

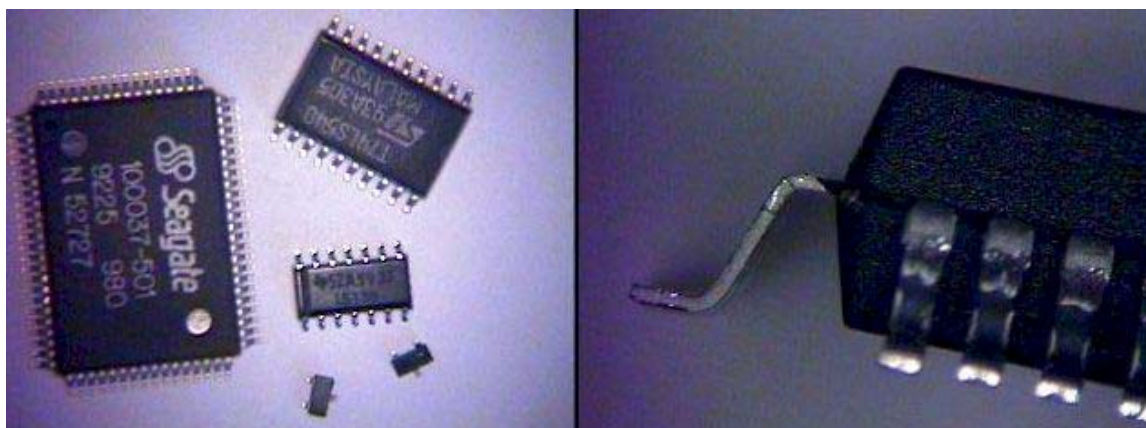
## Surface Mount Technology (SMT) Soldering

### Gull Wing Components

SMT Gull Wing Components come in many different configurations but have one thing in common: the shape of the leads themselves.

Gull wing type component types include:

- Small Outline Transistors (SOT) – DRM Pg. 40
- Diode Packages (DPAK) – DRM Pg. 41
- Small Outline Integrated Circuits – DRM Pg. 42
- Very Small Outline Packages (VSOP) – DRM Pg. 47
- Shrink Small Outline Packages (SSOP) – DRM Pg. 48
- Thin Small Outline Packages (TSOP) – DRM Pg. 50
- Quad Flat Packs (QFP) – DRM Pg. 54
- Plastic Quad Flat Packs (PQFP) – DRM Pg. 55



Gull wing type leads are metal leads that bend down and away from the component body and resemble the shape of a gull's wing. The leads are generally small and easily damaged. **Great care should be exercised when handling gull wing components to avoid any damage to the leads.**

Gull wing type components can perform many different functions on an electronic assembly. Some components are individual discrete components, such as the SOT. Some have millions of electronic circuits that process information such as QFP's. Others store information, sometimes called memory chips. These can come in many package variations.

### Lead Pitch

Lead Pitch is a measurement of how close the leads are to each other. Lead pitch is measured from the **center** of one lead to the **center** of the adjoining lead. The largest