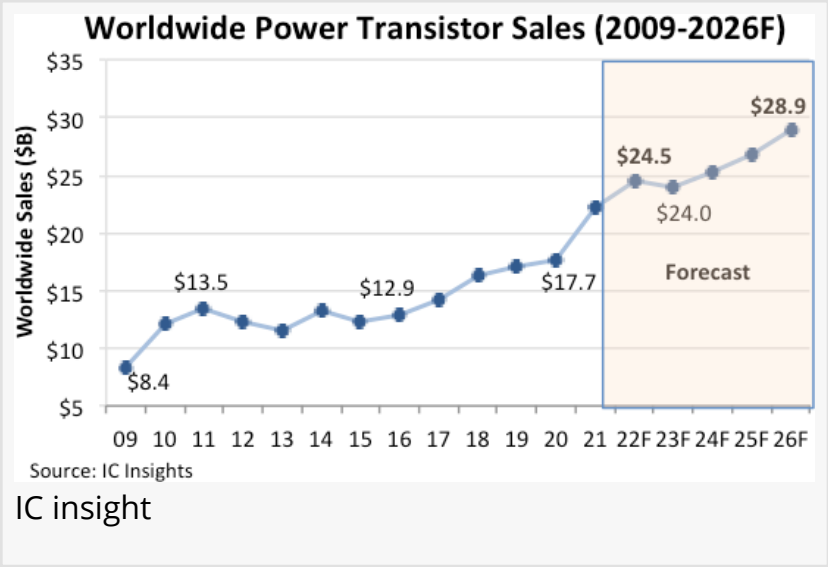
KYNIX Power Transistor Sales Will Increase 11% in 2022

Tight supply and device shortages are pushing the average selling price of power transistors to its highest percentage since 2010.



IC insight

HONGKONG, CHINA, October 26, 2022 /EINPresswire.com/ -- According to a new report from Kynix, tight supply and device shortages are pushing the average selling price of power transistors to its highest percentage since 2010. Sales of power transistors are anticipated to increase by 11% in 2022 to a projected $24.5 billion...

Since 2022, the supply-demand tension in the chip market has been easing quarter by quarter, but it still faces increased demand divergence, such as shrinking demand for consumer-grade chips forcing channel players to clear their inventories. While the supply-demand for power semiconductors such as automotive electronics and industrial control is still tight.

Silicon MOSFET (low-voltage based) power device prices show a significant downward trend, while IGBT modules, SiC devices, and other products are boosted by high demand in the new energy market, and the overall price performance is stronger.

According to a new report published by IC Insights, the average selling price of power transistors is expected to grow by 11% in 2022, reaching an estimated $24.5 billion, as tight supply and device shortages are driving the highest percentage since 2010.

As the chart below shows, the power transistor market is expected to begin another growth cycle in 2024, with annual sales growing steadily to $28.9 billion by 2026, at a compound annual growth rate (CAGR) expected to reach 5.5%.
Power semiconductors can be broadly divided into two categories: power semiconductor discrete devices (Power Discrete, including power modules) and power semiconductor integrated circuits (Power IC), and transistors belong to one of the power discrete devices, including metal-

oxide-semiconductor field-effect transistors (MOSFETs) and insulated gate bipolar transistors (IGBTs).

There was a shortage of imported IGBTs in the second half of 2019, and MOSFETs entered the shortage cycle with the outbreak of COVID-19 in early 2020.

Power transistor prices have risen dramatically since 2021. Silan Micro, a domestic power semiconductor manufacturer, has issued price increase notices for several product categories, including MOS, IGBT, SBD, FRD, and others. Jetty Micro Electric also announced price increases for VDMOS and TRENCH MOS products; Changjing Technology also announced price increases ranging from 10% to 20% for its entire product line.

Byd semiconductor also IPM, IGBT single tube product price adjustment, no less than 5% increase.

Infineon, STMicroelectronics, Onsemi, Nexperia, and other heads of the power semiconductor majors are also the price of the product up 10-15%. At that time, the delivery time of some imported products was up to 52 weeks, and the delivery time of domestic products was also up to three months.

High capacity expansion bottlenecks and price increases pushed up the average selling price of power transistors, with unit shipments of power transistors increasing by 13% and sales increasing by 26% in 2021.

Kynix noted that the average selling price (ASP) of power transistors is expected to grow 11% in 2022 after an 8% increase in 2021. This is the highest percentage increase since the recovery year of 2010 since the recession of 2009 triggered by the financial crisis of 2007-2008.

A series of record sales of power transistors is expected to end in 2023 when revenues are expected to fall 2% to $24 billion due to slower global economic growth and a 4% decline in global average selling prices next year.

TrendForce information shows that power discrete with MOSFETs, IGBTs, and other power transistors as mainstream products, by the 5G infrastructure, consumer fast charging, automotive electronics, electric vehicles, and other products per unit power component consumption increases and demand is growing rapidly. The overall market has long been dominated by international IDM plants, such as Infineon, On Semi, STM, etc., global IDM plants include about 80-90% of the market share, and Fabless accounts for about 10-20%.

Domestic power semiconductor fabs are also actively investing in construction, CR Microelectronics will invest about 10 billion yuan in Chongqing Xiyong Microelectronics Park to build a 12-inch wafer production line, mainly producing MOSFETs, IGBTs, power management chips, and other power semiconductor products.

In 2021, Silan Micro, according to the Investment Cooperation Agreement, Silan Tibco launched the first 12-inch chip production line "to add an annual output of 240,000 pieces of 12-inch high-voltage integrated circuits and power devices chip technology upgrading and expansion project", the total investment of the project is 2 billion yuan, the implementation cycle of 2 years.

The development of new energy vehicles has also increased the demand for power devices. Estimates suggest that the value of power semiconductor devices in new energy vehicles is approximately five times that of traditional fuel vehicles. IGBT, which is one of the core electronic devices in the electronic control system, accounts for approximately 37% of the cost of the electronic control system of new energy vehicles.

Alan Smith
Kynix Semiconductor Limited
+86 133 5296 4541
kynix02@gmail.com
Visit us on social media:
Facebook
Twitter
LinkedIn
