Device Packaging

https://news.ti.com/blog/2021/06/01/the-power-packaging

Chip Carriers

Dual-in-Line Package (DIP)  Leadless Chip Carrier (LCC)  Ceramic Pin Grid Array (CPGA)

Lids  Small Outline Integrated Circuit (SOIC)  Flat Packs

https://www.globalchipmaterials.com/visitors/products_visitors.htm
Wirebonding

Wire bonding is the process of connecting an individual die to a circuit board, dual inline chip (DIP) or packaging to allow the chip to interact with other circuitry or components. Wire is attached via heat, pressure and an ultrasonic pulse in a programmed scenario.

Wire: 25 µm gold or aluminum

Minimum metal thickness for good bonding is 200 to 300 nm.

https://en.wikipedia.org/wiki/Wire_bonding

Wirebonding

- Wire Bonding Overview
  https://www.youtube.com/watch?v=th1YxQHEpEU

- Ball Bonding
  https://www.youtube.com/watch?v=FRvECYvlaT0&ab_channel=Ding-MingKwai

- Wedge Bonding
  https://www.youtube.com/watch?v=oR_K43xFek

- Wirebonding Training Video
  https://www.youtube.com/watch?v=r5qehKvLo4M&t=33s
Lab Assignment # 5

- Question 1: What temperature was used for wire bonding?
- Question 2: What metal was the wire bonding thread?
- Question 3: What type of wirebonding was used for the lab?
- Question 4: What is the model number of the wirebonder?