

Transistor Assortment Kits (NPN/PNP)

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Electronics & Prototyping

Transistor assortment kits hold the common NPN and PNP transistors - BC547, BC557, 2N2222, 2N3904/6 and power types like TIP120 - for switching, amplification and driver circuits. A sorted kit turns any electronics bench into a working lab.

Key Features

- NPN and PNP small-signal types
- Power transistors and Darlington
- Assorted packages: TO-92, TO-220
- Value-labelled storage boxes
- Datasheet cards included

Typical Uses in the Workshop

- Switch loads from logic pins
- Drive LEDs, buzzers and relays
- Amplify small sensor signals
- Build oscillator and timer circuits

Safe Operation

1. Identify the transistor type and pinout
2. Check the base drive resistor value
3. Wire emitter, base and collector correctly
4. Apply the signal to the base
5. Load-test within the rating

SAFETY NOTES

- Do not exceed the collector current
- Check the pinout - wrong wiring kills transistors
- Keep the soldering iron away from the body
- Store sensitivity to static
- Do not run without a base resistor

Maintenance & Consumables

- Keep the kit sorted by type
- Check the labelling
- Replace damaged transistors
- Store the kit in its case
- Restock popular types

Specification & Buying Notes

An assortment box with the standard NPN/PNP and a few power Darlington covers circuit work. Quality transistors match datasheet specs. Sort and label the box before issuing.