

The European Semiconductor Industry Association



The Semiconductor Voice of Europe

Semiconductor Anti-Counterfeit Presentation

Semiconductor Industry as Enabling Industry

Communications –

wired and wireless, mobile, RF connectivity solutions (Bluetooth, GPRS..), telecommunications, traditional telecom equipment, home networking equipment



Consumer - entertainment, radio, TV, VCR, personal or home appliance, cameras, games, etc.



Automotive – powertrain, safety management, body and convenience, engine controls entertainment...



Industrial & Instrument - lab, test, control and measurements



Semiconductors are for the information society, what grain was for the agrarian society and what iron & steel were for the industrial society...

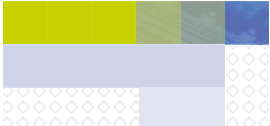
Shanghai Museum of Urban Development, 2004

Computer & Office - mainframe, peripheral office equipment and personal computers

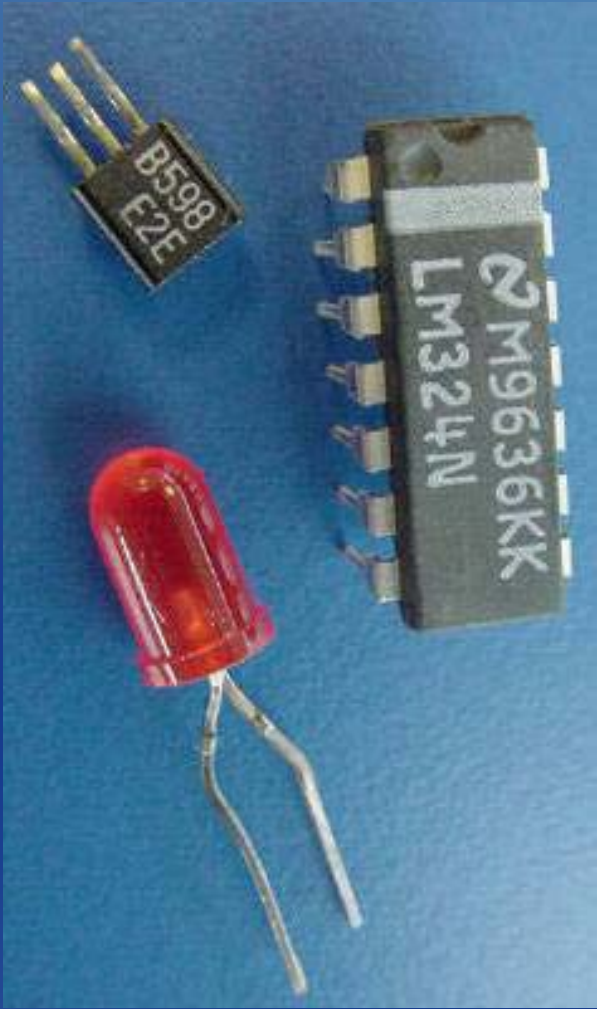
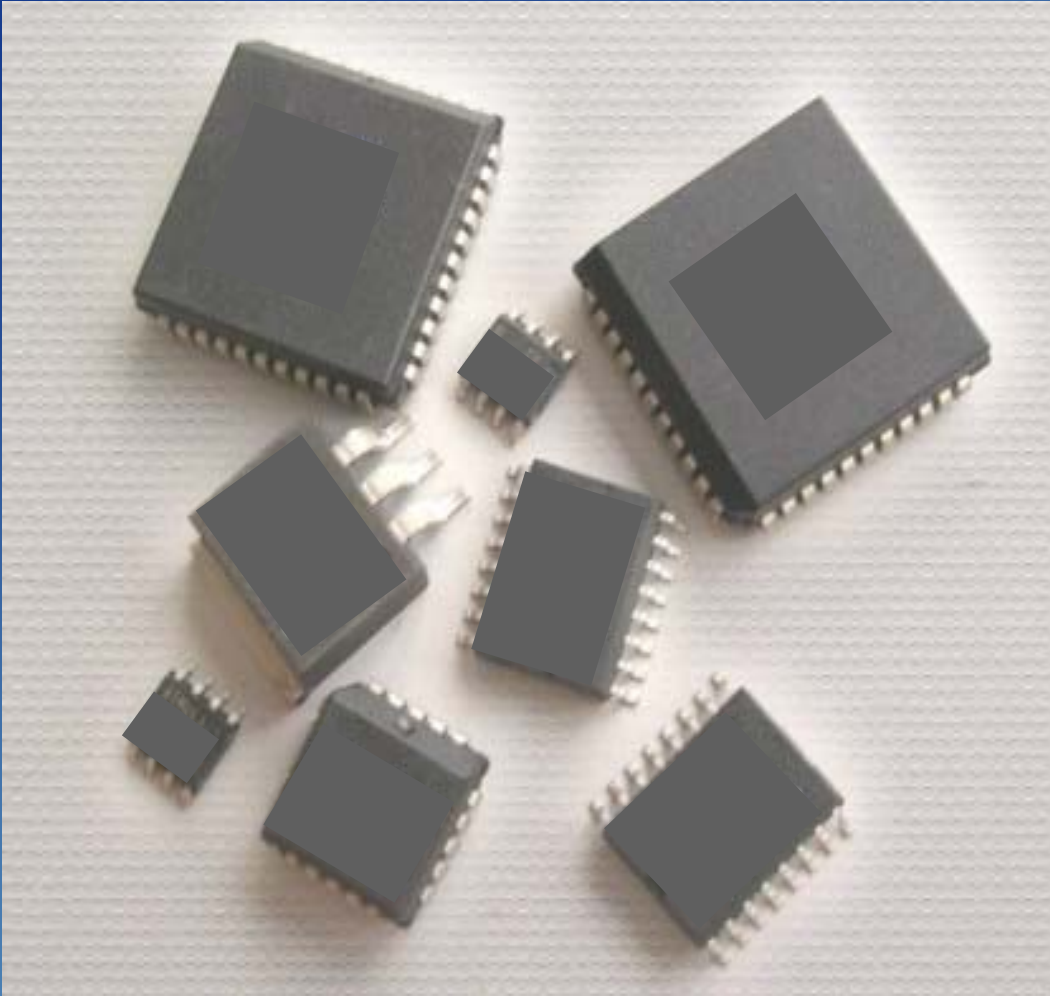


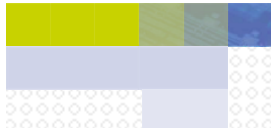
Source WSTS

What is a Semiconductor?



Examples





Examples



Semiconductors are a key enabling technology behind computers, telecommunications equipment, consumer electronics, medical devices, automobiles, avionics, and defense electronics.

- 2007 World Wide Market Sales - €187bn Euro (*Source – WSTS*)
- 2007 Europe Market Sales – €30bn Euro
- Employees Europe: around 120 000

Source – European Semiconductor Industry Association

- The proliferation of counterfeit semiconductor product coupled with the increased semiconductor content in today's market (e.g. air, defence, medical, and automotive applications) creates risk to the safety and health of the consumer.
- Counterfeit products are an increasing problem throughout the world, affecting industries as diverse as materials, components, electronics, machinery, food, automotive, pharmaceuticals, and medical devices. The semiconductor industry is no exception to this growing threat.
- Semiconductor product counterfeiting is a serious and growing risk for the European market. The impact goes beyond IP or trademark infringement of semiconductor companies.

- Processor over-clocking and remarking
- Product remarking
- Warranty fraud
- Lot aggregation fraud
- Increased trade in legacy products and counterfeit parts sold to business, military and government
- True fakes: other products, packaging, collateral, third- party adders, etc.
- Freight hijackings
- Counterfeit Example
 - Independent broker website offered 40,000 devices for sale
 - Brand Company actually made less than 200 units of named device with the specified date code. If all 40K were available, it would equate to \$34 million in fraud.

Legitimate Manufacturer

Production in clean-room environments to ensure quality



Protection of employee health and safety is the top priority

Counterfeiters

Chemical cleaning on the sidewalk and "sun-drying"



Sidewalk sorting process

Box and Printer for Counterfeit



Printer's Factory Front



Box Cutting Machine

Boxing



Loading



Fake Labels and Parts



“under the boarder” S/C flows



Counterfeiters are Professionals!!



Chip Shooter



Wave Solder



Test Line



Inspection



Counterfeit Bulk

Automated External Defibrillator or AED



Medical device end user customer reported to semiconductor company that semiconductors they purchased from a Broker failed. Examination revealed the semiconductors to be counterfeit.

- **First and foremost: Create awareness.**
- **Second: Stop the producers in their home country.**
- **Third: Stop brokers who deal in counterfeit product.**
- **Fourth: Stop the counterfeit products at the borders.**

Let's work together!