China comprises majority of new RF GaN patent families in Q2/2026, says KnowMade

Latest RF GaN Technology Patent Monitor finds over 30 new entrants, mostly Chinese.

In the latest update of its RF GaN Technology Patent Monitor, KnowMade says that more than 110 new patent families were published during second-quarter 2026.

China dominates newly published RF GaN inventions

Chinese applicants were responsible for most — more than 70. Their protection strategies remained largely focused on China, although Huawei, Ampleon and San'an each filed a PCT application during Q2. Across the RF GaN patent landscape, new filings were concentrated primarily in China and the USA, a pattern that is also visible among patent families granted for the first time.

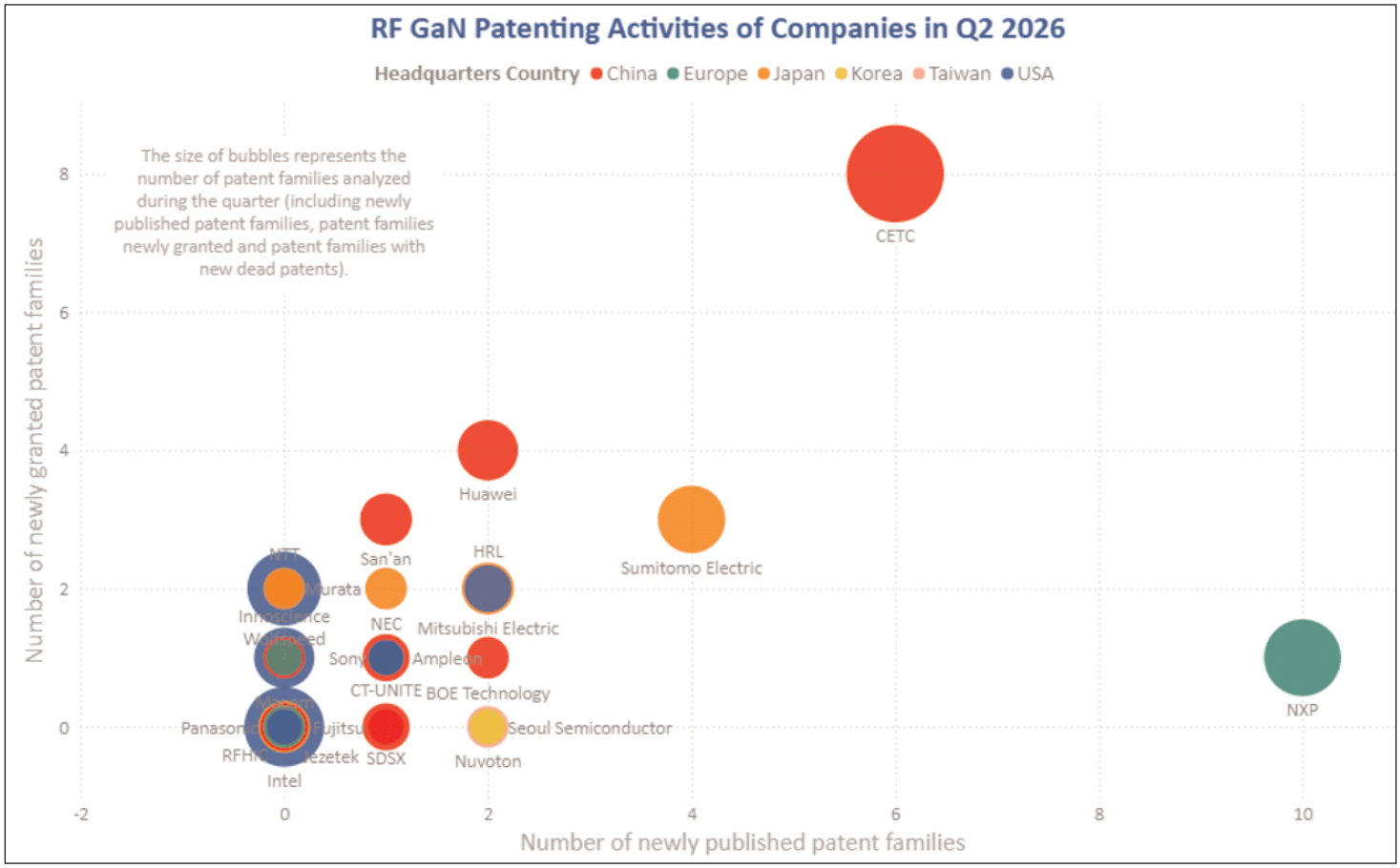
Most newly published inventions concerned RF GaN devices or the circuits and applications that use them. Patent activity relating to wafers, epitaxial wafers, packaging and modules was more limited during the quarter. This distribution highlights where recent disclosed inventive activity is concentrated across the RF GaN supply chain.

More than 80 patent families received a first grant in Q2/2026. Over 50 were attributed to Chinese IP players, led by CETC and Xidian University. These first grants provide a distinct measure of patent portfolio development alongside the publication of new inventions.

Industrial leaders and academic players strengthen IP positions

In China, industrial companies and academic institutions both featured prominently among the quarter's active RF GaN patent assignees. Xidian University led the academic group. Outside China, the most active patent applicants were predominantly industrial companies, with South Korea's ETRI a notable academic exception.





RF GaN patenting activity of selected companies in Q2/2026. The horizontal axis shows newly published patent families and the vertical axis shows families granted for the first time. The bubble size represents all families analyzed for each company during the quarter, including families affected by legal-status changes.

State-backed CETC remained a leading industrial player in China, with eight patent families granted for the first time in Q2/2026. Huawei and San'an also recorded newly granted families. Outside China, NXP stood out with ten newly published patent families, the highest figure among the companies shown in the quarter's activity chart. Sumitomo Electric combined four newly published families, with three families granted for the first time. HRL, Mitsubishi Electric and NEC each recorded two newly granted families.

More than 80 patent families lost at least one member during the quarter. Intel accounted for 13 of the affected families, the highest figure identified among assignees in this category. The loss of a family member does not, by itself, mean that protection for the invention has ended in every jurisdiction.

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Over 30 newcomers enter RF GaN patent scene

KnowMade identified more than 30 new entrants during Q2/2026, most of them Chinese entities. Among them, Unicompound Semiconductor disclosed three inventions concerning RF GaN high-electron-mobility transistor (HEMT) device engineering. Its patents describe the use of air cavities and air bridges around gate and field-plate regions to reduce parasitic capacitance while addressing passivation, breakdown performance and high-frequency operation.

Outside China, Seoul Viosys emerged with two disclosed inventions focused on GaN HEMT epitaxy and heterostructure engineering. They address aspects such as barrier and channel composition, ultrathin interlayers, defect and leakage reduction, and optimization of the two-dimensional electron gas 2DEG. These approaches aim to improve high-frequency device performance for applications including radar.

The arrival of these companies shows why monitoring new patent applicants matters alongside tracking established patent owners, says KnowMade: early publications can reveal technical priorities before a large patent portfolio has formed. ■

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