

## What Is an SMU?

Question:

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Answer:

The SMU (Source Monitor Unit) is the fundamental resource for parametric measurement. The SMU typically has two (mutually exclusive) modes of operation: force voltage and measure current, or force current and measure voltage. Mode selection is achieved via software control. Some SMUs have additional modes, such as COMMON (force an output voltage of zero and sink/source current in order to achieve a ground unit function). Since one terminal of the SMU is tied to common, the SMU is essentially a one-terminal device. Other related acronyms often encountered are MPSMU (Medium Power SMU), HPSMU (High Power SMU), and HRSMU (High Resolution SMU).

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A simplified schematic of the SMU is shown below:

### Simplified SMU schematic:

