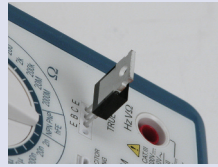


# Data Sheet

## Manual Ranging Tool Kit® DMM with Transistor Test Model 2704C



### hFE Transistor Test



Measures common-emitter gain.

The 2704C has all of the functionality for basic DMM applications including some high end features you might not expect. The 2000 count LCD can display resistance values up to 2 GΩ, capacitance to 20 uF or a transistors common-emitter gain value up to 1000. Value-packed features make this meter a must in every "Tool Kit"®.

#### Features

- Magnetic hanger
- AC voltage to 750 V
- Capacitance to 20 uF
- Diode test
- hFE Transistor test
- One-handed operation
- Measures up to 10 A (AC & DC)
- DC voltage to 1000 V
- Resistance to 2000 MΩ
- Continuity test
- Logic test

### Specifications

model

2704C

#### DC Volts

|                     |                                  |
|---------------------|----------------------------------|
| Ranges              | 200 mV, 2 V, 20 V, 200 V, 1000V  |
| Resolution          | 0.1 mV, 1 mV, 10 mV, 100 mV, 1 V |
| Accuracy            | ±(0.8 % rdg + 1 dgts)            |
| Input Impedance     | 10 MΩ                            |
| Overload Protection | 1000 VDC or 750 VACrms*          |

#### AC Volts (50 Hz-500 Hz)

|                     |  |
|---------------------|--|
| Ranges              | 200 mV, 2 V, 20 V, 200 V, 750V   |
| Resolution          | 0.1 mV, 1 mV, 10 mV, 100 mV, 1 V   |
| Accuracy            | 200 mV & 20 V ranges: ±(1.5 % rdg + 5 dgts)<br>200 V & 750 V ranges: ±(2.0 % rdg + 5 dgts) |
| Input Impedance     | 10 MΩ  |
| Overload Protection | 1000 VDC or 750 VACrms*  |

#### DC Current

|                  |  |
|------------------|--|
| Ranges           | 20 mA, 200 mA, 10 A  |
| Resolution       | 10 uA, 100 uA, 10 mA   |
| Accuracy         | 20 mA to 200 mA ranges: ±(1.0 % rdg + 1 dgts)<br>10 A range: ±(3.0 % rdg + 3 dgts) |
| Input Protection | 0.5 A/500 V & 10 A/600 V fast blow ceramic fuses                                   |
| 10A Input        | 10 A for 60 sec max. followed by a 10 minute cooling period                        |

#### AC Current (50 Hz-500 Hz)

|                  |  |
|------------------|--|
| Ranges           | 20 mA, 200 mA, 10 A  |
| Resolution       | 10 uA, 100 uA, 10 mA   |
| Accuracy         | 20 mA to 200 mA ranges: ±(2.0 % rdg + 5 dgts)<br>10 A range: ±(3.0 % rdg + 5 dgts) |
| Input Protection | 0.5 A/500 V & 10 A/600 V fast blow ceramic fuses                                   |
| 10A Input        | 10 A for 60 sec max. followed by a 10 minute cooling period                        |

#### Resistance

|                                |  |
|--------------------------------|--|
| Ranges                         | 200 Ω, 2 kΩ, 200 kΩ, 20 MΩ, 2000 MΩ  |
| Resolution                     | 0.1 Ω, 1.0 Ω, 100 Ω, 10 kΩ, 1 MΩ   |
| Accuracy                       | 200 Ω to 200 kΩ ranges: ±(1.0 % rdg + 4 dgts)<br>20 MΩ range: ±(2.0 % rdg + 4 dgts)<br>2000 MΩ range: ±(5.0 % rdg + 10 dgts) |
| Open Circuit Voltage (typical) | 0.3 VDC (3.0 VDC on 200 Ω, 2000 MΩ range)  |
| Overload Protection            | 500 VDC/ACrms  |

#### Capacitance

|                     |                                       |
|---------------------|---------------------------------------|
| Ranges              | 2 nF, 20 nF, 200 nF, 2.0 uF, 20 uF    |
| Resolution          | 1 pF, 10 pF, 100 pF, 1 nF, 10 nF      |
| Accuracy            | ±(4 % rdg + 10 dgts)                  |
| Overload Protection | Discharge capacitor before connecting |

#### Frequency

|                     |                                       |
|---------------------|---------------------------------------|
| Ranges              | 2 kHz, 20 kHz, 200 kHz, 2 MHz, 20 MHz |
| Resolution          | 1 Hz, 10 Hz, 100 Hz, 1 kHz, 10 kHz    |
| Accuracy            | ±(0.1 % rdg + 3 dgts)                 |
| Sensitivity         | 2.0 Vrms minimum                      |
| Minimum Pulse Width | >25 ns                                |
| Duty Cycle Limits   | >30 % and <70 %                       |
| Overload Protection | 500 VDC/AC rms                        |

#### Diode Test

|                      |                       |
|----------------------|-----------------------|
| Test Current         | 1.0 mA (typical)      |
| Resolution           | 10 mV                 |
| Accuracy             | ±(1.5 % rdg + 3 dgts) |
| Open Circuit Voltage | 3.0 VDC (typical)     |
| Overload Protection  | 500 VDC/ACrms         |

#### Continuity

|                     |                 |
|---------------------|-----------------|
| Audible Indication  | Less than 100 Ω |
| Response Time       | 100 ms          |
| Overload Protection | 500 VDC/ACrms   |

#### Transistor hFE

|              |   |
|--------------|---|
| Range        | 0 to 1000   |
| Base Current | Approximately 10 uADC (V <sub>CE</sub> = 3.0 VDC) |

#### Logic Test

|                     |   |
|---------------------|---|
| Threshold           | Logic Hi (2.8 V ±0.8 V) / Logic Lo (0.8 V ±0.5 V) |
| Indication          | 40 msec beep at logic Lo                          |
| Overload Protection | 500 VDC/AC rms                                    |

#### General

|                         |   |
|-------------------------|---|
| Display                 | 3 1/2 digit, 2000 count LCD   |
| Polarity                | Automatic, positive implied, negative polarity indication                     |
| Overrange               | OL or -OL is displayed  |
| Low Battery Indication  | Battery symbol will display when battery voltage drops below operating levels |
| Measurement Rate        | 2.5 times per second  |
| Operating Environment   | 0°C to 50°C at <70 % relative humidity  |
| Storage Environment     | -20°C to 60°C at 0 to 80 % relative humidity                                  |
| Accuracies              | Stated accuracy at 23°C +5°C at <75 % relative humidity                       |
| Temperature Coefficient | 0.1 x (specified accuracy) per °C. (°C to 18°C, 28°C to 50°C)                 |
| Power                   | Single standard 9 volt battery, NEDA 1604, JIS 006P, IEC 6F22                 |
| Battery Life            | 150 hours typical   |
| Dimensions              | 165 mm (H) x 78 mm (W) x 42.5 mm (D)  |
| Weight                  | Approximately 10 oz. (285 g) with battery and hanger                          |

### Three-Year Warranty

Supplied Accessories: User manual, one set of test leads, one spare fuse, and 9V battery (installed)

\* = 600 VDC/ACrms for 15 seconds on 200 mV range

# B&K Precision's 2700 Tool Kit® Series

## Models 2703C, 2704C, 2705B, 2706B, 2707B, 2708B, 2709B & 2712

These excellent meters are for most jobs that require flexibility, accuracy and speed. Value-packed features make these meters a must for everyone's "Tool Kit®".

Common Features:

- DC Voltage to 1000V
- DC Current to 10A
- Diode test
- Magnetic hanging strap
- AC Voltage to 750V
- Continuity test
- Drop resistant case



### Magnetic Hanging Strap

This convenient feature allows you to hang your DMM on any magnetic metallic surface freeing up your hands for troubleshooting.

### Back Light / Easy-to-Read LCD

Model 2706B

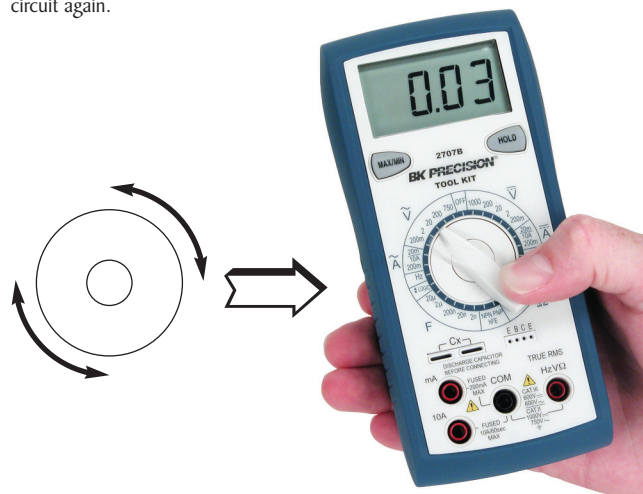
Ultra-bright blue LCD back light for low ambient light measurements

Models 2709B & 2712

Large easy-to-read LCD with green LED backlight

### Single-handed operation

The ergonomic design allows both left and right handed users to rotate the knob while holding the meter in one hand. While one hand keeps the probe on the circuit, the other hand changes the meter's function. This speeds up troubleshooting because you don't have to locate the probe point in the circuit again.



| Features          | models      |             |             |            |              |             |            |         |
|-------------------|-------------|-------------|-------------|------------|--------------|-------------|------------|---------|
|                   | 2712        | 2709B       | 2708B       | 2707B      | 2706B        | 2705B       | 2704C      | 2703C   |
| Ranging           | Auto/Manual | Auto/Manual | Auto/Manual | Manual     | Manual       | Auto/Manual | Manual     | Manual  |
| True RMS          | AC + DC     | √           | √           | √          | -            | -           | -          | -       |
| Current           | 10 A AC/DC  | 10 A AC/DC  | 10 A AC/DC  | 10 A AC/DC | 200 mA AC/DC | 10 A AC/DC  | 10 A AC/DC | 10 A DC |
| Capacitance       | to 40 uF    | to 66 mF    | -           | to 20 uF   | to 20 mF     | -           | to 20 uF   | -       |
| Transistor Test   | -           | -           | -           | √          | -            | -           | √          | -       |
| Frequency Counter | to 500 kHz  | to 66 MHz   | -           | to 20 MHz  | to 40 kHz    | -           | to 20 MHz  | -       |
| Temperature       | -           | -           | -           | -          | √            | -           | -          | -       |
| Logic Probe       | -           | -           | -           | √          | -            | -           | √          | -       |
| Backlight LCD     | √           | √           | -           | -          | √            | -           | -          | -       |
| Analog Bar Graph  | √           | -           | √           | -          | -            | -           | -          | -       |
| Battery Test      | -           | -           | -           | -          | -            | -           | -          | √       |
| Auto Power off    | √           | √           | √           | -          | √            | √           | -          | -       |

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)  
Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)