

## JFET Characteristics

**Model : SA-117**



**SINCOM SA-117 JFET Characteristics** is useful to study Drain and Transfer characteristics of JFET. The JFET is widely used as a switching and an amplification device in many electronics circuits. The trainer is simply designed to plot its characteristics and determine the various operational parameters in a simple experimental way. The trainer is without meters and has the facility to connect the external analog or digital voltmeter and ammeter in the circuit.

### Features

- ❖ N-Channel JFET of TO-72 Metal Transistor package is provided
- ❖ Low Power, High Frequency Device
- ❖ Individual control of Gate and Drain Input DC voltages
- ❖ Current controlling resistors in Gate and Drain
- ❖ In-Built Variable regulated DC Power Supply
- ❖ Multi color Circuit Diagram printed on the front of the white board
- ❖ Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- ❖ Facility to connect the external Digital/ Analog Voltmeter and Ammeter
- ❖ User friendly Designed
- ❖ Very Easy for Operation
- ❖ Interconnections by 2mm high quality banana sockets and pins
- ❖ Maximum Test points to explore all the corners of experiment
- ❖ 1 Year Warranty

### Technical Specifications

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|---------------------------------|--|
| ▪ AC Mains Power Supply         | : 230V $\pm$ 10%, 50Hz                   |
| ▪ DC Power Supply               | : Two Nos. Variable $\pm$ 12V/500mA      |
| ▪ Gate-Source Voltage $V_{GS}$  | : IC Regulated variable 0V to -12V/500mA |
| ▪ Drain-Source Voltage $V_{DS}$ | : IC Regulated variable 0V to +12V/500mA |
| ▪ Transistor Package            | : TO-72                                  |
| ▪ JFET Type                     | : N Channel Depletion                    |



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|---|--------------------------------------|
| ▪ JFET Used                             | : BFW10                              |
| ▪ Pin Count                             | : 4 Gate, Drain Source and Substrate |
| ▪ Gate Current Controlling Resistor     | : MFR 100K $\Omega$ , $\pm 5\%$      |
| ▪ Drain Current Controlling Resistor    | : MFR 10K $\Omega$ , $\pm 5\%$       |
| ▪ Max. Drain-Source Voltage $V_{DS}$    | : 30V DC                             |
| ▪ Max. Drain-Gate Voltage $V_{DG}$      | : 30V DC                             |
| ▪ Reverse Gate-Source Voltage $V_{GSR}$ | : -30V DC                            |
| ▪ Forward Gate Current $I_{GF}$         | : 10mA DC                            |
| ▪ Operating Junction Temperature        | : -65 to +150 $^{\circ}$ C           |
| ▪ Weight                                | : 2.0 kg (approx)                    |
| ▪ Dimensions (mm)                       | : L 220 x W 270 x H 110              |
| ▪ Interconnections                      | : 2mm Banana sockets                 |
| ▪ Operating Temperature                 | : 0-50 $^{\circ}$ C, 80% RH          |

### Learning Scope

- To Study the Drain characteristics of JFET.
- To Study the Transfer characteristics of JFET.
- To Determine VGS Cut-off Voltage of given JFET.

### Other Instruments Required

**SINCOM Digital Multi VI meter (DMVI) : Model DMVI-03** Range  $V_1$ -20V,  $I_1$ -20mA,  $V_2$ -20V,  $I_2$ -200mA DC

### Accessories Included

Set of Patch Cord and Details Instruction Manual