwise provided for	418
7	H05K	Printed circuits; casings or constructional details of electric apparatus; manufacture of assemblages of electrical components	398
8	A63B	Apparatus for physical training, gymnastics, swimming, climbing, or fencing; ball games; training equipment	340
9	A47J	Kitchen equipment; coffee mills; spice mills; apparatus for making beverages	339
10	A01G	Horticulture; cultivation of vegetables, flowers, rice, fruit, vines, hops, or seaweed; forestry; watering	289
11	A01K	Animal husbandry; care of birds, fishes, insects; fishing; rearing or breeding animals, not otherwise provided for; new breeds of animals	279
12	A61H	Physical therapy apparatus	236
13	A47C	Chairs; sofas; beds	215
13	A61B	Diagnosis; surgery; identification	215
13	B01D	Separation	215
13	B23Q	Details, components, or accessories for machine tools	215
17	F21V	Lighting devices	214
18	E06B	Shutter	198
19	A45D	Hairdressing or shaving equipment; manicuring or other cosmetic treatment	196
20	B25B	Tools or bench devices	187

Note : 1. The order of placement is arranged by the number of grants, from most to least.

2. For detailed IPC subject, please refer to International Patent Classification version 2017.01.

## 9. Design Grants by International Classification for Industrial Design System (LOC) in 2017 (TOP 20)

Rank	LOC	LOC Subject	Total
1	12-16	Parts, equipment and accessories for vehicles, not included in other classes or subclasses	656
2	26-06	Luminous devices for vehicles	324
3	13-03	Equipment for distribution or control of electric power	268
4	14-02	Data processing equipment as well as peripheral apparatus and devices	233
5	09-01	Bottles, flasks, pots, carboys, demijohns, and containers with dynamic dispensing means	225
6	14-03	Communications equipment, wireless remote controls and radio amplifiers	217
7	02-04	Footwear, socks and stockings	205
8	21-01	Games and toys	185
8	28-03	Toilet articles and beauty parlor equipment	185
10	03-01	trunks, suitcases, briefcases, handbags, keyholders, cases specially designed for their contents, wallets and similar articles	176
11	16-06	Optical articles	172
12	07-02	Cooking appliances, utensils and containers	166
13	14-04	Screen Displays and Icons	158
14	09-03	Boxes, cases, containers, (preserve) tins or cans	149
15	12-11	Cycles and motorcycles	147
16	23-01	Fluid distribution equipment	143
17	07-01	China, glassware, dishes and other articles of a similar nature	124
18	11-01	Jewellery	121
19	08-05	Other tools and implements	112
19	15-99	Miscellaneous	112

Note : 1. The order of placement is arranged by the number of grants, from most to least.

2. For detailed LOC subject, please refer to International Classification for Industrial Designs 9th edition.

## 10. Patent Applications by Nationality (2017)

Nationality	Application				
	Invention	Utility Model	Design	Total	Percentage
TAIWAN, REPUBLIC OF CHINA	18,199	18,343	4,293	40,835	55.34%
JAPAN	12,497	92	1,261	13,850	18.77%
UNITED STATES OF AMERICA	6,408	201	703	7,312	9.91%
MAINLAND CHINA	1,888	519	267	2,674	3.62%
REPUBLIC OF KOREA	1,864	23	152	2,039	2.76%
GERMANY	1,152	23	286	1,461	1.98%
HONG KONG	973	119	105	1,197	1.62%
SWITZERLAND	392	10	172	574	0.78%
NETHERLANDS	441	15	69	525	0.71%
UNITED KINGDOM	328	12	167	507	0.69%
FRANCE	211	2	171	384	0.52%
CAYMAN ISLANDS	197	79	23	299	0.41%
SINGAPORE	242	11	27	280	0.38%
SWEDEN	171	0	74	245	0.33%
ITALY	155	2	65	222	0.30%
BELGIUM	98	2	9	109	0.15%
ISRAEL	65	4	12	81	0.11%
AUSTRIA	69	0	9	78	0.11%
CANADA	59	7	5	71	0.10%
FINLAND	45	0	24	69	0.09%
BRITISH VIRGIN ISLANDS	28	12	28	68	0.09%
SEYCHELLES	48	11	7	66	0.09%
AUSTRALIA	45	5	16	66	0.09%
SAMOA	38	23	3	64	0.09%

Nationality	Application				
	Invention	Utility Model	Design	Total	Percentage
MALTA	51	0	6	57	0.08%
LUXEMBOURG	49	0	5	54	0.07%
DENMARK	39	3	9	51	0.07%
NORWAY	47	0	1	48	0.07%
NEW ZEALAND	17	0	30	47	0.06%
IRELAND	44	0	1	45	0.06%
SPAIN	24	2	15	41	0.06%
INDIA	33	0	6	39	0.05%
MALAYSIA	16	10	8	34	0.05%
MACAO	8	2	18	28	0.04%
LIECHTENSTEIN	21	0	6	27	0.04%
BARBADOS	8	0	19	27	0.04%
THAILAND	15	0	3	18	0.02%
ANTIGUA AND BARBUDA	17	0	0	17	0.02%
HUNGARY	5	0	9	14	0.02%
SLOVENIA	0	0	12	12	0.02%
POLAND	9	0	0	9	0.01%
BELIZE	2	7	0	9	0.01%
NAMIBIA	7	0	0	7	0.01%
BERMUDA	6	0	1	7	0.01%
BRUNEI	2	4	0	6	0.01%
INDONESIA	2	0	4	6	0.01%
OTHERS	87	6	19	112	0.09%
Total	46,122	19,549	8,120	73,791	100.00%

Note : Countries with fewer than 5 applications are listed as "OTHER."

## 11.Pre-grant Publications by Nationality (2017)

Nationality	Pre-grant Publication	Percentage	Nationality	Pre-grant Publication	Percentage
TAIWAN, REPUBLIC OF CHINA	16,322	37.37%	AUSTRALIA	46	0.11%
JAPAN	11,887	27.22%	DENMARK	42	0.10%
UNITED STATES OF AMERICA	6,977	15.97%	NORWAY	42	0.10%
REPUBLIC OF KOREA	1,700	3.89%	LUXEMBOURG	39	0.09%
MAINLAND CHINA	1,594	3.65%	IRELAND	37	0.08%
GERMANY	1,298	2.97%	MALAYSIA	30	0.07%
NETHERLANDS	525	1.20%	SPAIN	25	0.06%
HONG KONG	505	1.16%	INDIA	21	0.05%
SWITZERLAND	429	0.98%	SAMOA	21	0.05%
UNITED KINGDOM	349	0.80%	BRITISH VIRGIN ISLANDS	20	0.05%
FRANCE	290	0.66%	LIECHTENSTEIN	19	0.04%
CAYMAN ISLANDS	230	0.53%	NEW ZEALAND	18	0.04%
SINGAPORE	208	0.48%	SEYCHELLES	18	0.04%
SWEDEN	143	0.33%	BARBADOS	15	0.03%
ITALY	124	0.28%	ANTIGUA AND BARBUDA	8	0.02%
BELGIUM	97	0.22%	HUNGARY	8	0.02%
AUSTRIA	61	0.14%	POLAND	7	0.02%
CANADA	54	0.12%	BELIZE	6	0.01%
MALTA	53	0.12%	THAILAND	6	0.01%
ISRAEL	52	0.12%	OTHERS	302	0.64%
FINLAND	48	0.11%	Total	43,676	100.00%

Note : Countries with fewer than 5 pre-grant publications are listed as "OTHER."



## 12. Granted Patents by Nationality (2017)

Nationality	Number of Granted Patents				
	Invention	Utility Model	Design	Total	Percentage
TAIWAN, REPUBLIC OF CHINA	18,569	17,934	3,629	40,132	55.83%
JAPAN	12,123	64	1,145	13,332	18.55%
UNITED STATES OF AMERICA	7,156	224	662	8,042	11.19%
MAINLAND CHINA	1,503	462	157	2,122	2.95%
REPUBLIC OF KOREA	1,947	26	125	2,098	2.92%
GERMANY	1,162	20	284	1,466	2.04%
SWITZERLAND	392	4	157	553	0.77%
FRANCE	277	1	275	553	0.77%
NETHERLANDS	454	14	30	498	0.69%
HONG KONG	264	101	98	463	0.64%
CAYMAN ISLANDS	305	62	31	398	0.55%
SWEDEN	132	0	242	374	0.52%
UNITED KINGDOM	195	10	37	242	0.34%
SINGAPORE	205	9	9	223	0.31%
ITALY	101	2	71	174	0.24%
AUSTRIA	89	0	9	98	0.14%
FINLAND	79	0	18	97	0.13%
BRITISH VIRGIN ISLANDS	67	12	10	89	0.12%
CANADA	65	6	10	81	0.11%
BELGIUM	72	2	2	76	0.11%
MALTA	62	0	6	68	0.09%
AUSTRALIA	38	7	20	65	0.09%
LUXEMBOURG	52	0	4	56	0.08%
SAMOA	29	23	1	53	0.07%
IRELAND	42	1	3	46	0.06%

Nationality	Number of Granted Patents				
	Invention	Utility Model	Design	Total	Percentage
ISRAEL	39	4	3	46	0.06%
BARBADOS	28	0	11	39	0.05%
LIECHTENSTEIN	34	0	4	38	0.05%
SPAIN	30	0	3	33	0.05%
SEYCHELLES	19	14	0	33	0.05%
MALAYSIA	13	12	5	30	0.04%
DENMARK	18	3	7	28	0.04%
NORWAY	23	1	1	25	0.03%
NEW ZEALAND	10	1	11	22	0.03%
SLOVENIA	0	0	21	21	0.03%
INDIA	17	0	3	20	0.03%
SAUDI ARABIA	14	0	0	14	0.02%
BELIZE	7	7	0	14	0.02%
BAHAMAS	11	0	0	11	0.02%
MEXICO	10	0	0	10	0.01%
THAILAND	4	5	0	9	0.01%
MACAO	2	1	6	9	0.01%
HUNGARY	8	0	0	8	0.01%
CZECH REPUBLIC	3	1	4	8	0.01%
BRAZIL	4	1	2	7	0.01%
OTHERS	36	3	14	53	0.06%
TOTAL	45,710	19,037	7,130	71,877	100.00%

Note : Countries with fewer than 5 patents granted are listed as "OTHER."

## 13. Residents Patent Applications in 2017 (Top 20)

Rank	Applicant	Number of Applications			
		Invention	Utility Model	Design	Total
1	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD.	937	0	0	937
2	HON HAI PRECISION INDUSTRY CO., LTD.	438	28	19	485
3	INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE	436	14	1	451
4	ACER INCORPORATED	311	55	14	380
5	AU OPTRONICS CORPORATION	324	15	18	357
6	MEDIATEK INC.	349	0	0	349
7	MICROJET TECHNOLOGY CO., LTD	129	122	0	251
8	FAR-EAST-UNIVERSITY	54	151	0	205
9	CHINA STEEL CORPORATION	97	106	0	203
10	CHUNGHWA TELECOM CO., LTD.	170	0	2	172
11	INVENTEC CORPORATION	160	0	0	160
12	UNI-PRESIDENT ENTERPRISES CORP.	58	88	12	158
13	TAIPEI CHENGSHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY	11	144	0	155
14	ASUSTEK COMPUTER INC.	85	58	8	151
15	PRIMAX ELECTRONICS LTD.	147	1	0	148
16	NATIONAL CHUNG SHAN INSTITUTE OF SCIENCE AND TECHNOLOGY	108	22	5	135
17	SILICON MOTION, INC.	134	0	0	134
18	L&F PLASTICS, CO., LTD.	4	17	105	126
19	MACRONIX INTERNATIONAL CO., LTD.	125	0	0	125
20	WISTRON CORPORATION	109	10	5	124
20	DELTA ELECTRONICS, INC.	88	20	16	124

Note : Applicants with the same total of applications are given the same ranking, but the order of placement is arranged by the number of invention patents, from most to least.

#### 14. Residents Patent Grants in 2017 (Top 20)

Rank	Applicant	Number of Grants			
		Invention	Utility Model	Design	Total
1	HON HAI PRECISION INDUSTRY CO., LTD.	705	29	22	756
2	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD.	605	0	0	605
3	INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE	562	17	1	580
4	AU OPTRONICS CORPORATION	419	15	1	435
5	ACER INCORPORATED	280	76	5	361
6	CHINA STEEL CORPORATION	129	94	0	223
7	FAR-EAST-UNIVERSITY	96	114	1	211
8	MACRONIX INTERNATIONAL CO., LTD.	207	0	0	207
9	HIGH TECH COMPUTER, CORP.	176	0	18	194
10	WISTRON CORPORATION	179	0	0	179
11	CHUNGHWA TELECOM CO., LTD.	171	2	2	175
11	DELTA ELECTRONICS, INC.	146	16	13	175
13	METAL INDUSTRIES RESEARCH CENTRE	154	9	1	164
14	QUANTA COMPUTER INC.	132	10	14	156
15	MICROJET TECHNOLOGY CO., LTD	43	110	0	153
16	TAIPEI CHENGSHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY	3	140	1	144
17	ASUSTEK COMPUTER INC.	63	72	7	142
18	INVENTEC CORPORATION	139	1	1	141
18	NATIONAL CHENG KUNG UNIVERSITY	121	19	1	141
20	NATIONAL TSING HUA UNIVERSITY	131	2	0	133

Note : Applicants with the same total of grants are given the same ranking, but the order of placement is arranged by the number of invention patents, from most to least.

## 15. Non-Residents Patent Applications in 2017 (Top 20)

Rank	Applicant	Number of Applications			
		Invention	Utility Model	Design	Total
1	ALIBABA GROUP SERVICES LIMITED	761	1	0	762
2	QUALCOMM INCORPORATED	604	0	0	604
3	APPLIED MATERIALS, INC.	461	24	8	493
4	INTEL CORPORATION	429	0	0	429
5	SEMICONDUCTOR ENERGY LABORATORY CO., LTD.	352	0	0	352
6	TOKYO ELECTRON LIMITED	347	1	1	349
7	GUANG DONG OPPO MOBILE TELECOMMUNICATIONS CORP., LTD	309	0	14	323
8	SAMSUNG ELECTRONICS CO., LTD.	256	0	23	279
9	NITTO DENKO CORPORATION	274	0	0	274
10	MITSUBISHI ELECTRIC CORPORATION	187	0	55	242
11	CORNING INCORPORATED	228	0	0	228
12	SUMITOMO CHEMICAL CO., LTD.	218	0	0	218
13	GLOBALFOUNDRIES US INC.	214	0	0	214
14	DISCO CORPORATION	208	0	0	208
15	FUJIFILM CORPORATION	207	0	0	207
16	LG CHEM, LTD.	205	0	0	205
17	SCREEN HOLDINGS CO., LTD.	202	0	0	202
18	3M INNOVATIVE PROPERTIES COMPANY	163	5	32	200
19	SHIN-ETSU CHEMICAL CO., LTD.	195	0	2	197
20	TOSHIBA MEMORY CORPORATION	194	0	2	196

Note : Applicants with the same total of applications are given the same ranking, but the order of placement is arranged by the number of invention patents, from most to least.

## 16. Non-Residents Patent Grants in 2017 (Top 20)

Rank	Applicant	Number of Grants			
		Invention	Utility Model	Design	Total
1	INTEL CORPORATION	968	0	0	968
2	SEMICONDUCTOR ENERGY LABORATORY CO., LTD.	671	0	0	671
3	TOKYO ELECTRON LIMITED	414	0	1	415
4	SAMSUNG DISPLAY CO., LTD.	351	0	0	351
5	APPLIED MATERIALS, INC.	310	28	9	347
6	MITSUBISHI ELECTRIC CORPORATION	292	0	53	345
7	APPLE INC.	283	6	43	332
8	LG CHEM, LTD.	247	0	5	252
9	FUJIFILM CORPORATION	250	0	0	250
10	NITTO DENKO CORPORATION	233	1	0	234
11	SUMITOMO CHEMICAL CO., LTD.	218	0	0	218
12	FOXCONN INTERCONNECT TECHNOLOGY LIMITED	133	53	18	204
13	SAMSUNG ELECTRONICS CO., LTD.	190	0	11	201
13	RENAULT S.A.S.	0	0	201	201
15	HEWLETT-PACKARD DEVELOPMENT COMPANY, L. P.	184	0	4	188
16	SHIN-ETSU CHEMICAL CO., LTD.	184	0	3	187
17	3M INNOVATIVE PROPERTIES COMPANY	139	7	29	175
18	CORNING INCORPORATED	173	0	0	173
19	INTEL IP CORPORATION	166	0	0	166
20	SEIKO EPSON CORPORATION	155	0	6	161

Note : Applicants with the same total of grants are given the same ranking, but the order of placement is arranged by the number of invention patents, from most to least.

## 17. Certificates Issued by Type of Industry in 2017

Type of Industry	Corresponding International Patent Classification	Residents		Non-Residents		Total	
		Invention	Utility Model	Invention	Utility Model	No. of Certificates Issued	Percentage
Agriculture, Forest, Fishery & Animal Husbandry	A01, (exclude A01H,A01K67,A01N,A01P)	155	709	106	15	985	1.52%
Foods & Tobacco	A21-A24	95	236	212	4	547	0.84%
Domestic Articles	A41-A47	408	2,582	382	97	3,469	5.36%
Pharmaceutical & Entertainment	A61-A63,(exclude A61K&A61P,A61Q)	1,015	1,753	863	100	3,731	5.76%
Biotech	A01H,A01K67,A01N,A61K35/66-35/76,38,39,47/42,48,49/14,49/16,51/08,51/10,A61P,C07K,C12,G01N33,A01P	315	57	469	10	851	1.31%
Preparation for Medical, Dental or Toilet Purposes	A61K ( exclude 35/66-35/76,38,39,47/42,48,49/14,49/16,51/08,51/10 ) ,A61Q	243	52	386	2	683	1.05%
Separation & Mixing	B01-B09	312	437	557	25	1,331	2.06%
Working of Metal	B21-B32, (exclude B31)	1,184	1,356	1,646	75	4,261	6.58%
Printing	B41-B44	97	222	167	8	494	0.76%
Transporting	B60-B68	887	2,138	909	111	4,045	6.25%
Micro-structural technology; nano-technology	B81-B82	49	10	57	1	117	0.18%
Inorganic Chemistry, Treatment of Waste Water	C01-C05,C30	254	161	781	9	1,205	1.86%
Organic Chemistry	C07, (exclude C07K 、C07M)	131	0	1,029	0	1,160	1.79%
Organic Macromolecular Compound	C08	199	8	1,376	1	1,584	2.45%
Dyes, Petroleum, Animal or Vegetable Oils	C09-C11	151	32	1,168	2	1,353	2.09%
Sugar Industries & Pelts/Leather	C13-C14	2	1	1	0	4	0.01%
Metallurgy, Coating Metallic Material & Alloys	C21-C23,C25 (exclude C22K )	219	88	1,007	12	1,326	2.05%
Textiles & Flexible Materials	D01-D07	133	185	231	11	560	0.86%
Paper Making & Making Paper Articles	D21,B31	9	13	26	1	49	0.08%
Fixed Constructions	E01-E06	356	916	216	20	1,508	2.33%

Type of Industry	Corresponding International Patent Classification	Residents		Non-Residents		Total	
		Invention	Utility Model	Invention	Utility Model	No. of Certificates Issued	Percentage
Mining or Quarrying	E21	2	13	10	0	25	0.04%
Engines and Pumps	F01-F04	227	406	228	18	879	1.36%
Hydraulics or Pneumatics in General	F15-F17	349	678	375	35	1,437	2.22%
Lighting; Heating	F21-F28	565	831	412	40	1,848	2.85%
Weapons; Explosive Charges	F41-F42,C06	30	83	16	1	130	0.20%
Optics	G01-G03 ,(exclude G01N33 )	1,999	763	2,749	76	5,587	8.63%
Measuring	G04-G08,(exclude G06F,G06Q)	611	405	415	11	1,442	2.23%
Semi-Conductor Applications	G09-G12	785	265	931	21	2,002	3.09%
Nuclear Engineering	G21	4	1	24	1	30	0.05%
Electric Power; Generation, Distribution or Conversion of Electric Power, Electric Heating	H02,H05	1,297	786	1,066	83	3,232	4.99%
Basic Electronic	H01,(exclude H01L)	902	801	1,490	192	3,385	5.23%
Semiconductor Devices	H01L	2,145	367	4,055	51	6,618	10.22%
Basic Electronic Circuitry; Electric Communication Technique	H03,H04	1,287	399	2,004	24	3,714	5.74%
Electric Digital Data Processing	G06F ( exclude 17/60 )	1,744	487	1,606	40	3,877	5.99%
E-business	G06F17/60,G06Q	376	671	159	5	1,211	1.87%
Others		32	22	13	1	68	0.11%
Total		18,569	17,934	27,142	1,103	64,748	100.00%



## 18. Statistics for Valid Patent Invention & Utility Model

Classification	Invention	Utility Model
A01	1,873	3,050
A21	127	309
A22	16	36
A23	1,137	687
A24	199	44
A41	236	1,182
A42	68	355
A43	309	1,039
A44	727	492
A45	351	2,306
A46	157	154
A47	1,922	8,204
A61	11,303	6,250
A62	208	559
A63	1,822	2,881
B01	3,181	1,415
B02	121	141
B03	77	51
B04	43	26
B05	1,341	712
B06	17	8
B07	94	110
B08	431	274
B09	139	65
B21	1,008	577
B22	590	112
B23	3,144	2,490
B24	1,514	649
B25	2,525	2,395
B26	398	538
B27	129	223
B28	138	86
B29	2,300	1,152

Classification	Invention	Utility Model
B30	113	119
B31	54	74
B32	2,633	757
B33	3	13
B41	1,582	555
B42	70	324
B43	146	349
B44	161	194
B60	2,205	3,557
B61	199	42
B62	2,865	3,367
B63	219	226
B64	72	64
B65	4,012	4,920
B66	359	464
B67	109	134
B68	7	8
B81	365	22
B82	308	5
C01	1,892	69
C02	803	443
C03	1,853	177
C04	881	21
C05	64	40
C06	5	4
C07	7,523	5
C08	10,096	49
C09	6,950	89
C10	541	27
C11	475	71
C12	1,891	159
C13	9	1
C14	14	1

Classification	Invention	Utility Model
C21	500	55
C22	1,842	18
C23	4,137	156
C25	1,243	278
C30	765	85
C40	10	0
D01	546	88
D02	74	59
D03	181	140
D04	442	359
D05	449	272
D06	748	416
D07	12	25
D21	233	35
D99	1	2
E01	154	181
E02	251	262
E03	234	511
E04	861	1,985
E05	838	1,327
E06	469	1,393
E21	66	41
F01	340	216
F02	605	390
F03	327	474
F04	1,375	1,205
F15	156	75
F16	4,264	4,518
F17	184	98
F21	1,835	2,390
F22	48	35
F23	489	403
F24	1,183	1,995

Classification	Invention	Utility Model
F25	545	368
F26	108	142
F27	205	82
F28	641	320
F41	190	415
F42	27	47
G01	11,985	2,521
G02	16,857	2,456
G03	8,475	660
G04	183	126
G05	2,412	278
G06	29,696	6,669
G07	384	248
G08	1,033	841
G09	7,838	859
G10	1,198	312
G11	7,396	406
G12	39	22
G21	324	9
G99	1	1
H01	66,085	11,181
H02	7,776	2,397
H03	5,496	132
H04	24,743	2,422
H05	9,990	3,741
H99	1	0
Total	314,614	111,064

Note : The figures above are calculated based on existing patents as of December 31, 2017.

## Design

Classification	Design
01	200
02	1,442
03	992
04	278
05	348
06	1,831
07	1,808
08	2,238
09	2,800
10	1,319
11	1,221
12	5,259
13	2,971
14	5,093
15	2,404
16	1,529
17	39
18	109
19	640
20	249

Classification	Design
21	1,412
22	278
23	2,471
24	1,102
25	891
26	2,459
27	97
28	1,330
29	78
30	140
31	290
99	25
Toal	43,343

Note : The figures above are calculated based on existing patents as of December 31, 2017.

## 19. Statistics of Pending Patent Applications for Examination (2008~2017)

Item Year	Application			Reexamination		Opposition			Invalidation			Technical Evaluation Report for Utility Model	Total
	Invention	Utility Model	Design	Invention	Design	Invention	Utility Model	Design	Invention	Utility Model	Design		
2008	123,551	8,011	7,254	5,972	190	1	-	-	550	1,650	68	1,695	148,942
2009	141,213	8,117	6,057	4,676	119	-	1	-	522	1,319	44	2,803	164,871
2010	153,969	9,015	6,198	4,171	112	-	1	-	497	1,257	58	2,882	178,160
2011	160,858	8,444	6,224	4,312	74	-	-	-	399	1,116	82	2,322	183,831
2012	153,039	8,376	6,382	5,167	39	-	-	-	365	1,027	68	2,140	176,603
2013	129,318	6,599	6,681	7,345	40	-	-	-	292	844	49	1,740	152,908
2014	100,580	5,696	6,276	8,592	143	-	-	-	274	599	67	1,773	124,000
2015	72,892	4,641	4,854	8,711	179	-	-	-	257	511	87	1,584	93,716
2016	50,293	3,953	4,848	8,390	72	-	-	-	235	408	49	1,125	69,373
2017	44,002	4,859	5,056	6,256	55	-	-	-	202	271	23	620	61,344

Note : 1. Since July 1, 2004, Utility Model patents applications have only been subject to formality examination with the requirement that the technical evaluation reports be attached.

2. The statistics above excludes the number of applications not requesting for substantial examination. (2008: 12,965; 2009: 8,501; 2010: 10,705; 2011:12,671; 2012:10,932; 2013:9,959; 2014:10,734; 2015:9,684; 2016: 10,142; 2017: 9,707).

3. Some new applications were collected via E-filing starting April 2008. Since operation procedures were different, there was a slight discrepancy in statistical data for 2008 on the number of pending cases.

## D. Trend Table of Invention Requests For Examination

Number and Percentage of Requests for Examination (Shown by the Year of Filing)

Filing Year	Invention Applications (Total Applications In This Year)	In the First Year Since the Filing Date		In the Second Year Since the Filing Date		In the Third Year Since the Filing Date		After the Third Year Since the Filing Date		Sum of the Number/ Percentage of Applications Requested For Examination	
		Applications	Percentage	Applications	Percentage	Applications	Percentage	Applications	Percentage	Applications	Percentage
2008	51,831	32,213	62.15%	1,468	2.83%	12,289	23.71%	268	0.52%	46,238	89.21%
2009	46,582	28,508	61.20%	1,390	2.98%	11,520	24.73%	465	1.00%	41,883	89.91%
2010	47,327	27,829	58.80%	1,669	3.53%	11,947	25.24%	417	0.88%	41,862	88.45%
2011	49,919	29,092	58.28%	1,545	3.10%	12,473	24.99%	604	1.21%	43,714	87.57%
2012	51,189	30,520	59.62%	1,102	2.15%	12,137	23.71%	887	1.73%	44,646	87.22%
2013	49,217	28,464	57.83%	1,167	2.37%	12,223	24.83%	1,167	2.37%	43,021	87.41%
2014	46,379	26,513	57.17%	1,167	2.52%	2,925	6.31%	1,181	2.55%	31,786	68.54%
2015	44,415	24,799	55.83%	774	1.74%	2,668	6.01%	1,355	3.05%	30,196	67.99%
2016	43,836	22,655	51.68%	882	2.01%	348	0.79%	1,613	3.68%	26,164	59.69%
2017	46,122	24,255	52.59%	347	0.75%	234	0.51%	1,575	3.41%	26,411	57.26%

Note : 1. The number of requests for examination (including new applications, divisional applications, and conversion applications) refers to the number of requests for examination according to the provisions of Article 38.1 and 2 of the new Patent Act of the ROC.

2. Except for the divisional applications and conversion applications conforming to the provisions of Article 34 or 108 of the new Patent Act, the invention applications failing to be submitted a request for examination within three years from the filing date are deemed to have been withdrawn.

3. The percentage of requests for examination refers to the percentage of the total number of the requests for examination in each year within three years from the filing dates, divisional and conversion applications divided or converted in 30 days from the filing date according to the provisions of Articles 34 and 108 of the new Patent Act, to the total number of new applications for invention.

4. The total number of invention applications in each year, besides the new applications filed in the year, further includes the number of the divisional applications and the number of conversion applications divided or converted in the year but originally filed before the year.

## E. Statistics for IC Layout Applications and Certificates Issued

Year	Application	Certificate Issued
2008	37	37
2009	30	27
2010	50	48
2011	144	120
2012	159	124
2013	146	83
2014	87	195
2015	113	120
2016	114	133
2017	58	68

## II. Trademark Cases Filed & Disposed

### A. General Statistics of Trademark Cases (2008-2017)

Year \ Item	Application	Registration	Rejection
2008	59,568	49,500	7,811
2009	59,669	48,075	7,728
2010	66,496	54,292	8,356
2011	67,620	48,315	6,480
2012	74,357	61,918	8,724
2013	74,031	60,557	8,581
2014	75,933	66,257	7,641
2015	78,523	62,993	7,692
2016	79,300	68,177	8,956
2017	83,802	74,226	8,903

Note : 1. The figures for "Application" are calculated based on the total number of registration applications collected each year.  
2. The figures for "Registration" and "Rejection" are calculated based on the total number of cases published each year.

## B. Statistics of Trademark (2008-2017)

### 1. Statistics of Applications

Year \ Item	Application		Opposition	Invalidation	Revocation
	By case	By class			
2008	59,568	75,033	1,192	363	358
2009	59,669	74,177	1,033	389	354
2010	66,496	83,072	1,010	373	648
2011	67,620	85,958	881	444	441
2012	74,357	95,435	1,009	345	570
2013	74,031	94,958	955	225	513
2014	75,933	97,776	868	213	627
2015	78,523	101,327	780	210	669
2016	79,300	101,331	822	187	515
2017	83,802	108,758	913	248	640

Year \ Item	Renewal	License	Assignment	Alteration
2008	29,954	1,413	8,971	9,595
2009	30,386	1,432	8,925	8,703
2010	33,554	1,148	7,937	9,722
2011	37,530	1,082	8,743	7,848
2012	35,547	1,077	9,188	8,808
2013	42,536	1,046	9,299	8,358
2014	39,624	859	7,327	8,744
2015	41,471	930	8,998	12,323
2016	43,030	763	9,469	8,552
2017	42,474	696	9,147	9,153

Note : 1. The figures above reflect the total number of applications.

2. The term "Application" includes applications for certification mark, collective membership mark and collective trademark.

3. The term "License" includes applications for sub-license.

4. The term "Alteration" includes applications for "goods/service reduction."

5. Beginning from November 28, 2003, applications for trademark registration may contain two more types of goods or services, thus the number of applications and the number of classes are not the same.



## 2. Trademark Opposition

Year \ Item	Sustained	Denied	Others
2008	705	282	268
2009	753	295	256
2010	514	195	223
2011	436	124	260
2012	324	177	250
2013	421	377	273
2014	427	265	216
2015	470	177	261
2016	426	232	228
2017	386	183	227

Note : 1. The chart reflects the number of cases disposed each year.

2. The item "Others" includes rejection because of formal deficiency, withdrawal, and other type of rejection.

## 3. Trademark Invalidation

Year \ Item	Sustained	Denied	Others
2008	241	94	76
2009	295	149	107
2010	220	76	91
2011	194	50	122
2012	130	70	129
2013	116	130	89
2014	108	75	101
2015	122	60	74
2016	116	41	60
2017	106	32	80

Note : 1. The chart reflects the number of cases disposed each year.

2. The item "Others" includes rejection because of formal deficiency, withdrawal, application for identifying the scope of designated goods or services, and other type of rejection.

#### 4. Trademark Revocation (Cancellation)

Year \ Item	Sustained	Denied	Others
2008	226	43	53
2009	248	62	76
2010	484	27	56
2011	310	33	112
2012	343	41	116
2013	331	52	136
2014	405	47	115
2015	487	35	157
2016	379	47	193
2017	345	28	195

Note : 1. The chart reflects the number of cases disposed each year.  
 2. The item "Others" includes rejection because of formal deficiency, withdrawal, and other type of rejection.  
 3. Beginning from November 28, 2003, "disciplinary cancellation" has been changed to "revocation."

#### 5. Trademark Administrative Appeals, 2008-2017

Year \ Item	Administrative Appeals					
	Cases Filed	Decisions of Administrative Appeals				
		Original Decisions Revoked	Administrative Appeals Rejected	Others	Other Concluded Cases	Rate of Revocation
2008	1,054	85	953	0	25	8.00%
2009	1,048	78	920	0	35	7.55%
2010	906	68	930	0	27	6.63%
2011	674	34	648	0	31	4.77%
2012	835	37	771	1	11	4.63%
2013	811	59	653	14	10	9.92%
2014	787	84	652	15	10	13.01%
2015	722	29	709	4	5	4.42%
2016	688	15	680	4	11	2.68%
2017	684	26	689	7	11	4.50%

Note : 1. The above statistics are based on figures published by the Petitions and Appeals Committee, MOEA.  
 2. The "Administrative Appeals Rejected" column includes cases inadmissible and rejected. The "Other Concluded Cases" column includes withdrawals by appellants, jurisdictional transfers, and consolidated reviews.  
 3. The "Others" category for concluded appeals refers to partial rejection and partial cancellation.

## 6. Trademark Administrative Litigation Processed by the Intellectual Property Court

Year \ Item	Cases Received	Cases Concluded							
		Withdrawn	Plaintiff Won	Plaintiff Lost	Partially Sustained	Dismissals	Settlements	Others	Total
Jul. - Dec. 2008	148	3	5	43	3	8	2	2	66
2009	263	10	20	197	11	13	10	1	262
2010	254	14	14	188	14	12	1	0	243
2011	173	9	16	162	16	8	5	1	217
2012	192	8	18	122	19	1	3	0	171
2013	157	6	21	118	11	6	3	0	165
2014	162	9	19	120	9	3	1	0	161
2015	159	17	20	96	8	4	3	0	148
2016	158	9	14	119	3	6	2	0	153
2017	176	12	16	105	3	5	7	0	148

Note : 1. The above statistics are provided by the Intellectual Property Court. "Plaintiff Won" and "Partially Sustained" include appeals filed against the Ministry of Economic Affairs whose appeal decisions were revoked.

2. "Settlements" refer to cases concluded by the IP court after the litigants' mutual concession to the disputes and the reaching of an agreement.

## 7. Residents and Non-Residents Trademark Applications (By Case)

Year \ Item	Residents	Non-Residents
2008	45,876	14,244
2009	47,009	12,677
2010	50,998	15,498
2011	50,895	16,725
2012	55,696	18,661
2013	55,338	18,693
2014	56,217	19,716
2015	57,356	21,167
2016	57,548	21,752
2017	61,215	22,587

Note : Applications for joint ownership of trademark received from July 13, 2006. The number of statistics by nationality in this table is counted by the number of applicants in terms of their nationality.

## 8. Residents and Non-Residents Trademark Registrations (By Case)

Year \ Item	Residents	Non-Residents
2008	37,220	12,280
2009	35,650	12,425
2010	41,410	12,882
2011	36,687	11,628
2012	45,659	16,259
2013	44,174	16,383
2014	48,728	17,529
2015	45,233	17,760
2016	48,828	19,349
2017	53,202	21,024

## C. Statistics of Trademarks by Class and Nationality

### 1. Trademark Applications and Registrations by Class (2015-2017)

Class	Application			Registration		
	2015	2016	2017	2015	2016	2017
Total	101,226	101,257	108,656	81,616	88,196	96,655
1	1,242	1,328	1,457	976	1,174	1,251
2	301	390	338	226	303	356
3	6,763	6,838	6,818	5,154	5,400	6,337
4	500	475	520	391	422	446
5	5,715	5,963	6,754	4,437	4,838	5,765
6	881	947	967	748	826	983
7	1,842	1,903	2,083	1,785	1,696	1,888
8	675	716	746	598	646	724
9	7,607	7,572	8,325	6,389	6,829	7,057
10	1,620	1,729	1,821	1,474	1,455	1,840
11	1,902	2,087	2,046	1,701	1,780	1,876
12	1,737	1,709	1,699	1,566	1,564	1,515
13	39	61	73	38	53	57
14	1,499	1,242	1,383	1,291	1,292	1,278

Class	Application			Registration		
	2015	2016	2017	2015	2016	2017
15	134	187	164	136	138	185
16	2,750	2,702	2,935	2,294	2,473	2,686
17	597	599	537	507	562	586
18	2,580	2,226	2,218	2,154	2,153	2,244
19	480	423	529	406	410	463
20	1,496	1,478	1,602	1,222	1,384	1,566
21	2,094	2,092	2,284	1,741	1,873	2,028
22	212	219	230	206	206	215
23	74	99	90	85	89	84
24	928	1,066	986	866	868	1,065
25	4,838	4,598	4,602	4,225	3,971	4,388
26	332	343	383	306	330	378
27	217	296	250	177	196	309
28	2,103	1,996	2,287	1,826	1,956	2,015
29	3,868	3,648	4,025	2,784	3,156	3,544
30	6,975	7,074	7,407	5,204	5,800	6,343
31	1,412	1,454	1,586	1,009	1,259	1,374
32	1,911	2,142	2,167	1,387	1,549	1,932
33	869	944	1,000	695	744	855
34	365	372	324	316	364	313
35	11,548	11,362	12,938	9,333	10,286	11,158
36	1,491	1,372	1,632	1,253	1,293	1,424
37	1,305	1,319	1,445	1,060	1,193	1,304
38	1,262	1,209	1,340	1,055	1,131	1,185
39	1,106	1,068	1,133	860	1,053	977
40	632	626	694	514	591	641
41	4,699	4,746	5,400	3,632	4,131	4,537
42	3,300	3,139	3,427	2,729	2,843	2,907
43	6,684	6,746	7,076	4,777	5,557	5,897
44	1,689	1,757	1,945	1,355	1,470	1,718
45	952	995	990	728	889	961

Note : The above figures do not include the applications and registrations of certification mark and collective membership mark.

## 2. Trademark Applications by Nationality in 2017 (By Case)

Nationality	Application	Percentage	Nationality	Application	Percentage
TAIWAN, REPUBLIC OF CHINA	61,215	73.05%	BELGIUM	63	0.08%
MAINLAND CHINA	4,830	5.76%	ISRAEL	61	0.07%
JAPAN	3,892	4.64%	NORWAY	51	0.06%
UNITED STATES OF AMERICA	3,684	4.40%	BELIZE	48	0.06%
HONG KONG	1,579	1.88%	LIECHTENSTEIN	47	0.06%
REPUBLIC OF KOREA	1,521	1.81%	SEYCHELLES	46	0.05%
GERMANY	782	0.93%	MACAO	42	0.05%
FRANCE	720	0.86%	RUSSIAN FEDERATION	34	0.04%
SWITZERLAND	574	0.68%	POLAND	33	0.04%
UNITED KINGDOM	563	0.67%	UNITED ARAB EMIRATES	31	0.04%
SINGAPORE	528	0.63%	VIETNAM	23	0.03%
ITALY	390	0.47%	CHILE	22	0.03%
BRITISH VIRGIN ISLANDS	314	0.37%	PORTUGAL	21	0.03%
CAYMAN ISLANDS	301	0.36%	TURKEY	21	0.03%
AUSTRALIA	263	0.31%	PHILIPPINES	19	0.02%
CANADA	233	0.28%	BULGARIA	14	0.02%
THAILAND	185	0.22%	BRAZIL	14	0.02%
NETHERLANDS	173	0.21%	HUNGARY	14	0.02%
MALAYSIA	151	0.18%	MEXICO	13	0.02%
SWEDEN	142	0.17%	BERMUDA	11	0.01%
NEW ZEALAND	138	0.16%	CYPRUS	10	0.01%
SPAIN	117	0.14%	CZECH REPUBLIC	10	0.01%
INDONESIA	103	0.12%	MAURITIUS	10	0.01%
LUXEMBOURG	99	0.12%	SOUTH AFRICA	10	0.01%
AUSTRIA	90	0.11%	ISLE OF MAN	9	0.01%
SAMOA	86	0.10%	ECUADOR	8	0.01%
IRELAND	84	0.10%	EL SALVADOR	8	0.01%
INDIA	78	0.09%	GREECE	7	0.01%
FINLAND	77	0.09%	ARGENTINA	6	0.01%
DENMARK	74	0.09%	OTHERS	110	0.13%

	Subtotal	Ratio
Residents	61,215	73.05%
Non-Residents	22,587	26.95%
<b>Total</b>	<b>83,802</b>	<b>100.00%</b>

Note : 1. Applications for joint ownership of trademark received from July 13, 2006. The number of statistics by nationality in this table is counted by the number of applicants in terms of their nationality.  
2. Countries with fewer than five applications are listed as "Others."

## 3. Trademark Registrations by Nationality in 2017 (By Case)

Nationality	Registration	Percentage	Nationality	Registration	Percentage
TAIWAN, REPUBLIC OF CHINA	53,202	71.68%	ISRAEL	36	0.05%
MAINLAND CHINA	3,897	5.25%	POLAND	33	0.04%
UNITED STATES OF AMERICA	3,783	5.10%	BELIZE	32	0.04%
JAPAN	3,553	4.79%	VIETNAM	30	0.04%
HONG KONG	1,419	1.91%	CHILE	29	0.04%
REPUBLIC OF KOREA	1,227	1.65%	INDIA	26	0.04%
GERMANY	841	1.13%	MEXICO	26	0.04%
FRANCE	739	1.00%	NORWAY	26	0.04%
SWITZERLAND	638	0.86%	UNITED ARAB EMIRATES	24	0.03%
UNITED KINGDOM	609	0.82%	BERMUDA	20	0.03%
SINGAPORE	473	0.64%	BRAZIL	20	0.03%
ITALY	408	0.55%	RUSSIAN FEDERATION	18	0.02%
CAYMAN ISLANDS	297	0.40%	CYPRUS	17	0.02%
BRITISH VIRGIN ISLANDS	291	0.39%	TURKEY	16	0.02%
AUSTRALIA	259	0.35%	SYRIA	15	0.02%
NETHERLANDS	245	0.33%	ISLE OF MAN	14	0.02%
MALAYSIA	238	0.32%	BAHAMAS	13	0.02%
CANADA	196	0.26%	SOUTH AFRICA	13	0.02%
SPAIN	164	0.22%	HUNGARY	12	0.02%
THAILAND	123	0.17%	BRUNEI	11	0.01%
SAMOA	109	0.15%	BARBADOS	10	0.01%
NEW ZEALAND	101	0.14%	MALTA	10	0.01%
SWEDEN	100	0.13%	ARGENTINA	9	0.01%
LUXEMBOURG	99	0.13%	GREECE	9	0.01%
MACAO	86	0.12%	MONACO	9	0.01%
IRELAND	79	0.11%	PORTUGAL	9	0.01%
DENMARK	76	0.10%	MARSHALL ISLANDS	8	0.01%
FINLAND	72	0.10%	SAUDI ARABIA	8	0.01%
AUSTRIA	63	0.08%	ANGUILLA	7	0.01%
BELGIUM	56	0.08%	ECUADOR	7	0.01%
INDONESIA	51	0.07%	BULGARIA	6	0.01%
PHILIPPINES	44	0.06%	QATAR	6	0.01%
SEYCHELLES	43	0.06%	OTHERS	75	0.10%
LIECHTENSTEIN	41	0.06%			

	Subtotal	Ratio
Residents	53,202	71.68%
Non-Residents	21,024	28.32%
<b>Total</b>	<b>74,226</b>	<b>100.00%</b>

Note : Countries with fewer than five registrations are listed as "Others."

## D. Statistics for Certification Mark and Collective Membership Mark

Item Year	Certification Mark		Collective Membership Mark	
	Application	Registration	Application	Registration
2008	41	40	42	35
2009	43	27	57	41
2010	33	39	83	55
2011	64	21	70	56
2012	37	42	71	39
2013	41	30	64	54
2014	31	37	72	48
2015	43	31	58	56
2016	27	26	47	52
2017	41	30	61	36