



KAMARAJ IAS ACADEMY
Only IAS Academy by Grandson of "Perunthalsivam Kamarajar"

As imports of semiconductor chips rise, India eyes local production

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Context

At the World Economic Forum in January, Minister of Electronics and Information Technology Ashwini Vaishnaw announced that **India's first domestically manufactured semiconductor chip will be rolled out this year**. Through domestic production, India aims to **reduce its increasing import dependency**.

Five manufacturing facilities are under construction for the manufacturing and assembly of semiconductor chips.

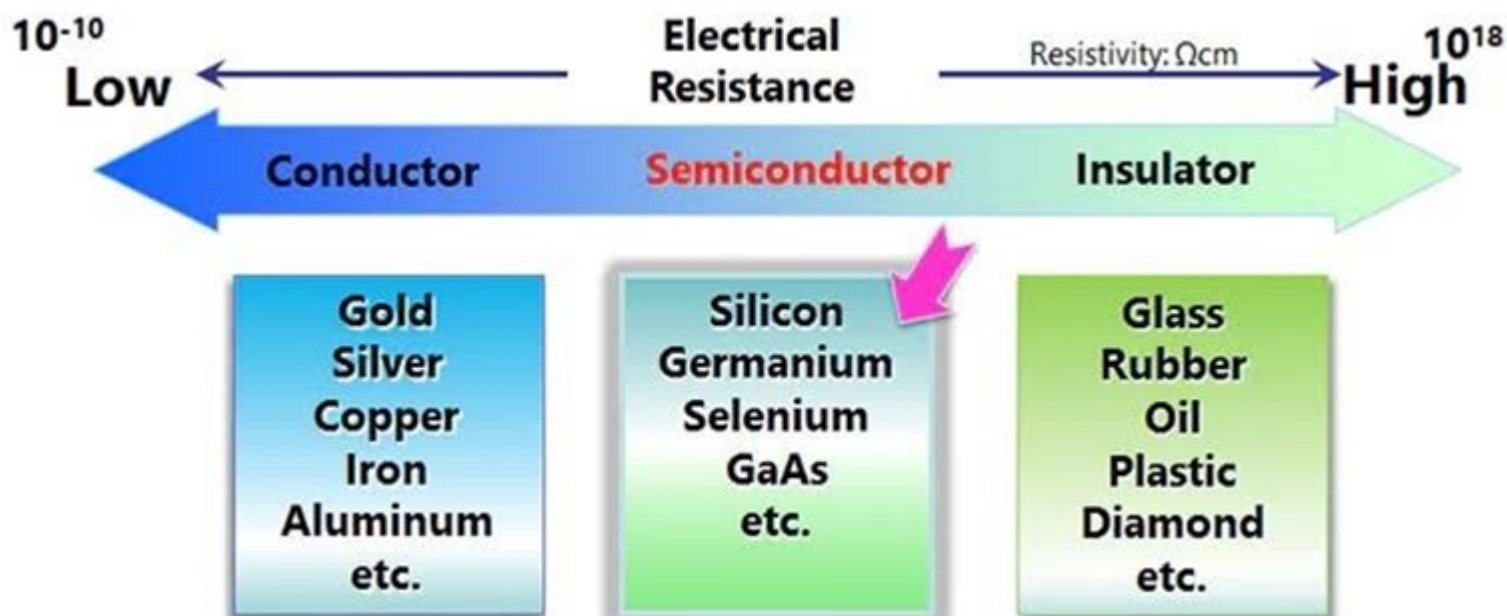
The **Semicon India Programme, launched in 2021**, aims to **develop the semiconductor and display manufacturing ecosystem**.

Monolithic ICs constitute nearly 2.09% of India's total imports in FY25 (April-November), a considerable jump from 0.19% in FY16.

In the past 10 years, except FY19, **China has been the major supplier** of semiconductor chips to India, accounting for nearly one-third of the import value every year.

Hong Kong, Japan, South Korea, Singapore, and Taiwan have also been major suppliers to India

Semiconductors & India's mission



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SEMICONDUCTOR

Semiconductors are materials having conductivity between conductors and insulators

→ EXAMPLES

- **Pure Elements:** Silicon and Germanium
- **Compounds:** Gallium Arsenide and Cadmium selenide

→ SIGNIFICANCE

- Essential to almost all sectors of the economy – **aerospace, automobiles, communications, clean energy, information technology** and medical devices

→ SEMICONDUCTORS AND INDIA

- India Imports from: **China, Taiwan, USA** and **Japan**
- **Indian Semiconductor Market:** Expected to reach **USD 55 bn** by **2026**

SCHEMES

- ↳ **Production-Linked Incentive (PLI) scheme**
- ↳ **Design Linked Incentive (DLI) Scheme**
- ↳ **Scheme for Promotion of Manufacturing of Electronic Components and Semi-conductors (SPECs)**
- ↳ Encourage semiconductor manufacturing in the country
- ↳ Nurture >20 domestic companies to achieve a turnover of > Rs 100 crore
- ↳ Manufacture electronic components and semiconductors

INDIA'S SEMICONDUCTOR MISSION (ISM)

→ VISION

- Build a **vibrant semiconductor and display design and innovation ecosystem**

→ LAUNCHED

→ COMPONENTS

- Scheme for setting up of semiconductor fabs
- Scheme for setting up of semiconductor design and development centres
- Scheme for setting up of semiconductor packaging and testing centres