

# TREND REPORT

## Technology field analysis Korea - 2015-2022



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# Index

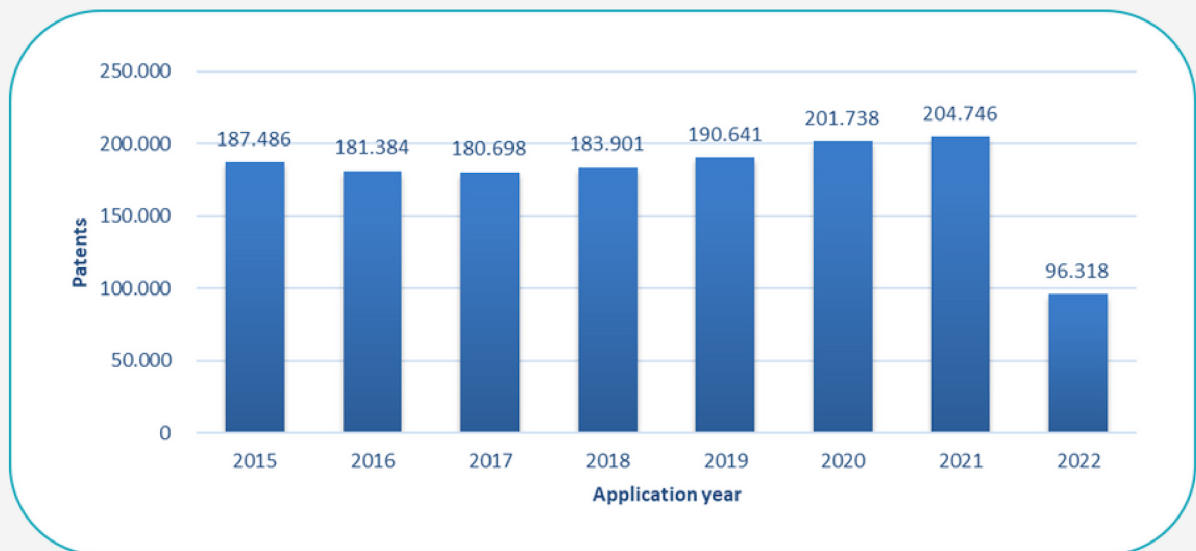
Introduction	3
Part I: General information	4
Part II: Technology Field	7
Part III: Standardized Current Assignees	9
Conclusion	11

# Introduction

The field of technology plays an important role in the development of patents, which can effectively distinguish a large number of patents, facilitate search and analysis, and help us understand the development trends and hotspots of technology. This report will analyze the development of patents (Inventions and Utility Models) in Korea 2015-2022 (Including patents publicly disclosed by the Korean Patent Office from 2015 to 2022) from the perspective of the technical field (Search date: November 24, 2023).

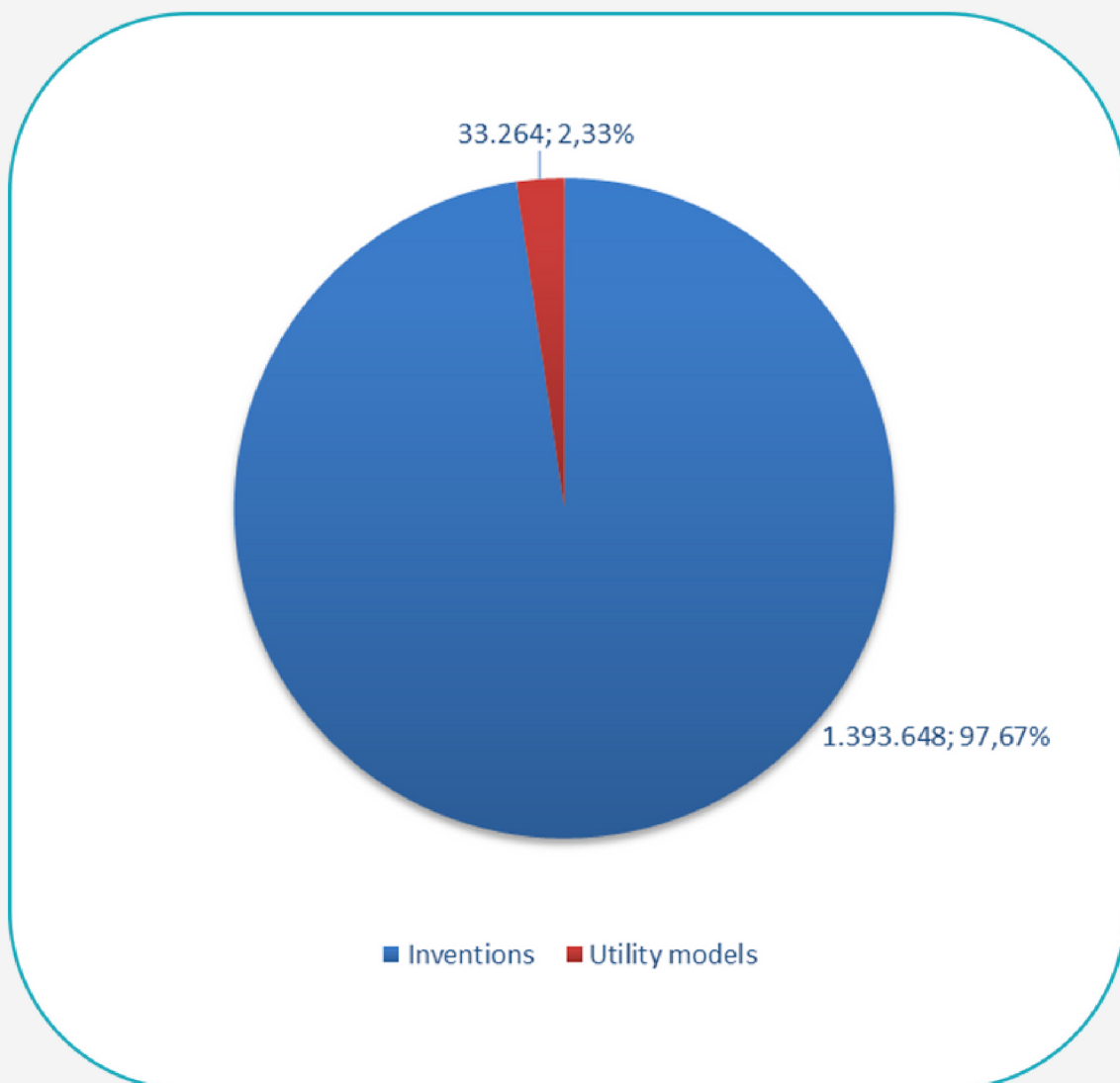
# Part 1: General information

The volume of patent applications in South Korea showed a trend of first decreasing (2015-2017) and then increasing (2017-2021) from 2015 to 2022 (as shown in [Figure 1](#)).



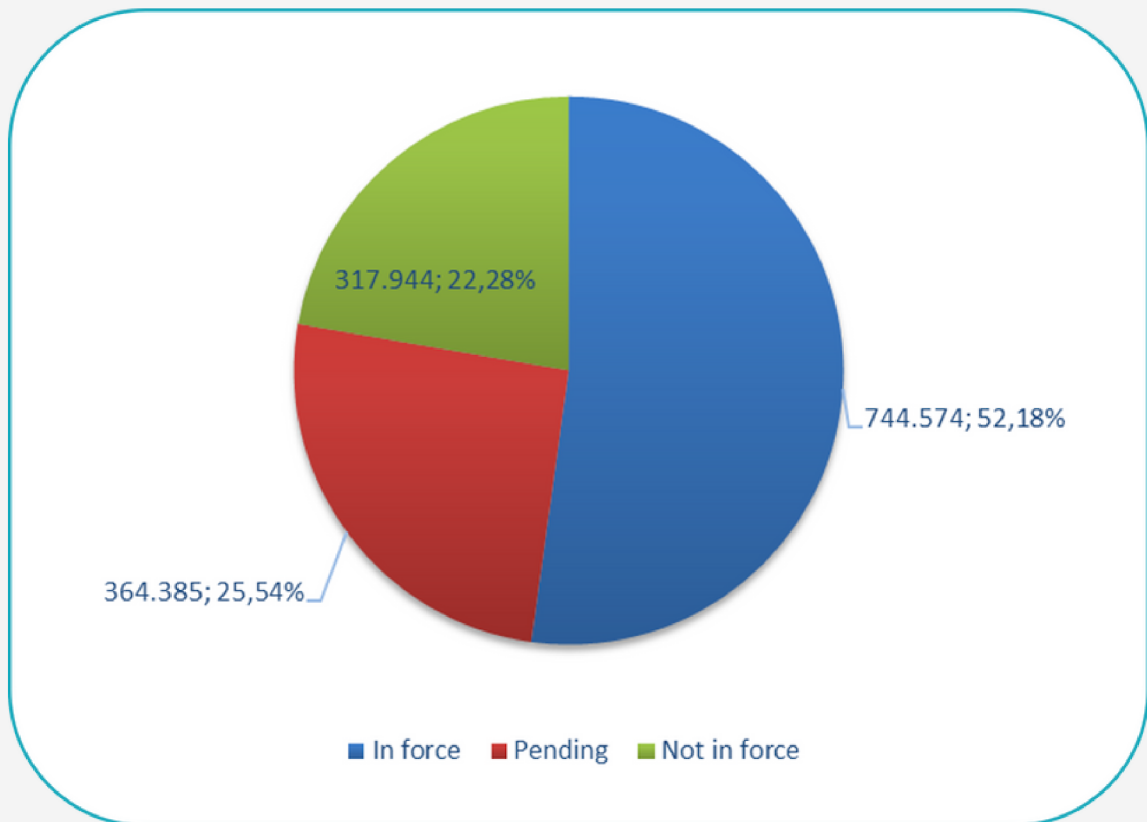
**Figure 1 Patent application trend in Korea**

The significant decrease in patent applications in 2022 was due to some of the patents applied for that year not being publicly disclosed. Meanwhile, among these patents, the vast majority are invention patents, with only 33,264 utility models (as shown in [Figure 2](#)). Overall, the volume of patent applications in Korea has remained relatively stable in recent years.



**Figure 2 Patent types**

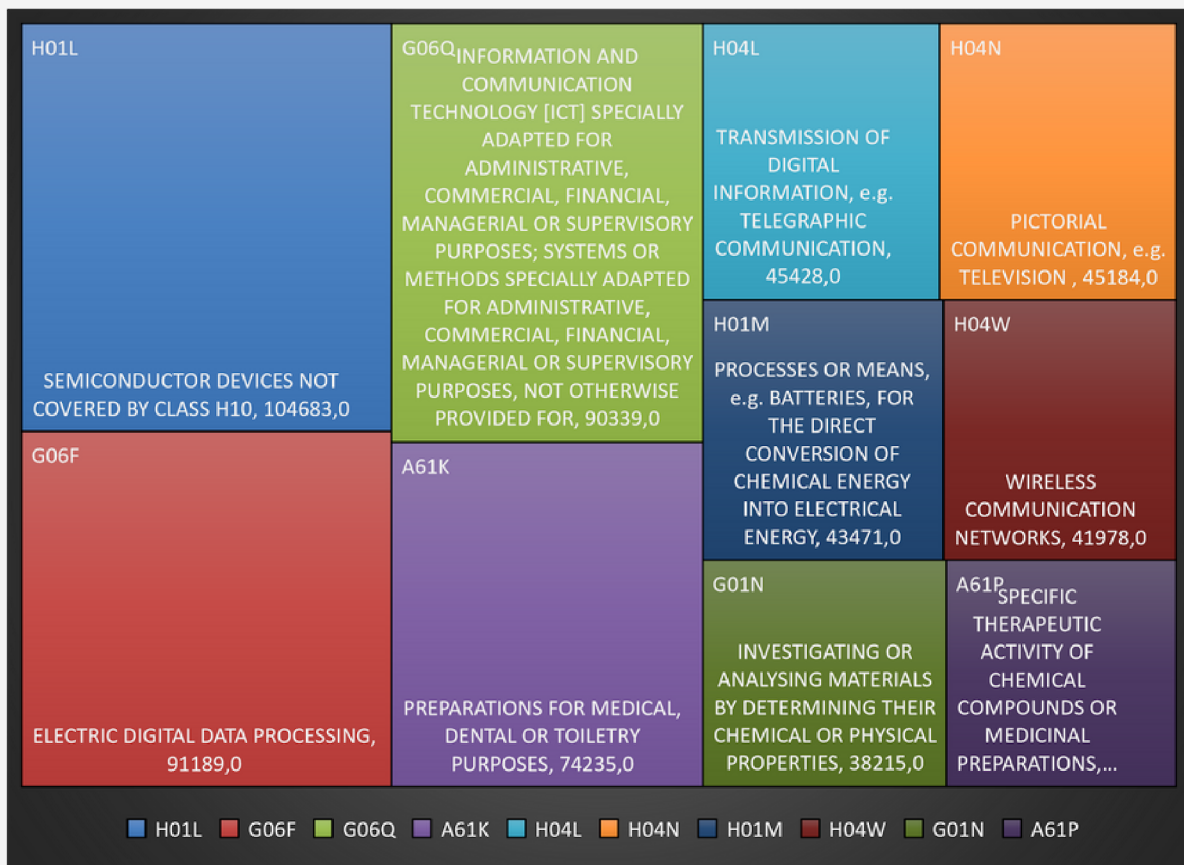
From the perspective of legal status, in recent years, 52.18% of patents in Korea have been valid, and an additional 25.54% are pending, reflecting a high patent granted rate (as shown in [Figure 3](#)).



**Figure 3** Legal status

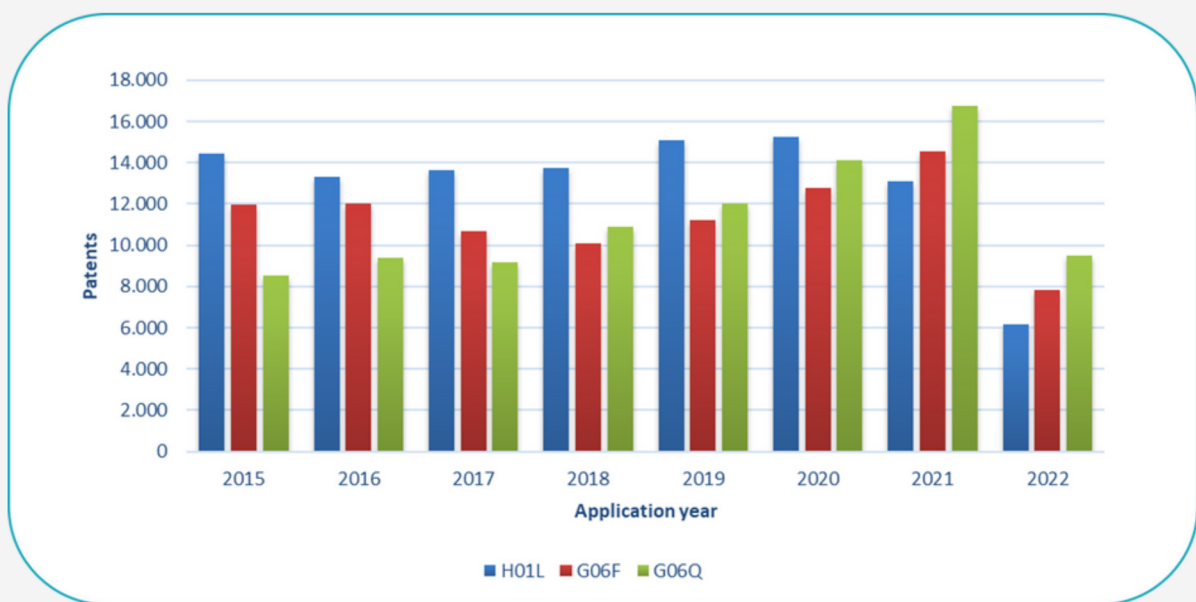
# Part 2: Technology Field

Analyzing the main technology field of Korean patents from 2015 to 2022, it can be found that semiconductor device (IPC: H01L), electronic digital data processing (IPC: G06F), information and communication technology (IPC: G06Q) involve the largest volume of patents (as shown in [Figure 4](#)).



**Figure 4** The top 10 IPC classification numbers

Furthermore, an analysis was conducted on the application trends in the main technical fields. The number of patents in the corresponding technical fields for H01L remained relatively stable, while G06F showed a trend of first decreasing and then increasing, while G06Q showed a more significant growth trend (as shown in [Figure 5](#)). It can be seen that in recent years, Korea's information and communication technology has received more attention.

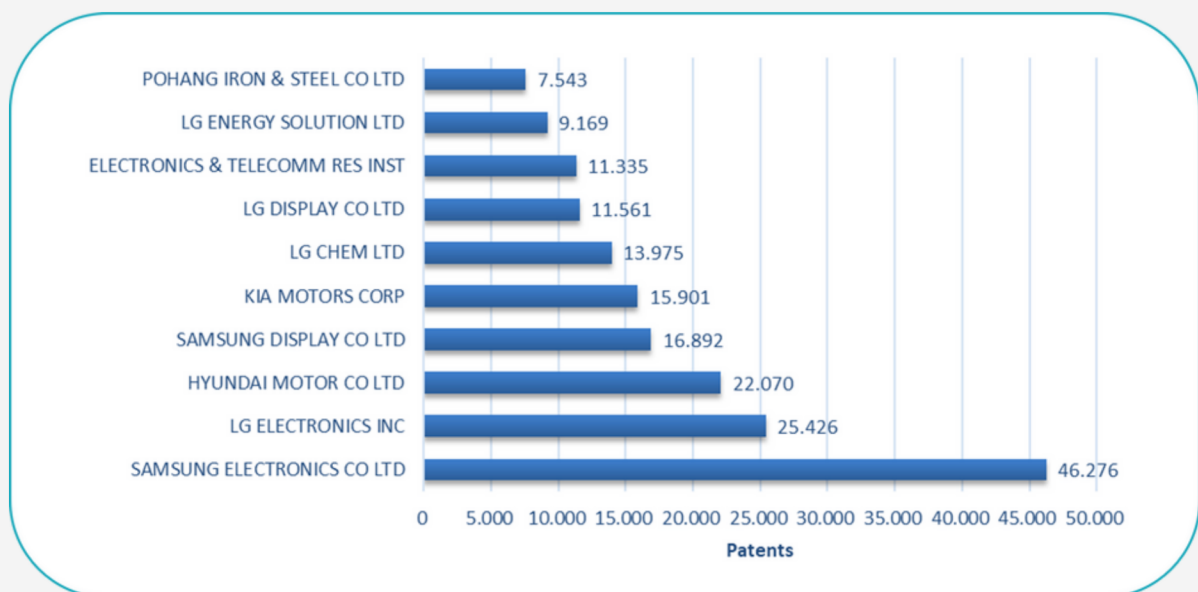


**Figure 5** Main technology field application trend in Korea



# Part 3: Standardized Current Assignees

To understand the technical fields that the main filers are concerned about, statistics were conducted on the top 10 patent filers in Korea from 2015 to 2022 (as shown in [Figure 6](#)). It can be seen that companies such as Samsung Electronics, LG Electronics, and Huawei have a large number of patent applications.



**Figure 6** The top 10 standardized current assignees

Samsung Electronics has a significant volume of patent layouts in multiple major technological fields, especially in H01L and G06F, where its corresponding patent applications are much higher than other companies. Samsung Display and LG Energy Solution have more patents in the corresponding technology fields of H01L and H01M, respectively.

At the same time, it can also be observed that the competition between H01L and G06F is more intense, with multiple major filers laying out patents in these two technical fields. Although A61K and A61P have the same number of applications, the main Korean applicants have not been involved in these two technical fields.



Figure 7 Top Assignees of Key Technologies

# Conclusion

In recent years, Korea's patents have mainly focused on high-tech fields such as semiconductor devices and electronic digital data processing. The main patent applicants in Korea have applied for a large volume of patents in these high-tech fields. These technological fields have high popularity and sustainability, and are worthy of our continuous attention.

Note: All numbers used and statements made in this report are indicative and for information purposes only. No warranty or liability is given nor accepted for anything published in this report.

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