Notes for using HP4145B & Exporting data to Labview:

- Labview is interfaced with HP4145B to extract the parameter and to plot the curve.
- N-channel MOS and BJT (NPN) will have the entire plot in the first quadrant.
- P-channel MOS and BJT (PNP) will have the entire plot in the Third quadrant.
- To get the Transfer Characteristics for BJT, set $V_{CE}$ carefully (–3V for PNP and 3V for NPN).
- After exporting the data from Labview, plot it with Excel or other software (In Labview, the curve for the previous simulation is shown, which is wrong).
- Please have the data sheet with you for HP4145B measurements to ensure the terminal connections are correct.

2N4403 (PNP Transistor)
2N4403 (PNP) – Output characteristics (From LabView)
2N4403 (PNP) – Transfer characteristics

2N3904 : NPN Transistor

Fig: 2N3904 (NPN) – Output characteristics (From LabView)
Output Characteristics

Circuit for determining the common-emitter output characteristics of an NPN transistor

2N3904 (NPN) output char [From Excel Plot]
Fig: 2N3904 (NPN) – Transfer characteristics (From LabView)

NPN Transfer Characteristics

2N3904 (NPN) – Transfer characteristics
J271 (p-channel JFET)

J271 (P-channel) – Output characteristics (From LabView)

J271 – Output characteristics
J271 (P-channel) – Transfer characteristics (From LabView)

J271 (P-channel) Transfer Char

Output Current (ID) vs Gate Source Voltage (VGS)

J271 (P-channel) – Transfer characteristics